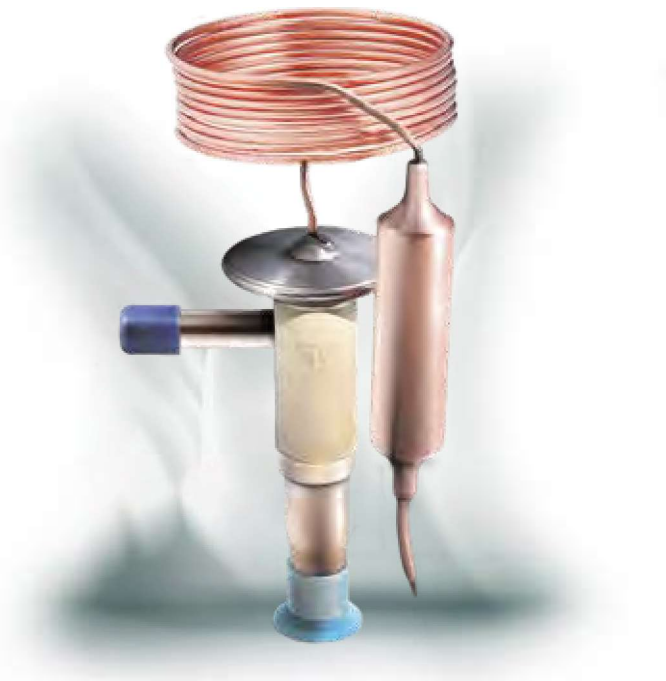


Thermostatic Expansion Valve

RFGB series thermostatic expansion valves are used to adjust mass flow of refrigerant into the evaporator while controlling the refrigerant's superheat at the outlet of the evaporator. They can be used for various refrigerants under all working conditions. Typical applications are refrigeration systems like commercial refrigerators and freezers, icemakers, dehumidifiers as well as air conditioners at various evaporation temperature.



FEATURES

- COMPACT DESIGN WITH BUILT-IN ORIFICE
- WARM THERMO HEAD CONSTRUCTION
- ALL CONNECTIONS PIPES ARE COMPLETELY IN COPPER
- VALVES WITH MOP FUNCTION CAN BE PROVIDED TO ASSURE RELIABLE COMPRESSOR OPERATION
- APPLICABLE IN A WIDE EVAPORATION TEMPERATURE RANGE
- RELIABLE AND CONSISTENT PERFORMANCE OF SUPERHEAT CONTROL

GENERAL SPECIFICATION

- Applicable for all common HCFC, HFC, HC, HFO refrigerants such as: R22, R134a, R404A, R407C, R507, R407A/F, R290, R1234yf, R448A/R449A, R452A, R450A/R513A¹⁾
- Ambient temperature min./max.: -35/+55°C
- Medium temperature TS min./max.: -40°C / +70°C
- Max. operating pressure PS: 2,1 ... 3,5 MPa (21 ... 35 bar)²⁾
- Installation position: - Preferably valve head upwards
- Flow direction from inlet A to outlet B
- Certifications: UL/CSA and PED declaration

Note: 1) Models for R407A/F, R1234yf, R448A/R449A, R452A, R450A/R513A are on request
2) Max. operating pressure is related to the used refrigerant

TECHNICAL PARAMETERS

- RFGB valve available in straight shape with adjustable superheat on site
- RFGB valve available in angle shape with fixed factory super heat settings
- Both versions are available with the following solder connections
 - Metric: Inlet 6mm ODF/ Outlet 10mm ODF or Inlet 10mm ODF/ Outlet 12mm ODF
 - Imperial: Inlet 1/4" ODF/ Outlet 3/8" ODF or Inlet 3/8" ODF/ Outlet 1/2" ODF
- Equalization port available as option:
 - Metric: 6mm ODF (available for models with metric solder connections)
 - Imperial: 1/4" ODF (available for models with imperial solder connections)
- Capillary tube length 800mm



MODEL DESIGNATION LEGEND

Position Number	Model Designation Legend	
1	Product Code	Product Series
	RFGB	Thermostatic expansion valve with build-in orifice
2	Refrigerant	Description
	1	R22
	2	R407C
	3	R404A / R507A
	4	R134a
	6	R290
3	Pressure Equalization	Description
	E	External pressure equalization
	(Omitted)	Internal pressure equalization
4	Valve Size	Internal Orifice Size
	From 1 to 5	Valve size: proportional to the orifice size and to the nominal capacity
5	Valve Shape	Description
	S	Straight Version
	A	Angle Version
6	Connections Type	Description
	Mx	Metric: M6 inlet 6mm ; M10 inlet 10mm
	Ix	Imperial: I2 inlet 1/4" ; I3 inlet 3/8"
7	Miscellaneous	Description
	xxx	Digits for additional information e.g. static superheat, MOP, Bleed...

