

6500 Series Vent

EPV-6500-*-*

- A selection of vents for specific applications
- Intrinsically safe operation
- Continuous flow vents for precise flow rates for dilution applications
- Continuous flow measurement for dilution, purging, and pressurization
- Low leakage rate vents for air or inert gas conversation
- High flow rate vents for fast, large enclosure systems
- Universal mounting in any orientation including most of the unit inside the enclosure
- Maximum enclosure size 12.75 cu.meters (450 cu.ft.)
- ATEX/IECEX Zone 1/21 certified for Ex pyb and Ex pxb
- Up to SIL 2 acc. to IEC/EN 61508

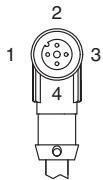
Enclosure protection vent for 6500 series type Ex pyb Ex pxb purge and pressurization system



Function

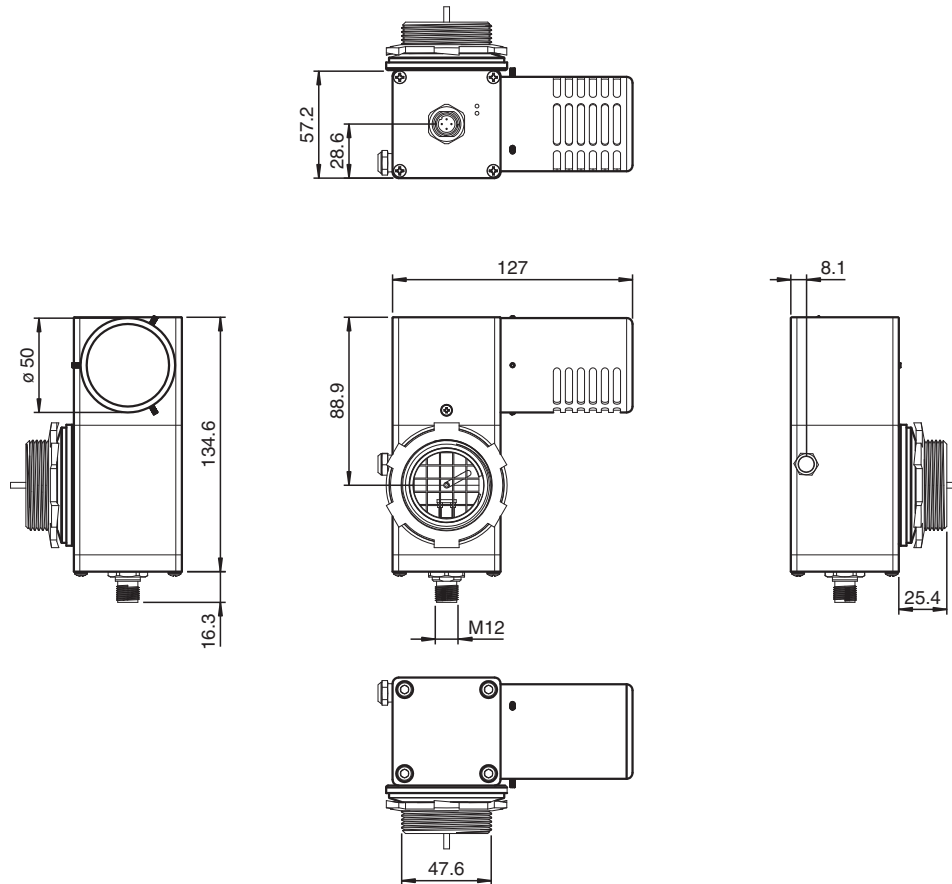
EPV-6500-*-* enclosure protection vents provide pressure relief to pressurized enclosures and pressure and flow information to 6500 series control units. The vents are intrinsically safe when used in conjunction with a 6500 control unit. Vent models are available for standard applications or continuous flow dilution applications that require precise flow measurement. For a streamlined enclosure design, the vent can be mounted in any orientation and can be mounted inside a pressurized enclosure with just the vent cap outside of the enclosure. EPV-6500-SS-* models include reference pressure tubing and hardware for internal mounting.

