

RFGB SERIES | *Thermostatic Expansion Valve*

RFGB series thermostatic expansion valves are used to regulate refrigerant flow rate 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, ice makers, air conditioners and dehumidifiers at various evaporating temperatures.



FEATURES

- COMPACT DESIGN WITH FIXED ORIFICE
- ALL COPPER CONNECTIONS
- CROSS-CHARGE TECHNOLOGY PROVIDES CONSISTENT SUPERHEAT CONTROL FOR MEDIUM AND LOW TEMPERATURE APPLICATIONS
- CHARGES WITH MOP FUNCTION CAN BE PROVIDED TO ASSURE RELIABLE COMPRESSOR OPERATION
- LASER WELDED POWER ELEMENT

GENERAL SPECIFICATION

- UL approved refrigerants: R22, R23, R32, R134a, R290, R404A, R407C, R507, R407A, R407F, R448A, R449A, R452A, R450A, R1234yf, R410A, R454B, R454C, R455A, R471A, R407H, R717, R600a, R1270, R452B, R1234ze, R422D, R513A.
- Ambient temperature range: -30°F to 130°F
- Fluid temperature range: -40°F to 158°F
- Maximum operating pressure: 508 psig
- UL File Number: SA12770

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TECHNICAL PARAMETERS

• **Three body configurations available:**

1. Angle – Side Inlet / Bottom Outlet
 - Fixed superheat set point (non-adjustable)
 - Inlet connection sizes: 1/4" ODF or 3/8" ODF
 - Outlet connection sizes: 3/8" ODF or 1/2" ODF
 - External equalizer connection size (optional): 1/4" ODF

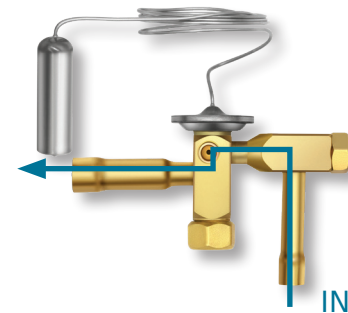
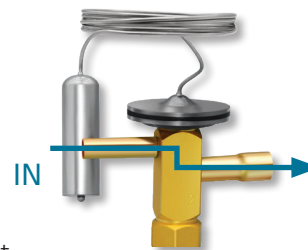
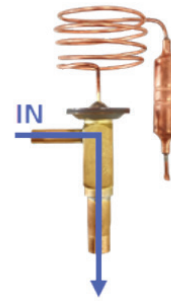
2. Straight Through – Side Inlet / Side Outlet
 - Adjustable superheat setting
 - Inlet connection sizes: 1/4" ODF or 3/8" ODF
 - Outlet connection sizes: 3/8" ODF or 1/2" ODF
 - External equalizer connection size (optional): 1/4" ODF

3. Angle – Bottom Inlet with Replaceable 100 mesh Inlet Strainer / Side Outlet
 - Adjustable superheat setting
 - Inlet connection size: 3/8" ODF
 - Outlet connection size: 1/2" ODF
 - External equalizer connection size (optional): 1/4" ODF

