

HF/HFK Series

The HF series is a balanced ported valve designed for refrigeration, air conditioning and heat pump applications.

Features

- Stainless steel replaceable power element eliminates corrosion and prevents valve failure
- Two body sizes provide capacities from 1/4 to 20 tons



NOTE: If the HF body is stamped HFK, then the cage is replaceable.

Standard Body – HF & HFK

- The HF is offered several ways:
 - *Pre-packaged HFK service kits* – Include a mix of bodies and power elements with a complete set of cages to serve the most applications with a minimum of parts
 - *Individual components* – Bodies, cages, & power elements may be ordered separately
 - *Finished valves* – Assembled valves ready for immediate installation
- Bi-Flow capability up to 5-1/2 tons R-22 allows one valve to control the superheat in both cooling and heating modes

Options

- ODF or SAE connections
- Straight-through or angle flow configurations
- Removable inlet strainer (ODF only)
- Internal or external equalizer

Extended Body – HF

- Capacity range from 8 to 20 tons (R-22)
- Finished valve only

Specifications

- Maximum working pressure: 450 psig
- UR/CUR file number: SA 5312

Nomenclature example: HFESC 2 HC 5 FT 3/8 x 1/2 ODF S/T

HF	N	E	S	C	B	2	H	C	5 FT	3/8 x 1/2	ODF	S/T
Valve Series Balanced Port Design	Superheat Adjustment N = Non-Adjustable Omit for Adjustable	Equalizer E=External (Omit for Internal)	Connection Type S = Solder (Omit for SAE Flare)	Removable Inlet Strainer (optional) C = Inlet Strainer (ODF only)	Bleed Hole (optional) (Omit for no bleed hole)	Capacity Nominal Rating in Tons (See nominal capacity table below)	Refrigerant Code +F = R-12 • H = R-22 +M = R-134a • N = R-407C * P = R-507 * R = R-502 * S = R-404A *B = R-448A/ R-449A +D = R-450A/ R-513A	Charge Code C = medium temp CA = heat pump W(MOP) = press. limiting Z = low temp AA = wide range	Capillary Tube Length 5 FT (std)	Inlet x Outlet Connection Sizes 1/4 x 3/8 3/8 x 1/2	Connection Type SAE = flare ODF = solder	Configuration ANG = 90° angle S/T = straight-thru

+ = R-12, R-134a R-450A and R-513A are interchangeable refrigerant charges
 * = R-507, R-502, R-404A, R-448A and R-449A are interchangeable refrigerant charges
 • = R-22 and R-407C are interchangeable refrigerant charges

HF Series-Nominal* Capacity Tables in Tons (kW)

Standard Body HF

R-12	R-134a	R-450A/ R-513A	R-22/ R-407C	R-502/ R-404A/ R-507	R-448A/ R-449
1/8 (0.4)	1/4 (0.9)	1/4 (0.7)	1/4 (0.9)	1/8 (0.4)	1/5 (0.7)
1/4 (0.9)	1/2 (1.8)	1/4 (0.9)	1/2 (1.8)	1/4 (0.9)	1/4 (0.9)
1/2 (1.8)	3/4 (2.7)	1/2 (1.8)	1 (3.5)	1/2 (1.8)	1/2 (1.8)
1 (3.5)	1 (3.5)	3/4 (2.7)	1 1/2 (5.3)	1 (3.5)	3/4 (2.7)
1 1/4 (4.4)	1 1/2 (5.3)	1 (3.5)	2 (7.0)	1 1/4 (4.4)	1 (3.5)
1 1/2 (5.3)	1 3/4 (6.2)	1 1/2 (5.3)	2 1/2 (8.8)	1 1/2 (5.3)	1 1/2 (5.3)
2 (7.0)	2 1/2 (8.8)	2 (7.0)	3 (11.0)	2 (7.0)	2 (7.0)
3 1/2 (12.0)	4 (14.0)	3 1/2 (12.0)	5 1/2 (20.0)	3 1/2 (12.0)	3 1/2 (12.0)

Extended Body HF

R-12	R-134a	R-450A/ R-513A	R-22/ R-407C	R-502/ R-404A/ R-507	**R-448A/ R-449
5 (17.0)	6(21.0)	4 1/2 (16.0)	8 (28.0)	5 (17.0)	8 1/2(30.0)
6 (21.0)	7 1/2 (27.0)	6 (21.0)	10 (35.0)	7 (27.0)	10 1/2(37.0)
9 (32.0)	11 (39.0)	9 (32.0)	15 (53.0)	10 (35.0)	16 (56.0)
12 (42.0)	14 (50.0)	14 (50.0)	20 (70.0)	13 (46.0)	20 (70.0)

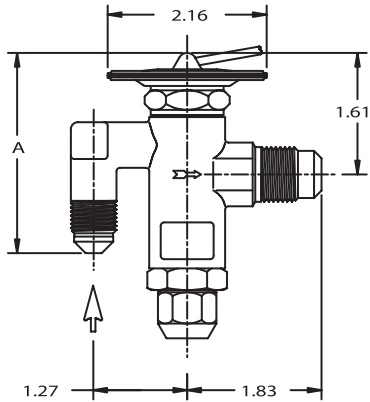
All capacities shown are at 100°F condensing, 40°F evaporator temperature.
 *See Extended Capacity Tables for ratings at a wide range of conditions per ARI standard 750.
 **Use SZ charge for all R-448A/R-449A applications. Recommend oversizing the valve capacity by 50% for low temperature applications.

