815 Robotic Soliprep for LC

2.815.4110

Manual
8.815.8002EN

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Although all the information given in this documentation has been checked with great care, errors cannot be entirely excluded. Should you notice any mistakes please send us your comments using the address given above.

Table of contents

1 Introduction

1.1 Instrument description

The 815 Robotic Soliprep systems are automation systems with a multiple variety of applications. They have been designed exclusively for usage in factories and laboratories and cover a wide range of applications. Soliprep systems can be used for automation purposes wherever a complex sample preparation of solid substances is required, e.g. for pharmaceutical or food analysis.

The Robotic Sample Processors, which have proven their worth for many years, form the basis for a versatile system that has been expanded to include opportunities for the dispersion, filtration and bottling of samples of all sorts. The versatile concept can be expanded practically at will.

Thanks to the integration of high-performance communication interfaces (USB, RS232), they can be incorporated seamlessly into a variety of instrument systems, and not only those manufactured by Metrohm. Operation by the high performance *tiamo*™ or MagIC Net™ software ensures not only user-friendly operation and programming of automation sequences, but also allows 100% conformity for the entire automation system with FDA (Federal Drug Administration) regulations. This applies in particular with regard to the regulation *21 CFR Part 11, electronic records and signatures*.

815 Robotic Soliprep for Liquid Chromatography

- Dispersion, filtration, dilution and sample transfer

The universal automation system for sample preparation in instrumental chromatography. A workstation equipped with a dispersion device is used to shred the sample. The dispersion aggregate is cleaned in a special rinsing station. The second workstation is equipped for sample transfer with a universal robotic arm with a Luer adapter. It is used for picking up syringe needles (for aspirating the dispersed sample and bottling the filtrate in sealed vials) and membrane filters (for filtering and injecting the sample in a capillary).

Needles, filters are charged in replaceable inserts. The needles and filters are automatically stripped off after use and disposed of in a waste container.

Two versatile dosing drives (800 Dosino) are used as an auxiliary device for diluting the sample and for transferring the sample solution.

1.2 Intended use

The 815 Robotic Soliprep for LC is designed for the automatic analysis of larger-sized sample series in analytical laboratories. The functioning of the automation system comprises crushing, homogenizing and dissolving of solid samples as well as filtering and transferring the resulting sample solutions. Its main area of application is the sample preparation in instrumental chromatography. It is **not** suitable for usage in biochemical, biological or medical environments in its basic equipment version.

The present instrument is suitable for processing chemicals and flammable samples. The usage of the 815 Robotic Soliprep for LC therefore requires that the user has basic knowledge and experience in the handling of toxic and caustic substances. Knowledge with respect to the application of the fire prevention measures prescribed for laboratories is also mandatory.

1.3 About the documentation

1.3.1 Symbols and conventions

The following symbols and styles are used 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.
	**Warning** This symbol draws attention to a possible life 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 a possible damage of instruments or instrument parts.
	**Note** This symbol marks additional information and tips.

1.4 Safety instructions

1.4.1 General notes on safety

Warning

This instrument may only be operated in accordance with the specifications in this documentation.

This instrument has left the factory in a flawless state in terms of technical safety. To maintain this state and ensure non-hazardous operation of the instrument, the following instructions must be observed carefully.

1.4.2 Electrical safety

The electrical safety when working with the instrument is ensured as part of the international standard IEC 61010.

Warning

Only personnel qualified by Metrohm are authorized to carry out service work on electronic components.

Warning

Never open the housing of the instrument. The instrument could be damaged by this. There is also a risk of serious injury if live components are touched.

There are no parts inside the housing which can be serviced or replaced by the user.

Mains voltage

Warning

An incorrect mains voltage can damage the instrument.

Only operate this instrument with a mains voltage specified for it (see rear panel of the instrument).

Protection against electrostatic charges

Warning

Electronic components are sensitive to electrostatic charges and can be destroyed by discharges.

Always pull the mains cable out of the mains connection socket before connecting or disconnecting electrical appliances on the rear panel of the instrument.

1.4.3 Personnel safety

Warning

Personnel are not permitted to reach into the working area of a Sample Processor while operations are running!

A **considerable risk of injury** exists for users who undertake manual interventions to the automatic running of the instrument.

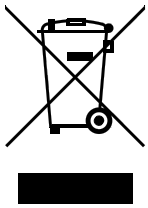
The various drives of a sample processor (including Swing Head) exhibit considerable force in order to be able to operated without difficulty, even with greater loads. They are equipped with an electronic overload protection that is activated in the presence of excessive mechanical resistance.

Warning

The Sample Processor does not provide sufficient protection during the processing of potentially infectious samples or reagents.

Implement appropriate protective measures.

1.5 Recycling and disposal



This product is covered by European Directive 2002/96/EC, WEEE – Waste from Electrical and Electronic Equipment.

The correct disposal of your old equipment will help to prevent negative effects on the environment and public health.

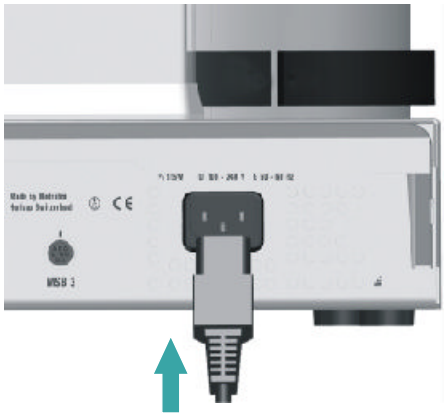
More details about the disposal of your old equipment can be obtained from your local authorities, from waste disposal companies or from your local dealer.

2 Installation

It is assumed for the purpose of these installation instructions that the required adjustment of turntable and Swing Heads has already been performed for the present Robotic Sample Processor.

2.1 Preparing the Sample Processor

Plugging in the mains cable



The mains connector is located on the rear side of the instrument.

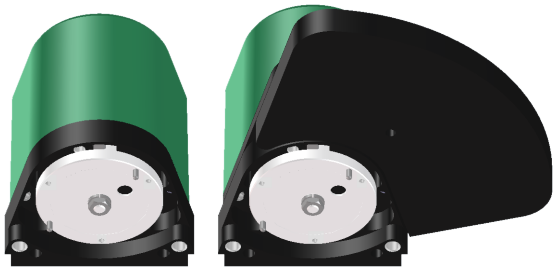
Connecting the Swing Heads

Note

The necessary settings must first be made in the (MagIC Net) control software before the robotic arms can be mounted on the Swing Heads. The two Swing Heads are connected for this purpose, but the robotic arms are not yet mounted.

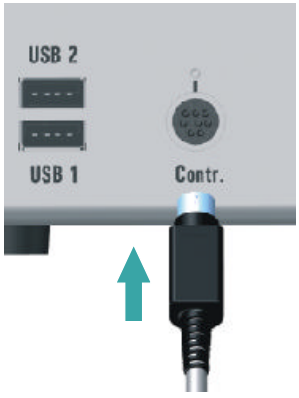
1 Connect the Swing Head with reinforcement to tower 1 (on the right), the Swing Head without reinforcement to tower 2 (on the left).

The connector is located in each case on the rear of a tower.



The Swing Heads can be laid down flat, but not with the drive disc facing downward.

Connecting the controller cable

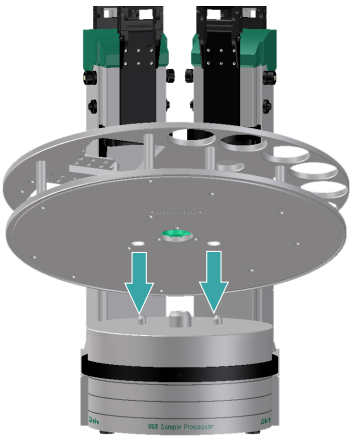


1 Connect the 6.2151.000 controller cable to the rear of the instrument.

Note

The plug on the instrument end of the 6.2151.000 controller cable is protected against accidental disconnection by means of a pull-out protection feature. If you wish to pull out the plug, you will first need to pull back the outer plug sleeve marked with arrows.

Attaching the sample rack



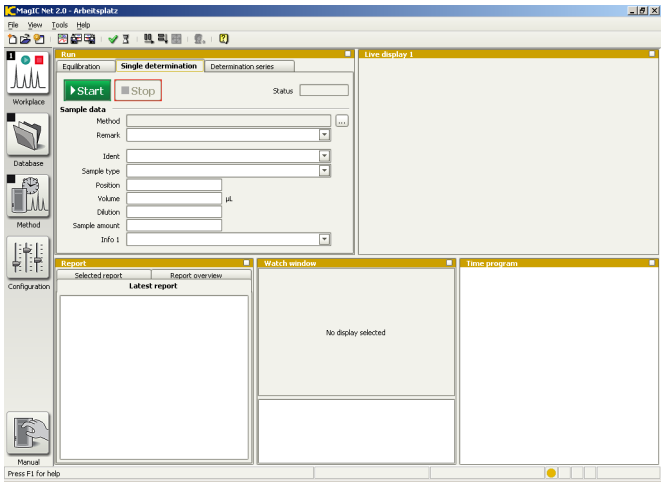
1 Attach the sample rack in such a way that the two openings in the bottom of the rack engage with the guide bolts on the turntable.

2 Tightly screw in the handle of the sample rack.

2.2 Installing MagIC Net™

Installing MagIC Net

1 Insert the MagIC Net CD into the CD drive of the PC and carry out the installation following the instructions. After this, start MagIC Net.



2.3 Configuring the Swing Heads

Connecting the controller cable to the PC

1 Connect the controller cable to a USB port on the computer.

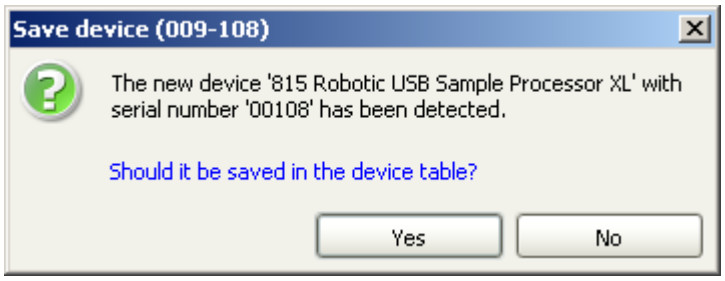
For Windows 2000: the instrument is recognized and the driver is installed automatically.

For Windows XP: the instrument is recognized and the installation assistant for the driver is started automatically. Select the option "Install software automatically" and click on **[Next]**. Exit the assistant with **[Finish]**.

For Windows Vista: the instrument is recognized and the installation assistant for the driver is started automatically. Select the option "Find and install driver software". Agree to all of the requests that follow. The installation assistant will be exited automatically.

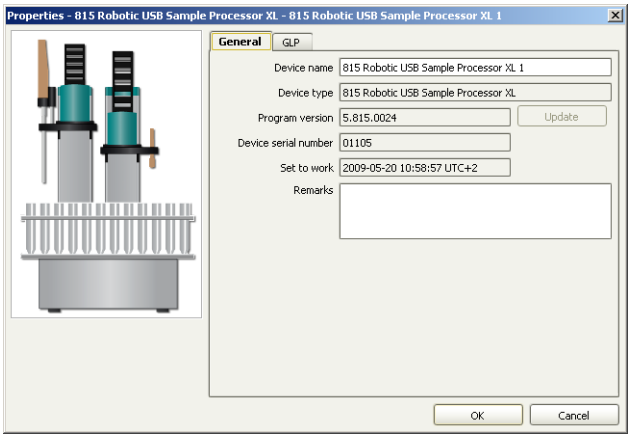
Instrument registration

The USB Sample Processor is automatically recognized by MagIC Net:



1 Confirm with **[Yes]**.

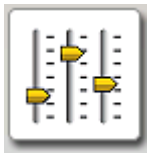
The properties window for configuring the instrument is displayed.



