

PRESSURE RATINGS & TORQUE VALUES

BSP pressure ratings & torque values

Thread size Type G Class A	Dashsize	ISO 8434-6 + NCB 174								Swepts Not applicable to push in adaptors		
		Working Pressure with O'ring			Working Pressure without O'ring			Tightening Torque		Mpa	bar	psi
		Mpa	bar	psi	Mpa	bar	psi	With O'ring Nm	Without O'ring Nm			
1/8"	-02	N/A	N/A	N/A	35	350	5075	-	10	30	300	4350
1/4"	-04	40	400	5800	35	350	5075	20	20	30	300	4350
3/8"	-06	40	400	5800	35	350	5075	35	35	30	300	4350
1/2"	-08	35	350	5075	31.5	315	4568	50	60	26	260	3770
5/8"	-10	35	350	5075	31.5	315	4568	60	70	21	210	3045
3/4"	-12	31.5	315	4568	25	250	3625	85	115	21.5	215	3120
1"	-16	25	250	3625	20	200	2900	115	140	21.5	215	3120
1 1/4"	-20	20	200	2900	16	160	2175	190	210	19	190	2755
1 1/2"	-24	16	160	2320	12.5	125	1812	240	290	17.5	175	2540
2"	-32	12.5	125	1812	8	80	1160	300	400	13	130	1885

Thread size Type G Class A	Dashsize	ISO 1179-3 BSP Positional connections										
		Working Pressure			Test Pressure						Assembly Torque for Testing (Nm)	Nut torque required to move washer (Nm)
		Mpa	bar	psi	Burst			Impulse - Cyclical endurance				
Mpa	bar				psi	Mpa	bar	psi	Mpa	bar	psi	
1/8"	-02	20	200	2900	80	800	11600	26.6	266	3860	25	3
1/4"	-04	20	200	2900	80	800	11600	26.6	266	3860	50	5
3/8"	-06	20	200	2900	80	800	11600	26.6	266	3860	80	7
1/2"	-08	20	200	2900	80	800	11600	26.6	266	3860	105	12
3/4"	-12	20	200	2900	80	800	11600	26.6	266	3860	220	15
1"	-16	20	200	2900	80	800	11600	26.6	266	3860	370	20
1 1/4"	-20	16	160	2320	64	640	9280	21.3	213	3090	500	25
1 1/2"	-24	16	160	2320	64	640	9280	21.3	213	3090	600	30

NPTF pressure ratings & torque values

Dashsize	Thread Size	Working Pressure			Tightening	
		Mpa	bar	psi	Nm	Turns past finger tight
-02	1/8	34.5	345	5000	40	1.5 > 3.0
-04	1/4	27.5	275	4000	45	1.5 > 3.0
-06	3/8	21	210	3000	60	1.5 > 3.0
-08	1/2	21	210	3000	70	1.5 > 3.0
-12	3/4	17.5	175	2500	75	1.5 > 3.0
-16	1	14	140	2000	90	1.0 > 2.5
-20	1-1/4	8	80	1150	110	1.0 > 2.5
-24	1-1/2	7	70	1000	130	1.0 > 2.5
-32	2	7	70	1000	160	1.0 > 2.5

