ANKERSMID Compressor cooler

ACC 80x/81x Ex Series

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 5°C. A good and stable gas dew point avoids cross-interference if the analyser is sensitive to H_2O.

Description

The cooler offers precision, safety and long-term stability for extractive analytics. The cooler incorporates a housing suitable for wall-mounting as standard.
The design enables up to 2 heat exchangers (mono or dual gas paths each). The exchangers can be connected in series or parallel following customer requirements.
The controller is self-checking. Significant deviation from the preset is signalled by a status output. A bi-color LED on the front shows 4 different operating conditions.
Condensate is removed either into condensate vessels or by automatic condensate drainers which can be attached to the heat exchangers within the cooler's outer contour.
Available for 230VAC and 115VAC power supply.

- **Provide clean dry sample gases to extractive analysers in continuous emission monitoring, process control and engine testing applications**
- **Optimise industrial burning processes**
- **Continuously dehumidify gas sample streams**
- **Environment-friendly (CFC free)**
- **Intended for use in Potentially Explosive Atmospheres**
- **For use in hazardous area Zone 1/2**

ANKERSMID Compressor cooler

ACC 80x/81x Ex Series

Technical data

Model ACC	8x1 Ex
Number of heat exchanger	1 (standard), max. 2
Number of gas paths	1 (standard), max. 4
Housing version	Wall-mount or stand alone
Housing material	Stainless steel / Polyester
Dimensions (H x W x D)	700 mm x 500 mm x 500 mm
Weight (approximately)	37 kg
Operation data	
Gas outlet temperature	factory setting: +5°C
Dew point stability	±0,5K
Ambient temperature	+0°C to +45°C
Cooling capacity (at 25°C)	> 615 kJ/h (170 W)
General electrical data	
Alarm contact	Voltage-free changeover contact, max. 250VAC/2A, min. 24V/10mA
Alarm set points	<0 / >+10°C
Marking	II 2 G Ex px e mb q [ia] IIC T4 Gb
Power supply	230V/50-60Hz (standard) or 115V/50-60Hz
Fuse	Motor protection switch
Electrical protection	External on installation site
Power consumption	250VA (230VAC), 300VA (115VAC)
Protection class electrically	IP 54
Coolant	R134a
Model ACC	**801 Ex**
Power supply*	220…240VAC, 50Hz (230V/60Hz on request)
Model ACC	**811 Ex**
Power supply*	100…115VAC, 50/60Hz
Display	
Status LED with 4 conditions	Green: Temperature in range Green flashing: Temperature in range, compressor is running Red: Temperature off range, cooling operation Red flashing: Cooler stooped or service required

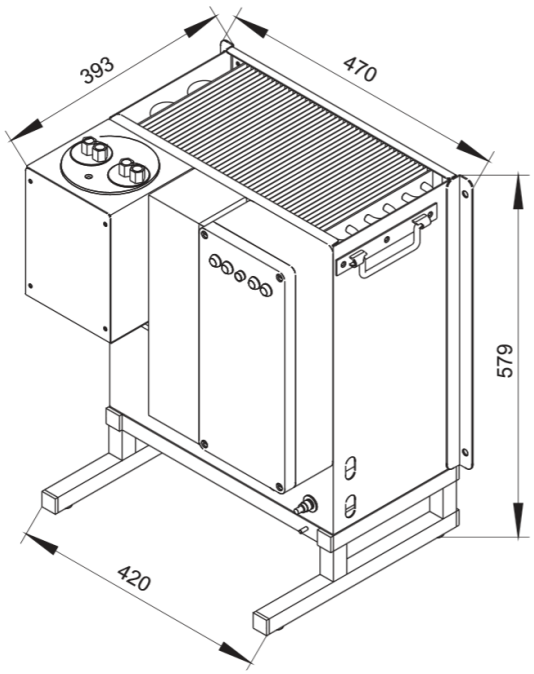
ANKERSMID Compressor cooler — Heat exchanger

