Technical Information
CYA680

Flow Assembly for the Life Sciences and Chemical Industry

Application

- For 12 mm sensors with Pg 13.5
- Installations with small pipe diameters
- Hygienic and sterile applications
- Chromatography
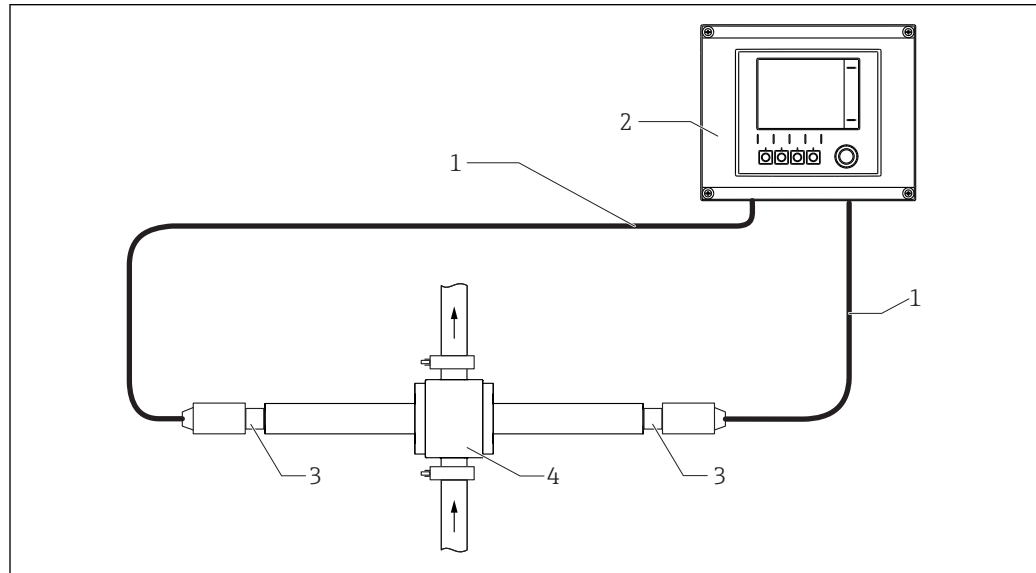- Filtrations
- Reverse osmosis

Your benefits

- Maximum product yield thanks to fast measured values in the smallest of sample volumes
- High level of product safety:
  Flow assembly is perfectly suitable for CIP and SIP.
- The PVDF-version is resistant to aggressive and corrosive media
- Complies with the requirements of the Life Sciences industry:
  Certified biocompatibility in relation to biological reactivity in accordance with USP <87> and USP <88>, FDA-listed seals and hygienic, electropolished surfaces (Ra ≤ 0.38 µm)

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People for Process Automation

Function and system design

Measuring system

A complete measuring system comprises:
- Transmitter, for example Liquiline CM44P
- One or two 12 mm sensors, e.g. CLS82D and / or CPS71D
- Flow assembly CYA680
- Measuring cable, for example CYK10

A0029448

 1   Example of a measuring system

1   Measuring cable
2   Liquiline CM44P transmitter
3   Sensors
4   Flow assembly CYA680

Installation

Installation instructions

Flow assembly CYA680 is available in various nominal diameters and materials.

It can be installed both in horizontal and vertical pipes.

ℹ Orientation

Please follow the installation instructions for the sensors used!

If the Ceragel CPS71D is installed vertically, use electrode version TU for upside-down installation.

Process

Process temperature and pressure range

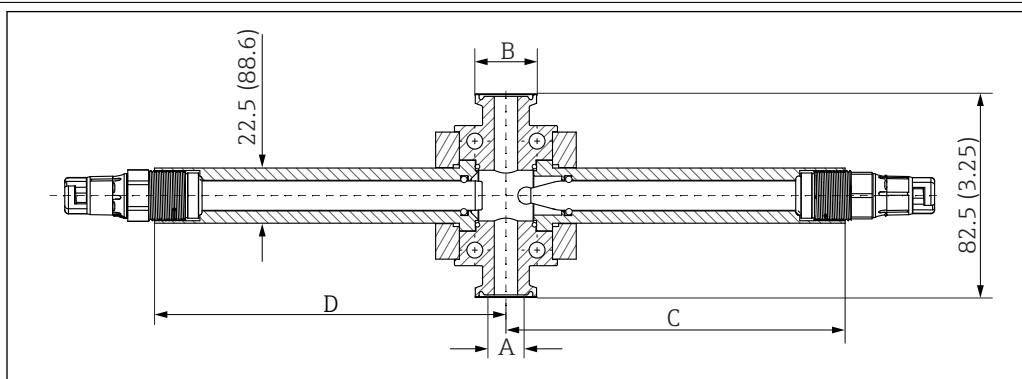Process temperature and pressure range depend on the material and nominal diameter.

Process connection	Nominal diameter	Nominal pressure	Temperature
316L Tri-Clamp	0.25 to 2"	16 bar (230 psi)	0 to 130 ℃ (32 to 266 ℉)
PVDF Tri-Clamp (Kynar)	0.25", 0.5", 0.75"	4 bar (58 psi)	0 to 130 ℃ (32 to 266 ℉)

ℹ Please observe the maximum permitted process temperature and process pressure of the sensor.

