FLOWING EXPERTISE

2023

CALEFFI

Hydronic Solutions

GENERAL PRODUCT GUIDE

COMPONENTS FOR CENTRAL HEATING SYSTEMS

AIR AND DIRT SEPARATION DEVICES

VALVES AND ACCESSORIES FOR RADIATORS

ZONE AND MOTORISED VALVES, DISTRIBUTION MANIFOLDS, BOXES AND ACCESSORIES

RADIANT PANEL SYSTEM CONTROL

COMPONENTS FOR DOMESTIC WATER SYSTEMS

BACKFLOW PREVENTION DEVICES

BALANCING AND CONTROL DEVICES

FITTINGS

GAS SAFETY

EXPANSION VESSELS, CHRONO-THERMOSTATS, THERMOSTATS

HEAT SYSTEMS

COMPONENTS FOR RENEWABLE ENERGY SYSTEMS

SPARE PARTS - For spare parts, please contact the appropriate department

FITTING COUPLING - PRODUCT DIMENSIONS are available on www.caleffi.com

GENERAL INDEX

GENERAL INDEX

CALEFFI
Hydronic Solutions

FLOWING EXPERTISE

With our heating and plumbing solutions, we have been redesigning the comfort of the spaces we live and work in for over 60 years. This is thanks to the flow of expertise, technology, experience and innovations that we have acquired over the years by constantly exchanging ideas with our customers and suppliers. A flow that pushes boundaries, allowing us to constantly set the benchmark. A flow that allows us to always look one step ahead into the future.

FLOW OF LIFE

A unique way of flowing.
It is **continuous change**, a high degree of reliability in our work, and the ongoing pursuit of total quality, which is the result of small daily actions.

FUTURE

Innovation aimed at creating **new forms of comfort** for spaces, which motivates us to continue to grow and improve.

SUSTAINABILITY

Our focus on preserving **environmental, social and economic well-being** so that it can be passed on to future generations through our products and processes.

TECHNOLOGY

Our ability to do research, invest in processes and develop **state-of-the-art solutions** in an ever-evolving world of expertise.

MADE IN CALEFFI

A uniqueness consisting of many details, which is what we are known for worldwide. True "**Made in Italy**" quality, the hallmark of our company.

MARCHIO STORICO

HISTORIC BRAND

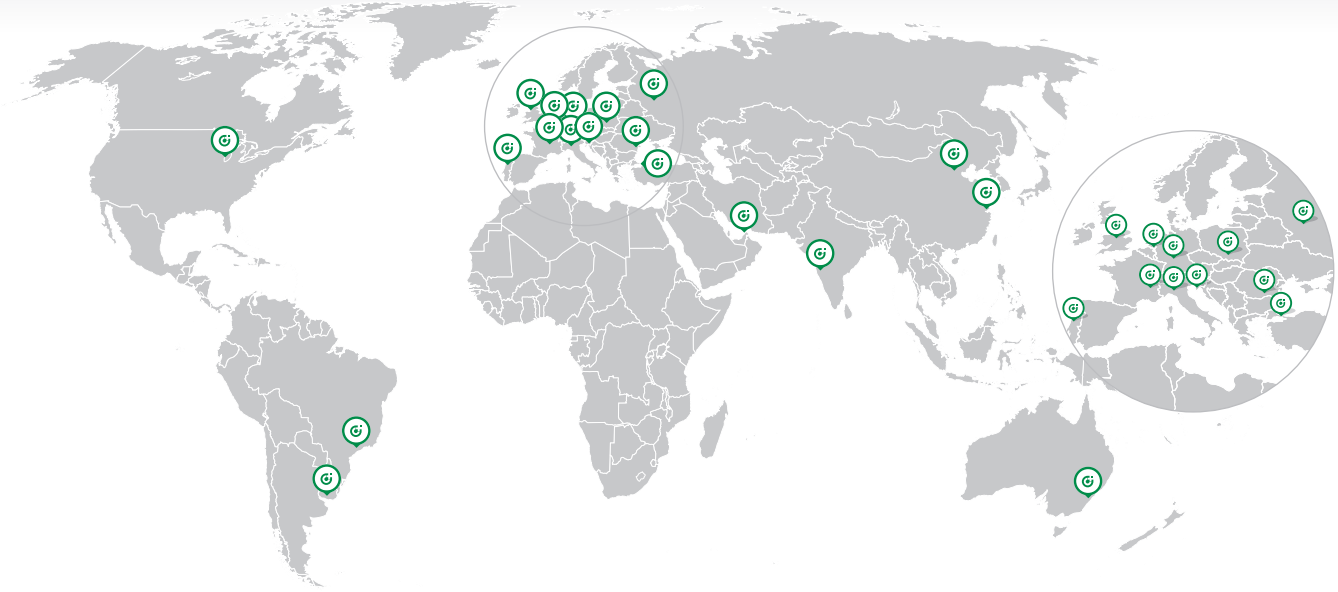
After more than 60 years in the business, we have been included in the special register of historic brands of national interest.
We have played a part in Italy's history and we are proud of it.

WHERE WE ARE SET WORLDWIDE

Caleffi Hydronic Solutions counts over **1,000 employees** worldwide and distributes to over **90 countries.**

Caleffi is member of the European association CEIR (Taps and Valves Industry) and of the Italian association ADV (Valvole e Rubinetti).

1. **Caleffi S.p.A.**
   Corporate Headquarters - Plant 1
   Fontaneto d'Agogna - ITALY
2. **Caleffi S.p.A.**
   Plant 2
   Fontaneto d'Agogna - ITALY
3. **Caleffi S.p.A.**
   Plant 3
   Gattico-Veruno - ITALY
4. **PRESSCO S.p.A.**
   Hot pressing and mechanical processing of brass components
   Invorio - ITALY



www.caleffi.com

C E R T I F I C A T I   E   O M O L O G A Z I O N I


ICIM

CERTIFICATO N. / CERTIFICATE No. 0003/9

CALEFFI S.p.A.

UNI EN ISO 9001:2015

EA: 18 - 29


IQNet

THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

CISQ/ICIM SPA has issued an IQNet recognized certificate that the organization

CALEFFI S.p.A.

Head Office and Operative Unit
Strada Regionale 229, 25 - I-28010 Fontaneto d'Agogna (NO)
Operative Unit
Via Maggiate, 15 - I-28013 Gattico (NO)

has implemented and maintains a

Quality Management System

for the following scope:

Design, manufacturing and trading of: safety relief valves, regulating valves and units, radiator valves, air vents, balancing valves, thermostatic mixing valves, pressure reducing valves, antipollution valves, distribution manifolds, switches and fittings, check valves, zone box with distribution and temperature control, user modules with domestic water local production and zone temperature control for domestic and industrial use on heating and cooling, plumbing, solar, geothermal, biomass and gas systems.

which fulfils the requirements of the following standard:

ISO 9001:2015

Issued on: 2020-07-16
First issued on: 1990-06-11
Expires on: 2023-05-06

Registration Number: IT-3742


ICIM

CERTIFICATO N. / CERTIFICATE No. 0512A/3

SI CERTIFICA CHE IL SISTEMA DI GESTIONE AMBIENTALE DI / WE HEREBY CERTIFY THAT THE ENVIRONMENTAL MANAGEMENT SYSTEM OPERATED BY

CALEFFI S.p.A.

Sede e Unità Operativa
Strada Regionale 229, 25 - 28010 Fontaneto d'Agogna (NO) – Italia
Unità Operativa
Via Maggiate, 15 - 28013 Gattico (NO) – Italia

È CONFORME ALLA NORMA / IS IN COMPLIANCE WITH THE STANDARD

UNI EN ISO 14001:2015

Sistema di Gestione Ambientale / Environmental Management System

EA: 18 - 14

Progettazione e fabbricazione di componenti idrotermici, sia per applicazioni in campo civile che industriale, realizzati mediante lavorazioni meccaniche (transfer e plurimandrino), stampaggio plastico a iniezione e assemblaggio.

Design and manufacture of hydrothermal components for civil and industrial applications, by mechanical processes (transference and multi-spindle), plastic injection molding and assembly.

DATA EMISSIONE / FIRST ISSUE: 05/06/2012
EMISSIONE CORRENTE / CURRENT ISSUE: 05/06/2021
DATA DI SCADENZA / EXPIRING DATE: 04/06/2024

Vincenzo Delacqua
ICIM S.p.A.


IQNet

THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

CISQ/ICIM SPA has issued an IQNet recognized certificate that the organization

CALEFFI S.p.A.

Head Office and Operative Unit
Strada Regionale 229, 25 - I-28010 Fontaneto d'Agogna (NO)
Operative Unit
Via Maggiate, 15 - I-28013 Gattico (NO)

has implemented and maintains a

Environmental Management System

for the following scope:

Design and manufacture of hydrothermal components for civil and industrial applications, by mechanical processes (transference and multi-spindle), plastic injection molding and assembly.

which fulfils the requirements of the following standard:

ISO 14001:2015

Issued on: 2021-06-05
First issued on: 2012-06-05
Expires on: 2024-06-04

Registration Number: IT-83000


bsi.

Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 9001:2015

Si certifica che: Caleffi S.p.A.
S.R. 229 N. 25
Fontaneto d'Agogna (NO)
28010
Italy

Detiene il Certificato n°: FM 21654

e applica un Sistema di Gestione per la Qualità in conformità ai requisiti ISO 9001:2015 con riferimento al seguente scopo:

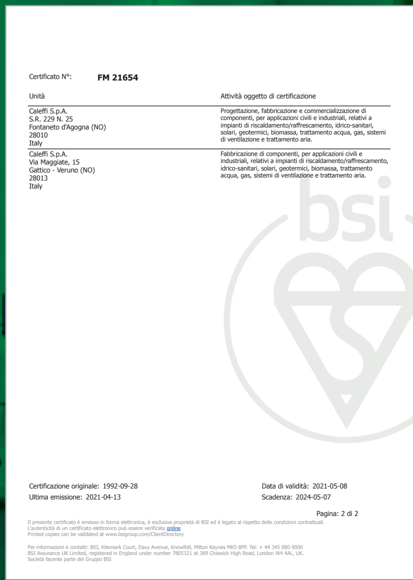
Progettazione, fabbricazione e commercializzazione di componenti, per applicazioni civili e industriali, relativi a impianti di riscaldamento/raffrescamento, idrico-sanitari, solari, geotermici, biomassa, trattamento acqua, gas, sistemi di ventilazione e trattamento aria.

In nome e per conto di BSI: Andrew Launn, EMEA Systems Certification Director

Certificazione originale: 1992-09-28
Ultima emissione: 2021-04-13
Data di validità: 2021-05-08
Scadenza: 2024-05-07

Pagina: 1 di 2

...making excellence a habit.


Certificato N°: FM 21654

Unità	Attività oggetto di certificazione
Caleffi S.p.A. S.R. 229 N. 25 Fontaneto d'Agogna (NO) 28010 Italy	Progettazione, fabbricazione e commercializzazione di componenti, per applicazioni civili e industriali, relativi a impianti di riscaldamento/raffrescamento, idrico-sanitari, solari, geotermici, biomassa, trattamento acqua, gas, sistemi di ventilazione e trattamento aria.
Caleffi S.p.A. Via Maggiate, 15 Gattico - Veruno (NO) 28013 Italy	Fabbricazione di componenti, per applicazioni civili e industriali, relativi a impianti di riscaldamento/raffrescamento, idrico-sanitari, solari, geotermici, biomassa, trattamento acqua, gas, sistemi di ventilazione e trattamento aria.

Certificazione originale: 1992-09-28
Ultima emissione: 2021-04-13
Data di validità: 2021-05-08
Scadenza: 2024-05-07

Pagina: 2 di 2


COMUNITÀ EUROPEA

AEO

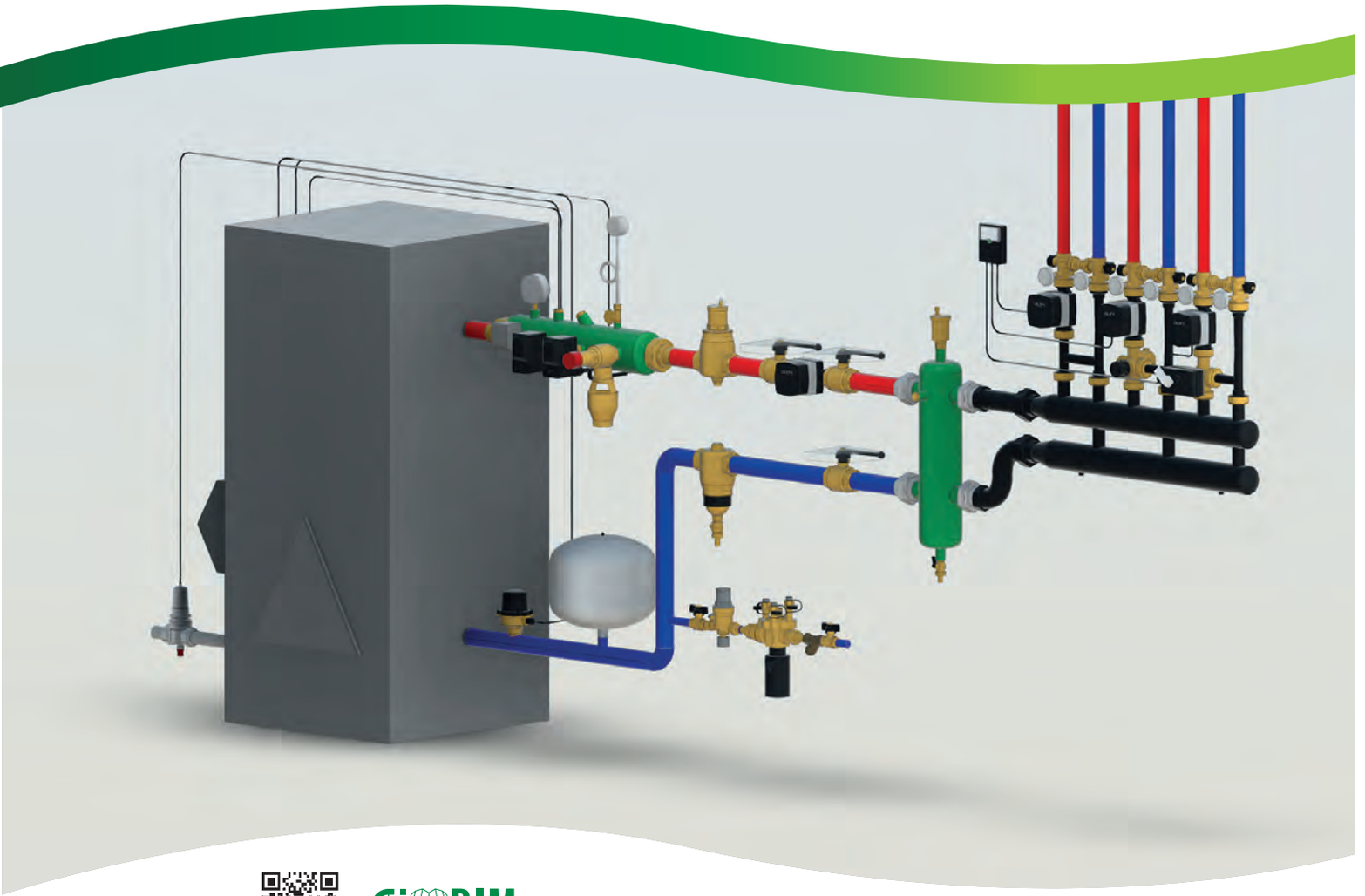
Certificato AEO: IT AEOF 12 0576

1. Titolare del Certificato AEO
2. Autorità che rilascia il Certificato

Operatore economico autorizzato
Semplificazioni doganali / Sicurezza (AEOF)

3. Data di validità del certificato: 29/05/2012

COMPONENTS FOR CENTRAL HEATING SYSTEMS



BIM
bim.caleffi.com

Safety relief valves
Temperature and pressure relief valves
Differential by-pass valve
BALLSTOP - anti-thermosiphon check valve
Air separators, instrument holders
Pressure switches and float switch
Automatic filling units
Flow switches
Automatic shut-off cocks
Accessories for boilers
Thermostats
Pressure gauges and temperature gauges
Hydraulic separators
Hydraulic separators-manifold SEPCOLL
Compact manifolds
Manifolds for central heating system
Distribution units
Temperature regulators
Strainers

SAFETY RELIEF VALVES

527 EST

tech. broch. 01053

Safety relief valve.
Female connections.
Discharge overpressure 10 %.
Closing differential 20 %.
PN 10.
Temperature range: 5–110 °C.

CE 2797

Code					
527422 EST	1/2″	x 3/4″	2,25 bar	1	25
527425 EST	1/2″	x 3/4″	2,5 bar	1	25
527427 EST	1/2″	x 3/4″	2,7 bar	1	25
527430 EST	1/2″	x 3/4″	3 bar	1	25
527435 EST	1/2″	x 3/4″	3,5 bar	1	25
527440 EST	1/2″	x 3/4″	4 bar	1	25
527445 EST	1/2″	x 3/4″	4,5 bar	1	25
527450 EST	1/2″	x 3/4″	5 bar	1	25
527454 EST	1/2″	x 3/4″	5,4 bar	1	25
527460 EST	1/2″	x 3/4″	6 bar	1	25
527522 EST	3/4″	x 1″	2,25 bar	1	25
527525 EST	3/4″	x 1″	2,5 bar	1	25
527527 EST	3/4″	x 1″	2,7 bar	1	25
527530 EST	3/4″	x 1″	3 bar	1	25
527535 EST	3/4″	x 1″	3,5 bar	1	25
527540 EST	3/4″	x 1″	4 bar	1	25
527545 EST	3/4″	x 1″	4,5 bar	1	25
527550 EST	3/4″	x 1″	5 bar	1	25
527554 EST	3/4″	x 1″	5,4 bar	1	25
527560 EST	3/4″	x 1″	6 bar	1	25
527622 EST	1″	x 1 1/4″	2,25 bar	1	10
527625 EST	1″	x 1 1/4″	2,5 bar	1	10
527627 EST	1″	x 1 1/4″	2,7 bar	1	10
527630 EST	1″	x 1 1/4″	3 bar	1	10
527635 EST	1″	x 1 1/4″	3,5 bar	1	10
527640 EST	1″	x 1 1/4″	4 bar	1	10
527645 EST	1″	x 1 1/4″	4,5 bar	1	10
527650 EST	1″	x 1 1/4″	5 bar	1	10
527654 EST	1″	x 1 1/4″	5,4 bar	1	10
527660 EST	1″	x 1 1/4″	6 bar	1	10
527722 EST	1 1/4″	x 1 1/2″	2,25 bar	1	10
527725 EST	1 1/4″	x 1 1/2″	2,5 bar	1	10
527727 EST	1 1/4″	x 1 1/2″	2,7 bar	1	10
527730 EST	1 1/4″	x 1 1/2″	3 bar	1	10
527735 EST	1 1/4″	x 1 1/2″	3,5 bar	1	10
527740 EST	1 1/4″	x 1 1/2″	4 bar	1	10
527745 EST	1 1/4″	x 1 1/2″	4,5 bar	1	10
527750 EST	1 1/4″	x 1 1/2″	5 bar	1	10
527754 EST	1 1/4″	x 1 1/2″	5,4 bar	1	10
527760 EST	1 1/4″	x 1 1/2″	6 bar	1	10

5520

tech. broch. 01053

Pre-formed "special" tundish.

Code			
552080	1 1/2″ F	1	–

527 EST Special settings

tech. broch. 01053

Safety relief valve.
Female connections.
Discharge overpressure 10 %.
Closing differential 20 %.
PN 10.
Temperature range: 5–110 °C.

CE 2797

Code					
527410 EST	1/2″	x 3/4″	1 bar	1	25
527415 EST	1/2″	x 3/4″	1,5 bar	1	25
527420 EST	1/2″	x 3/4″	2 bar	1	25
527470 EST	1/2″	x 3/4″	7 bar	1	25
527480 EST	1/2″	x 3/4″	8 bar	1	25
527510 EST	3/4″	x 1″	1 bar	1	25
527515 EST	3/4″	x 1″	1,5 bar	1	25
527520 EST	3/4″	x 1″	2 bar	1	25
527570 EST	3/4″	x 1″	7 bar	1	25
527580 EST	3/4″	x 1″	8 bar	1	25
527610 EST	1″	x 1 1/4″	1 bar	1	10
527615 EST	1″	x 1 1/4″	1,5 bar	1	10
527620 EST	1″	x 1 1/4″	2 bar	1	10
527670 EST	1″	x 1 1/4″	7 bar	1	10
527680 EST	1″	x 1 1/4″	8 bar	1	10
527710 EST	1 1/4″	x 1 1/2″	1 bar	1	10
527715 EST	1 1/4″	x 1 1/2″	1,5 bar	1	10
527720 EST	1 1/4″	x 1 1/2″	2 bar	1	10
527770 EST	1 1/4″	x 1 1/2″	7 bar	1	10
527780 EST	1 1/4″	x 1 1/2″	8 bar	1	10

5521

tech. broch. 01053

Elbow tundish.

Code				
552140	1/2″ M	x 3/4″	1	–
552150	3/4″ M	x 3/4″	1	–
552160	1″ M	x 1 1/4″ F	1	–
552170	1 1/4″ M	x 1 1/4″ F	1	–

5520

tech. broch. 01053

Straight tundish.

Code				
552050	3/4″ F	x 3/4″ F	1	25
552070	1 1/4″ F	x 1 1/4″ F	1	–

SAFETY RELIEF VALVES

311

tech. broch. 01253

Safety relief valve.
Female connections.
Discharge overpressure 20 %.
Closing differential 20 %.
PN 10.
Temperature range: 5–110 °C.

Code				
311415	1/2″	1,5 bar	1	50
311425	1/2″	2,5 bar	1	50
311430	1/2″	3 bar	1	50
311435	1/2″	3,5 bar	1	50
311440	1/2″	4 bar	1	50
311450	1/2″	5 bar	1	50
311460	1/2″	6 bar	1	50
311470	1/2″	7 bar	1	50
311480	1/2″	8 bar	1	50
311520	3/4″	2 bar	1	50
311525	3/4″	2,5 bar	1	50
311530	3/4″	3 bar	1	50
311535	3/4″	3,5 bar	1	50
311540	3/4″	4 bar	1	50
311550	3/4″	5 bar	1	50
311555	3/4″	5,5 bar	1	50
311560	3/4″	6 bar	1	50
311570	3/4″	7 bar	1	50
311580	3/4″	8 bar	1	50
311590	3/4″	9 bar	1	50

312

tech. broch. 01253

Safety relief valve.
Male - female connections.
Discharge overpressure 20 %.
Closing differential 20 %.
PN 10.
Temperature range: 5–110 °C.

Code				
312428	1/2″	1,8 bar	1	50
312425	1/2″	2,5 bar	1	50
312430	1/2″	3 bar	1	50
312435	1/2″	3,5 bar	1	50
312440	1/2″	4 bar	1	50
312450	1/2″	5 bar	1	50
312460	1/2″	6 bar	1	50
312470	1/2″	7 bar	1	50
312480	1/2″	8 bar	1	50

313

tech. broch. 01253

Safety relief valve.
Female connections.
Discharge overpressure 20 %.
Closing differential 20 %.
PN 10.
Temperature range: 5–110 °C.
Max. pressure gauge temperature: 90 °C.

Code				
313425	1/2″	2,5 bar	1	50
313430	1/2″	3 bar	1	50
313432 *	1/2″	3 bar	1	50
313460	1/2″	6 bar	1	50
313470	1/2″	7 bar	1	50
313480	1/2″	8 bar	1	50
313525	3/4″	2,5 bar	1	50
313530	3/4″	3 bar	1	50
313532 *	3/4″	3 bar	1	50
313560	3/4″	6 bar	1	50
313570	3/4″	7 bar	1	50
313580	3/4″	8 bar	1	50

* with pressure gauge connection

314

tech. broch. 01253

Safety relief valve.
Male - female connections.
Discharge overpressure 20 %.
Closing differential 20 %.
PN 10.
Temperature range: 5–110 °C.
Max. pressure gauge temperature: 90 °C.

Code				
314425	1/2″	2,5 bar	1	50
314430	1/2″	3 bar	1	50
314460	1/2″	6 bar	1	50
314470	1/2″	7 bar	1	50
314480	1/2″	8 bar	1	50

SAFETY RELIEF VALVES

513

tech. broch. 01253

Safety relief valve.
Female connections.
Discharge overpressure 20 %.
Closing differential 20 %.
PN 10.
Temperature range: 5–110 °C.

CE 2797

Code				
513415	1/2″	1,5 bar	1	50
513420	1/2″	2 bar	1	50
513425	1/2″	2,5 bar	1	50
513430	1/2″	3 bar	1	50
513435	1/2″	3,5 bar	1	50
513460	1/2″	6 bar	1	50
513470	1/2″	7 bar	1	50
513480	1/2″	8 bar	1	50

513

tech. broch. 01253

Safety relief valve.
Female connections.
Discharge overpressure 20 %.
Closing differential 20 %.
PN 10.
Temperature range: 5–110 °C.

CE 2797

Code					
513615	1″	x 1 1/4″	1,5 bar	1	25
513620	1″	x 1 1/4″	2 bar	1	25
513625	1″	x 1 1/4″	2,5 bar	1	25
513630	1″	x 1 1/4″	3 bar	1	25
513635	1″	x 1 1/4″	3,5 bar	1	25
513640	1″	x 1 1/4″	4 bar	1	25
513655	1″	x 1 1/4″	5,5 bar	1	25
513660	1″	x 1 1/4″	6 bar	1	25
513670	1″	x 1 1/4″	7 bar	1	25
513680	1″	x 1 1/4″	8 bar	1	25
513725	1 1/4″	x 1 1/2″	2,5 bar	1	10
513730	1 1/4″	x 1 1/2″	3 bar	1	10
513735	1 1/4″	x 1 1/2″	3,5 bar	1	10
513760	1 1/4″	x 1 1/2″	6 bar	1	10
513770	1 1/4″	x 1 1/2″	7 bar	1	10
513780	1 1/4″	x 1 1/2″	8 bar	1	10

514

tech. broch. 01253

Safety relief valve.
Male - female connections.
Discharge overpressure 20 %.
Closing differential 20 %.
PN 10.
Temperature range: 5–110 °C.

CE 2797

Code				
514420	1/2″	2 bar	1	50
514425	1/2″	2,5 bar	1	50
514430	1/2″	3 bar	1	50
514435	1/2″	3,5 bar	1	50
514440	1/2″	4 bar	1	50
514450	1/2″	5 bar	1	50
514460	1/2″	6 bar	1	50
514470	1/2″	7 bar	1	50
514480	1/2″	8 bar	1	50

SAFETY RELIEF VALVES WITH NF CERTIFICATION

311

tech. broch. 01253

Safety relief valve.
Female connections.
Discharge overpressure 20 %.
Closing differential 15 %.
Power rating: 110 kW.
Temperature range: 5–110 °C.
Certified to NF P 52-001 - Class 2.

Code			
311431	1/2" 3 bar	1	50

313

tech. broch. 01253

Safety relief valve.
Female connections.
With pressure gauge connection.
Discharge overpressure 20 %.
Closing differential 15 %.
Power rating: 110 kW.
Temperature range: 5–110 °C.
Certified to NF P 52-001 - Class 2.

Code			
313433	1/2" 3 bar	50	–

5121

Safety relief valve.
Male - female connections.
Discharge overpressure 20 %.
Closing differential 15 %.
Power rating: 110 kW.
Temperature range: 5–110 °C.
Certified to NF P 52-001 - Class 2.

Code			
512131	1/2" 3 bar	50	–

SAFETY RELIEF VALVES WITH TÜV CERTIFICATION

5320

Safety relief valve.
Female connections.
Discharge overpressure 20 %.
Closing differential 20 %.
Power rating: 50 kW.
Max. percentage of glycol: 50 %.
Temperature range: 5–120 °C.

TÜVRheinland ZERTIFIZIERT www.tuv.com ID 0000014051 CE 2797

Code				
532042	1/2″ x 3/4″	2,5 bar	1	50
532043	1/2″ x 3/4″	3 bar	1	50

5321

Safety relief valve.
Female connections. With pressure gauge.
Discharge overpressure 20 %.
Closing differential 20 %.
Power rating: 50 kW.
Max. percentage of glycol: 50 %.
Temperature range: 5–120 °C.
Max. pressure gauge temperature: 90 °C.

TÜVRheinland ZERTIFIZIERT www.tuv.com ID 0000014051 CE 2797

Code				
532142	1/2″ x 3/4″	2,5 bar	1	50
532143	1/2″ x 3/4″	3 bar	1	50

5322

Safety relief valve. Female connections.
With pressure gauge connection.
Discharge overpressure 20 %.
Closing differential 20 %.
Power rating: 50 kW.
Max. percentage of glycol: 50 %.
Temperature range: 5–120 °C.

TÜVRheinland ZERTIFIZIERT www.tuv.com ID 0000014051 CE 2797

Code				
532242	1/2″ x 3/4″	2,5 bar	1	50
532243	1/2″ x 3/4″	3 bar	1	50

5327

Safety relief valve.
Male - female connections.
Discharge overpressure 20 %.
Closing differential 20 %.
Power rating: 50 kW.
Max. percentage of glycol: 50 %.
Temperature range: 5–120 °C.

TÜVRheinland ZERTIFIZIERT www.tuv.com ID 0000014051 CE 2797

Code				
532742	1/2″ x 3/4″	2,5 bar	48	–
532743	1/2″ x 3/4″	3 bar	48	–

530

Safety relief valve. Female connections.
Discharge overpressure 20 %.
Closing differential 20 %.
Max. percentage of glycol: 50 %.
Temperature range: 5–120 °C.

TÜVRheinland ZERTIFIZIERT www.tuv.com ID 0000013864 CE 2797

Code				
530525	3/4″ x 1″	2,5 bar	1	25
530530	3/4″ x 1″	3 bar	1	25

530

Safety relief valve. Female connections.
Discharge overpressure 20 %.
Closing differential 20 %.
Max. percentage of glycol: 50 %.
Temperature range: 5–120 °C.
Settings 4 - 5 - 6 - 7 - 8 - 9 bar without TÜV certification.

TÜVRheinland ZERTIFIZIERT www.tuv.com ID 0000013864 CE 2797

Code				
530625	1″ x 1 1/4″	2,5 bar	1	25
530630	1″ x 1 1/4″	3 bar	1	25
530640	1″ x 1 1/4″	4 bar	1	25
530650	1″ x 1 1/4″	5 bar	1	25
530660	1″ x 1 1/4″	6 bar	1	25
530670	1″ x 1 1/4″	7 bar	1	25
530680	1″ x 1 1/4″	8 bar	1	25
530690	1″ x 1 1/4″	9 bar	1	25
530725	1 1/4″ x 1 1/2″	2,5 bar	1	10
530730	1 1/4″ x 1 1/2″	3 bar	1	10
530740	1 1/4″ x 1 1/2″	4 bar	1	10
530750	1 1/4″ x 1 1/2″	5 bar	1	10
530760	1 1/4″ x 1 1/2″	6 bar	1	10
530770	1 1/4″ x 1 1/2″	7 bar	1	10
530780	1 1/4″ x 1 1/2″	8 bar	1	10
530790	1 1/4″ x 1 1/2″	9 bar	1	10

312

Safety relief valve.
CR dezincification resistant alloy body.
For domestic water systems.
M x Ø 15 compression end.
With stainless steel seat.
Discharge overpressure 20 %.
Closing differential 20 %.
Temperature range: 5–110 °C.
Settings: 200 - 400 - 600 - 800 kPa.

SABS APPROVED SANS 198 WRAS APPROVED PRODUCT CERTIFICATION MARK

Code				
312406	1/2″ M x Ø 15 - 200 kPa	Black cap	50	–
312405	1/2″ M x Ø 15 - 400 kPa	Red cap	50	–
312407	1/2″ M x Ø 15 - 600 kPa	Green cap	50	–
312418	1/2″ M x Ø 15 - 800 kPa		50	–

SAFETY RELIEF VALVES FOR DOMESTIC WATER SYSTEMS

531

Safety relief valve
for domestic water systems.
Female connections.
Discharge overpressure 20 %.
Closing differential 20 %.
Medium: water.
Temperature range: 5–95 °C.

TÜVRheinland ZERTIFIZIERT www.tuv.com ID 0000014996 · CE 2797 · Cert · ACS

Code					
531440	1/2" x 3/4"	4 bar	1	50
531460	1/2" x 3/4"	6 bar	1	50
531480	1/2" x 3/4"	8 bar	1	50
531410	1/2" x 3/4"	10 bar	1	50
531540	3/4" x 1"	4 bar	1	25
531560	3/4" x 1"	6 bar	1	25
531580	3/4" x 1"	8 bar	1	25
531510	3/4" x 1"	10 bar	1	25

531

Safety relief valve
for domestic water systems.
Female connections.
Discharge overpressure 20 %.
Closing differential 20 %.
Medium: water.
Temperature range: 5–95 °C.
Settings: 4 - 6 - 8 - 10 bar.

TÜVRheinland ZERTIFIZIERT www.tuv.com ID 0000014996 · CE 2797 · Cert · ACS

Code					
531640	1"	x 1 1/4"	4 bar	1	25
531660	1"	x 1 1/4"	6 bar	1	25
531680	1"	x 1 1/4"	8 bar	1	25
531610	1"	x 1 1/4"	10 bar	1	25
531740	1 1/4"	x 1 1/2"	4 bar	1	10
531760	1 1/4"	x 1 1/2"	6 bar	1	10
531780	1 1/4"	x 1 1/2"	8 bar	1	10
531710	1 1/4"	x 1 1/2"	10 bar	1	10

TEMPERATURE AND PRESSURE RELIEF VALVES

309

tech. broch. 01130

Temperature and pressure relief valve.
CR dezincification resistant alloy body.
For domestic water system,
to protect the hot water storage.
Set temperature: 90 °C.
Discharge rating: 1/2" - 3/4" x Ø 15: 10 kW.
3/4" x Ø 22: 25 kW.
Settings certified to EN 1490: 4 - 7 - 10 bar.

CE 2797 · WRAS APPROVED PRODUCT CERTIFICATION MARK

Code			Probe length (mm)		
309430	1/2" M x Ø 15	3 bar	100	1	20
309440	1/2" M x Ø 15	4 bar	100	1	20
309460	1/2" M x Ø 15	6 bar	100	1	20
309470	1/2" M x Ø 15	7 bar	100	1	20
309400	1/2" M x Ø 15	10 bar	100	1	20
309542	3/4" M x Ø 15	4 bar	100	1	20
309530	3/4" M x Ø 22	3 bar	100	1	20
309560	3/4" M x Ø 22	6 bar	100	1	20
309570	3/4" M x Ø 22	7 bar	100	1	20
309500	3/4" M x Ø 22	10 bar	100	1	20

Code			Probe length (mm)		
309435	1/2" M x Ø 15	3 bar	200	1	20
309445	1/2" M x Ø 15	4 bar	200	1	20
309465	1/2" M x Ø 15	6 bar	200	1	20
309475	1/2" M x Ø 15	7 bar	200	1	20
309405	1/2" M x Ø 15	10 bar	200	1	20
309547	3/4" M x Ø 15	4 bar	200	1	20
309535	3/4" M x Ø 22	3 bar	200	1	20
309565	3/4" M x Ø 22	6 bar	200	1	20
309575	3/4" M x Ø 22	7 bar	200	1	20
309505	3/4" M x Ø 22	10 bar	200	1	20

309

Temperature and pressure relief valve.
CR dezincification resistant alloy body.
For domestic water system,
to protect the hot water storage.
Set temperature: 95 °C.
Discharge rating: 25 kW.
Setting: 6 bar.
For systems with nominal pressure of 400 kPa.

SABS APPROVED SANS 198

Code			Probe length (mm)		
309563	3/4" M x Ø 22	6 bar	100	1	20

DIFFERENTIAL BY-PASS VALVES

519

tech. broch. 01007

Differential by-pass valve,
adjustable with graduated scale.
Max. working pressure: 10 bar.
Temperature range: 0–110 °C.
Max. percentage of glycol: 30 %.

WRAS APPROVED PRODUCT CERTIFICATION MARK

Threaded connections

Code		Setting range m w.g.		
519500	3/4″	1–6	1	50
519504	3/4″	10–40	1	50
519700	1 1/4″	1–6	1	10
519703	1 1/4″	5–25	1	10

Compression ends

Code		Setting range m w.g.		
519002	∅ 22	1–6	1	50

519

tech. broch. 01007

Differential by-pass valve,
adjustable with graduated scale.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.
Max. percentage of glycol: 30 %.

Code		Setting range m w.g.		
519015	3/4″	1–6	1	25

NEW

518

tech. broch. 01410

Differential by-pass valve,
adjustable with graduated scale.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.
Max. percentage of glycol: 30 %.

Code		Setting range m w.g.		
518500	3/4″	1–6	1	50

Compression ends

Code		Setting range m w.g.		
518002	∅ 22	1–6	1	50

BALLSTOP - ANTI-THERMOSIPHON

327 BALLSTOP

tech. broch. 01021

Ball valve with built-in check valve
for heating systems.
Low head losses.
Max. working pressure: 16 bar.
Temperature range: 5–110 °C.

Code				
327400	1/2″	butterfly handle	10	–
327500	3/4″	butterfly handle	10	–
327600	1″	lever handle	4	–
327700	1 1/4″	lever handle	4	–
327800	1 1/2″	lever handle	2	–
327900	2″	lever handle	1	–

510

tech. broch. 01045

Anti-thermosiphon check valve
to prevent natural circulation of water.
Removable cap allows straight
or angled installations.
Max. working pressure: 10 bar.
Temperature range: 5–110 °C.

Code			
510500	3/4″	1	20
510600	1″	1	20
510700	1 1/4″	1	20

AIR SEPARATOR

547

Air separator.
Cast iron body.
Female connections.

Code			
547060	1″	1	10
547070	1 1/4″	1	10
547080	1 1/2″	1	10
547090	2″	1	10
547200	2 1/2″	1	–
547300	3″	1	–

547

Air separator.
Steel body.
Flanged connections PN 16.
To be coupled with flat counterflanges
EN 1092-1.

Code			
547400	DN 100	1	–
547500	DN 125	1	–

INSTRUMENT HOLDER FOR EXPANSION VESSEL

336

Instrument holder for heating systems.
Equipped with automatic shut-off cock for expansion vessel and male connection for safety valve 531 series.
Max. working temperature: 110 °C.
Up to 50 kW.

Code			
336600	3/4"	2	10

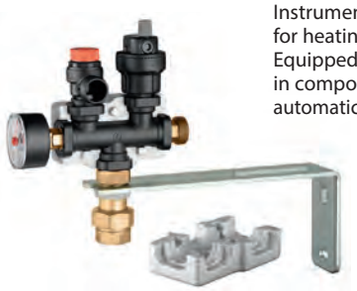
336

Assembled instrument holder for heating systems.
Equipped with air vent, safety relief valve, pressure gauge and automatic shut-off cock for expansion vessel.
Max. working temperature: 110 °C.
Up to 50 kW.

Code			
336630	3/4" 3 bar with automatic shut-off cock	1	5
336631	3/4" 3 bar with ball shut-off cock	1	5

305

Instrument holder kit in composite material for heating systems.
Equipped with air vent, safety relief valve in composite material, pressure gauge, automatic shut-off cock for expansion vessel and fixing bracket.
With insulation.
Temperature range: 5–90 °C.
Up to 50 kW.

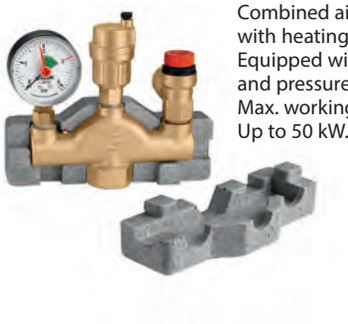


Code			
305503	3/4" 3 bar TÜV	1	10

INSTRUMENT HOLDER

302

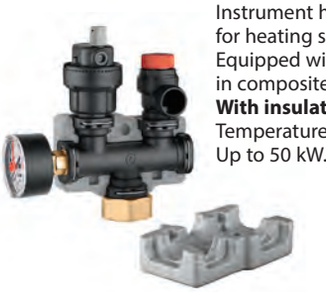
Combined air separator with heating system accessories.
Equipped with air vent, safety relief valve and pressure gauge.
Max. working temperature: 110 °C.
Up to 50 kW.



Code			
302630	1" 3 bar	1	10
302631	1" 3 bar with pre-formed insulation	1	10

305

Instrument holder in composite material for heating systems.
Equipped with air vent, safety relief valve in composite material and pressure gauge.
With insulation.
Temperature range: 5–90 °C.
Up to 50 kW.



Code			
305663	1" 3 bar TÜV	1	5

305

Instrument holder in composite material for heating systems.
Equipped with air vent in composite material, safety relief valve and pressure gauge.
With insulation.
Temperature range: 5–90 °C.
Up to 50 kW.

Code			
305671	1" 1,8 bar	1	5
305673	1" 3 bar NF	1	
305674	1" 4 bar without insulation	1	

AUTOMATIC FILLING UNITS

553

tech. broch. 01061

Pre-adjustable automatic filling unit,
anti-scale, inspectionable,
with pressure setting indicator,
manual cock, strainer, check valve.
Setting pressure range: 0,2–4 bar.
Max. inlet pressure: 16 bar.
Max. working temperature: 65 °C.

Code			
553540	1/2″ with pressure gauge connection	1	10
553640	1/2″ with pressure gauge	1	10

553

tech. broch. 01025

Automatic filling unit,
with manual cock, strainer, check valve.
Setting pressure range: 0,3–4 bar.
Max. inlet pressure: 16 bar.
Max. working temperature: 70 °C.

Code			
553040	1/2″ with pressure gauge connection	1	10
553140	1/2″ with pressure gauge	1	10

553

Pre-adjustable automatic filling unit,
anti-scale, inspectionable,
with pressure setting indicator,
manual cock, strainer and check valve.
With hose connection.
Setting pressure range: 0,2–4 bar.
Max. inlet pressure: 16 bar.
Max. working temperature: 65 °C.

Code			
553740	1/2″ with pressure gauge connection	1	10
553840	1/2″ with pressure gauge	1	10

554

tech. broch. 01125

Pre-adjustable automatic filling unit
for high flow rates, with double shut-off valve, check valve.
Self-contained replaceable cartridge.
Setting pressure range: 1–6 bar.
Max. inlet pressure: 16 bar.
Max. working temperature: 60 °C.

Code			
554040	1/2″ with pressure gauge connection	1	–
554140	1/2″ with pressure gauge	1	–
554150	3/4″ with pressure gauge	1	–

BOILER FILLING LOOP

3006
ROBOFIL

Boiler filling loop.
CR dezincification resistant alloy body.
Equipped with double check valve with shut-off valve, hose connection and shut-off valve.
Max. working pressure: 10 bar.
Max. working temperature: 95 °C.
Flexible hose length: 400 mm.

Code			
300600		1	10

AUTOMATIC CHARGING UNITS

573001

tech. broch. 01061

Automatic charging unit
with **CAa type** backflow preventer and shut-off valve.

Filling unit setting pressure range: 0,2–4 bar.
Max. working pressure: 10 bar.
Max. working temperature: 65 °C.
Backflow preventer certified to EN 14367 standard.

Code			
573001	1/2″	1	5

574011

tech. broch. 01161

Compact automatic charging unit with **BA type**
backflow preventer, shut-off valve and strainer.

With pre-formed insulation.
Filling unit setting pressure range: 0,2–4 bar.
Max. working pressure: 10 bar.
Max. working temperature: 65 °C.
Backflow preventer certified to EN 12729 standard.

Code			
574011	1/2″	1	5

574000

tech. broch. 01061

Automatic charging unit with **BA type**
backflow preventer, Y-strainer and shut-off valve.
Filling unit setting pressure range: 0,2–4 bar.
Max. working pressure: 10 bar.

Max. working temperature: 65 °C.
Backflow preventer certified to EN 12729 standard.

Code			
574000	1/2″	1	5

574001

tech. broch. 01125

Automatic charging unit with **BA type**
backflow preventer, Y-strainer and shut-off valve.
Pressure reducing valve setting pressure range: 1–6 bar.

Max. working pressure: 10 bar.
Max. working temperature: 60 °C.
Backflow preventer certified to EN 12729 standard.

Code			
574001	3/4″	1	–

AUTOMATIC COMPACT CHARGING UNIT

580011

tech. broch. 01361

Automatic compact charging unit to EN 1717 standard with **BA type** backflow preventer, shut-off valve, strainer, pressure test ports for controlling the backflow preventer, pressure reducing valve.
For horizontal or vertical installations.
Brass body.

With insulation.
Filling unit setting pressure range: 0,8–4 bar.
Max. working pressure: 10 bar.
Max. working temperature: 65 °C.
Backflow preventer certified to EN 12729 standard.
Pressure reducing valve certified to EN 1567 standard.
PATENT.

Code			
580011	1/2″	1	5

580010

tech. broch. 01333

Automatic compact charging unit to EN 1717 standard with **BA type** backflow preventer, shut-off valve, strainer, pressure test ports for controlling the backflow preventer, pressure reducing valve.
For horizontal or vertical installations.
CR dezincification resistant alloy body.
With insulation.
Filling unit setting pressure range: 0,8–4 bar.
Max. working pressure: 10 bar.
Max. working temperature: 65 °C.
Backflow preventer certified to EN 12729 standard.
Pressure reducing valve certified to EN 1567 standard.
PATENT PENDING.

Code			
580010	1/2″	1	5

FLOW SWITCHES

315

tech. broch. 01184

Flow switch
with magnetically operated contacts.
230 V - 0,02 A (an appropriate relais must be used in case of higher power consumption).
Max. working pressure: 6 bar.
Temperature range: -15–100 °C.

Contact closing with
increasing flow rate at: 156 l/h (1/2″)
456 l/h (3/4″)

Contact opening with
decreasing flow rate at: 108 l/h (1/2″)
348 l/h (3/4″)

Code			
315400	1/2″	1	50
315500	3/4″	1	25

626

tech. broch. 01052

Flow switch.
Suitable for 1″ to 8″ pipes.
250 V (AC) - 15 (5) A.
Max. working pressure: 10 bar.
Temperature range: -30–120 °C.
Protection class: IP 54.

Code			
626600	1″	1	5
626009	set of blades	1	–

SHUT-OFF COCK FOR EXPANSION VESSELS

558

Automatic shut-off cock,
for expansion vessels.
For domestic water circuit.
Max. working pressure: 10 bar.
Max. working temperature: 110 °C.

Code			
558500	3/4″	1	50

558

Automatic shut-off cock,
for expansion vessel,
with drain cock.
For domestic water circuit.
Max. working pressure: 6 bar.
Max. working temperature: 85 °C.

Code			
558510	3/4″	1	50

5580

Ball shut-off valve,
for expansion vessels,
with drain cock.
For domestic water circuit.
Max. working pressure: 6 bar.
Max. working temperature: 85 °C.

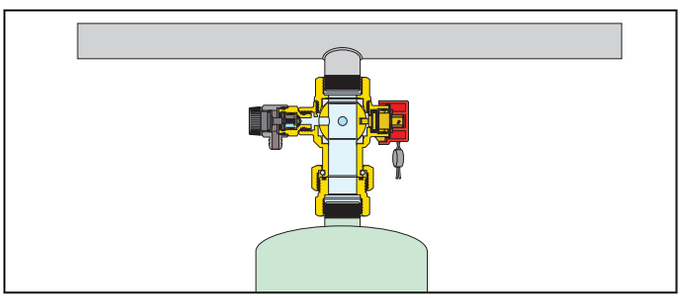
Code			
558050	3/4″	1	20
558060	1″	1	20
558070	1 1/4″	1	20

5580

Ball shut-off valve,
for expansion vessels, with drain cock.
For solar thermal systems.
Max. working pressure: 6 bar.
Max. working temperature: 120 °C.
Max. percentage of glycol: 50 %.

Code			
558052	3/4″	1	20
558062	1″	1	20

Application diagram of shut-off valve 5580 series



ACCESSORIES FOR BOILERS

690

Three way tap for INAIL master pressure gauge.
Max. working pressure: 15 bar.
Temperature range: 5–90 °C.

Code			
690200	1/4"	5	–
690300	3/8"	5	–
690400	1/2"	5	–

691

Water hammer reducing loop.
In chrome plated copper.

Code			
691200	1/4"	5	–
691300	3/8"	5	–
691400	1/2"	5	–

694

INAIL test pocket,
1/2" connection.

Code	Pocket length		
694045	45 mm	1	–
694100	100 mm	1	–

692

Thermometer in sleeve.
1/2" pocket connection.

Code	Pocket length	°C		
692000	45 mm	0–120	1	–

693

Bulb thermometer.

Code	°C		
693000	0–120	1	–

538

Drain cock with hose connection and cap.
Max. working pressure: 10 bar.
Max. working temperature: 110 °C.

Code			
538201	1/4" M	1	–
538400	1/2" M	1	100

538

Drain cock with hose connection and cap.
Complete with manual lever.
Max. working pressure: 10 bar.
Max. working temperature: 110 °C.

Code			
538405	1/2" M	1	100

THERMOSTATS

621

Adjustable contact thermostat.
Temperature range: 20–90 °C.
Protection class: IP 20.

Code			
621000		1	10

622

Adjustable immersion thermostat.
Temperature range: 0–90 °C.
With 1/2" connection pocket.
Protection class: IP 40.

Code			
622000		1	10

622

Stainless steel pocket
for domestic application exempt from INAIL certification requirements.
For thermostat code 622000.
Max. working pressure: 15 bar.
Temperature range: 0–100 °C.

Code			
622010	1/2" M	1	–

623

Double immersion thermostat:
- safety thermostat with manual reset, setting 100 °C (+0 °C -6 °C), setting 110 °C (+0 °C -6 °C)
- adjustment thermostat, temperature range: 0–90 °C, temperature range: 0–100 °C.

With 1/2" connection pocket.
Protection class: IP 40.

Code	Safety setting	Adjustment range		
623000	100 °C	0–90 °C	1	5
623100	110 °C	0–100 °C	1	5

624

Immersion safety thermostat, with manual reset,
- setting 100 °C (+0 °C -6 °C),
- setting 110 °C (+0 °C -6 °C).

With 1/2" connection pocket.
Protection class: IP 40.

Code	Safety setting		
624000	100 °C	1	10
624100	110 °C	1	10

Spare pocket for 622, 623 and 624 series.

Code	Use		
622401	622 - 624 series	1	–
623002	623 series	1	–

PRESSURE SWITCHES

625

Safety pressure switch, with manual reset.
250 V - 16 (10) A.
Max. working pressure: 5 bar.
Ambient temperature range: 0–50 °C.
Medium temperature range: 20–110 °C.
1/4" female connection.
Protection class: IP 44.

Code	Setting range		
625000	2–4,5 bar	1	50

625

Minimum pressure safety switch, with manual reset.
250 V - 16 (10) A.
Max. working pressure: 5 bar.
Ambient temperature range: 0–50 °C.
Medium temperature range: 20–110 °C.
1/4" female connection.
Protection class: IP 44.

Code	Setting range		
625100	0,5–1,7 bar	1	10

625

Pressure switch for boosting sets and domestic water applications.
Up to 500 V three-pole - 16 (10) A.
Ambient temperature range: 0–55 °C.
Medium temperature range: 0–55 °C.
1/4" female connection.
Protection class: IP 44.

Code	Setting range	Max. pressure		
625005	1– 5 bar	5 bar	1	10
625010	3–12 bar	12 bar	1	10

613

Float switch,
250 V - 10 A.
Heavy duty approved.

Code	Cable length		
613030	3 m	1	5
613050	5 m	1	5

TEMPERATURE AND PRESSURE GAUGES

557

Pressure gauge.
Accuracy class: UNI 2,5.
Temperature range: -20–90 °C.

Code	bar		Position	Ø		
557104	0–4	1/4″	central back conn.	50	1	–
557204	0–4	1/4″	"off-centred" back conn.	50	1	–
557304	0–4	1/4″	bottom conn.	50	1	–
557106	0–6	1/4″	central back conn.	50	1	–
557306	0–6	1/4″	bottom conn.	50	1	–
557310	0–10	1/4″	bottom conn.	50	1	–
557410	0–10	1/4″	central back conn.	63	1	–
557425	0–25	1/4″	central back conn.	63	1	–
557704	0–4	3/8″	bottom conn.	80	1	–
557706	0–6	3/8″	bottom conn.	80	1	–
557710	0–10	3/8″	bottom conn.	80	1	–

503

Temperature/pressure gauge.
1/2″ central back connection.
With shut-off pocket.
Ø 80 mm.
Accuracy class:
- temperature gauge UNI 2;
- pressure gauge UNI 2,5.

Code	bar	°C		
503040	0–4	0–120	1	10
503060	0–6	0–120	1	10

503

Temperature/pressure gauge.
1/2″ bottom connection.
With shut-off pocket.
Ø 80 mm.
Accuracy class:
- temperature gauge UNI 2;
- pressure gauge UNI 2,5.

Code	bar	°C		
503140	0–4	0–120	1	20
503160	0–6	0–120	1	20

5560

Pressure gauge
for expansion vessel pressure test.
Accuracy class: UNI 2,5.

Code	bar		
556000	0–10	1	–

688

Temperature gauge.
1/2″ central back connection.
With pocket.
Ø 80 mm.
Accuracy class: UNI 2.

Code	Pocket length	°C		
688000	45 mm	0–120	1	10
688010	100 mm	0–120	1	5
688011	without pocket	0–120	1	5

688

Temperature gauge.
1/2″ bottom connection.
With pocket.
Ø 80 mm.
Accuracy class: UNI 2.

Code	Pocket length	°C		
688100	45 mm	0–120	1	10

687

Temperature gauge for cooling systems.
1/2″ central back connection.
With pocket.
Ø 80 mm.
Accuracy class: UNI 2.

Code	Pocket length	°C		
687000	45 mm	-30–50	1	–
687010	100 mm	-30–50	1	–

687

Temperature gauge for cooling.
1/2″ bottom connection.
With pocket.
Ø 80 mm.
Accuracy class: UNI 2.

Code	Pocket length	°C		
687110	100 mm	-30–50	1	10

689

Flow gauge.
3/8″ bottom connection.
Ø 80 mm.
Accuracy class: UNI 2,5.
Temperature range: -20–90 °C.

Code	m w.g.		
689010	0–10	1	20
689016	0–16	1	20
689025	0–25	1	30

For higher pressures see pressure gauges 557 series.

HYDRAULIC SEPARATOR

548

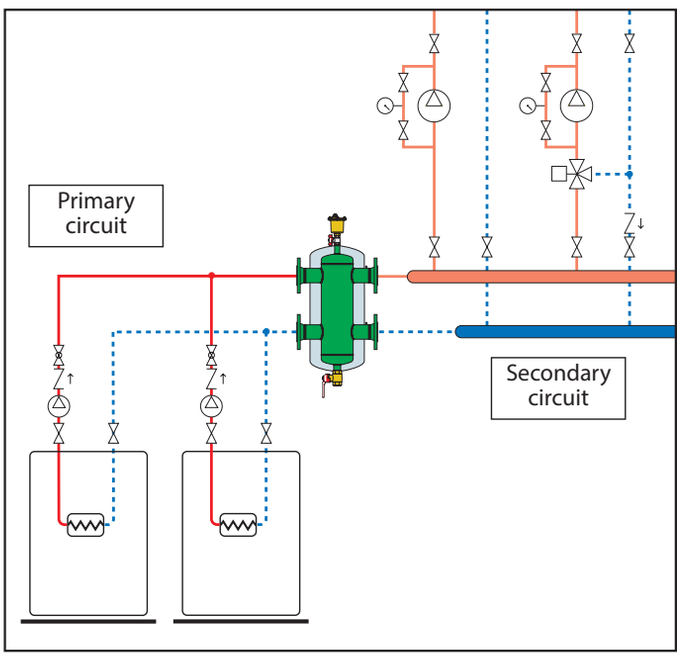
tech. broch. 01404

Hydraulic separator.
Epoxy resin coated steel body.
With pre-formed insulation.
Female union connections.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.
Complete with:
air vent with automatic shut-off cock,
drain cock.

Code		Max. recommended flow rate m³/h		
548006	1″	2,5	1	–
548007	1 1/4″	4	1	–
548008	1 1/2″	6	1	–
548009	2″	8,5	1	–

Choice of hydraulic separator 548 series
The hydraulic separator should be sized according to the **maximum flow rate value at the inlet**. The selected design value must be the greatest between the primary circuit and the secondary circuit.

548 series hydraulic separator application diagram



548

tech. broch. 01404

Hydraulic separator.
Epoxy resin coated steel body.
With pre-formed insulation.
Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.
Max. working pressure: 10 bar.
Temperature range:
0–105 °C (DN 50–DN 100),
0–100 °C (DN 125 - DN 150).
Temperature probe connection: 1/2″ F.
Complete with:
automatic air vent, shut-off valve,
drain valve.

Code			Max. recommended flow rate m³/h		
548052	DN	50	9	1	–
548062	DN	65	18	1	–
548082	DN	80	28	1	–
548102	DN	100	56	1	–
548122	DN	125	75	1	–
548152	DN	150	110	1	–

548

tech. broch. 01404

Hydraulic separator.
Epoxy resin coated steel body.
Flanged connections PN 10.
To be coupled with flat counterflanges EN 1092-1.
Max. working pressure: 10 bar.
Temperature range: 0–110 °C.
Temperature probe connection: 1/2″ F.
Complete with:
automatic air vent, shut-off valve,
drain valve.

Code			Max. recommended flow rate m³/h		
548200	DN	200	180	1	–
548250	DN	250	300	1	–
548300	DN	300	420	1	–

MULTIFUNCTION HYDRAULIC SEPARATOR

5495
SEP4

tech. broch. 01404

Multifunction hydraulic separator.
Epoxy resin coated steel body.
With pre-formed insulation.
Female union connections.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.
Complete with:
- hydraulic separator,
- automatic air vent,
- dirt separator,
- magnetic ring,
- drain cock with hose connection.

PCT INTERNATIONAL APPLICATION PENDING

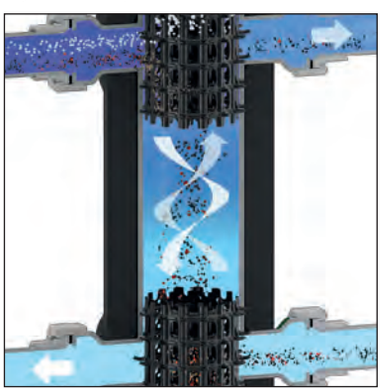
Code		Max. recommended flow rate m³/h		
549506	1″	2,5	1	–
549507	1 1/4″	4	1	–
549508	1 1/2″	6	1	–
549509	2″	8,5	1	–

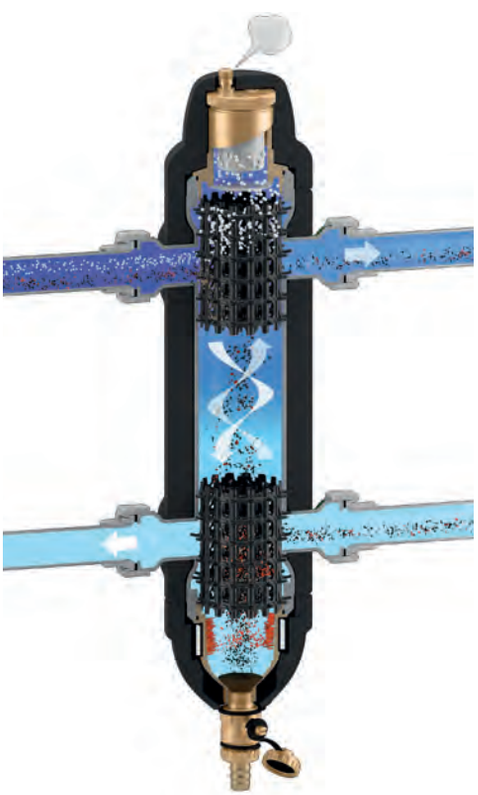
Function

The multifunction hydraulic separator combines different functional components, each of them to satisfy specific needs of heating and cooling system circuits.
It is supplied complete with hot pre-formed shell insulation to ensure perfect thermal insulation when used with both hot and chilled water.
The device is designed to carry out the following functions:

- **Hydraulic separation**
  To keep connected hydraulic circuits totally independent from each other.
- **Deaeration**
  Utilises the combined action of several physics principles: the widening of the cross section decreases the flow velocity and the technopolymer mesh creates whirling movements so as to facilitate the release of micro-bubbles. The bubbles, fusing with each other, increase in volume and, rising towards the top of the unit, are released through a float-operated automatic air vent.
- **Dirt separation**
  The dirt separator separates and collects any impurities in the circuits as they collide with the surface of the internal element.
- **Removal of magnetic particles**
  The special patented magnetic system also attracts ferromagnetic impurities in the water: the ferromagnetic particles are trapped in the collection zone, meaning they are prevented from being recirculated.

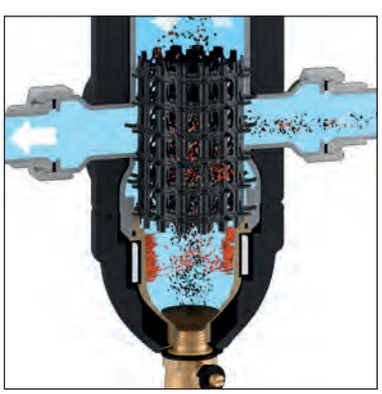
Hydraulic separation



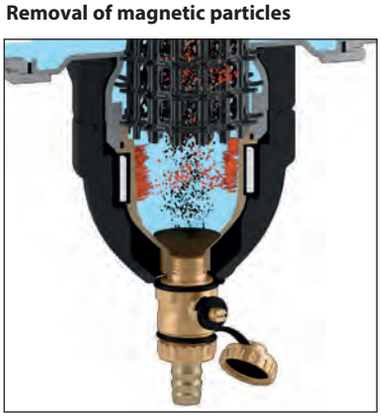


Deaeration

Dirt removal



Removal of magnetic particles



HYDRAULIC SEPARATOR-MANIFOLD
Outlet centre distance 90 mm

559 SEPCOLL 2+1.

tech. broch. 01084

Hydraulic separator-manifold for **heating and cooling systems**.
Steel body, PN 6.
1" F main connections.
Outlet connections: two 1" M at the top with captive nut and one 1" F at the side.
Temperature range: 0–110 °C.
Complete with mounting brackets.

Code	Outlet centre distance		
559021	90 mm	1	–

559 SEPCOLL 2+2.

tech. broch. 01084

Hydraulic separator-manifold for **heating and cooling systems**.
Steel body, PN 6.
With pre-formed insulation.
1 1/4" F main connections.
1 " M outlet connections:
two at the top and two at the bottom.
Temperature range: 0–110 °C.
Complete with mounting brackets.

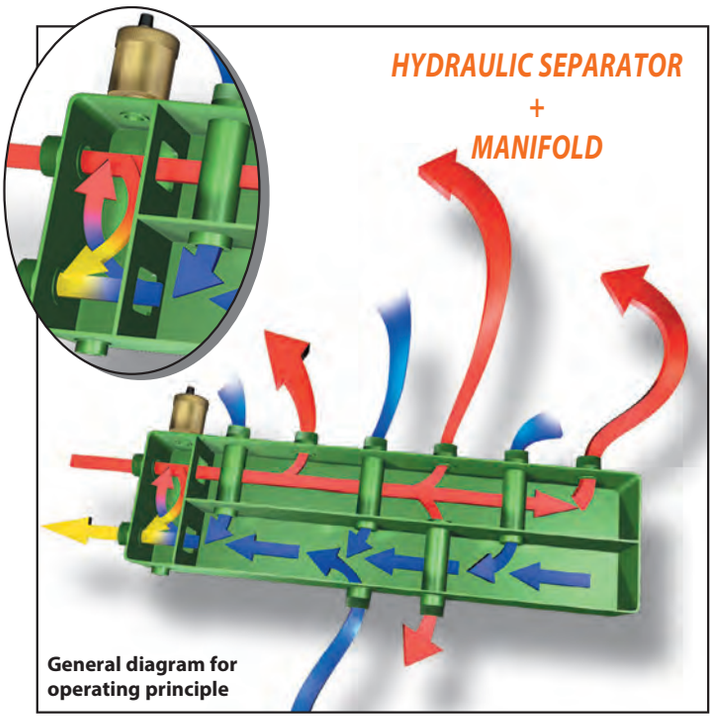
Code	Outlet centre distance		
559022	90 mm	1	–

559 SEPCOLL 3+1.

tech. broch. 01084

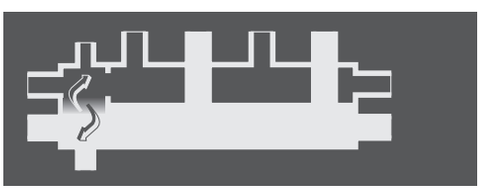
Hydraulic separator-manifold for **heating and cooling systems**.
Steel body, PN 6.
With pre-formed insulation.
1 1/4" F main connections.
1" M outlet connections:
three at the top and one at the bottom (can be inverted).
Temperature range: 0–110 °C.
Complete with mounting brackets.

Code	Outlet centre distance		
559031	90 mm	1	–

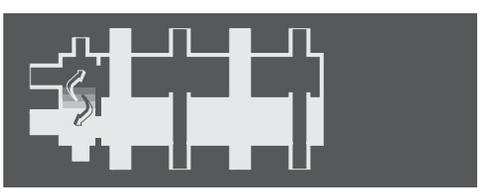


General diagram for operating principle

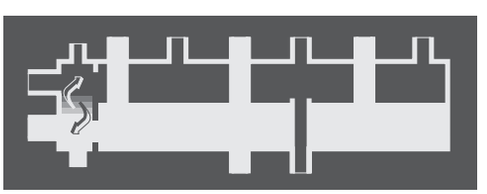
Hydraulic connections



559021



559022



559031

Maximum recommended flow rate at inlets of SEPCOLL separator 559 series		
Outlets	Primary	Secondary (total)
2+1 / 2	2 m³/h	5 m³/h
2+2	2,5 m³/h	6 m³/h
3+1	2,5 m³/h	6 m³/h

HYDRAULIC SEPARATOR-MANIFOLD
Outlet centre distance 125 mm

559 SEPCOLL 2.

tech. broch. 01084

Hydraulic separator-manifold for **heating and cooling systems**.
Steel body, PN 6.
With pre-formed insulation.
1" F main connections.
Outlet connections: two 1 1/2" at the top with captive nut.
Temperature range: 0–110 °C.
Complete with mounting brackets.

Code	Outlet centre distance		
559220	125 mm	1	–

559 SEPCOLL 2+1.

tech. broch. 01084

Hydraulic separator-manifold for **heating and cooling systems**.
Steel body, PN 6.
With pre-formed insulation.
1" F main connections.
Outlet connections: two 1 1/2" at the top with captive nut and one 1" F at the side.
Temperature range: 0–110 °C.
Complete with mounting brackets.

Code	Outlet centre distance		
559221	125 mm	1	–

559 SEPCOLL 2+2.

tech. broch. 01084

Hydraulic separator-manifold for **heating and cooling systems**.
Steel body, PN 6.
With pre-formed insulation.
1 1/4" F main connections.
1 1/2" outlet connections with captive nut: two at the top and two at the bottom.
Temperature range: 0–110 °C.
Complete with mounting brackets.

Code	Outlet centre distance		
559222	125 mm	1	–

559 SEPCOLL 3+1.

tech. broch. 01084

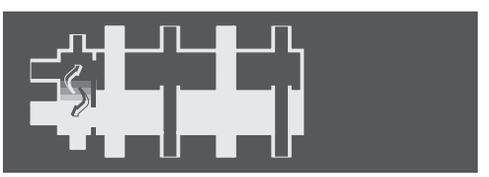
Hydraulic separator-manifold for **heating and cooling systems**.
Steel body, PN 6.
With pre-formed insulation.
1 1/4" F main connections.
1 1/2" outlet connections with captive nut: three at the top and one at the bottom (can be inverted).
Temperature range: 0–110 °C.
Complete with mounting brackets.

Code	Outlet centre distance		
559231	125 mm	1	–

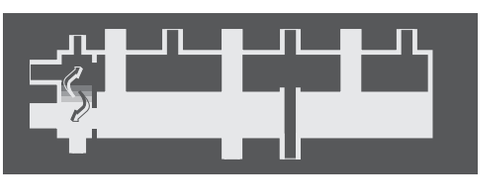
Hydraulic connections

559220

559221



559222



559231

ACCESSORIES FOR 559 SERIES

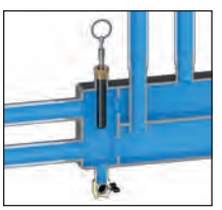
559

Pair of plugs with gaskets for unused outlets.
For 559 and 550 series with 125 mm outlet centre distance.

Code			
559001	1 1/2" M	1	–

559

Pocket with magnetic insert.
For 559 series.



Code			
559003	1/2" M	1	–

COMPACT MANIFOLD - DN 25

550 2

tech. broch. 01355

Manifold for heating and cooling systems.
Steel body. **With pre-formed insulation**.
Main connections: 1 1/2″ M.
Outlet connections: 1 1/2″ F with captive nut.
Max. working pressure: 6 bar.
Temperature range: 5–110 °C.
Complete with steel mounting brackets.

Code	Outlet centre distance	Max. reccomended flow rate m³/h		
550220	125 mm	4	1	–

550 2+1

tech. broch. 01355

Manifold for heating and cooling systems.
Steel body. **With pre-formed insulation**.
Main connections: 1 1/2″ M.
Outlet connections: 1 1/2″ F with captive nut.
Max. working pressure: 6 bar.
Temperature range: 5–110 °C.

Code	Outlet centre distance	Max. reccomended flow rate m³/h		
550221	125 mm	4	1	–

550 3

tech. broch. 01355

Manifold for heating and cooling systems.
Steel body. **With pre-formed insulation**.
Main connections: 1 1/2″ M.
Outlet connections: 1 1/2″ F with captive nut.
Max. working pressure: 6 bar.
Temperature range: 5–110 °C.
Complete with steel mounting brackets.

Code	Outlet centre distance	Max. reccomended flow rate m³/h		
550230	125 mm	4	1	–

550

tech. broch. 01355

Hydraulic separator for heating and cooling systems.
For manifolds 550 series DN 25.
Steel body. **With pre-formed insulation**.
Main connections: 1 1/2″ M.
Outlet connections: 1 1/2″ F with captive nut.
Max. working pressure: 6 bar.
Temperature range: 5–110 °C.

Code	Outlet centre distance	Max. reccomended flow rate m³/h		
550205	125 mm	4	1	–

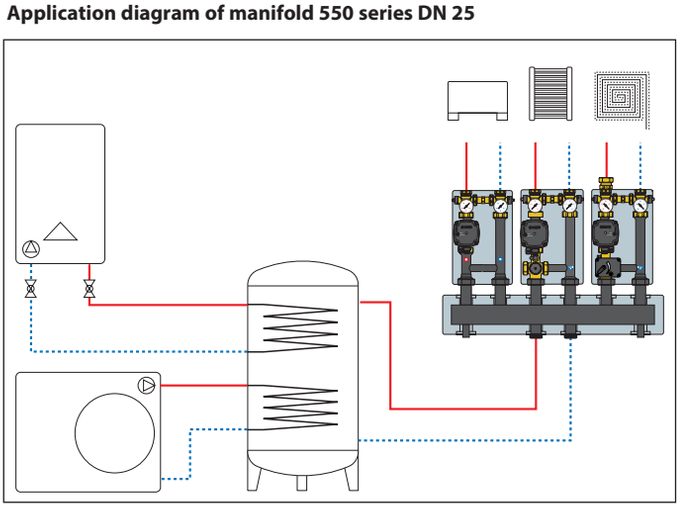
550 4

tech. broch. 01355

Manifold for heating and cooling systems.
Steel body. **With pre-formed insulation**.
Main connections: 1 1/2″ M.
Outlet connections: 1 1/2″ F with captive nut.
Max. working pressure: 6 bar.
Temperature range: 5–110 °C.
Complete with steel mounting brackets.

Code	Outlet centre distance	Max. reccomended flow rate m³/h		
550240	125 mm	4	1	–

Application diagram of manifold 550 series DN 25



COMPACT MANIFOLD - DN 32

550 2

tech. broch. 01355

Manifold for heating and cooling systems.
Steel body. **With pre-formed insulation**.
Main connections: 2" M.
Outlet connections: 1 1/2" F with captive nut.
Max. working pressure: 6 bar.
Temperature range: 5–110 °C.
Complete with steel mounting brackets.

Code	Outlet centre distance	Max. reccomended flow rate m³/h		
550320	125 mm	9	1	–

550 3

tech. broch. 01355

Manifold for heating and cooling systems.
Steel body. **With pre-formed insulation**.
Main connections: 2" M.
Outlet connections: 1 1/2" F with captive nut.
Max. working pressure: 6 bar.
Temperature range: 5–110 °C.
Complete with steel mounting brackets.

Code	Outlet centre distance	Max. reccomended flow rate m³/h		
550330	125 mm	9	1	–

550 4

tech. broch. 01355

Manifold for heating and cooling systems.
Steel body. **With pre-formed insulation**.
Main connections: 2" M.
Outlet connections: 1 1/2" F with captive nut.
Max. working pressure: 6 bar.
Temperature range: 5–110 °C.
Complete with steel mounting brackets.

Code	Outlet centre distance	Max. reccomended flow rate m³/h		
550340	125 mm	9	1	–

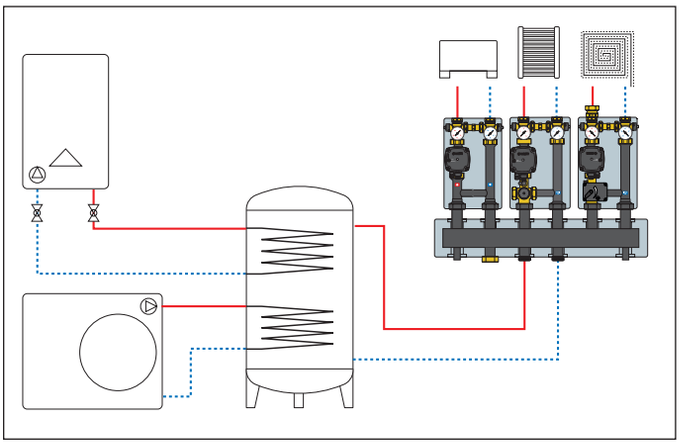
550

tech. broch. 01355

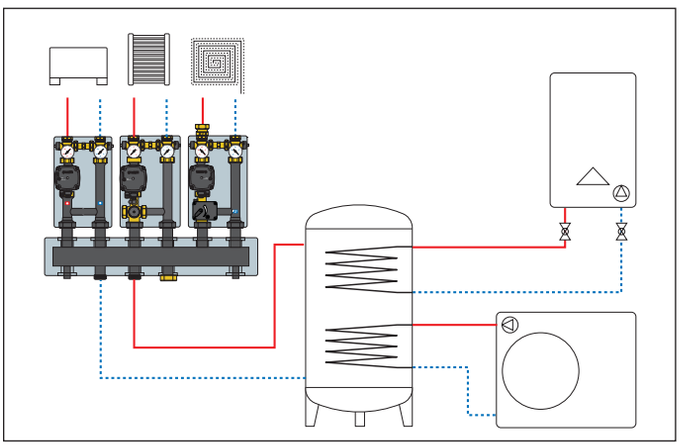
Hydraulic separator for heating and cooling systems.
For manifolds 550 series DN 32.
Steel body. **With pre-formed insulation**.
Main connections: 2" M.
Outlet connections: 2" F with captive nut.
Max. working pressure: 6 bar.
Temperature range: 5–110 °C.

Code	Outlet centre distance	Max. reccomended flow rate m³/h		
550305	125 mm	9	1	–

Application diagrams of manifold 550 series DN 32
Primary connection from the left



Primary connection from the right



559

Pair of plugs with gaskets for unused outlets.
For 559 and 550 series with
125 mm outlet centre distance.

Code			
559001	1 1/2" M	1	–

559

Pair of fittings with gaskets.
For 559 and 550 series with
125 mm outlet centre distance.

Code			
559002	1 1/2" M x 1" M	1	–

MANIFOLD FOR CENTRAL HEATING SYSTEM

550 2

tech. broch. 01261

Manifold for heating and cooling systems. Steel body.
1 1/4″ M main connections.
Outlet connections: 1 1/2″ F with captive nut.
Max. working pressure: 10 bar.
Temperature range: 5–110 °C.

Code	Outlet centre distance		
550020	125 mm	1	–

550 2+1

tech. broch. 01261

Manifold for heating and cooling systems.
Steel body.
1 1/4″ M main connections.
Outlet connections: 1 1/2″ F with captive nut.
Max. working pressure: 10 bar.
Temperature range: 5–110 °C.

Code	Outlet centre distance		
550021	125 mm	1	–

550 3

tech. broch. 01261

Manifold for heating and cooling systems.
Steel body.
1 1/2″ M main connections.
Outlet connections: 1 1/2″ F with captive nut.
Max. working pressure: 10 bar.
Temperature range: 5–110 °C.

Code	Outlet centre distance		
550030	125 mm	1	–

550 4

tech. broch. 01261

Manifold for heating and cooling systems.
Steel body.
1 1/2″ M main connections.
Outlet connections: 1 1/2″ F with captive nut.
Max. working pressure: 10 bar.
Temperature range: 5–110 °C.

Code	Outlet centre distance		
550040	125 mm	1	–

559

Pair of fittings with gaskets.
For 559 and 550 series with
125 mm outlet centre distance.

Code			
559002	1 1/2″ M x 1″ M	1	–

550 3+1

tech. broch. 01261

Manifold for heating and cooling systems.
Steel body.
1 1/2″ M main connections.
Outlet connections: 1 1/2″ F with captive nut.
Max. working pressure: 10 bar.
Temperature range: 5–110 °C.

Code	Outlet centre distance		
550031	125 mm	1	–

Insulation for manifolds
for central heating system 550 series.
For heating and cooling systems.

Code			
CBN550020	for manifold 2	1	–
CBN550021	for manifold 2+1	1	–
CBN550030	for manifold 3	1	–
CBN550031	for manifold 3+1	1	–
CBN550040	for manifold 4	1	–

550

Kit for 550 series manifold pipe connection
to 548 series hydraulic separator.

Code			
550001	1 1/4″ x 1 1/4″	1	–
550002	1 1/2″ x 1 1/4″	1	–
550003	1 1/2″ x 1 1/2″	1	–
550004	2″ x 1 1/2″	1	–

DIRECT SUPPLY UNIT

DN 25

165

tech. broch. 01398

Direct supply unit for **heating systems**.
With pre-formed insulation.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.
Supply: 230 V - 50/60 Hz.
System side connection: 1″ F.
Boiler side connection: 1 1/2″ M.
Outlet centre distance: **125 mm**

CE

RH to LH convertible

Code	Pump	Flow rate with residual head 4 m w.g.		
165600A2L	UPM3S Auto 25-60	1,6 m³/h	1	–

165

tech. broch. 01398

Direct supply unit for **heating and cooling systems**.
With pre-formed insulation.
Max. working pressure: 10 bar.
Primary inlet temperature range: 5–100 °C.
Supply: 230 V - 50/60 Hz.
System side connection: 1″ F.
Boiler side connection: 1 1/2″ M.
Outlet centre distance: **125 mm**

CE

RH to LH convertible

Code	Pump	Flow rate with residual head 4 m w.g.		
165640HE3	PARA 25/7	1,6 m³/h	1	–

NEW

165

tech. broch. 01398

Direct supply unit for **heating and cooling systems**.
With pre-formed insulation.
Max. working pressure: 10 bar.
Primary inlet temperature range: 5–100 °C.
Supply: 230 V - 50/60 Hz.
System side connection: 1″ F.
Boiler side connection: 1 1/2″ M.
Outlet centre distance: **125 mm**

CE

RH to LH convertible

Code	Pump	Flow rate with residual head 4 m w.g.		
165640HE5	EVOSTA2 70/130	1,6 m³/h	1	–

DN 32

165

tech. broch. 01398

Direct supply unit for **heating systems**.
With pre-formed insulation.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.
Supply: 230 V - 50/60 Hz.
System side connection: 1 1/4″ F.
Boiler side connection: 1 1/2″ M.
Outlet centre distance: **125 mm**

CE

RH to LH convertible

Code	Pump	Flow rate with residual head 4 m w.g.		
165601UPM	UPML 25-105	3,4 m³/h	1	–

165

tech. broch. 01398

Direct supply unit for **heating and cooling systems**.
With pre-formed insulation.
Max. working pressure: 10 bar.
Primary inlet temperature range: 5–100 °C.
Supply: 230 V - 50/60 Hz.
System side connection: 1 1/4″ F.
Boiler side connection: 1 1/2″ M.
Outlet centre distance: **125 mm**

CE

RH to LH convertible

Code	Pump	Flow rate with residual head 4 m w.g.		
165641HE4	PARA 25/9	2,7 m³/h	1	–

For distribution units fitted for heat metering, refer to Section 12

THERMOSTATIC REGULATING UNIT

DN 25

166

tech. broch. 01399

Thermostatic regulating unit
for **heating systems.**
With pre-formed insulation.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C
Supply: 230 V - 50/60 Hz.
System side connection: 1″ F.
Boiler side connection: 1 1/2″ M.
Outlet centre distance: **125 mm**

CE

RH to LH convertible

Code	Pump	Temperature adjustment range	Flow rate with residual head 4 m w.g.		
166600A2L	UPM3S Auto 25-60	25–50 °C	1,4 m³/h	1	–
166605A2L	UPM3S Auto 25-60	40–70 °C	1,4 m³/h	1	–

166

tech. broch. 01399

Thermostatic regulating unit
for **heating systems.**
With pre-formed insulation.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C
Supply: 230 V - 50/60 Hz.
System side connection: 1″ F.
Boiler side connection: 1 1/2″ M.
Outlet centre distance: **125 mm**

CE

RH to LH convertible

Code	Pump	Temperature adjustment range	Flow rate with residual head 4 m w.g.		
166600HE3	PARA 25/7	25–50 °C	1,4 m³/h	1	–

NEW

166

tech. broch. 01399

Thermostatic regulating unit
for **heating systems.**
With pre-formed insulation.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C
Supply: 230 V - 50/60 Hz.
System side connection: 1″ F.
Boiler side connection: 1 1/2″ M.
Outlet centre distance: **125 mm**

CE

RH to LH convertible

Code	Pump	Temperature adjustment range	Flow rate with residual head 4 m w.g.		
166600HE5	EVOSTA2 70/130	25–50 °C	1,4 m³/h	1	–

DN 32

166

tech. broch. 01399

Thermostatic regulating unit
for **heating systems.**
With pre-formed insulation.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C
Supply: 230 V - 50/60 Hz.
System side connection: 1 1/4″ F.
Boiler side connection: 1 1/2″ M.
Outlet centre distance: **125 mm**

CE

RH to LH convertible

Code	Pump	Temperature adjustment range	Flow rate with residual head 4 m w.g.		
166601UPM	UPML 25-105	25–50 °C	2,4 m³/h	1	–

MOTORISED REGULATING UNITS

DN 25

167

tech. broch. 01400

Motorised regulating unit for **heating systems.**
With pre-formed insulation.
Regulation with sector three-way valve.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C
System side connection: 1″ F.
Boiler side connection: 1 1/2″ M.
Outlet centre distance: 125 mm

CE

RH to LH convertible

Actuator with 3-point control signal
Supply: 230 V.
Operating time: 150 s (90° rotation).
Can be connected to digital regulators code 161010 and 1520 series.

Code	Pump	Flow rate with residual head 4 m w.g.		
167652HE1	UPM3S Auto 25-60	1,4 m³/h	1	–

Actuator with 0(2)–10 V control signal
Supply: 24 V.
Operating time: 75 s (90° rotation).
Feedback signal: 0–10 V.
Can be connected to digital regulators code 161010 (for actuator electric supply use 230 V / 24 V transformer).

Code	Pump	Flow rate with residual head 4 m w.g.		
167654HE1	UPM3S Auto 25-60	1,4 m³/h	1	–

167

tech. broch. 01400

Motorised regulating unit for **heating and cooling systems**.
With pre-formed insulation.
Regulation with sector three-way valve.
Max. working pressure: 10 bar.
Primary inlet temperature range: 5–100 °C.
System side connection: 1″ F.
Boiler side connection: 1 1/2″ M.
Outlet centre distance: 125 mm

CE

RH to LH convertible

Actuator with 3-point control signal
Supply: 230 V.
Operating time: 150 s (90° rotation).
Can be connected to digital regulators code 161010 and 1520 series.

Code	Pump	Flow rate with residual head 4 m w.g.		
167652HE3	PARA 25/7	1,4 m³/h	1	–

Actuator with 0(2)–10 V control signal
Supply: 24 V.
Operating time: 75 s (90° rotation).
Feedback signal: 0–10 V.
Can be connected to digital regulators code 161010 (for actuator electric supply use 230 V / 24 V transformer).

Code	Pump	Flow rate with residual head 4 m w.g.		
167654HE3	PARA 25/7	1,4 m³/h	1	–

DN 32

167

tech. broch. 01400

Motorised regulating unit for **heating systems.**
With pre-formed insulation.
Regulation with sector three-way valve.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C
System side connection: 1 1/4″ F.
Boiler side connection: 1 1/2″ M.
Outlet centre distance: 125 mm

CE

RH to LH convertible

Actuator with 3-point control signal (see code 167652HE1**)**

Code	Pump	Flow rate with residual head 4 m w.g.		
167662HE2	UPML 25-105	3,7 m³/h	1	–

Actuator with 0(2)–10 V control signal (see code 167654HE1**)**

Code	Pump	Flow rate with residual head 4 m w.g.		
167664HE2	UPML 25-105	3,7 m³/h	1	–

167

tech. broch. 01400

Motorised regulating unit for **heating and cooling systems**.
With pre-formed insulation.
Regulation with sector three-way valve.
With auxiliary microswitch.
Max. working pressure: 10 bar.
Primary inlet temperature range: 5–100 °C.
System side connection: 1 1/4″ F.
Boiler side connection: 1 1/2″ M.
Outlet centre distance: 125 mm

CE

RH to LH convertible

Actuator with 3-point control signal (see code 167652HE3**)**

Code	Pump	Flow rate with residual head 4 m w.g.		
167662HE4	PARA 25/9	2,2 m³/h	1	–

Actuator with 0(2)–10 V control signal (see code 167654HE3**)**

Code	Pump	Flow rate with residual head 4 m w.g.		
167664HE4	PARA 25/9	2,2 m³/h	1	–

ACCESSORIES FOR UNITS 165 - 166 - 167 SERIES

165

Hydraulic separator kit
for units 165, 166 and 167 series.
DN 25.

Code			
165010	1 1/2″ F x 1″ F	1	–

519

Differential by-pass valve
for units 165, 166 and 167 series.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code	Setting range m w.g.		
519006	1–6	1	–

165

Pair of eccentric tailpieces
for units 165, 166 and 167 series.
Centre distance: 105–145 mm.

Code			
165006	1 1/2″ F x 1″ F	1	–

165

Sensor holder extension
for units 165, 166 and 167 series.
Side connections:
M4 F x M4 F x 1/8″ F x 1/4″ F.

Code			
165003	1″ M x 1″ F	1	–

165

Female union with captive nut
complete with gasket
for units 165, 166 and 167 series.

Code			
165002	1 1/2″ F x 1″ F	1	–

165

Mounting bracket in stainless steel
for units 165, 166 and 167 series.

Code		
165001	1	–

165

Safety thermostat kit
for units 165, 166 and 167 series.
Protection class: IP 65.
M4 threading.

Code		Setting		
165004	Max. temperature safety thermostat	55 °C ± 3	1	–
165007	Min. temperature safety thermostat	10 °C ± 3	1	–

SPARE PARTS FOR REGULATING UNITS 165, 166 AND 167 SERIES

UPM3S Auto 25-60 spare part.
Complete with supply cable.

CE

Code			
F0001252	UPM3S Auto 25-60 pump	1	–

UPML 25-105 spare part.
Complete with supply cable.

CE

Code			
F19486	UPML 25-105 pump	1	–

PARA 25/7 spare part.
Complete with supply cable.

CE

Code			
F19441	PARA 25/7 pump	1	–

PARA 25/9 spare part.
Complete with supply cable.

CE

Code			
F0001584	PARA 25/9 pump	1	–

NEW

EVOSTA2 70/130 spare part.
Complete with supply cable.

CE

Code			
F0002041	EVOSTA2 70/130 pump	1	–

166

Thermostatic mixing valve.
Max. working pressure: 10 bar.
Connections:
1 1/2" M x 1 1/4" M x 1 1/2" F with captive nut.

Code	Temperature adjustment range	Kv (m³/h)		
166001	25–50 °C	4,1	1	–
166005	40–70 °C	4,1	1	–

Three-way sector mixing valve, threaded.
Brass body.
PN 10.
Max. working pressure: 10 bar.
Max. Δp: 1 bar.
Temperature range: 5–110 °C.

Code	Kv (m³/h)	Use		
F0001334	6,3	16765.HE1/HE3	1	–
F0001335	10,0	16766.HE2/HE4	1	–

6370

tech. broch. 01353

Actuator for unit 167 series.
Supply: 230 V - 50 Hz or 24 V.
Control signal:
637042: 3 points,
637044: 0(2)–10 V, 0(4)–20 mA, 0–5 V, 5–10 V.
Power consumption: 637042: 3 VA, 637044: 2 W.
Protection class: IP 44.
Rotation 90°.
Operating time: 150 s (code 637044 - 75 s).
Ambient temperature range: 0–55 °C.
Storage temperature range: -10–70 °C.
Supply cable length: 1,5 m.

CE

Code	Tension V	Control signal	Actuator torque (N·m)		
637042	230	3 points	5	1	–
637044	24	0(2)–10 V	5	1	–

Spare probe pockets for 167 series.

Code	
F0001592	

TEMPERATURE REGULATORS

161

Digital regulator with synoptic diagram for heating and cooling complete with immersion flow probes with pocket and Pt1000 Ø 6 mm return probe (pocket to be chosen according to the pipe, see accessories).
Optional outside compensated probe.
Temperature adjustment range: 5–95 °C.
Supply: 230 V - 50/60 Hz.
Control signal: 3-point, 0–10 V.
Protection class: IP 20 / EN 60529.
Probe cable length: 1,5 m.

CE

Code			
161010		1	-

161

Outside temperature probe.

Code			
161002		1	-

161

Pressure switch with preconnected pin.
Working range: 0,5–10 bar.
Max. working temperature: 100 °C.
Cable length: 1 m.

Code			
161003		1	-

161

Dew point detector.
Working range: 30–100 RH %.

Code			
161004		1	–

161

Remote regulator.
Functions:
- translation of regulation curves from +15 K to -15 K
- max. temperature
- position OFF.

Code			
161005		1	-

Accessories for regulator code 161010.

Code			
161012	Pt1000 contact probe for pipes Ø 6 mm, cable L 2,5 m		
161013	immersion pocket for Pt1000 probe 1/2" M, 60 mm		
161014	immersion pocket for Pt1000 probe 1/2" M, 100 mm		
161015	Pt1000 probe Ø 6 mm - L 20 mm, cable L 1,5 m		
161006	Pt1000 probe Ø 6 mm - L 45 mm, cable L 2,5 m		

1520

Outside compensated digital temperature regulator. Complete with contact flow probe and outside probe.
Adjustment range: 20–90 °C.
Supply: 230 V - 50/60 Hz.
Control signal: 3-point.
Protection class: IP 40.

CE

Code				
152001	1 channel		1	-
152002	2 channels		1	-
152003	3 channels		1	-

1520

Digital temperature controller for heating and cooling.
Complete with flow probe, outside probe and max. relative humidity probe.
Supply: 230 V - 50/60 Hz.
Power consumption: 5,5 VA.
Protection class: IP 40.

CE

Code				
152021	1 channel		1	-

STRAINER FOR HEATING AND DOMESTIC WATER SYSTEMS

577

Y-strainer.
Bronze body,
1/2"–2": PN 16,
2 1/2" - 3": PN 10.
Female connections.
Temperature range: -20–110 °C.
Max. percentage of glycol: 30 %.
Strainer on stainless steel stretched plate.

Code		Mesh size Ø (mm)	Kv (m³/h)		
577004	1/2"	0,40	2,5	1	–
577005	3/4"	0,40	3,9	1	–
577006	1"	0,40	7	1	–
577007	1 1/4"	0,47	16	1	–
577008	1 1/2"	0,47	24	1	–
577009	2"	0,53	35	1	–
577020	2 1/2"	0,53	57	1	–
577030	3"	0,53	73	1	–

Further strainers for domestic water at page 226

STRAINER FOR HEATING SYSTEMS

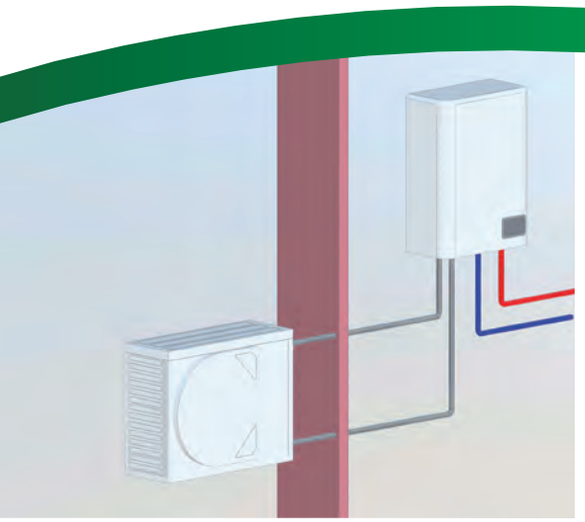
579

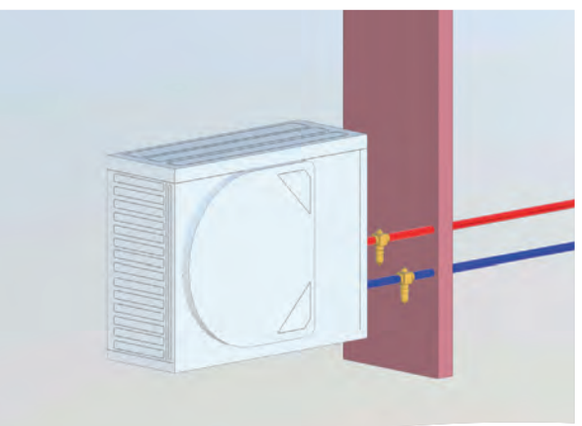
Y strainer for heating systems.
Ductile cast iron body , blue epoxy coating.
Max. working pressure: 16 bar.
Temperature range: -10–100 °C.
Max. percentage of glycol: 50 %.
Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.
Filtering mesh in stainless steel AISI 304.

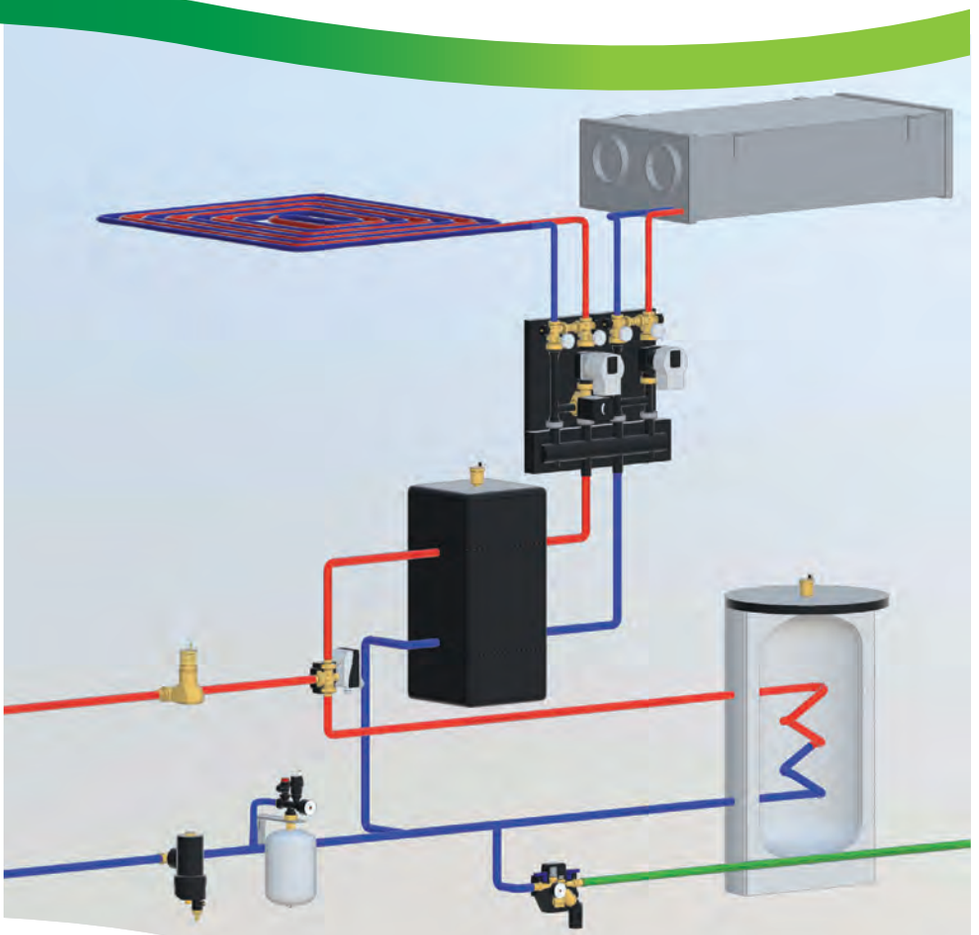
Code		Mesh size Ø (mm)	Kv (m³/h)		
579051	DN 50	1	28	1	–
579061	DN 65	1	37,2	1	–
579081	DN 80	1	62,2	1	–
579101	DN 100	1,6	149	1	–
579121	DN 125	1,6*	320	1	–
579151	DN 150	1,6*	367	1	–
579201	DN 200	1,6*	652	1	–
579251	DN 250	2*	844	1	–

** Rhomboidal reinforcing mesh*

COMPONENTS FOR HEAT PUMP SYSTEMS

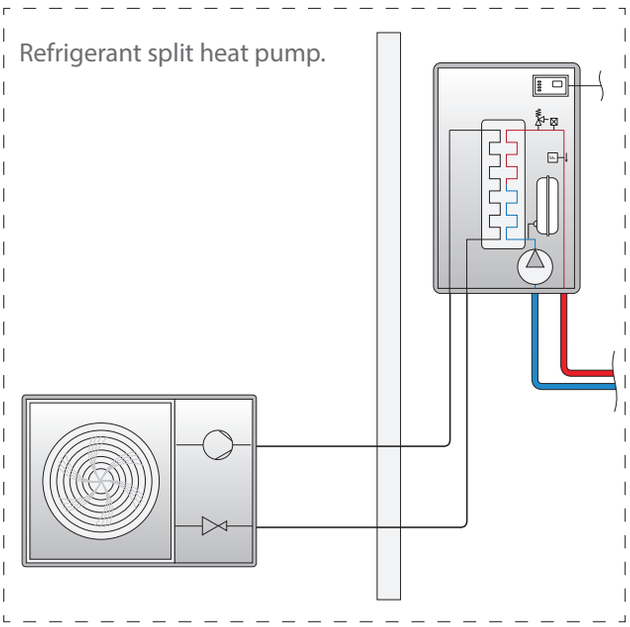


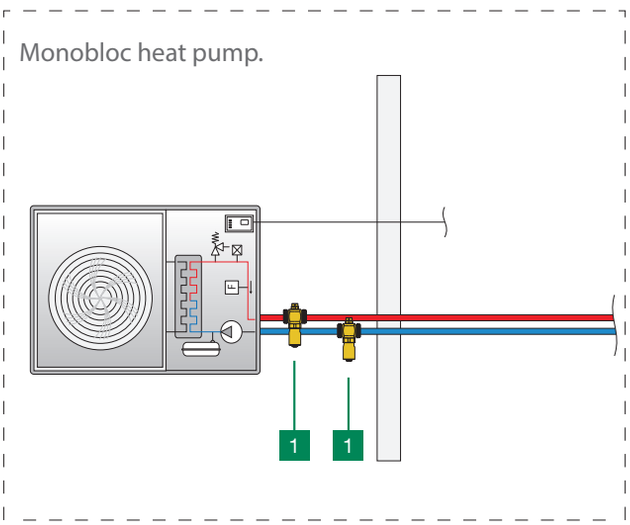


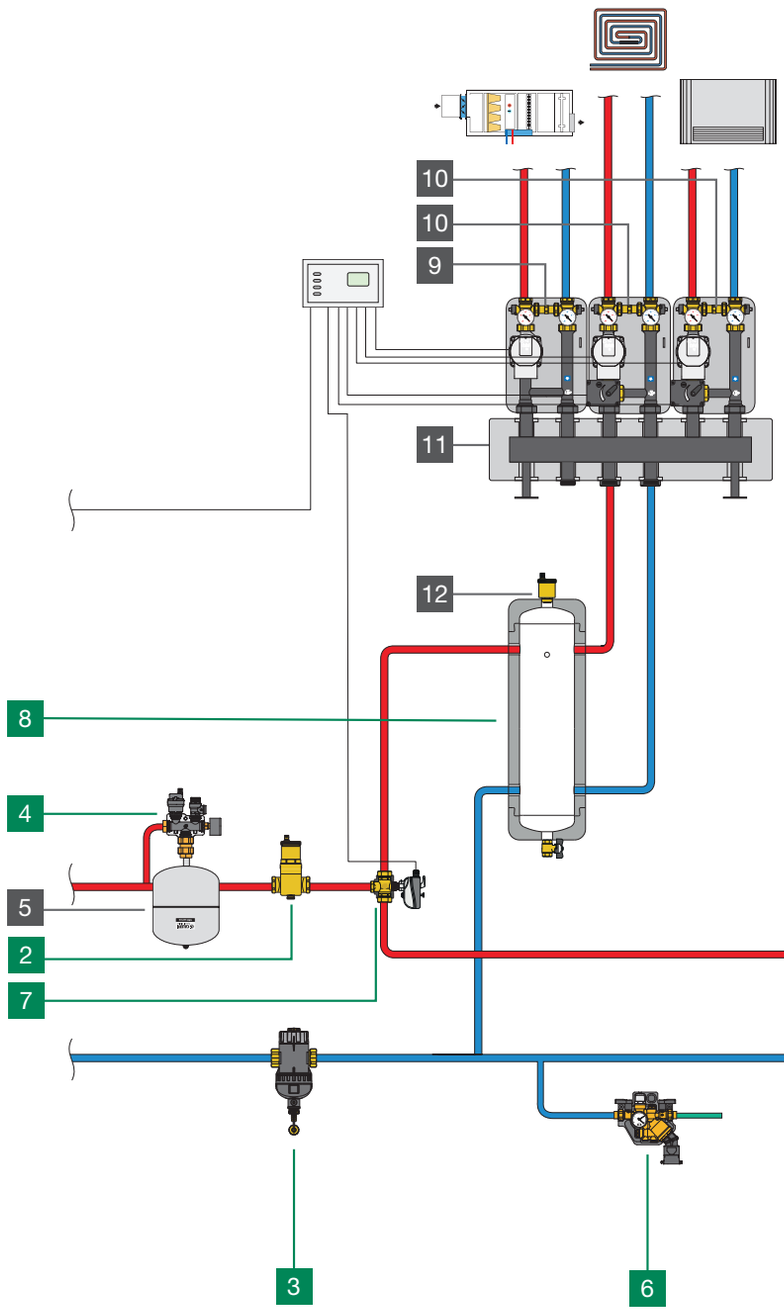


bim.caleffi.com

Antifreeze protection
Motorised three-way ball diverter valves
Semi-automatic self-cleaning magnetic filter CALEFFI XF
Deaerator
Multifunction device in composite with dirt separator and strainer
Deaerator-dirt separator with magnet
Differential by-pass valve
Balancing valve with flow meter
Instrument holder in composite material
Buffer tank for heat pump systems
Automatic compact charging unit


Refrigerant split heat pump.


Monobloc heat pump.
1
1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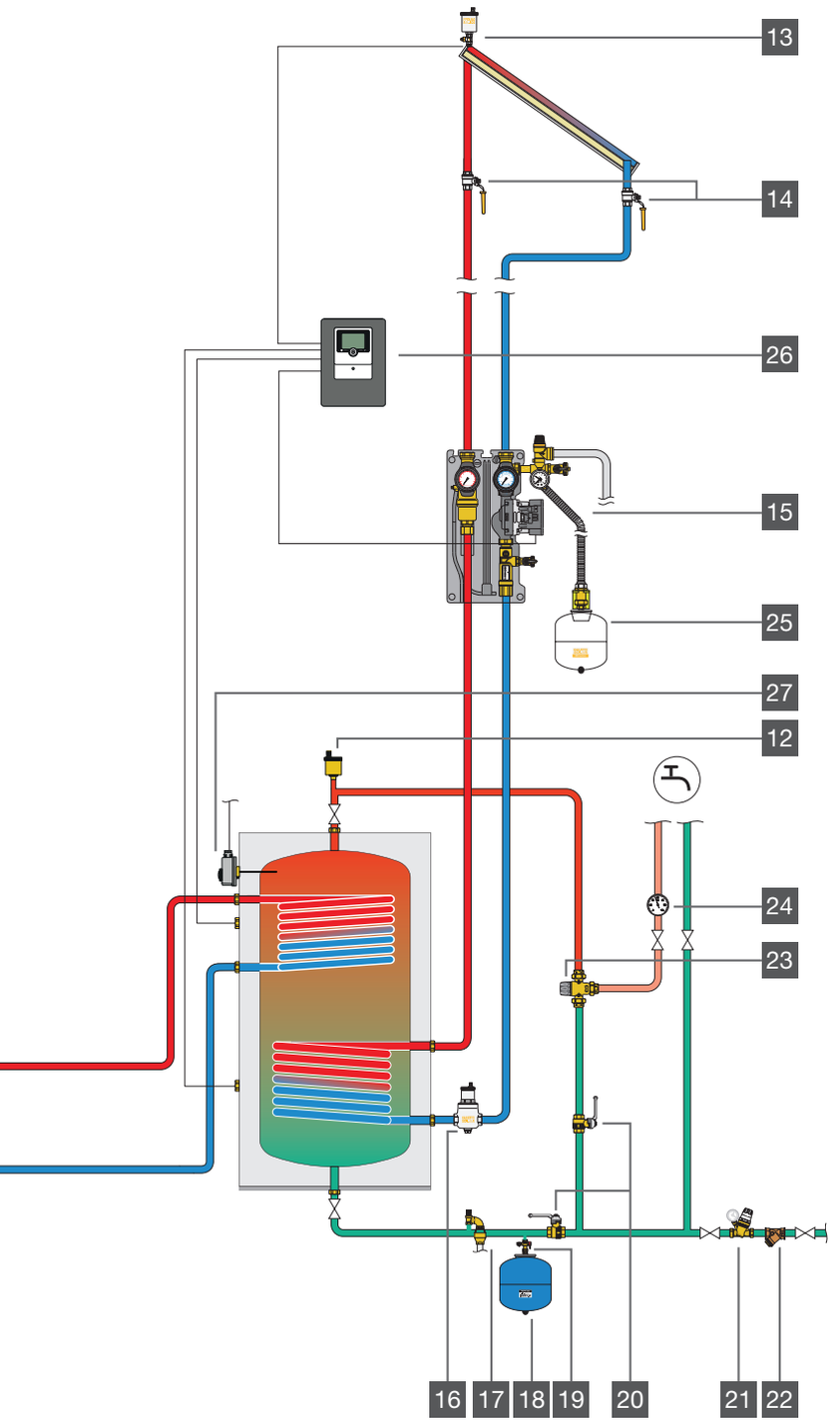
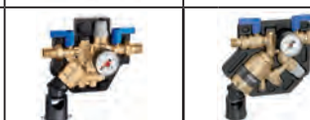


1	Series 108	Antifreeze valve
2	Series 551	DISCAL® deaerator
3	Series 577	CALEFFI XF semi-automatic self-cleaning magnetic filter
4	Series 305	Composite instrument holder manifold
5	Series 556	Welded expansion vessel for heating systems
6	Series 580	Automatic compact filling unit with BA type backflow preventer, shut-off valves, strainer, pressure test ports, pressure reducing valve
7	Series 638	3-way motorised ball valve
8	Series 5485	Buffer tank for heat pump systems
9	Series 165	Direct supply unit
10	Series 167	Motorised regulating unit
11	Series 550	Manifold for central heating system
12	Series 5020	MINICAL® automatic air vent
13	Series 250	Automatic air vent for solar thermal systems, complete with shut-off cock
14	Series 240	Ball valve for solar thermal systems
15	Series 279	Circulation unit for solar heating systems
16	Series 251	Deaerator for solar heating systems
17	Series 531	Safety relief valve for domestic water systems
18	Series 568	Welded expansion vessel for domestic systems
19	Series 5580	Shut-off ball valve for expansion vessels, with drain cock
20	Series 3230	Ball valve with check valve
21	Series 5350	Pressure reducing valve
22	Series 577	Oblique filter
23	Series 5231	Adjustable thermostatic mixing valve
24	Series 688	Temperature gauge
25	Series 259	Welded expansion vessel for solar thermal systems
26	Series 278	DeltaSol® SLL digital regulator
27	Series 622	Immersion thermostat, adjustable

Nominal power HP	[kW]	3	4	5	6	7	8
Max system flow rate [ΔT = 5 °C]	[l/h]	516	688	860	1032	1204	1376
Nominal pipe size*		3/4"	3/4"	1"	1"	1"	1"
1		n° 2 x **108**601 / n° 2 x **108**611					
2		**551**705 / **551**005		**551**706 / **551**006			
3		**545375** / **577**500		**545376** / **577**600			**545377** **577**600
4		**305**663 / **305**503					
6		**580**011/010					
7		**6445**62/ 66					
8		**5485**20			**5485**25		
11		**550**220					
11		**550**230					
12		**550**205					

9	10	11	12	14	16	18	22	25
1548	1720	1892	2064	2408	2752	3096	3784	4300
1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"
n° 2 x **108**701 / n° 2 x **108**711						n° 2 x **108**801 / n° 2 x **108**711		
551706 / **551**006				**551**007			**551**008	
545377 / **577**700				**577**700		**577**800		
305663 / **305**503								
580011								
638373						**638**383		
548530				**548550**				
550220							**550**320	
550230							**550**330	
550205							**550**305	

**Pipe pressure drop r ~ 20-22 mm w.g./m (50 °C)*

ANTIFREEZE PROTECTION

108 iStop®

tech. broch. 01376

Antifreeze valve. Brass body.
Max. working pressure: 10 bar.
Working temperature range: 0–65 °C.
Ambient temperature range: -30–60 °C.
Opening temperature: 3 °C.
Closing temperature: 4 °C.

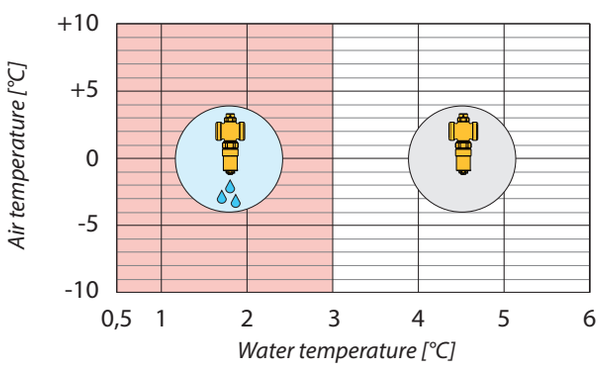
Threaded connections

Code			
108601	1″	1	25
108701	1 1/4″	1	20
108801	1 1/2″	1	20

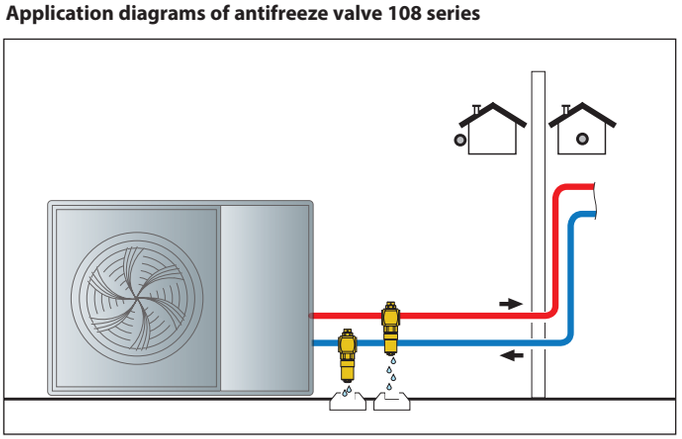
Compression ends

Code			
108301	∅ 28	1	20

Function
The antifreeze valve 108 series allows drainage of the medium in the circuit when the circuit temperature reaches an average value of 3 °C.



Application diagrams of antifreeze valve 108 series



ANTIFREEZE PROTECTION WITH AIR SENSOR

108 iStop®

tech. broch. 01376

Antifreeze valve with air sensor.
Brass body.
Max. working pressure: 10 bar.
Working temperature range: 0–65 °C.
Ambient temperature range: -30–60 °C.

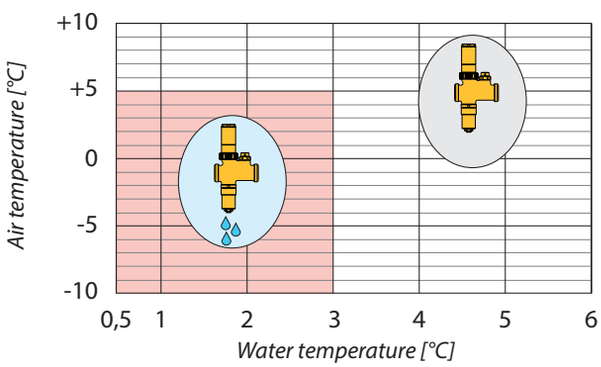
Antifreeze function (water sensor).
Opening temperature: 3 °C.
Closing temperature: 4 °C.

Enabling of antifreeze function with low outside air temperature < 5 °C.

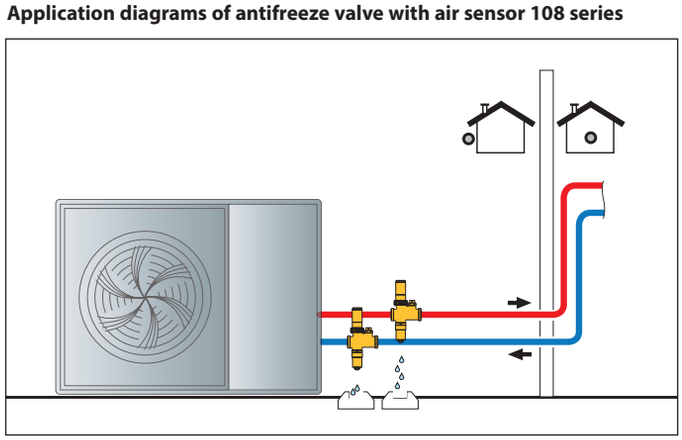
PATENT PENDING.

Code			
108611	1″	1	25
108711	1 1/4″	1	20

Operating principle
The 108 series antifreeze valve allows drainage of the medium in the circuit when the circuit temperature reaches a value of 3 °C.
In outside temperature conditions over 5 °C, antifreeze valve intervention is inhibited by the air temperature sensor. This prevents the valve from cutting in during operation in cooling mode during the summer.



Application diagrams of antifreeze valve with air sensor 108 series



MOTORISED THREE-WAY BALL DIVERTER VALVES

6445

tech. broch 01392

Motorised three-way ball valve.
With insulation kit for **heating and conditioning systems**.
With auxiliary microswitch.
Supply: 230 V (AC).
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5–110 °C.
Ambient temperature range: 0–55 °C.
Power consumption: - 644562: 4 VA
- 644566: 8 VA
Auxiliary microswitch contact rating: 0,8 A (230 V).
Protection class: IP 44.
90° rotation

Code		Operating time	Supply voltage V	Kv (m³/h)		
644562	1″	40 s	230	9	1	–
644566	1″	10 s	230	9	1	–

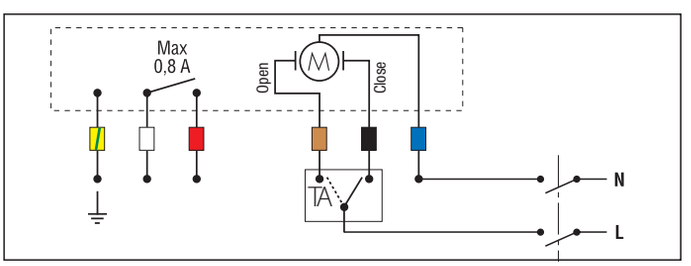
6440

tech. broch 01131

3-contact control spare actuator
for motorised ball zone valves 6445 series.
Supply: 230 V (AC).

Code	Operating time	Supply voltage V		
644002	40 s	230	1	10
644012	10 s	230	1	10

Wiring diagram for valves 6445 series, with 3-contact actuator.



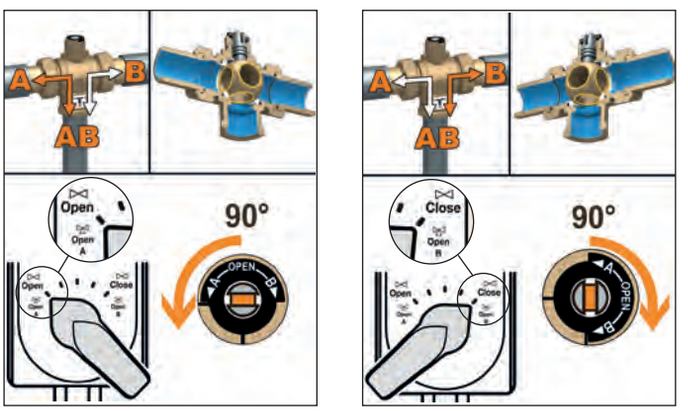
638

tech. broch. 01196

Motorised three-way ball valve.
With insulation kit for **heating and conditioning systems**.
Supply: 230 V (AC).
Max. working pressure: 16 bar.
Max. Δp: 10 bar.
Temperature range: -10–110 °C.
Ambient temperature range: -10–55 °C.
With auxiliary microswitch.
Power consumption: 6 VA.
Auxiliary microswitch contact rating: 6 (2) A - 230 V (AC).
Protection class: IP 65.
Operating time: 50 s (**90° rotation**).

Code		Operating time	Supply voltage V	Kv (m³/h)		
638373	1 1/4″	50 s	230	24,7	1	–
638383	1 1/2″	50 s	230	47	1	–

Operating diagram for 6445 series valve - with "T" drilling



Spare actuator for motorised ball zone valves 638 series.
90° rotation.

Code	Supply voltage V		
638012	230	1	–

Insulation kit
for heating and cooling systems.
Medium temperature range: -10–110 °C.
For motorised three-way ball valves 638 series.

Code	Use		
CBN638173	1 1/4″	1	–
CBN638183	1 1/2″	1	–

SEMI-AUTOMATIC SELF-CLEANING MAGNETIC FILTER

577 CALEFFI XF

tech. broch. 01391

Semi-automatic self-cleaning magnetic filter.
Technopolymer body.
Female connections.
Adjustable for horizontal and vertical pipes.
Drain cock with hose connection.

Max. working pressure: 3 bar.
Temperature range: 0–90 °C.
Strainer mesh size Ø = 0,16 mm.

Threaded connections

Code			
577500	3/4″	1	-
577600	1″	1	-
577700	1 1/4″	1	-

Compression ends

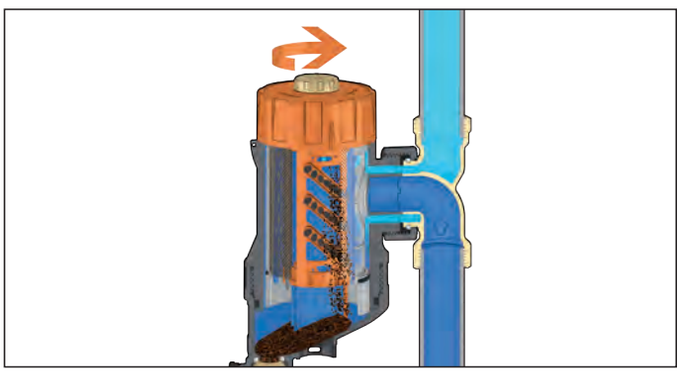
Code			
577200	Ø 22	1	-
577300	Ø 28	1	-

Insulation for semi-automatic self-cleaning magnetic filter.

Code	Use		
CBN577500	577500/600/700	1	–
CBN577800	577800/900	1	–

Cleaning the filter mesh

To clean the CALEFFI XF filter with the circulator stationary, there is no need to disassemble the component because it contains a mechanism with brushes to clean the filter mesh.



577 CALEFFI XF

tech. broch. 01391

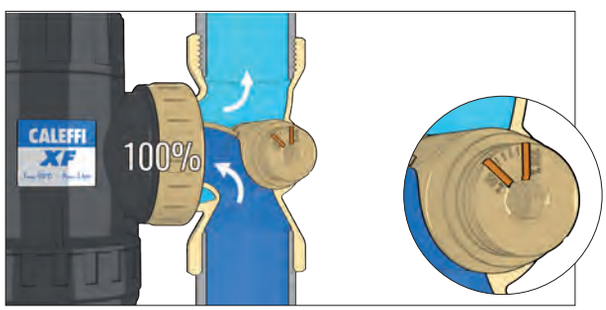
Semi-automatic self-cleaning magnetic filter **complete with by-pass**.
Technopolymer body.
Female connections.
Adjustable for horizontal and vertical pipes.
Drain cock with hose connection.

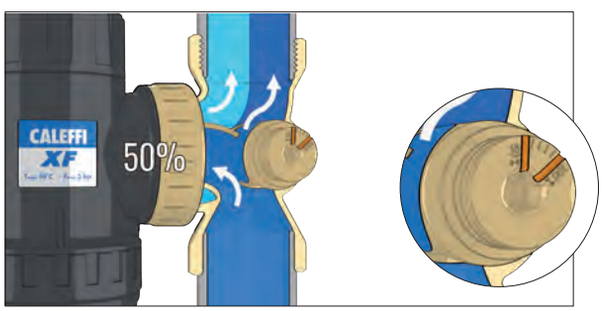
Max. working pressure: 3 bar.
Temperature range: 0–90 °C.
Strainer mesh size Ø = 0,16 mm.

Code			
577800	1 1/2″	1	-
577900	2″	1	-

Adjustable by-pass

Sizes DN 40 (code 577800, 1 1/2″) and DN 50 (code 577900, 2″) are equipped with a by-pass that allows the limitation of the flow rate passing through the device by up to 50%, thereby increasing the Kv value.
We recommend 100% filtration during filling and for the first weeks of system operation. Then, during the "maintenance" phase, the device can be set to function as a by-pass to achieve a higher Kv.





MULTIFUNCTION DEVICE WITH DIRT SEPARATOR AND STRAINER

5453 DIRTMAG*PLUS*®

tech. broch. 01258

Multifunction device with dirt separator and strainer.
Specific for the complete cleaning of the hydraulic circuit, to protect continuously generator and components.
Technopolymer body.
Dirt separator with tecnopolimer internal element, **with magnet**.
Two inspectable strainers with stainless steel mesh:
1 for initial cleaning (blue colour) already installed,
1 for maintenance (grey colour) in package.
Shut-off valves with nuts, brass body.
Female connections and
Ø 22 and Ø 28 mm with compression ends.
Adjustable for horizontal, vertical or 45° pipes.
Drain cock with hose connection.
Max. working pressure: 3 bar.
Temperature range: 0–90 °C.

PCT INTERNATIONAL APPLICATION PENDING

Threaded connections

Code			
545375	3/4"	1	5
545376	1"	1	5
545377	1 1/4"	1	5

Compression ends

Code			
545372	Ø 22	1	5
545373	Ø 28	1	5

DEAERATOR

551 DISCAL

Deaerator. Brass body.
Female and male connections and
Ø 22 and Ø 28 mm with compression ends.
Adjustable for horizontal and vertical pipes.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: 0–110 °C.

Threaded connections

Code			
551705	3/4" F	1	5
551706	1" F	1	5
551716	1" M	1	5

Compression ends

Code			
551702	Ø 22	1	5
551703	Ø 28	1	5

DEAERATOR-DIRT SEPARATOR WITH MAGNET

5464 DISCAL*DIRTMAG*

Deaerator-dirt separator **with magnet**.
Technopolymer body.
Female connections.
Adjustable for horizontal and vertical pipes.
With hygroscopic safety cap.
Drain cock with hose connection.

Max. working pressure: 3 bar.
Temperature range: 0–90 °C.

PCT INTERNATIONAL APPLICATION PENDING

Threaded connections

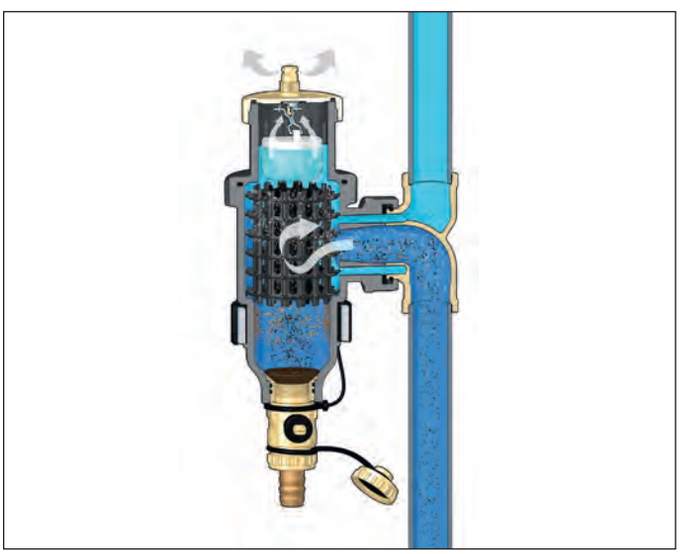
Code			
546405	3/4" F	1	5
546406	1" F	1	5

Compression ends

Code			
546402	Ø 22	1	5
546403	Ø 28	1	5

Problems caused by impurities in hydraulic circuits

The components of a heating and cooling system are exposed to degradation caused by the impurities contained in the system circuit. If the impurities in the thermal medium are not removed, they can impair operation of the units or components, such as heat generators or exchangers, especially in the system commissioning stage, already from the very first passage. This problem must not be underestimated because generator manufacturers will frequently reject warranty claims if their product is not adequately protected by a strainer from the time the product is commissioned onwards.



DIFFERENTIAL BY-PASS VALVE

519

tech. broch. 01007

Differential by-pass valve,
adjustable with graduated scale.
Max. working pressure: 10 bar.
Temperature range: 0–110 °C.
Max. percentage of glycol: 30 %.

Threaded connections

Code		Setting range m w.g.		
519500	3/4"	1–6	1	50
519504	3/4"	10–40	1	50
519700	1 1/4"	1–6	1	10
519703	1 1/4"	5–25	1	10

Compression ends

Code		Setting range m w.g.		
519002	∅ 22	1–6	1	50

519

tech. broch. 01007

Differential by-pass valve,
adjustable with graduated scale.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.
Max. percentage of glycol: 30 %.

Code		Setting range m w.g.		
519015	3/4"	1–6	1	25

518

NEW

tech. broch. 01410

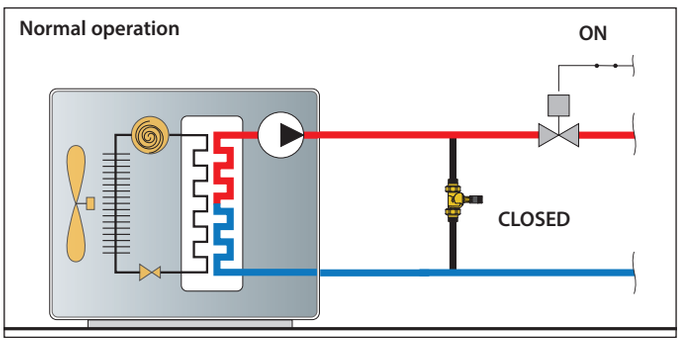
Differential by-pass valve,
adjustable with graduated scale.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.
Max. percentage of glycol: 30 %.

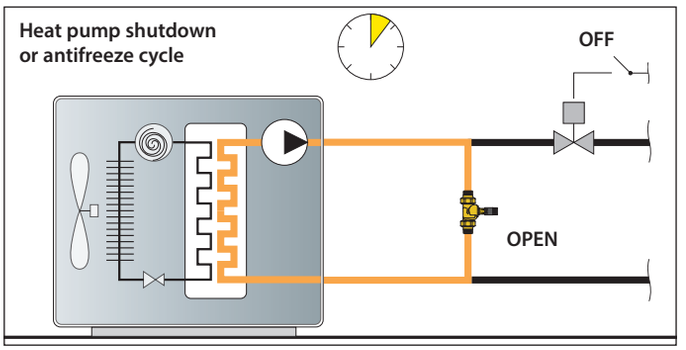
Code		Setting range m w.g.		
518500	3/4"	1–6	1	50

Compression ends

Code		Setting range m w.g.		
518002	∅ 22	1–6	1	50

Application diagrams of differential by-pass valve 519 series





BALANCING VALVE WITH FLOW METER

132

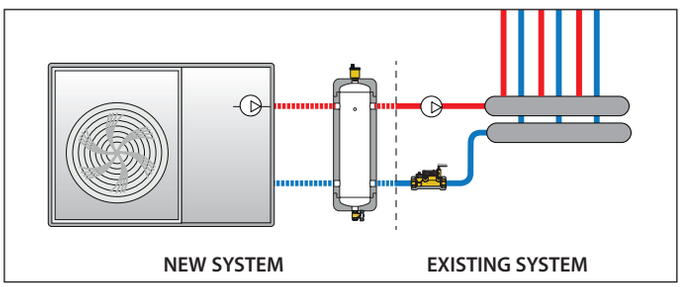
tech. broch. 01149

Balancing valve with flow meter.
Direct reading of flow rate.
Brass valve body and flow meter.
Ball valve for flow rate adjustment.
Graduated scale flow meter with
magnetic movement flow rate indicator.

With insulation.
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.
Max. percentage of glycol: 50 %.
PATENT PENDING.

Code		Flow rate range (l/min)		
132512	3/4"	5–13	1	5
132522	3/4"	7–28	1	5
132602	1"	10–40	1	5
132702	1 1/4"	20–70	1	5
132802	1 1/2"	30–120	1	5

Application diagram



INSTRUMENT HOLDER IN COMPOSITE MATERIAL

305

Instrument holder in composite material for heating systems.
Equipped with air vent, safety relief valve in composite material and pressure gauge.
With insulation.
Temperature range: 5–90 °C.
Up to 50 kW.

Code			
305663	1" 3 bar TÜV	1	5

305

Instrument holder in composite material for heating systems.
Equipped with air vent in composite material, safety relief valve and pressure gauge.
With insulation.
Temperature range: 5–90 °C.
Up to 50 kW.

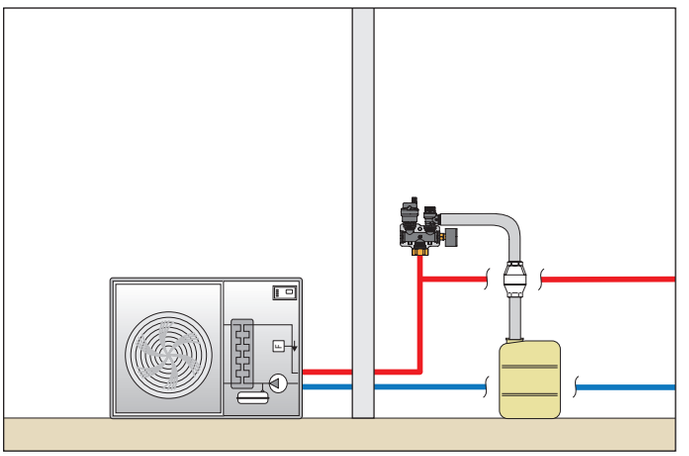
Code			
305671	1" 1,8 bar	1	5
305673	1" 3 bar NF	1	5
305674	1" 4 bar without insulation	1	5

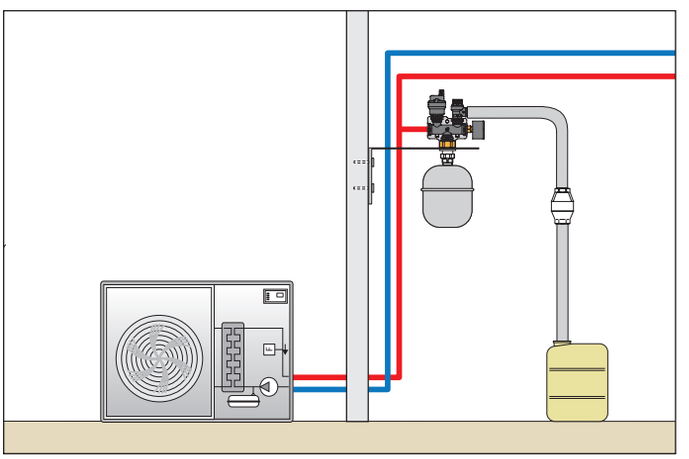
305

Instrument holder kit in composite material for heating systems.
Equipped with air vent, safety relief valve in composite material, pressure gauge, automatic shut-off cock for expansion vessel and fixing bracket.
With insulation.
Temperature range: 5–90 °C.
Up to 50 kW.

Code			
305503	3/4" 3 bar TÜV	1	10

Application diagram for instrument holder 305 series





BUFFER TANK FOR HEAT PUMP SYSTEMS

NEW

5485

tech. broch. 01406

Wall-mounted buffer tank-hydraulic separator for heat pump.
In AISI 304 **stainless steel**.

With highly effective expanded EPP insulation.
Max. working pressure: 4 bar.
Max. percentage of glycol: 30 %.
Working temperature range:
-10–95 °C (without the formation of ice).

Air vent top connection:
15–30 liters 1";
50 liters 1 1/4".

Drain valve bottom connection:
15–30 liters 1";
50 liters 1 1/4".

Front probe holder connection 1/4" F.

Code	Volume	Connections		
548515	15 liters	1" F	1	-
548520	20 liters	1" F	1	-
548525	25 liters	1" F	1	-
548530	30 liters	1" F	1	-
548550	50 liters	1 1/4" F	1	-

5020 MINICAL®

tech. broch. 01406

Automatic air vent. In hot stamped brass.
With hygroscopic safety cap.
With insulation.
Max. working pressure: 10 bar.
Max. drain pressure: 2,5 bar.
Max. working temperature: 120 °C.

WRAS APPROVED PRODUCT CERTIFICATION MARK

Code			
502067	1" M	1	50

Fitting for code 548550.

Code			
F0001878	1 1/4" M x 1" F	1	–

Construction details

Material AISI 304 stainless steel
The 5485 series inertial hydraulic separator is a higher quality product than traditional carbon steel types, and therefore helps to keep the thermal system clean.
It therefore reduces the number of problems caused by the impurities generated by corrosion

EPP insulation

The highly effective expanded PPE insulation allows the heat pump to run efficiently in both heating and air-conditioning modes.
The special boxy geometry makes the inertial hydraulic separator extremely compact and visually attractive.

Front probe holder connection

The 1/4" probe holder connection can be used to measure the thermal medium temperature with temperature probes or measurement temperature gauges.

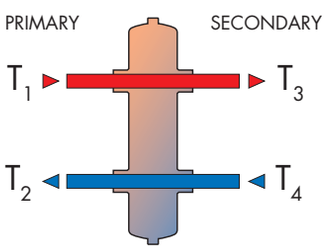
Sizing

The hydraulic separator should be sized in accordance with the maximum recommended flow rate value at the inlet. The selected value should be the sum of the primary circuit flow rates or the sum of the secondary circuit flow rates, whichever is greater.
On the other hand, the inertial hydraulic separator volume depends on the minimum volume of water required by the heat pump manufacturer to guarantee proper machine operation even in defrosting phases. Generally, with more modern heat pumps, it can assume an average value calculated on the basis of the machine power, which varies from 2,5 to 3,5 litres/kWt.

Volume	Connections	Max flow rate	Nominal power HP
15 l	1"	3,5 m³/h	3–5 kWt
20 l	1"	3,5 m³/h	
25 l	1"	3,5 m³/h	6–8 kWt
30 l	1"	3,5 m³/h	9–12 kWt
50 l	1 1/4"	5,5 m³/h	13–25 kWt

Operating principle

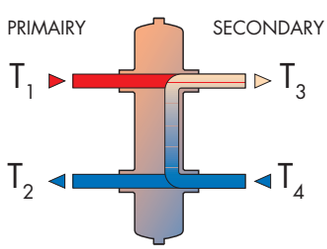
PRIMARY FLOW RATE
=
SECONDARY FLOW RATE



T1 = T3
T2 = T4

Limit configuration for heat pump systems: temperature difference at the user points the same as the value for the heat pump.

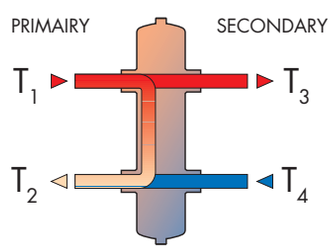
PRIMARY FLOW RATE
<
SECONDARY FLOW RATE



T1 > T3
T2 = T4

In a heat pump system this configuration may not guarantee the correct temperature at the terminals.

PRIMARY FLOW RATE
>
SECONDARY FLOW RATE



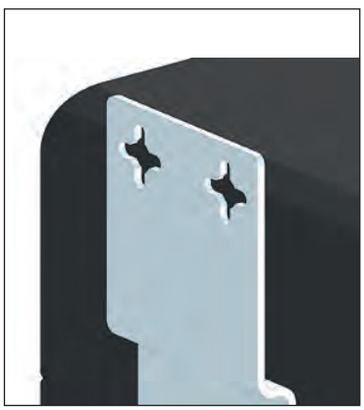
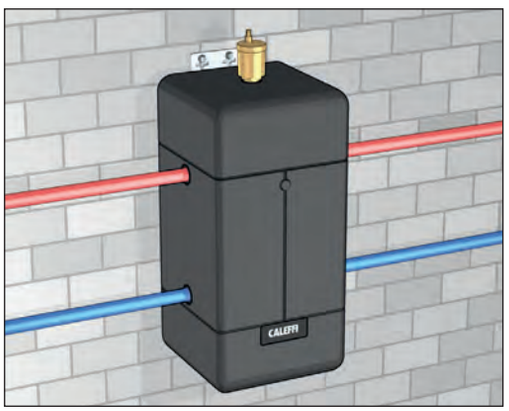
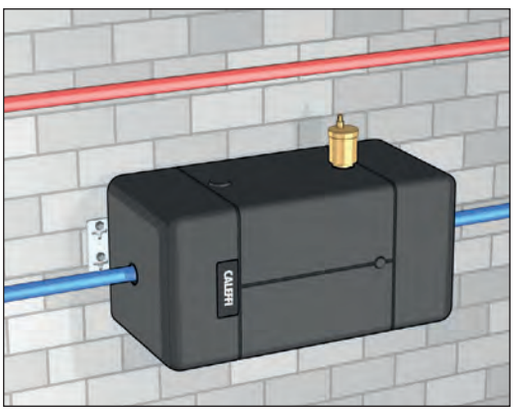
T1 = T3
T2 > T4

Optimal configuration for heat pump systems: temperature difference at the user points greater than the value for the heat pump.

