

LCP51

Purgepak Pressurising system

The Purgepak LCP51 is a well proven pneumatically controlled system that is specifically designed for purging and pressurising rotating machines sited in potentially explosive atmospheres.

System Features

- Pneumatic logic
- System initiation by local pushbutton or optionally by remote pneumatic initiation
- Visual indication of purging and pressurising status on the valve unit
- Remote electrical system initiation, indication for completion of purge and alarm via intrinsically safe barriers upon request
- Fully certified under ATEX to standards EN60079-0:2006 & EN60079-2:2007

Previous Customers

Shell Tern Alpha // BP // Transco // Marathon Oil // GASCO

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Specifications

- Supply Pressure: 4 bar to 10 bar
- Operating Temperature: -10°C to 60°C
- Dew Point maximum: -40°C
- Required Filtration: 85% at 5 microns
- Purge Flow Range: 1000 to 7000 NL/Min
- Leakage Compensation: 0 to 1500 NL/Min
- LCP System Certificate: Sira 03ATEX1233U
- Solenoid Valve Certificate: Sira 02ATEX9209



The Development

The origins of the LCP51 system date back to 1998 when low pressure and low differential pressure pneumatic relays were developed, forming the basis of the pneumatic system. Design changes made in 2002 to improve its operation and the changes made to meet certification requirements, have further enhanced reliability and have extend the range of machines that can be protected by the LCP51.

Interface

The LCP51 valve unit interfaces with a POR to ensure the rotating machine is purged and pressurised. The POR is a combined purge outlet and relief valve unit incorporating an orifice for purge outlet flow measurement and a spark arrestor.

A range of POR's are available to suit 1", 2" and 3" NB outlet pipework and incorporating purge flow orifices sized to suit application as follows:

- Up to 5500 l/min using a 63mm orifice plate.
- Up to 3500 l/min using a 56mm orifice plate.
- Up to 2000 l/min using a 34mm orifice plate.
- Up to 700 l/min using a 19.5mm orifice plate.

Starting

Once the LCP51 valve unit confirms that the rotating machine is purged and pressurised, the rotating machine may be started. If the pressure in the rotating machine drops below the required minimum pressure, the healthy status is lost and a signal is sent that may be used to shutdown the rotating machine or raise a warning alarm.

