

TFE R-22 Series

Thermal Expansion Valves

The TFE R-22 series is designed for large tonnage heat pump, air conditioning, and commercial refrigeration applications.

Features

- Stainless steel power element eliminates corrosion and prevents valve failure
- Replaceable power element
- External superheat adjustment
- ODF connections
- Balanced port construction compensates for changes in operating pressures due to varying ambients, or widely varying evaporator loads
- Bi-Directional control capacity
- External equalizer



Specifications

- Maximum working pressure: 450 psig

TFE Nominal* Capacity Table in Tons

R-134a	R-22/R-407C	R-502, R-404a/R-507
6	8	5
8	10	7
10	12	9
15	20	14

*See Extended Capacity Tables for ratings at a wide range of conditions per ARI standard 750

Nomenclature example: TFES 10 HCA 5/8 x 7/8 ODF S/T

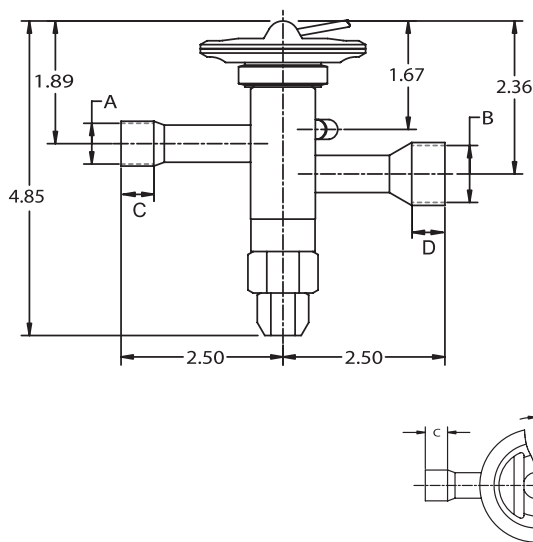
TF	E	S	10	H	CA	5/8 x 7/8	ODF	S/T
Valve Series Balanced Port, Replaceable Power Assembly	Equalizer E=External 1/4" ODF	Connection Type S = solder (Only)	Capacity Nominal Rating in Tons (See nominal capacity table below)	Refrigerant Code • H = R-22 M = R-134a • N = R-407C *P = R-507 *R = R-502 *S = R-404A	Charge Code C = medium temp CA = heat pump	Inlet x Outlet Connection Sizes (See ordering information table below)	Connection Type ODF=solder	Configuration S/T = Straight- thru

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

Ordering Information

Valve Series	Capacity Tons* (R-22 Nominal)	Connections	PCN HCA Charge (R-22 Heat Pump)
TFES	8	5/8 X 7/8 ODF S/T 6A ODF EE	061608
	10	5/8 X 7/8 ODF S/T 6A ODF EE	061610
	12	5/8 X 7/8 ODF S/T 6A	061609
	20	5/8 X 7/8 ODF S/T 6A	064493

Dimensional Data (in)



Inlet/Outlet Fittings Dimensional Data (in)

Connections		Inlet		Outlet		Equalizer	
Inlet	Outlet	A	B	C MIN	D MIN.	1/4 ODF	SAE
1/4 ODF	3/8 ODF	0.25	0.38	0.31	0.31	1.70	1.65
	1/2 ODF	0.25	0.50		0.37		
	5/8 ODF	0.25	0.63		0.50		
3/8 ODF	3/8 ODF	0.38	0.38		0.31		
	1/2 ODF	0.38	0.50		0.37		
	5/8 ODF	0.38	0.63		0.50		
	7/8 ODF	0.38	0.88		0.76		
1/2 ODF	1/2 ODF	0.50	0.50		0.37		
	5/8 ODF	0.50	0.63		0.50		
	7/8 ODF	0.50	0.88		0.76		
5/8 ODF	5/8 ODF	0.63	0.63		0.50		
	7/8 ODF	0.63	0.88		0.76		
	1-1/8 ODF	0.63	1.13		0.91		
7/8 ODF	7/8 ODF	0.88	0.88		0.76		
	1-1/8 ODF	0.88	1.13		0.91		

