THE NEW GENERATION

Modular | Compatible | Fast availability

DRUVA TEC
SAFETY AND MAINTENANCE PANELS
FOR INDUSTRIAL GAS SUPPLY SYSTEMS

METAL DIAPHRAGM SHUT OFF VALVE

Shut off valve used in supply systems for industrial, inert, flammable, oxidizing gases and gas mixtures.
Not usable for corrosive or toxic gases and gas mixtures.

SPECIAL FEATURES:

> Designed and approved in accordance with relevant sections of **EN ISO 10297:2015**
> **O2- ignitation** test regading EN ISO 10297 for main shutt of valve
> **Electrostatic chargeability test**
- fulfill requirements according DIN EN ISO 80079-36; IEC TS 60079-32-1 and German TRGS 727
- usable in EX- areas zones 1 and 2 for gases with explosion risk group I; IIA; IIB; IIC

VTMF 4-port metal diaphragm shut off valve

VTMI 4-port metal diaphragm shut off valve

VTLA 2- port metal diaphragm shut off valve

TECHNICAL DATA - VALVES		
Working temperature:	-20°C to + 60°C	
Inlet/Outlet ports:	NPT 1/4" female; NPT 3/8" female	
Max. working pressure:	300 bar; 40 bar	
Kv-value:	0,25; 0,35	
Seat diameter:	5 mm; 7 mm	
Leakage rate seat:	less than 6 cm^3/h (20°C; 1,013 bar absolut)	Compressed Air
Leakage rate outside:	less than 6 cm^3/h (20°C; 1,013 bar absolut)	Compressed Air
Filter inlet:	100 µm mesh	
Filter outlet ports:	100 µm mesh	
Mounting holes:	M6	
Weight:	0,30 kg; 0,62 kg	
Valve body:	BRASS (2.0401.26)	
Valve diaphragm:	2 x Elgiloy (2.4711); 1 x Hestiloy (2.4819) + Elgiloy (2.4711)	
Valve seat:	PCTFE	
Valve popet:	BRASS (2.0401.26)	
Tests in production:	Pressure test with dry air (ISO 8573 [1:2:2]) of each item	
	Seat leakage test with dry air (ISO 8573 [1:2:2]) of each item	
	Test of functionality of each item	
Approvals during development:	Type test accordance with relevant sections of EN ISO 10297:2015	
	O2 ignition test regarding EN ISO 10297 for main shut off valve	
	Electrostatic chargeability test	
	- fulfill requirements according DIN EN ISO 80079-36; IEC TS 60079-32-1 and German TRGS 727	
	- usable in EX- areas zones 1 and 2 for gases with explosion risk group I; IIA; IIB; IIC	

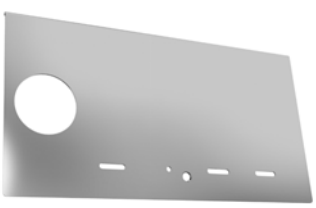
PANELS

> Consists of two parts (plates)
> Easy installation of ground plate (without weight of Safety and Maintenance Panel)
> Attach front plate and fix by one screw only
> Front plate with mounting hole for replacement of gauges

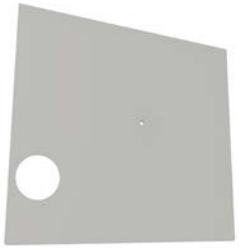
GROUND PLATE
Including grounding bolt

FRONT PLATE - STLMIN

FRONT PLATE - STLMID



FRONT PLATE - STLMAX



DRUVA TEC RANGE
- SAFETY AND MAINTENANCE PANELS

DRUVATEC LOW- FLOW RANGE- MAXIMAL- VERSION

for industrial, inert, flammable, oxidizing gases and gas mixtures. Not usable for corrosive or toxic gases and gas mixtures.

SPECIAL FEATURES:

On a Safety and Maintenance Panel, both safety-related components and maintenance-related systems of a central, industrial gas supply are combined.

