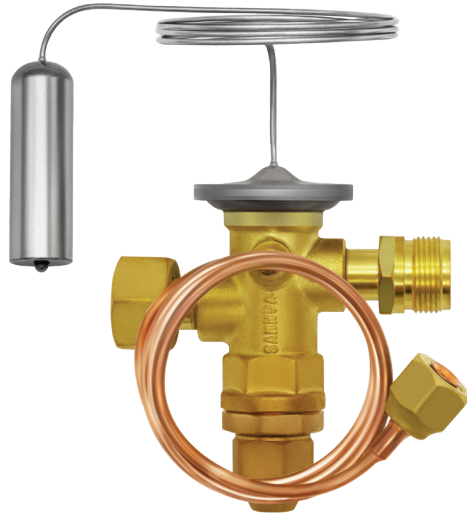


## RFGF SERIES | *Thermostatic Expansion Valve*



RFGF series thermostatic expansion valves are used to regulate refrigerant flow into the evaporator while controlling the refrigerant's superheat at the outlet of the evaporator. They incorporate an internal check valve which makes them ideal for use in AC/ Heat pump systems.

### FEATURES

- AN INTERNAL CHECK VALVE WITH A VERY LOW PRESSURE DROP AT FULL FLOW
- STAINLESS STEEL POWER ELEMENT, CAPILLARY TUBE AND BULB
- ADSORPTION CHARGE FOR STABLE SYSTEM OPERATION AND HIGHER EFFICIENCY
- LASER WELDED POWER ELEMENT

### GENERAL SPECIFICATION

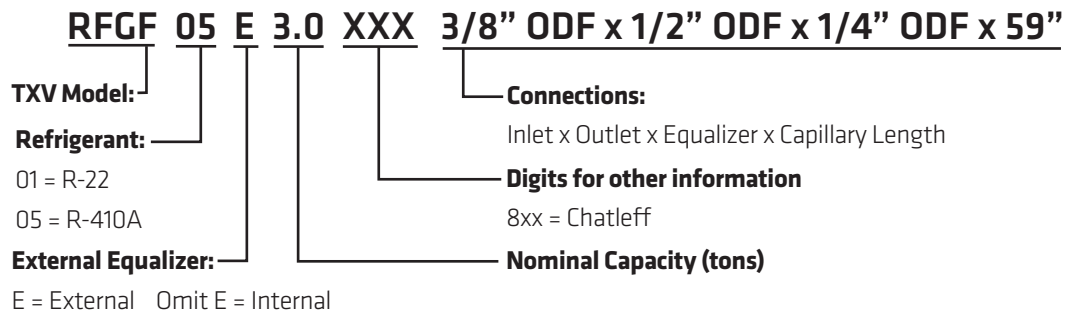
- Applicable UL Approved Refrigerants: R22, R23, R290, R32, R407C, R407A, R407F, R448A, R449A, R1234yf, R1234ze, R452A, R450A, R513A, R404A, R507, R410A, R134a, R454B, R454C, R455A, R471A, R407H, R600a, R1270, R452B, R422D, R12, R123, R152A, R422, R422A, R426A, R427A, R447A, R449B, R452C, R454A, R457A, R500, R502, R507A, R600
- Maximum operating pressure: 700 psig
- Installation position: It is recommended to install the power element in the upright position with flow direction from inlet A to outlet D
- Certifications: UL File Number: SA44768

