



AFAE 1/4SC-01

AFA Series Thermostatic Expansion Valves

The AFA Series is designed for air conditioning and commercial refrigeration applications. It is ideal for applications requiring compact size combined with stable and accurate control over wide load and evaporator temperature ranges.

Features

- Stainless steel power element prevents corrosion and valve failure
- External superheat adjustment
- Replaceable inlet strainer
- Angle configuration SAE connections only
- Wrench flats on inlet and outlet
- External or internal equalizer

Specifications

Maximum working pressure 700 psig (48 bar)
 UR/CUR file number..... SA5312
 Canadian CRN..... OC21506.513467890YTN

Model number nomenclature - Example: AFAE 1/2HC-01

Series	Superheat adjustment	Equalizer	Capacity	System refrigerant code	Charge code	Sequential identifier	Customer special	Pack type
AF	A	E	1/2	H	C	-01		
Hermetic Design, Flare Connections	A = Adjustable	E = External (Omit for Internal)	Nominal Rating in Tons	F = R-12 H = R-22 M = R-134a N = R-407C P = R-507 R = R-502 S = R-404A Z = R-410A	AA = Wide Range C = Medium Temp. CA = Heat Pump W(MOP) = Press. Limiting Z = Low Temp.	-01 Thru -99	G = Customer Special (Omit for Standard)	B1 = Bulk Pack (Omit for Individual Pack)

AFA Series Thermostatic Expansion Valves (body style angle 90°)

System refrigerant code	Capacity (nominal tonnage)	Charge code	Inlet x outlet connection	Adjustable superheat	Equalizer	Cap length	Model number	Item number
F (R-12) *R-134a	1/4	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	Internal	30 In.	AFA 1/4FC-03	057047
	1/4	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	Internal	5 Ft.	AFA 1/4FC-01	047753
	1/4	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	Internal	5 Ft.	AFA 1/4FC-02	054258
	1/2	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	External	30 In.	AFAE 1/2FC-03	057023
	1/2	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	Internal	30 In.	AFA 1/2FC-04	057028
	1/2	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	Internal	5 Ft.	AFA 1/2FC-01	047752
	1/2	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	Internal	30 In.	AFA 1/2FC-03	057027
	1	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	30 In.	AFAE 1FC-01	057048
	1	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	Internal	5 Ft.	AFA 1FC-01	047758
	1-1/2	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	30 In.	AFAE 1-1/2FC-02	061152

