

VENTING | ACCESSORIES

SENSOR-INTEGRATED VENTS



Features

- Easy-to-install electronic indication of vent-opening activity.
- Contact-free and made of corrosion resistant materials for lifetime reliability.
- Compatible with all new and existing Series 5000 EPRVs and Series 6000 PVRVs with standard valves.

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FEATURES

Meets CSA Requirements

- Designed to meet HazLoc (CSA, IEC, etc.) requirements for Class 1, Div 1, Zone 0 installation. (note: End user is responsible for appropriate field certification.)

Lifetime Operation

- The sensors use intrinsically safe palladium-silver contacts housed in a corrosion resistant 316L stainless steel body.
- Rated for millions of operations in temperatures ranging from -60°C to 125°C [-76°F to 257°F].

Backwards Compatible

- Sensor kits can come pre-installed on a new vent, or sold as a backwards compatible upgrade kit for existing vents.
- The integration kits are designed with the end user in mind, making it easy to install in the field, including a set-and-forget sensor calibration.

Contact Free Design

- Because the sensors are ferro-magnetic, there is no physical contact between the sensing element and the vent, which eliminates wear over time and leaves the vent to operate without any change to its proven sealing performance and reliability.

Wired for Reliability

- Sensors can be wired into nearly any type of monitoring system with discrete inputs. No complicated set-ups or expensive wireless modems are required.

SPECIFICATIONS

PVRV Configuration

Materials	316L SS (Sensors) Aluminum (Conduit + Junction Box)
Compatibility	6" Throat PVRVs [2" through 6" ANSI 150#, 8" API 12F] [†] Standard valve [‡]
Sensor	Model FS-B724L
Contact Arrangement	SPCO / SPDT
Contact Material	Palladium-Silver
HazLoc	UL/CSA Class I, II, III Div. 1, Zone 0 Intrinsically Safe Group A, B, C, D, E, F, G
Temperature Rating	T4 -60°C to 125°C [-76°F to 257°F]
Enviro. Protection	IP66, 67 & 68 (24h @ 30m) / NEMA 4X & 6P
Safety Rating	SIL 2 / SC3
Electrical Rating §	3A @ 24 VDC, 4A @ 110/120 VAC, 2A @ 230/240 VAC
Conduit Entry	1/2" NPT

EPRV Configuration

Materials	316L SS (Sensors) 304/430 SS (Bracket)
Compatibility	Single and Dual-arm EPRVs [8" through 24" ANSI 150 / API]
Sensor	Model FS-B722-WLR
Contact Arrangement	SPCO / SPDT
Contact Material	Palladium-Silver
HazLoc	UL/CSA Class I, II, III Div. 1, Zone 0 Intrinsically Safe Group A, B, C, D, E, F, G
Temperature Rating	T4/T6 -60°C to 125°C [-76°F to 257°F]
Enviro. Protection	IP66, 67 & 68 (24h @ 30m) / NEMA 4X & 6P
Safety Rating	SIL 2 / SC3
Electrical Rating §	3A @ 24 VDC, 4A @ 110/120 VAC, 2A @ 230/240 VAC
Conduit Entry	1/2" NPT

§ Electrical rating limited to **30 V, 250 mA, 1.3 W** for intrinsically safe applications.

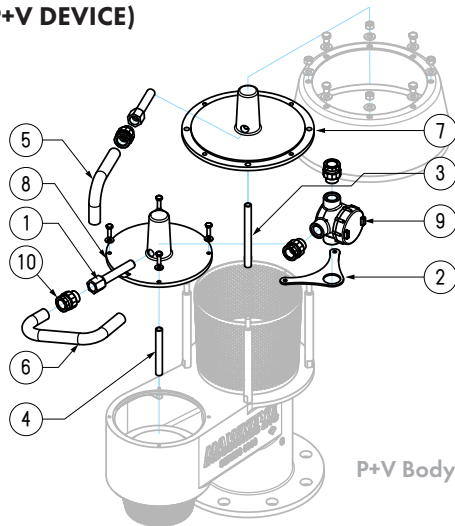
[†] Sensor configurations for 12" throat devices (8, 10 and 12" ANSI 150# connections) in development.

[‡] Not compatible with UBR valve technology.

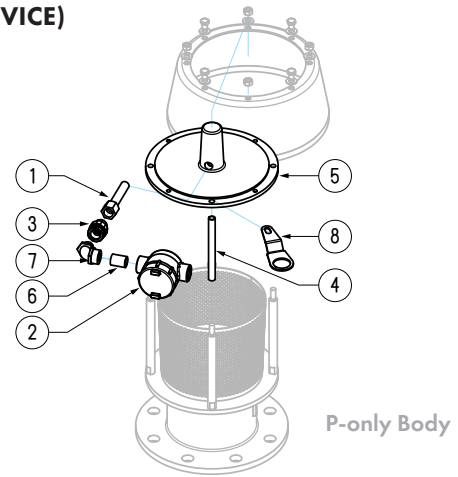
§ Electrical rating limited to **30 V, 250 mA, 1.3 W** for intrinsically safe applications.

