

## 7706

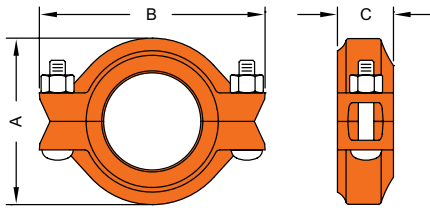
reducing coupling



ensure 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.

job name:	
job location:	
engineer:	
contractor:	
tag:	
po#:	
rep:	
wholesale dist.:	



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 standard orange paint finish. optional finishes such as hot dipped zinc galvanized and custom epoxy coatings are available.

for fire protection pressure rating, listing, and approval information, refer to data sheet B-42 or visit [www.shurjoint.com](http://www.shurjoint.com) for details or contact Shurjoint.

### 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	in mm	PSI Bar	lb kN	in mm	(°)	in / ft mm / m	in mm	in mm	in mm	in mm	lb kg
1-1/2 x 1-1/4	1.900 x 1.660	500	1410	0 - 0.065	1° - 54'	0.20	2.83	4.65	1.81	3/8 x 2-1/2	1.8
40 x 32	48.3 x 42.2	35	6.23	0 - 1.6		17	72	118	46	M10 x 55	0.8
2 x 1-1/2	2.375 x 1.900	500	2210	0 - 0.065	1° - 31'	0.16	3.35	4.80	1.89	3/8 x 2-1/8	2.0
50 x 40	60.3 x 48.3	35	9.70	0 - 1.6		13	85	122	48	M10 x 55	0.9
2-1/2 x 2	2.875 x 2.375	500	3240	0 - 0.065	1° - 15'	0.13	3.78	5.67	1.89	3/8 x 2-1/8	2.6
65 x 50	73.0 x 60.3	35	14.22	0 - 1.6		11	96	144	48	M10 x 55	1.2
3 x 2	3.500 x 2.375	50	4800	0 - 0.065	1° - 02'	0.11	4.57	6.61	1.89	1/2 x 3	3.3
80 x 50	88.9 x 60.3	35	21.09	0 - 1.6		9	116	168	48	M12 x 75	1.5
3 x 2-1/2	3.500 x 2.875	500	4800	0 - 0.065	1° - 02'	0.11	4.57	6.61	1.89	1/2 x 3	3.7
80 x 65	88.9 x 73.0	35	21.09	0 - 1.6		9	116	168	48	M12 x 75	1.7
4 x 2	4.500 x 2.375	500	7940	0 - 0.095	1° - 12'	0.13	5.75	7.80	1.93	1/2 x 3	5.3
100 x 50	114.3 x 60.3	35	34.87	0 - 2.4		11	146	198	49	M12 x 75	2.4
4 x 2-1/2	4.500 x 2.875	500	7940	0 - 0.095	1° - 12'	0.13	5.75	7.80	1.93	1/2 x 3	5.7
100 x 65	114.3 x 73.0	35	34.87	0 - 2.4		11	146	198	49	M12 x 75	2.6
4 x 3	4.500 x 3.500	500	7940	0 - 0.095	1° - 12'	0.13	5.75	7.80	2.01	1/2 x 3	5.3
100 x 80	114.3 x 88.9	35	34.87	0 - 2.4		11	146	198	51	M12 x 75	2.4
5 x 4	5.563 x 4.500	400	9710	0 - 0.125	1° - 18'	0.14	6.30	9.84	2.01	5/8 x 3-1/2	7.9
125 x 100	141.3 x 114.3	28	43.88	0 - 3.2		12	160	242	51	M16 x 90	3.6
6 x 3	6.625 x 3.500	400	13780	0 - 0.125	1° - 06'	0.12	8.19	10.63	2.05	5/8 x 3-1/2	10.1
150 x 80	168.3 x 88.9	28	62.26	0 - 3.2		10	208	270	52	M16 x 90	4.6
6 x 4	6.625 x 4.500	400	13780	0 - 0.125	1° - 06'	0.12	8.19	10.63	2.05	5/8 x 3-1/2	9.9
150 x 100	168.3 x 114.3	28	62.26	0 - 3.2		10	208	270	52	M16 x 90	4.5
8 x 6	8.625 x 6.625	400	23350	0 - 0.125	0° - 50'	0.09	10.24	13.11	2.09	3/4 x 4-3/4	14.3
200 x 150	219.1 x 168.3	28	105.51	0 - 3.2		8	260	333	53	M20 x 120	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.



