MODEL 7707 HEAVY DUTY FLEXIBLE COUPLING

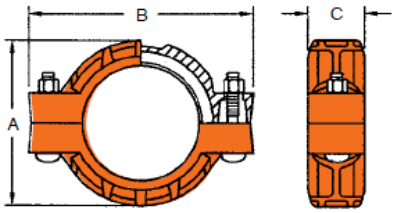
The Model 7707 Flexible Coupling is designed for use in a variety of general piping applications of moderate or high pressure services. Working pressure is usually dictated by the wall thickness and rating of the pipe being used. The Model 7707 couplings feature flexibility that can accommodate misalignment, distortion, thermal stress, vibration and noise and also resist seismic tremors. The utilization of Model 7707 couplings can accommodate a curved layout. See Typical Applications – Flexible Couplings on ***Shurjoint*** cutsheet #B-19.

The Model 7707 couplings are comprised of two housing segments, EPDM gaskets 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 epoxy coatings are also available.

7707 couplings should always be installed so that the coupling bolt pads make metal to metal contact.

c UL us LISTED FM APPROVED

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.



¾"~12"

10 YEAR LIMITED WARRANTY

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

Model 7707 Heavy Duty Flexible Coupling

Nominal Size	Pipe O.D.	Max. Working Pressure (CWP)*	ASME/ANSI Pressure Class Rating^ @100ºF/@38ºC	Max. End Load (CWP)	Axial Displace-ment †	Angular Movement ** †		Dimensions			Bolt		Weight
						Degree Per Coupling	Per Pipe	A	B	C	No	Size	
in	in	PSI	PSI	Lbs	in	(º)	in/ft	in	in	in		in	Lbs
mm	*mm*	*Bar*	*Nom. Class*	*kN*	*mm*		*mm/m*	*mm*	*mm*	*mm*		*mm*	*Kgs*
¾	1.050	1000	750	865	0.0625	3º – 23'	0.71	2.13	3.74	1.81	2	⅜ x 1¾	1.3
20	*26.7*	*69*	*300*	*3.79*	*1.6*		*58*	*54*	*95*	*46*		*M10x45*	*0.6*
1	1.315	1000	750	1360	0.0625	2º – 45'	0.58	2.40	3.90	1.81	2	⅜ x 2⅛	1.7
25	*33.4*	*69*	*300*	*6.15*	*1.6*		*48*	*61*	*99*	*46*		*M10x55*	*0.8*
1¼	1.660	1000	750	2160	0.0625	2º – 10'	0.45	2.76	4.25	1.81	2	⅜ x 3	2.1
32	*42.2*	*69*	*300*	*9.64*	*1.6*		*38*	*70*	*108*	*46*		*M10x75*	*1.0*
1½	1.900	1000	750	2830	0.0625	1º – 54'	0.40	3.00	4.88	1.81	2	½ x 2⅜	2.1
40	*48.3*	*69*	*300*	*12.64*	*1.6*		*33*	*76*	*124*	*45*		*M12x60*	*1.0*
2	2.375	1000	750	4430	0.0625	1º – 31'	0.31	3.50	5.24	1.81	2	½ x 3	2.6
50	*60.3*	*69*	*300*	*19.69*	*1.6*		*26*	*90*	*133*	*46*		*M12x75*	*1.2*
2½	2.875	1000	750	6490	0.0625	1º – 15'	0.26	4.00	5.90	1.81	2	½ x 3	2.9
65	*73.0*	*69*	*300*	*28.86*	*1.6*		*22*	*102*	*150*	*46*		*M12x75*	*1.3*
76.1 mm	3.000	1000	750	7065	0.0625	1º – 12'	0.25	4.06	5.90	1.81	2	½ x 3	2.9
	76.1	*69*	*300*	*31.37*	*1.6*		*21*	*103*	*150*	*46*		*M12x75*	*1.3*
3	3.500	1000	750	9620	0.0625	1º – 02'	0.21	4.88	6.73	1.89	2	½ x 3	3.3
80	*88.9*	*69*	*300*	*42.81*	*1.6*		*18*	*124*	*171*	*48*		*M12x75*	*1.5*
4	4.500	1000	750	15900	0.1250	1º – 36'	0.33	6.18	8.38	2.13	2	⅝ x 3½	4.6
100	*114.3*	*69*	*300*	*70.76*	*3.2*		*27*	*157*	*213*	*54*		*M16x90*	*2.1*
139.7 mm	5.500	1000	750	23750	0.1250	1º – 18'	0.27	7.32	9.50	2.13	2	⅝ x 3½	6.8
	139.7	*69*	*300*	*105.71*	*3.2*		*23*	*186*	*241*	*54*		*M16 x 90*	*3.1*
5	5.563	1000	750	24295	0.1250	1º – 18'	0.27	7.32	9.50	2.13	2	¾ x 4¾	7.2
125	*141.3*	*69*	*300*	*108.14*	*3.2*		*22*	*186*	*241*	*54*		*M20x120*	*3.3*
165.1 mm	6.500	1000	750	33170	0.1250	1º – 07'	0.23	8.11	11.26	2.13	2	¾ x 4¾	7.9
	165.1	*69*	*300*	*147.64*	*3.2*		*19*	*211*	*286*	*54*		*M20x120*	*3.6*

