



More than **sensors + automation**

# JUMO tecLine HD

Heavy duty electrodes for pH and redox



pH  
mV  
°C

## Reliably robust

- For high process pressures up to 13 bar
- Temperature operating range up to 135 °C
- Wide measuring range: pH 0 to 14
- Suitable for media that is contaminated with heavy solids or electrode poisons
- Can also be used in suspensions and emulsions such as media containing oil
- Available with PTFE or pinhole diaphragm, depending on the application



Types 201021, 201026

## For difficult applications

The particularly robust electrodes of the JUMO tecLine HD series are designed for professional applications in the process and industrial measuring technology field. They are implemented as combined electrodes and can even be used in difficult processes at high temperatures and pressures. An extensive PTFE ring diaphragm with optimal structure enables a quick response time while at the same time being largely impervious to greater pollution loads or oily/fatty process water and wastewater. Alternatively, a variant with pinhole diaphragm is available as the optimal solution for processes with high solids content (e.g. wastewater with sand particles or media that is subject to the reaction of precipitation and/or crystallization).

The double-chamber system is a standard feature. Its extended diffusion path prevents electrode failure in case of penetrating electrode toxins. A large salt reserve in the reference system enables measurements with long-term stability. The pH version is also available with an integrated Pt1000 temperature probe. Proven JUMO HT glass is used as the pH sensitive membrane glass. In addition to greater temperature resistance this glass is also characterized by its high linearity at alkaline pH values (> 12). The redox version is available with platinum or gold tip. The newly developed reference electrolyte that is based on solid polymer is also physiologically harmless and ageing resistant.

## The success story of the JUMO electrodes

The success story of JUMO electrodes is closely tied to glass technology. Glass thermometers have already been produced in Fulda since 1947. Today JUMO is one of the largest producers of electrochemical sensors in Europe.

## Technical data

### pH electrode

| Description                 | JUMO tecLine HD pH                 |
|-----------------------------|------------------------------------|
| Data sheet                  | 201021                             |
| Measuring range             | pH 0 to 14                         |
| Active pH component         | JUMO HT glass                      |
| Diaphragm                   | PTFE or pinhole diaphragm          |
| Temperature sensor (option) | Pt1000                             |
| Connection                  | Screw head Pg13.5<br>VP screw head |

### Redox electrode

| Description         | JUMO tecLine HD Rd   |
|---------------------|----------------------|
| Data sheet          | 201026               |
| Measuring range     | -2000 to +2000 mV    |
| Active pH component | Platinum or gold tip |
| Connection          | Screw head Pg 13.5   |

### Common data

| Description      | JUMO tecLine HD pH / Rd                      |
|------------------|----------------------------------------------|
| Data sheet       | 201021/201026                                |
| Max. pressure    | 13 bar                                       |
| Max. temperature | 135 °C (PTFE);<br>110 °C (pinhole diaphragm) |
| Length           | 120 mm<br>225 mm                             |

### Application areas

Chemical industry, industrial wastewater technology, electroplating processes, flue gas scrubber, sugar industry, processes with heightened media pressure, and other applications.