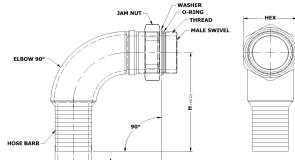


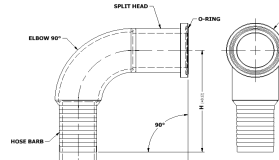
Part Number	Est. Weight (lbs)	Dimensions* (inches)					
		ID	L	A	H	HEX	Thread
HF12BA9012MSAE1A	0.67	0.58	2.35	0.77	3.34	1.50	1-1/16-12 UN
HF16BA9016MSAE1A	0.98	0.83	2.71	1.03	3.70	1.75	1-5/16-12 UN
HF20BA9020MSAE1A	1.51	1.09	3.23	1.29	4.07	2.00	1-5/8-12 UN
HF24BA9024MSAE1A	2.02	1.30	3.69	1.54	4.43	2.25	1-7/8-12 UN
HF32BA9032MSAE1A	3.58	1.80	4.60	2.02	5.27	3.00	2-1/2-12 UN
HF40BA9040MSAE1A	5.65	2.24	5.33	2.52	6.42	3.50	3-12 UN
HF48BA9048MSAE1A	8.36	2.72	6.30	3.03	7.73	4.00	3-1/2-12 UN
HF64BA9064MSAE1A	14.29	3.61	7.81	4.04	9.83	5.00	4-1/2-12 UN

*Dimensions are typical for Steel, Stainless Steel, and all O-ring material choices.



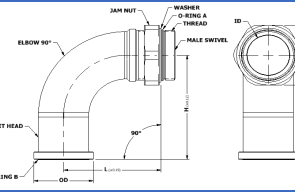
Part Number	Est. Weight (lbs)	Dimensions* (inches)			
		ID	OD	L	A
HF12BA9012FS31A	0.57	0.58	1.50	3.11	0.77
HF16BA9016FS31A	0.91	0.83	1.75	3.48	1.03
HF20BA9020FS31A	1.34	1.09	2.00	4.05	1.29
HF24BA9024FS31A	1.87	1.30	2.38	4.48	1.54
HF32BA9032FS31A	2.80	1.80	2.81	5.23	2.02
HF40BA9040FS31A	4.94	2.24	3.31	6.00	2.52
HF48BA9048FS31A	7.85	2.72	4.00	6.79	3.03
HF64BA9064FS31A	13.17	3.61	5.00	8.38	4.04

*Dimensions are typical for Steel, Stainless Steel, and all O-ring material choices.



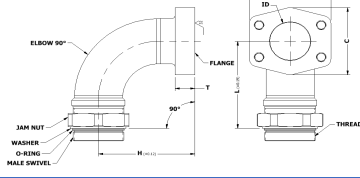
Part Number	Est. Weight (lbs)	Dimensions* (inches)					
		ID	L	OD	HEX	Thread	
HF12FS9012MSAE1A	0.85	0.75	2.35	3.11	1.50	1.50	1-1/16-12 UN
HF16FS9016MSAE1A	1.24	1.00	2.71	3.48	1.75	1.75	1-5/16-12 UN
HF20FS9020MSAE1A	1.86	1.25	3.23	4.05	2.00	2.00	1-5/8-12 UN
HF24FS9024MSAE1A	2.50	1.50	3.72	4.48	2.37	2.25	1-7/8-12 UN
HF32FS9032MSAE1A	4.18	2.00	4.60	5.23	2.81	3.00	2-1/2-12 UN
HF40FS9040MSAE1A	6.38	2.50	5.33	6.00	3.31	3.50	3-12 UN
HF48FS9048MSAE1A	9.49	3.00	6.29	6.77	4.00	4.00	3-1/2-12 UN
HF64FS9064MSAE1A	14.52	4.00	7.80	8.38	5.00	5.00	4-1/2-12 UN

*Dimensions are typical for Steel, Stainless Steel, and all O-ring material choices.



