Installation plan

Installation location

WARNING

Failure to comply with the setup conditions can result in injuries and/or damage to the device.

- The steam sterilizer should only be setup, installed and commissioned by persons authorised by MELAG.
- The steam sterilizer is not suitable for operation in explosive atmospheres.
- The steam sterilizer is conceived for use outside the patient care area. The device should be located a minimum of 1.5 m radius away from the treatment area.

General requirements

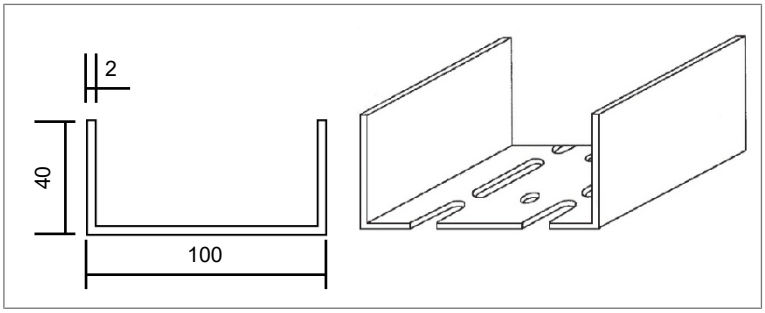
Properties	Requirements of the installation location
Corridor width required	With a 90° curve, the sum of the door width and the corridor width must amount to a minimum of 2.4 m (i.e. with a door width of e.g. 70 cm, the required corridor width amounts to 170 cm)
Clear width from the entrance of the practice to the installation location	min. 70 cm
Installation surface	level and horizontal, in accordance with EN 285: waterproof, collects or deflects water running out of the steam sterilizer
Installation location	interior of a building (dry and protected from dust)
Floor loading (normal operation)*)	568 kg | 142 kg per caster
Floor loading (pressure resistance test)*)	675 kg | 168.8 kg per caster
Heat emission (at maximum solid load and with an opened door)	2.0 kW
Ambient temperature	5-40 °C (ideal range 16-26 °C) Sufficient ventilation of the room must be guaranteed.
Relative humidity	max. 80 % at temperatures of up to 31 °C, max. 50 % at 40 °C (decreasing in linear fashion in-between)
Altitude (star connection)	max. 3000 m
Altitude (delta connection)	max. 4000 m
Illumination	in accordance with EN ISO 12100 and EN 1837
*) incl. MELAdem 56 M	

Steam egress can occur during operation. Do not set up the device in the immediate proximity of a smoke detector. Maintain clearance from materials which could suffer damage from steam.

Separation of the loading and removal side

For separation between dirty and clean area, place the device in a partition wall with a breakthrough. This partition wall should preferably consist of a drywall construction using U-shaped bracing profile 100 x 40 x 2.

Cross-section of a U-shaped bracing profile. All dimensions in mm



PLEASE NOTE: With existing solid walls, it is advantageous to install a drywall in the area of the device. Select the width of the drywall so that the solenoid casing panels can be fitted easily and provides sufficient space for installation on the loading side. For this purpose provide a minimum width of 1.75 m, see Space requirements [▸ Page 7]. For visual reasons, the wall should be at least 2 m wide. If it is not possible to install a drywall, the solenoid casing panels can be fitted on the solid wall. Coordinate the implementation with MELAG.

Requirements placed on the partition wall and the wall breakthrough

Property	Requirements
Composition	Dry construction form
Wall thickness K	min. 12 cm; max. 17 cm*)
Wall breakthrough	Stable framework construction with reinforced U-bracing profile UA 100 x 40 x 2 (2 mm steel panel); subsequent casing using a layer of drywall
Width between the UA profiles	73.7 ± 0.5 cm plus 2x drywall strength
Height between the floor and the UA profiles	160 ± 0.5 cm plus 1x drywall strength
Width of the wall breakthrough (final dimension)	73.7 ± 0.5 cm
Height of the wall breakthrough (final dimension)	160 ± 0.5 cm**)
*) In case of deviations to the wall thickness arrangements, consult with MELAG. **) From the floor / tile edge	

Setting up the frame

The width and the height of the frame depend on the strength of the drywall. The following dimensions table helps determine the correct dimensions for the wall breakthrough:

