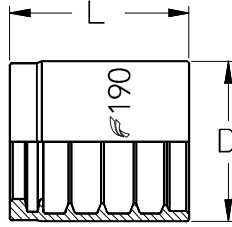

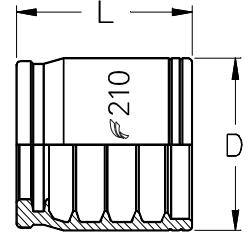



190 No Skive Ferrule for R17 BN175, BN160, BN170T



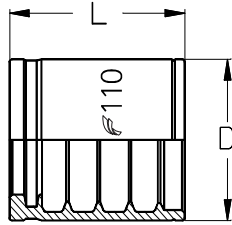
Part Number		D	L
	in	mm	mm
190-04	1/4	19.0	23.0
190-06	3/8	23.0	30.0

210 No Skive Ferrule for 2SN BN200, BN220



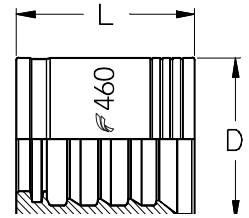
Part Number		D	L
	in	mm	mm
210-03	3/16	20.0	24.0
210-04	1/4	22.0	26.0
210-05	5/16	24.0	27.5
210-06	3/8	26.0	30.0
210-08	1/2	34.0	35.0
210-10	5/8	34.0	35.0
210-12	3/4	38.0	40.0
210-16	1	48.0	50.0
210-20	1-1/4	60.0	57.0
210-24	1-1/2	67.0	62.0
210-32	2	80.0	66.0


110 No Skive Ferrule for 1SN, 2SC, BN120, BN250, BN300, BN270T



Part Number		D	L
	in	mm	mm
110-03	3/16	19.0	24.0
110-04	1/4	20.0	27.0
110-05	5/16	22.0	27.5
110-06	3/8	24.5	30.0
110-08	1/2	28.0	32.5
110-10	5/8	32.0	35.0
110-12	3/4	36.0	40.0
110-16	1	45.0	50.0
110-20	1-1/4	54.0	50.0
110-24	1-1/2	62.0	55.0
110-32	2	76.0	60.0
110-40	2-1/2	88.0	90.0
110-48	3	101.0	90.0

460/464 Skive Ferrule for 4 Spiral SN300



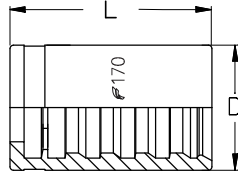
Part Number		D	L
	in	mm	mm
460-06	3/8	26.0	32.5
460-08	1/2	30.0	35.0
460-10	5/8	34.0	38.5
460-12	3/4	38.0	43.5
460-16	1	46.0	54.0
464-20	1-1/4	56.0	61.0
464-24	1-1/2	65.0	68.0
464-32	2	78.0	74.0

Two Piece

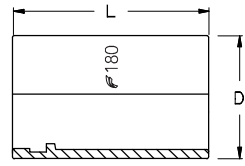
Two Piece


3 Ferrules


170 No Skive Ferrule for Thermoplastic 720, 711, 725



180 No Skive Ferrule for Teflon TBR





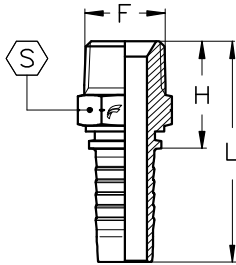
Part Number		D	L
	in	mm	mm
170-03	3/16	16.0	23.6
170-04	1/4	18.0	23.6
170-05	5/16	20.0	24.6
170-06	3/8	22.0	32.0
170-08	1/2	27.0	34.0
170-12	3/4	33.8	40.0

Part Number		D	L
	in	mm	mm
180-03	3/16	12.0	25.5
180-04	1/4	14.0	29.5
180-05	5/16	17.0	32.0
180-06	3/8	19.0	32.0
180-08	1/2	23.0	32.0
180-10	5/8	27.0	37.0
180-12	3/4	30.0	43.0
180-16	1	37.0	48.0
180-20	1-1/4	46.0	59.0



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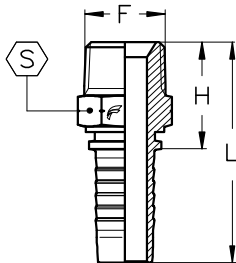
MP NPT Male

Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
W03-02MP	3/16	1/8 - 27	20.6	0.81	45.6	1.79	12	1/2
W03-04MP	3/16	1/4 - 18	26.5	1.04	51.5	2.03	14	9/16
W04-02MP	1/4	1/8 - 27	21.1	0.83	49.1	1.93	12	1/2
W04-04MP	1/4	1/4 - 18	27.0	1.06	55.0	2.16	14	9/16
W04-06MP	1/4	3/8 - 18	28.6	1.12	56.6	2.23	19	3/4
W04-08MP	1/4	1/2 - 14	34.0	1.34	62.0	2.44	22	7/8
W05-04MP	5/16	1/4 - 18	27.0	1.06	55.0	2.16	14	9/16
W05-06MP	5/16	3/8 - 18	28.6	1.12	56.6	2.23	19	3/4
W06-04MP	3/8	1/4 - 18	27.5	1.08	58.0	2.28	16	5/8
W06-06MP	3/8	3/8 - 18	28.6	1.12	59.1	2.33	19	3/4
W06-08MP	3/8	1/2 - 14	34.0	1.34	64.5	2.54	22	7/8
W08-04MP	1/2	1/4 - 18	30.5	1.20	63.2	2.49	22	7/8
W08-06MP	1/2	3/8 - 18	30.6	1.20	63.6	2.50	22	7/8
W08-08MP	1/2	1/2 - 14	35.0	1.38	68.0	2.68	22	7/8
W08-12MP	1/2	3/4 - 14	36.9	1.45	69.9	2.75	27	1 1/16
W10-08MP	5/8	1/2 - 14	36.2	1.42	72.0	2.83	25	1
W10-12MP	5/8	3/4 - 14	37.1	1.46	72.9	2.87	27	1 1/16
W12-08MP	3/4	1/2 - 14	37.5	1.48	78.0	3.07	27	1 1/16
W12-12MP	3/4	3/4 - 14	37.9	1.49	78.4	3.09	27	1 1/16
W12-16MP	3/4	1 - 11 1/2	45.5	1.79	86.0	3.38	35	1 7/16
W16-12MP	1	3/4 - 14	40.4	1.59	91.4	3.60	32	1 1/4
W16-16MP	1	1 - 11 1/2	47.0	1.85	98.0	3.86	35	1 7/16
W16-20MP	1	1 1/4 - 11 1/2	51.1	2.01	102.1	4.02	46	1 13/16
W20-20MP	1 1/4	1 1/4 - 11 1/2	51.9	2.04	109.6	4.31	46	1 13/16
W24-24MP	1 1/2	1 1/2 - 11 1/2	55.0	2.16	119.5	4.70	50	2
W32-32MP	2	2 - 11 1/2	64.0	2.52	134.0	5.27	65	2 9/16



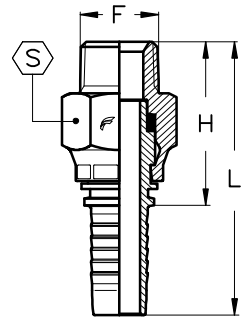
MPL NPT Male Long

Part Number		F	H		L			
	in		mm	in	mm	in	mm	
W04-04MPL	1/4	1/4 - 18	36.8	1.45	64.8	2.55	14	9/16
W06-06MPL	3/8	3/8 - 18	38.9	1.53	69.4	2.73	19	3/4



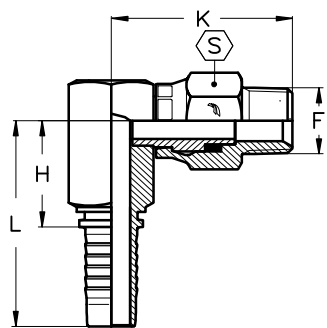
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MPX NPT Male Swivel



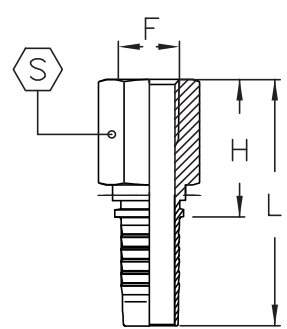
Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
W04-02MPX	1/4	1/8 - 18	32.0	1.28	60.0	2.38	13	1/2
W04-04MPX	1/4	1/4 - 18	41.0	1.61	69.0	2.72	17	11/16
W04-06MPX	1/4	3/8 - 18	46.0	1.81	74.0	2.91	22	7/8
W06-04MPX	3/8	1/4 - 18	41.0	1.61	72.0	2.83	17	11/16
W06-06MPX	3/8	3/8 - 18	45.0	1.77	75.0	2.95	22	7/8
W06-08MPX	3/8	1/2 - 14	57.0	2.24	88.0	3.46	27	1 1/16
W08-06MPX	1/2	3/8 - 18	46.0	1.81	79.0	3.11	22	7/8
W08-08MPX	1/2	1/2 - 14	56.0	2.20	89.0	3.50	27	1 1/16
W12-12MPX	3/4	3/4 - 14	61.0	2.40	101.0	3.98	34	1 3/8
W16-16MPX	1	1 - 11 1/2	65.0	2.56	116.0	4.57	38	1 1/2

MPX90B NPT Male Swivel - 90° Block Elbow



Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W04-04MPX90B	1/4	1/4 - 18	32.0	1.26	60.0	2.36	39.7	1.56	16	5/8
W06-06MPX90B	3/8	3/8 - 18	32.5	1.28	63.0	2.48	41.0	1.61	19	3/4
W08-08MPX90B	1/2	1/2 - 14	33.0	1.30	66.0	2.60	48.0	1.89	22	7/8
W12-12MPX90B	3/4	3/4 - 14	43.5	1.71	84.0	3.31	64.0	2.52	32	1 1/4

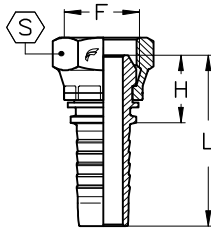
FP NPT Female Rigid





Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
W04-02FP	1/4	1/8 - 27	21.5	0.85	49.5	1.95	16	5/8
W04-04FP	1/4	1/4 - 18	27.1	1.07	55.1	2.17	19	3/4
W04-06FP	1/4	3/8 - 18	28.4	1.12	56.4	2.22	22	7/8
W06-04FP	3/8	1/4 - 18	27.1	1.07	57.6	2.27	19	3/4
W06-06FP	3/8	3/8 - 18	28.4	1.12	58.9	2.32	22	7/8
W06-08FP	3/8	1/2 - 14	34.5	1.36	65.0	2.56	29	1 3/16
W08-08FP	1/2	1/2 - 14	35.5	1.40	68.5	2.70	29	1 3/16
W12-12FP	3/4	3/4 - 14	38.0	1.50	78.5	3.09	32	1 1/4
W16-16FP	1	1 - 11 1/2	45.8	1.80	96.8	3.81	36	1 7/16

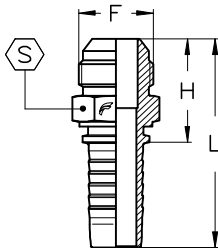
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FPX NPSM 60° Female Swivel



Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
W04-04FPX	1/4	1/4 - 18	19.0	0.75	47.0	1.85	17	11/16
W06-06FPX	3/8	3/8 - 18	21.0	0.83	51.0	2.00	22	7/8
W08-08FPX	1/2	1/2 - 14	23.0	0.90	56.0	2.20	25	1
W12-12FPX	3/4	3/4 - 14	27.0	1.06	67.0	2.64	32	1 1/4
W16-16FPX	1	1 - 11 1/2	30.0	1.18	81.0	3.19	38	1 1/2




MJ JIC 37° Male

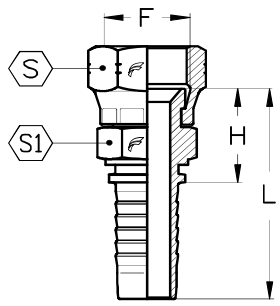


Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
W03-04MJ	3/16	7/16 - 20	25.0	0.98	50.0	1.97	12	1/2
W04-04MJ	1/4	7/16 - 20	25.5	1.00	53.5	2.11	12	1/2
W04-05MJ	1/4	1/2 - 20	25.5	1.00	53.5	2.11	14	9/16
W04-06MJ	1/4	9/16 - 18	26.6	1.05	54.6	2.15	15	5/8
W05-05MJ	5/16	1/2 - 20	25.5	1.00	53.5	2.11	14	9/16
W05-06MJ	5/16	9/16 - 18	26.6	1.05	54.6	2.15	15	5/8
W05-08MJ	5/16	3/4 - 16	29.7	1.17	57.7	2.27	19	3/4
W06-06MJ	3/8	9/16 - 18	26.6	1.05	57.1	2.25	15	5/8
W06-08MJ	3/8	3/4 - 16	29.7	1.17	60.2	2.37	19	3/4
W06-10MJ	3/8	7/8 - 14	34.3	1.35	64.8	2.55	24	1
W08-06MJ	1/2	9/16 - 18	29.7	1.17	62.6	2.46	19	3/4
W08-08MJ	1/2	3/4 - 16	30.7	1.21	63.7	2.51	19	3/4
W08-10MJ	1/2	7/8 - 14	35.3	1.39	68.3	2.69	24	1
W08-12MJ	1/2	1 1/16 - 12	38.9	1.53	71.9	2.83	27	1 1/16
W10-08MJ	5/8	3/4 - 16	33.7	1.33	68.4	2.69	24	1
W10-10MJ	5/8	7/8 - 14	35.5	1.40	71.3	2.81	24	1
W10-12MJ	5/8	1 1/16 - 12	39.1	1.54	74.9	2.95	27	1 1/16
W12-10MJ	3/4	7/8 - 14	37.3	1.47	77.8	3.06	27	1 1/16
W12-12MJ	3/4	1 1/16 - 12	39.9	1.57	80.4	3.16	27	1 1/16
W12-14MJ	3/4	1 3/16 - 12	41.6	1.64	82.1	3.23	32	1 1/4
W12-16MJ	3/4	1 5/16 - 12	42.1	1.66	82.6	3.25	34	1 3/8
W16-16MJ	1	1 5/16 - 12	43.6	1.72	94.6	3.72	34	1 3/8
W16-20MJ	1	1 5/8 - 12	46.8	1.84	97.8	3.85	42	1 1/16
W20-20MJ	1 1/4	1 5/8 - 12	47.6	1.87	105.3	4.14	42	1 1/16
W24-24MJ	1 1/2	1 7/8 - 12	53.0	2.09	117.5	4.62	50	2
W32-32MJ	2	2 1/2 - 12	63.4	2.50	133.4	5.25	65	2 9/16

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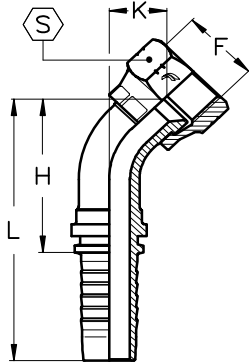
FJ JIC 37° Female Swivel



