

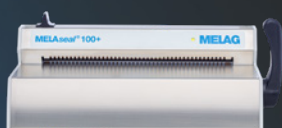
Anexa 28 Aparat de sigilare
Model MELAseal® 100+, Melag, Germania

Specificarea tehnică deplină solicitată, Standarde de referință	Specificarea tehnică deplină oferita, Standarde de referință
"Descriere:Destinat pentru lipirea rolelor de autoclave. Parametrul Specificația Putere: $\geq 100W$ Încărcare: laterală Mod de sigilare Tragerea manuală a pachetului pe linia de sigilare Temperatura de sigilare 160 - 200°C Latime de sigilare: 10 mm, ± 2 mm Lungime maxima de sigilare: minim 25 cm Suport pentru role, integrat sau separat obligatoriu Cuțit de tăiere, integrat cu posibilitatea de înlocuire a lamelor obligatoriu Alimentare: 220V, 50Hz Consumabile și accesorii: Rolă 5 cm x 200 m 8 Buc. Rolă 7.5 cm x 200 m 8 Buc. Rolă 15 cm x 200 m 8 Buc."	"Descriere:Destinat pentru lipirea rolelor de autoclave. Parametrul Specificația Putere: 300W Încărcare: frontală Mod de sigilare – amplasarea pachetului pe linia de sigilare si apăsarea maneta de etanșare în jos Temperatura de sigilare 140 - 195°C Latime de sigilare: 10 mm Lungime maxima de sigilare: 27,5 cm Suport pentru role, integrat - 2. ME10111 Reel dispenser Comfort Cuțit de tăiere, integrat cu posibilitatea de înlocuire a lamelor obligatoriu Alimentare: 220V, 50Hz Consumabile și accesorii: Rolă 5 cm x 200 m 8 Buc.- Rolă 7.5 cm x 200 m 8 Buc. Rolă 15 cm x 200 m 8 Buc.

MELAseal® Series

Sealed in foil. Packed with quality.

The MELAG bar and
rotary sealing devices:



MELAG sealing devices

Outstanding quality for efficient workflows.

Our priority is your satisfaction: Rely on innovative solutions for instrument decontamination made in Germany.
As a strong partner by your side, MELAG guarantees:

- 

Experience
Specialization since 1951
- 

Trust
Over 100,000 satisfied MELAsea® customers
- 

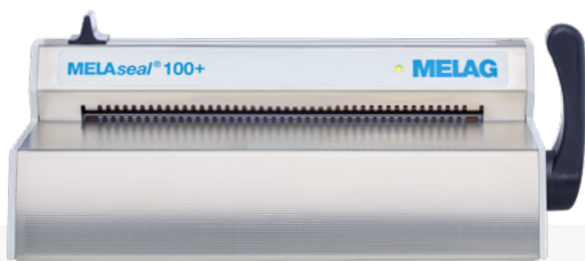
Quality
Made in Germany
- 

Innovation
180 specialized engineers
- 

System solution
Instrument decontamination from a one-stop provider

Tailored to your individual needs.

MELAG sealing devices guarantee an efficient packaging process in practice and clinic.
Benefit from our wide range of products and select the sealing device that best fits your needs:



MELAsea/® 300

Validatable rotary sealing device

- ★ **The boost for your workflow:**
Throughput speed of up to 15 m/min for sealing processes without interruption
- ★ **Magical operating concept:** Smart-Touch Display and integrated documentation interfaces for maximum user-friendliness and legal certainty
- ★ **Small but unmissable:** MELAsea/® 300 packs incredible power into an unbelievably slim and lightweight design

MELAsea/® 200

Validatable bar sealing device

- ✓ **Intuitive operation:** MELAG four key concept and LCD display
- ✓ **Documentation:** Two USB ports for computer connection and log transfer
- ✓ **Legal certainty:** Complying the requirements of EN ISO 11607-2

MELAsea/® 100+

Compact bar sealing device

- ✓ **Speed:** Short pre-heating and sealing times
- ✓ **Efficiency:** Saving service costs by maintenance-free operation
- ✓ **Safety:** Monitoring of sealing time and sealing temperature

Success Stories



„The MELAG system solution covers the entire instrument decontamination workflow to guarantee our patients’ best-possible protection and care.“

Clinic of Maryam Taleh



„The aligned MELAG products save time whilst providing the highest level of safety for patients and practice staff alike.“

Clinic of Frank Bachmann



„We have found a reliable and high-performing partner for the best-possible reprocessing workflow: MELAG provides a perfect level of protection and efficiency in our clinic.“

Clinic GesichtsPunkt

MELAsea® 300

Maximum efficiency in minimum space.

Simply magical. Magically simple. MELAsea® 300 redefines the packaging process: The compact MELAG rotary sealing device with large Smart-Touch Display not only fits in every reprocessing line, but also for every instrument volume: Because with the help of the automatic film feeder, you can pack a particularly large number of instruments in the shortest possible time - and without interruptions.

And it's that simple: Insert the film, done! Smart features and outstanding performance make the packaging process magically simple - saving time and ensuring absolute reliability. This is because all important sealing parameters and routine checks are documented with integrated USB and network interfaces.

Up to 50 % Space saving*

MELAsea® 300

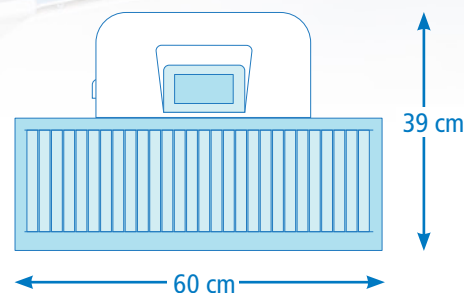
Conventional rotary sealers

Complementary accessories

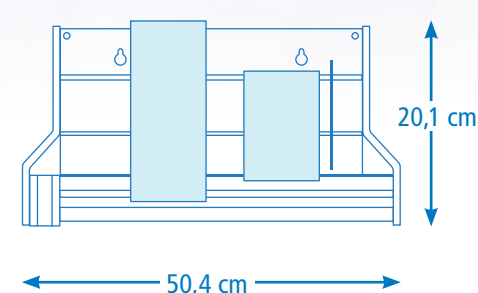
The versatile range of accessories provides highest flexibility: Choose a work table, reel dispenser and documentation medium to customize the sealing process in accordance with your needs. Find out more about our individual accessories on the following pages.



