

INSTALLATION MANUAL

Klick Central Linking System





Dear Technician,
Thank you for choosing a KLICK product.

This Manual is meant to guide you through all the steps needed to install the central linking system. We remain at your disposal for any information or clarification you may require. We also encourage you to keep up to date on the latest news of our product range, on the accessories available and on our company's events and initiatives.

You can contact us by writing an email to info@klaxon-klick.com, through our web site at www.klaxon-klick.com, or on our Facebook page www.facebook.com/klaxonklickworld.

Please note also that in compliance with European regulation, KLAXON MOBILITY GMBH holds CE certification for all the products in the KLICK range; they are classified as Class I medical devices according to Annex VIII EU745/2017 MDR and they comply with the essential requirements of Annex I EU745/2017 MDR and Annex I of the European Medical Devices Directive 93/42/EEC, as modified by the Directive 07/47/EEC.

KLICK devices belongs to:

- GMDN 42805 code (Wheelchair electric-motor-driven propulsion system)
- UMDNS 17952 code (Power Conversion Kits, Wheelchair)



Thank you again for having chosen our products. We wish you a good day and enjoyable use.

Best regards,
The Staff of KLAXON MOBILITY GMBH

PRELIMINARY INFORMATION

INTRODUCTION

This Manual explains how to install the central linking system of the KLICK electric series devices. KLICK devices are developed to increase the independence of persons with disabilities.

Manufacturer's identification data

KLAXON MOBILITY GMBH

Industriestrasse, 1

9601 - Arnoldstein (Austria)

Tel.: +43 (0)664 4681294

e-mail: info@klaxon-klick.com

Hereinafter: KLAXON.

REVISION INFORMATION

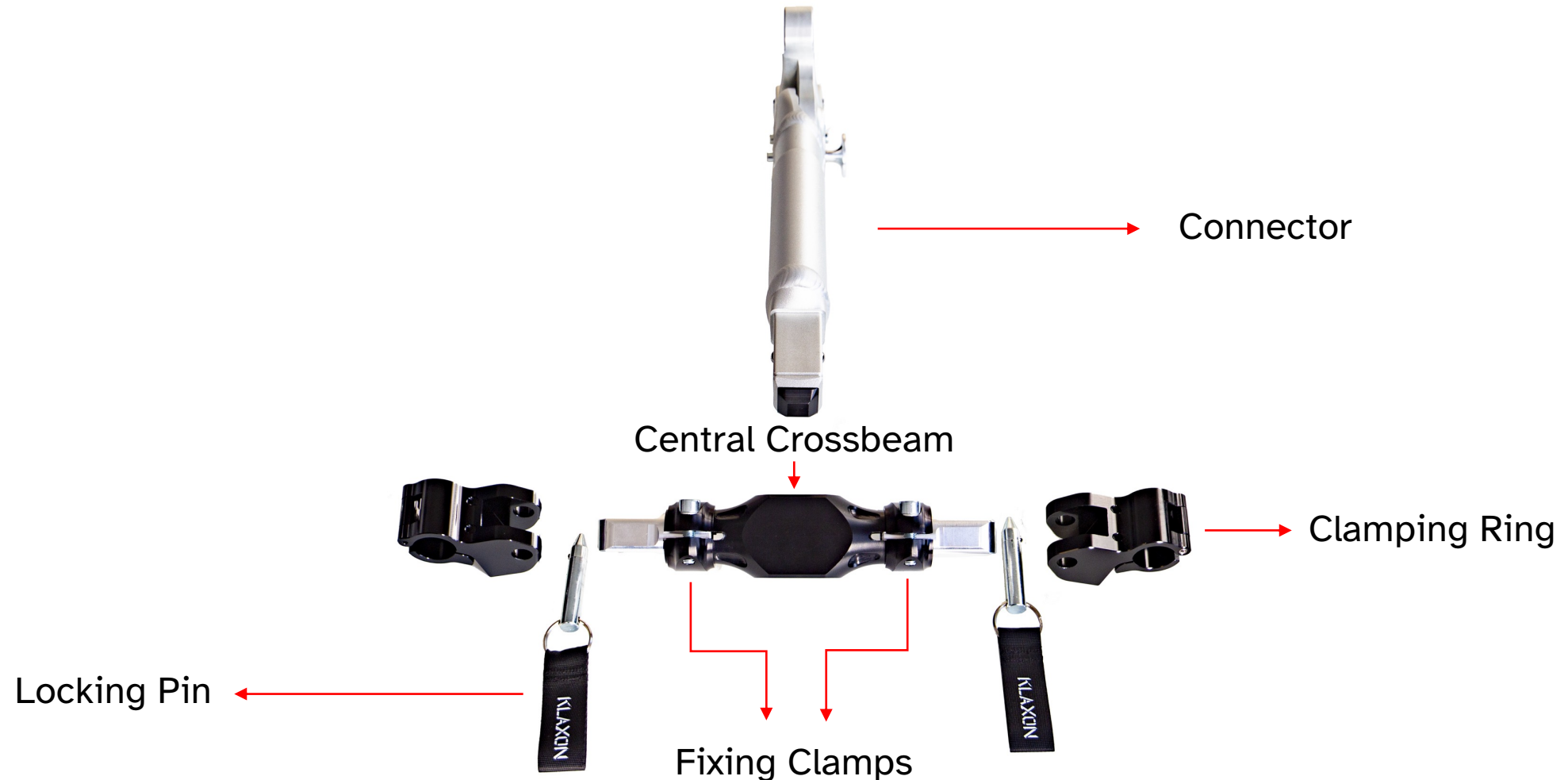
REV.	Description of the modification	DATE
01	Initial release	2016.07.27
02	Revision 2.0	2017.07.26
03	Revision 3.0	2021.01.27
04	Revision 4.0	2022.01.20

All information, illustrations and specifications in this document are based on the latest product information available at the time of publication.

