

Description

Model 1004 is a Rapid Exchange® purging system that operates on a supply of compressed instrument air or inert gas. It regulates and monitors pressure within sealed (protected) enclosure(s), in order to remove and prevent flammable gas or vapor accumulations. The system accomplishes four air exchanges and maintains a "safe" (0.25") pressure. A Pepperl+Fuchs Model EPV-4 Enclosure Protection Vent is required for proper operation. This process reduces the hazardous (classified) area rating within the enclosure(s), in accordance with the NEC - NFPA 70, Article 500, NFPA 496 and ISA 12.4.

Operation

In accordance with system instructions, start-up requires air supply to be engaged and enclosure power to be deenergized. The enclosure protection vent must be tested and the enclosure(s) must be sealed. The enclosure pressure control valve is then used to set a safe reading on the enclosure pressure indicator. When safe pressure is stable, the Rapid Exchange control valve must be fully engaged. Upon completion of the Rapid Exchange cycle, (five minutes minimum) the Rapid Exchange control valve must be disengaged to return to a safe enclosure pressure. Power can then be energized to the protected enclosure(s). Loss of safe pressure requires immediate attention, unless power is deenergized. WPS style systems include an explosion proof differential pressure switch with form "C" contacts for audible or visual alarm systems.

System Specifications

System Dimensions:	See page 14
Shipping Weight:	LPS - 15 lb / WPS - 23 lb
Temp. Range:	-20 °F to +120 °F
Supply Pressure Range:	80 - 120 psi
Capacity & Filtration:	8.5oz @ 40 Micron
Supply Requirements:	clean air or inert gas
Safe Press. Setpoint:	0.25"
Safe Press. Flow Rate:	* 0.1 - 3.5 SCFH
Exchange Pressure:	3" - 5"
Exchange Flow Rate:	** 30 SCFM /1800 SCFH
Exchange Time:	1 min / 7.5 ft ³
System Supply Port:	1/2" FPT
Enclosure Supply Fitting:	1/2" tube fitting
Enclosure Reference Fitting:	1/4" tube fitting
Switch Setting (Decr):	0.15" ± 0.02"
Switch Conduit Port Size:	1/2" FPT
Switch Contact Rating	
WPS Style:	120 VAC @ 15 A
WPSA Style:	*** 120/220 VAC, 24 VDC @ 10 A; 125 VDC @ 50 mA
Switch (WPSA) Power Requirement:	24 / 120 / 240 VDC @ 3 / 4 / 11 watts

* Enclosure integrity determines actual flow rate
 ** With regulator set to 80 psi min. during exchange. Rapid Exchange® is a Registered Trademark of Pepperl+Fuchs.
 *** Supply voltages 24 VDC and 240 VAC available upon request.

Model 1004



LPS Style
(Less Pressure Switch)



WPS/WPSA Style
(With Pressure Switch)

