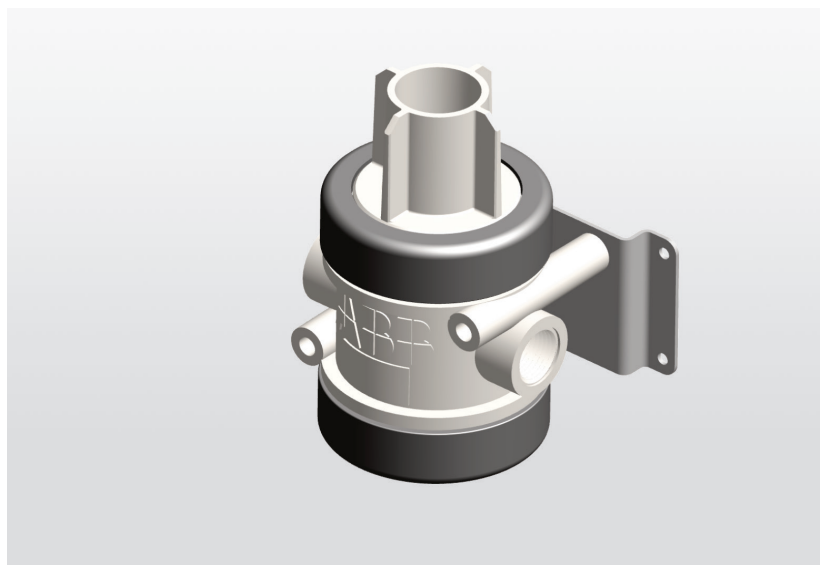


100 GP/100 ULTRA/500 PRO series

¾ in pH/Redox (ORP) sensors



Flow chamber accessories

Measurement made easy

Introduction

This publication details part numbers and installation procedures for sensor flow cell mounting accessories for use with 100 GP, 100 ULTRA and 500 PRO series ¾ in pH/Redox (ORP) sensors.

For more information

Publications for the associated sensors and transmitters are available for free download from:

www.abb.com/measurement

or by scanning this code:



Search for or click on:

Operating instruction 100 GP, 100 ULTRA, 500 PRO ¾ in pH/Redox (ORP) sensors	OI/100/500-EN
Operating instruction OI/AWT210 2-wire conductivity pH/ORP transmitter	OI/AWT210-EN
Operating instruction AWT440 multi-input transmitter	OI/AWT440-EN
Operating instruction AWT420 universal 4-wire single- and dual-input transmitter	OI/AWT420-EN
Data sheet AWT210 2-wire transmitter	DS/AWT210-EN
Data sheet AWT440 multi-input transmitter	DS/AWT440-EN
Data sheet AWT420 universal 4-wire single- and dual-input transmitter	DS/AWT420-EN

1 Safety

Potential safety hazards

The sensor operates on 3.3 V DC. There are no hazardous voltages present in the sensor.

WARNING

Before removing a sensor from the process, installing accessories or re-installing, reduce process pressure to zero and ensure the sensor is cool enough to handle.

WARNING

Potential high pressure/high temperature

- These procedures must be carried out by suitably trained personnel and in accordance with any local regulations and practices.

2 Specification

Flow cell materials

- Stainless steel flow cell (3KXA163000L0011)
 - 316 stainless steel
 - 30% GF polypropylene
 - Nitrile
- Plastic flow cell (3KXA163000L0012)
 - 30% GF polypropylene
 - ABS
 - Nitrile
- Calibration kit (3KXA163000L0120)
 - 316 Stainless steel
 - Polypropylene

Flow cell process pressure

Maximum operating process pressure: 6 bar (87 psi)