BUFFER TANK FOR HEAT PUMP SYSTEMS

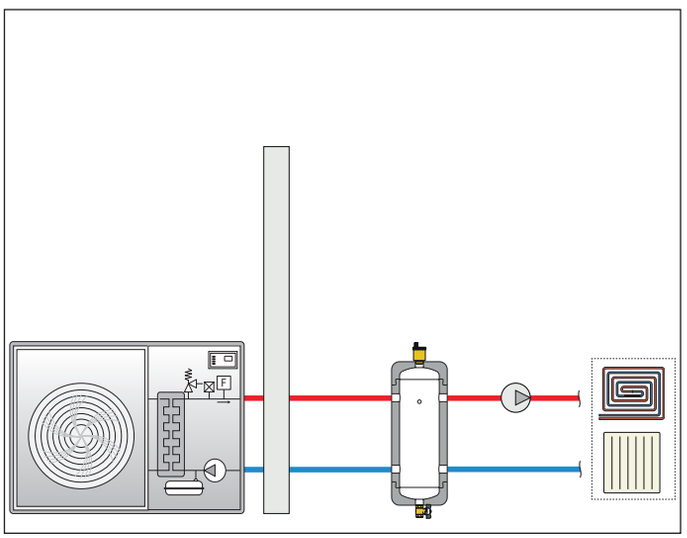
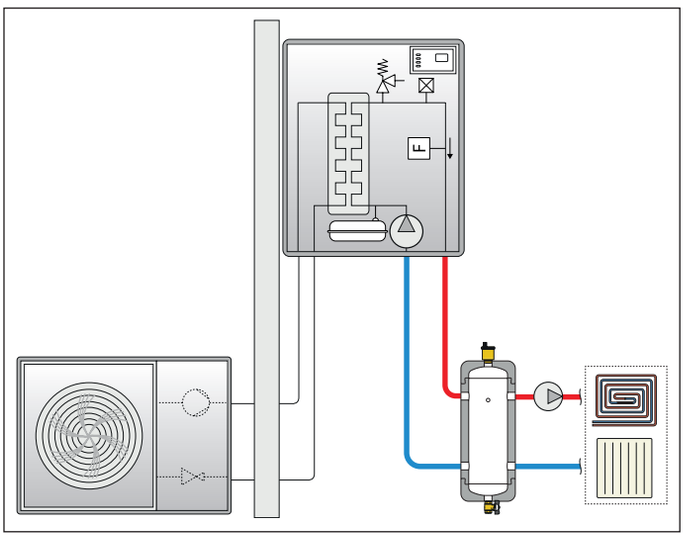
Extremely versatile installation
The 6 identical 1" connections (4 at the side, 1 at the top and 1 at the bottom) mean that this device can be installed in different configurations.
The brackets are also designed to allow wall mounting of the 5485 series both vertically and horizontally.

Installation examples

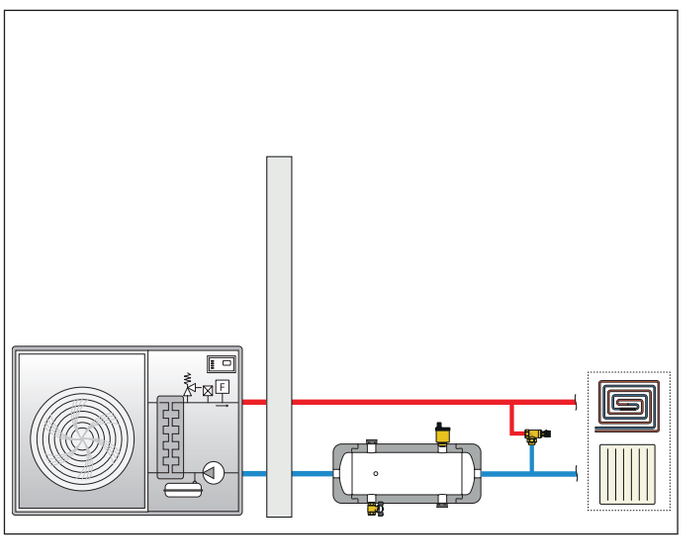
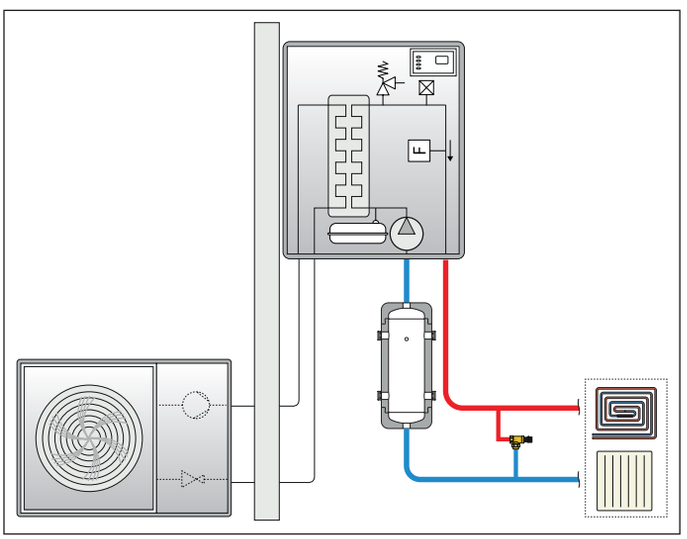




Application diagrams

IInstallation as hydraulic separator

Installation as buffer tank

AUTOMATIC COMPACT CHARGING UNIT

580010

tech. broch. 01333

Automatic compact charging unit to EN 1717 standard with **BA type** backflow preventer, shut-off valve, strainer, pressure test ports for controlling the backflow preventer, pressure reducing valve.
For horizontal or vertical installations.
CR dezincification resistant alloy body.

With insulation.
Filling unit setting pressure range: 0,8–4 bar.
Max. working pressure: 10 bar.
Max. working temperature: 65 °C.
Backflow preventer certified to EN 12729 standard.
Pressure reducing valve certified to EN 1567 standard.
PATENT PENDING.

Code			
580010	1/2"	1	5

580011

tech. broch. 01361

Automatic compact charging unit to EN 1717 standard with **BA type** backflow preventer, shut-off valve, strainer, pressure test ports for controlling the backflow preventer, pressure reducing valve.
For horizontal or vertical installations.
Brass body.

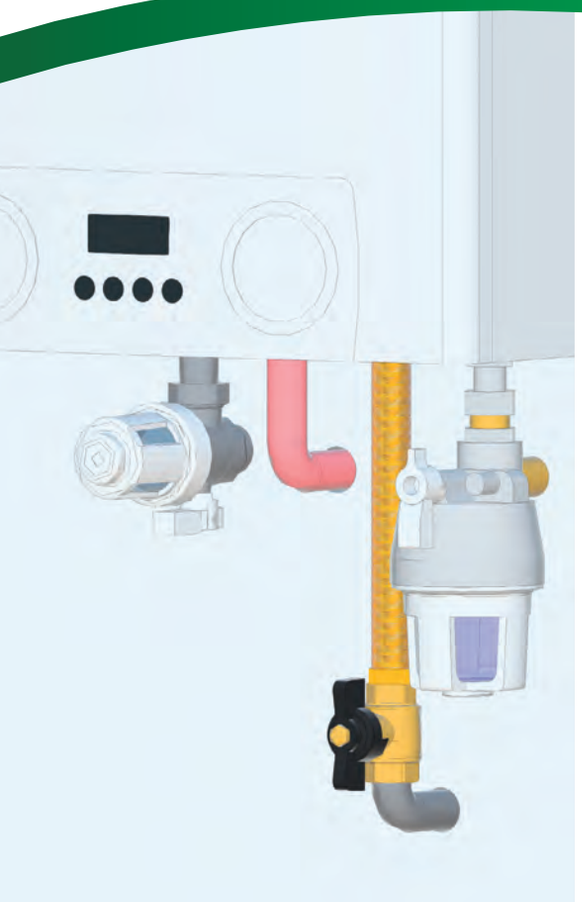
With insulation.
Filling unit setting pressure range: 0,8–4 bar.
Max. working pressure: 10 bar.
Max. working temperature: 65 °C.
Backflow preventer certified to EN 12729 standard.
Pressure reducing valve certified to EN 1567 standard.
PATENT.

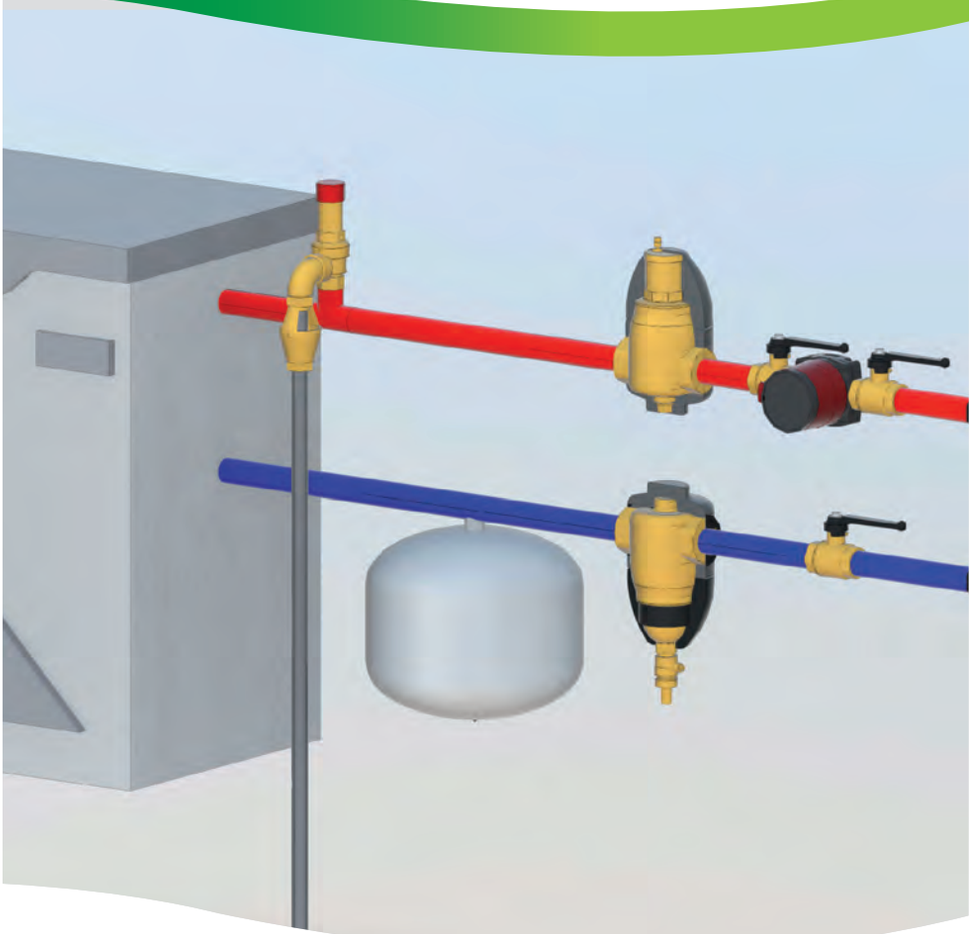
Code			
580011	1/2"	1	5

Backflow prevention reference standards

To avoid water backflow from the heating system, which is polluted and hazardous for human health, **it is indispensable to install an automatic charging unit with a backflow preventer**.
The correct use of hydraulic backflow preventers is governed by the European reference standard EN 1717: 2000 ("Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow").

DEVICES FOR DIRT SEPARATION, AIR VENT, WATER TREATMENT





bim.caleffi.com

Semi-automatic self-cleaning magnetic filter, CALEFFI XF
Multifunction device in technopolymer with dirt separator and strainer, DIRTMAGPLUS®
Under-boiler magnetic filter, CALEFFI XS®
Under-boiler dirt separators strainer with magnet, DIRTMAGMINI®
Dirt separators in technopolymer with magnet, DIRTMAG®
Dirt separators with magnet, DIRTMAG®
Dirt separators in technopolymer with double magnet for high flow rates, DIRTMAGPRO®
Self-cleaning dirt separator filter with magnet, DIRTMAGCLEAN®
Automatic air vent
End plug for radiators with automatic air vent
Manual air vents
Drain cocks
Deaerators
Deaerator-dirt separator
Deaerator-dirt separator with magnet
Under-boiler polyphosphate dispenser, CALEFFI XP
Chemical additives
Automatic water treatment unit
Softening and demineralisation cartridges

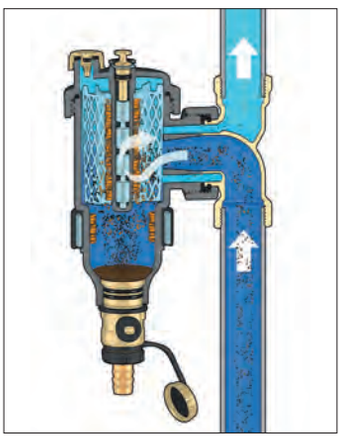
Dirt separators with magnet

Operating principle

Dirt separation is a physical treatment similar to filtration but more effective from the point of view of particle dimensions. By exploiting the principle of precipitation by gravity, after just a few recirculations it is able to separate and deposit even particles with dimensions down to 0,005 mm (5 µm).
The impurity separating action of the dirt separators with magnet is based on the combined action of several phenomena.
The reduction in medium flow speed encourages the dirt particles to fall into the collection chamber as a result of gravity. The collection chamber possesses the following features:

- it is located at the bottom of the device, at such a distance from the connections that the collected impurities are not affected by the swirling of the flow through the mesh;
- it is large enough to increase the dirt storage capacity, which means emptying/draining procedures are required less often;
- it has a drain cock for draining the impurities collected in the lower part even while the system is running.

The internal element with mesh surfaces provides a low resistance to the passage of the medium while still guaranteeing separation, which takes place due to the particles colliding with the mesh surfaces and then settling.
The magnet offers greater efficiency in the separation and collection of ferromagnetic impurities, which are captured in the dirt separator collection chamber by the magnets in the device.



Pressure drops

Due to the conformation of these components (large cross section), their pressure drop is almost always negligible over the range of optimal operating flow rates. The pressure drops are kept constant within the operating time.

Sizing

Sizing a dirt separator mainly depends on the speed at which the medium flows through the device, since an excessive speed would not allow correct separation of the impurities.

As is known, the medium flow speed depends on the flow rate and the cross section. Remaining within the speed limits specified above therefore means not exceeding certain **maximum** permissible **flow rates** for each size.

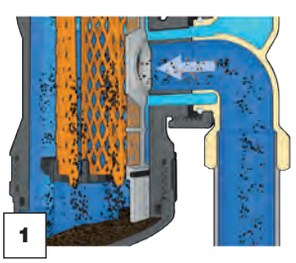
Magnetic filters dirt separators

Operating principle

The impurity separating action of the magnetic filter dirt separator is based on the combined action of several components:

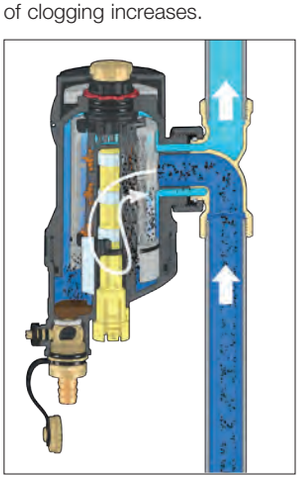
- an internal mesh element **(1)**, which carries out dirt separation;
- magnets fitted directly in the flow path **(2)**, which capture and retain ferrous impurities;
- a metal filter mesh **(3)**, which separates off the impurities by means of mechanical selection.

The filter mesh is characterised by various parameters, one the most important being the mesh size (or filtering capacity), which indicates the minimum dimensions of the particles that the filter is able to intercept. Another concerns the filter mesh surface, with a larger surface area guaranteeing a lower degree of fouling.
The collection chamber at the bottom of these devices has the same special features as the chamber used in dirt separators.



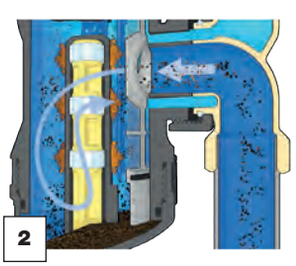
Pressure drops

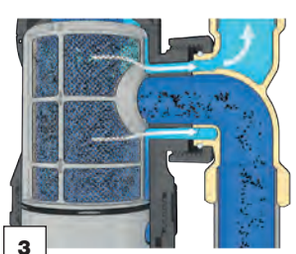
Due to the passage through the filter mesh, a pressure drop is produced in the medium which increases as the degree of clogging increases.



In combined devices such as filters dirt separators, the filter mesh is better protected than that of a simple strainer because some of the impurities fall into the dirt separator. This means there is less fouling than in normal strainers within the same operating time.

It is important to preform regular maintenance of the magnetic filter dirt separator; in some cases this process is made easier by automatic or semi-automatic cleaning systems.





Sizing

The main parameter to assess when sizing a magnetic filter dirt separator is its **pressure drop**. In fact, as the water passes through the filter mesh, it creates a different pressure drop, depending on the filtration capacity. The greater the filtration capacity, the greater the separation efficiency, but also the pressure drop.

HEAT PUMP SYSTEMS

TECHNOPOLYMER MAGNETIC FILTERS DIRT SEPARATORS

SEMI-AUTOMATIC SELF-CLEANING

CALEFFI *XF*
577
3/4" – 2"
Ø22 - Ø28

MANUAL CLEANING

DIRTMAG*PLUS*®
5453
3/4" – 1 1/4"
Ø22 - Ø28

WALL-MOUNTED BOILER SYSTEMS

MAGNETIC FILTER

ANGLED INSTALLATION

CALEFFI *XS*®
5459
3/4" M x 3/4" F captive nut
Ø22

IN-LINE INSTALLATION

CALEFFI *XS*®
5459
3/4" M x 3/4" F captive nut
Ø22

DIRT SEPARATOR IN TECHNOPOLYMER WITH MAGNET AND FILTER

UNIVERSAL INSTALLATION

DIRTMAG*MINI*®
5450
3/4" F captive nut x 3/4" M
Ø22

WALL-MOUNTED BOILER SYSTEMS WITH TECHNICAL ROOM - COOLING SYSTEMS

TECHNOPOLYMER DIRT SEPARATOR WITH MAGNET

STANDARD FLOW RATES

DIRTMAG®
5453
3/4" – 1"
Ø22 - Ø28

TECHNOPOLYMER DIRT SEPARATOR WITH DOUBLE MAGNET

HIGH FLOW RATES

DIRTMAG*PRO*®
5457
3/4" – 1 1/4"
Ø22 - Ø28

TECHNOPOLYMER MAGNETIC FILTER DIRT SEPARATOR

SEMI-AUTOMATIC CLEANING

CALEFFI *XF*
577
3/4" – 1 1/4"
Ø22 - Ø28

MEDIUM/LARGE SYSTEMS

TECHNOPOLYMER MAGNETIC FILTER DIRT SEPARATOR

CALEFFI *XF*
577
1 1/2" – 2"

BRASS DIRT SEPARATOR WITH MAGNET

DIRTMAG®
5463
3/4" – 2"

STEEL DIRT SEPARATOR WITH MAGNET

DIRTMAG®
5466
DN 50–DN 65

LARGE SYSTEMS

DIRT SEPARATOR IN STEEL WITH MAGNET

IN-LINE INSTALLATION

DIRTMAG®
5466
DN 50–DN 300

SELF-CLEANING DIRT SEPARATOR FILTER WITH MAGNET

BY-PASS INSTALLATION

DIRTMAG*CLEAN*®
5790

SEMI-AUTOMATIC SELF-CLEANING MAGNETIC FILTER

577 CALEFFI XF

tech. broch. 01391

Semi-automatic self-cleaning magnetic filter.
Technopolymer body.
Female connections.
Adjustable for horizontal and vertical pipes.
Drain cock with hose connection.

Max. working pressure: 3 bar.
Temperature range: 0–90 °C.
Mesh sized Ø = 0,16 mm.

Threaded connections

Code			
577500	3/4″	1	–
577600	1″	1	–
577700	1 1/4″	1	–

Compression ends

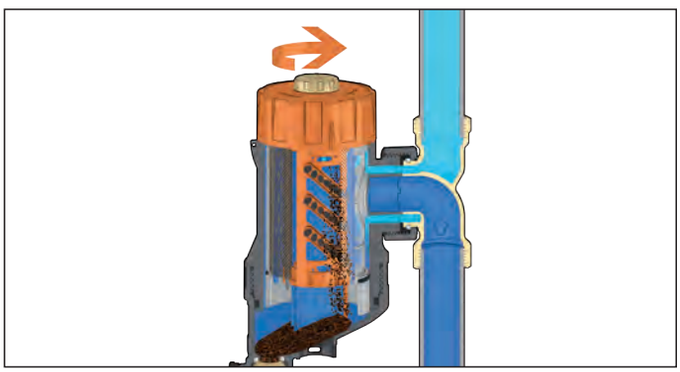
Code			
577200	Ø 22	1	–
577300	Ø 28	1	–

Insulation for semi-automatic self-cleaning magnetic filter.

Code	Use		
CBN577500	577500/600/700	1	–
CBN577800	577800/900	1	–

Cleaning the filter mesh

To clean the CALEFFI XF filter with the circulator stationary, there is no need to disassemble the component because it contains a mechanism with brushes to clean the filter mesh.



577 CALEFFI XF

tech. broch. 01391

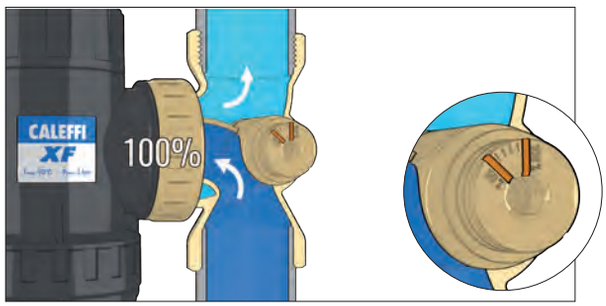
Semi-automatic self-cleaning magnetic filter **complete with by-pass**.
Technopolymer body.
Female connections.
Adjustable for horizontal and vertical pipes.
Drain cock with hose connection.

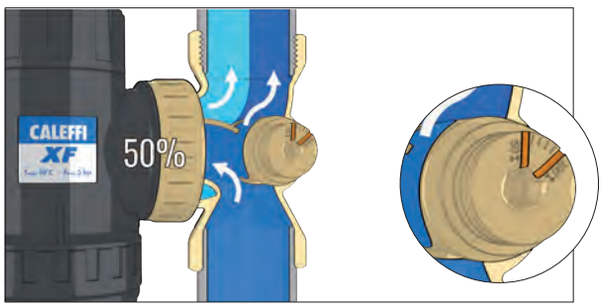
Max. working pressure: 3 bar.
Temperature range: 0–90 °C.
Mesh sized Ø = 0,16 mm.

Code			
577800	1 1/2″	1	-
577900	2″	1	-

Adjustable by-pass

Sizes DN 40 (code 577800, 1 1/2″) and DN 50 (code 577900, 2″) are equipped with a by-pass that allows the limitation of the flow rate passing through the device by up to 50%, thereby increasing the Kv value.
We recommend 100% filtration during filling and for the first weeks of system operation. Then, during the "maintenance" phase, the device can be set to function as a by-pass to achieve a higher Kv.





MULTIFUNCTION DEVICE IN TECHNOPOLYMER WITH DIRT SEPARATOR AND STRAINER

5453 DIRTMAG*PLUS*®

tech. broch. 01258

Multifunction device with dirt separator and strainer.
Specific for the complete cleaning of the hydraulic circuit, to protect continuously generator and components.
Technopolymer body.
Dirt separator with tecnopolimer internal element, **with magnet**.
Two inspectable strainers with stainless steel mesh:
1 for initial cleaning (blue colour) already installed,
1 for maintenance (grey colour) in package.
Shut-off valves with nuts, brass body.
Female connections and
Ø 22 and Ø 28 mm with compression ends.
Adjustable for horizontal, vertical or 45° pipes.
Drain cock with hose connection.
Max. working pressure: 3 bar.
Temperature range: 0–90 °C.

PCT INTERNATIONAL APPLICATION PENDING

Threaded connections

Code			
545375	3/4"	1	5
545376	1"	1	5
545377	1 1/4"	1	5

Compression ends

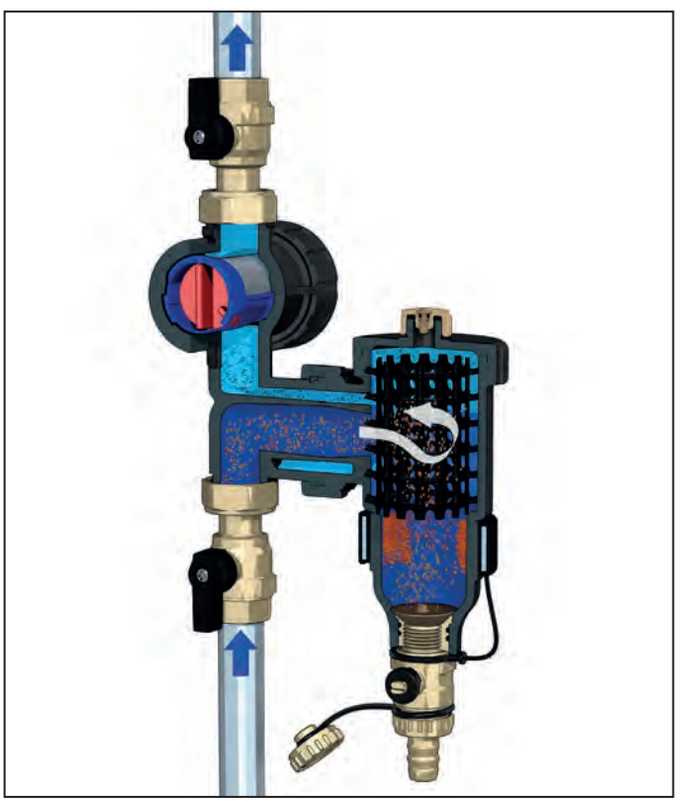
Code			
545372	Ø 22	1	5
545373	Ø 28	1	5

Accessory kit for circuit filling and flushing and strainer accessories for device DIRTMAGPLUS® 5453 series.

Code			
F49476	accessory kit	1	10
F49474/BL	first cleaning strainer (blue colour)	1	10
F49474/GR	maintenance strainer (grey colour)	1	10

Operating principle

The multifunction device is obtained by coupling a dirt separator and a cartridge strainer arranged in series.
The water circulating in the system flows, in sequence, first through the dirt separator and then through the cartridge strainer.
The dirt separator separates the impurities contained in the water by means of the action of the internal element.
Ferrous impurities are also trapped inside the body of the device thanks to the action of the two magnets inserted in a special removable outer ring.
The first passage through the dirt separator makes it possible to separate a high percentage of the impurities in the circulating water, down to minimal particle sizes. The cartridge strainer separates impurities by means of mechanical selection of the particles in accordance with their size, by means of a special metal mesh.
All the particles with diameter bigger than the mesh size are automatically stopped and separated, **with maximum separation efficiency at the first passage**.



UNDER-BOILER MAGNETIC FILTER

5459 CALEFFI XS®

tech. broch. 01357

Under-boiler magnetic filter.
Brass body. Chrome plated.
Connections: 3/4" M x 3/4" F.
Max. working pressure: 3 bar.
Temperature range: 0–90 °C.
PATENT PENDING.

Code			
545900	3/4" M x 3/4" F captive nut	1	10

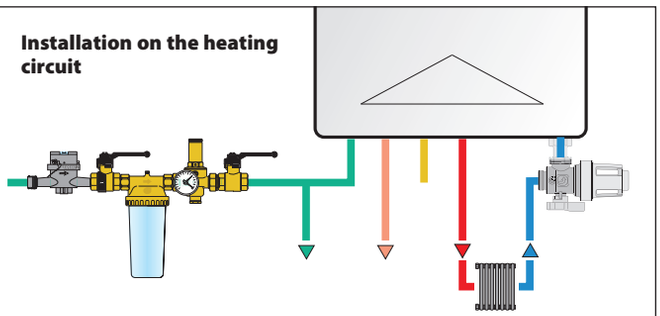
Connection fitting with nut and gasket. Chrome plated.

Code			
F0001297	3/4" F x 3/4" F	1	-

Flushing kit and additives addition.

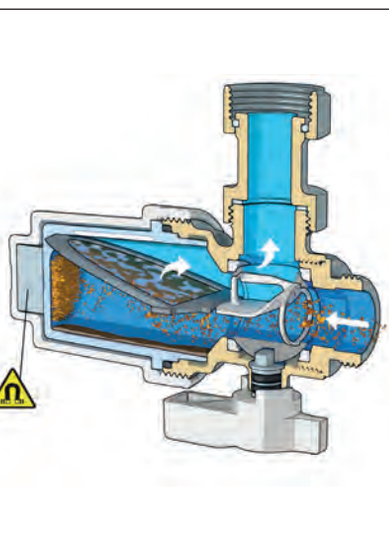
Code			
F0001037		1	-

Installation on the heating circuit

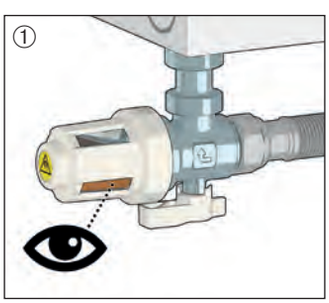


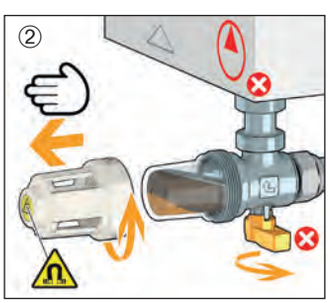
Operating principle

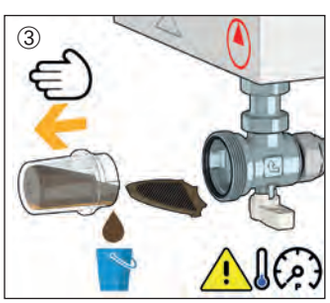
The under-boiler magnetic filter mechanically separates the impurities in heating systems using a triple effect: a steel mesh strainer (mesh size Ø 0,80 mm) for light non-ferrous particles, a powerful neodymium magnet for the ferrous components, and a large calming chamber to collect the heavier particles. The chamber has transparent windows, allowing the user to check whether the internal elements need to be cleaned.

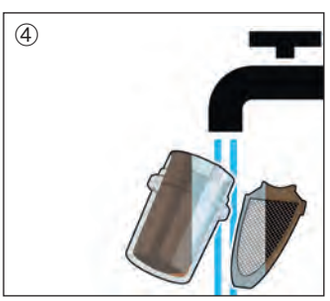


Maintenance





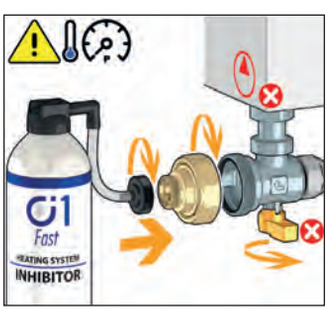


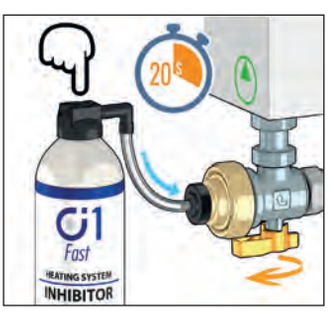


Protection pack

Package consisting of:
- Under-boiler magnetic filter;
- C3 FAST CLEANER;
- C1 FAST INHIBITOR.

To be used with kit code F0001037





Code			
KIT545900		1	-

UNDER-BOILER MAGNETIC FILTER

5459 NEW

tech. broch. 01357

CALEFFI XS®

Under-boiler magnetic filter.
Brass body. Chrome plated.
In-line installation.
Max. working pressure: 3 bar.
Temperature range: 0–90 °C.
PATENT PENDING.

Code			
545910	3/4" M x 3/4" F captive nut	1	10

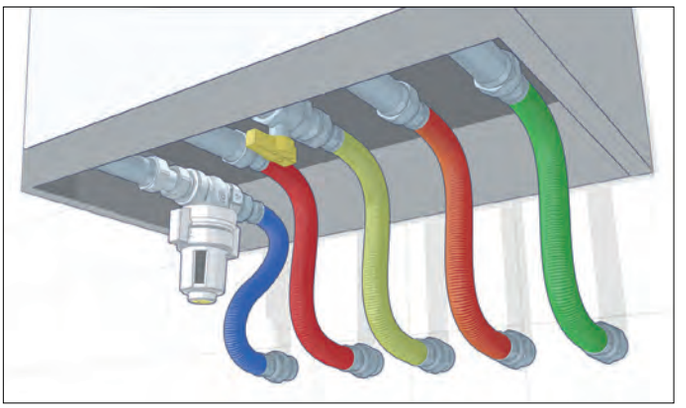
Connection fitting
with nut and gasket.
Chrome plated.

Code			
F0001297	3/4" F x 3/4" F	1	–

Flushing kit and additives addition.

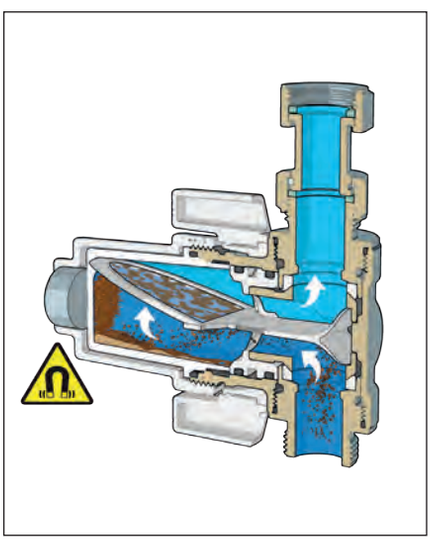
Code			
F0001037		1	–

Installation on the heating circuit



Operating principle

The under-boiler magnetic filter mechanically separates the impurities in heating systems using a triple effect: a steel mesh strainer (mesh size Ø 0,80 mm) for light non-ferrous particles, a powerful neodymium magnet for the ferrous components, and a large calming chamber to collect the heavier particles. The chamber has transparent windows, allowing the user to check whether the internal elements need to be cleaned.



UNDER-BOILER DIRT SEPARATOR STRAINER WITH MAGNET

5450 DIRTMAGMINI®

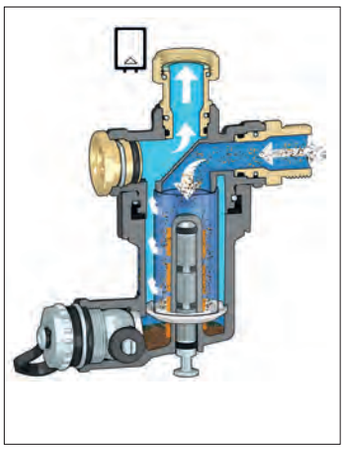
tech. broch. 01348

Under-boiler dirt separator strainer with magnet.
Technopolymer body.
Drain cock with hose connection, chrome plated.
Boiler side connection: 3/4" F with captive nut.
System return side connection: 3/4" M.
Max. working pressure: 3 bar.
Temperature range: 0–90 °C.
PATENT PENDING.

Code			
545000	3/4" F captive nut x 3/4" M	1	5

Operating principle

DIRTMAGMINI® magnetic dirt separator filter separates and captures impurities in the system thanks to the combined action of the strainer and dirt separator.
Ferrous impurities are also captured inside the body, thanks to the action of a removable magnet. Opening a dedicated cock drains the captured impurities.
The medium from the system is slowed down, so that the smaller particles that are not stopped by the filter separate and deposit, and are thereby removed from circulation. The special profile of the bottom allows the impurities to be captured and drained effectively.



5450 DIRTMAGMINI®

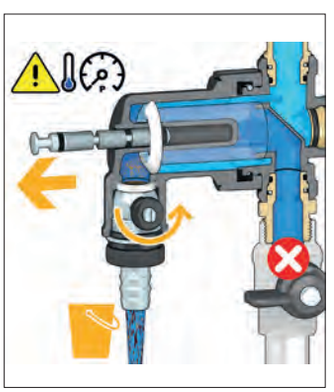
tech. broch. 01348

Under-boiler dirt separator strainer with magnet and shut-off valves.
Technopolymer body.
Drain cock with hose connection.
Connections: Ø 22 mm.
Max. working pressure: 3 bar.
Temperature range: 0–90 °C.
PATENT PENDING.

Code			
545022	Ø 22	1	5

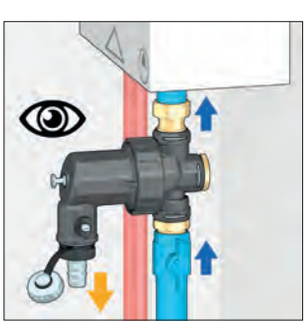
Filtration, dirt separation and self-cleaning

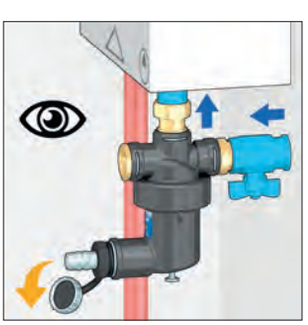
The high performance of the dirt separator is based on the combined action of the filter and dirt separation function. With its mesh size of 800 µm, the filter mesh can capture non-magnetic residues such as sand, soldering residues and residues of sealants such as hemp or PTFE. The magnet, which is not in direct contact with the medium, separates and captures magnetic particles.
It is possible to drain the impurities without disassembling the body, just by removing the magnet and opening the dedicated cock. Only perform this operation when the system is not in operation.
A self-cleaning function activates during draining, using the same system water (which is then collected in a dedicated container and disposed of in accordance with the regulations in force) to clean the filter. For this reason, there is normally no need to open the filter body to clean it manually, although this may be required during extraordinary maintenance.

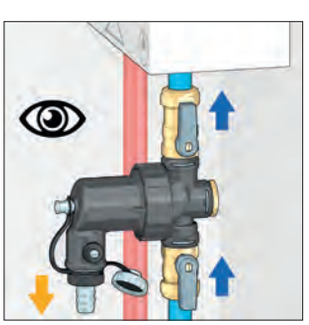


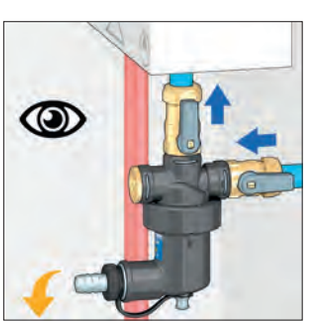
Installation

The magnetic dirt separator filter should be installed in the return circuit to protect the boiler from all the impurities in the system, especially during the start-up phase. It may be installed either vertically or horizontally, with the drain cock always in a suitable position, in accordance with the flow direction indicated by the arrows on the valve body.









DIRT SEPARATOR IN COMPOSITE WITH MAGNET

5453 DIRTMAG®

tech. broch. 01240

Dirt separator **with magnet**.
Technopolymer body.
Female connections and
Ø 22 and Ø 28 mm with compression ends.
Adjustable for horizontal and vertical pipes.
Drain cock with hose connection.
Max. working pressure: 3 bar.
Temperature range: 0–90 °C.

PCT INTERNATIONAL APPLICATION

Threaded connections

Code			Max recommended flow rate [m³/h]		
545305	3/4"		1,3	1	5
545306	1"		1,3	1	5
545325	3/4"	with insulation	1,3	1	5
545326	1"	with insulation	1,3	1	5

Compression ends

Code			
545302	Ø 22	1	5
545303	Ø 28	1	5

Insulation
for dirt separators 5453 series.

Code	Use		
CBN545305	545305/306	1	–

5453 DIRTMAG®

tech. broch. 01240

Dirt separator with **shut-off valves and magnet**.
Technopolymer body.
Female connections.
Adjustable for horizontal, vertical or 45° pipes.
Drain cock with hose connection.
Max. working pressure: 3 bar.
Temperature range: 0–90 °C.

PCT INTERNATIONAL APPLICATION PENDING

Code		Max recommended flow rate [m³/h		
545345	3/4"	1,3	1	5
545346	1"	1,3	1	5
545347	1 1/4"	2,1	1	5

Insulation
for dirt separators 5453 series.

Code	Use		
CBN545345	545345/346/347	1	–

Protection pack

Package consisting of:
- dirt separator with **shut-off valves and magnet**;
- C3 CLEANER;
- C1 INHIBITOR.

Threaded connections

Code			
KIT545345	with dirt separator 3/4"	1	–
KIT545346	with dirt separator 1"	1	-

Compression ends

Code	Conn.		
KIT545342	with dirt separator Ø 22	1	–

Additives dosing

The dirt separator can be used as an access point to inject chemical additives into the circuit for the cleaning and the protection of the system.

DIRT SEPARATOR WITH DOUBLE MAGNET FOR HIGH FLOW RATES

5457

tech. broch. 01388

DIRTMAGPRO®

Dirt separator **with double magnet**
For high flow rates.
Technopolymer body.
Female connections.
Adjustable for horizontal and vertical pipes.
Drain cock with hose connection.
Max. working pressure: 3 bar.
Temperature range: 0–90 °C.

PCT INTERNATIONAL APPLICATION PENDING

Threaded connections

Code		Max recommended flow rate [m³/h]		
545705	3/4″	1,6	1	5
545706	1″	1,8	1	5
545707	1 1/4″	2,6	1	5

Compression ends

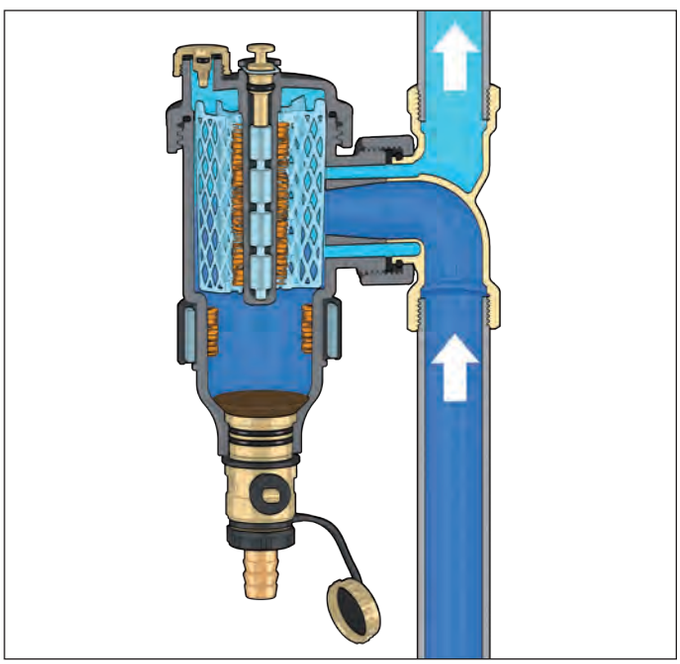
Code		Max recommended flow rate [m³/h]		
545702	Ø 22	1,6	1	5
545703	Ø 28	1,8	1	5

Insulation
for dirt separators 5457 series.

Code	Use		
CBN545305	545705-545706-545702-545703	1	–

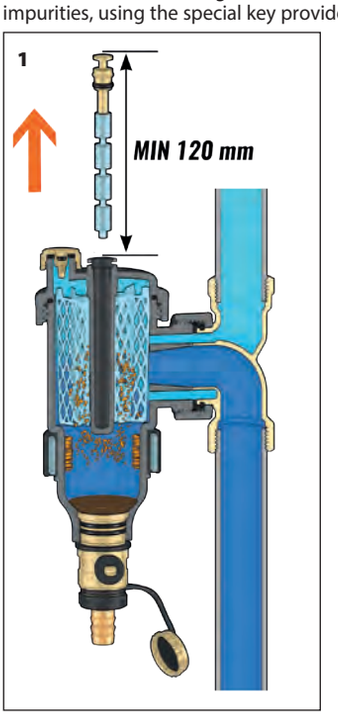
Operating principle

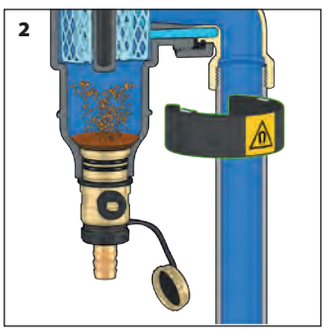
The impurities circulating within the closed circuits of systems, consisting of some sand and dirt particles but mostly ferrous material such as magnetite, are collected in a large collection chamber that does not require frequent cleaning.
The ferrous impurities are captured by the removable magnetic ring and the four magnets positioned in the centre of the flow. These magnets allow greater velocity of the medium, up to 1.6 m/s and, as a result, help to achieve a higher flow rate. Made using a composite material specifically designed for use in air-conditioning systems, this dirt separator is especially versatile as it can be installed on both horizontal and vertical pipes.

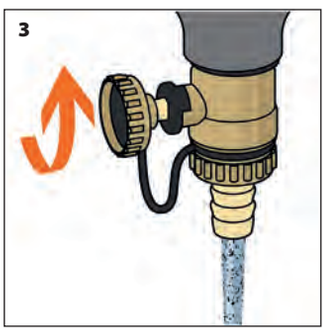


Sludge drain

Switch off the circulator, remove the stem holding the magnets from the top cover (1), remove the ring in which the magnets are housed (2) and drain the impurities, using the special key provided (3).







DIRT SEPARATORS WITH MAGNET

5463 DIRTMAG®

tech. broch. 01137

Dirt separator **with magnet**.
Brass body.
Female connections.
Drain cock with hose connection.
Top connection with plug.
With insulation.
Max. working pressure: 10 bar.
Temperature range: 0–110 °C.
Particle separation rating down to 5 µm.

PCT INTERNATIONAL APPLICATION PENDING

Code			
546315	3/4″	1	–
546316	1″	1	8
546317	1 1/4″	1	–
546318	1 1/2″	1	–
546319	2″	1	–

5466 DIRTMAG®

tech. broch. 01137

Dirt separator **with magnet**.
Epoxy resin coated steel body.
Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.
With insulation.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.
Particle separation rating down to 5 µm.

Code			
546650	DN 50	1	–
546660	DN 65	1	–
546680	DN 80	1	–
546610	DN 100	1	–
546612	DN 125	1	–
546615	DN 150	1	–

5463 DIRTMAG®

depl. 01137

Dirt separator **with magnet**.
Brass body.
Female connections.
Drain cock with hose connection.
Top connection with plug.
Max. working pressure: 10 bar.
Temperature range: 0–110 °C.
Particle separation rating down to 5 µm.

PCT INTERNATIONAL APPLICATION PENDING

Codice			
546305	3/4″	1	6
546306	1″	1	6
546307	1 1/4″	1	5
546308	1 1/2″	1	5
546309	2″	1	5

5466 DIRTMAG®

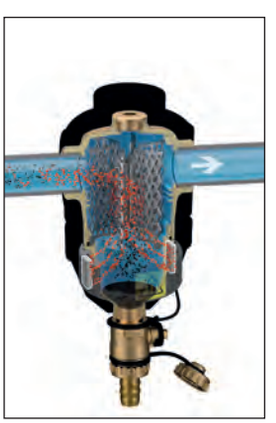
tech. broch. 01137

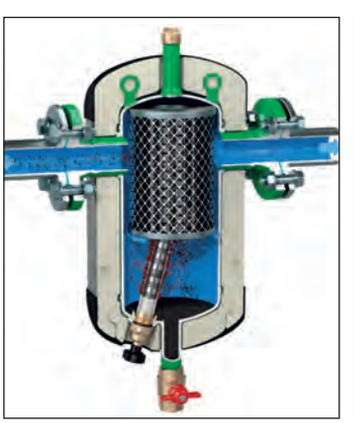
Dirt separator **with magnet**.
Epoxy resin coated steel body.
Flanged connections PN 10.
To be coupled with flat counterflanges EN 1092-1.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.
Temperature probe connection: 1/2″ F.
Particle separation rating down to 5 µm.

Code			
546620	DN 200	1	–
546625	DN 250	1	–
546630	DN 300	1	–

Operating principle

The magnetic dirt separator, in addition to the traditional dirt separation function, is equipped with a patented device to collect ferrous impurities contained within the system water. For the threaded version a specific ring, featuring two slots for housing the magnets, is placed outside the body in the part for collecting the impurities while, for the flanged version, the magnet is inserted in a specific pocket positioned inside the body, extractable for cleaning from magnetic dirt particles.
The ferrous particles are trapped in this way in the collection zone, thus avoiding they return in circulation.





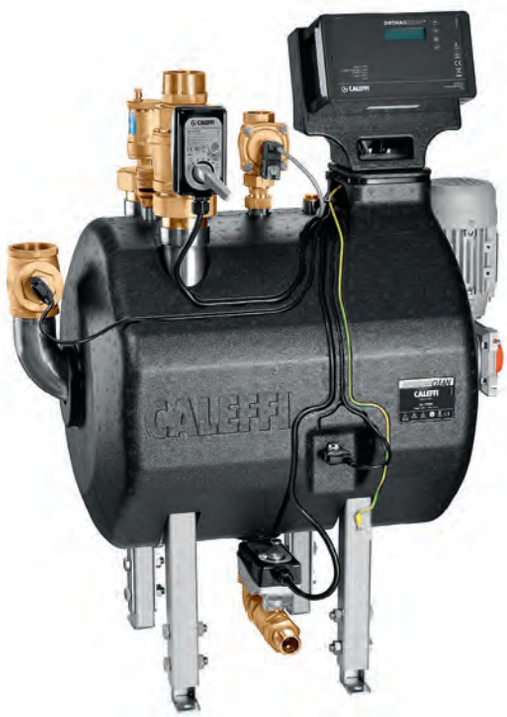
SELF-CLEANING DIRT SEPARATOR FILTER WITH MAGNET

5790
DIRTMAGCLEAN®

tech. broch. 01358

Self-cleaning dirt separator filter with magnet.
Body and support feet in stainless steel AISI 304.
Connections: inlet 2" M with union,
outlet 2" F,
drain 1" M with union,
flushing 1" F.
Max working pressure: 10 bar.
Temperature range: 5–85 °C.
Supply: 230 V.
Particle separation rating down to 2 µm.
Fitted for inserting chemical additives.
Fitted for MODBUS-RTU management.
PATENT PENDING.

CE



Code	Kv (m³/h)		
579000	45	1	–

MANUAL CLEANING DIRT SEPARATOR FILTER WITH MAGNET

5790
DIRTMAGCLEAN®

tech. broch. 01358

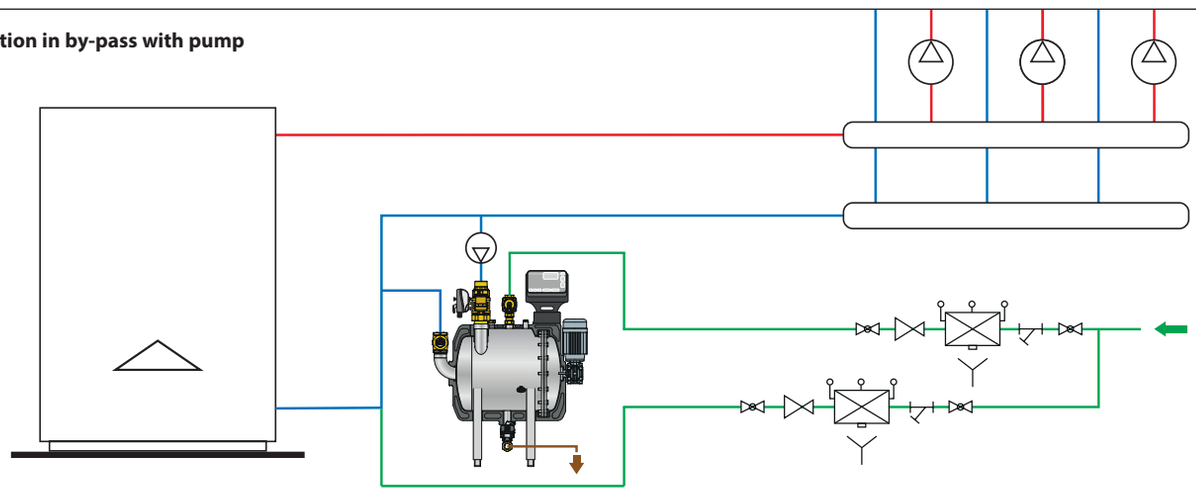
Manual cleaning dirt separator filter with magnet.
Body and support feet in stainless steel AISI 304.
Connections: inlet 2" F,
outlet 2" F,
drain 1" M with union,
flushing 1" F.
Max working pressure: 10 bar.
Temperature range: 5–85 °C.
Particle separation rating down to 2 µm.
PATENT PENDING.

CE

Code	Kv (m³/h)		
579001	45	1	–

Application diagrams 579000/579001 code

Installation in by-pass with pump



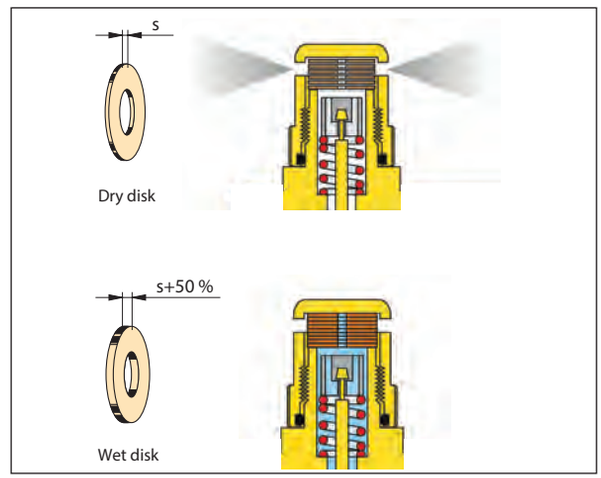
Automatic air vents

	Standard automatic air vents							
Code	***5020***30/40	***5020***31/41	***5020***50/60	***5020***51/61	***5021***30/40	***5021***31/41	***5021***32/42	***5021***33
	MINICAL®							
								
Material	brass	chrome plated brass	brass	chrome plated brass	brass	chrome plated brass	chrome plated brass	brass
Maximum working pressure	10 bar							
Maximum working temperature	120 °C				110 °C			
Automatic shut-off	optional		-		✔			
Hygroscopic cap	optional		✔		optional		✔	-
Anti-suction valve	optional		optional		optional		optional	✔
Connections	3/8″ - 1/2″	3/8″ - 1/2″	3/4″ - 1″	3/4″ - 1″	3/8″ - 1/2″	3/8″ - 1/2″	3/8″ - 1/2″	3/8″

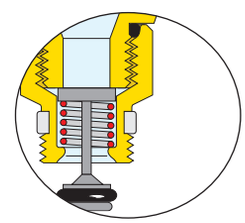
	Compact automatic air vents			
Code	***5024***20/30	***5025***30/33/43	***5026***30/40/41	***5027***30
	ROBOCAL®			
				
Material	brass	brass	brass/chrome plated	brass
Maximum working pressure	10 bar			
Maximum working temperature	115 °C	110 °C	115 °C	110 °C
Automatic shut-off	optional	✔	optional	✔
Hygroscopic cap	-	-	-	-
Anti-suction valve	-	-	optional	optional
Connections	1/4″ - 3/8″	3/8″ - 1/2″	3/8″ - 1/2″	3/8″

	Automatic air vents with high discharge capacity		
Code	***501***500	***551***004	***5022***21/31/41
	MAXCAL®	**DISCALAIR®**	**VALCAL®**
			
Material	brass	brass	chrome plated brass
Maximum working pressure	16 bar	10 bar	10 bar
Maximum working temperature	120 °C	110 °C	120 °C
Automatic shut-off	-	-	optional
Hygroscopic cap	-	optional	optional
Anti-suction valve	-	optional	optional
Connections	3/4″	1/2″	1/4″- 3/8″- 1/2″

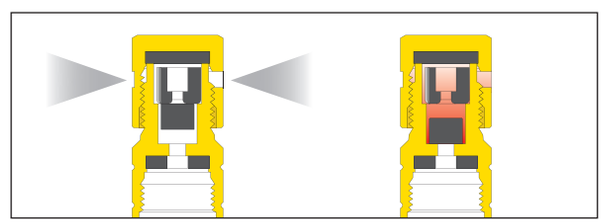
Hygroscopic cap
The discs increase in volume by 50 % when they come into contact with water. This leads to valve closure, in order to avoid potential leaks of water.



Automatic shut-off cock
This facilitates maintenance operations by inhibiting the flow of water when the valve is deactivated, and makes it easier to make sure the air vent device is working.



Anti-suction valve
Installed on the air vent line, it functions as a check valve: it only allows air to be released.
In a situation where the system experiences negative pressure, the internal element closes off the outlet channel to prevent unwanted air from entering.



AUTOMATIC AIR VENTS

STANDARD

5020 MINICAL

tech. broch. 01054

Automatic air vent.
In hot-stamped brass.
Max. working pressure: 10 bar.
Max. discharge pressure: 2,5 bar.
Max. working temperature: 120 °C.

Code			
502030	3/8" M	10	50
502040	1/2" M	10	50

5020 MINICAL

tech. broch. 01054

Automatic air vent.
In hot-stamped brass.
Chrome plated.
Max. working pressure: 10 bar.
Max. discharge pressure: 2,5 bar.
Max. working temperature: 120 °C.

Code			
502031	3/8" M	10	50
502041	1/2" M	10	50

5020 MINICAL

tech. broch. 01054

Automatic air vent.
In hot-stamped brass.
With hygroscopic safety cap.
Max. working pressure: 10 bar.
Max. discharge pressure: 2,5 bar.
Max. working temperature: 120 °C.

Code			
502050	3/4" M	2	50
502060	1" M	2	50

5020 MINICAL

tech. broch. 01054

Automatic air vent.
In hot-stamped brass.
Chrome plated.
With hygroscopic safety cap.
Max. working pressure: 10 bar.
Max. discharge pressure: 2,5 bar.
Max. working temperature: 120 °C.

Code			
502051	3/4" M	2	50
502061	1" M	2	50

5021 MINICAL

tech. broch. 01054

Automatic air vent.
In hot-stamped brass.
With automatic shut-off cock.
Max. working pressure: 10 bar.
Max. discharge pressure: 2,5 bar.
Max. working temperature: 110 °C.

Code			
502130	3/8" M	10	100
502140	1/2" M	10	100

5021 MINICAL

tech. broch. 01054

Automatic air vent.
In hot-stamped brass.
Chrome plated.
With automatic shut-off cock and hygroscopic safety cap.
Max. working pressure: 10 bar.
Max. discharge pressure: 2,5 bar.
Max. working temperature: 110 °C.

Code			
502132	3/8" M	10	100
502142	1/2" M	10	100

5021 MINICAL®

tech. broch. 01054

Automatic air vent.
With automatic shut-off cock and anti-vacuum cap.
Max. working pressure: 10 bar.
Max. discharge pressure: 2,5 bar.
Max. working temperature: 110 °C.

Code			
502133	3/8" M	1	10

5021 MINICAL

tech. broch. 01054

Automatic air vent.
In hot-stamped brass.
Chrome plated.
With automatic shut-off cock.
Max. working pressure: 10 bar.
Max. discharge pressure: 2,5 bar.
Max. working temperature: 110 °C.

Code			
502131	3/8" M	10	100
502141	1/2" M	10	100

AUTOMATIC AIR VENTS

COMPACT

5024 ROBOCAL

tech. broch. 01033

Automatic air vent.
In hot-stamped brass.
Max. working pressure: 10 bar.
Max. discharge pressure: 4 bar.
Max. working temperature: 115 °C.

Code				
502420	1/4″ M		112	–
502430	3/8″ M		1	50

5025 ROBOCAL

tech. broch. 01033

Automatic air vent.
In hot-stamped brass.
With automatic shut-off cock.
Max. working pressure: 10 bar.
Max. discharge pressure: 4 bar.
Max. working temperature: 110 °C.

Code				
502533	3/8″ M		10	100
502543	1/2″ M		10	100

5026 ROBOCAL

tech. broch. 01033

Automatic air vent.
In hot-stamped brass.
Max. working pressure: 10 bar.
Max. discharge pressure: 6 bar.
Max. working temperature: 115 °C.

Code				
502630	3/8″ M		10	50
502640	1/2″ M	Without O-Ring seal	10	100
502641	3/8″ M	Chrome plated	10	100

5027 ROBOCAL

tech. broch. 01033

Automatic air vent.
In hot-stamped brass.
With automatic shut-off cock.
Max. working pressure: 10 bar.
Max. discharge pressure: 6 bar.
Max. working temperature: 110 C.

Code				
502730	3/8″ M		10	100

AUTOMATIC AIR VENTS

HIGH DISCHARGE CAPACITY

501 MAXCAL

tech. broch. 01031

Automatic air vent for heating, cooling and refrigeration.
High discharge capacity.
Brass body and cover, stainless steel internal components.
Max. working pressure: 16 bar.
Max. discharge pressure: 6 bar.
Temperature range: -20–120 °C.

Code				
501500	3/4″ F x 3/8″ F		1	5

551 DISCAL*AIR*®

tech. broch. 01124

High performance automatic air vent.
Brass body.
Female connection.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: 0–110 °C.

Code				
551004	1/2″		1	10

5022 VALCAL

tech. broch. 01054

Automatic air vent.
In hot-stamped brass.
Chrome plated.
Max. working pressure: 10 bar.
Max. discharge pressure: 4 bar.
Max. working temperature: 120 °C.

Code				
502221	1/4″ M		1	25
502231	3/8″ M		1	25
502241	1/2″ M		1	25

END PLUG FOR RADIATORS WITH AUTOMATIC AIR VENT

507 AERCAL

tech. broch. 01032

End plug for radiators
with automatic air vent.
In hot-stamped brass.
Chrome plated.
With hygroscopic safety cap.
With rubber seal.
Max. working pressure: 10 bar.
Max. discharge pressure: 6 bar.
Max. working temperature: 100 °C.

Code			
507611	1" M right	1	25
507621	1" M left	1	25
507711	1 1/4" M right	1	25
507721	1 1/4" M left	1	25

504 AERCAL

tech. broch. 01055

Automatic air vent for radiators.
In hot-stamped brass.
Chrome plated.
With hygroscopic safety cap.
Max. working pressure: 10 bar.
Max. discharge pressure: 2,5 bar.
Max. working temperature: 100 °C.

Code			
504401	1/2" M	1	25
504501	3/4" M	1	25
504611	1" M right	1	25
504621	1" M left	1	25

ACCESSORIES

561

tech. broch. 01054

Automatic shut-off cock.
For automatic air vents 502**.** series.
PTFE seal on thread.
Max. working pressure: 10 bar.
Max. working temperature: 110 °C.

Code			
561230	1/4" x 3/8" M	50	500
561300	3/8" x 3/8" M	10	–
561340	3/8" x 1/2" M	10	–
561400	1/2" x 1/2" M without PTFE seal on thread	10	–

561

tech. broch. 01054

Automatic shut-off cock.
For automatic air vents 5020 and
5022 series.
Chrome plated.
PTFE seal on thread.
Max. working pressure: 10 bar.
Max. working temperature: 110 °C.

Code			
561301	3/8" x 3/8" M	10	–
561401	1/2" x 1/2" M without PTFE seal on thread	10	–

R59720 AQUASTOP

tech. broch. 01032

Hygroscopic safety cap.
For end plugs 507 series.
Chrome plated.

Code		
R59720	1	–

R59681 AQUASTOP

tech. broch. 01054

Hygroscopic safety cap.
For automatic air vents 5020 and
5021 series.

Code		
R59681	1	–

5620 AQUASTOP

tech. broch. 01054

Hygroscopic safety cap.
For automatic air vents
5020, 5021, 5022 and 504 series.
Chrome plated.

Code		
562000	50	–

5621

tech. broch. 01054

Anti-vacuum cap.
For automatic air vents
5020, 5021 and 5022 series.

Code		
562100	100	–

5622

tech. broch. 01033

Anti-vacuum cap.
For automatic air vents
5026 and 5027 series.

Code		
562200	100	–

MANUAL AIR VENTS

505

tech. broch. 01056

Manual air vent for radiators.
Chrome plated.
White POM (acetal resin) knob.
PTFE seal on thread.
Max. working pressure: 10 bar.
Max. working temperature: 90 °C.

Code			
505111	1/8" M	50	–
505121	1/4" M	50	500
505131	3/8" M	50	500

5055

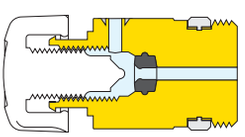
tech. broch. 01056

Manual air vent for radiators.
Rubber seal.
Chrome plated.
White POM (acetal resin) knob.
PTFE seal on thread.
Max. working pressure: 10 bar.
Max. working temperature: 90 °C.
PATENT.

Code			
505511	1/8" M	10	100
505521	1/4" M	10	100
505531	3/8" M	10	100
505541	1/2" M	10	50

Manual air vent for radiators 5055 series

The identifying detail of this valve is an internal seal in a special elastic material which provides a tight seal in relation to limited tightening of the knob and possible temperature changes.



The knob of the valve is shaped so as to be similar in appearance to Caleffi thermostatic valve heads, which enhances the uniformity of the radiator component range.

For all the radiator air vents, the knob should be tightened with the system still cold.

5054

tech. broch. 01056

Manual air vent for radiators.
Chrome plated.
White POM (acetal resin) knob.
Adjustable outlet.
PTFE seal on thread.
Max. working pressure: 10 bar.
Max. working temperature: 90 °C.

Code			
505411	1/8" M	50	–
505421	1/4" M	50	–
505431	3/8" M	50	–
505441	1/2" M	50	–

5080

tech. broch. 01056

Automatic hygroscopic air vent for radiators. Chrome plated.
White POM (acetal resin) knob.
PTFE seal on thread.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code			
508011	1/8" M	25	–
508021	1/4" M	25	–
508031	3/8" M	25	–
508041	1/2" M	25	–

5081

tech. broch. 01056

Spare hygroscopic cartridge for 5080 series.

Code			
508100	12 p.1,5	25	–

DRAIN COCKS

337

Drain cock.
Adjustable outlet.
PTFE seal on thread.
Max. working pressure: 6 bar.
Max. working temperature: 85 °C.
Medium: water, glycol solutions.
Max. percentage of glycol: 30 %.

Code			
337121	1/4"	50	200
337131	3/8"	50	200

337

Drain cock with metal seal.
Adjustable outlet.
PTFE seal on thread.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code			
337221	1/4"	80	400
337231	3/8"	50	250

560

tech. broch. 01056

Drain cock for radiators and wall-mounted boilers.
Chrome plated.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code			
560421 ◆	1/2"	10	–
560000	extractor drain hose	25	–

◆ *One extractor drain hose code 560000 is included in each 10-item package*

Deaerators

Operating principle

The deaerator utilises the combined action of several physics principles. The active part consists of a set of concentric mesh surfaces. These elements create the swirling motion required to facilitate the release of micro-bubbles and their adhesion to the surfaces. The bubbles, fusing with each other, increase in volume until the hydrostatic thrust is sufficient to overcome the force of adhesion to the structure. They then rise towards the top of the device and are expelled through a float-operated automatic air vent valve.

Systems with glycol solutions

It is also useful to use deaerators in systems with antifreeze mixtures of water and glycol.
Water-glycol mixtures are highly viscous and therefore have a strong tendency to trap both air bubbles and micro-bubbles, preventing their elimination.

Sizing

Sizing a deaerator mainly depends on the speed at which the medium flows through the device, since an excessive speed would not allow correct air separation and releasing of the micro-bubbles.

As is known, the medium flow speed depends on the flow rate and the cross section. Remaining within the speed limits specified above therefore means not exceeding certain **maximum** permissible **flow rates** for each size.

WALL-MOUNTED BOILER SYSTEMS

TECHNOPOLYMER DEAERATOR

DISCAL*SLIM*®
551
3/4" – 1"

WALL-MOUNTED BOILER SYSTEMS WITH TECHNICAL ROOM

BRASS DEAERATOR WITH ADJUSTABLE CONNECTIONS

DISCAL®
551
3/4" – 1"

MEDIUM/LARGE SYSTEMS

BRASS DEAERATOR

DISCAL®
551
3/4" – 2"

STEEL DEAERATOR

DISCAL®
551
DN 50–DN 65

LARGE SYSTEMS

STEEL DEAERATOR

DISCAL®
551
DN 50–DN 300

UNDER-BOILER DEAERATOR

551 DISCALSLIM®

tech. broch. 01337

Deaerator. Technopolymer body.
Female connections.
Adjustable for horizontal and vertical pipes.
With hygroscopic safety cap.
Max. working pressure: 3 bar.
Max. working temperature: 110 °C.
PATENT PENDING.

Code			
551805	3/4" F	1	10
551806	1" F	1	10

551 DISCALSLIM®

tech. broch. 01337

Deaerator. Technopolymer body.
Ø 18 and Ø 22 mm with compression ends.
Adjustable for horizontal and vertical pipes.
With hygroscopic safety cap.
Max. working pressure: 3 bar.
Max. working temperature: 110 °C.
PATENT PENDING.

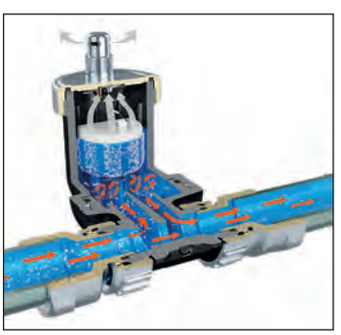
Code			
551801	Ø 18	1	10
551802	Ø 22	1	10

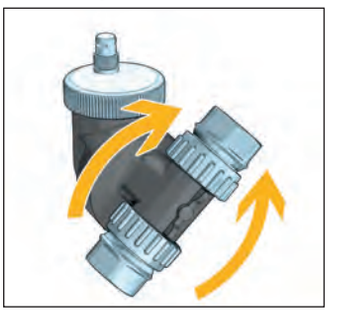
Insulation for deaerators DISCALSLIM® 551 series.

Code			
CBN551805		1	–

Operating principle

Thanks to its special internal configuration, DISCALSLIM® has a very low pressure drop.
The internal shape deviates a part of flow in the deaeration chamber. In the above mentioned chamber the flow slows down and is subdivided by the fins present in secondary chambers which cause appropriate turbulences. Thanks to these mini-vortices, the micro bubbles of air present in the flow are separated, collected in the lower part of the chamber, and after aggregating into larger bubbles, they rise upwards through the drain ducts located aside the float. Once the top of the valve is reached, the aggregate bubbles push the float downwards, causing the air vent to open and therefore to discharge the air.





DEAERATOR

551 DISCAL®

tech. broch. 01060

Deaerator. Brass body.
Female and male connections and
Ø 22 and Ø 28 mm with compression ends.
Adjustable for horizontal and vertical pipes.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: 0–110 °C.

Threaded connections

Code			
551705	3/4" F	1	5
551706	1" F	1	5
551716	1" M	1	5

Compression ends

Code			
551702	Ø 22	1	5
551703	Ø 28	1	5

551 DISCAL®

tech. broch. 01060

Deaerator. Brass body.
Female connections and
Ø 22 mm with compression ends.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: 0–110 °C.

Threaded connections

Code			
551003	3/4" F	1	5

Compression ends

Code			
551002	Ø 22	1	5

551 DISCAL®

tech. broch. 01060

Deaerator. Brass body.
Female connections.
With drain.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: 0–110 °C.

Code			
551005	3/4" F	1	6
551006	1" F	1	6
551007	1 1/4" F	1	6
551008	1 1/2" F	1	6
551009	2" F	1	–

Insulation for deaerators DISCAL® 551 series.

Code	Use		
CBN551005	551005-551006	1	–
CBN551007	551007-551008	1	–
CBN551009	551009	1	–

DEAERATOR

551 DISCAL®

tech. broch. 01060

Deaerator.
Epoxy resin coated steel body.
Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.
With insulation.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range:
0–105 °C (DN 50–DN 100),
0–100 °C (DN 125-DN 150),
0–110 °C (without insulation).

Code				
551052	DN	50	1	–
551062	DN	65	1	–
551082	DN	80	1	–
551102	DN	100	1	–
551122	DN	125	1	–
551152	DN	150	1	–

551 DISCAL®

tech. broch. 01060

Deaerator.
Epoxy resin coated steel body.
Flanged connections PN 10.
To be coupled with flat counterflanges EN 1092-1.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range:
0–110 °C.
Temperature probe connection: 1/2″ F.

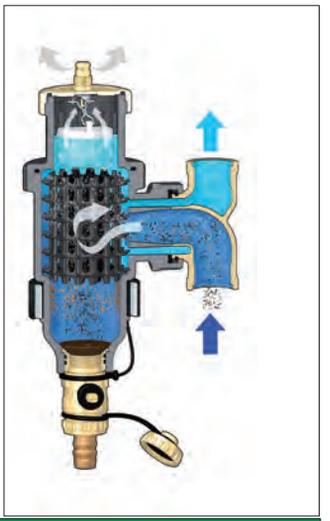
Code				
551200	DN	200	1	–
551250	DN	250	1	–
551300	DN	300	1	–

Deaerators-Dirt separators

These are made by assembling, in a single product, a deaerator and a dirt separator. A single product can therefore be used both to separate air and to separate the impurities present in the system water.

Operating principle

The device makes use of the combined action of the deaerator and the dirt separator. The internal element creates swirling movements that facilitate the release of micro-bubbles and the subsequent creation of bubbles that then rise to the top of the device, from which they are evacuated by means of an automatic air vent with float. Moreover, the impurities in the water, striking against the surfaces of the internal element, are separated and fall to the bottom of the valve body.
Deaerators-dirt separators fitted with a magnet offer greater efficiency in the separation and collection of ferrous impurities. The impurities are captured inside the dirt separator body by the strong magnetic field created by the magnets inserted in the special outer ring.
With respect to the solutions that call for the installation of separate deaerators and dirt separators, the deaerators-dirt separators present the following advantages: they take up less space and require a smaller number of connections, and are therefore ideal for systems where it is not possible to install the two separate components. Nevertheless, two separate devices will always guarantee a higher performance level.



Sizing

Sizing a deaerator-dirt separator mainly depends on the speed at which the medium flows through the device, since an excessive speed would not allow correct separation of air and impurities.

As is known, the medium flow speed depends on the flow rate and the cross section. Remaining within the speed limits therefore means not exceeding certain **maximum** permissible **flow rates** for each size.

HEAT PUMP SYSTEMS

TECHNOPOLYMER DEAERATOR-DIRT SEPARATOR WITH MAGNET

DISCAL*DIRTMAG*®
5464

3/4" – 1"
Ø22 - Ø28

WALL-MOUNTED BOILER SYSTEMS WITH TECHNICAL ROOM - COOLING SYSTEMS

BRASS DEAERATOR-DIRT SEPARATOR WITH MAGNET

DISCAL*DIRTMAG*®
5461

3/4" – 1"

MEDIUM/LARGE SYSTEMS

STEEL DEAERATOR-DIRT SEPARATOR WITH MAGNET

DISCAL*DIRTMAG*®
5461

1 1/2" – 2"

STEEL DEAERATOR-DIRT SEPARATOR

DISCAL*DIRT*®
546

DN 50–DN 65

LARGE SYSTEMS

STEEL DEAERATOR-DIRT SEPARATOR

DISCAL*DIRT*®
546

DN 80–DN 300

DEAERATOR-DIRT SEPARATOR

546 DISCALDIRT®

tech. broch. 01123

Deaerator-dirt separator.
Brass body.
Female connections and
Ø 22 mm with compression ends.
Drain cock with hose connection.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: 0–110 °C.
Particle separation rating down to 5 µm.

Threaded connections

Code			
546005	3/4"	1	–
546006	1"	1	5
546007	1 1/4"	1	–

Compression ends

Code			
546002	Ø 22	1	–

Insulation
for deaerators-dirt separators 5461 and 546 series.

Code	Use		
CBN546002	546005-546006-546105-546106	1	–
CBN546007	546007-546107	1	–

546 DISCALDIRT®

tech. broch. 01123

Deaerator-dirt separator.
Epoxy resin coated steel body.
Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.
With insulation.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range:
0–105 °C (DN 50–DN 100),
0–100 °C (DN 125-DN 150),
0–110 °C (without insulation).
Particle separation rating down to 5 µm.

Code				
546052	DN	50	1	–
546062	DN	65	1	–
546082	DN	80	1	–
546102	DN	100	1	–
546122	DN	125	1	–
546152	DN	150	1	–

546 DISCALDIRT®

tech. broch. 01123

Deaerator-dirt separator.
Epoxy resin coated steel body.
Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.
With insulation.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: 0–110 °C.
Particle separation rating down to 5 µm.

Code				
546200	DN	200	1	–
546250	DN	250	1	–
546300	DN	300	1	–

DEAERATORS-DIRT SEPARATORS WITH MAGNET

5464
DISCAL*DIRTMAG*

Deaerator-dirt separator **with magnet**.
Technopolymer body.
Female connections.
Adjustable for horizontal and vertical pipes.
With hygroscopic safety cap.
Drain cock with hose connection.
Max. working pressure: 3 bar.
Temperature range: 0–90 °C.

PCT INTERNATIONAL APPLICATION PENDING

Threaded connections

Code			
546405	3/4″	1	5
546406	1″	1	5

Compression ends

Code			
546402	Ø 22	1	–
546403	Ø 28	1	–

5461
DISCAL*DIRTMAG*

tech. broch. 01123

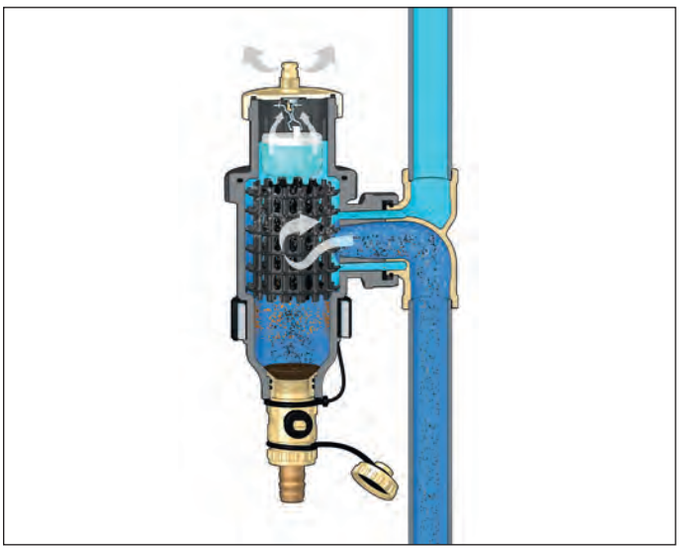
Deaerator-dirt separator **with magnet**.
Brass body.
Female connections.
Drain cock with hose connection.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: 0–110 °C.
Particle separation rating down to 5 µm.

PCT INTERNATIONAL APPLICATION PENDING

Code			
546105	3/4″		–
546106	1″		–
546107	1 1/4″		–

Insulation
for deaerators-dirt separators 5461 and 546 series.

Code	Use		
CBN546002	546005-546006-546105-546106	1	–
CBN546007	546007-546107	1	–



5461
DISCAL*DIRTMAG*

tech. broch. 01123

Deaerator-dirt separator **with magnet**.
Epoxy resin coated steel body.
Female union connections.
With insulation.
Drain cock with hose connection.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: 0–100 °C.
Particle separation rating down to 5 µm.

PCT INTERNATIONAL APPLICATION PENDING

Code			
546118	1 1/2″	1	–
546119	2″	1	–

Domestic hot water treatment - Polyphosphate dispenser

Operating principle

Scaling is the result of calcium and magnesium (the salts that determine water hardness) becoming deposited on the pipe walls, heat exchanger surfaces and control and regulation components. The amount of deposit depends on:
• the water temperature
• the water hardness
• the volume of water used.
Unlike other salts, calcium and magnesium salts become less soluble as temperature increases. For this reason, all systems in which water is heated, especially those used for domestic hot water production, are at risk of scaling.
The parameter to monitor is the total hardness, the sum of the concentration of calcium and magnesium ions responsible for scaling. Calcium and magnesium bicarbonates are chemically balanced with the calcium and magnesium carbonates, water and carbon dioxide. As temperature increases, the soluble bicarbonates become insoluble carbonates, forming limescale and releasing carbon dioxide.

Sodium and potassium polyphosphates (food polyphosphates) inside the container combine with calcium and magnesium ions (in the water) to form a chemical compound similar to limescale but which cannot adhere to pipe surfaces.
A shielding is then formed which prevents the precipitation of calcium and magnesium and the consequent formation of limescale deposits.
The polyphosphates, moreover, get deposited on the surface of the pipes, forming a protective film to protect them from scaling.

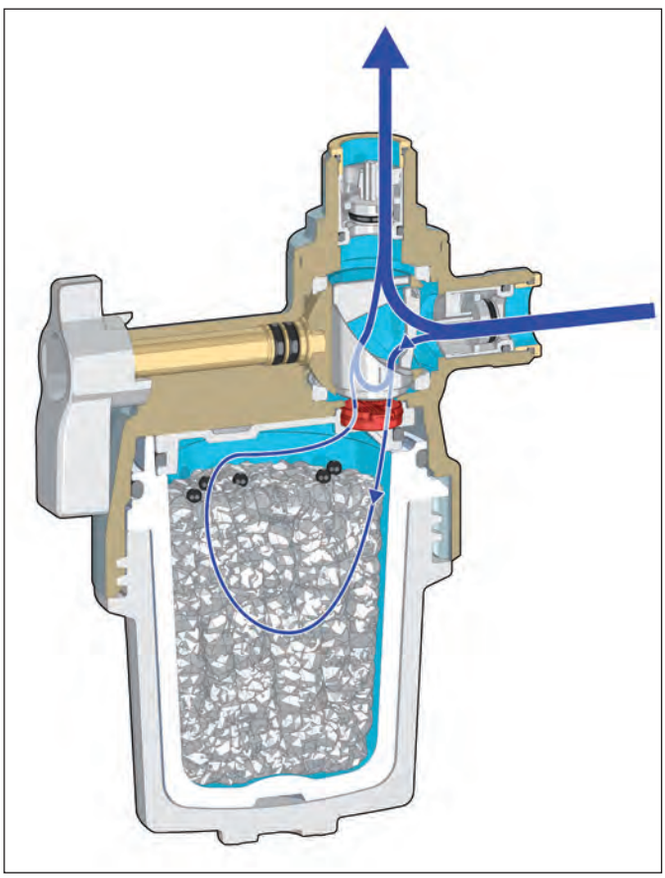
Construction details

Double Venturi proportional dosage
To keep the polyphosphate dosage efficient, dispensing must take place continuously and in a controlled manner, both with the minimum flow rate at the tap and with a variable water flow rate. This dosage maintains the protective film on the pipes and combats the precipitation of salts.
The Caleffi double Venturi proportional dispensing system features full mechanical operation and does not require an electric supply. Part of the inlet water flow passes through the first Venturi and only a minimal part passes through the second Venturi.
This innovative double Venturi proportional dispensing system allows a very precise dosing of polyphosphates, just underneath the average value of 5 mg/l (expressed as P_2O_5).

Check valve
The dispenser has two check valves: one at the inlet, upstream of the shut-off ball, to ensure the non-return of the water treated in the system and one downstream, to limit excessive dispersion of salts inside the pipes in the case of prolonged inactivity.

Air vent
The air vent makes it possible to eliminate air from the container and to lower the pressure inside the device before refilling takes place.

Design
The special white and chrome-plated finish means that the dispenser easily adapts to the domestic environment. Its very small dimensions make it suitable for installation on most wall-mounted boilers, regardless of whether they are installed in new or renovated systems. It can be installed underneath the boiler, next to the 5459 series magnetic filter.



Equipment for domestic use, for the treatment of potable water.

When using the polyphosphate crystal treatment, check current national regulations.
Italy: the use of polyphosphates is classed as a chemical conditioning treatment (as expressed in UNI 8065) which is based on the dispensing of salts in proportion to the amount of cold water passing through the device, without changing the water hardness.

Caleffi XP - 5459 series

Crystal refill duration

Average value: 35–40 m^3 domestic hot water. Data refers to water with an average hardness of 12 °f, pH 7, temperature 20 °C and average domestic hot water usage. The polyphosphate fill status can be monitored easily through the clear windows, which can be used to check the level of the dark-coloured pellets.

We do not recommend heating domestic hot water to over 70 °C, to avoid compromising the properties of the polyphosphates.

UNDER-BOILER POLYPHOSPHATE DISPENSER

5459 CALEFFI XP

tech. broch. 01375

Under-boiler polyphosphate dispenser.
For the treatment of potable water.
Brass body. Chrome plated.
Connections: 1/2" M x 1/2" F captive nut.
Max. working pressure: 6 bar.
Working temperature range: 5–40 °C.
Ambient temperature range: 40 °C.
Average crystal refill shelf life:
35–40 m^3 domestic hot water (*)
Only use genuine refills code F0001503.
Complete with polyphosphate crystal refill.
PATENT PENDING.
(*) data referring to water with an average hardness of 12°f, pH 7, temperature 20 °C and average domestic hot water usage.

Code				
545950	1/2" M x 1/2" F		1	5
545951	1/2" M x 1/2" F	without crystal refill		

Polyphosphate crystal refill.
Complete with spare internal strainer.
For dispenser code 545950, 545951.

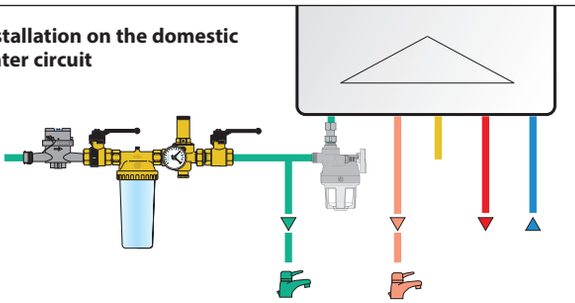
Code			
F0001503	1	10	

Insulation
for polyphosphate dispenser 5459 series.

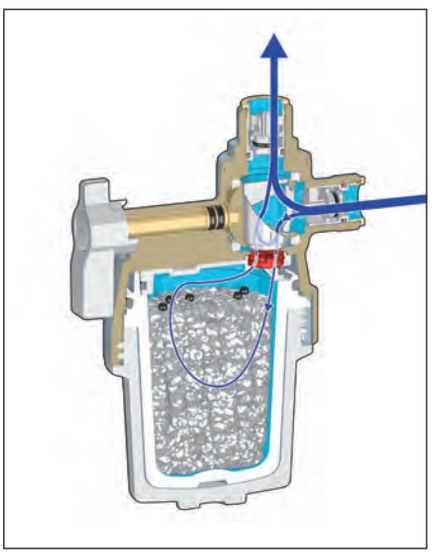
Code			
CBN545950	1	-	

Check current national regulations for polyphosphate water treatment.

Installation on the domestic water circuit



Operating principle



The polyphosphates dispenser, installed directly at the domestic cold water inlet in the boiler, reduces the effects of limescale in the domestic hot water circuit.
The sodium and potassium polyphosphates create a shield which prevents the precipitation of calcium and magnesium and stops limescale deposits from forming.
The dosage of polyphosphates in the water is proportional to the amount of cold water passing through the device.

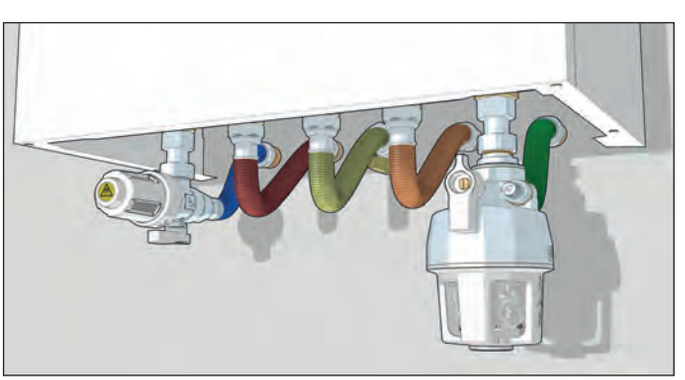
Polyphosphate refill

Polyphosphate crystals are mixed with dark-coloured rubber granules, useful for checking the level of crystals directly through the device's transparent windows.
One refill is sufficient to fill the dispenser completely.
Refill the device when the dark granules can be seen on the bottom of the glass and the crystals are no longer visible.

Double X protection

Package consisting of:
- Under-boiler magnetic filter;
- Under-boiler polyphosphate dispenser.

Code			
KIT5459	1	-	



CHEMICAL WATER TREATMENT

LIQUID CHEMICAL ADDITIVES

5709 C3 CLEANER

tech. broch. 01345

Removes sludge, limescale and debris.
Dose:
0,5 litres of product every 150 litres of water in the system.

Code			
570911	0,5 litres	6	–

5709 C1 INHIBITOR

tech. broch. 01345

Protects against corrosion and limescale.
Dose:
0,5 litres of product every 150 litres of water in the system.

Code			
570912	0,5 litres	6	–

5709 C7 BIOCIDE

tech. broch. 01345

Prevents bacterial and fungal growth.
Dose:
0,5 litres of product every 150 litres of water in the system.

Code			
570913	0,5 litres	6	–

5709 C4 LEAK SEALER

tech. broch. 01345

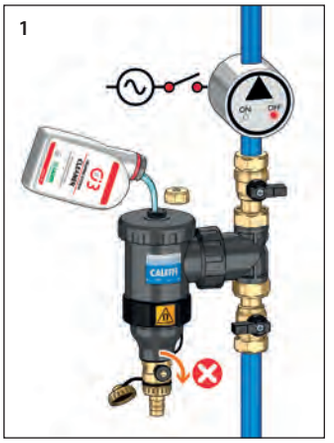
Liquid sealer.
Dose:
0,5 litres of product every 150 litres of water in the system.

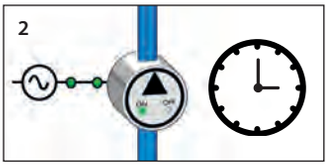
Code			
570914	0,5 litres	6	–

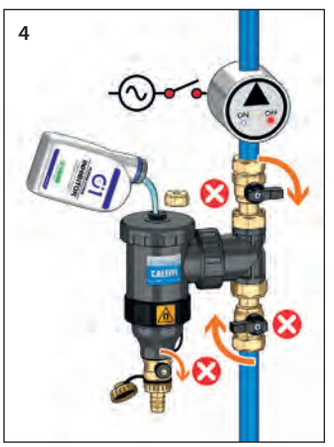
5750

C1 Test Kit.
Kit for metering the quantity of C1 INHIBITOR in the system.

Codice	Conf.	Imballo
575004	1	–







5

Indicate the date C1 FAST INHIBITOR was poured into the system.
Indicate whether C3 FAST CLEANER was used.

CHEMICAL WATER TREATMENT

PERSSURISED CHEMICAL ADDITIVES

BELGAQUA

5709 C3 FAST CLEANER

tech. broch. 01345

Removes sludge, limescale and debris.
Dose:
0,4 litres of product every 150 litres of water in the system.

Code			
570915	0,4 litres	1	4

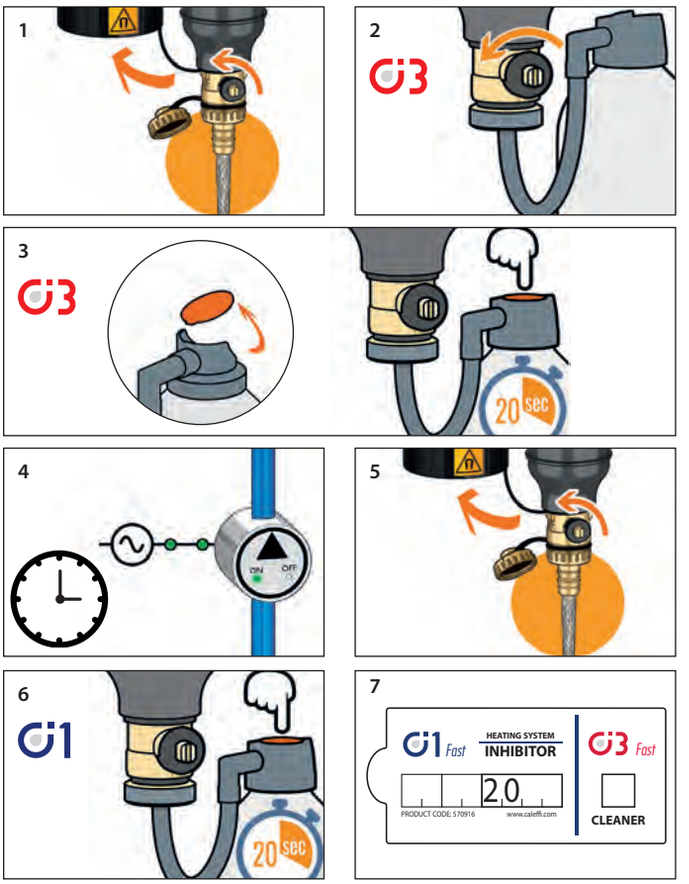
BELGAQUA

5709 C1 FAST INHIBITOR

tech. broch. 01345

Protects against corrosion and limescale.
Dose:
0,4 litres of product every 150 litres of water in the system.

Code			
570916	0,4 litres	1	4



Treatment summary

	System cleaning	*Washing and sanitising*	*Protection against corrosion and limescale*	*Protection against bacterial growth*	*Repair of microfissures*
C3 CLEANER	●	●			
C3 FAST CLEANER	●	●			
C1 INHIBITOR			●		
C1 FAST INHIBITOR			●		
C7 BIOCIDE		●		●	
C4 LEAK SEALER					●

Cleaning and washing treatments: pour into the system and leave to circulate for the required time. Then drain the system to eliminate the impurities collected in the dirt separator.

Protective treatments: use in the system and check once a year.

Treatment "as needed" for minor leaks. Leave in the system.

AUTOMATIC WATER TREATMENT UNIT

580020

tech. broch. 01360

Automatic water treatment unit for softening and demineralisation.
It includes a positive displacement meter with built-in conductivity measuring cell, by-pass regulator, downstream ball shut-off valve, drain cock and air vent cock.

With insulation.
Working temperature range: 4–30 °C.
Max. working pressure: 4 bar.
Max. working temperature: 30 °C.

Code			
580020	1/2"	1	-

580011

tech. broch. 01361

Automatic compact charging unit to EN 1717 standard with **BA type** backflow preventer, shut-off valve, strainer, pressure test ports for controlling the backflow preventer, pressure reducing valve.

For horizontal or vertical installations.
Brass body.
With insulation.
Filling unit setting pressure range: 0,8–4 bar.
Max. working pressure: 10 bar.
Max. working temperature: 65 °C.
Backflow preventer certified to EN 12729 standard.
Pressure reducing valve certified to EN 1567 standard.
PATENT.

Code			
580011	1/2"	1	5

Function
The automatic water treatment unit, installed on the inlet pipe, is used to treat water in the closed circuits of heating and cooling systems.
It is complete with a by-pass regulator to adjust the outlet water hardness at the softening treatment.

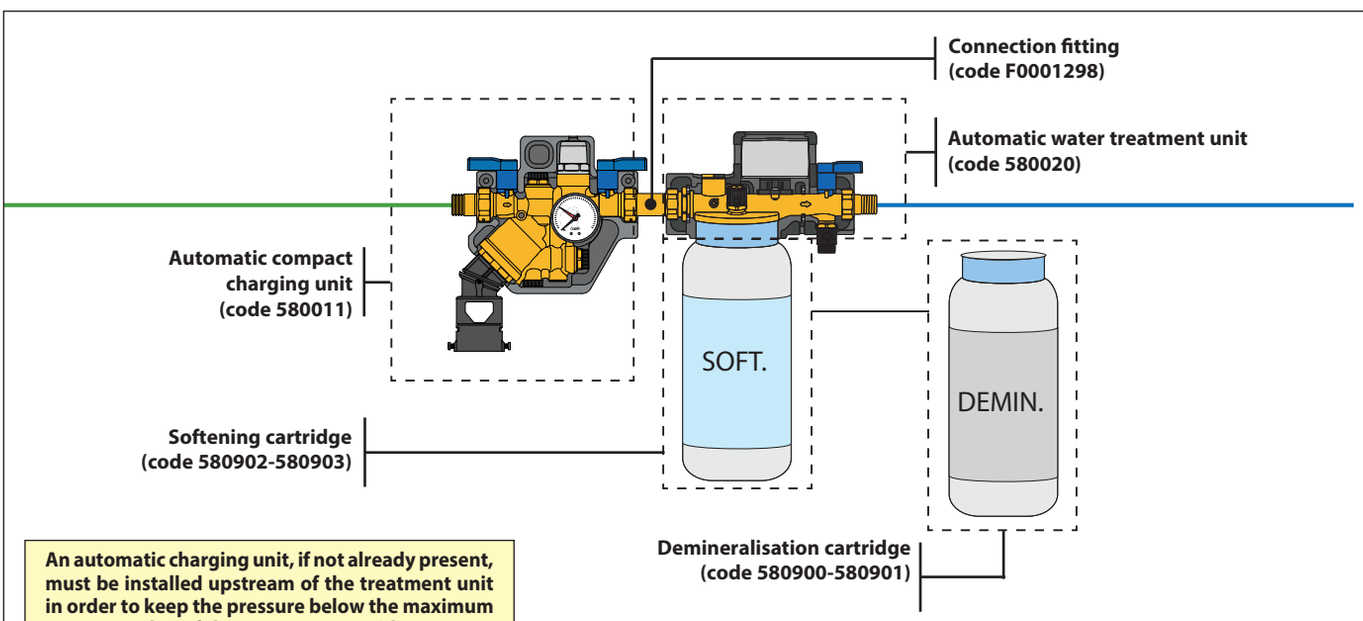
Electronic controller
The unit is equipped with an electronic controller, which is capable of handling water demineralisation and softening treatments alike. It is possible to set parameters and data relating to a specific treatment, directly from the front panel of the controller.
The software will automatically calculate all parameters for correct operation (refer to instruction sheet H0007428).

Backflow prevention reference standards

To avoid water backflow from the heating system, which is polluted and hazardous for human health, **it is indispensable to install an automatic charging unit with a backflow preventer**.
The correct use of hydraulic backflow preventers is governed by the European reference standard EN 1717: 2000 ("Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow").

Connection fitting
with nut and gasket.
For codes 580020 and 580011.

Code			
F0001298	3/4" F x 3/4" F	1	-



An automatic charging unit, if not already present, must be installed upstream of the treatment unit in order to keep the pressure below the maximum pressure value of the treatment cartridge.

SOFTENING CARTRIDGE

580

tech. broch. 01360

Disposable softening cartridge.
Max. working pressure: 4 bar.
Working temperature range: 4–30 °C.
Warehouse storage temperature range: 0–40 °C.
Nominal flow rate: 2 l/min (code 580902),
4 l/min (code 580903).

Code	Dimensioning coefficient (hardness °f)	Dimensioning coefficient (hardness °dH)		
580902	26	14	1	–
580903	43	24	1	–

5750

Hardness measurement kit.
Accuracy: 1°f / 1°dH.

Code		
575003	1	–

Softening cartridge sizing
The volume of treatable water depends on the hardness of the filling water and must be calculated as follows:

$$\text{Volume of treatable water } (m^3) = \frac{\text{Dimensioning coefficient}}{\text{hardness IN - hardness OUT}}$$

hardness IN = raw water hardness (°f/°dH)
hardness OUT = treated water hardness (°f/°dH)

DEMINERALISATION CARTRIDGE

580

tech. broch. 01360

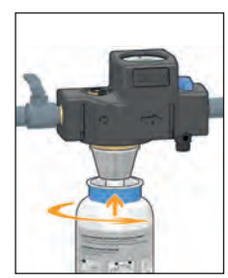
Disposable demineralisation cartridge.
Max. working pressure: 4 bar.
Working temperature range: 4–30 °C.
Warehouse storage temperature range: 0–40 °C.
Nominal flow rate: 2 l/min (code 580900),
4 l/min (code 580901).

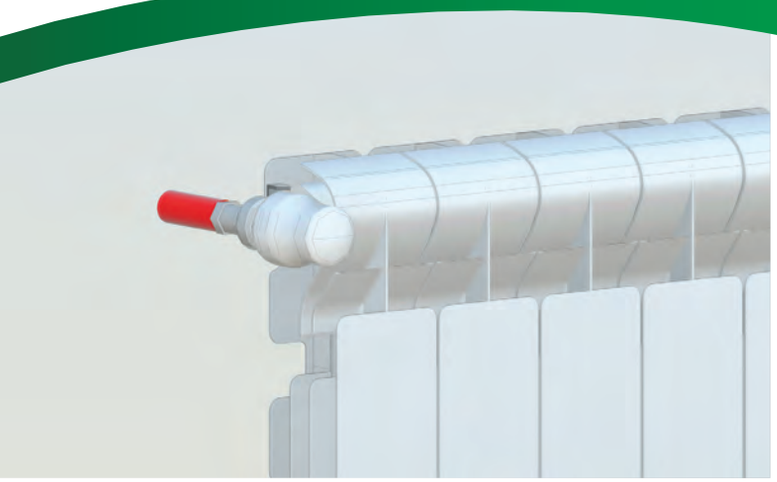
Code	Dimensioning coefficient (residual el. conductivity < 10 µS/cm)	Dimensioning coefficient (residual el. conductivity < 50 µS/cm) (*)		
580900	140	220	1	–
580901	180	280	1	–

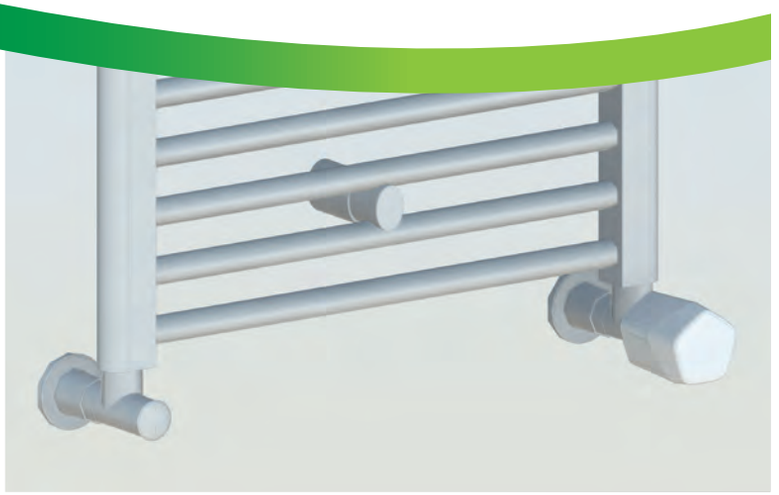
(*) If a full demineralisation treatment is not required (residual conductivity < 10 µS/cm), it is preferable to use the sizing coefficient for residual conductivity < 50 µS/cm.

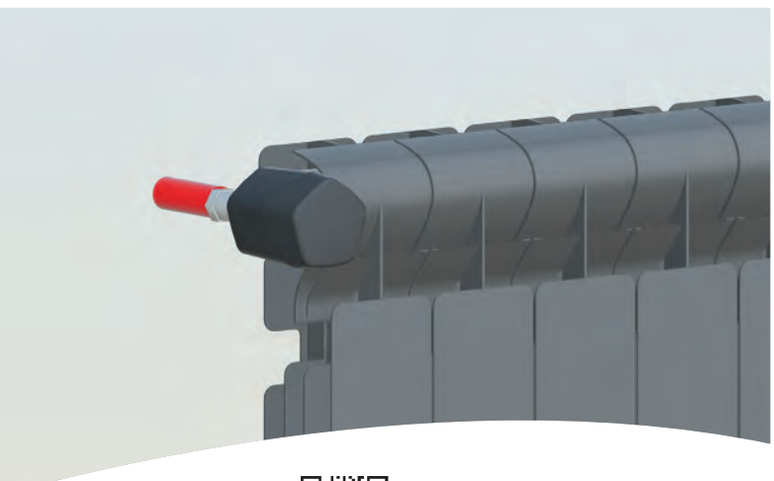
Demineralisation cartridge sizing
The volume of treatable water depends on the electrical conductivity of the filling water, and must be calculated as follows:

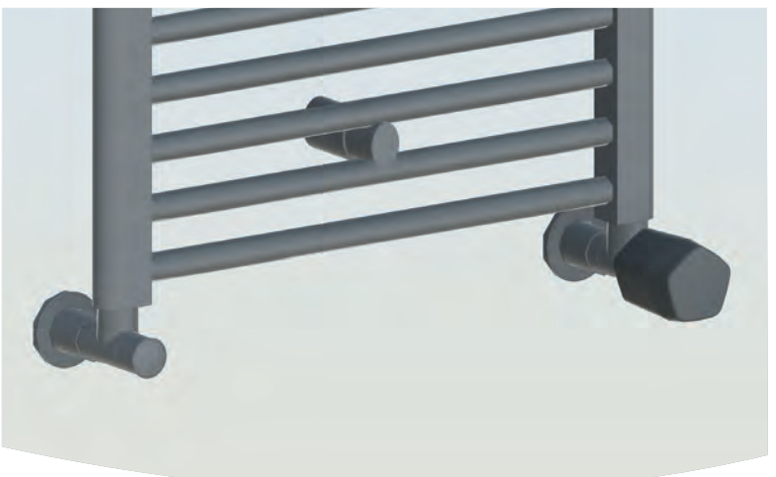
$$\text{Volume of treatable water } (m^3) = \frac{\text{Sizing coefficient}}{\text{Electrical conductivity } (\mu S/cm)}$$











bim.caleffi.com

Convertible radiator and lockshield valves
Convertible radiator valves with pre-setting
HIGH-STYLE convertible radiator valve
Double-angled thermostatic radiator and lockshield valves
Dynamic thermostatic radiator valves
Thermostatic radiator valves
Thermostatic control heads
Remote thermal regulation system for radiators
Wall-covering plates
Thermo-electric actuators
Manual radiator and lockshield valves
One-pipe and two-pipe radiator valves
Drain cock
Fittings
Calibrator for multilayer pipes
Valves for panel radiators

CONVERTIBLE RADIATOR AND LOCKSHIELD VALVES

338

tech. broch. 01009

Angled convertible radiator valve
fitted for thermostatic control heads
and thermo-electric actuators.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h)		
338302	3/8″	23 p.1,5	2,22	10	50
338402	1/2″	23 p.1,5	2,70	10	50
338452	1/2″	3/4″	2,70	10	50

339

tech. broch. 01009

Straight convertible radiator valve
fitted for thermostatic control heads
and thermo-electric actuators.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h)		
339302	3/8″	23 p.1,5	1,35	10	50
339402	1/2″	23 p.1,5	1,79	10	50
339452	1/2″	3/4″	1,79	10	50

401

tech. broch. 01009

Angled convertible radiator valve
fitted for thermostatic control heads
and thermo-electric actuators.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code			Kv (m³/h)		
401302	3/8″		2,22	10	50
401402	1/2″		2,70	10	50
401500	3/4″	without rubber seal	3,36	5	25
401603	1″	without rubber seal	4,47	5	25

402

tech. broch. 01009

Straight convertible radiator valve
fitted for thermostatic control heads
and thermo-electric actuators.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code			Kv (m³/h)		
402302	3/8″		1,35	10	50
402402	1/2″		1,79	10	50
402500	3/4″	without rubber seal	2,58	5	25
402603	1″	without rubber seal	4,43	5	25

342

tech. broch. 01009

Angled lockshield valve.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) fully open		
342302	3/8″	23 p.1,5	2,42	10	50
342402	1/2″	23 p.1,5	3,99	10	50
342452	1/2″	3/4″	3,99	10	50

343

tech. broch. 01009

Straight lockshield valve.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) fully open		
343302	3/8″	23 p.1,5	1,32	10	50
343402	1/2″	23 p.1,5	2,17	10	50
343452	1/2″	3/4″	2,17	10	50

431

tech. broch. 01009

Angled lockshield valve.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code			Kv (m³/h) fully open		
431302	3/8″		2,42	10	50
431402	1/2″		3,99	10	50
431503	3/4″	without rubber seal	4,52	5	25
431603	1″	without rubber seal	5,64	5	25

432

tech. broch. 01009

Straight lockshield valve.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code			Kv (m³/h) fully open		
432302	3/8″		1,32	10	50
432402	1/2″		2,17	10	50
432503	3/4″	without rubber seal	2,58	5	25
432603	1″	without rubber seal	4,81	5	25

CONVERTIBLE RADIATOR VALVES WITH PRE-SETTING

425

tech. broch. 01195

Angled convertible radiator valve
fitted for thermostatic control heads
and thermo-electric actuators.
With pre-setting.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection		
425302	3/8″	23 p.1,5	1	50
425402	1/2″	23 p.1,5	1	50

426

tech. broch. 01195

Straight convertible radiator valve
fitted for thermostatic control heads
and thermo-electric actuators.
With pre-setting.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection		
426302	3/8″	23 p.1,5	1	50
426402	1/2″	23 p.1,5	1	50

421

tech. broch. 01195

Angled convertible radiator valve
fitted for thermostatic control heads
and thermo-electric actuators.
With pre-setting.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code				
421302	3/8″		1	50
421402	1/2″		1	50
421500	3/4″	without rubber seal	1	25

422

tech. broch. 01195

Straight convertible radiator valve
fitted for thermostatic control heads
and thermo-electric actuators.
With pre-setting.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code				
422302	3/8″		1	50
422402	1/2″		1	50
422500	3/4″	without rubber seal	1	25

Pre-setting device

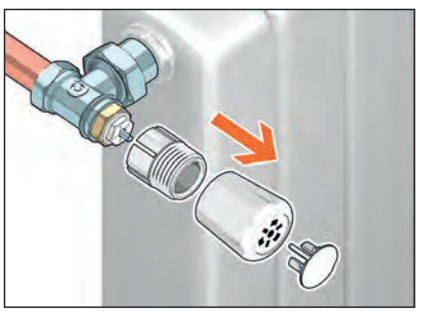
The convertible radiator valves are equipped with an internal device for pre-setting the head loss hydraulic characteristics.
Specific passage cross sections can be selected by means of the control nut, in order to generate the required resistance to the motion of the medium.

Each passage cross section determines a specific Kv value for the creation of the head loss, which corresponds to a setting position on a graduated scale.

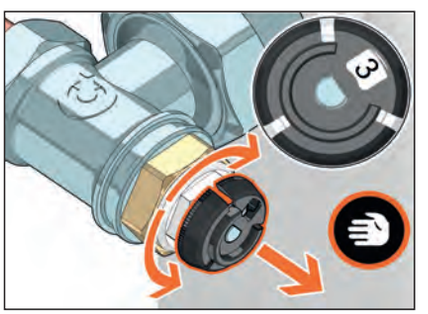
Depending on the position in the system, the valve can be pre-setted so as to obtain an immediate balancing of the hydraulic circuit, valid for both manual and thermostatic operation.

Pre-setting operation

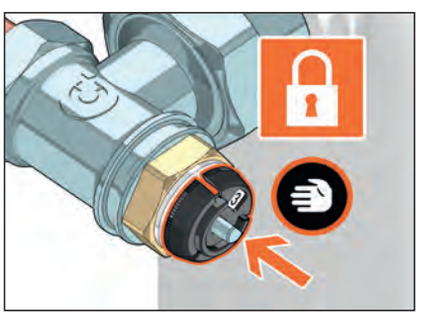
Remove the valve knob.



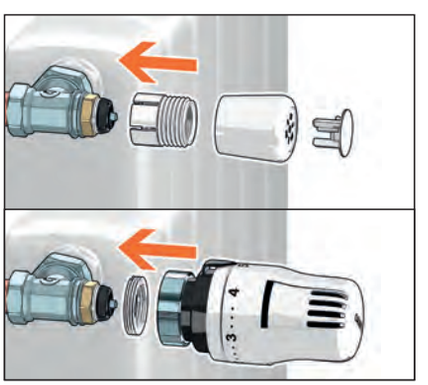
Lift the special control ring nut (supplied in package) of the pre-setting device and turn the control stem to select the required position on the graduated scale.



Lower the ring nut again.



Position the manual knob, thermostatic control head or thermo-electric actuator on the valve.



THERMOSTATIC RADIATOR VALVES

220

tech. broch. 01034

Angled thermostatic radiator valve
fitted for thermostatic and electronic control heads, thermo-electric actuators.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code			Kvs (m³/h)*		
220302	3/8″		2,29	10	50
220402	1/2″		2,39	10	50
220500	3/4″	without rubber seal	3,19	5	25

221

tech. broch. 01034

Straight thermostatic radiator valve
fitted for thermostatic and electronic control heads, thermo-electric actuators.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code			Kvs (m³/h)*		
221302	3/8″		1,05	10	50
221402	1/2″		1,52	10	50
221500	3/4″	without rubber seal	2,20	5	25

222

tech. broch. 01034

Angled thermostatic radiator valve
fitted for thermostatic and electronic control heads, thermo-electric actuators.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kvs (m³/h)*		
222302*	3/8″	23 p.1,5	2,29	10	50
222402	1/2″	23 p.1,5	2,39	10	50

** Without EN 215 certification*

223

tech. broch. 01034

Straight thermostatic radiator valve
fitted for thermostatic and electronic control heads, thermo-electric actuators.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kvs (m³/h)*		
223302*	3/8″	23 p.1,5	1,05	10	50
223402	1/2″	23 p.1,5	1,52	10	50

** Without EN 215 certification*

224

tech. broch. 01034

Reverse thermostatic radiator valve
fitted for thermostatic and electronic control heads, thermo-electric actuators.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code		Kvs (m³/h)*		
224302	3/8″	0,93	1	20
224402	1/2″	1,39	1	20

227

tech. broch. 01034

Reverse thermostatic radiator valve
fitted for thermostatic and electronic control heads, thermo-electric actuators.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kvs (m³/h)*		
227402	1/2″	23 p.1,5	1,39	1	20

4490

Knob for thermostatic radiator valves.
For valves 220, 221, 222, 223, 224, 225, 226, 227 series.

Code		
449010	1	100

***Kvs:** flow rate for the valve equipped with thermostatic control head at the maximum open position.*

028

The EN 215 certification covers the combination of codes 200000/200001 and 201, 204 series thermostatic control heads with valves 220, 221, 222, 223, 224, 225, 226 and 227 series.

DOUBLE-ANGLED THERMOSTATIC RADIATOR AND LOCKSHIELD VALVES

225

tech. broch. 01034

Double-angled thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.
Right-hand version.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code		Kvs (m³/h)*		
225312	3/8″	0,96	1	20
225412	1/2″	1,40	1	20

225

tech. broch. 01034

Double-angled lockshield valve.
Right-hand version.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code		Kvs (m³/h)*		
225352	3/8″	1,05	1	20
225452	1/2″	1,40	1	20

225

tech. broch. 01034

Double-angled thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.
Left-hand version.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code		Kvs (m³/h)*		
225322	3/8″	0,96	1	20
225422	1/2″	1,40	1	20

225

tech. broch. 01034

Double-angled lockshield valve.
Left-hand version.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code		Kvs (m³/h)*		
225362	3/8″	1,05	1	20
225462	1/2″	1,40	1	20

226

tech. broch. 01034

Double-angled thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.
Right-hand version.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kvs (m³/h)*		
226412	1/2″	23 p.1,5	1,40	1	20

226

tech. broch. 01034

Double-angled lockshield valve.
Right-hand version.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kvs (m³/h)*		
226452	1/2″	23 p.1,5	1,40	1	20

226

tech. broch. 01034

Double-angled thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.
Left-hand version.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kvs (m³/h)*		
226422	1/2″	23 p.1,5	1,40	1	20

226

tech. broch. 01034

Double-angled lockshield valve.
Left-hand version.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kvs (m³/h)*		
226462	1/2″	23 p.1,5	1,40	1	20

***Kvs:** flow rate for the valve equipped with thermostatic control head at the maximum open position.*

028

The EN 215 certification covers the combination of codes 200000/200001 and 201, 204 series thermostatic control heads with valves 220, 221, 222, 223, 224, 225, 226 and 227 series.

DYNAMIC THERMOSTATIC RADIATOR VALVES

230 DYNAMICAL®

tech. broch. 01330

Angled dynamic thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.
Chrome plated. For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–95 °C.
PATENT.

PCT INTERNATIONAL APPLICATION PENDING

Code		Flow rate range (l/h)			
230302	3/8″	20–120		10	50
230312	3/8″	10–80		10	50
230402	1/2″	20–120		10	50
230412	1/2″	10–80		10	50
230500	3/4″	20–120	without rubber seal	5	25

231 DYNAMICAL®

tech. broch. 01330

Straight dynamic thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.
Chrome plated. For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–95 °C.
PATENT.

PCT INTERNATIONAL APPLICATION PENDING

Code		Flow rate range (l/h)			
231302	3/8″	20–120		10	50
231312	3/8″	10–80		10	50
231402	1/2″	20–120		10	50
231412	1/2″	10–80		10	50
231500	3/4″	20–120	without rubber seal	5	25

232 DYNAMICAL®

tech. broch. 01330

Angled thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.
Chrome plated. For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–95 °C.
PATENT.

PCT INTERNATIONAL APPLICATION PENDING

Code	Radiator connection	Pipe connection	Flow rate range (l/h)		
232302	3/8″	23 p.1,5	20–120	10	50
232402	1/2″	23 p.1,5	20–120	10	50
232412	1/2″	23 p.1,5	10–80	10	50

233 DYNAMICAL®

tech. broch. 01330

Straight dynamic thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.
Chrome plated. For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–95 °C.
PATENT.

PCT INTERNATIONAL APPLICATION PENDING

Code	Radiator connection	Pipe connection	Flow rate range (l/h)		
233302	3/8″	23 p.1,5	20–120	10	50
233402	1/2″	23 p.1,5	20–120	10	50
233412	1/2″	23 p.1,5	10–80		

234 DYNAMICAL®

tech. broch. 01330

Reverse dynamic thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–95 °C.
PATENT.

PCT INTERNATIONAL APPLICATION PENDING

Code		Flow rate range (l/h)		
234302	3/8″	20–120	5	25
234402	1/2″	20–120	5	25

237 DYNAMICAL®

tech. broch. 01330

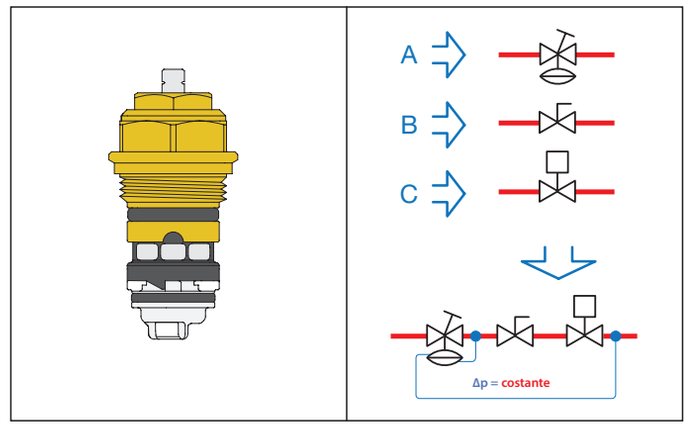
Reverse dynamic thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–95 °C.
PATENT.

PCT INTERNATIONAL APPLICATION PENDING

Code	Radiator connection	Pipe connection	Flow rate range (l/h)		
237302	3/8″	23 p.1,5	20–120	5	25
237402	1/2″	23 p.1,5	20–120	5	25

Function

The DYNAMICAL® valve allows the **automatic dynamic balancing** and **pressure-independent adjustment** of the thermal medium in the radiators of two-pipe heating systems.
The device, in conjunction with a thermostatic, electronic or thermo-electric control, combines different functions in a single component.



A. Differential pressure regulator, which automatically cancels the effect of the pressure fluctuations typical of variable flow rate systems and prevents noisy operation.

B. Device for pre-setting flow rate, which allows direct setting of the maximum flow rate value, thanks to the combination with the differential pressure regulator.

C. Flow rate control depending on the ambient temperature, thanks to the combination with a thermostatic control head. The flow rate control is optimised because it is pressure-independent.

SPARE PARTS

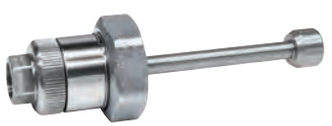
3872

Replacement kit for radiator valves headwork.
Equipped with 20 spare headworks (only for valves without pre-setting)
Only for 3/8" and 1/2" valves.
For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 456 and 4005.

Code		
387201	1	–

3872

Adapting kit for headwork tool code 387200 to new headwork tool code 387201.



Code		
387211	1	–

ΔP MEASURING KIT

230

Kit for Δp measuring in the circuits with dynamic valves.

Code		
230100	1	–

Spare headworks **for convertible and thermostatic radiator valves** 338, 339, 401, 402, 220, 221, 222, 223, 224, 227, 225 and 226 series.
Only for 3/8" and 1/2" sizes.

Code		
F39146	1	–

Spare headworks **for convertible radiator valves with pre-setting** 425, 426, 421 and 422 series.
Only for 3/8" and 1/2" sizes.

Code		
F49290	1	–

Spare headworks **for dynamic thermostatic radiator valves** 230, 231, 232, 233, 234 and 237 series.

Code		
230000	1	–

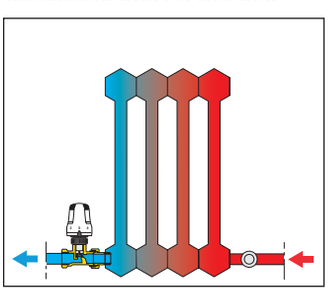
Spare headworks for **reverse flow** for convertible and thermostatic radiator valves 338, 339, 401, 402, 220, 221, 222, 223, 224, 227, 225 and 226 series.
Only for 3/8" and 1/2" sizes.

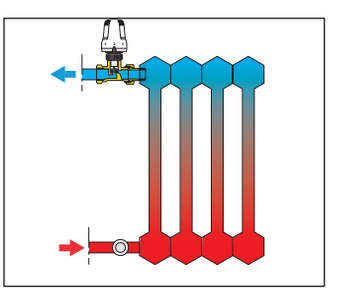
Code		
338000	1	–

Spare headworks for **reverse flow** for convertible radiator valves with pre-setting 421, 422, 425 and 426 series.
Only for 3/8" and 1/2" sizes.
PATENT PENDING.

Code		
421000	1	–

Installation with reverse flow





Spare headwork sealing for convertible radiator valves.

Code
F36073

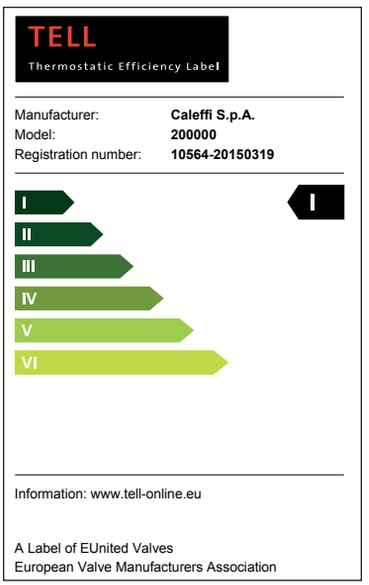
THERMOSTATIC CONTROL HEADS

Thermostatic control heads in I Class

EUnited Valves (The European Valve Manufacturers Association set up in Brussels) has prepared a classification system for products that manage home comfort and water responsibly in the residential field and, more specifically, for thermostatic valves.

Caleffi thermostatic control heads were included in the list of **TELL**-approved (Thermostatic Efficiency Label) products and were placed in the **I Efficiency Class**.

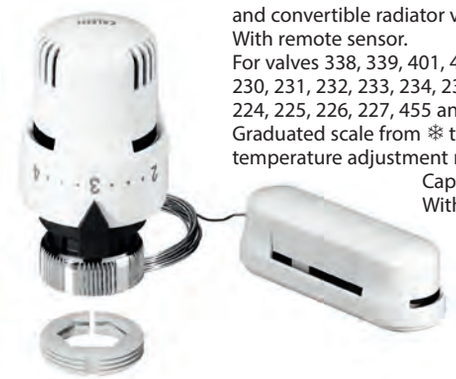
This classification guarantees that thermostatic valves are able to contribute to the energy saving of heating systems.



201

tech. broch. 01034

Thermostatic control head for thermostatic and convertible radiator valves.
With remote sensor.
For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 455 and 456 series.
Graduated scale from ❄ to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C.
Capillary length: 2 m.
With adapter.



Code		
201000	1	10

200

tech. broch. 01034

Thermostatic control head
for convertible radiator valves.
Built-in sensor with liquid-filled element.
For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 455 and 456 series.
Graduated scale from ❄ to 5 corresponding to a temperature adjustment range
from 7 °C to 28 °C.
With adapter.

Code		
200000	10	50

204

tech. broch. 01242

Thermostatic control head
for convertible radiator valves.
Built-in sensor with liquid-filled element.
For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 455 and 456 series.
Graduated scale from ❄ to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C.
With adapter.

Code		
204000	10	50

200

tech. broch. 01034

Thermostatic control head
for convertible radiator valves.
Built-in sensor with liquid-filled element.
For valves 220, 221, 222, 223, 224, 225, 226, 227, 230, 231, 232, 233, 234 and 237 series.
Graduated scale from ❄ to 5 corresponding to a temperature adjustment range
from 7 °C to 28 °C.

Code		
200001	1	10

204

tech. broch. 01242

Thermostatic control head for thermostatic and convertible radiator valves.
With remote sensor.
For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 455 and 456 series.
Graduated scale from ❄ to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C.
Capillary length: 2 m.
With adapter.

Code		
204100	1	10

THERMOSTATIC CONTROL HEADS

202

tech. broch. 01009

Thermostatic control head for radiator valves.
Built-in sensor with liquid-filled element.
With LCD type ambient temperature indicator.
For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 455 and 456 series.
Graduated scale from ❄ to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C.
Room temperature indicator range: 16–26 °C.
With adapter.
PATENT.

Visibility with sufficient lighting

Room temperature indicator
The room temperature indicator is a LCD type. It gets green coloured in correspondence with the actual room temperature reading.
A particular pivoting system keeps the indicator always in vertical position, thus allowing its optimal visualization.

Code			
202000		1	5

203

tech. broch. 01034

Thermostatic control head for thermostatic and convertible radiator valves;
with contact probe,
for medium temperature limiting.
For valves 220, 221, 222, 223, 224, 225, 226, 227, 338, 339, 401, 402 and 455 series.
Pre-set temperature scale.
Capillary length: 2 m.

Code	Temperature range		
203502	20–50 °C	1	25
203702	40–90 °C	1	–

472

Thermostatic control head with remote adjusting knob, liquid-filled element.
For valves 220, 221, 222, 223, 224, 225, 226, 227 series (direct coupling).
For valves 338, 339, 401, 402, 455 series (coupling with adapter).
Temperature range: 6–28 °C.
Capillary length: 2 m.

Code		
472000	1	5

ACCESSORIES FOR THERMOSTATIC CONTROL HEADS

209

tech. broch. 01034

Tamper-proof anti-theft cap
for use in public places.
For thermostatic control heads 200, 204, 202 and 205 series.
To be used with speciale allen key code 209001.

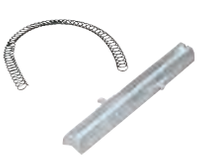
Code		
209000	1	10

209

tech. broch. 01034

Special allen key for tamper-proof anti-theft cap.
To be used with tamperproof cap 209 series.

Code		
209001	1	10



475

Contact probe mounting bracket.
For thermostatic control heads 203 series.

Code		
475001	1	–

475

Probe pocket.
For thermostatic control heads 203 series.

Code			
475002	for code 203502	1	–
475003	for code 203702	1	–

CALEFFI CODE

REMOTE THERMAL REGULATION SYSTEM FOR RADIATORS

215

tech. broch. 01366

Comfort control

Wireless electronic control for thermostatic or convertible radiator valves.
Operates through Gateway, Gateway PRO, APP Caleffi **CODE®** and front buttons.
Built-in temperature sensor.
Radio communication: RF 868 MHz.
Quick-coupling installation with adapter.
Battery electric supply: 2 x AA batteries 1,5 V (in package).
Compatible with rechargeable batteries.
Protection class: IP 30.
Ambient temperature range: 0–55 °C.
White colour RAL 9003.
REGISTERED DESIGN.

CE

Code		
215510	1	–

215

tech. broch. 01366

Sensor

Wireless ambient temperature sensor.
Operates through Gateway, Gateway PRO and APP Caleffi **CODE®**.
Radio communication: RF 868 MHz.
Battery electric supply: 2 x AAA batteries 1,5 V (in package).
Compatible with rechargeable batteries.
Protection class: IP 30.
Ambient temperature range: 0–45 °C.
White colour RAL 9003.
REGISTERED DESIGN.

CE

Code		
215001	1	–

215

tech. broch. 01366

Sensor PRO

Wireless ambient temperature sensor **with boiler contact**.
Operates through Gateway, Gateway PRO and APP Caleffi **CODE®**.
Radio communication: RF 868 MHz.
Battery electric supply: 2 x AAA batteries 1,5 V (in package).
Compatible with rechargeable batteries.
Boiler contact, max. 24 V (DC) 1 A.
Protection class: IP 30.
Ambient temperature range: 0–45 °C.
White colour RAL 9003.
REGISTERED DESIGN.

CE

Code		
215002	1	–

215

tech. broch. 01366

Gateway

Wireless multi-zone temperature regulation gateway.
Operation through Caleffi **CODE®** APP (Wi-Fi or Ethernet network connectivity required). Weekly programmable clock.
Settable time bands: up to 8 per day. Settable zones: up to 64.
Quick functions: Auto - Eco Mode - Holiday - Manual - OFF - Boost - Clean.
Boiler contact, max. 24 V (DC) 1 A.
Compatible with OpenTherm connectivity.
Radio communication: RF 868 MHz, Wi-Fi, BLE.
Powered from USB type C power supply, (supplied in package), input: 100–240 V (AC) - 0,5 A 50/60 Hz, output: 5 V (DC), 2 A.
Class: IV-VIII [Ecodesign Directive].
Protection class: IP 30.
Ambient temperature range: 0–55 °C.
White colour RAL 9003.
REGISTERED DESIGN.

CE

Code		
215100	1	–

215

tech. broch. 01366

Gateway PRO

Wireless multi-zone temperature regulation gateway, **with built-in GSM, UMTS, LTE modem**. Operation through Caleffi **CODE®** APP.
It works with micro SIM (not supplied).
Compatible with MODBUS-RTU connectivity.
Weekly programmable clock.
Settable time bands: up to 8 per day. Settable zones: up to 64.
Quick functions: Auto - Eco Mode - Holiday - Manual - OFF - Boost - Clean.
Boiler contact, max. 24 V (DC) 1 A.
Compatible with OpenTherm connectivity.
Radio communication: RF 868 MHz, Wi-Fi, BLE.
Powered from USB type C power supply, (supplied in package), input: 100–240 V (AC) - 0,5 A 50/60 Hz, output: 5 V (DC), 2 A.
Class: IV-VIII [Ecodesign Directive].
Protection class: IP 30.
Ambient temperature range: 0–55 °C.
White colour RAL 9003.
REGISTERED DESIGN.

CE

Code		
215015	1	–

REMOTE THERMAL REGULATION SYSTEM

The CALEFFI CODE® system guarantees more efficient management of the heating system, giving the user greater savings and the possibility of modifying the programming at any time and from anywhere according to actual needs.
Suitable for managing an independent residence or a unit in an apartment block.

CALEFFI CODE® App

The system is configured and managed exclusively through the CALEFFI CODE® app for smartphones and tablets (Android® or iOS®) with available internet and Bluetooth® connections.
The system can be controlled by two devices simultaneously, with the CALEFFI CODE® App installed on each device.

Scarica su App Store
DISPONIBILE SU Google Play

Compatible with:

amazon alexa

Google Home

CALEFFI CODE

REMOTE THERMAL REGULATION SYSTEM FOR RADIATORS

215

tech. broch. 01366

Comfort control
Wireless electronic control for thermostatic or convertible radiator valves.
Operates through Gateway, Gateway PRO, APP Caleffi **CODE®** and front buttons.
Built-in temperature sensor.
Radio communication: RF 868 MHz.
Quick-coupling installation with adapter.
Battery electric supply: 2 x AA batteries 1,5 V (in package).
Compatible with rechargeable batteries.
Protection class: IP 30.
Ambient temperature range: 0–55 °C.
Black colour RAL 9005.
REGISTERED DESIGN.

CE

Code			
215510 BLK		1	–

215

tech. broch. 01366

Sensor
Wireless ambient temperature sensor.
Operates through Gateway, Gateway PRO and APP Caleffi **CODE®**.
Radio communication: RF 868 MHz.
Battery electric supply: 2 x AAA batteries 1,5 V (in package).
Compatible with rechargeable batteries.
Protection class: IP 30.
Ambient temperature range: 0–45 °C.
Black colour RAL 9005.
REGISTERED DESIGN.

CE

Code			
215001 BLK		1	–

215

tech. broch. 01366

Sensor PRO
Wireless ambient temperature sensor **with boiler contact**.
Operates through Gateway, Gateway PRO and APP Caleffi **CODE®**.
Radio communication: RF 868 MHz.
Battery electric supply: 2 x AAA batteries 1,5 V (in package).
Compatible with rechargeable batteries.
Boiler contact, max. 24 V (DC) 1 A.
Protection class: IP 30.
Ambient temperature range: 0–45 °C.
Black colour RAL 9005.
REGISTERED DESIGN.

CE

Code			
215002 BLK		1	–

Accessories for thermal regulation electronic system 215 series.

Code			
210005	tamper-proof kit for actuators	1	10

215

tech. broch. 01366

Gateway
Wireless multi-zone temperature regulation gateway.
Operation through Caleffi **CODE®** APP (Wi-Fi or Ethernet network connectivity required). Weekly programmable clock.
Settable time bands: up to 8 per day. Settable zones: up to 64.
Quick functions: Auto - Eco Mode - Holiday - Manual - OFF - Boost - Clean.
Boiler contact, max. 24 V (DC) 1 A.
Compatible with OpenTherm connectivity.
Radio communication: RF 868 MHz, Wi-Fi, BLE.
Powered from USB type C power supply, (supplied in package),
input: 100–240 V (AC) - 0,5 A 50/60 Hz,
output: 5 V (DC), 2 A.
Class: IV-VIII [Ecodesign Directive].
Protection class: IP 30.
Ambient temperature range: 0–55 °C.
Black colour RAL 9005.
REGISTERED DESIGN.

CE

Code			
215100 BLK		1	–

215

tech. broch. 01366

Gateway PRO
Wireless multi-zone temperature regulation gateway, **with built-in GSM, UMTS, LTE modem**. Operation through Caleffi **CODE®** APP.
It works with micro SIM (not supplied).
Compatible with MODBUS-RTU connectivity.
Weekly programmable clock.
Settable time bands: up to 8 per day. Settable zones: up to 64.
Quick functions: Auto - Eco Mode - Holiday - Manual - OFF - Boost - Clean.
Boiler contact, max. 24 V (DC) 1 A.
Compatible with OpenTherm connectivity.
Radio communication: RF 868 MHz, Wi-Fi, BLE.
Powered from USB type C power supply, (supplied in package),
input: 100–240 V (AC) - 0,5 A 50/60 Hz,
output: 5 V (DC), 2 A.
Class: IV-VIII [Ecodesign Directive].
Protection class: IP 30.
Ambient temperature range: 0–55 °C.
Black colour RAL 9005.
REGISTERED DESIGN.

CE

Code			
215015 BLK		1	–

Knob for lockshields.

Code			
449300 BLK	black colour	1	–

Adapters for thermostatic and convertibles valves not produced by our company.

For RBM - Heimeier - Tiemme - Watts thermostatic valves with M30x1.5mm connection, use the adapter provided.

Code			
210051	for Giacomini valves (R431TG)	1	–
210052	for FAR valves (1610)	1	–
210053	for Watts (1188UM)	1	–
F0001597	for Danfoss valves	1	–

HIGH-STYLE CONVERTIBLE RADIATOR VALVES

4001

tech. broch. 01140

Pair consisting of:
- angled-convertible radiator valve fitted for thermostatic control head code 200015;
- angled lockshield valve;
- two pipe-covering/wall-covering shells and allen key.

To be used with fittings 437, 447, 681 and 679 series.

White colour.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400101	1/2"	23 p.1,5	2,0	1,92	1	5

4003

tech. broch. 01140

Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
- lockshield valve, double-angled connections;
- two pipe-covering/wall-covering shells and allen key.

Right-hand version.

To be used with fittings 437, 447, 681 and 679 series.

White colour.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400301	1/2"	23 p.1,5	1,27	1,37	1	5

4004

tech. broch. 01140

Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
- lockshield valve, double-angled connections;
- two pipe-covering/wall-covering shells and allen key.

Left-hand version.

To be used with fittings 437, 447, 681 and 679 series.

White colour.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400401	1/2"	23 p.1,5	1,27	1,37	1	5

200

tech. broch. 01140

Thermostatic control head
for designer heating system valves.
Built-in sensor with liquid-filled element.
For valves 4001, 4003, 4004 and 3380 series.
White colour.
Graduated scale from ❄ to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C.
With adapter, tamper-proof cap and special key for tamper-proof cap.

Code		
205005	1	5

200

tech. broch. 01140

Thermostatic control head
for designer heating system valves.
Built-in sensor with liquid-filled element.
For valves 4001, 4003, 4004 and 3380 series.
White colour.
Graduated scale from ❄ to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C.
With adapter.

Code		
205000	1	10

209

tech. broch. 01140

Tamper-proof anti-theft cap for use in public places.
For thermostatic control heads 200 series.
High chrome colour.
To be used with special allen key code 209001.

Code		
209000	1	10

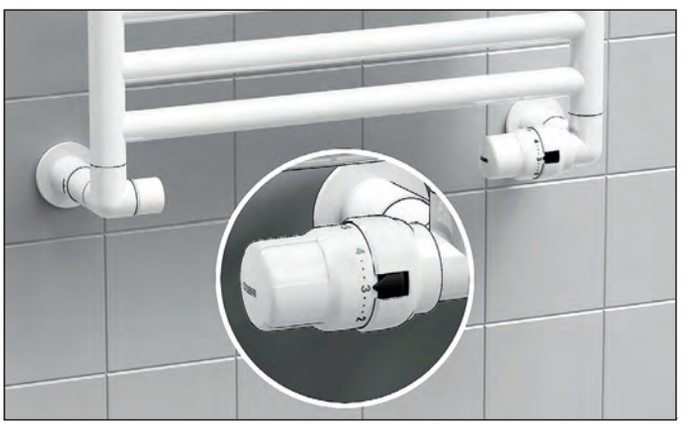
209

tech. broch. 01140

Special allen key for tamper-proof anti-theft cap.
To be used with tamperproof cap 209 series.

