MHG - 模块化湿度发生器
MHG - Modular Humidity Generator


+H2O
DRY

湿度控制
Humidity Control

为了得到可靠并且重复性良好的实验数据，越来越多的分析检测需要在受控的环境下进行，特别是对相对湿度的控制成为关注的重点。为了满足高要求分析实验的需要，我们特别研发了MHG系列模块化湿度发生器。

To provide reliable and reproducible results, an increasing number of analytical test methods require controlled environmental conditions. Especially the control of relative humidity has become a major concern. To support the demands of state of the art analytics we developed the MHG Modular Humidity Generators.

MHG32湿度发生器
The MHG32 Humidity Generator

通用型的MHG32湿度发生器可以为分析仪器提供精确的湿度控制，尤其适合较小流量的情况。

外置加湿器和混合单元直接与目标仪器连接，精确的控制被测区域的湿度。

The versatile MHG32 provides analytical equipment with precise humidity regulation especially at small flow rates.

An external humidifier and mixing unit directly attached to the target system controls humidity precisely at the spot where it is needed.

Technical data	MHG32
Gases	Air, N_2, CO_2, Helium, Argon
Flow rates	5 … 500 ml/min (optional: 1000 ml/min)
Temperature range	+2 °C … +95 °C
Relative Humidity	2 % RH … 98 % RH
Accuracy	±0.6 % RH (0 … 100 % RH) at 23 ±5 °C

Schematic diagram of a MHG32 humidity generator

MHG100湿度发生器
The MHG100 Humidity Generator

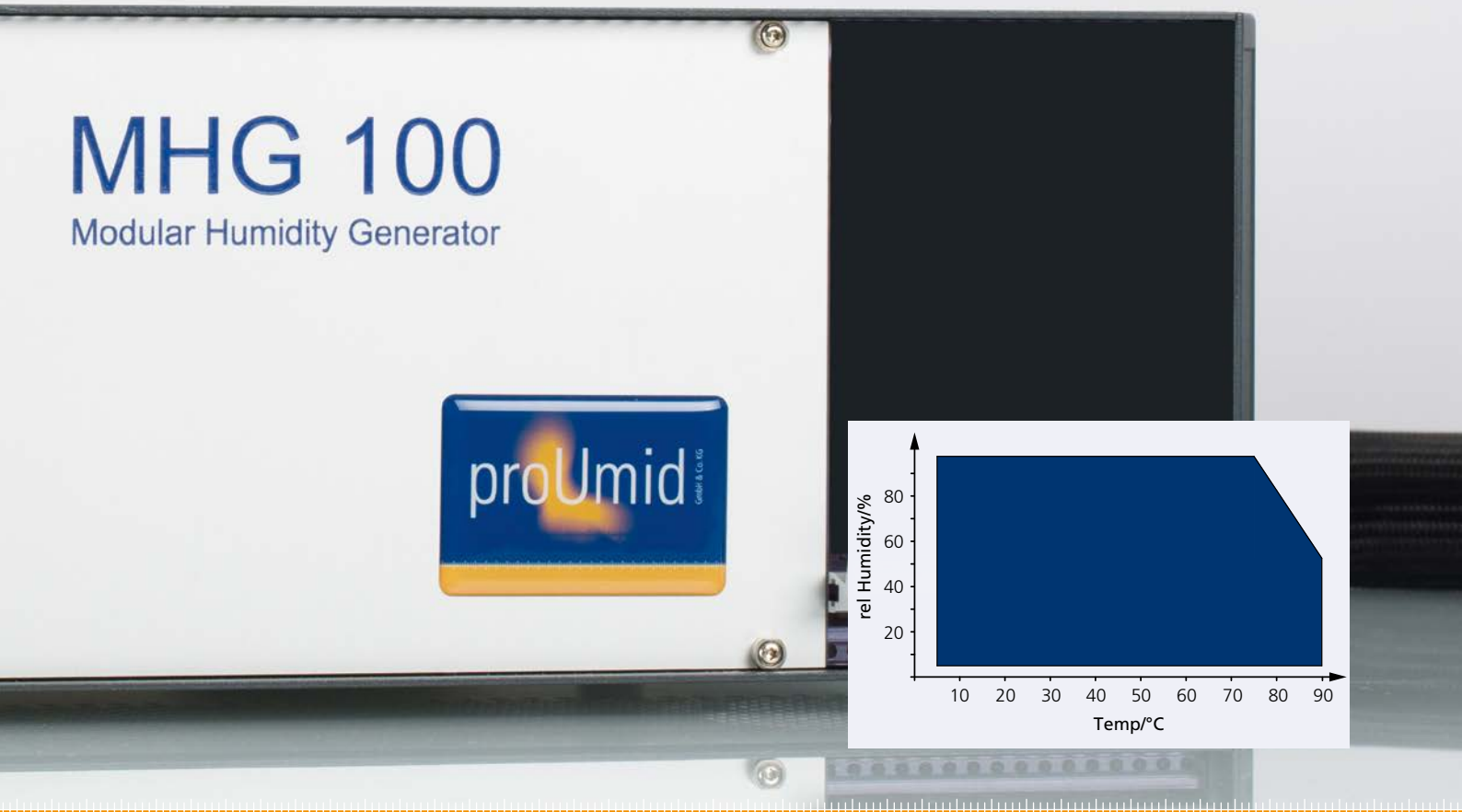
功能强大的MHG100湿度发生器专门为需要高流量的大体积开放系统设计。

该模块采用闭环控制，湿度感应器位于目标系统内部，即使是非常苛刻的应用条件也能够保证精确的湿度控制。

The powerful MHG100 is designed for open systems of large volume that require high flow rates.

