



Product Motor Pressurization System

Data Sheet

IECEX & ATEX Certified Purge & Pressurization System
for Large Machines

D795 Motor System

Hazardous Area classification
IECEX Zone 1 (21) Ex px IIC T6 GDb,
ATEX Cat 2 G,D Zone 1 (21) Ex px IIC T6

**IECEX
& ATEX
Certified**



D795 Motor System
Control Unit

Relief Valve

OPERATION

The Motor Purge and Pressurization MiniPurge™ system has been specifically designed for use on very large electric machines and generators to be located in a hazardous location.

The system has a High Purge rate to remove the gas that may be present within the machine prior to start-up. The purge flow rate and duration is normally established by the manufacturer & Certification (Notified) Body during the machine testing. On completion of the High Purge the system switches to Closed Loop Automatic Pressurization, leakage compensation. This automatically compensates for the pressure variation in the machine which are typically caused during start-up or due to temperature fluctuations. The machine will then continuously operate at a constant pressure offering the Manufacturer considerable savings in time on the test bed & the Plant Operator ease of Commissioning & Operation

COMPONENTS

The system has two components. The Control Unit controls air flow and monitors flow and pressure. It also contains the pneumatic logic controlling the purge timer circuit & volt free / dry system status contacts. The Relieve Valve provides over-pressure protection for the machine enclosure, the purge flow measurement on the outlet and provides the outlet path for the purge airflow via an integral spark arrestor.

Where the leakage of the machine is >1200 NI/min at the normal working pressure it is recommended a MiniPurge Boost Unit should also be installed to compensate for this increased leakage rate.

Features

- + Entirely pneumatic operation using the same compressed air supply for the Purge & Pressurization and Logic
- + Air regulator & Filter provided
- + IECEX & ATEX Certified Ex [px] to IEC/EN 60079-2
IECEX & ATEX certified Ex p (formerly Ex pD) to IEC/EN 61241 -0 & -4
- + Purge Flow Rates 7000 to 12000N NI/min
- + User selectable purge timer with increments up to a maximum of 45 minutes. Option: 105 minutes
- + One design of system may be fitted to a variety of machine frames
- + Closed Loop Automatic Pressurization System (CLAPS) for automatic control of the pressure in the machine during start-up and normal operation
- + Simple Installation on the side of the machine with minimal pipework required between the Control Unit & RLV
- + Clear visual status indication
- + Remote alarm contacts
- + Patented magnetic Relieve Valve

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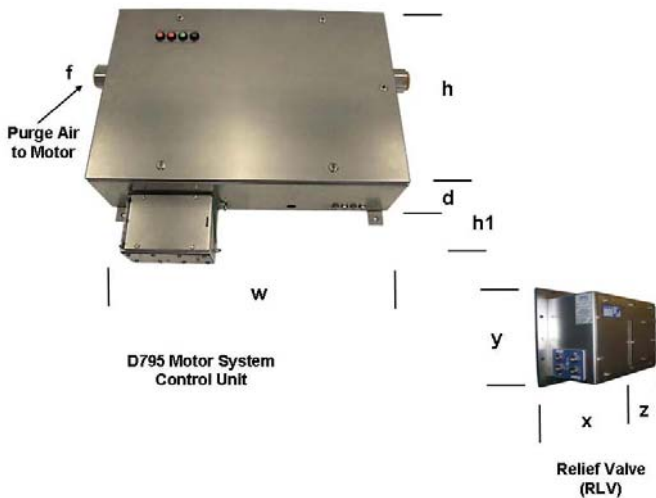
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Technical Specification

Motor Pressurization system

D795 Motor System



Dimensions/Spec		D795	
Width	w	37.4"	950mm
Height	h	25.6"	650mm
Height + SJB	ht	33.1"	841mm
Depth	d	10.5"	266mm
Fitting	f	2" NPT	2" NPT
RLV Width	x	21.3"	540mm
RLV Height	y	16.1"	410mm
RLV Depth	z	11.4"	289mm

OPTIONS

- Air Inlet 2" Ball Valve for local isolation of the system. To suit the D795 system
Order Code: D795BALLVV
- Air Inlet "Ex" approved 2" Solenoid Valve for remote isolation of the system
Order Code: D795SOLVV
- Extended Purge Timer option for additional 60 minute timer (total 105 minutes).
Order Code: KGM-PR00-008
- External manual override switch, supplied loose.
Order Code: /MO(Box)

MiniPurge™ Boost Unit

- LC capacity 1800 NI/min @ 5barg (1/2" NPT)
Order Code: AAU-1000-000
- LC capacity 3000 NI/min @ 5 barg (3/4" NPT)
Order Code: AAU-3000-000
- LC capacity 5000 NI/min @ 5 barg (1" NPT)
Order Code: AAU-3000-001

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Control Unit Specification

Model Number:

7XLC/ss/OV/PA/PC/D795

Type of Operation

Automatic Purging & Leakage Compensation (LC)

Action of Pressure Failure

Alarm and Trip / Disconnect of machine interlocks
(Alarm Only, operation User adjustable)

Certification

IEC Zone 1 (21) Ex [px] II T6

ATEX II 2 (2) G D Ex [px] II T6

Purge Time Increments: 10, 15 and 20 minutes, giving a maximum available period of 45 minutes (additional 60 minute timer optional)

Leakage Compensation (LC) Capacity

Up to 1500 NI/min @ 5 barg inlet pressure

Automatic (CLAPS) Capacity

+40% of the normal enclosure Leakage flow rate

Compressed Air Supply

Clean Dry Oil free Air or Inert Gas

Minimum supply pressure 4.5 barg, Maximum 16 barg

Supply inlet filter 40µ and regulator fitted

Process Connections

Purge Supply: 2" NPT female

Purge outlet to machine: 2" NPT female

Reference points and signals: 1/8" NPT female

Motor Interlock Contacts

2 pole normally open (DPNO), 4A 250V AC15 IECEX / ATEX
Ex d II T6

Alarm (No pressure) / Pressurized Contact

1 pole changeover (SPCO), 4A 250V AC15 IECEX / ATEX
Ex d II T6

Intermediate Pressure / Pre-Alarm Contacts

1 pole changeover (SPCO), 4A 250V AC15 IECEX / ATEX
Ex d II T6

Signal Junction Box (SJB)

316L Stainless steel ATEX II 2 G D Ex e II T5, c/w terminals,
front access & lower removable gland plate

Materials & Mounting

Housing and external process connections 316L stainless steel.

Wall mounting lugs & spacers provided for fitting to machine

Weight

D795 Motor Control Unit 70kg (155lb)

Temperature Range

-20°C, -4°F to 55°C, 131°F

System Sensors

Minimum Pressure range: 0.5 to 5 mbarg (Default 1.5 mbarg)

Intermediate Pressure range: 2 to 6 mbarg (Default 4 mbarg)

Normal Working Pressure: 10 mbarg maintained by CLAPS

Control Unit Specification

Model Number

RLV200/ss/FS

Purge Flow Range: 7000, 8000, 1000, 12000, 14000 NI/min
(factory set)

Relief Valve Lift-off pressure 20 to 50 mbarg (Default 30mbarg)

Material / Mounting: 316L stainless steel. Rectangular flange

Weight Relief Valve 23 kg (51 lb)

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