Flow cell process temperature

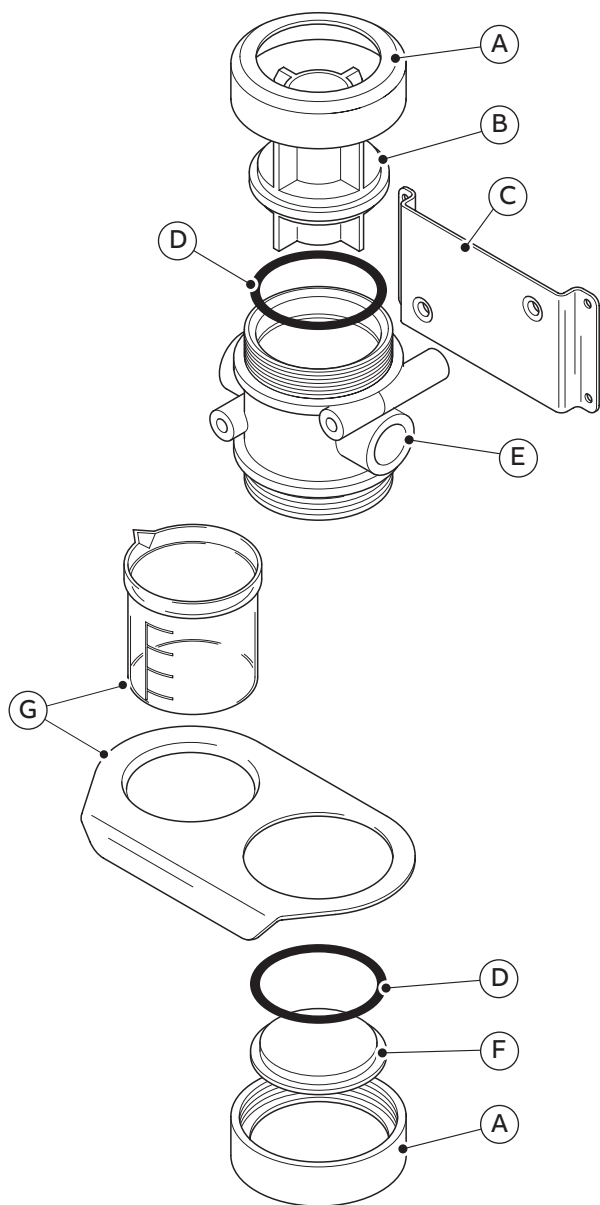
Maximum operating process temperature: 100 °C (212 °F)

3 Accessory part numbers/kits

Description	Part number	Qty
NPT plastic flow chamber assembly + ¾ in adapter	3KXA163000L0012	1
NPT stainless steel flow chamber assembly + ¾ in adapter	3KXA163000L0011	1
Pack of flow cell o-rings (2 off)	3KXA163000L0113	1 pack
Flow cell plastic ¾ in NPT adapter	3KXA163000L0118	1
Flow cell plastic locking ring	3KXA163000L0116	1
Calibration kit	3KXA163000L0120	1
This publication - 100 GP/100 ULTRA/500 PRO series ¾ in pH/Redox (ORP) sensors	IN/ANAINST/036-EN	1

Table 1 Plastic and stainless steel flow chamber for 100 and 500 series sensors

4 Overview



- (A) Flow cell plastic locking ring
- (B) Flow cell plastic $\frac{3}{4}$ in NPT Adapter
- (C) Flow cell bracket
- (D) Pack of flow cell O-rings (2 off)
- (E) Flow cell chamber body (plastic or stainless steel)
- (F) Flow cell plastic baseplate
- (G) Optional calibration kit

Figure 1 Flow chamber overview

5 Dimensions

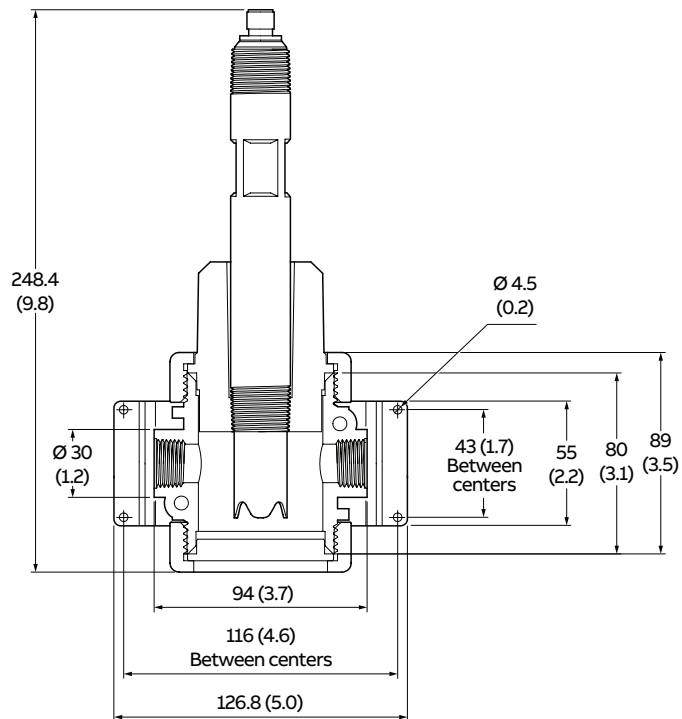


Figure 2 Flow chamber dimensions

6 Installation

⚠ WARNING

Before proceeding, reduce process pressure to zero and ensure the local components are cool enough to handle.

