



## GROOVED COUPLINGS

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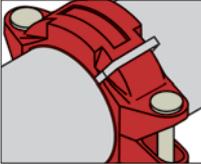
GRINNELL Couplings are designed for grooved end pipe and are available in nominal sizes of 25 to 600mm (1" to 24") including BS, ISO, and JIS outside diameters.

The GRINNELL Coupling Design provides economical advantages when compared to welded or flanged systems. GRINNELL Couplings provide a universal method for connecting pipe, fittings, and pipe system components.

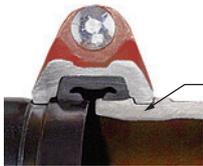
GRINNELL Couplings and Gaskets permit a wide selection of combinations for specific applications.

Field modifications are easily accommodated with GRINNELL Mechanical Products as the couplings can be easily rotated, eliminated and/or added to facilitate necessary modifications.

Grooved Couplings

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General notes: Additional information is included in our data sheets and is available upon request. It is the Designer's responsibility to select products suitable for the intended service and to ensure that pressure ratings and performance data is not exceeded. Always read and understand the installation constructions. Never remove any piping components nor correct or modify any piping deficiencies without first depressurising and draining the system. Material and gasket selection should be verified with the gasket recommendation listing for the specific application.



Full contact between Figure 772 Coupling key and groove diameter

### Additional Features:

- Standard industry groove does not require special tools.
- Backed by the industry's best 10-Year Limited Warranty. Review terms and conditions of sale on [www.grinnell.com](http://www.grinnell.com).



## MATERIAL SPECIFICATIONS

### Ductile Iron Housing Specifications

- ASTM A 536 – Standard specification for ductile iron castings, Grade 65-45-12
- Tensile strength, minimum 4481.6 Bar (65,000 psi)
- Yield strength, minimum 3102.6 Bar (45,000 psi)
- Elongation minimum 12%
- ASTM A 153 – Standard specification for hot-dip galvanising

### Bolt/Nut Specifications

- **Metric:** Carbon steel oval neck track head bolts (Gold colour coded) are heat treated and conform to the physical properties of ASTM F 568M with a minimum tensile strength of 760 MPa. Carbon Steel heavy hex nuts conform to the physical properties of ASTM A 563 M Class 9. Bolts and nuts are zinc-electroplated conforming to ASTM B 633.
- **ANSI:** Carbon steel oval neck bolts and nuts are heat-treated and conform to the physical properties of ASTM A 183 Grade 2 and SAE J429 Grade 5 with a minimum tensile strength of 7584 Bar (110,000 psi). Carbon Steel heavy hex nuts conform to the physical properties of ASTM A 183 Grade 2 and SAE J995 Grade 5. Bolts and nuts are zinc-electroplated conforming to ASTM B 633.
- Stainless steel bolts and nuts are available upon request.

### Coatings

- Red – Non-lead paint RAL 3000 (standard)
- White – Non-lead paint RAL 9010 (optional)
- Hot-Dipped, Zinc Galvanised (optional)

## GRINNELL Coupling Gasket Specifications

- **Grade "E" EPDM** gaskets have a Green colour code stripe identification and conform to ASTM D 2000 for service temperatures from -34°C to 110°C (-30°F to 230°F). They are recommended for hot water not to exceed 110°C (230°F), plus a variety of dilute acids, oil free air, and many chemical services. They are not recommended for petroleum services. For low temperature and vacuum systems, a Tri-Seal Grade "E" EPDM gasket with a rigid coupling is recommended.
- **Grade "T" Nitrile** gaskets have an Orange colour code stripe identification and conform to ASTM D 2000 for service temperatures from -29°C to 82°C (-20°F to 180°F). They are recommended for petroleum products, vegetable oils, mineral oils, and air with oil vapours.
- **Grade "L" Silicone** gaskets are Red colour code stripe and conform to ASTM D 2000 for service temperatures from -34°C to 177°C (-30°F to 350°F). They are recommended for air without hydrocarbons, or dry heat.
- **Grade "O" Fluoroelastomer** gaskets have a Blue colour code stripe and conform to ASTM D 2000 for service temperatures from -7°C to 149°C (+20°F to 300°F). They are recommended for oxidizing acids, petroleum products, hydraulic fluids, lubricants, and halogenated hydrocarbons.
- **Grade "EN" NSF-61 Approved** gaskets have a Yellow and Green colour code stripe and are for potable water systems up to 82°C (180°F). They are not recommended for petroleum service.

## Figure 772 Rigid Couplings

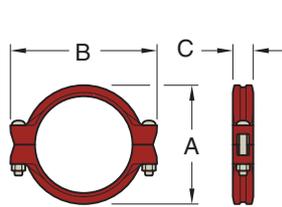
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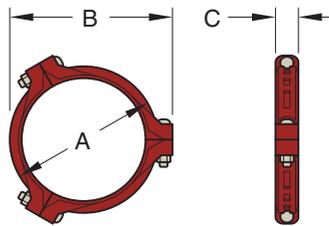


Grooved Couplings

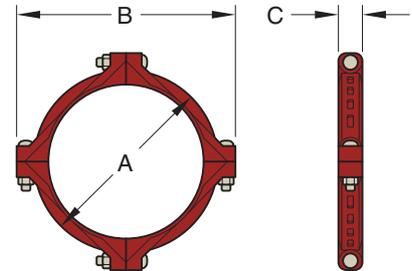
The GRINNELL Figure 772 Rigid Coupling provides a rigid joint by firmly gripping along the full 360° circumference of the pipe grooves. This coupling offers a dependable method of joining pipe and is an economical alternative to welding, threading, or using flanges. The GRINNELL Figure 772 Rigid Coupling is UL Listed for grounding and bonding, and is suitable for bonding systems with a maximum service entrance capacity of 200 amps. Sizes 32 – 200mm (1 1/4" – 8") feature a clamshell design that makes installation easier and faster.



