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# **Standing Frames**



# User and maintenance manual





REV. 1.2 (06/2018)



# EN 4

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### 1 GENERAL INFORMATION

Welcome!

Thank you for buying an excellent product for support, sustain, stabilization and movement. Before use we recommend to read carefully this user manual with particular reference to the warning to be observes before using the device (SPECIAL WARNINGS AND USE RESTRICTIONS).

For every additional information, observation or requests for clarification you can contact the reseller or the company Chinesport S.p.A.

# 1.1 Purpose, content and recipients of these instructions

This manual is intended to provide the necessary information to permit a proper use of the equipment and to be able to use it independently and safely. It' up to the specialist and to the user to decide to use the equipment in autonomy.

This manual contains information relating to the technical, operation, maintenance, spare parts and safety. This book is also intended to technicians in charge of maintenance equipment.

This Instruction booklet must always follows the equipment and must be carefully preserved in order not to compromise its readability.

In the case of assignment to a third party this manual must be transmitted with the other documents and communicated to the manufacturer as provided for in the European Directive 93/42/EEC amended by the Directive 2007/47/EC for the maintaining of the safety and the traceability of the product.

#### 1.2 Manufacturer



**CHINESPORT S.P.A**, Via Croazia,2-33100 Udine, Italy Tel. +39.0432.621.621 – Fax +39.0432.621.620 – website: <a href="www.chinesport.com">www.chinesport.com</a>. The company has a quality system according to the UNI EN ISO 13485:2012.

# 1.3 Intended use and equipment description



AV3 Standing Frame is a medical device.

The proper use falls within the medical devices use methodology.

Standing frame allows a person with limited limb and trunk functions to assume and maintain an upright posture. The equipment is intended for use by people who can hardly bear their own weight. The choice of which model to use is based on the user's remaining motor and coordination skills and is up to a qualified therapist. Depending on the model, the user can stand up manually, holding on to the large, side handles and the tray's edges, or by means of a rechargeable battery-powered electric lift motor, operated by hand control, or servo-assisted by gas spring. It features large handles to provide support when standing up, as well as a wide tray to hold objects.



The standing aid 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 user's height by means of a system servo-assisted by gas spring or an electric motor.

### 1.4 Biocompatibility

Every AV3 part and accessory intended for use by the user are developed in order to be homologated in compliance with the existing biocompatibility directives, provided that they are used within the prescribed limits.

For every additional information, observation or requests for clarification you can contact the dealer or the company Chinesport SpA.

For any clarifications, please contact an authorized reseller.

### 1.5 Product description

The device is composed by 9 elements which are configurable and connected to the specific functions of support, sustain, stabilization and movement:

- 1. Base
- 2. Footplates.
- 3. Knee supports
- 4. Height adjustment.
- 5. Lifting.
- 6. Back support.
- 7. Lateral support.
- 8. Upper part.
- 9. Service tray.

Different options are provided for all the configurable elements. More than forty relevant configurations are available in order to fulfil also the most specific needs of the users. A wide range of accessories can be supplied in order to grow up the comfort of the user and the and the speciality of the particular function.

# 1.6 Storage and operating environment

Medical devices covered by this manual are suitable for use for treatment administered in hospital, rehabilitation centers or in the home user. In any case, these devices are designed to be used in environments that are not exposed to atmospheric agents.

Operating temperature 0°C to 40°C / 32°F to 104°F
Storage temperature -25°C to 70°C / -13°F to 158°F
Humidity 0% to 80% without condensation

Do not charge batteries if they are frozen or have a temperature higher than 45°C

#### **Products insights**

Further documentation can be found on our website www.chinesport.com You can download declaration of conformity and other product documents in their latest version and in colour format directly from website.

#### Storage

Besides the environmental conditions, the following conditions must be ensured when the equipment is to be stored:

- 1. Switch off the equipment by setting to "O" position the thermomagnetic switch located on the tray (see "Stop functions" electric models only).
- 2. Recharge batteries, if not used at all, at least every six months (see "Recharging the equipment's batteries" electric models only).
- 3. If the equipment won't be used for a long time it's strictly recommended to disconnect the batteries (please refer to non-routine maintenance)

# 1.7 Symbols

In this manual and the machine itself, the symbols are used to draw your attention to important safety notices and useful information.

Observe all warning, attention and danger messages.

Symbol	Significance
Danger	Indicates an immediate danger with a high risk of death or serious injuries, if it is not avoided.
Warning	Indicates a possible danger with a moderate risk of death or serious injuries, if it is not avoided.
Attention	Indicates danger with a low risk of light injuries or damages to things, if it is not avoided.
	Class II device
<b>†</b>	Type B applied parts
	Crushing/shearing hazard
<b>C€</b>	Compliance to 93/42/EEC and 47/2007/EC directives for medical devices.  XXXX: Certification body identification number.
<b>(</b>	Carefully read the instructions in the use and maintenance manual
A	Warning of dangerous voltage, risk of electric shock
Ţ	Fragile
	Recyclable
Ť	Keep dry
<u>11</u>	Keep upright
Z	Dispose correctly
	Manufacturer



### **Expected product life**

10 years

### **Protection degree**

IP21.

The IP Code classifies and rates the degree of protection provided against intrusion (body parts such as hands and fingers), dust, accidental contact, and water by mechanical casings and electrical enclosures.

ΙP	
2	Fingers or similar objects >12.5 mm
1	Dripping water (vertically falling drops) shall
	have no harmful effect.

# 2 SPECIAL WARNINGS AND USE RESTRICTIONS

warning	<ul> <li>This equipment must not be used:</li> <li>Without the necessary adjustments and user-specific setup (see "Set-up and adjustment");</li> <li>with people weighing over 140 Kg;</li> <li>on unstable and/or uneven surfaces (e.g.: stairway, steps, etc.);</li> <li>if the original product has been modified or tampered with;</li> <li>in an explosive and/or corrosive atmosphere or exposed weather conditions</li> <li>when the environments temperature is over 40°C</li> </ul>
warning	<ul> <li>Side effects: <ul> <li>It can cause involuntary muscular contractions.</li> <li>It is not recommended for users with limited trunk and upper extremity control.</li> <li>It is not recommended for users with limited range of motion in the knees and/or the coxofemoral and/or tibiotarsal joints.</li> <li>It is not recommended for users with structural impairments of the lower extremities.</li> </ul> </li> </ul>
warning	<ul> <li>The user must be declared physically and psychologically fit to use the equipment by a specialist.</li> <li>Never spill liquid of any kind on the equipment.</li> <li>Do not use the lifting system in continuous mode, observe the duty cycle specified in chapter TECHNICAL SHEET.</li> </ul>
A	<ul> <li>Always unplug the battery charger during use and/or to move the equipment</li> <li>Disconnect batteries before carrying out any service on the equipment circuits.</li> <li>Do not connect to an electric system that does not comply with the current safety regulations.</li> <li>Pull out the plug (not the cable) to disconnect the battery charger, the hand control and the motor.</li> <li>Turn off the equipment when not in use to save battery life</li> </ul>

### 3 USE INDICATION

#### 3.1 Indications

AV3 standing frame is suitable for people with disabilities or spinal cord injuries, paraplegia, multiple sclerosis, Parkinson's disease or muscular pathologies, muscular dystrophies and those who are in difficulty in actions that require lifting, for example elderly people.

#### Minimum requirements for supervised training

The user can sit in upright position.

#### Minimum requirements for autonomous training

The user can fully handle AV3 alone and knows all the functions.

#### User

- 1. Person who, after proper instruction by the specialized staff or after a careful reading of this manual, is able to use and train with AV3
- 2. The user is totally responsible of the safe and proper use with the AV3 intended use

#### Specialised personnel

- 1. People who, for their knowledge, obtained from specialized training in the field of medicine, etc., possess medical-technical specialization (e.g. doctors, therapists, specialized resellers).
- 2. People who, for their professional experience and education / training by the manufacturer, have knowledge about security and are able to recognize any dangers during use (e.g. specialist assistants).

