

COLDSTOP SMART

Intelligent protection against brittle fracture in cryogenic systems

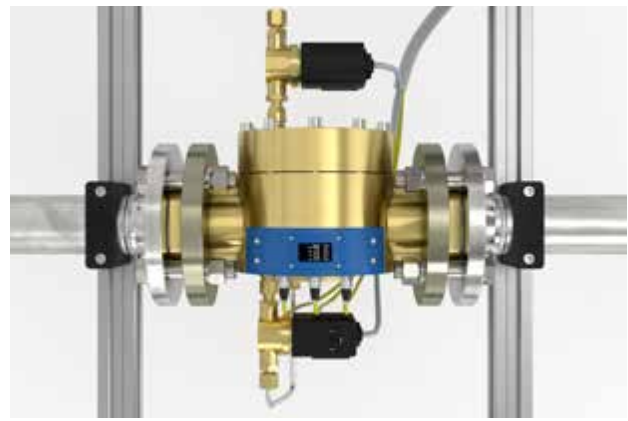
COLDSTOP SMART detects critically low gas temperatures in cryogenic systems and stops the gas flow preventively - automatically and absolutely reliably.

Downstream systems and pipework are thus effectively protected against brittle fractures. This reduces the risk of equipment failure and damage to equipment, increases overall operational safety and reduces costs.

The integrated solution consisting of the WITT smart dome-loaded pressure regulator (model 747LE/S, 757LE/S or 767LE/S), WITT control unit and solenoid valves. COLDSTOP SMART can be freely configured: Closing and opening values as well as the logic for alarms and actions (e.g. activation of additional vaporiser capacity) can be set individually.

The system enables remote monitoring of pressure, temperature and flow in real time and also offers interfaces for connecting to telemetry systems, for example.

COLDSTOP SMART meets the requirements of the harmonised EIGA, CGA and AIGA standards for the prevention of brittle fractures in cryogenic systems.



Features of COLDSTOP SMART

- best-in-class outlet pressure control accuracy, even when flow rates and inlet pressures are varying
- signaling of flow, inlet/outlet pressures and temperatures as 4-20 mA (ideal for cryogenic tank telemetry), and digitally via RS485
- closing (stopping the flow) at your defined set-point (freely selectable -30 °C to +50 °C / -22 °F to +122 °F)
- reopens at your defined set-point
- transmits its status at all times
- status signals can drive alarms and corrective actions (eg to engage additional vapouriser capacity)
- entire logic can be custom-configured to use all available signals



Example:



Approvals

Company certified according to ISO 9001, ISO 22000 and PED 2014/68/EU Module H
CE-marked according to PED 2014/68/EU

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| | |
|----------------------------|--|
| Type | Combination of smart WITT dome pressure regulator (model 747LE/S, 757LE/S or 767LE/S), WITT AM3 control unit and solenoid valves |
| Gases | N ₂ , Ar, CO ₂ , O ₂ and combustible gases (outside the Ex zone) |
| max. inlet pressure | 40 bar (O ₂ - 30 bar, CO ₂ - 25 bar) |
| Outlet pressure | 0.5 - 30 bar (CO ₂ - 16 bar) |
| Temperature range | -30 °C – +50 °C / -22 °F to +122 °F |

Connections

| 747LE/S SMART | 757LE/S SMART | 767LE/S SMART |
|--|-----------------------------|--|
| G 1" female | G 2" female | G 3" female |
| loose flange DN 25/PN 40 DN 32/PN 40 | loose flange DN 50/PN 40 | loose flange DN 80//PN 40 DN 100/PN 40 |
| 1" NPT female | 2" NPT female | 3" NPT female |

| | |
|---|---|
| Output signal via terminal strip in the housing of control unit AM3 | 6 x 4 till 20 mA for inlet-, outlet-, control pressure, temperature and flow rate 1 x potential-free changeover contact for alarm 1 x warning light connection |
| serial Interfaces RS485 | for inlet-, outlet-, control pressure, temperature and flow rate |
| Load of potential-free contact | 250V AC 5A or 24V DC 2A |
| System protection | Fail Close |
| Function keys | acknowledgement of alarm by resistive display setting by 4 capacitive keys |
| Display | - TFT display for setting parameters and alarm 1-8 - additional digital view of menu items - 4 bicolored LEDs for operating status, system fault, alarms 1-8 |
| Languages | German, English (more to follow) |
| Materials in contact with media Dome pressure regulator set | brass, stainless steel (1.4305, 1.4310), CR, NBR, PEEK, PTFE, sintered bronze |
| Wall housing AM3 | plastic |
| Protection class | Dome pressure regulator set IP 44, Wall housing AM3 IP 65 |
| Weight Dome pressure regulator set | 747LE/S SMART approx. 14 kg, 757LE/S SMART approx. 17 kg (with flange approx. 26 kg), 767LE/S SMART approx. 65 kg |
| Wall housing AM3 | approx. 5.0 kg |
| Dimensions (HxBxT) | Dome pressure regulator set 747LE/S see Data sheet DR2.2 SMART Dome pressure regulator set 757LE/S see Data sheet DR2.1 SMART Dome pressure regulator set 767LE/S see Data sheet DR2.8 SMART Wall housing AM3 approx. 280 x 302 x 158 mm (without connections) |
| Voltage | 230 V AC, 50 Hz |
| Power consumption | < 0.7 A |

