MODEL

R-88 RING JOINT COUPLING

The **Shurjoint** Model R-88 Ring Joint Coupling is available in sizes 8”/200mm and above. Sizes 14”/350mm to 24”/600mm are now available either in a two-segment style (R-88N) or multi-segment style (R-88). The two-segment style offers an easier and faster installation.

Pressure-Temperature Rating

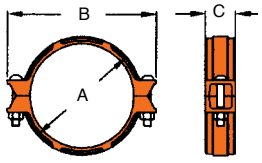
Size in / mm	Nom. Rating	Working Pressure (STD)	Max. Service Temperature
8” – 24”	Class	400 psi @100°F	EPDM: 230°F / 110°C
200 - 600	250	28 Bar @38°C	Nitrile: 180°F / 82°C

*Working pressure is based on standard wall carbon steel pipe.
*Proof test pressure: 1.5 times the working pressure, non-shock cold water.
*Burst pressure is engineered minimum 3 times the working pressure for sizes up to 12" (300mm) and 2 times for sizes 14" (350mm) and above.

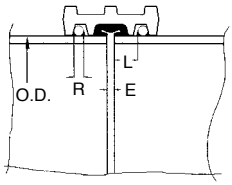
A 28" R-88 coupling installed in a chilled water system.

R-88
Size: 12"

R-88N
Size: 24"



8" ~ 24"
(R-88 & R-88N)



Nominal Size mm / in	Pipe OD mm / in	Max. Working Pressure Rings both sides fully welded XS (.500”) Bar / psi	STD (.375”) Bar / psi	LW (.312”) Bar / psi	Dimensions A mm / in	B mm / in	C mm / in	Bolt Size No.	mm / in	Pipe-end Preparation Sealing Surface L mm / in	Ring Size R mm / in	Separation E (max) mm / in	Weight Kgs / Lbs
200	219.1	40	28	28	256	330	79	2	¾ x 4¾	23	6	4.8	7.6
8	8.625	600	400	400	10.08	13.00	3.11			0.91	¼	0.19	16.8
250	273.0	40	28	28	312	386	83	2	¾ x 4¾	23	6	4.8	10.1
10	10.750	600	400	400	12.29	15.20	3.25			0.91	¼	0.19	22.2
300	323.9	40	28	28	374	455	86	2	⅞ x 6½	26	8	4.8	14.0
12	12.750	600	400	400	14.72	17.90	3.39			1.02	5/16	0.19	30.8
200JIS	216.3	40	28	28	253	327	79	2	M 20 x 120	23	6	4.8	8.0
	8.516	600	400	400	9.96	12.87	3.11			0.91	¼	0.19	17.6
250JIS	267.4	40	28	28	306	380	83	2	M 20 x 120	23	6	4.8	10.0
	10.528	600	400	400	12.05	14.96	3.25			0.91	¼	0.19	22.0
300JIS	318.5	40	28	28	369	450	86	2	M 20 x 120	26	8	4.8	14.8
	12.539	600	400	400	14.53	17.72	3.39			1.02	5/16	0.19	32.6
350 (R-88N)	355.6	40	28	24	411	380	98	2	M22	26	8	9.5	17.4
14	14.000	600	400	350	16.18	14.96	3.86		⅞	1.02	5/16	0.375	38.3
400 (R-88N)	406.4	35	28	24	461	422	98	2	M22	26	8	9.5	18.7
16	16.000	500	400	350	18.15	16.61	3.86		⅞	1.02	5/16	0.375	41.1
450 (R-88N)	457.2	35	28	24	511	489	105	2	M24	30	12*	9.5	23.1
18	18.000	500	400	350	20.12	19.25	4.14		1	1.18	½	0.375	50.8
500(R-88N)	508.0	35	28	20	591	665	116	2	M24	30	12	9.5	38.2
20	20.000	500	400	300	23.25	26.18	4.56		1	1.18	½	0.375	84.0
600 (R-88N)	609.6	35	28	17	702	762	123	4	M22	30	12	9.5	49.7
24	24.000	500	400	250	27.63	30.0	4.84		⅞	1.18	½	0.375	109.3

Note: R-88N is a two-segment style coupling.
Dimensions are subject to change without notice. Other sizes are available on request.
*10mm shouldered rings are also applicable.

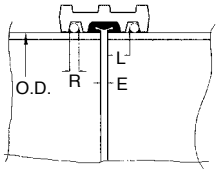
MODEL

R-88 RING JOINT COUPLING

Large diameter

The **Shurjoint** Model R-88 Ring Joint Coupling is available in sizes 26"/650mm to 96" / 2400mm. 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.

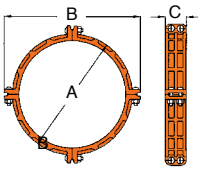
R-88
Size: 48"



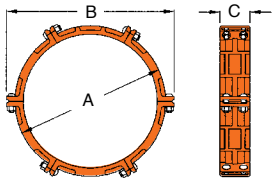
Pressure-Temperature Rating

Size	Nom. Rating	Working Pressure (STD)	Max. Service Temperature
26" - 36" 650 - 900	Class 150	300 psi @100°F 20 Bar @38°C	EPDM: 230°F / 110°C
38" – 96" 950 - 2400	Class 125	175 psi @100°F 12 Bar @38°C	Nitrile: 180°F / 82°C

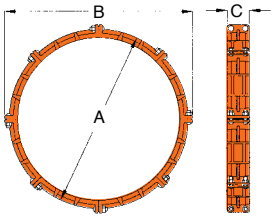
*Working pressure is based on standard wall carbon steel pipe.
*Proof test pressure: 1.5 times the working pressure, non-shock cold water.
*Burst pressure is engineered minimum 2 times the listed working pressure.