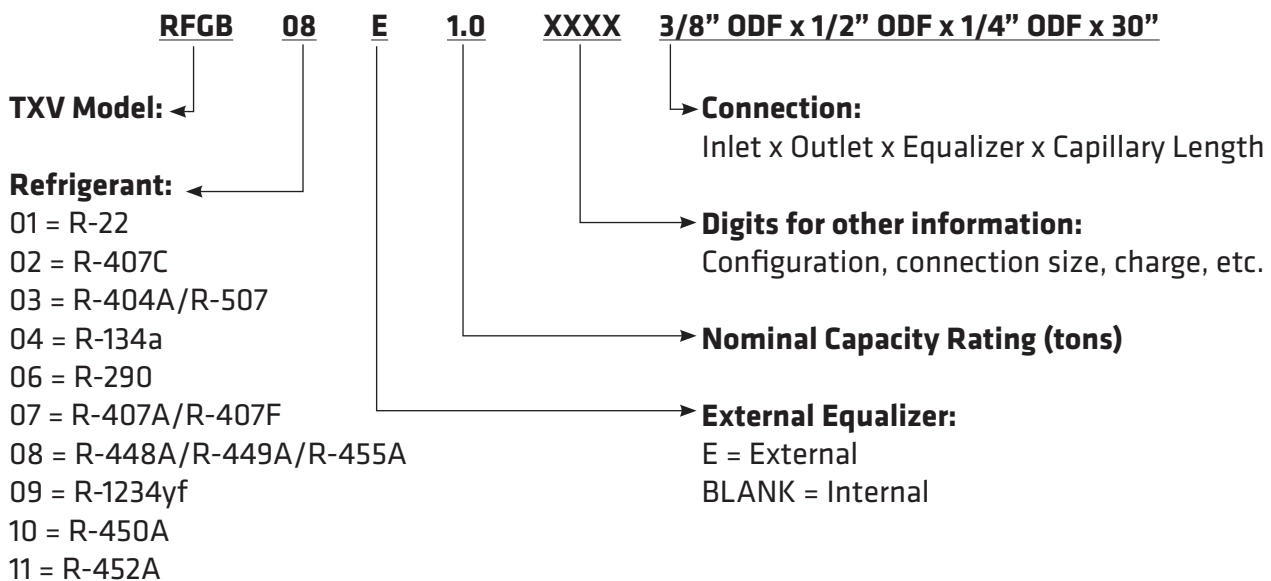
• **Two thermostatic charge types available:**

1. No MOP; Evaporator temperature range = -40°F to +50°F
2. With MOP: Customized MOP and evaporator temperature range

• Capillary tube length is 30". Customized lengths available per request.



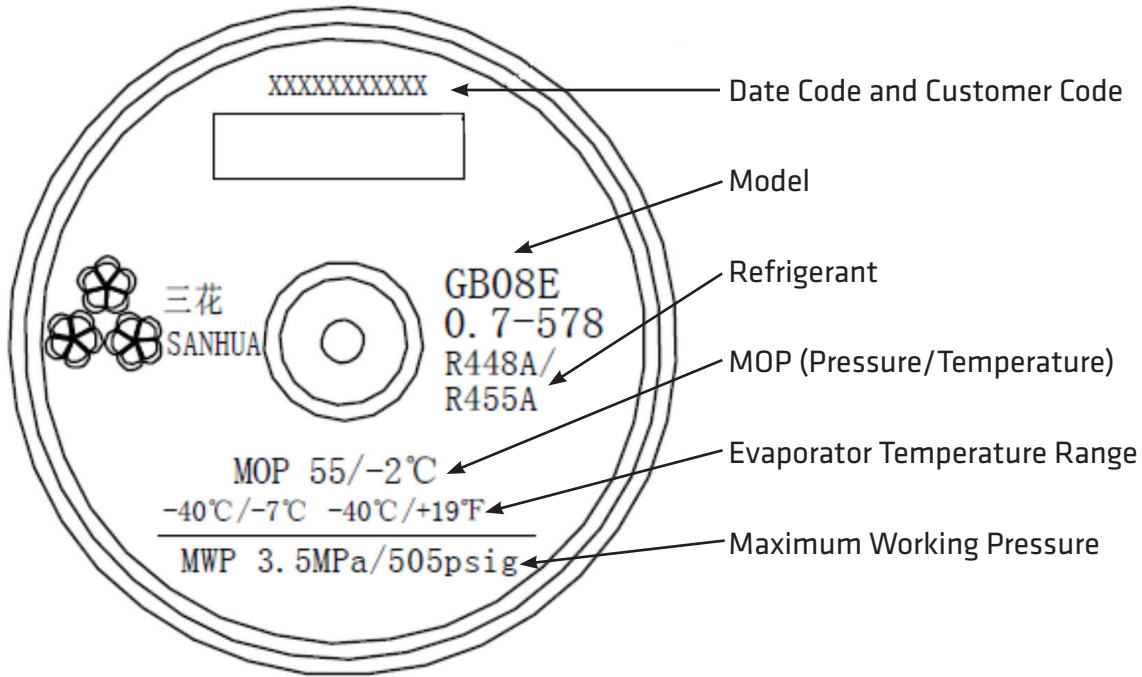
MODEL DESIGNATION



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MODEL DESIGNATION (continued)

