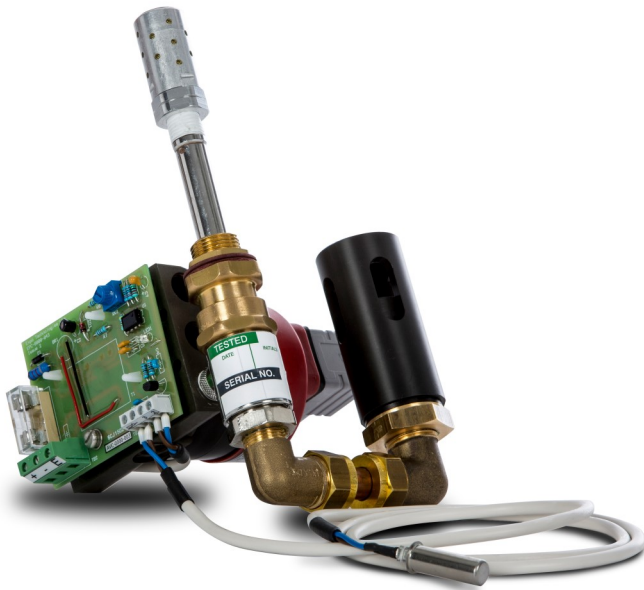


Hazardous Area Cabinet Cooler

For purged & pressurized enclosures :
Up to 300W (1023 Btu/hr) of cooling capacity



Specification

Cooling Capacity:	300W at 100psi (1023 Btu/hr at 7barg)
Air Supply:	60-100 psi (4-7 barg)
Air flow rate:	700 NI/min (25scfm)
Power Supply:	230 Vac. 50/60 Hz
(Options)	24Vdc. 110 Vac. 50/60 Hz
Power consumption:	5W max.
Temperature Control:	Electronic = +/-2°C (+/- 3.6°F)
Maximum Air Outlet Temperature:	130°C (266°F)

Air outlet muffler options: IP66 or IP54*

Sound pressure level in operation: Maximum 88.6 dB,
Average 87.5dB at 1m distance

Certification:

ATEX: II 2 G Ex h IIC T4 Gb Tamb -20°C to +55°C

IECEX: Ex h IIC T4 Gb Tamb -20°C to +55°C

Note: Ex h refers to non-electrical parts and applies to the air outlet muffler only.

* IP54 when the enclosure is pressurized, otherwise IP40

Overview

Expo Technologies Cabinet Cooler provides cooling for purged & pressurized enclosures. Cooling may be required either to remove heat generated by the contents of the enclosure, or to compensate for high ambient temperature.

The cooler works by using a compressed air supply and spinning the air into a chamber at very high RPM. This splits the air into a hot and cold fraction. The hot fraction is exhausted through a muffler to the outside. The cold fraction is retained inside the enclosure to provide cooling, before exiting through the vent valve.

The temperature of the hot fraction exiting the enclosure into the hazardous area is factory limited to 130°C (266°F) allowing a T4 rating.

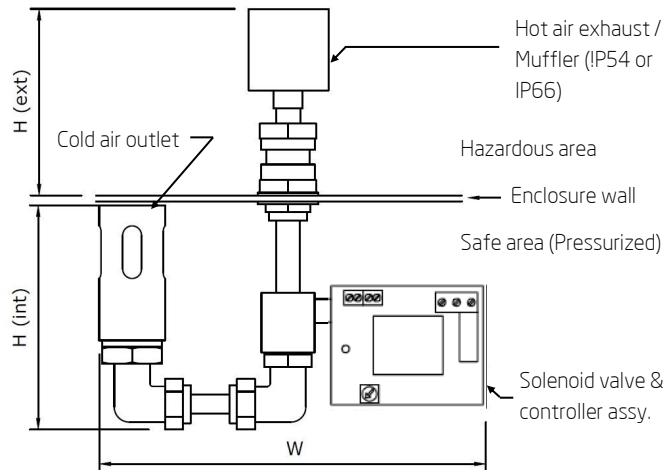
Temperature monitoring within the pressurized enclosure is achieved through the use of a remote temperature sensor, that can be positioned by the user to achieved optimum cooling. The temperature set point is adjusted on the controller.

For heat loads of 300-600W (1023-2046 Btu/hr) 2 vortex coolers can be installed in tandem, connected to the same instrument air supply, provided there is sufficient capacity. Depending on the operating conditions, the coolers can be configured in 2 ways: (i) If the temperature set-points are at the same level, then both coolers will operate simultaneously (ii) If one set point is higher than the other, a cascade effect is created.

Features

- Specifically designed to cool purged & pressurized enclosures in hazardous areas.
- Energised after the purge has been completed and power has been applied to the enclosure.
- Provides an economic option for low heat loads, avoiding the need for a certified AC system.
- One complete assembly, comprising cooler, controls, temperature sensor, and air solenoid valve. Quick and easy to install.
- Remote temperature sensor can be positioned as required to achieve optimum control within the enclosure. (Cable length 1m (39"))
- Hot air exhaust is temperature limited (T4).
- No moving parts, giving high reliability.

General arrangement



Weights & dimensions

Width W	194mm (7.65")
Internal height H (int)	119mm (4.7")
External height H (ext) Adjustable	98mm (3.9")
Approximate Weight	1.5kg (4lbs)

Part numbers

Power supply	IP rating	Vortex cooler part number	Vortex cooler kit part number*
230 VAC	IP66	AVC-0000-029	KVC-0000-016
	IP54	AVC-0000-001	KVC-0000-004
110 VAC	IP66	AVC-0000-030	KVC-0000-017
	IP54	AVC-0000-009	KVC-0000-005
24VDC	IP66	AVC-0000-028	KVC-0000-015
	IP54	AVC-0000-003	KVC-0000-012

*Note that the vortex cooler kit (KVC-0000-XXX) comprises the vortex cooler, RLV25 relief valve, and piping kit. This is the recommended option for installation on a purged & pressurized enclosure.

Installation notes

The Vortex Cooler assembly will operate in all orientations. However, the cold air out check valve must be rotated to the vertical position, using an extension pipe if required.

Temperature sensor, 35mm (1 3/8") long by 100mm (1 3/32") diameter is supplied and should be mounted at the top of the enclosure or the client preferred position, using a 'P' clip.

In addition to the relief valve that forms part of the purge system, a second enclosure relief valve is required to exhaust the cold fraction entering the pressurized enclosure. (This does not apply to CF type purge systems with an additional spark arrestor outlet).

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