+ Standard and Comfort Work Table



+ Flex Roll Holder



The product highlights:

- ✓ Short heat-up time of 100 sec. and high throughput speed of up to 15 m/min
- ✓ Intuitive operating concept with large Smart-Touch Display
- ✓ Integrated USB and network interfaces
- ✓ Set-up assistant for cost-effective commissioning by the practice team
- ✓ 12 mm wide segmented seal for convenient opening of the packaging
- ✓ Smart reminder function for seal check and seal seam stability test
- ✓ Power Save for top energy efficiency between sealing processes



Discover the product highlights of the MELAsea® 300 at www.melag.com/en/products/sealing-devices/melaseal300

MELAseal® 200

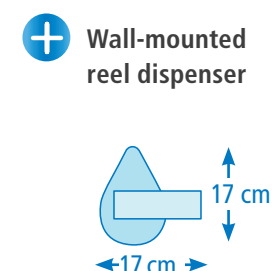
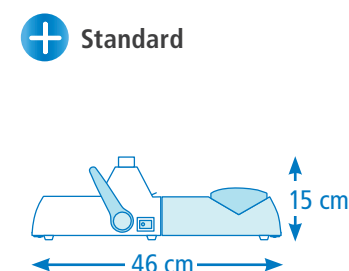
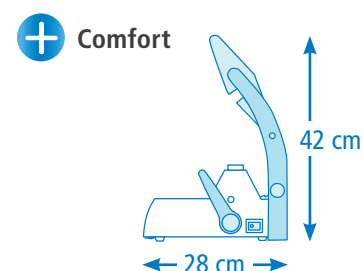
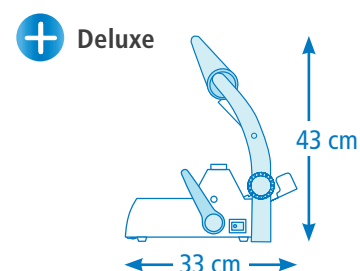
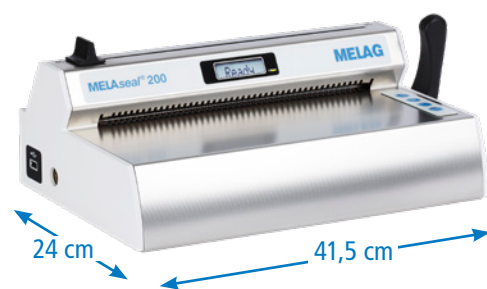
Unique in innovation and function.

MELAseal® 200 is the most compact validatable sealing device of its class. The compact dimensions and the innovative MELAG concept of the bar sealing device ensure efficient instrument packaging in practice and clinic. The sealing device is ready to use within 90 seconds and allows the successive wrapping of instruments in only 3 seconds without pause.

MELAseal® 200 automatically monitors the sealing parameters temperature, pressure and time to ensure maximum safety. The generated sealing logs can be transferred via USB ports in a quick and legally compliant way.

Perfection in the finest detail

The **variety of available reel dispensers** adapts the sealing device to the needs of your decontamination room. You require even more comfort? The reel dispenser "Deluxe" sets new standards: Its integrated hand wheel provides full control over the transparent sterilization roll feed. There is no need for the time-consuming manual feeding process.



The product highlights:

- ✓ **Two integrated USB interfaces** for log transfer and computer connection (incl. MELAG 8 GB USB flash drive)
- ✓ **Intuitive MELAG four key concept** with display and LED signal for **easy operation**
- ✓ **Compact and space-saving design** with an integrated cutting unit
- ✓ **Energy-saving mode** and standby function for even more **cost-saving operation**
- ✓ **Seal check function** and integrated user administration guarantee **maximum safety**
- ✓ **Compliance with EN ISO 11607-2** ensures **legal certainty**



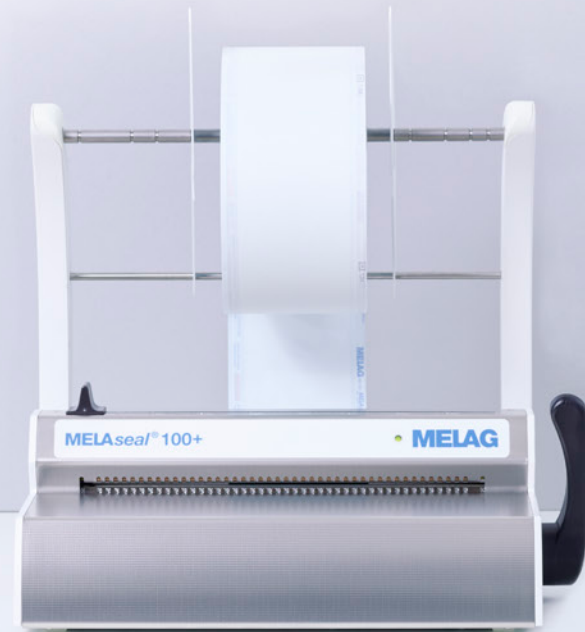
Save money: Our video tutorials lead you through the commissioning and operation of MELAseal® 200.

MELAseal® 100+

Unique in price and performance.

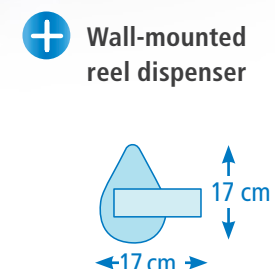
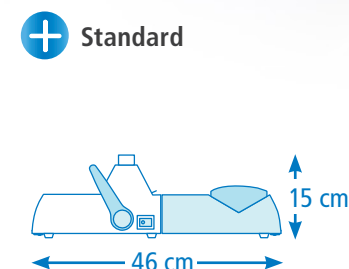
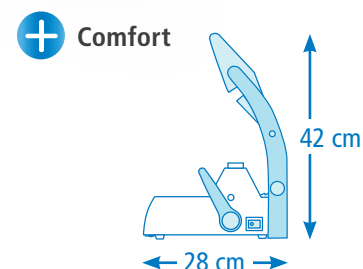
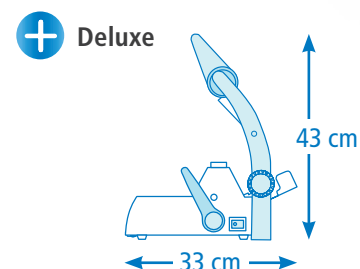
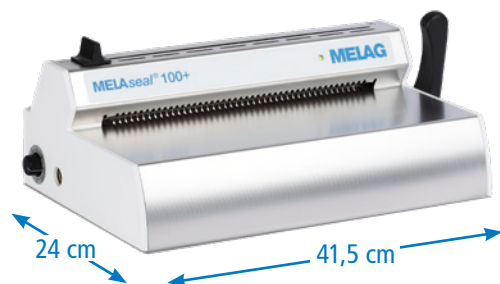
The tried-and-tested concept of MELAseal® 100+ provides a reliable solution for your packaging process. The sealing device combines performance with functionality: Seal transparent sterilization packaging without pause after a pre-heating time of only four minutes. The integrated electronics of the device monitors the sealing temperature and time. The acoustic and visual signal facilitate the evaluation of the seal seam quality. The individually adjustable thermostat permits the flexible use of versatile sterilization packaging.

