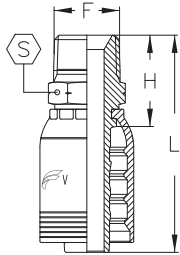


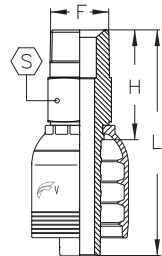




MP NPT Male



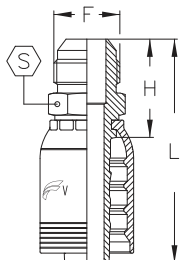
Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
V12-12MP	3/4	3/4 - 14	39.0	1.53	90.0	3.54	27	1 1/16
V12-16MP	3/4	1 - 11 1/2	47.0	1.85	98.0	3.85	36	1 7/16
V16-12MP	1	3/4 - 14	41.5	1.63	98.0	3.85	32	1 1/4
V16-16MP	1	1 - 11 1/2	48.5	1.90	105.0	4.13	36	1 7/16
V16-20MP	1	1 1/4 - 11 1/2	53.0	2.08	109.5	4.31	46	1 13/16
VS20-20MP	1 1/4	1 1/4 - 11 1/2	55.0	2.16	121.5	4.78	46	1 13/16
VS24-24MP	1 1/2	1 1/2 - 11 1/2	61.0	2.40	143.5	5.64	50	2
VS32-32MP	2	2 - 11 1/2	70.5	2.77	167.0	6.57	65	2 9/16



MPA API Male



Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
VS32-32MPA	2	2 - 11 1/2	112.3	4.42	208.8	8.22	65	2 9/16

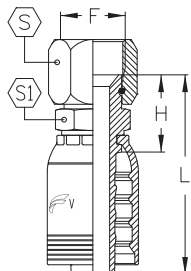
MJ JIC 37° Male



Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
V12-12MJ	3/4	1 1/16 - 12	40.0	1.57	91.0	3.58	27	1 1/16
V12-14MJ	3/4	1 3/16 - 12	41.5	1.63	92.5	3.64	32	1 1/4
V12-16MJ	3/4	1 5/16 - 12	43.0	1.69	94.0	3.70	36	1 7/16
V16-16MJ	1	1 5/16 - 12	45.0	1.77	101.5	3.99	36	1 7/16
V16-20MJ	1	1 5/8 - 12	48.0	1.88	104.5	4.11	46	1 13/16
VS20-20MJ	1 1/4	1 5/8 - 12	50.5	1.98	117.0	4.60	46	1 13/16
VS24-24MJ	1 1/2	1 7/8 - 12	57.0	2.24	139.5	5.49	50	2
VS32-32MJ	2	2 1/2 - 12	68.5	2.69	165.0	6.49	65	2 9/16

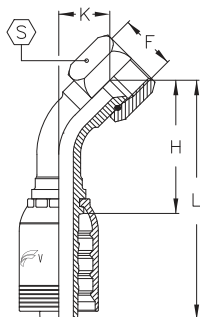
BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS WITHOUT NOTICE.

FJ JIC 37° Female Swivel



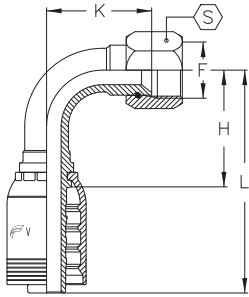
Part Number		F	H		L					
	in		mm	in	mm	in	mm	in	mm	in
V12-10FJ	3/4	7/8 - 14	33.0	1.29	84.0	3.30	27	1 1/16	27	1 1/16
V12-12FJ	3/4	1 1/16 - 12	34.0	1.33	85.0	3.34	32	1 1/4	27	1 1/16
V12-14FJ	3/4	1 3/16 - 12	35.5	1.39	86.5	3.40	36	1 7/16	30	1 3/16
V12-16FJ	3/4	1 5/16 - 12	38.0	1.49	89.0	3.50	41	1 5/8	32	1 1/4
V16-12FJ	1	1 1/16 - 12	36.5	1.43	93.0	3.66	32	1 1/4	32	1 1/4
V16-16FJ	1	1 5/16 - 12	39.5	1.55	96.0	3.77	41	1 5/8	32	1 1/4
V16-20FJ	1	1 5/8 - 12	46.0	1.81	102.5	4.03	50	2	41	1 5/8
VS20-16FJ	1 1/4	1 5/16 - 12	45.5	1.79	112.0	4.40	41	1 5/8	41	1 5/8
VS20-20FJ	1 1/4	1 5/8 - 12	48.0	1.88	114.5	4.50	50	2	41	1 5/8
VS20-24FJ	1 1/4	1 7/8 - 12	51.0	2.00	117.5	4.62	60	2 3/8	46	1 13/16
VS24-24FJ	1 1/2	1 7/8 - 12	53.0	2.08	135.5	5.33	60	2 3/8	46	1 13/16
VS32-32FJ	2	2 1/2 - 12	69.0	2.71	165.5	6.51	75	3	60	2 3/8

FJ45 JIC 37° Female Swivel - 45° Elbow



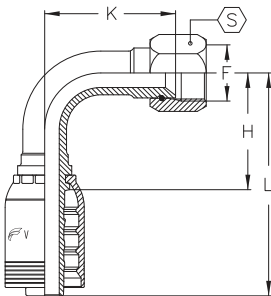
Part Number		F	H		L		K			
	in		mm	in	mm	in	in	mm	in	
V12-12FJ45	3/4	1 1/16 - 12	63.0	2.48	114.0	4.48	25.0	0.98	32	1 1/4
V12-16FJ45	3/4	1 5/16 - 12	63.0	2.48	114.0	4.48	25.0	0.98	41	1 5/8
V16-16FJ45	1	1 5/16 - 12	82.0	3.22	138.0	5.43	32.0	1.25	41	1 5/8
V16-20FJ45	1	1 5/8 - 12	82.0	3.22	138.0	5.43	32.0	1.25	50	2
VS20-20FJ45	1 1/4	1 5/8 - 12	98.0	3.85	164.0	6.45	38.0	1.49	50	2
VS20-24FJ45	1 1/4	1 7/8 - 12	98.0	3.85	164.0	6.45	38.0	1.49	60	2 3/8
VS24-24FJ45	1 1/2	1 7/8 - 12	118.0	4.64	201.0	7.91	46.0	1.81	60	2 3/8
VS32-32FJ45	2	2 1/2 - 12	157.0	6.18	253.0	9.96	62.0	2.44	75	3

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



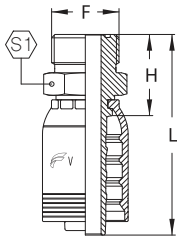
Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
V12-12FJ90M	3/4	1 1/16 - 12	55	2.16	106.0	4.17	52	2.04	32	1 1/4
V12-16FJ90M	3/4	1 5/16 - 12	55	2.16	106.0	4.17	52	2.04	41	1 5/8
V16-16FJ90M	1	1 5/16 - 12	71	2.79	128.0	5.03	67	2.63	36	1 7/16
V16-20FJ90M	1	1 5/8 - 12	71	2.79	128.0	5.03	67	2.63	50	2
VS20-20FJ90M	1 1/4	1 5/8 - 12	87	3.42	154.0	6.06	81	3.18	50	2
VS20-24FJ90M	1 1/4	1 7/8 - 12	87	3.42	154.0	6.06	81	3.18	60	2 1/2
VS24-24FJ90M	1 1/2	1 7/8 - 12	105	4.13	188.0	7.40	97	3.81	60	2 1/2
VS32-32FJ90M	2	2 1/2 - 12	140	5.51	237.0	9.33	132	5.19	75	3



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



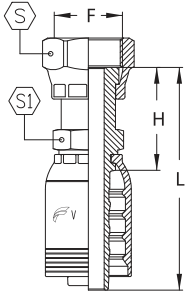
Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
V12-12FJ90L	3/4	1 1/16 - 12	55	2.16	106.0	4.17	96	3.77	32	1 1/4
V16-16FJ90L	1	1 5/16 - 12	71	2.79	128.0	5.03	116	4.56	41	1 5/8
VS20-20FJ90L	1 1/4	1 5/8 - 12	87	3.42	154.0	6.06	136	5.35	50	2




MF ORFS Male



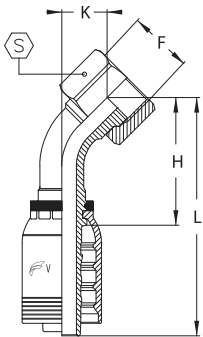
Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
V12-12MF	3/4	1 3/16 - 12	36.0	1.41	87.0	3.42	32	1 1/4
V16-16MF	1	1 7/16 - 12	41.0	1.61	97.0	3.81	41	1 5/8
VS20-20MF	1 1/4	1 11/16 - 12	44.0	1.73	111.0	4.37	46	1 13/16
VS24-24MF	1 1/2	2 - 12	48.0	1.88	131.0	5.15	55	2 1/4