For the safe use of AV3, specialized personnel must regularly attend refresher courses.

#### 3.2 Contraindications

- Contraindicated to users with trunk and upper limb control deficiency
- Contraindicated to users with joint limitation of the knees and / or coxo-femoris and / or ankle.
- Contraindicated to users with structural deficiencies in the lower limbs.

# 3.3 Proper use

For this purpose, the user moves to the device from a safe and stable wheelchair or from a simple chair (without wheels) or sofa with a sufficient stability on the floor. The user must assume an upright sitting position and the chair or wheelchair must not be able to tip over when the user move on the AV3 seat.

AV3 must be moved on a flat and solid surface, only INDOOR.



The use of AV3 is to be considered safe only if the safety measures and warnings described in this manual are observed and the contraindications described herein or established by a therapist / physician does not occur. Adjustments and modifications can be safely done only when the device is turned off and the patient is not seated on the device.

# 3.4 Predictable improper use

AV3 is not suitable for:



- Diagnosis
- Monitoring
- Measurement
- Sport training
- Outdoor moving

### 3.5 Unsafe use

Do not use AV3 (electrical versions)

- In combination with other devices 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

### 3.6 Exclusion of responsibility

The manufacturer and its distributor do not assume any responsibility as a result of:

- Improper, incorrect or not intended use
- Non-observance of this instruction manual
- Intention or gross negligence
- Too intensive training, eg. agonistic activity
- Outdoor training or movements
- Use of inappropriate wheelchairs, chairs, tables or beds that aren't stable
- Use of the device, although forbidden by the doctor or therapist
- Installation of unauthorized accessories
- Performing repairs or other interventions on AV3 by people not authorized by the manufacturer

# 4 CONFIGURATION ITEM CODE

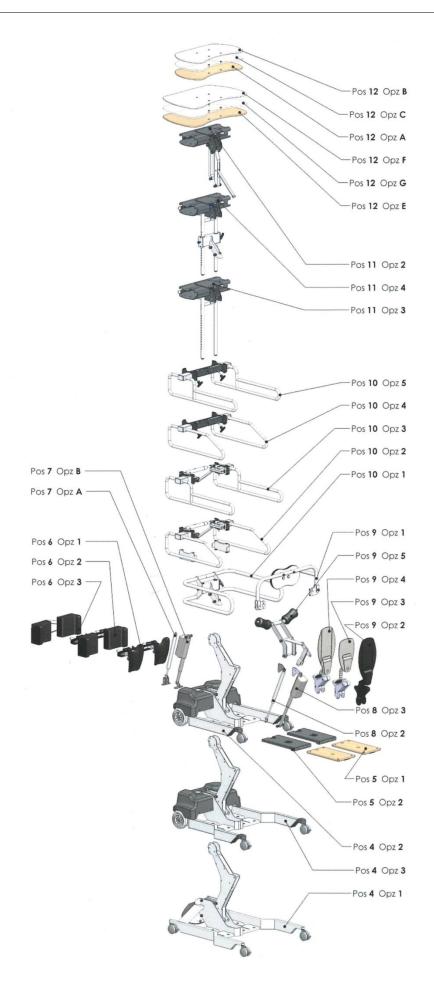
AV3 standing frame is extremely configurable. See the picture at the end of the table to have a graphic resume of the possible configurations.

	Wide base with wheels, assisted pushing movement, easy to access.	A V 3 1		
BASE Pos. 04	Narrow base with traction wheels, independently moving around, easy to drive	A V 3 2		
	Wide base with traction wheels, independently moving around, easy to drive and to access	A V 3 3		
	Without footplates, suitable for special customizations.	A V 3 0		
FOOTPLATE Pos. 05	Wooden footplates, adjustable in depth with tools.	A V 3 1		
	Metal footplates adjustable in depth without tools.	A V 3 2		

	Without knee support. Indicated for special customizations.	A V 3 0				
KNEE SUPPORT	Adjustable in depth and width.	A V 3 1				
Pos. 06	Adjustable in depth, soft padding	A V 3 2				
	Not adjustable, soft padding	A V 3 3				
HEIGHT	Adjustable by gas spring	A V 3 A				
REGULATION Pos. 07	Adjustable with electric actuator	A V 3 B				
	Independent	[A V 3    0				
LIFTING Pos. 08	Gas spring with handle	A V 3 2				
	Electric actuator with hand switch	A V 3 3				
	No support for lifting	A V 3 1 1				
DACK	Long seat, not adjustable in depth.	A V 3 2				
BACK SUPPORT Pos. 09	Short seat, adjustable in depth, removable	A V 3 3				
	Long seat, removable.	A V 3 4				
	Harness support	A V 3 5				
	Fixed, not adjustable	A V 3 1 1				
	Short handles, adjustable by rotation.	A V 3 2				
SUPPORT Pos. 10	Long handles, adjustable by rotation.	A V 3 3				
105. 10	Short handles, adjustable by shifting.	A V 3 4				
	Long handles, adjustable by shifting.	A V 3 5				
	Dynamic structure, with adjustable handles.	A V 3 2				
UPPER PART Pos. 11	Fixed structure, with fixed handles.	A V 3 3				
	Fixed structure, with adjustable handles.	A V 3 4				
	Without service tray.	A V 3 N				
	Wooden service tray – medium size.	A V 3 A				
SERVICE TRAY Pos. 12	Polyethylene service tray – medium size.	A V 3 B				
	Plexiglass service tray - medium size.	A V 3 C				
	Wooden service tray – large size.	A V 3				



Polyethylene service tray – large size.	A V 3 E				
Plexiglass service tray - large size.	A V 3 G				





### 4.1 Latest Improvements

Chinesport constantly improves his product trying to implement all the changes dictated by the market and by user feedback as well as constant post marketing surveillance in order to keep safety and conformity to the most recent medical devices regulations, testing and deploying the most recent available technology. Latest product upgrades involves various aspects of the production phases and improvements of electronic and electric components, as well as improvements on usability and comfort. Main big changes that affect better performances and better battery durations are already available from June 2018. These are:

### Improved Battery Technology

We adopted a better battery technology based on patented "ATB - Advanced Technology Battery" from Soneil which greatly improves battery life (more than doubled), expanded environment conditions, increased shelf life and discharge cycles, reduced gas emissions. Furthermore, we have increased the battery duration with a single charge more than 10%. Here a comparison table with other battery technology:

ITEM	◆ ACID	) ;	<b>Ģ</b> GEL	\$	ADVANCE TECHNOLOGY BATTERY	<b>\$</b>	LITHIUM	<b>\$</b>	NiCad	<b>\$</b>
Temperature	-18°C	C to +45°C	-18°C to +50°	C	-40°C to +65°C		-20°C to + 65°C		-20°C to + 65°	°C
Usage Life	2-3 Y	/ears	3-4 Years		8-12 Years		5-6 Years		4-5 Years	
Transportation Safety	Aver	age	Good		Very good		Very Poor		Average	
Discharge Cycle at 80%	450		500		1500		1000		1100	
Performance	Aver	age	Average		Very good		Good		Average	
Recyclability	Good	d	Good		Very good		Poor		Good	
Discharge Ability at High Current	Poor	-	Poor		Very Good		Average		Good	
Cost	Low		Low		Medium		Very High(5X Lead Acid)		High	

#### Improved Movement Control Technology

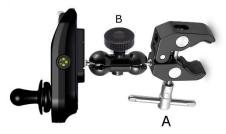
We have migrated all the movement control technology to the latest available solutions on the market, aiming to solve some performance problems and to improve durability and usability. The new low profile joystick, in conjunction with the new power module, give a better, smooth control of the device traction.





