

## WORKING PRESSURES - Adaptors, Hose Couplings and Hose Assemblies.

Since many factors influence the pressure at which a hydraulic system will, or will not, perform satisfactorily, maximum working pressures listed below should be used as a guide only and not as a "standard" nor "specification", nor construed as a "guaranteed minimum." Within the fluid power industry, many criteria are used for the determination of pressure capability. Various fibre stresses, minimum yields and design factors are applied, commensurate with total system conditions. Thus, it is impractical to lay down specific allowable working pressures that satisfy all design criteria. Unless otherwise specified in this document, and given correct working conditions, including, but not limited to, torque setting, assembly, alignment, support, pressures (internal and external), temperature limits, environmental, installation, vibration free, damage free, chemical, cleanliness and regular maintenance and inspection, the following may be used as a guide to maximum working pressure. For further technical assistance contact RYCO Hydraulics Technical Department or your RYCO Hydraulics distributor.

**The Maximum Working Pressure of a Hose Assembly is the lesser rated Working Pressure of the Hose or Tube or End Style (Connector termination). The Maximum Rated Working Pressure of an Adaptor with a combination of Thread / End Styles and sizes, is the Maximum Working Pressure of the least rated end.**

BSP		BSPT MALE		BSPP MALE		BSPT MALE LIVE SWIVEL		BSPT FEMALE FIXED		BSPP FEMALE SWIVEL (Crimp Nut)		BSPP FEMALE SWIVEL (Wire Nut)		BSPP MALE (O Ring & Retaining Ring)		BSPP MALE (Bonded Seal)	
THREAD SIZE	DASH SIZE	MAX. WORKING PRESSURE		MAX. WORKING PRESSURE		MAX. WORKING PRESSURE		MAX. WORKING PRESSURE		MAX. WORKING PRESSURE		MAX. WORKING PRESSURE		MAX. WORKING PRESSURE		MAX. WORKING PRESSURE	
inch		bar	psi	bar	psi	bar	psi	bar	psi	bar	psi	bar	psi	bar	psi	bar	psi
1/8	-02	830	12000	830	12000			700	10150	700	10150			420	6000	500	7250
1/4	-04	830	12000	830	12000	420	6000	700	10150	700	10150			420	6000	500	7250
3/8	-06	700	10150	700	10150	350	5100	700	10150	700	10150			420	6000	500	7250
1/2	-08	700	10150	700	10150	280	4060	600	8700	600	8700			420	6000	420	6000
5/8	-10	600	8700	600	8700	280	4060	500	7250	500	7250			280	4060	350	5100
3/4	-12	600	8700	600	8700	280	4060	420	6000	420	6000	500	7250	280	4060	350	5100
1	-16	420	6000	420	6000	215	3100	350	5100	350	5100	420	6000	215	3100	350	5100
1.1/4	-20	420	6000	420	6000			280	4060	280	4060	420	6000	215	3100	280	4060
1.1/2	-24	420	6000	420	6000			280	4060	280	4060	350	5100	180		280	4060
2	-32	350	5100	350	5100			215	3100	215	3100	215	3100	180		215	3100
2.1/2	-40	215	3100	215	3100							215	3100				

NPT		NPT MALE		NPT MALE LIVE SWIVEL		NPT FEMALE FIXED		NPSM FEMALE SWIVEL (Crimp Nut)		NPSM FEMALE SWIVEL (Wire Nut)	
THREAD SIZE	DASH SIZE	MAX. WORKING PRESSURE		MAX. WORKING PRESSURE		MAX. WORKING PRESSURE		MAX. WORKING PRESSURE		MAX. WORKING PRESSURE	
inch		bar	psi	bar	psi	bar	psi	bar	psi	bar	psi
1/8	-02	830	12000			700	10150	700	10150		
1/4	-04	830	12000	420	6000	700	10150	700	10150		
3/8	-06	700	10150	280	4060	700	10150	700	10150		
1/2	-08	700	10150	280	4060	500	7250	500	7250		
3/4	-12	600	8700	280	4060	420	6000	420	6000	500	7250
1	-16	420	6000	215	3100	350	5100	350	5100	420	6000
1.1/4	-20	420	6000			280	4060	280	4060	420	6000
1.1/2	-24	420	6000			280	4060	280	4060	280	4060
2	-32	350	5100			215	3100	215	3100	215	3100
2.1/2	-40	215	3100							215	3100

**JIC** **JIC MALE** **JIC FEMALE SWIVEL (Crimp Nut)** **JIC FEMALE SWIVEL (Wire Nut)**



TUBE SIZE	THREAD SIZE	DASH SIZE	MAX. WORKING PRESSURE		MAX. WORKING PRESSURE		MAX. WORKING PRESSURE	
inch	inch		bar	psi	bar	psi	bar	psi
3/16	3/8	-06	830	12000	700	10150		
1/4	7/16	-07	830	12000	700	10150		
5/16	1/2	-08	700	10150	700	10150		
3/8	9/16	-09	700	10150	700	10150		
1/2	3/4	-12	700	10150	600	8700		
5/8	7/8	-14	600	8700	500	7250		
3/4	1.1/16	-17	600	8700	420	6000	500	7250
7/8	1.3/16	-19	500	7250	420	6000	420	6000
1	1.5/16	-21	420	6000	350	5100	420	6000
1.1/4	1.5/8	-26	420	6000	280	4060	420	6000
1.1/2	1.7/8	-30	420	6000	280	4060	280	4060
2	2.1/2	-40	420	6000	215	3100	215	3100
2.1/2	3	-48	215	3100			215	3100

