Coupling Working Pressure Rating
on Light Wall Roll Grooved Steel Pipe

Gruvlok Coupling Working Pressure Rating (PSI) On Light Wall Roll Grooved Steel Pipe

Nominal Size	O.D.	Nom. Wall Thickness	Pipe Schedule	Maximum Working Pressure (PSI*)											
				Fig. 7000	Fig. 7001	Fig. 7003	Fig. 7004	Fig. 7005	Fig. 7010*	Fig. 7012	Fig. 7013	Fig. 7400	Fig. 7 401	Fig. 74/7402	Fig. 70
In./DN (mm)	In./mm	In.	Number	Lightweight	Standard	Hingelok®	High Pressure	Roughneck®	Reducing	Flange	Flange	Rigidlite®	Rigidlok®	SlideLOK®	SlideFLEX™
1 25	1.315 33.4	0.065 0.085 0.109	5 XL 10	300 300 600	500 300 750	– – –	– – –	– – –	– – –	– – –	– – –	175 300 300	– – –	– – –	– – –
1¼ 32	1.660 42.2	0.065 0.085 0.109	5 XL 10	300 300 600	500 300 750	– – –	– – –	– – –	– – –	– – –	– – –	175 300 300	– – –	– – –	– – –
1½ 40	1.900 48.3	0.065 0.090 0.109	5 XL 10	300 300 600	500 300 750	200 250 300	– – –	– – –	– – –	– – –	– – –	175 300 300	500 300 750	– – –	– – –
2 50	2.375 60.3	0.065 0.090 0.109	5 XL 10	300 300 600	500 300 750	200 250 300	500 300 800	– – 500	250 300 350	200 300 300	500 300 720	175 300 300	500 300 750	– – 600	– – 750
2½ 65	2.875 73.0	0.083 0.130 0.120	5 XL 10	300 300 600	500 300 750	200 250 300	500 300 800	– – 500	250 300 350	200 300 300	500 300 720	175 300 300	500 300 750	– – 600	– – 750
3 80	3.500 88.9	0.083 0.130 0.120	5 XL 10	300 300 600	500 300 750	200 250 300	500 300 800	– – 500	250 300 350	200 300 300	500 300 720	175 300 300	500 300 750	– – 600	– – 750
3½ 90	4.000 101.6	0.083 0.120	5 10	300 600	500 750	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –
4 100	4.500 114.3	0.083 0.120	5 10	300 600	500 750	200 300	400 600	– 400	200 300	200 300	500 720	175 300	500 750	– 500	– 750
5 125	5.563 141.3	0.109 0.134	5 10	250 500	400 500	200 250	400 600	– 400	200 300	200 300	400 500	175 300	400 500	– 500	– –
6 150	6.625 168.3	0.109 0.134 0.188	5 10 –	250 400 400	350 500 500	150 200 200	400 500 700	– 300 –	200 300 350	200 300 300	350 500 500	175 300 300	350 500 500	– 500 –	– 500 –
8 200	8.625 219.1	0.109 0.148 0.188 0.250	5 10 – 20	250 350 350 350	300 400 400 500	150 200 200 250	300 400 500 600	– 300 – –	150 250 300 300	200 300 300 300	300 400 400 500	175 175 300 300	300 400 400 500	– 300 – –	– 400 – –
10 250	10.750 273.1	0.134 0.165 0.188 0.250	5 10 – 20	– – – –	250 350 350 400	– – – –	300 400 400 500	– – – –	– – – –	200 200 300 300	250 350 350 400	– – – –	250 350 350 400	– – – –	– – – –
12 300	12.750 323.9	0.156 0.180 0.188 0.250	5 10 – 20	– – – –	200 350 350 400	– – – –	200 300 300 400	– – – –	– – – –	200 200 300 300	200 350 350 400	– – – –	200 350 350 400	– – – –	– – – –
14 350	14.000 355.6	0.156 0.250 0.312	5 10 20	– – –	125 250 275	– – –	– – –	– – –	– – –	125 250 250	– – –	– – –	125 250 275	– – –	– – –
16 400	16.000 406.4	0.165 0.250 0.312	5 10 20	– – –	125 175 275	– – –	– – –	– – –	– – –	100 175 250	– – –	– – –	100 175 275	– – –	– – –
18 450	18.000 457.2	0.250 0.312	10 20	– –	100 175	– –	– –	– –	– –	100 175	– –	– –	100 175	– –	– –
20 500	20.000 508.0	0.250 0.375	10 20	– –	100 300	– –	– –	– –	– –	100 250	– –	– –	100 250	– –	– –
24 600	24.000 609.6	0.250 0.375	10 20	– –	75 300	– –	– –	– –	– –	75 250	– –	– –	75 250	– –	– –

