OFFCARR

ALHENA - CHILDREN 3000
CHILDREN 3000 PLUS - DIVA
EMERALD - HALLEY - QPX
VEGA - VEGA.E - VEGA3000

Instructions for Use

CE

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Instructions for Use

Ultralight
Folding

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Thanks for choosing an OFFCARR product.

OFFCARR listens and responds to the customers' needs by engineering highly technical, innovative solutions aimed at reducing daily mobility problems, with special attention to product style and to improving quality of life.

OFFCARR has a certified system for quality management following UNI EN ISO 9001 regulations and a Medical Device - Quality management system following UNI EN ISO 13485 regulations.

OFFCARR products comply with the european medical device regulation UE MDR 2017/745.

Before using or making adjustments on this device, read this instruction manual carefully.

Different versions of this manual, accessible for various types of visual disabilities are available on *www.offcarr.com*

Contact an authorized dealer or the manufacturer at the following address if clarification regarding the safety measures is required.

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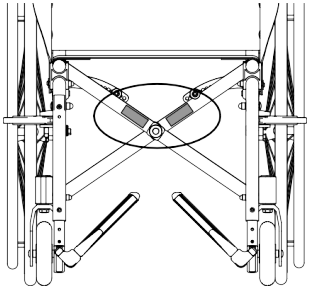
MADE IN ITALY

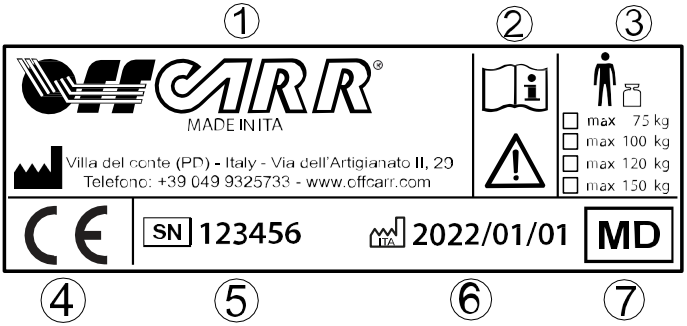
Distributor:

1. Labelling

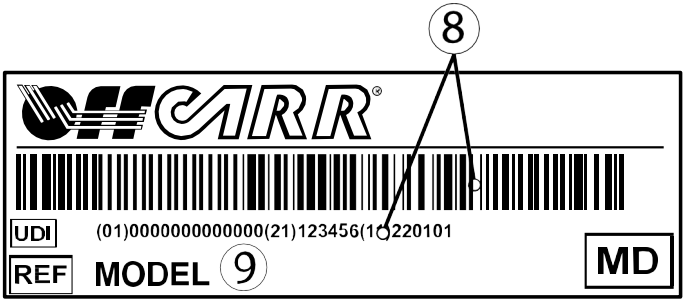
Each OFFCARR product is identified by an unique serial number. The serial number, along with other information is visible on the product stickers applied to the frame.



Stickers position on the product frame



Product sticker (applied on the frame)



UDI sticker (applied on the frame and on the instructions for use)

Information available from the product sticker:

1. Manufacturer
2. Read the instructions
3. Maximum load
4. CE symbol
5. Serial number
6. Manufacturing date
7. Medical device
8. UDI number
9. Model

1.1. Symbols description

Please read all instructions before using the device. Read all Cautions and Warnings carefully.

European Conformity - The symbol denotes conformity to European standards.

WARNING: Read carefully and follow the indications.

NOTE: Auxiliary information.

MD **Medical Device**

UDI **UDI: Unique Device Identifier**

SN **Serial Number**

REF **Reference** - The symbol indicates the model of the product.

ITA The symbol indicates the country of origin.

The symbol indicates the distributor of the product.

The symbol indicates the manufacturer of the product.

The symbol indicates the maximum load permissible for the product.

The symbol denotes the attachment points for *crash tested* models.

The symbol denotes the importance of protecting the packaging and the product from harsh weather.

ALTO FRAGILE The symbol denotes that shipment must be performed with care and the package must always be kept and stored with the arrows pointing upwards.

2. Using the device

In order to move safely and properly use the device, it is always recommended to consult qualified personnel.

Hereafter are some suggestions for a correct use of the device, also aimed to maintain the characteristics of safety and durability over time:

- The brakes only have a parking purpose and should never be used as service brakes to slow down the device in motion.
- Do not lean too far forward, because by moving the centre of gravity, the device could tip-over.
- The device should be used only in accordance with what is proposed in this manual and not of objects in general.
- Always deal with slopes above 6° with assistance from an attendant. This limit is only approximate and it depends on the specific configuration of the device, especially on the position of the centre of gravity of the user-wheelchair combination.
- To ensure the efficiency of the brakes, maintain the tyres properly inflated and quarterly check the knurled locking pin wear.
- Never use the anti-tip devices, if available, as transit wheels.
- The armrests, if available, are not designed to lift the device.
- Avoid wheeling the device without the supervision of an attendant.
- Perform a general check of the device at least every three months, by checking tyre inflation, efficiency of the quick-release axles and brakes; lubricate the moving parts whenever necessary.
- If necessary, the upholstery can be washed with water at low temperature. Avoid wetting or submerging other parts of the device.
- Prolonged contact of the device with water or prolonged exposure to high humidity levels can cause unwanted oxidation of some metal parts and decay of the security features of the materials involved.
- Avoid contact with seawater and sand. In case of contact proceed to an immediate and accurate cleaning.
- Clean periodically the device using a damp cloth and avoid even partial immersion of the frame. Keeping the device clean enhances its efficiency.

Suspend the use of the product and notify OFFCARR in case of allergic reactions or if other similar problems are developed after contact with the device materials.

There is no apparent danger of causing injury to people during the operations of preparation and setup of the device if carried out according to the instructions provided in this manual.

Make sure the tyres are correctly inflated. Since the correct pressure differs between models, read the required pressure on the side of the tyre itself.

The pressure of the *Schwalbe Marathon Plus* tyres should always be kept from a minimum of 7 bar (700 kPa - 100 psi) to a maximum of 9 bar (900 kPa - 130 psi) to prevent damage to the covers themselves.

Keep the device away from heat sources, as not all the components are fireproof.

Upholstery materials comply with the EN 1021-2:2014 regulation.

The approximate lifespan of the device is 7 years, considering correct, normal daily use by a single user and frequent maintenance.

3. Warnings to reduce any risks associated with misuse of the device

It is forbidden to use the device or its parts in different ways from those described on this manual.

When opening or closing the wheelchair, pay attention to the position of the fingers (see 5.1, “Wheelchair opening”) to avoid being pinched and possibly injured between the frame and the crossbar tubes.

Do not use the brakes, if available, to slow down the device at any speed. They are only designed as parking devices.

Do not use the armrests, if available, to pick the device up or as clamping spots.

Never use the anti-tip devices, if available, as transit wheels. It is not their intended purpose.

It is suggested to frequently check the working order of the quick-release wheel devices, especially after each insertion.

The gap between wheels and side-guards or brakes could be lower than 25 mm. Be careful not to put your fingers between the wheels and side-guards or brakes to avoid injury.

With pneumatic tyres, it is recommended to reduce their pressure in the case of air transport, to avoid collateral effects of pressure variations due to altitude.

To maintain the device efficient and maintain its safety requirements it is recommended to uphold a regular upkeep schedule, as described by this manual.

Poor maintenance and improper use of the device can cause damage or injury to the user or assistant.

Any tampering with the components of the device, as well as voiding the warranty, could compromise its structural integrity and safety standards.

Contact OFFCARR in case the maximum user weight is exceeded at any point during the device's lifespan.

Contact OFFCARR or your reseller to check for compatibility with accessories produced by a manufacturer different from OFFCARR.

Do not install on the device mechanical or electronic devices that are not approved by OFFCARR and do not modify its structure in any way. Any combination with other medical devices must be expressly authorized by OFFCARR. In case the combination has been approved, always refer to the respective manuals.

The device and its accessories are not suitable for use in hyperbaric chambers under any circumstances.

In case of prolonged exposure to the sun, the surface of the device can reach high temperatures.

To have more information about connection points and devices needed to secure the device during transport by car (exclusively valid for crash tested models) see 7, "Attachment of the wheelchair for use within a motor vehicle"

Before transferring to or from the device, activate the parking brakes. Always perform transfers with caution.

Some openings in the device may have angles lower than 75° (e.g. space between wheel spokes) or gaps smaller than 25 mm (e.g. gaps between spokes).

For technical and aesthetic reasons the pushing handles may be placed at a height lower than 900 mm from the ground.

Headrests (optional) are not approved for use as headrests on moving vehicles.

The tip assist pedal and anti-tip devices are optional accessories that must be requested when ordering the device.

Do not exceed the weight limit of the devices even temporarily. For example, do not perform activities such as weightlifting on the devices.

Use the device and its parts exclusively for their intended purpose.

The device is suitable for use by children and teenagers; however, adult supervision is recommended.

4. Product presentation

4.1. ALHENA

Alhena are non-invasive medical devices specifically designed to reduce and counterbalance motor impairments in the medium and long-term.

This wheelchair is manually propelled on the back wheels, it allows for many configurations and a wide range of accessories to meet the needs of users.

Only qualified operators must setup the device.

It is forbidden to use the device or its parts in different ways from those described in this manual.

4.1.1. Description

1. Rear frame
2. Crossbar
3. Seat
4. Pushing handles
5. Backrest
6. Rear wheel plate
7. Front frame
8. Front fork support plate
9. Front fork
10. Footrest
11. Footplate
12. Parking brakes
13. Castor wheel
14. Rear Wheel

4.1.2. Features

- Ultralightweight wheelchair
- Titanium folding frame
- Titanium double crossbar
- Two angle-shaped front frame
- Multiple positions for rear wheels
- Tilt adjustable front fork support
- Carbon fibre side-guards
- Foldable and detachable armrests (if selected on the setup)
- Footrest according to the choice during setup
- Different kind of side-guards and armrests
- The order form allows different setups and various combinations of accessories.
- Maximum load: 120 kg

4.1.3. Measurements table

All dimensions are in degrees (°) and millimetres (mm), the weight is expressed in kilograms (kg).

	ALHENA	**Reference values UNI EN 12183**[1]
Seat angle (from horizontal)	0° ÷ 20°	
Backrest angle (from horizontal)	90°	
Leg angle (from seat)	90° - 76°	
Total width	max 740 (L46 - 4°)	700[1]
Total length	max 1200 (P46)	1200[1]
Total height	max 1100	1200[1]
Pivot turn width	max 1650	1300[1]
Turn width	max 1300	1000[1]
Weight[2]	9,7 (38x40)	

All dimensions refer to wheelchairs in standard configuration
The addition of accessories may modify the indicated dimensions and weight
[1] Some dimensions may exceed the reference values according to UNI EN 12183. In some circumstances and with certain configurations, the use of safety exits may be complicated or impossible
[2] The weight depends on the selected configuration and may vary based on accessories.

4.1.4. Rear wheel and pushrim diameter

The table indicates diameter of rear wheels and relative pushrims.

Rear wheel diameter	**Pushrim outer diameter (average)**
24"	535 mm
25"	550 mm

4.1.5. Front wheel diameter

Front wheel options	
80 mm	solid
100 mm	solid
125 mm	solid
150 mm	solid or pneumatic

4.2. CHILDREN3000, CHILDREN3000 PLUS

Children3000, Children3000 Plus are non-invasive medical devices specifically designed to reduce and counterbalance motor impairments in the medium and long-term.

This wheelchair is manually propelled on the back wheels, it allows for many configurations and a wide range of accessories to meet the needs of users.

Only qualified operators must setup the device.

It is forbidden to use the device or its parts in different ways from those described in this manual.

4.2.1. Description

1. Rear frame
2. Crossbar
3. Seat
4. Pushing handles
5. Backrest
6. Rear wheel plate
7. Front frame
8. Front fork support plate
9. Front fork
10. Footrest
11. Footplate
12. Parking brakes
13. Castor wheel
14. Rear Wheel

4.2.2. CHILDREN3000 Features

- Super lightweight wheelchair
- Foldable aluminium alloy frame
- Adjustable frame and seat depth (+ 60 mm compared to the ordered size, up to 38 cm)
- Adjustable backrest height
- Double adjustable crossbar width
- Straight or abducted front frame
- Fixed or removable footrests (or removable and elevating upon technical compatibility assessment)
- Foot adjustment Device (FaD) for footplates
- Various side-guards as specified in the configuration sheet
- Rear wheel plate adjustable in multiple positions
- Tilt-adjustable front forks
- Available with single-drive configuration
- Maximum user weight: 75 kg
- CRASH TESTED: suitable for use in motor vehicles

4.2.3. CHILDREN3000 PLUS Features

- Super lightweight wheelchair
- Foldable aluminium alloy frame
- Adjustable frame and seat depth (+ 60 mm compared to the ordered size, up to 38 cm)
- Adjustable frame width (based on the selected size on the sheet)
- Adjustable backrest height
- Double adjustable crossbar width
- Straight or abducted front frame
- Fixed or removable footrests (or removable and elevating upon technical compatibility assessment)
- Foot adjustment Device (FaD) for footplates
- Various side-guards as specified in the configuration sheet
- Rear wheel plate adjustable in multiple positions
- Adjustable front forks in tilt
- Available with single-drive configuration
- Maximum user weight: 75 kg
- CRASH TESTED: suitable for use in motor vehicles

4.2.4. Measurements table

All dimensions are in degrees (°) and millimetres (mm), the weight is expressed in kilograms (kg).

	CHILDREN3000	**Reference values UNI EN 12183**[1]
Seat angle (from horizontal)	0° ÷ 23°	
Backrest angle (from horizontal)	90° ÷ 113°	
Leg angle (from seat)	90° ÷ 70°	
Total width	max 650	700[1]
Total length	max 1150 (P38)	1200[1]
Total height	max 1020	1200[1]
Pivot turn width	max 1450	1300[1]
Turn width	max 1100	1000[1]
Weight[2]	from 11.5 kg	

All dimensions refer to wheelchairs in standard configuration
The addition of accessories may modify the indicated dimensions and weight

[1] Some dimensions may exceed the reference values according to UNI EN 12183. In some circumstances and with certain configurations, the use of safety exits may be complicated or impossible
[2] The weight depends on the selected configuration and may vary based on accessories.

4.2.5. Rear wheel and pushrim diameter

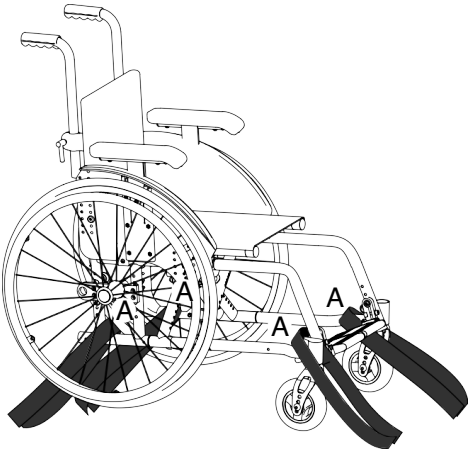
The table indicates diameter of rear wheels and relative pushrims.

Rear wheel diameter	Pushrim outer diameter (average)
20"	445 mm
22"	480 mm
24"	535 mm

4.2.6. Front wheel diameter

Front wheel options	
80 mm	solid
100 mm	solid
125 mm	solid
150 mm	solid or pneumatic

4.2.7. Attachment of the wheelchair for use within a motor vehicle: CHILDREN3000



CHILDREN3000 is equipped with four (4) attachment points **A** for a standard 4-point floor anchoring system, as shown in the diagram. When connecting the wheelchair to a vehicle, attach the fastening system to the four designated connection points marked with the appropriate symbol. These are the sturdiest contact points of the wheelchair and the only ones certified by crash testing.

4.3. DIVA

Diva are non-invasive medical devices specifically designed to reduce and counterbalance motor impairments in the medium and long-term.

This wheelchair is manually propelled on the back wheels, it allows for many configurations and a wide range of accessories to meet the needs of users.

Only qualified operators must setup the device.

It is forbidden to use the device or its parts in different ways from those described in this manual.

The medical device DIVA, if provided with vehicle attachments correctly installed is **CRASH TESTED** and can be used in any vehicle provided of an adequate retaining system.

All configurations of DIVA comply to the following standards:

- ISO 7176-8
- ISO 7176-16
- ISO 7176-19 (only with the optional accessories kit)

4.3.1. Description

1. Rear frame
2. Crossbar
3. Seat
4. Pushing handles
5. Backrest
6. Rear wheel plate
7. Front frame
8. Front fork support plate
9. Front fork
10. Footrest
11. Footplate
12. Parking brakes
13. Castor wheel
14. Rear Wheel

4.3.2. Features

- Ultralight wheelchair
- Aluminium folding frame
- Single or double crossbar (with some limitation of configuration)
- Multiple positions for backrest tilt (if selected on order)
- Multiple positions for rear wheels
- Tilt adjustable front fork support
- Different kind of side-guards and armrests
- Fixed or detachable footrests or elevating and detachable
- Single drive available
- Maximum load: 120 kg

4.3.3. Measurements table

All dimensions are in degrees (°) and millimetres (mm), the weight is expressed in kilograms (kg).