32mm - 300mm (1 1/4" - 12")



350mm - 450mm (14" - 18")



500mm - 600mm (20" - 24")

Part Number			Pipe Size					Dimensions			Coupling Bolts		Approx. Weight Kg. Lbs.
Grade "E" Gasket	Grade "E" Tri-Seal Gasket	DVGW Approved	Nominal mm Inches	O.D. mm Inches	Max. † Pressure Bar psi	Max. † End Load kN Lbs.	Max. * † End Gap mm In.	A mm In.	B mm In.	C mm In.	Qty.	Size mm Inches	
772ME0042*	772MT0042*	-	32 1 1/4	42.4 1.660	51.7 750	7.22 1,623	1.5 0.06	69.9 2.75	111.3 4.38	46.0 1.81	2	M10 x 57 3/8 x 2 1/4	0.5 1.0
772ME0048*	772MT0048*	-	40 1 1/2	48.3 1.900	51.7 750	9.46 2,127	2.0 0.08	76.2 3.00	117.3 4.62	46.0 1.81	2	M10 x 57 3/8 x 2 1/4	0.5 1.0
772ME0060*	772MT0060*	772MT0060*D	50 2	60.3 2.375	51.7 750	14.78 3,323	4.8 0.188	87 3.41	145.0 5.70	48 1.9	2	M12 x 76 1/2 x 3	1.3 2.9
772ME0073*	772MT0073*	-	65 2 1/2	73.0 2.875	51.7 750	21.66 4,869	4.8 0.188	101 3.97	160.0 6.30	48 1.9	2	M12 x 76 1/2 x 3	1.5 3.3
772ME0076*	772MT0076*	772MT0076*D	65 76,1mm	76.1 3.000	51.7 750	23.58 5,301	4.8 0.188	104 4.10	163.0 6.43	48 1.9	2	-	1.6 3.6
772ME0089*	772MT0089*	772MT0089*D	80 3	88.9 3.500	51.7 750	32.10 7,216	4.8 0.188	117 4.60	176.0 6.93	48 1.9	2	M12 x 76 1/2 x 3	1.7 3.7
772ME0114*	772MT0114*	772MT0114*D	100 4	114.3 4.500	51.7 750	53.06 11,928	4.8 0.188	147 5.81	205.0 8.07	48 1.9	2	M12 x 76 1/2 x 3	2.0 4.3
772ME0139*	772MT0139*	772MT0139*D	125 139,7mm	139.7 5.500	51.7 750	79.26 17,819	4.8 0.19	178.3 7.02	246.9 9.72	52.3 2.06	2	-	3.4 7.5
772ME0141*	772MT0141*	-	125 5	141.3 5.563	51.7 750	81.09 18,229	4.8 0.19	180.1 7.09	246.6 9.71	51.8 2.04	2	M16 x 83 5/8 x 3 1/4	3.4 7.5
772ME0165*	772MT0165*	-	150 165,1mm	165.1 6.500	48.2 700	103.18 23,228	4.8 0.19	205.5 8.09	267.5 10.53	54.1 2.13	2	-	3.4 7.6
772ME0168*	772MT0168*	772MT0168*D	150 6	168.3 6.625	48.2 700	107.34 24,130	4.8 0.19	205.5 8.09	267.5 10.53	54.1 2.13	2	M16 x 83 5/8 x 3 1/4	3.4 7.6
772ME0219*	772MT0219*	772MT0219*D	200 8	219.1 8.625	41.4 600	155.94 35,056	4.8 0.19	268.2 10.56	344.4 13.56	66.5 2.62	2	M20 x 121 3/4 x 4 3/4	8.2 18.0

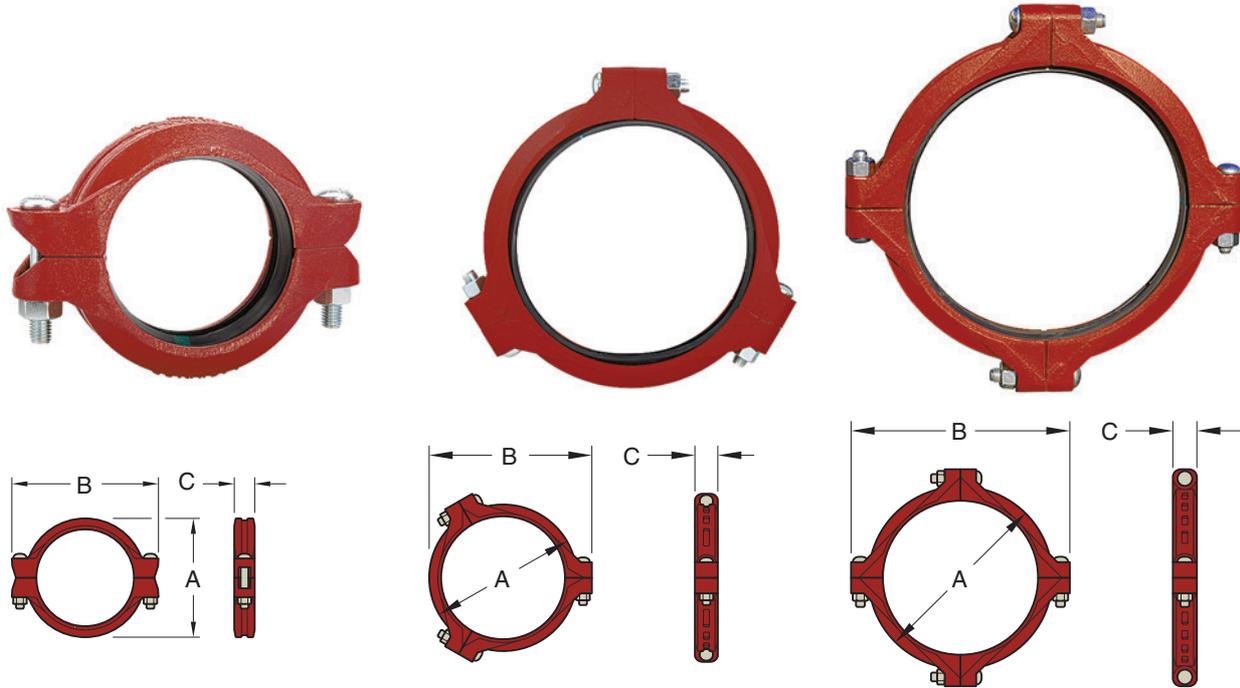
## Figure 772 Rigid Couplings

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**10**  
YEAR  
LIMITED  
WARRANTY

Grooved  
Couplings



32mm - 300mm (1¼" - 12")

350mm - 450mm (14" - 18")

500mm - 600mm (20" - 24")

