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

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

Extended Body – HF

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

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

Options

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

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)	1½ (5.3)	2 1/2 (8.8)	1 1/2 (5.3)	1 ½ (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)	3½ (12.0)	5 1/2 (20.0)	3 1/2 (12.0)	3½ (12.0)

Extended Body HF

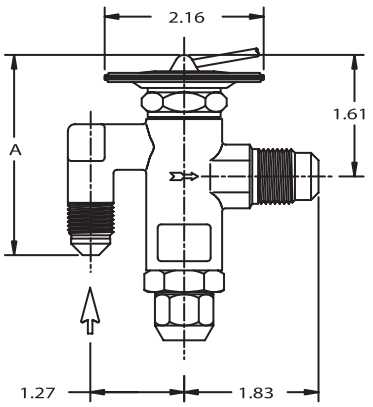
R-12	R-134a	R-450A/ R-513A	R-22/ R-407C	R-502/ R-404A/ R-507	**R-448A/ R-449
5 (17.0)	6(21.0)	4 ½ (16.0)	8 (28.0)	5 (17.0)	8 ½(30.0)
6 (21.0)	7 ½ (27.0)	6 (21.0)	10 (35.0)	7 (27.0)	10 ½(37.0)
9 (32.0)	11 (39.0)	9 (32.0)	15 (53.0)	10 (35.0)	16 (56.0)
12 (42.0)	14 (50.0)	14 (50.0)	20 (70.0)	13 (46.0)	20 (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.

Dimensional Data

Standard Body HF

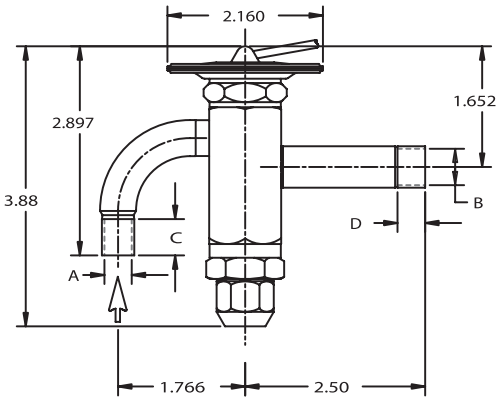
¼ thru 5½ tons R-22



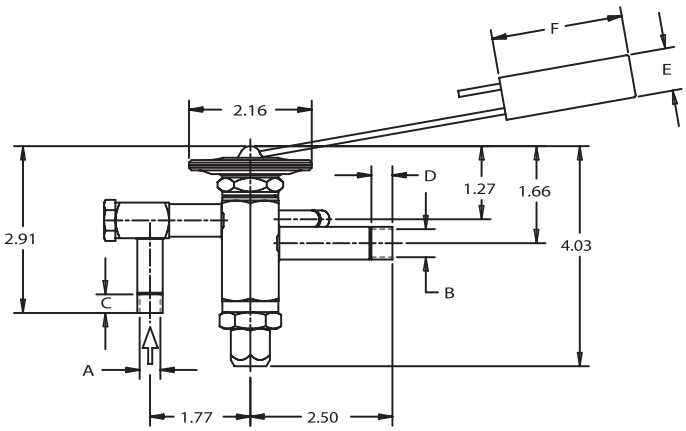
SAE

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		



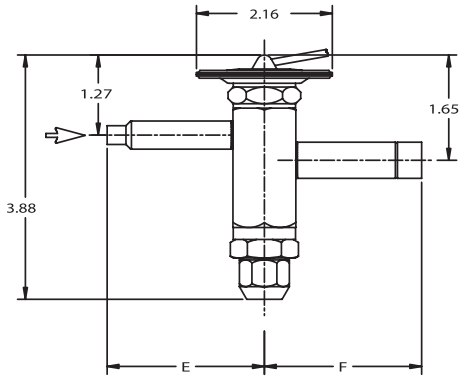
ODF



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		