

Section 6

Ring Joint, Shouldered & Plain-End Couplings

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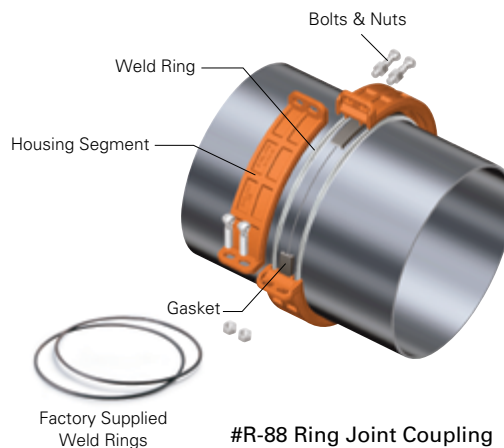
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Ring Joint, Shouldered and Plain End Couplings

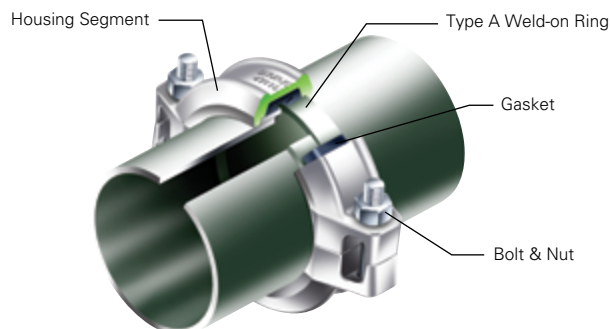
Shurjoint ring joint, shouldered and plain end couplings are non-grooved mechanical pipe joining components and excellent alternatives where pipe is difficult to groove or when grooving is not the preferred method. The processing of a roll groove

on pipe becomes more difficult as the pipe O.D. and or wall thickness increases. Roll grooving pipe larger than 14" (350 mm) requires proper tools and equipment. Pipe having a wall thickness greater than 0.375" (9.5 mm) may not be practical to roll groove.

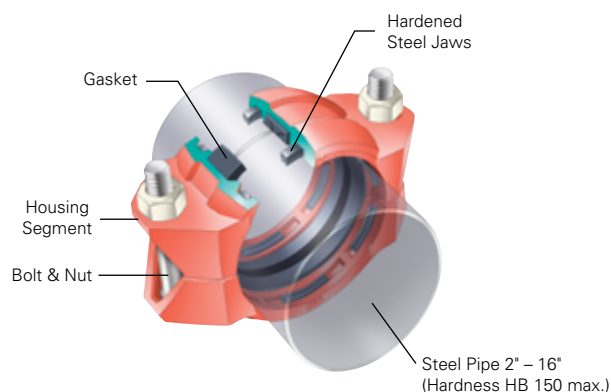
Ring Joint Coupling The Shurjoint ring joint coupling provides a much more secure joint than a comparable roll-grooved system, simply because the contact area of the rings is much greater than that of the roll-groove profile. In addition, the welded rings are able to withstand 2 - 3 times the shearing forces of roll grooves. High pressure couplings up to 3770 psi (260 Bar) are available.



Shouldered Coupling The Shurjoint shouldered piping system is a classic and versatile pipe joining method which utilizes Type A weld-on rings. Shurjoint shouldered couplings are widely used in irrigation, dewatering on construction sites, and other installations.



Plain-End Coupling The Shurjoint plain-end coupling securely grips the pipe with its built-in case hardened jaws incorporated within heavy duty housing segments and heavy duty bolts and nuts. The Shurjoint Model 79 Wildcat coupling is designed to join plain-end or beveled-end carbon steel pipe without roll-grooving, welding or threading. The Model 79 plain-end coupling can be used for mining, process piping, manifold piping, and oil field services.



Model

R-88 Ring Joint Coupling

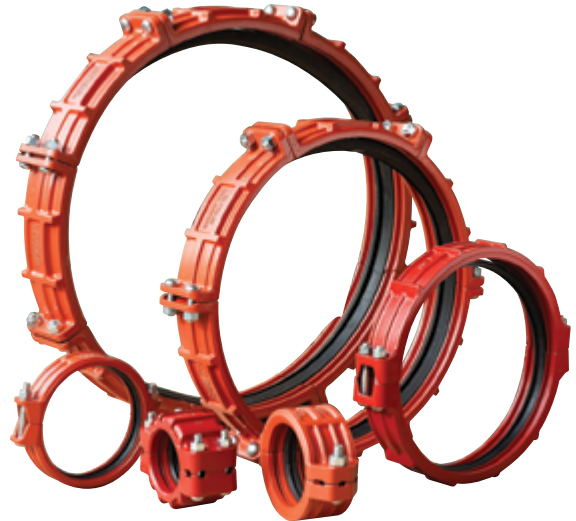
The **Shurjoint** Model R-88 Ring Joint Coupling is supplied with a pair of factory supplied weld rings. For installation weld a factory-supplied weld ring on each pipe end to be connected, next mount the rubber gasket over the pipe ends, place coupling segments over the gasket and fasten the bolts and nuts.

The **Shurjoint** R-88 Ring Joint Coupling is considered a shoulder coupling with the factory supplied weld rings serving as the joint shoulders. The R-88's performance standards meet and or exceed the requirements of ASTM F1476 and AWWA C606. The factory supplied weld rings offer a much more economical and convenient alternative to traditional shoulder rings, such as Type A, B, C, D, E, and G rings.

The R-88 Coupling can also be used on stainless steel pipe with optional weld rings available in compatible stainless steel grades. Check with **Shurjoint** for details and availability.

Typical applications

- Water & Waste Water Treatment Plants
- Mining & Tunnel Boring
- Pulp & Paper
- Hydroelectric Plants
- Co-Gen Electric Plants
- Food & Beverage
- Compressed Air
- HVAC



Max. Internal Service Pressures of Carbon Steel Pipe ASTM A53 Gr. B

When designing a piping system you must select pipe with the appropriate wall thickness to correspond with the intended working pressure of the system. The table lists design working pressure by the pipe wall schedule, XS, STD and LW, of representative ASTM A53 Gr. B carbon steel pipe calculated in accordance with the formula stipulated in ASME B31.1 Power Piping 104.1.

$$P = \frac{2SE (tm-A)}{Do - 2y (tm - A)}$$

Where:

- P = Maximum internal service pressure (psi)
SE = Allowable stress (psi)
(ASTM A53 Gr. B = 15,000 psi)
tm = Minimum pipe wall thickness (inch)
(87.5% of nominal wall thickness)
Do = Outside diameter of pipe (inch)
y = A coefficient (For ferritic steels 600°F or below = 0.4)
A = Additional thickness (inch) (A = 0)

Max. Internal Service Pressure of Carbon Steel Pipe, ASTM A53 Gr. B

Unit: psi

Nom. Size in / mm	XS 0.5"	STD 0.375**	LW 0.25" / 0.312" ^
8 / 200	1586	1006	777
10 / 250	1262	913	621
12 / 300	1058	788	522
14 / 350	962	717	475
16 / 400	839	625	415
18 / 450	744	555	368
20 / 500	668	499	331
24 / 600	555	415	275
26 / 650	512	382	318
28 / 700	475	355	295
30 / 750	443	331	275
32 / 800	415	310	258
36 / 900	368	275	229
38 / 950	349	261	217
40 / 1000	331	248	206
42 / 1050	315	236	187
44 / 1100	301	225	
48 / 1200	275	206	
52 / 1300	254	190	
54 / 1350	245	183	
56 / 1400	236	177	
60 / 1500	220	165	
66 / 1650	200	150	
68 / 1700	194	145	
72 / 1800	183	137	
84 / 2100	157	118	
96 / 2400	137	103	