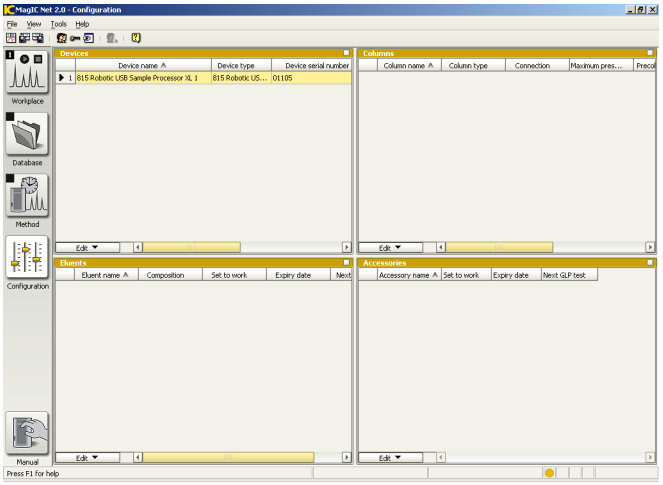
2 Confirm with **[OK]**.

Configuring Swing Heads

Now configure the robotic arms for both towers.

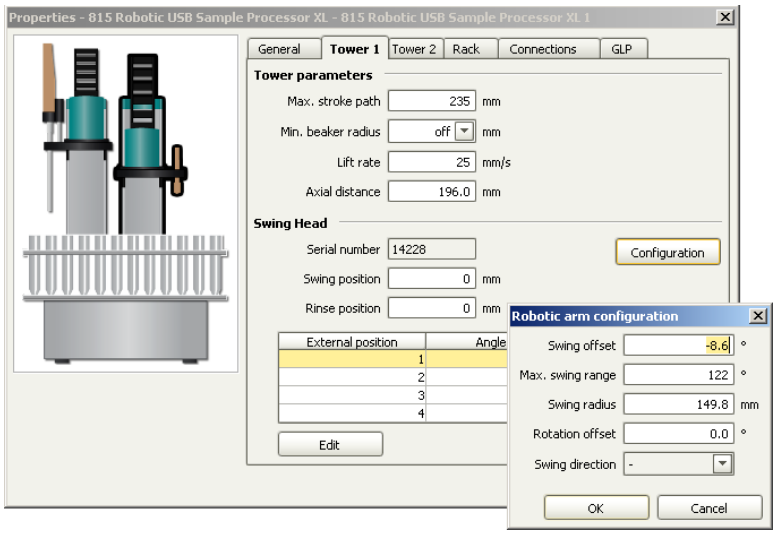


1 Click the **Configuration** icon.



2 Double-click on the instrument name **815 Robotic USB ...** in the **Devices** window.

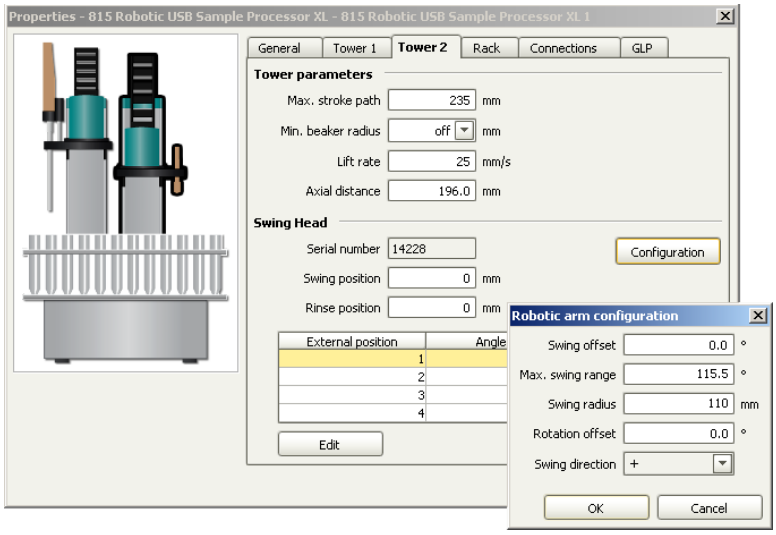
3 First click on the **Tower 1** tab and then on **Configuration**.



Enter the following settings:

- Swing offset **–8.6°**
- Maximum swing range **122°**
- Swing radius **149.8 mm**
- Rotation offset **0.0°**
- Swing direction **–**

4 First click on the **Tower 2** tab and then on **Configuration**.



Enter the following settings:

- Swing offset **0.0°**
- Maximum swing rage **115.5°**
- Swing radius **110 mm**
- Rotation offset **0.0°**
- Swing direction **+**

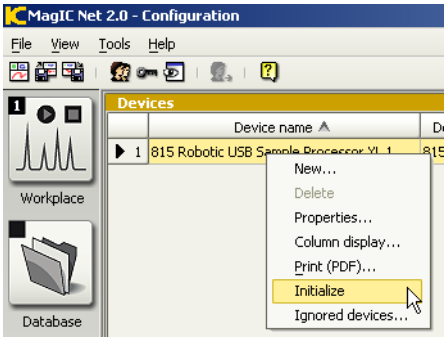
5 Finish the settings with **[OK]**.

The instrument must be reinitialized in order to make the settings effective.

6 Click on **[OK]**.

7 Attach a sample rack on the turntable of the instrument.

8 Right-click on the instrument name **815 Robotic USB ...** in the **Devices** window and click on Initialize.



The Sample Processor is initialized. The settings of the Swing Heads and robotic arms are now valid.

2.4 Mounting the Swing Heads

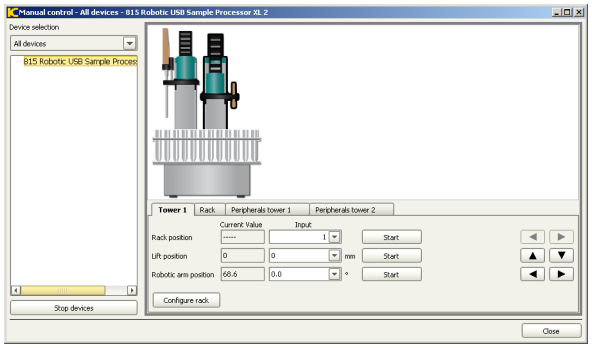
Preparing the towers

Both lifts must be moved into an appropriate position in order to ensure that the mounting of the Swing Heads and the robotic arms can be carried out without problem.

1 **Opening the manual control**

In the symbol bar of MagIC Net, click the hand symbol.

2 Under **Device selection**, first select **All devices** and then the **815 Robotic USB ...**. Click the tab **Tower 1**.



3 **Moving the lift into position**

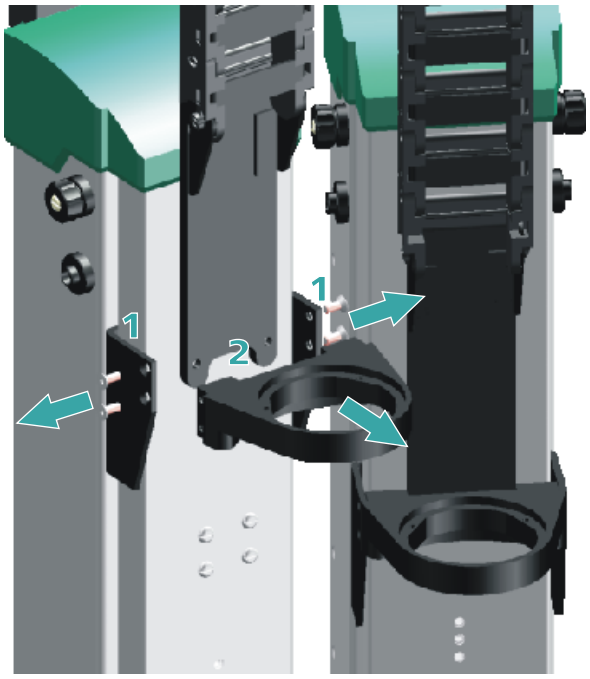
Under **Rack position**, click on **[Start]**.

The sample rack moves to a defined position. Now the lift can be moved.

4 Under **Lift position**, click on the arrow button "down" until the lift 1 has moved approx. 180 mm downwards.

The two lifts are now in a favorable position permitting easy access to all of the screws for mounting the Swing Heads.

Removing the titration head holders



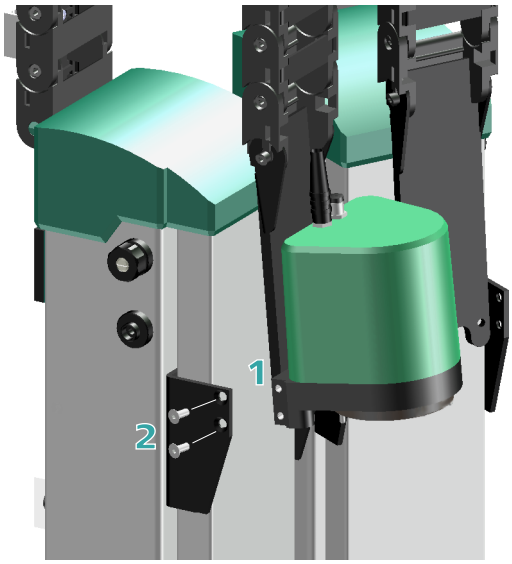
1 Release both the outside and the inside holder screws on tower 2 (left).

2 Loosen and remove the holder from the holder plate of the guide chain.

3 Remove the holder from tower 1 as well.

Use the hexagon key provided. The screws will be needed again later.

Mounting the Swing Heads

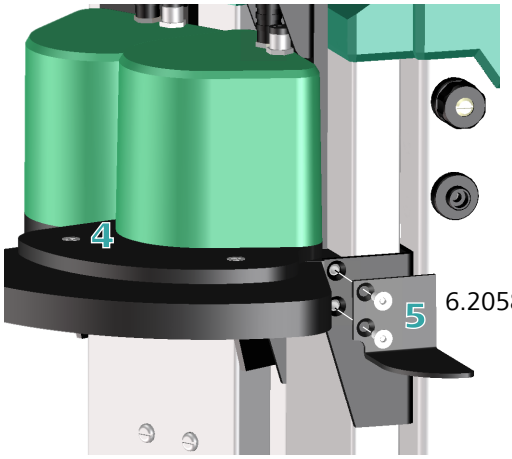


1 Screw the Swing Head without reinforcement tightly to the holder plate of the guide chain on tower 2 with two V.024.4012 countersunk screws.

2 Clamp the Swing Head between the guide jaws and screw it tightly.

3 Screw the second Swing Head (with reinforcement) tightly to the holder plate of the guide chain on tower 1 with two V.024.4012 countersunk screws.

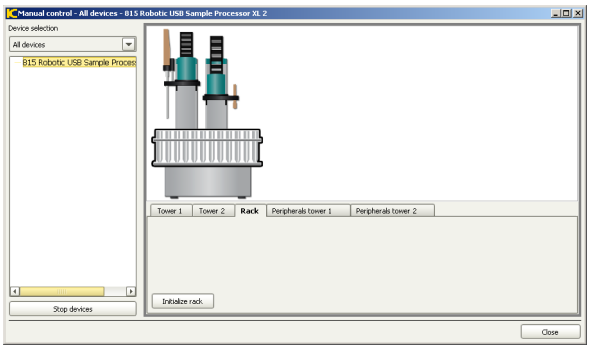
4 Clamp the Swing Head between the guide jaws and screw tight the two screws on the left-hand side.



5 Fasten the 6.2058.040 robotic arm reinforcement to the right-hand side while at the same time fixing the Swing Head in place. Use for this purpose the two screws supplied with the robotic arm reinforcement. These are longer than the ones previously used.

Initializing the rack and the Swing Heads

Both Swing Heads must be moved to the starting position for the mounting of the robotic arms.



1 On the tab **Rack**, click on **[Initialize rack]**.

Both lifts are moved upward. The Swing Heads are now in starting position.

