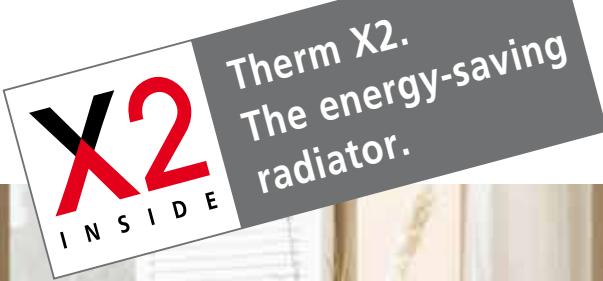


KERMI



Steel panel radiators

Technology



DIN EN **442**



SUMMARY OF CONTENTS



Non-binding price recommendation without VAT.

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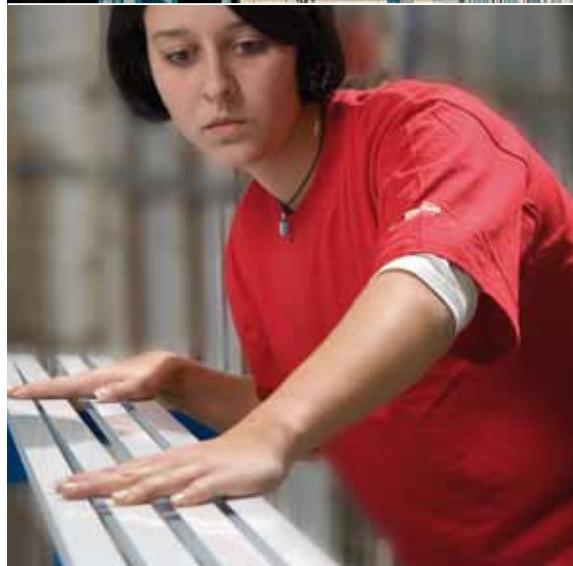
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OVERVIEW**

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The security of a
strong brand.

COMPETENCE COMES FROM KERMI.



MADE IN
GERMANY

Water and warmth are our world.

Comfort and freshness. Kermi provides both with unrivalled expertise. And with the know-how from more than 40 years' experience. As a company of AFG Arbonia-Forster-Holding AG headquartered Lower Bavaria, we are among the leading European manufacturers in the heating technology and shower enclosure sector. With 1500 highly qualified associates, state-of-the-art technology and trend-setting design solutions. "High Quality. Made in Germany". For a thoroughly comfortable home.

We deliver quality of life.

At Kermi highest quality has absolute priority. Beginning with product design through the selection of material and a rigorous series of tests to demanding final inspection, Kermi's high standard of quality is realised in full. Far in excess of the standard, guaranteed by international seals of quality and certified by an uncompromising quality assurance system with certification in conformity with DIN EN ISO 9001:2000 and 14001:2004.



Kermi makes feeling comfortable visibly more æsthetic.

The high-quality standard is conspicuous in the quality of the design too. In symbiosis with the creativity of expert designers, styles that redefine heating design and showering comfort originate in the Kermi product development department. Design to the pulse of the times. Exceptional, individual and distinctive. It is not by chance that Kermi products have been distinguished with major awards for design over and over again.

New thinking for new demands.

Kermi designs are and have often been pioneering achievements. Numerous innovations that remain unrivalled to date attest to this. Ideas that project. Whether in the realm of advanced, environmentally friendly production or smart facilitation of installation, optimised operation or unmatched comfort – right up to the fully up-to-date, universally unique, revolutionary concept for saving energy efficiently during heat distribution.



You can find more information about the brand, as well as the Kermi firm and full details about Kermi shower stalls and the heating technology programme, at the Kermi website: www.kermi.com.

High-quality technical
progress in heating.

HIGH QUALITY. MADE IN GERMANY.

MADE IN
GERMANY

First-class quality.
Produced in Germany
for over 40 years



RAL seal as guaranty of
highest quality

DIN EN **442**

Heat output in conformity
with the European EN 442
standard

CE

Kermi GmbH
Pankofen-Bahnhof 1
94447 Plattling
09
EN 442

Solid product quality in
conformity with EN 442

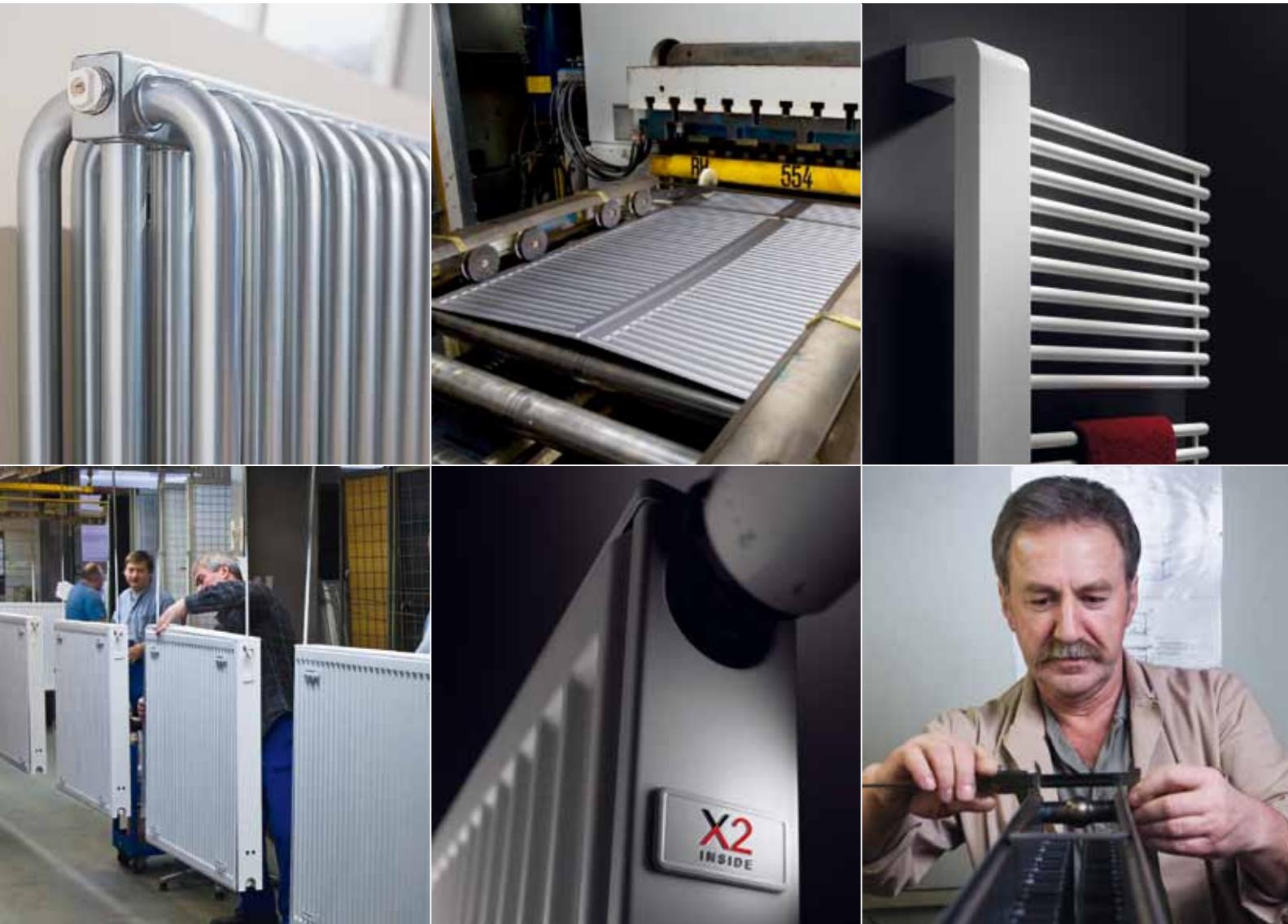


Uncompromising quality
assurance system in
conformity with
DIN EN ISO 9001:2008
Responsible environmental
management in conformity
with DIN EN ISO 14001:2004



At Kermi highest quality has first priority.

From product design through the selection of material and an extensive series of tests to demanding final inspection, Kermi's high standard of quality is realised conclusively. In addition to the CE conformity marking and the European DIN EN 442 standard, it is guaranteed by the RAL seal of quality and an uncompromising quality assurance system with certification in conformity with DIN EN ISO 9001:2008 and 14001:2004.



The RAL seal as guarantor of highest quality.

Through the RAL seal of quality Kermi radiators guarantee extensive quality features that exceed the standard. For example, precisely defined material quality. It is constantly monitored, as well as the entire production process and the standard heat output specified. Precise welds, leak testing far in excess of

the permissible operating pressure, high-quality priming and sparkling paint finishing are additional RAL features that ensure safety and a brilliant visual effect.

Therm X2.
The steel panel
radiator innovation
to triple you.

THERM X2. THE ENERGY-SAVING RADIATOR.



Save energy.

Your customers save on expensive heating energy and you save yourself from stiff pricing pressure and competition.

Unique X2 technology makes genuine energy savings during heat transfer possible for the first time ever – up to 11% compared to conventional steel panel radiator technology. As an effective extension and optimisation of the energy-efficient heat generator. A one-of-a-kind chance for you to perfectly complete the energy-savings chain. With convincing arguments that every homeowner is receptive to. And that unlock for you outstanding opportunities to attract customers, to retain clients and to stand out from the competition.

An example that shows how much can be saved with X2 – projected over 10 years:



Sample basis of calculation: old building, heated effective area 190 m², heating oil price 95.50 EUR/100 litres, rate of price increase 3 %/year.





Save trouble.

Your customers save on expensive heating energy and you save yourself from needless customer complaints.

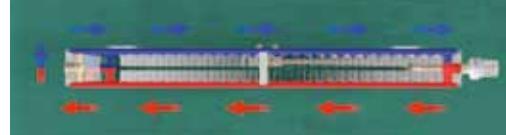
When there are low mass flows the radiator functions at part load over the better part of the heating period. In the course of this, the mean radiator surface temperature drops considerably – and with it the mood of your customers. Because a surface temperature of appreciably under 40° C is indeed enough to reach the designated room temperature but not the feeling of real comfort. You know the consequences only all-too well: needless time- and cost-intensive processing of customer complaints. Therm X2 finally puts an end to this. Because the serial flow-through necessarily produces a markedly higher surface temperature on the front plate and as a result a higher radiated portion of up to 100%. You finally have peace from angry customer complaints and your customers feel maximum thermal comfort at all times – even at partial load.

Save time.

Your customers save on expensive heating energy and you save valuable working hours.

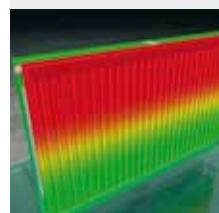
In addition to dynamic reactivity and up to 25% shorter heating-up time, the appeal of the Therm X2 lies in the specific dynamics of its installation. Because every Therm X2 valve radiator is equipped ex factory with a built-in valve insert that is k_v -preset and synchronised to the respective heat output. This not only provides for particularly efficient energy use but also for a considerable saving of time at the construction site. Because with it you do not need to worry about hydraulic balance in most cases.

And the extension of advanced X2 technology to the compact versions brings additional advantages. For multiple connection possibilities and the most generally used connection centre lines.

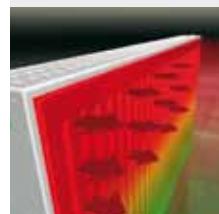


X2 technology functions according to the innovative, patented serial flow-through principle. In the process, the front panel is perfused first off the flow pipe. In controlled operation, the front panel's output is completely sufficient and the downstream panel takes on the radiation screening function. Only with the increasing need for output does it also contribute to the rapid heating of the room with high convection output.

The result: an energetic efficiency factor that is unrivalled in the steel panel radiator sector. Moreover, factory- k_v -preset valves ensure virtually ideal hydraulic ratios in the heating system ex factory. And added to this is an approximately 20% savings in pumping drive current.



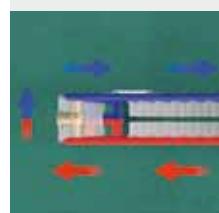
Up to 25% shorter radiator heating-up time. Forced flow-through produces a shorter heating cycle, shorter operating times and the valve closes more quickly.



Up to 100% higher radiated portion in the room. Induced by the front panel's higher mean surface temperature.



Lower radiation loss on the outer surfaces. Induced by the back panel's lower mean surface temperature.



Increase in energy efficiency and reduction in losses among other things due to greater ΔT between flow and return.

Therm X2 Plan-V
with lateral connection
or centre connection.

THERM X2 PLAN-V/VM

Energy-saving, comfortable future warmth
in supersmooth design.

- With unique X2 technology.
- Smooth, brilliantly coated front cover.
- Preset valve technology, fully integrated.
- Lateral connection right/left or with centre connection.
- Top cover and side screen standard.



Unique energy saving technology with an appealing visual effect.

With its brilliantly smooth design, Therm X2 Plan-V brings not just feel-good warmth and more comfort to every room, it can be harmoniously integrated into virtually every room situation too.

The valve is integrated and set ex factory to the respective heat output.

This not only saves on extra energy but also on hydraulic balance in the vast majority of the objects on site.



For the version with a centre connection, radiator type and dimensions can still be freely determined even after pipe installation.

Advanced valve technology.

Fully integrated.

With every Therm X2 V/VM the valve trim is fully integrated. Using the proper valve for the heat output. Delivered as standard with connection below right – also with connection below left on request and without additional cost.

Optimally controlled from the start. This saves energy and installation time.

Kermi uses control technology with k_V inserts that are optimally preset ex factory to the respective heater outputs. As a result, good control capability is guaranteed across the entire control range. The radiator receives precisely only the mass flow necessary to cover the heating requirement. This leads, viewed over the entire process chain, to a savings of 6% energy and 20% pump drive current. In combination with the innovative X2 technology, amounting to a energy savings of up to 11%. In addition, installation is appreciably simplified and hydraulic balance on site is usually no longer required.

Therm X2
▼ Save energy ▲ Gain comfort

Therm X2 Plan-K
with lateral connection
right/left.

THERM X2 PLAN-K

- Supersmooth, brilliantly coated front section.
- Top cover and side screens standard.
- Universally connection ready for single- and two-pipe systems.
- Installation ready, specially packed.
- Easy to install.



Therm X2 Plan compact radiators. Clean line, extremely efficient.

With its smooth front section, side screens and decorative cover, the X2 Compact Plan can be integrated with conviction – in every space allocation concept.

Modern heat in best form. Suitable for all heat sources and variable for single- and two-pipe systems. High in heat output, sensitive and dynamic in control due to low water content.

In the Type 12 version with only 66 mm depth, optimally adapted to condensing boiler technology requirements.

With optimal output at concurrently low water content.

Therm X2 Profil-V
with lateral connection
or centre connection.

THERM X2 PROFIL-V

THERM X2 PROFIL-VM

- Heater innovation.
- With distinctive Kermi quality.
- With unique X2 technology.
- Distinctive, distinguished look.
- Integrated valve trim with preset k_v values.
- Lateral connection right/left or with centre connection.
- Top cover and side screen standard.



For the centre connection version, both the radiator type and the dimensions remain freely selectable, even after pipe installation.



Advanced valve technology.

Fully integrated.

With every Therm X2 V/VM the valve trim is fully integrated. Using the proper valve for the heat output. Delivered as standard with connection below right – also with connection below left on request and without additional cost.

Optimally controlled from the start. This saves energy and installation time.

Kermi uses control technology with k_v inserts that are optimally preset ex factory to the respective heater outputs. As a result, good control capability is guaranteed across the entire control range. The radiator receives precisely only the mass flow necessary to cover the heating requirement. This leads, viewed over the entire process chain, to a savings of 6% energy and 20% pump drive current. In combination with the innovative X2 technology, amounting to a energy savings of up to 11%. In addition, installation is appreciably simplified and hydraulic balance on site is usually no longer required.



Innovative technology of the future.

Distinctive look.

In addition to the uniquely innovative X2 technology for greater comfort and reduced energy consumption, the Therm X2 Profil valve radiator has all the attributes of trend-setting heat distribution in terms of quality and design. From the high-quality brilliantly coated wraparound panel to the fully integrated valve trim with preset k_v values ex factory.

Therm X2 Profil-K
with lateral connection
right/left.

THERM X2 PROFIL-K

Universal heating technology with
a quality guaranty.

- Distinctive, distinguished look.
- Top cover and side screen standard.
- Universally connection ready for single-
and two-pipe systems.
- Installation ready, specially packed.

The basic version
with Kermi's high
standard of quality.
Finished, complete,
installation-friendly,
specially packed.



Therm X2 Profil Compact radiator.
**Universal heating technology with a quality
guaranty.**

Advanced heating with modern styling. Brilliantly coated with top and side cover. Manufactured with Kermi's high standard of quality. Distinctive in its technology. With high heat output – just right for low flow temperatures. Sensitive and dynamic in control due to low water content.

For all heat sources. Whether oil, gas or district heating system. Whether solar energy or traditional heating system. Also for condensing boiler technology requirements.

In particular with the superflat, double-row Type 12 that provides high heat output with low water content and with a depth of only 64 mm that makes recesses unnecessary.

Kermi steel panel radiators
vertical

VERTEO PLAN/ VERTEO PROFIL



Slimline heating technology that saves space and energy.

Advanced heating with modern styling. The space-saving solution for harmonious room integration. With supersmooth front section or with a distinctive, distinguished look. Equipped with uniquely innovative X2 technology for greater comfort and reduced energy consumption.

Modern heating in slimline panel format.

- With unique X2 technology.
- Supersmooth, brilliantly coated front section or distinctive, distinguished look.
- Side screen standard.
- Universal connection capability via 6 connecting sleeves for all multi-layer versions.
- Optional with Kermi valve shut-off block.
- Installation ready, specially packed.



Versatile and universal for customised heating requirements. With heating output from 650 to 3100 watts. In four different heights and four lengths. For all heat sources. Whether oil, gas or district heating system. Whether solar energy, heat pump or traditional heating system. Delivered complete with accessories.

Brilliantly coated with high-quality, environmentally friendly double-layer paint finish treatment. With side cover.

Installation ready, specially packed. Quick and easy to install. With multiple top and bottom connection options.

PLAN RADIATORS TECHNICAL DATA

Item Code Designation		RAL General Drawing Reg. No.	Austrian Standard Reg. No.	Heights (H) mm	Lengths (L) mm	Depths (D) mm
Therm X2 Plan-V						
Type 10	single row without convector without panel		0124	98 367	305 - 905	405 - 3005
Type 11	single row one convector with panel		0125	98 368	305 - 905	405 - 3005
Type 12	double row one convector with panel with serial flow-through		0126	98 369	305 - 905	405 - 3005
X2 INSIDE						66
Type 22	double row two convectors with panel with serial flow-through		0128	98 371	305 - 905	405 - 3005
X2 INSIDE						102
Type 33	triple row three convectors with panel with serial flow-through		0129	98 372	305 - 905	405 - 3005
X2 INSIDE						157
Therm X2 Plan-VM						
Type 10	single row without convector without panel		0124	98 367	305 - 905	405 - 2605
Type 11	single row one convector with panel		0125	98 368	305 - 905	405 - 2605
Type 12	double row one convector with panel with serial flow-through		0126	98 369	305 - 905	405 - 2605
X2 INSIDE						66
Type 22	double row two convectors with panel with serial flow-through		0128	98 371	305 - 905	405 - 2605
X2 INSIDE						102
Type 33	triple row three convectors with panel with serial flow-through		0129	98 372	305 - 905	405 - 2605
X2 INSIDE						157
Therm X2 Plan-K						
Type 10	single row without convector without panel		0124	98 367	305 - 905	405 - 3005
Type 11	single row one convector with panel		0125	98 368	305 - 905	405 - 3005
Type 12	double row one convector with panel with serial flow-through		0126	98 369	305 - 905	405 - 3005
X2 INSIDE						66
Type 22	double row two convectors with panel with serial flow-through		0128	98 371	305 - 905	405 - 3005
X2 INSIDE						102
Type 33	triple row three convectors with panel with serial flow-through		0129	98 372	305 - 905	405 - 3005
X2 INSIDE						157
Therm X2 Plan-K connection centre line 500 / 900 mm						
Type 12	double row one convector with panel with serial flow-through		0126	98 369	559, 959	405 - 3005
X2 INSIDE						66
Type 22	double row two convectors with panel with serial flow-through		0128	98 371	559, 959	405 - 3005
X2 INSIDE						102
Type 33	triple row three convectors with panel with serial flow-through		0129	98 372	559, 959	405 - 3005
X2 INSIDE						157

Therm X2 Plan valve radiators

Connections

2 x G 3/4" external thread for compression fitting bottom right (on special order bottom left – at no additional cost), for single pipe: Use bypass fitting. 3 x G 1/2" internal thread sideward.

For VM version

2 x G 3/4" external thread for compression fitting bottom centred, flow always on the left, independent of the position of the valve, standard = valve on the right (valve on the left available at no additional cost), 4 x G 1/2" internal thread sideward.

Operating conditions

Max. operating temperature 110° C, max. operating pressure 10 bar (test pressure 13 bar)

Scope of delivery

Type 10: with preset valve, as well as screwed-in blanking and air vent plug;

Type 11 - 33: with preset valve, top cover, side screens, as well as screwed-in blanking and air vent plugs. Fixing set with built-into-wall bracket fixture enclosed for all types.