MELAseal® 100+ with a 10 mm seal seam width significantly exceeds the prescribed width of 6 mm required by EN 868-5, thus guaranteeing additional safety.



Versatile range of reel dispensers

The ergonomically designed reel dispensers enable effortless feeding of the transparent sterilization packaging. The integrated cutting unit allows you to customize the film packaging to the individual needs and sizes of the instruments.



The product highlights:

- ✓ Short pre-heating and sealing times guarantee quick sealing processes
- ✓ Compact dimensions take up a minimum amount of space on your worktop
- ✓ Acoustic and visual signals ensure the proper monitoring of the sealing time and temperature
- ✓ Customizable: The lever can be set on the right or left-hand side
- ✓ Maintenance-free operation eliminates service costs



Find out more about the product highlights of MELAseal® 100+ in our product video.

MELAfol®+

Sealing processes at the highest level.

MELAfol®+ has been designed to fit all MELAG sealing devices perfectly: The transparent sterilization packaging is sealed reliably and quickly using the pre-set temperature of 180 degrees.

MELAfol®+ complies with the highest demands placed on instrument packaging and storage. The combination of film and paper guarantees tear-proof, crease-resistant and especially germ-impermeable storage. The treatment indicator on the sterilization packaging provides reliable proof of whether the packed instrument has been sterilized.

Medical and dental practices appreciate the excellent peeling behaviour of MELAfol®+. The peel direction indicated on the film guarantees easy and clean opening without releasing fibres or particles.



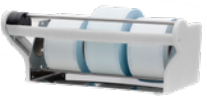
Accessories

Reel dispensers for the MELAseal® series.

- 

+ Deluxe reel dispenser
(Art. No. ME10108)
sets new standards in ergonomical operation of MELAseal® 100+ and MELAseal® 200.
- 

+ Comfort reel dispenser
(Art. No. ME10111)
saves space by storing the rolls above MELAseal® 100+ and MELAseal® 200.
- 

+ Standard reel dispenser
(Art. No. ME10117)
is attached to the rear side of MELAseal® 100+ and MELAseal® 200.
- 

+ Flex Roll Holder
(Art. No. ME00142)
Is designed for flexible use, the roll holder can either be placed on the work surface or mounted on the wall to save space.
- 

+ Standard work table
(Art. No. ME77750)
provides support during the packaging process and improves the ergonomics of MELAseal® 300.
- 

+ Comfort work table
(Art. No. ME00141)
with smooth-running castors for fast transport of heavy individual instruments and containers.

MELAfol®+ product highlights:

- ✓ Perfectly aligned to all MELAG sealing devices
- ✓ Reels and pouches available in a range of sizes
- ✓ Compliance with EN 868-5
- ✓ Integrated sterilization indicator and arrows for the peel direction
- ✓ Germ-impermeable, crease-resistant and easy to open



Find out more about the packaging process in our video tutorial.

As versatile as your requirements: MELAfol®+ at a glance.

Reels	MELAfol®+	MELAfol®+	MELAfol®+	MELAfol®+	MELAfol®+	MELAfol®+
Width x Length	5 cm x 200 m	7.5 cm x 200 m	10 cm x 200 m	15 cm x 200 m	20 cm x 200 m	25 cm x 200 m
Art. No.	ME00530	ME00531	ME00532	ME00533	ME00534	ME00535
Pouches	MELAfol®+	MELAfol®+	MELAfol®+	Pouches with fold		
Width x Length x Quantity	5 cm x 25 cm, 1000 pcs.	7.5 cm x 25 cm, 1000 pcs.	10 cm x 25 cm, 1000 pcs.	20 cm x 50 cm, 100 pcs.		
Art. No.	ME00536	ME00537	ME00538	ME00539		

Documenting the sealing process.

- 

+ MELAtrace®
for the documentation, approval and traceability of the entire decontamination process. Compatible with MELAseal® 200 and MELAseal® 300.
- 

+ USB stick
is specially tested and adapted to MELAseal® 300 and MELAseal® 200 for the documentation of sealing protocols.
- 

+ Routine testing
with seal check, inc test and seal seam stability test ensures reliable control of the seal seam in your practice.

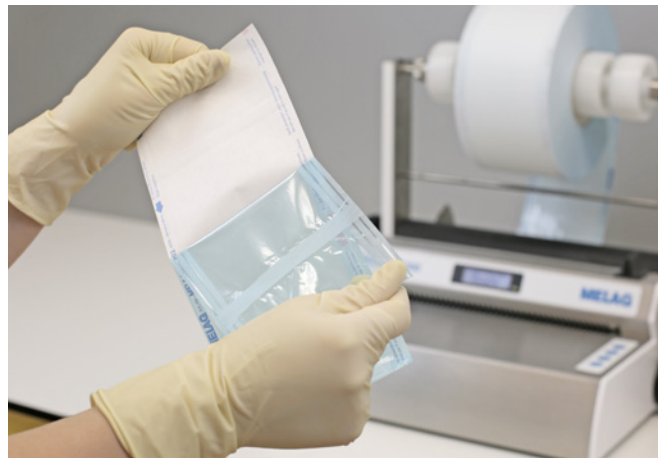
Routine checks of sealing devices

Maximum safety. Minimum costs.

The MELAG test procedures perform quick and affordable routine checks of your sealing devices, thereby ensuring legal compliance. Our aligned solutions work precisely to prove the quality and reproducibility of your seal seams. An overview of the tests to be performed on a daily, monthly and annual basis:



Peel test

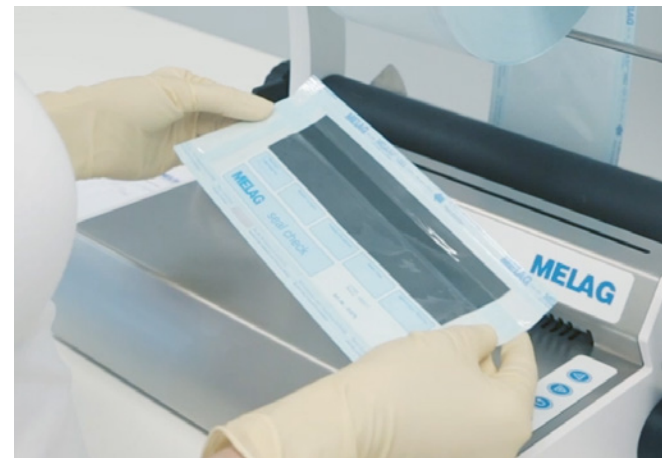


Please make sure to carry out the peel test on a **daily** basis, preferably before starting work: The tested seal seam must be even and complete.

