MODEL Z07 HEAVY DUTY RIGID COUPLING

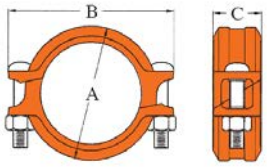
-Angle-Pad Design-

The ***Shurjoint*** Model Z07 is an angle-pad design rigid coupling for general piping applications where rigidity is required including valve connections, mechanical rooms, fire mains and long straight runs. The angle-pad design allows the coupling housings to slide along the bolt pads when tightened. The result is an offset clamping action which provides a rigid joint that resists flexural and torsional loads. Support and hanging requirements correspond to ANSI B31.1, B31.9 and NFPA 13.

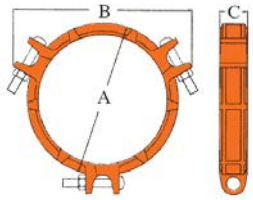
The ***Shurjoint*** Model Z07 is available with a standard "C" shaped or ***GapSeal®*** gasket in a variety grades to meet your specific service requirements.

Z07 couplings should always be installed so that the coupling bolt pads make metal to metal contact.

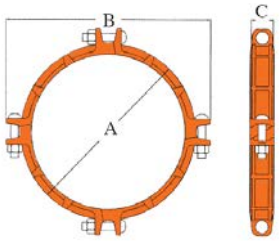
For Fire Protection pressure rating, listing, and approval information, refer to Data Sheet B-42 or visit ***SHURJOINT*** website, www.shurjoint.com for details or contact your ***SHURJOINT*** Representative.



1¼"~24"
Z07 & Z07N



14" ~ 18"



20" ~ 24"

10 YEAR LIMITED WARRANTY

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

Model Z07 Standard Rigid Coupling

Nominal Size	Pipe OD	Max. Working Pressure (CWP)*	ASME/ANSI Pressure Class Rating^ @100ºF/@38ºC	Max. End Load (CWP)	Axial Displace-ment †	Dimension A	Dimension B	Dimension C	Bolt No	Bolt Size	Weight
in *mm*	in *mm*	PSI *Bar*	PSI *Nom. Class*	Lbs *kN*	in *mm*	in *mm*	in *mm*	in *mm*		in *mm*	Lbs *Kgs*
1¼ *32*	1.660 *42.2*	750 *52*	750 *300*	1620 *7.27*	0 ~ 0.05 *0~1.2*	2.68 *68*	4.13 *105*	1.85 *47*	2	⅜ x 2⅛ *M10 x 55*	1.6 *0.7*
1½ *40*	1.900 *48.3*	750 *52*	750 *300*	2120 *9.52*	0 ~ 0.05 *0~1.2*	2.91 *74*	4.53 *115*	1.85 *47*	2	⅜ x 2⅛ *M10 x 55*	2.0 *0.9*
2 *50*	2.375 *60.3*	750 *52*	750 *300*	3320 *14.84*	0 ~ 0.07 *0~1.7*	3.39 *86*	4.72 *120*	1.88 *48*	2	⅜ x 2¾ *M10 x 70*	2.4 *1.1*
2½ *65*	2.875 *73.0*	750 *52*	750 *300*	4860 *21.75*	0 ~ 0.07 *0~1.7*	3.94 *100*	5.50 *140*	1.88 *48*	2	⅜ x 2¾ *M10 x 70*	2.4 *1.1*
76.1 mm	3.000 *76.1*	750 *52*	750 *300*	5290 *23.64*	0 ~ 0.07 *0~1.7*	4.00 *102*	5.75 *146*	1.88 *48*	2	⅜ x 2¾ *M10 x 70*	2.4 *1.1*
3 *80*	3.500 *88.9*	750 *52*	750 *300*	7210 *32.26*	0 ~ 0.07 *0~1.7*	4.53 *115*	6.18 *157*	1.88 *48*	2	½ x 3 *M12 x 75*	3.1 *1.4*
4 *100*	4.500 *114.3*	750 *52*	750 *300*	11920 *53.33*	0 ~ 0.16 *0~4.1*	5.78 *147*	7.83 *199*	2.13 *54*	2	½ x 3 *M12 x 75*	4.4 *2.0*
139.7 mm	5.500 *139.7*	750 *52*	750 *300*	17810 *79.66*	0 ~ 0.16 *0~4.1*	6.88 *175*	9.25 *235*	2.13 *54*	2	⅝ x 3½ *M16 x 90*	6.6 *3.0*
5 *125*	5.563 *141.3*	750 *52*	750 *300*	18220 *81.50*	0 ~ 0.16 *0~4.1*	6.97 *177*	9.25 *235*	2.13 *54*	2	⅝ x 3½ *M16 x 90*	6.6 *3.0*
165.1 mm	6.500 *165.1*	700 *48*	750 *300*	23210 *102.71*	0 ~ 0.16 *0~4.1*	7.87 *200*	10.20 *259*	2.13 *54*	2	⅝ x 3½ *M16 x 90*	7.5 *3.4*
6 *150*	6.625 *168.3*	700 *48*	750 *300*	24110 *106.73*	0 ~ 0.16 *0~4.1*	8.00 *203*	10.35 *263*	2.13 *54*	2	⅝ x 3½ *M16 x 90*	7.1 *3.2*
8 *200*	8.625 *219.1*	600 *42*	400 *250*	35030 *158.27*	0 ~ 0.19 *0~4.8*	10.55 *268*	13.46 *342*	2.52 *64*	2	¾ x 4¾ *M20 x 120*	15.7 *7.1*
10 *250*	10.750 *273.0*	500 *35*	400 *250*	45350 *204.77*	0 ~ 0.13 *0~3.2*	12.86 *327*	16.98 *431*	2.56 *65*	2	⅞ x 6½ *---*	27.4 *10.4*

