

Canadian Association of Occupational Therapists
Product Recognition Program

Panthera U3-S3 Rigid



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Specific questions related to this product(s) (including usage, availability, pricing, etc.) should be addressed directly to the manufacturer and/or distributor. Please visit triumphmobility.com or contact 1(855) 546-0711. Concerns or questions related to the content of this report should be addressed to Julie Lapointe, Director of Knowledge Translation Programs, at jlapointe@caot.ca or at 1(800) 434-2268 ext. 260.

The conclusions presented in the current report are derived from the best information available. In the case that new information becomes available and grants a modification to the conclusions, CAOT reserves the right to update and issue a new report of this product at any time.

Acknowledgement

The generation of this report would not have been possible without the contribution of occupational therapists and members of the Canadian Association of Occupational Therapists (CAOT).





Executive Summary

The Panthera U3-S3 Rigid is a lightweight manual wheelchair designed for individuals with good upper body (i.e. head, neck, trunk and arms) strength and control. All reviewers recommended that the Panthera U3-S3 Rigid be accepted for the CAOT Product Recognition Program. Information and recommendations regarding the performance of the product are provided in this report.



Panthera U3-S3 Rigid is recognized by CAOT.

Review report

The purpose of this product

The Panthera U3-S3 Rigid is a lightweight manual wheelchair designed for individuals with good upper body (i.e. head, neck, trunk and arms) strength and control. Users will appreciate the great manoeuvrability and ease of arm propulsion of this wheelchair model.

Performance of the product (efficacy, usability, safety, reliability, durability)

- The frame was found by reviewers to be well built and made out of robust quality material.
- The armrests have a T-shape and appear less stable than other models of armrests on the market. However, some reviewers found that this armrest design facilitates transfers and manipulations (i.e. inserting and removing the armrest).
- Reviewers noted that this type of lightweight upright seating wheelchairs will suit the needs of a specific population of users – the ones who can manoeuvre and benefit from using a reactive chair to facilitate their engagement in daily activities.
- The frame can be ordered in different widths (i.e. from 33 cm/13" to 50 cm/20") however the seat heights and depths are fixed at a seat height of 47 cm at the front, 43 cm at the back and a seat depth of 46 cm. Therefore, this product may not be suitable for all users.
- The backrest of the chair consists of tension adjustable upholstery. The narrow diameter tubing may present a problem for the installation of an aftermarket rigid back support.
- The small diameter front wheels allow for the increase manoeuvrability and small turning radius but in counterpart may get caught in cracks.
- Because it is a reactive wheelchair, careful selection and adjustment of features such as the frame and centre of gravity will be required at time of purchase. Once the features are well fitted to the user's needs, the wheelchair will be easy to use.
- Transportation and manipulation of the chair has been found to be easy and convenient by reviewers. The frame is light, the rear wheels have a quick release button that works well, the backrest can be folded down and the armrests removed.
- Users of this type of wheelchair are likely to be able to push themselves. However, reviewers appreciated the fact that this wheelchair comes with the option of adding push handles in case the user might need someone to help push the chair.
- The instructions that accompanied the Panthera U3-S3 Rigid were deemed to be clear, well detailed and comprising of the important safety tips. The fact that this wheelchair comes with its own assembly and adjustment toolkit has been found to be a great feature, particularly given that it is built in Sweden and the bolts and components are metric.
- Inexperienced users might have difficulty integrating all the details related to adjusting the wheelchair settings such as the centre of gravity, brake tension and backrest angle. Reviewers recommend that user continues to work with an occupational therapist or an experienced vendor/ technician to assist with these adjustments.
- The thin foam cushion that comes with the wheelchair provides very basic support. The user may need to consider installing another type of cushion for more support.



- Like other manual wheelchairs, regular maintenance, such as proper adjustment and regular monitoring of the brakes and anti-tippers is required for safe use. The company provides all of the necessary safety instructions and a clear maintenance and monitoring schedule with actions to be performed on a daily, monthly and twice-yearly basis.
- It is necessary to regularly monitor the tires' air pressure for proper inflation. However, the manual does not include instructions on how to inflate the tires. These pneumatic wheels may potentially get punctured, which would affect the integrity and safety of the product. All parts are available through Triumph Mobility, the Canadian distributor of this product.

Important recommendations

Inexperienced users might have difficulty integrating the details related to adjusting settings such as wheelchair centre of gravity, brake tensions and backrest angle (among others). Reviewers recommend that user continues to work with an occupational therapist or an experienced vendor/technician to assist with these adjustments.

This product clearly outlines that there is a 100 kg/220 lb. weight restriction. Therefore, the reviewers recommend that this product not be used with individuals close to or above that weight.

Economic considerations

The price of this particular lightweight wheelchair has been found by reviewers to be high compared to others in that category. It is important to note that this review is not intended to be an economic analysis of this product or of the market. The fact that this product comes from Sweden and that it is fairly new on the Canadian market might affect pricing.

Scientific evidence

- The Rehabilitation Engineering & Assistive Technology Society of North America (RESNA, 2012), a recognized authoritative association, recommends the use of ultralight manual wheelchairs for users of manual wheelchairs in order to ensure optimal long-term mobility performance.
- This is supported by other reviews which conclude that “ultra-light chairs are most appropriate for those users who have an active lifestyle” (Medola, Elui, Santana, & Fortulan, 2014, p. 315).
- To our knowledge there is no published research on the Panthera U3-S3 Rigid. A quick search in PubMed and Google Scholar yielded no result.

Review committee

The Panthera U3-S3 Rigid was reviewed by three occupational therapists, each with more than 15 years of experience in the provision of occupational therapy services for clients with seating and mobility needs. One of them is an authorizer for the Assistive Devices Program of the Ministry of Health and Long-Term Care in Ontario. Another is teaching the principles of wheelchair selection at one of the Canadian occupational therapy university programs. The other one has a clinical practice specifically focused on intervening with children and adults with seating and mobility needs.



Final recommendation

The three reviewers were unanimous in recommending that the Panthera U3-S3 Rigid be accepted for the CAOT Product Recognition Program. This product may be recommended by occupational therapists to clients that will benefit from using a rigid ultralight wheelchair to maximize mobility within their environment and their occupations. The targeted users are likely the ones who are active to very active, have a good trunk control, have good upper extremity strength and endurance, and are able to self-propel their chair with their arms.

References

- Medola, F. O., Elui, V. M. C., Santana, C. d. S., & Fortulan, C. A. (2014). Aspects of Manual Wheelchair Configuration Affecting Mobility: A Review. *Journal of Physical Therapy Science*, 26(2), 313-318. doi:10.1589/jpts.26.313
- Rehabilitation Engineering & Assistive Technology Society of North America (RESNA). (2012). *RESNA Position on the Application of Ultralight Manual Wheelchairs*. Retrieved from Arlington, VA: <http://www.resna.org/sites/default/files/legacy/resources/position-papers/UltraLightweightManualWheelchairs.pdf>