

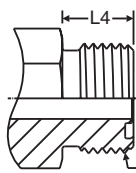


Reference

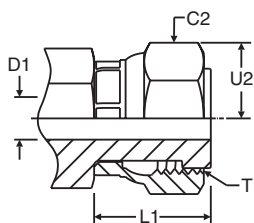
The Fitting Authority

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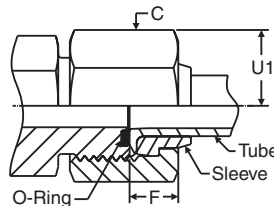
Seal-Lok O-Ring Face Seal Tube Ends



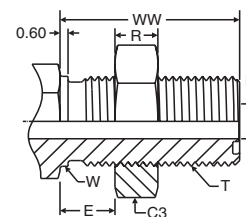
**Seal-Lok Male
Tube End**



Seal-Lok Swivel



**Seal-Lok Tube End
Assembly**

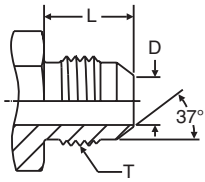


Seal-Lok Bulkhead

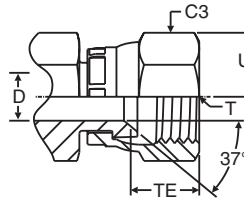
SAE Dash Size	Tube O.D. (in.) (mm)		Thread T	Tube Nut Hex C		Swivel Nut Hex C2		Bulkhead Locknut Hex C3		Max Drill Tube End D	Max Drill Swivel End D1 ¹⁾	Max Bulkhead Thickness E	Tube Nut Assembled Allowance F	Swivel Turn Back L1	Male Turn Back L4	Bulkhead			Across Corners	
																Locknut Thickness R	Pilot Dia W ²⁾	Length WW	Tube Nut Hex U1	Swivel Nut Hex U2
			UN/UNF	(in.) (mm)	(in.) (mm)	(in.) (mm)	(in.) (mm)	(in.) (mm)	(in.) (mm)	(in.) (mm)	(in.) (mm)	(in.) (mm)	(in.) (mm)	(in.) (mm)	(in.) (mm)	(in.) (mm)	(in.) (mm)	(in.) (mm)	(in.) (mm)	(in.) (mm)
4	1/4	6	9/16-18	11/16	17	11/16	17	13/16	22	0.172	0.165	0.55	0.255	0.642	0.394	0.27	0.563	1.24	0.80	0.80
6	3/8	8 10	11/16-16	13/16	22	13/16	22	1	27	0.264	0.264	0.55	0.295	0.715	0.441	0.32	0.688	1.34	0.94	0.94
8	1/2	12	13/16-16	15/16	24	15/16	24	1 1/8	30	0.378	0.358	0.55	0.394	0.865	0.512	0.35	0.813	1.44	1.08	1.08
10	5/8	14 15 16	1 1/4	1 1/8	30	1 1/8	30	1 5/16	36	0.484	0.453	0.55	0.393	0.980	0.618	0.41	1.000	1.60	1.30	1.30
12	3/4	18 20	1 3/8-12	1 3/8	36	1 3/8	36	1 1/2	41	0.609	0.547	0.55	0.452	1.110	0.677	0.41	1.188	1.64	1.58	1.58
14	7/8	—	1 5/8-12	1 1/2	—	1 1/2	—	1 5/8	—	0.709	0.709	0.55	0.512	1.145	0.697	0.41	1.313	1.66	1.74	1.74
16	1	22 25	1 7/8-12	1 5/8	41	1 5/8	41	1 3/4	46	0.811	0.783	0.55	0.512	1.190	0.697	0.41	1.438	1.66	1.88	1.88
20	1 1/4	28 30 32	1 11/16-12	1 7/8	50	1 7/8	50	2	50	1.024	1.024	0.55	0.512	1.251	0.697	0.41	1.688	1.66	2.16	2.16
24	1 1/2	35 38	2-12	2 1/4	60	2 1/4	60	2 3/8	60	1.260	1.260	0.55	0.512	1.330	0.697	0.41	2.000	1.66	2.60	2.60
32	2	42 50	2 1/2-12	2 7/8	—	2 7/8	—	2 3/4	—	1.772	1.772	0.50	0.629	1.690	0.874	0.54	2.500	1.83	3.32	3.32

- 1) D1 nominal may vary from the values shown in the chart by 0.004 to 0.008. [Contact the Tube Fittings Division](#) if there are any questions.
 2) Recommended clearance hole = $W + 0.015$.
 3) See [page O3](#) for ORFS O-rings.