Subsequently, **check the seal seam** manually. To do so, please sterilize the sealed packaging, take it from the autoclave and pull the seal seam apart slowly in the peel direction. The film must detach from the paper with almost no residue.



MELAcontrol Seal Check



The **daily MELAcontrol Seal Check** verifies the quality of the seal seam in accordance with DIN EN ISO 11607-2.

Place the seal check into the pouch and seal the packaging so that the generated seal seam runs centrally across the entire test strip. The indicator paper of the **MELAcontrol Seal Check** enables you to evaluate the seal seam reliably. The test is successful if the complete seal seam shows an even coloration and sharp contours without any faults, wrinkles or bubbles.

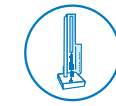


MELAcontrol Ink Test



The **MELAcontrol Ink Test** is a reliable test for performing a **weekly** routine check of the seal seam for leaks in accordance with DIN EN ISO 11607-1 and ASTM F1929-12.

Seal the disposable **MELAcontrol Ink Test** into the transparent packaging. Carefully apply pressure to the ink bag until it bursts. The ink will leak into the sealed pouch guaranteeing the reliable visual check of the seal seams, revealing irregularities, flaws or channels in the seal seams.



Seal Seam Stability Test



In order to validate packaging processes and to evaluate the performance of sealing devices, hygiene experts strongly recommend the seal seam stability test as an **annual** routine check.

The **MELAG seal seam stability test** is a standardized test procedure for the qualification of your MELAseal® sealing device in accordance with DIN EN 868-5, Appendix D. MELAG performs the test with a highly-precise testing machine for guaranteed valid results.



Find out more about the **routine tests** of sealing devices in our video tutorial.



Find out more about the **seal seam stability test** in our video tutorial.



The MELAG system solution

Your one-stop provider for instrument reprocessing.

The MELAG sealing devices constitute an important element of an efficient instrument decontamination workflow. Their perfect alignment with MELAG autoclaves and washer-disinfectors results in even more efficient operating procedures whilst providing the best-possible protection for patients and staff.

Take advantage of the benefits of the MELAG system solution with products from the leading manufacturer in practice hygiene:

- **Personal**
One contact partner for all of your questions
- **Efficient**
Reducing costs by synchronising the service
- **Process-optimized**
Perfect alignment of the workflow and operation

Are you looking to improve your decontamination workflow even further? Then why not enhance the efficiency and quality of your packaging process with MELAstore®. The MELAG wash trays and sterilization containers provide increased **standardization** to save time in the packaging of instrument sets and to reduce material costs and practice waste through a significantly lower need for sterilization packaging.



The instrument decontamination process:



✓ Cleaning and disinfection with MELAtherm® Series



✓ Packaging with MELAseal® and MELAstore®



✓ Sterilization with MELAG autoclaves



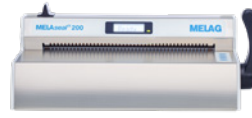
✓ Documentation and approval with MELAtrace®



✓ Labelling with MELAprint® 60

Technical data

Figures and facts at a glance.



	MELAseal® 300	MELAseal® 200	MELAseal® 100+
Device type	Rotary sealing device	Bar sealing device	Bar sealing device
Validatable	yes	yes	no
Documentation interface	2x USB port, 1x Ethernet	2x USB port	no
Device dimensions (W x D x H)	36 x 16 x 17.5 cm	41,5 x 24 x 15 cm	41.5 x 24 x 15 cm
Weight	5.6 kg	5.4 kg	5.4 kg
Electrical connection	230-240 V / 50/60 Hz	230 V / 50/60 Hz	230 V / 50/60 Hz
Power Input	650 watts	300 watts	300 watts
Pre-heating time	100 sec.	90 sec.	200 sec.
Sealing duration / speed	5-15 m/min	ca. 3 sec.	ca. 4 sec.
Temperature range	100 - 215 °C	100 - 210 °C	140 - 195 °C
Seal seam width	12 mm	10 mm	10 mm
Seal seam length	Unrestricted	max. 275 mm	max. 275 mm
Integrated cutting unit	no	yes	yes
Art. no.	ME10300	ME10120	ME10211

System solutions, innovation and quality

MELAG was founded in 1951 and is an owner-operated family company, that specializes in products aiming at optimized practice hygiene. The manufacturing and production sites are exclusively located in Germany on a 25.000 m² premises with 500 employees working diligently to maintain MELAG's world leading role in instrument decontamination.



Rev. 5-26/2820-05.26-EN-ME



Save paper, protect the environment:
In order to reduce paper, we provide you with electronic user documentation via our Download Center.

Further information at: <https://www.melag.com/en>

MELAG
competence in hygiene

User manual

MELAseal® 100+

Sealing device



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.

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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	Description
 WARNING	Indicates a dangerous situation, which if not avoided, could entail slight to life-threatening injuries.
 CAUTION	Indicates a dangerous situation, which if not avoided, could entail slight to moderate injuries.
NOTICE	Indicates a dangerous situation, which if not avoided, could result in damage to the instruments, the practice fittings or the device.
 PLEASE NOTE	Draws your attention to important information.

Formatting rules

Example	Description
see Chapter 2	Reference to another text section within this document.
	Prerequisites for the following handling instruction.
	Reference to the glossary or another text section.
	Information for safe handling.

Disposal

MELAG devices are synonymous with long-term quality. When you eventually need to decommission your MELAG device, the required disposal of the device can be carried out by MELAG in Berlin. Simply contact your stockist.

Dispose of ▶[components](#), spare parts, ▶[accessories](#), ▶[equipment](#) and consumables that you no longer need properly. Comply with all relevant disposal regulations regarding potentially contaminated waste.

The packaging protects the device against transport damage. The packaging materials have been selected for their environmentally-friendly and recycling properties and can be recycled. Returning the packaging to the material cycle 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.

Qualified personnel

- Only competent and trained personnel may use the device.
- The operator must ensure that the users are regularly trained in the operation and safe handling of the device.

Repair

- Never open the device housing. Incorrect opening and repair can compromise electrical safety and pose a danger to the user. The guarantee and warranty are forfeited as soon as the device is opened by anyone other than a MELAG-authorized technician.

3 Description of the device

Intended use

This device is a bar sealing device for the heat sealing of instruments in sterilization packages, in accordance with ►EN ISO 11607-2 and ►DIN 58953-7, in which medical instruments are to be reprocessed by means of steam sterilization. The device is designed for application in a medical context, e.g. clinics and medical and dental practices. The device is not intended for use on patients or in the patient care area.