MODEL DESIGNATION EXAMPLE

Position Number							According to Model Designation Legend
1	2	3	4	5	6	7	
RFGB	04	E	3	S	M6	xxxx	Thermostatic expansion valve with build-in orifice
RFGB	04	E	3	S	M6	xxxx	Refrigerant: R134a
RFGB	04	E	3	S	M6	xxxx	With connection for external pressure equalization
RFGB	04	E	3	S	M6	xxxx	Capacity: Valve and orifice size 3
RFGB	04	E	3	S	M6	xxxx	Valve Shape: straight
RFGB	04	E	3	S	M6	xxxx	Valve pipe connections: metric inlet 6mm/outlet 10mm
RFGB	04	E	3	S	M6	xxxx	Digits for additional information



TECHNICAL DATA

Nominal Cooling Capacities ¹⁾²⁾						
Refrigerant	Size	Model Name ⁴⁾	Drawing	Capacity		PS
				[USRT]	[kW]	[MPa]
R22	1	RFGB 01(E) -1	RFGB01(E)-0.35-xxx	0.35	1.2	2,8
	2	RFGB 01(E) -2	RFGB01(E)-0.7-xxx	0.7	2.5	
	3	RFGB 01(E) -3	RFGB01(E)-1.0-xxx	1	3.5	
	4	RFGB 01(E) -4	RFGB01(E)-1.5-xxx	1.5	5.3	
	5	RFGB 01(E) -5	RFGB01(E)-2.0-xxx	2	7	
R407C ³⁾	1	RFGB 02(E) -1	RFGB02(E)-0.38-xxx	0.38	1.3	2,8
	2	RFGB 02(E) -2	RFGB02(E)-0.76-xxx	0.76	2.7	
	3	RFGB 02(E) -3	RFGB02(E)-1.1-xxx	1.1	3.9	
	4	RFGB 02(E) -4	RFGB02(E)-1.6-xxx	1.6	5.6	
	5	RFGB 02(E) -5	RFGB02(E)-2.2-xxx	2.2	7.7	
R404A / R507	1	RFGB 03(E) -1	RFGB03(E)-0.25-xxx	0.25	0.9	3,5
	2	RFGB 03(E) -2	RFGB03(E)-0.5-xxx	0.5	1.8	
	3	RFGB 03(E) -3	RFGB03(E)-0.7-xxx	0.7	2.5	
	4	RFGB 03(E) -4	RFGB03(E)-1.0-xxx	1	3.5	
	5	RFGB 03(E) -5	RFGB03(E)-1.4-xxx	1.4	4.9	
R134a	1	RFGB 04(E) -1	RFGB04(E)-0.23-xxx	0.22	0.8	2,1
	2	RFGB 04(E) -2	RFGB04(E)-0.44-xxx	0.44	1.5	
	3	RFGB 04(E) -3	RFGB04(E)-0.63-xxx	0.63	2.2	
	4	RFGB 04(E) -4	RFGB04(E)-0.94-xxx	0.94	3.3	
	5	RFGB 04(E) -5	RFGB04(E)-1.3-xxx	1.3	4.6	
R290	1	RFGB 06(E) -1	RFGB06(E)-0.35-xxx	0.35	1.2	2,8
	2	RFGB 06(E) -2	RFGB06(E)-0.7-xxx	0.7	2.5	
	3	RFGB 06(E) -3	RFGB06(E)-1.0-xxx	1	3.5	
	4	RFGB 06(E) -4	RFGB06(E)-1.5-xxx	1.5	5.3	
	5	RFGB 06(E) -5	RFGB06(E)-2.0-xxx	2	7	

Note:

- 1) Nominal capacity valid for: - Version "S" in straight shape and version "A" in angle shape
- Versions with metrical and imperial connections
- 2) Nominal working conditions: Condensing temperature: 38°C; evaporating temperature +4,4°C; Liquid temperature 37°C
- 3) R407C data based on dew point conditions
- 4) Model Name in this table is referred to the first 4 positions of the model designation