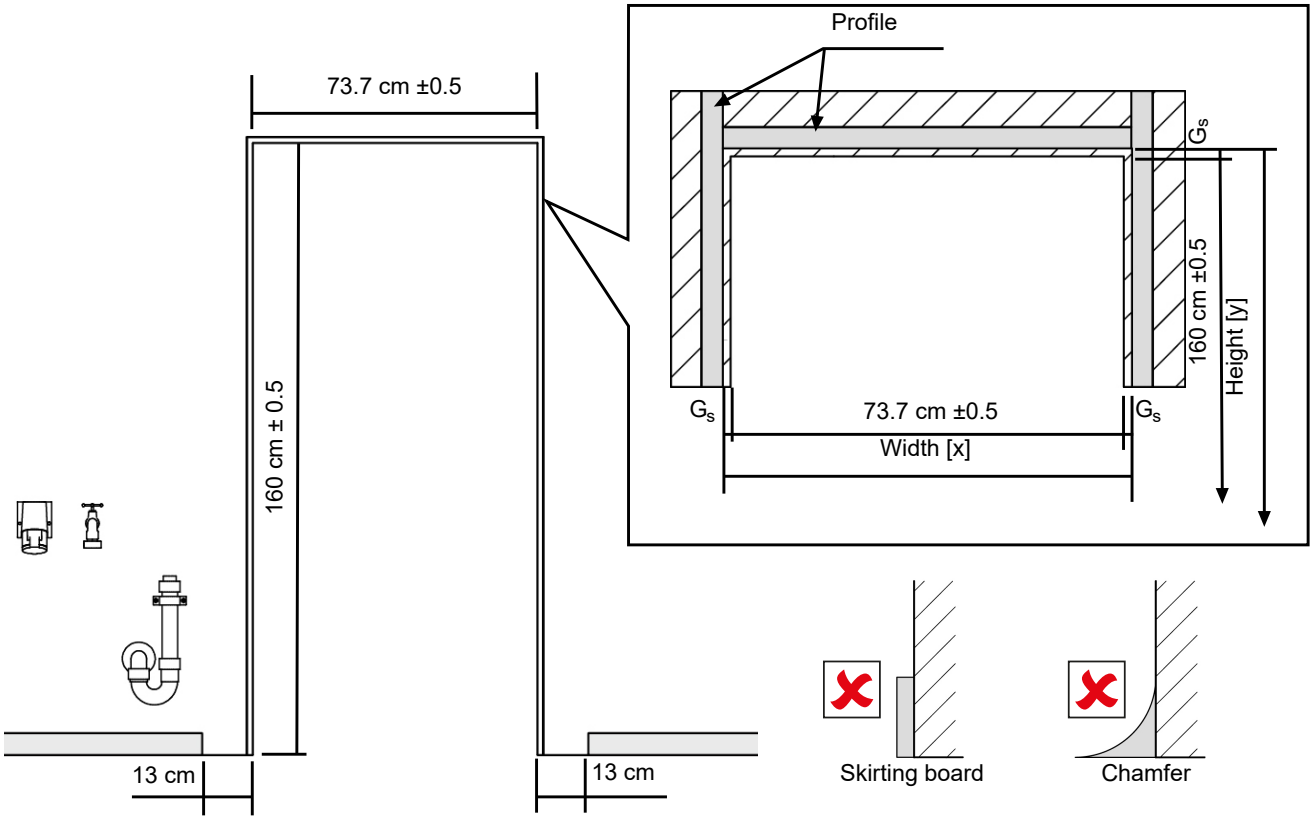
Strength of the drywall Gs	Wall breakthrough	
	Width [x]	Height [y]
1 cm	75.7 cm	161 cm
1.25 cm	76.2 cm	161.25 cm
1.5 cm (max.)	76.7 cm	161.5 cm

Given differing drywall strengths, calculate the wall breakthrough as follows:

Width of the wall breakthrough [x] = 73.7 ± 0.5 cm + 2x drywall strength G_s
The height of the wall breakthrough [y] = 160 ± 0.5 cm + 1x drywall strength G_s

To permit flush installation of the metal cladding, no skirting boards or chamfers may be applied 13 cm left or right of the wall breakthrough on either the loading or the removal side.