Connection



	4-PIN
1	+ (brown)
2	A (white)
3	- (blue)
4	B (black)

Dimensions



Dimensions shown in mm

Technical Data

General specifications	
Series	6500
System	Ex pxb Purge , Ex pyb Purge
Number of volume exchanges	5 to 19
Hazardous environment	gas, dust, gas and dust
Functional safety related parameters	
Safety Integrity Level (SIL)	SIL 2
Electrical specifications	
Connection	
Signal	BUS back to the 6500 control unit
Connection	M12 connector, 4-pin, cable length 5 meters (provided)
Cable length	max. 60 meters at 50 pf/ft and 0.2 μH/ft
Indicators/settings	
LED indication	POWER: green
Pneumatic parameters	
Protective gas supply	instrument grade air or inert gas
Maximum pressure	depends on the integrity of the enclosure (strength) vent pressure range: 0 to 25 mbar (0 to 9.9 in. w.c.)

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Technical Data

Safe pressure	Gas: 0.82 mbar (0.33 in. w.c.) Dust: 0.82 mbar (0.33 in. w.c.) Gas+Dust: 0.82 mbar (0.33 in. w.c.)
Purge flow rate	See graphs Readout on display is in increments of 28 l/min (1 scfm). Minimum and maximum reading depends on type of vent and supply pressure. EPV-6500*-07, 08 will readout continuous flow.
Purge flow and enclosure pressure rate	See graphs Readout on display is in increments of 28 l/min (1 scfm). Minimum and maximum reading depends on type of vent and supply pressure. EPV-6500*-07, 08 will readout continuous flow.
Flow rate for leakage compensation	EPV-6500....-01: Less than 9.9 l/min (0.35 scfm) @ 0.63 mbar (0.25 in. w.c.) Less than 27.3 l/min (0.97 scfm) @ 1.9 mbar (0.75 in. w.c.) EPV-6500....-03: Less than 6.6 l/min (0.23 scfm) @ 0.63 mbar (0.25 in. w.c.) Less than 16.0 l/min (0.57 scfm) @ 1.9 mbar (0.75 in. w.c.) EPV-6500....-05: Less than 1 l/min (0.035 scfm) @ 0.63 mbar (0.25 in. w.c.) Less than 1 l/min (0.035 scfm) @ 1.9 mbar (0.75 in. w.c.) EPV-6500....-07: n/a EPV-6500....-08: n/a
Breaking pressure	EPV-6500....-01: 2.0 mbar (0.8 in. w.c.) EPV-6500....-03: 3.5 mbar (1.4 in. w.c.) EPV-6500....-05: 3.8 mbar (1.5 in. w.c.) EPV-6500....-07: n/a EPV-6500....-08: n/a
Conformity	
Degree of protection	EN 60529
Shock resistance	EN 60068-2
Ambient conditions	
Ambient temperature	-20 ... 70 °C (-4 ... 158 °F)
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)
Relative humidity	5 ... 90 %, non-condensing
Vibration resistance	5 ... 100 Hz , 1 g, 12 m/s ² , all axes
Impact resistance	30 g, 11 ms, all axes
Mechanical specifications	
Degree of protection	IP66 rated sealing washer and electronics housing
Material	EPV-6500-AA-.... Cap: marine grade 5052 anodized aluminum, marine grade 6061T6 anodized aluminum EPV-6500-SS-.... Cap: 316L (UNS S31603) stainless steel; Body: marine grade 6061T6 anodized aluminum
Spark arrestor	304 (UNS S30400) stainless steel
Installation	- any orientation to enclosure - not gravity dependent - internal and external mounting possible
Mass	approx. 1.4 kg (3.1 lb)
Dimensions	127 x 146 x 83 mm (5.0" x 5.8" x 3.3")
Mounting	1 1/2" NPT knockout (50.8mm (2") hole) with seal nut included
Data for application in connection with hazardous areas	
EU-type examination certificate	DEMKO 15 ATEX 1622X
Marking	Ⓜ II 2G Ex ib [pxb Gb] IIC T4 Gb Ⓜ II 2D Ex ib [pxb Db] IIIC T135 °C Db Ⓜ II 2G Ex ib [pyb Gb] IIC T4 Gb Ⓜ II 2D Ex ib [pyb Db] IIIC T135 °C Db
Directive conformity	
Directive 2014/34/EU	EN IEC 60079-0:2018 , EN 60079-2:2014 , EN 60079-11:2012
International approvals	

