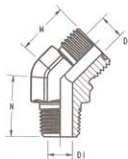
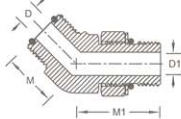


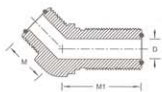
**45° Male Elbow**


Tube O.D.	Male Pipe Thread	Catalog Number	D	D1	M	N	Across Flats
1/4	1/8	4355x4	.172	.188	.63	.64	9/16
3/8	1/4	4355x6	.264	.281	.74	.86	3/4
1/2	3/8	4355x8	.378	.406	.80	.95	7/8
5/8	1/2	4355x10	.484	.531	.92	1.17	1-1/16
3/4	3/4	4355x12	.609	.719	1.02	1.20	1-5/16
1	1	4355x16	.812	.939	1.18	1.48	1-5/8
1-1/4	1-1/4	4355x20	1.026	1.252	1.26	1.67	1-5/8
1-1/2	1-1/2	4355x24	1.262	1.502	1.45	1.77	1-7/8

**45° Elbow - For-Seal® to  
Straight Thread O-Ring  
(Ref. SAE No. 520320)**


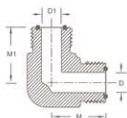
For replacement straight thread O-ring, see page 147.

Tube O.D.	Port Size	Catalog Number	D	D1	M	M1	Across Flats
1/4	1/4	4365x4	.172	.172	.63	1.18	9/16
1/4	3/8	4365x4x6	.172	.264	.68	1.30	3/4
3/8	1/4	4365x6x4	.264	.172	.74	1.22	3/4
3/8	3/8	4365x6	.264	.264	.74	1.30	3/4
3/8	1/2	4365x6x8	.264	.390	.74	1.43	3/4
1/2	3/8	4365x8x6	.378	.264	.80	1.27	3/4
1/2	1/2	4365x8	.378	.390	.80	1.43	3/4
1/2	5/8	4365x8x10	.378	.484	.82	1.76	1-1/16
1/2	3/4	4365x8x12	.378	.609	.87	1.97	1-3/16
5/8	1/2	4365x10x8	.484	.390	.92	1.59	1-1/16
5/8	5/8	4365x10	.484	.484	.92	1.76	1-1/16
5/8	3/4	4365x10x12	.484	.609	.94	1.97	1-3/16
3/4	5/8	4365x12x10	.609	.484	1.02	1.81	1-3/16
3/4	3/4	4365x12	.609	.609	1.02	1.97	1-5/16
3/4	1	4365x12x16	.609	.811	1.16	2.06	1-5/16
1	3/4	4365x16x12	.811	.609	1.12	2.03	1-7/16
1	1	4365x16	.812	.811	1.18	2.06	1-1/2
1	1-1/4	4365x16x20	.811	1.081	1.26	2.11	1-5/8
1-1/4	1-1/4	4365x20	1.024	1.081	1.26	2.11	1-5/8
1-1/2	1-1/2	4365x24	1.260	1.312	1.45	2.11	1-7/8

**45° Bulkhead Elbow  
(Ref. SAE No. 520801)**


For Bulkhead Nut, see page 157.

Tube O.D.	Catalog Number	D	M	M1	Across Flats
1/4	4375x4	.172	.63	1.73	9/16
3/8	4375x6	.264	.74	1.91	3/4
1/2	4375x8	.378	.80	2.01	3/4
5/8	4375x10	.484	.92	2.23	1-1/16
3/4	4375x12	.609	1.02	2.39	1-3/16
1	4375x16	.811	1.18	2.57	1-7/16
1-1/4	4375x20	1.045	1.26	2.64	1-11/16
1-1/2	4375x24	1.312	1.45	2.64	1-7/8

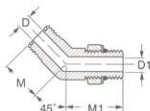
**90° Union Elbow  
(Ref. SAE No. 520201)**


Tube O.D.	Tube O.D.	Catalog Number	D	D1	M	M1	Across Flats
1/4	1/4	4505x4	.172	.172	.85	.85	9/16
1/4	3/8	4505x4x6	.172	.264	.92	.98	3/4
3/8	3/8	4505x6	.264	.264	.98	.98	3/4
1/2	1/2	4505x8	.378	.378	1.10	1.10	3/4
5/8	5/8	4505x10	.484	.484	1.31	1.31	1-1/16
3/4	3/4	4505x12	.609	.609	1.47	1.47	1-3/16
1	1	4505x16	.811	.811	1.64	1.64	1-7/16
1-1/4	1-1/4	4505x20	1.045	1.045	1.76	1.76	1-5/8
1-1/2	1-1/2	4505x24	1.312	1.312	1.92	1.92	1-7/8

# Straight Thread O-Ring

**Steel  
Fittings**

## 45° Elbow - For-Seal® to Straight Thread O-Ring (Ref. SAE No. 520320)



For replacement straight thread O-rings, see page 194.