26"



28" ~ 38"



40" ~ 96"

Nominal Size mm / in	Pipe OD mm / in	Max. Working Pressure Rings both sides fully welded XS (.500") Bar / psi	STD (.375") Bar / psi	LW (.312") Bar / psi	Dimensions A mm / in	B mm / in	C mm / in	Bolt Size No.	in	Pipe-end Preparation Sealing Surface L mm / in	Ring Size R mm / in	Separation E (max) mm / in	Weight Kgs / Lbs
650	660.4	28	20	17	726	815	122	8	⅞ x 4	30	12.7	9.5	59.0
26	26.000	400	300	250	28.58	32.09	4.80			1.18	1/2	0.375	130.0
700	711.2	28	20	17	806	902	171	12	⅞ x 4	50	12.7	12.7	101.0
28	28.000	400	300	250	31.75	35.50	6.73			2.00	1/2	0.50	222.2
750	762.0	28	20	17	857	955	171	12	1 x 3½	50	12.7	12.7	99.5
30	30.000	400	300	250	33.75	37.60	6.73			2.00	1/2	0.50	218.9
800	812.8	28	20	17	908	1003	171	12	1 x 3½	50	12.7	12.7	102.2
32	32.000	400	300	250	35.75	39.50	6.73			2.00	1/2	0.50	225.4
850	863.4	24	20	14	959	1054	171	12	1 x 3½	50	12.7	12.7	115.0
34	34.000	350	300	200	37.75	41.50	6.73			2.00	1/2	0.50	253.0
900	914.4	24	20	14	1010	1103	171	12	1 x 3½	50	12.7	12.7	111.6
36	36.000	350	300	200	39.75	43.50	6.73			2.00	1/2	0.50	246.0
950	965.2	20	16	12	1060	1156	171	12	1 x 3½	50	12.7	12.7	125.0
38	38.000	300	232	175	41.75	45.50	6.73			2.00	1/2	0.50	275.0
1000	1016.0	20	16	12	1135	1229	198	16	1 x 3½	60	15.9	15.9	141.0
40	40.000	300	232	175	44.69	48.39	7.80			2.37	5/8	0.625	310.2
1050	1066.8	20	16	12	1186	1280	198	16	1¼ x 5	60	15.9	15.9	148.6
42	42.000	300	232	175	46.70	50.39	7.80			2.37	5/8	0.625	326.9
1100	1117.6	20	16	12	1236	1318	198	16	1¼ x 5	60	15.9	15.9	156.0
44	44.000	300	232	175	48.66	51.89	7.80			2.37	5/8	0.625	343.2
1200	1219.2	20	16	---	1338	1420	198	16	1 x 3½	60	15.9	15.9	211.8
48	48.000	300	232	---	52.68	55.91	7.80			2.37	5/8	0.625	466.7
1300	1320.8	16	12	---	1555	1539	198	16	1¼ x 5	60	15.9	15.9	206.0
52	52.000	232	175	---	61.25	60.60	7.80			2.37	5/8	0.625	453.2
1350	1371.6	16	12	---	1660	1590	198	16	1¼ x 5	60	15.9	15.9	214.6
54	54.000	232	175	---	63.25	62.60	7.80			2.37	5/8	0.625	472.1
1400	1422.4	16	12	---	1660	1641	198	16	1¼ x 5	60	15.9	15.9	222.0
56	56.000	232	175	---	65.38	64.60	7.80			2.37	5/8	0.625	488.2
1500	1524.0	16	12	---	1762	1742	198	16	1¼ x 5	60	15.9	15.9	244.2
60	60.000	232	175	---	69.38	68.60	7.80			2.37	5/8	0.625	537.2
1650	1676.4	12	8.6	---	1932	1925	216	16	1½ x 5	60	19.1	19.1	278.4
66	66.000	175	125	---	76.00	75.79	8.00			2.37	3/4	0.75	612.5
1700	1727.2	12	8.6	---	1994	1976	216	16	1½ x 5	60	19.1	19.1	357.0
68	68.000	175	125	---	78.50	77.79	8.00			2.37	3/4	0.75	785.4
1800	1828.8	10	8.6	---	2095	2078	216	16	1½ x 5	60	19.1	19.1	335.3
72	72.000	150	125	---	82.50	81.81	8.00			2.37	3/4	0.75	737.7
2100	2133.6	8.6	7	---	2406	2383	216	16	1½ x 5	60	19.1	19.1	354.7
84	84.000	125	100	---	94.75	93.81	8.00			2.37	3/4	0.75	780.3
2400	2438.4	8.6	7	---	2711	2662	216	16	1½ x 5	60	19.1	19.1	374.2
96	96.000	125	100	---	106.75	105.79	8.00			2.37	3/4	0.75	823.2

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

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 pipes.

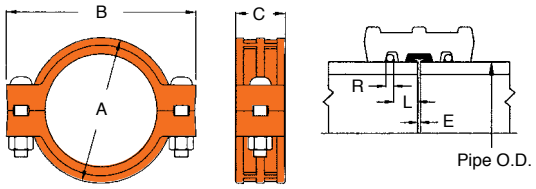
The coupling is comprised of two ductile iron heavy-wall housing segments, rubber gasket (EPDM or Nitrile) and two heat-treated track bolts and nuts which provide a fully restrained joint and a maximum working pressure of 1,000 psi (70 Bar) depending on the pipe used.

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

Pressure-Temperature Rating

Nom. Rating	Working Pressure (STD)	Max. Service Temperature
Class 400	1000 psi @100°F 70 Bar @38°C	EPDM: 230°F / 110°C Nitrile: 180°F / 82°C

*Working pressure is based on standard wall carbon steel pipe.
*Proof test pressure: 1.5 times the working pressure, non-shock cold water.
*Burst pressure is engineered minimum 3 times the working pressure.



Nominal Size mm / in	Pipe OD mm / in	Max. Working Pressure Bar / PSI	Dimensions A mm / in	B mm / in	C mm / in	Bolt / Nut No.	Size in	Deflection (°)	Pipe-end Preparation R mm / in	L mm / in	E (max) mm / in	Weight Kgs / Lbs
200	219.1	70	282	372	98	2	1" x 140	0° – 18'	12	25	3.2	18.1
8	8.625	1000	11.10	14.65	3.86				0.47	1	0.13	39.8
250	273.0	70	340	430	108	2	1" x 165	0° – 38'	12	25	3.2	26.0
10	10.750	1000	13.32	16.93	4.25				0.47	1	0.13	57.2
300	323.9	70	415	510	106	2	1" x 165	0° – 32'	12	25	3.2	33.0
12	12.750	1000	16.33	20.07	4.17				0.47	1	0.13	72.6

Note: Bolts & nuts are UNC threaded.

