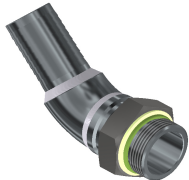
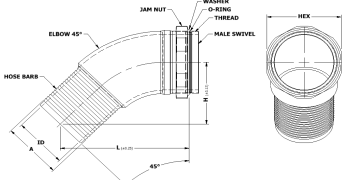


Part Number	Est. Weight (lbs)	Dimensions* (inches)					
		ID	L	A	H	HEX	Thread
HF12BA4512MSAE1A	0.58	0.58	3.50	0.77	1.89	1.50	1-1/16-12 UN
HF16BA4516MSAE1A	0.80	0.83	3.76	1.03	1.99	1.75	1-5/16-12 UN
HF20BA4520MSAE1A	1.21	1.09	4.16	1.29	2.09	2.00	1-5/8-12 UN
HF24BA4524MSAE1A	1.61	1.30	4.52	1.54	2.20	2.25	1-7/8-12 UN
HF32BA4532MSAE1A	2.85	1.80	5.27	2.02	2.49	3.00	2-1/2-12 UN
HF40BA4540MSAE1A	4.23	2.24	6.09	2.52	3.00	3.50	3-12 UN
HF48BA4548MSAE1A	6.08	2.72	7.19	3.03	3.60	4.00	3-1/2-12 UN
HF64BA4564MSAE1A	10.00	3.61	8.88	4.04	4.46	5.00	4-1/2-12 UN

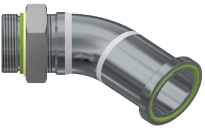
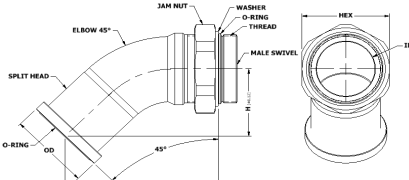
Dimensions are typical for Steel, Stainless Steel, and all spring material choices.

Part Number	Est. Weight (lbs)	Dimensions* (inches)				
		ID	OD	L	A	H
HF12BA4512FS31A	0.48	0.58	1.50	4.29	0.77	1.85
HF16BA4516FS31A	0.73	0.83	1.75	4.54	1.03	1.95
HF20BA4520FS31A	1.04	1.09	2.00	5.00	1.29	2.05
HF24BA4524FS31A	1.45	1.30	2.38	5.33	1.54	2.16
HF32BA4532FS31A	2.07	1.80	2.81	5.92	2.02	2.44
HF40BA4540FS31A	3.52	2.24	3.31	6.77	2.52	3.00
HF48BA4548FS31A	5.57	2.72	4.00	7.70	3.03	3.55
HF64BA4564FS31A	8.88	3.61	5.00	9.27	4.04	4.41



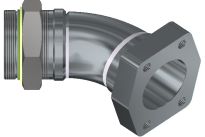
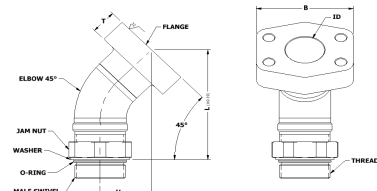

Dimensions are typical for Steel, Stainless Steel, and all spring material choices.

Part Number	Est. Weight (lbs)	Dimensions* (inches)					
		ID	L	H	OD	HEX	Thread
HF12FS34512MSAE1A	0.77	0.75	3.32	1.71	1.50	1.50	1-1/16-12 UN
HF16FS34516MSAE1A	1.06	1.00	3.58	1.82	1.75	1.75	1-5/16-12 UN
HF20FS34520MSAE1A	1.56	1.25	4.14	2.07	2.00	2.00	1-5/8-12 UN
HF24FS34524MSAE1A	2.09	1.50	4.54	2.23	2.37	2.25	1-7/8-12 UN
HF32FS34532MSAE1A	3.45	2.00	5.25	2.44	2.81	3.00	2-1/2-12 UN
HF40FS34540MSAE1A	4.96	2.50	5.78	2.69	3.31	3.50	3-12 UN
HF48FS34548MSAE1A	7.22	3.00	6.51	2.94	4.00	4.00	3-1/2-12 UN
HF64FS34564MSAE1A	10.23	4.00	7.63	3.42	5.00	5.00	4-1/2-12 UN


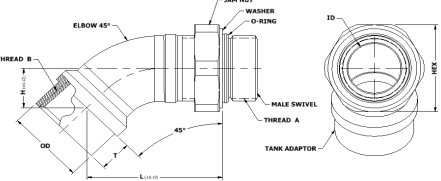
Dimensions are typical for Steel, Stainless Steel, and all spring material choices.

