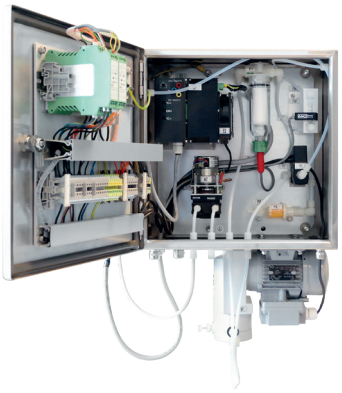


SS-M05 Marine

Gas Conditioning Unit Series PSS®

Version SS-M05 Marine for Marine Application

Special Features

- **Compact gas conditioning unit**
- **Type examination approval according to DNVGL-CG-0339**
- **With stainless steel Jet-Stream heat exchanger**
- **Ambient temperature up to +45 °C [113 °F]**
- **Outlet dew point adjustable from +2 to +15 °C [35.6 to 59 °F]**
- **Dew point stability < ±0.1 °C [±0.18 °F]**
- **Status alarm contact**
- **Self-controlling**
- **Possibility of test gas feeding through a solenoid valve**

Application

The SS-M05 Marine gas conditioning system is suitable for variable discontinuous use as well as for continuous operations in the maritime sector.

The components used in the SS-M05 Marine gas conditioning system have been specially designed and tested for marine applications.

Description

All components of the gas conditioning system are either housed in a compact stainless steel housing or attached to it.

The sample gas line is connected directly to the heat exchanger of the sample gas cooler.

The sample gas cooler cools the sample gas down to 5 °C [41 °F].

The heat exchanger is placed inside a heat-insulated cooling block.

The cooling block is cooled to a constant temperature of +5 °C [41 °F] by an electronically controlled (analog technology) Peltier element. A PT100 sensor is used to measure the temperature.

The thermal energy generated by the cooling system is dissipated via a fan-cooled heat sink.

The cooler is equipped with a temperature alarm contact that switches off the sample gas pump in case of a temperature deviation of ±3 °C [±5.4 °F] from the factory set point (+5 °C [41 °F]).

The peristaltic pump removes the accumulated condensate.

Downstream the cooler, there is a micro-filter with a 0.1 µm filter element and integrated liquid alarm sensor LA. In case of liquid leaking, the liquid alarm sensor also switches off the sample gas pump automatically.

A PTFE bellows pump is mounted onto the outside of the housing. This pump draws the sample gas from the sampling point via the sample probe SP180H/MA. The sample probe is sold separately. The gas is drawn through the heated sample gas line (optional) into the cooler and further through the micro-filter.

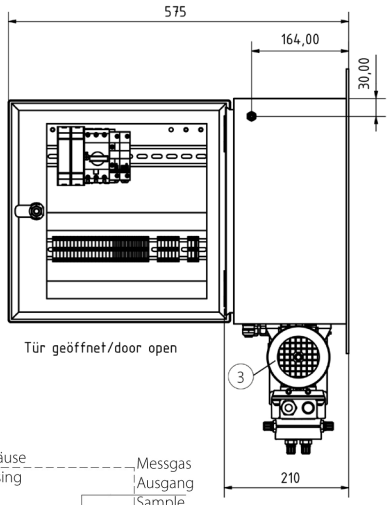
In the outlet of the sample gas pump a flow meter FM40 with flow monitoring FA-20mo is integrated.

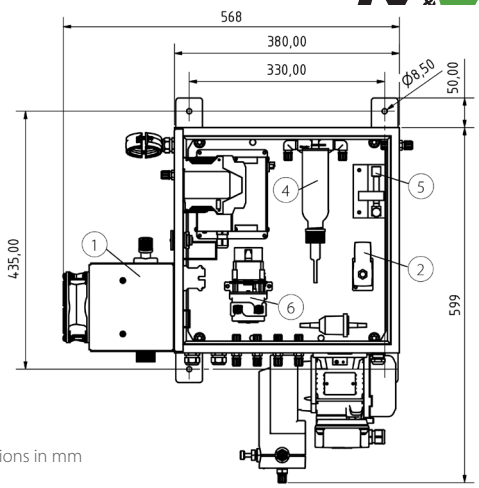
The flow rate controller reports the failure of the sample gas flow.