	DIVA	Reference values UNI EN 12183[1]
Seat angle (from horizontal)	0° ÷ 25°	
Backrest angle (from horizontal)	86° ÷ 121°	
Leg angle (from seat)	(90° ÷ 5°[X])	
Total width	max 750 (L50 camber 3°)	700[1]
Total length	max 1150 (max 950[Y]) (P50)	1200[1]
Total height	max 1050	1200[1]
Pivot turn width	1450	1300[1]
Turn width	1460	1000[1]
Weight[2]	from 11,5 kg	

All dimensions refer to wheelchairs in standard configuration
The addition of accessories may modify the indicated dimensions and weight

[1] Some dimensions may exceed the reference values according to UNI EN 12183. In some circumstances and with certain configurations, the use of safety exits may be complicated or impossible
[2] The weight depends on the selected configuration and may vary based on accessories.

4.3.4. Rear wheel and pushrim diameter

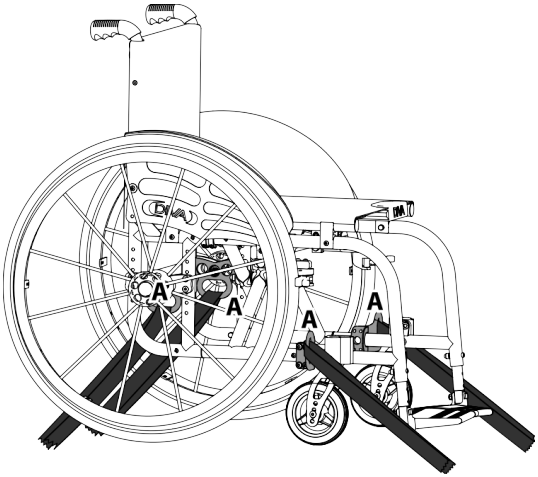
The table indicates diameter of rear wheels and relative pushrims.

Rear wheel diameter	Pushrim outer diameter (average)
24"	535 mm
25"	550 mm

4.3.5. Front wheel diameter

Front wheel options	
80 mm	solid
100 mm	solid
125 mm	solid
150 mm	solid or pneumatic

4.3.6. Attachment of the wheelchair for use within a motor vehicle: DIVA



DIVA is provided with four (4) attachment points **A** for a standard 4-point floor tiedown system, as indicated in the figure. When connecting the wheelchair to a vehicle, connect the attachment system to the four marked connection points. These are the most solid points of contact on the wheelchair, and the only connection points certified by the crash test.

4.4. EMERALD

Emerald are non-invasive medical devices specifically designed to reduce and counterbalance motor impairments in the medium and long-term.

This wheelchair is manually propelled on the back wheels, it allows for many configurations and a wide range of accessories to meet the needs of users.

Only qualified operators must setup the device.

It is forbidden to use the device or its parts in different ways from those described in this manual.

4.4.1. Description

1. Rear frame
2. Crossbar
3. Seat
4. Pushing handles
5. Backrest
6. Rear wheel plate
7. Front frame
8. Front fork support plate
9. Front fork
10. Footrest
11. Footplate
12. Parking brakes
13. Castor wheel
14. Rear Wheel

4.4.2. Features

- Ultra-lightweight wheelchair
- Foldable aluminium frame
- Single crossbar (or double only for depths of 34 and 36 cm)
- Straight or abducted front frame.
- Fixed or removable footrests
- Various side-guards as specified in the configuration sheet
- Rear wheels adjustable in multiple positions
- Front forks adjustable in tilt
- Available with single-drive configuration
- Maximum load capacity: 75 kg

4.4.3. Measurements table

All dimensions are in degrees (°) and millimetres (mm), the weight is expressed in kilograms (kg).

	EMERALD	**Reference values UNI EN 12183**[1]
Seat angle (from horizontal)	0° ÷ 25°	
Backrest angle (from horizontal)	90° ÷ 115°	
Leg angle (from seat)	90° ÷ 60°	
Total width	max 580 (L36 - camber 1°) max 620 (L36 - camber 6°)	700[1]
Total length	max 950 (P36)	1200[1]
Total height	max 1000	1200[1]
Pivot turn width	max 1690	1300[1]
Turn width	max 1250	1000[1]
Weight[2]	11 (32x32)	

All dimensions refer to wheelchairs in standard configuration
The addition of accessories may modify the indicated dimensions and weight

[1] Some dimensions may exceed the reference values according to UNI EN 12183. In some circumstances and with certain configurations, the use of safety exits may be complicated or impossible
[2] The weight depends on the selected configuration and may vary based on accessories.

4.4.4. Rear wheel and pushrim diameter

The table indicates diameter of rear wheels and relative pushrims.

Rear wheel diameter	**Pushrim outer diameter (average)**
20"	445 mm
22"	480 mm
24"	535 mm

4.4.5. Front wheel diameter

Front wheel options	
80 mm	solid
100 mm	solid
125 mm	solid
150 mm	solid or pneumatic

4.5. HALLEY/HALLEY.Ti

Halley are non-invasive medical devices specifically designed to reduce and counterbalance motor impairments in the medium and long-term.

This wheelchair is manually propelled on the back wheels, it allows for many configurations and a wide range of accessories to meet the needs of users.

Only qualified operators must setup the device.

It is forbidden to use the device or its parts in different ways from those described in this manual.

The medical device HALLEY is available in 2 variations, described by this manual:

HALLEY: the aluminium frame version

HALLEY.Ti: the titanium frame version

4.5.1. Description

1. Rear frame
2. Crossbar
3. Seat
4. Pushing handles
5. Backrest
6. Rear wheel plate
7. Front frame
8. Front fork support plate
9. Front fork
10. Footrest
11. Footplate
12. Parking brakes
13. Castor wheel
14. Rear Wheel

4.5.2. HALLEY Features

- Ultralight wheelchair
- Aluminium folding frame
- Double crossbar
- Multiple positions for rear wheels
- Tilt adjustable front fork support
- Different kind of side-guards and armrests
- Fixed or detachable footrests
- Maximum load: 120kg

4.5.3. HALLEY.TI Features

- Ultralight wheelchair
- Titanium folding frame
- Double crossbar
- Multiple positions for rear wheels
- Tilt adjustable front fork support
- Different kind of side-guards and armrests
- Fixed or detachable footrests
- Maximum load: 120kg

4.5.4. Measurements table

All dimensions are in degrees (°) and millimetres (mm), the weight is expressed in kilograms (kg).

	HALLEY	**Reference values UNI EN 12183**[1]
Seat angle (from horizontal)	0° ÷ 20°	
Backrest angle (from horizontal)	90°	
Leg angle (from seat)	90° - 76°	
Total width	max 720 (L44 - 4°)	700[1]
Total length	max 1200 (P46)	1200[1]
Total height	max 1100	1200[1]
Pivot turn width	max 1650	1300[1]
Turn width	max 1300	1000[1]
Weight[2]	12,4 (40x40)	

All dimensions refer to wheelchairs in standard configuration
The addition of accessories may modify the indicated dimensions and weight

[1] Some dimensions may exceed the reference values according to UNI EN 12183. In some circumstances and with certain configurations, the use of safety exits may be complicated or impossible
[2] The weight depends on the selected configuration and may vary based on accessories.

4.5.5. Rear wheel and pushrim diameter

The table indicates diameter of rear wheels and relative pushrims.

Rear wheel diameter	**Pushrim outer diameter (average)**
24"	535 mm
25"	550 mm

4.5.6. Front wheel diameter

Front wheel options	
80 mm	solid
100 mm	solid
125 mm	solid
150 mm	solid or pneumatic

4.6. QPX-AL, QPX-TI

The ultra-lightweight wheelchairs QPX are non-invasive medical devices, specifically designed to reduce and counterbalance a physical handicap. These wheelchairs, manually propelled on the back wheels, have many setups and a wide range of accessories that meet any customer need.

The medical device QPX is available in 2 variations, described by this manual:

QPX-AL: the aluminium frame version

QPX-TI: the titanium frame version

QPX-AL, QPX-TI are non-invasive medical devices specifically designed to reduce and counterbalance motor impairments in the medium and long-term.

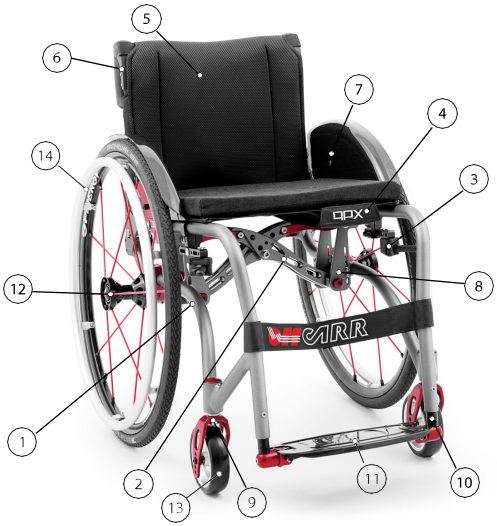
This wheelchair is manually propelled on the back wheels, it allows for many configurations and a wide range of accessories to meet the needs of users.

Only qualified operators must setup the device.

It is forbidden to use the device or its parts in different ways from those described in this manual.

4.6.1. Description

1. Rear frame
2. Crossbar
3. Seat
4. Pushing handles
5. Backrest
6. Rear wheel plate
7. Front frame
8. Front fork support plate
9. Front fork
10. Footrest
11. Footplate
12. Parking brakes
13. Castor wheel
14. Rear Wheel



4.6.2. QPX-AL Features

- Aluminium frame with aluminium crossbar
- Adjustable rear wheel placement to better adjust the centre of gravity
- Carbon fibre side-guard, eventually removable (optional)
- Self closing carbon fibre footplate
- **L** removable armrests (optional)
- Foldable backrest
- Locking system for the folded position
- Maximum weight supported: 100 Kg

4.6.3. QPX-TI Features

- Titanium frame and aluminium crossbar
- Adjustable rear wheel placement to better adjust the centre of gravity
- Carbon fibre side-guard, eventually removable (optional)
- Self closing carbon fibre footplate
- **L** removable armrests (optional)
- Foldable backrest
- Locking system for the folded position
- Maximum weight supported: 100 Kg

4.6.4. Measurements table

All dimensions are in degrees (°) and millimetres (mm), the weight is expressed in kilograms (kg).

	QPX-AL, QPX-TI	**Reference values UNI EN 12183**[1]
Seat angle (from horizontal)	0° ÷ 16°	
Backrest angle (from horizontal)	89° ÷ 93°	
Leg angle (from seat)	90°	
Total width	max 740 (L46)	700[1]
Total length	max 880 (P46)	1200[1]
Total height	max 950 (HP 48, HS 41)	1200[1]
Pivot turn width	max 1600	1300[1]
Turn width	max 1300	1000[1]
Weight[2]	10,3 (38x40)	

All dimensions refer to wheelchairs in standard configuration
The addition of accessories may modify the indicated dimensions and weight

[1] Some dimensions may exceed the reference values according to UNI EN 12183. In some circumstances and with certain configurations, the use of safety exits may be complicated or impossible
[2] The weight depends on the selected configuration and may vary based on accessories.

4.6.5. Rear wheel and pushrim diameter

The table indicates diameter of rear wheels and relative pushrims.

Rear wheel diameter	**Pushrim outer diameter (average)**
24"	535 mm
25"	550 mm

4.6.6. Front wheel diameter

Front wheel options	
80 mm	solid
100 mm	solid
125 mm	solid
150 mm	solid or pneumatic

4.7. VEGA / VEGA.E

The lightweight wheelchair VEGA is a non invasive medical device, specifically designed to reduce and counterbalance a physical handicap. This wheelchair is manually propelled on the back wheels, it has many setups and a wide range of accessories that meet any customer need.

Vega are non-invasive medical devices specifically designed to reduce and counterbalance motor impairments in the medium and long-term.

This wheelchair is manually propelled on the back wheels, it allows for many configurations and a wide range of accessories to meet the needs of users.

Only qualified operators must setup the device.

It is forbidden to use the device or its parts in different ways from those described in this manual.

The medical device VEGA is available in 2 variations, described by this manual:

VEGA: the standard version

VEGA.E: version with smaller front frame, only available with entirely detachable footrests that, when removed, shorten the wheelchair of around 50 mm compared to a same sized VEGA

4.7.1. Description

1. Rear frame
2. Crossbar
3. Seat
4. Pushing handles
5. Backrest
6. Rear wheel plate
7. Front frame
8. Front fork support plate
9. Front fork
10. Footrest
11. Footplate
12. Parking brakes
13. Castor wheel
14. Rear Wheel

4.7.2. Features

- Ultralight wheelchair
- Aluminium folding frame
- Double titanium crossbar (subject to limitations)
- Multiple positions for rear wheels
- Tilt adjustable front fork support
- Different kind of side-guards and armrests
- Fixed or detachable footrests or elevating and detachable
- Single drive available
- Maximum load: 120kg

4.7.3. Measurements table

All dimensions are in degrees (°) and millimetres (mm), the weight is expressed in kilograms (kg).

	VEGA / VEGA.E	Reference values UNI EN 12183[1]
Seat angle (from horizontal)	0° ÷ 25°	
Backrest angle (from horizontal)	90°	
Leg angle (from seat)	90° ÷ 70° (5°)	
Total width	max 720 (L48 - 3°)	700[1]
Total length	max 1200 (P50 - COG 7)	1200[1]
Total height	max 1050	1200[1]
Pivot turn width	max 1500	1300[1]
Turn width	max 1300	1000[1]
Weight[2]	12,7 (38x38)	

All dimensions refer to wheelchairs in standard configuration
The addition of accessories may modify the indicated dimensions and weight

[1] Some dimensions may exceed the reference values according to UNI EN 12183. In some circumstances and with certain configurations, the use of safety exits may be complicated or impossible
[2] The weight depends on the selected configuration and may vary based on accessories.

4.7.4. Rear wheel and pushrim diameter

The table indicates diameter of rear wheels and relative pushrims.

Rear wheel diameter	Pushrim outer diameter (average)
24"	535 mm
25"	550 mm

4.7.5. Front wheel diameter

Front wheel options	
80 mm	solid
100 mm	solid
125 mm	solid
150 mm	solid or pneumatic

4.8. VEGA3000

The lightweight VEGA3000 wheelchair is a non-invasive medical device, specifically designed to reduce and counterbalance physical disabilities, offering the possibility to accommodate any evolution of expansion or reduction of the user. It is a manually propelled wheelchair with rear-wheel drive, offering a wide range of accessories to meet any customer's needs.

Vega3000 are non-invasive medical devices specifically designed to reduce and counterbalance motor impairments in the medium and long-term.

This wheelchair is manually propelled on the back wheels, it allows for many configurations and a wide range of accessories to meet the needs of users.

Only qualified operators must setup the device.

It is forbidden to use the device or its parts in different ways from those described in this manual.

4.8.1. Description

1. Rear frame
2. Crossbar
3. Seat
4. Pushing handles
5. Backrest
6. Rear wheel plate
7. Front frame
8. Front fork support plate
9. Front fork
10. Footrest
11. Footplate
12. Parking brakes
13. Castor wheel
14. Rear Wheel

4.8.2. Features

- Super lightweight wheelchair
- Foldable aluminium alloy frame
- Adjustable frame and seat depth
- Adjustable backrest height
- Double adjustable crossbar width
- Straight or abducted front frame
- Fixed or removable footrests (or removable and elevating upon technical compatibility assessment)
- Foot adjustment Device (FaD) for footplates
- Various side-guards as specified in the configuration sheet
- Rear wheel plate adjustable in multiple positions
- Tilt-adjustable front forks
- Available with single-drive configuration
- Maximum user weight: 120 kg

4.8.3. Measurements table

All dimensions are in degrees (°) and millimetres (mm), the weight is expressed in kilograms (kg).

	VEGA3000	**Reference values UNI EN 12183**[1]
Seat angle (from horizontal)	0° ÷ 23°	
Backrest angle (from horizontal)	90° ÷ 113°	
Leg angle (from seat)	90° ÷ 70° (90° ÷ 5° [X])	
Total width	max 650	700[1]
Total length	max 1150 (max 1000 [Y]) (P38)	1200[1]
Total height	max 1020	1200[1]
Pivot turn width	max 1450	1300[1]
Turn width	max 1100	1000[1]
Weight[2]	from 12,5	

All dimensions refer to wheelchairs in standard configuration
The addition of accessories may modify the indicated dimensions and weight

[1] Some dimensions may exceed the reference values according to UNI EN 12183. In some circumstances and with certain configurations, the use of safety exits may be complicated or impossible
[2] The weight depends on the selected configuration and may vary based on accessories.

4.8.4. Rear wheel and pushrim diameter

The table indicates diameter of rear wheels and relative pushrims.

Rear wheel diameter	**Pushrim outer diameter (average)**
24"	535 mm
25"	550 mm

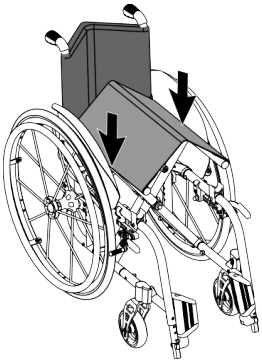
4.8.5. Front wheel diameter

Front wheel options	
80 mm	solid
100 mm	solid
125 mm	solid
150 mm	solid or pneumatic

5. Preparation for use

The preparation for use of these devices must be performed by qualified personnel to ensure the specific suitability of the product for the user and the correct working order of all parts and accessories, as well as to provide clear instructions to the user.