Except *8": 0.322", ^ 8" ~ 24": 0.25", 26" ~ 42": 0.312"

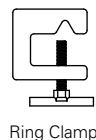
Model

R-88 Ring Joint Coupling

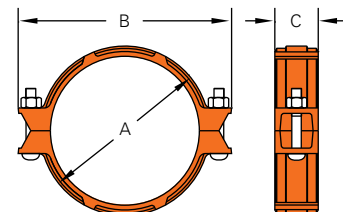
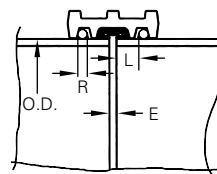
The Shurjoint Model R-88 Ring Joint Coupling is an ideal pipe joining method when pipe is difficult to groove or when grooving is not the preferred joining method. Available in sizes 8" to 96" the R-88 offers ease of use and excellent performance.



R-88
Size: 12"



Ring Clamp



8" ~ 12"

Nominal Size	Pipe O.D.	Rings both sides fully welded*		Axial Displacement † E	Angular Movement / Deflection †	Dimensions				Bolts		Sealing Surface L	Ring Size R	No. of Clamps‡	Weight
		Max. Working Pressure (CWP)#	Max. End Load (CWP)#			Per Cplg	Per Pipe	A	B	C	No.	Size			
in	in	PSI	Lbs	in				in	in	in		in	in		Lbs
mm	mm	Bar	kN	mm	Deg.(°)		mm / m	mm	mm	mm		mm	mm		Kgs
8	8.625	400	23350	0-0.340	2.14		0.45	10.08	13.00	3.11	2	¾ x 4¾	0.91	¼	16.8
200	219.1	28	105.51	0-8.7			37	256	330	79		M20x120	23	6.0	7.6
10	10.750	400	36280	0-0.340	1.95		0.41	12.29	15.20	3.25	2	¾ x 4¾	0.91	¼	22.2
250	273.0	28	163.81	0-8.7			34	312	386	83		M20 x 120	23	6.0	10.1
12	12.750	400	51040	0-0.190	0.82		0.17	14.72	17.90	3.39	2	¾ x 6½	1.02	5/16	30.8
300	323.9	28	230.59	0-4.8			14	374	455	86		—	26	8.0	14.0
200 JIS	8.516	400	22770	0-0.340	1.50		0.31	9.96	12.87	3.11	2	—	0.91	¼	17.6
	216.3	28	102.83	0-8.7			26	253	327	79		M20 x 120	23	6.0	8.0
250 JIS	10.528	400	34800	0-0.340	1.50		0.31	12.05	14.96	3.25	2	—	0.91	¼	22.0
	267.4	28	157.16	0-8.7			26	306	380	83		M20 x 120	23	6.0	10.0
300 JIS	12.539	400	49360	0-0.190	1.50		0.31	14.53	17.72	3.39	2	—	1.02	5/16	32.6
	318.5	28	222.97	0-4.8			26	369	450	86		M20 x 120	26	8.0	14.8

1) Dimensions are subject to change without notice. Other sizes are available on request.

* Working Pressure is based on rings both sides fully welded standard wall carbon steel pipe.

Working Pressure and End Load are the total from all internal and external loads based on the applicable pipe wall thickness.

† Allowable Axial Displacement and Angular Movement (Deflection) figures shown are the maximum nominal range of movement at each R-88 coupling joint when rings are welded in the standard position. For design and installation purposes these figures should be reduced by 25%.

‡ The number of ring clamps listed is the minimum required to correctly position the weld ring around the circumference of the pipe end.

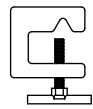
Model

R-88N Ring Joint Coupling

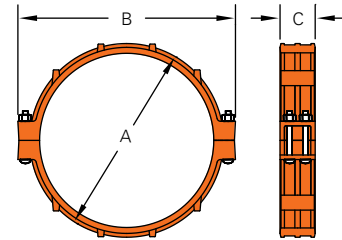
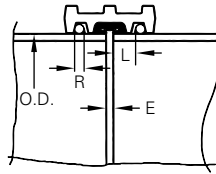
The Shurjoint Model R-88N is a two segment Ring Joint Coupling. Available in sizes 14" to 26" (350 mm to 650 mm). The two-segment style offers an easier and faster installation.



R-88N
Size: 24"



Ring Clamp



14" ~ 26"

Nominal Size	Pipe O.D.	Rings both sides fully welded*		Axial Displace- ment † E	Angular Movement / Deflection †	Dimensions				Bolts		Sealing Surface	Ring Size	No. of Clamps†	Weight
		Max. Working Pressure (CWP)#	Max. End Load (CWP)#			Per Cplg	Per Pipe	A	B	C	No.				
		PSI	Lbs kN									Deg.(°)	in / ft mm / m		
in mm	in mm	PSI Bar	Lbs kN	in mm	Deg.(°)	in / ft mm / m	in mm	in mm	in mm		in mm	in mm	in mm		Lbs Kgs
14	14.000	400	61540	0-0.250	1.20	0.25	15.93	19.40	3.65	2	⅞ x 5½	1.02	⅝ ₁₆	4	38.3
350	355.6	28	277.94	0-6.4		21	405	493	93		—	26	8.0		17.4
16	16.000	400	80380	0-0.250	0.90	0.19	17.92	21.52	3.65	2	⅞ x 5½	1.02	⅝ ₁₆	4	35.0
400	406.4	28	363.02	0-6.4		16	455	547	93		—	26	8.0		15.9
18	18.000	400	101730	0-0.375	1.20	0.25	20.37	24.17	4.23	2	1 x 5½	1.18	⅝ ₁₆	4	50.6
450	457.2	28	459.45	0-9.5		21	517	614	107		—	30	8.0⊕		23.0
20	20.000	400	125600	0-0.375	1.08	0.23	22.46	25.99	4.35	2	1 x 5½	1.18	⅝ ₈	4	68.7
500	508.0	28	567.22	0-9.5		19	570	660	110		—	30	9.5		31.2
24	24.000	400	180860	0-0.375	0.80	0.17	27.17	30.00	4.84	4	⅞ x 6½	1.18	½	4	104.7
600	609.6	28	816.80	0-9.5		14	690	762	123		—	30	12.7		47.5
26	26.000	300	159190	0-0.500	1.06	0.22	29.58	32.78	6.69	4	1 x 8⅞	1.97	½	4	173.5
650	660.4	20	684.72	0-12.7		18	751	832	170		—	50	12.7		78.7

1) Dimensions are subject to change without notice. Other sizes are available on request.

* Working Pressure is based on rings both sides fully welded standard wall carbon steel pipe.

Working Pressure and End Load are the total from all internal and external loads based on the applicable pipe wall thickness.

† Allowable Axial Displacement and Angular Movement (Deflection) figures shown are the maximum nominal range of movement at each R-88 coupling joint when rings are welded in the standard position. For design and installation purposes these figures should be reduced by 25%.