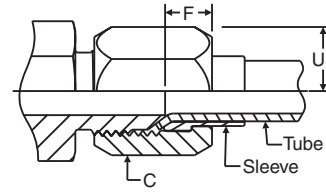
Triple-Lok 37° Flared Tube Ends



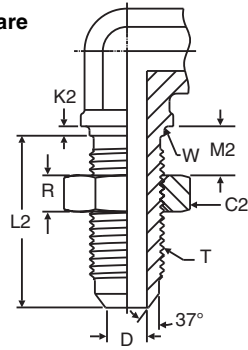
**Triple-Lok Male Flare
Tube End**



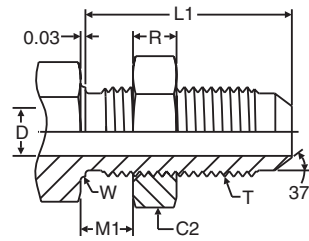
Triple-Lok Swivel



**Triple-Lok Tube End
Assembly**



**Triple-Lok Shape
Bulkhead**



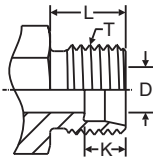
**Triple-Lok Straight
Bulkhead**

SAE Dash Size	Tube O.D.		T	C	C2		C3		D	F	L	Bulkhead				Max Bulkhead Thickness		Thread Engage- ment	Across Corners	
												Pilot Length - Shapes	Length - Straights	Length - Shapes	Locknut Thickness	Pilot Dia (Max)	Straights	Shapes		
	(in.)	(mm)	UN/UNF	(in.)	(in.)	(in.)	(mm)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)	(in.)
2	1/8	—	5/16-24	3/8	9/16	7/16	—	0.062	0.19	0.448	0.094	1.11	0.92	0.22	0.313	0.38	0.25	0.31	0.22	0.25
3	3/16	—	3/8-24	7/16	5/8	1/2	—	0.125	0.25	0.479	0.094	1.11	0.92	0.22	0.375	0.38	0.25	0.33	0.25	0.29
4	1/4	6	7/16-20	9/16	11/16	9/16	17	0.172	0.19	0.550	0.094	1.20	1.02	0.28	0.438	0.38	0.25	0.34	0.33	0.33
5	5/16	8	1/2-20	5/8	3/4	5/8	17	0.234	0.30	0.550	0.094	1.20	1.02	0.28	0.500	0.38	0.25	0.38	0.36	0.36
6	3/8	10	9/16-18	11/16	13/16	11/16	29	0.297	0.28	0.556	0.094	1.28	1.09	0.27	0.563	0.44	0.35	0.38	0.40	0.40
8	1/2	12	3/4-16	7/8	1	7/8	22	0.391	0.31	0.657	0.125	1.44	1.25	0.31	0.750	0.44	0.35	0.42	0.51	0.51
10	5/8	14 15 16	7/8-14	1	1 1/8	1	27	0.484	0.38	0.758	0.125	1.58	1.39	0.36	0.875	0.44	0.35	0.50	0.58	0.58
12	3/4	18 20	1 1/8-12	1 1/4	1 3/8	1 1/4	32	0.609	0.36	0.864	0.125	1.75	1.56	0.41	1.063	0.44	0.35	0.56	0.72	0.72
14	7/8	22	1 3/8-12	1 3/8	1 1/2	1 3/8	—	0.718	0.38	0.890	0.125	1.75	1.56	0.41	1.188	0.44	0.35	0.58	0.79	0.79
16	1	25	1 5/8-12	1 1/2	1 5/8	1 1/2	38	0.844	0.34	0.911	0.125	1.75	1.56	0.41	1.313	0.44	0.35	0.59	0.87	0.87
20	1 1/4	28 30 32	1 5/8-12	2	1 7/8	2	50	1.078	0.34	0.958	0.125	1.80	1.61	0.41	1.625	0.44	0.35	0.63	1.15	1.15
24	1 1/2	35 38	1 7/8-12	2 1/4	2 1/8	2 1/4	60	1.312	0.50	1.083	0.125	1.81	1.62	0.41	1.875	0.31	0.22	0.73	1.30	1.30
32	2	—	2 1/2-12	2 7/8	2 3/4	2 7/8	—	1.781	0.55	1.333	0.125	2.09	1.91	0.41	2.500	0.35	0.25	0.94	1.66	1.66
40 ²⁾	2 1/2	—	3-12	3-3/8	—	—	—	2.281	0.55	1.109	—	—	—	—	—	—	—	—	1.93	—

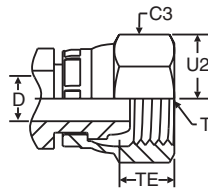
1) Recommended clearance hole = $W + 0.015$.