FF ORFS Female Swivel



Part Number		F	H		L					
	in		mm	in	mm	in	mm	in	mm	in
V12-10FF	3/4	1 - 14	43.0	1.69	94.0	3.70	30	1 3/16	27	1 1/16
V12-12FF	3/4	1 3/16 - 12	46.0	1.81	97.0	3.81	36	1 7/16	30	1 3/16
V12-16FF	3/4	1 7/16 - 12	49.0	1.93	100.0	3.94	41	1 5/8	36	1 7/16
V16-12FF	1	1 3/16 - 12	48.0	1.92	104.0	4.16	36	1 7/16	36	1 7/16
V16-16FF	1	1 7/16 - 12	51.0	2.00	107.0	4.21	41	1 5/8	36	1 7/16
V16-20FF	1	1 11/16 - 12	52.0	2.04	109.0	4.29	50	2	41	1 5/8
VS20-20FF	1 1/4	1 11/16 - 12	55.0	2.16	121.0	4.76	50	2	41	1 5/8
VS24-24FF	1 1/2	2 - 12	60.0	2.36	142.0	5.59	60	2 3/8	50	2

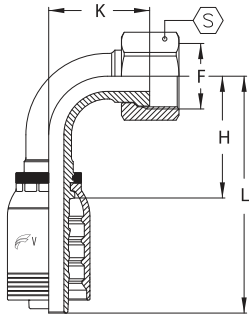
FF45 ORFS Female Swivel - 45° Elbow





Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
V12-12FF45	3/4	1 3/16 - 12	60.0	2.36	111.0	4.37	22.0	0.86	36	1 7/16
V12-16FF45	3/4	1 7/16 - 12	61.0	2.40	112.0	4.40	23.0	0.91	41	1 5/8
V16-12FF45	1	1 3/16 - 12	63.0	2.48	120.0	4.72	22.0	0.86	36	1 7/16
V16-16FF45	1	1 7/16 - 12	78.0	3.07	134.0	5.27	29.0	1.14	41	1 5/8
V16-20FF45	1	1 11/16 - 12	78.0	3.07	134.0	5.27	29.0	1.14	50	2
VS20-20FF45	1 1/4	1 11/16 - 12	93.0	3.66	159.0	6.25	34.0	1.33	50	2
VS24-24FF45	1 1/2	2 - 12	113	4.44	195.0	7.67	41.0	1.61	60	2 3/8

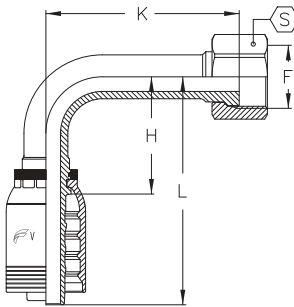
BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS WITHOUT NOTICE.



FF90S ORFS Female Swivel - 90° Elbow Short Drop



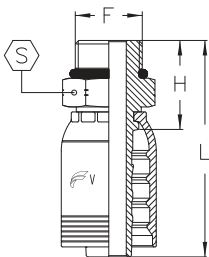
Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
V12-12FF90S	3/4	1 1/16 - 12	54.0	2.13	105.0	4.13	48.0	1.89	36	1 1/16
V16-12FF90S	1	1 3/16 - 12	71.0	2.80	127.0	5.00	48.0	1.93	36	1 1/16
V16-16FF90S	1	1 7/16 - 12	71.0	2.80	127.0	5.00	62.0	2.44	41	1 5/8
V16-20FF90S	1	1 7/16 - 12	71.0	2.80	127.0	5.00	62.0	2.44	50	2
VS20-20FF90S	1 1/4	1 11/16 - 12	87.0	3.42	153.0	6.02	75.0	2.95	50	2
VS24-24FF90S	1 1/2	2 - 12	105.0	4.13	187.0	7.36	90.0	3.54	60	2 3/8



FF90L ORFS Female Swivel - 90° Elbow Long Drop



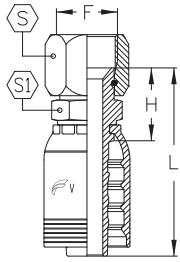
Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
V12-12FF90L	3/4	1 1/16 - 12	54	2.12	105.0	4.13	96	3.77	36	1 1/16
V16-16FF90L	1	1 7/16 - 12	71	2.79	127.0	5.00	114	4.48	41	1 5/8
VS20-20FF90L	1 1/4	1 11/16 - 12	87	3.42	153.0	6.02	130	5.11	50	2

MOB O-Ring Boss Male



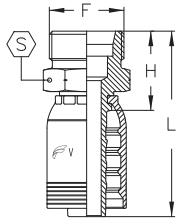
Part Number		F	H		L			
	in		mm	in	mm	in	in	
V12-12MOB	3/4	1 1/16 - 12	36.0	1.42	82.0	3.43	32	1 1/4
V16-16MOB	1	1 5/16 - 12	39.0	1.54	96.0	3.78	38	1 1/2

FK Komatsu Female Swivel



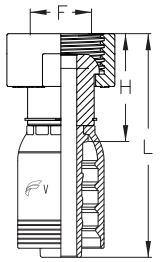
Part Number		F	H		L					
	in		mm	in	mm	in	mm	in	mm	in
V12-30FK	3/4	M30 x 1.5	36.0	1.42	87.0	3.43	36	1 7/16	36	1 7/16
V16-33FK	1	M33 x 1.5	38.0	1.50	95.0	3.74	41	1 5/8	36	1 7/16
V16-36FK	1	M36 x 1.5	42.0	1.65	98.0	3.86	46	1 13/16	41	1 5/8
VS20-36FK	1 1/4	M36 x 1.5	44.0	1.73	110.5	43.5	46	1 13/16	41	1 5/8

MKBC Kobelco Male



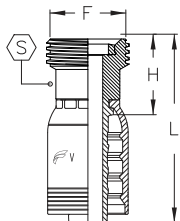
Part Number		F	H		L			
	in		mm	in	mm	in	mm	
V12-30MKBC	3/4	M30 x 1.5	39.2	1.54	90.2	3.55	38	1.50
V12-36MKBC	3/4	M36 x 1.5	39.2	1.54	90.2	3.55	41	1.61
V16-36MKBC	1	M36 x 1.5	42.5	1.67	99.0	3.90	41	1.61
V16-45MKBC	1	M45 x 1.5	45.0	1.77	101.6	4.00	50	2.00

MHU1502 Male Hammer Union with Lug Nut



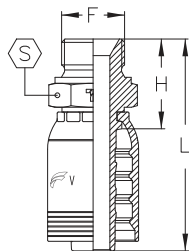
Part Number		Figure	H		L	
	in		mm	in	mm	in
VS32-32MHU1502	2	1502	105.0	4.13	201.5	7.93



FHU1502 Female Hammer Union with Rubber Gasket



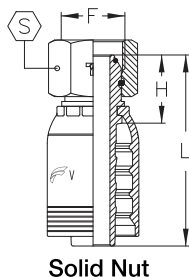
Part Number		Figure	H		L	
	in		mm	in	mm	in
VS32-32FHU1502	2	1502	94.7	3.73	191.2	7.53



MBSPP BSP Male



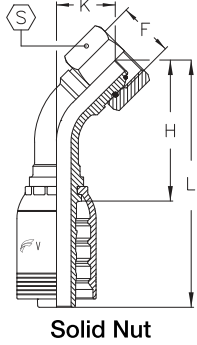
Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
V12-12MBSPP	3/4	3/4 - 14	38.0	1.49	89.0	3.50	32	1 1/4
V12-16MBSPP	3/4	1 - 11	43.0	1.69	91.0	3.58	41	1 5/8
V16-16MBSPP	1	1 - 11	45.0	1.77	101.0	3.97	41	1 5/8
V16-20MBSPP	1	1 1/4 - 11	48.0	1.88	104.0	4.09	50	2
VS20-20MBSPP	1 1/4	1 1/4 - 11	50.0	1.96	117.0	4.60	50	2
VS24-24MBSPP	1 1/2	1 1/2 - 11	55.0	2.16	138.0	5.43	55	2 1/4
VS32-32MBSPP	2	2 - 11	63.0	2.48	159.0	6.25	70	2 3/4



FBSPP BSP Female Swivel



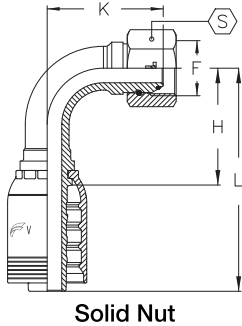
Part Number		F	H		L			
	in		mm	in	mm	in	mm	in
V12-12FBSPP	3/4	3/4 - 14	29.0	1.14	80.0	3.14	32	1 1/4
V12-16FBSPP	3/4	1 - 11	32.0	1.25	83.0	3.26	41	1 5/8
V16-16FBSPP	1	1 - 11	34.0	1.33	90.0	3.54	41	1 5/8
V16-20FBSPP	1	1 1/4 - 11	37.0	1.45	93.0	3.66	50	2
VS20-20FBSPP	1 1/4	1 1/4 - 11	39.0	1.53	106.0	4.17	50	2
VS24-24FBSPP	1 1/2	1 1/2 - 11	43.0	1.69	125.0	4.92	60	2 3/8
VS32-32FBSPP	2	2 - 11	47.0	1.85	143.0	5.62	75	3



