CHINESPORT® ITALIA

REHABILITATION and MEDICAL EQUIPMENT

ENGLISH

AV34 - AV35

STRUZZO RCR - STRUZZO RC

USER AND MAINTENANCE MANUAL

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CE

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1 GENERAL INFORMATION

This manual contains information for practical, correct and safe use of the device and is intended for reading by specialised personnel and the user of the product. It is recommended that you read the entire manual carefully before using the product.
If you have any doubts or need clarification, please contact your dealer who will be able to advise you correctly.
The importance of reading and understanding the user manual is highlighted on the product by the following symbol:

Follow the instructions for use

1.1 MANUFACTURER

CHINESPORT S.P.A.
Via Croazia, 2 - 33100 Udine - Italy
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https://www.chinesport.com
export@chinesport.it

The manufacturer produces in accordance with the quality standard UNI EN ISO 13485:2016

2 PRODUCT DESCRIPTION AND GENERAL INFORMATION

2.1 DESCRIPTION

Vertical and stabilizer in upright, height-adjustable, wheeled posture. The device, depending on the configuration chosen, has two or four braking wheels. The decision of the model to be used depend the patient's residual motor and coordination skills and may only be made by physicians with appropriate specialization.
Depending on the model, the user can vertical in the following ways

- manually, using the side grab handles and the grab handle provided by the table.
- using a seat operated by a rechargeable battery-powered electric motor,
- using a gas spring assisted seat.

The device is equipped with foot rests and a table that can be used for unloading the upper limbs and placing objects or accessories.

The medical device is easy to access and can be adapted to the morphological characteristics of the user through a wide range of adjustments. In particular, the main body can be adjusted to the height of the user via a servo system by the gas spring or an electric motor.

In the self-moving configuration, the device is equipped with traction motors controlled by a joystick.

This manual refers only to the device configurations called Struzzo RCR and Struzzo RC. Refer to the manufacturer's site for manuals for other configurations.

2.2 INTENDED USE

Configurable devices for lifting, holding in a standing position, and assisted or self-handling of patients.

The use of the device for purposes other than those defined in this manual is prohibited
The manufacturer declines any responsibility for damage to persons or property resulting from improper use of the device or in any case other than that provided for in this manual.
The manufacturer reserves the right to make changes to the product and the manual without prior notice in order to improve its characteristics and performance.

2.3 USERS

People with reduced lower limb mobility, paraplegia, elderly people who are unable or difficult to achieve an upright posture.

It is up to the specialist to judge the physical fitness of the patient for whom the product is intended to be used.
Use under operator supervision is always recommended.

2.4 PATIENT GROUPS AND CLINICAL CONDITIONS

The device is not suitable for patients with tetraplegia, or patients who generally do not have sufficient control of the upper limbs and torso. Use of the device by patients with severe osteoporosis is not recommended.

2.5 USE ENVIRONMENT

The medical aid is suitable for use in a clinical/hospital environment and in a domestic environment. Use on flat, dry, stable and obstacle-free surfaces. Not for outdoor use.
Observe the environmental conditions of use

Ambient temperature	Relative humidity	Atmospheric pressure
0˚C ~ 40˚C	0% ~ 80% @30°C (non-condensing)	70kPa ~ 106kPa (altitude ≤ 3000 m)

2.6 STORAGE AND TRANSPORT

Store in a dry place at room temperature. Avoid excessive pressure and contact with discolouring materials. Avoid excessive exposure to direct sunlight.

Do not charge the batteries under any circumstances if they are frozen or if they are hotter than 45° C.

Ambient temperature	Relative humidity	Atmospheric pressure
-25˚C ~ 70˚C	0% ~ 85% @30°C (non-condensing)	70kPa ~ 106kPa (altitude ≤ 3000 m)

2.7 MANUFACTURER'S DECLARATIONS

The manufacturer declares that
- the device is not a measuring instrument
- the device is not intended for clinical investigation
- the device is not sterile and is not for single use
- for a correct functioning and for the safety of the user, it is necessary that the ordinary maintenance operations are carried out as described in the relevant paragraph.
- device cannot be used for purposes other than those stated in this manual

3 GENERAL WARNINGS

Always refer to this manual for proper use of the device. The manual must always be kept near the equipment in such a way as to facilitate consultation.
- Store the device in an environment that complies with the labels on the packaging and the specifications in this manual
- The useful life of the product is 10 years in accordance with the correct execution of the ordinary maintenance operations provided for in this manual. It is strictly forbidden to use the device beyond its stated useful life. At the end of its useful life, it is possible to proceed as described in the relevant paragraph
- The manufacturer shall not be liable, to the fullest extent permitted by applicable law, for any direct or indirect, special, incidental or consequential damages caused by:
  - Wrong use of the device
  - Improper use of the device and outside of its intended use
  - Use of the device connected to unsuitable electrical systems
  - Use of the device beyond the useful life stated in this manual
  - Using the device in environments not covered by this manual
  - Use with ineligible patients
  - The distraction of operators or incorrect application of commands and adjustments
  - Use without checking the status of the device as described in the relevant paragraph
  - Incorrect maintenance or lack of maintenance
  - Use with parts or accessories that are not compatible or not approved by the manufacturer
  - Incorrect disposal or disposal is other than as described in this manual

The device is equipped with labels to draw attention to particular dangers such as:

Danger of crushing hand

Danger of crushing foot

Therefore, pay particular attention when carrying out operations in areas adjacent to these symbols.

3.1 SERIOUS INCIDENTS

In the event of major accidents involving the device, the user shall notify the manufacturer and the competent authority of the Member State in which the device is installed in good time.

3.2 SYMBOLS ON LABELS

Follow the instructions for use

CE marking

Type BF applied parts

Manufacturer

Dispose of properly

Indoor use only

Production date

Equipment serial number

Insulation class double

Medical device

Unique Device Identifier

IP21

Degree of protection against the ingress of liquids and solids:
Protection against dripping water
Protected against the ingress of sosolids >12mm

Identification of the country of production under ISO 3166-1 alpha-3 code (Italy)

Lowering the patient in case electric motor verticalization is possible (handset)

Lifting of the the patient in case electric motor vertical (handset) is possible

Decrease in the height of the structure if electric height adjustment (hand control) is possible

Increase in the height of the structure if electric height adjustment is possible (hand control)

Drive backward with drive wheels (Remote Control)

Drive Forward with drive wheels (Remote Control)

Right rotation, clockwise, via drive wheels (remote control)

Rotation to the left, counter-clockwise, via drive wheels (remote control)

Charging connector to connect the charger (joystick)

IPx4

Degree of protection against the ingress of liquids and solids

Horn (joystick)

Maximum speed control, speed increment direction (joystick)

Position of the unlocking for height adjustment via gas spring

Switching on the guidance system (joystick)

Position of the release for the vertical support by gas spring

3.3 SYMBOLS IN THIS MANUAL

Warning! This symbol indicates that you must pay particular attention to the instructions next to it. These are generally safety guidelines.

Joystick operating directions. Forward, backward, right and left.

3.4 SYMBOLS ON PACKAGING

Fragile

Keep this side at the top

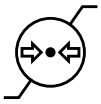
Recyclable

Do not use sharp blades to open

Keep dry

Storage temperature range. It is accompanied by an indication of the minimum and maximum allowed values

Storage humidity range. It is accompanied by an indication of the minimum and maximum allowed values



Storage atmospheric pressure range. It is accompanied by an indication of the minimum and maximum allowed values

3.5 SPECIAL WARNINGS

Do not use when the workload exceeds the declared capacity.
Do not use with unattended patient.
Do not use when patient and/or equipment are not stable enough.
Do not use if the wheels are not fixed to the frame.
Do not use if the original product has been modified or tampered with.
Do not use with components that are even partially defective or have been checked incorrectly.
Do not use if it is incorrectly configured or if it is suspected that it will cause harm to the patient or user.

3.6 CONTRAINDICATIONS AND SIDE EFFECTS

No specific side effects or contraindications are known for patients compatible with the intended user.
In general, erect posture by paraplegic patients or by users who are commonly unable to stand alone may lead to dizziness, muscle fatigue or a temporary drop in blood pressure.

Always read the warnings before use

May lead to involuntary muscle contractions.
Contraindicated to users with a lack of control of the trunk and upper limbs
Contraindicated to users with joint limitation of knees and / or coxo-femoral and / or tibiotarsal.
Contraindicated to users with structural limb deficiency.

3.7 RESTRICTIONS ON USE

Always use in accordance with the intended use and with patients meeting the weight requirements on the product label.
Maximum patient weight: 140 kg

The physical and mental fitness of the user to use the equipment must be approved by a specialist.
Do not spill liquids on the equipment
Do not use the lifting system continuously, observe the duty cycle specified in the TECHNICAL SPECIFICATIONS 38

Always unplug the charger when using and/or moving the unit.
Disconnect the batteries before working on equipment circuits.
Do not connect to an electrical system that does not comply with the applicable regulations for the system.

Do not disconnect the charger, button panel and motor by pulling on the cable, but always holding the plug body.
Turn off the equipment when not in use to preserve battery power

3.8 LIST OF COMMONLY USED FEATURES

The most frequently used functions of the standing frames are listed below. Refer to the respective paragraphs where the functions are explained in detail:

- Lifting or verticalization (Verticalization 25)
- Height adjustment (height adjustment 23)
- Movement (Moving with standing patient 26)
- Adjusting the knee supports (Adjusting the knee supports 30)
- Activation / deactivation of the wheel brake (Parking brake 24)
- Charging the batteries (Charging the batteries 27)

4 DEVICE CONFIGURATIONS

You can fill in the code below so that you can quickly reference the configuration of your product.

