Globally Certified
Z,Y,X Purge Indicators / Controllers and Accessories

Features:
• Stainless steel or anodized aluminum construction for superior corrosion resistance (NEMA 4,4X)
• Small Profile and light weight reduces installation footprint
• Global Certifications. Certified to: ATEX / IECEx / NEC /CEC in a single part number. Ideal for global companies looking to standardize on a single design
• Dry contact outputs for remote monitoring comes standard.
Purged and pressurized systems are an ideal method of explosion protection where components internal to the enclosure cannot be specifically rated for the area. They provide a lightweight, corrosion-resistant alternative to traditional explosion proof enclosures. The protection concept maintains an above-atmospheric pressure within the enclosure not allowing hazardous gas and/or dust to enter and to come into contact with possible sources of ignition.

The Purge Process

1) Purge Phase. In this phase, hazardous gases are removed from the enclosure by diluting the inside of the enclosure with a purge gas source. The enclosure is diluted between 4 to 5 times its cubic capacity with this purge gas, eliminating ignitable amounts of hazardous materials from being present inside the enclosure.

2) Pressurized Phase. In this phase, we have eliminated ignitable amounts of hazardous materials from being inside the enclosure. To prevent outside hazardous materials from entering the enclosure, the enclosure is then slightly pressurized above the outside environment.

Selecting Purge Indicators / Controller

Here are key questions you will need to know in selecting your purge indicator / controller:

1. What protection method do you need? Z, Y, or X?

Type “Z”
This system reduces the classification within protected enclosures from Division 2 / Zone 2 to non-hazardous. Automatic power control disconnects are not required, but visual and/or audible alarms must be initiated when there is loss of pressure within the enclosure.

Type “Y”
This system reduces the classification within protected enclosures from Division 1 / Zone 1 to Division 2 / Zone 2. All protected equipment inside the enclosure must be rated for Division 2 / Zone 2. Automatic power control disconnects are not required, but visual and/or audible alarms must be initiated when there is loss of pressure. In addition to all requirements in Z, there must be a remote monitor alarm.

Type “X”
This system reduces the classification within protected enclosures from Division 1 / Zone 1 to nonhazardous. It is required to automatically control electrical power to all protected equipment.

2. Is this a dust or gas environment?
Is the hazard a Class I (Vapor, Liquid, Gas) or Class II (Dust)?
3. How big is your enclosure?
What is the cubic volume of your enclosure?
- **Small** - Up to 15 Cubic Feet
- **Medium** - Up to 75 Cubic Feet
- **Large** - Up to 200 Cubic Feet

4. Voltage?
PurgEx offers the following:
- **Z** - 12 VDC, 24 VDC, 115 VAC, 230 VAC
- **Y** - 12 VDC or 24 VDC
- **X** - 115 or 230 VAC (for other voltages please consult factory)

5. Material Construction
Do you require 316 Stainless (NEMA 4X) or Anodized Aluminum? (NEMA 4)

6. What type of Purge Gas Inlet Kit do you plan to use?
**CONTINUOUS PURGE / PURGE GAS**
In Continuous Purge, purge gas is continuously passed through the enclosure at a maintained pressure during and after the dilution cycle, and discharged to the outside atmosphere through an exhaust vent. This method is preferred for applications where heat builds up from the electronics within the pressurized enclosure.

**LEAKAGE COMPENSATIVE / PRESSURIZATION PURGE**
Leakage compensation allows a higher volume of purge gas during the dilution cycle, which is then reduced to only what is required to maintain the required pressure within the enclosure. This is preferred when a source of instrument grade air is limited.

7. Location of the exhaust vent. Side or Top?
Traditional purge systems require an accessory exhaust vent. When one is required, its location needs to be determined (side or top mount).
*Please Note: If enclosure is 15 cubic feet or smaller, a separate vent is not required.*
PURGE / PRESSURIZATION

CLASSIFICATIONS FOR Z PurgeEx
- NEC / CEC / UL / CSA / ANSI / ISA 12.4 & NFPA 486 Certified
- ATEX
  Il 3 G Ex nA ic [pz] IIC T6 Gc
  Il 3 D Ex tu IIC T79°C Dc IP66
  DNV 14 ATEX 5461X

CLASSIFICATIONS FOR Y PurgeEx
- NEC / CEC / UL / CSA / ANSI / ISA 12.4 & NFPA 486 Certified
- ATEX
  Il 2 G Ex ib [py] IIC T4 Gb
  Il 2 D Ex tu IIC T79°C Db IP66
  DNV 14 ATEX 5460X