Part Number			Pipe Size					Dimensions			Coupling Bolts		Approx. Weight Kg. Lbs.
Grade "E" Gasket	Grade "E" Tri-Seal Gasket	DVGW Approved 	Nominal mm Inches	O.D. mm Inches	Max.† Pressure Bar psi	Max.† End Load kN Lbs.	Max. ‡ End Gap mm In.	A mm In.	B mm In.	C mm In.	Qty.	Size mm Inches	
772ME0273*	772MT0273*	772MT0273*D	250 10	273.0 10.750	34.5 500	201.87 45,381	3.3 0.13	326.1 12.84	416.8 16.41	66.5 2.62	2	M24 x 165 1 x 6½"	11.2 24.6
772ME0324*	772MT0324*	-	300 12	323.9 12.750	27.6 400	227.17 51,071	3.3 0.13	391.4 15.41	478.5 18.84	66.5 2.62	2	M24 x 165 1 x 6½"	19.1 42.0
772AE0355*	772AE0355*	-	350 14	355.6 14.000	24.1 350	239.66 53,878	3.3 0.13	423.7 16.68	517.6 20.38	74.4 2.93	3	- 1 x 5½"	21.7 48.0
772AE0406*	772AE0406*	-	400 16	406.4 16.000	24.1 350	313.03 70,372	3.3 0.13	469.9 18.50	575.1 22.64	74.4 2.93	3	- 1 x 5½"	23.6 52.1
772AE0457*	772AE0457*	-	450 18	457.2 18.000	24.1 350	396.18 89,064	6.4 0.25	541.3 21.31	638.0 25.12	77.7 3.06	3	- 1 x 5½"	30.8 68.0
772AE0508*	772AE0508*	-	500 20	508.0 20.000	24.1 350	489.11 109,956	6.4 0.25	596.9 23.50	708.2 27.88	77.7 3.06	4	- 1½ x 5¾"	40.4 89.0
772AE0610*	772AE0610*	-	600 24	609.6 24.000	24.1 350	704.31 158,336	6.4 0.25	701.8 27.63	812.8 32.00	81.0 3.19	4	- 1½ x 5¾"	43.5 96.0

\* = 1 for red paint finish, 2 for hot dipped galvanised finish

\* Maximum available gap between pipe ends. Minimum gap = 0.

† Maximum Pressure and End Load are total from all loads based on standard weight steel pipe. Pressure ratings and end loads may differ for other pipe materials and/or wall thicknesses. Contact a GRINNELL Sales Representative for details.

‡ Max End Gap is for cut grooved standard weight pipe. Values for roll grooved pipe will be half that of cut grooved.

• Only available in ANSI bolt sizes.

The Fig. 772 Heavy Duty Rigid Coupling does not provide compensation for pipe system expansion and/or contraction associated with pipe system temperature changes.

For information on alternative sizes, contact a GRINNELL Sales Representative.

See page 17 for coupling specifications and pages 116 - 127 for gasket information.

For instructions on part numbers, ordering information, and availability, refer to page 13 or contact a GRINNELL Sales Representative.

## Figure 774 Rigid Couplings

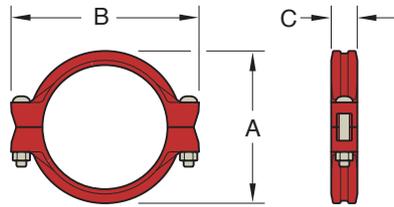
Tech Data Sheet: G142

**10**  
YEAR  
LIMITED  
WARRANTY

Grooved  
Couplings



The GRINNELL Figure 774 Grooved Rigid Coupling provides a rigid joint by firmly gripping along the full circumference of the pipe grooves. Figure 774 Grooved Rigid Couplings are a proven dependable method of joining pipe and are an economical alternative to welding, threading, or using flanges. It is capable of pressures up to 34.5 Bar (500 psi) depending on pipe size and wall thickness.



Part Number		Pipe Size		Max. † Pressure Bar psi	Max. † End Load kN Lbs.	Max. * ‡ End Gap mm Inches	Dimensions			Coupling Bolts Size ** (Qty 2) mm Inches	Approx. Weight kg Lbs.
Grade "E" Gasket	Grade "E" Tri-Seal Gasket	Nominal mm Inches	O.D. mm Inches				A mm Inches	B mm Inches	C mm Inches		
774ME0034*	774MT0034*	25 1	33.4 1.315	34.5 500	2.11 475	1.5 0.06	41 1.63	100 3.92	42 1.65	M10 x 57 3/8 x 2 1/4	0.55 1.2
774ME0042*	774MT0042*	32 1 1/4	42.4 1.660	34.5 500	4.81 1,082	1.5 0.06	68 2.66	112 4.40	42 1.64	M10 x 57 3/8 x 2 1/4	0.59 1.3
774ME0048*	774MT0048*	40 1 1/2	48.3 1.900	34.5 500	6.31 1,418	1.5 0.06	74 2.90	118 4.66	42 1.66	M10 x 57 3/8 x 2 1/4	0.68 1.5
774ME0060*	774MT0060*	50 2	60.3 2.375	34.5 500	9.85 2,215	1.5 0.06	86 3.38	132 5.20	43 1.70	M10 x 57 3/8 x 2 1/4	0.82 1.8
774ME0073*	774MT0073*	65 2 1/2	73.0 2.875	34.5 500	14.44 3,246	1.5 0.06	99 3.88	143 5.64	44 1.75	M10 x 57 3/8 x 2 1/4	0.91 2.0
774ME0076*	774MT0076*	65 76.1mm	76.1 3.000	34.5 500	15.72 3,534	1.5 0.06	102 4.00	147 5.78	44 1.75	M10 x 57 -	0.91 2.0
774ME0089*	774MT0089*	80 3	88.9 3.500	34.5 500	21.40 4,811	1.5 0.06	114 4.50	161 6.33	44 1.75	M10 x 57 3/8 x 2 1/4	1.50 3.3
774ME0114*	774MT0114*	100 4	114.3 4.500	34.5 500	35.37 7,952	1.5 0.06	145 5.70	191 7.50	46 1.83	M10 x 57 3/8 x 2 1/4	1.50 3.3
774ME0139*	774MT0139*	125 139.7mm	139.7 5.500	34.5 500	52.84 11,879	3.2 0.125	173 6.80	222 8.75	49 1.91	M12 x 76 -	2.41 5.3
774ME0141*	774MT0141*	125 5	141.3 5.563	34.5 500	54.06 12,153	3.2 0.125	174 6.86	224 8.82	49 1.91	M12 x 76 1/2 x 3	2.41 5.3
774ME0165*	774MT0165*	150 165.1mm	165.1 6.500	34.5 500	73.80 16,592	3.2 0.125	198 7.80	248 9.75	49 1.91	M12 x 76 -	2.59 5.7
774ME0168*	774MT0168*	150 6	168.3 6.625	34.5 500	76.67 17,236	3.2 0.125	215 8.47	251 9.88	49 1.91	M12 x 76 1/2 x 3	2.69 5.9
774ME0219*	774MT0219*	200 8	219.1 8.625	27.5 400	103.96 23,371	3.2 0.125	260 10.25	325 12.78	61 2.40	M16 x 83 5/8 x 3 1/4	5.32 11.7
774ME0273*	774MT0273*	250 10	273.0 10.750	16.0 233	94.07 21,148	6.4 0.25	318 12.50	419 16.50	65 2.56	M20 x 121 3/4 x 4 3/4	8.86 19.5
774ME0324*	774MT0324*	300 12	323.9 12.750	12.0 175	99.39 22,343	6.4 0.25	368 14.50	470 18.50	65 2.56	M20 x 121 3/4 x 4 3/4	10.00 22.0

\* = 1 for red paint finish, 2 for hot dipped galvanised finish, or 5 for painted white RAL 9010 coating

† Maximum available gap between pipe ends. Minimum gap = 0.

