

Performance Data Sheet – Ductile Iron Couplings on Carbon Steel & Stainless Steel Pipe

The following tables show maximum working pressures (CWP) of Shurjoint ductile iron couplings and flange adapters used on both carbon steel and stainless steel pipes. Shurjoint ductile iron couplings can be used in conjunction with stainless steel pipe in non-corrosive environment as the flow media does not come in direct contact with the coupling housings but rather only the gasket. Stated pressure ratings have been developed with a safety factor. Please see Shurjoint's 2017 online installation instructions for most recently updated instructions. Proper installation is important to proper performance.

Unit: psi / Bar

Model Z05 on Carbon Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	XS	STD	STD	Sch. 10	Sch. 5
in / mm					
1¼	600	600	500	400	250
32	42	42	35	28	17
1½	600	600	500	400	250
40	42	42	35	28	17
2	600	600	500	400	250
50	42	42	35	28	17
2½	600	600	500	400	250
65	42	42	35	28	17
3	600	600	500	400	250
80	42	42	35	28	17
4	600	600	500	400	200
100	42	42	35	28	14
5	450	450	350	300	175
125	31	31	24	20	12
6	450	450	350	300	175
150	31	31	24	20	12
8	450	450	350	300	150
200	31	31	24	20	10

Unit: psi / Bar

Model Z05 on Stainless Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	Sch. 80S	Sch. 40S	Sch. 40S	Sch. 10S	Sch. 5S
in / mm					
1¼	600	600	450	300	250
32	42	42	31	20	17
1½	600	600	450	300	250
40	42	42	31	20	17
2	600	600	450	300	250
50	42	42	31	20	17
2½	600	600	450	300	250
65	42	42	31	20	17
3	600	600	450	300	250
80	42	42	31	20	17
4	600	600	450	300	200
100	42	42	31	20	14
5	450	450	300	200	NR
125	31	31	20	14	
6	450	450	300	125	NR
150	31	31	20	9	
8	450	450	300	100	NR
200	31	31	20	7	

Unit: psi / Bar

Model K-9 on Carbon Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	XS	STD	STD	Sch. 10	Sch. 7
in / mm					
1¼	600	600	500	400	300
32	42	42	35	28	20
1½	600	600	500	400	300
40	42	42	35	28	20
2	600	600	500	400	300
50	42	42	35	28	20
2½	600	600	500	400	300
65	42	42	35	28	20
3	600	600	500	400	300
80	42	42	35	28	20
4	600	600	500	400	300
100	42	42	35	28	20
5	450	450	450	350	250
125	31	31	31	24	17
6	450	450	450	350	250
150	31	31	31	24	17
8	450	450	300	250	200
200	31	31	20	17	14
8 (K-9H)	450	450	300	250	200
200	31	31	20	17	14

Unit: psi / Bar

Model K-9 on Stainless Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	Sch. 80S	Sch. 40S	Sch. 40S	Sch. 10S	Sch. 5S
in / mm					
1¼	600	600	450	300	250
32	42	42	31	20	17
1½	600	600	450	300	250
40	42	42	31	20	17
2	600	600	450	300	250
50	42	42	31	20	17
2½	600	600	450	300	250
65	42	42	31	20	17
3	600	600	450	300	250
80	42	42	31	20	17
4	600	600	450	300	200
100	42	42	31	20	14
5	450	450	300	200	NR
125	31	31	20	14	
6	450	450	300	125	NR
150	31	31	20	9	
8	450	450	300	100	NR
200	31	31	20	7	
8 (K-9H)	450	450	300	100	NR
200	31	31	20	7	

Unit: psi / Bar

Model Z07 on Carbon Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	XS	STD	STD	Sch. 10	Sch. 7
in / mm					
1¼	750	750	750	600	400
32	52	52	52	42	28
1½	750	750	750	600	400
40	52	52	52	42	28
2	750	750	750	600	400
50	52	52	52	42	28
2½	750	750	750	600	400
65	52	52	52	42	28
3	750	750	750	600	400
80	52	52	52	42	28
4	750	750	750	600	400
100	52	52	52	42	28
5	750	750	750	500	350
125	52	52	52	35	24
6	700	700	700	400	300
150	48	48	48	28	20
8	600	600	600	350	250
200	42	42	42	24	17
10	500	500	500	300	200
250	35	35	35	20	14
12	400	400	400	250	150
300	28	28	28	17	10