#### Improved Joystick support

We changed radically the joystick support to meet user requests to have more flexible solution and wider position management of the Joystick.



If you have a less recent version of the AV3 device, you can contact your local distributor or manufacturer (Chinesport) to have more information on the possibility to upgrade your product.

### 4.2 Standard accessories

Here the list for the standard accessories available for the AV3 device.

FOOTPLATES	Foot straps	A C 0 0 4 7
	Fixed heel rests	A C 0 6 8 5
	Adjustable heel rests	A C 0 6 8 6
KNEE SUPPORT	Leg straps	A C 0 0 1 4
	Coloured paddings	A C 0 6 8 9 . W
BACK SUPPORT	Long seat padding	A C 0 5 4 4
	Short seat padding	A C 0 5 4 3
	Adjustable long seat	A C 0 6 9 0
	Adjustable short seat	A C 0 6 9 1
	Shaped pocket	A C 0 0 4 8
LATERAL SUPPORT	Back strap	A C 0 7 8 3
	Long handles	A C 0 7 8 2
	Lateral and back supports	A C 0 0 5 0
	Lateral supports	A C 0 0 4 9
	Adjustable lateral supports	A C 0 7 0 2
	Axillary support	A C 0 0 7 2
	Back support	A C 0 0 7 4
	Head support	A C 0 0 7 6
	Locking devices	A C 0 0 7 5
	Adjustable lateral-back supports	A C 0 7 0 3
UPPER PART	Anti-crushing safety system	A C 0 6 9 2
	Front support	A C 0 6 9 3
	Anti-crushing front support	A C 0 6 9 4



SERVICE TRAY	Hand grip	0 1 6 0 8					
	Hand-wrist grip	0 1 6 0 9					
	Coloured padding for medium service tray	A C 0 7 6 6 . W					
	Coloured padding for large service tray.	A C 0 7 6 7 . W					
	Large ABS service tray	A C 0 7 6 4					
	Medium ABS tray	A C 0 7 6 5					

The W option on some accessories refers to the possibility of having a different color compared to the standard black color. The options are:



# 4.3 Unpacking

The device is shipped already fully assembled for the options and accessory requested in the order. Simply remove the device from the package.

The version for independent mobility has the new Joystick support that is fixed to the handles only for shipment purposes. Before use find the best position for the Joystick, please see 5.4.1 Joystick placement.

# 5 USE OF THE DEVICE

# 5.1 Switcing on

Some configurations of the AV3 Device contain electric motors for:

- Movement, for independent mobility
- Verticalization
- Structure height adjustment

Those devices have a main switch that turn-on the whole system and allow the use of the electric motors. The main switch also activate the battery charging when the suitable charger is connected to the device.

TURN ON MAIN SWITCH	Switch to "1" the main switch placed under the service tray.	A V 3 B 3 AFFECTED MODELS
		GA

TURN ON INDEPENDENT MOBILITY	Switch to "1" the main switch placed under the service tray	A V 3 2
	Push the power button to turn ON the green light (JA)	JA JA

# 5.2 Switching off

All electric function, on selected models that contain electronics, are ceased when the device is turned off. The device will stay still if no action is explicitly required by pushing the respective button, so the main switch can be safely left turned on. However is always better to turn off the device when not in use or when not in charging, to preserve the battery charge.

When in use, to terminate the movement actions is sufficient to arrest that action by stopping to push the button that triggered that action.

TURN OFF MAIN SWITCH	Switch to "0" the circuit breaker placed under the service tray.	A V 3 2
		G A
STOP HEIGHT REGULATION	By stopping to press the grey buttons PC and/or PD on the hand switch	A V 3 B AFFECTED MODELS



STOP VERTICALIZATION	By stopping to press the blue button PA and/or PB on the hand switch.	PA CHINESPORT PB  A V 3 3 AFFECTED MODELS  PC PD  PD  PD  PD  PD  PD  PD  PD  PD  PD
VERTICALIZATION EMERGENCY STOP	A safety sensor (SA, yellow button) could be provided in order to attend the lifting operation as accessory. This device allows the operator to stop the lifting at any time he wants. When the button is pushed, the lifting of the back support is disabled, and only the descend of the back support s allowed. Once the yellow button has been released, the lifting will be enabled again.	A C 0 6 9 2 A C 0 6 9 4

STOP MOVING AROUND	By releasing the joystick knob (JM) By pushing the off button to turn the green light off (JA)	A V 3 2 3 AFFECTED MODELS
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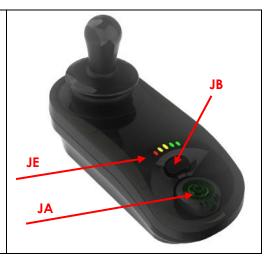
# 5.3 Security locking and unlocking of Joystick

Sometimes is useful to lock the joystick functions for security reasons (e.g. children in the house). In this way only trained people can unlock the joystick and start the movement.

INSERT SECURITY LOCK	Locking of Joystick	A V 3 2
	<ul> <li>When the device is on, push more than 4 seconds the ON button (JA)</li> <li>The LEDs (JE) in the odd positions (1, 3, 5) will start blinking for a short time</li> <li>The control box is now locked. If the JA button will be pushed again, the LEDs (JE) in the odd positions (1, 3, 5) will blink shortly but the use of the device will not be possible. After 10 seconds the control box will turn off.</li> </ul>	JE JA
REMOVE SECURITY LOCK	Unlocking of Joystick	A V 3 2



- Push the on button (JA).
   The LEDs (JE) in the odd positions (1, 3, 5) will blink shortly and the use of the device will not be possible
- 2) Push twice the horn button (JB) within 10 seconds. The control box LEDs now will turn on permanently and the use of the device will be enabled again.



# 5.4 Initial settings

Before the first use of the device is recommended to adjust the settings in relation with the pathological and physical features of the patient. The set up could be performed by using all the regulation provided for each option. Please contact your therapist in order to provide you all the support for the most comfortable setting up of the device and supervise the first use of the device to check if the latter is used safely. Please see 5.7 Adjustments and 5.8 Accessories adjustments for all the adjustments that best fit your model.



- A BAD SETUP COULD LIMIT OR PREVENT THE CORRECT USE OF THE DEVICE
- ADJUST THE KNEE SUPPORTS TO HAVE THE MAXIMUM CONFORT AN THE MINIMUM STRESS TO THE JOINTS DURING THE VERTICALIZATION PROCESS
- ADJUST THE HEIGHT OF THE STRUCTURE TO HAVE THE MAXIMUM CONFORT AND THE BEST POSITION OF THE BODY AND OF THE LIMBS
- THE REGULATION IN DEPTH OF THE SEAT MUST BE PERFORMED BEFORE STARTING THE TRANSFER FROM THE WHEELCHAIR
- BEFORE USE PLEASE CHECK THAT ALL THE REGULATION ITEMS ARE PROPERLY LOCKED

### 5.4.1 Joystick placement

AV3 Models that have independent mobility are equipped with a Joystick to control the device movements inside your locations. The joystick support mainly consist of two adjustment that allows two degrees of freedom for the positioning and orientation of the Joystick. The first adjustment is used to reach the required position on the table or on the handles. The second adjustment is used for the joystick ergonomically positioning.

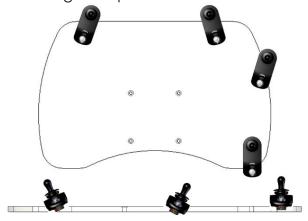


Item "A" allows to open and close the clamp in order to move the Joystick support and reach the required position on the table or on the handle. Once the positioning has been reached clamp the support with the knob "A". The support must be firmly clamped in order to guarantee a good stability of the joystick.

