

User Manual

MELAdem[®] 40

Ion exchanger

as of serial number 0640MD1961



EN

Dear customer,

We thank you for your confidence demonstrated by the purchase of this MELAG product. As an owner-run and operated family concern founded in 1951, we have a long history of successful specialization in hygiene products for practice-based use. Our focus on innovation, quality and the highest standards of operational reliability has established MELAG as the world's leading manufacturer in the instrument reprocessing and hygiene field.

You, our customer are justified in your demand for the best products, quality and reliability. Providing **“competence in hygiene”** and **“Quality – made in Germany”**, we guarantee that these demands will be met. Our certified quality management system is subject to close monitoring: one instrument to this end is our annual multi-day audit conducted in accordance with EN ISO 13485. This guarantees that all MELAG products are manufactured and tested in accordance with strict quality criteria.

The MELAG management and team.




Contents

1 General guidelines	4
Symbols used	4
Formatting rules	4
Disposal	4
2 Safety	5
3 Description of the device	6
Intended use	6
Mode of functioning	6
Scope of delivery	6
View of the device	7
4 Setup and installation	8
Installation location	8
Assembly	8
Cold water connection	10
Inserting the mixed-bed resin cartridges	11
Connecting the device	12
5 Commissioning	19
6 Maintenance	20
Maintenance intervals	20
Operating pauses	20
Replacing the mixed-bed resin cartridges	20
7 Technical data	21
8 Accessories and spare parts	22
Glossary	23

1 General guidelines

Please read this user manual carefully before commissioning the device. The manual includes important safety instructions. Make sure that you always have access to digital or printed version of the user manual. Should the manual no longer be legible, is damaged or has been lost, you can download a new copy from MELAG download centre at www.melag.com.

Symbols used

Symbol	Explanation
	Indicates a dangerous situation, which if not avoided, could entail slight to life-threatening injuries.
	Draws your attention to a situation, which if not avoided, could result in damage to the instruments, the practice fittings or the device.
	Draws your attention to important information.

Formatting rules

Example	Explanation
see Chapter 2	Reference to another text section within this document.

Disposal

MELAG devices are synonymous with high quality and a long life-span. When you eventually need to de-commission your MELAG device, the required disposal of the device can take place with MELAG in Berlin.

Dispose of accessories and consumption media which you no longer require in the appropriate manner. Comply with all relevant disposal specification in terms of possibly contaminated waste.

The packaging protects the device against transport damage. The packaging materials have been selected for their environmentally-friendly disposability and can be recycled. Returning the packaging to the material flow reduces the amount of waste and saves raw materials.

2 Safety



When operating the device, comply with the following safety instructions as well as those contained in subsequent chapters. Use the device only for the purpose specified in these instructions. Failure to comply with the safety instructions can result in injury and/or damage to the device.

Setup, installation and commissioning

- Check the device after unpacking for any damage suffered during transport.
- We recommend that the device only be setup, installed and commissioned by MELAG authorised persons.
- Install and operate the device in a frost-free environment.

Storage and transport

- Store and transport the device frost-free.
- Avoid strong shocks/vibrations.
- Store the device in a fashion protected against moisture.

Daily operation

- Use only original MELAG accessories or those from other stockists authorized for use by MELAG.
- Never operate the device unattended. Unsupervised operation of the device can result in damage to the device or your facility. In such a case, MELAG does not accept any liability.

Leaks

- Close the water intake upon detecting a leak. Check all hoses and hose connections for leaks.
- Only original MELAG spare parts may be used.

3 Description of the device

Intended use

The water treatment unit permits the production of demineralised (deionised) water. This requires tap water of drinking water quality.



PLEASE NOTE

The water treatment unit does not provide low-germ water.

The water treatment unit is suitable for the supply of small steam sterilizers with feed water. Furthermore demineralised water can be extracted, e.g. with the MELAJet spray pistol. The water treatment unit is intended for use in the medical field, e.g. in clinics, medical and dental practices and other medical care facilities outside the patient environment.

The water treatment unit MELAdem 40 is not a medical device within the meaning of European Regulation 2017/745 on medical devices.

Mode of functioning

The water treatment unit works according to the ion exchange process. The cartridges used in the tanks are disposable filters filled with mixed-bed resin. They are completely replaced every time the cartridge is changed. The salt content in the tap water is reduced by approx. 95-99 %, depending on the degree of used mixed-bed resin. All operating processes in the water treatment unit are controlled by the water line pressure.

The MELAdem 40 can be connected directly to a MELAG steam sterilizer for automatic water replenishment or used separately as a water treatment unit. The maximum flow rate of 2 l/min rate must not be exceeded.