FBSP45 BSPP Female Swivel - 45° Elbow



Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
V12-12FBSP45	3/4	3/4 - 14	67.0	2.63	118.0	4.64	29.0	1.14	32	1 1/4
V12-16FBSP45	3/4	1 - 11	70.0	2.76	121.0	4.76	32.0	1.26	41	1 5/8
V16-16FBSP45	1	1 - 11	86.0	3.38	142.0	5.59	36.0	1.41	41	1 5/8
V16-20FBSP45	1	1 1/4 - 11	87.0	3.43	145.0	5.63	37.0	1.47	50	2
VS20-20FBSP45	1 1/4	1 1/4 - 11	103.0	4.05	169.0	6.65	43.0	1.69	50	2
VS24-24FBSP45	1 1/2	1 1/2 - 11	123.0	4.84	206.0	8.11	60.0	2.55	60	2 3/8
VS32-32FBSP45	2	2 - 11	160.0	6.29	257.0	10.11	65.0	2.55	75	3

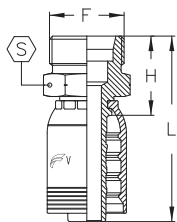
FBSP90 BSPP Female Swivel - 90° Elbow





Part Number		F	H		L		K			
	in		mm	in	mm	in	mm	in	mm	in
V12-12FBSP90	3/4	3/4 - 14	55.0	2.16	106.0	4.17	57.0	2.24	32	1 1/4
V12-16FBSP90	3/4	1 - 11	55.0	2.16	106.0	4.17	57.0	2.24	41	1 5/8
V16-16FBSP90	1	1 - 11	71.0	2.79	128.0	5.03	72.0	2.83	41	1 5/8
V16-20FBSP90	1	1 1/4 - 11	71.0	2.79	128.0	5.03	72.0	2.83	50	2
VS20-20FBSP90	1 1/4	1 1/4 - 11	87.0	3.42	154.0	6.06	88.0	3.46	50	2
VS24-24FBSP90	1 1/2	1 1/2 - 11	105.0	4.13	188.0	7.40	104.0	4.09	60	2 3/8
VS32-32FBSP90	2	2 - 11	140.0	5.51	237.0	9.33	137.0	5.39	75	3

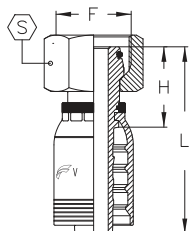
BECAUSE WE CONTINUALLY EXAMINE WAYS TO IMPROVE OUR PRODUCTS, WE RESERVE THE RIGHT TO ALTER SPECIFICATIONS WITHOUT NOTICE.



MMS Metric 24° Male Heavy - (CES)



Part Number		F	Tube	H		L			
	in			mm	in	mm	in	mm	in
V12-30MMS	3/4	M30 x 2.0	S20	85	3.35	34.0	1.34	30	1 ³ / ₁₆
V12-36MMS	3/4	M36 x 2.0	S25	89	3.50	38.0	1.49	36	1 ⁷ / ₁₆
V16-36MMS	1	M36 x 2.0	S25	97	3.82	40.0	1.57	36	1 ⁷ / ₁₆
V16-42MMS	1	M42 x 2.0	S30	101	3.97	44.0	1.73	46	1 ¹³ / ₁₆
VS20-42MMS	1 ¹ / ₄	M42 x 2.0	S30	113	4.45	47.0	1.85	46	1 ¹³ / ₁₆
VS20-52MMS	1 ¹ / ₄	M52 x 2.0	S38	117	4.60	51.0	2.00	55	2 ¹ / ₄
VS24-52MMS	1 ¹ / ₂	M52 x 2.0	S38	135	5.31	53.0	2.08	55	2 ¹ / ₄

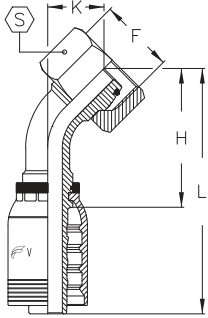
FMS Metric 24° Female Heavy - (DKOS)



Part Number		F	Tube	H		L			
	in			mm	in	mm	in	mm	in
V12-30FMS	3/4	M30 x 2.0	S20	37.0	1.46	88.0	3.46	36	1 ⁷ / ₁₆
V12-36FMS	3/4	M36 x 2.0	S25	39.0	1.53	90.0	3.54	46	1 ¹³ / ₁₆
V16-36FMS	1	M36 x 2.0	S25	41.0	1.61	97.0	3.82	46	1 ¹³ / ₁₆
V16-42FMS	1	M42 x 2.0	S30	42.0	1.65	98.0	3.85	50	2
VS20-42FMS	1 ¹ / ₄	M42 x 2.0	S30	43.0	1.69	109.0	4.29	50	2
VS20-52FMS	1 ¹ / ₄	M52 x 2.0	S38	48.0	1.88	115.0	4.52	60	2 ³ / ₈
VS24-52FMS	1 ¹ / ₂	M52 x 2.0	S38	51.0	2.00	133.0	5.23	60	2 ³ / ₈

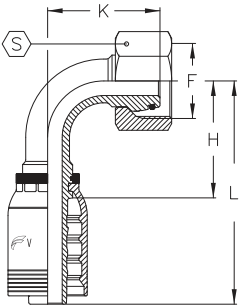
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FMS45 Metric 24° Female Heavy - 45° Elbow - (DKOS)



Part Number		F	Tube	H		L		K			
	in			mm	in	mm	in	mm	in	mm	in
V12-30FMS45	3/4	M30 x 2.0	S20	65.0	2.56	116.0	4.57	27.0	1.06	36	1 7/16
V12-36FMS45	3/4	M36 x 2.0	S25	66.0	2.59	117.0	4.60	28.0	1.10	46	1 13/16
V16-36FMS45	1	M36 x 2.0	S25	83.0	3.27	140.0	5.51	34.0	1.34	46	1 13/16
V16-42FMS45	1	M42 x 2.0	S30	82.0	3.22	138.0	5.43	32.0	1.25	50	2
VS20-42FMS45	1 1/4	M42 x 2.0	S30	100.0	3.94	166.0	6.53	40.0	1.57	50	2
VS20-52FMS45	1 1/4	M52 x 2.0	S38	97.0	3.81	164.0	6.45	38.0	1.49	60	2 3/8
VS24-52FMS45	1 1/2	M52 x 2.0	S38	121.0	4.76	203.0	7.99	48.0	1.88	60	2 3/8

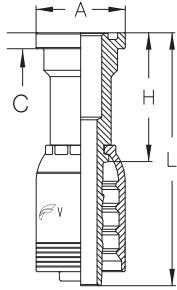
FMS90 Metric 24° Female Heavy - 90° Elbow - (DKOS)




Part Number		F	Tube	H		L		K			
	in			mm	in	mm	in	mm	in	mm	in
V12-30FMS90	3/4	M30 x 2.0	S20	55.0	2.16	106.0	4.17	55.0	2.16	36	1 7/16
V12-36FMS90	3/4	M36 x 2.0	S25	55.0	2.16	106.0	4.17	55.0	2.16	46	1 13/16
V16-36FMS90	1	M36 x 2.0	S25	71.0	2.79	128.0	5.03	69.0	2.72	46	1 13/16
V16-42FMS90	1	M42 x 2.0	S30	71.0	2.79	128.0	5.03	67.0	2.63	50	2
VS20-42FMS90	1 1/4	M42 x 2.0	S30	87.0	3.42	154.0	6.06	83.0	3.27	50	2
VS20-52FMS90	1 1/4	M52 x 2.0	S38	87.0	3.42	154.0	6.06	80.0	3.14	60	2 3/8
VS24-52FMS90	1 1/2	M52 x 2.0	S38	105.0	4.13	188.0	7.40	100.0	3.93	60	2 3/8

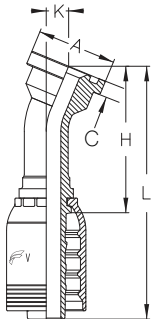
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FL Code 61 Flange



Part Number		C		A		H		L	
	in	mm	mm	in	mm	in	mm	in	
V12-12FL	3/4	6.7	38.1	1.50	55.0	2.16	106.0	4.17	
V12-16FL	3/4	6.7	44.5	1.75	57.0	2.24	108.0	4.25	
V12-20FL	3/4	6.7	50.8	2.00	55.0	2.16	106.0	4.17	
V16-12FL	1	6.7	38.1	1.50	58.0	2.28	114.5	4.51	
V16-16FL	1	8.0	44.5	1.75	58.0	2.28	114.5	4.51	
V16-20FL	1	8.0	50.8	2.00	63.0	2.48	119.5	4.70	
V16-24FL	1	8.0	60.4	2.38	55.0	2.16	115.5	4.55	
VS20-16FL	1 1/4	8.0	44.5	1.75	64.0	2.52	130.5	5.14	
VS20-20FL	1 1/4	8.0	50.8	2.00	64.0	2.52	130.5	5.14	
VS20-24FL	1 1/4	8.0	60.4	2.38	68.0	2.68	134.5	5.29	
VS20-32FL	1 1/4	9.5	71.4	2.81	75.0	2.95	141.5	5.57	
VS24-20FL	1 1/2	8.0	50.8	2.00	70.0	2.76	152.0	5.98	
VS24-24FL	1 1/2	8.0	60.4	2.38	73.0	2.87	155.5	6.12	
VS24-32FL	1 1/2	9.5	71.4	2.81	76.0	2.99	158.5	6.24	
VS32-24FL	2	9.5	60.4	2.38	80.0	3.15	176.5	6.95	
VS32-32FL	2	9.5	71.4	2.81	77.0	3.03	176.5	6.95	
VS32-40FL	2	9.5	84.1	3.31	90.0	3.54	186.5	7.34	

