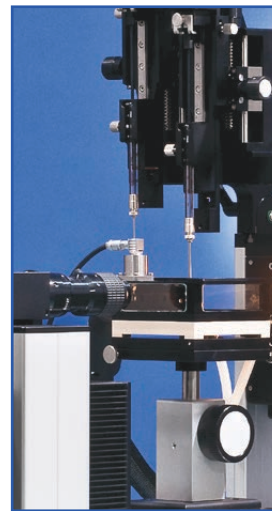
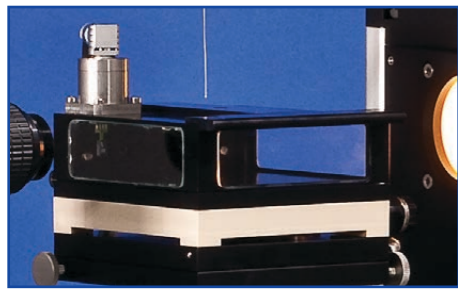


# HGC 20 / HGC 30

Humidity Generator and Controller





TPC 160 with mounted humidity and temperature sensor

The **Humidity Generator and Controller HGC 20** and **HGC 30** is designed for the automated regulation of the relative humidity for a wide range of applications.

It is easily connectable to any temperature controlled measuring chamber (OCA, TGA, TMA, DSC etc.).

The ambient air/gas first flows through the integrated desiccant reservoir. An electronic valve, controlled by the humidity and temperature sensor –directly mounted in the measuring chamber–diverts some air/gas through the heated water before it flows through the heated connection tube to the chamber.

#### Standard features

- Stand alone generation of dry air without an external pressurized gas supply
- Heated water reservoir
- Heated connection gas tube (transfer line) to thermal chamber to avoid condensation
- Easy control via touch-screen or optional software
- Serial RS 485 or USB interface
- Calculation of dew point in the measuring chamber



Humidity Generator and Controller HGC 20

#### Special features of HGC 20

- Automated drying and regeneration of desiccant by a built-in heating system in two alternatively used desiccant reservoirs (total stored desiccant amount about 1.0 kg)

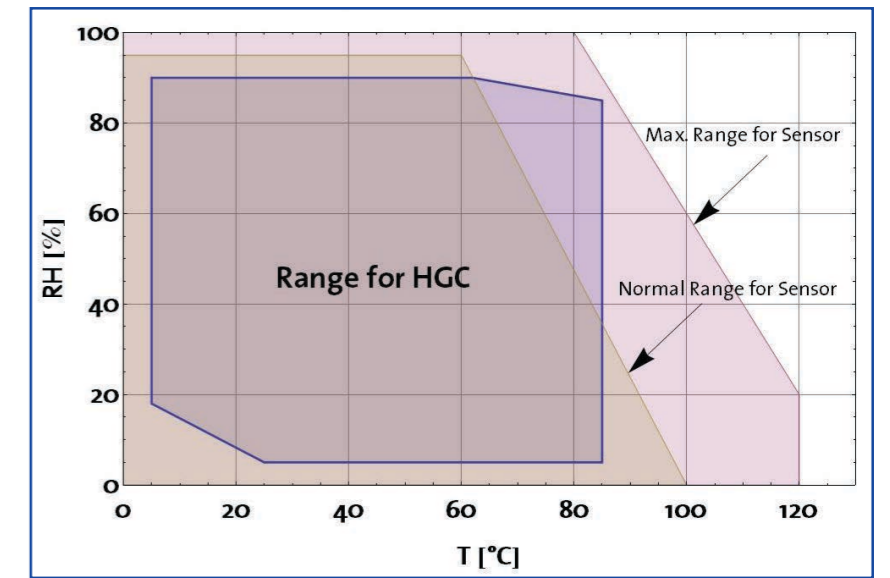
#### Special features of HGC 30

- Automated drying and regeneration of desiccant by a built-in heating system in two alternatively used desiccant reservoirs (total stored desiccant amount about 1.0 kg)
- External gas supply with integrated pressure regulator (only clean and oil-free gas)
- Integrated flow rate controller (0.07 ... 3.5 NI/min; calibrated for N2 and Ar)

#### Software for control, measurement, analysis and presentation

The **SCH 20** software assists you in the intuitive use of the humidity generator HGC xx, by

- controlling the humidity directly in the measuring cell
- define, execute, save, and load of humidity profiles
- collecting and evaluating the humidity and temperature data
- easy export of humidity and temperature data