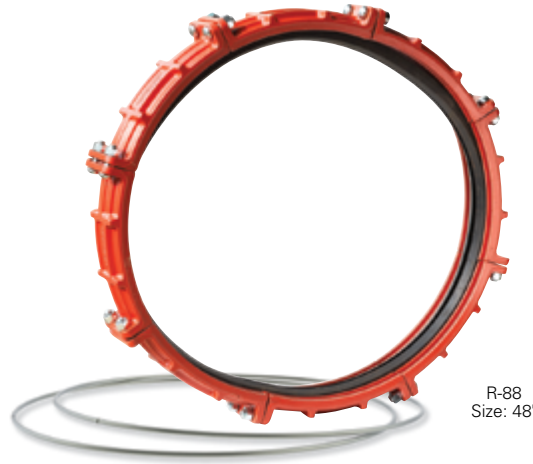
‡ The number of ring clamps listed is the minimum required to correctly position the weld ring around the circumference of the pipe end.

Model

R-88 Ring Joint Coupling

Large diameter

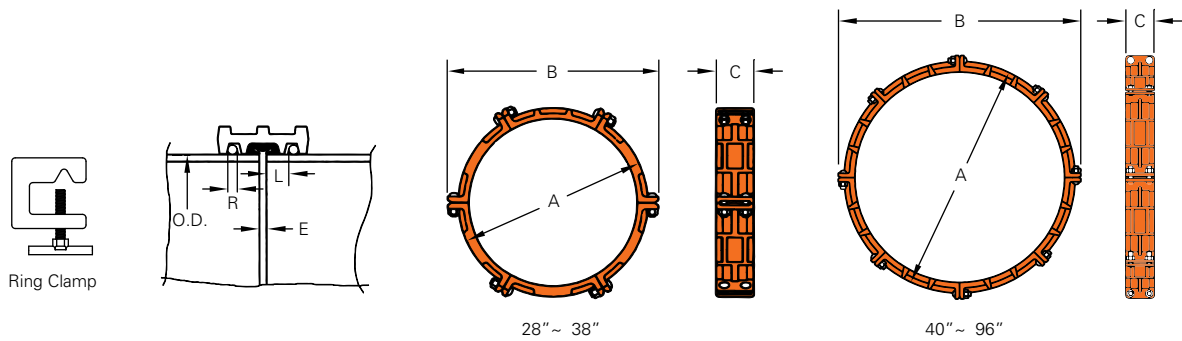
The Shurjoint Model R-88 Ring Joint Coupling is available in sizes 28" to 96" (700 mm to 2400 mm). The larger diameter couplings are comprised of 4 to 8 housing segments depending on the size and feature two bolts at each joint segment to ensure a positive connection.



R-88
Size: 48"

Nominal Size	Pipe O.D.	Rings both sides fully welded*		Axial Displace- ment † E	Angular Movement / Deflection †	Dimensions			Bolts		Sealing Surface	Ring Size	No. of Clamps†	Weight
		Max. Working Pressure (CWP)#	Max. End Load (CWP)#			A	B	C	No.	Size				
											Per Cplg	Per Pipe		
in	in	PSI	Lbs	in	Deg.(°)	in / ft	in	in	in		in	in		Lbs
mm	mm	Bar	kN	mm		mm / m	mm	mm	mm		mm	mm		Kgs
28**	28.0	300	184630	0-0.500	0.90	0.19	31.75	35.47	6.69	12	¾ x 4	2.00	½	222.2
700	711.2	20	794.11	0-12.7		16	806	901	170			50	12.7	4
30	30.0	300	211950	0-0.500	0.86	0.18	33.75	37.60	6.69	12	1 x 3½	2.00	½	218.9
750	762.0	20	911.61	0-12.7		15	857	955	170			50	12.7	4
32	32.0	300	241150	0-0.500	0.84	0.18	35.75	39.45	6.69	12	1 x 3½	2.00	½	225.4
800	812.8	20	1037.21	0-12.7		15	908	1002	170			50	12.7	4
34**	34.0	300	272230	0-0.500	0.84	0.18	37.75	41.50	7.87	12	1 x 3½	2.00	½	253.0
850	863.4	20	1170.37	0-12.7		15	959	1054	200			50	12.7	4
36	36.0	300	305200	0-0.500	0.76	0.16	39.75	43.50	7.87	12	1 x 3½	2.00	½	246.0
900	914.4	20	1312.72	0-12.7		13	1010	1103	200			50	12.7	4
38**	38.0	232	262980	0-0.500	0.76	0.16	41.75	45.50	7.87	12	1 x 3½	2.00	½	275.0
950	965.2	16	1170.10	0-12.7		13	1060	1156	200			50	12.7	4
40	40.0	232	291390	0-0.625	0.80	0.17	44.69	48.39	7.87	16	1 x 3½	2.37	¾	310.2
1000	1016.0	16	1296.51	0-15.9		14	1135	1229	200			60	15.9	6
42**	42.0	232	321250	0-0.625	0.86	0.18	46.70	50.71	7.87	16	1¼ x 5	2.37	¾	326.9
1050	1066.8	16	1429.41	0-15.9		15	1186	1288	200			60	15.9	6
44**	44.0	232	352580	0-0.625	0.80	0.17	48.66	52.64	7.87	16	1¼ x 5	2.37	¾	343.2
1100	1117.6	16	1568.78	0-15.9		14	1236	1337	200			60	15.9	6
48	48.0	232	419600	0-0.625	0.70	0.15	52.68	55.91	7.87	16	1 x 3½	2.37	¾	466.7
1200	1219.2	16	1866.98	0-15.9		12	1338	1420	200			60	15.9	6

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Nominal Size	Pipe O.D.	Rings both sides fully welded*		Axial Displace- ment †	Angular Movement / Deflection †	Dimensions			Bolts		Sealing Surface	Ring Size	No. of Clamps†	Weight	
		Max. Working Pressure (CWP)#	Max. End Load (CWP)#												
		in mm	in mm			PSI Bar	Lbs kN	in mm	Per Cplg Deg.(°)	Per Pipe in / ft mm / m	A in mm	B in mm	C in mm	No.	Size in
52**	52.0	175	371460	0-0.625	---	---	61.25	60.67	7.87	16	1¼ x 5	2.37	⅝	6	453.2
1300	1320.8	12	1643.33	0-15.9		---	---	1555	1541			200	60		15.9
54**	54.0	175	400580	0-0.625	---	---	63.25	62.52	7.87	16	1¼ x 5	2.37	⅝	6	472.1
1350	1371.6	12	1772.17	0-15.9		---	---	1607	1588			200	60		15.9
56**	56.0	175	430800	0-0.625	---	---	65.38	64.69	7.87	16	1¼ x 5	2.37	⅝	6	488.2
1400	1422.4	12	1905.87	0-15.9		---	---	1660	1643			200	60		15.9
60**	60.0	175	494550	0-0.625	---	---	69.38	68.82	7.87	16	1¼ x 5	2.37	⅝	6	537.2
1500	1524.0	12	2187.87	0-15.9		---	---	1762	1748			200	60		15.9
66**	66.0	125	427430	0-0.750	---	---	76.00	75.75	8.00	16	1½ x 5	2.37	¾	8	612.5
1650	1676.4	9	1897.24	0-19.1		---	---	1932	1924			216	60		19.1
68	68.0	125	453730	0-0.750	---	---	78.50	78.03	8.00	16	1½ x 5	2.37	¾	8	785.4
1700	1727.2	9	2013.97	0-19.1		---	---	1994	1982			216	60		19.1
72	72.0	125	508680	0-0.750	---	---	82.50	82.28	8.00	16	1½ x 6⅞	2.37	¾	8	737.7
1800	1828.8	9	2257.88	0-19.1		---	---	2095	2090			216	60		19.1
84**	84.0	100	553890	0-0.750	---	---	94.75	93.81	8.00	16	1½ x 5	2.37	¾	8	780.3
2100	2133.6	7	2501.46	0-19.1		---	---	2406	2383			216	60		19.1
96**	96.0	100	723450	0-0.750	---	---	106.75	106.54	8.00	16	1½ x 5	2.37	¾	8	823.2
2400	2438.4	7	3267.21	0-19.1		---	---	2711	2706			216	60		19.1

Dimensions are subject to change without notice. Other sizes are available on request.