Maximum line pressure, including surge, to which a joint should be subjected on pipe roll grooved to standard roll grooving specification with coupling properly assembled.
For coupling performance on standard wall steel pipe, refer to individual Gruvlok Coupling performance listing.
* Rating based on larger pipe size.

Coupling Working Pressure Rating

on Roll Grooved ISO Size Steel Pipe

Gruvlok Coupling Working Pressure Rating (Bar) On Roll Grooved ISO Size Steel Pipe

Nominal Size	O.D.	Nom. Wall Thickness	Maximum Working Pressure (bar)									
			Fig. 7000	Fig. 7001	Fig. 7003	Fig. 7004	Fig. 7010*	Fig. 7012	Fig. 7013	Fig. 7400	Fig. 7401	Fig. 74/7402
In./DN(mm)	In./mm	mm	Lightweight	Standard	Hingelok®	High Pressure	Reducing	Flange	Flange	Rigidlite®	Rigidlok®	SlideLOK®
1 25	1.315 33.4	1.8 2.9 3.2	20.7 41.4 41.4	34.5 51.7 69.0	– – –	– – –	– – –	– – –	– – –	12.1 20.7 20.7	– – –	– – –
1¼ 32	1.660 42.2	1.8 2.9 3.6	20.7 41.4 41.4	34.5 51.7 69.0	– – –	– – –	– – –	– – –	– – –	12.1 20.7 20.7	– – –	– – –
1½ 40	1.900 48.3	1.8 2.9 3.6	20.7 41.4 41.4	34.5 51.7 69.0	13.8 17.2 20.7	– – –	– – –	– – –	– – –	12.1 20.7 20.7	34.5 51.7 51.7	– – –
2 50	2.375 60.3	1.8 2.9 3.6	20.7 41.4 41.4	34.5 51.7 69.0	13.8 17.2 20.7	34.5 55.2 82.3	17.2 24.1 24.1	13.8 20.7 20.7	34.5 51.7 69.0	12.1 20.7 20.7	34.5 51.7 51.7	– 41.1 51.7
2½ 65	2.875 73.0	2.0 3.2 5.0	20.7 41.4 41.4	34.5 51.7 69.0	13.8 17.2 20.7	34.5 55.2 82.3	17.2 24.1 24.1	13.8 20.7 20.7	34.5 51.7 69.0	12.1 20.7 20.7	34.5 51.7 51.7	– 41.1 51.7
3 O.D. 76.1	2.996 76.1	2.0 3.2 5.0	20.7 41.4 41.4	34.5 51.7 69.0	– – –	– – –	– – –	13.8 20.7 20.7	– – –	12.1 20.7 20.7	34.5 51.7 51.7	– – –
3 80	3.500 88.9	2.0 3.2 5.6	20.7 41.4 41.4	34.5 51.7 69.0	13.8 17.2 20.7	34.5 55.2 82.3	17.2 24.1 24.1	13.8 20.7 20.7	34.5 51.7 69.0	12.1 20.7 20.7	34.5 51.7 51.7	– 41.1 51.7
3½ 90	4.000 101.6	2.0 3.2 5.6	20.7 41.4 41.4	34.5 51.7 69.0	– – –	– – –	– – –	– – –	– – –	– – –	– – –	– – –
4 100	4.500 114.3	2.0 3.2 5.6	20.7 41.4 41.4	34.5 51.7 69.0	13.8 17.2 20.7	27.6 41.4 82.3	13.8 20.7 24.1	13.8 20.7 20.7	34.5 51.7 69.0	12.1 20.7 20.7	34.5 51.7 51.7	– 34.5 51.7
