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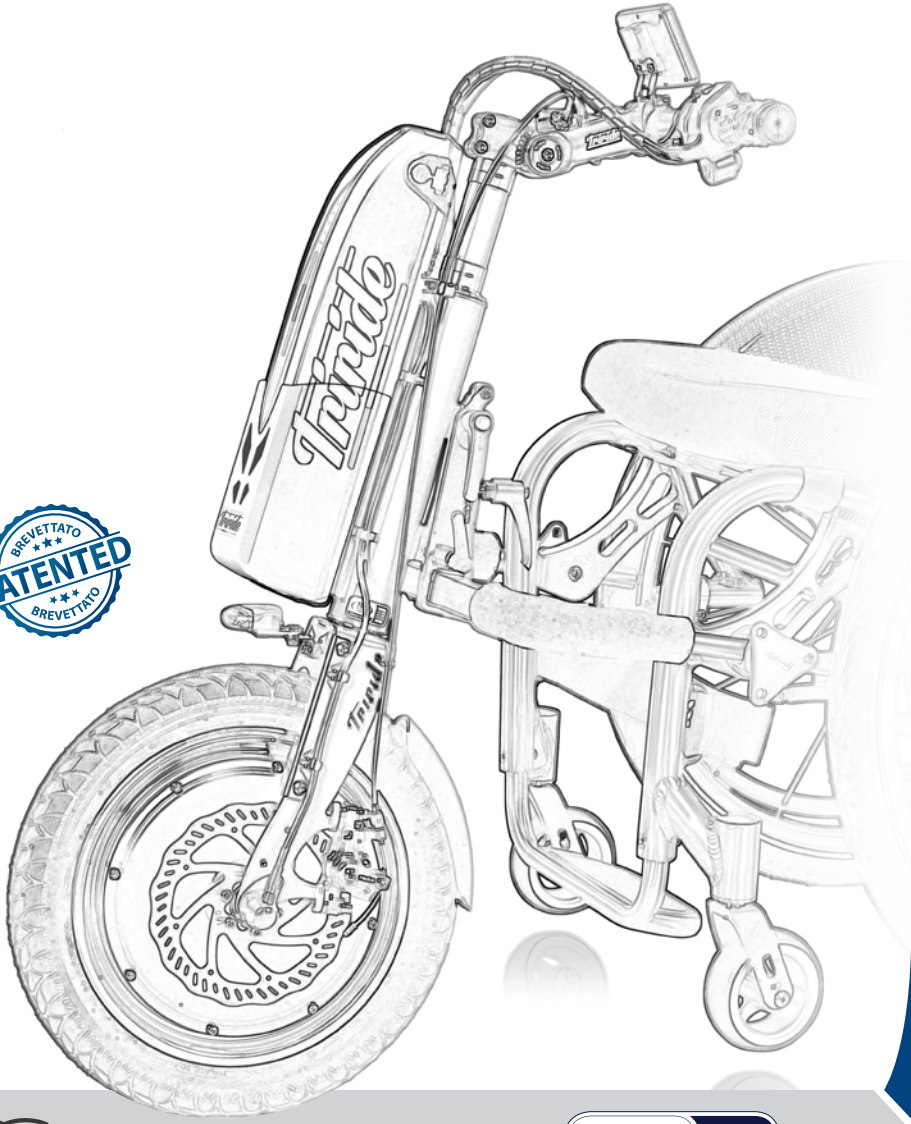
Triride®

by Gianni Conte

USER MANUAL AND MAINTENANCE



BREVETTATO PATENTED BREVETTATO

TÜV InterCert SAAR
UNI EN 12182:2012
UNI EN 12183:2014
CEI EN 61601-1:2007
PRODUCT CERTIFIED

CE

“Triride” is registered in the Medical Devices Register of the Health Ministry with the following codes:

MODEL	MEDICAL DEVICE CODE NO.
BASE/KIDS	922795
SPECIAL LIGHT	1560509
SPECIAL COMPACT	1560515
SPECIAL L14	1560510
SPECIAL HP16	1560514
PIEGHEVOLE	1560507
T-ROCKS	1776589
TRIBIKE	1776590

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1. INTRODUCTION

Dear User, Thank you for choosing Triride, a Made in Italy product, following a strong tradition of prestigious products.

All TRIRIDE S.R.L. products are compliant with European Council Directive 93/42/CEE concerning medical devices and subsequent updates.

Triride is manufactured and assembled with the greatest care and quality, using the best materials and components, to meet the specific requirements of every user and offer them increased mobility and independence.

For correct and optimal use of features, maximising performance and comfort, is it very important to read this manual and the safety instructions before using Triride for the first time.

All documents, including this Users and Maintenance Manual, are available in PDF files. It is possible to use a special reading program, such as Adobe Acrobat (Read with High Voice, Shift + Control + Y) to allow users with low vision to receive information on the device.

TRIRIDE S.R.L. is available for any further requests or requirements.

This usage and maintenance manual, together with the instructions on the label, present information provided by the manufacturer in compliance with Directives 93/42/CE and 2007/47/CE and IT Leg. Dec. 37/2010.

The medical device must be supplied with the necessary information to guarantee safe use, taking into account the level of education and knowledge of potential users.

This manual constitutes an integral part of the device and must therefore be stored with extreme care and always included if the product is passed on to third parties.

This manual is aimed at operators/users, the owner, users and maintenance operators.

This manual provides indications of technical features, correct product use, transport methods, storage, maintenance, disposal and associated safety considerations.

Any changes to the instructions provided by the manufacturer which are significant for the safety of the patient and/or operator/user, will be promptly communicated to the product owners/users via all available channels.

The manufacturer is not obliged to communicate any other change and/or addition.

If this manual or the labels and/or markings present on the product are damaged, even partially, faded or partially or entirely illegible, a new copy must be promptly requested from your reseller or from the manufacturer.

2. SYMBOLS

Graphic symbols are used in the manual and on the device with the meanings indicated in the table below.

SYMBOL	MEANING	NOTES
	Mark of compliance with European legislation	Present on the device
	Symbol for disposal in compliance with Directive RAEE 2012/19/EU	Present on the device
	Date of manufacture	Present on the device
	Manufacturer	Present on the device
	Model	Present on the device
	Serial number	Present on the device
	BF type applied part – Symbol IEC 60417-5333	Present on the device
	Please refer to the instruction manual	Present on the device Follow the instructions
	Generic warning symbol	Present on the device and on the AC/DC adaptor. Pay attention when this symbol is present.
	Warning: dangerous voltage	Present on the device and on the AC/DC adaptor. Pay attention when this symbol is present.
	Generic prohibition symbol	
	Generic mandatory conduct	Mandatory conduct

3. WARNINGS AND SAFETY PRECAUTIONS

BEFORE USING TRIRIDE, CAREFULLY READ AND UNDERSTAND THIS MANUAL AND THE FOLLOWING WARNINGS AND PRECAUTIONS.

The following actions must never be carried out, as they may compromise the compliance and/or characteristics of the device:

- Incorrect installation
- Improper use
- Use of third-party parts and/or accessories which have not been approved by the manufacturer
- Work and/or interference by unauthorised personal
- Lacking or improper maintenance

The following warnings and precautions are to be observed during installation, use and maintenance of the device in order to guarantee satisfaction of requirements for the safety of the operator and final user and the correct functioning of the device.

• Any handling, replacement of parts or work on the device not carried out by authorised TRIRIDE S.R.L. personal will void the guarantee and release the manufacturer from all responsibility for any direct and/or indirect damage caused to persons or property;

• To charge the battery, use the power supply provided in the package. Periodically check the state of the cable. Fully insert the plug into the mains-electricity socket;

• Use a supply voltage between 120-240 VAC, 50/60 Hz (or that indicated on the data plate);

• To avoid danger to people or property, observe all nominal values and indications on the product. Consult the manual before connecting the appliance;

• Avoid exposed circuits. Do not touch exposed connections or components connected to the mains;

• Do not operate in case of suspected fault or broken casing on the battery or control unit;

• If you suspect that the appliance is faulty and/or damaged, it must be checked by TRIRIDE S.R.L. specialist staff or personnel authorised by TRIRIDE S.R.L.;

• Carry out cleaning and maintenance only after disconnecting the device from the mains and switching it off;

• Avoid contact with or penetration of liquids and powders into the device;

• Do not operate in potentially explosive environments and/or in the presence of inflammable mixtures;

• Avoid exposure to sources of excessive heat. The operating temperature must be between -10°C and +50°C; maximum operating humidity is 90%, without condensation, at atmospheric pressure between 800 hPa and 1060 hPa;

• Use the device only with original spare parts supplied by the manufacturer;

• Ensure the electricity grid is compliant with the power requirements of the device and as indicated on the device label and in this manual;

• Do not use the device in environments with strong electromagnetic fields that may lead to malfunctioning of Triride and other appliances in the surrounding environment.

• Carry out maintenance on the device as indicated by Triride srl.

• The appliance must be installed and commissioned in compliance with the EMC information contained in this manual;

• Portable and mobile radiocommunications appliances may affect the functioning of the device;

• Do not operate shortwave or microwave therapy APPLIANCES in proximity (e.g. 1 m) to the device;

• The use of accessories other than those supplied may have a negative impact on the electromagnetic compatibility of Triride;

• Warning – use of controls and settings or procedures other than those specified herein may place the patient and operator at risk.

• Do not use the device with uncharged batteries, it can turn off and block.

• Triride srl does not assume any responsibility for damage, accident or injury caused by a failure to observe the requirements and safety indications/directives provided in this Manual.

• Therefore, TRIRIDE S.R.L. will not assume responsibility for any damage deriving from improper use and/or abuse of the product. Neither will it respond in any way for eventual damage deriving from wear, negligence, carelessness, interference, incorrect/faulty installation and/or connection of the products, or from improper use and/or incorrect use by the operator/final user or any third parties unauthorised to use the products.

3.1 Precautions Before Using Triride

Make sure the device is turned off before attaching it or remove it from the wheelchair, or for users with minor disability, before getting on or off the wheelchair.

