

AFA(E) Series

Thermal Expansion Valves

The AFA series is designed for air conditioning and commercial refrigeration applications requiring angle configuration SAE connections. The AFA is ideal for those applications requiring compact size combined with stable and accurate control over wide load and evaporator temperature ranges.



Features

- Stainless steel power element eliminates corrosion and prevents valve failure
- External superheat adjustment
- Replaceable inlet strainer
- SAE connections only
- Wrench flats on inlet and outlet

Options

- External or internal equalizer

Specifications

- Maximum working pressure: 700 psig
- UR/CUR file number: SA 5312

Nomenclature example: AFAE 1/2 HC 5 FT 3/8 x 1/2 SAE ANG

AF	A	E	1/2	H	C	5 FT	3/8 x 1/2	SAE	ANG
Valve Series Hermetic Design, Flare Connections	Superheat Adjustment A = Adjustable	Equalizer E=External (Omit for Internal)	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 Z = R-410A	Charge Code C = medium temp CA = heat pump W(MOP) = press. limiting Z = low temp AA = wide range	Capillary Tube Length 30 IN & 5 FT (std)	Inlet x Outlet Connection Sizes 1/4 x 3/8 3/8 x 1/2	Connection Type SAE=flare	Configuration ANG = 90° angle

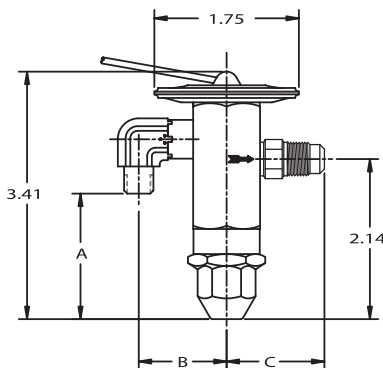
+ = R-12 and R-134a are interchangeable refrigerant charges, * = R-507, R-502 and R-404A are interchangeable refrigerant charges, • = R-22 and R-407C are interchangeable refrigerant charges

AFA Series – Nominal* Capacity Table in Tons (kW)

R-12	R-134a	R-22	R-502	R-507/R-404A	R-407C
-	1/8 (0.4)	1/5 (0.7)	-	1/8 (0.4)	1/5 (0.7)
1/8 (0.4)	1/4 (0.9)	1/4 (0.9)	1/8 (0.4)	1/4 (0.9)	1/4 (0.9)
1/4 (0.9)	1/2 (1.8)	1/2 (1.8)	1/4 (0.9)	1/2 (1.8)	1/2 (1.8)
1/2 (1.8)	3/4 (2.7)	1 (3.5)	1/2 (1.8)	3/4 (2.7)	1 (3.5)
1 (3.5)	1 (3.5)	1½ (5.3)	1 (3.5)	1 (3.5)	1¼ (4.4)
-	1½ (5.3)	2 (7.0)	-	1¼ (4.4)	2 (7.0)
1½ (5.3)	2 (7.0)	2½ (9.0)	1½ (5.3)	2 (7.0)	2½ (9.0)
2 (7.0)	2½ (9.0)	3 (11.0)	2 (7.0)	2¼ (8.0)	3¼ (11.5)
-	3 (11.0)	-	-	2½ (9.0)	4 (14.0)
3 (11.0)	4 (14.0)	5 (17.0)	3 (11.0)	3½ (12.0)	5¼ (19.0)

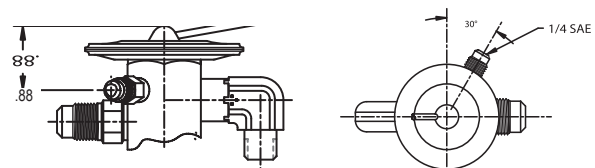
All capacities shown are at 100°F condensing, 40°F evaporator temperature.
*See Extended Capacity Tables for ratings at a wide range of conditions per ARI standard 750.

Dimensional Data



Remote Bulb Tubing Length 30" or 5' Standard

AFA(E) Connections (in)				
Inlet	Outlet	A	B	C
1/4 SAE elbow	3/8 SAE	1.56	1.31	1.64
	1/2 SAE			1.35
	5/8 SAE			1.98
	3/8 – 1/2 SAE			1.73
3/8 SAE elbow	3/8 SAE	1.47	1.31	1.34
	1/2 SAE			1.36
	5/8 SAE			1.98
	3/8 – 1/2 SAE			1.73