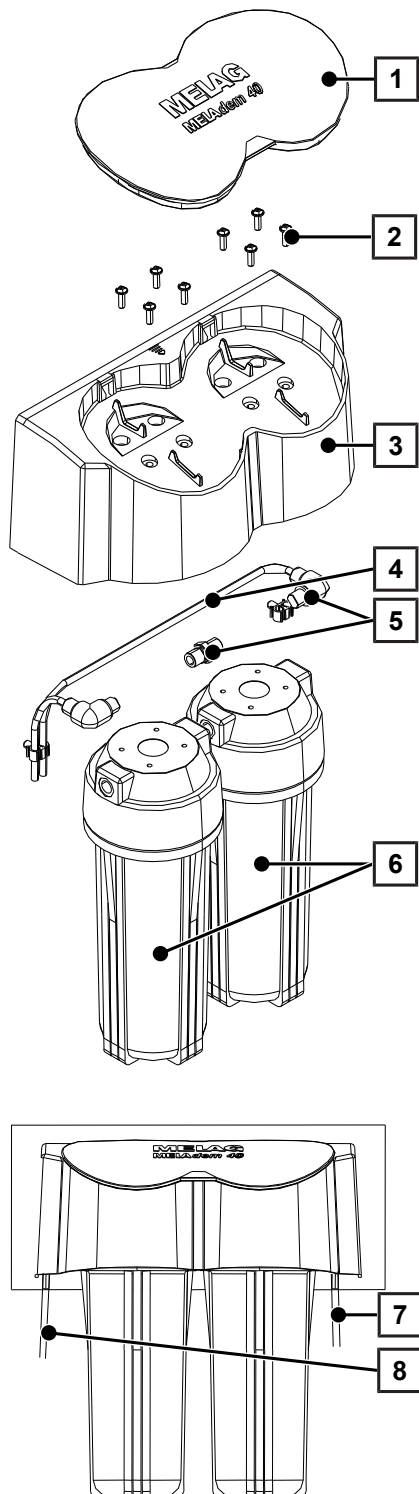
Scope of delivery

Please check the scope of delivery before setting up and connecting the device.

Standard scope of delivery

- MELAdem 40 ion exchanger
- User manual
- Record of installation and setup
- Certificate of warranty
- Container key for MELAdem
- 2x Mixed-bed resin cartridge
- Filter for MELAdem
- Fixing set MELAdem 40

View of the device



- 1 Lid
- 2 Retaining screws
- 3 Housing (with two hose holders on the inside)
- 4 Hose connection
- 5 Angled and double fitting
- 6 Filter container, mixed-bed resin cartridges

- 7 Inlet hose
- 8 Outlet hose

4 Setup and installation

Installation location

- ▶ Install the device in a clean, frost-free location that can be ventilated.
- ▶ The installation location must permit careful installation, operation and maintenance.
- ▶ To ensure safe operation of the water treatment unit, the water pressure on the building side must be between 1.5-10 bar.
- ▶ Make sure that the temperature along the inlet hose does not rise above 40 °C.
- ▶ If the room in which the device is installed does not have a floor drain, a leakage water detector (water stop, art. no. ME01056) is recommended, which shuts off the water supply in the event of damage via a moisture sensor on the floor and with the aid of a solenoid valve.

Assembly

The device can be mounted on the wall, in the floor unit or directly on the steam sterilizer.

Wall mounting



NOTICE

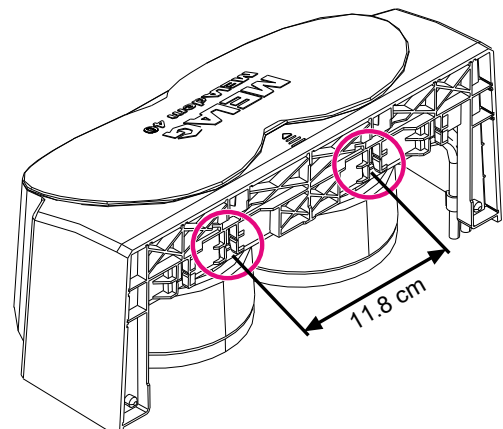
Damage due to falling down

- Use suitable fastening systems for mounting on the wall.

The following must be fulfilled or present:

- ✓ The size of the retaining screws is M4 or M5. MELAG recommends the use of M5 size screws.
- ✓ The maximum head diameter of the flat-head screws is 12 mm.
- ✓ The wall can bear the weight of the filled device (approx. 3.7 kg).
- ✓ The fastening material (e.g. dowels, diameter 6 mm) has been selected according to the wall.

1. For wall mounting, use only the inner, closely positioned fastening rails (see marking).



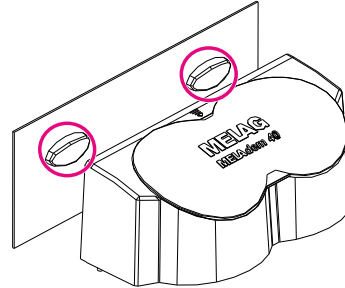
2. Drill the mounting drillholes (spacing: 11.8 cm) on the wall considering the height of the device.
3. Insert the dowels and fasten the mountings with the screws.
4. Hang the device on the mountings.

Mounting on a steam sterilizer

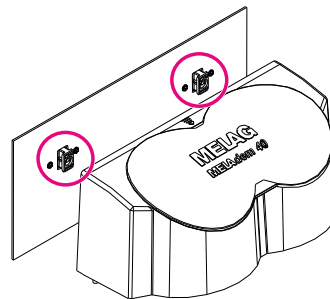
The device cover of the MELAG steam sterilizer does not have to be removed for mounting the device.

Method 1: The mounts are present on the device cover at the factory and are concealed under cover caps

1. Remove the cover caps using the notches on the undersides.



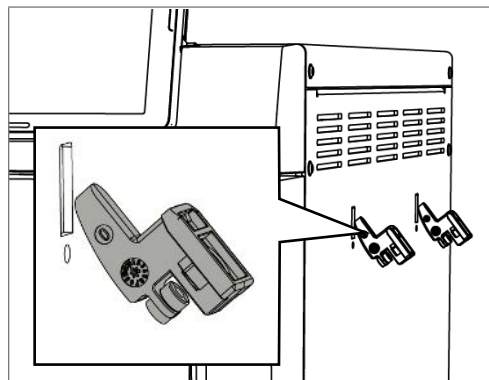
2. Hang the device vertically from the top into the mounts. Push the device downwards until the housing locks into the mounts.



