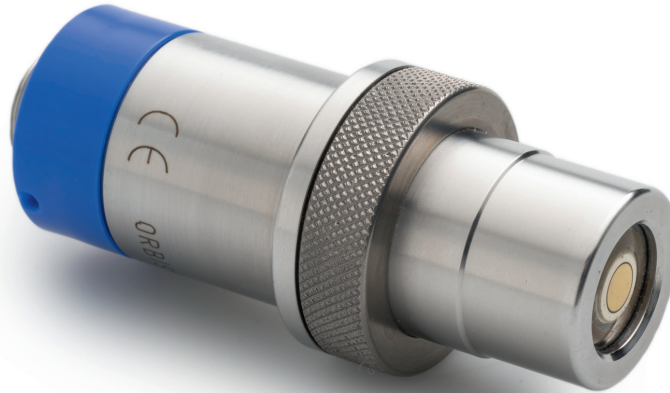# Hach Orbisphere GA2400/GA2800 Oxygen Sensors

**Applications**

• Beverage
• Boiler Water
• Cooling Water
• Industrial Water
• Ultrapure Water

**Service Protected**

## Highly accurate and customizable oxygen measurement for all environments

The Hach® Orbisphere GA2400 & GA2800 EX oxygen ($O_2$) Electrochemical (EC) sensors are designed for process monitoring of dissolved oxygen in ppm or ppb environments. It can also be utilized as part of laboratory analysis of oxygen in the liquid or gas phases.

The Hach Orbisphere GA2400 can be used for a wide range of non-harsh applications, including beer or soft-drinks production, rinsing of semiconductor wafers in chip-manufacturing plants, and reactor coolant systems in nuclear power plants.

The Hach Orbisphere GA2800 EX sensor is suitable for harsh environments, including chemical, oil, or petrochemical plants.

There are several different pre-mounted membrane kits, able to be customized to fulfill any particular process requirements and oxygen measurement ranges required. This allows for low measurement ranges of 0.1 ppb, or even very high measurement ranges of 400 ppm.

### Easy and fast maintenance

Traditional cleaning processes can take more than thirty minutes to complete. The GA2400 and GA2800 come with an innovative cartridge system that contains everything needed to complete membrane and electrolyte solution change in less than 5 minutes.

### Low level oxygen measurement and unrivaled accuracy

The Hach Orbisphere GA2400 and GA2800 EX utilize an electrochemical oxygen sensor with a lower detection level of 0.1 ppb and unrivaled highly accurate readings of ±1%. This feature allows users to ensure control of low oxygen levels, for product and equipment integrity and avoiding corrosion.
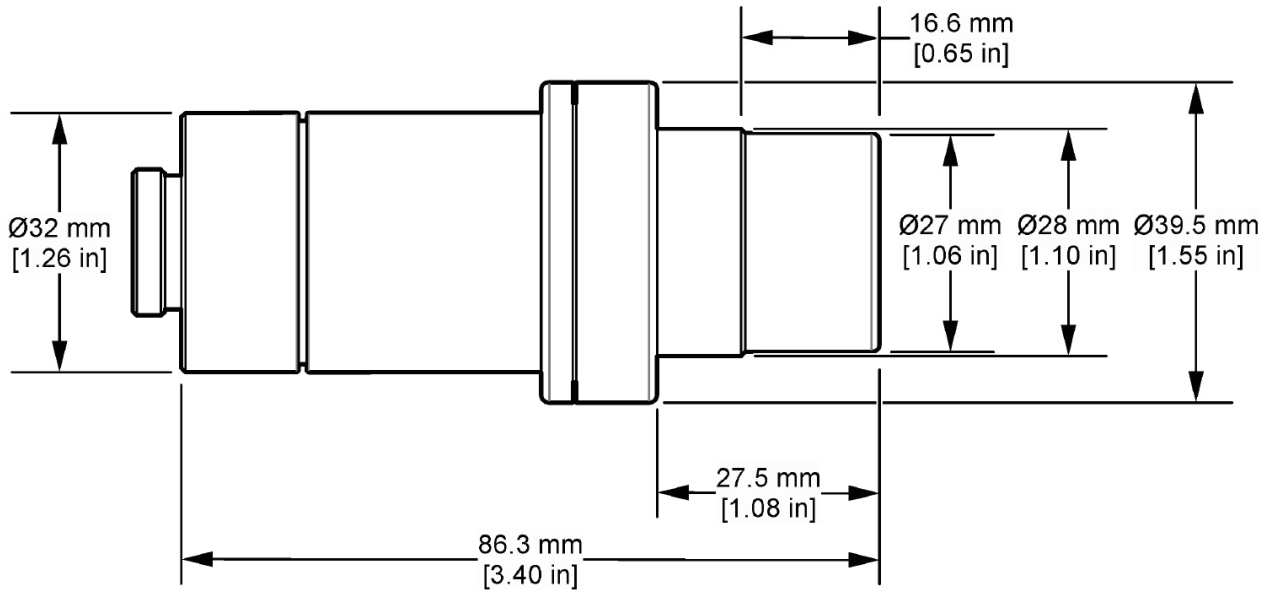
### Robust for harsh environments

The robust stainless steel or Hastelloy design makes the GA2400 and GA2800 EX sensor ideal for the most demanding applications. ATEX certification comes standard in all GA2800 units, making the sensor especially suitable for harsh chemical environments.