This document is subject to change due to technical innovations, without prior notice.

Linking System Klaxon®: Complete Linking System

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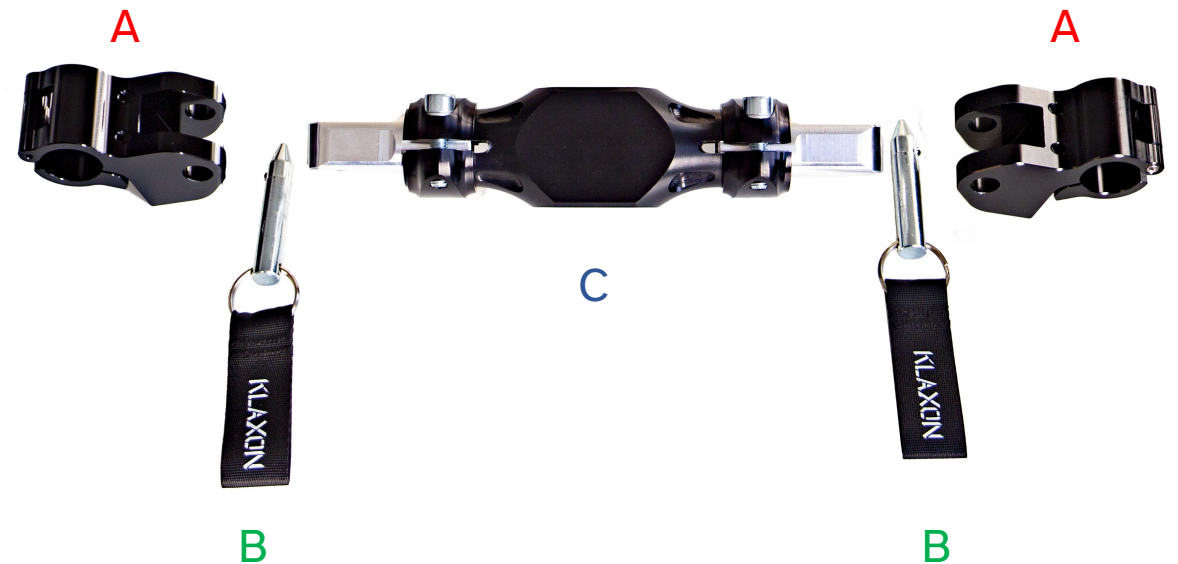
Linking System Klaxon®: Central Crossbeam

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The central crossbeam is the part of the Linking System that will be installed under the wheelchair's seat.

The Clamping Rings (A) will always remain fixed to the wheelchair's frame. The Central Crossbeam (B) can be removed by extracting both the Locking Pins (C).

In case of foldable wheelchair it will be sufficient to extract one of the Locking Pin to let the Central Crossbeam free. This will let you fold the wheelchair again



Linking System Klaxon®:

Connectors

There are two connectors available: the Connector Standard (A) and the Connector Tetra (B)

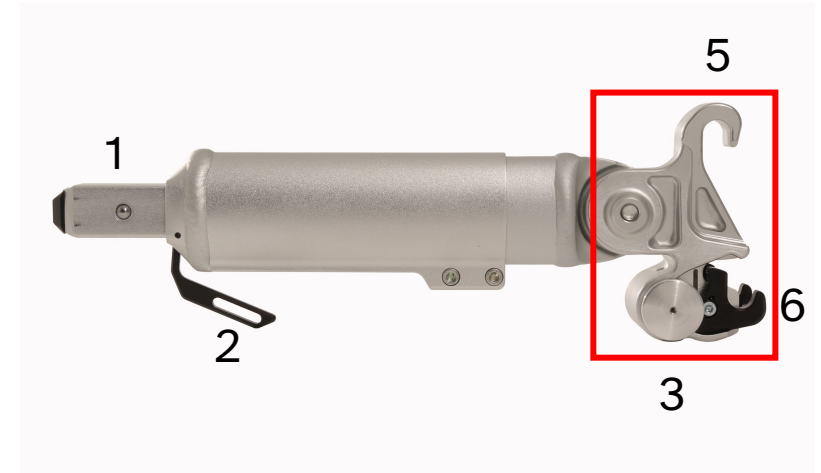
They are composed of:

1. Mounting System in the Crossbeam (with ball-type lock)
2. Connector Lock/Unlock Lever
3. Release button
4. Easy release lever
5. Seat of Upper Pin
6. Seat of Lower Pin
7. Velcro Grip