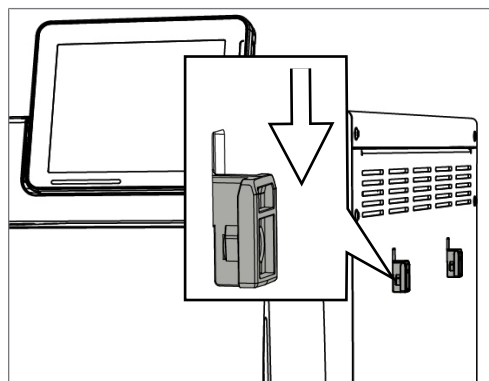
Method 2: The mounts must be attached to the device cover

There are rectangular recesses on both side walls of the steam sterilizer for attaching the mounts for the water treatment unit.

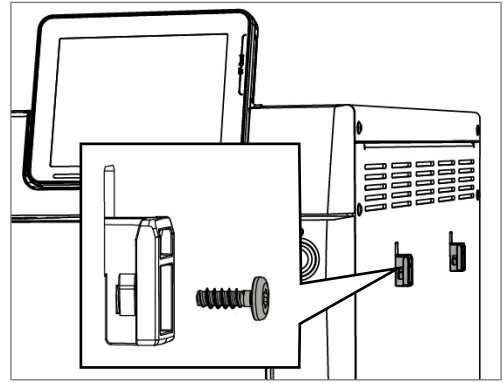
1. Guide the mounts into the recesses at an angle, with the hooks pointing upwards.



2. Pull the mounts vertically downwards until they engage.



3. Fix both mounts with the screws included with the delivery.



Cold water connection



PLEASE NOTE

MELAG recommends connecting the water treatment unit directly to the drinking water. Connecting water purification systems or filters that work with oxidants (e.g. chlorine) upstream can affect the mixed-bed resin and thus impair the performance of the water treatment unit.

Increased requirements can be placed on the quality of the DI water (e.g. a low endotoxin content) for the reprocessing of certain medical devices such as ophthalmic instruments. Comply with the following:

- ▶ In such cases, an additional filter system is required for the reprocessing of DI water.
- ▶ It is possible that the drinking water has been contaminated by the water installation. This includes the domestic installation and pre-device periphery.
- ▶ Arrange for a check of the drinking water quality at the removal point or request a report (e.g. from the building management) before setting up and installing the device.
- ▶ Further information is available from the corresponding trade associations and their publications. If in doubt, contact your stockist or the pertinent professional association.

The inlet of the water treatment unit is connected to a water tap with a $\frac{3}{4}$ " pipe thread. The water inflow tap must be fitted with a backflow preventer and a pipe aerator, to prevent the water from returning to the municipal water system. Close the water tap at night, when it is out of use for several weeks and during repair or maintenance work.



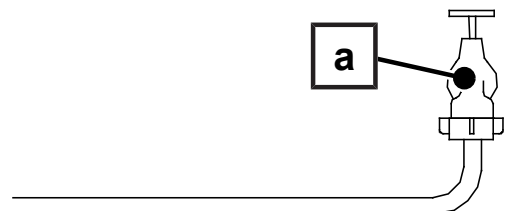
PLEASE NOTE

To prevent water damage, MELAG recommends the use of a leakage water detector e.g. the MELAG water stop.

To ensure a standard-compliant connection of the water treatment unit with backflow preventer and a pipe aerator independently of the building-side installation, MELAG recommends:

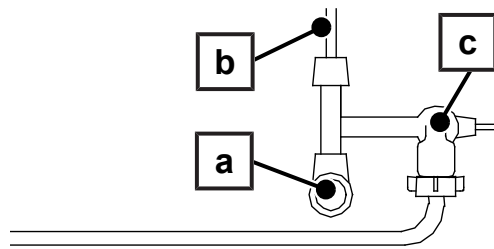
Method 1

- ▶ Installation of a separate water pipe (nominal width DN15 with $\frac{1}{2}$ " socket) and installation of a water tap with integrated safety combination (pos. a, art. no. ME37310).



Method 2

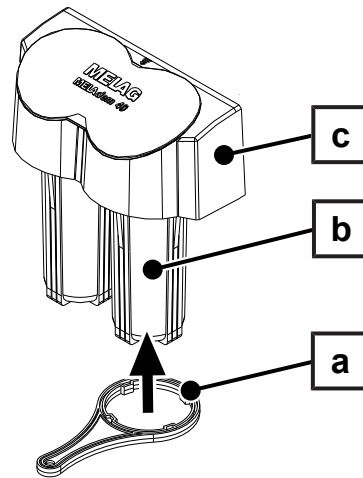
- ▶ Installation of a cold water connection (e.g. a sink) with an angle valve (pos. a) and pipe (pos. b, 10 mm) and the installation of an additional water inflow tap with an integrated safety combination (pos. c, art. no. ME58130) through direct assembly on the angle valve already present.



