

# Product Data Sheet

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

Control System for **Continuous Flow**

For enclosures up to

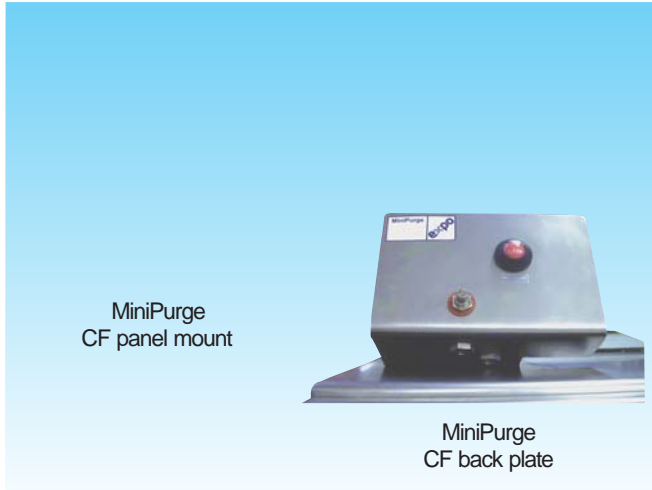
1ZCF/\_\_\_/\_\_\_ 17 cu ft, 0.48 m<sup>3</sup>

"Z" Purge Class I Division 2 Zone 2 Category G3 ATEX

1YCF/\_\_\_/\_\_\_ 17 cu ft, 0.48 m<sup>3</sup>

"Y" Purge Class I Division 1

Group A, B, C & D



## FEATURES

- + One Model number: includes Control Unit, Spark Arrestor Unit and Relief Valve.
- + Simple integrated mounting with little or no piping needed.
- + ATEX, FM and cULus approvals cover Europe, USA and Canada.
- + Clear visual status indication.
- + Remote Alarm contacts.

## OPERATION

For purged enclosures in Class I Division 2 Gp A-D, Zone 2 IIC [EEx nZ].

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 NFPA 496 Standard before applying.

The Continuous Flow (CF) Pressurizing system is designed for small to medium size purged enclosures. Typical Enclosure Size: 17 cu ft (0.48 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.

## 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 1kPa, 10 mbar, 4" wc

Spark Arrestor Unit - SAU25.

User Selectable: supplied with 8 orifice plates for Purge

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

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

Indicators Alarms: - "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

Back Plate & Panel Mount  
Approved to NFPA 496 & EN60079-15  
[www.expoworldwide.com](http://www.expoworldwide.com)



**ATEX**

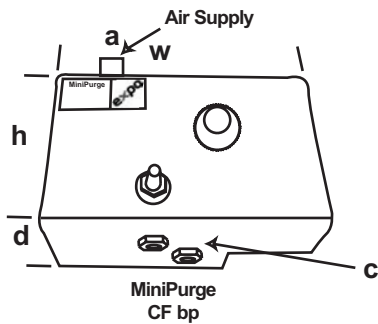
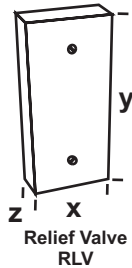
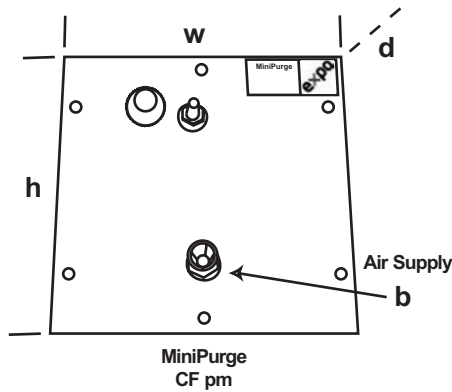


# Technical Specification

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

1ZCF/\_\_\_/\_\_\_ 17 cu ft, 0.48 m<sup>3</sup>

1YCF/\_\_\_/\_\_\_ 17 cu ft, 0.48 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

### Note on IS output

IS output can be connected to Intrinsically Safe or non-incendive circuits, with the panel mount PM option, it can also be connected to general purpose (GP) circuit powered from inside the enclosure.

## COMMON SPECIFICATION

### Location of Control unit.

#### 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. 1ZCF/bp/IS or /PO  
Model No. 1YCF/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 Output options:-

/IS Dry contacts for switching intrinsically safe circuits.  
"Alarm" open on loss of pressure.

/PO Pneumatic output"

"Alarm Output" Main supply 60 psi / 4 bar  
Pressure Output "Pressure OK". No output "Alarm".

## OPERATION

Type Number (example)

1 Z CF/bp/IS

### Size

1 Purge flow rate 8scfm, 225 NI/min

### Certification / Approval

Z North America Class I Division 2  
FM 1X8a4AE, cUL E190061  
Europe ATEX Category G3  
Cert No EXPO 04ATEX1026X [Ex nZ]

Y North America Class I Division 1  
For protecting Class I Division 2 equipment  
FM 1X8a4AE, cUL E190061

### Pressurization method

CF Continuous flow

### Housing

bp Back Plate  
pm Panel Mount

### Output see above

IS Intrinsically safe output  
PO Pneumatic output

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