ANKERSMID Compressor cooler

ACC 1xx neo Series

Picture: ACC 1xx/2xx

Application

Ankersmid Compressor Coolers are used to lower the dew point of humid gas to avoid condensate entering into the gas analyser.
This unique micro-processor controlled compressor cooler has been designed with a powerful dew point stabiliser. The dew point is set at 4°C but can be changed at any value between 1 and 15°C.
A good and stable gas dew point avoids cross-interference if the analyser is sensitive to H_2O.

Description

The ACC cooler offers precision, safety and long-term stability for extractive analytics. The very low gas dissolution rate is attained owing to the new cooler technology (Patents applied). Both the permanent separation of the condensate from the gas phase, as well as the shorter contact time of the gas in the system, plays important roles in reducing gas dissolution rates.
The new cooler incorporates an advanced structural design with housing suitable for both wall-mounting (standard) and 19"-racks by using optional brackets. The coolers can be integrated into the analysis cabinet without empty space requirements at the side for a cooling air outlet.
The design enables 1 or 2 heat exchangers to be incorporated either at the factory or at a later time, without any problem. The exchangers can be connected in series or parallel following customer requirements.
An electronic system monitors the dew point and controls the integrated fan.
A temperature alarm output is wired to the terminal block incorporated of the cooler housing for a safe connection without disassembling the cooler.

Available for 230VAC and 115VAC power supply.

The ACC cooler is designed especially for:
- Power Plants
- Waste Incinerators
- Cement Manufacturing
- Chemical Production Plants
- Gas Production Plants
- Glass manufacturing
- Timber Processing
- Food Processing

- **Demountable heat exchanger in various materials: PFA®/PTFE or stainless steel**
- **Provide clean dry sample gases to extractive analysers in continuous emission monitoring, process control and engine testing applications**
- **Universal cooler housing for wall-mounting (standard) and 19"-rack version by brackets**
- **Optimise industrial burning processes**
- **Continuously dehumidify gas sample streams**
- **Rapidly separate condensable liquids with a very low dissolution rate**
- **Peristaltic pump for each heat exchanger incorporated as standard**

© Ankersmid Products, ACC 1xx neo 08/2020, http://www.ankersmidsampling.com, Ankersmid Sampling products manufacturing
Neerlandweg 21, 2610 Wilrijk, Belgium Tel.: +32(0)3/820.80.00 Fax: +32(0)3/230.98.58

ANKERSMID Compressor cooler

ACC 1xx neo Series

Technical data

Model ACC	101 / 101S	102 / 102S
Number of heat exchanger	1	2
Housing version	Wall-mount (standard) / 19”-rack (with optional brackets)	
Housing color	RAL 7035 (light-grey)	
Dimensions (W x H x D)	443,5 x 220 x 270mm (wall-mount) / 491,5 x 220 x 270mm (19”-rack)	
Weight (approximately)	18 kg	
Operation data		
Gas inlet dew-point	Max. 65°C*	
Gas inlet temperature	Max. 190°C*	
Gas outlet temperature	+1°C ..... +15°C, factory setting: +4°C	
Stability	0,1°C	
Ambient temperature	+5°C to +45°C	
General electrical data		
Mains connection	Plug	
Alarm contact	Standard version: free programmable switch-over contact 1NO/1NC, rating: 250V, 16A AC Version RS485-output (option ACC 011): alarm via interface	
Alarm set-points	< +2°C / > +8°C	
Protection class	IP20 EN 60529 / EN 61010	
Power consumption	95W (steady-state)	
Electrical protection	Fuse F1At (230VAC), F2At (115VAC)	
Total cooling capacity	Max. 445BTU/h ≈ 470kJ/h	
Coolant	R134a	
Power supply	230V AC, 50Hz (standard)	
	115V AC, 60Hz (option p/n ACC 015)	
Data per heat exchanger	**ACC 101 / 102**	**ACC 101S / 102S**
Gas flow	Max. 250l/h*	
Material of outer body	PFA®-coated	Stainless steel
Material of inner spindle	PTFE	Stainless steel
Sealing	Viton®	
Maximum pressure	10 bar a	
Pressure drop	2mbar at 250l/h	
Dead volume	35ml	
Sample gas inlet / outlet	2x 1/4”f NPT	
Condensate outlet (HE)	1x 3/8”f NPT	
Condensate outlet (pump)	PVDF DN4/6	

Maximum values in technical data’s must be rated in consideration of total cooling capacity at 25°C ambient temperature and +4°C outlet dew-point

