



ANKERSMID Diaphragm pump

AMP 510/518/530 Series

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

Application

Ankersmid Diaphragm Pumps are used for the transportation of sample gas in sample conditioning systems in the chemical industry, for environmental applications, and in production technology; some application examples are sampling gases from the ambient environment, exhaust gases and smoke analysis. The **AMP 510/518/530** is easy to install and can be adapted to a variety of process conditions.

Description

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

Principle

The basic construction of the 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.



- **No contamination of the media due to oil-free operation**
- **Low maintenance**
- **Cool running motor even when in constant use**
- **Can operate in any installed position**
- **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**





ANKERSMID Diaphragm pump
AMP 510/518/530 Series

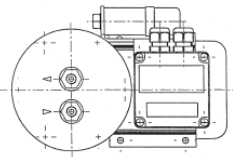
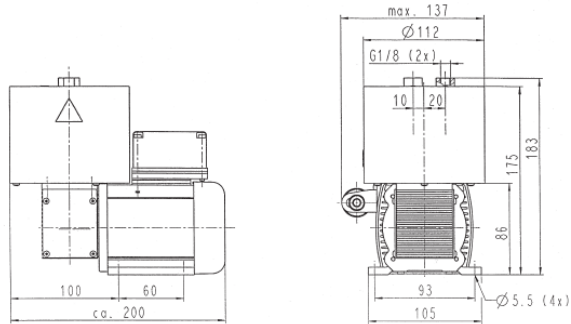
Technical data

Model AMP	AMP 510				AMP 518				AMP 530		
Version	TP	T	TC	EC	TP	T	TC	EC	T	TC	EC
Capacity (l/min)	10				18				30		
Max. operating pressure (bar g)	1,5										
Sample gas inlet/outlet	G1/8" f										
Ultimate vacuum (mbar abs.)	240				200						
Materials											
Pump head	PTFE	SS316			PTFE	SS316			SS316		
Diaphragm	PTFE-coated										
Valves	PTFE										
Sample and ambient temperature	+5°C to 40°C										
Pump motor											
Power consumption (W)	80				100				170		
Operating current (A)	0,4				0,6				1		
Protection class	IP54										
Heating											
Power consumption (W)	-	140			-	250			-	400	
Operating current (A)	-	0,6			-	1,2			-	1,9	
Heating temperature (°C)	-	240			-	240			-	240	
Operation mode	100% continuous duty, start of the pump only without pressure										
Weight	4Kg				7,5Kg				12Kg		
Power supply	230V/50Hz 115V/60Hz										

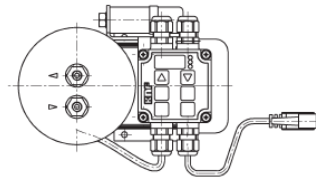
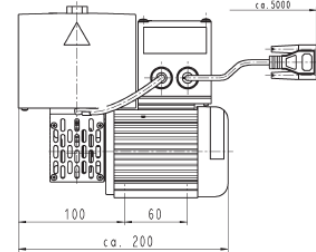
PTFE = Polytetrafluoroethylene (Teflon®)
 PVDF = Polyvinylidene difluoride
 FFPM = Perfluorinated Elastomer (Kalrez®)



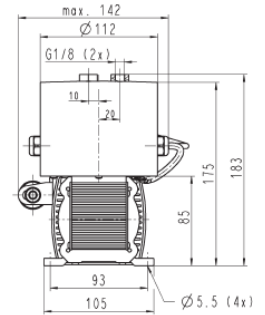
ANKERSMID Diaphragm pump AMP 510T/TP



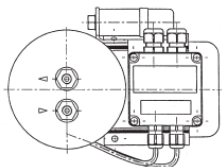
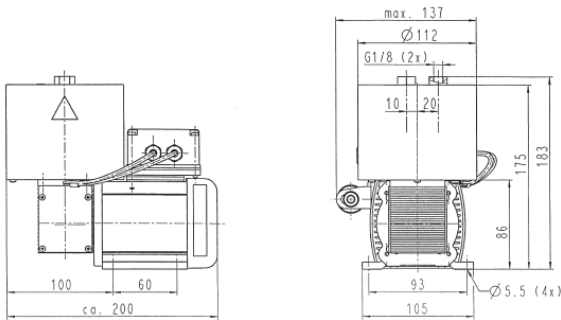
AMP 510EC