Unit: psi / Bar

Model Z07 on Stainless Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	Sch. 80S	Sch. 40S	Sch. 40S	Sch. 10S	Sch. 5S
in / mm					
1¼	750	750	750	750	300
32	52	52	52	52	20
1½	750	750	750	750	300
40	52	52	52	52	20
2	750	750	750	700	300
50	52	52	52	48	20
2½	750	750	750	700	300
65	52	52	52	48	20
3	750	750	750	500	300
80	52	52	52	35	20
4	750	750	750	500	250
100	52	52	52	35	17
5	750	750	650	500	NR
125	52	52	45	35	
6	700	700	600	300	NR
150	48	48	42	20	
8	600	600	450	300	NR
200	42	42	32	20	
10	500	500	450	150	NR
250	35	35	32	10	
12	400	400	400	125	NR
300	28	28	28	9	

Unit: psi / Bar

Model 7771 on Carbon Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	XS	STD	STD	Sch. 10	Sch. 7
in / mm					
1½	750	750	750	600	400
40	52	52	52	42	28
2	750	750	750	600	400
50	52	52	52	42	28
2½	750	750	750	600	400
65	52	52	52	42	28
3	750	750	750	600	400
80	52	52	52	42	28
4	750	750	750	600	400
100	52	52	52	42	28
5	750	750	750	500	350
125	52	52	52	35	24
6	700	700	700	400	300
150	48	48	48	28	20
8	600	600	600	350	250
200	42	42	42	24	17
10	500	500	500	300	200
250	35	35	35	20	14
12	400	400	400	250	150
300	28	28	28	17	10

Unit: psi / Bar

Model 7771 on Stainless Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	Sch. 80S	Sch. 40S	Sch. 40S	Sch. 10S	Sch. 5S
in / mm					
1½	750	750	700	500	300
40	52	52	48	35	20
2	750	750	700	500	300
50	52	52	48	35	20
2½	750	750	700	500	300
65	52	52	48	35	20
3	750	750	700	500	300
80	52	52	48	35	20
4	750	750	700	400	250
100	52	52	48	28	17
5	750	750	600	300	NR
125	52	52	42	20	
6	700	700	500	200	NR
150	48	48	35	14	
8	600	600	400	150	NR
200	42	42	28	10	
10	500	500	300	100	NR
250	35	35	20	7	
12	400	400	250	100	NR
300	28	28	17	7	

Unit: psi / Bar

Model XH-1000 on Carbon Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	XS	STD	STD	Sch. 10	Sch. 7
in / mm					
2	1000	1000	1000	750	NR
50	69	69	69	52	
2½	1000	1000	1000	600	NR
65	69	69	69	42	
3	1000	1000	1000	600	NR
80	69	69	69	42	
4	1000	1000	1000	600	NR
100	69	69	69	42	
6	1000	1000	1000	450	NR
150	69	69	69	31	
8	800	800	800	300	NR
200	55	55	55	20	
10	800	800	800	300	NR
250	55	55	55	20	
12	800	800	800	300	NR
300	55	55	55	20	

Unit: psi / Bar

Model XH-1000 on Stainless Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	Sch. 80S	Sch. 40S	Sch. 40S	Sch. 10S	Sch. 5S
in / mm					
2	1000	1000	750	700	NR
50	69	69	52	48	
2½	1000	1000	750	700	NR
65	69	69	52	48	
3	1000	1000	750	500	NR
80	69	69	52	35	
4	1000	1000	750	500	NR
100	69	69	52	35	
6	1000	1000	750	350	NR
150	69	69	52	24	
8	800	800	650	350	NR
200	55	55	45	24	
10	800	800	600	300	NR
250	55	55	42	20	
12	800	800	600	300	NR
300	55	55	42	20	

Unit: psi / Bar

Model 7705 on Carbon Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	XS	STD	STD	Sch. 10	Sch. 7
in / mm					
1	600	600	500	400	300
25	42	42	35	28	20
1¼	600	600	500	400	300
32	42	42	35	28	20
1½	600	600	500	400	300
40	42	42	35	28	20
2	600	600	500	400	300
50	42	42	35	28	20
2½	600	600	500	400	300
65	42	42	35	28	20
3	600	600	500	400	300
80	42	42	35	28	20
4	600	600	500	400	300
100	42	42	35	28	20
5	450	450	450	350	250
125	31	31	31	24	17
6	450	450	450	350	250
150	31	31	31	24	17
8	450	450	300	250	200
200	31	31	20	17	14
10	350	350	300	200	175
250	24	24	20	14	12
12	350	350	300	200	175
300	24	24	20	14	12

