

**“TIP SHEET” to assist in the completion
of the order form for the
Motion Composite HELIO A6 wheelchair**

*Prepared March 2024 by
Community Therapy Services Inc.
in reference to the order form used by
the Manitoba Wheelchair Program*

Helio A6

ORDER FORM - MANITOBA POSSIBLE

Manitoba Wheelchair Program (MWP)

1857 Notre Dame Ave Wpg MB R3E 3E7

MWP ORDER FORM LEGEND:

NC = NO CHARGE (option available through Manitoba Possible)
J = JUSTIFICATION REQUIRED (provide clinical rationale)
OTP = OPTION TO PURCHASE (client responsible for cost)
N/A = NOT AVAILABLE (option not available through Manitoba Possible.)

SEAT WIDTH, SEAT DEPTH and TIE DOWN OPTIONS

- Seat width** is determined mainly by the hip width of the client but may also be affected by chest width. Also consider the need to accommodate a solid back rest when applicable, with attention to the contour, adjustability and foam thickness of lateral supports.
- The practice of using “hip width plus 2 inches” is outdated.** The chair should fit much like a prosthetic in that chair width should be as close as possible to hip width to optimize positioning and propulsion. Excessive width causes client to reach up and over the arm rests, contributing to shoulder strain. Concerns about access through doors, space for winter wear/slings etc. rarely supersede client dimensions.
- Measure width** from one outside seat rail to the other outside seat rail.
- Optimum seat depth** should provide as much thigh support as possible. It is measured from the front of the back cane to the front of the upholstery. Seat depth will also affect foot-propelling. Excessive seat depth will limit the knee flexion required for effective foot propulsion.

TRANSIT TIE DOWN- Choose AC35 Transit Tie Down w/out belt as standard option from the MWP, unless client is in an HD chair in which case the choice is AC04. Q'straint belt may be needed for transport in a vehicle with a WC18 occupant restraint system.

MODEL								
WC19		Ultralight folding Helio A6 Wheelchair - 6000 series aluminum (265lb weight capacity)						NC
WC09		HD Heavy duty kit (350 lb weight capacity)						NC
Frame								
SEAT WIDTH ³								
SW		14"	15"	16"	17"	18" ¹		NC
		19" ¹	20" ¹	21" ²	22" ²			NC
SEAT DEPTH								
SD		14"	15"	16"	17"	18"		NC
		19"	20"					NC
TRANSIT TIE DOWN								
AC04		Transit Tie Down (Unoccupied)						NC
AC05-S		WC-19 Transit Tie Down w/Q'straint belt ⁴ Short belt 20"-41"						J
AC05-L		WC-19 Transit Tie Down w/Q'straint belt ⁴ Long belt 20"-46"						J
AC35		WC-19 Transit Tie Down without belt ⁴						NC

1 Available with HD Kit (350 lb) 2 Only with HD Kit (350 lb) 3. Width calculator 4. May interfere with swing away arm rest and clamp on height adjustable push handle. Not available with HD option.

FRONT STFH options are shown in the chart at the top of the next page.

- **Vertical columns show the caster sizes:** 6" and 8" are No Charge options. 5" need Justification. 3", 4" and 7" are OTP.
- **The vertical columns are sub-divided according to stem bolt length options of Standard, plus 1" and plus 2".**
- **Horizontal rows show the Fork Length options of 4", 5" and 7" as well as the positions that each fork can be set at.** 4" Forks have 2 position options. 5" Forks have 4 position options. 7" Forks have 5 position options.

Choose the caster size, stem bolt length and fork position needed to obtain optimal STFH for positioning, propulsion and transfers.

There is usually more than one combination for each STFH. The diagram on the last page gives more information regarding clinical reasoning.

- **Front STFH is measured** at seat rails, not in the centre. STFH that is too low will increase hip flexion and reduce thigh support.
- The Front STFH **does not include a cushion** but it is necessary to anticipate the affect that seating will have on the finished STFH.
- **Smaller diameter casters** may need to be considered for lower STFH's and often need to be paired with shorter forks. Smaller size casters have less roll efficiency and less ability to clear obstacles and/or absorb shock. They will be more efficient in tighter spaces especially when paired with shorter forks, assuming that the centre of gravity has been set up properly.

- **Foot propellers** with smaller leg lengths may need smaller casters with shorter forks. Note that 1 ½"-2" floor clearance is typical when foot rests are used. This needs to be considered when foot propellers use foot rests some of the time.
- **Larger casters** may roll better but can make it harder to get the chair in a forward-facing position. Caster interfere with the foot rests may impede propulsion and reduce transfer safety. Larger casters, combined with longer forks, may be essential to obtaining the required front STFH, but that this may result in a larger turning radius, decreased propulsion and accessibility challenges.

Choosing the best option if more than one option exists:

- **If the Front STFH is achievable with different size casters**, larger casters are preferred if the chair is often used outdoors. Choose smaller casters if the chair will often be used in tight spaces.
- **If the STFH is possible with two different fork positions**, choose the one that can be adjusted without changing to parts that are not standard. (e.g. If 16.5" STFH is needed, choose P3 option of STD bolt length to allow up/down adjustment without changing bolt length. This can be helpful if there has been a slight miscalculation or if seating has changed the optimal Front STFH.

□

A6 FRONT Seat-to-Floor Height- Please circle

Height available +/- ¼" (See stem bolt and fork combinations at the end of the order form.)