NEVER EXCEED THE INDICATED MAXIMUM WEIGHT! REFER TO THE SPECIFICATIONS TABLE FOR FURTHER DETAILS

During the first use of Triride, start slowly and proceed with caution. Each manoeuvre may carry risk, and it is important to become familiar with Triride and build up the necessary confidence. Particular care should be taken during steering and acceleration.

Choose a calm and safe environment for the first use of Triride and always have somebody at your side that has read the manual and who can help you in case of need.

Safe use of Triride for yourself and others requires training and experience and knowledge of legislation regarding pedestrian areas and roads in the country where it will be used.

3.2 Preliminary safety checks

Before every use of Triride, a series of preliminary safety checks is required:

• check that the fixed or mobile axles of the rear wheels and the seat and rear support of your wheelchair are intact and firmly fixed in place;

• check that the tire pressure matches what is indicated on the tires (low tire pressure on the wheelchair leads to an increased risk of tipping) and, if necessary, introduce more air;

• check that the tire pressure of the Triride is suitable and compliant with what is indicated on the tires and in the “technical specifications” table in this manual;

• check that the Triride frame is intact, without signs of breakage, and that it correctly connects and disconnects from the wheelchair. In the case of breakage or damaged parts, contact your agent or Triride customer support. Refer to the installation procedures contained in this manual for queries regarding correct installation;

• check that all components, especially screws, are sufficiently tight and that the brakes are working correctly;

• check that the electrical connections and cables are in good condition and that the battery is correctly inserted. In the case of damaged connections or cables, contact your agent or Triride customer support.

Triride may only be used by users trained to use the device, and it is essential to carefully consider the following warnings/contraindications.

The device must be switched on and used only by users trained to use it.

• The device must not be used by individuals fitted with pacemakers or other devices which are affected by magnetic fields and electrostatic currents (e.g. insulin infusers). If in doubt, contact a doctor;

• Use of this electromedical device is prohibited for children and minors unless accompanied by an adult;

3.3 Precautions to follow during use of Triride

• Use Triride exclusively for the transport of one person at a time;

• Use of Triride is advised only for those who are in suitable physical and mental condition to navigate pedestrian areas;

• The use of the “Triride” is recommended only for those people who are in a physical and psychological state adequate to move in the pedestrian paths and for those who have sufficient hands mobility in order to be able to use the driving controls of the device and proceed in safe way;

• Always switch the device off before inserting it or removing it from the wheelchair;

• Avoid unnecessary risk, such as high speed, abrupt steering and laying/tipping the wheelchair sideways;

• Also avoid moving over objects which may cause Triride to stop suddenly or tip over;

• Do not travel up or down slopes beyond the maximum gradient indicated in the section “technical specifications”;

• Take maximum care when crossing roads;

• Ensure that you are always easily visible and identifiable (wear reflective clothing in certain weather conditions, if necessary) when using Triride and switch on the lights provided when there is poor visibility.

• Adjust speed and driving style on roads with slippery surfaces (e.g. wet or with loose earth or gravel) and never use Triride on mud or ice.

• Check that the feet are positioned correctly on the foot rest of the wheelchair, avoiding interference with use of Triride, and that the foot band is correctly adjusted;

• Keep travel speed under constant control, adapting it to the terrain and weather conditions and maintaining prudence.

• Based on applicable legislation, in Italy, the maximum speed permitted is 6 km/h on pavements and pedestrian areas and 12 km/h on cycling paths.

• When braking at high speed, it is advisable to try to brake progressively, in order to avoid losing control of the “Triride” and determine a risk of overturning or collision. The IBS - Intelligent Braking System (optional) eliminates this risk by automatically modulating braking.

• While turning, in order to improve stability and reduce the risk of tipping, balance yourself by leaning towards the centre.

• During driving and braking, hold the handlebars with both hands, otherwise an accident may be caused by losing control of the direction of travel.

Maximum care is required when mounting and dismounting kerbs, avoiding those higher than 50 mm.
Always approach the pavement at 90° and mount or dismount with the two wheels of the wheelchair simultaneously.
WARNING! Approaching a kerb in any other manner significantly increases the risk of tipping.

• In case of misuse, the Triride may stop suddenly at any time during operation.

• Avoid strong impacts with any obstacle, as this may harm you, Triride and your wheelchair.

• On upward and downward slopes, always maintain a straight path as far as possible, avoid unnecessary steering and do not brake abruptly. This will avoid the risk of tipping.

• On steep upward slopes, lean forward to bring weight over the front wheel, improve traction and avoid possible tipping;

• To avoid the risk of tipping, never steer abruptly.

• On a downward slope, maintain a slow and controlled speed, constantly and gradually applying the brake and avoiding stopping suddenly.

• Do not use the wheelchair brakes while driving, as this may cause them to lock and lead to losing control of Triride.

• When travelling long distances, take the battery charger with you or take a spare battery.

• Check that the tire tread is in good condition, and only use tires of the same dimensions and characteristics as those supplied by TRIRIDE S.R.L.

• Familiarise yourself with braking distances at different speeds.

• Never use your Triride with a child on your knees.

The downward braking distance can be significantly greater than on the level paths.

3.4 Further General Recommendations

For any problems with Triride or for any regular and special maintenance, always contact your agents or an Authorised Technical Service.

Only use accessories approved by TRIRIDE S.R.L.

Avoid proximity of Triride with fires and open flames.

If Triride is exposed to direct sunlight or high (> 41°C) or low (< 0°C) temperatures for extended periods, its components may overheat or become excessively cold.

Triride should not be used in the rain or on snow-covered, slippery or unstable surfaces.

Only use the battery charger provided to charge the Triride battery.

If you do not use Triride for an extended period, remove the battery from its housing and keep it charged, recharging at least every two months to avoid possible damage due to complete discharging.

Store Triride out of the reach of children, unless supervised by an adult.

No tampering or interference with the battery is permitted, as this may lead to a risk of explosion and/or fire.

Remove the battery from Triride and store it in a sheltered, safe place when transporting in any other form of transport (car, bus, train, aeroplane, etc.).

4. APPLICABLE LEGISLATION

Triride is a medical device compliant with European Council Directive 93/42/CEE and meets the following technical standards:

- EN 14971:2012 - Medical devices – Application of risk management to medical devices;
- EN ISO 15223-1:2012 – Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied – Part 1: General requirements;
- EN 1041:2013 – Information supplied by the manufacturer of medical devices;
- EN 10993-1:2010 – Biological and clinical evaluation of medical devices – Part 1: Evaluation and testing within a risk management process;
- EN 12182:2012 – Assistive products for persons with disability – General requirements and test methods;
- EN 12183:2014 – Manual wheelchairs – Requirements and test methods;
- EN 12184:2014 – Electrically powered wheelchairs, scooters and their chargers – Requirements and test methods;
- EN 60601-1:2015 – Medical electrical equipment Part 1: General requirements for basic safety and essential performance;

- ISO 7176-9 – Environmental tests;
- ISO 7176-14 – Requirements and test methods for power and control systems for electrically powered wheelchairs and scooters;
- ISO 7176-21 – Requirements and test methods for electromagnetic compatibility for electrically powered wheelchairs and scooters;
- Triride is also compliant with Directive 2012/19/EU concerning disposal of electrical and electronic devices;

5. PURPOSE

Triride quickly and easily transforms most manual wheelchairs into electric wheelchairs. Contact your dealer/agent for further information on the Triride compatible wheelchair. Contact TRIRIDE S.R.L. for more information on which wheelchairs are compatible with Triride.

To connect Triride to a manual wheelchair, the caster wheels are lifted and a single driving wheel is used instead. This is directly connected to the Triride motor, ensuring constant and efficient power transmission whilst maintaining all of the other characteristics of the manual wheelchair.

Triride falls into the usage category of the wheelchair to which it is connected according to standard EN 12184.

In line with the definition of class B in standard EN 12184, the device is designed for indoor environments and is suitable for use with outdoor obstacles.

WARNING! Any improper use may lead to dangerous situations for the user or the sudden stop of the device.

6. COMPATIBILITY WITH MANUAL WHEELCHAIRS ON THE MARKET

Triride is compatible with nearly all models of fixed or folding frame wheelchairs.

In order to allow the positioning and tightening of the attachments that are an integral part of the device, the front part of the wheelchair frame must be made of metal, aluminium and the corresponding alloys such as ergal or avional, titanium , steel or iron.

Only in special cases and following assessment by TRIRIDE S.R.L. can carbon-fibre frames be considered suitable.

WARNING! The installation of the attachments must be performed only by specialized personnel. Particular attention must be paid to carbon wheelchairs.

For wheelchairs with removable foot-rests, the Triride attachments must not be positioned on the removable part of foot-rests.

The attachments must normally be positioned on the fixed wheelchair frame behind the foot-rests, where these are attached.

The Triride attachments vary in diameter from 19 mm to 40 mm. There are also specific clamps for wheelchairs with special frames or with free tube forms so that they can be perfectly fitted to most wheelchairs models available.

TRIRIDE S.R.L. can provide attachments which are fully compatible with oval or elliptical frame wheelchairs.

The attachments supplied with Triride must be installed by specialised technical personnel (orthopaedic technicians, physiotherapists and other similar figures) or by personnel authorised by TRIRIDE S.R.L.

All general rules regarding safe wheelchair use also fully apply for use of Triride.

Use the brakes installed on the wheelchair to park it.

The maximum Triride flow rate, shown in Table 9.1, includes the device, user, wheelchair and accessories.
In any case it is absolutely necessary to observe and respect the maximum capacity of the wheelchair, as indicated by the manufacturer of the wheelchair.

7. PRODUCT DESCRIPTION

The Triride models described in this manual may not correspond exactly to the model that you have purchased and are using. However, all of the instructions are applicable to your Triride.

TRIRIDE S.R.L. reserves the right to modify the characteristics and technical specifications described in this manual or the manual itself without prior notification.

All information, measurements and capabilities indicated in the manual do not represent specifications.
The most recent update of the manual will always be available online at **www.trirideitalia.com**

Below are the main components of Triride and the system for connecting a manual wheelchair.

