USA

erbe
power your performance.

USER MANUAL

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USER MANUAL

SystemCarrier performance

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Caution: Federal law (USA) restricts this device to sale, distribution, or use by or on the order of a physician.

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Chapter 1
General instructions for use

This user manual describes the normal use of the cart.

Note: Report serious incidents with the product to your local dealer or Erbe. If you are a user in the European Union, also report incidents to the responsible authority in your Member State.

Please observe the Warnings in Chapter 2.

Intended use / Indications for use

The SystemCarrier performance is intended to accommodate Erbe units and accessories.

Compatibility

The SystemCarrier performance accommodates electrosurgical units such as the VIO 3 and auxiliary units. The auxiliary units, e.g. APC 3, ERBEJET 2, IES 3 and ESM 2, are mounted under the electrosurgical unit. The SystemCarrier performance also accommodates accessories for electrosurgical units and auxiliary units, such as footswitch and gas bottle.

The following tables list examples of the maximum combinations of compatible units that can be accommodated on the SystemCarrier performance. Workstations listed under *Surgery* are intended solely for use in the surgical operating room. Workstations listed under *Endo* are intended solely for use in the endoscopy room.

Do not connect any other units or additional units to the SystemCarrier performance.

VIO 3						
	Surgery	Surgery	Surgery	Endo	Endo	Endo
APC 3	●	●	●	●	●	-
VIO seal	●	-	-	-	-	-
ERBEJET 2	-	●	●	●	-	●
ERBECRYO 2	-	-	-	-	●	●
IES 3	●	●	-	-	-	-
ESM 2	-	●	●	-	-	
EIP 2	●	-	●	●	●	●

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VIO 3n				
	Surgery	Surgery	Surgery	Endo
APC 3	●	●	●	●
VIO seal	●	●	●	-
ERBEJET 2	●	●	●	●
ERBECRYO 2	-	-	-	●
IES 3	●	●	-	-
ESM 2	●	-	●	-
EIP 2	-	●	●	●

One of the following electrosurgical units is an option: VIO 200 S, VIO 300 S, VIO 200 D, VIO 300 D				
	Surgery	Surgery	Surgery	Endo
APC 2	●	●	●	●
VIO seal	●	●	●	-
ERBEJET 2	●	●	●	●
ERBECRYO 2	-	-	-	●
IES 3	●	●	-	-
ESM 2	●	-	●	-
EIP 2	-	●	●	●

VIO seal			
	Surgery	Surgery	Surgery
ERBEJET 2	●	●	●
ERBECRYO 2	●	●	●
IES 3	●	●	-
ESM 2	●	-	●
EIP 2	-	●	●

Intended patient population

No restrictions.

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Contraindications

No known contraindications.

Side effects

No known side effects.

Environment

For the intended use, the cart must only be operated in premises used for medical purposes.

Qualification of user

For the intended use, the cart must only be operated by medical personnel who have been trained in the use of the cart on the basis of the user manual.

Performance characteristics

This is an accessory for a medical device. There are no clinical performance characteristics.

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Chapter 2
Safety instructions

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Meaning of the safety instructions

⚠ DANGER

indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION

indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTICE

indicates a potentially hazardous situation which, if not avoided, may result in property damage.

Meaning of the note

"Note:"

Refers a) to manufacturer's information that relates directly or indirectly to the safety of people or protection of property. The information does not relate directly to a risk or dangerous situation.

Refers b) to manufacturer's information that is important or useful for operating or servicing the unit.

Who must read this user manual?

Knowledge of the user manual is absolutely essential for correct operation and installation of the cart.

The user manual must therefore be read by everyone who works with the cart, installs units on it, or attaches accessories to it.

Anyone who prepares, disassembles, cleans, or disinfects the cart must also read the user manual.

Please pay particular attention to the safety instructions in each chapter.

Also read the user manuals for all products that are used with cart.

Compliance with safety instructions

Working with medical technology unit is associated with certain risks to patients, medical personnel, and the environment. Risks cannot be entirely eliminated by design measures alone.

Safety does not depend solely on the unit. Safety depends largely on the training of medical personnel and correct operation of the unit.

The safety instructions in this chapter must be read, understood, and applied by everyone who prepares, disassembles, cleans, or disinfects the cart.

Anyone who installs units on it or attaches accessories to it must also read, understand, and apply the safety instructions.

Structure of safety instructions

The safety instructions are structured based on the following risks:

- Operating errors and incorrect installation by persons without training
- Risks due to the environment
- Electric shock
- Burns
- Risk of injury due to installation of incompatible units or accessories
- Risk of injury due to damage to the cart and accessories
- Risk of infection
- Notes

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Operating errors and incorrect installation by persons without training

⚠ WARNING

Incorrect operation of the cart, incorrect installation of units and accessories

Risk to the medical personnel and to the installer! Risk of material damage.

⇨ The cart must only be used by persons who have been trained on how to use the cart properly according to this user manual.

⇨ Units and accessories on the cart must only be installed by employees of Erbe or by persons trained by Erbe. Both of these groups must comply with the user manual and the assembly instructions.

⇨ Instruction and training must only be provided by persons who are suitable on the basis of their knowledge and practical experience.

⇨ In case of doubt or if you have any questions, please contact Erbe USA. You will find the addresses in the address list at the end of this user manual.

Risks due to the environment

NOTICE

Unsuitable temperature or humidity during transport or storage

If you transport or store the cart at an unsuitable temperature or level of humidity, it may be damaged.

⇨ Transport and store the cart at a suitable temperature and level of humidity. You will find the tolerances for temperature and humidity in the Technical Data.

⇨ If other ambient conditions have to be observed for transport and storage of the cart, you will also find them in the Technical Data.

NOTICE

Unsuitable temperature or level of humidity during operation

If you operate the cart and unit at an unsuitable temperature or level of humidity, they may sustain damage, fail, or not perform properly.

⇨ Operate the cart and unit at a suitable temperature and level of humidity. You will find the tolerances for temperature and humidity in the Technical Data.

⇨ If other ambient conditions have to be observed for operation of the cart and unit, you will also find them in the Technical Data.

NOTICE

Overheating of a unit or units on the cart due to poor ventilation

If ventilation is bad, units can overheat, sustain damage, and fail.

⇨ Install units on the cart to ensure that there is an unobstructed circulation of air around the housing. Do not install the unit in confined spaces.

Electric shock

⚠ WARNING

Damaged cart or modified cart

Risk of electric shock and other injuries to medical personnel! Risk of material damage.

⇨ Check the cart for damage every time before using it. You must not use a damaged cart.

⇨ If the cart is damaged, please contact Erbe USA.

⇨ For your safety and that of the patient: Never attempt to perform repairs or make changes yourself. Any modification will exclude liability on the part of Erbe Elektromedizin GmbH.

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⚠ WARNING

Defective grounded power outlet, power supply network without proper grounding, inferior-quality power cord, incorrect line voltage, multiple power outlets, extension cords

Risk of electric shock and other injuries to medical personnel! Risk of material damage.