The now filtered and dried sample gas is passed on to the analyzers.

To calibrate the system, there is a switchover for test gas feeding through a solenoid valve. The switchover is implemented in the system.

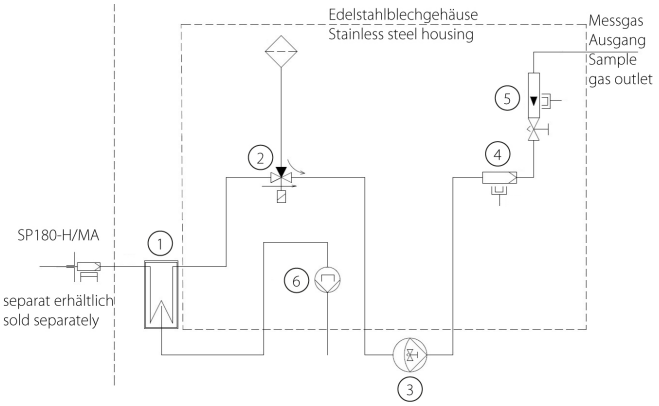
Dimensions





Dimensions in mm

SS-M05 Marine design



1 Gas cooler
2 Solenoid valve for test gas feeding
3 Sample gas pump MP-F 05
4 Filter FP-0,1 GF-D filter porosity 2 µm with integrated liquid alarm sensor LA
5 Flow meter FM40 with flow monitoring FA-20mo
6 Peristaltic pump SR25.2 for continuous automatic condensate drainage

Technical Data

Gas Conditioning System Series SS®	**SS-M05 Marine**
Part-No.	03G6000
DNV Type Examination Certificate	TAA000018R
Location classes	Temperature A Humidity B Vibration A EMC A Enclosure B
Sample outlet dew point	Range of adjustment: +2 to +15 °C [35.6 to 59 °F], factory setting: +5 °C [41 °F]
Sample outlet dew point stability	< ±0.1 °C [±0.18 °F] at constant conditions
Sample inlet temperature**	Max. 70 °C [158 °F]
Sample inlet water vapour saturation**	Max. 70 °C [158 °F]
Gas flow rate/heat exchanger**	Max. 100 l/h
Number of heat exchangers	1
Heat exchanger material	Stainless steel 316Ti
Ambient temperature**	+5 to +45 °C [41 to 113 °F]
Storage temperature	-20 to +60 °C [-4 to 140 °F]
Pressure	Max. 1 bar overpressure
Total cooling power at 25 °C ambient temperature	80 kJ/h
Sample gas connection inlet	Tubing 6 mm Ø*
Sample gas connection outlet	Tube connections DN 4/6 mm
Condensate connection	Tube connections DN 4/6 mm
Condensate removal	Peristaltic pump SR25.2
Sample gas pump	MP-F 05
Ready for operation	10 min
Power consumption	250 VA (up to 1600 VA for sample gas line)
Power supply	230 V ±10 %, 50 Hz or 115 V ±10 %, 60 Hz
Electrical connections	Clamps 2.5 mm², cable glands 2 x M20
Status alarm: gas flow rate	1 change-over contact
Switching power: status alarm	250 V, 2 A, 500 VA, 50 W
Case protection	IP54, EN 60529
Electrical equipment standard	EN 61010
Housing color	RAL 9005
Type of installation	Wall-mount
Dimensions (W x H x D)	600 x 780 x 600 mm [≈ 23.6" x 30.7" x 23.6"] with opened door
Weight	Approx. 30 kg [≈ 66.1 lbs]

* Standard, others on request
** Maximum values in technical data must be rated in consideration of total cooling capacity at 25 °C [77 °F] ambient temperature and an outlet dew point of 5 °C [41 °F].

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