ASSISTIVE PRODUCT
SPECIFICATION FOR
PROCUREMENT

Wheelchairs, manual

Objective:
The objective of this specification is to help organizations in procuring good quality manual wheelchairs that are durable and which assist individuals with mobility impairments to move.

World Health Organization
# 1. Product description

The purpose of this section is to provide specific key details relevant to the assistive product so that it is easily identifiable.

<table>
<thead>
<tr>
<th>Purpose of 1.1</th>
<th>Name of product as per WHO priority APL and/or commonly used names.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.1 Name of product</strong></td>
<td>Wheelchairs, manual</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Purpose of 1.2</th>
<th>As per ISO 9999 classification and terminology document (refer <a href="https://www.iso.org/standard/60547.html">https://www.iso.org/standard/60547.html</a>).</th>
</tr>
</thead>
</table>
| **1.2 ISO 9999 code** | 12 22 03 *Bimanual handrim-drive wheelchairs*  
Wheelchairs designed to be propelled and steered by the occupant, by pushing with both hands, on the wheels or on the handrims of the wheels.  
Included are, e.g. front-drive wheels, rear-drive wheels wheelchairs.  

12 22 06 *Bimanual lever-drive wheelchairs*  
Wheelchairs designed to be propelled and steered by the occupant using two-hand operated levers  

12 22 09 *Single-side manual drive wheelchairs*  
Wheelchairs designed to be propelled by the occupant using only one hand  
Included are, e.g. one-hand lever-drive wheelchairs, one handrim-drive wheelchairs.  

12 22 15 *Foot-propelled wheelchairs*  
Wheelchairs designed to be propelled and steered by contact of the occupant’s foot or feet with the floor  

12 22 18 *Push wheelchairs*  
Manual wheelchairs intended to be pushed and steered by an assistant, by pushing with both hands on the push handles of the wheelchair  

12 27 04 *Transportation chairs*  
Devices for short distance transportation of a person in a sitting position, propelled and controlled by an assistant  
Included are, e.g. emergency evacuation chairs, transport chairs adapted for climbing or descending stairs.  

18 09 39* *Modular seating systems*  
Seating systems based on a framework to which can be attached selected seat modules, the position of which can then be adjusted to achieve a particular seat configuration  
Included are, e.g. chairs assembled from separate elements.  
* This code indicate seating systems, that need to be mounted on a wheeled basis (12.22.18) in order to become a real wheelchair.  

Other relevant codes:  
12 24 Wheelchair accessories  
09 07 Assistive products for body stabilization (belts, harnesses)  
18 10 Accessories for wheelchairs for posture support |

<table>
<thead>
<tr>
<th>Purpose of 1.3</th>
<th>Describes the product type in clear, simple, easily understood language and the intended use in addressing functional needs.</th>
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</table>
1.3 Description and intended use

Devices providing wheeled mobility with a seating support system for a person with limitation in mobility and that rely on an occupant or an assistant to provide power for the operation.

Purpose of 1.4
Refers to general characteristics of the assistive product that describes its appearance and components.

1.4 General features

- 3 or 4 wheels (2 rear wheels and 1 or 2 front swivel castors, if necessary, more wheels can be added)
- Seat and backrest providing sitting support for the wheelchair user
- Foot supports
- Armrests
- Rear wheel locks (to park the wheelchair)
- Push rings for user propulsion on all categories, except transporter wheelchairs/buggies
- For transport and storage: Folding frame wheelchairs and buggies allow folding through cross-brace or other folding mechanism. Rigid frame wheelchairs and buggies must offer mechanism to fold and/or dismantle the device into smaller, separate components.

Purpose of 1.5
Refers to product models that are included in the specific APS.

1.5 Inclusion

- Wheelchairs, manual, assistant controlled
- Wheelchairs, manual for active use
- Wheelchairs, manual with postural support

Purpose of 1.6
Refers to product models that are excluded in the specific APS.

1.6 Exclusion

- Wheelchairs, electrically powered
- Wheelchairs, standing

Purpose of 1.7
Important, searchable words that relate to the specific assistive product.