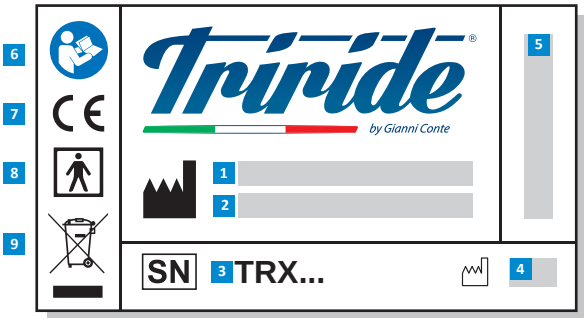
This manual covers different models of Triride, featuring the same stainless steel frame and different equipment and performance according to the details provided on the following pages.

In standard configuration, Triride is designed for users with full use of their hands.

The fully customisable special handlebar set-up makes it possible to meet the special requirements of tetraplegic users or with upper body limits in general.

8. TRIRIDE LABEL

The label, applied to the frame, contains all the information indicated below.



1. **Manufacturer Company Name**
2. **Registered Office of Manufacturer**
3. **Device Serial Number**
4. **Year of Production**
5. **Model name**
6. **Warnings to read the Usage Manual**
7. **CE Mark**
8. **Electrical protection according to EN 60601-1**
9. **RAEE Directive Symbol**

The label is always placed under the steering fork of Triride.

When requesting spare parts or reporting defects, please provide the details on the label, in particular the device serial number.

9. TECHNICAL SPECIFICATIONS

9.1 Technical Characteristics of Triride Models

	TRIRIDE BASE	TRIRIDE PIEGHEVOLE
MAXIMUM USER WEIGHT	>120 kg (1)	>120 kg (1)
MAXIMUM GRADIENT APPROACHABLE	Up to 15% (4)	Up to 15 % (4)
DIMENSIONS	Max height: 950 mm Max width: 460 mm Max depth: 420 mm	Max height: 900 mm Max width: 400 mm Max depth: 400 mm
WEIGHT	8,7 kg	8,2 kg
FRAME	INOX AISI 304 + INOX Screw	INOX AISI 304 + INOX Screw
CONDITIONS FOR WHEELCHAIR INSTALLATION	From wheelchair width of 320 mm	From wheelchair width of 320 mm
MAX SPEED	Up to 6 km/h (2)	Up to 6 km/h (2)
STEERING SYSTEM	Built-in bearings	Built-in bearings
TYPE OF DRIVING WHEEL	Reinforced aluminium wheel	Reinforced aluminium wheel
WHEEL DIAMETER	12” o 14”	12”
TIRE TYPE	City or Cross	City or Cross
TIRE PRESSURE	from 3,00 to 3,50 kPa	from 3,00 to 3,50 kPa
TREAD WIDTH	57 mm (5)	57 mm (5)
DISK BRAKE	Diameter 160 mm	Diameter 160 mm
BATTERY	Lithium ion	Lithium ion
BATTERY VOLTAGE	36V	36V
BATTERY WEIGHT	1,8 kg	1,8 kg
POWER SUPPLY	100-240 Vac 50/60Hz 90 w	100-240 Vac 50/60Hz 90 w
ELECTRIC MOTOR POWER	Max 540 w	Max 540 w
DISTANCE BEFORE CHARGE	Up to 40 km (3) (full charge)	Up to 40 km (3) (full charge)
SURMONTABLE OBSTACLES	30 - 50 mm (12" - 14" wheel)	30 mm
MINIMUM BRAKING DISTANCE AT HIGH SPEED	1000 mm at 6 Km/h 1500 mm at 12 Km/h	1000 mm at 6 Km/h 1500 mm at 12 Km/h

(1) The maximum load of the wheelchair indicated by the manufacturer must always be observed.
(2) The maximum speed permitted on pedestrian walkways is 6 km/h and on cycle paths is 12 km/h. On private streets and areas not open to the public, the speed limit may also be above 12 km/h.
(3) Value refers to charged 48V battery, using Eco Drive System, with flat terrain and user weight of around 75 kg. On uphill or slopes the autonomy of the battery can be inferior.
(4) The indications for the wheelchair provided by the manufacturer must always be observed.
(5) The tread width refers to the standard tire and can therefore vary depending on the type of tire fitted.

MANUFACTURER: TRIRIDE S.R.L.
Registered Office: Via Milano, 18 - 63827 Porto San Giorgio (FM)
Operating Headquarters: Via Massimo D'Antona, 8 - 63812 Montegranaro (FM)

	TRIRIDE SPECIAL LIGHT	TRIRIDE SPECIAL COMPACT HT
MAXIMUM USER WEIGHT	>160 kg (1)	>160 kg (1)
MAXIMUM GRADIENT APPROACHABLE	Up to 20 % (4)	Up to 20 % (4)
DIMENSIONS	Max height: 950 mm Max width: 460 mm Max depth: 420 mm	Max height: 950 mm Max width: 460 mm Max depth: 400 mm
WEIGHT	9 kg	11 kg
FRAME	INOX AISI 304 + INOX Screw	INOX AISI 304 + INOX Screw
CONDITIONS FOR WHEELCHAIR INSTALLATION	From wheelchair width of 320 mm	From wheelchair width of 320 mm
MAX SPEED	Up to 6 km/h (2)	Up to 6 km/h (2)
STEERING SYSTEM	Built-in bearings	Built-in bearings
TYPE OF DRIVING WHEEL	Reinforced aluminium wheel	Reinforced aluminium wheel
WHEEL DIAMETER	12" o 14"	12"
TIRE TYPE	City or Cross	City or Cross
TIRE PRESSURE	from 3,00 to 3,50 kPa	from 3,00 to 3,50 kPa
TREAD WIDTH	57 mm (5)	57 mm (5)
DISK BRAKE	Diameter 160 mm	Diameter 160 mm
BATTERY	Lithium ion	Lithium ion
BATTERY VOLTAGE	36V or 48V	36V or 48V
BATTERY WEIGHT	1,8 kg / 2,6 Kg	1,8 kg / 2,6 Kg
POWER SUPPLY	100-240 Vac 50/60Hz 120 w	100-240 Vac 50/60Hz 120 w
ELECTRIC MOTOR POWER	Max 1000 w	Max 1400 w
DISTANCE BEFORE CHARGE	Up to 50 km (3) (full charge)	Up to 50 km (3) (full charge)
SURMONTABLE OBSTACLES	30 - 50 mm (12" - 14" wheel)	30 mm
MINIMUM BRAKING DISTANCE AT HIGH SPEED	1000 mm at 6 Km/h 1500 mm at 12 Km/h	1000 mm at 6 Km/h 1500 mm at 12 Km/h

(1) The maximum load of the wheelchair indicated by the manufacturer must always be observed.
(2) The maximum speed permitted on pedestrian walkways is 6 km/h and on cycle paths is 12 km/h. On private streets and areas not open to the public, the speed limit may also be above 12 km/h.
(3) Value refers to charged 48 V battery, using Eco Drive System, with flat terrain and user weight of around 75 kg. On uphill or slopes the autonomy of the battery can be inferior.
(4) The indications for the wheelchair provided by the manufacturer must always be observed.
(5) The tread width refers to the standard tire and can therefore vary depending on the type of tire fitted.

	TRIRIDE SPECIAL L14	TRIRIDE SPECIAL HP L16
MAXIMUM USER WEIGHT	>160 kg (1)	>160 kg (1)
MAXIMUM GRADIENT APPROACHABLE	> 20% (4)	> 20% (4)
DIMENSIONS	Max height: 950 mm Max width: 460 mm Max depth: 420 mm	Max height: 1000 mm Max width: 460 mm Max depth: 440 mm
WEIGHT	Total 12,4 kg	Total 12,8 kg
FRAME	INOX AISI 304 + INOX Screw	INOX AISI 304 + INOX Screw
CONDITIONS FOR WHEELCHAIR INSTALLATION	From wheelchair width of 320 mm	From wheelchair width of 320 mm
MAX SPEED	Up to 6 km/h (2)	Up to 6 km/h (2)
STEERING SYSTEM	Built-in bearings	Built-in bearings
TYPE OF DRIVING WHEEL	Reinforced aluminium wheel	Reinforced aluminium wheel
WHEEL DIAMETER	14”	16”
TIRE TYPE	City or Cross	City or Cross
TIRE PRESSURE	from 3,00 to 3,50 kPa	from 3,00 to 3,50 kPa
TREAD WIDTH	57 mm (5)	57 mm (5)
DISK BRAKE	Diameter 160 mm	Diameter 160 mm
BATTERY	Lithium ion	Lithium ion
BATTERY VOLTAGE	36V or 48V	48V
BATTERY WEIGHT	1,8 kg / 2,6 Kg	2,6 Kg
POWER SUPPLY	100-240 Vac 50/60Hz 120 w	100-240 Vac 50/60Hz 120 w
ELECTRIC MOTOR POWER	Max 1500 w	Max 1500 w
DISTANCE BEFORE CHARGE	Up to 50 km (3) (full charge)	Up to 50 km (3) (full charge)
SURMONTABLE OBSTACLES	30 - 50 mm (12" - 14" wheel)	50 mm
MINIMUM BRAKING DISTANCE AT HIGH SPEED	1000 mm at 6 Km/h 1500 mm at 12 Km/h	1000 mm at 6 Km/h 1500 mm at 12 Km/h

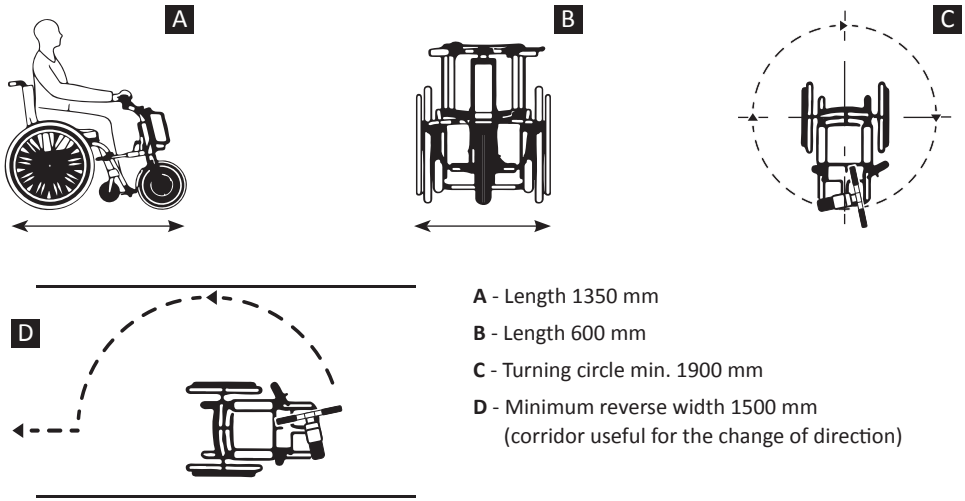
(1) The maximum load of the wheelchair indicated by the manufacturer must always be observed.
(2) The maximum speed permitted on pedestrian walkways is 6 km/h and on cycle paths is 12 km/h. On private streets and areas not open to the public, the speed limit may also be above 12 km/h.
(3) Value refers to charged 48V battery, using Eco Drive System, with flat terrain and user weight of around 75 kg. On uphill or slopes the autonomy of the battery can be inferior.
(4) The indications for the wheelchair provided by the manufacturer must always be observed.
(5) The tread width refers to the standard tire and can therefore vary depending on the type of tire fitted.