Code		
209001	1	10

Example of HIGH-STYLE valve installation for designer heating systems, right-hand version, with thermostatic control head



HIGH-STYLE CONVERTIBLE RADIATOR VALVES WITH CENTRAL CONNECTION

4003

tech. broch. 01140

Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head **205 series**;
- lockshield valve, double-angled connections;
- pipe-covering/wall-covering shell, connections: 50 mm centre distance.

Central connections.
Right-hand version.

To be used with fittings 437, 447, 681 and 679 series.

White colour.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400311	1/2″	23 p.1,5	1,27	1,37	1	5

4004

tech. broch. 01140

Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head **205 series**;
- lockshield valve, double-angled connections;
- pipe-covering/wall-covering shell, connections: 50 mm centre distance.

Central connections.
Left-hand version.

To be used with fittings 437, 447, 681 and 679 series.

White colour.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400411	1/2″	23 p.1,5	1,27	1,37	1	5

215

Comfort control
Wireless electronic control for thermostatic or convertible radiator valves.
Operates through Gateway, Gateway PRO, APP Caleffi **CODE®**
and front buttons.
Built-in temperature sensor.
Radio communication: RF 868 MHz.
Quick-coupling installation with adapter.
Battery electric supply: 2 x AA batteries 1,5 V (in package).
Compatible with rechargeable batteries.

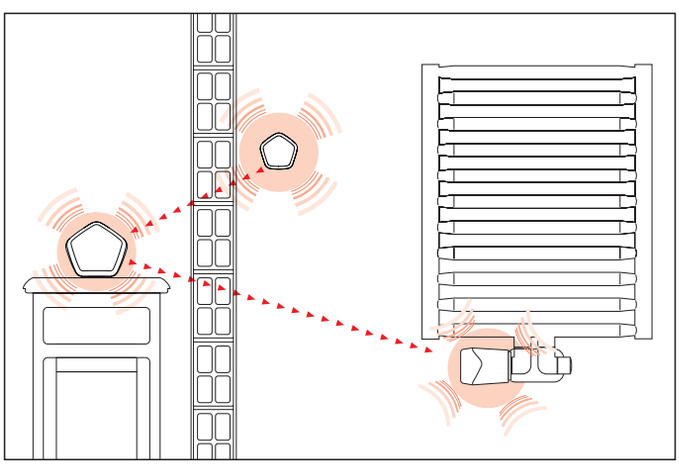
Protection class: IP 30.
Ambient temperature range: 0–55 °C.
White colour **RAL 9003**.
REGISTERED DESIGN.

CE

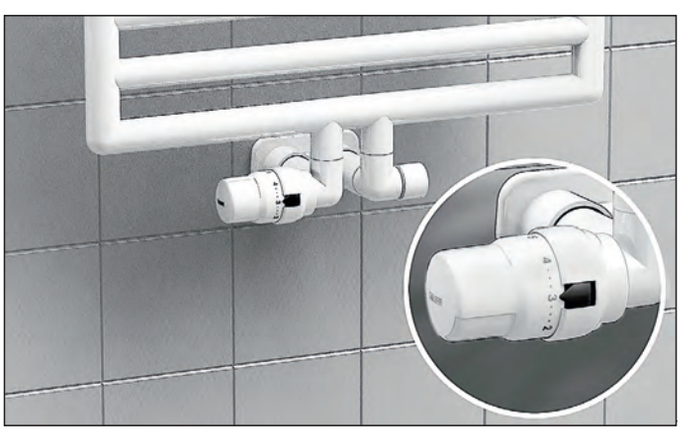
Code		
215510	1	–

For other CALEFFI CODE® components, refer to page 90

CALEFFI CODE® connected thermal regulation system



Example of HIGH-STYLE valve installation for designer heating systems with central connection, left-hand version, with thermostatic control head.



Example of HIGH-STYLE valve installation for designer heating systems with central connection, left-hand version, with electronic control.

HIGH-STYLE CONVERTIBLE RADIATOR VALVE

4001

tech. broch. 01140

Pair consisting of:
- angled-convertible radiator valve fitted for thermostatic control head code 200015;
- angled lockshield valve;
- two pipe-covering/wall-covering shells and allen key.

To be used with fittings 437, 447, 681 and 679 series.

Black colour RAL 9005.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400103	1/2"	23 p.1,5	2,0	1,92	1	5

4004

tech. broch. 01140

Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
- lockshield valve, double-angled connections;
- two pipe-covering/wall-covering shells and allen key.

Left-hand version.

To be used with fittings 437, 447, 681 and 679 series.

Black colour RAL 9005.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400403	1/2"	23 p.1,5	1,27	1,37	1	5

4003

tech. broch. 01140

Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
- lockshield valve, double-angled connections;
- two pipe-covering/wall-covering shells and allen key.

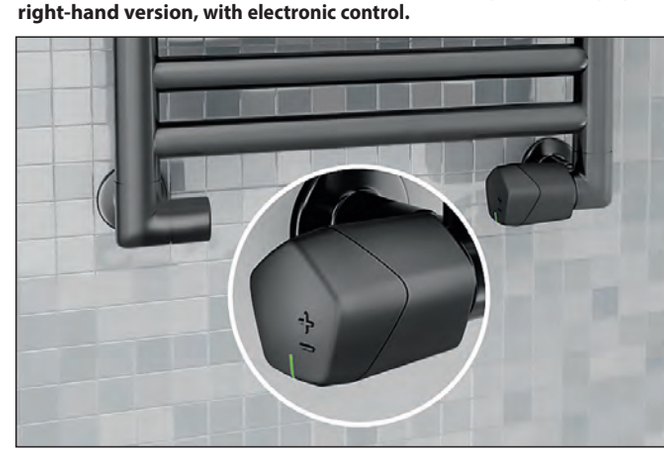
Right-hand version.

To be used with fittings 437, 447, 681 and 679 series.

Black colour RAL 9005.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400303	1/2"	23 p.1,5	1,27	1,37	1	5

Example of HIGH-STYLE valve installation for designer heating systems right-hand version, with electronic control.



HIGH-STYLE CONVERTIBLE RADIATOR VALVES WITH CENTRAL CONNECTION

4003

tech. broch. 01140

Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head **205 series**;
- lockshield valve, double-angled connections;
- pipe-covering/wall-covering shell, connections: 50 mm centre distance.

Central connections.

To be used with fittings 437, 447, 681 and 679 series.

Black colour RAL 9005.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400313	1/2″	23 p.1,5	1,27	1,37	1	5

4004

tech. broch. 01140

Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head **205 series**;
- lockshield valve, double-angled connections;
- pipe-covering/wall-covering shell, connections: 50 mm centre distance.

Central connections.
Left-hand version.

To be used with fittings 437, 447, 681 and 679 series.

Black colour RAL 9005.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400413	1/2″	23 p.1,5	1,27	1,37	1	5

Example of HIGH-STYLE valve installation for designer heating systems with central connection, left-hand version, with electronic control.

215

tech. broch. 013006

Comfort control
Wireless electronic control for thermostatic or convertible radiator valves.
Operates through Gateway, Gateway PRO, APP Caleffi **CODE®**
and front buttons.
Built-in temperature sensor.
Radio communication: RF 868 MHz.
Quick-coupling installation with adapter.
Battery electric supply: 2 x AA batteries 1,5 V (in package).
Compatible with rechargeable batteries.

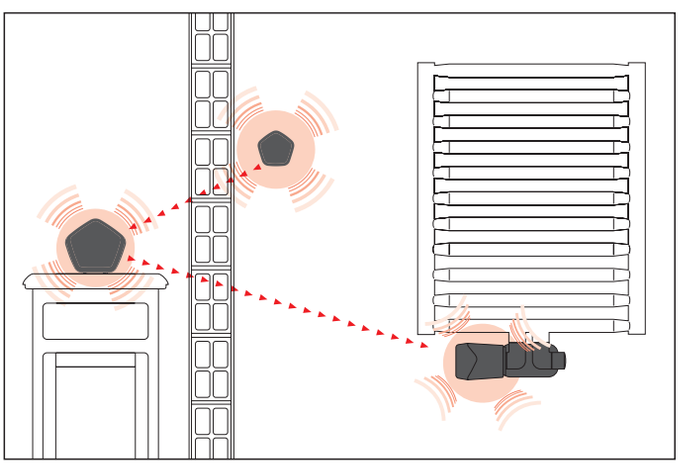
Protection class: IP 30.
Ambient temperature range: 0–55 °C.
Black colour RAL 9005.
REGISTERED DESIGN.

CE

Code		
215510 BLK	1	-

For other CALEFFI CODE® components, refer to page 91

CALEFFI CODE® connected thermal regulation system



HIGH-STYLE CONVERTIBLE RADIATOR VALVES

4001

tech. broch. 01140

Pair consisting of:
- angled-convertible radiator valve fitted for thermostatic control head code 200015;
- angled lockshield valve;
- two pipe-covering/wall-covering shells and allen key.

To be used with fittings 437, 447, 681 and 679 series.

High chrome finish.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400100	1/2"	23 p.1,5	2,0	1,92	1	5

4003

tech. broch. 01140

Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
- lockshield valve, double-angled connections;
- two pipe-covering/wall-covering shells and allen key.

Right-hand version.

To be used with fittings 437, 447, 681 and 679 series.

High chrome finish.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400300	1/2"	23 p.1,5	1,27	1,37	1	5

4004

tech. broch. 01140

Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
- lockshield valve, double-angled connections;
- two pipe-covering/wall-covering shells and allen key.

Left-hand version.

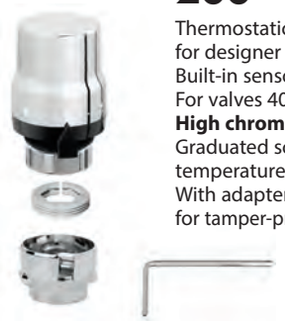
To be used with fittings 437, 447, 681 and 679 series.

High chrome finish.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400400	1/2"	23 p.1,5	1,27	1,37	1	5

200

tech. broch. 01140

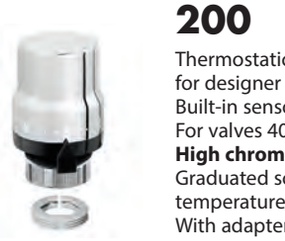


Thermostatic control head
for designer heating system valves.
Built-in sensor with liquid-filled element.
For valves 4001, 4003, 4004 and 3380 series.
High chrome finish.
Graduated scale from ❄ to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C.
With adapter, tamper-proof cap and special key for tamper-proof cap.

Code		
200015	1	5

200

tech. broch. 01140



Thermostatic control head
for designer heating system valves.
Built-in sensor with liquid-filled element.
For valves 4001, 4003, 4004 and 3380 series.
High chrome finish.
Graduated scale from ❄ to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C.
With adapter.

Code		
200013	1	10

209

tech. broch. 01140

Tamper-proof anti-theft cap for use in public places.
For thermostatic control heads 200 series.
High chrome finish.
To be used with special allen key code 209001.

Code		
209004	1	10

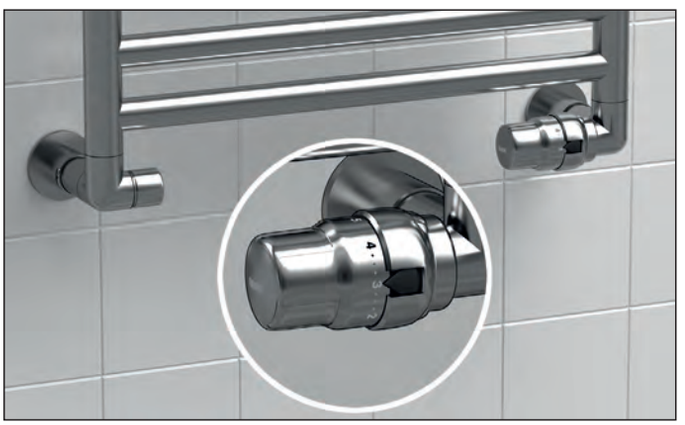
209

tech. broch. 01140

Special allen key for tamper-proof anti-theft cap.
To be used with tamperproof cap 209 series.

Code		
209001	1	10

Example of HIGH-STYLE valve installation for designer heating systems, right-hand version, with thermostatic control head



HIGH-STYLE CONVERTIBLE RADIATOR VALVES

4003

tech. broch. 01140

Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
- lockshield valve, double-angled connections;
- pipe-covering/wall-covering shell, connections: 50 mm centre distance.

Central connections.
Right-hand version.

To be used with fittings 437, 447, 681 and 679 series.

High chrome finish.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400310	1/2"	23 p.1,5	1,27	1,37	1	5

4004

tech. broch. 01140

Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
- lockshield valve, double-angled connections;
- pipe-covering/wall-covering shell, connections: 50 mm centre distance.

Central connections.
Left-hand version.

To be used with fittings 437, 447, 681 and 679 series.

High chrome finish.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
400410	1/2"	23 p.1,5	1,27	1,37	1	5

Example of HIGH-STYLE valve installation for designer heating systems with central connection, left-hand version, with thermostatic control head

CONVERTIBLE RADIATOR VALVES

3380

Pair consisting of:
- convertible radiator valve fitted for thermo-electric actuators and thermostatic control heads;
- lockshield valve.

Angled connections.
High chrome finish.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) valve	Kv (m³/h) lockshield valve (f.o.)		
338040	1/2" M	23 p.1,5	2,70	3,99	1	5

437

Compression fitting, for annealed copper, hard copper, brass, mild and stainless steel pipes. With O-Ring seal. **High chrome finish**.
Max. working pressure: 10 bar.
Temperature range : -25–120 °C.

Code			
437112	23 p.1,5 - Ø 12	1	50
437114	23 p.1,5 - Ø 14	1	50
437115	23 p.1,5 - Ø 15	1	50
437116	23 p.1,5 - Ø 16	1	50

681 DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.
High chrome finish.
Max. working pressure: 10 bar.
Temperature range:
5–80 °C (PE-X)
5–75 °C (Multilayer marked 95 °C).

Code		$Ø_{inside}$	$Ø_{outside}$		
681101	23 p.1,5	9,5–10	12–14	1	50
681124	23 p.1,5	11,5–12	14–16	1	50

383

Fitting for conversion from copper to steel connection.

Code			
383231	23 p.1,5 F x 3/8" F	1	10
383241	23 p.1,5 F x 1/2" F	1	10

CONVERTIBLE RADIATOR AND LOCKSHIELD VALVES WITH PUSH FIT CONNECTION

338

Angled convertible radiator valve
fitted for thermostatic control head
and thermo-electric actuators.
Chrome plated.
Push fit connection for Ø 15 hard
and annealed copper pipes
or for extension code 936415.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

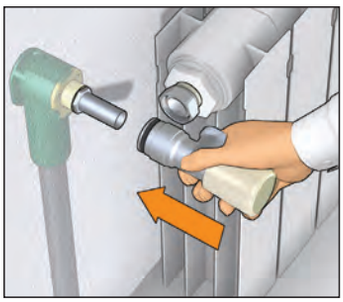
Code	Radiator connection	Pipe connection	Kv (m³/h)		
338415	1/2"	Ø 15	2,70	1	50

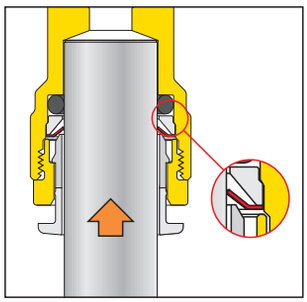
342

Angled lockshield valve.
Chrome plated.
Push fit connection for Ø 15 hard
and annealed copper pipes
or for extension code 936415.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

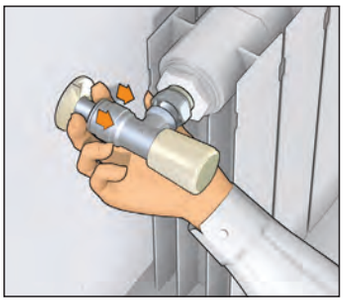
Code	Radiator connection	Pipe connection	Kv (m³/h) fully open		
342415	1/2"	Ø 15	3,99	1	50

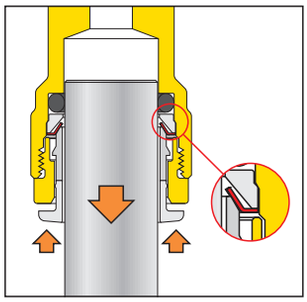
Installation of the valve on the pipe and locking with suitable clamps





Release by pressing on the outer ring





WALL-COVERING PLATES

4499

Single wall-covering plate.
White colour RAL 9010.
For pipes with external diameter
from 12 to 20 mm.

Code		
449900	1	40

4499

Single wall-covering plate.
Chrome plated.
For pipes with external diameter
from 12 to 20 mm.

Code		
449910	1	40

4499

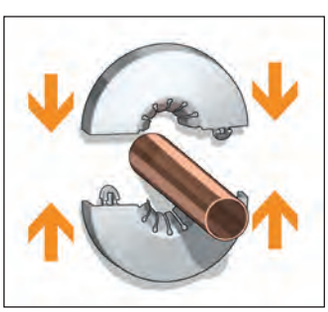
Double wall-covering plate.
White colour RAL 9010.
For pipes with external diameter
from 12 to 20 mm.

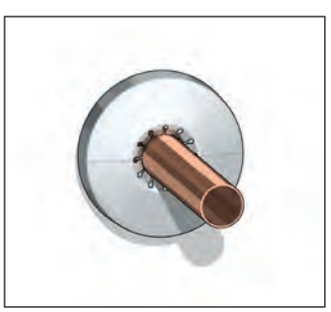
Code	Outlet centre distance		
449901	35 mm	1	50
449902	40 mm	1	50

4499

Double wall-covering plate.
Chrome plated.
For pipes with external diameter
from 12 to 20 mm.

Code	Outlet centre distance		
449911	35 mm	1	50
449912	40 mm	1	50





THERMO-ELECTRIC ACTUATORS

6563

tech. broch. 01142

Thermo-electric actuator.
With manual opening and position indicator.
For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 455 and 456 series.
Normally closed. **With auxiliary microswitch**.
Supply: 230 V (AC) or 24 V (AC)/(DC).
Power consumption: 3 W.
Starting current: ≤ 1 A.
Starting current (656344/54): ≤ 250 mA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Ambient temperature range: 0–50 °C.
Protection class: IP 40.
Cable length: 80 cm.
PATENT.

CE

Code	Supply voltage V			
656312	230		1	10
656314	24		1	10
656302	230	without auxiliary microswitch	1	10
656304	24	without auxiliary microswitch	1	10

With low power consumption

Code	Supply voltage V			
656354	24		1	10
656344	24	without auxiliary microswitch	1	10

6561

tech. broch. 01042

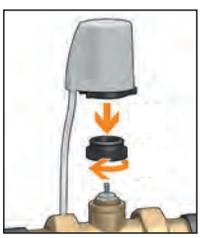
Thermo-electric actuator.
For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 455 and 456 series.
Normally closed. **With auxiliary microswitch**.
Supply: 230 V (AC) or 24 V (AC)/(DC).
Auxiliary microswitch contact rating: 0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 1 A.
Ambient temperature range: 0–50 °C.
Protection class: IP 44 (vertical stem).
Cable length: 80 cm.

CE

Code	Supply voltage V			
656112	230		1	10
656114	24		1	10
656102	230	without auxiliary microswitch	1	10
656104	24	without auxiliary microswitch	1	10

6562

tech. broch. 01198



Thermo-electric actuator.
With opening position indicator.
Quick-coupling installation, with a clip adapter.
For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 455 and 456 series.
Normally closed. **With auxiliary microswitch**.
Supply: 230 V (AC) or 24 V (AC)/(DC).
Auxiliary microswitch contact rating: 0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 1 A.
Ambient temperature range: 0–50 °C.
Protection class: IP 54.
Cable length: 80 cm.

CE

Code	Supply voltage V			
656212	230		1	10
656214	24		1	10
656202	230	without auxiliary microswitch	1	10
656204	24	without auxiliary microswitch	1	10

6564

tech. broch. 01198

Thermo-electric actuator
with low power consumption.
With opening position indicator.
Quick-coupling installation, with a clip adapter.
For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 455 and 456 series.
Normally closed. **With auxiliary microswitch**.
Supply: 230 V (AC) or 24 V (AC)/(DC).
Auxiliary microswitch contact rating: 0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 250 mA.
Ambient temperature range: 0–50 °C.
Protection class: IP 54.
Cable length: 80 cm.

CE

Code	Supply voltage V			
656412	230		1	10
656414	24		1	10
656402	230	without auxiliary microswitch	1	10
656404	24	without auxiliary microswitch	1	10

Adapter for installing thermostatic and thermo-electric actuator with valves 338, 339, 401, 402, 425, 426, 421, 422, 455 and 456 series.

Code		
F36077	1	50

MANUAL RADIATOR AND LOCKSHIELD VALVES

340

tech. broch. 01030

Angled manual radiator valve.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h)		
340302	3/8″	23 p.1,5	2,42	10	50
340402	1/2″	23 p.1,5	3,99	10	50
340452	1/2″	3/4″	3,99	10	50

341

tech. broch. 01030

Straight manual radiator valve.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h)		
341302	3/8″	23 p.1,5	1,32	10	50
341402	1/2″	23 p.1,5	2,17	10	50

411

tech. broch. 01030

Angled manual radiator valve.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code			Kv (m³/h)		
411302	3/8″		2,42	10	50
411402	1/2″		3,99	10	50
411422*	1/2″		3,99	10	50
401500**	3/4″	without rubber seal	3,36	5	25
401603**	1″	without rubber seal	4,47	5	25

** with chrome plated knob*
*** convertible radiator valve*

412

tech. broch. 01030

Straight manual radiator valve.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code			Kv (m³/h)		
412302	3/8″		1,32	10	50
412402	1/2″		2,17	10	50
412422*	1/2″		2,17	10	50
412503	3/4″	without rubber seal	2,58	5	25
402603**	1″	without rubber seal	4,43	5	25

** with chrome plated knob*
*** convertible radiator valve*

342

tech. broch. 01030

Angled lockshield valve.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) fully open		
342302	3/8″	23 p.1,5	2,42	10	50
342402	1/2″	23 p.1,5	3,99	10	50
342452	1/2″	3/4″	3,99	10	50

343

tech. broch. 01030

Straight lockshield valve.
Chrome plated.
For copper, single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h) fully open		
343302	3/8″	23 p.1,5	1,32	10	50
343402	1/2″	23 p.1,5	2,17	10	50

431

tech. broch. 01030

Angled lockshield valve.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code			Kv (m³/h) fully open		
431302	3/8″		2,42	10	50
431402	1/2″		3,99	10	50
431422*	1/2″		3,99	10	50
431503	3/4″	without rubber seal	4,52	5	25
431603	1″	without rubber seal	5,64	5	25

** with chrome plated knob*

432

tech. broch. 01030

Straight lockshield valve.
Chrome plated.
For steel pipe.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code			Kv (m³/h) fully open		
432302	3/8″		1,32	10	50
432402	1/2″		2,17	10	50
432422*	1/2″		2,17	10	50
432503	3/4″	without rubber seal	2,58	5	25
432603	1″	without rubber seal	4,81	5	25

** with chrome plated knob*

ONE-PIPE AND TWO-PIPE RADIATOR VALVES FOR DESIGNER HEATING SYSTEMS

4005

Convertible radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.
High chrome finish.
Factory set for one-pipe systems, adjustable for two-pipe systems.
Right-hand version.
For copper, single and multilayer plastic pipes.
Flow rate to the radiator:
- with manual control knob: 45 %,
- with thermostic control head (proportional band 2K): 30 %.

Outlet centre distance: 40 mm.
Brass probe: 40 cm.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m^3/h) one-pipe	Kv (m^3/h) two-pipe		
400510	1/2"	23 p.1,5	1,6	0,96	1	5

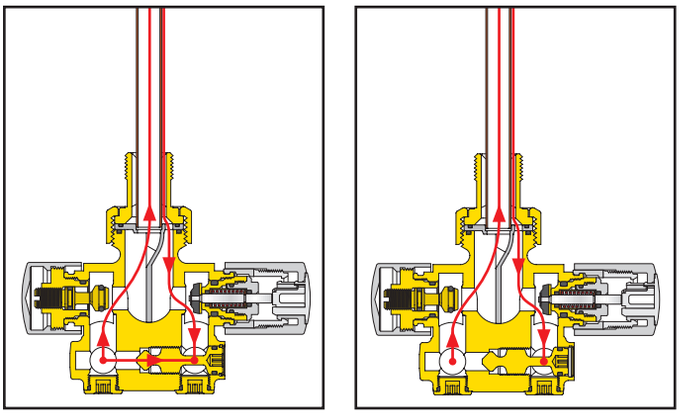
4005

Convertible radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.
High chrome finish.
Factory set for one-pipe systems, adjustable for two-pipe systems.
Left-hand version.
For copper, single and multilayer plastic pipes.
Flow rate to the radiator:
- with manual control knob: 45 %,
- with thermostic control head (proportional band 2K): 30 %.

Outlet centre distance: 40 mm.
Brass probe: 40 cm.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code	Radiator connection	Pipe connection	Kv (m^3/h) one-pipe	Kv (m^3/h) two-pipe		
400520	1/2"	23 p.1,5	1,6	0,96	1	5

One-pipe application ***Two-pipe application***



Flow and return connections can be inverted by means of the rotation of the specific deflector.

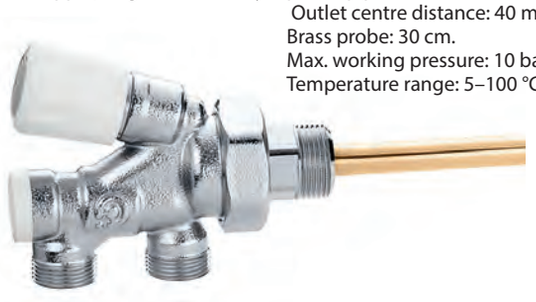
Installation example of the designer heating system radiator valve, vertical probe, left-hand version, with thermostatic control head

ONE-PIPE AND TWO-PIPE RADIATOR VALVES

455

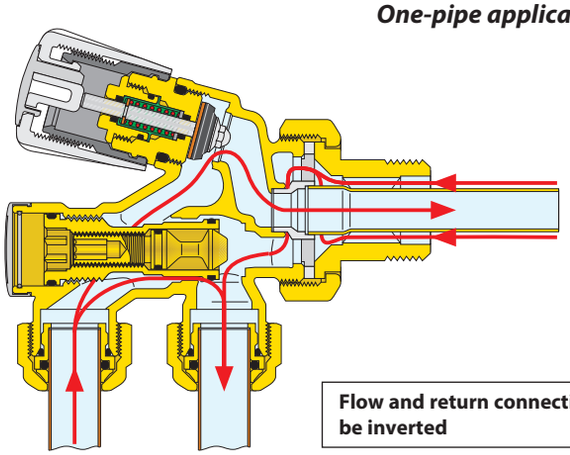
tech. broch. 01051

Convertible radiator valve fitted for thermostatic control heads and thermo-electric actuator.
Chrome plated.
Factory set for one-pipe systems, adjustable for two-pipe systems.
For copper, single and multilayer plastic pipes.
Outlet centre distance: 40 mm.
Brass probe: 30 cm.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.



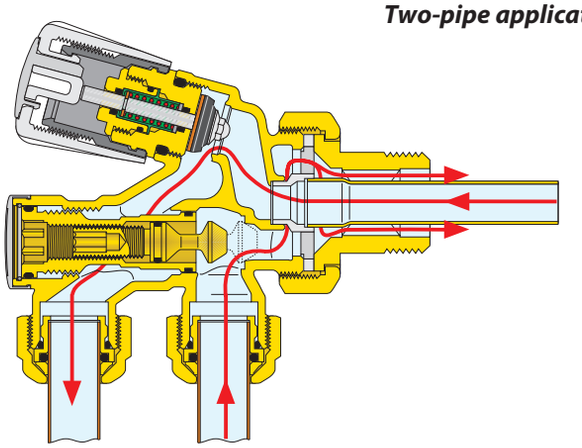
Code	Radiator connection	Pipe connection	Kv (m³/h) one-pipe	Kv (m³/h) two-pipe		
455400	1/2″	23 p.1,5	2,00	1,10	10	–
455500	3/4″	23 p.1,5	2,00	1,10	10	–
455600	1″ right	23 p.1,5	2,00	1,10	10	–
455601	1″ left	23 p.1,5	2,00	1,10	10	–

One-pipe application

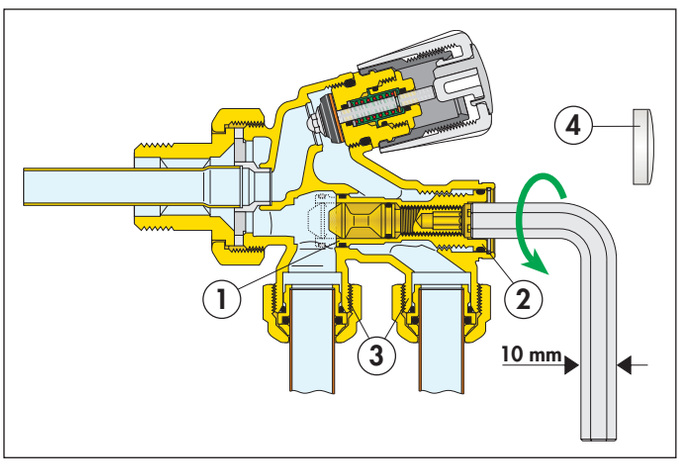


Flow and return connections can be inverted

Two-pipe application



Conversion of valve from one-pipe to two-pipe mode
The valve is converted from one-pipe to two-pipe mode by shutting off the by-pass (1) on the mobile sleeve (2) located above the outlet connections (3).
The valve is provided preconfigured for one-pipe function, e.g. with the sleeve (2) in the forward position and the by-pass (1) open. To convert the valve from the one-pipe factory configuration to the twopipe configuration, remove the plastic cap (4) and fully unscrew the sleeve (2) to the withdrawn position, by turning the outermost 10 mm hexagonal head screw. To revert to the one-pipe configuration, carry out the procedure in reverse order, fully screwing down the sleeve to the forward position.



SPARE PARTS

Tailpiece with probe for 455 series one-pipe convertible radiator valve.

Code	
R49158	1/2″ - Ø 11
R49159	3/4″ - Ø 11
R49160	1″D - Ø 14
R49161	1″S - Ø 14

Nut for 455 series one-pipe convertible radiator valve union.

Code	
R41277/C	1/2″ - 3/4″ - 1″

Jet breaker for 348 and 455 series one-pipe valve.

Code	
R46030	for 348 series
R46042	for 455 series (previous version)

Jet breaker for 455 series one-pipe convertible radiator valve.

Code	
R46072	

VALVES FOR ONE-PIPE SYSTEMS

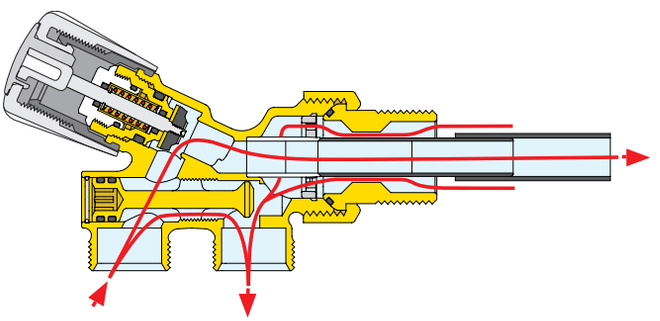
456

tech. broch. 01323

Convertible radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.
For one-pipe systems.
For copper, single and multilayer plastic pipes.
Flow rate to the radiator:
- with manual control knob: 27 %,
- with thermostic control head (proportional band 2K): 20 %.

Outlet centre distance: 35 mm.
PP probe: 33 cm.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

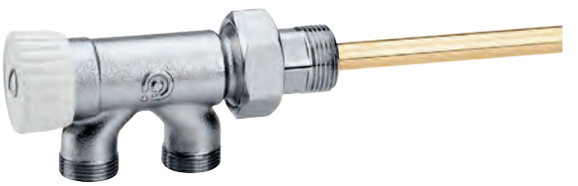
Code	Radiator connection	Pipe connection	Kv (m³/h)		
456400	1/2″	23 p.1,5	1,6	10	–
456500	3/4″	23 p.1,5	1,6	10	–



Flow and return connections can be inverted

4501

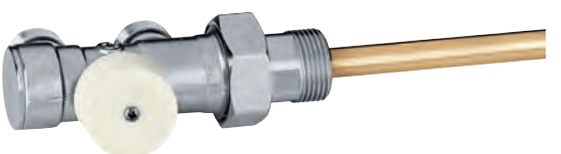
Radiator valve for one-pipe systems.
Chrome plated.
For copper, single and multilayer plastic pipes.
Flow rate to the radiator: 100 %.
Without template and wall-covering plate.
Outlet centre distance: 40 mm.
Brass probe: 30 cm.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.



Code	Radiator connection	Pipe connection	Kv (m³/h)		
450140	1/2″	23 p.1,5	3,20	10	40
450150	3/4″	23 p.1,5	3,70	10	–

348

Radiator valve for one-pipe systems.
Chrome plated.
For copper, single and multilayer plastic pipes.
Flow rate to the radiator: 100 %.
With front adjusting handle.
Without template and wall-covering plate.
Outlet centre distance: 40 mm.
Brass probe: 30 cm.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.



Code	Radiator connection	Pipe connection	Kv (m³/h)		
348400	1/2″	23 p.1,5	3,10	10	–
348500	3/4″	23 p.1,5	3,50	10	–

452

Radiator valve for one-pipe systems.
Chrome plated.
For copper, single and multilayer plastic pipes.
Flow rate to the radiator: 50 %.
For Ø 15 mm outside probe (454 series).
Wall connections.
Complete with template, wall-covering plate and probe connection.
Outlet centre distance: 40 mm.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h)		
452400	1/2″	23 p.1,5	2,20	1	25

ONE-PIPE AND TWO-PIPE RADIATOR VALVES AND ACCESSORIES

452

Radiator valve for two-pipe systems.
Chrome plated.
For copper, single and multilayer plastic pipes.
For Ø 15 mm outside probe (454 series).
Wall connections.
Complete with template, wall-covering plate and probe connection.
Outlet centre distance: 40 mm.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h)		
452401	1/2"	23 p.1,5	1,80	1	25

328

Radiator valve for one-pipe systems.
Chrome plated.
For copper, single and multilayer plastic pipes.
Flow rate to the radiator: 50 %.
For Ø 15 mm outside probe (454 series).
Floor connections.
Complete with probe connection.
Outlet centre distance: 40 mm.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h)		
328400	1/2"	23 p.1,5	2,20	1	20

328

Radiator valve for two-pipe systems.
Chrome plated.
For copper, single and multilayer plastic pipes.
For Ø 15 mm outside probe (454 series).
Floor connections.
Complete with probe connection.
Outlet centre distance: 40 mm.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code	Radiator connection	Pipe connection	Kv (m³/h)		
328401	1/2"	23 p.1,5	1,80	1	20

459

Angled connection for one-pipe valves 328 and 452 series and convertible radiator valves code 339402.
Chrome plated.

Code			
459001	1/2" M x 3/4" F nut	10	–

4496

Wall template.
For valves 4501, 452, 328, 348 and 455 series.
Outlet centre distance: 40 mm.

Code			
449640		10	–

453

Brass pipe extension for probe.
For valves 348, 4501 and 455 series.

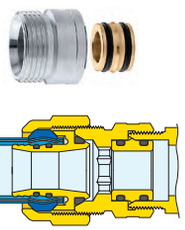
Code			
453020	200 mm (x 348-4501-455400-455500)	10	–
453030	300 mm (x 455600-455601)	10	–

454

Ø 15 mm brass outside probe. Chrome plated.
To be connected with valves 452 and 328 series at the bottom and radiator valves 223, 227, 339 and 341 series.

Code			
454060	600 mm	5	–
454090	900 mm	5	–

ACCESSORIES



383

Connection fitting
with O-Ring seal
for use with 3/4" 679 and 681 series.
Chrome plated.

Code			
383551	3/4" M x 23 p.1,5 F	10	100

382

Reduced tailpiece.
Chrome plated.

Code			
382532	3/4" F nut x 3/8" M	1	–

381

Telescopic union tailpiece with nut
for radiator valves and lockshield valves.
Extension range: 15 mm.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.
Chrome plated.

Code			
381302	1/2" F nut x 3/8" M	1	10
381402	3/4" F nut x 1/2" M	1	10

383

Female fitting - olive coupling.
Chrome plated.

Code			
383151	3/4" M x 23 p.1,5 F	10	–

384

Male fitting - olive coupling.
Chrome plated.

Code			
384031	3/8" M x 23 p.1,5 M	10	–
384041	1/2" M x 23 p.1,5 M	10	–

382

Fitting with 23 p.1,5 captive nut.
Chrome plated.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code			
382000	23 p.1,5 M x 23 p.1,5 F nut	10	–

942

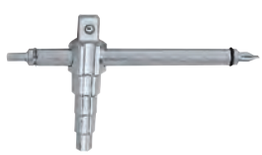
Sleeve.
Chrome plated.

Code			
942551	3/4" M x 3/4"	1	–
942561	3/4" M x 1"	1	–

936

Extension for connection between
elbow fitting 933 series and radiator valves.
Annealed copper, chrome plated.
With shaped rubber seal.
Length: 200 mm
(useful 188 mm).

Code			
936400	1/2" x Ø 16	1	50



3871

Universal key.
Use for 3/8" to 1" union tailpiece.

Code			
387127		1	10

3871

Wrench for 26 and 30 mm hexagonal nuts.
For fittings 437, 447, 679, 680, 681 23 p.1,5
and 3/4" series.

Code			
387100		1	4

560

tech. broch. 01056

Drain cock for radiators
and wall-mounted boilers.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.
Chrome plated.

Code			
560421 ◆	1/2"	10	–
560000	extractor hose connection	25	–

◆ *One extractor hose connection code 560000 is included in each 10-item package.*

FITTINGS 23 p.1,5

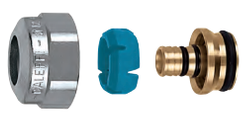
679
DARCAL

Fitting for multilayer plastic pipes
for continuous high temperature use.
Max. working pressure: 10 bar.
Temperature range: 0–95 °C.
Chrome plated.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series (see page 107).

Code			
679014	23 p.1,5 - Ø 14x2	10	100
679024	23 p.1,5 - Ø 16x2	10	100
679025	23 p.1,5 - Ø 16x2,25	10	100
679044	23 p.1,5 - Ø 18x2	10	100
679064*	23 p.1,5 - Ø 20x2	10	100
679065*	23 p.1,5 - Ø 20x2,25	10	100
679066*	23 p.1,5 - Ø 20x2,5	10	100
679067*	23 p.1,5 - Ø 20x2,9 (REHAU pipe)	10	100

** With metal ring*

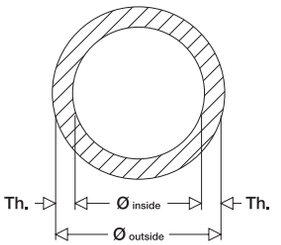


681
DARCAL

Self-adjustable diameter fitting
for single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range:
5–80 °C (PE-X)
5–75 °C (Multilayer marked 95 °C).
Chrome plated.

Code		$Ø_{inside}$	$Ø_{outside}$		
681000	23 p.1,5	7,5– 8	12–14	10	100
681002	23 p.1,5	9 – 9,5	14–16	10	100
681001	23 p.1,5	9,5–10	12–14	10	100
681006	23 p.1,5	9,5–10	14–16	10	100
681015	23 p.1,5	10,5–11	14–16	10	100
681017	23 p.1,5	10,5–11	16–18	10	100
681024	23 p.1,5	11,5–12	14–16	10	100
681026	23 p.1,5	11,5–12	16–18	10	100
681035	23 p.1,5	12,5–13	16–18	10	100
681044	23 p.1,5	13,5–14	16–18	10	100

Example: 681 series fitting selection



Known both the outside and inside diameters (**ex.: 17 mm** and **13 mm**);

or known the outside diameter (**ex.: Øo 17 mm**) and the thickness (**ex.: th. 2 mm**) and considering that:

$Ø_{outside}$ – 2 · th. = $Ø_{inside}$

17 – 2 · 2 = 13 mm

Look within the table for the code matching both diameters:

Code		$Ø_{inside}$	$Ø_{outside}$
681035	23 p.1,5	12,5–13	16–18

447

Pre-assembled compression fitting,
for soft annealed copper, hard copper,
brass, mild and stainless steel pipes.
With O-Ring seal.
Max. working pressure: 10 bar.
Temperature range: -25–120 °C.
Chrome plated.

Code			
447010	23 p.1,5 - Ø 10	100	–
447012	23 p.1,5 - Ø 12	100	–
447014	23 p.1,5 - Ø 14	100	–
447015	23 p.1,5 - Ø 15	100	–
447016	23 p.1,5 - Ø 16	100	–

437

Compression fitting,
for soft annealed copper, hard copper,
brass, mild and stainless steel pipes.
With O-Ring seal.
Max. working pressure: 10 bar.
Temperature range: -25–120 °C.
Chrome plated.

Code			
437010	23 p.1,5 - Ø 10	100	–
437012	23 p.1,5 - Ø 12	100	–
437014	23 p.1,5 - Ø 14	100	–
437015	23 p.1,5 - Ø 15	100	–
437016	23 p.1,5 - Ø 16	100	–

439

Fitting for copper pipe, with gasket.
Chrome plated.
Do not use with valves 232 series.

Code			
439010	23 p.1,5 - Ø 10	100	–
439012	23 p.1,5 - Ø 12	100	–
439014	23 p.1,5 - Ø 14	100	–
439015	23 p.1,5 - Ø 15	100	–
439016	23 p.1,5 - Ø 16	100	–

438

Compression fitting for copper pipe,
with PTFE seal.
Chrome plated.

Code			
438010	23 p.1,5 - Ø 10	100	–
438012	23 p.1,5 - Ø 12	100	–
438014	23 p.1,5 - Ø 14	100	–
438015	23 p.1,5 - Ø 15	100	–
438016	23 p.1,5 - Ø 16	100	–
438018	23 p.1,5 - Ø 18 with metal olive	100	–

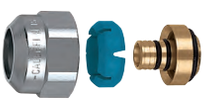
FITTINGS 3/4”

679
DARCAL

Fitting for multilayer plastic pipes
for continuous high temperature use.
Max. working pressure: 10 bar.
Temperature range: 0–95 °C.
Chrome plated.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series (see page 107).

Code			
679264	3/4” - Ø 20x2	10	100
679265	3/4” - Ø 20x2,25	10	100
679266	3/4” - Ø 20x2,5	10	100



681
DARCAL

Self-adjustable diameter fitting
for single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range:
5–80 °C (PE-X)
5–75 °C (Multilayer marked 95 °C).
Chrome plated.

Code		$Ø_{inside}$	$Ø_{outside}$		
681502	3/4”	7,5– 8	12–14	10	100
681500	3/4”	9 – 9,5	14–16	10	100
681501	3/4”	9,5–10	12–14	10	100
681506	3/4”	9,5–10	14–16	10	100
681515	3/4”	10,5–11	14–16	10	100
681517	3/4”	10,5–11	16–18	10	100
681524	3/4”	11,5–12	14–16	10	100
681526	3/4”	11,5–12	16–18	10	100
681535	3/4”	12,5–13	16–18	10	100
681537	3/4”	12,5–13	18–20	10	100
681546	3/4”	13,5–14	18–20	10	100
681555	3/4”	14,5–15	18–20	10	100
681556	3/4”	15 –15,5	18–20	10	100
681564	3/4”	15,5–16	18–20	10	100

437

Compression fitting,
for annealed copper, hard copper, brass,
mild and stainless steel pipes.
With O-Ring seal.
Max. working pressure: 10 bar.
Temperature range: -25–120 °C.
Chrome plated.
For connecting pipes to special valves
for panel radiators.

Code			
437510	3/4” - Ø 10	100	–
437512	3/4” - Ø 12	100	–
437514	3/4” - Ø 14	100	–
437515	3/4” - Ø 15	100	–
437516	3/4” - Ø 16	100	–
437518	3/4” - Ø 18	10	–

438

Compression fitting for copper pipe,
with PTFE seal.
Chrome plated.

Code			
438512	3/4” - Ø 12	100	–
438514	3/4” - Ø 14	100	–
438515	3/4” - Ø 15	100	–
438516	3/4” - Ø 16	100	–
438518	3/4” - Ø 18	100	–

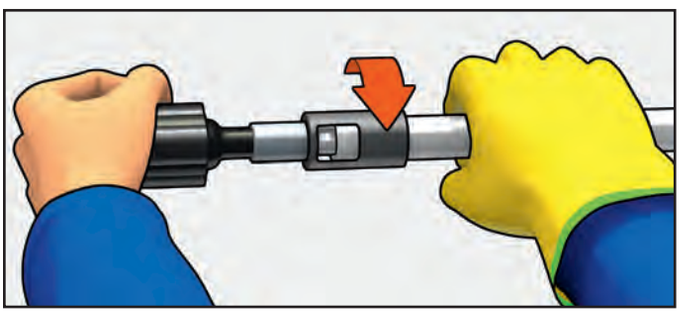
CALIBRATOR FOR MULTILAYER PIPES

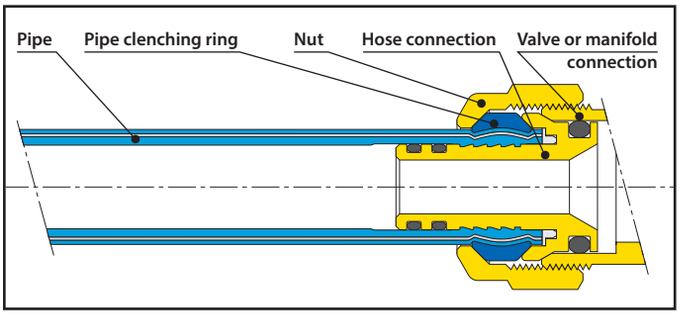
679

Calibrator and handle to adjust multilayer
pipes diameter before
use with fittings 679 series.

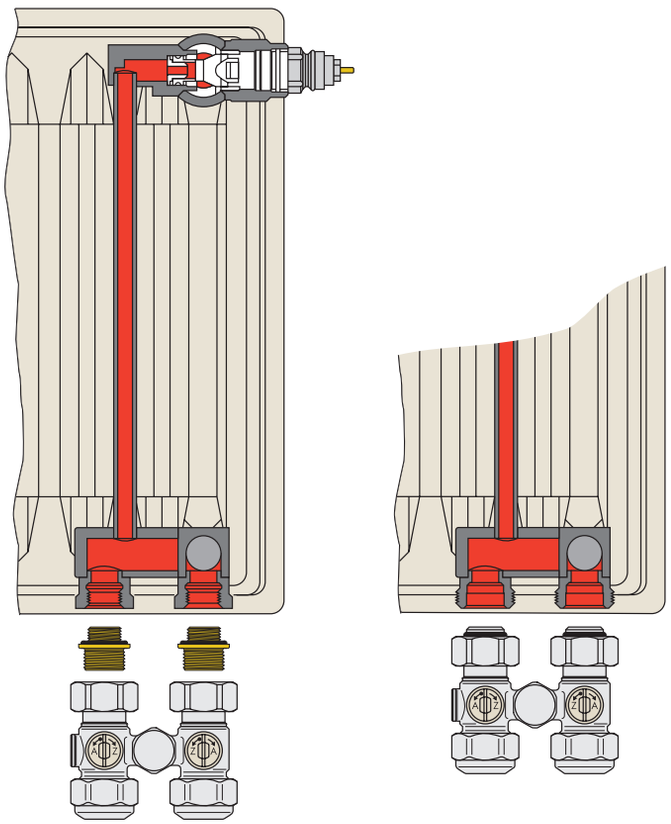
Code			
679001	calibrator Ø 14x2	1	–
679002	calibrator Ø 16x2	1	–
679003	calibrator Ø 16x2,25	1	–
679004	calibrator Ø 18x2	1	–
679006	calibrator Ø 20x2	1	–
679007	calibrator Ø 20x2,25	1	–
679008	calibrator Ø 20x2,5	1	–
679009	handle for calibrator	1	–
679010	calibrator Ø 26x3	1	–

Multilayer pipe calibration and installation of fitting components 679 series





VALVES FOR PANEL RADIATORS



This valves are installed on a particular kind of panel radiators, featuring both the connections at the bottom and an inner pipe, invisible from outside, providing the flow medium to the upper valve.

They come in two versions: for two-pipe and one-pipe systems. Both are available straight (pipes exiting the floor) and angled (pipes exiting the wall). The two-pipe version is equipped with two ball shut-off valves; the one-pipe, in addition to the shut-off valves, is equipped with an adjustable by-pass from 30 % to 50 % of the flow rate towards the radiator.

3010

Valve for panel radiators
with built-in thermostatic valve unit.
Single valve straight version
(floor connections) with 1/2″ F radiator connections.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code	Radiator connection	Pipe connection		
301040	1/2″ M	3/4″	1	25

3011

Valve for panel radiators
with built-in thermostatic valve unit.
Single valve angled version
(wall connections) with 1/2″ F radiator connections.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code	Radiator connection	Pipe connection		
301140	1/2″ M	3/4″	1	25

3012

Valve for panel radiators
with built-in thermostatic valve unit.
One-pipe straight version
(floor connections) with 1/2″ F radiator connections.
With adjustable by-pass.
With non-return device.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code	Radiator connection	Pipe connection		
301241	1/2″ M	3/4″	1	25

3013

Valve for panel radiators
with built-in thermostatic valve unit.
One-pipe angled version
(wall connections) with 1/2″ F radiator connections.
With adjustable by-pass.
With non-return device.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code	Radiator connection	Pipe connection		
301341	1/2″ M	3/4″	1	25

3010

Valve for panel radiators
with built-in thermostatic valve unit.
Single valve straight version
(floor connections)
with 3/4" M radiator connections.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code	Radiator connection	Pipe connection		
301050	3/4" F	3/4"	1	25

3011

Valve for panel radiators
with built-in thermostatic valve unit.
Single valve angled version
(wall connections)
with 3/4" M radiator connections.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code	Radiator connection	Pipe connection		
301150	3/4" F	3/4"	1	25

3012

Valve for panel radiators
with built-in thermostatic valve unit.
One-pipe straight version
(floor connections)
with 3/4" M radiator connections.
With adjustable by-pass.
With non-return device.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code	Radiator connection	Pipe connection		
301250	3/4" F	3/4"	1	25

3013

Valve for panel radiators
with built-in thermostatic valve unit.
One-pipe angled version
(wall connections)
with 3/4" M radiator connections.
With adjustable by-pass.
With non-return device.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code	Radiator connection	Pipe connection		
301350	3/4" F	3/4"	1	25

3015

Angled single valve for panel radiators
with built-in thermostatic valve unit
(wall connections)
with 1/2" F radiator connections.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

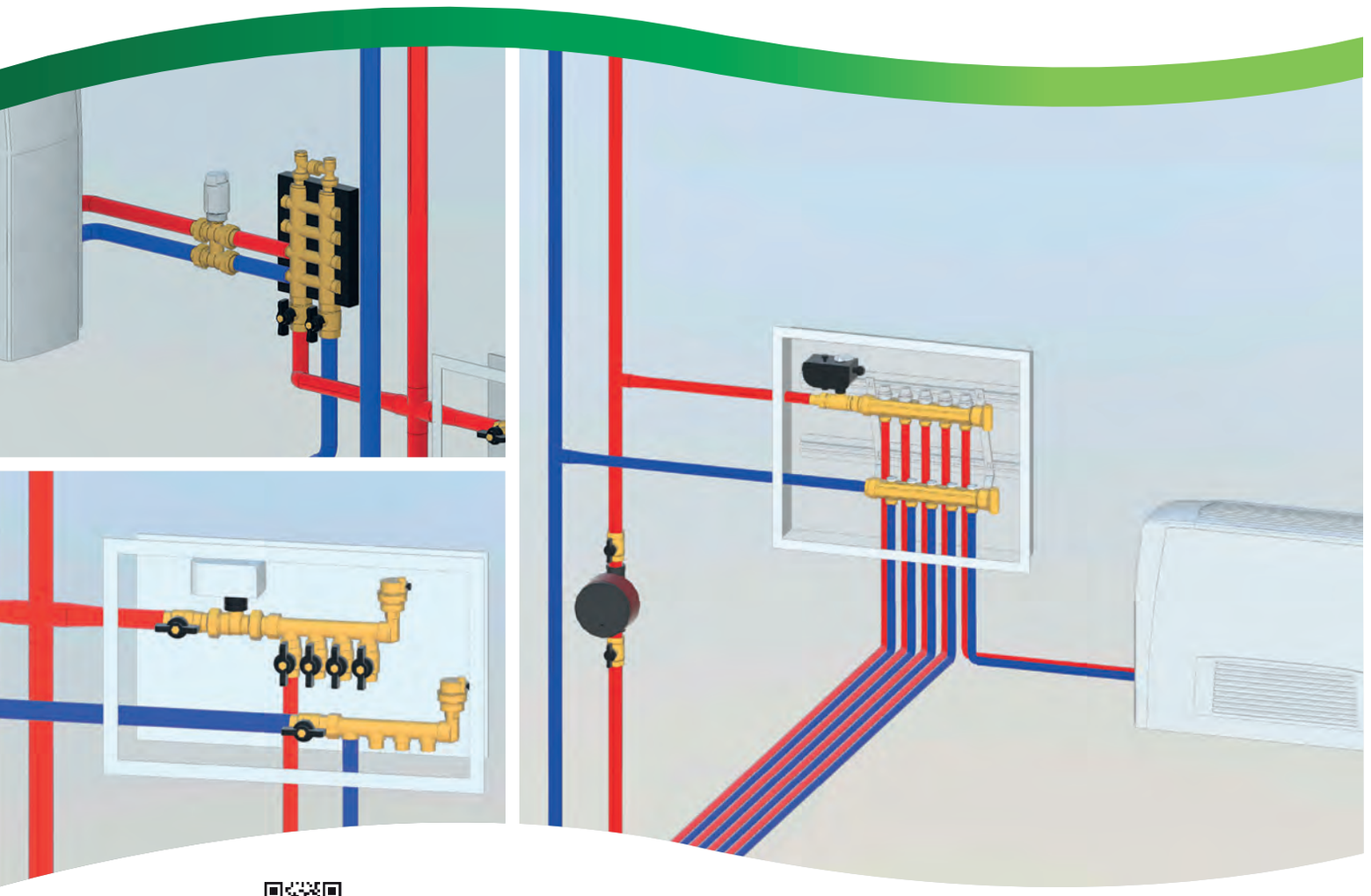
Code	Radiator connection	Pipe connection		
301540	1/2" M	3/4"	1	50

3015

Angled single valve for panel radiators
with built-in thermostatic valve unit
(wall connections)
with 3/4" M radiator connections.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code	Radiator connection	Pipe connection		
301550	3/4" F	3/4"	1	50

ZONE VALVES AND MOTORISED VALVES, DISTRIBUTION MANIFOLDS, WALL BOXES AND ACCESSORIES



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Motorised ball zone valves
Thermo-electric zone piston valves
Motorised zone valves with spring return
Motorised ball valves
Motorised valves for central heating systems
Butterfly valves
Distribution manifolds
Thermo-electric actuators
Inspection wall boxes

TWO-WAY AND THREE-WAY VALVES, DISTRIBUTION MANIFOLDS AND BOXES

The zone valves perform the function of automatically shutting off the flow rate of the vector medium distributed to the system.
In particular:
- in zone heating systems, they assist in ambient temperature regulation;
- in domestic hot water production and storage systems they regulate the temperature inside storage boilers;
- in residential and industrial systems they shut off the medium in the distribution networks.

Zone valves and motorised valves

- Motorised ball zone valves

- Thermo-electric zone piston valves

- Motorised zone valves with spring return

- Motorised ball valves

- Motorised ball valves for high flow rates

- Motorised valves for central heating systems

- Butterfly valves

Distribution manifolds and boxes

- Single manifolds

- Dual manifolds

- Manifolds with shut-off and pre-adjustment valves

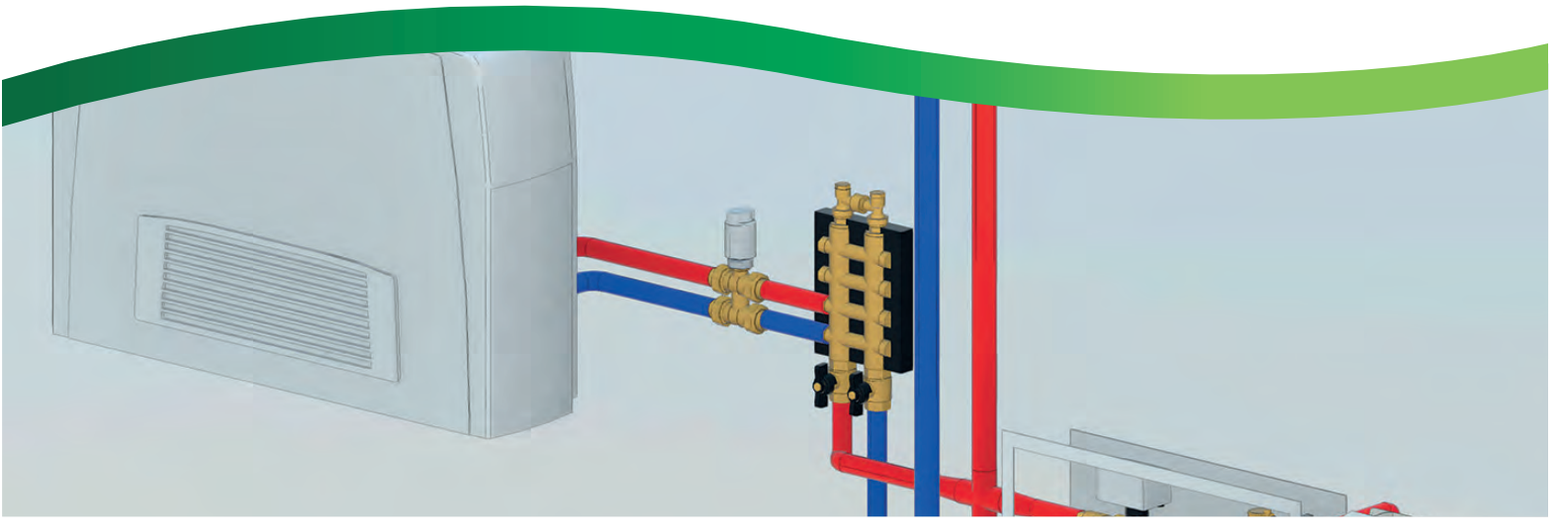
- Thermo-electric actuators

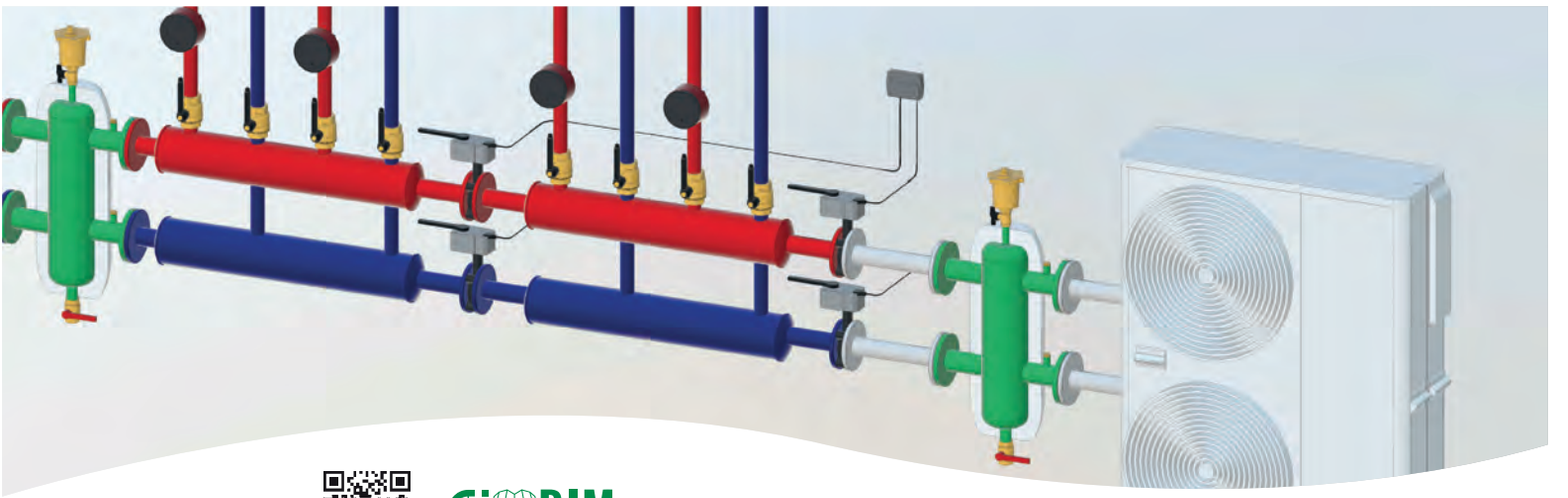
- Fittings

- Plastic inspection wall boxes

- Sheet metal inspection wall boxes

ZONE VALVES AND MOTORISED VALVES





BIM
bim.caleffi.com

Motorised ball zone valves
Thermo-electric piston zone valves
Motorised zone valves with spring return
Motorised ball valves
Butterfly valves

TWO-WAY VALVES

	Actuator	Application	Type of valve				Type of actuator			Control signal	
			ball	piston	paddle	butterfly	thermo-electric	motorised	motorised with spring return	2 points	3 points
642 		🔥			●				●	●	
676 	**656.** 	🔥		●			●			●	
632 	**630** 	🔥		●			●			●	
6452 		🔥 ❄	●					●		● (R)	
6442 (40 sec) 		🔥 🚰	●					●			●
6442 (10 sec) 		🔥 🚰	●					●			●
638 		🔥 ❄ (kit) 🚰	●					●			●
639 - LUG 	**639** 	🔥 ❄				●		●		●	●
639 - WAFER 	**639** 	🔥 ❄				●		●		●	●

Legend

🔥 *For heating systems*

❄ *For cooling systems*

❄ *Suitable for cooling with the use of insulation*

🚰 **For domestic water systems (check legislation in individual countries)**

(R) *with internal relay*
(kit) *with optional insulation kit*

THREE-WAY VALVES

	Actuator	Application	Type of valve			Type of actuator			Control signal	
			ball	piston	paddle	thermo-electric	motorised	motorised with spring return	2points	3points
643 					●			●	●	
677 	**656.** 			●		●			●	
678 	**656.** 			●		●			●	
633 	**630** 			●		●			●	
6453 			●				●		● (R)	
6443 (40 sec) 		(kit)	●				●			●
6443 (10 sec) 		(kit)	●				●			●
6443.. 3BY 			●				●			●
6444 			●				●			●
638 ("T" drilling) 		(kit)	●				●			●
638 ("L" drilling) 		(kit)	●				●			●

MOTORISED TWO-WAY BALL ZONE VALVES

Operating time 10 s

6442

tech. broch. 01131

Motorised two-way ball valve.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5–110 °C.

Equipped with actuator with 3-contact control.
With auxiliary microswitch.
Supply: 230 V (AC) or 24 V (AC).
Power consumption: 8 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Ambient temperature range: 0–55 °C.
Protection class: IP 44 (vertical stem).
IP 40 (horizontal stem).
Operating time: **10 s (rotation 90°)**.
Cable length: 100 cm.
PATENT.

Code		Supply voltage V	Kv (m³/h)		
644246	1/2″	230	11,1	1	10
644256	3/4″	230	11,1	1	10
644248	1/2″	24	11,1	1	10
644258	3/4″	24	11,1	1	10

Operating time 40 s

6442

tech. broch. 01131

Motorised two-way ball zone valve.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5–110 °C.

Equipped with actuator with 3-contact control.
With auxiliary microswitch.
Supply: 230 V (AC) or 24 V (AC).
Power consumption: 4 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Ambient temperature range: 0–55 °C.
Protection class: IP 44 (vertical stem),
IP 40 (horizontal stem).
Operating time: 40 s (90° rotation).
Lenght of supply cable: 100 cm.
PATENT.

Code		Supply voltage V	Kv (m³/h)		
644242	1/2″	230	11,1	1	10
644252	3/4″	230	11,1	1	10
644262	1″	230	11,1	1	10
644244	1/2″	24	11,1	1	10
644254	3/4″	24	11,1	1	10
644264	1″	24	11,1	1	10

MOTORISED THREE-WAY BALL DIVERTER VALVES

Operating time 10 s

6443

tech. broch. 01132

Motorised three-way diverter valve.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5–110 °C.

Equipped with actuator with 3-contact control.
With auxiliary microswitch.
Supply: 230 V (AC) or 24 V (AC).
Power consumption: 8 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Ambient temperature range: 0–55 °C.
Protection class: IP 44 (vertical stem).
IP 40 (horizontal stem).
Operating time: **10 s (rotation 90°)**.
Cable length: 100 cm.
PATENT.

Code		Supply voltage V	Kv (m³/h)		
644346	1/2″	230	3,9	1	5
644356	3/4″	230	3,9	1	5
644357	3/4″	230	8,6	1	5
644366	1″	230	9,0	1	5
644348	1/2″	24	3,9	1	5
644358	3/4″	24	3,9	1	5
644359	3/4″	24	8,6	1	5
644368	1″	24	9,0	1	5

Operating time 40 s

6443

tech. broch. 01132

Motorised three-way diverter valve.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5–110 °C.

Equipped with actuator with 3-contact control. **With auxiliary microswitch**.
Supply: 230 V (AC) or 24 V (AC).
Power consumption: 4 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Ambient temperature range: 0–55 °C.
Protection class: IP 44 (vertical stem).
IP 40 (horizontal stem).
Operating time: **40 s (90° rotation)**.
Cable lenght: 100 cm.
PATENT.

Code		Supply voltage V	Kv (m³/h)		
644342	1/2″	230	3,9	1	5
644352	3/4″	230	3,9	1	5
644353	3/4″	230	8,6	1	5
644362	1″	230	9,0	1	5
644344	1/2″	24	3,9	1	5
644354	3/4″	24	3,9	1	5
644355	3/4″	24	8,6	1	5
644364	1″	24	9,0	1	5

MOTORISED BALL DIVERTER VALVES BY-PASS VERSION

6443.. 3BY

tech. broch. 01131

Motorised three-way ball zone valve, by-pass version.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5–110 °C.

Equipped with actuator with 3-contact control.
With auxiliary microswitch.
Supply: 230 V (AC) or 24 V (AC).
Power consumption: 4 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Ambient temperature range: 0–55 °C.
Protection class: IP 44 (vertical stem), IP 40 (horizontal stem).
Operating time: 40 s (90° rotation).
Lenght of supply cable: 100 cm.
PATENT.

Code		Supply voltage V	Kv (m³/h) straight	Kv (m³/h) by-pass		
644342 3BY	1/2"	230	10,3	1,8	1	5
644352 3BY	3/4"	230	10,3	1,8	1	5
644362 3BY	1"	230	10,3	1,8	1	5
644344 3BY	1/2"	24	10,3	1,8	1	5
644354 3BY	3/4"	24	10,3	1,8	1	5
644364 3BY	1"	24	10,3	1,8	1	5

MOTORISED BALL DIVERTER VALVES WITH TELESCOPIC BY-PASS TEE

6444

tech. broch. 01131

Motorised three-way ball zone valve with telescopic by-pass tee.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5–110 °C.
Tee complete with nozzle U6.
Adjustable outlet centre distance from 49 to 63 mm.

Equipped with actuator with 3-contact control.
With auxiliary microswitch.
Supply: 230 V (AC) or 24 V (AC).
Power consumption: 4 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Ambient temperature range: 0–55 °C.
Protection class: IP 44 (vertical stem), IP 40 (horizontal stem).
Operating time: 40 s (90° rotation).
Lenght of supply cable: 100 cm.
PATENT.

Code		Supply voltage V	Kv (m³/h) straight	Kv (m³/h) by-pass		
644442	1/2"	230	10,3	1,2	1	5
644452	3/4"	230	10,3	1,2	1	5
644462	1"	230	10,3	1,2	1	5
644444	1/2"	24	10,3	1,2	1	5
644454	3/4"	24	10,3	1,2	1	5
644464	1"	24	10,3	1,2	1	5

ACCESSORIES AND SPARE PARTS

6440

tech. broch. 01132

3-contact control spare actuator for motorised ball zone valves 6443 series.
Operating time 10 s.
Supply: 230 V (AC) or 24 V (AC).

Code	Supply voltage V		
644012	230	1	10
644014	24	1	10

6440

tech. broch. 01132

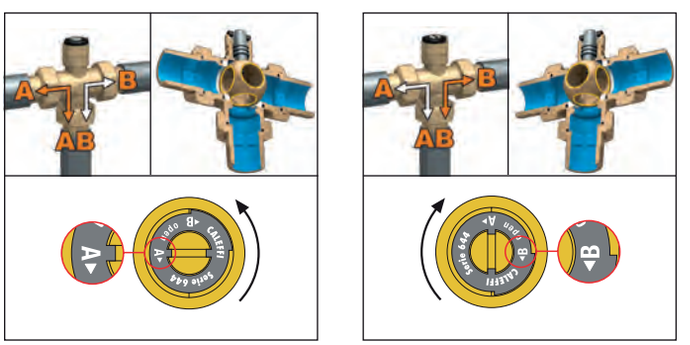
3-contact control spare actuator for motorised ball zone valve 6443 series.
Operating time 40 s.
Supply: 230 V (AC) or 24 V (AC).

Code	Supply voltage V		
644002	230	1	10
644004	24	1	10

Insulation kit for heating ad cooling systems.
Medium temperature range: -10–110 °C.
For motorised three-way ball valves 644 series.

Code	Use		
CBN644357	644353/57/62/66/55/59/64/68	1	–

Operating diagram for 6443 series valve
Operating time 10 s and 40 s - with "T" drilling



MOTORISED TWO-WAY BALL ZONE VALVES WITH INSULATION

6452

tech. broch. 01199

Motorised two-way ball zone valve,
for heating and cooling systems.
With manual opening lever.
With insulation.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -10–110 °C.

With auxiliary microswitch.
Supply: 230 V (AC) o 24 V (AC).
Power consumption: 6 VA.
Auxiliary microswitch contact rating:
6 (2) A (230 V).
Ambient temperature range: -10–55 °C.
Protection class: IP 65.
Operating time: 50 s (90° rotation).
Lenght of supply cable: 80 cm.

Code		Supply voltage V	Kv (m³/h)		
645242	1/2″	230	17,00	1	–
645252	3/4″	230	17,27	1	–
645262	1″	230	36,58	1	–
645272	1 1/4″	230	39,50	1	–
645244	1/2″	24	17,00	1	–
645254	3/4″	24	17,27	1	–
645264	1″	24	36,58	1	–
645274	1 1/4″	24	39,50	1	–

6450

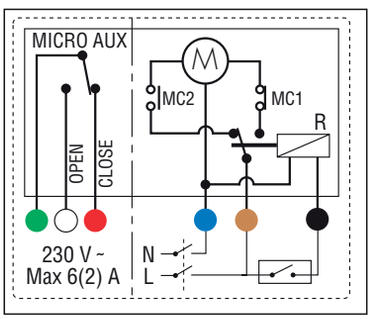
tech. broch. 01199

Spare actuator for motorised ball zone
valves 6452 and 6453 series.
Supply: 230 V (AC) or 24 V (AC).

Code	Supply voltage V		
645002	230	1	–
645004	24	1	–

Wiring diagram for 6452 and 6453 series valves, two point actuator with internal relais, valve in closed position

- R relay
- MC1 opening end microswitch.
- MC2 closing end microswitch.
- MICRO AUX free auxiliary microswitch.



MOTORISED THREE-WAY BALL ZONE VALVES WITH INSULATION

6453

tech. broch. 01199

Motorised three-way ball zone valve,
for heating and cooling systems.
With manual opening lever.
With insulation.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -10–110 °C.

With auxiliary microswitch.
Supply: 230 V (AC) o 24 V (AC).
Power consumption: 6 VA.
Auxiliary microswitch contact rating:
6 (2) A (230 V).
Ambient temperature range: -10–55 °C.
Protection class: IP 65.
Operating time: 50 s (90° rotation).
Lenght of supply cable: 80 cm.

CE EN 13

Code		Supply voltage V	Kv (m³/h) straight	Kv (m³/h) by-pass		
645342	1/2″	230	14,10	2,45	1	–
645352	3/4″	230	14,43	2,50	1	–
645362	1″	230	33,52	3,60	1	–
645372	1 1/4″	230	36,00	3,80	1	–
645344	1/2″	24	14,10	2,45	1	–
645354	3/4″	24	14,43	2,50	1	–
645364	1″	24	33,52	3,60	1	–
645374	1 1/4″	24	36,00	3,80	1	–

6459

tech. broch. 01199

By-pass tee.
For motorised ball zone valves 6453 series.
With insulation.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -10–110 °C.

Code			Kv (m³/h) tee + valve in by-pass		
645940	1/2″	without nozzle	2,20	1	–
645950	3/4″	without nozzle	2,25	1	–
645960	1″	without nozzle	3,25	1	–
645970	1 1/4″	without nozzle	3,40	1	–

ACCESSORIES AND SPARE PARTS

6459

tech. broch. 01199

Shell insulation
for motorised ball zone valves
6453 series with by-pass tee 6459
and 6490 series.
Fitted for manifolds 356... IS series.

Code			
645901	1/2″ - 3/4″	1	–
645900	1″ - 1 1/4″	1	–

6450

tech. broch. 01199

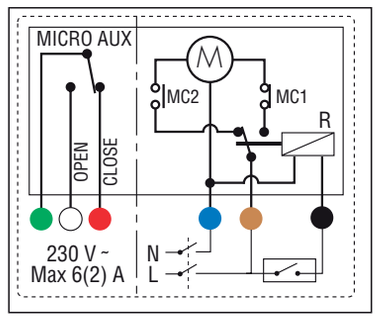
Spare actuator for motorised ball zone
valves 6452 and 6453 series.
Supply: 230 V (AC) or 24 V (AC).

CE EN 13

Code	Supply voltage V		
645002	230	1	–
645004	24	1	–

Wiring diagram for 6452 and 6453 series valves, two point actuator with internal relais, valve in closed position

- R relay
- MC1 opening end microswitch.
- MC2 closing end microswitch.
- MICRO AUX free auxiliary microswitch.



MOTORISED TWO-WAY BALL VALVES FOR HIGH FLOW RATES

638

tech. broch. 01196

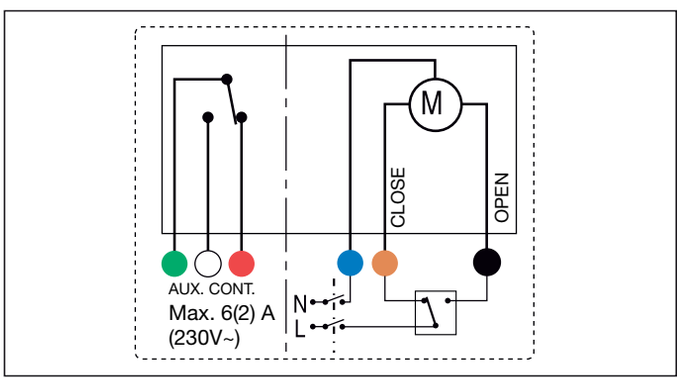
Motorised two-way ball valve.
With auxiliary microswitch.
Supply: 230 V (AC) or 24 V (AC).
Max. working pressure: 16 bar.
Max. Δp: 3/4"–1 1/4": 10 bar,
1 1/2"-2": 5 bar.
Temperature range: -10–110 °C.
Ambient temperature range: -10–55 °C.
Power consumption: 6 VA.
Auxiliary microswitch contact rating:
6 (2) A - 230 V (AC).
Protection class: IP 65.
Operating time: 50 s (90° rotation).

Code		Actuator torque (N·m)	Supply voltage V	Kv (m³/h)		
638052	3/4"	15	230	17	1	–
638062	1"	15	230	36,5	1	–
638072	1 1/4"	15	230	48	1	–
638082	1 1/2"	15	230	77	1	–
638092	2"	15	230	140	1	–
638054	3/4"	15	24	17	1	–
638064	1"	15	24	36,5	1	–
638074	1 1/4"	15	24	48	1	–
638084	1 1/2"	15	24	77	1	–
638094	2"	15	24	140	1	–

Spare actuators for
motorised two-way valves 638 series.
90° rotation.
Supply: 230 V (AC) or 24 V (AC).

Code	Supply voltage V		
638012	230	1	–
638014	24	1	–

Wiring diagram for two-way and three-way ball valves 638 series with 3-contact actuator
Internal diagram with valve in the following position:
- Closed, for two-way valve.
- Port **A** closed for three-way valves.



Insulation kit
for heating and cooling systems.
Medium temperature range: -10–110 °C.
For motorised two-way ball valves 638 series.

Code	Use		
CBN638052	3/4"	1	–
CBN638062	1"	1	–
CBN638072	1 1/4"	1	–
CBN638082	1 1/2"-2"	1	–

Insulation kit
for heating and cooling systems.
Medium temperature range: -10–110 °C.
For motorised three-way ball valves 638 series.

Code	Use			
CBN638053	3/4"	with "L" drilling	1	–
CBN638063	1"	with "L" drilling	1	–
CBN638073	1 1/4"	with "L" drilling	1	–
CBN638083	1 1/2"-2"	with "L" drilling	1	–
CBN638153	3/4"	with "T" drilling	1	–
CBN638163	1"	with "T" drilling	1	–
CBN638173	1 1/4"	with "T" drilling	1	–
CBN638183	1 1/2"-2"	with "T" drilling	1	–

MOTORISED THREE-WAY BALL VALVES FOR HIGH FLOW RATES

638

tech. broch. 01196

Motorised three-way ball valve.
With auxiliary microswitch.
Supply: 230 V (AC) or 24 V (AC).
Max. working pressure: 16 bar.
Max. Δp: 10 bar.
Temperature range: -10–110 °C.
Ambient temperature range: -10–55 °C.
Power consumption: 6 VA.
Auxiliary microswitch contact rating:
6 (2) A - 230 V (AC).
Protection class: IP 65.
Operating time: 50 s (90° rotation).
With "T" drilling. Reduced bore.

Code		Actuator torque (N·m)	Supply voltage V	Kv (m³/h)		
638153	3/4"	15	230	9,5	1	–
638163	1"	15	230	12,9	1	–
638173	1 1/4"	15	230	24,7	1	–
638183	1 1/2"	15	230	47	1	–
638193	2"	15	230	50	1	–
638155	3/4"	15	24	9,5	1	–
638165	1"	15	24	12,9	1	–
638175	1 1/4"	15	24	24,7	1	–
638185	1 1/2"	15	24	47	1	–
638195	2"	15	24	50	1	–

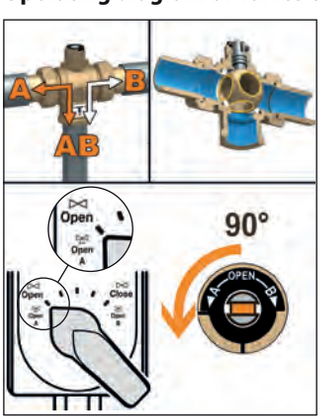
Spare actuators for
motorised three-way valves 638 series.
With "T" drilling. 90° rotation.
Supply: 230 V (AC) or 24 V (AC).

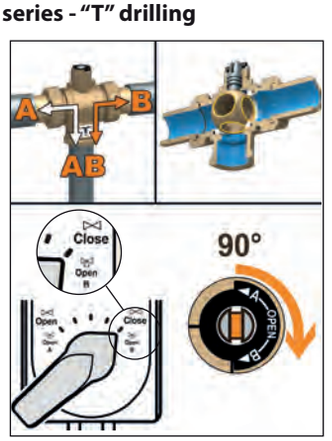
Code	Supply voltage V		
638012	230	1	–
638014	24	1	–

Applications

Diverter	Mixing
1 inlet - 2 outlets	**2 inlets - 1 outlet**

Operating diagram of valves 638 series - "T" drilling





638

tech. broch. 01196

Motorised three-way ball valve.
With auxiliary microswitch.
Supply: 230 V (AC) or 24 V (AC).
Max. working pressure: 16 bar.
Max. Δp: 10 bar.
Temperature range: -10–110 °C.
Ambient temperature range: -10–55 °C.
Power consumption: 6 VA.
Auxiliary microswitch contact rating:
6 (2) A - 230 V (AC).
Protection class: IP 65.
Operating time: 100 s (180° rotation).
With "L" drilling. Reduced bore.

Code		Actuator torque (N·m)	Supply voltage V	Kv (m³/h)		
638053	3/4"	15	230	9,9	1	–
638063	1"	15	230	13,4	1	–
638073	1 1/4"	15	230	22,8	1	–
638083	1 1/2"	15	230	44	1	–
638093	2"	15	230	50	1	–
638055	3/4"	15	24	9,9	1	–
638065	1"	15	24	13,4	1	–
638075	1 1/4"	15	24	22,8	1	–
638085	1 1/2"	15	24	44	1	–
638095	2"	15	24	50	1	–

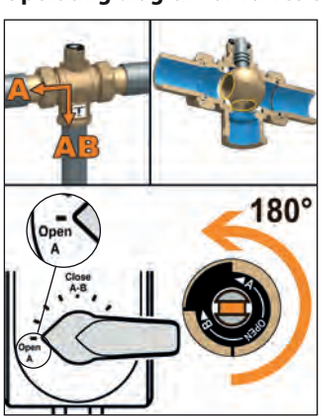
Spare actuators for
motorised three-way valves 638 series.
With "L" drilling. 180° rotation.
Supply: 230 V (AC) or 24 V (AC).

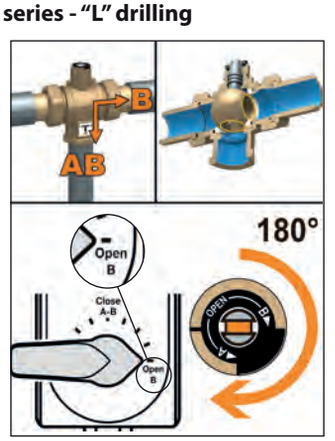
Code	Supply voltage V		
638412	230	1	–
638414	24	1	–

Applications

Diverter	Diverter
1 inlet - 2 outlets	**2 inlets - 1 outlet**

Operating diagram of valves 638 series - "L" drilling





THERMO-ELECTRIC PISTON ZONE VALVES

676

tech. broch. 01343

Two-way zone valve
with high flow rate.
Fitted for thermo-electric actuators
6563, 6561, 6562 and 6564 series.
Max. working pressure: 10 bar.
Max. Δp: 2,5 bar.
Temperature range: 0–95 °C.

Code		Kv (m³/h)		
676500	1″	4,77	1	20

676

tech. broch. 01072

Two-way zone valve.
Fitted for thermo-electric actuators
6563, 6561, 6562 and 6564 series.
Max. working pressure: 10 bar.
Max. Δp: 1,2 bar.
Temperature range: 0–95 °C.

Code		Kv (m³/h)		
676040	1/2″	3,7	1	10
676050	3/4″	3,7	1	10
676060	1″	3,7	1	10

677

tech. broch. 01072

Three-way zone valve.
Fitted for thermo-electric actuators
6563, 6561, 6562 and 6564 series.
Max. working pressure: 10 bar.
Max. Δp: 1,2 bar.
Temperature range: 0–95 °C.

Code		Kv (m³/h) straight	Kv (m³/h) by-pass		
677040	1/2″	3,7	1,0	1	10
677050	3/4″	3,7	1,0	1	10
677060	1″	3,7	1,0	1	10

678

tech. broch. 01072

Three-way zone valve
with by-pass tee.
Fitted for thermo-electric actuators
6563, 6561, 6562 and 6564 series.
Max. working pressure: 10 bar.
Max. Δp: 1,2 bar.
Temperature range: 0–95 °C.
Tee complete with nozzle U6.
Adjustable outlet centre distance from 49 to 63 mm.

Code		Kv (m³/h) straight	Kv (m³/h) by-pass		
678040	1/2″	3,7	1,0	1	10
678050	3/4″	3,7	1,0	1	10
678060	1″	3,7	1,0	1	10

6563

tech. broch. 01142

Thermo-electric actuator.
With manual opening and position indicator.
Normally closed. **With auxiliary microswitch**.
Supply: 230 V (AC) or 24 V (AC)/(DC).
Power consumption: 3 W.
Starting current: ≤ 1 A.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Ambient temperature range: 0–50 °C.
Protection class: IP 40.
PATENT.

Code	Supply voltage V			
656312	230		1	10
656314	24		1	10
656302	230	without auxiliary microswitch	1	10
656304	24	without auxiliary microswitch	1	10

6561

tech. broch. 01042

Thermo-electric actuator.
Normally closed. **With auxiliary microswitch**.
Supply: 230 V (AC) or 24 V (AC)/(DC).
Auxiliary microswitch contact rating: 0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 1 A.
Ambient temperature range: 0–50 °C.
Protection class: IP 44 (vertical stem).

Code	Supply voltage V			
656112	230		1	10
656114	24		1	10
656102	230	without auxiliary microswitch	1	10
656104	24	without auxiliary microswitch	1	10

6562

tech. broch. 01198

Thermo-electric actuator.
With opening position indicator.
Quick-coupling installation, with a clip adapter.
Normally closed. **With auxiliary microswitch**.
Supply: 230 V (AC) or 24 V (AC)/(DC).
Auxiliary microswitch contact rating: 0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 1 A.
Ambient temperature range: 0–50 °C.
Protection class: IP 54.

Code	Supply voltage V			
656212	230		1	10
656214	24		1	10
656202	230	without auxiliary microswitch	1	10
656204	24	without auxiliary microswitch	1	10

6564

tech. broch. 01198

Thermo-electric actuator with low power consumption. With opening position indicator.
Quick-coupling installation, with a clip adapter.
Normally closed. **With auxiliary microswitch**.
Supply: 230 V (AC) or 24 V (AC)/(DC).
Auxiliary microswitch contact rating: 0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 250 mA.
Ambient temperature range: 0–50 °C.
Protection class: IP 54.

Code	Supply voltage V			
656412	230		1	10
656414	24		1	10
656402	230	without auxiliary microswitch	1	10
656404	24	without auxiliary microswitch	1	10

THERMO-ELECTRIC PISTON ZONE VALVES

632

tech. broch. 01039

Two-way piston zone valve.
Max. working pressure: 10 bar.
Max. Δp: 1 bar.
Temperature range: -5–95 °C.

Code		Kv (m³/h)		
632400	1/2"	5,10	1	5
632500	3/4"	6,27	1	5
632600	1"	6,38	1	5

633

tech. broch. 01039

Three-way piston zone valve.
3/4" F by-pass connection.
Max. working pressure: 10 bar.
Max. Δp: 1 bar.
Temperature range: -5–95 °C.

Code		Kv (m³/h) straight	Kv (m³/h) by-pass		
633400	1/2"	4,99	4,33	1	5
633500	3/4"	6,19	4,91	1	5
633600	1"	6,45	5,30	1	5

635

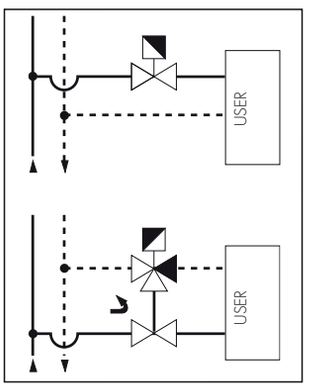
tech. broch. 01039

Balanced by-pass tee.
For zone valves 633 series.
Max. working pressure: 10 bar.
Max. Δp: 1 bar.
Temperature range: -5–95 °C.

Code			Kv (m³/h) tee + valve in by-pass		
635440	1/2"	U4	0,96	1	5
635460	1/2"	U6	1,32	1	5
635480	1/2"	U8	1,73	1	5
635540	3/4"	U4	0,98	1	5
635560	3/4"	U6	1,36	1	5
635580	3/4"	U8	1,79	1	5
635640	1"	U4	1,02	1	5
635660	1"	U6	1,43	1	5
635680	1"	U8	1,88	1	5

Installation

1. The 2-way zone valve 632 series should be installed on the circuit flow pipe.
   The 2-way valve cannot be converted into 3-way valve by removing the plug.
2. The 3-way zone valve 633 series should bealways installed on the circuit return pipe.
   The 3-way valve cannot be converted into 2-way valve by applying a plug.



630

tech. broch. 01039

Thermo-electric actuator.
For zone valves 632 and 633 series.
Normally closed.
Supply: 230 V (AC) or 24 V (AC).
With auxiliary microswitch.
Power consumption: - starting 11 W.
- operating 4 W.
Auxiliary microswitch contact rating:
6 (3) A (230 V).
Max. ambient temperature: 55 °C.
Protection class:
IP 44 (vertical stem),
IP 42 (horizontal stem).

Code	Supply voltage V			
630002	230	without auxiliary microswitch	1	10

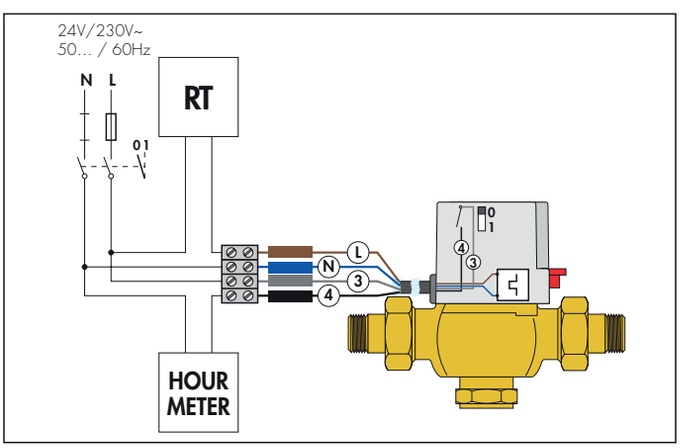
630

tech. broch. 01039

Thermo-electric actuator.
For zone valves 632 and 633 series.
Normally closed.
Supply: 230 V (AC) or 24 V (AC).
With manual actuator and auxiliary microswitch.
Power consumption: - starting 11 W.
- operating 4 W.
Auxiliary microswitch contact rating:
6 (3) A (230 V).
Max. ambient temperature: 55 °C.
Protection class: IP 20.

Code	Supply voltage V		
630112	230	1	10
630114	24	1	10

Wiring diagram for piston zone valves 632 and 633 series with thermo-electric actuator



MOTORISED ZONE VALVES WITH SPRING RETURN

642

tech. broch. 01115

Z-one™

Motorised two-way zone valve.
Normally closed.
With auxiliary microswitch.
Power consumption: 6,5 W; 7 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Opening time: 70–75 s.
Closing time: 5–7 s.
Protection class: IP 20.
Max. ambient temperature: 40 °C.
Max. working pressure: 16 bar.
Temperature range: 0–90 °C.
Cable length: 95 cm.

CE

Code		Kv (m³/h)	Max. Δp (bar)			
642042	1/2″	2,5	2,10	230 V	1	10
642052	3/4″	4,5	1,50	230 V	1	10
642062	1″	6	1,00	230 V	1	10
642064	1″	6	1,00	24 V	1	10

643

tech. broch. 01115

Z-one™

Motorised three-way zone valve.
Normally closed.
With auxiliary microswitch.
Power consumption: 6,5 W; 7 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Opening time: 70–75 s.
Closing time: 5–7 s.
Protection class: IP 20.
Max. ambient temperature: 40 °C.
Max. working pressure: 16 bar.
Temperature range: 0–90 °C.
Cable length: 95 cm.

CE

Code		Kv (m³/h)	Max. Δp (bar)			
643042	1/2″	2,5	2,10	230 V	1	10
643052	3/4″	4,5	1,50	230 V	1	10
643062	1″	6	1,00	230 V	1	10

641

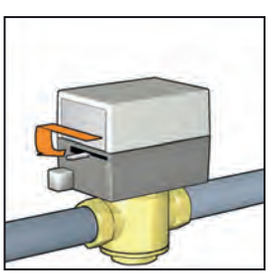
tech. broch. 01115

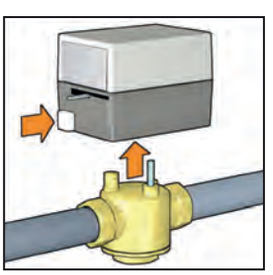
Spare actuator for motorised zone valves 642 and 643 series.

CE

Code				
641002	230 V	1	–

Removable actuator

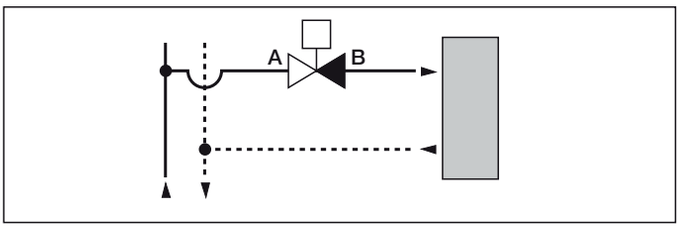




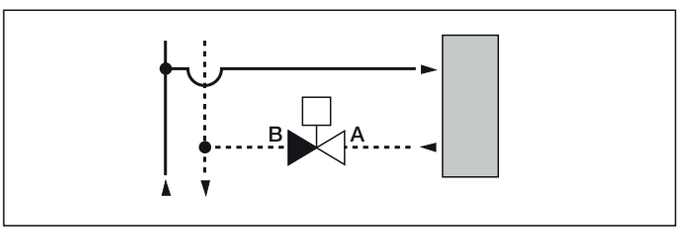
Installation

The 3-way valve cannot be converted into 2-way valve and viceversa.

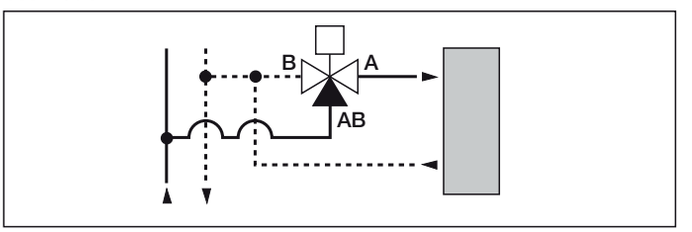
2-way valve installed on the flow



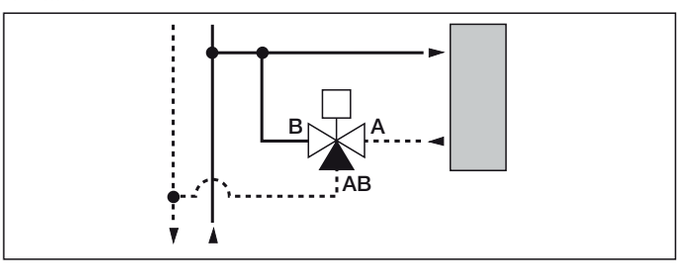
2-way valve installed on the return



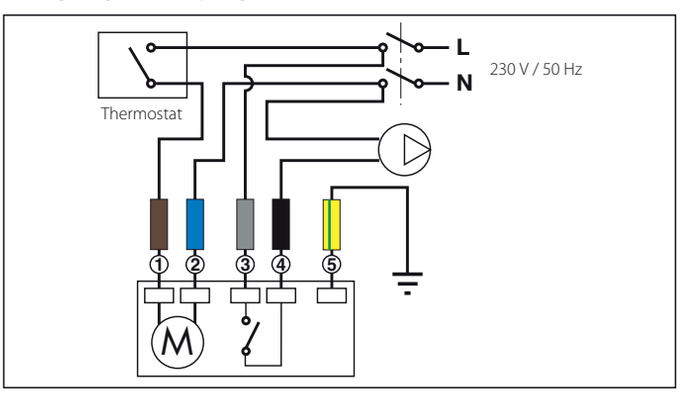
3-way valve installed on the flow with diverting position and ON/OFF use mode



3-way valve installed on the return with mixing position and ON/OFF use mode



Wiring diagram for spring return valves 642 and 643 series



MOTORISED TWO-WAY ZONE VALVE WITH SPRING RETURN AND TRANSFORMER

642 Z-one™

Motorised two-way zone valve.
Normally closed.
With auxilary microswitch and transformer.
Max. working pressure: 16 bar.
Temperature range: 0–90 °C.
Max. working temperature: 110 °C.
Supply: 24 V (AC).
Power consumption: 6,5 W; 7 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Opening time: 70–75 s.
Closing time: 5–7 s.
Max. ambient temperature: 40 °C.
Protection class: IP 20.
Cable length: 95 cm.

CE

Code		Kv (m³/h)	Δp max. (bar)		
642522	Ø 22	4,5	1,50	1	6

642 Z-one™

Motorised two-way zone valve.
Normally closed.
With reed contact and transformer.
Max. working pressure: 16 bar.
Temperature range: 0–90 °C.
Supply: 24 V (AC).
Power consumption: 6,5 W; 7 VA.
Auxiliary microswitch contact rating: 0,3 A (24 V).
Opening time: 70–75 s.
Closing time: 5–7 s.
Max. ambient temperature: 40 °C.
Protection class: IP 20.
Cable length: 95 cm.

CE

Code		Kv (m³/h)	Δp max. (bar)		
642523	Ø 22	4,5	1,50	1	6

642 Z-one™

Motorised two-way zone valve.
Normally closed.
With transformer.
Max. working pressure: 16 bar.
Temperature range: 0–90 °C.
Max. working temperature: 110 °C.
Supply: 24 V (AC).
Power consumption: 6,5 W; 7 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Opening time: 70–75 s.
Closing time: 5–7 s.
Max. ambient temperature: 40 °C.
Protection class: IP 20.
Cable length: 95 cm.

CE

Code		Kv (m³/h)	Δp max. (bar)		
642622	Ø 22	4,5	1,50	1	6

Accessories for code 642522 and 642622.

Code			
641024	Actuator 24 V (AC) with microswitch	1	–
641034	Actuator 24 V (AC)	1	–
F69893	Transformer 230/24 V	1	–
F69890	Brass body	1	–
641044	Actuator 24V (AC) with reed contact	1	–

BUTTERFLY VALVE

639

tech. broch. 01380

Butterfly valve, LUG type.
Grey cast iron body.
Flanged connections. PN 10/16.
To be coupled with flat counterflanges PN 10/16 - EN 1092-1.
Max. working pressure: 16 bar.
Working temperature range: -20–120 °C.

Code		Kv (m³/h)		
639040	DN 40	65	1	–
639050	DN 50	100	1	–
639060	DN 65	170	1	–
639080	DN 80	260	1	–
639100	DN 100	520	1	–
639120	DN 125	880	1	–
639150	DN 150	1400	1	–

639

tech. broch. 01380

Butterfly valve, WAFER type.
Grey cast iron body.
Flanged connections. PN 6/10/16.
To be coupled with flat counterflanges PN 6/10/16 - EN 1092-1.
Max. working pressure: 16 bar.
Working temperature range: -20–120 °C.

Code		Kv (m³/h)		
639041	DN 40	65	1	–
639051	DN 50	100	1	–
639061	DN 65	170	1	–
639081	DN 80	260	1	–
639101	DN 100	520	1	–
639121	DN 125	880	1	–
639151	DN 150	1400	1	–

639

tech. broch. 01380

Actuator for butterfly valve 639 series
DN 40 - DN 125.
Supply: 230 V (AC) o 24 V (DC).
Control signal: **ON/OFF, 3 points**.
Protection class: IP 54.
Operating time (90° rotation):
90 s (DN 40–65),
150 s (DN 80–125).

Δp max: 3 bar.
Δp max closure: 12 bar.
Ambient temperature range: -30–50 °C.
Warehouse storage temperature range: -40–80 °C.
Compatible with auxiliary microswitch code 639900.

Code	Use	Voltage V		
639902	DN 40–DN 65	230	1	–
639912	DN 80	230	1	–
639922	DN 100	230	1	–
639932	DN 125	230	1	–
639904	DN 40–DN 65	24	1	–
639914	DN 80	24	1	–
639924	DN 100	24	1	–
639934	DN 125	24	1	–

639

tech. broch. 01380

Manual lever
for 639 series butterfly valves.

Code	Use		
639000	DN 40–DN 100	1	–
639001	DN 125-DN 150	1	–

639

tech. broch. 01380

Actuator for butterfly valve 639 series
DN 150
Supply: 230 V (AC) o 24 V (DC).
With auxiliary 2 microswitches.
Adjustable points of intervention.
Microswitch contact rating:
1 mA...3 (0,5) A - 250 V (AC).
Control signal: **ON/OFF, 3 points**.
Protection class: IP 66/67.
Operating time (90° rotation): 30–120 s.
Δp max: 3 bar.
Δp max closure: 12 bar.
Ambient temperature range: -30–50 °C.
Warehouse storage temperature range: -40–80 °C.

Code	Use	Voltage V		
639942	DN 150	230	1	–

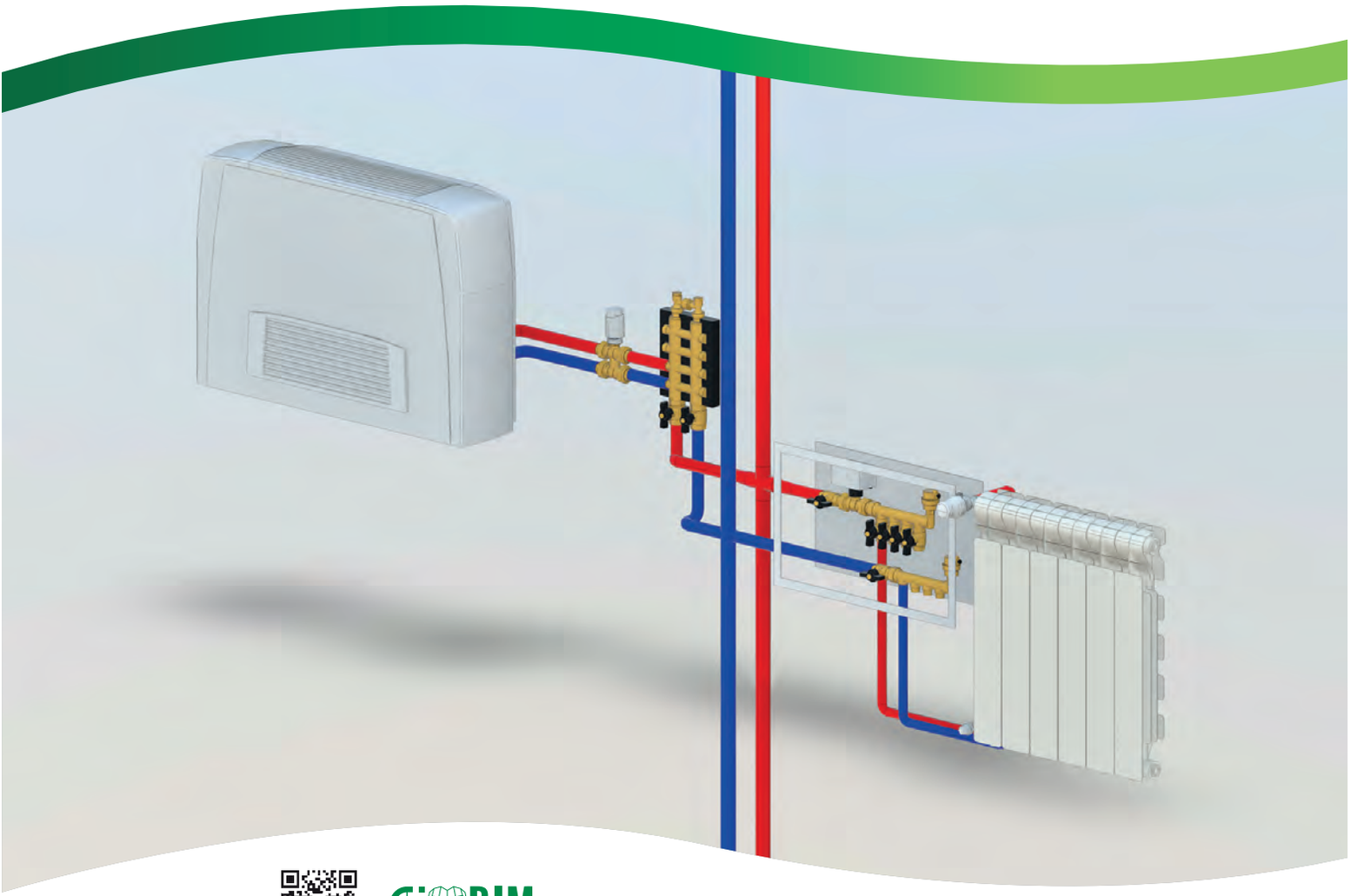
639

tech. broch. 01380

Auxiliary microswitches for 639 series actuators DN 40–DN 125.
Adjustable points of intervention.
Microswitch contact rating:
1 mA...3 (0.5) A - 250 V (AC),
1 mA…0.5 (0.2) A - 110 V (DC).
Ambient temperature range: -30–50 °C.
Warehouse storage temperature range: -40–80 °C.

Code	Use		
639900	DN 40–DN 125	1	–

DISTRIBUTION MANIFOLDS AND BOXES



bim.caleffi.com

Single manifolds
Dual manifolds
Manifolds complete with shut-off valves and pre-regulating valves
Thermo-electric actuators
Accessories
Fittings
Inspection wall boxes, in plastic
Inspection wall boxes, in painted sheet steel

SINGLE DISTRIBUTION MANIFOLDS / MALE OUTLET

349

Modular single distribution manifold.
For heating and cooling systems.
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.
Outlet centre distance: 35 mm.

Code	Connections	Outlet No.	Outlets		
349020	3/4″	x 2	23 p.1,5 M	5	50
349030	3/4″	x 3	23 p.1,5 M	5	50
349040	3/4″	x 4	23 p.1,5 M	5	50
349050	3/4″	x 5	23 p.1,5 M	5	50

350

Modular single distribution manifold.
For heating and cooling systems.
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.
Outlet centre distance:
50 mm for 3/4″ and 1″.
Outlet centre distance:
60 mm for 1 1/4″.
PTFE seal on coupling.

Code	Connections	Outlet No.	Outlets		
350520	3/4″	x 2	23 p.1,5 M	2	–
350530	3/4″	x 3	23 p.1,5 M	2	–
350540	3/4″	x 4	23 p.1,5 M	2	–
350620	1″	x 2	23 p.1,5 M	2	–
350630	1″	x 3	23 p.1,5 M	2	–
350640	1″	x 4	23 p.1,5 M	2	–
350720*	1 1/4″	x 2	23 p.1,5 M	2	–
350730*	1 1/4″	x 3	23 p.1,5 M	2	–
350740*	1 1/4″	x 4	23 p.1,5 M	2	–

** Without PTFE seal on coupling*

349

Modular single distribution manifold.
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.
Outlet centre distance: 35 mm.
Outlet male connections.

Code	Connections	Outlet No.	Outlets		
349130	3/4″	x 3	1/2″ M	5	50
349140	3/4″	x 4	1/2″ M	5	50
349150	3/4″	x 5	1/2″ M	5	50

349

Modular single distribution manifold.
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.
Con sede piana.
With flat seat for press-fittings.

Code	Connections	Outlet No.	Outlets		
349230	3/4″	x 3	1/2″ M - Ø 13	5	50
349240	3/4″	x 4	1/2″ M - Ø 13	5	50
349250	3/4″	x 5	1/2″ M - Ø 13	5	50

592

Modular single distribution manifold.
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.
PTFE seal on coupling.
Outlet male connections.

Code	Connections	Outlet No.	Outlets	Outlet centre distance		
592525	3/4″	x 2	1/2″ M	50	2	–
592535	3/4″	x 3	1/2″ M	50	2	–
592545	3/4″	x 4	1/2″ M	50	2	–
592625	1″	x 2	1/2″ M	50	2	–
592635	1″	x 3	1/2″ M	50	2	–
592645	1″	x 4	1/2″ M	50	2	–
592626	1″	x 2	1/2″ M	60	2	–
592636	1″	x 3	1/2″ M	60	2	–
592646	1″	x 4	1/2″ M	60	2	–
592726*	1 1/4″	x 2	1/2″ M	60	2	–
592736*	1 1/4″	x 3	1/2″ M	60	2	–
592746*	1 1/4″	x 4	1/2″ M	60	2	–
592622	1″	x 2	3/4″ M	60	2	–
592632	1″	x 3	3/4″ M	60	2	–

** Without PTFE on coupling*

SINGLE DISTRIBUTION MANIFOLDS / FEMALE OUTLET

349

Modular single distribution manifold.
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.
Outlet centre distance: 35 mm.
Outlet female connections.

Code	Connections	Outlet No.	Outlets		
349330	3/4″	x 3	1/2″ F	5	50
349340	3/4″	x 4	1/2″ F	5	50
349350	3/4″	x 5	1/2″ F	5	50

592

Modular single distribution manifold.
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.
PTFE seal on coupling.
Outlet female connections.

Code	Connections	Outlet No.	Outlets	Outlet centre distance		
592527	3/4″	x 2	1/2″ F	50	2	–
592537	3/4″	x 3	1/2″ F	50	2	–
592547	3/4″	x 4	1/2″ F	50	2	–
592627	1″	x 2	1/2″ F	50	2	–
592637	1″	x 3	1/2″ F	50	2	–
592647	1″	x 4	1/2″ F	50	2	–
592628	1″	x 2	1/2″ F	60	2	–
592638	1″	x 3	1/2″ F	60	2	–
592648	1″	x 4	1/2″ F	60	2	–
592728*	1 1/4″	x 2	1/2″ F	60	2	–
592738*	1 1/4″	x 3	1/2″ F	60	2	–
592748*	1 1/4″	x 4	1/2″ F	60	2	–

** Without PTFE on coupling*

BLIND SINGLE DISTRIBUTION MANIFOLDS

351

Blind sigle distribution manifold.
For heating and cooling systems.
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.
Outlet centre distance: 50 mm.

Code	Connections	Outlet No.	Outlets		
351520	3/4″	x 2	23 p.1,5 M	2	–
351530	3/4″	x 3	23 p.1,5 M	2	–
351540	3/4″	x 4	23 p.1,5 M	2	–
351620	1″	x 2	23 p.1,5 M	2	–
351630	1″	x 3	23 p.1,5 M	2	–
351640	1″	x 4	23 p.1,5 M	2	–

598

Blind single distribution manifold.
For heating and cooling systems.
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.
Outlet centre distance: 50 mm.
Outlet female connections.

Code	Connections	Outlet No.	Outlets		
598522	3/4″	x 2	1/2″ F	2	–
598532	3/4″	x 3	1/2″ F	2	–
598542	3/4″	x 4	1/2″ F	2	–
598622	1″	x 2	1/2″ F	2	–
598632	1″	x 3	1/2″ F	2	–
598642	1″	x 4	1/2″ F	2	–

SINGLE DISTRIBUTION MANIFOLDS WITH SHUT-OFF VALVES

354

Modular single distribution manifold with shut-off valves.
CR dezincification resistant alloy body.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.
Outlet centre distance: 35 mm.

Code	Connections	Outlet No.	Outlets		
354052	3/4″	x 2	23 p.1,5 M	5	20
354053	3/4″	x 3	23 p.1,5 M	5	20
354054	3/4″	x 4	23 p.1,5 M	5	20
354055	3/4″	x 5	23 p.1,5 M	5	20

354

Modular single distribution manifold with shut-off valves.
Brass body.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.
Outlet centre distance: 35 mm.
Outlet male connections.
With flat seat.
For press-fittings.

Code	Connections	Outlet No.	Outlets		
354252	3/4″	x 2	1/2″ M - Ø 13	2	30
354253	3/4″	x 3	1/2″ M - Ø 13	2	20
354254	3/4″	x 4	1/2″ M - Ø 13	2	10
354255	3/4″	x 5	1/2″ M - Ø 13	2	10

SINGLE DISTRIBUTION MANIFOLDS FOR AIR CONDITIONING SYSTEMS

650

tech. broch. 01067

Modular single distribution manifold. For air conditioning systems.
With insulation.
Max. working pressure: 10 bar.
Temperature range: -40–95 °C.
Outlet centre distance: 60 mm.

Code	Connections	Outlet No.	Outlets		
650622	1″	x 2	3/4″ M	2	–
650632	1″	x 3	3/4″ M	2	–
650722	1 1/4″	x 2	3/4″ M	2	–
650732	1 1/4″	x 3	3/4″ M	2	–
650742	1 1/4″	x 4	3/4″ M	2	-

DUAL DISTRIBUTION MANIFOLDS AND FITTINGS

356

tech. broch. 01014

Cast monoblock dual distribution manifold.
For heating and cooling systems.
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.
Main centre distance: 60 mm.
Outlet centre distance: 40 mm.

Code	Connections	Outlet No.	Outlets		
356502	3/4″	2+2	23 p.1,5 M	1	5
356504	3/4″	4+4	23 p.1,5 M	1	5
356506	3/4″	6+6	23 p.1,5 M	1	5
356508	3/4″	8+8	23 p.1,5 M	1	5
356510	3/4″	10+10	23 p.1,5 M	1	5
356604	1″	4+4	23 p.1,5 M	1	5
356606	1″	6+6	23 p.1,5 M	1	5
356608	1″	8+8	23 p.1,5 M	1	5
356610	1″	10+10	23 p.1,5 M	1	5
356612	1″	12+12	23 p.1,5 M	1	–

356

tech. broch. 01014

Cast monoblock dual distribution manifold.
For heating and cooling systems.
With insulation.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.
Main centre distance: 60 mm.
Outlet centre distance: 40 mm.

Code	Connections	Outlet No.	Outlets		
356604 IS	1″	4+4	23 p.1,5 M	1	10
356606 IS	1″	6+6	23 p.1,5 M	1	10
356608 IS	1″	8+8	23 p.1,5 M	1	5
356610 IS	1″	10+10	23 p.1,5 M	1	5

357

tech. broch. 01014

Single sided cast monoblock dual distribution manifold.
For heating and cooling systems.
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.
Main centre distance: 60 mm.
Outlet centre distance: 40 mm.

Code	Connections	Outlet No.	Outlets		
357502	3/4″	2+2	23 p.1,5 M	1	10
357503	3/4″	3+3	23 p.1,5 M	1	10
357504	3/4″	4+4	23 p.1,5 M	1	5
357505	3/4″	5+5	23 p.1,5 M	1	–
357506	3/4″	6+6	23 p.1,5 M	1	–

356

tech. broch. 01014

Differential by-pass for dual distribution manifolds 356 and 357 series.
3/8″ connection for automatic air vent.
Fixed differential by-pass setting:
20 kPa (2000 mm w.g.).
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.

Code			
356050	3/4″ M	1	20

3640

End fitting.
For distribution manifolds 356 and 357 series.

Code				
364050	3/4″ M	x 23 p.1,5 M	2	–
364060	1″ M	x 23 p.1,5 M	2	–

3641

Plug.
For distribution manifolds 356 and 357 series.

Code			
364150	3/4″ M	2	–
364160	1″ M	2	–

3642

End fitting for air vent connection.
For distribution manifolds 356 and 357 series.

Code			
364253	3/4″ M x 3/8″ F	2	–
364254	3/4″ M x 1/2″ F	2	–
364263	1″ M x 3/8″ F	2	–

DISTRIBUTION MANIFOLDS WITH SHUT-OFF AND PRE-REGULATING VALVES

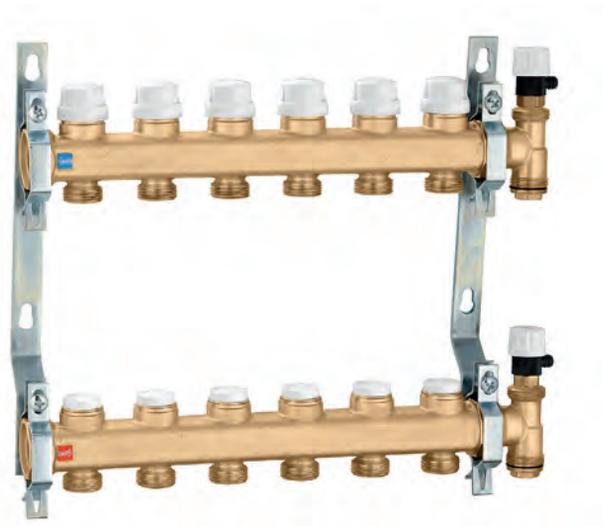
1" CONNECTIONS

662

tech. broch. 01180

Distribution manifold group.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.
Outlet centre distance: 50 mm.

Consisting of:
- return manifold complete with shut-off valves fitted for thermo-electric actuator;
- flow manifold complete with lockshield valves for flow rate pre-regulation;
- end fittings consisting of double radial end fitting, manual air vent and plugs;
- steel mounting brackets for use with box 659 series or for direct wall fixing.



Code	Connections	Outlet No.	Outlets		
6626B5	1"	x 2	3/4" M	1	–
6626C5	1"	x 3	3/4" M	1	–
6626D5	1"	x 4	3/4" M	1	–
6626E5	1"	x 5	3/4" M	1	–
6626F5	1"	x 6	3/4" M	1	–
6626G5	1"	x 7	3/4" M	1	–
6626H5	1"	x 8	3/4" M	1	–
6626I 5	1"	x 9	3/4" M	1	–
6626L5	1"	x 10	3/4" M	1	–
6626M5	1"	x 11	3/4" M	1	–
6626N5	1"	x 12	3/4" M	1	–
6626O5	1"	x 13	3/4" M	1	–

Insulation for distribution manifolds 662, 664 and 665 series.
For heating and cooling systems.
For use with box code 659..4 (**adjustable depth from 110 to 140 mm**).

Code			
CBN6646F1	for manifolds from 2 to 6 outlets	1	–
CBN6646N1	for manifolds from 7 to 12 outlets	1	–
CBN6646O1	for manifolds with 13 outlets	1	–

391

Pair of ball shut-off valves with O-Ring seal.
For distribution manifolds 664 and 665 series.
Female - male connections with union with O-Ring seal.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code			
391066	1"	1	–

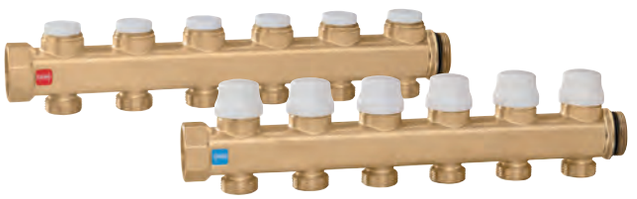
DISTRIBUTION MANIFOLDS WITH SHUT-OFF AND PRE-REGULATING VALVES

1" CONNECTIONS

662

tech. broch. 01180

Pair of manifolds equipped with shut-off and lockshield valves for flow rate pre-regulation.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.
Outlet centre distance: 50 mm.



Code	Connections	Outlet No.	Outlets		
662625	1"	x 2	3/4" M	1	–
662635	1"	x 3	3/4" M	1	–
662645	1"	x 4	3/4" M	1	–
662655	1"	x 5	3/4" M	1	–
662665	1"	x 6	3/4" M	1	–

6620

tech. broch. 01180

Return manifold equipped with shut-off valves, fitted for thermo-electric actuator.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.
Outlet centre distance: 50 mm.

Code	Connections	Outlet No.	Outlets		
662025	1"	x 2	3/4" M	2	–
662035	1"	x 3	3/4" M	2	–
662045	1"	x 4	3/4" M	2	–
662055	1"	x 5	3/4" M	2	–
662065	1"	x 6	3/4" M	2	–

6621

tech. broch. 01180

Flow manifold equipped with lockshield valves for flow rate pre-regulation.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.
Outlet centre distance: 50 mm.

Code	Connections	Outlet No.	Outlets		
662125	1"	x 2	3/4" M	2	–
662135	1"	x 3	3/4" M	2	–
662145	1"	x 4	3/4" M	2	–
662155	1"	x 5	3/4" M	2	–
662165	1"	x 6	3/4" M	2	–

5996

tech. broch. 01180

End fitting consisting of double radial end fitting, air vent cock and plug.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code			
599662	1" F	1	25

662

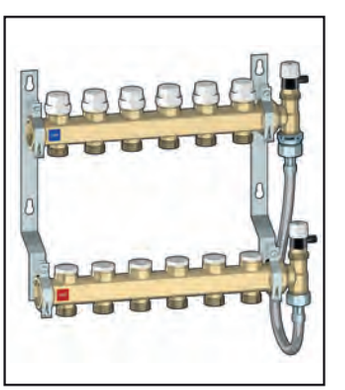
tech. broch. 01180

Fixed setting differential by-pass kit
20 kPa (2000 mm w.g.), with flexible hose.
For distribution manifolds 662 series.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.

Code			
662000	3/4" F nut x 3/4" F	1	5

Connection example of differential by-pass code 662000 with manifold 662 series

This special by-pass kit consists of a flexible hose which makes installation easier and allows the manifold to be adapted to suit the brackets, according to the actual positions of the system flow and return piping.



658

Pair of steel mounting brackets
for distribution manifolds 662 and 664 series.
To be used with boxes code 659..5
or directly wall mounted.

Code			
658101		1	–

658

tech. broch. 01180

Polymer mounting brackets with adjustable centre distance, for distribution manifolds 662 series.
With screws and wall anchors.
To be used with boxes code 659..4
(depth 110–140 mm) or directly wall mounted.

Code			
658400		1	5

DISTRIBUTION MANIFOLDS WITH SHUT-OFF AND PRE-REGULATING VALVES

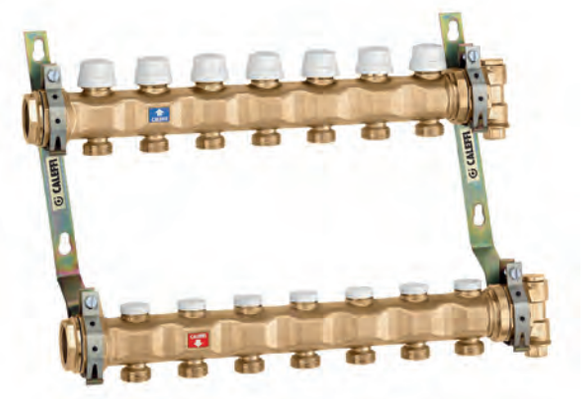
1 1/4" CONNECTIONS

663

tech. broch. 01065

Pre-assembled distribution manifold.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.
Outlet centre distance: 50 mm.

Consisting of:
- 1 return distribution manifold complete with shut-off valves fitted for thermo-electric actuator;
- 1 flow distribution manifold complete with lockshield valves for flow rate pre-regulation;
- 2 mounting brackets code 658100;
- 2 reduction fittings 1 1/4" M x 1" F code 364276;
- 2 double radial end fittings with plugs.



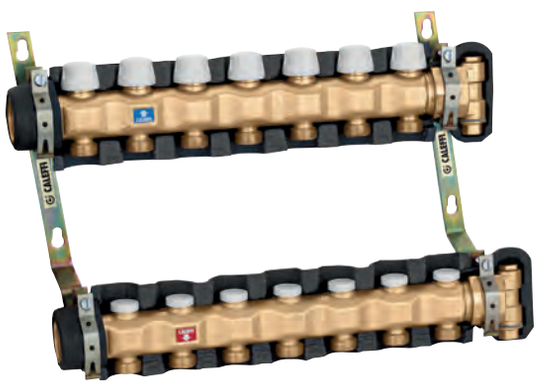
Code	Connections	Outlet No.	Outlets		
6637C5	1 1/4"	x 3	3/4" M	1	–
6637D5	1 1/4"	x 4	3/4" M	1	–
6637E5	1 1/4"	x 5	3/4" M	1	–
6637F5	1 1/4"	x 6	3/4" M	1	–
6637G5	1 1/4"	x 7	3/4" M	1	–
6637H5	1 1/4"	x 8	3/4" M	1	–
6637I5	1 1/4"	x 9	3/4" M	1	–
6637L5	1 1/4"	x 10	3/4" M	1	–
6637M5	1 1/4"	x 11	3/4" M	1	–
6637N5	1 1/4"	x 12	3/4" M	1	–
6637O5	1 1/4"	x 13	3/4" M	1	–

663

tech. broch. 01065

Pre-assembled distribution manifold for cooling systems.
With insulation.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.
Outlet centre distance: 50 mm.

Consisting of:
- 1 return distribution manifold complete with shut-off valves fitted for thermo-electric actuator;
- 1 flow distribution manifold complete with lockshield valve for flow rate pre-regulation;
- 2 mounting brackets code 658100;
- 2 reduction fittings 1 1/4" M x 1" F code 364276;
- 2 double radial end fittings with plugs.



Code	Connections	Outlet No.	Outlets		
6637C5 IS	1 1/4"	x 3	3/4" M	1	–
6637D5 IS	1 1/4"	x 4	3/4" M	1	–
6637E5 IS	1 1/4"	x 5	3/4" M	1	–
6637F5 IS	1 1/4"	x 6	3/4" M	1	–
6637G5 IS	1 1/4"	x 7	3/4" M	1	–
6637H5 IS	1 1/4"	x 8	3/4" M	1	–
6637I5 IS	1 1/4"	x 9	3/4" M	1	–
6637L5 IS	1 1/4"	x 10	3/4" M	1	–
6637M5 IS	1 1/4"	x 11	3/4" M	1	–
6637N5 IS	1 1/4"	x 12	3/4" M	1	–
6637O5 IS	1 1/4"	x 13	3/4" M	1	–

DISTRIBUTION MANIFOLDS WITH SHUT-OFF AND PRE-REGULATING VALVES

1 1/4" CONNECTIONS

663

tech. broch. 01065

Pair of distribution manifolds equipped with shut-off and lockshield valves for flow rate pre-regulation.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.
Outlet centre distance: 50 mm.

Code	Connections	Outlet No.	Outlets		
663735	1 1/4"	x 3	3/4" M	1	–
663745	1 1/4"	x 4	3/4" M	1	–
663755	1 1/4"	x 5	3/4" M	1	–
663765	1 1/4"	x 6	3/4" M	1	–
663775	1 1/4"	x 7	3/4" M	1	–
663785	1 1/4"	x 8	3/4" M	1	–

6630

tech. broch. 01065

Return distribution manifold equipped with shut-off valves, fitted for thermo-electric actuator.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.
Outlet centre distance: 50 mm.

Code	Connections	Outlet No.	Outlets		
663030	1 1/4"	x 3	3/4" M	2	–
663040	1 1/4"	x 4	3/4" M	2	–
663050	1 1/4"	x 5	3/4" M	2	–
663060	1 1/4"	x 6	3/4" M	2	–
663070	1 1/4"	x 7	3/4" M	2	–
663080	1 1/4"	x 8	3/4" M	2	–

6631

tech. broch. 01065

Flow distribution manifold equipped with lockshield valve for flow rate pre-regulation.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.
Outlet centre distance: 50 mm.

Code	Connections	Outlet No.	Outlets		
663130	1 1/4"	x 3	3/4" M	2	–
663140	1 1/4"	x 4	3/4" M	2	–
663150	1 1/4"	x 5	3/4" M	2	–
663160	1 1/4"	x 6	3/4" M	2	–
663170	1 1/4"	x 7	3/4" M	2	–
663180	1 1/4"	x 8	3/4" M	2	–

663

Off-centre by-pass kit with fixed setting 20 kPa (2000 mm w.g.).
For pre-assembled distribution manifolds 663 series.
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.

Code			
663000	1/2" M x 3/8" M	1	20

Full insulation (front and back) for couple manifolds 663 series.

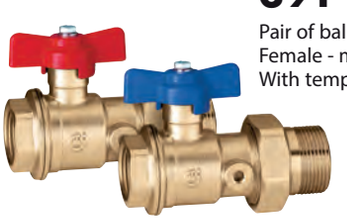
Code			
F69466	for manifolds with 3 outlets	1	–
F69467	for manifolds with 4 outlets	1	–
F69468	for manifolds with 5 outlets	1	–
F69469	for manifolds with 6 outlets	1	–
F69470	for manifolds with 7 outlets	1	–
F69471	for manifolds with 8 outlets	1	–
F69472	for manifolds with 9 outlets	1	–
F69473	for manifolds with 10 outlets	1	–
F69474	for manifolds with 11 outlets	1	–
F69475	for manifolds with 12 outlets	1	–
F69476	for manifolds with 13 outlets	1	–

391

Pair of ball valves.
Female - male connections with union.
With temperature gauge, scale: 0–80 °C, Ø 40 mm.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.

Code			
391167	1" x 1 1/4"	1	–
391177	1 1/4" x 1 1/4"	1	–

391



Pair of ball valves.
Female - male connections with union.
With temperature gauge connection.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.

Code			
391067	1" x 1 1/4"	1	–
391077	1 1/4" x 1 1/4"	1	–

THERMO-ELECTRIC ACTUATORS

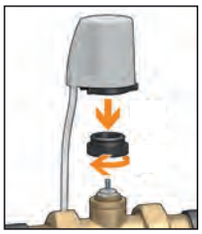
6563

tech. broch. 01142

Thermo-electric actuator.
With manual opening and position indicator.
For distribution manifolds 662 and 663 series.
Normally closed.
With auxiliary microswitch.
Supply: 230 V (AC) or 24 V (AC)/(DC).
Power consumption: 3 W.
Starting current: ≤ 1 A.
Starting current (656344/54): ≤ 250 mA.
Auxiliary microswitch contact rating:
0,8 A (230 V).
Ambient temperature range: 0–50 °C.
Protection class: IP 40.
Cable length: 80 cm.
PATENT.

CE

Code	Supply voltage V			
656312	230		1	10
656314	24		1	10
656302	230	without auxiliary microswitch	1	10
656304	24	without auxiliary microswitch	1	10



6562

tech. broch. 01198

Thermo-electric actuator.
With opening position indicator.
Quick-coupling installation, with a clip adapter.
For distribution manifolds 662 and 663 series.
Normally closed.
With auxiliary microswitch.
Supply: 230 V (AC) or 24 V (AC)/(DC).
Auxiliary microswitch contact rating:
0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 1 A.
Ambient temperature range: 0–50 °C.
Protection class: IP 54.
Cable length: 80 cm.

CE

Code	Supply voltage V			
656212	230		1	10
656214	24		1	10
656202	230	without auxiliary microswitch	1	10
656204	24	without auxiliary microswitch	1	10

With low power consumption

Code	Supply voltage V			
656354	24		1	10
656344	24	without auxiliary microswitch	1	10

6561

tech. broch. 01042

Thermo-electric actuator.
For distribution manifolds 662 and 663 series.
Normally closed.
With auxiliary microswitch.
Supply: 230 V (AC) or 24 V (AC)/(DC).
Auxiliary microswitch contact rating:
0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 1 A.
Ambient temperature range: 0–50 °C.
Protection class: IP 44 (vertical stem).
Cable length: 80 cm.

CE

Code	Supply voltage V			
656112	230		1	10
656114	24		1	10
656102	230	without auxiliary microswitch	1	10
656104	24	without auxiliary microswitch	1	10

CE

6564

tech. broch. 01198

Thermo-electric actuator
with low power consumption.
With opening position indicator.
Quick-coupling installation, with a clip adapter.
For distribution manifolds 662 and 663 series.
Normally closed.
With auxiliary microswitch.
Supply: 230 V (AC) or 24 V (AC)/(DC).
Auxiliary microswitch contact rating:
0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 250 mA.
Ambient temperature range: 0–50 °C.
Protection class: IP 54.
Cable length: 80 cm.

Code	Supply voltage V			
656412	230		1	10
656414	24		1	10
656402	230	without auxiliary microswitch	1	10
656404	24	without auxiliary microswitch	1	10

ACCESSORIES

385

Shut-off ball cook,
for distribution manifold outlets.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.
With handle.

Code			
385000	23 p.1,5 M x F nut	10	–

385

Shut-off ball cook,
for distribution manifold outlets.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.
Without handle.

Code			
385010	23 p.1,5 M x F nut	15	150

386

Screw plug with nut
for distribution manifold outlets.

Code			
386000	23 p.1,5	10	–

383

Female fitting to nut and olive coupling.

Code					
383030	3/8" F x	23 p.1,5 M		10	–
383040	1/2" F x	23 p.1,5 M		10	–
383050	3/4" F x	23 p.1,5 M		10	–
383140	23 p.1,5 F x	1/2" M		10	–
383150	23 p.1,5 F x	3/4" M		10	–
383151	23 p.1,5 F x	3/4" M	chrome plated	10	–

383

Connection fitting with O-Ring seal
for use with 3/4" 347, 679 and 680 series.

Code			
383550	3/4" M x 23 p.1,5	10	100

383

Female-female fitting.

Code			
383240	23 p.1,5 F x 1/2" F	10	–

384

Male fitting to nut and olive coupling.

Code			
384030	3/8" M x 23 p.1,5 M	10	–
384040	1/2" M x 23 p.1,5 M	10	–
384050	3/4" M x 23 p.1,5 M	10	–

384

Male fitting to nut and olive coupling.
Chrome plated.

Code			
384031	3/8" M x 23 p.1,5 M	10	–
384041	1/2" M x 23 p.1,5 M	10	–

382

Fitting with 23 p.1,5 captive nut.
Chrome plated.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.

Code			
382000	23 p.1,5 M x nut 23 p.1,5 F	10	–

383

Adapter with flat seat with O-Ring.
Transformation from 3/4" Euroconus
to 3/4" flat seat.

Code			
383000	3/4"	1	–

ACCESSORIES

392

Temperature gauge fitting.
For distribution manifolds 592 and 350 series.
Temperature gauge 0–80 °C, Ø 40 mm.

Code				
392600	1″ F x M	with PTFE seal	1	–
392700	1 1/4″ F x M	without PTFE seal	1	–

657

Temperature gauge fitting.
Temperature gauge 0–80 °C, Ø 40 mm.

Code			
657400	1/2″ M x 1/2″ F	5	–

657

Temperature gauge fitting.
For distribution manifold outlets.
Temperature gauge 0–80 °C, Ø 40 mm.

Code			
657050	3/4″ M x 3/4″ F nut	1	12

669

Self cleaning flow meter.
Flow rate scale: 1–4 l/min.
Double reading scale.
Max. working pressure: 6 bar.
Max. working temperature: 80 °C.
Accuracy: ± 10 %.

Code			
669050	3/4″ M x 3/4″ F nut	1	10

688

tech. broch. 01144

Temperature gauge with pocket.
Scale 0–80 °C.
Ø 40 mm.

Code			
688002	1/4″	2	–

3642

Reduction fitting.

Code			
364276	1″ F x 1 1/4″ M	2	–

5991

End fitting.
For distribution manifolds 349, 350, 592, 650 and 663 series.

Code				
599153	3/4″ F	x 3/8″ F	2	–
599154	3/4″ F	x 1/2″ F	2	–
599163	1″ F	x 3/8″ F	2	–
599164	1″ F	x 1/2″ F	2	–
599173	1 1/4″ F	x 3/8″ F	2	–
599174	1 1/4″ F	x 1/2″ F	2	–

5993

Plug.
For distribution manifolds 349, 350, 592, 650 and 663 series.

Code			
599350	3/4″ F	2	10
599360	1″ F	2	10
599370	1 1/4″ F	2	10

5994

Double radial end fitting.
For distribution manifolds 349, 350, 592, 650 and 663 series.

Code					
599453	3/4″ F	x 1/2″ F	x 3/8″ F	2	–
599454	3/4″ F	x 1/2″ F	x 1/2″ F	2	–
599463	1″ F	x 1/2″ F	x 3/8″ F	2	–
599464	1″ F	x 1/2″ F	x 1/2″ F	2	–
599473	1 1/4″ F	x 1/2″ F	x 3/8″ F	2	–
599474	1 1/4″ F	x 1/2″ F	x 1/2″ F	2	–

5995

Single radial end fitting.
For distribution manifolds 349, 350, 592, 650 and 663 series.

Code				
599553	3/4″ F	x 3/8″ F	2	–
599563	1″ F	x 3/8″ F	2	–
599573	1 1/4″ F	x 3/8″ F	2	–

5996

Double radial end fitting. For distribution manifolds 662 series.

Code			
599660		2	–

ACCESSORIES

586

Female blind end plug.

Code				
586300	3/8" F	10	–
586400	1/2" F	10	–
586600	1" F	10	–

583

Female compression fitting for outlets.

Code				
583034	3/8" F x 1/2" M - Ø 16	10	–
583045	1/2" F x 3/4" M - Ø 18	10	–
583064	1" F x 1/2" M - Ø 16	10	–
583065	1" F x 3/4" M - Ø 18	10	–

584

Male compression fitting for outlets.

Code				
584053	3/4" M x 3/8" M - Ø 12	10	–
584054	3/4" M x 1/2" M - Ø 16	10	–
584055	3/4" M x 3/4" M - Ø 18	10	–
584065	1" M x 3/4" M - Ø 18	10	–

585

Stiffener for copper pipe with wall thickness 0,75 and 1 mm.

Code		Thickness (mm)		
585010	Ø 10	0,75	100	–
585012	Ø 12	0,75	100	–
585014	Ø 14	0,75	100	–
585015	Ø 15	0,75	100	–
585016	Ø 16	0,75	100	–
585018	Ø 18	0,75	100	–
585110	Ø 10	1	100	–
585115	Ø 15	1	100	–
585116	Ø 16	1	100	–
585118	Ø 18	1	100	–

386

Screw plug with nut
for distribution manifold outlets.

Code				
386500	3/4"		10	–

FITTINGS 23 p.1,5

679
DARCAL

Fitting for multilayer plastic pipe
for continuous high temperature use.
Max. working pressure: 10 bar.
Temperature range: 0–95 °C.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series (see page 107).

Code			
679114	23 p.1,5 - Ø 14x2	10	100
679124	23 p.1,5 - Ø 16x2	10	100
679125	23 p.1,5 - Ø 16x2,25	10	100
679144	23 p.1,5 - Ø 18x2	10	100

446

Pre-assembled compression ends fitting,
for annealed copper, hard copper, brass,
mild steel and stainless steel pipes.
With O-Ring seal.
Max. working pressure: 10 bar.
Temperature range: -25–120 °C.

Code			
446010	23 p.1,5 - Ø 10	100	–
446012	23 p.1,5 - Ø 12	100	–
446014	23 p.1,5 - Ø 14	100	–
446015	23 p.1,5 - Ø 15	100	–
446016	23 p.1,5 - Ø 16	100	–

680
DARCAL

Self-adjustable diameter fitting
for single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range:
5–80 °C (PE-X)
5–75 °C (Multilayer marked 95 °C).

Code		$Ø_{inside}$	$Ø_{outside}$		
680000	23 p.1,5	7,5– 8	12–14	10	100
680002	23 p.1,5	9 – 9,5	14–16	10	100
680001	23 p.1,5	9,5–10	12–14	10	100
680006	23 p.1,5	9,5–10	14–16	10	100
680015	23 p.1,5	10,5–11	14–16	10	100
680017	23 p.1,5	10,5–11	16–18	10	100
680024	23 p.1,5	11,5–12	14–16	10	100
680026	23 p.1,5	11,5–12	16–18	10	100
680035	23 p.1,5	12,5–13	16–18	10	100
680044	23 p.1,5	13,5–14	16–18	10	100

347

Compression ends fitting,
for annealed copper, hard copper, brass,
mild steel and stainless steel pipes.
With O-Ring seal.
Max. working pressure: 10 bar.
Temperature range: -25–120 °C.