Item "B" is used to give the required positioning and orientation of the Joystick making use of the two spheres of the support:



Once the position has been reached the joystick can be horizontally and vertically orientated. Clamp firmly the "B" knob if a rigid position is required. Otherwise the "B" knob can be gentle clamped to obtain an adaptive regulation of the joystick. Here some joystick positioning examples on the AV3 Table:





THE JOYSTICK SUPPORT IS NOT INTENDED TO SUPPORT THE PATIENT LOAD. WE RECOMMEND TO MAINTAIN THE JOYSTICK ALWAYS IN CONTACT WITH THE TABLE IN ORDER TO GUARANTEE A GOOD STABILITY. DON'T APPLY ALL THE LOAD ON THE JOYSTICK OR ON THE SUPPORT.

#### 5.5 Normal use of the device





# BEFORE EACH USE PLEASE CHECK THAT ALL THE REGULATION ITEMS ARE PROPERLY LOCKED AND BATTERY ARE FULLY CHARGED

Please read carefully the instructions to find the correct use according to the owned device configuration.

### 5.5.1 Height Adjustment

Before transfer to the device, make sure that the height of the structure is already in the correct position and all adjustments are done. In case of assisted Verticalization is possible to change the height and the seat position using gas spring or electric motors.

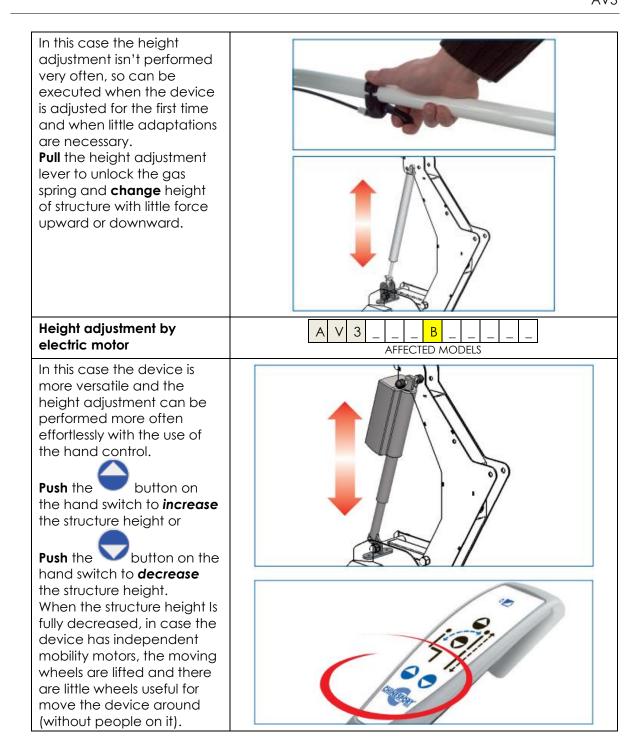
For an easy access, if a seat is chosen as a support for lifting (see "Lift support" - referring to position 9 of product code), the seat can be aligned to the sitting plane of the user thanks to the height adjustment. Such alignment of the seat at a starting point can simplify the transferring and can increase safety. In this way the user may transfer himself from his wheelchair, from the bedside or from the sofa with this type of accessibility.





If the chosen model is without seat, the height can be left untouched. The height can be adjusted as shown here: (please select case that apply)

Height adjustment by gas	A V 3 A	
spring	AFFECTED MODELS	



#### 5.5.2 Transfer to the device and Verticalization

The device can be approached directly with a wheelchair or it can be moved from other people near the patient seat (see "moving the device" section). Once the device height has been adjusted, when the patient is in front of the device ready for transfer, there are several options.



#### First steps

- 1- Lock the devices wheels by pushing down the levers on the rear wheels and front wheels (if present)
- 2- Lock the wheelchair wheels (see wheelchair user manual)
- 3- Put the feet on the device foot plates

**Unaided Verticalization** 



AFFECTED MODELS





In this case the configuration of the side handles is fixed and they are provided by a back restraining support.

Open the back support at full extension.

With your own force or with the aid of a careaiver, hold on the side handles and lift. After that, **Lock** the back support in place.





**Verticalization Partially** Aided by gas spring



THE GAS SPRING IS NOT POWERFUL ENOUGH TO SUSTAIN THE WHOLE PATIENT WEIGHT ONCE IT IS ACTIVATED.

٧ 3

WHEN THE GAS SPRING IS ACTIVATED AND THE PATIENT IS NOT ON THE DEVICE, THE MOVEMENT OF THE SEAT SHOULD BE ATTENDED WITH A HAND.

AFFECTED MODELS

In this case there is a gas spring that provide a partial aid to the lifting and reduces the weight of the user. The starting position is the seat aligned with the Verticalization support. To do so, adjust accordingly the height of the structure (see Height Adjustment 5.5.1). With your own force or with the aid of a caregiver, hold on the side handles and transfer on the device seat. Otherwise. instead of the seat there is a

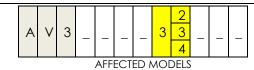


harness support. When ready:

**Pull** the Verticalization lever to unlock the gas spring and lift. The gas spring will help to lift partially reducing the weight of the body. The lifting phase could be performed in various step because the lifting movement can be interrupted by release the Verticalization lever.



Verticalization fully assisted by electric motor and Seats supports





- DON'T USE THE LIFTING SYSTEM CONTINUOUSLY. COMPLY WITH THE DUTY CYCLE INFORMATION'S ON THE LABEL (2 MINUTES USE, 18 MINUTES PAUSE)
- A WRONG SETUP OF THE SERVICE TRAY COULD GENERATE COMPRESSION ON THE USER WHEN STANDING UP
- PLEASE CHECK THE CONDITIONS AND REACTIONS OF THE USE WHILE THE LIFTING IS ON
- A WRONG SETUP OF THE KNEE SUPPORTS CAN STRESS THE JOINTS DURING THE VERTICALIZATION PROCESS

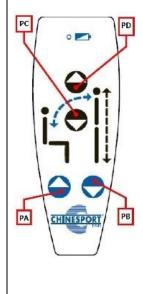
In this situation the user is fully aided during lift by the electric motor and there is a seat support.

The starting position is the seat aligned with the Verticalization support. To do so, adjust accordingly the height of the structure (see Height Adjustment 5.5.1). With your own force or with the aid of a caregiver, hold on the side handles and transfer on the device seat. Now:

Push the (PD) button on the hand switch to lift the Verticalization support or

(PC) button **Push** the on the hand switch to lower the Verticalization support.

Verticalization fully assisted by electric motor and





**Harness Support system** 



DON'T USE THE LIFTING SYSTEM CONTINUOUSLY. COMPLY WITH THE DUTY CYCLE INFORMATION'S ON THE LABEL (2 MINUTES USE, 18 MINUTES PAUSE)

AFFECTED MODELS

3



#### Warning

- A WRONG SETUP OF THE SERVICE TRAY COULD GENERATE COMPRESSION ON THE USER WHEN STANDING UP
- PLEASE CHECK THE CONDITIONS AND REACTIONS OF THE USE WHILE THE LIFTING IS ON
- A WRONG SETUP OF THE KNEE SUPPORTS CAN STRESS THE JOINTS DURING THE VERTICALIZATION PROCESS

In this situation the user is fully aided during lift by the electric motor but there isn't a seat support, but an harness that fully support the patient back. Some people will need help of a caregiver to use the harness. When fully connected to the device:

Push the PD button to lift the Verticalization support or Push the PC button to lower the Verticalization support.







