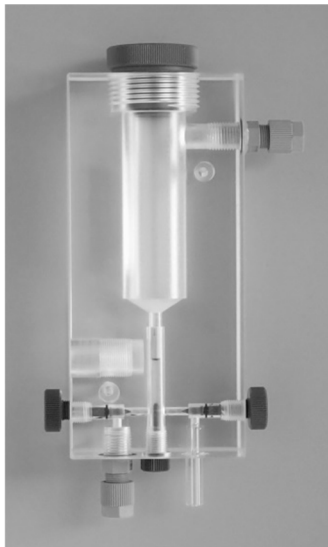


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## Operating instructions



## Flow Chambers TARAflow FLC-1, FLC-3

# Operating instructions TARAflow FLC






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### 1 Information about these operating instructions

#### 1.1 Symbols and displays in the text

Symbol	Meaning
	This symbol indicates tips and helpful information for optimum and economic use of the product.
	This symbol indicates actions to be performed by the personnel.
	This symbol indicates the result of an action.
	This symbol indicates individual bullet points.
	This symbol indicates a precondition before performing an action.

#### 1.2 Associated documents

Data sheets on the flow chambers can be found at the following Internet address:

<http://www.reiss-gmbh.com/english/datasheets.htm>

### 2 Product description

<b>Advice</b>	Please carefully read this manual completely before commissioning the flow chamber. Do not discard. The operator shall be liable for any damage caused by installation or operating errors.
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The flow chambers TARAflow FLC-1 and FLC-3 are intended for installation of amperometric sensors of the type TARABase, TARAline, TARAtec, TARAsens, TARApro to measure disinfectants which are dissolved in water. The measuring water must not transport any parts that might block up the water bearing channels.

The flow chamber is intended to provide ideal incoming flow conditions (from bottom-up to the membrane or electrodes) for a best possible measuring function of the sensor.

# Operating instructions TARAflow FLC

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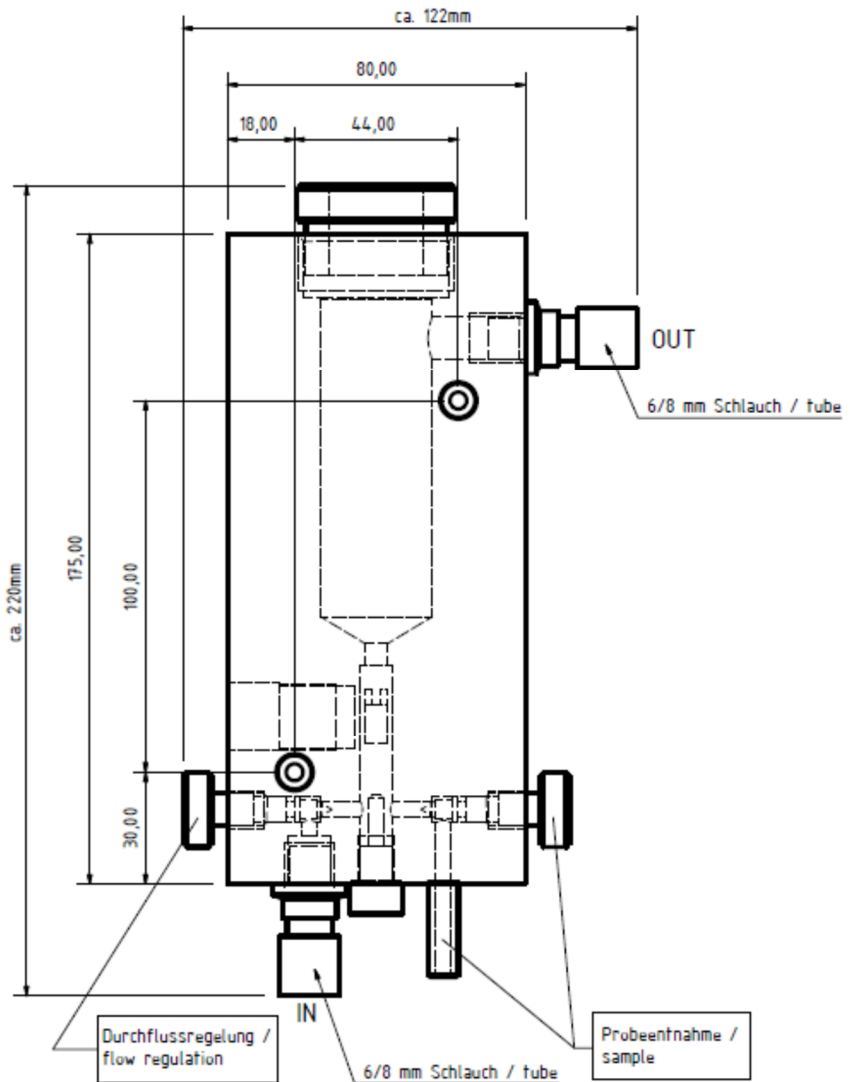