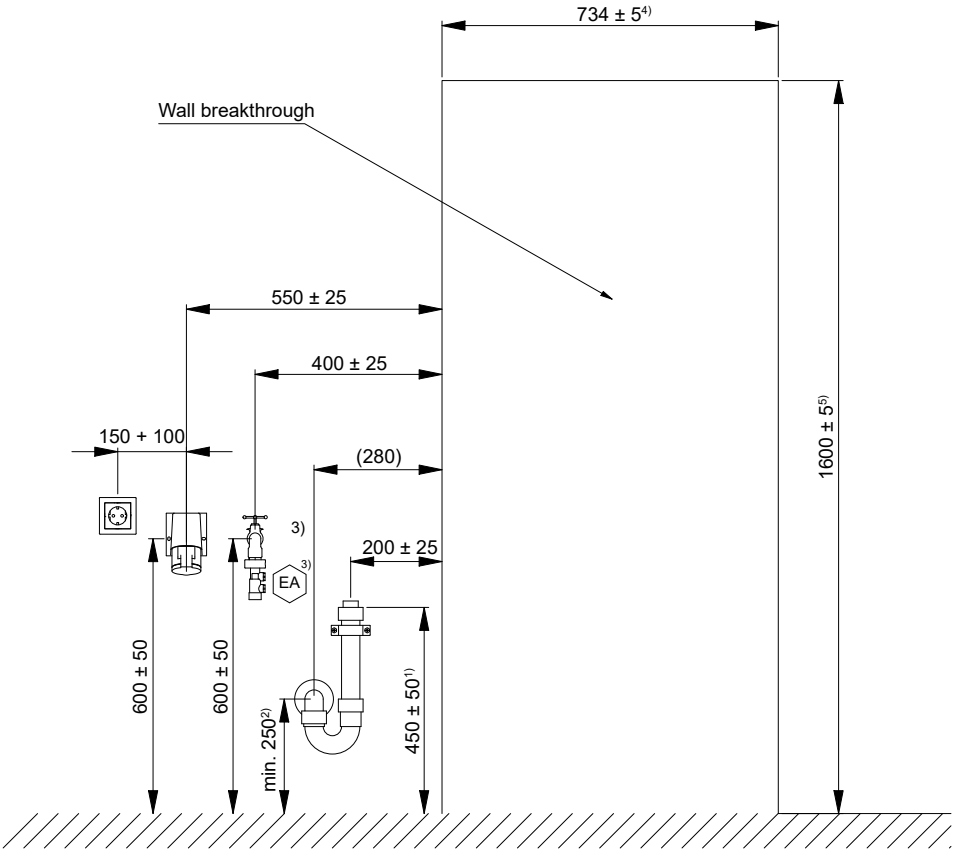
Wall breakthrough with U-shaped bracing profiles



On-side connections for installation

All water and electricity connections were installed on the loading side. The installation connections on the left-hand side of the wall breakthrough are shown as an example. The installation connections can be arranged in inverted fashion on the right-hand side or on both sides of the wall breakthrough.

Necessary installation requirements for the connections (all dimensions in mm)



1) Specifications apply when using the extension pipe (siphon and extension pipe included in the installation set).
2) Max. 500 mm, if no extension pipe is used. Depending on the height of the wastewater connection, the extension pipe must be cut to the necessary length.
3) The type EA back-flow preventer (included in the kiwa connection set, art. no. ME86902) is only required in the Netherlands.
4) Dimensions including the drywall cladding.
5) From the floor or the edge of the tiling.

Mains supply

WARNING

Improper installation may lead to a short-circuit, fire, water damage or electrical shock.

This could result in serious injury.

- Only have the device set up, installed and commissioned by people authorised by MELAG.

Implement the following safety measures when dealing with the cable and power plug:

- Never damage or alter the power plug or cable.
- Never bend or twist the power cable.
- Never remove the plug by pulling on the power cable. Always take a grip on the plug.
- Never place any heavy objects on the power cable.
- Never run the power cable over areas in which it could become trapped (e.g. doors or windows).
- Never lead the cable along a source of heat.
- Never use any nails, paper fasteners or similar objects to fix the cable.
- Should the power plug or cable suffer damage, switch off the device. The power cable or plug should only be replaced by authorised technicians.
- The mains socket must be freely accessible after installation so that the device can be disconnected from the electrical mains at any time if necessary by pulling the mains plug.

