



SmartPurge[®] Z

Simplifying Purge & Pressurization



SmartPurge Z

If Purge and Pressurization is such a simple concept, why are most purge systems so complicated?

Having to install separate inlet and relief valves is not only time-consuming to design and install, but it's so easy to order the wrong parts —losing valuable time and money on your panel build.

When it comes to commissioning, there are frequently multiple pages of set-up information, flow curves, and programming parameters that you need to understand.

And at the end of the process you don't want any snags with inspection and certification.

That's why Expo have created the SmartPurge Z: the all-in-one unit that's practically ready to go, right out of the box.

What makes the SmartPurge Z so simple to install, commission, and use?

One unit—contains the purge gas inlet, overpressure relief valve, and control system.

One size - suitable for enclosures up to 6.1m³ (ATEX/IECEX 5 volume changes) / 215 ft³ (NFPA 4 volume changes)

One input—purge duration is the only parameter you need to set up

Zero further adjustment—the built-in automatic leakage compensation eliminates time consuming flow rate adjustment during set up, and addresses increasing enclosure leakage over time. Minimises consumption of purge gas.



Expo have redefined simplicity with the SmartPurge Z



One unit:
single part
installation

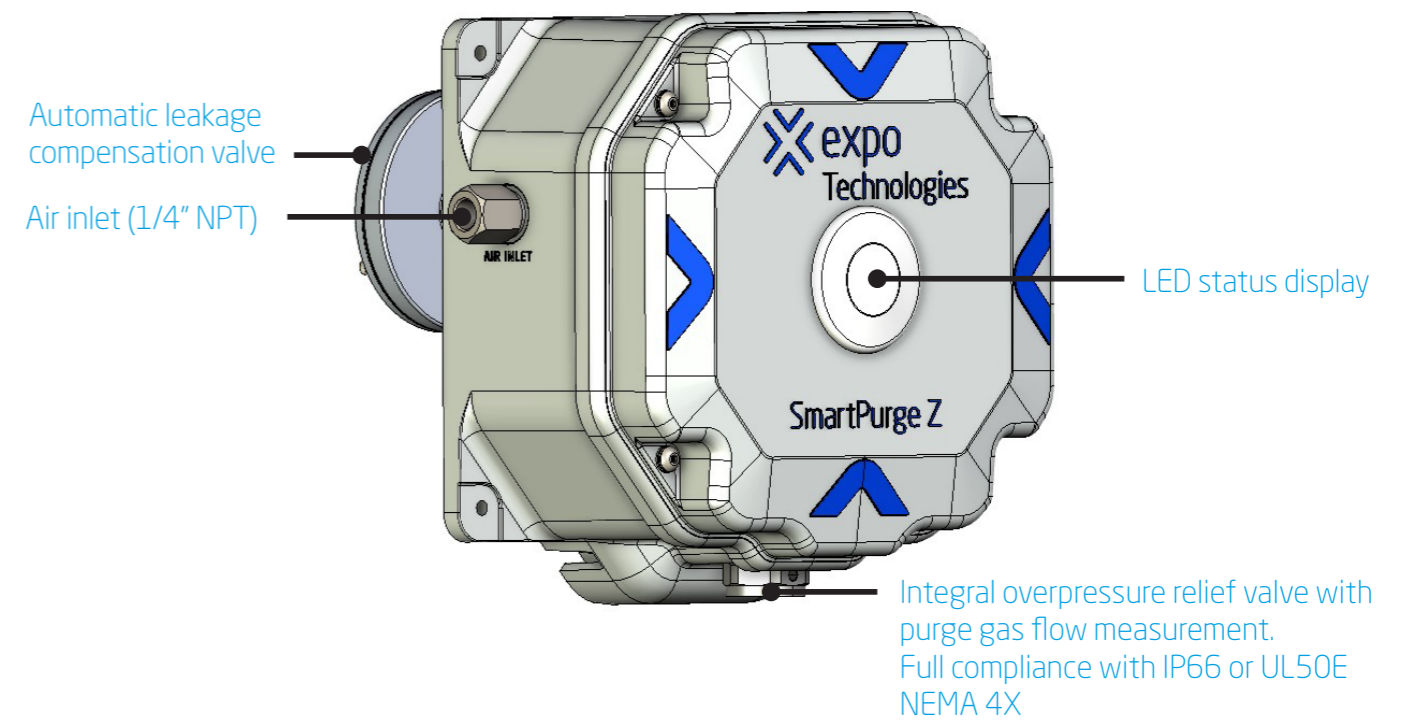


One size:
suitable for enclosures
up to 6.1m³ / 215 ft³



One input:
you only need to set
the purge timer

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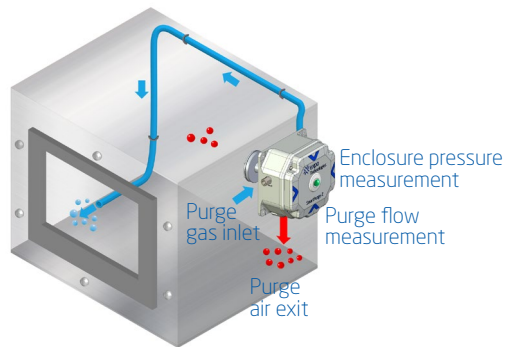


Specifications

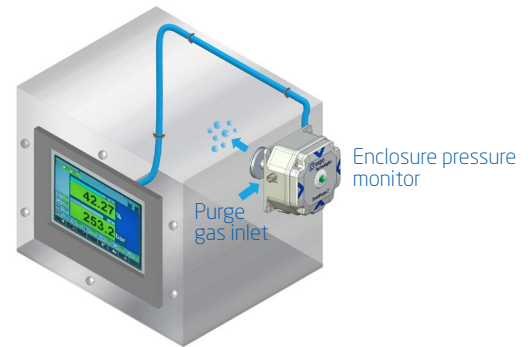
Purge gas flow rate	Minimum 310 NI/min (11 SCFM) at 4 barg inlet pressure
Maximum enclosure size	6.1m ³ ; 215 ft ³
Inlet connection / pressure range	¼" NPT(F) / 4.0-5.0 barg (58-72 psig) inlet pressure (must be regulated at inlet)
Operating temperatures	-20°C to +58°C (-4°F to +136°F)
Purging mode	Automatic leakage compensation up to 90NI/min (3.2 SCFM)
Hazardous environment	Zone 2 / Class I Division 2
Approvals	IECEX; ATEX; UL; UKEX; PESO; INMETRO; CCC
Housing material	GRP
Ingress protection	Maintains IP66 or UL50E NEMA 4X
Weight	3kg (6.6lb)