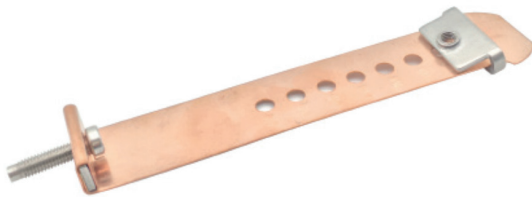
View of the top of the Power Element



BULB MOUNTING OPTIONS

Strap: Suitable for the following suction line diameters.

1/4", 3/8", 1/2", 5/8", 3/4", 7/8", 1"



Clip: Suitable for the following suction line diameters.

1/4", 3/8", 1/2"



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TECHNICAL DATA

Nominal Refrigerant Flow Capacities*

R-404A/R-507			R-290			R-407A/R-407F		
Model	tons	Btu/hr	Model	tons	Btu/hr	Model	tons	Btu/hr
RFGB03(E)-0.13	0.12	1,440	RFGB06(E)-0.17	0.20	2,400	RFGB07(E)-0.17	0.15	1,800
RFGB03(E)-0.25	0.26	3,120	RFGB06(E)-0.35	0.42	5,040	RFGB07(E)-0.35	0.33	3,960
RFGB03(E)-0.50	0.36	4,320	RFGB06(E)-0.70	0.59	7,080	RFGB07(E)-0.70	0.45	5,400
RFGB03(E)-0.70	0.68	8,160	RFGB06(E)-1.0	1.12	13,440	RFGB07(E)-1.0	0.87	10,440
RFGB03(E)-1.0	1.01	12,120	RFGB06(E)-1.5	1.65	19,800	RFGB07(E)-1.5	1.28	15,360
RFGB03(E)-1.4	1.14	13,680	RFGB06(E)-2.0	1.87	22,440	RFGB07(E)-2.0	1.44	17,280

R-448A/R-449A/R-455A			R-452A			R-407C		
Model	tons	Btu/hr	Model	tons	Btu/hr	Model	tons	Btu/hr
RFGB08(E)-0.17	0.15	1,800	RFGB11(E)-0.13	0.12	1,440			
RFGB08(E)-0.35	0.33	3,960	RFGB11(E)-0.25	0.26	3,120	RFGB02(E)-0.38	0.36	4,320
RFGB08(E)-0.70	0.46	5,520	RFGB11(E)-0.50	0.36	4,320	RFGB02(E)-0.76	0.49	5,880
RFGB08(E)-1.0	0.87	10,440	RFGB11(E)-0.70	0.69	8,280	RFGB02(E)-1.1	0.94	11,280
RFGB08(E)-1.5	1.28	15,360	RFGB11(E)-1.0	1.03	12,360	RFGB02(E)-1.6	1.39	16,680
RFGB08(E)-2.0	1.44	17,280	RFGB11(E)-1.4	1.16	13,920	RFGB02(E)-2.2	1.57	18,840

R-134a			R-450A			R-1234yf		
Model	tons	Btu/hr	Model	tons	Btu/hr	Model	tons	Btu/hr
RFGB04(E)-0.12	0.09	1,080	RFGB10(E)-0.12	0.09	1,080	RFGB09(E)-0.12	0.07	840
RFGB04(E)-0.23	0.19	2,280	RFGB10(E)-0.23	0.18	2,160	RFGB09(E)-0.23	0.14	1,680
RFGB04(E)-0.44	0.26	3,120	RFGB10(E)-0.44	0.24	2,880	RFGB09(E)-0.44	0.19	2,280
RFGB04(E)-0.63	0.48	5,760	RFGB10(E)-0.63	0.45	5,400	RFGB09(E)-0.63	0.36	4,320
RFGB04(E)-0.94	0.71	8,520	RFGB10(E)-0.94	0.66	7,920	RFGB09(E)-0.94	0.52	6,240
RFGB04(E)-1.3	0.80	9,600	RFGB10(E)-1.3	0.74	8,880	RFGB09(E)-1.3	0.59	7,080