**HACH**®

*Be Right*™

## Technical Data*

| Model | GA2400 | GA2800 |
|---|---|---|
| Certifications | 2004/108/EC - EN 61326-1 | ATEX |
| Sample Pressure | 0 - 40 bar | 0 - 100 bar |
| Wetted Materials | Stainless Steel 1.4404 (AISI 316L)<br>No O-rings are in contact with the sample. | Hastelloy or Stainless Steel<br>No O-rings are in contact with the sample. |
| Material | EPDM O-rings | Kalrez or Viton O-rings |
| Ambient Temperature | -5 - 100 °C (23 - 212 °F), due to electrolyte, but sensor will not be damaged up to 200 °C (392 °F), mechanical | |
| Flow Rate | Recommended flow rate in flow chamber<br>2935A-A: 25 mL/min<br>2952A-A: 50 mL/min<br>2956A-A: 180 mL/min<br>29552A-A: 50 mL/min | |
| Protection Class | IP66 | |
| Range | Range at 25 °C (77 °F)<br>2935A-A: 10 ppb - 400 ppm or 20 Pa - 1,000 kPa<br>2952A-A: 1 ppb - 80 ppm or 5 Pa - 200 kPa<br>2956A-A: 0.1 ppb - 20 ppm or 0.25 Pa - 50 kPa<br>29552A-A: 2 ppb - 80 ppm or 5 Pa - 200 kPa | |
| Accuracy | ±1% of reading, or ± lower measurement range, whichever is greater | |
| Response Time | 2935A-A: 2.5 min<br>2952A-A: 38 s<br>2956A-A: 7.2 s<br>29552A-A: 90 s | |
| Temperature Range | -5 - 60 °C (23 - 140 °F), without grille, during measurement or -5 - 95 °C (23 - 203 °F), with grille | |
| Weight | 0.3 kg (0.66 lbs) | |

*Subject to change without notice.*

## Dimensions

16.6 mm
[0.65 in]

Ø32 mm
[1.26 in]

Ø27 mm
[1.06 in]

Ø28 mm
[1.10 in]

Ø39.5 mm
[1.55 in]

27.5 mm
[1.08 in]

86.3 mm
[3.40 in]

# Order Information

## GA2400 Oxygen Sensors

**GA2400-S00**　　　Orbisphere GA2400 Stainless Steel Oxygen Sensor (EC), 40 bar, EPDM O-rings

**GA2400-S00T**　　Orbisphere GA2400 Stainless Steel Oxygen Sensor (EC) for 6110 TPO Analyser, 40 bar, EPDM O-rings

**GA2400-S0S**　　　Orbisphere GA2400 Stainless Steel Oxygen Sensor (EC), 100 bar, EPDM O-rings

## GA2800 ATEX Oxygen Sensors

**GA280E-HKS**　　Orbisphere GA2800 ATEX Oxygen Sensor (EC), Hastelloy, 100 bar, Kalrez O-rings

**GA280E-HVS**　　Orbisphere GA2800 ATEX Oxygen Sensor (EC), Hastelloy, 100 bar, Viton O-rings

**GA280E-SKS**　　Orbisphere GA2800 ATEX Oxygen Sensor (EC), Stainless Steel, 100 bar, Kalrez O-rings

**GA280E-SVS**　　Orbisphere GA2800 ATEX Oxygen Sensor (EC), Stainless Steel, 100 bar, Viton O-rings

## Accessories

**33051-S0**　　　Protection cap for GA2400 oxygen sensors, stainless steel, 28 mm, without grille

**33051-SP**　　　Protection cap for GA2400 oxygen sensors, stainless steel, 28 mm, with grille

**32001.011**　　Flow chamber in stainless steel (316) with ¼" fittings. Supplied with EPDM O-rings.

**32001.010**　　Flow chamber in stainless steel (316) with 6 mm fittings. Supplied with EPDM O-rings.

**2952A-A**　　　Recharge kit of 4 pre-filled cartridges with premounted 2952A membranes

**29552A-A**　　Recharge kit of 4 pre-filled cartridges with premounted 29552A membranes

**29552A-AV**　Recharge kit, 29552A membranes (4x), Viton O-rings

**2956A-A**　　　Recharge kit of 4 pre-filled cartridges with premounted 2956A membranes

**2956A-AV**　　Recharge kit, 2956A membranes (4x), Viton O-rings

**29781**　　　　Polishing kit for $O_3$ and $H_2$ sensors, incl. 3 µm powder (29331) and cloth

**32301.A**　　　Electrochemical sensor cleaning and regeneration unit, 115 VAC

**Service Protected**

With Hach Service, you have a global partner who understands your needs and cares about delivering timely, high-quality service you can trust. Our Service Team brings unique expertise to help you maximise instrument uptime, ensure data integrity, maintain operational stability, and reduce compliance risk.

DOC053.53.35283.Oct19

**Hach World Headquarters: Loveland, Colorado USA**

United States:　　　　　800-227-4224 tel　　　970-669-2932 fax　　　orders@hach.com

Outside United States:　970-669-3050 tel　　　970-461-3939 fax　　　int@hach.com

**hach.com**

**HACH**®

*Be Right*™