

## ANKERSMID Digital 19"-rack mount gas conditioning system

ADS 3xx Series

### Application

The digital gas conditioning system ADS has been designed for continuous use so that detailed gas analyses can be carried out at any time.

The entire gas conditioning system is equipped with a PLC which is housed in a compact 19"-housing and can be fully integrated into a gas analysis system. Its compact design ensures the ADS takes up only little space.

### Description

The Ankersmid digital gas conditioning system is a compact, low-maintenance, self-monitoring and completely equipped units is suitable for variable and continuous operation in most applications.

The innovative new programmed PLC with touch screen provides a comprehensive desktop with separate pop-up menus to check and control all parts of the conditioning system as well as external devices.

The PLC is operating as controller for the internal Peltier cooler, the integrated flow sensor, a liquid sensor and several check valves for zero gas and calibration gases.

Furthermore the PLC is able to control an external heated sample line and a gas sample probe. Due to that fact external temperature controllers are no longer required for these devices.

The heated sample line is to be mounted at the gas measuring inlet terminal backside the 19"-housing.

Several valves are fitted to the inlet terminal block of the system in order to calibrate analyser(s) with check gas.

The amount of flow is determined by a sample gas diaphragm pump. The sample gas pump is activated automatically by means of an excess temperature contact on the cooler.

A digital flow sensor is integrated and the flow rate can be checked and adjusted on the touch screen.

This unique PLC microprocessor controls the Peltier cooler with is a powerful designed dew-point stabiliser. The dew point is set at 4°C but can be changed at any value between 1°C and 15°C. The gas cooler is equipped with an innovative heat exchanger system.

A preliminary front-panel fine filter type is installed at the inlet of the gas sampling pump and can be equipped with a variety range of filter elements in different materials and porosities.

Any condensation is continually removed by a peristaltic pump.



\* Picture may vary

- **Low maintenance and self-monitoring**
- **Dew point +4°C ± 0,1°C**
- **Ready for use < 15 min**
- **Compact design**
- **Optimum reliability**
- **Light weight**
- **Universally equipped**
- **Good chemical resistance**



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gas conditioning system**

**Technical data**

APS Portable system	ADS 303
Gas flow rate max.	350 NI/h
Sample outlet dew point	+1°C ..... +15°C, factory setting: +4°C
Dew point stability	±0,1°C
Sample inlet temperature	Max.190°C
Sample inlet connection	Stainless steel connection DN4/6mm, suitable for heated sample lines
Sample inlet dew point	Max. 80°C
Ambient temperature	+5°C up to +45°C
Maximum pressure	3 bar abs.
<b>Material of gas wetted parts*</b>	
Heat exchanger coating	PFA
Diaphragm pump	Head: PPS, Valves: FPPM, Membrane: PTFE-coated
Filter	head, element holder: PVDF, filter element: PTFE, body: Duran® glass
Peristaltic pump	Tube: Novoprene®, Connectors: PVDF
Others	Tubing: PTFE, Inlet connector: SS316, Outlet connector: PVDF
Number of gas inlets	1 sample inlet, max 5 check/test gas inlets (3 standard, 2 optional)
Number of gas outlets	1 sample outlet, max. 2 (1 standard, 1 optional)
Filter porosity*	2µm
Alarm contact	Free programmable contact 1NO / 1NC, rating: 250V, 0,5A AC
Total cooling capacity	Max. 245kJ/h (2 Peltier elements)
Storage temperature	-25 °C up to +65 °C
Ready for operation	< 15 min
Power supply	230V/50Hz or 115V/60Hz
Power consumption	100VA
Electrical connection	Cold appliance plug with 1,5 m of cable
Housing	19"-housing for rack-mounting
Housing dimensions	483mm x 315mm x 400mm (W x H x D)
Electrical protection	Fuse 2A
Electrical equipment standard	EN61010
Weight approx.	20 kg

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  
 FPPM = Perfluorelastomer (Kalrez) PPS = Polypropylenesulphide (Ryton®)