PRESSURE RATINGS & TORQUE VALUES

JIC pressure ratings & torque values

Dashsize	Nom Tube OD Size mm	Nom Tube OD Size in	Straight Thread Size	Nom Pipe Size	Working Pressure						Tightening Torque Nm
					Male			Female			
					Mpa	bar	psi	Mpa	bar	psi	
-02	3.18	0.125	5/16 -24	1/8	34.5	345	5000	34.5	345	5000	10
-03	4.76	0.188	3/8 -24	1/8	34.5	345	5000	34.5	345	5000	10
-04	6.35	0.250	7/16 -20	1/8	34.5	345	5000	31	310	4500	14
-05	7.94	0.313	1/2 -20	1/8	34.5	345	5000	27.5	275	4000	20
-06	9.52	0.375	9/16 -18	1/4	34.5	345	5000	27.5	275	4000	22
-08	12.70	0.500	3/4 -16	3/8	31	310	4500	27.5	275	4000	48
-10	15.88	0.625	7/8 -14	1/2	24	240	3500	24	240	3000	81
-12	19.05	0.750	1-1/16 -12	3/4	24	240	3500	24	240	3000	108
-14	22.22	0.875	1-3/16 -12	3/4	21	210	3000	17	170	2500	136
-16	25.40	1.000	1-5/16 -12	1	21	210	3000	17	170	2500	148
-20	31.75	1.250	1-5/8 -12	1-1/4	17	170	2500	14	140	2000	173
-24	38.10	1.500	1-7/8 -12	1-1/2	14	140	2000	10.5	105	1500	216
-32	50.80	2.000	2-1/2 -12	2	10	100	1500	8	80	1125	334

This table also covers UNF O-Ring Plugs and Flareless tube Fittings as covered by SAE J514.

METRIC pressure ratings & torque values

Thread	Dashsize	Working Pressure			Tightening Torque
		Mpa	bar	psi	Nm
M10	-10	35	350	5075	10
M12	-12	35	350	5075	20
M14	-14	35	350	5075	20
M16	-16	35	350	5075	35
M18	-18	31.5	315	4568	60
M26	-26	25	250	3625	115
M30	-30	20	200	2900	140
M36	-36	20	200	2900	140
M42	-42	16	160	2175	210
M52	-52	10	100	1450	265

PRESSURE RATINGS & TORQUE VALUES

COMPRESSION - EN ISO 8434-1 pressure ratings & torque values

Series	Tube OD mm	Thread	Working Pressure		
			Mpa	bar	psi
L	6	M12 x 1.5	25	250	3625
L	8	M14 x 1.5	25	250	3625
L	10	M16 x 1.5	25	250	3625
L	12	M18 x 1.5	25	250	3625
L	15	M22 x 1.5	25	250	3625
L	18	M26 x 1.5	16	160	2320
L	22	M30 x 2	16	160	2320
L	28	M36 x 2	10	100	1450
L	35	M45 x 2	10	100	1450
L	42	M52 x 2	10	100	1450
S	6	M14 x 1.5	63	630	9135
S	8	M16 x 1.5	63	630	9135
S	10	M18 x 1.5	63	630	9135
S	12	M20 x 2	63	630	9135
S	16	M24 x 2	40	400	5800
S	20	M30 x 2	40	400	5800
S	25	M36 x 2	40	400	5800
S	30	M42 x 2	25	250	3625
S	38	M52 x 2	25	250	3625

CAPTIVE SEAL - BS ISO 1179-2 pressure ratings & torque values

Thread size Type G Class A	Dashsize	Working Pressure			Tightening Torque
		Mpa	bar	psi	Nm
1/8"	-02	-	-	-	-
1/4"	-04	63	630	9150	60
3/8"	-06	63	630	9150	90
1/2"	-08	40	400	5800	130
5/8"	-10	-	-	-	-
3/4"	-12	40	400	5800	200
1"	-16	40	400	5800	380
1 1/4"	-20	25	250	3625	500
1 1/2"	-24	25	250	3625	600
2"	-32	25	250	3625	650

JIS B 8363 pressure ratings & torque values

Symbol Designation	Straight Thread Size	Working Pressure			Tightening Torque
		Mpa	bar	psi	Nm
5	1/4	34.5	345	5000	25
6	1/4	34.5	345	5000	25
8	3/8	34.5	345	5000	49
9	3/8	34.5	345	5000	49
12	1/2	34.5	345	5000	59
15	3/4	27.5	275	3990	118
19	3/4	27.5	275	3990	118
25	1	20.5	205	2970	137
32	1-1/4	17	170	2465	167
38	1-1/2	10.5	105	1520	206
50	2	10.5	105	1520	245