General Specifications:
- Casing Dimensions: 4.5” diameter x 1.9” tall (114.3 mm diameter x 48.3 mm tall).
- Operating Temperature: -40°F to 150°F (-40°C to 65°C)
- Purge Pressure Lower Limit: 0.50 inch H20 (1.25 mbar).
- Voltage: 12 VDC model (11 VDC to 16 VDC), 47 to 63 Hz
  24 VDC model (19 VDC to 28 VDC), 47 to 63 Hz
  115 VAC model (85 VAC to 160 VAC), 47 to 63 Hz
  230 VAC model (130 VAC to 265 VAC), 47 to 63 Hz
- Dry Contact Rating: Contact open on alarm (standard)
  Contact closed on alarm (optional)
  250 Volts AC / DC, 150mA max
- Standard Hardware: All stainless steel mounting fasteners, o-ring, 1/4” (6.4 mm) diameter vent restrictor, warning label, and CD with all required documentation

Features:
- Integral Vent standard on 15 CU FT or smaller indicators (no need to purchase or install accessory vents)
- Stainless Steel or Anodized Aluminum Construction for Superior Corrosion Resistance (NEMA 4, 4X)
- Smallest Profile and Lightest Weight on the market reduces installation footprint

Global Certifications:
- Certified to ATEX / IECEx / NEC/CEC in a single part number.
- Dry Contact Outputs for Remote Monitoring Come Standard.
**OPTIONS & ACCESSORIES AVAILABLE CONTINUED:**

**Protective Gas Loss Indicator Kit:** An explosion-proof differential pressure switch may be installed to provide an alarm contact output signal to indicate the loss of the backup source of protective gas. Another explosion-proof differential pressure switch may be installed on the main protective gas supply to indicate that the primary protective gas pressure is adequate. Model number is PSO-PGLI-K.

**Differential Pressure Gauge Kit:** R. STAHL also offers an all stainless steel differential pressure gauge kit, which can be mounted on the left side model number PSO-DPG-L, right side model number PSO-DPG-R, top model number PSO-DPG-T or bottom model number PSO-DPG-B of enclosure.
X Purge Controllers

Classifications

- NEC / CEC / CSA / ANSI / ISA 12.4, & NFPA 496 Certified
- Class I, Division 1, Group B,C, & D, T4
- Class II, Division 1, Group E,F, & G, T4

ATEX
- II 2 G Ex e mb ib [px] IIIC T119°C Db IP66
- DNV 14 ATEX 5460X

IECEx
- Dnv 14 ATEx 5460X

Ambient Temperature Range:
- +65°C (+150°F) Max.
- -40°C (-40°F) Min.

Globally Certified X Purge Indicators and Accessories

Features:
- Integral Vent standard on 15 CU FT or smaller indicators (no need to purchase or install accessory vents)
- Stainless Steel or Anodized Aluminum Construction for Superior Corrosion Resistance (NEMA 4, 4X)

Global Certifications
- Certified to ATEX / IECEx / NEC/ CEC in a single part number.
- Dry Contact Outputs for Remote Monitoring Come Standard.

X Purge Controllers enable the use of general purpose components to be placed inside the enclosures the X Purge will be monitoring and placed in a Class I Division 1, and ATEX/ IECEx Zone 1 hazardous area. These PURGEEx X-Purge units come with global certifications. These units offer the lightest weight, and smallest profile controllers on the market. Because these designs mount directly on the enclosure, no additional holes, sheet metal, or plumbing is required.

<table>
<thead>
<tr>
<th>8</th>
<th>626/1</th>
<th>D</th>
<th>X</th>
<th>M</th>
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<tbody>
<tr>
<td>Dust or Gas</td>
<td>626/1</td>
<td>Protection Method</td>
<td>Type of Purge</td>
<td>Size of Enclosure</td>
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<tr>
<td>7 = Dust</td>
<td>D = Housing Mounted on enclosure</td>
<td>X = X-Purge</td>
<td>S = Up to 15 Cubic Feet</td>
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<tr>
<td>8 = Gas</td>
<td>N = Externally Mounted Housing</td>
<td></td>
<td>M = Up to 75 Cubic Feet</td>
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<td></td>
<td></td>
<td></td>
<td>L = Up to 200 Cubic Feet</td>
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</table>

PurgEx

X-Purge Controller (D)

- Integral Exhaust Vent Standard. No need to order and assemble accessory vent for enclosures with a volume up to 15 cubic feet.
- Available in Anodized Aluminum or 316 Stainless Steel 115 VAC up to 25 amps or 230VAC up to 12.5 Amps.
- Rugged, visual LED indicator for local monitoring is supplied as standard.
### CUSTOM CONFIGURATION LOGIC