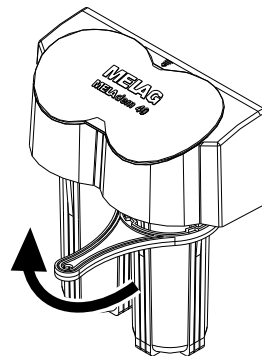
Inserting the mixed-bed resin cartridges

The filter containers of the mixed-bed resin cartridges are pre-assembled on the device. Before connecting the device to the steam sterilizer insert the mixed-bed resin cartridges as follows:

1. Guide the container key (pos. a) from bottom to top over the filter container (pos. b) of the mixed-bed resin cartridge.



2. Turn the container key to the left to open the filter container.



3. Remove the container key as soon as the filter container can be turned easily.
4. Turn the filter container by hand from the housing (pos. c) of the water treatment unit.
5. Remove the mixed-bed resin cartridge from the foil packaging.
6. Insert the mixed-bed resin cartridge upright into the filter container.
7. Screw the filter container into the housing of the water treatment unit by hand.
8. Guide the container key from bottom to top over the filter container.

9. Turn the container key to the right to tighten the filter container.
10. Repeat the process for the other mixed-bed resin cartridge.
11. Remove the container key and store it safely.

Connecting the device

The connection of the MELAdem 40 depends on the device type of the steam sterilizer. Observe the installation examples applicable to your steam sterilizer. The connection between the components of the water treatment unit is made with the PUR hose that is already connected. The additionally connected MELAjet spray pistol can be used to rinse instruments after disinfection and cleaning with demineralised water before loading the steam sterilizer.



NOTICE

Ensure that the hoses do not suffer kinking or crushing.

Connecting PUR hoses



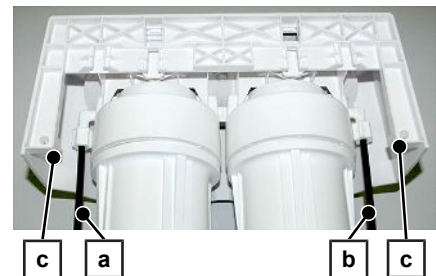
NOTICE

Observe the flow direction of the water through the device (see sticker on the device).

Hose connections on the device

The device is supplied from the factory with a 1.5 m PUR hose on both the water inlet side (inlet hose, pos. a) and the water outlet side (outlet hose, pos. b). The hoses can be routed via the hose holders (pos. c) on the inside of the housing.

Cut PUR hoses that are too long to the desired length or replace PUR hoses that are too short with longer hoses (PUR hose, black, 6 mm, length: 10 m, art. no. ME28820, not included in delivery).

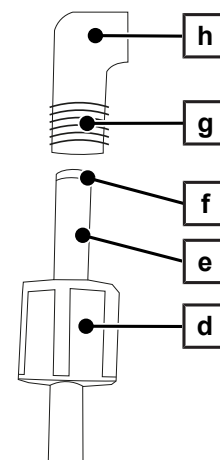


Shortening the PUR hose

- ▶ Cut the PUR hose to the required length with a hose cutter or sharp knife.

Replacing the PUR hose

1. Loosen the union nut (pos. d).
2. Pull the PUR hose (pos. e) off the quick coupling (pos. h).
3. Cut the PUR hose to the required length with a hose cutter or sharp knife.
4. Remove the clamping sleeve (pos. f) and the union nut (pos. d) from the PUR hose.
5. Push the union nut (pos. d) onto the hose end of the longer PUR hose (pos. e).
6. Insert the clamping sleeve (pos. f) into the end of the hose to be mounted on the device up to the collar stop.
7. Push the PUR hose (pos. e) onto the quick coupling (pos. h) as far as it will go.
8. Push the union nut (pos. d) up to the thread (pos. g) and tighten the union nut by hand.
9. Repeat the steps with the other PUR hose.



Connecting to the water inlet or steam sterilizer

Connect the free hose ends to quick couplings made of metal either at the water inlet or at the steam sterilizer as follows:

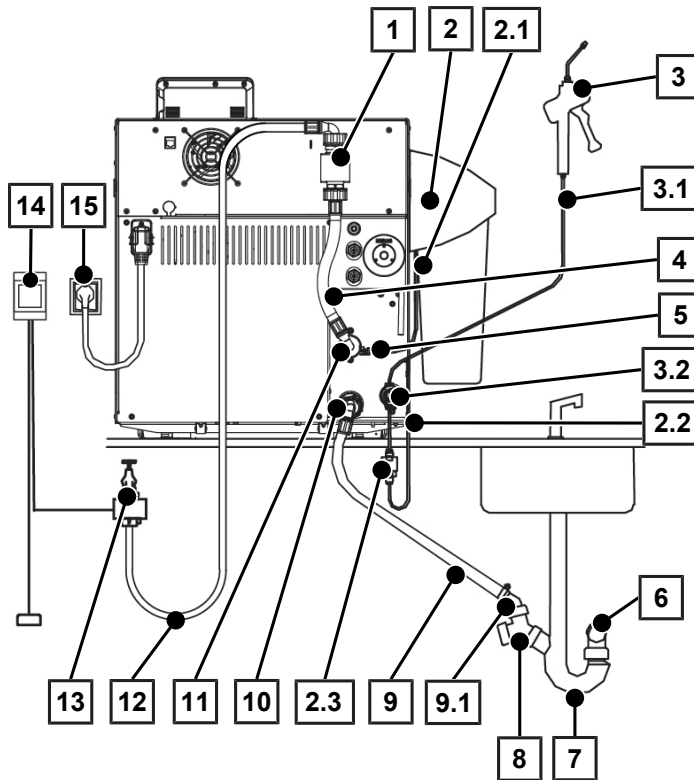
1. Push the union nut onto the free hose end of the PUR hose.
2. Push the PUR hose onto the metal quick coupling as far as it will go.
3. Tighten the union nut by hand.
4. Tighten the union nut approx. a quarter turn with an open-end wrench.