Building-side requirements of the mains connection

Property	On-site requirements
Local requirements	Electrical equipment must correspond with DIN VDE 0100. A main switch (all-pole) should be fitted outside the installation room. This must be marked as a separator for the device and be easily accessible for the operator. The feed line to the electrical connection must be laid separately from the distribution to the device. Observe the clockwise rotating field!
Electrical power	13.5 kW
Power supply (star connection)	CEE socket (red) with 3x380-415 V + N + PE, 32 A, 50/60 Hz, position PE: 6 h
Building-side fuse protection (star connection)	A separate circuit with fuse (to guarantee continued practice operation during device sterilizer malfunction): 3x32 A, RCD 30 mA
Power supply (delta connection)	CEE socket (blue) with 3x220-240 V + PE, 63 A, 50/60 Hz, position PE: 9 h
Building fuses (delta connection)	A separate circuit with fuse (to guarantee continued practice operation during device sterilizer malfunction): 3x63 A, RCD 30 mA
Length of the power cable from the floor unit	max. 1.8-2.1 m (depending on the connection side)
Other	Additional socket 230 V 50 Hz for leakage water detector (water stop), MELAprint 60 label printer or MELAprint 42/44 log printer

PLEASE NOTE: The device configurations of the electrical connections (star or delta connection) have different article numbers. Therefore, determine the device configuration according to the local conditions before ordering the device.
Star connection: worldwide standard network, common e.g. in Europe
Delta connection: regionally common, e.g. in Latin America, the Middle East, Africa and Asia

Connection to a network socket / MELAprint 60 label printer

The installation in the floor unit requires a network cable of sufficient length.

The network cable can be installed either on the loading or removal side and in the right or left of the floor unit. Depending on the version, various cable lengths of up to 2 m are required on the loading side and up to 2.5 m on the removal side.

When selecting the length of a suitable network cable, take into account the additional length from the floor unit to the peripheral device or network socket.

Water connection

	Cold water	Feed water	Wastewater
Connection in the practice	To the cold water cut-off valve (water inflow tap) G 3/4“	To a water treatment unit	To a surface-mounted siphon (included in the installation set)
Length of the hose from the floor unit[1)]	max. 1.75-2.15 m	--	max. 0.45-1.0 m
Installation height	55-65 cm	--	45 ± 2.5 cm (upper edge of the siphon)
Min. flow pressure	1.5 bar at 8 l/min	0.5 bar at 5 l/min	--
Recommended flow pressure	2.5-6 bar at 8 l/min	2-4 bar at 5 l/min	--
Min. static water pressure	--	2 bar	--
Max. static water pressure	10 bar	5 bar	--
Max. throughflow volume	--	--	short-term max. 9 l/min
Water temperature	1-20 °C (ideal 15 °C)[2)]	5-35 °C	short-term max. 90 °C
Water quality	drinking water, water hardness 4-12° dH (in accordance with EN 285)[3)]	EN 285, Appendix B, table B.1, max. conductivity 5 µS/cm	--
Measures for protecting the drinking water supply	None (internally secured against backflow into the drinking water supply by an air gap in accordance with EN 1717, fluid category class 5)	**MELAdem 56 M** none (internally secured against backflow into the drinking water supply by an air gap in accordance with EN 1717, fluid category class 5) **Other water treatment treatment unit** additional protection required in accordance with EN 1717, fluid category class 5	--
Leakage water detector	MELAG recommends the installation of a leakage water detector with a cut-off valve (e.g. MELAG water stop).		

PLEASE NOTE

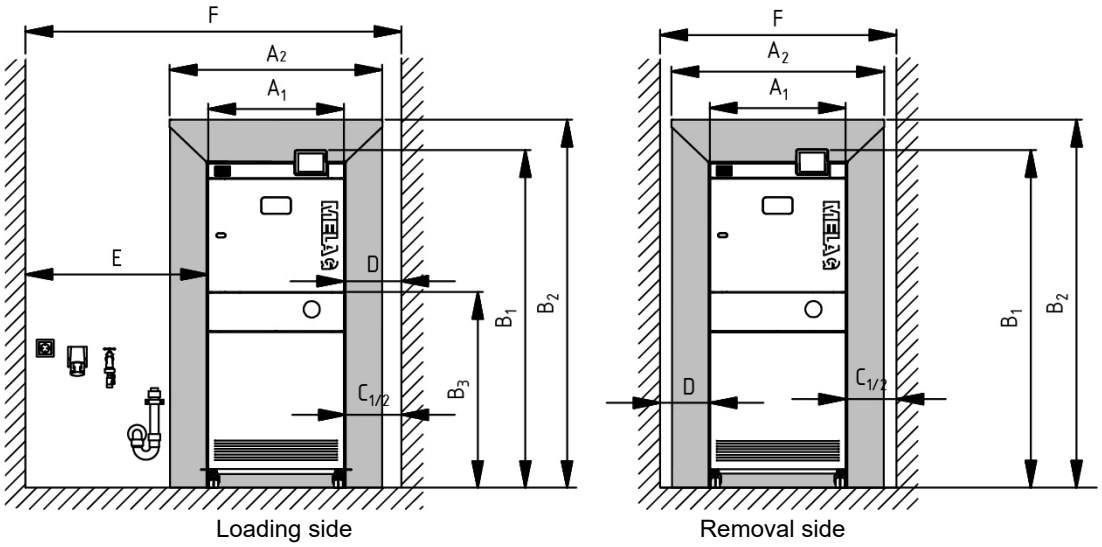
Fit the outlet hose at a constant decline without kinks or sagging. In case of deviations to the installation arrangements, consult with MELAG.