- ⇨ Connect the unit/cart to a properly installed grounded power outlet.
- ⇨ Use the compatible Erbe power cord (see the *Accessories, Compatible power cords* chapter).
- ⇨ Check the power cord for damage. You must not use a damaged power cord.
- ⇨ The line voltage must match the voltage specified on the unit's rating plate.
- ⇨ Do not use multiple power outlets.
- ⇨ Do not use extension cords.

⚠ WARNING

Connection of unit/cart and power supply during cleaning and disinfection

Risk of electric shock for the medical personnel!

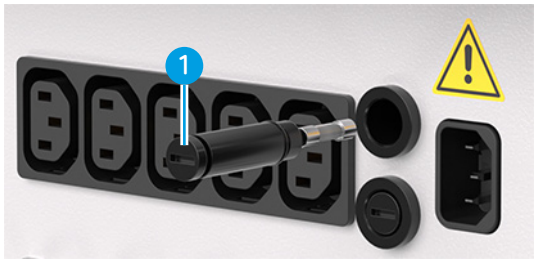
- ⇨ Switch off the unit. Unplug the power plug of the unit/cart.

⚠ CAUTION

Incorrect power fuse

The power supply cable may get hot – risk of burns.

- ⇨ Power fuses for adapting the unit configuration on the cart must only be installed by a qualified technician. Only fuses that have the same rating as the one specified on the rating plate of the cart must be used.
- ⇨ Blown power fuses may only be replaced by a competent technician. Only use spare fuses with the same rating as specified on the cart rating plate.
- ⇨ See below for the fuse insert with fuse (1).



Burns

⚠ CAUTION

Dirty casters

Dirt may affect the discharge capacity of the casters. A spark may ignite flammable gases.

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Risk of injury to the medical personnel! Risk of material damage.

⇨ Clean dirty casters.

Risk of injury due to installation of incompatible units or accessories

⚠ CAUTION

Units or accessories that are not compatible are installed on the cart. Improper items are placed on or in the cart.

Units, accessories, and items may fall off.

Risk of injury to the medical personnel! Risk of material damage.

⇨ Only install units specified in the section on compatibility.

⇨ Only install accessories specified in the chapter on compatibility.

⇨ Only use compatible footswitches for the footswitch holder and footswitch shelf.

⇨ The maximum load on the standard rail is 15 kg (33.1 lbs).

⇨ The total weight of the gas bottles in the gas bottle compartment must not exceed 30 kg (66.1 lbs).

⚠ CAUTION

Units not listed in the compatibility section are connected to the auxiliary power outlets. Units not installed on the cart are connected to the auxiliary power outlets.

The power supply cable may get hot – risk of burns.

⇨ Only connect units to the auxiliary power outlets that are specified in the compatibility section and that are installed on the cart.

⇨ See below for the auxiliary power outlets (1).

1

Risk of injury due to damage to the cart and accessories

⚠ WARNING

Damaged cart or modified cart

Risk of electric shock and other injuries to medical personnel! Risk of material damage.

⇨ Check the cart for damage every time before using it. You must not use a damaged cart.

⇨ If the cart is damaged, please contact our customer service.

⇨ For your safety and that of the patient: Never attempt to perform repairs or make changes yourself. Any modification will exclude liability on the part of Erbe Elektromedizin GmbH.

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⚠ CAUTION

The handle on the cart is used for lifting and carrying the cart

The handle can break off. The handle is only designed for pushing and pulling the cart.

Risk of injury to the medical personnel! Risk of material damage.

⇨ Do not lift or carry the cart with the handle.

⚠ CAUTION

The cart is not pushed or pulled using the handle

Units or accessories may fall off.

Risk of injury to the medical personnel! Risk of material damage.

⇨ Close the door before moving the cart.

⇨ Pull and push the cart only with the handle. See image below.

⇨ Do not push against the units.

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⚠ CAUTION

The casters are not fixed with the brakes.

The cart may move unintentionally.

Risk of injury to the medical personnel! Risk of material damage.

⇨ Lock the brakes on all four casters.

⚠ CAUTION

The gas bottle was not secured with the fixing strap

The gas bottle could fall over.

Risk of injury to the medical personnel! Risk of material damage.

⇨ Secure the gas bottle with the fixing strap.

Risk of infection

⚠ WARNING

The cart is contaminated

Risk of infection for the medical personnel.

⇨ Make sure no liquid can penetrate the cart.

⇨ Do not place vessels containing liquids on top of the cart.

⇨ Follow the instructions for cleaning and disinfecting the cart.

⚠ WARNING

Alternate use of disinfectant solutions with different active ingredients

The agents may affect one another. The disinfectant action of the disinfectant solutions may be weakened. Risk of infection for the medical personnel.

⇨ Do not alternate the use of these substances.

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Notes

Grounding

Note: If necessary, connect the grounding pin of the unit or the cart to the grounding system of the operating room using a grounding cable.

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Chapter 3
Description of the Controls