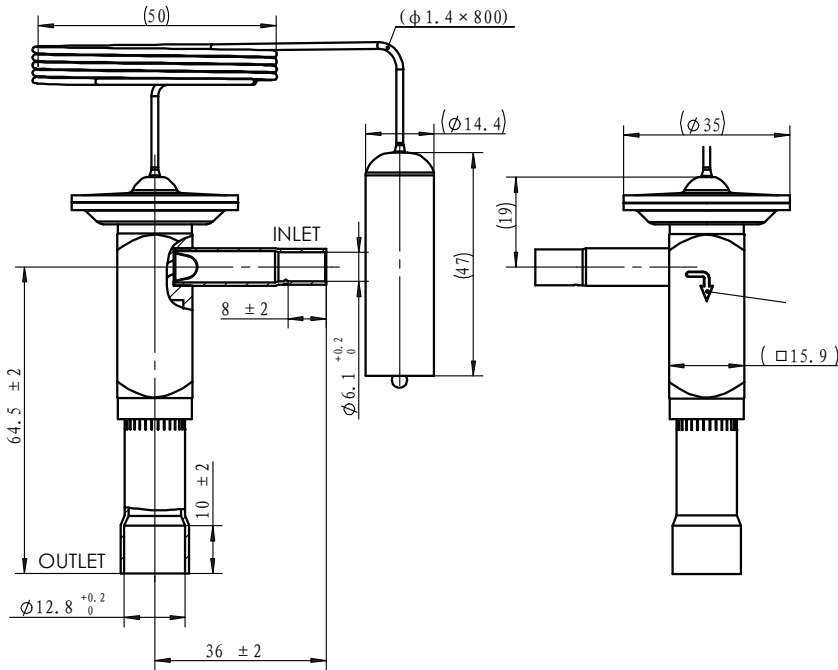
R-22		
Model	tons	Btu/hr
RFGB01(E)-0.17	0.18	2,160
RFGB01(E)-0.35	0.38	4,560
RFGB01(E)-0.70	0.52	6,240
RFGB01(E)-1.0	1.00	12,000
RFGB01(E)-1.5	1.47	17,640
RFGB01(E)-2.0	1.66	19,920

* Conditions rated in accordance with AHRI Standard 750 (I-P):
 40°F Evaporator Temperature
 110°F Condensing Temperature
 100°F Liquid Temperature
 100psi ΔP across TXV (except R-134a, R-1234yf, and R-450A TXVs which have 60psi ΔP)

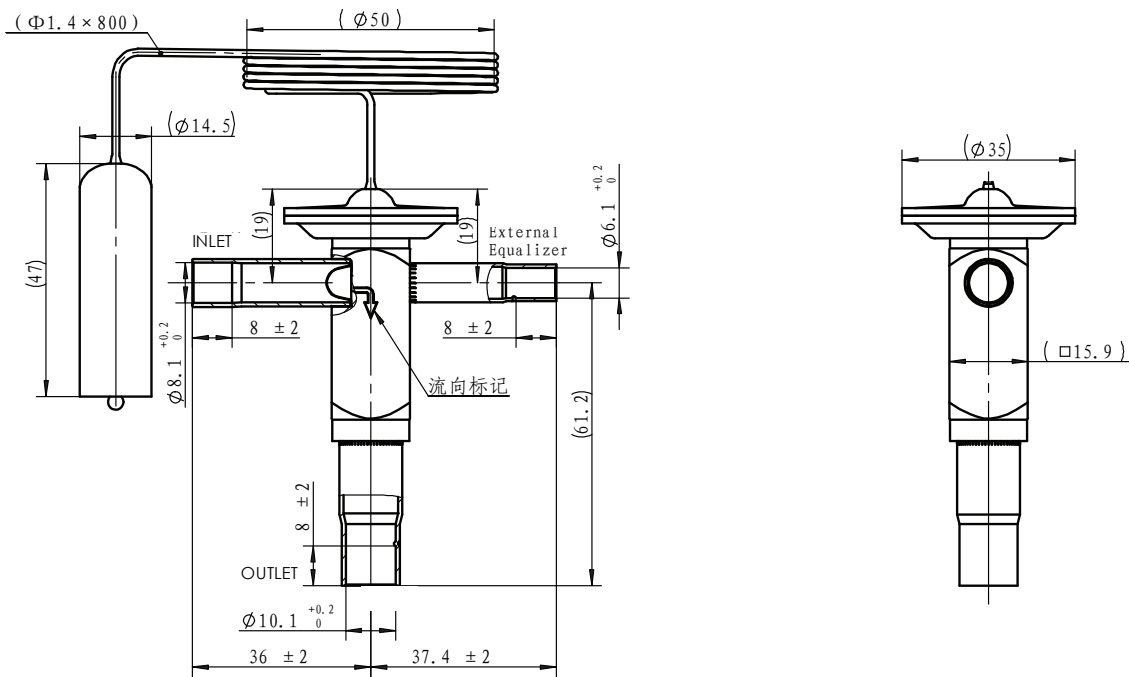
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DIMENSIONS