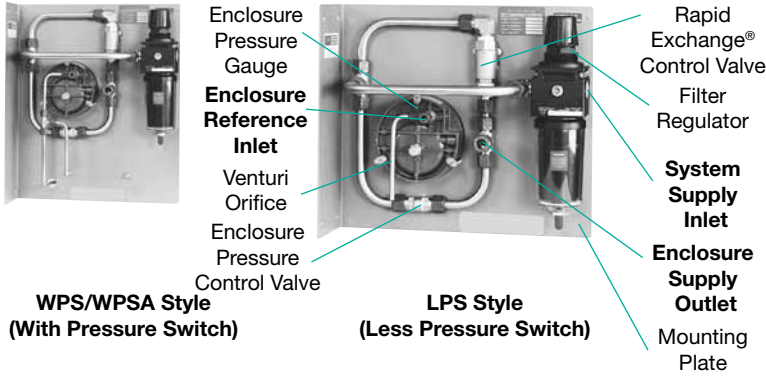


Standard Model Applications

<p>Model Number: 1004 Type Y Designation: Purging System Enclosure Volume: 200 ft³ max.</p> <p>LPS Style UL & FM Certified: Cl. I, Div. 1, Group A-D Rating Reduction: Div. 1 to Div. 2</p> <p>WPS Style UL & FM Certified: Cl. I, Div. 1, Group C&D Rating Reduction: Div. 1 to Div. 2</p> <p>WPSA Style UL & FM Certified: Cl. I, Div. 1, Group A-D Rating Reduction: Div. 1 to Div. 2</p>	<p>Model Number: 1004 Type Z Designation: Purging System Enclosure Volume: 200 ft³ max.</p> <p>LPS Style UL & FM Certified: Cl. I, Div. 2, Group A-D Rating Reduction: Div. 2 to Nonhazardous</p> <p>WPS Style UL & FM Certified: Cl. I, Div. 2, Group C&D Rating Reduction: Div. 2 to Nonhazardous</p> <p>WPSA Style UL & FM Certified: Cl. I, Div. 2, Group A-D Rating Reduction: Div. 2 to Nonhazardous</p>
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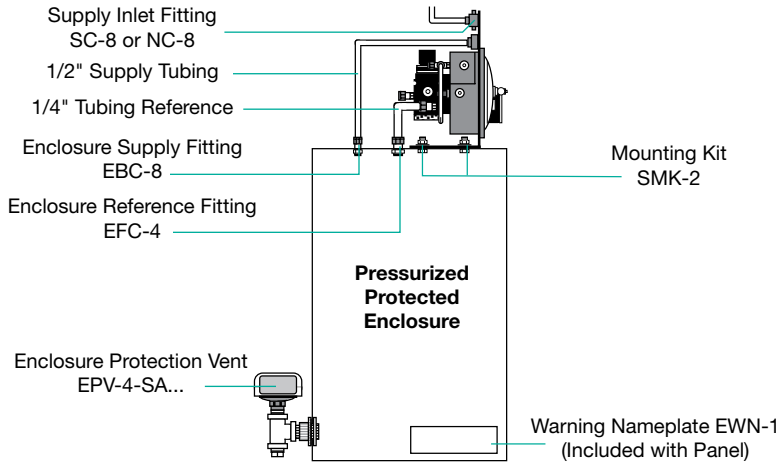
1000 SERIES

Type Y & Z



CONNECTION POINTS SHOWN ABOVE IN BOLD TEXT ON SYSTEM DIAGRAM

System Accessories Diagram



Material Specifications

Filter Regulator Body:	Zinc w/Enamel Finish
Regulator Handle & Bowl:	Polycarbonate
Enclosure Pressure Gauge:	Alum. w/Enamel Finish
Rapid Exchange Gauge:	Poly Case & Brass Tube
Tube Fittings & Valves:	316 SS Forged Body
Tubing:	316 SS 1/4" & 1/2" .035 Welded
System Nameplates:	Silk screened Lexan® & SS
Fastener Hardware:	Alum. & Stainless Steel
Mounting Plate:	316 14 Ga #3 Brush SS
EXP Pressure Switch Body:	Anodized Cast Alum.
Enclosure Warning Nameplate:	Silk screened SS

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Model Number Designations

1004 - LPS - CI - YZ - LH - ##

Series Model Number

System Style

- LPS - less pressure switch
- WPS - with pressure switch
- WPSA - with pressure switch

Area Classification

- CI - Class I Area

System Type

- YZ - Div. 1 to Div. 2, Div. 2 to Nonhazardous

Mounting Configuration

- LH - left hand
- RH - right hand
- TM - top mount
- BM - bottom mount
- WM - wall mount
- FM - frame mount
- PM - panel mount

- See Accessories Page 130 for additional factory installed accessories

Model 1004 System Accessories (See accessories page for complete details)

CONNECTION FITTINGS NC-8 1/2" Ninety Connector SC-8 1/2" Straight Connector EFC-4 1/4" Flush Connector EFC-8 1/2" Flush Connector EBC-8 1/2" Bulkhead Connector EPC-14 1 1/2" Pipe Connector		GPSK-1 General-purpose Switch Kit RAH Remote Alarm Horn RAB-1 Div. 1 Remote Alarm Beacon RAB-2 Div. 2 Remote Alarm Beacon LCK L Fitting Conduit Kit TCK T Fitting Conduit Kit		WARNING NAMEPLATES EWN-1 Class I Enclosure Warning ETW Enclosure Temperature Warning INSTALLATION & OPERATION MANUAL 129-0203 Inst. & Operation Manual	
ADDITIONAL ITEMS SMK-2 or 8 System Mounting Kit EPSK-1 Explosion Proof Switch Kit		ENCLOSURE PROTECTION VENTS ONE VENT REQUIRED WITH EACH SYSTEM EPV-4-SA-00 Straight w/Spark Arrestor EPV-4-SA-90 Rt Angle w/Spark Arrestor			

ONE (1) ENCLOSURE WARNING NAMEPLATE & ONE (1) INSTALLATION & OPERATION MANUAL ARE PROVIDED WITH EACH SYSTEM

Overall System Dimensions						
LPS / WPS	LH - left hand	RH - right hand	TM - top mount	BM - bottom mount	WM - wall mount	FM or PM - flat panel
Height	12 / 16.25	12 / 16.25	12 / 12	12 / 12	12 / 15	14 / 18.25
Width	13.5 / 13.5	13.5 / 13.5	13.5 / 16.75	13.5 / 16.75	13.5 / 13.5	15.5 / 15.5
Depth	6.75 / 8.25	6.75 / 8.25	6.75 / 8.25	6.75 / 8.25	7.75 / 9.25	6.75 / 8.25
Dimensions in inches. Mounting dimensions available upon request. FM & PM panel cutout dimensions: LPS - 13h x 14.5w WPS - 17.25h x 14.5w Height & width dimensions reflect mounting plate measurements. Depth dimension reflects overall measurement of system, including components.						