The bar sealing device MELAseal 100+ is not a medical device as defined by the Medical Device Regulation.

Suitable materials

For the heat sealing of transparent sterilization packages in accordance with ►EN 868-5 e.g. MELAfol+ reels and pouches are suitable. Should you wish to use any other packaging materials, please consult your stockist or contact MELAG directly.

Unsuitable materials

Sterilization packages that are not compatible with the requirements of EN 868-5, are incompatible with this device. The following materials are not suitable:

- Pure hose film (double-sided film), as these tends to become adhere to the sealing rail, and can restrict the functionality of the sealing device.
- Polythene film
- Soft PVC film
- Hard PVC film
- Polyamide film
- Polypropylene film

NOTICE

Warning of material damage from incorrect use

The use of unsuitable packaging materials carries the risk of damage to or malfunction of the device.

- Comply with the manufacturer's recommendations for the sealing temperatures suitable for each type of packaging material.

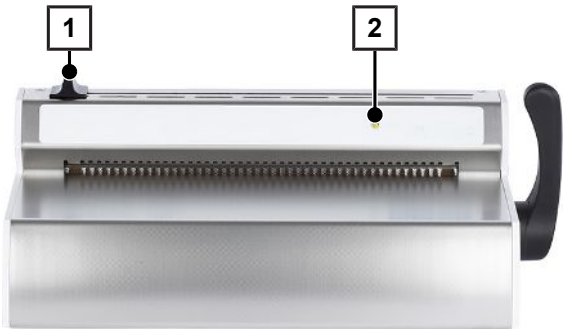
Scope of delivery

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

- Sealing device MELAseal 100+
- User manual
- Declaration of conformity
- Warranty certificate
- Power cable
- Sealing lever

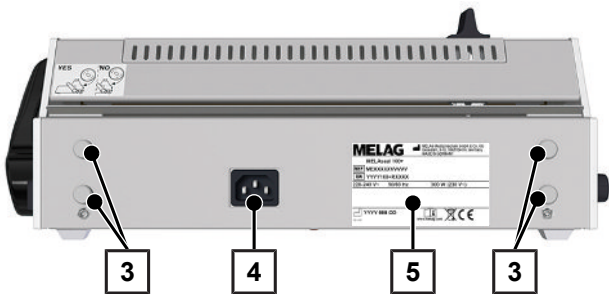
Views of the device

View from the front



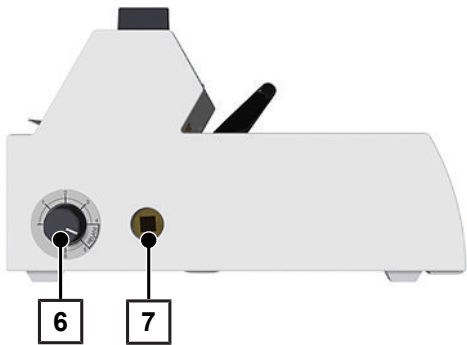
- 1 Knife handle
- 2 Control lamp

View from the rear



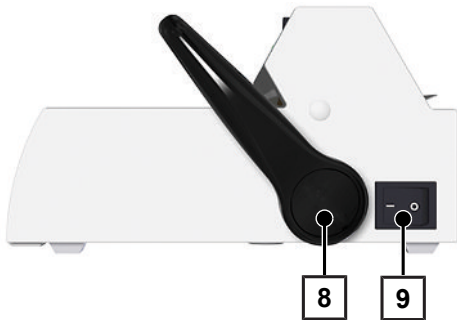
- 3 Bracket for reel dispenser
- 4 Power cable connection
- 5 Type plate

View from left



- 6 Rotary knob for temperature setting
- 7 Square hole for sealing lever (on both sides)

Fore right view



- 8 Sealing lever
- 9 Power switch (On/Off)

Symbols on the device

Type plate



Manufacturer of the product



Date of manufacture of the product



Article number of the product



Serial number of the product



Observe user manual or electronic user manual



Do not dispose of product in household waste



CE marking



Electrical connection of the product: Alternating current (AC)

Symbols on the power switch



Switching on device



Switching off device

Status display and acoustic signal

Control lamp/acoustic signal		Possible causes	What you can do
	LED illuminates orange	The sealing device is in the heating or cooling phase.	Wait until the pre-set sealing temperature has been reached.
	LED flashes red, warning signal sounds	- The sealing lever is depressed during the heating phase. - The sealing temperature has not yet been reached.	Wait until the LED is continuously illuminated green.
	LED illuminates green	- The sealing device has reached the pre-set sealing temperature and is ready for operation. - The pre-set sealing duration (4 s) has been reached. The sealing procedure has been completed.	Raise the sealing lever and remove the packaging.
	LED flashes green	The sealing procedure runs when the sealing lever is depressed (4 s).	Wait until the LED is continuously illuminated green.
	LED illuminates red, warning signal sounds (malfunction)	The sealing lever has been raised early, despite the required sealing duration not having been reached.	Keep the sealing lever depressed until the green LED is continuously illuminated.
		The sealing lever has not been raised, despite the required sealing duration having been completed.	Raise the sealing lever as soon as the sealing duration has been reached so that the transparent sterilization package is not burnt.
		Device malfunction: The heating phase takes too long (> 5 min). The sealing device does not reach the pre-set sealing temperature.	Upon repeated occurrence, inform an authorised technician.

PLEASE NOTE

If further status displays or acoustic signals occur, please contact the technical service.

4 Commissioning

Requirements of the installation location

Comply with the following for safe handling:

- Check the device after unpacking for any damage suffered during transport.
- Do not install or operate the device in potentially explosive areas.
- The device is only intended for use in interior spaces.
- The device is conceived for use outside the patient area. The device should be located a minimum of 1.5 m radius away from the treatment area.
- Install and operate the device in a frost-free environment.
- Install the device in a dry and dust-protected location.
- Ensure that the sealing device is located away from direct sunshine and outside the range of other sources of heat.
- Setup the device protected against blows or vibrations.
- Maintain sufficient clearance to the surrounding surfaces in order to ensure sufficient ventilation.

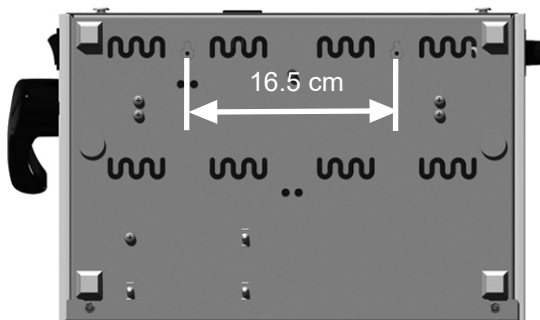
Removing from the packaging

1. Open the transport packaging carefully.
2. Remove the device from the transport packaging.
3. Check the device for any damage suffered during transport.