Fixing

4 cover plates at the rear of the radiator (from L 1800, 6 pieces), built-into-wall brackets, separator and dehinging safety device are delivered as standard.

Paint finish

Kermi white (RAL 9016).

Customised colouring also possible with the Kermi colour concept.

Therm X2 Plan compact radiators

Connection centre line

height - 59 mm

Connections

4 x G 1/2" internal thread

Operating conditions

Max. operating temperature 110° C, max. operating pressure 10 bar (test pressure 13 bar)

Scope of delivery

Type 10: fixing set with air vent plug and built-into-wall brackets enclosed, as well as blanking plug screwed in.

Type 11 - 33: with cover and side screens, fixing set with air vent plug and built-into-wall brackets enclosed, as well as blanking plugs screwed-in.

Type 12 - 33: with Therm X2 separation plugs

Fixing 4

cover plates at the rear of the radiator (from L 1800, 6 pieces), built-into-wall brackets, separator and dehinging safety device are delivered as standard.

Paint finish

Kermi white (RAL 9016).

Customised colouring also possible with the Kermi colour concept.

All Kermi steel panel radiators connection threads conform with the DIN V 3838 standard.

PROFIL RADIATOR TECHNICAL DATA

Item Code Designation		RAL General Drawing Reg. No.	Austrian Standard Reg. No.	Heights (H) mm	Lengths (L) mm	Depths (D) mm
Therm X2 Profil-V						
Type 10	single row without convector without panel		0112	98 361	300 - 900	400 - 3000
Type 11	single row one convector with panel		0113	98 362	300 - 900	400 - 3000
Type 12	double row one convector with panel with serial flow-through		0114	98 363	300 - 900	400 - 3000
Type 22	double row two convectors with panel with serial flow-through		0116	98 365	300 - 900	400 - 3000
Type 33	triple row three convectors with panel with serial flow-through		0117	98 366	300 - 900	400 - 3000
Therm X2 Profil-VM						
Type 10	single row without convector without panel		0112	98 361	300 - 900	400 - 2600
Type 11	single row one convector with panel		0113	98 362	300 - 900	400 - 2600
Type 12	double row one convector with panel with serial flow-through		0114	98 363	300 - 900	400 - 2600
Type 22	double row two convectors with panel with serial flow-through		0116	98 365	300 - 900	400 - 2600
Type 33	triple row three convectors with panel with serial flow-through		0117	98 366	300 - 900	400 - 2600
Therm X2 Profil-K						
Type 10	single row without convector without panel		0112	98 361	300 - 900	400 - 3000
Type 11	single row one convector with panel		0113	98 362	300 - 900	400 - 3000
Type 12	double row one convector with panel with serial flow-through		0114	98 363	300 - 900	400 - 3000
Type 22	double row two convectors with panel with serial flow-through		0116	98 365	300 - 900	400 - 3000
Type 33	triple row three convectors with panel with serial flow-through		0117	98 366	300 - 900	400 - 3000
Therm X2 Profil-K connection centre line 500 / 900 mm						
Type 12	double row one convector with panel with serial flow-through		0114	98 363	554, 954	400 - 3000
Type 22	double row two convectors with panel with serial flow-through		0116	98 365	554, 954	400 - 3000
Type 33	triple row three convectors with panel with serial flow-through		0117	98 366	554, 954	400 - 3000

Therm X2 Profil valve radiators

Connections

2 x G 3/4" external thread for compression fitting bottom right (on special order bottom left – at no additional cost), for single pipe: Use bypass fitting. 3 x G 1/2" internal thread sideward.

For VM version

2 x G 3/4" external thread for compression fitting bottom centred, flow always on the left, independent of the position of the valve, standard = valve on the right (valve on the left available at no additional cost), 4 x G 1/2" internal thread sideward.

Operating conditions

Max. operating temperature 110° C, max. operating pressure 10 bar (test pressure 13 bar)

Scope of delivery

Type 10: with preset valve, as well as screwed-in blanking and air vent plug;

Type 11 - 33: with preset valve, top cover, side screens, as well as screwed-in blanking and air vent plugs. Fixing set with built-into-wall bracket fixture enclosed for all types.

Fixing

4 cover plates at the rear of the radiator (from L 1800, 6 pieces), built-into-wall brackets, separator and dehinging safety device are delivered as standard.

Paint finish

Kermi white (RAL 9016).

Customised colouring also possible with the Kermi colour concept.

Therm X2 Profil compact radiators

Connection centre line

height - 54 mm

Connections

4 x G 1/2" internal thread

Operating conditions

Max. operating temperature 110° C, max. operating pressure 10 bar (test pressure 13 bar)

Scope of delivery

Type 10: fixing set with air vent plug and built-into-wall brackets enclosed, as well as blanking plug screwed in.

Type 11 - 33: with top cover and side screens, fixing set with air vent plug and built-into-wall brackets enclosed, as well as blanking plugs screwed-in.

Type 12 - 33: with Therm X2 separation plugs

Fixing

4 cover plates at the rear of the radiator (from L 1800, 6 pieces), built-into-wall brackets, separator and dehinging safety device are delivered as standard.

Paint finish

Kermi white (RAL 9016).

Customised colouring also possible with the Kermi colour concept.



$$\Phi = \Phi_{SL} \left(\frac{\Delta T}{\Delta T_n} \right)^n$$

Φ = heat output to be determined

Φ_{SL} = catalogue heat output

ΔT_n = standard temperature rise

ΔT = temperature rise at operating conditions
which the conversion is based on

n = radiator exponent



All Kermi steel panel radiators connection threads conform with the DIN V 3838 standard.

VERTEO RADIATOR TECHNICAL DATA

Item Code Designation	RAL General Drawing Reg. No.	Heights (H) mm	Lengths (L) mm	Depths (D) mm
Verteo Plan				
Type 20  double row without convector with panel with serial flow-through	0907	1600 - 2200	400 - 700	66
Type 21  double row one convector with panel with serial flow-through	0908	1600 - 2200	400 - 700	66
Type 22  double row two convectors with panel with serial flow-through	0909	1600 - 2200	400 - 700	102
Verteo Profil				
Type 10 single row	0903	1600 - 2200	400 - 700	61
Type 20  double row without convector with panel with serial flow-through	0904	1600 - 2200	400 - 700	64
Type 21  double row one convector with panel with serial flow-through	0905	1600 - 2200	400 - 700	64
Type 22  double row two convectors with panel with serial flow-through	0906	1600 - 2200	400 - 700	100

Verteo Plan / Verteo Profil

Connections

4 x 1/2" internal thread bottom (Type 20/21/22)
2 x 1/2" internal thread bottom (Type 10)
2 x 1/2" internal thread top, for all multi-layer types connection from bottom and top possible.
50 mm centre connection makes the installation of a valve shut-off block possible.

Operating conditions

Max. operating temperature 110° C, max.
operating pressure 10 bar (test pressure 13.0 bar)

Scope of delivery

Incl. cover plates, primed and powder coated. Side covers. Installation equipment (wall bracket, screws, dowel, dehinging safety device, sound protection clip, blanking and air vent plugs) included at no additional cost.

Fixing

cover plate support with 4 cover plates. Quick and easy installation with wall brackets included as standard in the scope of delivery. Orientation in horizontal and vertical direction possible.

Paint finish

Kermi white (RAL 9016).
Customised colouring also possible with the Kermi colour concept.



$$\Phi = \Phi_{SL} \left(\frac{\Delta T}{\Delta T_n} \right)^n$$

Φ = heat output to be determined

Φ_{SL} = catalogue heat output

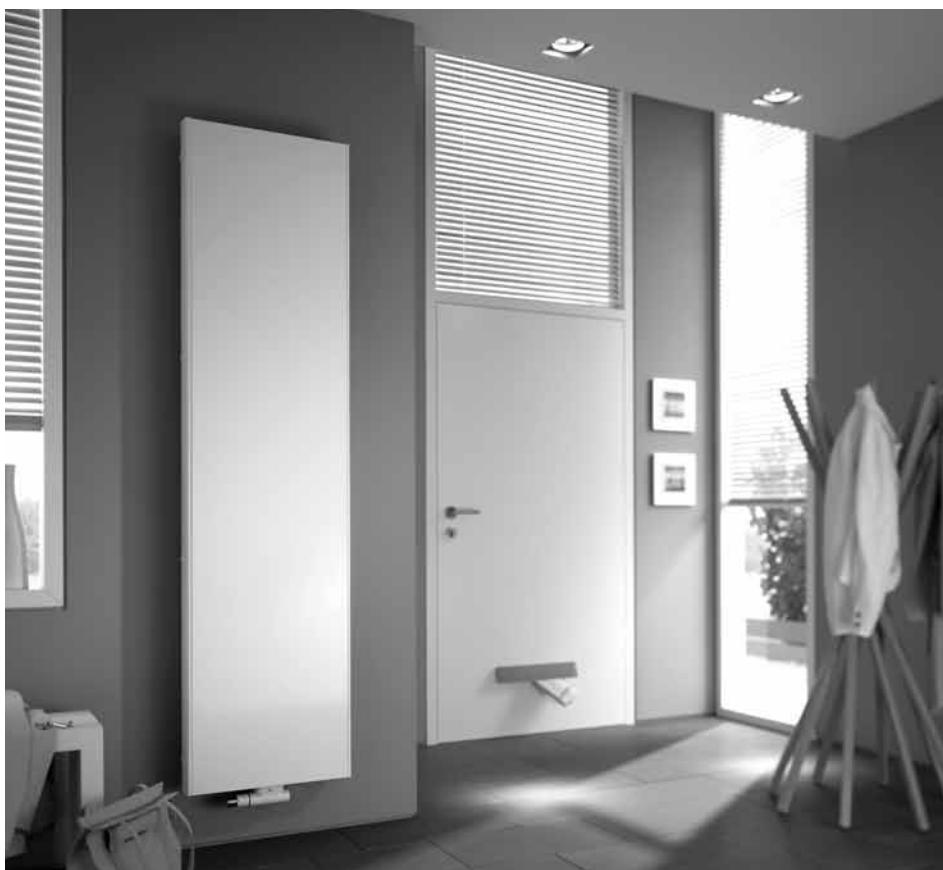
ΔT_n = standard temperature rise

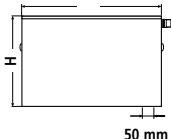
ΔT = temperature rise at operating conditions which the conversion is based on

n = radiator exponent

08

DIN EN  442





THERM X2 PLAN-V

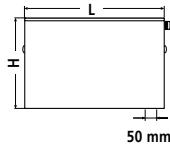
New Item Number										
P	T	V	22	060	100	1	R	1	K	
										R = Valve/ Connection right L = Valve/ Connection left
										Colour Kermi white (RAL 9016)
										Length
										Height
										Technical data
										V = Valve Radiator
										T = Series

F = Profil
P = Plan

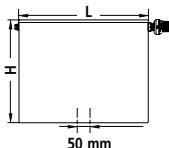
Sample Order	Type 10					Type 11					
	Type 10 605 x 705 mm = Item No. PTV10060070...	Type 11 505 x 1205 mm = Item No. PTV11050120...	single row Depth 63 mm, Item No. PTV10...					single row with convector Depth 63 mm, Item No. PTV11...			
Height mm	305	405	505	605	905	305	405	505	605	905	
Radiator exponent	1,2923	1,2932	1,294	1,2949	1,2894	1,2766	1,2785	1,28050	1,2824	1,2871	
watts/m 75/65/20° C	288	369	447	524	747	487	619	749	878	1265	
Length mm	heat outputs in watts / room temperature 20° C										
405	watts 75/65° C	117	149	181	212	303	197	251	303	356	512
505	watts 75/65° C	145	186	226	265	377	246	313	378	443	639
605	watts 75/65° C	174	223	270	317	452	295	375	453	531	765
705	watts 75/65° C	203	260	315	369	527	343	436	528	619	892
805	watts 75/65° C	232	297	360	422	601	392	498	603	707	1018
905	watts 75/65° C	261	334	405	474	676	441	560	678	795	1145
1005	watts 75/65° C	289	371	449	527	751	489	622	753	882	1271
1105	watts 75/65° C	318	408	494	579	825	538	684	828	970	1398
1205	watts 75/65° C	347	445	539	631	900	587	746	903	1058	1524
1305	watts 75/65° C	376	482	583	684	975	636	808	978	1146	1651
1405	watts 75/65° C	405	518	628	736	1050	684	870	1052	1234	1777
1605	watts 75/65° C	462	592	717	841	1199	782	994	1202	1409	2030
1805	watts 75/65° C	520	666	807	946	1348	879	1117	1352	1585	2283
2005	watts 75/65° C	577	740	896	1051	1498	977	1241	1502	1761	2537
2305	watts 75/65° C	664	851	1030	1208	1722	1123	1427	1727	2024	2916
2605	watts 75/65° C	750	961	1165	1365	1946	1269	1613	1951	2287	3296
3005	watts 75/65° C	866	1109	1343	1575	2245	1464	1860	2251	2639	3802



DIN EN **442**



Type 12	Type 22	Type 33	Sample Order		
			Type 12 505 x 1205 mm = Item No. PTV12050120... Type 22 305 x 905 mm = Item No. PTV22030090... Type 33 605 x 605 mm = Item No. PTV33060060...		
double row with convector Depth 66 mm, Item No. PTV12...	double row with two convectors Depth 102 mm, Item No. PTV22...	triple row with three convectors Depth 157 mm, Item No. PTV33...			
305 405 505 605 905	305 405 505 605 905	305 405 505 605 905	Height mm		
1,3125 1,3197 1,3268 1,334 1,3383	1,30610 1,31040 1,3146 1,3189 1,333	1,2863 1,2944 1,30260 1,31070 1,3347	Radiator exponent		
657 805 954 1106 1599	902 1125 1339 1549 2164	1299 1602 1901 2201 3140	watts/m 75/65/20° C		
heat outputs in watts / room temperature 20° C					Length mm
266 326 386 448 648	365 456 542 627 876	526 649 770 891 1272	405	watts 75/65° C	
332 407 482 559 808	456 568 676 782 1093	656 809 960 1112 1586	505	watts 75/65° C	
398 487 577 669 967	546 681 810 937 1309	786 969 1150 1332 1900	605	watts 75/65° C	
463 568 673 780 1127	636 793 944 1092 1526	916 1129 1340 1552 2214	705	watts 75/65° C	
529 648 768 890 1287	726 906 1078 1247 1742	1046 1290 1530 1772 2528	805	watts 75/65° C	
595 729 863 1001 1447	816 1018 1212 1402 1959	1176 1450 1721 1992 2842	905	watts 75/65° C	
660 809 959 1112 1607	907 1131 1346 1557 2175	1306 1610 1911 2212 3156	1005	watts 75/65° C	
726 890 1054 1222 1767	997 1243 1480 1712 2391	1436 1770 2101 2432 3470	1105	watts 75/65° C	
792 970 1150 1333 1927	1087 1356 1614 1867 2608	1565 1931 2291 2652 3784	1205	watts 75/65° C	
857 1051 1245 1443 2087	1177 1468 1748 2022 2824	1695 2091 2481 2873 4098	1305	watts 75/65° C	
923 1131 1340 1554 2247	1267 1581 1881 2177 3041	1825 2251 2671 3093 4412	1405	watts 75/65° C	
1055 1292 1531 1775 2567	1448 1806 2149 2486 3473	2085 2571 3051 3533 5040	1605	watts 75/65° C	
1186 1453 1722 1996 2886	1628 2031 2417 2796 3906	2345 2892 3432 3973 5668	1805	watts 75/65° C	
1317 1614 1913 2218 3206	1809 2256 2685 3106 4339	2605 3212 3812 4413 6296	2005	watts 75/65° C	
1515 1856 2199 2550 3686	2079 2593 3087 3571 4988	2994 3693 4382 5074 7238	2305	watts 75/65° C	
1712 2097 2485 2881 4166	2350 2931 3488 4035 5638	3384 4174 4952 5734 8180	2605	watts 75/65° C	
1974 2419 2867 3324 4805	2711 3381 4024 4655 6503	3904 4814 5713 6615 9437	3005	watts 75/65° C	



THERM X2 PLAN-VM

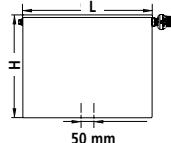
New Item Number									
P	T	M	22	060	100	1	R	1	K
R = Valve/ Connection right L = Valve/ Connection left									
Colour Kermi white (RAL 9016)									
Length									
Height									
Technical data									
M = Centre Connection									
T = Series									
F = Profil									
P = Plan									

Sample Order	Type 10					Type 11					
	Type 10 605 x 705 mm = Item No. PTM10060070...	Type 11 505 x 1205 mm = Item No. PTM11050120...	single row Depth 63 mm, Item No. PTM10...					single row with convector Depth 63 mm, Item No. PTM11...			
Height mm	305	405	505	605	905	305	405	505	605	905	
Radiator exponent	1,2923	1,2932	1,294	1,2949	1,2894	1,2766	1,2785	1,28050	1,2824	1,2871	
watts/m 75/65/20° C	288	369	447	524	747	487	619	749	878	1265	
Length mm	heat outputs in watts / room temperature 20° C										
405 watts 75/65° C	117	149	181	212	303	197	251	303	356	512	
505 watts 75/65° C	145	186	226	265	377	246	313	378	443	639	
605 watts 75/65° C	174	223	270	317	452	295	375	453	531	765	
705 watts 75/65° C	203	260	315	369	527	343	436	528	619	892	
805 watts 75/65° C	232	297	360	422	601	392	498	603	707	1018	
905 watts 75/65° C	261	334	405	474	676	441	560	678	795	1145	
1005 watts 75/65° C	289	371	449	527	751	489	622	753	882	1271	
1105 watts 75/65° C	318	408	494	579	825	538	684	828	970	1398	
1205 watts 75/65° C	347	445	539	631	900	587	746	903	1058	1524	
1305 watts 75/65° C	376	482	583	684	975	636	808	978	1146	1651	
1405 watts 75/65° C	405	518	628	736	1050	684	870	1052	1234	1777	
1605 watts 75/65° C	462	592	717	841	1199	782	994	1202	1409	2030	
1805 watts 75/65° C	520	666	807	946	1348	879	1117	1352	1585	2283	
2005 watts 75/65° C	577	740	896	1051	1498	977	1241	1502	1761	2537	
2305 watts 75/65° C	664	851	1030	1208		1123	1427	1727	2024		
2605 watts 75/65° C	750	961	1165	1365		1269	1613	1951	2287		
3005 watts 75/65° C											

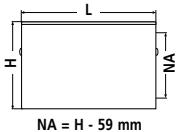


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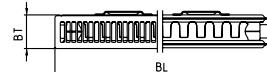
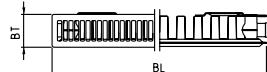
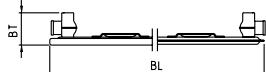
DIN EN **442**
EURO NORM



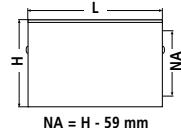
Type 12	Type 22	Type 33	Sample Order		
double row with convector Depth 66 mm, Item No. PTM12...	double row with two convectors Depth 102 mm, Item No. PTM22...	triple row with three convectors Depth 157 mm, Item No. PTM33...	Type 12 505 x 1205 mm = Item No. PTM12050120... Type 22 305 x 905 mm = Item No. PTM22030090... Type 33 605 x 605 mm = Item No. PTM33060060...		
305 405 505 605 905	305 405 505 605 905	305 405 505 605 905	Height mm		
1,3125 1,3197 1,3268 1,334 1,3383	1,30610 1,31040 1,3146 1,3189 1,333	1,2863 1,2944 1,30560 1,31070 1,3347	Radiator exponent		
657 805 954 1106 1599	902 1125 1339 1549 2164	1299 1602 1901 2201 3140	watts/m 75/65/20° C		
heat outputs in watts / room temperature 20° C					Length mm
266 326 386 448 648	365 456 542 627 876	526 649 770 891 1272	405	watts 75/65° C	
332 407 482 559 808	456 568 676 782 1093	656 809 960 1112 1586	505	watts 75/65° C	
398 487 577 669 967	546 681 810 937 1309	786 969 1150 1332 1900	605	watts 75/65° C	
463 568 673 780 1127	636 793 944 1092 1526	916 1129 1340 1552 2214	705	watts 75/65° C	
529 648 768 890 1287	726 906 1078 1247 1742	1046 1290 1530 1772 2528	805	watts 75/65° C	
595 729 863 1001 1447	816 1018 1212 1402 1959	1176 1450 1721 1992 2842	905	watts 75/65° C	
660 809 959 1112 1607	907 1131 1346 1557 2175	1306 1610 1911 2212 3156	1005	watts 75/65° C	
726 890 1054 1222 1767	997 1243 1480 1712 2391	1436 1770 2101 2432 3470	1105	watts 75/65° C	
792 970 1150 1333 1927	1087 1356 1614 1867 2608	1565 1931 2291 2652 3784	1205	watts 75/65° C	
857 1051 1245 1443 2087	1177 1468 1748 2022 2824	1695 2091 2481 2873 4098	1305	watts 75/65° C	
923 1131 1340 1554 2247	1267 1581 1881 2177 3041	1825 2251 2671 3093 4412	1405	watts 75/65° C	
1055 1292 1531 1775 2567	1448 1806 2149 2486 3473	2085 2571 3051 3533 5040	1605	watts 75/65° C	
1186 1453 1722 1996 2886	1628 2031 2417 2796 3906	2345 2892 3432 3973 5668	1805	watts 75/65° C	
1317 1614 1913 2218 3206	1809 2256 2685 3106 4339	2605 3212 3812 4413	2005	watts 75/65° C	
1515 1856 2199 2550	2079 2593 3087 3571	2994 3693 4382 5074	2305	watts 75/65° C	
1712 2097 2485 2881	2350 2931 3488 4035	3384 4174 4952 5734	2605	watts 75/65° C	
			3005	watts 75/65° C	