1.7 Keywords
Wheelchair, manual, active, transport, buggy (device for temporary use and transport with integrated posture support devices), PSD’s (postural support devices), tilt in space (seat and backrest tilt back together), recline (increasing the seat to backrest angle), child, adult

2. Product requirements

The purpose of this section is to provide details of all applicable requirements relative to the specific assistive product. A requirement is mandatory and typically describes what a product should be able to do, how it should appear (product and packaging) etc. Only supply and service requirements considered applicable in procurement of manual wheelchairs.

2.1 Functional requirements

Purpose of 2.1
A functional requirement refers to technical details and other specific functionality that define what a product variation is supposed to accomplish. Per product variation, the requirement should describe the typical user, specific characteristics of the product (in addition to the general features above) as well as the requirements for standard configuration of the product. It is important to focus on performance requirements rather than form factors. It is important to have a clear and specific description of the typical users including e.g. health condition, functional limitation or demographics (range of age, body weight, height, etc.). If applicable, specific context of use (e.g. indoor/outdoor, in noisy environment, etc.) should be specified in the product variations.

<table>
<thead>
<tr>
<th>Item</th>
<th>Product variations</th>
<th>Typical user</th>
<th>Specific characteristics</th>
<th>Requirements for standard configuration</th>
</tr>
</thead>
</table>


1. **Wheelchairs, manual assistant controlled**

### 1.1 Transport Wheelchair Adult and Child

- **Environment:** Primarily used indoors or on even surfaces outdoors.
- **Function:** Typically used intermittently for short duration or for short distance transportation. Primarily for assistant controlled mobility. Limited manual mobility of large rear wheels.
- **Posture support:** User with basic posture support needs.

<table>
<thead>
<tr>
<th>Frame</th>
<th>4-wheels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Folding frame</td>
<td>Push handles</td>
</tr>
<tr>
<td>Fixed backrest height, at least mid-thoracic height of target population</td>
<td>Tipping lever</td>
</tr>
<tr>
<td>Fixed seat/frame depth</td>
<td>Rear wheels: Diameter: From 8” (attendant mobility) up to 26” (independent mobility)</td>
</tr>
<tr>
<td><strong>Front castors:</strong> Diameter: 8”</td>
<td>Width: 1-2”</td>
</tr>
<tr>
<td><strong>COG frame adjustments</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Size range</strong></td>
<td>Size width range: Minimum 4 sizes</td>
</tr>
</tbody>
</table>

- Minimum configuration for all service levels
  - Rear wheel position in safe position (in line with backrest tubes or further rearward)
  - Height adjustable footrests
  - Two flip-up footrest or
  - Two swing-away and/or removable footrests
  - Flip-up and/or removable armrests
  - Solid rear wheels and front castors

### 1.2 Buggy Adult and Child

- **Environment:** Primarily used indoors, even surfaces and when equipped with a larger diameter wheel in the front for rough terrain outdoors.
- **Function:** Typically used intermittently for short duration of two hours or less or transportation.
- **Posture support:** Users who cannot sit safely in an upright posture and require some postural support as provided by the preset tilt.

<table>
<thead>
<tr>
<th>Frame</th>
<th>3 or 4 wheels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Folding frame</td>
<td>Push handles</td>
</tr>
<tr>
<td>Integrated seat and backrest upholstery</td>
<td>Accepts varying range of PSDs: Preset tilt</td>
</tr>
<tr>
<td>Head support (often integrated in backrest)</td>
<td>Optional: additional recline and/or tilt</td>
</tr>
<tr>
<td><strong>Wheels and Castors</strong></td>
<td>Two (2) larger rear wheels of 12” or greater</td>
</tr>
<tr>
<td></td>
<td>Single (12” or greater) or dual (7” or greater) front castors</td>
</tr>
<tr>
<td><strong>COG frame adjustments</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Size Range</strong></td>
<td>Minimum 4 sizes</td>
</tr>
<tr>
<td></td>
<td>Ability to extended seat depth at least 2” without additional parts</td>
</tr>
</tbody>
</table>