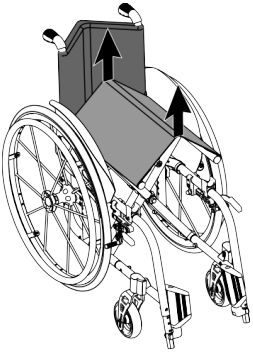
5.1. Wheelchair opening



Apply pressure with the open palm over the sides of the seat, as shown on the drawing, until the seat is perfectly aligned to the frame

Place your hands only on the upper part of the seat support tubes without wrapping them to avoid crushing of the fingers during the opening operation

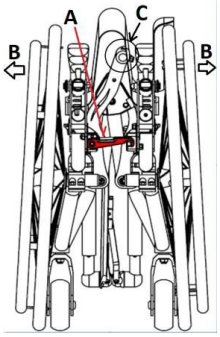
5.2. Wheelchair folding



If necessary, fold up the footplate(s) to allow the folding of the wheelchair frame

Pull the seat upholstery upwards with both hands as shown on the drawing

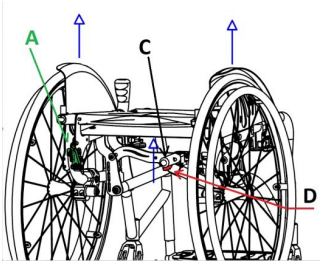
5.3. Wheelchair opening (QPX)



- Unlock locking lever **A** by putting it vertically
- Start opening the seat by pulling apart the wheels from one another outward.
- When the wheelchair is slightly open, apply pressure with the palms on **C** until you can hear the click of the locking mechanism.

Pay attention to avoid any pinching of the fingers between the moving crossbar arms. Act only on the lock

5.4. Wheelchair folding (QPX)



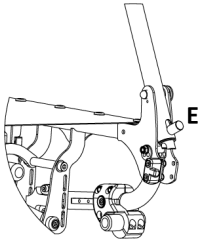
- Press button **D** on the lower part of block **C** to unlock the crossbar and allow for its closing;
- Pull block **C** upwards until its locking
- Turn **A** clockwise until it locks, to stop the frame from opening on its own

Note: If closing the wheelchair seems too hard, lift the footrest slightly on the not pivoted end. Doing so the closing process starts in a bit easier way and avoiding the force needed to start from the footrest completed open

5.5. Backrest opening and closing (QPX)

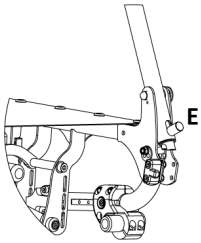
The two backrest holders are independent, they both have to be closed at the same time

5.5.1. Opening the backrest



- Open the backrest by pulling on both its sides.
- Keep pulling until the locking mechanism clicks.
- Make sure both mechanisms are locked.
- Try to lower the backrest without touching the levers to be sure it is locked before sitting on the wheelchair.

5.5.2. Closing the backrest



- Push the **E** lever on one of the two holders to unlock the backrest movement.
- Repeat on the other holder.
- Be careful: the position of the backrest upholstery may interfere with the crossbar when it is in the closed position

Armrests should be removed before folding the backrest

5.6. Inserting / removing the armrests (QPX)

L shaped armrest is the only removable armrest available for QPX wheelchairs. It's revolving and removable and, depending on the setup, height adjustable.

5.6.1. Inserting the armrests

- Place the lower part of the armrest onto its correct lodging
- Make sure it is facing the right way and check the correct placement by verifying its stability.

5.6.2. Removing the armrests

- When removing the armrest must be revolved backwards (even if partially) before it is removed from its lodging.
- The armrest is not fundamental for the correct functioning of the wheelchair and can be removed while the user is sitting on the wheelchair.

Armrests should never be used to lift the wheelchairs, be it with or without the user.

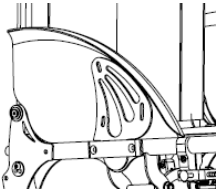
Armrests should be removed before folding the backrest.

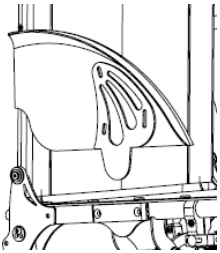
5.7. Inserting / removing the side-guards (QPX)

QPX models are available with carbon fibre side-guards. These can be fixed or removable, as chosen on the order form. Both cases leave a range of adjustments to compensate for any change of the rear wheel position.

For removable side-guards:

- To remove the side-guards, carefully extract it from its lodging.
- When inserting it back, insert the cone-shaped titanium blade supporting the carbon on its correct lodging on the side of the seat, making sure the placement is correct and stable.





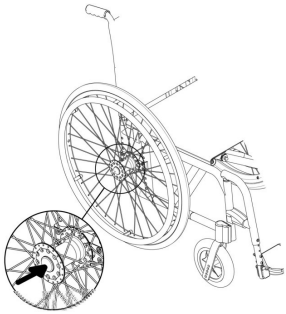
Inserting and extracting the side-guards can be performed with the wheel both in place and not and even with the user sitting on the wheelchair.

5.8. Rear wheels release and re-engagement check

Verify proper operation of the quick-release axle devices before using the wheelchair.

The wheelchair is usually shipped with the rear wheels already mounted.

- Make sure the brakes are released
- Holding down the quick-release button (in the centre of the hub), slide the wheel out of the bush
- Still holding down the button, reinsert the wheel into its seat and release the button, making sure it has returned to its home position. It should click audibly when in seat
- Check the working order of the engagement by trying to pull the wheel outward without pressing the button, making sure the wheel is correctly locked



For safety reasons it is important to repeat this test every time that for transport or maintenance reasons, the rear wheels are removed and reassembled to the frame.

5.9. Tyre pressure check

A periodical check of the tyre pressure helps to keep the device efficient and more comfortable

Verify the tyre pressure value according to the value marked on the tyre. Indicatively the maximum pressure for the most common wheels is:

- *7 to 9 bar (700÷900 kPa - 100÷130 psi)* for *Schwalbe Marathon Plus* wheels
- *7.5 bar (750 kPa - 110 psi)* for high pressure wheels
- *4.5 bar (450 kPa - 65 psi)* for 20", 22", 24" x 1.3/8" wheels
- *2.5 bar (250 kPa - 30 psi)* for pneumatic castor wheels

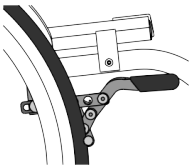
The pressure for the model Schwalbe Marathon Plus should always be kept from a minimum of ***7 bar (700 kPa - 100 psi)*** to a maximum of ***9 bar (900 kPa - 130 psi)*** to prevent damage to the lateral surface of the tyre itself.

With pneumatic tyres, it is recommended to reduce their pressure in the case of air transport, to avoid collateral effects of pressure variations due to altitude.

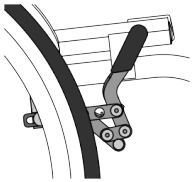
5.10. Brakes check

To check the correct functioning and the efficiency of the parking brakes:

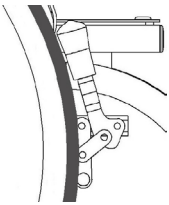
- activate the brakes (**ON** position)
- check if the wheels are locked in place



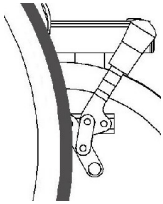
*Pushing brake **ON** position*



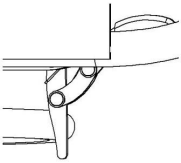
*Pushing brake **OFF** position*



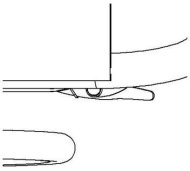
*Pulling brake **ON** position*



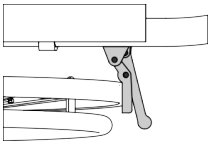
*Pulling brake **OFF** position*



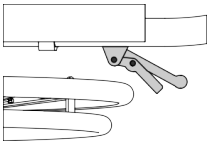
*Scissor brake **ON** position*



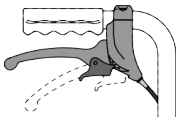
*Scissor brake **OFF** position*



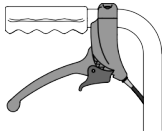
*Composite brake **ON** position*



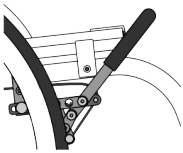
*Composite brake **OFF** position*



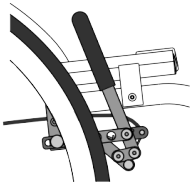
*Drum brake **ON** position*



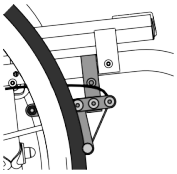
*Drum brake **OFF** position*



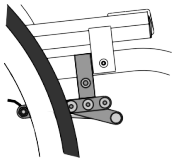
*Single brake lever side **ON** position*



*Single brake lever side **OFF** position*



*Single brake opposite to lever side **ON** position*



*Single brake opposite to lever side **OFF** position*

*Single brake integrated in clothes guard, **ON** pos.*

*Single brake ntegrated in clothes guard, **OFF** pos.*

Brake type availability is limited depending on the chosen configuration. Not all brake types are available for every setup.

The included brakes, except for the assistant-activated brakes (drum), must be used exclusively as parking brakes and never as service brakes.

To ensure the efficiency of the brakes it is necessary to maintain the proper tyre pressure and check the wear of the clamping elements frequently.

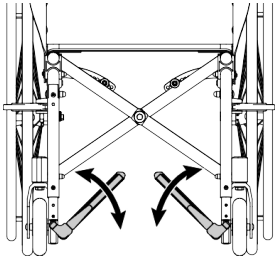
5.11. Footrest positioning

OFFCARR wheelchairs can be configured with detachable or not detachable footrests

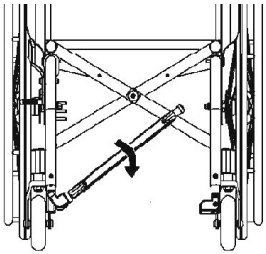
According to the limits of setup, the footplate can be single or double (separate footplates). The footplates can be folded down once the wheelchair is open

The single footplate is available in manual or automatic version. The automatic version, which follows the opening/folding of the wheelchair, is available only for non-detachable footrests frames.

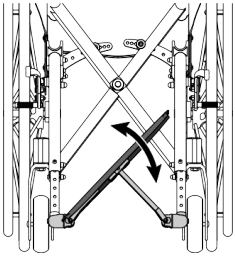
After opening the wheelchair, manually bring the footplates to the correct position by rotating them downward. In case of single footplate, pay special attention to the engagement of the footplate on the frame on the side opposite the fulcrum.



Separate footplates



Single footplate



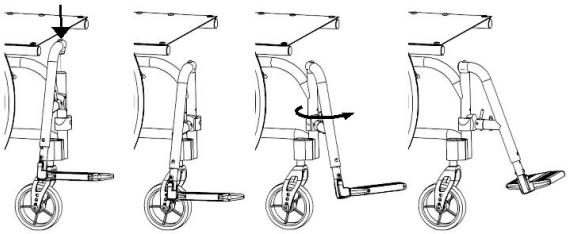
Automatic footplate

In the absence of weight, even with the wheelchair open, the automatic fooplate remains slightly raised on one side. This condition is absolutely normal and allows the automatic closing. A slight weight on the plate is enough to make it assume the horizontal position.

In case of removable footrests frame, the footrests are packed separately. They must be assembled before use.

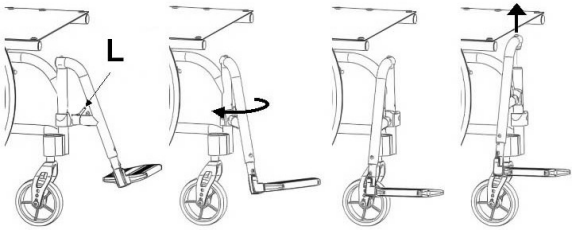
To insert the footrest:

- open the wheelchair
- insert the footrests in their correct housing and rotate them starting from a 90° angle position from the frame (as shown) and rotate it inwards until the hooking mechanism snaps



To extract the footrest:

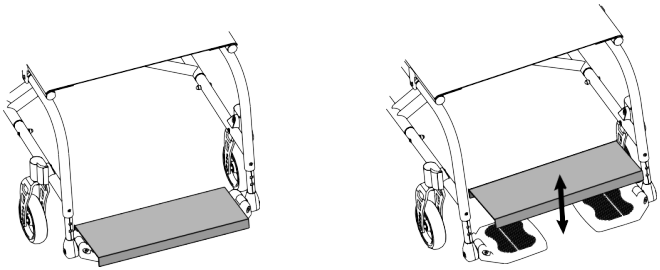
- Press the lever **L** and rotate the footrest outwards (while maintaining the lever pressed)
- Remove the footrest from the hinge pin by pulling it upwards



The detachable footrest can be rotated both inwards and outwards, by using the same mechanism

5.11.1. Footplate cover

For certain configurations, the wheelchair can be provided of a metal single plate that covers the plastic/aluminium footplates. The plate anchors to the footplates with light pressure, with no special locking mechanisms. To remove it, simply lift it up; to reinsert it, it must be placed over the footplates by applying slight pressure.



5.12. Accessories check

Some accessories required when setting up the wheelchair may be supplied separately. You must assemble them and check their operation before you start using the wheelchair.

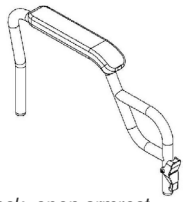
6. Accessories

OFFCARR products can be configured with different accessories, described in the following paragraphs.

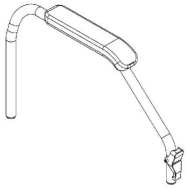
6.1. Armrests

OFFCARR wheelchairs can be equipped (with some limitations) with:

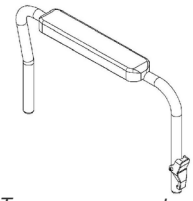
- open Desk armrest (to be used with side-guards fixed to the frame)
- closed Desk armrest (with built in side-guards)
- closed Height adjustable Desk armrest
- open Sport armrest (to be used with side-guards fixed to the frame)
- closed Sport armrest (with built in side-guards)
- closed Height adjustable Sport armrest
- open **U** armrest (to be used with side-guards fixed to the frame)
- closed **U** armrest (with built in side-guards)
- closed Height adjustable **U** armrest
- tip-up height adjustable **L** armrest (to be used with side-guards fixed to the frame)



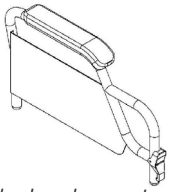
Desk, open armrest



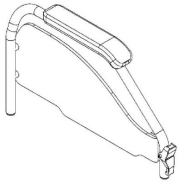
Sport, open armrest



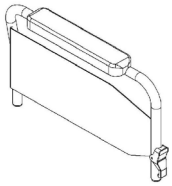
***U** Type, open armrest*



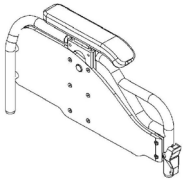
Desk, closed armrest



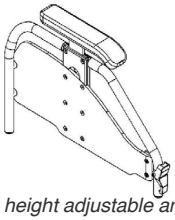
Sport, closed armrest



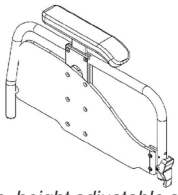
***U** Type, closed armrest*



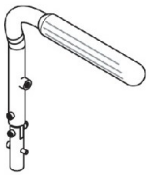
Desk, height adjustable armrest



Sport, height adjustable armrest



***U** Type, height adjustable armrest*



***L** Type, tip-up and height adjustable armrest*

Open or closed armrests (not height-adjustable) are available in two heights: 22 or 27 cm

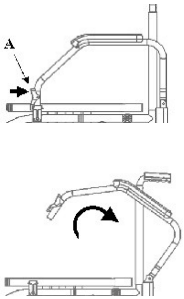
All armrests are supplied in a tip-up and removable version.

Conflicts caused by particular configurations may affect the choice of armrests. It is anyways always possible to disable armrest tilting.

The armrests are not designed to lift the wheelchair, either with or without a user.

6.1.1. Tip-up armrest

According to configuration limitations, Desk, Sport and **U** model armrests can all be folded down.

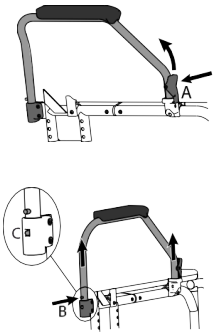


To flip the armrests over:

- Unlock the armrest rotation by pressing lever **A** and rotate it backwards.
- The armrest can be rotated fully behind the backrest.

6.1.2. Detachable armrest

Desk, Sport and **U** armrests are always detachable.



To remove the armrests:

- Press lever **A** to unlock the rotation and move them backwards.
- Once the front is unlocked, press and hold button **B** on the rear block to pull the armrest out of its housing.

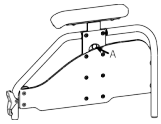
When reinserting the armrest on the rear support, make sure that the pin **C** is fully inserted on its guide. This guide prevents the armrest once opened from rotating sideways when it is not locked at the front.

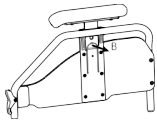
6.1.3. Height adjustable armrest

Desk, Sport and **U** armrests are also available with height adjustable elbow-rest. To

raise/lower the elbow-rest:

- While holding down button **A**, inside the armrest, move the armrest to the desired height.
- Release the button to lock the adjustment.
- Alternatively, you can pull out the hooking tab **B** slightly to unlock the movement of the elbow-rest.
- In either case, make sure the armrest is in a stable position before use. Apply light pressure until it clicks into place.