2) Not a standard SAE J514 size.

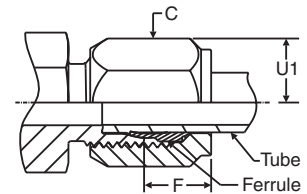
Ferulok Flareless Tube Ends



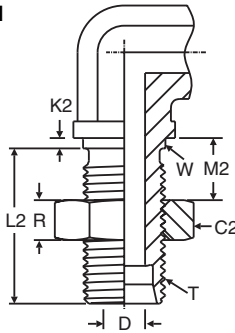
**Ferulok Male
Stud Tube End**



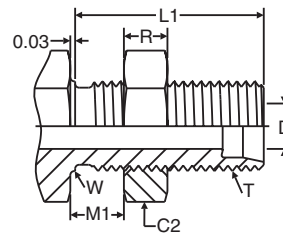
Ferulok Swivel



**Ferulok Tube End
Assembly**



**Ferulok Shape
Bulkhead**

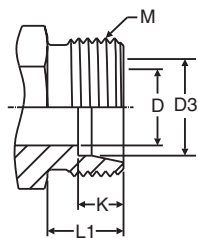


**Ferulok Straight
Bulkhead**

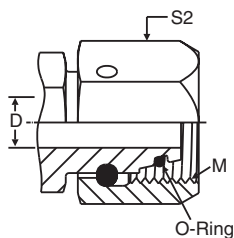
SAE Dash Size	Tube O.D. (in.)	T UN/UNF	C (in.)	C2 (in.)	C3 (in.)	D (in.)	Allowance		Male Turn Back	Bulkhead					Max Bulkhead Thickness		Thread Engage- ment	Across Corners	
							Tube Nut Assembled	Tube		Length Shapes	Length - Straights	Length - Shapes	Locknut Thickness	Pilot Dia	Straights	Shapes		Tube Nut Hex	Swivel Nut Hex
2	1/8	5/16-24	3/8	9/16	7/16	0.094	0.31	0.19	0.375	0.09	1.02	0.83	0.22	0.31	0.28	0.38	0.22	0.22	0.25
3	3/16	3/8-24	7/16	5/8	1/2	0.125	0.34	0.24	0.422	0.09	1.06	0.88	0.22	0.37	0.28	0.38	0.25	0.25	0.29
4	1/4	7/16-20	9/16	11/16	9/16	0.203	0.42	0.24	0.453	0.09	1.13	0.94	0.28	0.44	0.28	0.38	0.29	0.33	0.33
5	5/16	1/2-20	5/8	3/4	5/8	0.234	0.42	0.26	0.453	0.09	1.12	0.94	0.28	0.50	0.28	0.38	0.31	0.36	0.36
6	3/8	9/16-18	11/16	13/16	11/16	0.281	0.47	0.26	0.469	0.09	1.17	0.98	0.27	0.56	0.31	0.41	0.34	0.40	0.40
8	1/2	3/4-16	7/8	1	7/8	0.422	0.50	0.31	0.562	0.13	1.31	1.12	0.31	0.75	0.31	0.41	0.32	0.51	0.51
10	5/8	7/8-14	1	1 1/8	1	0.500	0.53	0.36	0.625	0.13	1.45	1.27	0.36	0.88	0.38	0.44	0.37	0.58	0.59
12	3/4	1 1/8-12	1 1/4	1 3/8	1 1/4	0.656	0.56	0.36	0.688	0.13	1.56	1.38	0.41	1.06	0.38	0.44	0.42	0.72	0.73
14	7/8	1 3/8-12	1 3/8	1 1/2	1 3/8	0.718	0.53	0.36	0.688	0.13	1.56	1.38	0.41	1.19	0.38	0.44	0.34	0.79	0.79
16	1	1 5/8-12	1 1/2	1 5/8	1 1/2	0.875	0.66	0.42	0.688	0.13	1.56	1.38	0.41	1.31	0.38	0.44	0.32	0.87	0.88
20	1 1/4	1 5/8-12	2	1 7/8	2	1.093	0.72	0.42	0.688	0.13	1.56	1.38	0.41	1.62	0.38	0.44	0.33	1.15	1.17
24	1 1/2	1 7/8-12	2 1/4	2 1/8	2 1/4	1.344	0.72	0.49	0.688	0.13	1.56	1.38	0.41	1.87	0.38	0.44	0.34	1.30	1.29
32	2	2 1/2-12	2 7/8	2 3/4	2 7/8	1.813	0.84	0.49	0.688	0.13	1.77	1.58	0.41	2.50	0.56	0.63	0.34	1.66	1.64

1) Recommended clearance hole = $W + 0.015$.