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 pipes.

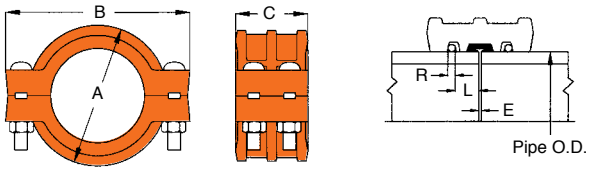
The coupling is comprised of two ductile iron heavy-wall housing segments, rubber gasket (EPDM or Nitrile) and four heat-treated track bolts and nuts which provide a fully restrained joint and a maximum working pressure up to 3,000 psi (210 Bar) depending on the pipe used.

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

Pressure-Temperature Rating

Nom. Rating	Working Pressure	Max. Service Temperature
Class 1500	3000 psi @100°F 210 Bar @38°C	EPDM: 230°F / 110°C Nitrile: 180°F / 82°C

*Working pressure is based on API 5L X65 line pipe.
*Proof test pressure: 1.5 times the working pressure, non-shock cold water.
*Burst pressure is engineered minimum 2 times the working pressure.



Nominal Size mm / in	Pipe OD mm / in	Max. Working Pressure Bar / PSI	Dimensions A mm / in	B mm / in	C mm / in	Bolt / Nut No.	Size in	Pipe-end Preparation R® mm / in	L mm / in	E mm / in	Weight Kgs / Lbs
200	219.1	210	300	394	148	2	1⅛ x 130	12	31	3	35.87
8	8.625	3000	11.81	15.51	5.83			0.472	1.22	⅛	78.92
250	273.0	210	380	481	152	4	1¼ x 165	16	31	3	52.78
10	10.748	3000	14.96	18.93	5.98			0.63	1.22	⅛	116.36
300	323.9	210	470	572	173	4	1½" x 160	16	31	3	96.24
12	12.752	3000	18.5	22.48	6.81			0.63	1.22	⅛	212.27

Note: Bolts & nuts are UNC threaded. @½" (12.7mm) and ⅝" (15.9mm) steel rings are also available on request.

MODEL

RX-3770 3770 PSI RING JOINT COUPLING

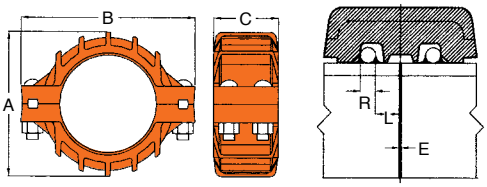
The **Shurjoint** Model RX-3770 Ring Joint Coupling is designed to provide a fully restrained joint for use with extra-strong carbon steel pipe including API 5L Grade X65 line pipe.

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 the coupling. Steel rings must always be fully welded on both sides.

Pressure-Temperature Rating

Nom. Rating	Working Pressure	Max. Service Temperature
Class 2000	3770 psi @100°F 260 Bar @38°C	EPDM: 230°F / 110°C Nitrile: 180°F / 82°C

*Working pressure is based on API 5L X65 line pipe.
*Proof test pressure: 1.5 times the working pressure, non-shock cold water.
*Burst pressure is engineered minimum 2 times the working pressure.



Nominal Size mm / in	Pipe OD mm / in	Max. Working Pressure Bar / PSI	Dimensions A mm / in	B mm / in	C mm / in	Bolt / Nut No.	Size in	Pipe-end Preparation R mm / in	L mm / in	E mm / in	Weight Kgs / Lbs
150	168.3	260	260	321	149	4	⅞" x 165	12	31	5	27.7
6	6.625	3770	10.24	12.64	5.87			0.472	1.22	0.20	61.2
200	219.1	260	329	414	175	4	1¼" x 165	16	38	5	49.9
8	8.625	3770	12.95	16.30	6.89			0.625	1.50	0.20	110.0
250	273.0	260	404	505	188	4	1½" x 175	19	38	5	79.2
10	10.750	3770	15.90	19.88	7.40			0.750	1.50	0.20	174.5
300	323.9	260	482	587	219	4	1½" x 175	22	38	6	112.3
12	12.750	3770	19.0	23.10	8.63			0.875	1.50	0.24	247.1

Note: Bolts & nuts are UNC threaded.

Proof and burst pressure testing

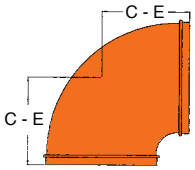
RING JOINT FITTINGS

MODEL

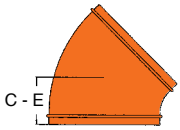
RJ-10 90° ELBOW RJ-11 45° ELBOW RJ-20 TEE RJ-60 CAP

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

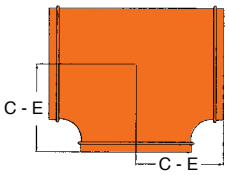
- Sizes 8" - 24" (200mm – 600mm) Models RJ-10, RJ-11 & RJ-60 and 8" – 16" (200mm – 400mm) Model RJ-20 are available either in cast ductile iron to ASTM A536 Gr. 65-45-12 or wrought carbon steel.
- Larger sizes are made of carbon steel standard weight pipe, ASTM A53 Gr. B or equivalent, or fabricated 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

