ANKERSMID AMP 510 10L/min
AMP 518 18L/min
AMP 530 30L/min

TEMPERATURE-RESISTANT AND HEATED DIAPHRAGM GAS SAMPLING PUMPS

AMP xxx TP temperature resistant PTFE
AMP xxx T temperature resistant
AMP xxx TC with thermostatic temperature control
AMP xxx EC with electronic temperature control
Flow rates 10 -18 or 30 L/min
Protection IP54

* Pictures may vary

Principle

The basic construction of the temperature-resistant and heated **AMP** diaphragm gas sampling pumps is simple. An elastic diaphragm is moved up and down by an eccentric (see illustration). On the down-stroke it draws the air or gas being handled through the inlet valve. On the up-stroke the diaphragm forces the medium through the exhaust valve and out of the head. The compression chamber is hermetically separated from the drive mechanism by the diaphragm. The pumps transfer, evacuate and compress completely oil-free.

Application

Diaphragm pumps have become the standard in many analytical applications. Based on their design, they work without any lubrication.
When analyzing hot gases, care must be taken not to cool the gas en route from sampling point to the gas analyzer. Were the gas to cool down, it could condensate and gas constituent parts could condense out of the gas, leading to inaccurate measurement results. To overcome condensation issues, hot gases are pumped using diaphragm pumps with heated heads.
All Ankersmid AMP 5xx models are characterized by an even spread of temperature throughout the pump head and highly efficient insulation. All models are characterised by an even spread of temperature throughout the pump head and highly efficient insulation. Pumps for this new range are available in three different versions:

- A temperature resistant version **(T)** up to 240°C
- A heated version **(TC)** up to 240°C with thermostatic temperature control
- A heated version **(EC)** for temperatures up to 240°C with electronic temperature control with PC software

- **Uncontaminated flow of the media (oil-free operation)**
- **Low maintenance required**
- **No condensation in the pump head**
- **Low heat loss to surroundings**
- **Easy access to the pump head**
- **Energy efficient heating**
- **Electronically controlled heating system**
- **PC software for controlling the pump via a PC and documentation of all operational data**
- **Gas tight:**
  Leakage < 6 x 10-3 mbar l/s

Dimensions and performance characteristics

Type	Delivery (l/min)	Vacuum (mbar absolute)	atm. Pess.	Pressure (bar g)	Weight (kg)
temperature-resistant	10,5	240		1,5	3,4
temperature-resistant	10,5	240		1,5	4,0
heated (with thermostat)	10,5	240		1,5	4,0
heated (electronic control)	10,5	240		1,5	4,2
temperature-resistant	18	200		1,5	6,1
temperature-resistant	18	200		1,5	7,3
heated (with thermostat)	18	200		1,5	7,3
heated (electronic control)	18	200		1,5	7,5
temperature-resistant	30	200		1,5	10,0
temperature-resistant	30	200		1,5	12,0
heated (with thermostat)	30	200		1,5	11,9
heated (electronic control)	30	200		1,5	12,1

Type and OrderNo.[2]	Delivery at atm. pressure (l/min)[1]	Max. operating pressure (bar g)	Vacuum (mbar abs.)
AMP 510 TP	10.5	1.5	240
AMP 510 T	10.5	1.5	240
AMP 510 TC	10.5	1.5	240
AMP 510 EC	10.5	1.5	240

[1] **Litre at STP**

[2] **„See also „MODEL CODE FOR EASY ORDERING".**

Protection class	**IP 54**
Voltage/Frequencies (V/Hz)	~230/50
Power P1 (W)	80
Operating current (A)	0.4

Motors with other voltages, frequencies and protection classes on request.

Model codes and materials

Type and Order No. 2)	Pump head	Diaphragm	Valves
AMP 510 TP	Aluminium	PTFE	PTFE
AMP 510 T	Stainless steel	PTFE	PTFE
AMP 510 TC	Stainless steel	PTFE	PTFE
AMP 510 EC	Stainless steel	PTFE	PTFE

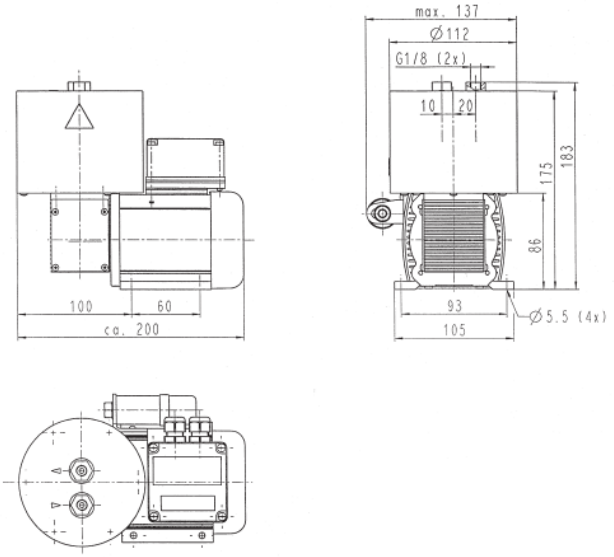
Heating: AMP 510TC and AMP 510EC

Voltage/Frequencies (V/Hz)	~230/50
Power P1 (W)	140
Operating current (A)	0.6
Heating temperature (°C)	240
Voltage/Frequencies (V/Hz)	~230/50