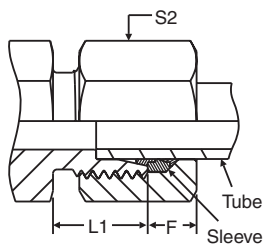
EO and EO-2 Metric Tube Ends



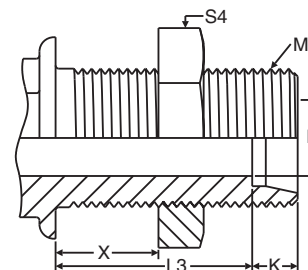
**EO/EO-2 Male
Tube End**



EO/EO-2 Swivel



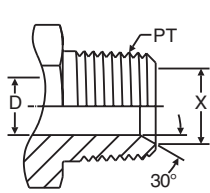
EO/EO-2 Assembly



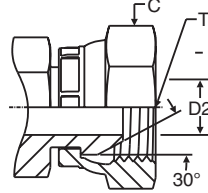
EO/EO-2 Bulkhead

	Tube O.D.	Thread	Drill	Tube Nut Assembled Allowance	Tube Depth	Male Turn Back	Bulkhead Length	Tube/Swivel Nut Hex	Bulkhead Nut Hex	Max Bulkhead Thickness
Size	D3 (mm)	M Metric	D (mm)	F (mm)	K (mm)	L1 (mm)	L3 (mm)	S2 (mm)	S4 (mm)	X (mm)
4LL	4	M8x1	3	5.5	4.0	8	—	10	—	—
6LL	6	M10x1	4	6	5.5	8	—	12	—	—
8LL	8	M12x1	6	6	5.5	9	—	14	—	—
10LL	10	M14x1	8	6	5.5	9	—	17	—	—
12LL	12	M16x1	10	6	6.0	9	—	19	—	—
6L	6	M12x1.5	4	8	7.0	10	34	14	17	16
8L	8	M14x1.5	6	8	7.0	10	34	17	19	16
10L	10	M16x1.5	8	8	7.0	11	35	19	22	16
12L	12	M18x1.5	10	8	7.0	11	36	22	24	16
15L	15	M22x1.5	12	8	7.0	12	38	27	30	16
18L	18	M26x1.5	15	9	7.5	12	40	32	36	16
22L	22	M30x2	19	9	7.5	14	42	36	41	16
28L	28	M36x2	24	9	7.5	14	43	41	46	16
35L	35	M45x2	30	11	10.5	16	47	50	55	16
42L	42	M52x2	36	12	11.0	16	47	60	65	16
6S	6	M14x1.5	4	8	7.0	12	36	17	19	16
8S	8	M16x1.5	5	8	7.0	12	36	19	22	16
10S	10	M18x1.5	7	9	7.5	12	37	22	24	16
12S	12	M20x1.5	8	9	7.5	12	38	24	27	16
14S	14	M22x1.5	10	10	8.0	14	40	27	30	16
16S	16	M24x1.5	12	10	8.5	14	41	30	32	16
20S	20	M30x2	16	11	10.5	16	44	36	41	16
25S	25	M36x2	20	12	12.0	18	47	46	46	16
30S	30	M42x2	25	13	13.5	20	51	50	50	16
38S	38	M52x2	32	15	16.0	22	53	60	65	16

Pipe Swivel (NPSM) Ends



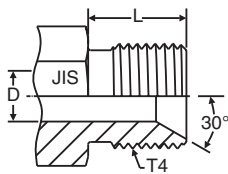
Male Pipe End



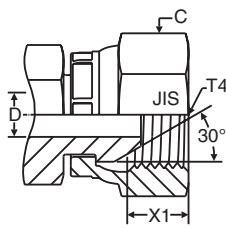
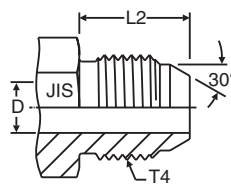
NPSM Pipe Swivel

	NPT/NPTF Thread	NPSM Thread	Hex - Swivel	Drill - Male	Drill - Swivel	Chamfer Dia.
Size	PT NPT/NPTF	T NPSM	C (in)	D (in)	D2 (in)	X (in)
2	1/8-27	1/8-27	9/16	0.188	0.156	0.281
4	1/4-18	1/4-18	11/16	0.281	0.219	0.344
6	3/8-18	3/8-18	7/8	0.406	0.344	0.469
8	1/2-14	1/2-14	1	0.531	0.469	0.625
12	3/4-14	3/4-14	1 1/4	0.719	0.641	0.813
16	1-11 1/2	1-11 1/2	1 1/2	0.938	0.844	1.031
20	1 1/4-11 1/2	1 1/4-11 1/2	1 7/8	1.250	1.141	1.344
24	1 1/2-11 1/2	1 1/2-11 1/2	2 1/8	1.500	1.359	1.625
32	2-11 1/2	2-11 1/2	2 5/8	1.938	1.813	2.063