THERM X2 PLAN-K



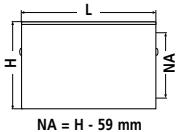
Sample Order	Type 10					Type 11					Type 12					
Type 10 605 x 705 mm = Item No. PK0100607																
Type 11 605 x 1005 mm = Item No. PK0110610																
Type 12 505 x 1205 mm = Item No. PK0120512																
Height mm	305	405	505	605	905	305	405	505	605	905	305	405	505	605	905	
Radiator exponent	1,2923	1,2932	1,294	1,2949	1,2894	1,2766	1,2785	1,28050	1,2824	1,2871	1,3125	1,3197	1,3268	1,334	1,3383	
watts/m 75/65/20° C	288	369	447	524	747	487	619	749	878	1265	657	805	954	1106	1599	
Length mm	heat outputs in watts / room temperature 20° C															
405	watts 75/65° C	117	149	181	212	303	197	251	303	356	512	266	326	386	448	648
505	watts 75/65° C	145	186	226	265	377	246	313	378	443	639	332	407	482	559	808
605	watts 75/65° C	174	223	270	317	452	295	375	453	531	765	398	487	577	669	967
705	watts 75/65° C	203	260	315	369	527	343	436	528	619	892	463	568	673	780	1127
805	watts 75/65° C	232	297	360	422	601	392	498	603	707	1018	529	648	768	890	1287
905	watts 75/65° C	261	334	405	474	676	441	560	678	795	1145	595	729	863	1001	1447
1005	watts 75/65° C	289	371	449	527	751	489	622	753	882	1271	660	809	959	1112	1607
1105	watts 75/65° C	318	408	494	579	825	538	684	828	970	1398	726	890	1054	1222	1767
1205	watts 75/65° C	347	445	539	631	900	587	746	903	1058	1524	792	970	1150	1333	1927
1305	watts 75/65° C	376	482	583	684	975	636	808	978	1146	1651	857	1051	1245	1443	2087
1405	watts 75/65° C	405	518	628	736	1050	684	870	1052	1234	1777	923	1131	1340	1554	2247
1605	watts 75/65° C	462	592	717	841	1199	782	994	1202	1409	2030	1055	1292	1531	1775	2567
1805	watts 75/65° C	520	666	807	946	1348	879	1117	1352	1585	2283	1186	1453	1722	1996	2886
2005	watts 75/65° C	577	740	896	1051	1498	977	1241	1502	1761	2537	1317	1614	1913	2218	3206
2305	watts 75/65° C	664	851	1030	1208	1722	1123	1427	1727	2024	2916	1515	1856	2199	2550	3686
2605	watts 75/65° C	750	961	1165	1365	1946	1269	1613	1951	2287	3296	1712	2097	2485	2881	4166
3005	watts 75/65° C	866	1109	1343	1575	2245	1464	1860	2251	2639	3802	1974	2419	2867	3324	4805



Type 22					Type 33					Sample Order	
 X2 INSIDE					 X2 INSIDE						
double row with two convectors Depth 102 mm, Item No. PK022...					triple row with three convectors Depth 157 mm, Item No. PK033...						
305	405	505	605	905	305	405	505	605	905	Height mm	
1,30610	1,31040	1,3146	1,3189	1,333	1,2863	1,2944	1,30260	1,31070	1,3347	Radiator exponent	
902	1125	1339	1549	2164	1299	1602	1901	2201	3140	watts/m 75/65/20° C	
heat outputs in watts / room temperature 20° C											
365	456	542	627	876	526	649	770	891	1272	405	watts 75/65° C
456	568	676	782	1093	656	809	960	1112	1586	505	watts 75/65° C
546	681	810	937	1309	786	969	1150	1332	1900	605	watts 75/65° C
636	793	944	1092	1526	916	1129	1340	1552	2214	705	watts 75/65° C
726	906	1078	1247	1742	1046	1290	1530	1772	2528	805	watts 75/65° C
816	1018	1212	1402	1959	1176	1450	1721	1992	2842	905	watts 75/65° C
907	1131	1346	1557	2175	1306	1610	1911	2212	3156	1005	watts 75/65° C
997	1243	1480	1712	2391	1436	1770	2101	2432	3470	1105	watts 75/65° C
1087	1356	1614	1867	2608	1565	1931	2291	2652	3784	1205	watts 75/65° C
1177	1468	1748	2022	2824	1695	2091	2481	2873	4098	1305	watts 75/65° C
1267	1581	1881	2177	3041	1825	2251	2671	3093	4412	1405	watts 75/65° C
1448	1806	2149	2486	3473	2085	2571	3051	3533	5040	1605	watts 75/65° C
1628	2031	2417	2796	3906	2345	2892	3432	3973	5668	1805	watts 75/65° C
1809	2256	2685	3106	4339	2605	3212	3812	4413	6296	2005	watts 75/65° C
2079	2593	3087	3571	4988	2994	3693	4382	5074	7238	2305	watts 75/65° C
2350	2931	3488	4035	5638	3384	4174	4952	5734	8180	2605	watts 75/65° C
2711	3381	4024	4655	6503	3904	4814	5713	6615	9437	3005	watts 75/65° C



DIN EN **442**



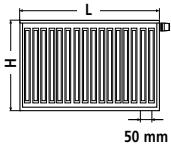
THERM X2 PLAN-K CONNECTION CENTRE LINE 500/900 MM

Sample Order	Type 12	Type 22	Type 33						
Type 12 559 x 1205 mm = Item No. PK012D512									
Type 22 559 x 805 mm = Item No. PK022D508									
Type 33 959 x 605 mm = Item No. PK033D906	double row with convector Depth 66 mm, Item No. PK012D...		double row with two convectors Depth 102 mm, Item No. PK022D...		triple row with three convectors Depth 157 mm, Item No. PK033D...		Selection guide for length		
Height mm	559	959	559	959	559	959			
Radiator exponent	1,33069	1,33907	1,31692	1,33554	1,30697	1,33902	Steel radiator 50 mm length/ Element / section		
watts/m 75/65/20° C	1035	1695	1453	2274	2062	3317	Steel radiator 60 mm length/ Element / section		
Length mm	heat outputs in watts / room temperature 20° C								
405	watts 75/65° C	419	681	589	896	835	1275	8	-
505	watts 75/65° C	523	849	734	1118	1041	1590	10	(8)
605	watts 75/65° C	626	1018	879	1339	1248	1905	12	10
705	watts 75/65° C	730	1186	1024	1560	1454	2220	14	(12)
805	watts 75/65° C	833	1354	1170	1782	1660	2534	16	(14)
905	watts 75/65° C	937	1522	1315	2003	1866	2849	18	-
1005	watts 75/65° C	1040	1691	1460	2224	2072	3164	20	(16)
1105	watts 75/65° C	1144	1859	1606	2446	2279	3479	22	-
1205	watts 75/65° C	1247	2027	1751	2667	2485	3794	24	20
1305	watts 75/65° C	1351	2195	1896	2888	2691	4108	26	(22)
1405	watts 75/65° C	1454	2363	2042	3110	2897	4423	28	(24)
1605	watts 75/65° C	1661	2700	2332	3552	3310	5053	32	(26)
1805	watts 75/65° C	1868	3036	2623	3995	3722	5683	36	30
2005	watts 75/65° C	2075	3373	2913	4437	4135	6312	40	(34)
2305	watts 75/65° C	2386	3877	3349	5101	4753	7257	46	(38)
2605	watts 75/65° C	2696	4382	3785	5765	5372	8201	52	(44)
3005	watts 75/65° C	3110	5055	4367	6651	6197	9460	60	50

Connection centre line 350 mm (height 405 mm) see table Therm X2 Plan-K.



NOTES



THERM X2 PROFIL-V

New Item Number									
F	T	V	22	060	100	1	R	1	K
							R = Valve/ Connection right	L = Valve/ Connection left	
							Colour Kermi white (RAL 9016)		
							Length		
							Height		
							Technical data		
							V = Valve Radiator		
							T = Series		
							F = Profil		
							P = Plan		

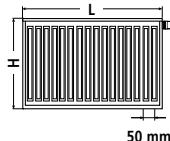
Therm X2 Profil-V in galvanised version

- Special version especially for use in damp rooms and rooms with aggressive atmospheres.
- Radiators that are provided with a standard paint finish in conformity with DIN 55900 are not suited for these areas (cf. BDH Info Sheet No. 7 Heater Coatings Fields of Application and Limits)
- Hot-dip galvanised steel panel radiators (incl. galvanised top and side covers) with powder coating (duplex coating) in colour RAL 9016
- Other equipment and technical data are identical to the standard version
- Types available, prices and delivery time on request

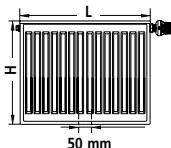
Sample Order	Type 10					Type 11												
	Type 10 600 x 1000 mm = Item No. FTV10060100...					Type 11 600 x 1000 mm = Item No. FTV11060100...												
	single row Depth 61 mm, Item No. FTV10...					single row with convector Depth 61 mm, Item No. FTV11...												
Height mm	300	400	500	600	900	300	400	500	600	900								
Radiator exponent	1,2361	1,255	1,2739	1,2928	1,2935	1,2196	1,2371	1,2546	1,2721	1,30440								
watts/m 75/65/20° C	335	425	514	602	872	551	697	840	979	1390								
Length mm	heat outputs in watts / room temperature 20° C																	
400	watts 75/65° C	134	170	206	241	349	220	279	336	392	556							
500	watts 75/65° C	168	213	257	301	436	276	349	420	490	695							
600	watts 75/65° C	201	255	308	361	523	331	418	504	587	834							
700	watts 75/65° C	235	298	360	421	610	386	488	588	685	973							
800	watts 75/65° C	268	340	411	482	698	441	558	672	783	1112							
900	watts 75/65° C	302	383	463	542	785	496	627	756	881	1251							
1000	watts 75/65° C	335	425	514	602	872	551	697	840	979	1390							
1100	watts 75/65° C	369	468	565	662	959	606	767	924	1077	1529							
1200	watts 75/65° C	402	510	617	722	1046	661	836	1008	1175	1668							
1300	watts 75/65° C	436	553	668	783	1134	716	906	1092	1273	1807							
1400	watts 75/65° C	469	595	720	843	1221	771	976	1176	1371	1946							
1600	watts 75/65° C	536	680	822	963	1395	882	1115	1344	1567	2224							
1800	watts 75/65° C	603	765	925	1084	1570	992	1255	1512	1762	2502							
2000	watts 75/65° C	670	850	1028	1204	1744	1102	1394	1680	1958	2780							
2300	watts 75/65° C	771	978	1182	1385	2006	1267	1603	1932	2252	3197							
2600	watts 75/65° C	871	1105	1336	1565	2267	1433	1812	2184	2546	3614							
3000	watts 75/65° C	1005	1275	1542	1806	2616	1653	2091	2520	2937	4170							



DIN EN **442** EURONORM



Type 12	Type 22	Type 33	Sample Order		
			Type 12 500 x 1200 mm = Item No. FTV12050120... Type 22 300 x 900 mm = Item No. FTV22030090... Type 33 600 x 600 mm = Item No. FTV33060060...		
double row with convector Depth 64 mm, Item No. FTV12...	double row with two convectors Depth 100 mm, Item No. FTV22...	triple row with three convectors Depth 155 mm, Item No. FTV33...			
300 400 500 600 900	300 400 500 600 900	300 400 500 600 900	Height mm		
1,3125 1,3197 1,3268 1,334 1,3383	1,30610 1,31040 1,3146 1,3189 1,333	1,2863 1,2944 1,30260 1,31070 1,3347	Radiator exponent		
657 805 954 1106 1599	902 1125 1339 1549 2164	1299 1602 1901 2201 3140	watts/m 75/65/20° C		
heat outputs in watts / room temperature 20° C					Length mm
288 358 425 492 689	384 483 576 666 918	552 698 832 958 1286	400	watts 75/65° C	
360 447 532 615 862	480 604 721 833 1148	691 872 1041 1197 1607	500	watts 75/65° C	
432 536 638 737 1034	575 724 865 1000 1377	829 1046 1249 1437 1929	600	watts 75/65° C	
504 626 744 860 1206	671 845 1009 1166 1607	967 1221 1457 1676 2250	700	watts 75/65° C	
576 715 850 983 1379	767 966 1153 1333 1836	1105 1395 1665 1915 2571	800	watts 75/65° C	
648 805 957 1106 1551	863 1086 1297 1500 2066	1243 1570 1873 2155 2893	900	watts 75/65° C	
720 894 1063 1229 1723	959 1207 1441 1666 2295	1381 1744 2081 2394 3214	1000	watts 75/65° C	
792 983 1169 1352 1895	1055 1328 1585 1833 2525	1519 1919 2289 2634 3536	1100	watts 75/65° C	
864 1073 1276 1475 2068	1151 1449 1729 1999 2754	1657 2093 2497 2873 3857	1200	watts 75/65° C	
936 1162 1382 1598 2240	1247 1569 1873 2166 2984	1795 2267 2706 3112 4179	1300	watts 75/65° C	
1008 1252 1488 1721 2412	1343 1690 2018 2333 3213	1934 2442 2914 3352 4500	1400	watts 75/65° C	
1152 1431 1701 1967 2757	1535 1931 2306 2666 3672	2210 2791 3330 3831 5143	1600	watts 75/65° C	
1296 1609 1914 2212 3102	1726 2173 2594 2999 4131	2486 3139 3746 4310 5786	1800	watts 75/65° C	
1440 1788 2126 2458 3446	1918 2414 2882 3332 4590	2762 3488 4162 4788 6428	2000	watts 75/65° C	
1656 2056 2445 2827 3963	2206 2776 3315 3832 5279	3177 4011 4787 5507 7393	2300	watts 75/65° C	
1872 2325 2764 3196 4480	2494 3138 3747 4332 5967	3591 4535 5411 6225 8357	2600	watts 75/65° C	
2160 2682 3189 3687 5169	2877 3621 4323 4998 6886	4143 5232 6243 7183 9643	3000	watts 75/65° C	



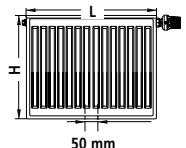
THERM X2 PROFIL-VM

New Item Number									
F	T	M	22	060	100	1	R	1	K
R = Valve/ Connection right L = Valve/ Connection left									
Colour Kermi white (RAL 9016)									
Length									
Height									
Technical data									
M = Centre Connection									
T = Series									
F = Profil P = Plan									

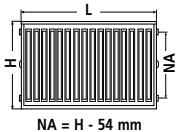
Sample Order	Type 10					Type 11					
	Type 10 600 x 1000 mm = Item No. FTM10060100...	Type 11 600 x 1000 mm = Item No. FTM11060100...	single row Depth 61 mm, Item No. FTM10...					single row with convector Depth 61 mm, Item No. FTM11...			
Height mm	300	400	500	600	900	300	400	500	600	900	
Radiator exponent	1,2361	1,255	1,2739	1,2928	1,2935	1,2196	1,2371	1,2546	1,2721	1,30440	
watts/m 75/65/20° C	335	425	514	602	872	551	697	840	979	1390	
Length mm	heat outputs in watts / room temperature 20° C										
400	watts 75/65° C	134	170	206	241	349	220	279	336	392	556
500	watts 75/65° C	168	213	257	301	436	276	349	420	490	695
600	watts 75/65° C	201	255	308	361	523	331	418	504	587	834
700	watts 75/65° C	235	298	360	421	610	386	488	588	685	973
800	watts 75/65° C	268	340	411	482	698	441	558	672	783	1112
900	watts 75/65° C	302	383	463	542	785	496	627	756	881	1251
1000	watts 75/65° C	335	425	514	602	872	551	697	840	979	1390
1100	watts 75/65° C	369	468	565	662	959	606	767	924	1077	1529
1200	watts 75/65° C	402	510	617	722	1046	661	836	1008	1175	1668
1300	watts 75/65° C	436	553	668	783	1134	716	906	1092	1273	1807
1400	watts 75/65° C	469	595	720	843	1221	771	976	1176	1371	1946
1600	watts 75/65° C	536	680	822	963	1395	882	1115	1344	1567	2224
1800	watts 75/65° C	603	765	925	1084	1570	992	1255	1512	1762	2502
2000	watts 75/65° C	670	850	1028	1204	1744	1102	1394	1680	1958	2780
2300	watts 75/65° C	771	978	1182	1385		1267	1603	1932	2252	
2600	watts 75/65° C	871	1105	1336	1565		1433	1812	2184	2546	
3000	watts 75/65° C										



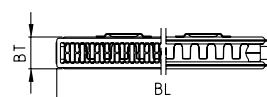
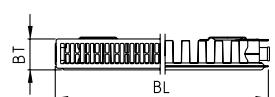
DIN EN **442**



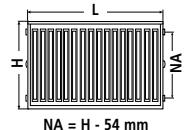
Type 12	Type 22	Type 33	Sample Order		
double row with convector Depth 64 mm, Item No. FTM12...	double row with two convectors Depth 100 mm, Item No. FTM22...	triple row with three convectors Depth 155 mm, Item No. FTM33...	Type 12 500 x 1200 mm = Item No. FTM12050120... Type 22 300 x 900 mm = Item No. FTM22030090... Type 33 600 x 600 mm = Item No. FTM33060060...		
300 400 500 600 900	300 400 500 600 900	300 400 500 600 900	Height mm		
1,2731 1,281 1,2889 1,2969 1,3343	1,2776 1,2827 1,2879 1,293 1,30690	1,2839 1,29 1,2962 1,30230 1,329	Radiator exponent		
720 894 1063 1229 1723	959 1207 1441 1666 2295	1381 1744 2081 2394 3214	watts/m 75/65/20° C		
heat outputs in watts / room temperature 20° C					Length mm
288 358 425 492 689	384 483 576 666 918	552 698 832 958 1286	400	watts 75/65° C	
360 447 532 615 862	480 604 721 833 1148	691 872 1041 1197 1607	500	watts 75/65° C	
432 536 638 737 1034	575 724 865 1000 1377	829 1046 1249 1437 1929	600	watts 75/65° C	
504 626 744 860 1206	671 845 1009 1166 1607	967 1221 1457 1676 2250	700	watts 75/65° C	
576 715 850 983 1379	767 966 1153 1333 1836	1105 1395 1665 1915 2571	800	watts 75/65° C	
648 805 957 1106 1551	863 1086 1297 1500 2066	1243 1570 1873 2155 2893	900	watts 75/65° C	
720 894 1063 1229 1723	959 1207 1441 1666 2295	1381 1744 2081 2394 3214	1000	watts 75/65° C	
792 983 1169 1352 1895	1055 1328 1585 1833 2525	1519 1919 2289 2634 3536	1100	watts 75/65° C	
864 1073 1276 1475 2068	1151 1449 1729 1999 2754	1657 2093 2497 2873 3857	1200	watts 75/65° C	
936 1162 1382 1598 2240	1247 1569 1873 2166 2984	1795 2267 2706 3112 4179	1300	watts 75/65° C	
1008 1252 1488 1721 2412	1343 1690 2018 2333 3213	1934 2442 2914 3352 4500	1400	watts 75/65° C	
1152 1431 1701 1967 2757	1535 1931 2306 2666 3672	2210 2791 3330 3831 5143	1600	watts 75/65° C	
1296 1609 1914 2212 3102	1726 2173 2594 2999 4131	2486 3139 3746 4310 5786	1800	watts 75/65° C	
1440 1788 2126 2458 3446	1918 2414 2882 3332 4590	2762 3488 4162 4788	2000	watts 75/65° C	
1656 2056 2445 2827	2206 2776 3315 3832	3177 4011 4787 5507	2300	watts 75/65° C	
1872 2325 2764 3196	2494 3138 3747 4332	3591	2600	watts 75/65° C	
			3000	watts 75/65° C	



