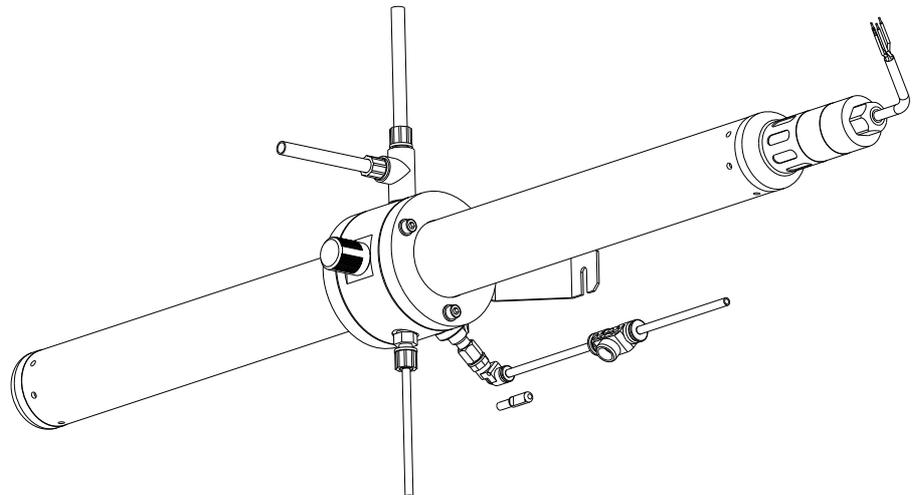


VIS FT-1



Flow-through measuring cell



Note

The latest version of the present operating manual can be found on the Internet under www.WTW.com.