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Material</th>
<th>Alarm</th>
<th>Type of Compensation</th>
<th>Exhaust Vent Mounting</th>
<th>Classification</th>
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<tbody>
<tr>
<td>3 = 115VAC</td>
<td>A = Aluminum</td>
<td>O = Normally open contact</td>
<td>T = Continuous Purge Inlet</td>
<td>S = Side</td>
<td>C = Class I, Division 1</td>
</tr>
<tr>
<td>4 = 230VAC</td>
<td>S = 316 Stainless</td>
<td>X = Normally closed contact</td>
<td>P = Manual Leakage Compensation Purge Inlet</td>
<td>T = Top</td>
<td>Z = ATEX / IECEx Zone 1</td>
</tr>
<tr>
<td>For DC voltage, consult factory</td>
<td>A = Automatic Leakage Compensation Purge Inlet</td>
<td>N = No Inlet Kit (Must be ordered separately. See pages G9-G17 for details on dimensions)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**External Mounted (N)**

**Vent Included**

- Available in Anodized Aluminum or 316 Stainless Steel 115 VAC up to 25 amps or 230 VAC up to 12.5 Amps.
- Rugged, visual LED indicator for local monitoring is supplied as standard.
**Casing Dimensions**
8.0” diameter x 1.9” tall (203.2 mm diameter x 48.3 mm tall), protrudes outside of purged enclosure.
6.5” diameter x 4.50” tall (65.1 mm diameter x 114.0 mm tall), protrudes inside of purged enclosure.

**Operating Temperature**
-40°F to 150°F (-40°C to 65°C)

**Purge Pressure Lower Limit:**
0.50 inches H20 (1.25 mbar) Purge Controller will disconnect power to protected enclosure electronics.

**Casing**
Anodized aluminum 16.09 lbs (7.30 kg), NEMA 4, (IP66).
316 stainless steel, 37.98 lbs. (1723kg), NEMA 4X, (IP66).

**Power Control Capability**
115 VAC up to 25 Amps RMS continuous over specified voltage ranges.
230 VAC up to 12.5 Amps RMS continuous over specified voltage ranges.

**Power Input / Consumption**
2 Watts max.

**Voltage:**
115 VAC model (85 VAC to 160 VAC), 47 to 63 Hz
230 VAC model (130 VAC to 265 VAC), 47 to 63 Hz

**Dry Contact Outputs & Rating**
1. Enclosure purge pressure is below 0.50 inches H20 (1.25 mbar).
2. Enclosure exhaust flow has stopped.
3. Purge Controller is in maintenance mode.
   Normally open contacts (standard).
   Normally closed contacts (optional).
   All rated to 265 Volts AC/DC, 150mA max.

**Standard Hardware**
All stainless steel mounting hardware, o-ring, 1/4” (6.4 mm) diameter exhaust vent restrictor, CD with all required documentation.

**Hazardous Area Approvals**
ATEX
II 2 G Ex e mb ib [px] IIC T4 Gb “for Zone 1 gas hazardous areas”
II 2 D Ex tb III C T119°C Db IP66 “for Zone 1 dust hazardous areas”

ANSI / ISA 12.4, CEC, NEC, and NFPA 496
Class I, Division 1, Group B,C, & D, T4 “for gas hazardous areas”
Class II, Division 1, Group E,F, & G, T4 “for dust hazardous areas”

Certified to an Ambient Temperature Range of -40°F (-40°C) ≤ Tamb ≤ 150°F (+65°C)

CE Marked
**X Purge Controllers**

**PURGE / PRESSURIZATION**

**DIMENSIONAL INFORMATION**

- **Front View of Unit**
  - 8.00" DIA. (203.2mm DIA.)

- **Side View of Unit**
  - 2.50" (63.5mm)
  - 1.82" (46.2mm)
  - 4.50" (114.3mm) INSIDE ENCLOSURE
  - 6.40" DIA. (162.6mm DIA.)

- **Local LED Status Indicator**
  - 0.25" (6.4mm) OUTER DIA. TUBE COMPRESSION FITTING
  - UP TO 6 PLACES TYP.