## RFGF SERIES | *Thermostatic Expansion Valve*

### TECHNICAL PARAMETERS

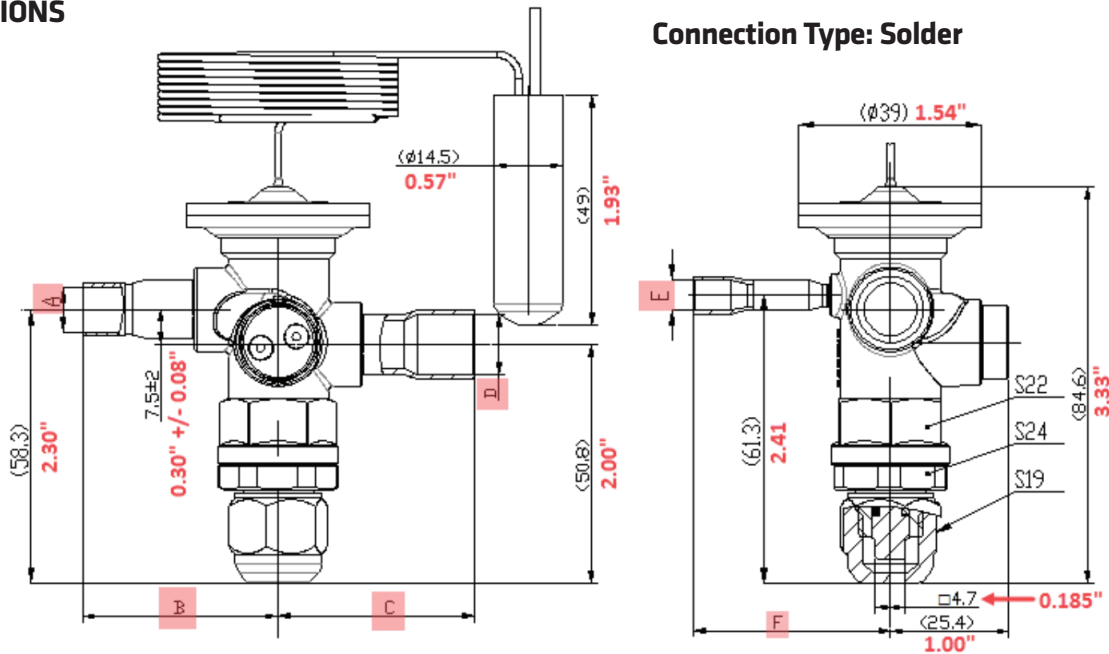
- RFGF valves are available in straight through configuration
- Adjustable superheat or fixed superheat
- Internal check valve
- Connection types:
  - Chatleff: Inlet: Male Chatleff  
Outlet: Female Chatleff  
External Equalizer: 1/8" ODx24" with 1/4" Female SAE Flare
  - Solder: Inlet: 3/8"ODF, 1/2"ODF, or 5/8"ODF  
Outlet: 3/8"ODF, 1/2"ODF, or 5/8"ODF  
External Equalizer: 1/4"ODF
- Capillary tube length: 60" (1500mm)
- Power element charge and MOP:
- Temperature range = -22°F to 50°F; with or without 59°F MOP

### MODEL DESIGNATION



## RFGF SERIES | Thermostatic Expansion Valve

### DIMENSIONS

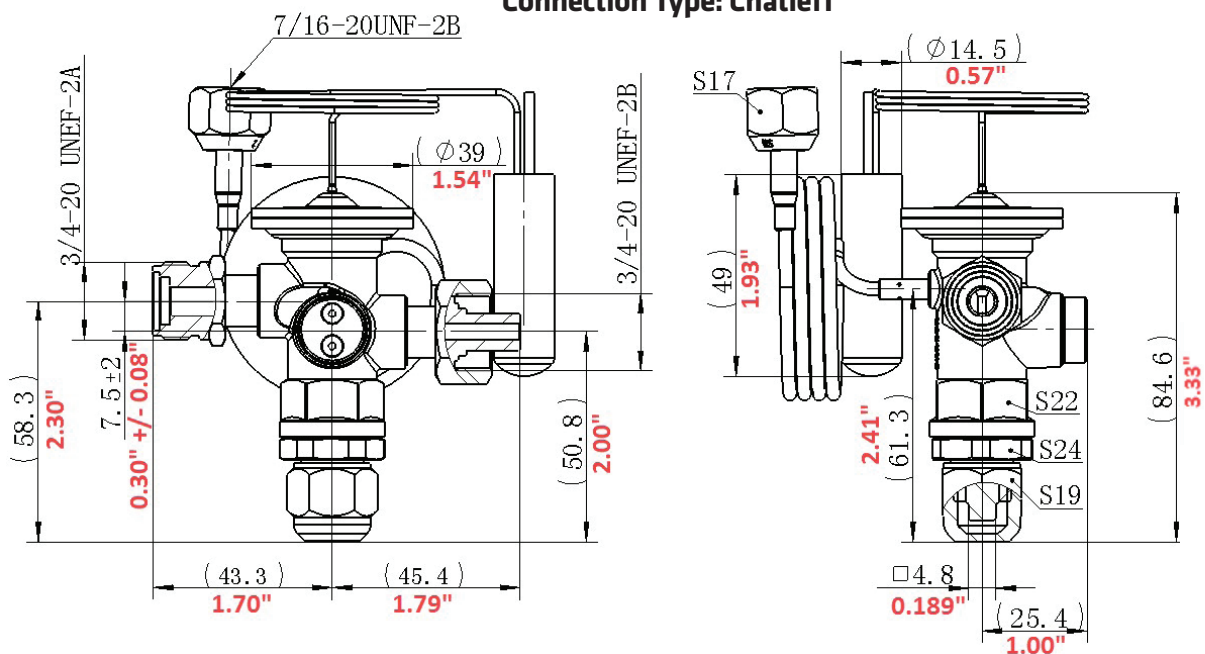


Inlet Solder Connection Size	Dim A in (mm)	Dim B in (mm)
3/8" ODF	.378 / .384 (9.60/9.75)	1.62 +/- .06 (41.1 +/- 1.5)
1/2" ODF	1.65 +/- .06 (41.9 +/- 1.5)	.504/.510
5/8" ODF	Available on request	