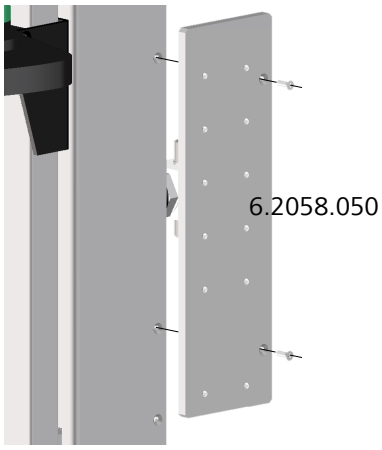
2.5 Mounting the deflector, Luer connector and collection container

When injection needles and disposable filters are used, these need to be stripped off the robotic arm again afterwards. A deflector has been mounted for this purpose. Proceed as follows:

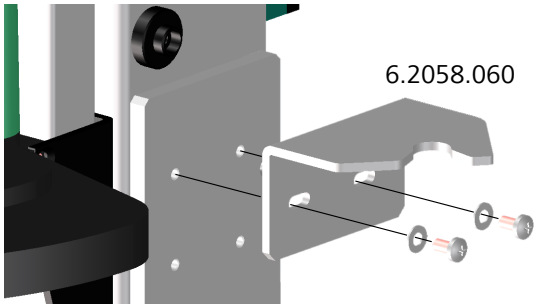
Mounting the deflector

1 Loosen the uppermost two screws on the right-hand side of Tower 1.

2 Screw the 6.2058.050 fastening plate tightly with the aid of the screws supplied.



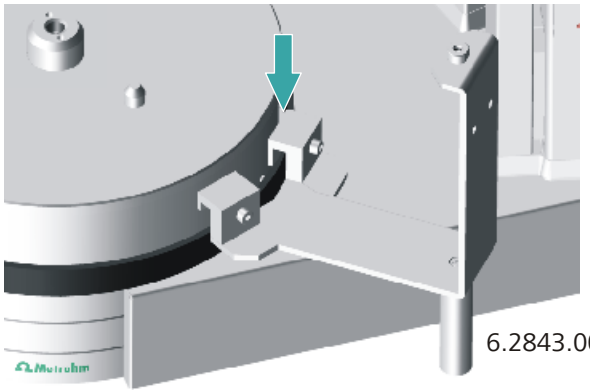
3 Screw the deflector tightly to the fastening plate with the screws and washers supplied. It is recommended that the highest position be selected. The deflector can be shifted laterally as required.



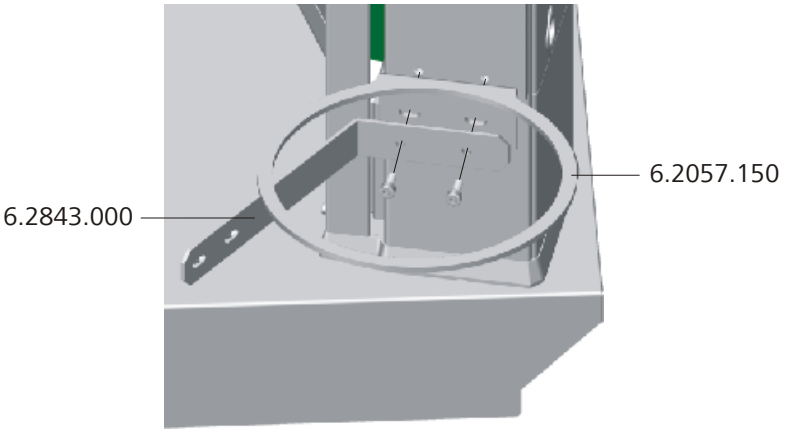
Mounting the Luer connector and collection container

1 Remove the sample rack.

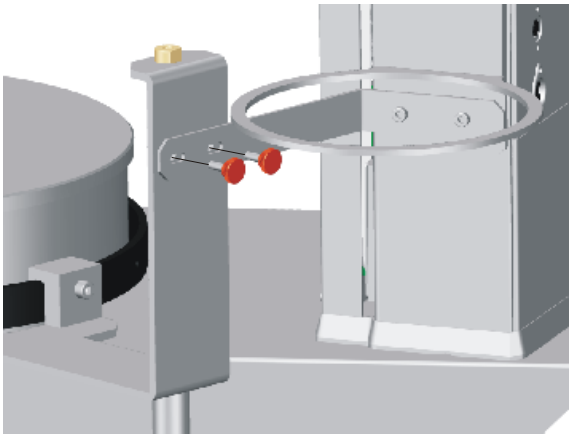
2 Fix the holder with the 6.2843.000 Luer connector as illustrated to the mounting rail with the aid of the clamps. The clamp on the right must enclose the spacer bolt of the mounting rail.



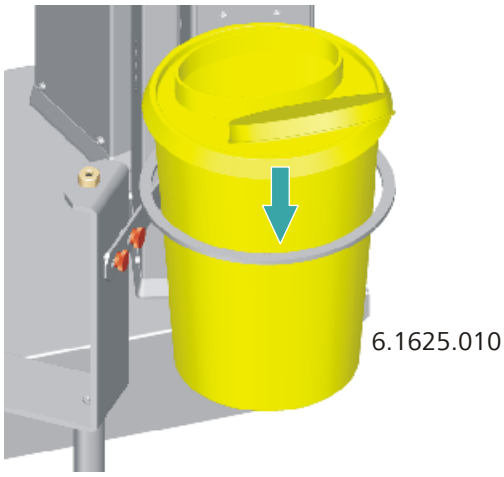
3 Fasten the 6.2057.150 holder for the collection container and the stabilizing square of the 6.2843.000 Luer connector together to the fastening plate of the tower, see figure.



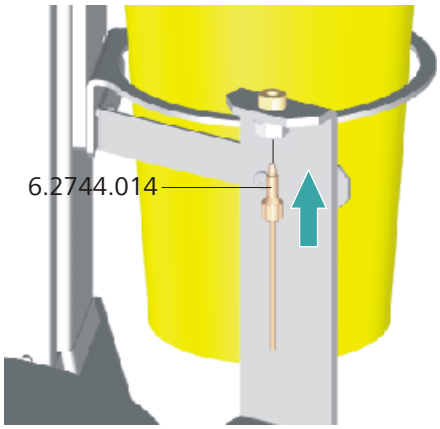
4 Fix the holder of the Luer connector with both knurled screws supplied to the stabilizing square.



5 Guide the 6.1625.010 collection container with opened cover into the holder.



6 Connect a PTFE capillary with the aid of a 6.2744.014 pressure screw from below to the Luer connector. Connect the PTFE capillary to the injection valve of the ion chromatograph. Select a capillary which is as short as possible.



7 Reattach the sample rack onto the instrument.

2.6 Mounting the transfer robotic arm

Prepare the Swing Head

After initialization, the drive disc of the Swing Head is positioned as though the robotic arm were located in the outermost position. In order to be able to mount the robotic arm in a favorable position, rotate the drive disc with **Manual control** in MagIC Net™ as follows:

1 **Open the manual control**

In the symbol bar of MagIC Net™ , click the hand symbol.

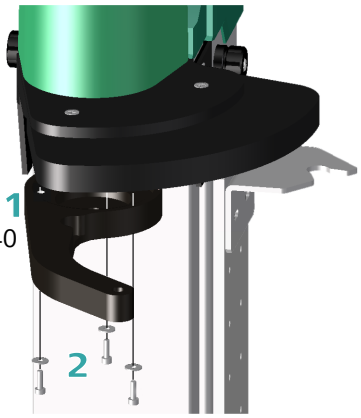
2 Under **Device selection**, first select **All devices** and then the **815 Robotic USB ...**. Click the tab **Tower 1**.

3 Under **Rack position**, click on **[Start]**.

The rack moves to a valid rack position.

4 Click on the arrow button "left" under **Robotic arm position** until the drive disc is no longer moving.

Mounting the robotic arm



6.1462.240

Mount the 6.1462.240 robotic arm to tower 1 as follows:

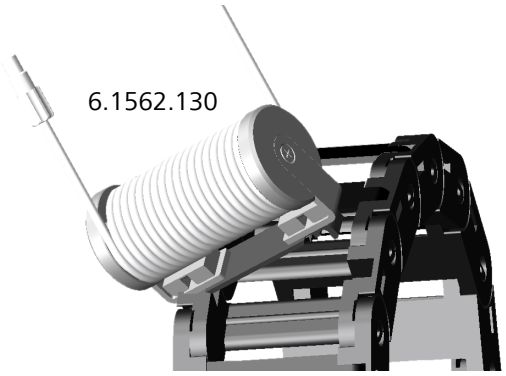
1 Align the robotic arm parallel to the left-hand edge of the Swing Head reinforcement and graze it across the guide pins of the drive disc of the Swing Head from below. The correct position of the arm can be found in the previous illustration

> **Note**
>
> Take care to ensure that you do not twist the drive disc, thus causing pressure against the drive.

2 Screw the robotic arm to the Swing Head tightly with the screws and washers provided.

Mounting the transfer tubing

A sufficiently long transfer tubing is required for aspirating or expelling samples. The 6.1562.130 transfer tubing contains more than 10 mL of volume and is placed in a holder on the guide chain of tower 1. Mount it as follows:

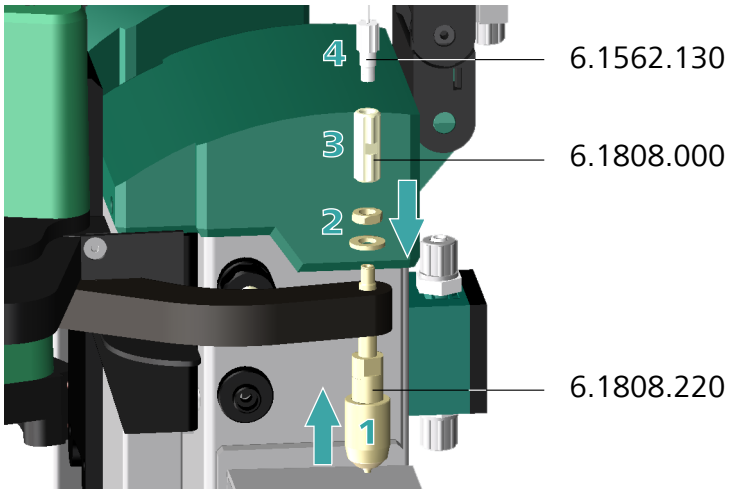


1 Use a screwdriver to open and remove one of the chain links on the guide chain, see for this purpose *(see Chapter 2.11, page 28)*.

2 Hang the holder with the 6.1562.130 transfer tubing in the guide chain in place of the removed chain link and press it into place.

Mounting the Luer adapter

Filters or injection needles should be able to be picked up with the transfer robotic arm. The 6.1808.220 adapter is used for this purpose. Mount it as follows:



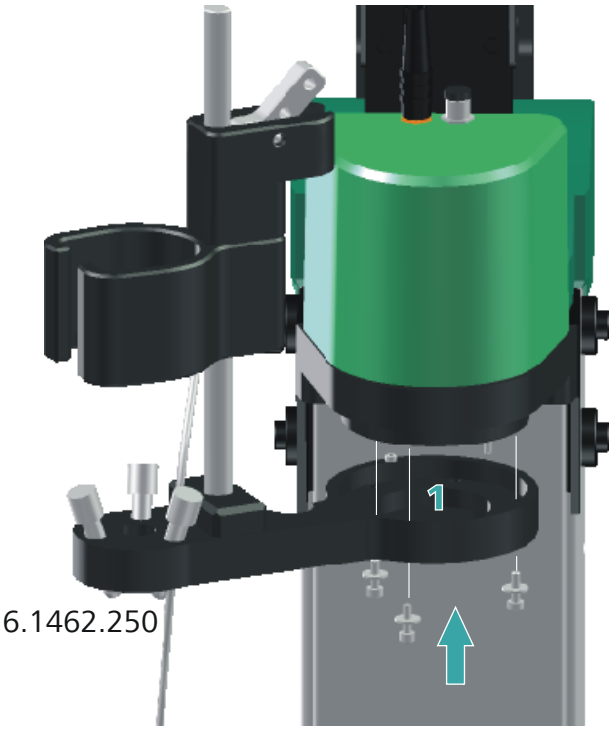
1 Loosen the screw and the washer of the adapter and guide the adapter into the robotic arm head from below.

2 Screw the adapter tightly with the screw and the washer. If needed, tighten carefully with a wrench.

3 Screw the tubing adapter (with 2x M6 inner thread, supplied with the adapter) tightly onto the adapter.

4 Fasten the previously mounted 6.1562.130 transfer tubing to the 6.1808.000 tubing adapter.

2.7 Mounting the Polytron robotic arm



Mount the 6.1462.070 robotic arm to tower 2 as follows:

1 Hold the robotic arm in such a way that the holder faces to the left and and slip it over the guide pins of the drive disc from below. While doing so, let the robotic arm point outwards as far as possible, i.e. towards the tower - see above.

