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.

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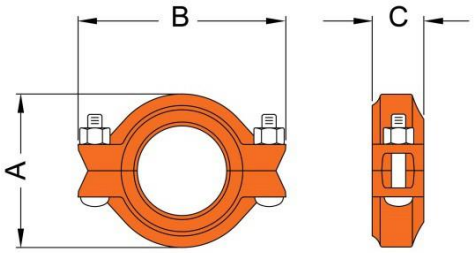
For Fire Protection pressure rating, listing, and approval information, refer to Data Sheet B-42 or visit ***SHURJOINT*** website, www.shurjoint.com for details or contact your ***SHURJOINT*** Representative.

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

CAUTION

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)	Axial Displacement †	Angular Movement **† Deg. Per Coupling	Angular Movement **† Per Pipe	Dimensions A	Dimensions B	Dimensions 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*	⅜ x 2⅛ *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*	⅜ x 2⅛ *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*	⅜ x 2⅛ *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*	⅜ x 2⅛ *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*

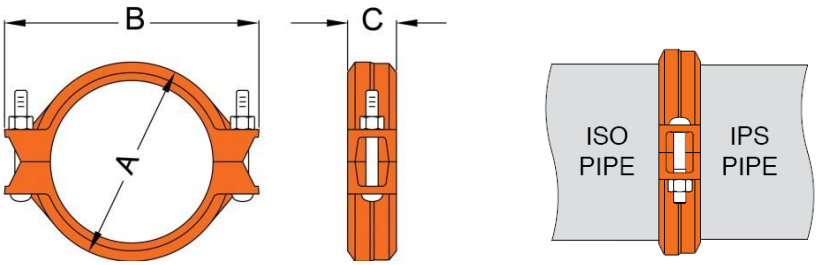
Model 7706 Reducing Coupling

Nominal Size	Pipe O.D.	Max. Working Pressure (CWP)*	Max. End Load (CWP)	Axial Displacement †	Angular Movement **† Deg. Per Coupling	Angular Movement **† Per Pipe	Dimensions A	Dimensions B	Dimensions C	Bolt Size	Weight
in *mm*	in *mm*	PSI *Bar*	Lbs *kN*	in *mm*	(º)	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*	1º - 07'	0.12 *10*	7.95 *202*	10.63 *270*	2.05 *52*	⅝ x 3½ *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*	1º - 06'	0.12 *10*	8.19 *208*	10.63 *270*	2.05 *52*	⅝ x 3½ *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*	1º - 07'	0.12 *10*	7.95 *202*	10.67 *271*	2.05 *52*	⅝ x 3½ *M16 x 90*	9.9 *4.5*
6 x 4 *150 x 100*	6.625 x 4.500 *168.3 x114.3*	400 *28*	13780 *62.26*	0 ~ 0.125 *0 ~ 3.2*	1º - 06'	0.12 *10*	8.19 *208*	10.63 *270*	2.05 *52*	⅝ x 3½ *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*	0º - 50'	0.09 *8*	10.24 *260*	13.11 *333*	2.09 *53*	¾ x 4¾ *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*	0º - 50'	0.09 *8*	10.24 *260*	13.11 *333*	2.20 *56*	¾ x 4¾ *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 ¾" – 3½"; 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**† Deg. Per Coupling	Angular Movement**† Per Pipe	Dimensions A	Dimensions B	Dimensions C	Bolt Size	Weight
in *mm*	in *mm*	PSI *Bar*	Lbs *kN*	in *mm*	(º)	in/ft *mm/m*	in *mm*	in *mm*	in *mm*	in *mm*	Lbs *Kgs*
2½ x 76.1mm	2.875 x 3.000 *73.0 x 76.1*	500 *35*	2110 *9.09*	0 ~ 0.065 *0 ~ 1.6*	1º - 12'	0.13 *11*	4.02 *102*	5.43 *138*	1.89 *48*	⅜ x 2⅛ *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*	0º - 33'	0.12 *10*	7.87 *200*	10.63 *270*	2.09 *53*	⅝ x 3½ *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 ¾" – 3½"; 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**		
in / mm	XS	STD	STD	Sch. 10	Sch. 7
1½ x 1¼	500	500	500	350	300
40 x 32	*35*	*35*	*35*	*24*	*20*
2 x 1½	500	500	500	350	300
50 x 40	*35*	*35*	*35*	*24*	*20*
2½ 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 2½	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 ½	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*

Unit: psi / Bar

Model 7706 on Stainless Steel Pipe					
Nom. Size	**Cut-Grooved**		**Roll-Grooved**		
in / mm	Sch. 80S	Sch. 40S	Sch. 40S	Sch. 10S	Sch. 5S
1½ x 1¼	500	500	350	300	250
40 x 32	*35*	*35*	*24*	*20*	*17*
2 x 1½	500	500	350	300	250
50 x 40	*35*	*35*	*24*	*20*	*17*
2½ 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 2½	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 ½	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*	
6 x 3	400	400	300	200	NR
150 x 80	*28*	*28*	*20*	*14*	
6 x 4	400	400	300	175	NR
150 x 100	*28*	*28*	*20*	*12*	
8 x 6	400	400	300	175	NR
200 x 150	*28*	*28*	*20*	*12*	

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.

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

Model 7706 Reducing Coupling			
Size	**Equivalent Length**	**Size**	**Equivalent Length**
in	feet	in	feet
mm	*m*	*mm*	*m*
1½ x 1¼	1.6	4 x 2½	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 1½	2.0	5 x 4	3.0
50 x 40	*0.6*	*125 x 100*	*0.9*
2½ x 2	2.0	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 x100*	*1.8*
3 x 2½	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*