‡ Maximum Pressure and End Load are total from all loads based on standard weight steel pipe. Pressure ratings and end loads may differ for other pipe materials and/or wall thicknesses. Contact a GRINNELL Sales Representative for details.

‡ Max End Gap is for cut grooved standard weight pipe. Values for roll grooved pipe will be half that of cut grooved.

• Only available in ANSI bolt sizes.

\*\* Gold colour coded metric bolt sizes for 25mm - 300mm couplings are available upon request.

The Fig. 774 Standard Weight Rigid Coupling does not provide compensation for pipe system expansion and/or contraction associated with pipe system temperature changes.

For information on alternative sizes, contact a GRINNELL Sales Representative.

See page 17 for coupling specifications and pages 116 - 127 for gasket information.

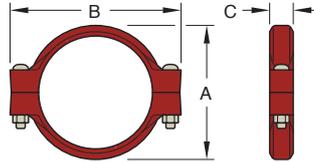
For instructions on part numbers, ordering information, and availability, refer to page 13 or contact a GRINNELL Sales Representative.

## Figure 705 Flexible Couplings

Tech Data Sheet: G110



The GRINNELL Figure 705 Flexible Coupling allows for angular and linear deflection, thermal expansion and contraction, and misalignments of pipe. It is capable of pressures up to 34.5 Bar (500 psi), depending on pipe size and wall thickness. Suitable for use in a variety of applications, the GRINNELL Figure 705 Coupling provides a dependable method of joining pipe.



Grooved Couplings

Grade "E" Gasket	Part Number	Grade "E" Tri-Seal Gasket	DVGW Approved	Pipe Size		Max. † Pressure Bar psi	Max. † End Load kN Lbs.	Max. † End Gap mm In.	Deflection ‡		Dim. - mm In.			Coupling Bolts Size (Qty 2) mm, In.	App. Wt. kg Lbs.
				Nominal DN In.	O.D. mm In.				Deg. Per Cplg	mm/m In./Ft	A	B	C		
	705ME0034*	705MT0034*	-	25	33.7	34.5	1.86	3.3	5° 30'	96.7	56.9	100.1	46.0	M10 x 44	0.6
				1	1.315	500	410	0.13		1.16	2.24	3.94	1.81	3/8 x 1 3/4	1.3
	705ME0042*	705MT0042*	-	32	42.4	34.5	4.81	3.3	4° 19'	75.0	65.0	106.4	46.0	M10 x 57	0.7
				1 1/4	1.660	500	1,082	0.13		0.90	2.56	4.19	1.81	3/8 x 2 1/4	1.5
	705ME0048*	705MT0048*	-	40	48.3	34.5	6.30	3.3	3° 46'	65.8	69.9	112.8	46.0	M10 x 57	0.7
				1 1/2	1.900	500	1,418	0.13		0.79	2.75	4.44	1.81	3/8 x 2 1/4	1.6
	705ME0060*	705MT0060*	705MT0060*D	50	60.3	34.5	9.85	3.3	3° 1'	52.5	82.6	124.0	47.8	M10 x 57	0.8
				2	2.375	500	2,215	0.13		0.63	3.25	4.88	1.88	3/8 x 2 1/4	1.7
	705ME0073*	705MT0073*	-	65	73.0	34.5	14.43	3.3	2° 29'	43.3	93.7	139.7	47.8	M10 x 57	0.9
				2 1/2	2.875	500	3,246	0.13		0.52	3.69	5.50	1.88	3/8 x 2 1/4	2.0
	705ME0076*	705MT0076*	705MT0076*D	65	76.1	34.5	15.72	3.3	2° 23'	41.7	101.6	146.10	47.8	M12 x 76	1.4
				76.1mm	3.000	500	3,534	0.13		0.50	4.00	5.75	1.88		3.0
	705ME0089*	705MT0089*	705MT0089*D	80	88.9	34.5	21.39	3.3	2° 3'	35.8	111.3	165.1	47.8	M12 x 76	1.4
				3	3.500	500	4,811	0.13		0.43	4.38	6.50	1.88	1/2 x 3	3.1
	705ME0108*	705MT0108*	-	100	108.0	34.5	31.55	6.4	3° 22'	58.3	139.7	190.5	52.3	M12 x 76	1.9
				108.0mm	4.252	500	7,093	0.25		0.70	5.50	7.50	2.06		4.2
	705ME0114*	705MT0114*	705MT0114*D	100	114.3	34.5	35.35	6.4	3° 11'	55.8	144.5	196.9	52.3	M12 x 89	1.8
				4	4.500	500	7,952	0.25		0.67	5.69	7.75	2.06	1/2 x 3	4.0
	705ME0133*	705MT0133*	-	125	133.0	31.0	43.33	6.4	2° 44'	46.7	166.6	241.3	52.3	M16 x 83	3.3
				133.0mm	5.236	450	9,741	0.25		0.56	6.56	9.50	2.06	-	7.2
	705ME0139*	705MT0139*	705MT0139*D	125	139.7	31.0	47.56	6.4	2° 36'	45.5	173.0	247.7	52.3	M16 x 83	3.3
				139.7mm	5.500	450	10,691	0.25		0.55	6.81	9.75	2.06	-	7.2
	705ME0141*	705MT0141*	-	125	141.3	31.0	48.63	6.4	2° 35'	45.0	174.8	247.7	52.3	M16 x 83	3.2
				5	5.563	450	10,938	0.25		0.54	6.88	9.75	2.06	5/8 x 3 1/4	7.1
	705ME0159*	705MT0159*	-	150	159.0	31.0	61.41	6.4	2° 17'	40.0	192.0	261.9	52.3	M16 x 83	3.4
				159.0mm	6.260	450	13,806	0.25		0.48	7.56	10.31	2.06	-	7.4
	705ME0165*	705MT0165*	-	150	165.1	31.0	66.36	6.4	2° 12'	38.3	196.9	271.5	52.3	M16 x 83	3.2
				165.1mm	6.500	450	14,932	0.25		0.46	7.75	10.69	2.06	-	7.1
	705ME0168*	705MT0168*	705MT0168*D	150	168.3	31.0	68.97	6.4	2° 10'	37.5	201.7	271.5	52.3	M16 x 83	3.2
				6	6.625	450	15,512	0.25		0.45	7.94	10.69	2.06	5/8 x 3 1/4	7.1
	705ME0200*	705MT0200*	-	200	216.3	31.0	113.59	6.4	1° 40'	29.2	255.8	342.9	58.7	M20 x 121	5.6
				216.3mm	8.500	450	25,535	0.25		0.35	10.07	13.50	2.31	-	12.4
	705ME0219*	705MT0219*	705MT0219*D	200	219.1	31.0	116.89	6.4	1° 40'	29.2	258.8	344.4	63.5	M20 x 121	6.6
				8	8.625	450	26,292	0.25		0.35	10.19	13.56	2.50	3/4 x 4 3/4	14.5
	705ME0273*	705MT0273*	705MT0273*D	250	273.0	24.1	141.31	6.4	1° 20'	23.3	322.3	416.1	66.8	M24 x 165	12.7
				10	10.750	350	31,767	0.25		0.28	12.69	16.38	2.63	1 x 6 1/2	28.0
	705ME0324*	705MT0324*	-	300	323.9	24.1	198.78	6.4	1° 7'	19.2	379.5	479.6	66.8	M24 x 165	16.6
				12	12.750	350	44,687	0.25		0.23	14.94	18.88	2.63	1 x 6 1/2	36.5

