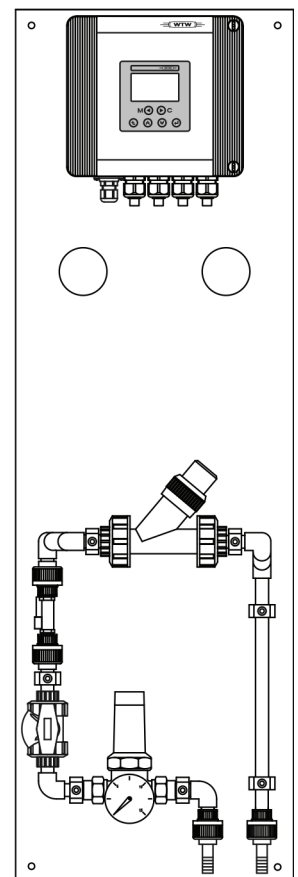
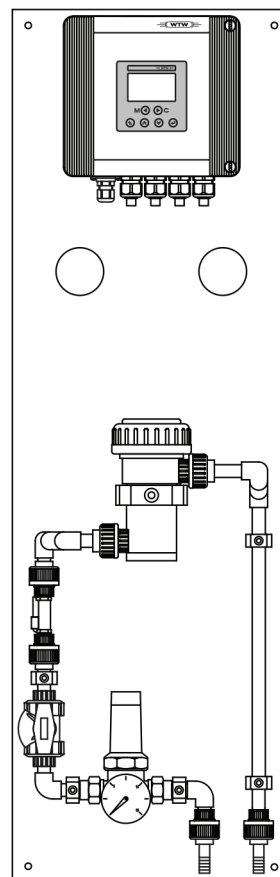
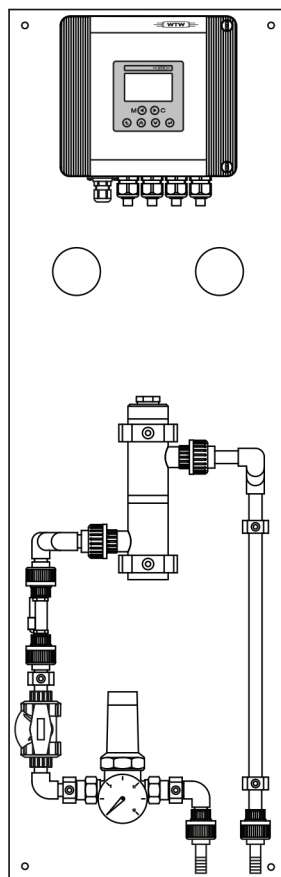


# Trinkwassertafel Drinking water panel

CL 7010

pH 5000

LF 6000  
Oxi 4000



**Modular single parameter measuring systems**

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**Accuracy when  
going to press**

The use of advanced technology and the high quality standard of our instruments are the result of a continuous development. Consequently, this may result in some differences between this operating manual and your instrument. Also, we cannot guarantee that there are absolutely no errors in this manual. Therefore, we are sure you will understand that we cannot accept any legal claims resulting from the data, figures or descriptions.



**Note**

The latest version of the present operating manual can be found on the Internet at [www.WTW.com](http://www.WTW.com).

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## Contents

<b>1</b>	<b>Overview</b>	<b>25</b>
<b>2</b>	<b>Safety instructions</b>	<b>27</b>
2.1	User qualification	27
2.2	Authorized use	28
2.3	General safety instructions	28
<b>3</b>	<b>Installation</b>	<b>31</b>
3.1	Installation prerequisites	31
3.2	Wall mounting	32
3.3	Connecting the voltage supply	33
3.4	Connecting the inlet and outlet	33
3.5	Installation of the sensors	34
3.6	Wiring of the sample flow monitor (option)	34
3.7	Commissioning	36
<b>4</b>	<b>Maintenance and cleaning</b>	<b>37</b>
4.1	Maintenance	37
4.2	Cleaning	37
<b>5</b>	<b>Technical data</b>	<b>39</b>
<b>6</b>	<b>Accessories, maintenance equipment and replacement parts</b>	<b>41</b>
6.1	pH 5000 (pH/ORP) drinking water panel	41
6.2	Oxi 4000 (oxygen) drinking water panel	41
6.3	LF 6000 (conductivity) drinking water panel	42
6.4	CL 7010 (chlorine) drinking water panel	42
6.5	General replacement and accessory parts	42