4¼ O.D. 108.0	4.250 108.0	2.0 3.2 5.6	20.7 41.4 41.4	– – –	– – –	– – –	– – –	– – –	– – –	– – –	– – –	– – –
5 125	5.563 141.3	2.9 3.6 6.3	17.2 34.5 34.5	27.6 34.5 69.0	10.3 13.8 20.7	27.6 41.4 82.3	13.8 20.7 24.1	13.8 20.7 20.7	27.6 34.5 69.0	12.1 20.7 20.7	27.6 34.5 51.7	– 34.5 51.7
5¼ O.D. 133.0	5.236 133.0	2.9 3.6 6.3	17.2 34.5 34.5	– – –	– – –	– – –	– – –	– – –	– – –	– – –	– – –	– – –
5½ O.D. 139.7	5.500 139.7	2.9 3.6 6.3	17.2 34.5 34.5	– – –	– – –	– – –	– – –	13.8 20.7 20.7	– – –	12.1 20.7 20.7	– – –	– – –
6 150	6.625 168.3	2.9 3.6 7.1	17.2 27.6 27.6	24.1 34.5 69.0	10.3 13.8 20.7	27.6 34.5 82.3	13.8 20.7 24.1	13.8 20.7 20.7	24.1 34.5 69	12.1 20.7 20.7	24.1 34.5 51.7	– 34.5 48.3
6¼ O.D. 159.0	6.259 159.0	2.9 3.6 7.1	17.2 27.6 27.6	– – –	– – –	– – –	– – –	– – –	– – –	– – –	– – –	– – –
6½ O.D. 165.1	6.500 165.1	2.9 3.6 7.1	17.2 27.6 27.6	24.1 34.5 69.0	– – –	– – –	– – –	13.8 20.7 20.7	– – –	12.1 20.7 20.7	24.1 34.5 51.7	– – –
8 200	8.625 219.1	2.9 5.0 8.0	17.2 24.1 24.1	20.7 34.5 55.2	10.3 13.8 20.7	20.7 35.4 69	10.3 24.1 24.1	13.8 20.7 20.7	20.7 34.5 55.2	12.1 20.7 20.7	20.7 34.5 51.7	– 20.7 41.4
10 250	10.750 273.1	3.6 5.0 8.0	– – –	17.2 24.1 55.2	– – –	20.7 27.6 55.2	– – –	13.8 20.7 20.7	17.2 24.1 55.2	– – –	17.2 24.1 51.7	– – –
12 300	12.750 323.9	4.0 5.0 8.0	– – –	17.2 24.1 55.2	– – –	13.8 20.7 55.2	– – –	13.8 20.7 20.7	17.2 24.1 55.2	– – –	17.2 24.1 51.7	– – –
14 350	14.000 355.6	4.0 6.3 8.8	– – –	8.6 17.2 20.7	– – –	– – –	– – –	8.6 17.2 20.7	– – –	– – –	8.6 17.2 20.7	– – –
16 400	16.000 406.4	4.0 6.3 8.8	– – –	6.9 12.1 20.7	– – –	– – –	– – –	6.9 12.1 20.7	– – –	– – –	6.9 12.1 20.7	– – –
18 450	18.000 457.2	5.0 6.3 8.8	– – –	5.2 6.9 17.2	– – –	– – –	– – –	5.2 6.9 17.2	– – –	– – –	5.2 6.9 17.2	– – –
20 500	20.000 508.0	5.0 6.3 8.8	– – –	3.4 6.9 17.2	– – –	– – –	– – –	3.4 6.9 17.2	– – –	– – –	3.4 6.9 17.2	– – –
24 600	24.000 609.6	5.0 6.3 8.8	– – –	1.7 5.2 17.2	– – –	– – –	– – –	1.7 5.2 17.2	– – –	– – –	1.7 5.2 17.2	– – –

