

Eaton® Winner®
Large Quantity Carbon Steel Adapter Program



Powering Business Worldwide

A

B

C

D

E

F

Eaton® Winner®

Carbon Steel Adapter Program

Table of Contents

Section A

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

1J	A-2
1J9	A-3
1JH	A-3
1JN	A-4
1JN4	A-5
1JN9	A-6
1JN9-L	A-7
1JN9-LL	A-7
1JO	A-8
1JO4-OG	A-9
1JO9-OG	A-10
1JO9-OG/L	A-11
1JO-L	A-11
2J	A-12
2J4	A-12
2J9	A-13
2NJ	A-13
2OJ	A-14
4ON	A-14
4J	A-15
4O	A-15
5J	A-16
5JN	A-16
5JN9	A-17
5O	A-17
6J-LN	A-18
6J4	A-18
6J9-LN	A-19
6NJ-LN	A-19
AJ	A-20
AJ6JJ-LN	A-20
AJJ6J-LN	A-21
AJJN	A-21
AJNJ	A-22
AJJO-OG	A-22
AJOJ-OG	A-23
BJ	A-23
CJ	A-24
NB200	A-24
NB300	A-25
NB500	A-25

Section B

ORFS Adapters

1FN	B-2
1FN9-16	B-2
1FO	B-3
1FO4-OG	B-3
1FO9-OG	B-4
2F9	B-4
4F	B-5
6F-LN	B-5
6F9	B-6
9F	B-6
AFFO-OG	B-7
CF	B-7

Section C

NPT Adapters

1N	C-2
1N9	C-2
4N	C-3
4NN	C-3
5N	C-4
5N4	C-5
5N9	C-5
5ON	C-6
5ON9-OG	C-6
7N	C-7
7N9-PK	C-7
7NJ-S	C-8
GN-PK	C-8
HN	C-9
JN	C-9
ZN	C-10

Section D

NPSM Adapters

2NU	D-2
2NU4	D-2
2NU9	D-3
2OU9-OG	D-3
7NU-S	D-4

Section E

Flange Adapters

1JFL	E-2
1JFL9	E-2
1JFS	E-3

Section F

Technical Information

Working Pressure	F-2
Port Type and Dimensions	F-4
Recommended Thread Torque	F-12
Seal Specifications	F-13

A

B

C

D

E

F

A

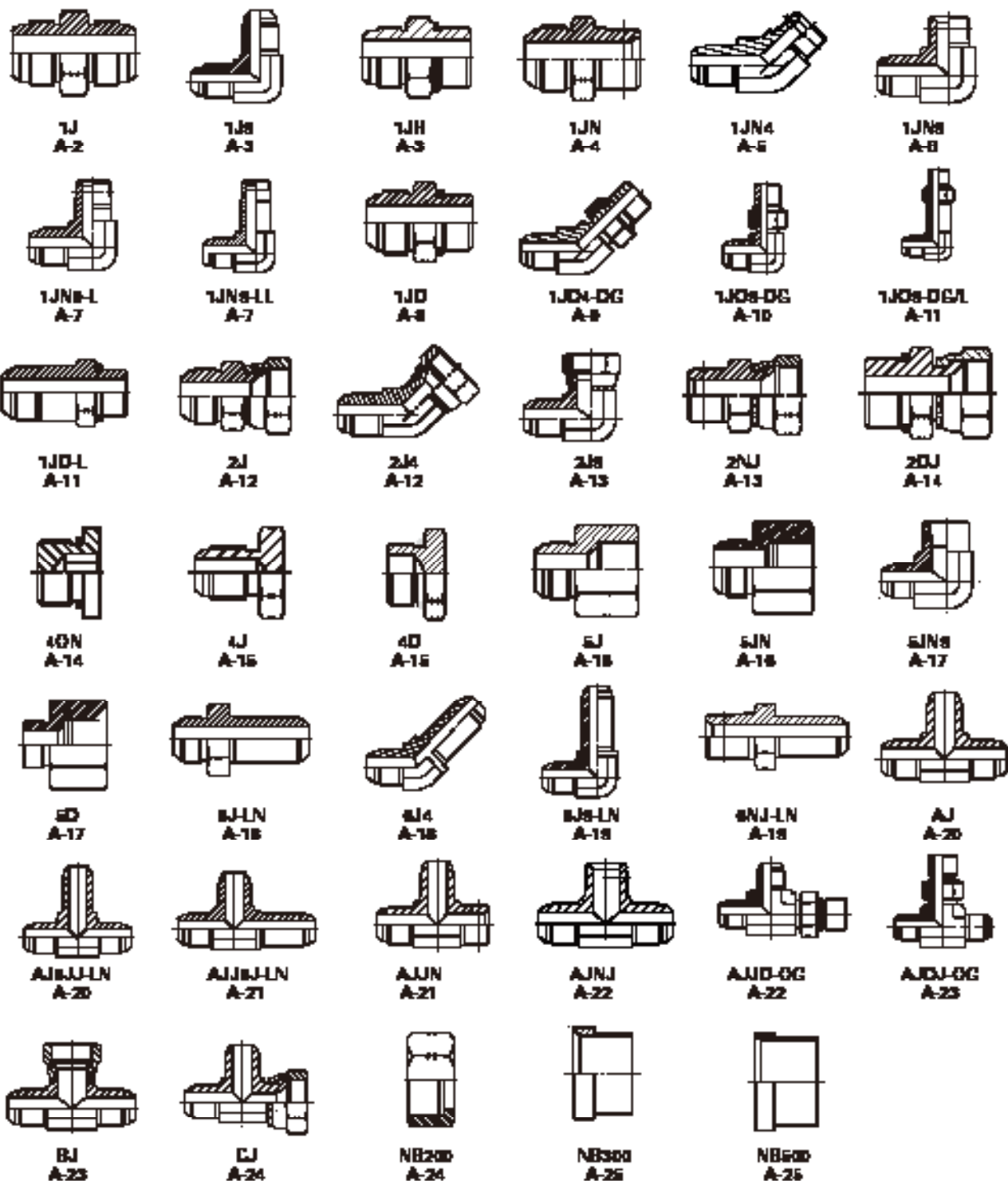
B

C

D

E

F

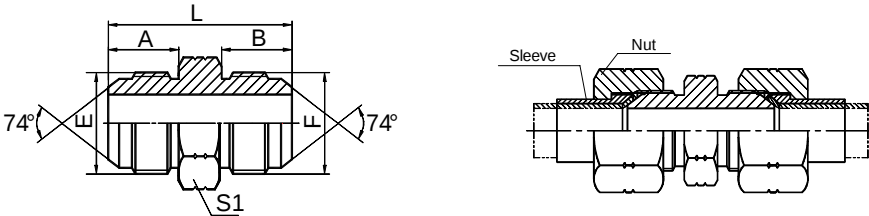


A

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index

A



1J

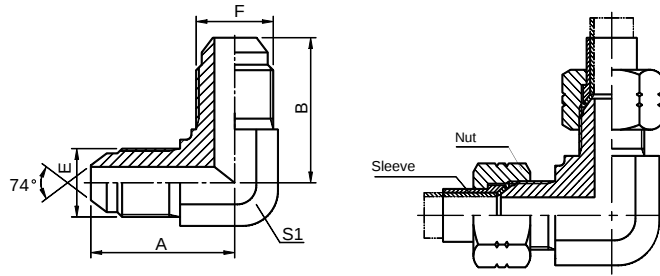
JIC Male 74° (37°) Cone

Part Number	Thread		Dimensions			
	E	F	A	B	L	S1
1J-04Z	7/16"X20	7/16"X20	14.0	14.0	35	12
1J-04-06Z	7/16"X20	9/16"X18	14.0	14.1	35.9	17
1J-06Z	9/16"X18	9/16"X18	14.1	14.1	36	17
1J-06-08Z	9/16"X18	3/4"X16	14.1	16.7	38.5	22
1J-08Z	3/4"X16	3/4"X16	16.7	16.7	41	22
1J-08-12Z	3/4"X16	1-1/16"X12	16.7	21.9	49.8	30
1J-10Z	7/8"X14	7/8"X14	19.3	19.3	48	24
1J-12Z	1-1/16"X12	1-1/16"X12	21.9	21.9	55	30
1J-16Z	1-5/16"X12	1-5/16"X12	23.1	23.1	57	36
1J-20Z	1-5/8"X12	1-5/8"X12	24.3	24.3	62	46
1J-24Z	1-7/8"X12	1-7/8"X12	27.5	27.5	70	50
1J-32Z	2-1/2"X12	2-1/2"X12	33.9	33.9	86.5	65

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index

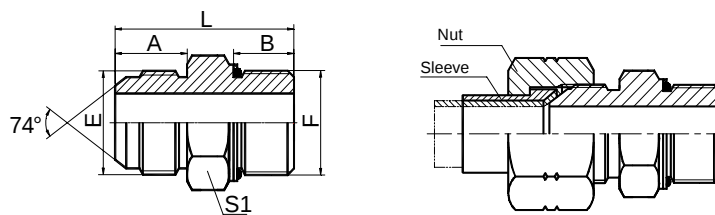


1J9

90° Elbow JIC Male 74° (37°) Cone

Part Number	Thread	F	Dimensions		
	E		A	B	S1
1J9-04Z	7/16"X20	7/16"X20	24.5	24.5	11
1J9-06Z	9/16"X18	9/16"X18	26.9	26.9	14
1J9-08Z	3/4"X16	3/4"X16	32.0	32.0	19
1J9-16Z	1-5/16"X12	1-5/16"X12	49.0	49.0	33

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.



1JH

JIC Male 74° (37°) Cone / Metric Male Adjustable Stud End L-Series ISO 6149-3

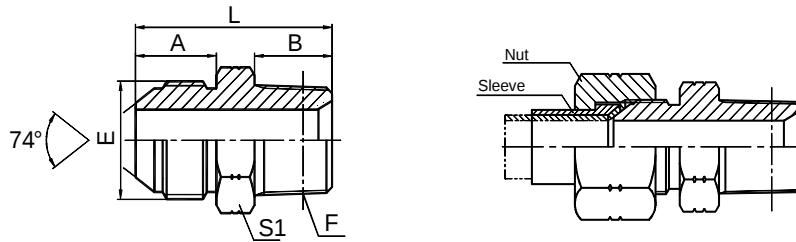
1JH Part Number	Thread	F	O-ring	Dimensions		L	S1
	E		F	A	B		
1JH-04-10Z	7/16"X20	M10X1	O08.1X1.6	14	8.5	30	14

Note: 1. Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.
2. F end is fit for ISO 9974-1 port or ISO 6149-1 port when useless of retaining ring.

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index

A



1JN

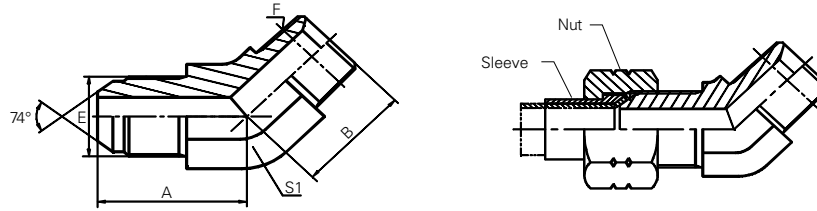
JIC Male 74° (37°) Cone / NPT Male

1JN Part Number	Thread E	F	Dimensions			
			A	B	L	S1
1JN-04-02Z	7/16"X20	1/8"X27	14.0	10.5	30.5	12
1JN-04Z	7/16"X20	1/4"X18	14.0	14.7	36.2	17
1JN-04-06Z	7/16"X20	3/8"X18	14.0	16.0	36.0	19
1JN-04-08Z	7/16"X20	1/2"X14	14.0	19.5	41.5	24
1JN-06-04Z	9/16"X18	1/4"X18	14.1	15.0	36.3	17
1JN-06Z	9/16"X18	3/8"X18	14.1	16.0	36.0	19
1JN-06-08Z	9/16"X18	1/2"X14	14.1	19.5	41.5	24
1JN-06-12Z	9/16"X18	3/4"X14	14.1	19.5	43.6	30
1JN-08-04Z	3/4"X16	1/4"X18	16.7	15.0	39.0	22
1JN-08-06Z	3/4"X16	3/8"X18	16.7	16.0	40.0	22
1JN-08Z	3/4"X16	1/2"X14	16.7	19.5	44.0	24
1JN-08-12Z	3/4"X16	3/4"X14	16.7	19.5	46.5	30
1JN-10-08Z	7/8"X14	1/2"X14	19.3	19.5	48.0	24
1JN-10-12Z	7/8"X14	3/4"X14	19.3	19.5	49.0	30
1JN-12-08Z	1-1/16"X12	1/2"X14	21.9	19.5	52.3	30
1JN-12Z	1-1/16"X12	3/4"X14	21.9	19.5	52.3	30
1JN-12-16Z	1-1/16"X12	1"X11.5	21.9	25.5	57.2	36
1JN-12-20Z	1-1/16"X12	1-1/4"X11.5	21.9	26.5	61.0	46
1JN-16-12Z	1-5/16"X12	3/4"X14	23.1	19.5	53.5	36
1JN-16Z	1-5/16"X12	1"X11.5	23.1	25.5	58.5	36
1JN-16-08Z	1-5/16"X12	1/2"X14	23.1	19.5	54.0	36
1JN-16-20Z	1-5/16"X12	1-1/4"X11.5	23.1	26.5	61.0	46
1JN-16-24Z	1-5/16"X12	1-1/2"X11.5	23.1	27.5	65.5	50
1JN-20-16Z	1-5/8"X12	1"X11.5	24.3	25.5	63.0	46
1JN-20Z	1-5/8"X12	1-1/4"X11.5	24.3	26.5	62.2	46
1JN-20-24Z	1-5/8"X12	1-1/2"X11.5	24.3	27.5	64.9	50
1JN-24-20Z	1-7/8"X12	1-1/4"X11.5	27.5	26.5	67.3	50
1JN-24Z	1-7/8"X12	1-1/2"X11.5	27.5	27.5	68.0	50
1JN-32Z	2-1/2"X12	2"X11.5	33.9	27.5	78.5	65
1JN-32-24Z	2-1/2"X12	1-1/2"X11.5	33.9	27.5	78.5	65

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index



1JN4

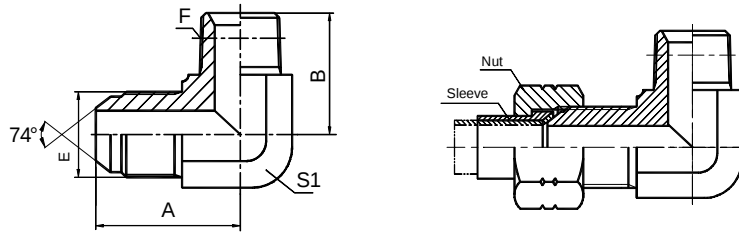
45° JIC Male 74° (37°) Cone / NPT Male

Part No.	Thread		Dimensions		
	E	F	A	B	S1
1JN4-04-02Z	7/16" X20	1/8" X27	21.5	17	11
1JN4-04Z	7/16" X20	1/4" X18	22.3	21	14
1JN4-06-04Z	9/16" X18	1/4" X18	22.8	21	14
1JN4-06-08Z	9/16" X18	1/2" X14	25.0	29.5	22
1JN4-06Z	9/16" X18	3/8" X18	24.0	24	16
UN4-08-06Z	1/8" X16	3/8" X18	26.8	24	19
1JN4-08Z	3/4" X16	1/2" X14	28.0	29.5	22
1JN4-10-08Z	7/8" X14	1/2" X14	31.0	29.5	22
1JN4-12-08Z	1-1/16" X12	1/2" X14	35.5	31	27
1JN4-12-16Z	1-1/16" X12	1" X11.5	37.5	39	33
1JN4-12Z	1-1/16" X12	3/4" X14	35.5	35	27
1JN4-16-12Z	1-5/16" X12	3/4" X14	38.5	36.5	33
1JN4-16Z	1-5/16" X12	1" X11.5	38.5	39	33
1JN4-20Z	1-5/8" X 12	1-1/4" X11.5	43.0	42	41
1JN4-24Z	1-7/8" X12	1-1/2" X11.5	49.0	45	48
1JN4-32Z	2-1/2" X12	2" X11.5	58.0	50	63

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index



1JN9

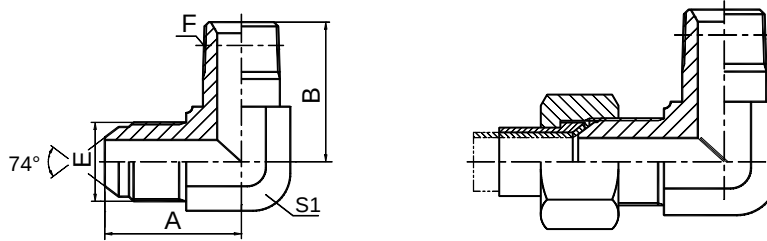
90° Elbow JIC Male 74° (37°) Cone / NPT Male

1JN9 Part Number	Thread E	F	Dimensions		
			A	B	S1
1JN9-04Z	7/16"X20	1/4"X18	26.6	25.5	14
1JN9-04-02Z	7/16"X20	1/8"X27	24.5	21.0	11
1JN9-04-06Z	7/16"X20	3/8"X18	29.5	31.0	19
1JN9-04-08Z	7/16"X20	1/2"X14	33.5	37.3	22
1JN9-05-04Z	1/2"X20	1/4"X18	26.6	25.5	14
1JN9-06Z	9/16"X18	3/8"X18	29.0	31.0	19
1JN9-06-02Z	9/16"X18	1/8"X27	26.9	23.5	14
1JN9-06-04Z	9/16"X18	1/4"X18	26.9	25.5	14
1JN9-06-08Z	9/16"X18	1/2"X14	32.0	36.7	22
1JN9-06-12Z	9/16"X18	3/4"X14	35.5	44.0	27
1JN9-08Z	3/4"X16	1/2"X14	34.8	37.3	22
1JN9-08-04Z	3/4"X16	1/4"X18	32.0	28.5	19
1JN9-08-06Z	3/4"X16	3/8"X18	32.0	31.0	19
1JN9-08-12Z	3/4"X16	3/4"X14	37.9	44.0	27
1JN9-08-16Z	3/4"X16	1"X11.5	41.5	50.0	33
1JN9-10-06Z	7/8"X14	3/8"X18	37.8	32.5	22
1JN9-10-08Z	7/8"X14	1/2"X14	37.8	37.3	22
1JN9-10-12Z	7/8"X14	3/4"X14	41.0	44.0	27
1JN9-12Z	1-1/16"X12	3/4"X14	44.2	44.0	27
1JN9-12-08Z	1-1/16"X12	1/2"X14	44.2	40.0	27
1JN9-12-16Z	1-1/16"X12	1"X11.5	49.0	50.0	33
1JN9-16Z	1-5/16"X12	1"X11.5	49.0	50.0	33
1JN9-16-12Z	1-5/16"X12	3/4"X14	49.0	45.2	33
1JN9-16-20Z	1-5/16"X12	1-1/4"X11.5	54.0	60.5	41
1JN9-20Z	1-5/8"X12	1-1/4"X11.5	55.5	54.5	41
1JN9-20-24Z	1-5/8"X12	1-1/2"X11.5	59.4	63.0	48
1JN9-24Z	1-7/8"X12	1-1/2"X11.5	62.5	63.0	48
1JN9-24-20Z	1-7/8"X12	1-1/4"X11.5	62.5	63.0	48
1JN9-32Z	2-1/2"X12	2"X11.5	75.4	67.5	63

Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index



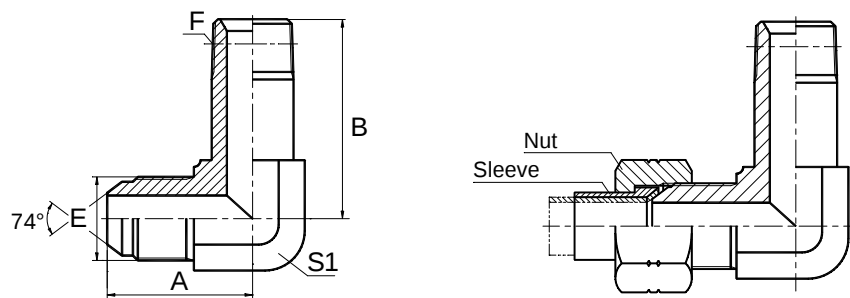
A

1JN9-L

90° JIC Male 74° (37°) Cone / Long NPT Male

1JN9-L Part Number	Thread E	F	Dimensions A	B	S1
1JN9-04-02LZ	7/16"X20	1/8"X27	24.5	30	11

Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.