fig. 1: Product overview

## Operating instructions TARAflow FLC

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A complete measuring and/or control system normally consists of the following components:

- sensor
- electrical leads and connectors
- flow chambers and connections
- measuring and control device
- dosing equipment
- analysing instrumentation



This manual primarily refers to the flow chamber. Please pay attention to the corresponding manual of the peripheral devices.



Please pay attention to the specifications of a sensor.

### **3 Intended use**

The flow chamber has to be used according to this manual (see section 5 and 6). The use of sensors from other manufacturers in this flow chamber has to be released by the manufacturer of this flow chamber. Otherwise the liability for a proper function of the sensors and personal injury and damage to equipment resulting from that is disclaimed.

Only trained and authorised staff should operate the flow chamber. Each application beyond this is a not intended use so the warranty becomes void and the liability is disclaimed.

We do not accept liability for injury to persons or damage to property if the instructions in this manual have not been followed, or the original state of the flow chamber has been changed, or the sensor has been used under conditions other than those specified.

If installing the flow chamber outside Germany, please comply with the corresponding local regulations.

## Operating instructions TARAflow FLC

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### 4 Scope of supply

Keep the packaging for the flow chamber completely. In case of repair or warranty return the flow chamber in this packaging.

Check that the delivery is undamaged. In case of damage please contact your supplier.

Check that the delivery is complete by comparing with the below mentioned scope of supply.

Component	Quantity	FLC-1.1	FLC-3
Block 50 x 80 x 175, PMMA transparent	1	✓	✓
screwing 1 ¼", PVC grey	1	✓	-
screwing 1 ¼", PVDF nature	1	-	✓
fitting ¼" with O-ring, PA grey	2	✓	-
fitting ¼" with O-ring, PVDF nature	2	-	✓
O-ring-holder, PVC grey	1	✓	-
O-ring-holder, PVDF nature	1	-	✓
Slide ring, PETP black	2	✓	✓
O-ring 30 x 2.6 FPM	1	✓	✓
O-ring 25 x 2.5 silicone	1	✓	✓
Needle valve, PVC grey	2	✓	-
Needle valve, PVDF nature	2	-	✓
float (depending on the type)	1	✓	✓
M10 sealing plug, PVC grey	1	✓	-
M10 sealing plug, PVDF nature	1	-	✓
Operating instructions	1	✓	✓

### 5 **Assembly**

- Mount the flow chamber with insertion opening vertically upwards, e. g. on a wall or a panel (recommendation: M4 x 60 mm, pan head screw or hexagon socket head screw)
- Close needle valves for sample taking and flow regulation.
- Connect hoses to inlet and outlet.
  - i** Make sure that the hose connections are tightly fixed and sealing properly.