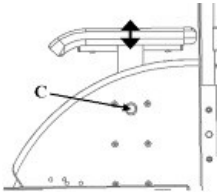


6.1.4. Armrest Integrated in the side-guard

Depending on the selected configuration, the side-guard can incorporate the adjustable armrest. To

raise/lower the armrest:

- While holding down button **C** located inside the side-guard, adjust the armrest to the desired height
- Release the button to lock the adjustment
- Ensure the armrest is in a stable position before use. Apply slight pressure until it clicks into place

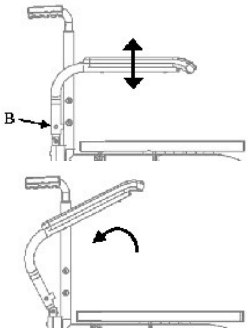


6.1.5. L type armrest, tip-up and height adjustable

Unless specifically requested, the standard height of the armrest from the seat is 220 mm. However, it is also possible to increase or decrease it by 20 or 40 mm after the order has been placed.

To adjust the height of an **L** type armrest:

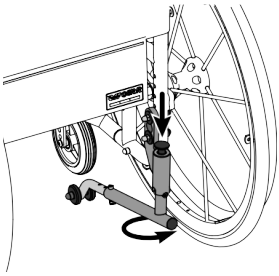
- Remove screw **B**.
- Select the desired height (the support insert is pre-drilled in 20 mm steps) and reinsert the previously removed screw **B**.
- Tighten screw **B** appropriately.



If provided by the selected configuration, it is possible to tilt the armrest backwards and extract it.

6.2. Anti-tip device

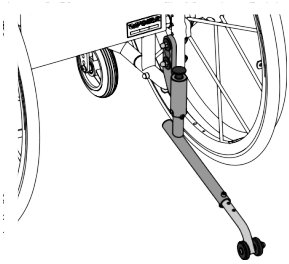
OFFCARR wheelchairs can be equipped with left and/or right anti-tip devices.



Never use the anti-tip devices as transit wheels. It is not their intended purpose.

6.2.1. Use of the revolving anti-tip device

When not in use the anti-tip device is positioned horizontally under the frame:

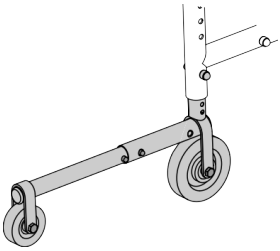


To activate the anti-tipping device, push the knob down to unlock it and rotate it to the working position. Always make sure that the locking position is reached after each activation or deactivation operation.

The anti-tip can be opened and closed only with the wheelchair fully opened.

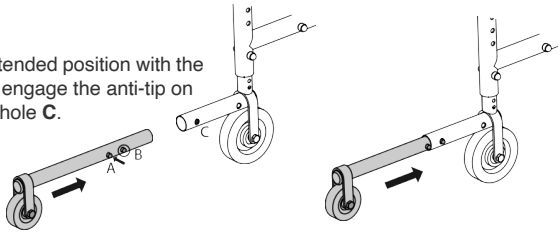
6.2.2. Fixed anti-tip device on straight rear frames

On frames with a straight rear the anti-tip device can be isolated or connected to narrow passage wheels as shown.



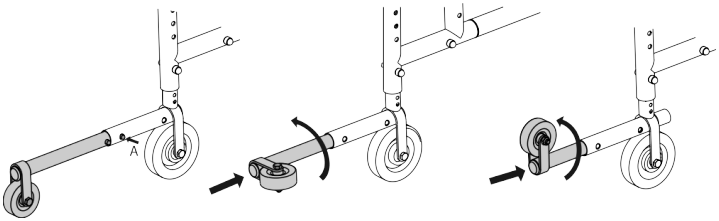
Activation of the anti-tip device

The anti-tip device is active when locked in the extended position with the AR-wheel facing downwards. Press button **A** and engage the anti-tip on the anti-tip holder until pin **B** clicks into reference hole **C**.



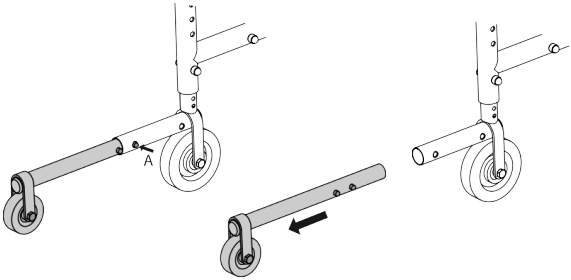
Anti-tip deactivation

- press button **A**
- rotate the telescopic tube until the small wheel is horizontal and slide it deep into a convenient position.
- position the wheel upwards; although not essential, it is recommended to look for one of the two locking positions



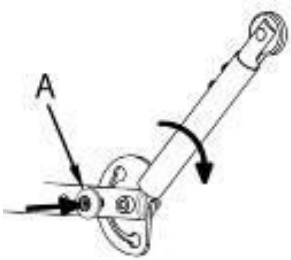
Removing anti-tip

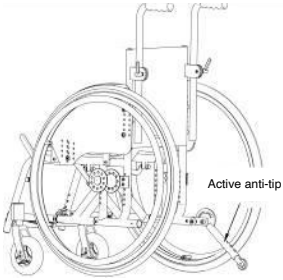
- press button **A**
- while holding down, pull out the telescopic tube



6.2.3. Using the CHILDREN3000 Anti-Tipping Device

To activate the anti-tipping device, press knob **A** and rotate the anti-tipping device downward into the usage position. Ensure the lock is engaged by adjusting the anti-tipping device up or down until you feel it lock in place.





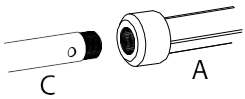
6.3. Single drive

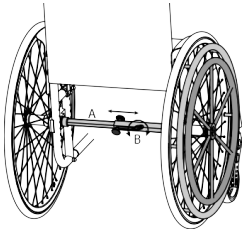
The wheelchair could be configured with a single-sided double-pushing pushrim. The single-sided double pushrim system consists of a wheel that, in addition to having the normal pushing pushrim, has a second one with a smaller diameter; this second pushrim, via a connecting axle, transmits the rotational motion to the opposite wheel without the pushing rings. The single drive option is also applicable in after-market situations by replacing the rear wheel support plates with plates suitable for the new application.

Inserting the wheel connection axle:

- open the wheelchair
- ensure that the wheels are properly fitted to the plates (see 5.8, “Rear wheels release and re-engagement check”)
- sit the user in the wheelchair
- insert the connecting axle **A** on the rear wheel axle pins **W**, making sure that the coupling of the toothed ends is complete
- move the wheelchair back and forth a few centimetres to allow for any settling
- secure the axle locking wing screw **B**

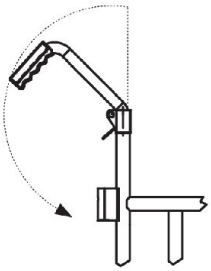
Before fixing the locking wing screw, it is recommended that, with the user seated in the wheelchair, a small movement of the wheelchair is carried out to allow for any settling in width and to reduce any play on the couplings between the connecting axle and the rear wheel studs. Single-wheel hubs have pins with a toothed end for precise connection to the connecting axle.





6.4. Hinged backrest

The only purpose of the articulated backrest is to reduce the height of the wheelchair for easier transport. The mounting height of the joints may vary depending on the configuration choices of the device. The joints on the backrest maintain the height adjustment feature of the backrest itself (see 14.18, “Backrest height adjustment, pushing handles adjustment”)

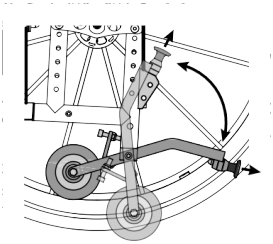


Hinged backrest cannot be assembled with lateral supports nor stretch bar.

If the wheelchair is used with a stair lift, any hooks must rest on the fixed part of the backrest under the joint and must not under any circumstances rest on the articulated upper part of the backrest.

It is recommended to ensure that the backrest is properly latched when climbing steps or ascending/descending even slight inclines.

6.5. Lever-activated small wheels for narrow passages



Lever-operated narrow passage small wheels are devices that make it easier to lift the wheelchair so that the rear wheels can be pulled out and the width of the wheelchair reduced.

They can be activated by the attendant, and in some cases also by the user himself.

Once the narrow lever passages have been activated, make sure that the locking knob is properly engaged in its seat. To deactivate the wheels, pull the knob upwards so that it disengages from its seat and then pull the lever down.

This device has some configuration limitations mainly related to the rear height of the seat from the ground and the size of the push wheels.

Lever push wheels are incompatible with some chassis and rear wheel configurations.

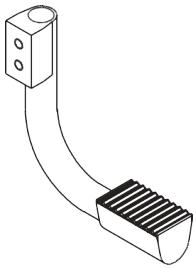
Lever-mounted narrow passage wheels are incompatible with any imbalance pedals and anti-tip devices.

Lever-mounted narrow passage wheels are always incompatible with wheelchairs configured with a curved rear.

6.6. Tip assist pedal

The tip assist pedal is a useful device to aid an attendant when overcoming small steps or to facilitate movement over uneven terrain, gravel and cobblestones.

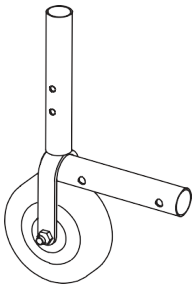
6.6.1. Curved rear frame tip assist pedal:



In frames configured with a curved rear, the anti-tip pedals are independent devices connected to the frame using the same holes available for attaching the rear wheel plates.

In these frames it is not possible to select both anti-tip and off-setting on the same side at the same time.

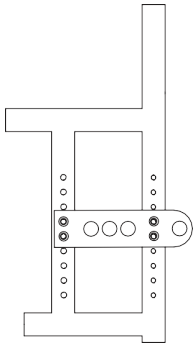
6.6.2. Straight rear frame unbalancing system



In frames configured with straight rear frame, the unbalancing pedal is integrated into the wheels for narrow passages support, so in case of aftersales addition request it is necessary to replace the complete support.

Under the same configurations, the unbalancing pedal is also used as a support for the anti-tip device.

6.7. Extended wheel plates



Extended wheel base plates for the push wheels are designed to retract the rear wheel axle and thus increase the stability of the wheelchair under certain conditions. The retraction of the push wheel axle shifts the centre of gravity of the user and wheelchair complex forward, making the wheelchair more secure. At the same time, it makes it less agile to drive and somewhat more difficult to push and manoeuvre, both for the user and the attendant.

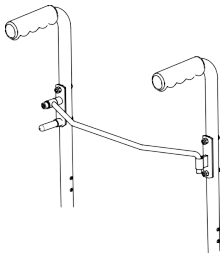
6.8. Stretch bar

The stretch bar is a device applied to the backrest with the purpose of stabilising the geometry of the wheelchair in certain configurations. It is recommended when the height of the backrest exceeds 410 mm and becomes mandatory for certain combinations of wheelchair width and backrest height, and indispensable for configurations with reclining backrest or with absorbing springs.

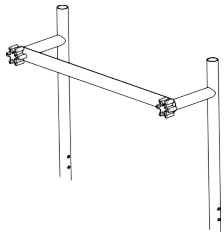
Any technical incompatibilities due to the presence or absence of the stretch bar require revision or cancellation of the requested configuration.

The stretch bar must be disengaged when closing the wheelchair.

UNRESTRAINED STRETCH BAR
for regular backrests



STRETCH BAR WITH CLAMPS
for reclining, hinged or dampened backrests or for use with headrests

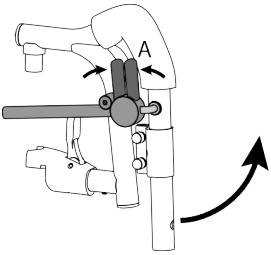


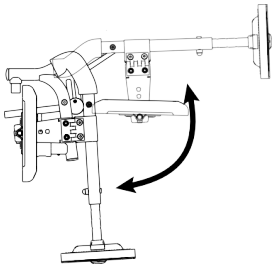
6.9. Elevating footrest

Removable and elevating footplates are available for the various OFFCARR versions.

For safety reasons, the elevating footplate must only be operated by the attendant.

For safety reasons, the operation to return the footplate from elevated to rest must be carried out by the attendant by simultaneously operating the movement activation lever **A** with one hand and with the other hand accompanying the descent of the footplate.





The footrest can be elevated to create a continuous plane with the seat: this position is unnatural for a user, so only use it if actually necessary.

Elevating footrests are always removable and when inserted increase the overall length of the frame.

6.10. Table

The choice of a table requires the presence of armrests in the wheelchair configuration. The

tables, which all have cutouts, are available in different materials and sizes:

Plastic (grey):	one size, 600 mm width
Soft padded:	S size, 500 mm width M size, 600 mm width L size, 700 mm width
Transparent polycarbonate table:	S size, 500 mm width M size, 600 mm width L size, 700 mm width

The connections between table and armrest vary depending on the model of the table itself, and the type of armrests.

For each type of table, both central single and double attachments are available.
The single attachment is not recommended in the presence of height-adjustable armrests.

When ordering any spare parts, it is necessary to specify the serial number of the wheelchair you wish to work on, or provide the wheelchair model, and the type of armrests, elbow-rest and table used.

Table support

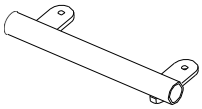
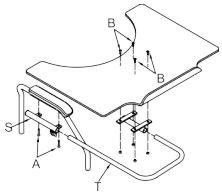
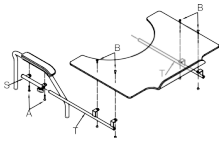


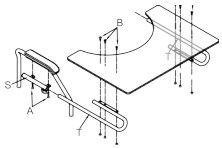
Table support with single centre attachment



Polycarbonate table with double attachment



Polycarbonate or plastic table with double attachment



6.11. *Swing away* lateral supports

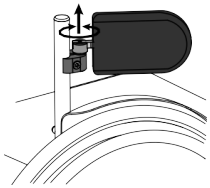
OFFCARR wheelchairs can be equipped with swing-away lateral supports.

The clamp that attaches to the backrest tube can be rotated to adjust lateral position and angle of containment. The padded support can also be independently adjusted in depth.

The padded supports are available in 4 sizes.

To unlock and open the support, simply lift it vertically by 10mm and rotate it outwards.

To activate, turn the holder towards the user until it snaps into the lock when the preset position is reached.



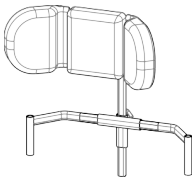
6.12. Headrest

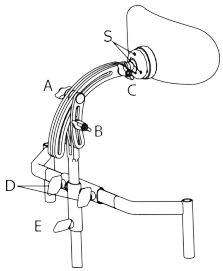
Different kind of headrest are available:

Shaped foam headrest

Form-fitting headrest

Lateral supports headrest





Adjustment of universal headrest attachment:

- The headrest attachment rails on the back tubes of the wheelchair can be adjusted in width by adjusting the wing screws **D**. Unless a certain asymmetry is expressly required, the vertical support must be centred in relation to the width of the wheelchair
- Adjust the height of the headrest by turning the wing screw **E**
- Adjust the position of the headrest depth by adjusting the wing screws **A** and **B**
- Adjust the inclination of the headrest by turning wing screw **C**
- Loosen the screws **S** to rotate the orbital joint for precise positioning of the headrest
- Once the desired position has been reached, fasten all screws of the device appropriately

All headrests can be removed from the wheelchair by pulling them upwards.

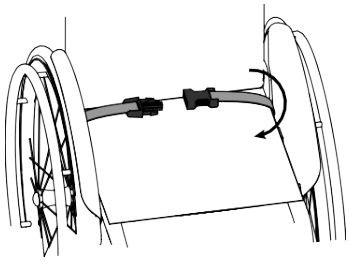
It is possible to equip the support with a locking mechanism, this works exactly like the quick-release axle. To release it, press the button (or buttons in case of a double lock) before pulling the whole support upwards.

6.13. Pelvic band installation

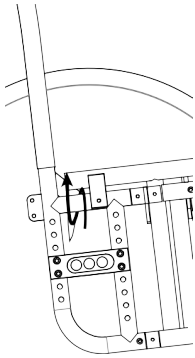
OFFCARR wheelchairs are designed to accommodate the installation of a pelvic band when necessary. The

45° pelvic strap is an accessory that can be selected at the time of ordering or added later.

To install a pelvic band, wrap it around the frame passing between the backrest and the side-guard as shown in the picture 1, and connect its two flaps inferiorly through the provided velcroed areas highlighted in picture 2.



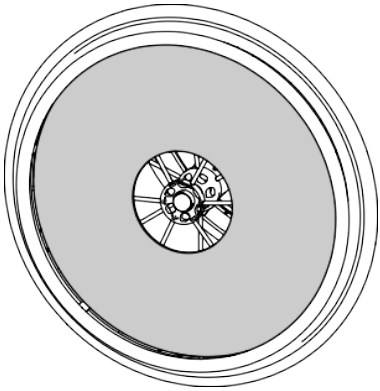
Picture 1: View of the installed pelvic band



Picture 2: Wrap the pelvic band around the tube as in the picture

6.14. Spokes guards

Spokes guards on the rear wheels serve as an esthetic feature as well as protection against accidental insertion of the user's fingers or hands between the spokes of the wheels. They can be attached to the spokes with velcro or clips depending on the specific model.