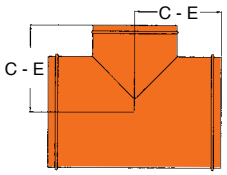
RJ-60

Nominal Size mm / in	Pipe OD mm / in	RJ-10 90° Elbow C - E mm / in	RJ-10 90° Elbow Weight Kgs / Lbs	RJ-11 45° Elbow C - E mm / in	RJ-11 45° Elbow Weight Kgs / Lbs	RJ-20 Tee C - E mm / in	RJ-20 Tee Weight Kgs / Lbs	RJ-60 Cap E - E mm / in	RJ-60 Cap Weight Kgs / Lbs
200	219.1	197	13.0	108	9.5	197	21.0	76	5.5
8	8.625	7.75	28.6	4.25	20.9	7.75	46.2	3.00	12.1
250	273.0	229	25.0	121	18.0	229	33.0	76	6.0
10	10.750	9.00	55.0	4.75	39.6	9.00	72.6	3.00	13.2
300	323.9	254	35.0	133	23.0	254	47.0	76	8.0
12	12.750	10.00	77.0	5.25	50.6	10.00	103.4	3.00	17.6
200JIS	216.3	197	13.0	108	9.5	197	21.0	76	5.5
	8.516	7.75	28.6	4.25	20.9	7.75	46.2	3.00	12.1
250JIS	267.4	229	25.0	121	18.0	229	33.0	76	6.0
	10.528	9.00	55.0	4.75	39.6	9.00	72.6	3.00	13.2
300JIS	318.5	254	35.0	133	23.0	254	47.0	76	8.0
	12.539	10.00	77.0	5.25	50.6	10.00	103.4	3.00	17.6
350	355.6	280	37.0	152	24.0	280	54.0	102	12.0
14	14.000	11.00	81.4	6.00	52.8	11.00	118.8	4.00	26.4
400	406.4	305	45.0	184	46.0	305	70.0	102	15.0
16	16.000	12.00	99.0	7.25	101.2	12.00	154.0	4.00	33.0
450	457.2	394	95.0	208	48.0	394	122.0	127	21.0
18	18.000	15.50	209.0	8.00	105.6	15.50	268.0	5.00	46.2
500	508.0	438	138.0	229	50.0	438	153.0	152	26.0
20	20.000	17.25	203.6	9.00	110.0	17.25	337.0	6.00	57.2
600	609.6	508	220.0	280	80.0	508	212.0	152	35.0
24	24.000	20.00	485.0	11.00	176.0	20.00	466.0	6.00	77.0
650	660.4	991	237.0	406	119.0	572	348.0	267	50.0
26	26.000	39.00	521.0	16.00	262.0	22.50	766.0	10.50	110.0
700	711.2	1067	275.0	438	138.0	597	392.0	267	56.0
28	28.000	42.00	605.0	17.25	304.0	23.50	862.0	10.50	123.0
750	76.20	1143	316.0	480	158.0	635	451.0	267	62.0
30	30.000	45.00	695.0	18.50	348.0	25.00	992.0	10.50	136.0
800	812.8	1219	360.0	502	180.0	673	516.0	267	113.0
32	32.000	48.00	792.0	19.75	396.0	26.50	1135.0	10.50	248.6
850	863.4	1295	407.0	533	204.0	711	584.0	267	75.0
34	34.000	51.00	895.0	21.00	449.0	28.00	1285.0	10.50	165.0
900	914.4	1372	457.0	565	229.0	762	657.0	267	152.0
36	36.000	54.00	1005.0	22.25	504.0	30.00	1445.0	10.50	334.4
1000	1016.0	1524	564.0	632	282.0	838	814.0	305	102.0
40	40.000	60.00	1241.0	24.88	620.0	33.00	1790.0	12.00	224.0
1050	1066.8	1600	622.0	660	311.0	889	837.0	305	110.0
42	42.000	63.00	1368.0	26.00	684.0	35.00	1841.0	12.00	242.0
1100	1117.6	1676	683.0	696	342.0	914	943.0	343	126.0
44	44.000	66.00	1503.0	27.39	752.0	36.00	2075.0	13.50	277.0
1200	1219.2	1829	814.0	759	407.0	1016	1131.0	343	143.0
48	48.000	72.00	1790.0	29.88	895.0	40.00	2488.0	13.50	315.0

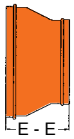
RING JOINT FITTINGS

MODEL

RJ-21 REDUCING TEE
RJ-50 CONCENTRIC REDUCER
RJ-51 ECCENTRIC REDUCER



RJ-21



RJ-50

RJ-51

Nominal Size mm / in	Pipe OD mm / in	RJ-21 Reducing Tee C - E mm / in	RJ-21 Reducing Tee Weight Kgs / Lbs	RJ-50 Conc. Reducer E - E mm / in	RJ-50 Conc. Reducer Weight Kgs / Lbs	RJ-51 Ecc. Reducer E - E mm / in	RJ-51 Ecc. Reducer Weight Kgs / Lbs
350 x 300	355.6 x 323.9	279	66.0	203*	23.0	203*	23.0
14 x 12	14.000 x 12.750	11.00	145.0	8.00	51.0	8.00	51.0
400 x 300	406.4 x 323.9	305	78.0	229*	29.0	229*	29.0
16 x12	16.000 x 12.750	12.00	172.0	9.00	64.0	9.00	64.0
400 x 350	406.4 x 355.6	305	80.0	229*	29.0	229*	29.0
16 x 14	16.000 x 14.000	12.00	176.0	9.00	64.0	9.00	64.0
450 x 300	457.2 x 323.9	394	112.0	241*	33.0	241*	35.0
18 x 12	18.000 x 12.750	15.50	246.0	9.50	72.6	9.50	78.0
450 x 350	457.2 x 355.6	394	115.0	381	36.0	381	36.0
18 x 14	18.000 x 14.000	15.50	253.0	15.00	79.0	15.00	79.0
450 x 400	457.2 x 406.4	394	120.0	381	36.0	381	36.0
18 x 16	18.000 x 16.000	15.50	264.0	15.00	79.0	15.00	79.0
500 x 300	508.0 x 323.9	438	135.0	254*	43.0	254*	43.0
20 x 12	20.000 x 12.750	17.25	297.0	10.00	95.0	10.00	95.0
500 x 350	508.0 x 355.6	438	138.0	508	45.0	508	45.0
20 x 14	20.000 x 14.000	17.25	304.0	20.0	99.0	20.0	99.0
500 x 400	508.0 x 406.4	438	144.0	254	46.0	254	46.0
20 x 16	20.000 x 16.000	17.25	317.0	10.00	101.0	10.00	101.0
500 x 450	508.0 x 457.2	438	149.0	508	58.0	508	58.0
20 x 18	20.000 x 18.000	17.25	328.0	20.00	128.0	20.00	128.0
600 x 300	609.6 x 323.9	508	180.0	305*	70.0	305*	70.0
24 x 12	24.000 x 12.750	20.00	396.0	12.00	154.0	12.00	154.0
600 x 350	609.6 x 355.6	508	185.0	508	70.0	508	70.0
24 x 14	24.000 x 14.000	20.00	407.0	20.00	154.0	20.00	154.0
600 x 400	609.6 x 406.4	508	190.0	305*	70.0	305*	70.0
24 x 16	24.000 x 16.000	20.00	418.0	12.00	154.0	12.00	154.0
600 x 450	609.6 x 457.2	508	197.0	508	70.0	508	70.0
24 x 18	24.000 x 18.000	20.00	433.0	20.00	154.0	20.00	154.0
600 x 500	609.6 x 508.0	508	202.0	305*	71.0	305*	71.0
24 x 20	24.000 x 20.000	20.00	444.0	12.00	156.0	12.00	156.0