Unit: psi / Bar

Model 7705 on Stainless Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	Sch. 80S	Sch. 40S	Sch. 40S	Sch. 10S	Sch. 5S
in / mm					
1	600	600	750	500	250
25	42	42	52	35	17
1¼	600	600	750	500	250
32	42	42	52	35	17
1½	600	600	650	500	250
40	42	42	45	35	17
2	600	600	500	500	250
50	42	42	35	35	17
2½	600	600	500	500	250
65	42	42	35	35	17
3	600	600	500	400	250
80	42	42	35	28	17
4	600	600	500	400	200
100	42	42	35	28	14
5	450	450	450	350	NR
125	31	31	31	24	
6	450	450	300	300	NR
150	31	31	20	20	
8	450	450	300	300	NR
200	31	31	20	20	
10	350	350	200	75	NR
250	24	24	14	5	
12	350	350	200	50	NR
300	24	24	14	3	

Unit: psi / Bar

Model 7707 on Carbon Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	XS	STD	STD	Sch. 10	Sch. 7
in / mm					
¾	1000	1000	1000*/750	750*/600	500
20	69	69	69*/52	52*/42	35
1	1000	1000	1000*/750	750*/600	500
25	69	69	69*/52	52*/42	35
1¼	1000	1000	1000*/750	750*/600	500
32	69	69	69*/52	52*/42	35
1½	1000	1000	1000*/750	750*/600	500
40	69	69	69*/52	52*/42	35
2	1000	1000	1000*/750	750*/600	500
50	69	69	69*/52	52*/42	35
2½	1000	1000	1000*/750	600	500
65	69	69	69*/52	42	35
3	1000	1000	1000*/750	600	500
80	69	69	69*/52	42	35
4	1000	1000	1000*/750	600	400
100	69	69	69*/52	42	28
5	1000	1000	1000*/750	500	350
125	69	69	69*/52	35	24
6	1000	1000	1000*/700	450	300
150	69	69	69*/48	31	20
8	800	800	800*/600	350	250
200	55	55	55*/42	24	17
10	800	800	800*/550	300	200
250	55	55	55*/38	20	14
12	800	800	800*/500	300	200
300	55	55	55*/35	20	14

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

Unit: psi / Bar

Model 7707 on Stainless Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	Sch. 80S	Sch. 40S	Sch. 40S	Sch. 10S	Sch. 5S
in / mm					
¾	750	750	750	500	325
20	52	52	52	35	22
1	750	750	750	500	325
25	52	52	52	35	22
1¼	750	750	750	500	325
32	52	52	52	35	22
1½	750	750	750	500	325
40	52	52	52	35	22
2	750	750	750	500	325
50	52	52	52	35	22
2½	750	750	750	500	325
65	52	52	52	35	22
3	750	750	750	500	325
80	52	52	52	35	22
4	750	750	750	500	250
100	52	52	52	35	17
5	750	750	650	500	NR
125	52	52	45	35	
6	750	750	500	200	NR
150	52	52	35	14	
8	600	600	450	300	NR
200	42	42	31	20	
10	600	600	400	125	NR
250	42	42	28	9	
12	600	600	400	125	NR
300	42	42	28	9	

Unit: psi / Bar

Model 7706 on Carbon Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	XS	STD	STD	Sch. 10	Sch. 7
in / mm					
1½ x 1¼	500	500	500	350	300
40 x 32	35	35	35	24	20
2 x 1½	500	500	500	350	300
50 x 40	35	35	35	24	20
2½ x 2	500	500	500	350	300
65 x 50	35	35	35	24	20
3 x 2	500	500	500	350	300
80 x 50	35	35	35	24	20
3 x 2½	500	500	500	350	300
80 x 65	35	35	35	24	20
4 x 2	500	500	500	350	300
100 x 50	35	35	35	24	20
4 x 2 ½	500	500	500	350	300
100 x 65	35	35	35	24	20
4 x 3	500	500	500	300	250
100 x 80	35	35	35	20	17
5 x 4	400	400	400	300	250
125 x 100	28	28	28	20	17
6 x 3	400	400	400	300	200
150 x 80	28	28	28	20	14
6 x 4	400	400	400	300	175
150 x 100	28	28	28	20	12
8 x 6	400	400	400	300	175
200 x 150	28	28	28	20	12

