



ANKERSMID Peltier cooler APC 14xx/16xx Series

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 H₂O.

Description

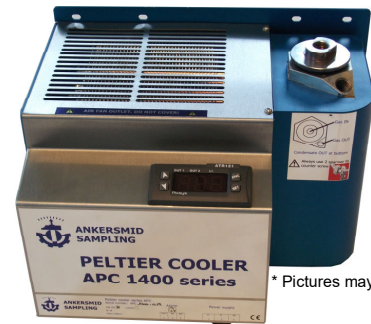
This unique microprocessor controlled Peltier Cooler has been designed with two powerful Peltier elements and an unique patented heat-pipe system. The dew-point is set at +4°C but can be changed at any value between 1 and 15°C. The condensate that is formed should be removed by a peristaltic pump, automatic drain or collection vessel.

The heat exchanger is demountable and PFA[®]-coated.

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 $\pm 3^{\circ}\text{C}$ from the set point.

Available for 230VAC and 115VAC power supply.



* Pictures may vary



- **Special demountable heat-exchanger with unique design**
- **Digital controlled high stable outlet dew point $\pm 0,1^{\circ}\text{C}$**
- **Ambient temperature up to $+50^{\circ}\text{C}$**
- **Alarm contact**
- **Optional digital communication Modbus/RS485**
- **Power supply 115/230VAC**
- **Universal housing for 2 different versions; 1x 250NI/h or 1x 350NI/h**
- **Isolation cap for heat exchanger head to avoid condensation**

**ANKERSMID Peltier cooler****Technical data**

APC 14xx/16xx Series

Model APC xxxx	14x3	16x3
Number of heat exchanger	1	
Housing version	Stainless steel/Aluminum anodized, Wall-mounting	
Dimensions (HxLxD)	200 x 280 x 190mm	
Data per heat exchanger		
Gas flow rate	1x 250NI/h max.	1x 350NI/h max.
Sealing	Viton®	
Maximum pressure	10 bar a	
Pressure drop	3mbar at 200NI/h	5mbar at 350NI/h
Dead volume	35cm ³	
Sample gas inlet	1x 1/4" f NPT	
Sample gas outlet	1x 1/4" f NPT	
Condensate outlet	1x 3/8" f NPT	
Material of gas wetted parts	PFA®	
Operation data		
Gas inlet dew point	Max. 50°C	
Gas inlet temperature	Max. 190°C	
Gas outlet temperature	+1°C ... +15°C, factory setting: +4°C	
Total cooling capacity	Max. 245kJ/h	
Stability	0,1°C at ambient temperature 20°C	
Ambient temperature	+5°C to +45°C	
Electrical data general		
Mains connection	Electrical terminals 2,5mm ² / Cable gland 2 x PG13	
Alarm contact	Free programmable contact 1NO / 1NC, rating: 250V, 16A AC	
Alarm set points	< +2°C / > +8°C	
Protection class	IP20 EN 60529 / EN 61010	
Electrical protection	Fuse 1,6A	
Power consumption	2 Peltier elements á 34W	
Weight	4,0 kg	4,5 kg
Model APC	1403	1603
Power supply	230VAC, 50/60Hz	
Model APC	1413	1613
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 5°C outlet dew point

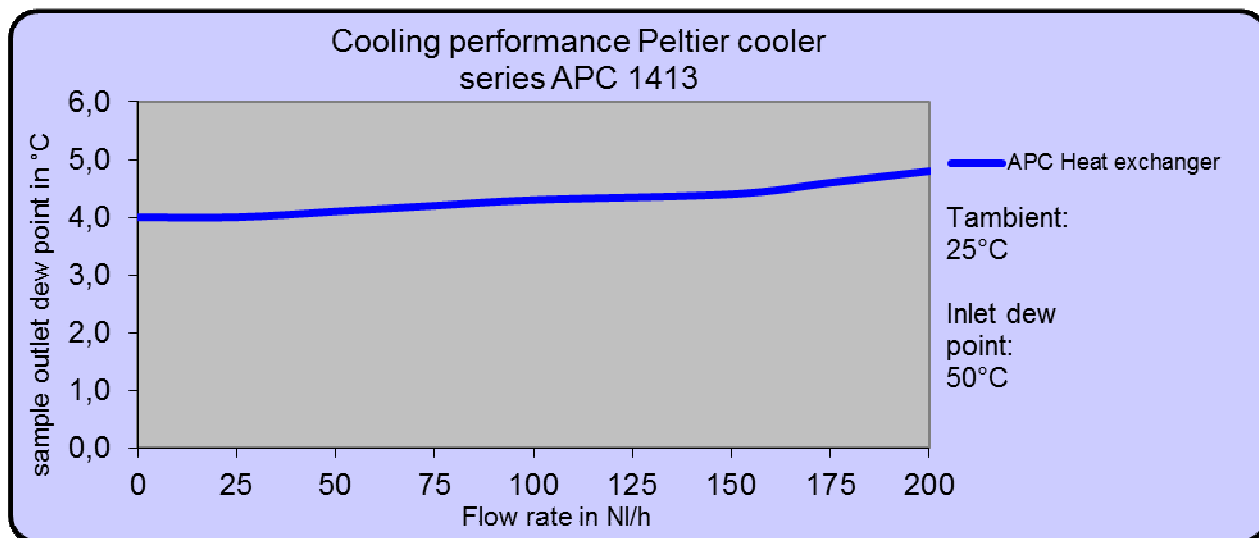
PTFE = Polytetrafluoroethylene (Teflon®) PVDF = Polyvinylidenfluoride
FFPM = Perfluorelastomer (Kalrez®) PPS = Polypropylenesulphide (Ryton®)