Power supply	DC: 18-30V; AC: 90-250 VAC
Status indication (LED)	Green flashing - purge in progress Green solid - enclosure pressurized Red - enclosure pressure low
Outputs	Low pressure alarm, N.O. volt free contacts
Purge timing	Automatic, adjustable 1-99 minutes

Expo's purge & pressurization systems protect thousands of electrical systems worldwide

Purge and Pressurization (Ex p) – a simple protection concept that excludes any hazardous material from the equipment installation. Ex p offers many advantages over other protection concepts – since general purpose electrical equipment and enclosures can be used, it makes system design, assembly, and commissioning simpler.



Purge: The SmartPurge Z supplies clean, dry instrument air to the enclosure at a high flow rate for a pre-set time, expelling any potentially flammable atmosphere remaining inside through the system relief valve. Enclosure pressure and purge flow are both monitored during this phase, and the electrical equipment inside the enclosure must not be energised.



Pressurization: After purge is complete, the automatic leakage compensation valve (ALCV) controls the air supply to maintain a constant pressure inside the enclosure and compensate for any small leaks, thus preventing ingress of the outside atmosphere. The enclosure pressure is continuously monitored. The electrical equipment inside the enclosure can now be energised.

There are so many applications where Purge & Pressurization is the best solution – here are a few

- Large control panels
- Gas / liquid analysers, CEM systems
- Complex/expensive instrumentation
- Packaging & filling lines
- Fire pump control systems
- VFD/VSD panels
- Painting robots
- Label printers
- Large flat screen monitors
- Mobile service equipment
- Hydrogen dispensing systems
- UV & EDI water treatment systems



Read more about these and many more applications on our website

Expo operates in more than 50 countries worldwide. To find out more about how Expo can help you solve your hazardous area problems, get in touch via our website www.expoworldwide.com or through your local channel partner.

You can speak to an applications engineer at one of our regional offices.

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