Wall mounting

If the device is not to be placed on a table, it can be mounted on a wall. MELAG recommends using the optional available wall mounted reel dispenser. Proceed as follows:

1. Remove the perforated wall-mounting metal panels from the base of the sealing device.
2. Drill two Ø 6 mm boreholes in the wall with a clearance of 16.5 mm at the desired mounting height.



3. Screw two rawl plugs (Ø 6 mm) with roundhead screws (Ø 3.5 x 45 mm) in the drillholes.
4. Hook the sealing device in the roundhead screws.

Connecting the sealing device

Comply with the following for safe handling:

- Only the power cable included in the scope of delivery may be connected to the device.
- The power cable may only be replaced by an original spare part from MELAG.
- Comply with all legal requirements and locally-specified connection conditions.
- Never operate the device if the plug or power cable are damaged.
- Never damage or alter the power plug or cable.
- Never bend and twist the power cable.
- Never unplug by pulling on the power cable. Always take a grip on the plug.
- Ensure that the power cable does not become jammed in.
- Never place any heavy objects on the power cable.
- Never lead the cable along a source of heat.
- Never fix the power cable with sharp objects.

NOTICE

Warning of material damage

Operating the device outside the specified ambient temperature (5-40 °C) can lead to damage to individual device components.

- Allow the device to acclimatise to the required ambient temperature (5-40 °C) before switching it on for the first time.

The following must be fulfilled or present:

- ✓ The device has been switched off.
 - ✓ The power cable, delivered in the scope of delivery, is present.
1. Connect the power cable to the back of the device.
 2. Plug the power plug of the device into the power socket of the practice.
 3. Insert the sealing lever in the square hole on the right or left hand side of the device as required.



Switching on the sealing device

- ✓ The device is connected to the power supply.
- Switch on the sealing device at the power switch. The control lamp on the fore side of the sealing device will illuminate yellow after activation.



Operational readiness

As soon as the control lamp is continuously illuminated green, the pre-set sealing temperature has been reached and the sealing device is ready to operate.

5 Sealing

Sealing temperature

Infinitely variable temperature control is performed via the rotary knob on the left-hand side of the sealing device. The sealing temperature is determined by the type of sterilization packaging. The sealing temperature for MELAfol+ reels and pouches is 170-190 °C. MELAG recommends a sealing temperature of 180 °C. For this turn the rotary knob to point to the middle of the area marked with "MELAfol". When using transparent sterilization packages from other manufacturers, set the sealing temperature according to the manufacturer's instructions. The temperature levels correspond approximately to the following sealing temperatures:

PLEASE NOTE: To ensure that the sealing process complies with all normative specifications, MELAG recommends carrying out a seal seam stability test when the transparent sterilization package is changed, see [MELAG seal seam stability test](#) ► page 21].

Rotary knob at the sealing device



Temperature level	Sealing temperature
0	140°C
1	145°C
2	155°C
3	165°C
4	175°C
5	185°C
6	195°C

Sealing procedure with pre-finished film pouches

⚠ CAUTION

Warning of burns

The sealing rail is heated continuously when the sealing device is switched on. Touching hot metal surfaces can cause burns.

- Never touch the metal surfaces on the sealing rail or in the area of the rear and fore paper guide.

NOTICE

Warning of material damage from incorrect use

If the transparent sterilisation packaging is inserted incorrectly, film residues may adhere to the sealing bar. Sticking of the sealing bar may result.

- Always guide the transparent sterilization package into the device with the film side pointing upwards.

! PLEASE NOTE

When sealing MELAfol pouches with a side gusset, ensure compliance with the manufacturer's specifications (e.g. Handling MELAfol+ pouches with side gusset) especially when wishing to seal cassettes.

In order to perform a sealing procedure with pre-finished film pouches, proceed as follows:

1. Insert the packaging (film side facing upwards) from the front in the paper guide between the pressure rail and sealing rail. Ensure the correct clearance between instrument and seal seam, see [Standard specifications](#) ► page 22].



2. Press the sealing lever down until it latches.



3. Leave the sealing lever depressed until the control lamp flashes green in short intervals (approx. 4 s).
4. When the control lamp is continuously illuminated green again, raise the sealing lever upwards to its starting position. Remove the film pouch from the sealing device.
5. Perform a visual inspection of the seal seam after every successful sealing procedure. There must be no channels, bubbles, creases or open areas present.

Example view of a defect-free seal seam



PLEASE NOTE

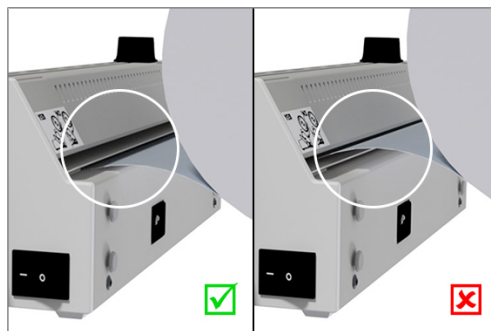
Carry out weekly checks of the sealing seam on gusseted pouches using an ink test (e.g. MELAcontrol Ink Test).

Sealing procedure for film reels

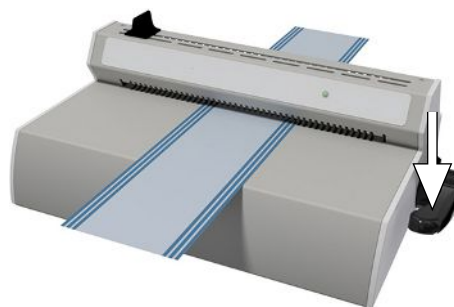
Producing a film pouch

If the instruments are packaged in pouches from the reel in transparent sterilization packaging, proceed as follows:

1. Guide the end of the film reel along the device rear panel into the lower paper guide with the paper side facing downwards (**lower slit**). Slide the film forward between the pressure and sealing rail up to the desired length.

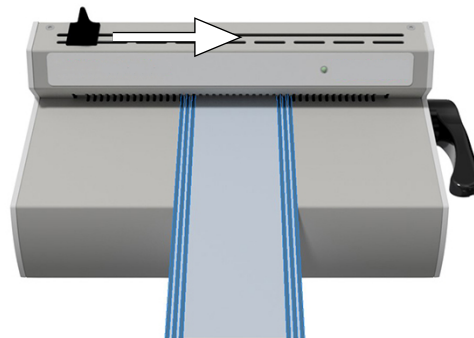


2. Press the sealing lever down until it latches.



3. Leave the sealing lever depressed until the control lamp flashes green in short intervals (approx. 4 s).

4. Ideally, the film should be cut off during the sealing procedure: Move the knife handle to the other end of the sealing device quickly; the sealing lever should remain depressed. Do not return the knife handle.