* Working Pressure is based on rings both sides fully welded standard wall carbon steel pipe.

Working Pressure and End Load are the total from all internal and external loads based on the applicable pipe wall thickness.

† Allowable Axial Displacement and Angular Movement (Deflection) figures shown are the maximum nominal range of movement at each R-88 coupling joint when rings are welded in the standard position. For design and installation purposes these figures should be reduced by 25%.

‡ The number of ring clamps listed is the minimum required to correctly position the weld ring around the circumference of the pipe end.

** Non-standard/stock items may require longer lead time.

Model

RH-1000 1000 PSI Ring Joint Coupling

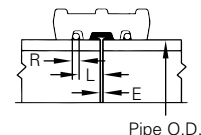
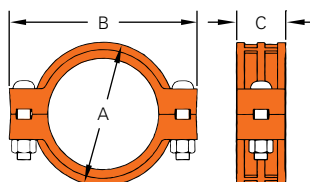
The Shurjoint Model RH-1000 coupling is a high pressure ring joint coupling for use with Sch. 40, Sch. 80 and heavier wall carbon steel pipe.

The coupling is comprised of two ductile

iron heavy-wall housings, rubber gasket (EPDM or Nitrile) and two heat-treated track bolts and nuts which provide a fully restrained joint and a maximum working pressure of 1,000 psi (70 Bar) depending on

the pipe used.

Two steel weld rings are factory supplied with the coupling. Steel rings must always be fully welded on both sides.



Nominal Size	Pipe O.D.	Max. Working Pressure (CWP)*	Max. End Load (CWP)	Dimensions			Bolt / Nut ‡		Deflection	Pipe-end Preparation			Weight
				A	B	C	No.	Size		R	L	E (max)	
in	in	PSI	Lbs	in	in	in			Deg.	in	in	in	Lbs
mm	mm	Bar	kN	mm	mm	mm		in		mm	mm	mm	Kgs
8	8.625	1000	58390	11.10	14.65	3.86	2	1 x 5½	0° – 18'	0.472 - 0.500	1	0.13	39.8
200	219.1	69	263.79	282	372	98	2	1 x 6½	0° – 38'	12.0 - 12.7	25	3.2	18.1
10**	10.750	1000	90710	13.32	16.93	4.25	2	1 x 6½	0° – 38'	0.472 - 0.500	1	0.13	57.2
250	273	69	409.54	340	430	108	2	1 x 6½	0° – 38'	12.0 - 12.7	25	3.2	26.0
12**	12.750	1000	127610	16.33	20.07	4.17	2	1 x 6½	0° – 32'	0.472 - 0.500	1	0.13	72.6
300	323.9	69	576.49	415	510	106	2	1 x 6½	0° – 32'	12.0 - 12.7	25	3.2	33.0

* Working pressure is based on standard wall carbon steel pipe. Burst test pressures are minimum 2 times the maximum working pressures.

‡ Bolt & nut are UNC threaded. **Non-standard/stock items may require longer lead time.

Model

RX-3000 3000 PSI Ring Joint Coupling

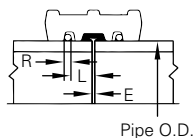
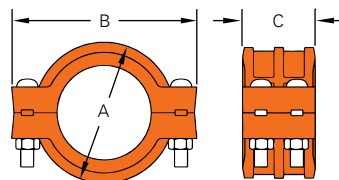
The Shurjoint Model RX-3000 coupling is a high pressure ring joint coupling for use with Sch. 80, 120 and heavier wall carbon steel pipe.

The coupling is comprised of two ductile

iron heavy-wall housings, rubber gasket (EPDM or Nitrile) and four heat-treated track bolts and nuts which provide a fully restrained joint and a maximum working pressure up to 3,000 psi (210 Bar)

depending on the pipe used.

Two steel weld rings are factory supplied with the coupling. Steel rings must always be fully welded on both sides.



Nominal Size	Pipe O.D.	Max. Working Pressure (CWP)*	Max. End Load (CWP)	Dimensions			Bolt / Nut ‡			Pipe-end Preparation			Weight
				A	B	C	No.	Size		R	L	E (max)	
in	in	PSI	Lbs	in	in	in				in	in	in	Lbs
mm	mm	Bar	kN	mm	mm	mm				mm	mm	mm	Kgs
8	8.625	3000	175180	11.81	15.51	5.83	2	1½ x 5½		0.472 ~ 0.500	1.22	½	78.92
200	219.1	207	791.36	300	394	148	2	1½ x 5½		12.0 ~ 12.7	31	3	35.87
10	10.748	3000	272040	14.96	18.93	5.98	4	1¼ x 6½		0.625 ~ 0.629	1.22	½	116.36
250	273.0	207	1228.61	380	481	152	4	1¼ x 6½		15.9 ~ 16.0	31	3	52.78
12**	12.752	3000	382950	18.50	22.48	6.81	4	1½ x 6¼		0.625 ~ 0.629	1.22	½	212.27
300	323.9	207	1729.46	470	572	173	4	1½ x 6¼		15.9 ~ 16.0	31	3	96.24

* Working pressure is based on API 5L X65 line pipe. Burst test pressures are minimum 2 times the maximum working pressures.

‡ Bolt & nut are UNC threaded. **Non-standard/stock items may require longer lead time.

Model

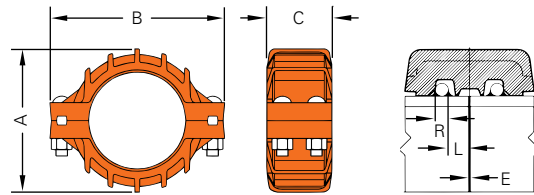
RX-3770 3770 PSI Ring Joint Coupling

The **Shurjoint** Model RX-3770 Ring Joint Coupling is designed to provide a fully restrained joint for use with extra-strong carbon steel pipe including API 5L Grade

X65 line pipe.

The coupling is comprised of two ductile iron heavy-wall housing segments, rubber gasket (EPDM) and four heat-treated track

bolts and nuts. Two steel weld rings are factory supplied with a coupling. Steel rings shall always be fully welded on both sides.