Angle Configuration - Side Inlet / Bottom Outlet; Internally Equalized



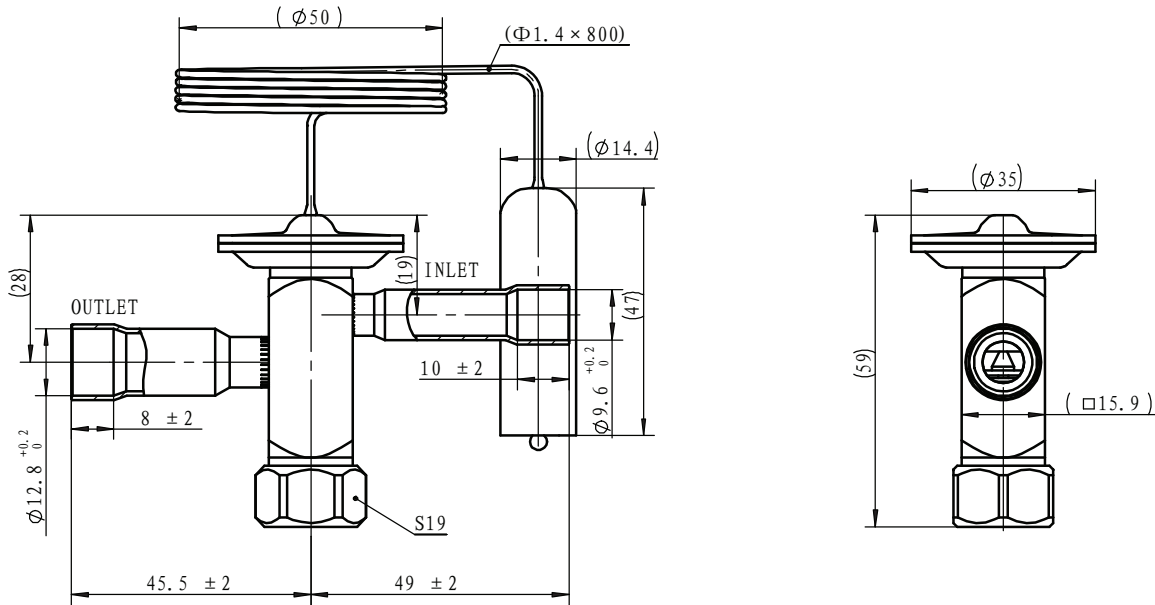
Angle Configuration - Side Inlet / Bottom Outlet; Externally Equalized