Note: Concentric reducers marked (*) are cast from of ductile iron.

MODEL

RJ-70 FLANGE ADAPTER

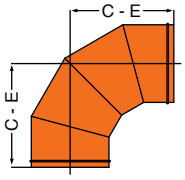
RJ-70

Nominal Size mm / in	Pipe O.D. mm / in	RJ-70 Flange Adapter E - E mm / in	RJ-70 Flange Adapter Weight Kgs / Lbs
200	219.1	152	20.4
8	8.625	6	44.9
250	273.0	203	30.5
10	10.750	8	67.1
300	323.9	203	44.6
12	12.750	8	98.1
350	355.6	203	54.0
14	14.000	8.00	118.8
400	406.4	203	66.8
16	16.000	8.00	147.0
450	457.2	203	65.0
18	18.000	8.00	143.0
500	508.0	203	77.0
20	20.000	8.00	169.4
600	609.6	203	130.4
24	24.000	8.00	286.9
1200	1219.2	203	364.0
48	46.000	8.00	800.8

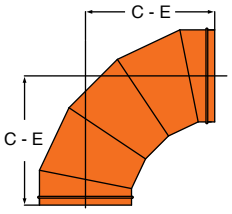
Large Diameter Ring Joint Fittings

Shurjoint fabricated ring joint fittings are made of carbon steel, 9.5mm (0.375") and 12.7mm (0.5") wall, conforming to ASTM A53, Grade B, or equivalent.

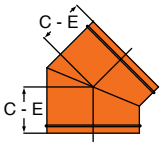
Additional ring joint fitting configurations are available to accommodate almost any connection; ring to groove, ring to flange or ring to weld. Contact **Shurjoint** for further details.



RJ-10W= 4 segments

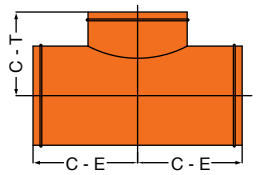


RJ-100W= 5 segments



RJ-11W

Nominal Size mm / in	Pipe OD mm / in	RJ-10W 90° Elbow, Standard Radius C - E mm / in	Wt (t = 9.5mm) Kgs / Lbs	Wt (t = 12.7mm) Kgs / Lbs	RJ-100W 90° Elbow, Long Radius C - E mm / in	Wt (t = 9.5mm) Kgs / Lbs	Wt (t = 12.7mm) Kgs / Lbs	RJ-11W 45° Elbow, Standard Radius C - E mm / in	Wt (t = 9.5mm) Kgs / Lbs	Wt (t = 12.7mm) Kgs / Lbs	RJ-110W 45° Elbow, Long Radius C - E mm / in	Wt (t = 9.5mm) Kgs / Lbs	Wt (t = 12.7mm) Kgs / Lbs
650	660.4	851	225	297	927	244	322	330	101	133	406	123	164
26	26.000	33.5	494	653	36.5	537	709	13	222	292	16.00	271	361
700	711.2	953	268	354	991	277	366	356	117	154	438	143	191
28	28.000	37.5	589	778	39.0	609	805	14	257	338	17.25	315	420
750	762.0	953	287	379	1054	318	420	381	134	176	470	165	219
30	30.000	37.5	632	835	41.5	699	924	15	295	388	18.50	363	482
800	812.8	953	306	405	1118	360	476	406	152	201	502	188	250
32	32.000	37.5	674	891	44.0	791	1047	16	335	441	19.75	414	550
850	863.4	1016	365	484	1181	403	534	432	171	226	533	212	282
34	34.000	40.0	803	1064	46.5	886	1176	17	377	498	21.0	466	620
900	914.4	1016	366	484	1245	450	596	457	192	253	565	238	317
36	36.000	40.0	805	1065	49.0	990	1310	18	423	558	22.25	524	697
950	965.2	1016	385	476	1308	456	605	483	218	289	600	267	355
38	38.000	40.0	847	1047	51.5	1003	1331	19	480	636	23.62	587	781
1000	1016.0	1105	426	592	1372	527	734	508	228	316	632	296	394
40	40.000	43.5	9376	1303	54.0	1160	1615	20	503	696	24.88	651	867
1050	1066.8	1105	449	622	1435	581	807	533	252	349	660	325	432
42	42.000	43.5	989	1369	56.5	1278	1774	21	555	767	26.00	715	950
1100	1117.6	1105	494	652	1511	672	890	559	290	382	695	359	477
44	44.000	43.5	1086	1435	59.5	1479	1958	22	638	841	27.38	790	1049
1150	1168.4	114.3	528	717	588	678	876	584	319	411	727	392	522
46	46.000	45.0	1162	1577	62.5	492	1927	23	702	904	28.62	862	1148
1200	1219.2	1143	550	732	1626	783	1044	610	342	454	759	428	569
48	48.000	45.0	1209	1610	64.0	1722	2296	24	752	999	29.88	942	1252