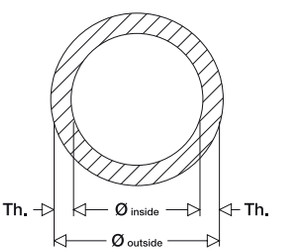
Code			
347010	23 p.1,5 - Ø 10	100	–
347012	23 p.1,5 - Ø 12	100	–
347014	23 p.1,5 - Ø 14	100	–
347015	23 p.1,5 - Ø 15	100	–
347016	23 p.1,5 - Ø 16	100	–

680
DARCAL

Self-adjustable diameter fitting
for single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range:
5–80 °C (PE-X)
5–75 °C (Multilayer marked 95 °C).

Code		$Ø_{inside}$	$Ø_{outside}$		
680055	23 p.1,5	14,5–15	18–20	10	100
680064	23 p.1,5	15,5–16	18–20	10	100

Example: 680 series fitting selection



Known both the outside and inside diameters (**ex.: 17 mm** and **13 mm**);

or known the outside diameter (**ex.: Øo 17 mm**) and the thickness (**ex.: th. 2 mm**) and considering that:

$Ø_{outside}$ – 2 · th. = $Ø_{inside}$

17 – 2 · 2 = 13 mm

Look within the table for the code matching both diameters:

Code		$Ø_{inside}$	$Ø_{outside}$
680035	23 p.1,5	12,5–13	16–18

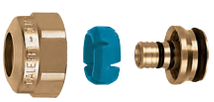
FITTINGS 3/4”

679
DARCAL

Fitting for multilayer pipes with continuous high temperature use.
Max. working pressure: 10 bar.
Temperature range: 0–95 °C.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series (see page 107).

Code				
679514	3/4”	- Ø 14x2	10	100
679524	3/4”	- Ø 16x2	10	100
679525	3/4”	- Ø 16x2,25	10	100
679544	3/4”	- Ø 18x2	10	100
679564	3/4”	- Ø 20x2	10	100
679565	3/4”	- Ø 20x2,25	10	100
679566	3/4”	- Ø 20x2,5	10	100



680
DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range:
5–80 °C (PE-X)
5–75 °C (Multilayer marked 95 °C).

Code		$Ø_{inside}$	$Ø_{outside}$		
680507	3/4”	7,5– 8	10,5–12	10	100
680502	3/4”	7,5– 8	12 –14	10	100
680503	3/4”	8,5– 9	12 –14	10	100
680500	3/4”	9 – 9,5	14 –16	10	100
680501	3/4”	9,5–10	12 –14	10	100
680506	3/4”	9,5–10	14 –16	10	100
680515	3/4”	10,5–11	14 –16	10	100
680517	3/4”	10,5–11	16 –18	10	100
680524	3/4”	11,5–12	14 –16	10	100
680526	3/4”	11,5–12	16 –18	10	100
680535	3/4”	12,5–13	16 –18	10	100
680537	3/4”	12,5–13	18 –20	10	100
680544	3/4”	13,5–14	16 –18	10	100
680546	3/4”	13,5–14	18 –20	10	100
680555	3/4”	14,5–15	18 –20	10	100
680556	3/4”	15 –15,5	18 –20	10	100
680564	3/4”	15,5–16	18 –20	10	100
680505	3/4”	17	22,5	10	100

680
DARCAL

Self-adjustable diameter fitting for plastic pipes.
Max. working pressure: 10 bar.
Temperature range: 5–80 °C.

Code		$Ø_{inside}$	$Ø_{outside}$		
680687	1”	17,5	25	10	100
680605	1”	19,5	25	10	100

347

Compression ends fitting,
for annealed copper, hard copper, brass, mild steel and stainless steel pipes.
With O-Ring seal.
Max. working pressure: 10 bar.
Temperature range: -25–120 °C.

Code				
347510	3/4”	- Ø 10	100	–
347512	3/4”	- Ø 12	100	–
347514	3/4”	- Ø 14	100	–
347515	3/4”	- Ø 15	100	–
347516	3/4”	- Ø 16	100	–
347518	3/4”	- Ø 18	10	–

680
DARCAL

Compression ends fitting
for multilayer pipe with fitting M-F.

Code				
680285	3/4” F	- Ø 25x2,5	10	–
680296	3/4” F	- Ø 26x3	10	–

PLASTIC INSPECTION WALL BOXES

361

Plastic inspection wall port,
with zinc plated sheet steel frame.
White colour RAL 9010.

Code	Dim. (h x w)		
361032	320 x 250	1	5
361050	500 x 250	1	10

360

Plastic inspection wall box.
For distribution manifolds 349, 350, 592 and 354 series.
Version with foldable side walls.
White colour RAL 9010.

Code	Dim. (h x w x d)		
360032	320 x 250 x 90	1	10
360050	500 x 250 x 90	1	10

363

tech. broch. 01091

Inspection wall port and frame in plastic.
Ventilated.
White colour RAL 9010.

Code	Dim. (h x w)		
363036	360 x 270	1	10
363056	560 x 330	1	5
363073	730 x 360	1	5

362

tech. broch. 01091

Plastic inspection wall box.
For dual distribution manifolds 356, 357 series and single distribution manifolds 349, 350, 592 and 354 series.
Ventilated.
Equipped with lateral protections.
Adjustable depth from 100 to 80 mm.
White colour RAL 9010.

Code	Dim. (h x w x d)		
362036	360 x 270 x 100/80	1	10
362056	560 x 330 x 100/80	1	5
362073	730 x 360 x 100/80	1	5

360

tech. broch. 01091

Pair of mounting brackets for 3/4" and 1" dual distribution manifolds 356, 356 IS and 357 series.
For plastic inspection boxes 360 and 362 series.

Code		
360003	1	–

360

Pair of stainless steel mounting brackets for distribution manifolds 354 series.
For plastic inspection boxes 360 and 362 series.

Code		
360210	1	10

360

tech. broch. 01091

Mounting brackets for 1" single distribution manifolds 350 and 592 series, for 3/4" and 1" distribution manifolds 351 and 598 series.
For plastic inspection boxes 360 and 362 series.
In package:
– N. 2 long brackets
– N. 2 short brackets.

Code		
360001	1	10

360

tech. broch. 01091

Mounting brackets for 3/4" single distribution manifolds 349, 350 and 592 series.
For plastic inspection boxes 360 and 362 series.
In package:
– N. 2 long brackets
– N. 2 short brackets.

Code		
360002	1	10

362

tech. broch. 01091

Mounting brackets for dual distribution manifolds 356 and 357 series.
For plastic inspection boxes 362 series.

Code		
362001	1	10

SHEET STEEL INSPECTION WALL BOXES

ADJUSTABLE DEPTH FROM 110 TO 140 MM

659

tech. broch. 01144

Inspection wall box for distribution manifolds 349, 350, 592, 662, 663, 671, 668...S1, 664 and 665 series.
Wall or floor installations (with 660 series).
Closure with a push-fit clamp.
In painted sheet steel.
Adjustable depth from 110 to 140 mm.

Code	Dim. (h x w x d)		
659044	500 x 400 x 110–140	1	–
659064	500 x 600 x 110–140	1	–
659084	500 x 800 x 110–140	1	–
659104	500 x 1000 x 110–140	1	–
659124	500 x 1200 x 110–140	1	–

659

tech. broch. 01144

Inspection wall port with frame.
In painted sheet steel.

Code			
659304	for 659044	1	–
659306	for 659064	1	–
659308	for 659084	1	–
659310	for 659104	1	–
659312	for 659124	1	–

ADJUSTABLE DEPTH FROM 80 - 120 MM

659

tech. broch. 01144

Inspection wall box for distribution manifolds 349, 350, 592, 662, 671, 664 and 665 series.
Complete with specific support for manifold brackets.
Closure with a push-fit clamp.
In painted sheet steel.
Adjustable depth from 80 to 120 mm.

Code	Dim. (h x w x d)		
659045	500 x 400 x 80–120	1	–
659065	500 x 600 x 80–120	1	–
659085	500 x 800 x 80–120	1	–
659105	500 x 1000 x 80–120	1	–

659

tech. broch. 01144

Inspection wall port with frame.
In painted sheet steel.

Code			
659504	for 659045	1	–
659506	for 659065	1	–
659508	for 659085	1	–
659510	for 659105	1	–

BRACKETS FOR INSPECTION WALL BOXES

658

Pair of mounting brackets

592, 350 and 351 series.
With insulating clamps, screws and wall anchors.
To be used with boxes 659 series
or directly wall mounted.

Code			
658000		1	20

658

Pair of steel mounting brackets
for distribution manifolds 662 and 664 series.
To be used with boxes code 659..5
or directly wall mounted.

Code			
658101		1	–

658

Pair of mounting brackets
for distribution manifolds 663 and 668...S1 series.
With screws and wall anchors.
To be used with boxes 659 series
or directly wall mounted.

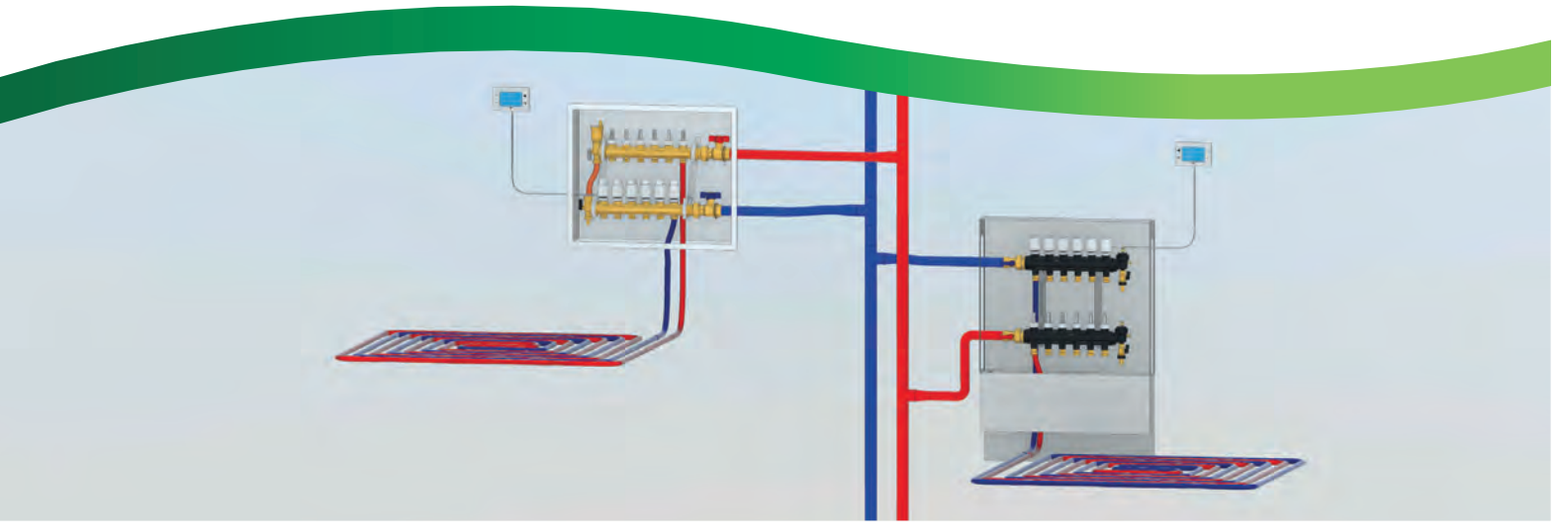
Code			
658100		1	20

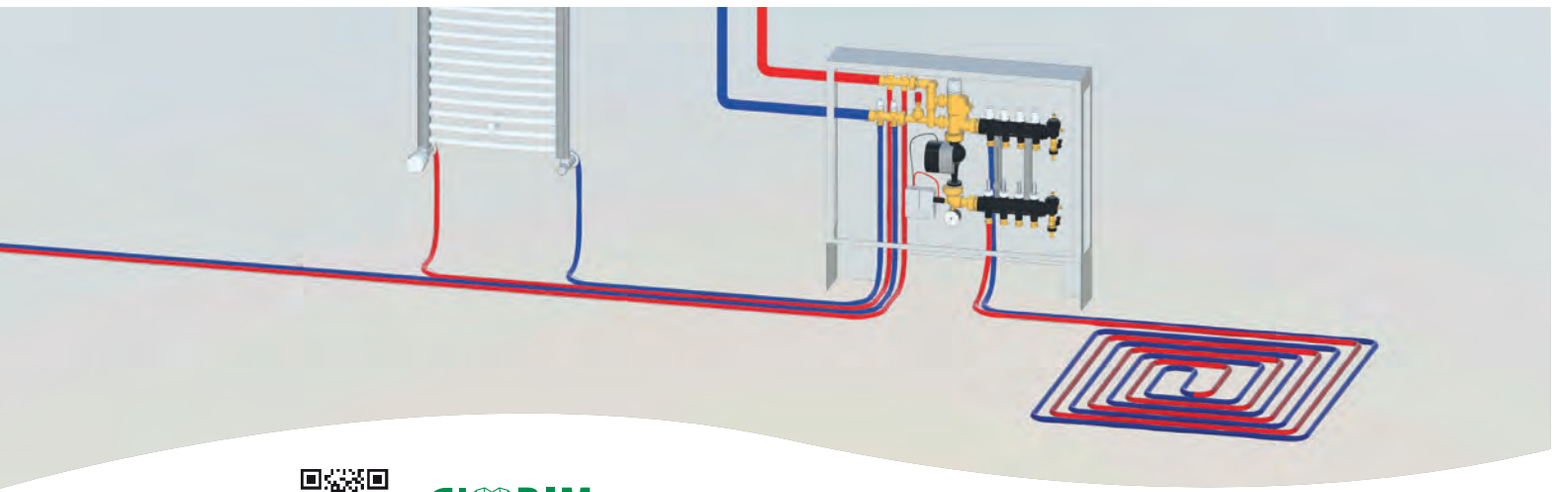
658

Pair of mounting brackets for 3/4" and 1"
distribution manifolds 350 and 592 series.
With clamps and screws.
To connect manifolds to zone valves.
To be used with boxes 659 series.

Code			
658200		1	–

DISTRIBUTION MANIFOLDS - DISTRIBUTION MANIFOLDS WITH REGULATING UNIT

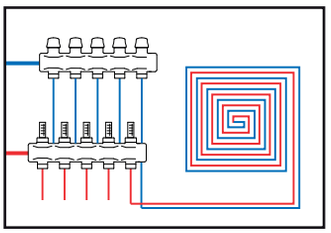




bim.caleffi.com

Composite distribution manifolds
Brass distribution manifolds
Dynamic distribution manifolds
Differential pressure control valve for distribution manifolds
Modulating temperature regulating unit
Modulating temperature regulating unit with medium distribution kit for primary circuit
Set point thermostatic regulating unit
Set point thermostatic regulating unit with medium distribution kit for primary circuit
Thermo-electric actuators
Boxes for distribution manifolds

MANIFOLDS FOR RADIANT PANEL SYSTEMS



Manifolds for radiant panel systems are used for optimal distribution of the heating medium in floor heating system circuits and ultimately to improve heat emission control.

They are composed of:

- flow manifold; complete with flow meters and built-in regulating valves;
- return manifold; complete with shut-off valves with facility for thermo-electric actuator;
- end fittings complete with automatic valve and manual air vent with filler/drain cocks.

Modulating temperature regulating units or set point thermostatic regulating units can be coupled with the distribution manifolds.

Distribution manifolds

- Composite distribution manifolds

- Differential pressure control valve for distribution manifolds

- Accessories for distribution manifolds

- Brass distribution manifolds

- Dynamic distribution manifolds

Distribution manifolds with regulating unit

- Modulating temperature regulating unit with digital temperature

- Set point thermostatic regulating unit

- Set point thermostatic regulating unit with medium distribution kit for primary circuit

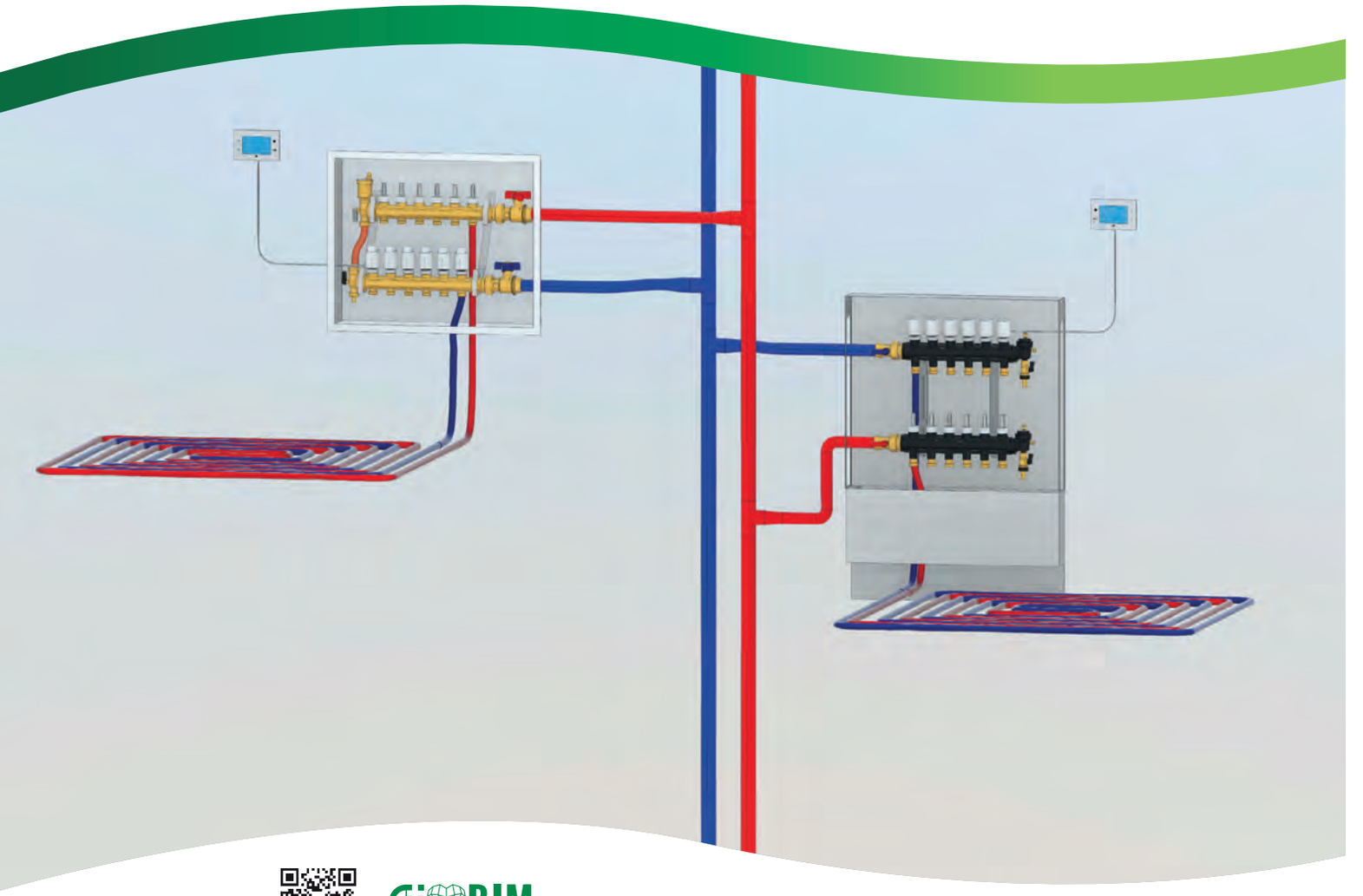
- Thermostatic mixing valve for radiant panel systems

Thermo-electric actuators and boxes for distribution manifolds

- Thermo-electric actuators

- Boxes for distribution manifolds

DISTRIBUTION MANIFOLDS FOR RADIANT PANEL SYSTEMS



bim.caleffi.com

Composite distribution manifolds
Brass distribution manifolds
Accessories for distribution manifolds
Dynamic distribution manifolds
Differential pressure control valve for distribution manifolds

COMPOSITE DISTRIBUTION MANIFOLDS

1" CONNECTIONS

671

tech. broch. 01405

Pre-assembled distribution manifold.
Max. working pressure: 6 bar.
Temperature range: 5–60 °C.

Equipped with:
- technopolymer flow manifold with built-in flow meters and flow rate balancing valves;
- technopolymer return manifold with built-in shut-off valves fitted for thermo-electric actuator;
- technopolymer end fittings with automatic air vent with hygroscopic cap, discharge valve and fill/drain cock;
- pair of ball shut-off valves;
- LCD thermometers on flow and return manifolds;
- adhesive labels indicating the rooms;
- pair of mounting brackets for box or wall mounting;
- coupling adapter with clip code 675850, for manifold outlets (in package);
- template for cutting pipe code 675002 (in package).

Code	Connections	Outlet No.	Outlets		
6716C1	1" F	x 3	3/4" M	1	–
6716D1	1" F	x 4	3/4" M	1	–
6716E1	1" F	x 5	3/4" M	1	–
6716F1	1" F	x 6	3/4" M	1	–
6716G1	1" F	x 7	3/4" M	1	–
6716H1	1" F	x 8	3/4" M	1	–
6716I1	1" F	x 9	3/4" M	1	–
6716L1	1" F	x 10	3/4" M	1	–
6716M1	1" F	x 11	3/4" M	1	–
6716N1	1" F	x 12	3/4" M	1	–
6716O1	1" F	x 13	3/4" M	1	–
6716P1	1" F	x 14	3/4" M	1	–

ACCESSORIES FOR COMPOSITE DISTRIBUTION MANIFOLDS

675

tech. broch. 01126

Technopolymer end fitting
with automatic air vent with hygroscopic cap, discharge valve, fill/drain cock.
Max. working pressure: 6 bar.
Temperature range: 5–60 °C.

Code			
675800	1 1/4"	1	20

675

tech. broch. 01126

Push-fit thermometer for panel piping.
For pipes with outer diameter from 15 to 18 mm.
Thermometer scale: 5–50 °C.
Thermometer fluid: alcohol.
Thermo-conductive paste supplied in package.

Code		
675900	10	100

675

tech. broch. 01126

Coupling adapter with clip.

Code			
675850	3/4" Ø 18 mm	1	40

675

tech. broch. 01126

Cutting pipe template.

Code		
675002	10	–

182

Differential by-pass kit
with fixed setting 25 kPa (2.500 mm w.g.)
complete with flexible hose.
For regulating units 182 series
and manifolds 670 and 671 series.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.

Code			
182000	3/4"	1	5

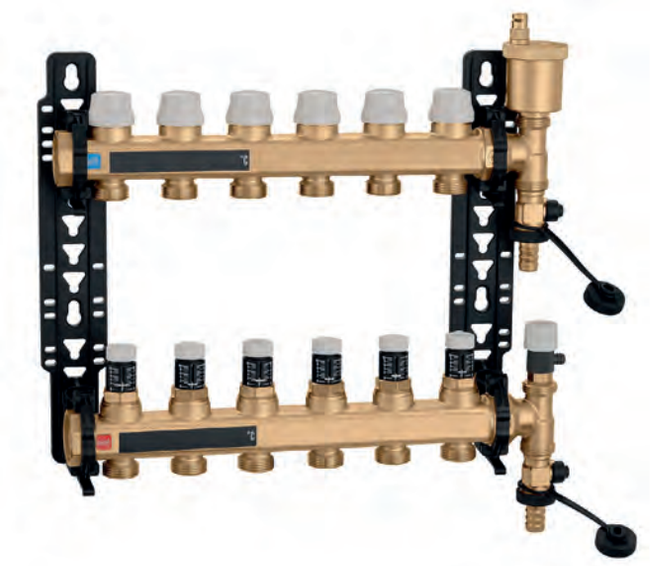
DISTRIBUTION MANIFOLDS FOR RADIANT PANEL SYSTEMS

1" CONNECTIONS

662

Pre-assembled distribution manifold.
Max. working pressure: 10 bar.
Temperature range: 5–80 °C.
Outlet centre distance: 50 mm.

Equipped with:
- return manifold with built-in shut-off valves fitted for thermo-electric actuator;
- flow manifold **with micrometric preregulating valves**;
- end fittings with automatic air vent and drain cock;
- polymer mounting brackets with adjustable centre distance for use with box 659 series or for direct wall mounting.



Code	Connections	Outlet No.	Outlets		
6626B6	1"	x 2	3/4" M	1	–
6626C6	1"	x 3	3/4" M	1	–
6626D6	1"	x 4	3/4" M	1	–
6626E6	1"	x 5	3/4" M	1	–
6626F6	1"	x 6	3/4" M	1	–
6626G6	1"	x 7	3/4" M	1	–
6626H6	1"	x 8	3/4" M	1	–
6626I6	1"	x 9	3/4" M	1	–
6626L6	1"	x 10	3/4" M	1	–
6626M6	1"	x 11	3/4" M	1	–
6626N6	1"	x 12	3/4" M	1	–
6626O6	1"	x 13	3/4" M	1	–

662

Pair of manifolds, with:
- return manifold with built-in shut-off valves fitted for thermo-electric actuator;
- flow manifold **with micrometric preregulating valves**;

Max. working pressure: 10 bar.
Temperature range: 5–80 °C.
Outlet centre distance: 50 mm.

Code	Connections	Outlet No.	Outlets		
662626	1"	x 2	3/4" M	1	–
662636	1"	x 3	3/4" M	1	–
662646	1"	x 4	3/4" M	1	–
662656	1"	x 5	3/4" M	1	–
662666	1"	x 6	3/4" M	1	–

658

tech. broch. 01180

Polymer mounting brackets with adjustable centre distance, for distribution manifolds 662 series.
With screws and wall anchors.
To be used with boxes code 659..4 (depth 110–140 mm) or directly wall mounted.

Code		
658400	1	5

5996

tech. broch. 01144

Return end fitting complete with automatic air vent and drain cock.
Max. working pressure: 6 bar.
Max. discharge pressure: 2,5 bar.
Temperature range: 0–100 °C.

Code			
599678	1 "	1	10

5996

tech. broch. 01144

Flow end fitting complete with manual air vent and drain cock.
Max. working pressure: 6 bar.
Max. discharge pressure: 2,5 bar.
Temperature range: 5–60 °C.

Code			
599679	1"	1	10

DISTRIBUTION MANIFOLDS FOR RADIANT PANEL SYSTEMS

1" CONNECTIONS

664

tech. broch. 01260

Pre-assembled distribution manifold.
Max. working pressure: 6 bar.
Temperature range: 5–60 °C.
Outlet centre distance: 50 mm.

Equipped with:
- return manifold with built-in shut-off valves fitted for thermo-electric actuator;
- flow manifold complete **with flow meters 0–5 l/m scale** and flow rate balancing valves;
- end fittings with automatic air vent and drain cock;
- steel mounting brackets for use with box or for direct wall mounting.

Code	Connections	Outlet No.	Outlets		
6646B1	1"	x 2	3/4" M	1	–
6646C1	1"	x 3	3/4" M	1	–
6646D1	1"	x 4	3/4" M	1	–
6646E1	1"	x 5	3/4" M	1	–
6646F1	1"	x 6	3/4" M	1	–
6646G1	1"	x 7	3/4" M	1	–
6646H1	1"	x 8	3/4" M	1	–
6646I1	1"	x 9	3/4" M	1	–
6646L1	1"	x 10	3/4" M	1	–
6646M1	1"	x 11	3/4" M	1	–
6646N1	1"	x 12	3/4" M	1	–
6646O1	1"	x 13	3/4" M	1	–

664

tech. broch. 01260

Pair of manifolds, with:
- return manifold with built-in shut-off valves fitted for thermo-electric actuator;
- flow manifold complete **with flow meters 0–5 l/m scale** and flow rate balancing valves;

Max. working pressure: 6 bar.
Temperature range: 5–60 °C.
Outlet centre distance: 50 mm.

Code	Connections	Outlet No.	Outlets		
664621	1"	x 2	3/4" M	1	–
664631	1"	x 3	3/4" M	1	–
664641	1"	x 4	3/4" M	1	–
664651	1"	x 5	3/4" M	1	–
664661	1"	x 6	3/4" M	1	–

658

Pair of steel mounting brackets for distribution manifolds 662 and 664 series.
To be used with boxes code 659..5 or directly wall mounted.

Code		
658101	1	–

5996

tech. broch. 01144

Return end fitting complete with automatic air vent and drain cock.
Max. working pressure: 6 bar.
Max. discharge pressure: 2,5 bar.
Temperature range: 0–100 °C.

Code			
599678	1 "	1	10

5996

tech. broch. 01144

Flow end fitting complete with manual air vent and drain cock.
Max. working pressure: 6 bar.
Max. discharge pressure: 2,5 bar.
Temperature range: 5–60 °C.

Code			
599679	1"	1	10

DYNAMIC DISTRIBUTION MANIFOLDS FOR RADIANT PANEL SYSTEMS

1" CONNECTIONS

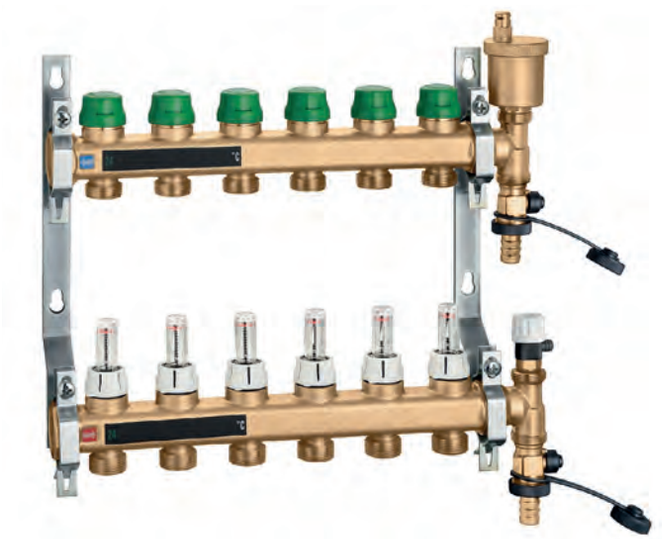
665
DYNAMICAL®

tech. broch. 01346

Pre-assembled distribution manifold.
Max. working pressure: 6 bar.
Temperature range: 5–60 °C.
Outlet centre distance: 50 mm.

Equipped with:
- return manifold complete with flow adjustment valves DYNAMICAL® fitted for thermo-electric actuator, with flow rate adjustment 25–150 l/h and shut-off valves;
- flow manifold complete with flow indicators;
- end fittings with automatic air vent with hygroscopic cap and drain cock;
- steel mounting brackets for use with box or for direct wall mounting.

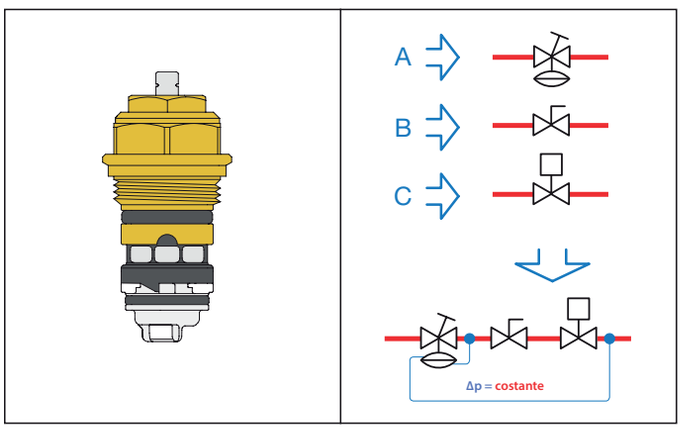
PATENT (Dynamical cartridge).



Code	Connections	Outlet No.	Outlets		
6656D1	1"	x 4	3/4" M	1	–
6656E1	1"	x 5	3/4" M	1	–
6656F1	1"	x 6	3/4" M	1	–
6656G1	1"	x 7	3/4" M	1	–
6656H1	1"	x 8	3/4" M	1	–
6656I1	1"	x 9	3/4" M	1	–
6656L1	1"	x 10	3/4" M	1	–
6656M1	1"	x 11	3/4" M	1	–
6656N1	1"	x 12	3/4" M	1	–

Function

The DYNAMICAL® valve allows the **automatic dynamic balancing** and **pressure-independent adjustment** of the thermal medium in the radiators of two-pipe heating systems.
The device, in conjunction with a thermostatic, electronic or thermo-electric control, combines different functions in a single component.



A. Differential pressure regulator, which automatically cancels the effect of the pressure fluctuations typical of variable flow rate systems and prevents noisy operation.

B. Device for pre-setting flow rate, which allows direct setting of the maximum flow rate value, thanks to the combination with the differential pressure regulator.

C. Flow rate control depending on the ambient temperature, thanks to the combination with a thermostatic control head. The flow rate control is optimised because it is pressure-independent.

ACCESSORIES FOR DISTRIBUTION MANIFOLDS

Insulation for distribution manifolds
662, 664 and 665 series.
For heating and cooling systems.
For use with box code 659..4
(**adjustable depth from 110 to 140 mm**).

Code			
CBN6646F1	for manifolds from 2 to 6 outlets	1	–
CBN6646N1	for manifolds from 7 to 12 outlets	1	–
CBN6646O1	for manifolds with 13 outlets	1	–

391

Pair of ball shut-off valves with O-Ring seal.
For distribution manifolds 664 and 665 series.

Female - male connections with union with O-Ring seal.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.

Code			
391066	1″	1	–

662

Off-centre by-pass kit
with fixed setting 25 kPa (2.500 mm w.g.).
For distribution manifolds 662, 664 and 665 series.
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.

Code		
662010	1	10

680 DARCAL

tech. broch. 01144

Self-adjustable diameter fitting
for single and multilayer plastic pipes.
Max. working pressure: 10 bar.
Temperature range:
5–80 °C (PE-X)
5–75 °C (Multilayer marked 95 °C).

Code		$Ø_{inside}$	$Ø_{outside}$		
680507	3/4″	7,5– 8	10,5–12	10	100
680502	3/4″	7,5– 8	12 –14	10	100
680503	3/4″	8,5– 9	12 –14	10	100
680500	3/4″	9 – 9,5	14 –16	10	100
680501	3/4″	9,5–10	12 –14	10	100
680506	3/4″	9,5–10	14 –16	10	100
680515	3/4″	10,5–11	14 –16	10	100
680517	3/4″	10,5–11	16 –18	10	100
680524	3/4″	11,5–12	14 –16	10	100
680526	3/4″	11,5–12	16 –18	10	100
680535	3/4″	12,5–13	16 –18	10	100
680537	3/4″	12,5–13	18 –20	10	100
680544	3/4″	13,5–14	16 –18	10	100
680546	3/4″	13,5–14	18 –20	10	100
680555	3/4″	14,5–15	18 –20	10	100
680556	3/4″	15 –15,5	18 –20	10	100
680564	3/4″	15,5–16	18 –20	10	100
680505	3/4″	17	22,5	10	100

386

tech. broch. 01144

Screw plug with nut,
for manifold outlets.

Code			
386500	3/4″	10	–

675

tech. broch. 01144

Push-fit thermometer for panel piping.
For pipes with outer diameter
from 15 to 18 mm.
Thermometer scale: 5–50 °C.
Thermometer fluid: alcohol.
Thermo-conductive paste
supplied in package.

Code		
675900	10	100

BRASS DISTRIBUTION MANIFOLDS FOR RADIANT PANEL SYSTEMS

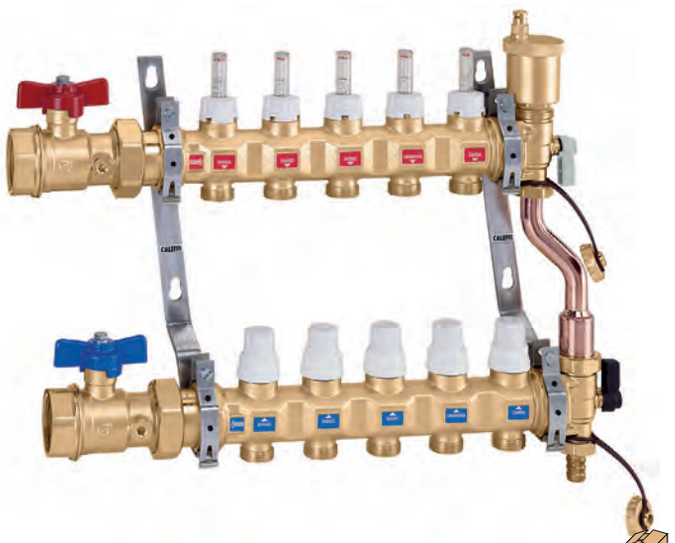
CONNECTIONS 1" - 1 1/4"

668...S1

tech. broch. 01144

Pre-assembled distribution manifold.
Max. working pressure: 10 bar.
Temperature range: 0–80 °C.

Equipped with:
- flow manifold with built-in flow meters and flow rate balancing valves;
- return manifold with built-in shut-off valves fitted for thermo-electric actuator;
- end fittings with multi-position ball valve, automatic air vent and fill/drain hose connection;
- off-centre by-pass kit with fixed setting and with connecting pipe;
- ball shut-off valves;
- mounting brackets for box or wall mounting.



Code	Conn.	Outlet No.	Outlets		
6686C5S1	1" F	x 3	3/4" M	1	–
6686D5S1	1" F	x 4	3/4" M	1	–
6686E5S1	1" F	x 5	3/4" M	1	–
6686F5S1	1" F	x 6	3/4" M	1	–
6686G5S1	1" F	x 7	3/4" M	1	–
6686H5S1	1" F	x 8	3/4" M	1	–
6686I5S1	1" F	x 9	3/4" M	1	–
6686L5S1	1" F	x 10	3/4" M	1	–
6686M5S1	1" F	x 11	3/4" M	1	–
6686N5S1	1" F	x 12	3/4" M	1	–
6686O5S1	1" F	x 13	3/4" M	1	–
6686P5S1	1" F	x 14	3/4" M	1	–
6687C5S1	1 1/4" F	x 3	3/4" M	1	–
6687D5S1	1 1/4" F	x 4	3/4" M	1	–
6687E5S1	1 1/4" F	x 5	3/4" M	1	–
6687F5S1	1 1/4" F	x 6	3/4" M	1	–
6687G5S1	1 1/4" F	x 7	3/4" M	1	–
6687H5S1	1 1/4" F	x 8	3/4" M	1	–
6687I5S1	1 1/4" F	x 9	3/4" M	1	–
6687L5S1	1 1/4" F	x 10	3/4" M	1	–
6687M5S1	1 1/4" F	x 11	3/4" M	1	–
6687N5S1	1 1/4" F	x 12	3/4" M	1	–
6687O5S1	1 1/4" F	x 13	3/4" M	1	–
6687P5S1	1 1/4" F	x 14	3/4" M	1	–

666...S1

tech. broch. 01144

Return manifold, with built-in shut-off valves fitted for thermo-electric actuator.
Max. working pressure: 10 bar.
Temperature range: 0–80 °C.
Outlet centre distance: 50 mm.

Code	Connections	Outlet No.	Outlets		
666735S1	1 1/4" F	x 3	3/4" M	2	12
666745S1	1 1/4" F	x 4	3/4" M	2	12
666755S1	1 1/4" F	x 5	3/4" M	2	12
666765S1	1 1/4" F	x 6	3/4" M	2	–
666775S1	1 1/4" F	x 7	3/4" M	2	–
666785S1	1 1/4" F	x 8	3/4" M	2	–

667...S1

tech. broch. 01144

Flow manifold, with built-in flow meters and flow rate balancing valves.
Max. working pressure: 10 bar.
Temperature range: 0–80 °C.
Outlet centre distance: 50 mm.

Code	Connections	Outlet No.	Outlets		
667735S1	1 1/4" F	x 3	3/4" M	2	12
667745S1	1 1/4" F	x 4	3/4" M	2	12
667755S1	1 1/4" F	x 5	3/4" M	2	12
667765S1	1 1/4" F	x 6	3/4" M	2	–
667775S1	1 1/4" F	x 7	3/4" M	2	–
667785S1	1 1/4" F	x 8	3/4" M	2	–

668...S1

tech. broch. 01144

Pair of manifolds, with built-in flow meters and flow rate balancing valves and shut-off valves.
Max. working pressure: 10 bar.
Temperature range:0–80 °C.
Outlet centre distance: 50 mm.

Code	Connections	Outlet No.	Outlets		
668735S1	1 1/4" F	x 3	3/4" M	1	6
668745S1	1 1/4" F	x 4	3/4" M	1	6
668755S1	1 1/4" F	x 5	3/4" M	1	5
668765S1	1 1/4" F	x 6	3/4" M	1	3
668775S1	1 1/4" F	x 7	3/4" M	1	3
668785S1	1 1/4" F	x 8	3/4" M	1	3

ACCESSORIES FOR DISTRIBUTION MANIFOLDS

668...S1

tech. broch. 01144

Off-centre by-pass kit
with fixed setting 25 kPa (2.500 mm w.g.),
complete with pipe for manifold connection.
For manifolds 668...S1 series.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.

Code			
668000S1	1″ nut x 3/4″ nut	1	10

391...S1

tech. broch. 01144

Pair of ball shut-off valves.
Female - male connections with union
with O-Ring seal.
With temperature gauge,
scale 0–80 °C, Ø 40 mm.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.

Code			
391167S1	1″ x 1 1/4″	1	5
391177S1	1 1/4″ x 1 1/4″	1	5

391...S1

tech. broch. 01144

Pair of ball shut-off valves.
Female - male connections with union
with O-Ring seal.
With temperature gauge connection.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.

Code			
391067S1	1″ x 1 1/4″	1	–
391077S1	1 1/4″ x 1 1/4″	1	–

5996

tech. broch. 01144

Flow end fitting complete with double radial
end fitting with two-position ball valve,
automatic air vent and fill/drain hose connection.
Max. working pressure: 10 bar.
Max. discharge pressure: 2,5 bar.
Temperature range: 0–100 °C.

Code			
599674	1 1/4″	1	10

5996

tech. broch. 01144

Return end fitting complete with double radial
end fitting with three-position ball valve,
by-pass connection with plug and
fill/drain hose connection.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.

Code			
599675	1 1/4″	1	10

3642..S1

tech. broch. 01144

Reduction fitting.

Code			
364276S1	1″ F x 1 1/4″ M	2	10

347...S1

tech. broch. 01144

Compression fitting for annealed copper,
hard copper, brass, mild steel and stainless steel
pipes. With O-Ring seal.
Specific to be used with manifolds 668...S1 series.
Max. working pressure: 10 bar.
Temperature range: -25–120 °C.

Code			
347512S1	3/4″ - Ø 12	1	50
347514S1	3/4″ - Ø 14	1	50

5020

tech. broch. 01144

Automatic air vent with hygroscopic cap.
In hot-stamped brass.
For manifolds end fittings 668...S1 series.
Max. working pressure: 10 bar.
Max. discharge pressure: 2,5 bar.
Max. working temperature: 110 °C.

Code			
502043	1/2″ M	10	100

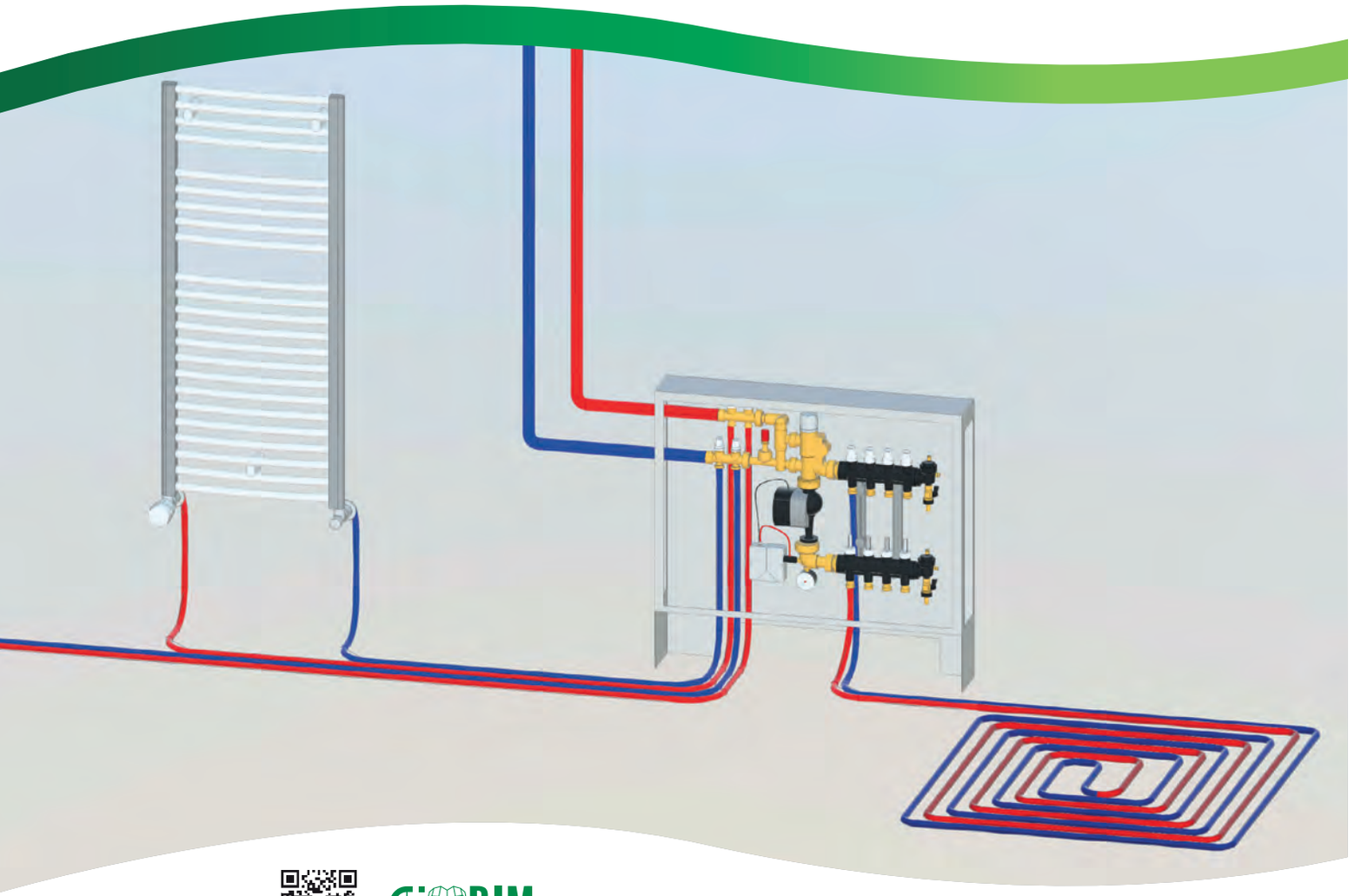
658

tech. broch. 01144

Pair of brackets for use with boxes,
659 and 661 series or directly on the wall.
With screws and plugs.

Code			
658100		1	20

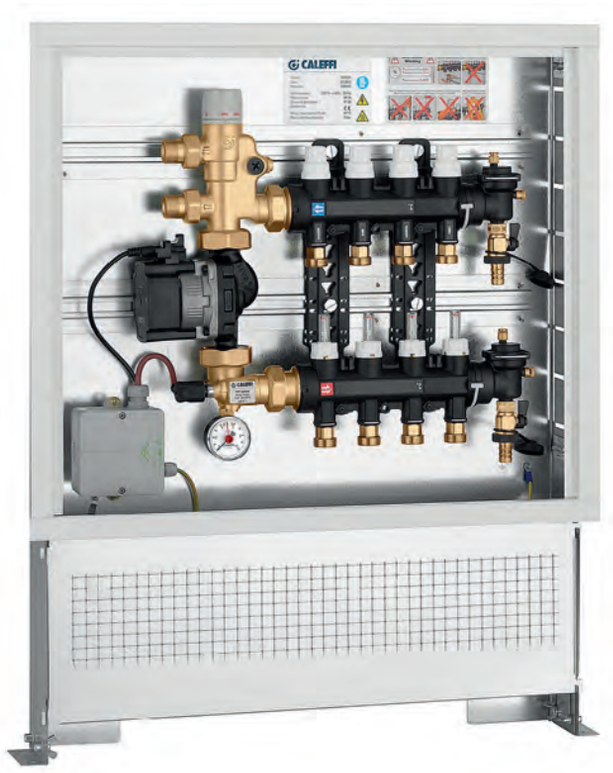
DISTRIBUTION MANIFOLDS WITH REGULATING UNIT



BIM
bim.caleffi.com

Set point thermostatic regulating unit
Set point thermostatic regulating unit with medium distribution kit for primary circuit
Accessories for Set point thermostatic regulating unit
Modulating temperature regulating unit with digital regulator
Accessories and spare parts for modulating temperature regulating unit
Thermostatic mixing valve for radiant panel systems

SET POINT THERMOSTATIC REGULATING UNIT



182

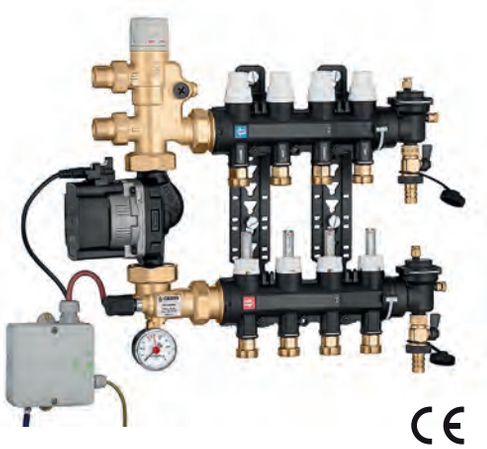
tech. broch. 01190

Set point regulating unit.
Pre-assembled in inspection wall box. Equipped with:
- set point thermostatic regulating unit,
- distribution manifolds in composite with built-in flow meters and shut-off valves,
- safety thermostat,
- high-efficiency pump, UPM3S Auto 25-60,
- inspection wall box, with floor supports.

Max. working pressure: 6 bar.
Adjustment temperature range: 25–55 °C.
Supply: 230 V - 50/60 Hz.

CE

Code	Conn.	Outlet No.	Outlets	Box length (mm)		
1825C1A2L	3/4" M	x 3	3/4" M	600	1	–
1825D1A2L	3/4" M	x 4	3/4" M	600	1	–
1825E1A2L	3/4" M	x 5	3/4" M	600	1	–
1825F1A2L	3/4" M	x 6	3/4" M	800	1	–
1825G1A2L	3/4" M	x 7	3/4" M	800	1	–
1825H1A2L	3/4" M	x 8	3/4" M	800	1	–
1825I1A2L	3/4" M	x 9	3/4" M	800	1	–
1825L1A2L	3/4" M	x 10	3/4" M	1000	1	–
1825M1A2L	3/4" M	x 11	3/4" M	1000	1	–
1825N1A2L	3/4" M	x 12	3/4" M	1200	1	–
1825O1A2L	3/4" M	x 13	3/4" M	1200	1	–



182

tech. broch. 01190

Pre-assembled set point thermostatic regulating unit.
Equipped with:
- set point thermostatic regulating unit,
- distribution manifolds in composite with built-in flow meters and shut-off valves,
- safety thermostat,
- high efficiency pump, UPM3S Auto 25-60.

Max. working pressure: 6 bar.
Adjustment temperature range: 25–55 °C.
Supply: 230 V - 50/60 Hz.

Code	Conn.	Outlet No.	Outlets	Box choise (mm)		
1825C5A2L	3/4" M	x 3	3/4" M	600	1	–
1825D5A2L	3/4" M	x 4	3/4" M	600	1	–
1825E5A2L	3/4" M	x 5	3/4" M	600	1	–
1825F5A2L	3/4" M	x 6	3/4" M	800	1	–
1825G5A2L	3/4" M	x 7	3/4" M	800	1	–
1825H5A2L	3/4" M	x 8	3/4" M	800	1	–
1825I5A2L	3/4" M	x 9	3/4" M	800	1	–
1825L5A2L	3/4" M	x 10	3/4" M	1000	1	–
1825M5A2L	3/4" M	x 11	3/4" M	1000	1	–
1825N5A2L	3/4" M	x 12	3/4" M	1200	1	–
1825O5A2L	3/4" M	x 13	3/4" M	1200	1	–

SET POINT THERMOSTATIC REGULATING UNIT WITH MEDIUM DISTRIBUTION KIT FOR PRIMARY CIRCUIT

182

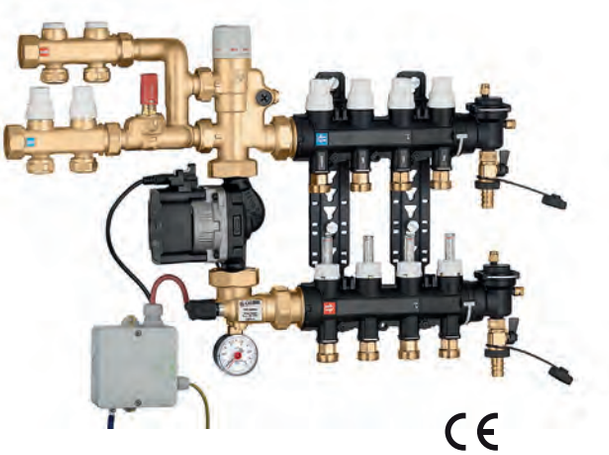
tech. broch. 01192

Set point regulating unit.
Pre-assembled in inspection wall box. Equipped with:
- set point thermostatic regulating unit,
- medium distribution kit with built-in lockshields and shut-off valves for primary circuit,
- distribution manifolds in composite with built-in flow meters and shut-off valves,
- primary circuit by-pass kit,
- safety thermostat,
- high-efficiency pump, UPM3S Auto 25-60,
- inspection wall box, with floor supports.

Max. working pressure: 6 bar.
Adjustment temperature range: 25–55 °C.
Supply: 230 V - 50/60 Hz.

CE

Code	Conn.	Outlet No. to panels	Outlet No. to radiators	Box length (mm)		
1826C1A2L 002	1" F	3 x 3/4" M	2 x 3/4" M	800	1	–
1826D1A2L 002	1" F	4 x 3/4" M	2 x 3/4" M	800	1	–
1826E1A2L 002	1" F	5 x 3/4" M	2 x 3/4" M	800	1	–
1826F1A2L 002	1" F	6 x 3/4" M	2 x 3/4" M	1000	1	–
1826G1A2L 002	1" F	7 x 3/4" M	2 x 3/4" M	1000	1	–
1826H1A2L 002	1" F	8 x 3/4" M	2 x 3/4" M	1000	1	–
1826I1A2L 002	1" F	9 x 3/4" M	2 x 3/4" M	1000	1	–
1826L1A2L 002	1" F	10 x 3/4" M	2 x 3/4" M	1000	1	–
1826M1A2L 002	1" F	11 x 3/4" M	2 x 3/4" M	1200	1	–
1826N1A2L 002	1" F	12 x 3/4" M	2 x 3/4" M	1200	1	–
1826O1A2L 002	1" F	13 x 3/4" M	2 x 3/4" M	1200	1	–



182

tech. broch. 01192

Pre-assembled set point regulating unit.
Equipped with:
- thermostatic set point regulating unit,
- medium distribution kit with built-in lockshields and shut-off valves for primary circuit,
- distribution manifolds in composite with built-in flow meters and shut-off valves,
- primary circuit by-pass kit,
- safety thermostat,
- high-efficiency pump, UPM3S Auto 25-60.

Max. working pressure: 6 bar.
Adjustment temperature range: 25–55 °C.
Supply: 230 V - 50/60 Hz.

Code	Conn.	Outlet No. to panels	Outlet No. to radiators	Box choise (mm)		
1826C5A2L 002	1" F	3 x 3/4" M	2 x 3/4" M	800	1	–
1826D5A2L 002	1" F	4 x 3/4" M	2 x 3/4" M	800	1	–
1826E5A2L 002	1" F	5 x 3/4" M	2 x 3/4" M	800	1	–
1826F5A2L 002	1" F	6 x 3/4" M	2 x 3/4" M	1000	1	–
1826G5A2L 002	1" F	7 x 3/4" M	2 x 3/4" M	1000	1	–
1826H5A2L 002	1" F	8 x 3/4" M	2 x 3/4" M	1000	1	–
1826I5A2L 002	1" F	9 x 3/4" M	2 x 3/4" M	1000	1	–
1826L5A2L 002	1" F	10 x 3/4" M	2 x 3/4" M	1000	1	–
1826M5A2L 002	1" F	11 x 3/4" M	2 x 3/4" M	1200	1	–
1826N5A2L 002	1" F	12 x 3/4" M	2 x 3/4" M	1200	1	–
1826O5A2L 002	1" F	13 x 3/4" M	2 x 3/4" M	1200	1	–

SET POINT THERMOSTATIC REGULATING UNIT

182

Set point regulating unit.
Pre-assembled in inspection wall box. Equipped with:
- set point thermostatic regulating unit,
- return manifold with built-in shut-off valves fitted for thermo-electric actuator;
- flow manifold complete with flow meters with 0–5 l/m scale and flow rate balancing valves;
- end fittings with automatic air vent and drain cock;
- safety thermostat,
- high-efficiency pump, UPM3S Auto 25-60,
- inspection wall box, with floor supports.

Max. working pressure: 6 bar.
Adjustment temperature range: 25–55 °C.
Supply: 230 V - 50/60 Hz.

CE

Code	Conn.	Outlet No.	Outlets	Box length (mm)		
1825C7A2L	3/4" M	x 3	3/4" M	600	1	–
1825D7A2L	3/4" M	x 4	3/4" M	600	1	–
1825E7A2L	3/4" M	x 5	3/4" M	600	1	–
1825F7A2L	3/4" M	x 6	3/4" M	800	1	–
1825G7A2L	3/4" M	x 7	3/4" M	800	1	–
1825H7A2L	3/4" M	x 8	3/4" M	800	1	–
1825I7A2L	3/4" M	x 9	3/4" M	800	1	–
1825L7A2L	3/4" M	x 10	3/4" M	1000	1	–
1825M7A2L	3/4" M	x 11	3/4" M	1000	1	–
1825N7A2L	3/4" M	x 12	3/4" M	1000	1	–
1825O7A2L	3/4" M	x 13	3/4" M	1000	1	–

182

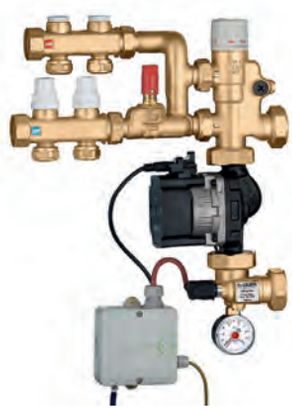
tech. broch. 01190

Pre-assembled set point regulating unit.
Equipped with:
- set point thermostatic regulating unit,
- safety thermostat,
- high-efficiency pump, UPM3S Auto 25-60.

Max. working pressure: 10 bar.
Adjustment temperature range: 25–55 °C.
Supply: 230 V - 50/60 Hz.

CE

Code	Connections		
182521A2L	3/4" M	1	–



182

tech. broch. 01192

Pre-assembled set point regulating unit.
Equipped with:
- set point thermostatic regulating unit,
- medium distribution kit with built-in lockshields and shut-off valves for primary circuit,
- primary circuit by-pass kit,
- safety thermostat,
- high-efficiency pump, UPM3S Auto 25-60.

Max. working pressure: 10 bar.
Adjustment temperature range: 25–55 °C.
Supply: 230 V - 50/60 Hz.

CE

Code	Connections	Outlets		
182621A2L 002	1" F	2	1	–
182621A2L 003	1" F	3	1	–

675

Pair of fittings with seals for connection of 182 series groups to 662 and 664 series manifolds.

Code			
675005	1 1/4" M x 1" M	1	–

675

Pair of fittings with seals for connection of 182 series groups to 670 and 671 series manifolds.

Code			
675004	1 1/4" M x 1 1/4" M	1	–

Spare parts for regulating units 172 and 182 series.

Code	
F0000972	safety thermostat
F19153	thermostatic mixing valve group for 172 series
F19267	thermostatic mixing valve group for 182 series
F0001252	UPM3S Auto 25-60 pump
F19219	spare electronic board

ACCESSORIES FOR SET POINT THERMOSTATIC REGULATING UNIT

661

Box for manifolds
662, 671 and 668...S1 series
and regulating units 182 series.
Closure with a push-fit clamp.
In painted sheet steel.
With supports for installation on floor.
Adjustable depth from 110 to 150 mm.
Adjustable height from 270 a 410 mm.

Code	Dim. (h x w x d)		
661045	500 x 400 x 110–150	1	–
661065	500 x 600 x 110–150	1	–
661085	500 x 800 x 110–150	1	–
661105	500 x 1000 x 110–150	1	–
661125	500 x 1200 x 110–150	1	–

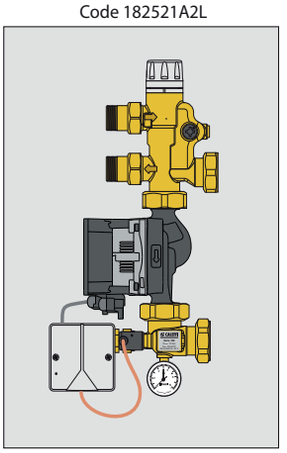
182

Differential by-pass kit with fixed setting
25 kPa (2.500 mm w.g.)
complete with flexible hose.
For regulating units 182 series
and manifolds 670 and 671 series.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.

Code			
182000	3/4"	1	5

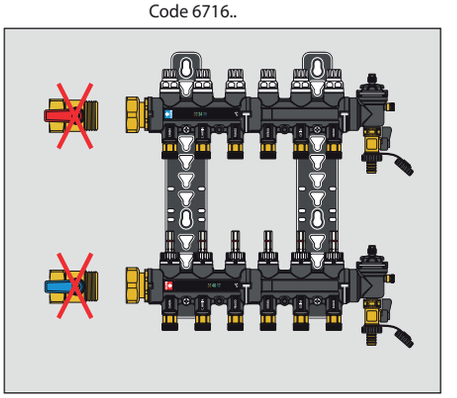
Coupling regulating units and manifolds

Code 182521A2L



Code 675004

Code 6716..



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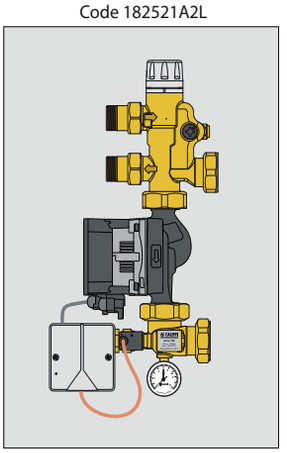

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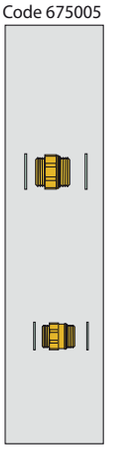


Code 662 / 664 / 665

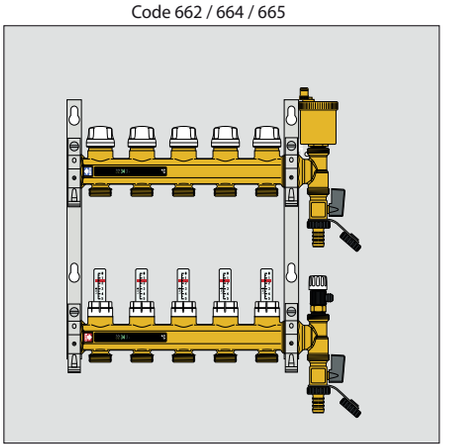


Diagram referred to installation in a box

MODULATING TEMPERATURE REGULATING UNIT WITH DIGITAL REGULATOR

171

Modulating temperature regulating unit.
Equipped with:
- temperature regulating unit with compensated set point digital regulator, convertible outside compensated,
- primary circuit by-pass kit,
- primary circuit shut-off valves,
- high-efficiency pump UPM3S Auto 25-60.

Max. working pressure: 10 bar.
Temperature range: 5–95 °C.
Supply: 230 V - 50/60 Hz.

CE

Code	Connections		
171525A2L	3/4" M	1	–

171

Modulating temperature regulating unit.
Equipped with:
- temperature regulating unit with compensated set point digital regulator, convertible outside compensated,
- medium distribution kit with built-in lockshields and shut-off valves for primary circuit,
- primary circuit by-pass kit,
- primary circuit shut-off valves,
- high-efficiency pump UPM3S Auto 25-60.

Max. working pressure: 10 bar.
Temperature range: 5–95 °C.
Supply: 230 V - 50/60 Hz.

CE

Code	Connections	Outlet no.		
171525A2L 002	3/4" M	2	1	–
171525A2L 003	3/4" M	3	1	–

675

Pair of fittings with seals for connection of 171 series groups to 671 series manifolds.

Code			
675003	1 1/4" M x 1" M	1	–

364

Pair of fittings with seals for connection of 171 series groups to 668 series manifolds.

Code		
364377	1	–

658

Pair of steal mounting brackets for coupling of distribution manifolds 662/664/665 and 171 series group.

Code		
658011	1	–

Pair of fittings with seals for connection of 171 series groups to 662/664/665 series manifolds.

Code
F0000662

661

Box for manifolds
662, 671 and 668...S1 series
and regulating units 182 series.
Closure with a push-fit clamp.
In painted sheet steel.
With supports for installation on floor.
Adjustable depth from 110 to 150 mm.
Adjustable height from 270 a 410 mm.

Code	Dim. (h x w x d)		
661064	500 x 1400 x 110–150	1	–
661084	500 x 1600 x 110–150	1	–
661104	500 x 1800 x 110–150	1	–
661124	500 x 1000 x 110–150	1	–

661

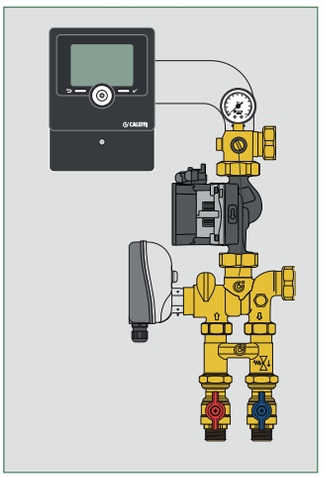
tech. broch. 01144

Inspection wall port
with frame.
In painted sheet steel.

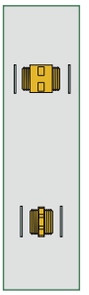
Code	Use		
661406	for 661064	1	–
661408	for 661084	1	–
661410	for 661104	1	–
661412	for 661124	1	–

Coupling regulating units and manifolds

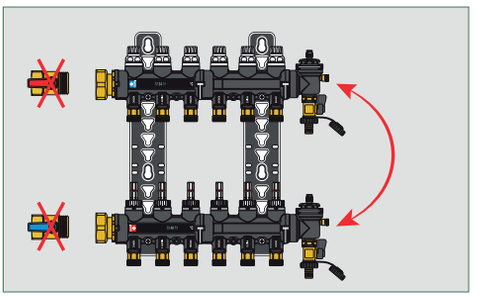
Code 171525A2L



Code 675003



Code 6716..



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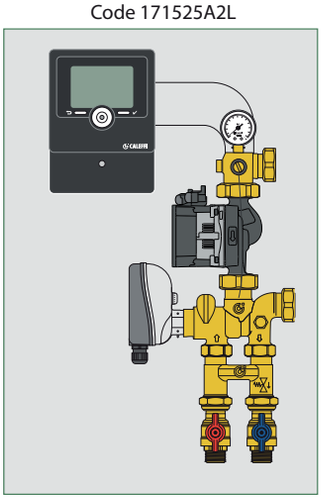

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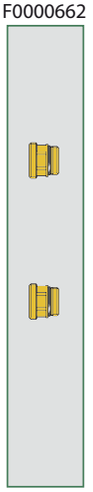
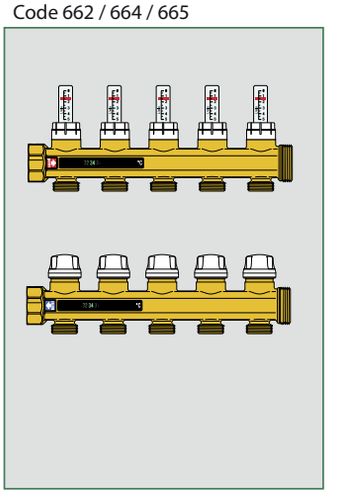


Code 662 / 664 / 665



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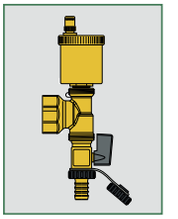

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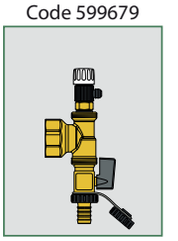

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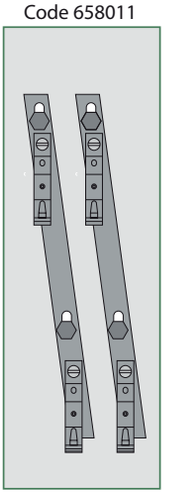

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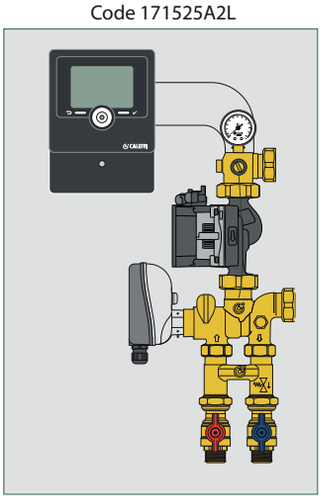


Code 364377

Code 668...S1

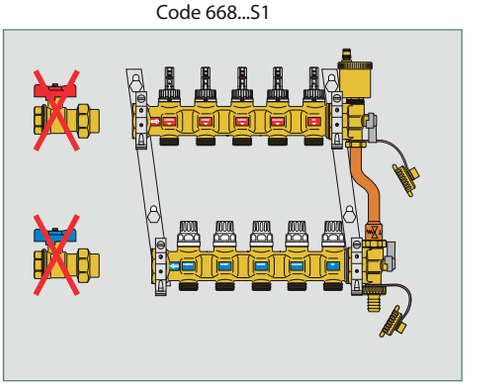


Diagram referred to installation in a box

ACCESSORIES AND SPARE PARTS FOR MODULATING TEMPERATURE REGULATING UNIT

161

Outside compensated temperature probe.

Code			
161002	1	–	

161

Pressure safety switch
complete with cable for wiring.
Working range: 0,5–10 bar.
Max. working temperature: 100 °C.
Cable length: 1 m.

Code			
161003	1	–	

161

Dew point detector.
Working range: 30–100 UR %.

Code			
161004	1	–	

161

Remote regulator.
Functions:
- translation of the regulating curves, from +15 K to -15 K,
- maximum temperature,
- OFF position.

Code			
161005	1	–	

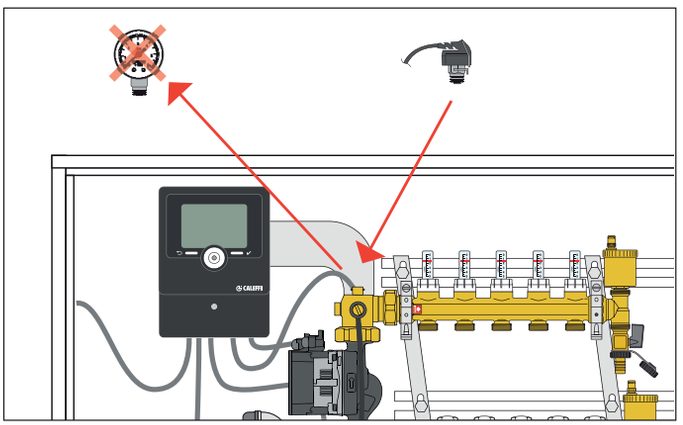
Accessories for regulator code 161010.

Code	
161012	Pt1000 contact probe for pipes Ø 6 mm, cable L 2,5 m
161013	immersion pocket for Pt1000 probe 1/2" M, 60 mm
161014	immersion pocket for Pt1000 probe 1/2" M, 100 mm
161015	Pt1000 probe Ø 6 mm - L 20 mm, cable L 1,5 m
161006	Pt1000 probe Ø 6 mm - L 45 mm, cable L 2,5 m

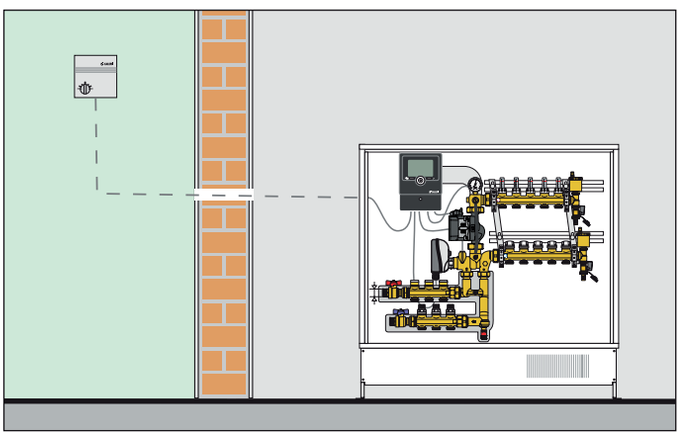
Spare parts for regulating units code 1715.5A2L.

Code	
161010	digital regulator
F19223	mixing valve group with actuator support
645312	actuator for mixing valve for code 1715.5A2L
F0001252	UPM3S pump (to replace the UPM3 Auto L pump)
F0000560	pocket 1/8" Ø 6 mm for probe Pt1000 L 20 mm
161015	probe Pt1000 Ø 6 mm - L 20 mm, L cable 1,5 m

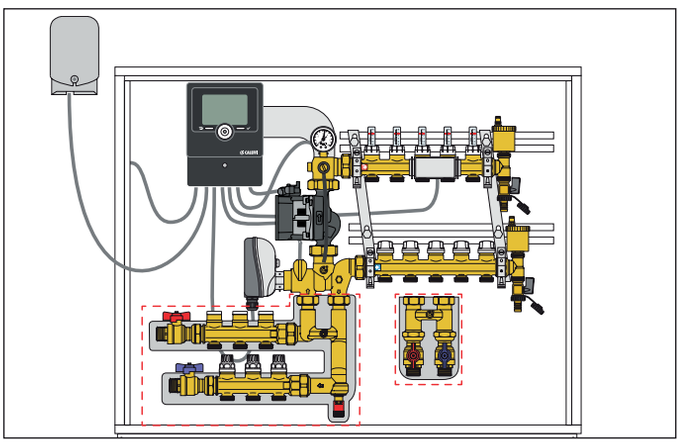
Application diagram with code 161003



Application diagram with code 161005



Transformation from modulating for heating to compensated temperature for heating and cooling with codes 161002 and 161004



THERMOSTATIC MIXING VALVE FOR RADIANT PANEL SYSTEMS

5202

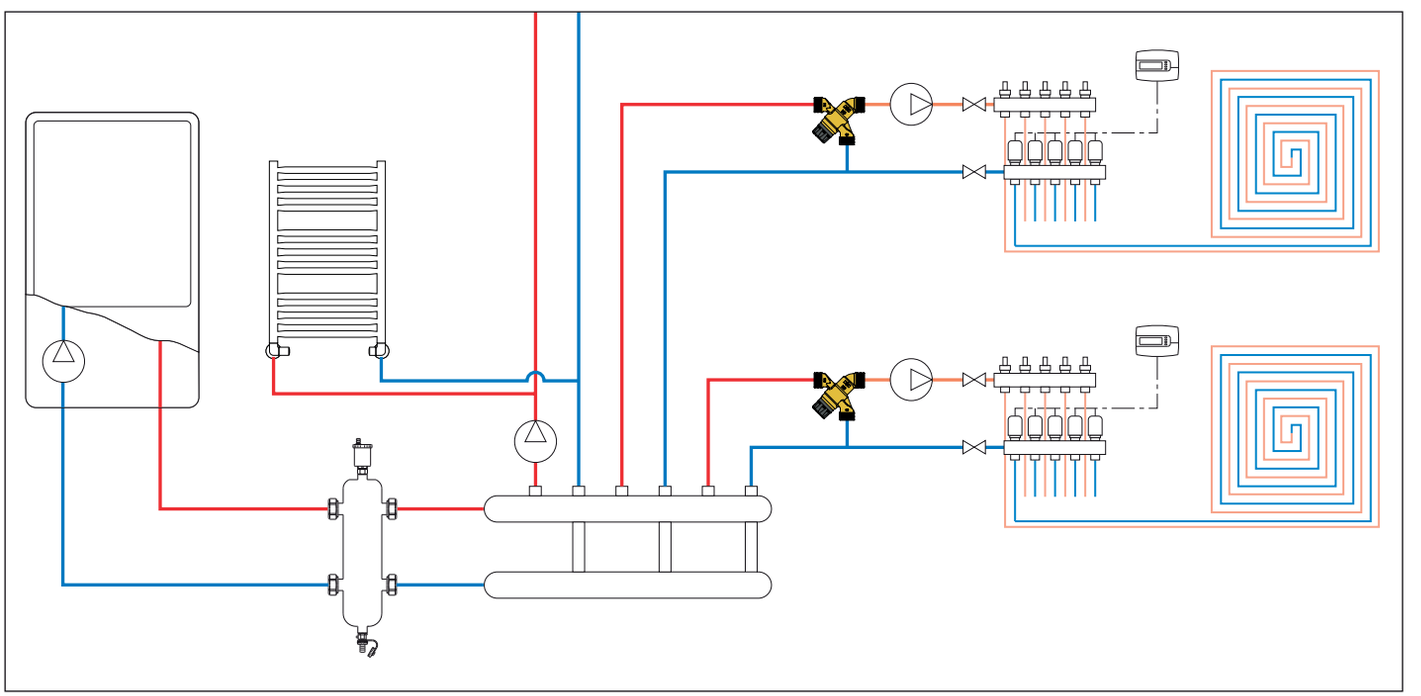
Adjustable thermostatic mixing valve with knob.
For radiant panel systems.
CR dezincification resistant alloy body.
Max. working pressure: 10 bar.
Max. inlet temperature: 90 °C.

Code	DN	Conn.	Temperature adjustment	Kv (m^3/h)		
520251	20	3/4" M	20–43 °C	1,4	1	10
520261	25	1" M	20–43 °C	4	1	5

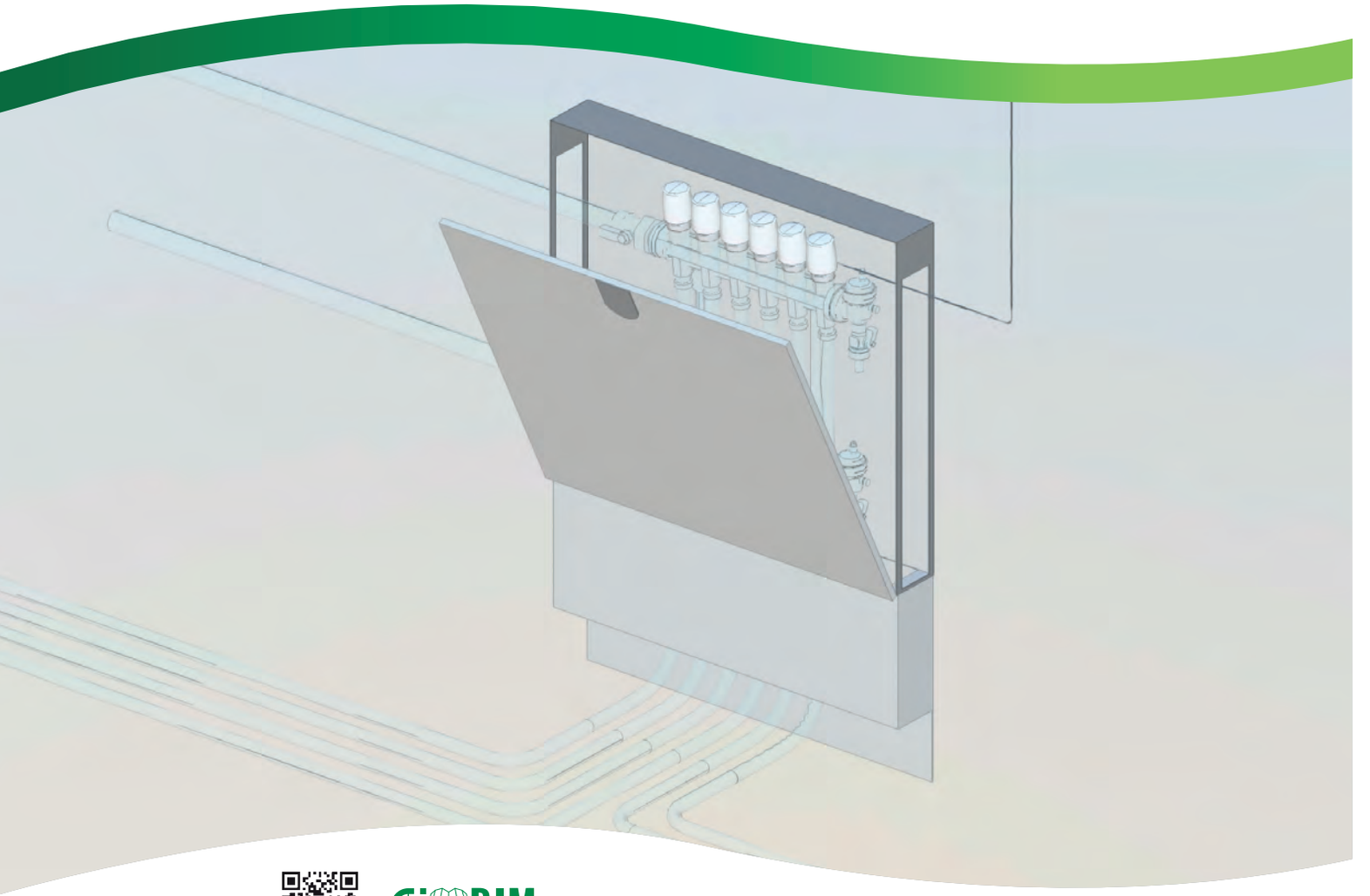
Operating principle

The purpose of the thermostatic mixing valve is to adjust the temperature of the medium supplied to the radiant panels.
The thermostatic mixing valve mixes the hot and cold water at the inlet so as to maintain the mixed water constantly at the set temperature at the outlet. A thermostatic element is fully immersed in the mixed water flow. It contracts or expands, moving an obturator which controls the passage of hot or cold water at the inlet. If the inlet temperature changes, the internal element automatically reacts to restore the set temperature at the outlet. A circulator must be installed downstream of the mixing valve so as to allow correct distribution of the medium at the radiant panel system manifold.

Application diagram of mixing valve 5202 series



THERMO-ELECTRIC ACTUATORS AND BOXES FOR DISTRIBUTION MANIFOLD



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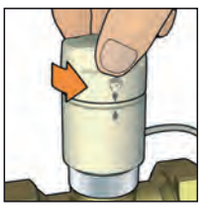
Thermo-electric actuators
Control bar
Boxes for distribution manifolds

THERMO-ELECTRIC ACTUATORS



6563

tech. broch. 01142

Thermo-electric actuator.
With manual opening and position indicator.
For distribution manifolds 670, 671, 668...S1, 6626.6, 664 and 665 series. Normally closed.
With auxiliary microswitch.
Supply: 230 V (AC) or 24 V (AC)/(DC).
Power consumption: 3 W.
Starting current: ≤ 1 A.
Starting current (656344/54): ≤ 250 mA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Ambient temperature range: 0–50 °C.
Protection class: IP 40.
Cable length: 80 cm.
PATENT.

CE

Code	Supply voltage V			
656312	230		1	10
656314	24		1	10
656302	230	without auxiliary microswitch	1	10
656304	24	without auxiliary microswitch	1	10

With low power consumption

Code	Supply voltage V			
656354	24		1	10
656344	24	without auxiliary microswitch	1	10

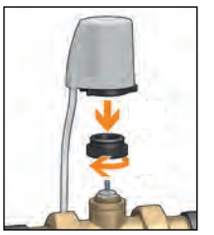
6561

tech. broch. 01042

Thermo-electric actuator.
For distribution manifolds 670, 671, 668...S1, 6626.6, 664 and 665 series. Normally closed.
With auxiliary microswitch.
Supply: 230 V (ac) or 24 V (ac)/(dc).
Auxiliary microswitch contact rating: 0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 1 A.
Max. ambient temperature: 50 °C.
Protection class: IP 44 (vertical stem).
Cable length: 80 cm.

CE

Code	Supply voltage V			
656112	230		1	10
656114	24		1	10
656102	230	without auxiliary microswitch	1	10
656104	24	without auxiliary microswitch	1	10



6562

tech. broch. 01198

Thermo-electric actuator.
With opening position indicator.
Quick-coupling installation, with a clip adapter.
For distribution manifolds 670, 671, 668...S1, 6626.6, 664 and 665 series. Normally closed.
With auxiliary microswitch.
Supply: 230 V (AC) or 24 V (AC)/(DC).
Auxiliary microswitch contact rating: 0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 1 A.
Ambient temperature range: 0–50 °C.
Protection class: IP 54.
Cable length: 80 cm.

CE

Code	Supply voltage V			
656212	230		1	10
656214	24		1	10
656202	230	without auxiliary microswitch	1	10
656204	24	without auxiliary microswitch	1	10

6564

tech. broch. 01198

Thermo-electric actuator
with low power consumption.
With opening position indicator.
Quick-coupling installation, with a clip adapter.
For distribution manifolds 670, 671, 668...S1, 6626.6, 664 and 665 series. Normally closed.
With auxiliary microswitch.
Supply: 230 V (AC) or 24 V (AC)/(DC).
Auxiliary microswitch contact rating: 0,8 A (230 V).
Power consumption: 3 W.
Starting current: ≤ 250 mA.
Ambient temperature range: 0–50 °C.
Protection class: IP 54.
Cable length: 80 cm.

CE

Code	Supply voltage V			
656412	230		1	10
656414	24		1	10
656402	230	without auxiliary microswitch	1	10
656404	24	without auxiliary microswitch	1	10

6205

tech. broch. 01186

Control bar.
Supply: 230 V - 50/60 Hz.
Power consumption: 5,5 VA max (8 outputs).
Changeover contacts: 10 A.
Protection class: IP 30 (with rubber cable clamps).
Output command for pump.
Input for SUMMER - WINTER.
Input for timer.

CE

Code			
620542	4 channels	1	–
620582	8 channels	1	–

BOXES FOR DISTRIBUTION MANIFOLDS

ADJUSTABLE DEPTH FROM 110 TO 140 MM

659

tech. broch. 01144

Inspection wall box for distribution manifolds 349, 350, 592, 662, 663, 671, 668...S1, 664 and 665 series.
Wall or floor installations (with 660 series).
Closure with a push-fit clamp.
In painted sheet steel.
Adjustable depth from 110 to 140 mm.

Code	Dim. (h x w x d)		
659044	500 x 400 x 110–140	1	–
659064	500 x 600 x 110–140	1	–
659084	500 x 800 x 110–140	1	–
659104	500 x 1000 x 110–140	1	–
659124	500 x 1200 x 110–140	1	–

659

tech. broch. 01144

Inspection wall port with frame.
In painted sheet steel.

Code			
659304	for 659044	1	–
659306	for 659064	1	–
659308	for 659084	1	–
659310	for 659104	1	–
659312	for 659124	1	–

660

tech. broch. 01144

Floor installation kit for box 659 series.
Consisting of:
- 2 supports height cm. 20,
- 2 side panels,
- 1 pipe-bending bar.

Code			
660040	for 659044	1	–
660060	for 659064	1	–
660080	for 659084	1	–
660100	for 659104	1	–
660120	for 659124	1	–

ADJUSTABLE DEPTH FROM 80 - 120 mm

659

tech. broch. 01144

Inspection wall box for distribution manifolds 349, 350, 592, 662, 671, 664 and 665 series.
Complete with specific support for manifold brackets.
Closure with a push-fit clamp.
In painted sheet steel.
Adjustable depth from 80 to 120 mm.

Code	Dim. (h x w x d)		
659045	500 x 400 x 80–120	1	–
659065	500 x 600 x 80–120	1	–
659085	500 x 800 x 80–120	1	–
659105	500 x 1000 x 80–120	1	–

659

tech. broch. 01144

Inspection wall port with frame.
In painted sheet steel.

Code			
659504	for 659045	1	–
659506	for 659065	1	–
659508	for 659085	1	–
659510	for 659105	1	–

ADJUSTABLE DEPTH FROM 110 - 150 mm

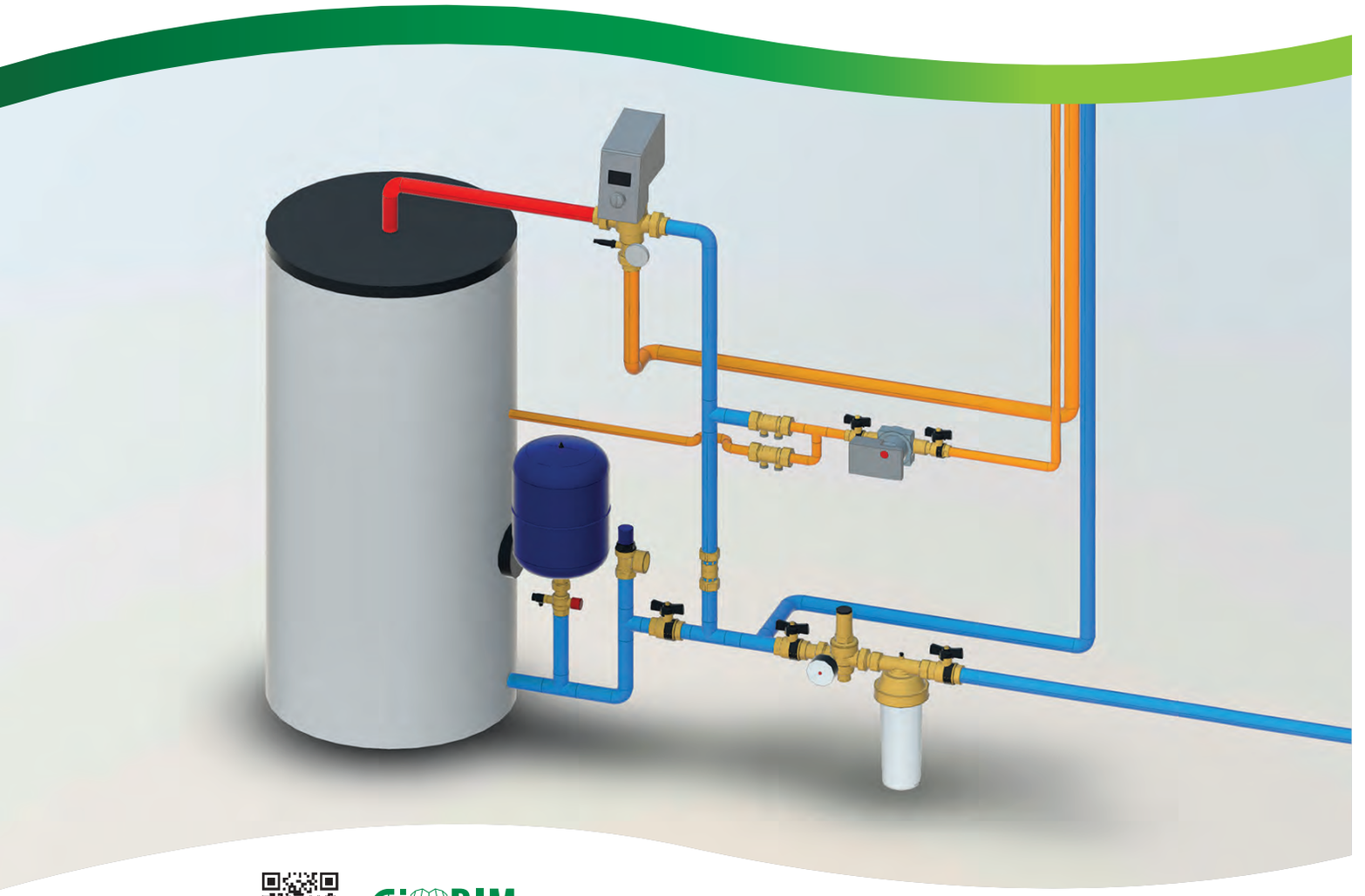
661

tech. broch. 01144

Box for manifolds 662, 671, 668...S1, 664 and 665 series and regulating units 182 series.
With supports for installation on floor.
Closure with a push-fit clamp.
In painted sheet steel.
Adjustable depth from 110 to 150 mm.
Adjustable height from 270 to 410 mm.

Code	(h x w x d)		
661045	500 x 400 x 110–150	1	–
661065	500 x 600 x 110–150	1	–
661085	500 x 800 x 110–150	1	–
661105	500 x 1000 x 110–150	1	–
661125	500 x 1200 x 110–150	1	–

COMPONENTS FOR DOMESTIC WATER SYSTEMS



6

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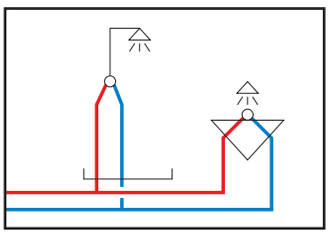
Pressure reducing valves
Thermostatic Mixing valves
Manifolds for domestic water systems
Components for domestic water systems

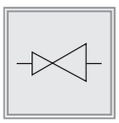
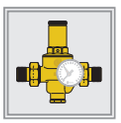
COMPONENTS FOR DOMESTIC WATER SYSTEMS



Modern domestic cold and hot water distribution systems need special protective and control devices, which are chosen according to the intended use and security level to be guaranteed for the utilities. Depending on the application type, for example home, commercial or public use, different rules are used to dimension systems, and they are fitted with different equipment. Below we describe the most important device classifications to help make the right choice.

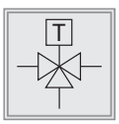
Pressure adjustment

- Pressure reducing valves

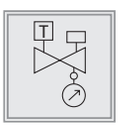
Temperature adjustment

- Thermostatic and electronic mixing valves



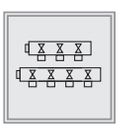
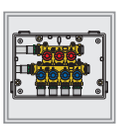
Flow rate adjustment

- Thermostatic regulator for recirculation circuits



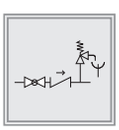
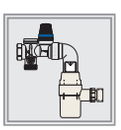
Cold and hot water distribution

- Distribution manifolds

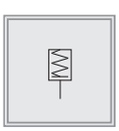
Safety and protection of hot water storage

- Safety groups - Safety valves - Expansion vessels

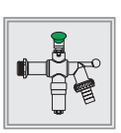
Water hammer phenomenon

- Water hammer arrester




Antifreeze protection

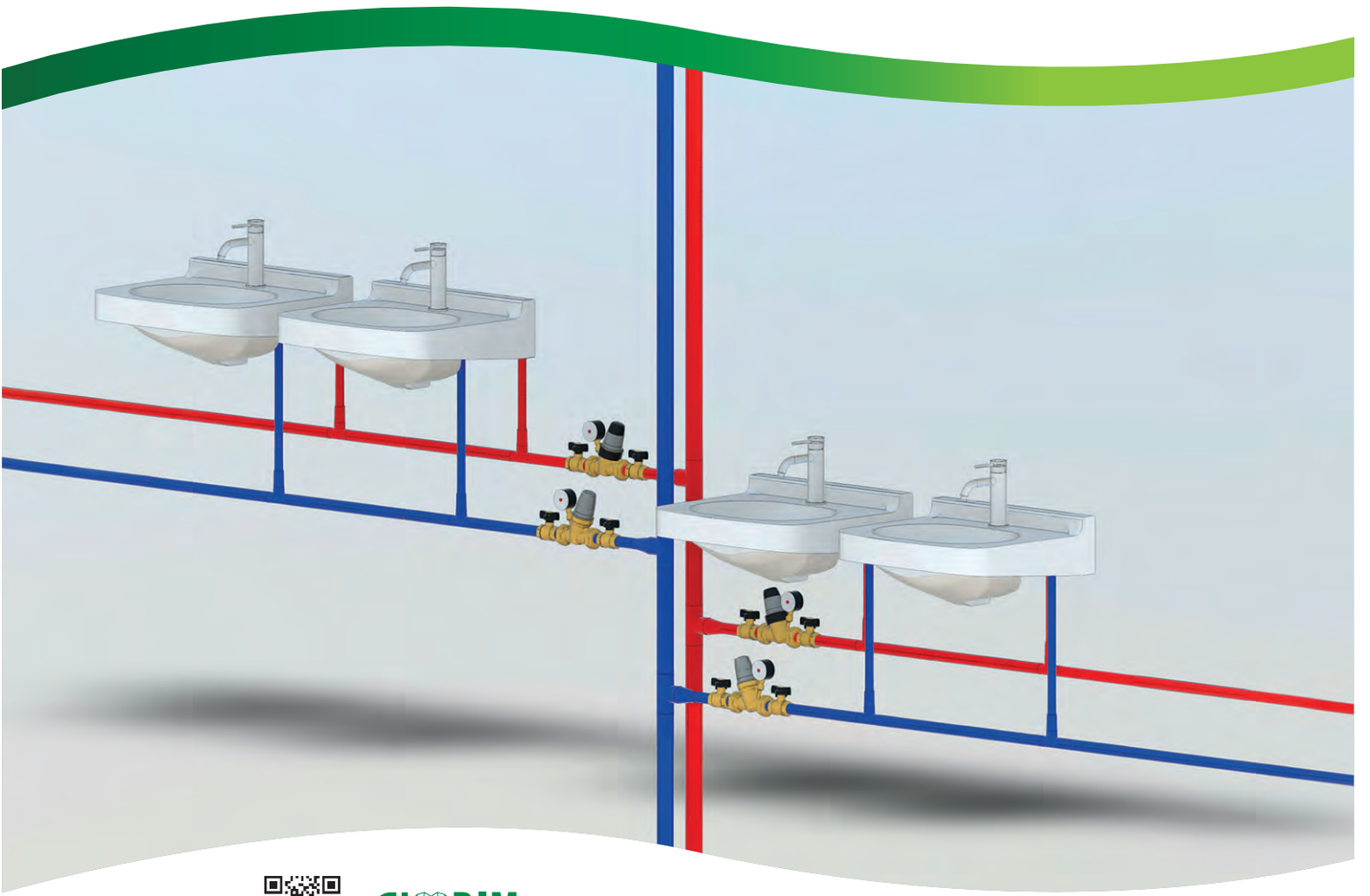
- Shut-off cock with antifreeze safety device

Shut off medium

- Ball valves with built-in check valve


PRESSURE REDUCING VALVES



BIM
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Pressure reducing valves
Pressure reducing and stabilising valves

Domestic Water Sizer
DOMESTIC WATER SYSTEM SIZER ALSO FOR SMARTPHONE
Available on www.caleffi.com and app for smartphone.
Download the version for your iOS and Android® mobile phone.

INCLINED MICRO PRESSURE REDUCING VALVE FOR SPECIAL APPLICATIONS

533...H

tech. broch. 01332

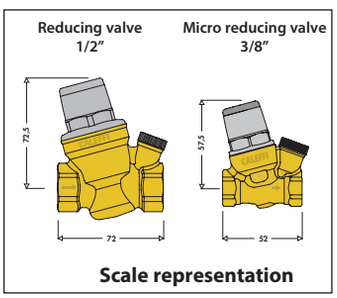
Inclined micro pressure reducing valve for special applications: **for dispensing water, beverages and coffee machines**.
Replaceable cartridge and strainer.
CR dezincification resistant alloy body **"LOW LEAD"**.
Max. upstream pressure: 16 bar.
Downstream pressure setting range: 0,8–4 bar.
Max. working temperature: 80 °C.
Max. recommended flow rate: 6 l/min.
Certified to EN 1567.
PATENT PENDING.

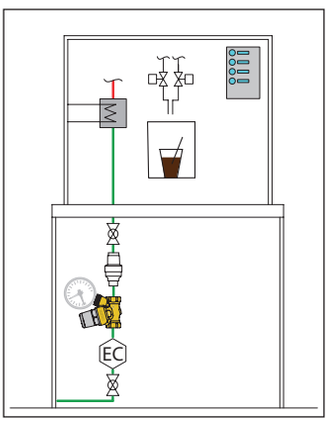
Code	DN	Connection			
533430H	8	3/8"		1	20
533230H	8	3/8"	with pressure gauge 0–10 bar	1	20

Code			
F0002665	pressure gauge 0–10 bar	1	–

Applications

The 533...H series of micro pressure reducing valves has been specially created for applications where it is necessary to reduce and precisely stabilise the pressure arriving from the mains in the presence of low flow rate values.
The 533...H series is typically installed for service in appliances that also have important dimensions and intermittent operation. The performance of this series of micro pressure reducing valves complies with the requirements of standard EN 1567, for use with cold water and hot water up to 80 °C.
The typical applications of these micro pressure reducing valves are appliances for dispensing water, beverages and coffee machines.





INCLINED PRESSURE REDUCING VALVES

533

tech. broch. 01024

Inclined pressure reducing valve.
Replaceable cartridge and strainer.
Brass body. Chrome plated.
Max. upstream pressure: 16 bar.
Downstream pressure setting range: 1–6 bar.
Max. working temperature: 40 °C.

Code			
533041	1/2"	1	20
533051	3/4"	1	20

5332

tech. broch. 01024

Inclined pressure reducing valve.
Replaceable cartridge and strainer.
Brass body. Chrome plated.
Max. upstream pressure: 16 bar.
Downstream pressure setting range: 1–6 bar.
Max. working temperature: 40 °C.
With pressure gauge: 0–10 bar.

Code			
533241	1/2"	1	20
533251	3/4"	1	20

5331

tech. broch. 01024

Inclined pressure reducing valve for safety group.
Replaceable cartridge and strainer.
Brass body. Chrome plated.
Max. upstream pressure: 16 bar.
Downstream pressure setting range: 1–6 bar.
Max. working temperature: 40 °C.

Code			
533151	3/4" M x nut 3/4" F	1	25

5334

tech. broch. 01024

Inclined pressure reducing valve.
Replaceable cartridge and strainer.
Brass body. Chrome plated.
Max. upstream pressure: 16 bar.
Downstream pressure setting range: 1–6 bar.
Max. working temperature: 40 °C.
With 1/4" F pressure gauge connection.

Code			
533441	1/2"	1	20
533451	3/4"	1	20
533461	1"	1	25

INCLINED PRESSURE REDUCING VALVES

5336

tech. broch. 01024

Inclined pressure reducing valve
with compression ends.
Replaceable cartridge and strainer.
CR dezincification resistant alloy body.
Chrome plated.
Max. upstream pressure: 16 bar.
Downstream pressure setting range: 1–6 bar.
Max. working temperature: 40 °C.

WRAS APPROVED PRODUCT CERTIFICATION MARK

Code			
533641	Ø 15	1	25
533651	Ø 22	1	25

5337

tech. broch. 01024

Inclined pressure reducing valve
with compression ends.
Replaceable cartridge and strainer.
CR dezincification resistant alloy body.
Chrome plated.
Max. upstream pressure: 16 bar.
Downstream pressure setting range: 1–6 bar.
Max. working temperature: 40 °C.
With 1/4" F pressure gauge connection.

WRAS APPROVED PRODUCT CERTIFICATION MARK

Code			
533741	Ø 15	1	20
533751	Ø 22	1	20

5338

tech. broch. 01024

Inclined pressure reducing valve
with compression ends.
Replaceable cartridge and strainer.
CR dezincification resistant alloy body.
Chrome plated.
Max. upstream pressure: 16 bar.
Downstream pressure setting range: 1–6 bar.
Max. working temperature: 40 °C.
With pressure gauge: 0–10 bar.

WRAS APPROVED PRODUCT CERTIFICATION MARK

Code			
533841	Ø 15	1	20
533851	Ø 22	1	20

5335

Inclined pressure reducing valve.
Replaceable cartridge and strainer.
CR dezincification resistant alloy body.
Max. upstream pressure: 1600 kPa.
Downstream pressure setting range:
100–600 kPa.
Max. working temperature: 40 °C.
With 1/4" F pressure gauge connection.

AS 1357.2
C of C 02467

Code			
533545 AUS	1/2"	1	25
533555 AUS	3/4"	1	25

5335

Three-way inclined pressure reducing valve.
Replaceable cartridge and strainer.
CR dezincification resistant alloy body.
Interchangeable outlet, with plug.
Max. upstream pressure: 1600 kPa.
Downstream pressure setting range:
100–600 kPa.
Max. working temperature: 40 °C.

AS 1357.2
C of C 02467

Code			
533550 AUS	3/4"	1	30

5339

Inclined pressure reducing valve
with compression ends
and built-in safety relief valve.

Pressure reducing valve.
CR dezincification resistant alloy body.
Replaceable cartridge and strainer.
Max. upstream pressure: 1600 kPa.
Downstream pressure setting range:
100–600 kPa.
Max. working temperature: 40 °C.

Safety relief valve.
With stainless steel seat.
CR dezincification resistant alloy body.

SABS APPROVED
SANS 198

Code			
533944	Ø 15	1	25
533954	Ø 22	1	25

5330

Spare cartridge.
For inclined pressure reducing valves 5330, 5331, 5332, 5334, 5335, 5336, 5337, 5338 and 5339 series.

Code			
533000		1	100

INCLINED PRESSURE REDUCING VALVES FOR HIGH TEMPERATURE

5330..H

tech. broch. 01252

Inclined pressure reducing valve.
For high temperature.
Replaceable cartridge and strainer.
Brass body. Chrome plated.
Max. upstream pressure: 16 bar.
Downstream pressure setting range: 1–5,5 bar.
Max. working temperature: 80 °C.
Certified to EN 1567.

Code			
533041H	1/2″	1	20
533051H	3/4″	1	20

5331..H

tech. broch. 01252

Inclined pressure reducing valve
for safety group.
For high temperature.
Replaceable cartridge and strainer.
CR dezincification resistant alloy body.
Max. upstream pressure: 16 bar.
Downstream pressure setting range: 1–5,5 bar.
Max. working temperature: 80 °C.
Certified to EN 1567.

Code			
533159H	Ø 22 x nut 3/4″ F	1	30

5332..H

tech. broch. 01252

Inclined pressure reducing valve.
For high temperature.
Replaceable cartridge and strainer.
Brass body. Chrome plated.
Max. upstream pressure: 16 bar.
Downstream pressure setting range: 1–5,5 bar.
Max. working temperature: 80 °C.
With pressure gauge: 0–10 bar.
Certified to EN 1567.

Code			
533241H	1/2″	1	20
533251H	3/4″	1	20

5332..H

tech. broch. 01252

Inclined pressure reducing valve.
For high temperature.
Replaceable cartridge and strainer.
CR dezincification resistant alloy body.
Chrome plated.
Max. upstream pressure: 16 bar.
Downstream pressure setting range: 1–5,5 bar.
Max. working temperature: 80 °C.
With pressure gauge: 0–10 bar.
Certified to EN 1567.

Code			
533241H LTC	1/2″	1	20
533251H LTC	3/4″	1	20

5334..H

tech. broch. 01252

Inclined pressure reducing valve.
For high temperature.
Replaceable cartridge and strainer.
Brass body. Chrome plated.
Max. upstream pressure: 16 bar.
Downstream pressure setting range: 1–5,5 bar.
Max. working temperature: 80 °C.
With 1/4″ F pressure gauge connection.
Certified to EN 1567.

Code			
533441H	1/2″	1	20
533451H	3/4″	1	20
533461H	1″	1	25

5334..H

tech. broch. 01252

Inclined pressure reducing valve.
For high temperature.
Replaceable cartridge and strainer.
CR dezincification resistant alloy body.
Chrome plated.
Max. upstream pressure: 16 bar.
Downstream pressure setting range: 1–5,5 bar.
Max. working temperature: 80 °C.
With 1/4″ F pressure gauge connection.
Certified to EN 1567.

Code			
533441H LTC	1/2″	1	20
533451H LTC	3/4″	1	20
533461H LTC	1″	1	20

INCLINED PRESSURE REDUCING VALVES FOR HIGH TEMPERATURE

5336..H

tech. broch. 01252

Inclined pressure reducing valve
with compression ends.
For high temperature.
Replaceable cartridge and strainer.
CR dezincification resistant alloy body.
Chrome plated.
Max. upstream pressure: 16 bar.
Downstream setting pressure range: 1–5,5 bar.
Max. working temperature: 80 °C.
Certified to EN 1567.

Code			
533641H	Ø 15	1	25
533651H	Ø 22	1	25

5337..H

tech. broch. 01252

Inclined pressure reducing valve
with compression ends.
For high temperature.
Replaceable cartridge and strainer.
CR dezincification resistant alloy body.
Chrome plated.
Max. upstream pressure: 16 bar.
Downstream setting pressure range: 1–5,5 bar.
Max. working temperature: 80 °C.
With 1/4" F pressure gauge connection.
Certified to EN 1567.

Code			
533741H	Ø 15	1	20
533751H	Ø 22	1	20
533761H	Ø 28	1	20

5338..H

tech. broch. 01252

Inclined pressure reducing valve
with compression ends.
For high temperature.
Replaceable cartridge and strainer.
CR dezincification resistant alloy body.
Chrome plated.
Max. upstream pressure: 16 bar.
Downstream setting pressure range: 1–5,5 bar.
Max. working temperature: 80 °C.
With pressure gauge: 0–10 bar.
Certified to EN 1567.

Code			
533841H	Ø 15	1	20
533851H	Ø 22	1	20
533861H	Ø 28	1	20

5335..H

Inclined pressure reducing valve.
Replaceable cartridge and strainer.
CR dezincification resistant alloy body.
Max. inlet pressure: 2000 kPa.
Downstream setting pressure range:
100–600 kPa.
Max. working temperature: 80 °C.
With 1/4" F pressure gauge connection.

Code			
533545H AUS	1/2"	1	25
533555H AUS	3/4"	1	25
533565H AUS	1"	1	10

5335..H

Three-way inclined pressure reducing valve.
Replaceable cartridge and strainer.
CR dezincification resistant alloy body.
Interchangeable outlet, with plug.
Max. inlet pressure: 2000 kPa.
Downstream setting pressure range:
100–600 kPa.
Max. working temperature: 80 °C.

Code			
533550H AUS	3/4"	1	30

5335..H

Two-way inclined pressure reducing valve.
Replaceable cartridge and strainer.
CR dezincification resistant alloy body.
Interchangeable outlet, with plug.
Max. inlet pressure: 2000 kPa.
Downstream setting pressure: 500 kPa.
Max. working temperature: 80 °C.

Code			
533551H AUS	3/4"	1	30

5330..H

Spare cartridge.
For inclined pressure reducing valves
5330H, 5331H, 5332H, 5334H, 5335H, 5336H
5337H, 5338H and 5339H series.

Code			
533000H		1	100

PRE-ADJUSTABLE PRESSURE REDUCING VALVES

5350

tech. broch. 01085

Pressure reducing valve
with self-contained replaceable cartridge.
CR dezincification resistant alloy body.
With pressure regulating scale for manual
pressure adjustment. Male union connections.
Max. upstream pressure: 25 bar.
Downstream setting pressure range:
1–6 bar.
Max. working temperature: 40 °C.
Certified to EN 1567.

With pressure gauge 0–10 bar

Code			
535041	1/2″	1	5
535051	3/4″	1	5
535061	1″	1	5
535075*	1 1/4″ with 1″ reduced cartridge	1	5
535071	1 1/4″	1	4
535081	1 1/2″	1	4
535091	2″	1	4

** Without DVGW certification*

With 1/4″ F pressure gauge connection

Code			
535040	1/2″	1	5
535050	3/4″	1	5
535060	1″	1	5
535074*	1 1/4″ with 1″ reduced cartridge	1	5
535070	1 1/4″	1	4
535080	1 1/2″	1	4
535090	2″	1	4

** Without DVGW certification*

5350

Pressure reducing valve
with self-contained replaceable cartridge.
CR dezincification resistant alloy body.
With pressure regulating scale
for manual pressure adjustment.
Ø 22 mm with compression ends.
Max. upstream pressure: 25 bar.
Downstream setting pressure range: 1–6 bar.
Max. working temperature: 40 °C.

With 1/4″ F pressure gauge connection

Code			
535022	Ø 22	1	10

5351

tech. broch. 01085

Pressure reducing valve with self-contained
replaceable cartridge. Brass body.
With pressure regulating scale
for manual pressure adjustment.
Stainless steel strainer cartridge
with transparent housing.
Male union connections.
Max. upstream pressure: 25 bar.
Downstream setting pressure
range: 1–6 bar.
Max. working temperature: 40 °C.
Strainer mesh size Ø: 0,28 mm.
Certified to EN 1567.
With replacement strainer and key to service strainer and cartridge.

With stainless steel pressure gauge 0–10 bar

Code			
535141	1/2″	1	5
535151	3/4″	1	5
535161	1″	1	5

With 1/4″ F pressure gauge connection

Code			
535140	1/2″	1	5
535150	3/4″	1	5
535160	1″	1	5

5350

Spare cartridge and key
to service strainer and cartridge.
For pressure reducing valves 5350 and 5351 series.

Code			
535004	1/2″ - 3/4″	1	8
535006	1″	1	8
535017	1 1/4″ (535074 - 535075)	1	8
535007	1 1/4″ - 1 1/2″ - 2″	1	–
R52484*	key to service strainer and cartridge	1	–

** Only for 1/2″, 3/4″, 1″ reducing valves*

PRE-ADJUSTABLE PRESSURE REDUCING VALVES FOR HIGH TEMPERATURE

5350..H

tech. broch. 01265

Pressure reducing valve
with self-contained replaceable cartridge.
For high temperature.
CR dezincification resistant alloy body **"LOW LEAD"**.
With pressure regulating scale for manual pressure adjustment. Male union connections.

Max. inlet pressure:
25 bar (static - EN 1567).
Max. inlet pressure:
16 bar (working - EN 1567).
Downstream setting pressure range: 1–6 bar.
Max. working temperature: 80 °C.
Certified to EN 1567.

With pressure gauge 0–10 bar

Code			
535041H	1/2"	1	5
535051H	3/4"	1	5
535061H	1"	1	5
535071H	1 1/4"	1	4
535081H	1 1/2"	1	4
535091H	2"	1	4

With 1/4" F pressure gauge connection

Code			
535040H	1/2"	1	5
535050H	3/4"	1	5
535060H	1"	1	5
535070H	1 1/4"	1	4
535080H	1 1/2"	1	4
535090H	2"	1	4

5350..H

tech. broch. 01265

Pressure reducing valve
with self-contained replaceable cartridge.
For high temperature.
CR dezincification resistant alloy body **"LOW LEAD"**.
With pressure regulating scale for manual pressure adjustment.

Compression ends connections.
Max. inlet pressure:
25 bar (static - EN 1567).
Max. inlet pressure:
16 bar (working - EN 1567).
Downstream setting pressure range: 1–6 bar.
Max. working temperature: 80 °C.
Certified to EN 1567.

With 1/4" F pressure gauge connection

Code			
535015H	Ø 15	1	5
535022H	Ø 22	1	5
535028H	Ø 28	1	5

5350..H

Pressure reducing valve
with self-contained replaceable cartridge.
For high temperature.
CR dezincification resistant alloy body **"LOW LEAD"**.
With pressure regulating scale for manual pressure adjustment. Male union connections.

Max. upstream pressure: 2000 kPa.
Downstream setting pressure range: 100–600 kPa.
Max. working temperature: 80 °C.

AS 1357.2
C of C 040162

With 1/4" F pressure gauge connection

Code			
535040H AUS	1/2"	1	5
535050H AUS	3/4"	1	5
535060H AUS	1"	1	5
535070H AUS	1 1/4"	1	4
535080H AUS	1 1/2"	1	4
535090H AUS	2"	1	4

5350..H

Spare cartridge
for pressure reducing valves 5350H series.

Code			
535006H	1/2" - 3/4" - 1"	1	8
535009H	1 1/4" - 1 1/2" - 2"	1	–

PRESSURE REDUCING VALVE

539

tech. broch. 01188

Pressure reducing valve.
CR dezincification resistant alloy body.
Supplied with two female - male fittings.
Max. upstream pressure: 25 bar.
Downstream setting pressure range: 1–5,5 bar.
Factory set: 3 bar.
Max. working temperature: 80 °C.
Certified to EN 1567.

With 1/4" F double pressure gauge connection

Code			
539250	3/4"	1	20

PRESSURE REDUCING VALVES

5360

tech. broch. 01026

Pressure reducing valve with replaceable cartridge.
CR dezincification resistant alloy body.
Male union connections.
Max. upstream pressure: 25 bar.
Downstream setting pressure range: 0,5–6 bar.
Max. working temperature: 80 °C.
Certified to EN 1567.

With pressure gauge 0–10 bar

Code			
536041	1/2″	1	5
536051	3/4″	1	5
536061	1″	1	5
536071	1 1/4″	1	4
536081	1 1/2″	1	4

With 1/4″ F pressure gauge connection

Code			
536040	1/2″	1	5
536050	3/4″	1	5
536060	1″	1	5
536070	1 1/4″	1	4
536080	1 1/2″	1	4

5362

tech. broch. 01026

Pressure reducing valve with replaceable cartridge.
CR dezincification resistant alloy body.
Female connections.
Max. upstream pressure: 25 bar.
Downstream setting pressure range: 0,5–6 bar.
Max. working temperature: 80 °C.

With pressure gauge 0–10 bar

Code			
536241	1/2″	1	5
536251	3/4″	1	5
536261	1″	1	5

With 1/4″ F pressure gauge connection

Code			
536240	1/2″	1	5
536250	3/4″	1	5
536260	1″	1	5

537

Soldering union connections.

Code			
537015	3/4″ x Ø 15	1	–
537022	1″ x Ø 22	1	–
537028	1 1/4″ x Ø 28	1	–
537035	1 1/2″ x Ø 35	1	–

5365

tech. broch. 01026

Pressure reducing valve with replaceable cartridge.
Bronze body. Male union connections.
Max. upstream pressure: 25 bar.
Downstream setting pressure range: 0,5–6 bar.
Pressure gauge upstream: 0–25 bar.
Pressure gauge downstream: 0–10 bar.
Max. working temperature: 80 °C.
Certified to EN 1567.

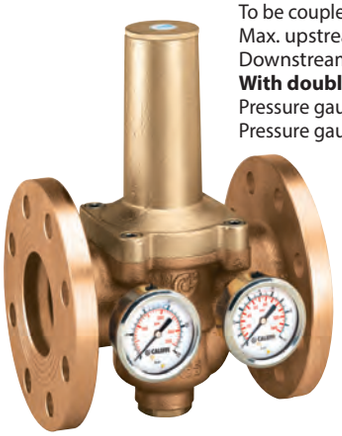
With double pressure gauge in glycerine bath

Code			
536581	1 1/2″	1	–
536591	2″	1	–

With 1/4″ F double pressure gauge connection

Code			
536580	1 1/2″	1	–
536590	2″	1	–

5366



tech. broch. 01026

Pressure reducing valve with replaceable cartridge.
Bronze body. Flanged connections, PN 16.
To be coupled with flat counterflanges EN 1092-1.
Max. upstream pressure: 16 bar.
Downstream setting pressure range: 0,5–6 bar.
With double pressure gauge in glycerine bath.
Pressure gauge upstream: 0–25 bar.
Pressure gauge downstream: 0–10 bar.
Max. working temperature: 80 °C.

Code			
536660	DN 65	1	–

5360

Spare cartridge
for pressure reducing valves
5360, 5362, 5365 and 5366 series.

Code			
536004	1/2″	1	–
536005	3/4″ - 1″	1	–
536027	1 1/4″ - 1 1/2″ (5360)	1	–
536008	1 1/2″ (5365) - 2″ - DN 65	1	–

PRESSURE REDUCING VALVES FOR FIRST STAGE CONTROL

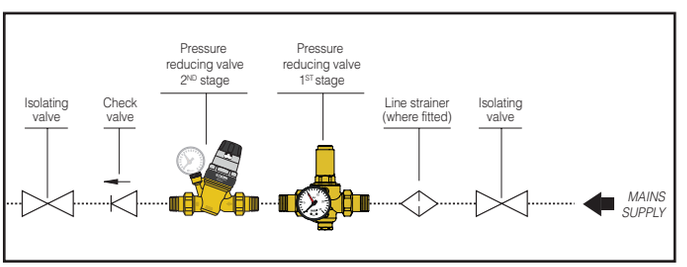
5360

Pressure reducing valve for first stage control, with replaceable cartridge. Piston operation.
CR dezincification resistant alloy body.
Male union connections.
Max. upstream pressure: 2500 kPa.
Downstream setting pressure range: 600–1000 kPa.
Pressure gauge: 0–2500 kPa.
Max. working temperature: 80 °C.

AS 1357.2
WM-40299

Code			
536043 AUS	1/2"	1	5
536053 AUS	3/4"	1	5
536063 AUS	1"	1	5
536073 AUS	1 1/4"	1	4
536083 AUS	1 1/2"	1	4

Application diagram of pressure reducing valve code 5360.3 AUS



PRESSURE REDUCING VALVES FOR HIGH-RISE BUILDINGS

5335..HS

Inclined pressure reducing valve.
Replaceable cartridge and strainer.
Piston operation.
CR dezincification resistant alloy body.
Max. inlet pressure: 2000 kPa.
Downstream setting pressure range: 100–600 kPa.
Max. working temperature: 80 °C.
With 1/4" F pressure gauge connection.
For applications with higher pressure reduction ratio in hot and cold water distribution system.

AS 1357.2
C of C 02467

Code			
533545HS AUS	1/2"	1	25
533555HS AUS	3/4"	1	25

PRESSURE REDUCING AND STABILISING VALVES

576

Pressure reducing valve.
Cast iron body, PN 16.
Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.
Max. upstream pressure: 16 bar.
Downstream setting pressure range: 2–14 bar.
Max. working temperature: 60 °C.
Supplied with double pressure gauge.

For combination with Y-strainer 579 series (see page 226).
Available on request PN 25 and PN 40.

Code			
576062	DN 65	1	–
576082	DN 80	1	–
576102	DN 100	1	–
576122	DN 125	1	–
576152	DN 150	1	–

578

Pilot operated pressure reducing valves.
Cast iron body, PN 16.
Flanged connections.
To be coupled with flat counterflanges EN 1092-1: DN 65–DN 150, PN 16; DN 200–DN 300, PN 10.
Max. upstream pressure: 16 bar.
Downstream setting pressure range: 2–14 bar.
Max. working temperature: 65 °C.
Supplied with double pressure gauge.

Code			
578062	DN 65	1	–
578082	DN 80	1	–
578102	DN 100	1	–
578122	DN 125	1	–
578152	DN 150	1	–
578202	DN 200	1	–
578252	DN 250	1	–
578302	DN 300	1	–

COMBINED GROUP FOR PRESSURE CONTROL IN DOMESTIC WATER SYSTEMS

539..H

tech. broch. 01389

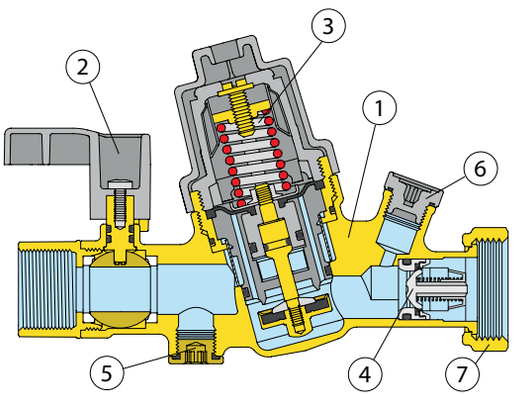
Pb LOW LEAD

Combined group for pressure control in domestic water systems with self-contained replaceable cartridge.
For high temperature.
CR dezincification resistant alloy body "**LOW LEAD**".
Shut-off valve with extended lever.
EA type check valve.
Max. upstream pressure: 16 bar.
Downstream setting pressure range: 1–5,5 bar.
Max. working temperature: 80 °C.
With G 1/4" upstream and downstream pressure test ports.
Pressure reducing valve certified to EN 1567.
Check valve certified to EN 13959.
PATENT PENDING

Code			
539050H	Rp 3/4" x G 1" with captive nut	1	5

Characteristic components

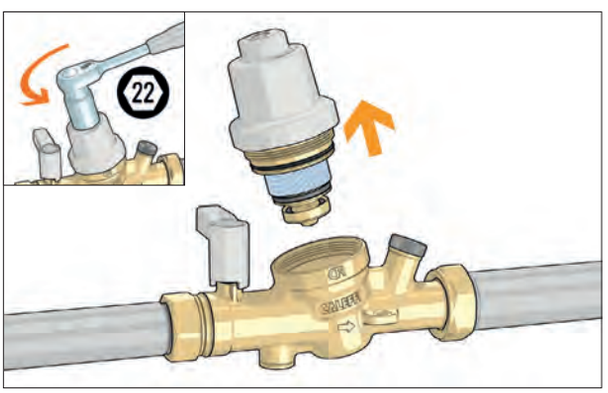
1. Compact, self-contained body
2. Shut-off valve
3. Pressure reducing valve with filter (EN 1567)
4. Check valve, EA type (EN 13959)
5. Upstream test port
6. Downstream test port
7. Captive nut



Function

The combined group for pressure control in domestic water systems combines three different devices in a single component: a ball shut-off valve, a pressure reducing valve with filter and a EA type check valve. Installed on the pipe supplying hot or cold water to the users, it reduces the pressure of the water coming from the mains network, prevents the backflow of water into the mains system and allows users to be shut off during testing and maintenance procedures.
The cartridge containing the diaphragm, strainer, seat, obturator and compensating piston is pre-assembled as a self-contained unit with a cover. It is easy to remove, simplifying inspection and maintenance procedures. The internal strainer, cleanable, is part of the cartridge and cannot be removed.

Removable self-contained cartridge



ACCESSORIES FOR COMBINED GROUP FOR PRESSURE CONTROL 539H

557

tech. broch. 01389

Pressure gauge.
Ø 40 mm.
Accuracy class: UNI 2,5.

Code	bar				
557010	0–10	1/4"	central back conn.	1	-
F0002665	0–10	1/4"	bottom conn.	1	-

tech. broch. 01389

Insulation for 539H series combined group.

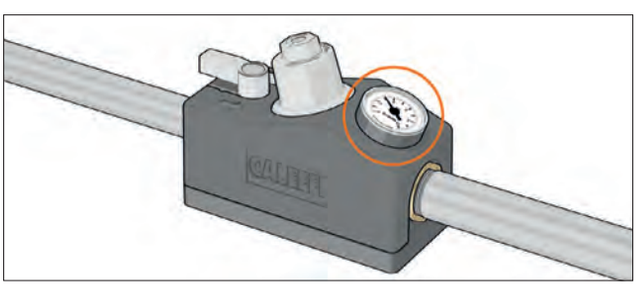
Code		
CBN539050	1	8

539..H

tech. broch. 01389

Spare cartridge
for combined group for pressure control

Code			
539005H	3/4"	1	8



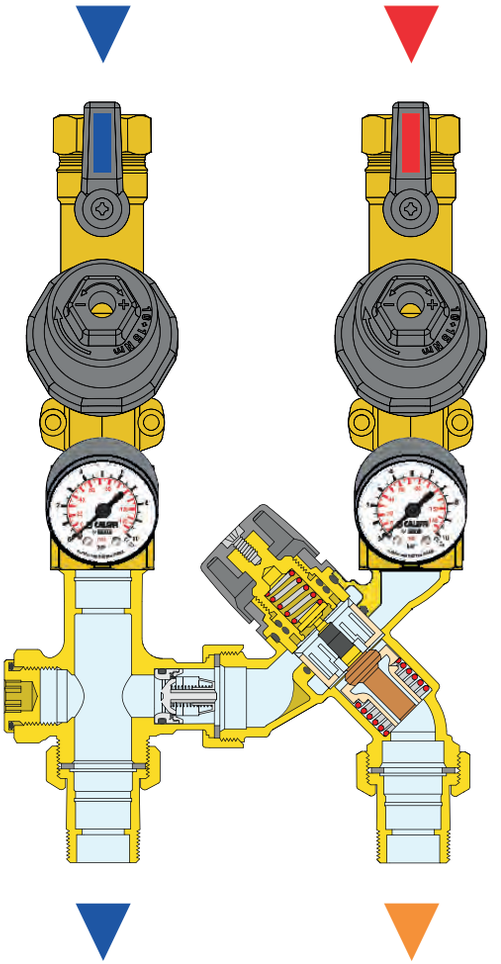
COMBINED GROUP FOR PRESSURE AND TEMPERATURE CONTROL IN DOMESTIC WATER SYSTEMS

539H NEW

Combined group for pressure and temperature control in domestic water systems.
CR dezincification resistant alloy body "LOW LEAD".
Consisting of:
- 539H series combined unit, cold water circuit
- 539H series combined unit, hot water circuit
- adjustable thermostatic mixing valve with advanced thermal performance and anti-scald function

Certified to EN 1111 and EN 1287.
- connection tee complete with check valve
- pressure gauges (optional).

Mixing valve performance
Max. working pressure: 10 bar.
Inlet Tmax: 90 °C.
Temperature adjustment range: 35–65°C.
Kv: 1,7 m³/h.

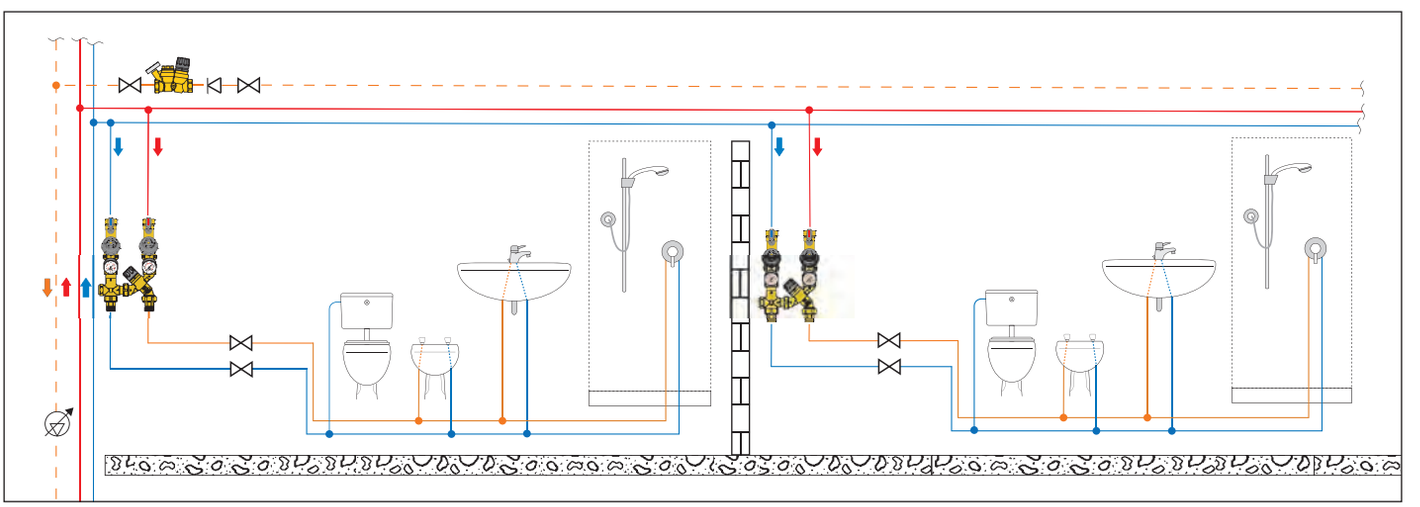


Code			
539500H	Rp 3/4" x G 3/4" with union	1	–

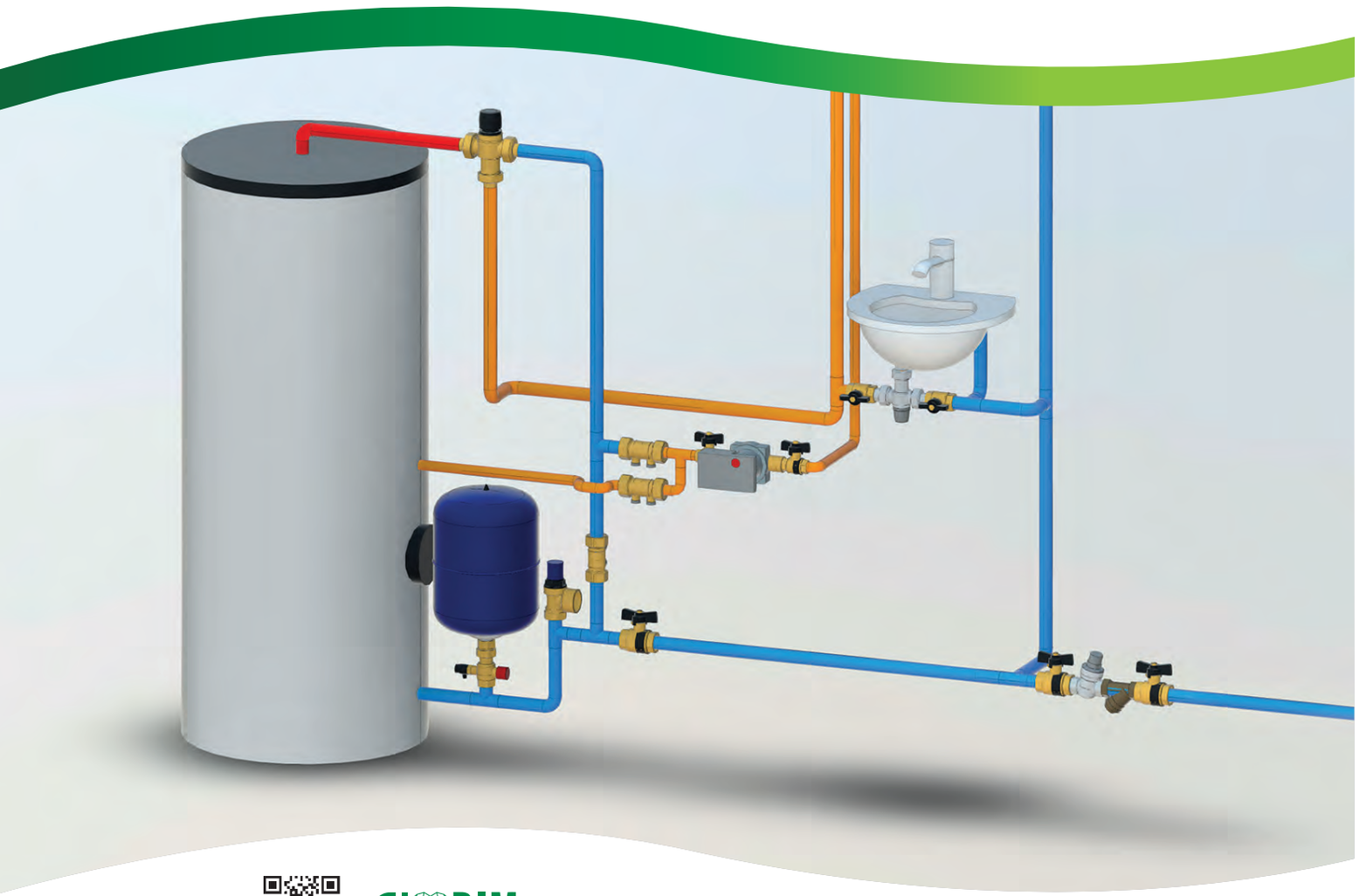
Function

It is essential to install various components capable of fulfilling all the required functions at the inlet of individual housing units, hotel rooms or hospital rooms, where it is necessary to control both the pressure and the temperature. The function of the combined unit is to keep the pressure and temperature of the mixed water supplied to the user constant at the set value, in spite of variations in the hot and cold water supply conditions at the inlet, thereby making pipe connections easier.

Application diagram of combined group



THERMOSTATIC MIXING VALVES



bim.caleffi.com

Thermostatic mixing valves
Hybrid electronic mixing valves, LEGIOMIX® 2.0
Electronic mixing valves with thermal disinfection and interface, LEGIOMIX®
Anti-scald device
Unit for temperature control and thermal disinfection, LEGIOFLOW®
Timer for valves operation
Multi-function thermostatic regulator

Domestic Water Sizer
DOMESTIC WATER SYSTEM SIZER ALSO FOR SMARTPHONE
Available on www.caleffi.com and app for smartphone.
Download the version for your iOS and Android® mobile phone.

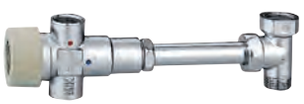
THERMOSTATIC MIXING VALVES FOR SMALL APPLICATIONS

520

tech. broch. 01064

Adjustable thermostatic mixing valve.
Brass body. Chrome plated.
Max. working pressure: 10 bar.
Max. inlet temperature: 90 °C.

Code		Temperature adjustment	Kv (m³/h)		
520430	1/2"	30–48 °C	1,30	1	50
520440	1/2"	40–60 °C	1,30	1	50
520530	3/4"	30–48 °C	1,80	1	50
520540	3/4"	40–60 °C	1,80	1	50
520630	1"	30–48 °C	2,75	1	10
520640	1"	40–60 °C	2,75	1	10



522

tech. broch. 01064

Adjustable thermostatic mixing valve.
For hot water storage heaters.
Brass body. Chrome plated.
Max. working pressure: 10 bar.
Max. inlet temperature: 90 °C.

Code		Temperature adjustment	Kv (m³/h)		
522430	1/2"	30–48 °C	1,30	1	15
522440	1/2"	40–60 °C	1,30	1	15

Pb LOW LEAD

521

tech. broch. 01050

Adjustable **anti-scale** thermostatic mixing valve.
CR dezincification resistant alloy body.
"LOW LEAD". Chrome plated.
Max. working pressure: 14 bar.
Max. inlet temperature: 85 °C.

Code		Temperature adjustment	Kv (m³/h)		
521400	1/2"	30–65 °C	2,6	1	10
521500	3/4"	30–65 °C	2,6	1	10

Pb LOW LEAD

521

tech. broch. 01050

Adjustable **anti-scale** thermostatic mixing valve with check valves.
CR dezincification resistant alloy body.
"LOW LEAD". Chrome plated.
Max. working pressure: 14 bar.
Max. inlet temperature: 85 °C.