Outlet Solder Connection Size	Dim C in (mm)	Dim D in (mm)
3/8" ODF	.378 / .384 (9.60/9.75)	1.62 +/- .06 (41.1 +/- 1.5)
1/2" ODF	1.65 +/- .06 (41.9 +/- 1.5)	.504/.510 (12.80/12.95)
5/8" ODF	Available on request	

External Equalizer Solder Connection Size	Dim E in (mm)	Dim F in (mm)
1.4" ODF	.256 / .262 (6.50 / 6.65)	1.65 +/- .06 (41.9 +/- 1.5)

### Connection Type: Chatleff



## RFGF SERIES | *Thermostatic Expansion Valve*

### REFRIGERANT CAPACITY TABLES

Ref.	Model Number	Nominal Capacity (tons)	Btu/hr
R32 (200 psi)	RFGK13E-1A	0.87	10,440
	RFGK13E-1.5A	1.54	18,480
	RFGK13E-2A	2.03	24,360
	RFGK13E-2.5A	2.60	31,200
	RFGK13E-3A	3.04	36,480
	RFGK13E-4A	3.9	46,800
	RFGK13E-5A	4.76	57,120
	RFGK13E-6A	6.08	72,960
	RFGK13E-7A	6.7	80,400
	RFGK13E-8A	7.7	92,400
	RFGK13E-9A	9.08	108,960
RFGK13E-10A	9.9	118,800	
R290 (100 psi)	RFGK06E-1	1.10	13,200
	RFGK06E-1.5	1.57	18,840
	RFGK06E-2	2.16	25,920
	RFGK06E-2.5	2.67	32,040
	RFGK06E-3	3.29	39,480
	RFGK06E-4	4.32	51,840
	RFGK06E-5	5.46	65,520
	RFGK06E-6	6.45	77,400
R454B (200 psi)	RFGK19E-1A	1.00	12,000
	RFGK19E-1.5A	1.53	18,360
	RFGK19E-2A	1.95	23,400
	RFGK19E-2.5A	2.49	29,880
	RFGK19E-3A	2.93	35,160
	RFGK19E-4A	4.02	48,240
	RFGK19E-5A	5.04	60,480
	RFGK19E-6A	5.80	69,600
	RFGK19E-7A	6.83	81,960
RFGK19E-8A	7.45	89,400	

## RFGF SERIES | Thermostatic Expansion Valve

### REFRIGERANT CAPACITY TABLES

#### R-410A Capacities (tons)

	Nominal Capacity (tons)	Evaporator Temperature (°F)											
		50°						40°					
		Pressure Drop (psi)											
		80	120	160	200	240	280	80	120	160	200	240	280
RFGF	1	0.74	0.91	1.05	1.17	1.28	1.38	0.72	0.88	1.02	1.14	1.24	1.34
	1.5	1.12	1.37	1.58	1.77	1.94	2.09	1.06	1.29	1.49	1.67	1.83	1.98
	2	1.50	1.84	2.12	2.37	2.60	2.81	1.41	1.73	2.00	2.24	2.45	2.65
	3	2.24	2.74	3.17	3.54	3.88	4.19	2.13	2.61	3.02	3.37	3.69	3.99
	4	3.00	3.67	4.24	4.74	5.19	5.61	2.83	3.47	4.00	4.47	4.90	5.29
	5	3.74	4.58	5.29	5.91	6.47	6.99	3.55	4.35	5.02	5.61	6.14	6.64
	6	4.48	5.48	6.33	7.08	7.75	8.38	4.27	5.22	6.03	6.74	7.39	7.98
	7	5.24	6.41	7.41	8.28	9.07	9.80	4.96	6.08	7.02	7.85	8.60	9.28
	8	5.98	7.32	8.45	9.45	10.4	11.2	5.68	6.96	8.03	8.98	9.84	10.6
9	6.72	8.22	9.50	10.6	11.6	12.6	6.38	7.81	9.02	10.1	11.0	11.9	