RJ-20W

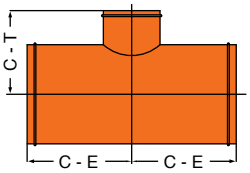
Nominal Size mm / in	Pipe OD mm / in	RJ-20W Tee C - E mm / in	C - T mm / in	Wt (t = 9.5mm) Kgs / Lbs	Wt (t = 12.7mm) Kgs / Lbs
650	660.4	495	495	354	466
26	26.000	19.5	19.5	779	1025
700	711.2	521	521	398	525
28	28.000	20.5	20.5	877	1154
750	762.0	559	559	458	604
30	30.000	22.0	22.0	1008	1329
800	812.8	597	597	524	690
32	32.000	23.5	23.5	1151	1517
850	863.4	635	635	592	781
34	34.000	25.0	25.0	1302	1718
900	914.4	673	673	666	878
36	36.000	26.5	26.5	1464	1931
1000	1016.0	749	749	829	1094
40	40.000	29.5	29.5	1823	2406
1050	1066.8	762	711	853	1126
42	42.000	30.0	27.0	1876	2476
1100	1117.6	813	762	959	1266
44	44.000	32.0	30.0	2111	2786
1200	1219.2	889	838	1149	1518
48	48.000	35.0	33.0	2527	3339

Note: C - E / C - T to ANSI B16.9

Coatings:

Standard: Rust inhibiting paint, orange color.

Optional: Other color paint or hot dipped zinc galvanized conforming to ASTM A-153.

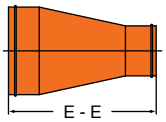


RJ-21W

Nominal Size mm / in	Pipe OD mm / in	RJ-21W Reducing Tee C - E mm / in	C - T mm / in	Wt (t = 9.5mm) Kgs / Lbs	Wt (t = 12.7mm) Kgs / Lbs
350 x 300	355.6 x 323.9	279	270	81	107
14 x 12	14.0 x 12.0	11.0	10.6	178	236
400 x 300	406.4 x 323.9	305	295	87	116
16 x 12	16.0 x 12.0	12.0	11.6	192	255
400 x 350	406.4 x 355.6	305	305	91	121
16 x 14	16.0 x 14.0	12.0	12.0	200	266
450 x 300	457.2 x 323.9	343	321	116	154
18 x 12	18.0 x 12.0	13.5	12.6	255	339
450 x 350	457.2 x 355.6	343	330	120	159
18 x 14	18.0 x 14.0	13.5	13.0	263	350
450 x 400	457.2 x 406.4	343	330	123	163
18 x 16	18.0 x 16.0	13.5	13.0	270	359
500 x 350	508.0 x 355.6	381	356	164	218
20 x 14	20.0 x 14.0	15.0	14.0	360	479
500 x 400	508.0 x 406.4	381	356	165	219
20 x 16	20.0 x 16.0	15.0	14.0	362	482
500 x 450	508.0 x 457.2	381	394	170	226
20 x 18	20.0 x 18.0	15.0	15.5	373	496
600 x 450	609.6 x 406.4	432	419	251	333
24 x 18	24.0 x 18.0	17.0	16.5	551	733
600 x 500	609.6 x 508.0	432	432	269	357
24 x 20	24.0 x 20.0	17.0	17.0	591	786
650 x 400	660.4 x 406.4	495	432	314	418
26 x 16	26.0 x 16.0	19.5	17.0	691	919
650 x 450	660.4x406.4	495	445	317	422
26 x 18	26.0 x 18.0	19.5	17.5	698	928
700 x 450	711.2 x 457.2	521	470	358	476
28 x 18	28.0 x 18.0	20.5	18.5	787	1046
700 x 500	711.2 x 508.0	521	483	361	480
28 x 20	28.0 x 20.0	20.5	19.0	793	1055
700 x 600	711.2 x 609.6	521	508	368	489
28 x 24	28.0 x 24.0	20.5	20.2	809	1076
750 x 500	762.0 x 508.0	559	508	413	549
30 x 20	30.0 x 20.0	22.0	20.2	909	1208
750 x 65	762.0 x 660.4	559	546	424	564
30 x 26	30.0 x 26.0	22.0	21.5	933	1241
800 x 600	812.8 x 609.6	597	559	476	633
32 x 24	32.0 x 24.0	23.5	22.0	1046	1392
800 x 700	812.8 x 711.2	597	572	482	641
32 x 28	32.0 x 28.0	23.5	22.5	1059	1409
850 x 650	863.4 x660.4	635	597	539	717
34 x 26	34.0 x 26.0	25.0	23.5	1186	1577
850 x 750	863.4 x 762.0	635	610	545	725
34 x 30	34.0 x 30.0	25.0	24.0	1199	1595
900 x 600	914.4 x 609.6	673	610	598	795
36 x 24	36.0 x 24.0	26.5	24.0	1315	1748
900 x 700	914.4 x 711.2	673	622	604	803
36 x 28	36.0 x 28.0	26.5	24.5	1328	1766
900 x 800	914.4 x 812.8	673	648	613	815
36 x 32	36.0 x 32.0	26.5	25.5	1348	1792
1000 x 700	1016.0 x 711.2	749	673	746	992
40 x 28	40.0 x 28.0	29.5	26.5	1641	2182
1000 x 800	1016.0 x 812.8	749	711	757	1007
40 x 32	40.0 x 32.0	29.5	28.0	1665	2215
1000 x 900	1016.0 x 914.4	749	737	768	1021
40 x 36	40.0 x 36.0	29.5	290	1689	2247
1050 x 750	1066.8 x 762.0	762	711	799	1062
42 x 30	42.0 x 30.0	30.0	28.0	1757	2337
1050 x 850	1066.8 x 863.4	762	711	805	1070
42 x 34	42.0 x 34.0	30.0	28.0	1770	2354
1100 x 800	1117.6 x 812.8	813	711	885	1178
44 x 32	44.0 x 32.0	32.0	28.0	1948	2591