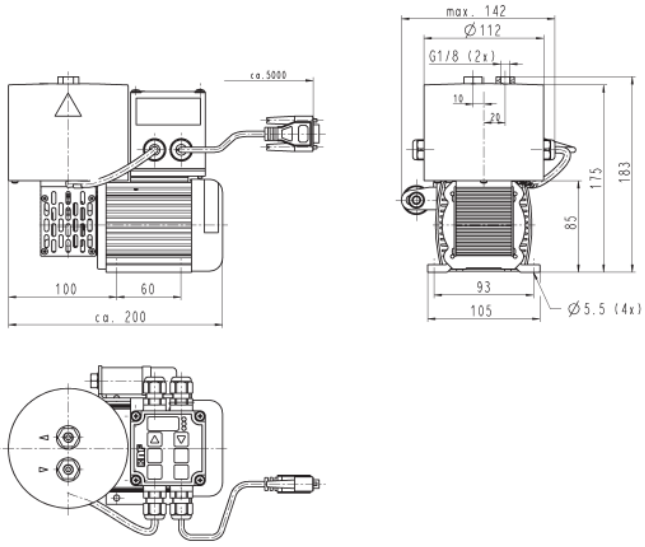
Heating with other voltages and frequencies on request.

Ankersmid offers the 510 EC version with an RS 232 interface. The interface protocol can be made available for applications which require external control.

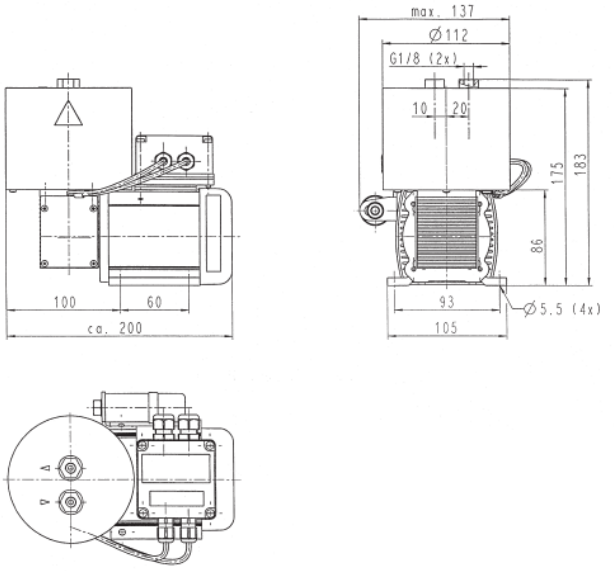
AMP 510 T

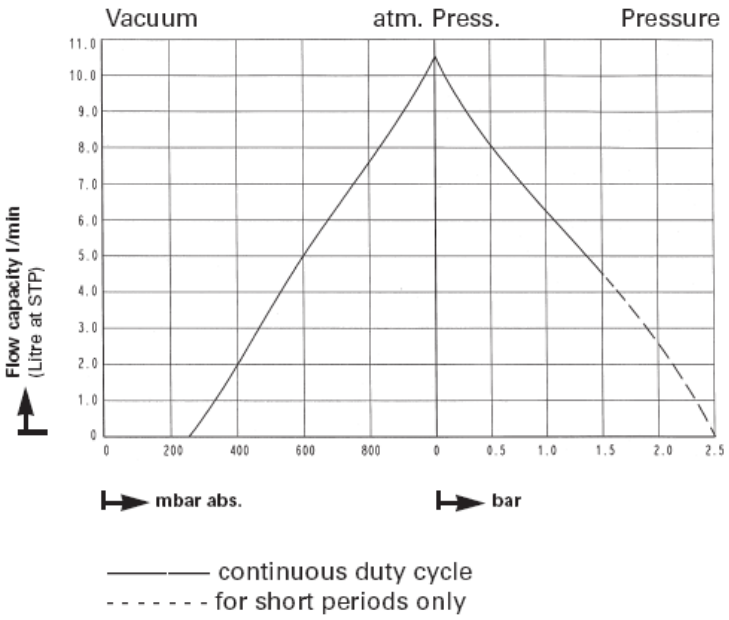


AMP 510 EC



AMP 510 TC





All dimensional tolerances conform to DIN ISO 2768-1, Tolerance Class V