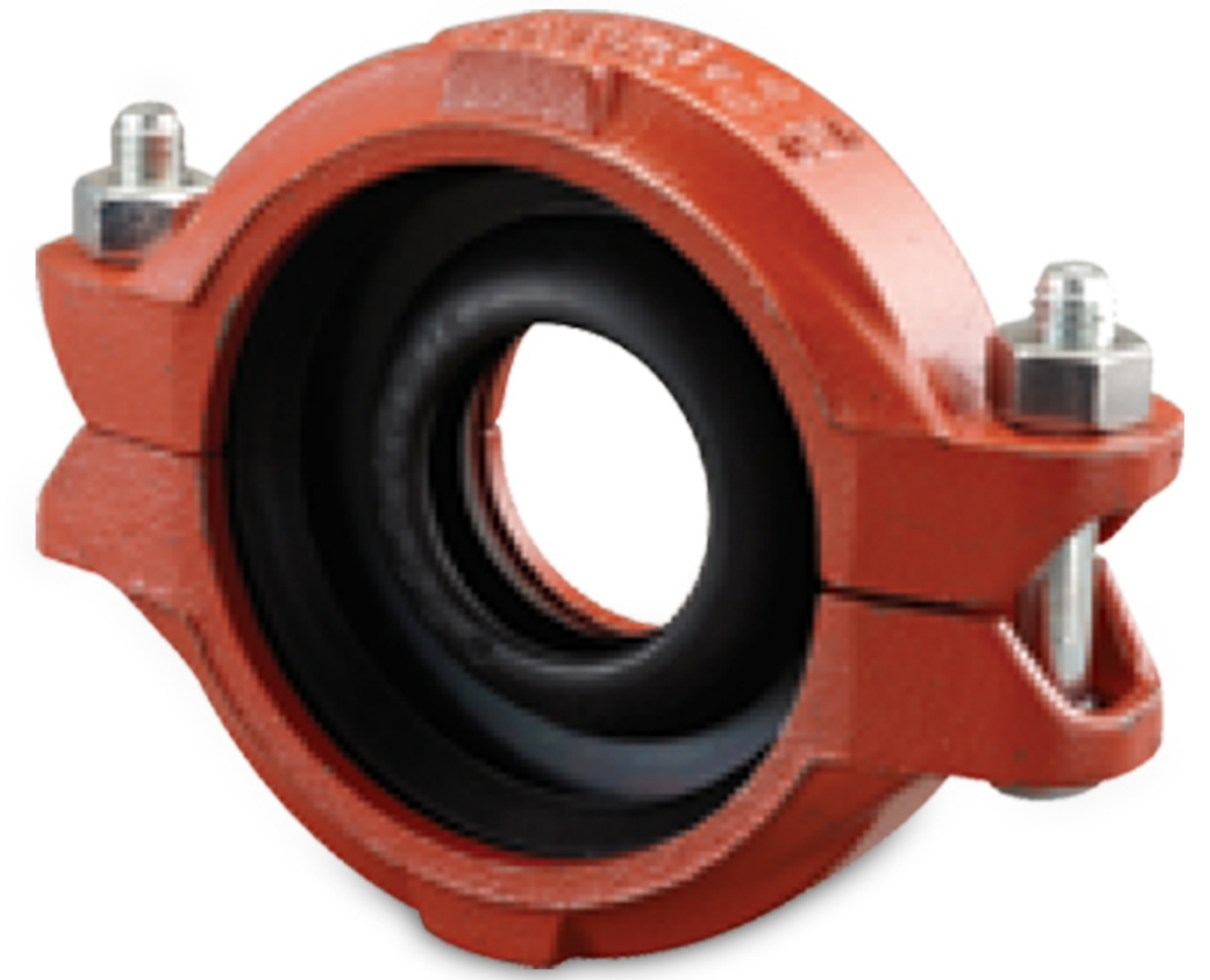


MODEL 7706 REDUCING COUPLING

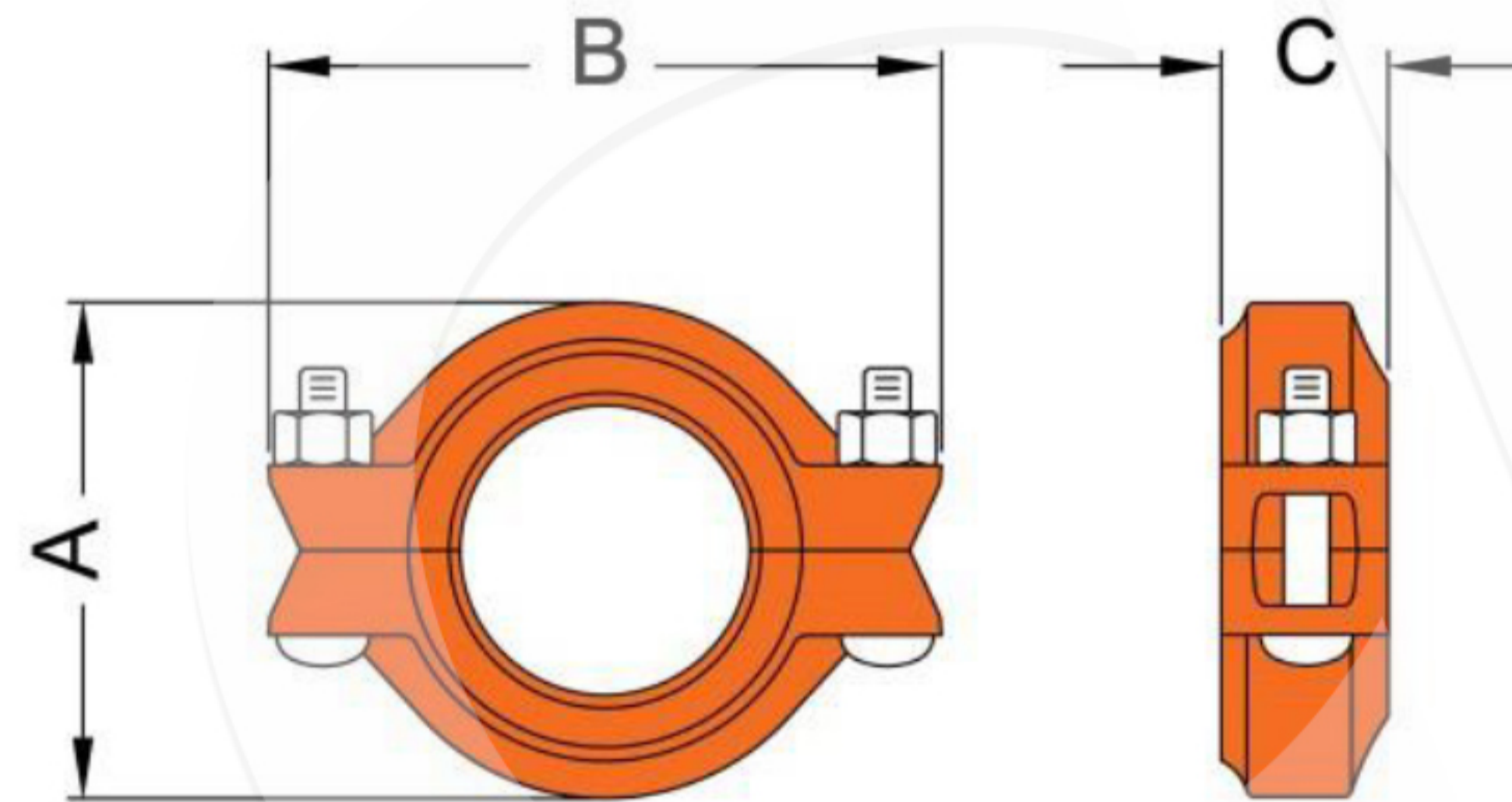
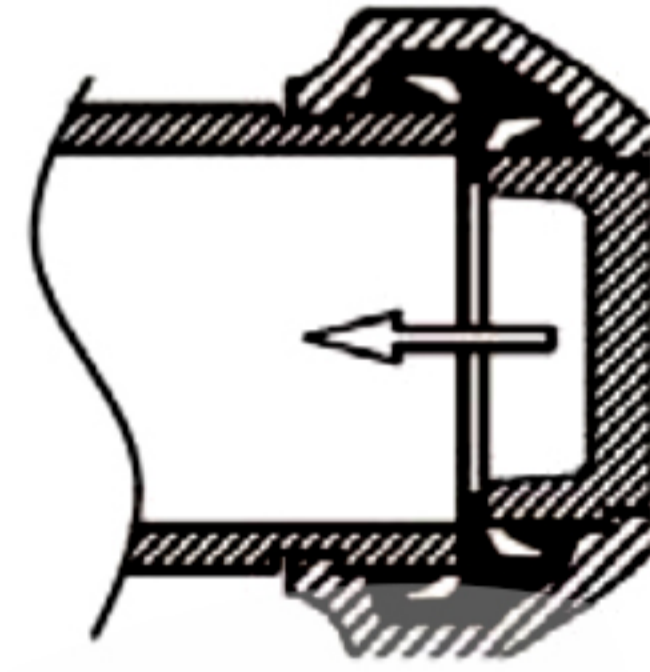
The Model 7706 Reducing Coupling allows direct reduction on a piping run and eliminates the need for a concentric reducer and couplings. The specially designed rubber gasket prevents the smaller pipe from telescoping into the larger pipe during vertical installation. All 7706 couplings are comprised of two identical housing segments, EPDM rubber gasket and plated track bolts and nuts. Housing segments are supplied with our standard painted finishes, i.e. orange or RAL3000 red. Optional finishes such as hot dipped zinc galvanized and custom epoxy coatings are available.



