

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

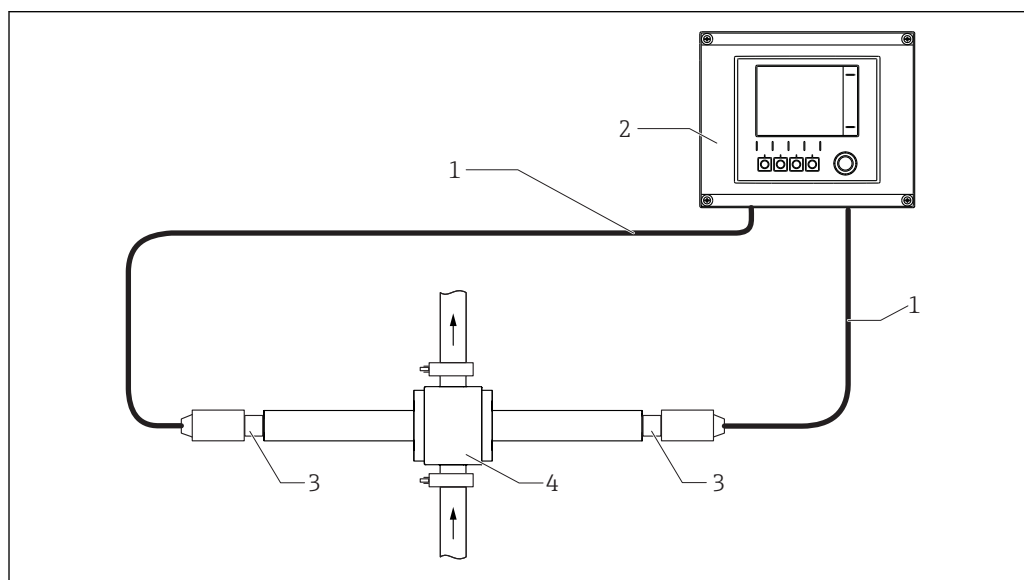
- Maximum product yield thanks to fast measured values in the smallest of sample volumes
- High level of product safety:
Flow assembly is perfectly suitable for CIP and SIP.
- The PVDF-version is resistant to aggressive and corrosive media
- Complies with the requirements of the Life Sciences industry: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

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.



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.

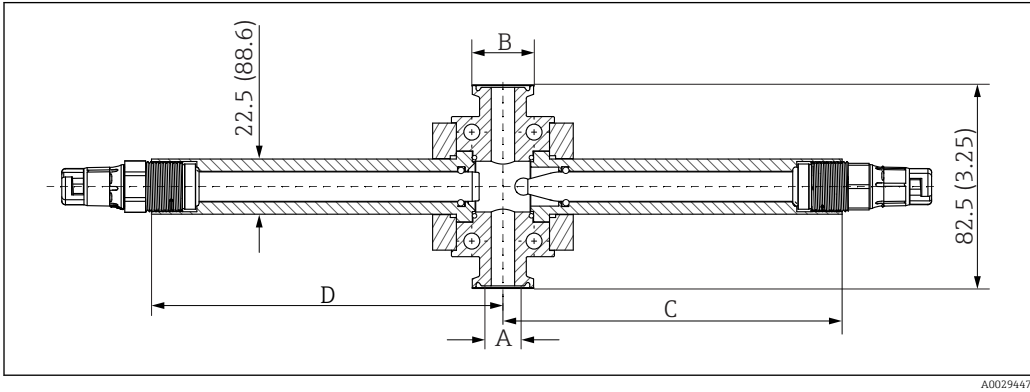
Process connection	Nominal diameter	Nominal pressure	Temperature
316L Tri-Clamp	0.25 to 2"	16 bar (230 psi)	0 to 130 °C (32 to 266 °F)
PVDF Tri-Clamp (Kynar)	0.25", 0.5", 0.75"	4 bar (58 psi)	0 to 130 °C (32 to 266 °F)



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
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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 pharmaceuticals, 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

www.addresses.endress.com