Code		Temperature adjustment	Kv (m³/h)		
521503	3/4"	30–65 °C	2,6	1	10

Pb LOW LEAD

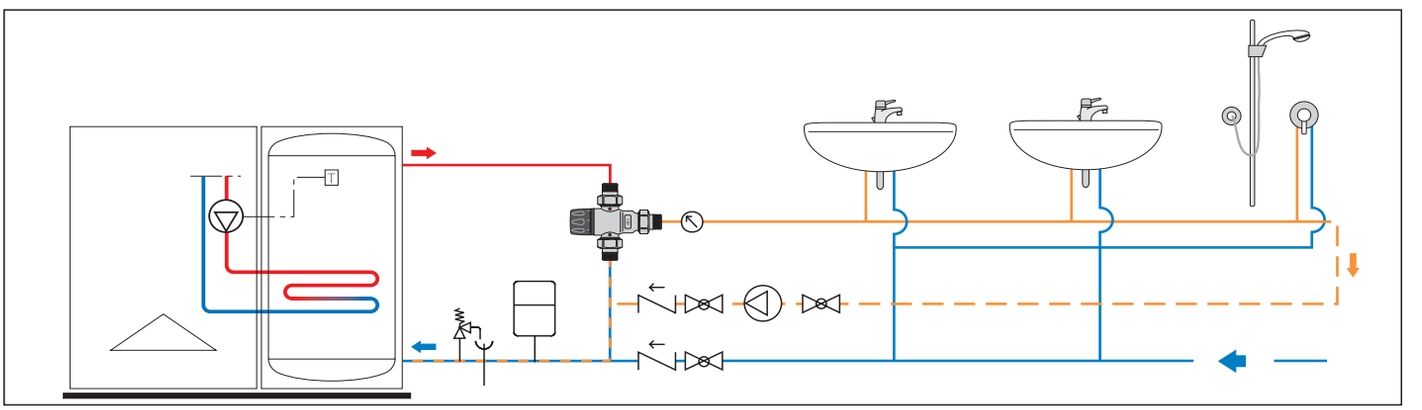
521

tech. broch. 01050

Adjustable **anti-scale** thermostatic mixing valve with check valves, strainers at the inlets and compression ends.
CR dezincification resistant alloy body.
"LOW LEAD". Chrome plated.
Max. working pressure: 14 bar.
Max. inlet temperature: 85 °C.

Code		Temperature adjustment	Kv (m³/h)		
521115	Ø 15	30–65 °C	2,6	1	10
521122	Ø 22	30–65 °C	2,6	1	10

Application diagram of thermostatic mixing valve 521 series



TEMPERING VALVE FOR INSTALLATION AT THE POINT OF DISTRIBUTION

5219

tech. broch. 01194

Tempering valve adjustable with knob.
For temperature control at the point of distribution.
With thermal shut-off function.
CR dezincification resistant alloy body.
"LOW LEAD". Chrome plated.
Max. working pressure: 10 bar.
Max. inlet temperature: 90 °C.
PATENT.

Code		Temperature adjustment	Kv (m³/h)		
521934	1/2"	35–65 °C	1,5	1	10
521935	3/4"	35–65 °C	1,7	1	10
521936	1"	35–65 °C	3,0	1	5

With check valves and strainers

Code		Temperature adjustment	Kv (m³/h)		
521914	1/2"	35–65 °C	1,5	1	10
521915	3/4"	35–65 °C	1,7	1	10
521916	1"	35–65 °C	3,0	1	5

5218

tech. broch. 01193

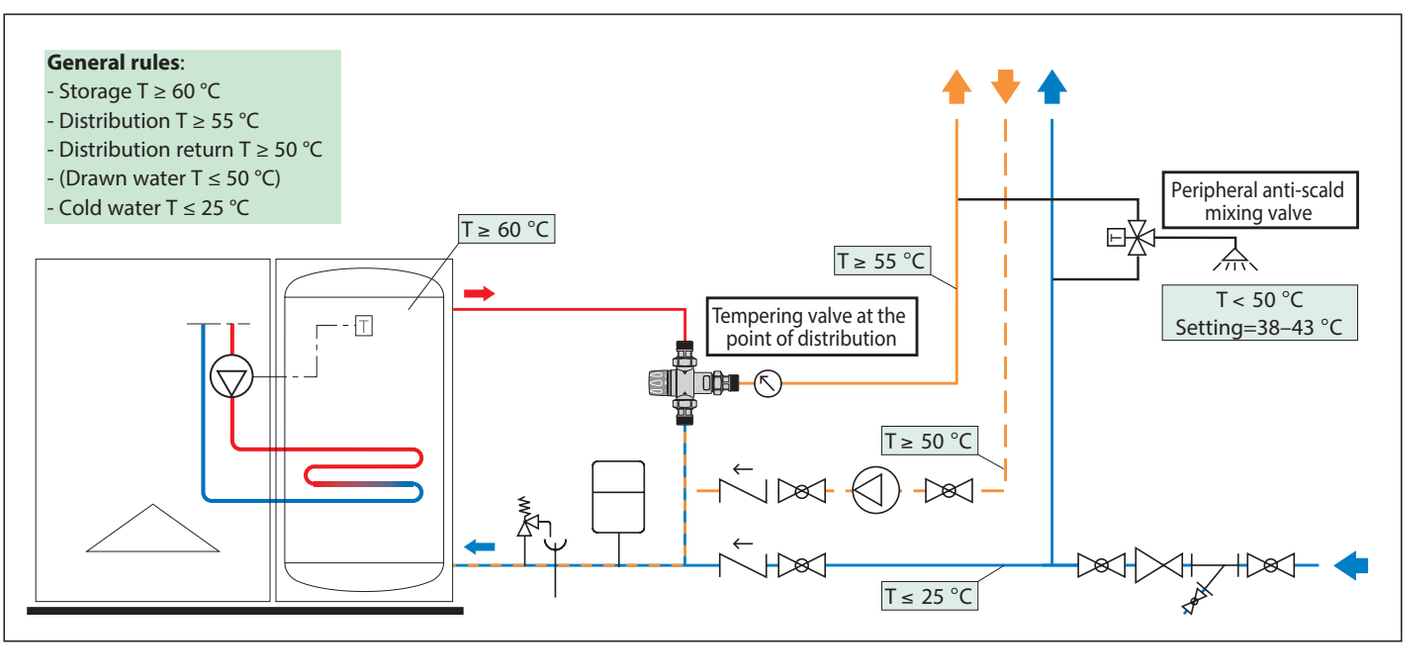
Tempering valve adjustable with knob,
with check valves and strainers.
Specific to control the temperature at the point of distribution.
With thermal shut-off function.
CR dezincification resistant alloy body.
"LOW LEAD". Chrome plated.
Max. working pressure: 10 bar.
Max. inlet temperature: 90 °C.
Certified to EN 15092.
PATENT.

Code		Temperature adjustment	Kv (m³/h)		
521814	1/2"	45–65 °C	1,5	1	10
521815	3/4"	45–65 °C	1,7	1	10
521816	1"	45–65 °C	3,0	1	5

European certification

European standard EN 15092 "***Inline hot water supply tempering valves. - Tests and requirements***" specifies the performance characteristics for tempering valves installed at the point of distribution in domestic water systems made in accordance with the recent European standards EN 806-1/2/3/4/5.
The 5218 series tempering valves are certified as compliant with these standards by the certification Scheme NSF DTC (UK).

Application diagram of thermostatic mixing valve at the point of distribution



ANTI-SCALD THERMOSTATIC MIXING VALVES FOR INSTALLATION AT THE POINT OF USE

5213

tech. broch. 01092

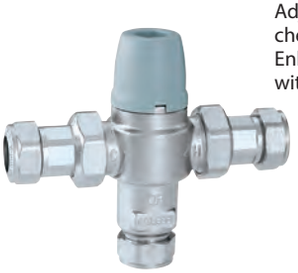
Adjustable thermostatic mixing valve with check valves and strainers at the inlets.
Enhanced thermal performance device with anti-scald safety function.
CR dezincification resistant alloy body.
Chrome plated.
Max. working pressure: 10 bar.
Max. inlet temperature: 85 °C.
Certified to NHS D08, BS 7942, EN 1111 and EN 1287.

Code		Temperature adjustment	Kv (m³/h)		
521304	1/2"	30–50 °C	1,5	1	10
521303	3/4"	30–50 °C	1,7	1	10
521306*	1"	30–50 °C	3,0	1	10

** Certified WRAS only*

5213

tech. broch. 01092



Adjustable thermostatic mixing valve with check valves, strainers and compression ends.
Enhanced thermal performance device with anti-scald safety function.
CR dezincification resistant alloy body.
Chrome plated.
Max. working pressure: 10 bar.
Max. inlet temperature: 85 °C.
Certified to NHS D08, BS 7942, EN 1111 and EN 1287.

Code		Temperature adjustment	Kv (m³/h)		
521315	Ø 15	30–50 °C	1,5	1	10
521322	Ø 22	30–50 °C	1,7	1	10

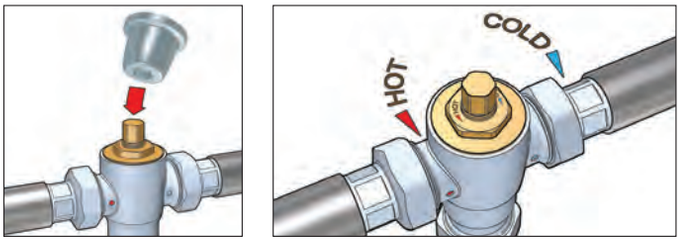
5217

tech. broch. 01145

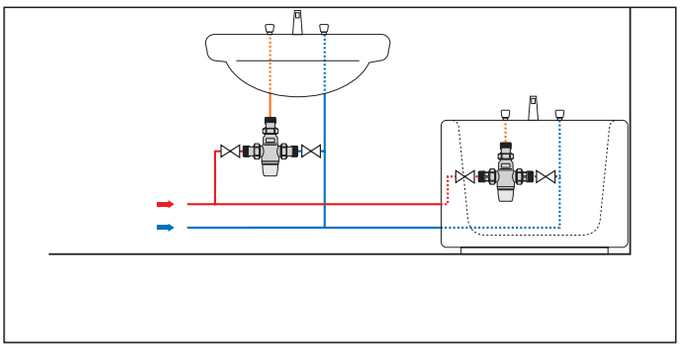
Thermostatic mixing valve, adjustable with knob, with check valves and strainers at the inlets.
Enhanced thermal performance device with anti-scald safety function.
Brass body.
Chrome plated.
Max. working pressure: 10 bar.
Max. inlet temperature: 85 °C.
Certified to NF 079 Doc. 8.

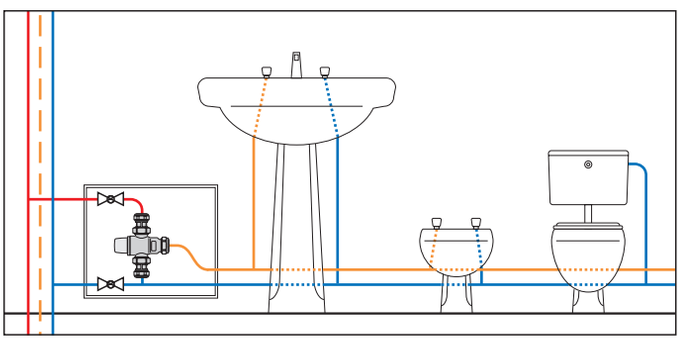
Code		Temperature adjustment	Kv (m³/h)		
521714	1/2"	30–50 °C	1,50	1	10
521713	3/4"	30–50 °C	1,85	1	10

Adjustment temperature of mixing valve 5213 series

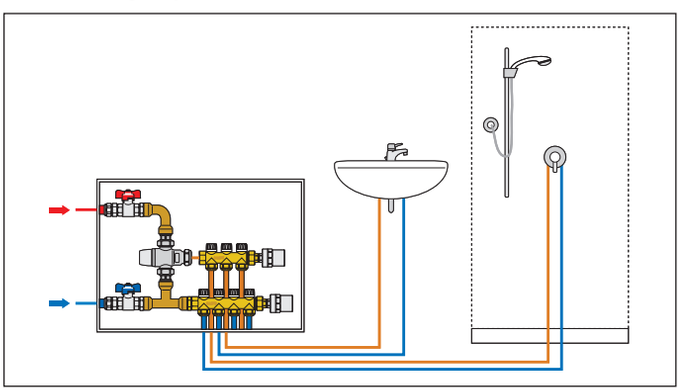


Application diagram of mixing valves 5213 or 5217 series





Application diagram of mixing valves 5213 or 5217 series with distribution group



Pre-formed shell insulation for 1/2" and 3/4" thermostatic mixing valves 5213, 5217, 5218 and 5219 series.

Code		
CBN521814	1	25
CBN521815	1	25

ADJUSTABLE THERMOSTATIC MIXING VALVE FOR UNDER SINK INSTALLATION

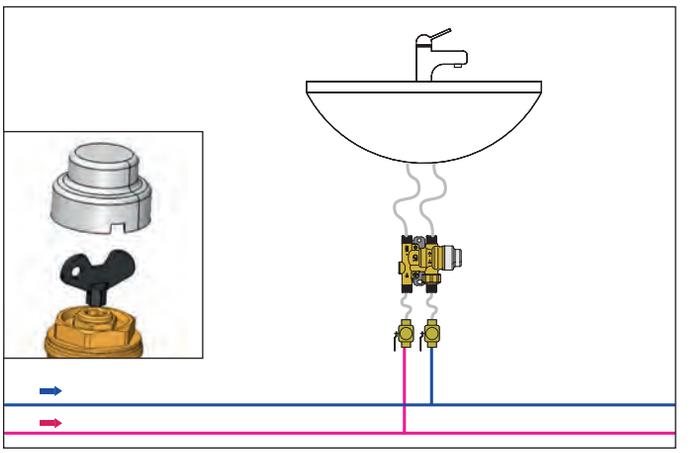
Pb LOW LEAD

5212

Adjustable thermostatic mixing valve for under sink installation.
With check valves and strainers at the inlets.
Enhanced thermal performance device with anti-scald safety function.
Complete with mounting brackets and adjustment key.
CR dezincification resistant alloy body.
"**LOW LEAD**".
Max. working pressure: 10 bar.
Max. inlet temperature: 90 °C.
Certified to ASSE 1070.

Code		Temperature adjustment	Kv (m³/h)		
521201	3/8"	35–50 °C	0,45	1	–

Application diagram of mixing valve code 521201



ANTI-SCALD TEMPERING AND THERMOSTATIC MIXING VALVES

5213

Adjustable anti-scald tempering valve with check valves and strainers at the inlets.
CR dezincification resistant alloy body.
Chrome plated.
Male union connections.
Max. working pressure: 1400 kPa.
Max. inlet temperature: 85 °C.
Certified to AS 4032.2.

AS 4032.2
C of C 02466

Code		Temperature adjustment	Kv (m³/h)		
521312 AUS	DN 15	30–50 °C	1,5	1	10
521319 AUS	DN 20	30–50 °C	1,7	1	10
521325 AUS	DN 25	20–50 °C	4,2	1	10

5213

Adjustable thermostatic mixing valve with isolating valves, check valves and strainers at the inlets.
Enhanced thermal performance device with anti-scald safety function.
CR dezincification resistant alloy body.
Chrome plated.
Max. working pressure: 1400 kPa.
Max. inlet temperature: 85 °C.
Certified to AS 4032.1.

AS 4032.1
C of C 02466
AS 1357.1/2
C of C 25724

Code		Temperature adjustment	Kv (m³/h)		
521312TMX AUS	1/2"	30–50 °C	1,3	1	10
521319TMX AUS	3/4"	30–50 °C	1,4	1	10

COMBINED GROUP FOR PRESSURE AND TEMPERATURE CONTROL IN DOMESTIC WATER SYSTEMS

Pb LOW LEAD

5200

tech. broch. 01266

Adjustable thermostatic mixing valve with knob, complete with check valves and strainers at the inlets.
Enhanced performance with thermal shut-off function.
CR dezincification resistant alloy body **"LOW LEAD"**.
Male union connections.
Max. working pressure: 10 bar.
Max. inlet temperature: 90 °C.
Certified to EN 1111 and EN 1287.

WRAS APPROVED PRODUCT CERTIFICATION MARK · 1.59/20511 · kiwa

Code	Body DN	Conn.	Temperature adjustment	Kv (m³/h)		
520040	15	1/2"	35–65 °C	1,5	1	10
520050	20	3/4"	35–65 °C	1,7	1	10
520060	25	1"	35–65 °C	3,0	1	5

Pb LOW LEAD

520

tech. broch. 01389

Connection tee for 5200 series thermostatic mixing valve complete with check valve.
CR dezincification resistant alloy body **"LOW LEAD"**.
Connections: inlet G 1"
side G 1" with nut
outlet G 3/4" with union
Max. working pressure: 10 bar.
Max. inlet temperature: 90 °C.

Code	Body DN	Conn.		
520004	20	G 1" x G 1" with nut x G 3/4" with union	1	-

Pb LOW LEAD

539H

NEW

Combined group for pressure and temperature control in domestic water systems.
CR **dezincification resistant alloy body "LOW LEAD"**.

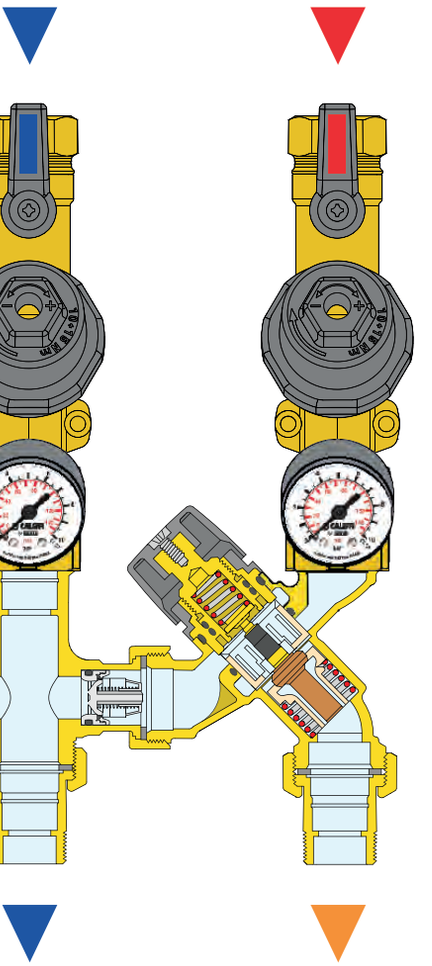
Consisting of:
- 539H series combined unit, cold water circuit
- 539H series combined unit, hot water circuit
- adjustable thermostatic mixing valve with advanced thermal performance and anti-scald function

Certified to EN 1111 and EN 1287.
- connection tee complete with check valve
- pressure gauges (optional).

Mixing valve performance
Max. working pressure: 10 bar.
Inlet Tmax: 90 °C.
Temperature adjustment range: 35–65°C.
Kv: 1,7 m³/h.

kiwa approved · WRAS APPROVED PRODUCT CERTIFICATION MARK · ACS

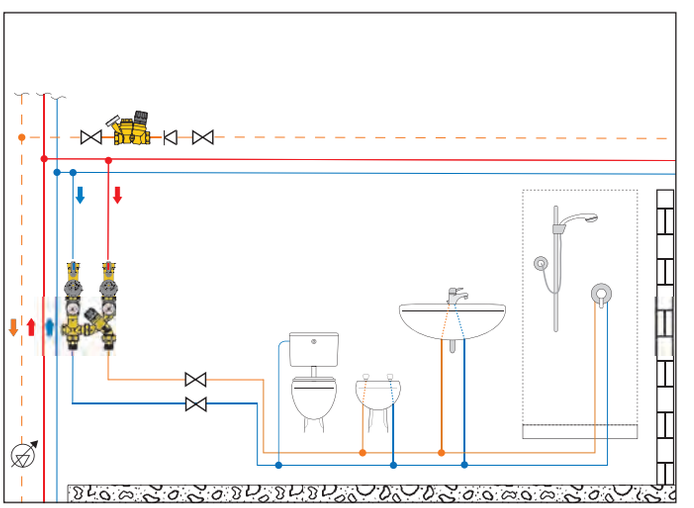
Code			
539500H	Rp 3/4" x G 3/4" with union	1	–



Function

It is essential to install various components capable of fulfilling all the required functions at the inlet of individual housing units, hotel rooms or hospital rooms, where it is necessary to control both the pressure and the temperature. The function of the combined unit is to keep the pressure and temperature of the mixed water supplied to the user constant at the set value, in spite of variations in the hot and cold water supply conditions at the inlet, thereby making pipe connections easier.

Application diagram of combined group



CONTROL UNIT FOR DOMESTIC HOT WATER TEMPERATURE

5201

tech. broch. 01267

Control unit for domestic hot water temperature at the point of distribution.
Consisting of:
- thermostatic mixing valve with thermal shut-off function,
- tee for cold water connection complete with check valves.

Max. working pressure: 10 bar.
Max. inlet temperature: 90 °C.
Mixing valve certified to EN 1111 and EN 1287 standards.

WRAS APPROVED PRODUCT CERTIFICATION MARK
1.59/20511
kiwa

Code	Body DN	Conn.	Temperature adjustment	Kv (m³/h)		
520150	20	3/4"	35–65 °C	1,7	1	–
520160	25	1"	35–65 °C	3,0	1	–
520162*	25	1"	35–65 °C	3,0	1	–

* With off-centre fittings

520

tech. broch. 01267

Accessory kit for recirculation connection complete with check valves.
Max. working pressure: 10 bar.
Max. inlet temperature: 90 °C.

Code	Body DN	Conn.		
520005	20	3/4"	1	–

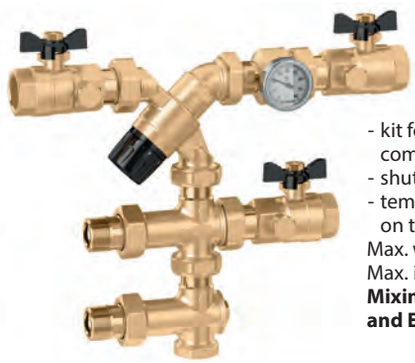
Pre-formed shell insulation for control unit for domestic hot water temperature at the point of distribution 5201 series.

Code		
CBN520150	1	25
CBN520160	1	25

6480

Pair of off-centre fittings for connecting temperature control unit to any storage with outlet centre distance between 100 and 120 mm.

Code	Conn.		
648005	3/4"	1	–
648006	1"	1	–



5201

tech. broch. 01267

Control unit for domestic hot water temperature at the point of distribution, complete with recirculation connection. Consisting of:
- thermostatic mixing valve with thermal shut-off function,
- tee for cold water connection complete with check valves,
- kit for recirculation connection complete with check valves,
- shut-off valves,
- temperature gauge with pocket on the mixed water outlet.

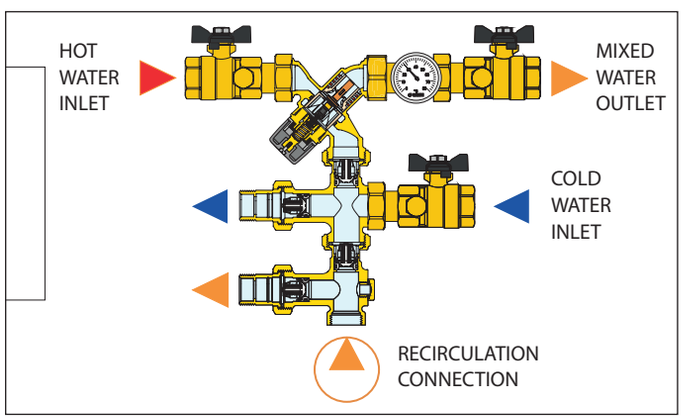
Max. working pressure: 10 bar.
Max. inlet temperature: 90 °C.
Mixing valve certified to EN 1111 and EN 1287 standards.

Code	Body DN	Conn.	Temperature adjustment	Kv (m³/h)		
520155	20	3/4"	35–65 °C	1,7	1	–

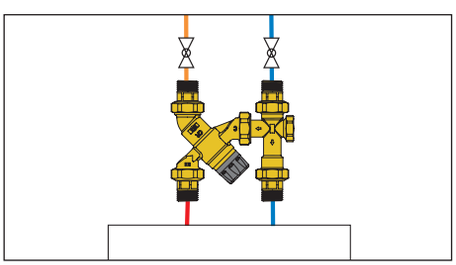
Specifications

The control unit for domestic hot water temperature is equipped with a high performance thermostatic mixing valve with a thermal shut-off function. This makes it possible to maintain a flow temperature at the distribution point that is perfectly stable at the required value.
The domestic hot water temperature control unit allows easy **connection between pipes serving the domestic hot water and storage system**, making it possible to minimise space requirements for installation. The unit is supplied with the **check valves that allow correct operation of the mixing valve in the presence of recirculation**. The group's modularity makes it extremely flexible, since it allows orientation of the various pipe connections in accordance with installation requirements. The shut-off valves with connection ports and temperature gauge on the mixed water outlet facilitate commissioning, checking and maintenance operations.

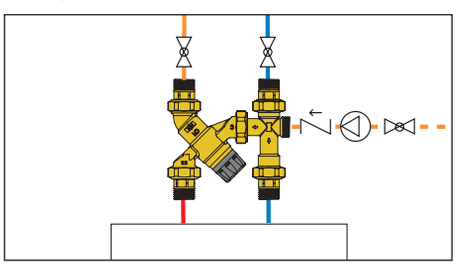
Interchangeable cold/recirculation connections



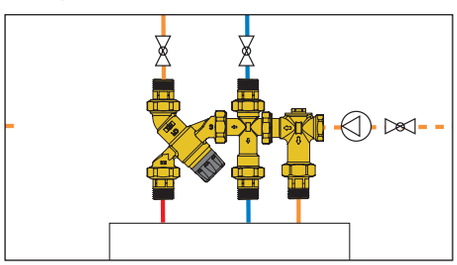
Without recirculation circuit



Storage without recirculation connection



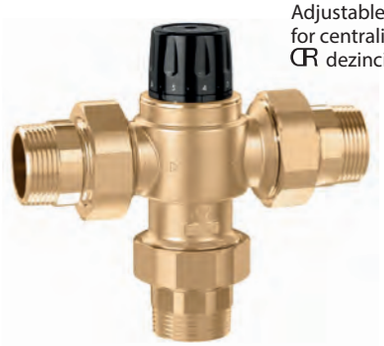
Storage with recirculation connection



THERMOSTATIC MIXING VALVES FOR MEDIUM-LARGE APPLICATIONS

5231

tech. broch. 01256



Adjustable thermostatic mixing valve, for centralised systems.
CR dezincification resistant alloy body.
Antiscale inner regulator in technopolymer.
Max. working pressure: 14 bar.
Max. inlet temperature: 90 °C.

Code		Temperature adjustment	Kv (m³/h)		
523140	1/2″	35–65 °C	4,3	1	5
523150	3/4″	35–65 °C	4,5	1	5
523160	1″	35–65 °C	5,5	1	–
523170	1 1/4″	35–65 °C	7,6	1	–
523180	1 1/2″	35–65 °C	11,0	1	–
523190	2″	35–65 °C	13,3	1	–

With check valves and compression ends

Code		Temperature adjustment	Kv (m³/h)		
523162	Ø 28	35–65 °C	7,6	1	–

5230

tech. broch. 01080

Adjustable thermostatic mixing valve, **with replaceable cartridge**, for centralised systems.
Brass body.
Max. working pressure: 14 bar.
Max. inlet temperature: 85 °C.

Code		Temperature adjustment	Kv (m³/h)		
523040	1/2″	30–65 °C	4,0	1	–
523050	3/4″	30–65 °C	4,5	1	–
523060	1″	30–65 °C	6,9	1	–
523070	1 1/4″	30–65 °C	9,1	1	–
523080	1 1/2″	36–60 °C	14,5	1	–
523090	2″	36–60 °C	19,0	1	–

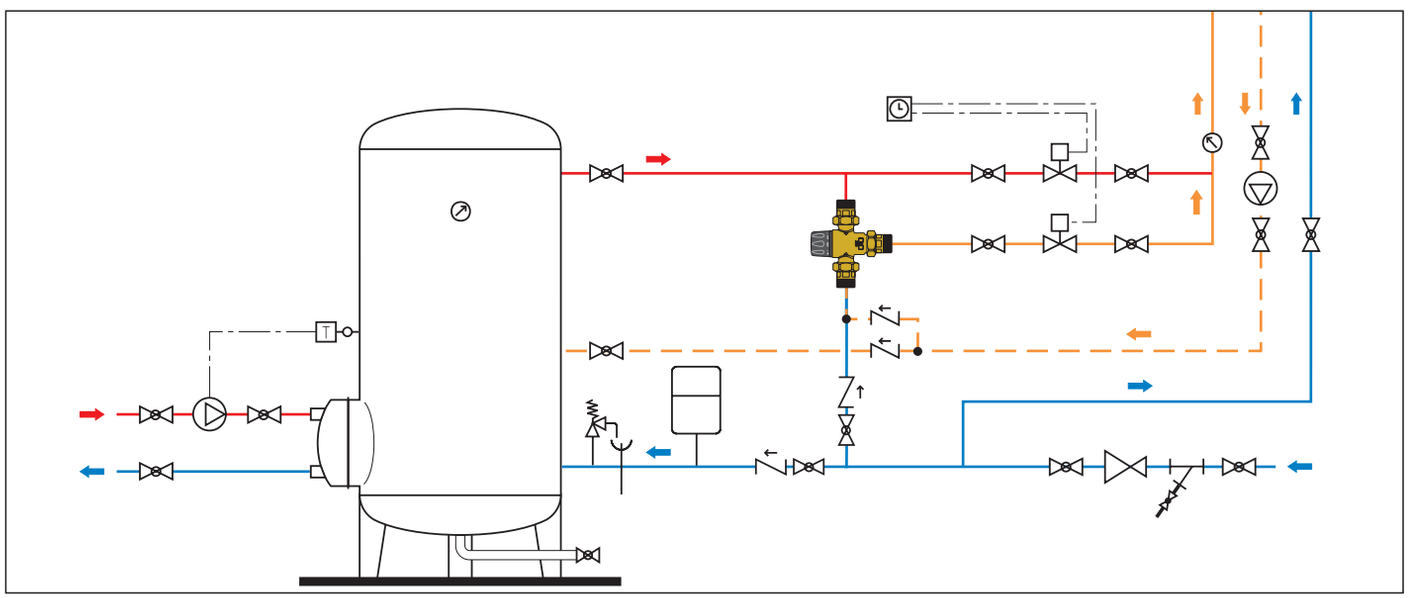
With check valves

Code		Temperature adjustment	Kv (m³/h)		
523043	1/2″	30–65 °C	4,0	1	–
523053	3/4″	30–65 °C	4,5	1	–
523063	1″	30–65 °C	6,9	1	–
523073	1 1/4″	30–65 °C	9,1	1	–

With check valves and compression ends

Code		Temperature adjustment	Kv (m³/h)		
523052	Ø 22	30–65 °C	4,5	1	–
523062	Ø 28	30–65 °C	6,9	1	–

Application diagram of mixing valve 5231 series



THERMOSTATIC MIXING VALVE FOR MEDIUM-LARGE APPLICATIONS

524

Adjustable thermostatic mixing valve for centralised systems.
With recirculation connection.
Male threaded connections.
Brass body.
Max. working pressure: 10 bar.
Max. inlet temperature: 90 °C.

Code	Body DN		Temperature adjustment	Kv (m³/h)		
524400*	15	1 1/8″	30–65 °C	1,4	1	–
524500	20	1 1/4″	30–65 °C	2,5	1	–
524600	25	1 1/2″	30–65 °C	4,0	1	–
524700	32	2″	30–65 °C	7,7	1	–
524800	40	2 1/4″	36–60 °C	11,5	1	–
524900	50	2 3/4″	36–60 °C	15,0	1	–

* *Without recirculation connection*

524

Connection kit for mixing valves with threaded connections, 524 series.
Complete with:
- 2 female unions with check valves, strainers and seals;
- 1 female union with seal.

Code				
524004	1/2″	for 524400	1	–
524005	3/4″	for 524500	1	–
524006	1″	for 524600	1	–
524007	1 1/4″	for 524700	1	–
524008	1 1/2″	for 524800	1	–
524009	2″	for 524900	1	–

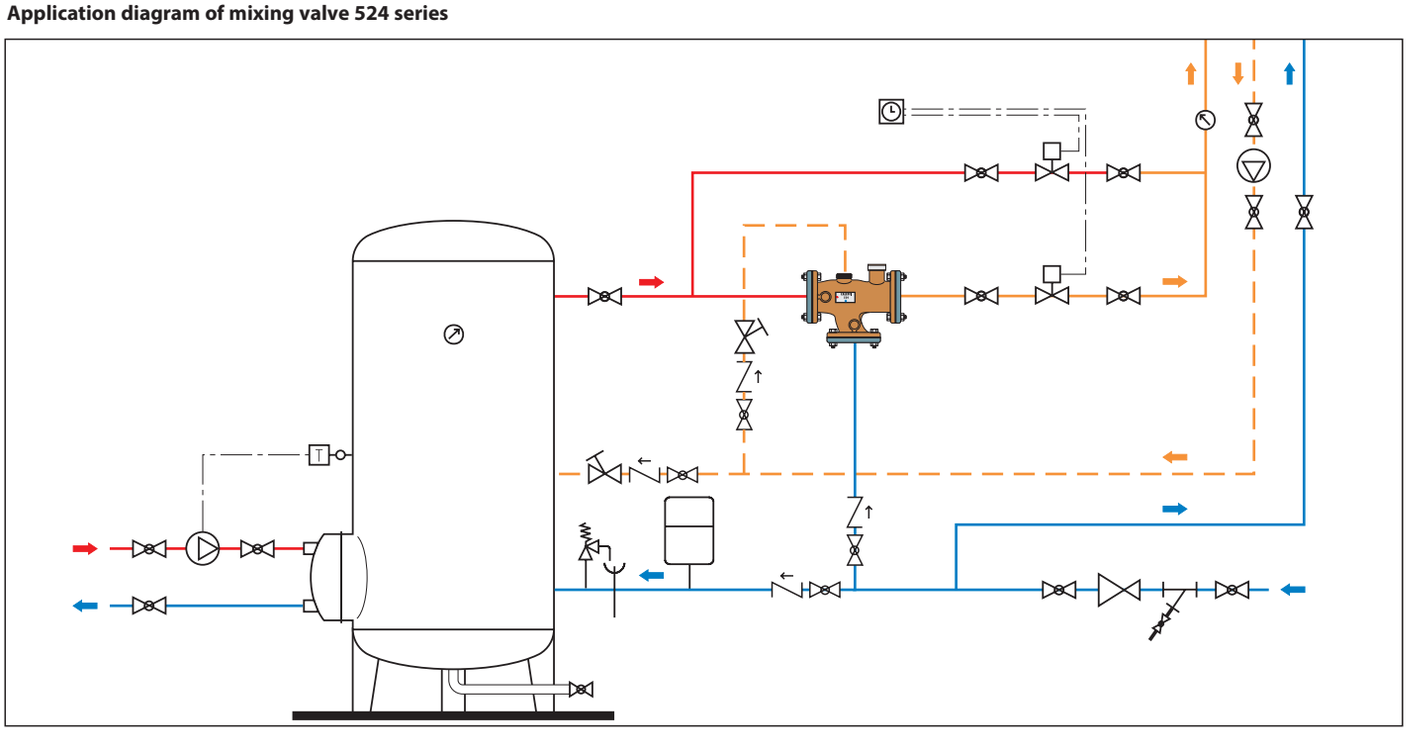
524

tech. broch. 01063

Adjustable thermostatic mixing valve.
Bronze body, PN 10.
Flanged connections.
Equipped with flat counterflanges EN 1092-1, PN 10.
Recirculation pipe connections.
Factory setting: 48 °C.
Max. working pressure: 10 bar.
Max. inlet temperature: 90 °C.

Code		Temperature adjustment	Kv (m³/h)		
524060	DN 65	36–53 °C (± 2 °C)	32,0	1	–
524080	DN 80	36–53 °C (± 2 °C)	43,0	1	–

Application diagram of mixing valve 524 series



HYBRID ELECTRONIC MIXING VALVE

6000
LEGIOMIX® 2.0

tech. broch. 01334

Hybrid electronic mixing valve.
Complete with:
- hybrid mixing valve with motorised actuator
- electronic regulator with programming of temperature levels and thermal disinfection cycles, built into the actuator casing
- integrated flow temperature probe
- circuit return temperature probe
- flow temperature gauge.

Fitted for data saving function (optional),
with recording of temperatures and functional parameters.
Fitted for connection to remote control system (optional).

CR dezincification resistant alloy body.
Electric supply: 230 V - 50/60 Hz.
Max working pressure: 10 bar.
Max. inlet temperature: 90 °C.
Adjustment temperature range in mixing mode: 35–65 °C.
Disinfection temperature range: 50–85 °C.
Protection class: IP 54.
PATENT PENDING.

Code	Body DN	Conn.	Kv (m³/h)		
600045 EST	15	1/2″	4,3	1	–
600055 EST	20	3/4″	4,3	1	–
600065 EST	25	1″	7,6	1	–
600075 EST	32	1 1/4″	10,0	1	–
600085 EST	40	1 1/2″	13,0	1	–
600095 EST	50	2″	18,0	1	–

Spare parts for electronic mixing valve 6000 series, LEGIOMIX® 2.0.

Code	
F0000964	body without unions for DN 15
F0000965	body without unions for DN 20
F0000966	body without unions for DN 25
F0000967	body without unions for DN 32
F0000968	body without unions for DN 40
F0000969	body without unions for DN 50

Operating principle

The electronic hybrid mixing valve combines the typical function of the mechanical thermostatic mixing valve and the management efficiency of an electronic mixing valve in a single device.

The thermostatic mixing valve uses the mechanical action performed by the internal control thermostatic element, which responds promptly to any variation in temperature, pressure and inlet flow rate to quickly restore the mixed water temperature value at the outlet.
Fast and accurate temperature control guaranteed, indispensable for use in domestic hot water distribution circuits.

This basic mixer is effectively managed by a motor-controlled actuator that, based on a signal coming from the temperature probes and under the control of a specific regulator, modifies the set point temperature of the mixed water. The latter is monitored continuously by means of temperature probes, which indicate the operation status of the domestic water circuit.

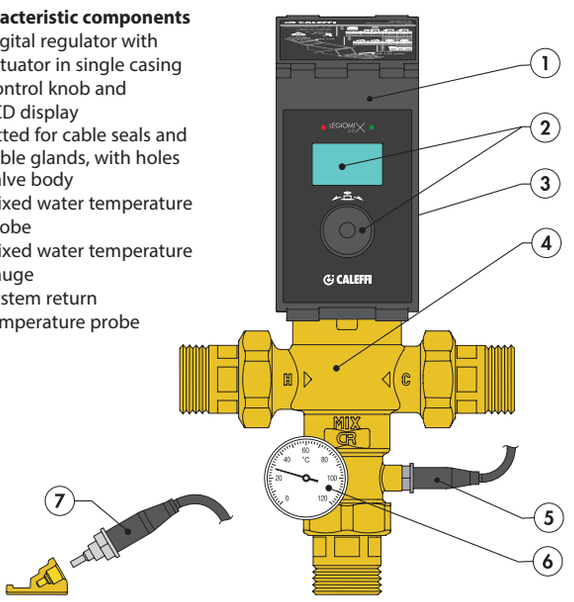
The electronic regulator, directly on the actuator, allows the mixed water temperature control according to different functional programs, both for normal control and for the thermal disinfection for the prevention of Legionella. This phase can be controlled and checked automatically in terms of temperatures and disinfection times, for optimal system management.

An optional memory system allows continuous recording of flow temperature, return temperature, alarm and functional statuses, useful for monitoring the operating status of the entire system.

Appropriate relays are used to manage the alarms and external appliances, for example for loading accumulation hot water and switching on/off the recirculation pump.

The regulator is fitted for remote control with specific MODBUS-RTU transmission protocols, through optional board, for use in Building Automation and Control Systems (BACS).

Characteristic components
1 Digital regulator with actuator in single casing
2 Control knob and LCD display
3 Fitted for cable seals and cable glands, with holes
4 Valve body
5 Mixed water temperature probe
6 Mixed water temperature gauge
7 System return temperature probe



Spare parts for electronic mixing valve 6000 series, LEGIOMIX® 2.0.

Code	
F69807	mixed water probe for 1/2″–2″
F69591	recirculation probe for check on disinfection
F69531	contact probe holder for check on disinfection
F29571	temperature gauge 0–120 °C
F0000970	digital regulator with actuator for DN 15-DN 20
F0000971	digital regulator with actuator for DN 25–DN 50

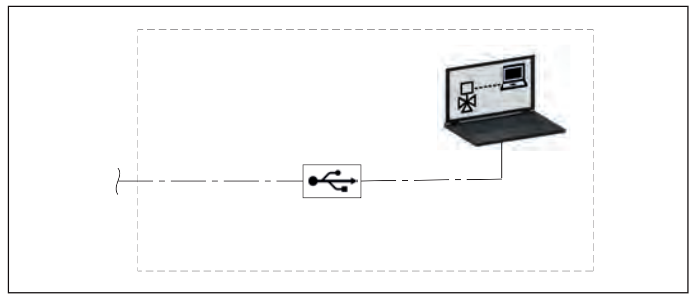
ACCESSORIES FOR HYBRID ELECTRONIC MIXING VALVE

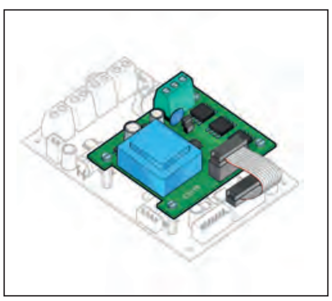
Code 600001
Optional board MODBUS-RTU transmission and logs
By installing the board on the device, it will be possible to manage the device through a specific MODBUS-RTU transmission protocol for use in Building Automation and Control Systems (BACS). The package includes the optional board, main board connection cable and logs.

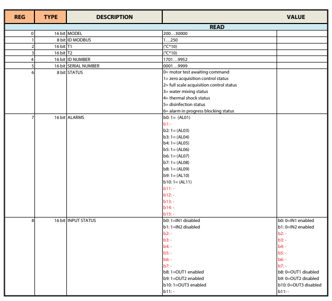
Code			
600001	optional board and logs	1	–

Code 600002
RS-485 USB cable and Caleffi Software
Using the cable with RS-485 USB interface and the Caleffi Software included in the package, it is possible to manage the device from PC.
The two Software are used to manage the mixing valves LEGIOMIX® 24 V and LEGIOMIX® 2.0.

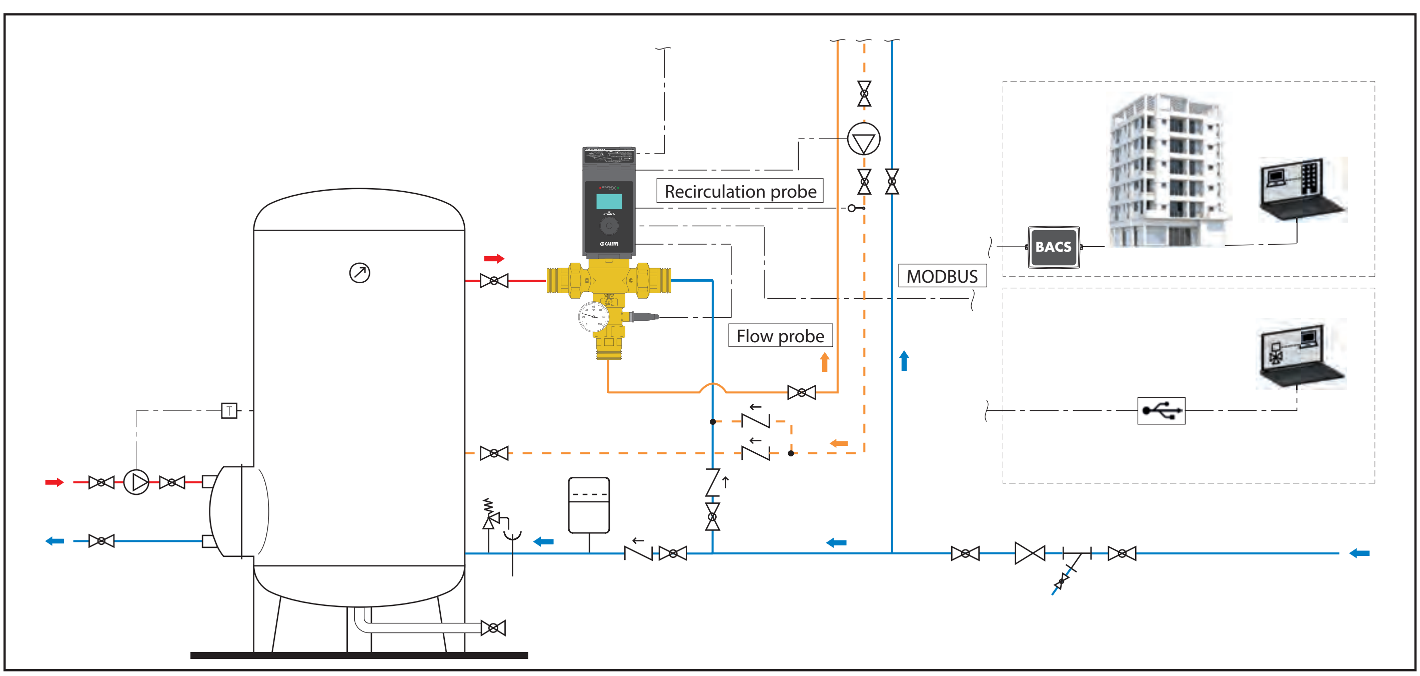
Code			
600002	RS-485 USB cable and Caleffi Software	1	–







Application diagram of electronic mixing valve 6000 EST LEGIOMIX® 2.0 series



ELECTRONIC MIXING VALVE WITH THERMAL DISINFECTION - 230 V

6000 LEGIOMIX®

tech. broch. 01086

Electronic mixing valve with programmable thermal disinfection and check on disinfection. Male threaded connections with union.
Consisting of:
- **three-way ball valve**,
- **actuator**,
- **regulator**,
- **flow temperature probe**,
- **return temperature probe**.

With auxiliary microswitches for disinfection management and other devices.
Suitable for remote control connection with interface code 600100 and proprietary protocol.
Electric supply: 230 V - 50/60 Hz - (6,5+6) VA.
Max. working pressure: 10 bar.
Max. inlet temperature: 100 °C.
Adjustment temperature range: 20–85 °C.
Disinfection temperature range: 40–85 °C.
Protection class: IP 65 (actuator).
PATENT.

Code		Kv (m³/h)		
60051	3/4″	8,4	1	–
60061	1″	10,6	1	–
60071	1 1/4″	21,2	1	–
60081	1 1/2″	32,5	1	–
60091	2″	41,0	1	–

Function

This particular series of electronic mixing valves is equipped with a special regulator **that controls a set of programs for circuit thermal disinfection**. In addition it enables checking the temperature and time for thermal disinfection are actually reached and undertaking the appropriate corrective action. All the parameters are updated every day and logged, recording the temperatures by time.

Spare parts for mixing valve.
Consisting of:
- **three-way ball valve**,
- **actuator**,
- **flow temperature probe**,
- **temperature gauge**,
- **holder accessories fitting**.

Code	
600251	for code 600051
600261	for code 600061
600271	for code 600071
600281	for code 600081
600291	for code 600091

Spare parts for electronic mixing valve with programmable thermal disinfection 6000 series with threaded connections, 230 V.

Code	
645112	actuator 230 V (AC) for 600051–600091
F69798	valve body without unions and probe holder for 3/4″
F69799	valve body without unions and probe holder for 1″
F69801	valve body without unions and probe holder for 1 1/4″
F69803	valve body without unions and probe holder for 1 1/2″-2″
F69807	flow probe for 3/4″-1″-1 1/4″
F69804	flow probe for 1 1/2″-2″
F69591	recirculation probe for check on disinfection
F69531	contact probe holder for recirculation loop
F69433	regulator with check on disinfection
R19101	temperature gauge 0–80 °C
F69752	electronic board
F69888	spare battery

ANTI-SCALD DEVICE

6001

tech. broch. 01086

Anti-scald device
for domestic hot water use.
Brass body. Chrome plated.
Setting temperature: 48 °C (± 1 °C).

Code			
600140	1/2″	1	10

Function

The purpose of the anti-scald device is to cut off the flow of water if its temperature reaches the setting value.
Designed to be used in domestic hot water systems with electronic mixing valves with programmable thermal disinfection.
Installed directly at the point of use, it prevents the hot water from scalding the user during the thermal disinfection period (T>50 °C).

ELECTRONIC MIXING VALVE WITH THERMAL DISINFECTION - 230 V

6000
LEGIOMIX®

tech. broch. 01086

Electronic mixing valve with programmable thermal disinfection and check on disinfection. Flanged connection PN 16. Consisting of:
- **three-way ball valve**,
- **actuator**,
- **regulator**,
- **flow temperature probe**,
- **return temperature probe**.

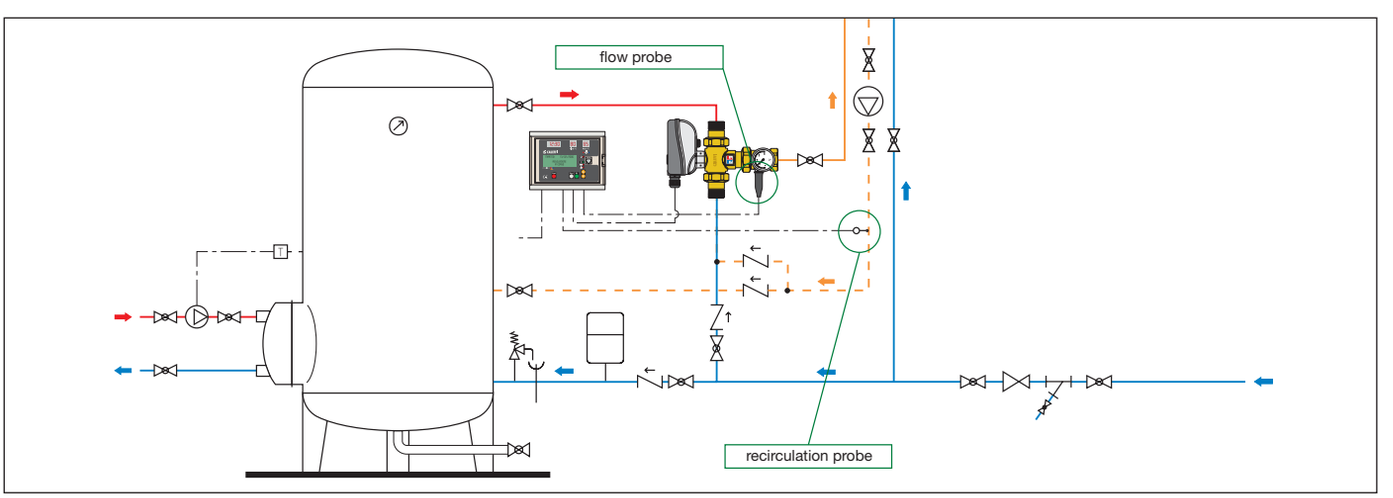
With auxiliary microswitches for disinfection management and other devices.
Suitable for remote control connection with interface code 600100 and proprietary protocol.
Electric supply: 230 V - 50/60 Hz - (6,5+10,5) VA.
Max. working pressure: 10 bar.
Max. inlet temperature: 100 °C.
Adjustment temperature range: 20–85 °C.
Disinfection temperature range: 40–85 °C.
To be coupled with counterflanges EN 1092-1.
Protection class: IP 65 (actuator).
PATENT.

Code		Kv (m³/h)		
600006	DN 65	90,0	1	–
600008	DN 80	120,0	1	–

Spare parts for electronic mixing valve with programmable thermal disinfection 6000 series with flanged connections.

Code	
F69381	flow temperature probe
F69393	three-way valve with flanged connections for codes 6000.6
F69394	three-way valve with flanged connections for codes 6000.8
F69395	actuator 230 V (AC) for codes 600006 and 600008
F69433	regulator with check on disinfection
F69591	recirculation probe for check on disinfection
F69531	contact probe holder for recirculation loop
F69888	spare battery

Application diagram of electronic mixing valve 6000 series



ELECTRONIC MIXING VALVE WITH THERMAL DISINFECTION - 24 V
Suitable for BACS with MODBUS-RTU management

6000 LEGIOMIX®

tech. broch. 01347

Electronic mixing valve with programmable thermal disinfection and check on disinfection. Male threaded connections with union.
Consisting of:
- **three-way ball valve**,
- **actuator**,
- **regulator**,
- **flow temperature probe**,
- **return temperature probe**.

With auxiliary microswitches for disinfection management and other devices.
Fitted for remote control connection with RS-485 and MODBUS-RTU protocols.
Electric supply: 24 V - 50/60 Hz - (6,5+6) VA.
Max. working pressure: 10 bar.
Max. inlet temperature: 100 °C.
Adjustment temperature range: 20–85 °C.
Disinfection temperature range: 40–85 °C.
Protection class: IP 65 (actuator).
PATENT.

Code		Kv (m³/h)		
600054	3/4"	8,4	1	–
600064	1"	10,6	1	–
600074	1 1/4"	21,2	1	–
600084	1 1/2"	32,5	1	–
600094	2"	41,0	1	–

Function

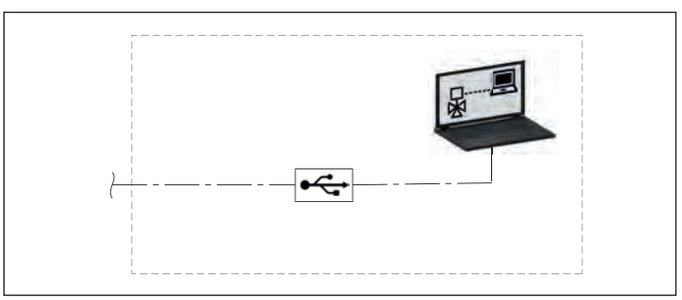
This particular series of electronic mixing valves is equipped with a special regulator **that controls a set of programs for circuit thermal disinfection**. In addition it enables checking the temperature and time for thermal disinfection are actually reached and undertaking the appropriate corrective action. All the parameters are updated every day and logged, recording the temperatures by time.

Spare parts for electronic mixing valve
with programmable thermal disinfection 6000 series
with threaded connections, 24 V.

Code	
645114	actuator 24 V (AC) for 600054–600094
F69798	valve body without unions and probe holder for 3/4"
F69799	valve body without unions and probe holder for 1"
F69801	valve body without unions and probe holder for 1 1/4"
F69803	valve body without unions and probe holder for 1 1/2"-2"
F69807	flow probe for 3/4"-1"-1 1/4"
F69804	flow probe for 1 1/2"-2"
F69591	recirculation probe for check on disinfection
F69531	contact probe holder for recirculation loop
F0000961	regulator with check on disinfection
R19101	temperature gauge 0–80 °C
F69888	spare battery

Code 600002
RS-485 USB cable and Caleffi Software
Using the cable with RS-485 USB interface and the Caleffi Software included in the package, it is possible to manage the device from PC.
The two Software are used to manage the mixing valves LEGIOMIX® 24 V and LEGIOMIX® 2.0.

Code			
600002	RS-485 USB cable and Caleffi Software	1	–



ELECTRONIC MIXING VALVE WITH THERMAL DISINFECTION - 24 V

Suitable for BACS with MODBUS-RTU management

6000 LEGIOMIX®

tech. broch. 01347

Electronic mixing valve with programmable thermal disinfection and check on disinfection. Flanged connection PN 16. Consisting of:
- **three-way ball valve**,
- **actuator**,
- **regulator**,
- **flow temperature probe**,
- **return temperature probe**.

With auxiliary microswitches for disinfection management and other devices.
Fitted for remote control connection with RS-485 and MODBUS-RTU protocols.
Electric supply: 24 V - 50/60 Hz - (6,5+10,5) VA.
Max. working pressure: 10 bar.
Max. inlet temperature: 100 °C.
Adjustment temperature range: 20–85 °C.
Disinfection temperature range: 40–85 °C.
To be coupled with counterflanges EN 1092-1.
Protection class: IP 65 (actuator).
PATENT.

Code		Kv (m³/h)		
600016	DN 65	90,0	1	–
600018	DN 80	120,0	1	–

Spare parts for electronic mixing valve with programmable thermal disinfection 6000 series with flanged connections.

Code	
F69381	flow temperature probe
F69393	three-way valve with flanged connections for codes 6000.6
F69394	three-way valve with flanged connections for codes 6000.8
F0000995	actuator 24 V (AC) for codes 600016 and 600018
F0000961	regulator with check on disinfection
F69591	recirculation probe for check on disinfection
F69531	contact probe holder for recirculation loop
F69888	spare battery

7550

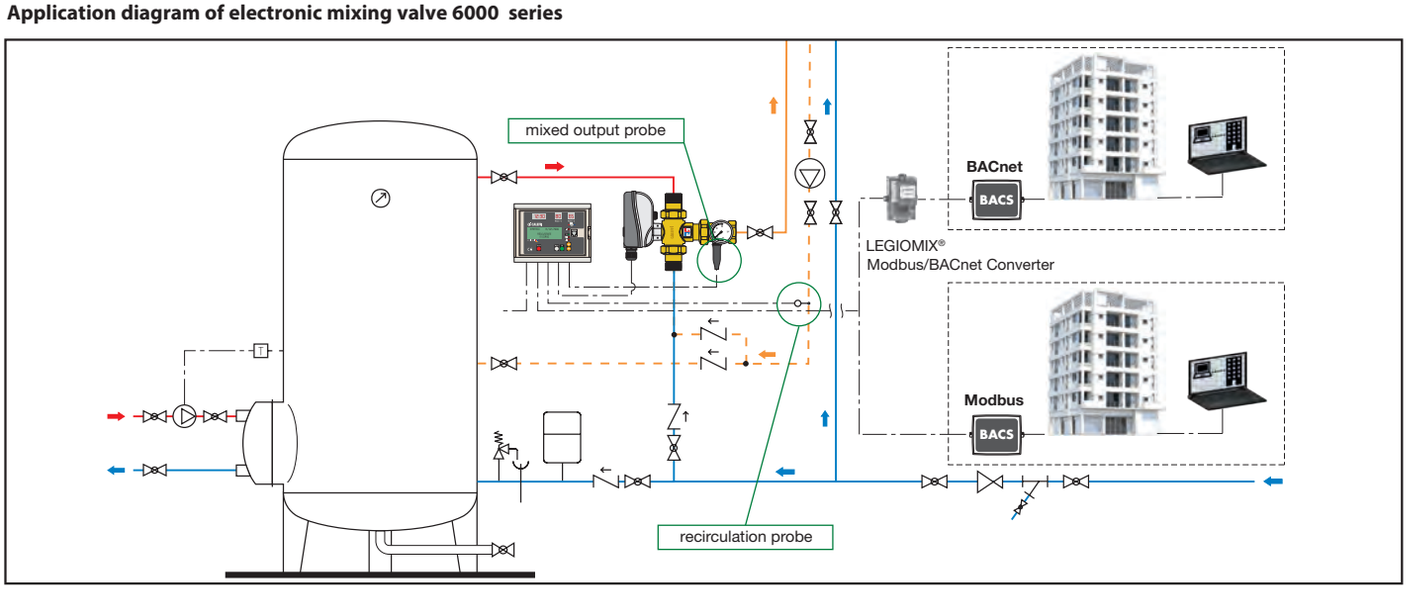
MODBUS-RTU/BACnet converter for connection with BACS systems.
Interface for products with MODBUS-RTU transmission with systems using BACnet protocol.

Supply:
9–30 V (dc), 12–24 V (AC), 50/60 Hz
2,5 W / a 12 V 150 mA.
Certification: CE, IEC, FCC, RHOS.
Inputs/Outputs:
Ethernet port 10/100
RS-485 port + / - / GND.
Working temperature: -40–75 °C.
Relative humidity: 5–90 % without condensation.

The converter is preconfigured for use with the following products:
- LEGIOMIX® 6000 series (for MODBUS-RTU version)
- LEGIOMIX® 2.0 6000 EST series
- CONTECA EASY 750. series.

Code		
755052	1	–

Application diagram of electronic mixing valve 6000 series



UNIT FOR TEMPERATURE CONTROL AND THERMAL DISINFECTION

6005 LEGIOFLOW®

tech. broch. 01160

Multi-function compact unit for temperature control, thermal disinfection and distribution for domestic water system. Consisting of:
- anti-scald thermostatic mixing valve,
- automatic flushing valve for thermal disinfection with thermo-electric actuator,
- shut-off ball valve with built-in strainers and check valves,
- cold water circuit outlet kit, with integral check valves.

Inlet connections: 3/4" M.
Outlet connections: 3/4" M with union.

Mixing valve
CR dezincification resistant alloy body.
Max. working pressure: 10 bar.
Adjustment temperature range: 30–50 °C.
Factory setting: 43 °C.
Max. inlet temperature at primary circuit: 85 °C.
Performance to standards NF 079 doc. 8, EN 1111 and EN 1287.

Thermo-electric actuator
Normally closed.
Supply: 230 V (AC).
Power consumption: 3 W.
Protection class: IP 44.
Cable length: 80 cm.

With thermo-electric actuator

Code	Connections	Kv (m³/h) mixing valve	Kv (m³/h) flushing valve		
600500	3/4"	1,75	1,80	1	6

Without thermo-electric actuator

Code	Connections	Kv (m³/h) mixing valve	Kv (m³/h) flushing valve		
600501	3/4"	1,75	1,80	1	6

Version without cold water circuit outlet kit. With shut-off ball valves with strainers and check valves.
For applications with push button or photo-cell activated user taps.

With thermo-electric actuator

Code	Connections	Kv (m³/h) mixing valve	Kv (m³/h) flushing valve		
600502	3/4"	1,75	1,80	1	6

Without thermo-electric actuator

Code	Connections	Kv (m³/h) mixing valve	Kv (m³/h) flushing valve		
600503	3/4"	1,75	1,80	1	6

6005 LEGIOFLOW®

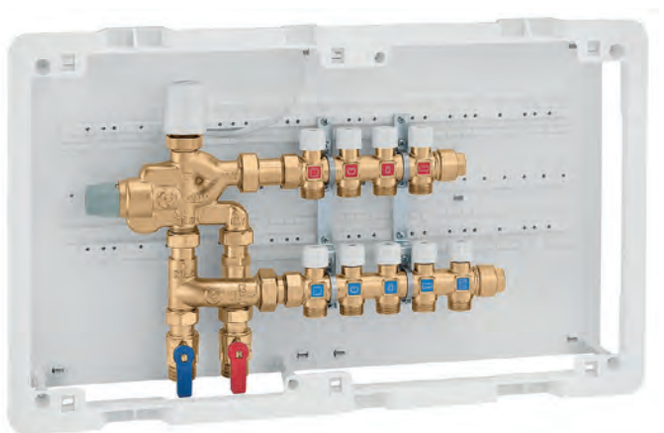
tech. broch. 01160

Multi-function compact unit for temperature control, thermal disinfection and distribution for domestic water system. Consisting of:
- anti-scald thermostatic mixing valve,
- automatic flushing valve for thermal disinfection with thermo-electric actuator,
- shut-off ball valve with built-in strainers and check valves,
- cold water circuit outlet kit,
- distribution manifolds with built-in shut-off valves,
- box code 362056 (560x330x80 mm).

Mixing valve
CR dezincification resistant alloy body.
Max. working pressure: 10 bar.
Adjustment temperature range: 30–50 °C.
Factory set: 43 °C.
Max. inlet temperature at primary circuit: 85 °C.
Performance to standards NF 079 doc. 8, EN 1111 and EN 1287.

Thermo-electric actuator
Normally closed.
Supply: 230 V (ac).
Power consumption: 3 W.
Protection class: IP 44.
Cable length: 80 cm.

Distribution manifolds
CR dezincification resistant alloy body.
Max. working pressure: 10 bar.
Working temperature range: 5–100 °C.
Outlet centre distance: 35 mm.



With thermo-electric actuator

Code	Connections	Outlets No. cold	Outlets No. hot	Outlets		
600530	3/4"	3	2	23 p.1,5 M	1	–
600540	3/4"	4	3	23 p.1,5 M	1	–
600550	3/4"	5	4	23 p.1,5 M	1	–

Without thermo-electric actuator

Code	Connections	Outlets No. cold	Outlets No. hot	Outlets		
600531	3/4"	3	2	23 p.1,5 M	1	–
600541	3/4"	4	3	23 p.1,5 M	1	–
600551	3/4"	5	4	23 p.1,5 M	1	–

UNIT FOR TEMPERATURE CONTROL AND THERMAL DISINFECTION

Thermal disinfection

To be more certain that there is no growth of Legionella, all sections of the network must be subjected to thermal disinfection. Even in the section downstream of the mixing valve, as far as the user tap, it must be possible to flush the system at temperatures exceeding 60 °C. This means by-passing the thermostatic mixing valve, which is set at lower values, and activating another valve that allows the taps to be feddirectly with the hot water arriving from the distribution network.

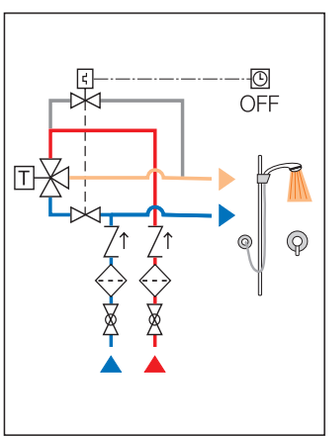
Function

The multi-function unit is used in domestic water systems to control the hot and cold water delivered to user taps, serving a bathroom or a dwelling. A high-performance adjustable thermostatic mixing valve keeps the hot water temperature at the desired level and protects the user from the danger of scalding.
A flushing valve is used for the circuit thermal disinfection all the way to the tap, in compliance with anti-Legionella regulations.

Hydraulic diagram

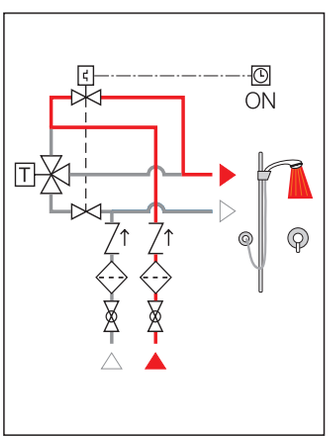
With mixing

- Flushing valve closed
- Cold water valve open

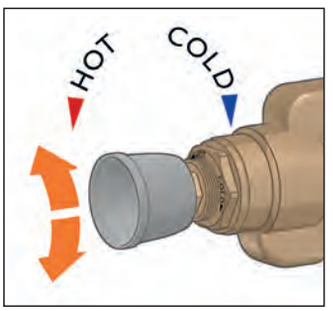


With thermal disinfection

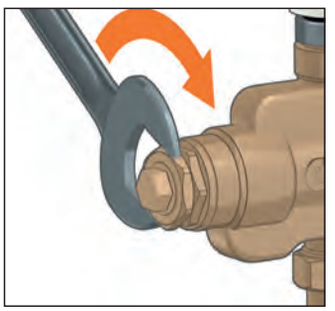
- Flushing valve open
- Cold water valve closed



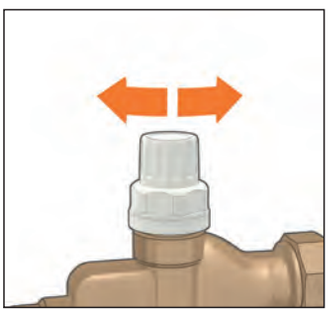
Temperature adjustment



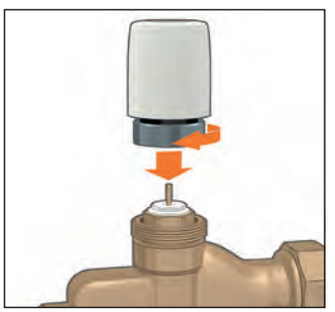
Adjustment locking using the locking nut



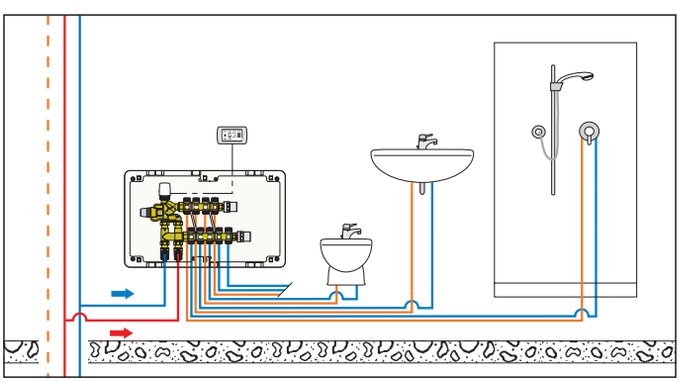
Manual opening



Thermo-electric actuator



Application diagram multi-function unit code 600550



TIMER FOR VALVE OPERATION

6002

Timer with programmable key, settings from 0,25 to 15 minutes.
To operate the valves used to carry out thermal disinfection of circuit sections, up to the taps.
Supply: 230 V (AC).

Code		
600200	1	–

MULTI-FUNCTION THERMOSTATIC REGULATOR

116

tech. broch. 01325

Thermostatic regulator for domestic hot water recirculation circuits.
Complete with automatic thermostatic thermal disinfection function.
With temperature gauge for circuit temperature check.
CR dezincification resistant alloy body **"LOW LEAD"**.
Female connections.
Max. working pressure: 16 bar.
Disinfection temperature: 70°C.

Code	DN	Conn.	Temperature adjustment		
116240	15	Rp 1/2"	35–60 °C	1	10
116250	20	Rp 3/4"	35–60 °C	1	10
116260	25	Rp 1"	35–65 °C	1	–
116270	32	Rp 1 1/4"	35–65 °C	1	–

116

tech. broch. 01325

Thermostatic regulator for domestic hot water recirculation circuits.
Fitted for automatic or controlled thermal disinfection function.
With pocket for temperature gauge.
CR dezincification resistant alloy body **"LOW LEAD"**.
Female connections.
Max. working pressure: 16 bar.

Code	DN	Conn.	Temperature adjustment		
116140	15	Rp 1/2"	35–60 °C	1	10
116150	20	Rp 3/4"	35–60 °C	1	10
116160	25	Rp 1"	35–65 °C	1	–
116170	32	Rp 1 1/4"	35–65 °C	1	–

Insulation
for multifunction thermostatic regulator 116 series.

Code	Use		
CBN116140	1/2" - 3/4"	1	20
CBN116160	1" - 1 1/4"	1	20

116

tech. broch. 01325

Cartridge for thermal disinfection function controlled by an actuator.
For use with 116 series combined with 656. series actuators.

Code		
116000	1	10

116

tech. broch. 01325

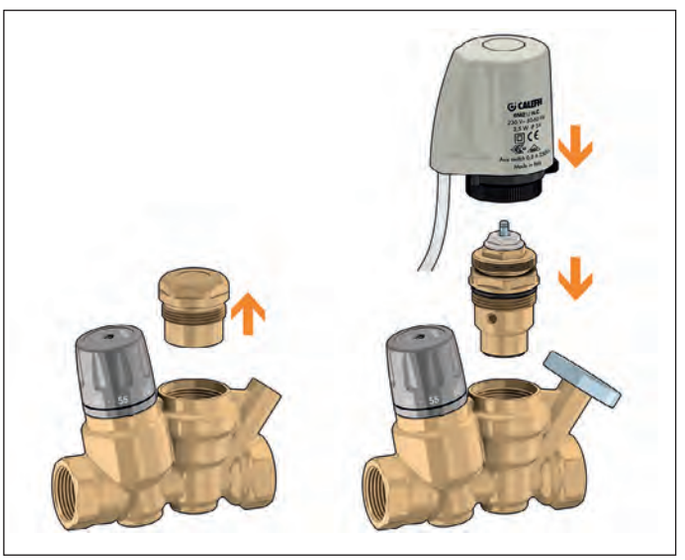
Accessory temperature gauge for thermostatic regulators 116 series.
Temperature gauge scale: 0–80 °C.

Code		
116010	1	20

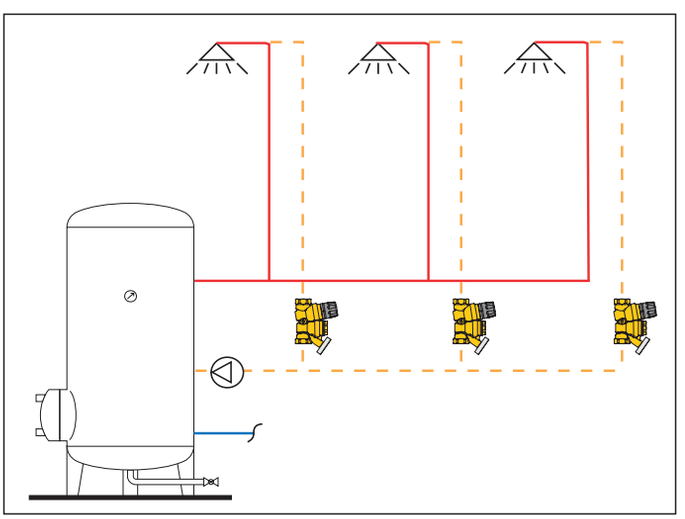
Function

In domestic hot water distribution circuits, to respect modern plant requirements for the prevention of Legionnaires' disease, it is essential to ensure that all sections are kept at the correct temperature. The recirculation network must be balanced, to avoid non-uniform temperature distribution, with cold sections at risk of Legionella proliferation.
The thermostatic regulator, installed on each return branch of the recirculation circuit, automatically maintains the set temperature. This device modulates the medium flow rate in accordance with the water inlet temperature by means of the action of a dedicated internal thermostatic cartridge. When the water temperature approaches the set value, the obturator progressively reduces the passage. The medium flow rate supplied by the recirculation pump is thus distributed to the other network branches, resulting in effective automatic thermal balancing.
If necessary, the regulator is already equipped with a thermal disinfection function, which is useful if the system temperature is to be increased to values over 55–60 °C.
This function can be completely automatic, activated by a dedicated second thermostatic cartridge that trips at 70 °C, or controlled with a thermo-electric actuator.

Cartridge replacement for electrically controlled disinfection



Application diagram of thermostatic regulator 116 series



MULTI-FUNCTION THERMOSTATIC REGULATOR

Operating modes

Here following the regulator's operating modes according to the variation of the water temperature of the circuit it is installed on.

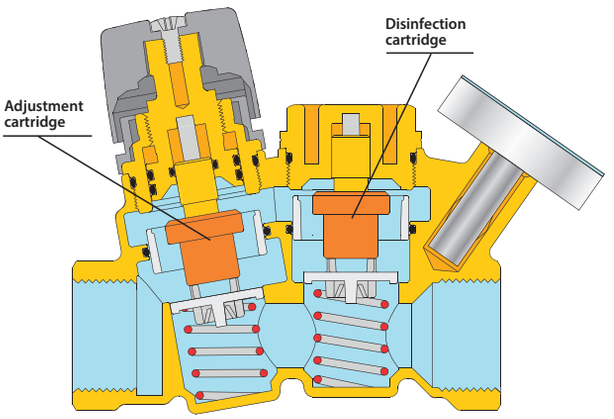
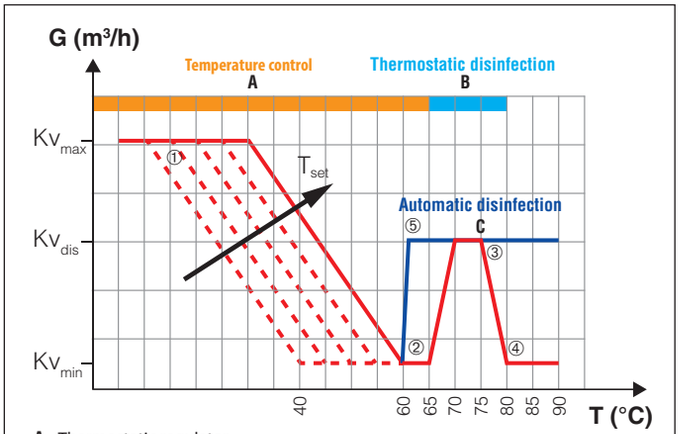


Diagram of thermostatic regulator 116 series

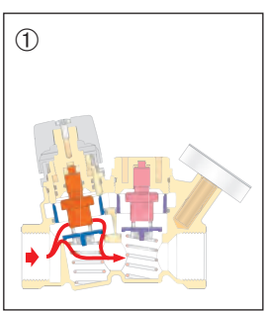


A Thermostatic regulator

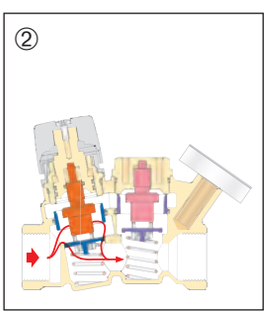
B Thermostatic regulator with automatic thermostatic disinfection function

C Thermostatic regulator with disinfection function controlled by an actuator

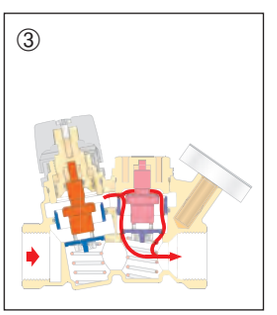
Thermostatic adjustment



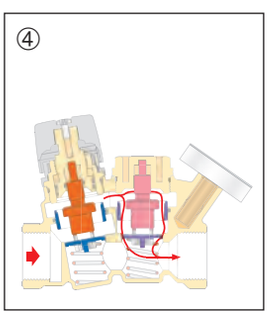
Minimum flow rate



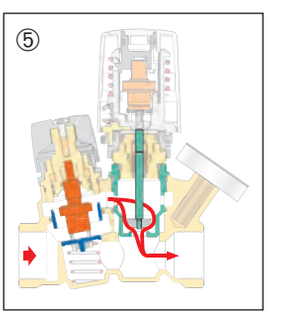
Thermostatic disinfection



Thermal closing



Electrically controlled disinfection



Pb LOW LEAD

116

Thermostatic regulator for domestic hot water recirculation circuits.
Complete with automatic thermostatic thermal disinfection function.
With temperature gauge for circuit temperature check.
CR dezincification resistant alloy body **"LOW LEAD"**.
Female connections.
Max. working pressure: 16 bar.
Disinfection temperature: 70 °C.

WMTS-468
WM-40195

Code	DN	Conn.	Temperature adjustment		
116240 AUS	15	1/2"	35–60 °C	1	–
116250 AUS	20	3/4"	35–60 °C	1	–

Pb LOW LEAD

116

Thermostatic regulator for domestic hot water recirculation circuits.
Fitted for automatic or controlled thermal disinfection function.
With temperature gauge.
CR dezincification resistant alloy body **"LOW LEAD"**.
Female connections.
Max. working pressure: 16 bar.

WMTS-468
WM-40195

Code	DN	Conn.	Temperature adjustment		
116141 AUS	15	1/2"	40–65 °C	1	–
116151 AUS	20	3/4"	40–65 °C	1	–
116140 AUS*	15	1/2"	40–65 °C	1	–
116150 AUS*	20	3/4"	40–65 °C	1	–

*Without temperature gauge

THERMOSTATIC REGULATOR FOR DOMESTIC HOT WATER RECIRCULATION CIRCUITS

116

tech. broch. 01362

Thermostatic regulator for domestic hot water recirculation circuits.
With temperature gauge for circuit temperature check.
CR dezincification resistant alloy body **"LOW LEAD"**.
Female connections.
Max. working pressure: 16 bar.

WMTS-468
WM-40195

Code	DN	Conn.	Temperature adjustment		
116441	15	Rp 1/2"	40–65 °C	1	20
116451	20	Rp 3/4"	40–65 °C	1	20
116451 AUS*	20	Rp 3/4"	40–65 °C	1	20

* With WATERMARK certification

116

tech. broch. 01362

Thermostatic regulator for domestic hot water recirculation circuits.
With pocket for temperature gauge.
CR dezincification resistant alloy body **"LOW LEAD"**.
Female connections.
Max. working pressure: 16 bar.

Code	DN	Conn.	Temperature adjustment		
116440	15	Rp 1/2"	40–65 °C	1	10
116450	20	Rp 3/4"	40–65 °C	1	10

116

tech. broch. 01362

Thermostatic regulator for domestic hot water recirculation circuits.
With pocket for temperature gauge.
CR dezincification resistant alloy body **"LOW LEAD"**.
Compression fittings connections.
Max. working pressure: 16 bar.

Code	DN	Conn.	Temperature adjustment		
116415	15	Ø 15	40–65 °C	1	10
116420	20	Ø 22	40–65 °C	1	10

Insulation
for 1/2" and 3/4" multifunction thermostatic regulator 116 series.

Code	Use		
CBN116440	1/2" - 3/4"	1	20

116

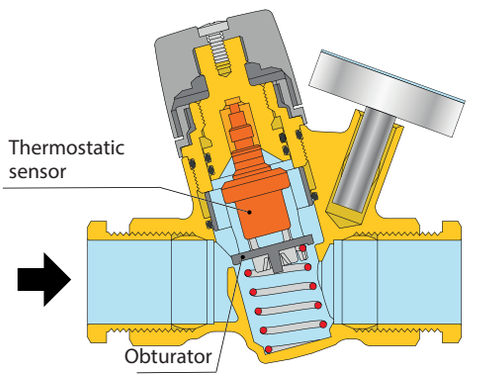
tech. broch. 01325

Accessory temperature gauge
for thermostatic regulators 116 series.
Temperature gauge scale: 0–80 °C.

Code		
116010	1	20

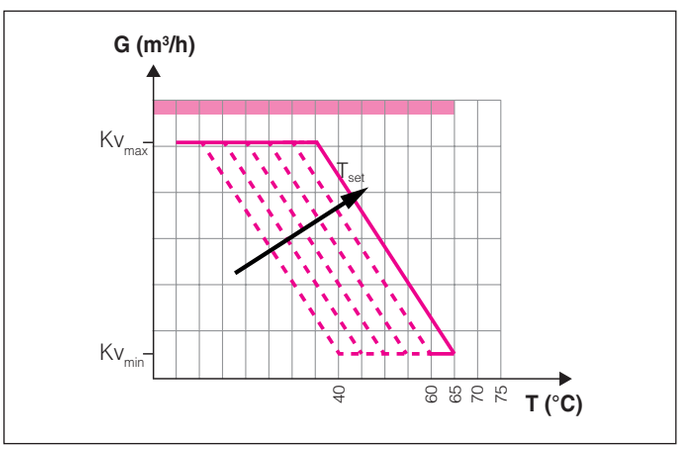
Operating principle

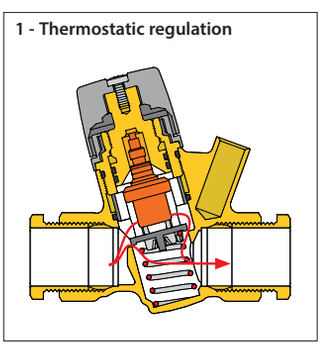
The thermostatic regulator, installed on each branch of the recirculation circuit, automatically maintains the set temperature. This device modulates the medium flow rate in accordance with the water inlet temperature by means of the action of a dedicated internal thermostatic cartridge. When the water temperature approaches the set value, the obturator progressively reduces the passage.
This specific version of the regulator has one single cartridge which allows the adjustment of the set temperature up to 65 °C.
This device can be used in cases where the temperature of the hot water network is constantly distributed at higher values, without the need to perform extra thermal disinfection.

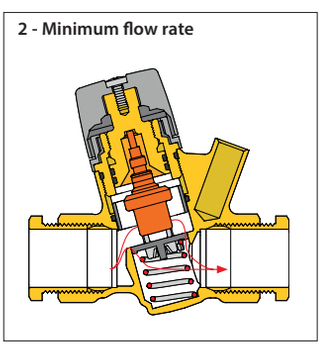


Hydraulic characteristics

The graph shows the variation of the Kv value depending on the device configuration and on the inlet temperature of the domestic water.







MANIFOLDS FOR DOMESTIC WATER SYSTEMS

bim.caleffi.com

Distribution manifolds with individual shut-off valves
Distribution manifolds with main shut-off valves
Unit with main shut-off valves
Distribution manifolds

DISTRIBUTION MANIFOLDS WITH INDIVIDUAL SHUT-OFF VALVES

359

tech. broch. 01371

Domestic water distribution manifolds pre-assembled in boxes with **individual shut-off valves**.
Brass body.
Max. working pressure: 10 bar.
Temperature range: 5–90 °C.
Outlet centre distrance: 35 mm.

Consisting of:
- pair of manifolds with shut-off knobs;
- box for manifolds (270 x 190 x 80 mm) complete with manifold supports and fixing brackets;
- protection cover for installation;
- 2 end fitting plugs with fixing clips.

PATENT PENDING.

Code	Outlets No. cold	hot		
359410★	4	3	1	–
359510★	5	4	1	–

★ CR dezincification resistant alloy body **"LOW LEAD"** available on request with the code extension: 001.

359

tech. broch. 01371

Accessories for manifolds series 359.

Code			
359001	tee with fixing clip	1	–
359002	blind plug with fixing clip	1	–
359003	23 p.1,5 fitting with fixing clip	1	–
359004	1/2" fitting Ø 13 flat seat with fixing clip	1	–
359005	3/4" fitting Ø 18 flat seat with fixing clip	1	–
359006	3/4" fitting Ø 18 Euroconus with fixing clip	1	–
359024	Ø 16x2 pressfitting	1	–
359064	Ø 20x2 pressfitting	1	–
359025	Ø 16x2,25 pressfitting	1	–
359065	Ø 20x2,25 pressfitting	1	–
359066	Ø 20x2,5 pressfitting	1	–
359087	Ø 26x3 pressfitting	1	–

Specifications

Manifolds 359 series are used to control and distribute the medium in domestic water circuits. They are supplied already assembled in a plastic inspection box to facilitate positioning and installation. The manifolds are equipped with shut-off valves with handwheels for each individual circuit, and labels summarising the utilities served.

359

tech. broch. 01371

Recessed door with push-to-open frame.

Code		
359700	1	–

359

tech. broch. 01371

Aesthetic cover plate made of paintable plastic with a RAL 9010 white finish.
Complete with support plate.

Code		
359801	1	–

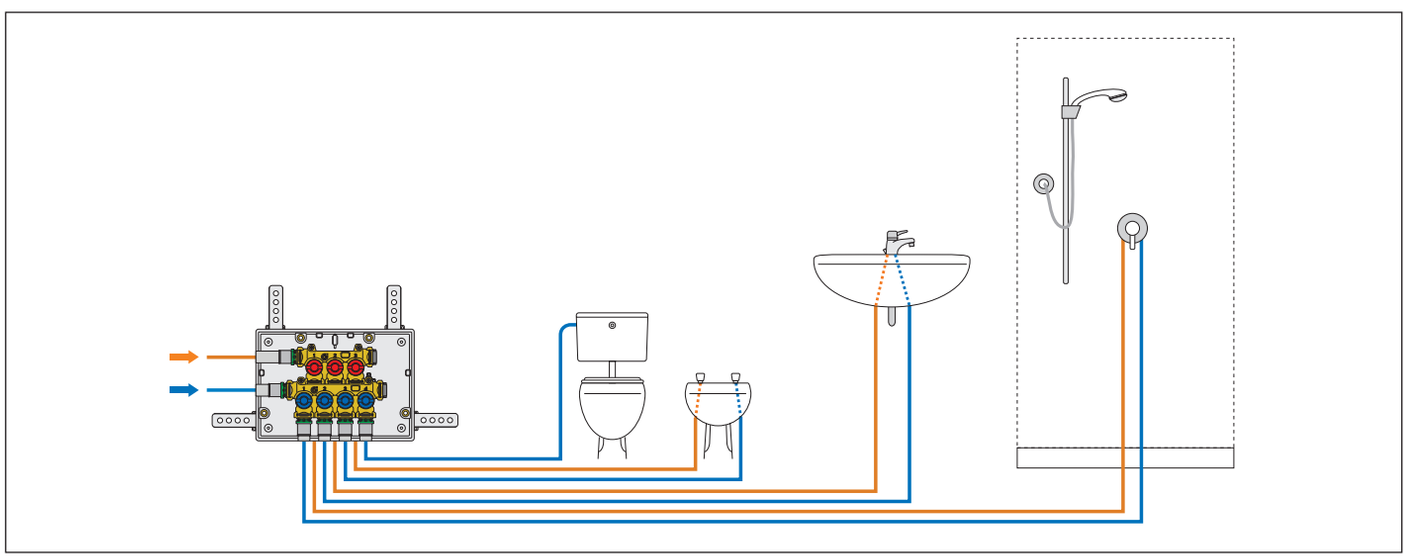
359

tech. broch. 01371

Aesthetic cover plate,
in stainless steel.
Complete with support plate.

Code			
359802	polished finish	1	–
359803	brushed finish	1	–

Application diagram



ACCESSORIES FOR MODULAR MANIFOLDS

359 tech. broch. 01371

Manifold with individual shut-off valves (red knobs).
Can be used as spare parts.

Code	Outlets No.		
359330★	3	1	–
359340★	4	1	–

359 tech. broch. 01371

Manifold with individual shut-off valves (blue knobs).
Can be used as spare parts.

Code	Outlets No.		
359240★	4	1	–
359250★	5	1	–

359 tech. broch. 01371

Brackets with screws for hot water manifold.
Stainless steel body.

Code		
359015	1	–

359 tech. broch. 01371

Brackets with screws for cold water manifold.
Stainless steel body.

Code		
359016	1	–

359 tech. broch. 01371

Long adapter with clip.
Brass body.

Code		
359017★	1	–

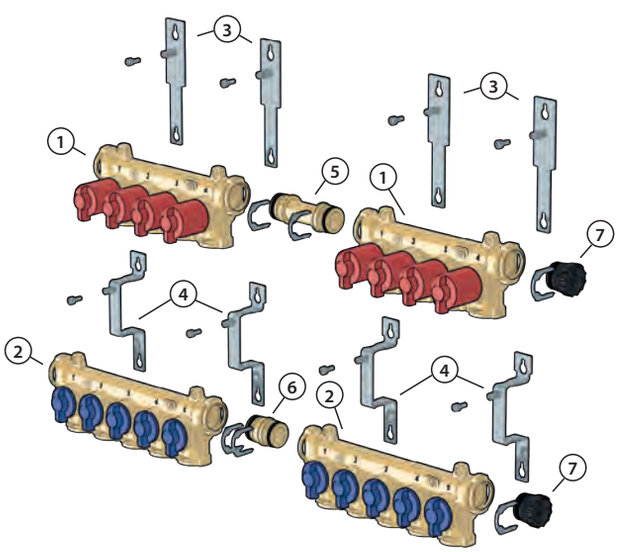
359 tech. broch. 01371

Short adapter with clip.
Brass body.

Code		
359018★	1	–

★ CR dezincification resistant alloy body **"LOW LEAD"** available on request with the code extension: 001.

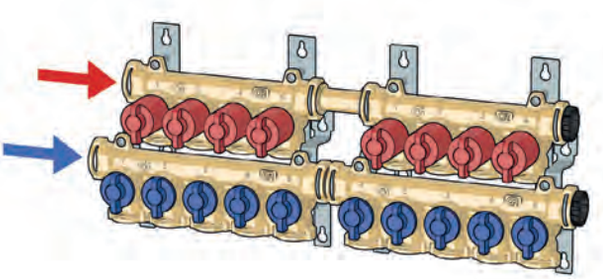
Characteristic components



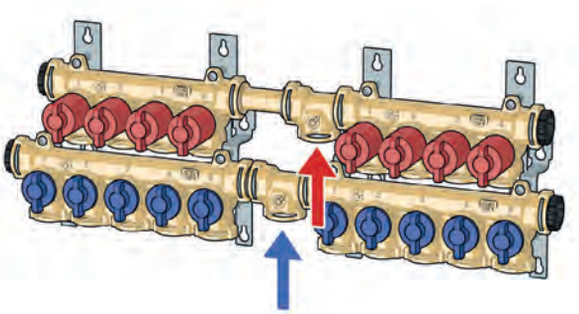
1. Hot water manifold with shut-off valves.
2. Cold water manifold with shut-off valves.
3. Pair of brackets and fixing screws for hot water manifold.
4. Pair of brackets and fixing screws for cold water manifold.
5. Long adapter with clip.
6. Short adapter with clip.
7. Blind plug with fixing clip.

Possible modular manifold configuration

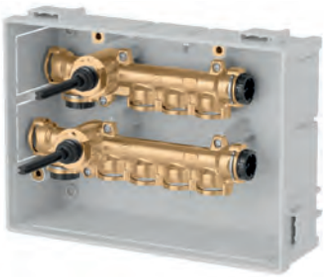
10 + 8 manifold with side inlet



10 + 8 manifold with central inlet



DISTRIBUTION MANIFOLDS WITH MAIN SHUT-OFF VALVES



359

tech. broch. 01371

Domestic water distribution manifolds pre-assembled in boxes with **main shut-off valves**.
Brass body.
Max. working pressure: 10 bar.
Temperature range: 5–90 C.
Outlet centre distrance: 32 mm.

Consisting of:
- pair of manifolds;
- box for manifolds (270 x 190 x 80 mm) complete with manifold supports and fixing brackets;
- cover;
- 4 plugs with fixing clip.

PATENT PENDING.

Code	Outlets No. cold	hot		
359420★	4	3	1	–

★ CR dezincification resistant alloy body **"LOW LEAD"** available on request with the code extension: 001.

359

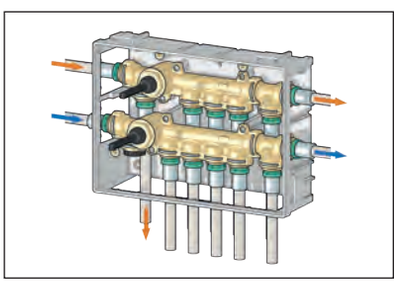
tech. broch. 01371

Accessories for manifolds series 359.

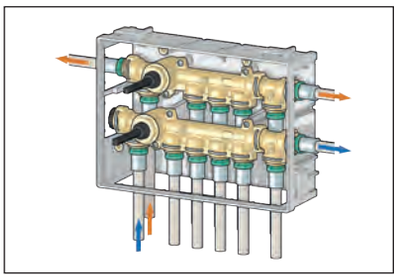
Code			
359001★	tee with fixing clip	1	–
359002	blind plug with fixing clip	1	–
359024	Ø 16x2 pressfitting	1	–
359064	Ø 20x2 pressfitting	1	–
359025	Ø 16x2,25 pressfitting	1	–
359065	Ø 20x2,25 pressfitting	1	–
359066	Ø 20x2,5 pressfitting	1	–
359087	Ø 26x3 pressfitting	1	–

Possible manifold configurations

Installation with side inlet and recirculation circuit at the bottom.
Tee for additional outlet and through outlet.



Installation with inlet at the bottom and recirculation at the side.
Tee for additional outlet and through outlet.



Specifications

Manifolds 359 series are used to control and distribute the medium in domestic water circuits. They are supplied already assembled in a plastic inspection box to facilitate positioning and installation. The manifolds have main shut-off valves on the hot and cold inlets.

359

tech. broch. 01371

Plate with hidden knobs.
High chrome finish.

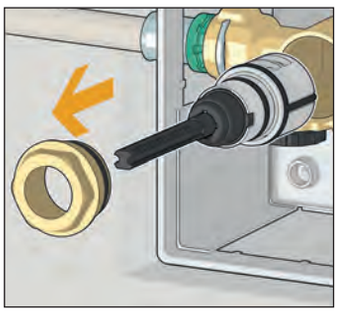
Code		
359902	1	–

Push-to-open knobs

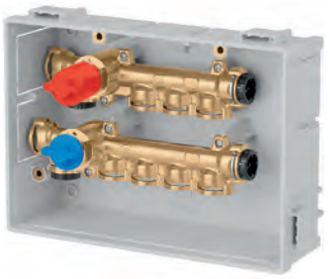
The push-to-open system allows the knob to be hidden, so that the look of the room is not compromised.
Just press it to extract it and open or close the shut-off valves.

Main shut-off cartridge

The special cartridge designed to shut off the 359 series manifold has a double sealing gasket to provide high long-term operating reliability.
The materials used in its construction offer a low opening/closing torque and significantly reduce jamming problems due to limescale.
When required, the cartridge can be replaced simply by extracting it from the front of the manifold and inserting the replacement one.



INSPECTABLE DISTRIBUTION MANIFOLDS WITH MAIN SHUT-OFF VALVES



359 tech. broch. 01371

Domestic water distribution manifolds pre-assembled in boxes with **main shut-off valves, inspectable**.
Brass body.
Max. working pressure: 10 bar.
Temperature range: 5–90 C.
Outlet centre distrance: 32 mm.

Consisting of:
- pair of manifolds;
- box for manifolds (270 x 190 x 80 mm) complete with manifold supports and fixing brackets;
- cover;
- 4 plugs with fixing clip.

PATENT PENDING.

Code	Outlets No. cold	hot		
359490★	4	3	1	–

★ CR dezincification resistant alloy body "**LOW LEAD**" available on request with the code extension: 001.

359 tech. broch. 01371

Accessories for manifolds series 359.

Code			
359001★	tee with fixing clip	1	–
359002	blind plug with fixing clip	1	–
359003	23 p.1,5 fitting with fixing clip	1	–
359004	1/2" fitting Ø 13 flat seat with fixing clip	1	–
359005	3/4" fitting Ø 18 flat seat with fixing clip	1	–
359006	3/4" fitting Ø 18 Euroconus with fixing clip	1	–
359024	Ø 16x2 pressfitting	1	–
359064	Ø 20x2 pressfitting	1	–
359025	Ø 16x2,25 pressfitting	1	–
359065	Ø 20x2,25 pressfitting	1	–
359066	Ø 20x2,5 pressfitting	1	–
359087	Ø 26x3 pressfitting	1	–

359 tech. broch. 01371

Aesthetic cover plate made of paintable plastic with a RAL 9010 white finish.
Complete with support plate.

Code		
359801	1	–

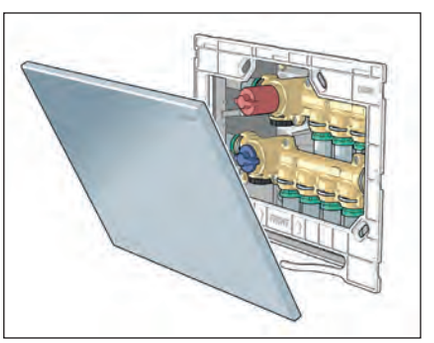
359 tech. broch. 01371

Aesthetic cover plate,
in stainless steel.
Complete with support plate.

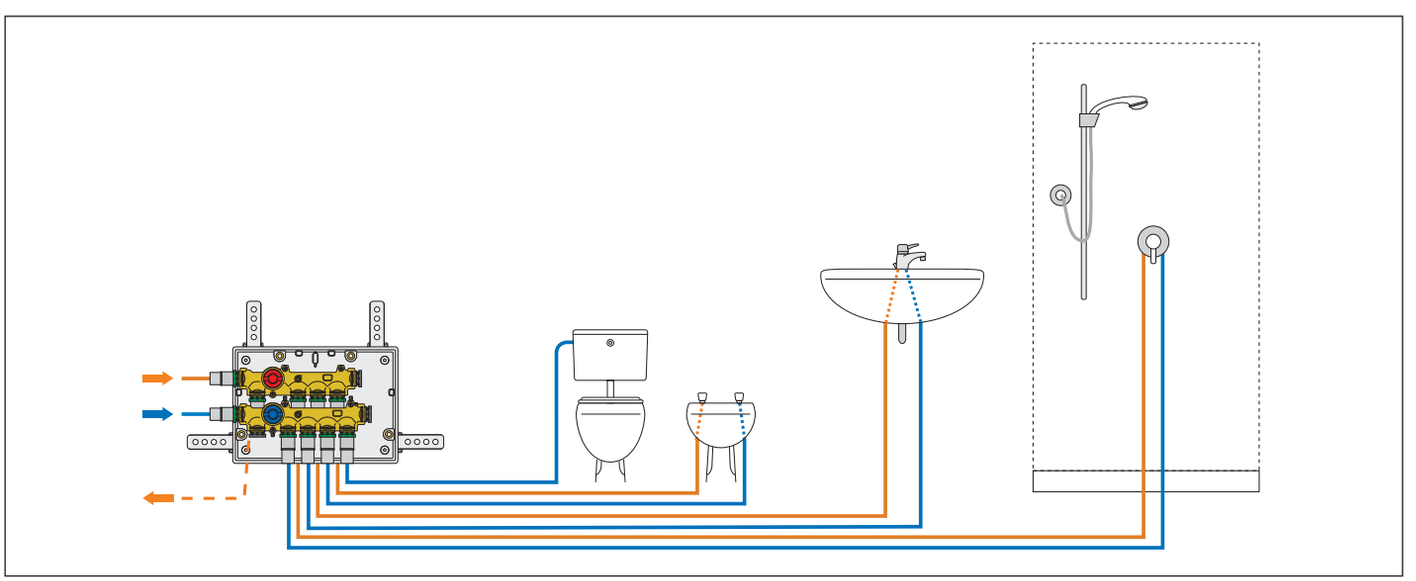
Code			
359802	polished finish	1	–
359803	brushed finish	1	–

Inspectability

The inspectable box allows full access to the distribution manifold.
When the cover plate is removed, it is possible to adjust the shut-off knobs or to intervene for any maintenance operations required.
Both compression and press-fittings can be used thanks to this feature.



Application diagram



UNIT WITH MAIN SHUT-OFF VALVES

359

tech. broch. 01371

Unit with **main shut-off valves**.
Brass body.
Max. working pressure: 10 bar.
Temperature range: 5–90 °C.

Consisting of:
- valves unit;
- box for manifolds (190 x 190 x 80 mm) complete with manifold supports and fixing brackets;
- cover;
- 4 plugs with fixing clip.

PATENT PENDING

Code			
359100★		1	–

★ CR dezincification resistant alloy body "**LOW LEAD**" available on request with the code extension: 001.

359

tech. broch. 01371

Accessories for manifolds 359 series.

Code			
359001★	tee with fixing clip	1	–
359002	blind plug with fixing clip	1	–
359024	Ø 16x2 pressfitting	1	–
359064	Ø 20x2 pressfitting	1	–
359025	Ø 16x2,25 pressfitting	1	–
359065	Ø 20x2,25 pressfitting	1	–
359066	Ø 20x2,5 pressfitting	1	–
359087	Ø 26x3 pressfitting	1	–

Specifications

The 359 series units with main shut-off valves are used to control and shut off the medium in domestic water circuits. They are supplied already assembled in a plastic inspection box to facilitate positioning and installation. The units have main shut-off valves on the inlets.

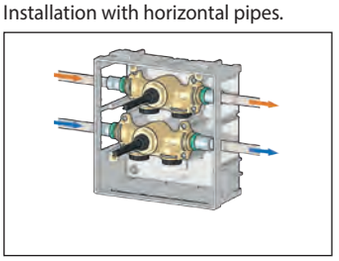
359

Plate with hidden knobs.
High chrome finish.

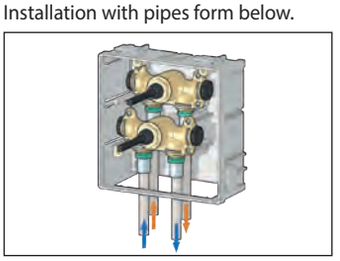
Code		
359902	1	–

Possible manifold configurations

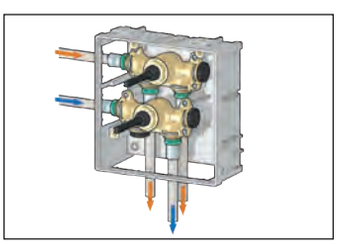
Installation with horizontal pipes.



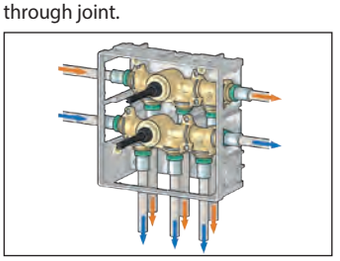
Installation with pipes form below.



L-shaped installation with recirculation circuit.

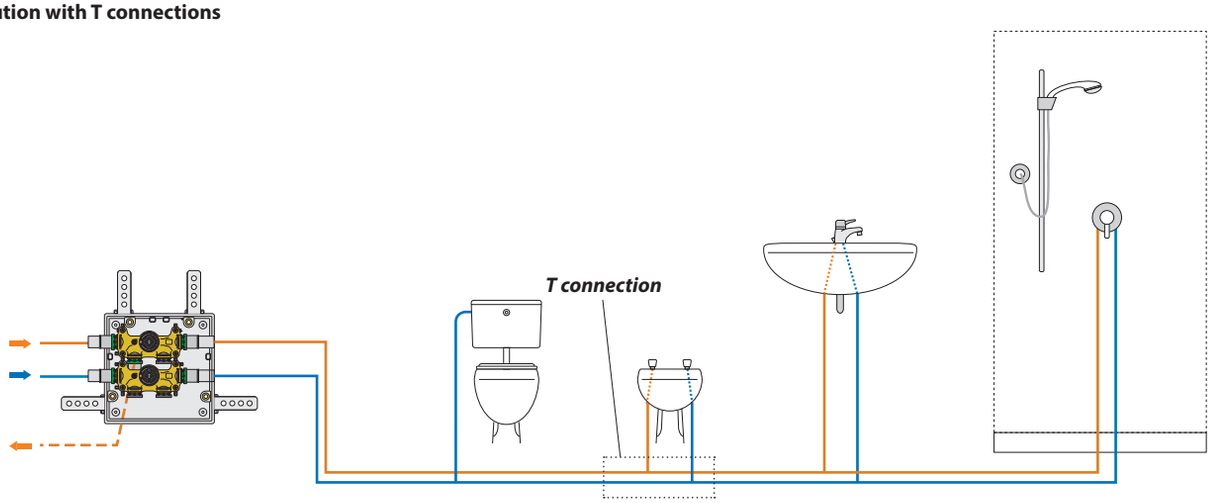


L-shaped installation with hot and cold water recirculation extension tee and through joint.



Application diagram

Distribution with T connections



INSPECTABLE UNIT WITH MAIN SHUT-OFF VALVES

359

tech. broch. 01371

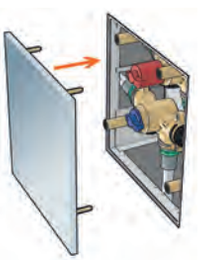
Unit with **main shut-off valves, inspectable**.
Brass body.
Max. working pressure: 10 bar.
Temperature range: 5–90 °C.

Consisting of:
- valves unit;
- box for manifolds (190 x 190 x 80 mm) complete with manifold supports and fixing brackets;
- cover;
- 4 plugs with fixing clip.

PATENT PENDING

Code			
359190★		1	–

★ CR dezincification resistant alloy body "**LOW LEAD**" available on request with the code extension: 001.



Aesthetic cover plate

The stainless steel cover plate allows easy inspection of the entire unit.
Once removed, it allows access to the opening/closing knobs.
It is installed simply by inserting the plate pins into the cylindrical guides for the box.

359

tech. broch. 01371

Aesthetic cover plate, in stainless steel.

Code			
359892	polish finish	1	–
359893	brushed finish	1	–

359

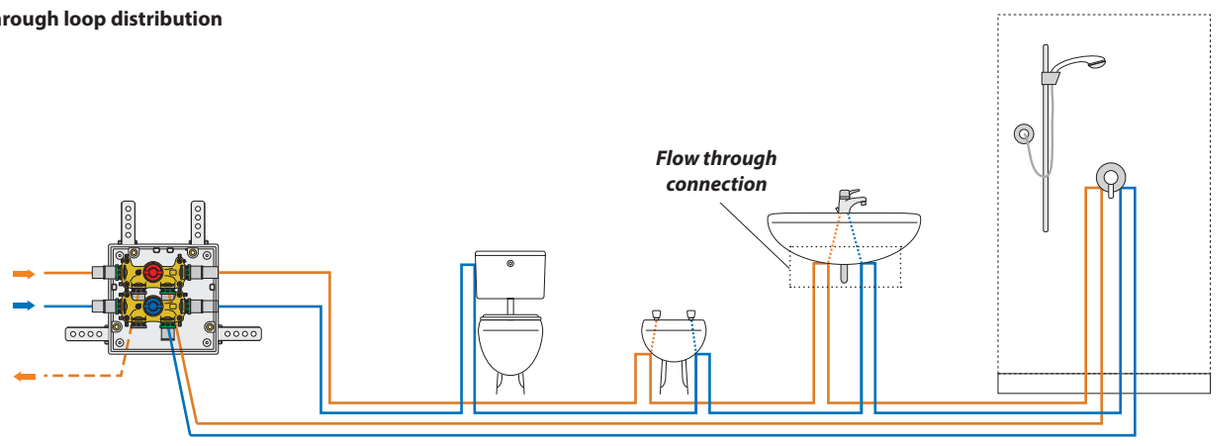
tech. broch. 01371

Accessories for manifolds series 359.

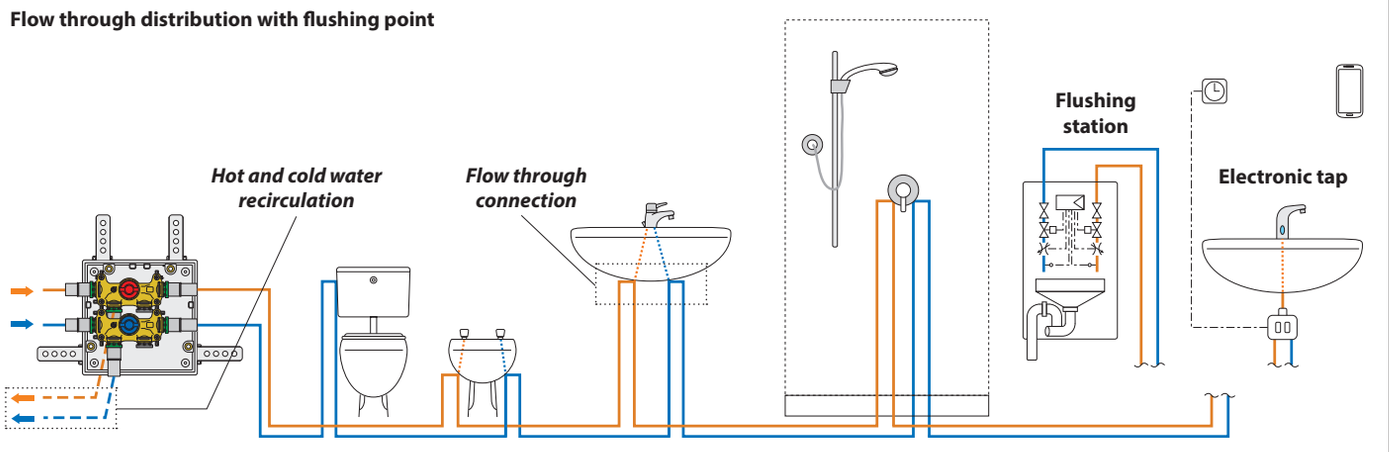
Code			
359001★	tee with fixing clip	1	–
359002	blind plug with fixing clip	1	–
359003	23 p.1,5 fitting with fixing clip	1	–
359004	1/2" fitting Ø 13 flat seat with fixing clip	1	–
359005	3/4" fitting Ø 18 flat seat with fixing clip	1	–
359006	3/4" fitting Ø 18 Euroconus with fixing clip	1	–
359024	Ø 16x2 pressfitting	1	–
359064	Ø 20x2 pressfitting	1	–
359025	Ø 16x2,25 pressfitting	1	–
359065	Ø 20x2,25 pressfitting	1	–
359066	Ø 20x2,5 pressfitting	1	–
359087	Ø 26x3 pressfitting	1	–

Application diagrams

Flow through loop distribution



Flow through distribution with flushing point



PRESS FITTING FOR MANIFOLDS 359 SERIES

359

Multi-crimp tool pressfittings for multilayer pipes with fixing clips.
CR dezincification resistant alloy body "**LOW LEAD**".
Max. working pressure: 10 bar.
Temperature range: 5–90 °C.

Can be used with H - TH - U profile crimp tool.

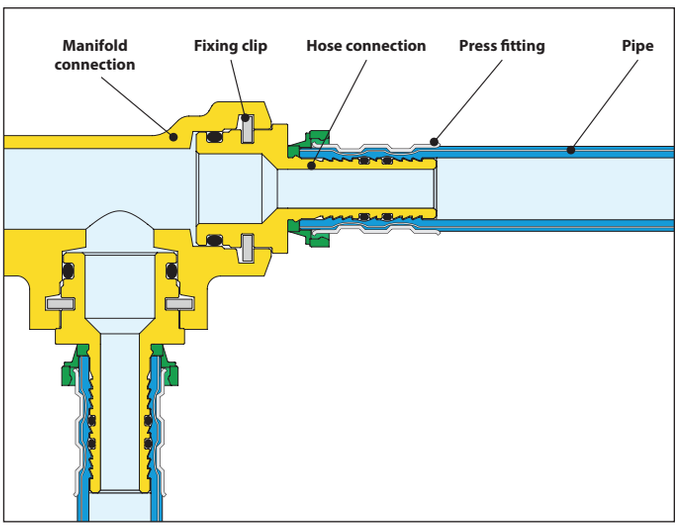
Code			
359024	Ø 16x2 pressfitting	1	–
359025	Ø 16x2,25 pressfitting	1	–
359064	Ø 20x2 pressfitting	1	–
359065	Ø 20x2,25 pressfitting	1	–
359066	Ø 20x2,5 pressfitting	1	–
359087*	Ø 26x3 pressfitting	1	–

* Can be used only with H - TH profile crimp tool.

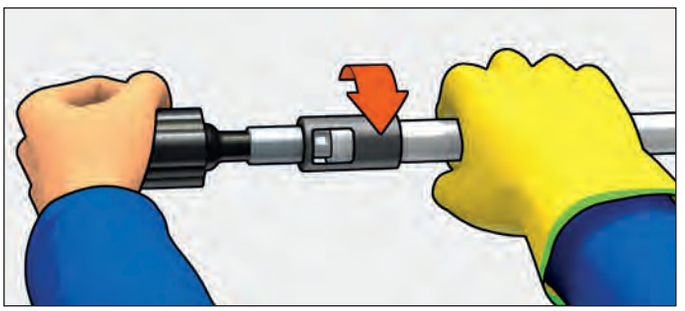
679

Calibrator and handle to adjust multilayer pipes diameter before use with fittings 359 series.

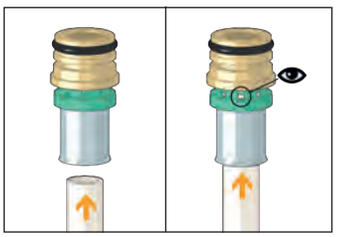
Code			
679002	calibrator Ø 16x2	1	–
679003	calibrator Ø 16x2,25	1	–
679006	calibrator Ø 20x2	1	–
679007	calibrator Ø 20x2,25	1	–
679008	calibrator Ø 20x2,5	1	–
679010	calibrator Ø 26x3	1	–
679009	handle for calibrator	1	–



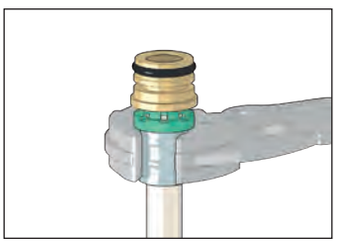
Multilayer pipe calibration and installation of fitting 359 series



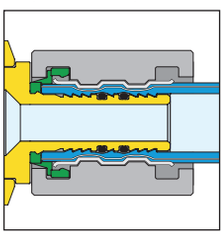
After calibrating the pipe with the calibrator, fit the pipe onto the fitting, taking care to insert it as far as it will go.
Check the pipe position through the peepholes.



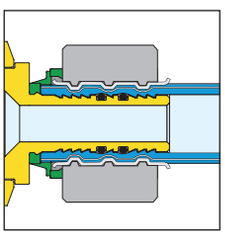
Crimp the pipe with the crimp tool until it clicks automatically.



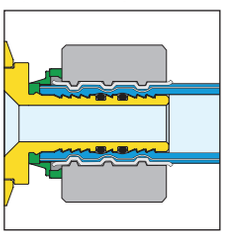
TH profile crimp tool



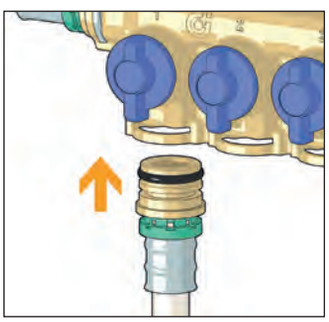
U profile crimp tool



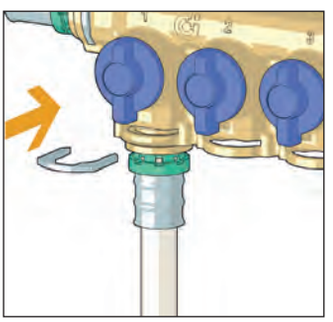
H profile crimp tool



Insert the pipe complete with fitting into the seat on the manifold.



Fasten it with the dedicated fixing clip.



SPARE PARTS FOR MANIFOLDS 359 SERIES

359
Manifold with main shut-off valve.

Code	Outlets No.		
359630★	3	1	–
359640★	4	1	–

359
Inspectable manifold with main shut-off valve (blue knob).

Code	Outlets No.		
359290★	4	1	–

359
Inspectable manifold with main shut-off valve (red knob).

Code	Outlets No.		
359390★	3	1	–

359
Unit with main shut-off valve.

Code			
359101★		1	–

359
Inspectable unit with main shut-off valve (blue knob).

Code			
359192★		1	–

359
Inspectable unit with main shut-off valve (red knob).

Code			
359193★		1	–

★ CR dezincification resistant alloy body "**LOW LEAD**" available on request with the code extension: 001.

359
Fixing clip.

Code			
359007		1	–

Individual shut-off valves cartridge.

Code			
F0001305		1	–

Main shut-off valves cartridge.

Code			
F0001306		1	–

Main shut-off valves cartridge (inspectable version).

Code			
F0001721		1	–

359
Spare protection cover.

Code			
359010		1	–

359
Box bottom.

Code			
359011	spare bottom for 3+4 individual shut-off valves	1	–
359012	spare bottom for 4+5 individual shut-off valves	1	–
359013	spare bottom for 3+4 main shut-off valves	1	–
359014	spare bottom for main shut-off valves	1	–

ACCESSORIES FOR MANIFOLDS 359 SERIES

359

Tee with fixing clip.
Brass body.
Max. working pressure: 10 bar.
Temperature range: 5–90 °C.

★ CR dezincification resistant alloy body "**LOW LEAD**" available on request with the code extension: 001.

Code			
359001★		1	–

359

Blind plug with fixing clip.
Technopolymer body.

Code			
359002		1	–

359

Fitting with fixing clip.
CR dezincification resistant alloy body "**LOW LEAD**".
Max. working pressure: 10 bar.
Temperature range: 5–90 °C.

Code			
359003	23 p. 1,5 fitting with fixing clip	1	–
359004	1/2" fitting Ø 13 flat seat with fixing clip	1	–
359005	3/4" fitting Ø 18 flat seat with fixing clip	1	–
359006	3/4" fitting Ø 18 Euroconus with fixing clip	1	–

PRE-ASSEMBLED DISTRIBUTION MANIFOLDS

354

Modular single distribution manifold with shut-off valve.
Brass body.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.
Outlet centre distance: 35 mm.
Outlet male connections.
With flat seat.
For press-fittings.

Code	Connections	Outlets No.	Outlets		
354252	3/4"	x 2	1/2" M - Ø 13	2	30
354253	3/4"	x 3	1/2" M - Ø 13	2	20
354254	3/4"	x 4	1/2" M - Ø 13	2	10
354255	3/4"	x 5	1/2" M - Ø 13	2	10

354

Modular single distribution manifold with shut-off valve.
CR dezincification resistant alloy body.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.
Outlet centre distance: 35 mm.

Code	Connections	Outlets No.	Outlets		
354052	3/4"	x 2	23 p.1,5 M	5	20
354053	3/4"	x 3	23 p.1,5 M	5	20
354054	3/4"	x 4	23 p.1,5 M	5	20
354055	3/4"	x 5	23 p.1,5 M	5	20

360

Pair of stainless steel mounting brackets for manifolds 354 series.
For inspection box 360 and 362 series.

Code			
360210		1	10

3642

End fitting.
For distribution manifolds 360 series.

Code			
364254	3/4" M x 1/2" F	2	–

3641

Plug.
For distribution manifolds 360 series.

Code			
364150	3/4" M	2	–

5991

End fitting.
For distribution manifolds 360 series.

Code			
599154	3/4" F x 1/2" F	2	–

5993

Plug.
For distribution manifolds 360 series.

Code			
599350	3/4" F	2	10

COMPONENTS FOR DOMESTIC WATER SYSTEMS

bim.caleffi.com

Expansion groups for hot water storage heaters
Hydraulic safety groups for hot water storage heaters
Safety group for hot water storage heaters
Expansion vessels
Water hammer arresters
Temperature and pressure relief valves - flow limiter
Housing and strainer cartridges
Ball valve with built-in check valve
Single and double check valves
Antifreeze safety device

EXPANSION GROUPS FOR HOT WATER STORAGE HEATERS

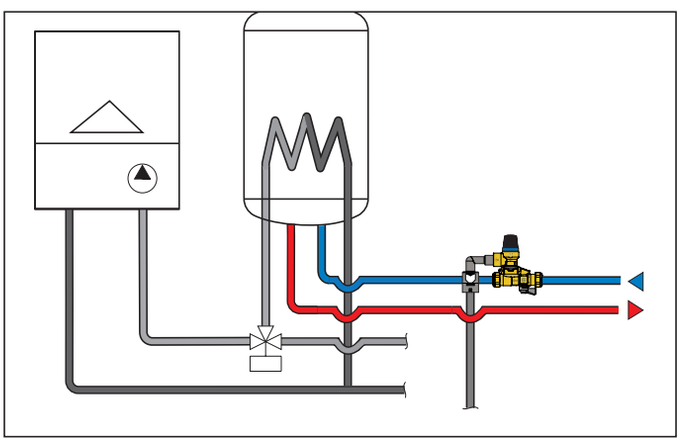
528

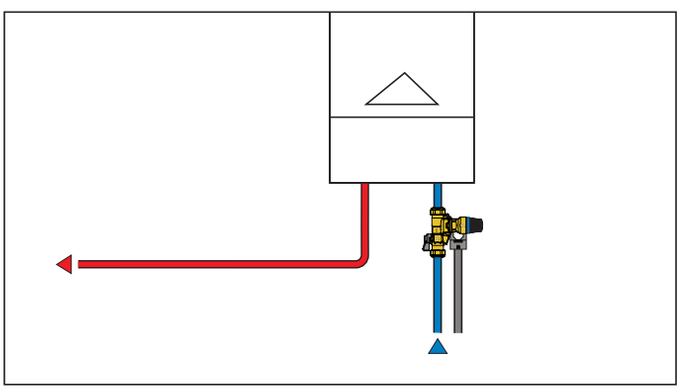
Expansion group for hot water storage heaters, for horizontal or vertical installation.
Brass body and expansion relief valve.
With shut-off valve and controllable check valve.
Max. working pressure: 10 bar.
Max. working temperature: 40 °C.
Settings: 7, 8, 10 bar.
Certified to EN 1488.

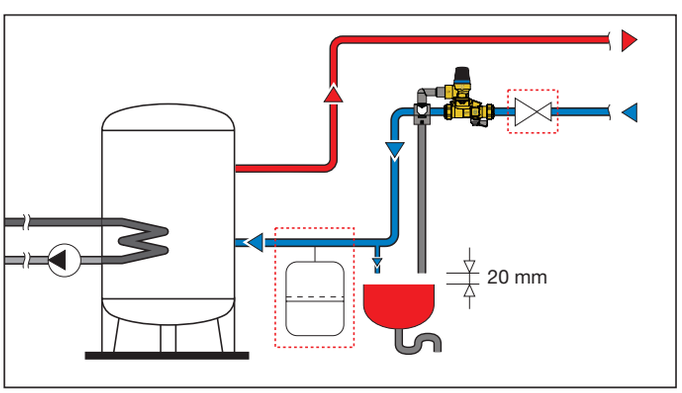
BELGAQUA 1.59/20511 kiwa

Code		Expansion relief valve		
528518	Ø 15	8 bar	1	20
528547	1/2″	7 bar	1	20
528548	1/2″	8 bar	1	20
528540	1/2″	10 bar	1	20

Application diagram 528 series

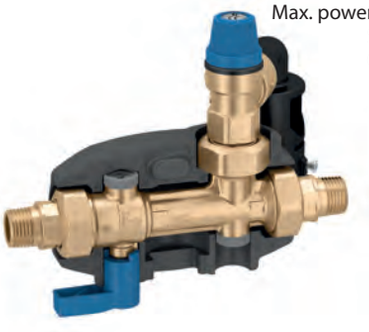






5280 SICAL®

Expansion group for hot water storage heaters, for horizontal or vertical installation.
Brass body and expansion relief valve.
With shut-off cock and controllable check valve.
With insulation.
Max. working pressure: 10 bar.
Max. working temperature: 40 °C.
Max. volume of domestic water storage: 200 l.
Max. power of domestic water storage: 75 kW.
Settings: 6, 8, 10 bar.
Certified to EN 1488.



Code		Expansion relief valve		
528046	1/2″ M	6 bar	1	5
528048	1/2″ M	8 bar	1	5
528041	1/2″ M	10 bar	1	5
528056	3/4″ M	6 bar	1	5
528058	3/4″ M	8 bar	1	5
528051	3/4″ M	10 bar	1	5

5281 SICAL®

Expansion group for hot water storage heaters, for horizontal or vertical installation.
Brass body and expansion relief valve.
With shut-off cock and controllable check valve.
With insulation.
Max. working pressure: 10 bar.
Max. working temperature: 40 °C.
Max. volume of domestic water storage: 1000 l.
Max. power of domestic water storage: 150 kW.
Settings: 6, 8, 10 bar.
Certified to EN 1488.

Code		Expansion relief valve		
528156	3/4″ M	6 bar	1	5
528158	3/4″ M	8 bar	1	5
528151	3/4″ M	10 bar	1	5
528166	1″ M	6 bar	1	5
528168	1″ M	8 bar	1	5
528161	1″ M	10 bar	1	5

HYDRAULIC SAFETY GROUPS FOR HOT WATER STORAGE HEATERS

5261

tech. broch. 01019

Hydraulic safety group
for hot water storage heaters,
with shut-off valve and
controllable check valve.
Brass body. Chrome plated.
Max. working pressure: 10 bar.
Max. working temperature: 120 °C.
Setting: 7 bar.
Max. power rating: 1/2" - 4 kW,
3/4" - 10 kW.
Certified to EN 1487.

Blue cap-with stainless steel seat.

Code			
526142	1/2"	1	30
526152	3/4"	1	30

Red cap-standard seat

Code			
526140	1/2"	1	30
526150	3/4"	1	30

319

tech. broch. 01019

Plastic discharge tundish
for safety groups 5261 series.

Code			
319601	1"	1	25

5261

tech. broch. 01019

Hydraulic safety group
for hot water storage heaters,
with shut-off valve and
controllable check valve.
For horizontal installation.
Brass body. Chrome plated.
Max. working pressure: 10 bar.
Max. working temperature: 120 °C.
Setting: 7 bar.
Max. power rating: 3/4" - 10 kW,
1" - 18 kW.
Certified to EN 1487.

Blue cap-with stainless steel seat.

Code			
526153	3/4"	1	10
526163*	1" yellow brass body	1	10

* Without HY mark.

Red cap-standard seat

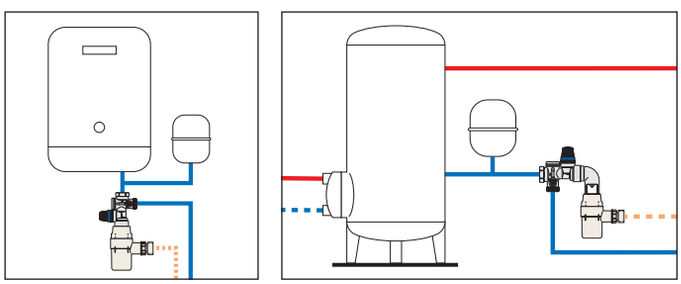
Code			
526151	3/4"	1	10

6509

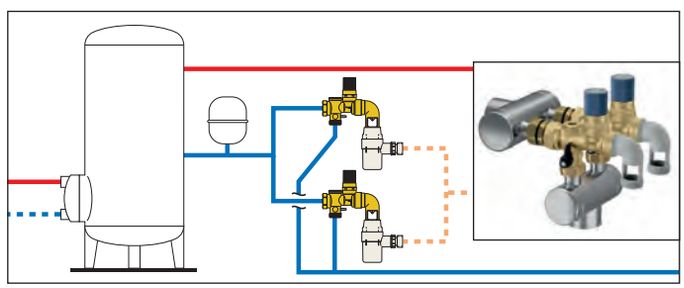
Connection kit
for unit code 526163.

Code			
650972	1 1/4" F x 1" M	1	25

Application diagram of safety group 5261 series



Application diagram of kit code 650972 with unit code 526163



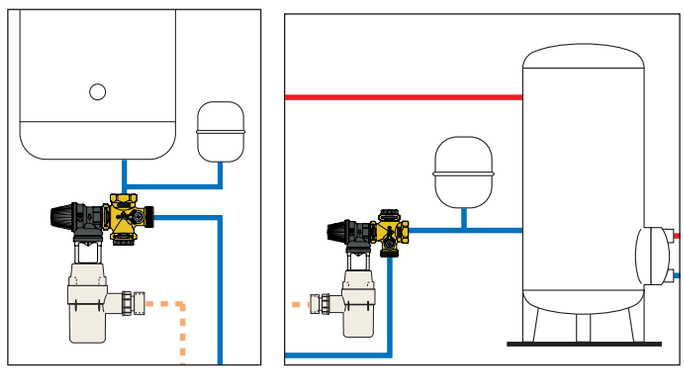
SAFETY GROUP FOR HOT WATER STORAGE HEATERS

5265

Safety group for hot water storage heaters,
with shut-off valve and check valve.
Brass safety group body.
PPSU safety relief valve body.
Max. working pressure: 10 bar.
Max. working temperature: 120 °C.
Safety relief valve opening pressure: 7 bar.
Max. power rating: 10 kW
Certified to EN 1487.

Code			
526554	DN 20 (3/4")	1	30

Application diagram safety group 5265 series



TEMPERATURE AND PRESSURE RELIEF VALVES

309

tech. broch. 01130

Temperature and pressure relief valve.
CR dezincification resistant alloy body.
For domestic water system, to protect the hot water storage.
Setting temperature: 90 °C.
Discharge rating: 1/2" - 3/4" x Ø 15: 10 kW.
3/4" x Ø 22: 25 kW.
Settings: 3 - 4 - 6 - 7 - 10 bar.
Settings certified to EN 1490: 4 - 7 - 10 bar.

CE 2797 WRAS APPROVED PRODUCT CERTIFICATION MARK

Code			Probe length (mm)		
309430	1/2" M x Ø 15	3 bar	100	1	20
309440	1/2" M x Ø 15	4 bar	100	1	20
309460	1/2" M x Ø 15	6 bar	100	1	20
309470	1/2" M x Ø 15	7 bar	100	1	20
309400	1/2" M x Ø 15	10 bar	100	1	20
309542	3/4" M x Ø 15	4 bar	100	1	20
309530	3/4" M x Ø 22	3 bar	100	1	20
309560	3/4" M x Ø 22	6 bar	100	1	20
309570	3/4" M x Ø 22	7 bar	100	1	20
309500	3/4" M x Ø 22	10 bar	100	1	20
309435	1/2" M x Ø 15	3 bar	200	1	20
309445	1/2" M x Ø 15	4 bar	200	1	20
309465	1/2" M x Ø 15	6 bar	200	1	20
309475	1/2" M x Ø 15	7 bar	200	1	20
309405	1/2" M x Ø 15	10 bar	200	1	20
309547	3/4" M x Ø 15	4 bar	200	1	20
309535	3/4" M x Ø 22	3 bar	200	1	20
309565	3/4" M x Ø 22	6 bar	200	1	20
309575	3/4" M x Ø 22	7 bar	200	1	20
309505	3/4" M x Ø 22	10 bar	200	1	20

309

Temperature and pressure relief valve.
CR dezincification resistant alloy body.
For domestic water system, to protect the hot water storage.
Set temperature: 95 °C.
Discharge rating: 25 kW.
Setting: 6 bar.
For systems with nominal pressure of 400 kPa.

SABS APPROVED SANS 198

Code		Probe length (mm)		
309563	3/4" M x Ø 22	100	1	20

FLOW LIMITER

534

Flow limiter.
Brass body.
Chrome plated.
1/2" connection.
Max. working pressure: 12 bar.
Max. working temperature: 80 °C.
Pressure range: 1–10 bar.

● **Key to code**
flow direction M ⇨ F = **1**
flow direction F ⇨ M = **2**

Code		Accuracy (%)		
534•02	2 l/min olive green	±30	1	–
534•04	4 l/min grey	±15	1	–
534•05	5 l/min yellow	±15	1	–
534•06	6 l/min black	±10	1	–
534•08	8 l/min white	±10	1	–
534•10	10 l/min light blue	±10	1	–
534•12	12 l/min red	±10	1	–
534•16	16 l/min blue	±10	1	–
534•18	18 l/min purple	±10	1	–

EXPANSION VESSELS

5557

tech. broch. 01079

Welded expansion vessel,
for hot water systems, EC certification.
Bladder membrane.
Max. working pressure: 10 bar.
System working temperature range: -10–100 °C.
Membrane working temperature range: -10–100 °C.
Conformity to EN 13831 standard.

CE 1370

Code	Litres	Conn.	Precharge (bar)		
555702	2	1/2″	2,5	4	–
555705	5	3/4″	2,5	1	–
555708	8	3/4″	2,5	1	–

For bigger capacity see page 288

HOUSING AND STRAINER CARTRIDGES

5370

tech. broch. 01028

Housing for strainer cartridges
of standard nominal size 10″.
Brass body,
transparent plastic housing.
Max. working pressure: 16 bar.
Temperature range: 5–40 °C.

Code			
537050	3/4″	1	–
537060	1″	1	–

5370

tech. broch. 01028

Strainer cartridges
for housing 5370 series.
Standard nominal size 10″.
Temperature range: 5–40 °C.
Max. Δp: 3 bar.
Characteristics:
537004 - nylon washable mesh - 60 µm,
537005 - stainless steel mesh - 50 µm.

Code		
537004	1	–
537005	1	–

WATER HAMMER ARRESTERS

525 ANTISHOCK

tech. broch. 01020

Water hammer arrester.
Brass body.
Chrome plated.
Max. working pressure: 10 bar.
Max. working temperature: 90 °C.
PTFE seal on thread.

WRAS APPROVED PRODUCT CERTIFICATION MARK

Code			
525040*	1/2″	1	25
525041	1/2″ yellow brass body	1	25

** Certified WRAS only*

525 ANTISHOCK

tech. broch. 01020

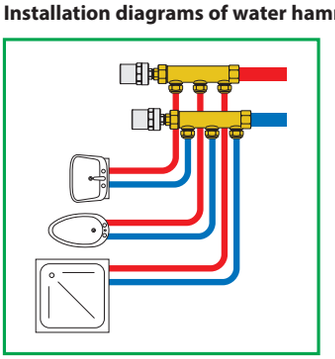
Water hammer arrester
for fitting under sinks, wash-hand basins and washing machine (3/4″).
Brass body.
Chrome plated.
Max. working pressure: 10 bar.
Max. working temperature: 90 °C.

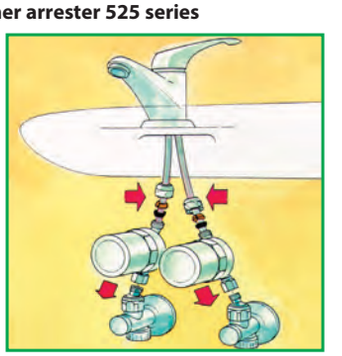
WRAS APPROVED PRODUCT CERTIFICATION MARK

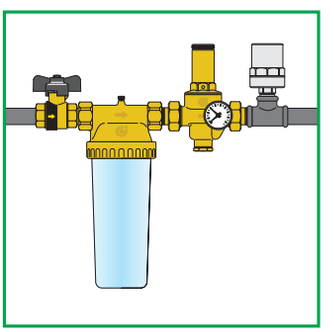
Code			
525130*	3/8″ F nut x 3/8″ M	1	50
525131	3/8″ F nut x 3/8″ M yellow brass body	1	50
525150*	3/4″ F nut x 3/4″ M	1	25
525151	3/4″ F nut x 3/4″ M yellow brass body	1	25

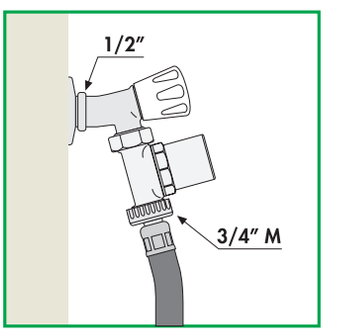
** Certified WRAS only*

Installation diagrams of water hammer arrester 525 series









BALL VALVE WITH BUILT-IN CHECK VALVE

3230 BALLSTOP

tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Female connections.
Butterfly handle.
Max. working pressure: 16 bar.
Temperature range: 5–90 °C.

Code			
323040	1/2"	10	–
323050	3/4"	10	–
323062	1"	10	–

333 BALLSTOP

tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Female - nut connection.
Drilled tamper-proof safety nut.
Butterfly handle.
Max. working pressure: 16 bar.
Temperature range: 5–90 °C.

Code			
333400	1/2" F x nut 3/4" F	10	–
333500	3/4" F x nut 3/4" F	10	–

3230 BALLSTOP

tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Female connections.
Lever handle.
Max. working pressure: 16 bar.
Temperature range: 5–90 °C.

Code			
323060	1"	4	–
323070	1 1/4"	4	–
323080	1 1/2"	2	–
323090	2"	1	–

334 BALLSTOP

tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Male - nut connection.
Drilled tamper-proof safety nut.
Butterfly handle.
Max. working pressure: 16 bar.
Temperature range: 5–90 °C.

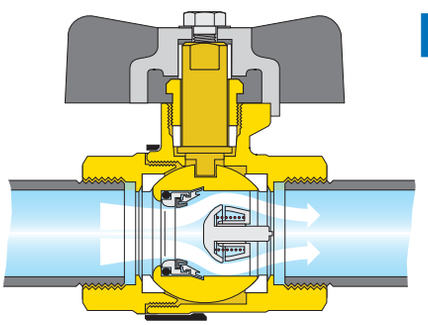
Code			
334400	1/2" M x nut 3/4" F	10	–
334500	3/4" M x nut 3/4" F	10	–

332 BALLSTOP

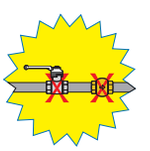
tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Male - female connections.
Butterfly handle.
Max. working pressure: 16 bar.
Temperature range: 5–90 °C.

Code			
332400	1/2" M x 1/2" F	10	–



BALLSTOP
TWO VALVES IN ONE



SINGLE AND DOUBLE CHECK VALVES

3037 ROBOCHECK-1

15 mm single check valve
with compression ends.
CR dezincification resistant alloy body.
Chrome plated.
Max. working pressure: 10 bar.
Max. working temperature: 90 °C.

Code			
303715	Ø 15	10	100

3038 ROBOCHECK-2

15 mm controllable double check valve
with compression ends.
CR dezincification resistant alloy body.
Chrome plated.
Max. working pressure: 10 bar.
Max. working temperature: 90 °C.

