DI GROOVD STANDARD FLEXIBLE COUPLING

Type: 1N **Doc No: DS-400-1N-01-E**

1.0 PRODUCT OVERVIEW

Standard flexible couplings are mainly used for grooved pipe connections where adjacent pipe ends allow a certain amount of relative angular displacement and corresponding axial rotation.

Dimensions:

1"(DN25)– 24"(DN600)

Design Standard:

ISO6182, AWWA C606, GB 5135.11

Connection Standard:

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

Working Pressure:

175PSI-500PSI

Application:

Standard flexible couplings are suitable for medium and low pressure pipeline systems with nominal pressure 175-500 PSI, nominal size DN25-DN600, 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

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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:

Sign Off:
Owner:_____ Contractor:_____ Engineer: _____
Location:_____ Date:_____ Approved& Date: _____

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.

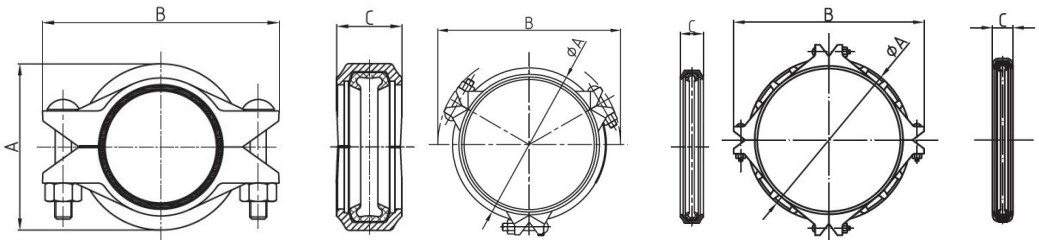
ANSI Oval Neck Track Bolt

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



Sign Off:

Owner:_____ Contractor:_____ Engineer: _____

Location:_____ Date:_____ Approved& Date: _____

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JINAN MEIDE CASTING CO., LTD

Nominal Size	Pipe O.D	Working Pressure	Dimensions			Bolt Size
DN/in	mm/in	PSI/MPa	A mm/in	B mm/in	C mm/in	No.-Size mm
25	33.7	500	55	92	42	2-3/8X55
1	1.327	3.45	2.16	3.62	1.65	2-M10X57
32	42.4	500	65	104	44	2-3/8X55
1¼	1.669	3.45	2.56	4.14	1.74	2-M10X57
40	48.3	500	70	110	44	2-3/8X55
1½	1.9	3.45	2.75	4.33	1.74	2-M10X57
50	60.3	500	83	125	44	2-3/8X55
2	2.375	3.45	3.27	4.92	1.74	2-M10X57
65	73	500	96	143	45	2-3/8X55
2½	2.875	3.45	3.78	5.63	1.78	2-M10X57
65	76.1	500	100	145	45	2-3/8X55
2½	3	3.45	3.94	5.71	1.78	2-M10X57
80	88.9	500	115	160	45	2-1/2X70
3	3.5	3.45	4.53	6.3	1.78	2-M12X70
100	108	500	138	190	50	2-1/2X70
4	4.25	3.45	5.43	7.48	1.97	2-M12X70
100	114.3	500	145	198	50	2-1/2X70
4	4.5	3.45	5.71	7.8	1.97	2-M12X70
125	133	300	162	225	51	2-5/8X80
5	5.25	2.07	6.38	8.86	2.01	2-M16X85
125	139.7	500	169	230	52	2-5/8X80
5	5.5	3.45	6.65	9.06	2.05	2-M16X85
125	141.3	500	170	232	51	2-5/8X80
5	5.563	3.45	6.69	9.13	2.01	2-M16X85
150	159	300	190	256	52	2-5/8X85
6	6.25	2.07	7.48	10.08	2.05	2-M16X85
150	165.1	500	196	260	52	2-5/8X85
6	6.5	3.45	7.72	10.24	2.05	2-M16X85
150	168.3	500	200	265	52	2-5/8X85
6	6.625	3.45	7.87	10.43	2.05	2-M16X85
200	216.3	300	254	320	59	2-5/8X85
8	8.516	2.07	10	12.6	2.32	2-M16X85
200	219.1	450	258	342	60	2-3/4X115
8	8.625	3.1	10.24	13.46	2.37	2-M20X115
250	267.4	300	308.5	403	64	2-3/4X115
10	10.528	2.07	12.15	15.87	2.52	2-M20X115

Sign Off:

Owner:_____ Contractor:_____ Engineer: _____

Location:_____ Date:_____ Approved& Date: _____

Nominal Size	Pipe O.D	Working Pressure	Dimensions			Bolt Size
DN/in	mm/in	PSI/MPa	A mm/in	B mm/in	C mm/in	No.-Size mm
250 10	273 10.75	300 2.07	337 13.27	406 16	65 2.56	2-7/8X140 2-M22X140
300 12	318.5 12.539	300 2.07	363 14.29	460 18.11	63 2.48	2-7/8X140 2-M22X140
300 12	323.9 12.75	300 2.07	378 14.96	465 18.31	65 2.56	2-7/8X140 2-M22X140
350 14	355.6 14	300 2.07	402 15.83	493 19.41	72 2.83	3-7/8X140 3-M22X140
350 14	377 14.843	225 1.6	428 16.85	520 20.45	72 2.85	3-7/8X140 3-M22X140
400 16	406.4 16	300 2.07	458 18.03	547 21.54	72 2.85	3-7/8X140 3-M22X140
400 16	426 16.772	225 1.6	476 18.74	566 22.28	73 2.87	3-7/8X140 3-M22X140
450 18	457.2 18	225 1.6	505 19.88	598 23.54	78 3.07	3-7/8X140 3-M22X140
450 18	480 18.9	225 1.6	529 20.83	623 24.53	78 3.07	3-7/8X140 3-M22X140
500 20	508 20	225 1.6	550 21.65	648 25.51	78 3.07	4-7/8X140 4-M22X140
500 20	530 20.866	225 1.6	585 23.03	680 26.77	76 3	4-7/8X140 4-M22X140
600 24	609.6 24	225 1.6	662 26.06	774 30.47	78 3.07	4-1X140

