

The Cliniclave[®] series

Large steam sterilizers for practices and clinics



The Cliniclave series

Four models for the greatest-possible flexibility

Our experience from developing and manufacturing steam sterilizers since decades, paired with the innovation power of our 165 specialist engineers has resulted in an especially innovative and energy-efficient series of steam sterilizer: the Cliniclave series.

In addition to the typical MELAG features of record operating times, an intuitive operating concept and integrated documentation and approval, the four steam sterilizers of this new range present a series of further unique innovations which only we as the specialists for instrument decontamination could deliver to our customers. The focus of the new Cliniclave series lies on the combination of even shorter operating times and even faster instrument availability, whilst achieving considerable levels of energy efficiency.

The Cliniclave series consists of large steam sterilizers with a capacity of one or two sterilization units (StU), available as single-door or double-door (pass-through) models.

Cliniclave® 45 single-door version

Chamber: Ø 44 cm x 72 cm deep
Volume: 105 litres
Load: 35 kg
Capacity: 1 sterilization unit (1 StU)
Dimensions: W 65 x H 160 x D 91 cm



Cliniclave® 45 D double-door version

Chamber: Ø 44 cm x 74 cm deep
Volume: 110 litres
Load: 35 kg
Capacity: 1 sterilization unit (1 StU)
Dimensions: W 65 x H 160 x D 101 cm



Cliniclave® 45 M single-door version

Chamber: Ø 44 cm x 134 cm deep
Volume: 200 litres
Load: 70 kg
Capacity: 2 sterilization units (2 StU)
Dimensions: W 65 x H 160 x D 153 cm



Cliniclave® 45 MD double-door version

Chamber: Ø 44 cm x 136 cm deep
Volume: 205 litres
Load: 70 kg
Capacity: 2 sterilization units (2 StU)
Dimensions: W 65 x H 160 x D 163 cm



The three most important advantages of the Cliniclave series at a glance

1. Save time

With a load quantity of up to 70 kg, the steam sterilizers of the Cliniclave series can sterilize significantly more instruments than other devices of their class, and achieve record operating sterilization times with low levels of water and energy consumption.