Note

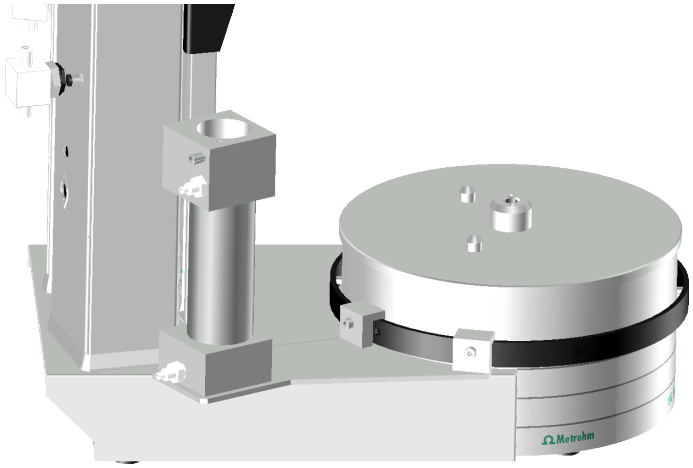
Take care to ensure that you do not twist the drive disc, thus causing pressure against the drive.

2 Screw the robotic arm to the Swing Head tightly with the screws and washers provided.

2.8 Washing station and drip pan

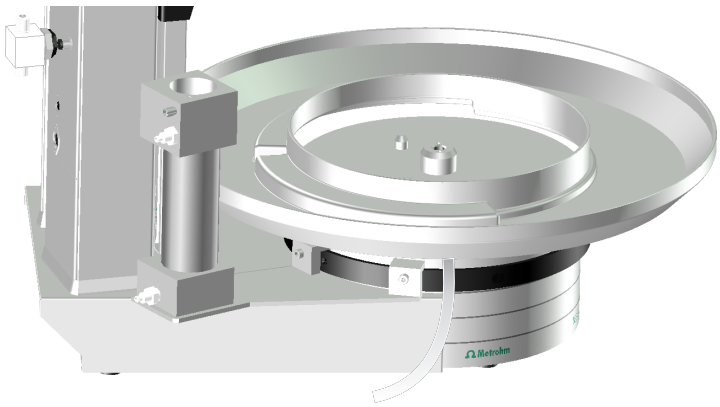
To mount the washing station and the drip pan, remove the sample rack. Now proceed as follows:

1 Mount the washing station to the left next to tower 2 on the assembly rail and screw it tightly.



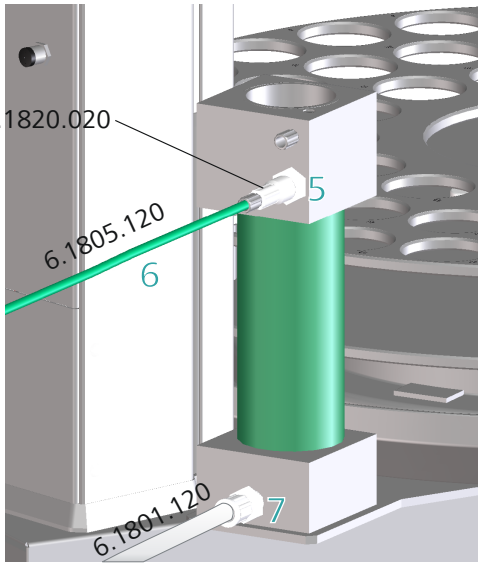
2 Fasten the enclosed tubing to the drainage nipple on the drip pan and guide the free end of the tubing into a drain or a waste container.

3 Place the drip pan over the stirrer rail. The correct alignment of the drip pan can be seen from the following illustration. Correct the position of the washing station slightly as needed.



4 Reattach the sample rack.

5 Fasten the 6.1820.020 screw connector with the M6 connector to the upper, larger tubing connector of the washing station.



6 Connect the green 6.1805.120 FEP tubing (1 m length) to the screw connector. This is the feed line of the washing station. Connect the other end of the tubing to the distributor of tower 2 *(see "Rinsing tubings at tower 2", page 28)*.

7 Fasten a 6.1812.000 PTFE tubing to the lower tubing connector of the washing station. This is the outlet of the washing station.

- Shorten the tubing to a suitable length, so that it can be connected to a peristaltic pump (772 Pump Unit).
- Remove the union nut of lower tubing connector and guide it over the end of a **6.1812.000 PTFE tubing**. You may have to extend the tubing end in order to be able to better mount the tubing, see the following note.
- Pull the end of the tubing over the connection nipple of the distributor and fasten in place with the union nut.

Note

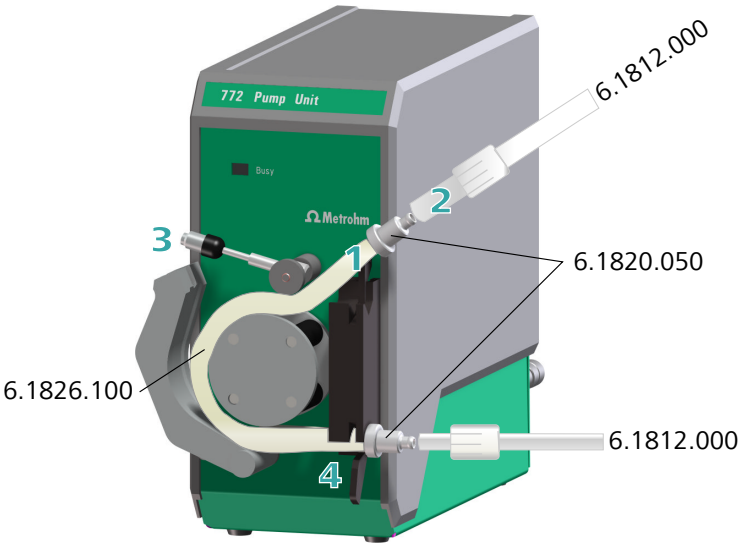
The opening of the tubing may need to be widened with a sharp object (e.g. with a Phillips screwdriver).

A piece of sandpaper may be used to get a better grip on the tubing.

Do not extend the tubing end before having slid the union nut onto the tubing.

2.9 Connecting and setting up the peristaltic pump

A peristaltic pump 772 Pump Unit is used for aspirating the washing station at tower 2.

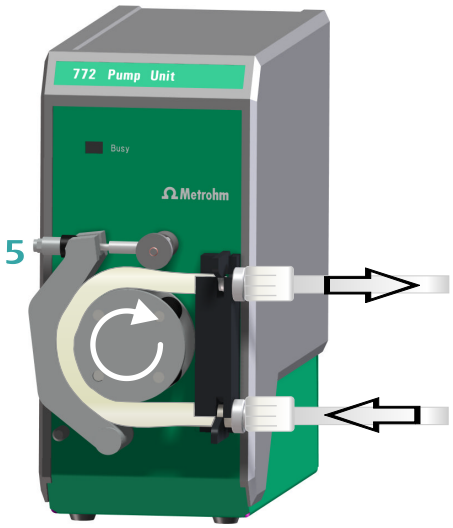


1 Cut one piece of 6.1826.100 pump tubing down to a length of approximately 17 cm and attach a 6.1820.050 olive connector at both ends.

2 Fasten a piece of 6.1812.000 PTFE tubing leading to a waste container to one of the olive connectors. Attach the 6.1812.000 PTFE tubing that is connected to the washing station as a drain connection to the other olive connector.

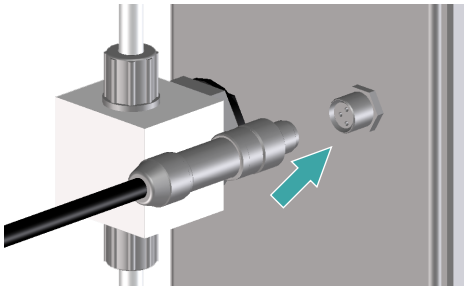
3 Release the fixing lever by rotating the set screw and fold open the pressure clamp.

4 Sling the pump tubing around the rotor and fasten it with the tubing clamps. The rotor turns in clockwise direction. The inlet tubing must therefore be clamped below, the outlet tubing above.



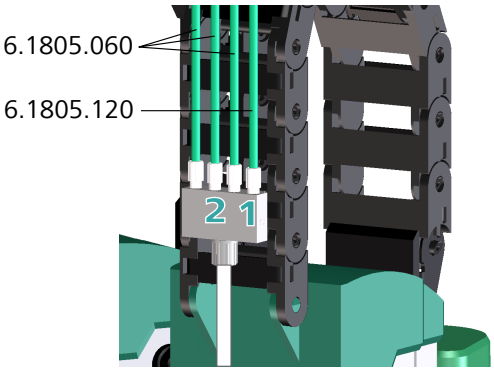
5 Apply pressure to the pressure clamp and clamp tightly with the fixing lever. Tighten the set screw to an extent sufficient to ensure that the pump tubing is unable to shift position. The flow rate of the pump can be regulated later with the set screw while the pump is running .

6 Connect the connection cable of the pump to tower 2. The instrument must be switched off thereby.



2.10 Setting up the rinsing tubings

Rinsing tubings at tower 2



Install the tubing for rinsing the washing station as follows:

1 Connect the green inlet tubing (6.1805.120) of the washing station to one of the four connectors on the tower 2 distributor.

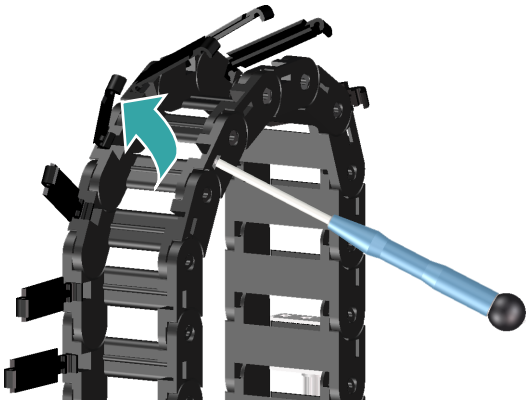
2 Connect three 6.1805.060 tubings (60 cm) to the tower 2 distributor.

3 Fasten a 6.1812.000 PTFE tubing to the tower 2 valve. Connect the other end of the tubing to a canister with rinsing liquid (e.g. water).

2.11 Opening guide chain

Tubings and cables can be placed into the guide chain of the towers.

You can open the individual chain links with a screwdriver as follows.



1 Open the guide chain

- Insert a screwdriver into the groove located on the side of a chain link.
- Loosen the clip with a forceful leverage movement.
- Pull the clip out of the chain by hand.
- Repeat the above actions for each chain link.

2 Insert into the guide chain

- Place the required tubings and cables into the guide chain.

3 Close the guide chain

- Close the clip for each chain link again by hand and apply forceful pressure to snap them into place.

Caution

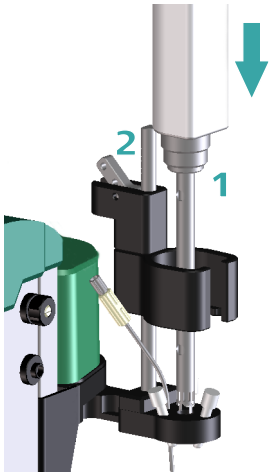
Take care to ensure that any cables and tubings that are fixed in the guide chain are not able to hinder the free movement of the lift or of the robotic arm. This could lead to damage to the affected drive.

The clip of one chain link can be removed entirely if required by releasing it on both sides.

2.12 Assembling and mounting the Polytron® drive

Please consult the Polytron user manual for details how to mount the aggregate to the **Polytron PT 1300 D**.