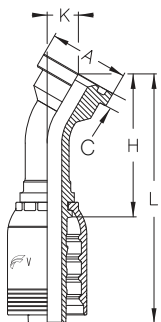
FL22 Code 61 Flange - 22° Elbow



Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FL22	3/4	6.7	38.1	1.50	70.0	2.75	121.0	4.76	11.0	0.43	
V12-16FL22	3/4	8.0	44.5	1.75	73.0	2.87	124.0	4.88	12.0	0.47	
V16-16FL22	1	8.0	44.5	1.75	86.0	3.38	142.0	5.59	12.0	0.47	
V16-20FL22	1	8.0	50.8	2.00	86.0	3.38	142.0	5.59	12.0	0.47	
VS20-20FL22	1 1/4	8.0	50.8	2.00	100.0	3.94	166.0	6.53	13.0	0.51	
VS20-24FL22	1 1/4	8.0	60.3	2.37	100.0	3.94	166.0	6.53	13.0	0.51	
VS24-24FL22	1 1/2	8.0	60.3	2.37	118.0	4.64	201.0	7.91	15.0	0.59	
VS24-32FL22	1 1/2	9.5	71.4	2.81	116.0	4.57	199.0	7.83	14.0	0.55	
VS32-32FL22	2	9.5	71.4	2.81	165.0	6.50	262.0	10.31	22.0	0.86	

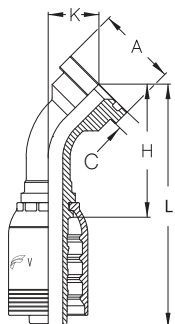
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FL30 Code 61 Flange - 30° Elbow



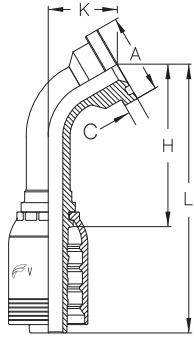
Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FL30	3/4	6.7	38.1	1.50	68.0	2.68	119.0	4.68	16.0	0.63	
V12-16FL30	3/4	8.0	44.5	1.75	71.0	2.79	122.0	4.80	17.0	0.67	
V16-16FL30	1	8.0	44.5	1.75	84.0	3.31	140.0	5.51	17.0	0.67	
V16-20FL30	1	8.0	50.8	2.00	84.0	3.31	140.0	5.51	17.0	0.67	
VS20-20FL30	1 1/4	8.0	50.8	2.00	98.0	3.86	164.0	6.46	19.0	0.75	
VS20-24FL30	1 1/4	8.0	60.4	2.38	98.0	3.86	164.0	6.46	19.0	0.75	
VS24-24FL30	1 1/2	8.0	60.4	2.38	116.0	4.57	199.0	7.83	22.0	0.87	
VS24-32FL30	1 1/2	9.5	71.4	2.81	114.0	4.49	197.0	7.75	21.0	0.83	
VS32-32FL30	2	9.5	71.4	2.81	162.0	6.38	258.0	10.16	31.0	1.22	


FL45 SAE Code 61 Flange - 45° Elbow



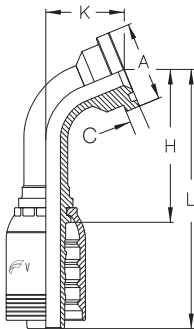
Part Number		F	A		H		L		K	
	in		mm	in	mm	in	mm	in	mm	in
V12-12FL45	3/4	6.7	38.1	1.50	63.0	2.48	114.0	4.49	16.0	0.98
V12-16FL45	3/4	8.0	44.5	1.75	65.0	2.56	116.0	4.57	17.0	1.06
V12-20FL45	3/4	8.0	50.8	2.00	63.0	2.48	116.0	4.57	27.0	1.06
V16-12FL45	1	6.7	38.1	1.50	81.0	3.19	137.0	5.39	31.0	1.22
V16-16FL45	1	8.0	44.5	1.75	78.0	3.31	134.0	4.27	44.0	1.73
V16-20FL45	1	8.0	50.8	2.00	78.0	3.31	134.0	4.27	31.0	2.01
VS20-16FL45	1	8.0	44.5	1.75	96.0	3.78	163.0	6.42	32.2	1.46
VS20-20FL45	1 1/4	8.0	50.8	2.00	91.0	3.86	157.0	6.18	32.0	1.26
VS20-24FL45	1 1/4	8.0	60.3	2.38	91.0	3.86	157.0	6.18	32.0	1.26
VS24-24FL45	1 1/2	8.0	60.3	2.38	108.0	4.57	191.0	7.52	36.0	1.42
VS24-32FL45	1 1/2	9.5	71.4	2.81	107.0	4.49	189.0	7.44	35.0	1.38
VS32-32FL45	2	9.5	71.4	2.81	157.0	6.38	245.0	9.65	57.0	2.24
VS32-40FL45	2	9.5	84.1	3.31	146.0	5.75	243.0	9.57	51.0	2.01


FL60 Code 61 Flange - 60° Elbow



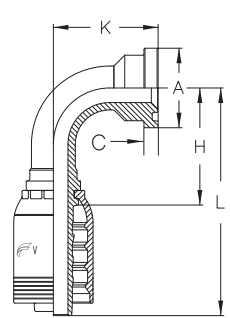
Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FL60	3/4	6.7	38.1	1.50	77.0	3.03	128.0	5.04	34.0	1.34	
V12-16FL60	3/4	8.0	44.5	1.75	79.0	3.11	130.0	5.12	37.0	1.46	
V16-16FL60	1	8.0	44.5	1.75	98.0	3.86	154.0	6.06	40.0	1.57	
V16-20FL60	1	8.0	50.8	2.00	98.0	3.86	154.0	6.06	40.0	1.57	
VS20-20FL60	1 1/4	8.0	50.8	2.00	118.0	4.64	184.0	7.24	45.0	1.77	
VS20-24FL60	1 1/4	8.0	60.4	2.38	118.0	4.64	184.0	7.24	45.0	1.77	
VS24-24FL60	1 1/2	8.0	60.4	2.38	140.0	5.51	223.0	8.78	52.0	2.05	
VS24-32FL60	1 1/2	9.5	71.4	2.81	139.0	5.47	222.0	8.74	50.0	1.97	
VS32-32FL60	2	9.5	71.4	2.81	192.0	7.56	289.0	11.38	73.0	2.87	


FL67 Code 61 Flange - 67° Elbow



Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FL67	3/4	6.7	38.1	1.50	72.0	2.83	123.0	4.84	39.0	1.53	
V12-16FL67	3/4	6.7	44.5	1.75	73.0	2.87	124.0	4.88	41.0	1.61	
V16-16FL67	1	8.0	44.5	1.75	92.0	3.62	148.0	5.83	45.0	1.77	
V16-20FL67	1	8.0	50.8	2.00	92.0	3.62	148.0	5.83	45.0	1.77	
V20-20FL67	1 1/4	8.0	50.8	2.00	111.0	4.37	178.0	7.01	52.0	2.05	
VS20-24FL67	1 1/4	8.0	60.4	2.38	111.0	4.37	178.0	7.01	52.0	2.05	
VS24-24FL67	1 1/2	8.0	60.4	2.38	133.0	5.24	216.0	8.50	60.0	2.36	
VS24-32FL67	1 1/2	9.5	71.4	2.81	132.0	5.20	215.0	8.46	58.0	2.28	
VS32-32FL67	2	9.5	71.4	2.81	181.0	7.12	278.0	10.94	84.0	3.31	