Nominal Size mm / in	Pipe OD mm / in	RJ-21W Reducing Tee C - E mm / in	C - T mm / in	Wt (t = 9.5mm) Kgs / Lbs	Wt (t = 12.7mm) Kgs / Lbs
1100 x 900	1117.6 x 914.4	813	724	892	1187
44 x 36	44.0 x 36.0	32.0	28.5	1963	2611
1100 x 1000	1117.6 x 1016.0	813	749	903	1201
44 x 40	44.0 x 40.0	32.0	29.5	1987	2643
1200 x 900	1219.2 x 914.4	889	787	1060	1410
48 x 36	48.0 x 36.0	35.0	31.0	2332	3101
1200 x 1000	1219.2 x 1066.8	889	813	1071	1424
48 x 40	48.0 x 40.0	35.0	32.0	2356	3133
1200 x 1100	1219.2 x 1117.6	889	838	1083	1440
48 x 44	48.0 x 44.0	35.0	33.0	2382	3168

Note: C-E / C-T to ANSI B16.9



RJ-50W

Nominal Size mm / in	Pipe OD mm / in	RJ-50W Concentric Reducer E - E mm / in	Wt (t = 9.5mm) Kgs / Lbs	Wt (t = 12.7mm) Kgs / Lbs
650 x 400	660.4 x 406.4	610	81	107
26 x 16	26.0 x 16.0	24	178	236
650 x 450	660.4x406.4	610	84	112
26 x 18	26.0 x 18.0	24	184	245
700 x 450	711.2 x 457.2	610	88	118
28 x 18	28.0 x 18.0	24	194	259
700 x 500	711.2 x 508.0	610	92	122
28 x 20	28.0 x 20.0	24	201	268
700 x 600	711.2 x 609.6	610	98	130
28 x 24	28.0 x 24.0	24	215	286
750 x 500	762.0 x 508.0	610	96	128
30 x 20	30.0 x 20.0	24	211	281
750 x 65	762.0 x 660.4	610	106	141
30 x 26	30.0 x 26.0	24	233	309
800 x 600	812.8 x 609.6	610	107	142
32 x 24	32.0 x 24.0	24	235	313
800 x 700	812.8 x 711.2	610	113	150
32 x 28	32.0 x 28.0	24	249	331
850 x 650	863.4 x660.4	610	114	152
34 x 26	34.0 x 26.0	24	252	335
850 x 750	863.4 x 762.0	610	120	160
34 x 30	34.0 x 30.0	24	265	352
900 x 600	914.4 x 609.6	610	117	155
36 x 24	36.0 x 24.0	24	257	341
900 x 700	914.4 x 711.2	610	122	162
36 x 28	36.0 x 28.0	24	268	356
900 x 800	914.4 x 812.8	610	129	171
36 x 32	36.0 x 32.0	24	283	376
1000 x 700	1016.0 x 711.2	610	136	181
40 x 28	40.0 x 28.0	24	299	398
1000 x 800	1016.0 x 812.8	610	141	187
40 x 32	40.0 x 32.0	24	310	412
1000 x 900	1016.0 x 914.4	610	147	195
40 x 36	40.0 x 36.0	24	323	430
1050 x 750	1066.8 x 762.0	610	144	192
42 x 30	42.0 x 30.0	24	318	422
1050 x 850	1066.8 x 863.4	610	149	199
42 x 34	42.0 x 34.0	24	329	437
1100 x 800	1117.6 x 812.8	610	152	202
44 x 32	44.0 x 32.0	24	334	444
1100 x 900	1117.6 x 914.4	610	157	209
44 x 36	44.0 x 36.0	24	345	459
1100 x 1000	1117.6 x 1016.0	610	163	217
44 x 40	44.0 x 40.0	24	358	477
1200 x 900	1219.2 x 914.4	711	192	255
48 x 36	48.0 x 36.0	28	422	561
1200 x 1000	1219.2 x 1066.8	711	199	265
48 x 40	48.0 x 40.0	28	438	582
1200 x 1100	1219.2 x 1117.6	711	206	274
48 x 44	48.0 x 44.0	28	453	602

Note: E - E to ANSI B16.9

Max. Internal Service Pressure 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.

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

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"

Material Specifications

Housing

Ductile iron, per ASTM A536 Gr. 65-45-12, and or ASTM A395 Gr. 65-45-15 minimum tensile strength 65,000 psi or 448 MPa. **Paint:** Orange or RAL3000 red. **Optional:** Hot-dip galvanized, epoxy coating or polyamid 11 (Nylon) coating is also available upon request.

Hardware

Bolts: Carbon steel heat-treated track bolts to ASTM A183 Gr. 2. **Nuts:** Carbon steel heavy duty nuts to ASTM A563. Both bolts and nuts are UNC threaded and electro zinc plated.

Weld Rings

Factory supplied end rings are made of carbon steel per SAE J403 (ANSI) 1020. **Optional:** Stainless steel rings: Type 304, 316 or 316L available upon request.

Gasket

Always specify the desired compound (Grade) at time of order

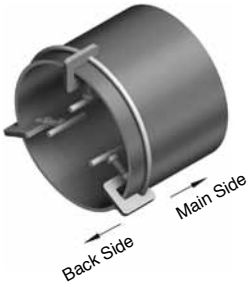
Compound	EPDM (Grade E)	Nitrile (Grade T)
Color Code	Green stripe	Orange stripe
Temperature Range Intermittent Continuous Service	 -29°F to +230°F (-34°C to +110°C) +32°F to +180°F (0°C to +82°C)	 -20°F to +180°F (-29°C to +82°C) +32°F to +150°F (0°C to +65°C)
Applications	Recommended for cold and hot water services, water with chlorine, deionized water, seawater, waste water, dilute acids, oil-free air and many other chemicals **Caution:** Not recommended for petroleum oils, mineral oils, solvents and aromatic hydrocarbons	Recommended for petroleum oils, mineral oils, vegetable oils, aromatic hydrocarbons, many acids and water up to +150°F (+65°C)

Note: Other gasket options are also available.

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 tolerances, 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.

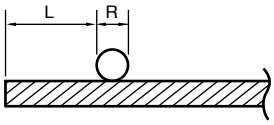
As with all piping systems proper support, anchoring and bracing are essential. Industry standard requirements such as B31.1 (Power Piping), B31.9 (Building Services) and B31.11 (Slurry Transportation), etc. should be followed for your specific type of pipeline system application.