Nominal Size	Pipe O.D.	Max. Working Pressure (CWP)*	Max. End Load (CWP)	Dimensions			Bolt / Nut †		Pipe-end Preparation			Weight
				A	B	C	No.	Size	R	L	E (max)	
in	in	PSI	Lbs	in	in	in			in			Lbs
mm	mm	Bar	kN	mm	mm	mm			mm	mm	mm	Kgs
6	6.625	3770	129890	10.24	12.64	5.87	4	7/8 x 6 1/2	0.472	1.22	0.20	61.2
150	168.3	260	578.11	260	321	149			12	31	5	27.7
8	8.625	3770	220150	12.95	16.30	6.89	4	1 1/4 x 6 1/2	0.625	1.50	0.20	110.0
200	219.1	260	979.78	329	414	175			16	38	5	49.9
10	10.750	3770	342000	15.90	19.84	7.72	4	1 1/2 x 6 7/8	0.750	1.50	0.20	174.5
250	273.0	260	1521.14	404	504	196			19	38	5	79.2
12	12.750	3770	481090	19.00	23.10	8.63	4	1 1/2 x 6 7/8	0.875	1.50	0.24	247.1
300	323.9	260	2141.24	482	587	219			22	38	6	112.3

* Working pressure is based on API 5L X65 line pipe. Burst test pressures are minimum 2 times the maximum working pressures.

† Bolt & nut are UNC threaded.

Ring Joint Fittings

Model

RJ-10 90° Elbow RJ-20 Tee

RJ-11 45° Elbow RJ-60 Cap

Shurjoint offers a full range of ring joint fittings for use with Model R-88 ring joint couplings.

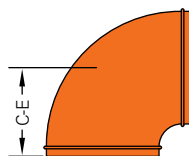
- 8" - 16" (200 mm – 400 mm) Models RJ-10, RJ-11 & RJ-60 and Model RJ-20

are available in cast ductile iron to ASTM A536 Gr. 65-45-12.

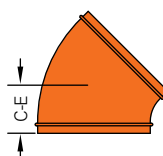
- Larger sizes are made of carbon steel standard weight pipe, ASTM A53 Gr. B or equivalent, or fabricated from wrought

carbon steel of the equivalent properties.

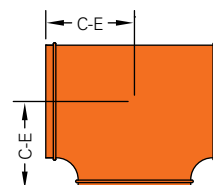
- Other configurations are also available upon request. Contact **Shurjoint** for details.



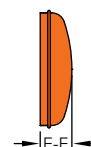
RJ-10



RJ-11



RJ-20



RJ-60

Nominal Size	Pipe O.D.	RJ-10 90° Elbow		RJ-11 45° Elbow		RJ-20 Tee		RJ-60 Cap	
		C - E	Weight	C - E	Weight	C - E	Weight	E - E	Weight
in	in	in	Lbs	in	Lbs	in	Lbs	in	Lbs
mm	mm	mm	Kgs	mm	Kgs	mm	Kgs	mm	Kgs
8	8.625	7.75	28.6	4.25	20.9	7.75	46.2	3.00	12.1
200	219.1	197	13.0	108	9.5	197	21.0	76	5.5
10	10.750	9.00	55.0	4.75	39.6	9.00	72.6	3.00	13.2
250	273.0	229	25.0	121	18.0	229	33.0	76	6.0
12	12.750	10.00	77.0	5.25	50.6	10.00	103.4	3.00	17.6
300	323.9	254	35.0	133	23.0	254	47.0	76	8.0
200 JIS	8.516	7.75	28.6	4.25	20.9	7.75	46.2	3.00	12.1
	216.3	197	13.0	108	9.5	197	21.0	76	5.5
250 JIS	10.528	9.00	55.0	4.75	39.6	9.00	72.6	3.00	13.2
	267.4	229	25.0	121	18.0	229	33.0	76	6.0
300 JIS	12.539	10.00	77.0	5.25	50.6	10.00	103.4	3.00	17.6
	318.5	254	35.0	133	23.0	254	47.0	76	8.0
14	14.000	11.00	81.4	6.00	52.8	11.00	118.8	4.00	26.4
350	355.6	280	37.0	152	24.0	280	54.0	102	12.0
16	16.000	12.00	99.0	7.25	101.2	12.00	154.0	4.00	33.0
400	406.4	305	45.0	184	46.0	305	70.0	102	15.0
18	18.000	27.00	209.0	11.25	105.6	15.50	268.0	5.00	46.2
450	457.2	686	95.0	286	48.0	394	122.0	127	21.0
20	20.000	30.00	203.6	12.50	110.0	17.25	337.0	6.00	57.2
500	508.0	762	138.0	318	50.0	438	153.0	152	26.0
24	24.000	36.00	485.0	15.00	176.0	20.00	466.0	6.00	77.0
600	609.6	914	220.0	381	80.0	508	212.0	152	35.0
26	26.000	39.00	521.0	16.00	262.0	22.50	766.0	10.50	110.0
650	660.4	991	237.0	406	119.0	572	348.0	267	50.0
28	28.000	42.00	605.0	17.25	304.0	23.50	862.0	10.50	123.0
700	711.2	1067	275.0	438	138.0	597	392.0	267	56.0
30	30.000	45.00	695.0	18.50	348.0	25.00	992.0	10.50	136.0
750	76.20	1143	316.0	480	158.0	635	451.0	267	62.0
32	32.000	48.00	792.0	19.75	396.0	26.50	1135.0	10.50	248.6
800	812.8	1219	360.0	502	180.0	673	516.0	267	113.0
34	34.000	51.00	895.0	21.00	449.0	28.00	1285.0	10.50	165.0
850	863.4	1295	407.0	533	204.0	711	584.0	267	75.0
36	36.000	54.00	1005.0	22.25	504.0	30.00	1445.0	10.50	334.4
900	914.4	1372	457.0	565	229.0	762	657.0	267	152.0
40	40.000	60.00	1241.0	24.88	620.0	33.00	1790.0	12.00	224.0
1000	1016.0	1524	564.0	632	282.0	838	814.0	305	102.0
42	42.000	63.00	1368.0	26.00	684.0	35.00	1841.0	12.00	242.0
1050	1066.8	1600	622.0	660	311.0	889	837.0	305	110.0
44	44.000	66.00	1503.0	27.39	752.0	36.00	2075.0	13.50	277.0
1100	1117.6	1676	683.0	696	342.0	914	943.0	343	126.0
48	48.000	72.00	1790.0	29.88	895.0	40.00	2488.0	13.50	315.0
1200	1219.2	1829	814.0	759	407.0	1016	1131.0	343	143.0

• C-E of RJ-10 and RJ-11 18" and larger sizes and E-E of RJ-60 26" and larger sizes conform to ANSI B16.9. All other sizes are to manufacturer's standard.