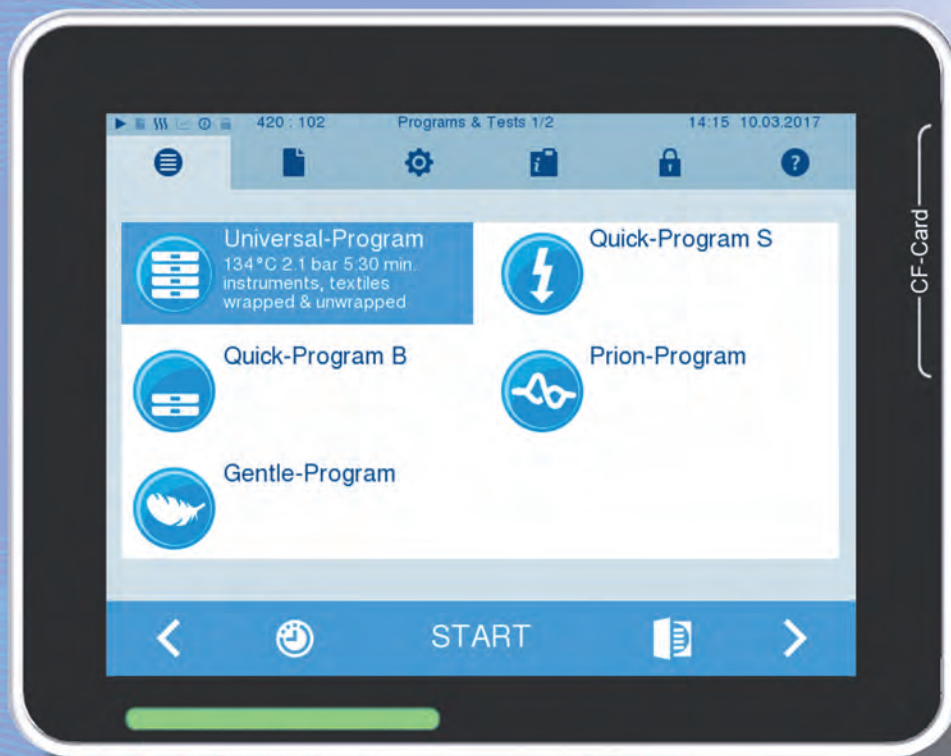
2. Work ergonomically

A wide range of batch configurations can be inserted and removed from the steam sterilizer using the loading system (including loading trolley), thereby allowing ergonomic, quick and secure operation.

3. Document securely

The XXL colour touch-display enables intuitive operation. The integrated documentation and approval software permits complete reproducibility. Via the Ethernet interface the Cliniclave series can be integrated in the practice or clinic network.





1. Save time

Sterilizing large quantities in short operating times.

The sterilization of large instrument quantities and textiles and their quick availability is one of the most important requirements in clinics, practices and outpatient centres. With a load quantity of up to 70 kg of wrapped instruments or 14 kg of textiles, the steam sterilizers of the Clinclave series provide far greater performance than almost all other large steam sterilizers. Used in connection with specially-designed mounts, the cylindrical sterilization chamber provides the best solution for all departments.

Ideal solutions for sterilization containers, individually-wrapped instruments and textiles.

Loading example: 11 x MELAstore®-Boxes 200
(Cliniclave 45) 1 x MELAstore®-Boxes 100

Dimensions of the MELAstore®-Box 200: 19 cm (W) x 31.2 cm (L) x 6.5 cm (H).

Dimensions of the MELAstore®-Box 100: 19 cm (W) x 31.2 cm (L) x 4.6 cm (H).

„The large load quantities and short operating times make an important contribution to improving the energy-efficiency of our practice.“

Kirsten, Dres. Frey, Oral Surgeons





2. Work ergonomically

With a loading system for secure and ergonomic loading and unloading.

The loading system of the Cliniclave series enables the loading and unloading of a wide range of loading configurations without much effort.



Loading trolley for the steam sterilizers of the Cliniclave series

The lower level of the loading trolley provides sufficient space to load the Cliniclave series steam sterilizers with further sterilization containers or other load elements. The loading system includes a loading trolley and a batch slider with Teflon runners. The sterilization containers or the tray mount are placed on the batch slider and moved securely with the loading hook.

„The loading and unloading of the large steam sterilizer using the loading system and the loading trolley guarantees ergonomic and secure working practices.“

Sabine, SPREDOCS Outpatient Surgical Centre





3. Document securely

With an integrated software for the approval and traceability of instruments.

The XXL colour touch-display enables an intuitive operation and helps the operator to avoid errors and to find all the important information quickly. The documentation and approval software integrated in all devices of the Cliniclave series permits complete reproducibility and total security.

An individual PIN can be issued to every user to enable secure traceability in the approval procedure. Authentication of the batch approval can be performed quickly and securely on the display.

The Cliniclave series provides a variety of documentation methods: network connection via Ethernet; the printout of barcode labels for marking wrapped instruments; and log output to a CF card.



Printing barcode labels with
MELAprint 60



„The user-friendly batch clearance provided by the Cliniclave 45 facilitates documentation of the sterilization process, thereby simplifying instrument treatment. The logs are easy to save and are available at any time. This represents an important contribution to maintaining the high quality of practice processes.“

Petra, Day clinic Krahl, Dr. Beltz, Dr. Poppelbaum

Documenting the complete
workflow with **MELAttrace**



Further device functions making your day that little bit easier

It is often the small things that make our working lives more pleasant. A range of features in the Cliniclave series help to make your working procedures more simple and secure. These functions are integrated in all of the models of the Cliniclave series and can be activated directly via the XXL colour touch-display.

DRYtelligence®



The patented procedure of the sensor-controlled and load-specific vacuum drying procedure saves time, cooling water and energy and guarantees optimal drying results.