### 6 **Insertion of the sensor in flow chambers TARAflow FLC**

#### 6.1 **Installation requirements**

The following installation requirements have to be fulfilled:

- ✓ Depressurise the system before inserting the sensor into the flow chamber.
- ✓ Close stop valves before the flow chamber.
- ✓ Close stop valves after the flow chamber.

Depending on the environmental conditions of the system the sensor can be inserted with or without retaining ring. When deciding please pay attention to the table below.



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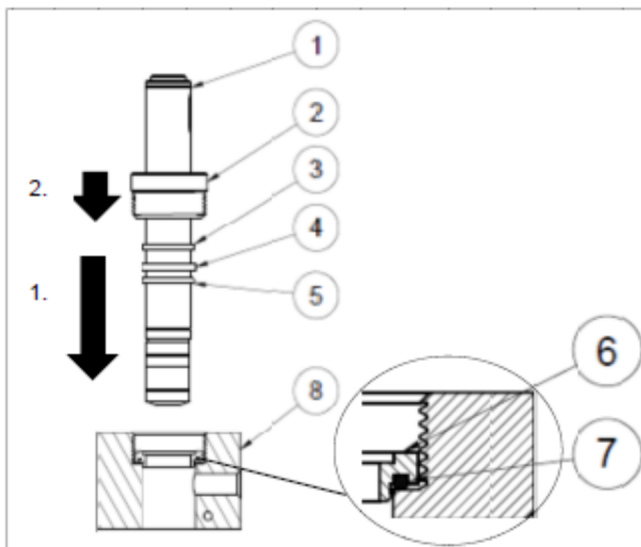
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Mode of mounting	Flow chamber	Operating pressure max.	Operating temperature max.	Flow rate
	Type	[bar]	[°C]	[l/h]
without retaining ring	FLC-1.1	0.5	45	15 (45)
	FLC-3		70	45 (15)
with retaining ring	FLC-1.1	8.0	45	15 (45)
	FLC-3		70	45 (15)

- i** Make sure that the sensor is tightly fixed in place. Otherwise it may be pressed out of the flow chamber when it is under pressure or leaks may occur.
  
- i** Comply with the max. allowed operating pressure of the sensor. Comply with the max. allowed operating temperature of the sensor.

### 6.2 Insertion with retaining ring

- ✓ Flow chamber is prepared according section 5, p. 8.
- ✓ System is depressurised.



*fig. 2: Insertion of the sensor with retaining ring*

- |   |                |   |                             |
|---|----------------|---|-----------------------------|
| 1 | Sensor         | 5 | O-ring 25 x 2.5             |
| 2 | screwing       | 6 | O-ring-holder               |
| 3 | retaining ring | 7 | O-ring 30 x 2.6             |
| 4 | slide ring     | 8 | Flow chamber<br>TARFlow FLC |

- Unscrew the screwing [2] from the flow chamber [8].
- Check the proper position of retaining ring [3], slide ring [4] and o-ring 25 x 2.5 [5] on the sensor.
- Check the proper position of o-ring-holder [6] and o-ring 30 x 2.6 [7] in the flow chamber.

## Operating instructions TARAflow FLC

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- Insert the sensor slowly in the flow chamber.
  - Push the screwing carefully over the sensor.
  - Fix the screwing tightly.
- ↪ Sensor with retaining ring is inserted in the flow chamber.

### 6.3 Insertion without retaining ring

- ✓ Flow chamber is prepared according section 5, p. 8.
- ✓ System is depressurised.