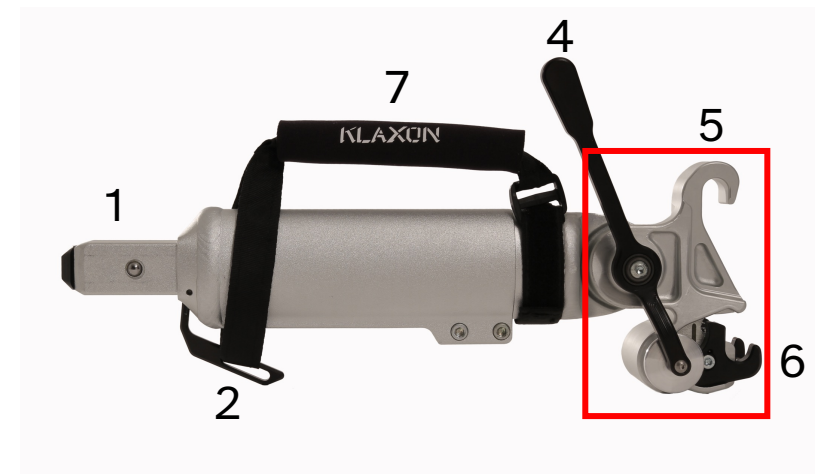
The red square shows the KLICK® coupling (Worldwide Patented)

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A



B

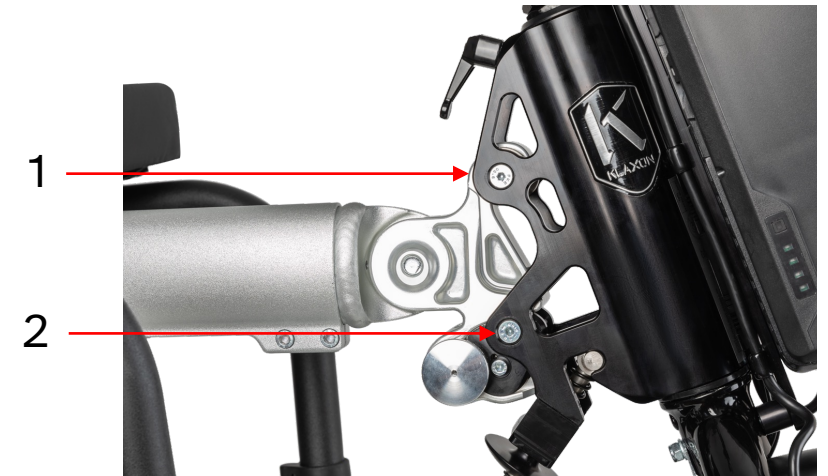
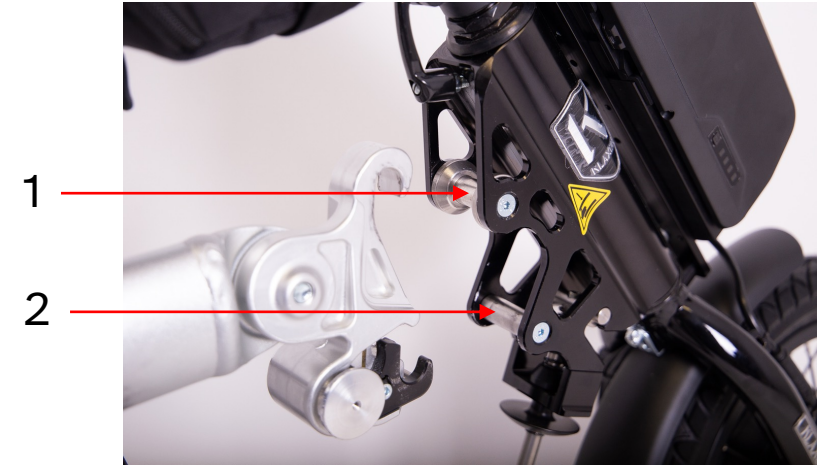


Linking System Klaxon®: Fixing Plate

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The Fixing Plate is located on the KLICK device and consist of an:

1. Upper Pin
2. Lower Pin



Linking System Klaxon®:

Clamping Rings



The clamping rings are the parts of the KLICK connection that always remain attached to the wheelchair frame.

Together with the crossbeam, they must be installed on the wheelchair by authorised KLAXON personnel and must never be removed by the user during use.

Various clamping ring sizes and shapes are available to suit the different tubing diameters and types of wheelchair frames (see some example in the table)

Tube frame section	Frame type	Diameter	Coupling cuff
Round	Parallel	34.945 mm	AGP35
Round	Parallel / Convergent	32.4 mm	AGP32 / AGCP132
Round	Parallel / Convergent	30.0 mm	AGP30 / AGCP130
Round	Parallel / Convergent	28.0 mm	AGP28 / AGCP128
Round	Parallel / Convergent	25.4 mm	AGP25 / AGCP125
Round	Parallel / Convergent	23.0 mm	AGP23 / AGCP123
Round	Parallel / Convergent	22.0 mm	AGP22 / AGCP122
Round	Parallel / Convergent	20.0 mm	AGP20 / AGCP120
Round	Parallel / Convergent	18.0 mm	AGP18 / AGCP118
Oval	Parallel	25.0 x 35.0 mm	AGPOV
Oval	Parallel	27.0 x 33.0 mm	AGPOVSX

