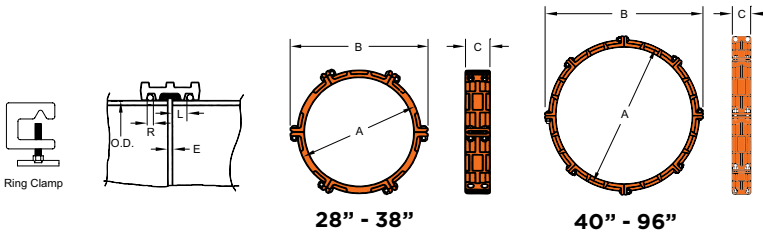


Job Name:	
Job Location:	
Engineer:	
Contractor:	
Tag:	
PO#:	
Rep:	
Wholesale Dist:	

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. The Shurjoint Model R-88 Ring Joint Coupling is supplied with a pair of factory weld rings. For installation weld a 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 shouldered 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 AWWA C606. The factory supplied weld rings offer a much more economical and installation friendly alternative to that of traditional shoulder rings, including 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 include: • Water & Waste Water Treatment Plants • Mining & Tunnel Boring • Pulp & Paper • Hydroelectric Plants • Co-Gen Electric Plants • Food & Beverage • Compressed Air • HVAC

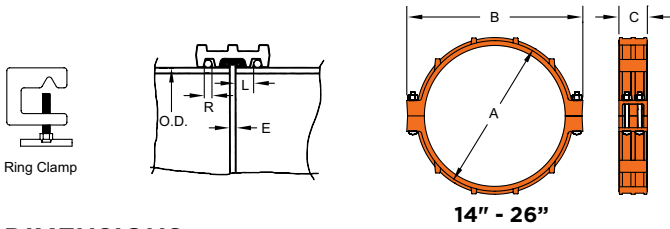


DIMENSIONS

R88 (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 mm	in mm	PSI Bar	lb kN	in mm	Deg.(°)	in / ft mm / m	in mm	in mm	in mm		in mm	in mm	in mm		lb kg
8	8.625	400	23350	0-0.340	2.14	0.45	10.08	13.00	3.11	2	3/4 x 4-3/4	0.91	1/4	3	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	3/4 x 4-3/4	0.91	1/4	3	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	7/8 x 6-1/2	1.02	5/16	3	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	1/4	3	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	1/4	3	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	3	32.6
	318.5	28	222.97	0-4.8		26	369	450	86		M20 x 120	26	8.0		14.8

Note: Dimensions are subject to change without notice. Other sizes are available on request
 *Working Pressure and End Load are the total from all internal and external loads based on the applicable pipe wall thickness.
 **Working Pressure is based on rings both sides fully welded standard wall carbon steel pipe.
 †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%.
 ‡10mm shoulder rings are acceptable. The number of ring clamps listed is the minimum required to correctly position the weld ring around the circumference of the pipe end.
 ***Some pipe standards allow for increased variation in OD as size increases. Shurjoint recommends a tolerance limit of +/- 1.6mm (0.063") for sizes larger than 26". Buyer should consult with the pipe manufacturer to limit this variation on what is acceptable, as this may affect performance.



DIMENSIONS

R88N (14"-26")

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	lb	in	Deg.(°)	in / ft	in	in	in		in	in	in		lb
mm	mm	Bar	kN	mm		mm / m	mm	mm	mm		mm	mm	mm		Kg
14	14.000	400	61540	0-0.250	1.20	0.25	15.93	19.40	3.65	2	7/8 x 5-1/2	1.02	5/16	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	7/8 x 5-1/2	1.02	5/16	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 5-1/2	1.18	5/16	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 5-1/2	1.18	3/8	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	7/8 x 6-1/2	1.18	1/2	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 8-7/8	1.97	1/2	4	173.5
650	660.4	20	684.72	0-12.7		18	751	832	170		---	50	12.7		78.7

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

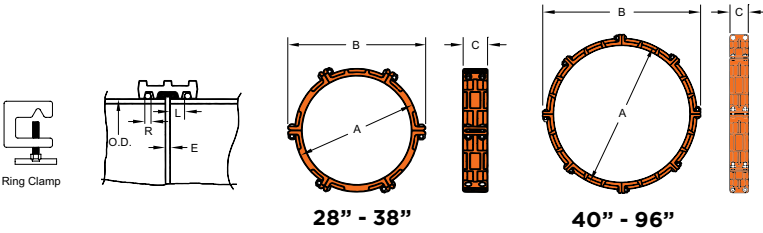
*Working Pressure and End Load are the total from all internal and external loads based on the applicable pipe wall thickness.

