



## Mini-Z-Purge Control System for Continuous Flow

For enclosures up to  
**1ZCF/\_\_\_ 17 cu ft, 0.39 m<sup>3</sup>**

Z-Purge Class I Division 2  
Ex [pz] Zone 2(22) IECEx Category 3 G D ATEX

**Mini-Y- Purge 1YCF/\_\_\_ 17 cu ft, 0.39 m<sup>3</sup>**

Y-Purge Class I Division 1 Groups A, B, C & D  
Ex [py] Zone 2(22) IECEx Category 3 GD ATEX



### ■ OPERATION

For purged enclosures in Class I Division 2 Gp A-D or Zone 2 IIC Ex [pz] or Ex [py] and Zone 22 Ex pD.

The initial purge flow removes the gasses, which may be present in the area when the enclosure is closed. After the purge cycle has been completed it continues to maintain pressurization. For enclosures with an internal source of flammable gas or vapor release, the continuous flow can be

set to reduce the concentration below 25% of the LFL (LEL). Reference must be made to IEC/EN 60079-2 or NFPA 496 Standards before applying.

The Continuous Flow (CF) Pressurizing system is designed for small to medium size purged enclosures. Typical Enclosure Size: 17 cu ft (0.39 m<sup>3</sup>) @ 3.2 scfm = 90 NI/min  
Note: Enclosure sizes are based on 30-minute purge period. There is no restriction on this purge period.

### ■ COMPONENTS

The system has three components. The Control Unit controls air flow and monitors flow and pressure. The Spark Arrestor Unit (SAU) provides a protected fixed measuring orifice to measure flow through the enclosure. The Relief Valve (RLV) provides over-pressure protection for the enclosure. Preferred options are Panel Mount and Back Plate option. Panel Mount fits directly on the enclosure with minimum external space. Back Plate mounts either directly onto the outside of or remote from the enclosure.

### ■ FEATURES

- One Model number: includes Control Unit, Spark Arrestor Unit and Relief Valve.
- Simple integrated mounting with little or no piping needed.
- IECEx, ATEX, FM and cULus approvals covering IEC/EN 60079-2 and NFPA 496.
- Clear visual status indication.
- Remote Alarm contacts



MiniPurge  
CF panel mount



MiniPurge  
CF back plate

### ■ COMMON SPECIFICATION

#### The Control Unit:

Purge Medium: Compressed Air or Inert Gas, clean, dry & free of flammable gasses.

Supply Pressure: 60 psi (4 bar)

Maximum working pressure: 115 psi (8 bar)

Temperature range: -20°C, -4°F to 55°C, 131°F

Supply Inlet 1/4 NPT(F): Connected with 1/2" (12mm)

O/D [Min. 3/8" (10mm) I/D] pipe. 33ft (10 meter) Max Length

#### Relief Valve RLV25 (Full 1" bore)

Magnetic operation (patented) with integral spark arrestor.

Opening pressure: 1 kPa, 10 mbar, 4" WC

#### Spark Arrestor Unit - SAU25

User Selectable: supplied with 8 orifice plates for Purge

Flows of: **0.4, 0.9, 1.4, 2.3, 3.2, 4.8, 6.4 or 8.0 scfm**

(NI/min: 10, 25, 40, 65, 90, 135, 180, or 225)

**Alarm Indicators:** "Alarm" Red Indicates Low Pressure.

Green Indicates Pressure OK

Low Pressure Sensor "Alarm": setting 1" WC (2.5 mbar)

**Permissible Enclosure Leakage:** 2 scfm (60 NI/min)

#### Materials of Construction

Control Unit: 316L stainless steel mounting plate.

Spark Arrestor Unit: 316L stainless steel

Relief Valve: 316L stainless steel.

Weight: 5 lb (2.4kg) approx



ISO 9001

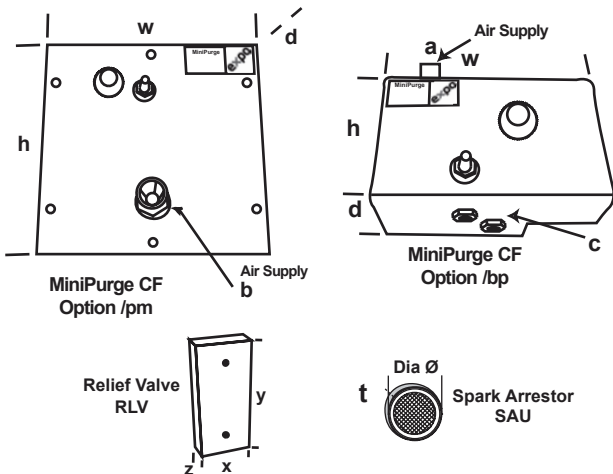




# Technical Specification

## Mini-Z-Purge Mini-Y-Purge

1ZCF/\_\_\_/\_\_\_ 17 cu ft, 0.39 m<sup>3</sup>  
1YCF/\_\_\_/\_\_\_ 17 cu ft, 0.39 m<sup>3</sup>



Dimensions/Spec.		1ZCF/pm/___ 1YCF/pm/___	1ZCF/bp/___ 1YCF/bp/___
Width	w	7.9" 200mm	7.8" 197mm
Height	h	7.9" 200mm	5.0" 127mm
Depth	d	2.4" 62mm	3.1" 79mm
RLV Width	x	2.4" 62mm	2.4" 62mm
RLV Height	y	5.2" 133mm	5.2" 133mm
RLV Depth	z	1.3" 33mm	1.3" 33mm
Fitting Length	a	1.0" 25mm	0.4" 11mm
Fitting NPT	b	1/4"	1/4"
Signals NPT	c	1/8"	1/8"
SAU Diameter	Ø	2.2" 55mm	2.2" 55mm
SAU Depth	t	1.4" 35mm	1.4" 35mm

Selection of Orifice Plate				
Orifice Plate #	Purge Flow		Enclosure Volume	
	scfm	NI/min	ft <sup>3</sup> (4 VC*)	m <sup>3</sup> (5 VC*)
1	0.4	10	3.0	0.06
2	0.9	25	8.3	0.15
3	1.4	40	10.5	0.24
4	2.3	65	17.2	0.39
5	3.2	90	24	0.54
6	4.8	135	36	0.81
7	6.4	180	48	1.08
8	8.0	225	60	1.35

\*VC = Volume Changes (based on 30 minute purge time)

### COMMON SPECIFICATION

#### Panel Mount:

Model No. 1ZCF/pm/IS or /PO  
Model No. 1YCF/pm/IS or /PO  
Control Unit Location: Side or Front of purge enclosure.

#### Back Plate:

Model No. 1ZDP/bp/IS or /PO  
Model No. 1YDP/bp/IS or /PO  
Control Unit Location: Top, Side or Bottom of purge enclosure

**Warning Label:** (loose) for User's calibration details, for mounting to purged enclosure.

#### "Alarm" Remote options:-

/PO Pneumatic output  
"Alarm Output" Main supply 60 psi / 4 bar  
Pressure Output "Pressure OK". No output "Alarm".  
/IS Dry contacts for switching non-incendive or intrinsically safe circuits. "Alarm" open on loss of pressure.

### OPERATION