\* = 1 for red paint finish, 2 for hot dipped galvanised finish, or 5 for painted white RAL9010 coating  
 † Maximum available gap between pipe ends. Minimum gap = 0.  
 ‡ Maximum pressure and end load are total from all loads based on standard weight steel pipe. Pressure ratings and end loads may differ for other pipe materials and/or wall thickness. Contact GRINNELL Products for details.  
 † Max end gap and deflection is for cut grooved standard weight pipe. Values for roll grooved pipe will be half that of cut grooved.  
 For information on alternative sizes, contact a GRINNELL Sales Representative.  
 See page 17 for coupling specifications and pages 116 - 127 for gasket information.  
 For instructions on part numbers, ordering information, and availability, refer to page 13 or contact a GRINNELL Sales Representative.

## Figure 707 Heavy Duty Flexible Couplings

(Page 1 of 2)

Tech Data Sheet: G130

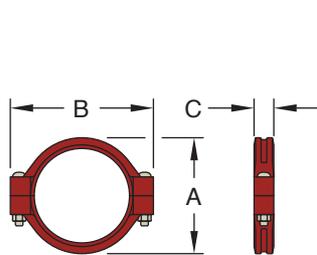


Grooved Couplings

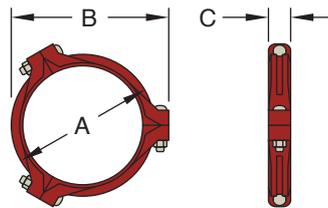


The GRINNELL Figure 707 Heavy Duty Flexible Coupling allows for angular and linear deflection, thermal expansion and contraction, and misalignments of the pipe. Flexible couplings can act as an "expansion joint", allowing linear and angular movement of the pipes when properly installed. This coupling is capable of pressures up to 68.9 Bar (1,000 psi), depending on pipe size and wall thickness.

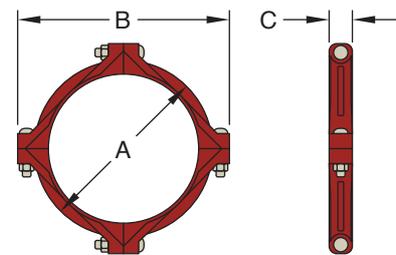
Suitable for use in a variety of applications, the Figure 707 Coupling provides a dependable method of joining pipe.



25mm - 350mm (1" - 14")



400mm - 450mm (16" - 18")



500mm - 600mm (20" - 24")

Part Number	Pipe Size		Max. † Pressure Bar psi	Max. † End Load kN Lbs.	Max. * ‡ End Gap mm Inches	Deflection ‡		Dimensions - mm / in.			Coupling Bolts		Approx. Weight Kg. Lbs.
	Nominal mm Inches	O.D. mm Inches				Degrees Per Coupling	mm/m Inches/Ft	A	B	C	Qty.	Size mm Inches	
707AE0034*	25	33.7	68.9	6.10	3.3	5° 26'	98.4	60.5	101.6	46.0	2	M12 x 57	0.9
	1	1.315	1000	1,360	0.13		1.14	2.38	4.00	1.81		1/2 x 2-1/4	2.0
707ME0042*	32	42.4	68.9	9.63	3.3	4° 19'	75.0	70.0	111.0	46.0	2	M12 x 76	1.0
	1 1/4	1.660	1000	2,165	0.13		0.90	2.76	4.37	1.81		1/2 x 3	2.2
707AE0048*	40	48.3	68.9	12.61	3.3	3° 46'	65.8	75.4	117.6	46.0	2	M12 x 76	1.1
	1 1/2	1.900	1000	2,835	0.13		0.79	2.97	4.63	1.81		1/2 x 3	2.5
707AE0060*	50	60.3	68.9	19.71	3.3	3° 1'	52.5	89.9	133.4	47.8	2	M12 x 76	1.4
	2	2.375	1000	4,430	0.13		0.63	3.54	5.25	1.88		1/2 x 3	3.0
707AE0073*	65	73.0	68.9	28.88	3.3	2° 29'	43.3	103.1	146.1	47.8	2	M12 x 76	1.6
	2 1/2	2.875	1000	6,492	0.13		0.52	4.06	5.75	1.88		1/2 x 3	3.5
707AE0076*	65	76.1	68.9	31.44	3.3	2° 23'	41.7	106.4	146.1	47.8	2	M12 x 76	1.8
	76,1mm	3.000	1000	7,069	0.13		0.50	4.19	5.75	1.88		-	4.0
707AE0089*	80	88.9	68.9	42.80	3.3	2° 3'	35.8	119.1	162.1	47.8	2	M12 x 76	1.8
	3	3.500	1000	9,621	0.13		0.43	4.69	6.38	1.88		1/2 x 3	4.0
707AE0114*	100	114.3	68.9	70.75	6.4	3° 11'	55.8	151.1	209.6	52.3	2	M16 x 83	3.2
	4	4.500	1000	15,904	0.25		0.67	5.95	8.25	2.06		5/8 x 3 1/4	7.0
707AE0139*	125	139.7	68.9	105.6	6.4	2° 30'	43.3	178.3	254.0	51.8	2	M20 x 121	3.8
	139,7mm	5.500	1000	23,758	0.25		0.52	7.02	10.00	2.04		3/4 x 4 3/4	8.3
707AE0141*	125	141.3	68.9	108.12	6.4	2° 35'	45.0	179.8	254.0	52.3	2	M20 x 121	4.5
	5	5.563	1000	24,306	0.25		0.54	7.08	10.00	2.06		3/4 x 4 3/4	10.0
707AE0165*	150	165.1	68.9	147.61	6.4	2° 12'	38.4	208.0	285.8	52.3	2	M20 x 121	5.4
	165,1mm	6.500	1000	33,183	0.25		0.46	8.19	11.25	2.06		-	12.0
707AE0168*	150	168.3	68.9	153.34	6.4	2° 10'	37.5	210.8	285.8	52.3	2	M20 x 121	5.0
	6	6.625	1000	34,472	0.25		0.45	8.30	11.25	2.06		3/4 x 4 3/4	11.1