1JN9-LL

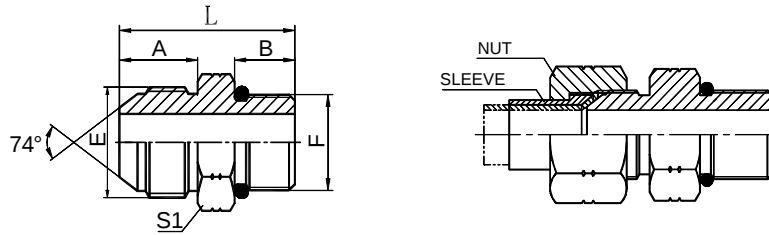
90° Elbow JIC Male 74° (37°) Cone / Longer NPT Male

1JN9 Part Number	Thread E	F	Dimensions A	B	S1
1JN9-04-02LLZ	7/16"X20	1/8"X27	24.5	39.6	11

Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index



1JO

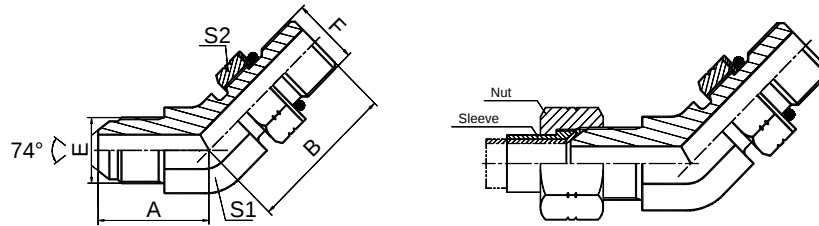
**JIC Male 74° (37°) Cone /
O-Ring Boss L-Series ISO 11926-3**

1JO Part Number	Thread E	F	O-Ring F	Dimensions			
				A	B	L	S1
1JO-04Z	7/16"X20	7/16"X20	O904	14.0	9.1	31.0	14
1JO-04-06Z	7/16"X20	9/16"X18	O906	14.0	10.0	32.7	17
1JO-04-08Z	7/16"X20	3/4"X16	O908	14.0	11.13	33.0	22
1JO-04-10Z	7/16"X20	7/8"X14	O910	14.0	12.7	37.7	27
1JO-06Z	9/16"X18	9/16"X18	O906	14.1	10.0	33.0	17
1JO-06-04Z	9/16"X18	7/16"X20	O904	14.1	9.1	32.2	17
1JO-06-08Z	9/16"X18	3/4"X16	O908	14.1	11.1	35.0	22
1JO-06-10Z	9/16"X18	7/8"X14	O910	14.1	12.7	37.9	27
1JO-06-12Z	9/16"X18	1-1/16"X12	O912	14.1	15.1	40.0	32
1JO-08Z	3/4"X16	3/4"X16	O908	16.7	11.1	37.5	22
1JO-08-06Z	3/4"X16	9/16"X18	O906	16.7	9.93	37.0	22
1JO-08-10Z	3/4"X16	7/8"X14	O910	16.7	12.7	40.0	27
1JO-08-12Z	3/4"X16	1-1/16"X12	O912	16.7	15.1	44.7	32
1JO-08-16Z	3/4"X16	1-5/16"X12	O916	16.7	15.1	45.6	41
1JO-10Z	7/8"X14	7/8"X14	O910	19.3	12.7	42.5	27
1JO-10-08Z	7/8"X14	3/4"X16	O908	19.3	11.1	41.5	24
1JO-10-12Z	7/8"X14	1-1/16"X12	O912	19.3	15.1	47.2	32
1JO-10-16Z	7/8"X14	1-5/16"X12	O916	19.3	15.09	45.5	38
1JO-12Z	1-1/16"X12	1-1/16"X12	O912	21.9	15.1	50.0	32
1JO-12-08Z	1-1/16"X12	3/4"X16	O908	21.9	11.1	49.2	30
1JO-12-10Z	1-1/16"X12	7/8"X14	O910	21.9	12.70	50.8	30
1JO-12-16Z	1-1/16"X12	1-5/16"X12	O916	21.9	15.09	48.0	38
1JO-12-20Z	1-1/16"X12	1-5/8"X12	O920	21.9	15.1	52.7	50
1JO-16Z	1-5/16"X12	1-5/16"X12	O916	23.1	15.09	49.0	38
1JO-16-12Z	1-5/16"X12	1-1/16"X12	O912	23.1	15.09	52.5	36
1JO-16-20Z	1-5/16"X12	1-5/8"X12	O920	23.1	15.09	53.0	50
1JO-16-24Z	1-5/16"X12	1-7/8"X12	O924	23.1	15.09	53.0	55
1JO-20Z	1-5/8"X12	1-5/8"X12	O920	24.3	15.09	54.5	50
1JO-20-16Z	1-5/8"X12	1-5/16"X12	O916	24.3	15.09	56.5	46
1JO-20-24Z	1-5/8"X12	1-7/8"X12	O924	24.3	15.1	56.8	55
1JO-24Z	1-7/8"X12	1-7/8"X12	O924	27.5	15.1	60.0	55
1JO-24-20Z	1-7/8"X12	1-5/8"X12	O920	27.5	15.09	61.5	50

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index



A

1JO4-OG

**45° Elbow JIC Male 74° (37°) Cone / SAE O-ring
Boss L-Series ISO 11926-3**

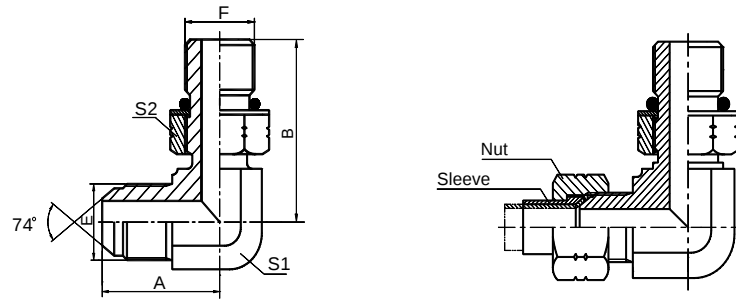
1JO4-OG Part Number	Thread E	F	O-Ring F	Dimensions		S1	S2
				A	B		
1JO4-04OGZ	7/16"X20	7/16"X20	O904	21	24.0	11	17
1JO4-06OGZ	9/16"X18	9/16"X18	O906	23.5	28.0	14	19
1JO4-08OGZ	3/4"X16	3/4"X16	O908	25.8	32.5	19	24
1JO4-08-10OGZ	3/4"X16	7/8"X14	O910	28	38.7	22	27
1JO4-12OGZ	1-1/16"X12	1-1/16"X12	O912	34	43.5	27	32
1JO4-12-16OGZ	1-1/16"X12	1-5/16"X12	O916	37	45.5	33	41
1JO4-16OGZ	1-5/16"X12	1-5/16"X12	O916	38	45.5	33	41
1JO4-16-12OGZ	1-5/16"X12	1-1/16"X12	O912	38	45.0	33	32
1JO4-20OGZ	1-5/8"X12	1-5/8"X12	O920	42	48.5	41	50

Note: 1. Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.
2. F end is connected with ISO 11926-1 port.

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index

A



1JO9-OG

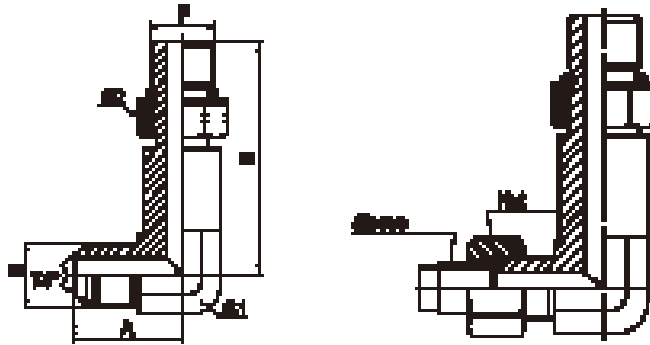
90° Elbow JIC Male 74° (37°) Cone /
SAE O-ring Boss L-Series ISO 11926-3

1JO9-OG Part Number	Thread E	F	O-Ring F	Dimensions		S1	S2
				A	B		
1JO9-04OGZ	7/16"X20	7/16"X20	O904	24.5	27.2	11	17
1JO9-04-06OGZ	7/16"X20	9/16"X18	O906	26.6	31.8	14	19
1JO9-06-04OGZ	9/16"X18	7/16"X20	O904	26.9	30.0	14	17
1JO9-06-08OGZ	9/16"X18	3/4"X16	O908	30.0	36.8	19	24
1JO9-06-10OGZ	9/16"X18	7/8"X14	O910	32.0	44.0	22	27
1JO9-06OGZ	9/16"X18	9/16"X18	O906	26.9	31.8	14	19
1JO9-08OGZ	3/4"X16	3/4"X16	O908	33.0	36.8	19	24
1JO9-08-06OGZ	3/4"X16	9/16"X18	O906	33.0	33.5	19	19
1JO9-08-10OGZ	3/4"X16	7/8"X14	O910	34.8	44.0	22	27
1JO9-08-12OGZ	3/4"X16	1-1/16"X12	O912	37.9	51.0	27	32
1JO9-08-16OGZ	3/4"X16	1-5/16"X12	O916	41.5	54.5	33	41
1JO9-10-08OGZ	7/8"X14	3/4"X16	O908	38.0	40.0	22	24
1JO9-10-12OGZ	7/8"X14	1-1/16"X12	O912	41.0	51.0	27	32
1JO9-10OGZ	7/8"X14	7/8"X14	O910	37.8	44.0	22	27
1JO9-12-08OGZ	1-1/16"X12	3/4"X16	O908	45.0	44.0	27	24
1JO9-12-10OGZ	1-1/16"X12	7/8"X14	O910	44.2	47.0	27	27
1JO9-12OGZ	1-1/16"X12	1-1/16"X12	O912	44.2	51.0	27	32
1JO9-12-16OGZ	1-1/16"X12	1-5/16"X12	O916	47.8	54.5	33	41
1JO9-16-12OGZ	1-5/16"X12	1-1/16"X12	O912	48.8	54.5	33	32
1JO9-16OGZ	1-5/16"X12	1-5/16"X12	O916	48.8	54.5	33	41
1JO9-16-20OGZ	1-5/16"X12	1-5/8"X12	O920	53.8	59.0	41	50
1JO9-20-16OGZ	1-5/8"X12	1-5/16"X12	O916	55.5	59.5	41	41
1JO9-20OGZ	1-5/8"X12	1-5/8"X12	O920	55.3	59.0	41	50
1JO9-20-24OGZ	1-5/8" X12	1-7/8"X12	O924	59.4	63.0	48	55
1JO9-24OGZ	1-7/8"X12	1-7/8"X12	O924	62.5	63.0	48	55
1JO9-24-20OGZ	1-7/8"X12	1-5/8"X12	O920	62.5	63	48	50

Note: 1 Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.
2 F end is connected with ISO 11926-1 port.

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index

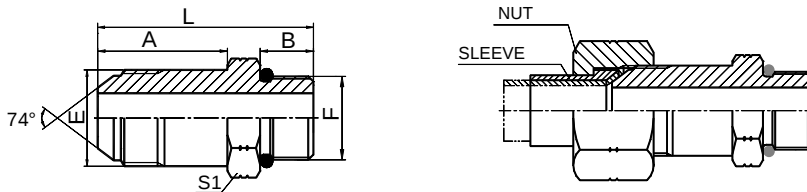


1JO9-OG/L

90°JIC Male 74° (37°) Cone / Long SAE
O-ring Boss L-Series ISO 11926-3

Part Number	Thread		O-Ring F	Dimensions		S1	S2
	E	F		A	B		
1JO9-06OGLZ	9/16"X18	9/16"X18	O906	26.9	52.8	14	19
1JO9-08OGLZ	3/4"X16	3/4"X16	O908	32.5	63.5	19	24
1JO9-12OGLZ	1-1/16"X12	1-1/16"X12	O912	44.2	84.8	27	32
1JO9-16OGLZ	1-5/16"X12	1-5/16"X12	O916	49.0	94.5	33	41

Note: 1. Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.
2. F end is connected with ISO 11926-1 port.



1JO-L

Long JIC Male 74° (37°) Cone / SAE
O-ring Boss L-Series ISO 11926-3

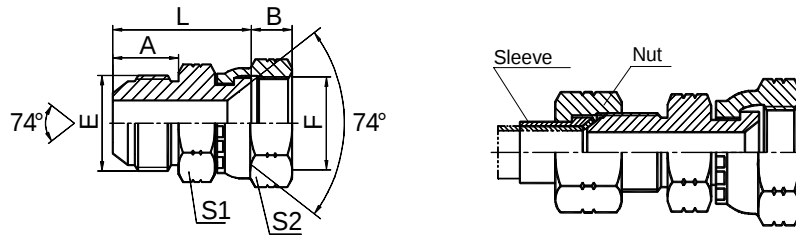
1JO-L Part Number	Thread		O-Ring F	Dimensions		L	S1
	E	F		A	B		
1JO-08LAZ	3/4"X16	3/4"X16	O908	48	11.1	67.5	22
1JO-16LAZ	1-5/16"X12	1-5/16"X12	O916	72	15.1	100	38

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index

A

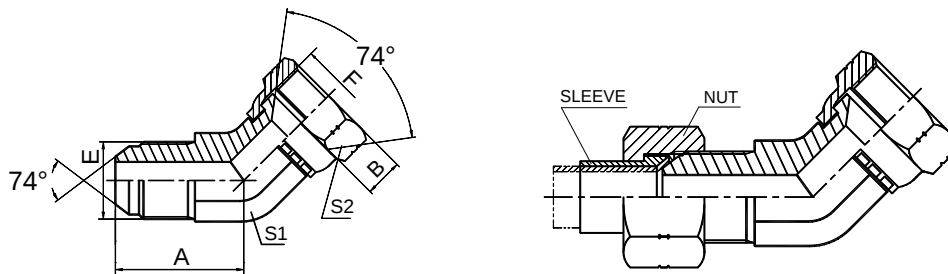


2J

JIC Male 74° (37°) Cone / JIC Female 74° (37°) Seat

2J Part Number	Thread E	F	Dimensions				
			A	B	L	S1	S2
2J-08-10Z	3/4"X16	7/8"X14	16.7	13	36.5	22	27
2J-10-12Z	7/8"X14	1-1/16"X12	19.3	15	42.0	27	32
2J-12-10Z	1-1/16"X12	7/8"X14	21.9	13	43.5	30	27
2J-16-12Z	1-5/16"X12	1-1/16"X12	21.9	15	46.5	36	32
2J-20-16Z	1-5/8"X12	1-5/16"X12	24.3	16	50.0	46	41
2J-20-24Z	1-5/8"X12	1-7/8"X12	24.3	20	55.5	46	55

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.