Mounting the Polytron



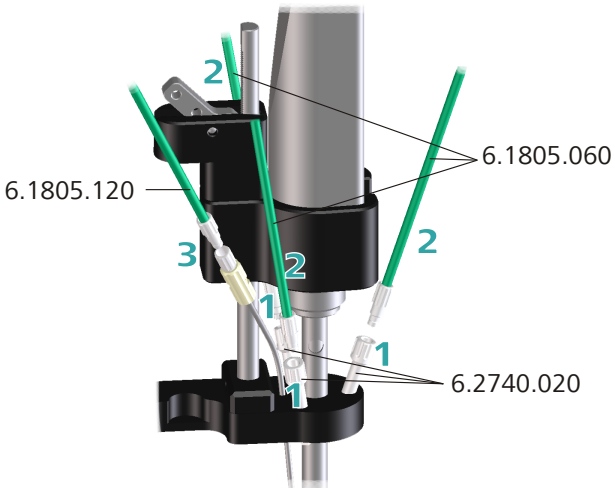
Mount the Polytron as follows:

1 Insert the Polytron with the aggregate already mounted into the robotic arm holder on tower 2 from above.

2 Readjust the position of the holder if necessary. Press down the fixing lever of the holder to accomplish this.

2.13 Mounting the rinsing tubings for the Polytron®

For rinsing the Polytron aggregate rinsing nozzles must be mounted on the robotic arm. Proceed as follows:



1 Replace the three stoppers on the Polytron robotic arm with 6.2740.020 rinsing nozzles.

2 Connect the three rinsing tubings that are connected to the tower 2 distributor to the rinsing nozzles.

3 The preinstalled tubing of the robotic arm is used to add solvent to the sample. Connect a 6.1805.120 to it and connect the other end of the tubing to to the port 1 of the Dosino with a 50 mL dosing unit.

2.14 Connecting the Polytron®

The **Polytron® PT 1300 D** is comprised of a control module and a dispersion drive with a dispersion aggregate for mixing and shredding solid samples. The control device is directed by a PC software, e.g. *tiamo* via a serial RS232 connector.

Consult the Polytron user manual for details about setting up the connections. The Polytron is connected as follows:

1 Connect the connection cable of the dispersion drive to the front side of the control module.

2 Check the mains voltage setting on the connection socket on the rear side of the control module. Switch the device off. Plug in the mains cable and connect with a socket.

3 Connect the 6.2134.040 RS232 connection cable to the 9-pin connection socket on the rear side of the control module. Plug in the other

end of the cable to the COM1 or COM2 port on the PC. The port on the PC is usually marked with **IOIOI**. If the PC has no serial interface, then a USB port on the PC can be used with the aid of an RS232/USB converter (e.g. the 2.145.0320 Edgeport).

Note

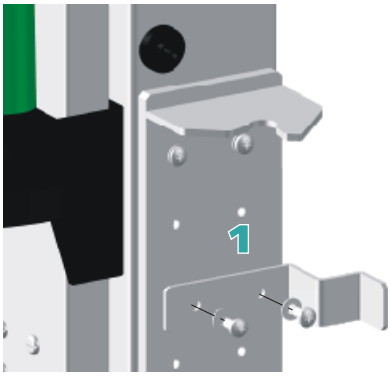
The Polytron must be registered manually in *tiamo* as an RS232 device.

2.15 Mounting the safety shield

Safety shield 6.2751.150

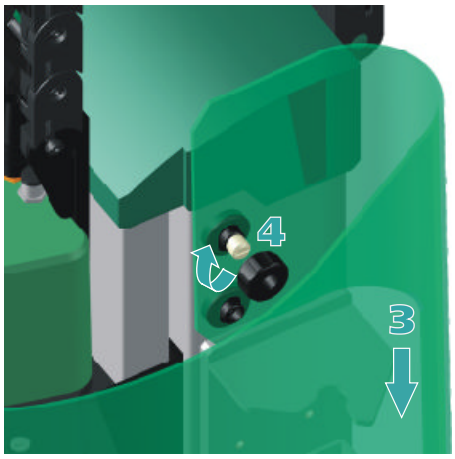
The 815 Robotic Soliprep for LC may not be operated without a safety shield. Install it as follows:

1 Mounting the spacer for the safety shield with the screws supplied to tower 1 according to the following figure.



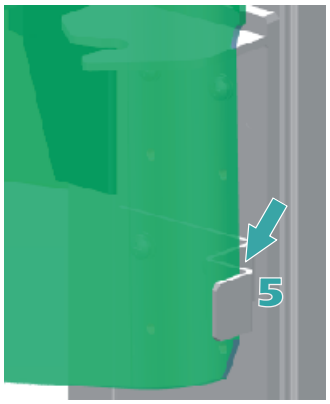
2 Unscrew the black nuts on both sides of tower 1.

3 Pull the green 6.2751.150 safety shield over tower 1, starting from the top.



4 Screw the safety shield tightly with the two nuts as shown in the following illustration.

5 Adjust the safety shield on the spacer, see the following figure.



2.16 Installing the Dosino

For the transferring and diluting of the sample, two Dosinos with a 10 mL and a 50 mL dosing unit is used. They are being installed as follows:

Preparing the Dosino 1 for sample transfer

1 Screw an adsorber tube filled with cotton to the **Vent** connector on the 10 mL dosing unit.

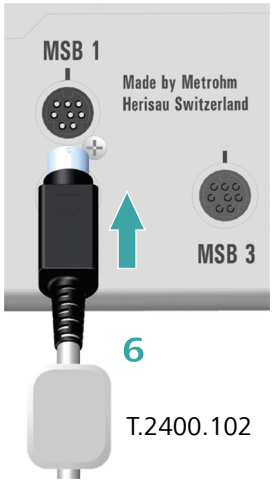
2 Equip the dosing unit with a filling tubing (Port 2 on the underside of the dosing unit) and screw it onto a 6.1808.070 clear glass bottle (2 L, with GL 45 thread). The bottle should be filled with the solvent (water or an organic solvent) which is also used for sample dispersion.

3 Connect the transfer tubing to tower 1 with the end that is still free to Port 1 on the dosing unit.

4 Place the Dosino (dosing drive) on the dosing unit.

5 Equip the connection cable of the Dosino with an anti-interference adapter made of ferrite (T2400.102) (see drawing).

Connect the connection cable to the MSB connector 1 (MSB 1) on the rear of the Sample Processor.



Preparing the Dosino 2 for diluting

Install the Dosino 2 in the same way as Dosino 1. Use the 50 mL dosing unit. Fill the clear glass bottle with a suitable dilution medium (e.g. water).

1 Screw an adsorber tube filled with cotton to the **Vent** connector on the 50 mL dosing unit.

2 Equip the dosing unit with a filling tubing (Port 2 on the underside of the dosing unit) and screw it onto a 6.1808.070 clear glass bottle (with GL 45 thread). The bottle should be filled with the dilution medium (e.g. water).

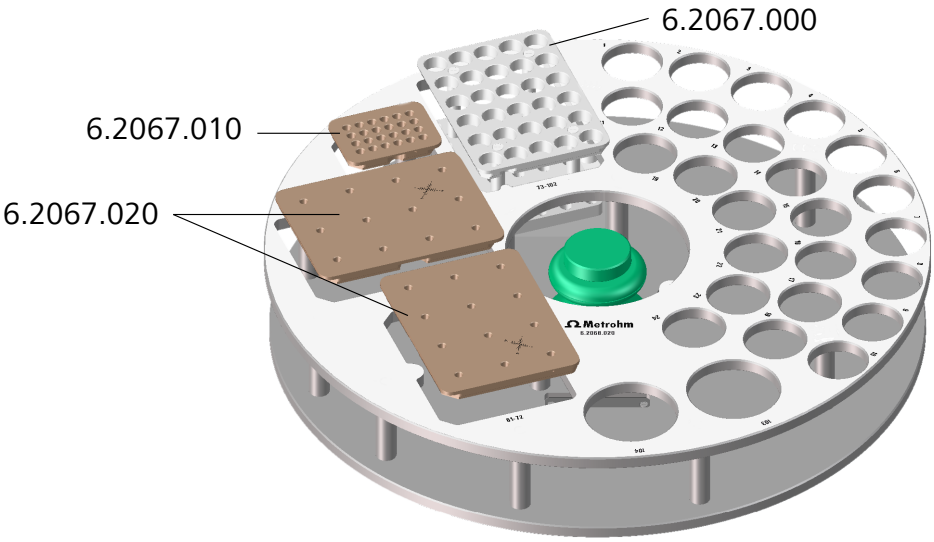
3 Connect the inlet tubing on the Polytron robotic arm (tower 2) with the end that is still free to port 3 on the dosing unit.

4 Place the Dosino (dosing drive) on the dosing unit.

5 Equip the connection cable of the Dosino with an anti-interference adapter made of ferrite (T2400.102) and connect it to the MSB connector 2 (MSB 2) on the rear of the Sample Processor.

2.17 Equipping the rack

In addition to sample vessels, the sample rack can also be equipped with various so-called **Inserts**, which can act as receptacles for various utensils.

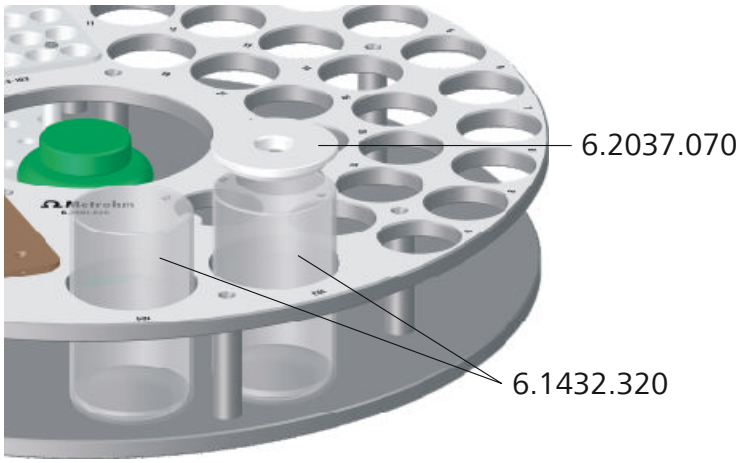


The inserts illustrated above are:

- 6.2067.000 - Insert for 6.2743.050 sample tubes (11 mL)
- 6.2067.010 - Insert for injection needles with Luer connector (maximum length 50 mm)
- 6.2067.020 - Insert for disposable membrane filters with Luer connector (maximum diameter 30 mm). This insert has a positioning reticle for adjusting the rack and the robotic arm.

Each insert is provided with a recess that prevents it from being inserted with the incorrect alignment.

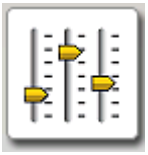
Two positions on the sample rack are reserved for rinsing and waste beakers.



The lid with the hole belongs on the waste beaker (position 103) into which a preliminary filtrate of the sample solution is to be disposed of when membrane filters are used. The filter can be placed on the hole in the lid with the robotic arm and pressure can be applied to force the sample solution through the filter.

The sample beaker can be defined as a special beaker for the purpose of dabbing off the Polytron aggregate if required.

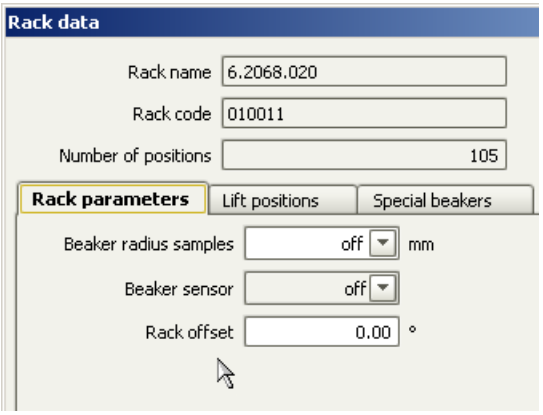
3 Defining rack positions



1 In MagIC Net™ , select **Configuration**.

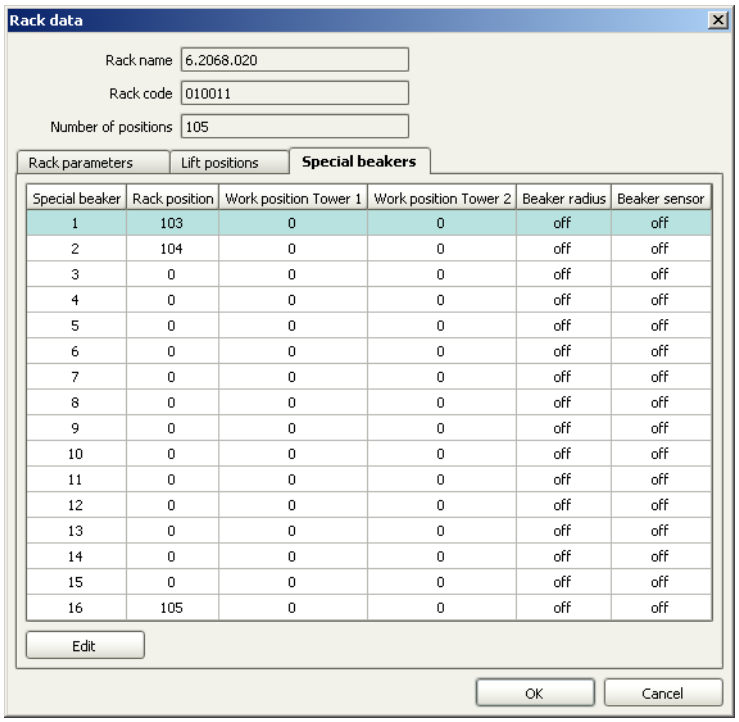
2 Double-click on the device name **815 Robotic USB...**.