Forks / Position		3" caster (OTP)			4" caster (OTP)			5" caster (J)			6" caster (NC)			7" caster (OTP)			8" caster (NC)		
		Stem bolt Length			Stem bolt Length			Stem bolt Length			Stem bolt Length			Stem bolt Length			Stem bolt Length		
4"	P1	STD	+1"	+2"	STD	+1"	+2"	STD	+1"	+2"	STD	+1"	+2"	STD	+1"	+2"	STD	+1"	+2"
	P2	12"	13"	14"	12 1/2"	13 1/2"	14 1/2"												
5"	P1	12 1/2"	13 1/2"	14 1/2"	13"	14"	15"	13 1/2"	14 1/2"	15 1/2"									
	P2																		
	P3				13"	14"	15"	13 1/2"	14 1/2"	15 1/2"									
	P4	13 1/2"	14 1/2"	15 1/2"	14"	15"	16"	14 1/2"	15 1/2"	16 1/2"	15"	16"	17"	15 1/2"	16 1/2"	17 1/2"			
7"	P1										15 1/2"	16 1/2"	17 1/2"	16"	17"	18"			
	P2							15 1/2"	16 1/2"	17 1/2"	16"	17"	18"	16 1/2"	17 1/2"	18 1/2"			
	P3							16"	17"	18"	16 1/2"	17 1/2"	18 1/2"	17"	18"	19"	17 1/2"	18 1/2"	19 1/2"
	P4	15 1/2"	16 1/2"	17 1/2"	16"	17"	18"	16 1/2"	17 1/2"	18 1/2"	17"	18"	19"	17 1/2"	18 1/2"	19 1/2"	18"	19"	20"
	P5	16	17	18	16 1/2"	17 1/2"	18 1/2"	17	18	19	17 1/2"	18 1/2"	19 1/2"	18	19	20	18 1/2"	19 1/2"	20 1/2"

CASTERS

- **Composite caster wheel with PU (poly-urethane) tires** are the standard choice offered by the program.
- **Pneumatic casters** may be purchased but are used much less often than pneumatic tires for rear wheels (partly because this would require the maintenance of 4 tires rather than 2 tires if pneumatic rear wheels were also chosen).
- **Wider casters will not sink into softer surfaces (carpet, grass, mud etc) as much as narrow casters.**

CASTERS				Availability			
CA01-03 to CA01-08	<input type="checkbox"/>	Composite wheel w/ PU tire (1")		3", 4", 5", 6", 7", 8"			NC
CA10 to CA11	<input type="checkbox"/>	Pneumatic casters (1 ¼")		6", 8"			OTP
CA14 to CA16	<input type="checkbox"/>	Newton UltraCaster Composite (1 ½ ")		4", 5", 6"			J
CA17 to CA19	<input type="checkbox"/>	Newton UltraCaster Aluminum (1 ½ ")		4", 5", 6"			OTP
CASTER OPTIONS							
CA12		Caster Pin Locks (Available with +1" or +2" Stem bolt ONLY) ¹					OTP
CA13		Carbon fiber Frog Legs suspension forks (Not available with caster pin locks)					OTP

-**Caster pin locks** are not available on the Move and are rarely needed on the A6. When in the locked position, the caster won't swivel.
-Frog leg suspension forks may be useful to active users who experience increased spasticity and/or pain with slight changes in terrain.
 Note that some users find this suspension too responsive resulting in less propulsion efficiency.

REAR WHEELS and REAR STFH options

-**Each vertical columns shows the STFH options for that wheel size.** 20", 22" and 24" are NC. 25" and 26" are OTP.
-24" wheels are more common but may cause excessive elbow flexion with lower STFH's, which may reduce propulsion.
-20" or 22" wheels may be needed for a lower STFH. Shorter clients may have better access to rims for more efficient propulsion.
-Rear STFH can be set at same or different height than the Front STFH. When they are the same, the chair frame is oriented upright with the seat parallel to the ground. This is typically good for foot propellers as long as they have sufficient trunk balance.
-When the rear is lower than the front it will introduce seat dump/slope into the frame of the chair. The orientation of the seat and back will be statically tilted against gravity which lowers buttock/hip and head height, but maintains thigh height...

...Lower Rear STFH changes upper extremity access to the rear wheels and impacts transfers. More seat slope can help reduce sliding and improve visual field orientation, however it may also increase the tendency into posterior tilt in kyphosis which in turn can increase sliding. **-When the rear is higher than the front** it will introduce anterior seat slope of seat dump into the frame of the chair. This changes the orientation of the seat and back in the opposite direction against gravity.