SAFETY RELATED COMPONENTS:

> **safety device with multiple functions** for flammable, oxidizing gases designed in single or redundant version, exchangeable without disassembly of the panel
> **safety relief valve** designed and adjusted based on worst case scenario measurements of DruvaTEC Low Flow manifold regulators
> **pressure indication port** for monitoring of pipeline pressure, separate lockable, gauges are exchangeable without disassembly of the panel

MAINTENANCE-RELATED SYSTEMS:

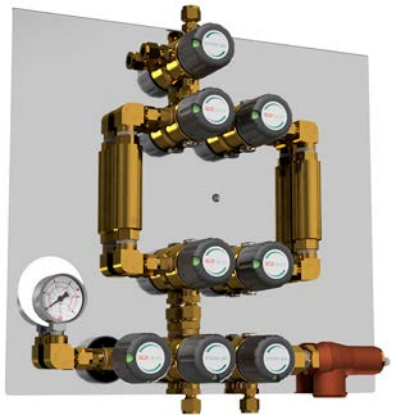
> inlet port for connecting external source
- as a second supply source to avoid system downtime during maintenance at manifolds
- as a test gas inlet port for pressure test of piping system after installation or during maintenance
- existing additional valve for releasing of pressure in piping system

PANEL CONSISTS OF TWO PLATES

- Easy installation of ground plate without weight of complete safety and maintenance panel
- Simple hang front plate including safety and maintenance panel
- Fixing front plate by only one bolt

STLMAX- Safety and Maintenance Panel
- Maximal version- single safety device

STLMAX- Safety and Maintenance Panel
- Maximal version- redundant safety devices



STLMID- Safety and Maintenance Panel- Middle version

STLMN- Safety and Maintenance Panel- Minimal version

PRODUCT CONFIGURATOR

For more information you can use our WEBSITES

DRUVA TEC LOW FLOW RANGE - SPARE PARTS

safety device

Gauges

Contact gauge

Pressure transmitter

Safety valve

TECHNICAL DATA - SAFETY DEVICE WITH MULTIPLE FUNCTIONS	
FLAMMABLE GASES	
according Standards EN 730-1 and ISO 5175:	
Included safety elements inside are flame arrestor, temperature sensitive cut- off valve and dust filter	
Maximum working pressure:	10 bar
Cracking pressure:	10 mbar
Working temperature range:	-20 °C up to 70 °C
Maximum flow rate:	more than 20 m^3/h
Material body:	brass (2.0401)
Material Internal spring:	stainless steel 1.4301
OXYGENE	
according Standards EN 730-1 and ISO 5175:	
Included safety elements inside are flame arrestor, temperature sensitive cut- off valve and dust filter	
Maximum working pressure:	10 bar
Cracking pressure:	10 mbar
Working temperature range:	-20 °C up to 70 °C
Maximum flow rate:	more than 20 m^3/h
Material body:	brass (2.0401)
Material Internal spring:	stainless steel 1.4310

TECHNICAL DATA - PRESSURE INDICATION PORT - GAUGE		
OPTION GAUGE		
based on requirement of EN 837 (safety gauge without baffle wall)		
Suitable for max. steady working pressure 75% of max. scale value		
Nominal size:	50 mm	
Inlet connection:	NPT ¼" male	
Cleaned for:		
Scale range (bar; psi):	16 bar (10 bar); 40 bar (20 bar); 65 bar (40 bar)	
Accuracy class:	2,5	
Temperature range:	-20°C up to 60 °C	
Material	Pressure element:	brass
	Pressure inlet connection:	brass nickel plated
	Dial:	Aluminum
	Pointer:	Aluminum
	Case:	stainless steel polished
	Window:	plastic crystal clear

TECHNICAL DATA - PRESSURE INDICATION PORT - OPTION REED CONTACT GAUGE		
based on requirement of EN 837 (safety gauge with baffle wall and blow out back- S3)		
Suitable for max. steady working pressure 75% of max. scale value		
Nominal size:	50 mm	
Inlet connection:	NPT ¼" male	
Cleaned for:	Oxygene	
Scale range (bar; psi):	16 bar (10 bar); 40 bar (20 bar); 65 bar (40 bar)	
Accuracy class:	2,5	
Temperature range:	-20°C up to 60 °C	
Material	Pressure element:	stainless steel
	Pressure inlet connection:	stainless steel
	Dial:	Aluminum
	Pointer:	Aluminum
	Case:	stainless steel blank
	Window:	plastic crystal clear
Electrical data contacts:	operating voltage U max. = 24 V DC/AC	
	Current input: Imax. = 0,4 A	
	Breaking capacity: P max. = 8W/8 VA	
Contact type:	RK 1.1, normally open, contact opens by decreasing value	
	RK 1.2, normally open, contact closed by decreasing value	

