

MHG Modular Humidity Generator

Humidity:

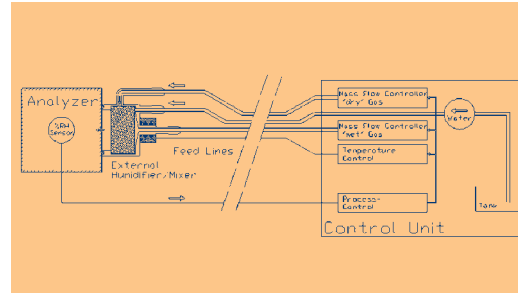
Virtually all materials interact more or less strongly with humidity.

The knowledge of moisture induced changes of the material properties is a key issue in decisions related to processing, packaging, storage and shelf life of a product.

The Modular Humidity Generator adds a new dimension to your Analysis Equipment: Measurements in an atmosphere with controlled humidity.

The MHG is designed to fit into your Analysis Equipment. Unlike standard humidity generators providing a gas with preadjusted humidity through long feed lines the MHG generates an atmosphere of controlled humidity exactly at the spot where it's needed. The design without dead volume allows fast and accurate humidity regulation independent from the length of the feed lines even at low flow rates.

Principle of Operation:



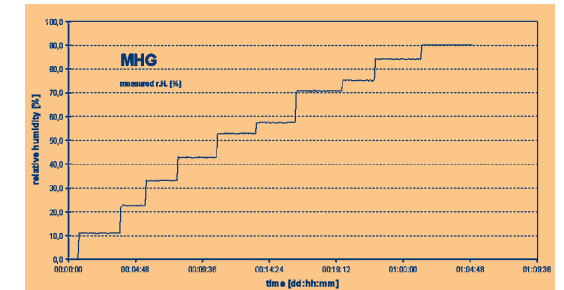
The Modular Humidity Generator consists of a Central Control Unit and an external Humidifier and Mixer Unit. The Control Unit regulates and controls the flow rates for gas and liquid and feeds the media separately towards the Humidifier/Mixer Unit. The losses of heat caused by evaporation enthalpy are compensated by an electronically controlled heater unit within the Humidifier/Mixer.

Therefore the Humidifier/Mixer is thermally inert and adapts to the temperature of the Analysis Equipment.

This unique architecture (Patent pending) allows fast and accurate humidity regulation from close to freezing up to the boiling point without condensation effects.

A broad range of humidity and temperature sensors are configurable and allow accurate and reliable humidity control just at the spot within your Test Equipment.

Programming and Remote Control:



The built in process controller allows easy and direct access to set humidity and flow rate as well as programming of complex humidity profiles including ramps, plateaus and steps.

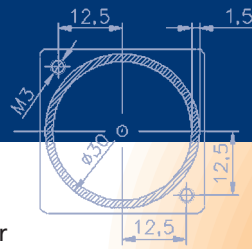
Up to 20 humidity profiles can be stored (optionally 50 profiles with 100 segments per profile and 500 segments maximum).

The Process Controller in the MHG is equipped with a PID optimization algorithm to provide easy adaptation to different target systems.

A calculation algorithm for temperature deviations is implemented to allow accurate humidity regulation of samples on a thermostatic mount. The MHG allows remote control via an RS232 or an optional Ethernet interface for easy integration into your automated Test equipment.

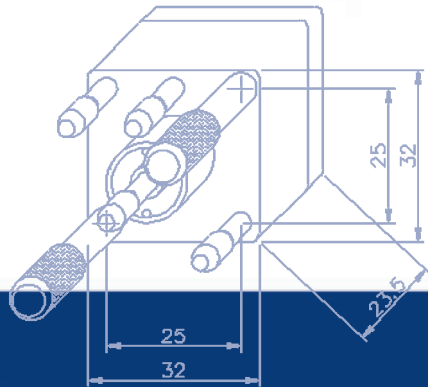


Technical data



Gases: Air, N₂, He, CO₂, Ar
Operating Pressure: 1bar < p < 6bar
Flow rates: 5 ... 500 ml/min (MHG 32)
Temperature Range: 2°C ... 95°C
Humidity Range: 2% ... 98% Relative Humidity*
*Note: The lower humidity rate depends on water content of gas supply
Humidity accuracy: ± 0.6% r.H. (0 ... 100% r.H) at 23°C ± 5°C**
Long term stability: Better than 1% r.H. per Year**
**Note: Based on humidity sensor "Hygroclip ST"

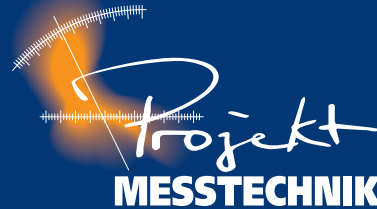
Dimensions:
Control Unit: Width: 448.9 mm
Depth: 315.5 mm
Height: 140 mm
Weight: 6.5 kg
The control Unit is compatible to a 19" 84TE 3 HE rack
Humidifier/Mixer Unit: Width: 32 mm
Depth: 23.5 mm (not including tubing)
Height: 32 mm
Weight: 0.2 kg (not including tubing)
Water storage: Removable Tank with 700 ml capacity
Interfaces: Graphical Controller Interface (Eurotherm 3504)
RS232 Interface
Ethernet Interface (optional)
Power supply: Voltage: 90-135, 170-264Vac
Power: 75 W
Environmental Conditions: Temperature: +15°C to +25°C
Humidity: +75% r.H. max



Expand Your Capabilities



MHG Modular Humidity Generator



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