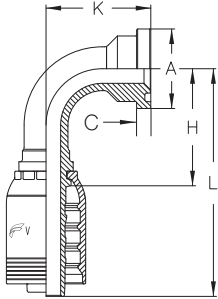
FL90 Code 61 Flange - 90° Elbow




Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FL90-051	3/4	6.7	38.1	1.50	55.0	2.16	106.0	4.17	51.0	2.00	
V12-12FL90-096	3/4	6.7	38.1	1.50	55.0	2.16	106.0	4.17	96.0	3.77	
V12-12FL90-127	3/4	6.7	38.1	1.50	55.0	2.16	106.0	4.17	127.0	5.00	
V12-12FL90-150	3/4	6.7	38.1	1.50	55.0	2.16	106.0	4.17	150.0	5.90	
V12-16FL90-055	3/4	8.0	44.5	1.75	55.0	2.16	106.0	4.17	55.0	2.16	
V12-16FL90-079	3/4	8.0	44.5	1.75	55.0	2.16	106.0	4.17	79.0	3.11	
V12-20FL90-060	3/4	8.0	50.8	2.00	55.0	2.16	106.0	4.17	60.0	2.36	
V16-12FL90-065	3/4	6.7	38.1	1.50	71.0	2.79	128.0	5.03	65.0	2.56	
V16-16FL90-061	1	8.0	44.5	1.75	71.0	2.79	128.0	5.03	61.0	2.40	
V16-16FL90-118	1	8.0	44.5	1.75	71.0	2.79	128.0	5.03	118.0	4.64	
V16-16FL90-158	1	8.0	44.5	1.75	71.0	2.79	128.0	5.03	158.0	6.22	
V16-20FL90-061	1	8.0	50.8	2.00	71.0	2.79	128.0	5.03	61.0	2.40	
V16-20FL90-118	1	8.0	50.8	2.00	71.0	2.79	128.0	5.03	118.0	4.64	
V16-24FL90-061	1	8.0	60.4	2.38	71.0	2.79	128.0	5.03	61.0	2.40	
VS20-16FL90-079	1 1/4	8.0	44.5	1.75	87.0	3.42	154.0	6.06	79.0	3.11	
VS20-20FL90-071	1 1/4	8.0	50.8	2.00	87.0	3.42	154.0	6.06	71.0	2.79	
VS20-20FL90-091	1 1/4	8.0	50.8	2.00	87.0	3.42	154.0	6.06	91.0	3.58	
VS20-20FL90-102	1 1/4	8.0	50.8	2.00	87.0	3.42	154.0	6.06	102.0	4.01	
VS20-20FL90-112	1 1/4	8.0	50.8	2.00	87.0	3.42	154.0	6.06	112.0	4.40	
VS20-20FL90-130	1 1/4	8.0	50.8	2.00	87.0	3.42	154.0	6.06	130.0	5.11	
VS20-20FL90-168	1 1/4	8.0	50.8	2.00	87.0	3.42	154.0	6.06	168.0	6.61	
VS20-24FL90-071	1 1/4	8.0	60.3	2.37	87.0	3.42	154.0	6.06	71.0	2.79	
VS20-24FL90-118	1 1/4	8.0	60.3	2.37	87.0	3.42	154.0	6.06	118.0	4.64	
VS20-24FL90-130	1 1/4	8.0	60.3	2.37	87.0	3.42	154.0	6.06	130.0	5.11	

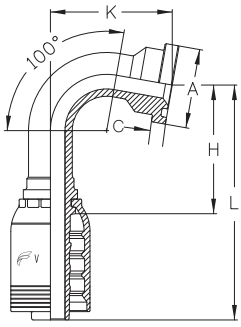
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FL90 Code 61 Flange - 90° Elbow



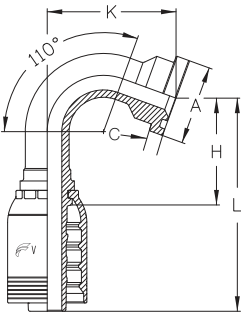
Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
VS24-20FL90-090	1½	8.0	50.8	2.00	98.0	3.85	180.0	7.09	90.0	3.54	
VS24-24FL90-083	1½	8.0	60.4	2.38	105.0	4.13	188.0	7.40	83.0	3.26	
VS24-24FL90-102	1½	8.0	60.4	2.38	105.0	4.30	188.0	7.40	102.0	4.01	
VS24-24FL90-148	1½	8.0	60.4	2.38	105.0	4.13	188.0	7.40	148.0	5.82	
VS24-24FL90-172	1½	8.0	60.4	2.38	105.0	4.13	188.0	7.40	172.0	6.77	
VS24-32FL90-081	1½	8.0	71.4	2.81	105.0	4.13	188.0	7.40	81.0	3.18	
VS24-32FL90-115	1½	8.0	71.4	2.81	105.0	4.13	188.0	7.40	115.0	4.52	
VS24-32FL90-172	1½	8.0	71.4	2.81	105.0	4.13	188.0	7.40	172.0	6.77	
VS32-24FL90-081	2	8.0	60.3	2.37	136.0	5.38	233.0	9.18	81.0	3.19	
VS32-24FL90-105	2	8.0	60.3	2.37	136.0	5.38	233.0	9.18	105.0	4.13	
VS32-24FL90-152	2	8.0	60.3	2.37	136.0	5.38	233.0	9.18	152.0	5.98	
VS32-24FL90-228	2	8.0	60.3	2.37	136.0	5.38	233.0	9.18	228.0	8.98	
VS32-32FL90-122	2	9.5	71.4	2.81	140.0	5.51	237.0	9.33	122.0	4.80	
VS32-32FL90-165	2	9.5	71.4	2.81	140.0	5.51	237.0	9.33	165.0	6.49	
VS32-32FL90-203	2	9.5	71.4	2.81	140.0	5.51	237.0	9.33	203.0	7.99	
VS32-40FL90-117	2	9.5	84.1	3.31	140.0	5.51	237.0	9.33	117.0	4.60	


FL100 Code 61 Flange - 100° Elbow



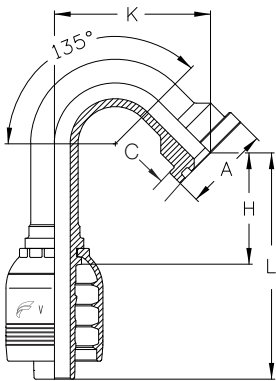
Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FL100-060	3/4	6.7	38.1	1.50	61.0	2.40	112.0	4.41	60.0	2.36	
V16-16FL100-073	1	8.0	44.5	1.75	77.0	3.03	134.0	5.27	73.0	2.87	


FL110 Code 61 Flange - 110° Elbow



Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FL110-064	3/4	6.7	38.1	1.50	51.0	2.01	102.0	4.01	64.0	2.52	
V16-16FL110-073	1	8.0	44.5	1.75	65.0	2.56	121.0	4.76	73.0	2.87	
V16-20FL110-073	1	8.0	50.8	2.00	65.0	2.56	121.0	4.76	73.0	2.87	
VS20-20FL110-080	1 1/4	8.0	50.8	2.00	82.0	3.23	148.0	5.83	80.0	3.15	
VS20-24FL110-081	1 1/4	8.0	60.4	2.38	82.0	3.23	148.0	5.83	81.0	3.19	
VS24-24FL110-095	1 1/2	8.0	60.4	2.38	95.0	3.74	178.0	7.01	95.0	3.74	
VS32-32FL110-140	2	9.5	71.4	2.81	124.0	4.88	220.0	8.66	140.0	5.51	

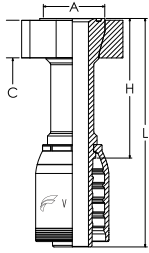
FL135 Code 61 Flange - 135° Elbow




Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FL135-069	3/4	6.7	38.1	1.50	69.0	2.72	120.0	4.72	69.0	2.72	
V12-16FL135-070	3/4	8.0	44.5	1.75	69.0	2.72	120.0	4.72	70.0	2.75	
V16-16FL135-088	1	8.0	44.5	1.75	57.0	2.24	113.0	4.45	88.0	3.46	

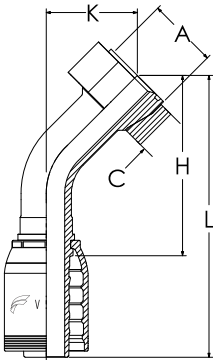
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LET Code 61 CAPTIVE Flange - 5000 PSI



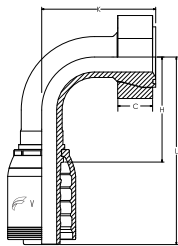
Part Number		C	A		H		L	
	in		mm	in	mm	in	mm	in
VS20-20LET	1¼		50.8	2.00	111.8	4.40	178.6	7.03
VS24-24LET	1½		60.3	2.37	129.6	5.10	212.1	8.35
VS32-32LET	2		71.4	2.81	139.5	5.49	236.0	9.29


LET45 Code 61 CAPTIVE Flange - 5000 PSI



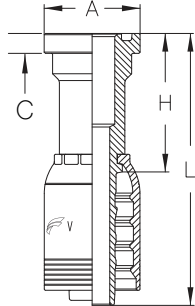
Part Number		C	A		H		L		K	
	in		mm	in	mm	in	mm	in	mm	in
VS20-20LET45-063	1¼		50.8	2.00	122.5	4.82	189.0	7.44	63.0	2.48
VS24-24LET45-074	1½		60.3	2.37	146.5	5.77	229.0	9.02	74.0	2.91


LET90 Code 61 CAPTIVE Flange - 5000 PSI



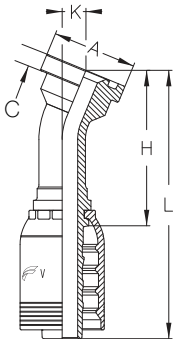
Part Number		C	A		H		L		K	
	in		mm	in	mm	in	mm	in	mm	in
VS20-20LET90-102	1¼		50.8	2.00	87.5	3.44	154.0	6.06	102.0	4.02
VS24-24LET90-114	1½		60.3	2.37	105.1	4.13	187.6	7.39	114.0	4.49
VS32-32LET90-136	2		71.4	2.81	150.3	5.92	247.0	9.72	136.0	5.35