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1 Overview

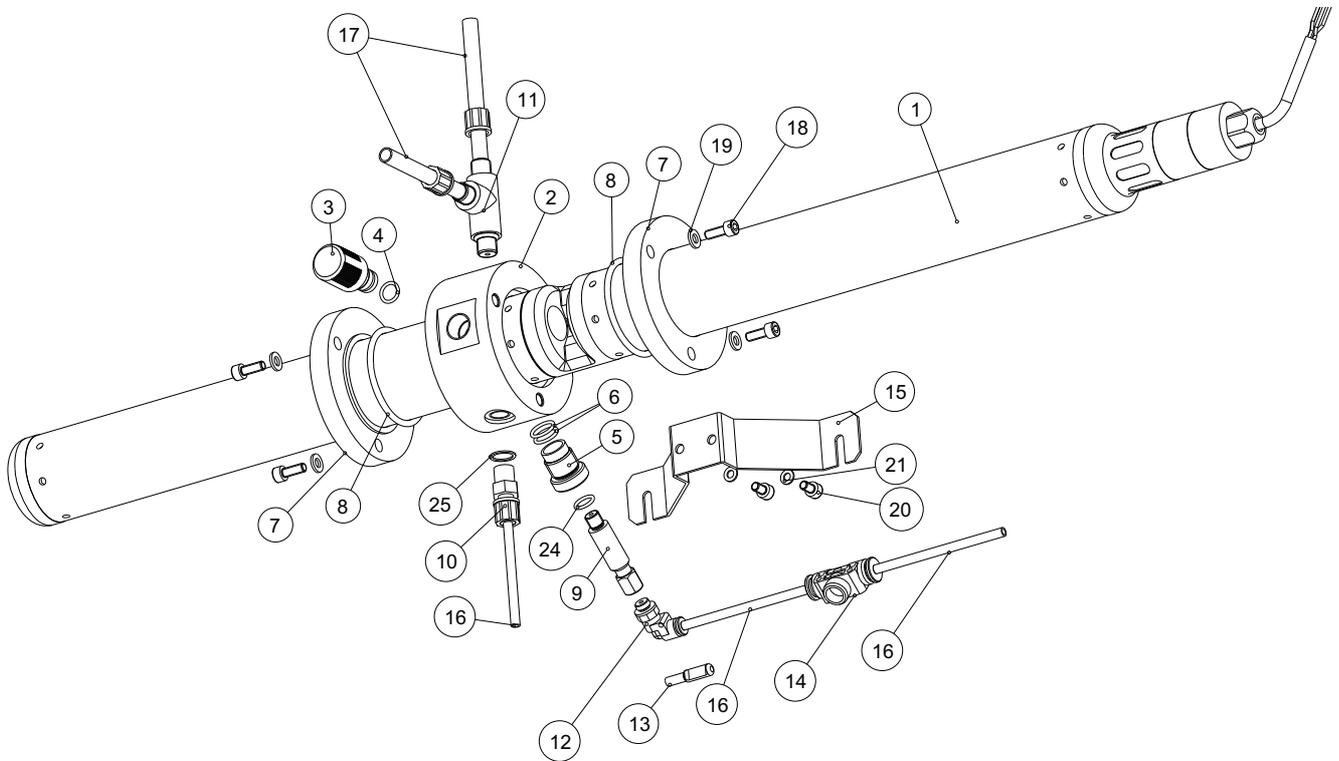


Fig. 1-1 Exploded drawing

Pos.	Designation
1	Spectral sensor
2	Measuring cell
3	Cleaning screw connection
4	O-ring for pos. 3 (11 x 2 mm)
5	Knurled and threaded clamp-connection for pos. 9
6	O-ring for pos. 5 (14 x 2 mm)
7	Flange
8	O-ring for pos. 7 (60 x 4 mm)
9	Compressed air center connector
10	Straight screw coupling for sample inlet
11	T-screw coupling for sample outlet
12	Angled screw coupling for compressed air
13	Blind plug for pos. 12
14	Compressed air check valve
15	Wall holder A2

Pos.	Designation
16	Hose 6x1 mm PU
17	Hose 10x1 mm PE
18	Screw for pos. 7
19	Plain washer for pos. 18
20	Screw for pos. 15
21	Plain washer for pos. 20
24	O-ring for pos. 9 (8 x 2 mm)
25	Seal disk 1/4 "

2 Installation

2.1 Installing the flow-through measuring cell on the sensor

1	Clean the spectral sensor and, if necessary, calibrate it before installing (see sensor operating manual).
2	Unscrew the knurled and threaded clamp-connection somewhat so that the compressed air center connector can be unscrewed. Remove the compressed air center connector.
3	Using an Allen key size 6, somewhat loosen the Allen screws that fix the flanges to the measuring chamber.
4	Insert the spectral sensor in the measuring chamber so that the G1/8" threaded connection of the spectral sensor is centered and completely visible through the knurled and threaded clamp-connection of the measuring chamber.
5	When doing so make sure that the rectangular surfaces on the sensor and measuring chamber point into the same direction (see fig. below)



6	When doing so the fixing openings of the wall holder must point downward, and the sensor must be thus positioned that the plug head connector for the sensor cable is on the right side (see fig. on the following page).
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7	Using an Allen key size 6, somewhat tighten the Allen screws that fix the flanges to the measuring chamber so that the measuring chamber cannot easily be moved on the spectral sensor. The threaded connection of the spectral sensor must still be centered and completely visible through the knurled and threaded clamp-connection of the measuring chamber.
8	Insert the compressed air center connector in the knurled and threaded clamp-connection and carefully screw it hand-tight into the G1/8" threaded connection of the spectral sensor.
9	Fasten the knurled and threaded clamp-connection hand-tight so that the compressed air center connector is firmly and tightly connected with the spectral sensor.
10	Using the Allen key size 6, fasten both flanges on the measuring chamber as far as they will go.
11	Screw the screwed joint for compressed air into the compressed air center connector and insert the compressed air hose (6x1 mm) into the screwed joint.

2.2 Mounting the flow-through measuring cell with the sensor

- | | |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12 | Using 2 screws, mount the measuring chamber together with the sensor and wall holder to a wall or wall area. When doing so hook the wall holder into the screws from above. |
| 13 | Compressed air connection:
To prevent any sample liquid from penetrating the compressed air hose, install the check valve (standard accessory, see Fig. 2-1) in the compressed air line. |