7. Attachment of the wheelchair for use within a motor vehicle

Where clearly indicated, the wheelchair models successfully passed the crash test according to the specifications of ISO 7176-19:2008 and can therefore be used safely in motor vehicles.

Some configurations, while available on order form, can prevent the wheelchair from being vehicle-compatible. Contact OFFCARR for further information.

It is mandatory that all of the approved wheelchair components are installed by authorized personnel following the correct technical specifications.

Whenever feasible, it is recommended to use the vehicle seat and its manufacturer- installed restraint systems, storing the wheelchair in the vehicle's cargo area or securing it in the passenger area.

When transporting an occupant the wheelchair must always face forward and be securely anchored to the vehicle.

The wheelchair has been tested only in a forward-facing orientation with the anthropomorphic test device (ATD) restrained by both pelvic and shoulder belts.

In order to safely transport a wheelchair user in a vehicle, the vehicle must be provided with a Wheelchair Tie-down and Occupant Restraint System (WTORS) conforming to ISO 10542 or SAE J2249 standards, appropriately installed according to the manufacturer specifications.

Both diagonal and lap belts must be used during transport to reduce the possibility, in the event of an accident, of impacts with other components inside the vehicle.

Anchor the wheelchair with extreme care and follow the instructions given by the manufacturer or authorized installer of the anchoring system closely. When in doubt, consult the instructions for use or contact the installer of such system.

Never transport an occupant sitting on a wheelchair unless the device is certified according to the requirements in ISO 7176-19:2008.

Wheelchair-mounted trays, if installed, should be removed and secured separately in the vehicle.

When possible, other auxiliary equipment must be either secured to the wheelchair or removed and secured in the vehicle.

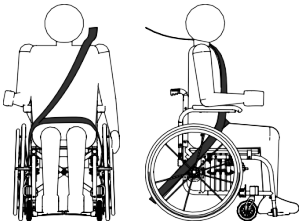
Postural systems, if installed, should not be relied on for occupant restraint in a motor vehicle, unless labelled as being compliant with ISO 7176-19:2008.

In order to securely connext the wheelchair to a vehicle, all the anchoring points must be used.

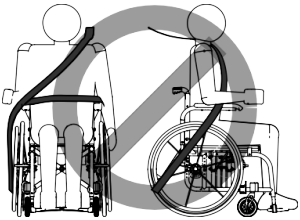
The anchoring points are indicated by the following label (according to ISO 7176-19 specifications)

If the user is transported while sitting on the wheelchair, they must be wearing a seat belt. Any safety belts for vehicle transport must be installed by authorized vehicle conversion companies and must be serviced.

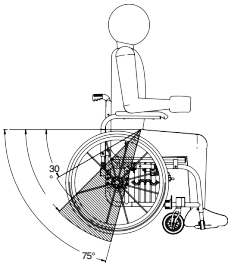
Belt restraints should make full contact with the shoulder, chest and pelvis, and pelvic belts should be positioned low on the pelvis near the thigh-abdominal junction (as shown on the drawing).



Belt restraints must not be held away from the body by wheelchair components such as armrests or wheels (as shown on the drawing).



The pelvic belt restraint should be worn low across the front of the pelvis, so that the angle of the pelvic belt restraint is within the preferred zone of 30° to 75° to the horizontal (as shown on the drawing).



If possible, it is recommended to use the restraints with a steeper angle of 45° to 75° from the horizontal (as shown on the drawing).

Belt restraints should be as tight as possible, consistently with user comfort, and should not be twisted during use.

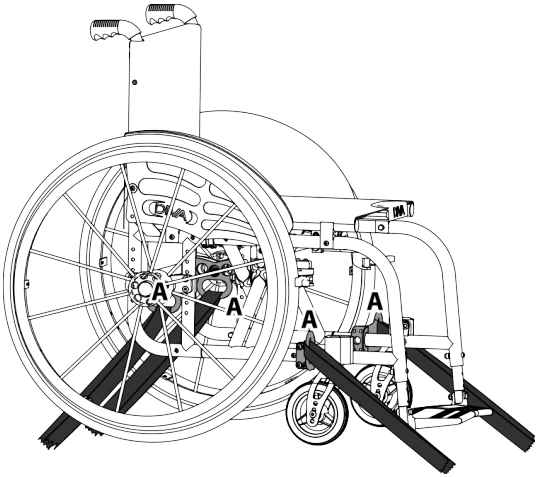
Following involvement in any type of collision, the wheelchair must be inspected by an OFFCARR representative before any further use.

No alterations or substitutions can be made to the wheelchair securement points or to structural and frame parts or components without consulting OFFCARR.

When applying the occupant restraint, make sure to position the seatbelt buckle so that the release button is not in contact with the wheelchair components during transport or in case of a crash.

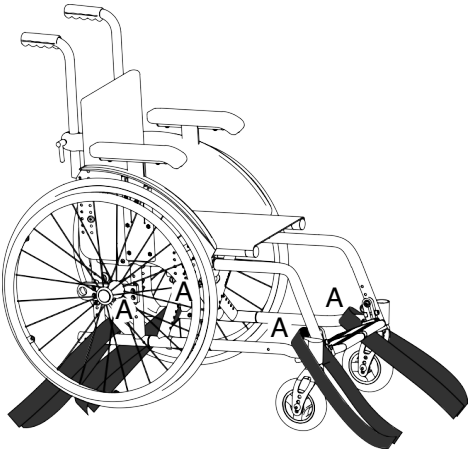
7.1. Vehicle attachment points

7.2. DIVA



DIVA is provided with four (4) attachment points **A** for a standard 4-point floor tiedown system, as indicated in the figure. When connecting the wheelchair to a vehicle, connect the attachment system to the four marked connection points. These are the most solid points of contact on the wheelchair, and the only connection points certified by the crash test.

7.3. CHILDREN3000



CHILDREN3000 is equipped with four (4) attachment points **A** for a standard 4-point floor anchoring system, as shown in the diagram. When connecting the wheelchair to a vehicle, attach the fastening system to the four designated connection points marked with the appropriate symbol. These are the sturdiest contact points of the wheelchair and the only ones certified by crash testing.

8. Maintenance, inspections and controls

Weekly:

- Check the tyre pressure. Each tyre shows on the lateral bands the maximum pressure for which they are designed. A flat tyre affects the efficiency of brakes and the agility of the wheelchair.
- Check the efficiency of the quick-release axle (see 5.8, “Rear wheels release and re-engagement check”) and if necessary proceed with the lubrication of axle and bushes.
- Check the tension of the backrest upholstery to maintain a comfortable position. Quarterly:
- Check the tightness of all the devices' screws.
- Check the perpendicularity of the front fork support screws.
- Check the wear of the front wheels. Solid wheels might be worn to the point of affecting the overall wheelchair front setup. In this case adjust the front fork assembly or replace the wheels (see 8.2, “Replacing front wheels”).
- Check the efficiency of the bearings. Replace any stuck bearings if necessary (see 8.3, “Replacing rear wheel bearings”, 8.4, “Replacing front wheel bearings” and 8.5, “Replacing front fork holder bearings”).
- Check the efficiency of the brakes and, in case, adjust them. If the knurled pin has to be replaced, consult authorised personnel.
- Lubricate moving parts such as hinges, bearings and quick-release axles. It is suggested to use silicon oil, which is efficient and doesn’t smear.

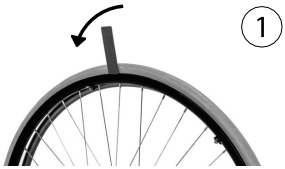
⚠ Only choose original parts when purchasing accessories or spare parts.
Contact OFFCARR if you can’t find original spare parts on the market elsewhere.

⚠ It is recommended to refer only to authorized and qualified personnel to perform maintenance programs, adjustments, and to replace components or accessories.

8.1. Replacement of tyre and inner tube

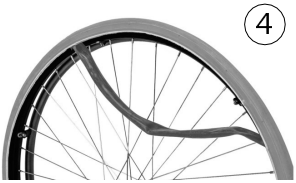
8.1.1. Removing the tyre and inner tube

- Deflate the wheel
- Insert a special lever between the rim and the shoulder of the tyre so that when the lever is overturned, the side of the tyre comes out (fig. 1 and 2).



- Insert another lever 100mm away from the previous point and repeat the operation (fig.3).
- Slide the two levers along the circle to free the entire shoulder of the tyre.

- Extract the inner tube, starting from the side opposite the inflation valve (fig. 4).
- Once the inner tube has been extracted, it is easy to remove the tyre to replace one or both of them.



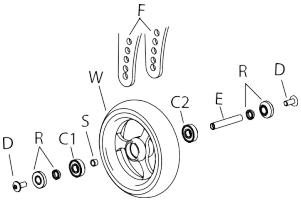
8.1.2. Assembling the inner tube and tyre

- Insert the (partially deflated) bladder into the tyre (fig. 5)
- Insert the chamber inflation valve into the hole on the rim.
- Insert one side of the tire entirely on the rim, paying attention to the direction of the tire tread pattern depending on whether the push wheel is right or left.
- Insert the opposite shoulder on the rim as well, starting from the point where the valve is positioned and continuing in both directions.
- Insert the last part of the shoulder with the help of the special levers by following the instructions represented in Fig. 3, Fig. 2 and Fig. 1 backwards.
- Inflate the wheel to the pressure indicated on the side of the tyre.

8.2. Replacing front wheels

If necessary, the front wheels can be replaced:

- Unscrew one of the screws **D** and remove the pin **E**, paying attention to the positioning of the spacers **R**
- Replace the wheel **W**
- Position the wheel hole in line with the selected hole on the fork **F**
- Insert the axle **E** respecting the original position of the spacers **R**
- Tighten the screw **D**



It is important to select the same position for both wheels. Asymmetrical positions produce instability.

Once the front wheel has been changed, it is essential to check or adjust the fork perpendicularity to the ground.

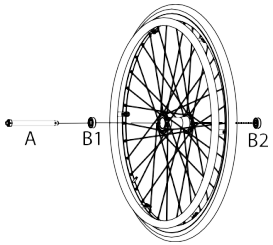
8.3. Replacing rear wheel bearings

Disassembly

- The bearings in the push wheels (**B1** and **B2**) are press-fit. To extract them it is necessary to push them from the inside with the aid of an extractor or a pin punch and a hammer.

Assembly

- Position the new bearing **B1** on the inside of the hub so that it is coaxial with the hub and apply pressure to seat it.
- Before positioning the second bearing **B2** insert the axle **A** to use it as a guide for the second bearing and to ensure coaxiality of the system.



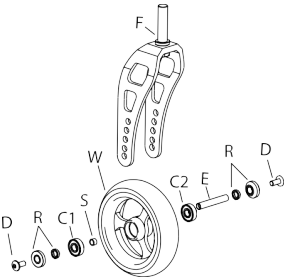
8.4. Replacing front wheel bearings

Disassembly

- The bearings in the front wheels (**C1** and **C2**) are press-fit. To extract them it is first necessary to remove the wheel **W** from the fork **F**, by unscrewing the screw **D** and removing the pin **E**, taking care of not losing the spacers **R**.
- Push the bearings from the inside out with the aid of an extractor or a pin punch and a hammer, making sure not to lose the spacer **S** placed inside the wheel.

Assembly

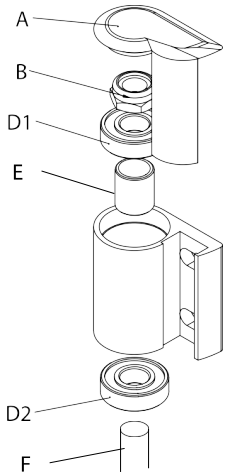
- Repeat the steps in the inverse order, making sure to put all spacers back where they were initially and ensuring bush coaxiality.



8.5. Replacing front fork holder bearings

Disassembly

- The bearings in the front fork holder (**D1** and **D2**) are press-fit. To extract them remove the press-fit cover **A** by sliding it upwards
- Remove the fork **F** by loosening the **B** nut.
- Remove the bearings from the inside with the aid of an extractor or a pin punch and a hammer, paying attention no to loose the spacer **E** placed between the two bearings.



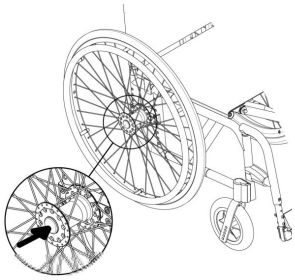
Assembly

- Place the new bearing **D2** on the lower side of the plate, applying pressure and making sure that it is evenly inserted (it must be coaxial with the hub otherwise it will not enter).
- Before positioning the bearing **D1** on the opposite side, it is necessary to insert the spacer **E** and the fork pin **F** on the already inserted bearing so that the pin itself becomes the guide for the bearing. In this way the coaxiality of the hub and the two bearings is ensured.
- Reposition and tighten the nut **B**, making sure that the fork is free to rotate.
- Replace the cover **A** and tighten it appropriately.

8.6. Quick extraction devices

8.6.1. Check

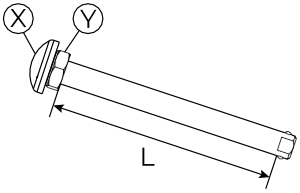
The quick extraction axles are shipped already checked and adjusted. However, it is recommended to periodically verify the effectiveness of their operation.



- Make sure that the **X** button is fully released once the wheel is correctly mounted.
- Check the effectiveness of the latch by trying to pull the wheel outward without pressing the button and make sure it does not slip off.

8.6.2. Adjustment

If necessary, it is possible to adjust the axle to eliminate any play between the wheel and the frame or to complete the release of the button once the wheel is inserted.



- If the quick-release button is not completely relaxed when the wheel is inserted in the frame, it is necessary to extend the useful length of the **L** axle by partially unscrewing the **Y** nut.
- If once the wheel has been inserted into the frame, there is play between the frame and the wheel itself, it is necessary to reduce the useful length of the **L** axis by partially tightening the **Y** nut.

The **Y** nut thread has a pitch of 1 mm, therefore the unscrewing or screwing of one turn involves the elongation or reduction of 1 mm. In case of adjustment, it is advisable to proceed with successive adjustments of ¼ of a turn at a time.

9. Cleaning instruction

Cleaning and disinfection procedure have to be performed exclusively by qualified personnel.

Use appropriate eye/facial protection and protective gloves, during cleaning and disinfection procedure.

In case of contamination with blood or other body fluids, the device has to be cleaned first and then disinfected as follows:

Most of the time is convenient and more effective to remove the upholstery from the frame before to proceed with the cleaning and disinfection of either frame or upholstery.

FRAME

- Wash the device with lukewarm water and neutral detergent using a damp cloth to remove gross soiling
- Remove eventual detergent residuals only with lukewarm water
- Dry the device prior to further processing
- Visually inspect the cleanliness of the complete device
- Disinfect the device using 70-90% alcohol
- Be sure it is completely dry before proceeding with use

UPHOLSTERY

In case of the user remaining the same before and after the cleaning treatment:

- Wash, rinse, dry and disinfect the upholstery using the same process used for the frame
- Be sure the upholstery parts are completely dry before reassembling them

In case of different user after the cleaning treatment:

- The best course of action is to change the upholsteries with a new set

During the cleaning process the device should be also carefully inspected for damage, oxidation and faults in function. If any damage or faults are found, the involved components should be removed for service, repair or replacement.

All waste materials related to this process must be disposed in compliance with specific local applicable law.

10. Technical service

For any service request, please contact OFFCARR supplying the following indications:

1. Model
2. Serial number
3. Fault description
4. Any reference or order number, if available, recorded on the order form.
5. Dealer

Every component of the device is available as spare part.

11. Warranty terms

It is strongly advised to register the product on the website www.offcarr.com after delivery.

1. The device's frame is guaranteed for 3 (three) years from the delivery date.
2. The label showing the serial number, the manufacturer address and the CE symbol cannot be removed for any reason to preserve the warranty validity.
3. Parts subject to normal wear and tear are not covered by the warranty, unless specific wear is caused by evident manufacturing fault.
4. During the warranty period OFFCARR may proceed at its own discretion to change or to repair the faulty parts.
5. The warranty does not cover damage due to negligence, carelessness, misuse or by incorrect maintenance performed by non authorized personnel.
6. If any damage occurred during transport, the forwarder company is the only responsible. It is important to inform immediately both the forwarder company and, for information, OFFCARR.
7. The warranty does not cover injury or any other damage to people or goods connected to the device's malfunctioning.

12. Packaging, shipment and delivery

All OFFCARR products are shipped in closed cardboard cases to protect them from bumps and dust.
The package includes the device configured according with the order form, this Instruction manual and a tool kit.

The device must be transported in trucks that protect it from atmospheric agents, as shown on the packaging box.

Upon receipt, check the box integrity: open the package, remove the device and check it for damages. In case of problems, note your remark on the waybill and immediately notify both the forwarder and, for information, OFFCARR.

Once these checks, mandatory to ensure the validity of the warranty, have been carried out, place again the device in its packing until it is used and store in a cool and dry place (between - 15 and + 50 °C and with a relative humidity lower than 80 %).

Do not place any objects over the packaging box.

The packaging materials follow the European directive 94/62/EC[13].