7706 couplings should always be installed so that the coupling bolt pads make metal to metal contact.



The Model 7706 couplings must not be used with an end cap, as the end cap could be sucked into the pipe by the vacuum created when a system is being drained.



**10
YEAR
LIMITED
WARRANTY**

Full warranty terms can be found on www.shurjoint.com

Model 7706 Reducing Coupling											
Nominal Size	Pipe O.D.	Max. Working Pressure (CWP)*	Max. End Load (CWP)	Angular Movement **†			Dimensions				
				Axial Displacement †	Deg. Per Coupling (°)	Per Pipe	A	B	C	Bolt Size	Weight
in mm	in mm	PSI Bar	Lbs kN	in mm		in/ft mm/m	in mm	in mm	in mm	in mm	Lbs Kgs
1½ x 1¼ 40 x 32	1.900 x 1.660 48.3 x 42.2	500 35	1410 6.23	0 ~ 0.065 0 ~ 1.6	1° - 54'	0.20 17	2.83 72	4.65 118	1.81 46	¾ x 2½ M10 x 55	1.8 0.8
2 x 1½ 50 x 40	2.375 x 1.900 60.3 x 48.3	500 35	2210 9.70	0 ~ 0.065 0 ~ 1.6	1° - 31'	0.16 13	3.35 85	4.80 122	1.89 48	¾ x 2½ M10 x 55	2.0 0.9
2½ x 2 65 x 50	2.875 x 2.375 73.0 x 60.3	500 35	3240 14.22	0 ~ 0.065 0 ~ 1.6	1° - 15'	0.13 11	3.78 96	5.67 144	1.89 48	¾ x 2½ M10 x 55	2.6 1.2
76.1 mm x 50	3.000 x 2.375 76.1 x 60.3	500 35	3530 15.46	0 ~ 0.065 0 ~ 1.6	1° - 12'	0.13 11	4.02 102	5.67 144	1.89 48	¾ x 2½ M10 x 55	2.6 1.2
3 x 2 80 x 50	3.500 x 2.375 88.9 x 60.3	500 35	4800 21.09	0 ~ 0.065 0 ~ 1.6	1° - 02'	0.11 9	4.57 116	6.61 168	1.89 48	½ x 3 M12 x 75	3.3 1.5
3 x 2½ 80 x 65	3.500 x 2.875 88.9 x 73.0	500 35	4800 21.09	0 ~ 0.065 0 ~ 1.6	1° - 02'	0.11 9	4.57 116	6.61 168	1.89 48	½ x 3 M12 x 75	3.7 1.7
80 x 76.1 mm	3.500 x 3.000 88.9 x 76.1	500 35	4800 21.09	0 ~ 0.065 0 ~ 1.6	1° - 02'	0.11 9	4.57 116	6.61 168	1.89 48	½ x 3 M12 x 75	3.7 1.7
4 x 2 100 x 50	4.500 x 2.375 114.3 x 60.3	500 35	7940 34.87	0 ~ 0.095 0 ~ 2.4	1° - 12'	0.13 11	5.75 146	7.80 198	1.93 49	½ x 3 M12 x 75	5.3 2.4
4 x 2½ 100 x 65	4.500 x 2.875 114.3 x 73.0	500 35	7940 34.87	0 ~ 0.095 0 ~ 2.4	1° - 12'	0.13 11	5.75 146	7.80 198	1.93 49	½ x 3 M12 x 75	5.7 2.6
100 x 76.1 mm	4.500 x 3.000 114.3 x 76.1	500 35	7940 34.87	0 ~ 0.095 0 ~ 2.4	1° - 12'	0.13 11	5.75 146	7.80 198	1.93 49	½ x 3 M12 x 75	5.7 2.6
4 x 3 100 x 80	4.500 x 3.500 114.3 x 88.9	500 35	7940 34.87	0 ~ 0.095 0 ~ 2.4	1° - 12'	0.13 11	5.75 146	7.80 198	2.01 51	½ x 3 M12 x 75	5.3 2.4
139.7 mm x 100	5.500 x 4.500 139.7 x 114.3	400 28	9490 42.90	0 ~ 0.125 0 ~ 3.2	1° - 18'	0.14 12	6.30 160	9.45 240	2.01 51	⅝ x 3½ M16 x 90	8.4 3.8
5 x 4 125 x 100	5.563 x 4.500 141.3 x 114.3	400 28	9710 43.88	0 ~ 0.125 0 ~ 3.2	1° - 18'	0.14 12	6.30 160	9.84 242	2.01 51	⅝ x 3½ M16 x 90	7.9 3.6