**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 standard orange paint finish.
- 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)**

- good for cold & hot water up to +230°F (+110°C). also good for services for water with acid, water with chlorine, chloramine, deionized water, seawater and waste water, dilute acids, oil-free air and many chemicals.
- good for cold +86°F (+30°C) and hot +180°F (+82°C) potable water services. EPDM is UL classified per NSF/ANSI 61 & NSF/ANSI 372.
- **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.

**(option) grade “T” nitrile (color code: orange stripe)**

- recommended for petroleum products, air with oil vapors, vegetable and mineral oils.
- 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.



### 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 the flow media does not come in direct contact with the coupling housings but rather only the gasket.

### carbon steel pipe

NOMINAL SIZE	CUT-GROOVED		ROLL-GROOVED		
	XS	STD	STD	SCH. 10	SCH. 7
in	psi	psi	psi	psi	psi
mm	Bar	Bar	Bar	Bar	Bar
1-1/2 x 1-1/4	500	500	500	350	300
40 x 32	35	35	35	24	20
2 x 1-1/2	500	500	500	350	300
50 x 40	35	35	35	24	20
2-1/2 x 2	500	500	500	350	300
65 x 50	35	35	35	24	20
3 x 2	500	500	500	350	300
80 x 50	35	35	35	24	20
3 x 2-1/2	500	500	500	350	300
80 x 65	35	35	35	24	20
4 x 2	500	500	500	350	300
100 x 50	35	35	35	24	20
4 x 2-1/2	500	500	500	350	300
100 x 65	35	35	35	24	20
4 x 3	500	500	500	300	250
100 x 80	35	35	35	20	17
5 x 4	400	400	400	300	250
125 x 100	28	28	28	20	17
6 x 3	400	400	400	300	200
150 x 80	28	28	28	20	14
6 x 4	400	400	400	300	175
150 x 100	28	28	28	20	12
8 x 6	400	400	400	300	175
200 x 150	28	28	28	20	12

### stainless steel pipe

NOMINAL SIZE	CUT-GROOVED		ROLL-GROOVED		
	SCH. 80S	SCH. 40S	SCH. 40S	SCH. 10S	SCH. 5S
in	psi	psi	psi	psi	psi
mm	Bar	Bar	Bar	Bar	Bar
1-1/2 x 1-1/4	500	500	350	300	250
40 x 32	35	35	24	20	17
2 x 1-1/2	500	500	350	300	250
50 x 40	35	35	24	20	17
2-1/2 x 2	500	500	350	300	250
65 x 50	35	35	24	20	17
3 x 2	500	500	350	300	250
80 x 50	35	35	24	20	17
3 x 2-1/2	500	500	350	300	250
80 x 65	35	35	24	20	17
4 x 2	500	500	350	300	250
100 x 50	35	35	24	20	17
4 x 2-1/2	500	500	350	300	200
100 x 65	35	35	24	20	14
4 x 3	500	500	300	250	200
100 x 80	35	35	20	17	14
5 x 4	400	400	300	250	NR
125 x 100	28	28	20	17	NR
6 x 3	400	400	300	200	NR
150 x 80	28	28	20	14	NR
6 x 4	400	400	300	175	NR
150 x 100	28	28	20	12	NR
8 x 6	400	400	300	175	NR
200 x 150	28	28	20	12	NR

### 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.

SIZE	EQUIVALENT LENGTH	SIZE	EQUIVALENT LENGTH
in	feet	in	feet
mm	m	mm	m
1-1/2 x 1-1/4	1.6	4 x 2-1/2	4.9
40 x 32	0.5	100 x 65	1.5
2 x 1	3.9	4 x 3	3.6
50 x 25	1.2	100 x 80	1.1
2 x 1-1/2	2	5 x 4	3
50 x 40	0.6	125 x 100	0.9
2-1/2 x 2	2	6 x 3	7.9
65 x 50	0.6	150 x 80	2.4
3 x 2	3.9	6 x 4	5.9
80 x 50	1.2	150 x 100	1.8
3 x 2-1/2	2.3	6 x 5	4.5
80 x 65	0.7	150 x 125	1.37
4 x 2	6.2	8 x 6	7.2
100 x 50	1.9	200 x 150	2.2