Model Z07 Standard Rigid Coupling

Nominal Size	Pipe OD	Max. Working Pressure (CWP)*	ASME/ANSI Pressure Class Rating^ @100ºF/@38ºC	Max. End Load (CWP)	Axial Displace-ment †	Dimension			Bolt		Weight
						A	B	C	No	Size	
in *mm*	in *mm*	PSI *Bar*	PSI *Nom. Class*	Lbs *kN*	in *mm*	in *mm*	in *mm*	in *mm*		in *mm*	Lbs *Kgs*
12 *300*	12.750 *323.9*	400 *28*	400 *250*	51040 *230.59*	0 ~ 0.13 *0~3.2*	14.86 *377*	18.88 *480*	2.56 *65*	2	⅞ x 6½ ---	26.0 *11.8*
200 JIS	8.516 *216.3*	600 *42*	400 *250*	34150 *154.25*	0 ~ 0.13 *0~3.2*	10.39 *264*	13.39 *340*	2.50 *64*	2	¾ x 4¾ *M20 x 120*	16.3 *7.4*
250 JIS	10.528 *267.4*	500 *35*	400 *250*	43500 *196.45*	0 ~ 0.13 *0~3.2*	12.63 *321*	15.63 *397*	2.56 *65*	2	⅞ x 6½ ---	23.1 *10.5*
300 JIS	12.539 *318.5*	400 *28*	400 *250*	49360 *222.97*	0 ~ 0.13 *0~3.2*	14.65 *372*	17.80 *452*	2.56 *65*	2	⅞ x 6½ ---	27.4 *12.4*
14 *350*	14.000 *355.6*	250 *17*	300 *150*	38460 *168.75*	0 ~ 0.13 *0~3.2*	16.06 *408*	19.89 *505*	2.95 *75*	3	⅞ x 5½ ---	32.7 *14.8*
16 *400*	16.000 *406.4*	250 *17*	300 *150*	50240 *220.41*	0 ~ 0.13 *0~3.2*	18.39 *467*	21.84 *554*	2.95 *75*	3	⅞ x 5½ ---	37.5 *17.0*
18 *450*	18.000 *457.2*	250 *17*	300 *150*	63580 *278.95*	0 ~ 0.13 *0~3.2*	20.68 *525*	23.89 *607*	3.11 *79*	3	⅞ x 5½ ---	47.0 *21.3*
20 *500*	20.000 *508.0*	250 *17*	300 *150*	78500 *344.39*	0 ~ 0.13 *0~3.2*	22.93 *582*	27.47 *698*	3.11 *79*	4	1 x 5½ ---	52.0 *23.6*
24 *600*	24.000 *609.6*	250 *17*	300 *150*	113040 *495.92*	0 ~ 0.13 *0~3.2*	27.05 *687*	31.61 *803*	3.15 *80*	4	1 x 6½ ---	64.6 *29.3*
14 (Z07N) *350*	14.000 *355.6*	250 *17*	300 *150*	38460 *168.75*	0 ~ 0.13 *0~3.2*	16.06 *408*	19.89 *505*	2.95 *75*	2	⅞ x 5½ ---	35.3 *16.0*
16 (Z07N) *400*	16.000 *406.4*	250 *17*	300 *150*	50240 *220.41*	0 ~ 0.13 *0~3.2*	18.39 *467*	21.84 *554*	2.95 *75*	2	⅞ x 5½ ---	30.5 *17.9*
18 (Z07N) *450*	18.000 *457.2*	250 *17*	300 *150*	63580 *278.95*	0 ~ 0.13 *0~3.2*	20.68 *525*	23.89 *607*	3.11 *79*	2	⅞ x 5½ ---	40.1 *22.3*
20 (Z07N) *500*	20.000 *508.0*	250 *17*	300 *150*	78500 *344.39*	0 ~ 0.13 *0~3.2*	22.93 *582*	27.47 *698*	3.00 *76*	2	1 x 5½ ---	57.8 *26.2*
24 (Z07N) *600*	24.000 *609.6*	250 *17*	300 *150*	113040 *495.92*	0 ~ 0.13 *0~3.2*	27.05 *687*	31.61 *803*	3.06 *78*	2	1 x 5½ ---	70.8 *32.1*

Note: Model Z07N two-segment couplings are now available in sizes 14" - 24". Please specify the model required when ordering.