PARTS LIST & MATERIALS OF CONSTRUCTION

PVRV (P+V DEVICE)



PVRV (P DEVICE)



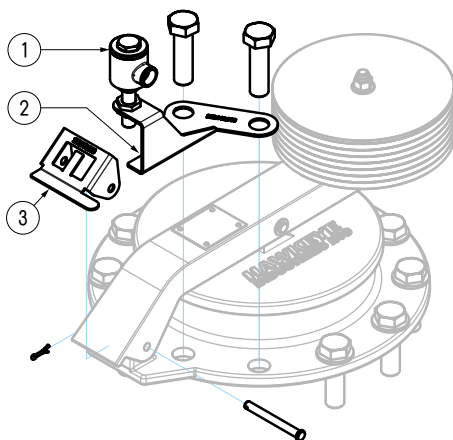
#	P/N	Part Name	Material
1	010.991.010	Sensor	316 SS
2	220.800.060	Support Bracket	Aluminum
3	220.301.080	Upper Guide Rod (Pressure)	SD 2507
4	220.301.060	Upper Guide Rod (Vacuum)	SD 2507
5	220.800.070	Conduit (Pressure)	Aluminum
6	220.800.080	Conduit (Vacuum)	Aluminum
7	220.300.011	Sensor-ported Bonnet (Pressure)	Aluminum
8	220.300.021	Sensor-ported Bonnet (Vacuum)	Aluminum
9	010.990.010	Junction Box	Aluminum
10	010.5B1.010	Union	Aluminum

#	P/N	Part Name	Material
1	010.991.010	Sensor	316 SS
2	010.990.010	Junction Box	Aluminum
3	010.5B1.010	Union	Aluminum
4	220.301.080	Upper Guide Rod	SD 2507
5	220.300.021	Sensor-ported Bonnet	Aluminum
6	010.541.010	Nipple	Aluminum
7	010.5C1.010	Elbow	Aluminum
8	220.800.065	Support Bracket	304 SS

Pipeaway configuration substitutes items below into the parts list above.

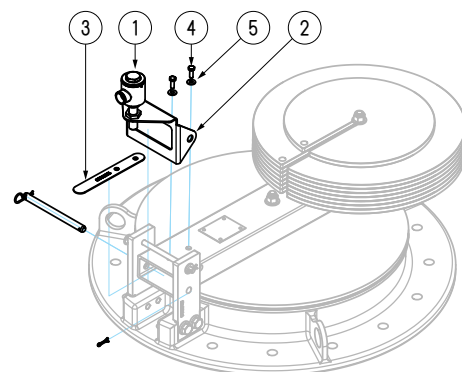
#	P/N	Part Name	Material
7	220.300.111	Sensor-ported Bonnet (Pressure Pipeaway)	Aluminum

EPRV (8 TO 12" SIZES)



#	P/N	Part Name	Material
1	010.991.020	Sensor c/w lock nuts	316 SS
2	225.80x.010	Support Bracket	304 SS
3	225.80x.010	Target Bracket	430 SS

EPRV (16 TO 24" SIZES)



#	P/N	Part Name	Material
1	010.991.020	Sensor c/w locknuts	316 SS
2	225.816.310	Support Bracket	304 SS
3	225.816.320	Target Bracket	430 SS
4	010.006.080	1/4-20 Hex Cap Screw	18-8SS
5	010.0B6.040	1/4 Washer	18-8SS

ORDERING INFORMATION

Sensors can be included with PVRV devices at time of order, or easily retrofitted on existing vents. Refer to PVRV brochures for more information on configuring a new device with sensors.

Sensor kits for EPRVs are sold and installed separately. Sensor kits are compatible with all existing EPRV devices.

Refer to the part numbers below to configure a EPRV sensor kit or PVRV retrofit sensor kit.