Model 7706 Reducing Coupling											
Nominal Size	Pipe O.D.	Max. Working Pressure (CWP)*	Max. End Load (CWP)	Axial Displacement †	Angular Movement **†		Dimensions			Bolt Size	Weight
					Deg. Per Coupling	Per Pipe	A	B	C		
in mm	in mm	PSI Bar	Lbs kN	in mm	(°)	in/ft mm/m	in mm	in mm	in mm	in mm	Lbs Kgs
165.1 mm x 80	6.500 x 3.500 165.1 x 88.9	400 28	13260 59.91	0 ~ 0.125 0 ~ 3.2	1° - 07'	0.12 10	7.95 202	10.63 270	2.05 52	5/8 x 3 1/2 M16 x 90	10.1 4.6
6 x 3 150 x 80	6.625 x 3.500 168.3 x 88.9	400 28	13780 62.26	0 ~ 0.125 0 ~ 3.2	1° - 06'	0.12 10	8.19 208	10.63 270	2.05 52	5/8 x 3 1/2 M16 x 90	10.1 4.6
165.1 mm x 100	6.500 x 4.500 165.1 x 114.3	400 28	13260 59.91	0 ~ 0.125 0 ~ 3.2	1° - 07'	0.12 10	7.95 202	10.67 271	2.05 52	5/8 x 3 1/2 M16 x 90	9.9 4.5
6 x 4 150 x 100	6.625 x 4.500 168.3 x 114.3	400 28	13780 62.26	0 ~ 0.125 0 ~ 3.2	1° - 06'	0.12 10	8.19 208	10.63 270	2.05 52	5/8 x 3 1/2 M16 x 90	9.9 4.5
8 x 6 200 x 150	8.625 x 6.625 219.1 x 168.3	400 28	23350 105.51	0 ~ 0.125 0 ~ 3.2	0° - 50'	0.09 8	10.24 260	13.11 333	2.09 53	3/4 x 4 3/4 M20 x 120	14.3 6.5
200 x 165.1 mm	8.625 x 6.500 219.1 x 165.1	400 28	23350 105.51	0 ~ 0.125 0 ~ 3.2	0° - 50'	0.09 8	10.24 260	13.11 333	2.20 56	3/4 x 4 3/4 M20 x 120	14.3 6.5

* Working Pressure is based on roll- or cut-grooved standard wall carbon steel pipe.

