PSS-10/1

Portable Gas Conditioning Unit Series PSS®

Version PSS-10/1 for 480 Nl/h gas flow rate

Special Features

- **Portable gas conditioning unit inside a robust aluminium-framed case**
- **Gas flow rate: max. 480 Nl/h**
- **Gas outlet dew point adjustable from +2 to +15 °C [36 to 59 °F]**
- **Dew point stability <± 0.1 °C [<± 0.18 °F]**
- **Minimum maintenance and self-monitoring**
- **Ready for operation in 20 minutes**
- **Jet-Stream heat exchangers made of glass, other materials available**
- **Customization for special measuring tasks possible**
- **Optionally: with trolley system**

Application

The portable gas conditioning unit PSS-10/1 is designed to carry out precise gas analyses at different locations. The entire gas conditioning unit is housed in a compact, robust aluminium-frame case to enable you to carry out your gas analyses rapidly, safely and with little maintenance work. The PSS-10/1 gas conditioning unit is suitable for variable, discontinuous use as well as for continuous operation. The components built into the PSS-10/1 gas conditioning unit are intended for "standard use". For special measuring tasks, different or additional components from our extensive product range can also be used.

Description

The M&C PSS-10/1 gas conditioning unit is equipped with a two-stage ECP20-2 gas cooler which cools the sample gas to a constant temperature of + 5 °C [41 °F] irrespective of the ambient temperature. As soon as the operating temperature of < +8 °C [46 °F] is reached after commissioning, the gas pump N9KPE is switched on automatically by the gas cooler status contact. The SR25.2-W peristaltic pumps ensure a continuous condensate drain, enabling long-term measurements without any problems. The corresponding particle filtration is carried out by the FP-2T ultra-fine filter. All this make the portable gas conditioning unit a complete gas conditioning system for most gas analysis devices.