Connecting to a steam sterilizer with a fixed water connection

The following must be fulfilled or present:

-
- ✓ *The MELAdem 40 is correctly mounted.*
 - ✓ *The mixed-bed resin cartridges are inserted.*
 - ✓ *The water inlet tap is closed.*
-

1. Connect the hose from the safety combination to the cooling water inlet of the steam sterilizer.
2. Screw the MELAdem 40 water branch to the cooling water inlet of the steam sterilizer.
3. Connect the hose from the safety combination to the MELAdem 40 water branch.
4. Connect the MELAdem 40 inlet hose to the MELAdem 40 water branch.
5. Insert the MELAdem 40 filter into the feed water inlet hose.
6. Connect the feed water inlet hose to the feed water connection of the steam sterilizer or, if available, to the swivel screw connection of the MELAjet.
7. Open the water inlet tap.
8. Check all hoses and hose connections for leak tightness. There must be no leaks.

Installation example**Example 1 – Connection to Vacuklav 40 B+, 44 B+**

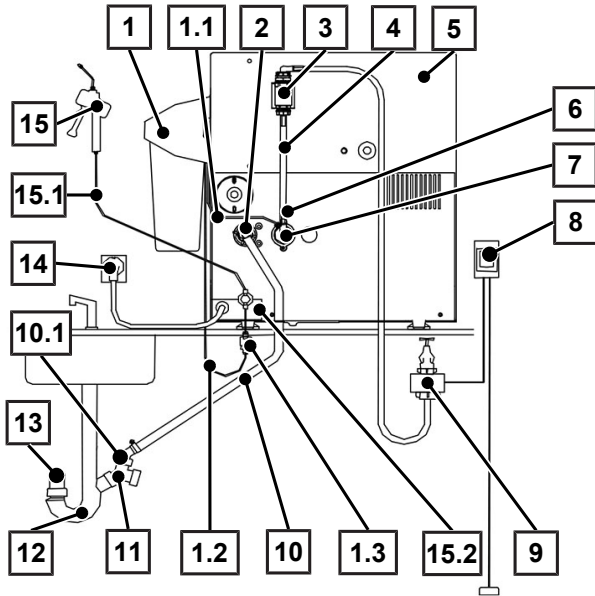
Position	Description	Art. no.	contained in
1	Safety combination EN 1717 incl. mount ^{*)}	ME82375	--
2	MELAdem 40 ion exchanger	ME01049	--
2.1	PUR hose, black, 6 mm, length: 10 m (inlet hose MELAdem 40)	ME28820	ME01049
2.2	PUR hose, black, 6 mm, length: 10 m (inlet hose feed water)	ME28820	ME01049
2.3	Filter for MELAdem	ME48240	ME01049
3	MELAjet spray pistol for MELAdem 40 (optional)	ME27300	--
3.1	PUR hose, black, 6 mm, length: 10 m (hose MELAjet)	ME28820	ME27300
3.2	Swivel screw connection MELAjet	ME53465	ME27300
4	Hose safety combination water inflow ^{*)}	ME25975	--
5	Water branch MELAdem 40	ME37241	--
6	Wall outlet NW 40 ^{***)}	--	--
7	Double chamber siphon ^{**)}	ME26635	--
8	Double hose fitting for siphon with backflow flaps (optional)	ME37400	--
9	Water outlet hose for steam sterilizers, 2 m ^{**)}	ME36585	--
9.1	Wastewater nozzle for siphon with seal and clamp	ME52615	ME36585
10	Connection piece for wastewater hose ^{*)}	ME21334	--
11	Solenoid valve "cooling water" (cooling water inlet ^{*)}	ME46995	--
12	Tap water supply hose EN 1717, 2.5 m ^{**)}	ME24930	--
13	Water tap with safety combination ^{***)}	--	--
14	Water stop (Leak water detector with cut-off valve and sensor, optional)	ME01056	--
15	Mains connection ^{***)}	--	--