Part Number		F	H		L					
	in		mm	in	mm	in	mm	in	mm	in
W03-03FJ	3/16	3/8 - 24	19.0	0.75	44.0	1.73	12	1/2	12	1/2
W03-04FJ	3/16	7/16 - 20	19.0	0.75	44.0	1.73	14	9/16	12	1/2
W03-05FJ	3/16	1/2 - 20	45.0	0.59	40.0	1.57	19	3/4	--	--
W04-04FJ	1/4	7/16 - 20	20.5	0.81	48.5	1.91	14	9/16	14	9/16
W04-05FJ	1/4	1/2 - 20	21.0	0.83	49.0	1.93	17	11/16	14	9/16
W04-06FJ	1/4	9/16 - 18	22.0	0.87	50.0	1.97	19	3/4	14	9/16
W04-08FJ	1/4	3/4 - 16	15.5	0.61	43.0	1.68	22	7/8	19	3/4
W05-04FJ	5/16	7/16 - 20	21.0	0.83	49.0	1.93	14	9/16	14	9/16
W05-05FJ	5/16	1/2 - 20	21.0	0.83	49.0	1.93	17	11/16	14	9/16
W05-06FJ	5/16	9/16 - 18	22.5	0.88	50.5	1.99	19	3/4	16	5/8
W05-08FJ	5/16	3/4 - 16	24.5	0.97	52.5	2.05	22	7/8	19	3/4
W06-04FJ	3/8	7/16 - 20	21.0	0.83	51.5	2.03	14	9/16	16	5/8
W06-05FJ	3/8	1/2 - 20	21.5	0.85	52.0	2.05	17	11/16	16	5/8
W06-06FJ	3/8	9/16 - 18	22.5	0.88	53.0	2.09	19	3/4	16	5/8
W06-06FJ-01	3/8	9/16 - 18	22.5	0.88	53.0	2.09	18	11/16	16	5/8
W06-08FJ	3/8	3/4 - 16	24.5	0.96	55.0	2.16	22	7/8	19	3/4
W06-10FJ	3/8	7/8 - 14	36.5	1.44	57.0	2.24	27	11/16	22	7/8
W08-06FJ	1/2	9/16 - 18	24.5	0.96	57.5	2.26	19	3/4	19	3/4
W08-08FJ	1/2	3/4 - 16	25.5	1.00	58.5	2.30	22	7/8	19	3/4
W08-10FJ	1/2	7/8 - 14	27.5	1.08	60.5	2.38	27	11/16	22	7/8
W08-12FJ	1/2	1 1/16 - 12	30.3	1.19	63.3	2.49	32	1 1/4	25	1
W10-08FJ	5/8	3/4 - 16	26.7	1.05	62.5	2.46	22	7/8	22	7/8
W10-10FJ	5/8	7/8 - 14	27.7	1.09	63.5	2.50	27	1 1/16	22	7/8
W10-12FJ	5/8	1 1/16 - 12	30.5	1.20	66.3	2.61	32	1 1/4	25	1
W12-10FJ	3/4	7/8 - 14	30.0	1.18	70.5	2.77	27	1 1/16	27	1 1/16
W12-12FJ	3/4	1 1/16 - 12	31.8	1.25	72.3	2.85	32	1 1/4	27	1 1/16
W12-14FJ	3/4	1 3/16 - 12	34.5	1.36	75.0	2.95	36	1 7/16	30	1 3/16
W12-16FJ	3/4	1 5/16 - 12	35.5	1.40	76.0	2.99	38	1 1/2	32	1 1/4
W16-12FJ	1	1 1/16 - 12	34.3	1.35	85.3	3.36	32	1 1/4	32	1 1/4
W16-16FJ	1	1 5/16 - 12	37.0	1.46	88.0	3.46	38	1 1/2	32	1 1/4
W16-20FJ	1	1 5/8 - 12	42.0	1.65	93.0	3.66	50	2	41	1 5/8
W20-20FJ	1 1/4	1 5/8 - 12	42.8	1.68	100.5	3.96	50	2	41	1 5/8
W20-24FJ	1 1/4	1 7/8 - 12	50.0	1.97	92.0	3.62	60	2 1/2	--	--
W24-24FJ	1 1/2	1 7/8 - 12	47.0	1.85	111.5	4.39	55	2 3/16	46	1 13/16
W32-32FJ	2	2 1/2 - 12	55.5	2.18	125.5	4.94	70	2 3/4	60	2 3/8



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FJ45 JIC 37° Female Swivel - 45° Elbow



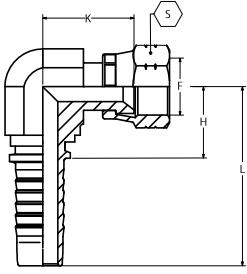
Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W03-04FJ45	3/16	7/16 - 20	29.0	1.14	54.0	2.12	10.0	0.39	14	9/16
W04-04FJ45	1/4	7/16 - 20	31.0	1.22	59.0	2.32	10.0	0.39	14	9/16
W04-05FJ45	1/4	1/2 - 20	32.0	1.26	60.0	2.36	11.0	0.43	17	11/16
W04-06FJ45	1/4	9/16 - 18	33.0	1.30	61.0	2.40	12.0	0.47	19	3/4
W05-05FJ45	5/16	1/2 - 20	33.0	1.30	61.0	2.40	11.0	0.43	17	11/16
W05-06FJ45	5/16	9/16 - 18	34.0	1.34	62.0	2.44	12.0	0.47	19	3/4
W06-06FJ45	3/8	9/16 - 18	35.5	1.40	66.0	2.60	12.0	0.47	19	3/4
W06-08FJ45	3/8	3/4 - 16	37.5	1.48	68.0	2.68	14.0	0.55	22	7/8
W08-08FJ45	1/2	3/4 - 16	41.0	1.61	74.0	2.91	14.0	0.57	22	7/8
W08-10FJ45	1/2	7/8 - 14	43.0	1.69	76.0	2.99	16.0	0.63	27	11/16
W08-12FJ45	1/2	1 1/16 - 12	45.5	1.79	79.0	3.09	19.0	0.75	32	1 1/4
W10-10FJ45	5/8	7/8 - 14	47.0	1.85	83.0	3.27	16.0	0.63	27	1 1/16
W10-12FJ45	5/8	1 1/16 - 12	50.0	1.97	86.0	3.38	19.0	0.75	32	1 1/4
W12-12FJ45	3/4	1 1/16 - 12	57.0	2.24	97.0	3.82	20.0	0.79	32	1 1/4
W12-14FJ45	3/4	1 3/16 - 12	59.0	2.32	100.0	3.94	22.0	0.87	36	1 7/16
W12-16FJ45	3/4	1 5/16 - 12	61.0	2.40	101.0	3.98	24.0	0.94	38	1 1/2
W16-16FJ45	1	1 5/16 - 12	72.0	2.83	123.0	4.84	24.0	0.94	38	1 1/2
W16-20FJ45	1	1 5/8 - 12	76.0	2.99	127.0	5.00	28.0	1.10	50	2
W20-20FJ45	1 1/4	1 5/8 - 12	85.0	3.35	143.0	5.63	38.0	1.10	50	2
W24-24FJ45	1 1/2	1 7/8 - 12	99.0	3.90	164.0	6.46	46.0	1.26	60	2 3/8
W32-32FJ45	2	2 1/2 - 12	132.0	5.20	202.0	7.95	61.0	1.69	70	2 3/4



3

W Series - Braided / Four Spiral Hose

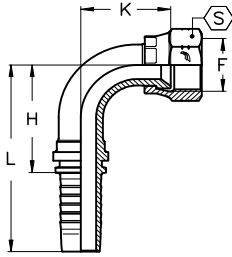
BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS WITHOUT NOTICE.



FJ90B JIC 37° Female Swivel - 90° Block Elbow



Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W04-04FJ90B	1/4	7/16 - 20	17.3	0.68	43.6	1.72	18.8	0.74	14	9/16
W06-06FJ90B	3/8	9/16 - 18	17.8	0.68	52.1	2.05	21.6	0.85	19	3/4
W08-08FJ90B	1/2	3/4 - 16	21.2	0.83	52.0	2.04	26.2	1.03	22	7/8

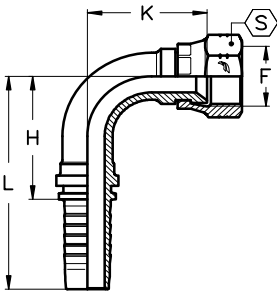
FJ90S JIC 37° Female Swivel - 90° Elbow Short Drop





Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W04-04FJ90S	1/4	7/16 - 20	25.5	1.00	53.5	2.11	20.0	0.79	14	9/16
W04-05FJ90S	1/4	1/2 - 20	25.5	1.00	53.5	2.11	21.0	0.83	17	1 1/16
W04-06FJ90S	1/4	9/16 - 18	25.5	1.00	53.5	2.11	23.0	0.90	19	3/4
W06-04FJ90S	3/8	7/16 - 20	25.5	1.00	56.0	2.20	20.0	0.79	14	9/16
W06-06FJ90S	3/8	9/16 - 18	30.0	1.18	60.5	2.38	23.0	0.90	19	3/4
W06-08FJ90S	3/8	3/4 - 16	31.0	1.22	61.5	2.42	29.0	1.14	22	7/8
W08-06FJ90S	1/2	9/16 - 18	30.0	1.18	61.5	2.42	23.0	0.90	19	3/4
W08-08FJ90S	1/2	3/4 - 16	37.0	1.46	70.0	2.75	29.0	1.14	22	7/8
W08-10FJ90S	1/2	7/8 - 14	38.0	1.50	71.0	2.79	33.0	1.30	27	1 1/16
W08-12FJ90S	1/2	1 1/16 - 12	40.0	1.57	73.0	2.87	40.0	1.57	32	1 1/4
W10-10FJ90S	5/8	7/8 - 14	43.0	1.69	79.0	3.11	32.0	1.26	27	1 1/16
W10-12FJ90S	5/8	1 1/16 - 12	45.0	1.77	81.0	3.19	40.0	1.57	32	1 1/4
W12-10FJ90S	3/4	7/8 - 14	44.0	1.73	84.5	3.33	33.0	1.30	27	1 1/16
W12-12FJ90S	3/4	1 1/16 - 12	55.0	2.16	95.0	3.74	43.0	1.69	32	1 1/4
W12-16FJ90S	3/4	1 5/16 - 12	55.0	2.16	95.0	3.74	49.0	1.93	38	1 1/2
W16-16FJ90S	1	1 5/16 - 12	71.0	2.79	122.0	4.80	56.0	2.20	38	1 1/2

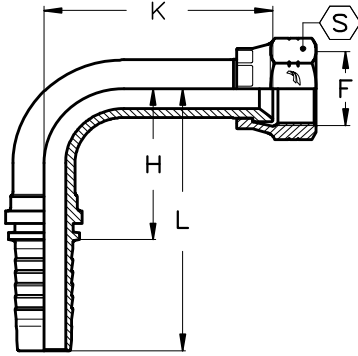
BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS WITHOUT NOTICE.



FJ90M JIC 37° Female Swivel - 90° Elbow Medium Drop



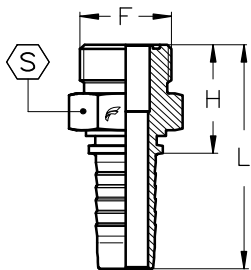
Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W03-04FJ90M	3/16	7/16 - 20	21.0	0.83	46.0	1.81	21.0	0.83	14	9/16
W04-04FJ90M	1/4	7/16 - 20	25.5	1.00	53.5	2.11	26.0	1.02	14	9/16
W04-05FJ90M	1/4	1/2 - 20	25.5	1.00	53.5	2.11	26.0	1.02	17	11/16
W04-06FJ90M	1/4	9/16 - 18	25.5	1.00	53.5	2.11	27.0	1.06	19	3/4
W05-05FJ90M	5/16	1/2 - 20	28.0	1.10	56.0	2.20	29.0	1.14	17	11/16
W05-06FJ90M	5/16	9/16 - 18	28.0	1.10	56.0	2.20	29.0	1.14	19	3/4
W05-08FJ90M	5/16	3/4 - 16	28.0	1.10	56.0	2.20	27.0	1.06	22	3/4
W06-06FJ90M	3/8	9/16 - 18	31.0	1.22	61.5	2.42	33.0	1.30	19	3/4
W06-08FJ90M	3/8	3/4 - 16	31.0	1.22	61.5	2.42	33.0	1.30	22	7/8
W08-08FJ90M	1/2	3/4 - 16	37.0	1.46	70.0	2.75	39.0	1.53	22	7/8
W08-10FJ90M	1/2	7/8 - 14	37.0	1.46	70.0	2.75	40.0	1.57	27	1 1/16
W08-12FJ90M	1/2	1 1/16 - 12	37.0	1.46	70.0	2.76	45.0	1.77	32	1 1/4
W10-10FJ90M	5/8	7/8 - 14	45.0	1.77	81.0	3.19	45.0	1.77	27	1 1/16
W10-12FJ90M	5/8	1 1/16 - 12	45.0	1.77	81.0	3.19	47.0	1.85	32	1 1/4
W12-10FJ90M	3/4	7/8 - 14	55.0	2.16	95.0	3.74	54.0	2.12	27	1 1/16
W12-12FJ90M	3/4	1 1/16 - 12	55.0	2.16	95.0	3.74	53.0	2.09	32	1 1/4
W12-14FJ90M	3/4	1 3/16 - 12	55.0	2.16	95.0	3.74	54.0	2.12	36	1 7/16
W12-16FJ90M	3/4	1 5/16 - 12	55.0	2.16	95.0	3.74	56.0	2.20	38	1 1/2
W16-16FJ90M	1	1 5/16 - 12	71.0	2.79	122.0	4.80	70.0	2.75	38	1 1/2
W16-20FJ90M	1	1 5/8 - 12	71.0	2.79	122.0	4.80	70.0	2.75	50	2
W20-20FJ90M	1 1/4	1 5/8 - 12	86.0	3.38	143.0	5.63	82.0	3.23	50	2
W20-24FJ90M	1 1/4	1 7/8 - 12	86.0	3.38	143.0	5.63	82.0	3.23	60	2 3/8
W24-24FJ90M	1 1/2	1 7/8 - 12	102.0	4.01	167.0	6.57	96.0	3.78	60	2 3/8
W32-32FJ90M	2	2 1/2 - 12	137.0	5.39	207.0	8.15	134.0	5.27	70	2 3/4



FJ90L JIC 37° Female Swivel - 90° Elbow Long Drop



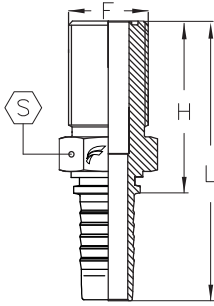
Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W04-04FJ90L	1/4	7/16 - 20	25.5	1.00	53.5	2.11	46.0	1.81	14	9/16
W04-05FJ90L	1/4	1/2 - 20	25.5	1.00	53.5	2.11	46.0	1.81	17	11/16
W04-06FJ90L	1/4	9/16 - 18	25.5	1.00	53.5	2.11	54.0	2.12	19	3/4
W06-06FJ90L	3/8	9/16 - 18	31.0	1.22	61.5	2.42	54.0	2.12	19	3/4
W06-08FJ90L	3/8	3/4 - 16	31.0	1.22	61.5	2.42	64.0	2.52	22	7/8
W08-08FJ90L	1/2	3/4 - 16	38.0	1.50	71.0	2.79	64.0	2.52	22	7/8
W08-10FJ90L	1/2	7/8 - 14	38.0	1.50	71.0	2.79	70.0	2.75	27	11/16
W10-10FJ90L	5/8	7/8 - 14	45.0	1.77	81.0	3.19	70.0	2.75	27	11/16
W10-12FJ90L	5/8	1 1/16 - 12	45.0	1.77	81.0	3.19	96.0	3.78	32	1 1/4
W12-12FJ90L	3/4	1 1/16 - 12	55.0	2.16	95.0	3.74	96.0	3.78	32	1 1/4
W16-16FJ90L	1	1 5/16 - 12	71.0	2.79	122.0	4.80	114.0	4.49	38	1 1/2
W20-20FJ90L	1 1/4	1 5/8 - 12	86.0	3.39	143.0	5.63	129.0	5.08	50	2



MF ORFS Male



Part Number		F	H		L			
	in		mm	in	mm	in	mm	
W04-04MF	1/4	9/16 - 18	23.5	0.92	51.5	2.02	17	11/16
W04-06MF	1/4	1 1/16 - 16	25.5	1.00	53.5	2.10	19	3/4
W05-06MF	5/16	1 1/16 - 16	25.5	1.00	53.5	2.11	19	3/4
W06-06MF	3/8	1 1/16 - 16	25.5	1.00	56.0	2.20	19	3/4
W06-08MF	3/8	1 3/16 - 16	28.5	1.12	59.0	2.32	22	7/8
W06-10MF	3/8	1 - 14	33.0	1.29	63.5	2.50	27	1 1/16
W08-08MF	1/2	1 3/16 - 16	29.5	1.16	62.5	2.46	22	7/8
W08-10MF	1/2	1 - 14	34.0	1.33	67.0	2.63	27	1 1/16
W08-12MF	1/2	1 3/16 - 12	37.0	1.45	70.0	2.75	32	1 1/4
W10-10MF	5/8	1 - 14	34.0	1.33	70.0	2.75	27	1 1/16
W10-12MF	5/8	1 3/16 - 12	37.0	1.45	73.0	2.87	32	1 1/4
W12-12MF	3/4	1 3/16 - 12	38.0	1.49	78.5	3.09	32	1 1/4
W12-16MF	3/4	1 7/16 - 12	42.5	1.67	83.0	3.26	41	1 5/8
W16-16MF	1	1 7/16 - 12	44.0	1.73	95.0	3.74	41	1 5/8
W20-20MF	1 1/4	1 11/16 - 12	46.0	1.81	104.0	4.09	46	1 13/16
W24-24MF	1 1/2	2 - 12	50.0	1.97	115.0	4.53	55	2 1/8

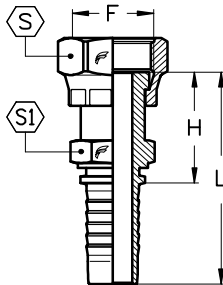
MFK ORFS Male Bulkhead






Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
W06-06MFK*	3/8	1 1/16 - 16	47.0	1.85	77.0	3.03	19	3/4
W08-08MFK*	1/2	1 3/16 - 16	50.8	2.00	83.3	3.28	22	7/8

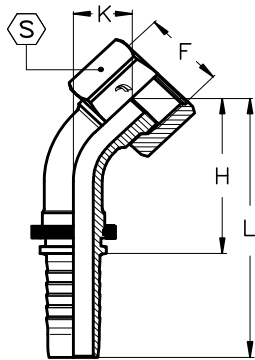
* Locknut included.



