DI GROOVED MECHANICAL TEE-GROOVED OUTLET

Type: 3G **Doc No: DS-400-3G-01-E**

1.0 PRODUCT OVERVIEW

Grooved outlet mechanical tee is a saddle-shaped joint for connecting one side of a pipe in the middle of a straight pipe, the branch pipe is a grooved connection.

Dimensions:

1"(DN25)– 10"(DN250)

Design Standard:

ISO6182, AWWA C606, GB 5135.11

Connection Standard:

ASME B36.10, ASTM A53-A53M, ISO 4200

Working Pressure:

175PSI-300PSI

Application:

Grooved outlet mechanical tee is suitable for medium and low pressure pipeline systems with nominal pressure 175-300 PSI, nominal size DN25-DN250, temperature range of - 20 ℃-+180℃, which are widely applied in water supply and drainage, fire-fighting, air conditioning, etc.

Pipe Material:

Welded and seamless rolled steel pipes according to ASME B36.10, ASTM A53-A53M, ISO 4200, GB/T 21835

Surface Treatment:

☐ Electrophoretic painting
☐ Epoxy power painting
☐ Hot-dip galvanizing
☐ Black
☐ Others would be available upon clients' detailed request

2.0 APPROVALS

3.0 SPECIFICATIONS

Housing:

ASTM A536, Ductile iron 65-45-12

Gasket:

1、EPDM Gasket，code E：
Temperature：-34℃～+110℃ （-30～+230℉）；
Applicable media: water, gas, diluted acid (base), and other chemicals (excluding hydrocarbons)
Note: Strictly prohibit the use of oil and hydrocarbons.
2、NBR，code D:
Temperature：-29℃～+82℃ （-20～+180℉）;
Applicable media: Petroleum products, vegetable oils, mineral oils, etc.
Note: strictly prohibit use with high temperature substances.
3、Silicone Rubber, code S：
Temperature: -40℃～+177℃ （-40～+350℉）
Applicable media: High temperature and dry air and some high temperature chemicals, drinking water and so on.
4、Chloroprene Rubber，code LD：
Temperature：-32℃～+82℃ （-26～+180℉）
Applicable media: sea water
5、Fluororubber, code F：
Temperature: -20℃～+180℃
Applicable media: Hot oil, some chemical products, good oxidation resistance.

Bolts/Nuts:

ANSI Heavy Hex Nut

1. Material: SAE J995 2.
2. Thread: ANSI B 1.1-1982, class 2B.
3. Surface Treatment: Zinc electroplated per ASTM B633
CLASS FE/ZN5 TYPE Ⅲ , thickness ≥ 5μm per class SC1.

Metric Heavy Hex Nut

1. Material: ISO 898-2:1992 \ GB/T3098.2-2000 Class 8.
2. Thread: ISO 261, tolerance 6h for M10& M12, 7h for M16 and above.
3. Surface Treatment: Zinc Electroplated followed by a yellow chromate dip per ISO 2081 FE/ZN5, ISO4520 CLASS 1A.

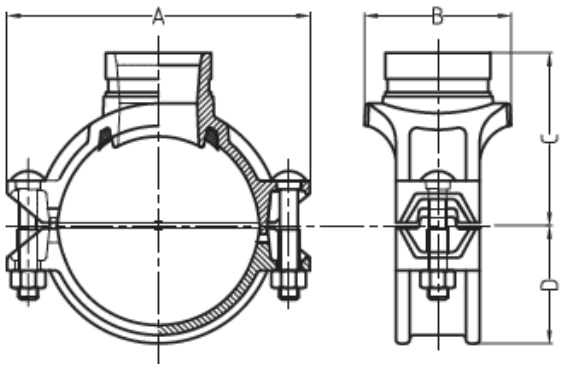
ANSI Oval Neck Track Bolt

1. Material: SAE J429 5.
2. Thread: UNC thread per ANSI B 1.1 Class 2A.
3. Surface Treatment: Silver chromate electroplated per ASTM B633 CLASS FE/ZN5 TYPE Ⅲ, thickness ≥ 5μm per class SC1.

Metric Oval Neck Track Bolt

1. Material: ISO 898-1: 1992 \ GB/T3098.1-2000 Class 8.8.
2. Thread: ISO metric thread per ISO 261, tolerance 6h.
3. Surface Treatment: Yellow chromate electroplated per ISO 2081 FE/ZN5 ISO4520 CLASS 1A.