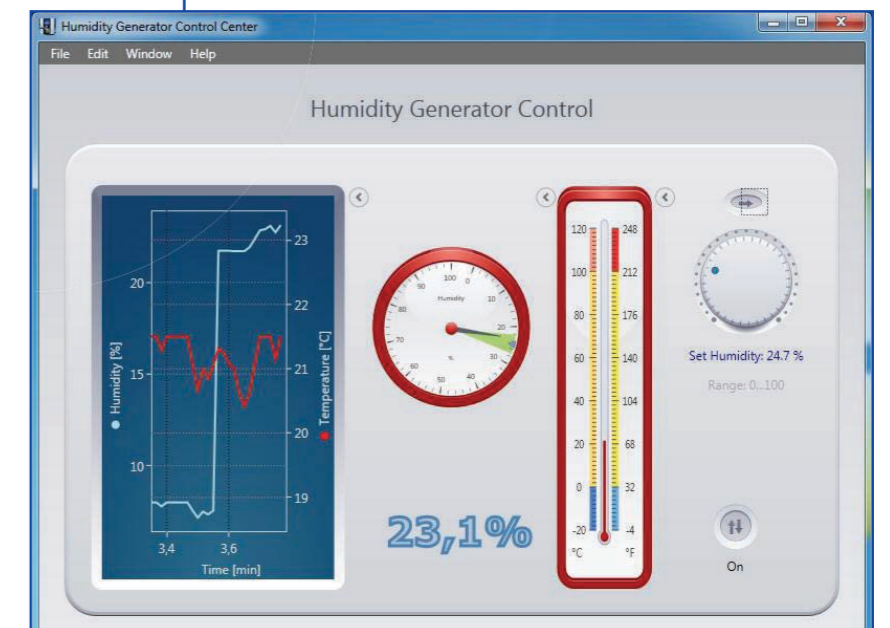
HGC working range



External gas supply at HGC 30



Humidity Generator and Controller HGC 20 connected to the TPC 160 of an OCA 20



SCH 20 control software for HGC

## Technical data

Relative humidity control range:	<ul style="list-style-type: none"> <li>• 5 % .. 90 % @ 25 °C</li> <li>• 10 % .. 85 % @ 85 °C</li> </ul>
Relative humidity accuracy:	<ul style="list-style-type: none"> <li>• <b>HGC 20:</b> ± 1.8 %</li> <li>• <b>HGC 30:</b> ± 1.0 %</li> </ul>
Temperature range:	• +5 ... +85 °C (requires appropriate temperature controlled chamber)
Dew point range:	• min. -15 °C, max. 85 °C
Gases:	<ul style="list-style-type: none"> <li>• <b>HGC 20:</b> ambient clean air</li> <li>• <b>HGC 30:</b> ambient clean, oil-free air; external gas supply with push-in fitting 6 mm for Nitrogen, Argon, or clean, oil-free compressed air; with integrated pressure regulator for a maximum inlet pressure of 14 bar</li> </ul>
Flow rate:	<ul style="list-style-type: none"> <li>• <b>HGC 20:</b> flow rate of 600 cm<sup>3</sup>/min, constant flow</li> <li>• <b>HGC 30:</b> adjustable flow rate 70 ... 600 Nml/min* with ambient air, 70 ... 3 500 Nml/min with external gas supply</li> <li>• *) <b>NI</b> (Norm Liter) is a unit of volume for gases equal to the volume of 1 litre (0.0353147 ft<sup>3</sup>) at a pressure of 1013.25 hPa (1 atm) and at a temperature of 0 °C (32 °F)</li> </ul>
Heated water reservoir:	• 80 ml
Desiccant reservoirs:	• two desiccant reservoirs (total stored desiccant amount about 1.0 kg), with automated drying and regeneration of desiccant by a built-in heating system
Heated connection gas tube length:	• 120 cm
Control connectors:	• RS-485 connection (to OCA) or USB connection (for TGA, TMA, DSC etc.)
Dimensions:	• 33 x 28 x 35 cm (LxWxH)
Weight: (incl. heated transfer line and desiccant)	<ul style="list-style-type: none"> <li>• <b>HGC 20:</b> 19.5 kg</li> <li>• <b>HGC 30:</b> 20.5 kg</li> </ul>
Power supply:	• 80 ... 275 VAC; 50 ... 60 Hz; 250 W

## Accessories and spare parts

- liquid temperature control unit **TFC 100** with Triple diffuser **TDI 100**
- peltier temperature control unit **TPC 160** with Triple diffuser **TDI 160**
- special adapters for measuring cells which are not produced by DataPhysics
- bottle with desiccant (700 ml molecular sieve)

**For more information about a tailor made solution  
to your surface chemistry requirements,  
please contact us.  
We will be pleased to provide a quotation,  
obligation free, for your instrument system.**

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