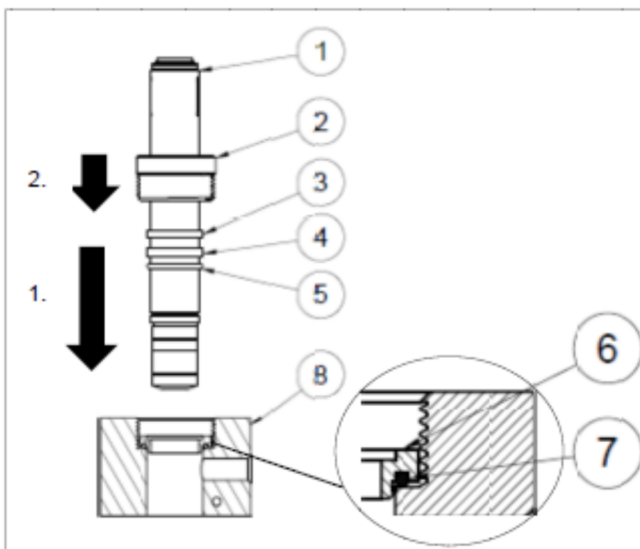


fig. 3: Insertion of the sensor without retaining ring

- |   |            |   |                              |
|---|------------|---|------------------------------|
| 1 | Sensor     | 5 | O-ring 25 x 2.5              |
| 2 | screwing   | 6 | O-ring-holder                |
| 3 | slide ring | 7 | O-ring 30 x 2.6              |
| 4 | slide ring | 8 | flow chamber<br>TARAflow FLC |

## Operating instructions TARAflow FLC

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- Unscrew the screwing [2] from the flow chamber [8].
- Push two slide rings [3+4] over the sensor.
- Push o-ring 25 x 2.5 [5] over the sensor.
- Check the proper position of o-ring-holder [6] and o-ring 30 x 2.6 [7] in the flow chamber.
- Insert the sensor slowly in the flow chamber.
  - i** Do not push the sensor on the bottom of the flow chamber.  
The distance between membrane and inflow-opening should be approx. 2 cm.
- Push the screwing carefully over the sensor.
- Fix the screwing tightly.
  
- ↪ Sensor without retaining ring is inserted in the flow chamber.

### 6.4 Insertion TARAsens with cleaning equipment RV1

- ✓ The sensor is prepared according the operating instructions “sensors TARAsens” (see section 4.3 of the operating instructions “sensors TARAsens”).

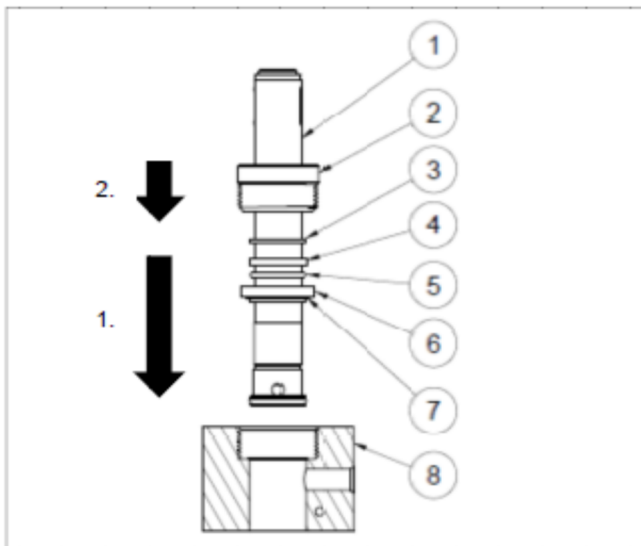


fig. 4: Insertion TARAsens with RV1

- |   |                 |   |                              |
|---|-----------------|---|------------------------------|
| 1 | Sensor with RV1 | 5 | O-ring 25 x 2.5              |
| 2 | screwing        | 6 | O-ring-holder                |
| 3 | retaining ring  | 7 | O-ring 30 x 2.6              |
| 4 | slide ring      | 8 | flow chamber<br>TARAflow FLC |

## Operating instructions TARAflow FLC

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- Rotate the sensor with RV1 [1] carefully clockwise into the installation opening of TARAflow [8].
    - i** By rotating anticlockwise the hull may become loose.
  - Check the proper position of o-rings 30 x 2.6 [7] and 25 x 2.5 [5].
  - Push the screwing [2] carefully over the sensor.
  - Fix the screwing tightly.
- ↪ Sensor with RV1 is inserted in the flow chamber.