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

†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%.

‡10mm shoulder rings are acceptable. The number of ring clamps listed is the minimum required to correctly position the weld ring around the circumference of the pipe end.

***Some pipe standards allow for increased variation in OD as size increases. Shurjoint recommends a tolerance limit of +/- 1.6mm (0.063") for sizes larger than 26". Buyer should consult with the pipe manufacturer to limit this variation on what is acceptable, as this may affect performance.



DIMENSIONS

R88 (28"-96")

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				
28**	28.0	300	184630	0-0.500	0.90	0.19	31.75	35.47	6.69	12	7/8 x 4	2.00	1/2	4	222.2
700	711.2	20	794.11	0-12.7		16	806	901	170			50	12.7		101.0
30	30.0	300	211950	0-0.500	0.86	0.18	33.75	37.60	6.69	12	1 x 3-1/2	2.00	1/2	4	218.9
750	762.0	20	911.61	0-12.7		15	857	955	170			50	12.7		99.5
32	32.0	300	241150	0-0.500	0.84	0.18	35.75	39.45	6.69	12	1 x 3-1/2	2.00	1/2	4	225.4
800	812.8	20	1037.21	0-12.7		15	908	1002	170			50	12.7		102.2
34**	34.0	300	272230	0-0.500	0.84	0.18	37.75	41.50	7.87	12	1 x 3-1/2	2.00	1/2	4	253.0
850	863.4	20	1170.37	0-12.7		15	959	1054	200			50	12.7		115.0
36	36.0	300	305200	0-0.500	0.76	0.16	39.75	43.50	7.87	12	1 x 3-1/2	2.00	1/2	4	246.0
900	914.4	20	1312.72	0-12.7		13	1010	1103	200			50	12.7		111.6
38**	38.0	232	262980	0-0.500	0.76	0.16	41.75	45.50	7.87	12	1 x 3-1/2	2.00	1/2	4	275.0
950	965.2	16	1170.10	0-12.7		13	1060	1156	200			50	12.7		125.0
40	40.0	232	291390	0-0.625	0.80	0.17	44.69	48.39	7.87	16	1 x 3-1/2	2.37	5/8	6	310.2
1000	1016.0	16	1296.51	0-15.9		14	1135	1229	200			60	15.9		141.0
42**	42.0	232	321250	0-0.625	0.86	0.18	46.70	50.71	7.87	16	1-1/4 x 5	2.37	5/8	6	326.9
1050	1066.8	16	1429.41	0-15.9		15	1186	1288	200			60	15.9		148.6
44**	44.0	232	352580	0-0.625	0.80	0.17	48.66	52.64	7.87	16	1-1/4 x 5	2.37	5/8	6	343.2
1100	1117.6	16	1568.78	0-15.9		14	1236	1337	200			60	15.9		156.0
48	48.0	232	419600	0-0.625	0.70	0.15	52.68	55.91	7.87	16	1 x 3-1/2	2.37	5/8	6	466.7
1200	1219.2	16	1866.98	0-15.9		12	1338	1420	200			60	15.9		211.8
52**	52.0	175	371460	0-0.625	---	---	61.25	60.67	7.87	16	1-1/4 x 5	2.37	5/8	6	453.2
1300	1320.8	12	1643.33	0-15.9		---	1555	1541	200			60	15.9		206.0
54**	54.0	175	400580	0-0.625	---	---	63.25	62.52	7.87	16	1-1/4 x 5	2.37	5/8	6	472.1
1350	1371.6	12	1772.17	0-15.9		---	1607	1588	200			60	15.9		214.6
56**	56.0	175	430800	0-0.625	---	---	65.38	64.69	7.87	16	1-1/4 x 5	2.37	5/8	6	488.2
1400	1422.4	12	1905.87	0-15.9		---	1660	1643	200			60	15.9		222.0
60**	60.0	175	494550	0-0.625	---	---	69.38	68.82	7.87	16	1-1/4 x 5	2.37	5/8	6	537.2
1500	1524.0	12	2187.87	0-15.9		---	1762	1748	200			60	15.9		244.2
66**	66.0	125	427430	0-0.750	---	---	76.00	75.75	8.00	16	1-1/2 x 5	2.37	3/4	8	612.5
1650	1676.4	9	1897.24	0-19.1		---	1932	1924	216			60	19.1		278.4
68	68.0	125	453730	0-0.750	---	---	78.50	78.03	8.00	16	1-1/2 x 5	2.37	3/4	8	785.4
1700	1727.2	9	2013.97	0-19.1		---	1994	1982	216			60	19.1		357.0
72	72.0	125	508680	0-0.750	---	---	82.50	82.28	8.00	16	1-1/2 x 6-7/8	2.37	3/4	8	737.7
1800	1828.8	9	2257.88	0-19.1		---	2095	2090	216			60	19.1		335.3
84**	84.0	100	553890	0-0.750	---	---	94.75	93.81	8.00	16	1-1/2 x 5	2.37	3/4	8	780.3
2100	2133.6	7	2501.46	0-19.1		---	2406	2383	216			60	19.1		354.7
96**	96.0	100	723450	0-0.750	---	---	106.75	106.54	8.00	16	1-1/2 x 5	2.37	3/4	8	823.2
2400	2438.4	7	3267.21	0-19.1		---	2711	2706	216			60	19.1		374.2

