



VC-1-SL

Pre-Cooling Units Series VC

Versions VC-1, VC-1-SL, VC-2-L, VC-2-SL

Special Features

- With patented Jet-Stream heat exchanger(s)
- Heat exchanger(s) in various materials available
- For cooling highly water vapor saturated gases to ambient temperature
- Light weight
- Version with forced ventilation of the cooling fin block available
- Version with automatic condensate separation available

Application

The M&C pre-cooling units VC are used in gas analysis technology for condensate pre-separation of highly water vapor-saturated gases, for example:

- to relieve the downstream main cooling system
- if water or vapor inrush is expected on the process side,
- if non-heated sample lines are installed without adequate gradient
- for measuring systems with chemical sensors.

Description

The VC pre-cooling units produced by M&C and the special design of the Jet-Stream heat exchangers are cooling highly water vapor saturated gases to ambient temperature and ensure optimum condensate separation. The condensate is discharged externally by peristaltic pumps, traps or collecting vessels.

In the VC-SL pre-cooling units, the SR25.1 peristaltic pumps for automatic condensate drainage are already part of the unit.

To increase the capacity, the VC-L pre-cooling units are equipped with fans for forced ventilation of the cooling fin block. A cover hood is integrated for optimum air flow.

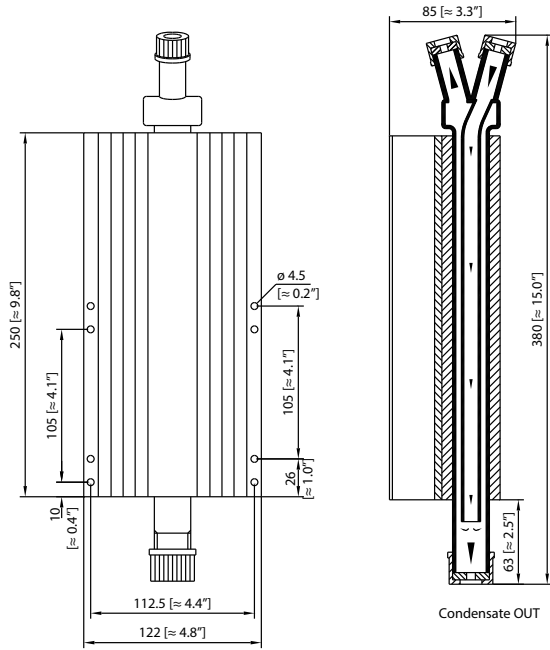
The VC-1 pre-cooling units are equipped with one EC Jet-Stream heat exchanger.

The VC-2 pre-cooling units have two EC-Jet-Stream heat exchangers for connecting two independent gas paths or in the case of parallel or series operation, for connecting a gas path with accordingly large flow rate.

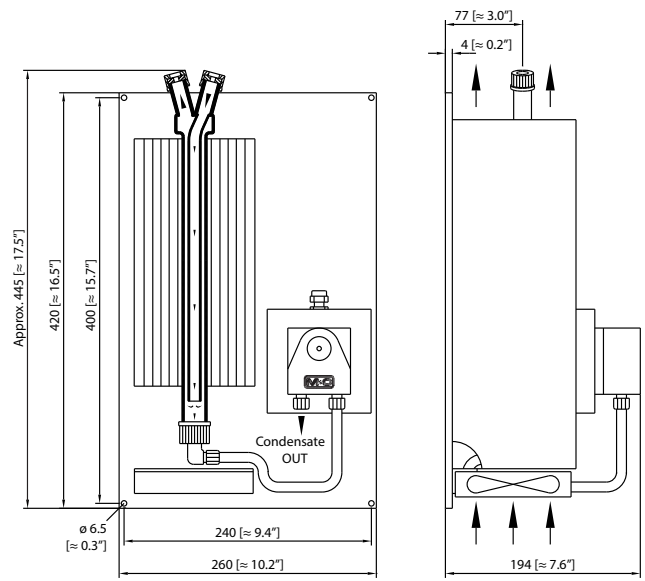
The compact and lightweight design of this device as well as its immediate readiness for operation make it ideal for use in portable and stationary gas conditioning systems.

The VC pre-cooling units require only minimum maintenance.