HELIO A6 - REAR Seat-to-floor Height - Please select your choice

	22" (501) (NC)	24" (540) (NC)	25" (559) (OTP)	26" (590) (OTP)
12" <input type="checkbox"/>	13" <input type="checkbox"/>	13 3/4" <input type="checkbox"/>	14 1/4" <input type="checkbox"/>	14 3/4" <input type="checkbox"/>
12 1/2" <input type="checkbox"/>	13 1/2" <input type="checkbox"/>	14 1/4" <input type="checkbox"/>	14 3/4" <input type="checkbox"/>	15 1/4" <input type="checkbox"/>
13" <input type="checkbox"/>	14" <input type="checkbox"/>	14 3/4" <input type="checkbox"/>	15 1/4" <input type="checkbox"/>	15 3/4" <input type="checkbox"/>
13 1/2" <input type="checkbox"/>	14 1/2" <input type="checkbox"/>	15 1/4" <input type="checkbox"/>	15 3/4" <input type="checkbox"/>	16 1/4" <input type="checkbox"/>
14" <input type="checkbox"/>	15" <input type="checkbox"/>	15 3/4" <input type="checkbox"/>	16 1/4" <input type="checkbox"/>	16 3/4" <input type="checkbox"/>
14 1/2" <input type="checkbox"/>	15 1/2" <input type="checkbox"/>	16 1/4" <input type="checkbox"/>	16 3/4" <input type="checkbox"/>	17 1/4" <input type="checkbox"/>
15" <input type="checkbox"/>	16" <input type="checkbox"/>	16 3/4" <input type="checkbox"/>	17 1/4" <input type="checkbox"/>	17 3/4" <input type="checkbox"/>
15 1/2" <input type="checkbox"/>	16 1/2" <input type="checkbox"/>	17 1/4" <input type="checkbox"/>	17 3/4" <input type="checkbox"/>	18 1/4" <input type="checkbox"/>
16" <input type="checkbox"/>	17" <input type="checkbox"/>	17 3/4" <input type="checkbox"/>	18 1/4" <input type="checkbox"/>	18 3/4" <input type="checkbox"/>
16 1/2" <input type="checkbox"/>	17 1/2" <input type="checkbox"/>	18 1/4" <input type="checkbox"/>	18 3/4" <input type="checkbox"/>	19 1/4" <input type="checkbox"/>
17" <input type="checkbox"/>	18" <input type="checkbox"/>	18 3/4" <input type="checkbox"/>	19 1/4" <input type="checkbox"/>	19 3/4" <input type="checkbox"/>
17 1/2" <input type="checkbox"/>	18 1/2" <input type="checkbox"/>	19 1/4" <input type="checkbox"/>	19 3/4" <input type="checkbox"/>	20 1/4" <input type="checkbox"/>

Configuration used:
1" seat slope with
Centre of Gravity set at 2"

Note: Tire size, Centre of Gravity setting and seat slope may result in a variation of +/- 1/2" of selected STFH.

SWING IN/SWING OUT FOOT RESTS, FOOT PLATES and RESIDUAL LIMB SUPPORT options:

- Choice of leg rest hanger angle** is determined largely by the client's tolerance for knee flexion. Other determining factors include hip and ankle flexibility, tightness of the quads and/or hamstrings and seat depth. If the hanger angle is not suitable, the pelvis may tilt anteriorly or posteriorly. The client may move forward on the seat leading to other positioning problems.
- Improper hanger angles and reduced ankle range may result in difficulty placing the feet on the foot plates. Adjustment of foot plate depth and/or use of angle adjustable foot plates may be helpful.
- More extended hanger angles result in a larger footprint which may limit environmental access.
- Less extended hanger angles may cause caster interference. Higher STFH may be needed.
- Swing-in/Swing-out foot rests** may facilitate access to other surfaces (e.g. toilet) for transfers.

- **High mount foot rests** are available when the lower leg length is shorter than the shortest length of standard leg rests. These have extensions that may hang lower than the footplates and could cause interference with 8" casters or longer forks.
- ELRs** may be chosen when there is limited knee flexion. They may be helpful to support an orthotic, cast or residual limb.
- ELRs are often ineffective in controlling edema and will reduce maneuverability. They also add weight to the chair.

- **Leg rest length** is measured from the seat upholstery to the middle of the footplate, where the hanger meets the foot plate.
- Leg rest length will be determined by the client's leg length less the compressed height of the cushion under the thigh.
- Indicate the range of the leg rest as well as the specific length that the leg rest should be set at.

Footrest					
SWING-IN/SWING-OUT FOOTREST					
FR03-01		60° Swing-in/swing-out footrest - 13.5" - 17"		Set at: *	NC
FR03-02		60° Swing-in/swing-out footrest - 14.5" - 19.5"		Set at: *	NC
FR03-03		60° Swing-in/swing-out footrest - 15.5" - 20.5"		Set at: *	NC
FR04-01		70° Swing-in/swing-out footrest - 13.5" - 17"		Set at: *	NC
FR04-02		70° Swing-in/swing-out footrest - 14.5" - 19.5"		Set at: *	NC
FR04-03		70° Swing-in/swing-out footrest - 15.5" - 20.5"		Set at: *	NC
FR15-01		80° Swing-in/swing-out footrest - 13.5" - 16" ⁵		Set at: *	NC
FR15-02	<input type="checkbox"/>	80° Swing-in/swing-out footrest - 14.5" - 19.5" ⁵		Set at: *	NC
FR15-03	<input type="checkbox"/>	80° Swing-in/swing-out footrest - 15.5" - 20.5" ⁵		Set at: *	NC
FR06	<input type="checkbox"/>	90° swing-in/swing-out with front mount - Standard (no extension) ¹	7.5" - 11"	Set at: *	NC
FR07	<input type="checkbox"/>	90° swing-in/swing-out with front mount - Short extension 2" ^{1, 2}	9.5" - 13"	Set at: *	NC
FR08	<input type="checkbox"/>	90° swing-in/swing-out with front mount - Medium extension 4" ^{1, 2}	9.5" - 14.5"	Set at: *	NC
FOOTREST OPTIONS					
FR09	<input type="checkbox"/>	High mount (footplate attached to the hanger with clamps) ³	5" - 13.5"	Set at: *	J
FR10	<input type="checkbox"/>	Elevating legrest with calf pad, Length adjustable ⁴ Left <input type="checkbox"/> Right <input type="checkbox"/>	14" - 22"	Set at:	J
FR99	<input type="checkbox"/>	Omit Footrest			N/A

