

ANKERSMID Diaphragm pump

AMP 505 Series

AMP xxx TP temperature-resistant

AMP xxx TC with thermostatic temperature control

Flow rate 5l/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 505 series** 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. Pumps for this new range are available in three different versions:

- A temperature-resistant version (**TP**) up to 240°C
- A heated version (**TC**) up to 240°C with thermostatic temperature control

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**
- **Gas tight: Leakage < 6 x 10⁻³ mbar l/s**





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Technical data

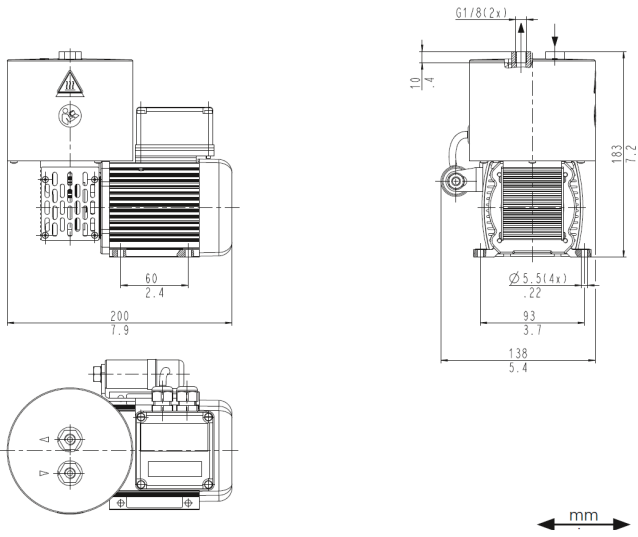
| Model AMP | AMP 505TP | |
|---------------------------------|---|--|
| Version | TP | TC |
| Capacity (l/min) | 5 | |
| Max. operating pressure (bar g) | 1,5 | |
| Sample gas inlet/outlet | G 1/8" f | |
| Ultimate vacuum (mbar abs.) | 240 | |
| Materials | | |
| Pump head | SS316 | |
| Diaphragm | PTFE-coated | |
| Valves | PTFE | |
| Ambient temperature | +5°C to +40°C | |
| Pump motor | | |
| Power consumption (W) | 80 | |
| Operating current (A) | 0,4 | |
| Protection class | IP54 | |
| Heating | | |
| Power consumption (W) | - | 140 |
| Operating current (A) | - | 0,6 |
| Heat resistant up to (°C) | 240 | |
| Kind of Heating | No active heating, only heat-resistant | Heated by thermostatic controller, temperature fix adjusted |
| Operation mode | 100% continuous duty, start of the pump only without pressure | |
| Weight | 4Kg | 8,8Kg |
| Power supply | 230V/50Hz 115V/60Hz | |

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

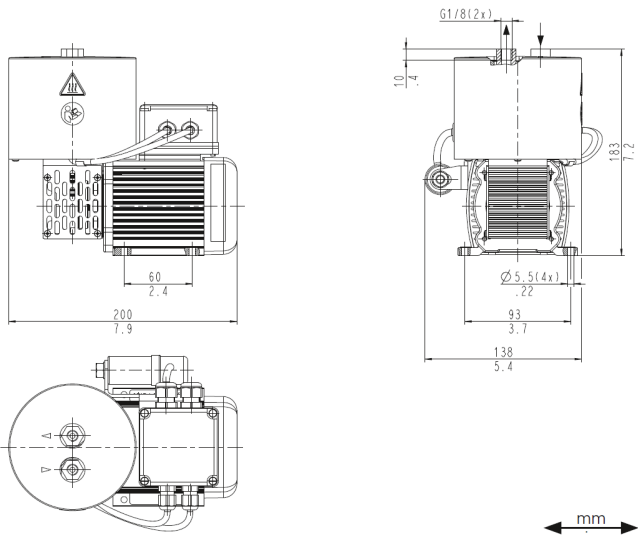


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Dimensions



AMP 505TC



All dimensions in mm