Maximum line pressure, including surge, to which a joint should be subjected on pipe roll grooved to standard roll grooving specification with coupling properly assembled. For coupling performance on standard wall steel pipe, refer to individual Gruvlok Coupling performance listing.
* Rating based on larger pipe size.

Coupling & Flange Working Pressure Rating

on 304 and 316 Stainless Steel Roll Grooved Pipe

The following are pressure ratings for Gruvlok Stainless Steel Piping Systems. The ratings for Schedule 10S pipe are based upon the use of roll-groover roll sets that have been specifically designed for use on Schedule 10 Stainless Steel pipe. Using roll sets that were designed for roll grooving standard wall pipe may significantly reduce the pressure ratings that can be obtained. The Model 1007/3007 roll groovers require the use of the optional Schedule 10 roll set to groove Schedule 5S and 10S. For grooving Schedule 40S on the Model 1007/3007 roll groovers, the standard steel roll grooving set should be used.

Gruvlok Coupling & Flange Working Pressure Ratings (PSI) On 304 And 316 Stainless Steel Roll Grooved Pipe

Nominal Pipe Size	Pipe O.D.	Nominal Wall Thickness	Pipe Sch. Number	Coupling and Flanges														
				Fig. 7000 Light-weight	Fig. 7001 Standard	Fig. 7003 Hingelok®	Fig. 7004 High Pressure	Fig. 7010* Reducing	Fig. 7012 Flange	Fig. 7013 Flange	Fig. 7400 Rigidlite®	Fig. 7401 Rigidlok®	Fig. 7001SS Flexible Coupling	Fig. 7400SS Rigidlite Coupling	Fig. 7401SS Rigid Coupling	Fig. 74 SlideLOK®	Fig. 770 Coupling	Fig. 70 SlideFLEX™
In./DN(mm)	In./mm	Inches	–	PSI														
1 25	1.315 33.4	0.065 0.109 0.133	5S 10S 40	400 400 500	400 500 750	– – –	– – –	– – –	– – –	– – –	300 300 300	– – –	325 500 500	– – –	– – –	– – –	– – –	– – –
1¼ 32	1.660 42.4	0.065 0.109 0.140	5S 10S 40	400 500 500	400 500 750	– – –	– – –	– – –	– – –	– – –	300 300 300	– – –	325 500 750	275 300 300	200 300 600	– – –	– – –	– – –
1½ 40	1.900 48.3	0.065 0.109 0.145	5S 10S 40	400 500 500	400 500 750	275 300 300	– – –	– – –	– – –	– – –	300 300 300	400 500 750	325 500 750	275 300 300	200 300 600	– – –	– – –	– – –
2 50	2.375 60.3	0.065 0.109 0.154	5S 10S 40	250 500 500	325 500 750	250 300 300	325 500 750	250 500 500	250 300 300	275 300 300	250 300 300	325 500 750	225 350 500	275 300 300	200 300 600	– 500 750	– 500 750	– 500 750
2½ 65	2.875 73.0	0.083 0.120 0.203	5S 10S 40	250 500 500	325 500 750	250 300 300	325 500 750	250 500 500	250 300 300	275 300 300	250 300 300	325 500 750	225 350 500	200 300 300	200 300 600	– 500 750	– 500 750	– 500 750
3 80	3.500 88.9	0.083 0.120 0.216	5S 10S 40	250 500 500	325 500 750	250 300 300	325 500 750	250 500 500	250 300 300	275 300 300	250 300 300	325 500 750	225 350 500	200 300 300	200 300 600	– 400 500	– 500 750	– 500 750
4 100	4.500 114.3	0.083 0.120 0.237	5S 10S 40	200 300 500	250 400 750	200 300 300	250 400 750	200 300 500	200 300 300	250 300 300	200 300 300	250 400 750	200 300 325	200 300 300	200 300 600	– 350 400	– 500 750	– 250 325
5 125	5.563 141.3	0.109 0.134 0.258	5S 10S 40	125 200 300	200 300 500	125 200 300	200 300 500	125 200 300	125 200 300	200 300 300	125 200 300	200 300 500	125 200 200	– – –	200 300 600	– 300 400	– – –	– – –
6 150	6.625 168.3	0.109 0.134 0.280	5S 10S 40	75 200 300	125 200 500	75 200 300	125 200 500	75 200 300	75 200 300	125 200 300	75 200 300	125 200 500	125 200 200	125 250 275	200 300 600	– 300 400	– 350 750	– 200 200
8 200	8.625 219.1	0.109 0.148 0.322	5S 10S 40	50 150 300	75 200 400	50 150 300	75 200 400	50 150 300	50 150 300	75 200 300	50 150 300	75 200 400	50 75 200	75 150 275	200 300 600	– 300 400	– 350 650	– 150 200
10 250	10.750 273.0	0.134 0.165 0.365	5S 10S 40	– – –	50 100 400	– – –	50 100 400	– – –	50 100 300	50 100 300	– – –	50 150 400	– – –	– – –	N/R 300 600	– – –	– – –	– – –
12 300	12.750 323.9	0.156 0.180 0.375	5S 10S 40	– – –	75 125 400	– – –	75 125 400	– – –	50 100 300	75 125 300	– – –	75 150 400	– – –	– – –	N/R 150 300	– – –	– – –	– – –