* 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.

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 painted finishes in orange or RAL3000 red.

- ☐ Hot dip zinc galvanized (Optional).
- ☐ Epoxy Coatings in RAL3000 red or other colors (Optional)

• 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: -20 ºF to +180 ºF (-29 ºC to +82 ºC).
  Do not use for HOT WATER above +150 ºF (+66 ºC) or HOT DRY AIR above +140 ºF (+60 ºC).

- ☐ Other options: Grade "O" - Fluoroelastomer.
  Grade "L" - Silicone.
  For dry systems we recommend the use of the *Shurjoint* GapSeal® gasket.
  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 Z07 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 Z07 on Carbon Steel Pipe					
Nom. Size	**Cut-Grooved**		**Roll-Grooved**		
in / mm	XS	STD	STD	Sch. 10	Sch. 7
1¼	750	750	750	600	400
32	*52*	*52*	*52*	*42*	*28*
1½	750	750	750	600	400
40	*52*	*52*	*52*	*42*	*28*
2	750	750	750	600	400
50	*52*	*52*	*52*	*42*	*28*
2½	750	750	750	600	400
65	*52*	*52*	*52*	*42*	*28*
2½	750	750	750	600	400
65	*52*	*52*	*52*	*42*	*28*
3	750	750	750	600	400
80	*52*	*52*	*52*	*42*	*28*
4	750	750	750	600	400
100	*52*	*52*	*52*	*42*	*28*
5	750	750	750	500	350
125	*52*	*52*	*52*	*35*	*24*
5	750	750	750	500	350
125	*52*	*52*	*52*	*35*	*24*
6	700	700	700	400	300
150	*48*	*48*	*48*	*28*	*20*
6	700	700	700	400	300
150	*48*	*48*	*48*	*28*	*20*
8	600	600	600	350	250
200	*42*	*42*	*42*	*24*	*17*
10	500	500	500	300	200
250	*35*	*35*	*35*	*20*	*14*
12	400	400	400	250	150
300	*28*	*28*	*28*	*17*	*10*

Unit: psi / Bar

Model Z07 on Stainless Steel Pipe					
Nom. Size	**Cut-Grooved**		**Roll-Grooved**		
in / mm	Sch. 80S	Sch. 40S	Sch. 40S	Sch. 10S	Sch. 5S
1¼	750	750	700	500	300
32	*52*	*52*	*48*	*35*	*20*
1½	750	750	700	500	300
40	*52*	*52*	*48*	*35*	*20*
2	750	750	700	500	300
50	*52*	*52*	*48*	*35*	*20*
2½	750	750	700	500	300
65	*52*	*52*	*48*	*35*	*20*
2½	750	750	700	500	300
65	*52*	*52*	*48*	*35*	*20*
3	750	750	700	500	300
80	*52*	*52*	*48*	*35*	*20*
4	750	750	700	400	250
100	*52*	*52*	*48*	*28*	*17*
5	750	750	600	300	NR
125	*52*	*52*	*42*	*20*	
5	750	750	600	300	NR
125	*52*	*52*	*42*	*20*	
6	700	700	500	200	NR
150	*48*	*48*	*35*	*14*	
6	700	700	500	200	NR
150	*48*	*48*	*35*	*14*	
8	600	600	400	150	NR
200	*42*	*42*	*28*	*10*	
10	500	500	300	100	NR
250	*35*	*35*	*20*	*7*	
12	400	400	250	100	NR
300	*28*	*28*	*17*	*7*	

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

Nom. Size	cULus	cULus/FM		VdS	LPCB
in mm	Sch. 5 PSI / Bar	Sch. 10 PSI / Bar	Sch. 40 PSI / Bar	Bar	PSI / Bar
1¼ *32*	175 *12*	500 *35*	500 *35*	16	300 *20*
1½ *40*	175 *12*	500 *35*	500 *35*	16	300 *20*
2 *50*	175 *12*	500 *35*	500 *35*	16	300 *20*
2½ *65*	N/A	500 *35*	500 *35*	N/A	N/A
76.1mm	N/A	500 *35*	N/A	16	300 *20*
3 *80*	N/A	500 *35*	500 *35*	16	300 *20*
4 *100*	N/A	500 *35*	500 *35*	16	300 *20*
139.7mm	N/A	400 *28*	N/A	16	300 *20*
5 *125*	N/A	400 *28*	400 *28*	N/A	N/A
165.1mm	N/A	400 *28*	N/A	N/A	300 *20*
6 *150*	N/A	400 *28*	400 *28*	16	N/A
8 *200*	N/A	400 *28*	400 *28*	16	300 *20*
10 *250*	N/A	350 *24*	350 *24*	12.5	300 *20*
12 *300*	N/A	350 *24*	350 *24*	12.5	300 *20*

* Model Z-07 incorporating Lube-E gasket is cULus listed and also suitable for use in dry pipe systems for temperatures to -40°F (-40°C).

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.*