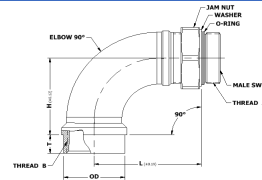
Part Number	Est. Weight (lbs)	Dimensions* (inches)								
		ID	L	H	T	HEX	Thread	B	C	Flange
HF12F9012MSAE1A	1.35	0.79	2.35	2.56	0.71	1.50	1-1/16-12 UN	2.56	1.97	3/4" C61
HF16F9016MSAE1A	1.74	0.98	2.71	3.00	0.71	1.75	1-5/16-12 UN	2.76	2.17	1" C61
HF20F9020MSAE1A	2.77	1.25	3.23	3.50	0.83	2.00	1-5/8-12 UN	3.11	2.68	1-1/4" C61
HF24F9024MSAE1A	3.96	1.50	3.69	3.97	0.98	2.25	1-7/8-12 UN	3.66	2.07	1-1/2" C61
HF32F9032MSAE1A	5.82	2.00	4.60	4.76	0.98	3.00	2-1/2-12 UN	4.01	3.54	2" C61
HF40F9040MSAE1A	8.50	2.48	5.33	5.69	0.98	3.50	3-12 UN	4.49	4.13	2-1/2" C61
HF48F9048MSAE1A	12.63	2.87	6.30	6.48	1.06	4.00	3-1/2-12 UN	5.28	4.88	3" C61
HF64F9064MSAE1A	18.63	3.90	7.81	7.91	1.06	5.00	4-1/2-12 UN	6.38	5.75	4" C61

*Dimensions are typical for Steel, Stainless Steel, and all O-ring material choices.



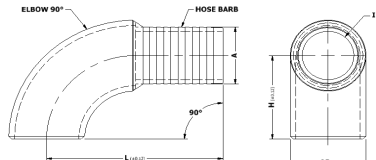
Part Number	Est. Weight (lbs)	Dimensions* (inches)							
		ID	L	OD	T	HEX	Thread A	Thread B	H
HF12FP9012MSAE1A	0.76	0.75	2.35	1.24	0.62	1.50	1-1/16-12 UN	3/4 NPT	1.64
HF16FP9016MSAE1A	1.07	1.00	2.71	1.49	0.62	1.75	1-5/16-12 UN	1 NPT	2.01
HF20FP9020MSAE1A	1.68	1.25	3.26	1.86	0.68	2.00	1-5/8-12 UN	1-1/4 NPT	2.46
HF24FP9024MSAE1A	2.18	1.50	3.69	2.11	0.68	2.25	1-7/8-12 UN	1-1/2 NPT	2.81
HF32FP9032MSAE1A	3.83	2.00	4.60	2.61	0.75	3.00	2-1/2-12 UN	2 NPT	3.55
HF40FP9040MSAE1A	6.38	2.50	5.33	3.24	0.87	3.50	3-12 UN	2-1/2 NPT	4.47
HF48FP9048MSAE1A	9.46	3.00	6.30	3.99	0.87	4.00	3-1/2-12 UN	3 NPT	5.38
HF64FP9064MSAE1A	14.86	4.00	7.81	4.99	0.87	5.00	4-1/2-12 UN	4 NPT	6.90

*Dimensions are typical for Steel, Stainless Steel, and all O-ring material choices.



Part Number	Est. Weight (lbs)	Dimensions* (inches)			
		ID	OD	L	A
HF12BA9012BW10	0.28	0.58	1.06	3.34	0.77
HF16BA9016BW10	0.49	0.83	1.32	3.70	1.03
HF20BA9020BW10	0.77	1.09	1.67	4.07	1.29
HF24BA9024BW10	1.09	1.30	1.91	4.43	1.54
HF32BA9032BW10	1.80	1.80	2.38	5.27	2.02
HF40BA9040BW10	3.48	2.24	2.88	6.42	2.52
HF48BA9048BW10	5.57	2.72	3.51	7.73	3.03
HF64BA9064BW10	10.66	3.61	4.50	9.83	4.04

*Dimensions are typical for Steel, Stainless Steel, and all O-ring material choices.



Part Number	Est. Weight (lbs)	Dimensions* (inches)				
		ID	L	H	Thread	
HF12MSAE9012MSAE1A	0.95	0.75	2.35	2.35	1.50	1-1/16-12 UN
HF16MSAE9016MSAE1A	1.30	1.00	2.71	2.71	1.75	1-5/16-12 UN
HF20MSAE9020MSAE1A	2.02	1.25	3.23	3.23	2.00	1-5/8-12 UN
HF24MSAE9024MSAE1A	2.65	1.50	3.72	3.72	2.25	1-7/8-12 UN
HF32MSAE9032MSAE1A	4.95	2.00	4.60	4.60	3.00	2-1/2-12 UN
HF40MSAE9040MSAE1A	7.08	2.50	5.33	5.33	3.50	3-12 UN
HF48MSAE9048MSAE1A	11.79	3.00	6.29	6.29	4.00	3-1/2-12 UN
HF64MSAE9064MSAE1A	15.61	4.00	7.80	7.80	5.00	4-1/2-12 UN

*Dimensions are typical for Steel, Stainless Steel, and all O-ring material choices.