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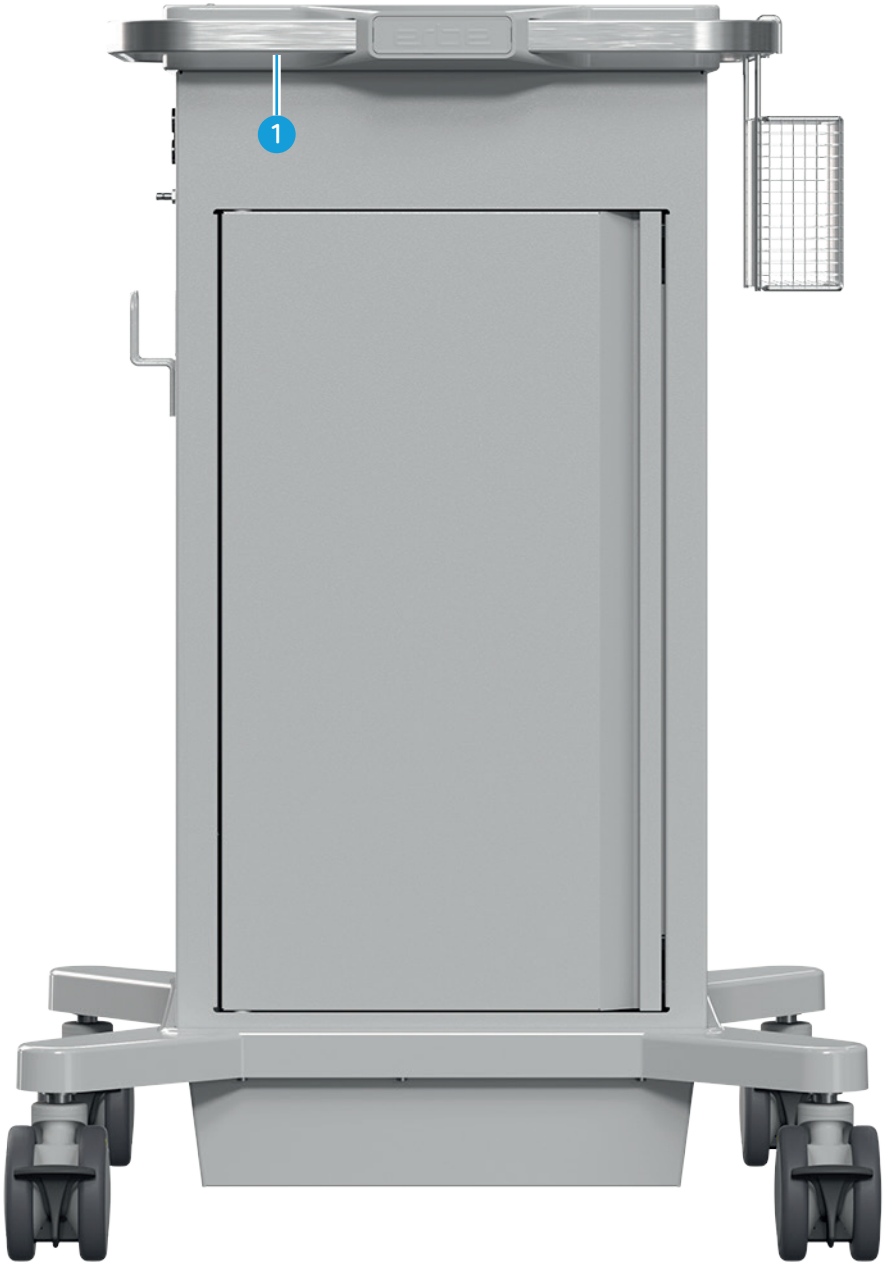
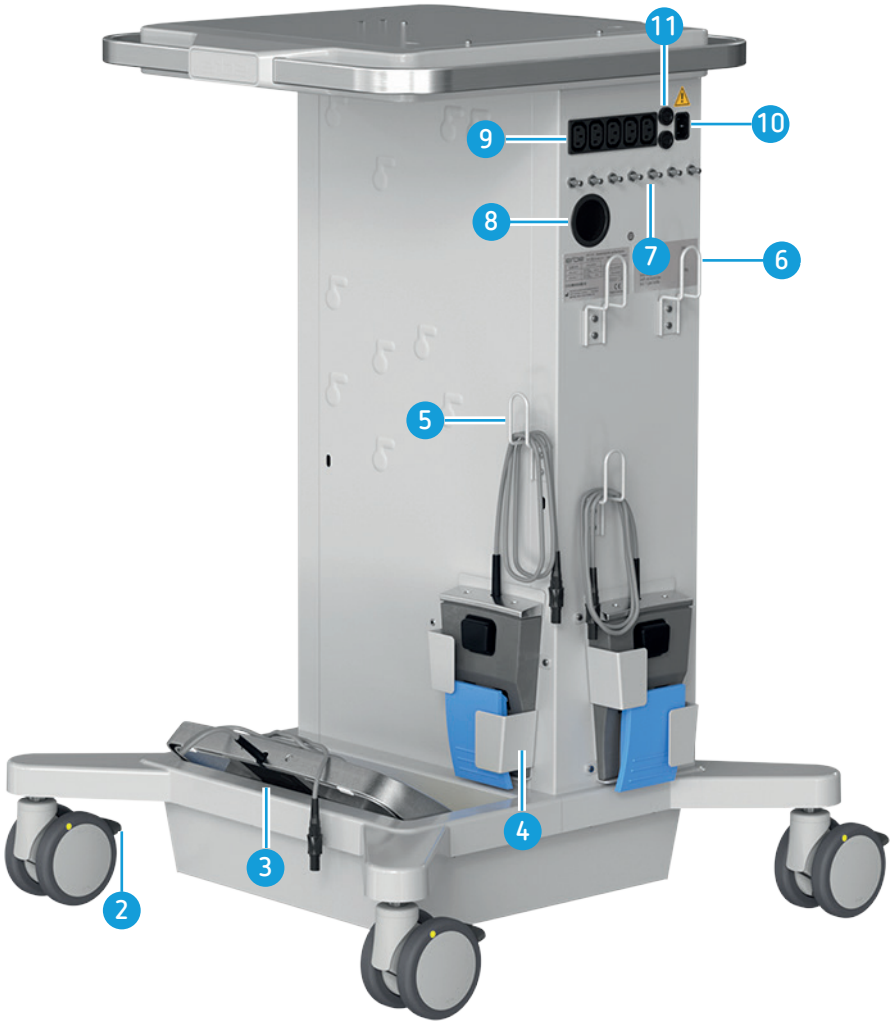


(1) Handle

For pushing or pulling the cart.



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(2) Brake

For braking the caster wheels. Each caster wheel is equipped with a brake.

(3) Shelf for the two-pedal footswitch

Holder for two-pedal footswitches for the VIO 200 S, VIO 300 S, VIO 200 D, VIO 300 D, VIO seal, VIO 3n, VIO 3 units.

(4) Footswitch holder for one-pedal footswitches for IES 3 or VIO electrosurgical units

Holder for one-pedal footswitches for IES 3, VIO 200 S, VIO 300 S, VIO 200 D, VIO 300 D, VIO seal, VIO 3n, VIO 3 units.

(5) Cable holder for footswitch cable

For coiling a footswitch cable.

(6) Cable holder for power cord

For coiling a power cord.

(7) Grounding terminals

For connecting the grounding pins of the units and for connecting the cart to the grounding terminal of the operating room.

(8) Opening

For feeding through the pressure line of the gas bottle and the high-pressure sensor line.

(9) Auxiliary power outlets

Only connect units to the auxiliary power outlets that are specified in the compatibility section and that are installed on the cart. Use the compatible Erbe power cord (see the *Accessories, Compatible power cords* chapter).

(10) Power connection

Connect the cart to a properly installed, grounded power outlet. Use the compatible Erbe power cord (see the *Accessories, Compatible power cords* chapter).

(11) Power fuses

Blown power fuses may only be replaced by a competent technician. Only use spare fuses with the same rating as specified on the cart rating plate.

(12) Cart door

Closes the gas bottle compartment.

(13) Cable holder for footswitch cable

For coiling a footswitch cable.

(14) Footswitch holder for one-pedal footswitch for EIP 2

For holding a one-pedal footswitch for the EIP 2 unit.

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(15) Gas bottle compartment

For holding two gas bottles.

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Chapter 4
Operation

Checking the cart

⚠ WARNING

Damaged cart or modified cart

Risk of electric shock and other injuries to medical personnel! Risk of material damage.

- ⇨ Check the cart for damage every time before using it. You must not use a damaged cart.
- ⇨ If the cart is damaged, please contact our customer service.
- ⇨ For your safety and that of the patient: Never attempt to perform repairs or make changes yourself. Any modification will exclude liability on the part of Erbe Elektromedizin GmbH.

Installation of units, gas bottles, and accessories

The installation is described in the assembly instructions.