A	**V**	**3**	*	*	*	B	3	*	*	2	*
1	2	3	4	5	6	7	8	9	10	11	12

The code can be composed of the following alternatives:

Object	Value	Description
BASE Position. 04	4	Narrow with traction wheels, for autonomous movements, with advanced controller
	5	Narrow with traction wheels, for autonomous movements, with advanced controller and remote control
FOOTPLATES Position 05	1	Made of wood, adjustable in depth with tools
	2	Made of metal can be adjusted in depth without tools
KNEE SUPPORTS Position 06	1	Anatomical, adjustable in width and depth
	2	Soft, adjustable in depth
HEIGHT ADJUSTMENT Position 07	B	Height adjustment assisted by an electric actuator
LIFT Position 08	3	Servo assisted by electric actuator controlled by the handset
REAR CONTAINMENT Position 09	3	Standard detachable seat
	4	Long detachable seat
LATERAL CONTAINMENT Position 10	4	Short width-adjustable by sliding
	5	Long adjustable in width by sliding
ACCOMPANIMENT Position 11	2	Parallel Dynamic
TABLE TOP Position 12	B	Polyethylene, small
	C	Plexiglass, small

	F	Polyethylene, large
	G	Plexiglass, large

5 PACKAGE CONTENTS AND PRODUCT CHARACTERISTICS

The product is delivered in a suitable cardboard packaging so that it can be received intact and functional. To open the package and remove its contents, pay attention to the warnings and symbols on the package itself.
Dispose of the packaging and the waste material in an appropriate manner and follow the instructions in the packaging and in this manual. The version for independent mobility has the new joystick support that is attached to the handles for shipping only. Before use, identify the most ergonomic position of the joystick, referring to the relevant paragraph.

5.1 CONTENTS OF THE PACKAGE

The package contains
- Instruction manual
- Product already assembled
- Packaging material to be disposed of

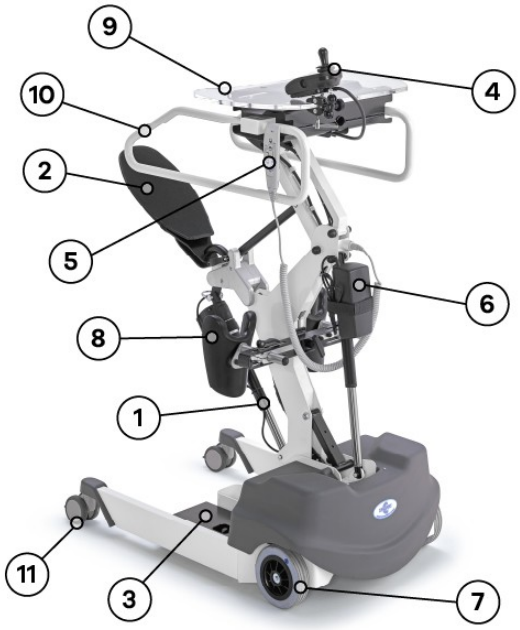
5.2 PRODUCT

Depending on the configuration chosen, the product may have some different features.

5.2.1 STRUZZO 500 RC AND 500 RCR

The variants referred to as the Struzzo 500 are those that have the base with the drive wheels for self-mobility. The RC model indicates remote control availability and the RCR model indicates readiness for a future upgrade to remote control use. The letters in the highlighted positions are those that can be configured as described in the section on available configurations 12.

Model	Code
STRUZZO 500 RC	AV35**21**B3**44**2 **C**
STRUZZO 500 RCR	AV34**21**B3**44**2 **C**



1 Verticalization motor
2 Patient saeat
3 Foot rests
4 Joystick for movement
5 Handset for lifting and vertical lifting
6 Lift motor and height adjustment
7 Drive wheels
8 Knee supports
9 Work table
10 Lateral containment
11 Pivoting wheels with brakes

5.2.2 DIFFERENCE BETWEEN RC AND RCR

Struzzo RC models, whose part number starts with AV35xx, are equipped with remote guidance. This system is only to be used for moving the aid by a few meters and only when there is no one on it. Refer to the respective paragraph 28 for more details.
The **Struzzo RCR** models, whose part number starts with AV34xx, are not equipped with remote guidance but are prepared for a future upgrade to use this remote control. This upgrade can be performed by a specialist technician of your dealer using the accessory AC1305 32.

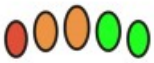
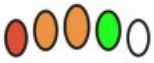
5.3 THE JOYSTICK

Models with self-mobility have a steering system consisting of a joystick for moving and driving wheels. The joystick has a power button located on the front above the control knob. The power button is equipped with a maximum speed adjustment dial. On the front of the joystick there is the charging port into which the charger connector is plugged, (supplied as standard).

	Maximum speed control dial on standard model. Turning clockwise increases the maximum speed
	Horn (joystick)
	Switching on the guidance system
	Charging connector for the charger

As the movement is from the front drive wheels, it may be advisable to familiarize yourself with the use of the joystick control lever to understand how movement occurs in space.

When the joystick is turned on, it shows the status of the machine and the battery charge with light signals.

	Batteries 100% charged
	Batteries 80% charged
	Batteries 60% charged
	Batteries 40% charged, recharging is recommended
	Batteries 20% charged, use not recommended, charge immediately

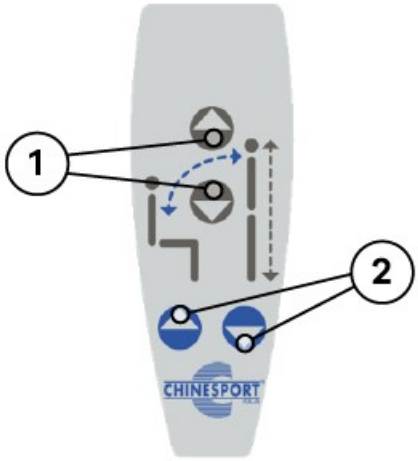
It is generally good practice to keep the batteries charged at all times, so daily charging or charging with slightly low batteries is recommended compared to less frequent charging or with very low batteries. Short charge cycles extend battery life. In certain situations the charge LEDs have different meanings, which are described in detail in the following paragraphs.

5.4 THE PENDANT

Some models have motorized height adjustment or motorized verticalization support or both.

These features are enabled by using the handset connected to the device via a long coiled cable, as can be seen from descriptive photos.

The pendant has 4 different colored buttons. One pair is for height adjustment (1) and one pair is for verticalization (2).



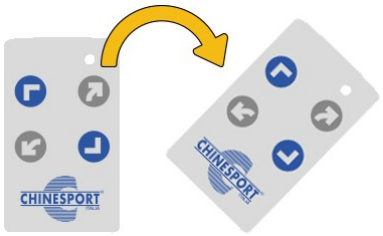
1		Increase the height of the structure	2		Lifting the patient
		Decrease the height of the structure			Lowering the patient

5.5 THE REMOTE CONTROL

Some models have the remote guidance system, which is designed solely for driving the device closer to or further away. This feature allows the patient to either approach the aid when he or she needs to vertical and move on his or her own, or move the aid away when he or she has finished using it, but there are no people in the vicinity to assist him or her. In both situations the starting or arrival situation is the patient on a seat or bed and the patient is assisted a few meters away. The command is not designed for long-distance use, so it has a limited range.

The remote control is coded and has a specific rolling code encryption algorithm linked to a unique identifier for each remote control. This ensures that only the remote control paired with the device can work with the device and does not interfere with any other similar device in the vicinity.
Each remote control has a unique identifier stamped on the back, and the device with which it has been paired has a label with the same identifier, so you can quickly identify which remote control it has been paired with.

To get the most out of the remote control and understand the controls more quickly, it is recommended to use the remote control by turning it 45° clockwise. This makes it more obvious and intuitive to match the joystick movement controls.



	Forward movement		Left rotation, anti-clockwise
	Move backward		Rotation to the right, clockwise

The remote control only works when the device is in remote guidance mode. This mode can only be activated by entering a specific sequence to avoid abuse by third parties. This sequence is indicated in the chapters on using the device (see activating Remote Guidance 22).

6 ASSEMBLY AND FIRST USE

6.1 ASSEMBLY

The device is delivered assembled and ready for use.

In the version for independent mobility, the joystick support is positioned on the connecting piece between the seat and the accompanying frame to prevent damage. Before use, remove the joysitick from the shipping position and attach it to the table in the most ergonomic position for your needs. However, refer to the relevant paragraph on joystick positioning.

For models equipped with batteries, it is recommended to fully charge the device before using it.

6.2 FIRST TIME USE

Before proceeding with the first use, it is necessary to read this instruction manual.
Make sure that the product corresponds to what is described in this manual and that the contents of the package coincide with what is described in the relevant paragraph.
Before using the product for the first time:

- Make sure there are no components of the device inside the packaging (screws, nuts, knobs...)
- Make sure there are no obvious signs of damage or tampering
- Check the knee supports for signs of damage
- Check that all knobs or pins for adjustments are present
- Check the rotation and sliding of the wheels
- Check the parking brakes for correct operation and effectiveness
- Check the operation of the height adjustment control (electric or gas spring)
- Using the height adjustment control, move the device to the minimum height and then back to the maximum height
- Check the operation of the vertical control (electric or gas spring if fitted)
- On versions with autonomous mobility, switch on the joystick and check that the drive wheels move in the same direction.