Note: Dimensions are subject to change without notice. Other sizes are available on request.
 *Working Pressure and End Load are the total from all internal and external loads based on the applicable pipe wall thickness.
 **Working Pressure is based on rings both sides fully welded standard wall carbon steel pipe.
 †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.
 ***Some pipe standards allow for increased variation in OD as size increases. Shurjoint recommends a tolerance limit of +/- 1.6mm (0.063") for sizes larger than 26". Buyer should consult with the pipe manufacturer to limit this variation on what is acceptable, as this may affect performance.

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

PERFORMANCE DATA

NOMINAL SIZE	PIPE O.D.	MAX. WORKING PRESSURE / MAX. END LOAD - RINGS BOTH SIDES FULLY WELDED					
		XS (.500")		STD (.375")		LW (.312")	
		PSI	lb	PSI	lb	PSI	lb
in	in	Bar	kN	Bar	kN	Bar	kN
8	8.625	600	35040	400	23359	400	23359
200	219.1	40	150.74	28	105.51	28	105.51
10	10.75	600	54430	400	36287	400	36287
250	273	40	234.02	28	163.81	28	163.81
12	12.75	600	76567	400	51045	400	51045
300	323.9	40	329.42	28	230.59	28	230.59
200 JIS	8.516	600	34215	400	22772	400	22772
	216.3	40	150.58	28	102.83	28	102.83
250 JIS	10.528	600	52205	400	34803	400	34803
	267.4	40	224.52	28	157.16	28	157.16
300 JIS	12.539	600	74054	400	49369	400	49369
	318.5	40	318.53	28	222.97	28	222.97
14	14	600	92316	400	61544	350	53851
350 (R-88N)	355.6	40	397.06	28	277.94	24	238.23
16	16	500	100480	400	80384	350	70336
400 (R-88N)	406.4	35	453.78	28	363.02	24	311.16
18	18	500	12170	400	101736	350	89019
450 (R-88N)	457.2	35	574.31	28	459.45	24	393.82
20	20	500	157000	400	125600	300	94200
500 (R-88N)	508	35	709.03	28	567.22	20	405.16
24	24	500	226080	400	180864	250	113040
600 (R-88N)	609.6	35	1021	28	816.8	17	495.92
26	26	400	212264	300	159198	250	132665
650 (R-88N)	660.4	28	958.61	20	584.72	17	582.01
28	28	400	246176	300	184632	250	153860
700	711.2	28	1111.76	20	794.11	17	675
30	30	400	282600	300	211950	250	176625
750	762	28	1276.26	20	911.61	17	774.87
32	32	400	321536	300	241152	250	200960
800	812.8	28	1452.1	20	1037.21	17	881.63
34	34	350	317611	300	272238	200	181492
850	863.4	24	1404.45	20	1170.37	14	819.26
36	36	350	356076	300	305208	200	203472
900	914.4	24	1575.26	20	1312.72	14	918.9
38	38	300	340062	232	262981	175	198370
950	965.2	20	1462.63	16	1170.1	12	877.58
40	40	300	376800	232	291392	175	219800
1000	1016	20	1620.64	16	1296.51	12	972.39
42	42	300	415422	232	321260	175	242330
1050	1066.8	20	1786.76	16	1429.41	12	1072.05
44	44	300	455928	232	352584	175	265958
1100	1117.6	20	1960.98	16	1568.78	12	1176.59
48	48	300	542592	232	419604	---	---
1200	1219.2	20	2333.72	16	1866.98	---	---
52	52	232	492452	175	371462	---	---
1300	1320.8	16	2191.11	12	1643.33	---	---
54	54	232	531062	175	400586	---	---
1350	1371.6	16	2362.9	12	1772.17	---	---
56	56	232	571128	175	430808	---	---
1400	1422.4	16	2541.17	12	1905.87	---	---