Pushing the cart

⚠ CAUTION

The handle on the cart is used for lifting and carrying the cart

The handle can break off. The handle is only designed for pushing and pulling the cart.

Risk of injury to the medical personnel! Risk of material damage.

- ⇨ Do not lift or carry the cart with the handle.

⚠ CAUTION

The cart is not pushed or pulled using the handle

Units or accessories may fall off.

Risk of injury to the medical personnel! Risk of material damage.

- ⇨ Close the door before moving the cart.
- ⇨ Pull and push the cart only with the handle. See image below.
- ⇨ Do not push against the units.

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➢ Close the door before moving the cart.

➢ Push or pull the cart only with the handle. Do not push against the units.

Braking the cart

⚠ CAUTION

The casters are not fixed with the brakes.

The cart may move unintentionally.

Risk of injury to the medical personnel! Risk of material damage.

⇨ Lock the brakes on all four casters.

➢ Lock all four caster wheels with the brakes when the cart is in the required position.

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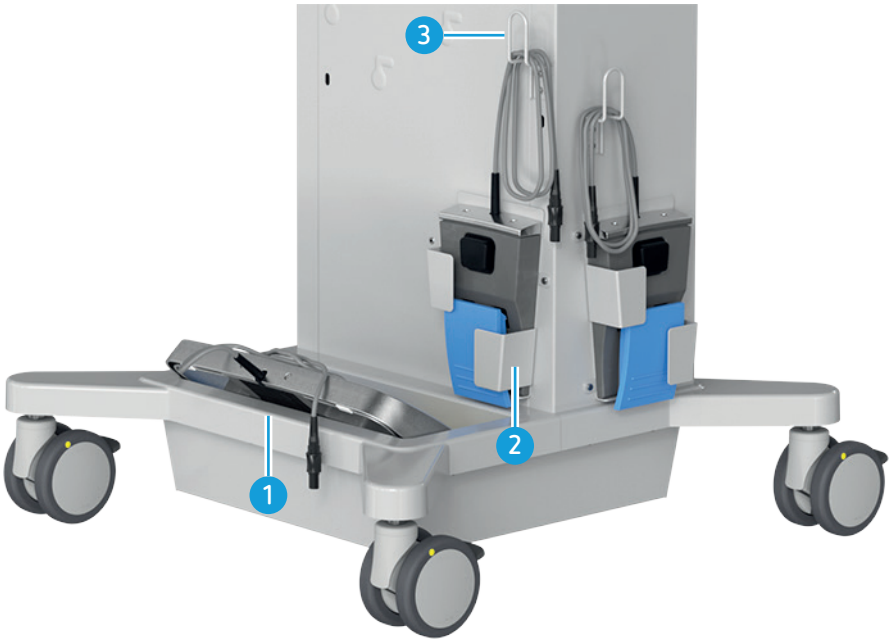
Using the shelf for two-pedal footswitch, footswitch holders, and cable holders



- ➢ Place the two-pedal footswitch on the shelf (1).
- ➢ Insert the one-pedal footswitch into the correct footswitch holder (2).
- ➢ Coil the footswitch cable and the power cord around the cable holders (3).

Using the gas bottle compartment

The gas bottle compartment can hold two gas bottles. The maximum diameter of a gas bottle is 170 mm (6.7”); the maximum height is 750 mm (29.5”). The maximum load per compartment is 30 kg (66.1 lbs).

Power fuses

⚠ CAUTION

Incorrect power fuse

The power supply cable may get hot – risk of burns.

- ⇨ Power fuses for adapting the unit configuration on the cart must only be installed by a qualified technician. Only fuses that have the same rating as the one specified on the rating plate of the cart must be used.
- ⇨ Blown power fuses may only be replaced by a competent technician. Only use spare fuses with the same rating as specified on the cart rating plate.
- ⇨ See below for the fuse insert with fuse (1).

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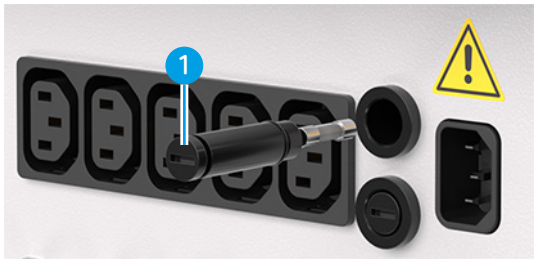

The cart as delivered has 2 T 10 A H / 250 V fuses for connecting units with a voltage of 220 V – 240 V.

If you wish to connect units with a voltage of 100 V – 120 V, a qualified technician must replace the installed fuses with the two included T 15 A H / 250 V. If the fuses are not changed, they may blow.

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Chapter 5
Cleaning and disinfection

Safety instructions

⚠ WARNING

Connection of unit/cart and power supply during cleaning and disinfection

Risk of electric shock for the medical personnel!

⇨ Switch off the unit. Unplug the power plug of the unit/cart.

⚠ WARNING

The cart is contaminated

Risk of infection for the medical personnel.

⇨ Make sure no liquid can penetrate the cart.

⇨ Do not place vessels containing liquids on top of the cart.

⇨ Follow the instructions for cleaning and disinfecting the cart.

⚠ WARNING

Alternate use of disinfectant solutions with different active ingredients

The agents may affect one another. The disinfectant action of the disinfectant solutions may be weakened. Risk of infection for the medical personnel.

⇨ Do not alternate the use of these substances.

⚠ CAUTION

Dirty casters

Dirt may affect the discharge capacity of the casters. A spark may ignite flammable gases.

Risk of injury to the medical personnel! Risk of material damage.

⇨ Clean dirty casters.

Selecting a suitable cleaner and disinfectant

The following categories of cleaners and disinfectants should not cause any damage to the surfaces of unit or cart when used properly:

- Alcohol-based agents
- Agents based on guanidine
- Agents based on active oxygen-based per compounds

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- Agents based on peracetic acid
- Chlorine-based agent with up to 3 % bleach

Frequent use of the above-mentioned agents may cause harmless discoloration of surfaces.

Do not use cleaners or disinfectants containing the following substances:

- Sodium hydroxide, strong organic acids, and strong oxidizing agents

These substances may attack metal parts due to their corrosive effect.

- Quaternary ammonium cations, phenolic compounds (e.g., phenoxyethanol)
- Solvents and benzine

These substances damage plastics.

Supplies

- Ready-for-use wipes with a cleaner or disinfectant solution.

or

- Low-lint single-use wipes moistened before cleaning or disinfection with a suitable product.

Use different wipes for cleaning and disinfecting.

Cleaning

Use only cleaners that comply with relevant national standards. Observe the manufacturer's specifications for the cleaner, particularly regarding material compatibility. If you use different products for cleaning and disinfection, the products must be compatible with each other.