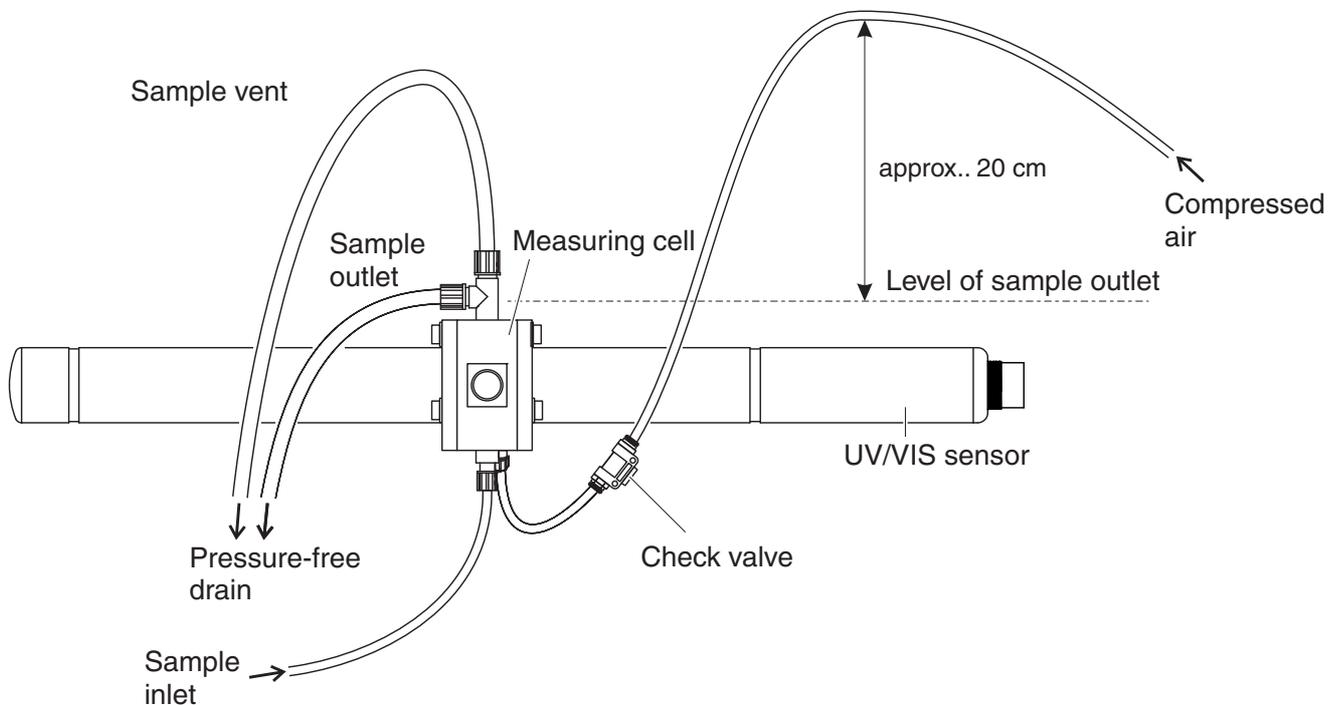


Fig. 2-1 VIS FT-1 mounted

- | | |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14 | Sample vent:
Connect the sample vent hose (10 mm outer diameter) to the upward-leading connector of the T-connection for the outlet. Mount the hose upward first, then downward in a U-form into a pressure-free drain and fix it with holding clamps. |
| 15 | Sample outlet:
Connect the sample outlet hose (10 mm outer diameter) to the lateral connector of the screw-in connection for the outlet and fix it with holding clamps. |

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|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16 | Sample inlet:
Connect the sample inlet hose (6 mm outer diameter) to the straight screw coupling for the sample inlet positioned on the underside of the measuring chamber (pos. 10 in Fig. 1-1). |
| 17 | Check the flow-through quantity and compressed air cleaning. |

3 Technical data

Dimensions without wall holder and connections

Width	approx. 73 mm
Diameter	approx. 105 mm

Dimensions with wall holder and connections

Width	approx. 73 mm
Diameter	approx. 150 mm
Depth	approx. 185 mm

Min. flow-through quantity

Approx. 20 ml/min (depending on measuring interval)

Max. flow-through quantity

Approx. 500 ml/min

Max. pressure

1 bar
The VIS FT-1 flow-through measuring cell fulfills all requirements according to article 3(3) of the directive 97/23/EC ("pressure equipment directive").

Max. temperature

45 °C

Inlet

Hose connection 6 x 1 mm
(outer diameter 6 mm x inner diameter 4 mm)

Outlet and vent

Hose connection 10 x 1 mm
(outer diameter 10 mm x inner diameter 8 mm)

Max. pressure of compressed air

6 bar

Compressed air connection

Hose connection 6 x 1 mm
(outer diameter 6 mm x inner diameter 4 mm)

Materials

Measuring cell, flanges, intermediate rings, cleaning screw connection	PVC
Parts of the screw connections	PVDF/PTFE, PA, PC
O-rings	NBR
Compressed-air hose	PU
Screws	V2A EdV2A stainless steel 1.4301
Wall holder	V2A EdV2A stainless steel 1.4301

4 Cleaning and maintenance



Warning

The measuring cell is under pressure during the compressed air cleaning procedure. Switch on the maintenance condition for the sensor each time prior to opening the measuring cell.

Cleaning:

The measuring gap of the spectral sensor can be cleaned after unscrewing the cleaning screw connection (pos. 3 in Fig. 1-1). When cleaning the measuring gap, follow the instructions in the operating manual of the spectral sensor. Only use the cleaning agents and accessories mentioned there.

5 Replacement parts and accessories

Designation	Model	Order no.
Replacement parts set, comprising:	VIS FT-1/RS	480 081
– 4 O-rings 11 x 2 mm		
– 2 O-rings 14 x 2 mm		
– 2 O-rings 60 x 4 mm		
– 1 O-ring 8 x 2 mm		
– 1 Seal disk 1/4 "		



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