Notes:

1) Pressure ratings based on ASTM A312 Type 304 stainless steel pipe or equivalent.

2) Failure to use Rollers specifically designed for Stainless Steel Pipe may significantly reduce pressure retention capabilities.

3) Pressure ratings on cut grooved pipe meet or exceed the schedule 40 pressure ratings listed above. For information regarding higher ratings contact Anvil.

4) *For pressure ratings on Figure 7010 Reducing Couplings use larger pipe size.

5) For pressure ratings for the reducing tees, concentric reducers and eccentric reducers, use the rating of the weakest end.

6) Pressure ratings on schedule 10 stainless steel pipe may be decreased by not using ASC's 1007/3007 roll groovers with the schedule 10 roller set. Contact ASC for details.

For pressure tests exceeding the published load, please contact an ASC Representative.

Coupling & Flange Working Pressure Rating
on Aluminum Pipe

Gruvlok Coupling & Flange Working Pressure Ratings (PSI) On Aluminum Pipe

Nominal Pipe Size	Pipe O.D.	Wall Thickness	Schedule	R/C	Coupling and Flanges						
					Fig. 7401 Rigidlok®	Fig. 7001 Standard	Fig. 7400 Rigidlite®	Fig. 7000 Light Weight	Fig. 7012 Flange	Fig. 74 SlideLOK®	Fig. 70 Slideflex™
In./DN(mm)	In./mm	Inches	–	–				PSI			
1 25	1.315 33.4	0.179 0.133 0.109 0.065	80 40 10 5	C R/C R R	– – – –	1000 800 600 500	500 500 500 500	500 500 500 500	– – – –	– – – –	– – – –
1¼ 32	1.660 42.4	0.191 0.140 0.109 0.065	80 40 10 5	C R/C R R	– – – –	1000 800 600 500	500 500 500 500	500 500 500 500	– – – –	– – – –	– – – –
1½ 40	1.900 48.3	0.200 0.145 0.109 0.065	80 40 10 5	C R/C R R	750 750 600 500	1000 800 600 500	500 500 500 500	500 500 500 500	– – – –	– – – –	– – – –
2 50	2.375 60.3	0.218 0.154 0.109 0.065	80 40 10 5	C R/C R R	750 750 600 500	1000 800 600 500	500 500 500 500	500 500 500 500	– 250 250 150	– – 600 –	– – 600 –
2½ 65	2.875 73.0	0.276 0.203 0.120 0.083	80 40 10 5	C R/C R R	750 750 600 500	1000 800 600 500	500 500 500 500	500 500 500 500	250 250 150 250	– – – –	– – – –
3 80	3.500 88.9	0.300 0.216 0.120 0.083	80 40 10 5	C R/C R R	750 750 500 400	1000 800 600 400	500 500 500 500	500 500 500 500	250 150 150 250	– – 500 –	– – 600 –
4 100	4.500 114.3	0.337 0.237 0.121 0.083	80 40 10 5	C R/C R R	750 600 350 250	800 600 350 250	500 500 350 250	500 500 350 250	250 150 250 250	– 600 – –	– 600 – –