# 1 Overview

## Structure

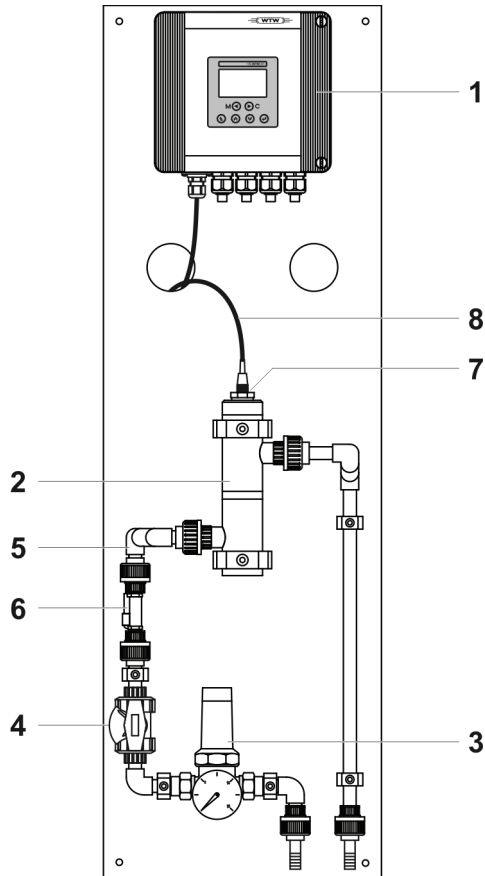


Fig. 1-1 Overview of drinking water panel (example)

A mounted drinking water panel that is ready for operation consists - depending on the order - of the following main components (Fig. 1-1):

- Ready-mounted baseplate with:
  - monitor, designed for the measured parameter (pos. 1)
  - flow-through vessel, version depends on the measured parameter (pos. 2)
  - pressure regulator (pos. 3)
  - throttle valve (pos. 4)
  - pipe system (pos. 5)
  - sample flow monitoring (option, pos. 6)
- sensor, depends on the measured parameter and measuring range (pos. 7)
- sensor connection cable, depends on the sensor (pos. 8)



## 2 Safety instructions

This chapter contains essential instructions that must be followed during the commissioning, operation and maintenance of the drinking water panel. Thus, it is essential for the operator to read this component operating manual before carrying out any work with the system.

Some components (monitor, sensor) are delivered with their own operating manual. It is also important to heed the SAFETY chapter in this manual. Keep the collected operating manuals available close to the drinking water panel where possible.

### General safety instructions

Safety instructions in this operating manual are indicated by the warning symbol (triangle) in the left column. The signal word (e.g. "Caution") indicates the danger level:



#### Warning

indicates instructions that must be followed precisely in order to prevent serious danger to personnel.



#### Caution

indicates instructions that must be followed precisely in order to avoid slight injury to personnel or damage to the instrument or the environment.

### Other labels



#### Note

indicates notes that draw your attention to special features.



#### Note

indicates cross-references to other documents, e.g. component operating manuals.

### Target group

#### 2.1 User qualification

The drinking water panel was developed for online analysis. Some maintenance activities, such as changing the electrolyte in specific sensors, require the safe handling of chemicals. Thus, we assume that the maintenance personnel is familiar with the necessary precautions to take when dealing with chemicals as a result of their professional training and experience.

**Special user qualifications**

The following installation activities may only be performed by a qualified electrician:

- Connecting the drinking water panel to the supply line (see operating manual of the monitor).
- Connection of external, line voltage-carrying circuits to relay contacts (see operating manual of the monitor).

**2.2 Authorized use**

The authorized use of the drinking water panel consists only of its use in the analysis of drinking water, swimming pool water and similar media.

Please observe the technical specifications according to chapter 5 TECHNICAL DATA. Only operation and running according to the instructions in this component operating manual is authorized.

Any other use is considered to be **unauthorized**. Unauthorized use invalidates any claims with regard to the guarantee.

**2.3 General safety instructions**

The monitor of the drinking water panel is constructed and inspected in accordance with the relevant guidelines and norms for electronic instruments (see chapter TECHNICAL DATA in the monitor operating manual). It left the factory in a safe and secure technical condition.

