



INSTRUCTION SHEET

SET THE CENTER OF GRAVITY ON FOLDING WHEELCHAIRS



This document explains how to **adjust** the center of gravity of Motion Composites **folding wheelchairs**. The center of gravity is adjusted differently depending on the **type of rear wheel mounting plate**:

- Multi-position
- 6 positions non-reversible
- 12 positions reversible

The documents mentioned in below are available at [motioncomposites.com](https://www.motioncomposites.com) (Support and Education/ How-to documents):

- Squaring the front caster housings (MC-MTKG-WI-0008)
- Changing camber angle on folding wheelchairs (MC-MTKG-WI-0004)

Wheelchair model(s)

- HELIO C2/A6/A7/Kids
- VELOCE
- MOVE

Tool(s) and materials required

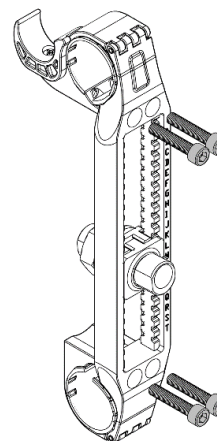
- Worktable or flat leveled surface
- Wheelchair support or any other object to support the wheelchair
- Measuring tape
- Torque wrench
- Hex keys (Allen keys): 4 mm, 5 mm
- Medium strength threadlocker adhesive (Blue Loctite)

IMPORTANT INFORMATION

- When the **center of gravity** is **changed and** the seat has a **slope**, the **position of the front caster housing must be checked and adjusted if necessary**. See instruction sheet "**Squaring the front caster housings**" (MC-MTKG-WI-0008).
- When the **center of gravity** is **changed**, the **rear seat height** should also be **checked and adjusted if necessary**
 - To adjust the rear seat height, raise or lower the rear wheel axle.
 - See the instruction sheet "**Changing camber angle on folding wheelchairs**" (MC-MTKG-WI-0004). The first few pages explain how to adjust the rear seat height, among other things.

ADJUSTING THE CENTER OF GRAVITY ON A CHAIR WITH MULTI-POSITION MOUNTING PLATES

- The **multi-position mounting plate** is used on the following models: **HELIO A7/C2/Kids/VELOCE**.
- If possible, place the chair on a **worktable**.
- **Remove** one or both **wheels** and place a **support under the chair**.
- **Unscrew and completely remove** the **4 screws** holding the rear wheel **mounting plate** using a **5 mm hex key**.