- **Overall Dimensions**
  - 8.34" (211.8mm)
  - 10.42" (264.7mm)

- **Other Specifications**
  - FRONT VIEW OF UNIT
  - SIDE VIEW OF UNIT

---

EXPLOSION PROTECTION by R. STAHIL 1-800-782-4357
### Continuous Dilution Purge Gas Inlet Kits

**PURGE / PRESSURIZATION**

- **EXPLORSION PROTECTION by R. STAHL** 1-800-782-4357

#### Size Information

<table>
<thead>
<tr>
<th>Size</th>
<th>A (mm)</th>
<th>B (mm)</th>
<th>C (mm)</th>
<th>Purge Gas Inlet Size</th>
<th>Enclosure Volume</th>
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</thead>
<tbody>
<tr>
<td>Small</td>
<td>5.15 (130.8)</td>
<td>4.44 (112.8)</td>
<td>4.00 (101.6)</td>
<td>1/4 - 18 FNPT</td>
<td>Up to 15 Cubic Feet</td>
</tr>
<tr>
<td>Medium</td>
<td>6.19 (157.2)</td>
<td>4.68 (118.9)</td>
<td>4.23 (107.4)</td>
<td>3/8 FNPT</td>
<td>Up to 75 Cubic Feet</td>
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<tr>
<td>Large</td>
<td>6.19 (157.2)</td>
<td>4.68 (118.9)</td>
<td>4.23 (107.4)</td>
<td>1/2 - 14 FNPT</td>
<td>Up to 200 Cubic Feet</td>
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#### Ordering Information

<table>
<thead>
<tr>
<th>Size</th>
<th>Enclosure Type</th>
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<td>Stainless</td>
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**Manual Leakage Compensation**

**Purge Gas Inlet Kits**

**EXPLOSION PROTECTION by R. STAHL 1-800-782-4357**

**Size Information**

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<th>Size</th>
<th>A (mm)</th>
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<tr>
<td>Small</td>
<td>5.15 (130.8)</td>
<td>4.44 (112.8)</td>
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<td>6.19 (157.2)</td>
<td>4.68 (118.9)</td>
<td>4.23 (107.4)</td>
<td>1/2 - 14 FNPT</td>
<td>Up to 200 Cubic Feet</td>
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**Ordering Information**

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<thead>
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<th>Size</th>
<th>Enclosure Type</th>
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<tr>
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Automatic Leakage Compensation Purge Gas Inlet Kits

**Size Information**

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<th>D (mm)</th>
<th>E (mm)</th>
<th>F (mm)</th>
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<th>Enclosure Volume</th>
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<tr>
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<td>3.28 (83.3)</td>
<td>4.95 (125.7)</td>
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<td>3.31 (84.1)</td>
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<td>4.89 (124.2)</td>
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<td>Up to 75 Cubic Feet *</td>
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<tr>
<td>Large</td>
<td>4.89 (124.2)</td>
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<td>3.84 (97.5)</td>
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<td>2.75 (69.8)</td>
<td>3.93 (99.8)</td>
<td>1/2 - 14 FNPT</td>
<td>Up to 200 Cubic Feet *</td>
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*X Purge Controllers Only

**Ordering Information**

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<td>Zone 1</td>
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<tr>
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<td>Stainless</td>
<td>230VAC</td>
<td>Div 1</td>
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<td>Zone 1</td>
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</tbody>
</table>
Automatic Leakage Compensation Purge
Gas Inlet Kits

EXPLOSION PROTECTION by R. STAHL 1-800-782-4357
**Top & Side Vent Mount**

**Top Vent Mount**

- VENT CAP ASSY.
- 1/4 INCH TUBE x PIPE NIPPLE FITTING
- PIPE NIPPLE
- PIPE TEE
- TOP OUTSIDE WALL OF ENCLOSURE
- TOP INSIDE WALL OF ENCLOSURE
- HEX NUT

**Side Vent Mount**

- VENT CAP ASSY.
- PIPE NIPPLE
- PIPE TEE
- 1/4 INCH TUBE x PIPE NIPPLE FITTING
- PIPE NIPPLE x STRAIGHT THREAD FITTING
- TOP OUTSIDE WALL OF ENCLOSURE
- TOP INSIDE WALL OF ENCLOSURE
- HEX NUT
- SIDE OUTSIDE WALL OF ENCLOSURE
- SIDE INSIDE WALL OF ENCLOSURE

**Vent Mount Size**

<table>
<thead>
<tr>
<th>Size</th>
<th>Box Hole Size Required</th>
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</thead>
<tbody>
<tr>
<td>Small</td>
<td>0.570 (14.480)</td>
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<tr>
<td>Medium</td>
<td>1.310 (33.30)</td>
</tr>
<tr>
<td>Large</td>
<td>2.380 (60.50)</td>
</tr>
</tbody>
</table>

**Top / Side**

- Small
  - Top: DO-11068-B
  - Side: DO-11069-B
- Medium
  - Top: DO-11113-B
  - Side: DO-11114-B
- Large
  - Top: DO-11128-A
  - Side: DO-11129-A
  - DO-11130-A

**G13**

EXPLOSION PROTECTION by R. STAHL 1-800-782-4357