60	60	232	656532	175	494550	---	---
1500	1524	16	2917.16	12	2187.87	---	---
66	66	175	598406	125	427433	---	---
1650	1676.4	12	2647.32	8.6	1897.24	---	---
68	68	175	635222	125	453730	---	---
1700	1727.2	12	2810.19	8.6	2013.97	---	---
72	72	150	610416	125	508680	---	---
1800	1828.8	10	2625.44	8.6	2257.88	---	---
84	84	125	692370	100	553896	---	---
2100	2133.6	8.6	3073.22	7	2501.46	---	---
96	96	125	904320	100	723456	---	---
2400	2438.4	8.6	4014.01	7	3267.21	---	---

PRESSURE RATINGS 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 para. 104.1.

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

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)

MAXIMUM INTERNAL SERVICE PRESSURE OF CARBON STEEL PIPE, ASTM A53 GR. B

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	

*Unit: PSI

Except * 8" = 0.322" and 10" = 0.365"

^ 8" to 24" = 0.25" and 26" to 40" = 0.312"

ANGULAR DEFLECTION

The R-88 coupling is designed to provide a restrained joint with a controlled range of angular deflection (flexibility). The degree of deflection is influenced by several factors including; pipe, fitting and component dimensions, pipe end squareness, ring location, weld size and system pressure. When designing a piping system these considerations should be factored into the system. When designing a system requiring increased deflection (flexibility) please contact Shurjoint for customized solutions. As with all piping systems proper support, anchoring and bracing are essential. Industry standard requirements such as B31.1 (Power Piping), B31.9 (Building Services) and B31.11 (Slurry Transportation), etc. should be followed for your specific type of pipeline system application.

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).
- Sizes 8"-26" consist of two housing segments
- 28"-38" consist of six housing segments
- 40"-96" consist of eight housing segments

SURFACE FINISH::

- Standard painted finishes in orange or RAL3000 red.
- Hot-dip galvanized (optional)
- Epoxy Coatings in RAL3000 red or other colors (optional)
- Polyamide 11 (Nylon) coating (optional)

WELD RINGS::

- Carbon Steel SAE J403 (ANSI) 1020
- Stainless steel: 304, 316, 316L

BOLTS & NUTS:

- 3/4" - 1-1/2": Heat treated carbon steel track bolts to ASTM A183 Gr. 2, minimum tensile strength 110,000 psi (758 MPa), Zinc electroplated, with heavy-duty hexagonal nuts to ASTM A563.
- Stainless steel bolts and stainless steel nuts or Silicone-Bronze nut are available upon request.

RUBBER GASKET:

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 gaskets for water services are not recommended for steam services.

(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 "M" - Halogenated Butyl

Grade "L" - Silicone

- For additional details contact Shurjoint.

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).
- Field Joint Test: For one time only the system may be tested hydrostatically at 1.5 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.