IC equipment

IC equipment: Full loop, PP, 889 Basic (6.05330.220)

Manual

8.0108.8035EN / v2 / 2023-02-28

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Technical Communication
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This documentation has been prepared with great care. However, errors can never be entirely ruled out. Please send comments regarding possible errors to the address above.

Disclaimer

Deficiencies arising from circumstances that are not the responsibility of Metrohm, such as improper storage or improper use, etc., are expressly excluded from the warranty. Unauthorized modifications to the product (e.g. conversions or attachments) exclude any liability on the part of the manufacturer for resulting damage and its consequences. Instructions and notes in the Metrohm product documentation must be strictly followed. Otherwise, Metrohm's liability is excluded.

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1 Introduction

1.1 Description of the IC equipment: Full loop, PP, 889 Basic

The IC equipment: Full loop, PP, 889 Basic (6.05330.220) contains all the accessory parts required for transferring from the 889 IC Sample Center Basic to the ion chromatograph. The sample is conveyed with the peristaltic pump of the ion chromatograph. **Full Loop Injection** is used. The sample loop is filled completely for the full loop injection.

1.2 About the documentation

This manual describes the correct assembly and maintenance of the IC equipment: Full loop, PP, 889 Basic and the installation of the capillary connections.

The installation of the ion chromatograph and the 889 IC Sample Center Basic is not described in this manual. This description can be found in the respective manuals for the ion chromatograph or for the 889 IC Sample Center Basic (8.889.8004).

CAUTION

Read through this documentation carefully before putting the IC equipment: Full loop, PP, 889 Basic into operation. The documentation contains information and warnings which the user must follow in order to ensure safe operation of the IC equipment: Full loop, PP, 889 Basic.

1.3 Symbols and conventions

The following symbols and formatting may appear in this documentation:

*(5-**12**)*	**Cross-reference to figure legend** The first number refers to the figure number, the second to the instrument part in the figure.
1	**Instruction step** Carry out these steps in the sequence shown.
Method	**Dialog text**, **parameter** in the software
File ▶ New	Menu or menu item
[Next]	**Button** or **key**
	**WARNING** This symbol draws attention to a possible life-threatening hazard or risk of injury.
	**WARNING** This symbol draws attention to a possible hazard due to electrical current.
	**WARNING** This symbol draws attention to a possible hazard due to heat or hot instrument parts.
	**WARNING** This symbol draws attention to a possible biological hazard.
	**CAUTION** This symbol draws attention to possible damage to instruments or instrument parts.
	**NOTE** This symbol highlights additional information and tips.

1.4 Accessories and additional information

Additional information is available on the Metrohm website (*https://www.metrohm.com*):

- Product family
- Product versions
- Accessories
- Documents about the product

Downloading the accessories list

NOTICE

The accessories list is a part of the product documentation. Download the accessories list and store it as a reference.

1. Use the search function to search for the product.
2. Open the desired product version.
3. Download the accessories list.

2 Overview

2.1 Parts of the IC equipment: Full loop, PP, 889 Basic

Figure 1 IC equipment: Full loop, PP, 889 Basic – Parts

1	**Pressure screw, short (6.2744.070)**	**2**	**PEEK transfer capillary 2 mL, 5 m (6.1841.000)**
3	**Pump tubing LFL (white/white), 3 stoppers (6.1826.360)**	**4**	**Eluent bottle / 2 L / GL 45 (6.1608.070)**
5	**Bottle cap / GL 45 - 3 × UNF 10/32 (6.1602.150)**	**6**	**PTFE capillaries 0.5 mm inner diameter / 3 m (6.1803.030)**
7	**Coupling olive/UNF 10/32, 2x (6.2744.034)**		

2.2 Flow path of the IC equipment: Full loop, PP, 889 Basic

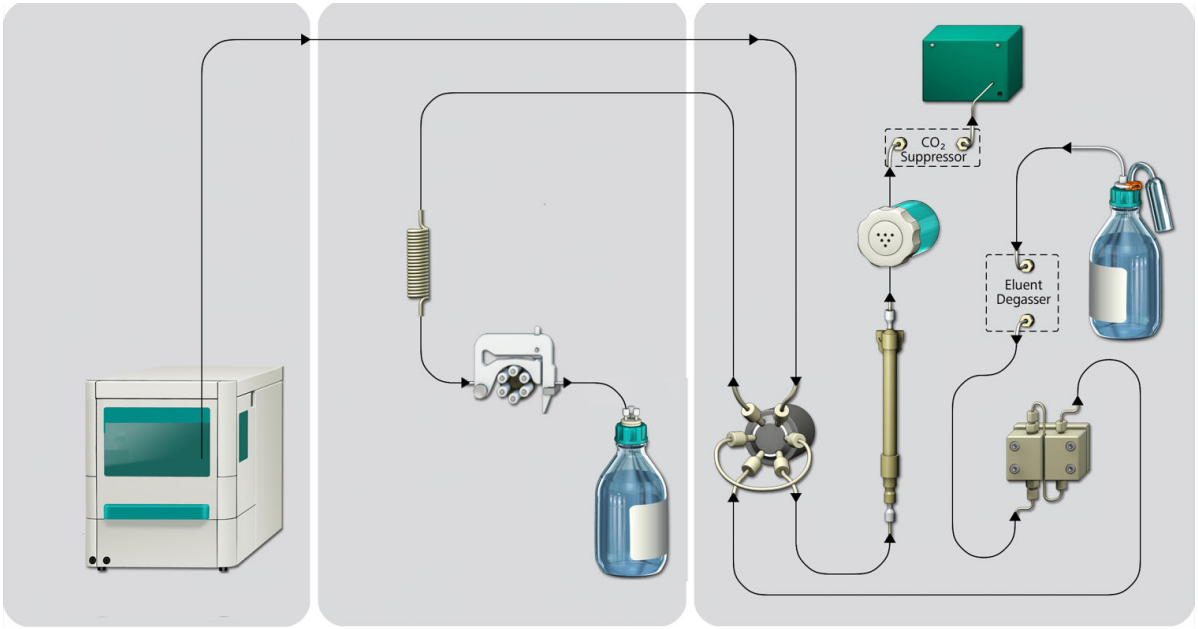

Figure 2 IC equipment: Full loop, PP, 889 Basic – Flow path

3 Installation

Required accessories:

- IC equipment: Full loop, PP, 889 Basic (6.05330.220)
  - PEEK transfer capillary 2 mL, 5 m (6.1841.000)
  - PTFE capillaries 0.5 mm inner diameter / 3 m (6.1803.030)
  - Pump tubing LFL (white/white), 3 stoppers (6.1826.360)
  - Pressure screw, short, 5x (6.2744.070)
  - Coupling olive/UNF 10/32, 2x (6.2744.034)
  - Eluent bottle / 2 L / GL 45 (6.1608.070)
  - Bottle cap / GL 45 - 3 × UNF 10/32 (6.1602.150)
- Capillary cutter (6.2621.080)

1 Connecting the pump tubing

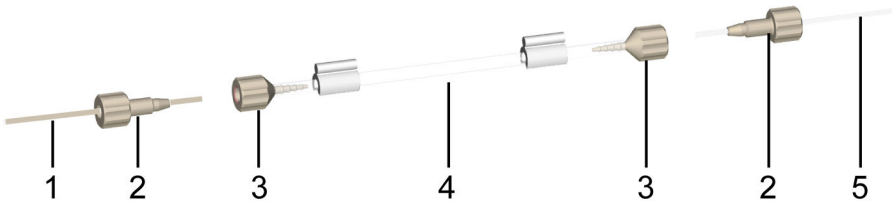

Figure 3 Connecting the pump tubing

1 PEEK transfer capillary 2 mL, 5 m (6.1841.000)	**2 Pressure screw, short (6.2744.070)**
3 Coupling olive/UNF 10/32 (6.2744.034)	**4 Pump tubing LFL (white/white), 3 stoppers (6.1826.360)**
5 PTFE capillaries 0.5 mm inner diameter / 3 m (6.1803.030)	

- Use the pump tubing with white stoppers for transporting the rinsing solution.
- Attach a coupling olive/UNF 10/32 to the inlet and the outlet of the pump tubing.
- Screw the transfer capillary to the inlet of the pump tubing using a pressure screw.
- Screw the PTFE capillary to the outlet of the pump tubing using a pressure screw.

2 Inserting the pump tubing into the tubing cartridge

- Insert the pump tubing in the tubing cartridge, see *manual for the ion chromatograph*.

3 Inserting the tubing cartridge

- Insert the tubing cartridge into the cartridge holder, see *manual for the ion chromatograph*.

4 Connecting a bottle

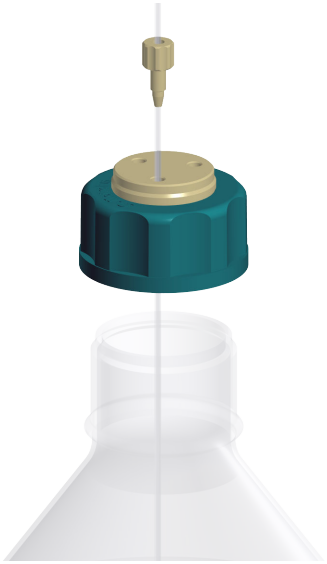

Figure 4 Connecting a bottle

- Fill the bottle with ultrapure water.
- Screw the bottle cap onto the bottle.
- Shorten the PTFE capillary with the capillary cutter so that the end of the capillary reaches the bottom of the bottle.
- Thread a pressure screw onto the free end of the PTFE capillary.
- Immerse the PTFE capillary through the bottle cap into the ultrapure water.
- Tighten the PTFE capillary with the pressure screw on the bottle cap.

The IC equipment: Full loop, PP, 889 Basic is completely installed and can be put into operation.

4 Operation and maintenance

4.1 Sequence

To convey sample, select a speed in the positive range for the peristaltic pump (e.g. 2). The peristaltic pump rotates clockwise. The sample is transferred into the sample loop. A transfer capillary is located between the injector and the rinsing solution to prevent sample from entering the rinsing solution.

After the injection, the sample loop, sample needles and capillaries are flushed with ultrapure water. To convey rinsing solution, select a speed in the negative range for the peristaltic pump (e.g. -2). The peristaltic pump rotates counterclockwise. To empty the sample needle, move to the **Waste position**. Afterwards, clean the sample needle. To accomplish this, move to **Wash position**.

4.2 Peristaltic pump

Pump tubings used for the peristaltic pump are consumables with a limited service life.

Pump tubings with 3 stoppers are inserted into the tubing cartridge in such a way that the cartridge is located between 2 stoppers. This results in 2 possible positions for the tubing cartridge. Once the pump tubing exhibits significant signs of wear, it can be tensioned a 2nd time in the other respective position.

Maintenance interval: Replace the pump tubing every 2 months. Replace the pump tubing every 4 weeks if the peristaltic pump is being used continuously.

4.3 889 IC Sample Center Basic

Information regarding care and maintenance of the 889 IC Sample Center Basic can be found in the *Manual for the 889 IC Sample Center Basic (8.889.8004)*.