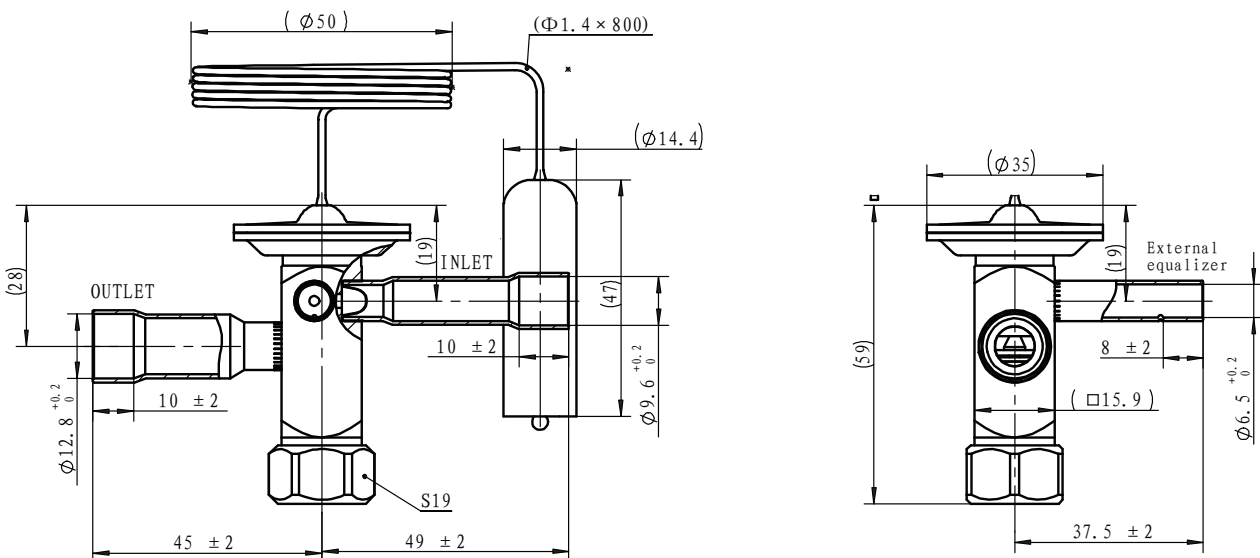
RFGB SERIES | Thermostatic Expansion Valve

DIMENSIONS (continued)

Straight Through Configuration - Side Inlet / Side Outlet; Internally Equalized



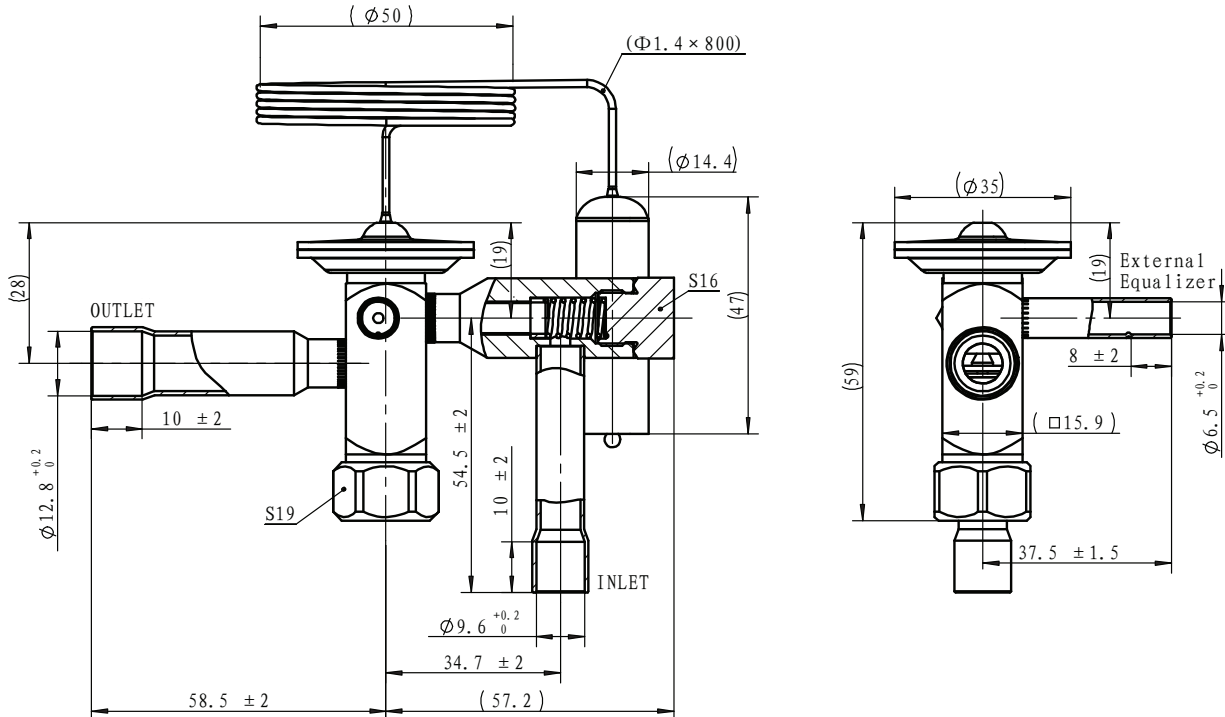
Straight Through Configuration - Side Inlet / Side Outlet; Externally Equalized