3 Switch over to the tab **Rack** and click on **[Rack data]** to open the rack parameter settings.

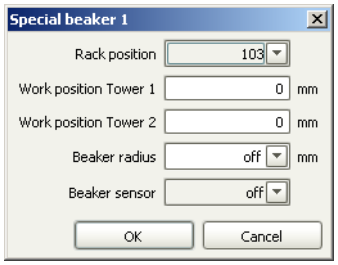


4 Select the tab **Special beaker**.

Special beaker on the sample rack 6.2068.020



1 Select the 1st line (**Special beaker 1**) and click on **[Edit]**.



2 Under **Rack position** select **103**.

3 Close the dialog window with **[OK]**.

4 Assign the rack position **104** to **Special beaker 2**, as described above.

5 The last position of the sample rack is conceived as **Adjusting position**. Assign rack position **105** to **Special beaker 16**.

6 Close the rack data table with **[OK]**.

4 Adjusting rack and robotic arm

The Luer adapter must be positioned precisely on the robotic arm for picking up membrane filters or syringe needles. In order to ensure this, it is necessary to align the sample rack and the robotic arm precisely in relation to one another.

The control software MagIC Net allows the user to enter a so-called "offset" in the configuration of a robotic arm or a sample rack (rack table). This allows fine tuning to be performed.

The adjustment only needs to be made when a 6.2068.020 or 6.2068.030 sample rack is used. The inserts for membrane filters which can be used with these racks have a positioning reticle. This is the adjusting position.

Preparing the Sample Processor

Proceed as follows:

1. Put the sample rack in place.

   The insert (or the inserts) for membrane filters must be attached.

2. Start MagIC Net.

3. Open the Manual control with a click on the corresponding icon in the toolbar.

4. Under **Device selection ▸ All devices ▸ 815 Robotic USB...**, select the tab **Rack**.

5. Click on **[Initialize rack]**.

   The sample rack moves into starting position. The rack code is read and the rack table is loaded.

Moving to the positioning reticle

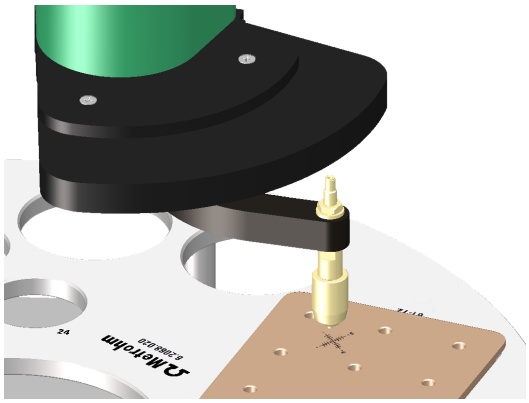
Proceed as follows:

1. In the **Manual control** in MagIC Net, switch to the tab **Tower 1**.

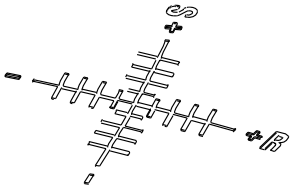
2 Under **Rack position**, select the target position **Special beaker 16** and click **[Start]**.

It is also possible to specify the target position as absolute rack position. For the **6.2068.020** sample rack, the adjusting position is no. **105**; for the **6.2068.030** sample rack the adjusting position is **115**.

3 Under lift position enter **160 mm** as target position and click **[Start]**. Afterwards, move the lift further downwards, millimeter by millimeter, until the robotic arm with the Luer adapter is located precisely above the positioning reticle.



The positioning reticle



The positioning reticle shows the directions of movement for the rack (**R**) and the Swing Head (**S**). The scale lines stand for approximately 0.5° rotation angle or swing angle deviation.

Determine the deviation of the adapter tip from the middle of the positioning reticle.

You can make the corresponding corrections in the MagIC Net configuration afterwards.

Correcting the swing offset

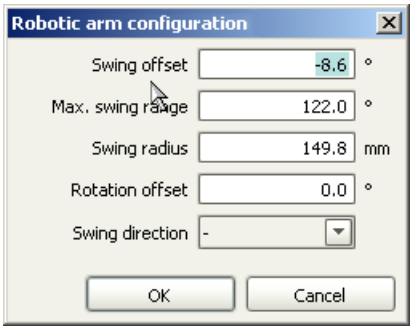
If there is a deviation on the **S line**, then proceed as follows:

1 In MagIC Net, select **Configuration**.

2 Double-click on the device name **815 Robotic USB...**.

3 Switch over to the **Tower 1** tab and open the robotic arm settings with a click on **[Configuration]**.

Confirm the safety prompt with **[Yes]**.



4 Correct the value for the **Swing offset** according to the observed deviation from the positioning reticle. One tick mark corresponds to approximately 0.5°.

5 Close the robotic arm configuration and the Sample Processor properties dialog each with **[OK]**.

6 In the manual control, select the same rack position again and lower the lift down to the positioning reticle.

Now the adapter tip should point to the middle of the positioning reticle. If this is not the case, then an additional correction must be made and the rack offset needs to be corrected.

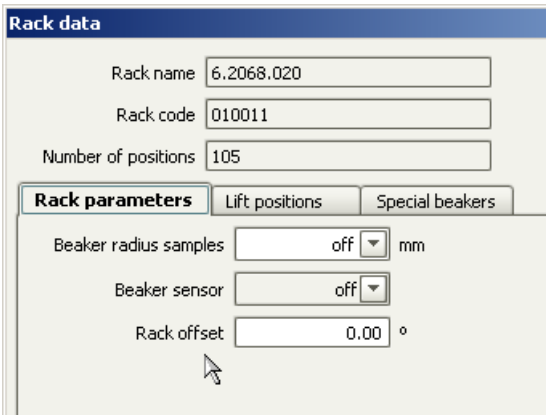
Correcting the rack offset

If there is a deviation on the **R Line**, proceed as follows:

1 In MagIC Net, select **Configuration**.

2 Double-click on the device name **815 Robotic USB...**.

3 Switch over to the **Rack** tab and open the rack parameter settings with a click on **[Rack data]**.



4 Correct the value for **Rack offset** according to the observed deviation from the positioning reticle. One tick mark corresponds to approximately 0.5°.

5 Close the rack data configuration and the Sample Processor properties dialog each with **[OK]**.

6 In manual control, select the same rack position again and lower the lift down to the positioning reticle.

Now the adapter tip should point to the middle of the positioning reticle. If this is not the case, then an additional correction must be made.

5 Setting lift positions

Various lift positions must be defined before process methods are created for the Soliprep.

The simplest way to accomplish this is by having the individual positions established in MagIC Net™ with the aid of the **Manual control**. The established position can then be assigned to a predefined lift position.

The sample rack must be charged with all of the inserts.

Preparing

1 **Opening the manual control**
In the symbol bar of MagIC Net, click the hand symbol.

2 Under **Device selection ▸ All devices**, click on **815 Robotic USB...** and then select the tab **Tower 1**.

5.1 Lift position for sample beakers

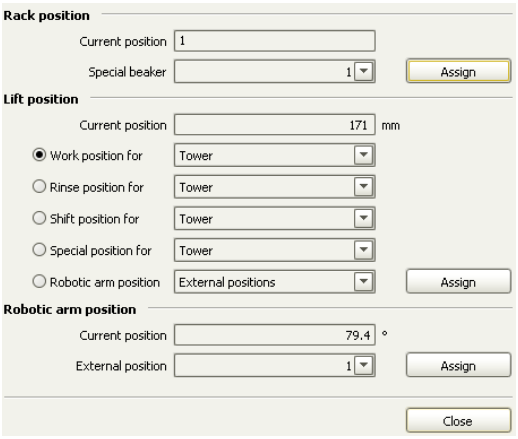
Working height

1 Move to sample position 1. Under **Rack position**, enter **Target position 1** and click **[Start]**.

2 Fasten a plastic needle to the Luer adapter of the transfer robotic arm.

3 Move the lift downward until the needle is at a suitable height for aspiration of the dispersed sample. Under **Lift position** click on the arrow button **[Arrow down]** and also (if required) **[Arrow up]** in order to set a suitable position.

4 Click on **[Configure rack]**.



5 Under **Lift position**, select **Work position for tower**, if this is not yet selected.

6 Click on the associated **[Assign]** button.

7 Click on **[Close]**.

8 Remove the needle from the Luer adapter.

5.2 Lift position for picking up needles and filters

Picking up the needle

1 Move to a rack position 25. Under **Rack position**, enter **Target position 25** and click **[Start]**.

2 Place a plastic needle in the position established in the insert.

3 Move the lift downwards until the Luer adapter engages the needle and it is fixed in place. Under **Lift position** click on the arrow button **[Arrow down]** in order to set a suitable position.

The needle must rest up close against the adapter. The lift may not however be lowered too far, because otherwise the lift drive could become overloaded and suffer damage.

4 Note the current lift position (in mm).

This lift height must be entered in the method as absolute lift position.

5 Move the lift upward and remove the needle.

Picking up the filter

1 Move to rack position 49. Under **Rack position**, enter **Target position 49** and click **[Start]**.

2 Place a membrane filter on the established position in the insert.

3 Move the lift downward until the Luer adapter engages the filter and it is fixed in place. Under **Lift position** click on the arrow button **[Arrow down]** in order to set a suitable position.

The filter must rest up close against the adapter. The lift may not however be lowered too far, because otherwise the lift drive could become overloaded and suffer damage.

4 Note the current lift position (in mm).

This lift height must be entered in the method as absolute lift position.

5 Move the lift upward and remove the filter.

5.3 Lift positions for special beakers

Special beaker 1

1 Move to special beaker position 1. Under **Rack position**, enter **Target position 103** and click **[Start]**.

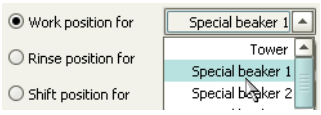
2 Place a sample beaker on the established position. Lay the cover with the hole on the sample beaker.

3 Fasten a membrane filter on the Luer adapter of the transfer robotic arm.

4 Move the lift downward until the filter rests against the cover of the sample beaker. Under **Lift position** click on the arrow button **[Arrow down]** in order to set a suitable position.

5 Click on **[Configure rack]**.

6 Under **Lift position** select the **Work position for Special beaker 1**.



7 Click on the associated **[Assign]** button.

8 Click on **[Close]**.

9 Move the lift upward and remove the membrane filter.

Special beaker 2

1 Move to special beaker position 2. Under **Rack position**, enter **Target position 104** and click **[Start]**.

2 Place a sample beaker on the established position.

3 Move the lift downward until the Luer adapter arrives at a suitable position for rinsing the transfer tubing. Click on the arrow button **[Arrow down]** and also (if required) **[Arrow up]** under lift position in order to set a suitable position.

4 Click on **[Configure rack]**.

5 Under **Lift position** select the **Work position for Special beaker 2**.

6 Click on the associated **[Assign]** button.

7 Click on **[Close]**.

5.4 Lift positions for stripping needles and filters

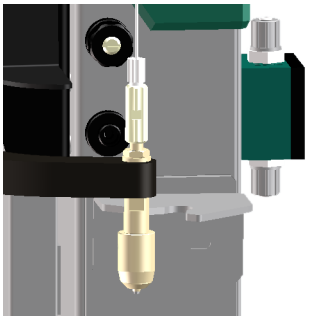
External position 1

1 Under **Device selection** ▸ **All devices**, click on **815 Robotic USB...** and then select the tab **Tower 1**.

2 Fasten a plastic needle or a membrane filter to the Luer adapter of the transfer robotic arm.

3 Under **Robotic arm position** actuate the button **[Arrow right]** until the Luer adapter is approximately 2 cm in front of the deflector.