ANKERSMID Peltier cooler

APC 14xx/16xx Series

Performance



Part no.

Ankersmid Peltier Cooler Series APC

List price



Pictures:

Series APC

APC 1403	Peltier gas cooler type APC 1403 in a stainless steel housing for wall-mounting. With 1 heat exchanger for 1x 250NI/h , material of gas wetted parts: PFA® . Electronically controlled at 4°C, digital display, high/low alarm contact. Connections: 1/4" f NPT (gas inlet/outlet), 3/8" f NPT (condensate outlet). Power: 230VAC	€ 2.090,00	Pc.
APC 1603	Peltier gas cooler type APC 1603 in a stainless steel housing for wall-mounting. With 1 heat exchanger for 1x 350NI/h , material of gas wetted parts: PFA® . Electronically controlled at 4°C, digital display, high/low alarm contact. Connections: 1/4" f NPT (gas inlet/outlet), 3/8" f NPT (condensate outlet). Power: 230VAC	€ 2.990,00	Pc.

Options

APC 015	Option for cooler APC 1xxx, power supply 115V/60Hz instead of standard 230V/50Hz	€ 0,00	Pc.
APC 010	Extra charge for Peltier coolers series APC xxx with integrated electronic temperature controller, incl. high/low alarm (combined) and RS 485 Modbus interface	€ 270,00	Pc.

Spare parts

APC 155	Heat exchanger spindle for ACP cooler series APC 14xx/15xx, until 03/2015 . Incl. O-ring. Materials: PFA®, Viton®. Connections: 1/4" f NPT (gas outlet), 3/8" f NPT (condensate outlet)	€ 400,00	Pc.
ACC 155	Heat exchanger spindle for ACC cooler series ACC 1xx neo, ACC 4xx neo, APC 1403, APC 1503, from 04/2015 . Incl. O-ring. Materials: PFA®, Viton®. Connections: 1/4" f NPT (gas inlet/outlet), 3/8" f NPT (condensate outlet)	€ 370,00	Pc.
APC 156	Heat exchanger spindle for ACP cooler series APC 16xx. Incl. O-ring. Materials: PFA®, Viton®. Connections: 1/4" f NPT (gas outlet), 3/8" f NPT (condensate outlet)	€ 470,00	Pc.
APC 120	Thermal conductivity paste (5gr.)	€ 5,25	Pc.
APC 121	Thermal conductivity paste (50gr.)	€ 31,50	Pc.
APC 130	Power transistor for Peltier cooler series APC 1xxx	€ 19,95	Pc.
APC 132	Temperature sensor Pt100 for Peltier cooler series APC 1xxx	€ 57,75	Pc.
APC 133	Peltier element for Peltier cooler series APC 1xxx and gas conditioning systems series APS 31x, ASS 31x. Power consumption: 34W. Single-layer design. Incl. thermal conductivity paste (5gr.)	€ 157,50	Pc.
APC 140	Power supply for Peltier cooler series APC 1xxx	€ 294,00	Pc.
APC 142	Insulation set for Peltier cooler series APC 3xx	€ 120,75	Pc.
APC 143	Electronic controller type ATC 142 for Peltier cooler series APC 1xxx. Power: 115/230VAC	€ 315,00	Pc.
APC 144	Electronic controller type ATC 142rs for Peltier cooler series APC 1xxx, with RS 485 interface. Power: 115/230VAC	€ 450,00	Pc.
APC 136	Fan for Peltier cooler series APC 1xxx	€ 90,00	Pc.
APC 185	O-ring for heat exchanger system series APC 14xx/15xx, ACC1xx/4xx, material: Viton®	€ 10,50	Pc.
APC 186	O-ring for heat exchanger system series APC 16xx, material: Viton®	€ 18,90	Pc.
APC 190	Isolation cap for heat exchanger system series APC 14xx	€ 42,00	Pc.
APC 191	Isolation cap for heat exchanger system series APC 15xx	€ 42,00	Pc.
APC 192	Isolation cap for heat exchanger system series APC 16xx	€ 42,00	Pc.
APC 123	Fine fuse 1AT (5 Pcs.) for Peltier cooler series APC	€ 10,50	Pc.