2J4

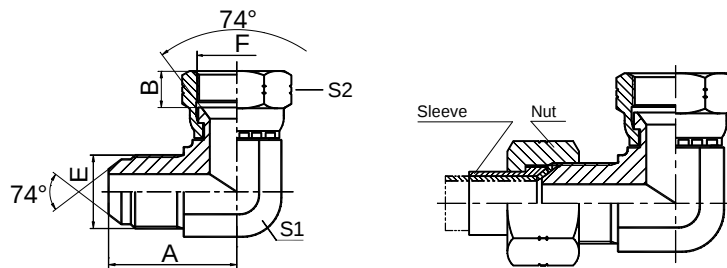
45° Elbow JIC Male 74° (37°) Cone / JIC Female 74° (37°) Seat

2J4 Part Number	Thread E	F	Dimensions				
			A	B	S1	S2	
2J4-04Z	7/16"X20	7/16"X20	21.5	9	11	15	
2J4-06Z	9/16"X18	9/16"X18	22.8	10.5	14	19	
2J4-08Z	3/4"X16	3/4"X16	26.8	11	19	24	
2J4-10Z	7/8"X14	7/8"X14	31.0	13	22	27	
2J4-12Z	1-1/16"X12	1-1/16"X12	35.5	15	27	32	
2J4-16Z	1-5/16"X12	1-5/16"X12	38.5	16	33	41	
2J4-20Z	1-5/8"X12	1-5/8"X12	43.0	17	41	50	

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index

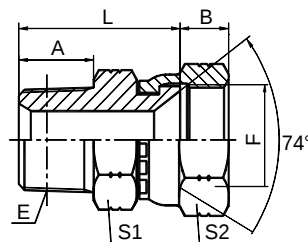


2J9

90° Elbow JIC Male 74° (37°) Cone /
JIC Female 74° (37°) Seat

2J9 Part Number	Thread E	Thread F	Dimensions			
			A	B	S1	S2
2J9-04Z	7/16"X20	7/16"X20	24.5	9	11	15
2J9-06Z	9/16"X18	9/16"X18	26.9	10.5	14	19
2J9-08Z	3/4"X16	3/4"X16	32.0	11	19	24
2J9-10Z	7/8"X14	7/8"X14	37.8	13	22	27
2J9-12Z	1-1/16"X12	1-1/16"X12	44.2	15	27	32
2J9-16Z	1-5/16"X12	1-5/16"X12	48.8	16	33	41
2J9-20Z	1-5/8"X12	1-5/8"X12	55.5	17	41	50
2J9-24Z	1-7/8"X12	1-7/8"X12	62.5	20	48	55

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.



2NJ

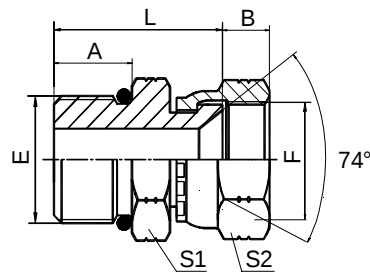
NPT Male / JIC Female 74° (37°) Seat

2NJ	Thread		Dimensions				
Part Number	E	F	A	B	L	S1	S2
2NJ-02-04Z	1/8"X27	7/16"X20	10.5	9.0	24.5	12	15
2NJ-04Z	1/4"X18	7/16"X20	15.0	9.0	29.0	17	15
2NJ-04-06Z	1/4"X18	9/16"X18	15.0	10.5	29.5	17	19
2NJ-06Z	3/8"X18	9/16"X18	16.0	10.5	30.5	19	19
2NJ-06-08Z	3/8"X18	3/4"X16	16.0	10.5	32.5	19	24
2NJ-08Z	1/2"X14	3/4"X16	19.5	10.5	37.5	22	24
2NJ-12Z	3/4"X14	1-1/16"X12	19.5	15.0	42.0	30	32
2NJ-16Z	1"X11.5	1-5/16"X12	25.5	16.0	48.0	36	41
2NJ-20Z	1-1/4"X11.5	1-5/8"X12	26.5	17.0	56.0	46	50

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index

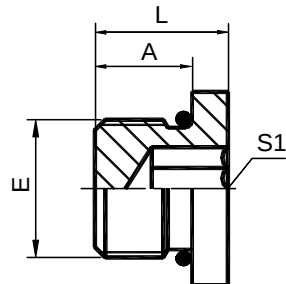
A



20J

SAE O-ring Boss / JIC Female 74° (37°) Seat

20J Part No.	Thread		O-Ring E	Dimensions				
	E	F		A	B	L	S1	S2
20J-06Z	9/16"X18	9/16"X18	0906	9.9	10.5	24.5	17	19
20J-06-08Z	9/16"X18	3/4"X16	0906	9.9	10.5	26.0	19	24
20J-08Z	3/4"X16	3/4"X16	0908	11.1	10.5	29.5	22	24
20J-12Z	1-1/16"X12	1-1/16"X12	0912	15.1	15.0	38.5	32	32
20J-16Z	1-5/16"X12	1-5/16"X12	0916	15.1	16.0	38.5	38	41



40N

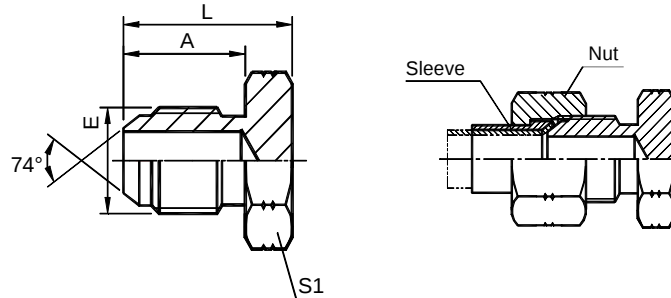
SAE O-ring Boss Hollow Hex Plug

40N Part Number	Thread E	O-Ring E	Dimensions		
			A	L	S1
40N-04Z	7/16"X20	0904	9.1	11.5	5
40N-06Z	9/16"X18	0906	9.9	12.2	6
40N-08Z	3/4"X16	0908	11.1	14.3	8

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index

4J

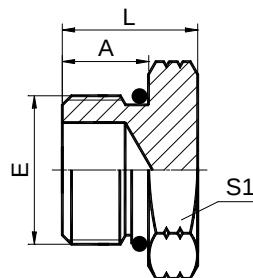


JIC Male 74° (37°) Cone Plug

4J Part Number	Thread E	Dimensions		
		A	L	S1
4J-04Z	7/16"X20	14.0	20	12
4J-06Z	9/16"X18	14.1	20	17
4J-08Z	3/4"X16	16.7	24	22
4J-10Z	7/8"X14	19.3	27.5	24
4J-12Z	1-1/16"X12	21.9	32	30
4J-16Z	1-5/16"X12	23.1	34	36
4J-20Z	1-5/8"X12	24.3	37	46
4J-24Z	1-7/8"X12	27.5	42	50
4J-32Z	2-1/2"X12	33.9	52	65

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.

4O



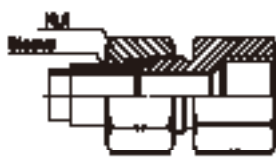
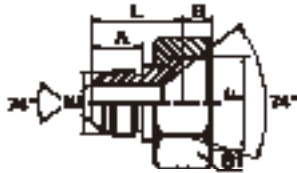
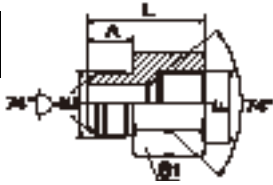
SAE O-ring Boss Plug

4O Part Number	Thread E	O-Ring E	Dimensions		
			A	L	S1
4O-04Z	7/16"X20	0904	9.15	17.0	14
4O-06Z	9/16"X18	0906	9.90	18.5	17
4O-08Z	3/4"X16	0908	11.1	20.3	22
4O-10Z	7/8"X14	0910	12.7	23.6	27
4O-12Z	1-1/16"X12	0912	15.1	27.7	32
4O-16Z	1-5/16"X12	0916	15.1	28.4	38
4O-20Z	1-5/8"X12	0920	15.1	30.5	50
4O-24Z	1-7/8"X12	0924	15.1	32.3	55

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index

A



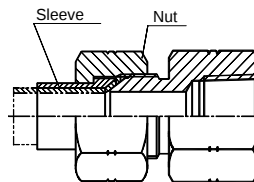
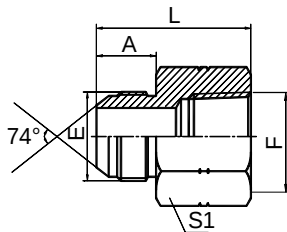
5J

5JS

JIC Male 74° (37°) Cone / JIC Female 74° (37°) Seat

Part Number	Thread		Dimensions			
	E	F	A	L	S1	B
5J-04-06SZ	7/16"X20	9/16"X18	14.0	24.6	19	9.8
5J-04-08SZ	7/16"x20	3/4"X16	14.0	25.4	24	10.9
5J-06-08SZ	9/16"X18	3/4"X16	14.1	25.4	24	10.9
5J-06-12SZ	9/16"X18	1-1/16"X12	14.1	27.7	32	15.0
5J-06-16SZ	9/16"X18	1-5/16"X12	14.1	30.9	38	15.9
5J-08-12SZ	3/4"X16	1-1/16"X12	16.7	30.2	32	15.0
5J-08-16SZ	3/4"X16	1-5/16"X12	16.7	32.0	38	15.9
5J-10-16SZ	7/8"X14	1-5/16"X12	19.3	35.0	38	15.9
5J-12-16SZ	1-1/16"X12	1-5/16"X12	22.0	37.3	38	15.9
5J-16-20SZ	1-5/16"X12	1-5/8"X12	23.0	40.3	50	16.8

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.



5JN

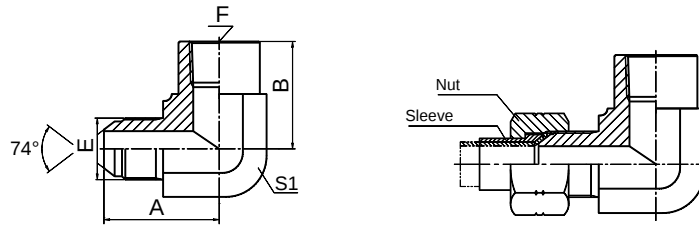
JIC Male 74° (37°) Cone / NPT Female

Part Number	Thread		Dimensions		
	E	F	A	L	S1
5JN-04Z	7/16"X20	1/4"X18	14.0	35.5	19
5JN-06-04Z	9/16"X18	1/4"X18	14.1	35.6	19
5JN-06Z	9/16"X18	3/8"X18	14.1	37.1	22
5JN-08Z	3/4"X16	1/2"X14	16.7	45.6	30
5JN-12Z	1-1/16"X12	3/4"X14	21.9	52.3	36
5JN-16Z	1-5/16"X12	1"X11.5	23.1	59.0	41
5JN-20Z	1-5/8"X12	1-1/4"X11.5	24.3	61.5	50
5JN-24Z	1-7/8"X12	1-1/2"X11.5	27.5	62.5	60

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index



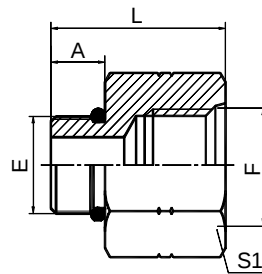
A

5JN9

90° Elbow JIC Male 74° (37°) Cone / NPT Female

5JN9 Part Number	Thread E	F	Dimensions		
			A	B	S1
5JN9-04Z	7/16"X20	1/4"X18	30.9	22.4	19
5JN9-08Z	3/4"X16	1/2"X14	39.5	31.2	30

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.



50

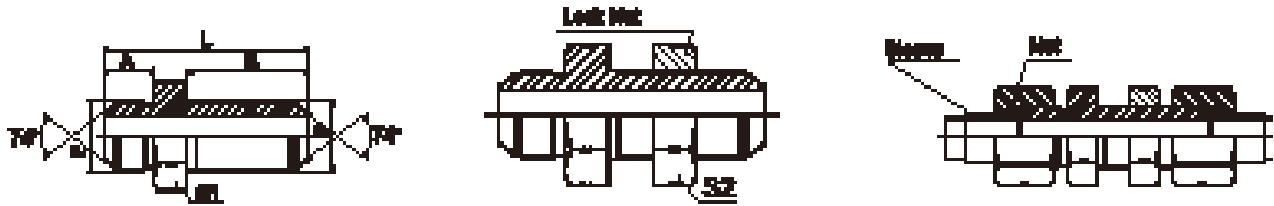
SAE O-ring Boss L-Series
ISO 11926-3 / SAE Female ISO 11926-1

50 Part Number	Thread E	F	O-Ring E	Dimensions		
				A	B	S1
50-12-06Z	1-1/16"X12	9/16"X18	O912	15.09	26.0	32
50-16-08Z	1-5/16"X12	3/4"X16	O916	15.09	26.0	38
50-16-12Z	1-5/16"X12	1-1/16"X12	O916	15.1	43.5	38
50-20-12Z	1-5/8"X12	1-1/16"X12	O920	15.1	35.0	50
50-20-16Z	1-5/8"X12	1-5/16"X12	O920	15.1	42.0	50

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index

A

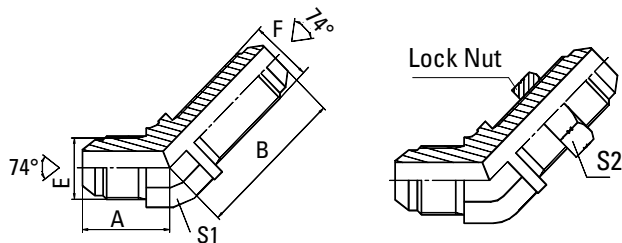


6J-LN

JIC Male 74° (37°) Cone Bulkhead

6J-LN Part Number	Thread E	F	Dimensions		L	S1	S2
			A	B			
6J-04LNZ	7/16"X20	7/16"X20	14.0	32.5	52.5	17	17
6J-06LNZ	9/16"X18	9/16"X18	14.1	32.5	54.5	22	22
6J-08LNZ	3/4"X16	3/4"X16	16.7	36.5	61.5	24	24
6J-10LNZ	7/8"X14	7/8"X14	19.3	40.0	69.5	30	30
6J-12LNZ	1-1/16"X12	1-1/16"X12	21.9	44.5	78.5	36	36
6J-16LNZ	1-5/16"X12	1-5/16"X12	23.1	44.5	79.8	41	41
6J-20LNZ	1-5/8"X12	1-5/8"X12	24.3	45.7	84	50	50
6J-24LNZ	1-7/8"X12	1-7/8"X12	27.5	46.0	89.5	55	55

Note: "LN" in part number designates the adapter with lock nut. Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.



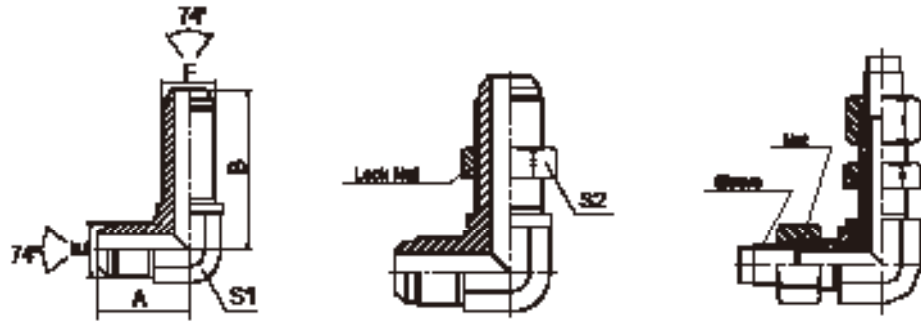
6J4

45° JIC Male 74° (37°) Cone

6J4 Part Number	Thread E	F	Dimensions		S1	S2
			A	B		
6J4-06LNZ	9/16"X18	9/16"X18	23.0	42.4	14	22
6J4-08LNZ	3/4"X16	3/4"X16	27.0	49.3	19	24
6J4-16LNZ	1-5/16"X12	1-5/16"X12	37.8	65.0	33	41

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index



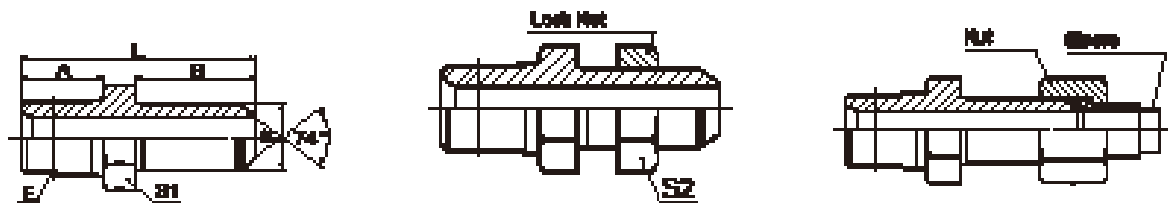
A

6J9-LN

90° JIC Male 74° (37°) Cone Bulkhead

6J9 Part Number	Thread E	F	Dimensions		S1	S2
			A	B		
6J9-04LNZ	7/16"X20	7/16"X20	24.5	40.4	11	17
6J9-06LNZ	9/16"X18	9/16"X18	27.7	46.0	14	22
6J9-08LNZ	3/4"X16	3/4"X16	34.5	53.5	19	24
6J9-12LNZ	1-1/16"X12	1-1/16"X12	45.2	67.8	27	36
6J9-16LNZ	1-5/16"X12	1-5/16"X12	50.0	71.0	33	41

Note: "LN" in part number designates the adapter with lock nut. Nut and sleeve should be ordered separately. Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.