1- Available only with two piece adjustable footplates; 2- May interfere with front casters; 3- Not available with front mount and the elevating legrest; * +/- 1/2"

4- The elevating legrest replace the footrest side selected; Not available with one piece footplate; 5- Not available with 8" caster

FOOT PLATES

- Composite plastic foot plates** are the standard option offered by the MWP. They are lighter but less durable than aluminum foot plates.
- Adjustable angle foot plates** (which are also depth adjustable) can be used to compensate for limited ankle ROM if necessary. Adjustable angle aluminum foot plates offer greater adjustability and may be selected if required based on ROM.
- One-piece adjustable angle flip-up foot plates** are available on the A6 but not the Move. This option is not chosen often because users may find it uncomfortable compared to individual foot rests that distribute the forces through two hangers. Other disadvantages include the possibility of the one-piece foot plate interfering with transfers and the difficulty some clients have when trying to flip it up.
- Heel loops** are standard but may be removed if not needed, or if they cause skin irritation or reduce the surface area for large feet.
- Calf straps** can be purchased but are not often used on folding chairs because they are attached to swingaway leg rests.
- Residual limb supports** are adjustable in height, depth, width and angle to improve/maintain positioning, comfort and skin integrity. Limb length would determine the dimensions. Contoured shape may offer more stability for the residual limb.

FOOTPLATES				
FP01		Standard - Composite ¹		NC
FP02		Newton adjustable angle - Composite		J
FP03		Newton adjustable angle - Aluminum		OTP
FP06		One piece adjustable angle flip-up - Aluminum		OTP
FOOTPLATE ACCESSORIES				
FP08		Length adjustable heel loop ²		NC
FP09		Calf strap		OTP
FP30		Bodypoint Aeromesh Padded calf strap		OTP

1- Not available with front mount 2- Not available with

BACK REST SPECIFICATIONS including back canes, handles and upholstery

- The optimal seat/back angle will be determined by factors such as hip flexion, kyphosis, eye gaze and propulsion.**
- Fixed angle back canes** may be chosen when a back rest is being installed as the hardware will give some angle options. Note that greater recline angles may cause back cane interference with shoulders and trunk. If this occurs, angle adjustable back canes will likely be needed.
- Both **fixed and adjustable angle backs** have an 8 degree bend, starting 8" above the seat.
- The **8 degree bend** is designed to offer support in a more natural postural position. The goals are to keep the trunk more stable in relation to the pelvis and to increase freedom of arm movement. It lowers the push handle height slightly. The bend will also cause greater recline that may impact on sight line, positioning and stability. The bend will also contribute to upholstery stretching which may affect posture.
- Higher back will give more support but may interfere with the shoulder excursion needed for self-propelling/transfers.
- Optimal back height is determined by measuring the client from axilla to the seat, and then adding the height of the cushion.
- Consider pressure issues, positioning and arm propulsion. When client needs pelvis support, aim to have the back support cover area below PSIS up to the inferior angle of the scapula. If there is a kyphotic apex below this landmark, the back height may need adjustment.
- Stroller handles** are helpful to tall caregivers. **Stabilizer bar** minimizes flex in back canes (especially in a wider chair without a solid back)
- Slip-on upholstery** is supplied when a solid back is not being ordered. **Adjustable tension upholstery** may be helpful for mild abnormalities.

SWING AWAY RESIDUAL LIMB SUPPORT							
FR27		Residual limb support - flat 6"x8"	Left	Right			OTP
FR28		Residual limb support - flat 8"x10"	Left	Right			OTP
FR29		Residual limb support - flat 10"x10"	Left	Right			OTP
FR30		Residual limb support - flat 10"x14"	Left	Right			OTP
FR32		Residual limb support - contour 6"x8"	Left	Right			OTP
FR33		Residual limb support - contour 8"x10"	Left	Right			OTP
Backrest							
FIXED ANGLE BACK CANES WITH INTEGRATED PUSH HANDLE <i>(push handle included - no further selection needed)</i>							
BC58-915		Straight aluminum back cane	9" - 15"	<i>increment of 1/2"</i>	Set at ² :		NC
BC58-1521		Straight aluminum back cane	15" - 21"	<i>increment of 1/2"</i>	Set at ² :		NC
BC60		Straight aluminum back cane	21" - 24"	<i>increment of 1"</i>	Set at ² :		J
BC01-16		8° bend aluminum back cane	16"				NC
BC01-18		8° bend aluminum back cane	18"				NC
BC01-20		8° bend aluminum back cane	20"				NC
BC59		8° bend aluminum back cane	21" - 24"	<i>increment of 1"</i>	Set at ² :		J
FIXED ANGLE, HEIGHT ADJUSTABLE BACK CANES WITH PUSH HANDLE OPTIONS <i>(MUST select ONE push handle options)</i>							
BC11-912		Straight aluminum back cane	9" - 12"	<i>increment of 1/2"</i>	Set at ² :		J
BC11-1215		Straight aluminum back cane	12" - 15"	<i>increment of 1/2"</i>	Set at ² :		J
BC11-1518		Straight aluminum back cane	15" - 18"	<i>increment of 1/2"</i>	Set at ² :		J
BC11-1821		Straight aluminum back cane	18" - 21"	<i>increment of 1/2"</i>	Set at ² :		J
BC12-1315		8° bend aluminum back cane	13.5" - 15"	<i>increment of 1/2"</i>	Set at ² :		OTP
BC12-1518		8° bend aluminum back cane	15" - 18"	<i>increment of 1/2"</i>	Set at ² :		OTP
BC12-1821		8° bend aluminum back cane	18" - 21"	<i>increment of 1/2"</i>	Set at ² :		OTP