5. When the control lamp is continuously illuminated green, raise the sealing lever upwards to its starting position. Remove the film pouch from the sealing device.

Sealing film pouches

NOTICE

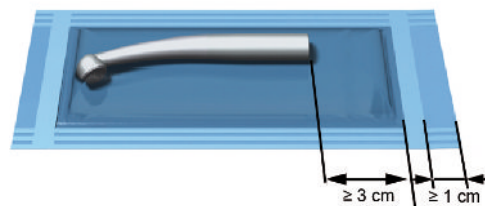
Warning of material damage from incorrect use

If the transparent sterilisation packaging is inserted incorrectly, film residues may adhere to the sealing bar. Sticking of the sealing bar may result.

- Always guide the transparent sterilization package into the device with the film side pointing upwards.

To seal the film pouch cut to the corresponding length, proceed as follows:

1. Place the instruments to be sterilized in the film pouch. Ensure the correct clearance between instrument and seal seam, see [Standard specifications](#) [► page 22].



2. Slide the open side of the film pouch from the front into the paper guide.



3. Press the sealing lever down until it latches.



4. Leave the sealing lever depressed until the control lamp flashes green in short intervals (approx. 4 s).

5. When the control lamp is continuously illuminated green again, raise the sealing lever upwards to its starting position. Remove the film pouch from the sealing device.
6. Perform a visual inspection of the seal seam after every successful sealing procedure. There must be no channels, bubbles, creases or open areas present.

Example view of a defect-free seal seam



6 Function checks

Function check with MELAcontrol Seal Check

The MELAcontrol Seal Check serves to check the function of the seal seam produced by your sealing device. MELAG recommends performing this function check once a day during operation.

For further information, see the MELAcontrol Seal Check instructions for use.

Performing a MELAcontrol Ink Test

The MELAcontrol Ink Test is a reliable test for routine control of the seal seam for leaks. The MELAcontrol Ink Test can also be used for bags with a side gusset.

- ▶ Carry out weekly seal seam checks with a MELAcontrol Ink Test.

For further information, see the MELAcontrol Ink Test instructions for use.

7 Maintenance

Cleaning and regular checks

Comply with the following for safe handling:

- Switch off the sealing device at the mains and remove the cable before cleaning.
- The cleaning cloth may never be allowed to become entirely wet in order to prevent water from entering the interior of the sealing device.
- Liquids may not be permitted to reach the interior of the device. This could result in an electrical shock or short circuiting.

Interval	Measure
When necessary and every 6 months	Clean the exterior of the sealing device with a dry or damp, non-fuzzing cloth and where necessary with a neutral fluid cleaner or spirit. Only at persistent soiling, use a mild stainless steel cleaning agent with a pH value between 5 and 8.

8 Pause times

Pause times

The sealing device can remain switched on over longer operating pauses of many hours. MELAG recommends switching off the device during long operating pauses to save energy.

Transport and storage

NOTICE**Warning of material damage**

Damage to the housing and the device interior as a result of using unsuitable transport packaging.

- Only transport the device in its original packaging or other suitable packaging.

Comply with the following for safe handling:

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

9 Optional equipment

Reel dispenser Standard

The reel dispenser Standard is placed directly behind the sealing device. The film reels are placed into the cavity and held in position using additional spacers located to the left and right. This prevents them from slipping.

- ▶ Hook the reel dispenser into the outside brackets to fix it on the rear panel of the sealing device.



Reel dispenser Comfort

The reel dispenser Comfort enables space-saving storage of the film reels above the sealing device. The reels are slid onto the rod laterally and held in position via additional spacers to the left and right. This prevents the reel from slipping.

- ▶ Hook the reel dispenser into the outside brackets to fix it on the rear panel of the sealing device.



Reel dispenser Deluxe

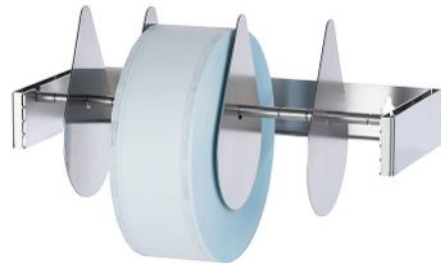
When using the reel dispenser Deluxe, the film reels are stored above the sealing device, thus saving space. The integrated feeding device enables easy feeding of the film via a hand wheel.

Further information regarding assembly and operation is specified in the appendent user manual.



Wall mounted reel dispenser

Mounted on the wall directly over the sealing device, the wall mounted reel dispenser saves space.



10 Manufacturer's recommendation for routine operation

Video tutorial

See also "Manufacturer's Recommendation for Routine Operation" (<https://www.melag.com/en/service/tutorial/sealing-unit/melaseal200>).



For further information see separate document "Manufacturer's recommendation for routine operation of MELAG sealing devices".

Performing the peel test

1. Seal a transparent sterilization package in the sealing device.
2. Perform a visual check to verify whether the seal seam extends consistently along the whole width and length of the sterilization package just sterilized. No paper residue bigger than 10 mm is permitted on the seal seam.
3. Process the sealed transparent sterilization package in a sterilization cycle.
4. Working by hand, pull the seal seam apart slowly along the direction of peeling:
 - The seal seam produced by your sealing device must offer noticeable resistance when opened.
 - The paper must not tear when opened.
5. Document the results.

MELAG seal seam stability test

Video tutorial

See also "Test for seal seam stability" (<https://www.melag.com/en/service/tutorial/sealing-unit/melaseal200>).



Each change of a transparent sterilization package has an influence on the result of the sealing procedure. The optimum sealing temperature, speed and force vary with different transparent sterilization packages. The device is optimised for sealing MELAfol+ transparent sterilization packages. When using other transparent sterilization packages, observe the manufacturer's instructions and set the device accordingly.

To ensure that the sealing process complies with all normative specifications, MELAG recommends carrying out a seal seam stability test annually and when the transparent sterilization package is changed.

MELAG offers a seal seam stability test for the validation of your sealing procedures. After testing the film test strips, you will receive a certificate from MELAG stating the conformity of the seal seams with the ►EN 868-5 standard, Appendix D, if the seal seam stability test is successful. Use the MELAG seal seam stability test application form. Download the application form from the MELAG website (Service/Download Center).