1. Prepare the cleaner solution in a concentration specified by the manufacturer. Moisten low-lint single-use wipes with the cleaner solution.
2. Or use ready-for-use cleaning wipes with a cleaner solution.
3. Wipe the surfaces thoroughly.
4. Ensure that the surfaces are completely wetted.
5. Leave the cleaning agent to work as specified by the manufacturer (exposure time).
6. Keep the surfaces wet throughout the entire exposure time. Use additional wipes if needed.
7. Clean all visible contamination (e.g., blood) off the surfaces. Residual contamination may reduce the effectiveness of the subsequent disinfection.
8. Visually inspect all surfaces after cleaning. If you find any residual contamination, repeat cleaning until all contamination has been removed.

Note: If you cannot carry out a full clean, do not carry out a wipe disinfection. Do not use the unit or the cart. Contact Technical Service.

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Disinfection

Use only disinfectants that comply with relevant national standards. Comply with the manufacturer's specifications for the disinfectant, particularly regarding material compatibility. If you use different products for cleaning and disinfection, the products must be compatible with each other.

1. Prepare the disinfectant solution in a concentration specified by the manufacturer. Moisten low-lint single-use wipes with the disinfectant solution.
2. Or use ready-for-use disinfectant wipes with a disinfectant solution.
3. Wipe the surfaces thoroughly.
4. Ensure that the surfaces are completely wetted.
5. Leave the disinfectant to work as specified by the manufacturer (exposure time).
6. Keep the surfaces wet throughout the entire exposure time. Use additional wipes if needed.
7. Visually inspect the surfaces for any damage after disinfection.

Note: If the surfaces are damaged, do not use the unit or the cart. Contact Technical Service.

Validated procedure for cleaning and disinfection

Cleaning

Clean with Sani-Cloth Bleach Germicidal Disposable Wipes, PDI, Woodcliff Lake, NJ 07677 USA. Leave the cleaning agent to work for four minutes, making sure it is visibly wetted. Clean all visible contamination (e.g., blood) off the surfaces. Residual contamination may reduce the effectiveness of the subsequent disinfection.

Disinfection

Disinfect with Sani-Cloth Bleach Germicidal Disposable Wipes, PDI, Woodcliff Lake, NJ 07677 USA. Leave the disinfection solution to work for four minutes, making sure it is visibly wetted.

Erbe recommends this processing procedure. Other equivalent procedures are possible. Using appropriate measures, the user must ensure that the procedures used are suitable (e.g., validation, routine monitoring, check of material compatibility).

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Chapter 6
Technical data

Rated supply voltage	100 - 120 VAC (±10 %) / 220 - 240 VAC (±10 %)
Mains rated input current	15 A / 10 A
Rated supply frequency	50 Hz/60 Hz
Power fuses for 100 - 120 VAC units, included for replacement	2 x T 15 A H / 250 V
Power fuses for 220 - 240 VAC units, installed on delivery	2 x T 10 A H / 250 V
Power inputs / power outputs	1 power input / 5 power outputs
Terminal for grounding (potential equalization)	Yes (7 units)
Caster wheel diameter	100 millimeters (3.9")
The caster wheels are conductive.	
Width × height × depth	642 × 925 × 633 mm (25.3" x 36.4" x 24.9")
Weight	28 kg (61.7 lbs)
Maximum load	95 kg (209.4 lbs)
Maximum load of the gas bottle compartment	30 kg (66.1 lbs)
Maximum number of gas bottles	2
Maximum size of the gas bottle	Diameter 170 mm (6.7"), height 750 mm (29.5")

Ambient conditions for transport and storage of the cart	
Temperature	-29 °C to +60 °C (-20.2 °F to +140 °F)
Relative humidity	15 %–85 %, non-condensing

Ambient conditions for operation of the cart	
Temperature	+10 °C to +40 °C (50 °F to 104 °F)
Relative humidity	15 %–80 %, non-condensing

If you transport, store or operate the cart together with gas bottles, observe the specific ambient conditions for the gas bottles.

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Standards	
Classification according to Regulation (EU) 2017/745	I

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Chapter 7
Maintenance, Customer Service, Warranty, Disposal

Maintenance

Modifications and repairs

Modifications and repairs must not reduce the safety of the unit or cart and accessories for the patient, user, and the environment. This condition is met when changes to the design and functional characteristics are not detrimental to safety.

Authorized persons

Modifications and repairs may only be carried out by Erbe or by persons expressly authorized by Erbe. Erbe accepts no liability if modifications and repairs to the unit or accessories are made by unauthorized persons. This will also void the warranty.

Customer service

If you are interested in a service contract, please contact Erbe (Technical Services).

Servicing

Procure service work as follows:

1. Contact the Technical Services Department at Erbe USA, Inc. for a Service Call or to obtain a Return Authorization Number. This Number must appear on all correspondences.

   Telephone:
   770-955-4400 or 1-800-778-3723
   E-Mail: technicalservice@erbe-usa.com
   FAX: 770-955-2577

2. Address:
   Erbe USA, Inc.
   2225 Northwest Parkway
   Marietta, GA 30067

3. If the product is being returned to Erbe USA, Inc.; the shipment must be insured as well as safely and securely packed, preferably in the original shipping carton, and should include a letter explaining the problem and make reference to the Return Authorization Number. All transportation and insurance charges and risk of loss are the responsibility of the customer and must be prepaid. A purchase order must be issued to Erbe USA, Inc. to cover all transportation and insurance charges for the return shipment after service.

Authorization from the Erbe USA, Inc. Customer Service or Technical Services Departments must be obtained prior to the return of equipment and/or accessory(ies) for servicing. To obtain an appropriate Return Authorization Number (R.A. #), please be prepared to give the following information when contacting Erbe:

1. The customer name.
2. The name and telephone number of the contact person. The catalog number, or model number, and serial number of the involved equipment and/or accessory(ies). The REASON or problem.

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The R.A. #, and the name and telephone number of the contact person at your location MUST be clearly indicated on the packing list you send with the equipment and/or accessory(ies).

The user must decontaminate any item being returned that possesses a risk of transmitting disease.

Erbe USA, Inc. reserves the right to refuse and/or return, transportation charges collect, any return item(s) that does not have an appropriate R.A. # as issued by the Customer Service or Technical Services Departments. All shipments must be insured, and safely and securely packed, preferably in the original shipping carton. All transportation and insurance charges and risk of loss are the responsibility of the customer and must be prepaid.

Additional Information needed?

Please contact Erbe with any concerns regarding the equipment or this Manual. Also, as requested and available, copies of scientific publications will be provided.

Warranty

Erbe warrants the material and workmanship of the VIO ESU for a period of 2 years from the delivery date with the accessories [e.g., cables/cords, footswitch(es), etc.] having a 90 day warranty from the delivery date.

At installation, the equipment should be inspected for transportation damage and any other deficiency. A report should be prepared with the information being brought to Erbe's attention. If this product should become inoperable due to a defect in material or workmanship during warranty period; Erbe will, at its option, repair or replace the product. This action will be performed by Erbe authorized personnel. This limited warranty does not include replacement or service to repair damage from improper installation, external electrical fault, accident, disaster, use for a purpose other than that for which originally designed or indicated in this Manual, negligence, modification, unauthorized service by non Erbe personnel, or normal wear. The sole and exclusive remedy under this warranty shall be repair or replacement. In no event will Erbe be liable for any damages arising out of the loss of use, or any other incidental or consequential damages. No person, agent, distributor, dealer, or company is authorized to change or modify the terms of this warranty.