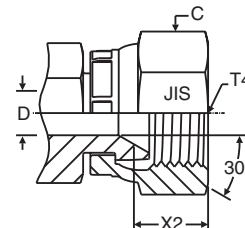
JIS Ends



JIS Male, 60° Seat

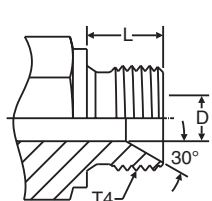
JIS Swivel
for 60° Seat

JIS Male, 30° Flare

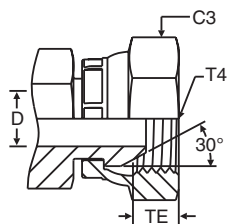
JIS Swivel
for 30° Seat

	BSPP Thread	Swivel Hex	Drill	Male Turn Back		Assembly Allowance	
Dash Size	T4 BSPP	C (in)	D (in)	L (in)	L2 (in)	X1 (in)	X2 (in)
4	1/4-19	.75	0.177	.570	.606	0.35	0.36
6	3/8-19	.88	0.275	.609	.684	0.29	0.38
8	1/2-14	1.06	0.433	.726	.763	0.46	0.53
12	3/4-14	1.44	0.625	.805	.842	0.55	0.56
16	1-11	1.63	0.828	.883	.881	0.53	0.58

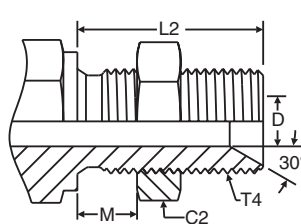
K4 BSP Ends



K4 Male



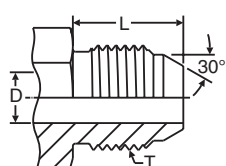
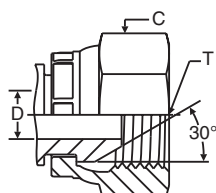
K4 Swivel



K4 Bulkhead

	BSPP Thread	Bulkhead Nut Hex	Swivel Hex	Drill	Male Turn Back	Bulkhead Length	Max Bulkhead Thickness	Assembly Allowance
Dash Size	T4 BSPP	C2 (mm)	C3 (mm)	D (mm)	L (mm)	L2 (mm)	M (mm)	TE (mm)
2	9	—	14	3.5	8	—	—	—
4	1/4-18	19	19	4.7	11	28	9.5	7.3
6	3/8-18	22	22	7.9	12	32	12.5	8.4
8	1/2-14	27	27	11.1	14	35	12.3	9.3
10	5/8-14	30	30	14.3	16	35	10.7	—
12	3/4-14	36	32	16.7	16	38	13.3	11.3
16	1-11 1/2	41	41	22.2	19	41	10.0	13.6
20	1 1/4-11 1/2	50	50	28.6	20	44	12.0	—
24	1 1/2-11 1/2	55	60	33.3	22	48	14.0	—
32	2-11	—	—	46.0	25	—	—	—

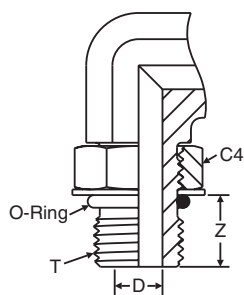
Komatsu Ends

Komatsu Male,
30° Flare

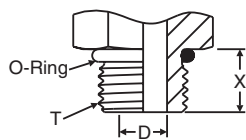
Komatsu Swivel

	Metric Thread	Hex	Drill	Male Turn Back
Dash Size	T Metric	C (mm)	D (mm)	L (mm)
4	M14x1.5	19	0.197	16.0
6	M18x1.5	24	0.315	18.0
8	M22x1.5	27	0.394	20.0
10	M24x1.5	32	0.512	21.5
12	M30x1.5	36	0.551	26.0
16	M33x1.5	41	0.748	30.0

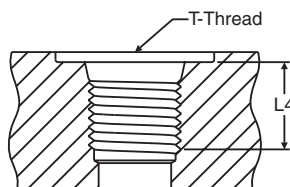
Port Ends for SAE J1926-1 (ISO 11926-1) Port