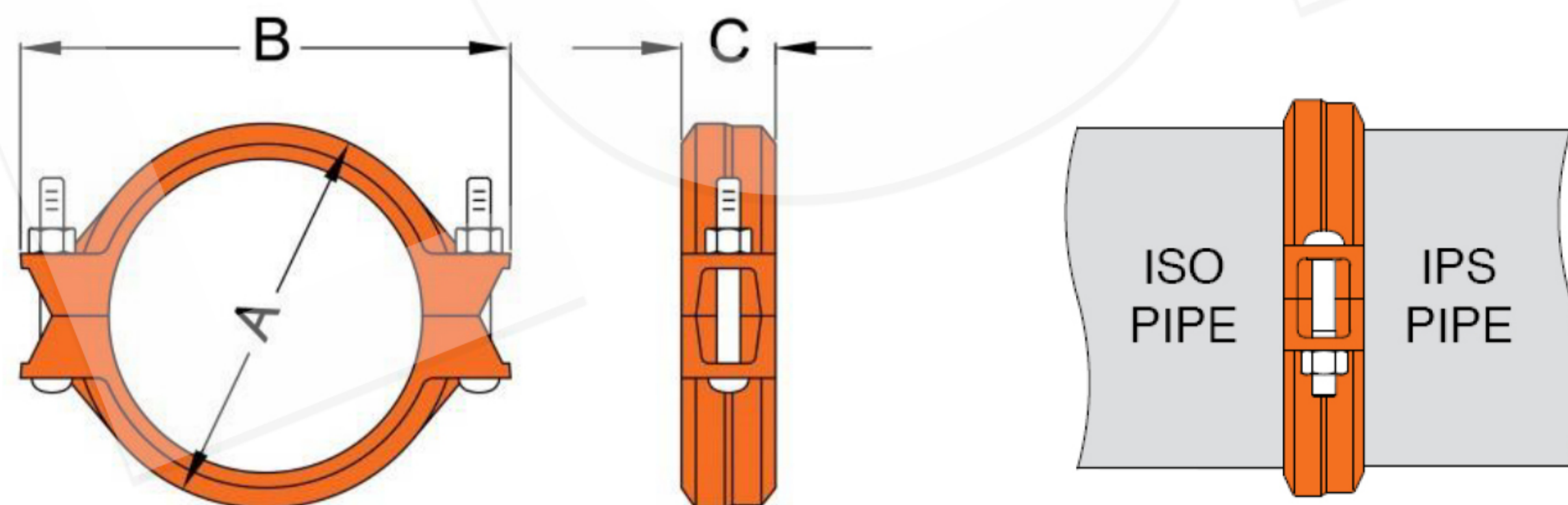
† Allowable Axial Displacement and Angular Movement (deflection) figures are for roll grooved standard steel pipe. Values for cut grooved pipe will be double that of roll grooved. These values are maximums; for design and installation purposes these figures should be reduced by: 50% for 3/4" – 3 1/2"; 25% for 4" and larger to compensate for jobsite conditions.

** Deflection or angular movement given is the maximum value that a coupling allows. When using the given maximum angles for a curved layout, proper bracing should be used to counter pressure thrust that will occur when the system is pressurized.

Flexible couplings can be used for angular movement and or thermal expansion, though please note individual coupling(s) cannot be used to their maximums for both types of movement within a system at the same time.

MODEL 7706-T TRANSITION COUPLING

The Model 7706-T Transition Coupling allows for a direction transition from IPS pipe sizes to ISO pipe sizes.