Dimensions

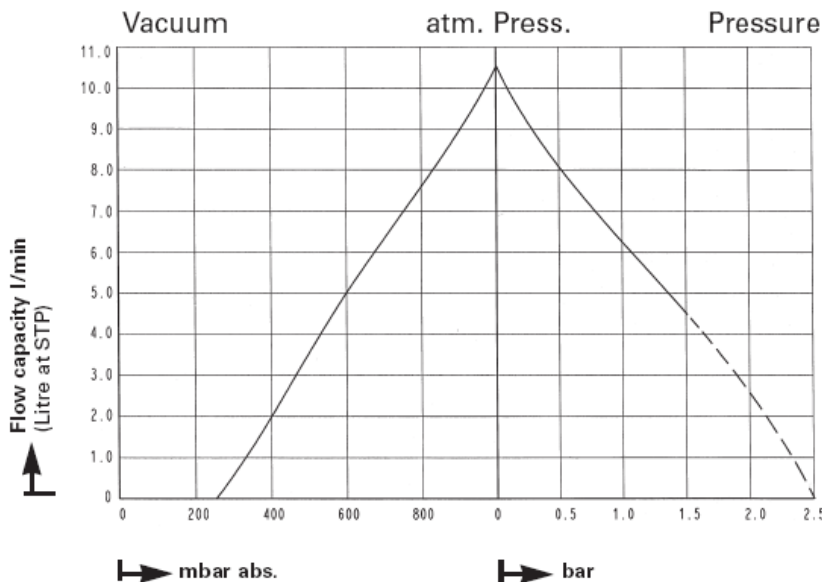


AMP 510TC



All dimensions in mm

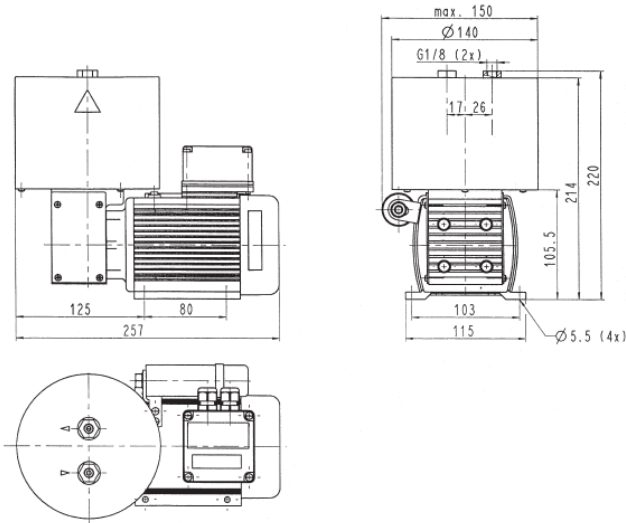
Performance characteristics



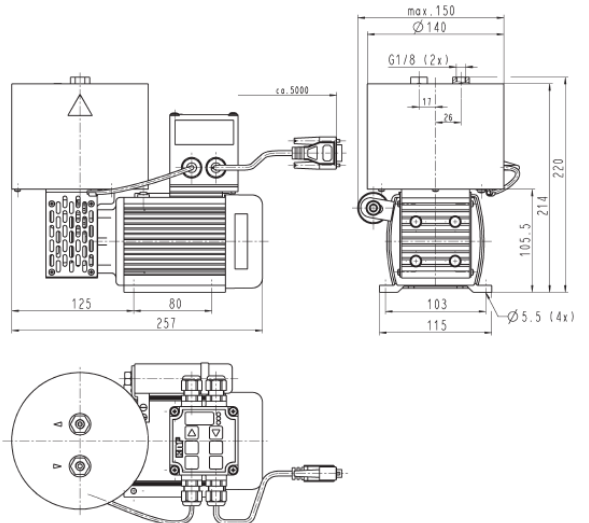
————— continuous duty cycle
 - - - - - for short periods only