**SAE J1926
Adjustable**



**SAE J1926
Nonadjustable**



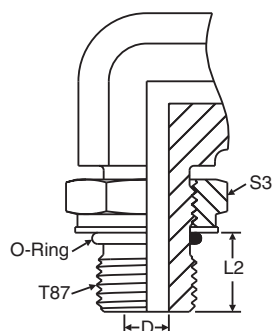
**SAE J1926-1
Port²⁾**

	Thread	Locknut Hex	Drill	Minimum Thread	Stud Length	
SIZE	T UN/UNF	C4 (inch)	D Max (inch)	L4 Min (inch)	X (inch)	Z Max (inch)
LIGHT DUTY (TRIPLE-LOK, FERULOK, ADAPTERS)						
2	5/16-24	7/16	0.063	0.390	0.297	0.36
3	3/8-24	1/2	0.125	0.390	0.297	0.33
4	7/16-20	9/16	0.172	0.454	0.360	0.39
5	1/2-20	5/8	0.234	0.454	0.360	0.43
6	9/16-18	11/16	0.297	0.500	0.391	0.43
8	3/4-16	7/8	0.391	0.562	0.438	0.49
10	7/8-14	1	0.484	0.656	0.500	0.56
12	1 1/6-12	1 1/4	0.609	0.750	0.594	0.65
14	1 3/16-12	1 3/8	0.719	0.750	0.594	0.65
16	1 5/16-12	1 1/2	0.844	0.750	0.594	0.65
20	1 5/8-12	1 7/8	1.078	0.750	0.594	0.65
24	1 7/8-12	2 1/8	1.312	0.750	0.594	0.65
32	2 1/2-12	2 3/4	1.781	0.750	0.594	0.59
HEAVY DUTY (SEAL-LOK)						
2	5/16-24	1/2	0.063	0.390	0.374	0.38
3	3/8-24	9/16	0.125	0.390	0.374	0.39
4	7/16-20	5/8	0.172	0.454	0.433	0.43
5	1/2-20	11/16	0.236	0.454	0.433	0.44
6	9/16-18	3/4	0.264	0.500	0.472	0.47
8	3/4-16	15/16	0.378	0.562	0.551	0.54
10	7/8-14	1 1/16	0.484	0.656	0.630	0.63
12	1 1/6-12	1 3/8	0.609	0.750	0.728	0.73
14	1 3/16-12	1 1/2	0.709	0.750	0.728	0.73
16	1 5/16-12	1 5/8	0.811	0.750	0.728	0.73
20	1 5/8-12	1 7/8	1.024	0.750	0.728	0.73
24	1 7/8-12	2 1/8	1.260	0.750	0.728	0.73
32	2 1/2-12	2 3/4	1.575	0.750	0.728	0.73

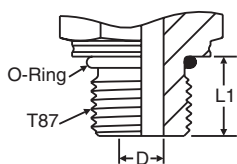
1) See [page O3](#) for SAE O-rings.

2) See [page U26](#) for port details.

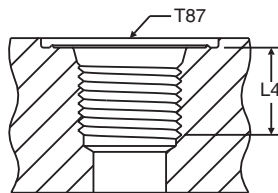
Port Ends for ISO 6149-1 Port



ISO 6149
Adjustable



ISO 6149
Nonadjustable



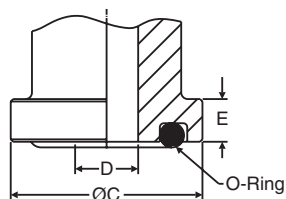
ISO 6149
Port ²⁾

	Thread	Drill	Minimum Thread	Stud Length		Lockhead Hex
SIZE	T87 Metric	D Max (mm)	L4 Min (mm)	L1 (mm)	L2 Max (mm)	S3 (mm)
LIGHT DUTY (TRIPLE-LOK, FERULOK, ADAPTERS)						
M8	M8X1	3	10.0	8.5	8.7	12
M10	M10X1	4.5	10.0	8.5	8.7	14
M12	M12X1.5	6	11.5	11.0	11.0	17
M14	M14X1.5	7.5	11.5	11.0	11.0	19
M16	M16X1.5	9	13.0	11.5	11.5	22
M18	M18X1.5	11	14.5	12.5	12.5	24
M20	M20X1.5	—	14.5	—	—	—
M22	M22X1.5	14	15.5	13.0	13.0	27
M27	M27X2	18	19.0	16.0	16.0	32
M30	M30X2	—	19.0	—	—	—
M33	M33X2	23	19.0	16.0	16.0	41
M38	M38X2	—	19.0	—	—	—
M42	M42X2	30	19.5	16.0	16.0	50
M48	M48X2	36	22.0	17.5	17.2	55
M60	M60X2	44	24.5	17.5	17.2	65
HEAVY DUTY (SEAL-LOK)						
M8	M8X1	2	10.0	9.5	9.7	12
M10	M10X1	3	10.0	9.5	9.7	14
M12	M12X1.5	4	11.5	11.0	11.0	17
M14	M14X1.5	6	11.5	11.0	11.0	19
M16	M16X1.5	7	13.0	12.5	12.5	22
M18	M18X1.5	9	14.5	14.0	14.0	24
M20	M20X1.5	11	14.5	14.0	—	—
M22	M22X1.5	12	15.5	15.0	15.0	27
M27	M27X2	15	19.0	18.5	18.0	32
M30	M30X2	18	19.0	18.5	18.5	36
M33	M33X2	20	19.0	18.5	18.5	41
M38	M38X2	26	19.0	18.5	19.0	46
M42	M42X2	26	19.5	19.0	19.0	50
M48	M48X2	32	22.0	21.5	21.5	55
M60	M60X2	40	24.5	24.0	24.0	65