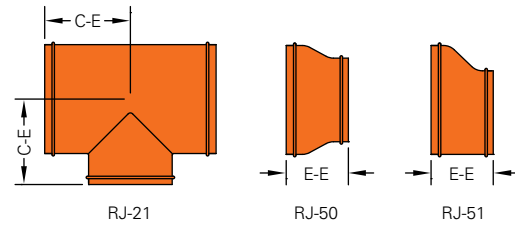
Ring Joint Fittings

Model

RJ-21 Reducing Tee

RJ-50 Concentric Reducer

RJ-51 Eccentric Reducer



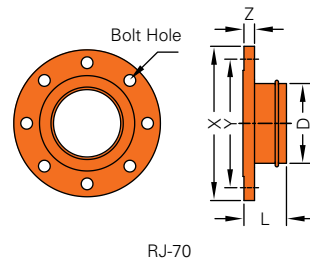
Nominal Size	Pipe O.D.	RJ-21 Reducing Tee			RJ-50 Conc. Reducer		RJ-51 Ecc. Reducer	
		C - E	C - B	Weight	E - E	Weight	E - E	Weight
in	in	in	in	Lbs	in	Lbs	in	Lbs
mm	mm	mm	mm	Kgs	mm	Kgs	mm	Kgs
14 x 12	14.000 x 12.750	11.00	10.62	145.0	8.00	51.0	13.00	51.0
350 x 300	355.6 x 323.9	279	270	66.0	203*	23.0	330	23.0
16 x 12	16.000 x 12.750	12.00	11.62	172.0	9.00*	64.0	9.00*	64.0
400 x 300	406.4 x 323.9	305	295	78.0	229	29.0	229	29.0
16 x 14	16.000 x 14.000	12.00	12.00	176.0	9.00*	64.0	9.00*	64.0
400 x 350	406.4 x 355.6	305	305	80.0	229	29.0	229	29.0
18 x 12	18.000 x 12.750	13.50	12.62	246.0	9.50*	72.6	15.00	78.0
450 x 300	457.2 x 323.9	343	321	112.0	241	33.0	381	35.0
18 x 14	18.000 x 14.000	13.50	13.00	253.0	15.00	79.0	15.00	79.0
450 x 350	457.2 x 355.6	343	330	115.0	381	36.0	381	36.0
18 x 16	18.000 x 16.000	13.50	13.00	264.0	15.00	79.0	15.00	79.0
450 x 400	457.2 x 406.4	343	330	120.0	381	36.0	381	36.0
20 x 12	20.000 x 12.750	15.00	13.62	297.0	10.00*	95.0	20.00	95.0
500 x 300	508.0 x 323.9	381	346	135.0	254	43.0	508	43.0
20 x 14	20.000 x 14.000	15.00	14.00	304.0	20.00	99.0	20.00	99.0
500 x 350	508.0 x 355.6	381	356	138.0	508	45.0	508	45.0
20 x 16	20.000 x 16.000	15.00	14.00	317.0	20.00	101.0	20.00	101.0
500 x 400	508.0 x 406.4	381	356	144.0	508	46.0	508	46.0
20 x 18	20.000 x 18.000	15.00	14.50	328.0	20.00	128.0	20.00	128.0
500 x 450	508.0 x 457.2	381	368	149.0	508	58.0	508	58.0
24 x 12	24.000 x 12.750	17.00	15.62	396.0	12.00*	154.0	20.00	154.0
600 x 300	609.6 x 323.9	432	397	180.0	305	70.0	508	70.0
24 x 14	24.000 x 14.000	17.00	16.00	407.0	20.00	154.0	20.00	154.0
600 x 350	609.6 x 355.6	432	406	185.0	508	70.0	508	70.0
24 x 16	24.000 x 16.000	17.00	16.00	418.0	12.00*	154.0	20.00	154.0
600 x 400	609.6 x 406.4	432	406	190.0	305	70.0	508	70.0
24 x 18	24.000 x 18.000	17.00	16.50	433.0	20.00	154.0	20.00	154.0
600 x 450	609.6 x 457.2	432	419	197.0	508	70.0	508	70.0
24 x 20	24.000 x 20.000	17.00	17.00	444.0	12.00*	156.0	20.00	156.0
600 x 500	609.6 x 508.0	432	432	202.0	305	71.0	508	71.0

C-E: Mfr's standard. E-E marked (*): Mfr's standard (made of ductile iron). All other E-E: ANSI B16.9.

Model

RJ-70 Flange Adapter

ANSI Class 125/150



Nominal Size	Pipe O.D. D	RJ-70 Flange Adapter							
		X	Y	Z	Bolt Size	Bolt Hole		L	Weight
						Dia.	No.		
in	in	in	in	in	in	in		in	Lbs
mm	mm	mm	mm	mm				mm	Kgs
8	8.625	13.500	11.750	1.125	¾	⅞	8	6	44.9
200	219.1	343.0	298.0	29.0				152	20.4
10	10.750	16.000	14.250	1.180	⅞	1	12	8	67.1
250	273.0	406.4	362.0	30.0				203	30.5
12	12.750	19.000	17.000	1.250	⅞	1	12	8	98.1
300	323.9	483.0	432.0	32.0				203	44.6
14	14.000	21.000	18.750	1.377	1	1½	12	8	118.8
350	355.6	533.0	476.25	35.0				203	54.0
16	16.000	23.500	21.250	1.456	1	1½	16	8	147.0
400	406.4	597.0	539.75	37.0				203	66.8
18	18.000	25.000	22.751	1.059	1½	1¼	16	8	143.0
450	457.2	635.0	577.9	26.9				203	65.0
20	20.000	27.519	25.000	1.692	1½	1¼	20	8	169.4
500	508.0	699.0	635.0	43.0				203	77.0
24	24.000	32.031	29.500	1.889	1¼	1⅝	20	8	286.9
600	609.6	813.6	749.3	48.0				203	130.4

L: Mfr's standard.

Pressure Performance Data

The following tables show maximum cold welded and corresponding working pressure working pressures (CWP) of Shurjoint R-88 for applicable steel pipe. couplings based on rings both sides fully