ANKERSMID Diaphragm pump
AMP 518T/TP

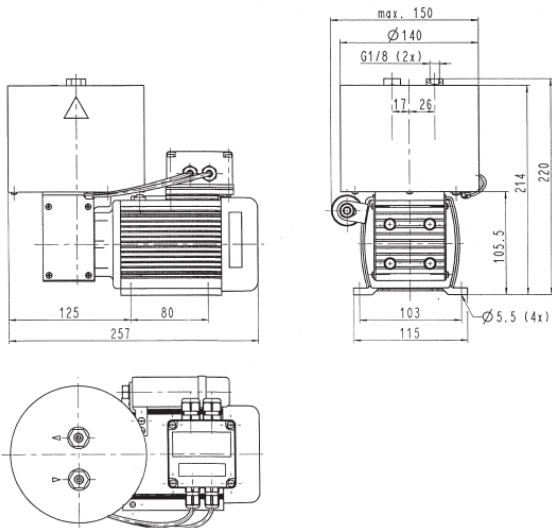


AMP 518EC



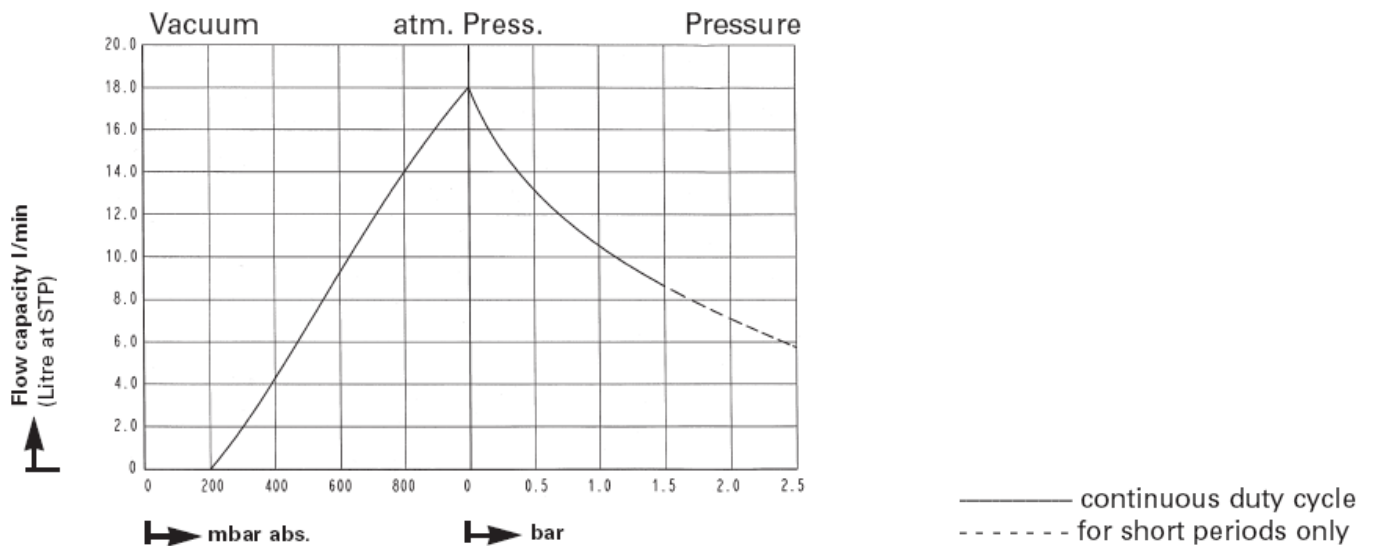
Dimensions

AMP 518TC



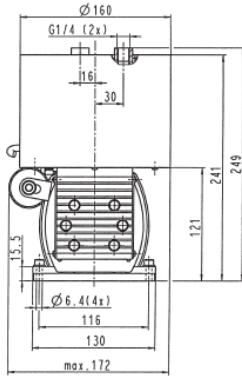
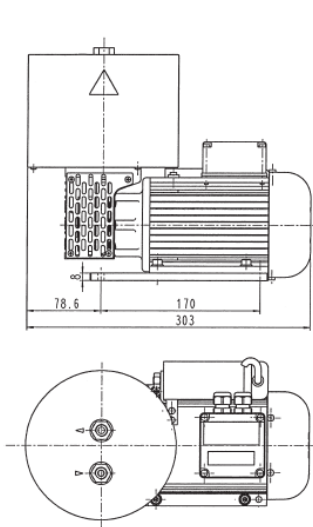
All dimensions in mm