Model 7706-T Transition Coupling											
Nominal Size	Pipe O.D.	Max. Working Pressure (CWP)*	Max. End Load	Axial Displacement †	Angular Movement**†		Dimensions			Bolt Size	Weight
					Deg. Per Coupling	Per Pipe	A	B	C		
in mm	in mm	PSI Bar	Lbs kN	in mm	(°)	in/ft mm/m	in mm	in mm	in mm	in mm	Lbs Kgs
2 1/2 x 76.1mm	2.875 x 3.000 73.0 x 76.1	500 35	2110 9.09	0 ~ 0.065 0 ~ 1.6	1° - 12'	0.13 11	4.02 102	5.43 138	1.89 48	3/8 x 2 1/8 M10 x 55	2.6 1.2
6 x 165.1mm	6.625 x 6.500 168.3 x 165.1	400 28	9940 42.80	0 ~ 0.125 0 ~ 3.2	0° - 33'	0.12 10	7.87 200	10.63 270	2.09 53	5/8 x 3 1/2 M16 x 90	7.7 3.5

*Working Pressure is based on roll grooved standard wall carbon steel pipe.

† Allowable Axial Displacement and Angular Movement (deflection) figures are for roll grooved standard steel pipe. Values for cut grooved pipe will be double that of roll grooved. These values are maximums; for design and installation purposes these figures should be reduced by 50% for 3/4" – 3 1/2"; 25% for 4" and larger to compensate for jobsite conditions.

** Deflection or angular movement given is the maximum value that a coupling allows. When using the given maximum angles for a curved layout, proper bracing should be used to counter pressure thrust that will occur when the system is pressurized.

Flexible couplings can be used for angular movement and or thermal expansion, though please note individual coupling(s) cannot be used to their maximums for both types of movement within a system at the same time.

Performance Data

The following tables show the maximum working pressures (CWP) of **Shurjoint** Model 7706 Reducing Coupling used on both carbon steel and stainless steel pipes. **Shurjoint** ductile iron couplings can be used in conjunction with stainless steel pipe in non-corrosive environment as the flow media does not come in direct contact with the coupling housings but rather only the gasket.

Unit: psi / Bar

Model 7706 on Carbon Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	XS	STD	STD	Sch. 10	Sch. 7
1½ x 1¼ 40 x 32	500 35	500 35	500 35	350 24	300 20
2 x 1½ 50 x 40	500 35	500 35	500 35	350 24	300 20
2½ x 2 65 x 50	500 35	500 35	500 35	350 24	300 20
3 x 2 80 x 50	500 35	500 35	500 35	350 24	300 20
3 x 2½ 80 x 65	500 35	500 35	500 35	350 24	300 20
4 x 2 100 x 50	500 35	500 35	500 35	350 24	300 20
4 x 2½ 100 x 65	500 35	500 35	500 35	350 24	300 20
4 x 3 100 x 80	500 35	500 35	500 35	300 20	250 17
5 x 4 125 x 100	400 28	400 28	400 28	300 20	250 17
6 x 3 150 x 80	400 28	400 28	400 28	300 20	200 14
6 x 4 150 x 100	400 28	400 28	400 28	300 20	175 12
8 x 6 200 x 150	400 28	400 28	400 28	300 20	175 12

Unit: psi / Bar

Model 7706 on Stainless Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	Sch. 80S	Sch. 40S	Sch. 40S	Sch. 10S	Sch. 5S
1½ x 1¼ 40 x 32	500 35	500 35	350 24	300 20	250 17
2 x 1½ 50 x 40	500 35	500 35	350 24	300 20	250 17
2½ x 2 65 x 50	500 35	500 35	350 24	300 20	250 17
3 x 2 80 x 50	500 35	500 35	350 24	300 20	250 17
3 x 2½ 80 x 65	500 35	500 35	350 24	300 20	250 17
4 x 2 100 x 50	500 35	500 35	350 24	300 20	250 17
4 x 2½ 100 x 65	500 35	500 35	350 24	300 20	200 14
4 x 3 100 x 80	500 35	500 35	300 20	250 17	200 14
5 x 4 125 x 100	400 28	400 28	300 20	250 17	NR
6 x 3 150 x 80	400 28	400 28	300 20	200 14	NR
6 x 4 150 x 100	400 28	400 28	300 20	175 12	NR
8 x 6 200 x 150	400 28	400 28	300 20	175 12	NR

Equivalent Length of Sch. 40 steel pipe for water at 60°F (16°C)

Flow Data

The pressure drop or head loss across Model 7706 Reducing Coupling is small and less than that of the same size of concentric reducer. Equivalent lengths of sch. 40 steel pipe (new pipe) for water 60°F (16°C) are shown in the table.