6.3 NON COMPLIANT USE

The device is not suitable for:
- Diagnosis
- Monitoring
- Measurement
- Competitive training
- Handling outdoor

Autonomous driving requires responsibility and should be avoided if there are uneven surfaces, obstacles in the path, including carpets, and improperly protected stairways or hatches.

6.4 UNSAFE USE

Do not use the device
- In combination with other device that emits ionizing radiation (e.g. radiotherapy, nuclear medicine, etc.)
- In environments where:
  - Explosive materials are present
  - Enriched oxygen is present
- In combination with
  - Flammable anaesthetics
  - Volatile solvents
- In environments with uneven surfaces, unprotected or reported obstacles or hazards.
- Do not use remote control when the patient is on the device.

6.5 EXCLUSION OF RESPONSIBILITY

The manufacturer shall not be liable for any of the following:
- Misuse, wrong use or unintended use
- Failure to observe this instruction manual
- Intention or gross negligence
- Too intensive training, e.g. agonistic activity
- Use or move outdoors
- Use in combination with unstable wheelchairs, chairs, tables or beds
- Use of the device, although forbidden by the doctor or therapist
- Installation of unauthorized accessories
- Perform repairs, modifications or other work on the device by persons not authorized by the manufacturer

7 USE

7.1 PRECAUTIONS BEFORE USE

Before each use, make sure that:

The product does not show any obvious signs of tampering or damage
The product has been sanitised in the parts in contact with the user
The physical and clinical condition of the user has been assessed and found to be appropriate for the use of the device

The operating environment is in accordance with the provisions of this instruction manual
There are no particular hazards in the areas around the device (shelves, obstacles, flammable materials, etc. ...)
There are no oil stains on the floor caused by the gas spring
If batteries are present, make sure they are always charged

7.2 INITIAL CONFIGURATIONS

When using the device for the first time, it is recommended to adjust the settings according to the pathological and physical characteristics of the patient. The setting can be made using all the adjustments provided for each option. Please contact your therapist to provide all support for the safest and most comfortable adjustment of the device and supervise the first use of the device to check if it is used safely. See the Adjustments (ADJUSTMENTS 29) section for all adjustments that best fit your model.

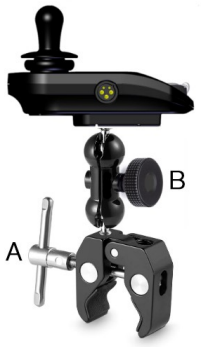
Incorrect configuration may restrict or prevent proper use of the device
Adjust the knee supports for maximum comfort and minimum stress for the joints during the verticalization process
Adjust the height of the frame for maximum comfort and position of the body and limbs
Seat depth adjustment must be carried out before transferring from the wheelchair
Check that all adjustment elements are correctly tightened before use

The distributor and the manufacturer are at your disposal to assist in the initial configuration and to provide all information regarding the safe use of the device. If you have any doubt about the safety instructions, please do not hesitate to contact the manufacturer.

7.2.1 POSITIONING THE JOYSTICK

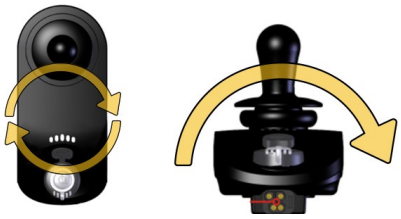
Independent mobility models feature a Joystick to control device movements in homes. The joystick support consists primarily of two adjustments that allow two degrees of freedom for positioning and steering the joystick. The first adjustment is used to reach the required position on the table or handles. The second adjustment is used for the ergonomic positioning of the joystick.

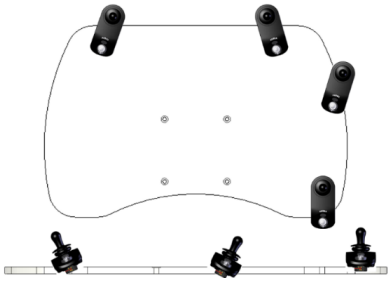
The adjustment marked “A” allows the clamp to be opened and closed in order to position the joystick elsewhere on the table or tube. Once the point has been selected, the clamp should be tightened by adjusting the “A” setting until the vice is secure at the selected point.



The adjustment marked with "B" instead allows you to orient the Joystick in space by rotating around the two support spheres:

Once the position has been decided, the joystick can be oriented along the horizontal plane and along the vertical plane.





Once the most suitable position has been found, adjustment B must be tightened as much as possible in order to maintain this position. If you want some adaptability, tighten less, and if you want absolute stiffness, tighten as much as possible. Below are some examples of joystick positioning as viewed from above and as a profile:

The joystick support is intended to support the weight of the joystick only and should not be used as patient support. It is therefore advisable to keep any part of the joystick body in contact with the table and never rest on the joystick or any part of the joystick or stand with your own weight

7.3 USE OF THE DEVICE

Before each use, check that all adjustment elements are correctly tightened and that the batteries are fully charged. If you want to use the remote control, make sure that you have the remote control at hand and that the remote control battery is charged

Read the instructions carefully to find the correct use based on your actual device configuration.

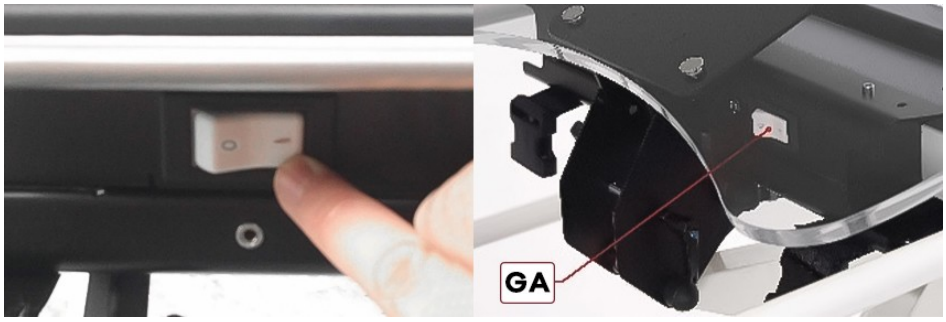
7.3.1 SWITCHING ON AND OFF

The device contains electric motors for:
- Movement, for independent mobility
- Verticalization
- Structure height adjustment

These devices have a main switch that turns on the entire system and allows the use of electric motors. The battery disconnect switch also activates battery charging when the appropriate charger is connected to the device.

7.3.2 MAIN SWITCH

The device is equipped with a battery disconnect switch to electrically disconnect the batteries from the circuit and preserve their charge. The switch also acts as a thermal protection in the event of a fault.
To turn on, switch the main switch on the right under the service table to “I”. To turn off, switch to “O”.
To activate the lifting and verticalisation functions, the guidance system must also be switched on, as shown below.



7.3.3 ACTIVATION OF GUIDANCE SYSTEM

On the joystick there is a button for switching driving on and off marked with the symbol:

To activate , press the power button on the joystick, indicated by **A** in the figure. This will illuminate green and show the charging status of the batteries on LEDs, indicated by **D** in the illustration.

To switch off guidance press button **A** again and button A will go out, along with the battery status LEDs. The horn button (**C**) is used to make a sound from the joystick.

Use lever **B** to move the device

7.3.4 JOYSTICK SAFETY LOCK AND UNLOCK

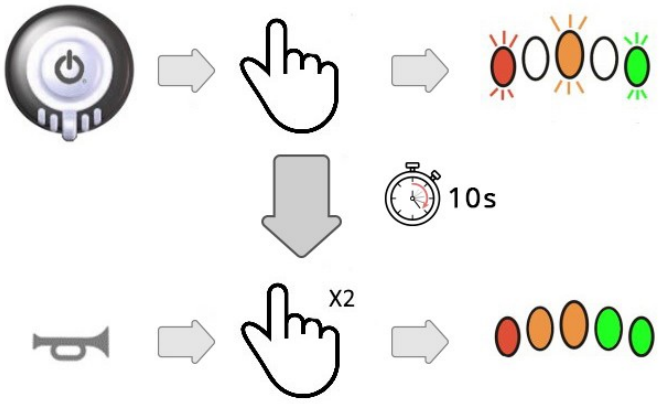
It is sometimes useful to lock the joystick functions for safety reasons (e.g. Children in the house). This allows only trained persons to unlock the joystick and start the movement. To lock the joystick follow these instructions:

1. When the power is on, press the power button (A) for more than 4 seconds
2. The LEDs (D) in the odd positions (1, 3, 5) will flash briefly

The joystick is locked. If button A is pressed again, the LEDs (D) in the odd positions (1, 3, 5) will flash briefly but operation of the device will not be possible. After 10 seconds the joystick switches off by itself.

To unlock the joystick again, the following procedure must be followed:

1. Press the power button (A). The LEDs (D) in the odd positions (1, 3, 5) flash briefly and operation of the device will still not be possible
2. Press the horn button (C) twice within 10 seconds. The LEDs on the joystick will now light up permanently and use of the device will be enabled again.



7.3.5 ACTIVATION OF THE REMOTE GUIDANCE SYSTEM

AV35x models include a remote driving control system that is only used to move the aid in and out of the way when service personnel are temporarily unavailable. This system allows you to move the aid a few meters with a remote control only when there is no one on it so that you can move the aid closer to or further away from your position so that you can get on or off the aid.

Activate remote guidance only to move the aid a few meters and only when no one is on it

Remote guidance can only be activated if the battery disconnect switch is turned on and the aid is within range of the remote control. This range is intentionally reduced to approximately 5m, and may be affected by external interference, walls, and the charge status of the remote control battery. It is always recommended to test the remote control first in the actual environment in order to be confident about the true range of the remote control.