Linking system: Crossbeam - Precondition

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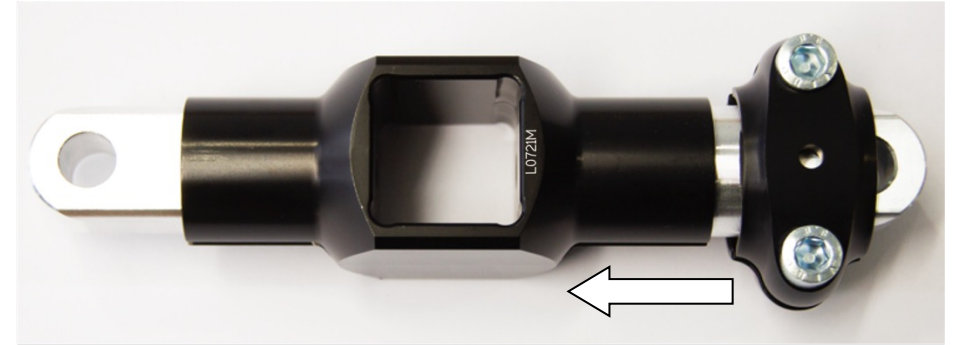


It is advisable to keep the batch code on the front for quick reference in case of need.

Linking system: Crossbeam - Precondition

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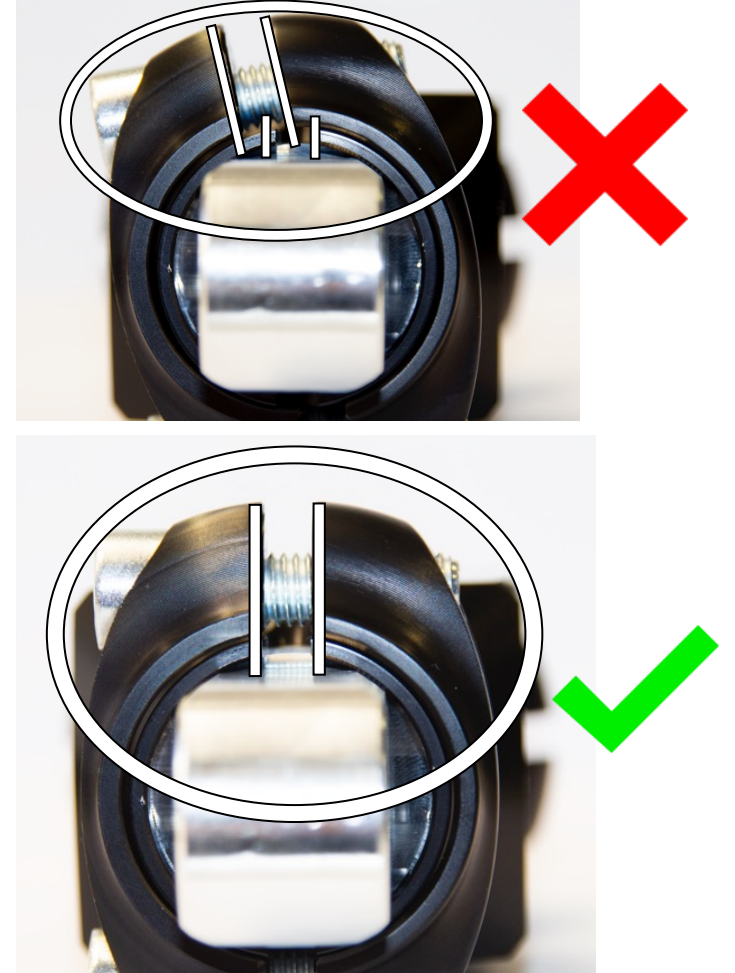
1. The two Fixing Clamps must be inserted in the front part of the crossbeam. For a quick reference see the page above



Linking system: Crossbeam - Precondition

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2. Align the straps to the grooved seat then gently tight their screws alternatively



Installation:

Warning

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Before proceeding to the installation of the KLICK connection system, ensure the items supplied are suitable for the wheelchair to which it will be installed.

Installation:

Clamping Rings - Positioning

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1. To better identify the position where to install the clamping rings, temporarily remove the seat and the moving parts of the wheelchair, if necessary (brakes, side supports, seat supports, etc.). For details about this operation, refer to the wheelchair use and maintenance manual



Installation:

Clamping Rings - Positioning

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2. Install the Clamping Rings on the wheelchair's frame, fastening them with the dedicated screws (which must be facing downwards, when installed on the upper frame tube and facing upwards, when installed on the lower frame tube).



The Clamping Rings must be positioned as forward as possible beneath the seat, in correspondence with the front part of the seat, according to the needs of the user and the specific characteristics of the wheelchair



Installation:

Clamping Rings - Positioning

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	<p>The Clamping Rings must be compatible with the dimensions of all the other wheelchair components; for further information, contact your distributor or KLAXON by sending an email directly to info@klaxon-klick.com.</p>
	<p>If the Clamping Rings are positioned too far back from the front limit of the seat, the coupling of the KLICK CONNECTOR and CROSSBEAM could be difficult for the user; conversely, if positioned too far forward, the CROSSBEAM could cause injury to the lower limbs of the user. Always verify the needs of the end user before fixing the clamping rings in their final position.</p>

Installation:

Clamping Rings - Warning

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If the wheelchair has a converging (or diverging) frame, be very careful when performing the next operation! Use a water level or measure the correct position of the two clamping rings to ensure that the Crossbeam is perfectly perpendicular to the direction of travel of the wheelchair. In case of an installation with converging clamping rings, the locking pins must be inserted from the top (see photo below).