	Nominal Capacity (tons)	Evaporator Temperature (°F)											
		20°						0°					
		Pressure Drop (psi)											
		80	120	160	200	240	280	80	120	160	200	240	280
RFGF	1	0.53	0.65	0.75	0.83	0.91	0.99	0.44	0.51	0.57	0.62	0.67	0.72
	1.5	0.78	0.96	1.11	1.24	1.35	1.46	0.67	0.78	0.87	0.95	1.03	1.10
	2	1.03	1.27	1.46	1.64	1.79	1.94	0.91	1.05	1.17	1.28	1.38	1.48
	3	1.56	1.91	2.21	2.47	2.71	2.92	1.34	1.55	1.74	1.90	2.05	2.20
	4	2.09	2.56	2.96	3.31	3.62	3.91	1.81	2.09	2.34	2.56	2.77	2.96
	5	2.60	3.18	3.67	4.11	4.50	4.86	2.25	2.60	2.90	3.18	3.44	3.67
	6	3.13	3.83	4.42	4.94	5.41	5.85	2.72	3.14	3.51	3.84	4.15	4.43
	7	3.65	4.47	5.17	5.78	6.33	6.83	3.16	3.64	4.07	4.46	4.82	5.15
	8	4.16	5.10	5.88	6.58	7.21	7.78	3.60	4.15	4.64	5.08	5.49	5.87
9	4.69	5.74	6.63	7.41	8.12	8.77	4.06	4.69	5.24	5.74	6.20	6.63	

### LIQUID TEMPERATURE CORRECTION FACTORS

Refrigerant	Liquid Temperature Entering TXV (°F)											
	40°	50°	60°	70°	80°	90°	98°	100°	110°	120°	130°	140°
	Correction Factor											
<b>R-410A</b>	<b>1.45</b>	<b>1.37</b>	<b>1.30</b>	<b>1.22</b>	<b>1.14</b>	<b>1.06</b>	<b>1.00</b>	<b>0.98</b>	<b>0.90</b>	<b>0.81</b>	<b>0.72</b>	<b>0.62</b>

Ratings are in accordance with AHRI Standard 750-2016

## RFGF SERIES | *Thermostatic Expansion Valve*

### REFRIGERANT CAPACITY TABLES

#### R-22 Capacities (tons)

	Nominal Capacity (tons)	Evaporator Temperature (°F)											
		50°						40°					
		Pressure Drop (psi)											
		75	100	125	150	175	200	75	100	125	150	175	200
RFGF	1	0.92	1.06	1.19	1.30	1.40	1.50	0.87	1.00	1.12	1.22	1.32	1.41
	2	1.53	1.77	1.98	2.17	2.34	2.50	1.45	1.67	1.87	2.05	2.21	2.36
	3	2.29	2.64	2.95	3.23	3.49	3.73	2.16	2.49	2.78	3.05	3.29	3.52
	4	3.07	3.54	3.96	4.34	4.68	5.01	2.90	3.35	3.75	4.10	4.43	4.74
	5	3.82	4.41	4.93	5.40	5.83	6.24	3.60	4.16	4.65	5.09	5.50	5.88
	6	4.62	5.34	5.97	6.54	7.06	7.55	4.36	5.04	5.63	6.17	6.67	7.13

	Nominal Capacity (tons)	Evaporator Temperature (°F)											
		20°						0°					
		Pressure Drop (psi)											
		75	100	125	150	175	200	75	100	125	150	175	200
RFGF	1	0.63	0.73	0.82	0.89	0.97	1.03	0.44	0.51	0.57	0.62	0.67	0.72
	2	1.06	1.22	1.36	1.49	1.61	1.73	0.74	0.85	0.95	1.04	1.12	1.20
	3	1.58	1.82	2.03	2.23	2.41	2.57	1.10	1.27	1.42	1.56	1.68	1.80
	4	2.12	2.45	2.74	3.00	3.24	3.46	1.48	1.71	1.91	2.09	2.26	2.42
	5	2.64	3.05	3.41	3.74	4.03	4.31	1.85	2.14	2.39	2.62	2.83	3.03
	6	3.19	3.68	4.11	4.51	4.87	5.20	2.23	2.57	2.87	3.15	3.40	3.63

### LIQUID TEMPERATURE CORRECTION FACTORS

Refrigerant	Liquid Temperature Entering TXV (°F)												
	40°	50°	60°	70°	80°	90°	98°	100°	110°	120°	130°	140°	
	Correction Factor												
<b>R-22</b>	<b>1.33</b>	<b>1.27</b>	<b>1.22</b>	<b>1.16</b>	<b>1.10</b>	<b>1.05</b>	<b>1.00</b>	<b>0.98</b>	<b>0.93</b>	<b>0.87</b>	<b>0.81</b>	<b>0.74</b>	

Ratings are in accordance with AHRI Standard 750-2016