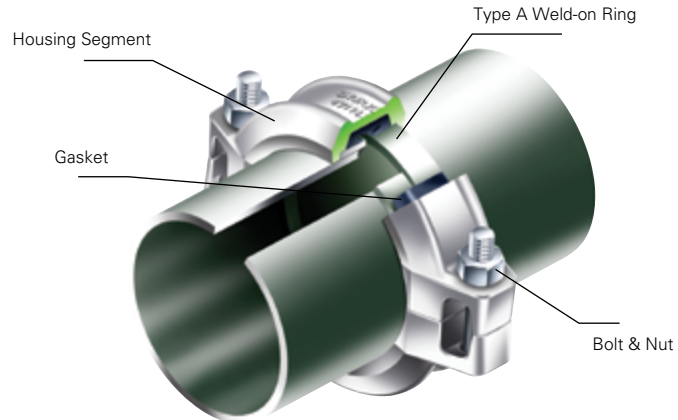
Model R-88 Ring Joint Coupling

Nominal Size	Pipe O.D.	Max. Working Pressure / Max. End Load Rings both sides fully welded					
		XS (.500")		STD (.375")		LW (.312")	
in	in	PSI	Lbs	PSI	Lbs	PSI	Lbs
mm	mm	Bar	kN	Bar	kN	Bar	kN
8	8.625	600	35040	400	23359	400	23359
200	219.1	42	150.74	28	105.51	28	105.51
10	10.750	600	54430	400	36287	400	36287
250	273.0	42	234.02	28	163.81	28	163.81
12	12.750	600	76567	400	51045	400	51045
300	323.9	42	329.42	28	230.59	28	230.59
200 JIS	8.516	600	34215	400	22772	400	22772
	216.3	42	150.58	28	102.83	28	102.83
250 JIS	10.528	600	52205	400	34803	400	34803
	267.4	42	224.52	28	157.16	28	157.16
300 JIS	12.539	600	74054	400	49369	400	49369
	318.5	42	318.53	28	222.97	28	222.97
14	14.000	600	92316	400	61544	350	53851
350 (R-88N)	355.6	42	397.06	28	277.94	24	238.23
16	16.000	500	100480	400	80384	350	70336
400 (R-88N)	406.4	35	453.78	28	363.02	24	311.16
18	18.000	500	12170	400	101736	350	89019
450 (R-88N)	457.2	35	574.31	28	459.45	24	393.82
20	20.000	500	157000	400	125600	300	94200
500 (R-88N)	508.0	35	709.03	28	567.22	20	405.16
24	24.000	500	226080	400	180864	250	113040
600 (R-88N)	609.6	35	1021.00	28	816.80	17	495.92
26	26.000	400	212264	300	159198	250	132665
650 (R-88N)	660.4	28	958.61	20	584.72	17	582.01
28	28.000	400	246176	300	184632	250	153860
700	711.2	28	1111.76	20	794.11	17	675.00
30	30.000	400	282600	300	211950	250	176625
750	762.0	28	1276.26	20	911.61	17	774.87
32	32.000	400	321536	300	241152	250	200960
800	812.8	28	1452.10	20	1037.21	17	881.63
34	34.000	350	317611	300	272238	200	181492
850	863.4	24	1404.45	20	1170.37	14	819.26
36	36.000	350	356076	300	305208	200	203472
900	914.4	24	1575.26	20	1312.72	14	918.90
38	38.000	300	340062	232	262981	175	198370
950	965.2	20	1462.63	16	1170.10	12	877.58
40	40.000	300	376800	232	291392	175	219800
1000	1016.0	20	1620.64	16	1296.51	12	972.39
42	42.000	300	415422	232	321260	175	242330
1050	1066.8	20	1786.76	16	1429.41	12	1072.05
44	44.000	300	455928	232	352584	175	265958
1100	1117.6	20	1960.98	16	1568.78	12	1176.59
48	48.000	300	542592	232	419604	---	---
1200	1219.2	20	2333.72	16	1866.98	---	---
52	52.000	232	492452	175	371462	---	---
1300	1320.8	16	2191.11	12	1643.33	---	---
54	54.000	232	531062	175	400586	---	---
1350	1371.6	16	2362.90	12	1772.17	---	---
56	56.000	232	571128	175	430808	---	---
1400	1422.4	16	2541.17	12	1905.87	---	---
60	60.000	232	656532	175	494550	---	---
1500	1524.0	16	2917.16	12	2187.87	---	---
66	66.000	175	598406	125	427433	---	---
1650	1676.4	12	2647.32	9	1897.24	---	---
68	68.000	175	635222	125	453730	---	---
1700	1727.2	12	2810.19	9	2013.97	---	---
72	72.000	150	610416	125	508680	---	---
1800	1828.8	10	2625.44	9	2257.88	---	---
84	84.000	125	692370	100	553896	---	---
2100	2133.6	9	3073.22	7	2501.46	---	---
96	96.000	125	904320	100	723456	---	---
2400	2438.4	9	4014.01	7	3267.21	---	---

Shurjoint Shouldered Piping System

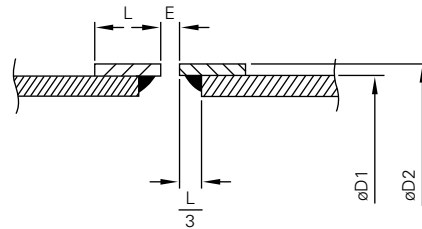
The **Shurjoint** shouldered piping system is a classic and versatile piping method used for a wide range of applications including irrigation, dewatering on construction sites, and other installations, etc. The shouldered system features full flow characteristics, provides speed and ease of installation, and proven reliability. The system provides for limited expansion and contraction and accommodates some linear and angular movement. Each joint is a union.

The **Shurjoint** shouldered piping system utilizes Type A weld-on rings, manufactured from mild steel or material compatible to pipe end used.



Shoulder Dimensions (Type A Weld-on Rings)

The **Shurjoint** shouldered piping system utilizes Type A weld-on rings, manufactured from mild steel or material compatible to pipe end used. Type A rings are suitable for services up to maximum 600 psi (40 Bar) for sizes up to 4" (100 mm) and 400 psi (28 Bar) for 5" (125 mm) through 8" (200 mm).



Nominal Size	Pipe O.D. ø D1	Shoulder Dia. ø D2	Shoulder Length L	Nominal Gap E
in	in	in	in	in
mm	mm	mm	mm	mm
2	2.375	2.618	0.625	0.125
50	60.3	66.5	16.0	3.2
3	3.500	3.819	0.625	0.125
80	88.9	97.0	16.0	3.2
4	4.500	4.803	0.688	0.125
100	114.3	122.0	17.5	3.2
165.1 mm	6.500	6.870	0.688	0.125
	165.1	174.5	17.5	3.2
6	6.625	7.007	0.688	0.125
150	168.3	178.0	17.5	3.2
8	8.625	9.134	0.813	0.125
200	219.1	232.0	20.6	3.2
10	10.750	11.260	0.813	0.125
250	273.0	286.0	20.6	3.2
12	12.750	13.248	0.813	0.125
300	323.9	336.5	20.6	3.2

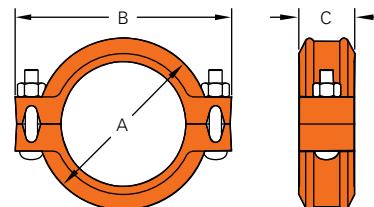
Note: The exterior surface and the edge of the shouldered pipe ends must be free from any indentations, projections or other harmful surface defects such as weld splatters, any lumps of galvanizing, rust, dirt and score marks. Shouldered rings must be contacted or near tight to the pipe. The "stand off length" must be accurately consistent in the circumference.

(*:The distance between the edge of the Shouldered ring and the pipe end (1/3 the shoulder length 'L').

Model

S35 Shouldered Flexible Coupling

The Shurjoint Model S35 coupling is a flexible type shouldered coupling for general applications for use on Type A shouldered pipe ends. The housing segments are made of ductile iron to ASTM A536 Gr. 65-45-12 and or A395 Gr. 65-45-15 and are normally supplied in hot-dip galvanized. The standard rubber gasket is Grade T Nitrile.



Nominal Size	Pipe O.D.	Working Pressure (CWP)*	Dimensions			Allowable Pipe End Separation	Deflection	Bolt Size	Weight
			A	B	C				
in	in	PSI	in	in	in	in	Deg. (°)	in	Lbs
mm	mm	Bar	mm	mm	mm	mm			Kgs
2	2.375	600	3.90	5.47	1.81	0.13	2° 43'	3/8" x 2 1/8"	2.4
50	60.3	40	99.0	139.0	46.0	3.2			1.1
3	3.500	600	5.08	6.61	1.81	0.13	1° 53'	1/2" x 3"	3.3
80	88.9	40	129.0	168.0	46.0	3.2			1.5
4	4.500	600	6.26	7.87	1.97	0.13	1° 29'	1/2" x 3"	4.9
100	114.3	40	159.0	200.0	50.0	3.2			2.2
165.1 mm	6.500	600	8.39	10.50	1.97	0.13	1° 2'	5/8" x 3 1/2"	7.7
	165.1	40	213.0	267.0	50.0	3.2			3.5
6*	6.625	600	8.62	11.00	1.97	0.13	1° 1'	5/8" x 3 1/2"	8.4
150	168.3	40	219.0	279.0	50.0	3.2			3.8
8	8.625	600	10.75	13.19	2.36	0.13	0° 47'	3/4" x 4 3/4"	13.0
200	219.1	40	273.0	335.0	60.0	3.2			5.9
10*	10.750	300	13.20	15.62	2.56	0.13	0° 47'	3/4" x 4 3/4"	19.8
250	273.0	20	335.4	396.8	65.0	3.2			9.0
12*	12.750	300	15.19	17.72	2.56	0.13	0° 47'	3/4" x 4 3/4"	22.9
300	323.9	20	385.8	450.1	65.0	3.2			10.4

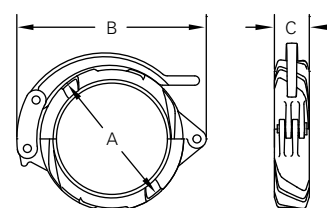
* Non-standard/stock items may require longer lead time.