Remote guidance is only for moving the aid closer and further away when you are not on it and is not intended as an emergency system. Failure of the remote control shall not constitute a hazardous situation

To activate remote guidance, a specific sequence must be entered on the remote control so that it cannot be activated by children or by unintentional pressing of the buttons. Type the sequence at a constant rate with a pause of approximately 1 seconds between keys.

Models manufactured prior to serial number 240000138 have a more complex activation sequence:

If you enter the sequence correctly, you can see the battery status LEDs on the joystick light up and after a few seconds two joystick horn beeps. Remote guidance is now active, and will automatically turn off under any of the following conditions:

3. The power button on the joystick is pressed
4. 60 seconds have elapsed since the last pressing of any key on the remote control

The first condition is to bypass the guidance system at any time if someone accidentally enters the activation sequence while the patient is still on the device.
The second condition is to prevent the system from being activated for too long and therefore reduces the life of the batteries.

7.4 HEIGHT ADJUSTMENT

Before moving to the device, either on your own or with the help of an assistant, make sure that the height of the structure is already in the correct position and that all adjustments have been made.
For easy access, the seat can be aligned with the user's seat plane thanks to the height adjustment. This alignment of the seat as a starting point can simplify transfer and increase safety. This allows the user to move from their wheelchair, bed, or sofa with this type of accessibility.

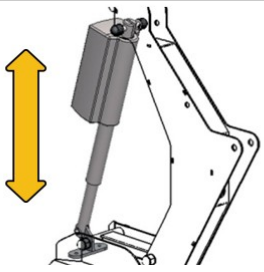
When lowering is in progress, the column is very close to the base. Be careful not to reach your feet into the trap area to avoid the risk of crushing

In this case the device is more versatile and height adjustment can be performed more often without effort using the handset

Press the gray up arrow key on the pendant to increase the height of the structure

Press the gray down arrow key on the pendant to decrease the height of the structure.

When the height of the structure has completely decreased, in case the device has independent mobility motors, the mobile wheels are raised and there are small wheels useful for moving the device around (without people on it).



7.5 PARKING BRAKE

You can use the parking brake on the rear wheels to prevent unwanted movement of the device when the device is not in use or when the patient is on it. Devices with drive wheels for self-mobility only have the parking brake on the rear wheels as the drive wheels are self-braking.
To activate the brake, apply the lever on the wheel you want to lock downwards using your foot.

To deactivate the brake, apply the lever on the wheel you want to unlock upwards using your foot.

7.6 TRANSFER TO DEVICE

Prior to patient transfer to the device, the patient's starting seat must be aligned with the device seat, or the proximity of the device in models where there is no sitting.
The device can be approached directly with a wheelchair or moved by other persons near the patient seat. On Remote Guide models the device can be moved closer using the remote control.
When the patient is in front of the device ready for transfer, follow the instructions below.

7.6.1 PREPARING FOR TRANSFER

The following conditions must be met before starting the transfer:

- The front and rear wheels are locked (see parking brake 24) or if the drive wheels are fitted, check that the drive wheels are braked securely
- The wheels of the wheelchair are locked (see the wheelchair user manual) or the seat is securely on the floor.

7.6.2 ASSISTED VERTICALIZATION TRANSFER

The push button panel must be used to lower the patient support to the minimum, using the vertical drop down key.

Press the button  on the handset to **lower** the patient support (seat or sling)

Press the button  or  on the handset to **decrease or increase** the height of

the frame if necessary

The structure lowering step should only be performed if necessary, i.e. when the seat level is much higher than the chair where the patient is sitting:

Incorrect starting position

Correct starting position

Once the aid seat is within reach, follow these steps to transfer to the device:

- Place your feet on the footrests
- Using your own force or with the help of an assistant, hold on to the side handles and transfer to the device

7.7 VERTICALIZATION

Once the patient is on board the aid, it can be placed in a standing posture using the verticalization assist on the device. Only in the model with no verticalization (stand-up 500) the patient must verticalize himself or herself with the help of another person.

An electric motor that fully assists the patient's verticalization.

Do not use the verticalization motor for a long time. Observe the duty cycle indications on the label
Incorrect table setting may cause compression on the user during lifting if the anti-crush accessory is not fitted
Please monitor the patient's condition and reactions while lifting is in progress
A wrong configuration of the knee supports can stress the joints during the process of verticalization

When Ready:

On the handset, locate the buttons for verticalization operation:

Press the button  on the button pad to **raise** the patient support (seat or sling).

Press the button  on the button pad to **lower** the patient support (seat or sling) if necessary.

It is recommended to take breaks during verticalization to check the patient's health.
Changing from a sitting position to a vertical position often leads to some sudden changes in the patient's vascular system and also affects the urinary and digestive systems

If the anti-crush accessory is fitted, any collision of the patient's body stops the ascent function immediately. The function will be inhibited as long as the button is pressed.
The same recommendations apply even if the patient support consists of a sling. The difference is the final position that is less upright:

7.8 MOVING WITH PATIENT UPRIGHT

Once the vertical position is reached, the aid can be moved. The patient himself can maneuver the device to reach the desired place in the home.

Use extreme caution when using motorized movement
Use independent mobility only indoors and only on flat, unobstructed surfaces
Please always set the required minimum speed
Do not use height adjustment or vertical adjustment while moving

Once the guidance system has been activated (see activating the guidance system 21 paragraph), moving the control knob (JM) in the desired direction will start the movement.

In detail, the steps are as follows:

- If not already done, switch on the joystick by pressing the power button (A) to activate the guidance system
- The joystick lights up and the status LEDs (D) indicate the battery charge level. When all LEDs are on, the battery is fully charged. If, instead of turning on, only the odd LEDs flash, the joystick is locked, it must be unlocked (see Joystick safety lock and unlock 21)
- To move, use the control knob (B) by tilting it in the desired direction. Depending on the inclination, the speed and acceleration are adjusted. Maximum speed is obtained when the joystick control lever is tilted to its maximum extension
- To change the maximum achievable speed, and thus the adjustment range of the knob, use the maximum speed control dial (see paragraph Joystick 14)

7.9 DESCENT AND CONCLUSION OF THE SESSION

When the patient needs to dismount from the device, the patient can perform the operations performed during the transfer and verticalization phases in reverse. All the operations that require the assistance of third parties are the same and it is necessary to make sure that the target seat is stable and does not move with the patient's weight. To move from the device to the seat, once the patient support is lowered, the person can move on his/her own or with the help of a third person. All the recommendations set out in the respective paragraphs apply. At this point, if you are not going to use the device further, it is recommended that you charge the device or turn off the mains switch if you do not need additional functionality, such as remote control navigation.

7.10 CHARGING THE BATTERIES

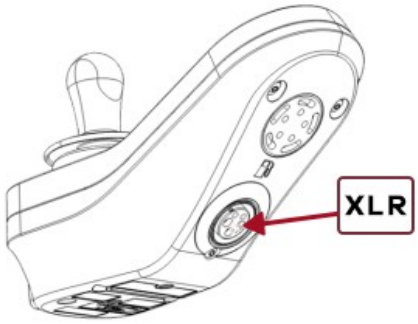
When the device is not in use, it is recommended to recharge the battery for future use. Charging the batteries daily improves their expected life and prevents the device from discharging during use.

Never leave the device with empty batteries or never use the device when the batteries are not fully charged.
Use only the Battery charger provided by the manufacturer

The battery disconnect switch must remain on to charge the batteries.

The charging connector is located on the joystick body (see also joystick 14).

Once the XLR connector is located, insert the charging plug and connect the charger to the socket to start charging.
The charging process takes approximately 6 hours, but sometimes it takes a full 10-hour cycle. The charger has an orange light on it, which lights up when charging is in progress. When the battery is fully charged, a green light replaces the orange light.
If the orange light does not come on, check that the main switch is in the "I" position.



