



CSS-V2

Gas Conditioning Unit series CSS®

Version CSS-V1 for max. 1 x 250NI/h gas flow rate,
Version CSS-V2 for max. 2 x 150NI/h gas flow rate,
for 19"- or wall mounting

Special Features

- Compact high-performance construction with compressor cooler
- Individually configurable
- Completely pre-installed
- One or two gas streams
- 19"- or wall mounting housing
- Low maintenance and self-monitoring
- Outlet dew point adjustable from +2 °C to +7 °C
- Dew point stability $\pm 0,1^{\circ}\text{C}$
- Operational in 10 minutes
- Light weight
- Optimum reliability

Application

The units CSS-V.. provide a complete pre-installed compact high-performance sample gas conditioning for continuous use. Due to a big variety of additional options the gas conditioning units excellently can be adapted to the most diverse requirements of gas analysis technique.

Its compact construction only takes up little space. The CSS-V units are ready for use in a few minutes. This makes time-consuming procurement of individual components and assembly superfluous.

The ventilation grids in the sidewalls ensure that the equipment is sufficiently ventilated.

A liquid alarm sensor is integrated in the filter FPF-2-0,3GF to protect the downstream analysers against liquid irruptions and to increase the operating safety of the whole system. Via one or two potential free contacts for the summery alarm (cooler temperature, gas flow, liquid) an alarm is indicated and the sample gas pump, if existing, is switched off.

Description

All components of the gas conditioning unit are mounted in a compact sheet steel case.

Filter, flowmeter and peristaltic pump are placed into the front panel and thus assure a very easy maintenance.

The compressor gas cooler is equipped with one or two heat exchangers of Duran glass, stainless steel SS316Ti or PVDF.

The fine filter FPF-2-0,3GF (0,3 μm filter fineness) installed in front of the sample gas pump N3/5/9 KPE ensures the necessary removal of solid particles. The condition of the filter element is visible from outside.

The downstream installed sample gas pump N3/5/9 KPE is available with 3 pump capacities.

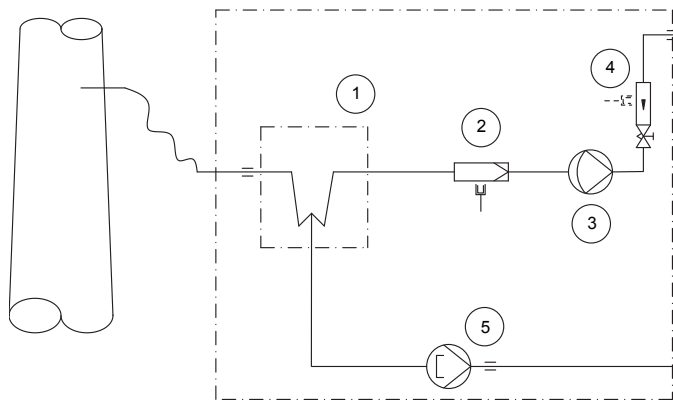
The flow meter FM40 with corresponding measuring range installed in the sample gas outlet can be equipped with a flow alarm sensor FA-20mo and the adequate electronic.

The unit contains a temperature alarm contact that is activated in case the temperature differs more than $\pm 3^{\circ}\text{C}$ from the set value ($+ 5^{\circ}\text{C}$) adjusted at the factory and switches off the sample gas pump if existing.

The condensate occurred is removed continuously via the peristaltic pump type SR25.2.