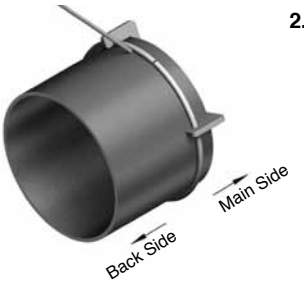
Installation Instructions



1. Mounting factory supplied weld rings: Mount the factory supplied weld ring on the pipe end using the ***Shurjoint*** ring clamp, C-clamp or other device to secure and position the ring in place. **Prior to welding make sure that the "L" dimension (the distance between the pipe end and the ring) is as specified for the coupling / pipe size.**

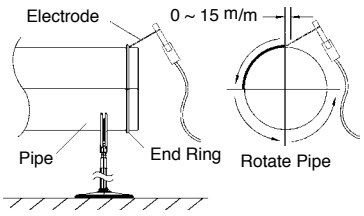
Ring Clamp

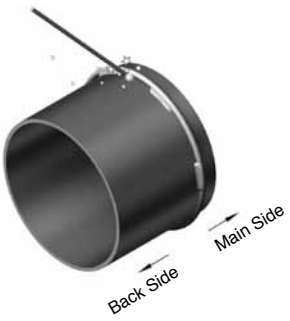




2. Step one welding: First weld the butt ends of the ring together. Next tack weld the ring to the pipe at several locations. Remove the ring clamps or other positioning devices.

Welding conditions:
Method: SMAW (Shielded metal arc welding)*
Electrode: Flux-cored electrode 3/32" (2.4mm) to 1/8" (3.2mm)
Welding speed: 12" (300mm) to 16" (400mm) per minute
Current: 110A – 160A
Rotate pipe so that you can keep your electrode holder at the same position.
*GTAW or FCAW is also acceptable.

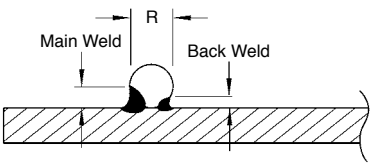


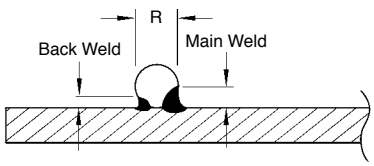


3-1. Step two welding: Determine the type of weld required, full or partial, depending on the intended system working pressure. Refer to page 13 for working pressures and full and partial welding information. Weld the ring to the pipe using the proper weld(s) for the intended service.

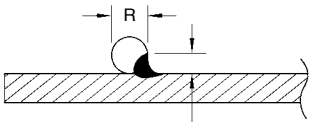
Full & Partial Ring Welding: The **Shurjoint** Model R-88 Ring Joint Coupling is supplied with factory weld rings and is designed for a variety of service and pressure applications. For lower pressure applications weld rings need not be fully welded around the entire circumference of the pipe. The table shows the minimum required weld length in inches or mm and corresponding working pressures. Working pressures are based on the use of applicable pipe wall thickness for the service pressure intended.

Full welding means both sides of the weld ring are fully welded around the circumference of the pipe. One side shall be referred to as the "Main Weld" and the other side as "Back Weld". Either side of the weld ring can receive the Main Weld.

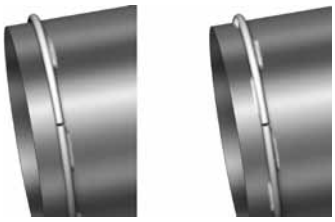




3-2. Partial weld: Partial ring welding will provide sufficient strength for lower pressure services. In case of partial ring welding, the weld shall be processed on the backside (away from the pipe end) of the ring.



An equal alternating or zigzag weld is acceptable. Welds should be equal and evenly spaced. Back welding provides additional strength to a partial weld.



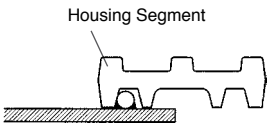
Working Pressure / Full & Partial Ring Welding

Minimum required weld length in inches (mm) and corresponding working pressures in psi (bar) for applicable steel pipe*.

Nominal Size in / mm	Weld Length - in / mm			
	< 125 psi < 9 bar	< 175 psi < 12 bar	< 300 psi < 20 bar	350 psi < 24 bar <
8 / 200	10 / 254	14 / 356	20 / 508	Full
10 / 250	12 / 305	20 / 508	30 / 762	Full
12 / 300	16 / 406	24 / 610	36 / 914	Full
14 / 350	18 / 457	28 / 711	40 / 1016	Full
16 / 400	22 / 559	32 / 813	Full	Full
18 / 450	28 / 711	40 / 1016	Full	Full
20 / 500	30 / 762	44 / 1118	Full	Full
24 / 600	40 / 1016	56 / 1422	Full	Full
26 / 650	42 / 1067	60 / 1524	Full	Full
28 / 700	44 / 1118	62 / 1575	Full	Full
30 / 750	48 / 1219	70 / 1778	Full	Full
32 / 800	50 / 1270	76 / 1930	Full	Full
34 / 850	54 / 1372	80 / 2032	Full	Full
36 / 900	68 / 1727	88 / 2235	Full	Full
38 / 950	76 / 1930	94 / 2388	Full	
40 / 1000	78 / 1981	102 / 2591	Full	
42 / 1050	81 / 2057	106 / 2692	Full	
44 / 1100	90 / 2286	114 / 2896	Full	
48 / 1200	110 / 2794	130 / 3302	Full	
52 / 1300	136 / 3454	Full	Full	
54 / 1350	140 / 3556	Full	Full	
56 / 1400	150 / 3810	Full	Full	
60 / 1500	164 / 4166	Full	Full	
66 / 1650	Full	Full		
68 / 1700	Full	Full		
72 / 1800	Full	Full		
84 / 2100	Full			
96 / 2400	Full			

1. Applicable to Model R-88 couplings only.
2. "Full" welding means both sides of the weld ring are fully welded, all others are welded one side only.
3. * Refer to Max. Internal Service Pressure of Carbon Steel Pipe, ASTM A53 Gr. B table on page 11.

4. Quick check guide: After welding use an R-88 housing segment as a gauge to check the weld size by ensuring full and smooth engagement. The housing ring pocket must fully engage the ring without interference from the weld or fillet material.



Quick Check