1) See [page O4](#) for ISO 6149 O-rings.

2) See [page U25](#) for port details.

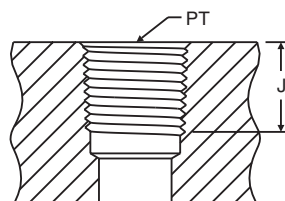
Code 61 and Code 62 Port Ends NPTF and BSPT Port Ends



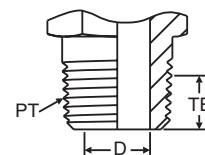
**Code 61 and Code 62
Flange Head**

	Flange O.D.	Drill	Flange Height
SIZE	C (inch)	D Max (inch)	E (inch)
CODE 61			
8	1.19	0.50	0.265
12	1.50	0.75	0.265
16	1.75	1.00	0.315
20	2.00	1.25	0.315
24	2.38	1.50	0.360
32	2.81	2.00	0.315
CODE 62			
8	1.25	0.50	0.305
12	1.63	0.75	0.345
16	1.88	1.00	0.375
20	2.13	1.25	0.405
24	2.50	1.50	0.495
32	3.13	2.00	0.495

1) See [page O9](#) for O-rings.



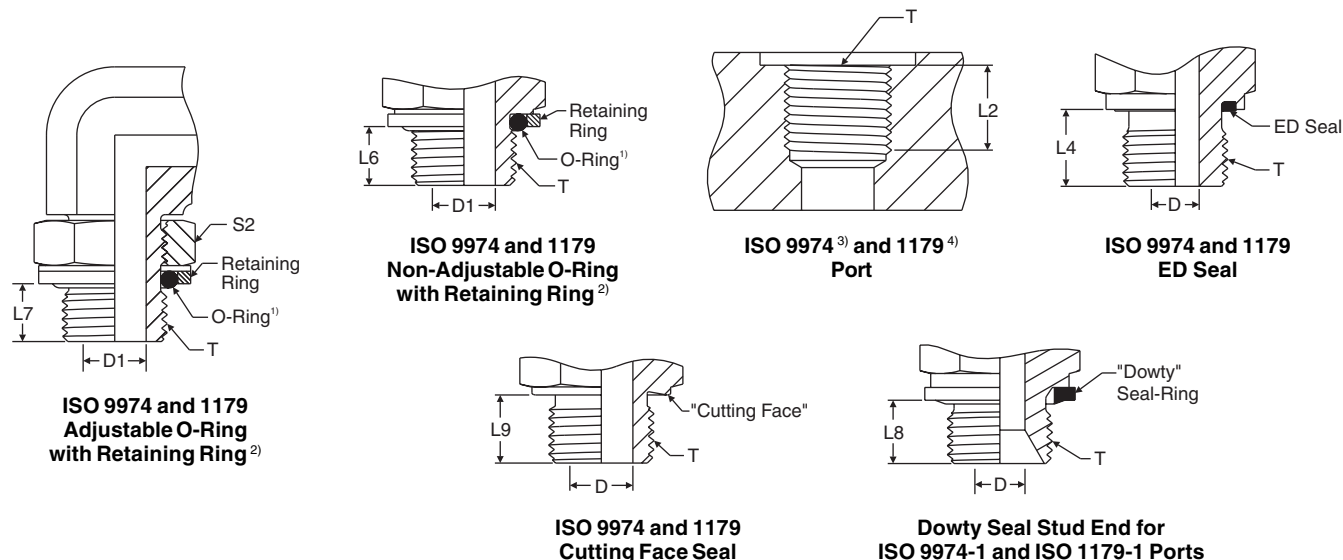
**NPTF and BSPT
Port**



**NPTF and BSPT
Stud**

	Thread	Drill	Minimum Thread	Thread Engagement
SIZE	PT	D Max (inch)	J (inch)	TE (inch)
NPTF				
2	1/8-27	0.188	0.31	0.24
4	1/4-18	0.281	0.44	0.34
6	3/8-18	0.406	0.47	0.34
8	1/2-14	0.531	0.59	0.46
12	3/4-14	0.719	0.63	0.46
16	1-11 1/2	0.938	0.75	0.59
20	1 1/4-11 1/2	1.250	0.78	0.59
24	1 1/2-11 1/2	1.500	0.81	0.59
32	2-11 1/2	1.938	0.81	0.59
BSPT				
2	1/8-28	0.188	0.31	0.24
4	1/4-19	0.281	0.44	0.34
6	3/8-19	0.406	0.47	0.34
8	1/2-14	0.531	0.59	0.46
12	3/4-14	0.719	0.63	0.46
16	1-11	0.938	0.75	0.59
20	1 1/4-11	1.250	0.78	0.59
24	1 1/2-11	1.438	0.81	0.59
32	2-11	1.938	0.81	0.59

Port Ends for ISO 9974-1 and 1179-1 Ports



ISO 9974

		O-Ring, RR Stud	Light Duty (L Series)	Heavy Duty (S Series)	Port Min Depth		O-Ring, RR Non- Adj Stud	O-Ring, RR Adj- Stud	O-Ring, RR Adj-Stud, Locknut Hex	Dowty Seal Stud	Cutting Face Stud
	Thread	Drill Max				ED Stud					