Model 7707 Heavy Duty Flexible Coupling

Nominal Size	Pipe O.D.	Max. Working Pressure (CWP)*	ASME/ANSI Pressure Class Rating^ @100ºF/@38ºC	Max. End Load (CWP)	Axial Displace-ment †	Angular Movement ** †		Dimensions			Bolt		Weight
						Degree Per Coupling	Per Pipe	A	B	C	No	Size	
in *mm*	in *mm*	PSI *Bar*	PSI *Nom. Class*	Lbs *kN*	in *mm*	(º)	in/ft *mm/m*	in *mm*	in *mm*	in *mm*		in *mm*	Lbs *Kgs*
6 *150*	6.625 *168.3*	1000 *69*	750 *300*	34455 *153.42*	0.1250 *3.2*	1º – 05'	0.22 *19*	8.24 *214*	11.38 *289*	2.13 *54*	2	¾ x 4¾ *M20x120*	8.1 *3.7*
8 *200*	8.625 *219.1*	800 *55*	400 *250*	46720 *207.26*	0.1250 *3.2*	0º – 50'	0.18 *15*	10.86 *276*	14.00 *356*	2.44 *62*	2	⅞ x 5½ ---	14.5 *6.6*
10 *250*	10.750 *273.0*	800 *55*	400 *250*	72575 *321.78*	0.1250 *3.2*	0º – 40'	0.14 *11*	13.50 *343*	16.73 *425*	2.52 *64*	2	1 x 6½ ---	23.3 *10.6*
12 *300*	12.750 *323.9*	800 *55*	400 *250*	102090 *452.95*	0.1250 *3.2*	0º – 34'	0.12 *10*	15.35 *390*	18.39 *467*	2.52 *64*	2	1 x 6½ ---	26.4 *12.0*
200 JIS	8.516 *216.3*	800 *55*	400 *250*	45545 *202.00*	0.1250 *3.2*	0º – 51'	0.18 *15*	10.86 *276*	14.00 *356*	2.44 *62*	2	¾ x 4¾ *M20x120*	14.5 *6.6*
250 JIS	10.528 *267.4*	800 *55*	400 *250*	69610 *308.71*	0.1250 *3.2*	0º – 41'	0.14 *12*	13.27 *337*	16.54 *420*	2.52 *64*	2	⅞ x 6½ ---	22.4 *10.2*
300 JIS	12.539 *318.5*	800 *55*	400 *250*	98740 *437.98*	0.1250 *3.2*	0º – 35'	0.12 *10*	15.31 *389*	18.81 *478*	2.52 *64*	2	⅞ x 6½ ---	25.5 *11.6*

* Working Pressure is based on roll grooved standard wall carbon steel pipe.
^ The ASME/ANSI pressure class rating is not the design or maximum pressure rating, rather is provided for those that are accustomed to specifying or using ASME/ANSI pressure class rated components such as flange, valves, etc.
† 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 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 7707 Heavy Duty Flexible 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 7707 on Carbon Steel Pipe