FF ORFS Female Swivel



Part Number		F	H		L					
	in		mm	in	mm	in	mm	in	mm	in
W04-04FF	1/4	9/16 - 18	26.5	1.04	54.5	2.14	17	1 1/16	14	9/16
W04-06FF	1/4	1 1/16 - 16	28.5	1.12	56.5	2.22	22	7/8	16	5/8
W04-08FF	1/4	1 3/16 - 16	32.5	1.28	60.5	2.38	24	1	19	3/4
W05-06FF	5/16	1 1/16 - 16	28.5	1.12	56.5	2.22	22	7/8	16	5/8
W06-04FF	3/8	9/16 - 18	26.5	1.04	57.0	2.24	17	1 1/16	16	5/8
W06-06FF	3/8	1 1/16 - 16	28.5	1.12	59.0	2.32	22	7/8	16	5/8
W06-08FF	3/8	1 3/16 - 16	32.5	1.27	63.0	2.48	24	1	19	3/4
W08-06FF	1/2	1 1/16 - 16	30.5	1.20	63.5	2.50	22	7/8	19	3/4
W08-08FF	1/2	1 3/16 - 16	33.5	1.31	66.5	2.61	24	1	19	3/4
W08-10FF	1/2	1 - 14	39.5	1.55	72.5	2.85	30	1 3/16	24	1
W08-12FF	1/2	1 3/16 - 12	43.5	1.71	76.5	3.01	36	1 7/16	27	1 1/16
W10-08FF	5/8	1 3/16 - 16	35.7	1.41	71.5	2.81	24	1	24	1
W10-10FF	5/8	1 - 14	39.5	1.55	75.5	2.97	30	1 3/16	24	1
W10-12FF	5/8	1 3/16 - 12	43.5	1.71	79.5	3.12	36	1 7/16	27	1 1/16
W12-10FF	3/4	1 - 14	41.5	1.63	82.0	3.22	30	1 3/16	27	1 1/16
W12-12FF	3/4	1 3/16 - 12	44.5	1.75	85.0	3.34	36	1 7/16	27	1 1/16
W12-16FF	3/4	1 7/16 - 12	47.5	1.87	88.0	3.46	41	1 5/8	36	1 7/16
W16-12FF	1	1 3/16 - 12	47.0	1.85	98.0	3.85	36	1 7/16	32	1 1/4
W16-16FF	1	1 7/16 - 12	49.0	1.92	100.0	3.93	41	1 5/8	36	1 7/16
W16-20FF	1	1 11/16 - 12	50.5	1.98	102.0	4.01	50	2	41	1 5/8
W20-20FF	1 1/4	1 11/16 - 12	51.0	2.00	109.0	4.29	50	2	41	1 5/8
W20-24FF	1 1/4	2 - 12	54.5	2.15	112.0	4.41	60	2 3/8	50	2
W24-24FF	1 1/2	2 - 12	54.5	2.14	119.0	4.68	60	2 3/8	50	2

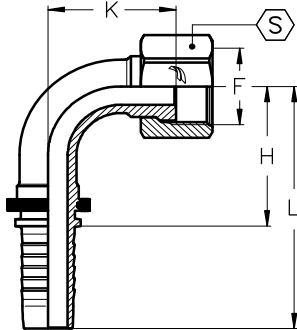
FF ORFS Female Swivel - 45° Elbow





Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W04-04FF45	1/4	9/16 - 18	32.5	1.27	60.5	2.38	10.5	0.41	17	11/16
W04-06FF45	1/4	11/16 - 16	34.5	1.35	62.5	2.46	12.5	0.49	22	7/8
W05-06FF45	5/16	11/16 - 16	35.0	1.37	63.0	2.48	12.5	0.49	22	7/8
W06-04FF45	3/8	9/16 - 18	35.0	1.37	65.5	2.59	11.5	0.45	17	11/16
W06-06FF45	3/8	11/16 - 16	36.0	1.41	66.5	2.61	12.5	0.49	22	7/8
W06-08FF45	3/8	13/16 - 16	38.5	1.51	69.0	2.71	15.0	0.59	24	1
W08-06FF45	1/2	11/16 - 16	46.5	1.83	79.5	3.12	19.5	0.76	22	7/8
W08-08FF45	1/2	13/16 - 16	42.5	1.67	75.5	2.97	15.5	0.61	24	1
W08-10FF45	1/2	1 - 14	45.0	1.77	78.0	3.07	17.5	0.68	30	13/16
W08-12FF45	1/2	13/16 - 12	47.0	1.85	80.0	3.14	20.5	0.80	36	17/16
W10-10FF45	5/8	1 - 14	49.0	1.92	85.0	3.34	18.0	0.70	30	13/16
W10-12FF45	5/8	13/16 - 12	51.5	2.02	87.5	3.44	20.5	0.80	36	17/16
W12-10FF45	3/4	1 - 14	64.0	2.51	104.0	4.09	25.5	1.00	30	13/16
W12-12FF45	3/4	13/16 - 12	58.0	2.28	99.0	3.89	21.0	0.82	36	17/16
W12-16FF45	3/4	17/16 - 12	60.5	2.38	101.0	3.97	23.5	0.92	41	15/8
W16-16FF45	1	17/16 - 12	73.0	2.87	124.0	4.88	24.0	0.94	41	15/8
W16-20FF45	1	111/16 - 12	75.0	2.95	126.0	4.96	26.5	1.04	50	2
W20-20FF45	11/4	111/16 - 12	84.0	3.30	142.0	5.59	27.0	1.06	50	2
W24-24FF45	11/2	2 - 12	98.0	3.85	163.0	6.41	30.0	1.18	60	23/8

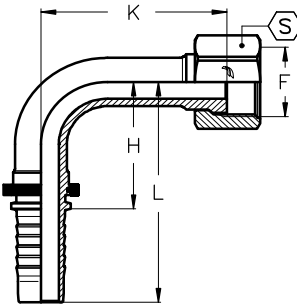
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FF90S ORFS Female Swivel - 90° Elbow Short Drop



Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W04-04FF90S	1/4	9/16 - 18	27.0	1.06	55.0	2.17	21.0	0.83	17	11/16
W04-06FF90S	1/4	11/16 - 16	27.0	1.06	55.0	2.17	24.0	0.94	22	7/8
W05-06FF90S	5/16	11/16 - 16	29.0	1.14	57.0	2.24	25.0	0.98	22	7/8
W06-04FF90S	3/8	9/16 - 18	30.0	1.18	60.5	2.38	22.0	0.87	17	11/16
W06-06FF90S	3/8	11/16 - 16	31.5	1.24	62.0	2.44	24.5	0.96	22	7/8
W06-08FF90S	3/8	13/16 - 16	31.0	1.22	61.0	2.40	30.0	1.18	24	1
W08-06FF90S	1/2	11/16 - 16	37.0	1.46	70.0	2.76	24.5	0.96	22	7/8
W08-08FF90S	1/2	13/16 - 16	39.0	1.54	72.0	2.83	31.0	1.22	24	1
W08-10FF90S	1/2	1 - 14	39.0	1.54	72.0	2.83	34.0	1.34	30	13/16
W08-12FF90S	1/2	13/16 - 12	39.0	1.54	72.0	2.83	42.0	1.65	36	17/16
W10-08FF90S	5/8	13/16 - 16	41.0	1.61	75.0	2.95	31.0	1.22	24	1
W10-10FF90S	5/8	1 - 14	45.0	1.77	81.0	3.19	35.0	1.38	30	13/16
W10-12FF90S	5/8	13/16 - 12	45.0	1.77	81.0	3.19	42.0	1.65	36	17/16
W12-10FF90S	3/4	1 - 14	46.5	1.83	83.5	3.29	35.0	1.38	30	13/16
W12-12FF90S	3/4	13/16 - 12	55.0	2.17	95.0	3.74	45.0	1.77	36	17/16
W12-16FF90S	3/4	17/16 - 12	55.0	2.17	95.0	3.74	49.0	1.93	41	15/8
W16-16FF90S	1	17/16 - 12	71.0	2.79	122.0	4.80	55.0	2.17	41	15/8
W16-20FF90S	1	111/16 - 12	71.0	2.79	122.0	4.80	58.0	2.28	50	2
W20-20FF90S	11/4	111/16 - 12	86.0	3.39	143.0	5.63	63.0	2.48	50	2
W24-24FF90S	11/2	2 - 12	102.0	4.02	167.0	6.57	73.0	2.87	60	23/8

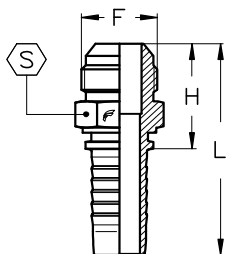
FF90L ORFS Female Swivel - 90° Elbow Long Drop



Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W04-04FF90L	1/4	9/16 - 18	29.0	1.14	57.0	2.24	46	1.81	17	11/16
W04-06FF90L	1/4	11/16 - 16	27.0	1.06	55.0	2.16	54	2.12	22	7/8
W06-06FF90L	3/8	11/16 - 16	34.0	1.33	64.5	2.53	54	2.12	22	7/8
W06-08FF90L	3/8	13/16 - 16	34.0	1.33	64.5	2.53	64	2.51	24	1
W08-08FF90L	1/2	13/16 - 16	39.0	1.53	72.0	2.83	64	2.51	24	1
W08-10FF90L	1/2	1 - 14	39.0	1.53	72.0	2.83	70	2.75	30	13/16
W10-10FF90L	5/8	1 - 14	45.0	1.77	81.0	3.18	70	2.75	30	13/16
W12-12FF90L	3/4	13/16 - 12	54.0	2.12	95.0	3.74	96	3.77	36	17/16
W16-16FF90L	1	17/16 - 12	71.0	2.79	122.0	4.80	114	4.48	41	15/8
W20-20FF90L	11/4	111/16 - 12	83.3	3.28	141.0	5.55	130	5.12	50	2

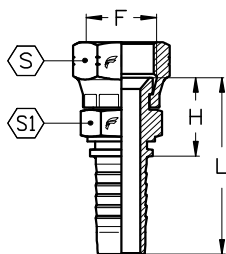
BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS WITHOUT NOTICE.

MA SAE 45° Male



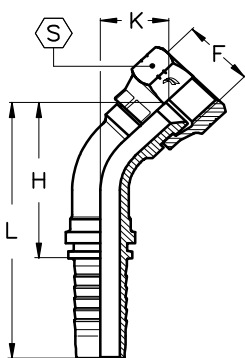
Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
W05-06MA	5/16	5/8 - 18	28.2	1.11	56.2	2.21	16	5/8
W06-06MA	3/8	5/8 - 18	28.2	1.11	58.7	2.21	16	5/8
W12-12MA	3/4	1 1/16 - 14	43.4	1.71	83.9	3.30	27	1 1/16

FA SAE 45° Female Swivel



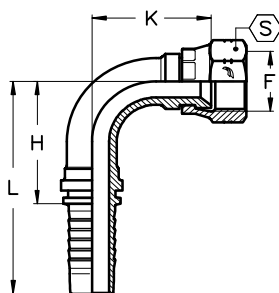
Part Number		F	H		L					
	in		mm	in	mm	in	mm	in	mm	
W04-06FA	1/4	5/8 - 18	23.0	0.90	51.0	2.02	22	7/8	17	1 1/16
W05-06FA	5/16	5/8 - 18	23.5	0.92	51.5	2.02	22	7/8	16	5/8
W06-06FA	3/8	5/8 - 18	23.5	0.92	54.0	2.12	22	7/8	16	5/8
W10-12FA	5/8	1 1/16 - 14	31.8	1.25	78.0	3.07	32	1 1/4	25	1
W12-12FA	3/4	1 1/16 - 14	31.8	1.25	72.3	3.27	32	1 1/4	27	1

FA45 SAE 45° Female Swivel - 45° Elbow



Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W05-06FA45	5/16	5/8 - 18	38.0	1.50	66.0	2.60	16.0	0.63	22	7/8
W06-06FA45	3/8	5/8 - 18	39.0	1.53	69.5	2.74	16.0	0.63	22	7/8
W12-12FA45	3/4	1 1/16 - 14	62.0	2.44	103	4.05	25.0	0.98	32	1 1/4

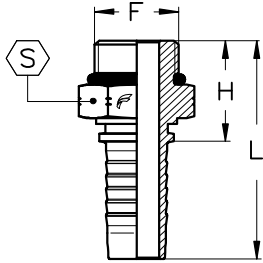
FA90 SAE 45° Female Swivel - 90° Elbow





Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W05-06FA90	5/16	5/8 - 18	28.0	1.10	56.0	2.20	29.0	1.14	22	7/8
W06-06FA90	3/8	5/8 - 18	31.0	1.22	61.0	2.40	31.0	1.22	22	7/8
W12-12FA90	3/4	1 1/16 - 14	55.0	2.16	95.0	3.74	51.0	2.01	32	1 1/4

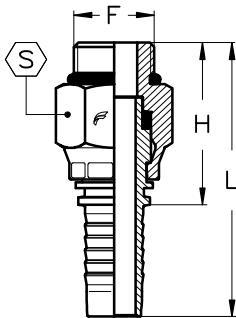
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MOB O-Ring Boss Male



Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
W04-04MOB	1/4	7/16 - 20	21.7	0.85	49.7	1.96	14	9/16
W04-05MOB	1/4	1/2 - 20	22.2	0.87	50.2	1.98	16	5/8
W04-06MOB	1/4	9/16 - 18	23.5	0.92	51.5	2.03	17	11/16
W04-08MOB	1/4	3/4 - 16	26.0	1.02	54.0	2.12	22	7/8
W06-06MOB	3/8	9/16 - 18	23.5	0.92	54.0	2.12	17	11/16
W06-08MOB	3/8	3/4 - 16	26.2	1.03	56.7	2.23	22	7/8
W06-10MOB	3/8	7/8 - 14	28.0	1.10	58.5	2.30	25	1
W08-08MOB	1/2	3/4 - 16	27.2	1.07	60.2	2.37	22	7/8
W08-10MOB	1/2	7/8 - 14	29.7	1.17	62.7	2.47	25	1
W08-12MOB	1/2	1 1/16 - 12	33.6	1.32	66.6	2.62	32	1 1/4
W10-10MOB	5/8	7/8 - 14	29.9	1.18	65.7	2.59	25	1
W10-12MOB	5/8	1 1/16 - 12	33.8	1.33	69.6	2.74	32	1 1/4
W12-12MOB	3/4	1 1/16 - 12	34.6	1.36	75.1	2.96	32	1 1/4
W12-16MOB	3/4	1 5/16 - 12	36.1	1.42	76.6	3.01	38	1 1/2
W16-16MOB	1	1 5/16 - 12	37.6	1.48	88.6	3.49	38	1 1/2

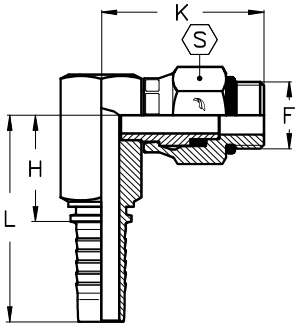
MOBX O-Ring Boss Male Swivel



Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
W04-04MOBX	1/4	7/16 - 20	37.0	1.46	65.0	2.56	17	11/16
W04-06MOBX	1/4	9/16 - 18	42.0	1.65	70.2	2.76	19	3/4
W06-06MOBX	3/8	9/16 - 18	42.0	1.65	73.0	2.87	19	3/4
W06-08MOBX	3/8	3/4 - 16	47.0	1.85	80.0	3.15	22	7/8
W08-08MOBX	1/2	3/4 - 16	49.0	1.93	82.0	3.23	22	7/8
W08-10MOBX	1/2	7/8 - 14	50.0	1.97	83.0	3.27	26	1 1/16
W10-10MOBX	5/8	7/8 - 14	50.2	1.97	86.0	3.36	26	1 1/16
W12-12MOBX	3/4	1 1/16 - 12	59.0	2.32	99.0	3.90	32	1 1/4

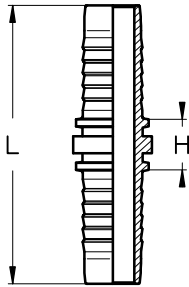
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MOBX90B O-Ring Boss Male Swivel - 90° Block Elbow



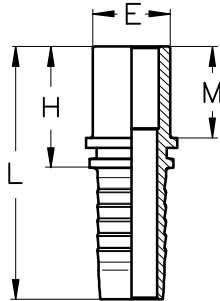
Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W04-06MOBX90B	1/4	9/16 - 18	32.0	1.26	60.0	2.36	47.4	1.87	19	3/4
W06-06MOBX90B	3/8	9/16 - 18	32.0	1.26	63.0	2.36	48.0	1.88	19	3/4
W06-08MOBX90B	3/8	3/4 - 16	33.0	1.36	63.0	2.48	50.0	1.97	22	7/8
W08-08MOBX90B	1/2	3/4 - 16	33.0	1.30	66.0	2.60	51.0	2.00	22	7/8
W08-10MOBX90B	1/2	7/8 - 14	33.0	1.30	66.0	2.60	55.0	2.16	26	1 1/16
W12-12MOBX90B	3/4	1 1/16 - 12	43.0	1.69	84.0	3.31	65.0	2.56	32	1 1/4