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Disposal

Your product bears a crossed-out garbage can icon (see image). Meaning: In all EU countries this product must be disposed of separately in accordance with the national laws implementing EU Directive 2012/19/EU of 07/04/2012, WEEE.

In non-EU countries the local regulations must be observed.

If you have any questions about disposal of the product, please contact Erbe Elektromedizin or your local distributor.

Chapter 8
Accessories

Accessories

Use only the following accessories with these REF No.:

- 20180-512 Fastening Set IES 3 on SystemCarrier performance
- 20180-511 Fastening Set ESM 2 on SystemCarrier performance
- 20180-513 Fastening set EIP 2 on SystemCarrier performance
- 20180-150 Fastening set device
- 20180-134 Fastening set VIO to APC 2
- 20180-144 Fastening set VIO 3 / APC 3 on ERBEJET 2
- 20150-050 Fastening set for ERBEJET 2 to connect to VIO / APC 2 / VEM 2
- 20180-464 One-pedal footswitch mount EIP 2 / VIO C footswitch
- 20180-463 One-pedal footswitch mount VIO footswitch
- 20180-465 Hook for cable storage for SystemCarrier
- 20325-002 Hook for irrigation-liquid bag on bracket / VIO Cart
- 20180-460 Cable holder
- 20180-509 Attachment rail for suction container
- 20180-520 Accessory basket for SystemCarrier performance
- 20180-010 Wire basket 339 x 205 x 155 / 100 mm (13.3" x 8.1" x 6.1" / 3.9")

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Compatible power cords

Use the following Erbe power cords for the mains connection of the cart to the grounded power outlet of the operating room.

REF No. (supplied with the unit)	REF No. (spare part)	Length, amperage	Power plug (Erbe designation)	Power plug (international designation)
51704-037	52704-037	2.5 m (8.2 ft), 10 A	303A	E+F
51704-038	52704-038	2.5 m (8.2 ft), 10 A	404	G
51704-039	52704-039	4 m (13.1 ft), 15 A	NEMA 5-15 P	B
51704-040	52704-040	2.5 m (8.2 ft), 10 A	403	L
51704-042	52704-042	5 m (16.4 ft), 10 A	303A	E+F
51704-043	52704-043	5 m (16.4 ft), 10 A	404	G
51704-045	52704-045	5 m (16.4 ft), 10 A	403	L

REF No. (supplied with the unit)	REF No. (spare part)	Length, amperage	Power plug (Erbe designation)	Power plug (international designation)
51704-050	52704-050	4 m (13.1 ft), 10 A	PRC/3	I
51704-051	52704-051	4 m (13.1 ft), 10 A	RA/3	I
51704-052	52704-052	4 m (13.1 ft), 10 A	512	J
51704-053	52704-053	4 m (13.1 ft), 10 A	DK3	K
51704-054	52704-054	4 m (13.1 ft), 10 A	BR/3	N
51704-057	52704-055	5 m (16.4 ft), 10 A	VII	E+F
51704-058	52704-058	5 m (16.4 ft), 10 A	IL/3G	H
51704-062	52704-062	2.5 m (8.2 ft), 10 A	E+F	E+F
51704-063	52704-063	5 m (16.4 ft), 10 A	G	G
51704-064	52704-064	5 m (16.4 ft), 10 A	E+F	E+F
51704-065	52704-065	5 m (16.4 ft), 10 A	G	G
51704-066	52704-066	5 m (16.4 ft), 15 A	B	B
51704-067	52704-067	5 m (16.4 ft), 10 A	L	L
51704-068	52704-068	5 m (16.4 ft), 10 A	I	I
51704-070	52704-070	5 m (16.4 ft), 10 A	J	J
51704-071	52704-071	5 m (16.4 ft), 10 A	K	K
51704-072	52704-072	5 m (16.4 ft), 10 A	N	N
51704-074	52704-074	5 m (16.4 ft), 10 A	H	H
51704-075	52704-075	5 m (16.4 ft), 10 A	I	I
51704-076	52704-076	5 m (16.4 ft), 10 A	M	M

Use the following Erbe power cord for the mains connection of the connected unit to the auxiliary outlet of the cart.

REF No. (supplied with fastening set)	REF No. (spare part)	Length, amperage	Power plug (Erbe designation)	Power plug (international designation)
51704-041	51704-041	0.48 m (1.6 ft), 10 A	C14W	C14
51704-061	51704-061	0.80 m (2.6 ft), 10 A	C14W	C14

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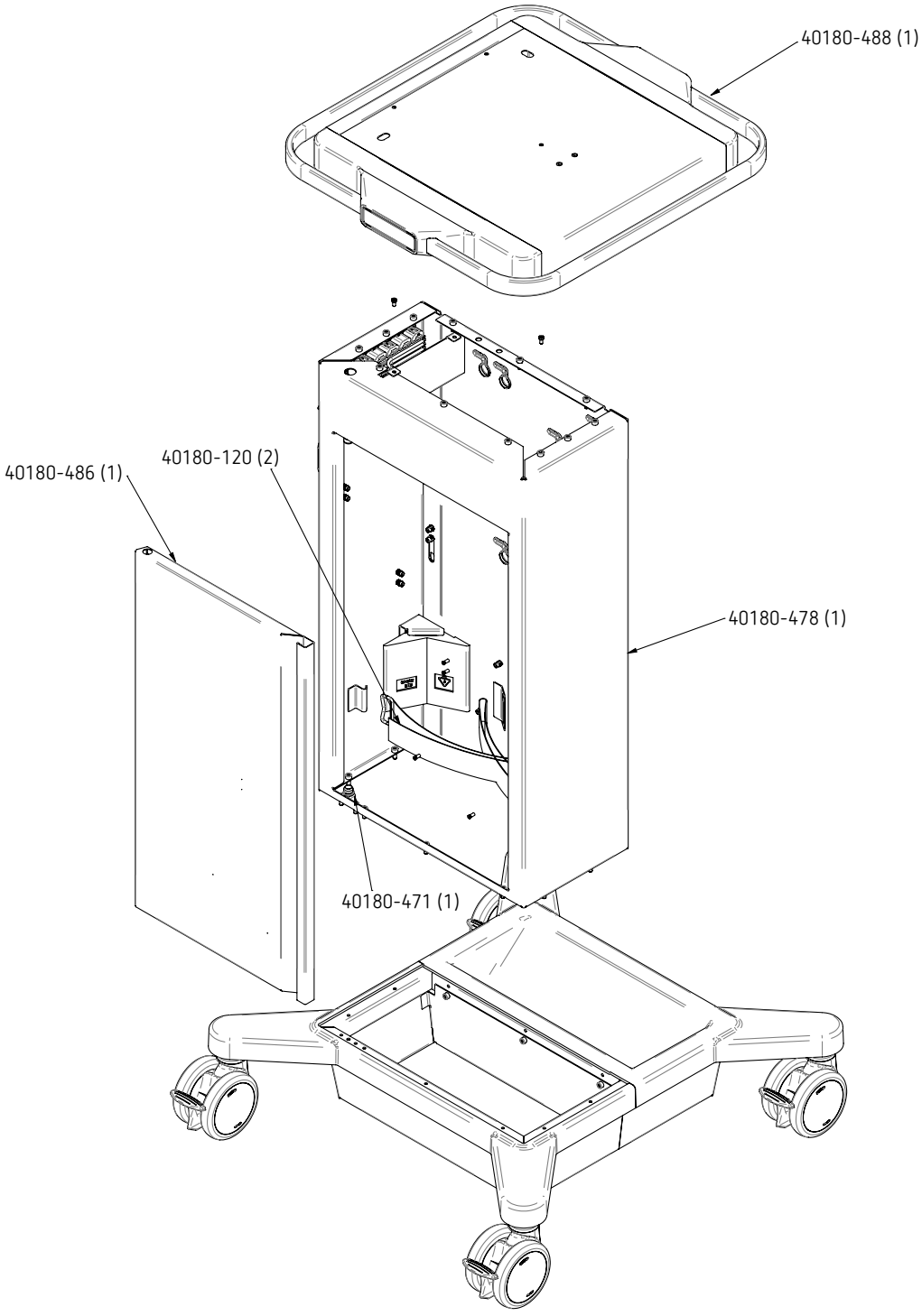
Chapter 9
Spare parts



