December 2016 / **Bulletin 50-10-1**

Ball Valve with Integral Pressure Relief

Type EBV(T)-PR

SPORLAN

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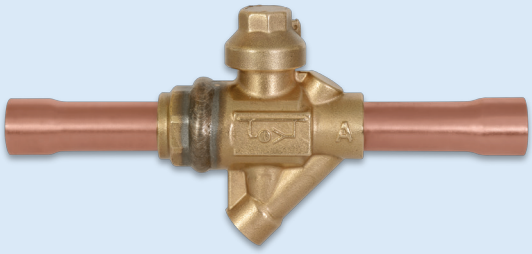


BALL VALVE WITH INTEGRAL PRESSURE RELIEF

EBV(T)-PR Series

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

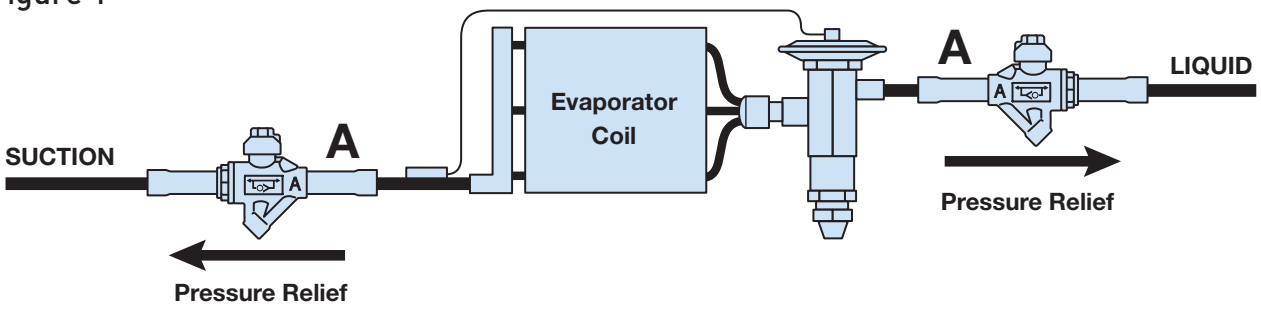
FEATURES

- 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 copper fittings and optional access fittings.
- Full size ports for unrestricted flow on most sizes, 3/8" (10 mm) through 1-1/8" (28 mm).
- 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 may be installed in any position.

SPECIFICATIONS

- Full refrigeration service temperature range: -40°F to +325°F (-40°C to +149°C)
- Design working pressure: 1015 psig (70 bar)
- For refrigeration or air conditioning systems
- Suitable for use with the following refrigerants: R-22, R-123, R-125, R-134a, R-236fa, R-402A, R-402B, R-404A, R-407A, R-407C, R-407F, R-410A, R-422D, R-448A, R-449A, R-450A, R-452A, R-507, R-513A, R-744
- Patent Pending

Figure 1

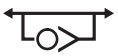


The "A" side of the ball valve should always be on the same side as the coil.

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. (See 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.