A closed control loop with the humidity sensor inside the target system enables a precise climate control even for demanding applications.

Technical data	MHG100
Gases	Air, N_2, CO_2, Helium, Argon
Flow rates	0 … 15 l/min
Temperature range	+5 °C … +90 °C
Relative Humidity	5 % RH … 95 % RH
Accuracy	±0.6 % RH (0 … 100 % RH) at 23 ±5 °C



与目标仪器的连接
Adaption to the Target System

外置混合单元和MHG的输气管线很容易连接到目标仪器上。

传感器接口可以按任何具备模拟输出功能的温湿度传感器的需求进行配置连接。

对于样品和传感器被热隔离的情况，会自动进行湿度矫正。

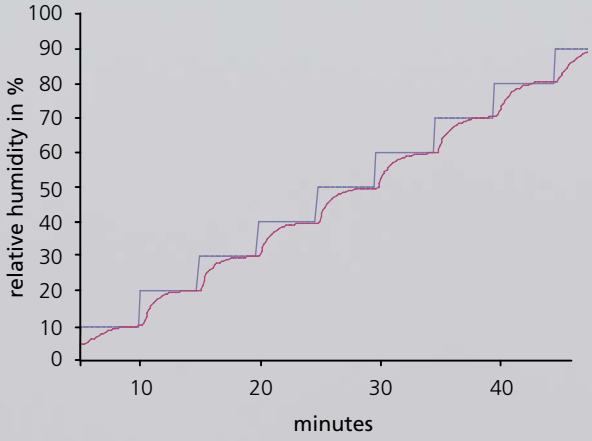
External mixing unit and supply lines of the MHGs are easily adapted to the target system.

The sensor interface is fully configurable for any humidity/temperature sensor having an analogue output.

For samples thermally separated from the sensor, an automatic humidity correction is provided.

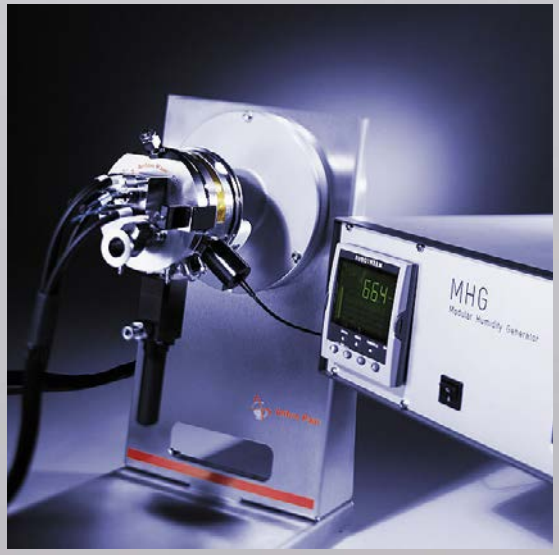
MHG100的输气管线
MHG100 supply lines

MHG32的外置混合单元
External mixing unit of the MHG32



MHG32在一台TGA的炉腔内，
以50ml/min的气流速度快速又精确的进行湿度调节。

Fast and precise humidity regulation of a MHG32 inside a TGA oven at 50 ml / min gas flow



MHG的操作
Operating the MHG

MHG可以直接通过前面板操作或是通过RS232或以太网进行远程控制操作。

MHG和分析设备通过一个触发信号保持同步，无需复杂的软件集成。

The MHG is operated directly via the front panel or by remote control via RS232 or Ethernet connection.

A trigger signal synchronises the MHG with analytical equipment. No intricate software integration is needed.

MHG遥控软件

MHG remote control software

应用领域
Fields of Applications

MHG适用于多种多样的分析设备，可以应用于各种需要控制环境湿度的检测任务。

MHGs are used in a wide range of analytical equipment and measurement tasks that require an atmosphere of controlled humidity.

热重分析TGA

动态力学分析 DMA

X-射线衍射 XRD

原子力显微镜AFM

样品的吸附平衡

流变学Rheology

近红外光谱NIR

粉末检测：流动性，粘性，结块性

拉曼光谱

模块化湿度发生器
Modular Humidity Generators

既快速又精确的控制湿度，直接作用于目标仪器内部的被测物体。

可以在分析仪器内部通过小流量气体精确控制相对湿度，也可以在大的开放体积内以大流速气体调节湿度。

温湿度控制范围宽。

通用型MHG系统可以非常简便的与多种仪器联用。

Fast and precise humidity control straight at the test object inside the target system.

Accurate humidity control at small flow rates in analytical equipment as well as higher flow rates in large open volumes.

Large temperature and humidity range.

The versatile MHG systems are easily adapted to a multitude of applications.