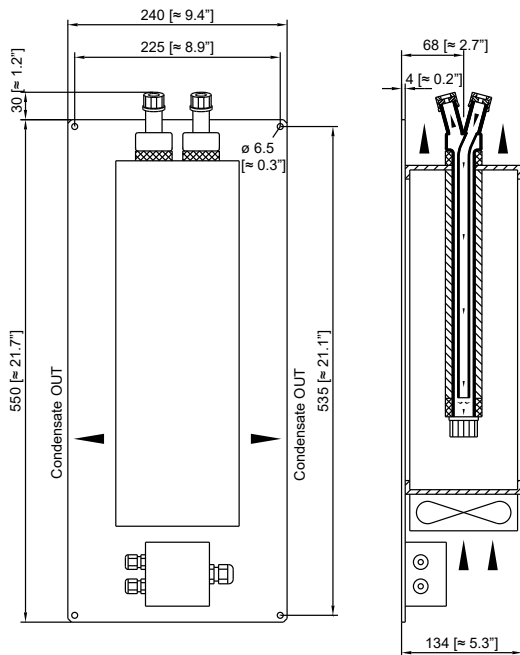
Pre-Cooling Unit VC-1



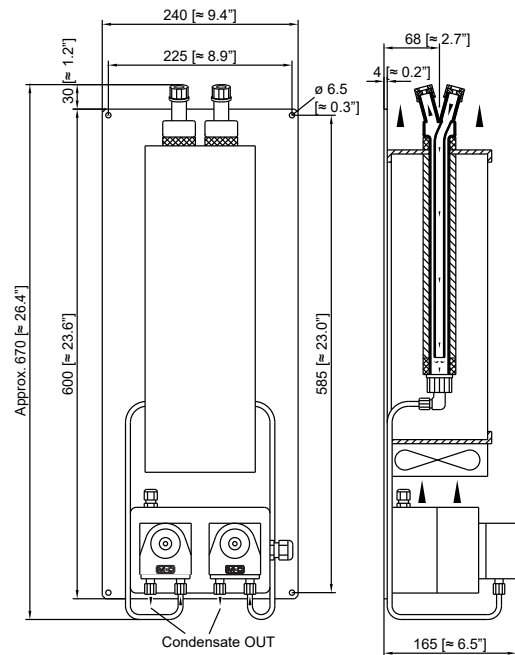
Pre-Cooling Unit VC-1-SL



Pre-Cooling Unit VC-2-L



Pre-Cooling Unit VC-2-SL



Dimensions in mm [Inches]

Pre-cooling units series VC	VC-1	VC-1-SL	VC-2-L	VC-2-SL
Part No. 230 V/50-60 Hz	03K1000	03K3000	03K4000	03K5000
Part No. 115 V/50-60 Hz	03K1000	03K3000a	03K4000a	03K5000a
Jet-Stream heat exchanger(s) out of Duran® glass EC-G	1 x	1 x	2 x	2 x
Forced ventilation	No	Yes	Yes	Yes
Automatic condensate separation with SR25.1		1x*		2x*
Sample gas connection	2 x GL 18-6	2 x GL 18-6	4 x GL 18-6	4 x GL 18-6
Condensate connection	1 x GL 25-12	1 x DN 4/6	2 x GL 25-12	2 x DN 4/6
Power consumption		25 VA	20 VA	30 VA
Gas flow rate recommended, (other flow rates possible)	1 x 250 NI/h	1x 250 NI/h	2 x 250 NI/h	2 x 250 NI/h
Weight approximately	3.5 kg [≈ 7.7 lbs]	7.5 kg [≈ 16.5 lbs]	9 kg [≈ 19.8 lbs]	11 kg [≈ 24.3 lbs]
Sample gas pressure	Max. 3 bar g			
ΔP per heat exchanger	4 mbar at 300 NI/h			
Stagnant space per heat exchanger	Approx. 70 ml			
Sample inlet temperature	Max. 180 °C [356 °F]			
Ambient temperature	+2 to +45 °C [35.6 to 113 °F]			
Storage temperature	0 to +55 °C [32 to 131 °F]			
Electrical connection	Terminals max. 2.5 mm ² , PG11 cable gland			
Electrical standard/Case protection	EN 61010/IP22 EN 60529			
Method of mounting	Wall-mounting			
Ready for operation	Immediately			
Material of sample-contacting parts	Duran® glass, PTFE	Duran® glass, PTFE, PVDF, Novoprene	Duran® glass, PTFE	Duran® glass, PTFE, PVDF, Novoprene

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

Duran® glass is a brand name for borosilicate glass produced by the company Duran Group GmbH