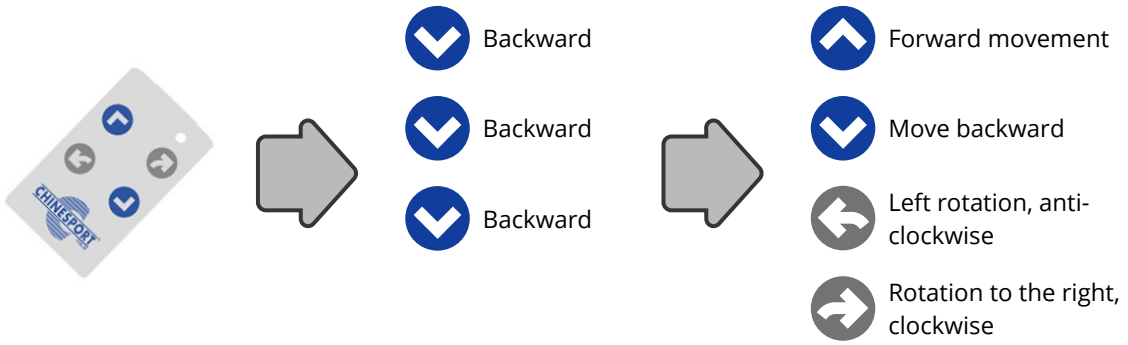
Standard model

7.11 REMOTE CONTROLLED MOVEMENT

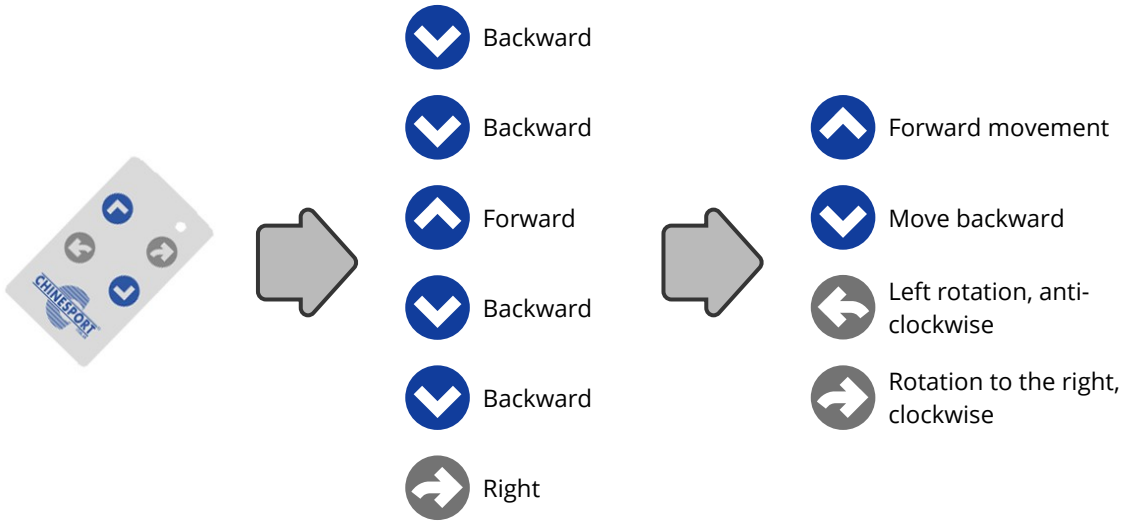
Some models have the ability to be moved using the remote control only to store the device when you no longer need it or to resume using the device when you need it.

Activate remote guidance only to move the aid a few meters and only when no one is on it
Although the speed of moving with the remote control is limited, care must always be taken to ensure that no movement is made, as any collision with the aid may result in injury or trauma

To be able to move the device by remote control, remote guidance must be activated using the activation sequence (see activating Remote Guidance 22). Once the sequence has been entered, the device can be moved using the remote control. No more than 60 seconds must pass between one command and another, otherwise the device will automatically deactivate remote guidance and remain in stand-by.



Models manufactured prior to serial number 240000138 have a more complex activation sequence:



It is recommended to exercise extreme caution when handling with the remote control and to familiarize yourself with the controls in a large, unobstructed room.

Remote control guidance is not intended as a safety feature and any malfunction of the remote control or discharge of the remote control battery or aid shall not constitute a hazardous situation

8 EMERGENCY LOWERING

These instructions must be performed by the person assisting the patient on board the aid

If for some reason the device stops working with the patient still upright (motor-assisted verticalization models only) it must be determined whether the battery is completely discharged or not. If the batteries are completely empty, you can charge the device using the battery charger. After a few minutes charging will be sufficient to lower the patient support to allow it to exit the device.
If it is not battery-dependent, follow this procedure to free the patient from the device.

The following emergency manoeuvre should be performed by the person assisting the patient. If the patient is unable to support himself or herself in the lateral containment structures, an additional person should be available to support the patient
As the support pin is removed the patient support is free to fall, be careful to stop the fall

- Place the patient in an appropriate seat after the patient has been freed, and position the seat so that the patient support can be lowered more easily
- Have the patient hold on the lateral containment structures or on the table or if this is not possible, have it supported by a person
- While holding the patient support (if present), open the spring and remove the upper safety pin from the actuator (be careful, the patient support is now free to fall down). If present, remove the sling from the patient.

- Lower the patient support completely to the floor
- Help the patient to reach the support seat.
- Contact your technical service department to identify the cause of the malfunction

9 ADJUSTMENTS

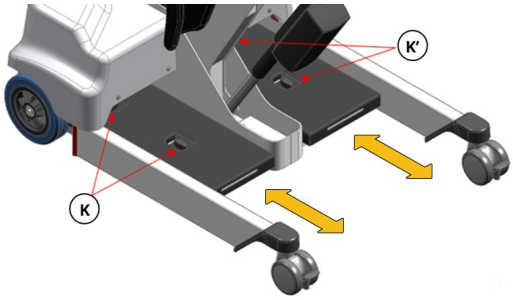
The following adjustments do not apply to all models, please take the ones that apply to your device as valid.

9.1 FOOT BOARD ADJUSTMENT

Both metal footrests are adjustable in depth by simply unscrewing a knob.

Incorrect setting of the footrests may cause compression on the user's lower limbs during lifting

- Loosen the 2 knobs (K or K') of the metal platform to be adjusted. Do not unscrew completely, just loosen the tightening.
- Slide the footplate in the desired direction in or out of the starting position
- Once the position has been reached, tighten the screws (S and S') or the knobs (K or K') again to block the platform again.

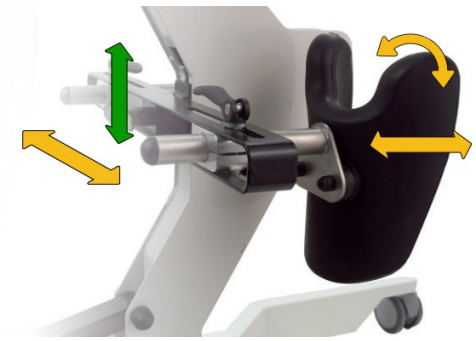


9.2 ADJUSTING THE KNEE SUPPORTS

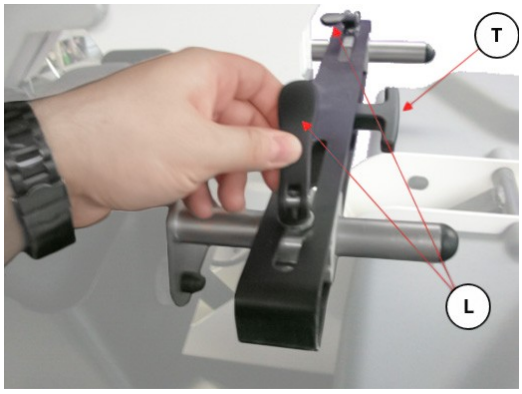
The knee supports can be adjusted in height, width, depth and rotation.

Incorrect setting of the knee supports may interfere with the patella (too high) or cause the feet to slide off the footrests (too low).
In addition, during lifting, the joints can be overstressed and comfort is compromised

The height adjustment (green arrow) takes place as a block and affects both knee supports. Other adjustments (yellow arrows) are made individually on each knee support.



To adjust the height, loosen the T-shaped knob in the center of the bar that holds the knee supports (T), while to adjust the depth, width and rotation of the single knee support you need to loosen the quick release lever (L).



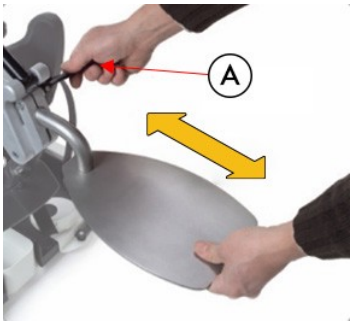
Once a position is found that provides maximum patient comfort, especially during a vertical adjustment, the knob or quick release levers should be tightened again.

9.3 ADJUSTING THE PATIENT SUPPORT

The seat can be adjusted in depth.

Do not pull the seat beyond the red limit indicated on the seat rod
Check that the securing handle is properly tightened before transferring to the device

To adjust the seat perform the following steps:
- Loosen quick release lever (A)
- Adjust the desired depth
- Tighten the quick release lever



9.4 LATERAL CONTAINMENT ADJUSTMENT

All models are equipped with lateral containment. Regardless of the shape, the width of the lateral containment handles can be adjusted.

Check that the adjustment knobs of the lateral holding handles are properly tightened before transferring to the device

To adjust the width of the lateral containment handles perform the following steps:
- Loosen the respective T-knob under the table (T or T')
- Reach the desired handle width by sliding the handles
- Tighten the T-knob

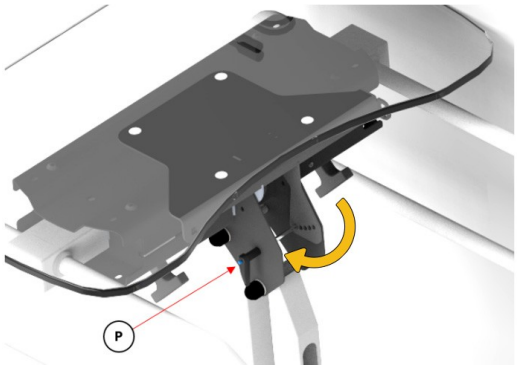
9.5 ADJUSTING THE TABLE TOP

The table top on most models can be adjusted to tilt. On some models it can also be adjusted in height and depth.

Check that the pins are properly locked before use
When adjusting the table depth, ensure that it will not cause compression in the verticalized position

TILT ADJUSTMENT

- Press the blue button and pull out the locking pin (P) completely
- Tilt and hold the table until the desired inclination is reached within the four available positions (visible from the fixing holes)
- Insert the pin again and release the blue button



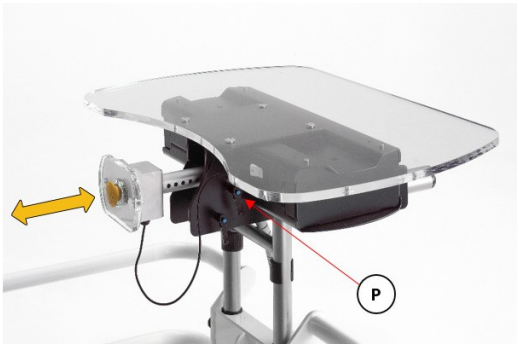
9.6 ANTI-CRUSHING ADJUSTMENT

Aid models that have motorized verticalization support have an anti-crush support as a basic accessory that prevents crushing of the patient's abdomen in the event of a collision during motorized verticalization. The button stops the vertical function immediately and only allows lowering as long as the button is pressed.
The button can be adjusted in depth to fit the patient's size and better calibrate the point of collision.

