

## CLINICAL RATIONALE/JUSTIFICATION FOR TITANIUM MANUAL WHEELCHAIRS

This information is only a guide. Permobil recommends that a clinician experienced in seating and mobility be consulted to determine if these features are appropriate for the user's particular needs. Permobil provides this information to assist prescribing therapists. Each client should be considered as an individual with specific clinical needs based upon individual assessment.

### ***Client medical needs/presentation:***

- Client presents with limited strength/weakness of the upper extremities
- Client presents with limitations to range of motion of the upper extremity joints
- Client presents with spasticity/high tone/fluctuations in tone
- Client presents with decreased endurance/fatigue
- Client presents with high risk of upper extremity overuse injury
- Client has a history of repetitive strain injury (rotator cuff injury, carpal tunnel syndrome)
- Client has postural deformities/postural instability
- Client reports pain, limited sitting tolerance when rolling over bumps, thresholds, and obstacles
- Client has risk of skin breakdown (history of skin breakdown)
- Client needs to lift/transport/move wheelchair for transfers and transportation



### ***Product requirements:***

- Client requires a wheelchair that is easy to maneuver and easy to control.
- Client requires a wheelchair that is lightweight to lift, move into position for transfers and transport in vehicle.
- Client requires shock absorption/vibration reduction to protect skin and to manage pain and sitting tolerance as well as control of propulsion.
- Client requires a chair that is responsive and lightweight to reduce propulsion strokes, therefore reducing risk of repetitive strain injury.
- Client requires durable wheelchair frame that is responsive for ease of propulsion but strong for active use.

### ***Titanium is required as it meets all the above needs and has the following properties/features:***

- Strength
- Durable over time
- Vibration reduction
- Ease of maneuverability
- Lightweight
- Controlled propulsion

### ***References:***

<https://www.resna.org/sites/default/files/legacy/resources/position-papers/UltraLightweightManualWheelchairs.pdf>