5 125	5.563 141.3	0.375 0.258 0.134 0.109	80 40 10 5	C R/C R R	750 600 350 250	800 600 300 250	450 450 300 250	450 450 300 250	150 150 250 250	– – – –	– – – –
6 150	6.625 168.3	0.432 0.280 0.134 0.109	80 40 10 5	C R/C R R	600 600 200 200	600 600 200 200	450 450 200 200	450 450 200 200	150 250 250 150	– 400 – –	– 500 – –
8 200	8.625 219.1	0.500 0.322 0.148 0.109	80 40 10 5	C R/C R R	400 300 – –	400 300 – –	300 150 100 100	300 150 100 100	150 250 250 100	– 500 – –	– 400 – –
10 250	10.750 273.0	0.594 0.365	80 40	C R/C	300 200	300 200	– –	– –	250 250	– –	– –
12 300	12.750 323.9	0.688 0.406	80 40	C R/C	300 200	300 200	– –	– –	250 250	– –	– –

Notes:

Field roll grooving is recommended for 6061-T4/6063-T4, 6063 T-5 aluminum pipe. Field cut grooving is recommended for 6061-T6/6063-T6 aluminum pipe. Field roll grooving may result in stress cracking. ASC recommends reviewing roll/cut groove recommendations with the aluminum pipe manufacturer's as mechanical properties may vary from pipe to pipe.

Coupling Working Pressure Rating
on CPVC Pipe

Gruvlok Coupling Working Pressure Ratings (PSI) On CPVC Pipe

Nominal Pipe Size	Pipe O.D.	Wall Thickness	Schedule	R (Roll)/C (Cut) Groove	Coupling
					Fig. 7001 Standard
In./DN(mm)	In./mm	Inches	–	–	PSI
2 50	2.375 60.3	0.218	80	C	400
2½ 65	2.875 73.0	0.276	80	C	420
3 80	3.500 88.9	0.300	80	C	370
4 100	4.500 114.3	0.337	80	C	320
6 150	6.625 168.3	0.432	80	C	280
8 200	8.625 219.1	0.500	80	C	250

Temperature Derating Factors on CPVC Pipe

Working Temperature		Pipe De-rating Factor(multiply by pressure rating from chart above)	
°F	°C	Cell Class: CPVC 4120-05	Cell Class: CPVC 4120-06
73-80	23.0-26.7	1.00	1.00
90	32.2	0.91	0.91
100	37.8	0.82	0.83
120	48.9	0.65	0.70
140	60.0	0.50	0.57
160	71.1	0.40	0.44
180	82.2	0.25	0.41

Notes:

1. Cut groove per ASC's CPVC Cut Groove Specification.
2. ASC Recommended Groover: Rex Wheeler 6950 Plastic Cut Groover
3. Pressure ratings based upon Corzan Schedule 80 CPVC Pipe produced to ASTM F441 standards
4. Gruvlok Standard Lubricant is FBC Compatible
5. FBC compliant lubricants are required for use with CPVC Pipe.
6. CPVC pipe manufactured per ASTM F441. Minimum cell class "23447" per ASTM D1784.