THERM X2 PROFIL-K



Sample Order	Type 10	Type 11	Type 12													
Type 10 600 x 700 mm = Item No. FK0100607																
Type 11 600 x 100 mm = Item No. FK0110610																
Type 12 500 x 1200 mm = Item No. FK0120512	single row Depth 61 mm, Item No. FK010...	single row with convector Depth 61 mm, Item No. FK011...	double row with convector Depth 64 mm, Item No. FK012...													
Height mm	300	400	500	600	900	300	400	500	600	900	300	400	500	600	900	
Radiator exponent	1,2361	1,255	1,2739	1,2928	1,2935	1,2196	1,2371	1,2546	1,2721	1,30440	1,2731	1,281	1,2889	1,2969	1,3343	
watts/m 75/65/20° C	335	425	514	602	872	551	697	840	979	1390	720	894	1063	1229	1723	
Length mm	heat outputs in watts / room temperature 20° C															
400	watts 75/65° C	134	170	206	241	349	220	279	336	392	556	288	358	425	492	689
500	watts 75/65° C	168	213	257	301	436	276	349	420	490	695	360	447	532	615	862
600	watts 75/65° C	201	255	308	361	523	331	418	504	587	834	432	536	638	737	1034
700	watts 75/65° C	235	298	360	421	610	386	488	588	685	973	504	626	744	860	1206
800	watts 75/65° C	268	340	411	482	698	441	558	672	783	1112	576	715	850	983	1379
900	watts 75/65° C	302	383	463	542	785	496	627	756	881	1251	648	805	957	1106	1551
1000	watts 75/65° C	335	425	514	602	872	551	697	840	979	1390	720	894	1063	1229	1723
1100	watts 75/65° C	369	468	565	662	959	606	767	924	1077	1529	792	983	1169	1352	1895
1200	watts 75/65° C	402	510	617	722	1046	661	836	1008	1175	1668	864	1073	1276	1475	2068
1300	watts 75/65° C	436	553	668	783	1134	716	906	1092	1273	1807	936	1162	1382	1598	2240
1400	watts 75/65° C	469	595	720	843	1221	771	976	1176	1371	1946	1008	1252	1488	1721	2412
1600	watts 75/65° C	536	680	822	963	1395	882	1115	1344	1567	2224	1152	1431	1701	1967	2757
1800	watts 75/65° C	603	765	925	1084	1570	992	1255	1512	1762	2502	1296	1609	1914	2212	3102
2000	watts 75/65° C	670	850	1028	1204	1744	1102	1394	1680	1958	2780	1440	1788	2126	2458	3446
2300	watts 75/65° C	771	978	1182	1385	2006	1267	1603	1932	2252	3197	1656	2056	2445	2827	3963
2600	watts 75/65° C	871	1105	1336	1565	2267	1433	1812	2184	2546	3614	1872	2325	2764	3196	4480
3000	watts 75/65° C	1005	1275	1542	1806	2616	1653	2091	2520	2937	4170	2160	2682	3189	3687	5169



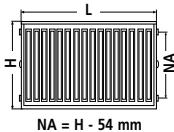
Type 22					Type 33					Sample Order		
300	400	500	600	900	300	400	500	600	900	Height mm		
1,2776	1,2827	1,2879	1,293	1,30690	1,2839	1,29	1,2962	1,30230	1,329	Radiator exponent		
959	1207	1441	1666	2295	1381	1744	2081	2394	3214	watts/m 75/65/20° C		
										Length mm		
384	483	576	666	918	552	698	832	958	1286	400	watts 75/65° C	
480	604	721	833	1148	691	872	1041	1197	1607	500	watts 75/65° C	
575	724	865	1000	1377	829	1046	1249	1437	1929	600	watts 75/65° C	
671	845	1009	1166	1607	967	1221	1457	1676	2250	700	watts 75/65° C	
767	966	1153	1333	1836	1105	1395	1665	1915	2571	800	watts 75/65° C	
863	1086	1297	1500	2066	1243	1570	1873	2155	2893	900	watts 75/65° C	
959	1207	1441	1666	2295	1381	1744	2081	2394	3214	1000	watts 75/65° C	
1055	1328	1585	1833	2525	1519	1919	2289	2634	3536	1100	watts 75/65° C	
1151	1449	1729	1999	2754	1657	2093	2497	2873	3857	1200	watts 75/65° C	
1247	1569	1873	2166	2984	1795	2267	2706	3112	4179	1300	watts 75/65° C	
1343	1690	2018	2333	3213	1934	2442	2914	3352	4500	1400	watts 75/65° C	
1535	1931	2306	2666	3672	2210	2791	3330	3831	5143	1600	watts 75/65° C	
1726	2173	2594	2999	4131	2486	3139	3746	4310	5786	1800	watts 75/65° C	
1918	2414	2882	3332	4590	2762	3488	4162	4788	6428	2000	watts 75/65° C	
2206	2776	3315	3832	5279	3177	4011	4787	5507	7393	2300	watts 75/65° C	
2494	3138	3747	4332	5967	3591	4535	5411	6225	8357	2600	watts 75/65° C	
2877	3621	4323	4998	6886	4143	5232	6243	7183	9643	3000	watts 75/65° C	

Therm X2 Profil-K in galvanised version

■ Special version especially for use in damp rooms and rooms with aggressive atmospheres. Radiators that are provided with a standard paint finish in conformity with DIN 55900 are not suited for these areas (cf. BDH Info Sheet No. 7 Heater Coatings Fields of Application and Limits)

- Hot-dip galvanised steel panel radiators (incl. galvanised top and side covers) with powder coating (duplex coating) in colour RAL 9016
- Other equipment and technical data are identical to the standard version
- Types available, prices and delivery time on request





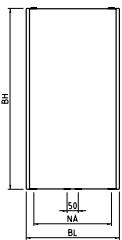
THERM X2 PROFIL-K CONNECTION CENTRE LINE 500/900 MM

Sample Order	Type 12	Type 22	Type 33						
Type 12 554 x 1200 mm = Item No, FK012D512									
Type 22 554 x 800 mm = Item No, FK022D508	double row with convector Depth 64 mm, Item No, FK012D,,,	double row with two convectors Depth 100 mm, Item No, FK022D,,,	triple row with three convectors Depth 155 mm, Item No, FK033D,,,						
Height mm	554	954	554	954	554	954	Selection guide for length		
Radiator exponent	1,2936	1,34	1,2899	1,329	1,2987	1,3348	Steel radiator 50 mm length/ Element / section		
watts/m 75/65/20° C	1153	1812	1564	2402	2252	3346	Steel radiator 60 mm length/ Element / section		
Length mm	heat outputs in watts / room temperature 20° C								
400	watts 75/65° C	461	714	626	923	901	1287	8	-
500	watts 75/65° C	577	893	782	1154	1126	1609	10	(8)
600	watts 75/65° C	692	1072	938	1384	1351	1931	12	10
700	watts 75/65° C	807	1250	1095	1615	1577	2253	14	(12)
800	watts 75/65° C	922	1429	1251	1846	1802	2575	16	(14)
900	watts 75/65° C	1038	1608	1408	2076	2027	2896	18	-
1000	watts 75/65° C	1153	1786	1564	2307	2252	3218	20	(16)
1100	watts 75/65° C	1268	1965	1721	2538	2477	3540	22	-
1200	watts 75/65° C	1384	2143	1877	2769	2703	3862	24	20
1300	watts 75/65° C	1499	2322	2033	2999	2928	4184	26	(22)
1400	watts 75/65° C	1614	2501	2190	3230	3153	4506	28	(24)
1600	watts 75/65° C	1845	2858	2503	3691	3603	5149	32	(26)
1800	watts 75/65° C	2076	3215	2815	4153	4054	5793	36	30
2000	watts 75/65° C	2306	3572	3128	4614	4504	6436	40	(34)
2300	watts 75/65° C	2652	4108	3597	5307	5180	7402	46	(38)
2600	watts 75/65° C	2998	4644	4067	5999	5856	8367	52	(44)
3000	watts 75/65° C	3459	5358	4692	6922	6757	9655	60	50

Connection centre line 350 mm (height 400 mm) see table Therm X2 Profil-K.



NOTES



VERTEO PLAN



Sample Order	Type 20	Type 21	Type 22										
Type 20: 1800 x 500 = PSN201800501X3K													
Type 21: 1600 x 600 = PSN211600601X3K													
Type 22: 2000 x 400 = PSN222000401X3K													
	Double row, depth 66 mm, Item No. PSN20....	Double row with convector Depth 66 mm, Item No. PSN21...	Double row with two convectors Depth 102 mm, Item No. PSN22...										
Height mm	1600	1800	2000										
Length mm	2200	1600	1800	2000	2200	1600	1800	2000	2200				
400	Radiator exponent watts 75/65° C	1,2879 853	1,2903 969	1,2922 1062	1,2998 1114	1,3262 1018	1,3351 1117	1,3379 1209	1,3392 1294	1,3005 1324	1,3122 1453	1,3138 1576	1,315 1691
500	Radiator exponent watts 75/65° C	1,2879 1066	1,2903 1211	1,2922 1327	1,2998 1393	1,3215 1254	1,34 1376	1,3422 1489	1,3356 1593	1,3020 1638	1,315 1798	1,3192 1950	1,3188 2092
600	Radiator exponent watts 75/65° C	1,2879 1279	1,2903 1453	1,2922 1592	1,2998 1672	1,3168 1487	1,345 1632	1,3456 1766	1,3321 1890	1,3035 1950	1,3179 2140	1,3247 2321	1,3226 2490
700	Radiator exponent watts 75/65° C	1,2879 1429	1,2903 1695	1,2922 1858	1,2998 1950	1,3121 1718	1,3499 1885	1,3508 2040	1,3286 2186	1,3050 2259	1,3207 2480	1,3301 2689	1,3264 2886



08

DIN EN **442** EURONORM

$$\Phi = \Phi_{SL} \left(\frac{\Delta T}{\Delta T_n} \right)^n$$

Φ = heat output to be determined

Φ_{SL} = catalogue heat output

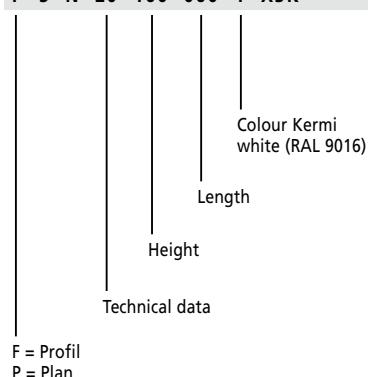
ΔT_n = standard temperature rise

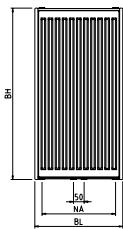
ΔT = temperature rise at operating conditions
which the conversion is based on

n = radiator exponent

Item Number

P	S	N	20	160	060	1	X3K
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VERTEO PROFIL



Sample Order	Type 10	Type 20	Type 21	Type 22												
Type 10: 2200 x 500 = FSN102200501X3K Type 20: 1800 x 500 = FSN201800501X3K Type 21: 1600 x 600 = FSN211600601X3K Type 22: 2000 x 400 = FSN222000401X3K																
Height mm	1600 1800 2000 2200	1600 1800 2000 2200	1600 1800 2000 2200	1600 1800 2000 2200												
Length mm	heat outputs in watts / room temperature 20° C															
400 Radiator exponent watts 75/65° C	1,2535 673	1,2748 746	1,2831 813	1,2984 903	1,3035 943	1,3164 1082	1,3198 1158	1,3211 1256	1,3203 1087	1,3279 1201	1,3338 1319	1,3481 1442	1,3277 1411	1,3299 1548	1,3304 1676	1,3312 1797
500 Radiator exponent watts 75/65° C	1,2535 842	1,2748 933	1,2831 1016	1,2984 1129	1,3035 1179	1,3164 1353	1,3198 1448	1,3211 1571	1,3294 1342	1,3391 1483	1,3442 1629	1,3544 1781	1,3281 1747	1,3341 1916	1,3409 2075	1,3437 2224
600 Radiator exponent watts 75/65° C	1,2535 1010	1,2748 1119	1,2831 1219	1,2984 1355	1,3035 1415	1,3164 1623	1,3198 1737	1,3211 1885	1,3386 1594	1,3503 1761	1,3546 1935	1,3608 2116	1,3284 2080	1,3384 2281	1,3514 2417	1,3563 2648
700 Radiator exponent watts 75/65° C	1,2535 1178	1,2748 1306	1,2831 1422	1,2984 1581	1,3035 1651	1,3164 1894	1,3198 2027	1,3211 2199	1,3477 1844	1,3614 2037	1,365 2238	1,3671 2447	1,3288 2410	1,3427 2644	1,3619 6863	1,3688 3069

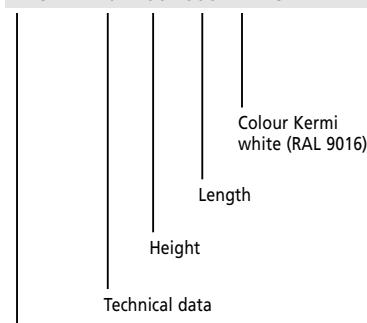


$$\Phi = \Phi_{SL} \left(\frac{\Delta T}{\Delta T_n} \right)^n$$

- Φ = heat output to be determined
- Φ_{SL} = catalogue heat output
- ΔT_n = standard temperature rise
- ΔT = temperature rise at operating conditions which the conversion is based on
- n = radiator exponent

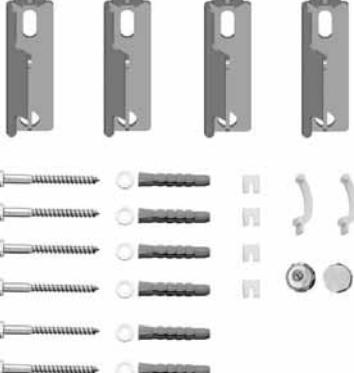
Item Number

F S N 20 160 060 1 X3K



F = Profil
P = Plan

VERTEO ACCESSORIES

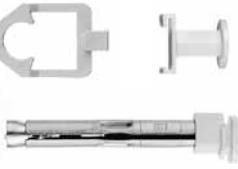
Item Code Designation	Item Designation / Fig.	Scope of delivery	Radiator type
		PSN	PSN
	Wall bracket (short) for vertical steel panel radiators (set)		
Note: Included in scope of radiator delivery.	for universal use, made from galvanised steel sheet Set consists of: 4 wall brackets short, wall spacing 34 mm or 60 mm 4 special screws with hex head, 4 sound protection clips, 2 safety hooks, 6 screws, 6 washers, 6 dowels, 1 air vent plug, 1 blanking plug, 1 instruction sheet, 1 foreign language insert		
ZB01070001	for Type 10, wall spacing 60 mm	1 pc	●
ZB01070002	for Type 20, 21, 22, wall spacing 34 mm	1 pc	● ●
	Towel rail for vertical steel panel radiators		
	continuously adjustable for height suitable for 700 mm lengths can be cut to shorter lengths, not suitable for Type 10.		
ZC00700001	Surface support + towel bar white (RAL 9016)	1 pc	● ●
ZC00700002	Surface support + graphite grey (RAL 7024) + towelling bar silver anodised	1 pc	● ●
	Retaining clip for side cover Type 20/21		
	8 in a set		
ZA00880001	Surface white (RAL 9016)	1 set	● ●
ZA00880002	Surface silver metallic	1 set	● ●
			
	Retaining clip for side cover Type 22		
	8 in a set		
ZA00890001	Surface white (RAL 9016)	1 set	● ●
ZA00890002	Surface silver metallic	1 set	● ●
			
	Retaining clip coloured for side cover Type 20/21		
ZA0088*	Surface according to the Kermi colour concept 8 in a set * please specify colour when ordering	1 set	● ●
			
	Retaining clip coloured for side cover Type 22		
ZA0089*	Surface according to the Kermi colour concept 8 in a set * please specify colour when ordering	1 set	● ●
			

VERTEO ACCESSORIES

Item Code Designation	Item Designation / Fig.	Scope of delivery	Radiator type	
			PSN	PSN
Side cover for Type 20 / 21	Note: When ordering please specify colour.			
ZA00900001	Height 1600 mm	1 pc	● ●	
ZA00900002	Height 1800 mm	1 pc	● ●	
ZA00900003	Height 2000 mm	1 pc	● ●	
ZA00900004	Height 2200 mm	1 pc	● ●	
Side cover for Type 22	Note: When ordering please specify colour.			
ZA00910001	Height 1600 mm	1 pc	● ●	
ZA00910002	Height 1800 mm	1 pc	● ●	
ZA00910003	Height 2000 mm	1 pc	● ●	
ZA00910004	Height 2200 mm	1 pc	● ●	
Valve shut-off block angular design	Fitting with 50 mm connection centre line between radiator and piping system with integrated valve and decorative screen. For connection to the radiator with G 1/2" (internal thread), incl. reducing pipe nipple 1/2" x 3/4". Connections to the piping system 3/4" euro taper (external thread). Connection for thermostatic head M30 x 1.5. Valve adjustable (condition as supplied to customer: for two-pipe operation, valve with highest presetting, incl. installation site cover). By setting the bypass spindle also suitable for single-pipe operation! Not for Verteo Type 10.			
ZV00410001	Valve shut-off block angular design, screen white	1 pc	● ●	
ZV00410002	Valve shut-off block angular design, screen chrome	1 pc	● ●	
ZV00410003	Valve shut-off block angular design, screen stainless steel look	1 pc	● ●	
Valve shut-off block opening	Fitting with 50 mm connection centre line between radiator and piping system with integrated valve and decorative screen. For connection to the radiator with G 1/2" (internal thread), incl. reducing pipe nipple 1/2" x 3/4". Connections to the piping system 3/4" euro taper (external thread). Connection for thermostatic head M30 x 1.5. Valve adjustable (condition as supplied to customer: for two-pipe operation, valve with highest presetting, incl. installation site cover). By setting the bypass spindle also suitable for single-pipe operation! Not for Verteo Type 10.			
ZV00400001	Valve shut-off block opening, screen white	1 pc	● ●	
ZV00400002	Valve shut-off block opening, screen chrome	1 pc	● ●	
ZV00400003	Valve shut-off block opening, stainless steel look	1 pc	● ●	
Thermostatic head				
ZV00380001	Thermostatic head chrome	1 pc	● ●	
ZV00380002	Thermostatic head stainless steel look	1 pc	● ●	

STEEL PANEL RADIATOR ACCESSORIES WALL FIXING

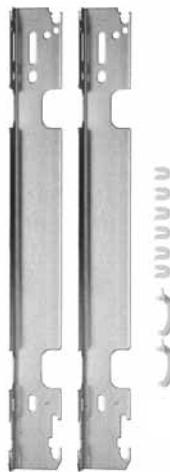
Verteo Accessories –
see page 36 - 37

Item Code Designation	Item Designation / Fig.	Scope of delivery	Radiator type					
			PTV	PTM	PKO	PHO	FTV	FTM
Built-into-wall bracket set	consists of: 2 built-into-wall brackets, 2 separators, 2 locking clips			1 pc	●	●	●	●
ZB01360001	Length 95 mm			1 pc	●	●	●	●
ZB01360002	Length 130 mm			1 pc	●	●	●	●
ZB01360003	Length 160 mm			1 pc	●	●	●	●
ZB01360004	Length 200 mm			1 pc	●	●	●	●
Built-into-wall bracket as 3rd bracket from L 1800	consists of: 1 built-into-wall bracket, 1 separator, 1 locking clip							
ZB01700001	Length 95 mm			1 pc	●	●	●	●
ZB01700002	Length 130 mm			1 pc	●	●	●	●
ZB01700003	Length 160 mm			1 pc	●	●	●	●
ZB01700004	Length 200 mm			1 pc	●	●	●	●
Locking clip for built-into-wall bracket	10 in a set			1 set	●	●	●	●
ZB01370001								
Separator	10 in a set			1 set	●	●	●	●
ZB01140001								
Extension separator	10 in a set			1 set	●	●	●	●
ZB01150001								
Wall bracket (short)	for universal use, made from galvanised steel sheet							
	Set consists of: 2 wall brackets short, wall spacing 34 or 60 mm 2 special screws with hex head and Phillips head (not shown) 2 sound protection clips, 2 safety hooks 2 screws, 2 washers, 2 dowels, 2 separators, 2 spanners for separators (Type 10) (not shown) 1 instruction sheet (not shown)							
ZB01640002	for Type 11 - 33, wall spacing 34 mm			1 pc	●	●	●	●
ZB01640001	for Type 10, wall spacing 60 mm			1 pc	●	●	●	●
Wall bracket (short) as 3rd bracket from L 1800	for universal use, made from galvanised steel sheet							
	Set consists of: 1 wall bracket short, wall spacing 34 or 60 mm 1 special screw with hex head and Phillips head (not shown) 1 sound protection clip, 1 safety hook 1 screw, 1 washer, 1 dowel, 1 separator, 1 spanner for separator (Type 10) (not shown)							
ZB01620002	for Type 11 - 33, wall spacing 34 mm			1 pc	●	●	●	●
ZB01620001	for Type 10, wall spacing 60 mm			1 pc	●	●	●	●

STEEL PANEL RADIATOR ACCESSORIES WALL FIXING

Verteo Accessories –
see page 36 - 37

Item Code Designation	Item Designation / Fig.	Scope of delivery	Radiator type					
			PTV	PTM	PKO	PHO	FTV	FTM
Corner bracket (long)								
	for universal use (prefabricated houses, wooden and concrete walls, etc.) galvanised steel sheet, angled, due to varying length of limbs two different wall spacings are possible (30 mm, 50 mm), adjustable for height							
	Set consists of: 2 corner brackets, 6 sound protection clips, 2 dehinging safety devices, without dowels and screws							
ZB01650001	H 300 mm	1 pc	●	●	●	●	●	●
ZB01650002	H 400 mm	1 pc	●	●	●	●	●	●
ZB01650003	H 500 mm	1 pc	●	●	●	●	●	●
ZB01650004	H 554 mm	1 pc					●	●
ZB01650005	H 600 mm	1 pc	●	●	●	●	●	●
ZB01650007	H 900 mm	1 pc	●	●	●	●	●	●
ZB01650008	H 954 mm	1 pc		●			●	●
Corner bracket	as 3rd bracket (from L 1800)							
ZB01590001	H 300 mm	1 pc	●	●	●	●	●	●
ZB01590002	H 400 mm	1 pc	●	●	●	●	●	●
ZB01590003	H 500 mm	1 pc	●	●	●	●	●	●
ZB01590004	H 554 mm	1 pc					●	●
ZB01590005	H 600 mm	1 pc	●	●	●	●	●	●
ZB01590007	H 900 mm	1 pc	●	●	●	●	●	●
ZB01590008	H 954 mm	1 pc		●			●	●
	When delivered individually it is necessary to order separate ZB01290001 sound protection clips!							
Sound protection clips								
ZB01290001	for ZB015... corner bracket 12 in a set	1 set	●	●	●	●	●	●