6NJ-LN

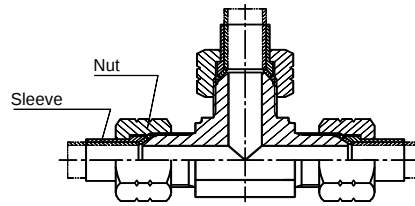
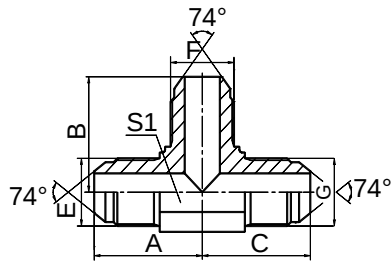
NPT Male / JIC Male 74° (37°) Cone Bulkhead

6NJ Part Number	Thread E	F	Dimensions		L	S1	S2
			A	B			
6NJ-04-06LNZ	1/4"X18	9/16"X18	15.0	32.5	55.5	22	22
6NJ-06-08LNZ	3/8"X18	3/4"X16	16.0	36.5	60.5	24	24
6NJ-08-10LNZ	1/2"X14	7/8"X14	19.5	40.0	69.5	30	30
6NJ-12LNZ	3/4"X14	1-1/16"X12	19.5	44.5	74.0	36	36
6NJ-16LNZ	1"X11.5	1-5/16"X12	25.5	44.5	83.0	41	41

Note: "LN" in part number designates the adapter with lock nut. Nut and sleeve should be ordered separately. Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index

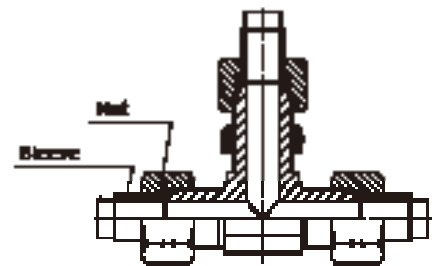
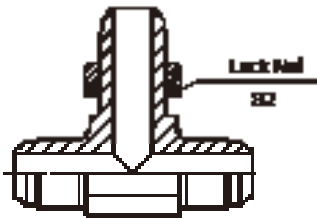
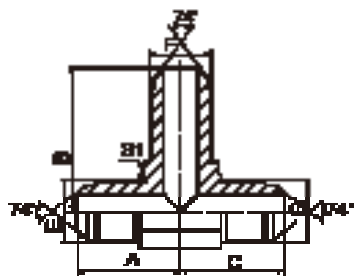


AJ

JIC Male 74° (37°) Cone

AJ Part Number	Thread			Dimensions			
	E	F	G	A	B	C	S1
AJ-04Z	7/16"X20	7/16"X20	7/16"X20	24.5	24.5	24.5	11
AJ-06Z	9/16"X18	9/16"X18	9/16"X18	26.9	26.9	26.9	14
AJ-08Z	3/4"X16	3/4"X16	3/4"X16	32.0	32.0	32.0	19
AJ-12Z	1-1/16"X12	1-1/16"X12	1-1/16"X12	44.2	44.2	44.2	27
AJ-16Z	1-5/16"X12	1-5/16"X12	1-5/16"X12	49.0	49.0	49.0	33

Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.



AJ6JJ-LN

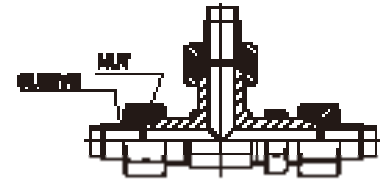
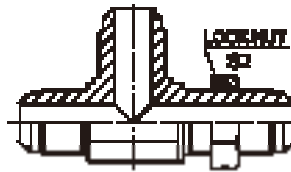
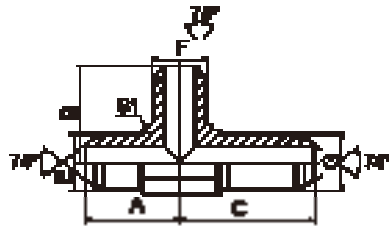
JIC Male 74° (37°) Cone

AJ6JJ Part Number	Thread			Dimensions				
	E	F	G	A	B	C	S1	S2
AJ6JJ-06LNZ	9/16"X18	9/16"X18	9/16"X18	26.9	46.0	26.9	14	22
AJ6JJ-08LNZ	3/4"X16	3/4"X16	3/4"X16	32.0	53.5	32.0	19	24

Note: "LN" in part number designates the adapter with lock nut. Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index



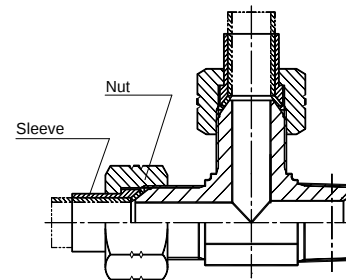
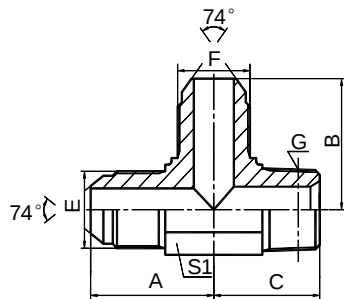
A

AJJ6J-LN

JIC Male 74° (37°) Cone

Part Number	Thread			Dimensions				
	E	F	G	A	B	C	S1	S2
AJJ6J-06LNZ	9/16"X18	9/16"X18	9/16"X18	26.9	26.9	46.0	14	22
AJJ6J-08LNZ	3/4"X16	3/4"X16	3/4"X16	32.0	32.0	53.5	19	24
AJJ6J-12LNZ	1-1/16"X12	1-1/16"X12	1-1/16"X12	44.2	44.2	67.8	27	36
AJJ6J-16LNZ	1-5/16"X12	1-5/16"X12	1-5/16"X12	49.0	49.0	71.0	33	41

Note: "LN" in part number designates the adapter with lock nut. Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.



AJJN

JIC Male / JIC Male / NPT Male

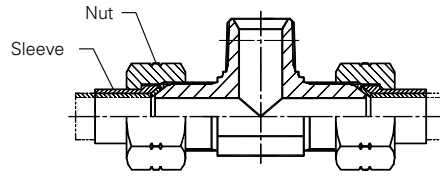
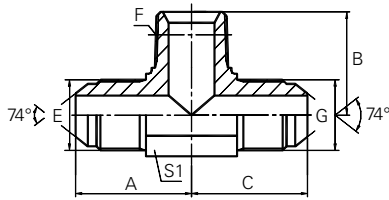
AJJN Part Number	Thread			Dimensions			
	E	F	G	A	B	C	S1
AJJN-04Z	7/16"X20	7/16"X20	1/4"X18	26.6	26.6	25.5	14
AJJN-06Z	9/16"X18	9/16"X18	3/8"X18	30.0	30.0	31.0	19
AJJN-08Z	3/4"X16	3/4"X16	1/2"X14	34.8	34.8	36.7	22
AJJN-12Z	1-1/16"X12	1-1/16"X12	3/4"X14	44.2	44.2	44.0	27
AJJN-16Z	1-5/16"X12	1-5/16"X12	1"X11.5	49.0	49.0	50.0	33

Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index

A

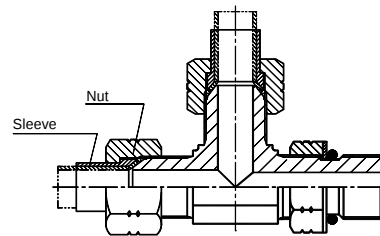
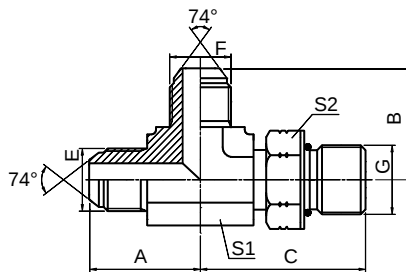


AJNJ

JIC Male / NPT Male / JIC Male

AJNJ	Thread			Dimensions				
Part No.	E	F	G	A	B	C	S1	
AJNJ-04Z	7/16" X20	1/4" X18	7/16" X20	26.6	25.5	26.6	14	
AJNJ-08Z	3/4" X16	1/2" X14	3/4" X16	34.8	37.3	34.8	22	

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.



AJJO-OG

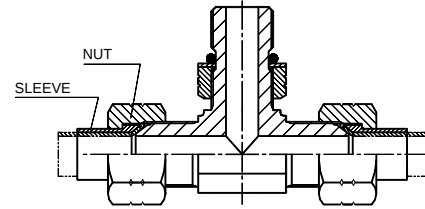
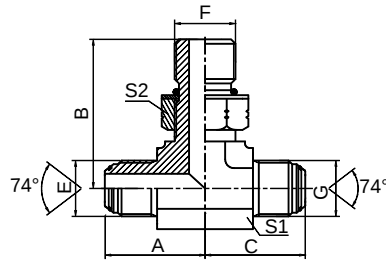
JIC Male / JIC
Male / SAE O-ring Boss

AJJO-OG	Thread			O-Ring	Dimensions				
Part Number	E	F	G	G	A	B	C	S1	S2
AJJO-04OGZ	7/16"X20	7/16"X20	7/16"X20	O904	24.5	24.5	27.2	11	17
AJJO-06OGZ	9/16"X18	9/16"X18	9/16"X18	O906	26.9	26.9	31.8	14	19
AJJO-08OGZ	3/4"X16	3/4"X16	3/4"X16	O908	33.0	33.0	36.8	19	24
AJJO-12OGZ	1-1/16"X12	1-1/16"X12	1-1/16"X12	O912	44.2	44.2	51.0	27	32
AJJO-16OGZ	1-5/16"X12	1-5/16"X12	1-5/16"X12	O916	48.8	48.8	54.5	33	41
AJJO-20OGZ	1-5/8"X12	1-5/8"X12	1-5/8"X12	O920	55.3	55.3	59.0	41	50

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index



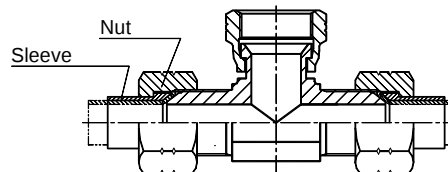
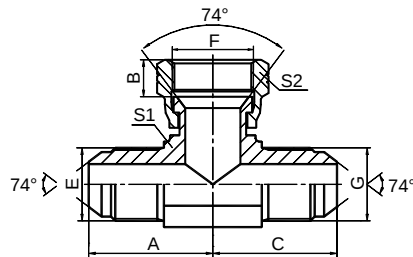
A

AJOJ-OG

JIC Male / SAE O-ring Boss / JIC Male

AJOJ-OG Part Number	Thread E	F	G	O-Ring F	Dimensions		C	S1	S2
					A	B			
AJOJ-06OGZ	9/16"X18	9/16"X18	9/16"X18	O906	26.9	31.8	26.9	14	19
AJOJ-08OGZ	3/4"X16	3/4"X16	3/4"X16	O908	33.0	36.8	33.0	19	24
AJOJ-12OGZ	1-1/16"X12	1-1/16"X12	1-1/16"X12	O912	44.2	51.0	44.2	27	32
AJOJ-20OGZ	1-5/8"X12	1-5/8"X12	1-5/8"X12	O920	55.3	59.0	55.3	41	50

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.



BJ

JIC Male / JIC Female / JIC Male

BJ Part Number	Thread E	F	G	Dimensions		C	S1	S2
				A	B			
BJ-04Z	7/16"X20 7	7/16"X20	7/16"X20	24.5	9	24.5	11	15
BJ-06Z	9/16"X18	9/16"X18	9/16"X18	26.9	10.5	26.9	14	19
BJ-08Z	3/4"X16	3/4"X16	3/4"X16	32.0	11	32.0	19	24
BJ-10Z	7/8"X14	7/8"X14	7/8"X14	37.8	14	37.8	22	27
BJ-12Z	1-1/16"X12	1-1/16"X12	1-1/16"X12	44.2	15	44.2	27	32
BJ-16Z	1-5/16"X12	1-5/16"X12	1-5/16"X12	49.0	16	49.0	33	41
BJ-20Z	1-5/8"X12	1-5/8"X12	1-5/8"X12	56.0	17	56.0	41	50

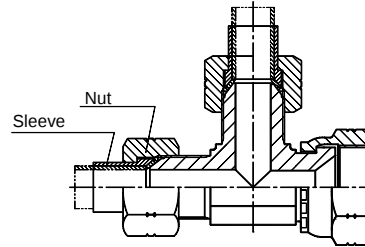
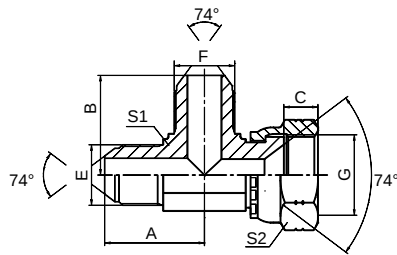
Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index

A

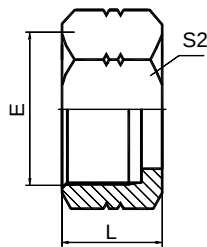
CJ



JIC Male / JIC Male / JIC Female

CJ Part Number	Thread			Dimensions				
	E	F	G	A	B	C	S1	S2
CJ-04Z	7/16"X20	7/16"X20	7/16"X20	24.5	24.5	9.0	11	15
CJ-06Z	9/16"X18	9/16"X18	9/16"X18	26.9	26.9	10.5	14	19
CJ-08Z	3/4"X16	3/4"X16	3/4"X16	32.0	32.0	9.5	19	24
CJ-10Z	7/8"X14	7/8"X14	7/8"X14	37.8	37.8	13	22	27
CJ-12Z	1-1/16"X12	1-1/16"X12	1-1/16"X12	44.2	44.2	15	27	32
CJ-16Z	1-5/16"X12	1-5/16"X12	1-5/16"X12	49.0	49.0	16	33	41
CJ-20Z	1-5/8"X12	1-5/8"X12	1-5/8"X12	55.5	55.5	17	41	50

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.



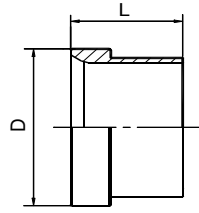
NB200

JIC Triple Lock Nut

Part Number	Thread E	Tube O.D. & Sleeve				Dimensions L	S2
		in.	Inch Sleeve	mm	Metric Sleeve		
NB200-04Z	7/16"X20	1/4"	NB300-04	6	NB500-06	15.8	14
NB200-06Z	9/16"X18	3/8"	NB300-06	10	NB500-10	18.5	19
NB200-08Z	3/4"X16	1/2"	NB300-08	12	NB500-12	21.6	24
NB200-10Z	7/8"X14	5/8"	NB300-10	16	NB500-16	24.9	27
NB200-12Z	1-1/16"X12	3/4"	NB300-12	18	NB500-18	26.2	32
NB200-16Z	1-5/16"X12	1"	NB300-16	25	NB500-25	28.7	38
NB200-20Z	1-5/8"X12	1-1/4"	NB300-20	32	NB500-32	31.2	50
NB200-24Z	1-7/8"X12	1-1/2"	NB300-24	38	NB500-38	36.1	60
NB200-32Z	2-1/2"X12	2	NB300-32	50	NB500-50	44.5	75

JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index

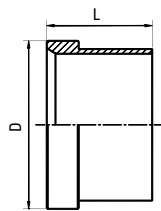


A

NB300

JIC Inch Sleeve

NB300				
Part Number	Thread	Tube O.D.	Dimensions D	L
NB300-04Z	7/16"X20	1/4"	9.73	10.4
NB300-06Z	9/16"X18	3/8"	12.75	12.7
NB300-08Z	3/4"X16	1/2"	17.32	14.2
NB300-10Z	7/8"X14	5/8"	20.24	16.8
NB300-12Z	1-1/16"X12	3/4"	24.69	17.3
NB300-16Z	1-5/16"X12	1"	31.04	19.8
NB300-20Z	1-5/8"X12	1-1/4"	38.96	23.1
NB300-24Z	1-7/8"X12	1-1/2"	45.31	28.4
NB300-32Z	2-1/2"X12	2"	61.19	30.2



NB500

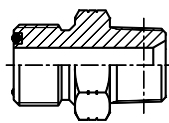
JIC Metric Sleeve

NB305				
Part Number	Thread	Tube O.D. mm	Dimensions D	L
NB500-06Z	7/16"X20	6	9.7	10.4
NB500-08Z	1/2"X20	8	11.3	11.2
NB500-10Z	9/16"X18	10	12.7	12.7
NB500-12Z	3/4"X16	12	17.3	14.2
NB500-16Z	7/8"X14	16	20.2	16.8
NB500-20Z	1-3/16"X12	20	27.8	19.3
NB500-32Z	1-5/8"X12	32	38.9	23.1

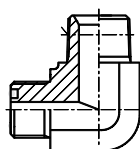
JIC 74° (37°) Cone Flared Carbon Steel Adapters and SAE ORB Plugs

Part No. Index Page intentionally left blank

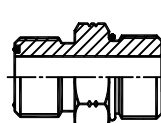
A



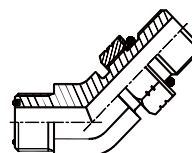
1FN
B-2



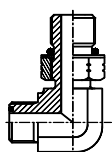
1FN9-16
B-2



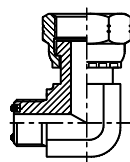
1FO
B-3



1FO4-OG
B-3



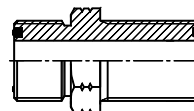
1FO9-OG
B-4



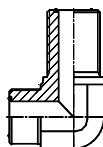
2F9
B-4



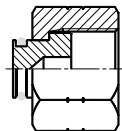
4F
B-5



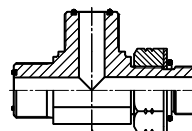
6F-LN
B-5



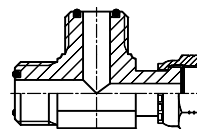
6F9
B-6



9F
B-6



AFFO-OG
B-7



CF
B-7

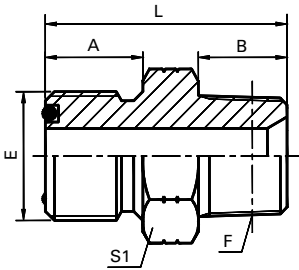
B



Powering Business Worldwide

ORFS Adapters

Part No. Index



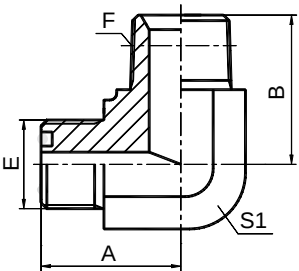
B

1FN

ORFS Male O-ring / NPT Male

Part Number	Thread E	F	O-Ring E	Dimensions		L	S1
				A	B		
1FN-12Z	1-3/16"X12	3/4"X14	O018	17	19.5	49	32

Note: ORFS fittings utilize a machined half dovetailed groove for seal retention.



1FN9-16

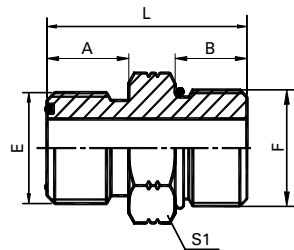
90° Elbow ORFS Male
O-ring / NPT Male

Part Number	Thread E	F	O-Ring E	Dimensions		S1
				A	B	
1FN9-16Z	1-7/16"X12	1"X11.5	O021	44.5	51.6	36

Note: E end is connected with ISO 11926-1 port. ORFS fittings utilize a machined half dovetailed groove for seal retention.

