



PGD-100

madur gas conditioner unit

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CHARACTERISTIC | FEATURES | TECHNICAL DATA | APPEARANCE

PGD-100 prepares gas sample for the co-operating analyser by removing dust, salts particles and condensate, so the sample is dry and clean.

Using gas conditioner is essential in case of majority measurements with gas analysers.

PGD-100

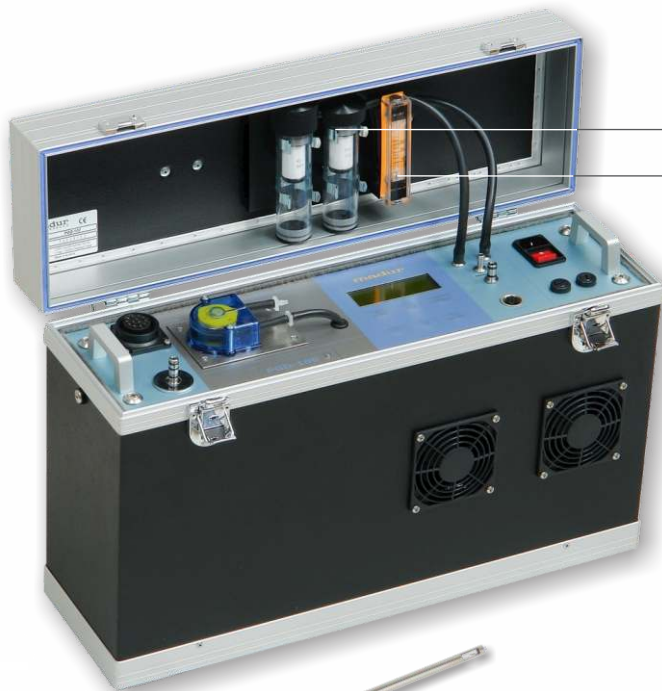
CHARACTERISTIC

FEATURES

TECHNICAL DATA

APPEARANCE

- Gas conditioner unit includes:
 - Gas probe pipe
 - Initial heated filter
 - Heated hose that supplies gas sample to the analyser's drying module(s)
 - One or two drying modules
 - Final filter that cleans the dried gas sample
 - Gas pump
 - Condensation pump (only when PGD-100 is equipped with condensation type dryer with Peltier element)
 - Ventilation valve that provides clean air for cooperating analyser
- Drying modules are: Nafion® exchanger or condensation based unit
- The dryer receives adjustment settings from the co-operating analyser, and returns own status and errors to the analyser via RS-232 communication interface



GAS FILTERS SET

FLOW METER



HEATED HOSE
WITH MAGNETIC
FITTING



GAS PROBE PIPE L=300MM
(EXCHANGEABLE)



GAS HOSE
(DRYER - ANALYSER)



COMMUNICATION CABLE
(DRYER - ANALYSER)

PGD-100



CHARACTERISTIC | FEATURES | TECHNICAL DATA | APPEARANCE

PGD-100 GAS DRYER WITH SINGLE CONDENSATION DRYER

| | |
|---|---|
| Dimensions (W * H * D) | 500 mm * 340 mm * 150 mm |
| Weight | 12 kg ÷ 13 kg |
| Casing material | Plywood covered with aluminium |
| Operating conditions | T: 10°C ÷ 50°C, RH: 5% ÷ 90% (non-condensing) |
| Dryer type | Based on Peltier cooling element with fan (12V DC supply) |
| Drying method | Water condensation by rapid cooling down |
| Cooling temperature | 0°C ÷ 20°C |
| Ready to operate after | 5 minutes |
| Storing temperature | 0°C ÷ 60°C |
| Maximum gas flow for efficient drying (at inlet gas temp. 100°C and RH 100%) | 100 l/h |
| Gas filters: quantity material | 2 PA - body, PC - cover, viton - sealing |
| Filter insert: length ID OD material pore size | 32mm 12mm or 15mm 18mm or 20mm PE 5µm |
| Condensate removal | With built-in peristaltic pump |
| Peristaltic pump capacity | 38 ml/min |
| Power supply: input maximal power consumption | 230V AC 40W (without heated hose) |
| Heated hose temperature | +180°C electronically stabilised |
| Heated hose temperature hysteresis | ~5°C |
| Heated hose length | 3m (optionally 5m or 10m) |
| Heated hose power supply: input maximal power consumption | 230V AC 1000W |
| Heated hose thermocouple wires | K-type (S-type optionally) |