HM Hose Mender



Part Number		H		L	
	in	mm	in	mm	in
W04-04HM	1/4	13.0	0.51	70.0	2.75
W06-06HM	3/8	13.0	0.51	74.0	2.91
W08-08HM	1/2	15.0	0.59	81.0	3.18
W12-12HM	3/4	18.0	0.71	99.0	3.89
W16-16HM	1	21.0	0.83	123.0	4.84

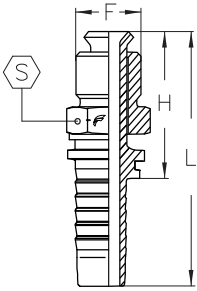
SP Imperial Standpipe





Part Number		E		H		M		L	
	in	mm	in	mm	in	mm	in	mm	in
W04-04SP	1/4	6.3	1/4	30.5	1.20	24.0	0.94	58.5	2.30
W06-06SP	3/8	9.5	3/8	32.0	1.26	26.0	1.02	62.5	2.46
W08-08SP	1/2	12.7	1/2	32.5	1.28	26.0	1.02	65.5	2.58
W12-12SP	3/4	19.0	3/4	44.5	1.75	36.0	1.42	85.0	3.35
W16-16SP	1	25.4	1	49.5	1.95	40.0	1.57	100.0	3.94

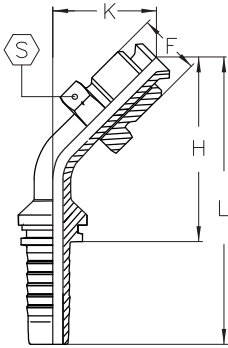
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MIX SAE Inverted Flare Male Swivel



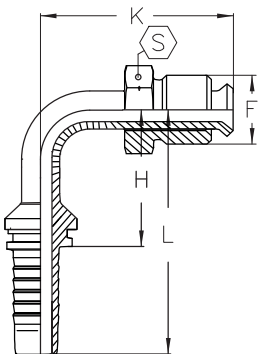
Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
W04-03MIX	1/4	3/8 - 24	38.3	1.51	66.8	2.63	9.5	3/8
W04-04MIX	1/4	7/16 - 24	39.1	1.54	67.8	2.67	11.1	7/16
W04-05MIX	1/4	1/2 - 20	42.2	1.66	70.6	2.78	12.0	1/2
W06-04MIX	3/8	7/16 - 24	39.9	1.57	70.6	2.78	11.1	7/16
W06-05MIX	3/8	1/2 - 20	42.4	1.67	73.1	2.88	12.0	1/2
W06-06MIX	3/8	5/8 - 18	43.7	1.72	74.4	2.93	16.0	5/8
W06-08MIX	3/8	3/4 - 18	48.5	1.91	79.2	3.12	19.0	3/4
W08-08MIX	1/2	3/4 - 18	49.0	1.93	82.3	3.24	19.0	3/4



MIX45 SAE Inverted Flare Male Swivel - 45° Elbow



Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W04-03MIX45	1/4	3/8 - 24	41.6	1.64	70.1	2.76	13.5	0.53	9.5	3/8
W04-04MIX45	1/4	7/16 - 24	51.8	2.04	80.3	3.16	14.5	0.57	11.1	7/16
W04-05MIX45	1/4	1/2 - 20	52.1	2.05	81.5	3.21	16.5	0.65	12.0	1/2
W06-05MIX45	3/8	1/2 - 20	50.0	1.97	80.5	3.17	16.5	0.65	12.0	1/2
W06-06MIX45	3/8	5/8 - 18	52.6	2.07	83.0	3.27	18.0	0.71	16.0	5/8
W08-08MIX45	1/2	3/4 - 18	64.8	2.55	97.8	3.85	21.6	0.85	19.0	3/4

MIX90 SAE Inverted Flare Male Swivel - 90° Elbow

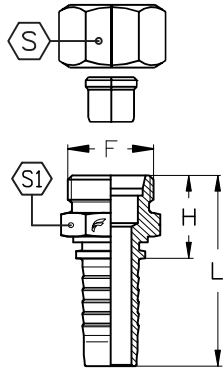


Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W04-03MIX90	1/4	3/8 - 24	32.5	1.28	61.0	2.40	24.6	0.97	9.5	3/8
W04-04MIX90	1/4	7/16 - 24	40.4	1.59	68.8	2.71	27.9	1.10	11.1	7/16
W04-05MIX90	1/4	1/4 - 20	42.7	1.68	71.1	2.80	32.5	1.28	12.0	1/2
W06-05MIX90	3/8	1/2 - 20	43.4	1.71	73.9	2.91	32.5	1.28	12.0	1/2
W06-06MIX90	3/8	5/8 - 18	48.3	1.90	78.7	3.10	36.8	1.45	16.0	5/8
W06-08MIX90	3/8	3/4 - 18	55.6	2.19	86.1	3.39	45.2	1.78	19.0	3/4
W08-08MIX90	1/2	3/4 - 18	56.1	2.21	89.1	3.51	45.2	1.78	19.0	3/4

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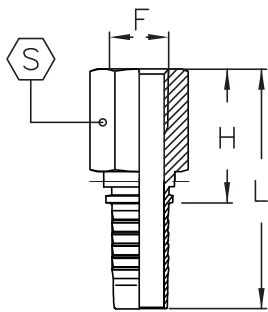
Two Piece

MRNS SAE Flareless Compression



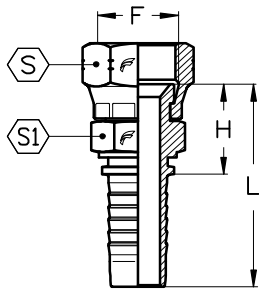
Part Number		F	H		L					
	in		mm	in	mm	in	mm	in	mm	in
W04-04MRNS	1/4	7/16 - 20	24.0	0.94	51.0	2.01	14	9/16	14	9/16
W04-05MRNS	1/4	1/2 - 20	25.3	1.00	53.0	2.09	16	5/8	17	11/16
W06-05MRNS	3/8	1/2 - 20	26.0	1.02	55.6	2.19	16	5/8	17	11/16
W06-06MRNS	3/8	9/16 - 18	26.8	1.05	55.6	2.19	17	11/16	17	11/16
W06-08MRNS	3/8	3/4 - 16	30.0	1.18	58.5	2.30	22	7/8	19	3/4
W08-08MRNS	1/2	3/4 - 16	30.4	1.20	61.3	2.41	22	7/8	19	3/4
W08-10MRNS	1/2	7/8 - 14	32.3	1.27	63.4	2.50	25	1	24	1
W12-12MRNS	3/4	1 1/16 - 12	35.7	1.40	74.7	2.94	32	1 1/4	27	1 1/16
W16-16MRNS	1	1 5/16 - 12	36.7	1.44	87.7	3.45	38	1 1/2	36	1 7/16

FG Female Grease



Part Number		F	H		L			
	in		mm	in	mm	in	mm	
W04-08FG	1/4	1/2 - 27	23.5	0.92	44.0	1.73	19	3/4
W06-08FG	3/8	1/2 - 27	23.5	0.92	48.0	1.89	19	3/4

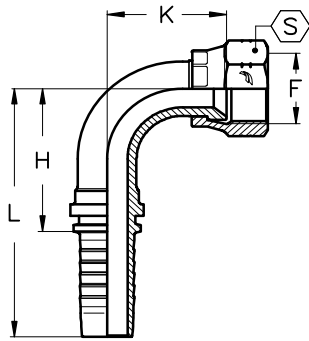
FJIS JIS Female Swivel (Toyota)



Part Number		F	H		L					
	in		mm	in	mm	in	mm	in	mm	
W04-04FJIS	1/4	1/4 - 19	24.0	0.94	52.0	2.05	19	3/4	14	9/16
W06-06FJIS	3/8	3/8 - 19	26.0	1.02	57.0	2.24	22	7/8	17	11/16
W08-08FJIS	1/2	1/2 - 14	30.0	1.18	63.0	2.48	27	1 1/16	22	7/8
W10-10FJIS	5/8	5/8 - 14	35.0	1.38	71.0	2.80	30	1 3/16	30	1 3/16
W12-12FJIS	3/4	3/4 - 14	36.0	1.42	76.0	2.99	32	1 1/4	27	1 1/16
W16-16FJIS	1	1 - 11	40.0	1.57	91.0	3.58	41	1 5/8	32	1 1/4
W20-20FJIS	1 1/4	1 1/4 - 11	46.0	1.81	104.0	4.69	50	2	46	1 13/16
W24-24FJIS	1 1/2	1 1/2 - 11	47.0	1.85	123.0	4.84	70	2 3/4	50	2

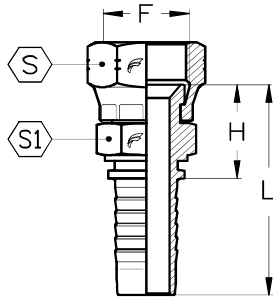
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FJIS90 JIS Female Swivel (Toyota) - 90° Elbow



Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W04-04FJIS90	1/4	1/4 - 19	27.0	1.06	53.0	2.08	27	1.06	19	3/4
W06-06FJIS90	3/8	3/8 - 19	30.0	1.18	63.0	2.48	29	1.14	22	7/8
W08-08FJIS90	1/2	1/2 - 14	41.0	1.61	70.0	2.75	38	1.49	27	1 1/16
W12-12FJIS90	3/4	3/4 - 14	65.0	2.56	109.0	4.29	57	2.24	32	1 1/4
W16-16FJIS90	1	1 - 11	71.0	2.80	118	4.65	66	2.60	41	1 5/8

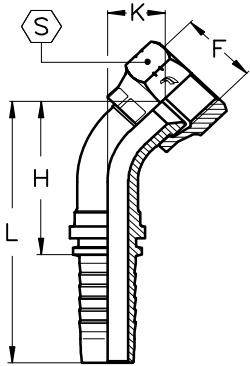
FK Komatsu Female Swivel




Part Number		F	H		L					
	in		mm	in	mm	in	mm	in	mm	in
W04-12FK	1/4	M12 x 1.5								
W04-14FK	1/4	M14 x 1.5	24.0	0.94	52.5	2.06	19	3/4	19	3/4
W04-18FK	1/4	M18 x 1.5	24.0	0.94	52.5	2.06	24	1	19	3/4
W06-14FK	3/8	M14 x 1.5	24.0	0.94	54.5	2.14	19	3/4	19	3/4
W06-16FK	3/8	M16 x 1.5	22.2	0.87	52.7	2.07	22	7/8	19	3/4
W06-18FK	3/8	M18 x 1.5	24.3	0.95	54.8	2.15	24	1	19	3/4
W06-20FK	3/8	M20 x 1.5	29.0	1.14	59.0	2.32	25.4	1	22	7/8
W06-22FK	3/8	M22 x 1.5	29.0	1.14	59.0	2.32	27	1 1/16	22	7/8
W08-18FK	1/2	M18 x 1.5	26.0	1.02	59.0	2.32	24	1	22	7/8
W08-22FK	1/2	M22 x 1.5	26.5	1.04	59.5	2.34	27	1 1/16	27	1 1/16
W08-24FK	1/2	M24 x 1.5	29.9	1.17	62.9	2.47	32	1 1/4	32	1 1/4
W10-24FK	5/8	M24 x 1.5	29.9	1.17	65.9	2.59	32	1 1/4	32	1 1/4
W12-24FK	3/4	M24 x 1.5	31.0	1.22	71.5	2.81	32	1 1/4	32	1 1/4
W12-30FK	3/4	M30 x 1.5	33.0	1.29	74.0	2.91	36	1 7/16	36	1 7/16
W12-33FK	3/4	M33 x 1.5	34.5	1.35	76.5	3.01	41	1 5/8	36	1 7/16
W16-33FK	1	M33 x 1.5	34.5	1.35	89.5	3.52	41	1 5/8	36	1 7/16
W16-36FK	1	M36 x 1.5	39.0	1.53	90.5	3.56	46	1 13/16	41	1 5/8
W20-36FK	1 1/4	M36 x 1.5	40.0	1.57	97.5	3.84	46	1 13/16	41	1 5/8
W24-42FK	1 1/2	M42 x 1.5	42.5	1.67	107.0	4.21	50	2	46	1 3/16

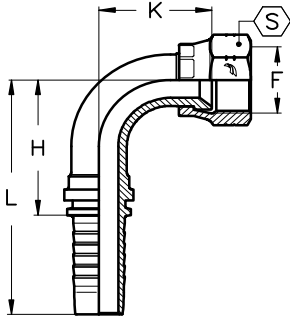
BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS WITHOUT NOTICE.



FK45 Komatsu Female Swivel - 45° Elbow



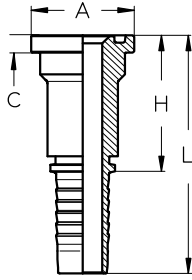
Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W04-14FK45	¼	M14 x 1.5	34.0	1.33	62.0	2.44	16.0	0.62	19	¾
W04-18FK45	¼	M18 x 1.5	33.0	1.29	61.0	2.40	16.0	0.62	24	1
W06-18FK45	⅜	M18 x 1.5	41.0	1.61	71.5	2.81	19.0	0.74	24	1
W08-22FK45	½	M22 x 1.5	53.5	2.10	86.5	3.40	25.0	0.98	27	1 1/16
W10-24FK45	⅝	M24 x 1.5	54.0	2.12	89.8	3.53	26.0	1.02	32	1 ¼
W12-30FK45	¾	M30 x 1.5	59.5	2.34	100.0	3.93	28.0	1.10	36	1 7/16


FK90 Komatsu Female Swivel - 90° Elbow



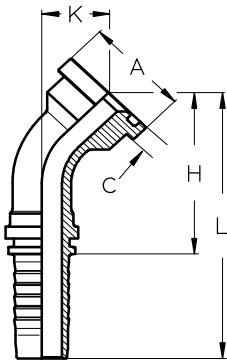
Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W04-14FK90	¼	M14 x 1.5	25.0	0.98	53.0	2.08	28.0	1.10	19	¾
W04-16FK90	¼	M16 x 1.5	29.0	1.14	54.0	2.12	29.0	1.14	19	¾
W04-18FK90	¼	M18 x 1.5	24.0	0.94	52.0	2.04	30.0	1.18	24	1
W06-18FK90	⅜	M18 x 1.5	31.0	1.22	61.5	2.42	37.0	1.45	24	1
W08-22FK90	½	M22 x 1.5	41.0	1.61	74.0	2.91	48.0	1.88	27	1 1/16
W10-24FK90	⅝	M24 x 1.5	42.0	1.65	77.8	3.06	50.0	1.96	32	1 ¼
W12-30FK90	¾	M30 x 1.5	48.5	1.90	89.0	3.50	57.0	2.24	36	1 7/16


FLK Komatsu Flange



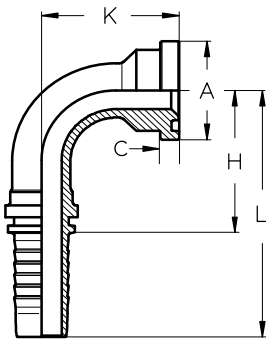
Part Number		C		A		H		L	
	in	mm	mm	in	mm	in	mm	in	
W10-10FLK	5/8	6.0	34.2	1.34	49.3	1.94	85.3	3.36	


FLK45 Komatsu Flange - 45° Elbow



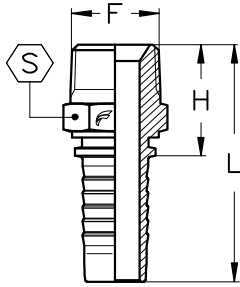
Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
W10-10FLK45	5/8	6.0	34.2	1.34	70.0	2.75	110	4.33	30.0	1.18	

FLK90 Komatsu Flange - 90° Elbow



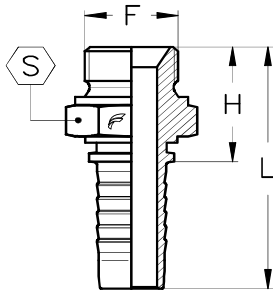
Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
W10-10FLK90-044	5/8	6.0	34.2	1.34	49.0	1.93	85.0	3.35	44.0	1.93	