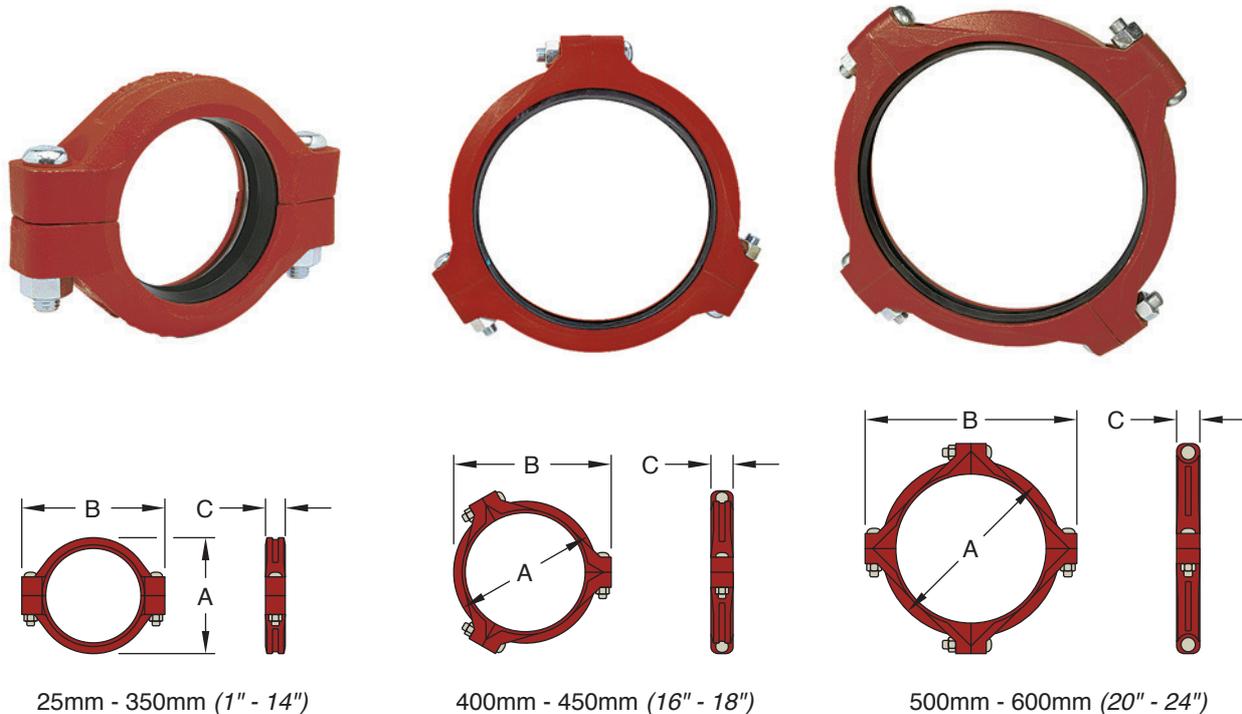
## Figure 707 Heavy Duty Flexible Couplings

(Page 2 of 2)

Tech Data Sheet: G130

**10**  
YEAR  
LIMITED  
WARRANTY

Grooved  
Couplings



Part Number	Pipe Size		Max. † Pressure Bar psi	Max. † End Load kN Lbs.	Max. * ‡ End Gap mm Inches	Deflection ‡		Dimensions - mm /in.			Coupling Bolts		Approx. Weight Kg. Lbs.
	Nominal mm Inches	O.D. mm Inches				Degrees Per Coupling	mm/m Inches/Ft	A	B	C	Qty.	Size mm Inches	
707AE0219*	200	219.1	55.2	207.91	6.4	1° 40'	29.2	271.3	355.6	62.7	2	M22 x 165	9.7
	8	8.625	800	46,741	0.25							0.35	10.68
707AE0273*	250	273.0	55.2	322.99	6.4	1° 20'	23.3	331.7	417.6	66.8	2	M24 x 165	13.2
	10	10.750	800	72,610	0.25							0.28	13.06
707AE0324*	300	323.9	55.2	454.35	6.4	1° 7'	19.2	390.9	478.5	66.8	2	M24 x 165	16.8
	12	12.750	800	102,141	0.25							0.23	15.39
707AE0355*	350	355.6	24.1	239.66	6.4	1° 2'	18.3	423.4	517.7	74.7	2	-	20.9
	14	14.000	350	53,878	0.25							0.22	16.67
707AE0406*	400	406.4	24.1	313.03	6.4	0° 54'	15.8	478.3	575.1	74.7	3	-	26.8
	16	16.000	350	70,372	0.25							0.19	18.83
707AE0457*	450	457.2	20.7	339.58	6.4	0° 48'	14.2	541.3	638.0	77.7	3	-	35.4
	18	18.000	300	76,341	0.25							0.17	21.31
707AE0508*	500	508.0	20.7	419.23	6.4	0° 43'	12.5	596.1	708.2	77.7	4	-	40.4
	20	20.000	300	94,248	0.25							0.15	23.47
707AE0610*	600	609.6	24.1	704.31	6.4	0° 36'	10.8	700.5	812.8	81.0	4	-	50.8
	24	24.000	350	158,336	0.25							0.13	27.58

\* = 1 for red paint finish, 2 for hot dipped galvanised finish

\* Maximum available gap between pipe ends. Minimum gap = 0.

† Maximum Pressure and End Load are total from all loads based on standard weight steel pipe. Pressure ratings and end loads may differ for other pipe materials and/or wall thicknesses. Contact a GRINNELL Sales Representative for details.

‡ Max End Gap and Deflection is for cut grooved standard weight pipe. Values for roll grooved pipe will be half that of cut grooved.

For information on alternative sizes, contact a GRINNELL Sales Representative.

For coupling sizes above 300mm (12") bolt sizes only available in ANSI.

See page 17 for coupling specifications and pages 116 - 127 for gasket information.

For instructions on part numbers, ordering information, and availability, refer to page 13 or contact a GRINNELL Sales Representative.