13. Correct disposal and recycling

OFFCARR products are made of aluminium alloy (Al 7020, Al 6082, Al 2017, Al 6061, Al 5754), titanium, steel, stainless steel, carbon fibre, polyurethane, epoxy resins, other composite materials.

Recycle or disposal of all materials must be in compliance with the local applicable laws. Contact

your dealer in case of doubt or for help when disposing the device.

14. Adjustments

The wheelchair is shipped to the customer in the setup chosen on the order form.

Considering potential setup restrictions it is still possible to perform other adjustment to hone in the wheelchair to the specific user.

Please refer to authorized and qualified personnel to perform the adjustments described in this manual.

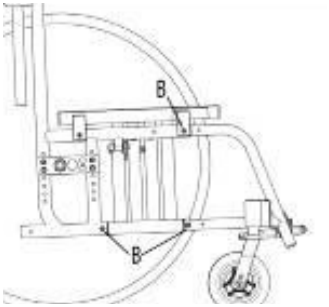
14.1. Seat Depth Adjustment (CHILDREN 3000, CHILDREN3000 PLUS, VEGA3000)

The frame of the CHILDREN, CHILDREN3000 wheelchairs is adjustable in depth by 30 mm increments, VEGA3000 frame is adjustable in depth by 20 mm increments. The maximum adjustment is 60 mm.

The extension is achieved through a pre-drilled telescopic tube that connects the front frame, crossbar, and rear frame.

14.1.1. Lenghtening of the Frame

- Remove the parking brakes
- Remove screws **B** that secure the front frame to the telescopic tube and the crossbar
- Adjust the frame's depth by pulling the front element forward to the desired measurement (the telescopic connecting tube is pre-drilled every 30 mm for CHILDREN, CHILDREN3000,
  20 mm for VEGA3000)
- Secure screws **B** again
- Reinsert the rear wheels (see 5.8, "Rear wheels release and re-engagement check")
- Adjust the brake position (see 14.12, "Brakes adjustment") Perform these operations symmetrically on both sides of the wheelchair



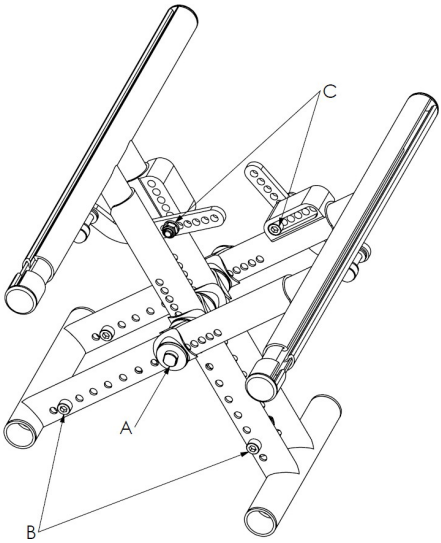
Once the depth is adjusted, it's necessary to adjust the brake position (see 14.12, "Brakes adjustment")

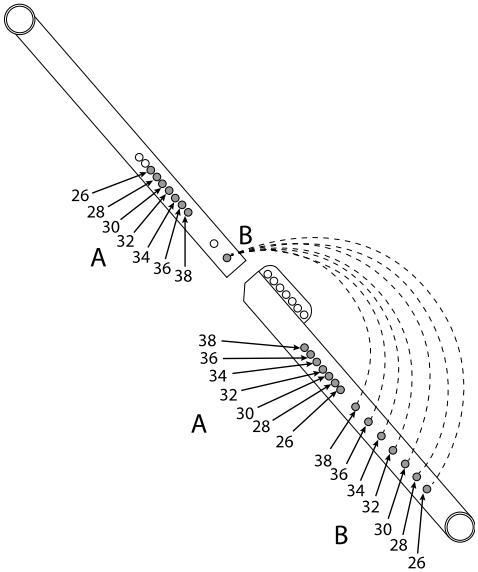
14.2. Width Adjustment (CHILDREN 3000 PLUS)

The crossbar of the model Children 3000 Plus wheelchairs allows for increasing the width of the wheelchair to accommodate the child's growth. This is made possible through telescopic tubes that form the crossbar.

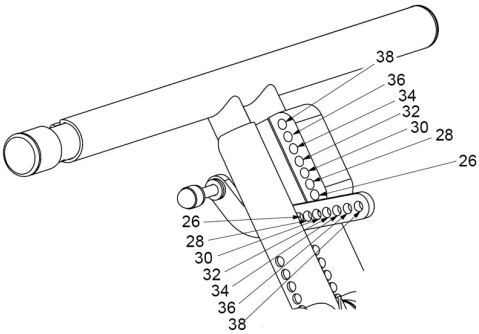
To adjust the width:

- Remove the seat cover;
- Remove central screw **A**, screws **B**, and screws **C** that secure the hinge to the crossbar;
- Insert the inner tube (seat side, smaller diameter) into the outer tube (larger diameter);
- Using the following illustration, select the hole corresponding to the same measurement of the inner and outer tubes and align them;
- Reinsert central screw **A**.
- Using the same illustration, choose the holes on the inner and outer tubes that correspond to the desired width for securing screws **B**;
- Reinsert securing screws **B**.
- Using the following illustration, choose the holes on the hinge's securing block and the hinge itself that correspond to the desired width;
- Reinsert hinge securing screws **C**.

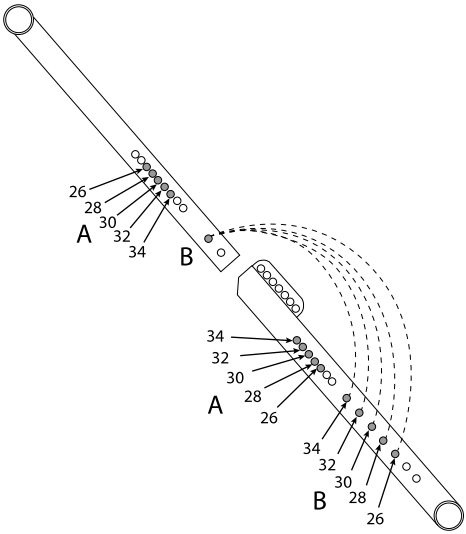




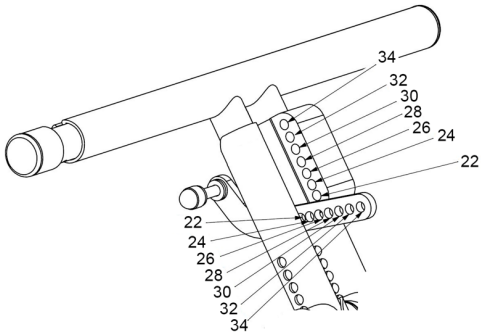
*Holes for screws **A** e **B** for width adjustable Children 3000 plus 26 – 38 range*



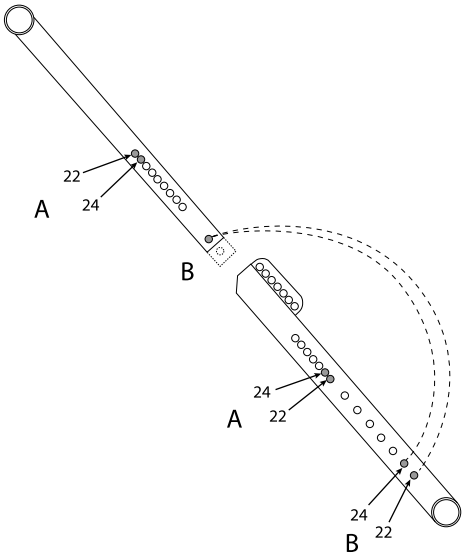
*Holes for screws **A** e **B** for width adjustable Children 3000 plus 26 – 38 range*



*Holes for screws **A** e **B** for width adjustable Children 3000 plus 26 – 34 range*



*Holes for screws **A** e **B** for width adjustable Children 3000 plus 22 – 34 range*



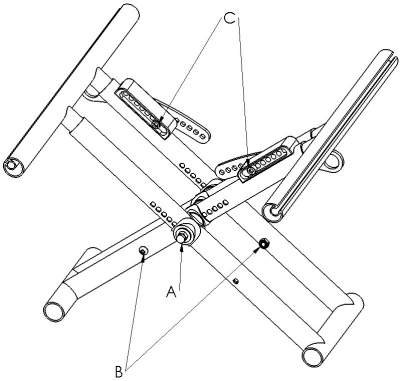
*Holes for screws **A** and **B** in widths 22 and 24*
The dotted part is missing in this range
(it interferes with the frame)

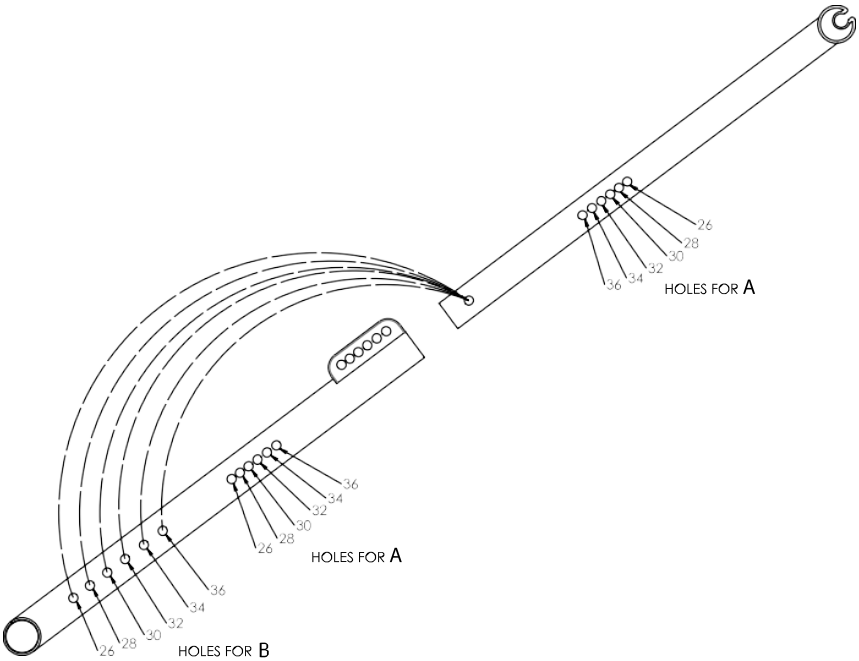
14.3. Width adjustment (VEGA3000)

VEGA3000 allows for an increase in width by adjusting the crossbar of the wheelchair. This adjustment is possible thanks to the telescopic tubes that make up the crossbar.

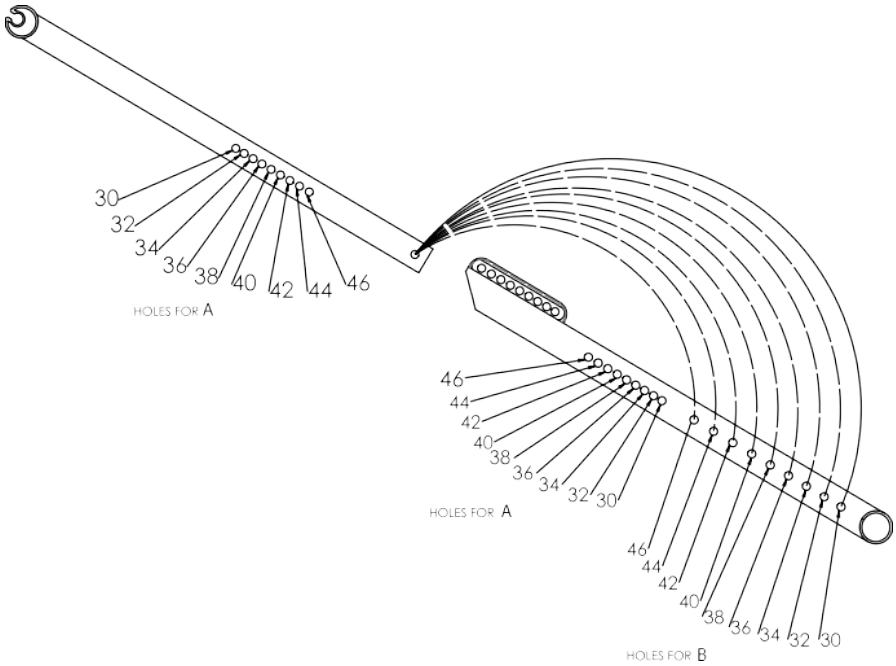
To adjust the width:

- Remove the seat upholstery;
- Remove the central screw **A**, screws **B**, and screws **C** that secure the hinge to the crossbar.
- Insert the inner tube (side with the seat, smaller diameter) into the outer tube (larger diameter).
- Using the following images, choose the corresponding hole with the same measurement as the inner and outer tube, and align them.
- Re-insert the central screw **A**.
- Using the same image, choose the holes corresponding to the desired width on the inner and outer tube for screws **B**.
- Re-insert and tighten screws **B**.

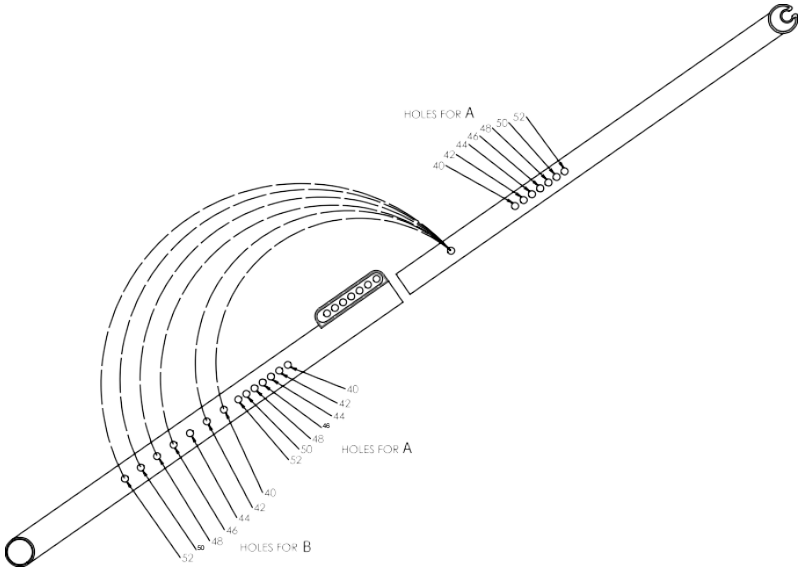




*Holes for screws **A** and **B** for Vega3000 adjustable in width from 26 to 36*

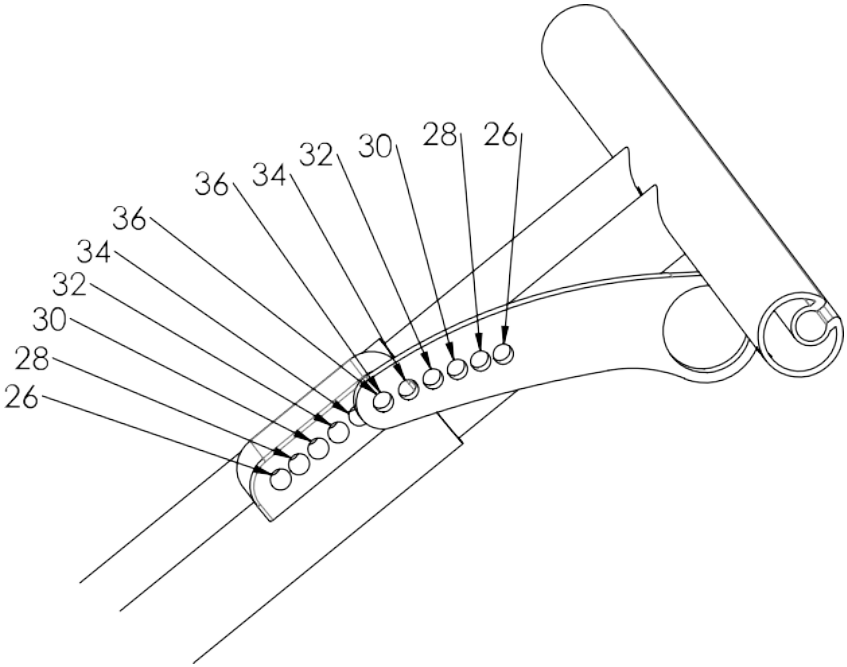


*Holes for screws **A** and **B** for Vega3000 adjustable in width from 30 to 46*

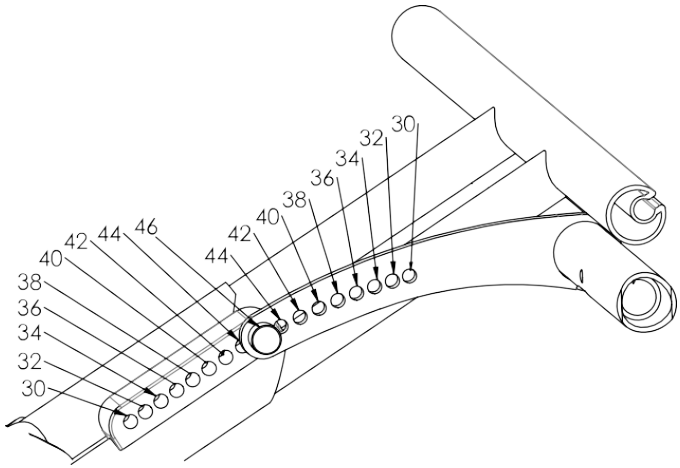


*Holes for screws **A** and **B** for Vega3000 adjustable in width from 40 to 52*

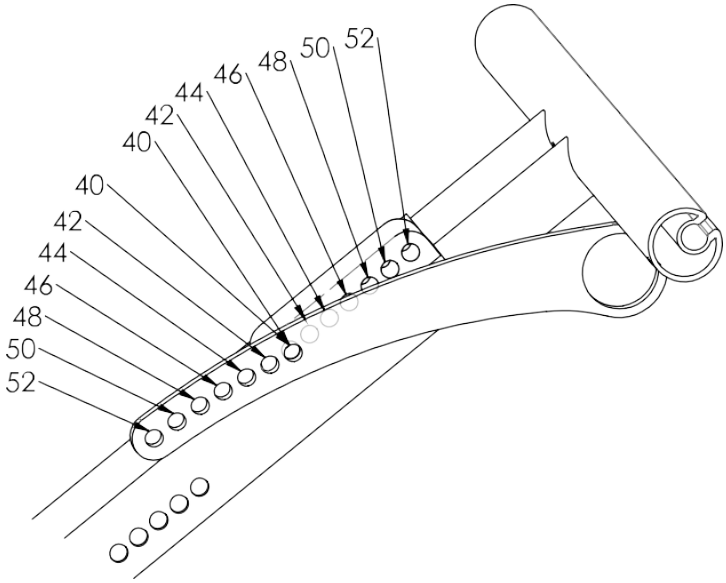
- Using the following diagram, choose the corresponding holes on the crossbar block and the crossbar itself for the desired width.
- Re-insert the crossbar screws **C**.