4.0 DIMENSIONS AND PERFORMANCE



Nominal Size	Pipe O.D	Working Pressure	Hole Dia. mm/in	Dimensions				Bolt Size
				A	B	C	D	
mm/in	mm/in	PSI/Mpa	+1.6,0/+0.063,0	mm/in	mm/in	mm/in	mm/in	mm/in
50×32	60.3×42.4	300	45	116	76	69.5	39	3/8×55
2×1¼	2.375×1.660	2.07	1.75	4.57	2.99	2.74	1.54	M10X57
50×40	60.3×48.3	300	45	116	76	69.5	39	3/8×55
2×1½	2.375×1.900	2.07	1.75	4.57	2.99	2.74	1.54	M10X57
65×25	73.0×33.7	300	38	137	71	78	49	1/2×70
2½×1	2.875×1.315	2.07	1.5	5.39	2.8	3.07	1.93	M12X70
65×32	73.0×42.4	300	51	137	84.5	78	49	1/2×70
2½×1¼	2.875×1.660	2.07	2	5.39	3.33	3.07	1.93	M12X70
65×40	73.0×48.3	300	51	137	84.5	78	49	1/2×70
2½×1½	2.875×1.900	2.07	2	5.39	3.33	3.07	1.93	M12X70
65×25	76.1×33.7	300	38	137	71	78	49.5	1/2×70
76.1×1	3.000×1.315	2.07	1.5	5.39	2.8	3.07	1.95	M12X70
65×32	76.1×42.4	300	51	137	84.5	78	49.5	1/2×70
76.1×1¼	3.000×1.660	2.07	2	5.39	3.33	3.07	1.95	M12X70
65×40	76.1×48.3	300	51	137	84.5	78	49.5	1/2×70

76.1×1½	3.000×1.900	2.07	2	5.39	3.33	3.07	1.95	M12X70
80×25	88.9×33.7	300	38	152	72.5	84.5	56.5	1/2×75
3×1	3.500×1.315	2.07	1.5	5.98	2.85	3.33	2.22	M12X76
80×32	88.9×42.4	300	51	152	85.5	84.5	56.5	1/2×75
3×1¼	3.500×1.660	2.07	2	5.98	3.37	3.33	2.22	M12X76
80×40	88.9×48.3	300	51	152	85.5	84.5	56.5	1/2×75
3×1½	3.500×1.900	2.07	2	5.98	3.37	3.33	2.22	M12X76
80×50	88.9×60.3	300	64	152	98	84.5	56.5	1/2×75
3×2	3.500×2.375	2.07	2.5	5.98	3.86	3.33	2.22	M12X76
100×25	114.3×33.7	300	38	188	78.4	102	70	1/2×75
4×1	4.500×1.315	2.07	1.5	7.4	3.09	4.02	2.76	M12X76
100×32	114.3X42.4	300	51	188	89	102	70	1/2×75
4×1¼	4.500×1.660	2.07	2	7.4	3.5	4.02	2.76	M12X76
100×40	114.3×48.3	300	51	188	89	102	70	1/2×75
4×1½	4.500×1.900	2.07	2	7.4	3.5	4.02	2.76	M12X76
100×50	114.3×60.3	300	64	188	104.5	102	70	1/2×75
4×2	4.500×2.375	2.07	2.5	7.4	4.11	4.02	2.76	M12X76

Nominal Size	**Pipe O.D**	**Working Pressure**	**Hole Dia mm/in**	**Dimensions**				**Bolt Size**
				A	**B**	**C**	**D**	
mm/in	**mm/in**	**PSI/Mpa**	**+1.6,0/+0.063,0**	**mm/in**	**mm/in**	**mm/in**	**mm/in**	**mm/in**
100×65	114.3×73.0	300	70	188	104.5	102	70	1/2×75
4×2½	4.500×2.875	2.07	2.75	7.4	4.11	4.02	2.76	M12X76
100×65	114.3×76.1	300	70	188	104.5	102	70	1/2×75
4×76.1	4.500×3.000	2.07	2.75	7.4	4.11	4.02	2.76	M12X76
100×80	114.3×88.9	300	89	188	128	102	70	1/2×75
4×3	4.500×3.500	2.07	3.5	7.4	5.03	4.02	2.76	M12X76
125×32	139.7×42.4	300	51	221.5	95	118	84	5/8×85
139.7×1¼	5.500×1.660	2.07	2	8.72	3.74	4.65	3.31	M16X85
125×40	139.7×48.3	300	51	221.5	95	118	84	5/8×85
139.7×1½	5.500×1.900	2.07	2	8.72	3.74	4.65	3.31	M16X85
125×50	139.7×60.3	300	64	221.5	112.5	118	84	5/8×85
139.7×2	5.500×2.375	2.07	2.5	8.72	4.43	4.65	3.31	M16X85
125×65	139.7×76.1	300	70	221.5	112.5	118	84	5/8×85
139.7×76.1	5.500×3.000	2.07	2.75	8.72	4.43	4.65	3.31	M16X85
125×80	139.7×88.9	300	89	221.5	132	118	84	5/8×85
139.7×3	5.500×3.500	2.07	3.5	8.72	5.2	4.65	3.31	M16X85
125×100	139.7×114.3	300	114	221.5	160	125	84	5/8×85
139.7×4	5.500×4.500	2.07	4.5	8.72	6.3	4.92	3.31	M16X85

