

Technical Information

Stamoclean CAT411

Microfilter

Cross-flow filter for the filtration of aqueous samples from pressure pipes



The CAT411 microfilter is a special cross-flow filter for sampling from pressure pipes for the purpose of continuous online monitoring.

A self-cleaning effect results from the flow of medium at the filter.

Application

- Wastewater treatment plant
 - Return activated sludge up to max. 4 g/l (4000 ppm) dry matter
 - Excess sludge up to max. 4 g/l (4000 ppm) dry matter
 - Secondary clarification
- Industry
 - Pressure on filter 0.2 to 1 bar (3 to 15 psi)
 - Sampling in the bypass at higher pressures

Your benefits

- High degree of operational safety thanks to robust design
- Simple cleaning reduces operating costs
- Easy and fast replacement of filter membranes
- Long service life
- Short response time of downstream measuring device due to low dead volume
- No separate energy requirements
- Easy installation

Function and system design

Operating principle

A sample flow of 0.8 to 1.8 m³/h (3.5 to 8 gal/min) is permanently conducted through the microfilter via a pressure pipe. Some of the sample passes the filter membrane and is then conveyed to the measuring device as filtrate.

The principle of cross-flow filtration is used for sampling. The PTFE filter membrane separates particles > 0.45 µm from the filtrate. These particles collect in front of the filter membrane and are washed away with the sample flow.

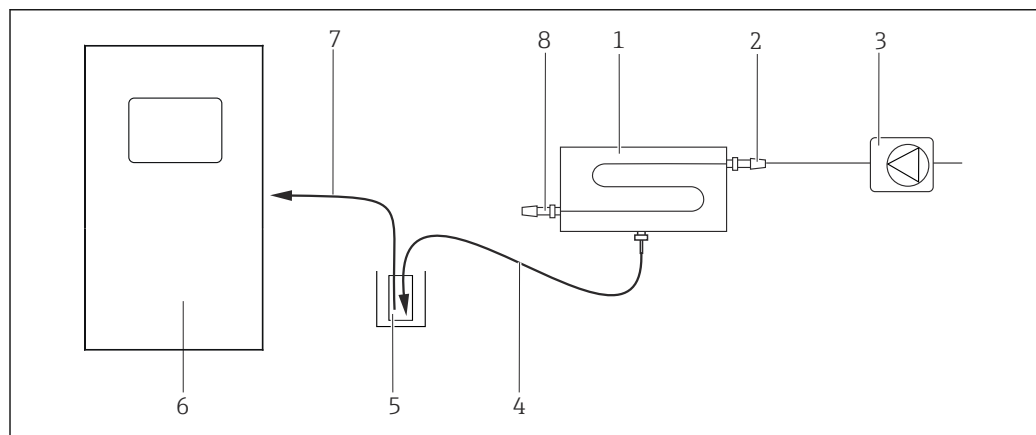
The medium is conducted in a meander-like channel through the filter element. A consistently high flow velocity is achieved in this way. This causes the self-cleaning effect. Mechanical drives to generate a flow at the filter surface are therefore not required.

Measuring system

A complete sample conditioning system comprises:

- Stamoclean CAT411 microfilter
- Collecting vessel
- Analyzer

A sensor with a flow assembly can also optionally be integrated into the measuring system.



1 Complete measuring system

1 CAT411

2 Inlet

3 Sample pump or pressure line

4 Filtrate line

5 Collecting vessel (optional)

6 Analyzer

7 Analyzer suction line

8 Free outlet

Process

Medium temperature 5 to 50 °C (41 to 122 °F)

Process pressure 0.2 to 1 bar (3 to 15 psi)

Flow velocity 2.5 to 5.5 m/s (8 to 18 ft/s)

Inlet volume 0.8 to 1.8 m³/h (3.5 to 8 gal/min)

Mechanical construction

Dimensions	2 Dimensions Filter membrane L x B: 300 x 135 mm (11.8 x 5.31")	
Weight	Approx. 3 kg (6.6 lbs)	
Materials	Housing Fixing screws Seals Filter membrane	POM Stainless steel Perbunan PTFE
Channel cross-section	9 x 10 mm (0.35 x 0.39")	
Filter membrane pore size	0.45 µm	
Connections	Inlet and outlet: Filtrate outlet:	Hose connection nipple for hose ID 14 mm (0.55") Hose connection nipple for hose ID 4 mm (0.16")

Ordering information

Product pagewww.endress.com/cat411**Product Configurator**

1. **Configure:** Click this button on the product page.
 2. Select **Extended selection**.
 - ↳ The Configurator opens in a separate window.
 3. Configure the device according to your requirements by selecting the desired option for each feature.
 - ↳ In this way, you receive a valid and complete order code for the device.
 4. **Apply:** Add the configured product to the shopping cart.
-  For many products, you also have the option of downloading CAD or 2D drawings of the selected product version.
5. **Show details:** Open this tab for the product in the shopping cart.
 - ↳ The link to the CAD drawing is displayed. If selected, the 3D display format is displayed along with the option to download various formats.

Scope of delivery

The scope of delivery comprises:

- 1 Filter holder
- 2 Perbunan seals
- 1 Operating Instructions

 The materials to secure the filter holder on the wall are not included in the scope of supply and must be provided by the customer.



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