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DIMENSIONS (continued)

Angle Config. - Bottom Inlet with Replaceable Inlet Strainer / Side Outlet; Externally Equalized



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EXTENDED REFRIGERANT CAPACITY TABLES

Medium Temperature Refrigeration*

R-404A/R-507			R-290			R-407A/R-407F		
Model	tons	Btu/hr	Model	tons	Btu/hr	Model	tons	Btu/hr
			RFGB06(E)-0.17	0.19	2,280	RFGB07(E)-0.17	0.15	1,800
RFGB03(E)-0.25	0.25	3,000	RFGB06(E)-0.35	0.40	4,800	RFGB07(E)-0.35	0.31	3,720
RFGB03(E)-0.50	0.34	4,080	RFGB06(E)-0.70	0.55	6,600	RFGB07(E)-0.70	0.43	5,160
RFGB03(E)-0.70	0.64	7,680	RFGB06(E)-1.0	1.04	12,480	RFGB07(E)-1.0	0.81	9,720
RFGB03(E)-1.0	0.95	11,400	RFGB06(E)-1.5	1.53	18,360	RFGB07(E)-1.5	1.19	14,280
RFGB03(E)-1.4	1.07	12,840	RFGB06(E)-2.0	1.73	20,760	RFGB07(E)-2.0	1.34	16,080

R-448A/R-449A/R-455A			R-452A			R-22		
Model	tons	Btu/hr	Model	tons	Btu/hr	Model	tons	Btu/hr
RFGB08(E)-0.17	0.15	1,800	RFGB11(E)-0.13	0.12	1,440	RFGB01(E)-0.17	0.17	2,040
RFGB08(E)-0.35	0.31	3,720	RFGB11(E)-0.25	0.25	3,000	RFGB01(E)-0.35	0.36	4,320
RFGB08(E)-0.70	0.43	5,160	RFGB11(E)-0.50	0.34	4,080	RFGB01(E)-0.70	0.50	6,000
RFGB08(E)-1.0	0.81	9,720	RFGB11(E)-0.70	0.65	7,800	RFGB01(E)-1.0	0.94	11,280
RFGB08(E)-1.5	1.19	14,280	RFGB11(E)-1.0	0.96	11,520	RFGB01(E)-1.5	1.39	16,680
RFGB08(E)-2.0	1.34	16,080	RFGB11(E)-1.4	1.09	13,080	RFGB01(E)-2.0	1.56	18,720

R-134a			R-450A		
Model	tons	Btu/hr	Model	tons	Btu/hr
RFGB04(E)-0.12	0.09	1,080	RFGB10(E)-0.12	0.08	960
RFGB04(E)-0.23	0.18	2,160	RFGB10(E)-0.23	0.17	2,040
RFGB04(E)-0.44	0.24	2,880	RFGB10(E)-0.44	0.22	2,640
RFGB04(E)-0.63	0.45	5,400	RFGB10(E)-0.63	0.42	5,040
RFGB04(E)-0.94	0.66	7,920	RFGB10(E)-0.94	0.61	7,320
RFGB04(E)-1.3	0.75	9,000	RFGB10(E)-1.3	0.69	8,280

* Conditions:

25°F Evaporator Temperature

110°F Condensing Temperature

100°F Liquid Temperature

125psi ΔP across TXV (except R-134a, and R-450A TXVs which have 80psi ΔP)