Failure to do so can result in malfunctions of the device.

[1)] The length varies, depending on the position from which the hoses are led out of the floor unit.
[2)] The higher the temperature, the longer the operating times and the higher the water consumption.
[3)] Higher levels of water hardness necessitate the upstream installation of a water-softening unit.

Space requirements

View from the front, door hinge right on both sides



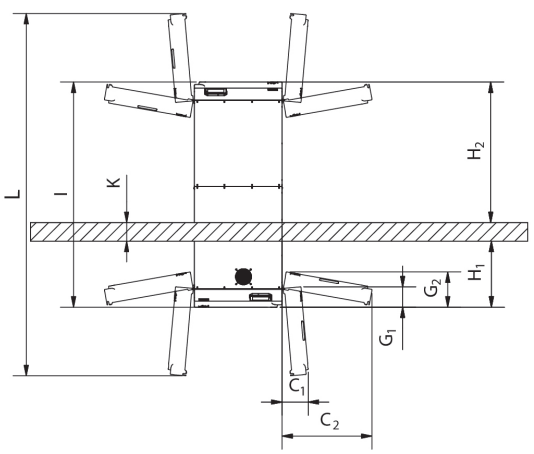
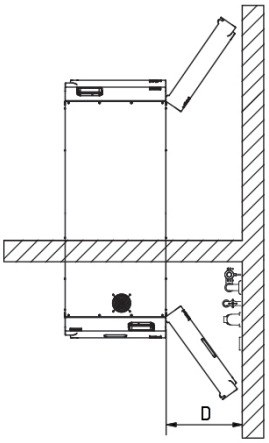
The minimum clearances to be maintained on both sides in the area of the wall installation

Dimensions		Loading side	Removal side
Width	A_1	64 cm	
Width inc. metal cladding	A_2	100 cm	
Height device with floor unit	B_1	158 cm	
Height inc. metal cladding	B_2	approx. 170 cm	
Height to door of steam sterilizer (free area below the swivel range of the door)	B_3	90 cm	
Min. clearance to the side of the door hinge*)	C_1	25 cm (opening angle 95°)	
	C_2	75 cm (opening angle 170°)	
Min. clearance to the side**)	D	25 cm	
Space for installation	E	85 cm	
Niche width required	F	min. 175 cm	min. 110 cm (opening angle 95°) min. 160 cm (opening angle 170°)

*) With the door hinge on the left-hand side, keep the clearance $C_{1/2}$ mirror-inverted.

**) Maintain a minimum clearance D on both sides.

Door swing range when installed

Standard installation: Installation in the wall without any laterally adjacent wall	**Alternative installation:** Wall installation with an adjacent lateral wall, door hinge right/left.
Removal side  Loading side	Removal side  Loading side

With door hinge on the left, invert the clearances. The device must be pulled out of the wall for maintenance. The corresponding space must be available on the loading side.

The minimum clearances to be maintained in the swing range

Dimensions		**Loading side**	**Removal side**
Min. clearance to the side of the door hinge without any laterally adjacent wall*)	C_1	25 cm (opening angle 95°)	
	C_2	75 cm (opening angle 170°)	
Max. clearance to the side of the door hinge with an adjacent lateral wall**)	D	45 cm	
Swing range	G_1	15 cm (opening angle 95°)	
	G_2	26 cm (opening angle 170°)	
Wall clearance	$H_{1/2}$	min. 47 cm	min. 27 cm
Depth	I	163 cm	
Wall thickness	K	12-17 cm	
Depth with open doors	L	262 cm (opening angle 95°)	

*) Keep the clearances mirror-inverted depending on the position of the door hinge.

**) The specifications correspond to the recommended installation of the outlet hose, i.e. if this is inserted in both tensioning carriages. Contact MELAG in case of deviating installation requirements. Ensure that the outlet hose is installed without kinks or sagging.