ORFS Adapters

Part No. Index



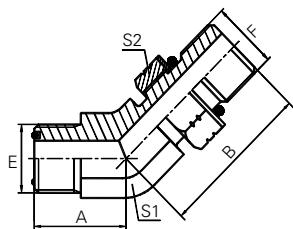
B

1FO

ORFS Male O-ring /
SAE O-ring Boss S-Series ISO 11926-2

Part Number	Thread		O-Ring		Dimensions			
	E	F	E	F	A	B	L	S1
1FO-04-06Z	9/16"X18	9/16"X18	O011	O906	9.8	12.0	29.5	17
1FO-06Z	11/16"X16	9/16"X18	O012	O906	11.2	12.0	31.9	19
1FO-06-08Z	11/16"X16	3/4"X16	O012	O908	11.2	14.0	35.0	22
1FO-08Z	13/16"X16	3/4"X16	O014	O908	12.8	14.0	36.6	22
1FO-08-12Z	13/16"X16	1-1/16"X12	O014	O912	12.8	18.5	44.5	32
1FO-12Z	1-3/16"X12	1-1/16"X12	O018	O912	17.0	18.5	48.6	32
1FO-12-16Z	1-3/16"X12	1-5/16"X12	O018	O916	17.0	18.5	49.8	38
1FO-16Z	1-7/16"X12	1-5/16"X12	O021	O916	17.5	18.5	50.3	38
1FO-16-20Z	1-7/16"X12	1-5/8"X12	O021	O920	17.5	18.5	52.0	50
1FO-20-16Z	1-11/16"X12	1-5/16"X12	O025	O916	17.5	18.5	54.0	46
1FO-20Z	1-11/16"X12	1-5/8"X12	O025	O920	17.5	18.5	52.3	50
1FO-24Z	2"X12	1-7/8"X12	O029	O924	17.5	18.5	54.1	55

Note: F end is connected with ISO 11926-1 port. ORFS fittings utilize a machined half dovetailed groove for seal retention.



1FO4-OG

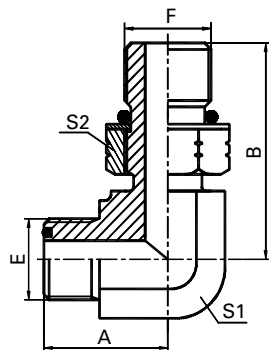
45° Elbow ORFS Male O-ring / SAE O-ring
Boss S-Series ISO 11926-2

Part No.	Thread		O-Ring		Dimensions			
	E	F	E	F	A	B	S1	S2
1FO4-04OGZ	9/16" X18	7/16" X20	O011	O904	18.3	26.0	14	17
1FO4-06OGZ	11/16" X16	9/16" X18	O012	O906	20.5	29.5	19	19
1FO4-08OGZ	13/16" X16	3/4" X16	O014	O908	24.0	34.0	22	24
1FO4-10OGZ	1" X14	7/8" X14	O016	O910	28.0	41.5	27	27
1FO4-12OGZ	1-3/16" X12	1-1/16" X12	O018	O912	30.7	45.5	30	32
1FO4-16OGZ	1-7/16" X12	1-5/8" X12	O021	O916	33.0	47.9	36	41
1FO4-20OGZ	1-11/16" X12	1-5/8" X12	O025	O920	35.5	48.8	41	50
1FO4-24OGZ	2" X12	1-7/8" X12	O029	O924	39.0	52.0	50	55

Note: F end is connected with ISO 11926-1 port. ORFS fittings utilize a machined half dovetailed groove for seal retention.

ORFS Adapters

Part No. Index



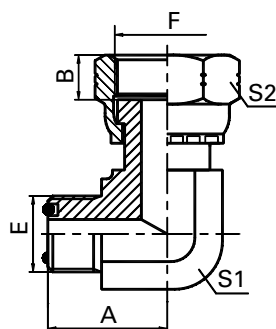
B

1FO9-OG

90° Elbow ORFS Male O-ring / SAE O-ring
Boss S-Series ISO 11926-2

1FO9-OG Part Number	Thread E	F	O-Ring E	F	Dimensions A B		S1	S2
1FO9-04OGZ	9/16"X18	7/16"X20	O011	O904	23.0	30.3	14	17
1FO9-04-06OGZ	9/16"X18	9/16"X18	O011	O906	23.0	32.0	14	19
1FO9-06OGZ	11/16"X16	9/16"X18	O012	O906	27.0	34.5	19	19
1FO9-06-08OGZ	11/16"X16	3/4"X16	O012	O908	27.5	38.0	19	24
1FO9-08OGZ	13/16"X16	3/4"X16	O014	O908	31.0	40.5	22	24
1FO9-08-12OGZ	13/16"X16	1-1/16"X12	O014	O912	34.5	52.0	27	32
1FO9-10OGZ	1"X14	7/8"X14	O016	O910	36.5	50.8	27	27
1FO9-12OGZ	1-3/16"X12	1-1/16"X12	O018	O912	41.0	54.0	30	32
1FO9-12-16OGZ	1-3/16"X12	1-5/16"X12	O018	O916	43.0	55.5	33	41
1FO9-16OGZ	1-7/16"X12	1-5/16"X12	O021	O916	44.5	59.0	36	41
1FO9-16-20OGZ	1-7/16"X12	1-5/8"X12	O021	O920	47.6	60.5	41	50
1FO9-20-16OGZ	1-11/16"X12	1-5/16"X12	O025	O916	47.5	60.5	41	41
1FO9-20OGZ	1-11/16"X12	1-5/8"X12	O025	O920	47.5	60.5	41	50

Note: F end is connected with ISO 11926-1 port. ORFS fittings utilize a machined half dovetailed groove for seal retention.



2F9

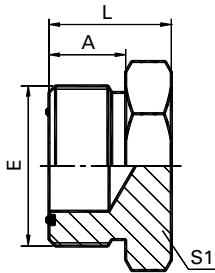
90° Elbow ORFS Male
O-ring / ORFS Female

Part Number	Thread E	F	O-Ring E	Dimensions A B		S1	S2
2F9-06Z	11/16"X16	11/16"X16	O012	27.5	10	19	22
2F9-08Z	13/16"X16	13/16"X16	O014	31.0	11	22	27
2F9-16Z	1-7/16"X12	1-7/16"X12	O021	44.5	15	36	41

Note: ORFS fittings utilize a machined half dovetailed groove for seal retention.

ORFS Adapters

Part No. Index



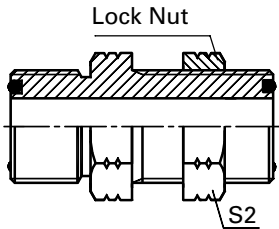
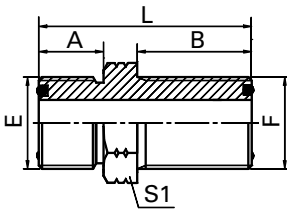
B

4F

ORFS Male O-ring Plug

Part Number	Thread	O-Ring	Dimensions		
	E		A	L	S1
4F-04Z	9/16"X18	O011	9.8	16.8	17
4F-06Z	11/16"X16	O012	11.2	19.2	19
4F-08Z	13/16"X16	O014	12.8	21.8	22
4F-10Z	1"X14	O016	15.5	25.9	27
4F-12Z	1-3/16"X12	O018	17.0	27.4	32
4F-16Z	1-7/16"X12	O021	17.5	27.9	38
4F-20Z	1-11/16"X12	O025	17.5	27.9	46

Note: ORFS fittings utilize a machined half dovetailed groove for seal retention.



6F-LN

ORFS Male O-ring Bulkhead

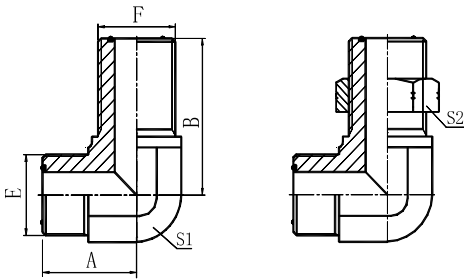
Part Number	Thread		O-Ring	Dimensions					
	E	F		F	A	B	L	S1	S2
6F-10LNZ	1"X14	1"X14	O016	O016	15.5	40.6	66.6	36	36
6F-16LNZ	1-7/16"X12	1-7/16"X12	O021	O021	17.5	42.2	70.2	46	46
6F-20LNZ	1-11/16"X12	1-11/16"X12	O025	O025	17.5	42.2	70.2	50	50

Note: "LN" in part number designates the adapter with lock nut. ORFS fittings utilize a machined half dovetailed groove for seal retention.

ORFS Adapters

Part No. Index

B

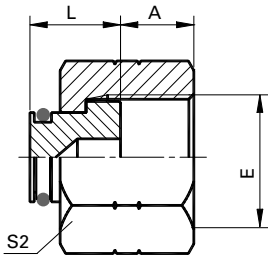


6F9-LN

90° ORFS Male Bulkhead

6F9 Part Number	Thread E	F	O-Ring E	F	Dimensions		S1	S2
					A	B		
6F9-08LNZ	13/16"X16	13/16"X16	O014	O014	31.0	55.5	22	30
6F9-10LNZ	1"X14	1"X14	O016	O016	36.5	63.0	27	36

Note: "LN" in part number designates the adapter with lock nut. ORFS fittings utilize a machined half dovetailed groove for seal retention.



9F

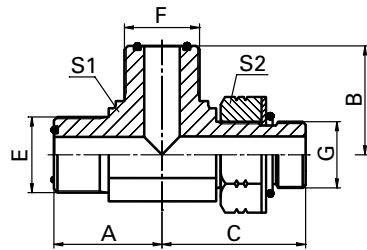
ORFS Female Flat Plug

Part Number	Thread E	Dimensions		S2
		A	L	
9F-04GMZ	9/16"X18	8.5	10.5	19
9F-06GMZ	11/16"X16	10	13	22
9F-08GMZ	13/16"X16	11	14	27
9F-10GMZ	1"X14	13.5	16	30
9F-12GMZ	1-3/16"X12	15	15	36
9F-16GMZ	1-7/16"X12	15	18	41
9F-20GMZ	1-11/16"X12	15	19	50
9F-24GMZ	2"X12	16	21	60

Note: ORFS fittings utilize a machined half dovetailed groove for seal retention.

ORFS Adapters

Part No. Index



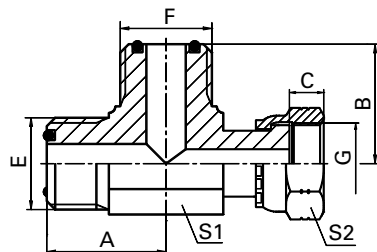
B

AFFO-OG

**ORFS Male O-ring / SAE O-ring Boss
S-Series ISO 11926-2 Run Tee**

Part Number	Thread			O-Ring			Dimensions			S1	S2
	E	F	G	E	F	G	A	B	C		
AFFO-06OGZ	11/16"X16	11/16"X16	9/16"X18	O012	O012	O906	27.5	27.5	35.5	19	19
AFFO-08OGZ	13/16"X16	13/16"X16	3/4"X16	O014	O014	O908	31.0	31.0	40.5	22	24
AFFO-12OGZ	1-3/16"X12	1-3/16"X12	1-1/16"X12	O018	O018	O912	40.3	40.3	55.3	30	32

Note: F end is connected with ISO 11926-1 port. ORFS fittings utilize a machined half dovetailed groove for seal retention.



CF

ORFS Male O-ring / ORFS Female Run Tee

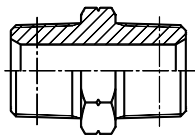
CF Part Number	Thread			O-Ring		Dimensions			S1	S2
	E	F	G	E	F	A	B	C		
CF-04Z	9/16"X18	9/16"X18	9/16"X18	O011	O011	23.0	23.0	8.5	14	19
CF-06Z	11/16"X16	11/16"X16	11/16"X16	O012	O012	27.5	27.5	10	19	22
CF-08Z	13/16"X16	13/16"X16	13/16"X16	O014	O014	31.0	31.0	11	22	27
CF-12Z	1-3/16"X12	1-3/16"X12	1-3/16"X12	O018	O018	40.3	40.3	15	30	36
CF-16Z	1-7/16"X12	1-7/16"X12	1-7/16"X12	O021	O021	44.5	44.5	15	36	41

Note: ORFS fittings utilize a machined half dovetailed groove for seal retention.

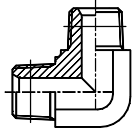
ORFS Adapters

Part No. Index Page intentionally left blank

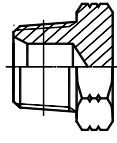
B



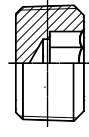
1N
C-2



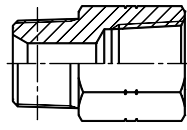
1N9
C-2



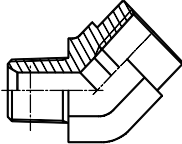
4N
C-3



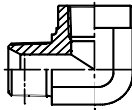
4NN
C-3



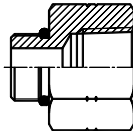
5N
C-4



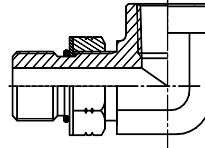
5N4
C-5



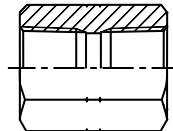
5N9
C-5



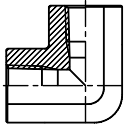
5ON
C-6



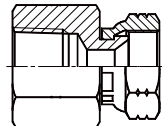
5ON9-OG
C-6



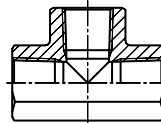
7N
C-7



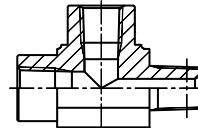
7N9-PK
C-7



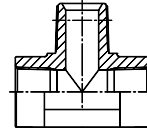
7NJ-S
C-8



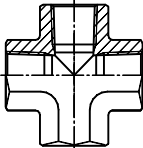
GN-PK
C-8



HN
C-9



JN
C-9



ZN
C-10

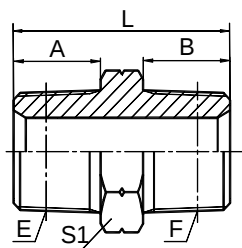
C



Powering Business Worldwide

NPT Adapters

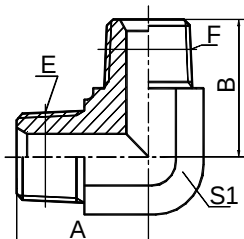
Part No. Index



1N

NPT Male

1N Part Number	Thread E	F	Dimensions A B		L	S1
1N-02Z	1/8"X27	1/8"X27	10.5	10.5	27	12
1N-04Z	1/4"X18	1/4"X18	15.0	15.0	35	17
1N-04-06Z	1/4"X18	3/8"X18	15.0	16.0	37	19
1N-04-08Z	1/4"X18	1/2"X14	15.0	19.5	41.5	22
1N-06Z	3/8"X18	3/8"X18	16.0	16.0	38	19
1N-06-08Z	3/8"X18	1/2"X14	16.0	19.5	43.5	22
1N-08Z	1/2"X14	1/2"X14	19.5	19.5	47	22
1N-08-12Z	1/2"X14	3/4"X14	19.5	19.5	49	27
1N-12Z	3/4"X14	3/4"X14	19.5	19.5	49	27
1N-12-16Z	3/4"X14	1"X11.5	19.5	25.5	55	36
1N-16Z	1"X11.5	1"X11.5	25.5	25.5	61	36
1N-16-20Z	1"X11.5	1-1/4"X11.5	25.5	26.5	64	46
1N-20Z	1-1/4"X11.5	1-1/4"X11.5	26.5	26.5	65	46
1N-24Z	1-1/2"X11.5	1-1/2"X11.5	27.5	27.5	69	50
1N-32Z	2"X11.5	2"X11.5	27.5	27.5	71	65



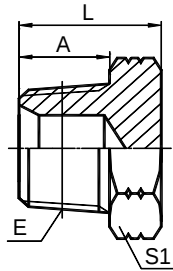
1N9

90° Elbow NPT Male

1N9 Part Number	Thread E	F	Dimensions A B		S1
1N9-04Z	1/4"X18	1/4"X18	25.5	25.5	14
1N9-04-06Z	1/4"X18	3/8"X18	28.0	31.0	19
1N9-06Z	3/8"X18	3/8"X18	31.0	31.0	19
1N9-08Z	1/2"X14	1/2"X14	37.3	37.3	22
1N9-08-12Z	1/2"X14	3/4"X14	40.0	44.0	27
1N9-12Z	3/4"X14	3/4"X14	44.0	44.0	27
1N9-16Z	1"X11.5	1"X11.5	50.0	50.0	33

NPT Adapters

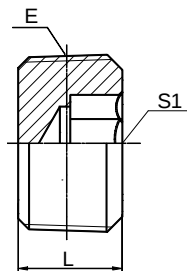
Part No. Index



4N

NPT Male Plug

Part Number	Thread	Dimensions		
	E	A	L	S1
4N-02Z	1/8"X27	10.5	16	12
4N-04Z	1/4"X18	15.0	20	17
4N-06Z	3/8"X18	16.0	21	19
4N-08Z	1/2"X14	19.5	27	22
4N-12Z	3/4"X14	19.5	29.5	27
4N-16Z	1"X11.5	25.5	36.5	36
4N-20Z	1-1/4"X11.5	26.5	38.5	46
4N-24Z	1-1/2"X11.5	27.5	43	50