Energy-saving mode



If the Cliniclave is not to be switched off during longer operating pauses, the energy-saving mode can be set. This shortens the pre-heating time before the next start.

Automatic shutdown



Activating this function before starting the last batch of the day means that the Cliniclave switches-off automatically immediately after the end of the program. Batch clearance can then be performed the next day, immediately after activating the device.

Start time pre-selection

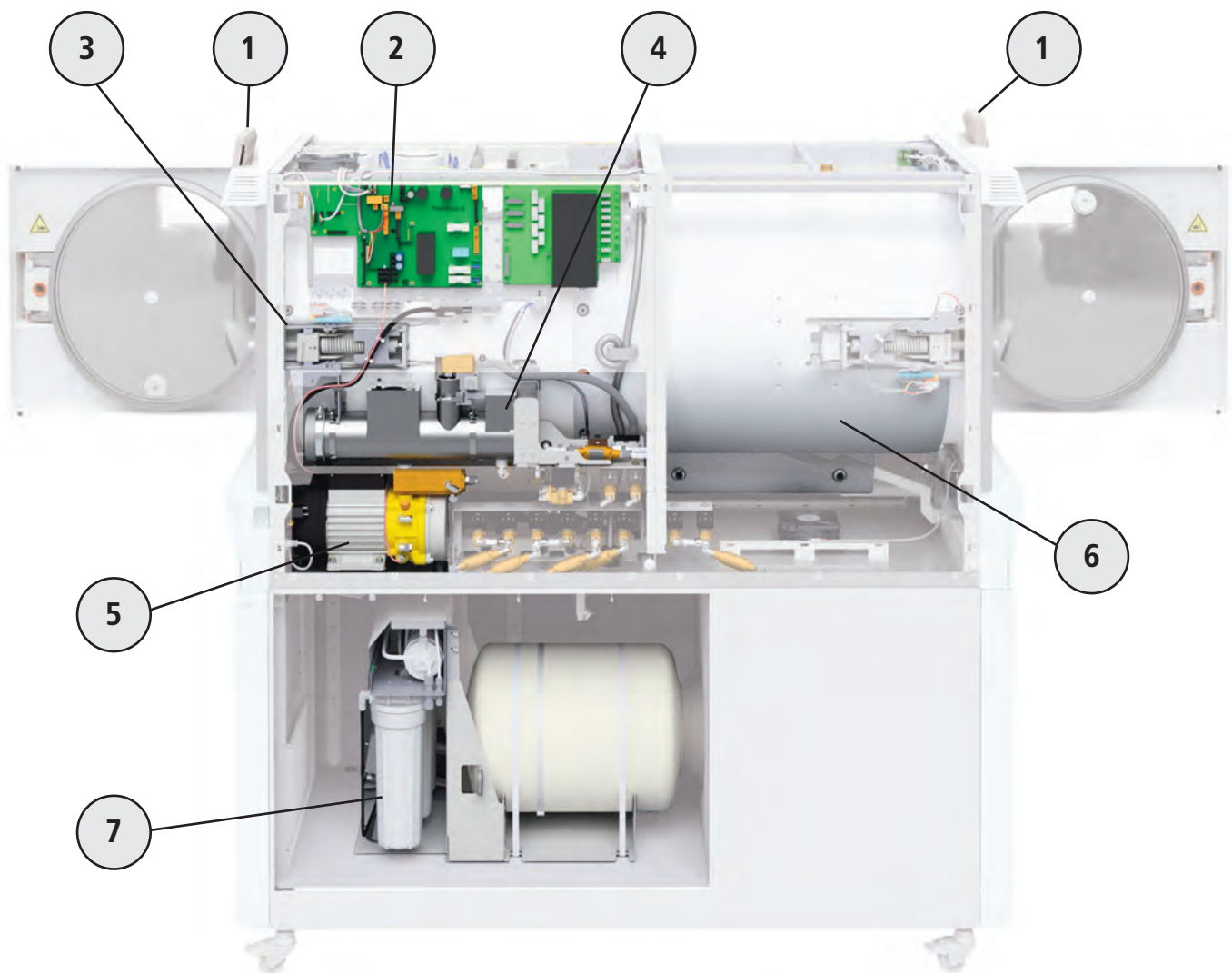


The start-time pre-selection function enables the user to select any program and then start it at a specific time, e.g. in order to perform a routine test program.



