ANKERSMID Peltier cooler

APC 4xx/5xx/6xx Series

*Picture may vary

Application

Ankersmid Peltier Coolers are used to lower the dew point of humid gas to avoid condensate entering into the gas analyser.

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

Description

This unique microprocessor controlled Peltier 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. The condensate that is formed should be removed by a peristaltic pump, automatic drain or collection vessel.

3 possible exchanger materials: Glass body with PTFE head; PVDF body with PTFE head or completely out of stainless steel.

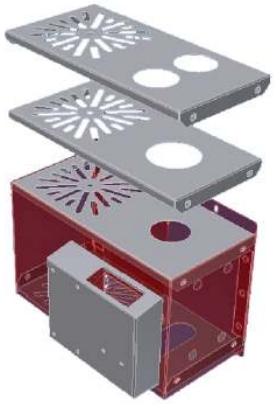
The digital controlled cooler has many control and warning features like programmable alarms, mA-output, digital inputs and Modbus or RS485 communication.
The alarm status changes when the temperature deviates by ± 3 °C from the set point.

Available for 230VAC and 115VAC power supply.

Extra Features

Ankersmid's electronically controlled Peltier cooler incorporates a unique design of demountable heat exchangers. This versatile design creates many possibilities. One of the important available features is the humidification of calibration gases to avoid volumetric errors.
Humidification is achieved with a special inlet for liquids. During calibration the heat exchanger dries out due to the dry calibration gas; this volumetric change is important for reference measurements. Injection of liquid during calibration can avoid this issue.

- **Special demountable heat-exchanger with unique design**
- **Humidified heat-exchanger for calibration cross-interference compensation**
- **Digital controlled high stable outlet dew point ± 0,1°C**
- **Ambient temperature up to +50°C**
- **Alarm contact**
- **Optional digital communication Modbus/RS485**
- **Power supply 115/230VAC**
- **Universal housing for 3 different versions; 1x 150Nl/h, 2x 150Nl/h or 1x 350Nl/h**



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Technical data APC – Ankersmid Peltier Cooler series 400 / 500 / 600

Model APC	APC 4xx	APC 5xx	APC 6xx
Number of heat exchanger	1	2	1
Housing version	Stainless steel, Wall-mounting		
Dimensions (HxLxD)	200 x 280 x 190mm		

Data per heat exchanger	APC 4x1/5x1/6x1	APC 4x2/5x2/6x2	APC 4x3/5x3/6x3
Gas flow rate	1x 150Nl/h max.	2x 150Nl/h max.	1x 350Nl/h max.
Material of heat exchanger body	Duran® Glass	PVDF	SS316
Material of heat exchanger head	PTFE	PTFE	SS316
Sealing	Viton®	Viton®	Viton®
Maximum pressure	3 bar a	3 bar a	10 bar a
Pressure drop	2mbar at 150Nl/h	2mbar at 150Nl/h	5mbar at 350Nl/h
Dead volume	35cm³	35cm³	100 cm³
Sample gas inlet	1x G1/4"i	1x G1/4"i	1x G1/4"i
Sample gas outlet	1x G1/4"i	1x G1/4"i	2x G1/4"i
Condensate outlet	1x GL25	1x 3/8"i	1x G3/8"i

Operation data	APC 4xx	APC 5xx	APC 6xx
Gas inlet dew point	Max. 65°C*		
Gas inlet temperature	Max. 190°C*		
Gas outlet temperature	+1°C ... +15°C, factory setting: +4°C		
Total cooling capacity	Max. 215kJ/h	Max. 225kJ/h	
Stability	0,1°C at ambient temperature 20°C		
Ambient temperature	+5°C to 45°C		

Electrical data general	APC 4xx	APC 5xx	APC 6xx
Mains connection	Electrical terminals 2,5mm² / Cable gland 2 x PG13		
Alarm contact	Free programmable contact 1NO / 1NC, rating: 250V, 16A AC		
Alarm set points	< +2°C / > +10°C		
Protection class	IP20 EN 60529 / EN 61010		
Electrical protection	Fuse 1A		
Power consumption	75W		
Weight	4,0 kg	4,6 kg	4,5 kg

Model APC	APC 40x	APC 50x	APC 60x
Power supply	230VAC, 50/60Hz		

Model APC	APC 41x	APC 51x	APC 61x
Power supply	115VAC, 50/60Hz		

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®)
PVDF = Polyvinylidenfluoride