The procedure of Verticalization fully assisted by electric motor, with the presence of a seat support, can be resumed by the following image:



When the seat support is substituted from an harness system, the final position will be the following:



# 5.5.3 Moving Around

When the patient is safely positioned on the device, it can be moved around. There are two main options based on the models:

First steps Before moving around remember to unlock the device wheels by pulling up the wheels levers on the rear and front wheels (if present)	
Aided Mobility	A V 3 1
In this case the AV3 device can be moved around only by the aid of a caregiver using the device tilting wheels. When the final position is reached, the wheels must be locked again.	
Independent Mobility	A V 3 2
Warning	<ul> <li>PLEASE BE CAREFUL WHEN USING THE MOTOR         MOVEMENT</li> <li>USE THE INDEPENDENT MOBILITY ONLY INDOOR AND         ONLY ON A FLAT SURFACE WITHOUT OBSTACLES</li> <li>PLEASE SET ALWAYS THE MINIMUM SPEED REQUIRED</li> </ul>



In this case there are electric motors for move the device around. 1) Turn on the joystick by pushing the on button (JA) 2) The control box turn on and the LED strip (JE) indicates the level of battery charge. When all the LEDs are on, the battery is fully charged. 3) To move around simply use the joystick knob (JM). Use the joystick knob tilting to regulate the speed and the JE acceleration. The maximum speed could be modified using the (JS) Speed dial: JS

# 5.5.4 Charging Battery

High

Low

When the device is not in use, is better to recharge battery for future use. Never leave the device with a low battery or never use the device when the battery aren't fully charged.

Battery recharge independent mobility	A V 3 2
Warning	<ul> <li>USE ONLY THE BATTERY CHARGER PROVIDED WITH THE DEVICE</li> <li>CHARGING THE DEVICE DAILY IMPROVES THE BATTERIES EXPECTED LIFE AND PREVENT DEVICE GOING OUT OF CHARGE WHEN IN USE</li> </ul>

1) Turn on the device using the Main Switch. The Main Switch must be on "I" position to activate the recharge. 2) Plug the battery charger XLR Plug (JP) on the Joystick XLR connector (JN right side) and connect it to the power network. The charging process takes about 10 hours. The battery charger has a red light on it, which turn on when the charging process is in progress. When the battery is fully charged a green light replace the red light. If the red light doesn't turn on please check that the Main Switch is on the 'I' position. During the charge process the movement of the wheels is disabled. Battery recharge aided mobility with at least one В electric motor AFFECTED MODELS **USE ONLY THE BATTERY CHARGER PROVIDED WITH THE DEVICE CHARGING THE DEVICE DAILY IMPROVES THE BATTERIES EXPECTED LIFE AND PREVENT DEVICE GOING OUT OF CHARGE WHEN IN USE** 



- 1) Turn on the device using the Main Switch. The Main Switch must be on "I" position to activate the recharge.
- 2) Connect the battery charger on the plug placed on the front of the device and connect it to the power network.

The charging process takes about 10 hours. The battery charger has a yellow light which turn on when the charging process is in progress. When the battery is fully charged a green light replace the red light. When the charging is in progress is not possible to use the device. The battery charger is suitable for all the power networks (100-240V~ / 50-60Hz). Special plugs could be provided in order to fit to the electrical plugs of your country.



# 5.6 Emergency lowering

If for some reason the device stop working with the patient still on it on vertical position (only models that have Verticalization assisted by electric motor), and the problem is not low battery, follow this procedure to free patient from the device:



WHEN THE VERTICALIZATION MOTOR PIN IS REMOVED THE PATIENT SUPPORT FALL APART, PLEASE BE CAREFUL. WILL BE BETTER IF IS AVAILABLE A SOFT SEAT ON THE BACK OF THE DEVICE

- 1) Reach / move close to a support surface (chair, wheelchair, sofa, etc.) in a way that the patient support is faced towards this support
- 2) The user MUST lay on the service tray with his own force or another people MUST fully support him 3) While holding patient support (if present), open the spring and remove the upper security pin from the actuator (be careful, the patient support is now free to fall apart). If present, remove harness to the patient.
- 4) Carefully lower totally the patient support on the floor or on the aforementioned support surface
- 5) Help the user reach the bearing plane.
- 5) Contact service to identify the cause of the failure



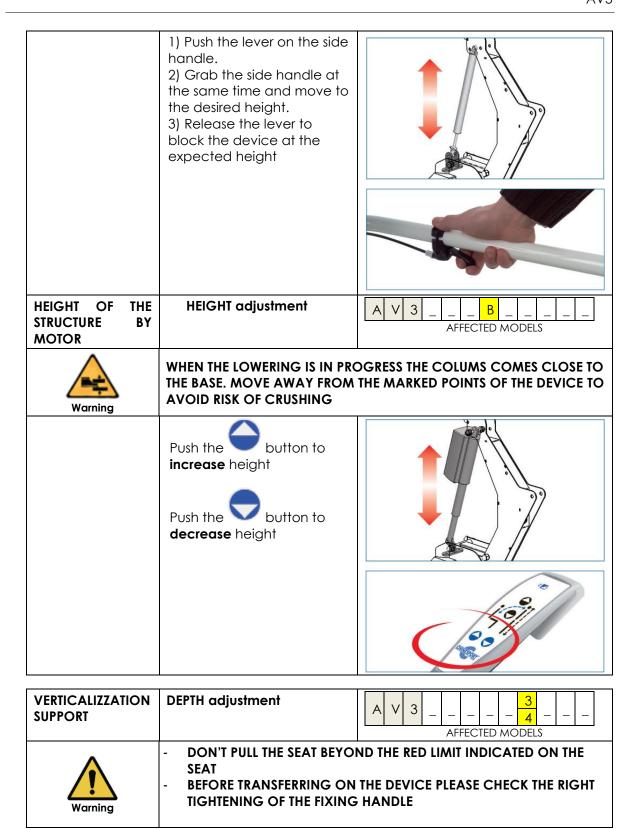
# 5.7 Adjustments

Here are summarized all possible adjustments based on product configuration

BASE FOR INDEPENDENT MOBILITY	Maximum Speed Adjustment	A V 3 2
Warning	EXCESSIVE SPEED COULD CAU BE CAREFUL WHEN MOVING A	SE PROBLEMS OF INSTABILITY, PLEASE ROUND
	Use the JS speed dial to increase and decrease the maximum speed.  Low High	J <sub>S</sub>



WOODEN FOOT-PLATES	DEPTH Adjustment	A V 3 _ 1
Warning	A WRONG SETUP OF THE FOOT PLATES COULD GENERATE COMPRESSION ON THE USER WHEN STANDING UP	
	<ol> <li>Loosen the screws (S) with the allen key provided</li> <li>Place the foot-plate in the respective position</li> <li>Tighten the screws (S)</li> </ol>	S
METAL FOOT- PLATES	DEPTH Adjustment	A V 3 _ 2 AFFECTED MODELS
Warning	A WRONG SETUP OF THE FOOT PLATES COULD GENERATE COMPRESSION ON THE USER WHEN STANDING UP	
	<ul> <li>Loosen the knob (K)</li> <li>Place the foot plate in the respective position</li> <li>Tighten the knob (K)</li> </ul>	K
KNEE-SUPPORTS	HEIGHT, WIDTH and DEPTH Adjustment	A V 3
Warning	- IF THE KNEE SUPPORT HAVE BEEN SET UP TOO HIGHT THEY CAN INTERFERE WITH THE ROTULA - IF THE KNEE SUPPORT HAVE BEEN SET UP TOO LOW THEY CAN FACILITATE THE SLIDING OF THE FEET FRON THE FOOT-PLATES - AFTER ADJUSTMENT CHECK THE PATIENT COMFORT	
	The knee supports positions are strictly related to the height of the patient and the structure height adjustment.  The height of the knee support can be adjusted (green) loosening the "T" knob.  The depth, width and orientation can be adjusted (red) loosening the quick clamps.	
HEIGHT OF THE STRUCTURE BY GAS SPRING	HEIGHT adjustment	A V 3 A AFFECTED MODELS





- 1) Loosen the fixing handle
- 2) Reach the desired position
- 3) Tighten the fixing handle



# **SIDE HANDLES WIDTH** adjustment 3 AFFECTED MODELS 1) Loosen the respective Tknobs under the service tray 2) Reach the desired handle width by sliding the handles 3) Tighten the T-knobs **ROTATION** adjustment AFFECTED MODELS 1) Push the regulation lever 2) Reach the desired width by rotating the handles 3) Release the regulation lever **HEIGHT** adjustment V 3 only for small tray AFFECTED MODELS Loosen the T-knobs under the service tray 2) Pull away the handles and switch them. 3) Rotate the handles as shown in the picture 4) Tighten the T-knob.

