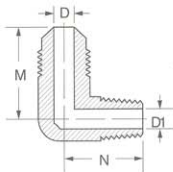
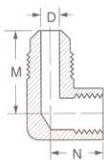
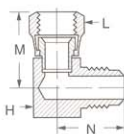


**90° Male Elbow**  
(Ref. SAE No. 010202)


Tube O.D.	Male Pipe Thread	Catalog Number	D	D1	M	N
1/8	1/8	49x2	.078	.219	.62	.69
3/16	1/8	49x3	.125	.219	.75	.75
1/4	1/8	49x4	.188	.219	.81	.76
1/4	1/4	49x4x4	.188	.312	.88	.94
1/4	3/8	49x4x6	.188	.375	.94	1.03
5/16	1/8	49x5	.219	.219	.91	.78
5/16	1/4	49x5x4	.219	.312	.95	.92
3/8	1/8	49x6x2	.281	.219	1.03	.91
3/8	1/4	49x6	.281	.312	.97	1.06
3/8	3/8	49x6x6	.281	.406	1.06	1.09
3/8	1/2	49x6x8	.281	.438	1.16	1.28
1/2	1/4	49x8x4	.406	.281	1.22	1.19
1/2	3/8	49x8	.406	.406	1.22	1.12
1/2	1/2	49x8x8	.406	.406	1.26	1.36
5/8	3/8	49x10x6	.500	.410	1.41	1.23
5/8	1/2	49x10	.500	.562	1.41	1.38
3/4	1/2	49x12	.625	.531	1.62	1.50
3/4	3/4	49x12x12	.625	.750	1.59	1.62

**90° Female Elbow**  
(Ref. SAE No. 010203)


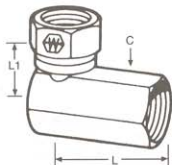
Tube O.D.	Fem. Pipe Thread	Catalog Number	D	M	N
1/4	1/8	50x4	.188	.88	.47
1/4	1/4	50x4x4	.188	.97	.66
5/16	1/4	50x5x4*	.219	1.03	.66
3/8	1/4	50x6	.281	1.09	.69
3/8	3/8	50x6x6*	.281	1.16	.69
1/2	3/8	50x8*	.406	1.28	.75
1/2	1/2	50x8x8*	.406	1.38	.94
5/8	1/2	50x10	.500	1.50	1.00
5/8	3/4	50x10x12*	-	-	-

**90° Elbow - 45° Flare Female Swivel to Male SAE 45°**  
(Steel)


Tube O.D.	Catalog Number	M	N	Hex H	Hex L
3/8	9151x6x6	1.09	1.00	3/4	3/4
1/2	9151x8x8	1.43	1.25	1	7/8
5/8	9151x10x10	1.60	1.44	1-1/4	1

90° Elbow - Female Pipe Swivel to  
Female Pipe

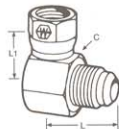
(Ref. SAE No. 140231)



NPSM Swivel Nut	Fem. Pipe Thread	Catalog Number	Hex C	L	L1
1/8-27	1/8-27	9455x2x2	9/16	.640	.700
1/4-18	1/4-18	9455x4x4	11/16	.870	.750
1/4-18	3/8-18	9455x4x6	13/16	1.000	.810
1/4-18	1/2-14	9455x4x8	1	1.250	.940
3/8-18	1/4-18	9455x6x4	13/16	1.000	.900
3/8-18	3/8-18	9455x6x6	13/16	1.000	.900
3/8-18	1/2-14	9455x6x8	1	1.250	1.000
1/2-14	3/8-18	9455x8x6	1	1.220	1.020
1/2-14	1/2-14	9455x8x8	1	1.250	1.000
1/2-14	3/4-14	9455x8x12	1-1/4	1.440	1.120
3/4-14	1/2-14	9455x12x8	1-1/4	1.440	1.250
3/4-14	3/4-14	9455x12x12	1-1/4	1.490	1.200
3/4-14	1-11/12	9455x12x16	1-1/2	1.750	1.380
1-11/12	3/4-14	9455x16x12	1-1/2	1.750	1.380
1-11/12	1-11/12	9455x16x16	1-1/2	1.690	1.460
1-1/4-11/12	1-1/4-11/12	9455x20x20	1-7/8	1.850	1.630
1-1/2-11/12	1-1/2-11/12	9455x24x24	2-1/8	2.250	1.750
2-11/12	2-11/12	9455x32x32	2-5/8	2.500	2.310

90° Elbow - SAE 45° Female Swivel to  
Male SAE 45°

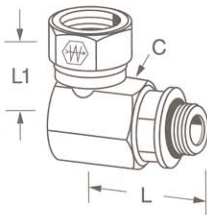
(Steel)



Tube O.D.	Catalog Number	Hex C	L	L1
3/8	9151x6x6	3/4	1.00	.69
1/2	9151x8x8	1	1.25	.99
5/8	9151x10x10	1-1/4	1.44	1.09

90° Elbow - Male Straight Thread to  
Female Pipe Swivel

(Ref. SAE No. 140257)



Straight Thread	NPSM Swivel Nut	Catalog Number	Hex C	L	L1
7/16-20	1/4-18	9515x4x4	11/16	1.090	.781
7/16-20	3/8-18	9515x4x6	7/8	1.100	.900
9/16-18	1/4-18	9515x6x4	11/16	1.187	.781
9/16-18	3/8-18	9515x6x6	7/8	1.296	.937
9/16-18	1/2-14	9515x6x8	1	1.484	1.000
3/4-16	3/8-18	9515x8x6	1	1.515	1.000
3/4-16	1/2-14	9515x8x8	1	1.515	1.000
3/4-16	3/4-14	9515x8x12	1-1/4	1.656	1.250
7/8-14	3/8-18	9515x10x6	1	1.640	1.000
7/8-14	1/2-14	9515x10x8	1	1.640	1.025
7/8-14	3/4-14	9515x10x12	1-1/4	1.781	1.250
1-1/16-12	1/2-14	9515x12x8	1-1/4	1.921	1.125
1-1/16-12	3/4-14	9515x12x12	1-1/4	1.921	1.250
1-3/16-12	3/4-14	9515x14x12	1-1/4	1.921	1.250
1-5/16-12	3/4-14	9515x16x12	1-1/2	2.093	1.375
1-5/16-12	1-11/12	9515x16x16	1-1/2	2.093	1.390
1-5/8-12	3/4-14	9515x20x12	1-7/8	2.484	1.562
1-5/8-12	1-1/4-11/12	9515x20x20	1-7/8	2.484	1.656
1-7/8-12	1-1/2-11/12	9515x24x24	2-1/8	2.609	1.734
2-1/2-12	2-11/12	9515x32x32	2-5/8	3.250	2.312

Replacement O-rings page 194.

NOTE: C and L dimensions subject to change.