Ordering Information

Internally Equalized

Refrigerant	Series	Tons*	Charge	Connections	Cap Tube	PCN		
R-12	AFA	1/4	FC	1/4 X 3/8-1/2 SAE	5 FT	047753		
			FC	1/4 X 3/8-1/2 SAE	30 IN	057047		
			FC	3/8 X 3/8-1/2 SAE	5 FT	054258		
		1/2	FC	1/4 X 3/8-1/2 SAE	5 FT	047752		
			FC	1/2 X 3/8-1/2 SAE	30 IN	057028		
			FC	3/8 X 3/8-1/2 SAE	5 FT	054226		
		1	FC	3/8 X 3/8-1/2 SAE	30 IN	057027		
			FC	3/8 X 3/8-1/2 SAE	5 FT	047758		
		FC	3/8 X 3/8-1/2 SAE	30 IN	057029			
R-134a R-12	AFA	1/4	MC	1/4 X 3/8-1/2 SAE	5 FT	058536		
			MC	1/4 X 3/8-1/2 SAE	30 IN	057607		
		1/2	MC	1/4 X 3/8-1/2 SAE	30 IN	057606		
			MC	3/8 X 3/8-1/2 SAE	30 IN	059625		
		1	MC	1/4 X 3/8-1/2 SAE	30 IN	057605		
R-22 R-407C	AFA	1/4	HC	1/4 X 3/8-1/2 SAE	30 IN	057261		
			HZ	1/4 X 3/8-1/2 SAE	30 IN	059575		
		1/2	HC	1/4 X 3/8-1/2 SAE	30 IN	057260		
			HC	3/8 X 3/8-1/2 SAE	5 FT	054229		
		1	HC	3/8 X 3/8-1/2 SAE	5 FT	054231		
			HZ	3/8 X 3/8-1/2 SAE	5 FT	057555		
		1 1/2	HC	3/8 X 3/8-1/2 SAE	5 FT	054232		
		2	HC	3/8 X 3/8-1/2 SAE	5 FT	054233		
		3	HC	3/8 X 3/8-1/2 SAE	5 FT	054234		
		R-404A R-507 R-502	AFA	1/4	SC	1/4 X 3/8-1/2 SAE	5 FT	064072
					SW45	1/4 X 3/8-1/2 SAE	30 IN	066498
SZ	1/4 X 3/8-1/2 SAE				30 IN	066438		
1/2	SC			1/4 X 3/8-1/2 SAE	30 IN	066424		
	SW45			1/4 X 3/8-1/2 SAE	30 IN	066499		
	SZ			1/4 X 3/8-1/2 SAE	30 IN	066439		
3/4	SC			3/8 X 3/8-1/2 SAE	30 IN	066425		
	SW45			3/8 X 3/8-1/2 SAE	30 IN	066500		
	SZ			3/8 X 3/8-1/2 SAE	30 IN	066440		
1	SC			3/8 X 3/8-1/2 SAE	30 IN	066426		
	SW45			3/8 X 3/8-1/2 SAE	30 IN	066501		
	SZ	3/8 X 3/8-1/2 SAE	30 IN	066441				

* For interchangeable refrigerant charges R-134a/R-12, R-404A/R-507/R-502, and R-22/R-407C, the tons of capacity shown in the table are for the first (primary) refrigerant listed. Consult the Nominal Capacity Table for determining the tons of capacity for the secondary refrigerants listed.

Example: A 1/4 ton R-12 valve is required. What R-134a ton valve should be selected? **Solution:** From the Nominal Capacity Table, a 1/2 ton R-134a valve is equivalent to a 1/4 ton R-12 valve.

Ordering Information

Externally Equalized

Refrigerant	Series	Tons*	Charge	Connections	Cap Tube	PCN		
R-134a R-12	AFAE	1/4	MC	3/8 X 3/8-1/2 SAE	30 IN	063898		
		1/2	MC	1/4 X 3/8-1/2 SAE	30 IN	057853		
			MC	3/8 X 3/8-1/2 SAE	30 IN	061904		
		1	MC	3/8 X 3/8-1/2 SAE	30 IN	057613		
		1½	MC	3/8 X 3/8-1/2 SAE	30 IN	060865		
		2	MC	3/8 X 3/8-1/2 SAE	30 IN	061906		
		3	MC	3/8 X 3/8-1/2 SAE	30 IN	061908		
R-22 R-407C	AFAE	1/2	HC	1/4 X 3/8-1/2 SAE	5 FT	054243		
		1	HC	3/8 X 3/8-1/2 SAE	5 FT	054246		
			HC	1/4 X 3/8-1/2 SAE	5 FT	054245		
			HZ	3/8 X 3/8-1/2 SAE	5 FT	057163		
		1½	HC	3/8 X 3/8-1/2 SAE	5 FT	054247		
			HZ	3/8 X 3/8-1/2 SAE	5 FT	057950		
		2	HZ	3/8 X 3/8-1/2 SAE	5 FT	057951		
			HC	3/8 X 3/8-1/2 SAE	5 FT	054248		
		3	HC	3/8 X 3/8-1/2 SAE	5 FT	054249		
			HZ	3/8 X 3/8-1/2 SAE	5 FT	057556		
		5	HC	3/8 X 3/8-1/2 SAE	5 FT	054250		
			HZ	3/8 X 3/8-1/2 SAE	5 FT	058484		
		R-404A R-507 R-502	AFAE	1/4	SC	1/4 X 3/8-1/2 SAE	30 IN	066427
					SW45	1/4 X 3/8-1/2 SAE	30 IN	066502
SZ	1/4 X 3/8-1/2 SAE				30 IN	066442		
1/2	SC			1/4 X 3/8-1/2 SAE	30 IN	066428		
	SW45			3/8 X 3/8-1/2 SAE	30 IN	066453		
	SZ			1/4 X 3/8-1/2 SAE	30 IN	066443		
3/4	SC			3/8 X 3/8-1/2 SAE	30 IN	061911		
	SW45			3/8 X 3/8-1/2 SAE	30 IN	066504		
	SZ			1/4 X 3/8-1/2 SAE	30 IN	066444		
1	SC			3/8 X 3/8-1/2 SAE	30 IN	061912		
	SW45			3/8 X 3/8-1/2 SAE	30 IN	066452		
	SZ			1/4 X 3/8-1/2 SAE	30 IN	066445		
1½	SZ			3/8 X 3/8-1/2 SAE	5 FT	063464		
	SC			3/8 X 3/8-1/2 SAE	5 FT	066454		
	SZ			3/8 X 3/8-1/2 SAE	5 FT	063465		
2	SC			3/8 X 3/8-1/2 SAE	30 IN	061914		
	SW45			3/8 X 3/8-1/2 SAE	5 FT	066505		
	SZ			3/8 X 3/8-1/2 SAE	5 FT	061646		

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