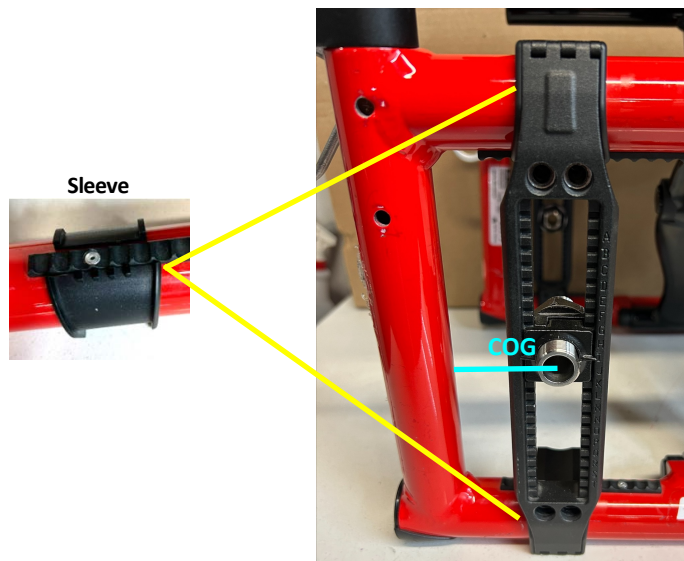




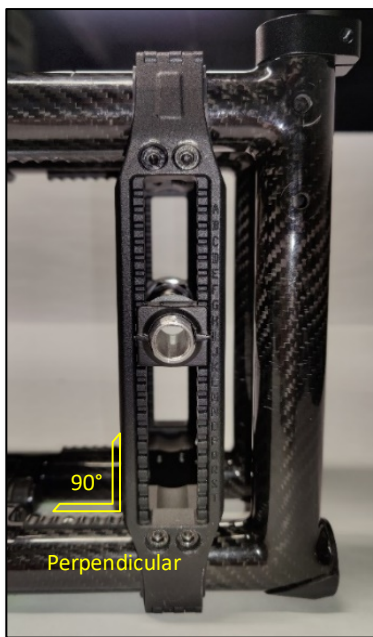
INSTRUCTION SHEET

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- Remove the wheels.
- **LIFT UP ON SEAT UPHOLSTERY TO SLIGHTLY FOLD CHAIR TO ALLOW MOUNTING PLATE TO SLIDE.**
- Undo the screws.
- **Open the mounting plate hinges at the top and bottom.**
- **Move the mounting plate along the frame to the location of the center of gravity (COG) as prescribed by the therapist.**
- MEASURE:
 - **Center of gravity** can be adjusted from 1" to 3 ¾" or 4", depending on the model in ¼ inch increments.
 - **IMPORTANT:** The **center of gravity on this chair** is measured between the **inside of the rear vertical tube** of the frame and the **center of the axle receiver** (large photo).
 - **ATTENTION:** The **plastic sleeves** must **not cover the notched rails** (small photo).



- **Close the hinges.**
 - **CAUTION:** Make sure that the **mounting plates are perpendicular to the frame tube at the top and bottom** (see photo) and that the **hinges are properly closed on the plastic sleeves and the notched rails.**
- Apply **medium strength threadlocker adhesive** (blue Loctite) to the last threads of all screws.
- **Insert and screw in the 4 screws** that hold the mounting plate.
- **OPEN THE CHAIR.**
- Apply a tightening **torque of 12 Nm** to the **4 screws** of the mounting plate.
- Put the wheels back on.
- Be sure to say repeat on the other side.
- Will need to adjust the wheel locks.
- Will note not to use a drill, only Allen wrench and torque wrench when adjusting.





INSTRUCTION SHEET

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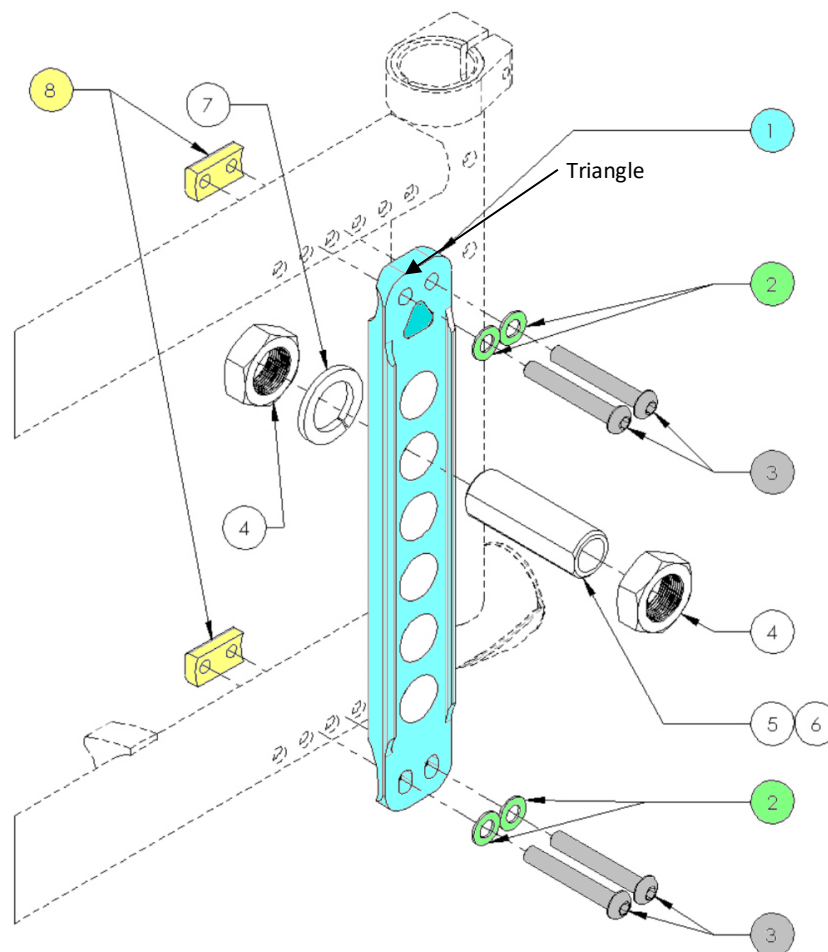
ADJUSTING THE COG ON A CHAIR WITH 6 POSITIONS NON-REVERSIBLE OR 12 POSITIONS REVERSIBLE MOUNTING PLATES