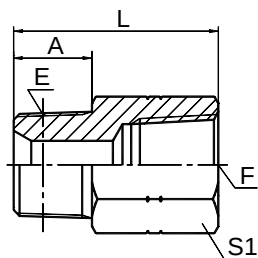
4NN

NPT Male Hollow Hex Plug

Part Number	Thread	Dimensions	
	E	L	S1
4NN-08Z	1/2"X14	15	10

NPT Adapters

Part No. Index



C

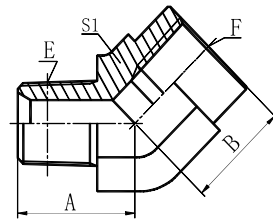
5N

NPT Male / NPT Female

5N Part Number	Thread E	F	Dimensions		S1
			A	L	
5N-02Z	1/8"X27	1/8"X27	10.5	25.5	17
5N-02-04Z	1/8"X27	1/4"X18	10.5	31.0	19
5N-04-02Z	1/4"X18	1/8"X27	15.0	22.0	17
5N-04-06Z	1/4"X18	3/8"X18	15.0	36.6	24
5N-06-04Z	3/8"X18	1/4"X18	16.0	22.0	19
5N-06-08Z	3/8"X18	1/2"X14	16.7	43.7	30
5N-08-04Z	1/2"X14	1/4"X18	19.5	28.0	24
5N-08-06Z	1/2"X14	3/8"X18	19.5	28.5	24
5N-08-12Z	1/2"X14	3/4"X14	19.5	49.0	36
5N-12-04Z	3/4"X14	1/4"X18	19.5	30.0	27
5N-12-06Z	3/4"X14	3/8"X18	19.5	30.5	27
5N-12-08Z	3/4"X14	1/2"X14	19.5	30.5	27
5N-12-16Z	3/4"X14	1"X11.5	19.5	55.4	41
5N-16-08Z	1"X11.5	1/2"X14	25.5	35.5	36
5N-16-12Z	1"X11.5	3/4"X14	25.5	36.5	36
5N-16Z	1"X11.5	1"X11.5	25.5	60.7	41
5N-20-12Z	1-1/4"X11.5	3/4"X14	26.5	38.5	46
5N-20-16Z	1-1/4"X11.5	1"X11.5	26.5	41.0	46
5N-24-12Z	1-1/2"X11.5	3/4"X14	27.5	41.0	50
5N-24-16Z	1-1/2"X11.5	1"X11.5	27.5	41.5	50
5N-24-20Z	1-1/2"X11.5	1-1/4"X11.5	27.5	41.0	50
5N-32-20Z	2"X11.5	1-1/4"X11.5	27.5	44.5	65
5N-32-24Z	2"X11.5	1-1/2"X11.5	27.5	45.0	65
5N-32-16Z	2"X11.5	1"X11.5	27.5	45.0	65

NPT Adapters

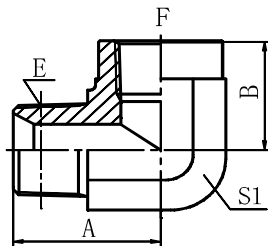
Part No. Index



5N4

45° NPT Male / NPT Female

5N4 Part Number	Thread E	F	Dimensions		
			A	B	S1
5N4-04Z	1/4"X18	1/4"X18	22.0	20.0	19
5N4-08Z	1/2"X14	1/2"X14	31.7	28.0	30
5N4-12Z	3/4"X14	3/4"X14	36.5	30.0	33
5N4-16Z	1"X11.5	1"X11.5	42.5	37.5	41



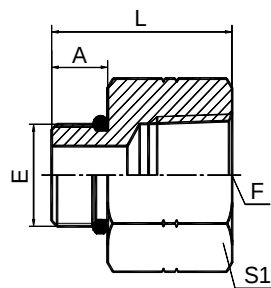
5N9

90° NPT Male / NPT Female

Part Number	Thread E	F	Dimensions		
			A	B	S1
5N9-02Z	1/8"X27	1/8"X27	24.5	17.8	16
5N9-04Z	1/4"X18	1/4"X18	28.0	22.4	19
5N9-06Z	3/8"X18	3/8"X18	33.5	25.0	24
5N9-08-06Z	1/2"X14	3/8"X18	37.5	25.0	24
5N9-08Z	1/2"X14	1/2"X14	41.2	31.2	30
5N9-12Z	3/4"X14	3/4"X14	45.2	34.5	33
5N9-16Z	1"X11.5	1"X11.5	54.5	41.1	41
5N9-20Z	1-1/4"X11.5	1-1/4"X11.5	63.0	43.2	48
5N9-24Z	1-1/2"X11.5	1-1/2"X11.5	71.5	52.8	63

NPT Adapters

Part No. Index

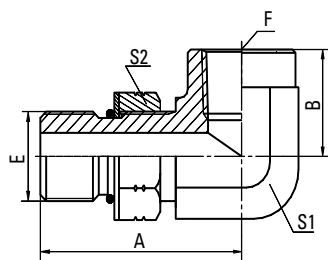


C

50N

SAE O-ring Boss
L-Series ISO 11926-3 / NPT Female

50N Part Number	Thread E	F	O-Ring E	Dimensions		S1
				A	L	
50N-06-04Z	9/16"X18	1/4"x18	O906	9.9	31.5	19
50N-08Z	3/4"X16	1/2"X14	O908	11.1	40.0	30
50N-10-08Z	7/8"X14	1/2"x14	O910	12.7	41.5	30
50N-12-08Z	1-1/16"X12	1/2"x14	O912	15.1	42.0	32
50N-12Z	1-1/16"X12	3/4"x14	O912	15.1	45.5	36
50N-16-12Z	1-5/16"X12	3/4"x14	O916	15.1	43.0	38
50N-16Z	1-5/16"X12	1"X11.5	O916	15.1	51.5	41
50N-20Z	1-5/8"X12	1-1/4"X11.5	O920	15.1	53.5	50
50N-24Z	1-7/8"X12	1-1/2"X11.5	O924	15.1	50.0	60
50N-32Z	2-1/2"X12	2"X11.5	O932	15.1	50.0	70



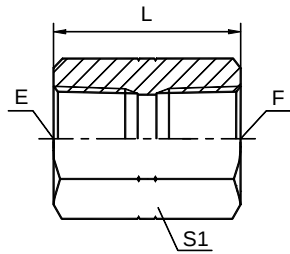
50N9-OG

SAE O-ring Boss L-Series ISO 11926-3 / NPT
Female

50N9-OG Part Number	Thread E	F	O-Ring E	Dimensions		S1	S2
				A	B		
50N9-12OGZ	1-1/16"X12	3/4"x14	O912	55.0	34.5	33	32

NPT Adapters

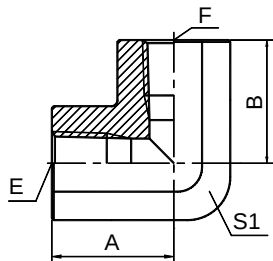
Part No. Index



7N

NPT Female

Part Number	Thread		Dimensions	
	E	F	L	S1
7N-02Z	1/8"X27	1/8"X27	24	17
7N-04Z	1/4"X18	1/4"X18	29	19
7N-06Z	3/8"X18	3/8"X18	29	22
7N-08Z	1/2"X14	1/2"X14	38	30
7N-12Z	3/4"X14	3/4"X14	39	36
7N-16Z	1"X11.5	1"X11.5	48	41
7N-20Z	1-1/4"X11.5	1-1/4"X11.5	49	50
7N-24Z	1-1/2"X11.5	1-1/2"X11.5	49	60



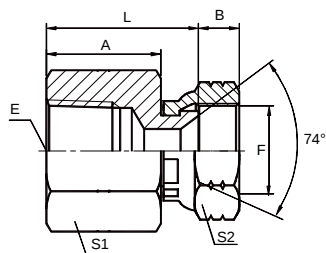
7N9-PK

90° Elbow NPT Female

Part Number	Thread		Dimensions		
	E	F	A	B	S1
7N9-04PKZ	1/4"X18	1/4"X18	22.5	22.5	19
7N9-06PKZ	3/8"X18	3/8"X18	26	26	24
7N9-08PKZ	1/2"X14	1/2"X14	31	31	27
7N9-12PKZ	3/4"X14	3/4"X14	34	34	33
7N9-16PKZ	1"X11.5	1"X11.5	42	42	41

NPT Adapters

Part No. Index

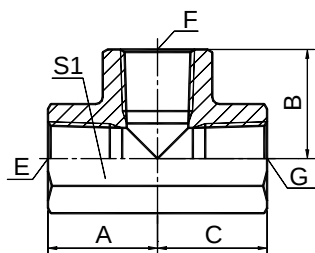


C

7NJ-S

NPT Female / JIC Female 74° (37°) Seat

Part Number	Thread		Dimensions				
	E	F	A	B	L	S1	S2
7NJ-04-06Z	1/4"X18	9/16"X18	19.5	10.5	28.0	19	19
7NJ-04SZ	1/4"X18	7/16"X20	21.0	9.0	29.0	19	15
7NJ-06SZ	3/8"X18	9/16"X18	21.5	10.5	30.0	24	19
7NJ-08SZ	1/2"X14	3/4"X16	27.0	11.0	37.5	30	24
7NJ-12SZ	3/4"X14	1-1/16"X12	28.0	15.0	40.5	36	32
7NJ-16SZ	1"X11.5	1-5/16"X12	35.0	16.0	47.5	41	41



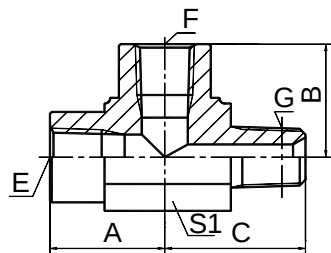
GN-PK

NPT Female Tee

GN-PK Part Number	Thread			Dimensions			
	E	F	G	A	B	C	S1
GN-02PKZ	1/8"X27	1/8"X27	1/8"X27	20	20	20	16
GN-04PKZ	1/4"X18	1/4"X18	1/4"X18	22.5	22.5	22.5	19
GN-06PKZ	3/8"X18	3/8"X18	3/8"X18	26	26	26	24
GN-08PKZ	1/2"X14	1/2"X14	1/2"X14	31	31	31	27
GN-12PKZ	3/4"X14	3/4"X14	3/4"X14	34	34	34	33
GN-16PKZ	1"X11.5	1"X11.5	1"X11.5	42	42	42	41
GN-20PKZ	1-1/4"X11.5	1-1/4"X11.5	1-1/4"X11.5	48	48	48	50
GN-24PKZ	1-1/2"X11.5	1-1/2"X11.5	1-1/2"X11.5	53	53	53	60

NPT Adapters

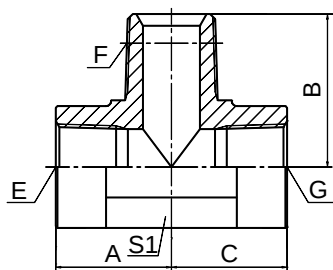
Part No. Index



HN

NPT Female / NPT Male Run Tee

Part Number	Thread	F	G	Dimensions			
	E			A	B	C	S1
HN-02Z	1/8"X27	1/8"X27	1/8"X27	20	20	24.5	16
HN-04Z	1/4"X18	1/4"X18	1/4"X18	25	25	28.5	19
HN-06Z	3/8"X18	3/8"X18	3/8"X18	27	27	33.5	24
HN-08Z	1/2"X14	1/2"X14	1/2"X14	35	35	42.5	30
HN-12Z	3/4"X14	3/4"X14	3/4"X14	37	37	45.2	33
HN-16Z	1"X11.5	1"X11.5	1"X11.5	44	44	54.7	41
HN-20Z	1-1/4"X11.5	1-1/4"X11.5	1-1/4"X11.5	48	48	58.5	48



JN

NPT Female / NPT Male Branch Tee

Part Number	Thread	F	G	Dimensions			
	E			A	B	C	S1
JN-04Z	1/4"X18	1/4"X18	1/4"X18	22.4	28	22.4	19
JN-06Z	3/8"X18	3/8"X18	3/8"X18	25.0	33.5	25.0	24
JN-08Z	1/2"X14	1/2"X14	1/2"X14	31.2	41.2	31.2	30
JN-12Z	3/4"X14	3/4"X14	3/4"X14	34.5	45.2	34.5	33
JN-16Z	1"X11.5	1"X11.5	1"X11.5	41.1	54.5	41.1	41

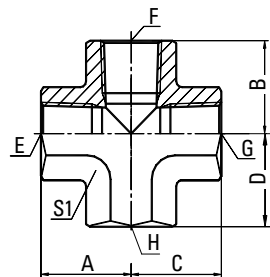
NPT Adapters

Part No. Index

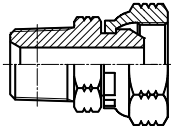
C

ZN

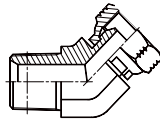
NPT Female Cross



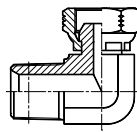
Part Number	Thread	Dimensions							
	E	F	G	H	A	B	C	D	S1
ZN-16Z	1"X11.5	1"X11.5	1"X11.5	1"X11.5	42	42	42	42	41



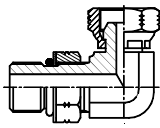
2NU
D-2



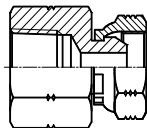
2NU4
D2



2NU9
D-3



20U9-OG
D-3

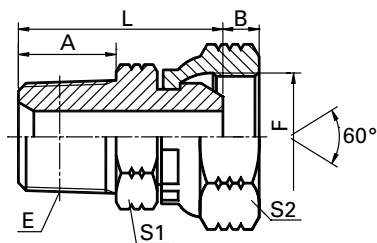


7NU-S
D-4

D

NPSM Adapters

Part No. Index

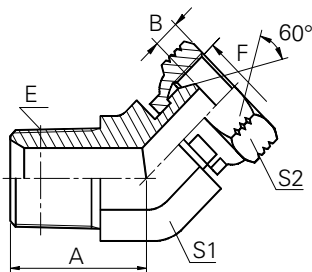


2NU

NPT Male / NPSM Female 60° (30°) Cone

D

Part Number	Thread		Dimensions				
	E	F	A	B	L	S1	S2
2NU-04Z	1/4"X18	1/4"X18	15.0	4.6	32.0	17	19
2NU-06Z	3/8"X18	3/8"X18	16.0	6.0	34.5	19	22
2NU-08Z	1/2"X14	1/2"X14	19.5	7.5	41.5	22	27
2NU-08-06Z	1/2"X14	3/8"X18	19.5	6.0	39.5	22	22
2NU-12Z	3/4"X14	3/4"X14	19.5	8.9	44.5	30	32
2NU-16Z	1"X11.5	1"X11.5	25.5	10.5	52.5	36	41
2NU-20Z	1-1/4"X11.5	1-1/4"X11.5	26.5	11.2	59.5	46	50
2NU-24Z	1-1/2"X11.5	1-1/2"X11.5	27.5	11.2	62.5	50	55
2NU-32Z	2"X11.5	2"X11.5	27.5	11.2	64.5	65	70



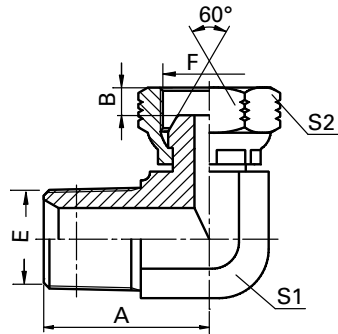
2NU4

45° Elbow NPT Male / NPSM Female 60° (30°) Cone

Part No.	Thread		Dimensions			
	E	F	A	B	S1	S2
2NU4-12Z	3/4"X14	3/4"x14	35.0	8.9	27	32
2NU4-16Z	1"X11.5	1"x11.5	39.0	10.5	33	41
2NU4-20Z	1-1/4"X11.5	1-1/4"x11.5	42.5	11.2	41	50

NPSM Adapters

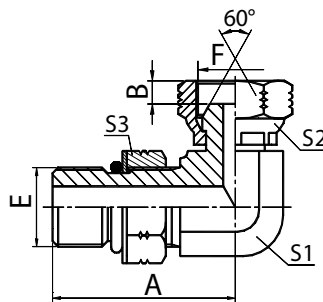
Part No. Index



2NU9

90° Elbow NPT Male / NPSM Female
60° (30°) Cone

Part Number	Thread E	F	Dimensions				S1	S2
			A	B				
2NU9-02Z	1/8"X27	1/8"X27	21.0	3.5			11	15
2NU9-04Z	1/4"X18	1/4"X18	25.5	4.6			14	19
2NU9-06Z	3/8"X18	3/8"X18	31.0	6.0			19	22
2NU9-08Z	1/2"X14	1/2"X14	37.3	7.5			22	27
2NU9-12Z	3/4"X14	3/4"X14	44.0	8.9			27	32
2NU9-16Z	1"X11.5	1"X11.5	50.0	10.5			33	41
2NU9-20Z	1-1/4"X11.5	1-1/4"X11.5	54.5	11.2			41	50
2NU9-24Z	1-1/2"X11.5	1-1/2"X11.5	59.5	11.2			48	55



2OU9-OG

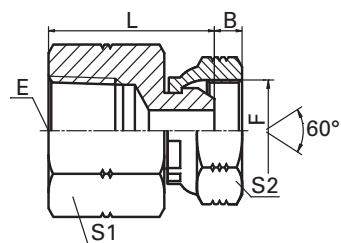
90° Elbow SAE O-ring Boss L-Series
ISO 11926-3 / NPSM Female 60° (30°) Cone

Part Number	Thread E	F	O-ring E	Dimensions			S1	S2	S3
				A	B				
2OU9-06-04OGZ	9/16"X18	1/4"X18	O906	32	4.6		14	19	19
2OU9-06OGZ	9/16"X18	3/8"X18	O906	33	6.0		16	22	19
2OU9-08OGZ	3/4"X16	1/2"X14	O908	37	7.5		19	27	24
2OU9-12OGZ	1-1/16"X12	3/4"X14	O912	51	8.9		27	32	32

Note: E end is connected with ISO 11926-1 port.