STEEL PANEL RADIATOR ACCESSORIES WALL FIXING

Verteo Accessories –
see page 36 - 37

Item Code Designation	Item Designation / Fig.	Scope of delivery	Radiator type				
			PTV	PTM	PKO	PHO	FTV
Quick-assembly brackets set for Type 10							
	Finished in Kermi white, for universal use, Set consists of: 2 brackets, finished, with sound protection, 1 sliding safety device, finished, 2 screws 8 x 60 mm, 2 dowels 10 x 60 mm						
ZB01530001	H 300 mm	1 pc	●	●	●	●	●
ZB01530002	H 400 mm	1 pc	●	●	●	●	●
ZB01530003	H 500 mm	1 pc	●	●	●	●	●
ZB01530004	H 600 mm	1 pc	●	●	●	●	●
ZB01530006	H 900 mm	1 pc	●	●	●	●	●
Quick-assembly brackets set for Type 11 - 33							
	Finished in Kermi white, for universal use, Set consists of: 2 brackets, finished, with sound protection, 1 sliding safety device, finished, 2 screws 8 x 60 mm, 2 dowels 10 x 60 mm						
ZB01550001	H 300 mm	1 pc	●	●	●	●	●
ZB01550002	H 400 mm	1 pc	●	●	●	●	●
ZB01550003	H 500 mm	1 pc	●	●	●	●	●
ZB01550004	H 554 mm	1 pc				●	
ZB01550005	H 600 mm	1 pc	●	●	●	●	●
ZB01550007	H 900 mm	1 pc	●	●	●	●	●
ZB01550008	H 954 mm	1 pc			●		●
Quick-assembly brackets set for Type 10							
	as 3rd bracket (from L 1800 mm) Finished in Kermi white, Set consists of: 1 bracket, finished, with sound protection, 1 screw 8 x 60 mm, 1 dowel 10 x 60 mm						
ZB01540001	H 300 mm	1 pc	●	●	●	●	●
ZB01540002	H 400 mm	1 pc	●	●	●	●	●
ZB01540003	H 500 mm	1 pc	●	●	●	●	●
ZB01540004	H 600 mm	1 pc	●	●	●	●	●
ZB01540006	H 900 mm	1 pc	●	●	●	●	●
Quick-assembly brackets set for Type 11 - 33							
	as 3rd bracket (from L 1800 mm) Finished in Kermi white, Set consists of: 1 bracket, finished, with sound protection, 1 screw 8 x 60 mm, 1 dowel 10 x 60 mm						
ZB01560001	H 300 mm	1 pc	●	●	●	●	●
ZB01560002	H 400 mm	1 pc	●	●	●	●	●
ZB01560003	H 500 mm	1 pc	●	●	●	●	●
ZB02180001	H 554 mm	1 pc			●		
ZB01560004	H 600 mm	1 pc	●	●	●	●	●
ZB01560006	H 900 mm	1 pc	●	●	●	●	●
ZB02180002	H 954 mm	1 pc			●		●

Item Code Designation	Item Designation / Fig.	Scope of delivery	Radiator type					
			PTV	PTM	PKO	PHO	FTV	FTM
Universal preassembling jig								
ZK00150001	Preassembling jig with integrated arched fitting for flushing, connection G 3/4" outside thread, wall spacing continuously adjustable, enables preinstallation without assembly of the valve radiator. Also possible for Verteo connection centred.	1 pc	●	●			●	●
Preassembling jig								
ZK00570001	G 3/4" outside thread, wall spacing 30 mm for Type 11-33 and 50 mm for Type 10, enables preinstallation without assembly of the valve radiator. Note: Only suited for fixing the radiator by use of built-into-wall bracket and corner bracket (long).	1 pc	●	●			●	●



STEEL PANEL RADIATOR ACCESSORIES FLOOR FIXING

Item Code Designation	Item Designation / Fig.	Scope of delivery	Radiator type				
			PTV	PTM	PKO	PHO	FTV
	Kermi soil stand bracket complete, internal						
	Comprising:						
	1 bracket foot with standpipe 30 x 10 mm, 1 carrier pipe (with set screw), 1 hook (with washer and nut), 1 bracket frame, 1 support for Type 11, 12 and 33, 1 support for Type 22, 2 covering caps						
	as previously described:						
ZB01380001	Soil stand bracket for H 300, 400, 500 and 554 mm (pipe length 460 mm)	1 pc	●	●	●	●	●
ZB01380002	Soil stand bracket for H 600, 900 und 954 mm (pipe length 760 mm)	1 pc	●	●	●	●	●
	Note: When installing the Type 11 valve version, the Type 11 ZB01450001 lateral levelling piece is required!						
	Note: When installing the Type 10, the Type 10 ZB01520001 accessory set is required!						
							
	Plastic rosette						
ZB0119001	Plastic rosette for standpipe 30 x 10 mm (for installation on unfinished floor)	1 pc	●	●	●	●	●
							
	Lateral levelling piece for installation of Type 11 valve radiator on soil stand bracket (ZB0138 . . .)						
ZB01450001		1 pc	●	●	●	●	●
							
	Type 10 accessory set for soil stand bracket (ZB0138 . . .)						
ZB01520001	Separator, support and carrier pipe for Type 10	1 pc	●	●	●	●	●
							
	Screen						
ZB00290001	Screen for bracket foot (pipe 30 x 10 mm) (for installation on finished floor)	1 pc	●	●	●	●	●
							

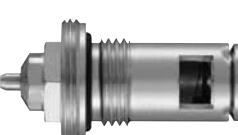
Item Code Designation	Item Designation / Fig.	Scope of delivery	Radiator type							
			PTV	PTM	PKO	PHO	FTV	FTM		
Kermi soil stand bracket separable, internal										
Comprising:										
ZB01480001	Soil stand bracket for H 300, 400, 500 and 554 mm for unfinished floor installation (bracket foot height: 245 mm, distance unfinished floor/radiator = 300 mm)	1 pc	●	●	●	●	●	●		
ZB01460001	Soil stand bracket for H 300, 400, 500 and 554 mm for finished floor installation (bracket foot height: 115 mm, finished floor/radiator = 170 mm)	1 pc	●	●	●	●	●	●		
ZB01480002	Soil stand bracket for H 600, 900 and 954 mm for unfinished floor installation (bracket foot height: 245 mm, distance unfinished floor/radiator = 300 mm)	1 pc	●	●	●	●	●	●		
ZB01460002	Soil stand bracket for H 600, 900 and 954 mm for finished floor installation (bracket foot height: 115 mm, finished floor/radiator = 170 mm)	1 pc	●	●	●	●	●	●		
Note: When installing the Type 11 valve version, the Type 11 ZB01450001 lateral levelling piece is required! (not for FTM/PTM)										
Note: When installing the Type 10, the Type 10 ZB01520001 accessory set is required! (installation of Type 10 for FTM/PTM not possible)										
Kermi centre bracket separable, internal										
Extension set for steel panel radiators centre connection from L 1800 mm for centrical installation/stabilisation consisting of:										
ZB01470001	Centre bracket for H 300, 400, 500 and 554 mm for unfinished floor installation (bracket foot height: 245 mm)	1 pc	●	●						
ZB01470002	Centre bracket for H 600, 900 and 954 mm for unfinished floor installation (bracket foot height: 245 mm)	1 pc	●	●						



STEEL PANEL RADIATOR ACCESSORIES

ACCESSORY

Item Code Designation	Item Designation / Fig.	Scope of delivery	Radiator type
			PTV PTM PKO PHO FTV FTM FK0
Window sill support	ZC00380001 Window sill support for Type 22 and 33 steel panel radiators Adjustment range 160 - 270 mm adjustment height 80 - 120 mm	1 pc	● ● ● ● ● ●
Double rosette	ZT00660001 Double rosette (plastic) 50 mm distance	1 pc	● ● ● ● ● ●
Towel rail for steel panel radiators	for universal use, colour white		
ZC00400001	Towel rail length 450 mm	1 pc	● ● ● ● ● ●
ZC00400002	Towel rail length 600 mm	1 pc	● ● ● ● ● ●

Item Code Designation	Item Designation / Fig.	Scope of delivery	Radiator type					
			PV	PTM	PKO	PHO	FTV	FTM
k _v adjuster ZV00360001		1 pc	● ●				● ●	
k_v insert standard ZV00040001	k _v insert Kermi V3K-S (standard valve) with continuously opening control skirt, 8 main k _v positions and 7 intermediate positions; suitable for all Kermi valve-type steel panel radiators from production of 01/2001 Certified in conformity with EN 215 (Register No. 6T0002 + 6T0006).		1 pc	● ●			● ●	
k_v insert for low quantities of water (district heating installations) ZV00050001	k _v insert Kermi V3K-F (fine-adjusting valve) with continuously opening control skirt, 8 main k _v positions and 7 intermediate positions; suitable for all Kermi valve-type steel panel radiators from production of 01/2001 Certified in conformity with EN 215 (Register No. 6T0002 + 6T0006).		1 pc	● ●			● ●	
Blanking plug 1/2" ZT00520001	Blanking plug 1/2" incl. O-ring seal cap instead of the valve insert, e.g. for control of adjacent areas 10 in a set		1 set	● ●	● ●	● ●	● ●	● ●
Separation plug set for single-pipe system ZT00820001	for connecting compact steel panels in the single-pipe system. Set consists of: Separation plug and installation spanner		1 pc	● ●			● ●	
Separation plug set for coupled Therm X2 compact radiators ZT00810001	for equilaterally connection of at least 2 coupled Therm X2 compact radiators. Set consists of: Separation plug and instruction sheet		1 pc	● ●			● ●	

SPARE PARTS/COVERS FOR PLAN/PROFIL RADIATORS

Top cover for Profil radiators



Top cover for Plan radiators



Profil radiators

	Type 11, 12	Type 22	Type 33
Length	Item Number	Item Number	Item Number
400	ZA00160001	ZA00170001	ZA00180001
500	ZA00160002	ZA00170002	ZA00180002
600	ZA00160003	ZA00170003	ZA00180003
700	ZA00160004	ZA00170004	ZA00180004
800	ZA00160005	ZA00170005	ZA00180005
900	ZA00160006	ZA00170006	ZA00180006
1000	ZA00160007	ZA00170007	ZA00180007
1100	ZA00160008	ZA00170008	ZA00180008
1200	ZA00160009	ZA00170009	ZA00180009
1300	ZA00160010	ZA00170010	ZA00180010
1400	ZA00160011	ZA00170011	ZA00180011
1600	ZA00160012	ZA00170012	ZA00180012
1800	ZA00160013	ZA00170013	ZA00180013
2000	ZA00160014	ZA00170014	ZA00180014
2300	ZA00160015	ZA00170015	ZA00180015
2600	ZA00160016	ZA00170016	ZA00180016
3000	ZA00160017	ZA00170017	ZA00180017

Plan radiators

	Type 11, 12	Type 22	Type 33
Length	Item Number	Item Number	Item Number
405	ZA00210001	ZA00220001	ZA00230001
505	ZA00210002	ZA00220002	ZA00230002
605	ZA00210003	ZA00220003	ZA00230003
705	ZA00210004	ZA00220004	ZA00230004
805	ZA00210005	ZA00220005	ZA00230005
905	ZA00210006	ZA00220006	ZA00230006
1005	ZA00210007	ZA00220007	ZA00230007
1105	ZA00210008	ZA00220008	ZA00230008
1205	ZA00210009	ZA00220009	ZA00230009
1305	ZA00210017	ZA00220017	ZA00230017
1405	ZA00210010	ZA00220010	ZA00230010
1605	ZA00210011	ZA00220011	ZA00230011
1805	ZA00210012	ZA00220012	ZA00230012
2005	ZA00210013	ZA00220013	ZA00230013
2305	ZA00210014	ZA00220014	ZA00230014
2605	ZA00210015	ZA00220015	ZA00230015
3005	ZA00210016	ZA00220016	ZA00230016

SPARE PARTS/SIDE PANELS FOR VALVE RADIATORS PLAN/PROFIL

Item Code Designation	Item Designation / Fig.	Scope of delivery	Radiator type					
			PTV	PTM	PKO	PHO	FTV	FTM
Side cover for Type 11, 12								
ZA00260002	Connecting side H 300/305	1 pc	●				●	
ZA00260004	Connecting side H 400/405	1 pc	●				●	
ZA00260006	Connecting side H 500/505	1 pc	●				●	
ZA00260008	Connecting side H 600/605	1 pc	●				●	
ZA00260012	Connecting side H 900/905	1 pc	●				●	
ZA00260001	H 300/305	1 pc	● ●				● ●	
ZA00260003	H 400/405	1 pc	● ●				● ●	
ZA00260005	H 500/505	1 pc	● ●				● ●	
ZA00260007	H 600/605	1 pc	● ●				● ●	
ZA00260011	H 900/905	1 pc	● ●				● ●	
Side cover for Type 22								
ZA00270002	Connecting side H 300/305	1 pc	●				●	
ZA00270004	Connecting side H 400/405	1 pc	●				●	
ZA00270006	Connecting side H 500/505	1 pc	●				●	
ZA00270008	Connecting side H 600/605	1 pc	●				●	
ZA00270012	Connecting side H 900/905	1 pc	●				●	
ZA00270001	H 300/305	1 pc	● ●				● ●	
ZA00270003	H 400/405	1 pc	● ●				● ●	
ZA00270005	H 500/505	1 pc	● ●				● ●	
ZA00270007	H 600/605	1 pc	● ●				● ●	
ZA00270011	H 900/905	1 pc	● ●				● ●	
Side cover for valve radiators with right-hand connection - Type 33								
ZA00280004	on the right H 300/305	1 pc	●				●	
ZA00280008	on the right H 400/405	1 pc	●				●	
ZA00280012	on the right H 500/505	1 pc	●				●	
ZA00280016	on the right H 600/605	1 pc	●				●	
ZA00280024	on the right H 900/905	1 pc	●				●	
ZA00280001	on the left (for FTM/PTM*) H 300/305	1 pc	● ●				● ●	
ZA00280005	on the left (for FTM/PTM*) H 400/405	1 pc	● ●				● ●	
ZA00280009	on the left (for FTM/PTM*) H 500/505	1 pc	● ●				● ●	
ZA00280013	on the left (for FTM/PTM*) H 600/605	1 pc	● ●				● ●	
ZA00280021	on the left (for FTM/PTM*) H 900/905	1 pc	● ●				● ●	
Side cover for valve radiators with left-hand connection - Type 33								
ZA00280003	on the right (for FTM/PTM*) H 300/305	1 pc	● ●				● ●	
ZA00280007	on the right (for FTM/PTM*) H 400/405	1 pc	● ●				● ●	
ZA00280011	on the right (for FTM/PTM*) H 500/505	1 pc	● ●				● ●	
ZA00280015	on the right (for FTM/PTM*) H 600/605	1 pc	● ●				● ●	
ZA00280023	on the right (for FTM/PTM*) H 900/905	1 pc	● ●				● ●	
ZA00280002	on the left H 300/305	1 pc	●				●	
ZA00280006	on the left H 400/405	1 pc	●				●	
ZA00280010	on the left H 500/505	1 pc	●				●	
ZA00280014	on the left H 600/605	1 pc	●				●	
ZA00280022	on the left H 900/905	1 pc	●				●	
* if using for Profil/Plan radiators with centre connection this must always be specified when ordering.								

SPARE PARTS/SIDE PANELS FOR PLAN/PROFIL COMPACT RADIATORS

Item Code Designation	Item Designation / Fig.	Scope of delivery	Radiator type				
			PTV	PTM	PKO	PHO	FTV
Side cover for Type 11, 12							
ZA00260001	H 300/305	1 pc		●			●
ZA00260003	H 400/405	1 pc		●			●
ZA00260005	H 500/505	1 pc		●			●
ZA00260013	H 554/559	1 pc		●			●
ZA00260007	H 600/605	1 pc		●			●
ZA00260011	H 900/905	1 pc		●			●
ZA00260014	H 954/959	1 pc		●			●
Side cover for Type 22							
ZA00270001	H 300/305	1 pc		●			●
ZA00270003	H 400/405	1 pc		●			●
ZA00270005	H 500/505	1 pc		●			●
ZA00270013	H 554/559	1 pc		●			●
ZA00270007	H 600/605	1 pc		●			●
ZA00270011	H 900/905	1 pc		●			●
ZA00270014	H 954/959	1 pc		●			●
Side cover for Type 33							
ZA00280003	on the right	H 300/305	1 pc		●		●
ZA00280007	on the right	H 400/405	1 pc		●		●
ZA00280011	on the right	H 500/505	1 pc		●		●
ZA00280026	on the right	H 554/559	1 pc		●		●
ZA00280015	on the right	H 600/605	1 pc		●		●
ZA00280023	on the right	H 900/905	1 pc		●		●
ZA00280028	on the right	H 954/959	1 pc		●		●
ZA00280001	on the left	H 300/305	1 pc		●		●
ZA00280005	on the left	H 400/405	1 pc		●		●
ZA00280009	on the left	H 500/505	1 pc		●		●
ZA00280025	on the left	H 554/559	1 pc		●		●
ZA00280013	on the left	H 600/605	1 pc		●		●
ZA00280021	on the left	H 900/905	1 pc		●		●
ZA00280027	on the left	H 954/959	1 pc		●		●

Item Code Designation	Item Designation / Fig.	Scope of delivery	Radiator type					
			PTV	PTM	PKO	PHO	FTV	FTM
Kermi Clip, on the right								
	Kermi Clip for Type 11-33 on the right							
ZK00070001	white	1 set	●	●	●	●	●	●
ZK00070002	silver metallic	1 set	●	●	●	●	●	●
	10 in a set							
Kermi Clip, on the left								
	Kermi Clip for Type 11-33 on the left							
ZK00060001	white	1 set	●	●	●	●	●	●
ZK00060002	silver metallic	1 set	●	●	●	●	●	●
	10 in a set							
Fixing adapter								
ZK00140001	Fixing adapter for H 600 mm for retrofitting top cover and side screens from 10/93 on Profil radiators to 10/93	1 set	●	●	●	●	●	●
	10 in a set							
Retaining clip for top cover, Type 11								
	from 10/2000							
ZA00200001	white	1 set	●	●	●	●	●	●
ZA00200004	silver metallic	1 set	●	●	●	●	●	●
	10 in a set							
Retaining clip for top cover, Type 12								
	from 10/2000							
ZA00200002	white	1 set	●	●	●	●	●	●
ZA00200005	silver metallic	1 set	●	●	●	●	●	●
	10 in a set							
Retaining clip for top cover, Type 22 / 23								
	from 10/2000							
ZA00200003	white	1 set	●	●	●	●	●	●
ZA00200006	silver metallic	1 set	●	●	●	●	●	●
	10 in a set							

SPARE PARTS RADIATOR PAINT

Item Code Designation	Item Designation / Fig.	Scope of delivery	Radiator type
			PTV PTM PKO PHO FTV FTM FKO
Spray can			
ZK00160001	Spray can 150 ml, Kermi white	1 pc	● ● ● ● ● ● ● ●
			