PTFE = Polytetrafluoroethylene (Teflon®) PFA = Perfluoralkoxy-Polymere

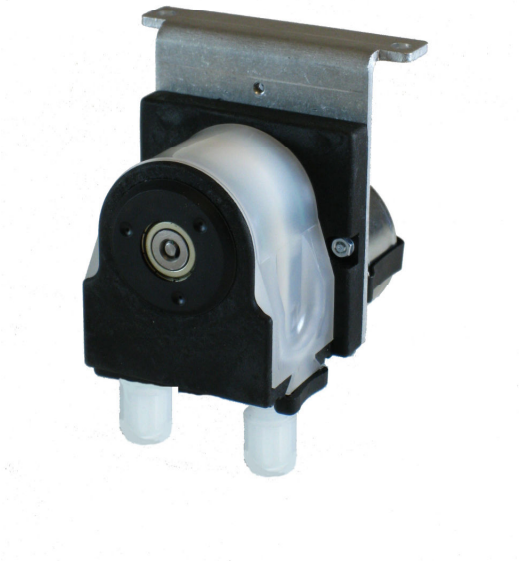
PVDF = Polyvinylidenfluoride FFPM = Perfluorelastomer (Kalrez®) PPS = Polypropylenesulphide (Ryton®)

ANKERSMID Sampling

ANKERSMID Compressor cooler

ACC 1xx neo Series

Equipment



Condensate removal

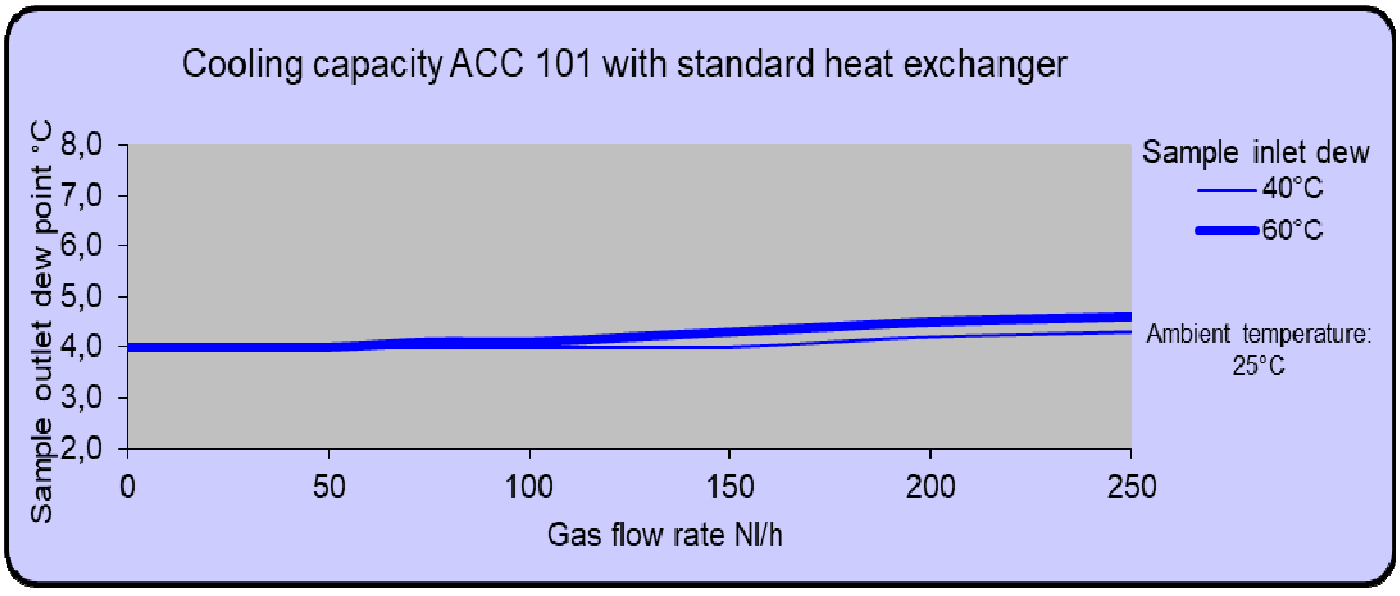
Each heat exchanger is, as a standard fitted with a peristaltic pump type ACP 001 (ASR25). The pump removes all condensate, while ensuring condensate flow- back is impossible.

The pump's 0.25 l/h capacity guarantees a complete condensate removal even at high dew points.

Driven by a synchronous motor, a system of pulleys presses the condensate through a special tube with very long runtime. These pulleys are pressed by 4 springs on the peristaltic tube.