	TRIRIDE MAD MAX	TRIRIDE T-ROCKS
MAXIMUM USER WEIGHT	>160 kg (1)	>160 kg (1)
MAXIMUM GRADIENT APPROACHABLE	> 20% (4)	> 20% (4)
DIMENSIONS	Max height: 1000 mm Max width: 500 mm Max depth: 600 mm	Max height: 1000 mm Max width: 600 mm Max depth: 800 mm
WEIGHT	Total 12,3 kg	Total 12,4 kg
FRAME	INOX AISI 304 + INOX Screw	INOX AISI 304 + INOX Screw
CONDITIONS FOR WHEELCHAIR INSTALLATION	From wheelchair width of 320 mm	From wheelchair width of 320 mm
MAX SPEED	Up to 6 km/h (2)	Up to 6 km/h (2)
STEERING SYSTEM	Built-in bearings	Built-in bearings
TYPE OF DRIVING WHEEL	Reinforced aluminium wheel	Reinforced aluminium wheel
WHEEL DIAMETER	16” (18” effective)	20”
TIRE TYPE	City	City or Cross
TIRE PRESSURE	from 3,00 to 3,50 kPa	from 3,00 to 3,50 kPa
TREAD WIDTH	76 mm (5)	100 mm (5)
DISK BRAKE	Diameter 160 mm	Diameter 160/180 mm
BATTERY	Lithium ion	Lithium ion
BATTERY VOLTAGE	48V	48V
BATTERY WEIGHT	2,6 Kg	2,6 Kg
POWER SUPPLY	100-240 Vac 50/60Hz 120 w	100-240 Vac 50/60Hz 120 w
ELECTRIC MOTOR POWER	Max 1500 w	Max 1500 w
DISTANCE BEFORE CHARGE	Up to 50/55 km (3) (full charge)	Up to 50/55 km (3) (full charge)
SURMONTABLE OBSTACLES	50 mm	60 mm
MINIMUM BRAKING DISTANCE AT HIGH SPEED	1000 mm at 6 Km/h 1500 mm at 12 Km/h	1000 mm at 6 Km/h 1500 mm at 12 Km/h

(1) The maximum load of the wheelchair indicated by the manufacturer must always be observed.
(2) The maximum speed permitted on pedestrian walkways is 6 km/h and on cycle paths is 12 km/h. On private streets and areas not open to the public, the speed limit may also be above 12 km/h.
(3) Value refers to charged 48V battery, using Eco Drive System, with flat terrain and user weight of around 75 kg. On uphill or slopes the autonomy of the battery can be inferior.
(4) The indications for the wheelchair provided by the manufacturer must always be observed.
(5) The tread width refers to the standard tire and can therefore vary depending on the type of tire fitted.

9.2 Overall dimensions and maneuverability

The following shows the dimensions and overall dimensions of the Triride device associated with a manual wheelchair[1].



A - Length 1350 mm

B - Length 600 mm

C - Turning circle min. 1900 mm

D - Minimum reverse width 1500 mm
(corridor useful for the change of direction)

[1] The dimensions and measurements shown in the diagrams are indicative, calculated with a Triride Base model mounted on a standard wheelchair (Length 950 mm, Width 600 mm, Height 820 mm). These measurements may differ depending on the Triride model purchased and depending on the size of the user's wheelchair.
For more information contact customer service at info@tririderitalia.it

9.3 Environmental Conditions

ENVIRONMENTAL CONDITIONS FOR USE	Temperature: min -10°C – max +50°C Humidity: max 90% without condensation Atmospheric pressure: 800-1060 hPa
ENVIRONMENTAL CONDITIONS FOR TRANSPORT	Temperature: min -10°C – max +60°C Humidity: max 90% without condensation Atmospheric pressure: 500-1060 hPa
ENVIRONMENTAL CONDITIONS FOR WAREHOUSE STORAGE	Temperature: min 0°C – max +40°C Humidity: max 90% without condensation Atmospheric pressure: 700-1060 hPa

9.4 Main Parts of Triride

9.5 Console with Main Controls

Power button ON/OFF	Press for 2/3 seconds until the display turns on. The Triride is ready to use.
UP arrow button DOWN arrow button	Press for changing the speed gear on the display from 1 to 5. Zero (0) for neutral gear. Refer to the display instruction manual for all others command.
Driving mode Normal (O) Sport (||)	Switch the button for normal or sport mode. Available only on “Special” models. Normal mode: Soft acceleration, soft braking, energy saving. Sport mode: Acceleration and more intense braking, active driving.
Reverse	Switch on to the right the button for reverse. The command activates only when device is stationary.
Cruise Control / ICC*	Press the button while driving in order to maintain the set speed without using the accelerator. With the optional ICC function is possible to maintain the set speed also downhill. In order to deactivate the command, press the button, accelerate or brake.
Assisted load	While installing the Triride, keep pressing the button and accelerate in order to lift the device up to the hooking position. (Refer to section 11.4)
Electronic brake / IBS*	Press the electronic brake button* in order to decrease the speed. Whit IBS (optional) the braking results more progressive and can be customized more or less softer.

*The electronic brake button and the software commands ICC and IBS are optional and not standard.
NB: Different models of LCD display available. Refer to the user instruction of the display attached to this manual.
FOR MORE INFORMATION ON IBS & ICC VISIT OUR WEBSITE WWW.TRIRIDEITALIA.COM

9.6 Description of the Main Features of "Triride"

Triride is available in versions with high-torque/power motor, allowing the user to travel with their wheelchair attached on particularly long and steep slopes and terrain without asphalt (e.g. grass, dirt tracks, uneven or bumpy ground).

This is permitted by a special electronic control system and motor which provides a very high level of torque, combined with greater power.

Performance is not compromised by prolonged output because the control unit of this device is suitably sized for intense, heavy use and equipped with a ventilation and cooling system that prevent overheating.

The main features of the Special models are:

- Electronic brake controlled by brake lever
- Reverse
- Cruise control at any speed
- Electric assisted lifting for the front wheels of the wheelchair
- Two driving modes: Normal/Sport (excluding Base model)
- Five speed levels
- All parameters (acceleration, departure, reverse, electronic brake, speed, anti-skid) can be customised and programmed.

Only TRIRIDE S.R.L. or personnel authorised by TRIRIDE S.R.L. may adjust the electronic control unit settings.

TRIRIDE S.R.L. will not be held responsible for any work or interference with the device by unauthorised personnel.

The Special models allow use on gradients up to 30%[1] with user weight of 75 kg; however, it is absolutely prohibited to approach gradients above those indicated by the manufacturer of the wheelchair to which Triride has been attached.

[1] Depending on the Triride model, the user's weight and other factors such as the road surface etc.

9.7 IBS - Intelligent Braking System (Optional)

Triride offers, as an option, an exclusive braking system that increases safety and saves on brake consumption.

This system called IBS - Intelligent Braking System, programmable and customizable based on the user's needs.

IBS effectively enhances driving comfort and the response of the device to braking stress, improving stability and safety, also thanks to its anti-wheel lock system (ABS).

IBS allows to adapt the brake mode to user needs, to different routes and driving style. All without having to use the mechanical brake.

The main features of this system are:

- **ANTI-LOCKING BRAKE WHEEL**
- **NO MORE BRAKES PADS WEAR**
- **BATTERY CHARGING DURING BRAKING**
- **COMPLETE CUSTOMIZATION**

HOW TO USE IBS

IBS can be used by brake lever or with optional button thet covers the complete function of IBS system. By pushing the button, the user will get high efficiency of braking system without using mechanical/ hydraulic brake.

9.8 ICC - Intelligent Cruise Control (Optional)

Triride's standard cruise control can be implemented with the ICC system (optional) that allows to keep the speed set on each type of route, even downhill!

The advanced electronics automatically maintain the desired and set speed along the routes, in total safety and efficiency.

ICC is an essential electronic assistant that guides the user through difficult climbs while maintaining adequate engine torque and avoiding excessive consumption.

In the descents this electronic system allows to exploit the engine brake and proceed in total tranquility and safety without using the brake and recharging the battery!

The main features of this system are:

- **GENUINE DRIVING ASSISTANCE BOTH UPHILL AND DOWNHILL**
- **OPTIMIZATION OF AUTONOMY AND SELF-CHARGING DOWNHILL**
- **REDUCTION OF BRAKE PADS WEAR**
- **EASY TO OPERATE BY PRESSING THE DEDICATED BUTTON WHILE DRIVING**
- **INSTANT REMOVAL BY ACCELERATING, BRAKING OR PRESSING THE SAME BUTTON**

HOW TO USE ICC

ICC can be used by pushing the "Cruise Control" during drive (from 2 Km/h).

ICC is switched off when accelerating, when braking or when the "Cruise Control" button is pressed again.

9.9 MDC - Motion Direct Control (Optional)

MDC (Motion Direct Control) an electronic system with which it is possible to control the traction directly with a single command (accelerator).