**Function and operational safety**

The fault-free functioning and operational safety of the drinking water panel are only guaranteed if the generally applicable safety measures and the special safety instructions in this operating manual are followed during its use.

The fault-free functioning and operational safety of the components are only guaranteed under the environmental conditions that are specified in chapter 5 TECHNICAL DATA.

**Safe operation**

If safe operation is no longer possible, the drinking water panel must be taken out of operation and secured against inadvertent operation.

Safe operation is no longer possible if components:

- have been damaged in transport
- have been stored under adverse conditions for a prolonged period of time
- are visibly damaged
- no longer operate as described in this manual.

If you are in any doubt, contact the supplier of your drinking water panel.

**Obligations of the operator**

The operator of the drinking water panel must ensure that all relevant regulations are followed when dealing with chemicals such as:

- EEC directives for protective labor legislation
- National protective labor legislation
- Accident prevention regulations



## 3 Installation

### 3.1 Installation prerequisites

#### Requirements of the measurement location

The drinking water panel is intended for mounting on a flat, vertical wall. The measurement location must meet the environmental conditions specified in chapter 5 TECHNICAL DATA. Make sure there is good accessibility for maintenance and setting work.

The following facilities are assumed on the operator side at the site:

- 230 or 115 V AC power supply with interrupt facility (for details, see operating manual of the monitor)
- Sample intake line DN 10 or hose line 1/2" (requisite sample flow, see chapter 5 TECHNICAL DATA)
- Sample outlet dimensioned for open channel drain according to the sample flow.

### 3.2 Wall mounting

The base plate has four holes at the corners for attaching to a wall. Make sure the wall has the necessary stability for the weight of the drinking water panel. Only use mounting material which is suitable for the wall material (screws, dowels, etc.). The spacings of the drilled holes are indicated in the following figure:

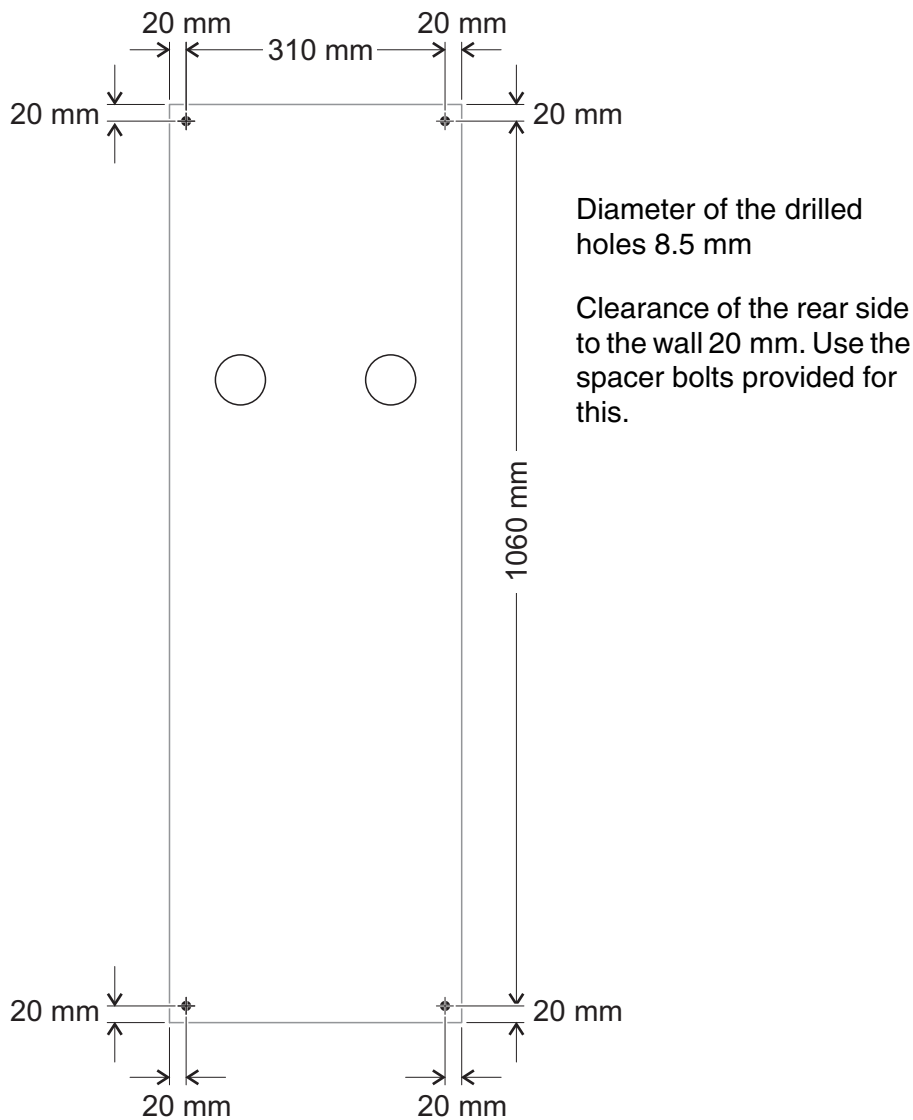


Fig. 3-1 Drilled hole distance for the drinking water panel (dimensions in mm)



**Note**

Make sure that there is sufficient space under the drinking water panel for connecting the sample inlet and outlet and that the display of the monitor is easy to access and read.

### 3.3 Connecting the voltage supply

The monitor of the drinking water panel is supplied with mains voltage. The mains voltage must comply with the specifications given on the nameplate and in the operating manual of the monitor. The power line and all lines to current outputs and relays can be laid via the two openings at the back of the base plate.



#### Note

The connection of the voltage supply is described in detail in the operating manual of the monitor.

### 3.4 Connecting the inlet and outlet

The connection of the inlet and outlet line can be carried out in two ways:

- Connection via hoses (inside diameter 1/2") via the mounted hose connection pieces. Secure the hose connections with the aid of the hose clamps provided.
- Rigid pipe union via the couplings (diameter DN 10) after removing the hose connections.



#### Note

For reasons of safety we recommend the installation of a stopcock before the sample inlet in order to be able to quickly interrupt the sample flow if necessary.



#### Caution

**The outlet of the drinking water panel may only be connected to an open channel flow that is virtually pressureless. A water column of max. 0.5 m relating to the lid of the flow through armature may be applied. Check the tightness of your connections after the installation.**

### 3.5 Installation of the sensors



#### Installation in the drinking water panel

#### Note

Heed the instructions for installation in the sensor operating manual.

1	Install the sensor in the flow-through vessel. Depending on the type, the sensor is screwed into the installation opening up to the stop or plugged in and then fixed with a coupling ring.
2	If necessary, connect the plug of the connection cable with the sensor and the free cable ends with the terminal strip of the monitor (see operating manual of the monitor).
3	The two openings in the base plate enable the cable to be stowed between the rear wall and base plate.

### 3.6 Wiring of the sample flow monitor (option)

The sample flow monitor consists of a switch (flow control) that closes when the flow-through reaches a specific level. The switching threshold is typically 30 l/h. By wiring up the contacts of the flow control with the analog output of measured values of the monitor (current output in the  $r_{EL}$  operating mode) the flow-through can be monitored and recorded.