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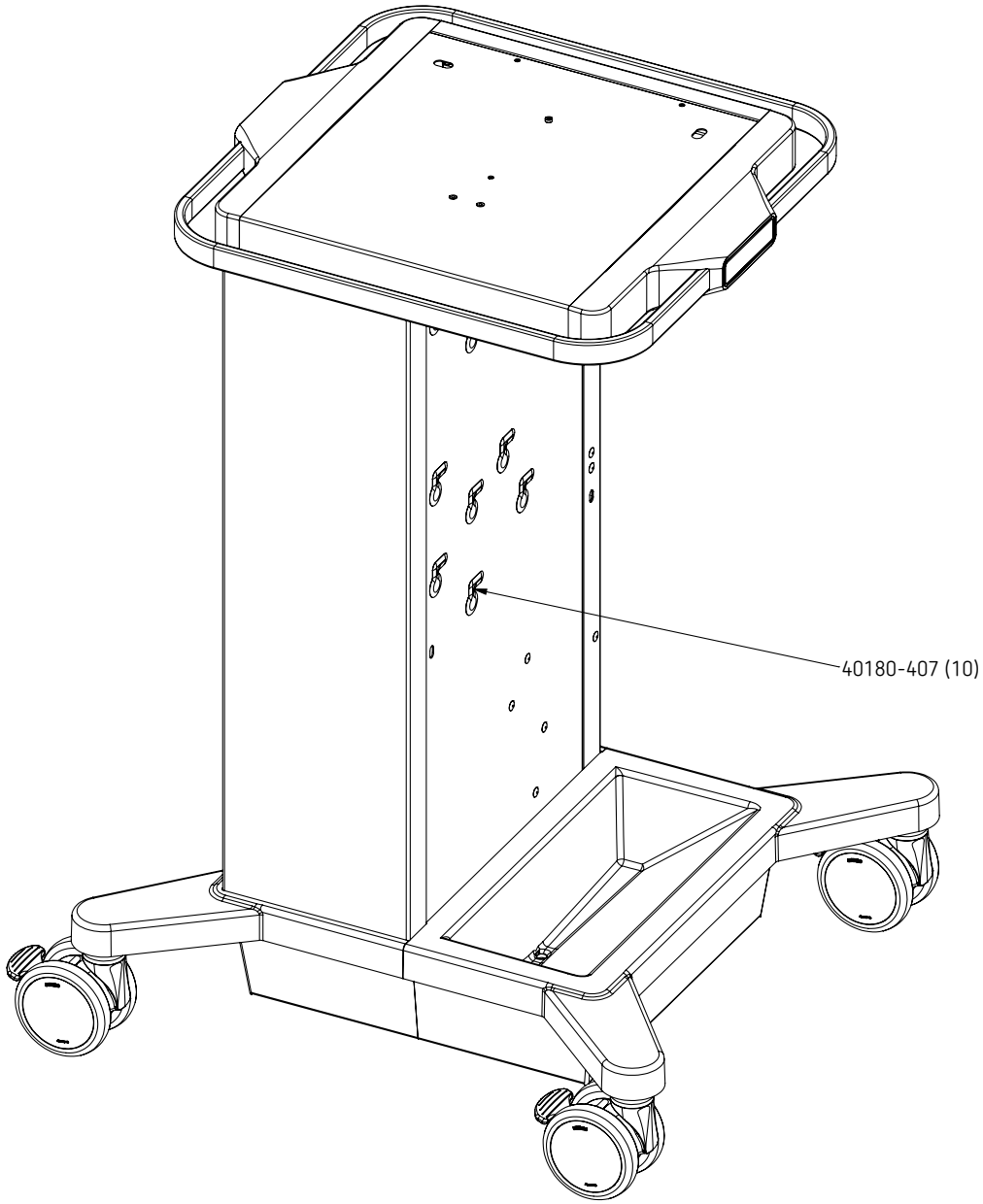

