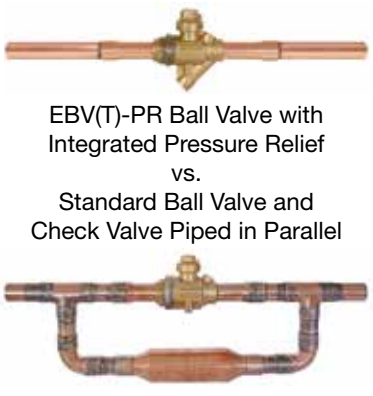
Ball Valve with Integrated Pressure Relief

Type EBV(T)-PR

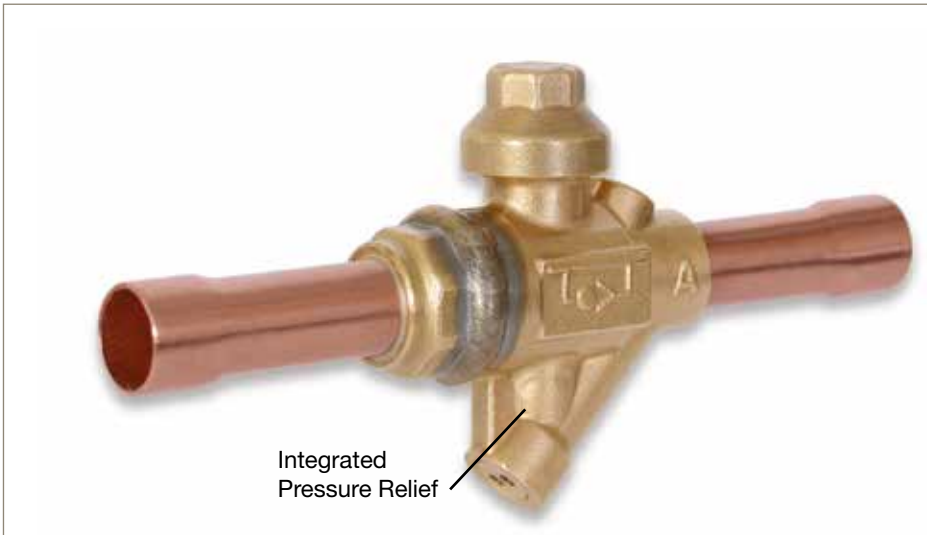
Advantages

For greater system design flexibility and increased productivity, specify the EBV(T)-PR ball valve with integrated pressure relief. This compact solution eliminates the check valve and associated brazing involved when piping a ball valve and check valve in parallel to protect a system from over pressurization.

- Compact design **simplifies installation**
- Eliminates the check valve and associated piping, resulting in significant **material cost savings**
- Decreases braze joints resulting in **labor savings and increased productivity**
- Minimizes the potential for leaks and decreases nuisance call-backs



EBV(T)-PR Ball Valve with Integrated Pressure Relief
vs.
Standard Ball Valve and Check Valve Piped in Parallel



Features

- Allows for positive shut off in one direction and flow in the other direction whenever pressure differential is present (the integrated pressure relief feature is one direction only)
- Protects system from pressure spikes when servicing equipment
- Welded body joint. Factory tested to ensure positive, leak-free performance. Forged brass body construction with extended K65® fittings and optional access fittings
- Full size ports for unrestricted flow on most sizes 10 mm (3/8") through 28 mm (1-1/8")
- Dual Teflon seals surround the polished, brass ball to prevent leakage. Stem seal and stem washer provide the primary stem seal. Bottom load stem for safety
- Stainless steel stop plate ensures fully open to fully closed with a 1/4 turn
- All EBV(T)-PR ball valves use C19400 (K65) copper fitting material

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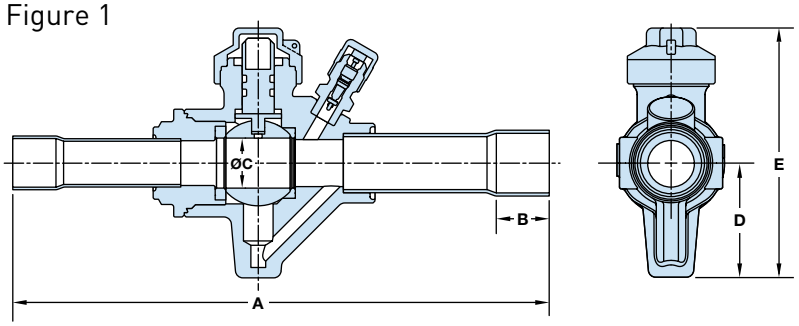
Specifications

- Full refrigeration service temperature range: -40°C to +149°C (-40°F to +325°F)
- Design working pressure: 90 bar (1,305 psig)
- Integral Pressure Relief:

- Crack open pressure: <5 psid
- Full open pressure: 50 psid
- Wide open flow: 1.93 gpm H2O @ 50 psid

- For refrigeration or air conditioning systems
- Suitable for use with Class A1 refrigerants: HFC, HCFC, HFO and CO_2
- Art. 4.3 as per 2014/68/EU (PED)