ACC 80x/81x Ex Series

	Material	Mono heat exchanger	Dual heat exchanger
Sample gas flow rate Mono max.	PVDF Glass Stainless steel	125 l/h 280 l/h 530 l/h	2x 115 l/h 2x 140 l/h 2x 250 l/h
Dew point sample gas inlet	PVDF Glass Stainless steel	65 °C 80 °C 80 °C	65 °C 65 °C 80 °C
Temperature sample gas inlet limited by temperature class, T4	PVDF Glass Stainless steel	135 °C 135 °C 180 (135) °C	
Cooler capacity	PVDF Glass Stainless steel	120 KJ/h 230 KJ/h 450 KJ/h	185 KJ/h 230 KJ/h 450 KJ/h
Operating pressure max.	PVDF Glass Stainless steel	3,0 bara 3,0 bara 160 bara	2,0 bara 3,0 bara 25 bara
Differential pressure (v=150 l/h)	PVDF Glass Stainless steel	8 mbar 8 mbar 8 mbar	15 mbar 5 mbar 5 mbar
Dead volume Mono	PVDF Glass Stainless steel	129 ml 48 ml 69 ml	21/21 ml 25/25 ml 28/25 ml
Sample gas connection	PVDF Glass Stainless steel	DN4/6mm GL14 G1/4"f	DN4/6mm GL14 6mm tube
Condensate outlet on bottom	PVDF Glass Stainless steel	G3/8"f GL25 G3/8"f	DN5/8mm GL14 10mm tube

ANKERSMID Compressor cooler — Dimensions

ACC 80x/81x Ex Series



ANKERSMID Compressor cooler

ACC 85x/86x Ex Series

* Picture may vary

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 3°C. A good and stable gas dew point avoids cross-interference if the analyser is sensitive to H_2O.

Description

The cooler offers precision, safety and long-term stability for extractive analytics. The cooler incorporates a housing suitable for wall-mounting as standard.
The design enables one heat exchanger (mono or dual gas path). The exchanger can be connected in series or parallel following customer requirements.
An electronic system not only monitors the dew point, but also the ambient temperature.
An isolated temperature alarm output for high and low temperature alarm is included as standard.

Available for 230VAC and 115VAC power supply.

- **Provide clean dry sample gases to extractive analysers in continuous emission monitoring, process control and engine testing applications**
- **Cooler housing for wall-mounting**
- **Optimise industrial burning processes**
- **Continuously dehumidify gas sample streams**
- **Environment-friendly (CFC free)**
- **Intended for use in Potentially Explosive Atmospheres**
- **According to Directive 94/9/EC**
- **For use in hazardous area Zone 2**

ANKERSMID Compressor cooler

ACC 85x/86x Ex Series

Technical data

Model ACC	85x	86x Ex
Number of gas paths	1 (standard), max. 2 (with double heat exchanger)	
Housing version	Wall-mount or stand alone	
Housing color	RAL 7035 (light-grey)	
Dimensions (W x H x D)	230 x 300 x 355 mm	
Weight (approximately)	18,5 kg	
Peristaltic pump ASR25 for condensate removal	1 pc. (standard)	2 pcs. (standard)
Data per heat exchanger		
Gas flow	1x 250l/h or 2x 125l/h	1x 500l/h or 2x 250l/h
Material of heat exchanger	PVDF	Stainless steel
Maximum pressure	1,5 bar a	100bar a
Pressure drop	6 mbar	8 mbar
Dead volume	67ml (singler heat exchanger), 55ml (double heat exchanger)	
Sample gas inlet	Tube DN 4/6mm	
Sample gas outlet	Tube DN 4/6mm	
Condensate outlet	Tube DN 10/12mm	
Operation data		
Gas inlet dew-point	Max. 70°C	Max. 80°C
Gas inlet temperature	Max. 140°C	Max. 180°C
Cooler capacity	90W	160W
Gas outlet tem ture	factory setting: +3°C	
Dew point stab...	±1K	
Ambient temperature	+10°C to +40°C	
General electrical data		
Mains connection	approx. 2,3m open wire ends	
Alarm contact	Voltage-free changeover contact, max. 250VAC/2A, min. 5VADC/5mA	
Alarm set points	<0 / >+10°C	
Protection class	IP 20 (EN60529)	
Marking	Ex II 3G Ex ma IIA T3 Ex II 3D Ex ma IIIB T180°c (IEc respectively EN60079)	
Power supply	220…240VAC/50Hz (standard) or 100…115VAC/60Hz	
Electrical protection	External on installation site, fuse characteristic C; 230VAC 6A; 115VAC 10A	
Power consumption	190 VA (depending on configuration, ambient temperature & load)	
Coolant	R134a	

ANKERSMID Compressor cooler

ACC 85x/86x Ex Series

Dimensions