This system makes it possible to accelerate and brake electronically using only the accelerator lever, allowing the user to have total control of the movement and always remain in complete safety in every situation.

MDC allows maximum security both uphill and downhill thanks to integrated systems:

- **HILL HOLDER - Hill start assist control.**
- **DESCENT - Downhill traction management.**
- **REGEN - Battery recharge during braking.**

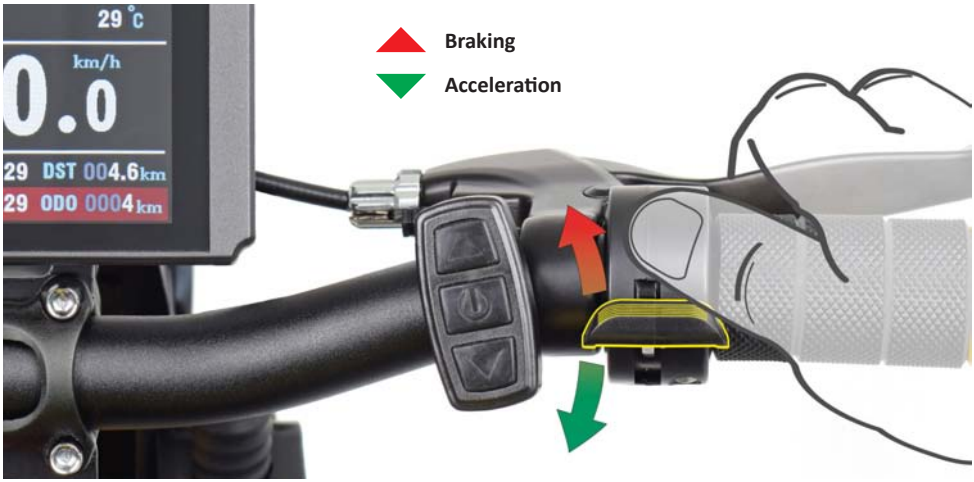
The system allows to control the gait in the different routes simply by dosing the accelerator. All without having to use the brake.

With MDC system it will be pleasant to face even the most challenging climbs and descents in total safety.

HOW TO USE MDC

MDC is available for thumb throttle and push & pull lever and can be activated by the appropriate ON-OFF switch.

While driving, simply dose the accelerator to obtain the desired pace, the system will automatically accelerate or brake without having to use other commands.



9.10 ECODRIVE

EcoDrive[1] is an electronic power management system that allows you to increase the autonomy of the device up to 40% more! EcoDrive offers 5 driving modes that can be entered directly from the display: 1 - ECO | 2 - URBAN | 3 - TOUR | 4 - SPEEDY | 5 - TURBO

The 1 | 2 | 3 modes allow great energy savings and an even smoother and more relaxing drive. Modes 4 | 5 allow the Triride to tackle the most demanding situations such as mountain trails or steeper climbs.

- **GREATER RIDING AUTONOMY WITH ALL TRIRIDE!**
- **INCREASE IN AUTONOMY UP 40%!**
- **SMOOTHER DELIVERY OF POWER AND TRACTION**

The Normal/Sport function, (that allows greater acceleration and more intense electronic braking) remains unchanged.

Reverse and cruise control (if available) operate automatically at maximum power..

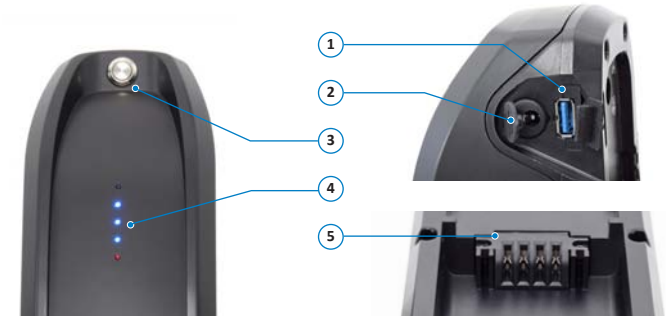
The 5 display functions do not determine the speed levels but correspond to the level of power supplied, therefore to the possibility of improving the autonomy performance.

1	**ECO**	for maximum energy savings	20% of the maximum power. **Battery range increase + 40%** Maximum gradient[2] 8%
2	**URBAN**	smooth drive for urban environments	30% of the maximum power. **Battery range increase + 30%** Maximum gradient[2] 10%
3	**TOUR**	torque and power with ease for most situations	50% of the maximum power. **Battery range increase + 20%** Maximum gradient[2] 15%
4	**SPEEDY**	to face the paths more demanding	75% of the maximum power. **Battery range increase + 5%** Maximum gradient[2] 20%
5	**TURBO**	for the most demanding routes and situations	100% of the maximum power. **Battery range increase + 0%** Maximum gradient[2] more than 20%

[1]The Eco Drive system is available as an option. The EcoDrive system can also be implemented on existing Trirides from 2016.
[2]It is recommended not to go uphill or downhill with slopes greater than those indicated in the User Manual. The actual slope that can be overcome depends on the Triride model used, the driver's ability, the type of road surface, the user weight, the wheelchair model, the state of wear of the front tire.

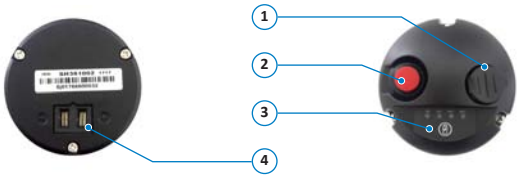
10. TRIRIDE BATTERY

10.1 “Special Models” Battery (from 2019)



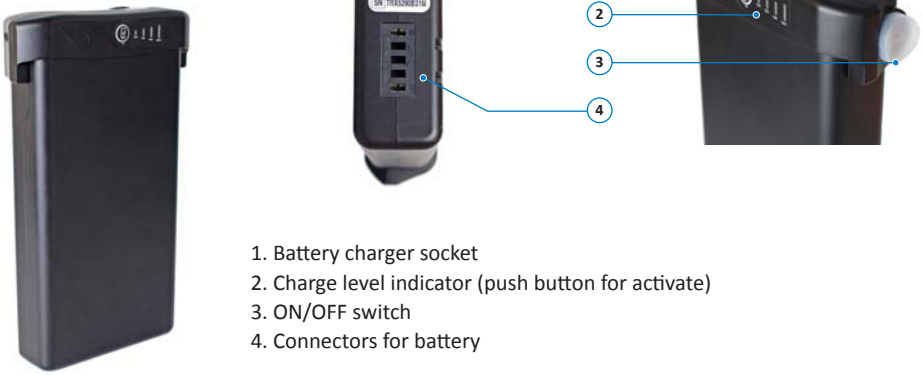
1. USB Port for smartphone or other dispositives
2. Battery charger socket
3. ON/OFF switch
4. Charge level indicator
5. Connectors for battery

10.2 Cylindrical Battery for “Base”, “Pieghevole”, “Tribike E” Models.



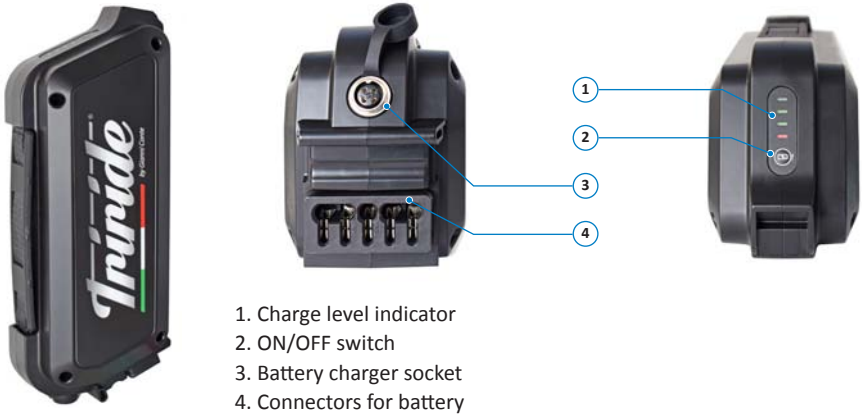
1. Battery charger socket
2. ON/OFF switch
3. Charge level indicator (push button for activate)
4. Connectors for battery

10.3 EVO Battery for “Base” Model



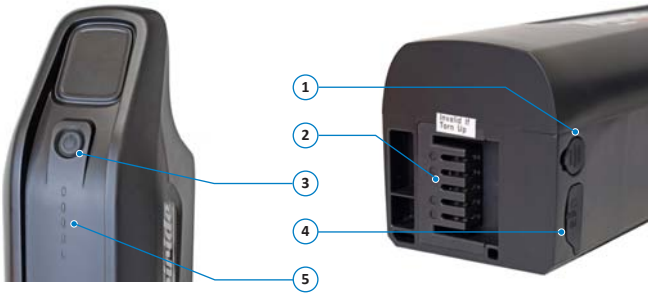
1. Battery charger socket
2. Charge level indicator (push button for activate)
3. ON/OFF switch
4. Connectors for battery

10.4 “Special Models” Battery (old version)



1. Charge level indicator
2. ON/OFF switch
3. Battery charger socket
4. Connectors for battery

10.5 Battery for “MadMax” Models



1. Battery charger socket
2. Connectors for battery
3. ON/OFF switch
4. USB port
5. Charge level indicator

10.6 Battery charge status

Each battery model has a charge status indicator.

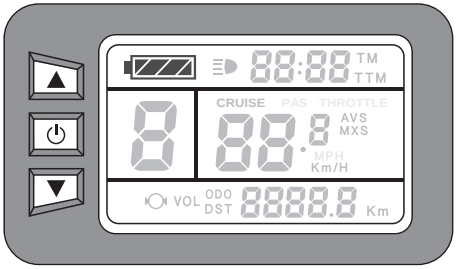
In general, this indicator is composed of LED lights of different colors.

Battery life and the corresponding indication value vary depending on the way the Triride is used, the user’s weight and the type of road course.