Technical Data

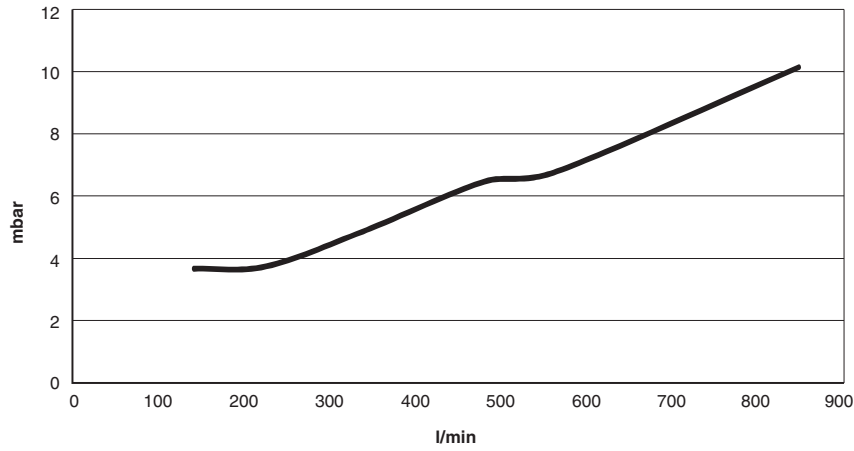
IECEX approval	
IECEX certificate	IECEX UL 15.0147X
IECEX marking	Ex ib [pxb Gb] IIC T4 Gb Ex ib [pxb Db] IIIC T135 °C Db Ex ib [pyb Gb] IIC T4 Gb Ex ib [pyb Db] IIIC T135 °C Db EPV-6000: $-20\text{ °C} \leq T_{\text{amb}} \leq 60\text{ °C}$ EPV-6500: $-20\text{ °C} \leq T_{\text{amb}} \leq 70\text{ °C}$
General information	
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com .