For replacement For-Seal® o-rings, see page 163.

Tube O.D.	Port Size	Catalog Number	D	D1	M	M1	Across Flats
1/4	1/4	4365x4	.172	.172	.63	1.18	9/16
1/4	3/8	4365x4x6	.172	.264	.68	1.30	3/4
3/8	1/4	4365x6x4	.264	.172	.74	1.22	3/4
3/8	3/8	4365x6	.264	.264	.74	1.30	3/4
3/8	1/2	4365x6x8	.264	.390	.74	1.43	3/4
1/2	3/8	4365x8x6	.378	.264	.80	1.27	3/4
1/2	1/2	4365x8	.378	.390	.80	1.43	3/4
1/2	5/8	4365x8x10	.378	.484	.82	1.76	1-1/16
1/2	3/4	4365x8x12	.378	.609	.87	1.97	1-3/16
5/8	1/2	4365x10x8	.484	.390	.92	1.59	1-1/16
5/8	5/8	4365x10	.484	.484	.92	1.76	1-1/16
5/8	3/4	4365x10x12	.484	.609	.94	1.97	1-3/16
3/4	5/8	4365x12x10	.609	.484	1.02	1.81	1-3/16
3/4	3/4	4365x12	.609	.609	1.02	1.97	1-5/16
3/4	1	4365x12x16	.609	.811	1.16	2.06	1-5/16
1	3/4	4365x16x12	.811	.609	1.12	2.03	1-7/16
1	1	4365x16	.812	.811	1.18	2.06	1-1/2
1	1-1/4	4365x16x20	.811	1.081	1.26	1.11	1-5/8
1-1/4	1-1/4	4365x20	1.024	1.081	1.26	1.11	1-5/8
1-1/2	1-1/2	4365x24	1.260	1.312	1.45	1.11	1-7/8

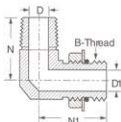
## 45° Elbow - Male Straight Thread O-Ring to Female Pipe Swivel (Ref. SAE No. 140357)



Replacement O-rings page 194.

Port Size	NPSM Swivel Nut	Catalog Number	Hex C	Hex C1	L	L1
1/4	1/4-18	9365x4x4	7/16	11/16	1.06	.66
1/4	3/8-18	9365x4x6	7/16	7/8	1.00	.75
3/8	3/8-18	9365x6x6	9/16	7/8	1.06	.70
3/8	1/2-14	9365x6x8	9/16	1	1.13	.82
1/2	3/8-18	9365x8x6	3/4	1	1.13	.88
1/2	1/2-14	9365x8x8	3/4	1	1.13	.82
5/8	1/2-14	9365x10x8	7/8	1	1.50	.78
3/4	3/4-14	9365x12x12	1-1/16	1-1/4	1.50	1.05
1	1-11-1/2	9365x16x16	1-5/16	1-1/2	1.62	1.06
1-1/4	1-1/4-11-1/2	9365x20x20	1-5/8	1-7/8	2.28	1.17
1-1/2	1-1/2-11-1/2	9365x24x24	1-7/8	2-1/8	2.61	1.34

## 90° Elbow - Straight Thread O-Ring to Male Pipe



Replacement O-rings page 194.

Port Size	Male Pipe Thread	Catalog Number	Straight Thread B	D1	D	N	N1	Across Flats
1/4	1/8	TF3569x4	7/16-20	.172	.188	.78	1.03	1/2
5/16	1/8	TF3569x5	1/2-20	.234	.188	.78	1.09	9/16
3/8	1/4	TF3569x6	9/16-18	.297	.281	1.09	1.25	5/8
1/2	3/8	TF3569x8	3/4-16	.391	.406	1.22	1.45	13/16
5/8	1/2	TF3569x10	7/8-14	.484	.531	1.47	1.70	15/16
3/4	3/4	TF3569x12	1-1/16-12	.609	.719	1.59	1.94	1-1/8
7/8	3/4	TF3569x14	1-3/16-12	.719	.919	1.69	2.00	1-1/4
1	1	TF3569x16	1-5/16-12	.844	.938	1.97	2.05	1-3/8
1-1/4	1-1/4	TF3569x20	1-5/8-12	1.078	1.250	2.38	2.25	1-3/4
1-1/2	1-1/2	TF3569x24	1-7/8-12	1.312	1.500	2.64	2.39	2
2	2	TF3569x32	2-1/2-12	1.781	1.938	3.00	2.89	2-5/8