^{*)} present on the device side

^{**)} included in the scope of delivery of the steam sterilizer

^{***)} present on the building side

Example 2 – Connection to Vacuklav 24 B+, 24 BL+, 30 B+



Position	Description	Art. no.	contained in
1	MELAdem 40 ion exchanger	ME01049	--
1.1	PUR hose, black, 6 mm, length: 10 m (inlet hose MELAdem 40)	ME28820	ME01049
1.2	PUR hose, black, 6 mm, length: 10 m (inlet hose feed water)	ME28820	ME01049
1.3	Filter for MELAdem	ME48240	ME01049
2	Nozzle for wastewater (professional class)	ME57705	--
3	Safety combination EN 1717 incl. mount*)	ME82375	--
4	Hose safety combination water inflow*) Vacuklav 30 B+ Vacuklav 24 B+, Vacuklav 24 BL+	ME25975 ME48475	-- --
5	Tap water supply hose EN 1717, 2.5 m**)	ME24930	--
6	Water branch MELAdem 40	ME37241	--
7	Solenoid valve block, cooling water Vacuklav (cooling water inlet*)	ME57715	--
8	Water stop (Leak water detector with cut-off valve and sensor, optional)	ME01056	--
9	Water tap with safety combination***)	--	--
10	Water outlet hose for steam sterilizers, 2 m**)	ME36585	--
10.1	Wastewater nozzle for siphon with seal and clamp	ME52615	ME36585
11	Double hose fitting for siphon with backflow flaps (optional)	ME37400	--
12	Double chamber siphon**)	ME26635	--
13	Wall outlet NW 40***)	--	--
14	Mains connection***)	--	--
15	MELAjet spray pistol for MELAdem 40 (optional)	ME27300	--
15.1	PUR hose, black, 6 mm, length: 10 m (hose MELAjet)	ME28820	ME27300
15.2	Swivel screw connection MELAjet	ME53465	ME27300

*) present on the device side

**) included in the scope of delivery of the steam sterilizer

***) present on the building side

Connecting to a stand-alone steam sterilizer

To connect the MELAdem 40 to a Vacuklav 41 B+ *Evolution*, 43 B+ *Evolution*, 23 B+ or 31 B+, install the feed water inlet connection for a hose diameter of 6x1 mm (see technical manual of the steam sterilizer). MELAG recommends mounting the safety combination according to the following installation examples for compliant operation according to EN 1717.

The following must be fulfilled or present:

-
- ✓ *The MELAdem 40 is correctly mounted.*
 - ✓ *The mixed-bed resin cartridges are inserted.*
 - ✓ *Both chambers of the internal storage tank are emptied.*
 - ✓ *The water inlet tap is closed.*
-

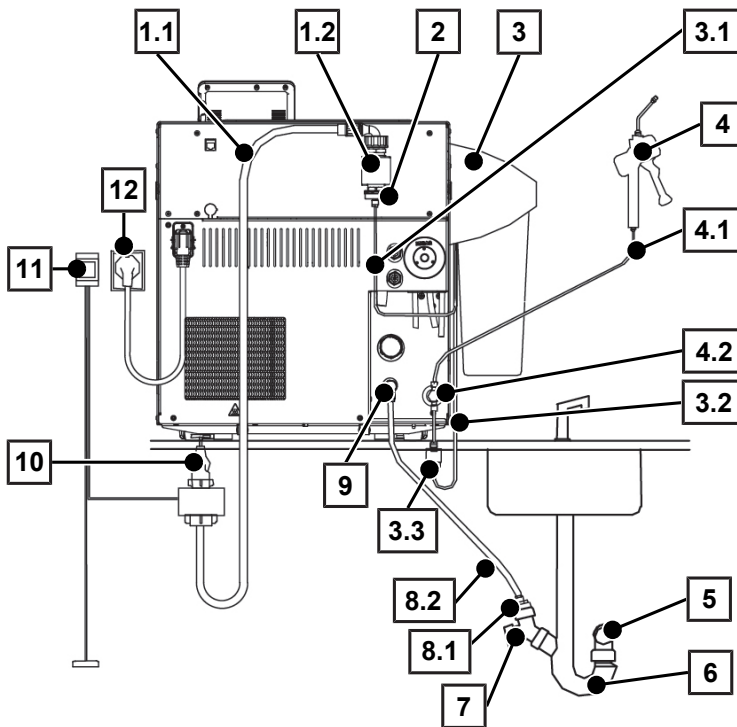
1. Mount the cold water adapter on the outlet of the safety combination.
2. Connect the inlet hose MELAdem 40 to the cold water adapter.
3. Insert the MELAdem 40 filter into the feed water inlet hose.
4. Connect the feed water inlet hose to the feed water connection of the steam sterilizer or, if available, to the swivel screw connection of the MELAjet.
5. Open the water inlet tap.
6. Check all hoses and hose connections for leak tightness. There must be no leaks.

PLEASE NOTE: Stand-alone steam sterilizers collect the used feed water (wastewater) in the wastewater chamber of the storage tank. Hot wastewater can run off the emergency overflow of a Vacuklav 41 B+/43 B+. The steam sterilizer must be connected to the existing siphon of the domestic water inlet or the double-chamber siphon from MELAG. MELAG also makes this recommendation for a Vacuklav 23 B+/31 B+.

When connecting to a stand-alone steam sterilizer, additional connection sets are required for supply and wastewater (see [Accessories and spare parts](#) ▶ page 22]).