PUSH HANDLES, STROLLER HANDLES, STABILIZER BARS and BACK UPHOLSTERY

- **Push handles** that are a fold down handles may be useful if the handles are not used continuously.
- Clamp-on adjustable handles may be useful if people pushing the chair vary in height, likely more applicable in pediatric settings.
- **Stroller handles** are helpful to tall caregivers.
- **Stabilizer bar** minimizes flex in the back canes (may be useful in wider (HD) chairs particularly if a back rest is not being installed)
- **Slip-on upholstery** is supplied when a solid back rest is not being ordered or if this is undecided.
- **Adjustable tension upholstery** may be helpful when abnormalities are not severe (e.g. mild kyphosis)
- If a solid back rest is definitely being ordered, the upholstery may be omitted to facilitate installation.

ANGLE AND HEIGHT ADJUSTABLE BACK CANE WITH PUSH HANDLE OPTIONS (MUST select ONE push handle options)						
BC13-1518		Straight aluminum back cane	15" - 18"	increment of 1/2"	Set at 2:	J
BC13-1821		Straight aluminum back cane	18" - 21"	increment of 1/2"	Set at 2:	J
BC14-1518		8° bend aluminum back cane	15" - 18"	increment of 1/2"	Set at 2:	OTP
BC14-1821		8° bend aluminum back cane	18" - 21"	increment of 1/2"	Set at 2:	OTP
		Select back cane angle:	85° ¹	90°	95° STD	100°
					105°	110°
PUSH HANDLES OPTIONS (ONE option at a time)						
PH01		Push handles				NC
PH05		Fold down push handles ^{3, 5}				OTP
PH06-920		Clamp on height adjustable push handles 9"-20" ^{3,4, 5}				OTP
PH06-923		Clamp on height adjustable push handles 9"-23" ^{3,4, 5}				OTP
PH02		Omit push handles				NC
STROLLER HANDLE AND STABILIZER BAR (only available with push handle)						
PH04		Stroller handle (not available with the HD option)				OTP
PH03		Newton folding stabilizer bar (not available with stroller handle)				OTP

1. Not compatible with 8 degree bent back cane; 2- If not indicated, default height setting is at the lowest position; measured from seat sling to top of back upholstery; 3- 265lb weight limit
4. Not compatible with swing away armrests, 8° bend back canes, 21-24" back canes and amputee axle plates; 5- Not compatible with stroller handler, stabilizer bar, headrest and attendant lock

BACK UPHOLSTERY						
BH05		Slip-on Nylon back upholstery				NC
BH06		Adjustable tension Nylon back upholstery				OTP
BH99		Omit Back upholstery				NC
		NXT back Support		See pricelist		OTP
SEAT CUSHION						
SC01		2" Cushion				OTP
SC02		3" Cushion				OTP
SC99		Omit seat cushion				NC
		NXT cushion		See price list		OTP

REAR WHEELS and TIRES

- Mag wheels** require little or no maintenance but may warp over time. They are heavier than spokes with less shock absorption.
- Spoke wheels** are lighter with better shock absorption. They need maintenance but are easily repaired. They can be customized here may be a risk of fingers getting caught in spoke wheels. Spoke guards can minimize this risk.
- Urethane tires** are heavier than pneumatic, have increased rolling resistance and less shock absorption. They require less maintenance and have more tensile strength. They perform well on smooth indoor surfaces and are puncture proof.
- Knobby tread** on urethane tires helps to push wheels through outdoor terrain, but will bring more grit indoors.
- Pneumatic tires** give the most energy efficient, comfortable ride. The chair will be more shock absorbent and maneuverable. They should be checked weekly or more often if the chair performance changes. Inflation should be kept at the recommended PSI range.
- Pneumatic with insert** is smoother than solid urethane but is the heaviest tire. High pressure tires may be helpful to active users.

Rear wheels												
ONE ARM DRIVE ¹ Only available with Newton One rear wheel, permanent axles and 0° camber												
HR22		One arm drive - aluminum inner handrim ^{2, 3}	24"	Left	Right							J
HR60		One arm drive - plastic coated inner handrim ^{2, 3}	24"	Left	Right							OTP
HR98		Omit handrim on opposite side of the One Arm Drive (OAD)										OTP
REAR WHEELS												
RW01		Mag ⁴								20", 22" 24"		OTP
RW02		Newton One - spoke wheel ⁵								20", 22" 24"		NC
RW03		Newton Gravity - ultralight wheel								20", 22", 24", 25", 26"		OTP
RW04		Spinergy Spox	Blk STD	Wht ⁶	Blue ⁶	Red ⁶	Yel ⁶			22", 24", 25", 26"		OTP
RW05		Spinergy LX	Blk STD	Pur ⁶	Wht ⁶	Blue ⁶	Red ⁶	Yel ⁶	Pink ⁶	Grn ⁶	Org ⁶	OTP
RW07		Spinergy CLX ⁷	Blk STD	Pur ⁶	Wht ⁶	Blue ⁶	Red ⁶	Yel ⁶	Pink ⁶	Grn ⁶	Org ⁶	OTP