150×50	159.1×60.3	300	64	244	112.5	125	94	5/8×105
159.0×2	6.250×2.375	2.07	2.5	9.6	4.43	4.92	3.7	M16X108
150×100	159.1×108.0	300	114	244	154	133	94	5/8×105
159.0×108.0	6.250×4.250	2.07	4.5	9.6	6.06	5.24	3.7	M16X108
150×100	159.1×114.3	300	114	244	159	125	94	5/8×105
159.0×4	6.250×4.500	2.07	4.5	9.6	6.26	4.92	3.7	M16X108
150×50	165.1×60.3	300	64	244	112.5	127	97.5	5/8×105
165.1×2	6.500×2.375	2.07	2.5	9.6	4.43	5	3.84	M16X108
150×65	165.1×76.1	300	70	244	112.5	130	97.5	5/8×105
165.1×76.1	6.500×3.000	2.07	2.75	9.6	4.43	5.12	3.84	M16X108

Nominal Size	**Pipe O.D**	**Working Pressure**	**Hole Dia mm/in**	**Dimensions**				**Bolt Size**
				A	**B**	**C**	**D**	
mm/in	**mm/in**	**PSI/Mpa**	**+1.6,0/+0.063,0**	**mm/in**	**mm/in**	**mm/in**	**mm/in**	**mm/in**
150×80	165.1×88.9	300	89	244	132	130	97.5	5/8×105
6½O.D×3	6.500×3.500	2.07	3.5	9.6	5.2	5.12	3.84	M16X108
150×100	165.1×114.3	300	114	244	154	135	97.5	5/8×105
6½O.D×4	6.500×4.500	2.07	4.5	9.6	6.06	5.32	3.84	M16X108
150×40	168.3×48.3	300	51	247	95	128	98.5	5/8×105
6×1½	6.500×1.900	2.07	2	9.72	3.74	5.04	3.88	M16X108
150×50	168.3×60.3	300	64	247	114	134	98.5	5/8×105
6×2	6.625×2.375	2.07	2.5	9.72	4.49	5.28	3.88	M16X108
150×65	168.3×73.0	300	70	247	112.5	135	98.5	5/8×105
6×2½	6.625×2.875	2.07	2.75	9.72	4.43	5.32	3.88	M16X108
150×65	168.3×76.1	300	70	247	112.5	135	98.5	5/8×105
6×2½	6.625×3.000	2.07	2.75	9.72	4.43	5.32	3.88	M16X108
150×80	168.3×88.9	300	89	247	132	136.5	98.5	5/8×105
6×3	6.625×3.500	2.07	3.5	9.72	5.2	5.37	3.88	M16X108
150×100	168.3×114.3	300	114	247	160	138	98.5	5/8×105
6×4	6.625×4.500	2.07	4.5	9.72	6.3	5.43	3.88	M16X108
200×50	219.1×60.3	300	64	320	118	158	125	3/4×115
8×2	8.625×2.375	2.07	2.5	12.6	4.65	6.22	4.92	M20X115
200×65	216.3×76.1	300	70	315	117	157	122	3/4×115
8×76.1	8.516×3.000	2.07	2.75	12.4	4.61	6.18	4.8	M20X115
200×65	219.1×73.0	300	70	320	118	158	125	3/4×115
8×2½	8.625×2.875	2.07	2.75	12.6	4.65	6.22	4.92	M20X115
200×65	219.1×76.1	300	70	320	118	158	125	3/4×115

8×76.1	8.625×3.000	2.07	2.75	12.6	4.65	6.22	4.92	M20X115
200×80	219.1×88.9	300	89	320	136.5	161	125	3/4×115
8×3	8.625×3.500	2.07	3.5	12.6	5.37	6.34	4.92	M20X115
200×100	219.1×108.0	300	114	320	162	161	125	3/4×115
8×4	8.625×4.250	2.07	4.5	12.6	6.38	6.34	4.92	M20X115

Nominal Size	Pipe O.D	Working Pressure	Hole Dia mm/in	Dimensions				Bolt Size
				A	B	C	D	
mm/in	mm/in	PSI/Mpa	+1.6,0/+0.063,0	mm/in	mm/in	mm/in	mm/in	mm/in
200×100	219.1×114.3	300	114	320	162	161	125	3/4×115
8×4	8.625×4.500	2.07	4.5	12.6	6.38	6.34	4.92	M20X115
250×65	273.0×76.1	300	70	376	118	189	155	3/4×120
10×2½	10.75×3.000	2.07	2.75	14.8	4.65	7.44	6.1	M20X115
250×80	273.0×88.9	300	89	376	136.5	189	155	3/4×120
10×3	10.75×3.500	2.07	3.5	14.8	5.37	7.44	6.1	M20X115
250×100	273.0×108	300	114	376	164	189	155	3/4×120
10×4	10.75×4.250	2.07	4.5	14.8	6.46	7.44	6.1	M20X115
250×100	273.0×114.3	300	114	376	164	189	155	3/4×120
10×4	10.75×4.500	2.07	4.5	14.8	6.46	7.44	6.1	M20X115

5.0 REFERENCE MATERIALS

Approved certification for grooved fittings and couplings

I-JM-Grooved fitting: Installation Instructions for grooved fittings and couplings