PGD-100

CHARACTERISTIC

FEATURES

TECHNICAL DATA

APPEARANCE

PDG - 100 GAS DRYER WITH SINGLE NAFION® DRYER

| | |
|----------------------------------|---|
| Weight | 9kg ÷ 10kg |
| Dryer type | Based on Nafion® exchanger |
| Drying method | Water transfer through Nafion® membrane driven by partial vapour pressure differential - first order kinetic reaction |
| Cooling temperature | n/a |
| Ready to operate after | 1 minute |
| Under pressure in Nafion® collar | ~ 500 mbar |

*all other data is the same as for PDG-100 gas dryer with single condensation dryer

PDG - 100 GAS DRYER WITH NAFION® DRYER + CONDENSATION DRYER

| | |
|------------------------|---|
| Weight | 11 kg ÷ 12 kg |
| Dryer type | Outlet 1: Based on Nafion® exchanger Outlet 2: Based on Peltier cooling element with fan (12V DC supply) |
| Drying method | Outlet 1: Water transfer through Nafion® membrane driven by partial vapour pressure differential - first order kinetic reaction Outlet 2: Water condensation by rapid cooling down |
| Cooling temperature | Outlet 1: n/a Outlet 2: 0°C ÷ 20°C |
| Ready to operate after | 5 minutes |

*all other data is the same as for PDG-100 gas dryer with single condensation dryer

PDG - 100 GAS DRYER WITH DUAL CONDENSATION DRYER

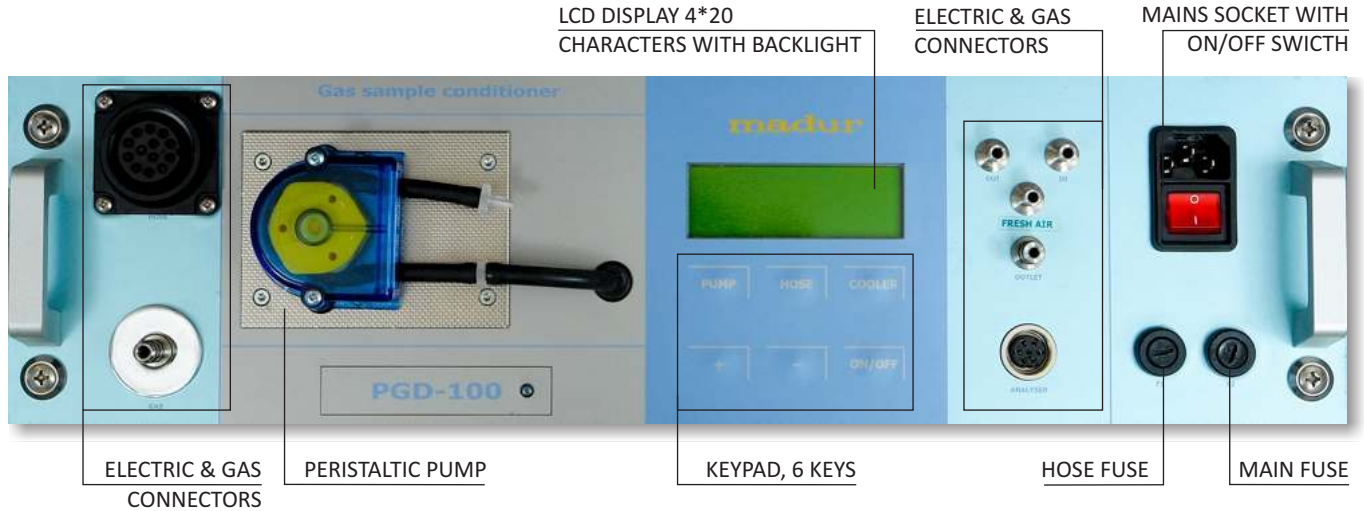
| | |
|------------------------|---|
| Weight | 12 kg ÷ 13 kg |
| Cooling temperature | First dryer: Constant, about +1°C, output gas dewpoint about +4°C Second dryer: 0°C ÷ 20°C |
| Ready to operate after | 5 minutes |