Innovative and convincing technology

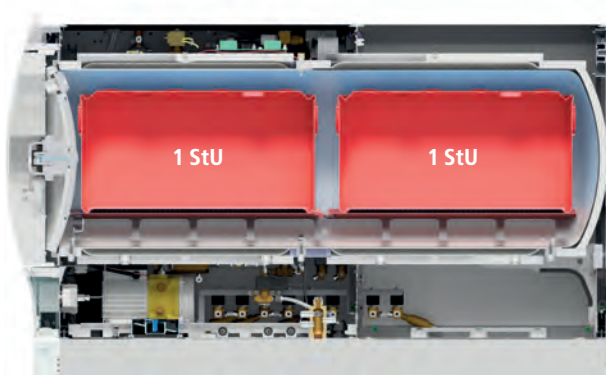
The innovative functions and durable components of the high-end Cliniclave series produce consistently convincing results. The unique device concept satisfies the highest requirements. In addition to the central device components shown below, the steam sterilizers of the Cliniclave series contain a range of further highlights, including the unique concept of multipoint steam intake and discharge technology for record operating times and excellent drying results.



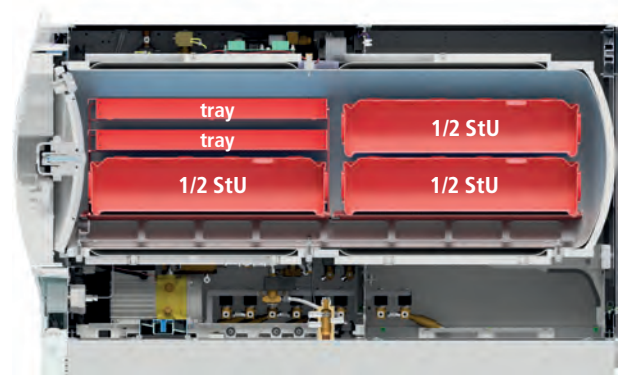
1. XXL colour touch-display
2. Microprocessor control and monitoring electronics for secure and valid processes
3. Electrical door lock for security and ease of use
4. Air gap in accordance with DIN EN 1717 for protection of the drinking water
5. High-performance vacuum pump for the best process results
6. Double jacket technology for the highest-quality saturated steam
7. Reverse osmosis unit for independent and automatic aqua dem subsequent feeding

Even more space in the Magnum steam sterilizers of the Cliniclave series

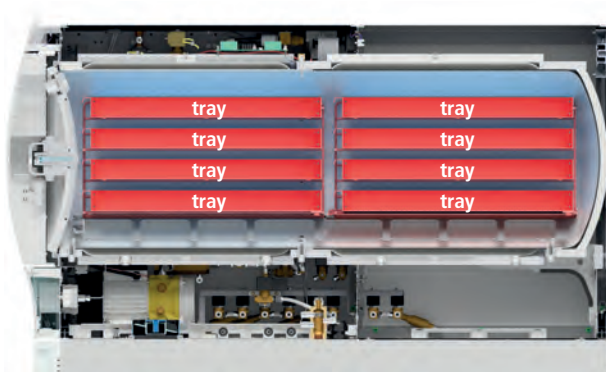
The Cliniclave 45 M and Cliniclave 45 MD accommodate 2 sterilization units and can sterilize up to 70 kg of instruments in record time. Four example loads:



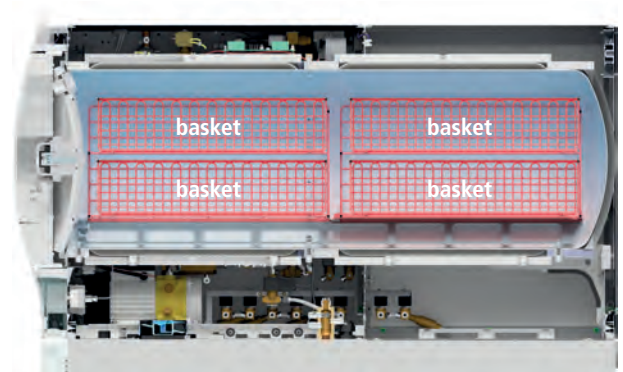
Cliniclave 45 M with 2 sterilization containers 30 x 30 x 60 cm



Cliniclave 45 M with 3 sterilization containers 30 x 15 x 60 cm and 2 trays 30 x 5 x 59 cm



Cliniclave 45 M with 8 trays 30 x 5 x 59 cm



Cliniclave 45 M with 4 instrument baskets

The Cliniclave 45 M shown above is also available as the double-door pass-through steam sterilizer Cliniclave 45 MD.

Simple installation of the pass-through steam sterilizers.

Before installing a double-door pass-through steam sterilizer, it is vital to ensure that the local conditions permit an efficient installation.

Find out for yourself about the simple and quick installation of the steam sterilizer.



The Cliniclave series provides the suitable model for every requirement

The compact dimensions of the four large steam sterilizers of the Cliniclave series are ideally-suited to the needs of clinics, practices and outpatient centres. The position of the door hinge (left or right-hand side) can be chosen for each Cliniclave model - including the doors of the pass-through steam sterilizers.

	Cliniclave 45	Cliniclave 45 D	Cliniclave 45 M	Cliniclave 45 MD
Device version	single-door version	double-door version	single-door version	double-door version
Chamber volume	105 litres	110 litres	200 litres	205 litres
Capacity	1 StU		2 StU	
Door hinge	Selectable: left or right			
Chamber diameter	Ø 44 cm			
Chamber depth	72 cm	74 cm	134 cm	136 cm
Dimensions (W x H x D)	65 x 160 x 91 cm	65 x 160 x 101 cm	65 x 160 x 153 cm	65 x 160 x 163 cm
Empty weight	255 kg	298 kg	315 kg	384 kg
Operation weight	275 kg	335 kg	370 kg	435 kg
Power supply	3x380-415 V, 50/60 Hz, 10,500 W, 16 A	3x380-415 V, 50/60 Hz, 10,500 W, 16 A	3x380-415 V, 50/60 Hz 13,500 W, 32 A	3x380-415 V, 50/60 Hz, 13,500 W, 32 A



Supply with feed water is best performed via a MELAdem 56 reverse osmosis unit. The MELAdem 56 was developed especially for the Cliniclave series and complies with the requirements of EN 1717 for the protection of the drinking water.

The MELAdem 56 is installed in the floor unit to save space.

The devices of the Cliniclave series can also be connected to a central water treatment unit or an existing ion exchanger.

Faster instrument decontamination and lower energy consumption

Fast operating times and secure sterilization are amongst the most important requirements of a large steam sterilizer. The devices of the Cliniclave series always fulfil these requirements. The large load quantities and the low water and energy consumption make the steam sterilizers of the Cliniclave series the most efficient and compact large steam sterilizers of their class.