Code			
303815	Ø 15	10	100

ANTIFREEZE SAFETY DEVICE

603 ICECAL

tech. broch. 01181

Garden tap, ball type,
with antifreeze safety device.
Brass body. Chrome plated.
Stainless steel lever and fixing nut.
Hose connection for Ø 15 mm pipe.
Max. working pressure: 10 bar.
Ambient temperature range: -30–90 °C.
Opening temperature: 3 °C.
Closing temperature: 4 °C.

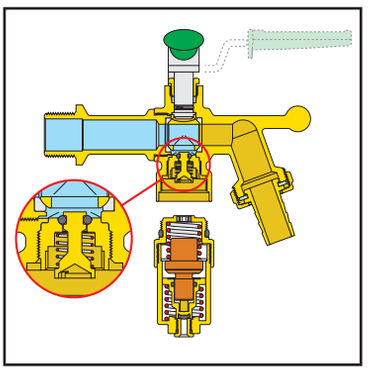
Code			
603450	1/2" M x 3/4" M with hose connection	1	10

antifreeze group spare part,
chrome plated for code 603450.

Code		
F89046/C	1	–

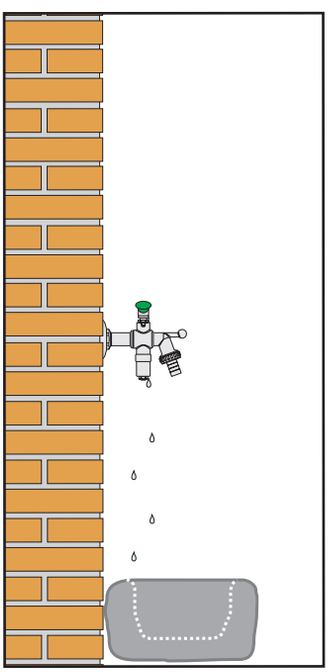
antifreeze safety device replacement

The antifreeze safety device is preassembled and can be replaced in case of necessity.
A specific internal valve automatically shuts the water off during the replacement operation.

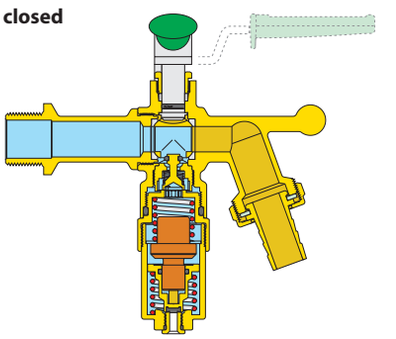


Function

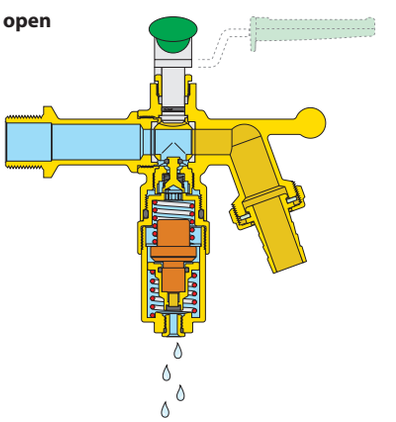
The antifreeze safety device prevents ice build-up in domestic water circuits, avoiding possible damage to pipes in hydraulic and irrigation systems.
When the minimum intervention temperature is reached, it automatically opens so that a minimum quantity of water may flow toward the drain, enabling a small continuous inflow of water; this prevents the circuit from freezing.
A particular product has been developed by combining the antifreeze safety device with a garden tap ball type, specifically constructed for these installations.
The valve is fitted with ball with blow-out proof design, O-ring seal and packing gland; the control lever and fixing nut are made of stainless steel, for total resistance against corrosion in different climatic conditions.



antifreeze safety device closed



antifreeze safety device open



VACUUM BREAKER DEVICE FOR DOMESTIC WATER SYSTEMS

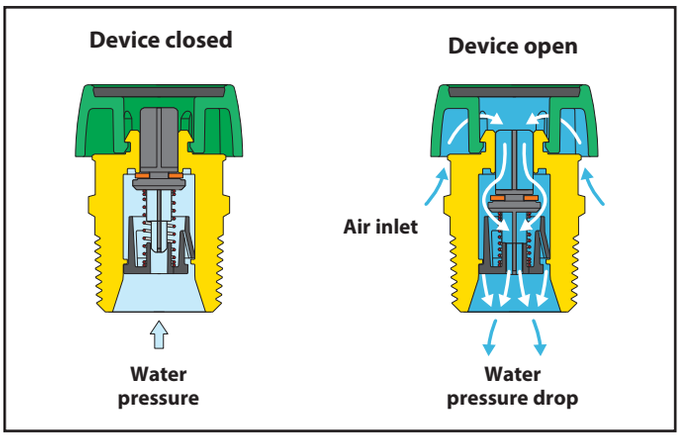
Pb LOW LEAD

3040 NEW

tech. broch. 01402

Vacuum breaker device for domestic water systems. For the protection of hot and cold water storage tanks.
CR **dezincification resistant alloy body "LOW LEAD".**
Max. working pressure: 14 bar.
Max. working temperature: 120 °C.

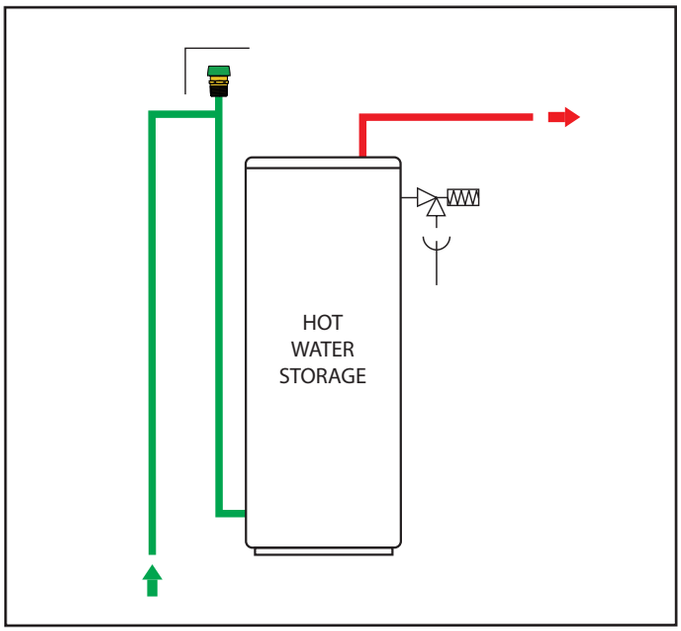
Code			
304040	1/2" M	1	50
304050	3/4" M	1	50



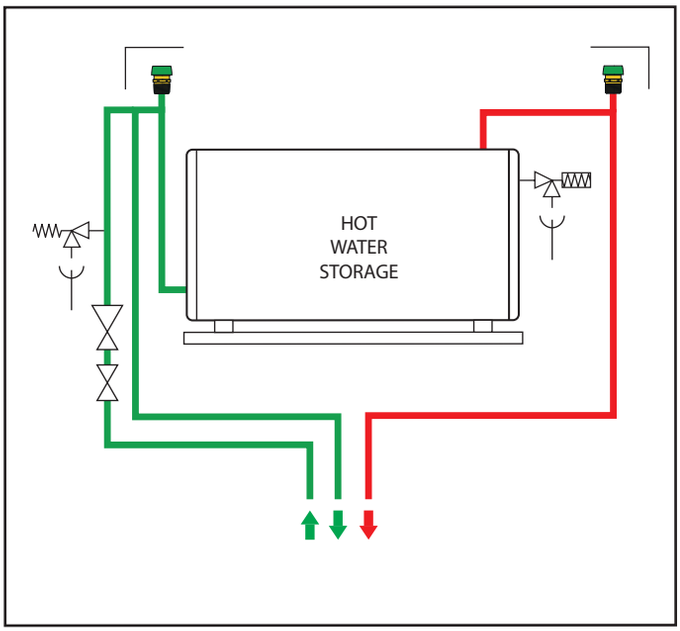
Function

The vacuum breaker device is used to prevent water storages from being damaged by a sudden rapid drop in the pressure of the water inside the tank body. This may happen, for example, if the inlet shut-off valve is left closed and enough water is drawn at the same time to create a significant drop in pressure inside the tank. In this case, the internal pressure loss can lead to the destructive implosion of the tank walls.
The vacuum breaker device should be installed at the top of the tank connection pipe.
When water is being supplied under the correct pressure conditions, the vacuum breaker device remains closed, allowing normal system operation to take place. It opens in pressure loss conditions, allowing the entry of air at atmospheric pressure in order to prevent hazardous situations from arising.

Application diagram, 3040 series



Application diagram, 3040 series

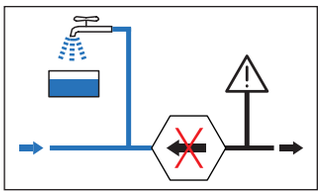


BACKFLOW PREVENTION DEVICES

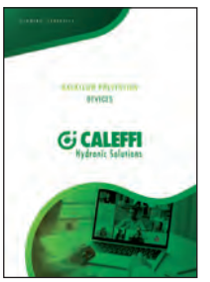
7

bim.caleffi.com

Backflow preventers
Pre-assembled group with backflow preventer, Y-strainers and shut-off valves
Y-strainers for backflow preventers
Spare parts for backflow preventers
Backflow preventers with multifunction geometry
Ball valves with built-in check valves, BALLSTOP
Anti-pollution check valves



The following pages are extracted from the specific Monographic Guide, which concerns the problem of pollution of water supplies from backflow and presents the range of Caleffi products specifically designed to prevent this problem.
The materials of the components and their performance characteristics meet the specific regulatory and safety requirements of water supply systems.



POLLUTION OF WATER SUPPLIES - NORMATIVE REFERENCES

Pollution is defined as any relative degradation of the quality of potable water.
European standard **EN 1717:2000** "*Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow*" is the reference point as regards the prevention of pollution of public water supplies caused the backflow of fluid from private systems downstream.

The above standard is applied in conjunction with **EN 806:2012** "*Specifications for installations inside buildings conveying water for human consumption.*" that indicates the requirements for design, operation and maintenance.
Both these European reference standards should be applied in conjunction with the applicable national standards and regulations.
Installations must be designed and maintained in such a way that they do not cause pollution of the public water supply or of the internal system by backflow of any type of substance considered hazardous.

The standard EN 1717 classifies fluids contained in installations into five categories according to the degree of risk they pose to human health; these categories range from 1, with no human health hazard, to 5, the most hazardous.

Category 1:
Water to be used for human consumption coming directly from a potable water distribution system.

Category 2:
Fluid presenting no human health hazard, as per 1, the quality of which can have undergone a change in taste, odour, colour or temperature.

Category 3:
Fluid representing some human health hazard due to the presence of one or more harmful substances.

Category 4:
Fluid presenting a human health hazard due to the presence of one or more "toxic" or "very toxic" substances or one or more radioactive, mutagenic or carcinogenic substances.

Category 5:
Fluid presenting a human health hazard due to the presence of microbiological or viral elements.

According to this classification, suitable backflow prevention devices must be fitted in water distribution circuits.

EN 1717 lists the operating principle and minimum requirements of devices designed to protect the public water supply from the backflow of fluids belonging to one of these five categories.

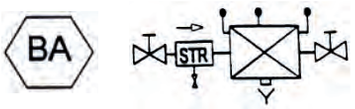
Protection devices are grouped in eight Families, identified by the letters A, B, C, D, E, G, H, L, each of which may have one or more variants called Types, also identified with the letters A, B, C, or D. EN 1717 specifies for each Type of device the minimum and maximum fluid category and the conditions in which it may be used for to protect the installation against backflow.

The sequence of appliances, including protection device, filters, check valves, shut-off valves, pressure test ports, air gaps, etc. that together comprise the backflow protection, is defined as the **Protection Unit**.
The Protection Point is defined as the point in the system in which the Protection Unit is applied.

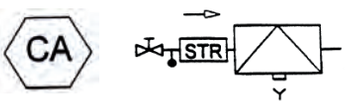
The generic symbol used in EN 1717 to identify the Protection Unit is a hexagon containing the letters indicating the protection Family and Type, as shown in the following figure:

Here below are some examples of Protection Units with the relative sequences of devices required by EN 1717.

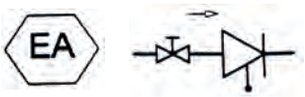
Protection unit: Family B, Type A

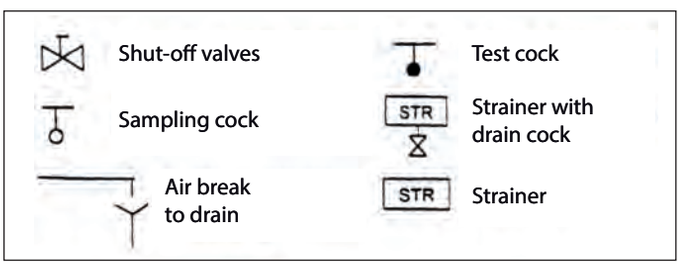


Protection unit: Family C, Type Aa



Protection unit: Family E, Type A



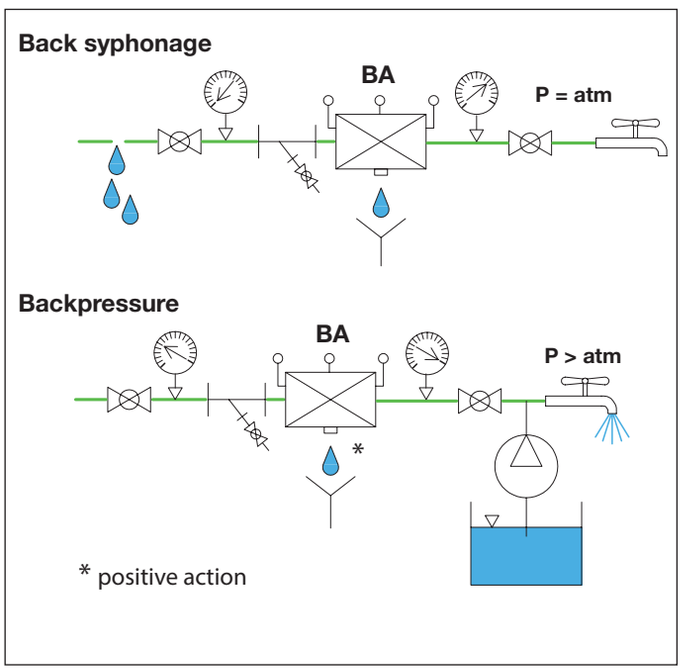


The indications in EN 1717 may be applied to all domestic, industrial/commercial and non domestic installations connected to the public potable water supply:

- domestic installations in residential or similar buildings, such as homes, hotels, schools, offices, hostels, etc.: kitchen sinks, hand basins, baths, showers, WCs, domestic hot water systems, domestic washing machines and dishwashers, garden irrigation systems, systems with low concentrations of additives that are not harmful to human health,such as water treatment, conditioning systems, etc.;
- in industrial and commercial installations the standard applies to all applications of potable water with similar use to a domestic installation, excluding therefore process water; also fire fighting, centralised heating or irrigation systems;
- non domestic installations for professional uses of water, for example, industries, commerce, agriculture, clinics, public and private swimming pools and thermal baths.

POLLUTION OF WATER SUPPLIES - NORMATIVE REFERENCES

Backflow
Potable water from the mains supply may be subject to pollution caused mainly by the contaminated fluids flowing back from plumbing installations connected directly to the mains supply. Backflow can be attributed to a variation in the pressure difference that causes a consequent inversion of the normal direction of flow at certain point of the installation. This phenomenon, termed “backflow”, occurs when:
a) the pressure in the mains system is less than that in the plumbing circuit receiving the supply (back syphonage). This situation can occur, for example, due to a break in the pipework of the mains supply and the consequent maintenance work, or when significant quantities of water are drawn by other users connected upstream, such as fire-fighting systems.
b) the pressure in the plumbing circuit receiving the supply rises (back pressure) due, for example, to water being pumped from a well.



Risk assessment
Given the potential dangers of the phenomenon and the requirements of current regulations, the risk of pollution caused by backflow must be assessed on the basis of the type of system and the characteristics of the fluid that flows inside it.

A suitable backflow prevention device must be selected on the basis of the assessment performed by the system designer and the mains supplier. The device must be located along the supply line at the points at risk of backflow which would be hazardous to human health.

In addition to consultation of the European standard EN 1717, it is always necessary to consult the water supplier and the specific national regulations as, depending the type of installation, there may be more restrictive or more permissive derogations from the European standard.

In situations where there are fluids present that pose different degrees of hazard, backflow prevention should consider the most hazardous of these fluids. In the case of fluids that are exceptionally hazardous, it will be necessary to assess additional technical parameters.

In the case of applications where it is not possible to verify the risk level, it is necessary to hypothesise the greatest risk. The “Protection Matrix” tables reported in the following pages list various types of installation and the corresponding fluid categories.

Protection Unit - Product standards - Caleffi devices
Tables 1 and 2 below list all the Protection Units defined in EN 1717, with the relative fluid categories, the product standards and the corresponding products in the Caleffi catalogue.

Table 2

Devices	Category	Authorised level of the Protection Unit
Tap with spray outlet over handbasins, sinks, showers, baths; excluding WCs and bidets	5	Protection unit for category 2 and EB, ED, HC
Tub with water inlet below the rim of the tub (b)	5	Protection unit for category 3
Draw-off tap for hose connection (a b)	5	Protection unit for category 3
Over ground or in-ground irrigation system (b)	5	Protection unit for category 4
(a) Used for washing, cleaning or garden irrigation (b) The Protection Unit must be installed above the maximum operating level		

Table 1		Fluid category						
Family Type	EN 1717 Protection unit	1	2	3	4	5	Product standard	Caleffi series
BA	Backflow preventer with controllable reduced pressure zone	●	●	●	●	-	EN 12729	580, 574, 575
CA	Backflow preventer with different non controllable pressure zones	●	●	●	-	-	EN 14367	573
EA	Controllable anti-pollution check valves from DN 6 to DN 250	●	●	-	-	-	EN 13959	3045, 3046
EB	Non-controllable anti-pollution check valves from DN 6 to DN 250	■					EN 13959	3047
EC	Controllable anti-pollution double check valves from DN 6 to DN 250	●	●	-	-	-	EN 13959	
ED	Non-controllable anti-pollution double check valves from DN 6 to DN 250	■					EN 13959	

Units with atmospheric vent must not be installed in zones at risk of flooding (for example, AA, BA, CA, GA, GB...)
● Covers the risk - Does not cover the risk ■ Only for certain sanitary uses (see Table 2)

BACKFLOW PREVENTERS

572

Non controllable backflow preventer with different pressure zones for wall mounted boilers.
CAb type. Brass body. PN 10.
Ø 6 copper pipe connections.
Max. working temperature: 40 °C.
Certified to standard EN 14367.

Code			
572106		1	50

573

tech. broch. 01328

Non controllable backflow preventer with different pressure zones. **CAa type**.
Brass body. PN 10.
Female union connections.
Max. working temperature: 65 °C.
Certified to standard EN 14367.

SC0934-09

Code			
573415	1/2″	1	10
573515	3/4″	1	10

573

Non controllable backflow preventer with different pressure zones.
Normally closed.
Brass body. PN 10.
Female union connections.
With threaded outlet.
Max. working temperature: 65 °C.

Code			
573405	1/2″	1	20
573505	3/4″	1	20

574

tech. broch. 01022

Controllable, reduced pressure zone backflow preventer.
BA type.
CR dezincification resistant alloy components "**LOW LEAD**".
PN 10. Male union connections.
Max. working temperature: 65 °C.
Discharge opening differential pressure to: 14 kPa.
Certified to standard EN 12729.

Upstream of the backflow preventer is mandatory to install a strainer 577 series.

SC0933-09

Code			
574004	1/2″	1	10

574

tech. broch. 01022

Controllable, reduced pressure zone backflow preventer.
BA type.
CR dezincification resistant alloy components "**LOW LEAD**".
PN 10. Male union connections.
Max. working temperature: 65 °C.
Discharge opening differential pressure to: 14 kPa.
Certified to standard EN 12729.
Upstream of the backflow preventer is mandatory to install a strainer 577 series.

SC0933-09

Code			
574040	1/2″	1	–
574050	3/4″	1	–
574006	1″	1	–

BACKFLOW PREVENTERS

574

tech. broch. 01022

Controllable, reduced pressure zone backflow preventer.
BA type.
CR dezincification resistant alloy components "**LOW LEAD**".
PN 10. Male union connections.
Max. working temperature: 65 °C.
Discharge opening differential pressure to: 14 kPa.
Certified to standard EN 12729.
Upstream of the backflow preventer is mandatory to install a strainer 577 series.

SC0933-09

1.57/19919

Code			
574600	1″	1	–
574700	1 1/4″	1	–
574008	1 1/2″	1	–

575

tech. broch. 01022

Controllable, reduced pressure zone backflow preventer.
BA type. Bronze body. PN 10. Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.
Max. working temperature: 65 °C.
Discharge opening differential pressure to: 14 kPa.
Certified to standard EN 12729.
Upstream of the backflow preventer is mandatory to install a strainer 579 series.

SC0933-09

1.57/19919

Code			
575005	DN 50	1	–
575006	DN 65	1	–
575008	DN 80	1	–
575010	DN 100	1	–

574

tech. broch. 01022

Controllable, reduced pressure zone backflow preventer.
BA type. Bronze body. PN 10. Male union connections.
Max. working temperature: 65 °C.
Discharge opening differential pressure to: 14 kPa.
Certified to standard EN 12729.
Upstream of the backflow preventer is mandatory to install a strainer 577 series.

SC0933-09

1.57/19919

Code			
574800	1 1/2″	1	–
574900	2″	1	–

570

tech. broch. 01022

Pre-assembled group consisting of:
backflow preventer 574 series;
Y-strainer 577 series for backflow preventers;
manual shut-off valves.
PN 10. Female connections.
Max. working temperature: 65 °C.

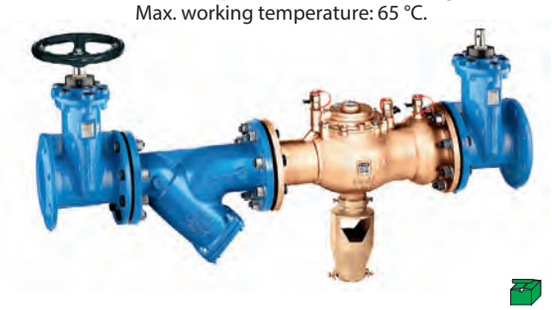
Code			
570004	1/2″	1	–
570005	3/4″	1	–
570006	1″	1	–
570007	1 1/4″	1	–
570008	1 1/2″	1	–
570009	2″	1	–

BACKFLOW PREVENTERS

570

tech. broch. 01022

Pre-assembled group consisting of:
backflow preventer 575 series;
Y-strainer 579 series for backflow preventers;
manual shut-off valves.
PN 10. Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.
Max. working temperature: 65 °C.



Code				
570050	DN 50		1	–
570060	DN 65		1	–
570080	DN 80		1	–
570100	DN 100		1	–

575

tech. broch. 01245

Controllable, reduced pressure zone backflow preventer.
BA type. Cast iron body, with epoxy coating.
PN 10. Flanged connections.
To be coupled with flat counterflanges EN 1092-1.
Max. working temperature: 60 °C.
Discharge opening differential pressure to: 14 kPa.
Certified to standard EN 12729.
Upstream of the backflow preventer is mandatory to install a strainer 579 series.

Code				
575150	DN 150		1	–
575200	DN 200		1	–
575250	DN 250		1	–

570

tech. broch. 01245

Pre-assembled group consisting of:
backflow preventer 575 series;
Y-strainer 579 series for backflow preventers;
manual shut-off valves.
PN 10. Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.
Max. working temperature: 60 °C.

Code				
570150	DN 150		1	–
570200	DN 200		1	–
570250	DN 250		1	–

Y-STRAINERS AND TEST KIT FOR BACKFLOW PREVENTERS

577

Y-strainer,
for backflow preventers 573 and 574 series.
Bronze body,
1/2"–2": PN 16,
2 1/2" - 3": PN 10.
Female connections.
Temperature range: -20–110 °C.
Max. percentage of glycol: 30 %.
Strainer in stainless steel stretched plate.

Code		Mesh size Ø (mm)	Kv (m³/h)		
577004	1/2"	0,40	3,4	1	–
577005	3/4"	0,40	7	1	–
577006	1"	0,40	10	1	–
577007	1 1/4"	0,47	16	1	–
577008	1 1/2"	0,47	24	1	–
577009	2"	0,53	35	1	–
577020	2 1/2"	0,53	57	1	–
577030	3"	0,53	73	1	–

579

Y-strainer, for backflow preventer 575 series and for pressure reducing valve 576 series.
Cast iron body, with epoxy coating.
Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.
Max. working pressure: 16 bar.
Max. working temperature: 65 °C.
Stainless steel mesh.
With drain cock.

Code		Mesh size Ø (mm)	Kv (m³/h)		
579050	DN 50	1	28	1	–
579060	DN 65	1	37,2	1	–
579080	DN 80	1	62,2	1	–
579100	DN 100	1,6	149	1	–
579120	DN 125	1,6*	320	1	–
579150	DN 150	1,6*	367	1	–
579200	DN 200	1,6*	652	1	–
579250	DN 250	2*	844	1	–

** Rhomboidal reinforcing mesh*

SPARE PARTS FOR BACKFLOW PREVENTERS

Discharge device
for backflow preventers
574 and 575 series.

Code			
59978	1/2″ (574004)	1	–
59471	1/2″ (574040) - 3/4″ - 1″ (574006)	1	–
59457	1″ (574600) - 1 1/4″ - 1 1/2″ (574008)	1	–
59461	1 1/2″ - 2″ - DN 50	1	–

Discharge device
for backflow preventer 575 series.

Code			
59625	DN 65 (575006)	1	–
59629	DN 80 (575008) - DN 100 (575010)	1	–

Discharge valve seat
for backflow preventers
574 and 575 series.

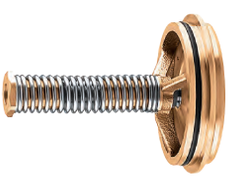
Code			
59472	1/2″ (574040) - 3/4″ - 1″ (574006)	1	–
59458	1″ (574600) - 1 1/4″ - 1 1/2″ (574008)	1	–
59462	1 1/2″ - 2″ - DN 50 - DN 65	1	–

Discharge valve seat
for backflow preventer 575 series.

Code			
59630	DN 80 (575008) - DN 100 (575010)	1	–

Upstream check valve
for backflow preventers
574 and 575 series.

Code			
59977	1/2″ (574004)	1	–
59973	1/2″ (574040) - 3/4″ (574050)	1	–
59469	3/4″ (574005) - 1″ (574006)	1	–
59455	1″ (574600) - 1 1/4″ - 1 1/2″ (574008)	1	–
59459	1 1/2″ - 2″ - DN 50	1	–



Upstream check valve
for backflow preventer 575 series.

Code			
59627	DN 65 (575006)	1	–
59631	DN 80 (575008) - DN 100 (575010)	1	–

Downstream check valve
for backflow preventers
574 and 575 series.

Code			
59979	1/2″ (574004)		
59470	1/2″ (574040) - 3/4″ - 1″ (574006)	1	–
59456	1″ (574600) - 1 1/4″	1	–
F0001636	1 1/2″ (574008)	1	–
59460	1 1/2″ - 2″ - DN 50	1	–

Downstream check valve
for backflow preventer 575 series.

Code			
59628	DN 65 (575006)	1	–
59632	DN 80 (575008) - DN 100 (575010)	1	–

BACKFLOW PREVENTERS WITH MULTIFUNCTION GEOMETRY

580

tech. broch. 01322

Backflow preventer
with multifunction geometry. **BA type**.
CR dezincification resistant alloy body.
Threaded union connections.
For linear installation on horizontal or vertical pipes.
Complete with strainer at the inlet.
Max. working pressure: 10 bar.
Max. working temperature: 65 °C.
Certified to EN 12729 standard.

Code				
580004	DN 15	1/2" M	1	5
580040	DN 15 (Cartridge DN 20)	1/2" M	1	5
580050	DN 20	3/4" M	1	5
580060	DN 25	1" M	1	–
580070	DN 32	1 1/4" M	1	–

580

tech. broch. 01322

Backflow preventer
with multifunction geometry. **BA type**.
CR dezincification resistant alloy body.
Complete with connection fitting to the tap at the inlet and hose connection at the outlet.
For vertical installation.
Complete with strainer at the inlet.
Max. working pressure: 10 bar.
Max. working temperature: 65 °C.
Certified to EN 12729 and Beschluss 4/2007 standard.

Code				
580104	DN 15	3/4" nut x 3/4" M	1	5
580150	DN 20	3/4" nut x 3/4" M	1	5

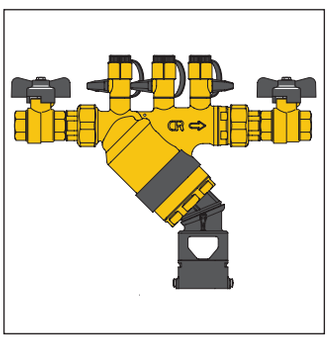
580

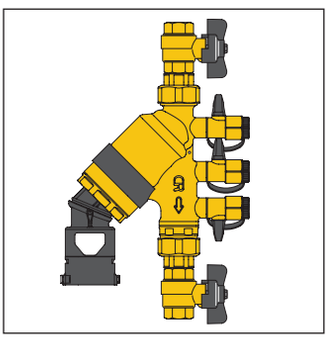
tech. broch. 01322

Backflow preventer
with multifunction geometry. **BA type**.
CR dezincification resistant alloy body.
Complete with isolating valve at the inlet and hose connection at the outlet.
For vertical installation.
Complete with strainer at the inlet.
Max. working pressure: 10 bar.
Max. working temperature: 65 °C.
Certified to EN 12729 and W570-3 standard.

Code				
580240	DN 15 (Cartridge DN 20)	1/2" M x 3/4" M	1	5
580250	DN 20	3/4" M x 3/4" M	1	5

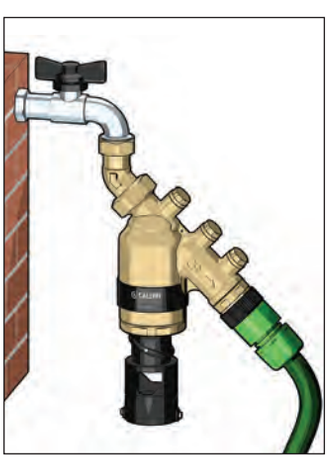
Discharge tundish
Thanks to the possibily of orienting the tundish, the same body can be used in three different configurations: installation on horizontal or vertical pipes or for special applications.



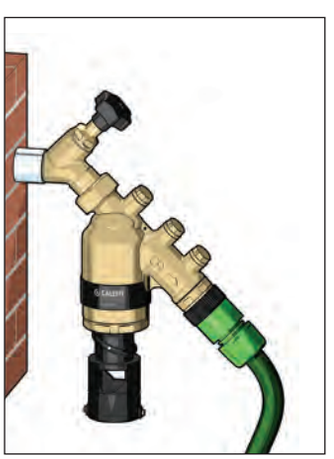


Self-contained cartridge
The self-contained cartridge comprises, all in one piece, the membrane, the upstream check valve, the discharge valve and the whole activation system. In case of maintenance, it can be easily extracted from the body without the aid of further sealing elements.

Application diagram code 580104/580150



Application diagram code 580240/580250



ANTI-POLLUTION CHECK VALVES WITH BUILT-IN SHUT-OFF VALVE

324

tech. broch. 01341

Anti-pollution check valve with built-in shut-off valve. **EA type**.
Pressure test ports upstream and downstream.
Replaceable check valve cartridge.
CR dezincification resistant alloy body **"LOW LEAD"**.
Medium: drinking water.
Max. working pressure: 10 bar.
Check valve minimum opening pressure (Δp): 0,5 kPa.
Max. working temperature: 65 °C.
Certified to EN 13959 and EN 13828 standards.
PATENT PENDING.

Code	DN internal check valve	Conn.		
324140	20	1/2" M	1	10
324150	20	3/4" M	1	10

324

tech. broch. 01341

Anti-pollution check valve with built-in shut-off valve. **EA type**.
Pressure test ports upstream and downstream.
Replaceable check valve cartridge.
CR dezincification resistant alloy body **"LOW LEAD"**.
Medium: drinking water.
Max. working pressure: 10 bar.
Check valve minimum opening pressure (Δp): 0,5 kPa.
Max. working temperature: 65 °C.
Certified to EN 13959 and EN 13828 standards.
PATENT PENDING.

Code	DN internal check valve	Conn.		
324250	20	3/4" M x nut 3/4" F	1	10

324

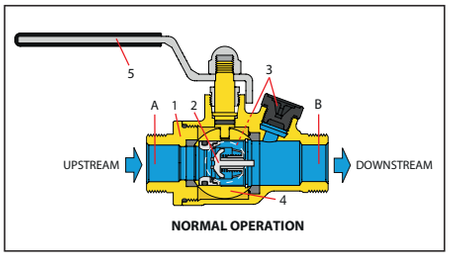
tech. broch. 01341

Anti-pollution check valve with built-in shut-off valve. **EA type**.
Pressure test ports upstream and downstream.
Replaceable check valve cartridge.
CR dezincification resistant alloy body **"LOW LEAD"**.
Medium: drinking water.
Max. working pressure: 10 bar.
Check valve minimum opening pressure (Δp): 0,5 kPa.
Max. working temperature: 65 °C.
Certified to EN 13959 and EN 13828 standards.
PATENT PENDING.

Code	DN internal check valve	Conn.		
324110	20	Ø 15	1	10
324120	20	Ø 22	1	10

Code			
F0002665	pressure gauge 0–10 bar	1	–

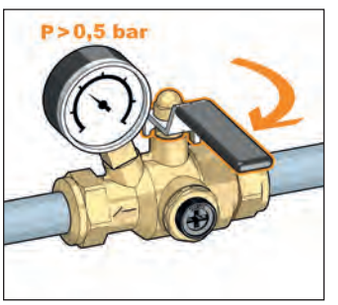
Operating principle

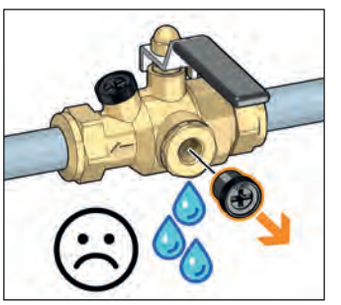


The anti-pollution check valve with built-in shut-off valve is comprised of a valve body (1), a check valve (2), two test ports (3), one downstream for operation checks and one downstream for system pressure testing, a shut-off ball valve (4) with control lever (5). The check valve (2) delimits two distinct zones: one upstream or at the inlet (A), and one downstreamor at the outlet (B).

Operation check

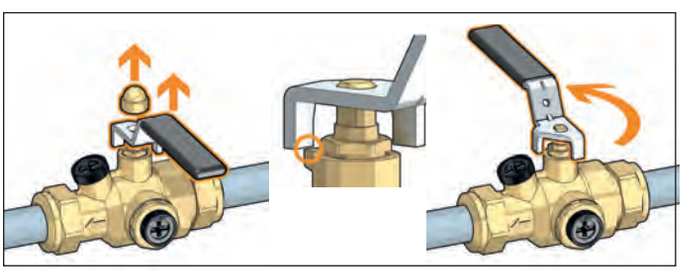
To test the seal of the check valve, check that the valve closes each time the pressure in the upstream water supply so as to prevent water from the installation flowing back into the supply system:
- to maintain pressure in the installation in the absence of flow, close all shut-off valves and users downstream of the valve. Using the downstream test port, check that the pressure is greater than 0,5 bar;
- close the built-in shut-off valve, rotating it clockwise through 90° relative to the longitudinal position,and open the check valve test port. The flow should stop after the small amount of fluid contained in the valve body between the shut-off valve and pressure test port has drained off;
- if not, check the seal of the built-in shut-off valve: if this valve is sealing co rectly but the flow from the test port continues, replace the check valve, as the flow can only be caused by imperfect sealing of the valve.

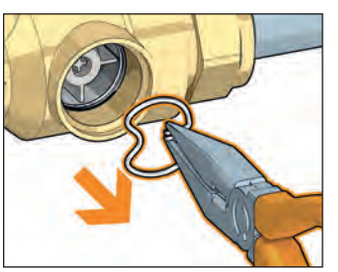


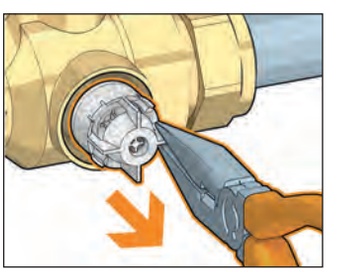


Replacement of the check valve

Thanks to the special patented design, all operation check and replacement operations can be carried out using just one shut-off valve:
- position the lever perpendicular to the valve body by raising it slightly and rotating it anti-clockwise through 90° relative to the longitudinal position;
- open the side cap;
- remove the snap ring;
- use pliers to remove the snap ring, taking care not to damage it. Carry out the maintenance operations, position the original or replacement check valve in its seat and refit by reversing the removal procedure.







BALL VALVE WITH BUILT-IN CHECK VALVE

3230 BALLSTOP

tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Female connections.
Butterfly handle.
Max. working pressure: 16 bar.
Temperature range: 5–90 °C.

Code			
323040	1/2″	10	–
323050	3/4″	10	–
323062	1″	10	–

333 BALLSTOP

tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Female - nut connection.
Drilled tamper-proof safety nut.
Butterfly handle.
Max. working pressure: 16 bar.
Temperature range: 5–90 °C.

Code			
333400	1/2″ F x nut 3/4″ F	10	–
333500	3/4″ F x nut 3/4″ F	10	–

3230 BALLSTOP

tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Female connections.
Lever handle.
Max. working pressure: 16 bar.
Temperature range: 5–90 °C.

Code			
323060	1″	4	–
323070	1 1/4″	4	–
323080	1 1/2″	2	–
323090	2″	1	–

334 BALLSTOP

tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Male - nut connection.
Drilled tamper-proof safety nut.
Butterfly handle.
Max. working pressure: 16 bar.
Temperature range: 5–90 °C.

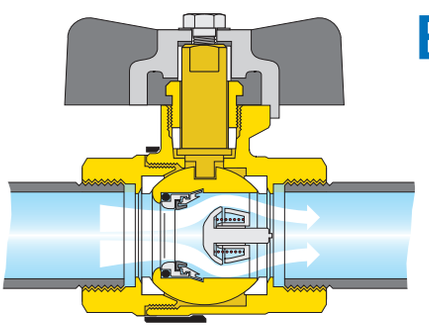
Code			
334400	1/2″ M x nut 3/4″ F	10	–
334500	3/4″ M x nut 3/4″ F	10	–

332 BALLSTOP

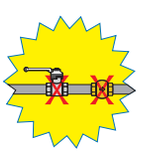
tech. broch. 01021

Ball valve with built-in check valve.
Brass body.
Male - female connections.
Butterfly handle.
Max. working pressure: 16 bar.
Temperature range: 5–90 °C.

Code			
332400	1/2″ M x 1/2″ F	10	–



BALLSTOP
TWO VALVES IN ONE



SINGLE AND DOUBLE CHECK VALVES

3037 ROBOCHECK-1

15 mm single check valve
with compression ends.
CR dezincification resistant alloy body.
Chrome plated.
Max. working pressure: 10 bar.
Max. working temperature: 90 °C.

Code			
303715	Ø 15	10	100

3038 ROBOCHECK-2

15 mm controllable double check valve
with compression ends.
CR dezincification resistant alloy body.
Chrome plated.
Max. working pressure: 10 bar.
Max. working temperature: 90 °C.

Code			
303815	Ø 15	10	100

ANTI-POLLUTION CHECK VALVES

3045

tech. broch. 01005

Check valve. **EA type**.
Controllable. Brass body.
Female connections.
Max. working pressure: 10 bar.
Max. working temperature: 90 °C.
Certified to standard EN 13959.

Code			
304540	1/2"	10	100
304550	3/4"	10	50
304560	1"	5	25
304570	1 1/4"	5	25
304580	1 1/2"	2	20
304590	2"	1	10

3046

Compact check valve. **EA type**.
Controllable. Brass body.
Nut - male connections.
Max. working pressure: 10 bar.
Max. working temperature: 90 °C.
Certified to standard EN 13959.

Code	Inside check device DN	Connections		
304601	15	3/4" F x 3/4" M	10	100

3046

tech. broch. 01005

Check valve. **EA type**.
Controllable. Brass body.
Nut - male connections.
Max. working pressure: 10 bar.
Max. working temperature: 90 °C.
Certified to standard EN 13959.

Code	Inside check device DN	Connections		
304640	15	3/4" F x 3/4" M	10	100
304650	20	1" F x 1" M	10	50
304660*	25	1 1/4" F x 1 1/4" M	5	25
304670*	32	1 1/2" F x 1 1/2" M	4	20
304680*	40	2" F x 2" M	2	10

** Without NF and SVGW certification*

3046

Check valve. **EA type**.
Controllable. Brass body.
Nut - male connections.
Max. working pressure: 10 bar.
Max. working temperature: 90 °C.
Certified to standard EN 13959.

Code	Inside check device DN	Connections		
304644	15	3/4" F nut x 3/4" M	1	50
304654	20	1" F nut x 1" M	1	50

3046

Check valve. **EA type**.
Controllable. Brass body.
Nut - male connections.
Max. working pressure: 10 bar.
Max. working temperature: 90 °C.
Certified to standard EN 13959.

Code	Inside check device DN	Connections		
304645	15	3/4" F x 3/4" M	10	100

3047

tech. broch. 01005

Check valve. **EB type**.
Non controllable. Brass body.
Female connections.
Max. working pressure: 10 bar.
Max. working temperature: 90 °C.

Code			
304740	1/2"	10	100
304750	3/4"	10	50
304760	1"	5	25

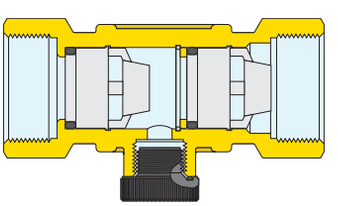
3048

tech. broch. 01005

Double check valve.
Controllable. Brass body.
Female connections.
Max. working pressure: 10 bar.
Max. working temperature: 90 °C.

Code			
304840	1/2"	1	50
304850	3/4"	1	50

Double check valve 3048 series
This double check valve can be used according to local regulations, instead of the backflow preventer when a low pressure valve, at the inlet from the public network, is present. The watertightness of the check valve, furthermore, can be verified by using the pressure test port on the valve body.

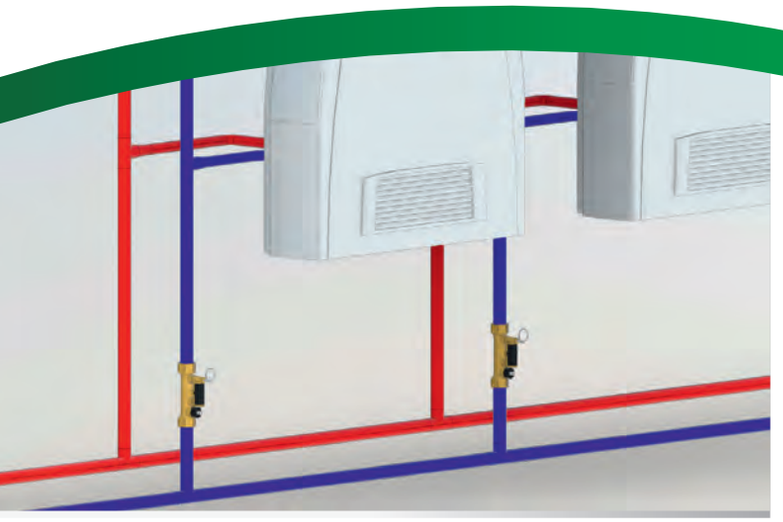


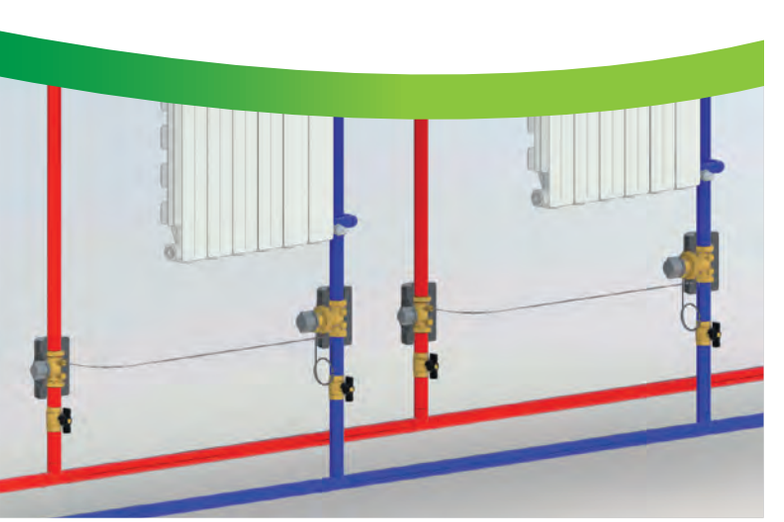
3041

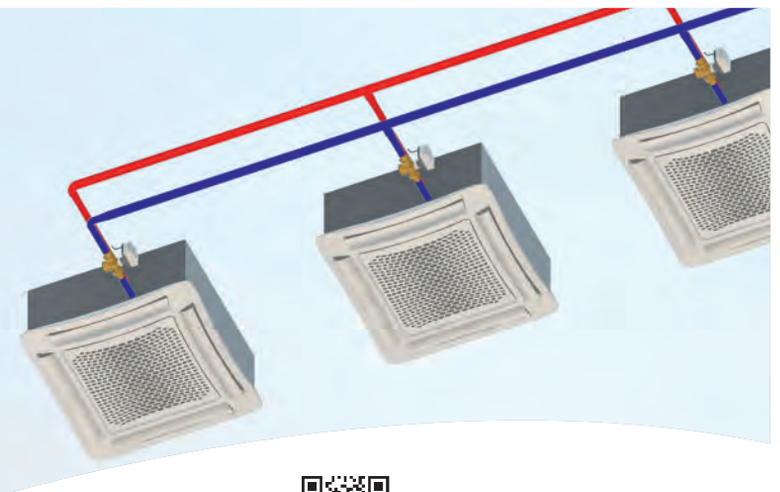
tech. broch. 01005

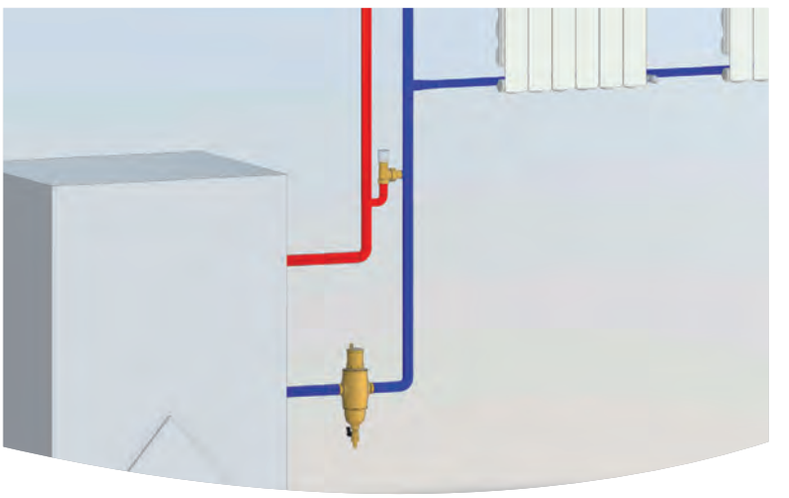
Ball valve with built-in certified check valve.
Controllable. Brass body.
Nut - male connections.
Max. working pressure: 10 bar.
Max. working temperature: 90 °C.

Code	Inside check device DN	Connections		
304140	15	3/4" F x 3/4" M	5	25









BIM
bim.caleffi.com

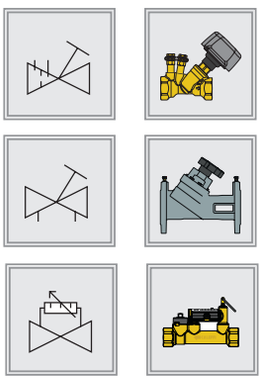
Static balancing devices
Dynamic balancing and control devices
Differential pressure control devices
Regulating valves

BALANCING AND CONTROL DEVICES

Circuit balancing devices can be classified in accordance with their method of action and the type of control they perform in relation to the hydronic circuit.

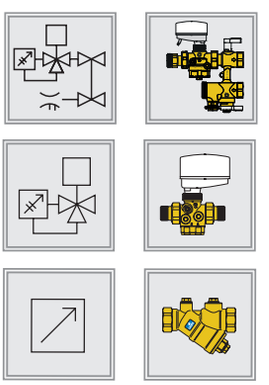
Static balancing devices

- Manual balancing valve, with Venturi device	**130 series**
- Manual balancing valve, with variable orifice	**130 series**
- Balancing valve with flow meter	**132 series**



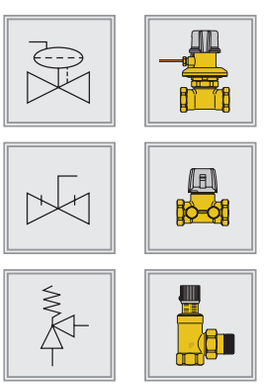
Dynamic balancing and control devices

- Connection and regulation kit for HVAC terminal units	**149 series**
- Pressure independent control valve (PICV)	**145-146 series**
- Automatic flow rate regulator, fixed flow rate	**127-128-121-126-120-125-103 series**



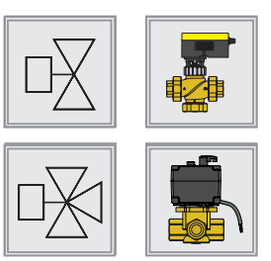
Differential pressure control devices

- Differential pressure control valve	**140 series**
- Shut-off and pre-regulation valve	**142 series**
- Differential by-pass valve	**519 series**

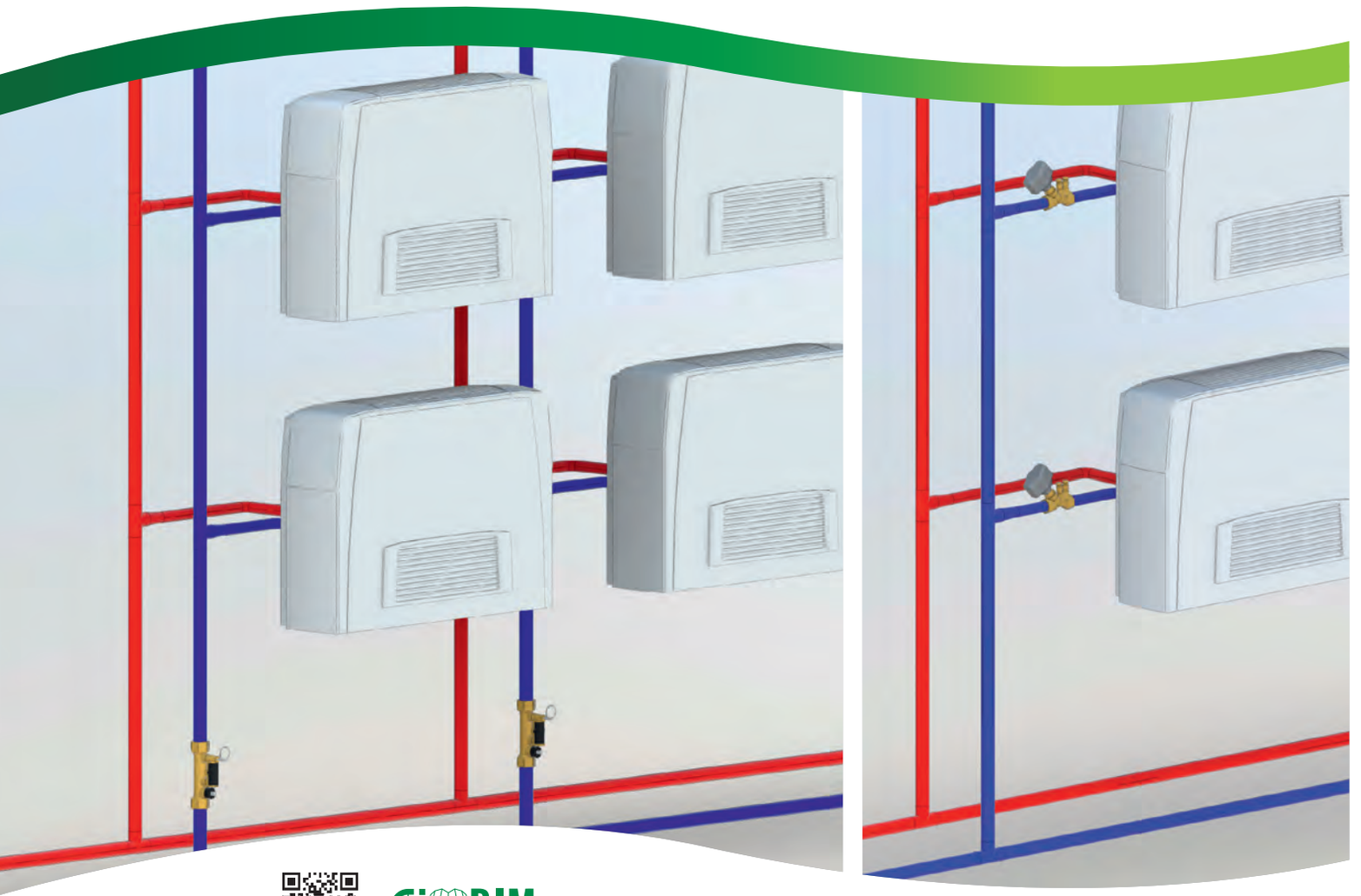


Regulating valves

- Regulating valves	**636 series**
- Temperature regulating valves	**610-611-612 series**



STATIC BALANCING DEVICES



bim.caleffi.com

Manual balancing valve
Manual balancing valve, with Venturi device
Manual balancing valve, with variable orifice

BALANCING VALVES

130

tech. broch. 01251

Balancing valve for hydraulic systems.
Flow rate measurement with Venturi device.
CR dezincification resistant alloy body, stainless steel obturator.
Complete with pressure ports.
Max. working pressure: 16 bar.
Temperature range: -20–120 °C.
Max. percentage of glycol: 50 %.

Code			
130400	1/2″	1	5
130500	3/4″	1	5
130600	1″	1	5
130700	1 1/4″	1	5
130800	1 1/2″	1	5
130900	2″	1	5

Pre-formed insulation for balancing valves with threaded connections 130 series.
For heating and cooling system.

Code			
CBN130400	1/2″	1	–
CBN130500	3/4″	1	–
CBN130600	1″	1	–
CBN130700	1 1/4″	1	–
CBN130800	1 1/2″	1	–
CBN130900	2″	1	–

142

Balancing valve.
CR dezincification resistant alloy body.
Max. working pressure: 16 bar.
Temperature range: -10–120 °C.
Max. percentage of glycol: 50 %.

Code		Kv (m³/h)		
142340	1/2″	0,32–2,96	10	–
142345	1/2″	0,15–1,60	10	–
142350	3/4″	0,47–4,35	10	–

130

tech. broch. 01251

Balancing valve
for hydraulic systems.
Body: - DN 65–200: grey cast iron
- DN 250 e 300: ductile cast iron
Obturator: - DN 65–200: technopolymer
- DN 250 e 300: ductile cast iron
Complete with pressure ports.

Max. working pressure: 16 bar.
Temperature range:
DN 65–DN 300: -10–120 °C.
Max. percentage of glycol: 50 %.
Flaged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.

Code			
130063	DN 65	1	–
130083	DN 80	1	–
130103	DN 100	1	–
130123	DN 125	1	–
130153	DN 150	1	–
130203	DN 200	1	–
130253	DN 250	1	–
130303	DN 300	1	–

BALANCING VALVE WITH FLOW METER

132

tech. broch. 01149

Balancing valve with flow meter.
Direct reading of flow rate.
Brass valve body and flow meter.
Ball valve for flow rate adjustment.
Graduated scale flow meter with magnetic movement flow rate indicator.

With insulation.
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.
Max. percentage of glycol: 50 %.
PATENT.

Code		Flow rate range (l/min)		
132402	1/2″	2– 7	1	5
132512	3/4″	5– 13	1	5
132522	3/4″	7– 28	1	5
132602	1″	10– 40	1	5
132702	1 1/4″	20– 70	1	5
132802	1 1/2″	30–120	1	5
132902	2″	50–200	1	5

132

Balancing valve with flow meter.
Direct reading of flow rate.
Cast iron body.
Brass flow meter.
Characterized ball valve for flow rate adjustment.
Graduated scale flow meter with magnetic movement flow rate indicator.
Max. working pressure: 10 bar.
Temperature range: -10–110 °C.
Max. percentage of glycol: 50 %.
Flaged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.
PATENT.

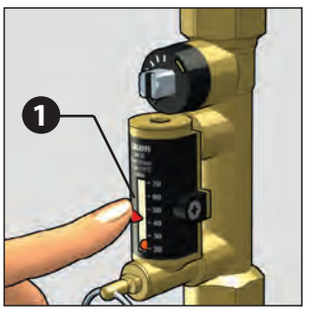
Code		Flow rate range (m³/h)		
132060	DN 65	6–24	1	–
132080	DN 80	8–32	1	–
132100	DN 100	12–48	1	–

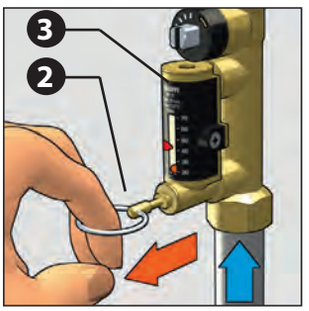
Flow rate adjustment

The flow rate is adjusted by carrying out the following operations:

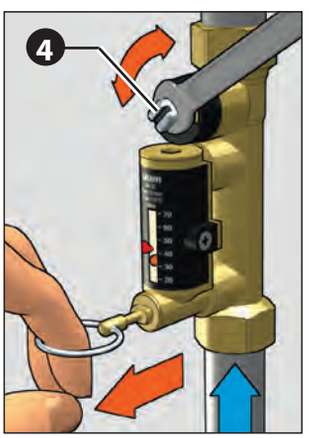
1. With the aid of the indicator (1), mark the reference flow rate at which the valve has to be set.

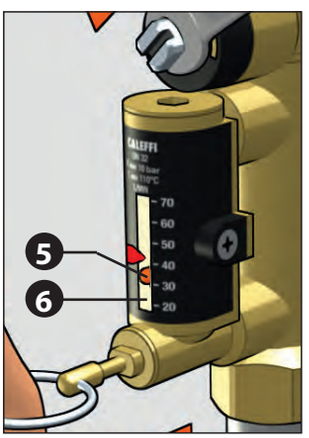
2. Use the ring (2) to open the obturator that shuts off the flow of medium in the flow meter (3) under normal operating conditions.





3. Keeping the obturator open, apply a wrench on the control stem of the valve (4) to adjust the flow rate. It is indicated by a metal ball (5) that runs inside a transparent guide (6) marked by a graduated scale in l/min.



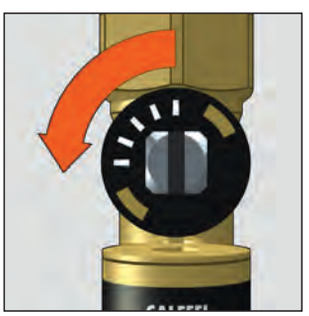


4. After completing the balancing, release the ring (2) of the flow meter obturator that, thanks to an internal spring, will automatically go back into the closed position.

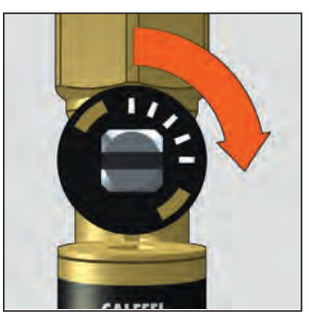
5. After completing the balancing, the indicator (1) can be used to keep in memory the selected setting in case of future inspections.

Complete opening and closing of the valve

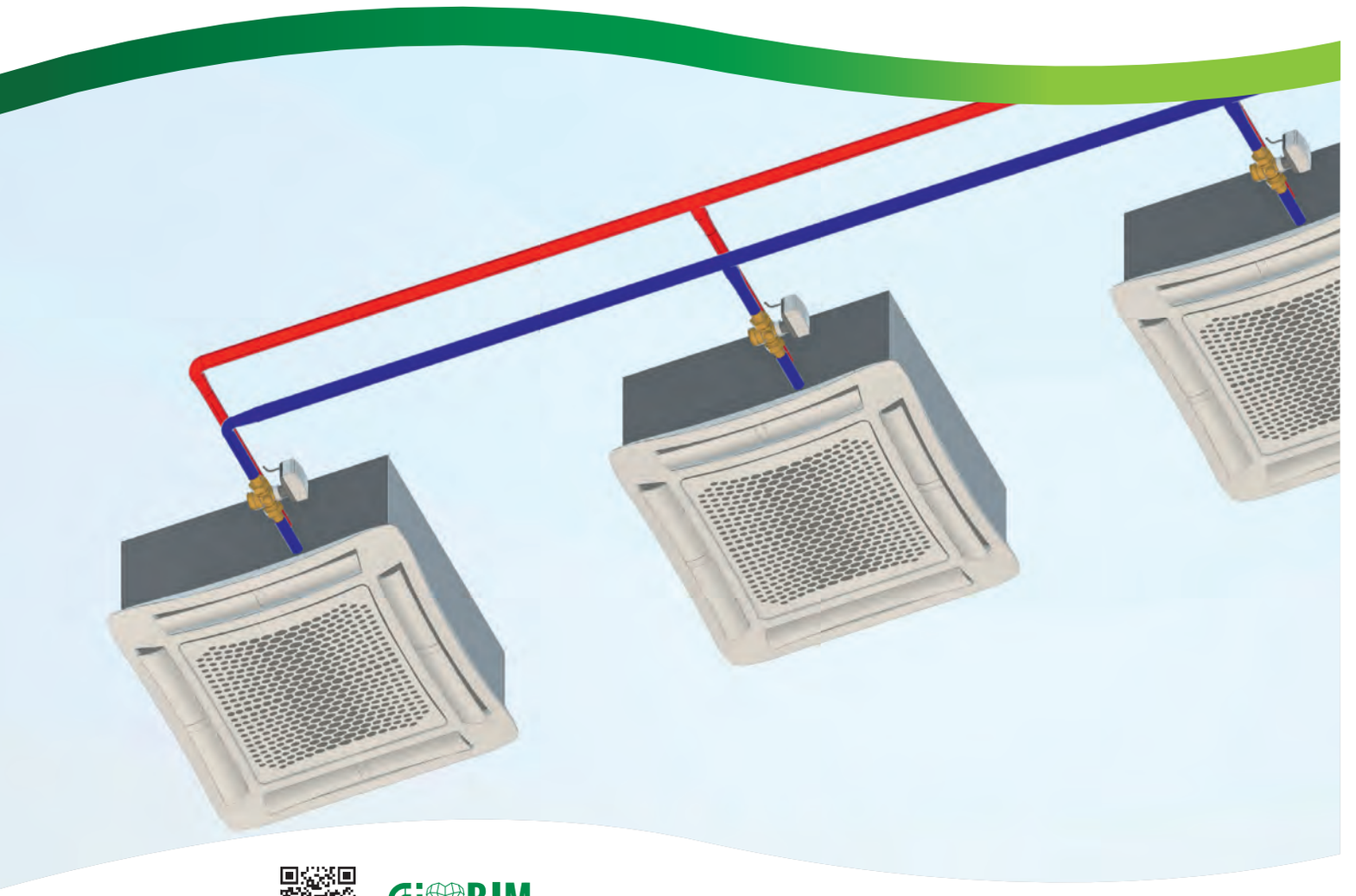
Complete opening of the valve



Complete closing of the valve



DYNAMIC BALANCING AND CONTROL DEVICES



bim.caleffi.com

Pressure independent control valve (PICV)
Connection and regulation kit for HVAC terminal units
Automatic flow rate regulator
Automatic flow rate regulator with stainless steel cartridge - flanged connections

PRESSURE INDEPENDENT CONTROL VALVE (PICV)

145 FLOWMATIC®

tech. broch. 01262

Pressure independent control valve FLOWMATIC®.
CR dezincification resistant alloy body.
Male connections. Flow rate regulator in polymer with membrane in EPDM.
Graduated scale indicator.
Max. working pressure: 25 bar.
Temperature range: -20–120 °C.
Max. percentage of glycol: 50 %.
Δp range: 25–400 kPa. With pressure test ports.
Fitted for 145 series actuator and 6565/6566 series thermo-electric actuator.

Code	DN	Conn.	Flow rate range (m³/h)		
145437 H20	15	1/2″	0,02–0,20	1	10
145447 H20	15	3/4″	0,02–0,20	1	10
145447 H40	15	3/4″	0,08–0,40	1	10
145447 H80	15	3/4″	0,08–0,80	1	10
145557 H20	20	1″	0,02–0,20	1	10
145557 H40	20	1″	0,08–0,40	1	10
145557 H80	20	1″	0,08–0,80	1	10
145557 1H2	20	1″	0,12–1,20	1	10
145667 1H8	25	1 1/4″	0,18–1,80	1	10
145667 3H0	25	1 1/4″	0,30–3,00	1	10
145667 3H7	25	1 1/4″	0,37–3,70	1	10

145 FLOWMATIC®

tech. broch. 01262

Pressure independent control valve FLOWMATIC®.
CR dezincification resistant alloy body.
Male connections. Flow rate regulator in polymer with membrane in EPDM.
Graduated scale indicator.
Max. working pressure: 25 bar.
Temperature range: -20–120 °C.
Max. percentage of glycol: 50 %.
Δp range: 25–400 kPa. Fitted for connection of pressure test ports.
Fitted for 145 series actuator and 6565/6566 series thermo-electric actuator.

Code	DN	Conn.	Flow rate range (m³/h)		
145434 H20	15	1/2″	0,02–0,20	1	10
145444 H40	15	3/4″	0,08–0,40	1	10
145444 H80	15	3/4″	0,08–0,80	1	10
145554 H20	20	1″	0,02–0,20	1	10
145554 H40	20	1″	0,08–0,40	1	10
145554 H80	20	1″	0,08–0,80	1	10
145554 1H2	20	1″	0,12–1,20	1	10
145664 1H8	25	1 1/4″	0,18–1,80	1	10
145664 3H0	25	1 1/4″	0,30–3,00	1	10
145664 3H7	25	1 1/4″	0,37–3,70	1	10

Union with gasket.

Code			
145001	1/2″ F x 3/8″ M	1	–
145003	3/4″ F x 1/2″ M	1	–
145005	1″ F x 3/4″ M	1	–
145006	1″ F x 1″ M	1	–
145007	1 1/4″ F x 1″ M	1	–
145008	1 1/4″ F x 1 1/4″ M	1	–

ACTUATORS FOR KITS AND CONTROL VALVES (PICV)

145 FLOWMATIC®

tech. broch. 01336

Proportional linear actuator
for FLOWMATIC® 145 series control valve and 149 series kit.
Supply: 24 V (AC)/(DC).
Control signal: 0(2)–10 V, 0(4)–20 mA, 0–5 V, 5–10 V.
Feedback signal: 0–10 V.
Ambient temperature range: 0–50 °C.
Protection class: IP 54.
Connection: M 30 p.1,5.
Supply cable length: 2 m.

CE

Code	Tension V	Control signal	Feedback signal		
145013	24	0–10 V	0–10 V	1	–

6565

tech. broch. 01336

Proportional thermo-electric actuator
for FLOWMATIC® 145 series control valve and 149 series kit.
Quick-coupling installation, with a clip adapter.
Normally closed.
Supply: 24 V (AC)/(DC).
Control signal: 0–10 V.
Feedback signal: 0–10 V.
Power consumption: 1,2 W.
Ambient temperature range: 0–60 °C.
Protection class: IP 54.
Connection: M 30 p.1,5.
Supply cable length: 1 m.

CE

Code	Tension V	Control signal	Feedback signal		
656524	24	0–10 V	0–10 V	100	–

6565/6566

Thermo-electric actuator
for FLOWMATIC® 145 series control valve and 149 series kit.
Quick-coupling installation, with a clip adapter.
Supply: 230 V (AC) o 24 V (AC)/(DC).
Control signal: ON/OFF.
Power consumption: 1 W.
Ambient temperature range: 0–60 °C.
Protection class: IP 54.
Connection: M 30 p.1,5.
Supply cable length: 1 m.

CE

Code	Tension V	Control signal			
656502	230	ON/OFF	normally closed	100	–
656504	24	ON/OFF	normally closed	100	–
656602	230	ON/OFF	normally open	100	–
656604	24	ON/OFF	normally open	100	–

PRESSURE INDEPENDENT CONTROL VALVE (PICV)

145

Pressure independent control valve.
Cast iron body.
Max. working pressure: 25 bar.
Temperature range: -10–120 °C.
Max. percentage of glycol: 50 %.
Δp range: 30–600 kPa.
With pressure test ports.

Code	DN	Conn.	Flow rate range (m³/h)		
145895	40	2″ M	2,9– 9,3	1	–
145905	50	2 1/2″ M	5,1–14,8	1	–

CE

145

Rotational proportional actuator for pressure independent control valve 145 series.
Supply: 24 V (AC)/(DC).
Control signal: 2–10 V.
Feedback signal: 2–10 V.
Ambient temperature range: -30–50 °C.
Protection class: IP 54.
Manual override.

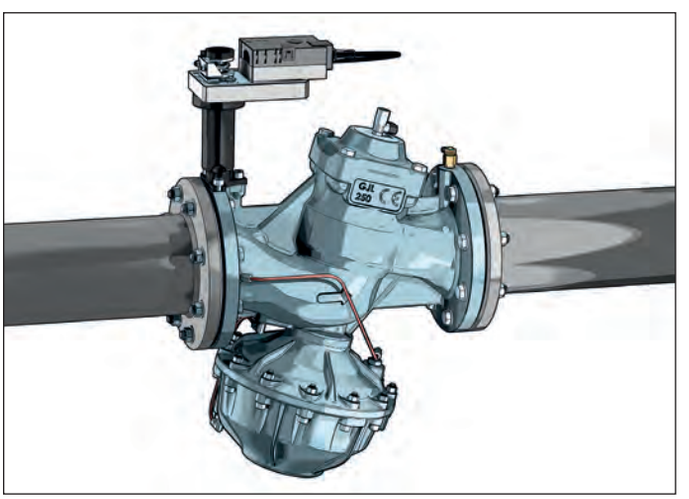
Code	Voltage V	Control signal	Feedback signal	Use		
145017	24	2–10 V	2–10 V	DN 40 - DN 50	1	–

Union with gasket for cast iron 145 series.

Code			
145009	2"F x 11/2"M	1	–
145010	2 1/2"F x 2"M	1	–

146

Pressure independent control valve.
Grey cast iron body.
Max. working pressure: 16 bar.
Temperature range: -10–120 °C.
Max. percentage of glycol: 50 %.
Δp range: 30–400 kPa.
With pressure ports.
Flanged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.



Code	DN	Flow rate range (m³/h)		
146060	65	6–26	1	–
146080	80	8–36	1	–
146100	100	16–82,5	1	–
146120	125	20–125	1	–
146150	150	27–160	1	–

CE

146

Rotational proportional actuator for pressure independent control valve 146 series.
Supply: 24 V (AC)/(DC).
Control signal: 2–10 V.
Feedback signal: 2–10 V.
Ambient temperature range: -30–50 °C.
Protection class: IP 54.
Manual override.

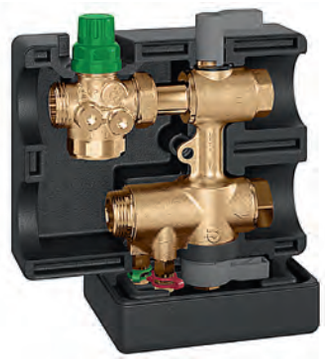
Code	Voltage V	Control signal	Feedback signal	Use		
146025	24	2–10 V	2–10 V	DN 65 - DN 150	1	–

CONNECTION AND REGULATION KIT FOR HVAC TERMINAL UNITS

149

tech. broch. 01336

Connection and regulation kit
for HVAC terminal units.
CR dezincification resistant alloy body.
Complete with:
- pressure independent control valve,
- three-way shut-off valve,
- integrated by-pass,
- Venturi device with pressure test ports (only in codes 149.00 **...**),
- filtering cartridge,
- fill/drain cock.
- pre-formed shell insulation.



Max. working pressure: 25 bar.
Temperature range: -10–120 °C.
Max. percentage of glycol: 50 %.
Δp range (PICV): 25–400 kPa.
Centre distance: **80 mm**.
Fitted for 145 series actuator and 6565/6566 series thermo-electric actuator.
PATENT PENDING.

Optional drain cock
for 149 series.

Code		Use		
F0000680	3/4" M x 3/4" F	DN 15	1	–
F0000681	1" M x 1" F	DN 20	1	–
F0000682	1 1/4" M x 1 1/4" F	DN 25	1	–

149

Stainless steel flexible hoses.
L = 300 mm.
PN 25

Code				
149000 530	3/4" F x 3/4" F	DN 16	1	–
149000 630	1" F x 1" F	DN 20	1	–
149000 730	1 1/4" F x 1 1/4" F	DN 25	1	–

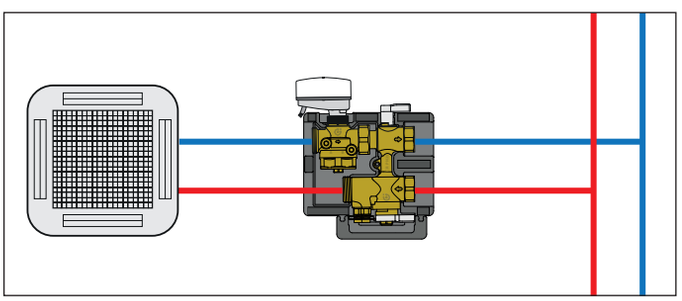
With Venturi device

Code	DN	Kv Venturi (m³/h)	Flow rates range (m³/h)		
149400 H10	15	0,25	0,02–0,10	1	–
149400 H20	15	0,50	0,10–0,20	1	–
149400 H40	15	1,10	0,20–0,40	1	–
149400 H80	15	2,35	0,40–0,80	1	–
149500 H10	20	0,25	0,02–0,10	1	–
149500 H20	20	0,50	0,10–0,20	1	–
149500 H40	20	1,10	0,20–0,40	1	–
149500 H80	20	2,35	0,40–0,80	1	–
149500 1H2	20	5,00	0,80–1,20	1	–
149600 1H8	25	5,00	1,20–1,80	1	–
149600 3H0	25	9,60	1,80–3,00	1	–
149600 3H7	25	9,60	1,85–3,70	1	–

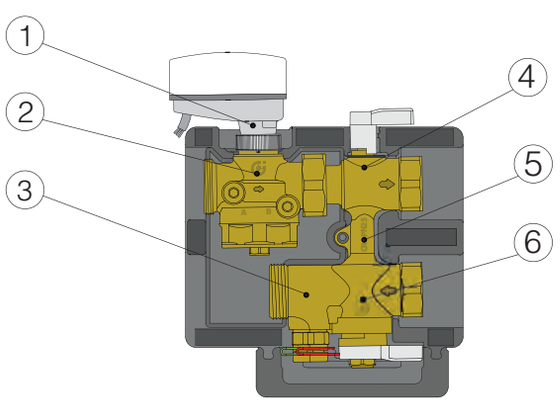
Without Venturi device

Code	DN	Flow rates range (m³/h)		
149410 H20	15	0,02–0,20	1	–
149410 H40	15	0,08–0,40	1	–
149410 H80	15	0,08–0,80	1	–
149510 H20	20	0,02–0,20	1	–
149510 H40	20	0,08–0,40	1	–
149510 H80	20	0,08–0,80	1	–
149510 1H2	20	0,12–1,20	1	–
149610 1H8	25	0,18–1,80	1	–
149610 3H0	25	0,30–3,00	1	–
149610 3H7	25	0,37–3,70	1	–

Application diagram of 149 series



Characteristics components



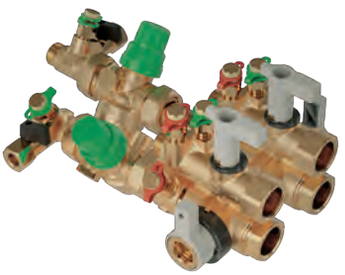
1. Actuator (optional)
2. Pressure independent control valve (PICV)
3. Venturi device for flow rate measurement with connections for pressure test ports (in 149.00 codes only)
4. Three-way shut-off valve
5. By-pass
6. Three-way shut-off valve with built-in strainer

CONNECTION AND REGULATION KITS FOR HVAC TERMINAL UNITS

149

tech. broch. 01349

Connection and regulation kit
for HVAC terminal units.
CR dezincification resistant alloy body.
Complete with:
- pressure independent control valve,
- three-way shut-off valve,
- filtering cartridge,
- integrated by-pass,
- Venturi device with pressure test ports,
- fill/drain cock.

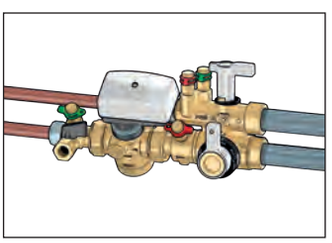


Max. working pressure: 25 bar.
Temperature range: -10–120 °C.
Max. percentage of glycol: 50 %.
Δp range (PICV): 25–400 kPa.
Centre distance: **40 mm**.
Fitted for 145 series actuator and 6565/6566 series thermo-electric actuator.

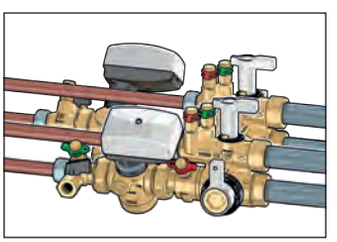
Code	DN	Kv Venturi (m³/h)	Flow rates range (m³/h)		
149500 H08 001	20	0,15	0,02–0,08	1	–
149500 H20 001	20	0,50	0,08–0,20	1	–
149500 H40 001	20	1,10	0,20–0,40	1	–
149500 H80 001	20	2,25	0,40–0,80	1	–
149500 1H2 001	20	3,90	0,60–1,20	1	–

Code	DN	Kv Venturi (m³/h)	Flow rates range (m³/h)		
149500 H08 002	20	0,15	0,02–0,08	1	–
149500 H20 002	20	0,50	0,08–0,20	1	–
149500 H40 002	20	1,10	0,20–0,40	1	–
149500 H80 002	20	2,25	0,40–0,80	1	–
149500 1H2 002	20	3,90	0,60–1,20	1	–

Single installation
code 149500 ... 001



Double installation
code 149500 ... 001+
code 149500 ... 002



ACTUATORS FOR KIT AND CONTROL VALVES (PICV)

145 FLOWMATIC®

tech. broch. 01336

Proportional linear actuator
for FLOWMATIC® 145 series control valve
and 149 series kit.
Supply: 24 V (AC)/(DC).
Control signal: 0(2)–10 V, 0(4)–20 mA, 0–5 V, 5–10 V.
Feedback signal: 0–10 V.
Ambient temperature range: 0–50 °C.
Protection class: IP 54.
Connection: M 30 p.1,5.
Supply cable length: 2 m.

CE

Code	Tension V	Control signal	Feedback signal		
145013	24	0–10 V	0–10 V	1	–

6565

tech. broch. 01336

Proportional thermo-electric actuator
for FLOWMATIC® 145 series control valve
and 149 series kit.
Quick-coupling installation, with a clip adapter.
Normally closed.
Supply: 24 V (AC)/(DC).
Control signal: 0–10 V.
Feedback signal: 0–10 V.
Power consumption: 1,2 W.
Ambient temperature range: 0–60 °C.
Protection class: IP 54.
Connection: M 30 p.1,5.
Supply cable length: 1 m.

CE

Code	Tension V	Control signal	Feedback signal		
656524	24	0–10 V	0–10 V	100	–

6565/6566

Thermo-electric actuator
for FLOWMATIC® 145 series control valve
and 149 series kit.
Quick-coupling installation, with a clip adapter.
Supply: 230 V (AC) o 24 V (AC)/(DC).
Control signal: ON/OFF.
Power consumption: 1 W.
Ambient temperature range: 0–60 °C.
Protection class: IP 54.
Connection: M 30 p.1,5.
Supply cable length: 1 m.

CE

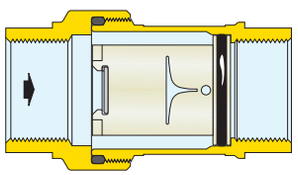
Code	Tension V	Control signal			
656502	230	ON/OFF	normally closed	100	–
656504	24	ON/OFF	normally closed	100	–
656602	230	ON/OFF	normally open	100	–
656604	24	ON/OFF	normally open	100	–

COMPACT AUTOMATIC FLOW RATE REGULATOR WITH HIGH RESISTANCE POLYMER CARTRIDGE

127 AUTOFLOW®

tech. broch. 01166

Compact automatic flow rate regulator.
Brass body.
AUTOFLOW® cartridge:
1/2"–11/4" in high resistance polymer,
1 1/2" - 2" in high resistance polymer and stainless steel.
Max. working pressure: 16 bar.
Temperature range: 0–100 °C.
Max. percentage of glycol: 50 %.
Flow rates: 0,02–0,06 m³/h - Δp range: 20–200 kPa - Accuracy: ± 15 %.
Flow rates: 0,085–11,0 m³/h - Δp range: 15–200 kPa - Accuracy: ± 10 %.
PATENT.



Code			
127141 ●●●	1/2"	1	–
127151 ●●●	3/4"	1	–
127161 ●●●	1"	1	–
127171 ●●●	1 1/4"	1	–
127181 ●●●	1 1/2"	1	–
127191 ●●●	2"	1	–

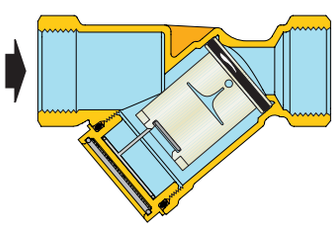
Code	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m³/h)
127141 ●●●	15	15–200 (20–200*)	0,02*; 0,04*; 0,06*; 0,085; 0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4
127151 ●●●	15	15–200 (20–200*)	0,02*; 0,04*; 0,06*; 0,085; 0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6
127161 ●●●	15	15–200	0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 4,75; 5,0
127171 ●●●	15	15–200	0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 4,75; 5,0
127181 ●●●	15	15–200	4,5; 4,75; 5,0; 5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0
127191 ●●●	15	15–200	4,5; 4,75; 5,0; 5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0

AUTOMATIC FLOW RATE REGULATOR WITH HIGH RESISTANCE POLYMER CARTRIDGE AND BALL VALVE

128 AUTOFLOW®

tech. broch. 01269

Compact automatic flow rate regulator.
Brass body.
AUTOFLOW® cartridge: in high resistance polymer.
Max. working pressure: 16 bar.
Temperature range: 0–100 °C.
Max. percentage of glycol: 50 %.
Flow rates: 0,02–0,06 m³/h - Δp range: 20–200 kPa - Accuracy: ± 15 %.
Flow rates: 0,085–5,0 m³/h - Δp range: 15–200 kPa - Accuracy: ± 10 %.



Code			
128141 ●●●	1/2" F	1	–
128151 ●●●	3/4" F	1	–
128161 ●●●	1" F	1	–
128171 ●●●	1 1/4" F	1	–

NEW

Insulation for Compact automatic flow rate regulator 128 series.

Code	Use		
CBN128141	128141-128151	1	–
CBN128161	128161-128171	1	–

Code	Kv (m³/h)	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m³/h)
128141 ●●●	6,69	15	15–200 (20–200*)	0,02*; 0,04*; 0,06*; 0,085; 0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2
128151 ●●●	7,58	15	15–200 (20–200*)	0,02*; 0,04*; 0,06*; 0,085; 0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4
128161 ●●●	14,00	15	15–200	0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,2; 2,5; 2,7; 3,0; 3,2; 3,5; 3,7; 4,0; 4,2; 4,5; 4,7; 5,0
128171 ●●●	14,50	15	15–200	0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,2; 2,5; 2,7; 3,0; 3,2; 3,5; 3,7; 4,0; 4,2; 4,5; 4,7; 5,0

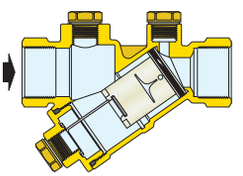
AUTOMATIC FLOW RATE REGULATOR WITH HIGH RESISTANCE POLYMER CARTRIDGE

126 AUTOFLOW®

tech. broch. 01141

Automatic flow rate regulator.
CR dezincification resistant alloy body.
AUTOFLOW® cartridge:
1/2"–11/4" in high resistance polymer,
1 1/2" - 2" in high resistance polymer and stainless steel.
Max. working pressure: 25 bar.
Temperature range: -20–100 °C.
Max. percentage of glycol: 50 %.
Δp range: 15–200 kPa.
Flow rates: 0,085–11,0 m³/h.
Accuracy: ± 10 %.

Fitted for connection of pressure ports and drain valve.
PATENT.



Code			
126141 ●●●	1/2"	1	–
126151 ●●●	3/4"	1	–
126161 ●●●	1"	1	–
126171 ●●●	1 1/4"	1	–
126181 ●●●	1 1/2"	1	–
126191 ●●●	2"	1	–

Code	Kv (m³/h)	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m³/h)
126141 ●●●	6,69	15	15–200	0,085; 0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2
126151 ●●●	7,58	15	15–200	0,085; 0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6
126161 ●●●	14,00	15	15–200	0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 4,75; 5,0
126171 ●●●	14,50	15	15–200	0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 4,75; 5,0
126181 ●●●	34,72	15	15–200	5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0
126191 ●●●	37,38	15	15–200	5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0

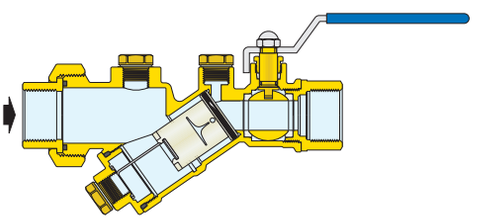
AUTOMATIC FLOW RATE REGULATOR WITH HIGH RESISTANCE POLYMER CARTRIDGE AND BALL VALVE

121 AUTOFLOW®

tech. broch. 01141

Combination of automatic flow rate regulator and ball valve.
CR dezincification resistant alloy body.
AUTOFLOW® cartridge:
1/2"–11/4" in high resistance polymer,
1 1/2" - 2" in high resistance polymer and stainless steel.
Max. working pressure: 25 bar.
Temperature range: -20–100 °C.
Max. percentage of glycol: 50 %.
Δp range: 15–200 kPa.
Flow rates: 0,085–11,0 m³/h.
Accuracy: ± 10 %.

Fitted for connection of pressure ports and drain valve.
PATENT.



Code			
121141 ●●●	1/2"	1	–
121151 ●●●	3/4"	1	–
121161 ●●●	1"	1	–
121171 ●●●	1 1/4"	1	–
121181 ●●●	1 1/2"	1	–
121191 ●●●	2"	1	–

Code	Kv (m³/h)	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m³/h)
121141 ●●●	6,90	15	15–200	0,085; 0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2
121151 ●●●	7,73	15	15–200	0,085; 0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6
121161 ●●●	18,00	15	15–200	0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 4,75; 5,0
121171 ●●●	18,50	15	15–200	0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 4,75; 5,0
121181 ●●●	47,24	15	15–200	5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0
121191 ●●●	48,89	15	15–200	5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0

Method of coding AUTOFLOW® 121 - 126 - 127 - 128 series

For correct identification of the device, fill in the form indicating: series, size, flow rate and Δp range.

Complete code

1st	2nd	3rd	4th	5th	6th	7th	8th	9th
			1		1			
SERIES				SIZE		FLOW RATE - Δp RANGE		

SERIES

1st 2nd 3rd

The first three digits indicate the series

121	AUTOFLOW® regulator and ball valve
126	AUTOFLOW® regulator
127	AUTOFLOW® compact regulator
128	AUTOFLOW® compact regulator

SIZE

5th

The fifth digit indicates the size

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Digit	4	5	6	7	8	9

FLOW RATE - Δp RANGE

7th 8th 9th

The last three digits indicate the available flow rate

Δp range 20–200 kPa

m³/h	digit	m³/h	digit	m³/h	digit
0,02	M02	0,04	M04	0,06	M06

Δp range 15–200 kPa

m³/h	digit	m³/h	digit	m³/h	digit	m³/h	digit	m³/h	digit	m³/h	digit
0,085	M08	0,40	M40	1,20	1M2	2,75	2M7	4,50	4M5	7,50	7M5
0,12	M12	0,50	M50	1,40	1M4	3,00	3M0	4,75	4M7	8,00	8M0
0,15	M15	0,60	M60	1,60	1M6	3,25	3M2	5,00	5M0	8,50	8M5
0,20	M20	0,70	M70	1,80	1M8	3,50	3M5	5,50	5M5	9,00	9M0
0,25	M25	0,80	M80	2,00	2M0	3,75	3M7	6,00	6M0	9,50	9M5
0,30	M30	0,90	M90	2,25	2M2	4,00	4M0	6,50	6M5	10,0	10M
0,35	M35	1,00	1M0	2,50	2M5	4,25	4M2	7,00	7M0	11,0	11M

Minimum differential pressure required

This is given by the sum of two values:
1. the minimum working Δp of the AUTOFLOW® cartridge;
2. the Δp required for the nominal flow rate to pass through the valve body. This value can be determined on the basis of the values of Kv shown above referring to the valve body.

Pump head $H = \Delta p_{circuit} + \Delta p_{requise}$

SPARE POLYMER CARTRIDGES. For 127 series.

For 1/2" - 3/4" bodies

Code	Flow rate (m³/h)
02M02 XXG	0,020
02M04 XXG	0,040
02M06 XXG	0,060
02M08 XXG	0,085
02M12 XXG	0,12
02M15 XXG	0,15
02M20 XXG	0,20
02M25 XXG	0,25
02M30 XXG	0,30
02M35 XXG	0,35
02M40 XXG	0,40
02M50 XXG	0,50
02M60 XXG	0,60
02M70 XXG	0,70
02M80 XXG	0,80
02M90 XXG	0,90
021M0 XXG	1,00
021M2 XXG	1,20
021M4 XXG	1,40
021M6 XXG	1,60

For 1" - 1 1/4" bodies, with adapter

Code	Flow rate (m³/h)
02M50 XXH	0,50
02M60 XXH	0,60
02M70 XXH	0,70
02M80 XXH	0,80
02M90 XXH	0,90
021M0 XXH	1,00
021M2 XXH	1,20
021M4 XXH	1,40
021M6 XXH	1,60

For 1" - 1 1/4" bodies

Code	Flow rate (m³/h)
041M8 XXH	1,80
042M0 XXH	2,00
042M2 XXH	2,25
042M5 XXH	2,50
042M7 XXH	2,75
043M0 XXH	3,00
043M2 XXH	3,25
043M5 XXH	3,50
043M7 XXH	3,75
044M0 XXH	4,00
044M2 XXH	4,25
044M5 XXH	4,50
044M7 XXH	4,75
045M0 XXH	5,00

For 1 1/2" - 2" bodies, with adapter

Code	Flow rate (m³/h)
044M5 XXI	4,50
044M7 XXI	4,75
045M0 XXI	5,00

For 1 1/2" - 2" bodies

Code	Flow rate (m³/h)
055M5 XXI	5,50
056M0 XXI	6,00
056M5 XXI	6,50
057M0 XXI	7,00
057M5 XXI	7,50
058M0 XXI	8,00
058M5 XXI	8,50
059M0 XXI	9,00
059M5 XXI	9,50
0510M XXI	10,0
0511M XXI	11,0

Spare AUTOFLOW® cartridge complete with label for fixing to the body of the AUTOFLOW® device.

SPARE POLYMER CARTRIDGES. For 128 series.

For 1/2″ - 3/4″ bodies

Code	Flow rate (m³/h)
02M02 XXL	0,02
02M04 XXL	0,04
02M06 XXL	0,06
02M08 XXL	0,085
02M12 XXL	0,12
02M15 XXL	0,15
02M20 XXL	0,20
02M25 XXL	0,25
02M30 XXL	0,30
02M35 XXL	0,35
02M40 XXL	0,40
02M50 XXL	0,50
02M60 XXL	0,60
02M70 XXL	0,70
02M80 XXL	0,80
02M90 XXL	0,90
021M0 XXL	1,00
021M2 XXL	1,20
021M4 XXL	1,40

For 1″ - 1 1/4″ bodies, with adapter

Code	Flow rate (m³/h)
02M50 XXM	0,50
02M60 XXM	0,60
02M70 XXM	0,70
02M80 XXM	0,80
02M90 XXM	0,90
021M0 XXM	1,00
021M2 XXM	1,20
021M4 XXM	1,40
021M6 XXM	1,60

For 1″ - 1 1/4″ bodies

Code	Flow rate (m³/h)
041M8 XXM	1,80
042M0 XXM	2,00
042M2 XXM	2,25
042M5 XXM	2,50
042M7 XXM	2,75
043M0 XXM	3,00
043M2 XXM	3,25
043M5 XXM	3,50
043M7 XXM	3,75
044M0 XXM	4,00
044M2 XXM	4,25
044M5 XXM	4,50
044M7 XXM	4,75
045M0 XXM	5,00

Spare AUTOFLOW® cartridge complete with metal tag and metal chain for fixing to the body of the AUTOFLOW® device.

SPARE POLYMER CARTRIDGES. For 121 - 126 series.

For 1/2″ - 3/4″ bodies

Code	Flow rate (m³/h)
02M08 XXX	0,085
02M12 XXX	0,12
02M15 XXX	0,15
02M20 XXX	0,20
02M25 XXX	0,25
02M30 XXX	0,30
02M35 XXX	0,35
02M40 XXX	0,40
02M50 XXX	0,50
02M60 XXX	0,60
02M70 XXX	0,70
02M80 XXX	0,80
02M90 XXX	0,90
021M0 XXX	1,00
021M2 XXX	1,20
021M4 XXX	1,40
021M6 XXX	1,60

For 1″ - 1 1/4″ bodies, with adapter

Code	Flow rate (m³/h)
02M50 XXC	0,50
02M60 XXC	0,60
02M70 XXC	0,70
02M80 XXC	0,80
02M90 XXC	0,90
021M0 XXC	1,00
021M2 XXC	1,20
021M4 XXC	1,40
021M6 XXC	1,60

For 1″ - 1 1/4″ bodies

Code	Flow rate (m³/h)
041M8 XXC	1,80
042M0 XXC	2,00
042M2 XXC	2,25
042M5 XXC	2,50
042M7 XXC	2,75
043M0 XXC	3,00
043M2 XXC	3,25
043M5 XXC	3,50
043M7 XXC	3,75
044M0 XXC	4,00
044M2 XXC	4,25
044M5 XXC	4,50
044M7 XXC	4,75
045M0 XXC	5,00

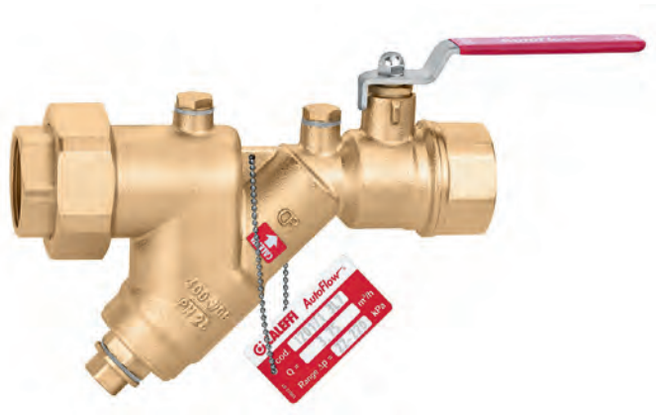
For 1 1/2″ - 2″ bodies

Code	Flow rate (m³/h)
055M5 XXD	5,50
056M0 XXD	6,00
056M5 XXD	6,50
057M0 XXD	7,00
057M5 XXD	7,50
058M0 XXD	8,00
058M5 XXD	8,50
059M0 XXD	9,00
059M5 XXD	9,50
0510M XXD	10,0
0511M XXD	11,0

NOTE:
When ordering, give the full code of the AUTOFLOW® device into which the cartridge is to be fitted (code shown on the metal plate supplied with every AUTOFLOW® device).

Spare AUTOFLOW® cartridge complete with metal tag for fixing to the body of the AUTOFLOW® device.

AUTOMATIC FLOW RATE REGULATOR WITH STAINLESS STEEL CARTRIDGE AND BALL VALVE

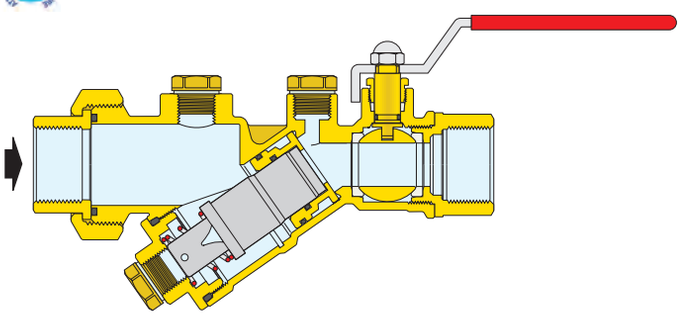


120 AUTOFLOW®

tech. broch. 01041

Combination of automatic flow rate regulator and ball valve.
CR dezincification resistant alloy body.
Stainless steel AUTOFLOW® cartridge.
Max. working pressure: 25 bar.
Temperature range: 0–110 °C.
Max. percentage of glycol: 50 %.
Δp range: 10–95 kPa; 22–210 kPa; 40–390 kPa.
Flow rates: 0,12–15,5 m³/h.
Accuracy: ± 5 %.

Fitted for connection of pressure ports and drain valve.



Code			
120141 ●●●	1/2″	1	–
120151 ●●●	3/4″	1	–
120161 ●●●	1″	1	–
120171 ●●●	1 1/4″	1	–
120181 ●●●	1 1/2″	1	–
120191 ●●●	2″	1	–

Code	Kv (m³/h)	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m³/h)
120141 ●●●	6,90	10	10–95	0,3; 0,45; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0
120151 ●●●	7,73	10	10–95	0,3; 0,45; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0
120161 ●●●	17,04	10	10–95	0,7; 0,8; 0,9; 1,0
120171 ●●●	17,74	10	10–95	0,7; 0,8; 0,9; 1,0
120181 ●●●	47,24	10	10–95	2,75; 3,0; 3,25; 3,5; 3,75; 4,25; 5,0; 7,0;
120191 ●●●	48,89	10	10–95	2,75; 3,0; 3,25; 3,5; 3,75; 4,25; 5,0; 7,0;

Code	Kv (m³/h)	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m³/h)
120141 ●●●	6,90	22	22–210	0,12; 0,15; 0,2; 0,25; 0,35; 0,4; 0,6; 0,7; 0,8; 0,9; 1,2; 1,4; 1,6; 1,8
120151 ●●●	7,73	22	22–210	0,12; 0,15; 0,2; 0,25; 0,35; 0,4; 0,6; 0,7; 0,8; 0,9; 1,2; 1,4; 1,6; 1,8
120161 ●●●	17,04	22	22–210	1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25
120171 ●●●	17,74	22	22–210	1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25
120181 ●●●	47,24	22	22–210	4,0; 4,5; 5,5; 6,0; 6,5; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0
120191 ●●●	48,89	22	22–210	4,0; 4,5; 5,5; 6,0; 6,5; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0

Code	Kv (m³/h)	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m³/h)
120141 ●●●	6,90	40	40–390	0,25; 0,35; 0,45; 0,7; 0,9; 1,1; 1,4; 1,6; 1,8; 2,1; 2,25; 2,5; 2,75
120151 ●●●	7,73	40	40–390	0,25; 0,35; 0,45; 0,7; 0,9; 1,1; 1,4; 1,6; 1,8; 2,1; 2,25; 2,5; 2,75
120161 ●●●	17,04	40	40–390	1,6; 1,8; 2,1; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,0; 5,5; 6,0
120171 ●●●	17,74	40	40–390	1,6; 1,8; 2,1; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,0; 5,5; 6,0
120181 ●●●	47,24	40	40–390	3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 10,0; 11,0; 12,0; 13,0; 14,5; 15,5
120191 ●●●	48,89	40	40–390	3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 10,0; 11,0; 12,0; 13,0; 14,5; 15,5

●●● *For code completion see method of coding on page 252*

Minimum differential pressure required

This is given by the sum of two values:
1. the minimum working Δp of the AUTOFLOW® cartridge;
2. the Δp required for the nominal flow rate to pass through the valve body. This value can be determined on the basis of the values of Kv shown above referring to the valve body.

Pump head $H = \Delta p_{circuit} + \Delta p_{requise}$

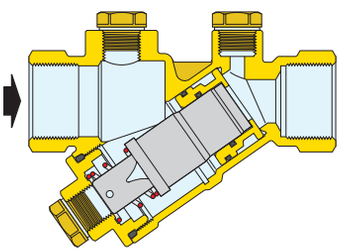
AUTOMATIC FLOW RATE REGULATOR WITH STAINLESS STEEL CARTRIDGE

125 AUTOFLOW®

tech. broch. 01041

Automatic flow rate regulator.
CR dezincification resistant alloy body.
Stainless steel AUTOFLOW® cartridge.
Max. working pressure: 25 bar.
Temperature range: -20–110 °C.
Max. percentage of glycol: 50 %.
Δp range: 10–95 kPa; 22–210 kPa; 40–390 kPa.
Flow rates: 0,12–22 m³/h.
Accuracy: ± 5 %.

Fitted for connection of pressure ports and drain valve.



Code			
125141 ●●●	1/2″	1	–
125151 ●●●	3/4″	1	–
125161 ●●●	1″	1	–
125171 ●●●	1 1/4″	1	–
125181 ●●●	1 1/2″	1	–
125191 ●●●	2″	1	–
125101 ●●●	2 1/2″	1	–

Code	Kv (m³/h)	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m³/h)
125141 ●●●	6,69	10	10–95	0,3; 0,45; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0
125151 ●●●	7,58	10	10–95	0,3; 0,45; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0
125161 ●●●	13,42	10	10–95	0,7; 0,8; 0,9; 1,0
125171 ●●●	13,26	10	10–95	0,7; 0,8; 0,9; 1,0
125181 ●●●	34,72	10	10–95	2,75; 3,0; 3,25; 3,5; 3,75; 4,25; 5,0; 7,0;
125191 ●●●	37,38	10	10–95	2,75; 3,0; 3,25; 3,5; 3,75; 4,25; 5,0; 7,0;

Code	Kv (m³/h)	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m³/h)
125141 ●●●	6,69	22	22–210	0,12; 0,15; 0,2; 0,25; 0,35; 0,4; 0,6; 0,7; 0,8; 0,9; 1,2; 1,4; 1,6; 1,8
125151 ●●●	7,58	22	22–210	0,12; 0,15; 0,2; 0,25; 0,35; 0,4; 0,6; 0,7; 0,8; 0,9; 1,2; 1,4; 1,6; 1,8
125161 ●●●	13,42	22	22–210	1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25
125171 ●●●	13,26	22	22–210	1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25
125181 ●●●	34,72	22	22–210	4,0; 4,5; 5,5; 6,0; 6,5; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0
125191 ●●●	37,38	22	22–210	4,0; 4,5; 5,5; 6,0; 6,5; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0
125101 ●●●	75,82	22	22–210	9,0; 9,5; 10,0; 11,0; 12,0; 13,5; 14,5; 15,5; 16,5; 17,0

Code	Kv (m³/h)	Min. working Δp (kPa)	Δp range (kPa)	Flow rates (m³/h)
125141 ●●●	6,69	40	40–390	0,25; 0,35; 0,45; 0,7; 0,9; 1,1; 1,4; 1,6; 1,8; 2,1; 2,25; 2,5; 2,75
125151 ●●●	7,58	40	40–390	0,25; 0,35; 0,45; 0,7; 0,9; 1,1; 1,4; 1,6; 1,8; 2,1; 2,25; 2,5; 2,75
125161 ●●●	13,42	40	40–390	2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,0; 5,5; 6,0
125171 ●●●	13,26	40	40–390	2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,0; 5,5; 6,0
125181 ●●●	34,72	40	40–390	3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 10,0; 11,0; 12,0; 13,0; 14,5; 15,5
125191 ●●●	37,38	40	40–390	3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 10,0; 11,0; 12,0; 13,0; 14,5; 15,5
125101 ●●●	75,82	40	40–390	6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 11,0; 18,0; 19,0; 20,0; 21,0; 22,0;

●●● *For code completion see method of coding on page 252*

Minimum differential pressure required

This is given by the sum of two values:
1. the minimum working Δp of the AUTOFLOW® cartridge;
2. the Δp required for the nominal flow rate to pass through the valve body. This value can be determined on the basis of the values of Kv shown above referring to the valve body.

Pump head $H = \Delta p_{circuit} + \Delta p_{requise}$

Method of coding AUTOFLOW® 120 - 125 series

For correct identification of the device, fill in the form indicating: series, size, flow rate and Δp range.

Complete code

1st	2nd	3rd	4th	5th	6th	7th	8th	9th
			1		1			
SERIES				SIZE		FLOW RATE AND Δp RANGE		

SERIES

1st 2nd 3rd

The first three digits indicate the series:

120	AUTOFLOW® regulator and ball valve
125	AUTOFLOW® regulator

SIZE

5th

The fifth digit indicates the size:

Size	1/2″	3/4″	1″	1 1/4″	1 1/2″	2″	2 1/2″
Digit	4	5	6	7	8	9	0

FLOW RATE AND Δp RANGE

7th 8th 9th

The last three digits indicate the available flow rates.

Δp range 10–95 kPa

m³/h	digit	m³/h	digit	m³/h	digit	m³/h	digit
0,30	S30	0,70	S70	2,75	2S7	3,75	3S7
0,45	S45	0,80	S80	3,00	3S0	4,25	4S2
0,50	S50	0,90	S90	3,25	3S2	5,00	5S0
0,60	S60	1,00	1S0	3,50	3S5	7,00	7S0

Δp range 22–210 kPa

m³/h	digit	m³/h	digit	m³/h	digit	m³/h	digit	m³/h	digit	m³/h	digit
0,12	L12	0,70	L70	1,80	1L8	3,50	3L5	6,50	6L5	11,0	11L
0,15	L15	0,80	L80	2,00	2L0	3,75	3L7	7,50	7L5	12,0	12L
0,20	L20	0,90	L90	2,25	2L2	4,00	4L0	8,00	8L0	13,5	13L
0,25	L25	1,00	1L0	2,50	2L5	4,25	4L2	8,50	8L5	14,5	14L
0,35	L35	1,20	1L2	2,75	2L7	4,50	4L5	9,00	9L0	15,5	15L
0,40	L40	1,40	1L4	3,00	3L0	5,50	5L5	9,50	9L5	16,5	16L
0,60	L60	1,60	1L6	3,25	3L2	6,00	6L0	10,0	10L	17,0	17L

Δp range 40–390 kPa

m³/h	digit	m³/h	digit	m³/h	digit	m³/h	digit	m³/h	digit	m³/h	digit	m³/h	digit
0,25	H25	1,40	1H4	2,75	2H7	4,25	4H2	7,00	7H0	11,0	11H	19,0	19H
0,35	H35	1,60	1H6	3,00	3H0	4,50	4H5	7,50	7H5	12,0	12H	20,0	20H
0,45	H45	1,80	1H8	3,25	3H2	5,00	5H0	8,00	8H0	13,0	13H	21,0	21H
0,70	H70	2,10	2H1	3,50	3H5	5,50	5H5	8,50	8H5	14,5	14H	22,0	22H
0,90	H90	2,25	2H2	3,75	3H7	6,00	6H0	9,00	9H0	15,5	15H		
1,10	1H1	2,50	2H5	4,00	4H0	6,50	6H5	10,0	10H	18,0	18H		

SPARE STAINLESS STEEL CARTRIDGES

Spare AUTOFLOW® cartridge complete with metal tag and metal chain for fixing to the body of the AUTOFLOW® device.
Available in different models depending on the flow rate.
The different colours identify the available models.

NOTE: When ordering, give the full code of the AUTOFLOW® device into which the cartridge is to be fitted (code shown on the metal plate supplied with every AUTOFLOW® device).

Δp range 10–95 kPa

For 1/2″ - 3/4″ bodies

Code	Flow rate (m³/h)
03S30 XXX	0,30
03S45 XXX	0,45
03S50 XXX	0,50
03S60 XXX	0,60
03S70 XXX	0,70
03S80 XXX	0,80
03S90 XXX	0,90
031S0 XXX	1,00

For 1″ bodies

Code	Flow rate (m³/h)
04S70 XXF	0,70
04S80 XXF	0,80
04S90 XXF	0,90
041S0 XXF	1,00

For 1 1/2″ - 2″ bodies

Code	Flow rate (m³/h)
052S7 XXX	2,75
053S0 XXX	3,00
053S2 XXX	3,25
053S5 XXX	3,50
053S7 XXX	3,75
054S2 XXX	4,25
055S0 XXX	5,00
057S0 XXX	7,00

Δp range 22–210 kPa

For 1/2″ - 3/4″ bodies

Code	Flow rate (m³/h)
03L12 XXX	0,12
03L15 XXX	0,15
03L20 XXX	0,20
03L25 XXX	0,25
03L35 XXX	0,35
03L40 XXX	0,40
03L60 XXX	0,60
03L70 XXX	0,70
03L80 XXX	0,80
03L90 XXX	0,90
031L2 XXX	1,20
031L4 XXX	1,40
031L6 XXX	1,60
031L8 XXX	1,80

For 1″ - 1 1/4″ bodies

Code	Flow rate (m³/h)
041L0 XXF	1,00
041L2 XXF	1,20
041L4 XXF	1,40
041L6 XXF	1,60
041L8 XXF	1,80
042L0 XXF	2,00
042L2 XXF	2,25
042L5 XXF	2,50
042L7 XXF	2,75
043L0 XXF	3,00
043L2 XXF	3,25
043L5 XXF	3,50
043L7 XXF	3,75
044L0 XXF	4,00
044L2 XXF	4,25

For 1 1/2″ - 2″ bodies

Code	Flow rate (m³/h)
054L0 XXX	4,00
054L5 XXX	4,50
055L5 XXX	5,50
056L0 XXX	6,00
056L5 XXX	6,50
057L5 XXX	7,50
058L0 XXX	8,00
058L5 XXX	8,50
059L0 XXX	9,00
059L5 XXX	9,50
0510L XXX	10,00
0511L XXX	11,00

For 2 1/2″ bodies

Code	Flow rate (m³/h)
069L0 XXF	9,00
069L5 XXF	9,50
0610L XXF	10,00
0611L XXF	11,00
0612L XXF	12,00
0613L XXF	13,00
0614L XXF	14,00
0615L XXF	15,00
0616L XXF	16,00
0617L XXF	17,00

Δp range 40–390 kPa

For 1/2″ - 3/4″ bodies

Code	Flow rate (m³/h)
03H25 XXX	0,25
03H35 XXX	0,35
03H45 XXX	0,45
03H70 XXX	0,70
03H90 XXX	0,90
031H1 XXX	1,10
031H4 XXX	1,40
031H6 XXX	1,60
031H8 XXX	1,80
032H2 XXX	2,25
032H5 XXX	2,50
032H7 XXX	2,75

For 1″ - 1 1/4″ bodies

Code	Flow rate (m³/h)
042H5 XXF	2,50
042H7 XXF	2,75
043H0 XXF	3,00
043H2 XXF	3,25
043H5 XXF	3,50
043H7 XXF	3,75
044H0 XXF	4,00
044H2 XXF	4,25
044H5 XXF	4,50
045H0 XXF	5,00
045H5 XXF	5,50
046H0 XXF	6,00

For 1 1/2″ - 2″ bodies

Code	Flow rate (m³/h)
043H0 XXX	3,00
043H2 XXX	3,25
043H5 XXX	3,50
043H7 XXX	3,75
044H0 XXX	4,00
044H2 XXX	4,25
044H5 XXX	4,50
056H5 XXX	6,50
057H0 XXX	7,00
057H5 XXX	7,50
058H0 XXX	8,00
058H5 XXX	8,50
059H0 XXX	9,00
0510H XXX	10,00
0511H XXX	11,00
0512H XXX	12,00
0513H XXX	13,00
0514H XXX	14,50
0515H XXX	15,50

For 2 1/2″ bodies

Code	Flow rate (m³/h)
066H5 XXX	6,50
067H0 XXX	7,00
057H5 XXX	7,50
058H0 XXX	8,00
058H5 XXX	8,50
059H0 XXX	9,00
0511H XXX	11,00

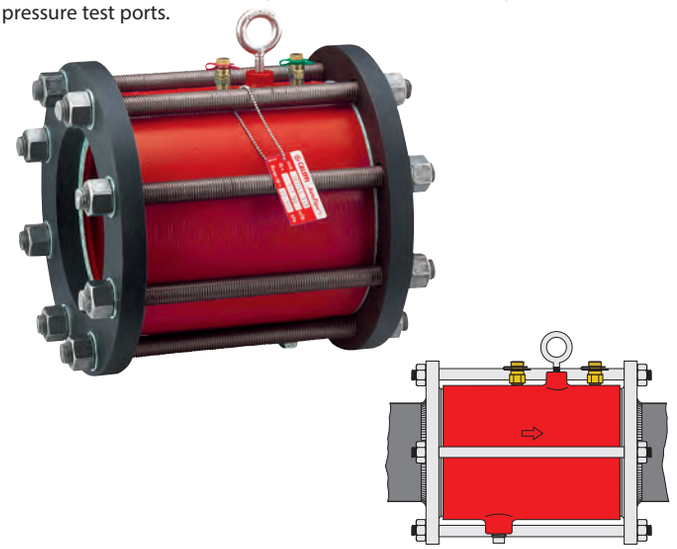
AUTOMATIC FLOW REGULATOR WITH STAINLESS STEEL CARTRIDGE

103
AUTOFLOW®

tech. broch. 01041

Automatic flow rate regulator, flanged version.
Cast iron body. Stainless steel AUTOFLOW® cartridge.
Max. working pressure: 16 bar.
Temperature range: -20–110°C.
Max. percentage of glycol: 50 %.
Δp range: 22–210 kPa; 40–390 kPa; 55–210 kPa.
Flow rates: 9–4400 m³/h.
Accuracy: ± 5 %.

Supplied with flat counterflanges EN 1092-1 PN 16, rods, gasket and quick-fit pressure test ports.



Minimum differential pressure required

This is equal to the min. working Δp of the AUTOFLOW® cartridge (22, 40 or 55 kPa).
Pump head H = $\Delta p_{circuit} + \Delta p_{requise}$

Code	DN	Min. working (kPa)	Flow rates (m³/h)	Δp range (kPa)		
103111 ●●●	65	22	9– 17	22–210	1	–
103113 ●●●	65	40	18 – 23	40–390	1	–
103114 ●●●	65	55	25 – 36	55–210	1	–
103121 ●●●	80	22	9– 17	22–210	1	–
103123 ●●●	80	40	18 – 23	40–390	1	–
103124 ●●●	80	55	25 – 36	55–210	1	–
103231 ●●●	100**	22	18– 34	22–210	1	–
103233 ●●●	100**	40	23 – 45	40–390	1	–
103234 ●●●	100**	55	50 – 73	55–210	1	–
103141 ●●●	125	22	18– 34	22–210	1	–
103143 ●●●	125	40	23– 45	40–390	1	–
103144 ●●●	125	55	50– 73	55–210	1	–
103151 ●●●	150	22	40 – 68	22–210	1	–
103153 ●●●	150	40	40– 91	40–390	1	–
103154 ●●●	150	55	92– 145	55–210	1	–
103161 ●●●	200*	22	80– 119	22–210	1	–
103163 ●●●	200*	40	80– 159	40–390	1	–
103164 ●●●	200*	55	160–255	55–210	1	–
103171 ●●●	250*	22	110–187	22–210	1	–
103173 ●●●	250*	40	110–250	40–390	1	–
103174 ●●●	250*	55	251– 400	55–210	1	–
103181 ●●●	300*	22	150–255	22–210	1	–
103183 ●●●	300*	40	150–341	40–390	1	–
103184 ●●●	300*	55	342– 545	55–210	1	–

* Supplied with ANSI 150 flanges.

** Supplied with flanges EN 1092-1 PN 25.

They are available on request in sizes DN 350 to DN 1000, with flow rates up to 4400 m³/h.

To identify AUTOFLOW® devices and their codes correctly, contact Caleffi technical support in advance.

Method of coding AUTOFLOW® 103 series

To identify AUTOFLOW® devices and their codes correctly, contact Caleffi technical support in advance.

For correct identification of the device, fill in the form indicating: size, Δp range and the flow rate.

Complete code

1st	2nd	3rd	4th	5th	6th	7th	8th	9th
1	0	3	1					
Series			(*)	SIZE	Δp RANGE	FLOW RATE		

(*) — 4th

for codes 103231, 103233, 103234

DN	100
Digit	2

SIZE — 5th

The fifth figure indicates the size:

DN	65	80	100	125	150	200	250	300
Digit	1	2	3	4	5	6	7	8

Δp RANGE — 6th

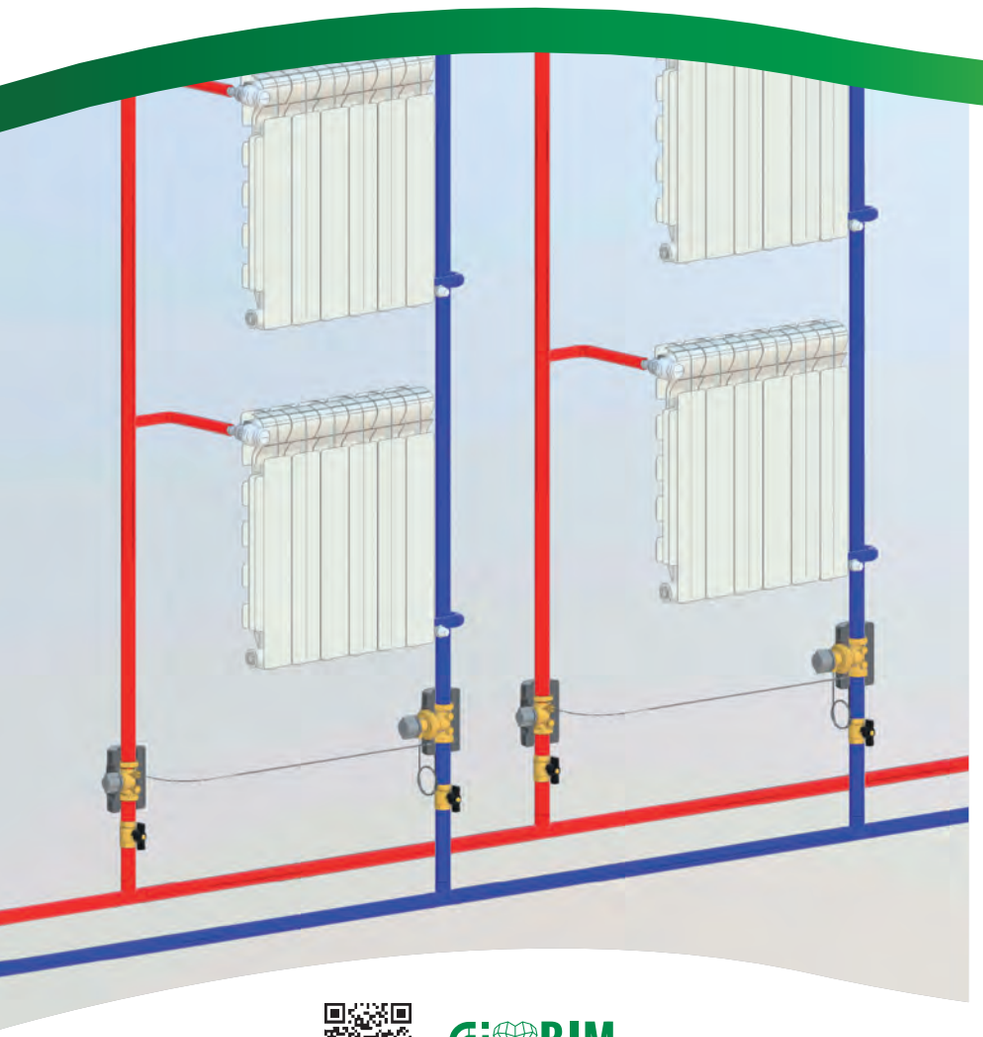
The sixth figure indicates the differential pressure range (Δp range):

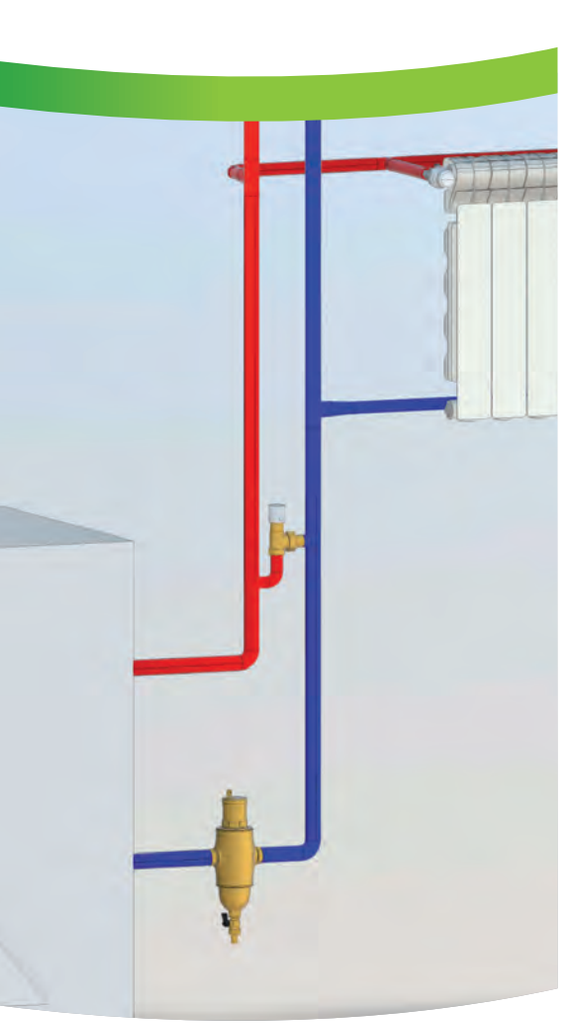
kPa	22–210	40–390	55–210
Digit	1	3	4

FLOW RATE — 7th 8th 9th

The last three digits indicate the flow rate values.

DIFFERENTIAL PRESSURE CONTROL DEVICES





BIM
bim.caleffi.com

Differential pressure control valve
Differential by-pass valve
Measuring and control accessories

DIFFERENTIAL PRESSURE CONTROL VALVE (DPCV)

140

tech. broch. 01250

Differential pressure control valve (DPCV).
CR dezincification resistant alloy body.
Complete with capillary pipe for connection to the valve on the flow pipe.
With insulation.
Max. working pressure: 16 bar.
Temperature range: -10–120 °C.
Max. percentage of glycol: 50 %.
Length of capillary pipe Ø 3 mm: 1,5 m.

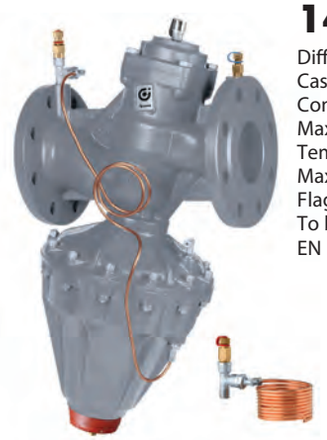
Code		Differential pressure adjustable set (mbar)			
140340	1/2″	50–300		1	5
140440	1/2″	250–600		1	5
140350	3/4″	50–300		1	5
140450	3/4″	250–600		1	5
140360	1″	50–300		1	5
140460	1″	250–600		1	5
140342	1/2″	50–300	without insulation	1	5
140442	1/2″	250–600	without insulation	1	5
140352	3/4″	50–300	without insulation	1	5
140452	3/4″	250–600	without insulation	1	5
140362	1″	50–300	without insulation	1	5
140462	1″	250–600	without insulation	1	5

140

tech. broch. 01250

Differential pressure control valve (DPCV).
CR dezincification resistant alloy body.
Complete with capillary pipe for connection to the valve on the flow pipe.
With insulation.
Max. working pressure: 10 bar.
Temperature range: -10–120 °C.
Max. percentage of glycol: 50 %.
Length of capillary pipe Ø 3 mm: 1,5 m.

Code		Differential pressure adjustable set (mbar)			
140370	1 1/4″	50–300		1	–
140470	1 1/4″	250–600		1	–
140380	1 1/2″	50–300		1	–
140480	1 1/2″	250–600		1	–
140372	1 1/4″	50–300	without insulation	1	–
140472	1 1/4″	250–600	without insulation	1	–
140382	1 1/2″	50–300	without insulation	1	–
140482	1 1/2″	250–600	without insulation	1	–
140392	2″	50–300	without insulation	1	–
140492	2″	250–600	without insulation	1	–



140

Differential pressure control valve (DPCV).
Cast iron body.
Complete with pressure ports.
Max. working pressure: 16 bar.
Temperature range: -10–120 °C.
Max. percentage of glycol: 50 %.
Flaged connections PN 16.
To be coupled with flat counterflanges EN 1092-1.

Code		Differential pressure adjustable set (mbar)		
140506	DN 65	200–800	1	–
140606	DN 65	800–1600	1	–
140508	DN 80	200–800	1	–
140608	DN 80	800–1600	1	–
140510	DN 100	200–800	1	–
140610	DN 100	800–1600	1	–
140512	DN 125	200–800	1	–
140515	DN 150	200–800	1	–

142

tech. broch. 01250

Shut-off and pre-regulation valve.
CR dezincification resistant alloy body.
Complete with pressure test ports for connection of capillary pipe.
With insulation.
Max. working pressure: 16 bar.
Temperature range: -10–120 °C.
Max. percentage of glycol: 50 %.

Code				
142140	1/2″		1	5
142150	3/4″		1	5
142160	1″		1	10
142240	1/2″	without insulation	1	10
142250	3/4″	without insulation	1	10
142260	1″	without insulation	1	10

142

tech. broch. 01250

Shut-off and pre-regulation valve.
CR dezincification resistant alloy body.
Complete with pressure test ports for connection of capillary pipe.
With insulation.
Max. working pressure: 16 bar.
Temperature range: -10–120 °C.
Max. percentage of glycol: 50 %.

Code				
142170	1 1/4″		1	–
142180	1 1/2″		1	–
142270	1 1/4″	without insulation	1	5
142280	1 1/2″	without insulation	1	5
142290	2″	without insulation	1	–

DIFFERENTIAL BY-PASS VALVES

519

tech. broch. 01007

Differential by-pass valve,
adjustable with graduated scale.
Max. working pressure: 10 bar.
Temperature range: 0–110 °C.
Max. percentage of glycol: 30 %.

WRAS APPROVED PRODUCT CERTIFICATION MARK

Threaded connections

Code		Setting range m w.g.		
519500	3/4"	1–6	1	50
519504	3/4"	10–40	1	50
519700	1 1/4"	1–6	1	10
519703	1 1/4"	5–25	1	10

Compression ends

Code		Setting range m w.g.		
519002	∅ 22	1–6	1	50

519

tech. broch. 01007

Differential by-pass valve,
adjustable with graduated scale.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.
Max. percentage of glycol: 30 %.

Code		Setting range m w.g.		
519015	3/4"	1–6	1	25

NEW

518

tech. broch. 1410

Differential by-pass valve,
adjustable with graduated scale.
Max. working pressure: 10 bar.
Temperature range: 0–100 °C.
Max. percentage of glycol: 30 %.

Code		Setting range m w.g.		
518500	3/4"	1–6	1	50

Compression ends

Code		Setting range m w.g.		
518002	∅ 22	1–6	1	50

MEASURING STATION

130

tech. broch. 01251

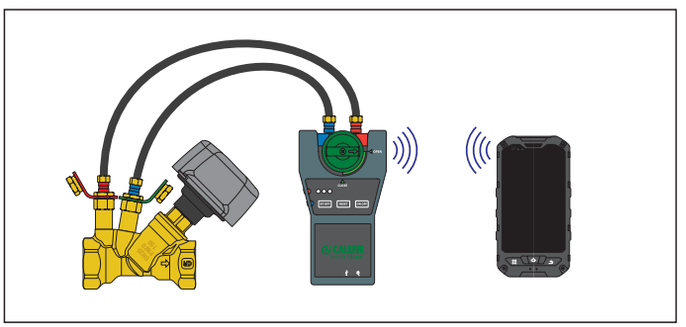
Electronic flow rate and differential pressure measuring station.
Supplied complete with shut-off and connection fittings.
Can be used for measuring the flow rate of balancing valves 130, 142 series and of the flow metering device 683 series.
Suitable for Δp measurement of automatic flow rate regulators.
Electric supply from battery.
Bluetooth® transmission between Δp measuring station and remote control unit.
Versions complete with remote control unit with Android® application for Smartphone and Tablet.
Measurement range: 0–1000 kPa.
Static Pmax: 1000 kPa.

CE

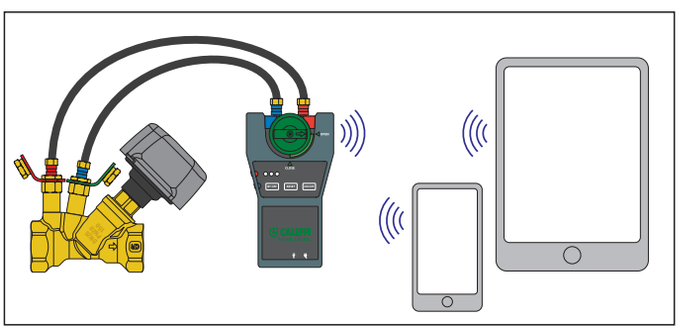
Smart Balancing Caleffi
Available app for smartphone.
Download for your Android® mobile phone.

Code			
130006	complete with remote control unit, with Android® application	1	–
130005	without remote control unit, with Android® application	1	–

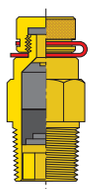
Transmission via Bluetooth® to the terminal with Android® application



Transmission via Bluetooth® to Smartphone/Tablet with Android® application



MEASURING AND CONTROL ACCESSORIES



100

tech. broch. 01041

Pair of fast-plug pressure/temperature test ports.
Their special construction allows rapid and accurate measurements while ensuring leaktightness.
Can be used for:
- checking the working range of AUTOFLOW®;
- checking the clog degree of strainers;
- checking the heat output of the terminals.

Cap cover facing available in:
- **Red** for upstream pressure test port.
- **Green** for downstream pressure test port.

Brass body.
EPDM seals.
Max. working pressure: 30 bar.
Temperature range: -5–130 °C.

Code			
100000	1/4"	1	100

538

tech. broch. 01041

Manual shut-off cock.
Brass body.
Seals in non-asbestos fibre.
Max. working pressure: 16 bar.
Temperature range: -10–120 °C.

Code			
538203	1/4"	1	–

538

tech. broch. 01041

Drain cock with hose connection and cap.
Max. working pressure: 10 bar.
Max. working temperature: 110 °C.

Code			
538201	1/4" M	1	–
538400	1/2" M	1	100

140

Tee for pressure test ports.

Code			
140002	1/4"	1	–

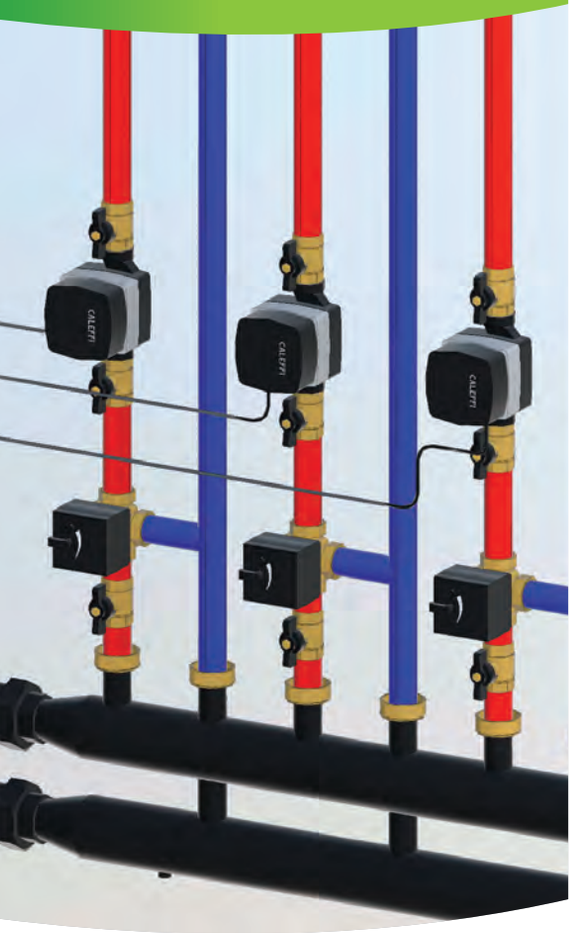
100

tech. broch. 01041

Pair of fittings with fast-plug syringe for connection of pressure ports to measuring instruments.
1/4" female threaded connection.
Max. working pressure: 10 bar.
Max. working temperature: 110 °C.

Code			
100010	1/4"	1	–

REGULATING VALVES



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Regulating valves
Mixing valves
Actuators for mixing valves
Motorised mixing valves
Actuators
Temperature regulators

REGULATING VALVES

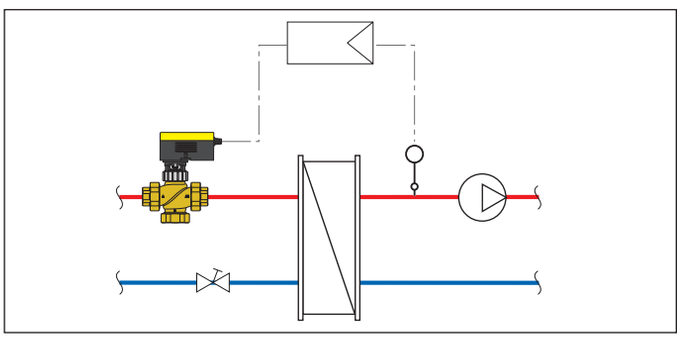
636

tech. broch. 01354

Two-way regulating globe valve, threaded.
Female union connections.
CR dezincification resistant alloy body. PN 16.
Equipercentage regulation.
Max. working pressure: 16 bar.
Temperature range: 0–100 °C.

Code	DN	Conn.	Kv (m³/h)		
636400	15	1/2″	4	1	–
636500	20	3/4″	6,3	1	–
636600	25	1″	10	1	–
636700	32	1 1/4″	16	1	–
636800	40	1 1/2″	22	1	–
636900	50	2″	28	1	–

Application diagram of threaded two-way regulating valve



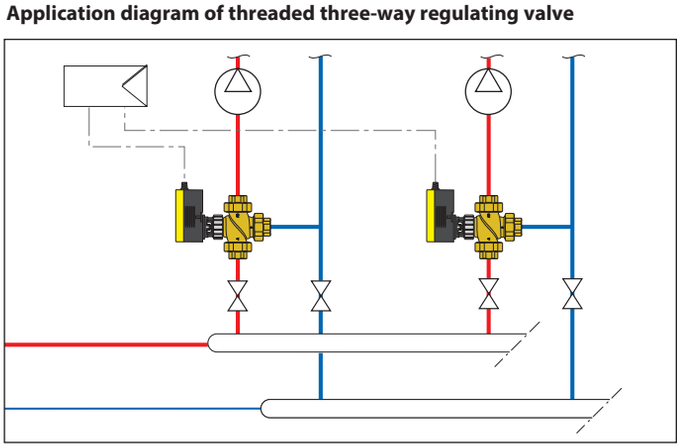
636

tech. broch. 01354

Three-way regulating globe valve, threaded.
Female union connections.
CR dezincification resistant alloy body. PN 16.
Equipercentage/linear regulation.
Max. working pressure: 16 bar.
Temperature range: 0–100 °C.

Code	DN	Conn.	Kv (m³/h)		
636410	15	1/2″	4	1	–
636510	20	3/4″	6,3	1	–
636610	25	1″	10	1	–
636710	32	1 1/4″	16	1	–
636810	40	1 1/2″	22	1	–
636910	50	2″	28	1	–

Application diagram of threaded three-way regulating valve



636

tech. broch. 01354

Actuator for threaded regulating valves 636 series.
Supply: **24 V**.
Control signal: **2 points**, **3 points**, **0–10 V**.
Power consumption: 8,5 VA.
Protection class: IP 54.
Operating time: 35 s, 60 s, 120 s.
Ambient temperature range: -10–55 °C.

CE

Code	Tension V	Nominal force (N)		
636004	24	**250**	1	–

636

tech. broch. 01354

Actuator for threaded regulating valves 636 series.
Supply: **230 V**.
Control signal: **2 points**, **3 points**.
Power consumption: 4 VA.
Protection class: IP 54.
Operating time: 120 s.
Ambient temperature range: -10–55 °C.

CE

Code	Tension V	Nominal force (N)		
636002	230	**500**	1	–

636

tech. broch. 01354

Actuator for threaded regulating valves 636 series.
Supply: **24 V**.
Control signal: **2 points**, **3 points**, **0–10 V**.
Power consumption: 8,7 VA.
Protection class: IP 54.
Operating time: 60 s, 120 s.
Ambient temperature range: -10–55 °C.