Model 7706 Reducing Coupling					
Size	Equivalent Length		Size	Equivalent Length	
	in	feet		in	feet
1½ x 1¼ 40 x 32		1.6 0.5	4 x 2½ 100 x 65		4.9 1.5
2 x 1 50 x 25		3.9 1.2	4 x 3 100 x 80		3.6 1.1
2 x 1½ 50 x 40		2.0 0.6	5 x 4 125 x 100		3.0 0.9
2½ x 2 65 x 50		2.0 0.6	6 x 3 150 x 80		7.9 2.4
3 x 2 80 x 50		3.9 1.2	6 x 4 150 x 100		5.9 1.8
3 x 2½ 80 x 65		2.3 0.7	6 x 5 150 x 125		4.5 1.37
4 x 2 100 x 50		6.2 1.9	8 x 6 200 x 150		7.2 2.2

MATERIAL SPECIFICATIONS

• Housing:

Ductile Iron to ASTM A536, Gr. 65-45-12 and or ASTM A395, Gr. 65-45-15, min. tensile strength 65,000 psi (448 MPa).

• Surface Finish:

Standard painted finishes in orange or RAL3000 red.

- Hot dip zinc galvanized (Option)
- Epoxy Coatings in RAL3000 red or other colors (Option)

• Rubber Gasket:

Grade E-pw EPDM (Color code: Double Green stripe) approved under NSF/ANSI 61 and NSF/ANSI 372 for potable water service to +180°F (+82°C). Also good for services for water with acid, water with chlorine or chloramines, deionized water, seawater and waste water, dilute acids, oil-free air and many chemicals.

Not recommended for petroleum oils, minerals oils, solvents and aromatic hydrocarbons.

Maximum Temperature Range: -30°F (-34°C) to +230°F (+110°C)*.

*EPDM seat for water services are not recommended for steam services unless valves or components are accessible for frequent replacement.

- (Option) **Grade “E” EPDM** (Color code: Green stripe) Good for cold & hot water up to +230°F (+110°C). Also good for services for water with acid, water with

chlorine or chloramines, deionized water, seawater and waste water, dilute acids, oil-free air and many chemicals.

Not recommended for petroleum oils, minerals oils, solvents and aromatic hydrocarbons.

Maximum Temperature Range: -30°F (-34°C) to +230°F (+110°C)*.

*EPDM seat for water services are not recommended for steam services unless valves or components are accessible for frequent replacement

- (Option) **Grade “T” Nitrile** (Color code: Orange stripe) Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Also good for water services under +150°F (+66°C). Temperature range: -20°F to +180°F (-29°C to +82°C). **Do not use for HOT WATER above +150°F (+66°C) or HOT DRY AIR above +140°F (+60°C)**
- Other options: Grade “O” - Fluoroelastomer.
Grade “L” - Silicone.
For additional details contact **Shurjoint**.

• Bolts & Nuts:

Heat treated carbon manganese steel track bolts to ASTM A449-83a (or A183 Gr. 2), minimum tensile strength 110,000 psi (758 MPa), Zinc electroplated, with heavy-duty hexagonal nuts to ASTM A563.

LISTINGS/APPROVALS

The information provided below is based on the latest listing and approval data at the time of publication. Listings/Approvals are subject to change and/or additions by the approvals agencies. Contact **Shurjoint** for the performance on other pipes and the latest listings and approvals

