

## Ergo Lite 2 Tall Clinical Justification

### Lower extremity functional limitation

Individuals with lower extremity functional limitations, including impaired strength, endurance, balance, and/or coordination, experience difficulty ambulating safely and effectively within their daily environment.

However, many of these population are unable to efficiently propel a standard-weight wheelchair due to excessive energy expenditure, shoulder strain, and reduced endurance.

The extensive **lightweight design** of Ergo Lite 2 Tall enables users to self-propel with significantly reduced effort, minimizing energy expenditure and allowing the user to conserve energy for other functional tasks throughout the day. For caregivers, the reduced overall weight allows for easier pushing, lifting, and transport. In addition, the attendant brakes allows caregivers to maneuver the wheelchair safely and with convenience.

**The availability of rear wheel size options** allows the configuration to be matched to the user's functional abilities.

- Users with intact upper extremity strength and coordination may select larger rear wheels to facilitate independent self-propulsion.
- Users who primarily depend on caregiver assistance may select smaller rear wheels, which reduce overall weight, improve maneuverability in confined spaces.

Accessory / Feature	Clinical Application for Amputation
<p><b>Selectable Seat Width</b></p>	<p>Provides precise seat width to ensure pelvic support, maintaining seating stability.            16", 18", 20" — three sizes available, ensures approximately 1-2 finger-widths of clearance between each thigh and the side guard after seating, reducing shear and pressure.            Selecting the seat width according to the user's hip width allows the arms to hang naturally and propel the wheelchair with the most energy-efficient position, improving propulsion efficiency.</p>
<p><b>S-Ergo Seating System</b></p>	<p>Users with poor sitting endurance or insufficient trunk muscle strength are prone to posterior pelvic tilt and forward sliding in sitting position. The S-curve design distributes some pressure at the ischial tuberosity to the thigh, achieving basic pressure relief. The design of the front seat higher than the rear assists with sitting positioning and reduces the risk of forward sliding.</p>
<p><b>Foldable Backrest</b></p>	<p>The foldable backrest design reduces overall volume and allows handlers to keep the folded wheelchair closer to their center of gravity, helping to prevent lumbar and shoulder muscle injuries during carrying.            Along with foldable frame, the volume allow the wheelchair to be easily transported. This enables elderly users to participate in family gatherings, medical appointments, follow-up visits, or outdoor activities, improving mental health and rehabilitation motivation.            Minimum storage dimensions: 720 x 230 x 690 mm            Mass of the heaviest part: 6.9 kg</p>
<p><b>Foldable Headrest</b></p>	<p>Provides a support platform for users with poor head/neck control or low muscular endurance, achieving postural stability and rest, reduces fatigue and improves sitting tolerance, thereby improving social activities and quality of life.</p>

<p><b>Detachable Swing-away Footrest</b></p>	<p>The entire support structure can be swung outward and detached. Swinging the legrests away allows the wheelchair to be positioned closer to the target surface (e.g., toilet or hospital bed), shortening the physical transfer distance and reducing risk for both the caregiver and the user.</p> <p>This standard legrest has slight knee extension angle, providing sufficient ground clearance.</p>
<p><b>Heel Loop</b></p>	<p>Offers firm heel support to prevent the foot from sliding off the footplate.</p>
<p><b>Rear Wheel Size Options</b></p>	<p>Balancing self-propulsion and transfers: 14-inch small wheels are designed for users who are caregiver-dependent, have upper-limb weakness, or have cognitive impairment preventing independent operation. Addresses space and weight concerns — without hand rims, the overall wheelchair width is significantly reduced, allowing passage through extremely narrow doorways; additionally, smaller wheels reduce the total wheelchair weight, substantially decreasing lumbar strain for caregivers who frequently need to load the wheelchair into vehicles.</p> <p>22" rear wheels is suitable for users with upper extremity self-propel capability. Larger wheel diameter provides a longer lever at the handrim contact point, reducing propulsion effort and increasing propulsion efficiency.</p>
<p><b>22" Spoked Wheels</b></p>	<p>Spoke construction achieves stability and lightweight design, reducing heaviness during propulsion and physiological load, preventing repetitive strain injuries to shoulder and wrist soft tissues.</p>
<p><b>Push &amp; Pull Brake</b></p>	<p>Caregivers can lock the wheelchair while in the pushing position, reducing risks of lower back strain from repeatedly bending over to operate the brake lever, improving caregiver convenience and safety in wheelchair operation.</p>

**Ergo Anti-tipper**

A single foot press locks the anti-tipper, preventing the wheelchair from tipping over; pressing again releases it, allowing tilting for curb climbing.

Reduces the lower back strain on caregivers from repeatedly bending to adjust anti-tippers, increasing caregiving safety and convenience.



Clinical Justification for  
Ergo Lite 2 Tall

*The clinical recommendations provided in this document are for professional therapists' reference only and should not replace individualized clinical assessment. The actual prescription should be determined by healthcare professionals based on the user's physical functions, home environment, and individual needs. Karma Medical reserves the right to change product specifications.*

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