CE

Code	Tension V	Nominal force (N)		
636014	24	**500**	1	–

Max. Δp table: actuator + threaded valve body 636 series

Code body valve	Actuator code 636004	Actuator code 636002	Actuator code 636014
6364.0	4 bar	6 bar	6 bar
6365.0	4 bar	5 bar	5 bar
6366.0	4 bar	4 bar	4 bar
6367.0	3 bar	3,5 bar	3,5 bar
6368.0	1,9 bar	3 bar	3 bar
6369.0	1 bar	2,4 bar	2,4 bar

REGULATING VALVES

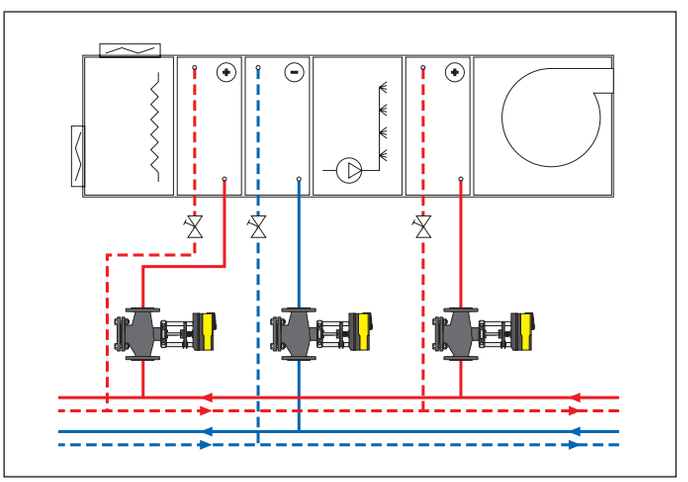
636

tech. broch. 01354

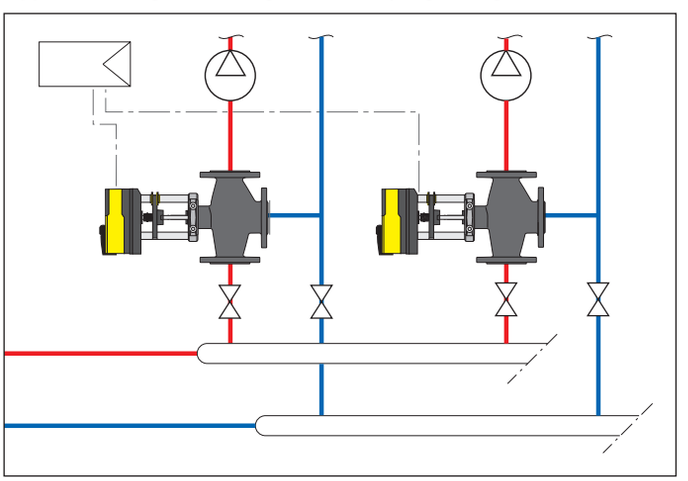
Two/three-way regulating globe valve, flanged.
Grey cast iron body.
Flanged connections. PN 16.
To be coupled with flat counterflanges EN 1092-1.
Equipercentage regulation (two-way).
Equipercentage/linear regulation (three-way).
Max. working pressure: 16 bar.
Temperature range: 0–100 °C.
The valve can be transformed into a three-way valve by opening the central third port.

Code		Kv (m³/h)		
636060	DN 65	63	1	–
636080	DN 80	100	1	–
636100	DN 100	160	1	–
636120	DN 125	220	1	–
636150	DN 150	320	1	–

Application diagram of flanged two-way regulating valve



Application diagram of flanged three-way regulating valve



636

tech. broch. 01354

Actuator for flanged regulating valves 636 series. codes 636060 and 636080.
Supply: **24 V**.
Control signal: **2 points**, **3 points**, **0–10 V**.
Power consumption: 3,5 VA.
Protection class: IP 54.
Operating time: 80 s / 120 s.
Ambient temperature range: -10–55 °C.

CE

Code	Tension V	Nominal force (N)		
636024	24	**1.000**	1	–

636

tech. broch. 01354

Actuator for flanged regulating valves 636 series.
Supply: **24 V**.
Control signal: **2 points**, **3 points**, **0–10 V**.
Power consumption: 20 VA.
Protection class: IP 66.
Operating time:
40 s / 80 s / 120 s (DN 65-DN 80),
80 s / 160 s / 240 s (DN 100–DN 150).
Ambient temperature range: -10–55 °C.

CE

Code	Tension V	Nominal force (N)		
636034	24	**2.500**	1	–

Max. Δp table: actuator + flanged valve body 636 series

Code body valve	Actuator code 636024	Actuator code 636034
636060	2,5 bar	3 bar
636080	1,5 bar	3 bar
636100	-	2 bar
636125	-	1,5 bar
636150	-	1 bar

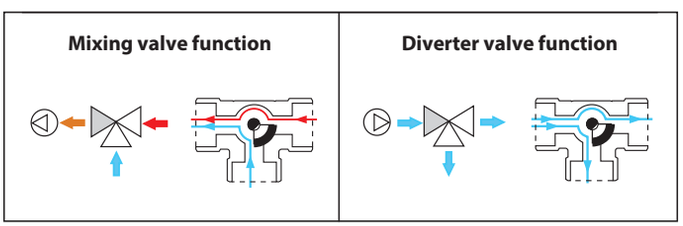
MIXING VALVES

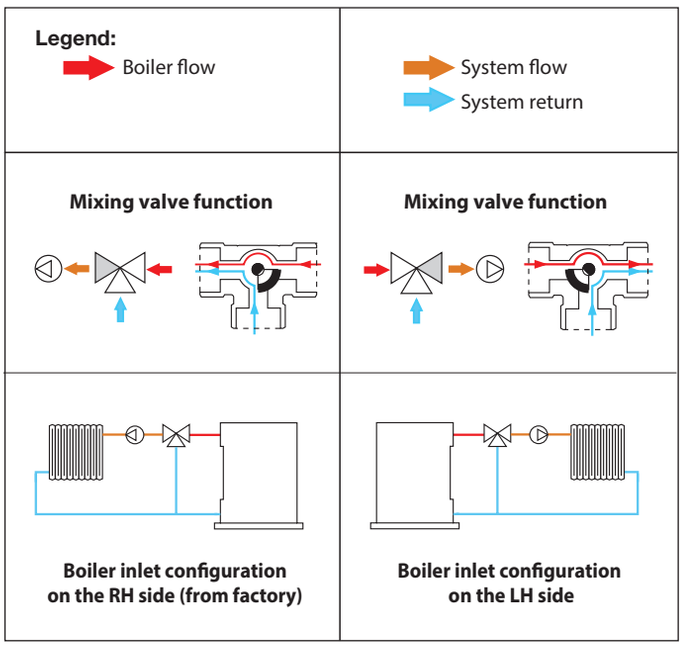
610

tech. broch. 01353

Three-way sector mixing valve,
threaded connections.
Brass body.
PN 10.
Max. working pressure: 10 bar.
Max. Δp: 1 bar.
Temperature range: 5–110 °C.
Factory configuration:
boiler inlet on the RH connection.

Code		Kv (m³/h)		
610400	Rp 1/2″	4	1	–
610500	Rp 3/4″	6,3	1	–
610600	Rp 1″	10	1	–
610700	Rp 1 1/4″	15	1	–
610800	Rp 1 1/2″	25	1	–
610900	Rp 2″	40	1	–





ACTUATORS FOR MIXING VALVES

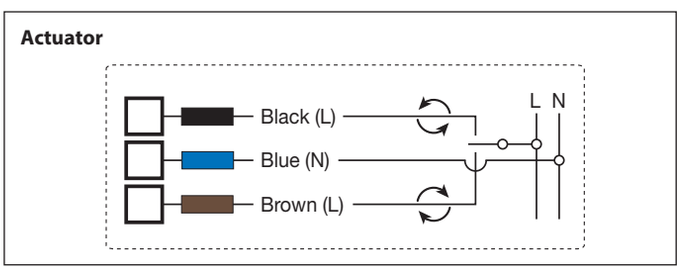
6370

tech. broch. 01353

Actuator for mixing valves
codes 610.00 from 1/2″ to 2″.
Supply: 230 V - 50 Hz.
Control signal: 3 points.
Power consumption: 3 VA.
Protection class: IP 44.
Rotation 90°.
Operating time: 150 s.
Ambient temperature range: 0–55 °C.
Storage temperature range: -10–70 °C.
Supply cable length: 1,5 m.

Code	Tension V	Actuator torque (N·m)		
637042	230	5	1	–

Wiring diagram



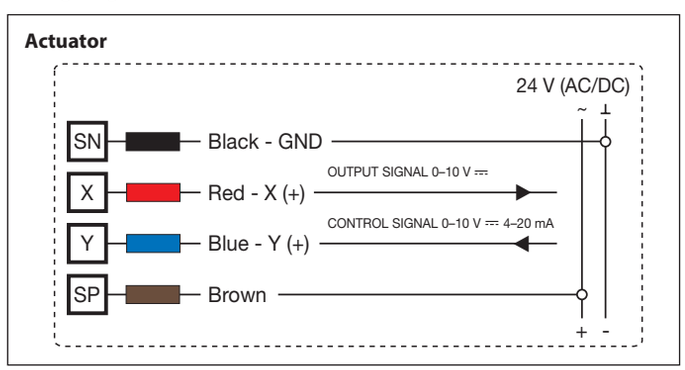
6370

tech. broch. 01353

Actuator for mixing valves
codes 610.00 from 1/2″ to 2″.
Supply: 24 V.
Control signal:
0(2)–10 V, 0(4)–20 mA, 0–5 V, 5–10 V.
Power consumption: 2 W.
Protection class: IP 44.
Rotation 90°.
Operating time: 75 s.
Ambient temperature range: 0–55 °C.
Storage temperature range: -10–70 °C.
Supply cable length: 1,5 m.

Code	Tension V	Actuator torque (N·m)		
637044	24	5	1	–

Wiring diagram



MIXING VALVES

610

tech. broch. 01169

Three-way butterfly mixing valve.
Threaded connections.
Max. working pressure: 6 bar.
Temperature range: 2–110 °C.
Heavy series.
Factory configuration:
boiler inlet on the RH connection.

Code		Kv (m³/h)		
610005	3/4″	7,5	1	–
610006	1″	11,9	1	–
610007	1 1/4″	16,8	1	–
610008	1 1/2″	30	1	–
610009	2″	45	1	–
610020	2 1/2″	72	1	–

610

tech. broch. 01169

Three-way butterfly mixing valve.
Body PN 6.
Flanged connections.
To be coupled with
flat counterflanges EN 1092-1.
Max. working pressure: 6 bar.
Temperature range: 2–110 °C.
Heavy series.
Factory configuration:
boiler inlet on the RH connection.

Code		Kv (m³/h)		
610050	DN 50 (2″)	45	1	–
610060	DN 65 (2 1/2″)	72	1	–
610080	DN 80 (3″)	140	1	–
610100	DN 100 (4″)	183	1	–
610120	DN 125 (5″)	340	1	–

611

tech. broch. 01169

Four-way butterfly mixing valve.
Threaded connections.
Max. working pressure: 6 bar.
Temperature range: 2–110 °C.
Heavy series.
Factory configuration:
boiler inlet on the RH connection.

Code		Kv (m³/h)		
611005	3/4″	7,8	1	–
611006	1″	12,3	1	–
611007	1 1/4″	18,5	1	–
611008	1 1/2″	30	1	–
611009	2″	53	1	–
611020	2 1/2″	80	1	–

611

tech. broch. 01169

Four-way butterfly mixing valve.
Body PN 6.
Flanged connections.
To be coupled with
flat counterflanges EN 1092-1.
Max. working pressure: 6 bar.
Temperature range: 2–110 °C.
Heavy series.
Factory configuration:
boiler inlet on the RH connection.

Code		Kv (m³/h)		
611050	DN 50 (2″)	53	1	–
611060	DN 65 (2 1/2″)	80	1	–
611080	DN 80 (3″)	140	1	–
611100	DN 100 (4″)	230	1	–
611120	DN 125 (5″)	410	1	–

612

tech. broch. 01169

Three-way sector mixing valve.
Threaded connections.
Max. working pressure: 6 bar.
Temperature range: 2–110 °C.
Heavy series.
Factory configuration:
boiler inlet on the RH connection.

Code		Kv (m³/h)		
612005	3/4″	7,2	1	–
612006	1″	11,9	1	–
612007	1 1/4″	16,5	1	–
612008	1 1/2″	30	1	–
612009	2″	42	1	–
612020	2 1/2″	62	1	–

612

tech. broch. 01169

Three-way sector mixing valve.
Body PN 6.
Flanged connections.
To be coupled with
flat counterflanges EN 1092-1.
Max. working pressure: 6 bar.
Temperature range: 2–110 °C.
Heavy series.
Factory configuration:
boiler inlet on the RH connection.

Code		Kv (m³/h)		
612050	DN 50 (2″)	42	1	–
612060	DN 65 (2 1/2″)	62	1	–
612080	DN 80 (3″)	123	1	–
612100	DN 100 (4″)	172	1	–
612120	DN 125 (5″)	340	1	–

MOTORISED MIXING VALVES

6120

Motorised three-way sector mixing valve.
Threaded connections.
Max. working pressure: 6 bar.
Temperature range: 2–110 °C.

CE

Boiler inlet on the RH connection

Code		Supply voltage V	Kv (m³/h)		
612025	3/4″	230	7,2	1	–
612026	1″	230	11,9	1	–
612027	1 1/4″	230	16,5	1	–
612028	1 1/2″	230	30	1	–
612029	2″	230	42	1	–
612021	2 1/2″	230	62	1	–

6120

Motorised three-way sector mixing valve.
Threaded connections.
Max. working pressure: 6 bar.
Temperature range: 2–110 °C.

CE

Boiler inlet on the LH connection

Code		Supply voltage V	Kv (m³/h)		
612015	3/4″	230	7,2	1	–
612016	1″	230	11,9	1	–
612017	1 1/4″	230	16,5	1	–
612018	1 1/2″	230	30	1	–
612019	2″	230	42	1	–
612011	2 1/2″	230	62	1	–

ACTUATORS

6370

tech. broch. 01169

Actuator for mixing valves
from 3/4″ to 1 1/2″.
With auxiliary microswitch.
Supply: 230 V or 24 V - 50 Hz.
Power consumption: 3 VA.
Auxiliary microswitch contact rating:
10 (2) A - 250 V (AC).
Protection class: IP 42.
Operating time: 60 s.
With adapter.

CE

Boiler inlet on the RH connection

Code	Supply voltage V	Actuator torque (N·m)		
637002	230	15	1	–
637004	24	15	1	–

6370

tech. broch. 01169

Actuator for mixing valves
from 2″ to 5″.
With double auxiliary microswitches.
Supply: 230 V or 24 V - 50 Hz.
Power consumption: 4,5 VA.
Auxiliary microswitch contact rating:
16 (4) A - 250 V (AC).
Protection class: IP 42.
Operating time: 180 s.
With adapter.

CE

Code	Supply voltage V	Actuator torque (N·m)		
637012	230	35	1	–
637014	24	35	1	–

6370

Actuator for mixing valves
from 3/4″ to 1 1/2″.
With auxiliary microswitch.
Supply: 230 V or 24 V - 50 Hz.
Power consumption: 3 VA.
Auxiliary microswitch contact rating:
10 (2) A - 250 V (AC).
Protection class: IP 42.
Operating time: 60 s.
With adapter.

CE

Boiler inlet on the LH connection

Code	Supply voltage V	Actuator torque (N·m)		
637001	230	15	1	–
637003	24	15	1	–

TEMPERATURE REGULATORS

161

Digital regulator with synoptic diagram for heating and cooling complete with immersion flow probes with pocket and Pt1000 Ø 6 mm return probe (pocket to be chosen according to the pipe, see accessories).
Optional outside compensated probe.
Temperature adjustment range: 5–95 °C.
Supply: 230 V - 50/60 Hz.
Control signal: 3-point, 0–10 V.
Protection class: IP 20 / EN 60529.
Probe cable length: 1,5 m.

CE

Code			
161010		1	-

161

Remote regulator.
Functions:
- translation of regulation curves from +15 K to -15 K
- max. temperature
- position OFF.

Code			
161005		1	-

Accessories for regulator code 161010.

Code			
161012	Pt1000 contact probe for pipes Ø 6 mm, cable L 2,5 m		
161013	immersion pocket for Pt1000 probe 1/2" M, 60 mm		
161014	immersion pocket for Pt1000 probe 1/2" M, 100 mm		
161015	Pt1000 probe Ø 6 mm - L 20 mm, cable L 1,5 m		
161006	Pt1000 probe Ø 6 mm - L 45 mm, cable L 2,5 m		

161

Outside temperature probe.

Code			
161002		1	-

1520

Digital temperature controller for heating and cooling.
Complete with flow probe, outside probe and max. relative humidity probe.
Supply: 230 V - 50/60 Hz.
Power consumption: 5,5 VA.
Protection class: IP 40.

CE

Code			
152021	1 channel	1	-

161

Pressure switch with preconnected pin.
Working range: 0,5–10 bar.
Max. working temperature: 100 °C.
Cable length: 1 m.

Code			
161003		1	-

1520

Outside compensated digital temperature regulator. Complete with contact flow probe and outside probe.
Adjustment range: 20–90 °C.
Supply: 230 V - 50/60 Hz.
Control signal: 3-point.
Protection class: IP 40.

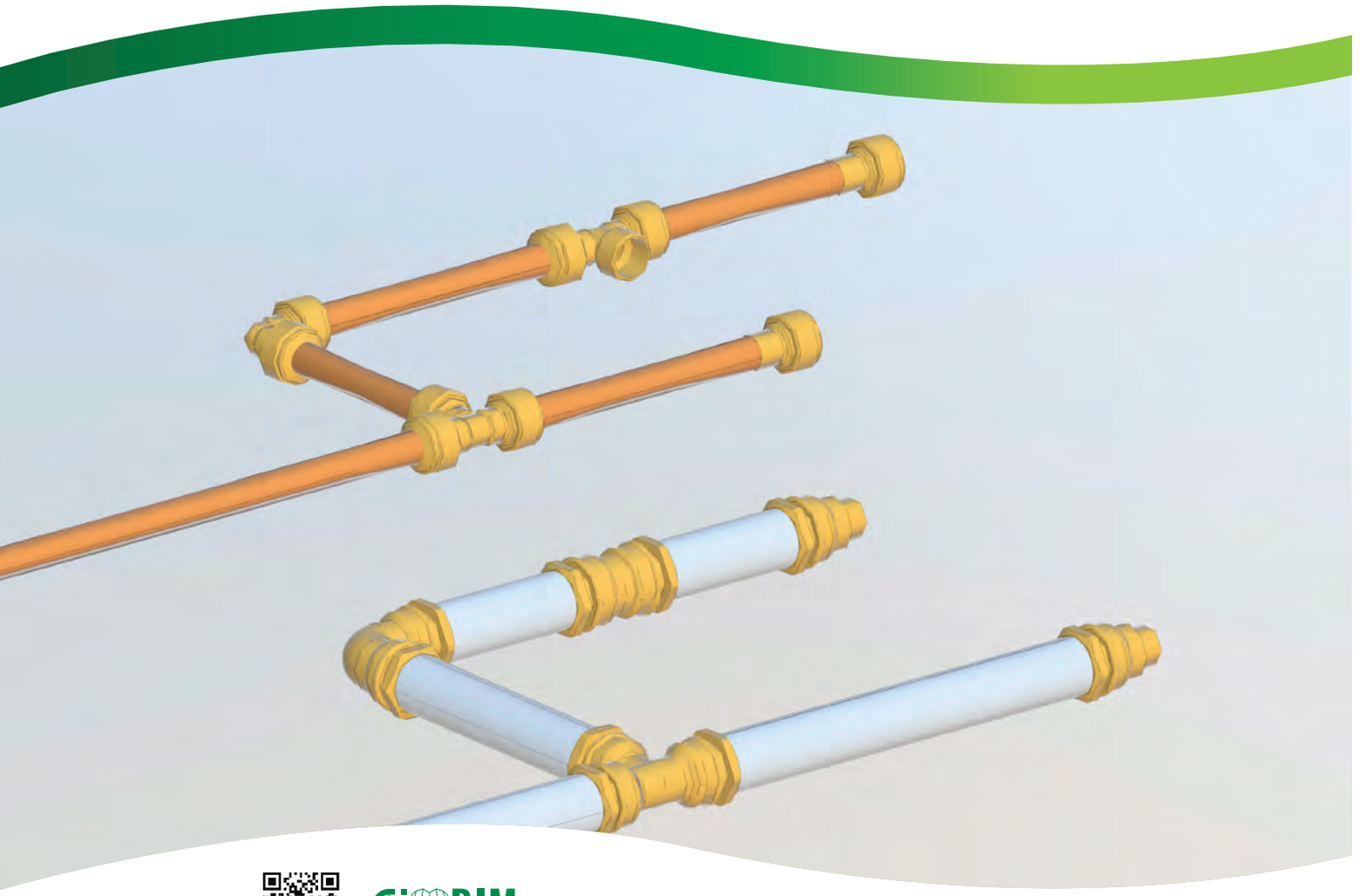
CE

Code			
152001	1 channel	1	-
152002	2 channels	1	-
152003	3 channels	1	-

161

Dew point detector.
Working range: 30–100 RH %.

Code			
161004		1	–



bim.caleffi.com

Three-piece union fittings
Fittings for polyethylene pipes (PE-X)
Mechanical fittings with O-Ring seal
DECA-fittings for polyethylene pipes
Dezincification resistant alloy fittings for polyethylene pipes
DECA-fittings for steel pipes

THREE-PIECE UNION FITTINGS

for gas and hydrocarbons - EN 549 standard

for hydraulic and domestic water systems - EN 681.1 standard

Fittings highlighted in yellow are supplied with two O-Rings:
yellow to be used for gas and fluid hydrocarbons - black to be used for hydraulic systems.

To be used for gas systems with power output up to 35 kW, according to UNI 7129-2015 standard only.

588

Three-piece straight union fitting. PN 16.
For gas and fluid hydrocarbons:
yellow O-Ring according to EN 549 standard.
Temperature range: -20–100 °C.
For hydraulic and domestic water systems:
black O-Ring according to EN 681.1 standard.
Max. working pressure: 16 bar.
Temperature range: -25–120 °C.

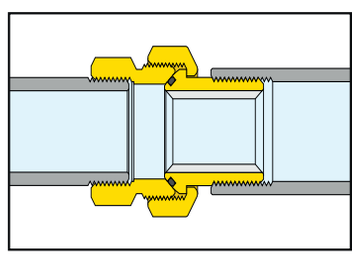
Code				
588030	3/8″ F	x M with union	1	50
588040	1/2″ F	x M with union	1	50
588050	3/4″ F	x M with union	1	25
588060	1″ F	x M with union	1	20
588070	1 1/4″ F	x M with union	1	10
588080	1 1/2″ F	x M with union	1	–
588090	2″ F	x M with union	1	–

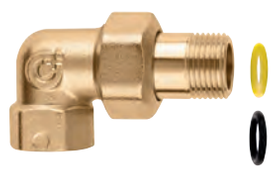
588

Three-piece straight union fitting. PN 16.
Chrome plated.
For hydraulic and domestic water systems:
black O-Ring according to EN 681.1 standard.
Max. working pressure: 16 bar.
Temperature range: -25–120 °C.

Code				
588031	3/8″ F	x M with union	1	50
588041	1/2″ F	x M with union	1	50
588051	3/4″ F	x M with union	1	25
588061	1″ F	x M with union	1	20
588071	1 1/4″ F	x M with union	1	10
588081	1 1/2″ F	x M with union	1	–
588091	2″ F	x M with union	1	–

O-Ring seal
The hydraulic tightness between the two fitting components is a tapered type with O-Ring.
This allows to screw the fitting up smoothly with a full safety warranty.

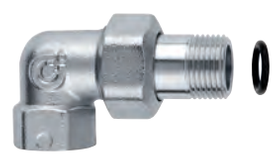




5881

Three-piece elbow union fitting. PN 16.
For gas and fluid hydrocarbons:
yellow O-Ring according to EN 549 standard.
Temperature range: -20–100 °C.
For hydraulic and domestic water systems:
black O-Ring according to EN 681.1 standard.
Max. working pressure: 16 bar.
Temperature range: -25–120 °C.

Code				
588130	3/8″ F	x M with union	1	50
588140	1/2″ F	x M with union	1	25
588150	3/4″ F	x M with union	1	25
588160	1″ F	x M with union	1	15
588170	1 1/4″ F	x M with union	1	10



5881

Three-piece elbow union fitting. PN 16.
Chrome plated.
For hydraulic and domestic water systems:
black O-Ring according to EN 681.1 standard.
Max. working pressure: 16 bar.
Temperature range: -25–120 °C.

Code				
588131	3/8″ F	x M with union	1	50
588141	1/2″ F	x M with union	1	25
588151	3/4″ F	x M with union	1	25
588161	1″ F	x M with union	1	15
588171	1 1/4″ F	x M with union	1	10

UNIONS

Flat seat union
with gasket.

Code		
R59787	3/4″ F	x 1/2″ M
R59788	1″ F	x 3/4″ M
R59789	1 1/4″ F	x 1″ M
R59485	1 1/2″ F	x 1 1/4″ M
R59581	2″ F	x 1 1/2″ M
R59487	2 1/2″ F	x 2″ M

FITTINGS FOR POLYETHYLENE PIPES (PE-X)

930

Male elbow fitting with wall connection. Fitted for coupling with fittings 347, 438 and 680 series for water use.

Code				
930418	1/2" F x 23 p.1,5 M		5	–

940

Male fitting.

Code				
940300	3/8" M x 23 p.1,5		50	–
940400	1/2" M x 23 p.1,5		50	–
940450	1/2" M x 3/4"		50	–
940500	3/4" M x 23 p.1,5		50	–

941

Female fitting.

Code				
941300	3/8" F x 23 p.1,5		50	–
941400	1/2" F x 23 p.1,5		50	–
941450	1/2" F x 3/4"		50	–
941500	3/4" F x 23 p.1,5		50	–
941550	3/4" F x 3/4"		50	–
941560	3/4" F x 1"		50	–

942

Sleeve.

Code				
942000	23 p.1,5 x 23 p.1,5		50	–
942550	3/4" x 3/4"		50	–
942560	3/4" x 1"		50	–

943

Elbow fitting.

Code				
943000	23 p.1,5 x 23 p.1,5		50	–
943550	3/4" x 3/4"		50	–

944

Male elbow fitting.

Code				
944400	1/2" M x 23 p.1,5		50	–
943550	3/4" M x 3/4"		50	–

945

Female elbow fitting.

Code				
945400	1/2" F x 23 p.1,5		50	–
945550	3/4" F x 3/4"		50	–

946

Tee piece.

Code				
946000	23 p.1,5 x 23 p.1,5 x 23 p.1,5		50	–
946500	3/4" x 3/4" x 3/4"		25	–

947

Side male tee piece.

Code				
947400	1/2" M x 23 p.1,5 x 23 p.1,5		50	–
947500	3/4" M x 3/4" x 3/4"	(use **946**500)	50	–

948

Central male tee piece.

Code				
948400	23 p.1,5 x 1/2" M x 23 p.1,5		50	–
946500	3/4" x 3/4" M x 3/4"		50	–

MECHANICAL FITTINGS WITH O-RING SEAL

according to EN 1254-2 and EN 1254-4 standards

***for gas and fluid hydrocarbons** - EN 549 standard (not including gasoline)*

***for hydraulic and domestic water systems** - EN 681.1 standard*

Fittings highlighted in yellow are supplied with two O-Rings:
yellow to be used for gas and fluid hydrocarbons - black to be used for hydraulic systems

900

Female fitting. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. Double O-Ring. According to EN 1254-4 standard.
For gas and fluid hydrocarbons: yellow O-Ring according to EN 549 standard.
Temperature range: -20–100 °C.
For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard.
Max. working pressure: 16 bar.
Temperature range: -25–120 °C.

Code			
900308	3/8" F - Ø 8	50	–
900310	3/8" F - Ø 10	50	–
900312	3/8" F - Ø 12	50	–
900314	3/8" F - Ø 14	50	–
900410	1/2" F - Ø 10	50	–
900412	1/2" F - Ø 12	50	–
900414	1/2" F - Ø 14	50	–
900415	1/2" F - Ø 15	50	–
900416	1/2" F - Ø 16	50	–
900418	1/2" F - Ø 18	25	–
900516	3/4" F - Ø 16	50	–
900518	3/4" F - Ø 18	25	–
900522	3/4" F - Ø 22	25	–
900622	1" F - Ø 22	25	–
900628*	1" F - Ø 28	25	–

** To be used only with water and non-dangerous glycol solutions*

904

Male fitting. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. Double O-Ring. According to EN 1254-4 standard.
For gas and fluid hydrocarbons: yellow O-Ring according to EN 549 standard.
Temperature range: -20–100 °C.
For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard.
Max. working pressure: 16 bar.
Temperature range: -25–120 °C.

Code			
904308	3/8" M - Ø 8	50	–
904310	3/8" M - Ø 10	50	–
904312	3/8" M - Ø 12	50	–
904314	3/8" M - Ø 14	50	–
904410	1/2" M - Ø 10	50	–
904412	1/2" M - Ø 12	50	–
904414	1/2" M - Ø 14	50	–
904415	1/2" M - Ø 15	50	–
904416	1/2" M - Ø 16	50	–
904418	1/2" M - Ø 18	25	–
904514	3/4" M - Ø 14	50	–
904516	3/4" M - Ø 16	50	–
904518	3/4" M - Ø 18	25	–
904522	3/4" M - Ø 22	25	–
904618	1" M - Ø 18	25	–
904622	1" M - Ø 22	25	–
904628 *	1" M - Ø 28	10	–

** To be used only with water and non-dangerous glycol solutions*

903

Coupling sleeve. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. According to EN 1254-2 standard.
For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard.
Max. working pressure: 16 bar.
Temperature range: -25–120 °C.

Code			
903008	Ø 8	50	–
903010	Ø 10	50	–
903012	Ø 12	50	–
903014	Ø 14	50	–
903015	Ø 15	50	–
903016	Ø 16	50	–
903018	Ø 18	25	–
903022	Ø 22	25	–

9050

Elbow fitting. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. According to EN 1254-2 standard.
For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard.
Max. working pressure: 16 bar.
Temperature range: -25–120°C.

Code			
905010	Ø 10	25	–
905012	Ø 12	25	–
905014	Ø 14	25	–
905015	Ø 15	25	–
905016	Ø 16	25	–
905018	Ø 18	25	–
905022	Ø 22	25	–

MECHANICAL FITTINGS WITH O-RING SEAL

9057

Male elbow fitting. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. Double O-Ring. According to EN 1254-4 standard.

For gas and fluid hydrocarbons:
yellow O-Ring according to EN 549 standard.
Temperature range: -20–100 °C.
For hydraulic and domestic water systems:
black O-Ring according to EN 681.1 standard.
Max. working pressure: 16 bar.
Temperature range: -25–120 °C.

Code			
905730	3/8" M - Ø 10	25	–
905732	3/8" M - Ø 12	25	–
905740	1/2" M - Ø 10	25	–
905742	1/2" M - Ø 12	25	–
905744	1/2" M - Ø 14	25	–
905745	1/2" M - Ø 15	25	–
905746	1/2" M - Ø 16	25	–
905748	1/2" M - Ø 18	25	–
905756	3/4" M - Ø 16	25	–
905758	3/4" M - Ø 18	25	–
905752	3/4" M - Ø 22	25	–

9058

Female elbow fitting. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. Double O-Ring. According to EN 1254-4 standard.

For gas and fluid hydrocarbons:
yellow O-Ring according to EN 549 standard.
Temperature range: -20–100 °C.
For hydraulic and domestic water systems:
black O-Ring according to EN 681.1 standard.
Max. working pressure: 16 bar.
Temperature range: -25–120 °C.

Code			
905830	3/8" F - Ø 10	25	–
905832	3/8" F - Ø 12	25	–
905840	1/2" F - Ø 10	25	–
905842	1/2" F - Ø 12	25	–
905844	1/2" F - Ø 14	25	–
905845	1/2" F - Ø 15	25	–
905846	1/2" F - Ø 16	25	–
905848	1/2" F - Ø 18	25	–
905856	3/4" F - Ø 16	25	–
905858	3/4" F - Ø 18	25	–
905852	3/4" F - Ø 22	25	–

930

Elbow fitting with wall connection.
For annealed copper, hard copper, brass, mild steel and stainless steel pipes.
According to EN 1254-4 standard.
With double O-Ring.
For gas and fluid hydrocarbons:
yellow O-Ring according to EN 549 standard.
Temperature range: -20–100 °C.
For hydraulic and domestic water systems:
black O-Ring according to EN 681.1 standard.
Max. working pressure: 16 bar.
Temperature range: -25–120 °C.

Code			
930412	1/2" F - Ø 12	25	–
930414	1/2" F - Ø 14	25	–
930416	1/2" F - Ø 16	25	–

9060

Tee fitting. For annealed copper, hard copper, brass, mild steel and stainless steel pipes.
According to EN 1254-2 standard.
For hydraulic and domestic water systems:
black O-Ring according to EN 681.1 standard.
Max. working pressure: 16 bar.
Temperature range: -25–120 °C.

Code			
906010	Ø 10	25	–
906012	Ø 12	25	–
906014	Ø 14	25	–
906015	Ø 15	25	–
906016	Ø 16	25	–
906018	Ø 18	25	–
906022	Ø 22	20	–

9067

Male tee fitting. For annealed copper, hard copper, brass, mild steel and stainless steel pipes.
According to EN 1254-4 standard.
For hydraulic and domestic water systems:
black O-Ring according to EN 681.1 standard.
Max. working pressure: 16 bar.
Temperature range: -25–120 °C.

Code			
906740	1/2" M - Ø 10	25	–
906742	1/2" M - Ø 12	25	–
906744	1/2" M - Ø 14	25	–
906745	1/2" M - Ø 15	25	–
906746	1/2" M - Ø 16	25	–
906758	3/4" M - Ø 18	25	–
906752	3/4" M - Ø 22	20	–

9068

Female tee fitting. For annealed copper, hard copper, brass, mild steel and stainless steel pipes.
According to EN 1254-4 standard.
For hydraulic and domestic water systems:
black O-Ring according to EN 681.1 standard.
Max. working pressure: 16 bar.
Temperature range: -25–120 °C.

Code			
906830	3/8" F - Ø 10	25	–
906832	3/8" F - Ø 12	25	–
906840	1/2" F - Ø 10	25	–
906842	1/2" F - Ø 12	25	–
906844	1/2" F - Ø 14	25	–
906845	1/2" F - Ø 15	25	–
906846	1/2" F - Ø 16	25	–
906858	3/4" F - Ø 18	25	–
906852	3/4" F - Ø 22	20	–

SPARE PARTS FOR MECHANICAL FITTINGS WITH O-RING SEAL

Spare O-Ring.
For 900, 903, 904, 9050, 9057, 9058, 9060, 9067, 9068, 930, 910, 913 and 914 series mechanical fittings.
For hydraulic systems and for human consumption.

Code	
R97020	Ø 8
R97022*	Ø 10
R97021	Ø 10
R97023	Ø 12
R97024	Ø 14
R47037	Ø 15
R97025	Ø 16
R97026	Ø 18
R97027	Ø 22

** Only for fittings 900310, 903010, 904310, 910310, 913010 and 914310.*

Spare O-Ring.
For 900, 904, 910310 9057, 9058, 930 series mechanical fittings
For gas and liquid fuel systems (not including gasoline).

Code	
R97012	Ø 10
R97013*	Ø 10
R97014	Ø 12
R97015	Ø 14
R97016	Ø 15
R97017	Ø 16
R97018	Ø 18
R97019	Ø 22

** Only for fittings 900310, 904310, 905730 and 905830.*

Spare locking ring.
For 900, 903, 904, 9050, 9057, 9058, 9060, 9067, 9068, 930, 910, 913 and 914 series mechanical fittings.

Code	
R91236	Ø 8
R91237*	Ø 10
R91238	Ø 10
R91239	Ø 12
R41423	Ø 14
R41424	Ø 15
R91240	Ø 16
R41448	Ø 18
R91235	Ø 22
R91241	Ø 28

** Only for fittings 900310, 903010, 904310, 910310, 913010 and 914310.*

MECHANICAL FITTINGS WITH O-RING SEAL

910

Female fitting. Chrome plated.
For annealed copper, hard copper, brass, mild steel and stainless steel pipes.
According to EN 1254-4 standard.
For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard.
Max. working pressure: 16 bar.
Temperature range: -25–120 °C.

Code			
910310	3/8" F - Ø 10	50	–
910312	3/8" F - Ø 12	50	–
910314	3/8" F - Ø 14	50	–
910410	1/2" F - Ø 10	50	–
910412	1/2" F - Ø 12	50	–
910414	1/2" F - Ø 14	50	–
910415	1/2" F - Ø 15	50	–

914

Male fitting. Chrome plated.
For annealed copper, hard copper, brass, mild steel and stainless steel pipes.
According to EN 1254-4 standard.
For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard.
Max. working pressure: 16 bar.
Temperature range: -25–120 °C.

Code			
914310	3/8" M - Ø 10	50	–
914312	3/8" M - Ø 12	50	–
914314	3/8" M - Ø 14	50	–
914410	1/2" M - Ø 10	50	–
914412	1/2" M - Ø 12	50	–
914414	1/2" M - Ø 14	50	–
914415	1/2" M - Ø 15	50	–

913

Coupling sleeve. Chrome plated.
For annealed copper, hard copper, brass, mild steel and stainless steel pipes.
According to EN 1254-2 standard.
For hydraulic and domestic water systems: black O-Ring according to EN 681.1 standard.
Max. working pressure: 16 bar.
Temperature range: -25–120 °C.

Code			
913010	Ø 10	50	–
913012	Ø 12	50	–
913014	Ø 14	50	–

Mechanical fittings with O-Ring seal are not suitable for use with fuel added with RME (Rape Methyl Ester).

DECA-FITTINGS FOR POLYETHYLENE PIPES

860

tech. broch. 01037

Female fitting.
In brass.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
860420	Ø 20 x 1/2" F	12	60
860421*	Ø 21 x 1/2" F	12	60
860525	Ø 25 x 3/4" F	10	50
860527*	Ø 27 x 3/4" F	10	50
860625	Ø 25 x 1" F	10	60
860632	Ø 32 x 1" F	10	50
860634*	Ø 34 x 1" F	10	50
860740	Ø 40 x 1 1/4" F	10	50
860850	Ø 50 x 1 1/2" F	5	25
860963	Ø 63 x 2" F	8	–

** Without DVGW and SVGW certifications*

861

tech. broch. 01037

Male fitting.
In brass.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
861420	Ø 20 x 1/2" M	12	60
861421*	Ø 21 x 1/2" M	12	60
861525	Ø 25 x 3/4" M	10	50
861527*	Ø 27 x 3/4" M	10	50
861625	Ø 25 x 1" M	10	60
861632	Ø 32 x 1" M	10	50
861634*	Ø 34 x 1" M	10	50
861740	Ø 40 x 1 1/4" M	10	50
861850	Ø 50 x 1 1/2" M	5	25
861963	Ø 63 x 2" M	8	–

** Without DVGW and SVGW certifications*

860

tech. broch. 01037

Female fitting.
In cast iron.
Stainless steel rods.
For polyethylene pipes.
Max. working pressure: 10 bar.
Max. working temperature: 40 °C.

Code			
860075	Ø 75 x 2 1/2" F	1	–
860090	Ø 90 x 3" F	1	–
860110	Ø 110 x 4" F	1	–

861

tech. broch. 01037

Male fitting.
In cast iron.
Stainless steel rods.
For polyethylene pipes.
Max. working pressure: 10 bar.
Max. working temperature: 40 °C.

Code			
861075	Ø 75 x 2 1/2" M	1	–
861090	Ø 90 x 3" M	1	–
861110	Ø 110 x 4" M	1	–

875

tech. broch. 01037

Reduced female fitting.
In brass.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
875425	Ø 25 x 1/2" F	10	50
875532	Ø 32 x 3/4" F	10	50
875640	Ø 40 x 1" F	10	50

876

tech. broch. 01037

Female fitting with union.
In brass.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
876520	Ø 20 x 3/4"	15	75
876525	Ø 25 x 3/4"	12	60
876625	Ø 25 x 1"	12	60
876632	Ø 32 x 1"	10	50

DECA-FITTINGS FOR POLYETHYLENE PIPES

862

tech. broch. 01037

Reduced male fitting.
In brass.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
862320	Ø 20 x 3/8" M	12	60
862425	Ø 25 x 1/2" M	10	50
862532	Ø 32 x 3/4" M	10	50
862640	Ø 40 x 1" M	10	50
862750	Ø 50 x 1 1/4" M	5	25
862863	Ø 63 x 1 1/2" M	8	–

888

tech. broch. 01037

Flanged fitting,
PN 10 EN 1092-1 series.
In cast iron.
Stainless steel rods.
For polyethylene pipes.
Max. working pressure: 10 bar.
Max. working temperature: 40 °C.

Code			
888075	Ø 75 x DN 65	1	–
888090	Ø 90 x DN 80	1	–
888110	Ø 110 x DN 100	1	–
888125	Ø 125 x DN 100	1	–

863

tech. broch. 01037

Sleeve fitting.
In brass.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
863020	Ø 20	15	75
863021*	Ø 21	15	75
863025	Ø 25	12	60
863027*	Ø 27	10	50
863032	Ø 32	10	50
863034*	Ø 34	5	25
863040	Ø 40	5	25
863050	Ø 50	5	25
863063	Ø 63	6	–

** Without DVGW and SVGW certifications*

863

tech. broch. 01037

Sleeve fitting.
In cast iron.
Stainless steel rods.
For polyethylene pipes.
Max. working pressure: 10 bar.
Max. working temperature: 40 °C.

Code			
863075	Ø 75	1	–
863090	Ø 90	1	–
863110	Ø 110	1	–
863125	Ø 125	1	–

864

tech. broch. 01037

Tee fitting.
In brass.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
864020	Ø 20	10	50
864021*	Ø 21	10	50
864025	Ø 25	10	50
864027*	Ø 27	5	25
864032	Ø 32	5	25
864034*	Ø 34	4	20
864040	Ø 40	5	–
864050	Ø 50	5	–
864063	Ø 63	5	–

** Without DVGW and SVGW certifications*

865

tech. broch. 01037

Reduced male-female tee fitting.
In brass.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
865420	Ø 20 x 1/2" M x 3/8" F	10	50
865525	Ø 25 x 3/4" M x 1/2" F	10	50
865632	Ø 32 x 1" M x 3/4" F	5	25
865740	Ø 40 x 1 1/4" M x 1" F	5	–
865850	Ø 50 x 1 1/2" M x 1 1/4" F	5	–
865963	Ø 63 x 2" M x 1 1/2" F	5	–

DECA-FITTINGS FOR POLYETHYLENE PIPES

866

tech. broch. 01037

Elbow fitting.
In brass.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
866020	Ø 20	10	50
866025	Ø 25	10	50
866032	Ø 32	5	25
866040	Ø 40	4	20
866050	Ø 50	3	15
866063	Ø 63	5	–

867

tech. broch. 01037

Male elbow fitting.
In brass.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
867420	Ø 20 x 1/2″ M	10	50
867525	Ø 25 x 3/4″ M	10	50
867632	Ø 32 x 1″ M	10	50
867740	Ø 40 x 1 1/4″ M	4	20
867850	Ø 50 x 1 1/2″ M	4	20
867963	Ø 63 x 2″ M	5	–

868

tech. broch. 01037

Female elbow fitting.
In brass.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

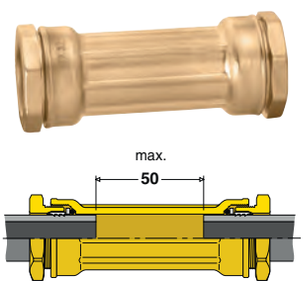
Code			
868420	Ø 20 x 1/2″ F	10	50
868525	Ø 25 x 3/4″ F	10	50
868632	Ø 32 x 1″ F	10	50
868740	Ø 40 x 1 1/4″ F	4	20
868850	Ø 50 x 1 1/2″ F	4	20
868963	Ø 63 x 2″ F	5	–

869

tech. broch. 01037

Female elbow fitting
with wall connections.
In brass.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
869420	Ø 20 x 1/2″ F	5	25
869425	Ø 25 x 1/2″ F	4	20
869525	Ø 25 x 3/4″ F	4	20



870

tech. broch. 01037

Long sleeve fitting.
Can be used for pipe repairs.
In brass.
For polyethylene pipes.

Allows pipe repairs
with a maximum distance of 50 mm
between pipe ends.

Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
870025	Ø 25	10	50
870032	Ø 32	5	25
870040	Ø 40	4	20
870050	Ø 50	3	15

871

tech. broch. 01037

Fitting with ball valve.
In brass.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
871425	Ø 25 x 1/2″ F	10	50
871525	Ø 25 x 3/4″ F	5	25
871532	Ø 32 x 3/4″ F	5	25

DEZINCIFICATION RESISTANT ALLOY FITTINGS FOR POLYETHYLENE PIPES

960

Female fitting.
In CR dezincification resistant alloy.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
960420	Ø 20 x 1/2" F	12	60
960525	Ø 25 x 3/4" F	10	50
960625	Ø 25 x 1" F	10	60
960632	Ø 32 x 1" F	10	50
960740	Ø 40 x 1 1/4" F	6	30
960850	Ø 50 x 1 1/2" F	5	20
960963	Ø 63 x 2" F	8	–

975

Reduced female fitting.
In CR dezincification resistant alloy.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
975532	Ø 32 x 3/4" F	10	50
975640	Ø 40 x 1" F	6	30
975732	Ø 32 x 1 1/4" F	6	30
975750	Ø 50 x 1 1/4" F	5	20

961

Male fitting.
In CR dezincification resistant alloy.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
961420	Ø 20 x 1/2" M	12	60
961520	Ø 20 x 3/4" M	12	60
961525	Ø 25 x 3/4" M	10	50
961625	Ø 25 x 1" M	10	60
961632	Ø 32 x 1" M	10	50
961732	Ø 32 x 1 1/4" M	10	50
961740	Ø 40 x 1 1/4" M	6	30
961840	Ø 40 x 1 1/2" M	6	30
961850	Ø 50 x 1 1/2" M	5	20
961950	Ø 50 x 2" M	5	20
961963	Ø 63 x 2" M	8	–

962

Reduced male fitting.
In CR dezincification resistant alloy.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
962532	Ø 32 x 3/4" M	10	50
962640	Ø 40 x 1" M	6	30

963

Sleeve fitting.
In CR dezincification resistant alloy.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
963020	Ø 20	15	75
963025	Ø 25	12	60
963032	Ø 32	10	50
963040	Ø 40	5	20
963050	Ø 50	6	–
963063	Ø 63	5	–

964

Tee fitting.
In CR dezincification resistant alloy.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

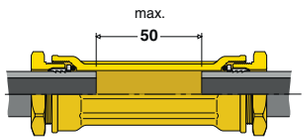
Code			
964020	Ø 20	10	50
964025	Ø 25	10	50
964032	Ø 32	5	25
964040	Ø 40	5	–
964050	Ø 50	5	–

DEZINCIFICATION RESISTANT ALLOY FITTINGS FOR POLYETHYLENE PIPES

966

Elbow fitting.
In CR dezincification resistant alloy.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
966025	Ø 25	10	50
966032	Ø 32	5	25
966040	Ø 40	3	15



970

Long sleeve fitting.
In CR dezincification resistant alloy.
For polyethylene pipes.

Allows pipe repairs
with a maximum distance of 50 mm
between pipe ends.

Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
970032	Ø 32	5	25
970040	Ø 40	5	–
970050	Ø 50	4	–

967

Male elbow fitting.
In CR dezincification resistant alloy.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
967632	Ø 32 x 1" M	10	50

986

Reduction kit.

Code			
986032	from Ø 32 to Ø 25	12	60
986043	from Ø 40 to Ø 32	10	50
986053	from Ø 50 to Ø 32	6	30
986054	from Ø 50 to Ø 40	6	30

968

Female elbow fitting.
In CR dezincification resistant alloy.
For polyethylene pipes.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
968632	Ø 32 x 1" F	10	50
968740	Ø 40 x 1 1/4" F	4	20

980

Kit.

Code			
980025	Ø 25	100	–
980032	Ø 32	100	–
980040	Ø 40	50	–
980050	Ø 50	50	–
980063	Ø 63	50	–

DECA-FITTINGS FOR STEEL PIPES

Steel series

For steel pipes with nominal outer diameters for gas threading. Stainless steel pipe clenching ring.

890

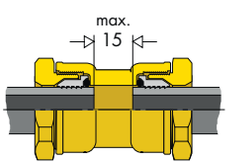
Female fitting. In brass.
For steel pipe.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
890421	Ø 21 x 1/2" F	12	60
890527	Ø 27 x 3/4" F	10	50
890634	Ø 34 x 1" F	10	50

891

Male fitting. In brass.
For steel pipe.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
891421	Ø 21 x 1/2" M	12	60
891527	Ø 27 x 3/4" M	10	50
891634	Ø 34 x 1" M	10	50



893

Sleeve fitting. In brass.
For steel pipe.
Without internal stop to be used as joint repair sleeve.

Can be used for pipe repair with a maximum distance of 15 mm between pipe ends.

Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

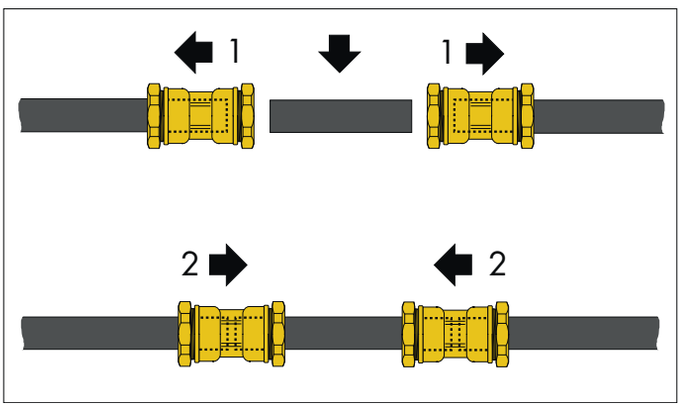
Code			
893021	Ø 21	15	75
893027	Ø 27	10	50
893034	Ø 34	5	25

894

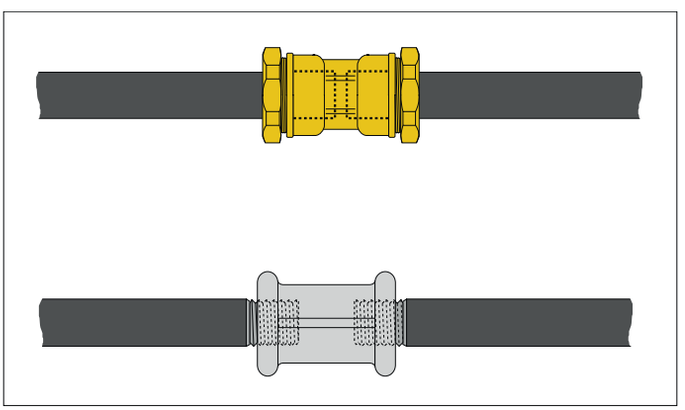
Tee fitting. In brass.
For steel pipe.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
894021	Ø 21	10	50
894027	Ø 27	5	25
894034	Ø 34	4	20

Example of use on steel pipes



Example of repair with the insertion of a supplementary sleeve.



In order to avoid corrosion, which is typical when traditional threaded sleeves are used (see diagram in grey colour), the application of the **Steel** series fittings (see diagram in yellow colour) allows piping to keep the complete galvanisation.
The traditional sleeve in fact does not cover the entire threaded part which is therefore subjected to high corrosion since it features no galvanisation and is weakened on the diameter.

ACCESSORIES AND SPARE PARTS FOR DECA-FITTINGS

886

Reduction kit.

Code			
886022	from Ø 25 to Ø 20	1	–
886032	from Ø 32 to Ø 25	1	–
886043	from Ø 40 to Ø 32	1	–
886054	from Ø 50 to Ø 40	1	–
886065	from Ø 63 to Ø 50	1	–

887

Pipe stiffener.

PN 10 series

Code			
887120	20 x 2	10	–
887223	25 x 2,3	10	–
887330	32 x 3	10	–
887437	40 x 3,7	5	–
887546	50 x 4,6	5	–
887658	63 x 5,8	5	–

For REHAU pipes

Code			
887128	20 x 2,8	10	–
887235	25 x 3,5	10	–

S 5 PN 4 series

Code			
887130	20 x 3	10	–
887230	25 x 3	10	–
887330	32 x 3	10	–
887437	40 x 3,7	5	–
887546	50 x 4,6	5	–
887658	63 x 5,8	5	–

S 8 PN 2,5–4 series

Code			
887430	40 x 3	5	–
887530	50 x 3	5	–
887636	63 x 3,6	5	–

877

Pipe clenching ring.

Code			
877020	Ø 20 brass	1	–
877021	Ø 21 brass	1	–
877121	Ø 21 stainless steel	1	–
877025	Ø 25 brass	1	–
877027	Ø 27 brass	1	–
877127	Ø 27 stainless steel	1	–
877032	Ø 32 brass	1	–
877034	Ø 34 brass	1	–
877134	Ø 34 stainless steel	1	–
877040	Ø 40 brass	1	–
877050	Ø 50 brass	1	–
877063	Ø 63 brass	1	–

878

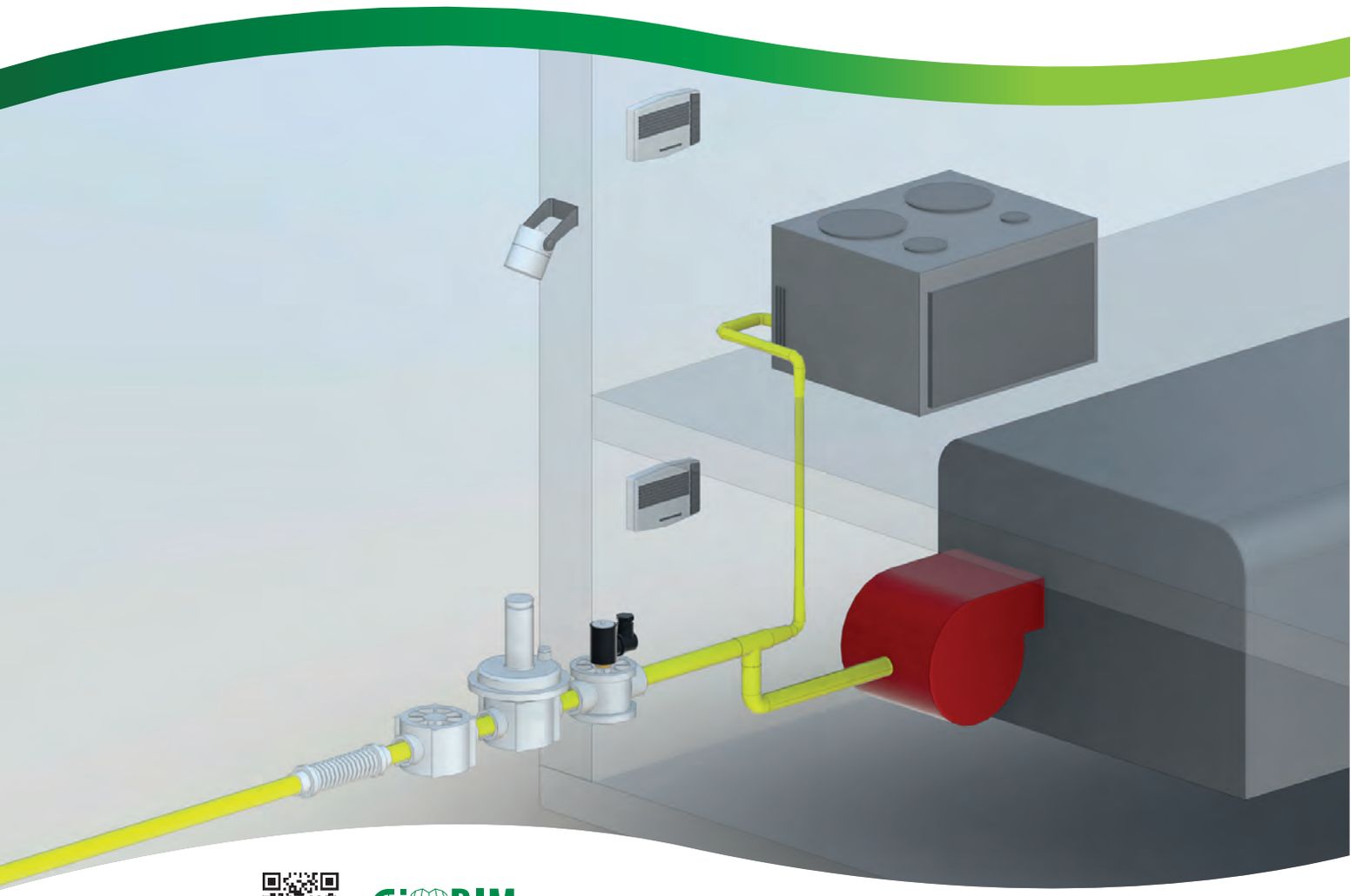
Brass washer.

Code			
878020	Ø 20	1	–
878021	Ø 21	1	–
878025	Ø 25	1	–
878027	Ø 27	1	–
878032	Ø 32	1	–
878034	Ø 34	1	–
878040	Ø 40	1	–
878050	Ø 50	1	–
878063	Ø 63	1	–

879

O-Ring.

Code			
879020	Ø 20	1	–
879021	Ø 21	1	–
879025	Ø 25	1	–
879027	Ø 27	1	–
879032	Ø 32	1	–
879034	Ø 34	1	–
879040	Ø 40	1	–
879050	Ø 50	1	–
879063	Ø 63	1	–



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847

Compact gas filter.
Max. pressure: 2 bar.
Filtration: Ø ≥ 50 µm.
Filtration class: G 2 (to EN 779).

CE

Code			
847004	1/2″	1	–
847005	3/4″	1	–

848

Gas filter.
Max. pressure: 2 bar.
Filtration: Ø ≥ 50 µm.
Filtration class: G 2 (to EN 779).

CE

Code			
848004	1/2″	1	–
848005	3/4″	1	–
848006	1″	1	–
848007	1 1/4″	1	–
848008	1 1/2″	1	–
848009	2″	1	–

848

Gas filter.
Body PN 16.
Flanged connection.
To be coupled with flat counterflanges EN 1092-1.
Max. pressure: 2 bar.
Filtration: Ø ≥ 50 µm.
Filtration class: G 2 (to EN 779).

CE

Code			
848060	DN 65	1	–
848080	DN 80	1	–
848100	DN 100	1	–

850

Gas pressure closing filter regulator, double diaphragm.
Threaded connections.
Max. inlet pressure: 500 mbar.
Temperature range: -15–60 °C.
Regulation and closing at null flow according to UNI EN 88.
Filtration: Ø ≥ 50 µm.
Filtration class: G 2 (to EN 779).
Conformity to Directive ATEX (II 2G - II 2D).

CE Ex

Code		Adjustment (mbar)		
850004	1/2″	18–40	1	–
850005	3/4″	18–40	1	–
850006	1″	18–40	1	–
850007	1 1/4″	13–23	1	–
850008	1 1/2″	13–23	1	–
850009	2″	13–23	1	–

850

Gas pressure closing filter regulator, double diaphragm.
Body PN 16.
Flanged connection.
To be coupled with flat counterflanges EN 1092-1.
Max. inlet pressure: 500 mbar.
Temperature range: -15–60 °C.
Regulation and closing at null flow according to UNI EN 88.
Filtration: Ø ≥ 50 µm.
Filtration class: G 2 (to EN 779).
Conformity to Directive ATEX (II 2G - II 2D).

CE Ex

Code		Adjustment (mbar)		
850060	DN 65	13–27	1	–
850080	DN 80	13–27	1	–
850100	DN 100	15–27	1	–

852

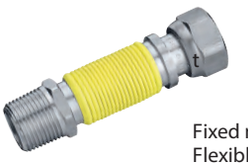
Gas pressure closing regulator, double diaphragm.
Threaded connections.
Max. inlet pressure: 500 mbar.
Temperature range: -15–60 °C.
Regulation and closing at null flow according to UNI EN 88.
Conformity to Directive ATEX (II 2G - II 2D).

Code		Adjustment (mbar)		
852004	1/2″	18–40	1	–
852005	3/4″	18–40	1	–
852006	1″	18–40	1	–
852007	1 1/4″	13–23	1	–
852008	1 1/2″	13–23	1	–
852009	2″	13–23	1	–

852

Gas pressure closing regulator, double diaphragm.
Body PN 16.
Flanged connection.
To be coupled with flat counterflanges EN 1092-1.
Max. inlet pressure: 500 mbar.
Temperature range: -15–60 °C.
Regulation and closing at null flow according to UNI EN 88.
Conformity to Directive ATEX (II 2G - II 2D).

Code		Adjustment (mbar)		
852060	DN 65	13–27	1	–
852080	DN 80	13–27	1	–
852100	DN 100	15–27	1	–



841

Extendible stainless steel joint according to UNI 11353, for gas systems in domestic applications (max. 35 kW).
Max. working pressure PS: 0,5 bar.
Fixed male connection: AISI 303.
Flexible: AISI 316L.
Captive female connection: AISI 303.

Code		Min./max. L		
841414	1/2″	90/130	3	–
841514	3/4″	90/130	3	–
841614	1″	90/130	3	–
841420	1/2″	120/210	3	–
841520	3/4″	120/210	3	–
841620	1″	120/210	3	–
841440	1/2″	240/410	3	–
841540	3/4″	240/410	3	–
841640	1″	240/410	3	–

842

Antivibration joint for gas systems.
According to EN 676 standard.
Max. working pressure PS: 0,5 bar.

Threaded version: body AISI 316L, fixed male connection: FE 37.

Flanged version: body AISI 321, free flanged connections: ASTM A 105 - PN 10.
To be coupled with flat counterflanges EN 1092-1 (PN 10 - PN 16).

Code		L (mm)		
842004	1/2″	145	3	–
842005	3/4″	150	3	–
842006	1″	165	3	–
842007	1 1/4″	180	1	–
842008	1 1/2″	210	1	–
842009	2″	230	1	–
842060	DN 65	175	1	–
842080	DN 80	175	1	–
842100	DN 100	195	1	–

8460

Tap for gas pressure gauge, with opening button.
Female connections.

Code			
846002	1/4″	1	–
846003	3/8″	1	–

8461

Pressure gauge for gas.
Diaphragm precision sensitive element.
Bottom connection.
Accuracy: UNI 1,6.

Code		mbar	Ø		
846101	1/4″	0–60	60	1	–
846102	1/4″	0–100	60	1	–
846103	3/8″	0–60	80	1	–
846104	3/8″	0–100	80	1	–

SOLENOID VALVES FOR GAS - NORMALLY OPEN - MANUAL RESET

8540

Solenoid valve for gas,
normally open,
with manual reset.
Max. pressure: 500 mbar.
Protection class: IP 65.

CE

Code		Electric supply		
854024	1/2″	230 V (AC)	1	–
854025	3/4″	230 V (AC)	1	–
854044	1/2″	24 V (AC)	1	–
854045	3/4″	24 V (AC)	1	–

Spare coil,
complete with connector.

Code	Electric supply	Use		
854012	230 V (AC)	1/2″ - 3/4″	1	–
854014	24 V (AC)	1/2″ - 3/4″	1	–

8540

Solenoid valve for gas,
normally open,
with manual reset.
Max. pressure: 500 mbar.
Protection class: IP 65.

CE

Code		Electric supply		
854026	1″	230 V (AC)	1	–
854046	1″	24 V (AC)	1	–

Spare coil,
complete with connector.

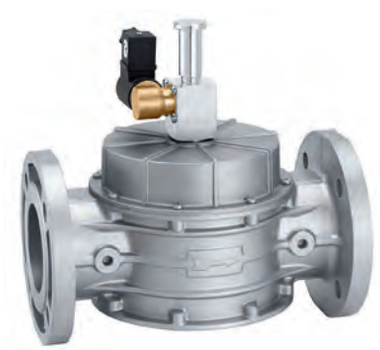
Code	Electric supply	Use		
854002	230 V (AC)	1″	1	–
854004	24 V (AC)	1″	1	–

839

Solenoid valve for gas,
normally open,
with manual reset.
Max. pressure: 500 mbar.
Protection class: IP 65.

CE

Code		Electric supply		
839005	3/4″	230 V (AC)	1	–
839006	1″	230 V (AC)	1	–
839007	1 1/4″	230 V (AC)	1	–
839008	1 1/2″	230 V (AC)	1	–
839009	2″	230 V (AC)	1	–
839105	3/4″	24 V (AC)	1	–
839106	1″	24 V (AC)	1	–
839107	1 1/4″	24 V (AC)	1	–
839108	1 1/2″	24 V (AC)	1	–
839109	2″	24 V (AC)	1	–
839205	3/4″	12 V (DC)	1	–
839206	1″	12 V (DC)	1	–
839207	1 1/4″	12 V (DC)	1	–
839208	1 1/2″	12 V (DC)	1	–
839209	2″	12 V (DC)	1	–



839

Solenoid valve for gas,
normally open,
with manual reset.
Body PN 16.
Max. pressure: 500 mbar.
Protection class: IP 65.

Flanged connections PN 16.
To be coupled with flat
counterflanges EN 1092-1.

CE

Code		Electric supply		
839060	DN 65	230 V (AC)	1	–
839080	DN 80	230 V (AC)	1	–
839100	DN 100	230 V (AC)	1	–
839120	DN 125	230 V (AC)	1	–
839150	DN 150	230 V (AC)	1	–
839160	DN 65	24 V (AC)	1	–
839180	DN 80	24 V (AC)	1	–
839190	DN 100	24 V (AC)	1	–
839220	DN 125	24 V (AC)	1	–
839250	DN 150	24 V (AC)	1	–

Spare coil,
complete with connector.

Code	Electric supply	Use		
839A05	230 V (AC)	3/4″–DN 150	1	–
839B05	24 V (AC)	3/4″–DN 150	1	–
839C05	12 V (DC)	3/4″–DN 150	1	–

SOLENOID VALVES FOR GAS - NORMALLY CLOSED - MANUAL RESET

8541

Solenoid valve for gas,
normally closed,
with manual reset.
Max. pressure: 500 mbar.
Class A - Group 2.
Protection class: IP 65.

CE

Code		Electric supply		
854124	1/2"	230 V (AC)	1	–
854125	3/4"	230 V (AC)	1	–
854126	1"	230 V (AC)	1	–
854144	1/2"	24 V (AC)	1	–
854145	3/4"	24 V (AC)	1	–
854146	1"	24 V (AC)	1	–

Spare coil,
complete with connector.

Code	Electric supply	Use		
854102	230 V (AC)	1/2"–1"	1	–
854104	24 V (AC)	1/2"–1"	1	–

837

Solenoid valve for gas,
normally closed,
with manual reset.
Max. pressure: 500 mbar.
Class A - Group 2.
Protection class: IP 65.

CE

Code		Electric supply		
837005	3/4"	230 V (AC)	1	–
837006	1"	230 V (AC)	1	–
837007	1 1/4"	230 V (AC)	1	–
837008	1 1/2"	230 V (AC)	1	–
837009	2"	230 V (AC)	1	–
837105	3/4"	24 V (AC)	1	–
837106	1"	24 V (AC)	1	–
837107	1 1/4"	24 V (AC)	1	–
837108	1 1/2"	24 V (AC)	1	–
837109	2"	24 V (AC)	1	–
837205	3/4"	12 V (DC)	1	–
837206	1"	12 V (DC)	1	–
837207	1 1/4"	12 V (DC)	1	–
837208	1 1/2"	12 V (DC)	1	–
837209	2"	12 V (DC)	1	–

Spare coil,
complete with connector.

Code	Electric supply	Use		
837A05	230 V (AC)	3/4"–2"	1	–
837B05	24 V (AC)	3/4"–2"	1	–
837C05	12 V (DC)	3/4"–2"	1	–

837

Solenoid valve for gas,
normally closed,
with manual reset.
Body PN 16.
Max. pressure: 500 mbar.
Class A - Group 2.
Protection class: IP 65.

Flanged connections PN 16.
To be coupled with flat
counterflanges EN 1092-1.

CE

Code		Electric supply		
837060	DN 65	230 V (AC)	1	–
837080	DN 80	230 V (AC)	1	–
837100	DN 100	230 V (AC)	1	–
837120	DN 125	230 V (AC)	1	–
837150	DN 150	230 V (AC)	1	–
837160	DN 65	24 V (AC)	1	–
837180	DN 80	24 V (AC)	1	–
837190	DN 100	24 V (AC)	1	–
837220	DN 125	24 V (AC)	1	–
837250	DN 150	24 V (AC)	1	–

Spare coil,
complete with connector.

Code	Electric supply	Use		
837A60	230 V (AC)	DN 65–DN 150	1	–
837B60	24 V (AC)	DN 65–DN 150	1	–

SOLENOID VALVES FOR GAS - NORMALLY CLOSED

838

Solenoid valve for gas,
normally closed.
Max. pressure: 360 mbar.
Class A - Group 2.
Protection class: IP 65.

CE

Code		Electric supply		
838004	1/2″	230 V (AC)	1	–
838005	3/4″	230 V (AC)	1	–
838006	1″	230 V (AC)	1	–
838007*	1 1/4″	230 V (AC)	1	–
838008*	1 1/2″	230 V (AC)	1	–
838009*	2″	230 V (AC)	1	–
838104	1/2″	24 V (AC)	1	–
838105	3/4″	24 V (AC)	1	–
838106	1″	24 V (AC)	1	–
838107*	1 1/4″	24 V (AC)	1	–
838108*	1 1/2″	24 V (AC)	1	–
838109*	2″	24 V (AC)	1	–

** With upper hexagonal fixing nut*

838

Solenoid valve for gas,
normally closed.
Body PN 16.
Max. pressure: 200 mbar.
Class A - Group 2.
Protection class: IP 65.

Flanged connections PN 16.
To be coupled with flat
counterflanges EN 1092-1.

CE

Code		Electric supply		
838060	DN 65	230 V (AC)	1	–
838080	DN 80	230 V (AC)	1	–
838100	DN 100	230 V (AC)	1	–
838120	DN 125	230 V (AC)	1	–
838150	DN 150	230 V (AC)	1	–
838160	DN 65	24 V (AC)	1	–
838180	DN 80	24 V (AC)	1	–
838190	DN 100	24 V (AC)	1	–
838220	DN 125	24 V (AC)	1	–
838250	DN 150	24 V (AC)	1	–

CE

Spare coil,
complete with connector.

Code	Electric supply	Use			
838A04	230 V (AC)	1/2″ - 3/4″	(round version)	1	–
838A06	230 V (AC)	1″	(round version)	1	–
838A07	230 V (AC)	1 1/4″–2″	(round version)	1	–
838A17	230 V (AC)	1 1/4″–2″	(round version)*	1	–
838B04	24 V (AC)	1/2″ - 3/4″	(round version)	1	–
838B06	24 V (AC)	1″	(round version)	1	–
838B07	24 V (AC)	1 1/4″–2″	(round version)	1	–
838B17	24 V (AC)	1 1/4″–2″	(round version)*	1	–

** With upper hexagonal fixing nut*

CE

Spare coil,
complete with connector.

Code	Electric supply	Use		
838A60	230 V (AC)	DN 65 - DN 80	1	–
838A00	230 V (AC)	DN 100	1	–
838A20	230 V (AC)	DN 125 - DN 150	1	–
838B60	24 V (AC)	DN 65 - DN 80	1	–
838B00	24 V (AC)	DN 100	1	–
838B20	24 V (AC)	DN 125 - DN 150	1	–

ROTATING SIREN - BLINKER

8561

Rotating siren.
230 V (AC) - 112 dB/1 m.

CE

Code		
856102	1	–

8562

Electronic intermittence blinker.
230 V (AC) - Lamp power: 40 W.

CE

Code		
856202	1	–

GAS DETECTORS

8563

Gas detector, with built-in sensor
and relay outlet.
With BUS connection,
for auxiliary remote sensor.
For solenoid valves 8540, 8541, 837,
838 and 839 series.
Supply: 230 V (AC).
Outlet contact: 8 (2) A.
Protection class: IP 42.
Domestic use.

CE

Code				
856300	for methane gas	1	–
856302	for LPG	1	–

8563

Auxiliary remote sensor
for gas detector 8563 series.
Supply: 230 V (AC).
Protection class: IP 42.
Domestic use.

CE

Code				
856310	for methane gas	1	–
856312	for LPG	1	–

8565

Gas detector, with built-in sensor
and relay outlet.
Without BUS connection.
Supply: 230 V (AC).
Outlet contact: 8 (2) A.
Protection class: IP 42.
Domestic use.

CE

Code				
856500	for methane gas	1	–
856502	for LPG	1	–

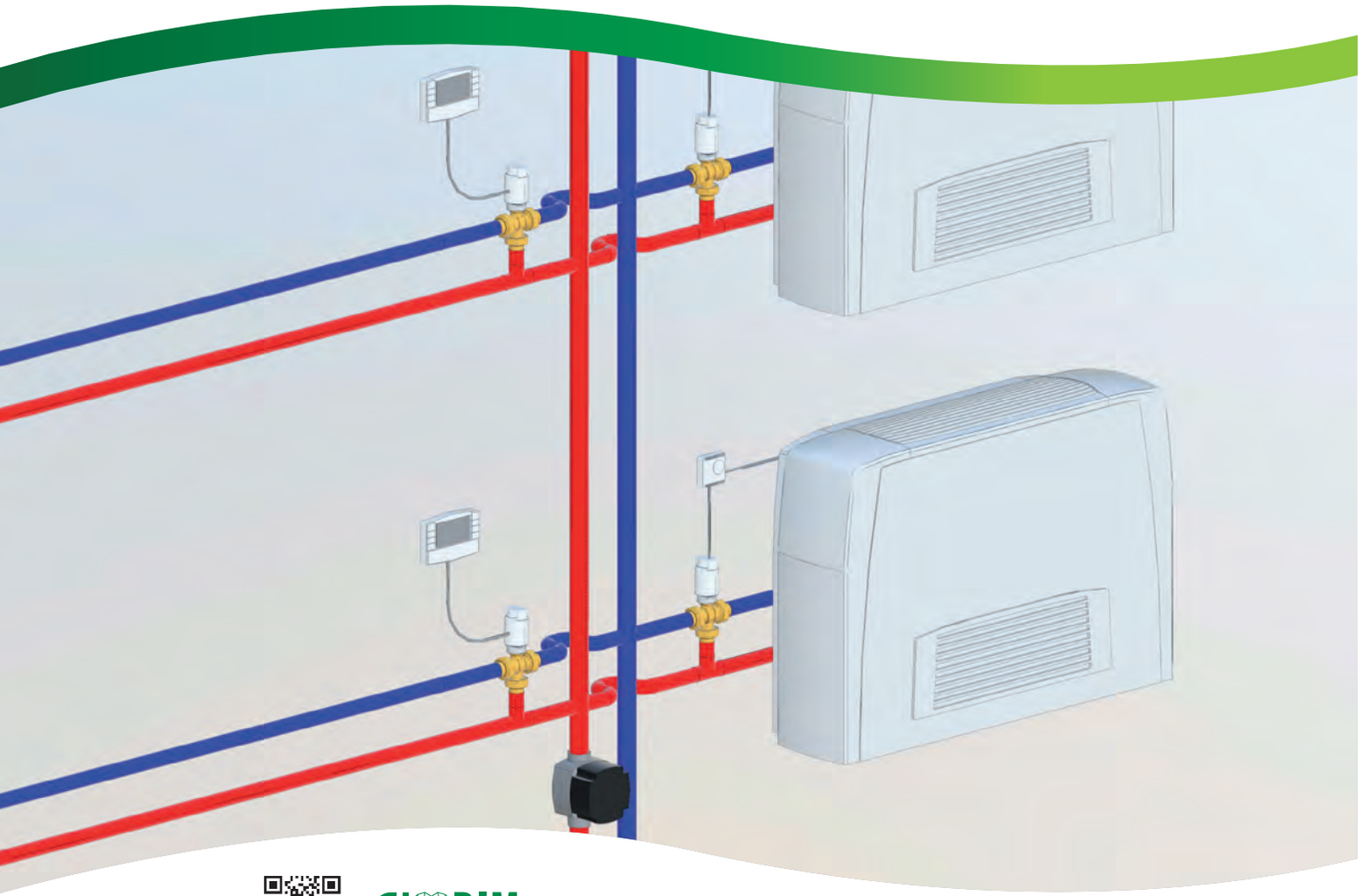
855

Gas detector, with built-in sensor
and relay outlet.
Without BUS connection.
With solenoid valve.
Normally open.
Supply: 230 V (AC).
Protection class: IP 42.

CE

Code				
855400	1/2″	for methane gas	1	–
855500	3/4″	for methane gas	1	–
855410	1/2″	for LPG	1	–
855510	3/4″	for LPG	1	–

EXPANSION VESSELS, CHRONO-THERMOSTATS, THERMOSTATS



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Expansion vessels
Shut-off cocks for expansion vessels
Pressure switch and float switch
Temperature regulators
Thermostats
Chrono-thermostats

Domestic Water Sizer
DOMESTIC WATER SYSTEM SIZER ALSO FOR SMARTPHONE
Available on www.caleffi.com and app for smartphone.
Download the version for your iOS and Android® mobile phone.

EXPANSION VESSELS FOR HEATING SYSTEMS

556

tech. broch. 01079

Welded expansion vessel,
for heating systems, EC certification.
Diaphragm membrane.
Max. working pressure: 6 bar.
System working temperature range: -10–120 °C.
Membrane working temperature range: -10–70 °C.
Max. percentage of glycol: 50 %.
Conformity to EN 13831 standard.

CE 0045

Code	Litres	Conn.	Precharge (bar)		
556008	8	3/4"	1,5	1	–
556012	12	3/4"	1,5	1	–
556018	18	3/4"	1,5	1	–
556025	25	3/4"	1,5	1	–

556

tech. broch. 01079

Welded expansion vessel,
for heating systems, EC certification.
Diaphragm membrane.
Max. working pressure: 6 bar.
System working temperature range: -10–120 °C.
Membrane working temperature range: -10–70 °C.
Max. percentage of glycol: 50 %.
Conformity to EN 13831 standard.

CE 0045

Code	Litres	Conn.	Precharge (bar)		
556035	35	3/4"	1,5	1	–
556050	50	3/4"	1,5	1	–
556080	80	1"	1,5	1	–
556100	100	1"	1,5	1	–
556140	140	1"	1,5	1	–
556200	200	1"	1,5	1	–
556250	250	1"	1,5	1	–

556

tech. broch. 01079

Welded expansion vessel,
for heating systems, EC certification.
Diaphragm membrane.
Max. working pressure: 6 bar.
System working temperature range: -10–120 °C.
Membrane working temperature range: -10–70 °C.
Max. percentage of glycol: 50 %.
Conformity to EN 13831 standard.

CE 0045

Code	Litres	Conn.	Precharge (bar)		
556300	300	1"	1,5	1	–
556400	400	1"	1,5	1	–
556500	500	1"	1,5	1	–
556600	600	1"	1,5	1	–

EXPANSION VESSELS FOR HOT WATER SYSTEMS

5557

tech. broch. 01079

Welded expansion vessel,
for hot water systems, EC certification.
Bladder membrane.
Max. working pressure: 10 bar.
System working temperature range: -10–100 °C.
Membrane working temperature range: -10–100 °C.
Conformity to EN 13831 standard.

CE 1370

Code	Litres	Conn.	Precharge (bar)		
555702	2	1/2"	2,5	4	–
555705	5	3/4"	2,5	1	–
555708	8	3/4"	2,5	1	–

568

tech. broch. 01079

Welded expansion vessel,
for hot water systems, EC certification.
Bladder membrane.
Max. working pressure: 10 bar.
System working temperature range: -10–70 °C.
Membrane working temperature range: -10–70 °C.
Conformity to EN 13831 standard.

CE 0045

Code	Litres	Conn.	Precharge (bar)		
568008	8	3/4"	2,5	1	–
568012	12	3/4"	2,5	1	–
568018	18	3/4"	2,5	1	–
568025	25	3/4"	2,5	1	–
568033*	33	3/4"	2,5	1	–

** Complete with brackets for wall mounting*

568

tech. broch. 01079

Welded expansion vessel,
for hot water systems, EC certification.
Bladder membrane
(can be replaced for volumes from 60 to 500 litres).
Max. working pressure: 10 bar.
System working temperature range: -10–70 °C.
Membrane working temperature range: -10–70 °C.
Conformity to EN 13831 standard.

CE 0045

Code	Litres	Conn.	Precharge (bar)		
568050	50	1"	2,5	1	–
568060	60	1"	2,5	1	–
568080	80	1"	2,5	1	–
568100	100	1"	2,5	1	–
568200	200	1 1/4"	2,5	1	–
568300	300	1 1/4"	2,5	1	–
568400	400	1 1/4"	2,5	1	–
568500	500	1 1/4"	2,5	1	–

SHUT-OFF COCK FOR EXPANSION VESSELS

558

Automatic shut-off cock,
for expansion vessels.
For domestic water circuit.
Max. working pressure: 10 bar.
Max. working temperature: 110 °C.

Code			
558500	3/4"	1	50

558

Automatic shut-off cock,
for expansion vessel,
with drain cock.
For domestic water circuit.
Max. working pressure: 6 bar.
Max. working temperature: 85 °C.

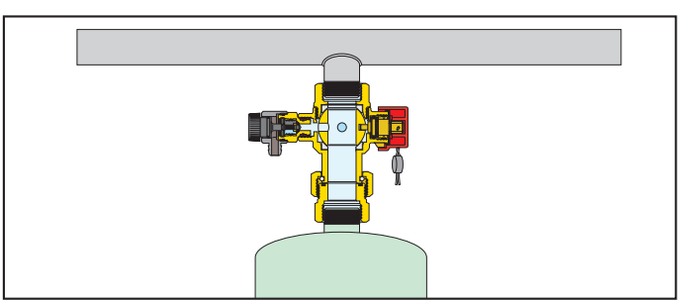
Code			
558510	3/4"	1	50

5580

Ball shut-off valve,
for expansion vessels,
with drain cock.
For domestic water circuit.
Max. working pressure: 6 bar.
Max. working temperature: 85 °C.

Code			
558050	3/4"	1	20
558060	1"	1	20
558070	1 1/4"	1	20

Application diagram of shut-off valve 5580 series



PRESSURE SWITCH AND FLOAT SWITCH

625

Pressure switch for boosting sets and domestic water applications.
Up to 500 V three-pole - 16 (10) A.
Ambient temperature range: 0–55 °C.
Medium temperature range: 0–55 °C.
1/4" female connection.
Protection class: IP 44.

CE

Code	Setting range	Max. pressure		
625005	1– 5 bar	5 bar	1	10
625010	3–12 bar	12 bar	1	10

613

Float switch, 250 V - 10 A.
Heavy duty approved.

Code	Cable length		
613030	3 m	1	5
613050	5 m	1	5

TEMPERATURE REGULATOR

161

Digital regulator with synoptic diagram for heating and cooling complete with immersion flow probe with pocket and Pt1000 Ø 6 mm return probe (pocket to be chosen according to the pipe; see accessories).
Optional outside compensated probe.
Temperature adjustment range: 5–95 °C.
Supply: 230 V - 50/60 Hz.
Protection class: IP 20 / EN 60529.
Probe cable length: 1,5 m.

CE

Code			
161010		1	–

161

Remote regulator.
Functions:
- translation of regulation curves,
- max. temperature,
- position OFF.

Code			
161005		1	–

Accessories for regulator code 161010.

Code			
161012	Pt1000 contact probe for pipes Ø 6 mm, cable L 2,5 m		
161013	immersion pocket for Pt1000 probe 1/2" M, 60 mm		
161014	immersion pocket for Pt1000 probe 1/2" M, 100 mm		
161015	Pt1000 probe Ø 6 mm - L 20 mm, cable L 1,5 m		
161006	Pt1000 probe Ø 6 mm - L 45 mm, cable L 2,5 m		

161

Outside temperature probe.

Code			
161002		1	–

1520

Digital temperature regulator for heating and cooling.
Complete with flow probe, outside probe and max. relative humidity probe.
Supply: 230 V - 50/60 Hz.
Power consumption: 5,5 VA.
Protection class: IP 40.

CE

Code			
152021	1 channel	1	–

161

Pressure switch with preconnected pin.
Working range: 0,5–10 bar.
Max. working temperature: 100 °C.
Cable length: 1 m.

Code			
161003	1/2"	1	–

1520

Digital temperature regulator.
Complete with flow contact probe and outside probe.
Adjustment range: 20–90 °C.
Supply: 230 V - 50/60 Hz.
Protection class: IP 40.

CE

Code			
152001	1 channel	1	–
152002	2 channels	1	–
152003	3 channels	1	–

161

Dew point detector.
Working range: 30–100 RH %.

Code			
161004		1	–

THERMOSTATS

620

Room thermostat with changeover switch 16 (2,5) A - 250 V.

620000: without warning lamp.

620100: with warning lamp.

620110: with warning lamp ON/OFF switch.

620120: with warning lamp and SUMMER - WINTER switch.

Protection class: IP 30.
Class: I [Ecodesign Directive].

CE

Code			
620000		1	50
620100		1	50
620110		1	50
620120		1	50

620

Digital room thermostat with display.
With changeover contact 5 (3) A.
ON/OFF function with adjustable differential from 0,2 to 2 °C or proportional.
2 temperature levels + antifreeze.
SUMMER - WINTER switch.
Adjustable temperature with 0,1 °C steps.
Protection class: IP 30.
Class: I [Ecodesign Directive].

CE

Code			
620300	battery supply	1	10
620302	electric supply 230 V	1	10

6205

tech. broch. 01186

Control bar.
Supply: 230 V - 50/60 Hz.
Power consumption: max. 5,5 VA (8 outputs).
Changeover contacts: 10 A.
Protection class: IP 30 (with rubber cable clamps).
Output command for pump.
Input for SUMMER - WINTER.
Input for timer.

CE

Code			
620542	4 channels	1	–
620582	8 channels	1	–

CHRONO-THERMOSTATS

618

Digital chrono-thermostat,
with battery supply.
Daily or weekly programmable clock.
2 temperature levels + antifreeze.
Fitted for phone programmer.
30-minute minimum programme.
Output contact: 8 (2) A.
Protection class: IP 30.
Class: I-IV [Ecodesign Directive].

CE

Code			
618101	daily	1	–
618107	weekly	1	–

739

Digital chrono-thermostat,
with battery supply.
Weekly programmable clock.
Quick programming.
SUMMER - WINTER changeover.
Output contact: 5 (2) A.
Protection class: IP 30.
Class: I-IV [Ecodesign Directive].

CE

Code			
739107	135 x 90 x 28 mm	1	–

738

Digital room chrono-thermostat
with battery electric supply.
Backlit display and navigation via menu.
Weekly programmable clock.
Fitted for phone programmer.
3 temperature levels + antifreeze.
30-minute minimum programme.
ON/OFF function with adjustable differential from 0,2 to 2 °C or proportional.
SUMMER - WINTER changeover.
Adjustable temperature with 0,1 °C steps.
Relais output with changeover switch contact: 5 (3) A / 250 V.
Protection class: IP 30.
Class: I-IV [Ecodesign Directive].

CE

Code			
738407		1	–

738

Digital room chrono-thermostat.
Electric supply: 230 V.
Backlit display and navigation via menu.
Backlit status bar.
Weekly programmable clock.
Fitted for phone programmer.
3 temperature levels + antifreeze.
30-minute minimum programme.
ON/OFF function with adjustable differential from 0,2 to 2 °C or proportional.
SUMMER - WINTER changeover.
Adjustable temperature with 0,1 °C steps.
Relais output with changeover switch contact: 5 (3) A / 250 V.
Protection class: IP 30.
Class: I-IV [Ecodesign Directive].

CE

Code			
738427		1	–

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User modules
Wall mounted HIU - Instantaneous DHW production
Recess mounted HIU - Instantaneous DHW production

PLURIMOD XM SELF BALANCED USER MODULE

7004

NEW

tech. broch. 01409

PLURIMOD XM hydraulic module complete with:
- 2 pairs of 3/4" M ball valves
- differential pressure control valve with presetting
- technopolymer template for flow meter
- inspectable strainer with probe connection
- technopolymer mounting bracket with thermal break
- first flushing strainer
- PPE full insulation.

Fitted for thermo-electric actuators 6565/6566 series.

Code	Flow rate range with Δp_{user} 15 kPa (m³/h)
700475 002	0,04–0,34
700485 002	0,20–1,05

6565/6566

Thermo-electric actuator.
Quick-coupling installation, with a clip adapter.
Supply: 230 V (AC) o 24 V (AC)/(DC).
Control signal: ON/OFF.
Power consumption: 1 W.
Ambient temperature range: 0–60 °C.
Protection class: IP 54.
Connection: M 30 p.1,5.
Supply cable length: 1 m.

Code	Supply voltage V	Control signal			
656502	230	ON/OFF	normally closed	100	–
656504	24	ON/OFF	normally closed	100	–
656602	230	ON/OFF	normally open	100	–
656604	24	ON/OFF	normally open	100	–

PLURIMOD EASY SELF BALANCED UNIVERSAL USER MODULE CENTRALISED DOMESTIC WATER

700205

tech. broch. 01303

Recessed box with galvanised backplate and RAL 9010 painted door for interior use; finishing frame with adjustable depth from 130 to 160 mm.

Complete with:
- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax 55 °C
- PPE full insulation.

Fitted for positioning of domestic water functions codes 70005. (see page 312).

Code	Conn.	Dimension (mm)
700205	3/4"	480 x 480

700025 DUPLEX

tech. broch. 01113

Recessed box for double PLURIMOD EASY user. Galvanised backplate and RAL 9010 painted door for interior use; finishing frame with adjustable depth from 140 to 180 mm. Equipped with guides for positioning the brackets code 700205 002.
Fitted for positioning of domestic water functions codes 70005. (see page 312).

Code	Dimension (mm)
700025	550 x 1175

700205 003

tech. broch. 01303

Steel plate for fastening vertically to a wall or for inserting in a services duct.
Complete with:
- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax 55 °C
- PPE full insulation.

Fitted for positioning of domestic water functions codes 70005. (see page 312).

Code	Conn.	Dimension (mm)
700205 003	3/4"	480 x 610

7002

tech. broch. 01303

Hydraulic module PLURIMOD EASY fitted for heat metering.
Complete with:
- 2-way zone valve with ON/OFF control by means of thermo-electric actuator 6562 series
- differential valve with user side control with fixed Δp
- 2 pockets for temperature probe (flow pocket with stainless steel strainer cartridge)
- 1 copper template for flow meter.

Code	Actuator supply voltage (V)	Δp set (kPa)
700215 001	230	15
700216 001	24	15
700217 001	230	20
700218 001	24	20
700219 001	230	30
700220 001	24	30

700205 002

tech. broch. 01303

Module bracket for PLURIMOD EASY complete with:
- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax 55 °C
- PPE full insulation.

Code	
700205 002	3/4"

Copper template for flow meter to replace the plastic template.

Code
R79112

USER MODULE WITH AUTOMATIC FLOWRATE CONTROL CENTRALISED DOMESTIC WATER

7003

Recessed box with galvanised backplate and RAL 9010 painted door for interior use; finishing frame with adjustable depth from 130 to 160 mm.
For both vertical and horizontal installation, inlet possible on both left and right side of the box.

Complete with PLURIMOD EASY ULTRA user module (code 700306 002).
Fitted for positioning of domestic water functions codes 70005. (see page 312).

Code	Conn.	Dimension (mm)	Flow rate range (l/h)
700306	1″	480 x 480	180–1800

7003

PLURIMOD EASY ULTRA 1″ hydraulic module complete with:
- 2 pairs of 1″ M ball valves
- PICV DN 25, max. flow rate: 1,8 m³/h
- technopolymer template for flow meter
- inspectable strainer with probe connection
- technopolymer mounting bracket with thermal break
- PPE full insulation.

Fitted for thermo-electric actuators 6565/6566 series.

Code	Conn.	Flow rate range (l/h)
700306 002	1″	180–1800

7003

Steel plate for fastening vertically to a wall or for inserting in a services duct.
Complete with PLURIMOD EASY ULTRA user module (code 700306 002).
Fitted for positioning of domestic water functions codes 70005. (see page 312).

Code	Conn.	Dimension (mm)	Flow rate range (l/h)
700306 003	1″	480 x 610	180–1800

6565/6566

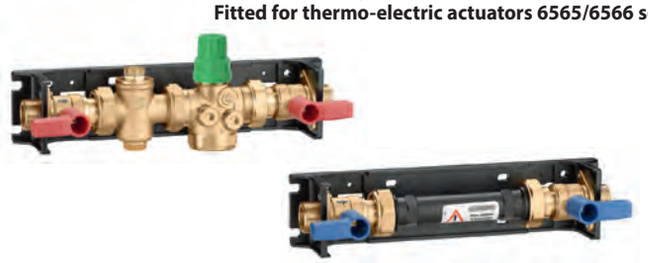
Thermo-electric actuator.
Quick-coupling installation, with a clip adapter.
Supply: 230 V (AC) o 24 V (AC)/(DC).
Control signal: ON/OFF.
Power consumption: 1 W.
Ambient temperature range: 0–60 °C.
Protection class: IP 54.
Connection: M 30 p.1,5.
Supply cable length: 1 m.

Code	Supply voltage V	Control signal			
656502	230	ON/OFF	normally closed	100	–
656504	24	ON/OFF	normally closed	100	–
656602	230	ON/OFF	normally open	100	–
656604	24	ON/OFF	normally open	100	–

7002*55* ...

Hydraulic module fitted for heat metering.
Complete with:
- 1 zone valve unit with flow pocket with strainer mesh
- 1 template for flow meter. Tmax. 55 °C
- 1 pressure independent control valve.

Fitted for thermo-electric actuators 6565/6566 series.



Code	Flow rate range (l/h)
700255 H20	20–200
700255 H40	80–400
700255 1H2	120–1200

PLURIMOD EASY UNIVERSAL USER MODULE
CENTRALISED DOMESTIC WATER - WITH DISTRIBUTION MANIFOLD

70028

Recessed box for PLURIMOD EASY
with distribution manifold for fan-coil systems.
Galvanised backplate and RAL 9010 painted door for interior use.

The box is supplied with:
- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax 55 °C
- 2 x 1" distribution manifolds **662 series** (max 8 connections).

Fitted for positioning of domestic water functions codes 70005**.** (see page 312).

Code	Outlets No.	Outlets	Dimension (mm)
70028B	2	3/4"	866 x 600 x 140–180
70028C	3	3/4"	866 x 600 x 140–180
70028D	4	3/4"	866 x 600 x 140–180
70028E	5	3/4"	866 x 600 x 140–180
70028F	6	3/4"	866 x 600 x 140–180
70028G	7	3/4"	866 x 600 x 140–180
70028H	8	3/4"	866 x 600 x 140–180

70029

Recessed box for PLURIMOD EASY
with distribution manifold.
Galvanised backplate and RAL 9010 painted door for interior use.

The box is supplied with:
- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax 55 °C
- 2 single 3/4" distribution manifolds **350 series** (max 8 connections).

Fitted for positioning of domestic water functions codes 70005**.** (see page 312).

Code	Outlets No.	Outlets	Dimension (mm)
70029B	2	23 p.1,5	866 x 600 x 140–180
70029C	3	23 p.1,5	866 x 600 x 140–180
70029D	4	23 p.1,5	866 x 600 x 140–180
70029E	5	23 p.1,5	866 x 600 x 140–180
70029F	6	23 p.1,5	866 x 600 x 140–180
70029G	7	23 p.1,5	866 x 600 x 140–180
70029H	8	23 p.1,5	866 x 600 x 140–180

70026

Recessed box for PLURIMOD EASY
with distribution manifold for radiant panel systems.
Galvanised backplate and RAL 9010 painted door for interior use.

The box is supplied with:
- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax. 55 °C
- 2 x 1" distribution manifolds **664 series**, flow manifold **complete with flow meters and flow rate regulating valve** (max 8 connections).

Fitted for positioning of domestic water functions codes 70005**.** (see page 312).

Code	Outlets No.	Outlets	Dimension (mm)
70026B	2	3/4"	866 x 600 x 140–180
70026C	3	3/4"	866 x 600 x 140–180
70026D	4	3/4"	866 x 600 x 140–180
70026E	5	3/4"	866 x 600 x 140–180
70026F	6	3/4"	866 x 600 x 140–180
70026G	7	3/4"	866 x 600 x 140–180
70026H	8	3/4"	866 x 600 x 140–180

7002

tech. broch. 01303

Hydraulic module PLURIMOD EASY fitted for heat metering.
Complete with:
- 2-way zone valve with ON/OFF control by means of thermo-electric actuator 6562 series
- differential valve with user side control with fixed Δp
- 2 pockets for temperature probe (flow pocket with stainless steel strainer cartridge)
- 1 copper template for flow meter.

Code	Actuator supply voltage (V)	Δp set (kPa)
700215 001	230	15
700216 001	24	15
700217 001	230	20
700218 001	24	20
700219 001	230	30
700220 001	24	30

For HEAT METERS - HYDRAULIC OPTIONS - see pages 311-312

PLURIMOD UNIVERSAL USER MODULE
CENTRALISED DOMESTIC WATER

70005

tech. broch. 01203

Recessed box with galvanised backplate and RAL 9010 painted door for interior use; finishing frame with adjustable depth from 120 to 150 mm.
Complete with:
- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax 55 °C.

Fitted for positioning of domestic water functions codes 70005. (see page 312).

Code	Conn.	Dimension (mm)
70005	3/4"	550 x 550

70005 003

Steel plate for fastening vertically to a wall or for inserting in a services duct.
Complete with:
- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax 55 °C.

Fitted for positioning of domestic water functions codes 70005. (see page 312).

Code	Conn.	Dimension (mm)
70005 003	3/4"	480 x 610

7000

tech. broch. 01203

Hydraulic module PLURIMOD fitted for heat metering.
Complete with:
- 1 motorised zone valve
- 2 pockets for temperature probe
- 1 copper template for AUTOFLOW®
- 1 copper template for flow meter
- insulation.

Code	Actuator supply voltage (V)	Max. recommended flow rate l/h
70015 001	230	1400
70016 001	24	1400

70025 **DUPLEX**

tech. broch. 01113

Recessed box for double PLURIMOD user. Galvanised backplate and RAL 9010 painted door for interior use; finishing frame with adjustable depth from 140 to 180 mm. Equipped with guides for positioning the brackets code 700005 002.
Fitted for positioning of domestic water functions codes 70005. (see page 312).

Code	Dimension (mm)
70025	550 x 1175

70005 002

Galvanized sheet metal mounting bracket for PLURIMOD plumbing module.

Complete with:
- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system.

Tmax 55 °C.

Code
70005 002

70075

Compact automatic flow rate regulator.
Brass body. Polymer cartridge.
Max. working pressure: 16 bar.

Temperature range: 0-100 °C.
ΔP range: 15-200 kPa.
Flow rates: 0.12 - 1.40 m³/h.
Accuracy: ±10 %.

To complete the code, consult the table.
Example: Maximum required flow rate 600 l/h code 700075 M60.

m³/h	... digit	m³/h	... digit	m³/h	... digit	m³/h	... digit	m³/h	... digit
0,12	**M12**	0,25	**M25**	0,40	**M40**	0,70	**M70**	1,00	**1M0**
0,15	**M15**	0,30	**M30**	0,50	**M50**	0,80	**M80**	1,20	**1M2**
0,20	**M20**	0,35	**M35**	0,60	**M60**	0,90	**M90**	1,40	**1M4**

Code	
70075 ...	1" F captive nut x 1" M

For HEAT METERS - HYDRAULIC OPTIONS - see pages 311-312

PLURIMOD UNIVERSAL USER MODULE
CENTRALISED DOMESTIC WATER - WITH DISTRIBUTION MANIFOLD

70008

tech. broch. 01203

Recessed box for PLURIMOD
with distribution manifold for fan-coil heating systems.
Galvanised backplate and RAL 9010 painted door for interior use.

The box is supplied with:
- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax 55 °C
- 2 x 1" distribution manifolds **662 series** (max 8 connections).

Fitted for positioning of domestic water functions codes 70005**.** (see page 312).

Code	Outlets No.	Outlets	Dimension (mm)
70008B	2	3/4"	866 x 600 x 140–180
70008C	3	3/4"	866 x 600 x 140–180
70008D	4	3/4"	866 x 600 x 140–180
70008E	5	3/4"	866 x 600 x 140–180
70008F	6	3/4"	866 x 600 x 140–180
70008G	7	3/4"	866 x 600 x 140–180
70008H	8	3/4"	866 x 600 x 140–180

70009

tech. broch. 01203

Recessed box for PLURIMOD
with distribution manifold for radiator heating systems.
Galvanised backplate and RAL 9010 painted door for interior use.

The box is supplied with:
- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax 55 °C
- 2 single 3/4" distribution manifolds **350 series** (max 8 connections).

Fitted for positioning of domestic water functions codes 70005**.** (see page 312).

Code	Outlets No.	Outlets	Dimension (mm)
70009B	2	23 p.1,5	866 x 600 x 140–180
70009C	3	23 p.1,5	866 x 600 x 140–180
70009D	4	23 p.1,5	866 x 600 x 140–180
70009E	5	23 p.1,5	866 x 600 x 140–180
70009F	6	23 p.1,5	866 x 600 x 140–180
70009G	7	23 p.1,5	866 x 600 x 140–180
70009H	8	23 p.1,5	866 x 600 x 140–180

70006

tech. broch. 01203

Recessed box for PLURIMOD
with distribution manifold for radiant panel systems.
Galvanised backplate and RAL 9010 painted door for interior use.

The box is supplied with:
- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax 55 °C
- 2 x 1" distribution manifolds **664 series**, flow manifold **complete with flow meters and flow rate regulating valve** (max 8 connections).

Fitted for positioning of domestic water functions codes 70005**.** (see page 312).

Code	Outlets No.	Outlets	Dimension (mm)
70006B	2	3/4"	866 x 600 x 140–180
70006C	3	3/4"	866 x 600 x 140–180
70006D	4	3/4"	866 x 600 x 140–180
70006E	5	3/4"	866 x 600 x 140–180
70006F	6	3/4"	866 x 600 x 140–180
70006G	7	3/4"	866 x 600 x 140–180
70006H	8	3/4"	866 x 600 x 140–180

7000

tech. broch. 01203

Hydraulic module PLURIMOD fitted for heat metering.
Complete with:
- 1 motorised zone valve
- 2 pockets for temperature probe
- 1 copper template for AUTOFLOW®
- 1 copper template for flow meter
- insulation.

Code	Actuator supply voltage (V)	Max. recommended flow rate l/h
700015 001	230	1400
700016 001	24	1400

For HEAT METERS - HYDRAULIC OPTIONS - see pages 311-312

PLURIMOD CLIMA UNIVERSAL USER MODULE - CENTRALISED DOMESTIC WATER

700105

tech. broch. 01210

Recessed box with galvanised backplate and RAL 9010 painted door for interior use; finishing frame with adjustable depth from 120 to 150 mm.

Complete with:
- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax 55 °C
- full insulation.

Fitted for positioning of domestic water functions codes 70005. (see page 312).

Code	Conn.	Dimension (mm)
700105	3/4"	550 x 550

700105 003

Steel plate for fastening vertically to a wall or for inserting in a services duct.
Complete with:
- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax. 55 °C
- full insulation.

Fitted for positioning of domestic water functions codes 70005. (see page 312).

Code	Conn.	Dimension (mm)
700105 003	3/4"	480 x 610

7001

Hydraulic module PLURIMOD CLIMA fitted for heat metering.
Complete with:
- 1 zone valve unit with probe pocket
- 1 servomotor 6450 series, IP 65
- 1 copper template for AUTOFLOW®
- 1 copper template for flow meter
- by-pass adjustment knob.

CE

Code	Actuator supply voltage (V)	Max. recommended flow rate l/h
700115 001	230	1400
700116 001	24	1400

700025 DUPLEX

tech. broch. 01113

Recessed box for double PLURIMOD CLIMA user. Galvanised backplate and RAL 9010 painted door for interior use; finishing frame with adjustable depth from 140 to 180 mm. Equipped with guides for positioning the brackets code 700105 002.
Fitted for positioning of domestic water functions codes 70005. (see page 312).

Code	Dimension (mm)
700025	550 x 1175

700105 002

Galvanized sheet metal mounting bracket for PLURIMOD CLIMA plumbing module.

Complete with:
- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax. 55 °C
- full insulation.

Code
700105 002

700075

Compact automatic flow rate regulator.
Brass body. Polymer cartridge.
Max. working pressure: 16 bar.

Temperature range: 0-100 °C.
ΔP range: 15-200 kPa.
Flow rates: 0.12 - 1.40 m³/h.
Accuracy: ±10 %.

To complete the code, consult the table.
Example: Maximum required flow rate 600 l/h code 700075 M60.

m³/h	... digit	m³/h	... digit	m³/h	... digit	m³/h	... digit	m³/h	... digit
0,12	**M12**	0,25	**M25**	0,40	**M40**	0,70	**M70**	1,00	**1M0**
0,15	**M15**	0,30	**M30**	0,50	**M50**	0,80	**M80**	1,20	**1M2**
0,20	**M20**	0,35	**M35**	0,60	**M60**	0,90	**M90**	1,40	**1M4**

Code	
700075 ...	1" F captive nut x 1" M

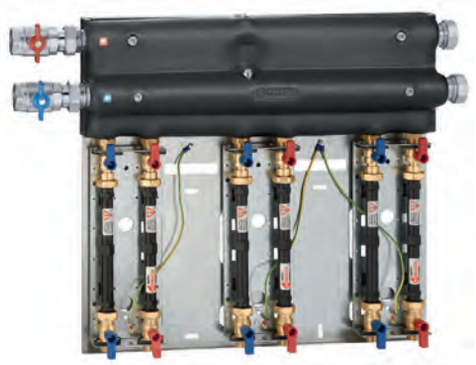
For HEAT METERS - HYDRAULIC OPTIONS - see pages 311-312

PRE-ASSEMBLED UNITS FOR PLURIMOD VAN - CENTRALISED DOMESTIC WATER

7000

tech. broch. 01113

Pre-assembled unit for positioning in the services duct.
It can accommodate 3 complete user systems.



Unit with 3 outlets for heating and cooling circuits.
Complete with:
- 1 dual 1 1/4"distribution manifold - 3 x 3/4" connections for heating/cooling circuit
- telescopic shut-off valves
- flushing pipes, Tmax. 55 °C
- end plugs
- manifolds insulation (700036)
- full insulation (700136)

Dimension (w x h x d): 840 x 650 x 160 mm.

Circuit template unit for PLURIMOD 7000 series

Code	
700036	heating

Circuits template unit for PLURIMOD CLIMA 7001 series

Code	
700136	heating and cooling

Unit with 3 outlets for domestic water circuit.
Complete with:
- 1 simple 1 1/4" distribution manifold - 3 x 3/4" connections, for DHW
- 1 simple 1 1/4" distribution manifold - 3 x 3/4" connections, for DCW
- telescopic shut-off valves
- flushing pipes, Tmax. 55 °C
- end plugs
- manifolds insulation.

Dimension (w x h x d): 870 x 500 x 240 mm.

Code	
700037	domestic water circuit template unit

7000

tech. broch. 01203

Hydraulic module PLURIMOD
fitted for heat metering.
Complete with:
- 1 motorised zone valve
- 2 pockets for temperature probe
- 1 copper template for AUTOFLOW®
- 1 copper template for flow meter
- insulation.

Code	Actuator supply voltage (V)	Max. recommended flow rate l/h
700015 001	230	1400
700016 001	24	1400

7001

Hydraulic module PLURIMOD CLIMA
fitted for heat metering.Complete with:
- 1 zone valve unit with probe pocket
- 1 servomotor 6450 series, IP 65
- 1 copper template for AUTOFLOW®
- 1 copper template for flow meter
- by-pass adjustment knob.

Code	Actuator supply voltage (V)	Max. recommended flow rate l/h
700115 001	230	1400
700116 001	24	1400

For HEAT METERS - HYDRAULIC OPTIONS - see pages 311-312

DIRECT SUPPLY UNITS

765

tech. broch. 01215

Direct supply unit for **heating and cooling systems**.
With pre-formed insulation.
Template for flow meter.
Connections for direct immersion probes.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.
Electric supply: 230 V - 50 Hz.
System syde conection: 1" F.
Boiler side connection: 1 1/2" M.
Centre distance: 125 mm.

CE

Reversible RH-LH

Code	Pump	Flow rate with residual prevalence 4 m w.g.
765600HE	PARA 25/9	2,5 m³/h

THERMOSTATIC REGULATING UNITS

766

tech. broch. 01215

Thermostatic regulating unit for **heating systems**.
With pre-formed insulation.
Template for flow meter.
Connections for direct immersion probes.
Max. working pressure: 10 bar.
Temperature adjustment range: 25–50 °C.
Primary inlet temperature: 100 °C.
Electric supply: 230 V - 50 Hz.
System syde conection: 1" F.
Boiler side connection: 1 1/2" M.
Centre distance: 125 mm.

CE

Reversible RH-LH

Code	Pump	Flow rate with residual prevalence 4 m w.g.
766600HE	PARA 25/9	2,1 m³/h

MOTORISED REGULATING UNITS

767

tech. broch. 01215

Motorised regulating unit for **heating systems and cooling systems.**
With pre-formed insulation.
Template for flow meter.
Connections for direct immersion probes.
Regulation with sector three-way valve.
Can be connected to digital regulators code 161010.
Max. working pressure: 10 bar.
Max. working temperature: 100 °C.
Electric supply: 230 V - 50 Hz.
System side connection: 1" F.
Boiler side connection: 1 1/2" M.
Centre distance: 125 mm.

CE

Reversible RH-LH

Actuator with 3-point control signal - 230 V supply voltage

Code	Pump	Flow rate with residual prevalence 4 m w.g.
767662HE2	PARA 25/9	2,2 m³/h

Actuator with 0(2)–10 V control signal - 24 V supply voltage

Code	Pump	Flow rate with residual prevalence 4 m w.g.
767664HE2	PARA 25/9	2,2 m³/h

REGULATOR

161

Digital regulator with synoptic diagram for heating and cooling complete with immersion flow probe with pocket and Pt1000 Ø 6 mm return probe (pocket to be chosen according to the pipe; see accessories).
Optional outside compensated probe.
Temperature adjustment range: 5–95 °C.
Supply: 230 V - 50/60 Hz.
Control signal: 3 points, 0–10 V.
Protection class: IP 20 / EN 60529.
Probe cable length: 1,5 m.

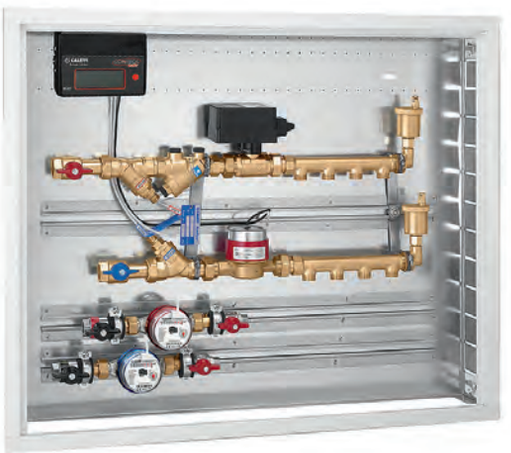
CE

Code
161010

2-WAY USER MODULE - WITH AUTOFLOW® - CENTRALISED DOMESTIC WATER

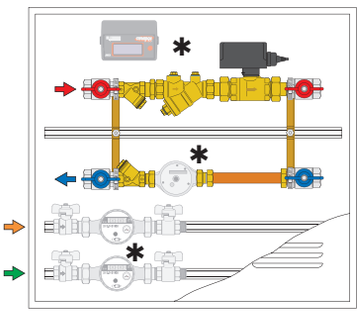
799 series

tech. broch. 01103



Zone outlet module complete with:
- Recessed box with galvanised backplate and RAL 9010 painted door for interior use, h = 650 mm, depth = 110 (140) mm
- pair of ball shut-off
- two-way ball zone valve 6470 series and servomotor 6460 series
- air vent 5021 series
- AUTOFLOW®
- 3/4" and 1" simple manifold 350 series, 1 1/4" manifold 650 series
- template for heat meter
- probe holder pocket (flow pocket with strainer mesh)
- connections for domestic water function 794. series.

2-way user module with AUTOFLOW®



Code	Outlets	End conn.	Outlets conn.	Width (mm)
799560 ●●●	without manifolds	3/4"	-	600
79956B ●●●	2	3/4"	23 p.1,5	800
79956C ●●●	3	3/4"	23 p.1,5	800
79958D ●●●	4	3/4"	23 p.1,5	800
79958E ●●●	5	3/4"	23 p.1,5	800
79958F ●●●	6	3/4"	23 p.1,5	1.000
79958G ●●●	7	3/4"	23 p.1,5	1.000
79951H ●●●	8	3/4"	23 p.1,5	1.000
799660 ●●●	without manifolds	1"	-	600
79968C ●●●	3	1"	23 p.1,5	800
79968D ●●●	4	1"	23 p.1,5	800
79968E ●●●	5	1"	23 p.1,5	800
79961F ●●●	6	1"	23 p.1,5	1.000
79961G ●●●	7	1"	23 p.1,5	1.000
79961H ●●●	8	1"	23 p.1,5	1.000
79961 I ●●●	9	1"	23 p.1,5	1.000
79962L ●●●	10	1"	23 p.1,5	1.200
799780 ●●●	without manifolds	1 1/4"	-	800
79978C ●●●	3	1 1/4"	3/4"	800
79978D ●●●	4	1 1/4"	3/4"	800
79971E ●●●	5	1 1/4"	3/4"	1.000
79971F ●●●	6	1 1/4"	3/4"	1.000
79971G ●●●	7	1 1/4"	3/4"	1.000
79972H ●●●	8	1 1/4"	3/4"	1.200
79972 I ●●●	9	1 1/4"	3/4"	1.200
79972L ●●●	10	1 1/4"	3/4"	1.200

AUTOFLOW® flow rate table

●●● To complete the code, please consult the table below:

7995. series
79005. series
(3/4")

with Δp range 15–200 kPa

m³/h	●●● digit	m³/h	●●● digit
0,30	M30	0,90	M90
0,40	M40	1,00	1M0
0,50	M50	1,20	1M2
0,60	M60	1,40	1M4
0,70	M70		
0,80	M80		

7996. series
79006. series
(1")

with Δp range 15–200 kPa

m³/h	●●● digit	m³/h	●●● digit
0,60	M60	1,40	1M4
0,70	M70	1,60	1M6
0,80	M80	1,80	1M8
0,90	M90	2,00	2M0
1,00	1M0	2,25	2M2
1,20	1M2		

7997. series
79007. series
(1 1/4")

with Δp range 15–200 kPa

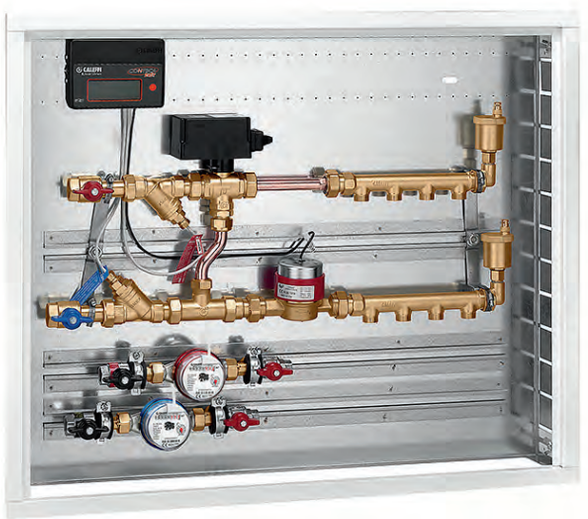
m³/h	●●● digit	m³/h	●●● digit
1,00	1M0	2,25	2M2
1,20	1M2	2,50	2M5
1,40	1M4	2,75	2M7
1,60	1M6	3,00	3M0
1,80	1M8	3,25	3M2
2,00	2M0	3,50	3M5

✱ **For HEAT METERS - HYDRAULIC OPTIONS - INSULATION see pages 311-312-313**
The colours that identify the connection diameter are a guide to help find the corresponding heat meter, see pages 311

3-WAY USER MODULE - CENTRALISED DOMESTIC WATER

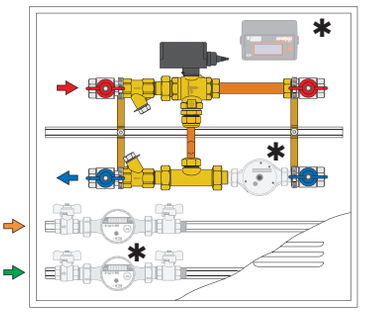
796 series

tech. broch. 01101



Zone outlet module complete with:
- Recessed box with galvanised backplate and RAL 9010 painted door for interior use, h = 650 mm, depth = 110 (140) mm
- pair of ball shut-off
- three-way ball zone valve 6480 series with by-pass tee 6490 series and servomotor 6460 series
- air vent 5021 series
- 3/4" and 1" simple manifold 350 series, 1 1/4" manifold 650 series
- template for heat meter
- probe holder pocket (flow pocket with strainer mesh)
- connections for domestic water function 794. series.

3-way user module



Code	Outlets	End conn.	Outlets conn.	Width (mm)
796560	without manifolds	3/4"	-	600
79658B	2	3/4"	23 p.1,5	800
79658C	3	3/4"	23 p.1,5	800
79658D	4	3/4"	23 p.1,5	800
79658E	5	3/4"	23 p.1,5	800
79658F	6	3/4"	23 p.1,5	1.000
79651G	7	3/4"	23 p.1,5	1.000
79651H	8	3/4"	23 p.1,5	1.000
796680	without manifolds	1"	-	800
79661C	3	1"	23 p.1,5	1.000
79661D	4	1"	23 p.1,5	1.000
79661E	5	1"	23 p.1,5	1.000
79661F	6	1"	23 p.1,5	1.000
79662G	7	1"	23 p.1,5	1.200
79662H	8	1"	23 p.1,5	1.200
79662 I	9	1"	23 p.1,5	1.200
79662L	10	1"	23 p.1,5	1.200
796780	without manifolds	1 1/4"	-	800
79671C	3	1 1/4"	3/4"	1.000
79671D	4	1 1/4"	3/4"	1.000
79672E	5	1 1/4"	3/4"	1.200
79672F	6	1 1/4"	3/4"	1.200
79672G	7	1 1/4"	3/4"	1.200
79672H	8	1 1/4"	3/4"	1.200

Spare wall box

R79674	600 x 650 x 110/140 mm
R79675	800 x 650 x 110/140 mm
R79676	1000 x 650 x 110/140 mm
R79677	1200 x 650 x 110/140 mm
R79088	800 x 650 x 150/175 mm

✱ **For HEAT METERS - HYDRAULIC OPTIONS - INSULATION see pages 311-312-313**
The colours that identify the connection diameter are a guide to help find the corresponding heat meter, see pages 311

COMPACT WALL MOUNTED DIRECT HEAT INTERFACE UNIT INSTANTANEOUS DHW PRODUCTION - SATK20 - SATK22 SERIES

LOW TEMPERATURE

SATK201 tech. broch. 01209

LOW temperature HIU.
Heating temperature range: 25–45 °C.
Max. 18 l/min DHW.
Max. operating pressure: 10 bar.
Max. primary Δp: 0,9 bar.
Dimensions (w x h x d):
450 x 550 x 265 mm.

CE

Code	
SATK20103HE	heat exchanger 40 kW

MEDIUM TEMPERATURE

SATK202 tech. broch. 01209

MEDIUM temperature HIU.
Heating temperature range: 45–75 °C.
Max. 18 l/min DHW.
Max. operating pressure: 10 bar.
Max. primary Δp: 0,9 bar.
Dimensions (w x h x d):
450 x 550 x 265 mm.

CE

Code	
SATK20203HE	heat exchanger 40 kW

SATK221 tech. broch. 01309

LOW temperature HIU.
Heating temperature range: 25–45 °C.
Max. 24 l/min DHW.
Max. operating pressure: 10 bar.
Max. primary Δp: 6 bar.
User interface with chrono-thermostat function.
Programmable DHW pre-heating.
Remote control via MODBUS-RTU.
Dimensions (w x h x d):
490 x 500 x 245 mm.

CE

Code	
SATK22103	heat exchanger 50 kW
SATK22105	heat exchanger 60 kW
SATK22107	for systems with low primary temperature

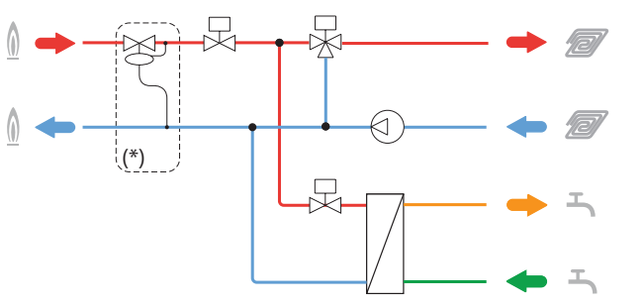
SATK222 tech. broch. 01309

MEDIUM temperature HIU.
Heating temperature range: 45–75 °C.
Max. 24 l/min DHW.
Max. operating pressure: 10 bar.
Max. primary Δp: 6 bar.
User interface with chrono-thermostat function.
Programmable DHW pre-heating.
Remote control via MODBUS-RTU.
Dimensions (w x h x d):
490 x 500 x 245 mm.

CE

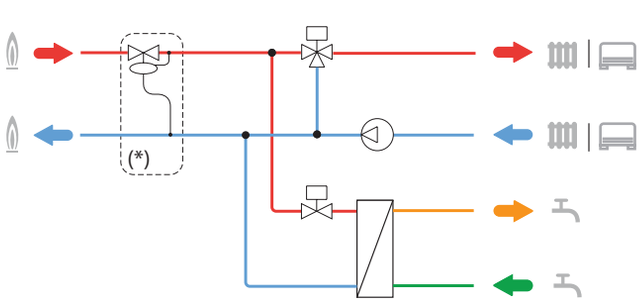
Code	
SATK22203	heat exchanger 50 kW
SATK22205	heat exchanger 60 kW
SATK22207	for systems with low primary temperature

Hydraulic diagram SATK201/SATK221



(*) SATK20: optional code 789603
SATK22: built-in device

Hydraulic diagram SATK202/SATK222



(*) SATK20: optional code 789603
SATK22: built-in device

COMPACT WALL MOUNTED DIRECT HEAT INTERFACE UNIT INSTANTANEOUS DHW PRODUCTION - SATK20 - SATK22 SERIES

HIGH TEMPERATURE

SATK203 tech. broch. 01209

HIGH temperature HIU.
Max. heating temperature: 85 °C.
Max. 18 l/min DHW (SATK20303).
Max. 27 l/min DHW (SATK20305).
Max. operating pressure: 10 bar.
Max. primary Δp: 0,9 bar.
Dimensions (w x h x d):
450 x 550 x 265 mm.

CE

Code

SATK20303	heat exchanger 40 kW
SATK20305	heat exchanger 65 kW

HIGH TEMPERATURE-WITH PRIMARY PUMP

SATK204 tech. broch. 01209

HIGH temperature HIU.
Max. heating temperature: 85 °C.
Max. 18 l/min DHW.
Max. operating pressure: 10 bar.
Max. primary Δp: 0,9 bar.
With primary pump.
Dimensions (w x h x d):
450 x 550 x 265 mm.

CE

Code

SATK20403HE	heat exchanger 40 kW

SATK223 tech. broch. 01309

HIGH temperature HIU.
Max. heating temperature: 85 °C.
Max. 24 l/min DHW.
Max. operating pressure: 10 bar.
Max. primary Δp: 6 bar.
User interface with chrono-thermostat function.
Programmable DHW pre-heating.
Remote control via MODBUS-RTU.
Dimensions (w x h x d):
490 x 500 x 245 mm.

CE

Code

SATK22303	heat exchanger 50 kW
SATK22305	heat exchanger 60 kW
SATK22307	for systems with low primary temperature

SATK224 tech. broch. 01309

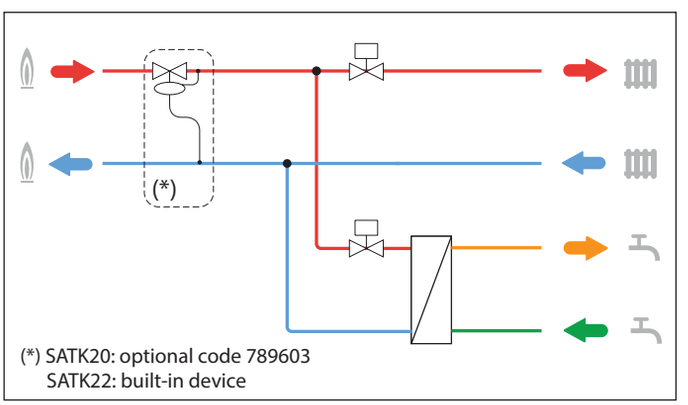
HIGH temperature HIU.
Max. heating temperature: 85 °C.
Max. 24 l/min DHW.
Max. operating pressure: 10 bar.
Max. primary Δp: 6 bar.
With primary pump.
User interface with chrono-thermostat function.
Programmable DHW pre-heating.
Remote control via MODBUS-RTU.
Dimensions (w x h x d):
490 x 500 x 245 mm.

CE

Code

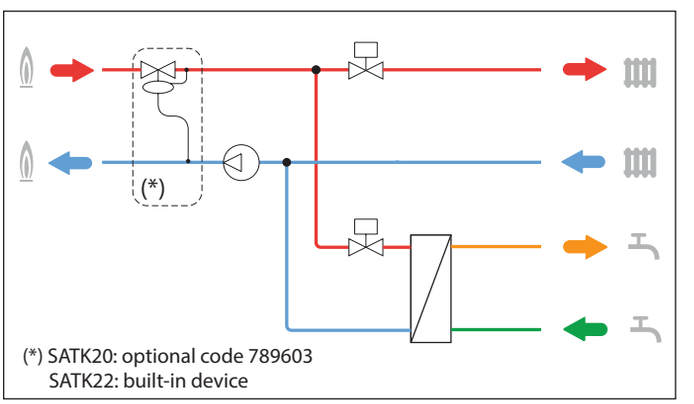
SATK22403	heat exchanger 50 kW
SATK22405	heat exchanger 60 kW
SATK22407	for systems with low primary temperature

Hydraulic diagram SATK203/**SATK22**3



(*) SATK20: optional code 789603
SATK22: built-in device

Hydraulic diagram SATK204/**SATK22**4



(*) SATK20: optional code 789603
SATK22: built-in device

COMPACT WALL MOUNTED INDIRECT HEAT INTERFACE UNIT
SATK30 - SATK32 - SATK40 SERIES

LOW/MEDIUM/HIGH TEMPERATURE

SATK30

tech. broch. 01209

LOW temperature range: 25–45 °C.
Medium/high temperature range: 45–75 °C.
Max. 18 l/min DHW (SATK30103HE).
Max. 27 l/min DHW (SATK30105HE).
Max. operating pressure: 16 bar.
Max. primary Δp: 1,65 bar.
Dimensions (w x h x d): 550 x 630 x 265 mm.

CE

Code

SATK30103HE	heat exchanger 40 kW
SATK30105HE	heat exchanger 65 kW

SATK32

tech. broch. 01301

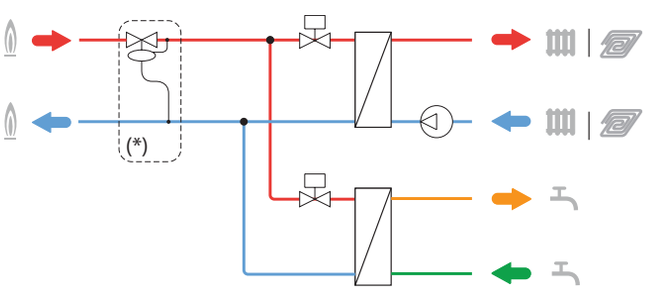
LOW temperature range: 25–45 °C.
Medium/high temperature range: 45–75 °C.
Max. 24 l/min DHW.
Max. operating pressure: 16 bar.
Max. primary Δp: 6 bar.
User interface with chrono-thermostat function.
Programmable DHW pre-heating.
Remote control via MODBUS-RTU.
Dimensions (w x h x d): 490 x 630 x 245 mm.

CE

Code

SATK32103	heat exchanger 50 kW
SATK32105	heat exchanger 60 kW
SATK32107	for systems with low primary temperature

Hydraulic diagram SATK301/**SATK32**1



(*) SATK30: optional code 789603
SATK32: built-in device

LOW/MEDIUM/HIGH TEMPERATURE STORAGE DHW PRODUCTION

SATK40

tech. broch.01216

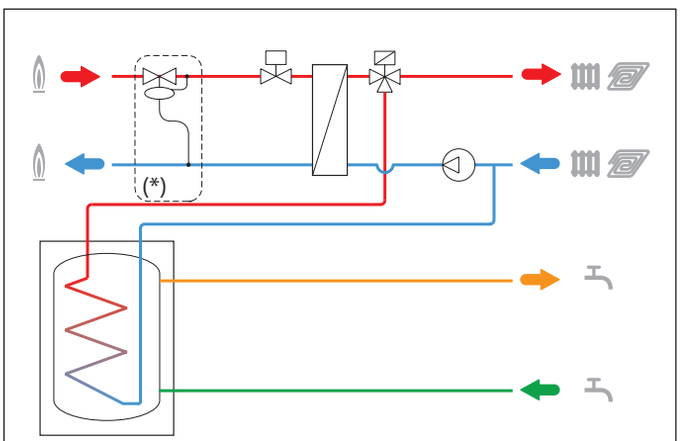
LOW temperature range: 25–45 °C.
Medium/high temperature range: 45–75 °C.
Max. operating pressure: 16 bar.
Max. primary Δp: 1,5 bar.
DHW production in storage cylinder (not supplied).
Dimensions (w x h x d): 550 x 630 x 265 mm.

CE

Code

SATK40103HE

Hydraulic diagram SATK40



(*) SATK40: optional code 789603

COMPLETION CODES FOR SATK SERIES

789100

Manual flushing by-pass
for SATK20, SATK30 and SATK40.
System side conection: 3/4" M.
User side connection: 3/4" M.

Code
789100

789110

Manual flushing by-pass
for SATK22 and SATK32.
System side conection: 3/4" F.
User side connection: 3/4" M.

Code
789110

572120

Filling loop with
CB type backflow preventer
for SATK32.

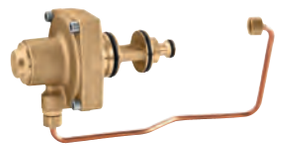
Code
572120

789833

NEW

Outside temperature probe
for SATK22 and SATK32.

Code
789833



789

Differential pressure control valve.
For SATK20, SATK30 and SATK40.
Brass body.
Max working pressure: 16 bar.
Max. upstream Δp: 6 bar.
Fixed setting: 40 kPa.

Code
789603

789023

Mounting template with shut-off valve
for SATK22 and SATK32.

Code
789023

794540

NEW

Template for domestic water meter with:
- ball shut-off valve with built-in check valve BALLSTOP
- flushing pipe.

For SATK20, SATK30, SATK40, SATK50 and SATK60

Code	
794540	3/4"

789832

NEW

Drain conveyor pipe for SATK32

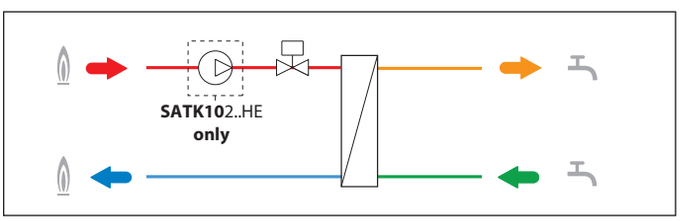
Code	
789832	3/4"

DHW ONLY HEAT INTERFACE UNIT - SATK10 SERIES

SATK10 tech. broch. 01308

Domestic hot water production only.
Max. 27 l/min DHW.
Max. operating pressure: 10 bar.
Max. primary Δp: 0,9 bar.
Dimensions (w x h x d):
476 x 350 x 188 mm.

CE



Code		Max. flow rate
SATK10203HE	heat exchanger 40 kW	18 (l/min)
SATK10204HE	heat exchanger 65 kW	25 (l/min)
SATK10205HE	heat exchanger 75 kW	27 (l/min)

Without primary pump

Code		Max. flow rate
SATK10253	heat exchanger 40 kW	18 (l/min)
SATK10254	heat exchanger 65 kW	25 (l/min)
SATK10255	heat exchanger 75 kW	27 (l/min)

COMPACT WALL MOUNTED INDIRECT HEAT INTERFACE UNIT - MECHANICAL VERSIONS INSTANTANEOUS DHW PRODUCTION - SATK15 - SATK16 SERIES

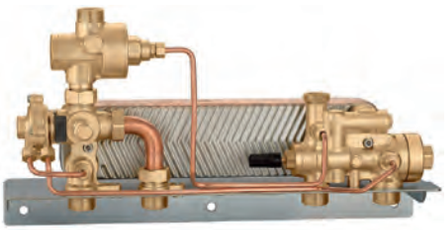
SATK15

tech. broch. 01407

Heating and DHW production. Modulating primary control.
With DPCV on the primary side, fixed setting 30 kPa.
Max. operating pressure: 10 bar.
Max. primary Δp: 2 bar.
Connections: 3/4" M.

Dimensions (w x h x d): 420 x 223 x 130 mm. (**SATK15**324 DPCV)

Dimensions (w x h x d): 420 x 223 x 169 mm. (**SATK15**325 DPCV)



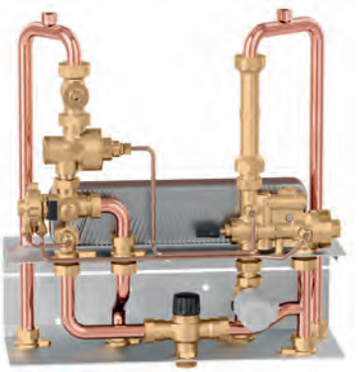
Code

SATK15324 DPCV	heat exchanger 40 kW
SATK15325 DPCV	for systems with low primary temperature

SATK16

tech. broch. 01359

Heating and DHW production. Modulating primary control.
With DPCV on the primary side, fixed setting 30 kPa.
With heating zone valve and thermostatic mixing valve on DHW outlet.
Max. operating pressure: 10 bar.
Max. primary Δp: 2 bar.
Connections: 3/4" M.
Dimensions (w x h x d): 420 x 450 x 200 mm.



Code

SATK16315	for systems with low primary temperature

SATK15

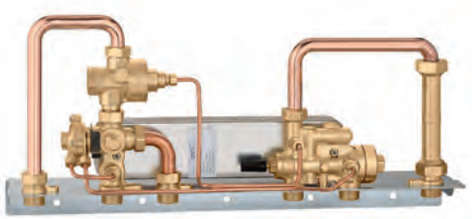
NEW

tech. broch. 01407

Heating and DHW production. Modulating primary control.
With DPCV on the primary side, fixed setting 30 kPa.
Max. operating pressure: 10 bar.
Max. primary Δp: 2 bar.
Connections: 3/4" M.

Dimensions (w x h x d): 570 x 260 x 160 mm. (**SATK15**324 ABC)

Dimensions (w x h x d): 570 x 260 x 170 mm. (**SATK15**325 ABC)



Code

SATK15324 ABC	heat exchanger 40 kW
SATK15325 ABC	for systems with low primary temperature

COOLING INTERFACE UNIT

797

tech. broch. 01368

Cooling interface unit.
Max. primary circuit pressure: 16 bar.
Primary circuit nominal flow rate:
360 l/h (797601)
1080 l/h (797603)
1800 l/h (797605)
Max. primary Δp: 4 bar.
Connections: 1".
Dimensions (w x h x d): 480 x 780 x 220 mm.

Code	Nominal power
797601	3 kW*
797603	8 kW*
797605	15 kW*

(*) primary 6–12 °C, secondary 14–8 °C

COMPACT RECESS MOUNTED DIRECT HEAT INTERFACE UNIT INSTANTANEOUS DHW PRODUCTION - SATK50 SERIES

LOW TEMPERATURE

SATK501

tech. broch. 01212

LOW temperature HIU.
Heating temperature range: 25–45 °C.
Max. 18 l/min DHW.
Max. operating pressure: 10 bar
Max. primary Δp: 0,9 bar.
Dimensions (w x h x d): 570 x 410 x 110 mm.

CE

Code	
SATK50103HE	heat exchanger 40 kW

LOW temperature recessed module (for installation without box code 794950)
with features identical to SATK50103HE.
Ideal for on-site solutions, to give functional continuity to user modules with similar connections and features. 1" M connection with flat seat.
Ball shut-off valves not included.
Valve kit F0001495 must be used.

Code		
SATK50193HE	heat exchanger 40 kW	
SATK50193HE 001	heat exchanger 40 kW	with insulation cover

MEDIUM TEMPERATURE

SATK502

tech. broch. 01212

MEDIUM temperature HIU.
Heating temperature range: 45–75 °C.
Max. 18 l/min DHW.
Max. operating pressure: 10 bar.
Max. primary Δp: 0,9 bar.
Dimensions (w x h x d): 570 x 410 x 110 mm.

CE

Code	
SATK50203HE	heat exchanger 40 kW

MEDIUM temperature recessed module (for installation without box code 794950)
with features identical to SATK50203HE.
Ideal for on-site solutions, to give functional continuity to user modules with similar connections and features. 1" M connection with flat seat.
Ball shut-off valves not included.
Valve kit F0001495 must be used.

Code	
SATK50293HE	heat exchanger 40 kW

HIGH TEMPERATURE

SATK503

tech. broch. 01212

HIGH temperature HIU.
Max. heating temperature: 85 °C.
Max. 18 l/min DHW.
Max. operating pressure: 10 bar.
Max. primary Δp: 0,9 bar.
Dimensions (w x h x d): 570 x 410 x 110 mm.

CE

Code	
SATK50303	heat exchanger 40 kW

HIGH temperature recessed module (for installation without box code 794950)
with features identical to SATK50303.
Ideal for on-site solutions, to give functional continuity to user modules with similar connections and features. 1" M connection with flat seat. Ball shut-off valves not included.
Valve kit F0001495 must be used.

Code		
SATK50393	heat exchanger 40 kW	
SATK50393 001	heat exchanger 40 kW	with insulation cover

ACCESSORIES

7949

tech. broch. 01212

Recessed mounting box for SATK50.03HE, complete with shut-off valves
for preliminary connections to the system.

Code	Dimensions (w x h x d)	
794950	600 x 700 x 120 mm	
794950 004	600 X 700 mm	backplate with valves

Modules SATK50193HE, SATK50293HE and SATK50393 can be installed without box code 794950 as they have a specific locking template. Shut-off valves are required for every periodic or non-periodic maintenance operation and for system safety in general. Product code F00001495 may be used; this includes 6 x 3/4" M–1"F ball valves with with captive nut connection and elevant seals.

Code	
F0001495	valve kit for SATK50.93HE/SATK60193HE

COMPACT RECESS INDIRECT HEAT INTERFACE UNIT INSTANTANEOUS DHW PRODUCTION - SATK60 SERIES

LOW/MEDIUM/HIGH TEMPERATURE

SATK60 tech. broch 01212

LOW heating
temperature range: 25–45 °C.
MEDIUM/HIGH heating
temperature range: 45–75 °C.
Max. 18 l/min DHW.
Max. operating pressure: 16 bar.
Max. primary Δp: 0,9 bar.
Dimensions (w x h x d):
570 x 410 x 110 mm.