HF/HFK Series

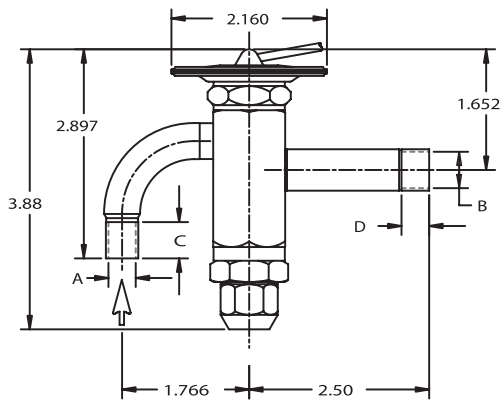
Dimensional Data

Standard Body HF

¼ thru 5½ tons R-22



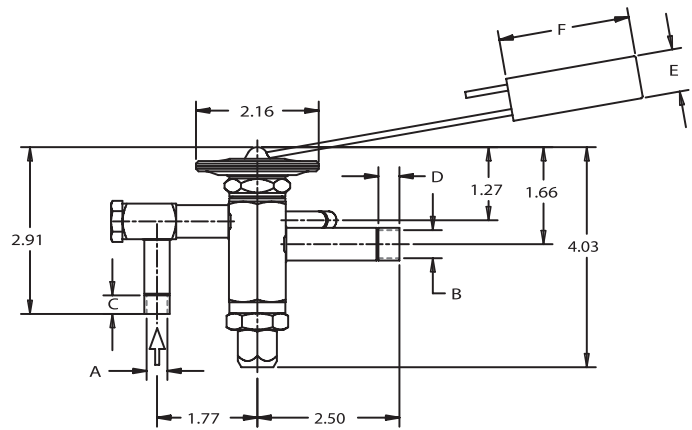
SAE



ODF

HF SAE

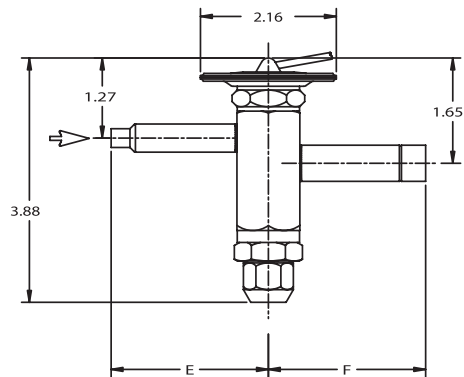
Connection Size		A	B	C
Inlet	Outlet			
1/4 SAE	1/2 SAE	3.11	1.27	1.83
3/8 SAE	1/2 SAE	2.72		



ODF
w/optional strainer
at inlet

Extended Body HF

8, 10, 15 & 20 ton R-22



ODF

HF ODF

Connection Size		A± .002	B± .002	C MIN	D MIN	E	F
Inlet	Outlet						
1/4 ODF	3/8 ODF	0.25	0.38	0.31	0.31	2.50	2.50
3/8 ODF	1/2 ODF	0.25	0.50	0.31	0.37		
3/8 ODF	1/2 ODF	0.38	0.50	0.37	0.37		

HF/HFK Series

Ordering Information (continued)