FLH Code 62 Flange



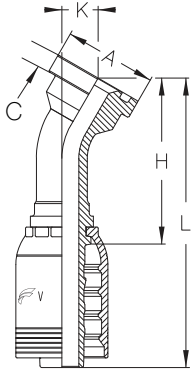
Part Number		C		A		H		L	
	in	mm	mm	in	mm	in	mm	in	
V12-12FLH	3/4	8.8	41.3	1.62	59.5	2.34	110.0	4.33	
V12-16FLH	3/4	9.5	47.6	1.87	61.0	2.40	112.0	4.41	
V16-12FLH	1	8.8	41.3	1.62	65.0	2.56	121.5	4.78	
V16-16FLH	1	9.5	47.6	1.87	65.0	2.56	121.5	4.78	
V16-20FLH	1	10.3	54.0	2.12	69.0	2.72	125.5	4.94	
VS20-16FLH	1 1/4	9.5	47.6	1.87	70.0	2.75	136.5	5.37	
VS20-20FLH	1 1/4	10.3	54.0	2.12	70.0	2.75	136.5	5.37	
VS20-24FLH	1 1/4	12.6	63.5	2.50	80.0	3.15	146.5	5.77	
VS24-24FLH	1 1/2	12.6	63.5	2.50	84.0	3.31	116.5	4.59	
VS24-20FLH	1 1/2	10.3	54.0	2.12	72.0	2.83	154.0	6.06	
VS24-32FLH	1 1/2	12.6	79.4	3.12	99.0	3.90	181.5	7.14	
VS32-32FLH	2	12.6	79.4	3.12	100.0	3.94	196.5	7.74	

FLH22 Code 62 Flange - 22° Elbow



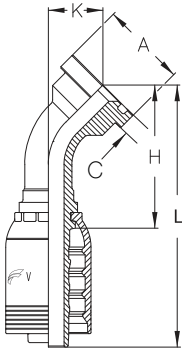
Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FLH22	3/4	8.8	41.3	1.62	74.0	2.91	125.0	4.92	13.0	0.51	
V12-16FLH22	3/4	9.5	47.6	1.87	76.0	2.99	127.0	5.00	14.0	0.55	
V16-16FLH22	1	9.5	47.6	1.87	89.0	3.50	145.0	5.70	13.0	0.51	
V16-20FLH22	1	10.3	54.0	2.12	89.0	3.50	145.0	5.70	13.0	0.51	
VS20-20FLH22	1 1/4	10.3	54.0	2.12	103.0	4.05	169.0	6.65	15.0	0.59	
VS20-24FLH22	1 1/4	12.6	63.5	2.50	104.0	4.09	171.0	6.73	15.0	0.59	
VS24-24FLH22	1 1/2	12.6	63.5	2.50	123.0	4.84	206.0	8.11	17.0	0.66	
VS24-32FLH22	1 1/2	12.6	79.4	3.12	127.0	5.00	210.0	8.26	19.0	0.74	
VS32-32FLH22	2	12.6	79.4	3.12	166.0	6.53	263.0	10.35	24.0	0.94	

FLH30 Code 62 Flange - 30° Elbow



Part VNumber		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FLH30	3/4	8.8	41.3	1.62	72.0	2.83	123.0	4.84	18.0	0.70	
V12-16FLH30	3/4	9.5	47.6	1.87	74.0	2.91	125.0	4.92	19.0	0.74	
V16-16FLH30	1	9.5	47.6	1.87	87.0	3.42	143.0	5.62	19.0	0.74	
V16-20FLH30	1	10.3	54.0	2.12	87.0	3.42	143.0	5.62	19.0	0.74	
VS20-20FLH30	1 1/4	10.3	54.0	2.12	100.0	3.93	167.0	6.57	20.0	0.78	
VS20-24FLH30	1 1/4	12.6	63.5	2.50	102.0	4.01	168.0	6.61	21.0	0.82	
VS24-24FLH30	1 1/2	12.6	63.5	2.50	121.0	4.76	203.0	7.99	24.0	0.94	
VS24-32FLH30	1 1/2	12.6	79.4	3.12	124.0	4.88	207.0	8.14	26.0	1.02	
VS32-32FLH30	2	12.6	79.4	3.12	162.0	6.37	259.0	10.19	34.0	1.33	

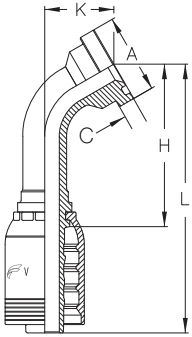
FLH45 Code 62 Flange - 45° Elbow




Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FLH45	3/4	8.8	41.3	1.62	66.0	2.59	117.0	4.60	28.0	1.10	
V12-16FLH45	3/4	9.5	47.6	1.87	68.0	2.67	118.0	4.64	29.0	1.14	
V16-12FLH45	1	8.8	41.3	1.62	81.0	3.18	137.0	5.39	31.0	1.22	
V16-16FLH45	1	9.5	47.6	1.87	80.0	3.14	136.0	5.35	30.0	1.18	
V16-20FLH45	1	10.3	54.0	2.12	80.0	3.14	136.0	5.35	30.0	1.18	
VS20-16FLH45	1 1/4	9.5	47.6	1.87	96.0	3.77	163.0	6.41	37.0	1.45	
VS20-20FLH45	1 1/4	10.3	54.0	2.12	93.0	3.66	160.0	6.29	34.0	1.33	
VS20-24FLH45	1 1/4	12.6	63.5	2.50	94.0	3.70	161.0	6.33	35.0	1.37	
VS24-24FLH45	1 1/2	12.6	63.5	2.50	112.0	4.40	195.0	7.67	40.0	1.57	
VS24-32FLH45	1 1/2	12.6	79.4	3.12	115.0	4.52	198.0	7.79	43.0	1.69	
VS32-32FLH45	2	12.6	79.4	3.12	150.0	5.90	247.0	9.72	56.0	2.20	

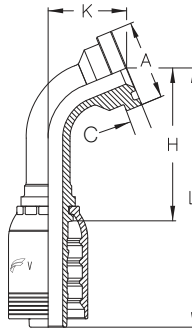
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FLH60 Code 62 Flange - 60° Elbow



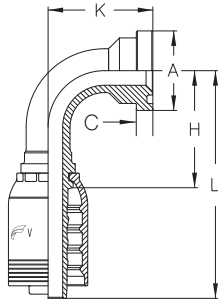
Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FLH60	3/4	8.8	41.3	1.63	79.0	3.11	130.0	5.12	38.0	1.50	
V12-16FLH60	3/4	9.5	47.6	1.87	80.0	3.15	131.0	5.16	40.0	1.57	
V16-16FLH60	1	9.5	47.6	1.87	99.0	3.90	155.0	6.10	42.0	1.65	
V16-20FLH60	1	10.3	54.0	2.12	99.0	3.90	155.0	6.10	42.0	1.65	
VS20-20FLH60	1 1/4	10.3	54.0	2.12	119.0	4.68	185.0	7.28	47.0	1.85	
VS20-24FLH60	1 1/4	12.6	63.5	2.50	120.0	4.72	186.0	7.32	49.0	1.93	
VS24-24FLH60	1 1/2	12.6	63.5	2.50	143.0	5.62	225.0	8.85	56.0	2.20	
VS24-32FLH60	1 1/2	12.6	79.4	3.12	145.0	5.71	228.0	8.98	60.0	2.36	
VS32-32FLH60	2	12.6	79.4	3.12	193.0	7.59	289.0	11.37	79.0	3.11	


FLH67 Code 62 Flange - 67° Elbow



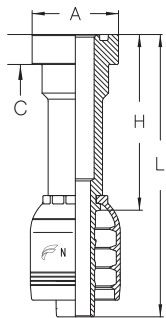
Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FLH67	3/4	8.8	41.3	1.63	74.0	2.91	125.0	4.92	43.0	1.69	
V12-16FLH67	3/4	9.5	47.6	1.87	75.0	2.95	126.0	4.96	45.0	1.77	
V16-16FLH67	1	9.5	47.6	1.87	93.0	3.66	150.0	5.90	48.0	1.88	
V16-20FLH67	1	10.3	54.0	2.12	93.0	3.66	150.0	5.90	48.0	1.88	
VS20-20FLH67	1 1/4	10.3	54.0	2.12	112.0	4.40	179.0	7.04	54.0	2.12	
VS20-24FLH67	1 1/4	12.6	63.5	2.50	113.0	4.45	180.0	7.09	56.0	2.20	
VS24-24FLH67	1 1/2	12.6	63.5	2.50	135.0	5.31	217.0	8.54	65.0	2.55	
VS24-32FLH67	1 1/2	12.6	79.4	3.12	137.0	5.39	219.0	8.62	69.0	2.72	
VS32-32FLH67	2	12.6	79.4	3.12	182.0	7.16	278.0	10.94	90.0	3.54	

