

MODEL 7706 REDUCING COUPLING



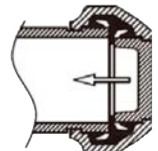
The Model 7706 Reducing Coupling allows direct reduction on a piping run and eliminates the need for a concentric reducer and couplings.

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.



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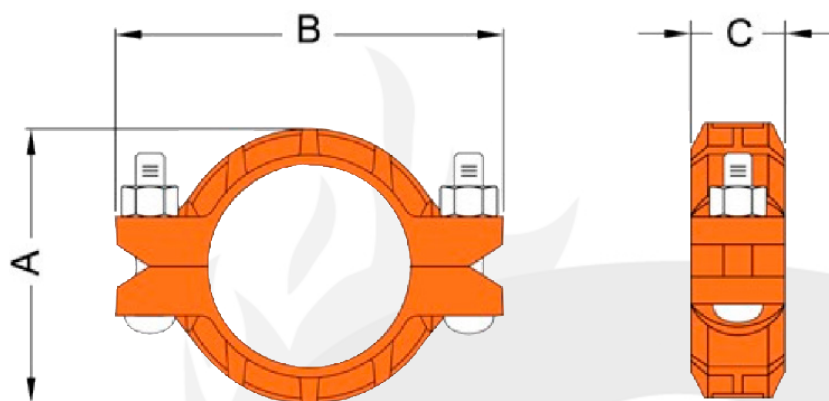
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DIMENSIONS



Nominal Size	Pipe O.D.	Max, Working Pressure (CWP)*		Max, End Load (CWP)		Axial Displacement †	Angular Movement**†		DIMENSIONS			Bolt Size	Weight
							Degree per coupling	Per pipe	A	B	C		
in	mm	PSI	Bar	Lbs	kN	mm	(°)	mm/m	mm	mm	mm	mm	Kg
1 1/2" x 1 1/4"	48,3 x 42,2	500	35	1410	6,23	0 ~ 1,6	1° - 54'	17	72	118	46	M10 x 55	0,8
2" x 1 1/2"	60,3 x 48,3	500	35	2210	9,70	0 ~ 1,6	1° - 31'	13	85	122	48	M10 x 55	0,9
2 1/2" x 2"	76,1 x 60,3	500	35	3530	15,46	0 ~ 1,6	1° - 12'	11	102	144	48	M10 x 55	1,2
3" x 2"	88,9 x 60,3	500	35	4800	21,09	0 ~ 1,6	1° - 02'	9	116	168	48	M12 x 75	1,5
3" x 2 1/2"	88,9 x 76,1	500	35	4800	21,09	0 ~ 1,6	1° - 02'	9	116	168	48	M12 x 75	1,7
4" x 2"	114,3 x 60,3	500	35	7940	34,87	0 ~ 2,4	1° - 12'	11	146	198	49	M12 x 75	2,4
4" x 2 1/2"	114,3 x 76,1	500	35	7940	34,87	0 ~ 2,4	1° - 12'	11	146	198	49	M12 x 75	2,6
4" x 3"	114,3 x 88,9	500	35	7940	34,87	0 ~ 2,4	1° - 12'	11	146	198	51	M12 x 75	2,4
5" x 4"	139,7 x 114,3	400	28	9490	42,90	0 ~ 3,2	1° - 18'	12	160	240	51	M16 x 90	3,8
	141,3 x 114,3	400	28	9710	42,90	0 ~ 3,2	1° - 18'	12	160	242	51	M16 x 90	3,6
6" x 3"	165,1 x 88,9	400	28	13260	59,91	0 ~ 3,2	1° - 07'	10	202	270	52	M16 x 90	4,6
	168,3 x 88,9	400	28	13780	62,26	0 ~ 3,2	1° - 06'	10	208	270	52	M16 x 90	4,6
6" x 4"	165,1 x 114,3	400	28	13260	59,91	0 ~ 3,2	1° - 07'	10	202	271	52	M16 x 90	4,5
	168,3 x 114,3	400	28	13780	62,26	0 ~ 3,2	1° - 06'	10	208	270	52	M16 x 90	4,5
8" x 6"	219,1 x 168,3	400	28	23350	105,51	0 ~ 3,2	0° - 50'	8	260	333	53	M20 x 120	6,5
	219,1 x 165,1	400	28	23350	105,51	0 ~ 3,2	0° - 50'	8	260	333	56	M20 x 120	6,5

* 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 is the maximum value that a coupling allows under no internal pressure.

