# WATERPROOF DISSOLVED O, PORTABLE INSTRUMENTS













#### HIGHLIGHTS

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

### ADDITIONAL HIGHLIGHTS GMH 5650

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

# ADDITIONAL FUNCTIONS GMH 5650:



max. 3 bar overpressure corre-





# **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:

Display:

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.

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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:	0.0070.00 mg/l (ppm) (resolution can be selected)	
O <sub>2</sub> saturation:	$0.0.600.0 \% O_2$ (resolution selectable)	
O <sub>2</sub> partial pressure:	01200 hPa O <sub>2</sub> (0	0.0427.5 mmHg)
Temperature:	0,050,0 ℃	
Air pressure:	101200 hPa abs	3005000 hPa abs
Measuring depth:	-	040.0 m water column * 1)
Accuracy		
Oxygen:	$\pm$ 1.5 % of meas. MW $\pm$ 0.2 mg/l (025 mg/l) or $\pm$ 2.5 % of meas. MW $\pm$ 0.3 mg/l (2570 mg/l)	
Temperature:	0,050,0 °C	
Air pressure:	101200 hPa abs	3005000 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, do and maintenance	

4 1/2 digits 7-segment, illuminated

pressure:	sponds 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:	$160 \times 86 \times 37 \text{ mm (H x W x D)}$ 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

Sensor operating

Pabs/altitude correction: automatic with integrated

# Measuring depth (only GMH 5650):

hydrostatic depth measurement \*1

### Output/external supply:

OUT socket: interface 38400 baud, external supply 5  $\rm V$ additional GMH 5650: analog output 0..1 V, adjustable

Calibration: 1 point air, simple adjustment in air at the push of a button

additionally GMH 5650: 1 point water, 2 point or 3 point (air + zero point and 100 %  $O_2$ )

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 (O2 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

### 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

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

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

### GMH 5650-L10

Item No. 607478

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

# GMH 5650-L30

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
- O Dry delivery for long shelf life
- O Still compact 12 mm in diameter!

# MEASUREMENT SET FOR DISSOLVED OXYGEN



#### **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. 60776

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

### GWO 5610-L10

Item No. 607.

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

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

#### **GMH 5630-SET**

Item No. 611613

Measuring set:

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

#### **GMH 5650-SET**

Item No. 61125

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

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 O2, T, air pressure (integratchannels: ed)/measuring depth

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)

0..1200 hPa O<sub>2</sub> (0.0..427.5 mmHg) O<sub>2</sub>partial pressure: 0,0..50,0 °C

Temperature: 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 GMH 5650-SET only: 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 607

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

## **USB 5100**

Item No. 601095

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

# **GWOK 02**

Item No. 608012

Spare membrane head for GWO 5610

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)