### 6.5 Commissioning TARAflow

- Open measuring water outlet.
- Open slowly the measuring water supply.
  - i** Prove hereby for tightness.

### 7 Flow rate regulation

The needle valve on the left side of TARAflow FLC opens and closes the measuring water inflow.

- regulate the desired flow rate.

### 8 Sample taking of measuring water

The needle valve on the right side of TARAflow FLC opens a separate outlet.

- Take a sample of the measuring water, e. g. for analytics.

### 9 Exchange of the float / Cleaning of the float channel

Prior to dismantling the flow chamber:

- Stop measuring water supply.
- Stop measuring water outlet.
- Remove the sensor from the flow chamber according section 10, p. 16.
- Remove hose connections (inlet/outlet).
- Dismantle TARAflow FLC.
- Unscrew the sealing plug below the float channel carefully.
- Remove float.
- Clean float.
- Clean float channel.

Prior to re-installing the flow chamber:

- Re-insert the float in the float channel.
  - i** crown must point in the direction of the insertion opening for the sensor.

**i** When changing the float:

- Use a new float.
  
- Screw the sealing plug carefully on again until the o-ring seals.
- Re-establish hose connections.
- ↺ The flow chamber can be put into service again according section 5, p. 8.

### 10 Disassembling of the sensor

Prior to disassembling the sensor:

- Switch the measuring-/control system off or put it on manual operation.
  - i** Disassembling the sensor can result in an incorrect measuring value, which may cause an uncontrolled dosing within a control system.
- Stop measuring water supply.
- Stop measuring water outlet.
- ↔ System is depressurised.
- ↔ Sensor can be disassembled.
  
- Disconnect the sensor from the measuring/control device.

#### 10.1 Disassembling with retaining ring

- Unscrew the screwing from the flow chamber.
- Pull the sensor carefully out of the flow chamber.

#### 10.2 Disassembling without retaining ring

- Loosen the screwing from the flow chamber.
- Pull the sensor carefully out of the flow chamber.
  - i** Do not push the sensor on the bottom of the flow chamber.

#### 10.3 Disassembling with RV1

- Unscrew the screwing from the flow chamber.
- Pull the sensor with RV1 slowly out of the flow chamber while rotating it clockwise.
  - i** By rotating anticlockwise the hull may become loose.



### 11 Disassembling and storage

To disassemble the flow chamber and prepare it for storage follow the instructions below:

- Stop measuring water supply.
- Stop measuring water outlet.
- Remove hose connections (inlet/outlet).
- Dismantle TARAflow FLC.
- Rinse it thoroughly with tap water.
- Dry it.
- Store it in a dust-free place.



When putting it into service again follow instructions of section 5, p. 8 and section 6, p. 8.

### 12 Technical data

Please find information about the technical data at the following internet address:

<http://www.reiss-gmbh.com/english/datasheets.htm>

### 13 Accessories

Please find information about the accessories at the following internet address:

<http://www.reiss-gmbh.com/english/datasheets.htm>

### 14 Disposal

- Follow the locally valid waste disposal regulations.

### 15 Warranty

Each flow chamber has been tested.

We grant a manufacturer's warranty of two years on the flow chamber subject to appropriate application. Should there be mechanical damage or should the serial number be illegible, the warranty becomes void.

#### **Return of a flow chamber for check/reconditioning:**

Only shipments returned with carriage paid are accepted. Otherwise they will be returned to the sender.

On checked/reconditioned flow chambers we grant a warranty of one year subject to appropriate application from the date of check/reconditioning. Should there be mechanical damage or should the serial number be illegible, this warranty becomes void.

### 16 Liability disclaimer

The flow chamber is manufactured with the greatest care.

Should any malfunctions occur in the flow chamber despite this, no liability claims may be lodged against the manufacturer in case of damage resulting from this malfunction.

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