MBSPT BSPT Male



Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
W04-02MBSPT	1/4	1/8 - 28	21.0	0.83	49.0	1.93	12	1/2
W04-04MBSPT	1/4	1/4 - 19	25.0	0.98	53.0	2.09	15	5/8
W04-06MBSPT	1/4	3/8 - 19	26.0	1.02	54.0	2.12	19	3/4
W06-04MBSPT	3/8	1/4 - 19	26.0	1.02	56.0	2.20	15	5/8
W06-06MBSPT	3/8	3/8 - 19	27.0	1.06	57.0	2.24	19	3/4
W06-08MBSPT	3/8	1/2 - 14	32.0	1.26	63.0	2.48	22	7/8
W08-08MBSPT	1/2	1/2 - 14	33.0	1.30	66.0	2.60	22	7/8
W12-12MBSPT	3/4	3/4 - 14	36.0	1.41	77.0	3.03	27	1 1/16
W16-16MBSPT	1	1 - 11	43.0	1.69	94.0	3.70	36	1 7/16

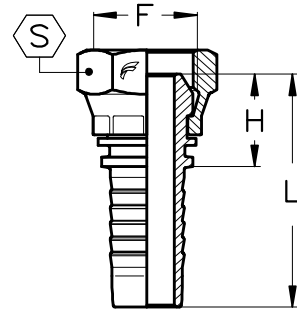
MBSPP MBSPP Male



Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
W03-02MBSPP	3/16	1/8 - 28	20.0	0.79	45.0	1.77	14	9/16
W03-04MBSPP	3/16	1/4 - 19	24.0	0.94	49.0	1.93	19	3/4
W04-02MBSPP	1/4	1/8 - 28	20.0	0.79	48.0	1.89	14	9/16
W04-04MBSPP	1/4	1/4 - 19	25.0	0.98	53.0	2.09	19	3/4
W04-06MBSPP	1/4	3/8 - 19	27.0	1.06	55.0	2.16	22	7/8
W04-08MBSPP	1/4	1/4 - 19	32.0	1.26	60.0	2.36	27	1 1/16
W05-06MBSPP	5/16	3/8 - 19	27.0	1.06	55.0	2.16	22	7/8
W06-04MBSPP	3/8	1/4 - 19	25.0	0.98	55.0	2.16	19	3/4
W06-06MBSPP	3/8	3/8 - 19	27.0	1.06	58.0	2.28	22	7/8
W06-08MBSPP	3/8	1/2 - 14	32.0	1.26	62.0	2.44	27	1 1/16
W08-06MBSPP	1/2	3/8 - 19	28.0	1.10	61.0	2.40	22	7/8
W08-08MBSPP	1/2	1/2 - 14	33.0	1.30	66.0	2.60	27	1 1/16
W08-10MBSPP	1/2	5/8 - 14	35.0	1.38	68.0	2.68	30	1 3/16
W08-12MBSPP	1/2	3/4 - 14	36.0	1.42	69.0	2.72	32	1 1/4
W10-08MBSPP	5/8	1/2 - 14	33.0	1.30	69.0	2.72	27	1 1/16
W10-10MBSPP	5/8	5/8 - 14	35.0	1.38	71.0	2.79	30	1 3/16
W10-12MBSPP	5/8	3/4 - 14	36.0	1.42	72.0	2.83	32	1 1/4
W12-12MBSPP	3/4	3/4 - 14	37.0	1.46	77.0	3.03	32	1 1/4
W12-16MBSPP	3/4	1 - 11	42.0	1.65	82.0	3.23	41	1 5/8
W16-16MBSPP	1	1 - 11	43.0	1.69	94.0	3.70	41	1 5/8
W16-20MBSPP	1	1 1/4 - 11	46.0	1.81	97.0	3.82	50	2
W20-20MBSPP	1 1/4	1 1/4 - 11	47.0	1.85	105.0	4.13	50	2
W24-24MBSPP	1 1/2	1 1/2 - 11	50.0	1.97	115.0	4.52	55	2 3/16
W32-32MBSPP	2	2 - 11	56.0	2.20	126.0	4.96	70	2 3/4

BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS WITHOUT NOTICE.

FBSPB BSBP Female Swivel



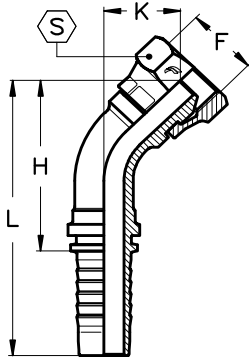
Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
W03-02FBSPB	3/16	1/8 - 28	16.0	0.63	41.0	1.61	14	9/16
W03-04FBSPB	3/16	1/4 - 19	19.0	0.75	44.0	1.73	19	3/4
W04-02FBSPB	1/4	1/8 - 28	17.0	0.67	45.0	1.77	14	9/16
W04-04FBSPB	1/4	1/4 - 19	19.0	0.75	47.0	1.85	19	3/4
W04-06FBSPB	1/4	3/8 - 19	22.0	0.87	50.0	1.97	22	7/8
W05-06FBSPB	5/16	3/8 - 19	22.0	0.87	50.0	1.97	22	7/8
W06-04FBSPB	3/8	1/4 - 19	19.0	0.75	49.0	1.93	19	3/4
W06-06FBSPB	3/8	3/8 - 19	21.0	0.83	51.0	2.01	22	7/8
W06-08FBSPB	3/8	1/2 - 14	23.0	0.90	54.0	2.12	27	1 1/16
W08-06FBSPB	1/2	3/8 - 19	22.0	0.87	56.0	2.20	22	7/8
W08-08FBSPB	1/2	1/2 - 14	23.0	0.90	56.0	2.20	27	1 1/16
W08-10FBSPB	1/2	5/8 - 14	24.0	0.94	57.0	2.24	30	1 3/16
W08-12FBSPB	1/2	3/4 - 14	27.0	1.06	60.0	2.36	32	1 1/4
W10-08FBSPB	5/8	1/2 - 14	23.0	0.91	59.0	2.32	27	1 1/16
W10-10FBSPB	5/8	5/8 - 14	23.0	0.90	59.0	2.32	30	1 3/16
W10-12FBSPB	5/8	3/4 - 14	27.0	1.06	63.0	2.48	32	1 1/4
W12-12FBSPB	3/4	3/4 - 14	27.0	1.06	67.0	2.64	32	1 1/4
W12-16FBSPB	3/4	1 - 11	30.0	1.18	70.0	2.75	41	1 5/8
W16-12FBSPB	1	3/4 - 14	28.0	1.10	79.0	3.11	32	1 1/4
W16-16FBSPB	1	1 - 11	30.0	1.18	81.0	3.19	41	1 5/8
W16-20FBSPB	1	1 1/4 - 11	35.0	1.38	86.0	3.38	50	2
W20-20FBSPB	1 1/4	1 1/4 - 11	34.0	1.34	92.0	3.62	50	2
W24-24FBSPB	1 1/2	1 1/2 - 11	34.0	1.34	99.0	3.90	55	2 3/16
W32-32FBSPB	2	2 - 11	37.0	1.46	107.0	4.21	70	2 3/4

3

W Series - Braided / Four Spiral Hose

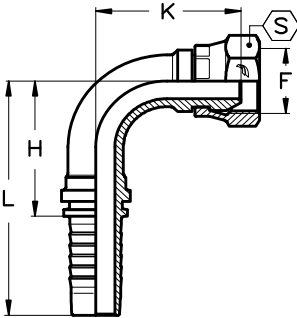
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FBSP45 BSPF Female Swivel - 45° Elbow



Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W03-02FBSP45	3/16	1/8 - 28	33.0	1.30	58.0	2.28	14.0	0.55	14	9/16
W04-02FBSP45	1/4	1/8 - 28	36.0	1.42	64.0	2.52	16.0	0.63	14	9/16
W04-04FBSP45	1/4	1/4 - 19	37.0	1.46	65.0	2.56	16.0	0.63	19	3/4
W04-06FBSP45	1/4	3/8 - 19	40.0	1.57	68.0	2.68	19.0	0.75	22	7/8
W06-06FBSP45	3/8	3/8 - 19	42.0	1.65	73.0	2.87	19.0	0.75	22	7/8
W06-08FBSP45	3/8	1/2 - 14	44.0	1.73	75.0	2.95	21.0	0.83	27	1 1/16
W08-08FBSP45	1/2	1/2 - 14	49.0	1.93	82.0	3.23	22.0	0.87	27	1 1/16
W08-10FBSP45	1/2	5/8 - 14	49.0	1.93	82.0	3.23	22.0	0.87	30	1 3/16
W10-10FBSP45	5/8	5/8 - 14	54.0	2.12	90.0	3.54	24.0	0.94	30	1 3/16
W10-12FBSP45	5/8	3/4 - 14	57.0	2.24	93.0	3.66	26.0	1.02	32	1 1/4
W12-12FBSP45	3/4	3/4 - 14	66.0	2.60	106.0	4.17	28.0	1.10	32	1 1/4
W16-16FBSP45	1	1 - 11	84.0	3.31	135.0	5.31	36.0	1.42	41	1 5/8
W20-20FBSP45	1 1/4	1 1/4 - 11	100.0	3.94	157.0	6.18	43.0	1.69	50	2
W24-24FBSP45	1 1/2	1 1/2 - 11	116.0	4.57	180.0	7.09	49.0	1.93	55	2 3/16
W32-32FBSP45	2	2 - 11	157.0	6.18	227.0	8.94	69.0	2.72	70	2 3/4

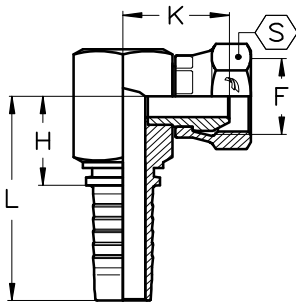
FBSP90 BSPF Female Swivel - 90° Elbow



Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W03-02FBSP90	3/16	1/8 - 28	21.0	0.83	46.0	1.81	23.0	0.91	14	9/16
W04-02FBSP90	1/4	1/8 - 28	26.0	1.02	54	2.12	28.0	1.10	14	9/16
W04-04FBSP90	1/4	1/4 - 19	26.0	1.02	54	2.12	28.0	1.10	19	3/4
W04-06FBSP90	1/4	3/8 - 19	26.0	1.02	54	2.12	32.0	1.26	22	7/8
W06-06FBSP90	3/8	3/8 - 19	31.0	1.22	61	2.40	35.0	1.38	22	7/8
W06-08FBSP90	3/8	1/2 - 14	31.0	1.22	61	2.40	38.0	1.50	27	1 1/16
W08-08FBSP90	1/2	1/2 - 14	37.0	1.46	70	2.75	42.0	1.65	27	1 1/16
W08-10FBSP90	1/2	5/8 - 14	37.0	1.46	70	2.75	43.0	1.69	30	1 3/16
W10-10FBSP90	5/8	5/8 - 14	45.0	1.77	80	3.15	46.0	1.81	30	1 3/16
W10-12FBSP90	5/8	3/4 - 14	45.0	1.77	80	3.15	50.0	1.97	32	1 1/4
W12-12FBSP90	3/4	3/4 - 14	54.0	2.12	95	3.74	56.0	2.20	32	1 1/4
W12-16FBSP90	3/4	1 - 11	54.0	2.12	95	3.74	59.0	2.32	41	1 5/8
W16-12FBSP90	1	3/4 - 14	70.0	2.76	121	4.76	75.0	2.95	32	1 1/4
W16-16FBSP90	1	1 - 11	70.0	2.76	121	4.76	72.0	2.83	41	1 5/8
W20-20FBSP90	1 1/4	1 1/4 - 11	84.0	3.31	142	5.59	87.0	3.43	50	2
W24-24FBSP90	1 1/2	1 1/2 - 11	100.0	3.94	165	6.50	100.0	3.94	55	2 3/16
W32-32FBSP90	2	2 - 11	134.0	5.28	204	8.03	141.0	5.55	70	2 3/4

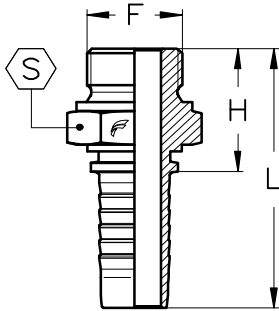
BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS WITHOUT NOTICE.

FBSP90B BSP Female Swivel - 90° Block Elbow



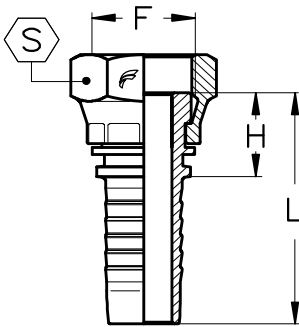
Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
W04-04FBSP90B	1/4	1/4 - 19	18.0	0.71	46.0	1.81	23.0	0.90	19	3/4
W06-06FBSP90B	3/8	3/8 - 19	21.0	0.83	52.0	2.05	26.0	1.02	22	7/8
W08-08FBSP90B	1/2	1/2 - 14	24.0	0.94	57.0	2.24	28.0	1.10	27	1 1/16
W12-12FBSP90B	3/4	3/4 - 14	31.0	1.22	72.0	2.83	35.0	1.38	32	1 1/4
W16-16FBSP90B	1	1 - 11	38.0	1.50	89.0	3.50	41.0	1.61	41	1 5/8

MBSPFF BSP Male Flat Face



Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
W04-04MBSPFF	1/4	1/4 - 19	27.0	1.06	55.0	2.16	22	7/8
W06-06MBSPFF	3/8	3/8 - 19	27.0	1.06	58.0	2.28	22	7/8
W06-08MBSPFF	3/8	1/2 - 14	32.0	1.26	62.0	2.44	27	1 1/16
W08-08MBSPFF	1/2	1/2 - 14	33.0	1.30	66.0	2.60	27	1 1/16
W12-12MBSPFF	3/4	3/4 - 14	37.0	1.46	77.0	3.03	32	1 1/4
W12-16MBSPFF	3/4	1 - 11	42.0	1.65	84.0	3.23	41	1 5/8
W16-16MBSPFF	1	1 - 11	43.0	1.69	94.0	3.70	41	1 5/8

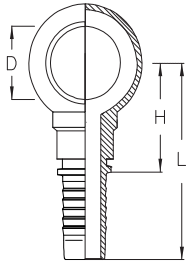
FBSPFF BSP Female Flat Face Swivel



Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
W04-04FBSPFF	1/4	1/4 - 19	15	0.59	43	1.69	19	3/4
W04-06FBSPFF	1/4	3/8 - 19	18	0.71	46	1.81	22	7/8
W06-06FBSPFF	3/8	3/8 - 19	17	0.67	47	1.85	22	7/8
W06-08FBSPFF	3/8	1/2 - 14	19	0.75	49	1.93	27	1 1/16
W08-08FBSPFF	1/2	1/2 - 14	19	0.75	52	2.05	27	1 1/16
W08-12FBSPFF	1/2	3/4 - 14	23	0.90	56	2.20	32	1 1/4
W10-10FBSPFF	5/8	5/8 - 14	20	0.79	56	2.20	30	1 1/16
W12-12FBSPFF	3/4	3/4 - 14	22	0.87	63	2.48	32	1 1/4

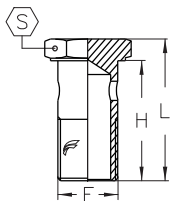
BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS WITHOUT NOTICE.