Standard Pipe				Specialty Pipe		
Nom. Size	cULus / FM		VdS	LPCB	cULus	FM
	Sch. 10 <i>PSI/Bar</i>	Sch. 40 <i>PSI/Bar</i>	<i>Bar</i>	<i>PSI/Bar</i>	BS1387(M) <i>PSI/Bar</i>	
2×1½ <i>50 x 40</i>	300 <i>20</i>	300 <i>20</i>	16	300 <i>20</i>	N/A	300 <i>20</i>
2½×2 <i>65 x 50</i>	300 <i>20</i>	300 <i>20</i>	N/A	N/A	N/A	300 <i>20</i>
76.1 mm×2 <i>65 x 50</i>	300 <i>20</i>	300 <i>20</i>	16	300 <i>20</i>	300 <i>20</i>	300 <i>20</i>
76.1 mm×3 <i>65 x 80</i>	N/A	N/A	N/A	N/A	300 <i>20</i>	N/A
3×2 <i>80 x 50</i>	300 <i>20</i>	300 <i>20</i>	16	300 <i>20</i>	300 <i>20</i>	300 <i>20</i>
3×2½ <i>80 x 65</i>	300 <i>20</i>	300 <i>20</i>	N/A	N/A	300 <i>20</i>	300 <i>20</i>
3×76.1 mm <i>80 x 65</i>	N/A	300 <i>20</i>	16	300 <i>20</i>	N/A	300 <i>20</i>
4×2 <i>100 x 50</i>	300 <i>20</i>	300 <i>20</i>	16	300 <i>20</i>	N/A	300 <i>20</i>
4×2½ <i>100 x 65</i>	300 <i>20</i>	300 <i>20</i>	N/A	N/A	300 <i>20</i>	300 <i>20</i>
4×76.1 mm <i>100 x 65</i>	300 <i>20</i>	300 <i>20</i>	16	300 <i>20</i>	N/A	300 <i>20</i>
4×3 <i>100 x 80</i>	300 <i>20</i>	300 <i>20</i>	16	300 <i>20</i>	300 <i>20</i>	300 <i>20</i>
5×4 <i>125 x 100</i>	N/A	300 <i>20</i>	N/A	N/A	N/A	300 <i>20</i>
139.7 mm×4 <i>125 x 100</i>	N/A	300 <i>20</i>	N/A	N/A	N/A	300 <i>20</i>
165.1 mm×3 <i>150 x 80</i>	N/A	300 <i>20</i>	N/A	N/A	N/A	300 <i>20</i>
6×3 <i>150 x 80</i>	300 <i>20</i>	300 <i>20</i>	N/A	N/A	N/A	300 <i>20</i>
165.1 mm×4 <i>150 x 100</i>	300 <i>20</i>	300 <i>20</i>	N/A	300 <i>20</i>	300 <i>20</i>	300 <i>20</i>
6×4 <i>150 x 100</i>	300 <i>20</i>	300 <i>20</i>	N/A	N/A	N/A	300 <i>20</i>
8×165.1 mm <i>200 x 150</i>	N/A	300 <i>20</i>	N/A	300 <i>20</i>	N/A	300 <i>20</i>
8×6 <i>200 x 150</i>	300 <i>20</i>	300 <i>20</i>	N/A	N/A	N/A	300 <i>20</i>

General Notes:

- **Maximum Working Pressure (CWP)** listed is the maximum cold water pressure for general piping services tested to ASTM F1476 and or AWWA C606 methods. Figures listed are based on roll- or cut-grooved standard wall carbon steel pipe. For other pipe schedules or pipe materials, contact **Shurjoint** for additional information.
- **Max. End Load** is calculated based on the maximum working pressure (CWP).
- **Listed and or Approved Pressures** are pressure ratings for fire protection systems, tested and approved by various approval bodies. Please always refer to the latest approval data posted on the **Shurjoint** website.
- **Field Joint Test:** For one time only the system may be tested hydrostatically at 1½ times the maximum working pressure listed (AWWA C606 5.2.3).
- **Warning:** Piping systems must always be depressurized and drained before attempting disassembly and or removal of any components.
- **The 10 Year Limited Warranty** applies to manufacturing defects only and does not cover severe service/temperature applications or wear parts.
- **Shurjoint** reserves the right to change specifications, designs and or standard without notice and without incurring any obligations.

*Shurjoint product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact **Shurjoint** Technical Service. **Shurjoint** reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligations to make such changes and modifications on **Shurjoint** products previously subsequently sold.*