Installation example

Example 1 – Connection to Vacuklav 41 B+, 43 B+

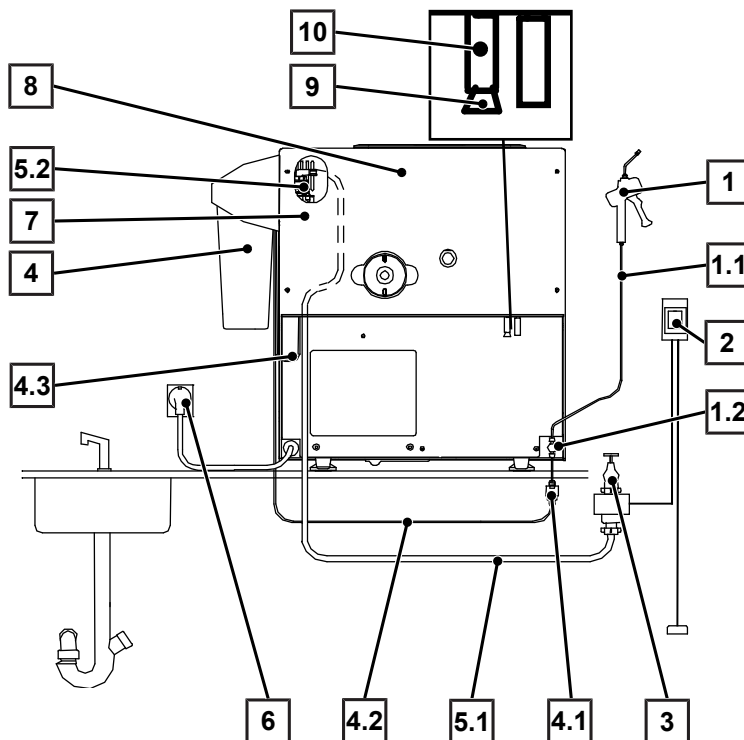


Position	Description	Art. no.	contained in
1	Mounting set EN 1717 for MELAdem (optional)	ME49600	--
1.1	Tap water supply hose EN 1717, 2.5 m	ME24930	ME49600
1.2	Safety combination EN 1717 incl. mount	ME82375	ME49600
2	Cold water adapter (direct connection to water pipe)	ME09037	--
3	MELAdem 40 ion exchanger	ME01049	--
3.1	PUR hose, black, 6 mm, length: 10 m (inlet hose MELAdem 40)	ME28820	ME01049
3.2	PUR hose, black, 6 mm, length: 10 m (inlet hose feed water)	ME28820	ME01049
3.3	Filter for MELAdem	ME48240	ME01049
4	MELAjet spray pistol for MELAdem 40 (optional)	ME27300	--
4.1	PUR hose, black, 6 mm, length: 10 m (hose MELAjet)	ME28820	ME27300
4.2	Swivel screw connection MELAjet	ME53465	ME27300
5	Wall outlet NW 40**)	--	--
6	Double chamber siphon (optional)	ME26635	--
7	Double hose fitting for siphon with backflow flaps (optional)	ME37400	--
8	Wastewater hose for pressure release 41B+ (Evo)/43 B+ (Evo)	ME39181	
8.1	PTFE hose (8/6 mm, 5 m, wastewater hose)	ME39180	ME39181
8.2	Wastewater adapter (G1/4" internal thread)	ME56930	ME39181
9	Threaded connection 1/4", angle, for hose 8/6 mm (pressure release connection)*)	ME53471	--
10	Water tap with safety combination**)	--	--
11	Water stop (Leak water detector with cut-off valve and sensor, optional)	ME01056	--
12	Mains connection**)	--	--

*) present on the device side

***) present on the building side

Example 2 – Connection to Vacuklav 23 B+, 31 B+



Position	Description	Art. no.	contained in
1	MELAjet spray pistol for MELAdem 40 (optional)	ME27300	--
1.1	PUR hose, black, 6 mm, length: 10 m (hose MELAjet)	ME28820	ME27300
1.2	Swivel screw connection MELAjet	ME53465	ME27300
2	Water stop (Leak water detector with cut-off valve and sensor, optional)	ME01056	--
3	Water tap with safety combination**)	--	--
4	MELAdem 40 ion exchanger	ME01049	--
4.1	Filter for MELAdem	ME48240	ME01049
4.2	PUR hose, black, 6 mm, length: 10 m (inlet hose feed water)	ME28820	ME01049
4.3	PUR hose, black, 6 mm, length: 10 m (inlet hose MELAdem 40)	ME28820	ME01049
5	Mounting set (EN 1717) for MELAdem (optional)	ME25410	--
5.1	Tap water supply hose EN 1717, 2.5 m	ME24930	ME49600
5.2	Safety combination EN 1717 incl. mount	ME82375	ME49600
6	Mains connection**)	--	--
7	Cold water adapter (direct connection to water pipe)	ME09037	--
8	Rear wall panel*)	ME66790	
9	Plug for water drain*)	ME31140	--
10	Silicon hose (9/6 mm, 5 m, one-way drain*)	ME34410	--

*) present on the device side

***) present on the building side

5 Commissioning



NOTICE

Unsupervised operation of water consuming devices, including this water treatment unit follows at the operator's risk. Do not operate the device for a long period unsupervised, e.g. over night. This could void the insurance cover for the building. MELAG accepts no liability what so ever for any damage resulting from unsupervised operation.

In your absence, switch off the water shut-off valve or the central water shut-off.

After assembly and installation, put the device into operation as follows:

✓ *The mixed-bed resin cartridges are inserted, see [Inserting the mixed-bed resin cartridges](#) [▶ page 11].*

1. Open the water inlet tap.
2. Check all hoses and hose connections for leak tightness.
There must be no leaks.
 - The device is ready for operation after approx. 5 min. Sufficient demineralised water can be taken for the connected steam sterilizer or another consumer (e.g. MELAjet).
3. Perform an empty sterilization with the steam sterilizer.