BJBSP BSP Banjo



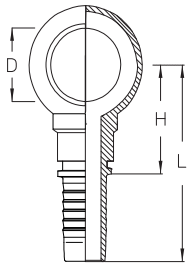
Part Number	in	Bolt Size	D		H		L		T	
			mm	in	mm	in	mm	in	mm	in
W03-02BJBSP	3/16	1/8	10.2	0.40	20.0	0.79	45.0	1.72	10.0	0.39
W04-02BJBSP	1/4	1/8	10.2	0.40	23.0	0.90	51.0	2.01	10.0	0.39
W04-04BJBSP	1/4	1/4	13.3	0.52	23.0	0.90	51.0	2.01	14.0	0.55
W04-06BJBSP	1/4	3/8	16.8	0.66	26.5	1.04	54.5	2.14	17.5	0.69
W06-04BJBSP	3/8	1/4	13.3	0.52	24.0	0.94	54.5	2.14	14.0	0.55
W06-06BJBSP	3/8	3/8	16.8	0.66	24.0	0.94	54.5	2.14	17.5	0.69
W06-08BJBSP	3/8	1/2	21.0	0.83	32.0	1.26	62.5	2.46	23.0	0.90
W08-06BJBSP	1/2	3/8	16.8	0.66	26.5	1.04	59.5	2.34	17.5	0.69
W08-08BJBSP	1/2	1/2	21.0	0.83	28.5	1.12	61.5	2.42	23.0	0.90
W12-12BJBSP	3/4	3/4	26.5	1.04	37.5	1.48	78.0	3.07	29.5	1.16
W16-16BJBSP	1	1	33.5	1.32	49.0	1.93	100.0	3.94	37.5	1.48


BJBSPBT BSP Banjo Bolt



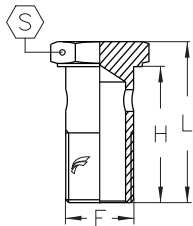
Part Number	F	H		L		S	
		mm	in	mm	in	mm	in
02BJBSPBT	1/8 - 28	26.0	1.02	21.5	0.85	14	9/16
04BJBSPBT	1/4 - 19	34.3	1.35	29.5	1.16	19	3/4
06BJBSPBT	3/8 - 19	40.5	1.59	34.0	1.34	22	7/8
08BJBSPBT	1/2 - 14	46.0	1.81	36.0	1.42	27	1 1/16
10BJBSPBT	5/8 - 14	55.0	2.16	45.5	1.79	30	1 3/16
12BJBSPBT	3/4 - 14	56.0	2.20	48.0	1.89	32	1 1/4
16BJBSPBT	1 - 11	69.0	2.72	59.0	2.32	41	1 5/8


BJM Metric Banjo



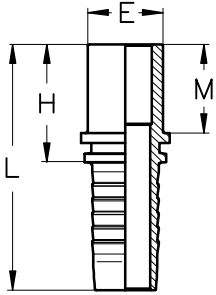
Part Number		Bolt Size	D		H		L		T	
	in		mm	in	mm	in	mm	in	mm	in
W03-10BJM	3/16	M10	10.2	0.40	20.0	0.79	45.0	1.77	10.0	7/16
W04-10BJM	1/4	M10	10.2	0.40	23.0	0.91	51.0	2.01	10.0	7/16
W04-12BJM	1/4	M12	12.1	0.48	23.0	0.90	51.0	2.01	12.0	1/2
W04-14BJM	1/4	M14	14.2	0.56	23.0	0.90	51.0	2.01	14.0	9/16
W06-12BJM	3/8	M12	12.1	0.48	20.2	0.79	49.8	1.96	12.0	1/2
W06-14BJM	3/8	M14	14.2	0.56	24.0	0.94	54.5	2.14	14.0	9/16
W06-16BJM	3/8	M16	16.2	0.64	24.0	0.94	54.5	2.14	17.5	11/16
W06-18BJM	3/8	M18	18.2	0.72	27.0	1.06	57.5	2.26	20.5	13/16
W08-18BJM	1/2	M18	18.2	0.72	28.1	1.11	61.1	2.40	20.5	13/16
W08-20BJM	1/2	M20	20.2	0.80	28.5	1.12	61.5	2.42	23.0	7/8
W08-22BJM	1/2	M22	22.2	0.87	28.5	1.12	61.5	2.42	22.5	57/64
W10-22BJM	5/8	M22	22.2	0.87	27.2	1.07	63.0	2.48	22.5	57/64
W12-26BJM	3/4	M26	26.5	1.04	41.5	1.63	78.0	3.07	29.5	1 1/32


BJMBT Metric Banjo Bolt



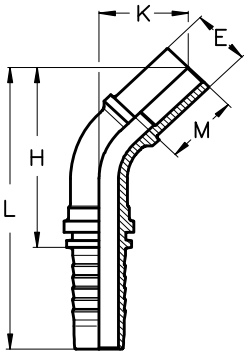
Part Number	F	H		L			
		mm	in	mm	in	mm	in
10BJMBT	M10 x 1.0	21.5	0.85	26.0	1.02	14	9/16
12BJMBT	M12 x 1.5	25.5	1.00	31.0	1.22	17	1 1/16
14BJMBT	M14 x 1.5	30.5	1.20	37.5	1.48	19	3/4
16BJMBT	M16 x 1.5	32.5	1.28	40.0	1.57	22	7/8
18BJMBT	M18 x 1.5	36.5	1.44	44.0	1.73	24	1
20BJMBT	M20 x 1.5	39.5	1.55	48.0	1.89	27	1 1/16
22BJMBT	M22 x 1.5	41.5	1.63	50.0	1.97	28	1 1/8
26BJMBT	M26 x 1.5	48.5	1.91	58.0	2.28	32	1 1/4


SPML Metric Standpipe L/S



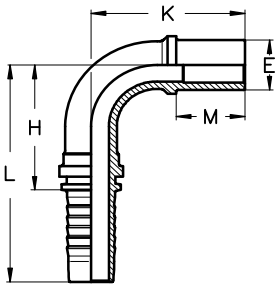
Part Number		E		H		M		L	
	in	mm	in	mm	in	mm	in	mm	in
W04-06SPML	1/4	6	0.24	27.5	1.08	21	0.83	55.0	2.16
W04-08SPML	1/4	8	0.31	29.5	1.16	23	0.90	58.0	2.28
W04-10SPML	1/4	10	0.39	31.5	1.24	25	0.98	60.0	2.36
W06-10SPML	3/8	10	0.39	28.5	1.12	22	0.87	59.0	2.32
W06-12SPML	3/8	12	0.48	31.5	1.24	25	0.98	62.0	2.44
W08-12SPML	1/2	12	0.48	32.5	1.28	25	0.98	65.5	2.58
W08-15SPML	1/2	15	0.59	31.5	1.24	24	0.94	64.5	2.54
W08-16SPML	1/2	16	0.63	36.5	1.44	29	1.14	69.5	2.74


SPML45 Metric Standpipe L/S - 45° Elbow



Part Number		E		H		M		L		K	
	in	mm	in	mm	in	mm	in	mm	in	mm	in
W04-06SPML45	1/4	6	0.24	48.0	1.89	21	0.83	77.0	3.03	24.0	0.94
W04-08SPML45	1/4	8	0.31	48.0	1.89	23	0.90	76.5	3.01	24.0	0.94
W04-10SPML45	1/4	10	0.39	49.5	1.95	25	0.98	78.0	3.07	25.5	1.00
W06-10SPML45	3/8	10	0.39	62.0	2.44	22	0.87	92.5	3.64	27.5	1.08
W06-12SPML45	3/8	12	0.48	62.5	2.46	25	0.98	93.0	3.66	28.5	1.12
W08-15SPML45	1/2	15	0.59	70.5	2.77	24	0.94	103.5	4.07	31.0	1.22
W08-16SPML45	1/2	16	0.63	74.0	2.91	29	1.14	107.0	4.21	34.5	1.36



SPML90 Metric Standpipe L/S - 90° Elbow

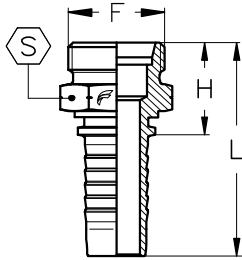


Part Number		E		H		M		L		K	
	in	mm	in	mm	in	mm	in	mm	in	mm	in
W04-06SPML90	1/4	6	0.24	24	0.94	21	0.83	52	2.05	39.0	1.53
W04-08SPML90	1/4	8	0.31	24	0.94	23	0.90	52	2.05	39.0	1.53
W04-10SPML90	1/4	10	0.39	24	0.94	25	0.98	52	2.05	41.0	1.61
W06-10SPML90	3/8	10	0.39	34	1.34	22	0.87	64	2.52	48.0	1.89
W06-12SPML90	3/8	12	0.48	34	1.34	25	0.98	64	2.52	49.0	1.93
W08-15SPML90	1/2	15	0.59	41	1.61	24	0.94	74	2.91	53.5	2.11
W08-16SPML90	1/2	16	0.63	41	1.61	29	1.14	74	2.91	58.5	2.30

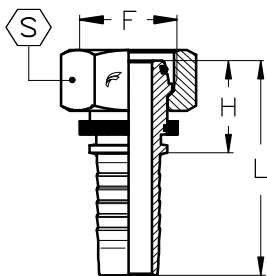
BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS WITHOUT NOTICE.



MML Metric 24° Male Light - (CEL)

Part Number		F	Tube	H		L			
	in			mm	in	mm	in	mm	in
W03-12MML	3/16	M12 x 1.5	L6	21.0	0.83	46.0	1.81	12	1/2
W03-14MML	3/16	M14 x 1.5	L8	21.0	0.83	46.0	1.81	14	9/16
W04-12MML	1/4	M12 x 1.5	L6	21.0	0.83	49.0	1.93	12	1/2
W04-14MML	1/4	M14 x 1.5	L8	21.0	0.83	49.0	1.93	14	9/16
W04-16MML	1/4	M16 x 1.5	L10	23.0	0.90	51.0	2.01	17	11/16
W04-18MML	1/4	M18 x 1.5	L12	23.0	0.90	51.0	2.01	19	3/4
W05-16MML	5/16	M16 x 1.5	L10	23.0	0.90	51.0	2.01	17	11/16
W05-18MML	5/16	M18 x 1.5	L12	23.0	0.90	51.0	2.01	19	3/4
W06-16MML	3/8	M16 x 1.5	L10	23.0	0.90	53.0	2.09	17	11/16
W06-18MML	3/8	M18 x 1.5	L12	23.0	0.90	53.0	2.09	19	3/4
W06-22MML	3/8	M22 x 1.5	L15	25.0	0.98	56.0	2.20	22	7/8
W08-18MML	1/2	M18 x 1.5	L12	25.0	0.98	58.0	2.28	19	3/4
W08-22MML	1/2	M22 x 1.5	L15	26.0	1.02	59.0	2.32	22	7/8
W08-26MML	1/2	M26 x 1.5	L18	28.0	1.10	61.0	2.40	27	1 1/16
W10-26MML	5/8	M26 x 1.5	L18	28.0	1.10	64.0	2.52	27	1 1/16
W10-30MML	5/8	M30 x 2.0	L22	30.0	1.18	66.0	2.60	30	1 3/16
W12-26MML	3/4	M26 x 1.5	L18	29.0	1.14	70.0	2.75	27	1 1/16
W12-30MML	3/4	M30 x 2.0	L22	31.0	1.22	72.0	2.83	30	1 3/16
W16-36MML	1	M36 x 2.0	L28	35.0	1.38	86.0	3.38	36	1 7/16
W20-45MML	1 1/4	M45 x 2.0	L35	40.0	1.57	97.0	3.82	46	1 3/4
W24-52MML	1 1/2	M54 x 2.0	L42	42.0	1.65	106.0	4.17	55	2 3/16

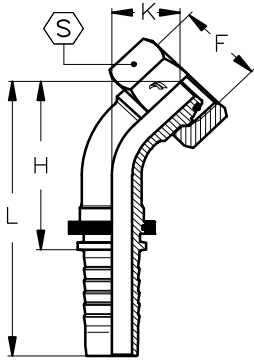




FML Metric 24° Female Light - (DKOL)



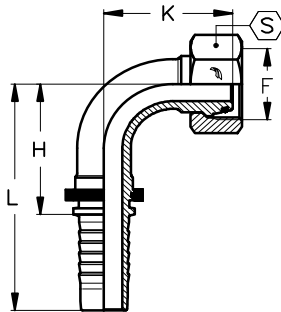
Part Number		F	Tube	H		L			
	in			mm	in	mm	in	mm	in
W03-12FML	3/16	M12 x 1.5	L6	21.0	0.83	46.0	1.81	14	9/16
W03-14FML	3/16	M14 x 1.5	L8	21.0	0.83	46.0	1.81	17	1 1/16
W04-12FML	1/4	M12 x 1.5	L6	23.0	0.90	51.0	2.01	17	1 1/16
W04-14FML	1/4	M14 x 1.5	L8	22.0	0.87	50.0	1.97	17	1 1/16
W04-16FML	1/4	M16 x 1.5	L10	24.0	0.94	52.0	2.05	19	3/4
W04-18FML	1/4	M18 x 1.5	L12	24.0	0.94	52.0	2.05	22	7/8
W05-16FML	5/16	M16 x 1.5	L10	24.0	0.94	52.0	2.05	19	3/4
W05-18FML	5/16	M18 x 1.5	L12	24.0	0.94	52.0	2.05	22	7/8
W06-16FML	3/8	M16 x 1.5	L10	23.0	0.90	54.0	2.12	19	3/4
W06-18FML	3/8	M18 x 1.5	L12	24.0	0.94	54.0	2.12	22	7/8
W06-22FML	3/8	M22 x 1.5	L15	24.0	0.94	54.0	2.12	27	1 1/16
W08-22FML	1/2	M22 x 1.5	L15	24.0	0.94	57.0	2.24	27	1 1/16
W08-26FML	1/2	M26 x 1.5	L18	26.0	1.02	59.0	2.32	32	1 1/4
W10-26FML	5/8	M26 x 1.5	L18	27.0	1.06	62.0	2.44	32	1 1/4
W10-30FML	5/8	M30 x 2.0	L22	28.0	1.10	64.0	2.52	36	1 7/16
W12-26FML	3/4	M26 x 1.5	L18	34.0	1.34	75.0	2.95	32	1 1/4
W12-30FML	3/4	M30 x 2.0	L22	31.0	1.22	71.0	2.79	36	1 7/16
W16-36FML	1	M36 x 2.0	L28	32.0	1.26	83.0	3.27	41	1 5/8
W20-45FML	1 1/4	M45 x 2.0	L35	36.0	1.42	102.0	3.70	50	2
W24-52FML	1 1/2	M52 x 2.0	L42	37.0	1.46	183.0	4.02	60	2 3/8



BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS WITHOUT NOTICE.

FML45 Metric 24° Female Light - 45° Elbow (DKOL)

Part Number		F	Tube	H		L		K			
	in			mm	in	mm	mm	in	mm	in	
W03-12FML45	3/16	M12 x 1.5	L6	34.0	1.34	59.0	2.32	14.0	0.55	14	9/16
W03-14FML45	3/16	M14 x 1.5	L8	35.0	1.38	60.0	2.36	14.0	0.55	17	1 1/16
W04-12FML45	1/4	M12 x 1.5	L6	35.0	1.38	63.0	2.48	14.0	0.55	17	1 1/16
W04-14FML45	1/4	M14 x 1.5	L8	36.0	1.42	64.0	2.52	14.0	0.55	17	1 1/16
W04-16FML45	1/4	M16 x 1.5	L10	38.0	1.50	66.0	2.60	16.0	0.63	19	3/4
W04-18FML45	1/4	M18 x 1.5	L12	39.0	1.53	67.0	2.64	17.0	0.67	22	7/8
W05-16FML45	5/16	M16 x 1.5	L10	39.0	1.53	67.0	2.64	17.0	0.67	19	3/4
W05-18FML45	5/16	M18 x 1.5	L12	39.0	1.53	67.0	2.64	18.0	0.71	22	7/8
W06-16FML45	3/8	M16 x 1.5	L10	39.0	1.53	69.0	2.72	16.0	0.63	19	3/4
W06-18FML45	3/8	M18 x 1.5	L12	40.0	1.57	71.0	2.79	18.0	0.71	22	7/8
W06-22FML45	3/8	M22 x 1.5	L15	42.0	1.65	72.0	2.83	19.0	0.75	27	1 1/16
W08-22FML45	1/2	M22 x 1.5	L15	46.0	1.81	79.0	3.11	19.0	0.75	27	1 1/16
W08-26FML45	1/2	M26 x 1.5	L18	47.0	1.85	80.0	3.15	21.0	0.83	32	1 1/4
W10-26FML45	5/8	M26 x 1.5	L18	53.0	2.09	89.0	3.50	22.0	0.87	32	1 1/4
W10-30FML45	5/8	M30 x 2.0	L22	54.0	2.12	90.0	3.54	23.0	0.90	36	1 7/16
W12-26FML45	3/4	M26 x 1.5	L18	66.0	2.60	107.0	4.21	29.0	1.14	32	1 1/4
W12-30FML45	3/4	M30 x 2.0	L22	62.0	2.44	103.0	4.05	25.0	0.98	36	1 7/16
W16-36FML45	1	M36 x 2.0	L28	80.0	3.15	131.0	5.16	31.0	1.22	41	1 5/8
W20-45FML45	1 1/4	M45 x 2.0	L35	96.0	3.78	154.0	6.06	40.0	1.57	50	2
W24-52FML45	1 1/2	M52 x 2.0	L42	115.4	4.53	179.0	7.05	48.0	1.89	60	2 3/8



FML90 Metric 24° Female Light - 90° Elbow (DKOL)

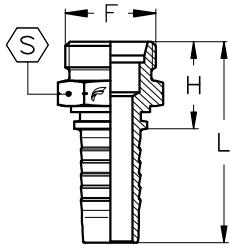


Part Number		F	Tube	H		L		K			
	in			mm	in	mm	in	mm	in	mm	in
W03-12FML90	3/16	M12 x 1.5	L6	27.0	1.06	52.0	2.05	28.0	1.10	14	9/16
W03-14FML90	3/16	M14 x 1.5	L8	27.0	1.06	52.0	2.05	28.0	1.10	17	11/16
W04-12FML90	1/4	M12 x 1.5	L6	26.0	1.02	53.0	2.09	26.0	1.02	17	11/16
W04-14FML90	1/4	M14 x 1.5	L8	29.0	1.14	57.0	2.24	29.0	1.14	17	11/16
W04-16FML90	1/4	M16 x 1.5	L10	29.0	1.14	57.0	2.24	30.0	1.18	19	3/4
W04-18FML90	1/4	M18 x 1.5	L12	29.0	1.14	57.0	2.24	32.0	1.26	22	7/8
W05-16FML90	5/16	M16 x 1.5	L10	31.0	1.22	59.0	2.32	33.0	1.30	19	3/4
W05-18FML90	5/16	M18 x 1.5	L12	28.0	1.10	56.0	2.20	32.0	1.26	22	7/8
W06-16FML90	3/8	M16 x 1.5	L10	31.0	1.22	61.0	2.40	31.0	1.22	19	3/4
W06-18FML90	3/8	M18 x 1.5	L12	31.0	1.22	61.0	2.40	33.0	1.30	22	7/8
W06-22FML90	3/8	M22 x 1.5	L15	31.0	1.22	61.0	2.40	35.0	1.38	27	11/16
W08-22FML90	1/2	M22 x 1.5	L15	37.0	1.46	70.0	2.75	38.0	1.50	27	11/16
W08-26FML90	1/2	M26 x 1.5	L18	37.0	1.46	70.0	2.75	40.0	1.57	32	1 1/4
W10-26FML90	5/8	M26 x 1.5	L18	44.0	1.73	80.0	3.15	45.0	1.77	32	1 1/4
W10-30FML90	5/8	M30 x 2.0	L22	44.0	1.73	80.0	3.15	47.0	1.85	36	1 7/16
W12-30FML90	3/4	M30 x 2.0	L22	54.0	2.12	94.0	3.70	52.0	2.05	36	1 7/16
W16-36FML90	1	M36 x 2.0	L28	70.0	2.75	121.0	4.76	66.0	2.60	41	1 5/8
W20-45FML90	1 1/4	M45 x 2.0	L35	84.0	3.31	141.0	5.55	83.0	3.27	50	2
W24-52FML90	1 1/2	M52 x 2.0	L42	100.0	3.94	164.0	6.46	100.0	3.94	60	2 3/8



BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS WITHOUT NOTICE.