SERVICE TRAY	TILT adjustment	A V 3
Warning	AND THE T-KNOBS ARE WEL	H OF THE TABLE, CHECK THAT IT WON'T
	<ol> <li>Push the blue button and pull away the pin.</li> <li>Tilt and hold the service tray reaching one of the four desired position</li> <li>Insert back the pin and release the blue button</li> </ol>	
	HEIGHT adjustment	A V 3 3
	<ol> <li>Loosen the T-knob near the right side handle</li> <li>Grab the service tray and sustain it. At the same time unlock the positioning pin near the left side handle</li> <li>Once the desired height is reached, insert back and lock the pin.</li> <li>Tighten the T-knob</li> </ol>	
	DEPTH adjustment	A V 3 3
	<ol> <li>Loosen the T-knob on the right side (blue)</li> <li>Unlock the positioning pin on the left side (red)</li> <li>Once the desired depth is reached, insert back and lock the pin</li> <li>Tighten the T-knob</li> </ol>	



# 5.8 Accessories adjustments

Here are summarized adjustments of the accessories. Please refer also on the dedicated and detailed manual of the single accessory.

ADJUSTABLE HEELRESTS	WIDTH adjustment	
A C 0 6 8 6	<ul><li>Loosen the knob</li><li>Adjust the heel rest position</li><li>Tighten the knob</li></ul>	
REMOVABLE SEAT	DEPTH adjustment	
A C 0 6 9 1	<ol> <li>Loosen the lateral handle</li> <li>Adjust the seat depth (don't exceed to pull beyond the red sign)</li> <li>Tighten the handle</li> </ol>	Fixing handle
LONG LATERAL SUPPORTS	DEPTH adjustment	
A C 0 7 0 2	<ol> <li>Loosen the knobs</li> <li>Adjust the paddings depth</li> <li>Tighten the knobs</li> </ol>	
BACK SUPPORT	HEIGHT adjustment	11
A C 0 0 7 4	<ol> <li>Loosen the T-knobs on the paddings</li> <li>Adjust the height of the back support</li> <li>Tighten the T-knobs         DEPTH adjustment     </li> <li>Loosen the knob on the back support</li> <li>Adjust the back support depth</li> </ol>	
	3) Tighten the knob	
HEAD SUPPORT	HEIGHT adjustment	
A C 0 0 7 6	<ol> <li>Loosen the T-knobs on the head support</li> <li>Adjust the head support height</li> <li>Tighten the T-knobs</li> </ol> <b>DEPTH adjustment</b>	
	Loosen the knob on the head	
	support  2) Adjust the head support depth  3) Tighten the knob	

ADJUSTABLE LATERAL/BACK SUPPORTS	DEPTH adjustment	
A C 0 7 0 3	<ol> <li>Loosen the knobs</li> <li>Adjust the lateral supports depth</li> <li>Tighten the knobs</li> </ol>	
ANTI-CRUSHING SAFETY SYSTEM	DEPTH adjustment	
A C 0 6 9 2	<ol> <li>Push the blue button on the pin and remove it completely</li> <li>Adjust the anti-crushing safety system depth</li> <li>Insert the pin back to lock the regulation</li> </ol>	
FRONT SUPPORT	DEPTH adjustment	1
A C 0 6 9 3	<ol> <li>Push the blue button on the pin and remove it completely</li> <li>Adjust the front support depth</li> <li>Insert the pin to lock back the regulation</li> </ol>	
ANTI-CRUSHING FRONT SUPPORT	DEPTH adjustment	
A C 0 6 9 4	<ol> <li>Push the blue button on the pin and remove it completely</li> <li>Adjust the anti-crushing front support depth</li> <li>Insert the pin to lock back the regulation</li> </ol>	

### **6 MAINTENANCE**

AV3 Standing frame does not require special routine maintenance, however it is good to check its parts periodically to evaluate any deterioration.



- DEVICE MUST NOT BE USED WHEN A RISK FOR THE SECURITY HAS BEEN DETECTED
- TAKE NOTE OF EVERY DEFECT, DAMAGE OR OPERATION CONCERNING THE SAFETY OF THE DEVICE

Simple routine maintenance is recommended every 6-12 month, depending on the device use (estimated 1000 lifting cycles). Routine maintenance can be carried out by technical skilled people. Please follow this list:

- Cleaning of the device
- Check of the good conditions and good cleaning of the wheels
- Check the good tightening of the screws, nuts, and adjustments knobs
- Visual inspection in order to note damages, deformations on the frames and on the mechanical parts.
- Functional test of the gas springs (if presents) and of the regulations
- Visual and functional test of the cables and sheathes
- Functional test of the electrical commands and of the regulations
- Check of the connectors, plugs and battery charger



Check of the safety system button (if present)

Chinesport customer service specialist maintenance is recommended every 2-3 years of operation for guarantee safety and prolong device expected life. During maintenance, will be done:

- Check the device's general operation
- Check device electronic and cabling
- Check the wear and eventually replace: motors, wheels, electronics
- Once the inspection is over a full load cycle is performed (BURN-IN)
- Electrical safety tests (CEI EN 62353)

It is recommended to carry out the electrical safety tests (CEI EN 62353/ EN 60601-1) of the device at least once every two years.

# 6.1 Extraordinary maintenance

Extraordinary maintenance work must be carried out by qualified technicians familiar with the contents of this instruction manual. Please contact your local distributor or Chinesport customer service.



FOR ALL THE OPERATIONS NOT MENTIONED IN THE MAINTENANCE LIST OR THE TROUBLESHOOTING TABLE, CONTACT THE CHINESPORT SERVICE CENTRE

### 6.2 Spare parts

The spare parts list is provided directly by Chinesport S.p.a. on request and includes order codes and price list.

#### 6.3 Non routine maintenance

Non routine maintenance is required when devices fail to work as intended use. If for some reason or for some event (e.g.: after a device fail apart, liquid spills, violent shocks, etc.) the device begin to work in anomalous way or emits noise, is better to contact your local distributor or Chinesport customer service.

If you have a less recent version of the AV3 device, you can contact your local distributor or manufacturer (Chinesport) to have more information on the possibility to upgrade your product.

For battery replacement, please contact your local distributor or Chinesport customer service to get battery replaced.

Local distributor please refer to Service Manual.

# 7 TROUBLESHOOTING

If you find a problem try to follow the troubleshooting chart below. If none of the proposed solutions works, please contact your local distributor or Chinesport customer service.