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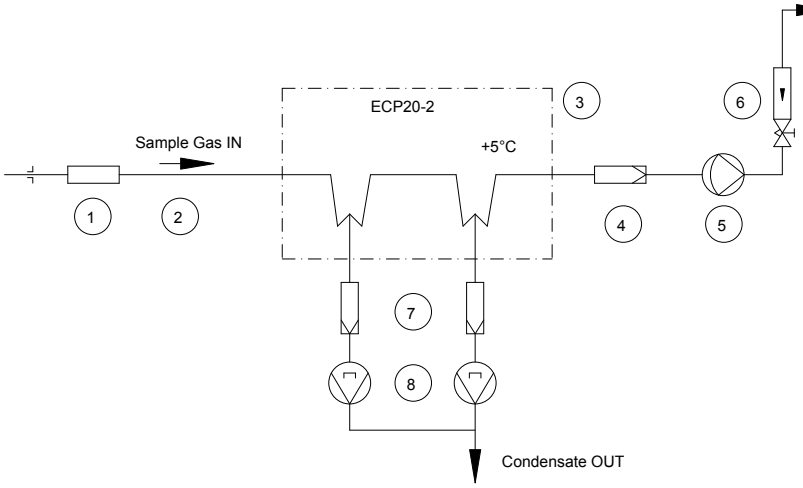
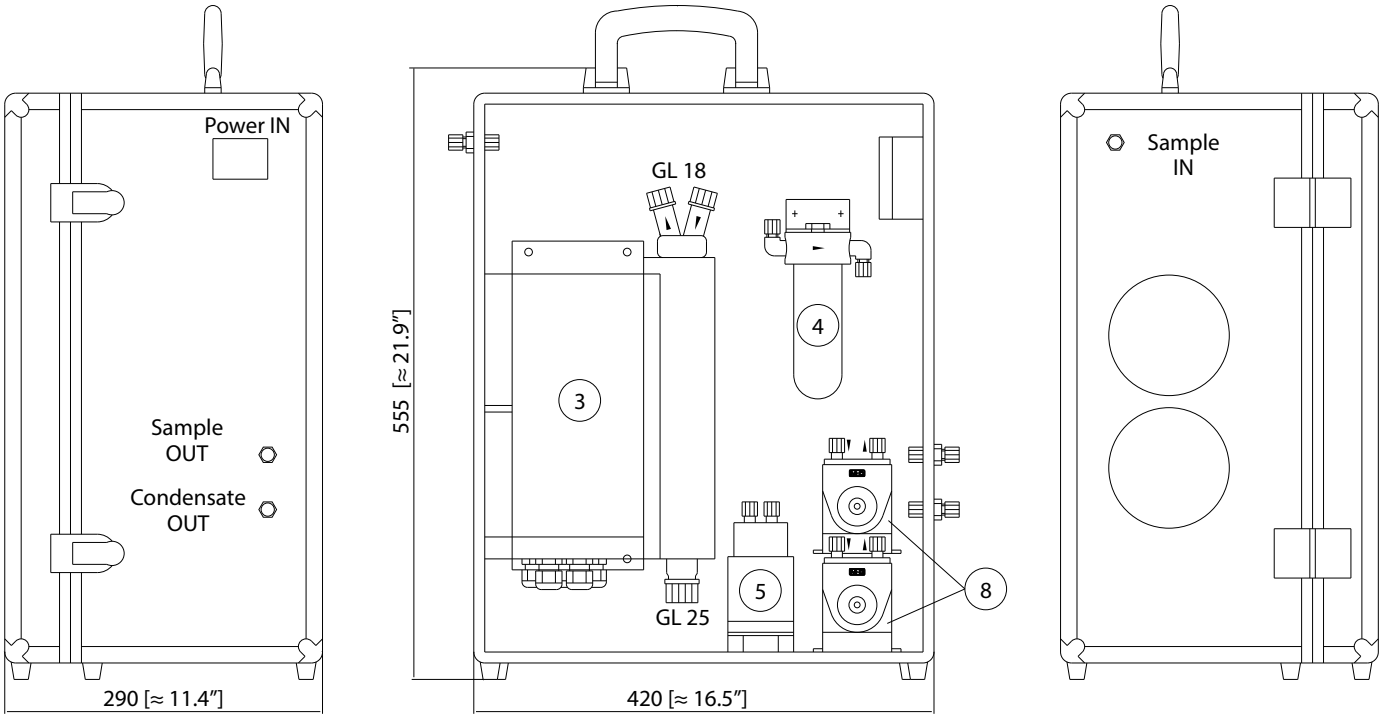
Flow scheme PSS-10/1

1 Gas sample probe
2 Sample line, 3 m Viton® hose
3 Gas cooler ECP 20-2
4 Fine filter FP-2T, filter porosity 2 µm
5 Diaphragm pump N9KPE
6 Optional flow meter FM 40
7 Pre-filter PF2
8 Peristaltic pumps SR25.2-W



Dimensions



Dimensions in mm [Inches]

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Technical Data

Gas Conditioning Unit Series PSS®	Version PSS-10/1
Part No. for 230 V/50 Hz version	01G5000
Part No. for 115 V/60 Hz version	01G5000a
Gas outlet dew point	Range of adjustment: +2 to +15 °C [36 to 59 °F], factory setting: +5 °C [41 °F]
Dew point stability	At constant conditions < ±0.1 °C [± 0.18 °F]
Gas inlet temperature*	Max. 80 °C [176 °F], optional: max. 180 °C [176 °F] with stainless steel bulkhead union
Gas inlet dew point*	Max. 80 °C [176 °F]
Gas flow rate*	Max. 480 Nl/h
Ambient temperature*	+5 up to +40 °C [41to 104 °F]
Storage temperature	-25 up to +65 °C [-13 to 149 °F]
Pressure	0.7 bar up to 1.4 bar abs.
Total cooling capacity*	Max. 80 kJ/h
Number of gas inlets	1
Number of gas outlets	1, optional: max. 4
Medium connections	Tube connection DN 4/6
Material of sample-contacting parts	Stainless steel 316Ti, glass, PVDF, Viton®, Novoprene
Ready for operation	Approx. 10 min.
Power supply	230 V/50 Hz or 115 V/60 Hz
Power consumption	Max. 350 VA; with option temperature controller and heated sample line 230 V: max.1730 VA 115 V: max. 1040 VA
Fuse protection	4 A t, 5 x 20 mm, with option temperature controller: 6.3 A t
Electrical connection	Cold appliance plug with 2 m [≈ 3.3 ft] cable
Case protection	IP20 (DIN 40050, IEC 529)
Case type	Portable aluminium framed protective case
Housing dimensions (H x W x D)	555 x 460 x 290 mm [≈ 21.9“ x 18.1“ x 11.4“]
Electrical equipment standard	EN 61010
Weight	Approx. 24 kg [≈ 55.1 lbs]

