

### Description

Model 1005 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-5 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 22                     |
| Shipping Weight:             | LPS - 15 lb / WPS - 25 lb       |
| Temp. Range:                 | -20°F to +120°F                 |
| Supply Pressure Range:       | 80 - 120 psi                    |
| Capacity & Filtration:       | 8.5 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:          | ** 60 SCFM / 3600 SCFH          |
| Exchange Time:               | 1 min / 15 ft <sup>3</sup>      |
| System Supply Port:          | 1/2" FPT                        |
| Enclosure Supply Fitting:    | 1/2" FPT                        |
| 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 VAC, 10 A, 28 - 125 VDC |

\* Enclosure integrity determines actual flow rate

\*\* With regulator set to 80 psi min. during exchange Rapid Exchange® is a Registered Trademark of Pepperl+Fuchs, Inc.

\*\*\* Supply voltages 24 VDC and 240 VAC available upon request.

### Model 1005



LPS Style  
(Less Pressure Switch)



WPS/WPSA Style  
(With Pressure Switch)



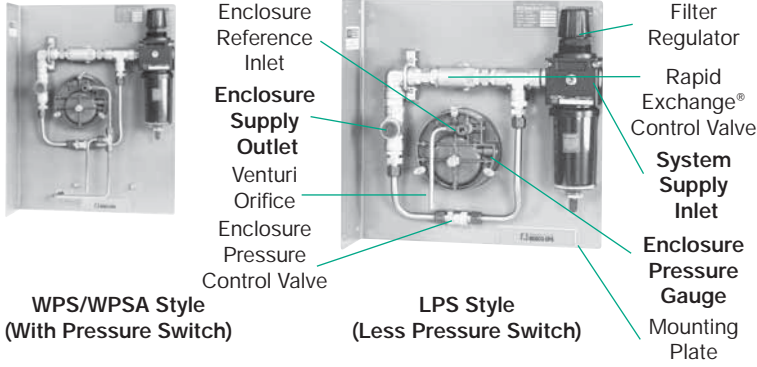
### Standard Model Applications

| Model Number:      | 1005 Type Y              | Model Number:      | 1005 Type Z              |
|--------------------|--------------------------|--------------------|--------------------------|
| Designation:       | Purging System           | Designation:       | Purging System           |
| Enclosure Volume:  | 450 ft <sup>3</sup> max. | Enclosure Volume:  | 450 ft <sup>3</sup> max. |
| <b>LPS Style</b>   |                          | <b>LPS Style</b>   |                          |
| 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   |
| <b>WPS Style</b>   |                          | <b>WPS Style</b>   |                          |
| 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   |
| <b>WPSA Style</b>  |                          | <b>WPSA Style</b>  |                          |
| 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   |

# Type Y & Z

1000 SERIES

Type Y & Z



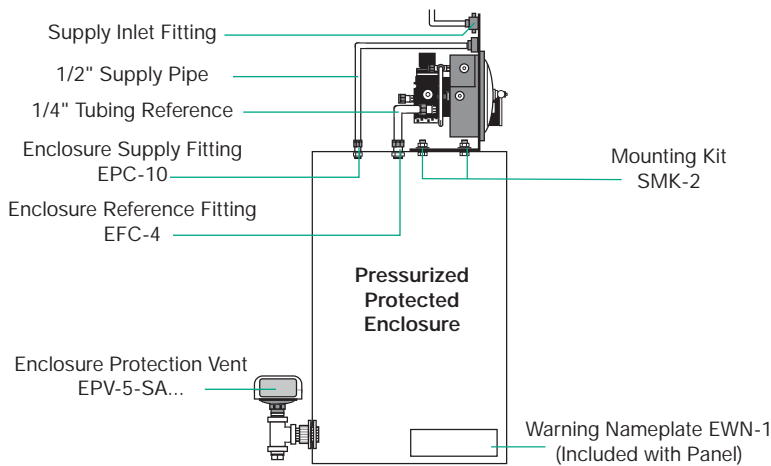
## Material Specifications

|                              |                           |
|------------------------------|---------------------------|
| 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" .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          |

Lexan® is a registered trademark of the General Electric Company

CONNECTION POINTS SHOWN ABOVE IN BOLD TEXT ON SYSTEM DIAGRAM

## System Accessories Diagram



## Model Number Designations

1005 - 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 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 116 for additional factory installed accessories

## Model 1005 System Accessories (See accessories page for complete details)

|                            |                            |   |  |                                   |
|----------------------------|----------------------------|---|--|-----------------------------------|
| <b>CONNECTION FITTINGS</b> |                            | RAB-1 Div. 1 Remote Alarm Beacon          | <b>WARNING NAMEPLATES</b>                  |                                   |
| EFC-4                      | 1/4" Flush Connector       | RAB-2 Div. 2 Remote Alarm Beacon          | EWN-1 Class I Enclosure Warning            | 129-0204 Inst. & Operation Manual |
| EPC-10                     | 1/2" Pipe Connector        | LCK L Fitting Conduit Kit                 | ETW Enclosure Temperature Warning          |                                   |
| EPC-15                     | 2" Pipe Connector          | TCK T Fitting Conduit Kit                 | <b>INSTALLATION &amp; OPERATION MANUAL</b> |                                   |
| <b>ADDITIONAL ITEMS</b>    |                            | <b>ENCLOSURE PROTECTION VENTS</b>         |  |                                   |
| SMK-2 or -8                | System Mounting Kit        | <b>ONE VENT REQUIRED WITH EACH SYSTEM</b> |  |                                   |
| EPSK-1                     | Explosion Proof Switch Kit | EPV-5-SA-00                               | Straight w/Spark Arrestor                  |                                   |
| GPSK-1                     | General Purpose Switch Kit | EPV-5-SA-90                               | Rt Angle w/Spark Arrestor                  |                                   |
| RAH                        | Remote Alarm Horn          |   |  |                                   |

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   | 13.5 / 17.75   | 13.5 / 17.75    | 14 / 13        | 14 / 13           | 15 / 17.75      | 15.5 / 19.75          |
| Width  | 13.5 / 13.5    | 13.5 / 13.5     | 13.5 / 16.125  | 13.5 / 16.125     | 13.5 / 13.5     | 15.5 / 15.5           |
| Depth  | 6 / 7.5        | 6 / 7.5         | 6 / 7.5        | 6 / 7.5           | 7.75 / 9.25     | 5 / 6.5               |
| Dimensions in inches. Mounting dimensions available upon request. FM & PM panel cutout dimensions: LPS - 14.5h x 14.5w WPS - 18.75h x 14.5w Height & Width dimensions reflect mounting plate measurements. Depth dimension reflects overall measurement of system, including components. |                |                 |                |                   |                 |                       |

Protected under U.S. Patent #5,101,710