**JIS** **BSPP MALE 60° CONVEX SEAT** **BSPP FEMALE SWIVEL 60° CONCAVE SEAT**



THREAD SIZE	DASH SIZE	MAX. WORKING PRESSURE		MAX. WORKING PRESSURE	
inch		bar	psi	bar	psi
1/4	-04	830	12000	700	10150
3/8	-06	700	10150	700	10150
1/2	-08	700	10150	600	8700
5/8	-10	600	8700	500	7250
3/4	-12	600	8700	420	6000
1	-16	420	6000	350	5100

**JIS (KOMATSU)** **METRIC FEMALE SWIVEL 60° CONCAVE SEAT**



**THREAD SIZE** **DASH SIZE** **MAX. WORKING PRESSURE**

mm		bar	psi
M14 x 1,5	-14	700	10150
M18 x 1,5	-18	700	10150
M22 x 1,5	-22	600	8700
M24 x 1,5	-24	500	7250
M30 x 1,5	-30	420	6000
M33 x 1,5	-33	350	5100
M36 x 1,5	-36	280	4060
M42 x 1,5	-42	280	4060

**METRIC DKL & DKOL (LIGHT SERIES)**  
**MALE, FEMALE & FEMALE O RING**



**TUBE SIZE** **THREAD SIZE** **DASH SIZE** **MAX. WORKING PRESSURE**

mm	mm		bar	psi
6	M12 x 1,5	-12	700	10150
8	M14 x 1,5	-14	700	10150
10	M16 x 1,5	-16	700	10150
12	M18 x 1,5	-18	500	7250
15	M22 x 1,5	-22	420	6000
18	M26 x 1,5	-26	350	5100
22	M30 x 2,0	-30	280	4060
28	M36 x 2,0	-36	215	3100
35	M45 x 2,0	-45	180	2600
42	M52 x 2,0	-52	180	2600

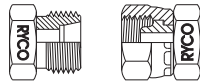
**METRIC DKS & DKOS (HEAVY SERIES)**  
**MALE, FEMALE & FEMALE O RING**



**TUBE SIZE** **THREAD SIZE** **DASH SIZE** **MAX. WORKING PRESSURE**

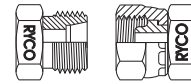
mm	mm		bar	psi
6	M14 x 1,5	-12	830	12000
8	M16 x 1,5	-14	700	10150
10	M18 x 1,5	-16	700	10150
12	M20 x 1,5	-20	700	10150
14	M22 x 1,5	-22	700	10150
16	M24 x 2,0	-24	600	8700
20	M30 x 2,0	-30	500	7250
25	M36 x 2,0	-36	420	6000
30	M42 x 2,0	-45	420	6000
38	M52 x 2,0	-52	420	6000

## METRIC FRENCH GAZ (ISO)



TUBE SIZE	THREAD SIZE	DASH SIZE	MAX. WORKING PRESSURE	
mm	mm		bar	psi
13,25	20 x 1,5	<b>-20</b>	420	6000
16,75	24 x 1,5	<b>-24</b>	350	5100
21,25	30 x 1,5	<b>-30</b>	280	4060
26,75	36 x 1,5	<b>-36</b>	215	3100
33,50	45 x 1,5	<b>-45</b>	215	3100
42,25	52 x 1,5	<b>-52</b>	215	3100

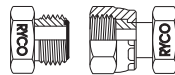
## METRIC FRENCH MILLIMETRIC



TUBE SIZE	THREAD SIZE	DASH SIZE	MAX. WORKING PRESSURE	
mm	mm		bar	psi
20	27 x 1,5	<b>-27</b>	280	4060
22	30 x 1,5	<b>-30</b>	215	3100
25	33 x 1,5	<b>-33</b>	215	3100
28	36 x 1,5	<b>-36</b>	215	3100
30	39 x 1,5	<b>-39</b>	215	3100
35	45 x 1,5	<b>-45</b>	180	2600

## ORFS

### O RING FACE SEAL



TUBE SIZE	THREAD SIZE	DASH SIZE	MAX. WORKING PRESSURE	
inch	inch		bar	psi
1/4	9/16	<b>-09</b>	700	10150
3/8	11/16	<b>-11</b>	700	10150
1/2	13/16	<b>-13</b>	600	8700
5/8	1	<b>-16</b>	500	7250
3/4	1.3/16	<b>-19</b>	500	7250
1	1.7/16*	<b>-23</b>	420	6000
1.1/4	1.11/16*	<b>-27</b>	280	4060
1.1/2	2*	<b>-32</b>	280	4060