TIRES				Available		
Solid						
TI01		Soft Urethane 1 3/8"		20", 22" 24"		NC
TI02		Soft Urethane knobby 1 3/8" ⁸		22", 24", 25", 26"		J
TI04		Soft Urethane 1" - <i>Shox</i>		22", 24", 25", 26"		OTP
Pneumatic						
TI05		Pneumatic 1 3/8"		20", 22", 24", 25", 26"		NC
TI08		Pneumatic with Airless insert 1 3/8" ⁹		22", 24", 26"		OTP
TI06		Pneumatic HP, Low Tread, Puncture resistant, black 1" - <i>SpeedLite</i>		20", 22", 24", 25", 26"		OTP
TI07		Pneumatic HP, Medium Tread, Puncture resistant, black 1" - <i>TrailBlazer</i>		24", 25", 26"		OTP

1- Offered with handrims on each side of the wheelchair; select the outer handrim in the handrims section; 2- Only standard handrim position available; 3- Not available with HD option
4- Not compatible with HP tires ; Only available with aluminum or plastic coated handrim, standard position; 5- Not compatible with Shox tires; 6- color spokes require an additional 10 days lead-time
7- Only available with 1" tires 8- 22" is only available with Mags and Newton One rear wheels 9- Not available with Synergy CLX, Spinerger LX 25", 26", and Spox 25", 26" rear wheels

HAND RIMS

- **Coated rims** may increase efficiency compared to aluminum anodized (non-coated) rims.
- Plastic coated rims may cause discomfort because sharp "burrs" often develop with wear and tear.
- Neoprene burrs are softer and cause less discomfort. Wearing gloves may be helpful whether rims are coated or not.
- **Newton Air Grip rims** can be ordered to help improve propulsion. A variety of colors can be purchased.
- Newton Air Grips wear down over time but do not chip off the same way that plastic coated rims.
- Simi H, Nova H, Optimum H, Surge and Natural Fit rims have added height and different shapes that can help with ergonomics and joint protection. This may be recommended when the client has issues that interfere with gripping the rim.

Handrims option

ASSEMBLY POSITION						
HR29		Standard Handrim position	Full tab			NC
HR030		Narrow Handrim position no cut	Full tab			NC
HR30		Narrow Handrim position with cut ³	Short tab 2 positions			J
HR31		Super Narrow Handrim ³	Short tab 2 positions STD Short tab 1 position			J
THUMB PIECE SELECTION FOR NATURAL FIT, SURGE, SURGE LT HANDRIMS						
HR23	<input type="checkbox"/>	Standard grip				OTP
HR27	<input type="checkbox"/>	Super grip				OTP
HR099	<input type="checkbox"/>	Omit thumb piece				OTP

3- Only available with Aluminum and Air Grip handrims;

AXLE						
AX01		<input type="checkbox"/> Quick release axle ¹				NC
AX02		<input type="checkbox"/> Permanent axle				J
AX03		<input type="checkbox"/> Quad release axle ¹				OTP
AXLE PLATE						
AX04	<input type="checkbox"/>	Amputee adjustable axle plate ²				OTP

1. Not required with one arm drive 2. May interfere with swing away arm rests and limit seat to floor height

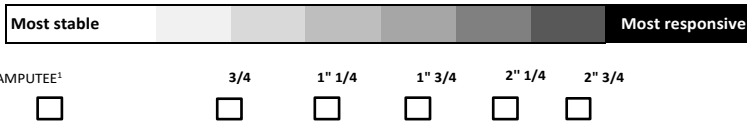
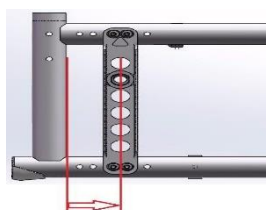
CAMBER may increase lateral stability and improve propulsion efficiency, especially for active users. It may also protect finger joints from trauma when passing through doorways. 3 degrees of camber will widen the chair by about 1.5" which may hinder environmental access.

REAR WHEEL CAMBER

CM00		0° camber				NC
CM03		3° camber				NC

CENTER OF GRAVITY

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



Motion Composites will select the closest possible center of gravity (COG) if an issue arises with the COG

COG 1- Only available with amputee axle plate

- Clients may benefit from an axle that is in a more responsive in position. This will improve wheeling efficiency by aligning the centre of gravity of the chair with that of the client. The majority of the client's weight should be over the rear wheels. With client's arms positioned at each side, the middle finger should line up with the centre of the wheel.

- **Optimal axle set-up is a high priority.** Setting the axle at the mid-way point or slightly further back is a good place to start. Adjustments can be made from there. The added axle options may justify choosing the A6 over the Move for eligible clients.

ARM RESTS

- Flip back** armrests are helpful for those who transfer laterally (e.g. sliding board) as the armrest and hardware flip out of the way.
- "T" style** armrests are more sturdy for clients who weight bear heavily through arm rests during transfers.
- Arm rest length** is determined by forearm length, positioning, and the use of the arm rests during transfers and table/desk access.
- Swing away armrests** are not available on the Move chair. They may be indicated for those who have decreased hand function who transfer laterally, and cannot manage a flip back style arm rest.
- Gel pads** (also not on the Move), can be ordered to increase comfort but the added thickness may interfere with other components.