## Figure 716 Flexible Reducing Couplings

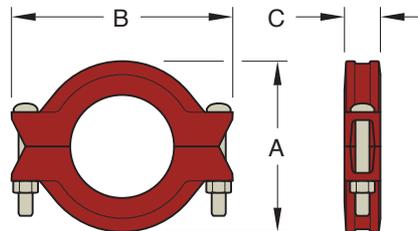
Tech Data Sheet: G120

**10**  
YEAR  
LIMITED  
WARRANTY

Grooved  
Couplings



The GRINNELL Figure 716 Flexible Reducing Coupling allows for a direct transition between two different pipe sizes and replaces two couplings and a reducing fitting. It is capable of pressures up to 34.5 Bar (500 psi) depending on pipe size and wall thickness. A flexible reducing coupling is not recommended for low-temperature applications.



Part Number	Pipe Size		Max. † Pressure Bar	Max. † End Load kN	Max. ‡ End Gap mm	Deflection ‡		Dimensions mm			Coupling Bolts Size (Qty 2) mm	Approx. Weight kg
	Nominal DN	O.D. mm				Degrees Per Coupling	mm/m	A	B	C		
716AE2015*	50 x 40	60.3 x 48.3	34.5	6.31	3.3	1° 53'	32.9	88.9	128.5	47.8	M10 x 57	1.3
716AE2520*	65 x 50	73.0 x 60.3	34.5	9.85	3.3	1° 33'	27.1	101.6	139.7	47.8	M10 x 57	1.5
716ME2620*	65 x 50	76.1 x 60.3	34.5	9.85	3.3	1° 34'	26.7	106.4	149.4	47.8	M12 x 76	1.4
716AE3020*	80 x 50	88.9 x 60.3	34.5	9.85	3.3	1° 17'	22.5	119.1	165.1	47.8	M12 x 76	1.9
716AE3025*	80 x 65	88.9 x 73.0	34.5	14.44	3.3	1° 17'	22.5	119.1	165.1	47.8	M12 x 76	2.0
716ME3026*	80 x 65	88.9 x 76.1	34.5	15.72	3.3	1° 17'	22.5	119.1	165.1	47.8	M12 x 76	1.9
716AE4220*	100 x 60	114.3 x 60.3	34.5	9.85	4.8	2° 38'	45.8	152.4	206.5	50.8	M16 x 83	2.5
716AE4225*	100 x 65	114.3 x 73.0	34.5	14.44	4.8	2° 38'	45.8	152.4	206.5	50.8	M16 x 83	2.9
716ME4226*	100 x 65	114.3 x 76.1	34.5	15.72	4.8	2° 38'	45.8	152.4	206.5	50.8	M16 x 83	2.9
716AE4230*	100 x 80	114.3 x 88.9	34.5	21.40	4.8	2° 38'	45.8	152.4	206.5	50.8	M16 x 83	2.8
716ME5242*	125 x 100	139.7 x 114.3	34.5	35.37	6.4	2° 38'	45.8	179.3	241.3	52.3	M20 x 121	4.3
716AE5342*	125 x 100	141.3 x 114.3	34.5	35.37	6.4	2° 5'	36.7	181.1	242.8	52.3	M20 x 121	4.4
716ME6242*	150 x 100	165.1 x 114.3	27.6	28.30	6.4	1° 50'	31.7	207.8	274.6	52.3	M20 x 121	5.7
716AE6342*	150 x 100	168.3 x 114.3	27.6	28.30	6.4	1° 44'	30.0	212.9	276.4	52.3	M20 x 121	5.7
716AE6353*	150 x 125	168.3 x 141.3	27.6	43.25	6.4	1° 44'	30.0	212.9	276.4	52.3	M20 x 121	5.2
716AE8063*	200 x 150	219.1 x 168.3	27.6	61.33	6.4	1° 15'	21.7	271.5	349.3	57.2	M22 x 165	9.4

\* = 1 for red paint finish, 2 for hot dipped galvanised finish

† Maximum available gap between pipe ends. Minimum gap = 0.

‡ Maximum pressure and end load are total from all loads based on standard weight steel pipe. Pressure ratings and end loads may differ on other pipe materials and/or wall thickness. Contact GRINNELL Products for details.

‡ Max end gap and deflection is for cut grooved standard weight pipe. Values for roll grooved pipe will be half that of cut grooved.

For information on alternative sizes, contact a GRINNELL Sales Representative.

See page 17 for coupling specifications and pages 116 - 127 for gasket information.

For instructions on part numbers, ordering information, and availability, refer to page 13 or contact a GRINNELL Sales Representative.

## Figure 7706T Transition Couplings

**10**  
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Grooved  
Couplings

### Ductile Iron Housing

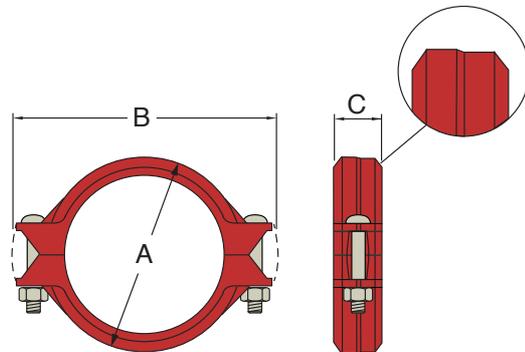
- ASTM A 536 – Standard specification for ductile iron castings, Grade 65-45-12

### Finish

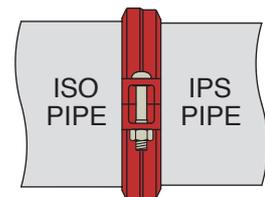
- Standard painted finishes in orange or RAL 3000 red.
- Hot dip zinc galvanised (Option)
- Epoxy Coatings in RAL 3000 red or other colours (Option)

### Gaskets

- **Grade "E" EPDM**  
Green colour code stripe  
-34°C to 110°C (-30°F to 230°F)
- **Grade "L" Silicone**  
Red colour code stripe  
-34°C to 177°C (-30°F to 350°F)
- **Grade "T" Nitrile**  
Orange colour code stripe  
-29°C to 82°C (-20°F to 180°F)
- **Grade "O" Fluoroelastomer**  
Blue colour code stripe  
-7°C to 149°C (+20°F to 300°F)



Model 7706-T Transition Couplings allows for a direct transition from IPS pipe sizes to ISO pipe sizes.