Unit: psi / Bar

Model 7706 on Stainless Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	Sch. 80S	Sch. 40S	Sch. 40S	Sch. 10S	Sch. 5S
in / mm					
1½ x 1¼	500	500	350	300	250
40 x 32	35	35	24	20	17
2 x 1½	500	500	350	300	250
50 x 40	35	35	24	20	17
2½ x 2	500	500	350	300	250
65 x 50	35	35	24	20	17
3 x 2	500	500	350	300	250
80 x 50	35	35	24	20	17
3 x 2½	500	500	350	300	250
80 x 65	35	35	24	20	17
4 x 2	500	500	350	300	250
100 x 50	35	35	24	20	17
4 x 2 ½	500	500	350	300	200
100 x 65	35	35	24	20	14
4 x 3	500	500	300	250	200
100 x 80	35	35	20	17	14
5 x 4	400	400	300	250	NR
125 x 100	28	28	20	17	
6 x 3	400	400	300	200	NR
150 x 80	28	28	20	14	
6 x 4	400	400	300	175	NR
150 x 100	28	28	20	12	
8 x 6	400	400	300	175	NR
200 x 150	28	28	20	12	

Unit: psi / Bar

Model G28 on Carbon Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	XS	STD	STD	Sch. 10	Sch. 7
1½	300	300	300	300	NR
40	20	20	20	20	
2	300	300	300	300	NR
50	20	20	20	20	
2½	300	300	300	300	NR
65	20	20	20	20	
3	300	300	300	300	NR
80	20	20	20	20	
4	300	300	300	300	NR
100	20	20	20	20	
5	300	300	300	300	NR
125	20	20	20	20	
6	300	300	300	300	NR
150	20	20	20	20	
8	300	300	300	250	NR
200	20	20	20	17	
10	300	300	300	250	NR
250	20	20	20	17	

Unit: psi / Bar

Model G28 on Stainless Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	Sch. 80S	Sch. 40S	Sch. 40S	Sch. 10S	Sch. 5S
1½	300	300	300	300	NR
40	20	20	20	20	
2	300	300	300	300	NR
50	20	20	20	20	
2½	300	300	300	300	NR
65	20	20	20	20	
3	300	300	300	300	NR
80	20	20	20	20	
4	300	300	300	175	NR
100	20	20	20	12	
5	300	300	250	150	NR
125	20	20	17	10	
6	300	300	250	150	NR
150	20	20	17	10	
8	300	300	200	NR	NR
200	20	20	14		
10	300	300	200	NR	NR
250	20	20	14		

Unit: psi / Bar

Model C-7 on Carbon Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	XS	STD	STD	Sch. 10	Sch. 7
1½ x *	500	500	500	350	300
40 x *	35	35	35	24	20
2 x *	500	500	500	350	300
50 x *	35	35	35	24	20
2½ x *	500	500	500	350	300
65 x *	35	35	35	24	20
3 x *	500	500	500	350	300
80 x *	35	35	35	24	20
4 x *	500	500	500	350	300
100 x *	35	35	35	24	20
6 x *	400	400	400	350	300
150 x *	28	28	28	24	20

* = all branch sizes, threaded and grooved

Unit: psi / Bar

Model C-7 on Stainless Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	Sch. 80S	Sch. 40S	Sch. 40S	Sch. 10S	Sch. 5S
1½ x *	500	500	350	300	250
40 x *	35	35	24	20	17
2 x *	500	500	350	300	250
50 x *	35	35	24	20	17
2½ x *	500	500	350	300	250
65 x *	35	35	24	20	17
3 x *	500	500	350	300	250
80 x *	35	35	24	20	17
4 x *	500	500	350	300	250
100 x *	35	35	24	20	17
6 x *	400	400	300	300	250
150 x *	28	28	20	20	17

* = all branch sizes, threaded and grooved

Unit: psi / Bar

Model 7041 on Carbon Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	XS	STD	STD	Sch. 10	Sch. 5
in / mm					
2	300	300	300	250	250
50	20	20	20	17	17
2½	300	300	300	250	250
65	20	20	20	17	17
3	300	300	300	250	250
80	20	20	20	17	17
4	300	300	300	250	250
100	20	20	20	17	17
5	300	300	300	250	200
125	20	20	20	17	14
6	300	300	300	250	200
150	20	20	20	17	14
8	300	300	300	200	NR
200	20	20	20	14	
10	300	300	300	200	NR
250	20	20	20	14	
12	300	300	300	200	NR
300	20	20	20	14	
14	300	300	300	200	NR
350	20	20	20	14	
16	300	300	300	175	NR
400	20	20	20	12	
18	300	300	300	175	NR
450	20	20	20	12	
20	300	300	300	150	NR
500	20	20	20	10	
24	300	300	300	150	NR
600	20	20	20	10	