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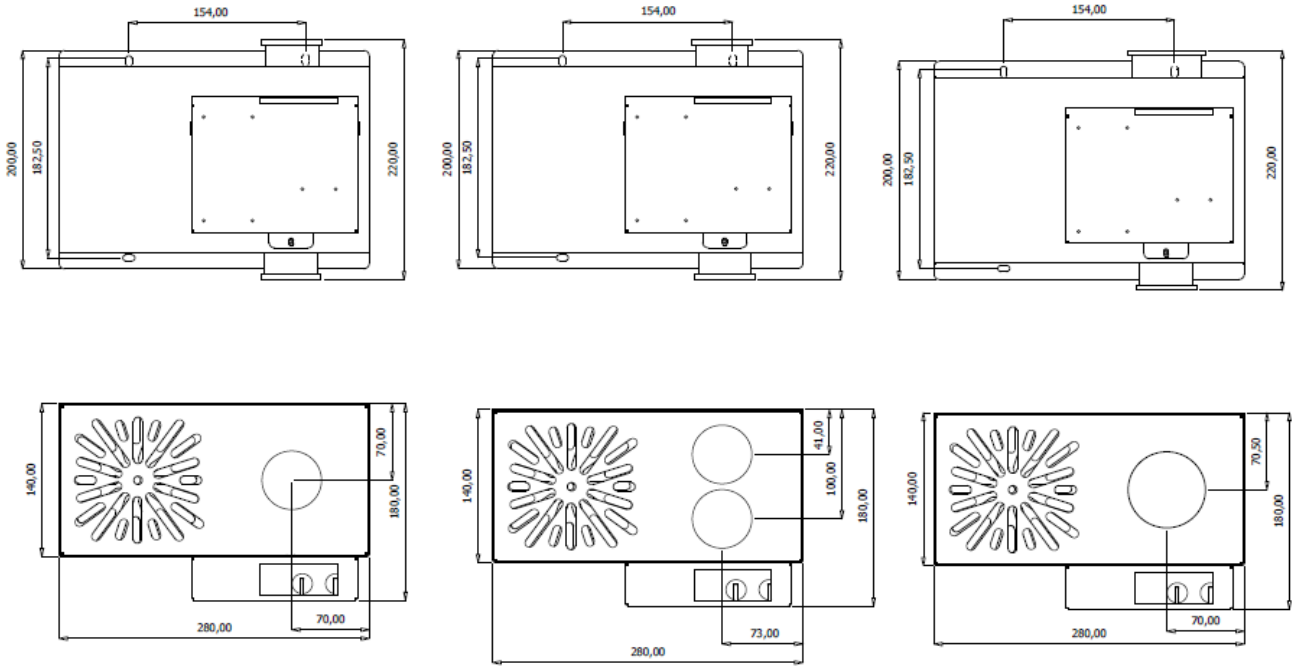
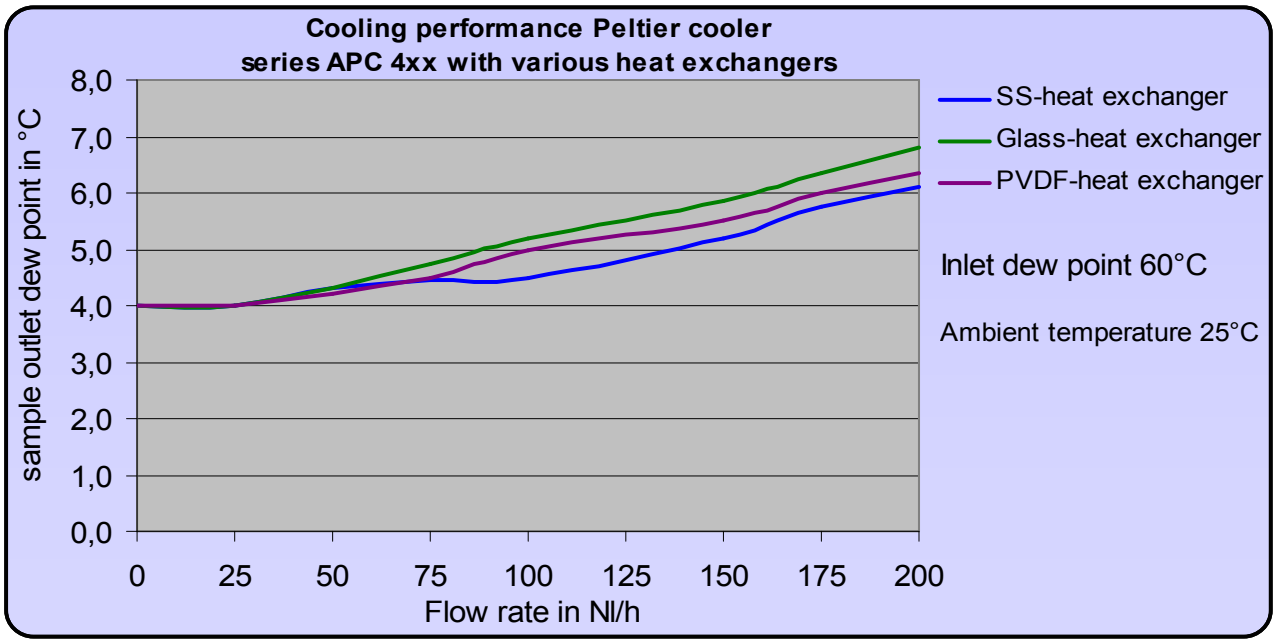
Dimensions Peltier cooler series APC 400 / 500 / 600



Performance diagram



Further diagrams on request

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