\*Wire Nut used

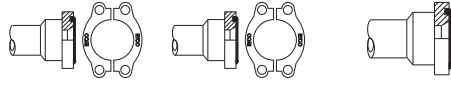
## SAE

### SAE 45° FLARE SAE INVERTED FLARE



TUBE SIZE	THREAD SIZE	DASH SIZE	MAX. WORKING PRESSURE		MAX. WORKING PRESSURE	
inch	inch		bar	psi	bar	psi
1/4	7/16	<b>-07</b>	700	10150	215	3100
5/16	1/2	<b>-08</b>	700	10150	215	3100
3/8	5/8	<b>-10</b>	700	10150	180	2600
7/16	11/16	<b>-11</b>			180	2600
1/2	3/4	<b>-12</b>	600	8700		
5/8	7/8	<b>-14</b>	500	7250		
3/4	1.1/16	<b>-17</b>	420	6000		
1	1.5/16	<b>-21</b>	420	6000		
1.1/4	1.5/8	<b>-26</b>	350	5100		
1.1/2	1.7/8	<b>-30</b>	280	4060		
2	2.1/2	<b>-40</b>	215	3100		

**SAE FLANGE**      **CODE 61 SAE FLANGE**      **CODE 62 SAE FLANGE**      **RYCO CODE 62C SPECIAL FLANGE**



**RYCOLOK (STAPLE)**      **RYCOLOK MALE & FEMALE**      **RYCO SUPERLOK MALE & FEMALE**      **RYCO SUPER-D MALE & FEMALE**



NOM. FLANGE SIZE	DASH SIZE	MAX. WORKING PRESSURE		MAX. WORKING PRESSURE		MAX. WORKING PRESSURE	
inch		bar	psi	bar	psi	bar	psi

1/2	-08	420	6000	500	7250	500	7250
5/8	-10	420	6000	500	7250	500	7250
3/4	-12	420	6000	500	7250	500	7250
1	-16	350	5100	420	6000	420	6000
1.1/4	-20	280	4060	420	6000	420	6000
1.1/2	-24	280	4060	420	6000	420	6000
2	-32	215	3100	420	6000	420	6000
2.1/2	-40	215	3100				

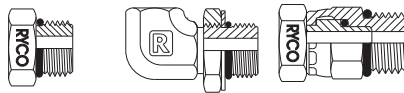
NOMINAL SIZE	MAX. WORKING PRESSURE		MAX. WORKING PRESSURE		MAX. WORKING PRESSURE	
DN	inch	Dash	bar	psi	bar	psi

6	1/4	-06	500	7250			
10	3/8	-10	500	7250			
12	1/2	-13	420	6000	500	7250	
16	5/8	-16	350	5100	500	7250	
19	3/4	-20	350	5100	420	6000	500 7250
25	1	-25	350	5100	420	6000	420 6000
31	1.1/4	-32	280	4060	420	6000	420 6000
38	1.1/2	-40	280	4060	350	5100	420 6000
51	2	-50	280	4060	350	5100	420 6000
65	2.1/2	-65	215	3100			

**WARNING: Staples must only be used ONCE, they MUST NOT BE RE-USED.**

This applies to all RYCOLOK, RYCO SUPERLOK and RYCO SUPER-D Staples. Failure to observe this warning may result in serious personal injury, or property damage.

**UN O RING (O RING BOSS)**      **UN O RING (O RING BOSS) ADJUSTABLE**      **UN O RING (O RING BOSS) LIVE SWIVEL**



TUBE SIZE	THREAD SIZE	DASH SIZE	MAX. WORKING PRESSURE		MAX. WORKING PRESSURE		MAX. WORKING PRESSURE	
inch	inch		bar	psi	bar	psi	bar	psi

1/4	7/16	-07	420	6000	420	6000	300	4350
5/16	1/2	-08	420	6000	420	6000	300	4350
3/8	9/16	-09	420	6000	420	6000	300	4350
1/2	3/4	-12	420	6000	350	5100	300	4350
5/8	7/8	-14	350	5100	280	4060	250	3620
3/4	1.1/16	-17	350	5100	215	3100	215	3100
7/8	1.3/16	-19	350	5100	215	3100	180	2600
1	1.5/16	-21	350	5100	180	2600		
1.1/4	1.5/8	-26	215	3100	150	2175	150	2175
1.1/2	1.7/8	-30	215	3100	104	1500		
2	2.1/2	-38	180	2600	90	1300		

**TUBE BITE**



TUBE SIZE	DASH SIZE	MAX. WORKING PRESSURE	
inch		bar	psi

1/4	-04	420	6000
5/16	-05	420	6000
3/8	-06	420	6000
1/2	-08	350	5100
5/8	-10	350	5100
3/4	-12	350	5100
1	-16	280	4060
1.1/4	-20	215	3100
1.1/2	-24		
2	-32		

**NOTE:** Also consider the Maximum Working Pressure of the tubing to be used with TUBE BITE connections.