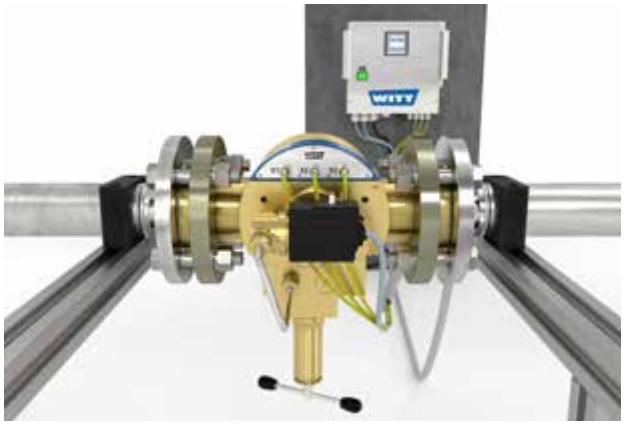
COLDSTOP SMART

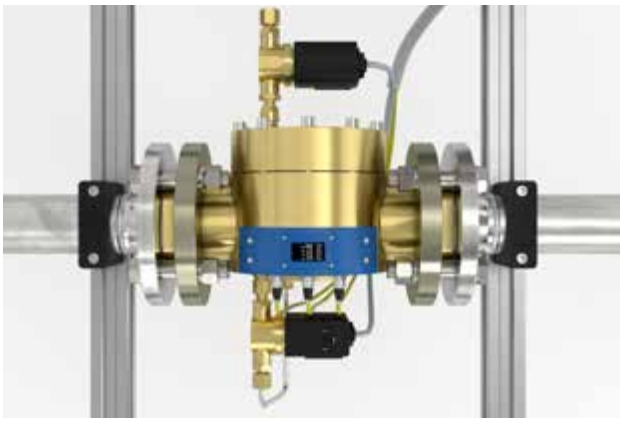
Intelligent protection against brittle fracture in cryogenic systems

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

DR9 USA - B01/5G subject to change

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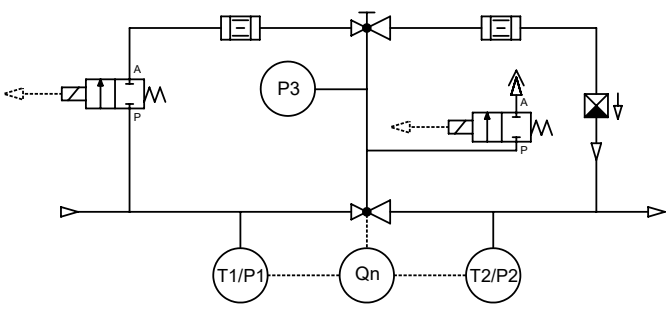
www.wittgas.com

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	580 PSI
Outlet pressure	7 - 435 PSI
Temperature range	-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	6 x 4 till 20 mA
via terminal strip in the housing of control unit AM3	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 Closed
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. 30 lb, 757LE/S SMART approx. 37 lb (with flange approx. 57 lb), 767LE/S SMART approx. 143 lb
Wall housing AM3	approx. 11 lb
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. 11 x 12 x 6 inches (without connections)
Voltage	230 V AC, 50 Hz
Power consumption	< 0.7 A



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