

## WATERPROOF DISSOLVED O<sub>2</sub> PORTABLE INSTRUMENTS



### HIGHLIGHTS

- Waterproof and robust (silicone protective cover)
- Large double backlit display
- New oxygen sensor GWO 5610
- Environmental pressure compensation with integrated barometer

### ADDITIONAL HIGHLIGHTS GMH 5650

- Data logger and alarm function
- Analog output, pressure connection

### ADDITIONAL FUNCTIONS GMH 5650:



### GMH 5630

Item No. 606880

Portable instrument for dissolved oxygen, Device only, without sensor

### GMH 5650

Item No. 606882

Portable instrument for dissolved oxygen with data logger, device only, without sensor

#### APPLICATION:

Oxygen monitoring in aquaculture and aquaristics. Investigations on well water, wastewater and in sewage treatment plants, also suitable for harsh environments. Delivery can be ready for use (filled) or dry. Electrodes delivered dry have a long shelf life and are ready for use within approx. 1 hour after filling.

TECHNICAL SPECIFICATIONS:	GMH 5630	GMH 5650
Measurement channels:	O <sub>2</sub> , T, air pressure (integrated)	O <sub>2</sub> , T, air pressure (integrated) / measuring depth *1)

Measuring ranges	
O <sub>2</sub> concentration:	0.00..70.00 mg/l (ppm) (resolution can be selected)
O <sub>2</sub> saturation:	0.0..600.0 % O <sub>2</sub> (resolution selectable)
O <sub>2</sub> partial pressure:	0..1200 hPa O <sub>2</sub> (0.0..427.5 mmHg)
Temperature:	0,0..50,0 °C
Air pressure:	10..1200 hPa abs 300..5000 hPa abs
Measuring depth:	- 0.40.0 m water column *1)

Accuracy	
Oxygen:	± 1.5 % of meas. MW ± 0.2 mg/l (0.25 mg/l) or ± 2.5 % of meas. MW ± 0.3 mg/l (25.70 mg/l)
Temperature:	0,0..50,0 °C
Air pressure:	10..1200 hPa abs 300..5000 hPa abs

Sensor:	GWO 5610, active membrane type with platinum cathode, Ø 12 mm, standard cable length 2 m, connection 7-pole bayonet
Response time:	90 % in 10 s
Lifespan:	approx. 3 years, dependent on use and maintenance
Display:	4 ½ digits 7-segment, illuminated (white)

**Working temperature:** Device: -25 .. + 50 °C Sensor: 0..40 °C

**Sensor operating pressure:** max. 3 bar overpressure corresponds to max. 30 m water depth

**Inflow:** min. 20 cm/s

**Power supply:** 2 x AAA batteries, power consumption: 0.9 mA

**Battery life:** approx. 1000 h (without lighting)

**Protection class:** IP65 / IP67

**Housing:** impact-resistant ABS, with stand-up/hanging bracket

**Dimensions:** 160 x 86 x 37 mm (H x W x D) including silicone protective cover

**Weight:** approx. 250 g including battery and protective cover

**Scope of delivery:** Device including batteries (2xAAA), silicone protective cover, test report, operating instructions, brief instructions

#### ADDITIONAL FUNCTIONS:

**Salinity correction:** 0.0..70.0

**Pabs / altitude correction:** automatic with integrated sensor

**Measuring depth (only GMH 5650):** hydrostatic depth measurement \*1)

**Output / external supply:** OUT socket: interface 38400 baud, external supply 5 V **additional GMH 5650:** analog output 0..1 V, adjustable

**Calibration:** 1 point air, simple adjustment in air at the push of a button **additional GMH 5650:** 1 point water, 2 point or 3 point (air + zero point and 100 % O<sub>2</sub>)

**GLP:** additional calibration interval **GMH 5650:** Calibration history

**Data logger (only GMH 5650):** Cyclic: 10,000, single: 1000, single value logger with measuring point input

**Alarm (only GMH 5650):** 2 alarm channels (O<sub>2</sub> and temperature) with separate alarm limits. Alerting sounder/visual/interface

\*1) A simple hydrostatic depth measurement can be made with special accessories. Together with the logger function, very convenient oxygen profiles in waters can be recorded.

### GMH 5630-L02

Item No. 607470

Portable instrument for dissolved oxygen, incl. device, sensor 2 m: GWO5610-L02, replacement GWOK 02, KOH 100

### GMH 5650-L02

Item No. 607474

Portable instrument for dissolved oxygen with data logger, incl. Device, sensor 2 m: GWO5610-L02, replacement GWOK 02, KOH 100

#### VARIANTS:

### GMH 5630-L04

Item No. 606881

Portable instrument for dissolved oxygen, device, sensor 4 m: GWO5610-L04, replacement GWOK 02, KOH 100

### GMH 5630-L10

Item No. 607471

Portable instrument for dissolved oxygen, device, sensor 10 m: GWO5610-L02, replacement GWOK 02, KOH 100

### GMH 5630-L30

Item No. 607472

Portable instrument for dissolved oxygen, device, sensor 30 m: GWO5610-L02, replacement GWOK 02, KOH 100