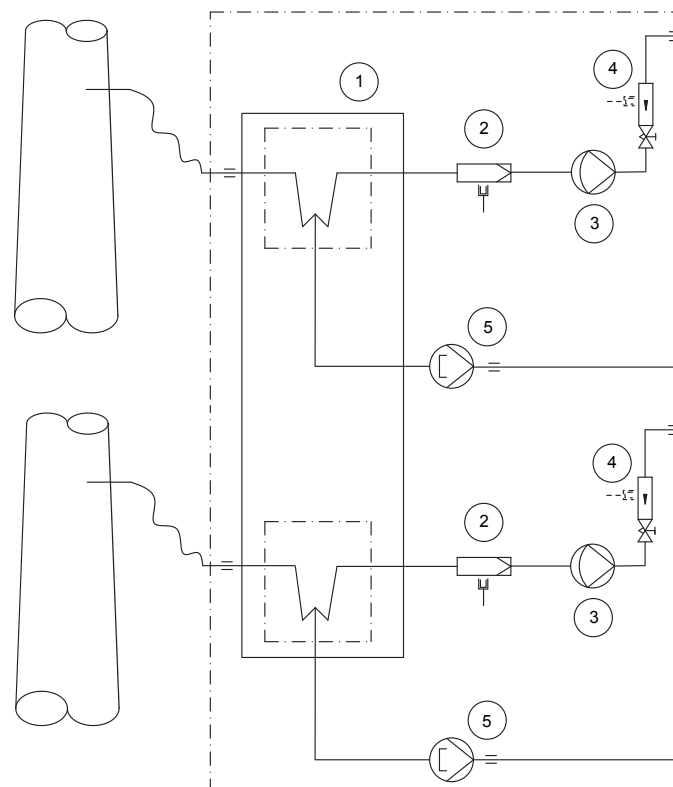
Design CSS-V1

- 1 Gas cooler series ECM-1
- 2 Option front panel filter FPF-2-0,3GF, 0,3µm filter unit with integrated liquid alarm
- 3 Option sample gas pump N3/5/9KPE
- 4 Option flowmeter FM40 with flow alarm
- 5 Option peristaltic pump SR25.2

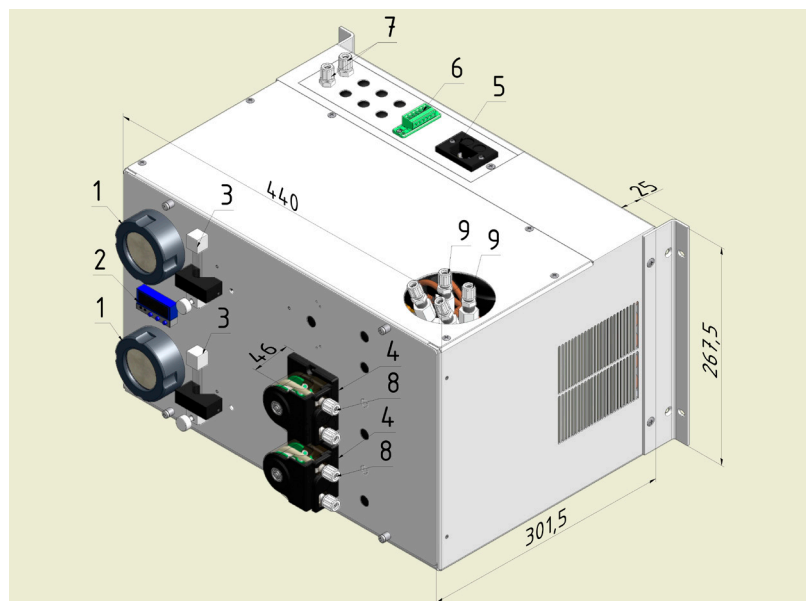


Design CSS-V2

- 1 Gas cooler series ECM-2
- 2 Option front panel filter FPF-2-0,3GF, 0,3µm filter unit with integrated liquid alarm
- 3 Option sample gas pump N3/5/9KPE
- 4 Option flowmeter FM40 with flow alarm
- 5 Option peristaltic pump SR25.2



Dimensions CSS-V..