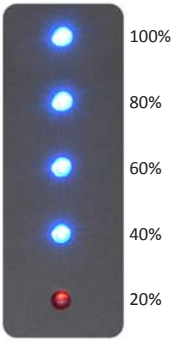
Charge level indicator on the display

The indication of the battery charge status is also shown on the Tririder’s LCD display (when present), however the one on the battery may be more accurate.

For the indicators and instructions on the LCD display on the device, refer to the enclosed leaflet with the users and maintenance manual.



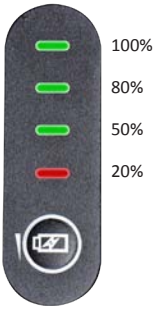
Below is a diagram of indicator with the corresponding charge residue for each LED lit:



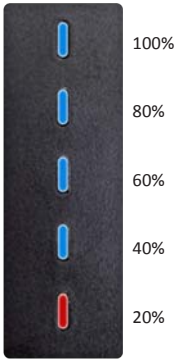
“Special” Battery (20/19)

Cylindrical Battery

Evo Battery



“Special” Battery (old)



“MadMax” Battery

10.7 Battery connection

Inserting the "Special" Battery

Insert the battery vertically in the special housing until the looking, following the arrow in the picture.

By turning the key and removing it, the batery will be locked to the device. To release the battery, turn the key and unlock the battery performing the reverse procedure.

WARNING - Always lock the battery before turn on the Triride!

Inserting the Cylindrical battery

Insert the battery in the special housing, paying attention to the contacts. Secure the battery with the elastic belt.
For removing the battery perform the reverse procedure.

Inserting the EVO battery

Insert the battery in the special housing from above until you hear the locking snap.
For removing the battery, pull it from above.

Inserting the Special battery

Insert frontally the battery in the special housing and follow the arrow in the picture above in order to lock it. The specific hooking snap is confirming the locking.
To release the battery, turn the key counterclockwise and unlock the battery performing the reverse procedure.

Inserting the “MadMax” battery

Insert the battery laterally in the special housing and follow the arrow in the picture in order to lock it to the support. The specific hooking snap will confirm the locking of the battery.
To release, turn the key counterclockwise and unlock the battery performing the reverse procedure.

By turning the key (where available) clockwise and removing it, the battery will be locked to the device.

10.8 Correct battery use

The main rules for correct usage are indicated on the label, located on the back of the battery.

WARNING

- Do not short circuit the battery.
- The battery must be disposed of correctly.
- Only use specific battery chargers.
- Risk of explosion if the battery is exposed to open flames.

11. OPERATION OF TRIRIDE

Below, are the main components of Triride and instructions for connecting a manual wheelchair.

11.1 Delivery

Triride is supplied completely packaged in a sealed cardboard box to protect it from impact and dust. To avoid breakage during transport, components, such as the battery charger, which may be installed later are packaged separately in the cardboard box.

Upon receipt, check that the packaging is intact and that the cardboard box does not have any superficial damage that may have been caused during transport. Report any anomalies immediately to the transport company.

11.2 Unpacking

Carefully remove all the packaging materials.

Remove the Triride parts (including the battery and the battery charger) from the cardboard box and check that all components are present as expected and indicated in this Usage and Maintenance Manual.

Check that Triride does not have any damaged, scratched, marked, impact-damaged or deformed parts or other defects.

For any problems (defects and missing components), please immediately contact the Authorised Technical Service.

Below are the main components of Triride and the system for connecting a manual wheelchair.

11.3 Contents of package

Triride is delivered unassembled with the following components, as illustrated below.

1. Triride (frame complete with wheel, motor, control unit, steering fork and handlebars with electric controls).

2. Tilting frame with spring cotter pin, locking clamps and brackets.

3. Battery (in separate box).

4. Battery charger (in separate box).

5. Specific attachments (in separate box).

6. Screw handles for locking clamps (set. 2 pcs).

The images are purely indicative, the type of battery and connections are provided according to the purchased model.

The package also includes this User manual & maintenance and other documentation (display instruction, guarantee and battery related documentation) which must be read very carefully before using Triride.

11.4 Triride Assembly

Assemble Triride exclusively in a flat area with wheelchair brake engaged.

The positioning sequence of your Triride is illustrated below.

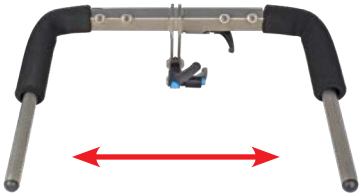
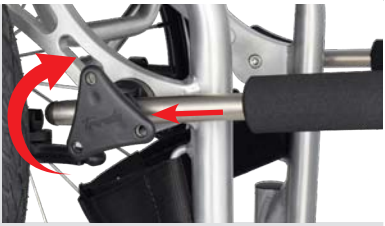
IMAGE	STEP/DESCRIPTION
	01* **Triride clamps installation on the wheelchair** Install the dedicated clamps on the wheelchair following the instructions for a correct mounting provided by Triride.
	02* **Adjustment of arms** Loosen the 4 lower screws with 4 mm hex key; adjust the width of the arms until compatible with the wheelchair frame; re-tighten the screws.
	03 **Connecting Triride to the tilting frame** Insert tilting part into collar.
	04 **Fixing Triride to the tilting frame** Insert the screws and lock by turning the knob clockwise.

IMAGE	STEP/DESCRIPTION
	05 **Fixing frame to wheelchair** Insert the arms into the special attachments previously mounted on the wheelchair and fix them by turning the screw handles clockwise.
	06 **Connecting the battery** Refer to the 10.6 section for the inserting method based on the battery model.
	07 **Assisted lifting** Turn on the battery and the display pushing the ON/OFF button (Section 12.2). Press the green button and accelerate at the same time, the Triride is going to lift up to the hooking position. Pull the brake lever and release the green button and the accelerator keeping lifted the Triride.
	08 **Fixing tilting part** Release the spring cotter pin (A) in one of the three pin holes (do not pull, just rotate) and set free the brake lever. Fix the tilting frame by rotating clockwise the lever pin (B).

Watch the video for a correct installation of the Triride on our website http://www.trirideitalia.com/en/faq/

***Step 1 and step 2 must be performed only by qualified staff or authorized by Triride.**

The other steps can be performed by the user only after being instructed by qualified personnel appointed by Triride srl.

SUMMARY OF FIXING OPERATIONS

1. Insert the arms of the tilting frame into the special attachments on the wheelchair and fix them firmly with the special screw handles (STEP 5).

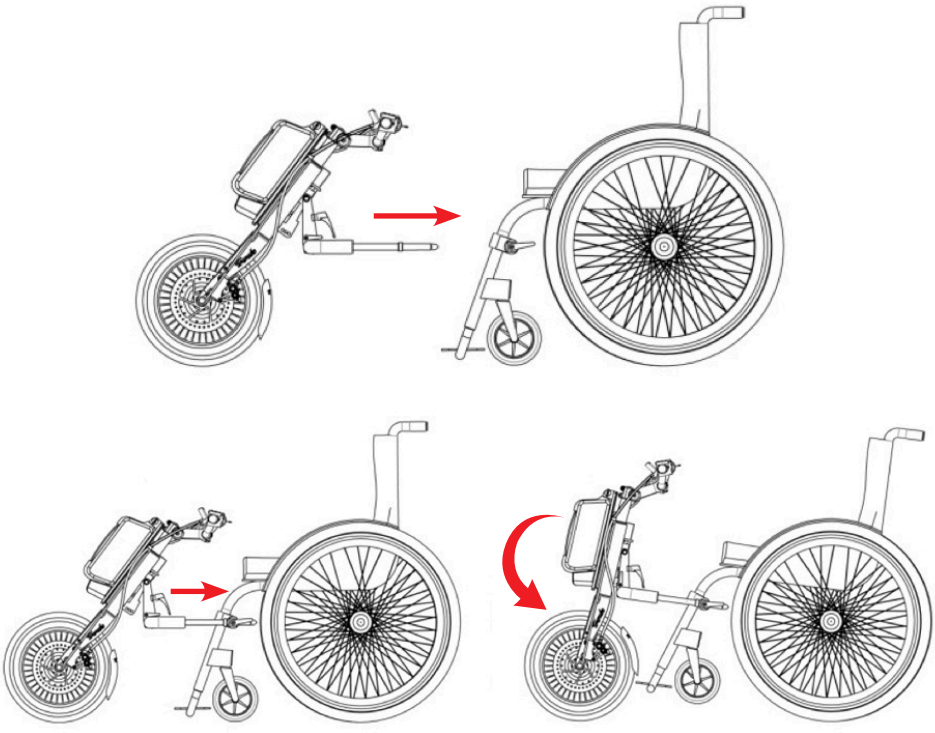
2. Connect the battery to the support and press the ON/OFF button (STEP 6).

3. Switch on the display using the ON/OFF button.

4. Activate the assisted lifting system (STEP 7) bringing the Triride into the locking position.

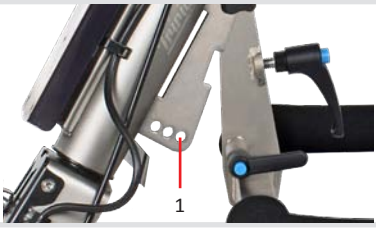
5. Lock the tilting frame by inserting the pin into one of the three holes, rotating the lever sideways and tightening the front screw handle (STEP 8).

6. Triride is ready for use.



12. USING TRIRIDE

12.1 Adjusting Handlebars and Frame Tilt

IMAGE	STEP/DESCRIPTION
	**Adjusting handlebars** To adjust the height and angle of the handlebar piece, loosen the screws indicated with a 5 mm Allen key. Must be performed only by qualified personnel appointed by Triride srl.
	**Selecting tilt hole** The user can choose the height to set the wheelchair's caster wheels above the ground, based on the roughness of the surface, by inserting the pin into one of the three holes* illustrated in the picture.

*Moving from hole 1 to hole 3 (closer to the tube) there is a more and more vertical arrangement of the steering column, an increase in the height of the casters and a reduction in the overall pitch.

Instead, passing from hole 3 to hole 1, there is a lowering of the casters, to an increase in the overall step with an increase in weight on the driving wheel and a consequent improvement in directionality and traction.

For terrain particularly rich in obstacles, it is advisable to insert the pin into the hole closest to the tube.