Thermostatic Expansion Valve



MODEL LIST

Evaporation Temp. Range to = +10...-40°C¹⁾

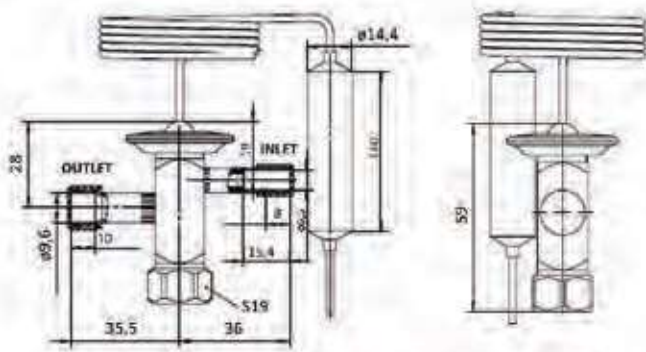
Model Name ^{2) 3) 4) 5)}				Connections Size (Solder ODF)					
Valve Body All Refrigerants	Capacity Size All Sizes	Valve Shape ⁶⁾ Straight / Angle	Pipe connections Metric / Imperial	Inlet		Outlet		Pressure Equal.	
				[mm]	[inch]	[mm]	[inch]	[mm]	[inch]
RFGB 01 - RFGB 02 - RFGB 03 - RFGB 04 - RFGB 06 -	1 - 2 - 3 -	S -	M6	6	-	10	-	-	-
			M10	10	-	12	-	-	-
			2	-	1/4	-	3/8	-	-
	4 - 5 -	A -	3	-	3/8	-	1/2	-	-
			M6	6	-	10	-	-	-
			M10	10	-	12	-	-	-
RFGB 01E - RFGB 02E - RFGB 03E - RFGB 04E - RFGB 06E -	1 - 2 - 3 -	S -	M6	6	-	10	-	6	-
			M10	10	-	12	-	6	-
			2	-	1/4	-	3/8	-	1/4
	4 - 5 -	A -	3	-	3/8	-	1/2	-	1/4
			M6	6	-	10	-	6	-
			M10	10	-	12	-	6	-
			2	-	1/4	-	3/8	-	1/4
			3	-	3/8	-	1/2	-	1/4

Note:

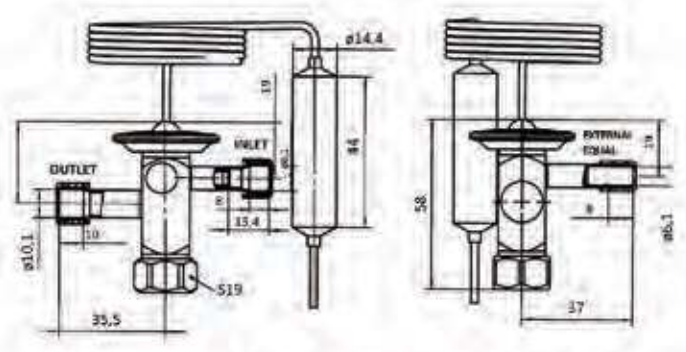
- 1) Different evaporation temperature range on request
- 2) Extent of delivery: valve body and bulb strap
- 3) MOP function on request
- 4) Delivery time on request
- 5) Model Name in this table is referred to the first 6 positions of the model designation
- 6) Superheat : - Straight version "S" with adjustable settings
- Angle version "A" with fixed factory settings



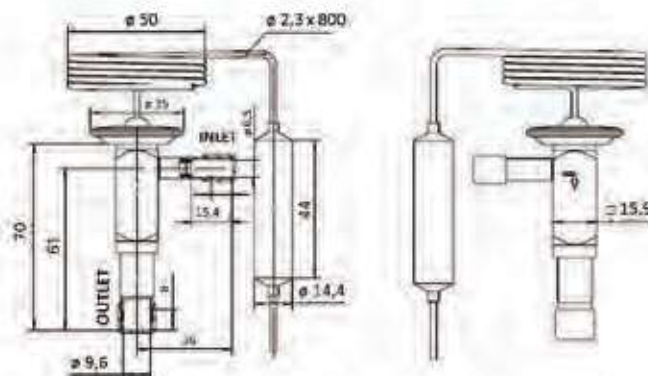
DIMENSIONS



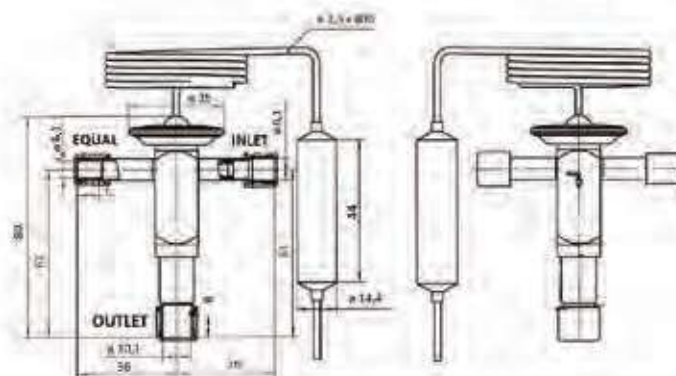
Straight Shape with Internal Pressure Equalization



Straight Shape with External Pressure Equalization



Angle Shape with Internal Pressure Equalization



Angle Shape with External Pressure Equalization