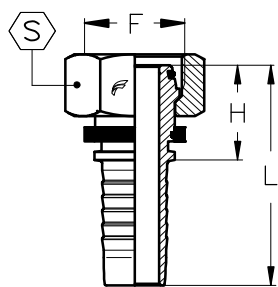
MMS Metric 24° Male Heavy - (CES)

Part Number		F	Tube	H		L			
	in			mm	in	mm	mm	in	
W03-14MMS	3/16	M12 x 1.5	S6	23.0	0.91	48.0	1.89	14	9/16
W03-16MMS	3/16	M14 x 1.5	S8	23.0	0.91	48.0	1.89	17	1 1/16
W04-14MMS	1/4	M14 x 1.5	S6	23.0	0.90	51.0	2.01	14	9/16
W04-16MMS	1/4	M16 x 1.5	S8	23.0	0.90	51.0	2.01	17	1 1/16
W04-18MMS	1/4	M18 x 1.5	S10	24.0	0.94	52.0	2.05	19	3/4
W04-20MMS	1/4	M20 x 1.5	S12	25.0	0.98	53.0	2.09	22	7/8
W05-18MMS	5/16	M18 x 1.5	S10	24.0	0.94	52.0	2.05	19	3/4
W05-20MMS	5/16	M20 x 1.5	S12	25.0	0.98	53.0	2.09	22	7/8
W06-18MMS	3/8	M18 x 1.5	S10	24.0	0.94	55.0	2.16	19	3/4
W06-20MMS	3/8	M20 x 1.5	S12	25.0	0.98	56.0	2.20	22	7/8
W06-22MMS	3/8	M22 x 1.5	S14	27.0	1.06	58.0	2.28	22	7/8
W06-24MMS	3/8	M24 x 1.5	S16	31.0	1.22	58.0	2.28	24	1
W08-22MMS	1/2	M22 x 1.5	S14	28.0	1.10	61.0	2.40	22	7/8
W08-24MMS	1/2	M24 x 1.5	S16	29.0	1.14	62.0	2.44	24	1
W10-30MMS	5/8	M30 x 2.0	S20	32.0	1.26	68.0	2.68	30	1 3/16
W12-30MMS	3/4	M30 x 2.0	S20	33.0	1.30	74.0	2.91	30	1 3/16
W12-36MMS	3/4	M36 x 2.0	S25	37.0	1.46	78.0	3.07	36	1 7/16
W16-36MMS	1	M36 x 2.0	S25	39.0	1.53	90.0	3.54	36	1 7/16
W20-42MMS	1 1/4	M42 x 2.0	S30	44.0	1.73	101.0	3.98	46	1 13/16
W20-52MMS	1 1/4	M52 x 2.0	S38	48.0	1.89	105.0	4.13	55	2 3/16
W24-52MMS	1 1/2	M52 x 2.0	S38	48.0	1.89	112.0	4.41	55	2 3/16

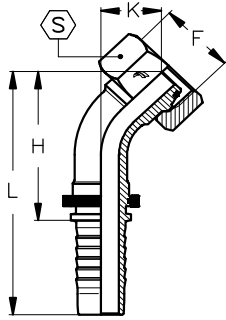




FMS Metric 24° Female Heavy - (DKOS)

Part Number		F	Tube	H		L			
	in			mm	in	mm	in	mm	in
W03-14FMS	3/16	M14 x 1.5	S6	21.0	0.83	46.0	1.81	17	1 1/16
W03-16FMS	3/16	M16 x 1.5	S8	21.0	0.83	46.0	1.81	19	3/4
W04-14FMS	1/4	M14 x 1.5	S6	23.0	0.90	51.0	2.01	17	1 1/16
W04-16FMS	1/4	M16 x 1.5	S8	22.0	0.87	50.0	1.97	19	3/4
W04-18FMS	1/4	M18 x 1.5	S10	24.0	0.94	52.0	2.05	22	7/8
W04-20FMS	1/4	M20 x 1.5	S12	24.0	0.94	52.0	2.05	24	1
W05-18FMS	5/16	M18 x 1.5	S10	24.0	0.94	52.0	2.05	22	7/8
W05-20FMS	5/16	M20 x 1.5	S12	24.0	0.94	52.0	2.05	24	1
W06-18FMS	3/8	M18 x 1.5	S10	25.0	0.98	55.0	2.16	22	7/8
W06-20FMS	3/8	M20 x 1.5	S12	24.0	0.94	54.0	2.12	24	1
W06-22FMS	3/8	M22 x 1.5	S14	28.0	1.10	58.0	2.28	27	1 1/16
W06-24FMS	3/8	M24 x 1.5	S16	28.0	1.10	58.0	2.28	30	1 3/16
W08-22FMS	1/2	M22 x 1.5	S14	28.0	1.10	61.0	2.40	27	1 1/16
W08-24FMS	1/2	M24 x 1.5	S16	29.0	1.14	62.0	2.44	30	1 3/16
W10-30FMS	5/8	M30 x 2.0	S20	33.0	1.30	69.0	2.72	36	1 7/16
W12-30FMS	3/4	M30 x 2.0	S20	36.0	1.42	76.0	2.99	36	1 7/16
W12-36FMS	3/4	M36 x 2.0	S25	38.0	1.50	78.0	3.07	46	1 13/16
W16-36FMS	1	M36 x 2.0	S25	40.0	1.57	91.0	3.58	46	1 13/16
W16-42FMS	1	M42 x 2.0	S30	40.0	1.57	91.0	3.58	50	2
W20-42FMS	1 1/4	M42 x 2.0	S30	41.0	1.61	99.0	3.90	50	2
W20-52FMS	1 1/4	M52 x 2.0	S38	45.0	1.77	103.0	4.06	60	2 3/8
W24-52FMS	1 1/2	M52 x 2.0	S38	46.0	1.81	110.0	4.33	60	2 3/8





FMS45 Metric 24° Female Heavy - 45° Elbow (DKOS)

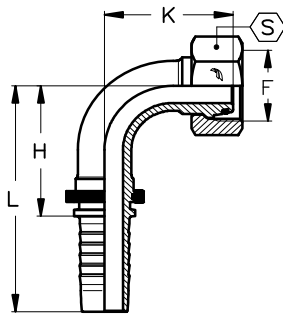


Part Number		F	Tube	H		L		K			
	in			mm	in	mm	mm	in	mm	in	
W03-14FMS45	3/16	M14 x 1.5	S6	34.0	1.34	59.0	2.32	14.0	0.55	17	1 1/16
W03-16FMS45	3/16	M16 x 1.5	S8	35.0	1.38	60.0	2.36	14.0	0.55	19	3/4
W04-14FMS45	1/4	M14 x 1.5	S6	35.0	1.38	63.0	2.48	14.0	0.55	17	1 1/16
W04-16FMS45	1/4	M16 x 1.5	S8	36.0	1.42	64.0	2.52	14.0	0.55	19	3/4
W04-18FMS45	1/4	M18 x 1.5	S10	38.0	1.50	66.0	2.60	16.0	0.63	22	7/8
W04-20FMS45	1/4	M20 x 1.5	S12	39.0	1.53	67.0	2.64	17.0	0.67	24	1
W05-18FMS45	5/16	M18 x 1.5	S10	39.0	1.53	67.0	2.64	17.0	0.67	22	7/8
W05-20FMS45	5/16	M20 x 1.5	S12	39.0	1.53	67.0	2.64	18.0	0.71	24	1
W06-18FMS45	3/8	M18 x 1.5	S10	40.0	1.57	70.0	2.75	17.0	0.67	22	7/8
W06-20FMS45	3/8	M20 x 1.5	S12	40.0	1.57	71.0	2.79	18.0	0.71	24	1
W06-22FMS45	3/8	M22 x 1.5	S14	42.0	1.65	72.0	2.83	19.0	0.75	27	1 1/16
W08-22FMS45	1/2	M22 x 1.5	S14	46.0	1.81	79.0	3.11	20.0	0.79	27	1 1/16
W08-24FMS45	1/2	M24 x 1.5	S16	47.0	1.85	80.0	3.15	21.0	0.83	30	1 3/16
W10-30FMS45	5/8	M30 x 2.0	S20	56.0	2.20	92.0	3.62	25.0	0.98	36	1 7/16
W12-30FMS45	3/4	M30 x 2.0	S20	64.0	2.52	105.0	4.13	27.0	1.06	36	1 7/16
W12-36FMS45	3/4	M36 x 2.0	S25	64.0	2.52	105.0	4.13	28.0	1.10	46	1 13/16
W16-36FMS45	1	M36 x 2.0	S25	82.0	3.23	133.0	5.24	34.0	1.34	41	1 13/16
W16-42FMS45	1	M42 x 2.0	S30	80.0	3.15	131.0	5.16	31.0	1.22	50	2
W20-42FMS45	1 1/4	M42 x 2.0	S30	96.0	3.78	154.0	6.06	41.0	1.61	50	2
W20-52FMS45	1 1/4	M52 x 2.0	S38	94.0	3.70	152.0	5.98	38.0	1.50	60	2 3/8
W24-52FMS45	1 1/2	M52 x 2.0	S38	115.0	4.53	180.0	7.09	49.0	1.93	60	2 3/8

BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS WITHOUT NOTICE.

FMS90 Metric 24° Female Heavy - 90° Elbow (DKOS)

Part Number		F	Tube	H		L		K			
	in			mm	in	mm	mm	in	mm	in	
W03-14FMS90	3/16	M14 x 1.5	S6	27.0	1.06	52.0	2.05	28.0	1.10	17	11/16
W03-16FMS90	3/16	M16 x 1.5	S8	27.0	1.06	52.0	2.05	28.0	1.10	19	3/4
W04-14FMS90	1/4	M14 x 1.5	S6	25.0	0.98	53.0	2.09	26.0	1.02	17	11/16
W04-16FMS90	1/4	M16 x 1.5	S8	29.0	1.41	57.0	2.24	29.0	1.14	19	3/4
W04-18FMS90	1/4	M18 x 1.5	S10	29.0	1.41	57.0	2.24	30.0	1.18	22	7/8
W04-20FMS90	1/4	M20 x 1.5	S12	29.0	1.41	57.0	2.24	32.0	1.26	24	1
W05-18FMS90	5/16	M18 x 1.5	S10	31.0	1.22	59.0	2.32	33.0	1.30	22	7/8
W05-20FMS90	5/16	M20 x 1.5	S12	28.0	1.10	56.0	2.20	32.0	1.26	24	1
W06-18FMS90	3/8	M18 x 1.5	S10	30.0	1.18	61.0	2.40	33.0	1.30	22	7/8
W06-20FMS90	3/8	M20 x 1.5	S12	31.0	1.22	61.0	2.40	33.0	1.30	24	1
W06-22FMS90	3/8	M22 x 1.5	S14	34.0	1.34	64.0	2.52	37.0	1.46	27	11/16
W08-22FMS90	1/2	M22 x 1.5	S14	39.0	1.53	71.0	2.79	41.0	1.61	27	11/16
W08-24FMS90	1/2	M24 x 1.5	S16	39.0	1.53	71.0	2.79	42.0	1.65	30	13/16
W10-30FMS90	5/8	M30 x 2.0	S20	44.0	1.73	80.0	3.15	49.0	1.93	36	17/16
W12-30FMS90	3/4	M30 x 2.0	S20	54.0	2.12	94.0	3.70	55.0	2.16	36	17/16
W12-36FMS90	3/4	M36 x 2.0	S25	54.0	2.12	94.0	3.70	57.0	2.24	46	113/16
W16-36FMS90	1	M36 x 2.0	S25	70.0	2.75	121.0	4.76	70.0	2.75	46	113/16
W16-42FMS90	1	M42 x 2.0	S30	70.0	2.75	121.0	4.76	66.0	2.60	50	2
W20-42FMS90	1 1/4	M42 x 2.0	S30	84.0	3.31	141.0	5.55	84.0	3.31	50	2
W20-52FMS90	1 1/4	M52 x 2.0	S38	84.0	3.31	141.0	5.55	80.0	3.15	60	2 3/8
W24-52FMS90	1 1/2	M52 x 2.0	S38	100.0	3.94	164.0	5.55	101.0	3.98	60	2 3/8

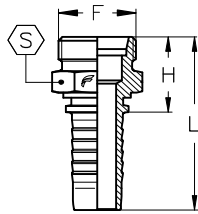




3

W Series - Braided / Four Spiral Hose

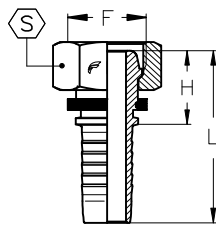
BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS WITHOUT NOTICE.



MGAZ French Metric Male GAZ



Part Number		T	Tube	H		L			
	in			mm	in	mm	in	mm	in
W06-20MGAZ	3/8	M20 x 1.5	13.25	26.7	1.05	57.2	2.25	22	7/8
W08-24MGAZ	1/2	M24 x 1.5	16.75	30.7	1.20	63.7	2.50	27	1 1/16
W10-30MGAZ	5/8	M30 x 1.5	21.25	31.2	1.22	67.2	2.64	32	1 1/4
W12-30MGAZ	3/4	M30 x 1.5	21.25	31.7	1.24	73.2	2.88	32	1 1/4
W12-36MGAZ	3/4	M36 x 1.5	26.75	31.7	1.24	73.2	2.88	36	1 7/16
W16-45MGAZ	1	M45 x 1.5	33.50	37.2	1.46	92.2	3.62	46	1 13/16

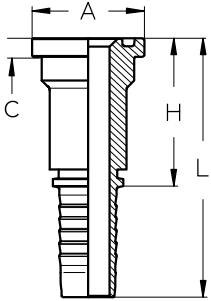
FGAZ French Metric Female GAZ




Part Number		T	Tube	H		L			
	in			mm	in	mm	in	mm	in
W06-20FGAZ	3/8	M20 x 1.5	13.25	23.8	0.93	54.3	2.13	24	1
W06-24FGAZ	3/8	M24 x 1.5	16.75	25.0	0.98	58.0	2.28	30	1 3/16
W08-24FGAZ	1/2	M24 x 1.5	16.75	27.3	1.07	60.3	2.37	30	1 3/16
W10-30FGAZ	5/8	M30 x 1.5	21.25	30	1.18	66	2.59	36	1 7/16
W12-30FGAZ	3/4	M30 x 1.5	21.25	30.6	1.20	71.6	2.81	36	1 7/16
W12-36FGAZ	3/4	M36 x 1.5	26.75	33.6	1.32	74.5	2.93	41	1 5/8
W16-45FGAZ	1	M45 x 1.5	33.50	33.9	1.33	88.9	3.50	50	2

