



SPORLAN

TYPE RC

COMPACT and ADJUSTABLE THERMOSTATIC EXPANSION VALVE with an INTERNAL CHECK VALVE

for REPLACEMENT of CBI AND CBBI valves on
AIR CONDITIONING and HEAT PUMP SYSTEMS

Type RC valves are available for replacement of types CBI and CBBI valves. These valves contain internal check valves to allow reverse flow on heat pump applications. This eliminates the need for an external check valve piped around the TEV for reverse flow. The RC valve can be used on Heat Pump and Air Conditioning (cooling only) applications. This allows you to reduce inventory by using the same valve to replace the I and BI valves. The RC valve can even be used to replace the RI valve (non-RPB versions only).

The small physical size of the Type RC valve makes replacement of the CBI, CBBI, BI, and I valves easier when compared to the larger size models (Type G, C, or S).

Exact replacement valves for the CBI, CBBI, BI, and I valves are available from the OEM and should be ordered from the OEM during the warranty period of the equipment, or when special features such as specific bleed ports, connections, configurations, capillary tube lengths, etc., are required.

Replaceable elements available for these valves are the following: Refrigerant 22, Element Kit Number KT-43-VGA-30", and Refrigerant 410A, Element Kit Number KT-45-ZGA-30".

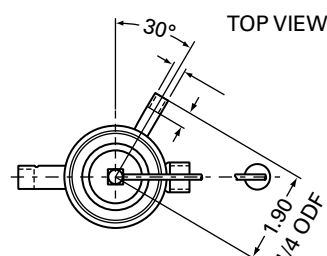
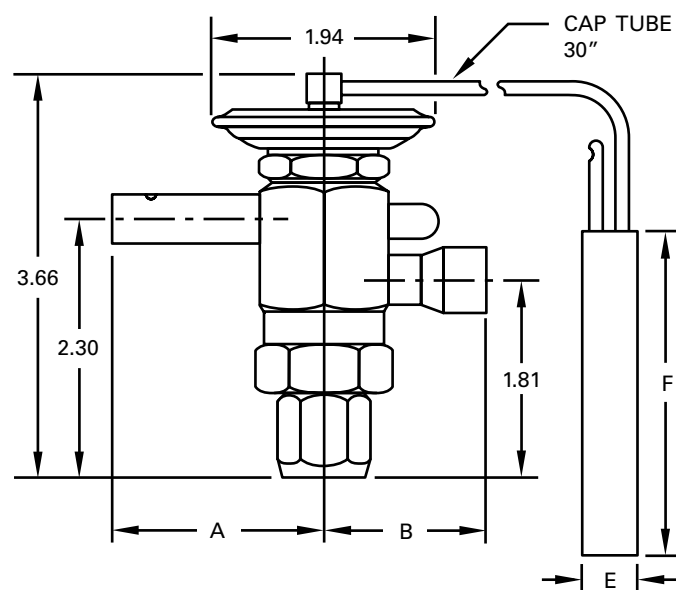
SPECIFICATIONS – The Type RC thermostatic expansion valves are only available with the specifications shown below.

SPECIFICATIONS					
Valve Type	Connections - Inches ① Bold figures are standard and will be furnished unless otherwise directed.		Refrigerant	External Equalizer ②,③	Capillary Tube Length - Inches
	Inlet	Outlet			
RCVE-2-GA	3/8 SAE	1/2 SAE	22	1/4 SAE 1/4 ODF	30 ONLY
RCVE-3-GA	3/8 ODF	1/2 ODF			
RCVE-4-GA	1/2 ODF	1/2 ODF			
RCVE-5-GA	1/2 SAE	1/2 SAE			
RCVE-6-GA	1/2 ODF	5/8 ODF			
RCZE-2-GA	3/8 ODF	1/2 ODF	410A	1/4 ODF	30 ONLY
RCZE-3-GA					
RCZE-4-GA	1/2 ODF	1/2 ODF			
RCZE-5-GA	1/2 ODF	5/8 ODF			
RCZE-6-GA					

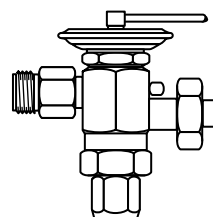
① Valves are also available as special order with Chatleff connections.

② Valves with SAE inlet and outlet fittings are available only with the 1/4" SAE flare external equalizer; valves with ODF fittings are available only with the 1/4" ODF external equalizer.

③ Valves with Chatleff fittings are available only with the 1/8" OD X 24" long tube with flare and nut external equalizer.