Referring to Figure 3:

- 1 Insert sensor (A) into flow chamber (B) and screw into place until hand-tight.
- 2 Make process connections both sides (C) and (D) of flow chamber (B) using ½ in NPT connectors (not supplied).
- 3 Prepare the sensor for operation – refer to Operating Instruction [OI/100/500-EN](#).
- 4 Bring the process back to operational state.

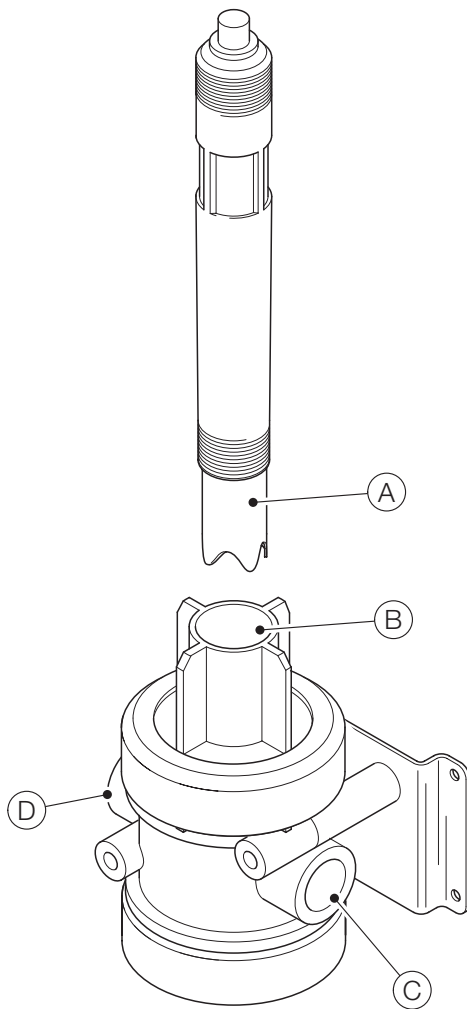


Figure 3 Installing the flow chamber

7 Maintenance

⚠ WARNING

Before proceeding, reduce process pressure to zero and ensure the local components are cool enough to handle.

Referring to Figure 3:

- 1 Remove sensor (A) from flow chamber (B).
- 2 Disconnect process connections both sides (C) and (D) of flow chamber (B).

Referring to Figure 4:

- 3 Unscrew both flow cell locking rings (A).
- 4 Clean the flowcell (B) using a soft cloth.
- 5 If necessary, remove and clean bracket (C).
- 6 If fitted, remove and clean optional calibration kit (G).
- 7 Before re-assembling, ensure O-rings (D) are located correctly on base plate (E).
- 8 Tighten flow cell locking rings (A) until hand-tight.
- 9 Refer to Section 6 to refit the sensor and bring the process back to operational state.

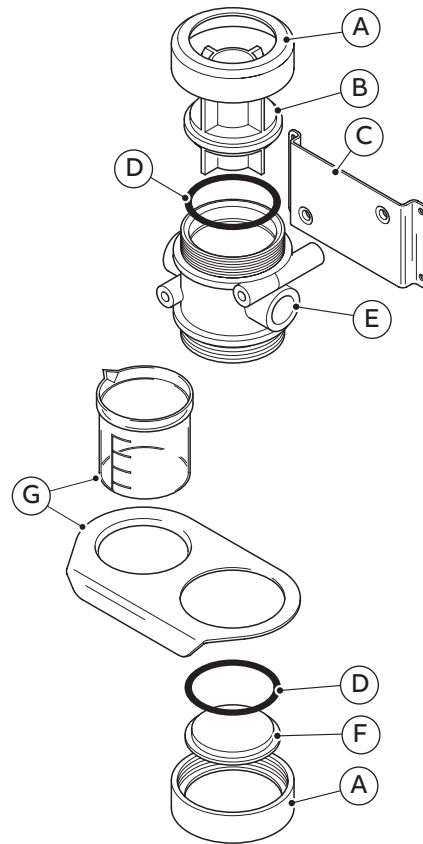


Figure 4 Cleaning the flow chamber