After adjustment, check that the button works by starting the vertical adjustment and pressing the button to stop the vertical adjustment.
Find the position so that any collision with the abdomen will not cause any crushing

To adjust the anti-crush button in depth, follow these steps:

- Press the blue button and pull out the locking pin (P) completely
- Slide the support forward or backward to find the correct position of the anti-crush system
- Insert the locking pin and look for the exact hole to return the pin to its fully inserted position and release the blue button



10 ACCESSORIES

A variety of accessories can be applied to AV3 devices. For a complete list of accessories, please contact your distributor or refer to www.chinesport.com.

Use only Chinesport accessories

ACCESSORIES

AC0686 – ADJUSTABLE HEEL RESTS 1

Individually adjustable in width for metal footboards. The height of the heel stops shall be 2.5 cm from the footboards. Foot strap included

AC1300 – ADJUSTABLE HEEL RESTS

Individually adjustable in width and rotation for wooden walkways. The height shall be 4 cm. Can be used in two positions, one central and one outer

AC1271 – PADDED KNEE SUPPORTS

Foam with imitation leather coating. Independently adjustable in width and depth, as well as simultaneous height adjustment

AC0691 – ADJUSTABLE SHORT SEAT

Seat length 24 cm, adjustable in depth. Weight: 4.9 kg Sizing 52.4 x 17.4 x 14.2 h cm
Padding sold separately (AC0045)

AC0045 – SHORT SEAT BASE PADDING

Adjustable short seat base pad AC0691 for extra comfort

AC0543 – SHORT SEAT UPHOLSTERY

Easy-to-wash/sterilize breathable padding provides flexibility and comfort while maintaining its shape, due to the short seat AC0691.

AC0871 – HYGIENE SEAT

Hygienic fiberglass seat, easily sanitized. Adjustable in depth. Weight: 2.8 kg Sizing 61.7 x 32.2 x 18 h cm

AC0690 – LONG SEAT - ADJUSTABLE

Long seat. Seat length 36 cm, adjustable in depth. Weight: 5.5 kg Sizing 58 x 20 x 14.2 h cm. Padding included (AC0046)

AC0046 – LONG SEAT BASE PADDING

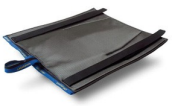
Base pad for adjustable long seat AC0690 for extra comfort

AC0544 – LONG SEAT PADDING

Easy to wash/sterilize, breathable padding provides flexibility and comfort while maintaining its shape, for the long seat AC0690.

AC0048 – MOLDED POCKET FOR LONG SEAT

Useful for the user with difficulty in transferring from the wheelchair to the seat. Recommended for use with the adjustable long seat (AC0690)



AC0049 – LATERAL SUPPORTS

Made of self-sealing polyurethane foam. Strong, shockproof and easy to sanitize. Only applicable to short grab bars in fixed position

AC0702 – ADJUSTABLE LATERAL SUPPORTS

Made of self-sealing polyurethane foam. Strong, shockproof and easy to sanitize. Only applicable to long grab handles, adjustable along the grab handles

AC0014 – LEG STRAPS

For improved stabilization of the lower limb. It applies at the knee support level

AC0783 – BACK RESTRAINT SLING For containment during verticalization. Applied by the assistant to secure the user in case of difficulties controlling the torso. Single size adjustable in length 	**AC0693 – FRONT SUPPORT** Wide frontal stand to be used in the absence of appropriate user control of the torso. Sizing 30 x 38.5 x 26 h cm 
AC1216 – TRUNK SUPPORT Wide support to be used in the absence of appropriate user control of the torso. Plexiglas only, to be applied to the existing safety crushing system. Sizing 30 x 38.5 x 26 h cm 	**AC1124 – POCKET FOR OBJECTS** Bag with Velcro straps for easy installation on both sides. Useful for carrying magazines, newspapers, tablet, phone, remote controls 
01608 – HAND ANCHOR Ergonomic grip, can be applied for extra stability 	**AC1305 – AV34 TO AV35 CONVERSION KIT** Kit to enable the remote driving system for Struzzo RCR models, consisting of control unit and remote control already coupled 

11 MAINTENANCE AND SERVICE LIFE

11.1 ROUTINE MAINTENANCE

Scheduled maintenance is required for proper operation of the device, proper use, patient and operator safety, and performance assurance of the device.
Ordinary maintenance work may be carried out by specialised operators or authorised technical personnel.

PERIODICITY	CATEGORY	VERIFICATION
6 months	Visual inspection of the device	Knee supports integrity
		Checking the condition of the traction wheels
		The integrity of the chassis and the absence of rust and any breakaway elements
		Checking the brake wheels and condition of the brakes
		Checking the tightness of screws and adjustment elements
		Check the integrity of plastic covers
		Check the condition of the connectors and plugs
	Functional verification	Check the height adjustment for correct operation
		If equipped, check the operation of the gas springs, the push, the slide and the sealing
		Correct braking wheel pivoting

		Correct rolling of the wheels
		Effectiveness of the parking brakes
		Test the comfort of the knee supports
		Testing the electrical controls
		Check the function of the anti crush button
2 years	Instrumental and functional tests	Check the general operation of the device
		Checking electronic devices and wiring
		Check for wear and, if necessary, replace: motors, wheels, electronics
	Electrical checks	Electrical safety tests

It is recommend that electrical safety tests (CEI EN 62353/ EN 60601-1) be carried out on the device at least once every two years.

11.2 MALFUNCTIONS, EXTRAORDINARY MAINTENANCE AND REPAIRS

Extraordinary maintenance work may only be carried out by personnel authorised by the manufacturer. Otherwise any warranty conditions will be immediately terminated. The manufacturer declines all responsibility if tampering with the original product is ascertained.
Any malfunctions found by the user must be promptly reported to the distributor or directly to the manufacturer and inhibit the use of the device.
Repairs may only be carried out by technical personnel authorised by the manufacturer and may include the withdrawal of the device in order to carry out the necessary repairs
The spare parts list is provided directly by Chinesport S.p.A. on request and includes ordering codes and price list.

11.3 REPLACING THE BATTERIES

To replace the batteries, contact your local distributor or Chinesport Customer Service. If the device care and charge management guidelines are followed carefully, the life of the batteries can be up to 4-5 years.

11.4 REMOTE CONTROL PAIR

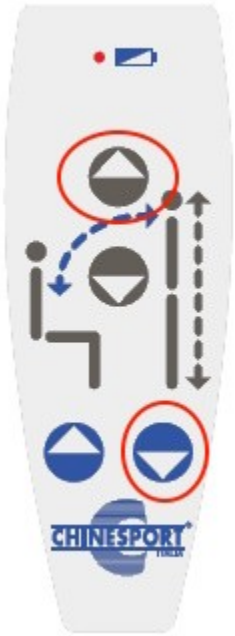
If you buy a new remote control, you need to follow the Struzzo pairing procedure, shown below. The following procedure is valid for the AV35xx, Struzzo RC models. If you have an AV34xx RCR model in which the remote control accessory has been installed, the procedure is not valid and you need to contact your authorized distributor to pair the new remote control.

Part List
- Remote control for AV35xx SP0103

Requirements

Place the device on a site where the electromagnetic disturbances are reduced. Since the pairing operation is timing based, please read all steps before proceed, in order to have clear what are the timings for each operation.

Step by step procedure

#	Operation	Reference
001	Turn off the main switch of the device	
002	Press, and **keep pressed** the 2 buttons on the handset showed in the picture	
003	**Still pressing** the 2 handset buttons, turn on the main switch and begin to count 6 seconds.  1 - 2 - 3 - 4 - 5 - 6 After the 6 seconds **release** the handset buttons.	

#	Operation	Reference
004	Press for 5 seconds the first button on the new remote control, staying as close as possible to the AV35 1 - 2 - 3 - 4 - 5 Release the button.	
005	After that, press for 5 seconds the second button on the new remote control. 1 - 2 - 3 - 4 - 5 Release the button. At this point the remote control should be paired. Use the activation sequence to see if the remote activation mode turn on. Otherwise repeat the operations.	

11.5 SERVICE LIFE

The service life of the device is also defined at the beginning of this manual, and is approximately 10 years, provided that all indications in this manual are observed.
At the end of its useful life, you can proceed in the following ways:

1. Dispose of the device as described in the paragraph Disposal 45
2. Require the manufacturer to recondition and recertify the device so that it can continue to be used

As stated in the paragraph General warnings 8, the manufacturer declines all responsibility for the use of the device beyond the useful life established in this manual.

12 CLEANING

It is necessary to clean the device at the end of each use if the device is intended for different users.

Cleaning should be done with the device disconnected from the mains and with the main switch set to 0

12.1 CLEANING

Remove dust from metal parts using mild detergents and drying immediately after washing.
Clean the plastic parts with a neutral product with a damp cloth and immediately dry the surfaces.