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EXTENDED REFRIGERANT CAPACITY TABLES (continued)

Low Temperature Refrigeration*

R-404A/R-507			R-290			R-407A/R-407F		
Model	tons	Btu/hr	Model	tons	Btu/hr	Model	tons	Btu/hr
RFGB03(E)-0.13	0.09	1,080	RFGB06(E)-0.17	0.14	1,680	RFGB07(E)-0.17	0.11	1,320
RFGB03(E)-0.25	0.18	2,160	RFGB06(E)-0.35	0.29	3,480	RFGB07(E)-0.35	0.23	2,760
RFGB03(E)-0.50	0.24	2,880	RFGB06(E)-0.70	0.39	4,680	RFGB07(E)-0.70	0.30	3,600
RFGB03(E)-0.70	0.46	5,520	RFGB06(E)-1.0	0.73	8,760	RFGB07(E)-1.0	0.57	6,840
RFGB03(E)-1.0	0.67	8,040	RFGB06(E)-1.5	1.07	12,840	RFGB07(E)-1.5	0.84	10,080
RFGB03(E)-1.4	0.75	9,000	RFGB06(E)-2.0	1.21	14,520	RFGB07(E)-2.0	0.95	11,400

R-448A/R-449A/R-455A			R-452A		
Model	tons	Btu/hr	Model	tons	Btu/hr
RFGB08(E)-0.17	0.11	1,320	RFGB11(E)-0.13	0.09	1,080
RFGB08(E)-0.35	0.23	2,760	RFGB11(E)-0.25	0.18	2,160
RFGB08(E)-0.70	0.30	3,600	RFGB11(E)-0.50	0.24	2,880
RFGB08(E)-1.0	0.57	6,840	RFGB11(E)-0.70	0.46	5,520
RFGB08(E)-1.5	0.84	10,080	RFGB11(E)-1.0	0.68	8,160
RFGB08(E)-2.0	0.95	11,400	RFGB11(E)-1.4	0.76	9,120

* Conditions:

- 10°F Evaporator Temperature
- 110°F Condensing Temperature
- 100°F Liquid Temperature
- 150psi ΔP across TXV

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NECESSARY INFORMATION FOR CUSTOMIZING RFGB MODELS

Please specify all information in the Request Form below.

TXV REQUEST FORM - RFGB SERIES			
CUSTOMER NAME:			
SYSTEM REFRIGERANT:			
SYSTEM CONDITIONS:			
Evaporator Capacity (tons):	Evaporator Temperature:		
Condensing Temperature:	Liquid Temperature:		
Distributor ΔP (psi):	High Side Loss (psi):		
BLEED % (if applicable):			
STATIS SUPERHEAT SET POINT:			
THERMOSTATIC CHARGE:			
<input type="checkbox"/> Evaporator Temperature Range: -40°F to 50°F; NO MOP			
<input type="checkbox"/> Custom Evaporator Temperature Range: to ; MOP			
VALVE BODY CONFIGURATION:			
<input type="checkbox"/> Angle <input type="checkbox"/> Straight Through <input type="checkbox"/> Angle w/ Removable 100 Mesh Inlet Stainer			
CONNECTION SIZES			
Inlet: <input type="checkbox"/> 1/4" ODF	<input type="checkbox"/> 3/8" ODF	<input type="checkbox"/> Other:	
Outlet: <input type="checkbox"/> 3/8" ODF	<input type="checkbox"/> 1/2" ODF	<input type="checkbox"/> Other:	
External Equalizer: <input type="checkbox"/> Internally Equalized	<input type="checkbox"/> 1/4" ODF	<input type="checkbox"/> Other:	
POWER ELEMENT CAPILLARY TUBE LENGTH:			
<input type="checkbox"/> 30" ODF <input type="checkbox"/> Other:			
BULB MOUNTING PREFERENCE:			
<input type="checkbox"/> Strap <input type="checkbox"/> Clip <input type="checkbox"/> Other (not standard):			
Please note any other desirable features, markings, labelling, or options not mentioned above:			
EAU:			