SIZE	T Metric	D1 (mm)	D (mm)		L2 (mm)	L4 (mm)	L6 (mm)	L7 (mm)	S2 (mm)	L8 (mm)	L9 (mm)
M8	M8X1	2	—	—	8	—	8.0	8.6	11	—	8
M10	M10X1	4	4	—	8	8	8.0	8.7	14	—	8
M12	M12X1.5	5	6	4	12	12	8.7	10.0	17	—	12
M14	M14X1.5	7	7	5	12	12	8.7	10.0	19	—	12
M16	M16X1.5	9	9	7	12	12	9.0	11.3	21	—	12
M18	M18X1.5	11	11	8	12	12	11.0	12.2	22	—	12
M20	M20X1.5	11	-	10	14	14	12.7	—	—	—	14
M22	M22X1.5	13	14	12	14	14	12.7	13.7	27	—	14
M26	M26X1.5	13	18	—	16	16	14.0	—	—	—	16
M27	M27X2	16	—	16	16	16	15.0	16.8	32	—	16
M33	M33X2	22	23	20	18	18	15.0	16.8	38	—	18
M42	M42X2	28	30	25	20	20	15.5	17.3	48	—	20
M48	M48X2	36	36	32	22	22	19.5	19.3	55	—	22
M60	M60X2	44	—	—	24.5	—	20.5	22.3	65	—	—

ISO 1179

SIZE	Thread	O-Ring, RR Stud	Light Duty (L Series)	Heavy Duty (S Series)	Port Min Depth	ED Stud	O-Ring, RR Non- Adj Stud	O-Ring, RR Adj- Stud	O-Ring, RR Adj-Stud, Locknut Hex	Dowty Seal Stud	Cutting Face Stud
	T BSPP	Drill Max			L2 (mm)	L4 (mm)	L6 (mm)	L7 (mm)	S2 (mm)	L8 (mm)	L9 (mm)
	D1 (mm)	D (mm)									
2	1/8-28	4.4	4	—	8	8	6.3	7.2	14	8	8
4	1/4-19	7.5	7	5	12	12	9.4	9.4	19	11	12
6	3/8-19	9.9	9	8	12	12	9.4	9.3	22	12	12
8	1/2-14	12.3	14	12	14	14	12.6	13.1	30	14	14
12	3/4-14	15.5	18	16	16	16	12.6	13.1	36	16	16
16	1-11	21.5	23	20	18	18	16.0	14.7	46	16	18
20	1-1/4-11	27.5	30	25	20	20	16.0	14.7	50	19	20
24	1-1/2-11	33.0	36	32	22	22	16.0	14.7	55	22	22
32	2-11	—	—	—	26	—	16.0	14.7	75	25	—

1) See [Section O](#) for O-rings and seals.

2) O-ring with retaining ring stud ends are not shown in ISO 9974.

3) See [page U30](#) for ISO 9974-1 port details.

4) See [page U29](#) for ISO 1179-1 port details.