NPSM Adapters

Part No. Index

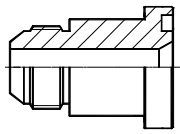


7NU-S

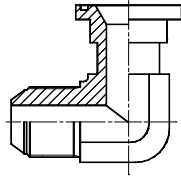
NPT Female / NPSM Female 60° (30°) Cone

D

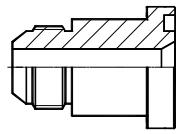
Part Number	Thread		Dimensions			
	E	F	B	L	S1	S2
7NU-16SZ	1"X11.5	1"X11.5	10.5	51.5	41	41
7NU-20SZ	1-1/4"X11.5	1-1/4"X11.5	11.2	55.0	50	50
7NU-24SZ	1-1/2"X11.5	1-1/2"X11.5	11.2	55.5	60	55



1JFL
E-2



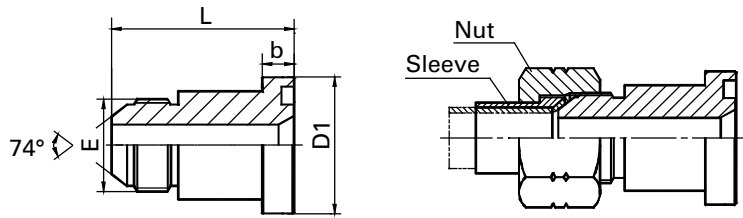
1JFL9
E-2



1JFS
E-3

Flange Adapters

Part No. Index



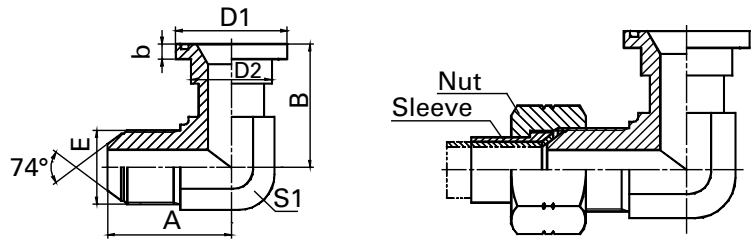
1JFL

JIC Male 74° (37°) Cone /
L-Series Flange ISO 6162-1

E

Part Number	Thread	Flange Size	O-Ring	Dimensions		
	E			b	D1	L
1JFL-12Z	1-1/16X12	3/4"	O214	6.73	38.1	50.5
1JFL-16Z	1-5/16X12	1"	O219	8.0	44.4	53.4
1JFL-20Z	1-5/8X12	1-1/4"	O222	8.0	50.8	53.1
1JFL-24Z	1-7/8X12	1-1/2"	O225	8.0	60.3	59.2
1JFL-24-32Z	1-7/8X12	2"	O228	9.53	71.4	60.0

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.



1JFL9

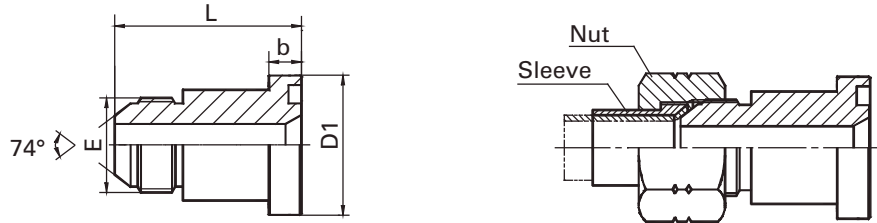
90° Elbow JIC Male 74° (37°) Cone /
L-Series Flange ISO 6162-1

Part Number	Thread	Flange Size	O-Ring	Dimensions					
	E			A	B	b	D1	D2	S1
1JFL9-24-32Z	1-7/8X12	2"	O228	74.5	108	9.53	71.4	62	63

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.

Flange Adapters

Part No. Index



1JFS

JIC Male 74° (37°) Cone /
S-Series Flange ISO 6162-2

Part Number	Thread	Flange Size	O-Ring	Dimensions		
	E			b	D1	L
1JFS-16Z	1-5/16"X12	1"	O219	9.53	47.6	62.8
1JFS-16-20Z	1-5/16"X12	1-1/4"	O222	10.29	54.0	67.7
1JFS-20Z	1-5/8"X12	1-1/4"	O222	10.29	54.0	68.9

Note: Nut and sleeve should be ordered separately. The nut NB200 and sleeve NB500 is suitable for metric tube, the nut NB200 and sleeve NB300 is suitable for inch tube.

E

Flange Adapters

Part No. Index Page intentionally left blank

E

Technical Information

Technical Information

Working Pressure	F-2
-------------------------	-----

Port Type and Dimension

ISO 9974-1 Metric Thread Port and Mating Stud End	F-4
ISO 6149-1 Metric Thread Port and Mating Stud End	F-5
DIN 3852 BSP Thread Port and Mating Stud End	F-6
BS 5380 BSP Thread Port and Mating Stud End	F-7
JIS B 2351 BSP Thread Port and Mating Stud End	F-8
ISO 11926-1 SAE Thread Port and Mating Stud End	F-9
Taper Thread Port	F-10
ISO 6162 Flange Port	F-11

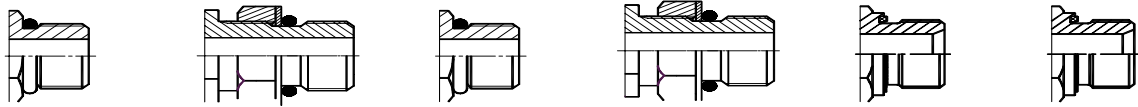
Recommended Thread Torque

Metric Thread	F-12
BSP Thread	F-12
JIC Thread	F-12
ORFS Thread	F-12

Seal Specifications

For ORFS Male O-ring	F-13
For SAE Flange O-ring	F-13
For BSP Male O-ring	F-13
For SAE Male O-ring	F-13
For Metric Male Adjustable Stud End O-ring	F-13

Technical Information – Working Pressure



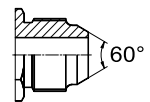
Thread	Metric Male O-Ring S-Series	Metric Male O-Ring Adjustable Stud End S-Series	Metric Male O-Ring L-Series	Metric Male O-Ring Adjustable Stud End L-Series	Metric Male Captive Seal L-Series	Metric Male Captive Seal S-Series
M8X1	63	40	40	31.5	-	-
M10X1	63	40	40	31.5	25	-
M12X1.5	63	40	40	31.5	25	63
M14X1.5	63	40	40	31.5	25	63
M16X1.5	63	40	31.5	25	25	63
M18X1.5	63	40	31.5	25	25	63
M20X1.5	-	-	-	-	-	63
M22X1.5	-	-	-	-	16	40
M22X1.5	63	40	31.5	25	-	-
M26X1.5	-	-	-	-	16	-
M27X2	40	40	20	16	-	40
M30X2	40	40	20	16	-	-
M33X2	-	-	-	-	10	40
M33X2	40	31.5	20	16	-	-
M42X2	25	25	20	16	-	-
M42X2	-	-	-	-	10	25
M48X2	25	20	20	16	10	25
M60X2	25	16	16	10	-	-

Pressure Unit MPa



Thread	Metric Male 74° (37°) Cone	Metric Male O-Ring	Metric Male 60° (30°) Cone Seat
M10X1	35	-	-
M10X1	35	-	-
M12X1.25	-	63	-
M12X1.5	35	-	-
M14X1.5	35	63	34.5
M16X1.5	25	63	-
M18X1.5	25	63	34.5
M22X1.5	20	63	34.5
M24X1.5	20	-	-
M27X1.5	20	40	-
M27X2	-	-	27.5
M30X2	20	-	-
M30X1.5	-	40	-
M33X2	16	-	20.5
M36X2	16	-	-
M36X2	-	40	-
M39X2	12.5	-	-
M39X2	-	25	-
M42X2	12.5	-	17
M42X2	-	25	-
M45X2	10	-	-
M45X2	-	25	-
M52X2	-	25	-
M60X2	-	25	-
M64X2	-	25	-

Pressure Unit MPa



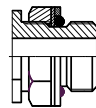
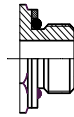
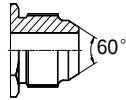
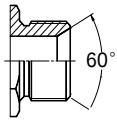
Thread	JIS Metric Male 60° (30°) Cone
M12X1.5	34.5
M14X1.5	34.5
M16X1.5	34.5
M18X1.5	34.5
M20X1.5	34.5
M22X1.5	34.5
M24X1.5	27.5
M27X1.5	27.5
M30X1.5	20.5
M33X1.5	20.5
M36X1.5	17
M42X1.5	17

Pressure Unit MPa

Conversion Factors

MPa to PSI	= MPa X 145.038
MPa to Bar	= MPa X 10

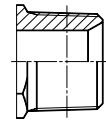
Technical Information – Working Pressure



**BSP Male
O-Ring
Adjustable
Stud End**

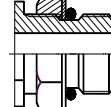
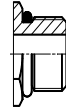
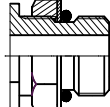
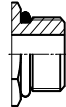
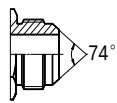
Thread	BSP Male 60° Cone Seat	JIS GAS Male 60° Cone	BSP Male O-Ring	
G1/8"X28	34.5	34.5	40	31.5
G1/4"X19	34.5	34.5	40	31.5
G3/8"X19	34.5	34.5	31.5	25
G1/2"X14	34.5	34.5	31.5	25
G3/4"X14	27.5	27.5	20	16
G1"X11	20.5	20.5	20	16
G1-1/4"X11	17.0	17.0	20	16
G1-1/2"X11	10.5	10.5	20	16
G2"X11	10.5	10.5	16	10

Pressure Unit MPa



Thread	BSPT Male
R-1/8"X28	34.5
R1/4"X19	34.5
R3/8"X19	34.5
R1/2"X14	34.5
R3/4"X14	27.5
R1"X11	20.5
R1-1/4"X11	17.0
R1-1/2"X11	10.5
R2"X11	10.5

Pressure Unit MPa

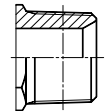


**SAE Male
O-Ring
Adjustable
Stud End
S-Series**

**Metric Male
O-Ring
Adjustable
Stud End
L-Series**

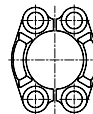
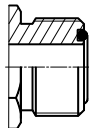
Thread	JIC 74° (37°) Cone	SAE Male O-Ring S-Series		SAE Male O-Ring L-Series	
5/16"X24	34.5	—	—	31.5	31.5
3/8"X24	34.5	63	40	31.5	31.5
7/16"X20	34.5	63	40	31.5	31.5
1/2"X20	34.5	63	40	31.5	31.5
9/16"X18	34.5	63	40	31.5	25.0
3/4"X16	31	63	40	31.5	25.0
7/8"X14	24	63	40	25.0	20.0
1-1/16"X12	24	40	40	25.0	20.0
1-3/16"X12	21	40	40	20.0	16.0
1-5/16"X12	21	40	31.5	20.0	16.0
1-5/8"X12	17	25	25	16.0	12.5
1-7/8"X12	14	25	20	16.0	12.5
2-1/2"X12	10.5	—	—	12.5	10.0

Pressure Unit MPa



Thread	NPT Male
1/8"X27	34.5
1/4"X18	27.5
3/8"X18	21.0
1/2"X14	21.0
3/4"X14	17.0
1"X11.5	14.0
1-1/2"X11.5	8.0
1-1/2"X11.5	7.0

Pressure Unit MPa



Thread	ORFS Male O-Ring
9/16"X18	63
11/16"X16	63
13/16"X16	63
1"X14	40
1-3/16"X12	40
1-7/16"X12	40
1-11/16"X12	25
2"X12	25

Pressure Unit MPa

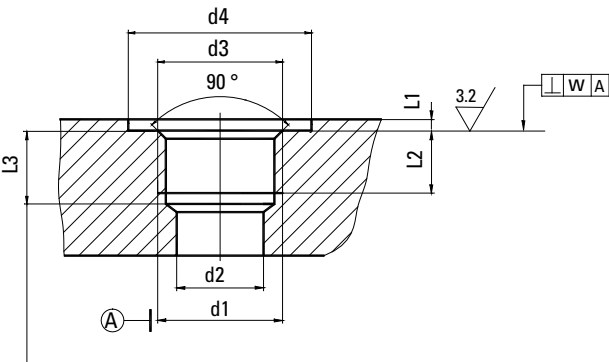
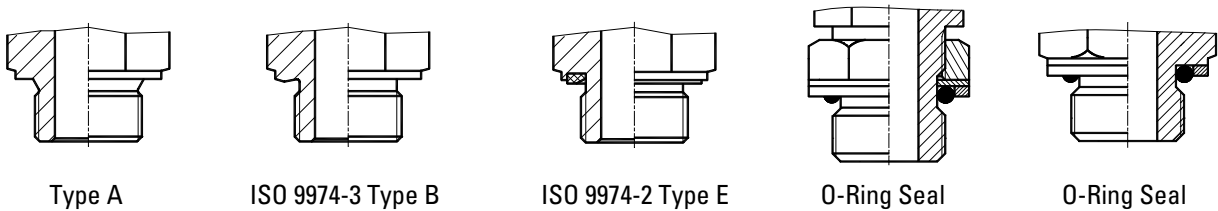
SAE Flange Size	Mid-Strength Bolt L-Series	High-Strength Bolt L-Series	Mid-Strength Bolt S-Series	High-Strength Bolt S-Series
1/2"	35	35	35	40
3/4"	35	35	35	40
1"	25	31.5	35	40
1-1/4"	20	25	35	40
1-1/2"	20	20	35	40
2"	16	16	35	40

Pressure Unit MPa

Technical Information – Port Type and Dimensions

ISO 9974-1 Metric Thread Port

ISO 9974-1 Metric Thread Port and Mating Stud End



This dimension only applies when tap drill cannot pass through entire boss

ISO 9974-1 Port

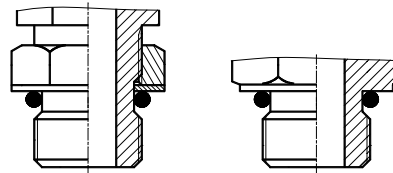
Port Dimensions mm

Thread d1	d2 ref.	nom.	d3 tol.	d4 min.	L1 min.	L2 min.	L3 min.	w
M8X1	3	8	0, +0.2	13	1.0	8	10	0.1
M10X1	4.5	10	0, +0.2	15	1.0	8	10	0.1
M12X1.5	6	12	0, +0.2	18	1.5	12	15	0.1
M14X1.5	7	14	0, +0.2	20	1.5	12	15	0.1
M16X1.5	9	16	0, +0.2	23	1.5	12	15	0.1
M18X1.5	11	18	0, +0.2	25	2.0	12	15	0.1
M20X1.5	10	20	0, +0.2	27	2.0	14	17	0.1
M22X1.5	14	22	0, +0.2	28	2.5	14	17	0.1
M26X1.5	18	26	0, +0.2	33	2.5	16	19	0.2
M27X2	16	27	0, +0.2	33	2.5	16	20	0.2
M33X2	23	33	0, +0.3	41	2.5	18	22	0.2
M42X2	30	42	0, +0.3	51	2.5	20	24	0.2
M48X2	36	48	0, +0.3	56	2.5	22	36	0.2

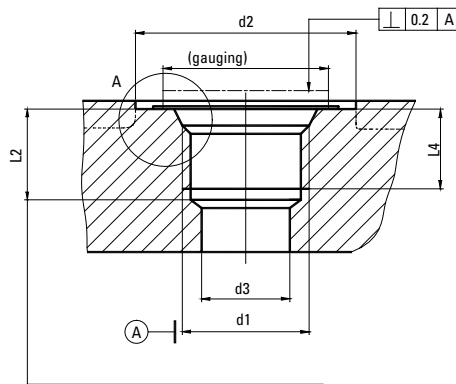
Technical Information – Port Type and Dimensions

ISO 6149-1 Metric Thread Port

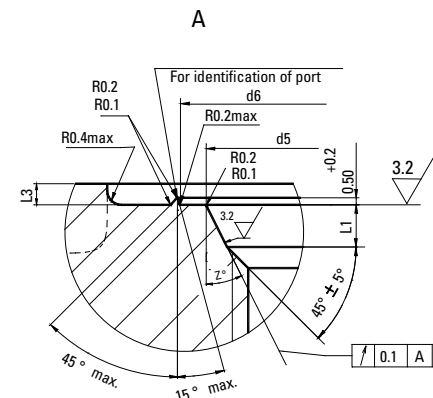
ISO 6149-1 Metric Thread Port and Mating Stud End



ISO 6149-3 stud end



This dimension only applies when tap drill cannot pass through entire boss



ISO 6149-1 Port

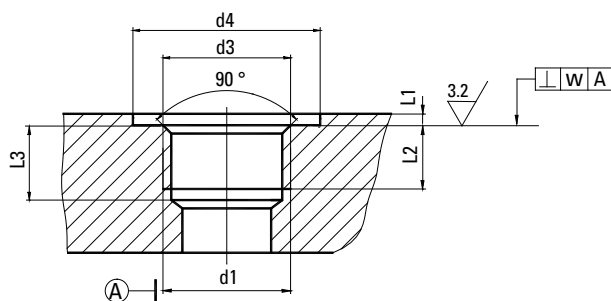
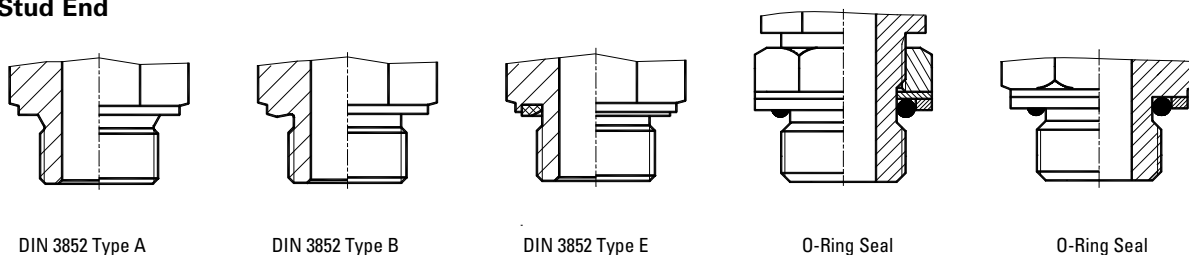
Port Dimensions mm