Model: **MOVE**

- These models use a **6 positions non-reversible** mounting plate.

Model: **HELIO A6**

- These models use a **reversible 12 positions** mounting plate.
- If possible, place the chair on a **worktable**.
- **Remove** one or both **wheels** and place a **support under the chair**.
 - NOTE THE DIRECTION OF THE ARROW.
 - If it is a **12 positions reversible** mounting plate, **note** whether the **triangle** is **positioned up or down**.
- LIFT/FOLD CHAIR TO ALLOW REMOVAL OF AXLE AND RECEIVER.
- Completely **remove** the **4 screws (#3)** holding the **mounting plate (#1)** to the rear wheels using a **4 mm hex key**
 - Be careful not to drop or lose the **washers (#2)** and **threaded retainers (#8)** on the back of the frame



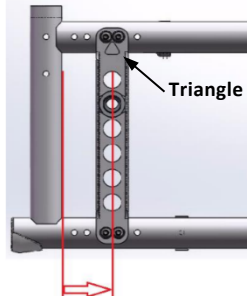


INSTRUCTION SHEET

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- **Position** the mounting plate where the **center of gravity** should be as **prescribed** by the **therapist**.
 - If it is a **12 positions reversible** mounting plate, **install** the **triangle** in the **same position** as noted at disassembly (**up** or **down**). Note that you may need to adjust it again to adjust the rear seat height, which may involve reversing the plate.
 - There are **5 possible positions** for the **12-position reversible** mounting plates.
 - The COG measurements corresponds to the measurements listed on the order form.

CENTER OF GRAVITY *Extract from an order form*



Triangle

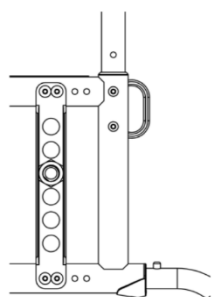
Choose position of rear wheel axle plate: _____
 Measure distance from front of back post to center of axle receiver.
Default setting is at 1" 1/4

	Most stable				Most responsive
AMPUTEE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3/4"	1" 1/4"	1" 3/4"	2" 1/4"	2" 3/4"

If a configuration issue arises due to the choice of the Center Of Gravity (COG) Motion Composites reserves the right to reduce or increase the COG to the closest position.

- There are **2 possible positions** for the **6 positions non-reversible** mounting plates.

CENTER OF GRAVITY *Extract from an order form*



Choose position of rear wheel axle plate: _____
 Measure distance from front of back post to center of axle receiver.
Default setting is at 3/4"

	Most stable		Most responsive
AMPUTEE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3/4"		2"

- **IMPORTANT:** The **center of gravity** is measured between the **inside of the rear vertical tube** of the frame and the **center of the axle receiver**.
- Apply **medium strength threadlocker adhesive** (blue Loctite) to the last threads of all screws.
- Insert the **washers** into the **screws**.
- **Insert** and **screw** the **4 screws** that hold the mounting plate to the threaded retainer that you have placed on the back of the frame tube opposite the screws.
- **OPEN THE FRAME.**
- Apply a tightening **torque** of **7 Nm** to the **4 screws** of the mounting plate.
- **PUT WHEEL(S) BACK ON.**