System refrigerant code	Capacity (nominal tonnage)	Charge code	Inlet x outlet connection	Adjustable superheat	Equalizer	Cap length	Model number	Item number
H (R-22) *R-407C	1/4	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	Internal	30 In.	AFA 1/4HC-03	057261
	1/2	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	External	5 Ft.	AFAE 1/2HC-01	054243
	1/2	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	Internal	30 In.	AFA 1/2HC-03	057260
	1/2	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	Internal	5 Ft.	AFA 1/2HC-02	054229
	1/2	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	Internal	5 Ft.	AFAE 1/2HC-02	054244
	1	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	5 Ft.	AFAE 1HC-02	054246
	1	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	Internal	5 Ft.	AFA 1HC-01	054231
	1	Z (Low Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	5 Ft.	AFAE 1HZ-01	057163
	1-1/2	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	5 Ft.	AFAE 1-1/2HC-01	054247
	1-1/2	Z (Low Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	5 Ft.	AFAE 1-1/2HZ-01	057950
	2	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	5 Ft.	AFAE 2HC-01	054248
	2	Z (Low Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	5 Ft.	AFAE 2HZ-01	057951
	3	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	5 Ft.	AFAE 3HC-01	054249
	3	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	Internal	5 Ft.	AFA 3HC-01	054234
	3	Z (Low Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	5 Ft.	AFAE 3HZ-01	057556
	5	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	5 Ft.	AFAE 5HC-01	054250
5	Z (Low Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	5 Ft.	AFAE 5HZ-01	058484	
M (R-134a) *R-12	1/4	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	Internal	30 In.	AFA 1/4MC-01	057607
	1/4	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	Internal	5 Ft.	AFA 1/4MC-02	058536
	1/2	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	External	30 In.	AFAE 1/2MC-01	057853
	1/2	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	Internal	30 In.	AFA 1/2MC-01	057606
	1/2	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	Internal	30 In.	AFA 1/2MC-02	059625
	1	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	Internal	30 In.	AFA 1MC-01	057605
	1	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	30 In.	AFAE 1MC-01	057613
	1-1/2	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	30 In.	AFAE 1-1/2MC-01	060865
	2	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	30 In.	AFAE 2MC-01	061906
3	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	30 In.	AFAE 3MC-01	061908	
R (R-502) *R-404A *R-507	1/4	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	Internal	5 Ft.	AFA 1/4RC-01	049871
	1/2	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	Internal	5 Ft.	AFA 1/2RC-01	048431
	1/2	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	5 Ft.	AFAE 1/2RC-01	054254
	1/2	W45 (MOP)	3/8" X 3/8"-1/2" SAE	Yes	External	30 In.	AFAE 1/2RW45-01	058925
	1-1/2	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	5 Ft.	AFAE 1-1/2RC-01	054255
	1-1/2	Z (Low Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	5 Ft.	AFAE 1-1/2RZ-01	049360
S (R-404A) *R-502 *R-507	1/4	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	External	30 In.	AFAE 1/4SC-01	066427
	1/4	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	Internal	5 Ft.	AFA 1/4SC-01	064072
	1/4	Z (Low Temp.)	1/4" X 3/8"-1/2" SAE	Yes	Internal	30 In.	AFA 1/4SZ-01	066438
	1/2	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	External	30 In.	AFAE 1/2SC-02	066428
	1/2	C (Med. Temp.)	1/4" X 3/8"-1/2" SAE	Yes	Internal	30 In.	AFA 1/2SC-01	066424
	1/2	Z (Low Temp.)	1/4" X 3/8"-1/2" SAE	Yes	External	30 In.	AFAE 1/2SZ-02	066443
	1/2	Z (Low Temp.)	1/4" X 3/8"-1/2" SAE	Yes	Internal	30 In.	AFA 1/2SZ-01	066439
	3/4	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	Internal	30 In.	AFA 3/4SC-01	066425
	3/4	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	30 In.	AFAE 3/4SC-01	061911
	3/4	Z (Low Temp.)	1/4" X 3/8"-1/2" SAE	Yes	External	30 In.	AFAE 3/4SZ-01	066444
	1	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	Internal	30 In.	AFA 1SC-01	066426
	1	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	30 In.	AFAE 1SC-01	061912
	1	W45 (MOP)	3/8" X 3/8"-1/2" SAE	Yes	External	30 In.	AFAE 1SW45-01	066452
	1	Z (Low Temp.)	1/4" X 3/8"-1/2" SAE	Yes	External	30 In.	AFAE 1SZ-02	066445
	1	Z (Low Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	5 Ft.	AFAE 1SZ-01	063464
	1	Z (Low Temp.)	3/8" X 3/8"-1/2" SAE	Yes	Internal	30 In.	AFA 1SZ-01	066441
	1-1/2	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	5 Ft.	AFAE 1-1/2SC-01	066454
	1-1/2	Z (Low Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	5 Ft.	AFAE 1-1/2SZ-01	063465
2	C (Med. Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	30 In.	AFAE 2SC-01	061914	
2	Z (Low Temp.)	3/8" X 3/8"-1/2" SAE	Yes	External	5 Ft.	AFAE 2SZ-01	061646	

* Valve capacity is for the first refrigerant listed. To determine the capacity for additional refrigerants listed, consult the Nominal Capacity Tables for Interchangeable Refrigerants.

Nominal capacity table for interchangeable refrigerants in tons (kw)

R-134A	R-12
1/8 (0.4)	—
1/4 (0.9)	1/8 (0.4)
1/2 (1.8)	1/4 (0.9)
3/4 (2.6)	1/2 (1.8)
1 (3.5)	1 (3.5)
1-1/2 (5.3)	—
2 (7)	1-1/2 (5.3)
2-1/2 (8.8)	2 (7)
3 (10.6)	2-1/2 (8.8)
4 (14.1)	3 (10.6)

R-404 / R-507	R-502
1/8 (0.4)	—
1/4 (0.9)	1/8 (0.4)
1/2 (1.8)	1/4 (0.9)
3/4 (2.6)	1/2 (1.8)
1 (3.5)	1 (3.5)
1-1/4 (4.4)	—
2 (7)	1-1/2 (5.3)
2-1/4 (7.2)	2 (7)
2-1/2 (8.8)	2-1/2 (8.8)
3-1/2 (12.3)	3 (10.6)

R-22	R-407C
1/5 (0.7)	1/5 (0.7)
1/4 (0.9)	1/4 (0.9)
1/2 (1.8)	1/2 (1.8)
1 (3.5)	1 (3.5)
1-1/2 (5.3)	1-1/4 (4.4)
2 (7)	2 (7)
2-1/2 (8.8)	2-1/2 (8.8)
3 (10.6)	3-1/4 (11.4)
4 (14.1)	4 (14.1)
5 (17.6)	5-1/4 (18.5)

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 AHRI standard 750.



Capacity tables (tons)