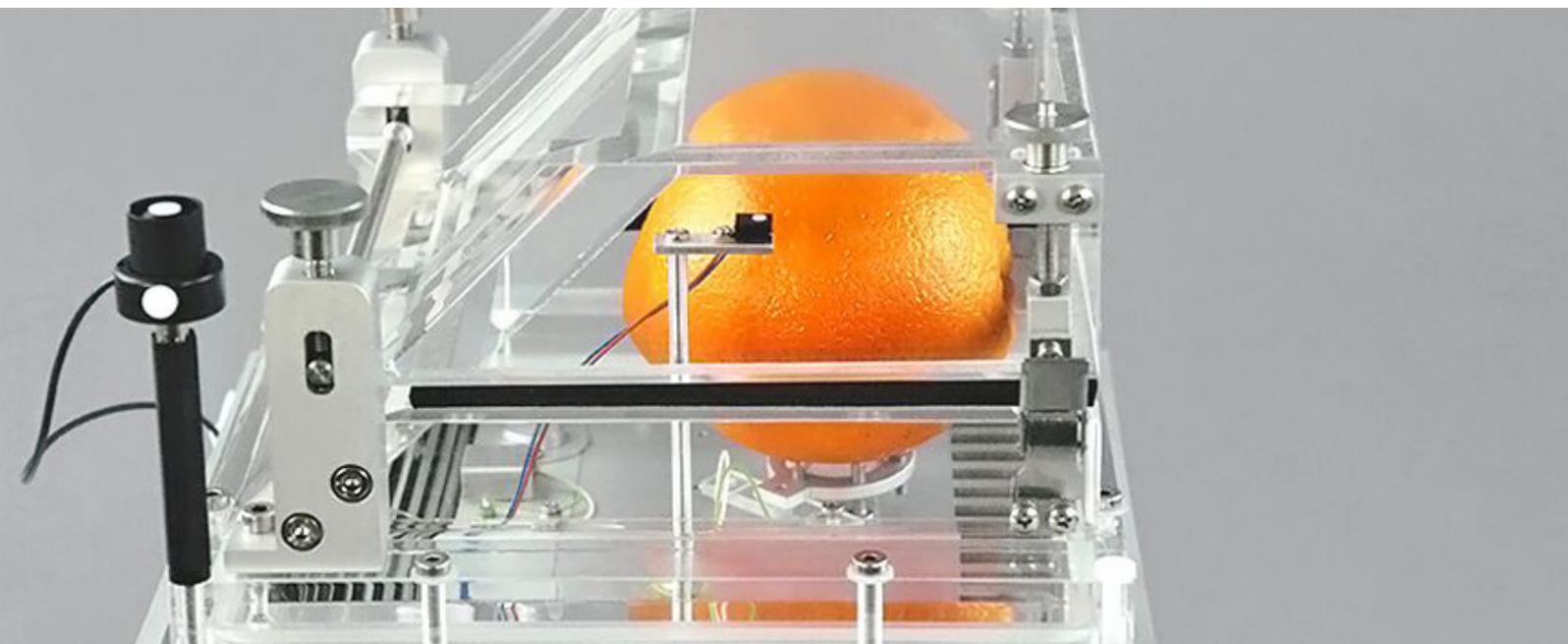


Print version

# 3010-GWK1

Gas-Exchange Chamber



High Quality Instrumentation for Plant Sciences

**WALZ**

## Accessories for 3010-GWK1

### **LED-Panel RGBW-L084**

LED-Panel RGBW-L084 with a densely packed array of high-power color LEDs features various illumination options. See also 3010-GWK1 & LED-Panel.

### **Chamber**

Chambers can be designed on customer request, for example a fruit chamber as shown.

### **Interface 3010-I/Box**

Interface establishing a connection between the socket COMP and the USB-port of a PC. Suitable for direct operation of the Standard Measuring Heads 3010-S, the Dual-PAM Gas-Exchange Cuvette 3010-DUAL, the Gas-Exchange Chamber 3010-GWK1, or any Control Unit by an external PC.

## Specifications for 3010-GWK1

All specifications are subject to change without prior notice.

### Gas-Exchange Chamber 3010-GWK1

**Design:** Chamber consisting of an aluminum cooling block with two pneumatic connectors and transversal fan, flat polymer lid or user-designed cuvette; micro-processor controlled electronics with connectors for temperature sensors, humidity sensor, PAR-sensors, GFS-3000 or 3010-I/Box connection, power-input; cooled with Peltier-cooling units and ventilator

**Measurement of chamber and ambient temperatures:** Pt 100 type A, range -10 to 50 °C, accuracy  $\pm 0.1$  °C. An extended version with a range from -10 to 75°C is available

**Leaf temp. measurement:** Thermocouple, range: -10 to 50 °C, accuracy  $\pm 0.2$  °C, range of extended version: -10 to 75°C

**Temperature control:** Three modes of temperature control: Constant cuvette temperature, constant leaf temperature, follow ambient temperature with an offset

**Temperature control range:**

-10°C to 50°C depending on ambient temperature and radiative heat intake.

With 4l volume, dark: 10 K below ambient temperature and 25 K above ambient temperature.

With flat lid, dark: 20 K below ambient temperature and 35 K above ambient temperature.

Range of extended version: -10 to 75°C

**Relative humidity sensor:** Range: 0 to 100% r.h., accuracy:  $\pm 1.5\%$  (5 to 95% r.h.),  $T_{90}$  response time (11 to 75% r.h.): <10 s

**External miniature quantum sensor:** Mini Quantum Sensor MQS-B/GWK1 outside of chamber. Selective PAR measurement, range 0 to 2500  $\mu\text{mol m}^{-2} \text{s}^{-1}$ , accuracy  $\pm 5\%$ , cosine corrected (measuring photosynthetic photon flux density PPFD)

**Internal light sensor:** Selective PAR measurement, range 0 to 2500  $\mu\text{mol m}^{-2} \text{s}^{-1}$  PAR, accuracy  $\pm 10\%$ , two sensors, one in the upper and one in the lower part of the cuvette

**Cuvette ventilation system:** Transversal fan

**Maximum sample area:** 14 cm x 10 cm

**Pneumatic connectors:** Hose fittings for 10/8 mm (OD/ID) tubing

**Inner volume of the cooling unit alone:** 840 ml (up to edge of aluminum frame)

**Power supply:** AC Power Supply 3020-N for laboratory operation

**Power consumption:** Max. 45 W

**Operating temperature:** -5 to 45 °C

**Dimension of cooling unit:** 26 cm x 25 cm x 19.5 cm (L x W x H)

**Weight:** 6.9 kg including cables and tubes

Cuvette

**Standard:** Flat lid (inside: 16 cm x 14.5 cm, outside: 18.5 cm x 17 cm, volume: 320 ml)

**Other design:** Available on customer request

AC Power Supply 3020-N

**Design:** DC power supply unit for laboratory use

**Output voltage:** 16 V DC

**Output power:** 135 W

**Mains power supply:** 100 to 240 V AC, 50/60 Hz

**Operating temperature:** 0 to 60 °C

**Dimensions:** 20 cm x 8 cm x 5 cm (L x W x H)

**Weight:** 1 kg