Thread	d2			d3 ref.	d4	d5 +0.1 0	d6 +0.5 0	L1 +0.4 0	L2 min.	L3 max.	L4 min.	Z° ± 1°	O-RING
	min. ¹⁾	min ²⁾											
M8X1	17	14	3	12.5	9.1	14	1.6	11.5	1	10	12	6.1X1.6	
M10X1	20	16	4.5	14.5	11.1	16	1.6	11.5	1	10	12	8.1X1.6	
M12X1.5	23	19	6	17.5	13.8	19	2.4	14	1.5	11.5	15	9.3X2.2	
M14X1.5	25	21	7.5	19.5	15.8	21	2.4	14	1.5	11.5	15	11.3X2.2	
M16X1.5	28	24	9	22.5	17.8	24	2.4	15.5	1.5	13	15	13.3X2.2	
M18X1.5	30	26	11	24.5	19.8	26	2.4	17	2	14.5	15	15.3X2.2	
M20X1.5	32	27	—	25.5	21.8	27	2.4	—	2	14.5	15	17.3X2.2	
M22X1.5	34	29	14	27.5	23.8	29	2.4	18	2	15.5	15	19.3X2.2	
M27X2	40	34	18	32.5	29.4	34	3.1	22	2	19	15	23.6X2.9	
M33X2	49	43	23	41.5	35.4	43	3.1	22	2.5	19	15	29.6X2.9	
M42X2	60	52	30	50.5	44.4	52	3.1	22.5	2.5	19.5	15	38.6X2.9	
M48X2	66	57	36	55.5	50.4	57	3.1	25	2.5	22	15	44.6X2.9	
M60X2	76	67	44	65.5	62.4	67	3.1	27.5	2.5	24.5	15	56.6X2.9	

Technical Information – Port Type and Dimensions

DIN 3852 BSP Thread Port

DIN 3852 BSP Thread Port and Mating Stud End



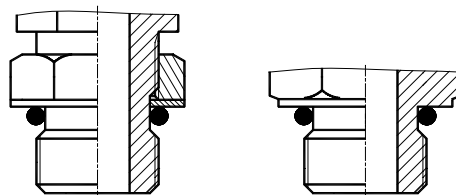
Port Dimensions mm

		d4 +0.4 0		L1 max.	L2 min.	L3 min.	w
Thread d1	d3	Type B, E	Others				
G1/8X28	9.8	0,+0.2	15 19	1.0	8	13	0.1
G1/4X19	13.2	0,+0.2	19 25	1.5	12	18.5	0.1
G3/8X19	16.7	0,+0.2	23 28	2.0	12	18.5	0.1
G1/2X14	21.0	0,+0.2	27 34	2.5	14	22	0.1
G3/4X14	26.5	0,+0.2	33 42	2.5	16	24	0.2
G1X11	33.3	0,+0.3	40 47	2.5	18	27	0.2
G1-1/4X11	42.0	0,+0.3	50 58	2.5	20	29	0.2
G1-1/2X11	47.9	0,+0.3	56 65	2.5	22	31	0.2
G2X11	59.7	0,+0.3	69 76	3.0	24	33	0.2

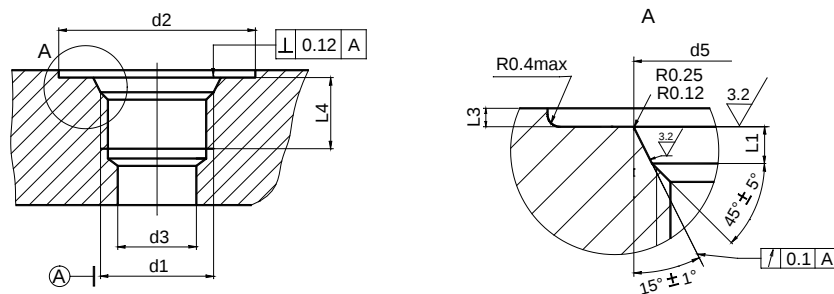
Technical Information – Port Type and Dimensions

BS 5380 BSP Thread Port

BS 5380 BSP Thread Port and Mating Stud End



BS 5380 stud end



BS 5380 Port

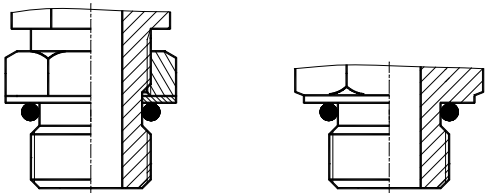
Port Dimensions mm

Thread d1	d2 min.	d3 max.	d5 +0.12 0	L1 +0.4 0	L3 max.	L4 min.	O-ring
G-1/8X28	15	14	11.24	1.3	0.6	10.5	8.1X1.6
G1/4X19	19	18	14.16	1.2	0.6	11.0	10.1X1.6
G3/8X19	23	22	18.86	1.9	0.6	12.5	13.6X2.4
G1/2X14	27	26	22.40	1.9	0.8	15.0	17.6X2.4
G5/8X14	31	30	26.00	2.4	0.8	16.3	19.5X3.0
G3/4X14	33	32	28.92	2.4	1.1	16.3	22.5X3.0
G1X11	40	39	35.50	2.4	1.1	19.1	29.5X3.0
G1-1/4X11	50	49	43.56	2.4	1.1	21.4	36.5X3.0
G1-1/2X11	56	55	49.42	2.4	1.1	22.5	42.5X3.0
G2X11	69	68	61.42	2.4	1.1	25.7	54.5X3.0

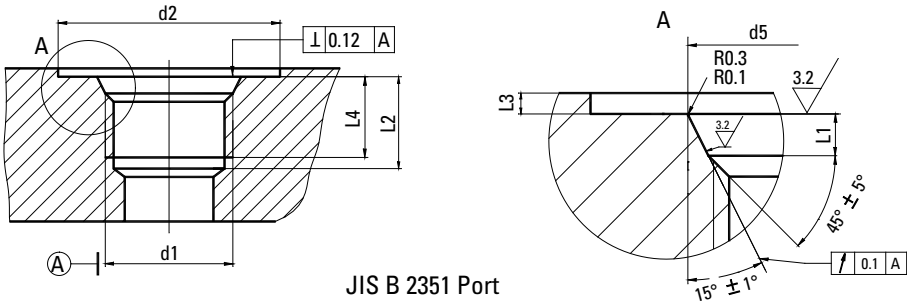
Technical Information – Port Type and Dimensions

JIS B 2351 BSP Thread Port

JIS B 2351 BSP Thread Port and Mating Stud End



JIS B 2351 stud end



JIS B 2351 Port

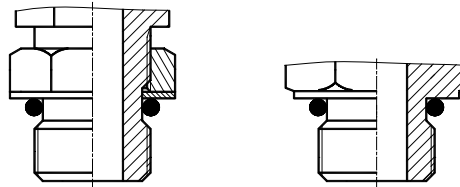
Port Dimensions mm

Thread d1	d2 ± 0.3	d5 + 0.1 0	L1 + 0.4 0	L2 min.	L3 max.	L4 min.	O-ring
G1/8X28	18	11.6	2.0	15	1.0	10	7.8X1.9
G1/4X19	24	15.6	2.5	18	1.5	12	10.8X2.4
G3/8X19	28	18.6	2.5	18	2.0	12	13.8X2.4
G1/2X14	34	22.6	2.5	24	2.5	16	17.8X2.4
G3/4X14	45	29.8	3.5	25	2.5	17	22.1X3.5
G1X11	51	35.8	3.5	30	2.5	21	28.7X3.5
G1-1/4X11	62	44.8	3.5	30	2.5	21.4	37.7X3.5
G1-1/2X11	68	50.8	3.5	30	2.5	21.4	43.7X3.5

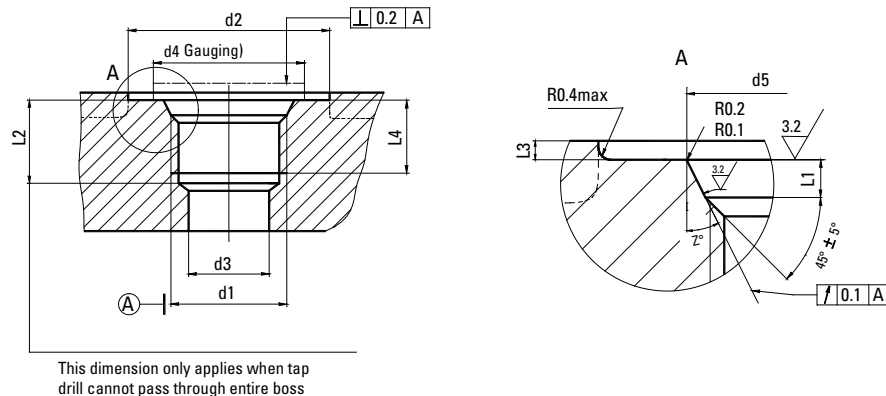
Technical Information – Port Type and Dimensions

ISO 11926-1 SAE Thread Port

ISO 11926-1 SAE Thread Port and Mating Stud End



ISO 11926-2 ISO 11926-3 SAE thread stud end



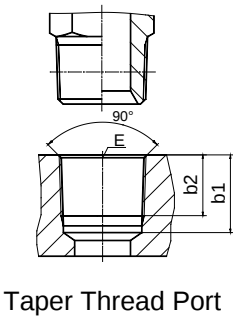
Port Dimensions mm

Thread d1	d2 min.	d3 ref.	d4 min.	d5 ±0.05	L1 +0.4 0	L2 min.	L3 max.	L4 min.	Z° ±1°	O-ring
5/16"X24	17	2.5	11	9.15	1.9	12	1.6	10	12	6.07X1.63
3/8"X24	19	3.5	13	10.75	2.4	12	1.6	10	12	7.65X1.63
7/16"X20	21	4.5	15	12.45	2.4	14	1.6	11.5	12	8.92X1.83
1/2"X20	23	6.0	16	14.05	2.5	14	1.6	11.5	12	10.52X1.83
9/16"X18	25	7.5	18	15.70	2.5	15.5	2.4	12.7	15	11.89X1.98
3/4"X16	30	10	22	20.65	2.5	17.5	2.4	14.3	15	16.36X2.21
7/8"X14	34	12.5	26	24.0	3.3	20	2.4	16.7	15	19.18X2.46
1-1/16"X12	41	16	32	29.2	3.3	23	2.4	19	15	23.47X2.95
1-3/16"X12	45	18	35	32.4	3.3	23	2.4	19	15	26.62X2.95
1-5/16"X12	49	21	38	35.55	3.3	23	3.2	19	15	29.74X2.95
1-5/8"X12	58	27	48	43.55	3.3	23	3.2	19	15	37.46X3.00
1-7/8"X12	65	33	54	49.9	3.3	23	3.2	19	15	43.69X3.00
2-1/2"X12	88	45	70	65.75	3.3	23	3.2	19	15	59.36X3.00

Technical Information – Port Type and Dimensions

Taper Thread Port

Taper Thread Port

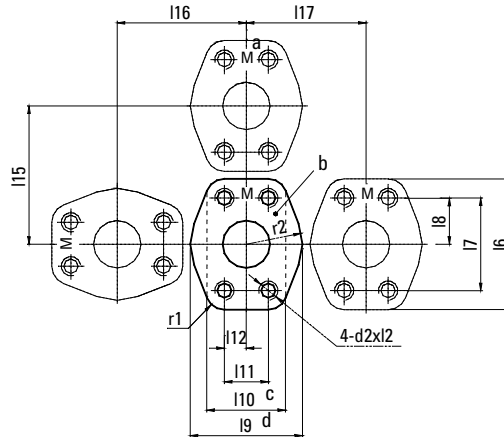


	Thread E	b2 min.	b2 min.
BSPT Thread	R1/8x28	9.5	7.5
	R1/4x19	13.5	11.0
	R3/8x19	14.0	11.5
	R1/2x14	17.5	15.0
	R3/4x14	19.0	16.5
	R1x11	22.5	19.5
	R1-1/4x11	24.8	21.5
	R1-1/2x11	24.8	21.5
	R2x11	29.5	26.0
NPT Thread	1/8x27	10.0	7.8
	1/4x18	14.0	11.8
	3/8x18	14.0	11.8
	1/2x14	18.0	15.5
	3/4x14	18.5	16.0
	1x11.5	22.5	19.5
	1-1/4x11.5	24.0	20.5
	1-1/2x11.5	24.0	20.5
	2x11.5	25.0	21.5

Technical Information – Port Type and Dimensions

ISO 6162 Flange Port

ISO 6162 Flange Port



a Metric Thread Port Mark

b Port Roughness Ra 3.2

c Flange Washer Min. Width

d Recommended Flange Washer Width

F

ISO 6162-1 Flange Port Dimensions (3.5MPa-35MPa)

			I6		I7 ± 0.25	I8 ± 0.25	I9 ± 0.8	I10 min.	I11 ± 0.25	I12 ± 0.25	I15 min.	I16 min.	I17 min.	r1 ± 0.4	r2 ± 0.8
Flange Size	d2	I2 min.	max.	min.											
-08 1/2"	M8	14	54.9	53.1	38.1	19.05	46	33	17.5	8.75	56	52	49	8	23
-12 3/4"	M10	18	65.8	64.3	47.6	23.8	52	41	22.3	11.15	68	61	55	9	26
-16 1"	M10	18	70.6	69.1	52.4	26.2	59	48	26.2	13.1	72	67	61	9	29
-20 1-1/4"	M10	22	80.3	78.5	58.7	29.35	73	54	30.2	15.1	82	78	75	10	37
-24 1-1/2"	M12	22	94.5	93.0	69.9	34.95	83	64	35.7	17.85	96	90	85	12	41
-32 2"	M12	22	103.1	100.1	77.8	38.9	97	76	42.9	21.45	104	102	99	12	49

ISO 6162-1 Flange Port Dimensions (35MPa-40MPa)

			I6		I7 ± 0.25	I8 ± 0.25	I9 ± 0.8	I10 min.	I11 ± 0.25	I12 ± 0.25	I15 min.	I16 min.	I17 min.	r1 ± 0.4	r2 ± 0.8
Flange Size	d2	I2 min.	max.	min.											
-08 1/2"	M8	16	57.2	55.6	40.5	20.25	48	38	18.2	9.1	59	56	53	8	24
-12 3/4"	M10	18	72.1	70.6	50.8	25.4	60	48	23.8	11.9	75	70	66	10	30
-16 1"	M12	23	81.8	80.3	57.2	28.6	70	54	27.8	13.9	84	80	75	12	35
-20 1-1/4"	M12	20	96.0	94.5	66.6	33.3	78	60	31.8	15.9	99	90	83	14	39
-24 1-1/2"	M16	27	114.3	111.3	79.3	39.65	95	70	36.5	18.25	116	108	101	17	48
-32 2"	M20	35	134.9	131.8	96.8	48.4	114	86	44.5	22.25	137	128	120	18	57

Technical Information – Recommended Thread Torque

Metric Thread

Thread	Nut Torque
M12x1.5	10-20
M14x1.5	20-35
M16x1.5	25-40
M18x1.5	30-45
M20x1.5	35-50
M22x1.5	40-70
M24x1.5	40-70
M26x1.5	60-100
M30x2.0	80-120
M36x2.0	100-150
M42x2.0	150-220
M45x2.0	180-250
M52x2.0	200-300

BSP Thread

Thread	Nut Torque
G1/8"x28	11-12
G1/4"x19	25-28
G3/8"x19	41-48
G1/2"x14	72-82
G5/8"x14	96-110
G3/4"x14	124-137
G1"x11	151-165
G1-1/4"x11	192-206
G1-1/2"x11	261-275
G2"x11	343-357

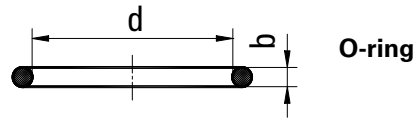
JIC Thread

Thread	Nut Torque
7/16"x20	15-16
1/2"x20	19-21
9/16"x18	24-28
3/4"x16	49-53
7/8"x14	77-85
1-1/16"x12	107-119
1-3/16"x12	127-140
1-5/16"x12	147-154
1-5/8"x12	172-181
1-7/8"x12	215-226
2-1/2"x12	332-350

ORFS Thread

Thread	Nut Torque
9/16"x18	14-16
11/16"x16	24-27
13/16"x16	43-47
1"x14	60-68
1-3/16"x12	90-95
1-7/16"x12	125-135
1-11/16"x12	170-190
2"x12	200-225

Technical Information – Seal Specifications



For ORFS Male O-ring

Part No.	Thread	d	b
O011	9/16"x18UNF	7.65	1.78
O012	11/16"x16UN	9.25	1.78
O014	13/16"x16UN	12.42	1.78
O016	1"x14UNSf	15.6	1.78
O018	1-3/16"x12UN	18.77	1.78
O021	1-7/16"x12UN	23.52	1.78
O025	1-11/16"x12UN	29.87	1.78
O029	2"x12UN	37.82	1.78

For SAE Flange O-ring

Part No.	Flange Size	d	b
O214	3/4"	24.99	3.53
O219	1"	32.92	3.53
O222	1-1/4"	37.69	3.53
O225	1-1/2"	47.22	3.53
O228	2"	56.74	3.53

For BSP Male O-ring

Part No.	Thread	d	b
O011	G1/8"X28	7.65	1.78

For SAE Male O-ring

Part No.	Thread	d	b
O904	7/16"x20UNF	8.92	1.83
O906	9/16"x18UNF	11.89	1.98
O908	3/4"x16UNF	16.36	2.21
O910	7/8"x14UNF	19.18	2.46
O912	1-1/16"x12UN	23.47	2.95
O916	1-5/16"x12UN	29.74	2.95
O920	1-5/8"x12UN	37.46	3.00
O924	1-7/8"x12UN	43.69	3.00
O932	2-1/2"x12UN	59.36	3.00

For Metric Male Adjustable Stud End O-ring

Part No.	Thread	d	b
008.1X1.6	M10X1	8.1	1.6

Eaton
Hydraulics Business USA
14615 Lone Oak Road
Eden Prairie, MN 55344
USA
Tel: 952-937-9800
Fax: 952-294-7722
www.eaton.com/hydraulics

Eaton
Hydraulics Business Europe
Route de la Longeraie 7
1110 Morges
Switzerland
Tel: +41 (0) 21 811 4600
Fax: +41 (0) 21 811 4601

Eaton
Hydraulics Business Asia Pacific
11th Floor Hong Kong New World Tower
300 Huaihai Zhong Road
Shanghai 200021
China
Tel: 86-21-6387-9988
Fax: 86-21-6335-3912



Powering Business Worldwide

© 2011 Eaton Corporation
All Rights Reserved
Printed in USA
Document No. E-MEAD-MC002-E
Supersedes: H-AP-EHGC-2011-C1
April 2011