PROBLEM	CAUSE	SOLUTION					
	Main switch is set to "0", (Green LED on the battery charger)	Unplug the battery charger, turn on the device with the main switch to 'I' and connect the battery charger again					
Batteries NOT charging when	Batteries are dead (Green LED on the battery charger, Main switch to "I" and device not working)	Try to charge batteries for 12 hours. If no effect replace the batteries					
battery charger is plugged in	Battery charger either not properly connected or not powered (LED on battery charger is off)	Check connections Check mains voltage or change power outlet Check integrity of power supply cable					
	Battery charger is broken (properly connected but LED is OFF)	Replace charger					
	Main switch is set to "0", (3 LEDs under the chassis are OFF)	Turn Main switch to "I"					
Electrical lifting is not	Connector of motor disconnected or not properly connected	Check connections and connect motor properly					
working or	Batteries are discharged (red LED ON)	Charge battery					
Electrical height regulation is not working	Main fuse burned out (3 LEDs are OFF) or Control box or hand control or lift actuator are broken	Contact local distributor or Chinesport customer service  Stop to press emergency button or remove obstacles that prevent the button to depress					
	Emergency button pressed (Electrical lift work only when lowering)						
Gas lifting is not working or	Gas spring is broken	Contact local distributor or Chinesport customer service					
Gas height regulation is not working	Cable from the lever to the gas spring is broken	Replace					
Device doesn't move (aided mobility)	Wheels are locked or there are obstacles on wheels	Unlock wheels or remove obstacles from wheels					
	Main switch is set to "0", (3 LEDs under the chassis are OFF)	Turn Main switch to "I"					
Device doesn't move	Joystick is powered OFF (Power button not lighted)	Power Joystick ON (see 5.1 Switcing on)					
(independent mobility)	Wheels are locked or there are obstacles on wheels	Unlock wheels or remove obstacles from wheels					
	Batteries are discharged	Charge battery					



Joystick is locked (Power button ON but odd LEDs blink)	Unlock Joystick (see 5.3 Security locking and unlocking of Joystick)
Control unit or joystick are broken	Contact local distributor or Chinesport customer service

If the fault detection procedure with the troubleshooting chart has not been successful, it is possible to open a service ticket through our web site www.chinesport.it in the Assistance section.

#### Please note:

Before calling our customer service department, be sure to have your SERIAL NUMBER at hand: you can find it on the product label located on the equipment (as shown in the image), or the delivery note/invoice number. This identification number helps reduce waiting times and improves service quality.



#### Remember:

Equipment to be repaired at Chinesport's premises must bear the "AUTHORIZATION NUMBER" on the package. This identification number, which must be obtained from our Customer Service Department, helps reduce waiting times and improves service quality.

Alternatively, you can contact Customer Service by e-mail (assistenza@chinesport.it). Users without an internet connection can send a fax (+39.0432.621.698) or phone (+39.0432.621.699), but our response time could be longer.

### 8 TAKING CARE OF PARTS AND CLEANING

Clean the surface of the AV3 standing frame with a soft damp cloth.

Do not use abrasive or corrosive agents or solvents and be careful not to remove the labels.

It is advisable to disinfect the surfaces of the AV3 standing frame from time to time, with a common disinfectant always applied with a soft damp cloth; dry the surfaces well after cleaning.



# CLEANING OF ELECTRICAL EQUIPMENT MUST BE CARRIED OUT UNPLUGGED FROM THE POWER GRID AND WITH MAIN SWITCH SET TO "0"

The structure of the equipment is of metal and plastic. Resistance and easy maintenance make it particularly suitable for use in hospitals, nursing homes, etc. Dust with a soft, damp cloth or suede. Dry or abrasive cloths can cause surface scratches and create an electrostatic charge on the surface.

### 8.1 Cleaning

Spray gently and in case of slight stains, pass the surface with a damp cloth or with a neutral detergent solution. Dry by avoiding direct exposure to sunlight.

For the stained and obtuse spots (oil, grease, cosmetics, ink, coffee, liquor, chewing gum, etc.), the following instructions should be followed: discard the stain with 20% diluted ethyl alcohol in water, buffer and then treat with a neutral detergent solution, rinse well.

#### 8.2 Disinfection

#### 8.2.1 Personal disinfection

We recommend disinfection of the hands or parts of the body that come in contact with the patient or other surfaces using disinfectant products for external use such as AMUCHINA® 10% with the following spectrum of action:

Bactericide in the presence of interfering substances according to EN 1276: 1997 (1);

Fungicide in the presence of interfering substances according to EN 1650: 1997 (1);

Bacteriological surface test according to EN 13697: 2001 (2);

Fungicide surface test according to EN 13697: 2001 (2);

Active on Salmonella tiphymurium according to EN 13697: 2001 (3);

Active on: HIV (4), HAV - HBV (5), HCV (6);

Virucidal according to EN14476: 2005 (7);

Active on influenza H1N1 virus according to EN14476: 2005 (8).

For safe use refer to the folding instructions included in the product.

#### 8.2.2 Surfaces disinfection

If it is deemed necessary, it is advisable to disinfect hand controls (hand switch and Joystick), service tray and other surfaces such as rubber, plastics etc. with the use of disinfectants such as AMUCHINA MULTIUSO DISINFETTANTE® with the following spectrum of action:

Bactericide in the presence of interfering substances according to EN 1276: 1997 (1):

Fungicide in the presence of interfering substances according to EN 1650: 1997 (1); Bacteriological surface test according to EN 13697: 2001 (2);

Fungicide surface test according to EN 13697: 2001 (2);

Active on Salmonella tiphymurium according to EN 13697: 2001 (3);

Active on: HIV (4), HAV - HBV (5), HCV (6);

Virucidal according to EN14476: 2005 (7);

Active on influenza H1N1 virus according to EN14476: 2005 (8).

For safe use refer to the folding instructions included in the product.



AGGRESSIVE PRODUCTS CAN DAMAGE THE SURFACES
BEFORE REUSING THE EQUIPMENT AFTER CLEANING, CHECK THAT ALL
COMPONENTS ARE PERFECTLY DRY

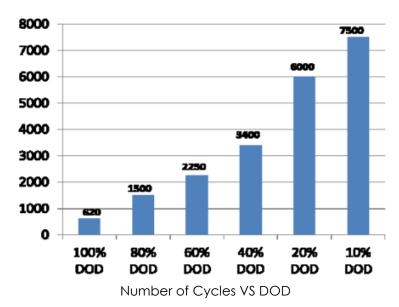


DO NOT USE: ALCOHOL-BASED GLASSES CLEANING PRODUCTS, ABRASIVE COMPOUNDS OR SOLVENTS SUCH AS ACETONE, GASOLINE, BENZENE, ALCOHOL, CARBON TETRACHLORIDE OR SIMILAR PRODUCTS. THESE CAN SCRATCH THE SURFACE CAUSING SMALL CRACKS

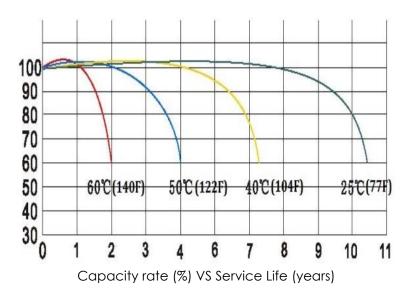
# 9 BATTERIES NOTES

These indications are only for models that have internal batteries.

For Advanced Technology lead acid batteries, is better to charge often rather than seldom. More is DOD (Depth of Discharge) and lesser are the charge-discharge cycles.



The temperature also affect service life. Higher is the working temperature and lesser is the service life.



Two stickers with charging instructions are provided in order to facilitate the user during the charging operation.

We suggest to place the labels in a comfortable place in order to consult the charging instructions in an easy way.

#### **CHARGING INSTRUCTIONS**

- 1) SET THE WHITE POWER BUTTON ON "I"
- 2) CONNECT THE BATTERY CHARGER TO THE POWER SUPPLY AND TO THE CHARGING SOCKET FOR FUTHER INFORMATION PLEASE REFER TO THE USER MANUAL DAILY RECHARGING IS RECOMMENDED

#### CHARGING INSTRUCTIONS

- 1) SET THE WHITE POWER BUTTON ON "I"
- 2) CONNECT THE BATTERY CHARGER TO THE POWER SUPPLY AND TO THE CHARGING SOCKET

FOR FUTHER INFORMATION PLEASE REFER TO THE USER MANUAL DAILY RECHARGING IS RECOMMENDED

### 10 ELECTROMAGNETIC COMPATIBILITY INFORMATIONS

The manufacturer declares that AV3 including his original accessories supplied with the device complies with the requirements of EN 60601-1-2 for electromagnetic compatibility. The battery charger is only for charging battery when device is not in use, and has its own certification.