## Wiring diagram

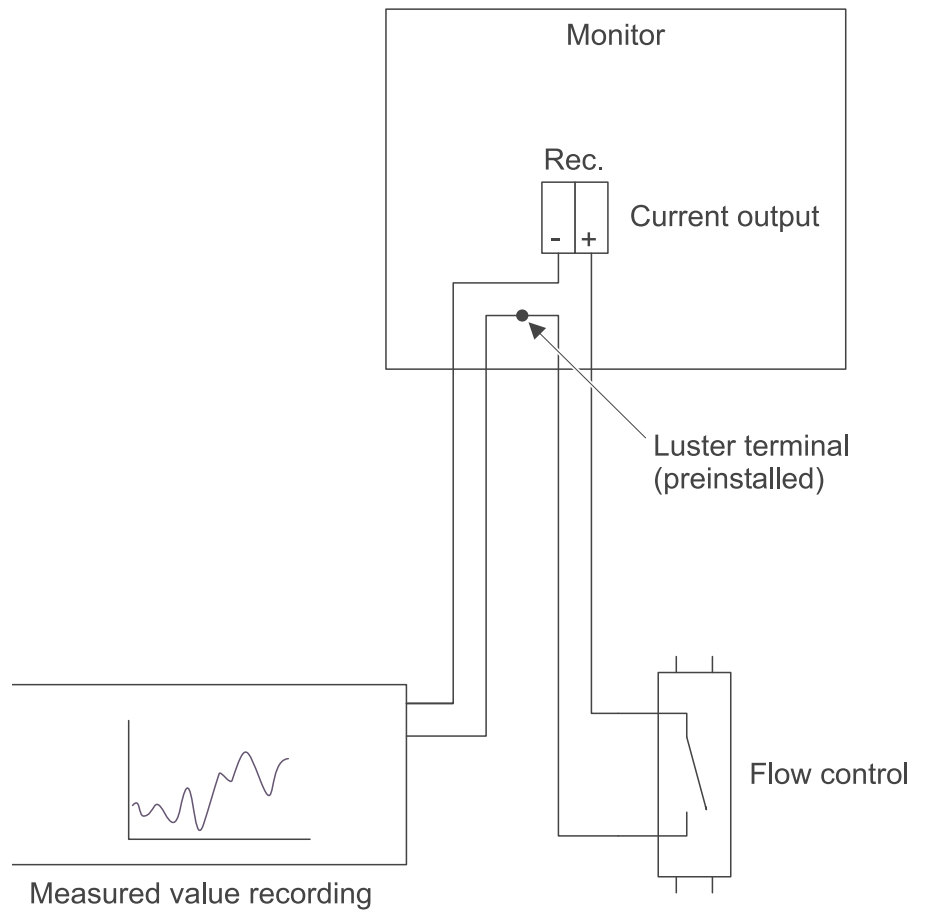


Fig. 3-2 Wiring diagram for the sample flow monitoring

**Note**

Set the current range of the output ideally between 4 and 20 mA in order to reliably detect any decrease in sample flow to below the switching threshold even at low measured values.

### 3.7 Commissioning

To commission the drinking water panel, proceed as follows:

1	Switch on the supply voltage for the monitor and wait until the monitor has started up.
2	Make the necessary settings on the monitor (see operating manual of the monitor).
3	Open the sample inlet and adjust the sample flow (for values, see chapter 5 TECHNICAL DATA).

#### Adjusting the sample flow

Set the sample flow to at least approx. 30 l/h (corresponds to 0.5 l/min). A higher sample flow has no negative effect on the measurement.

Change the sample flow via the pressure setting on the pressure reducer or the position of the throttle valve. The 180° fine scaling of the throttle valve enables a fine setting. The sample flow can be measured, for example, by volumetric measurement of an amount of water collected within a specific time at the sample outlet (bucket and stop watch).

The through-connection threshold of the sample flow monitoring (option) is typically 30 l/h. Increase the sample flow if necessary until the flow control connects reliably through.



#### Caution

**Check the tightness of the pipe systems after the commissioning (visual control). Pay attention to traces of escaping water at the joints while doing so.**



#### Note

Heed any warm-up period for specific sensors (see operating manual of the sensor).

## 4 Maintenance and cleaning

### 4.1 Maintenance

Maintenance activities	Component	Maintenance
	Pipe system	Regularly check all joints for traces of escaping water (visual control)
	Monitor	(see monitor operating manual)
	Sensors	Depending on the sensor type (see sensor operating manual)
	Other components	See component operating manual

### 4.2 Cleaning

#### Panel and components

Clean the wall mounting panel, tubes and component surfaces by wiping them with a moist cloth.

#### Tubes, inside cleaning

Basically, it is not necessary to clean the insides of the tubes. If required, the pipe system can be cleaned as follows:



#### Note

For cleaning, remove the sensors from the flow-through vessel and, where necessary, clean them according to the instructions in the respective sensor operating manual.