HFESC Series – Externally Equalized (continued)						
Refrigerant	Series	Tons*	Charge	Connections	Cap Tube	PCN
R-12	HFESC	1/2	FC	3/8 X 1/2 ODF ANG	5 FT	057397
		1	FC	3/8 X 1/2 ODF ANG	5 FT	057398
		1-1/2	FC	3/8 X 1/2 ODF ANG	5 FT	057399
R-134a R-12 R-450A R-513A	HFESC	1/4	MC	3/8 X 1/2 ODF ANG	5 FT	057572
		1/2	MC	3/8 X 1/2 ODF ANG	5 FT	058069
		1	MC	3/8 X 1/2 ODF ANG	5 FT	057570
		1-1/2	MC	3/8 X 1/2 ODF ANG	5 FT	057568
R-22 R-407C	HFESC	1/4	HC	3/8 X 1/2 ODF ANG	5 FT	057409
			HZ	3/8 X 1/2 ODF ANG	5 FT	057428
		1/2	HC	3/8 X 1/2 ODF ANG	5 FT	057291
			HZ	3/8 X 1/2 ODF ANG	5 FT	057429
		1	HC	3/8 X 1/2 ODF ANG	5 FT	057410
			HZ	3/8 X 1/2 ODF ANG	5 FT	057430
		1-1/2	HC	3/8 X 1/2 ODF ANG	5 FT	057292
			HZ	3/8 X 1/2 ODF ANG	5 FT	057321
		2	HZ	3/8 X 1/2 ODF ANG	5 FT	057433
			HC	3/8 X 1/2 ODF ANG	5 FT	057294
		2-1/2	HC	3/8 X 1/2 ODF ANG	5 FT	057411
			HZ	3/8 X 1/2 ODF ANG	5 FT	057434
		3	HC	3/8 X 1/2 ODF ANG	5 FT	057412
			HZ	3/8 X 1/2 ODF ANG	5 FT	057748
		5-1/2	HC	3/8 X 1/2 ODF ANG	5 FT	057781
			HC	3/8 X 1/2 ODF ANG	5 FT	058609
		1/4	SC	1/4 x 1/2 ODF ANG	30 IN	066539
			SW45	1/4 x 1/2 ODF ANG	30 IN	066540
			SZ	1/4 x 1/2 ODF ANG	30 IN	066542
		1/2	SC	1/4 x 1/2 ODF ANG	30 IN	066543
			SW45	1/4 x 1/2 ODF ANG	30 IN	066544
			SZ	1/4 x 1/2 ODF ANG	30 IN	066545
		1	SC	3/8 x 1/2 ODF ANG	5 FT	058135
			SW45	3/8 x 1/2 ODF ANG	5 FT	058157
			SZ	3/8 x 1/2 ODF ANG	5 FT	058118
		1-1/2	SC	3/8 x 1/2 ODF ANG	5 FT	058119
			SW45	3/8 x 1/2 ODF ANG	5 FT	058136
			SZ	3/8 x 1/2 ODF ANG	5 FT	058121
		2	SC	3/8 x 1/2 ODF ANG	5 FT	058122
			SW45	3/8 x 1/2 ODF ANG	5 FT	058212
			SZ	3/8 x 1/2 ODF ANG	5 FT	058214
		3-1/2	SC	3/8 x 1/2 ODF ANG	5 FT	058071
			SW45	3/8 x 1/2 ODF ANG	5 FT	066547
			SZ	3/8 x 1/2 ODF ANG	5 FT	066548
		5	SC	3/8 x 1/2 ODF ANG	5 FT	058220
			SW45	3/8 x 1/2 ODF ANG	5 FT	058221
SZ	3/8 x 1/2 ODF ANG		5 FT	066549		
7	SC	5/8 x 7/8 ODF ANG	5 FT	065458		
	SW45	5/8 x 7/8 ODF ANG	5 FT	066550		
	SZ	5/8 x 7/8 ODF ANG	5 FT	064058		
10	SC	5/8 x 7/8 ODF ANG	5 FT	064219		
	SW45	5/8 x 7/8 ODF ANG	5 FT	066551		
	SZ	5/8 x 7/8 ODF ANG	5 FT	064059		
R-404A R-507 R-502 **R-448A **R-449A	HFESC	1/4	RC	3/8 X 1/2 ODF ANG	5 FT	057436
			RZ	3/8 X 1/2 ODF ANG	5 FT	057454
		1/2	RC	3/8 X 1/2 ODF ANG	5 FT	057437
			RZ	3/8 X 1/2 ODF ANG	5 FT	057455
		1	RC	3/8 X 1/2 ODF ANG	5 FT	057438
			RW 45	3/8 X 1/2 ODF ANG	5 FT	057446
			RZ	3/8 X 1/2 ODF ANG	5 FT	057456
		1-1/2	RC	3/8 X 1/2 ODF ANG	5 FT	057439
			RW 45	3/8 X 1/2 ODF ANG	5 FT	057448
		2	RZ	3/8 X 1/2 ODF ANG	5 FT	057322
			RC	3/8 X 1/2 ODF ANG	5 FT	057440
		2-1/2	RZ	3/8 X 1/2 ODF ANG	5 FT	057457
			RC	3/8 X 1/2 ODF ANG	5 FT	057441
		5	RZ	3/8 X 1/2 ODF ANG	5 FT	057458
			RC	3/8 X 1/2 ODF ANG	5 FT	058595
			RZ	3/8 X 1/2 ODF ANG	5 FT	059654

**Use SZ charge for all R-448A/R-449A applications. Recommend oversizing the valve capacity by 50% for low temperature applications.

Thermal Expansion Valves
TXV Extended Capacity Tables
EX Valves and Controls
EX Extended Capacity Tables
Solenoid Valves and Coils
Solenoid Capacity Tables
Industrial Solenoid Valves
Shut-Off Valves
System Protectors
System Protectors Capacity Tables
Oil Controls
Temperature Pressure Controls