TECHNICAL DATA - PRESSURE INDICATION PORT - OPTION INDUCTIVE CONTACT GAUGE		
based on requirement of EN 837 (safety gauge with baffle wall and blow out back- S3)		
Suitable for max. steady working pressure 75% of max. scale value		
Nominal size:	50 mm	
Inlet connection:	NPT ¼" male	
Cleaned for:	Oxygene	
Scale range (bar; psi):	16 bar (10 bar); 40 bar (20 bar); 65 bar (40 bar)	
Accuracy class:	2,5	
Temperature range:	-20°C up to 60 °C	
Material	Pressure element:	stainless steel
	Pressure inlet connection:	stainless steel
	Dial:	Aluminum
	Pointer:	Aluminum
	Case:	stainless steel blank
	Window:	plastic crystal clear
Electrical data contacts:	operating voltage U nominal = 8,2 V DC	
	Current input contact closed: > = 3 mA	
	Current input contact open: <= 1 mA	
Contact type:	IK 1.1, inductive contact, contact opens by decreasing value	
	IK 1.2, inductive contact, contact closed by decreasing value	

TECHNICAL DATA - PRESSURE INDICATION PORT - OPTION PRESSURE TRANSMITTER		
FOR INERT, NON-CORROSIVE GASES AND GAS MIXTURES, OXYGEN (Not for flammable gases, not useable in EX-Areas)		
Long Term Drift:	0,2% Full Scale/YR (non-cumulative)	
Accuracy:	0,25% Full Scale	
Thermal Error	0,83% Full Scale/100°F (1,5% Full Scale/100°C)	
Compensated Temperatures	-40°C to +125°C	
Operating Temperatures	-40°C to +125°C	
Zero Tolerance	0,5% of span	
Span Tolerance	0,5% of span	
Fatigue Life	Designed for more than 100 M cycles	
Mechanical Configuration:	stainless steel	
Pressure Port	¼" NPT Male	
Electrical Connection	M12x1 – 4 pin	
Parts in Contact with Gas	Stainless Steel	
Enclosure	IP67 (IP65 for electrical code G)	
Supply Voltage:	2 Volts above full scale to 30 Vdc max @ 4.5mA (6.5mA at output version)	
Vibration:	40G peak to peak sinusoidal (Random Vibration: 20 to 100 Hz @ aprox.. 40G	
	Peak per MIL-STD-810E	
Shock:	Withstands free fall to IEC 68-2-32 procedure 1	
Apprrovals:	CE, conform to European Pressure Directive, Fully RoHS compliant	
	UL recognized files # E219842 & E174228	
Weight:	35 grams	
Output signal:	4...20mA	
FOR FLAMMABLE GASES, USEABLE IN EX-AREAS		
Material gas wetted parts:	Stainless steel, fully welded.	
Accuracy:	</= +/- 0,50% of span	
Output signal:	4...20mA	
Operating temperature medium:	-15°C to +70°c	
Operating temperature ambient:	-15°C to +70°C	
Manufacture's information	SIL 2, Functional safety, MTTF:>100 yearsand certificates China RoHS directive	
Long term stability	</= +/- 0,2% of span/year	
Mechanical Configurration	Pressure Port:	¼" NPT Male
	Electrical Connection	M12x1 – 4 pin
	Parts in Contact with Gas:	Stainless Steel
	Enclosure:	IP65 (IP 68 also available)
	Power Supply:	24 VDC
	Vibration resistance:	20 g
	Shock resistance:	1,000 g
Apprrovals:	ATEX, IECEx, FM, CSA, SIL rating per IEC61508/ IEC 61511	

TECHNICAL DATA - SAFETY RELIEF VALVE		
P.E.D. 2014/68/EU and AD2000 (A2) approved		
Cracking pressure:	13 bar	
Seat diameter:	9,5 mm	
Inlet threat:	NPT ½" male	
Outlet threat:	NPT ¾" female	
Working temperature rate:	-20°C up to 60°C	
Material gas wetted parts:	Valve body:	Brass (C83600)
	Seat:	CW614N
	Seal:	Viton
	Inner plunger:	CW614N

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