Contamination	Cleaning agents	Implementation
Lime and hydroxide coatings	Acetic acid (10 %)	<ul style="list-style-type: none"> <li>– Close the inlet and outlet</li> <li>– Pour cleaning agent into the flow-through vessel from above and leave to take effect</li> <li>– Subsequently rinse thoroughly with water.</li> </ul>

Contamination	Cleaning agents	Implementation
Algae, biofilm	Water and household washing-up liquid	<ul style="list-style-type: none"><li data-bbox="1150 367 1385 434">– Dismantle pipe system</li><li data-bbox="1150 450 1422 584">– Clean inner surfaces with brush/cloth and washing-up liquid</li><li data-bbox="1150 600 1422 831">– Subsequently rinse thoroughly with water (carefully remove any residues of washing-up liquid!).</li></ul>

## 5 Technical data

<b>Wall mounting panel</b>	Dimensions (H x W x D)	Approx. 1100 x 350 x 13 mm Clearance to the wall 20 mm via rear spacer bolts on the plate
	Material	PVC rigid foam, spumed, white

**Mounting** Through four drillings in the panel, diameter 8.5 mm, drilled hole diagram, see Fig. 3-1.

### Ambient conditions

#### Temperature

Operation	0 °C ... + 40 °C
Storage	0 °C ... + 40 °C



#### Note

The drinking water panel is designed for operation in closed rooms and is not suitable for outdoor installation.

### Permissible overpressure

Before pressure regulator (inlet)	0 ... 10 bar
After pressure regulator	0 ... 6 bar

### Required sample flow

10 ... 70 l/h (depending on the sensor)

### Sample flow monitoring, flow control (option)

Through-connection threshold: approx. 30 l/h (0.5 l/min)

### Medium overflow

Into open channel flow, virtually pressureless. A water column of max. 0.5 m relating to the lid of the flow through armature may be applied.

### Power supply

Depending on version ordered (depending on the monitor)

### Application range

Drinking water and swimming pool water

### Connections for inlet and outlet

Can be realized as hose line (hose diameter 1/2") or rigid pipe union (DN 10).



## 6 Accessories, maintenance equipment and replacement parts

### 6.1 pH 5000 (pH/ORP) drinking water panel

Description	Model	Order no.
pH combination electrode, drinking water	SenTix® ML 70	104 100
ORP combination electrode, drinking water	SenTix® ML ORP	104 150
Temperature sensor with 1 m connection cable	TFK 5000	104 151
pH/ORP connection cable, 1 m	AK-S7/1	108 150
Buffer pH 4.006 (DIN/NIST), 250 mL	PL 4	109 110
Buffer pH 6.865 (DIN/NIST), 250 mL	PL 7	109 120
Buffer pH 9.180 (DIN/NIST), 250 mL	PL 9	109 130
Technical buffer, pH 4.01, 250 mL	TPL 4	108 800
Technical buffer, pH 7.0, 250 mL	TPL 7	108 802
Technical buffer, pH 10.01, 250 mL	TPL 10 Trace	108 105
ORP buffer solution, pH 7, UH=427mV (CH), 250 mL	RH 28	109 740
(Buffer solutions in larger trading units are listed in the WTW catalog or on the Internet)		

### 6.2 Oxi 4000 (oxygen) drinking water panel

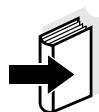
Description	Model	Order no.
Drinking water panel oxygen sensor with 1 m connection cable	Oxi ML 41	201 931
Accessory box for Oxi ML 41	ZBK-Oxi ML 41	202 300

### 6.3 LF 6000 (conductivity) drinking water panel

Description	Model	Order no.
Conductivity measuring cell, graphite/epoxy with Pt1000 temperature sensor and 1 m connection cable	LR ML	301 150
KCL control standard 0.01 M KCl, 6x 50 ml	E-SET	300 572

### 6.4 CL 7010 (chlorine) drinking water panel

Description	Model	Order no.
Chlorine measuring cell, free chlorine, pH 4...9, pH-compensated	FCML 412-S	201 186
Maintenance set for FCML 412-S	ZBK-FCML 412	205 247
Chlorine measuring cell, free chlorine, pH 6...8, pH-sensitive	FCML 68-S	201 196
Maintenance set for FCML 68-S	ZBK-FCML68	205 248
Chlorine measuring cell, total chlorine, pH 4...12, pH-compensated	TCML-S	201 191
Maintenance set for TCML-S	ZBK-TCML	205 249
Connection cable for chlorine sensors, 1 m	AK-CL	108 152



#### Note

Photometer for calibration of the chlorine sensors and photometric test kits are given in the WTW catalog or on the Internet at [www.WTW.com](http://www.WTW.com).

### 6.5 General replacement and accessory parts

Description	Model	Order no.
Pressure regulator R1/2"	Pr-DN15	904 000
Dosage ball valve	Do-DN10	904 005
Flow control	Flow control	601 802