4 Move the lift downward until the thick sleeve of the Luer adapter is approximately 1 cm underneath the deflector. Click on the arrow button **[Arrow down]** and also (if required) **[Arrow up]** under lift position in order to set a suitable position.



5 Click on **[Configure rack]**.

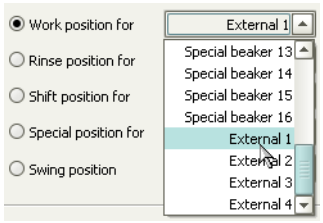
6 Under **Lift position** select **Swing position External positions**.

7 Click on the associated **[Assign]** button.

8 Under **Robotic arm position** select **External position 1**.

9 Click on the associated **[Assign]** button.

10 Under **Lift position** select the **Work position for External 1**.

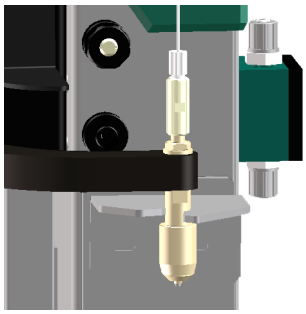


11 Click on the associated **[Assign]** button.

12 Click on **[Close]**.

External position 2

1 Under **Robotic arm position** actuate the button **[Arrow right]** until the Luer adapter is standing to the right. It should now be located in the of the deflector opening.



2 Move the lift upward (arrow button **[Arrow up]**) until the needle or the filter is stripped off and falls into the collection container. Do not move the lift too far upward.

3 Under **Robotic arm position** select **External position 2**.

4 Click on **[Configure rack]**.

5 Under **Lift position** select the **Work position for External 2**.

6 Click on the associated **[Assign]** button.

7 Click on **[Close]**.

8 Move the lift to the **Shift position**.

9 Under **Robotic arm position**, as **Target position** select **External 1** and click on **[Start]**.

5.5 Lift position for the Luer connector

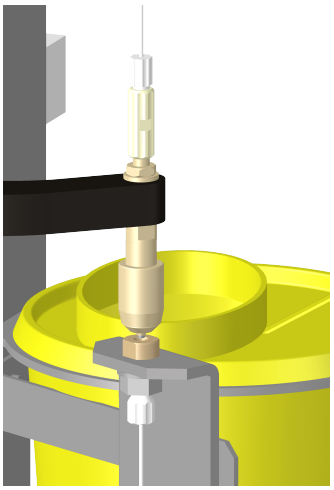
External position 3

1 Under **Device selection** ▸ **All devices**, click on **815 Robotic USB...** and then select the tab **Tower 1**.

2 Under **Robotic arm position** actuate the button **[Arrow right]** until the Luer adapter is located above the Luer connector.

3 Move the lift downwards until the Luer adapter is located approx. 1 mm above the Luer connector.

4 Under **Robotic arm position** actuate the arrow buttons **[Arrow left]** and **[Arrow right]** until both components fit to one another in the middle.



5 Click on **[Configure rack]**.

6 Under **Robotic arm position** select **External position 3**.

7 Click on the associated **[Assign]** button.

8 Click on **[Close]**.

Work position

1. Move the lift upwards by several mm.
2. Fasten a membrane filter to the Luer adapter of the robotic arm.
3. Under **Lift position** actuate the arrow key **[Arrow down]** several times until the membrane filter is tightly placed on the Luer connector.
4. Click on **[Configure rack]**.
5. Under **Lift position** select the **Work position for External 3**.
6. Click on the associated **[Assign]** button.
7. Click on **[Close]**.
8. Move the lift to the **Shift position** and remove the membrane filter from the Luer adapter.

5.6 Lift position for the Polytron

Working height

1. Under **Device selection ▸ All devices**, click on **815 Robotic USB...** and then select the tab **Tower 2**.
2. Move to sample position 1. Under **Rack position**, enter **Target position 1** and click **[Start]**.
3. Move the lift downward until the Polytron is at a suitable height for sample dispersion. Click on the arrow button **[Arrow down]** and also (if required) **[Arrow up]** under lift position in order to set a suitable position.
4. Click on **[Configure rack]**.
5. Under **Lift position**, select **Work position for tower**, if this is not yet selected.

6 Click on the associated **[Assign]** button.

7 Click on **[Close]**.

5.7 Lift position for the washing station

External position 1

These settings apply to tower 2.

1 Move the lift upward until the Polytron is at a suitable height for swinging to the washing station. Click on the arrow button **[Arrow down]** and also (if required) **[Arrow up]** under lift position in order to set a suitable position.

2 Under **Robotic arm position** click on the button **[Arrow left]** until the robotic arm stops.

3 Click on **[Configure rack]**.

4 Under **Robotic arm position** select **External position 1**.

5 Click on the associated **[Assign]** button.

6 Click on **[Close]**.

Work position

1 Under **Robotic arm position** select **External 1** and click on **[Start]**.

2 Move the lift downwards (button **[Arrow down]**) until the Polytron is at the right height for rinsing.

If the Polytron does not fit in the middle of the washing station, then the latter can be shifted laterally.

3 Click on **[Configure rack]**.

4 Under **Lift position** select the **Work position for External 1**.

5 Click on the associated **[Assign]** button.

6 Click on **[Close]**.

6 Controlling the Polytron®

Configuration

Once the Polytron has been set up, it can be configured in MagIC Net.

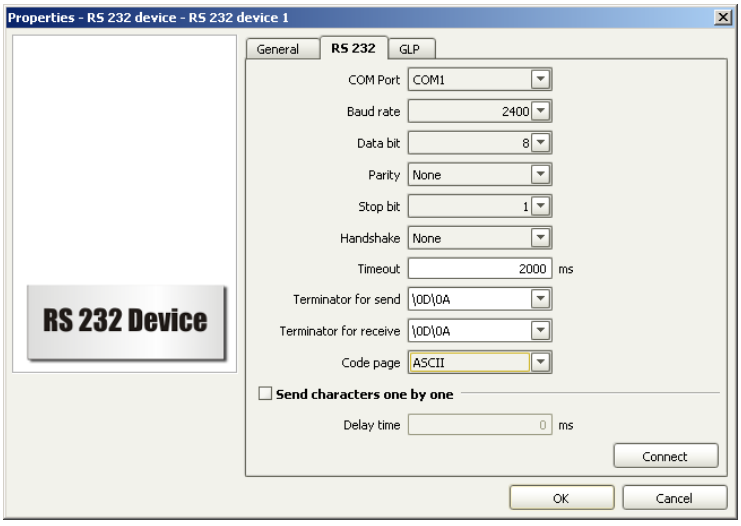
Configuring the Polytron

1 Click the **Configuration** icon.

2 Click on **[Edit]** in the **Devices window**.

3 Select the entry **New…** in the pull-down menu and then, in the device selection under **Miscellaneous**, set up a new **RS232 device**.

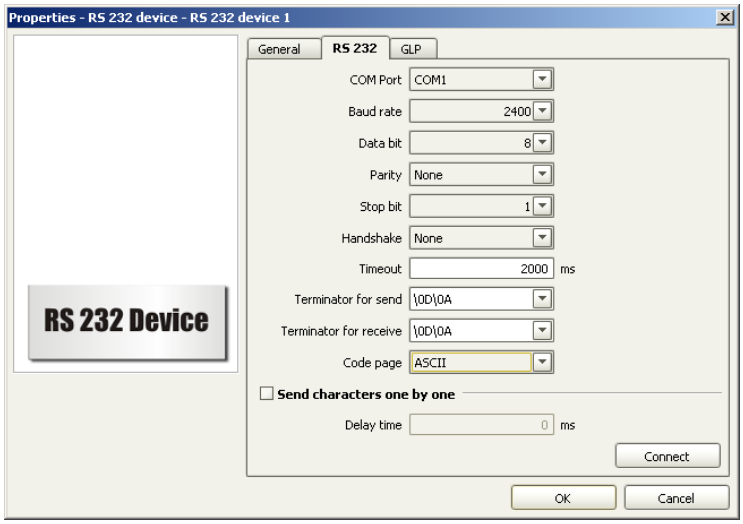
4 Enter a device name and the device serial number of the Polytron under General.



5 Enter the following settings in the dialog window **RS 232**:

- COM Port **COM1** (or the interface on the PC at which you have connected the Polytron)
- Baud rate **2400**
- Data bit **8**
- Parity **None**
- Stop bit **1**

- Handshake **None**
- Timeout **2000** ms
- Terminator for send **\0D\0A** (= CR LF)
- Terminator for receive **\0D\0A** (= CR LF)
- Code page **ASCII**



6 Click on **[Check connection]**.

In the dialog window of the connection test, you can check the data transfer to the Polytron by sending a command to the device. A list of possible commands can be found below, *see page 56*.

7 Close the window with **[OK]** and then quit the configuration dialog with **[OK]**.

Control

The Polytron can be switched off and on with the communications command **TRANSFER**. In addition, the rotational speed of the aggregate can also be set (in revolutions per minute). This can be accomplished when the Polytron is in either switched-on or switched-off status.

The control commands for the Polytron are comprised of a three-digit numerical code.

A TRANSFER command for switching on the device could look as follows:

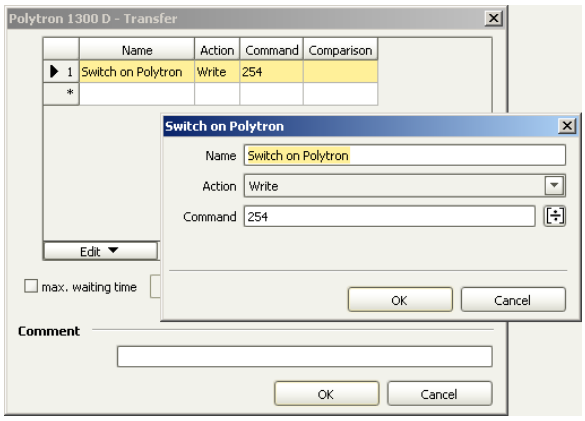


Table 1 Command list of the Polytron 1300 D

Command	Setting	Command	Setting
254	On	060	13000 r/min
253	Off	070	14000 r/min
000	7000 r/min	080	15000 r/min
001	7100 r/min	090	16000 r/min
002	7200 r/min	100	17000 r/min
003	7300 r/min	110	18000 r/min
004	7400 r/min	120	19000 r/min
005	7500 r/min	130	20000 r/min
006	7600 r/min	140	21000 r/min
007	7700 r/min	150	22000 r/min
008	7800 r/min	160	23000 r/min
009	7900 r/min	170	24000 r/min
010	8000 r/min	180	25000 r/min
020	9000 r/min	190	26000 r/min
030	10000 r/min	200	27000 r/min
040	11000 r/min	210	28000 r/min
050	12000 r/min	220	29000 r/min
		230	30000 r/min

7 Accessories

Note

Subject to change without notice.