### GMH 5650-L04

Item No. 606883

Portable instrument for dissolved oxygen with data logger, device, sensor 4 m: GWO5610-L04, replacement GWOK 02, KOH 100

### GMH 5650-L10

Item No. 607473

Portable instrument for dissolved oxygen with data logger, device, sensor 10 m: GWO5610-L02, replacement GWOK 02, KOH 100

### GMH 5650-L30

Item No. 607479

Portable instrument for dissolved oxygen with data logger with sensor with 30 m cable length

#### ACCESSORIES OR SPARE PARTS:

### GKK 5001

Item No. 611606

Case for GMH 5000 / G7500 series water analysis / universal, 395 x 295 x 106 mm (W x H x D)

## DISSOLVED O<sub>2</sub> SENSOR



### HIGHLIGHTS:

- Significantly lower flow than with the predecessor necessary
- Dry delivery for long shelf life possible
- Still compact 12 mm in diameter!

### GWO 5610-L02

Item No. 607386

Spare sensor for dissolved oxygen, GMH 56 & GMH 75, sensor with 2 m cable

#### GENERAL:

Standard, for laboratory use, electrode is supplied filled, dry delivery on request

#### ACCESSORIES OR SPARE PARTS:

##### GWO 5610-L04

Item No. 607764

Spare sensor for dissolved oxygen, GMH 56 & GMH 75, Sensor with 4 m cable (field use)

##### GWO 5610-L10

Item No. 607765

Spare sensor for dissolved oxygen, GMH 56 & GMH 75, Sensor with 10 m cable (field use)

##### GWO 5610-L30

Item No. 607766

Spare sensor for dissolved oxygen, GMH 56 & GMH 75, Sensor with 30 m cable (field use)

##### GSKA 3600

Item No. 601414

Protective cap for depth measurement for sensors Ø 12 mm



##### GSKA 3610

Item No. 607267

Protective cap for depth measurement for sensors Ø 12 mm



##### GWOK 02

Item No. 608012

Spare membrane head for GWO 5610

##### GAS 5610

Item No. 608032

Working set, consisting of 3 GWOK 02, 1 KOH100, 1 pipette

##### KOH 100

Item No. 603356

KOH spare electrolyte, 100 ml



##### GCAL 3610

Item No. 611371

Calibration bottle for gel. Oxygen sensors with Ø 12 mm

##### GKK 5001

Item No. 611606

Case for GMH 5000 / G7500 series water analysis / universal, 395 x 295 x 106 mm (W x H x D)

## MEASUREMENT SET FOR DISSOLVED OXYGEN



### GMH 5630-SET

Item No. 611613

Measuring set:

Device, GWO5610-L02, GWOK 02, KOH 100, GSKA 3610, GKK 5001

### GMH 5650-SET

Item No. 611255

Measuring set: Device, GWO5610-L02, GWOK 02, KOH 100, GSKA 3610, software, USB 5100, GKK 5001

#### GENERAL:

With our ready-to-use measurement set for dissolved oxygen, you not only have everything you need for your work in a practical case – with the set you save 13 % compared to the individual components

#### APPLICATIONS:

No matter what industry you are in, our comprehensive set will never let you down and, thanks to the practical case, is always tidy

#### TECHNICAL SPECIFICATIONS:

Measurement channels:	O <sub>2</sub> , T, air pressure (integrated) / measuring depth
Measuring ranges:	
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O <sub>2</sub> saturation:	0.0..600.0 % O <sub>2</sub> (resolution selectable)
O <sub>2</sub> partial pressure:	0..1200 hPa O <sub>2</sub> (0.0..427.5 mmHg)
Temperature:	0.0..50.0 °C
Air pressure:	300..5000 hPa abs
Measuring depth:	0..40.0 m water column
Dimensions:	450 x 360 x 123 mm (case)
Weight:	approx. 1900 g
Scope of delivery:	Device with silicone protective cover, sensor, protective cap, 2 pipettes, spare membrane head, spare electrolyte, case, battery, test report, operating instructions <b>GMH 5650-SET only:</b> software, interface converter

#### ACCESSORIES OR SPARE PARTS:

##### GMH 5630

Item No. 606880

Portable instrument for dissolved oxygen without accessories

##### GMH 5650

Item No. 606882

Portable instrument for dissolved oxygen with data logger without accessories

##### GWO 5610-L02

Item No. 607386

Spare sensor for dissolved oxygen, GMH 56 & GMH 75 with 2 m cable

##### GSKA 3610

Item No. 607267

Protective cap for depth measurement for sensors Ø 12 mm

##### GSOFT 3050

Item No. 601336

Windows software for GMH 3000 and GMH 5000 with logger

##### USB 5100

Item No. 601095

Interface converter GMH 5xxx <=> PC, Galvanic isolation

##### GWOK 02

Item No. 608012

Spare membrane head for GWO 5610

##### KOH 100

Item No. 603356

KOH replacement electrolyte 100 ml

##### GKK 5001

Item No. 611606

Case for GMH 5000 / G7500 series water analysis / universal, 395 x 295 x 106 mm (W x H x D)