12.2 DISINFECTION

For disinfection of the product use disinfection with a low chlorine content, such as AMUCHINA® 10% or equivalent solutions with a concentration of 0.1% sodium hypochlorite and the following spectrum of action:

- bactericide in the presence of interfering substances according to EN 1276:1997;
- a fungicide in the presence of interfering substances according to EN 1650:1997;
- bactericidal surface test according to EN 13697:2001;
- fungicide surface test according to EN 13697:2001;
- active on Salmonella Typhimurium according to EN 13697:2001;
- active on: HIV, HAV - HBV, HCV;
- virucide according to EN14476:2005;
- active on H1N1 influenza virus according to EN14476:2005.

For safe use, refer to the instruction leaflet included in the product

IF you have a plexiglass table, DO NOT use aggressive product such as alcohol or bleach. They may damage the table irreparably

For the disinfection of the plexiglass table, use the specific product for plexiglass or methacrylate, such as the SANI-PLEX PRO product. Contact the manufacturer for more information.

13 TECHNICAL SPECIFICATIONS

THE MANUFACTURER will provide on request circuit diagrams, component lists, descriptions, calibration instructions, or other information that will assist SERVICE PERSONNEL in repairing parts of EM equipment AV34 - AV35 judged by THE MANUFACTURER to be repairable by SERVICE PERSONNEL.

	STRUZZO 500 RC - 500 RCR
Base - accessibility	466 mm
Overall dimensions (L x W x H)	90 x 60 x 85 - 127 cm
Wheels	Ø 150 mm + Ø 75 mm
Frame height above ground	31 mm
Parking brake	Motor brake
Safe working load	140 kg
Weight	95 kg
Batteries	2x 12 V 12 Ah
Insulation class	II
Applied Parts	BF
Battery Charger Supply Voltage	100-240V~ 50/60Hz
Protection degrees	IP21

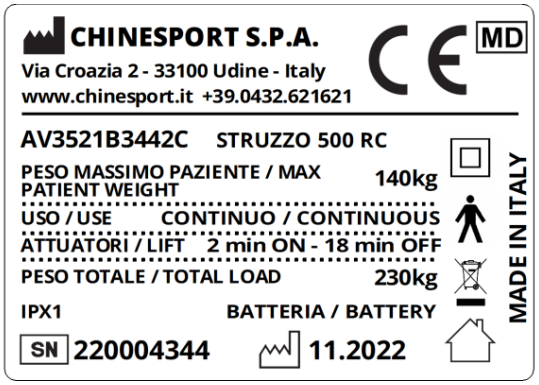
	STRUZZO 500 RC - 500 RCR
MDR Device class	I

MOVEMENT	
	STRUZZO 500 RC - 500 RCR
Movement	independent
Type of movement	motorized
Maximum step size that can be passed	20 mm
Maximum drivable slope	2 degrees
Type of command	Joystick - remote control
Maximum speed	2,5 km/h
Foot boards type	metal
Knee supports	anatomical
Structure height adjustment	electrical
Verticalization	electrical
Patient support	long seat
Lateral containment	short handles
Upper structure	dynamic
Support table	small

ELECTRICAL PART	
	STRUZZO 500 RC - 500 RCR
Continuous operating time	90 min
Lift cycles (maximum load)	20
Average battery charging time	8-10 hours
Battery charge level	5 LED
Auto-off	standard
Fault diagnosis and maintenance	On joystick
Verticalization Stop button	standard

13.1 LABELLING

The following labels are found on the device and on the packaging. All symbols are explained in paragraph Symbols on labels 9. The serial number can be identified on the label if it is necessary to contact the manufacturer's service center.



14 ELECTROMAGNETIC COMPATIBILITY

The manufacturer declares that the device AV34 - AV35 including all original accessories and the supplied power cable complies with the requirements of the EN 60601-1-2 standard for electromagnetic compatibility. As they are electromedical equipment, they require special precautions with regard to electromagnetic emissions (EMC) and must be installed and commissioned according to the EMC information provided in this manual.

The use of accessories, transducers or cables other than those specified or provided by the manufacturer of the device, could increase electromagnetic emissions and decrease the electromagnetic immunity of the device
The use of this device near or overlapping (above or below) with other devices must be prohibited because it could cause improper operation. If this type of use is necessary, the device in question and the others involved must be kept under control to verify its correct operation

The device is not compatible with high-frequency surgical equipment.

14.1 ESSENTIAL PERFORMANCE

When used in all intended environments and in accordance with this manual, the device guarantees basic safety and essential performance. In the presence of electromagnetic interference the device may suffer from degraded operation but basic safety remains guaranteed and the following performance is guaranteed:

- The device remains safe for the patient and operator
- The device does not make unexpected movements
- The handling parameters of the system do not change
- The charger may shut down in the event of voltage dips, but will return to operation when voltage returns (LED on)
- When moving with the remote control, movement stops may occur but no unwanted movement (starts or deviations) may occur

14.2 ELECTROMAGNETIC EMISSIONS

The device AV34 - AV35 It is intended for use both at home and in the clinical setting, except in locations close to active high frequency (HF) surgical devices, or in radio frequency (RF) shielded environments, in an electromagnetic environment described in the following table. The user of the device AV34 - AV35 must ensure use in the appropriate environment.

Emissions test	Conformity	Electromagnetic environment Recommendations
Radiated / conducted RF emissions CISPR 11 / EN 55011	Group 1	The devices AV34 - AV35 uses RF energy only for its internal function. Therefore, its RF emissions are very low and are unlikely to cause any interference electronic. Remote control versions emit RF energy from the remote control
Radiated / conducted RF emissions CISPR 11 / EN 55011	Class B	The devices AV34 - AV35 are suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic Emissions IEC/ EN 61000-3-2	Class A	
Voltage fluctuations and flickering IEC/EN 61000-3-3	Compliant	

14.3 TRANSMIT AND RECEIVE RF SIGNALS

The AV3 models that can be remote controlled, have a FCC certified commercial RF transmitter and receiver. RF energy is transmitted by the remote control and received by the receiver inside the AV3.
The RF signal has the following characteristics

- Transmit and receive frequency: 433.92MHz
- Modulation FM
- Encoding: Rolling code FOBLOQ

The remote control complies with the essential requirements of 2014/53/EU, identified as a narrow range SRD and complies with harmonized standards:

- EN 60950-1:2006+A2:2013
- ETSI EN 301 489-1 V2.1.1 (2017-02)
- ETSI EN 301 489-3 V2.1.1 (2017-03)
- ETSI EN 300 220-2 V3.1.1 (2017-02)
- EN 50581: 2012

14.4 ELECTROMAGNETIC IMMUNITY

The device AV34 - AV35 is intended for use in the use environment [7], in the electromagnetic environment specified in the following table. The user of the device AV34 - AV35 must ensure use in the appropriate environment. Portable and mobile RF communications equipment can affect medical electrical equipment.

Immunity test	IEC/EN 60601-1-2 test levels	Electromagnetic environment - Recommendations
Electrostatic Discharges (ESD) IEC/EN 61000-4-2	±8 kV contact	Floors should be covered with wood, concrete, or ceramic tiles. If floors are

Immunity test	IEC/EN 60601-1-2 test levels	Electromagnetic environment - Recommendations
	±2 kV, ±4 kV, ±8 kV, ±15 kV air	covered with synthetic material, the relative humidity must be at least 30%.
Fast Transient / Electric Burst IEC/EN 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines PRF 100kHz	The quality of the mains power supply must comply with the typical commercial or hospital applications.
Overvoltage surge IEC/EN 61000-4-5	±1 kV differential mode 1.2/50us ±2 kV common mode 0°, 90°, 180°, 270°	The quality of the mains power supply must comply with the typical commercial or hospital applications.
Voltage dips, short interruptions and voltage variations on power supply lines IEC/EN 61000-4-11	0% UT (100% hole in UT) for 0.5 cycles 0°, 45°, 90°, 135°, 180°, 225°, 270°, 315° 0% UT (100% dip in UT) for 1 period 70% UT (30% dip in UT) for 25 cycles 0% UT (>100% dip in UT) for 5s	The quality of the mains power supply must comply with the typical commercial or hospital applications. If the user of the device requires continued operation of the system even when the power supply is interrupted, it is recommended that the device be powered from a UPS. (battery charger)
Mains frequency magnetic fields (50/60 Hz) IEC/EN 61000-4-8	30 A/m 50Hz	Mains frequency magnetic fields must be tuned to the levels typical of a standard network used for commercial or hospital use.

Immunity test	IEC/EN 60601-1-2 test levels	Electromagnetic environment - Recommendations
Conducted RF IEC/EN 61000-4-6 RF radiated IEC/EN 61000-4-3	3 Vrms Mod. AM 80% 150 kHz – 80 MHz 6 Vrms in ISM band 3 V/m Mod. AM 80% 1kHz 80 MHz – 2.7 GHz	Portable and mobile RF communications equipment should not be used near any part of the device AV34 - AV35the recommended separation distance, including cables, calculated from the equation applicable to the frequency of the transmitter. Recommended Separation Distance $d = 1,16\sqrt{P}$ $d = 1.16\ \sqrt{P}$ 80 MHz – 800 MHz $d = 2.33\ \sqrt{P}$ 800 MHz – 2.7 GHz Where P is the estimate of the maximum output power of the transmitter in Watts (W) according to the manufacturer of the transmitter and d is the recommended separation distance in meters (m). The field of energy from fixed RF transmitters, as determined by an electromagnetic field study[a], must be below the range level in each frequency range[b]. Interference may occur near devices marked with the following symbol:

Immunity test	IEC/EN 60601-1-2 test levels	Electromagnetic environment - Recommendations
		
NOTE 1 At 80 MHz and 800 MHz, the separation distance is applied for the highest frequency range. NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is subject to absorption and reflection by structures, objects and people		
a) The field of energy from fixed transmitters, as base stations for mobile phones (cellular / cordless) and mobile cellular radio systems, amateur radio, AM and FM radio broadcasts and television can not be predicted theoretically with precision. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength at the site in which you are using AV34 - AV35 exceeds the applicable level of compliance above, the operation of should be observed AV34 - AV35. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the AV34 - AV35. b) Beyond the 150 KHz-80 MHz frequency range, the power range must be less than 3 V / m.		