12.2 Switching On and Operating Triride

IMMAGE	STEP/DESCRIPTION
	**Switching on the battery** After inserting the battery into the housing, turn it on using the ON / OFF button. Refer to section 10 for the different battery models.
	**Switching on console** Press the ON/OFF button until the display turns on. Refer to Display Instruction attached to this manual.
	**Operation and driving** Push the potentiometer lever downwards and use the handlebars to steer the front wheel. The speed will be directly proportional to the pressure applied to the lever.
	**Brake** To brake, release the potentiometer lever and pull the brake lever.
	**Switching off** Use the ON/OFF button to turn the display OFF. Use the ON/OFF button to turn the battery OFF. Refer to section 10 for the different battery models.

12.3 Charging the Battery

IMAGE	STEP/DESCRIPTION
	**Turn OFF the battery** Use the switch to turn the battery OFF. Refer to section 10 for the different battery models.
	**Unlocking and removing the battery** Turn the key anticlockwise (if present). Remove the battery from the support as indicated on section 10.6.
	**Connecting to charger** Connect the smaller plug on the battery charger to the socket on the battery, underneath the protector flap. Refer to section 10 for the different battery models. (in the picture is shown the charge of the “Special” battery).
	**Connect to power outlet** Connect the plug on the battery charger to a 230V max 16 A (in the picture is shown the charge of the “Special” battery).

The charger LED will indicate the status as below.

Red(1): charger ON.

Red(2): charging.

Green(2): charging complete, battery fully charged.

13. GUIDELINES FOR USING LITHIUM BATTERIES

• Always charge your battery, even when you only travel a few kilometres. There are several reasons for this:

1. You will always have maximum available distance;

2. You will maximise system performance (control unit and motor), as the voltage is always higher;

3. You will extend the life of the battery. Lithium batteries of all types, whether lithium ion or lithium polymer, do not have a memory effect and can therefore also be charged when only partially discharged. In fact, lithium batteries can be damaged if completely discharged, although in this case there is a control unit within the battery itself (battery management system – BMS) that interrupts the current when voltage falls below a certain limit.

• Do not leave the battery charger connected at 230 V for too long once the charging cycle is complete, indicated by the green LED.

• Always charge your battery in a ventilated area and away from inflammable materials.

• Do not short circuit the battery (creating a connection between the battery terminals using metal elements).

• Do not throw the battery in water.

• Do not attempt to open the battery pack.

• Do not let children play with the battery pack.

• Do not dispose of the battery with normal household waste at the end of its useful life. Take it to a specific disposal centre.

• Do not leave the battery in the sun or rain for too long.

• Avoid contact with any liquids which leak out of the damaged battery.

If the battery is not used, remember to charge it at least once every three months. If you notice that the battery is damaged, the casing is broken or it is swelling, or if you see smoke issuing from it, do not use it and immediately contact customer support.

Always keep the original battery packaging; it is the only option that meets the legal requirements for transport of batteries. If problems are experienced with the battery in future, use this packaging to return the battery to us for repair.

13.1 Battery Features

The Triride battery is a 36 V or 48 V lithium battery without memory effect and, depending on model, has a range of approximately 50 km which can vary from 30 km to 60 km and may be less or greater than the indicated range depending on the set speed, user's weight, type of terrain and weather conditions ... (depending on model, speed, user weight, terrain and weather conditions).

Lithium batteries offer greater flexibility of use and allow charging at any time without having to wait for the battery to completely discharge.

TRIRIDE S.R.L. only uses batteries equipped with a suitable safety system and an intelligent battery management system (BMS).

13.2 Battery Discharging

Discharging of the battery, which occurs with normal use of Triride, is protected by an intelligent management system which interrupts power in case of excess current and if one of the battery cells is too low on charge.

13.3 Battery Charging

The Triride battery is charged via a socket on the side of the battery. Only charge the battery using the original charger supplied with Triride. The battery charging time (if used correctly) averages around 4-5 hours.

Both the intelligent charger and the intelligent battery management system interrupt current when the battery is charged.

13.4 Storing the Battery

Generally, lithium batteries have a discharge level of almost zero when stored. However, the intelligent battery management system contains circuits that constantly consume a small quantity of energy, controlling it at all times.

The energy use for this is very low, but if the battery is stored completely discharged, the BMS may function only for a few more weeks, after which time the battery may be permanently damaged and no longer usable.

Therefore, carefully follow these instructions:

- fully charge the battery before long periods of non-usage
- in any case, fully charge the battery at least once every two months
- if the battery does not function following a long period of storage, it should be disposed of for safety reasons.

13.5 Further Safety Information

The lithium batteries used on the Triride may represent a danger, as they have sufficient potential energy to cause a serious accident in cases of improper use or negligence.

TRIRIDE S.R.L. only uses lithium batteries which are considered stable and equipped with safety systems, including an intelligent management system which controls the battery at all times.

In any case:

- only charge the battery under supervision;
- do not charge the battery while sleeping;
- charge the battery away from inflammable objects;
- only use the battery charger supplied with Triride to charge the battery;
- do not charge or leave the battery near heat sources;
- do not charge the battery at temperatures below 0°C;
- always store the battery charged.

13.6 Supplementary Information on Battery Use

Using the battery at low temperatures

Performance of lithium batteries decreases at low temperatures, both in term of power and duration (below 0°C). This is not a danger, but an inconvenience, and the battery should be stored indoors in the case of such weather conditions.

Do not charge the battery at temperatures below 0°C.

Using the battery in high humidity

The battery's casing protects the cells and circuitry against humidity and rain. This protection is sufficient for occasional, limited exposure, but constant, prolonged exposure to weather conditions such as rain and high levels of humidity may cause battery malfunction. Therefore, avoid these conditions and minimise time spent using Triride in rain or snow as much as possible.

Useful life of battery

All batteries have a useful life, but their performance also decreases over time. The speed of deterioration depends on various factors, including temperature, frequency and conditions of use (user weight, driving style, topography and weather conditions).

Depending on these factors, the useful life of a lithium battery can be estimated between 500 to 1000 charging cycles (if treated correctly).

To maximise the useful life of the battery:

- drive smoothly and at a moderate speed
- do not put the battery under excessive and prolonged strain from the motor
- avoid exposing the battery to high temperatures
- avoid leaving the battery unused for long periods

Battery efficiency decreases gradually, and if the battery stops functioning suddenly, there is definitely a technical problem.

TRIRIDE S.R.L. guarantees the battery for one year, as it is a consumable material. In the case of replacement of the battery under guarantee, the new battery will have a guarantee equivalent to the guarantee period remaining on the original battery.

Disposal of batteries

The Triride battery must be appropriately disposed of through a specialised waste management centre. Consult your local waste collection services for indications. You may contact TRIRIDE S.R.L. for any further clarification.

13.7 Transporting Triride

For transportation of Triride, slide it out of its supports (follow the procedure illustrated in section 11.4 in reverse).

Deactivate the appliance before boarding public or private transport. Always switch off Triride during transport. During transport, place Triride and the wheelchair in the baggage area as per applicable law.

Once Triride has been removed from the supports attached to the wheelchair, it is possible to reinsert the pin into the tilting part and use the arms as a stand for the appliance.

14. MAINTENANCE

14.1 Maintenance, Inspection and Checks

Triride has been carefully designed for optimum performance, but to maintain efficiency, it is very important that a series of preventive maintenance activities are implemented according to the table below.

Regular maintenance significantly reduces the possibility of problems and extends the useful life of the product.

To minimise the risk of accidents or damage to Triride, it is very important to always use the Authorised Technical Service for all repairs.

The first point of contact for information and any questions regarding repairs, maintenance and the guarantee is the reseller/distributor that sold and delivered Triride.

To optimise Triride performance, we propose the following preventive maintenance plan.

MAINTENANCE ACTIVITY	FREQUENCY
Check tire pressure (Tab. section 9.1)	Weekly
Clean Triride	Monthly
Check screw tightness (section 14.4)	Monthly
Check brakes	Monthly
Lubrication of transmission and connection mechanism	Monthly
General check of Triride by Authorised Technical Service	Yearly
Replacing tires and brake pads	As required

*For general yearly checkup, Triride must be delivered clean to the technical service

For cleaning refer to section 14.6

Always perform a general safety check of Triride before each use, remembering that inadequate maintenance may void the guarantee.

14.2 Authorised Technical Support

Ensure that your Triride is always kept in good condition, with the necessary care and maintenance carried out by trained and qualified personnel of the Authorised Technical Service.

For all problems, contact the Authorised Technical Service directly, indicating the serial number that uniquely identifies each appliance, found on the label on the Triride frame.

You can contact your dealer or Triride Customer Service directly via the contact information on the back of this manual.

When a Triride device is sent to the company for maintenance or breakdown assistance, a general check of the structural and wear parts will be carried out automatically to ensure their safety.

It should be noted that no extra work will be carried out from those commissioned, unless specifically authorized by the customer, however, if the customer refuses to perform indispensable and mandatory works (eg brake pads, brake discs, bearings, damaged structural parts, tires, etc.) for the safety of the device, the company will issue a declaration of decline of responsibility and invalidity of the warranty even on the work already carried out, as this is a clear negligence on the part of the user and non-compliance with the provisions of this manual.

14.3 Checking Tire Pressure and Changing the Tire

Following installation, to guarantee your personal safety and maintain correct functioning of Triride, always check that the tire pressure corresponds to what is indicated in this manual (Tab. section 9.1) and that the tires are in perfect condition and do not have surface irregularities.

To change the tire, contact the Authorised Technical Service or TRIRIDE S.R.L. or a centre specialised in maintenance for bicycles and motorcycles.

14.4 Check the Tightening Torque

Check that the screws and connections are firmly tightened. The tightening torque for the screws is:

M5 screws: 7 Nm M6 screws: 10 Nm M8 screws: 15 Nm

14.5 Brake Check

Check that when the brakes are activated, the disk is pressed sufficiently by the brake pad for effective braking.

14.6 Cleaning

To clean Triride, only ever use a damp soft cloth, to avoid introducing water into the appliance. Clean the components of the frame with hot water and soap or a neutral, non-abrasive detergent. Dry carefully to remove any excess water.