Performance characteristics

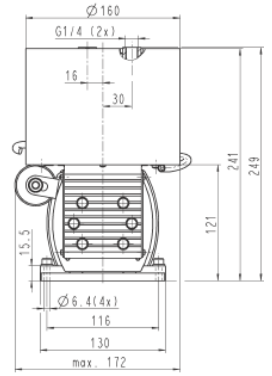
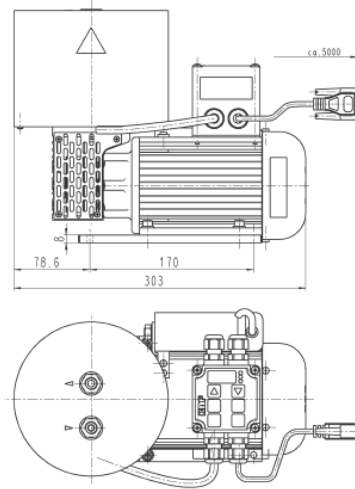




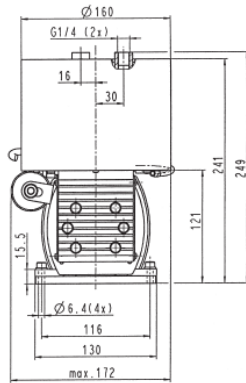
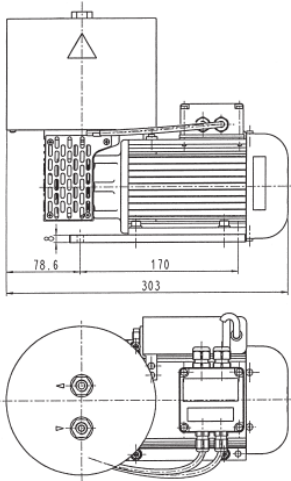
ANKERSMID Diaphragm pump AMP 530T



AMP 530EC

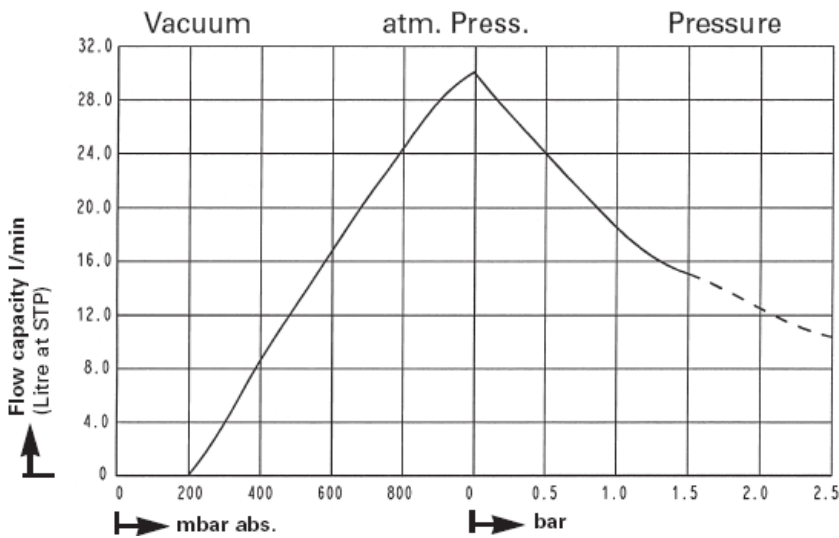


AMP 530TC



All dimensions in mm

Performance characteristics



—— continuous duty cycle
 - - - - for short periods only