Mechanical construction

Dimensions

2   Dimensions in mm (inch)

A   Internal diameter
B   Flange diameter
C   Sensor holder pH
D   Sensor holder conductivity

Flange	A	B	C	D
¼" Tri-Clamp	4.57 mm (0.18")	25 mm (0.984")	138.4 mm (5.45")	143.4 mm (5.65")
½" Tri-Clamp	9.53 mm (0.375")	25 mm (0.984")	138.4 mm (5.45")	143.4 mm (5.65")
¾" Tri-Clamp	15.24 mm (0.60")	25 mm (0.984")	138.4 mm (5.45")	143.4 mm (5.65")
1" Tri-Clamp	22.1 mm (0.87")	50.39 mm (1.984")	144 mm (5.67")	149 mm (5.87")
1 ½" Tri-Clamp	34.44 mm (1.356")	50.39 mm (1.984")	144 mm (5.67")	149 mm (5.87")
2" Tri-Clamp	45 mm (1.856")	63.91 mm (2.516")	150 mm (5.92")	155 mm (6.10")

Materials

Flow assembly: Stainless steel 1.4404/1.4435 (AISI 316L), PVDF
O-rings: EPDM FDA, KALREZ FDA, VITON FDA

PVDF is not suitable for all hazardous areas.

Weight

Weight of the stainless steel version (examples):

Flange	1 Sensor location	2 Sensor locations
¼" Tri-Clamp	Approx. 1.30 kg (2.86 lbs)	Approx. 1.65 kg (3.64 lbs)
2" Tri-Clamp	Approx. 2.20 kg (4.85 lbs)	Approx. 2.55 kg (5.63 lbs)

Ordering information

Product page	www.endress.com/cya680

Product Configurator
On the product page there is a "Configure" button to the right of the product image **Configure**.

1. Click this button.
   ↳ The Configurator opens in a separate window.
2. Select all the options to configure the device in line with your requirements.
   ↳ In this way, you receive a valid and complete order code for the device.
3. Export the order code as a PDF or Excel file. To do so, click the appropriate button on the right above the selection window.

For many products you also have the option of downloading CAD or 2D drawings of the selected product version. Click the tab for this **CAD** and select the desired file type using picklists.

Scope of delivery
The delivery comprises:
- Assembly in the version ordered
- Operating Instructions

Accessories

The following are the most important accessories available at the time this documentation was issued. For accessories not listed here, please contact your service or sales office.

pH sensors

Orbisint CPS11D / CPS11
- pH electrode for process technology
- Optional SIL version for connecting to SIL transmitter
- With dirt-repellent PTFE diaphragm
- Product Configurator on the product page: www.endress.com/cps11d or www.endress.com/cps11

Technical Information TI00028C

Memosens CPS31D
- pH electrode with gel-filled reference system with ceramic diaphragm
- Product Configurator on the product page: www.endress.com/cps31d

Technical Information TI00030C

Ceraliquid CPS41D / CPS41
- pH electrode with ceramic junction and KCl liquid electrolyte
- Product Configurator on the product page: www.endress.com/cps41d or www.endress.com/cps41

Technical Information TI00079C

Ceragel CPS71D / CPS71
- pH electrode with reference system including ion trap
- Product Configurator on the product page: www.endress.com/cps71d or www.endress.com/cps71

Technical Information TI00245C

Orbipore CPS91D / CPS91
- pH electrode with open aperture for media with high dirt load
- Product Configurator on the product page: www.endress.com/cps91d or www.endress.com/cps91

Technical Information TI00375C

Memosens CPS171D
- pH electrode for bio-fermenters with digital Memosens technology
- Product Configurator on the product page: www.endress.com/cps171d

Technical Information TI01254C

ORP sensors	**Orbisint CPS12D / CPS12**
	• ORP sensor for process technology
	• Product Configurator on the product page: www.endress.com/cps12d or www.endress.com/cps12

Technical Information TI00367C

Ceraliquid CPS42D / CPS42
• ORP electrode with ceramic junction and KCl liquid electrolyte
• Product Configurator on the product page: www.endress.com/cps42d or www.endress.com/cps42

Technical Information TI00373C

Ceragel CPS72D / CPS72
• ORP electrode with reference system including ion trap
• Product Configurator on the product page: www.endress.com/cps72d or www.endress.com/cps72

Technical Information TI00374C

pH ISFET sensors	**Tophit CPS441D / CPS441**
	• Sterilizable ISFET sensor for low-conductivity media
	• Liquid KCl electrolyte
	• Product Configurator on the product page: www.endress.com/cps441d or
	www.endress.com/cps441

Technical Information TI00352C

Tophit CPS471D / CPS471
• Sterilizable and autoclavable ISFET sensor for food and pharmaceutics, process engineering
• Water treatment and biotechnology
• Product Configurator on the product page: www.endress.com/cps471d or
www.endress.com/cps471

Technical Information TI00283C

Tophit CPS491D / CPS491
• ISFET sensor with open aperture for media with high dirt load
• Product Configurator on the product page: www.endress.com/cps491d or
www.endress.com/cps491

Technical Information TI00377C

pH and ORP combined sensors	**Memosens CPS16D**
	• Combined pH/ORP sensor for process technology
	• With dirt-repellent PTFE diaphragm
	• With Memosens technology
	• Product Configurator on the product page: www.endress.com/cps16D

Technical Information TI00503C

Memosens CPS76D
• Combined pH/ORP sensor for process technology
• Hygienic and sterile applications
• With Memosens technology
• Product Configurator on the product page: www.endress.com/cps76d

Technical Information TI00506C

Memosens CPS96D
• Combined pH/ORP sensor for chemical processes
• With poison-resistant reference with ion trap
• With Memosens technology
• Product Configurator on the product page: www.endress.com/cps96d

Technical Information TI00507C

Conductivity sensors	**Memosens CLS82D**
	• Four-electrode sensor
	• With Memosens technology
	• Product Configurator on the product page: www.endress.com/cls82d

Technical Information TI01188C

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