*Holes for screws **A** and **B** for Vega3000 adjustable in width from 26 to 36*

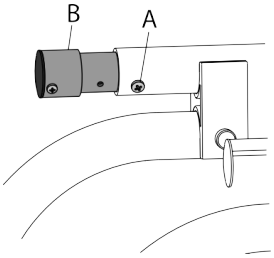


*Holes for screws **A** and **B** for Vega3000 adjustable in width from 30 to 46*



*Holes for screws **A** and **B** for Vega3000 adjustable in width from 40 to 52*

14.4. Seat Length Adjustment



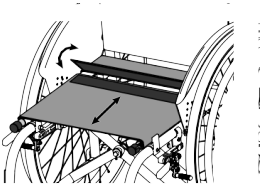
- Remove screw **A** securing the extension **B** to the crossbar
- Slide extension **B** forward by 20, 40, or 60 mm
- Secure screw **A**

14.5. Front Seat Cover Length Adjustment

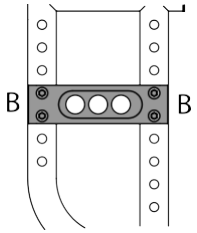
Lengthening the seat cover can only be done after extending the crossbar (see 14.4, “Seat Length Adjustment”).

The seat cover consists of a front and a rear section, held together by a velcro area.

- With the wheelchair fully unfolded, separate the front section from the rear one by unfastening the velcro
- Close the wheelchair a few centimeters to relieve tension
- Move the front portion forward until it reaches the front caps (move the guide tubes along with the fabric)
- Fully open the wheelchair and join the two seat cover sections by pressing on the velcro area



14.6. Rear seat height adjustment



- Pull out the rear wheel by pressing the quick-release button
- Lay the wheelchair on its side
- Unscrew and remove screws **B**
- Move the four cores (inside the tubes) to the desired new position
- Align the plates with the cores on the selected holes
- Re-insert and tighten the screws **B**

14.7. Gravity centre (COG) adjustment

The choice of the centre of gravity is always a compromise between agility and safety. With a very active configuration, the wheelchair is very agile in pushing but requires greater skill in control. A more cautious centre of gravity increases the stability of the device at the expense of its agility.

It is an individual choice linked to the general configuration of the device, the anatomy and disability of the user, and the usage environment; a choice that determines the experience of pushing and inevitably influences daily activities.

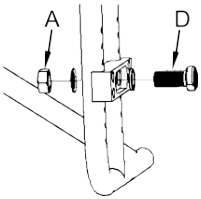
The opportunity to vary this parameter over time allows the device to accompany the user's motor development, optimizing their potential.

Consider that the further forward the hub is mounted, the more agile the wheelchair, while the further rearward the hub is mounted, the less active the set-up is to the benefit of safety; advancing the rear wheel with respect to the backrest axis, minimises the pushing effort and gives greater agility and smoothness to the wheelchair but reduces its safety margins against backward imbalance.

The advancement of the rear wheel in relation to the axis of the backrest minimises the pushing effort and gives the wheelchair greater agility and smoothness, but reduces its safety margins against backward imbalance, particularly on climbs.

If the distance between the hub centre and the projection of the backrest is reduced, the wheelchair is less active but assumes a more cautious stance.

Make sure you have chosen the same position for the wheel bushes on both sides of the frame. Asymmetrical combinations produce instability.

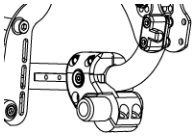


- Remove the rear wheel by pressing the quick-release button
- Remove the wheel bush **D** from the plate, taking care to maintain the order of the shims
- Refit the wheel bush **D** to one of the holes available on the plate, taking care to maintain the order of the shims and the locking washer
- reinsert the wheel, checking that it is correctly engaged and locked (see 5.8, "Rear wheels release and re-engagement check")
- the operations must be carried out symmetrically for both wheels

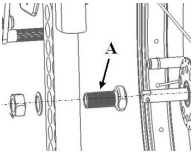
14.7.1. Gravity centre (COG) adjustment - QPX

All **QPX** wheelchairs are supplied with adjustable axle
To adjust the axle:

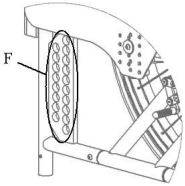
- By maintaining the quick-release button pressed, pull out the wheel from the hub
- Unfasten, without completely removing, the **D** screws;
- Move the bushes holders of the COG axle to the desired position (on the frame there are some marked positions which allow the correct aligning of the blocks)
- Re-fasten the **D** screws
- Adjust consequently the position of the side-guards and of the brakes, according to the new centre of gravity i.e. the new position of the rear wheels



14.7.2. Gravity centre (COG) and/or rear seat height adjustment - Fixed rear plate frame (VEGA)



- Push the quick-release button and pull out the rear wheel from the frame
- lie the wheelchair on its side
- remove **A** screw
- reseat it in the desired position (choosing between all **F** holes), taking care of maintaining the correct washers order and position
- tighten the **A** screws

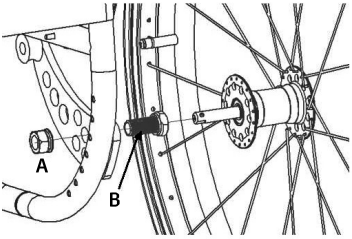


14.7.3. Gravity centre (COG) and/or rear seat height adjustment (HALLEY)

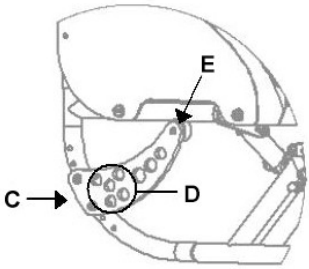
Acting on the AwP is possible to change the height and seat rear set-up.

The further the rear wheels axles are assembled, the more active and agile the wheelchair becomes, but at the same time the stability is reduced. The more back the rear wheel axles are assembled, the more stable the wheelchair is, but more effort is required to push it.

- Pull out the rear wheel from the frame by pushing the quick-release button
- if any of the five positions **D** available on the AwP plate are suited to obtain the new desired setup:
- loosen and remove the **B** wheel bush from the AwP plate, paying attention to the spacer's order
- select the new position for the **B** bush from the five **D** holes available, maintaining the original sequence for spacers, washers, and nut.



- if none of the five positions **D** available on the AwP plate are suited to obtain the new desired setup, it is possible to rotate the AwP plate to multiply the possible combinations of rear height and centre of gravity (COG) position.
- loosen and remove the two **C** screws connecting the AwP plate to the frame
- loosen, without removing, the fulcrum screw **D** to enable the rotation of the AwP plate.
- rotate the AwP plate in the desired position
- reseat and tighten properly the **C** and **D** screws
- if needed, change the position of the **B** wheel bush as previously described.



Consider that the further the hub is connected, the more agile the wheelchair is, and the further back it is assembled, the less active but the safest the wheelchair becomes

- connect the wheels back to the frame checking the correct assembly (see 5.8, “Rear wheels release and re-engagement check”)
- the operations always have to be performed symmetrically either left and right side.

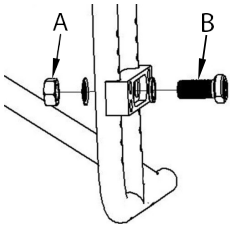
Be sure to choose the same position in both wheel bushes on the back of the frame. Asymmetrical combinations produce instability.

Once the position of the back wheel changes, it is essential to adjust the front fork perpendicularity (see [regolazioneperpend]) and the positioning of the parking brakes (see 14.12, “Brakes adjustment”) and, if necessary, of the side-guards (see 14.13, “side- guard adjustment”).

14.8. Rear wheels camber adjustment

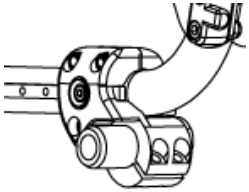
The camber is supplied as requested in the order form. However, it is possible to change it later by replacing the rear wheel bushes:

- remove the rear wheels (see 5.8, “Rear wheels release and re-engagement check”)
- unscrew and remove the **A** nut and **C** washer
- replace the **B** bush with a new one of the desired camber
- place the **B** bush with the camber in the correct direction and the two flat surfaces perpendicular to the ground
- Insert the **C** washer and **A** nut keeping it loose until a fine adjustment of the wheel camber has been performed.



14.8.1. Adjusting for Non-0° Camber.

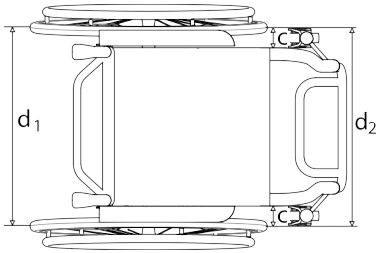
The rear wheel camber is set according to the order form selection. it is however possible to change it if required over time replacing the bush with a new with different camber



- Remove the wheels
- Loosen the clamp holding the bush in place

- Swap the bush with the one with the new desired angle
- Place the camber bush with the camber in the correct direction and with the two flat surfaces approximately perpendicular to the ground
- Before tightening the clamp, be sure to check the wheel alignment.

14.9. Camber alignment check



- Insert the rear wheels and check the distances between them (d1 and d2), measured on the front and on the back at the level of the hub as
- **d1** and **d2** have to be equal
- Check the a distance from frame to wheel and verify if it is equal both on the left and on the right side
- if the distances are equal on both sides, tightly fix the clamp

After making adjustments, tighten the nuts that secure the bushes, insert the wheels, and verify the correct insertion and locking of the quick-release axles (see 5.8, “Rear wheels release and re-engagement check”).

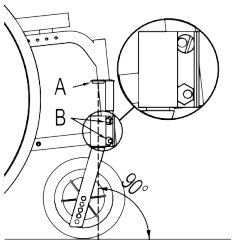
Once changed the front wheels it is essential to adjust the front fork perpendicularity (see 14.11, “Front fork support plate perpendicularity adjustment”).

14.10. Front seat height adjustment

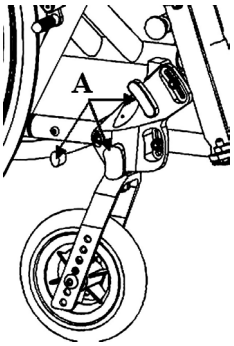
14.11. Front fork support plate perpendicularity adjustment

After making adjustments to the front height or replacing or repositioning the front wheels, the perpendicularity of the front fork plate, i.e. the perpendicularity of the fork pivot axis, must be checked and adjusted if necessary. This adjustment is necessary to achieve maximum steering feel and stability of the wheelchair.

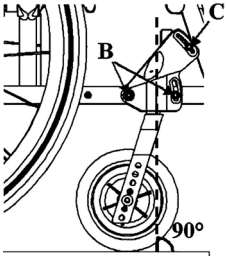
- Remove the protective cover **A**
- Loosen the screws **B** that secure the plate
- Choose the most convenient position of the eccentric nuts until the plate is at right angles to the ground. (to reposition an eccentric nut it is necessary to completely remove the bolt).
- Tighten the screws **B** appropriately.
- Replace the protective cover **A**.



14.11.1. VEGA



- Remove protective caps **A**
- Loosen the screws **B** that lock the plate in place
- Remove the screw **C**
- Rotate the plate until it is perfectly square to the ground
- Reinsert the screw **C**
- Tighten the screws **B**
- Put the protective caps **A** back in place



Should it prove impossible to achieve perpendicularity, it is advisable to choose the position that generates an angle immediately above 90° (as shown in the figure) in order to keep the wheelchair agile when running and changing direction.

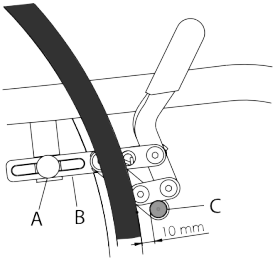
The adjustment must be carried out symmetrically on both forks. It is important to check the symmetry carefully after each adjustment.

14.12. Brakes adjustment

With the exception of drum brakes, the brakes provided are only suitable for parking of the aid and not for reducing the running speed.

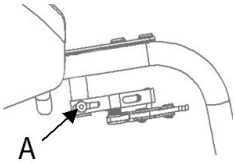
If the position of the rear wheel has been changed, the position of the brakes must be adjusted accordingly. OFFCARR can be equipped with pull, push, scissor or composite brakes.

To adjust the position of the brakes:



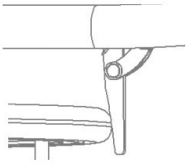
CLASSIC BRAKES (pull or push)

- Loosen screw **A** that secures the brake support to the frame
- Move the brake along the support **B** until the knurled pin **C** is about 10 mm away from the tyre
- While maintaining the pin **C** parallel to the axle tube, tighten screws **A**
- If the pin **C** appears worn on the contact area with the wheel, it can be rotated to achieve a better position or replaced
- **Check the effectiveness of the brakes** (see 5.10, "Brakes check") and if necessary, repeat the adjustment procedure



COMPOSITE AND SCISSOR BRAKES

- Put the brake in the ON position
- Loosen screw **A**
- Move the brake along the support until it touches the tyre
- Return the brake to the OFF position, move it towards the wheel by 3-4 mm, and then tighten screws **A**
- **Check the effectiveness of the brakes** (see 5.10, "Brakes check") and if necessary, repeat the adjustment procedure

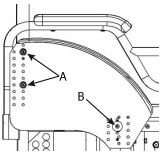


14.13. Side-guard adjustment

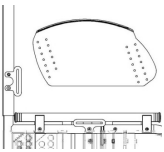
Sideguards, if fitted, are attached to the wheelchair frame by means of screws which act on special slots that also allow for gradual adjustment.

In case of plastic side-guards, there is an aluminium reinforcement panel.

The side-guards are an independent accessory, are not compatible with closed armrests and are not available for reclining or dampened models.



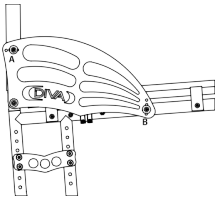
- Remove screws **A** and **B**.
- Choose the new desired position of the side protection considering that the ideal distance between the protection and the tyre is approx. 6 mm
- Re-attach screws **A** and **B**, taking care to retain the original order of any shims and washers
- For minor adjustments, simply loosen screws **A** and **B** and slide them over the slots to find the desired position



14.14. Backrest tilt angle adjustment

14.14.1. DIVA

The backrest tilt angle of the wheelchair is assembled according to the value specified on order form. However, depending on the configuration, the angle can be adjusted as follows:

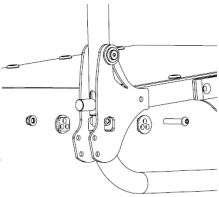


- remove the **A** screws that connects the side-guards and the backrest (on both sides);
- select the new desired backrest tilt angle;
- insert again the **A** screws and tighten firmly;

Note: if the holes on the side-guard around the **A** screw cannot provide the desired tilt, it is possible to move the **B** screws to extend the adjustment range.

14.14.2. QPX

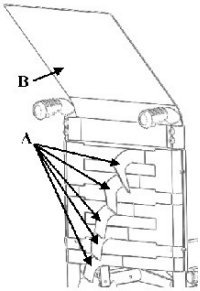
The backrest tilt angle of the wheelchair is assembled according to the value specified on order form. However, depending on the configuration, the angle can be adjusted as follows:



- Unscrew the screws fastening the tilt backrest plates.
- Move the plates into the desired position by verifying it is done symmetrically in both sides for the wheelchair.
- Verify the backrest reached the desired tilt position.
- Reposition and fasten properly the blocking screws of the adjustment plates.