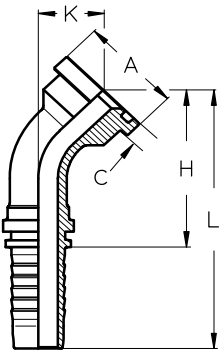
Two Piece


FL Code 61 Flange



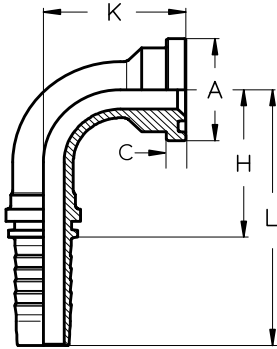
Part Number		C		A		H		L	
	in	mm	mm	in	mm	in	mm	in	
W08-08FL	1/2	6.7	30.2	1.19	47.0	1.85	80.0	3.15	
W08-12FL	1/2	6.7	38.1	1.50	47.0	1.85	80.0	3.15	
W10-12FL	5/8	6.7	38.1	1.50	48.0	1.89	84.0	3.30	
W12-08FL	3/4	6.7	30.2	1.18	49.5	1.95	90.0	3.54	
W12-12FL	3/4	6.7	38.1	1.50	54.0	2.13	94.5	3.72	
W12-16FL	3/4	8.0	44.5	1.75	54.0	2.13	94.5	3.72	
W16-12FL	1	6.7	38.1	1.50	55.0	2.20	106.0	4.17	
W16-16FL	1	8.0	44.5	1.75	55.0	2.17	106.0	4.17	
W16-20FL	1	8.0	50.8	2.00	55.0	2.17	106.0	4.17	
W20-16FL	1 1/4	8.0	44.5	1.75	62.0	2.44	120.0	4.72	
W20-20FL	1 1/4	8.0	50.8	2.00	62.0	2.44	120.0	4.72	
W20-24FL	1 1/4	8.0	60.3	2.37	62.0	2.44	120.0	4.72	
W24-24FL	1 1/2	8.0	60.4	2.38	67.5	2.66	132.0	5.20	
W24-32FL	1 1/2	9.5	71.4	2.81	67.5	2.66	132.0	5.20	
W32-32FL	2	9.5	71.4	2.81	70.0	2.76	140.0	5.50	


FL45 Code 61 Flange - 45° Elbow



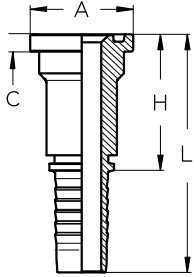
Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
W08-08FL45	1/2	6.7	30.2	1.19	47.0	1.85	80.0	3.15	20.0	0.79	
W08-12FL45	1/2	6.7	38.1	1.50	51.0	2.00	84.0	3.31	24.0	0.94	
W10-12FL45	5/8	6.7	38.1	1.50	55.0	2.17	91.0	3.58	24.0	0.94	
W12-08FL45	3/4	6.7	30.2	1.19	64.0	2.52	104.0	4.09	26.0	1.02	
W12-12FL45	3/4	6.7	38.1	1.50	62.0	2.44	102.0	4.02	25.0	0.98	
W12-16FL45	3/4	6.7	44.5	1.75	64.0	2.52	104.0	4.09	27.0	1.06	
W16-16FL45	1	8.0	44.5	1.75	77.0	3.03	128.0	5.04	28.0	1.10	
W16-20FL45	1	8.0	50.8	2.00	77.0	3.03	128.0	5.04	28.0	1.10	
W20-20FL45	1 1/4	8.0	50.8	2.00	88.0	3.46	146.0	5.75	32.0	1.26	
W20-24FL45	1 1/4	8.0	60.3	2.37	88.0	3.46	146.0	5.75	32.0	1.26	
W24-24FL45	1 1/2	8.0	60.3	2.37	105.0	4.13	169.0	6.65	37.0	1.46	
W24-32FL45	1 1/2	9.5	71.4	2.81	105.0	4.13	169.0	6.65	37.0	1.46	
W32-32FL45	2	9.5	71.4	2.81	212.0	8.35	142.0	5.59	53.0	2.09	


BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS WITHOUT NOTICE.

FL90 Code 61 Flange - 90° Elbow

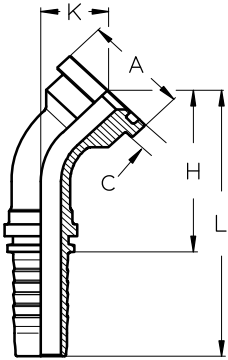
Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
W08-08FL90-040	1/2	6.7	30.2	1.19	38.0	1.47	71.0	2.80	40.0	1.57	
W08-12FL90-045	1/2	6.7	38.1	1.50	38.0	1.47	71.0	2.80	45.0	1.77	
W10-08FL90-042	5/8	6.7	30.2	1.19	45.0	1.77	81.0	3.19	42.0	1.65	
W10-12FL90-047	5/8	6.7	38.1	1.50	45.0	1.77	81.0	3.19	47.0	1.85	
W12-08FL90-054	3/4	6.7	30.2	1.19	55.0	2.17	95.0	3.74	54.0	2.13	
W12-12FL90-051	3/4	6.7	38.1	1.50	55.0	2.17	95.0	3.74	51.0	2.00	
W12-16FL90-054	3/4	8.0	44.5	1.75	55.0	2.17	95.0	3.74	54.0	2.13	
W16-16FL90-061	1	8.0	44.5	1.75	70.0	2.76	121.0	4.76	61.0	2.40	
W16-20FL90-061	1	8.0	50.8	2.00	70.0	2.76	121.0	4.76	61.0	2.40	
W20-16FL90-078	1 1/4	8.0	44.5	1.75	85.0	3.35	142.0	5.59	78.0	3.07	
W20-20FL90-070	1 1/4	8.0	50.8	2.00	85.0	3.35	142.0	5.59	70.0	2.76	
W20-24FL90-070	1 1/4	8.0	60.3	2.37	85.0	3.35	142.0	5.59	70.0	2.76	
W24-24FL90-083	1 1/2	8.0	60.4	2.38	105.0	4.13	170.0	6.69	83.0	3.27	
W24-32FL90-083	1 1/2	9.5	71.4	2.81	105.0	4.13	170.0	6.69	83.0	3.27	
W32-32FL90-122	2	9.5	71.4	2.81	140.0	5.51	210.0	8.27	122.0	4.72	


FLH Code 62 Flange

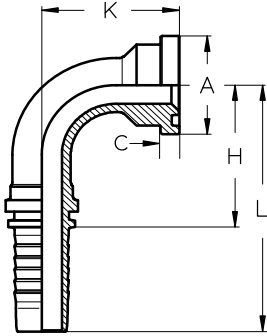



Part Number		C		A		H		L	
	in	mm	mm	in	mm	in	mm	in	
W08-08FLH	1/2	7.8	31.8	1.25	47.0	1.85	80.0	3.15	
W08-12FLH	1/2	8.8	41.3	1.63	47.0	1.85	80.0	3.15	
W10-12FLH	5/8	8.8	41.3	1.63	48.0	1.89	84.0	3.31	
W12-12FLH	3/4	8.8	41.3	1.63	58.0	2.28	98.5	3.88	
W12-16FLH	3/4	9.5	47.6	1.87	58.0	2.28	98.5	3.88	
W16-16FLH	1	9.5	47.6	1.87	64.0	2.52	115.0	4.53	
W16-20FLH	1	10.3	54.0	2.13	64.0	2.52	115.0	4.53	
W20-20FLH	1 1/4	10.3	54.0	2.13	67.5	2.66	125.0	4.92	
W20-24FLH	1 1/4	12.6	63.5	2.50	67.5	2.66	125.0	4.92	
W24-24FLH	1 1/2	12.6	63.5	2.50	79.5	3.13	144.0	5.67	
W24-32FLH	1 1/2	12.6	79.4	3.13	79.5	3.13	144.0	5.67	
W32-32FLH	2	12.6	79.4	3.13	95.0	3.74	165.0	6.50	

FLH45 Code 62 Flange - 45° Elbow



Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
W08-08FLH45	1/2	7.8	31.8	1.25	47.0	1.85	80.0	3.15	20.0	0.79	
W08-12FLH45	1/2	8.8	41.3	1.63	53.0	2.09	86.0	3.39	26.0	1.02	
W10-12FLH45	5/8	8.8	41.3	1.63	57.0	2.24	93.0	3.66	26.0	1.02	
W12-12FLH45	3/4	8.8	41.3	1.63	64.0	2.52	104.0	4.09	26.0	1.02	
W12-16FLH45	3/4	9.5	47.6	1.87	68.0	2.68	108.0	4.25	31.0	1.22	
W16-16FLH45	1	9.5	47.6	1.87	80.0	3.15	131.0	5.16	32.0	1.26	
W16-20FLH45	1	10.3	54.0	2.13	85.0	3.35	136.0	5.35	37.0	1.46	
W20-20FLH45	1 1/4	10.3	54.0	2.13	93.0	3.66	151.0	5.94	37.0	1.46	
W20-24FLH45	1 1/4	12.6	63.5	2.50	99.0	3.90	157.0	6.18	43.0	1.69	
W24-24FLH45	1 1/2	12.6	63.5	2.50	111.0	4.37	175.0	6.89	44.0	1.73	
W24-32FLH45	1 1/2	12.6	79.4	3.13	122.0	4.80	184.0	7.32	55.0	2.17	
W32-32FLH45	2	12.6	79.4	3.13	147.0	5.79	217.0	8.54	58.0	2.28	

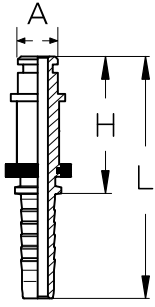
FLH90 Code 62 Flange - 90° Elbow


Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	mm
W08-08FLH90-040	1/2	7.8	31.8	1.25	38.0	1.50	71.0	2.80	40.0	1.57	
W08-12FLH90-047	1/2	8.8	41.3	1.63	38.0	1.50	71.0	2.80	47.0	1.85	
W10-12FLH90-050	5/8	8.8	41.3	1.63	45.0	1.77	81.0	3.19	50.0	1.97	
W12-12FLH90-054	3/4	8.8	41.3	1.63	55.0	2.17	95.0	3.74	54.0	2.13	
W12-16FLH90-060	3/4	9.5	47.6	1.87	55.0	2.17	95.0	3.74	60.0	2.36	
W16-16FLH90-066	1	9.5	47.6	1.87	70.0	2.76	121.0	4.76	66.0	2.60	
W16-20FLH90-073	1	10.3	54.0	2.13	70.0	2.76	121.0	4.76	73.0	2.87	
W20-20FLH90-078	1 1/4	10.3	54.0	2.13	85.0	3.35	142.0	5.59	78.0	3.07	
W20-24FLH90-086	1 1/4	12.6	63.5	2.50	85.0	3.35	142.0	5.59	86.0	3.39	
W24-24FLH90-093	1 1/2	12.6	63.5	2.50	105.0	4.13	170.0	6.69	93.0	3.66	
W24-32FLH90-109	1 1/2	12.6	79.4	3.13	105.0	4.13	170.0	6.69	109.0	4.29	
W32-32FLH90-125	2	12.6	79.4	3.13	140.0	5.51	210.0	8.27	125.0	4.92	

3

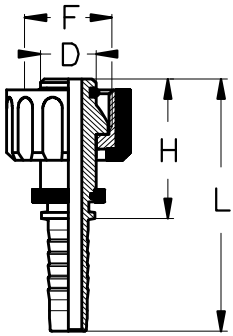
W Series - Braided / Four Spiral Hose


MPWK Pressure Wash Gun End - K



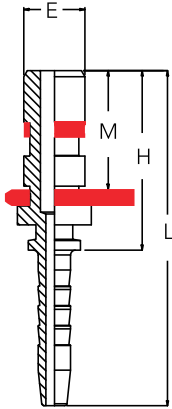
Part Number		A		H		L	
	in	mm	in	mm	in	mm	in
W04-22MPWK	1/4	11.0	0.43	36.0	1.42	64.0	2.52
W05-22MPWK	5/16	11.0	0.43	36.0	1.42	64.0	2.52


FPWK Metric Pressure Wash Swivel - K



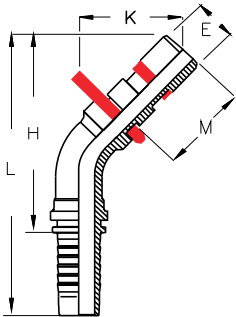
Part Number		F	H		L		D	
	in		mm	in	mm	in	mm	in
W04-22FPWK	1/4	M22 x 1.5	35.0	1.38	63.0	2.48	14	0.55
W05-22FPWK	5/16	M22 x 1.5	38.0	1.50	66.0	2.60	14	0.55
W06-22FPWK	3/8	M22 x 1.5	38.0	1.50	68.0	2.68	14	0.55


14710 WEO Male



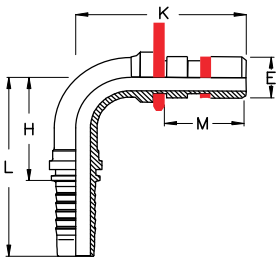
Part Number		E		H		M		L	
	in	mm	in	mm	in	mm	in	mm	in
147100404	1/4	10.0	0.39	33.0	1.30	19.0	0.75	58.0	2.28
147100604	1/4	13.0	0.51	33.0	1.30	22.0	0.87	61.0	2.40
147100606	3/8	13.0	0.51	33.0	1.30	22.0	0.87	63.0	2.48
147100806	3/8	16.0	0.63	33.0	1.30	22.0	0.87	63.0	2.48
147100808	1/2	16.0	0.63	33.0	1.30	22.0	0.87	64.0	2.52
147101208	1/2	23.0	0.91	42.5	1.67	31.0	1.22	73.5	2.90
147101212	3/4	23.0	0.91	43.0	1.70	31.0	1.22	82.0	3.23


14712 WEO Male - 45° Elbow



Part Number		E		H		M		L		K	
	in	mm	in	mm	in	mm	in	mm	in	mm	in
147120404	1/4	10.0	0.39	51.0	2.01	19.0	0.75	79.0	3.11	28.0	1.10
147120604	1/4	13.0	0.51	55.0	2.17	22.0	0.87	83.0	3.27	32.0	1.26
147120606	3/8	13.0	0.51	59.0	2.32	22.0	0.87	89.0	3.50	33.0	1.30
147120806	3/8	16.0	0.63	60.0	2.36	22.0	0.87	90.0	3.54	34.0	1.34
147120808	1/2	16.0	0.68	66.0	2.60	22.0	0.87	97.0	3.82	36.0	1.42
147121208	1/2	23.0	0.91	73.0	2.87	31.0	1.22	104.0	4.09	44.0	1.73
147121212	3/4	23.0	0.91	103.0	4.06	31.0	1.22	142.0	5.59	55.0	2.17

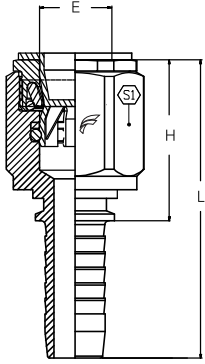
14714 WEO Male - 90° Elbow



Part Number		E		H		M		L		K	
	in	mm	in	mm	in	mm	in	mm	in	mm	in
147140404	1/4	10.0	0.39	34.0	1.34	19.0	0.75	62.0	2.44	51.1	2.00
147140604	1/4	13.0	0.51	34.0	1.34	22.0	0.87	62.0	2.44	56.0	2.20
147140606	3/8	13.0	0.51	39.0	1.54	22.0	0.87	69.0	2.71	60.0	2.36
147140806	3/8	16.0	0.63	39.0	1.54	22.0	0.87	69.0	2.71	61.0	2.40
147140808	1/2	16.0	0.63	48.0	1.89	22.0	0.87	79.0	3.11	69.0	2.72
147141208	1/2	23.0	0.91	48.0	1.89	31.0	1.22	79.0	3.11	79.0	3.11
147141212	3/4	23.0	0.91	75.0	2.95	31.0	1.22	114.0	4.49	104.0	4.09

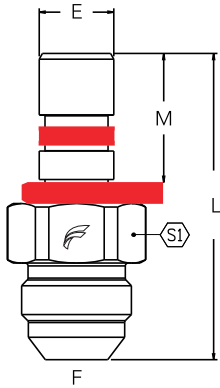
BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS WITHOUT NOTICE.

14817 WEO Female



Part Number	E		H		L		S		
	in	mm	in	mm	in	mm	in	mm	
148170404	1/4	10.0	0.39	32.0	1.26	62.0	2.44	20	13/16
148170606	3/8	13.0	0.51	36.0	1.42	66.0	2.60	24	15/16
148170808	1/2	16.0	0.63	38.0	1.50	67.0	2.64	28	1 1/8
148171212	3/4	23.0	0.91	48.0	1.89	87.0	3.42	36	1 7/16

14727 WEO Male - MJIC



Part Number	E		F	M		L		S	
	mm	in	in	mm	in	mm	in	mm	in
147270407	10.0	0.39	7/16 - 18	19.0	0.75	42.0	1.65	13	7/16
147270609	13.0	0.51	9/16 - 18	22.0	0.87	47.0	1.85	16	5/8
147270612	13.0	0.51	3/4 - 16	22.0	0.87	53.0	2.09	22	7/8
147270809	16.0	0.63	9/16 - 18	22.0	0.87	47.0	1.85	20	13/16
147270812	16.0	0.63	3/4 - 16	22.0	0.87	52.0	2.05	20	13/16
147270813	16.0	0.63	7/8 - 14	22.0	0.87	55.0	2.17	24	13/16
147270817	16.0	0.63	1 1/16 - 12	22.0	0.87	62.0	2.44	30	1 3/16
147271217	23.0	0.91	1 1/16 - 12	31.0	1.22	68.0	2.68	30	1 3/16