Armrests							
HEIGHT ADJUSTABLE FLIP BACK ARMREST (Convertible to "T" armrest) ^{1, 4}							
AR01-812		10" Desk length armpad	8" - 12"	Locked	Unlocked STD		NC
AR01-1014		10" Desk length armpad	10" - 14"	Locked	Unlocked STD		NC
AR02-812		14" Full length armpad	8" - 12"	Locked	Unlocked STD		NC
AR02-1014		14" Full length armpad	10" - 14"	Locked	Unlocked STD		NC
HEIGHT ADJUSTABLE "T" ARMREST ¹							
AR13-610		10" Desk length armpad ⁵	6" - 10"				NC
AR13-812		10" Desk length armpad	8" - 12"				NC
AR13-1014		10" Desk length armpad	10" - 14"				NC
AR14-610		14" Full length armpad ⁵	6" - 10"				NC
AR14-812		14" Full length armpad	8" - 12"				NC
AR14-1014		14" Full length armpad	10" - 14"				NC
SWING AWAY ARMREST ²							
AR05		Tubular armrest - Short pad	8" - 11"				J
AR23		Tubular armrest - long pad	8" - 11"				J
AR06		10" Desk length flat armpad	8" - 11"				J
AR17		14" Full length flat armpad	8" - 11"				J
ARMREST OPTIONS							
AR12	<input type="checkbox"/>	14" Full Length armpad - Gel Ovation (pair) ³					OTP
AR99	<input type="checkbox"/>	Omit armrest					J

1. May have 1/2" adjustment restriction on both limits of the range;

2- Could interfere with some rigid backrests; Not available with attendant lock and fixed carbon fiber side guards;

3. Only available with full length armrest; Not available with tubular (short and long) and short armrest;

4- Not available with attendant lock; 5- May have some restriction with seat-to-floor height and rear wheel

SIDES GUARDS

- Side guards are not available on Move chairs. If client purchases for the A6, carbon fiber will be lighter and stronger than plastic.
- Side guards can be helpful to fill in the gap between the wheel and seat cushion.

SIDE GUARDS (not available with Flip Back and "T" Armrest)					
SG01		Plastic side guards (removable)			OTP
SG02		Carbon fiber side guards (fixed)			OTP
SG03		Carbon fiber side guards (removable)			OTP
SG06		Plastic fender side guards - straight bracket (removable)			OTP
SG08		Plastic fender side guards - offset bracket (removable) ¹			OTP
SG04		Carbon fiber fender side guards (removable)			OTP
SG99		Omit side guard			NC
SIDE GUARDS OPTION					
SG07	<input type="checkbox"/>	Side guards clip (pair) ²			NC

1. only compatible with 0° camber; Increase distance between fender side guards by 1 1/8";

2- Not available with fixed carbon fiber side guard

BELTS

- 35" Auto buckle belt is standard. 60" is available for larger abdominal girth. Hardware needed for attachment.
- These postural lap belts are not transit compliant in that they are not designed to withstand crash forces.
- BodyPoint belt may be helpful when stiffness or abnormal tone interferes with proper hip placement

POSITIONING BELT							
SB01-S		Velcro adjustable - Standard 35" ¹					OTP
SB01-L		Velcro adjustable - Long 60"					OTP
SB02-S		Auto buckle - Standard 35" ¹					NC
SB02-L		Auto buckle - Long 60"					NC
SB04-M		BodyPoint Hip Belt - 2 point not padded - Medium 56"					OTP
SB04-L		BodyPoint Hip Belt - 2 point not padded - Long 61"					OTP
SB05-S		BodyPoint Hip Belt - 2 point padded - Small 51"					OTP
SB05-M		BodyPoint Hip Belt - 2 point padded - Medium 56"					OTP
SB05-L		BodyPoint Hip Belt - 2 point padded - Long 61"					OTP

SB06-S		BodyPoint Hip Belt - 4 point padded - Small 51"			OTP
SB06-M		BodyPoint Hip Belt - 4 point padded - Medium 56"			OTP
SB06-L		BodyPoint Hip Belt - 4 point padded - Long 61"			OTP
SB03		Hardware attachment for 2 extra points (1 pair)			OTP
SB08-M		BodyPoint EVOFLEX® Positioning Belt Rehab latch and Band Clamps - Medium 18"			OTP
SB08-L		BodyPoint EVOFLEX® Positioning Belt Rehab latch and Band Clamps - Long 24"			OTP
SB99		Omit positioning belt			NC

1- Not available with wheelchair width of 18" and more

HEADRESTS

-Head rests are not often needed for chairs that do not tilt/recline, but are available for purchase if indicated.













HEADREST					
AC01-S		Profiled Headrest - Small (3.5"X6")			OTP
AC01-M		Profiled Headrest - Medium (4.5"X7")			OTP
AC01-L		Profiled Headrest - Large (5.5"X8")			OTP
AC28		Headrest mounting hardware with removable non folding stabilizer bar ¹			OTP

ACCESSORIES are listed below. The only ones available through the program are anti-tippers.