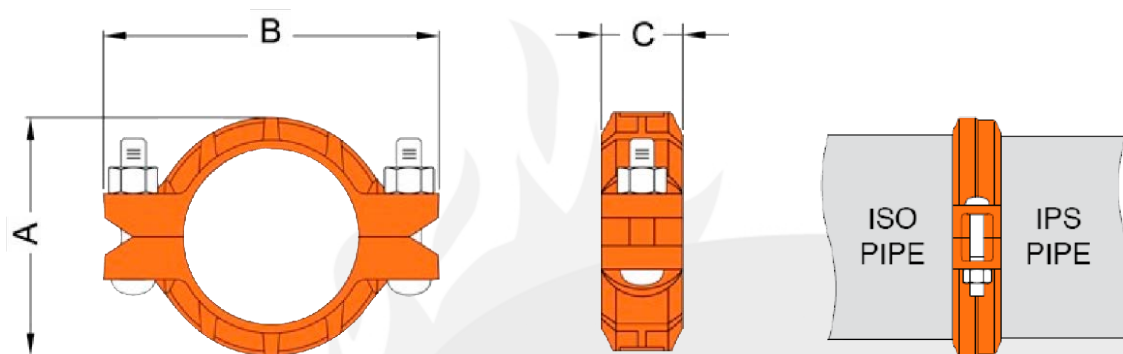
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Nominal Size		Pipe O.D.	Max. Working Pressure (CWP)*		Max. End Load (CWP)		Axial Displacement †	Angular Movement**†		DIMENSIONS			Bolt Size	Weight
								Degree per coupling	Per pipe	A	B	C		
in	mm	mm	PSI	Bar	Lbs	kN	mm	(°)	mm/m	mm	mm	mm	mm	Kg
2 1/2" x 76,1"		73,0 x 76,1	500	35	2110	9,09	0 ~ 1,6	1° - 12'	11	102	138	48	M10 x 55	1,2
6" x 165,1"		168,3 x 165,1	400	28	9940	42,80	0 ~ 3,2	0° - 33'	10	200	270	53	M16 x 90	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 is the maximum value that a coupling allows under no internal pressure.

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.

Model 7706 on Carbon Steel Pipe						
Nom. Size		Cut-Grooved		Roll Grooved		
in	mm	XS	STD	STD	Sch. 10	Sch. 7
1 1/2" x 1 1/4"	40 x 32	35	35	35	24	20
2" x 1 1/2"	50 x 40	35	35	35	24	20
2 1/2" x 2"	65 x 50	35	35	35	24	20
3" x 2"	80 x 50	35	35	35	24	20
3" x 2 1/2"	80 x 65	35	35	35	24	20
4" x 2"	100 x 50	35	35	35	24	20
4" x 2 1/2"	100 x 65	35	35	35	24	20
4" x 3"	100 x 80	35	35	35	20	17
5" x 4"	125 x 100	28	28	28	20	17
6" x 3"	150 x 80	28	28	28	20	14
6" x 4"	150 x 100	28	28	28	20	12
8" x 6"	200 x 150	28	28	28	20	12

Model 7706 on Stainless Steel Pipe						
Nom. Size		Cut-Grooved		Roll Grooved		
in	mm	Sch. 80S	Sch. 40S	Sch. 40S	Sch. 10S	Sch. 5S
1 1/2" x 1 1/4"	40 x 32	35	35	24	20	17
2" x 1 1/2"	50 x 40	35	35	24	20	17
2 1/2" x 2"	65 x 50	35	35	24	20	17
3" x 2"	80 x 50	35	35	24	20	17
3" x 2 1/2"	80 x 65	35	35	24	20	17
4" x 2"	100 x 50	35	35	24	20	17
4" x 2 1/2"	100 x 65	35	35	24	20	14
4" x 3"	100 x 80	35	35	20	17	14
5" x 4"	125 x 100	28	28	20	17	NR
6" x 3"	150 x 80	28	28	20	14	NR
6" x 4"	150 x 100	28	28	20	12	NR
8" x 6"	200 x 150	28	28	20	12	NR

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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	mm	feet	m	in	mm	feet	m
1 1/2" x 1 1/4"	40 x 32	1,6	0,5	4" x 2 1/2"	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 1 1/2"	50 x 40	2,0	0,6	5" x 4"	125 x 100	3,0	0,9
2 1/2" 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 2 1/2"	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

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

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		Sch. 40					BS1387				
in	mm	PSI	Bar	PSI	Bar	Bar	PSI	Bar	PSI	Bar	PSI	Bar	
2" x 1 1/2"	50 x 40	300	20	300	20	16	300	20	N/A	N/A	300	20	
76,1 mm x 2"	65 x 50	300	20	300	20	16	300	20	300	20	300	20	
76,1 mm x 3"	65 x 80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	300	20	N/A	N/A	
3" x 2"	80 x 50	300	20	300	20	16	300	20	300	20	300	20	
3" x 76,1 mm	80 x 65	N/A	N/A	300	20	16	300	20	N/A	N/A	300	20	
4" x 2"	100 x 50	300	20	300	20	16	300	20	N/A	N/A	300	20	
4" x 76,1 mm	100 x 65	300	20	300	20	16	300	20	N/A	N/A	300	20	
4" x 3"	100 x 80	300	20	300	20	16	300	20	300	20	300	20	
5" x 4"	125 x 100	N/A	N/A	300	20	N/A	N/A	N/A	N/A	N/A	300	20	
139,7 mm x 4"	125 x 100	N/A	N/A	300	20	N/A	N/A	N/A	N/A	N/A	300	20	
165,1 mm x 3"	150 x 80	N/A	N/A	300	20	N/A	N/A	N/A	N/A	N/A	300	20	
6" x 3"	150 x 80	300	20	300	20	N/A	N/A	N/A	N/A	N/A	300	20	
165,1 mm x 4"	150 x 100	300	20	300	20	N/A	300	20	300	20	300	20	
6" x 4"	150 x 100	300	20	300	20	N/A	N/A	N/A	N/A	N/A	300	20	
8" x 165,1 mm	200 x 150	N/A	N/A	300	20	N/A	300	20	N/A	N/A	300	20	
8" x 6"	200 x 150	300	20	300	20	N/A	N/A	N/A	N/A	N/A	300	20	

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MATERIAL SPECIFICATIONS

- **Housing:** Ductile Iron to ASTM A536, Gr. 65-45-12 and or to 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" 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, 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 gaskets for water services are not recommended for steam services unless couplings or components are accessible for frequent gasket 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.

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.

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.

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