Nom. Size	Cut-Grooved		Roll-Grooved		
in / *mm*	XS PSI / *Bar*	STD PSI / *Bar*	STD PSI / *Bar*	Sch. 10 PSI / *Bar*	Sch. 7 PSI / *Bar*
¾ *20*	1000 *69.0*	1000 *69.0*	1000* / 750 *69.0* / *51.7*	750* / 600 *51.7* / *41.4*	500 *34.5*
1 *25*	1000 *69.0*	1000 *69.0*	1000* / 750 *69.0* / *51.7*	750* / 600 *51.7* / *41.4*	500 *34.5*
1¼ *32*	1000 *69.0*	1000 *69.0*	1000* / 750 *69.0* / *51.7*	750* / 600 *51.7* / *41.4*	500 *34.5*
1½ *40*	1000 *69.0*	1000 *69.0*	1000* / 750 *69.0* / *51.7*	750* / 600 *51.7* / *41.4*	500 *34.5*
2 *50*	1000 *69.0*	1000 *69.0*	1000* / 750 *69.0* / *51.7*	750* / 600 *51.7* / *41.4*	500 *34.5*
2½ *65*	1000 *69.0*	1000 *69.0*	1000* / 750 *69.0* / *51.7*	600 *41.4*	500 *34.5*
3 *80*	1000 *69.0*	1000 *69.0*	1000* / 750 *69.0* / *51.7*	600 *41.4*	500 *34.5*
4 *100*	1000 *69.0*	1000 *69.0*	1000* / 750 *69.0* / *51.7*	600 *41.4*	400 *27.6*
5 *125*	1000 *69.0*	1000 *69.0*	1000* / 750 *69.0* / *51.7*	500 *34.5*	350 *24.2*
6 *150*	1000 *69.0*	1000 *69.0*	1000* / 700 *69.0* / *48.3*	450 *31.0*	300 *20.7*
8 *200*	800 *55.0*	800 *55.0*	800* / 600 *55.0* / *41.4*	350 *24.2*	250 *17.2*
10 *250*	800 *55.0*	800 *55.0*	800* / 550 *55.0* / *37.9*	300 *20.7*	200 *13.8*
12 *300*	800 *55.0*	800 *55.0*	800* / 500 *55.0* / *34.5*	300 *20.7*	200 *13.8*

Model 7707 on Stainless Steel Pipe

Nom. Size	Cut-Grooved		Roll-Grooved		
in / *mm*	Sch. 80S PSI / *Bar*	Sch. 40S PSI / *Bar*	Sch. 40S PSI / *Bar*	Sch. 10S PSI / *Bar*	Sch. 5S PSI / *Bar*
¾ *20*	750 *51.7*	750 *51.7*	700 *48.3*	450 *31.0*	325 *22.4*
1 *25*	750 *51.7*	750 *51.7*	700 *48.3*	450 *31.0*	325 *22.4*
1¼ *32*	750 *51.7*	750 *51.7*	700 *48.3*	450 *31.0*	325 *22.4*
1½ *40*	750 *51.7*	750 *51.7*	700 *48.3*	450 *31.0*	325 *22.4*
2 *50*	750 *51.7*	750 *51.7*	700 *48.3*	450 *31.0*	325 *22.4*
2½ *65*	750 *51.7*	750 *51.7*	700 *48.3*	450 *31.0*	325 *22.4*
3 *80*	750 *51.7*	750 *51.7*	700 *48.3*	450 *31.0*	325 *22.4*
4 *100*	750 *51.7*	750 *51.7*	700 *48.3*	400 *27.6*	250 *17.2*
5 *125*	750 *51.7*	750 *51.7*	600 *41.4*	300 *20.7*	NR
6 *150*	750 *51.7*	750 *51.7*	500 *34.5*	200 *13.8*	NR
8 *200*	600 *41.4*	600 *41.4*	450 *31.0*	150 *10.3*	NR
10 *250*	600 *41.4*	600 *41.4*	400 *27.6*	125 *8.6*	NR
12 *300*	600 *41.4*	600 *41.4*	400 *27.6*	125 *8.6*	NR

Note: * Maximum line pressure, including surge, to which a joint should be subjected.

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).
- ☐ Tailored epoxy coatings including 3M Scotchkote #134 for waste water, hydrocarbons, harsh chemicals and sea water services, Drynamels #4900 for exterior (outdoor) architectural applications and others (Option).

For additional details contact *Shurjoint*.

• Rubber Gasket:

Grade "E" EPDM (Color code: Green stripe) Good for cold & hot water up to +230ºF (+110ºC). 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: -30ºF (-34ºC) to +230ºF (+110ºC)*.
*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 +150ºF (+66ºC).
  Temperature range: -20ºF to +180ºF (-29ºC to +82ºC).
  Do not use for HOT WATER above +150ºF (+66ºC) or HOT DRY AIR above +140ºF (+60ºC)

- ☐ 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. Plain washers are always supplied for epoxy coated couplings.

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

General Notes:

- *ASME/ANSI Pressure-Temperature Rating* is provided as an aid in selecting a proper coupling to incorporate with other piping components (valves, flanges, and etc.) that are used in the same system and carry the ASME/ANSI rating. Select a Class 150 coupling to incorporate with Class 150 valves and flanges.
- *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.

Job Name:	System No.	Location:
Contractor:	Approved:	Date:
Engineer:	Approved:	Date:

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.*