CHATLEFF FITTINGS
OPTION ③



DIMENSIONS - Inches

Capacity Tons	Fitting Size	A	B
2 & 3	3/8 SAE	1.92	---
	1/2 SAE	---	1.92
	3/8 ODF	1.92	---
	1/2 ODF	---	1.45
4, 5 & 6	1/2 SAE	1.89	1.92
	1/2 ODF	1.98	1.45
	5/8 ODF	---	1.53
Chatleff Fittings		1.89	1.71

BULB SIZE - Inches

Thermostatic Charge	Dim. "E"	Dim. "F"
ZGA	.75	2.00
VGA	.75	2.00

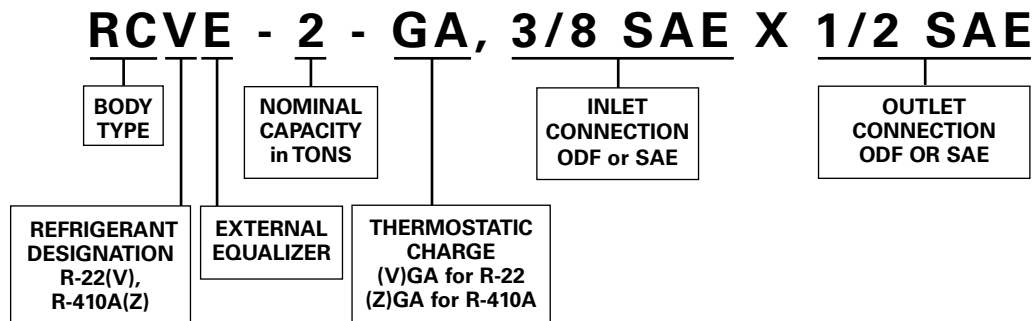
SELECTION – The selection of the proper RC valve is simplified if complete system operating conditions are available. This includes evaporator and condensing temperatures, to calculate the pressure drop across the valve, liquid temperature at the valve inlet, and evaporator load in tons.

When operating conditions are **not** readily available, the RC can be selected for the same capacity as the CBI, CBBI, BBI, BI, and I it is replacing. Since valves have different superheat settings, the RC valve can be adjusted for peak performance.

CAPACITY RATINGS – The capacity ratings for the Type RC thermostatic expansion valves are identical to the ratings for our Type BBI and CBBI models. The tables are based on 100°F vapor free liquid at the valve inlet. For liquid temperatures other than 100°F multiply the capacity from the table at the available pressure drop for the valve in question by the correction factor in the Refrigerant Liquid Temperature Correction Factor Table.

Valve Type	Nominal Capacity	Evaporator Temperature (°F)								
		40			20			0		
		Pressure Drop Across Valve (psi)								
		100	125	150	100	125	150	100	125	150
RCVE-2-GA	2	2.30	2.57	2.82	2.24	2.51	2.75	2.01	2.24	2.46
RCVE-3-GA	3	3.20	3.58	3.92	3.12	3.49	3.82	2.79	3.12	3.42
RCVE-4-GA	4	4.20	4.70	5.15	4.10	4.58	5.02	3.66	4.09	4.49
RCVE-5-GA	5	5.00	5.60	6.13	4.88	5.45	5.97	4.36	4.87	5.34
RCVE-6-GA	6	6.01	6.71	7.36	5.85	6.54	7.17	4.72	5.28	5.78
Valve Type	Nominal Capacity	Pressure Drop Across Valve (psi)								
		150	175	200	150	175	200	150	175	200
RCZE-2-GA	2	2.67	2.89	3.09	2.60	2.81	3.01	2.33	2.51	2.69
RCZE-3-GA	3	3.71	4.01	4.29	3.62	3.91	4.18	3.24	3.50	3.74
RCZE-4-GA	4	4.88	5.26	5.63	4.76	5.14	5.49	4.25	4.59	4.91
RCZE-5-GA	5	5.80	6.27	6.70	5.66	6.11	6.54	5.06	5.46	5.84
RCZE-6-GA	6	6.96	7.52	8.04	6.79	7.34	7.84	5.48	5.92	6.32
Liquid Correction Factor R-22										
Temperature (°F)		60°	70°	80°	90°	100°	110°	120°	130°	140°
Correction Factor		1.23	1.17	1.12	1.06	1.00	0.94	0.88	0.82	0.76
Liquid Correction Factor R-410A										
Temperature (°F)		60°	70°	80°	90°	100°	110°	120°	130°	140°
Correction Factor		1.32	1.24	1.16	1.08	1.00	0.92	0.83	0.73	0.62

ORDERING INSTRUCTIONS – When ordering this thermostatic expansion valve, specify completely as follows:



DISTRIBUTION: W & C



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