7.1 Scope of delivery 2.815.4110

Qty.	Order no.	Description
1	2.136.0100	**Polytron PT 1300 D - Metrohm version** Homogenizer with digital display. Included are drive and controller, no dispersing aggregate, see optional accessories
1	1.772.0110	**772 Pump Unit** Peristaltic pump for direct connection to Sample Processors
1	1.786.0010	**786 Swing Head** Auxiliary drive for Sample Processors, for controlling a robotic arm
1	1.786.0110	**786 Swing Head** Auxiliary drive with stabilizer plate for Sample Processors, for controlling a robotic arm
2	1.800.0010	**800 Dosino** Drive with write/read hardware for intelligent dosing units.
1	1.815.0110	**815 Robotic USB Sample Processor XL** Sample Processor with 2 towers, 2 built-in membrane pumps and 2 pump connectors
2	6.1432.320	**Sample beaker 250 mL** Material: borosilicate glass 3.3 Height (mm): 111 Outer diameter (mm): 65 Volume (mL): 250

Qty.	Order no.	Description
1	6.1459.300	**Sample beaker / 120 mL / 100 pieces** Sample beaker with screw cap for sampling, 100 pieces. Material: PP Height (mm): 113 Outer diameter (mm): 40 Volume (mL): 120
1	6.1462.240	**Transfer head for 786 Swing Head, bent and right swinging** Transfer head, bent and right swinging, for 786 Swing Head. In combination with the 6.1808.220 Adapter the transfer head can be used on multi-row racks to pick up tools with luer connection. Material: PP (black)
1	6.1462.250	**Swing arm for Polytron and 786 Swing Head, left swinging** Swing arm for Polytron and 786 Swing Head, left swinging, with one buret tip for the additiona of solvent or titrant and three spray nozzles for cleaning. The swing arm allows the usage of the Polytron for sample preparation on multi row racks. Material: PP (black) Material 2: Metal

Qty.	Order no.	Description
1	6.1546.030	**Extractor rod** For PTFE piston of dosing unit

Qty.	Order no.	Description
1	6.1562.130	**Transfer Tubing with holder 2 x M6 / 10 mL to Sample Processors** Transfer tubing for dilution and preconcentration using a Dosino and Advanced IC Sample Processor Material: FEP Inner diameter (mm): 2 Length (m): 5 Volume (mL): 10

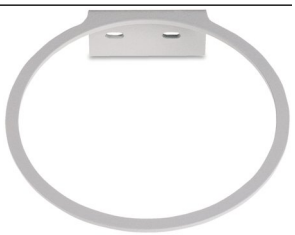
Qty.	Order no.	Description
2	6.1608.070	**Eluent bottle / 2 L / GL 45** Material: Clear glass Height (mm): 262 Volume (mL): 2000

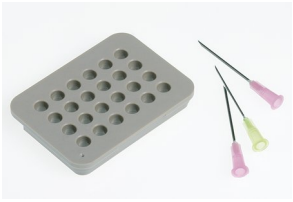
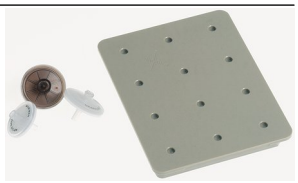
Qty.	Order no.	Description
3	6.1621.000	**Container 10 L** As rinsing or waste container in automated systems. Material: PE Width (mm): 265 Height (mm): 400 Volume (mL): 10000

Qty.	Order no.	Description	
1	6.1625.010	**Collection container for Soliprep** Container for safe collection of used tools in automated systems Material: PP	
2	6.1801.120	**PVC tubing / 4 mm / 6 mm / 2 m** Material: PVC (transparent) Outer diameter (mm): 6 Inner diameter (mm): 4 Length (m): 2	
1	6.1803.030	**PTFE capillary 0.5 mm i.d. / 3 m** Capillary for inline dialysis, for Dialysis Unit, IC Dialysis Sample Processor, IC Liquid Handling Dialysis Unit Material: PTFE Outer diameter (inches): 1/16 Inner diameter (mm): 0.5 Length (m): 3	
3	6.1805.060	**FEP tubing / M6 / 60 cm** With light and kink protection Material: FEP Inner diameter (mm): 2 Length (mm): 600	

Qty.	Order no.	Description	
2	6.1805.120	**FEP tubing / M6 / 100 cm** With light and kink protection Material: FEP Inner diameter (mm): 2 Length (mm): 1000	
1	6.1808.220	**Luer adapter for transfer head** Adapter with outside thread M6 and luer connection for 6.1462.240 Transfer head for using luer tools on multi-row racks Material: PEEK	
1	6.1808.260	**Distributor for pump tubings for Sample Processors**	
2	6.1812.000	**PTFE tubing 4/6 mm, 4m** Material: PTFE Outer diameter (mm): 6 Inner diameter (mm): 4	
1	6.1820.020	**Screw connector M6** Connection piece with M10 thread for 6.1812.XXX tubing and M6 thread for 6.1805.XXX tubing. Material: PVDF	

Qty.	Order no.	Description	
2	6.1820.050	**Screw connector** For 6.1826.100 pump tubing, for peristaltic pumps	
1	6.1826.100	**PP pump tubing 6.4 mm, 1 m** Replacement tubing for the pump tubing in the 772 Pump Unit Material: PP Outer diameter (mm): 9.6 Inner diameter (mm): 6.4 Length (m): 1	
3	6.1828.000	**PVDF connection nipple** For 6.1621.000 container Material: PVDF	
2	6.1829.020	**FEP aspiration tube M6, 0.5 m** For Dosing Unit Material: FEP Inner diameter (mm): 2 Length (mm): 500	
1	6.2037.070	**Lid with hole for 250 mL sample beaker** The lid with hole is used in the Soliprep system to pre-rinse applied syringe filters into the special beaker. Material: PP	

Qty.	Order no.	Description	
2	6.2053.000	**Cable clip** Cable clip for fastening cables and tubes	
1	6.2057.150	**Holder for collection container** Holder for mounting collection container Material: Aluminum	
1	6.2058.040	**Swing arm enhancement for Swing Head 786** The swing arm enhancement is for stabilizing the swing arm connected to the 786 Swing Head and working with various tools Material: Aluminum	
1	6.2058.050	**Fastening plate for deflector and holder for collection container** The fastening plate is mounted at the side of the Sample Processor tower and allows the mounting of a deflector for the automatic pulling off the used tools. Material: Aluminum	
1	6.2058.060	**Deflector for adapter 61808220** The deflector is mounted with the fastening plate (6.2058.050) at the side of the Sample Processor tower and allows the automatic pulling off the used luer tools into the collection container (6.1625.010) Material: Aluminum	

Qty.	Order no.	Description	
1	6.2067.000	**Insert for 30x11mL for Soliprep sample rack** Sample rack insert for 30x11mL (6.2743.050) Material: PVC	
1	6.2067.010	**Insert for 24xSyringe needles for Soliprep sample rack** Sample rack insert for 24xsyringe needles (luer connection) Material: PEEK	
2	6.2067.020	**Insert for 12x30 mm syringe filters for Soliprep Sample rack** Sample rack insert for 12x30 mm syringe filters (luer connection) Material: PEEK	
1	6.2068.020	**Sample rack 24x120 mL for Soliprep** Sample rack for Soliprep with 24 x 120 mL PP beakers (6.1459.300), 2 x 250 mL (6.1432.320) glass beakers and inserts for 30 x 11 mL (6.2743.050), 24 x syringe needles (luer connection) as well as two inserts for 12 x 30 mm syringe filters (luer connection) Material: PVC Outer diameter (mm): 480 Hole diameter (mm): 42	
1	6.2134.110	**Cable RS-232 DB9 socket f – DB9 plug** Connecting Metrohm RS-232 interface (DB9) to a Custom DP40 printer. For Titrinos or 756/831 KF Coulometer. RS-232 extension cable (1:1) Length (m): 1.8	
1	6.2151.000	**Cable USB A – mini-DIN 8-pin** Controller cable Length (m): 1.8	

Qty.	Order no.	Description	
1	6.2621.030	**Hexagon key 4 mm** Length (mm): 73	
1	6.2621.070	**Hexagon key 5 mm** 5 mm. Length (mm): 80	
1	6.2621.120	**Hexagon key 1.5 mm**	
1	6.2621.140	**Hexagon key 2.5 mm**	

Qty.	Order no.	Description
1	6.2711.070	**Drip pan for 789/815/855**

Drip pan for 789, 815, 855 Robotic Sample Processors XL

Material: PVC

Qty.	Order no.	Description
3	6.2740.020	**Spray nozzle**

For the fine-spraying of the rinsing solution

Material: ETFE
Outer diameter (mm): 10
Length (mm): 47

Qty.	Order no.	Description
1	6.2743.057	**Sample tubes 11 mL**

200 pieces. For IC Sample Processors and VA Autosampler

Material: PP
Outer diameter (mm): 16
Length (mm): 108
Volume (mL): 11

Qty.	Order no.	Description
1	6.2744.014	**Pressure screw 2x**

With UNF 10/32 connection. For the connection of PEEK capillaries

Material: PEEK
Length (mm): 26

Qty.	Order no.	Description
1	6.2751.150	**Splash protection for Robotic Soliprep** Splash protection for the Robotic Soliprep systems Filtration and Flexible, these pick up and drop, on tower 1, different tools such as syringe needles. The protection also prevents possible injury by the pivoting arm as well as contact with any accidentally escaping solutions. Material: Plexiglas (PMMA)
1	6.2841.000	**External Polytron washing station for Robotic Sample Processors** The external washing station can be mounted on the side of the Robotic Sample Processor tower and allows the external cleaning of the Polytron while other actions can be carried out on the sample rack. Material: PP Material 2: PVC
1	6.2843.000	**Luer connector with holder for Soliprep**
1	6.3032.210	**Dosing Unit 10 mL** Dosing unit with integrated data chip with 10 mL glass cylinder and light protection, mountable on reagent bottle with ISO/DIN GL45 thread. FEP tubing connection, anti-diffusion buret tip. Volume (mL): 10
1	6.3032.250	**Dosing Unit 50 mL** Dosing unit with integrated data chip with 50 mL glass cylinder and light protection, mountable on reagent bottle with ISO/DIN GL45 thread. FEP tubing connection, anti-diffusion buret tip. Volume (mL): 50
4	T.240.0102	**Ferrite cores** Anti-interference adapters
4	V.024.4012	**Countersunk-head screw**
1	6.2122.0x0	**Mains cable with C13 line socket IEC-60320-C13** Cable plug according to customer requirements. Switzerland: Type SEV 12 6.2122.020

Qty.	Order no.	Description
	Germany, …:	Type CEE(7), VII 6.2122.040
	USA, …:	Type NEMA/ASA 6.2122.070
1	**8.815.8002EN**	**Manual 815 Robotic Soliprep for LC**

7.2 Optional accessories

Qty.	Order no.	Description	
1	**6.6059.201**	**MagIC Net™ 2.0 Compact CD: 1 Licence** Professional PC program for controlling one intelligent Compact IC system and one Professional Sample Processor or one 771 Compact Interface. The software permits control, data acquisition, evaluation and monitoring as well as report generation for ion chromatographic analyses. Graphic user interface for routine operations, extensive database programs, method development, configuration and manual system control, highly flexible user administration, efficient database operations, extensive data export functions, individually configurable report generator, control and monitoring of all system components and the chromatographic results. MagIC Net™ Compact complies with FDA regulation 21 CFR Part 11 as well as GLP. Dialogue languages: German, English, French, Spanish, Chinese, Korean, Japanese and more. 1 licence.	
1	**6.6059.202**	**MagIC Net™ 2.0 Professional CD: 1 licence** Professional PC program for controlling intelligent Professional IC systems, Compact IC instruments and their peripherals such as Professional Sample Processors, model 800 Dosinos dosing systems, 771 Compact Interface, etc. The software permits control, data acquisition, evaluation and monitoring as well as report generation for ion chromatographic analyses. Graphic user interface for routine operations, extensive database programs, method development, configuration and manual system control, highly flexible user administration, efficient database operations, extensive data export functions, individually configurable report generator, control and monitoring of all system components and the chromatographic results. MagIC Net™ Professional complies with FDA regulation 21 CFR Part 11 as well as GLP. Dialogue languages: German, English, French, Spanish, Chinese, Korean, Japanese and more. 1 licence.	

Qty.	Order no.	Description	
1	**6.6059.203**	**MagIC Net™ 2.0 Multi CD: 3 licences** Professional PC program for controlling intelligent Professional IC systems, Compact IC instruments and their peripherals such as Professional Sample Processors, 800 Dosino, 771 Compact Interface, etc. The software permits control, data acquisition, evaluation and monitoring as well as report generation for ion chromatographic analyses. Graphic user interface for routine operations, extensive database programs, method development, configuration and manual system control; highly flexible user administration, efficient database operations, extensive data export functions, individually configurable report generator, control and monitoring of all system components and the chromatographic results. MagIC Net™ Multi complies with FDA regulation 21 CFR Part 11 as well as GLP. Dialogue languages: German, English, French, Spanish, Chinese, Korean, Japanese and more. Client-Server version with 3 licences.	
	6.9012.000	**Dispersing aggregate for Polytron** Length (mm): 115	
	6.9012.010	**Dispersing aggregate for Polytron** Length (mm): 157	

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