Installation:

Clamping Rings - Horizontal Alignment

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- Secure one of the two clamping rings by tightening the screws lightly. Insert the crossbeam (with the clamp's screws facing forwards) and then fix it in place with the locking pin (as shown in the first photo)



Check the horizontal alignment using the second clamping ring: move it forwards or backwards (as in the third photo), position it so that the crossbeam can move freely within its seat. Once the ideal position has been found, lock the crossbeam into the second clamping ring by inserting the dedicated locking pin. Also tight the screws of the second clamping lightly.



Installation:

Clamping Rings – Vertical Alignment

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4. The following cases have been identified:
- a) Oval CLAMPING-RINGS: vertical alignment is guaranteed by the shape of the CLAMPING-RINGS itself, and no other check is required.
 - b) Round CLAMPING-RINGS for converging frames: rotate the Clamping rings so that the CROSSBEAM can move freely in its seat when coupling/uncoupling (as shown in stage 3).
 - c) Round CLAMPING-RINGS for parallel frame (see Figure): rotate the Clamping rings so that the CROSSBEAM is perfectly horizontal and positioned minimum 2 cm from the wheelchair seat.



Installation:

Clamping Rings – Warning

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	<p>Always check the needs of the user before securing the CLAMPING-RINGS in their final position (meeting the technical requirements for installation of the KLICK system and the characteristics of the wheelchair).</p>
	<p>After aligning the Clamping rings, ensure the CROSSBEAM can be easily removed.</p>

Installation:

Clamping Rings – Fix in place

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5. Tighten the fixing clamps' screw lightly so as they can maintain their position. To do so tighten all the screws lightly and alternatively.





Installation:

Clamping Rings – Fix in place

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5. Tightening the Clamping Rings' screws: After checking the vertical and horizontal alignment of the two Clamping rings (crossbeam), apply copper grease to the screws' thread (one by one), then secure them to the frame of the wheelchair, tighten the screws with a torque wrench set to 10Nm. Tighten with 1-2-1 sequence and repeat the sequence until both screws are tightened at the specified torque.



	Tight the Clamping Rings screws with a torque wrench set to 10Nm (with copper grease).
	When tightening the clamping ring screws with the torque wrench, ensure that the vertical and horizontal alignments have not been altered.

Installation:

Centring the Crossbeam

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6. Loosen the fixing clamps' screws. Position the square section of the Crossbeam in the exact centre of the space between the two Clamping rings (moving the Crossbeam to the right or left). The allowed tolerance is equal to ± 0.5 mm. Once the CROSSBEAM has been positioned centrally, gently tighten the two screws of the fixing clamps in order to keep it in the required position. Use the grooved ruler present on the crossbeam to help you adjust and to centre it equally on both sides.



Installation: Reassembling

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7. After carefully checking the KLICK connection system has been installed on the wheelchair, reassemble the moving parts which were removed previously in Point 1 (brakes, seat supports, etc.). To adjust and reassemble them in their correct position, refer to the wheelchair use and maintenance manual.



Installation:

Special Cases

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For special installation cases please refer to the “Wheelchair Installation Catalogue”. To obtain a copy of the aforementioned catalogue please contact your national distributor (a list of the National Distributors can be found at www.klaxon-klick.com at the “Where to Buy” area) or Klaxon directly. Please note that the catalogue is updated from time to time, always ask for the latest revision available.

Linking system:

KLICK connection system settings

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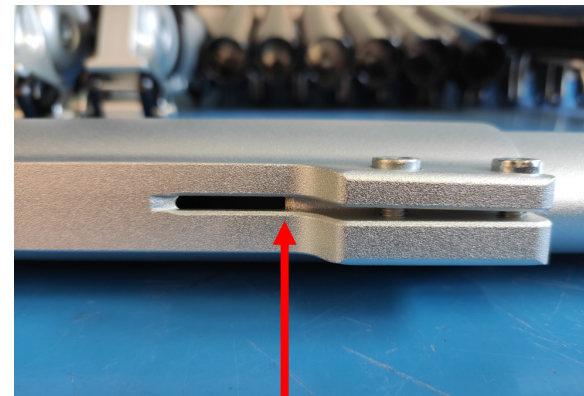
Before proceeding to the installation of the KLICK connection system, ensure the items supplied are suitable for the wheelchair to which it will be installed. Before making any adjustments, always check the needs of the end user.

Linking system:

KLICK connection system settings

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1. Extend the Klick Connector by first loosening the two locking screws on the right side. When extending the Connector do it accordingly the user's need. Tighten all the screws again. Once the screws are tightened again, press the release lever and insert the Crossbeam inside the square seat of the Crossbeam (with the release lever facing downward).



Maximum extension
possible

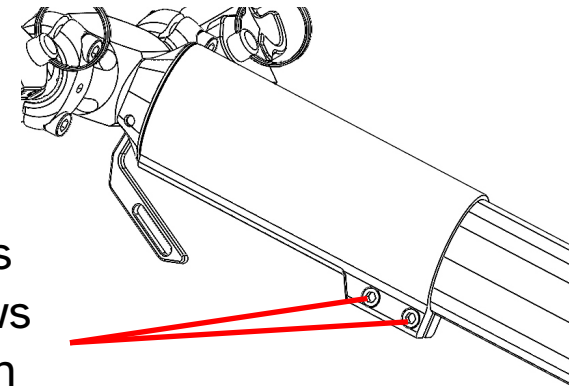


Linking system: KLICK connection system settings

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Once the correct length is set, apply copper grease on the two fixing screws' thread (one by one) and tighten them using an adjustable torque wrench set to 10 Nm.

