

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*	220240VAC, 50Hz (230V/60Hz on request)	
Model ACC	811 Ex	
Power supply*	100115VAC, 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	



Heat exchanger

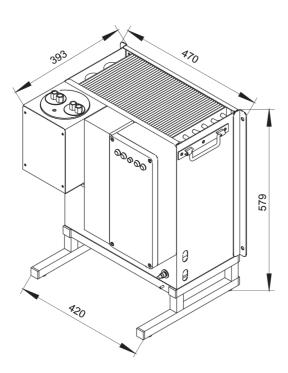
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	Material	Mono heat exchanger	Dual heat exchanger
Sample gas flow rate Mono max.	PVDF	125 l/h	2x 115 l/h
	Glass	280 l/h	2x 140 l/h
	Stainless steel	530 l/h	2x 250 l/h
Dew point sample gas inlet	PVDF	65 °C	65 °C
	Glass	80 °C	65 °C
	Stainless steel	80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

ANKERSMID Compressor cooler

Dimensions

ACC 80x/81x Ex Series







ACC 85x/86x 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 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 wallmounting
- 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)		
l	Ex II 3G Ex ma IIA T3		
Marking	Ex II 3D Ex ma IIIB T180°c		
Power supply	(IEc respectively EN60079) 220240VAC/50Hz (standard) or 100115VAC/60Hz		
rowei suppiy	External on installation site,		
Electrical protection	fuse characteristic C; 230VAC 6A; 115VAC 10A		
Power consumption	190 VA (depending on configuration, ambient temperature & load)		
Coolant	R134a		





Dimensions

ACC 85x/86x Ex Series