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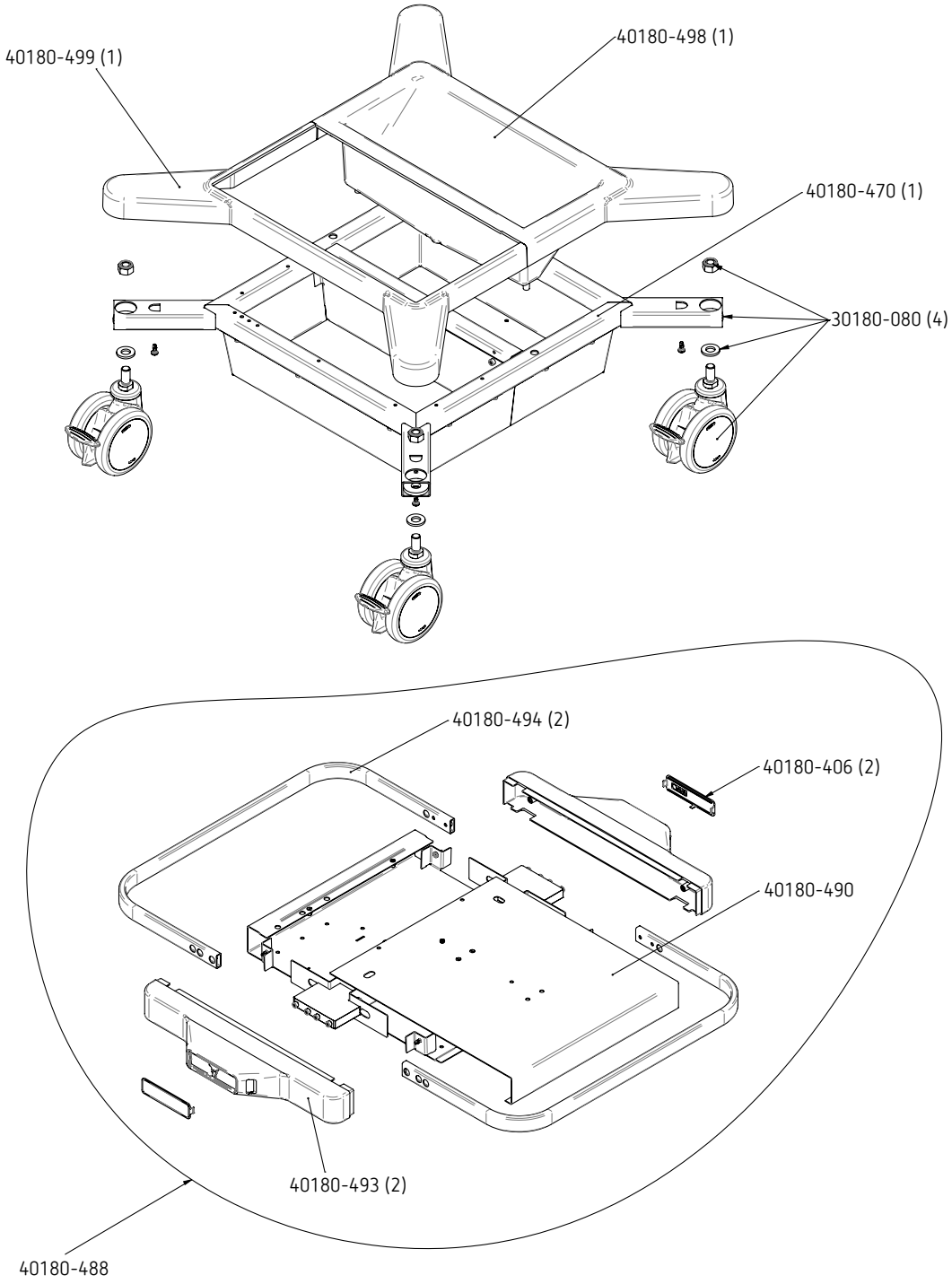

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Chapter 10
Symbols

Individual details of the symbols in this chapter may deviate from your product. Not all symbols may necessarily appear on your unit or its packaging.

Standard	Ref. no.	Symbol	Title	Explanation
ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied	5.4.4		Caution	Before switching the unit on or performing another action related to the unit, read the safety instructions in the user manual.
ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied	5.4.3		Consult instructions for use or consult electronic instructions for use	Indicates the need for the user to consult the instructions for use.
ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied	5.1.6		Catalogue number	Indicates the manufacturer's catalogue number so that the medical device can be identified.
ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied	5.1.7		Serial number	Indicates the manufacturer's serial number so that a specific medical device can be identified.
ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied	5.1.1		Manufacturer	Indicates the medical device manufacturer.
ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied	5.1.3		Date of manufacture	Indicates the date when the medical device was manufactured.
ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied	5.3.2		Keep away from sunlight	Indicates a medical device that needs protection from light sources.
ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied	5.3.4		Keep dry	Indicates a medical device that needs to be protected from moisture.
ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied	5.3.7		Temperature limit	Indicates the temperature limits to which the medical device can be safely exposed.

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Standard	Ref. no.	Symbol	Title	Explanation
ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied	5.3.8		Humidity limitation	Indicates the range of humidity to which the medical device can be safely exposed.
ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied	5.3.9		Atmospheric pressure limitation	Indicates the range of atmospheric pressure to which the medical device can be safely exposed.
ISO 15223-1 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied	5.7.7		Medical device	Indicates the item is a medical device.
ISO 7010 Graphical symbols - Safety colours and safety signs - Registered safety signs	M002		Refer to instruction manual/booklet	To signify that the instruction manual/booklet must be read.
ISO 7010 Graphical symbols - Safety colours and safety signs - Registered safety signs	W012		Warning; Electricity	To warn of electricity.
ISO 7010 Graphical symbols - Safety colours and safety signs - Registered safety signs	W001		General warning sign	To signify a general warning.
IEC 60417 Graphical Symbols for Use on Equipment	5021		Equipotentiality	To identify the terminals which, when connected together, bring the various parts of an equipment or of a system to the same potential, not necessarily being the earth (ground) potential, e.g. for local bonding.
IEC 60417 Graphical Symbols for Use on Equipment	5140		Non-ionizing electromagnetic radiation	To indicate generally elevated, potentially hazardous, levels of non-ionizing radiation, or to indicate equipment or systems e.g. in the medical electrical area that include RF transmitters or that intentionally apply RF electromagnetic energy for diagnosis or treatment.
IEC 60417 Graphical Symbols for Use on Equipment	5336		Defibrillation-proof type CF applied part	To identify a defibrillation-proof type CF applied part complying with IEC 60601-1. Note 1 – C = Cardial. Note 2 – F = Floating applied part.
IEC 60417 Graphical Symbols for Use on Equipment	5998		Computer network	To identify the computer network itself or to indicate the connecting terminals of the computer network.
IEC 60417 Graphical Symbols for Use on Equipment	5034		Input	To identify an input terminal when it is necessary to distinguish between inputs and outputs.

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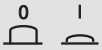
Standard	Ref. no.	Symbol	Title	Explanation
IEC 60601-2-2 Medical electrical equipment - Part 2-2: Particular requirements for the basic safety and essential performance of high frequency surgical equipment and high frequency surgical accessories	–		HF isolated patient circuit	The risk of leakage currents and therefore the risk of burns is substantially reduced for the patient.
IEC TR 60878 Graphical symbols for electrical equipment in medical practice	1853, 5114		Foot switch	To identify a foot switch or the connection for a foot switch.
IEC TR 60878 Graphical symbols for electrical equipment in medical practice	5269, 5268		„OUT"/"IN" position of a bi-stable push control	 To associate the "OUT" position of a bi-stable push control with the corresponding function.  To associate the "IN" position of a bi-stable push control with the corresponding function.
MDD 93/42/EEC, Annex XII	–		European conformity marking	Confirmation from the manufacturer that the product meets the requirements of the applicable European guidelines.
EN 50419 Marking of electrical and electronic equipment in accordance with Article 11(2) of Directive 2002/96/EC (WEEE)	–		Separate disposal	The product must be disposed of separately.
–	–		Quantity (x)	Quantity of the product. x pieces of the product are supplied in one packaging unit.
–	–	ECB	Erbe Communication Bus	Indicates an ECB connection. ECB is a system for transferring data between Erbe units.
–	–		Air inlet	Indicates an air inlet.
–	–		Air outlet	Indicates an air outlet.

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Kontakt, Contact, Contacto, 联系我们

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