Figure 1



Dimensions

EBV(T)-PR Series - Inches

Valve Type	Part Number	Connection (ODF)	Dim. A (mm)	Dim. B (mm)	Dim. C (mm)	Dim. D (mm)	Dim. E (mm)	Kv m3/h
EBV-PR-1030	502199	3/8"	165,10	7,87	12,70	39,62	78,23	3,67
EBV-PR-1040	502200	1/2"	165,10	9,65	12,70	39,62	78,23	5,97
EBV-PR-1050	502201	5/8"'	165,10	12,70	12,70	39,62	78,23	11,86
EBV-PR-1060	502202	3/4"	184,15	15,75	19,05	45,47	91,19	17,93
EBV-PR-1070	502203	7/8"	184,15	19,05	19,05	45,47	91,19	25,86
EBV-PR-1090	502204	1-1/8"	215,90	23,11	25,40	54,10	104,39	52,29
EBVT-PR-1030	502205	3/8"	165,10	7,87	12,70	39,62	78,23	3,67
EBVT-PR-1040	502206	1/2"	165,10	9,65	12,70	39,62	78,23	5,97
EBVT-PR-1050	502207	5/8"'	165,10	12,70	12,70	39,62	78,23	11,86
EBVT-PR-1060	502208	3/4"	184,15	15,75	19,05	45,47	91,19	17,93
EBVT-PR-1070	502209	7/8"	184,15	19,05	19,05	45,47	91,19	25,86
EBVT-PR-1090	502210	1-1/8"	215,90	23,11	25,40	54,10	104,39	52,29

EBV(T)-PR Series - Millimeters

Valve Type	Part Number	Connection (ODF)	Dim. A (mm)	Dim. B (mm)	Dim. C (mm)	Dim. D (mm)	Dim. E (mm)	Kv m3/h
EBV-PR-10MM	502399	10 mm	165,10	8,00	12,70	39,62	78,23	3,67
EBV-PR-12MM	502400	12 mm	165,10	10,00	12,70	39,62	78,23	5,97
EBV-PR-16MM	502401	16 mm	165,10	13,00	12,70	39,62	78,23	11,86
EBV-PR-18MM	502402	18 mm	184,15	16,00	19,05	45,47	91,19	17,93
EBV-PR-22MM	502403	22 mm	184,15	19,00	19,05	45,47	91,19	25,86
EBV-PR-28MM	502405	28 mm	215,90	24,00	25,40	54,10	104,39	52,29
EBVT-PR-10MM	502406	10 mm	165,10	8,00	12,70	39,62	78,23	3,67
EBVT-PR-12MM	502407	12 mm	165,10	10,00	12,70	39,62	78,23	5,97
EBVT-PR-16MM	502408	16 mm	165,10	13,00	12,70	39,62	78,23	11,86
EBVT-PR-18MM	502409	18 mm	184,15	16,00	19,05	45,47	91,19	17,93
EBVT-PR-22MM	502410	22 mm	184,15	19,00	19,05	45,47	91,19	25,86
EBVT-PR-28MM	502411	28 mm	215,90	24,00	25,40	54,10	104,39	52,29

The EBV(T)-PR valve will close in one direction and relieve pressure in the other direction. This single valve would replace a current ball valve plus a check valve plumbed around the ball valve.

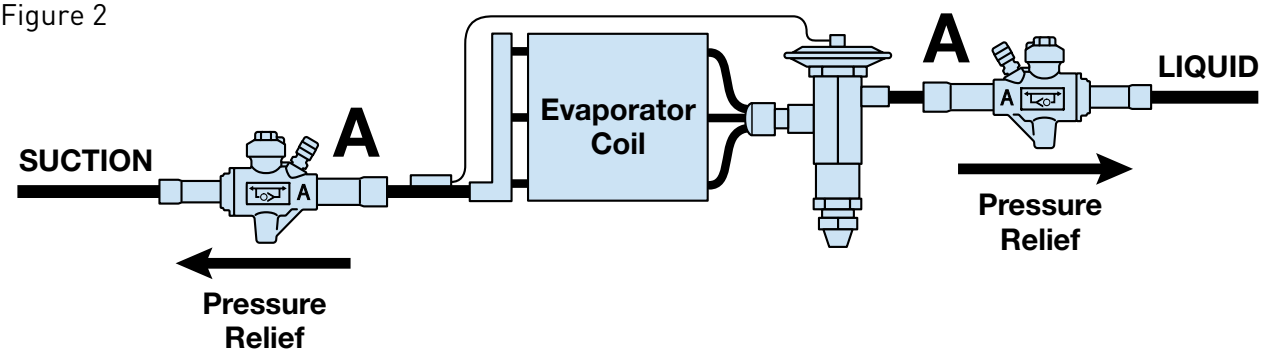
Allows evaporator coil to be isolated without over pressurizing due to warm up. May also have needs in loop piping and at the rack.

The symbol ‘A’ indicates the pressure relief side of the valve. Any pressure build up on the ‘A’ side with the ball valve in the closed position can relieve to the other side of the ball valve. When used on an evaporator coil, the ‘A’ side of the valve should always be on the coil side of the valve (refer to Figure 1).

This symbol indicates the direction of pressure relief and direction of check valve feature. Flow from left to right is check direction. Flow from right to left is pressure relief direction.

IMPORTANT: This valve has a pressure relief feature in one direction only. If installed incorrectly, pressures may drastically increase causing rupture of valve, piping and/or other components exposed to such pressure. This could cause damage to equipment and cause injury or possible death to anyone in the area.

Figure 2



The “A” side of the ball valve should always be on the same side as the coil.

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