Touch up paint			
ZK00100001	Touch up paint, Kermi white	1 pc	● ● ● ● ● ● ● ●
			
Paint can			
ZK00090001	Paint can 500 g, Kermi white	1 pc	● ● ● ● ● ● ● ●
			
Note			
	Touch up paint and paint cans in other colours on request		

THERM X2 PLAN-V/-VM/-K

WEIGHT, WATER CONTENT

Height mm	Type 10					Type 11					Type 12					Type 22					Type 33					
	305	405	505	605	905	305	405	505	605	905	305	405	505	605	905	305	405	505	605	905	305	405	505	605	905	
Length mm	kg	4,17	5,26	6,34	7,43	10,68	5,63	7,28	8,92	10,57	15,51	7,49	9,76	12,04	14,31	21,14	8,59	11,27	13,94	16,61	24,62	12,23	16,07	19,91	23,75	35,27
405	ltr	0,72	0,90	1,08	1,26	1,80	0,72	0,90	1,08	1,26	1,80	1,44	1,80	2,16	2,52	3,60	1,44	1,80	2,16	2,52	3,60	2,16	2,70	3,24	3,78	5,40
505	kg	5,02	6,37	7,73	9,08	13,14	6,79	8,84	10,88	12,93	19,07	9,11	11,94	14,77	17,60	26,09	10,43	13,75	17,07	20,39	30,36	14,84	19,62	24,40	29,17	43,50
505	ltr	0,89	1,12	1,35	1,57	2,25	0,89	1,12	1,35	1,57	2,25	1,80	2,25	2,70	3,15	4,50	1,80	2,25	2,70	3,15	4,50	2,70	3,78	4,05	4,72	6,75
605	kg	5,86	7,49	9,11	10,73	15,61	7,91	10,35	12,80	15,24	22,58	10,74	14,12	17,50	20,89	31,04	12,26	16,23	20,20	24,18	36,10	17,46	23,17	28,88	34,60	51,74
605	ltr	1,08	1,35	1,62	1,89	2,70	1,08	1,35	1,62	1,89	2,70	2,16	2,70	3,24	3,78	5,40	2,16	2,70	3,24	3,78	5,40	3,24	4,05	4,86	5,67	8,10
705	kg	6,70	8,60	10,49	12,39	18,07	9,01	11,85	14,70	17,54	26,08	12,36	16,30	20,24	24,17	35,98	14,09	18,71	23,34	27,96	41,84	20,07	26,72	33,37	40,02	59,97
705	ltr	1,25	1,57	1,89	2,20	3,15	1,25	1,57	1,89	2,20	3,15	2,52	3,15	3,78	4,41	6,30	2,52	3,15	3,78	4,41	6,30	3,78	4,73	5,67	6,61	9,45
805	kg	7,55	9,71	11,88	14,04	20,53	10,17	13,41	16,66	19,90	29,64	13,99	18,48	22,97	27,46	40,93	15,92	21,20	26,47	31,75	47,57	22,69	30,28	37,86	45,45	68,21
805	ltr	1,44	1,80	2,16	2,52	3,60	1,44	1,80	2,16	2,52	3,60	2,88	3,60	4,32	5,04	7,20	2,88	3,60	4,32	5,04	7,20	4,32	5,40	6,48	7,56	10,80
905	kg	8,39	10,83	13,26	15,69	22,99	11,33	14,98	18,62	22,27	33,20	15,61	20,65	25,70	30,75	45,88	17,75	23,68	29,60	35,53	53,31	25,30	33,83	42,35	50,87	76,44
905	ltr	1,60	2,02	2,43	2,83	4,05	1,60	2,02	2,43	2,83	4,05	3,24	4,05	4,86	5,67	8,10	3,24	4,05	4,86	5,67	8,10	4,86	6,07	7,29	8,50	12,15
1005	kg	9,24	11,94	14,64	17,34	25,45	12,50	16,54	20,58	24,63	36,76	17,29	22,89	28,48	34,08	50,88	19,68	26,25	32,83	39,41	59,14	28,07	37,53	46,99	56,45	84,83
1005	ltr	1,80	2,25	2,70	3,15	4,50	1,80	2,25	2,70	3,15	4,50	3,60	4,50	5,40	6,30	9,00	3,60	4,50	5,40	6,30	9,00	5,40	6,75	8,10	9,45	13,50
1105	kg	10,08	13,05	16,02	19,00	27,91	13,66	18,10	22,55	26,99	40,32	18,91	25,06	31,22	37,37	55,83	21,51	28,74	35,96	43,19	64,88	30,69	41,08	51,48	61,87	93,06
1105	ltr	1,99	2,48	2,97	3,47	4,95	1,99	2,48	2,97	3,47	4,95	3,96	4,95	5,94	6,93	9,90	3,96	4,95	5,94	6,93	9,90	5,94	7,42	8,91	10,40	14,85
1205	kg	10,92	14,17	17,41	20,65	30,37	14,82	19,66	24,51	29,35	43,88	20,53	27,24	33,95	40,66	60,78	23,34	31,22	39,10	46,98	70,62	33,38	44,71	56,04	67,38	101,37
1205	ltr	2,16	2,70	3,24	3,78	5,40	2,16	2,70	3,24	3,78	5,40	4,32	5,40	6,48	7,56	10,80	4,32	5,40	6,48	7,56	10,80	6,48	8,10	9,72	11,34	16,20
1305	kg	11,77	15,28	18,79	22,30	32,83	15,98	21,23	26,47	31,71	47,44	22,16	29,42	36,68	43,94	65,73	25,17	33,70	42,23	50,76	76,36	35,84	48,11	60,38	72,65	109,46
1305	ltr	2,35	2,93	3,51	4,10	5,85	2,35	2,93	3,51	4,10	5,85	4,68	5,85	7,02	8,19	11,70	4,68	5,85	7,02	8,19	11,70	7,02	8,77	10,53	12,29	17,55
1405	kg	12,61	16,39	20,17	23,95	35,29	17,15	22,79	28,43	34,07	51,00	23,89	31,70	39,52	47,33	70,78	27,19	36,37	45,55	54,73	82,28	38,83	52,04	65,25	78,45	118,07
1405	ltr	2,52	3,15	3,78	4,41	6,30	2,52	3,15	3,78	4,41	6,30	5,04	6,30	7,56	8,82	12,60	5,04	6,30	7,56	8,82	12,60	7,56	9,45	11,34	13,23	18,90
1805	kg	14,30	18,62	22,94	27,26	40,21	19,47	25,91	32,35	38,80	58,12	27,14	36,06	44,98	53,91	80,68	30,85	41,33	51,82	62,30	93,76	44,06	59,14	74,22	89,30	134,54
1805	ltr	3,24	4,05	4,86	5,67	8,10	3,24	4,05	4,86	5,67	8,10	6,48	8,10	9,72	11,34	16,20	6,48	8,10	9,72	11,34	16,20	9,72	12,15	14,58	17,01	24,30
2005	kg	17,77	23,16	28,56	33,96	50,15	24,23	32,27	40,31	48,35	72,47	33,72	44,86	56,00	67,14	100,56	38,27	51,35	64,44	77,53	116,80	54,61	73,44	92,27	111,09	167,57
2005	ltr	3,60	4,50	5,40	6,30	9,00	3,60	4,50	5,40	6,30	9,00	7,20	9,00	10,80	12,60	18,00	7,20	9,00	10,80	12,60	18,00	10,80	13,50	16,20	18,90	27,00
2305	kg	20,30	26,50	32,71	38,92	57,53	27,72	36,96	46,20	55,44	83,15	38,60	51,40	64,20	77,00	115,41	43,76	58,80	73,84	88,89	134,01	62,46	84,10	105,73	127,37	192,28
2305	ltr	4,14	5,18	6,21	7,24	10,35	4,14	5,18	6,21	7,24	10,35	8,28	10,35	12,42	14,49	20,70	8,28	10,35	12,42	14,49	20,70	12,42	15,52	18,63	21,73	31,05
2605	kg	22,83	29,84	36,86	43,87	64,91	31,21	41,65	52,08	62,52	93,83	43,52	57,99	72,45	86,91	130,30	49,35	66,34	83,34	100,33	151,32	70,46	94,90	119,35	143,80	217,13
2605	ltr	4,68	5,85	7,02	8,19	11,70	4,68	5,85	7,02	8,19	11,70	9,36	11,70	14,04	16,38	23,40	9,36	11,70	14,04	16,38	23,40	14,04	17,54	21,06	24,57	35,10
3005	kg	26,21	34,30	42,39	50,48	74,76	35,86	47,90	59,93	71,97	108,07	50,07	66,75	83,43	100,11	150,15	56,77	76,37	95,96	115,56	174,36	81,07	109,26	137,45	165,65	250,23
3005	ltr	5,40	6,75	8,10	9,45	13,50	5,40	6,75	8,10	9,45	13,50	10,80	13,50	16,20	18,90	27,00	10,80	13,50	16,20	18,90	27,00	16,20	20,24	24,30	28,35	40,50

weight in kg
water content in ltr

Weight allowance for
Therm X2 Plan-V-VM:
0,5 kg

Note

There is a limited length spectrum available for Therm X2 Plan-VM.

THERM X2 PLAN-K CONNECTION CENTRE LINE 500/900 MM WEIGHT, WATER CONTENT

		Type 12		Type 22		Type 33		weight in kg water content in ltr	
Length mm		559	959	559	959	559	959		
405	kg	13,07	22,18	14,99	25,68	21,40	36,76		
	ltr	2,35	3,79	2,35	3,79	3,53	5,69		
505	kg	16,05	27,37	18,37	31,66	26,24	45,35		
	ltr	2,94	4,74	2,94	4,74	4,41	7,11		
605	kg	19,03	32,57	21,76	37,65	31,08	53,93		
	ltr	3,53	5,69	3,53	5,69	5,30	8,54		
705	kg	22,01	37,76	25,14	43,63	35,92	62,51		
	ltr	4,12	6,64	4,12	6,64	6,18	9,96		
805	kg	24,99	42,96	28,52	49,62	40,75	71,10		
	ltr	4,71	7,59	4,71	7,59	7,06	11,38		
905	kg	27,97	48,15	31,90	55,60	45,59	79,68		
	ltr	5,30	8,54	5,30	8,54	7,95	12,81		
1005	kg	31,00	53,40	35,37	61,68	50,58	88,42		
	ltr	5,89	9,49	5,89	9,49	8,83	14,23		
1105	kg	33,98	58,59	38,75	67,67	55,42	97,00		
	ltr	6,47	10,43	6,47	10,43	9,71	15,65		
1205	kg	36,96	63,79	42,13	73,65	60,33	105,66		
	ltr	7,06	11,38	7,06	11,38	10,59	17,07		
1305	kg	39,94	68,98	45,51	79,64	65,01	114,09		
	ltr	7,65	12,33	7,65	12,33	11,48	18,50		
1405	kg	43,02	74,28	49,08	85,80	70,23	123,05		
	ltr	8,24	13,28	8,24	13,28	12,36	19,92		
1605	kg	48,98	84,67	55,84	97,77	79,90	140,22		
	ltr	9,42	15,18	9,42	15,18	14,13	22,77		
1805	kg	55,03	95,15	62,69	109,83	89,67	157,48		
	ltr	10,59	17,07	10,59	17,07	15,89	25,61		
2005	kg	60,99	105,55	69,45	121,80	99,34	174,65		
	ltr	11,77	18,97	11,77	18,97	17,66	28,46		
2305	kg	69,92	121,13	79,59	139,76	113,85	200,40		
	ltr	13,54	21,82	13,54	21,82	20,31	32,73		
2605	kg	78,91	136,77	89,82	157,80	128,51	226,30		
	ltr	15,30	24,66	15,30	24,66	22,96	37,00		
3005	kg	90,88	157,60	103,44	181,84	148,01	260,79		
	ltr	17,66	28,46	17,66	28,46	26,49	42,69		

THERM X2 PROFIL-V/-VM/-K WEIGHT, WATER CONTENT

Height mm	Type 10						Type 11						Type 12						Type 22						Type 33						
	300	400	500	600	900	300	400	500	600	900	300	400	500	600	900	300	400	500	600	900	300	400	500	600	900	300	400	500	600	900	
Length mm 400	kg 3,05	3,81	4,57	5,33	7,60	4,56	5,88	7,20	8,52	12,48	6,43	8,37	10,32	12,27	18,12	7,51	9,86	12,20	14,55	21,58	11,15	14,67	18,18	21,70	32,24						
	litr 0,72	0,90	1,08	1,26	1,80	0,72	0,90	1,08	1,26	1,80	1,44	1,80	2,16	2,52	3,60	1,44	1,80	2,16	2,52	3,60	2,16	2,70	3,24	3,78	5,40						
500	kg 3,62	4,57	5,52	6,46	9,30	5,47	7,11	8,74	10,38	15,30	7,79	10,21	12,63	15,06	22,33	9,08	12,00	14,91	17,83	26,58	13,50	17,87	22,25	26,62	39,73						
	litr 0,89	1,12	1,35	1,57	2,25	0,89	1,12	1,35	1,57	2,25	1,80	2,25	2,70	3,15	4,50	1,80	2,25	2,70	3,15	4,50	2,70	3,38	4,05	4,72	6,75						
600	kg 4,19	5,33	6,46	7,60	11,01	6,32	8,28	10,24	12,19	18,07	9,15	12,05	14,95	17,84	26,53	10,65	14,14	17,62	21,11	31,57	15,85	21,08	26,31	31,54	47,22						
	litr 1,08	1,35	1,62	1,89	2,70	1,08	1,35	1,62	1,89	2,70	2,16	2,70	3,24	3,78	5,40	2,16	2,70	3,24	3,78	5,40	3,24	4,05	4,86	5,67	8,10						
700	kg 4,76	6,09	7,41	8,74	12,71	7,16	9,44	11,72	13,99	20,83	10,52	13,89	17,26	20,63	30,74	12,22	16,28	20,33	24,39	36,57	18,20	24,29	30,37	36,46	54,71						
	litr 1,25	1,57	2,20	3,15	1,25	1,57	1,89	2,20	3,15	2,52	3,15	3,78	4,41	6,30	2,52	3,15	3,78	4,41	6,30	3,78	4,41	6,30	3,78	4,73	5,67	6,61	9,45				
800	kg 5,33	6,85	8,36	9,88	14,42	8,06	10,66	13,26	15,85	23,65	11,88	15,73	19,57	23,42	34,95	13,78	18,41	23,04	27,67	41,56	20,55	27,49	34,44	41,38	62,20						
	litr 1,44	1,80	2,16	2,52	3,60	1,44	1,80	2,16	2,52	3,60	2,88	3,60	4,32	5,04	7,20	2,88	3,60	4,32	5,04	7,20	4,32	5,40	6,48	7,56	10,80						
900	kg 5,90	7,61	9,31	11,01	16,12	8,97	11,88	14,80	17,71	26,46	13,25	17,57	21,88	26,20	39,16	15,35	20,55	25,75	30,95	46,56	22,90	30,70	38,50	46,30	69,70						
	litr 1,60	2,02	2,43	2,83	4,05	1,60	2,02	2,43	2,83	4,05	3,24	4,05	4,86	5,67	8,10	3,24	4,05	4,86	5,67	8,10	4,05	4,86	5,67	6,61	12,15						
1000	kg 6,47	8,36	10,26	12,15	17,83	9,87	13,10	16,34	19,58	29,28	14,66	19,46	24,25	29,04	43,42	17,01	22,78	28,56	34,33	51,64	25,40	34,06	42,71	51,37	77,34						
	litr 1,80	2,25	2,70	3,15	4,50	1,80	2,25	2,70	3,15	4,50	3,60	4,50	5,40	6,30	9,00	3,60	4,50	5,40	6,30	9,00	5,40	6,75	8,10	9,45	13,50						
1100	kg 7,04	9,12	11,21	13,29	19,53	10,77	14,32	17,88	21,44	32,10	16,03	21,29	26,56	31,83	47,63	18,58	24,92	31,26	37,61	56,64	27,75	37,27	46,78	56,29	84,83						
	litr 1,99	2,48	3,47	4,95	1,99	2,48	2,97	3,47	4,95	3,47	3,96	4,95	5,94	6,93	9,90	3,96	4,95	5,94	6,93	9,90	5,94	7,42	8,91	10,40	14,85						
1200	kg 7,61	9,88	12,15	14,43	21,24	11,67	15,55	19,42	23,30	34,92	17,39	23,13	28,87	34,62	51,84	20,15	27,06	33,97	40,89	61,63	30,17	40,54	50,91	61,28	92,38						
	litr 2,16	2,70	3,24	3,78	5,40	2,16	2,70	3,24	3,78	5,40	4,32	5,40	6,48	7,56	10,80	4,32	5,40	6,48	7,56	10,80	6,48	7,56	8,10	9,72	11,34	16,20					
1300	kg 8,18	10,64	13,10	15,56	22,94	12,57	16,77	20,96	25,16	37,74	18,76	24,97	31,19	37,40	56,05	21,71	29,20	36,68	44,17	66,63	32,39	43,61	54,84	66,07	99,74						
	litr 2,33	2,93	3,51	4,10	5,85	2,35	2,93	3,51	4,10	5,85	4,68	5,85	7,02	8,19	11,70	4,68	5,85	7,02	8,19	11,70	7,02	8,77	10,53	12,29	17,55						
1400	kg 8,75	11,40	14,05	16,70	24,65	13,48	17,99	22,50	27,02	40,56	20,22	26,91	33,60	40,29	60,36	23,47	31,52	39,58	47,64	71,80	35,10	47,19	59,27	71,35	107,60						
	litr 2,52	3,15	3,78	4,41	6,30	2,52	3,15	3,78	4,41	6,30	5,04	6,30	7,56	8,82	12,60	5,04	6,30	7,56	8,82	12,60	6,48	7,56	8,10	9,72	11,34	13,23	18,90				
1500	kg 9,89	12,92	15,95	19,98	28,06	15,28	20,43	25,59	30,74	46,20	22,95	30,59	38,23	45,87	68,78	26,60	35,80	45,20	54,20	81,79	39,81	53,60	67,40	81,98	122,58						
	litr 2,88	3,60	4,32	5,04	7,20	2,88	3,60	4,32	5,04	7,20	5,76	7,20	8,64	10,08	14,40	5,76	7,20	8,64	10,08	14,40	8,64	10,80	12,60	14,40	21,60						
1600	kg 11,12	14,53	17,93	21,34	31,56	17,19	22,99	28,78	34,57	51,95	25,77	34,36	42,94	51,53	77,29	29,83	40,17	50,51	60,51	91,87	44,60	60,11	75,62	91,12	137,65						
	litr 3,24	4,05	4,86	5,67	8,10	3,24	4,05	4,86	5,67	8,10	6,48	8,10	9,72	11,34	16,20	6,48	8,10	9,72	11,34	16,20	9,72	12,15	14,58	17,01	24,30						
1800	kg 12,26	16,05	19,83	23,62	34,97	19,00	25,43	31,86	38,29	57,59	28,50	38,03	47,57	57,10	85,71	32,96	44,44	55,93	67,41	101,86	49,30	66,52	83,74	100,97	152,64						
	litr 3,60	4,50	6,30	9,00	3,60	4,50	6,30	9,00	7,20	9,00	10,80	12,60	18,00	7,20	9,00	10,80	12,60	18,00	7,20	9,00	10,80	13,50	16,20	18,90	27,00						
2000	kg 13,97	18,32	22,68	27,03	40,09	21,71	29,10	36,49	43,87	66,04	32,59	43,55	54,51	65,46	98,33	37,66	50,86	64,06	77,25	116,85	56,35	76,14	95,93	115,73	175,11						
	litr 4,14	5,18	6,21	7,24	10,35	4,14	5,18	6,21	7,24	10,35	8,28	10,35	12,42	14,49	20,70	8,28	10,35	12,42	14,49	20,70	12,42	15,52	18,63	21,73	31,05						
2500	kg 15,68	20,60	25,52	30,44	45,20	24,41	32,76	41,11	49,46	74,50	36,74	49,12	61,50	73,87	111,01	42,46	57,37	72,28	87,19	131,92	63,55	85,91	108,27	130,64	197,73						
	litr 4,68	5,85	7,02	8,19	11,70	4,68	5,85	7,02	8,19	11,70	9,36	11,70	14,04	16,38	23,40	9,36	11,70	14,04	16,38	23,40	14,04	17,54	21,06	24,57	35,10						
2600	kg 17,96	23,64	29,31	34,99	52,03	28,02	37,65	47,27	56,90	85,78	42,25	56,52	70,80	85,07	127,90	48,82	66,02	83,21	100,41	151,99	73,10	98,89	124,68	150,47	227,84						
	litr 5,40	6,75	8,10	9,45	13,50	5,40	6,75	8,10	9,45	13,50	10,80	13,50	16,20	18,90	27,00	10,80	13,50	16,20	18,90	27,00	16,20	20,24	24,30	28,35	40,50						

weight in kg
water content in ltr

Weight allowance for
Therm X2 Profil-V-VM:
0,5 kg

Note

There is a limited length spectrum available for Therm X2 Plan-VM.