Model

SD-28A Shouldered Toggle Coupling

The Shurjoint Model SD-28A coupling is designed to connect shouldered-end pipe with Type A rings for services where frequent assembly and disassembly is desired or required. The housing segments are hinged with a lever handle for easy installation. The use of a split pin prevents

accidental opening of the couplings. The housing segments are made of ductile iron to ASTM A536 Gr. 65-45-12 and or A395 Gr. 65-45-15 and are normally supplied in hot-dip galvanized. The standard rubber gasket is Grade T Nitrile.



Nominal Size	Pipe O.D.	Working Pressure (CWP)**	Dimensions			Allowable Pipe End Separation	Deflection	Weight
			A	B	C			
in	in	PSI	in	in	in	in	Deg. (°)	Lbs
mm	mm	Bar	mm	mm	mm	mm		Kgs
2*	2.375	400	39.32	4.43	1.93	0.125	2° - 43'	2.8
50	60.3	28	86.5	112.5	49	3.2		1.3
3*	3.500	400	4.96	6.46	1.93	0.125	1° - 53'	4.4
80	88.9	28	126.0	164.0	49	3.2		2.0
4	4.500	400	6.30	8.43	2.05	0.125	1° - 29'	6.6
100	114.3	28	160.0	214.0	52	3.2		3.0
6*	6.500	400	8.43	11.14	2.05	0.125	1° - 2'	6.5
150	165.1	28	214.0	283.0	52	3.2		4.3
6	6.625	400	8.54	11.10	2.05	0.125	1° - 1'	9.9
150	168.3	28	217.0	282.0	52	3.2		4.5
8*	8.625	400	10.95	14.17	2.36	0.125	0° - 47'	18.3
200	219.1	28	278.0	360.0	60	3.2		8.3

* Non-standard/stock items may require longer lead time.

** Working pressure is based on standard wall carbon steel pipe.

Plain-End Piping System for Steel Pipe

Model

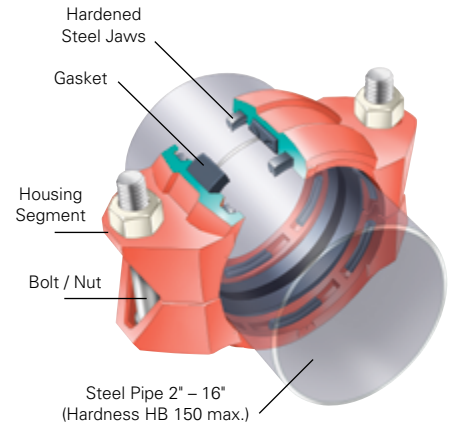
79 Wildcat Coupling

The **Shurjoint** Model 79 Wildcat Coupling is designed to mechanically join plain-end or beveled end carbon steel pipe. The Wildcat couplings can be used for a variety of applications including mining, process piping, manifold piping and oilfield services. The Wildcat couplings feature case-hardened jaws* within the housings and large diameter heat treated track bolts that when tightened securely grip the pipe surface. As with grooved couplings, a C-shaped rubber gasket effectively seals the pipe ends (* For sizes larger than 14" (350 mm) ,

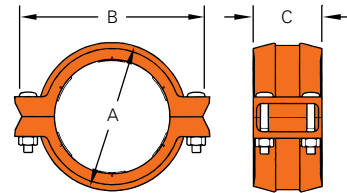
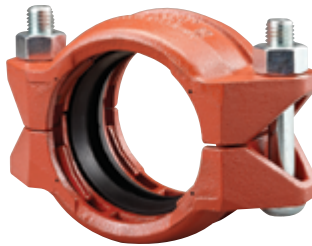
jaws are made of 17-4PH stainless steel.)

The **Shurjoint** Wildcat coupling is recommended for use on steel pipe with a hardness less than HB 150, not recommended for plastic, HDPE, cast iron or other brittle pipe.

Gaskets are available either in Grade E EPDM for water services of -29°F to + 230°F (-34°C to + 110°C) or Grade T Nitrile for oil services -20°F to +180°F (-29°C to +82°C).



Bolts and nuts must always be tightened to the required torque.



Nominal Size	Pipe O.D.	Max. Working Pressure*	Max. End Load	Required Bolt Torque	Bolt		Dimensions			Weight
					No.	Size	A	B	C	
in	in	PSI	Lbs	Lbs-Ft		in	in	in	in	Lbs
mm	mm	Bar	kN	Nm		mm	mm	mm	mm	Kgs
1	1.315	750	1020	150	2	½ x 2¾	2.60	4.37	3.05	3.3
25	33.4	52	4.55	200			66	111	78	1.5
1½	1.900	750	2130	150	2	½ x 2¾	3.15	5.08	3.05	3.9
40	48.3	52	9.52	200			80	129	78	1.8
2	2.375	750	3320	150	2	¾ x 3½	3.75	5.94	3.54	7.0
50	60.3	52	14.84	200			95	151	90	3.2
2½	2.875	600	3890	150	2	¾ x 3½	4.25	6.46	3.54	7.3
65	73.0	42	17.57	200			108	164	90	3.3
3	3.500	600	5770	200	2	¾ x 4¾	5.00	7.48	3.54	11.0
80	88.9	42	26.06	270			127	190	90	5.0
4	4.500	450	7150	200	2	¾ x 4¾	6.14	8.78	4.00	14.3
100	114.3	31	32.82	270			154	223	102	6.5
5	5.563	300	7290	250	2	7⁄8 x 6½	7.36	10.31	4.38	24.2
125	141.3	20	32.91	340			187	262	111	11.0
6	6.625	300	10340	250	2	7⁄8 x 6½	8.50	11.50	4.38	28.6
150	168.3	20	46.69	340			216	292	111	13.0
8	8.625	250	14600	200	4	¾ x 4¾	10.88	14.02	5.00	41.8
200	219.1	17	64.06	270			276	356	127	19.0
10	10.750	250	22680	300	4	7⁄8 x 6½	12.60	16.14	5.00	52.8
250	273.0	17	99.46	400			320	410	127	24.0
12	12.750	250	31900	350	4	1 x 6½	14.60	18.54	5.00	63.1
300	323.9	17	140.00	470			371	471	127	28.7
14	14.000	200	30770	350	4	1 x 6½	16.70	20.00	5.28	93.5
350	355.6	14	138.97	470			424	508	134	42.5
16	16.000	150	30140	350	4	1 x 6½	18.70	22.00	5.28	95.7
400	406.4	10	129.65	470			475	559	134	43.5

* Working pressure is for plain-end standard wall steel pipe with hardness less than HB150.