CE

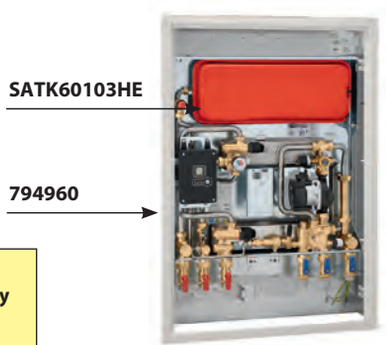
Code	
SATK60103HE	heat exchanger 40 kW
SATK60193HE	with locking template
F0001495	valve kit for SATK50.93HE/SATK60193HE

7949 tech. broch. 01212

Recessed mounting box for SATK60, complete with shut-off valves for preliminary connections to the system.

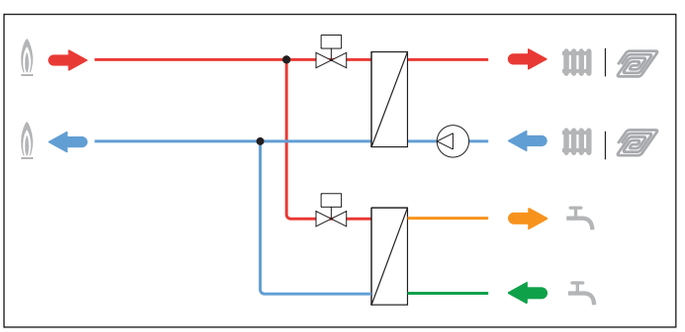
Note
Box code 794960 is compulsory for the installation of product codeSATK60103HE..

Code	Dimensions (w x h x d)
794960	625 x 890 x 120 mm



Note
Box code 794960 is compulsory for the installation of product codeSATK60103HE.

Schema per SATK60



Module code SATK60193HE can be installed without box code 794960 as it has a specific locking template. Shut-off valves are required for every periodic or non-periodic maintenance operation and for system safety in general. Product code F00001495 may be used; this includes 6 x 3/4" M–1"F ball valves with connection with captive nut and the relevant seals.

DIRECT HEAT METER - CENTRALISED TRANSMISSION - BUS RS-485

CONTECA EASY 7504 series

tech. broch. 01306

Direct heat metering with local reading by means of LCD or centralised reading by means of Bus transmission.
The heat meter is supplied with:
- Pair of immersion temperature probe (L= 1,9 m).
- Turbine flow meter with pulse output (Tmax 90 °C).
- Electronic integrator with LCD.
- Accuracy class: 3.
- **Electric supply 24 V (AC) 50 Hz - 1 W**.

Fitted for Bus RS-485 transmission in M-Bus protocol.
Optional MODBUS-RTU.

7504

Direct heat meter (MI004)
for user modules 796, 799, 7900 series.
Flow meter with union connections.
Pair of Y-pockets (with strainer on the flow one) included.

Code	Conn.	Meas. type	Q_p m³/h	Q_i l/h
750405	3/4"	single jet	2,5	50
750406	1"	multi jet	3,5	70
750407	1 1/4"	multi jet	6	120

7504

Direct heat meter (MI004) **for modules 7000, 7001, 7002 series** and **for distribution and regulating units 765, 766, 767 series**.

Code	Conn.	Type	Q_p m³/h	Q_i l/h	Max. recommended flow rate l/h
750405G	1"	single jet	2,5	50	1600

7504

Direct heat meter (MI004) **for HIU SATK20, SATK22, SATK30, SATK32, SATK40, SATK50 series**.

Code	Conn.	Type	Q_p m³/h	Q_i l/h	Max. recommended flow rate l/h
750405K	1"	single jet	2,5	50	1600

Q_p = permanent flow rate Q_i = minimum flow rate

CONTECA EASY ULTRA 7507 series

tech. broch. 01307

Direct heat metering with local reading by means of LCD or centralised reading by means of Bus transmission.
The heat meter is supplied with:
- Pair of immersion temperature probe (L= 1,9 m).
- Ultrasonic heat meter (Tmax 90 °C).
- Electronic integrator with LCD.
- Accuracy class: 2.
- **Electric supply 24 V (AC) 50 Hz - 1 W**

Fitted for Bus RS-485 transmission in M-Bus protocol.
Optional MODBUS-RTU.

7507

Ultrasonic direct heat meter (MI004)
for user modules 796, 799, 7900 series.
Flow meter with union connections.
Pair of Y-pockets (with strainer on the flow one) included.

Code	Conn.	Q_p m³/h	Q_i l/h
750705	3/4"	2,5	10
750706	1"	3,5	35
750707	1 1/4"	6	24

7507

Ultrasonic direct heat meter (MI004) **for modules 7000, 7001, 7002 series**.

Code	Conn.	Q_p m³/h	Q_i l/h
750705G	1"	2,5	10

7507

Ultrasonic direct heat meter (MI004) **for HIU SATK20, SATK22, SATK30, SATK32, SATK40, SATK50 series**.

Code	Conn.	Q_p m³/h	Q_i l/h
750705K	1"	2,5	10

Q_p = permanent flow rate Q_i = minimum flow rate

ELECTRONIC OPTIONS

755810

Cooling metering option for 7504 and 7505 series.
The CONTECA series meters can be activated via software to keep a record of the thermal and refrigeration unit consumption in separate registers through the evaluation of a negative temperature difference.

Code
755810

750811

MODBUS-RTU transmission option for 7504 and 7505 series.
Transmission settings: 9600,E,8,1.

Code
750811

HYDRAULIC OPTIONS

70005

Domestic water meter kit.
For user module 7000, 7001, 7002 (except codes 700036 and 700136).
Consisting of:
- ball shut-off valve with built-in check valve BALLSTOP
- flow meter (MI001)
- shut-off ball valve with male terminal
- flushing pipe
- mounting bracket.

Conforms to directive 2014/32/UE (MI001)

Code		Pulse weight (l/pulse)
700050	domestic hot water 3/4" with local reading	-
700051	domestic hot water 3/4" with pulse output	10
700052	domestic cold water 3/4" with local reading	-
700053	domestic cold water 3/4" with pulse output	10

700009

Template with 3/4'' valves for domestic water meter.
For user module 7000, 7001, 7002 (except codes 700036 and 700136).
Tmax. 55 °C.

Code
700009

7942

Water meter
for domestic hot / cold water (MI001).
With pulse output.
1/2": for template code 794540,
3/4": for unit codes 700037.

Conforms to directive 2014/32/UE (MI001)

Code		Pulse weight (l/pulse)
794204	1/2" - domestic cold water (Tmax. **30 °C**) - L= 110 mm*	10
794205	3/4" - domestic cold water (Tmax. **30 °C**) - L= 130 mm*	10
794205/C	3/4" - domestic hot water (**30–90 °C**) - L= 130 mm*	10

** Lenght without unions*

7941

Domestic water meter kit.
For user module 796, 799, 7900 series.
Consisting of:
- ball shut-off valve with built-in check valve BALLSTOP
- flow meter (MI001), with pulse output
- shut-off ball valve with male terminal.

Conforms to directive 2014/32/UE (MI001)

Code		Pulse weight (l/pulse)
794140	domestic cold water 1/2"	10
794141	domestic hot water 1/2"	10
794150	domestic cold water 3/4"	10
794151	domestic hot water 3/4"	10

7940

Domestic water meter kit.
For user module 796, 799, 7900 series.
Consisting of:
- ball shut-off valve with built-in check valve BALLSTOP
- flow meter (MI001), with local reading
- shut-off ball valve with male terminal.

Conforms to directive 2014/32/UE (MI001)

Code	
794040	domestic cold water 1/2"
794041	domestic hot water 1/2"
794050	domestic cold water 3/4"
794051	domestic hot water 3/4"

PRE-FORMED INSULATION

798

Pre-formed insulation
for user module 799, 7900 series without distribution.

Code		
798205	3/4″	- **2-way module**
798206	1″	- **2-way module**
798207	1 1/4″	- **2-way module**

798

Pre-formed insulation
for user module 796, 7900 series without distribution.

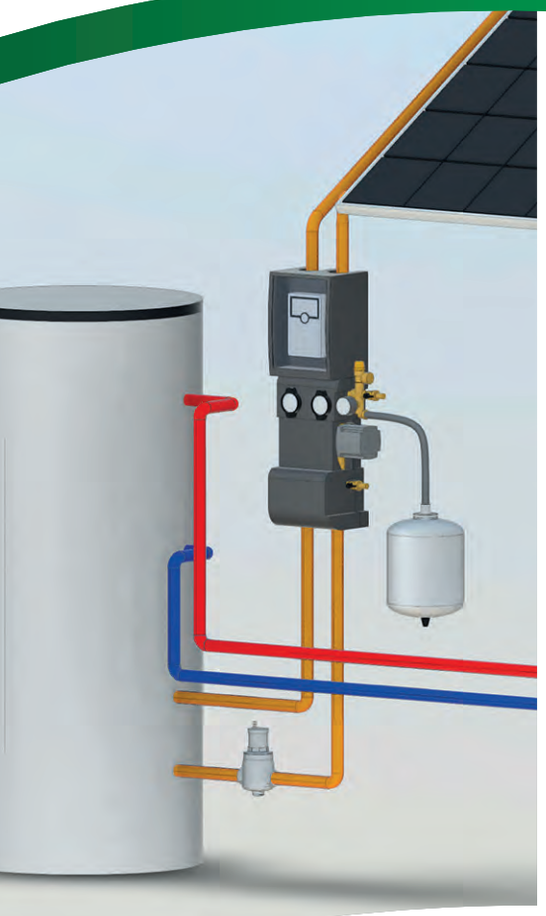
Code		
798305	3/4″	- **3-way module**
798306	1″	- **3-way module**
798307	1 1/4″	- **3-way module**

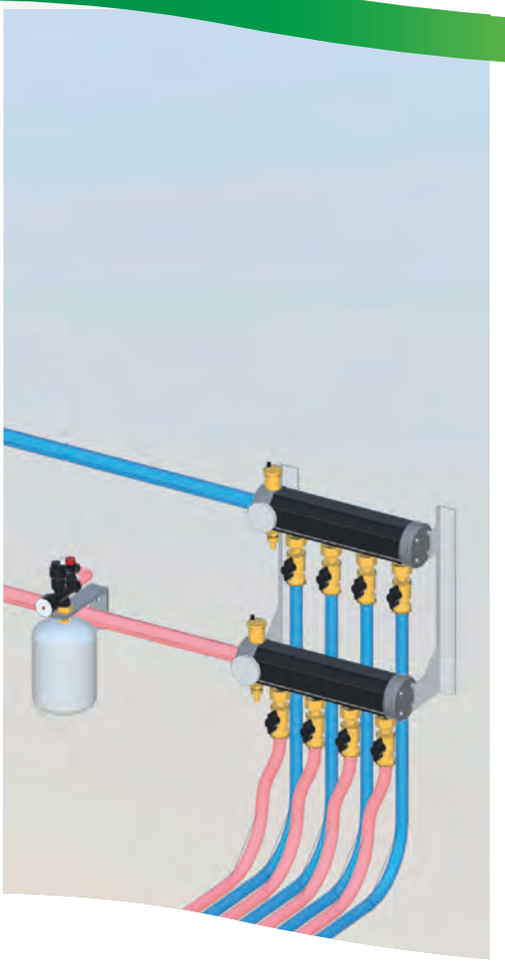
798

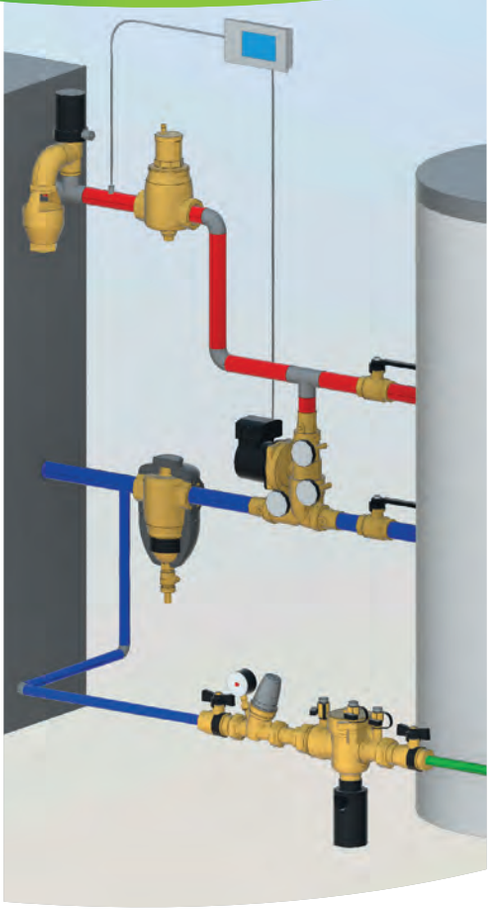
Insulation for pair of manifolds.
For user module 796, 799 series.
Max. 8 outlets.

Code		
798015	3/4″	
798016	1″	
798017	1 1/4″	

N.B.: Carry out the order for the insulation together with the module. It is not possible to apply it later.







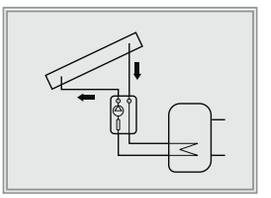
bim.caleffi.com

Components for solar thermal systems
Components for geothermal systems
Components for biomass systems

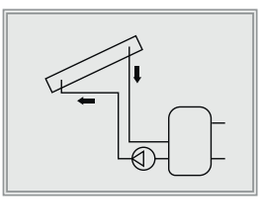
COMPONENTS FOR SOLAR THERMAL SYSTEMS

The CALEFFI SOLAR product range has been specifically developed for use in solar thermal systems, where high temperatures can normally be reached and where, depending on the kind of system, there can be glycol. Materials and performance of the components must necessarily take into account these particular operating conditions.

- Components for closed systems



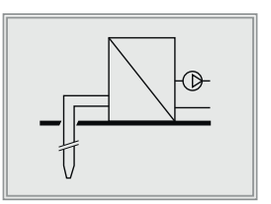
- Components for opened systems



COMPONENTS FOR GEOTHERMAL SYSTEMS

The products in the CALEFFI GEO series have been specifically designed for use in heat pump systems. In ground source heat pumps a mixture of water and antifreeze fluid is generally used to protect against freezing temperatures.
The components are made with high-performance materials for this type of applications.

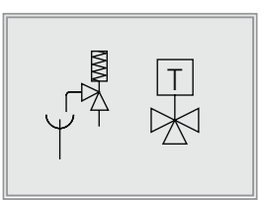
- Components for water-water heat pumps



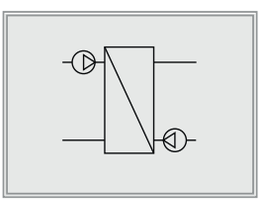
COMPONENTS FOR BIOMASS SYSTEMS

The CALEFFI BIOMASS® product series has been created specifically to be used in circuits of systems with wood solid fuel generators, operating at high temperature with water or glycol solutions as thermal medium. The materials of the components and their performance take account of the specific system needs in terms of efficiency and safety of the generators and systems.

- Safety and protection components



- Control units



COMPONENTS FOR SOLAR THERMAL SYSTEMS

BIM
bim.caleffi.com

CALEFFI SOLAR

Safety relief valve - Automatic air vents
Deaerators, DISCAL® - Manual air separator
Pump stations
Components for pump stations
Ball valve
Mechanical fittings with O-Ring seal - Three piece union fitting
Digital regulator
Heat meter CONTECA SOLAR®
Balancing valve with flow meter
Temperature and pressure relief valve
Antifreeze safety device
Motorised ball diverter valve
Thermostatic diverter valve
Thermostatic mixing valves
Solar storage-to-boiler connection kit

Domestic Water Sizer
DOMESTIC WATER SYSTEM SIZER ALSO FOR SMARTPHONE
Available on www.caleffi.com and app for smartphone.
Download the version for your iOS and Android® mobile phone.

SAFETY RELIEF VALVE - AUTOMATIC AIR VENTS

253

tech. broch. 01089

Safety relief valve for solar thermal systems.
Brass body. Chrome plated.
Female connections. PN 10.
Temperature range: -30–160 °C.
Max. percentage of glycol: 50 %.
Oversized discharge outlet.
Discharge rating: 1/2″ - 50 kW;
3/4″ - 100 kW.
TÜV certified to TRD 721 - SV 100 § 7.7.
Settings: 2,5 - 3 - 4 - 6 - 8 - 10 bar.

CE 2797 TÜVRheinland ZERTIFIZIERT www.tuv.com ID 0000013604 WRAS APPROVED PRODUCT CERTIFICATION MARK

Code				
253042	1/2″ F x 3/4″ F	2,5 bar	1	50
253043	1/2″ F x 3/4″ F	3 bar	1	50
253044	1/2″ F x 3/4″ F	4 bar	1	50
253046	1/2″ F x 3/4″ F	6 bar	1	50
253048	1/2″ F x 3/4″ F	8 bar	1	50
253040	1/2″ F x 3/4″ F	10 bar	1	50
253052	3/4″ F x 1″ F	2,5 bar	1	25
253053	3/4″ F x 1″ F	3 bar	1	25
253054	3/4″ F x 1″ F	4 bar	1	25
253056	3/4″ F x 1″ F	6 bar	1	25
253058	3/4″ F x 1″ F	8 bar	1	25
253050	3/4″ F x 1″ F	10 bar	1	25

250

tech. broch. 01133

Consisting of:

- Automatic air vent for solar thermal systems.

Brass body. Chrome plated.
Max. working pressure: 10 bar.
Max. discharge pressure: 5 bar.
Temperature range: -30–180 °C.
Max. percentage of glycol: 50 %.

- Shut-off cock complete with seal.

Brass body. Chrome plated.
Max. working pressure: 10 bar.
Temperature range: -30–200 °C.
Max. percentage of glycol: 50 %.

WRAS APPROVED PRODUCT CERTIFICATION MARK

Code				
250031	3/8″ M	without cock	1	25
250131	3/8″ M		1	25
250041	1/2″ M	without cock	1	25

250

Consisting of:

- Automatic air vent for solar thermal systems.

Brass body. Chrome plated.
Max. working pressure: 10 bar.
Max. discharge pressure: 2,5 bar.
Temperature range: -30–180 °C.
Max. percentage of glycol: 50 %.

- Shut-off cock complete with seal.

Brass body. Chrome plated.
Max. working pressure: 10 bar.
Temperature range: -30–200 °C.
Max. percentage of glycol: 50 %.

Code				
250831	3/8″ M	without cock	1	50
250931	3/8″ M		1	50

251 DISCALAIR®

tech. broch. 01135

High-performance automatic air vent for solar thermal systems.
Brass body. Chrome plated.
Female connections.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: -30–160 °C.
Max. percentage of glycol: 50 %.

Code			
251004	1/2″ F	1	10

250

tech. broch. 01133

Shut-off cock complete with seal.
Brass body. Chrome plated.
Max. working pressure: 10 bar.
Temperature range: -30–200 °C.
Max. percentage of glycol: 50 %.

WRAS APPROVED PRODUCT CERTIFICATION MARK

Code				
250300	3/8″ M x 3/8″ F - batterfly handle		1	10
250400	1/2″ M x 1/2″ F - lever handle		1	10

The automatic air vent must be shut off after the system has been filled.

DEAERATORS

251
DISCAL®

tech. broch. 01134

Deaerator for solar thermal systems.
Brass body. Chrome plated.
Female connections.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: -30–160 °C.
Max. percentage of glycol: 50 %.

Code			
251003	3/4″ F	1	10

251
DISCAL®

tech. broch. 01134

Deaerator for solar thermal systems.
Brass body. Chrome plated.
Female connections.
With drain.
Max. working pressure: 10 bar.
Max. discharge pressure: 10 bar.
Temperature range: -30–160 °C.
Max. percentage of glycol: 50 %.

Code			
251006	1″ F	1	–
251007	1 1/4″ F	1	–

MANUAL AIR SEPARATOR

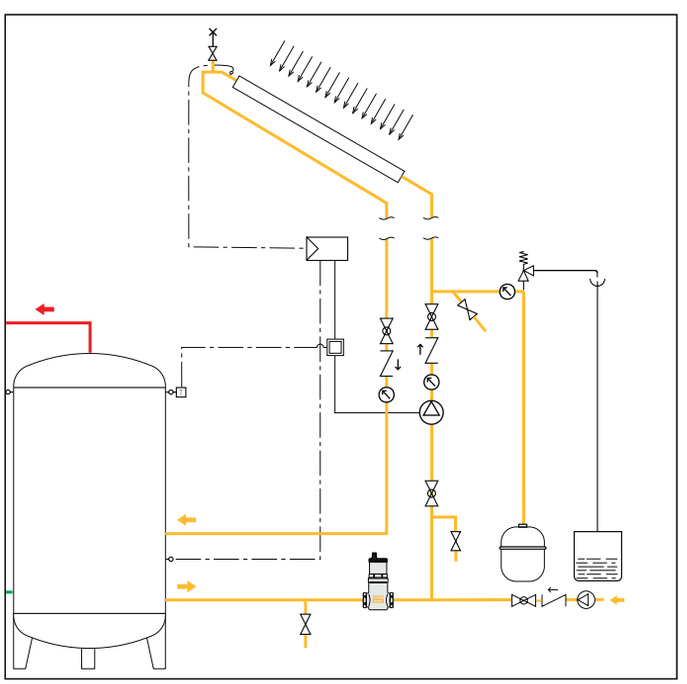
251

tech. broch. 01197

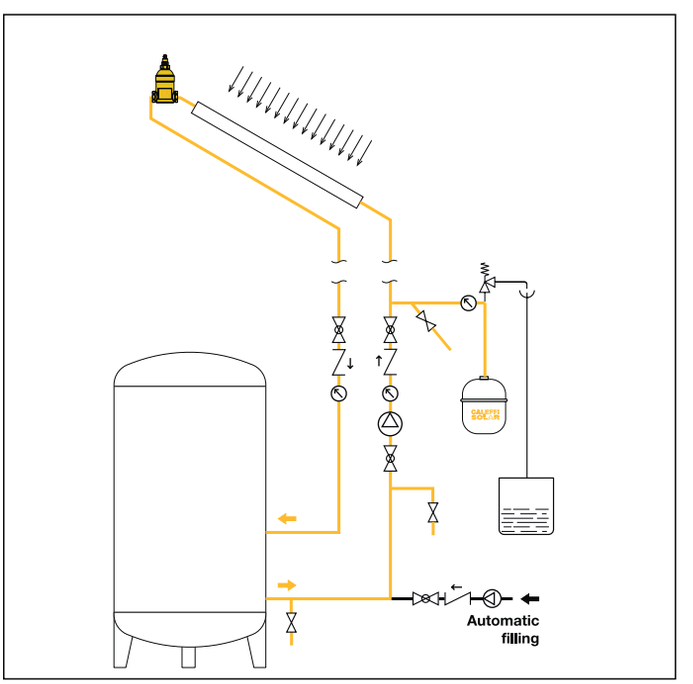
Manual air separator
for solar thermal systems.
Brass body.
Female connections.
Max. working pressure: 10 bar.
Temperature range: -30–200 °C.
Max. percentage of glycol: 50 %.

Code			
251093	3/4″ F	1	10

Application diagram of DISCAL® 251 series for vertical pipes



Application diagram 251 series



PUMP STATIONS

278

Pump station for solar thermal systems,
return connection.
Electric supply: 230 V (AC).
Max. working pressure: 10 bar.
Safety relief valve temperature range: -30–160 °C.
Safety relief valve setting: 6 bar (for other setting,
see 253 series using the adapter code F21224).
Flow meter temperature range: -10–110 °C.
Max. percentage of glycol: 50 %.

Consisting of:
- Solar circulation pump;
- safety relief valve for solar thermal systems 253 series;
- fill/drain cock;
- instrument holder fitting with pressure gauge;
- flow meter;
- return temperature gauge;
- shut-off valve with check valve;
- 2 hose connections;
- pre-formed shell **insulation**.

CE

Code		Flow meter scale (l/min)	Pump		
278050HE	3/4" F	1–13	UPM3 15-75*	1	–
278052HE	3/4" F	8–30	UPM3 15-75*	1	–

** With on/off and PWM control*

279

Pump station for solar thermal systems,
flow and return connection.
Electric supply: 230 V (AC).
Max. working pressure: 10 bar.
Safety relief valve temperature range: -30–160 °C.
Safety relief valve setting: 6 bar (for other setting,
see 253 series using the adapter code F21224).
Flow meter temperature range: -10–110 °C.
Max. percentage of glycol: 50 %.

Consisting of:
- Solar circulation pump;
- safety relief valve for solar thermal systems 253 series;
- 2 fill/drain cocks;
- instrument holder fitting with pressure gauge;
- flow meter;
- deaerator device;
- flow temperature gauge;
- return temperature gauge;
- 2 shut-off valves with check valves;
- 2 hose connections;
- pre-formed shell **insulation**.

Fitted for coupling with digital regulator DeltaSol® SLL

CE

Code		Flow meter scale (l/min)	Pump		
279050HE	3/4" F	1–13	UPM3 15-75*	1	–
279052HE	3/4" F	8–30	UPM3 15-75*	1	–

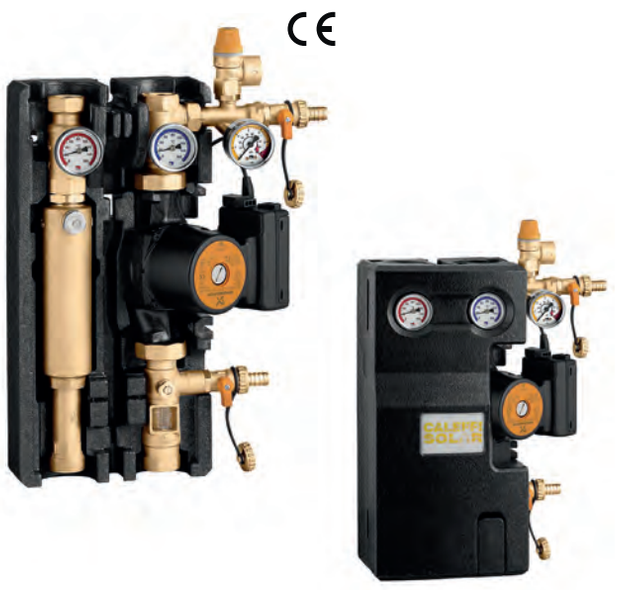
** With on/off and PWM control*

PUMP STATIONS

255

Pump station for solar thermal systems,
flow and return connection.
Electric supply: 230 V (AC).
Max. working pressure: 10 bar.
Safety relief valve temperature range: -30–160 °C.
Safety relief valve setting: 6 bar (for other setting see 253 series).
Max. flow meter temperature: 120 °C.
Max. percentage of glycol: 50 %.

Consisting of:
- Solar circulation pump;
- safety relief valve for solar thermal systems 253 series;
- 2 fill/drain cocks with hose connections;
- instrument holder fitting with pressure gauge;
- flow regulator with flow meter;
- deaerator device;
- flow temperature gauge;
- return temperature gauge;
- 2 shut-off valves with check valves;
- pre-formed shell **insulation**.



Code		Flow meter scale (l/min)	Pump		
255266HE	1" F	5–40	PML 25-145*	1	–

** With PWM control only*

DIGITAL REGULATOR

278

Digital regulator DeltaSol® SLL with PWM control.
Electric supply: 230 V (AC).
Complete with pre-forme shell **insulation** for coupling with pump stations 278...HE, 279...HE and 255...HE series.
Complete with 3 Pt1000 probes, with fourth probe as optional.
Functions: differential temperature regulator with supplementary and optional functions.
Inputs for 4 Pt1000 probes.
Outputs: 3 semiconductor relays
2 PWM.

Code			
278005		1	–
F29883	PWM cable	1	–

ACCESSORIES FOR PUMP STATIONS

259

tech. broch. 01246

Welded expansion vessel only
for primary circuit of solar thermal systems,
EC certification. Bladder membrane.
Max. working pressure: 10 bar.
System working temperature range: -10–120 °C.
Membrane working temperature range: -10–70 °C.
Max. percentage of glycol: 50 %.
Conformity to EN 13831 standard.

CE 0045

Code	Litres	Conn.	Precharge (bar)		
259008	8	3/4″	2,5	1	–
259012	12	3/4″	2,5	1	–
259018	18	3/4″	2,5	1	–
259025	25	3/4″	2,5	1	–
259033	33	3/4″	2,5	1	–

259

tech. broch. 01246

Welded expansion vessel only
for primary circuit of solar thermal systems,
EC certification. Diaphragm membrane.
Max. working pressure: 10 bar.
System working temperature range: -10–120 °C.
Membrane working temperature range: -10–70 °C.
Max. percentage of glycol: 50 %.
Conformity to EN 13831 standard.

CE 0045

Code	Litres	Conn.	Precharge (bar)		
259050	50	3/4″	2,5	1	–
259080	80	1″	2,5	1	–

161

Pocket for Pt1000 probe.
Stainless steel body.
Lenght: 100 mm.

Code			
161014	1/2″	1	–

255

tech. broch. 01136

Expansion vessel connection kit.
Consisting of:
- stainless steel flexible hose (L=610 mm);
- automatic shut-off cock;
- wall mounting bracket (for vessels up to 24 litres).

Max. working pressure: 10 bar.
Shut-off cock max. working temperature: 110 °C.
Max. percentage of glycol: 50 %.

Code			
255007	3/4″	1	–

5580

Ball shut-off valve,
for expansion vessels, with drain cock.
For solar thermal systems.
Max. working pressure: 6 bar.
Max. working temperature: 120 °C.
Max. percentage of glycol: 50 %.

Code			
558052	3/4″	1	20
558062	1″	1	20

255

System filling pump
for pump stations 279, 278 and 255 series.

Code		
255010	1	–

Adapter for pump stations 278 and 279 series.
To be used for the installation
of the 1/2″ safety relief valve 253 series.

Code	
F21224	

BALL VALVE

240

tech. broch. 01185

Ball valve for solar thermal systems.
Body and ball in stainless steel AISI 316.
PN 63.
Female connections.
Handle in stainless steel AISI 304.
Temperature range: -30–200 °C.
Max. percentage of glycol: 50 %.

Code			
240400	1/2″	1	5
240500	3/4″	1	5
240600	1″	1	5

SPARE PARTS FOR CIRCULATION UNITS FOR 278/279 SERIES

Pump UPM3 15-75 for 278HE and 279HE series, with cable

CE

Code	
F29885	UPM3 15-75 pump

Safety relief valve 6 bar

Code
F0000602

Code	
161006	Pt1000 probe - temperature: -5–80 °C
257006	Pt1000 probe - temperature: -50–180 °C
161014	pocket for Pt1000 probe
257007	flow temperature gauge for 267, 269 and 279 series
257008	return temperature gauge for 266, 267, 268, 269, 278 and 279 series
R29435	pressure gauge for 278, 279 series

Spare flow meters for 278 and 279 series circulation units.

Code	Flow meter scale (l/min)
278003	1–13
278004	8–30

SPARE PARTS FOR CIRCULATION UNITS FOR 255/256 SERIES

Flow meter 1" 5–40 for unit code 255266HE

Code
255018

Pump PML Solar 25-145 for unit 255266

CE

Code	
F0000565*	PML 25-145 pump

** With PWM control only*

Code	
255003	flow temperature gauge 0–160 °C
255004	return temperature gauge 0–160 °C
255005	pressure gauge Ø 40, 0–6 bar

MECHANICAL FITTINGS WITH O-RING SEAL

2540

Female fitting, mechanical O-Ring seal for solar thermal systems.
For annealed copper, hard copper, brass, mild and stainless steel pipes.
Max. working pressure: 16 bar.
Temperature range: -30–160 °C.
Max. percentage of glycol: 50 %.
Black nickel plated nut.

Code			
254055	3/4" F - Ø 15	1	25
254058	3/4" F - Ø 18	1	25
254052	3/4" F - Ø 22	1	25
254062	1" F - Ø 22	1	25
254068	1" F - Ø 28	1	10

2543

Coupling sleeve, mechanical O-Ring seal for solar thermal systems.
For annealed copper, hard copper, brass, mild and stainless steel pipes.
Max. working pressure: 16 bar.
Temperature range: -30–160 °C.
Max. percentage of glycol: 50 %.
Black nickel plated nut.

Code			
254305	Ø 15	1	25
254308	Ø 18	1	25
254302	Ø 22	1	25

2544

Male fitting, mechanical O-Ring seal for solar thermal systems.
For annealed copper, hard copper, brass, mild and stainless steel pipes.
Max. working pressure: 16 bar.
Temperature range: -30–160 °C.
Max. percentage of glycol: 50 %.
Black nickel plated nut.

Code			
254455	3/4" M - Ø 15	1	25
254458	3/4" M - Ø 18	1	25
254452	3/4" M - Ø 22	1	25
254465	1" M - Ø 15	1	25
254462	1" M - Ø 22	1	25

2545

Elbow coupling sleeve, mechanical O-Ring seal for solar thermal systems.
For annealed copper, hard copper, brass, mild and stainless steel pipes.
Max. working pressure: 16 bar.
Temperature range: -30–160 °C.
Max. percentage of glycol: 50 %.
Black nickel plated nut.

Code			
254505	Ø 15	1	25
254508	Ø 18	1	25
254502	Ø 22	1	25

2546

Tee fitting, mechanical O-Ring seal for solar thermal systems.
For annealed copper, hard copper, brass, mild and stainless steel pipes.
Max. working pressure: 16 bar.
Temperature range: -30–160 °C.
Max. percentage of glycol: 50 %.
Black nickel plated nut.

Code			
254602	Ø 22	1	20

2547

Male elbow fitting, mechanical O-Ring seal for solar thermal systems.
For annealed copper, hard copper, brass, mild and stainless steel pipes.
Max. working pressure: 16 bar.
Temperature range: -30–160 °C.
Max. percentage of glycol: 50 %.
Black nickel plated nut.

Code			
254755	3/4" M - Ø 15	1	25
254758	3/4" M - Ø 18	1	25
254752	3/4" M - Ø 22	1	25

2548

Female elbow fitting, mechanical O-Ring seal for solar thermal systems.
For annealed copper, hard copper, brass, mild and stainless steel pipes.
Max. working pressure: 16 bar.
Temperature range: -30–160 °C.
Max. percentage of glycol: 50 %.
Black nickel plated nut.

Code			
254855	3/4" F - Ø 15	1	25
254858	3/4" F - Ø 18	1	25
254852	3/4" F - Ø 22	1	25

2540

Plug for Ø 22 copper pipe.

Code			
254002	Ø 22	1	25

THREE-PIECE UNION FITTING

588

Three-piece straight union fitting for solar thermal systems.
Max. working pressure: 16 bar.
Temperature range: -30–160 °C.
Max. percentage of glycol: 50 %.
Black nickel plated nut.

Code			
588052	3/4" F x M with union	1	25
588062	1" F x M with union	1	20

HEAT METER

75025 CONTECA EASY SOLAR

tech. broch. 01311

Direct heat metering **with local reading via LCD display/centralised reading via BUS transmission**.

Max. working pressure: 10 bar.
Temperature range: 5–120 °C.
Max. percentage of glycol: 50 %.

The CONTECA EASY SOLAR heat meter is supplied complete with:
- a pair of temperature probes,
- a pair of Y pockets for immersion probes,
- flow meter with pulse output (Tmax 120 °C),
- electronic calculator with LCD display.

Electric supply 24 V (AC) (+10 % -5 %) / 50/60 Hz - 1 W.
Fitted for transmission on Bus RS-485.

CE

Code	Conn.	Meas. type	Q_{nom} m³/h		
750254	1/2″	single jet	1,5	1	–
750255	3/4″	single jet	2,5	1	–
750256	1″	multi jet	3,5	1	–
750257	1 1/4″	multi jet	6	1	–
750258	1 1/2″	multi jet	10	1	–
750259	2″	multi jet	15	1	–

BALANCING VALVE WITH FLOW METER

258

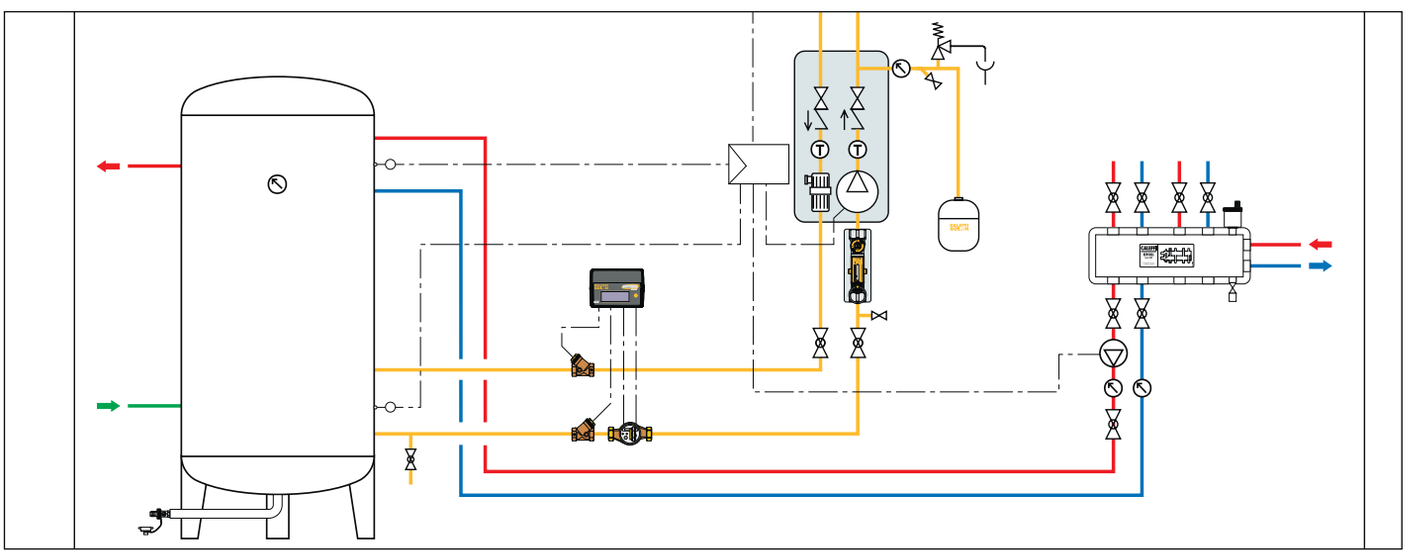
tech. broch. 01148

Balancing valve with flow meter, for solar thermal systems.
Direct reading of flow rate.
Brass valve body and flow meter.
Chrome plated.
Ball valve for flow rate adjustment.
Graduated scale flow meter with magnetic movement flow rate indicator.

With insulation.
Max. working pressure: 10 bar.
Temperature range: -30–130 °C.
Max. percentage of glycol: 50 %.
PATENT.

Code		Flow rate range (l/min)		
258503	3/4″	2– 7	1	5
258533	3/4″	3–10	1	5
258523	3/4″	7–28	1	5
258603	1″	10–40	1	5

Application diagram of heat meter 75025 series and balancing valve 258 series



TEMPERATURE AND PRESSURE RELIEF VALVE

309

tech. broch. 01147

Temperature and pressure relief valve.
For solar thermal systems, to protect the hot water storage.
CR dezincification resistant alloy body.
Chrome plated.
Setting temperature: 90 °C.
Discharge rating:
1/2" x Ø 15: 10 kW.
3/4" x Ø 22: 25 kW.
Settings: 6 - 7 - 10 bar.
Settings certified to EN 1490: 7 - 10 bar.

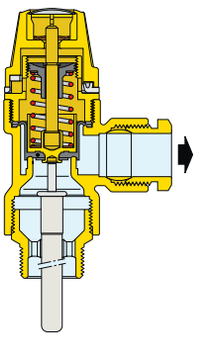
CE 2797

WRAS APPROVED PRODUCT CERTIFICATION MARK

Code				
309461	1/2" M x Ø 15	6 bar	1	20
309471	1/2" M x Ø 15	7 bar	1	20
309401	1/2" M x Ø 15	10 bar	1	20
309561	3/4" M x Ø 22	6 bar	1	20
309571	3/4" M x Ø 22	7 bar	1	20
309501	3/4" M x Ø 22	10 bar	1	20

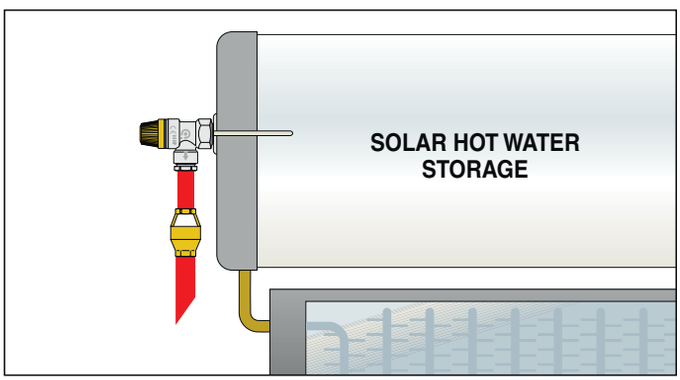
Function

The temperature and pressure relief valve controls and limits the temperature and pressure of the hot water contained in a solar domestic water storage heater and prevents it to reach temperatures over 100°C, with the formation of steam.
On reaching the settings, the valve discharges a sufficient amount of water into the atmosphere so that the temperature and pressure return within the system's operating limits.
As the temperature and pressure decrease, the opposite action occurs with the valve subsequently reclosing within the set tolerances.



Product certification in accordance with European Standard EN 1490
European Standard EN 1490: 2000, entitled *"Building valves - Combined temperature and pressure relief valves – Tests and requirements"*, describes the constructional and performance specifications that TP relief valves must have. Caleffi 309 series TP relief valves for solar systems are certified by Buildcert (UK) to comply with the requirements of the European Standard EN 1490.

Application diagram of valve 309 series on a solar hot water storage



ANTIFREEZE SAFETY DEVICE

603
ICECAL®

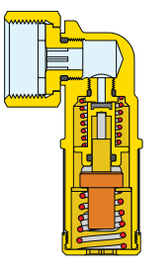
Antifreeze safety device.
For solar thermal systems, to protect the hot water storage.
CR dezincification resistant alloy body.
Max. working pressure: 10 bar.
Ambient temperature range: -30–90 °C.
Opening temperature: 3 °C.
Closing temperature: 4 °C.

Code			
603040	1/2" F with nut	1	50

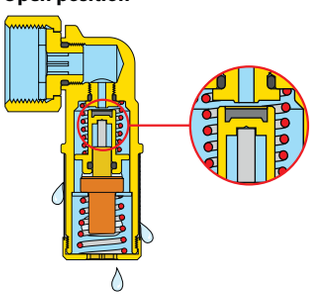
Function

The antifreeze safety device prevents ice build-up in domestic water circuits, thereby avoiding potential damage to storage tanks and pipes
When the minimum ambient intervention temperature is reached, it automatically opens a minimum passage of water toward the drain, enabling a small continuous flow of water at the inlet; this prevents any risk of freezing.
When the ambient temperature increases or in the event of contact with warmer water, the opposite action occurs, causing the device to shut off and circuit normal operating conditions to be restored.

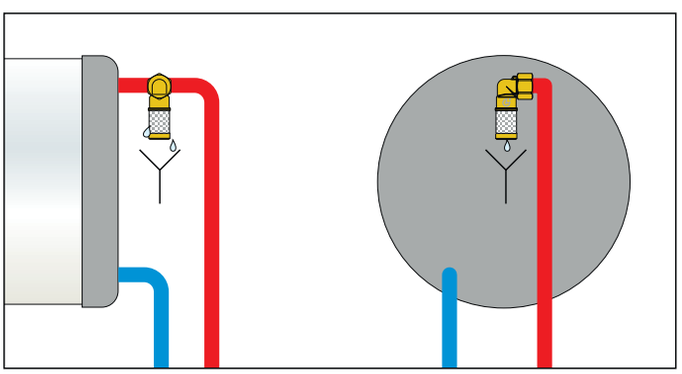
Closed position



Open position



Application diagram of device 603 series on a domestic water circuit



MOTORISED BALL DIVERTER VALVE

6443

tech. broch. 01132

Motorised three-way ball diverter valve.
Max. working pressure: 10 bar.
Max. Δp: 10 bar.
Temperature range: -5–110 °C.

Complete with actuator with 3-contact control.
With auxiliary microswitch.
Supply: 230 V (AC) or 24 V (AC).
Power consumption: 8 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Ambient temperature range: 0–55 °C.
Protection class: IP 44 (vertical stem).
IP 40 (horizontal stem).
Operating time: 10 s (90° rotation).
Cable length: 100 cm.

Code		Supply voltage V	Kv (m³/h)		
644346	1/2″	230	3,9	1	5
644356	3/4″	230	3,9	1	5
644357	3/4″	230	8,6	1	5
644366	1″	230	9	1	5
644348	1/2″	24	3,9	1	5
644358	3/4″	24	3,9	1	5
644359	3/4″	24	8,6	1	5
644368	1″	24	9	1	5

THERMOSTATIC DIVERTER VALVES

2620

tech. broch. 01335

Thermostatic diverter valve for solar thermal systems.
CR dezincification resistant alloy body.
Chrome plated.
Max. working pressure: 10 bar.
Factory setting: 45 °C.
Max. inlet temperature: 100 °C.

Code		Temperature adjustment	Kv (m³/h)		
262040	1/2″	35–55 °C	1,5	1	10
262050	3/4″	35–55 °C	1,7	1	10

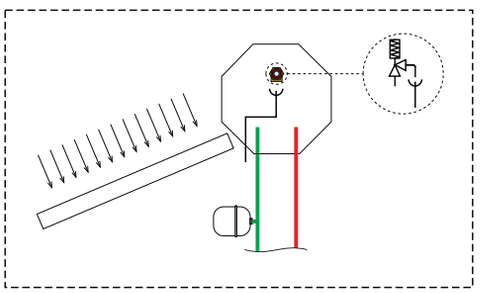
2620

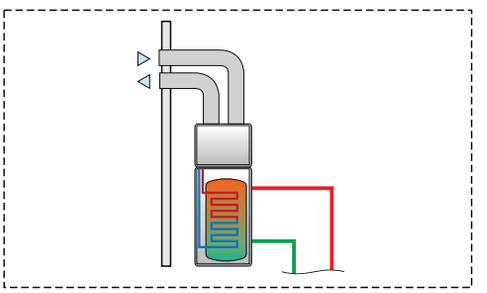
tech. broch. 01335

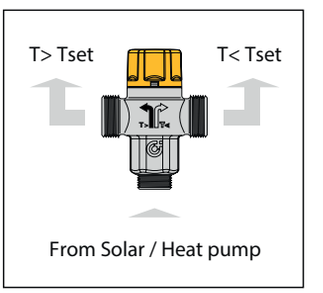
Thermostatic diverter valve for solar thermal systems.
CR dezincification resistant alloy body.
Chrome plated.
Max. working pressure: 10 bar.
Factory setting: 45 °C.
Max. inlet temperature: 100 °C.

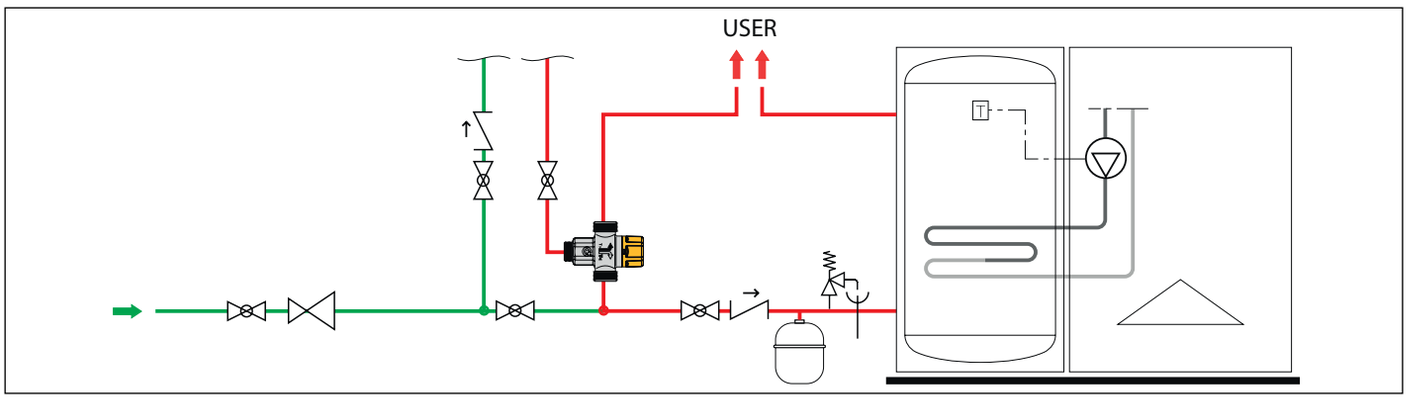
Code		Temperature adjustment	Kv (m³/h)		
262060	1″	38–52 °C	2,6	1	10

Application diagram of thermostatic diverter valve 2620 series









THERMOSTATIC MIXING VALVES

2521 tech. broch. 01127

Pb LOW LEAD

Adjustable thermostatic mixing valve for solar thermal systems.
CR dezincification resistant alloy body **"LOW LEAD"**. Chrome plated.
Male union connections.
Max. working pressure: 14 bar.
Max. inlet temperature: 100 °C.

Code		Temperature adjustment	Kv (m³/h)		
252140	1/2"	30–65 °C	2,6	1	10
252150	3/4"	30–65 °C	2,6	1	10

2521 tech. broch. 01257

Thermostatic mixing valve for centralised solar thermal systems.
CR dezincification resistant alloy body.
Male union connections.
Antiscale inner regulator in technopolymer.
Max. working pressure: 14 bar.
Max. inlet temperature: 100 °C.

Code		Temperature adjustment	Kv (m³/h)		
252151	3/4"	35–65 °C	4,5	1	10
252160	1"	35–65 °C	5,5	1	–
252170	1 1/4"	35–65 °C	7,6	1	–
252180	1 1/2"	35–65 °C	11,0	1	–
252190	2"	35–65 °C	13,3	1	–

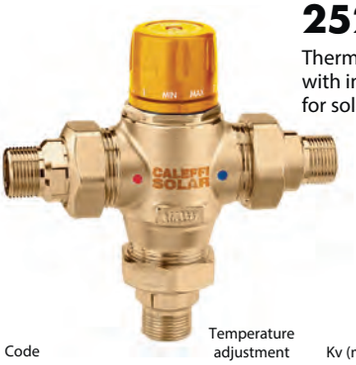
2521 tech. broch. 01127

Pb LOW LEAD

Adjustable thermostatic mixing valve, **with check valves**, for solar thermal systems.
CR dezincification resistant alloy body **"LOW LEAD"**. Chrome plated.
Male union connections.
Max. working pressure: 14 bar.
Max. inlet temperature: 100 °C.

Code		Temperature adjustment	Kv (m³/h)		
252153	3/4"	30–65 °C	2,6	1	10

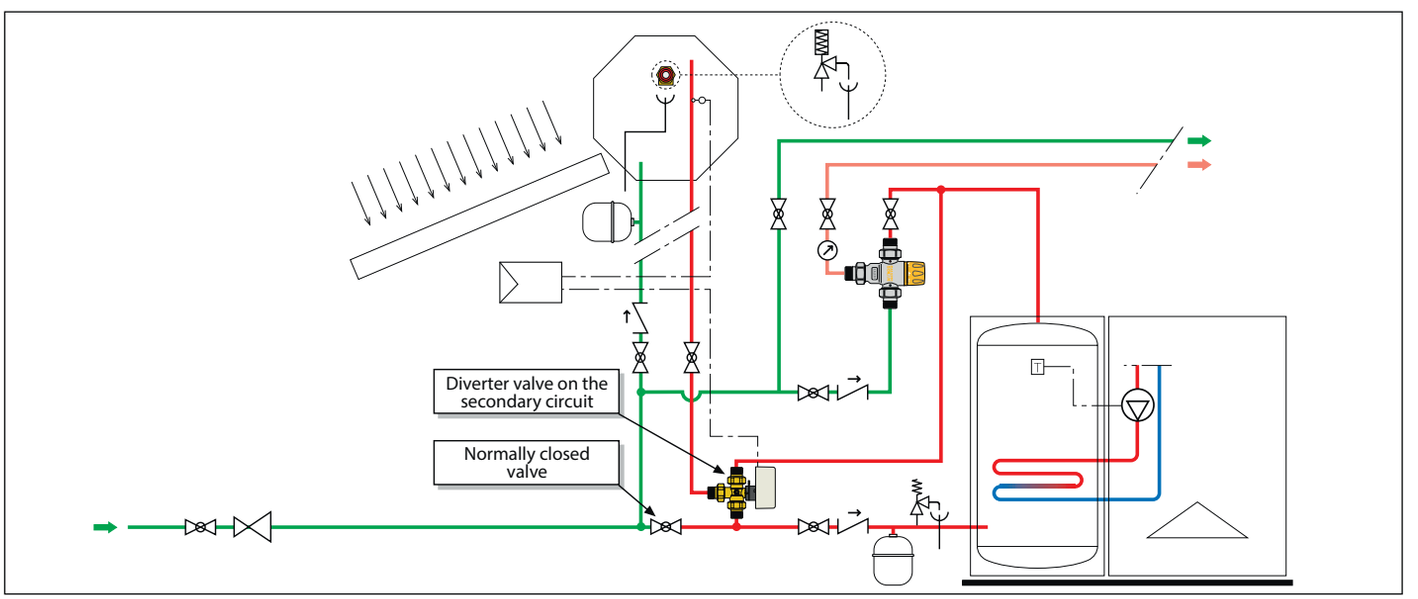
2523 tech. broch. 01129



Thermostatic mixing valve with interchangeable cartridge for solar thermal systems.
Brass body.
Male union connections.
Max. working pressure: 14 bar.
Max. inlet temperature: 110 °C.

Code		Temperature adjustment	Kv (m³/h)		
252340	1/2"	30–65 °C	4,0	1	–
252350	3/4"	30–65 °C	4,5	1	–
252360	1"	30–65 °C	6,9	1	–
252370	1 1/4"	30–65 °C	9,1	1	–
252380	1 1/2"	35–65 °C	14,5	1	–
252390	2"	35–65 °C	19,0	1	–

Application diagram of thermostatic mixing valve 2521 series



ANTI-SCALD TEMPERING AND THERMOSTATIC MIXING VALVES

2527

tech. broch. 01165

Adjustable anti-scald thermostatic mixing valve, **with check valves and strainers**, for solar thermal systems.
High thermal performance device **with anti-scald safety function**.
Brass body.
Chrome plated.
Male union connections.
Performance to standards NF 079 doc. 8, EN 15092, EN 1111, EN 1287.
Max. working pressure: 10 bar.
Max. inlet temperature: 100 °C.

Code		Temperature adjustment	Kv (m³/h)		
252714	1/2″	35–55 °C	1,5	1	10
252713	3/4″	35–55 °C	1,7	1	10

2522

Adjustable thermostatic mixing valve **with check valves and strainers**, for solar thermal systems.
Enhanced thermal performance device **with anti-scald safety function**.
With override function for thermal disinfection.
CR dezincification resistant alloy body.
Chrome plated.
Male union connections.
Max. working pressure: 1400 kPa.
Max. inlet temperature: 100 °C.
Certified to AS 4032.1.

AS 4032.1 C of C 02466
AS 1357.1/2 C of C 25724

Code		Temperature adjustment	Kv (m³/h)		
252212TMF AUS*	DN 15	30–50 °C	1,3	1	10
252219TMF AUS	DN 20	30–50 °C	1,4	1	6

** Without union*

2522

High performance adjustable anti-scald tempering valve **with check valves and strainers** at the inlets.
Suitable for solar and instantaneous hot water systems.
CR dezincification resistant alloy body.
Chrome plated.
Male union connections.
Max. working pressure: 1400 kPa.
Max. inlet temperature: 100 °C.
Certified to AS 4032.2.

AS 4032.2 C of C 02466

Code		Temperature adjustment	Kv (m³/h)		
252212HP AUS	DN 15	35–55 °C	1,5	1	10
252219HP AUS	DN 20	35–55 °C	1,7	1	5

2522

Adjustable thermostatic mixing valve **with check valves and strainers**, for solar thermal systems.
Enhanced thermal performance device **with anti-scald safety function**.
CR dezincification resistant alloy body.
Chrome plated.
Male union connections.
Max. working pressure: 1400 kPa.
Max. inlet temperature: 100 °C.
Certified to AS 4032.1.

AS 4032.1 C of C 02466

Code		Temperature adjustment	Kv (m³/h)		
252225TM AUS	DN 25	30–50 °C	3,0	1	5

SOLAR STORAGE-TO-BOILER CONNECTION KIT

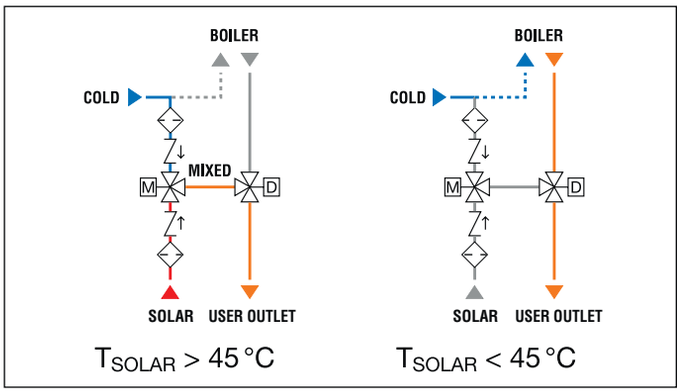
264 SOLARNOCAL

tech. broch. 01163

Function

A thermostatic anti-scald mixing valve, at the kit inlet, controls the temperature of the water coming from the solar hot water storage.
The thermostat, by means of the probe positioned on the hot water flow from the solar hot water storage, controls the diverter valve at the kit outlet. Depending on the temperature setting, the valve diverts the water towards the user circuit or activates the boiler circuit, **without thermal integration**.

Hydraulic diagrams



Solar storage-to-boiler connection kit, **without thermal integration**.
Consisting of:
- thermostatic anti-scald mixing valve, adjustable with knob, for solar thermal systems. Complete with strainers and check valves at the inlets;
- diverter valve with three-contact actuator, with auxiliary microswitch;
- thermostat with probe for solar thermal system, for operating diverter valve. Display showing temperature.
- pre-formed **shell protective cover**.

Diverter-to-mixing valve coupling with adjustable position of the inlet and outlet connections.

Mixing valve
CR dezincification resistant alloy body.
Max. working pressure: 10 bar.
Adjustment temperature range: 35–55 °C.
Max. inlet temperature: **100°C**.

Diverter valve
Brass body.
Max. working pressure: 10 bar.
Temperature range: -5–110 °C.

Actuator
Three-contact type.
Supply: 230 V (AC).
Power consumption: 8 VA.
Auxiliary microswitch contact rating: 0,8 A (230 V).
Ambient temperature range: 0–55 °C.
Protection class: IP 44 (vertical stem).
IP 40 (horizontal stem).
Operating time: 10 s.
Cable length: 1 m.

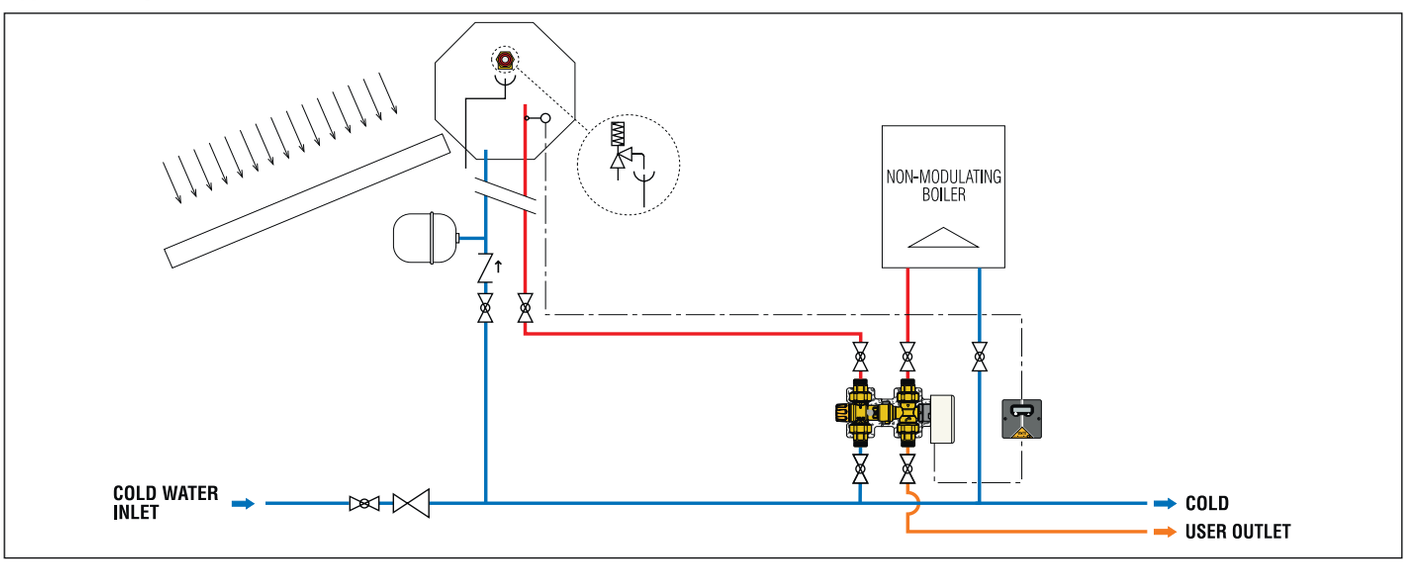
Thermostat with probe
Supply: 230 V (AC).
Adjustable temperature range: 25–50 °C.
Factory setting: 45 °C.
Box protection class: IP 54.

Code			
264352	3/4"	1	–

Spare parts for connection kit 264 and 265 series.

Code	
F29399	actuator
F29488	Ø 6 mm probe
161014	stainless steel pocket for Pt1000 probe

Application diagram of SOLARNOCAL kit 264 series



SOLAR STORAGE-TO-BOILER CONNECTION KIT

265
SOLARINCAL

tech. broch. 01163

Function

The thermostat, by means of the probe positioned on the hot water flow from the solar hot water storage, controls the diverter valve at the kit inlet. Depending on the temperature setting, the valve diverts the water towards the user circuit or the boiler circuit, **with thermal integration**.
A thermostatic anti-scald mixing valve, at the kit outlet, constantly controls the temperature of the water sent to the user.

Solar storage-to-boiler connection kit, **with thermal integration**.
Consisting of:
- thermostatic anti-scald mixing valve, adjustable with knob, for solar thermal systems. Complete with strainers and check valves at the inlets;
- diverter valve with three-contact actuator, with auxiliary microswitch;
- thermostat with probe for solar thermal system, for operating diverter valve. Display showing temperature.
- pre-formed **shell protective cover**.

Diverter-to-mixing valve coupling with adjustable position of the inlet and outlet connections.

Mixing valve
For technical details see 264 series.

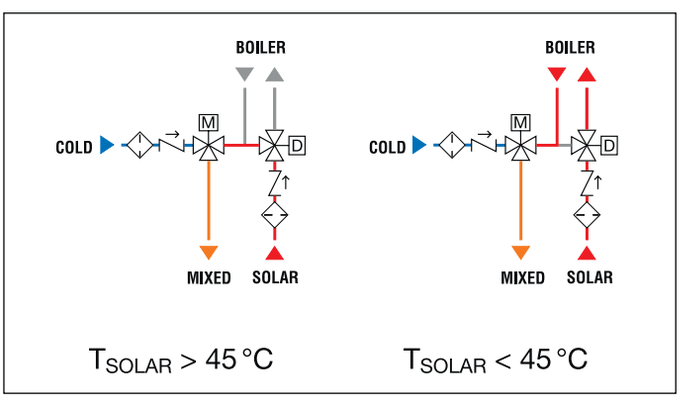
Diverter valve
For technical details see 264 series.

Actuator
For technical details see 264 series.

Thermostat with probe
For technical details see 264 series.

Code			
265352	3/4"	1	–
F29384	mixing valve spare for 262 and 265 series	1	–

Hydraulic diagrams



265

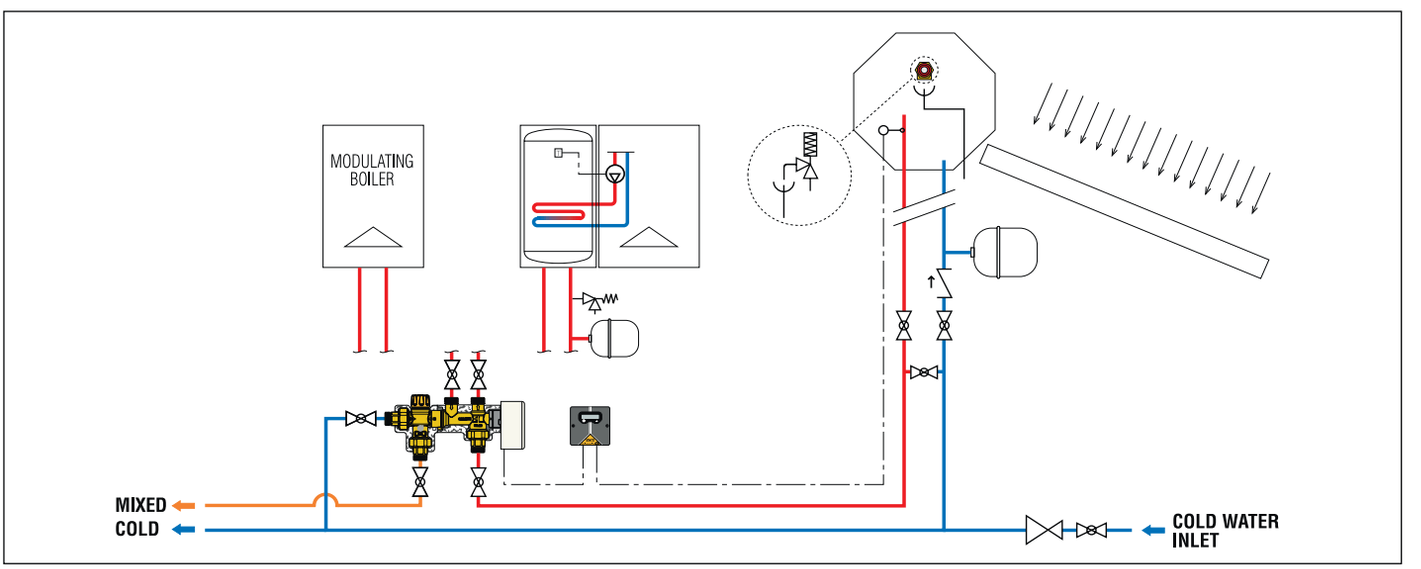
Thermostat with display showing storage temperature.
For devices 264 and 265 series.
Supply: 230 V (AC).
Adjustable temperature range: 25–50 °C.
Factory setting: 45 °C.
Factory setting: 45 °C.
Box protection class: IP 54.

Code		
265001	1	–

Accessories for connection kit 264 and 265 series.

Code	
264359	kit 264 series without thermostat and probe
265359	kit 265 series without thermostat and probe
F29525	box with switching 3 contact relay
F29466	Ø 15 mm contact probe
F29467	pocket for Ø 15 mm probe

Application diagram of SOLARINCAL kit 265 series



SOLAR STORAGE-TO-BOILER THERMOSTATIC CONNECTION KIT

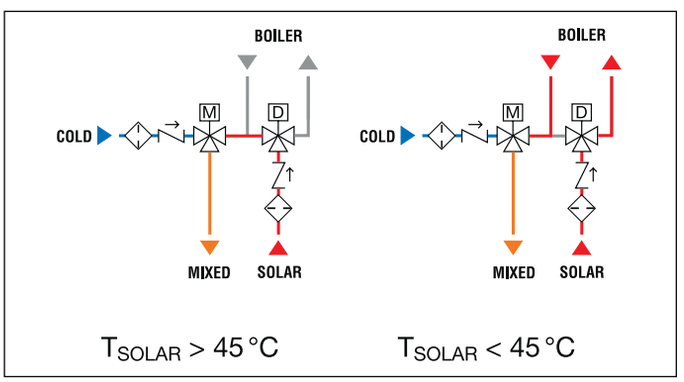
262
SOLARINCAL-T

tech. broch. 01164

Function

A thermostatic diverter valve, at the kit inlet, receives hot water coming from the solar water storage.
Depending on the temperature setting, the valve diverts the water automatically and in a proportional manner towards the user circuit or the **boiler with storage circuit**, **with thermal integration**.
The valve modulates the flow rates to optimise the energy contained in the solar storage and reduces boiler operation times to a minimum.
A thermostatic anti-scald mixing valve, at the kit outlet, constantly controls and limits the temperature of the water sent to the user.

Hydraulic diagrams

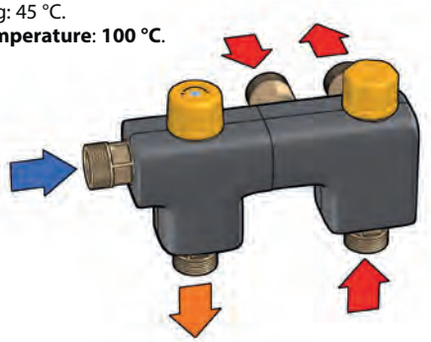


Solar storage-to-boiler connection kit, **with thermal integration**.
Consisting of:
- thermostatic anti-scald mixing valve, adjustable with knob, for solar thermal systems. Complete with strainers and check valves at the inlets.
- thermostatic diverter valve;
- pre-formed **shell protective cover**.

Diverter-to-mixing valve coupling with adjustable position of the inlet and outlet connections.

Mixing valve
CR dezincification resistant alloy body.
Max. working pressure: 10 bar.
Adjustment temperature range: 35–55 °C.
Max. inlet temperature: **100 °C**.
Performance to standards NF 079 doc. 8, EN 15092, EN 1111, EN 1287.

Diverter valve
Brass body.
Max. working pressure: 10 bar.
Factory setting: 45 °C.
Max. inlet temperature: **100 °C**.



Code			
262350	3/4"	1	–
F29384	mixing valve spare for 262 and 265 series	1	–

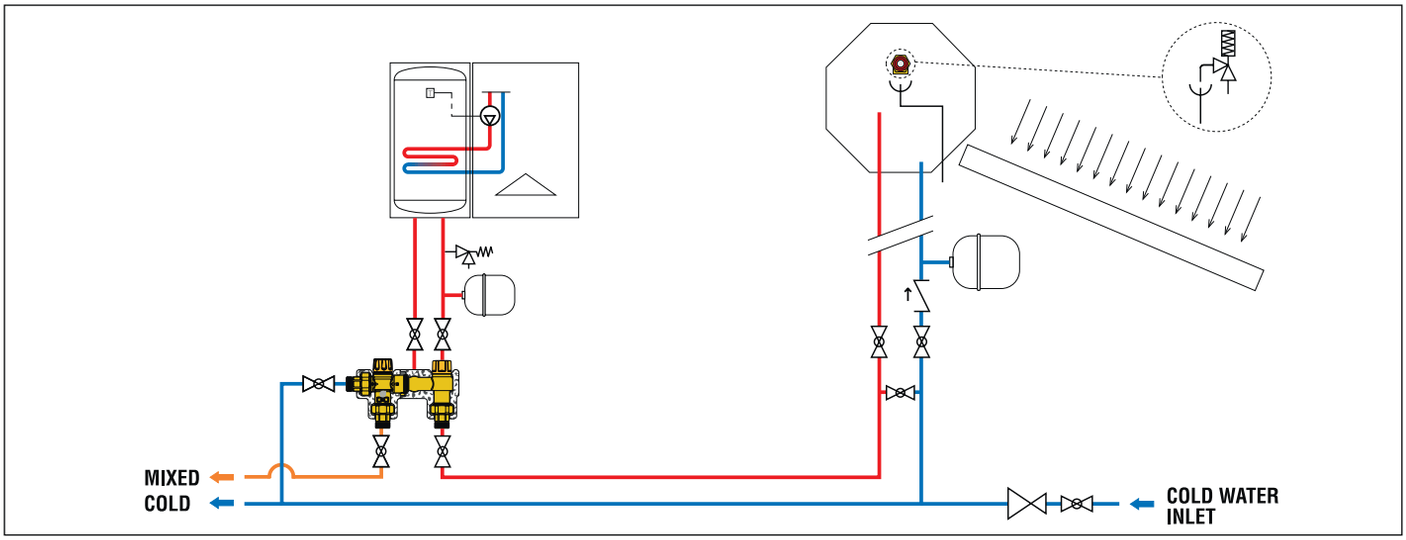
262
SOLARINCAL-T

tech. broch. 01164

Solar storage-to-boiler connection kit, **with thermal integration**.
Without shell protective cover.

Code			
262342	1/2"	1	–

Application diagram of SOLARINCAL-T kit 262 series



SOLAR STORAGE-TO-BOILER THERMOSTATIC CONNECTION KIT

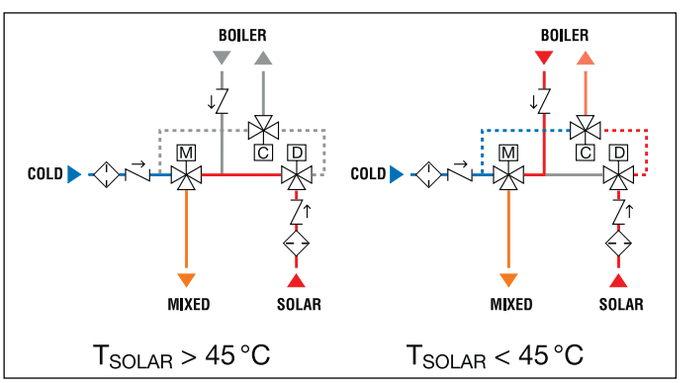
263
SOLARINCAL-T *PLUS*

tech. broch. 01164

Function

A thermostatic diverter valve, at the kit inlet, receives hot water coming from the solar water storage. Depending on the temperature setting, the valve diverts the water automatically and proportionally towards the user circuit or the **instantaneous boiler circuit**, **with thermal integration**. The valve modulates the flow rates to optimise the energy contained in the solar storage and reduces boiler operation times to a minimum.
A specific thermostatic control device limits the boiler inlet temperature to prevent it being switched on and off too often, which leads to hunting and irregular operation.
A thermostatic anti-scald mixing valve, at the kit outlet, constantly controls the temperature of the water sent to the user.

Hydraulic diagrams

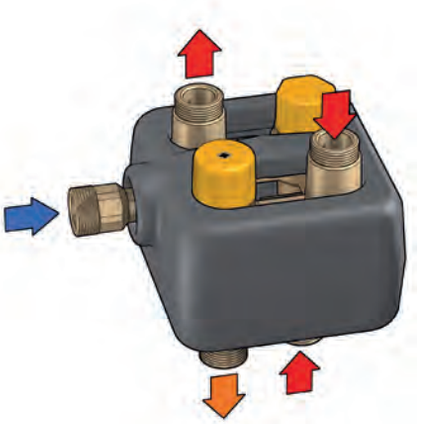


Solar storage-to-boiler connection kit, **with thermal integration**.
Consisting of:
- thermostatic anti-scald mixing valve, adjustable with knob, for solar thermal systems. Complete with strainers and check valves at the inlets;
- thermostatic diverter valve;
- thermostatic control device;
- pre-formed **shell protective cover**.

Mixing valve
CR dezincification resistant alloy body.
Max. working pressure: 10 bar.
Adjustment temperature range: 35–55 °C.
Max. inlet temperature: **100 °C**.
Performance to standards NF 079 doc. 8, EN 15092, EN 1111, EN 1287.

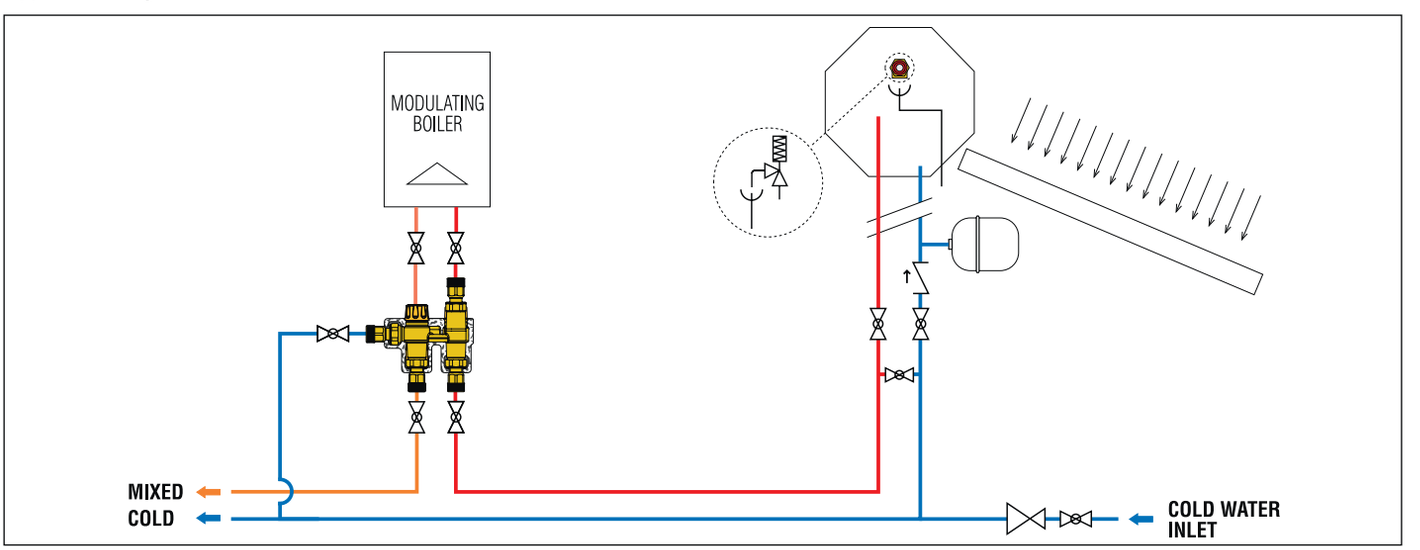
Diverter valve
CR dezincification resistant alloy body.
Max. working pressure: 10 bar.
Factory setting: 45 °C.
Max. inlet temperature: **100 °C**.

Control device
CR dezincification resistant alloy body.
Factory setting: 30 °C.
Max. inlet temperature: 85 °C.
PATENT.

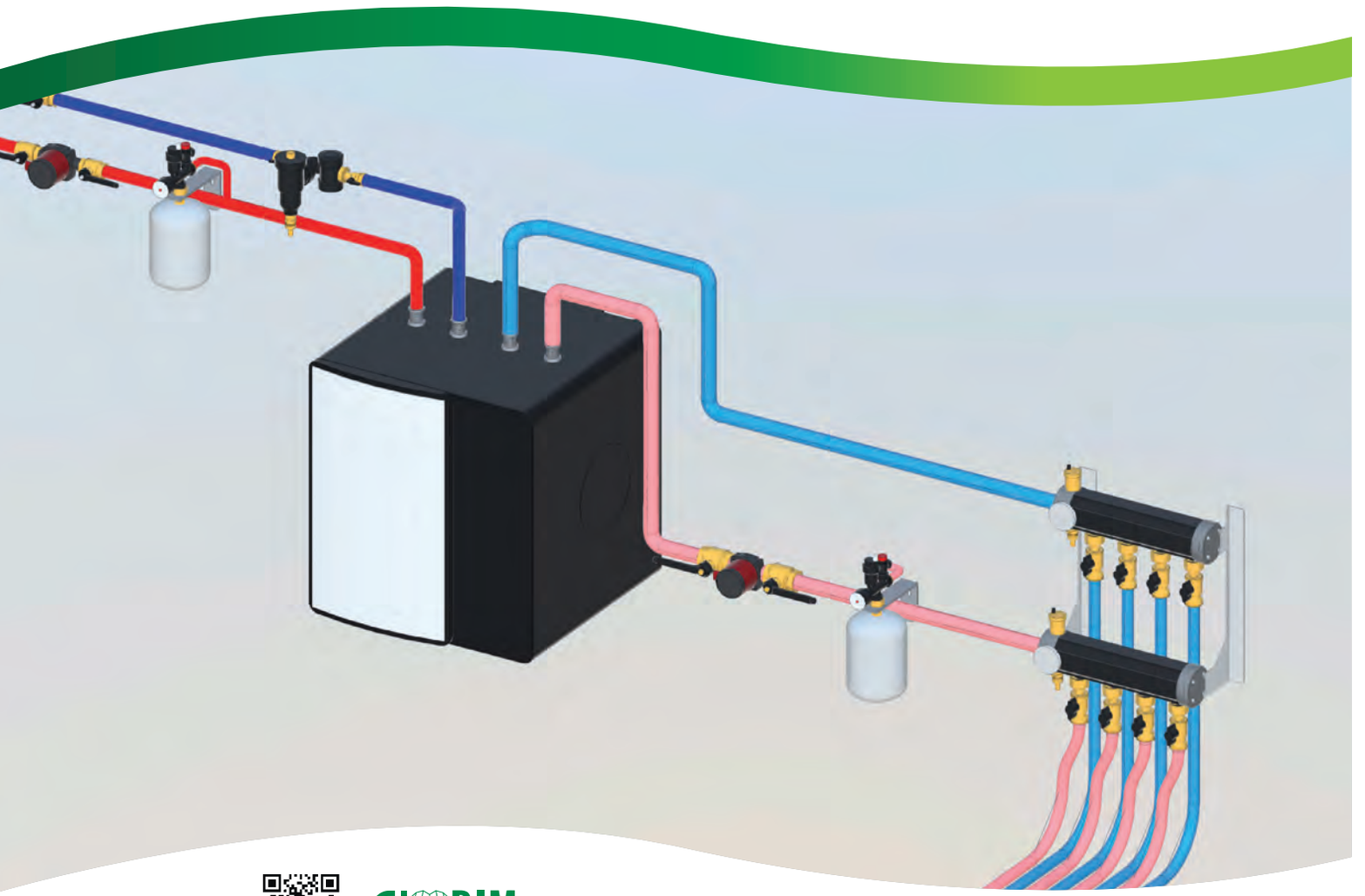


Code			
263350	3/4"	1	–

Application diagram of SOLARINCAL-T Plus kit 263 series



COMPONENTS FOR GEOTHERMAL SYSTEMS



BIM
bim.caleffi.com

Preassembled geothermal manifold
Modular geothermal manifold
Shut-off and balancing devices for geothermal manifold

PREASSEMBLED GEOTHERMAL MANIFOLD

110

tech. broch. 01221

Preassembled geothermal manifold.
Complete with:
- automatic air vents;
- temperature gauges Ø 80 mm;
- fill/drain cocks;
- flow and return manifolds in polymer;
- blind end plugs with insulation;
- stainless steel wall brackets;
- set of labels for direction of flow and circuit identification;
- wall fixing anchors.

Max. working pressure: 6 bar.
Max. hydraulic test pressure: 10 bar.
Temperature range: -10–60 °C.
Ambient temperature range: -20–60 °C.
Medium: water, glycol solutions, saline solutions.
Max. percentage of glycol: 50 %.
Manifold DN 50.
Max. flow rate: 7 m³/h.
Outlet centre distance: 100 mm.
Outlet connections with mechanical seal for shut-off valves 111 series, balancing valves 112 series and flow meters 113 series.

Code		Outlet connection			
1107B5	2 circuits	1 1/4"	42 p.2,5 TR	1	–
1107C5	3 circuits	1 1/4"	42 p.2,5 TR	1	–
1107D5	4 circuits	1 1/4"	42 p.2,5 TR	1	–
1107E5	5 circuits	1 1/4"	42 p.2,5 TR	1	–
1107F5	6 circuits	1 1/4"	42 p.2,5 TR	1	–
1107G5	7 circuits	1 1/4"	42 p.2,5 TR	1	–
1107H5	8 circuits	1 1/4"	42 p.2,5 TR	1	–

For more than 8 outlet circuits, see the modular manifold

MODULAR GEOTHERMAL MANIFOLD

110

tech. broch. 01221

Modular manifold single module in polymer.
Max. working pressure: 6 bar.
Max. hydraulic test pressure: 10 bar.
Working temperature range: -10–60 °C.
Ambient temperature range: -20–60 °C.
Medium: water, glycol solutions, saline solutions.
Max. percentage of glycol: 50 %.
Manifold DN 50.
Outlet connection: 42 p.2,5 TR.
Outlet connections with mechanical seal for shut-off valves 111 series, balancing valves 112 series and flow meters 113 series.

Code		
110700	1	–

110

tech. broch. 01221

Stainless steel tie-rods
for assembling modular manifolds.
M8 threaded stainless steel bar.

Code			
110012	for manifold with 2 circuits	1	–
110013	for manifold with 3 circuits	1	–
110014	for manifold with 4 circuits	1	–
110015	for manifold with 5 circuits	1	–
110016	for manifold with 6 circuits	1	–
110017	for manifold with 7 circuits	1	–
110018	for manifold with 8 circuits	1	–
110019	for manifold with 9 circuits	1	–
110020	for manifold with 10 circuits	1	–
110021	for manifold with 11 circuits	1	–
110022	for manifold with 12 circuits	1	–

110

tech. broch. 01221

Assembly kit for modular manifolds. Complete with:
- brass end fitting with automatic air vent, fill/drain cock;
- brass blind end plug;
- pre-formed shell insulation;
- screws and bolts for tie-rods and brackets;
  set of labels for direction of flow and circuit identification;
- temperature gauge with pocket (-30–50 °C);
- No. 2 seal gaskets.

Max. working pressure: 6 bar.
System test max. pressure: 10 bar.
Temperature range: -10–60 °C.
Ambient temperature range: -20–60 °C.
Medium: water, glycol solutions, saline solutions.
Max. percentage of glycol: 50 %.
Connections: 1 1/4" F.

Code		
110750	1	–

110

tech. broch. 01221

Pair of stainless steel brackets to secure modular manifolds.
Rapid wall coupling system. System for rapidly coupling the manifold on the brackets.
With screws and plugs.

Code		
110001	1	–

SHUT-OFF AND BALANCING DEVICES FOR GEOTHERMAL MANIFOLD 110 SERIES

112

tech. broch. 01235

Balancing valve with flow meter.
Complete with fitting for polyethylene pipe.
Direct reading of flow rate.
Ball valve for flow rate setting.
Graduated scale flow meter
with magnetic movement flow rate indicator.
Brass valve body and flow meter.
Connection to manifold:
female connections with captive nut 42 p.2,5 TR.
Max. working pressure: 10 bar.
Temperature range: -10–40 °C.
Ambient temperature range: -20–60 °C.
Medium: water, glycol solutions, saline solutions.
Max. percentage of glycol: 50 %.
Accuracy: ± 10 %.

Code		Scale (m³/h)		
112621	42 p.2,5 TR x Ø 25	0,3–1,2	1	–
112631	42 p.2,5 TR x Ø 32	0,3–1,2	1	–
112641	42 p.2,5 TR x Ø 40	0,3–1,2	1	–

112

tech. broch. 01235

Insulation for balancing valves.
Material: closed cell expanded PE-X.
Tickness: 10 mm.
Density: inner part 30 kg/m³, outer part 80 kg/m³.
Thermal conductivity (DIN 52612):
at 0 °C: 0,038 W/(m·K); at 40 °C: 0,045 W/(m·K).
Coefficient of resistance
to water vapour (DIN 52615): > 1.300.
Working temperature range: 0–100 °C.
Reaction to fire (DIN 4102): class B2.

Code	Use		
112001	Ø 25 - Ø 32	1	–
112003	Ø 40	1	–

871

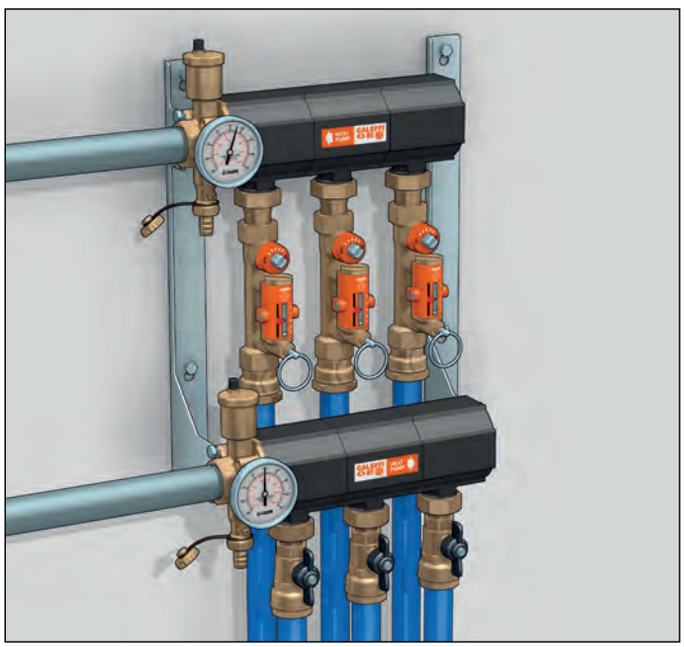
Ball valve complete with fitting
for polyethylene pipe.
Brass body.
Connection to manifold:
female connection with captive nut 42 p.2,5 TR.
Max. working pressure: 16 bar.
Working temperature range: -10–40 °C.
Ambient temperature range: -20–60 °C.
Medium: water, glycol solutions, saline solutions.
Max. percentage of glycol: 50 %.
Fitted for 111 series insulation.

Code			
871025	42 p.2,5 TR x Ø 25	1	–
871032	42 p.2,5 TR x Ø 32	1	–
871040	42 p.2,5 TR x Ø 40	1	–

110

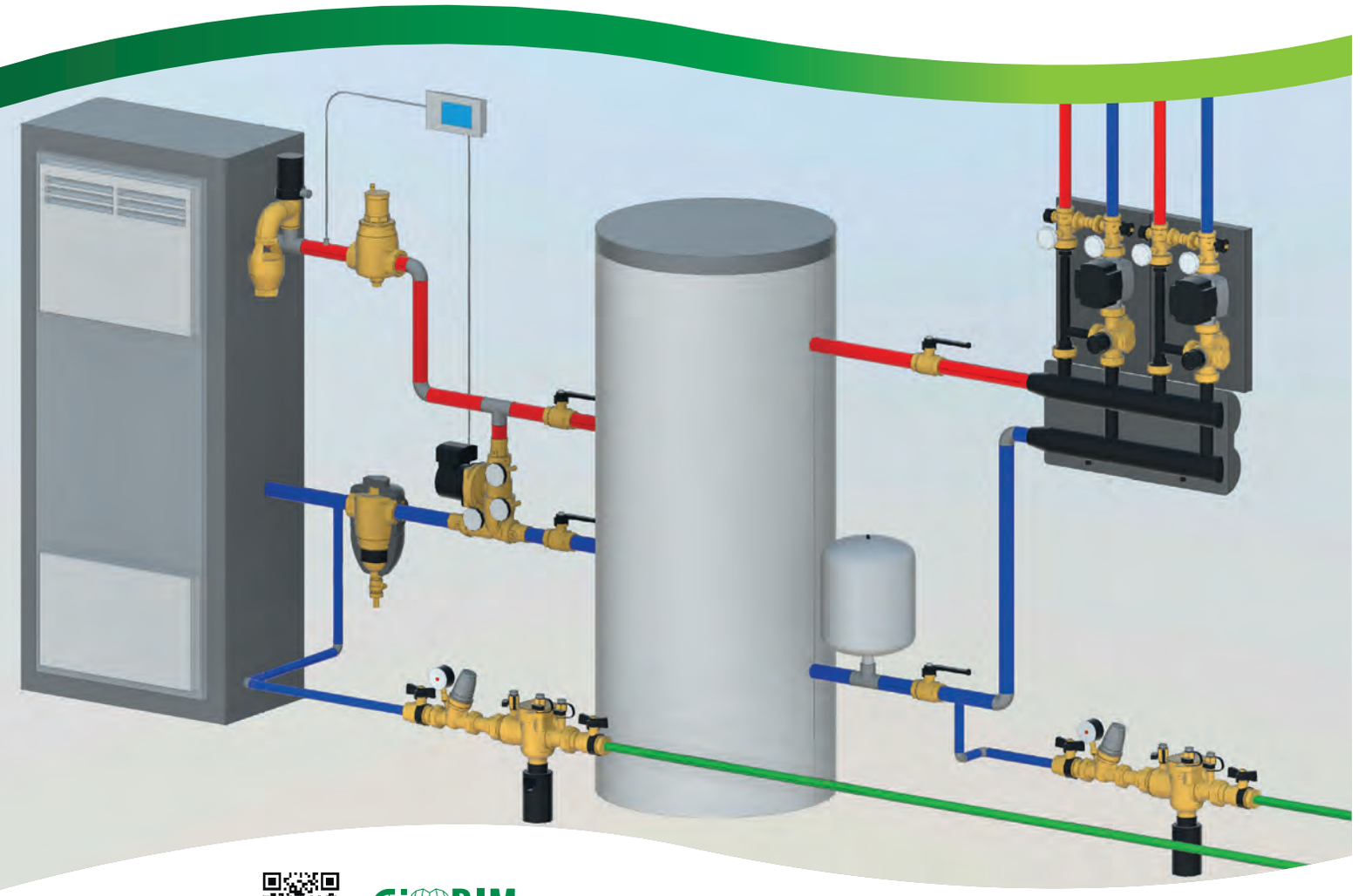
Union with gasket.
Max. working pressure: 16 bar.
Max. working temperature: 40 °C.

Code			
110050	42 p.2,5 TR x 3/4"	1	–
110060	42 p.2,5 TR x 1"	1	–



The use of a flow meter greatly simplifies the process of system balancing, since the flow rate can be measured and controlled at any time and there is no need for differential pressure gauges or reference charts.

COMPONENTS FOR BIOMASS SYSTEMS



BIM
bim.caleffi.com

CALEFFI BIOMASS

Safety devices
Anti-condensation valve
Anti-condensation circulation unit
Anti-condensation recirculation and distribution unit
Connection and energy management unit (heating version)
Connection and energy management compact unit (heating version)
Digital regulator for systems with solid fuel generator

SAFETY DEVICES

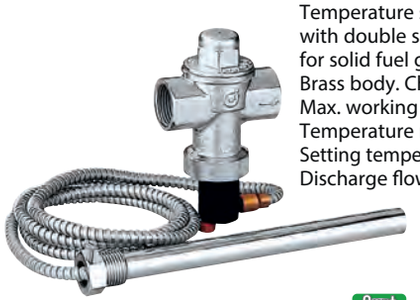
542

tech. broch. 01001

Temperature relief valve,
with fail-safe action.
Manual reset for burner switch off
or alarm activation.
Working pressure: 0,3 bar ≤ P ≤ 10 bar.
Temperature range: 5–100 °C.
Settings temperature: 98 °C, 99 °C.
Certified and calibrated to INAIL.
Discharge rating:
1 1/2" x 1 1/4" - 136 kW.
1 1/2" x 1 1/2" - 419 kW.

CE 2797 INAIL

Code		Setting		
542870	1 1/2" M x 1 1/4" F	98 °C	1	10
542880	1 1/2" M x 1 1/2" F	99 °C	1	10



543

tech. broch. 01057

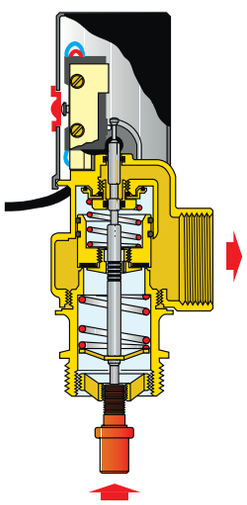
Temperature safety relief valve,
with double safety sensor,
for solid fuel generators.
Brass body. Chrome plated.
Max. working pressure: 10 bar.
Temperature range: 5–110 °C.
Setting temperature: 98 °C (0/-4 °C).
Discharge flow rate with Δp of 1 bar
and T=110 °C: 3000 l/h.
Capillary length: 1300 mm.
Certified to EN 14597.

Cert TÜVRheinland ZERTIFIZIERT www.tuv.com ID 0000021744 DIN geprüft CE 2797

Code		Setting			
543513	3/4" F	98 °C		1	10
543503	3/4" F	98 °C	yellow brass body	1	10

Function

The temperature relief valve discharges the system water on reaching the setting temperature. Equipped with positive action.
It can be used with non-pulverized solid fuel generators with open or closed vessel in accordance with current regulations.



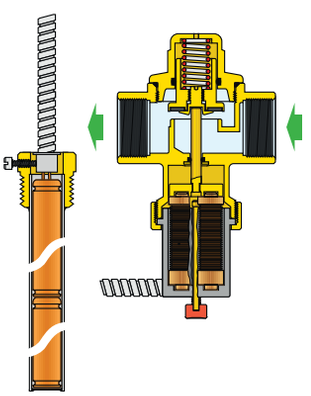
INAIL - Ex ISPESL reference standards
According to the provisions of Collection R Ed. 2009, concerning *"central heating systems using hot water with temperatures no greater than 110 °C and a maximum nominal heat output greater than 35 kW"*, the use of the temperature relief valve is contemplated in the following cases:

Open vessel systems
- Systems with generators stoked with non-pulverized solid fuel, in place of the consumption water heater or emergency exchanger (chap. R.3.C., point 2.1, letter i2).

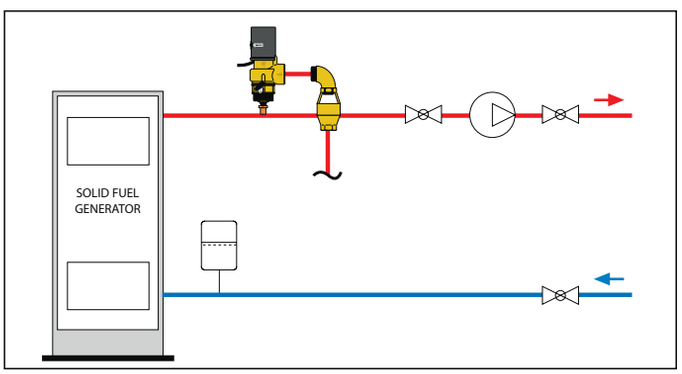
Closed vessel systems
- Thermal systems with generators stoked with non-pulverized solid fuels up to a nominal heat output of 100 kW with partial cut-off in place of the residual power dissipation device (chap. R.3.C., point 3.2).

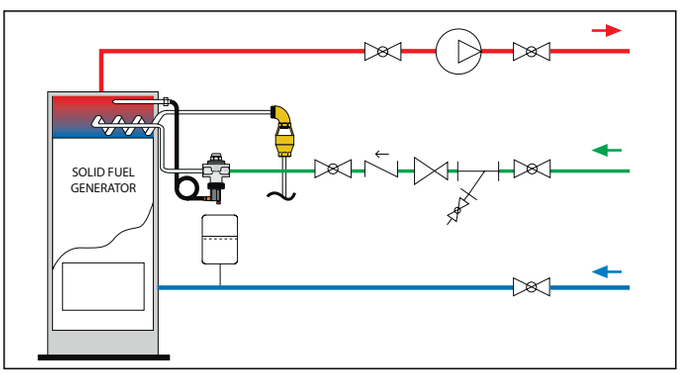
Function

The temperature safety relief valve limits the water temperature in solid fuel generators equipped with a built-in storage or emergency exchanger (for immediate cooling).
On reaching the setting temperature, the valve opens the flow of mains water through the emergency exchanger or built-in storage unit, so as to draw off the excess heat and thereby lower the temperature of the system water contained in the boiler jacket.

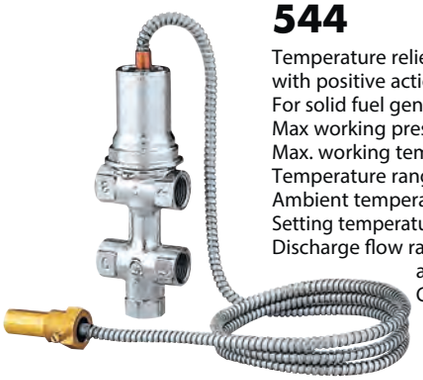


Reference standards
Its use is contemplated in the INAIL - Ex ISPESL standards, Collection R - ed. 2009, chapter R.3.C., point 2.1, letter i2; point 3.1, letter i; point 3.3. The valve complies with EN 14597, it can be combined with solid fuel generators with a heat output of less than 100 kW, used according to the system provisions of the standards EN 12828, UNI 10412-2 and EN 303-5.





SAFETY DEVICES



544

tech. broch. 01058

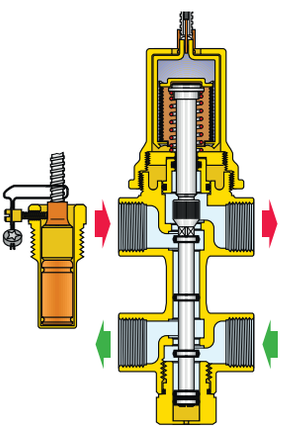
Temperature relief valve,
with positive action with automatic filling.
For solid fuel generators.
Max working pressure: 6 bar.
Max. working temperature: 110 °C.
Temperature range: 5–110 °C.
Ambient temperature range: 1–50° C.
Setting temperature: 100 °C (0/-5 °C).
Discharge flow rate with Δp of 1 bar
and T=110 °C: 1600 l/h.
Capillary length: 1300 mm.

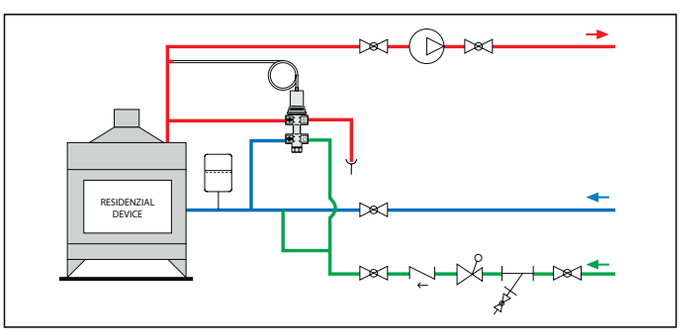
Code		Setting		
544400	1/2"	100 °C	1	10

Function

On reaching the setting temperature, the temperature relief valve discharges the water of the system with a solid fuel generator.
The device integrates in a single group a temperature relief valve with a positive safety remote sensor and a filling valve. The discharge of water enables limiting the system water temperature, while the filling inlet enables the replacement of the discharged flow rate.

Reference standards
Used when there is no emergency exchanger and for heat outputs < 35 kW (Italy).





544

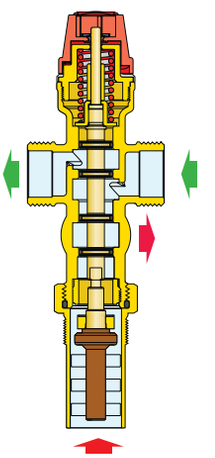
Temperature relief valve
with automatic filling for solid fuel generators,
with knob for manual discharge.
Max. working pressure: 6 bar.
Max. working temperature: 120 °C.
Setting temperature: 100 °C (0/-5 °C).
Discharge flow rate with Δp of 1 bar
and T=110 °C: 1800 l/h.

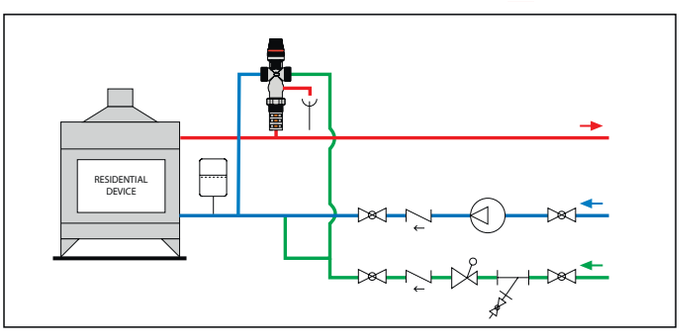
Code		Setting		
544501	3/4"	100 °C	1	–

Function

The device integrates in a single group a temperature relief valve and a filling valve that operate simultaneously by means of a sensor integrated in the valve body. On reaching the setting value, the valve opens the discharge outlet to eliminate the excess heat and, at the same time, the filling inlet to replace the discharged flow rate of the system water.

Reference standards
Used when there is no emergency exchanger and for heat outputs < 35 kW (Italy).





529

tech. broch. 01226

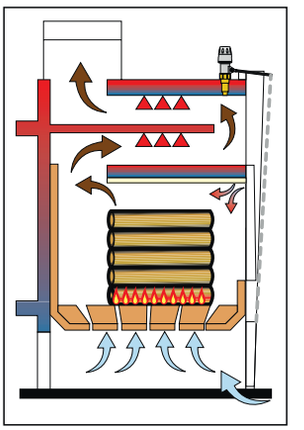
Draught regulating valve.
Male threaded connection.
Adjustment temperature range: 30–90 °C.
Certified to EN 14597.

Code		Pocket length (mm)		
529050	3/4" M ISO 7/1	58	1	10
529151	3/4" M ISO 7/1	78	1	10

Code		Pocket length (mm)		
529150	3/4" M ISO 7/1	58	1	10

Function

The draught regulating valve, installed on the generator with the thermostatic element immersed in the medium, automatically adjusts the flow rate of the comburent air to provide a more regular and complete combustion.



ANTI-CONDENSATION VALVE

280

tech. broch. 01223

Anti-condensation valve
with thermostatic control of the return temperature to solid fuel generators.
Brass body.
Male union connections.
Max. percentage of glycol: 50 %.
Max. working pressure: 10 bar.
Temperature range: 5–100 °C.
Settings: 45 °C, 55 °C, 60 °C, 70 °C.
Setting accuracy: ± 2 °C.
By-pass complete closing temperature:
Tmix = Tset +10 °C = Tr.

Code	DN	Connection	Kv (m^3/h)	Max. recommended power		
28005.	20	3/4″	3,2	10 kW	1	10
28026.	20	1″	3,2	10 kW	1	10
28006.	25	1″	9	35 kW	1	5
28007.	32	1 1/4″	12	45 kW	1	5

Valve selection
The valve selection should be made according to the Kv value (corresponding to a specific DN body size) and not only according to the threaded connections. Given the system flow rate, the corresponding head losses on the valve should be calculated by using the Kv value. The sum of the head losses on the valve and the head losses of the rest of the system should be compatible with the available head of the generator pump.

• Code completion

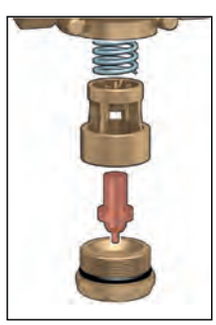
Setting	45 °C	55 °C	60 °C	70 °C
•	**4**	**5**	**6**	**7**

Spare thermostats
for anti-condensation valve.

Code	Setting	Use		
F29629	45 °C	code **280**05. / **280**26.	1	–
F29630	55 °C	code **280**05. / **280**26.	1	–
F29631	60 °C	code **280**05. / **280**26.	1	–
F29632	70 °C	code **280**05. / **280**26.	1	–
F29633*	45 °C	code **280**06. / **280**07.	1	–
F29634*	55 °C	code **280**06. / **280**07.	1	–
F29635*	60 °C	code **280**06. / **280**07.	1	–
F29636*	70 °C	code **280**06. / **280**07.	1	–

** Also use for 281, 282, 2850, 2851, 2853, 2855 series*

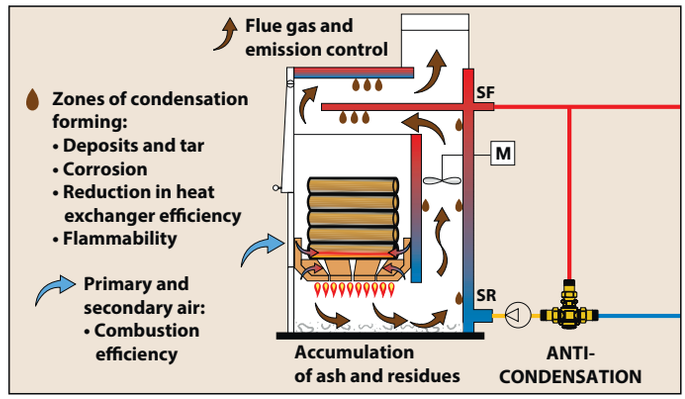
Thermostat replacement to modify setting
The adjustment sensor can easily be removed for maintenance or to change the set, with no need to remove the valve body from the piping.

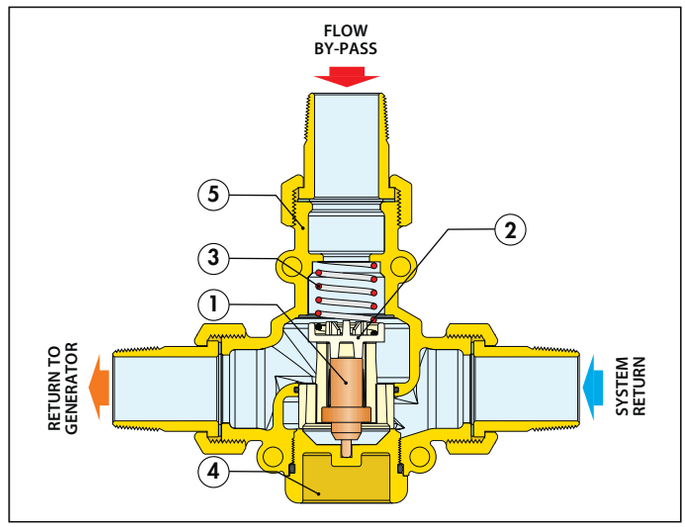


Installation
The valve can be fitted on both sides of the generator in any position, vertical or horizontal.
Installation is recommended on the return to the generator in mixing mode; it is also allowed on the flow from the generator in diverter mode according to the needs of system control.

Function

The anti-condensation valve, used in heating systems with a solid fuel generator, automatically regulates at the set value the temperature of the water returning to the generator.
Keeping the boiler at a high temperature **prevents condensation of the water vapour contained in the flue gas**.
Condensation produces tarry deposits that, accumulating on the metal surfaces of the flue gas-system water exchanger, cause corrosion, reduce the thermal efficiency of the flue gas-system water exchanger and are a source of danger for the flue gas chimney as they are flammable.
The anti-condensation valve gives the generator a longer life and ensures greater efficiency.

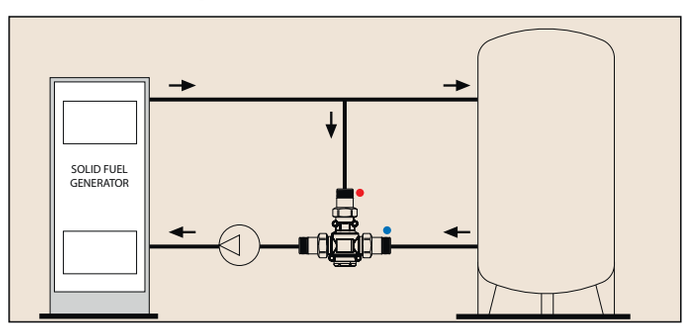




Characteristics components

1) Thermostatic sensor
2) Obturator
3) Spring
4) Plug
5) Valve body

Installation in mixing mode (anti-condensation)



ANTI-CONDENSATION RECIRCULATION AND DISTRIBUTION UNIT

281

tech. broch. 01224

Anti-condensation recirculation and distribution unit, with thermostatic control of the return temperature to solid fuel generators. Brass body.
With insulation.
Female union connections.
Medium: water, glycol solutions.
Max. percentage of glycol: 50 %.
Temperature range: 5–100 °C.
Max. working pressure: 10 bar.
Max. recommended flow rate: 2 m³/h.
Temperature gauge scale: 0–120 °C.

Anti-condensation valve
Temperature range: 5–100 °C.
Settings: 45 °C, 55 °C, 60 °C, 70 °C.
Setting accuracy: ± 2 °C.
By-pass complete closing temperature: Tmix = Tset +10 °C = Tr.

Pump
High-efficiency pump: WILO PARA MS/7.

CE

Code	DN	Connection			
28106.WYP	25	1" F	with pump WILO PARA MS/7	1	–
28107.WYP	25	1 1/4" F	with pump WILO PARA MS/7	1	–

Unit sizing
The unit should be selected according to the head avalaible at the unit connections, depending on the DN, and not only according to the threaded connections. Given the system head losses, the available head of the unit pump should be evaluated.

Code			
F29806	spare rotor for unit 281 series	1	–

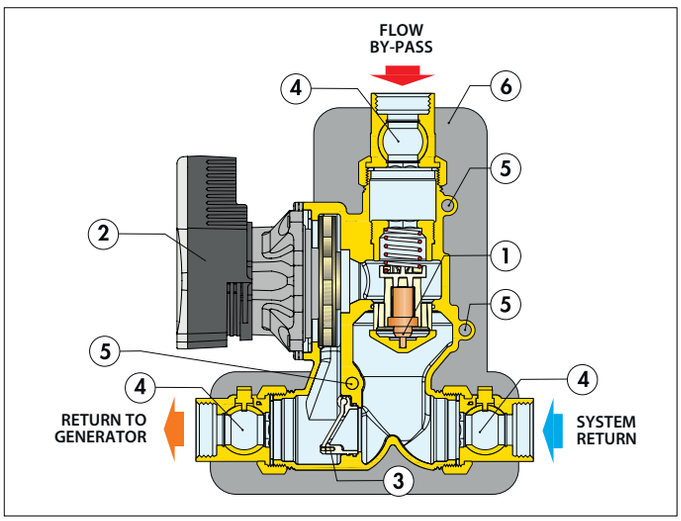
• Code completion

Setting	45 °C	55 °C	60 °C	70 °C
•	**4**	**5**	**6**	**7**

For spare thermostats see page 342

Function

The anti-condensation recirculation and distribution unit enables the connection of the solid fuel generator to the user system (direct or with inertial storage). It controls the return temperature to the generator to avoid condensation, by means of the built-in thermostatic device.



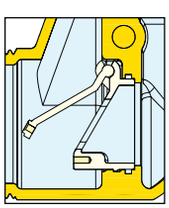
Characteristics components

1) Anti-condensation thermostatic device
2) High-efficiency pump
3) Natural circulation clapet valve
4) Union with built-in ball valve
5) Temperature gauge housing
6) Insulation

Construction details

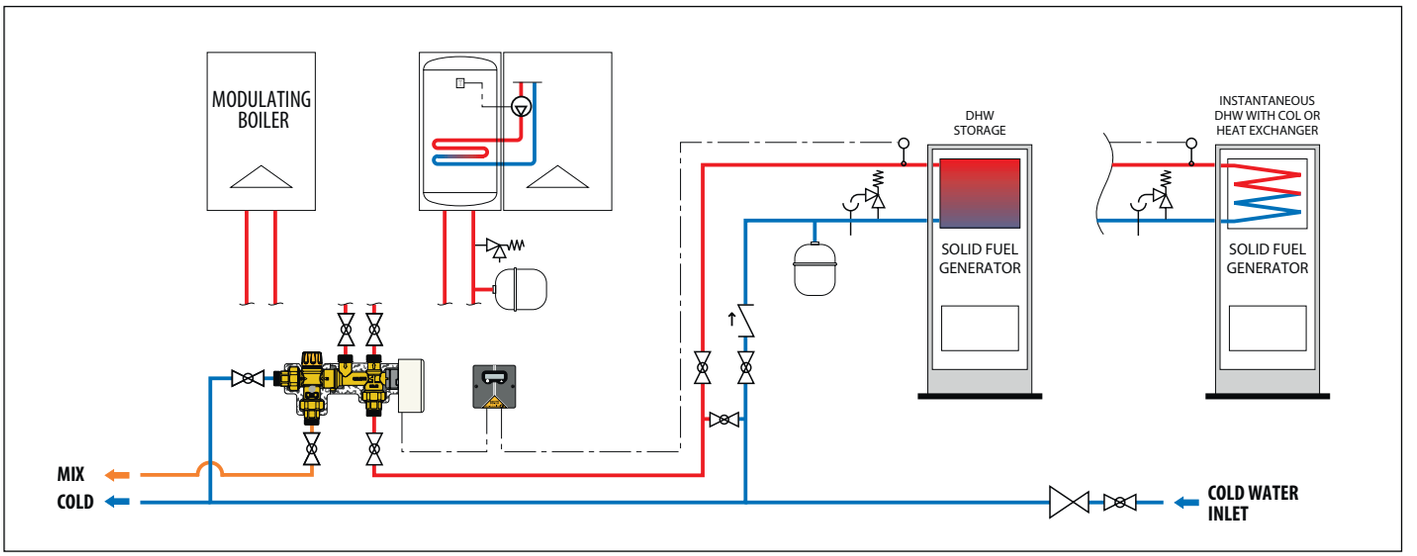
Single casting and reversibility
The compact brass single casting, that houses the pump and functional components, enables immediate installation of the device, either on the right or left of the solid fuel generator, respecting the flow directions as shown. The temperature gauges can be extracted from the housings and re-inserted in the same position on the back side of the unit.

Anti-condensation valve
This device incorporates a thermostatic sensor to control the temperature of the water returning to the solid fuel generator so as to prevent condensation. The sensor has been specifically realised to be removed from the valve body for maintenance or replacement if necessary.

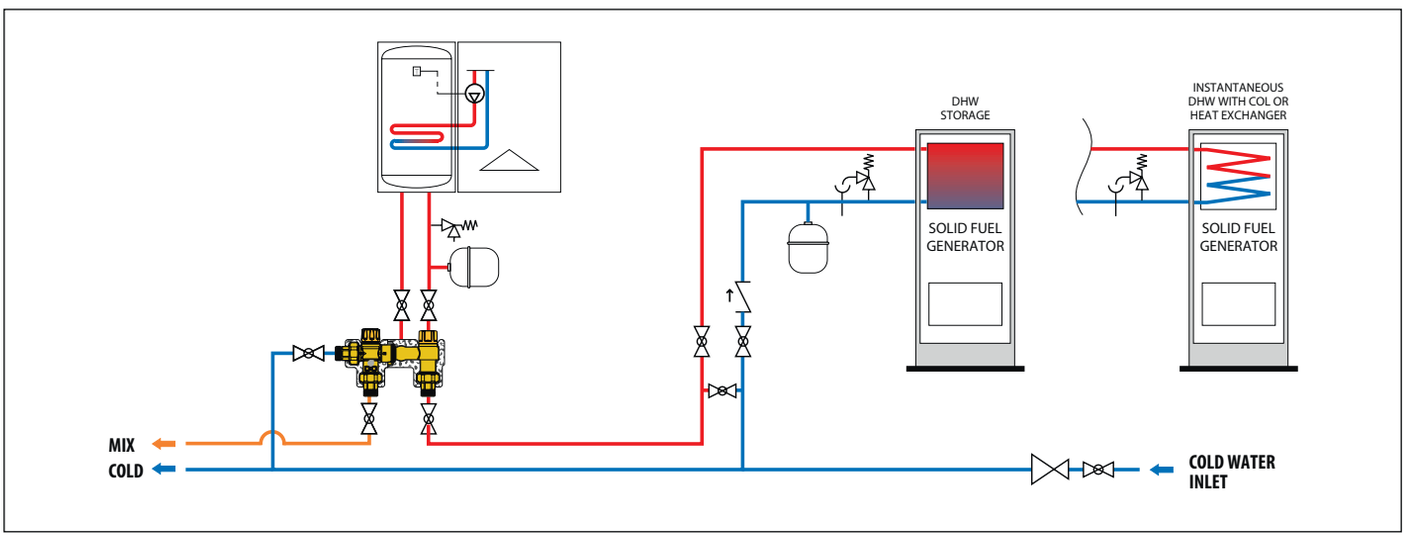
Natural circulation clapet valve

The function of this clapet device is to ensure natural circulation of the medium in the event of pump stop due to an electric supply failure. When the pump is active, the thrust of medium keeps the valve closed, forcing the water to flow through the anti-condensation thermostatic valve. If the event of pump stop, when the water within the generator is at high temperature, a natural circulation of the water begins, by-passing the anti-condensation valve, thus preventing the temperature in the generator from reaching dangerous high levels. The unit is provided with natural circulation valve locked. To activate its function, remove the locking screw.

SOLID FUEL GENERATOR-TO-GAS BOILER CONNECTION KIT

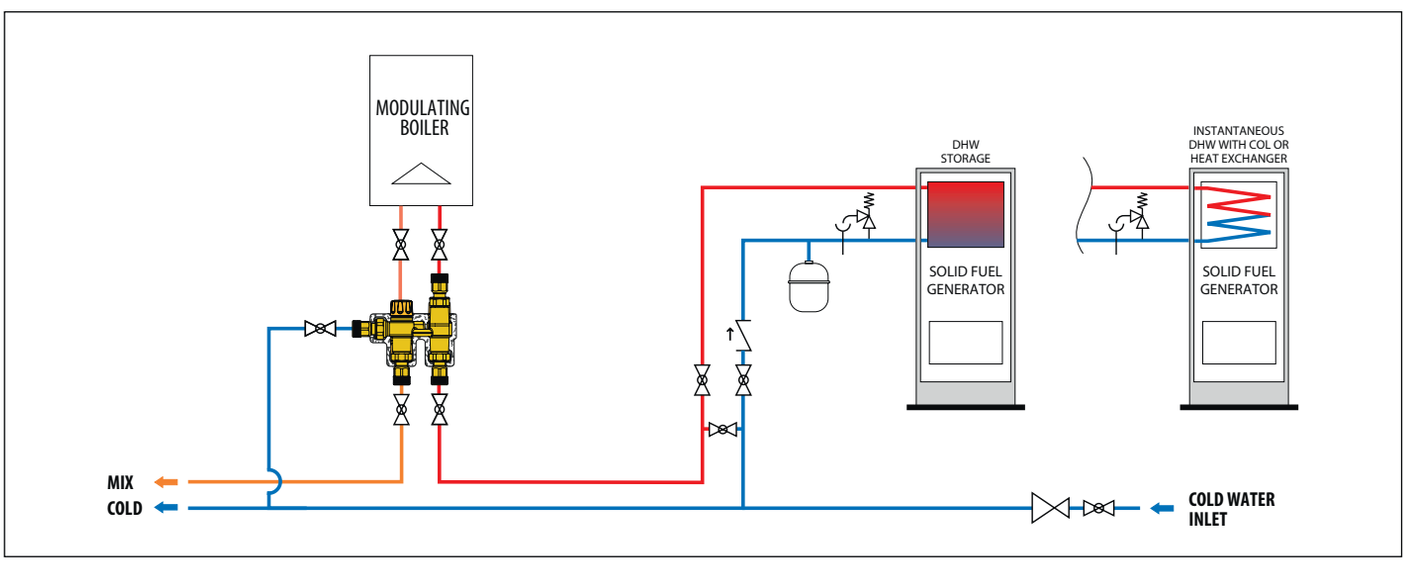
Application diagram of kit SOLARINCAL 265 series with solid fuel generator



Application diagram of kit SOLARINCAL-T 262 series with solid fuel generator

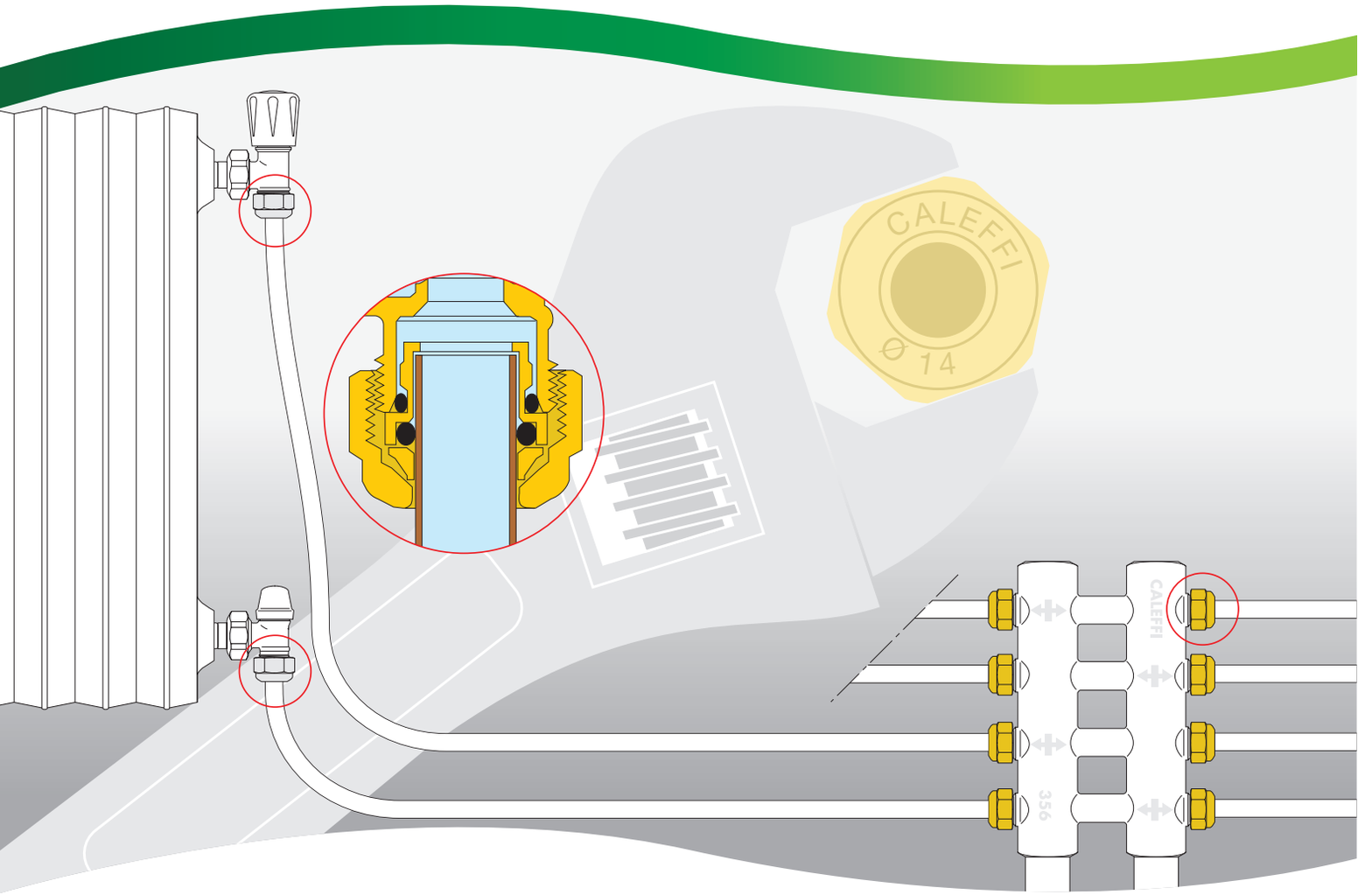


Application diagram of kit SOLARINCAL-T PLUS 263 series with solid fuel generator



FITTING COUPLING

PRODUCT DIMENSIONS are available on www.caleffi.com



CHROME PLATED BRASS FITTINGS

23 p.1,5 pipes connection

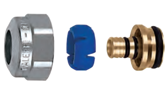
6790 DARCAL

Fitting **for multilayer plastic pipe** with continuous high temperature use.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series.

Code	
679014	23 p.1,5 - Ø 14x2
679024	23 p.1,5 - Ø 16x2
679025	23 p.1,5 - Ø 16x2,25
679044	23 p.1,5 - Ø 18x2
679064*	23 p.1,5 - Ø 20x2
679065*	23 p.1,5 - Ø 20x2,25
679066*	23 p.1,5 - Ø 20x2,5
679067*	23 p.1,5 - Ø 20x2,9 (REHAU pipe)

* With metal ring



6810 DARCAL

Self-adjustable diameter fitting **for single and multilayer plastic pipes**.

Code		Øinside	Øoutside
681000	23 p.1,5	7,5– 8	12–14
681002	23 p.1,5	9 – 9,5	14–16
681001	23 p.1,5	9,5–10	12–14
681006	23 p.1,5	9,5–10	14–16
681015	23 p.1,5	10,5–11	14–16
681017	23 p.1,5	10,5–11	16–18
681024	23 p.1,5	11,5–12	14–16
681026	23 p.1,5	11,5–12	16–18
681035	23 p.1,5	12,5–13	16–18
681044	23 p.1,5	13,5–14	16–18

6810 DARCAL

Self-adjustable diameter fitting **for single and multilayer plastic pipes. High chrome finish**.

Code		Øinside	Øoutside
681101	23 p.1,5	9,5–10	12–14,4
681124	23 p.1,5	11,5–12	14–16,4

4470

Pre-assembled compression fitting, **for annealed copper, hard copper, brass, mild and stainless steel**. With O-Ring seal.

Code	
447010	23 p.1,5 - Ø 10
447012	23 p.1,5 - Ø 12
447014	23 p.1,5 - Ø 14
447015	23 p.1,5 - Ø 15
447016	23 p.1,5 - Ø 16

4370

Compression fitting, **for annealed copper, hard copper, brass, mild and stainless steel**. With O-Ring seal.

Code	
437010	23 p.1,5 - Ø 10
437012	23 p.1,5 - Ø 12
437014	23 p.1,5 - Ø 14
437015	23 p.1,5 - Ø 15
437016	23 p.1,5 - Ø 16

4371

Compression fitting, **for annealed copper, hard copper, brass, mild and stainless steel**. With O-Ring seal. **High chrome finish**.

Code	
437112	23 p.1,5 - Ø 12
437114	23 p.1,5 - Ø 14
437115	23 p.1,5 - Ø 15
437116	23 p.1,5 - Ø 16

4380

Compression fitting, **for copper pipes**. With PTFE seal.

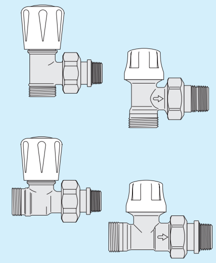
Code	
438010	23 p.1,5 - Ø 10
438012	23 p.1,5 - Ø 12
438014	23 p.1,5 - Ø 14
438015	23 p.1,5 - Ø 15
438016	23 p.1,5 - Ø 16
438018	23 p.1,5 - Ø 18 with metal olive

4390

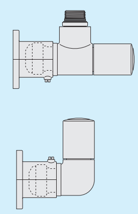
Fitting for **copper pipe**, with gasket. Chrome plated. **Do not use with valves 232 series.**

Code	
439010	23 p.1,5 - Ø 10
439012	23 p.1,5 - Ø 12
439014	23 p.1,5 - Ø 14
439016	23 p.1,5 - Ø 16

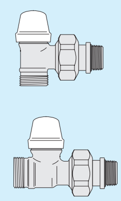
23 p.1,5 M - Ø 18



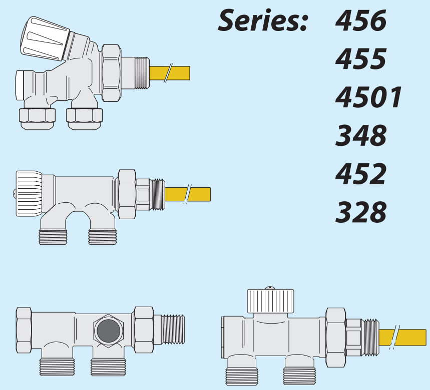
Series: *338, 339, 425, 426, 222, 232, 223, 233, 227, 237*



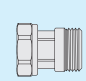
Series: *4001, 4003, 4004, 4005*



Series: *340, 341, 342, 343*



Series: *456, 455, 4501, 348, 452, 328*



Series: *382*

CHROME PLATED BRASS FITTINGS

3/4” pipes connection

6792 DARCAL

Fitting **for multilayer plastic pipe** with continuous high temperature use.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series.

Code		
679264	3/4”	- Ø 20x2
679265	3/4”	- Ø 20x2,25
679266	3/4”	- Ø 20x2,5

6815 DAR CAL

Self-adjustable diameter fitting **for single and multilayer plastic pipes**.

Code		$Ø_{inside}$	$Ø_{outside}$
681502	3/4”	7,5– 8	12–14
681500	3/4”	9 – 9,5	14–16
681501	3/4”	9,5–10	12–14
681506	3/4”	9,5–10	14–16
681515	3/4”	10,5–11	14–16
681517	3/4”	10,5–11	16–18
681524	3/4”	11,5–12	14–16
681526	3/4”	11,5–12	16–18
681535	3/4”	12,5–13	16–18
681537	3/4”	12,5–13	18–20
681546	3/4”	13,5–14	18–20
681555	3/4”	14,5–15	18–20
681556	3/4”	15 –15,5	18–20
681564	3/4”	15,5–16	18–20

4375

Compression fitting, **for annealed copper**, **hard copper**, **brass**, **mild and stainless steel**. With O-Ring seal.

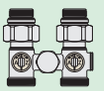
Code		
437510	3/4”	- Ø 10
437512	3/4”	- Ø 12
437514	3/4”	- Ø 14
437515	3/4”	- Ø 15
437516	3/4”	- Ø 16
437518	3/4”	- Ø 18

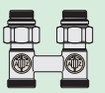
4385

Compression fitting, **for copper pipes**. With PTFE seal.

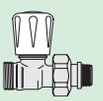
Code		
438512	3/4”	- Ø 12
438514	3/4”	- Ø 14
438515	3/4”	- Ø 15
438516	3/4”	- Ø 16
438518	3/4”	- Ø 18

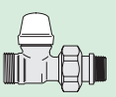
3/4” M - Ø 18





Series: ***3010***
3011
3012
3013
3014
3015





Codes: ***338***452
339452
340452
342452
343452

BRASS FITTINGS

23 p.1,5 pipes connection

6791 DARCAL

Fitting **for multilayer plastic pipes** with continuous high temperature use.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series.

Code	
679114	23 p.1,5 - Ø 14x2
679124	23 p.1,5 - Ø 16x2
679125	23 p.1,5 - Ø 16x2,25
679144	23 p.1,5 - Ø 18x2

4460

Pre-assembled compression fitting, **for annealed copper**, **hard copper**, **brass**, **mild and stainless steel pipes**. With O-Ring seal.

Code	
446010	23 p.1,5 - Ø 10
446012	23 p.1,5 - Ø 12
446014	23 p.1,5 - Ø 14
446015	23 p.1,5 - Ø 15
446016	23 p.1,5 - Ø 16

6800 DARCAL

Self-adjustable diameter fitting **for single and multilayer plastic pipes**.

Code		$Ø_{inside}$	$Ø_{outside}$
680000	23 p.1,5	7,5– 8	12–14
680002	23 p.1,5	9 – 9,5	14–16
680001	23 p.1,5	9,5–10	12–14
680006	23 p.1,5	9,5–10	14–16
680015	23 p.1,5	10,5–11	14–16
680017	23 p.1,5	10,5–11	16–18
680024	23 p.1,5	11,5–12	14–16
680026	23 p.1,5	11,5–12	16–18
680035	23 p.1,5	12,5–13	16–18
680044	23 p.1,5	13,5–14	16–18

3470

Compression fitting, **for annealed copper**, **hard copper**, **brass**, **mild and stainless steel pipes**. With O-Ring seal.

Code	
347010	23 p.1,5 - Ø 10
347012	23 p.1,5 - Ø 12
347014	23 p.1,5 - Ø 14
347015	23 p.1,5 - Ø 15
347016	23 p.1,5 - Ø 16

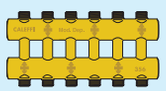
6800 DARCAL

Self-adjustable diameter fitting **for single and multilayer plastic pipes**.

Code		$Ø_{inside}$	$Ø_{outside}$
680055	23 p.1,5	14,5–15	18–20
680064	23 p.1,5	15,5–16	18–20

23 p.1,5 M - Ø 18

Series: ***350*** ***351*** ***349***

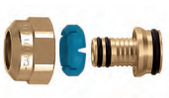


Series: ***356*** ***357*** ***385*** ***161***

Series: ***354***

BRASS FITTINGS

3/4” pipes connection

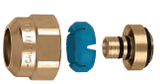


6795 DARCAL

Fitting **for multilayer plastic pipes** with continuous high temperature use.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series.

Code		
679514	3/4”	Ø 14 x 2
679524	3/4”	Ø 16 x 2
679525	3/4”	Ø 16 x 2,25
679544	3/4”	Ø 18 x 2
679564	3/4”	Ø 20 x 2
679565	3/4”	Ø 20 x 2,25
679566	3/4”	Ø 20 x 2,5



6805 DARCAL

Self-adjustable diameter fitting **for single and multilayer plastic pipes**.

Code		$Ø_{inside}$	$Ø_{outside}$
680507	3/4”	7,5– 8	10,5–12
680502	3/4”	7,5– 8	12 –14
680503	3/4”	8,5– 9	12 –14
680500	3/4”	9 – 9,5	14 –16
680501	3/4”	9,5–10	12 –14
680506	3/4”	9,5–10	14 –16
680515	3/4”	10,5–11	14 –16
680517	3/4”	10,5–11	16 –18
680524	3/4”	11,5–12	14 –16
680526	3/4”	11,5–12	16 –18
680535	3/4”	12,5–13	16 –18
680537	3/4”	12,5–13	18 –20
680544	3/4”	13,5–14	16 –18
680546	3/4”	13,5–14	18 –20
680555	3/4”	14,5–15	18 –20
680556	3/4”	15 –15,5	18 –20
680564	3/4”	15,5–16	18 –20
680505	3/4”	17	22,5

6802 DARCAL

Compression ends fitting **for multilayer pipes with fitting M-F**.

Code	
680285	3/4” F - Ø 25x2,5
680296	3/4” F - Ø 26x3

3475

Compression fitting, **for annealed copper, hard copper, brass, mild and stainless steel pipes**. With O-Ring seal.

Code	
347510	3/4” - Ø 10
347512	3/4” - Ø 12
347514	3/4” - Ø 14
347515	3/4” - Ø 15
347516	3/4” - Ø 16
347518	3/4” - Ø 18

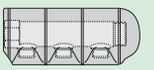
3475..S1

Compression fitting **for annealed copper, hard copper, brass, mild steel and stainless steel pipes**. With O-Ring seal. **Specific to be used with manifolds 668...S1 series**.

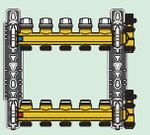
Code	
347512S1	3/4” - Ø 12
347514S1	3/4” - Ø 14

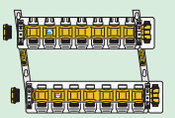
3/4” M - Ø 18

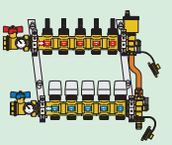
Series: ***592***



Series: ***650***







Series: ***662***
6620
6621
663
6630
6631
666...S1*
667...S1*
668...S1*
664
665
669
657

**** Do not use with copper pipe fittings 347 and 5812 series***

1” pipes connection

6806 DARCAL

Self-adjustable diameter fitting **for single and multilayer plastic pipes**.

Code		$Ø_{inside}$	$Ø_{outside}$
680687	1”	17,5	25
680605	1”	19,5	25

1” M - Ø 25

Series: ***941***
942

We reserve the right to change our products and their relevant technical data, contained in this publication, at any time and without prior notice.

The products in this catalogue have been designed, manufactured and factored by Caleffi in accordance with the requirements of EN ISO 9001 standard.
Factored products, listed by series in the index, are clearly identified by the "light blue dot ●".

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