11 Standard specifications

Explanation of terms

Name	Description
Sterile barrier system	►EN ISO 11607-2 replaces the terms “packaging”, “end packaging” and “primary packaging” with the single term “sterile barrier system”. A sterile barrier system is the minimum level of packaging which prevents the penetration of micro-organisms and permits aseptic provision of the product at the location of use. This includes transparent sterilization packages, a sterilization bag, reusable containers etc.
Protective packaging	The protective packaging is designed to provide the sterile barrier system with protection up until its final application.
Packaging system	The sterile barrier system and protective packaging combine to form the packaging system.
Peel test	A procedure to determine the peeling characteristics of paper-/plastic composite material in accordance with ►EN 868-5, Appendix E.

General information regarding the packaging and sealing procedure

Comply with the following during wrapping and sealing:

- Choose packaging of a sufficient size.
- Packaging made of porous materials and plastic composite film should be filled to a max. of 3/4 of its volume (►DIN 58953-7).
- For packaging made of porous materials and plastic composite film, at least 30 mm must remain free between the sterilization material and the seam to be sealed (DIN 58953-7).
- When using transparent sterilization packages from a reel, the removal side must have an overlap of min. 10 mm between the cutting edge and the seal seam, enabling an aseptic removal (DIN 58953-7).
- Press together to remove all air before sealing.

Seal seam width

- The recommended nominal size for the width of the seal seam in DIN 58953-7 is 6 mm. Section 4.3.2 of EN 868-5 requires total seal width of at least 6 mm. Thus for grooved seal seams, the sum of the individual grooved seams should amount to at least 6 mm.

This sealing device produces homogeneous seal seams of 10 mm in width with every sealing procedure.

Clearance of the seal seam to the cutting edge

- Maintain the clearance between seal seam and cutting edge as prescribed in the standard:
DIN 58953-7 requires the maintenance of a sufficient overhang between the seal seam and the cutting edge when working with film pouches on the removal side. This ensures aseptic removal. MELAG recommends a minimum overhang of 10 mm.

Seal seam stability

When using MELAfol+ transparent sterilization packages, the sealing device guarantees a seal seam stability in accordance with EN 868-5.

Storage duration for sterile medical devices

The maximum storage time is dependent on the packaging and the storage conditions. Please observe the regulatory requirements for the storage period of ►sterile materials (in Germany e.g. ►DIN 58953, Part 8 or the ►DGSV guidelines) as well as the following listed criteria:

- Store the sterile material in a dust-protected environment e.g. in a closed instrument cabinet.
- Store the sterile material in an environment protected against moisture.
- Store the sterile material in an environment protected against excess temperature variations.

12 Technical Data

Device type	MELAseal 100+
Device dimensions (W x D x H)	41.5 x 24 x 15 cm
Weight	5.4 kg
Electrical connection	
Power supply	220-240 V, 50/60 Hz 100-110 V, 50/60 Hz ¹⁾
Max. voltage range	198-264 V
Electrical power	max. 300 W, average 100 W
Building fuse	10 A, RCD 30 mA (1.3 A operation)
Overvoltage category	transient overvoltages up to the values of overvoltage category II
Pollution degree (in accordance with EN 61010-1)	Category 2
Overheat protection	> 240 °C
Length of the power cable	1.5 m
Ambient conditions	
Installation location	interior of a building (dry and protected from dust)
Max. altitude	2000 m
Ambient temperature	5-40 °C (ideal range 16-26 °C)
Relative humidity	max. 80 % at 31 °C, max. 50 % at 40 °C (decreasing in linear fashion in-between)
Degree of protection (in accordance with IEC 60529)	IP20
Sealing characteristics	
Sealing temperature range	140-195 °C
Sealing force	factory settings, fix
Heating duration (from 25 °C to 180 °C)	approx. 200 s
Sealing duration	min. 4 s (factory settings, fix)
Seal seam width	10 mm
Seal seam length	max. 27.5 cm
Maximum load quantity - transparent sterilization package	3 kg

¹⁾ see type plate

13 Components, accessories and spare parts

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

Accessories

Category	Article	Art. no.
Films	MELAfol+ (roll, 5 cm x 200 m)	ME00530
	MELAfol+ (roll, 7.5 cm x 200 m)	ME00531
	MELAfol+ (roll, 10 cm x 200 m)	ME00532
	MELAfol+ (roll, 15 cm x 200 m)	ME00533
	MELAfol+ (roll, 20 cm x 200 m)	ME00534
	MELAfol+ (roll, 25 cm x 200 m)	ME00535
	MELAfol+ (pouch, 5 cm x 25 cm, 1000 pcs.)	ME00536
	MELAfol+ (pouch, 7.5 cm x 25 cm, 1000 pcs.)	ME00537
	MELAfol+ (pouch, 10 cm x 25 cm, 1000 pcs.)	ME00538
	MELAfol+ (pouches with side gusset, 20 cm x 50 cm, 100 pcs.)	ME00539

Other equipment

Category	Article	Art. no.
Optional equipment	Reel dispenser Standard	ME10117
	Reel dispenser Comfort	ME10111
	Reel dispenser Deluxe	ME10108
	Wall mounted reel dispenser	ME00106
	Spacer washer for wall mounted reel dispenser	ME13330
	Spacer washer reel dispenser Comfort/Deluxe (white)	ME89740
	Separating plate for reel dispenser Standard (2 pcs.)	ME72335
Testing equipment	MELAcontrol Seal Check	ME01079
	MELAcontrol Ink Test	ME01089

Spare parts

Article	Art. no.
Sealing lever (black) for MELAseal 100+/200	ME77000

Glossary

Accessory

Accessories are independent articles that are used with one or several medical devices. Accessories specifically and directly assist the intended purpose of the medical device.

Component

A component is a part of a medical device, which is delivered with it but is not permanently connected to it. A component supports or achieves the intended purpose of the medical device for at least one use case. It is not an independent accessory or medical device.

DGSV

DGSV is the abbreviation for "Deutsche Gesellschaft für Sterilgutversorgung" [German Society for Sterile Supply]. The training guidelines of the DGSV are listed in DIN 58946, Part 6 as requirements for personnel.

DIN 58953

Standard for "Sterilization – Sterile supply"

DIN 58953-7

Standard for "Sterilization – Sterile supply – Part 7: Application technology for sterilization paper, nonwovens, paper bags and sealable transparent bags and tubes"

EN 868-5

Standard for "Packaging for medical devices to be sterilized in the final packaging – Part 5: Sealable transparent bags and tubes made of porous materials and plastic composite film - Requirements and test methods"

EN ISO 11607-2

Standard for "Packaging for medical devices to be sterilized in the final packaging – Part 2: Validation requirements for forming, sealing and assembly processes"

Equipment

Equipment is an article that can be used with the medical device, however, it is not necessary for assisting and/or achieving the intended purpose of the medical device. It is not an independent accessory or medical device.

Sterile material

Sterile goods are successfully sterilized (i.e. sterile) goods. Sterile goods are also referred to as batches.



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We reserve the right to technical alterations