6 Maintenance

Maintenance intervals

Interval	Measure
Daily	Control the permeate with a conductivity meter or using a steam sterilizer with inbuilt conductivity measurement.
Every 6 months	Check the hoses and screw connections for leaks, swelling, crushing, kinks or age-related brittleness.
Every 6 years	Replace all the hoses on the water treatment unit and the MELAjet spray pistol (if present, art. no. ME28820).
As required	With poor conductivity: Replace the mixed-bed resin cartridges The mixed-bed resin cartridges have an expiry date: Replace the mixed-bed resin cartridges at the latest when the date expires.

Operating pauses

- ▶ Close the water tap or the central water shut-off during longer breaks in operation (e.g. overnight, at the weekend or on holiday).
- ▶ Replace the mixed-bed resin cartridges after operating breaks of four weeks and longer before restarting.

Replacing the mixed-bed resin cartridges

Replace the mixed-bed resin cartridges when the conductivity of the feed water increases and the mixed-bed resin in the mixed-bed resin cartridges is exhausted. When connecting the device to a MELAG steam sterilizer, a corresponding message appears on the display of the steam sterilizer.

Replace the mixed-bed resin cartridge as follows:

1. Close the water inlet tap.
2. **With MELAjet spray pistol:** Remove some water with the help of the MELAjet spray pistol.
3. **Without MELAjet spray pistol:** Perform a pressure release by starting the Universal-Program and stopping it after approx. 20 s.
4. Open the filter container of the mixed-bed resin cartridge, see [Inserting the mixed-bed resin cartridges](#) [▶ page 11]. **Please note:** The filter container is full to the brim with water. Pour off the water.
5. Remove the mixed-bed resin cartridge from the filter container.
6. Remove the sealing ring from the filter container.
7. Clean the seal ring and then grease it a little (e.g. with Grease for seals/O-rings, art. no. ME24371, not included in the scope of delivery).
8. Rinse out the filter container with tap water.
9. Place the sealing ring in the filter container.
10. Insert a new mixed-bed resin cartridge and screw the filter container back on, see [Inserting the mixed-bed resin cartridges](#) [▶ page 11].
11. Repeat the process for the other mixed-bed resin cartridge.
12. Check that all parts are firmly seated.
13. Open the water inlet tap.
14. Check all hoses and hose connections for leak tightness. There must be no leaks.

7 Technical data

Device type	MELAdem 40
Device dimensions (H x W x D)	35 x 32 x 16 cm
Weight (incl. mixed-bed resin)	approx. 3.7 kg
Amount of resin	approx. 2 x 0.7 l (total approx. 1.4 l)
Capacity	at 10 °dH: 210 l (depending on the water hardness and the conductivity of the local tap water)
Nominal flow rate	at max. 2 l/min no exceeding of 40 µS/cm
Cold water	
Water temperature min./max.	5-40 °C
Water pressure min./max.	1.5-10 bar
pH value min./max.	5.0-9.0



PLEASE NOTE

The indicated yield (capacity) is an approximate guide value that depends on other factors in addition to the water hardness. An upstream softening system with regeneration based on common salt can lead to a reduction in the capacity of the MELAdem 40, regardless of the set initial water hardness.

8 Accessories and spare parts

You can obtain the specified articles and an overview of further accessories from your stockist.

Category	Article	Art. no.
Accessories and consumables	Mixed-bed resin cartridge (2 pcs, filled)	ME61026
	MELAtest 60 conductivity meter	ME01060
	MELAJet spray pistol	ME27300
	Grease for seals/O-rings	ME24371
	PUR hose, black, 6 mm, length: 10 m	ME28820
Spare parts	Seal filter housing (container)	ME37465
	Bracket for wall mounting (2x)	ME15856 (contained in ME37106)
	Filter housing wrench for MELAdem	ME61050
Connecting parts	Mounting set MELAdem 40 (on device housing/wall, universal)*)	ME37106
	3/4" water inflow tap with safety combination	ME37310
	Additional water tap with unit combination	ME58130
Connecting sets for connecting to a steam sterilizer	Water branch MELAdem 40 for: Vacuklav 40 B+ (<i>Evolution</i>)/44 B+ (<i>Evolution</i>), Vacuklav 24 B+/24 BL+/30 B+	ME37241
	Water connection set for Premium-Class for: Vacuklav 41 B+ (<i>Evolution</i>)/43 B+ (<i>Evolution</i>)	ME09034
	Water connection set for Pro-Class for: Vacuklav 23 B+/31 B+	ME09033
	Water connection set for Euroklav for: Euroklav 23 S+/23 VS+/29 VS+	ME09031
	Cold water adapter (direct connection water hose)	ME09037
*) Required when mounting on steam sterilizers that do not have any mountings for MELAdem on the device cover or do not have them at the required location.		

Glossary

Conductivity

is the ability of a conductive chemical substance or mixture of substances to conduct or transfer energy or other substances or particles in space.

Demineralised water

Water without the minerals usually found in normal spring or tap water; is produced through ion exchange of normal tap water. It is used here as feed water.

DI water

Demineralised water (DI water) is water (H₂O) without the salts found in normal spring and tap water, which are dissolved as anions and cations.

Feed water

Feed water is required to produce steam for sterilization. Guide values for water quality in accordance with EN 285 / EN 13060 – Appendix C

MELAG Medizintechnik GmbH & Co. KG

Geneststraße 6-10
10829 Berlin
Germany

Email: info@melag.com
Web: www.melag.com

Original instructions

Responsible for content: MELAG Medizintechnik GmbH & Co. KG
We reserve the right to technical alterations

Your stockist