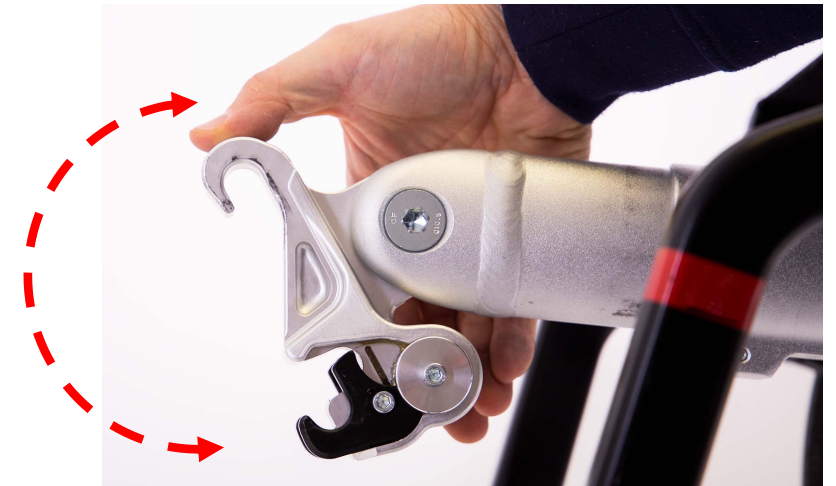
Connector's
Fixing Screws
(10 Nm, with
copper grease)



Linking system: KLICK connection system settings

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2. Loose the Hook's screw in order to regulate the inclination of the Hook's lock-in system



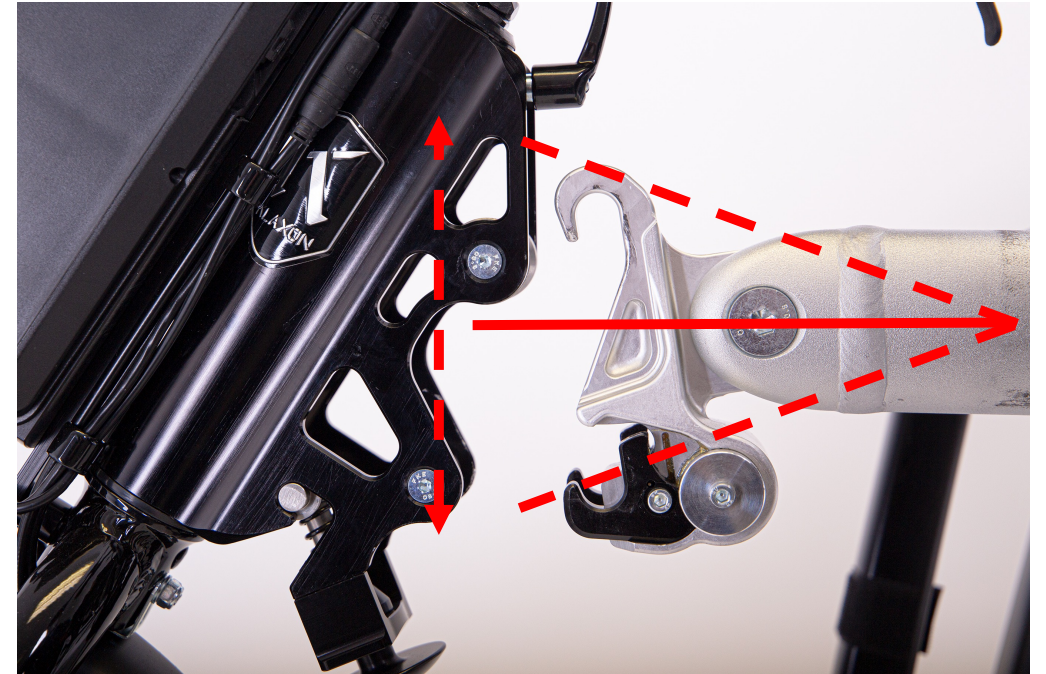
Linking system:

KLICK connection system settings

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3. Place the hook near the fixing plate then adjust the inclination of the crossbeam

Remember that the fixing clamps' screw must be lightly tightened before performing this action