Remote Bulb

Charge	Tubing Length (Ft)	F	G
C,A,Z	2, 2-1/2, 5	3.06	0.63
	10	3.56	
	15, 20, 30	4.81	
	40, 50	6.19	0.76
CA, AA	2-1/2, 5, 10	2.31	

Replacement Parts

	Description	PCN
Power Assembly	X-28458 HCA-2	063414
	X-28458 HW100-2	063416
	X-28458 SW45-2	065298
Seal Nut	27676-1	058707

TFE R-410A Series

R-410A

Thermal Expansion Valves

The TFE R-410A series is designed for large tonnage heat pump, air conditioning, and commercial refrigeration applications.

Features

- Stainless steel power element eliminates corrosion and prevents valve failure
- Replaceable power element
- External superheat adjustment
- ODF connections
- Balanced port construction compensates for changes in operating pressures due to varying ambients, or widely varying evaporator loads
- Bi-Directional control capacity
- External equalizer
- ZAA charge for R-410A systems



Specifications

- Maximum working pressure: 630 psig

TFE Nominal* Capacity Table in Tons

Model	Typical System Application
TFE 12	10-13 Tons
TFE 16	14-17 Tons
TFE 20	18-20 Tons

*See Extended Capacity Tables for ratings at a wide range of conditions per ARI standard 750

Nomenclature example: TFES 16 ZAA 5/8 x 7/8 ODF S/T

TF	E	S	16	Z	AA	5/8 x 7/8	ODF	S/T
Valve Series Balanced Port, Replaceable Power Assembly	Equalizer E=External 1/4" ODF	Connection Type S = solder	Capacity Nominal Rating in Tons	Refrigerant Code Z = R-410A	Charge Code AA = wide range	Inlet x Outlet Connection Sizes (See ordering information table below)	Connection Type ODF=solder	Configuration S/T = Straight- thru

Ordering Information

Refrigerant	Tons	Bleed	Inlet x Outlet	Sensing Bulb Capillary Tube Length	PCN
R-410A	12	-	5/8 ODF x 7/8 ODF	5 ft.	066146
		15%	5/8 ODF x 7/8 ODF	5 ft.	066147
		-	7/8 ODF x 1-1/8 ODF	10 ft.	066148
		-	5/8 ODF x 7/8 ODF	5 ft.	066149
	16	-	5/8 ODF x 7/8 ODF	5 ft.	066150
		15%	5/8 ODF x 7/8 ODF	5 ft.	066151
		-	7/8 ODF x 1-1/8 ODF	10 ft.	066152
		-	5/8 ODF x 7/8 ODF	5 ft.	066153
	20	-	5/8 ODF x 7/8 ODF	5 ft.	066154
		15%	5/8 ODF x 7/8 ODF	5 ft.	066155
		-	7/8 ODF x 1-1/8 ODF	10 ft.	066156
		-	5/8 ODF x 7/8 ODF	5 ft.	066157

Inlet/Outlet Fittings Dimensional Data (in)

Connections		Inlet		Outlet	
Inlet	Outlet	A	B MIN.	C	D MIN.
1/2 ODF	1/2 ODF	0.50	0.37	0.50	0.37
	5/8 ODF	0.50	0.37	0.63	0.50
	7/8 ODF	0.50	0.37	0.88	0.76
5/8 ODF	5/8 ODF	0.63	0.50	0.63	0.50
	7/8 ODF	0.63	0.50	0.88	0.76
	1-1/8 ODF	0.63	0.50	1.13	0.91
7/8 ODF	7/8 ODF	0.88	0.76	0.88	0.76
	1-1/8 ODF	0.88	0.76	1.13	0.91

Replacement Parts

Description	PCN
R-410A Power Assembly (10 ft.)*	066155*
Seal Nut	058707

*Approved for use only on TFE-Series R-410A valves (with ZAA charge)

Dimensional Data (in)

