

Description

Model 1003 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-3 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 12
Shipping Weight:	LPS - 12 lb / WPS - 17 lb
Temp. Range:	-20 °F to +120 °F
Supply Pressure Range:	80 - 120 psi
Capacity & Filtration:	3.8 oz @ 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:	** 10 SCFM / 600 SCFH
Exchange Time:	1 min / 2.5 ft ³
System Supply Port:	3/8" FPT
Enclosure Supply Fitting:	3/8" 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 60 psi min. during exchange. Rapid Exchange® is a Registered Trademark of Pepperl+Fuchs.
 *** Supply voltages 24 VDC and 240 VAC available upon request.

Model 1003



LPS Style
(Less Pressure Switch)



WPS/WPSA Style
(With Pressure Switch)

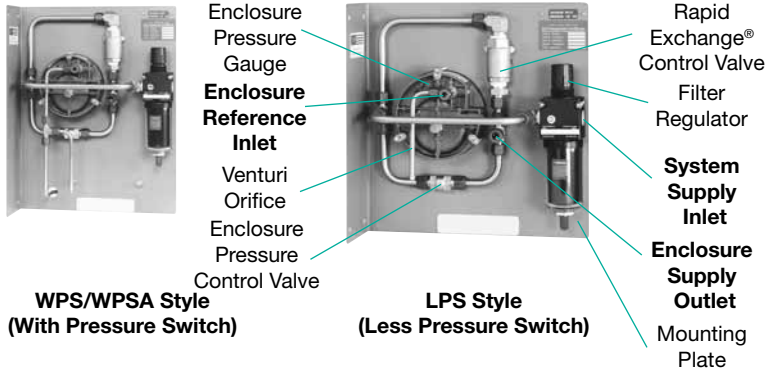


Standard Model Applications

Model Number:	1003 Type Y	Model Number:	1003 Type Z
Designation:	Purging System	Designation:	Purging System
Enclosure Volume:	75 ft ³ max.	Enclosure Volume:	75 ft ³ max.
LPS Style		LPS Style	
UL & FM Certified:	Cl. I, Div. 1, Group A-D	UL & FM Certified:	Cl. I, Div. 2, Group A-D
Rating Reduction:	Div. 1 to Div. 2	Rating Reduction:	Div. 2 to Nonhazardous
WPS Style		WPS Style	
UL & FM Certified:	Cl. I, Div. 1, Group C&D	UL & FM Certified:	Cl. I, Div. 2, Group C&D
Rating Reduction:	Div. 1 to Div. 2	Rating Reduction:	Div. 2 to Nonhazardous
WPSA Style		WPSA Style	
UL & FM Certified:	Cl. I, Div. 1, Group A-D	UL & FM Certified:	Cl. I, Div. 2, Group A-D
Rating Reduction:	Div. 1 to Div. 2	Rating Reduction:	Div. 2 to Nonhazardous

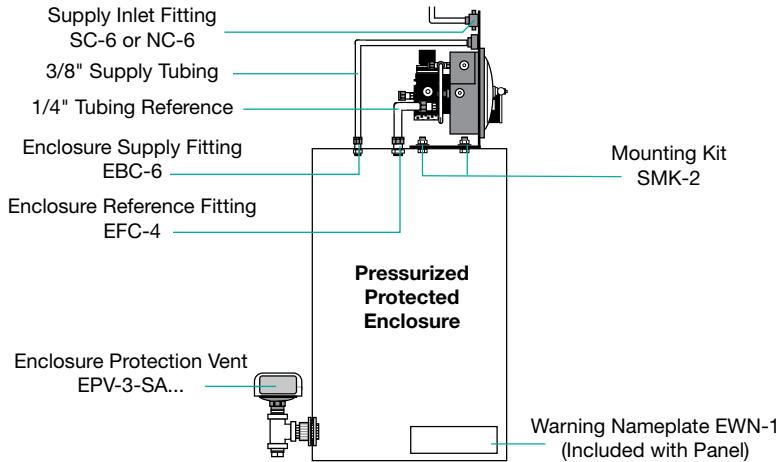
1000 SERIES

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" & 3/8" .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

1003 - LPS - CI - YZ - LH - ##

- Series Model Number**
 - 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 left side of enclosure
 - RH** - right hand right side of enclosure
 - TM** - top mount top of enclosure
 - BM** - bottom mount bottom of enclosure
 - WM** - wall mount wall surface
 - FM** - frame mount external frame or rack
 - PM** - panel mount enclosure surface cutout
(Not available in WPS Style)

- See Accessories Page 130 for additional factory installed accessories

Model 1003 System Accessories (See accessories page for complete details)

CONNECTION FITTINGS

NC-6	3/8" Ninety Connector
SC-6	3/8" Straight Connector
EFC-4	1/4" Flush Connector
EFC-6	3/8" Flush Connector
EBC-6	3/8" Bulkhead Connector
EPC-13	1" Pipe Connector

ADDITIONAL ITEMS

SMK-2 or -8	System Mounting Kit
EPSK-1	Explosion Proof Switch Kit

GPSK-1

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

ENCLOSURE PROTECTION VENTS

ONE VENT REQUIRED WITH EACH SYSTEM

EPV-3-SA-00	Straight w/Spark Arrestor
EPV-3-SA-90	Rt Angle w/Spark Arrestor

WARNING NAMEPLATES

EWN-1	Class I Enclosure Warning
ETW	Enclosure Temperature Warning
INSTALLATION & OPERATION MANUAL	
129-0195	Inst. & Operation Manual

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 / 15	12 / 15	12 / 12	12 / 12	12 / 15	14 / 17
Width	11.5 / 11.5	11.5 / 11.5	11.5 / 15.25	11.5 / 15.25	11.5 / 11.5	13.5 / 13.5
Depth	6 / 7.5	6 / 7.5	6 / 7.5	6 / 7.5	7.75 / 9.25	5.75 / 7.25
Dimensions in inches. Mounting dimensions available upon request. FM & PM panel cutout dimensions: LPS - 13h x 12.5w WPS - 16h x 12.5w Height & width dimensions reflect mounting plate measurements. Depth dimension reflects overall measurement of system, including components.						