# 10.1 Manufacturer declaration – Electromagnetic emissions

AV3 is intended for use both in the home and in the clinic, in an electromagnetic environment described in the following table. The user of the AV3 must guarantee its use in the appropriate environment.

Emission test	Conformity	Recommended electromagnetic environment
Irradiated / Conducted RF emissions CISPR 11	Group 1	AV3 uses RF energy only for its internal functions. Therefore, its RF emissions are very low and are unlikely to cause some interference in nearby electronics.
Irradiated / Conducted RF emissions CISPR 11	Class B	AV3 is suitable for use in all environments
Harmonic emissions IEC61000-3-2	Not Applicable	including home environments and all those directly connected to the low voltage power supply network that supplies home-based
Voltage fluctuations and flickering IEC61000-3-3	Not Applicable	buildings.

# 10.2 Manufacturer declaration – Electromagnetic immunity

AV3 is intended for use both in the home and in the clinic, in an electromagnetic environment described in the following table. The user of the AV3 must guarantee its use in the appropriate environment.

Immunity test	CEI 60601-1-2 test levels	Electromagnetic environment - Recommendations
Electrostatic discharges (ESD) IEC 61000-4-2		Floors should be covered with wood, cement or ceramic tiles. If the floors are



		covered with synthetic material, the relative humidity must be at least 30%.
Fast Transient / Electric Burst IEC 61000-4-4	Not Applicable	Network power quality must be in accordance with typical commercial or hospital applications.
Overvoltage surge IEC 61000-4-5	Not Applicable	Network power quality must be in accordance with typical commercial or hospital applications.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	Not Applicable	Network power quality must be in accordance with typical commercial or hospital applications.  If the user of the AV3 needs continuous operation even when the power supply is interrupted, it is advisable to power it through a UPS.
Mains frequency magnetic fields (50/60 Hz) IEC 61000-4-8	30 A/m	Network frequency magnetic fields must be attuned to the levels typical for a standard network used for commercial or hospital use.
Ut is the input comm	on mode voltage before	the application of test levels

Immunity test	CEI 60601-1-2 test levels	Electromagnetic environment - Recommendations
Conducted RF IEC 61000-4-6 Irradiated RF IEC 61000-4-3	Not Applicable  10 V/m  Modul. AM 80% 1kHz  80 MHz – 2.7 GHz	Portable and mobile RF communication apparatus must not be used near any part of the AV3, including cables, of the recommended separation distance calculated from the equation applicable to the transmitter frequency.  Recommended Separation Distance  d=1.2 √P  d=1.2 √P 80 MHz − 800 MHz  d=2.3 √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 studya, must be below the conformance level in each frequency rangeb.  Interference may occur near the devices marked with the following symbol:

NOTE 1 At 80 MHz and 800 MHz, the separation distance is applied for the highest frequency range.

NOTE 2 These guidelines can not be applied 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 estimate the

electromagnetic environment due to fixed RF transmitters, it should be considered an electromagnetic field survey. If the energy field measured in the space where the AV3 is used exceeds the applicable RF compliance level, AV3 must be tested to check its normal operation. If an abnormal activity is found, additional measures may be required, such as reorientation or repositioning of AV3.

b) Beyond the 150 KHz-80 MHz frequency range, the power range must be less than 3 V / m.

# 10.3 Recommended separation distances between RF portable communication devices and mobiles and AV3

AV3 is designed for use in an electromagnetic environment where disturbances of radiated RF are controlled. The customer or user of AV3 can help to prevent electromagnetic interference while maintaining a minimum distance between portable and mobile RF transmitters and AV3 as recommended below, in relation to the maximum output power of the communication device.

Transmitter	Separation distanc	Separation distance according to transmitter frequency (m)										
maximum output power estimate (W)	150 kHz – 80 MHz d = 1,2 $\sqrt{P}$	80 MHz – 800 MHz $d = 1,2\sqrt{P}$	800 MHz - 2.7 GHz d = 2,3√P									
0.01	0.12	0.12	0.23									
0.1	0.38	0.38	0.74									
1	1.2	1.2	2.3									
10	3.8	3.8	7.4									
100	12	12	23									

For transmitters considered at the maximum output power not shown above, the separation distance in meters (m) recommended can be calculated using the equation applicable to the transmitter frequency, where P is the estimate of the maximum output power of the transmitter in Watts (W) according to the manufacturer of the transmitter.

Note 1: At 80 MHz and 800 MHz, the separation distance for the highest frequency range applies.

Note 2: These guidelines cannot be applied in all situations. Electromagnetic propagation is subject to absorption and reflection by structures, objects and people.

# 11 WARRANTY

#### GENERAL AFTER-SALES SERVICE CONDITIONS FOR CHINESPORT ITEMS

The warranty shall be valid for a period of 24 months from the date of delivery.

The warranty does not cover consumable items, rechargeable batteries, and generally all materials subject to wear, breakdowns caused by knocks, falls, misuse or improper use, accidental events and damage while being transported. This warranty shall be automatically invalidated if the equipment is tampered with.

Repair of the equipment will be carried out in relation to the breakdown reported.

A quotation must be specifically requested.

Payment is cash on delivery, unless otherwise agreed.

Any dispute will be settled solely by the Court of UDINE.

#### **REPAIRS UNDER WARRANTY**

Repairs under warranty must be specifically requested.

Repairs under warranty shall be carried out at our workshop and upon authorization, complete with the return authorization number.



Products are to be shipped in their original packaging, carriage paid.

A fiscal document (bill of sale, purchase invoice or cash receipt) is required to make a warranty claim; the purchase date indicated must fall within the warranty time period.

If the product is found to be in good working order without defect, the customer will be charged for the fault-finding service.

#### **REPAIRS NOT UNDER WARRANTY**

For repairs not covered by the warranty carried out at our workshops upon authorization, transportation charges shall be paid by the customer.

The warranty on the parts replaced during repair operations is 12 months from the moment the equipment is collected.

If the product is found to be in good working order without defect, the customer shall be charged for the fault-finding service.

#### **REPAIRS DONE AT HOME**

If repairs are done at the customer's home, a written request is required indicating the complete details of the person making the request, the type of machine and the breakdown.

The cost per kilometer for on-site technician visits will be agreed upon in relation to the customer's urgency.

If the device is under warranty, the customer will have to pay only the expenses incurred for the technician to reach the customer's house.

Time is calculated from the moment the technician leaves our workshop until they return. The time of his/her return will be estimated based on the time required to get there.

#### SALE OF SPARE PARTS AND CONSUMABLE ITEMS

Orders must be in writing and state the customer, the item and the shipping method as well as the customer's precise fiscal details.

The order processing time can vary depending on the availability of the material. Returned spare parts will not be accepted.

Payment will be cash on delivery, unless otherwise agreed.

### 12 DISPOSAL OF ELECTRICAL OR ELECTRONIC EQUIPMENT

The symbol found on the equipment indicates that the waste must be "collected separately".



Therefore, the user shall take the waste to the separate waste collection points arranged by local authorities, or deliver it to the sales dealer against purchase of equivalent equipment (only in Europe). The separate collection of waste and subsequent treatment, recovery and disposal operations promote the production of equipment using recycled materials and reduce the negative effects on the environment and health that improper waste management can cause.

Fraudulent disposal of the product will result in an administrative fine being imposed on the user by Authorities according to local Laws.

# 13 MAINTENANCE RECORD SHEET

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						Α	٧	3						
DATE OF SERVICE	TECHNICIAN	SIGNATURE	NEXT VERIFY DATE	ACCESSORIES  OPERATIONS CARRIED OUT										



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