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Nom. Size	Pipe O.D	1N						
		Cut Grooved		Roll Grooved			Max. End Load	Pipe End Separation
		Max. Work Pressure		Max. Work Pressure				
		Sch.30	Sch.40	Sch.10	Sch.30	Sch.40		
DN/in	mm/in	Bar/Psi	Bar/Psi	Bar/Psi	Bar/Psi	Bar/Psi	KN/Lbs	mm/in
25 1	33.7 1.315	35/500	35/500	35/500	35/500	35/500	3.0/680	0-1.6 0-0.06
32 1¼	42.4 1.66	35/500	35/500	35/500	35/500	35/500	4.8/1080	0-1.6 0-0.06
40 1½	48.3 1.9	35/500	35/500	35/500	35/500	35/500	6.3/1420	0-3.2 0-0.13
50 2	60.3 2.375	35/500	35/500	35/500	35/500	35/500	9.8/2210	0-3.2 0-0.13
65 2½	73 2.875	35/500	35/500	35/500	35/500	35/500	14.4/3240	0-3.2 0-0.13
65 2½	76.1 3	35/500	35/500	35/500	35/500	35/500	15.7/3520	0-3.2 0-0.13
80 3	88.9 3.5	35/500	35/500	35/500	35/500	35/500	21.4/4810	0-3.2 0-0.13
100 4	108 4.25	35/500	35/500	35/500	35/500	35/500	31.5/7100	0-3.2 0-0.13
100 4	114.3 4.5	35/500	35/500	35/500	35/500	35/500	35.4/7960	0-3.2 0-0.13
125 5	133 5.25	20/300	20/300	20/300	20/300	20/300	28.7/6460	0-3.2 0-0.13
125 5	139.7 5.5	35/500	35/500	35/500	35/500	35/500	52.9/11800	0-3.2 0-0.13
125 5	141.3 5.563	35/500	35/500	35/500	35/500	35/500	54.1/12100	0-3.2 0-0.13
150 6	159 6.25	20/300	20/300	20/300	20/300	20/300	41.0/9240	0-3.2 0-0.13
150 6	165.1 6.5	35/500	35/500	35/500	35/500	35/500	73.8/16610	0-3.2 0-0.13
150 6	168.3 6.625	35/500	35/500	35/500	35/500	35/500	76.7/17260	0-3.2 0-0.13
200 8	216.3 8.516	20/300	20/300	20/300	20/300	20/300	76.0/17100	0-3.2 0-0.13

Sign Off:

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Nom. Size	Pipe O.D	1N						
		Cut Grooved		Roll Grooved			Max. End Load	Pipe End Separation
		Max. Work Pressure		Max. Work Pressure				
		Sch.30	Sch.40	Sch.10	Sch.30	Sch.40		
DN/in	mm/in	Bar/Psi	Bar/Psi	Bar/Psi	Bar/Psi	Bar/Psi	KN/Lbs	mm/in
200 8	219.1 8.625	31/450	31/450	20/300	31/450	31/450	116.9/26280	0-3.2 0-0.13
250 10	267.4 10.528	20/300	20/300	20/300	20/300	20/300	116.2/26140	0-3.2 0-0.13
250 10	273 10.75	20/300	20/300	20/300	20/300	20/300	121.0/27210	0-3.2 0-0.13
300 12	318.5 12.539	20/300	20/300	20/300	20/300	20/300	164.8/37090	0-3.2 0-0.13
300 12	323.9 12.75	20/300	20/300	20/300	20/300	20/300	170.3/38280	0-3.2 0-0.13
350 14	355.6 14	20/300	20/300	20/300	20/300	20/300	205.5/46220	0-3.2 0-0.13
350 14	377 14.843	16/225	16/225	16/225	16/225	16/225	178.5/40160	0-3.2 0-0.13
400 16	406.4 16	20/300	20/300	20/300	20/300	20/300	268.4/60370	0-3.2 0-0.13
400 16	426 16.772	16/225	16/225	16/225	16/225	16/225	227.9/51270	0-3.2 0-0.13
450 18	457.2 18	16/225	16/225	16/225	16/225	16/225	262.5/59060	0-3.2 0-0.13
450 18	480 18.9	16/225	16/225	16/225	16/225	16/225	289.4/65100	0-3.2 0-0.13
500 20	508 20	16/225	16/225	16/225	16/225	16/225	324.1/72910	0-3.2 0-0.13
500 20	530 20.866	16/225	16/225	16/225	16/225	16/225	351.5/79070	0-3.2 0-0.13
600 24	609.6 24	16/225	16/225	16/225	16/225	16/225	466.7/104990	0-3.2 0-0.13

5.0 REFERENCE MATERIALS

Approved certification for Grooved Fittings and Couplings

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

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Location:_____ Date:_____ Approved& Date: _____

couplings

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Owner:_____ Contractor:_____ Engineer: _____

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