FLH90 Code 62 Flange - 90° Elbow




Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FLH90-056	3/4	8.8	41.3	1.62	55.0	2.16	106.0	4.17	56.0	2.20	
V12-12FLH90-100	3/4	8.8	41.3	1.62	55.0	2.16	106.0	4.17	100.0	3.93	
V12-12FLH90-175	3/4	8.8	44.3	1.74	55.0	2.16	100.0	4.17	175.0	6.89	
V12-16FLH90-058	3/4	9.5	47.6	1.87	55.0	2.16	106.0	4.17	58.0	2.28	
V12-16FLH90-140	3/4	9.5	47.6	1.87	55.0	2.16	106.0	4.17	140.0	5.51	
V16-12FLH90-065	1	8.8	41.3	1.62	71.0	2.79	128.0	5.03	65.0	2.55	
V16-16FLH90-064	1	9.5	47.6	1.87	71.0	2.79	128.0	5.03	64.0	2.51	
V16-16FLH90-120	1	9.5	47.6	1.87	71.0	2.79	128.0	5.03	120.0	4.72	
V16-16FLH90-150	1	9.5	47.6	1.87	71.0	2.79	128.0	5.03	150.0	5.90	
V16-20FLH90-064	1	10.3	54.0	2.12	71.0	2.79	128.0	5.03	64.0	2.51	
VS20-16FLH90-079	1 1/4	9.5	47.6	1.87	87.0	3.42	154.0	6.06	79.0	3.11	
VS20-20FLH90-074	1 1/4	10.3	54.0	2.12	87.0	3.42	154.0	6.06	74.0	2.91	
VS20-20FLH90-120	1 1/4	10.3	54.0	2.12	87.0	3.42	154.0	6.06	120.0	4.72	
VS20-20FLH90-180	1 1/4	10.3	54.0	2.12	87.0	3.45	154.0	6.06	180.0	7.08	
VS20-24FLH90-076	1 1/4	12.6	63.5	2.50	87.0	3.42	154.0	6.06	76.0	2.99	
VS24-24FLH90-088	1 1/2	12.6	63.5	2.50	105.0	4.13	188.0	7.40	88.0	3.46	
VS24-32FLH90-093	1 1/2	12.6	79.4	3.12	105.0	4.13	188.0	7.40	93.0	3.66	
VS32-32FLH90-123	2	12.6	79.4	3.12	140.0	5.51	237.0	9.33	123.0	4.84	

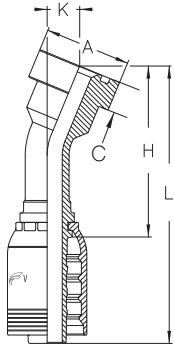
FLC CAT® Flange




Use with D-Ring

Part Number		C		A		H		L	
	in	mm	mm	in	mm	in	mm	in	
V12-12FLC	3/4	14.2	41.3	1.62	84.0	3.30	135.0	5.31	
V12-16FLC	3/4	14.2	47.6	1.87	84.0	3.30	135.0	5.31	
V16-16FLC	1	14.2	47.6	1.87	90.0	3.54	146.5	5.76	
V16-20FLC	1	14.2	54.0	2.12	90.0	3.54	146.5	5.76	
V20-20FLC	1 1/4	14.2	54.0	2.12	88.0	3.46	154.4	6.07	
V20-24FLC	1 1/4	14.2	63.5	2.50	88.0	3.46	154.5	6.07	
V24-24FLC	1 1/2	14.2	63.5	2.50	84.0	3.31	166.0	6.53	
V24-32FLC	1 1/2	14.2	79.4	3.12	110.0	4.33	192.0	7.56	
V32-32FLC	2	14.2	79.4	3.12	130.0	5.12	220.0	8.90	

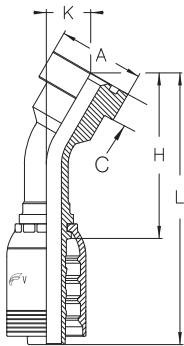
FLC22 CAT® Flange - 22° Elbow




Use with D-Ring

Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FLC22	3/4	14.2	41.3	1.62	82.0	3.22	133.0	5.23	16.0	0.62	
V12-16FLC22	3/4	14.2	47.6	1.87	84.0	3.30	135.0	5.31	17.0	0.66	
V16-16FLC22	1	14.2	47.6	1.87	97.0	3.81	153.0	6.02	17.0	0.66	
V16-20FLC22	1	14.2	54.0	2.12	97.0	3.81	153.0	6.02	17.0	0.66	
VS20-20FLC22	1 1/4	14.2	54.0	2.12	106.0	4.17	172.0	6.77	16.0	0.62	
VS20-24FLC22	1 1/4	14.2	63.5	2.50	106.0	4.17	174.0	6.85	16.0	0.62	
VS24-24FLC22	1 1/2	14.2	63.5	2.50	125.0	4.92	208.0	8.19	18.0	0.71	
VS24-32FLC22	1 1/2	14.2	79.4	3.12	129.0	5.08	211.0	8.31	19.0	0.75	
VS32-32FLC22	2	14.2	79.4	3.12	168.0	6.61	265.0	10.43	25.0	0.98	

FLC30 CAT® Flange - 30° Elbow

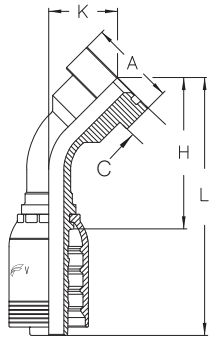


Use with D-Ring


Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FLC30	3/4	14.2	41.3	1.62	79.0	3.11	130.0	5.11	22.0	0.86	
V12-16FLC30	3/4	14.2	47.6	1.87	82.0	3.22	133.0	5.23	23.0	0.90	
V16-16FLC30	1	14.2	47.6	1.87	94.0	3.70	151.0	5.94	23.0	0.90	
V16-20FLC30	1	14.2	54.0	2.12	94.0	3.70	151.0	5.94	23.0	0.90	
VS20-20FLC30	1 1/4	14.2	54.0	2.12	103.0	4.05	170.0	6.69	22.0	0.86	
VS20-24FLC30	1 1/4	14.2	63.5	2.50	104.0	4.09	170.0	6.69	23.0	0.90	
VS24-24FLC30	1 1/2	14.2	63.5	2.50	123.0	4.84	205.0	8.07	25.0	0.98	
VS24-32FLC30	1 1/2	14.2	79.4	3.12	126.0	4.96	208.0	8.19	27.0	1.06	
VS32-32FLC30	2	14.2	79.4	3.12	164.0	6.46	264.0	10.39	35.0	1.38	

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

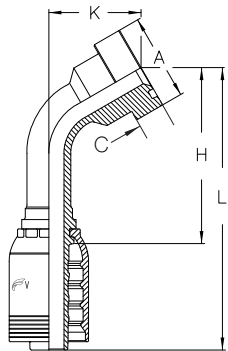
FLC45 CAT® Flange - 45° Elbow




Use with D-Ring

Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FLC45	3/4	14.2	41.3	1.62	72	2.83	123.0	4.84	34.0	1.33	
V12-16FLC45	3/4	14.2	47.6	1.87	74	2.91	125.0	4.92	36.0	1.41	
V16-16FLC45	1	14.2	47.6	1.87	86	3.38	143.0	5.62	36.0	1.41	
V16-20FLC45	1	14.2	54.0	2.12	86	3.38	143.0	5.62	36.0	1.41	
VS20-20FLC45	1 1/4	14.2	54.0	2.12	96	3.77	162.0	6.37	36.0	1.41	
VS20-24FLC45	1 1/4	14.2	63.5	2.50	96	3.77	162.0	6.37	36.0	1.41	
VS24-24FLC45	1 1/2	14.2	63.5	2.50	114.0	4.49	196.0	7.72	41.0	1.61	
VS24-32FLC45	1 1/2	14.2	79.4	3.12	116.0	4.57	199.0	7.83	44.0	1.73	
VS32-32FLC45	2	14.2	79.4	3.12	152.0	5.98	250.0	9.84	57.0	2.24	

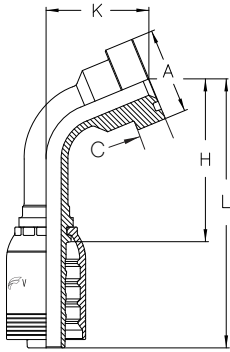
FLC60 CAT® Flange - 60° Elbow




Use with D-Ring

Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FLC60	3/4	14.2	41.3	1.62	83.0	3.26	134.0	5.27	45.0	1.77	
V12-16FLC60	3/4	14.2	47.6	1.87	85.0	3.34	136.0	5.35	48.0	1.88	
V16-16FLC60	1	14.2	47.6	1.87	103.0	4.05	160.0	6.29	50.0	1.96	
V16-20FLC60	1	14.2	54.0	2.12	103.0	4.05	160.0	6.29	50.0	1.96	
VS20-20FLC60	1 1/4	14.2	54.0	2.12	121.0	4.76	187.0	7.36	50.0	1.96	
VS20-24FLC60	1 1/4	14.2	63.5	2.50	121.0	4.76	187.0	7.36	51.0	2.00	
VS24-24FLC60	1 1/2	14.2	63.5	2.50	144.0	5.67	226.0	8.90	58.0	2.28	
VS24-32FLC60	1 1/2	14.2	79.4	3.12	146.0	5.75	228.0	8.98	61.0	2.40	
VS32-32FLC60	2	14.2	79.4	3.12	194.0	7.64	290.0	11.42	81.0	3.19	