- 1 Fine filter FPF-2-0,3GF
- 2 Electronic controller
- 3 Flow meter FM40 with flow alarm sensor FA-20mo
- 4 Peristaltic pump SR25.2
- 5 Power supply
- 6 Connection collective alarm
- 7 Sample gas outlets
- 8 Condensate outlet at the peristaltic pump
- 9 Sample gas inlets at heat exchanger

Technical Data

Gas Conditioning Unit series CSS*	version CSS-V1	version CSS-V2
Part No. for 230V 50Hz version	01G6010	01G6020
Extra charge 115V/50-60Hz	01G6160	
Sample outlet dew point	range of adjustment: +2 °C +7 °C, factory setting: +5 °C	
Dew point stability	at constant conditions < ±0,1 °C	
Sample inlet temperature	**max. 180 °C	
Sample inlet dew point	**max.+80 °C	
Gas flow rate	**max. 250 NI/hr	**max. 2 x 150 NI/hr
Ambient temperature	**+5 °C up to +40 °C	
Storage temperature	-25 °C up to +65 °C	
Pressure	0,7 bar up to 1,4 bar abs.	
Total cooling capacity **	max. 144 kJ/hr	
Number of gas inlets	1	2
Number of gas outlets	1	2
Condensate outlet	1	2
Medium connections	tube connection 4/6 mm	
Material of sample contacting parts	PVDF, Novoprene®, FPM, PVC, PPH, PTFE	
Ready for operation	approx. 10 min.	
Power supply	230V 50-60Hz ±10% or 115V 50-60Hz ±10% (115V/50Hz not with option sample pump)	
Power consumption	max. 220VA + max. 300VA for the sample gas pump	
Fuse protection	4A t, 5x 20 mm	
Electrical connection	Cold appliance plug with 2 m of cable	
Case protection	IP20 EN 60529	
Sheet steel housing, execution	sheet steel case for 19"- or wall mounting, lacquered RAL 7032	
Equipment dimensions	267,5 mm x 483 mm x 301,5 mm (H x W x D)	
Electrical equipment standard	EN61010	
Weight	approx. 22 kg	

PVDF = Polyvinylidenfluoride
PVC = Polyvinylchloride
FPM = Fluor caoutchouc = Viton®
PPH = Polypropylene hard
PTFE = Polytetrafluorethylene

** Maximum values in technical data must be rated in consideration of total cooling power at 25 °C and an outlet dew point of +5°C.

Options

Description	Part No.
Extra charge for heat exchanger ECM-1 out of glass	93K0140
Extra charge for heat exchanger ECM-1 out of stainless steel SS316Ti	93K0160
Extra charge for heat exchanger ECM-1 out of PVDF	93K0170
Extra charge for heat exchanger ECM-2 out of glass	97K0100
Extra charge for heat exchanger ECM-2 out of stainless steel SS316Ti	97K0115
Extra charge for heat exchanger ECM-2 out of PVDF	97K0110
Extra charge for mounting the sample gas pump N3KPE (additionally electronic controller 01G6150 necessary)	01G6125
Extra charge for mounting the sample gas pump N5KPE (additionally electronic controller 01G6150 necessary)	01G6130
Extra charge for mounting the sample gas pump N9KPE (additionally electronic controller 01G6150 necessary)	01G6135
Extra charge for mounting a sample gas filter FPF-2-0,3GF with integrated liquid alarm sensor	01G6120
Extra charge for mounting a flow meter FM40 7-70NI/hr	09F4000
Extra charge for mounting a flow meter FM40 15-150NI/hr	09F4005
Extra charge for mounting a flow meter FM40 25-250NI/hr	09F4010
Extra charge for mounting a flow alarm sensor FA-20mo	02E3500
Extra charge for mounting a peristaltic pump SR25.2 for condensate removal, completely flexible tubed	01G6140
Extra charge for mounting an electronic controller for max. 2 liquid alarm sensors and max. 2 flow alarm sensors	01G6150

Order example:

1x 01G6010 + 1x 93K0140 + 1x 01G6125 + 1x 01G6120 + 1x 09F4010 + 1x 02E3500 + 1x 01G6140 + 1x 01G6150 = CSS-V1 , 230V, with heat exchanger out of glass, built-in sample gas pump N3KPE, sample gas filter FPF-2-0,3GF with integrated liquid alarm sensor, flowmeter FM40 25-250NI/h and flow alarm sensor FA-20mo, peristaltic pump SR25.2 for condensate removal and electronic controller for liquid and flow alarm sensor.