Part Number	Pipe Size		Max. End Load kN Lbs.	Axial Displacement mm Inches	Angular Movement		Dim.- mm /in			Bolt / Nut Size in	Approx. Weight Kg. Lbs.
	Nominal mm Inches	O.D. mm Inches			Per Coupling Degree	Per Pipe mm/m in/ft.	A	B	C		
7706T2526*	65 x 65	73.0 x 76.1	5.90	0 ~ 3.2	2° -24'	21.0	102	138	48	M10 x 55	1.2
	2 1/2 x 76.1mm	2.875 x 3.000	1330	- ~ 0.13							
7706T6362*	150 x 150	168.3 x 165.1	44.29	0 ~ 6.4	1° - 06'	19.0	200	270	53	M16 x 90	3.5
	6 x 165.1mm	6.625 x 6.500	9960	0 ~ 0.25							

\*Deflection or angular movement is the maximum value that a coupling allows with no internal pressure.

Refer to the technical data sheet for complete technical information and installation instructions.

For information on alternative sizes, contact a GRINNELL Sales Representative.

In the mechanical catalog, See page 17 for coupling specifications and pages 116 - 127 for gasket information.

For instructions on part numbers, ordering information, and availability, refer to page 13 in the mechanical catalog or contact a GRINNELL Sales Representative.

## Electrical Continuity

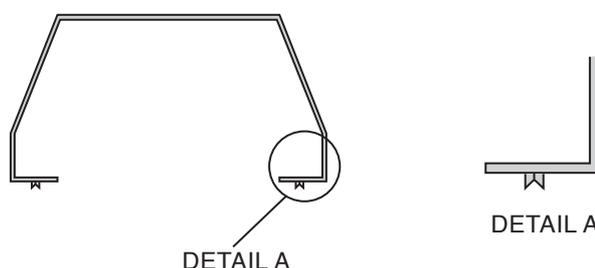
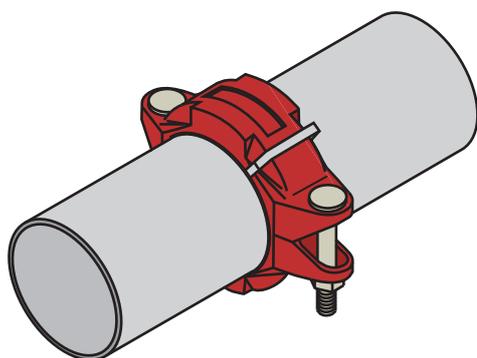
**10**  
YEAR  
LIMITED  
WARRANTY

Grooved  
Couplings

### Couplings in Painted Finish

Earth bonding of the GRINNELL couplings in painted finish can be made in steel pipework systems with an electrical continuity clip. This clip, manufactured from 301-grade stainless steel, is designed to ensure electrical continuity in situations of high current loading and/or corrosive environments, providing equipotential bonding of the conductive parts. It is recommended that the pipework is assembled and installed as recommended and that

the pipework is bonded to the electrical earth and tested in accordance with the I.E.E. regulations for bonding (earthing). Installation should be regularly checked for equipotential bonding (earthing) in case of accidental damage or unauthorised pipework modifications. Following any future modification, electrical continuity clips must be used and the installation re-tested for equipotential bonding.



Part Number	Suitable for size Coupling Inches	Approx Weight kg
CLIP0103	1 - 3	0.005
CLIP0406	4 - 6	0.005
CLIP0812	8 - 12	0.005

For instructions on part numbers, ordering information, and availability, refer to page 13 or contact a GRINNELL Sales Representative.

### Couplings in Galvanised Finish

Most GRINNELL Grooved Couplings in galvanised finish comply to the electric conductivity according to clause 11.1.2 of EN 61537-2007. Tests were performed by TÜV Rheinland® and test reports are available upon request.



Test pipe at TÜV Rheinland®

## GRINNELL Coupling Installation Information

Installation Handbook: IH-1000M

Grooved  
Couplings

### • WARNING

Failure to follow these instructions may result in improper product installation, joint failure or leakage, serious personal injury, and/or property damage.

The following instructions should be used as a guideline for the proper installation of GRINNELL Grooved Products.

1. Always read and understand the instructions.
2. To avoid serious personal injury always wear appropriate personal protective equipment (ppe), such as safety glasses, hard hat and foot protection.
3. Never remove any piping component without verifying that the system is de-pressurised and drained. Failure to do so may result in serious personal injury.
4. Ensure that the supplied gasket is suitable for the intended application. To prevent deterioration of the gasket material, a petroleum lubricant should never be used. Use a recommended lubricant to install the gasket.
5. The pipe groove dimensions must be in accordance with Standard Roll Groove or Cut Groove Specifications. Refer to Pages 117 to 121 or Tech Data Sheet G710 for additional information.
6. Ensure that the coupling keys are engaged in the grooves.
7. Always tighten nuts evenly by alternating sides. Uneven tightening can cause the gasket to pinch or bind. If a gasket becomes pinched, replace it immediately.
8. Torque values are supplied as a guideline and may be used when setting the torque on power impact wrenches. Always refer to the power impact wrench manufacturer's instructions for settings.
9. Exceeding the suggested torque values may cause damage to the coupling and/or result in pipe-joint failure. Minimum bolt torque is required for coupling to meet the published performance parameters.
10. Always inspect each joint to ensure that the coupling is properly installed.

EPDM, Tri-Seal gaskets are recommended for freezer applications. Reducing Couplings are not recommended for freezer applications. For dry pipe and freezer applications, use the Tri-Seal freezer gasket with a petroleum-free silicone lubricant. Standard lube is not recommended for this application as it freezes and can cause leakage.

These installation instructions do not take the place of nor do they eliminate the need for the installer to fully read and understand the complete GRINNELL Products Installation Handbook (refer to IH-1000M). Always review the GRINNELL Products Installation Handbook and individual product tech data sheets for the latest instructions, techniques, and care and maintenance information. This document does not supersede or replace the GRINNELL Products Installation Handbook or individual product tech data sheets. Current documentation can be obtained by contacting your GRINNELL sales Representative or visiting [www.grinnell.com](http://www.grinnell.com).

### ASME Standard Note

\*Note: The samples that were tested contained the GRINNELL Figure 707 high pressure flexible couplings, and the GRINNELL Figure 260 end caps of the appropriate size. These were used on the assembly to test system components as related in a field environment. The rated or working pressure of these items is 68.9 bar (1,000 psi)

\*Note: The material of both the fittings and couplings used in this testing is found in the GRINNELL Handbook. This material is Ductile Iron Casting Grade 65-45-12, which has an elongation in 51mm (2") of 12%.

The **Component Proof Test** in ASME A17.1 – 2004, section 3.19.1.3 requires testing to section 8.2.8.5, or five times the rated pressure.

The calculation of the factor of safety located in section 8.2.8.5 would then be calculated as  $F = (5.04 / 12 - 2.8) + 2.7$ . This then, according to section 8.2.8.5, would be a requirement safety factor of 3.25. The minimum pressure requirement of these components then would be 224.1 bar (3,250 psig)