Clean the console, the battery pack and the frame with a common mild detergent. Ensure that the front wheel turns freely and remove any dirt present.

Sand and sea water may damage some parts of Triride with prolonged contact. Always clean Triride following use in coastal areas.

14.7 Disposal

When disposing of Triride, the user is responsible for taking all parts which have reached the end of their useful life to an appropriate waste collection centre.

Packaging materials may be taken to waste-collection centres, however it is advisable to keep it for a possible sending in maintenance or assistance.

however it is advisable to keep them for possible return for maintaining or assistance.

Used batteries must be taken to specific centres for recycling.

This product is compliant with Directive 2012/19/EU. The symbol on the appliance featuring a dustbin with a cross through it indicates that at the end of its useful life, requiring disposal separately from domestic waste, the product must be taken to a specific waste management centre for electrical and electronic appliances or returned to the seller upon purchase of a new, equivalent appliance.

The user is responsible for taking the appliance to the appropriate waste collection centre at the end of its useful life.

Appropriate separate waste disposal for subsequent recycling, treatment and environmentally compatible disposal of the decommissioned appliance contributes to avoiding possible negative effects on the environment and health and supports recycling of the product's component materials.

For more detailed information regarding available waste collection systems, contact your local waste disposal service.

15. TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SOLUTION
Triride console does not switch on	Battery discharged	Recharge
	The battery is not inserted correctly	Remove and reinstall the battery, locking with the key
	The battery is not turn ON	Before switching on the Display ensure the battery is turned on
Excessive vibration is experienced during use	The fixing screws in the arms may be loose	Tighten the screws
The control console switches on but the device will not start	Incorrect connection of motor to control unit (Error info 03)	Check that the connection is Secure
	Speed level set on zero (0)	Increase the speed level (1-5)

If you do not solve the problem, contact your dealer or the Triride service center.

16. GUARANTEE

16.1 Terms of Guarantee

TRIRIDE S.R.L. guarantees all rigid and structural components against material defects for the original registered owner for a period of two (2) years from receipt of the device.

TRIRIDE S.R.L. guarantees the battery and battery charger against material defects for the original registered owner for a period of one (1) year from receipt of the device.

The battery is a consumable material.

16.2 Conditions of Guarantee

Consumable materials (except the battery, which has a guarantee of 1 year) are excluded from the guarantee, except in case of early wear due to an original factory defect. These elements include tires, handlebars, brake cables, motor bearings and similar parts.

For problems that can be managed under the guarantee, TRIRIDE S.R.L. recommends contacting the reseller/distributor that sold and delivered Triride.

TRIRIDE S.R.L. will not be held responsible if Triride malfunctions due to inadequate warehouse storage or improper use.

If TRIRIDE S.R.L. considers that any component has been incorrectly installed, used or stored or modifications have been made to Triride or its components which do not observe the manufacturer's specifications or repairs have been carried out autonomously without informing the Authorised Technical Service or TRIRIDE S.R.L., the guarantee is void.

The guarantee does not cover costs for transport, delivery or labour necessary for support or maintenance work, and TRIRIDE S.R.L. will invoice any relative costs if it is established that the component or components are not faulty or, in any case, are not defective under the terms of this guarantee.

Repair or replacement of a defective part must only be carried out by TRIRIDE S.R.L. or an Authorised Technical Service.

Regarding the spare parts installed after the start of the original warranty, TRIRIDE S.R.L. provides (grants) additional warranty period depending on the terms of the warranty itself.

The battery is considered consumable material, and therefore a replacement unit will have a guarantee equivalent to the remaining guarantee on the original battery until one (1) year from the date of first receipt of Triride.

In event of faults or defects, TRIRIDE S.R.L. reserves the right to request that the Triride be sent to them along with all components at the customer's expense to evaluate replacement or repair.

The guarantee is not transferable. The guarantee is only valid for the original registered user that can provide proof of purchase.

With the exception of applicable legal provisions, this limited guarantee fully governs the relationship between the user and TRIRIDE S.R.L. regarding any responsibility that may derive from use of Triride.

The Triride guarantee period is 24 months from the date of receipt of the product. For the battery, the guarantee period is 12 months.

Parts with natural wear are not covered by the guarantee, except in the case of excessive wear caused by a factory defect.

If a defect is identified during the guarantee period, TRIRIDE S.R.L. may proceed with repair or replacement of the part at its discretion.

No guarantee is provided for damage caused by negligence, careless use, interference or improper maintenance by unauthorised personnel.

The plate with the Triride serial number must never be removed or tampered with, or the guarantee is void.

16.3 Activation of Guarantee

The form "Declaration of Successful Receipt of Triride" attached to this manual, must be entirely filled out and sent to TRIRIDE S.R.L. for activation of the guarantee.

The form can be completed online on the page www.trirideitalia.com/en/warranty

17. EMC TABLES

Guide and manufacturer's declaration – electromagnetic emissions		
TRIRIDE is designed to function in the electromagnetic environment indicated below. The customer or user of the appliance must guarantee that it is used in such an environment		
Emissions test	**Compliance**	**Electromagnetic environment**
RF CISPR 11 Emissions	Group 1	TRIRIDE uses RF energy only for internal functions. Thus, RF emissions are very low and therefore probably do not cause any interference with nearby electronic appliances
CISPR 11 Emissions	Class B	TRIRIDE is suitable for use in all those environments, including domestic environments and those connected directly with a public grid low-voltage power source that supplies buildings for domestic use.
Harmonic emissions IEC 61000-3-2	Not applicable	
Voltage/flicker fluctuation emissions IEC 61000-3-3	Not applicable	

Guide and manufacturer's declaration – electromagnetic immunity			
TRIRIDE is designed to function in the electromagnetic environment indicated below. The customer or user of TRIRIDE must guarantee that it is used in such an environment.			
Immunity test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment**
Electrostatic discharge (ESD) IEC 61000-4-2	on contact +- 6kV	on contact +- 2;4;6kV	Floors must be wood, concrete or ceramic tiles. If floors are coated in synthetic materials, the relative humidity must be at least 30%.
	in air +- 8kV	in air +- 2;4;6;8kV	
High-frequency magnetic field (50/60Hz) IEC 61000-4-8	3 A/m	30 A/m	Grid-frequency magnetic fields should be at average levels of a typical area in a commercial or hospital environment.

Guide and manufacturer's declaration – electromagnetic immunity			
TRIRIDE is designed to function in the electromagnetic environment indicated below. The customer or user of TRIRIDE must guarantee that it is used in such an environment			
Immunity test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment**
			Portable and mobile RF communications equipment should not be used closer to any part of TRIRIDE, including cables, than the recommended separation distance calculated with the equation applicable to the transmitter frequency. **Recommended distance:**
Radiated RF IEC 61000-4-3	3 V/m from 80 MHz to 2,5 GHz	20 V/m	d= 0,17 √P from 80 MHz to 800 MHz
			d =0,35 √P from 800 MHz to 2.5 GHz
			Where P is the maximum rated output power of the transmitter, in watts (W), according to the manufacturer of the transmitter and D is the recommended distance, in meters (m). Field strengths of fixed RF transmitters determined by an electromagnetic site[a] survey should be lower than the compliance level for each frequency range[b]. Interferences can occur in proximity of appliances marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the separation distance for higher frequency ranges applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is influenced by the absorption and reflection of structures, objects and people.

[a] Field strengths for fixed transmitters, such as base stations for radio telephones (cordless phones) and land mobile radios, amateur radio equipment, AM FM radio transmitters and TV transmitters can not be predicted theoretically with precision. To assess an electromagnetic environment caused by fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the place where TRIRIDE is used exceeds the applicable compliance level above, the operation of TRIRIDE should be monitored. If abnormal performance is noted, additional measurement may be required as a different orientation or position of the Triride.

[b] The field strength in the frequency range 150 kHz to 80 MHz should be less than 3 V / m

Separation distances recommended between portable and mobile radiocommunication devices and TRIRIDE

TRIRIDE is designed to work in the electromagnetic environment in which RF-irradiated disturbances are controlled. The customer or the user of TRIRIDE can help prevent electromagnetic interference by ensuring a minimum distance between mobile and portable RF communications devices (transmitters) and TRIRIDE, as recommended below, in relation to the maximum output power of the radiocommunication equipment.

Maximum rated output power of the transmitter (W)	Separation distance at transmitter frequency (m)		
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

For the transmitters designed for a maximum output power not reported above, the recommended separation distance d in meters (m) can be calculated using the equation applicable to the transmitter frequency, where P is the nominal maximum output power of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is influenced by the absorption and reflection of structures, objects and people.

18. ACCESSORIES

The standard equipment of the Triride can be enriched by several options and many accessories, in order to enjoy better the new life with Triride.

DISCOVER ALL THE ACCESSORIES ON WWW.TRIRIDEITALIA.COM

Follow us on our website and socials media for the news and events!

Triride

19. ATTACHMENTS - " ACCEPTANCE AND PERSONAL WARRANTY"

Attached to this booklet, in addition to the display manual in use with the purchased Tribike, a file will be delivered containing the regulations in force to be respected on the road and the "Acceptance and approval declaration".

This form must be completed in full and delivered by mail or email to Triride srl for the activation of the warranty.

The form can be completed online on the page **www.trirideitalia.com/en/warranty**

For further information, the Triride Warranties service is active - **garanzia@trirideitalia.it**

WARNING!

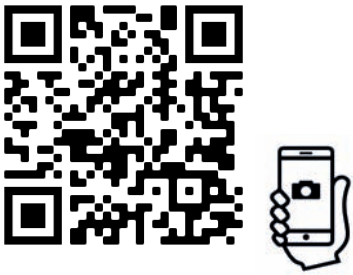
The "Declaration of delivery of the Device" must be read and filled out entirely and delivered to Triride srl by e-mail or post for the personal guarantee to be activated.

In the absence of such, Triride srl reserves the right not to exercise the warranty on the medical device in question.

ACTIVATE YOUR PERSONAL WARRANTY

The form can also be completed online at

www.trirideitalia.com/en/warranty



Dealer stamp

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