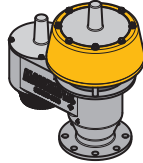
PVRV Sensor Retrofit Kit

PVRV	-	PSK	X	-	Y
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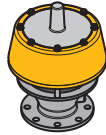
[X] Device Configuration	
Type	Flag
Pressure + Vacuum	1
Pressure only	2
Pipeaway	3

[Y] Sensor Locations	
Type	Flag
Pressure and Vacuum Valves	1
Only Pressure Valve	2
Only Vacuum Valve	3

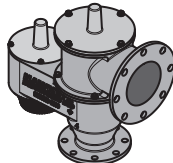
Examples	
PVRV SENSOR RETROFIT KIT P&V SENSORS FOR P+V DEVICE	PVRV-PSK1-1
PVRV SENSOR RETROFIT KIT P SENSORS FOR P+V DEVICE	PVRV-PSK1-2
PVRV SENSOR RETROFIT KIT P SENSORS FOR P ONLY DEVICE	PVRV-PSK2-2



P+V DEVICE, X = 1



P DEVICE, X = 2



PA DEVICE, X = 3

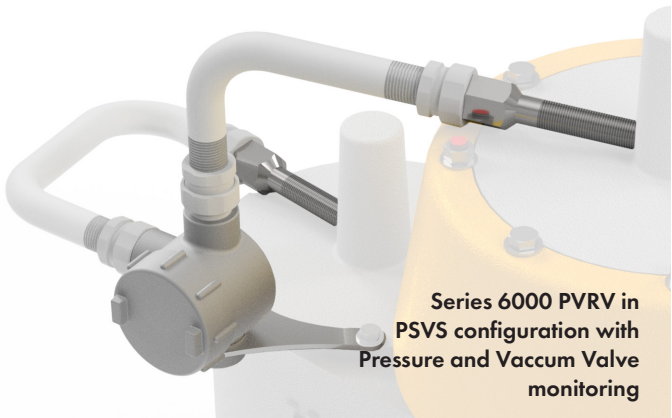
EPRV Sensor Add-on Kit

EPRV	-	PSK	X	-	R
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[X] Sensors	
EPRV Size & Bolt Pattern	Flag
8" API 12F	1
8" ANSI 150#	2
10" ANSI 150#	3
12" ANSI 150#	4
16" - 24" API / ANSI	5

[R] Reserved	
	Flag
	0

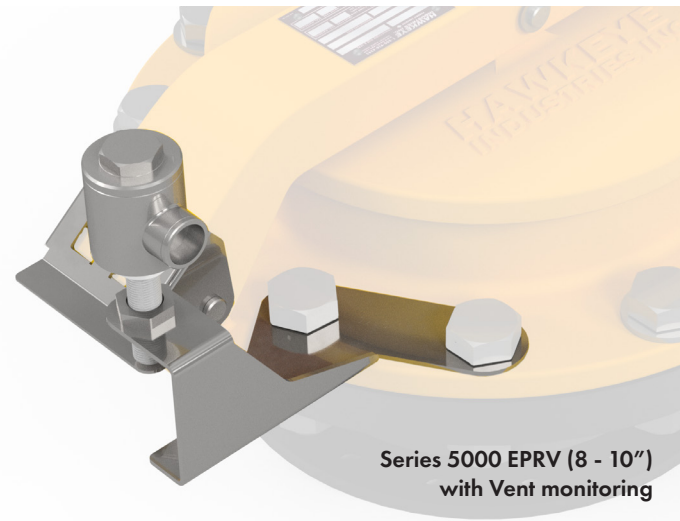
Examples	
EPRV SENSOR KIT 8" API 12F	EPRV-PSK1-0
EPRV SENSOR KIT 16" TO 24" ANSI 150#, 20 & 24" API 650	EPRV-PSK5-0



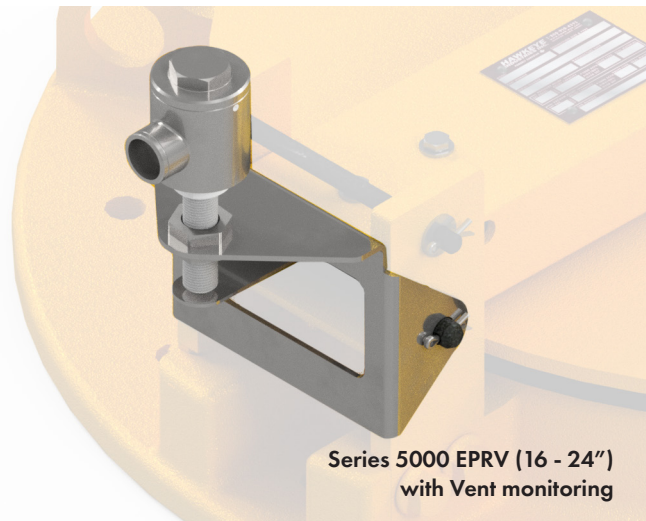
Series 6000 PVRV in PSVS configuration with Pressure and Vacuum Valve monitoring

HAZLOC FIELD CERTIFICATION

All components supplied with the vent sensors are suitable for Hazardous Location (HazLoc) service. End user or installer is responsible for field certification once the vent is installed on the tank.



Series 5000 EPRV (8 - 10") with Vent monitoring



Series 5000 EPRV (16 - 24") with Vent monitoring