THERM X2 PROFIL-K CONNECTION CENTRE LINE 500/900 MM WEIGHT, WATER CONTENT, RADIATOR DESIGN

		Type 12		Type 22		Type 33		weight in kg	water content in ltr
Length mm		554	954	554	954	554	954		
400	kg	11,18	18,98	13,09	22,46	19,50	33,56		
	ltr	2,35	3,79	2,35	3,79	3,53	5,69		
500	kg	13,70	23,39	16,00	27,66	23,87	41,36		
	ltr	2,94	4,74	2,94	4,74	4,41	7,11		
600	kg	16,21	27,80	18,91	32,86	28,24	49,16		
	ltr	3,53	5,69	3,53	5,69	5,30	8,54		
700	kg	18,73	32,21	21,83	38,06	32,61	56,95		
	ltr	4,12	6,64	4,12	6,64	6,18	9,96		
800	kg	21,25	36,63	24,74	43,26	36,98	64,75		
	ltr	4,71	7,59	4,71	7,59	7,06	11,38		
900	kg	23,76	41,04	27,65	48,45	41,35	72,54		
	ltr	5,30	8,54	5,30	8,54	7,95	12,81		
1000	kg	26,33	45,50	30,66	53,75	45,87	80,49		
	ltr	5,89	9,49	5,89	9,49	8,83	14,23		
1100	kg	28,85	49,92	33,57	58,94	50,24	88,29		
	ltr	6,47	10,43	6,47	10,43	9,71	15,65		
1200	kg	31,36	54,33	36,49	64,14	54,67	96,15		
	ltr	7,06	11,38	7,06	11,38	10,59	17,07		
1300	kg	33,88	58,74	39,40	69,34	58,91	103,81		
	ltr	7,65	12,33	7,65	12,33	11,48	18,50		
1400	kg	36,50	63,26	42,50	74,72	63,65	111,98		
	ltr	8,24	13,28	8,24	13,28	12,36	19,92		
1600	kg	41,53	72,08	48,32	85,12	72,38	127,57		
	ltr	9,42	15,18	9,42	15,18	14,13	22,77		
1800	kg	46,65	81,00	54,24	95,61	81,21	143,25		
	ltr	10,59	17,07	10,59	17,07	15,89	25,61		
2000	kg	51,69	89,82	60,07	106,00	89,95	158,84		
	ltr	11,77	18,97	11,77	18,97	17,66	28,46		
2300	kg	59,23	103,06	68,81	121,60	103,06	182,23		
	ltr	13,54	21,82	13,54	21,82	20,31	32,73		
2600	kg	66,83	116,35	77,64	137,28	116,32	205,77		
	ltr	15,30	24,66	15,30	24,66	22,96	37,00		
3000	kg	76,95	134,05	89,39	158,17	133,94	237,11		
	ltr	17,66	28,46	17,66	28,46	26,49	42,69		

Connection centre line 350 mm (height 400 mm)

see table Profil compact radiator

Registered output data Therm X2 Compact Profil special height						
Height mm	Type 12		Type 22		Type 33	
	Φ_{SL} W/m	n	Φ_{SL} W/m	n	Φ_{SL} W/m	n
554	1153	1,2936	1564	1,2899	2252	1,2987
954	1812	1,34	2402	1,329	3346	1,3348
Radiated portion conventional steel panel radiators	20 %		20 %		10 %	
Radiated portion Therm X2		30 %		30 %		20 %

Φ_{SL} = standard heat output based on 1 m length, according to DIN EN 442 at a flow temperature of $t_V = 75^\circ C$, a return temperature of $t_R = 65^\circ C$ and a room temperature of $t_L = 20^\circ C$

n = exponent of the space heater characteristic

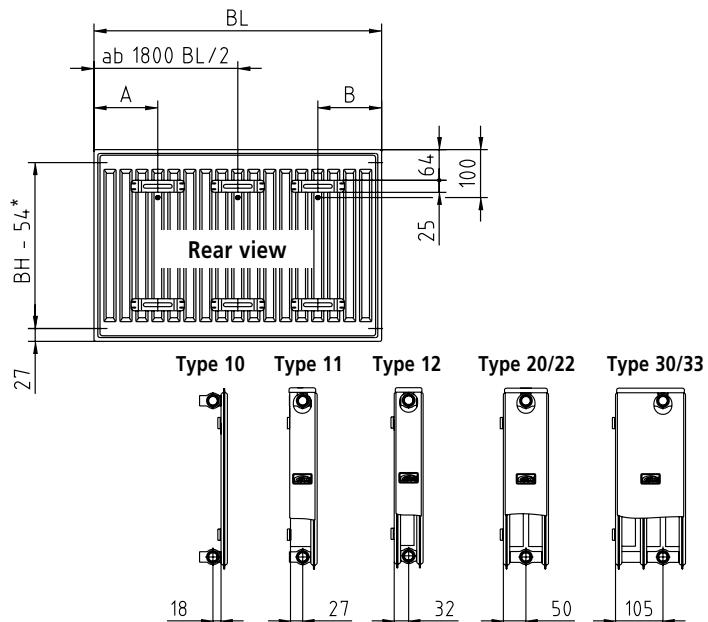
On the basis of registered heat outputs per m lengths result for the particular sizes that appear in the output tables for specified standard heat outputs.

$$\Phi_{SL} = \Phi_{SL} \times \text{length in m}$$

FITTING DIMENSIONS

Therm X2 Plan-K/Profil-K

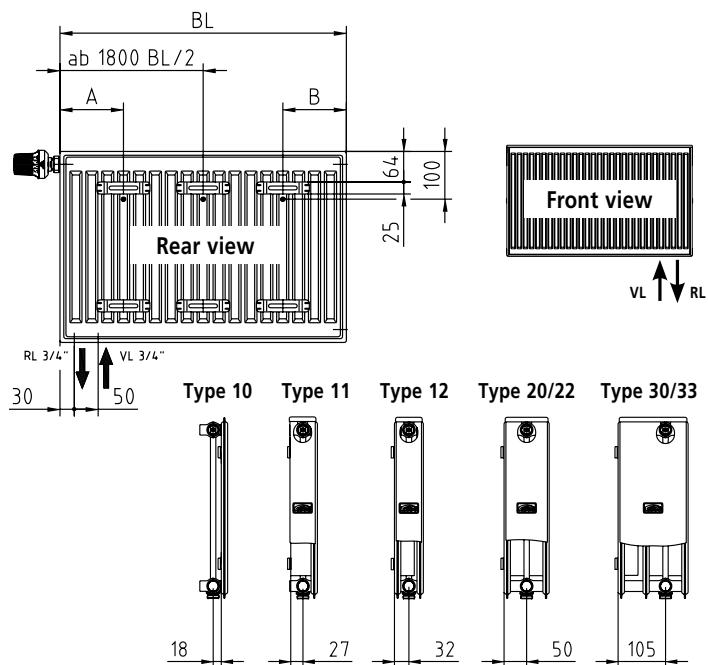
Technical data	L	Dimension A	Dimension B
10	400	100	100
10	500 - 3000	140	140
11	400 - 3000	85	85
12/20/22/30/33	400	100	100
12/20/22/30/33	500 - 3000	140	140



* for Therm X2 Plan-K
BH-59

Therm X2 Plan-V/Profil-V

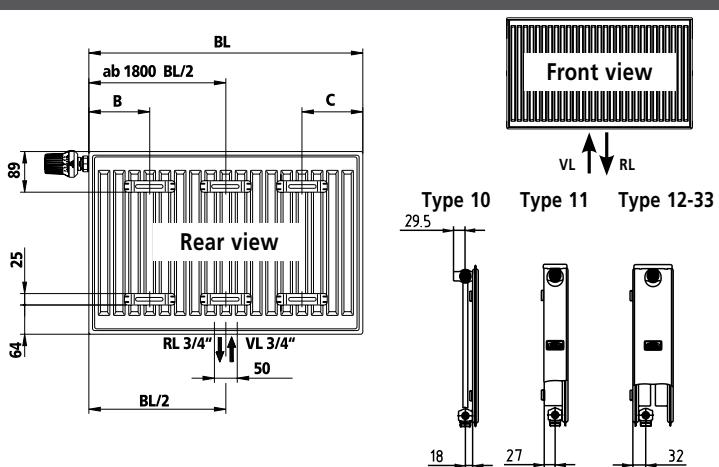
Technical data	L	Dimension A	Dimension B
10	400	165	100
10	500 - 3000	165	140
11	400 - 3000	85	85
12/20/22/30/33	400	100	100
12/20/22/30/33	500 - 3000	140	140



"Valve on the right"
version as displayed,
"Valve on the left"
version mirror image.

Therm X2 Plan-VM/Profil-VM

Technical data	L	Dimension B	Dimension C
10	400	165	100
10	500 - 2600	165	140
11	400 - 2600	85	85
12/20/22/30/33	400	100	100
12/20/22/30/33	500 - 2600	140	140



Note

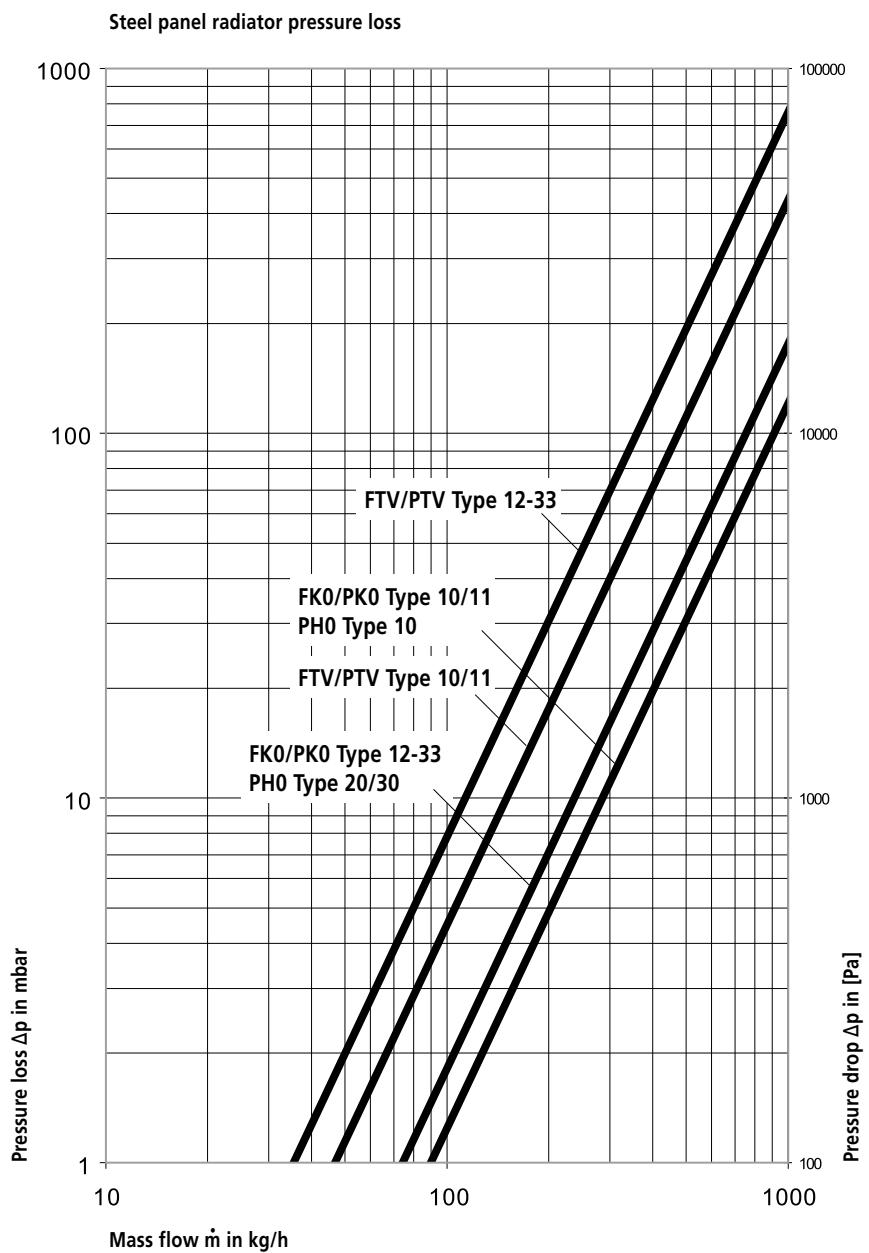
For Therm X2 VM the flow (VL) is always on the left, independent of the valve's position.

STEEL PANEL RADIATOR PRESSURE LOSS

Volume flow rate chart for FK0, FTV, PK0, PTV, PH0

The specifications for compact radiators' pressure loss apply to the connection on the same side.

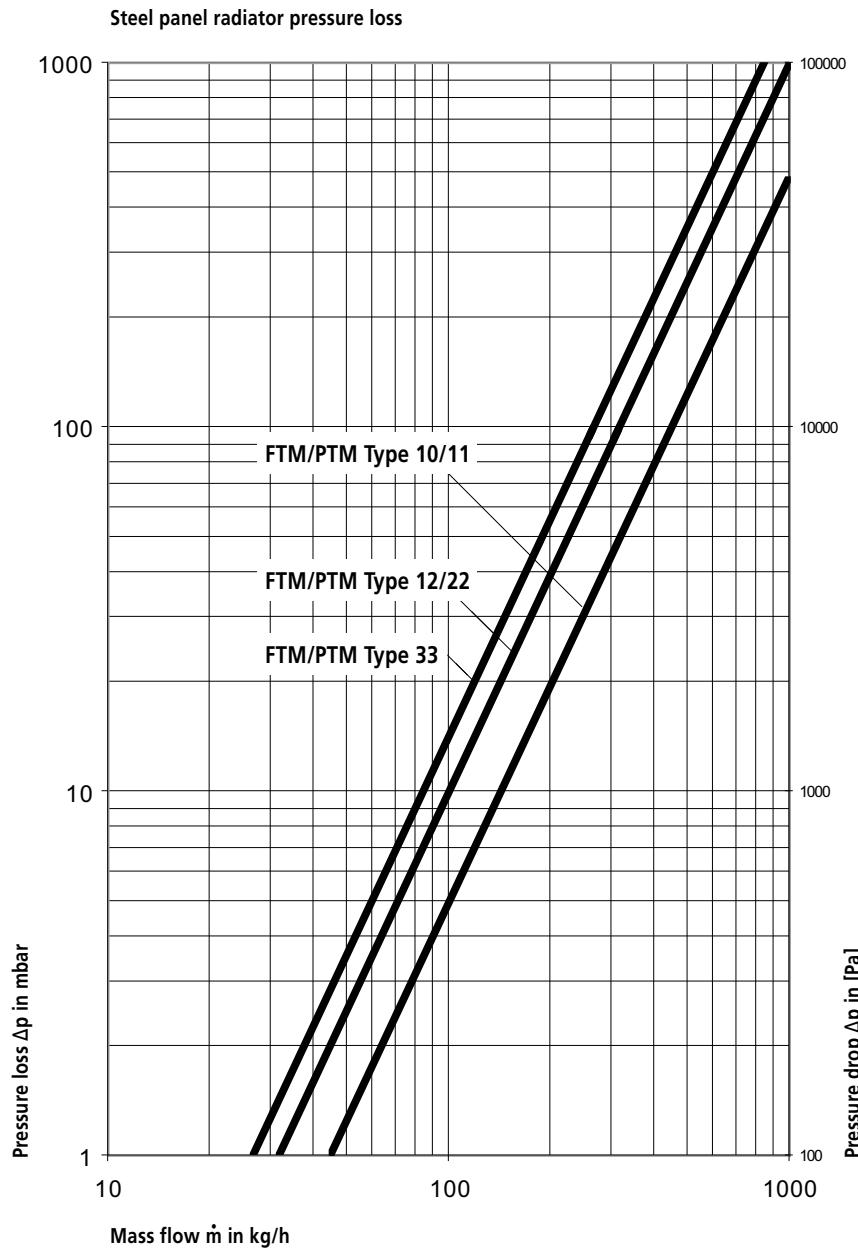
Pressure loss for valve radiators entails neither the valve nor a connection fitting.



STEEL PANEL RADIATOR PRESSURE LOSS

Volume flow rate chart for FTM, PTM

Pressure loss entails neither the valve nor a connection fitting.



VALVE TECHNOLOGY STANDARD VALVE STEEL PANEL RADIATORS

Valve Technology Standard Valve V3K S

Kermi valve radiators are equipped ex factory for two-pipe systems. Every radiator is equipped with a preset valve insert relative to its heat output. Also, the k_v presetting is labelled via colour-coding on the front side (cf. table).



Note

Thermostat valves with presetting comply with requirements of the German Energy Saving Ordinance (EnEV) and according to DIN 4701-10 can be designed with either 1 or 2 K proportional deviation.

Certified in conformity with EN 215.

Setting chart for a deviation of 1 K

k_v values table

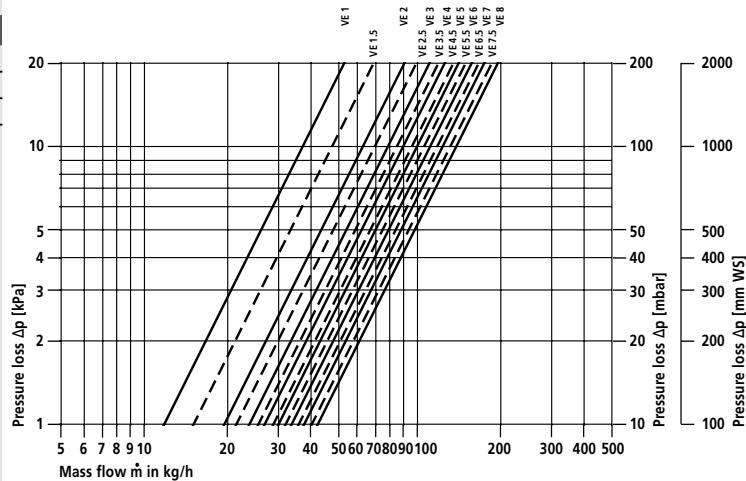
Valve insert V3K S/V4K S*

Setting	1	1.5	2	2.5	3	3.5	4	4.5
k_v value to	0,12	0,15	0,19	0,22	0,24	0,27	0,28	0,31
Colour**	white							red

Valve insert V3K S

Setting	5	5.5	6	6.5	7	7.5	8
k_v value to	0,33	0,35	0,37	0,38	0,39	0,39	0,40
Colour**	black						blue

* visual labelling of the k_v presettings ex factory



The valve's pressure loss is factored in this chart.

The radiator's pressure loss comes from the chart for steel panel radiators.

Setting chart for a deviation of 2 K

k_v values table

Valve insert V3K S/V4K S*

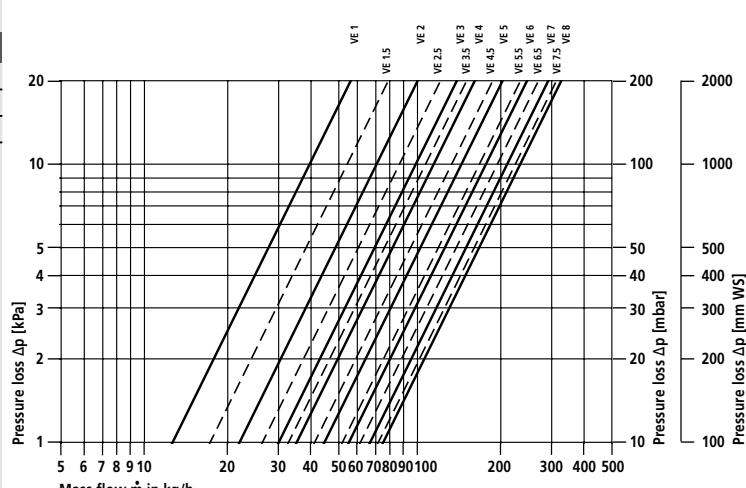
Setting	1	1.5	2	2.5	3	3.5	4	4.5
k_v value to	0,13	0,18	0,22	0,27	0,31	0,35	0,38	0,42
Colour**	white							red

Valve insert V3K S

Setting	5	5.5	6	6.5	7	7.5	8
k_v value to	0,47	0,52	0,57	0,62	0,66	0,71	0,75
Colour**	black						blue

* set in the Kermi valve shut-off block

** visual labelling of the k_v presettings ex factory



The valve's pressure loss is factored in this chart.

The radiator's pressure loss comes from the chart for steel panel radiators.

VALVE TECHNOLOGY FINE-ADJUSTING VALVE STEEL PANEL RADIATORS

Valve Technology Fine-adjusting valve V3K F

Kermi valve radiators can also be equipped with a fine adjusting valve.

The adjustable valve insert enables reproducible settings of low water quantities that are required primarily in district heating installations with large temperature spreads. The chart pictured indicates the setting values.



k_v values table

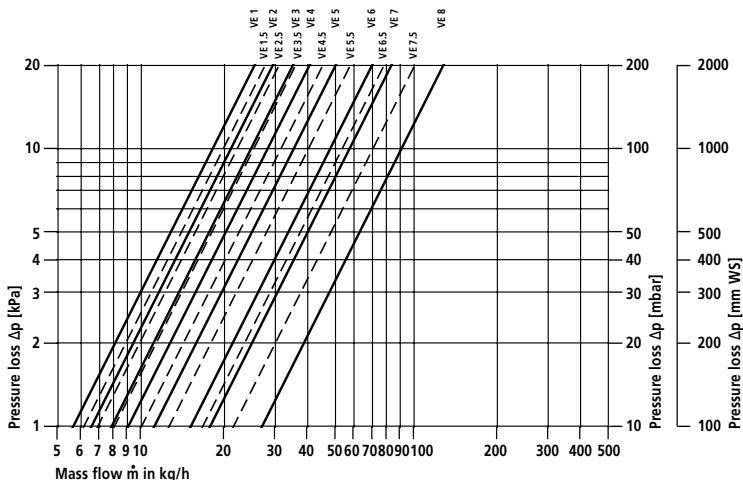
Valve insert V3K F

Setting	1	1.5	2	2.5	3	3.5	4	4.5
k_v value to	0,06	0,06	0,06	0,07	0,08	0,08	0,09	0,10
Colour**								

Valve insert V3K F

Setting	5	5.5	6	6.5	7	7.5	8
k_v value to	0,11	0,13	0,15	0,17	0,18	0,22	0,26
Colour**	yellow						green

* visual labelling of the k_v presettings ex factory



Note

Thermostat valves with presetting comply with requirements of the German Energy Saving Ordinance (EnEV) and according to DIN 4701-10 can be designed with either 1 or 2 K proportional deviation.

Certified in conformity with EN 215.

The valve's pressure loss is factored in this chart.

The radiator's pressure loss comes from the chart for steel panel radiators.