*all other data is the same as for PDG-100 gas dryer with single condensation dryer

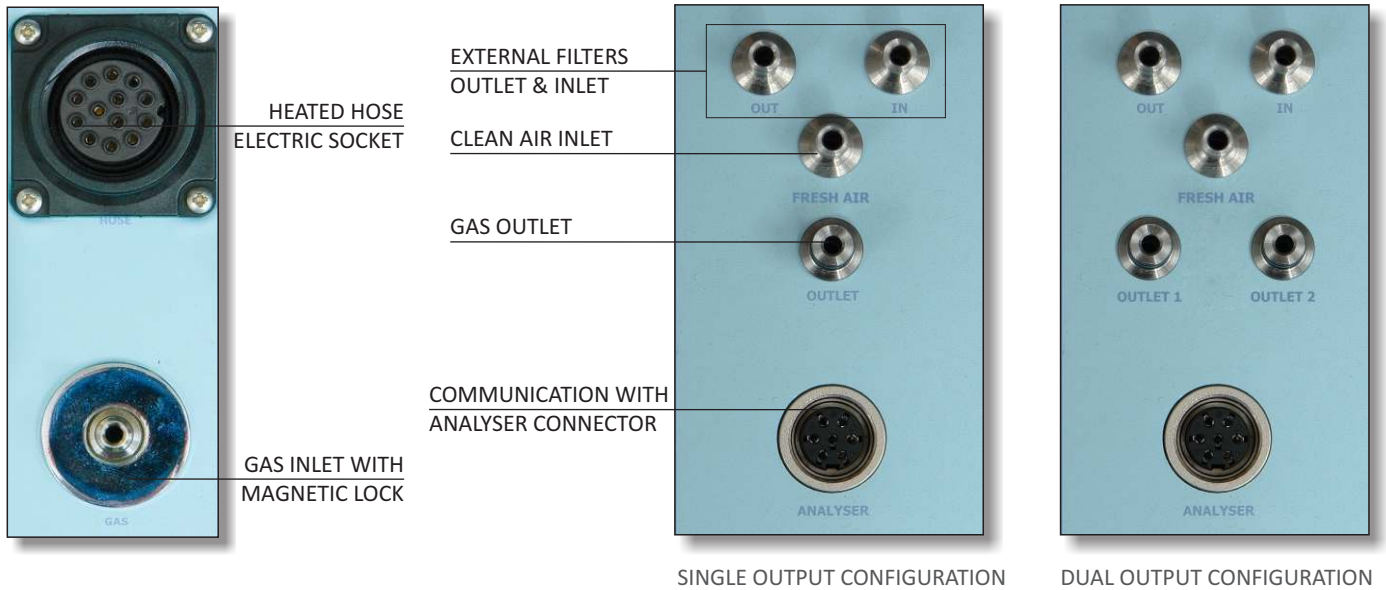
PGD-100

CHARACTERISTIC | FEATURES | TECHNICAL DATA | **APPEARANCE**

FRONT PANEL



GAS AND ELECTRONIC CONNECTORS



EXAMPLE PRINT SCREENS