14.5 RECOMMENDED SEPARATION DISTANCE

The device AV34 - AV35 is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF transmitters and the device as recommended below, according to the maximum output power of the communications equipment.

Mobile, radio frequency communication devices (including cables for external antennas and antennas) shall not be used closer than 30 cm (12 inches) to any part of the device AV3, including cables specified by the manufacturer. Otherwise, the performance of the device may deteriorate

Recommended separation distances between portable and mobile RF communications equipment and the device			
Estimation of the maximum output power of the transmitter (W)	**Separation distance according to the transmitter frequency (m)**		
	150 kHz – 80 MHz d = 1,16√P	**80 MHz – 800 MHz d = 1,16√P**	**800 MHz – 2.7 GHz d = 2,33√P**
0.01	0.116 -> 0.3	0.116 -> 0.3	0.233 -> 0.3
0.1	0368	0366	0737
1	1166	1166	2333
10	3689	3689	7378
100	11666	11666	23333
For transmitters considered at maximum output power not indicated above, the recommended separation distance in meters (m) can be calculated using the equation applicable to the transmitter frequency, where P is the estimating estimate of the maximum transmitter output power in Watts (W) according to the transmitter manufacturer. NOTE 1 At 80 MHz and 800 MHz, the separation distance applies for the higher frequency range. NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

15 TROUBLESHOOTING

If you encounter a problem or malfunction, try the following troubleshooting table. If none of the above works, contact your local distributor or Chinesport Customer Service.

Problem	Causes	Solution
The batteries DO NOT charge when the battery charger is connected	The main switch is set to "0", (Green LED on the battery charger)	Disconnect the battery charger, switch on the device with the main switch in 'I' and connect the battery charger again
	The batteries are dead (Green LED on battery charger, main switch on "I" and device not working)	Try charging the batteries for 12 hours. If no effect is found, replace the batteries
	The battery charger is not connected properly or has no power (the LED on the battery charger is off)	Check the connections Check the mains voltage or change the socket Check the integrity of the power cable
	Battery charger is broken (connected correctly but LED is off)	Replace the battery charger
The electrical lifting does not work or The electric height adjustment does not work	The main switch is set to "0", (the 3 LEDs under the chassis are off)	Turn on the battery disconnect switch to the “I” position
	The motor connector is disconnected or not connected properly	Check the connections and connect the motor correctly
	Batteries are low (red LED on)	Charge the batteries
	Blown main fuse (3 LEDs off) or The control box or hand control or lift actuator is faulty	Contact your local distributor or Chinesport customer service
	Emergency button pressed (The electric lift only functions when the lower button is pressed)	Stop pressing the emergency stop button or remove obstacles that prevent the button from coming loose
Device does not move (stand-alone mobility)	The main switch is set to "0", (the 3 LEDs under the chassis are off)	Turn on the battery disconnect switch to the “I” position
	Joystick is switched off (power key not lit)	Switching on the Joystick (see Switching on and off 20)
	The wheels are blocked or there are obstacles on the wheels	Unlock the wheels or remove obstacles from the wheels
	The batteries are empty	Charge the batteries
	Joystick is locked (power button is on but odd LEDs flash)	Unlock the Joystick (see Joystick safety lock and unlock 21)
	Control unit or joystick is broken	Contact your local distributor or Chinesport customer service

16 SPARE PARTS

Contact your dealer or the manufacturer's technical support service for information on spare parts. Only use original spare parts supplied by the manufacturer or by authorised distributors

17 DISPOSAL

The symbol on the label of the equipment indicates that the waste must be subject to "separate collection".
Therefore, the user must either hand over the waste to the separate waste collection centres set up by the local authorities or hand it over to the retailer against the purchase of new equipment of an equivalent type. Separate waste collection and subsequent treatment, recovery and disposal operations promote the production of equipment with recycled materials and limit any negative effects on the environment and health caused by improper waste management. Improper disposal of the product by the user could result in the application of administrative penalties.
Refer to European Directives 2018/851/EU and 2018/852/EU, national transpositions and local regulations regarding the correct disposal of waste.

Identify the items to be disposed of according to the following classification.

PART	**DISPOSAL**
Outer packaging	Recycle or dispose of cardboard and wood parts
Inner packaging	Recycle or dispose of polystyrene, nylon and plastic parts
Electronic equipment	Disassemble and handle according to the WEEE Directive
Metal structure	Recycling as metal
Padded panels, slings	Dispose of as plastics, fabric and polymers

The waste code is a numeric code (EWC or CER code) that determines the disposal path of a hazardous waste type based on its material and/or chemical composition. Directive 91/689/EEC, replaced by Decision 2000/532/EC, defines the different types of waste and assigns CER codes. The following is a list of relevant CER codes for the device AV34 - AV35.

CER CODE	**DESCRIPTION**
200136	Electrical and electronic equipment that has been discontinued

CER CODE	**DESCRIPTION**
160601	Lead-acid accumulators

CER CODE	**DESCRIPTION**
150101	Paper and cardboard packaging
150102	Plastic packaging
150103	Wooden packaging

18 WARRANTY

18.1 GENERAL CONDITIONS

All Chinesport products are warranted against defects in materials or workmanship for a period of 24 months from the date of sale of the product, except for any exclusions, limitations or conditions defined at the time of delivery of the product.
The warranty is not valid in case of improper use, tampering with the device, abuse or modification of the product or for any use or operation not explicitly mentioned in this manual.
The warranty is not valid if the device has not been correctly maintained and documented in accordance with this manual, or if the instructions regarding storage, cleaning and sanitation are not followed.
The manufacturer is not responsible for any damage or injury or any situation caused by incorrect installation or configuration of the device or using equipment that does not comply with the instructions in the installation, assembly and operating manuals.
The manufacturer does not guarantee its products against defects or damages in the presence of extraordinary conditions such as: natural disasters, unauthorised maintenance and repairs, improper power supply (where applicable), use of parts or components or accessories not original, shipping damage not directly managed by the manufacturer, lack of maintenance, obvious negligence on the part of the user or operator.

The warranty does not cover consumables, rechargeable batteries, and in general all material subject to wear, failures caused by knocks, falls, incorrect or improper use, accidental events, transport damage. If the equipment is tampered with, the warranty is automatically cancelled.

18.2 WARRANTY REPAIRS

In the case of a report of defects in materials or workmanship, the manufacturer assesses whether the defect is covered by warranty.
Warranty repairs must be expressly requested and are to be understood in our laboratory, subject to authorisation and with the issue of the return number.
For products sent in their original packaging, the return shipment will be made freight free.
For warranty repairs, a fiscal document is required where the date of purchase is within the warranty period (sales note, purchase invoice, fiscal receipt).

Labour costs for warranty repair (when the warranty conditions are valid) are borne by the manufacturer.
Repairing or replacing a product does not renew or extend the terms and expiration dates of the warranty.

18.3 OUT-OF-WARRANTY REPAIRS

Non-warranty products can be repaired by the manufacturer by returning them after having been authorised by the technical assistance service. The costs of repair, including shipping, materials and labour, are to be understood as being borne by the customer or the retailer. The parts and components being repaired are considered to be covered by warranty for 24 months from the date of receipt of the repaired device

18.4 NON-DEFECTIVE PRODUCTS

In the event that the manufacturer does not find any malfunction or defect in the returned products, it is concluded that the product is not to be considered as defective. Shipping and device management costs will be charged to the customer or distributor.

18.5 HOME REPAIRS

In case of repair at the customer's premises, a written request must be made indicating the complete details of the applicant, the type of machine and the fault.
The kilometric cost for the technician's transfer is to be agreed in relation to the customer's urgency.
In the event that the machine in question is under warranty, only the costs of the transfer will be charged.
The time is counted from the departure of the technician from our laboratory until his return, the time of return will be estimated on the basis of the time spent on the outward journey.

18.6 REPLACEMENT PARTS

A detailed list of all spare parts can be obtained from the manufacturer.
Spare parts are sold following a formal request for an offer to the technical assistance service. Processing times are related to the availability of the parts. Returns for spare parts are not accepted.
The payment will be cash on delivery unless otherwise agreed.

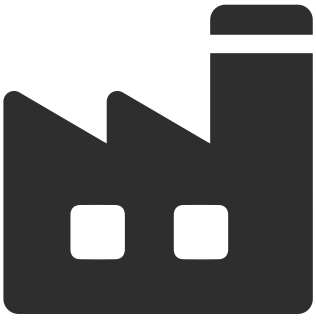
19 RECORDS OF OPERATIONS AND MAINTENANCE

DEVICE		**DATE OF INSTALLATION**		**NUMBER SERIAL**
DATE	OPERATIONS PERFORMED	TECHNICAL	SIGNATURE	NEXT VERIFICATION

NOTE:

NOTE:

NOTE:



MADE IN ITALY

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