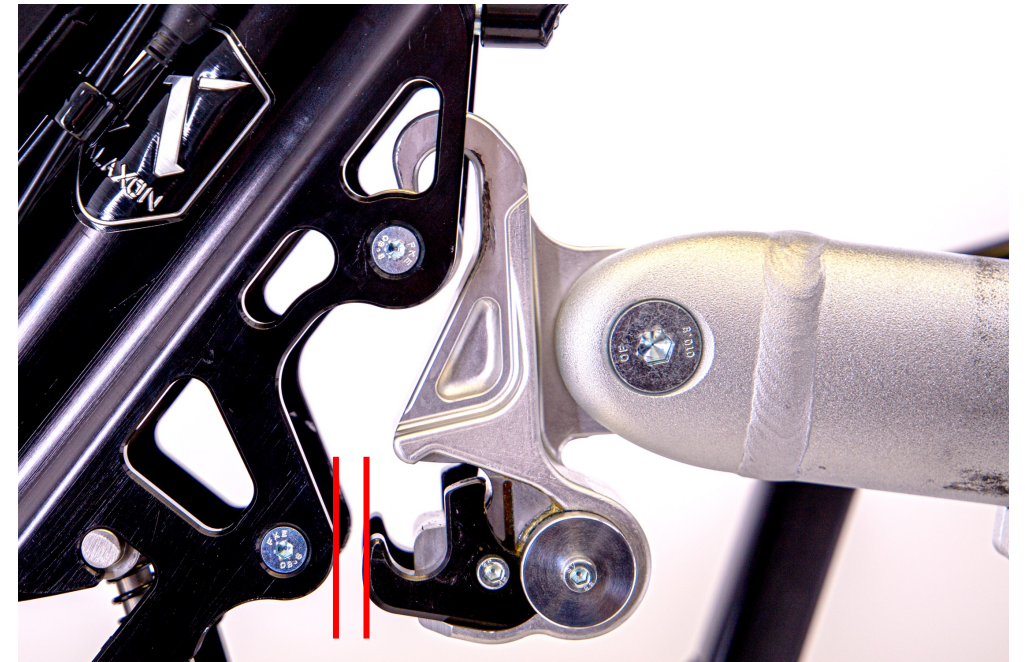


Linking system:

KLICK connection system settings

KLAXON®

4. The upper hook of the KLICK connector should fit to the upper pin and move freely over it. The distance between the lower hook on the KLICK connector and the lower pin located on the coupling plate must be 0,5 to 1 cm



Linking system:

KLICK connection system settings - Warning

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For an optimal and easy use of the KLICK and, specifically, to permit the maximum ease in coupling and uncoupling it, the front fastener of the KLICK CONNECTOR must be at a height equal or slightly greater than the upper pin of the coupling plate, when the KLICK is uncoupled



Linking system:

KLICK connection system settings

KLAXON®

5. Apply copper grease on the screw of the hook locking system and tighten it with a torque wrench set at 50Nm



Tighten the screw with a torque wrench set at 50Nm (with copper grease)



Linking system:

KLICK connection system settings - Warning

KLAXON®



To achieve the safest and best use of the KLICK, the set-up of the Connection system must be performed with the utmost care and attention.

Follow the alignment instructions carefully and repeat the set-up operation until the coupling-release operation is easy and safe.

Linking system:

KLICK connection system settings

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6. Apply copper grease to the thread of the screws of both the Crossbeam's Straps and tighten it using a torque wrench calibrated to 25 Nm. Apply 1-2-1 sequence to tighten. Do this in order to fix the crossbeam in place. From this point it is recommended to fix the crossbeam permanently.



Tighten both the screws of both the Crossbeam's Straps using a torque wrench calibrated to 25 Nm (with copper grease)



Linking system:

Crossbeam permanent fix

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1. After having performed the correct installation and established that the setting is perfect and definitive it is recommended to permanently fix the position of the crossbeam by using the Spring Type Straight Pins (included in the installation set).



Linking system:

Crossbeam permanent fix

KLAXON®

2. Make sure that the Strap is adjusted and tightened in the definitive position. Use a Drill bit of 5mm to open an hole. Keep drilling until you perceive the first void

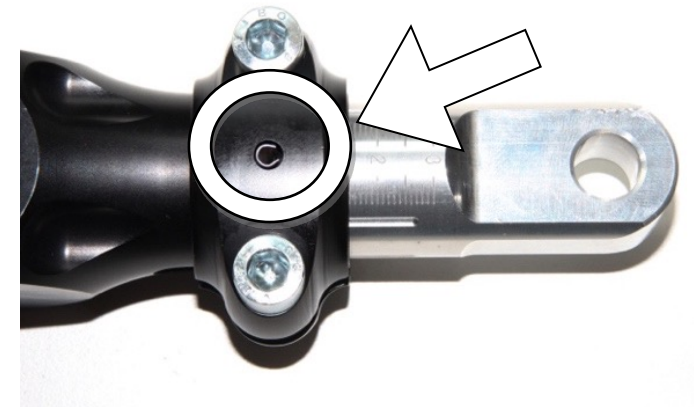


Linking system:

Crossbeam permanent fix

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3. Insert the Spring Type Straight Pins and fix it with a hammer. The final result is highlighted by a circle in the last image. Repeat the procedure for all the two holes.



Linking system:

Final Adjustments – Warning

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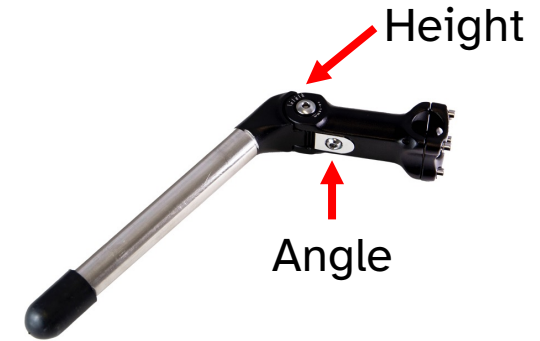
Before making any adjustments, always check the needs of the end user.