Hydrostatic shell test: 450 psi (30 Bar) per ANSI B16.5

Unit: psi / Bar

Model 7041 on Stainless Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	Sch. 80S	Sch. 40S	Sch. 40S	Sch. 10S	Sch. 5S
in / mm					
2	300	300	275	275	250
50	20	20	19	19	17
2½	300	300	275	275	250
65	20	20	19	19	17
3	300	300	275	275	250
80	20	20	19	19	17
4	300	300	275	275	250
100	20	20	19	19	17
5	300	300	275	200	200
125	20	20	19	14	14
6	300	300	250	200	200
150	20	20	17	14	14
8	300	300	200	75	NR
200	20	20	14	5	
10	300	300	200	75	NR
250	20	20	14	5	
12	300	300	200	50	NR
300	20	20	14	3	
14	250	250	125	NR	NR
350	17	17	9		
16	250	250	125	NR	NR
400	17	17	9		
18	250	250	125	NR	NR
450	17	17	9		
20	250	250	100	NR	NR
500	17	17	7		
24	250	250	100	NR	NR
600	17	17	7		

Unit: psi / Bar

Model 7043 on Carbon Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	XS	STD	STD	Sch. 10	Sch. 7
in / mm					
2	750	750	750	500	NR
50	52	52	52	35	
2½	750	750	750	500	NR
65	52	52	52	35	
3	750	750	750	500	NR
80	52	52	52	35	
4	750	750	750	500	NR
100	52	52	52	35	
5	750	750	750	450	NR
125	52	52	52	31	
6	750	750	750	450	NR
150	52	52	52	31	
8	750	750	750	300	NR
200	52	52	52	20	
10	750	750	750	300	NR
250	52	52	52	20	
12	750	750	750	250	NR
300	52	52	52	17	

Hydrostatic shell test: 1125 psi (77 Bar) per ANSI B16.5

Unit: psi / Bar

Model 7043 on Stainless Steel Pipe					
Nom. Size	Cut-Grooved		Roll-Grooved		
	Sch. 80S	Sch. 40S	Sch. 40S	Sch. 10S	Sch. 5S
in / mm					
2	400	400	400	NR	NR
50	28	28	28		
2½	400	400	400	NR	NR
65	28	28	28		
3	400	400	400	NR	NR
80	28	28	28		
4	300	300	300	NR	NR
100	20	20	20		
5	300	300	250	NR	NR
125	20	20	17		
6	300	300	200	NR	NR
150	20	20	14		
8	250	250	150	NR	NR
200	17	17	10		
10	250	250	150	NR	NR
250	17	17	10		
12	250	250	150	NR	NR
300	17	17	10		

Unit: psi / Bar

Model 7707N on Carbon Steel Pipe			
Nom. Size	Cut-Grooved	Roll-Grooved	
in / mm	XS (0.500")	STD (0.375")	LW (0.312")
14	300	300	250
350	20	20	17
16	300	300	250
400	20	20	17
18	300	300	250
450	20	20	17
20	300	300	250
500	20	20	17
22	300	300	250
550	20	20	17
24	300	300	250
600	20	20	17

Unit: psi / Bar

Model Z07N on Carbon Steel Pipe			
Nom. Size	Cut-Grooved	Roll-Grooved	
in / mm	XS (0.500")	STD (0.375")	LW (0.312")
14	NR	250	200
350		17	14
16	NR	250	200
400		17	14
18	NR	250	200
450		17	14
20	NR	250	200
500		17	14
24	NR	250	200
600		17	14

Unit: psi / Bar

Model 7707L on Carbon Steel Pipe			
Nom. Size	Cut-Grooved	Roll-Grooved	
in / mm	XS (0.500")	STD (0.375")	LW (0.312")
28	250	175	125
700	17	12	9
30	250	175	125
750	17	12	9
32	250	175	125
800	17	12	9
34	250	175	125
850	17	12	9
36	250	175	125
900	17	12	9
40	250	175	125
1000	17	12	9
42	250	175	125
1050	17	12	9

Stated pressure ratings have been developed with a safety factor. Please see Shurjoint's 2017 online installation instructions for most recently updated instructions. Proper installation is important to proper performance.