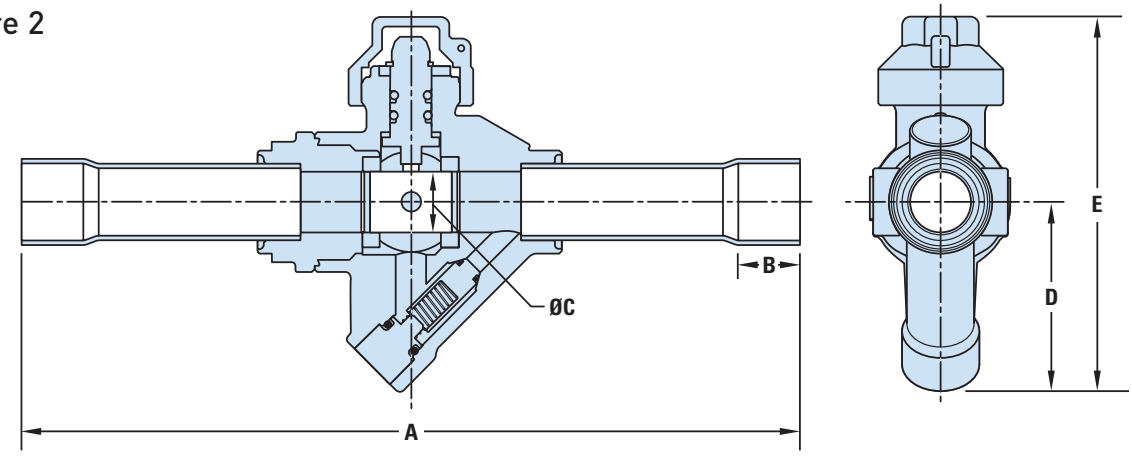
DIMENSIONS

EBV(T)-PR Series - Inches

Part Number	Valve Type	Connection (ODF)	Overall Length A	Socket Depth B	Port Size C	D	Overall Height E	Cv
502199	EBV-PR1030	3/8	6.50	0.31	0.50	1.56	3.08	4.3
502200	EBV-PR1040	1/2	6.50	0.38	0.50	1.56	3.08	7.0
502201	EBV-PR1050	5/8	6.50	0.50	0.50	1.56	3.08	13.9
502202	EBV-PR1060	3/4	7.25	0.62	0.75	1.79	3.59	21.0
502203	EBV-PR1070	7/8	7.25	0.75	0.75	1.79	3.59	30.3
502204	EBV-PR1090	1-1/8	8.50	0.91	1.00	2.13	4.11	61.3
502205	EBVT-PR1030*	3/8	6.50	0.31	0.50	1.56	3.08	4.3
502206	EBVT-PR1040*	1/2	6.50	0.38	0.50	1.56	3.08	7.0
502207	EBVT-PR1050*	5/8	6.50	0.50	0.50	1.56	3.08	13.9
502208	EBVT-PR1060*	3/4	7.25	0.62	0.75	1.79	3.59	21.0
502209	EBVT-PR1070*	7/8	7.25	0.75	0.75	1.79	3.59	30.3
502210	EBVT-PR1090*	1-1/8	8.50	0.91	1.00	2.13	4.11	61.3

*With access fitting.

Figure 2



NOMENCLATURE

Inches - Example: EBVT-PR1030

EBV	T	-	PR	1	03	0
Valve Type	Access Fitting		Pressure Relief	**Series:** 1 = Full Port 2 = Reduced Port	**Fitting Size:** (In eighths of an inch) ie: 03 = 3/8”	**Fitting Configuration:** 0 = ODF x ODF

INSTALLATION

Brazing Instructions

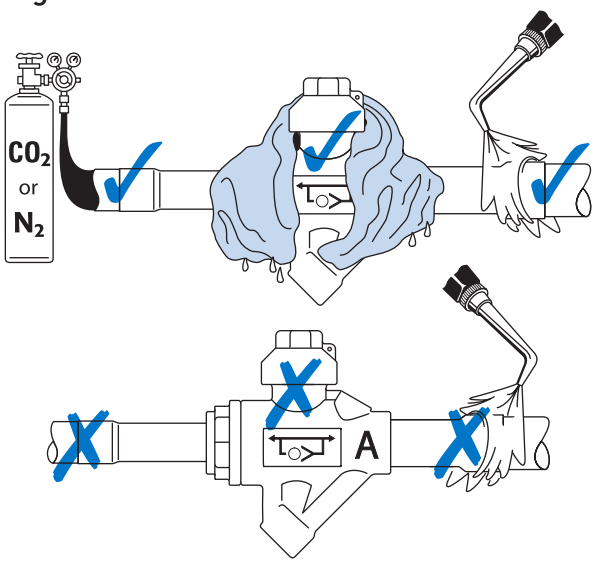
1. **DO NOT DISASSEMBLE.**
2. **WRAP THE BODY OF THE VALVE WITH A WET RAG** (to dissipate heat-overheating causes damage).
3. Bleed dry nitrogen or CO_2 through the valve while brazing.
4. Use flux with silver brazing alloys.
5. Flux not required with phoscopper alloys, on copper to copper joints, but flux is recommended for deeper penetration and more uniform results with all alloys.
6. Use large enough torch to rapidly heat joint to brazing temperature. Direct flame away from existing copper to brass joints.
7. Quench to reduce heat spread after brazing.

OPERATION NOTES

1. Remove seal cap. **CAUTION:** Pressure may be under seal cap, remove slowly.
2. Rotate stem using adjustable wrench. Turn 90° against the mechanical stops. Align open arrow with refrigerant line for non-directional flow. Turn clock-wise to close; counter-clockwise to open.
3. This valve contains mechanical stops. **DO NOT USE EXCESSIVE FORCE AGAINST STOPS OR PERMANENT DAMAGE MAY OCCUR.**
4. Install seal cap.
5. Valves are designed for use with R-22, R-123, R-125, R-134a, R-236fa, R-402A, R-402B, R-404A, R-407A, R-407C, R-407F, R-410A, R-422D, R-448A, R-449A, R-450A, R-452A, R-507, R-513A and R-744.

NOTICE: DO NOT DISASSEMBLE VALVE FOR ANY REASON.

Figure 3



For use with CFC, HFC, and HCFC refrigerants listed in CAN/CSA B52 and ANSI/ASHRAE 15 Sec. 9.2 where the saturation vapor pressure at 125°F (52°C) (high side) and 80°F (27°C) (low side) is less than the maximum design working pressure. After charging, mark unit with refrigerant type and oil type.

NOTE: WARRANTY IS VOID IF THESE INSTRUCTIONS ARE NOT FOLLOWED.

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