Characteristic Curve

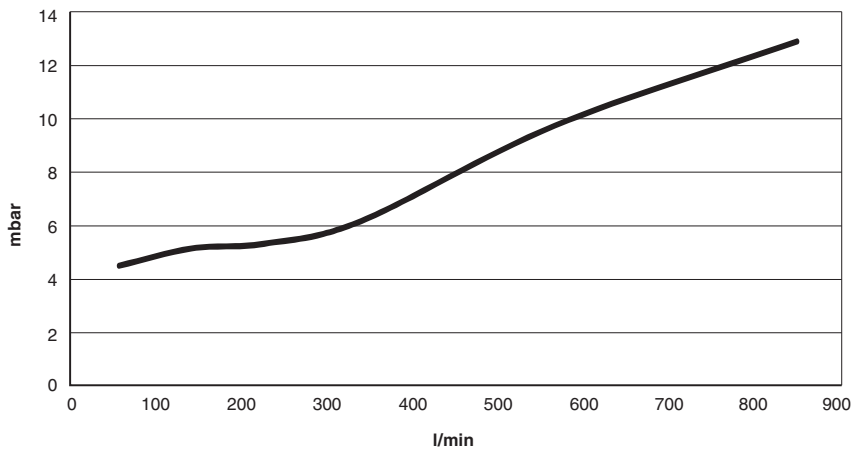
Flow Rate Curves

Standard Vent Pressure / Flow Curves

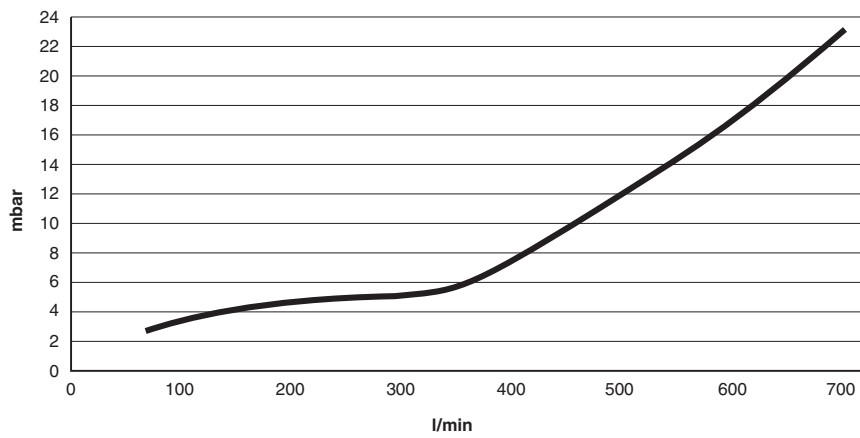
EPV-6500-* -01



EPV-6500-* -03



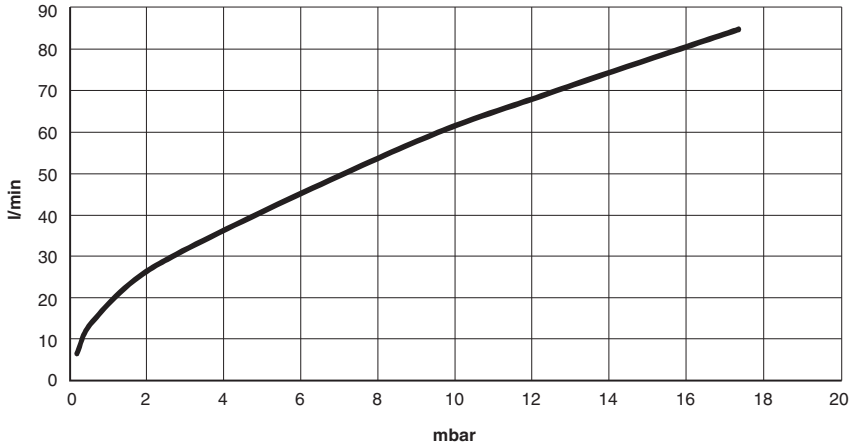
EPV-6500-* -05



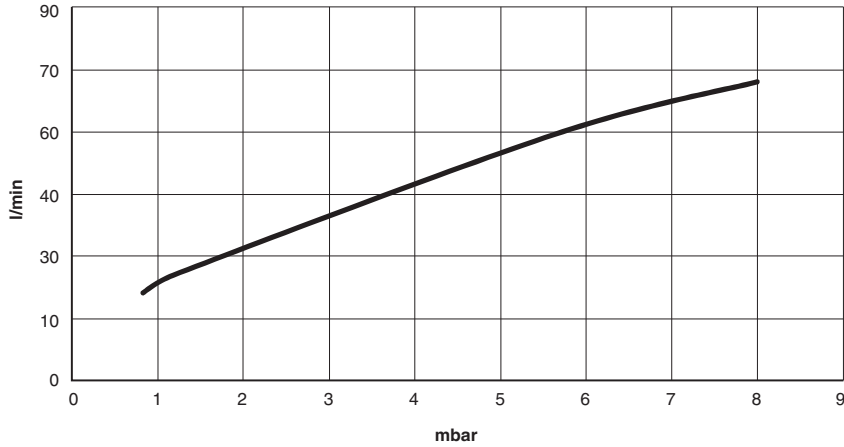
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Continuous Vent Pressure / Flow Curves

EPV-6500-*-07: 8 mm Orifice



EPV-6500-*-08: 16 mm



Note:

These graphs should only be used for representation of flow and pressure through each type of vent and not used for calculating purge time. They can be used for estimating purge time but the actual purge time will be automatically calculated by the 6500 control unit. These graphs are used to determine which vent type will be best suited for the application.

Type Code

E P V - 6 5 0 0 - A A - 0 1

Series of vents
6500 EPV-6500 vent

Material

- AA** 6000 series aluminum anodized body and cap
- SS** 6000 series aluminum anodized body and 316L stainless steel cap

Configuration

- 01** High flow rate, low enclosure pressure, high leakage rate
- 03** Medium flow rate, medium encl pressure, medium leakage rate
- 05** Low flow rate, High enclosure pressure, low leakage rate
- 07** Continuous flow, 17 l/min to 85 l/min(0.6 to 3.0 scfm)
- 08** Continuous flow, 71 l/min to 226 l/min(2.5 to 8.0 scfm)

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