PRESSURE RATINGS & TORQUE VALUES

ORFS - SAE J1454 pressure ratings & torque values

Dashsize	Nom Tube OD Size mm	Nom Tube OD Size in	Working Pressure - Straight Fittings			Torque	Working Pressure - Adjustable Fittings			Torque
			Mpa	bar	psi	Nm	Mpa	bar	psi	Nm
-04	6.35	0.250	41.3	413	6000	14-16	41.3	413	6000	20-22
-06	9.52	0.375	41.3	413	6000	24-27	41.3	413	6000	33-35
-08	12.70	0.500	41.3	413	6000	43-47	41.3	413	6000	68-78
-10	15.88	0.625	41.3	413	6000	60-68	41.3	413	6000	98-110
-12	19.05	0.750	41.3	413	6000	90-95	41.3	413	6000	170-183
-16	25.40	1.000	41.3	413	6000	125-135	34.5	345	5000	270-300
-20	31.75	1.250	27.5	275	4000	170-190	27.5	275	4000	285-380
-24	38.10	1.500	27.5	275	4000	200-225	20.7	207	3000	370-490

SELF CENTERING BONDED SEALS nitrile - mild steel

Thread Size	B&H Part	D	d	d1	S	R	P	Pressure Rating Bar
M8	MBS-8	14.00	8.70	10.40	±0.12	0.85	0.3	748
1/8 BSP	BBS-2	15.88	10.37	11.84	±0.18	0.73	0.25/0.51	737
M10	MBS-10	16.00	10.70	12.40	±0.14	0.85	0.4	627
M12	MBS-12	19.00	12.70	14.10	±0.14	0.7	0.4	751
1/4 BSP	BBS-4	20.57	13.74	15.21	±0.18	0.73	0.25/0.51	761
M14	MBS-14	22.00	14.70	16.40	±0.14	0.85	0.4	738
M16	MBS-16	24.00	16.70	18.40	±0.14	0.85	0.4	657
3/8 BSP	BBS-6	23.80	17.28	18.75	±0.18	0.73	0.25/0.51	582
M18	MBS-18	26.00	18.70	20.40	±0.14	0.85	0.4	593
M20	MBS-20	28.00	20.70	22.50	±0.14	0.9	0.4	528
1/2 BSP	BBS-8	28.58	21.54	23.01	+0.35/-0.18	0.73	0.25/0.51	523
M22	MBS-22	30.00	22.70	24.40	±0.18	0.85	0.4	496
5/8 BSP	BBS-10	31.75	23.49	24.97	+0.35/-0.18	0.74	0.25/0.51	586
M24	MBS-24	32.00	24.70	26.40	±0.18	0.85	0.4	458
3/4 BSP	BBS-12	34.93	27.05	28.53	+0.35/-0.18	0.74	0.25/0.51	485
7/8 BSP	N/A	38.10	30.81	32.29	+0.35/-0.18	0.74	0.25/0.51	389
1 BSP	BBS-16	42.80	33.89	36.88	+0.20/-0.40	1.5	0.25/0.51	347
1 1/4 BSP	BBS-20	52.38	42.93	45.93	+0.20/-0.40	1.5	0.25/0.51	303
1 1/2 BSP	BBS-24	58.60	48.44	51.39	+0.20/-0.40	1.47	0.25/0.51	303
1 3/4 BSP	BBS-28	69.85	54.89	58.30	+0.20/-0.40	1.7	0.25/0.51	428
2 BSP	BBS-32	73.03	60.58	63.63	+0.20/-0.40	1.52	0.25/0.51	319
2 1/2 BSP	BBS-40	90.30	76.08	79.38	+0.20/-0.40	1.65	0.25/0.51	325

Pressure ratings are given for reference only. Relevant adaptor ratings should be used when determining working pressures.