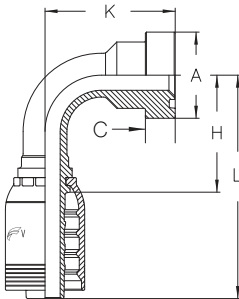
FLC67 CAT® Flange - 67° Elbow




Use with D-Ring

Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FLC67	3/4	14.2	41.3	1.62	77.0	3.03	128.0	5.03	50.0	1.96	
V12-16FLC67	3/4	14.2	47.6	1.87	79.0	3.11	130.0	5.11	53.0	2.08	
V16-16FLC67	1	14.2	47.6	1.87	97.0	3.81	153.0	6.02	56.0	2.20	
VS20-20FLC67	1 1/4	14.2	54.0	2.12	114.0	4.48	181.0	7.12	57.0	2.24	
VS24-24FLC60	1 1/2	14.2	63.5	2.50	137.0	5.39	219.0	8.62	66.0	2.60	
VS24-32FLC60	1 1/2	14.2	79.4	3.12	138.0	5.43	220.0	8.66	69.0	2.72	
VS32-32FLC60	2	14.2	79.4	3.12	184.0	7.24	280.0	11.02	92.0	3.62	

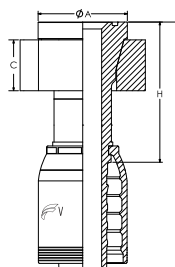
FLC90 CAT® Flange - 90° Elbow




Use with D-Ring

Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
V12-12FLC90-064	3/4	14.2	41.3	1.62	55.0	2.16	106.0	4.17	64.0	2.52	
V12-12FLC90-129	3/4	14.2	41.3	1.62	55.0	2.16	106.0	4.17	129.0	5.07	
V12-16FLC90-064	3/4	14.2	47.6	1.87	55.0	2.16	106.0	4.17	64.0	2.51	
V16-16FLC90-073	1	14.2	47.6	1.87	71.0	2.79	128.0	5.03	73.0	2.87	
V16-16FLC90-132	1	14.2	47.6	1.87	71.0	2.79	128.0	5.03	132.0	5.19	
V16-16FLC90-150	1	14.2	47.6	1.87	71.0	2.79	128.0	5.03	150.0	5.90	
V16-20FLC90-073	1	14.2	54.0	2.12	71.0	2.79	128.0	5.03	73.0	2.87	
VS20-20FLC90-077	1 1/4	14.2	54.0	2.12	87.0	3.42	154.0	6.06	77.0	3.03	
VS20-20FLC90-150	1 1/4	14.2	54.0	2.12	87.0	3.42	154.0	6.06	150.0	5.90	
VS20-24FLC90-078	1 1/4	14.2	63.5	2.50	87.0	3.42	154.0	6.06	78.0	3.07	
VS20-24FLC90-135	1 1/4	14.2	63.5	2.50	87.0	3.42	154.0	6.06	135.0	5.31	
VS24-24FLC90-090	1 1/2	14.2	63.5	2.50	105.0	4.13	188.0	7.40	90.0	3.54	
VS24-24FLC90-106	1 1/2	14.2	63.5	2.50	87.0	3.42	154.0	6.06	106.0	4.17	
VS24-32FLC90-094	1 1/2	14.2	79.4	3.13	105.0	4.13	188.0	7.40	94.0	3.70	
VS32-32FLC90-125	2	14.2	79.4	3.13	140.0	5.51	237.0	9.33	125.0	4.92	

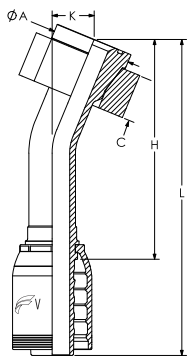
FLOKA O&K® Flange




Use OO O-Ring

Part Number		C		A		H		L	
	in	mm	mm	in	mm	in	mm	in	
V16-20FLOKA	1	39.0	57.4	2.26	116.5	4.59	173	6.81	
VS20-20FLOKA	1¼	39.0	57.4	2.26	118.5	4.67	185	7.28	
VS24-24FLOKA	1½	39.0	68.4	2.69	107.5	4.23	190	7.48	

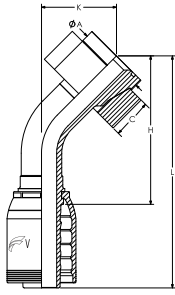
FLOKA22 O&K® Flange - 22° Elbow




Use OO O-Rings

Part Number		C		A		H		L		K	
	in	mm	mm	in	mm	in	mm	in	mm	in	
VS24-24FLOKA22-036	1½	39.0	68.4	2.69	188.5	7.42	271	10.67	36.0	1.42	

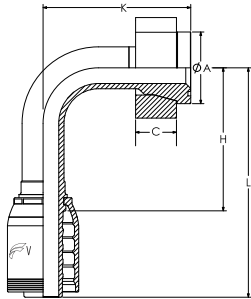
FLOKA45 O&K® Flange - 45° Elbow




Use OO O-Rings

Part Number		A		H		L		K	
	in	mm	in	mm	in	mm	in	mm	in
VS20-20FLOKA45-063	1¼	57.4	2.26	138	5.43	204.5	8.06	63.0	2.48
VS20-24FLOKA45-066	1¼	68.4	2.69	125	4.92	191.5	7.54	66.0	2.62
VS24-24FLOKA45-074	1½	68.4	2.69	147	5.77	229.0	9.02	74.0	2.91
VS24-32FLOKA45-080	1½	83.4	3.28	150	5.91	232.5	9.15	80.0	3.15

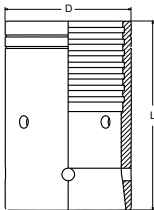
FLOKA90 O&K® Flange - 90° Elbow




Use OO O-Rings

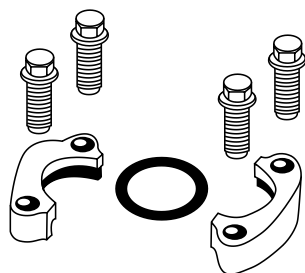
Part Number		A		H		L		K	
	in	mm	in	mm	in	mm	in	mm	in
VS16-20FLOKA90-100	1	57.4	2.26	97.5	3.84	154	6.06	100.0	4.80
VS20-20FLOKA90-122	1¼	57.4	2.26	122.5	4.82	189	7.44	122.0	4.80
VS24-24FLOKA90-141	1½	68.4	2.69	136.5	5.37	219	8.62	141.0	5.55
VS24-32FLOKA90-160	1½	83.4	3.28	126.5	4.98	209	8.22	160.0	6.29

OKBR FLOKA Crimp Strain Relief Sleeve



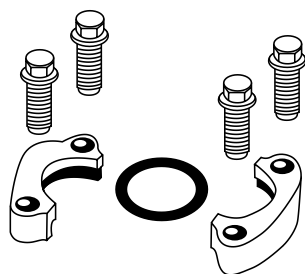
Part Number		D		L	
	in	mm	in	mm	in
20OKABR	1¼	60.0	2.36	90.0	3.54
24OKABR	1½	73.0	2.87	105.0	4.13
32OKABR	2	95.0	3.74	120.0	4.72

1901 Code 61 Split Flange Kit



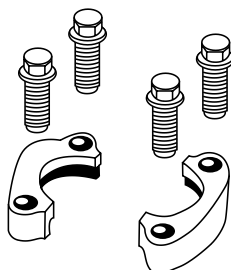
Part Number	Size
1901-08-K	1/2
1901-12-K	3/4
1901-16-K	1
1901-20-K	1 1/4
1901-24-K	1 1/2
1901-32-K	2
1901-40-K	2 1/2

1902 Code 62 Split Flange Kit



Part Number	Size
1902-08-K	1/2
1902-12-K	3/4
1902-16-K	1
1902-20-K	1 1/4
1902-24-K	1 1/2
1902-32-K	2

1903 CAT® Split Flange Kit



D-Ring not included

Part Number	Size
1903-12-K	3/4
1903-16-K	1
1903-20-K	1 1/4
1903-24-K	1 1/2
1903-32-K	2

O-Rings / D-Rings



Size	Standard 61/62 O-Ring	High Pressure 61/62 O-Ring	CAT D-Ring
1/2	OF-08	OO-08	OC-08
3/4	OF-12	OO-12	OC-12
1	OF-16	OO-16	OC-16
1 1/4	OF-20	OO-20	OC-20
1 1/2	OF-24	OO-24	OC-24
2	OF-32	OO-32	OC-32
2 1/2	OF-40	--	--