Part Number	Est. Weight (lbs)	Dimensions* (inches)							
		ID	L	B	T	HEX	Thread	H	Flange
HF12F34512MSAE1A	1.26	0.79	2.97	2.56	0.71	1.50	1-1/16-12 UN	1.29	3/4" C.61
HF16F34516MSAE1A	1.57	0.98	3.28	2.76	0.71	1.75	1-5/16-12 UN	1.46	1" C.61
HF20F34520MSAE1A	2.47	1.25	3.58	3.11	0.83	2.00	1-5/8-12 UN	1.65	1-1/4" C.61
HF24F34524MSAE1A	3.54	1.50	4.21	3.66	0.98	2.25	1-7/8-12 UN	1.84	1-1/2" C.61
HF32F34532MSAE1A	5.08	2.00	4.93	4.01	0.98	3.00	2-1/2-12 UN	2.08	2" C.61
HF40F34540MSAE1A	7.07	2.48	5.59	4.49	0.98	3.50	3-12 UN	2.44	2-1/2" C.61
HF48F34548MSAE1A	10.35	2.87	6.32	5.28	1.06	4.00	3-1/2-12 UN	2.67	3" C.61
HF64F34564MSAE1A	14.34	3.90	7.33	6.38	1.06	5.00	4-1/2-12 UN	3.05	4" C.61

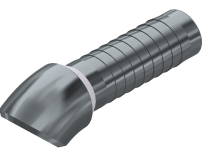
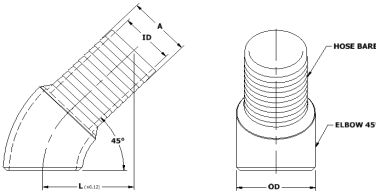
Dimensions are typical for Steel, Stainless Steel, and all spring material choices.

Part Number	Est. Weight (lbs)	Dimensions* (inches)							
		ID	L	OD	T	HEX	Thread A	Thread B	H
HF12FNPT4512MSAE1A	0.67	0.75	2.49	1.24	0.62	1.50	1-1/16-12 UN	3/4 NPT	0.69
HF16FNPT4516MSAE1A	0.89	1.00	2.56	1.49	0.62	1.75	1-5/16-12 UN	1 NPT	0.79
HF20FNPT4520MSAE1A	1.39	1.25	3.02	1.86	0.68	2.00	1-5/8-12 UN	1-1/4 NPT	0.95
HF24FNPT4524MSAE1A	1.77	1.50	3.37	2.11	0.68	2.25	1-7/8-12 UN	1-1/2 NPT	1.06
HF32FNPT4532MSAE1A	3.10	2.00	4.06	2.61	0.75	3.00	2-1/2-12 UN	2 NPT	1.27
HF40FNPT4540MSAE1A	4.95	2.50	4.71	3.24	0.87	3.50	3-12 UN	2-1/2 NPT	1.62
HF48FNPT4548MSAE1A	7.17	3.00	5.53	3.99	0.87	4.00	3-1/2-12 UN	3 NPT	1.94
HF64FNPT4564MSAE1A	10.56	4.00	6.60	4.99	0.87	5.00	4-1/2-12 UN	4 NPT	2.38

Dimensions are typical for Steel, Stainless Steel, and all spring material choices.

Part Number	Est. Weight (lbs)	Dimensions* (inches)			
		ID	OD	L	A
HF12BA4512BW10	0.19	0.58	1.06	1.89	0.77
HF16BA4516BW10	0.31	0.83	1.32	1.99	1.03
HF20BA4520BW10	0.48	1.09	1.67	2.09	1.29
HF24BA4524BW10	0.68	1.30	1.91	2.20	1.54
HF32BA4532BW10	1.07	1.80	2.38	2.48	2.02
HF40BA4540BW10	2.06	2.24	2.88	3.00	2.52
HF48BA4548BW10	3.29	2.72	3.51	3.59	3.03
HF64BA4564BW10	6.37	3.61	4.50	4.46	4.04

Dimensions are typical for Steel, Stainless Steel, and all spring material choices.