Linking system:

Final Adjustments - Handlebar

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1. To adjust the height of the handlebar, proceed as follows:
 - Remove the protective cap and loose the screw located above the tube, using the Hex Key N.6
 - Raise or lower the handlebar to the desired height
 - Close the screw so that the adjustment cannot be modified during normal use of the device



Linking system:

Final Adjustments - Handlebar

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2. To adjust the angle of the handlebar, do the following:

- Use the Hex Key N. 5 to lightly unscrew the screw located over the unit control's bag
- Modify the angle of the handlebar stem to the desired position, rotating it within the range indicated on the printed graphic
- Close the screw so that the adjustment cannot be modified during normal usage of the device
- Next, use the Hex Key N.4 to unscrew lightly the the 4 handlebar plate's screws
- Adjust the inclination by rotating the handlebar itself
- Close the screws after finishing the adjustment.



Linking system:

Final Adjustments - Handlebar



3. To adjust the position and angle of each individual component located on the handlebar (accelerator lever, brake lever, reverse key, LED display), do as follows:
 - Loosen the self-sealing screw from the component
 - Adjust the angle or the position of the component based on needs
 - Close the self-sealing screw so that the adjustment cannot be modified during normal use of the device

Linking system:

Final Adjustments – Display inclination

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3. The display bracket is made of a ductile material that can be bent by applying a moderate amount of force.

To adjust the angle of the Display:

- Determine the angle needed
- Apply sufficient pressure to the top of the stand and in the direction of the desired inclination
- Stop applying force when the desired inclination is reached.



Battery Storage:

Charge level and temperatures



- Always keep Li-Ion batteries charged.
- Li-Ion batteries must never be completely discharged (0%) or stored discharged;
- If fully charged, they should be used as soon as possible.
- For the long-period storage of Li-Ion batteries is preferable that the battery has a charge level of 40-50% when stored.
- Li-ion batteries should be kept at a temperature located between 0°C and 25 °C. The aging of the battery is faster at high temperatures.
- Li-ion batteries must not freeze. Most Li-Ion batteries freeze at approximately -40°C.
- The batteries must be stored in dry places and away from direct sunlight.
- If the batteries are subject to storage for such a long term as more than 3 months, it is recommended to recharge once a month. Charge them between 40% to 50%.
- It is strictly forbidden to store batteries outdoor and to expose them to direct sunlight and to water and/or to the rain. The batteries must be stored in dry places and away from direct sunlight.
- All the previous points must comply to the law, rules, regulations and legislation of the country/area in question.
- All other laws, rules and regulations in force in the country/area in question must be respected

Permanent Charge Capacity Loss Chart (depending on the storage condition)		
Storage temperature	40% Charge	100% Charge
0 °C (32 °F)	2% of charge loss after 1 year	6% of charge loss after 1 year
25 °C (77 °F)	4% of charge loss after 1 year	20% of charge loss after 1 year
40 °C (104 °F)	15% of charge loss after 1 year	35% of charge loss after 1 year
60 °C (140 °F)	25% of charge loss after 1 year	40% of charge loss after <i>3 months</i>

Battery Storage:

Storing and handling



- The battery must not be damaged, ruined, burned, wetted, disassembled, beaten, bended, compressed, crushed, thrown, short-circuited, dropped from a height, pierced or penetrated in any ways and/or by any means.
- Do not put the batteries in a place where children can reach it. In case the device is not used for a long time period, the battery must be removed and stored as indicated previously in the text.
- Do not compress or stack the battery packs. The height of the battery packs must not exceed 1.3m .
- Do not charge the batteries with a battery charger other than that the one provided by the manufacturer. During the charging, the battery/vehicle must be kept in a well ventilated place with good air circulation. Charging time must not exceed 10 hours.
- Do not charge the battery in domestic spaces, offices or crowded areas. It is recommended to monitor the battery/vehicle during the charging period.
- The battery compartments must be separated to prevent them from tilting and/or slipping during storage and transport. Avoid strong vibrations, shocks, extrusions and exposure to direct sunlight, water and/or rain.
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Storing and handling



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Battery Storage:

Recycling/disposal

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The recycling/disposal of Li-Ion batteries depend from national regulations.

The recycling/disposal of the equipment inside the KLICK devices must absolutely comply with regulations of the country. KLAXON is not responsible for disposal that does not comply with the specific local regulations in force.

Servicing: Software updates

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The servicing must include the verification and, in case it is present, the update of the Klick's software.

Servicing: Error Codes



ERROR CODE (bin)	TYPE	AFFECTED COMPONENT
1	Throttle fault	THROTTLE
2	Cruise Fault	CRUISE BUTTON
4	Watchdog	ECU UNIT
8	DIAG	ECU UNIT
16	DIAG	ECU UNIT
32	DIAG	ECU UNIT
64	FPU fault	ECU UNIT
128	ALU fault	ECU UNIT
256	Flow fault	ECU UNIT
512	Echo fault	ECU UNIT
1024	Reverse Check fault	REVERSE COMMAND
2048	Motor overload	MOTOR
4096	Motor overcurrent	MOTOR
8192	Battery overvoltage	BATTERY
16384	Motor temperature	MOTOR
32768	Hall sensor fault	MOTOR