14.15. Backrest tension adjustment

The backrest tension can be easily adjusted by acting on the velcro straps:



- Raise the flap **B** of the backrest cover. It is normally closed at the back but can be found closed at the front if the configuration requires it
- Adjust the tension of the straps **A** by increasing or decreasing the overlap of the two flaps
- Reseat in place the backrest fabric **B**

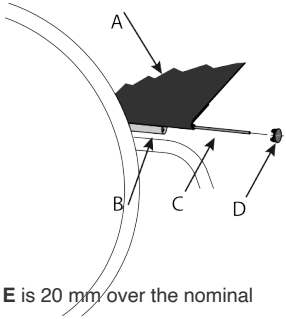
The bands **A** which regulate the tension of the backrest, especially the highest one, must not be so tight as to reduce the width of the wheelchair, this is to allow for easy closing and opening of the wheelchair and not to damage its movement.

14.16. Seat upholstery adjustment and replacement

The seat tension can be adjusted through the velcro straps:

Seat tension adjustment:

Close the wheelchair

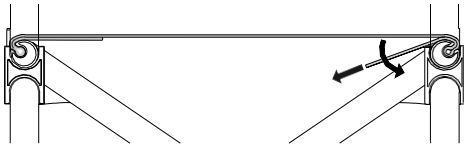


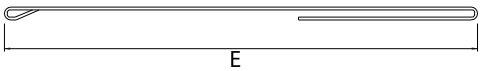
- Remove cap **D** (by unscrewing the screw under the seat)
- Remove the insert **C**
- Adjust the width of the seat upholstery **E**
- Insert the insert **C** into the upholstery **A**.
- Insert upholstery and insert into the slot of the seat tube **B**
- Reseat in place cap **D** and fasten with screw

Seat upholstery replacement:

Lay the seat upholstery on a table and bend the velcro area until the width **E** is 20 mm over the nominal wheelchair width;

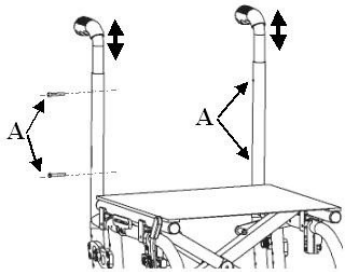
- Plug the insert **C** into the upholstery **A**
- Plug insert and upholstery into the seat tube **B**, simultaneously on the left and right side
- Insert the cap **D** and fix the screw





14.17. Backrest height adjustment, pushing handles adjustment

The height of the backrest is chosen when ordering, but further adjustments are possible. The backrest has a telescopic section, regardless from the chosen pushing handles model.



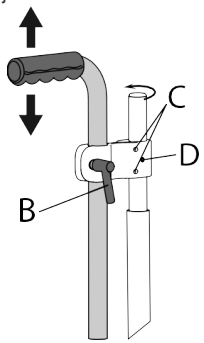
- Lift up the backrest upholstery and open the tensioning straps to gain access to the screws **A** that secure the extensions to the frame
- Remove screws **A**
- Raise or lower the tubes to the desired height (tubes are pre-drilled every 20 mm)
- Re-insert and secure the screws **A** previously removed
- Reset the tensioning of the backrest and fold down the cover (see 14.16, “Backrest tension adjustment”)

- In the presence of side-guards, remove the screws securing them to the frame and take off the corresponding support loop. Adjust the height of the backrest tube and then restore the position and fastening of the side-guards.

The same procedure can also be followed if the wheelchair has no pushing handles or is configured with height adjustable handles.

14.18. Height adjustable pushing handles adjustment

If the wheelchair is equipped with height adjustable pushing handles it is possible to adjust them:



- Turn the lever **B** so as to loosen the clamp attachment
- Raise or lower the push handle to the desired position
- Tighten the lever **B** correctly
- Position the lever **B** in a convenient position

To change the rest position of the lever **B**, pull it slightly outwards to release its engagement and rotate it to the new position.

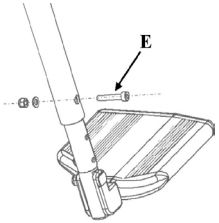
The clamp that connects the pushing handle to the wheelchair frame can be rotated around the backrest tube. If necessary, unscrew the safety screw **D** before turning the screws **C** to loosen the clamp and allow it to rotate. Once the bracket is secured in its new position, tighten the **C** screws and then the **D** safety screw appropriately.

14.19. Footrest height adjustment

The telescopic footrest support is inserted into the front of the frame and secured through a screw and nut couple **E** for each side of the frame.

For QPX It is not possible to use footplates different from the automatic closing one (such as separate or single aluminium footplates) because also in the open wheelchair position (ready for sitting) the footplate helps in its stability.

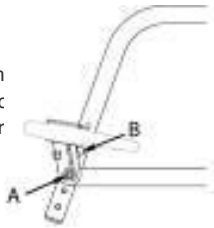
- Loosen and remove screw **E** that secures the telescopic support to the frame
- Slide the step up to the desired height, aligning the holes of the outer tube and the inner tube (20mm pitch)
- Reinsert screw **E** and tighten it appropriately



Example of adjustment for a single separate footrest

14.19.1. Seat-to-Footrest Distance Less Than 35cm

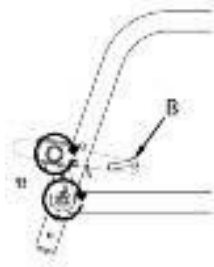
For a seat-to-footrest distance less than 35cm, the footrest is directly fixed to the fram tube. It's possible to adjust the footrest height using the provided holes on the frame c to move the footrest closer to or farther from the seat by rotating it around the suppor



Changing Footrest Height Using Frame Holes

- Remove screw A that secures the footrest to the frame.
- Adjust the footrest height by choosing another hole available on the frame.
- Ensure that the threaded insert is properly inserted into the frame tube.
- Reinsert and tighten the previously removed screw A.

Moving the Footrest Closer to or Farther from the Seat

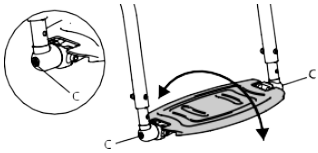


- Loosen screw **B** that secures the clamp, allowing the footrest to rotate.
- Adjust the distance between the seat and the footrest and the orientation of the footplate by rotating it around its support.
- Properly tighten screw B.

14.20. Footplate tilt adjustment

14.20.1. Automatic footplate

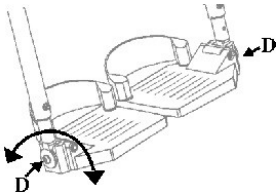
If the wheelchair is equipped with an automatic footplate, the orientation of the footplate can be adjusted as follows:



- Release the screws **C**
- Position the footplate with the required inclination
- Fasten the screws **C**

14.20.2. Plastic footplates

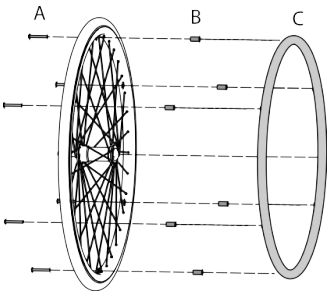
If the wheelchair is fitted with plastic footplates, the orientation of the footplates can be adjusted as follows:



- Release the screws **D**
- Position the steps with the required inclination
- Fix the screws **D**

14.21. Pushrim with rivets

Replacement



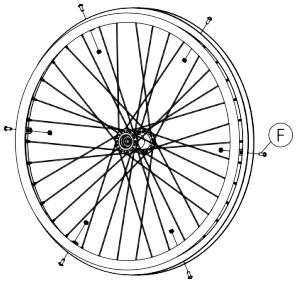
- Remove the wheels from the wheelchair
- Completely unscrew the screws using a 4 mm hex key and remove the pushrim
- A new pushrim can be attached if the spacer sequence is maintained

Adjust the distance between pushrim and rim

- Remove the wheels from the wheelchair
- Completely unscrew the screws using a 4 mm hex key and remove the pushrim
- Replace the screws with ones of the desired length and increase or decrease the height of the spacers accordingly
- Tighten the screws appropriately, possibly in a criss-cross sequence

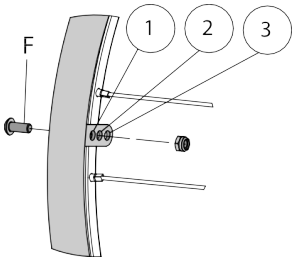
14.22. Pushrim with splices

Replacement



- Remove wheels from wheelchair
- Remove the cover, inner tube (see 8.1, “Replacement of tyre and inner tube”) and inner protective tape to access the screws
- Completely unscrew the screws **F** and remove the pushrim
- Position the new pushrim and replace the screws, taking care to tighten them in a criss-cross sequence if possible
- Refit inner protective tape, inner tube and cover (see 8.1, “Replacement of tyre and inner tube”)

Adjust distance between pushrim and rim

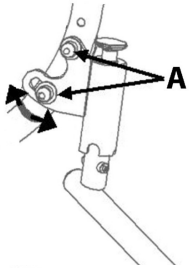


- To give the possibility of choosing the Pushrim mounting distance from the wheel rim, some pushrim offer more than one fastening hole (**1**, **2**, **3**) on the connecting splices
- In this case, you can choose the preferred distance when joining the pushrim to the wheel rim
- Proceed as described above with the fastening of the screws, making sure that the pushrims are positioned equivalently in the two wheels

14.23. Anti-tip device adjustment on curved rear frames

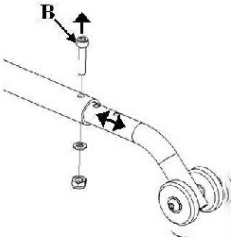
The operating height of the anti-tip device is defined during installation. However, if necessary it is possible to change its distance from the ground and thus vary the intervention threshold.

14.23.1. Ground clearance adjustment



- Loosen, without removing them, the screws **A** that secure the anti-tipping device to the wheelchair frame
- With the anti-tipping device activated (see 6.2, “Anti-tip device”) rotate the fastening plate to obtain the desired distance of the castor wheel from the ground
- Tighten the screws **A** appropriately

14.23.2. End terminal adjustment

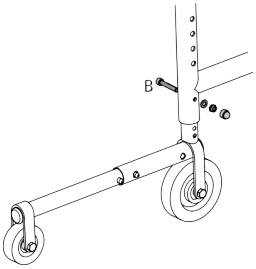


- Remove screw **B**
- With the anti-tilt activated, slide the terminal to the desired, more or less protruding position
- reinsert screw **B** into place and secure appropriately

14.24. Anti-tip adjustment on straight rear frames

14.24.1. Ground clearance adjustment

The operating height of the anti-tip device is defined during installation. However, if necessary it is possible to change its distance from the ground and thus vary the intervention threshold. If the anti-tip device is fitted in combination with narrow passage wheels, any adjustment must take this into account.

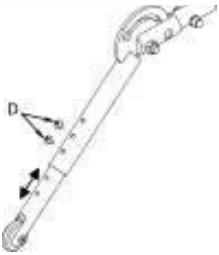


- Remove screw **B**
- Slide the inner tube to the desired height
- Insert screw **B** and tighten accordingly

14.25. CHILDREN3000 Anti-Tip Adjustment

The anti-tip intervention height is defined during assembly. However, if necessary, you can modify its distance from the ground by adjusting the position of the terminal, thus adjusting the intervention threshold.

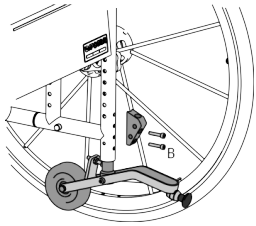
14.25.1. Terminal Adjustment



- Remove screws **D**
- With the anti-tip engaged, slide the terminal to the desired position, extending more or less as needed
- Reinsert screws **D** and tighten them securely

14.26. Height adjustment for lever-activated small wheels

The position of the lever-activated small wheels is defined during the assembly. However it is possible to change its distance from ground if the rear height has been changed (limited to a small range near the original height)



- Remove the **B** screw
- Slide the small wheel holding tube and the external block till the desired height
- Insert the **B** screw and fix it properly

14.27. Table installation

To install the table on a wheelchair:

- Loosen and remove the **A** screws that connect the elbow-rest to the armrest;
- Mount the table support paying attention to its direction (right or left) and fix it using two new screws 5 mm longer than the ones removed
- Put the table supporting tubes in place and fix them to the preferred depth with the **B** wing screw;
- Fix the supports to the table with the **C** screws.

Table support

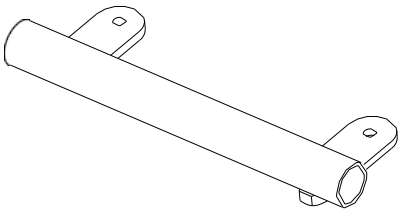
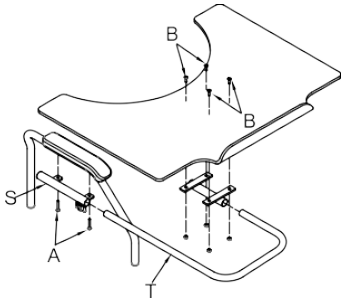
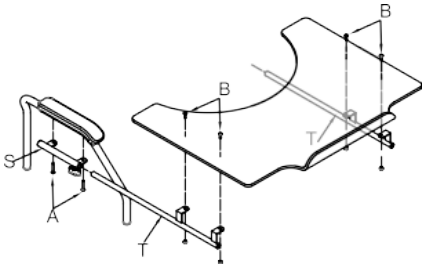


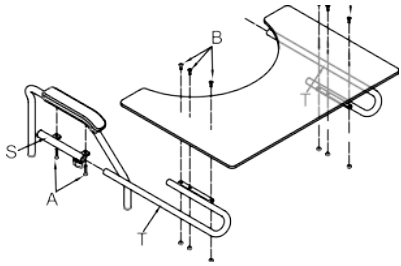
Table support with single centre attachment



Polycarbonate table with double attachment



Polycarbonate or plastic table with double attachment



14.28. Abductor assembly

On OFFCARR wheelchairs, a pull-out abductor can be fitted. Follow the

instructions below for fitting:

- Mount the supplied blocks **H** on the side tubes of the frame
- Loosen the screws **A** on the support bar without removing them
- Assemble the support bar by inserting the lateral ends into the guides of the brackets **H**, paying attention to the knobs **M**, and fix the screws **A** to lock the width
- Insert the sliding support of the abductor into its guide and secure it with the wing screw **N**.

To adjust the depth of the abductor, or remove it to facilitate transfers or other manoeuvres of the user in the wheelchair, act as follows:

- Loosen the wing screw **N**
- Position the dock to the desired depth and tighten the wing screw **N** or completely remove the abductor knob from the seat.

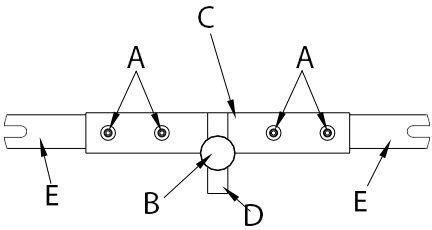
In this case of only removing the abductor knob, the support bar remains mounted on the wheelchair and does not allow it to be closed for transport.

To fold the wheelchair it is essential to remove the abductor knob with the support bar:

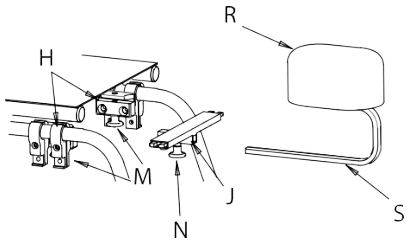
- Pull one of the two knobs **M** to release the support bar;
- Remove the support bar by pulling it out of its slots in an arching motion.

The bar can be removed with or without the knob inserted. With the user sitting in the wheelchair, it is recommended to remove the abductor knob separately and then the support bar if necessary.

Support bar



Scheme of the abductor parts

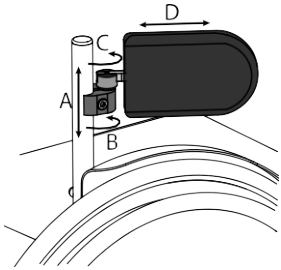


- The distance between the seat and the abductor can be reduced by 20 mm by turning the support bar upside down.
- The sliding support bar is available in various heights, depending on the required distance between the seat canvas and the base of the abductor knob, to suit different cushion options.

14.29. Assembly and adjustment of *swing-away* lateral supports

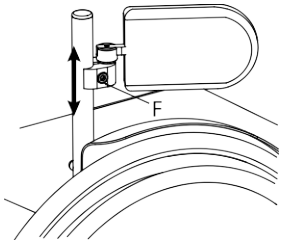
Swing-away lateral supports are accessories that can be provided at the time of ordering or can also be fitted later without special arrangements. Their fastening system allows a wide flexibility in finding the preferred positioning while always maintaining the characteristic of openness to facilitate transfers, dressing etc.

It is possible to adjust the height **A**, the angle between the clamp and the backrest **B**, the angle of the support **C**, and the depth position of the soft support **D**



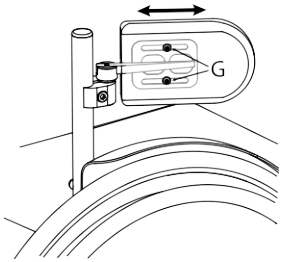
14.29.1. Height and width support adjustment

- Loosen screw **F** without removing it
- Position the clamp to achieve the desired support height
- Rotate the clamp and the support to position the latter at the desired width
- Tighten screw **F** appropriately



14.29.2. Depth position adjustment:

- Loosen screws **G** accessible on the outside under the upholstery
- Slide the upholstery back or forward to the desired position
- Tighten screws **G** and reassemble the upholstery



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