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

Options	Type	Part No.
Further sample gas outlet	Extra charge for parallel sample gas outlet, tubing via T-piece on lateral PVDF bulkhead fitting, DN 4/6, max. 4 pieces	01G9065
Flow meter, max. 4 pieces	FM40 7-70 Nl/h air, mounted in sample gas outlet FM40 15-150 Nl/h air, mounted in sample gas outlet FM40 25-250 Nl/h air, mounted in sample gas outlet FM40 50-500 Nl/h air, mounted in sample gas outlet	01G9070 01G9075 01G9080 01G9085
Fittings out of PVDF	Fittings out of PVDF instead of PP and 3 m [≈ 9.8 ft] Viton® sample tube DN 4/6	01G9025
Sample tube	Sample tube out of Kanthal® ø 6 mm, length 1 m [≈ 3.3 ft], sampling temperature max. 1300 °C [2372 °F]	01G9030
Liquid alarm sensor	Liquid alarm LA 1/1.4, consisting of: liquid alarm sensor LA1, controller LA1.4, filter glass F120G-D with GL connection incl. mounting/wiring. In case of condensate inrush, the sample gas pump is automatically switched off	01G9035
3-way ball valve	3L/PV-1 for switching over from test gas to sample gas, in the inlet of the sample gas conditioning unit, mounted with mounting brackets, fitting PVDF	01G9046
5-way ball valve	5L/PV-1 for switching over from test gas to sample gas, in the inlet of the sample gas conditioning unit, mounted with mounting brackets, fitting PVDF	01G9045
Electronic temperature controller for max. 12 m heated sample line 100 W/m	701 control range 0 to 200 °C [34 to 392°F], inlet PT100, power 230 V/50 Hz, Contact capacity 250 V AC max. 4 A, completely mounted incl. 7-pin plug 10 A	01G9055
Electronic temperature controller for max. 12 m heated sample line 100 W/m	701 control range 0 to 200 °C [34 to 392 °F], inlet PT100, power 115 V/60 Hz, Contact capacity 250 V AC max. 4 A, completely mounted incl. 7-pin plug 10 A	01G9055a
Connecting adapter for heated sample line DN 4/6	PSS-10 connecting adapter with anti-kink protection for rigid mounting of heated sample line with replaceable PTFE tube DN 4/6, consisting of reinforced plate, Swagelok® fitting with 4 mm support sleeve, material: SS 316Ti	01G9062
Connecting adapter for heated sample line DN 6/8	PSS-10 connecting adapter with anti-kink protection for rigid mounting of heated sample line with replaceable PTFE tube DN 6/8, consisting of reinforced plate, Swagelok® fitting with 4 mm support sleeve, material: SS 316Ti	01G9063
Sample gas inlet made of stainless steel	Extra charge for gas conditioning unit series PSS® with stainless steel fittings in the sample gas inlet for 6 mm tube, material: SS316Ti	C40002
Built-in aerosol filter CLF-5	Extra charge for gas conditioning unit series PSS® with built-in aerosol filter CLF-5, fittings and mounting included	C40003
Sample gas outlet made of stainless steel	Extra charge for gas conditioning unit series PSS® with stainless steel fittings in the sample gas outlet for 6 mm tube, material: SS316Ti	C40005
Trolley system	Detachable trolley for M&C white case, as of 2014, three-stage pull-out handle with locking knob in the handle and large, ball-bearing mounted casters	90G0160

Please note: Nl/h and Nl/min refer to the German standard DIN 1343 and are based on these standard conditions: 0 °C [32 °F], 1013 mbar.
Other versions on request.

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