VERTEO PLAN/VERTEO PROFIL

WEIGHT, WATER CONTENT/PRESSURE LOSS CHART

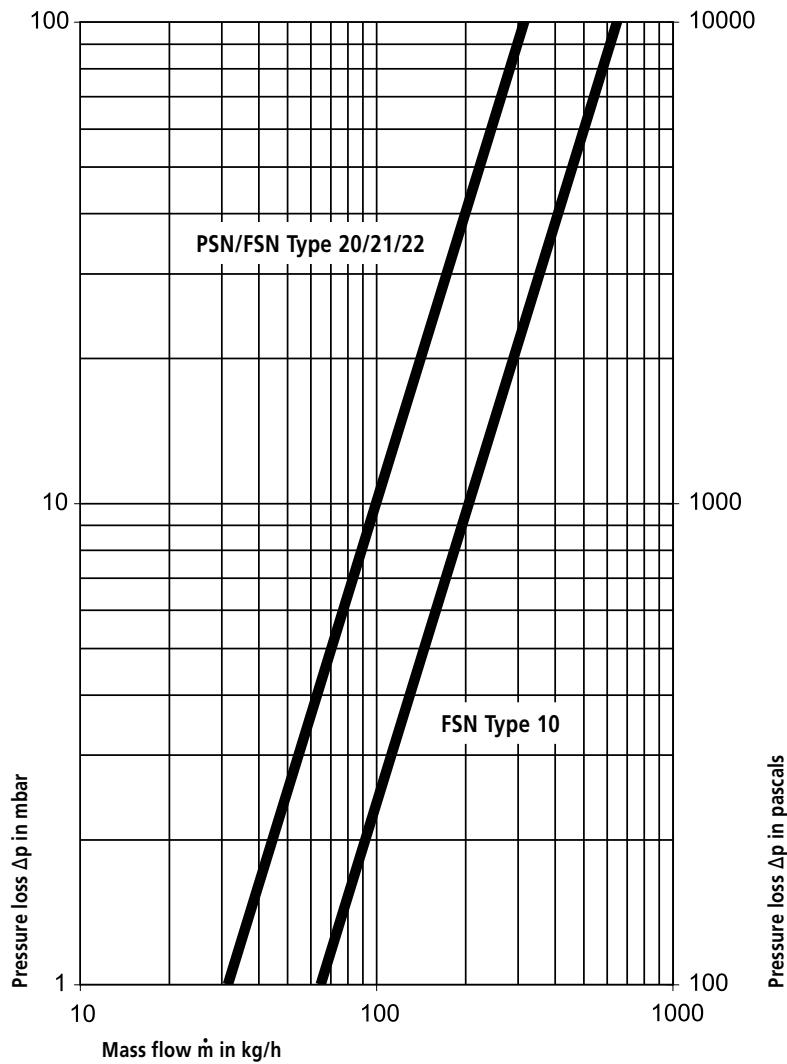
Verteo Plan

Length mm	Height mm	Type 20				Type 21				Type 22			
		1600	1800	2000	2200	1600	1800	2000	2200	1600	1800	2000	2200
400	kg	32,36	36,21	40,05	43,89	35,27	40,57	44,42	48,26	39,19	46,03	49,96	53,89
	ltr	6,14	6,49	6,83	7,17	6,14	6,49	6,83	7,17	6,14	6,49	6,83	7,17
500	kg	39,63	44,38	49,12	53,86	43,51	50,2	54,94	59,69	48,4	57,11	61,94	66,77
	ltr	7,68	8,11	8,54	8,96	7,68	8,11	8,54	8,96	7,68	8,11	8,54	8,96
600	kg	46,9	52,54	58,19	63,83	51,75	59,82	65,47	71,11	57,61	68,19	73,92	79,65
	ltr	9,22	9,73	10,24	10,76	9,22	9,73	10,24	10,76	9,22	9,73	10,24	10,76
700	kg	54,17	60,71	67,26	73,8	60	69,45	75,99	82,54	66,82	79,27	85,9	92,53
	ltr	10,75	11,35	11,95	12,55	10,75	11,35	11,95	12,55	10,75	11,35	11,95	12,55

Verteo Profil

Length mm	Height mm	Type 10				Type 20				Type 21				Type 22			
		1600	1800	2000	2200	1600	1800	2000	2200	1600	1800	2000	2200	1600	1800	2000	2200
400	kg	13,39	14,98	16,56	18,15	26,99	30,17	33,35	36,52	29,91	34,54	37,71	40,89	33,82	39,99	43,25	46,52
	ltr	3,07	3,24	3,41	3,59	6,14	6,49	6,83	7,17	6,14	6,49	6,83	7,17	6,14	6,49	6,83	7,17
500	kg	16,36	18,32	20,28	22,23	32,98	36,9	40,81	44,73	36,87	42,72	46,64	50,55	41,75	49,63	53,63	57,63
	ltr	3,84	4,05	4,27	4,48	7,68	8,11	8,54	8,96	7,68	8,11	8,54	8,96	7,68	8,11	8,54	8,96
600	kg	19,33	21,66	23,99	26,32	38,97	43,63	48,28	52,94	43,83	50,91	55,56	60,22	49,68	59,27	64,01	68,75
	ltr	4,61	4,86	5,12	5,38	9,22	9,73	10,24	10,76	9,22	9,73	10,24	10,76	9,22	9,73	10,24	10,76
700	kg	22,3	25	27,7	30,4	44,96	50,35	55,75	61,14	50,78	59,09	64,48	69,88	57,61	68,91	74,39	79,87
	ltr	5,38	5,68	5,97	6,27	10,75	11,35	11,95	12,55	10,75	11,35	11,95	12,55	10,75	11,35	11,95	12,55

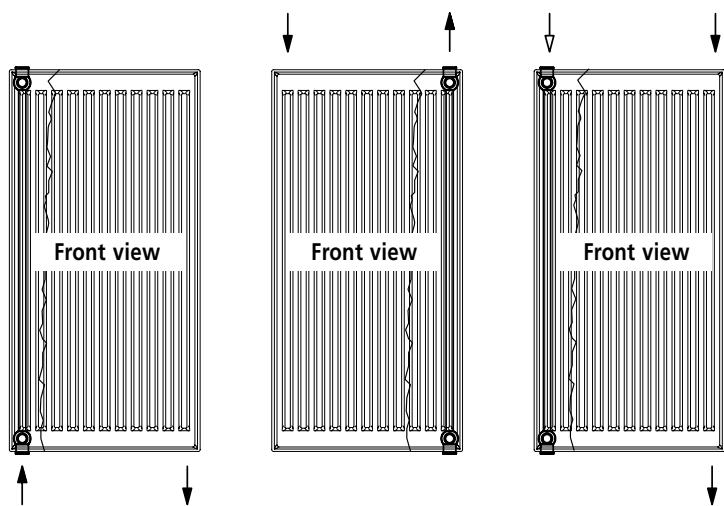
Verteo volume flow rate chart



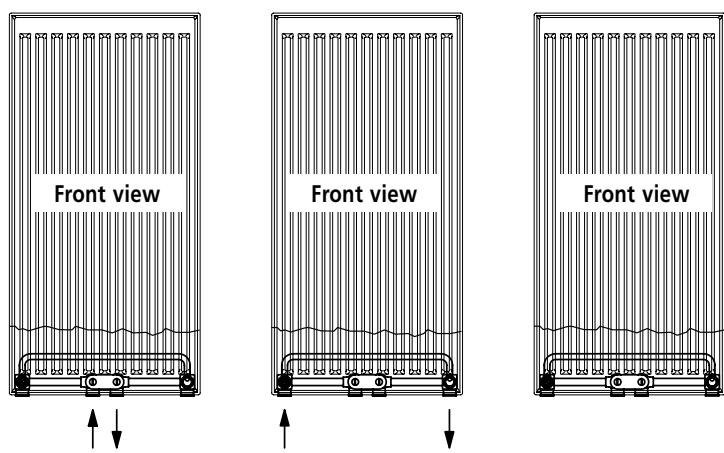
VERTEO PLAN/VERTEO PROFIL FITTING TYPES/FITTING DIMENSIONS

fitting types

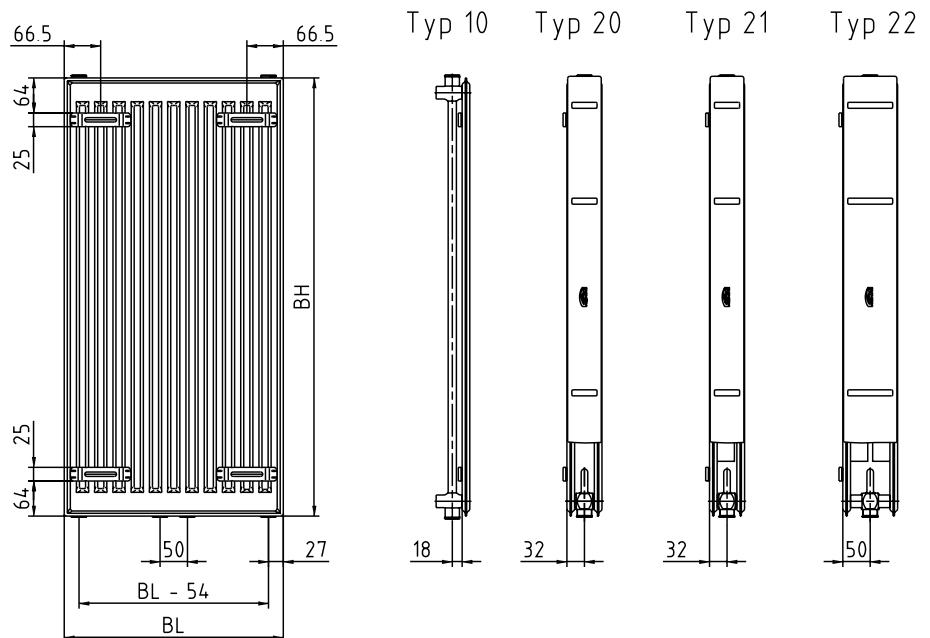
Type 10: 4 x $\frac{1}{2}$ " internal thread



Type 20, 21, 22: 6 x $\frac{1}{2}$ " internal thread



fitting dimensions



RADIATOR DESIGN

Rooms with discontinued heating according to DIN EN 12831

According to DIN EN 12831, max. permissible reheating times can be defined for reheating a room once heating has been discontinued. The reheating time required thus determines the level of auxiliary heating load needed for this.

Reheating output (Φ_{RH}) according to DIN EN 12831, for rooms with discontinued heating, is calculated as follows:

$$\Phi_{RH} = A * f_{RH}$$

A = area [m^2]

The reheating factor (f_{RH}) is to be taken from the standard's country-specific appendix.

The factor takes into account the reheating time, the building mass and the level of the assumed temperature drop during the drawdown phase.

The following results for the standard heating load (Φ_{HL}):

$$\Phi_{HL} = \Phi_{HL, net} + \Phi_{RH}$$

$$\Phi_{HL, net} = \Phi_T = \Phi_V$$

Φ_T = transmission heat loss

Φ_V = ventilation heat loss

Note: The reheating time and the additional heating output resulting from it must be agreed with the customer on a room-by-room basis if need be. You can find practice-oriented reheating times in the adjacent table: recommended reheating times.

The values that result from defining a particular reheating time for reheating factors (f_{RH} in [W/m^2]) are to be taken from the tables of the country-specific appendix to EN 12831.

Reduced output is also to be taken into account in the case of recess installation and other rebuilds involving the radiator.

It is possible to work with the factory-provided tables when dealing with design temperatures of 70/55 and 55/45. At other design temperatures the heat output has to be converted using the following formula or using the simplified conversion table on the next page.

Heat output conversion

According to DIN EN 442 a flow temperature of 75° C, a return temperature of 65° C and an air temperature of 20° C form the basis of standard heat outputs. For other temperature ratios the outputs must be converted as per the following formula:

$$\Phi = \Phi_{SL} * \left(\frac{\Delta t_{ln}}{49.83} \right)^n$$

with: Φ = heat output of the radiator under operating conditions

Φ_{SL} = standard heat output of the radiator

Δt_{ln} = logarithmically averaged temperature rise

$$\Delta t_{ln} = \frac{t_V - t_R}{\ln \frac{t_V - t_L}{t_R - t_L}}$$

n = exponent of the space heater characteristic

RADIATOR DESIGN/CORRECTION VALUES

Conversion factors for irregular design temperatures for hot-water heating of pumps according to DIN EN 442; n = 1.3; calculated logarithmically.

Determining the heat output of a radiator for a customised system temperature ($t_V/t_R/t_L$) from given standard heat output at ΔT_{50} (75/65/20)

Conversion formula:

$$\Phi_H = \frac{\Phi_S}{F}$$

Φ_H = heat output for customised system temperature

Φ_S = standard heat output

F = conversion factor

Example:

Given:

- system temperature of the heating system

$$t_V/t_R/t_L = 55/45/20$$

- standard heat output of the radiator

1960 watts

Wanted:

- heat output of the radiator at

$$t_V/t_R/t_L = 55/45/20$$

Solution:

$$\Phi_H = \frac{1960 \text{ watts}}{1.96} = 1000 \text{ watts}$$

A radiator with a standard heat output of 1960 watts while running at $t_V/t_R/t_L = 55/45/20$ provides an output of 1000 watts.

Conversion of a room's specified standard heating load to the standard heat output (ΔT_{50} - 75/65/20) of a radiator for selecting the size of the radiator required.

Conversion formula:

$$\Phi_S = \Phi_{HL} * F$$

Φ_S = standard heat output

Φ_{HL} = standard heating load

F = conversion factor

Example:

Given:

- the room's standard heating load 1000 watts

- system temperature of the heating system

$$(t_V/t_R/t_L) = 55/45/20$$

Wanted:

- heat output of the radiator

$$(\Delta T_{50} - 75/65/20)$$

Solution:

$$\Phi_S = 1000 \text{ watts} * 1.96 = 1960 \text{ watts}$$

To cover the standard heating load of 1000 watts at $t_V/t_R/t_L = 55/45/20$ a radiator with an output of 1960 watts is to be selected from the table having the standard heat outputs ($\Delta T_{50} - 75/65/20$).

While running at $t_V/t_R/t_L = 55/45/20$ it thus provides the requisite heat output of 1000 watts.

t_V = flow temperature [°C]

t_R = return temperature [°C]

t_L = air temperature [°C]

Design according to DIN EN 442

t_V flow temperature °C	t_R return temperature °C	t_L room temperature °C						20	22	24
		10	12	15	18	20				
110	90	0,47	0,48	0,50	0,53	0,54	0,56	0,58	0,56	0,58
	80	0,51	0,52	0,55	0,58	0,60	0,62	0,64	0,62	0,64
	70	0,56	0,58	0,61	0,64	0,67	0,69	0,72	0,69	0,72
	60	0,62	0,64	0,68	0,73	0,76	0,79	0,83	0,79	0,83
	50	0,70	0,73	0,78	0,84	0,89	0,94	0,99	0,94	0,99
	40	0,82	0,86	0,94	1,02	1,09	1,17	1,26	1,17	1,26
105	80	0,52	0,54	0,57	0,60	0,62	0,65	0,67	0,65	0,67
	70	0,58	0,60	0,63	0,67	0,69	0,72	0,76	0,72	0,76
	60	0,64	0,67	0,71	0,76	0,79	0,83	0,87	0,83	0,87
	50	0,73	0,76	0,82	0,88	0,93	0,98	1,04	0,98	1,04
	40	0,85	0,90	0,98	1,07	1,14	1,23	1,33	1,23	1,33
100	80	0,54	0,56	0,59	0,63	0,65	0,67	0,70	0,67	0,70
	70	0,60	0,62	0,66	0,70	0,72	0,76	0,79	0,76	0,79
	60	0,67	0,69	0,74	0,79	0,83	0,87	0,91	0,87	0,91
	55	0,71	0,74	0,79	0,85	0,89	0,94	0,99	0,94	0,99
	50	0,76	0,79	0,85	0,92	0,97	1,03	1,09	1,03	1,09
	40	0,89	0,94	1,02	1,12	1,20	1,29	1,40	1,29	1,40
95	70	0,62	0,65	0,68	0,73	0,76	0,79	0,83	0,79	0,83
	60	0,69	0,72	0,77	0,83	0,87	0,91	0,96	0,91	0,96
	55	0,74	0,77	0,83	0,89	0,93	0,99	1,04	0,99	1,04
	50	0,79	0,83	0,89	0,96	1,02	1,08	1,15	1,08	1,15
	40	0,93	0,98	1,07	1,18	1,26	1,36	1,48	1,26	1,48
90	80	0,59	0,61	0,64	0,68	0,71	0,74	0,77	0,74	0,77
	75	0,62	0,64	0,68	0,72	0,75	0,78	0,82	0,78	0,82
	70	0,65	0,67	0,72	0,76	0,80	0,83	0,87	0,80	0,87
	65	0,68	0,71	0,76	0,81	0,85	0,89	0,93	0,89	0,93
	60	0,72	0,76	0,81	0,87	0,91	0,96	1,01	0,96	1,01
	55	0,77	0,81	0,87	0,93	0,98	1,04	1,10	1,04	1,10
85	50	0,83	0,87	0,93	1,01	1,07	1,14	1,21	1,14	1,21
	75	0,64	0,67	0,71	0,75	0,79	0,82	0,86	0,82	0,86
	70	0,68	0,70	0,75	0,80	0,84	0,88	0,92	0,88	0,92
	65	0,72	0,75	0,80	0,85	0,89	0,94	0,99	0,94	0,99
	60	0,76	0,79	0,85	0,91	0,96	1,01	1,07	0,96	1,07
	55	0,81	0,85	0,91	0,98	1,04	1,10	1,16	1,04	1,16
80	50	0,87	0,91	0,98	1,07	1,14	1,25	1,32	1,14	1,25
	70	0,71	0,74	0,79	0,84	0,88	0,93	0,97	0,93	0,97
	60	0,80	0,83	0,89	0,96	1,01	1,07	1,13	1,07	1,13
	50	0,91	0,96	1,04	1,13	1,20	1,28	1,37	1,28	1,37
	40	1,07	1,14	1,25	1,39	1,50	1,63	1,78	1,63	1,78
75	65	0,79	0,82	0,88	0,95	1,00	1,05	1,12	1,05	1,12
	60	0,84	0,88	0,94	1,02	1,08	1,14	1,21	1,14	1,21
	55	0,89	0,94	1,01	1,10	1,17	1,24	1,32	1,24	1,32
	50	0,96	1,01	1,10	1,20	1,28	1,37	1,47	1,37	1,47
	45	1,04	1,10	1,20	1,32	1,42	1,53	1,66	1,53	1,66
70	60	0,88	0,93	1,00	1,08	1,15	1,22	1,30	1,22	1,30
	55	0,94	0,99	1,08	1,17	1,25	1,33	1,42	1,33	1,42
	50	1,01	1,07	1,17	1,28	1,37	1,47	1,58	1,47	1,58
	45	1,10	1,16	1,28	1,42	1,52	1,65	1,79	1,65	1,79
	40	1,20	1,28	1,42	1,59	1,73	1,89	2,08	1,89	2,08
65	55	1,00	1,05	1,15	1,26	1,34	1,43	1,54	1,43	1,54
	50	1,08	1,14	1,25	1,37	1,47	1,59	1,71	1,59	1,71
	45	1,17	1,24	1,37	1,52	1,64	1,78	1,94	1,78	1,94
	40	1,28	1,37	1,52	1,71	1,87	2,05	2,27	1,87	2,27
	35	1,42	1,53	1,73	1,98	2,19	2,44	2,76	2,44	2,76
60	55	1,07	1,13	1,23	1,36	1,45	1,56	1,68	1,56	1,68
	50	1,15	1,22	1,34	1,48	1,60	1,73	1,87	1,73	1,87
	45	1,25	1,33	1,47	1,65	1,78	1,94	2,13	1,94	2,13
	40	1,37	1,47	1,64	1,86	2,03	2,24	2,50	2,24	2,50
	35	1,52	1,65	1,87	2,15	2,39	2,69	3,06	2,69	3,06
	30	1,73	1,89	2,19	2,59	2,96	3,44	4,13	3,44	4,13
55	50	1,23	1,31	1,45	1,62	1,75	1,90	2,07	1,90	2,07
	45	1,34	1,43	1,60	1,80	1,96	2,15	2,37	2,15	2,37
	40	1,47	1,59	1,78	2,03	2,24	2,48	2,78	2,48	2,78
	35	1,64	1,78	2,03	2,36	2,64	2,99	3,43	2,99	3,43
	30	1,87	2,05	2,39	2,86	3,29	3,86	4,67	3,86	4,67
50	45	1,45	1,56	1,75	1,98	2,17	2,40	2,67	2,40	2,67
	40	1,60	1,73	1,96	2,25	2,50	2,79	3,15	2,79	3,15
	35	1,78	1,94	2,24	2,63	2,96	3,38	3,92	3,38	3,92
	30	2,03	2,24	2,64	3,20	3,70	4,39	5,39	4,39	5,39
45	40	1,75	1,90	2,17	2,53	2,83	3,19	3,66	3,19	3,66
	35	1,96	2,15	2,50	2,96	3,37	3,89	4,58	3,89	4,58
	30	2,24	2,48	2,96	3,63	4,25	5,11	6,38	5,11	6,38
	25	2,40	2,83	3,41	3,93	4,62	5,54	6,38	4,62	5,54
	20	2,50	2,79	3,37	4,21	5,01	6,14	7,87	5,01	6,14

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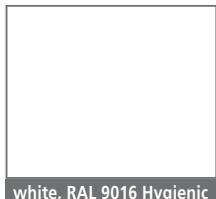
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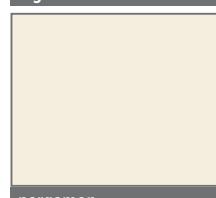
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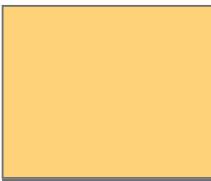
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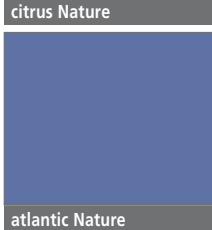
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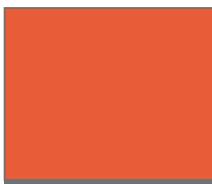


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