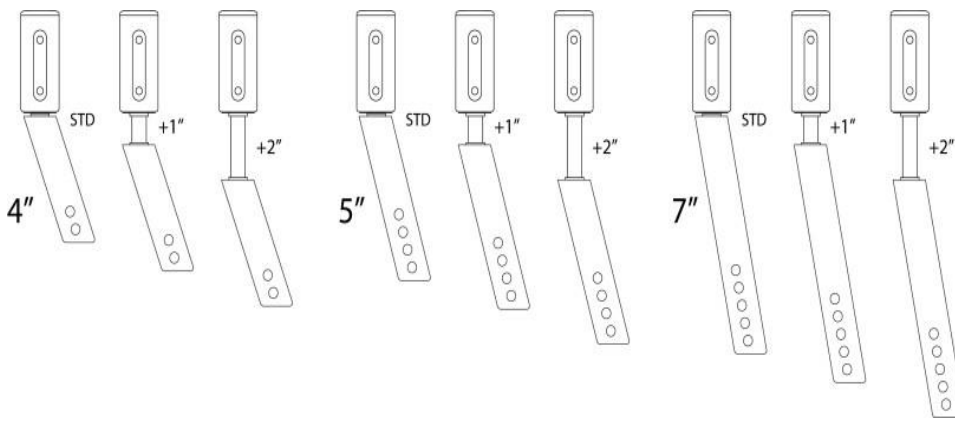
ACCESSORIES					
AC03		Anti-tippers			NC
AC29		Swing-away anti-tipper ¹	Left	Right	OTP
AC27		Tip assist ²			OTP
AC06		Cane and crutch holder	Left	Right	OTP
AC07		Oxygen tank holder ⁴ - D and E Type - <i>Installed to the left</i>			OTP
AC08		Spoke guards ³	Available: 20", 22", 24", 26"		
AC09		Footrest neoprene impact guard (<i>pair</i>) - Black			OTP
AC10		Seat pouch			OTP
AC30		Newton multi-purpose pouch			OTP
AC26		BodyPoint Mobility Bag			OTP
AC23		Newton Backpack			OTP
AC12		Velcro Closing Strap			OTP
AC13		Tool kit			OTP
AC16	<input type="checkbox"/>	Motion Composites Polo Shirt	W/S	W/M	W/L
			M/S	M/M	M/L
					M/XL
					M/XXL
					M/XXXL
					OTP

1.Must select the pair (left and right) with HD option; Only available with rear seat to floor height between 13 1/2" and 19 3/4"; 2- Cannot be combined with Anti Tippers

FRAME COLORS are shown below. They are available to clients who wish to personally customize their chair. Black is the only color available through Manitoba Possible.

Colors																			
Options ¹	Black	Sunkissed Orange	Burgundy	Sapphire Blue	Monster Green	Charcoal	Fuchsia	Steel Blue	Ferrari Red	Acid Green	Electric Purple	Caribbean Blue	White	Pink Pearl	Plum Purple	Sky Blue	Black Cherry	Khaki Green (matte)	Desert Sand (matte)
AirGrip													<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Frame	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>																		

1- Color representation may vary from one monitor to another. Therefore, the actual paint color on your wheelchair might differ slightly from what you see on your screen.; Finish between Airgrip and frame might be different;



FORK AND STEM BOLT COMBINATIONS

This diagram gives a visual representation of fork and stem bolt combinations. It assists in choosing the ones that will give the required STFH for the STFH on p1.

Options for forks and stem bolts were discussed earlier. Here are some additional factors to keep in mind.

- Both the length of the fork and the length of the stem bolt will affect STFH.
- Lengthening the fork will reduce efficiency because it is a moving piece which takes user energy.
- A stem bolt is a non-moving piece. It will affect the front STFH but does not affect efficiency.
- Generally speaking, a longer fork allows for more position options without changing parts. However, choosing a fork that is unnecessarily long may reduce propulsion efficiency and contribute to caster interference.
- Although longer stem bolts are not standard, it may be better to choose a longer stem bolt than a longer fork if a higher STFH is needed. This may help to avoid reduced propulsion efficiency.
- Whenever possible, choose a fork/stem bolt combination that offers options of raising or lowering STFH without changing parts. This will assist with adjustments that may be needed when seating components are installed or when a client is no longer foot propelling. Check the STFH chart on page 1 for options that alter seat height using the same parts.

TWO ADD-ONE of ADDITIONAL INFO

UNILATERAL WHEEL LOCK RESTRICTIONS are shown in the chart below. This which would likely apply only to chairs with a one-arm drive. Note that the design of the one-arm drive mechanism has improved over the years and may be a more viable option.

Seat depth: shall be 16 in and greater		
Rear wheel: shall be 24 in and less		
"T" or flip-back armrest only compatible with 0° Camber		
One arm drive: Not compatible with "T" or flip-back armrest		
"T" or flip-back armrest may require to move the rear wheels outwards		
Not compatible with wheel lock lever extension		
Rear wheel diameter	Seat depth (in)	COG Compatibility Range (in)
20 in	16+	1.25 to 2.75
	16	0.75 to 2.25
22 in	17+	0.75 to 2.75
	16	0.75 to 1.75
24 in	17	0.75 to 2.25
	18+	0.75 to 2.75

-A **"caster drop test"** may be helpful if a client has noticed that their wheelchair is not performing well.

Propulsion will be reduced if casters are too tight or too loose. With the chair flipped up, use caster drop test to check. If the stem bolt is too tight, the caster won't drop with a light tap. If it's under-tightened, it will drop and swivel too easily.

-Another reason for **casters not spinning freely** is if they are **clogged with dirt/hair**.

NOTES: