SHURJOINT®

MODEL 7771 STANDARD RIGID COUPLING

- T&G Design -

The Model 7771 Standard Rigid Coupling is the ideal choice for risers, mechanical rooms or other applications where rigidity is required. The tongue and groove design and mechanisms provide a rigid connection reducing and or eliminating flexural and torsional loads. The Model 7771 coupling sizes 1½" - 12" (40 mm – 300 mm) are comprised of two identical housing segments, sizes 14"-18" (350 mm – 400 mm) are comprised of three identical segments and sizes 20" - 24" (500 mm – 600 mm) are comprised of four identical segments. All include an 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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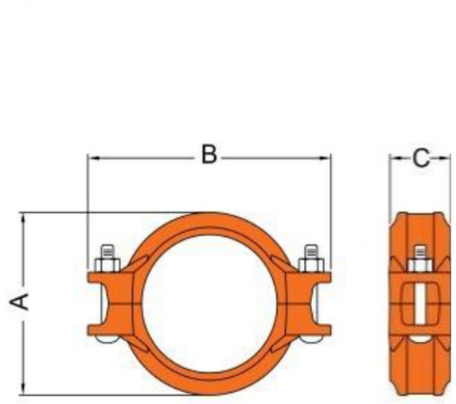
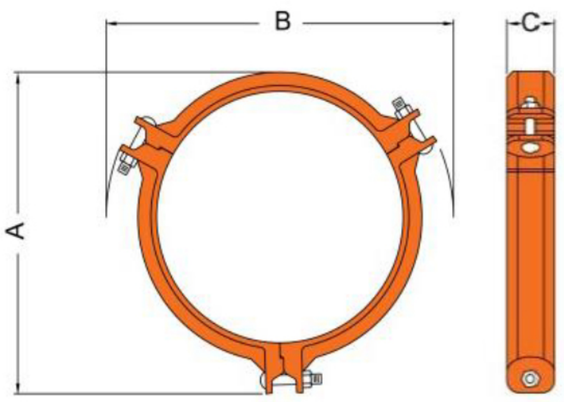
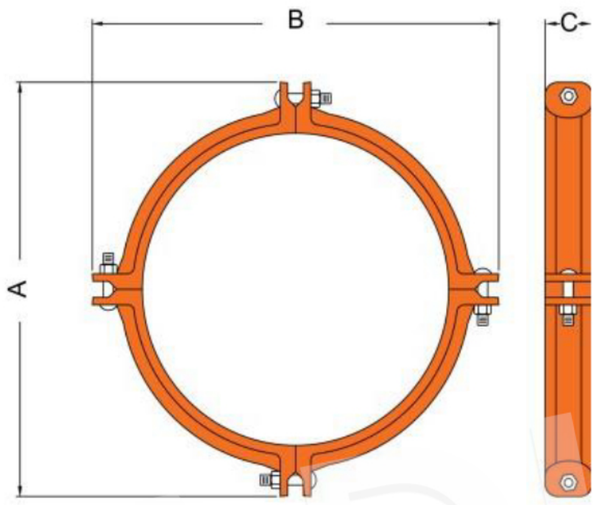
7771 couplings should always be installed so that the coupling bolt pads make metal to metal contact.



1½"~12"



14"~18"



20"~24"

10 YEAR LIMITED WARRANTY

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

Model 7771 Standard Rigid Coupling

Nominal Size	Pipe O.D.	Max. Working Pressure (CWP)*	Max. End Load (CWP)	Axial Displacement †	Dimensions A	Dimensions B	Dimensions C	Bolt No.	Bolt Size	Weight
in *mm*	in *mm*	PSI *Bar*	Lbs *kN*	in *mm*	in *mm*	in *mm*	in *mm*		in *mm*	Lbs *Kgs*
1½ *40*	1.900 *48.3*	500 *35*	1410 *6.23*	0~0.06 *0~1.6*	2.91 *74*	4.41 *112*	1.81 *46*	2	⅜ x 2⅛ *M10 x 55*	1.5 *0.7*
2 *50*	2.375 *60.3*	500 *35*	2210 *9.70*	0~0.06 *0~1.6*	3.34 *85*	4.96 *126*	1.81 *46*	2	⅜ x 2⅛ *M10 x 55*	1.9 *0.9*
2½ *65*	2.875 *73.0*	500 *35*	3240 *14.22*	0~0.06 *0~1.6*	3.89 *99*	5.59 *142*	1.81 *46*	2	⅜ x 2⅛ *M10 x 55*	2.6 *1.2*
76.1 mm	3.000 *76.1*	500 *35*	3530 *15.46*	0~0.06 *0~1.6*	4.00 *102*	5.90 *150*	1.81 *46*	2	⅜ x 2⅛ *M10 x 55*	2.6 *1.2*
3 *80*	3.500 *88.9*	500 *35*	4800 *21.09*	0~0.06 *0~1.6*	4.52 *115*	6.50 *165*	1.81 *46*	2	½ x 3 *M12 x 75*	3.3 *1.5*
108.0 mm	4.250 *108.0*	500 *35*	7090 *31.13*	0~0.16 *0~4.1*	5.54 *141*	7.59 *193*	2.00 *51*	2	½ x 3 *M12 x 75*	4.8 *2.2*
4 *100*	4.500 *114.3*	500 *35*	7940 *34.87*	0~0.16 *0~4.1*	5.82 *148*	7.79 *198*	2.00 *51*	2	½ x 3 *M12 x 75*	4.8 *2.2*
133.0 mm	5.250 *133.0*	450 *31*	9730 *43.05*	0~0.16 *0~4.1*	6.61 *168*	9.72 *247*	2.00 *51*	2	⅝ x 3½ *M16 x 90*	6.0 *2.7*
139.7 mm	5.500 *139.7*	450 *31*	10680 *47.49*	0~0.16 *0~4.1*	6.8 *173*	9.45 *240*	2.00 *51*	2	⅝ x 3½ *M16 x 90*	6.4 *2.9*
5 *125*	5.563 *141.3*	450 *31*	10930 *48.59*	0~0.16 *0~4.1*	6.88 *175*	9.84 *250*	2.00 *51*	2	⅝ x 3½ *M16 x 90*	6.4 *2.9*

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Rev.M 20210908

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Nominal Size	Pipe O.D.	Max. Working Pressure (CWP)*	Max. End Load (CWP)	Axial Displacement †	– Dimensions			Bolt		Weight
					A	B	C	No.	Size	
in *mm*	in *mm*	PSI *Bar*	Lbs *kN*	in *mm*	in *mm*	in *mm*	in *mm*		in *mm*	Lbs *Kgs*
165.1 mm	6.500 *165.1*	450 *31*	14920 *66.33*	0~0.16 *0~4.1*	7.87 *200*	11.02 *280*	2.09 *53*	2	⅝ x 3½ *M16 x 90*	7.7 *3.5*
6 *150*	6.625 *168.3*	450 *31*	15500 *68.93*	0~0.16 *0~4.1*	8.07 *205*	11.18 *284*	2.09 *53*	2	⅝ x 3½ *M16 x 90*	8.1 *3.7*
8 *200*	8.625 *219.1*	300 *20*	17510 *75.37*	0~0.16 *0~4.1*	10.27 *261*	13.58 *345*	2.48 *63*	2	⅝ x 5 5/16 *M16 x 135*	14.6 *6.6*
10 *250*	10.750 *273.0*	300 *20*	27210 *117.01*	0~0.16 *0~4.1*	12.44 *316*	15.51 *394*	2.50 *64*	2	¾ x 4¾ *M20 x 120*	18.6 *8.4*
12 *300*	12.750 *323.9*	300 *20*	38280 *164.71*	0~0.16 *0~4.1*	14.17 *360*	18.00 *457*	2.50 *64*	2	⅞ x 6½ ---	24.5 *11.1*
200 JIS	8.516 *216.3*	300 *20*	17070 *73.45*	0~0.16 *0~4.1*	10.00 *254*	13.58 *345*	2.48 *63*	2	⅝ x 5 5/16 *M16 x 135*	15.2 *6.9*
250 JIS	10.528 *267.4*	300 *20*	26100 *112.26*	0~0.16 *0~4.1*	12.20 *310*	15.20 *386*	2.50 *64*	2	¾ x 4¾ *M20 x 120*	19.3 *8.7*
300 JIS	12.539 *318.5*	300 *20*	37020 *159.26*	0~0.16 *0~4.1*	13.94 *354*	17.48 *444*	2.50 *64*	2	⅞ x 6½ ---	26.0 *11.2*
14 *350*	14.000 *355.6*	300 *20*	46150 *198.53*	0~0.13 *0~3.2*	16.25 *413*	20.28 *515*	2.95 *75*	2	⅞ x 4 ---	31.9 *14.5*
16 *400*	16.000 *406.4*	300 *20*	60280 *259.30*	0~0.13 *0~3.2*	18.11 *460*	22.17 *563*	2.95 *75*	3	⅞ x 4 ---	35.2 *16.0*
18 *450*	18.000 *457.2*	300 *20*	76300 *328.18*	0~0.13 *0~3.2*	20.51 *521*	24.21 *615*	3.11 *79*	3	⅞ x 4 ---	37.4 *17.0*
20 *500*	20.000 *508.0*	300 *20*	94200 *405.16*	0~0.13 *0~3.2*	22.87 *581*	26.26 *667*	3.11 *79*	4	1 x 3½ ---	52.8 *24.0*
22 *550*	22.000 *558.8*	250 *17*	94980 *416.71*	0~0.13 *0~3.2*	24.49 *622*	28.35 *720*	3.11 *79*	4	1 x 3½ ---	58.3 *26.5*
24 *600*	24.000 *609.6*	250 *17*	113040 *495.92*	0~0.13 *0~3.2*	27.12 *689*	30.24 *768*	3.11 *79*	4	1 x 3½ ---	62.6 *28.4*

* 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.

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).

For additional details contact ***Shurjoint***.

• 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, 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.

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- ☐ (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 Type 304 or 316 track bolts with heavy duty nuts (Option).

Performance Data

The following tables show the maximum working pressures (CWP) of ***Shurjoint*** Model 7771 Standard Rigid 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 7771 on Carbon Steel Pipe					
Nom. Size	**Cut-Grooved**		**Roll-Grooved**		
in / mm	XS	STD	STD	Sch. 10	Sch. 7
1½ *40*	750 *52*	750 *52*	750 *52*	600 *42*	400 *28*
2 *50*	750 *52*	750 *52*	750 *52*	600 *42*	400 *28*
2½ *65*	750 *52*	750 *52*	750 *52*	600 *42*	400 *28*
3 *80*	750 *52*	750 *52*	750 *52*	600 *42*	400 *28*
4 *100*	750 *52*	750 *52*	750 *52*	600 *42*	400 *28*
5 *125*	750 *52*	750 *52*	750 *52*	500 *35*	350 *24*
6 *150*	700 *48*	700 *48*	700 *48*	400 *28*	300 *20*
8 *200*	600 *42*	600 *42*	600 *42*	350 *24*	250 *17*
10 *250*	500 *35*	500 *35*	500 *35*	300 *20*	200 *14*
12 *300*	400 *28*	400 *28*	400 *28*	250 *17*	150 *10*

Unit: psi / Bar

Model 7771on Stainless Steel Pipe					
Nom. Size	**Cut-Grooved**		**Roll-Grooved**		
in / mm	Sch. 80S	Sch. 40S	Sch. 40S	Sch. 10S	Sch. 5S
1½ *40*	750 *52*	750 *52*	700 *48*	500 *35*	300 *20*
2 *50*	750 *52*	750 *52*	700 *48*	500 *35*	300 *20*
2½ *65*	750 *52*	750 *52*	700 *48*	500 *35*	300 *20*
3 *80*	750 *52*	750 *52*	700 *48*	500 *35*	300 *20*
4 *100*	750 *52*	750 *52*	700 *48*	400 *28*	250 *17*
5 *125*	750 *52*	750 *52*	600 *42*	300 *20*	NR
6 *150*	700 *48*	700 *48*	500 *35*	200 *14*	NR
8 *200*	600 *42*	600 *42*	400 *28*	150 *10*	NR
10 *250*	500 *35*	500 *35*	300 *20*	100 *7*	NR
12 *300*	400 *28*	400 *28*	250 *17*	100 *7*	NR

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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.