With a speed of 5 rpm, the two PVDF hose pulleys and the Novoprene® hose guarantee a good mechanical and chemical resistance with a long life time. Changing the peristaltic tube is a simple procedure that takes only seconds.

Performance

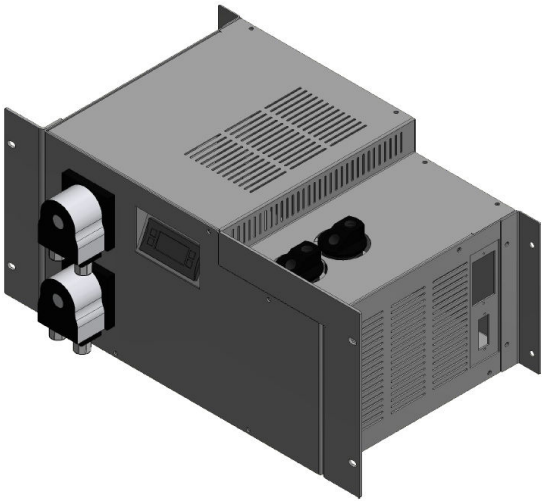


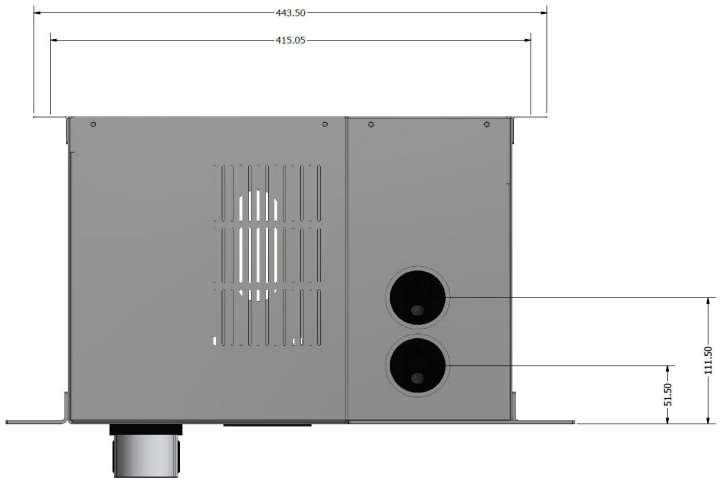
© Ankersmid Products, ACC 1xx neo 08/2020, http://www.ankersmidsampling.com, Ankersmid Sampling products manufacturing
Neerlandweg 21, 2610 Wilrijk, Belgium Tel.: +32(0)3/820.80.00 Fax: +32(0)3/230.98.58

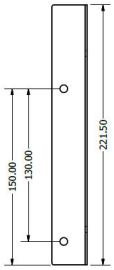
ANKERSMID Compressor cooler

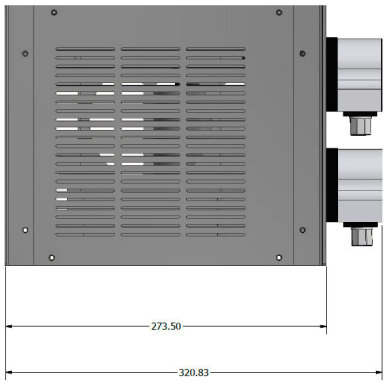
ACC 1xx neo Series

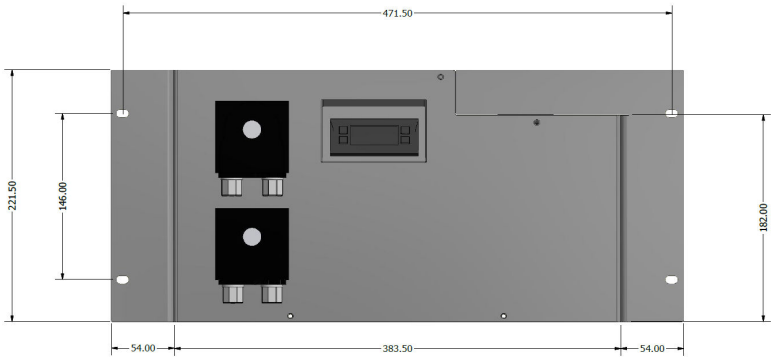
Dimensions











© Ankersmid Products, ACC 1xx neo 08/2020, http://www.ankersmidsampling.com, Ankersmid Sampling products manufacturing
Neerlandweg 21, 2610 Wilrijk, Belgium Tel.: +32(0)3/820.80.00 Fax: +32(0)3/230.98.58