## 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

UL / CUL			
NOM. SIZE	SCH 40	SCH 10	BS13 87(M)
in	psi	psi	psi
mm	Bar	Bar	Bar
2 x 1-1/2	300	300	NA
50 x 40	20	20	
2-1/2 x 2	300	300	NA
65 x 50	20	20	
76.1 mm x 2	NA	NA	300
66 x 50			20
76.1 mm x 3	NA	NA	300
65 x 50			20
3 x 2	300	300	NA
80 x 50	20	20	
3 x 2-1/2	300	300	NA
80 x 65	20	20	
3 x 76.1 mm	NA	NA	300
80 x 65			20
4 x 2	300	300	NA
100 x 50	20	20	
4 x 2-1/2	300	300	NA
100 x 65	20	20	
4 x 76.1 mm	NA	NA	300
100 x 65			20
4 x 3	300	300	300
100 x 80	20	20	20
5 x 4	NA	NA	NA
125 x 100			
137.7 mm x 4	NA	NA	NA
125 x 100			
165.1 mm x 3	NA	NA	NA
150 x 80			
6 x 3	300	300	NA
150 x 80	20	20	
165.1 mm x 4	300	300	300
150 x 100	20	20	20
6 x 4	300	300	NA
150 x 100	20	20	
8 x 165.1 mm	NA	NA	NA
200 x 150			
8 x 6	300	300	NA
200 x 150	20	20	

FM			
NOM. SIZE	SCH 40	SCH 10	EN 10255 (M)
in	psi	psi	psi
mm	Bar	Bar	Bar
2 x 1-1/2	300	300	300
50 x 40	20	20	20
2-1/2 x 2	300	300	300
65 x 50	20	20	20
76.1 mm x 2	300	300	300
66 x 50	20	20	20
76.1 mm x 3	300	300	300
65 x 50	20	20	20
3 x 2	300	300	300
80 x 50	20	20	20
3 x 2-1/2	300	300	300
80 x 65	20	20	20
3 x 76.1 mm	300	300	300
80 x 65	20	20	20
4 x 2	300	300	300
100 x 50	20	20	20
4 x 2-1/2	300	300	300
100 x 65	20	20	20
4 x 76.1 mm	300	300	300
100 x 65	20	20	20
4 x 3	300	300	300
100 x 80	20	20	20
5 x 4	300	300	300
125 x 100	20	20	20
139.7 mm x 4	300	300	300
125 x 100	20	20	20
165 mm x 3	300	300	300
150 x 80	20	20	20
6 x 3	300	300	300
150 x 80	20	20	20
165 mm x 4	300	300	300
150 x 100	20	20	20
6 x 4	300	300	300
150 x 100	20	20	20
8 x 165.1 mm	300	300	300
200 x 150	20	20	20
8 x 6	300	300	300
200 x 150	20	20	20

VDS	
NOM. SIZE	PRESSURE
in	psi
mm	Bar
2 x 1-1/2	232
50 x 40	16
2-1/2 x 2	NA
65 x 50	
76.1 mm x 2	232
66 x 50	16
76.1 mm x 3	NA
65 x 50	
3 x 2	232
80 x 50	16
3 x 2-1/2	NA
80 x 65	
3 x 76.1 mm	232
80 x 65	16
4 x 2	232
100 x 50	16
4 x 2-1/2	NA
100 x 65	
4 x 76.1 mm	232
100 x 65	16
4 x 3	232
100 x 80	16
5 x 4	NA
125 x 100	
137.7 mm x 4	NA
125 x 100	
165.1 mm x 3	NA
150 x 80	
6 x 3	NA
150 x 80	
165.1 mm x 4	NA
150 x 100	
6 x 4	NA
150 x 100	
8 x 165.1 mm	NA
200 x 150	
8 x 6	NA
200 x 150	

LPCB	
NOM. SIZE	PRESSURE
in	psi
mm	Bar
2 x 1-1/2	300
50 x 40	20
2-1/2 x 2	NA
65 x 50	
76.1 mm x 2	300
66 x 50	20
76.1 mm x 3	NA
65 x 50	
3 x 2	300
80 x 50	20
3 x 2-1/2	NA
80 x 65	
3 x 76.1 mm	300
80 x 65	20
4 x 2	300
100 x 50	20
4 x 2-1/2	NA
100 x 65	
4 x 76.1 mm	300
100 x 65	20
4 x 3	300
100 x 80	20
5 x 4	NA
125 x 100	
137.7 mm x 4	NA
125 x 100	
165.1 mm x 3	NA
150 x 80	
6 x 3	NA
150 x 80	
165.1 mm x 4	300
150 x 100	20
6 x 4	NA
150 x 100	
8 x 165.1 mm	300
200 x 150	20
8 x 6	NA
200 x 150	

## 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 1.5 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.