Program cycle times	Operating time ¹⁾				Drying ²⁾		Packaging
	Cliniclave 45	Cliniclave 45 D	Cliniclave 45 M	Cliniclave 45 MD	Cliniclave 45 / 45 D	Cliniclave 45 M / 45 MD	
Universal-Program							
Partial load ³⁾	~23 min.	~21 min.	~27 min.	~28 min.	~20 min.	~30 min.	Multiple wrapping
Full load ⁴⁾	~35 min.	~40 min.	~48 min.	~50 min.	~20 min.	~30 min.	
Textiles ⁵⁾	~26 min.	~28 min.	~35 min.	~36 min.	~20 min.	~20 min.	
Quick-Program B							
Partial load ³⁾	~20 min.	~21 min.	~27 min.	~28 min.	~10 min.	~11 min.	Single wrapped
Quick-Program S							
Partial load ³⁾	~17 min.	~17 min.	~22 min.	~22 min.	~6 min.	~7 min.	Unwrapped
Gentle-Program							
Partial load ³⁾	~36 min.	~36 min.	~45 min.	~45 min.	~20 min.	~20 min.	Multiple wrapping
Textiles ⁵⁾	~42 min.	~45 min.	~53 min.	~53 min.	~20 min.	~20 min.	
Prion-Program							
Partial load ³⁾	~38 min.	~36 min.	~42 min.	~43 min.	~20 min.	~20 min.	Multiple wrapping
Full load ⁴⁾	~50 min.	~55 min.	~63 min.	~65 min.	~20 min.	~30 min.	
Textiles ⁵⁾	~41 min.	~41 min.	~50 min.	~51 min.	~20 min.	~20 min.	

1) Without drying and dependent on the load and the set-up conditions e.g. mains voltage and air-pressure.

2) When taking into account the specified load quantities, the program-specific drying times guarantee excellent drying of the sterilized equipment. The time specifications pertain to the time-controlled drying. Additional drying can be activated for especially difficult drying tasks.

3) Partial load Cliniclave 45/Cliniclave 45 D 15 kg Cliniclave 45 M/Cliniclave 45 MD 30 kg

4) Full load Cliniclave 45/Cliniclave 45 D 35 kg Cliniclave 45 M/Cliniclave 45 MD 70 kg

5) Textiles Cliniclave 45/ Cliniclave 45 D 7 kg Cliniclave 45 M/Cliniclave 45 MD 14 kg

The Cliniclave series is produced in conformity with the following directives and standards:

93/42/EEC Medical device class IIb (Medical Devices Directive)

2006/42/EC (Machinery directive)

2014/30/EU (Electromagnetic compatibility)

2014/35/EU (Low voltage directive)

2014/68/EU (Pressure equipment directive)

EN 285 (Large steam sterilizers)

EN 61010-1/-2-040 (Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements)

EN 61326-1 (Electrical equipment for measurement, control and laboratory use - EMC requirements- Part 1: General requirements)

EN 1717 (Protection Against Pollution of Potable Water installations and general requirements of devices to prevent pollution by backflow)

Further information regarding these topics, our products and all current questions are available here: www.melag.com.

Innovation, quality and expertise:

the ingredients of success for a family company

As a German owner-run and operated family business founded in 1951, we have a long history of successful specialization in hygiene products for clinic and practice-based use. Our focus on quality, innovation and the highest safety standards has established MELAG as the world's leading manufacturer in the "instrument decontamination" field, selling over 550,000 devices to date. Our entire product range is produced exclusively in Germany (Berlin). Over 365 employees work on a c. 20,000 m² premises. Today we are by far the world's largest specialist manufacturer of sterilizers and washer-disinfectors concentrating exclusively on clinic and practice hygiene.

We have consistently rejected outsourcing to low-wage third countries, as we did not want to risk a reduction in our worldwide unbeatable quality. We have also ruled out an expansion of our product range.

Focussing on providing cutting-edge innovation, our Research and Development department now comprises 85 members of staff. Our Testing & Experiment department lays the foundation for our market-leading quality, as well as subjecting all purchase parts to the closest of scrutiny. It now comprises some 40 members.

Device software is responsible for the safe control of all our products and their problem-free integration in the clinic network. Our "Electronics / Software department" has grown to 40 members of staff. We currently employ a total of 165 engineers in our "R&D" department. Constituting 45 % of our total staff, this lies well over the industry average.

Our customers are rightfully demanding the highest-possible quality and reliability from MELAG. Providing "competence in hygiene" and "quality - made in Germany" we guarantee that these demands will be met.

The MELAG management and team.

Come on a virtual tour
of our company.