**For all service levels**
- Height adjustable footrests
- Single footrest
- Push Handles

**Additional features for intermediate and advance service levels**
Accepts a varying range of PSDs and accessories including but not limited to: pelvic belt, trunk harness, foot straps, hip guides, trunk laterals, tray, canopy, rain cover, mosquito net
2.1 **Active Urban Wheelchair (Adult and Child)**

**Environment:** Wheelchair used in urban indoor and outdoor environments. Depending on wheelchair user’s mobility skills, can be used on rougher terrain for short distances.

**Function:** Primarily for users who self-propel. Also used by users who cannot self-propel but need the environmental and posture support design features of this chair. Wheelchair must fold/components disassemble for transportation/storage.

**Posture support:** For users with range of basic to advanced posture support needs through adjustment options and/or addition of PSDs. Not suitable for users who need daily adjustable tilt in space.

**Frame**
- 3 or 4 wheels
- Folding/rigid frame
- Push handles optional requirement and may be integrated into the frame or supplied as an add-on component.
- Armrest design for minimal profile
- Shorter overall length than transport wheelchair and compact turning circle
- Lightweight frame (recommended maximum product weight 16 kg complete - includes frame, wheels, castors, upholstery, wheel lock and footrests)

**Rear wheels**
- Quick-release
- Camber: 0 degrees (rear wheel perpendicular to ground) to 1 to 3 degrees (off from the vertical)
- Diameter: Appropriate for self-propelling and size of wheelchair
- Diameter: 22-26”
- Width: 1 3/8”

**Front castors**
- Appropriate for design and user function
- Diameter: 3-8”
- Width: ½-2”

**COG frame adjustments**
Required adjustment options (through wheel/frame adjustments):
- access to the rear wheels
- front/back stability

**Frame size range**
- Size width range to be appropriate for the population profile and include child, adult and bariatric sizes as appropriate
- Size range in 1-2” (25 - 50mm) increments
- Seat depth adjustability or seat extension options or frame seat depth options

Minimum configuration for all service levels
- Back height adjustment or frame back height options
- Push handles: optional requirement
- Seat depth adjustability or seat extension options or frame seat depth options
- Backrest contouring options e.g. tension adjustable backrest or solid backrest with depth-, angle- and height adjustment, including separate padded cover
- Footrest height adjustability
- Armrests: optional requirement
- Required adjustment options (through wheel/frame adjustments):
  - access to the rear wheels
  - front/back stability
- Solid rear wheels and front castors. Pneumatic optional requirement.
- Appropriate cushion to be added according to user’s needs and which matches the wheelchair seat size configurations
- If any of the add-on mobility components for active wheelchairs (Wheelchair accessories are required), this should be specified with the tender

Optional required adjustments for postural support at all levels (through wheel/frame adjustments):
- front and rear seat to floor heights and/or different frame heights
- seat angle (if seat angle adjustable, seat to backrest angle must also be adjustable)

Additional features for intermediate and advanced level services
- Removable backrest upholstery with frame capabilities to accept 3rd party backrests
- Adjustments for postural support:
  - Tilt in space (seat and backrest angle backwards together). Tool adjustable mechanism through wheel/frame adjustments. Maximum 15 degrees.
<table>
<thead>
<tr>
<th>2.2</th>
<th>Active Dual Use Wheelchair (Adult and Child)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environment:</strong></td>
<td>Wheelchair used in mixed environments, indoor, urban outdoor and in fairly unlevel outdoor environments. Longer wheelbase benefits outdoor mobility on unlevel terrain for users who do not have advanced wheelchair mobility skills.</td>
</tr>
<tr>
<td><strong>Function:</strong></td>
<td>Primarily for users who self-propel, but also used by users who cannot propel manually and need assisted mobility but need the environmental design benefits of an active wheelchair. Rear wheel adjustments allow adjustment to achieve optimal access to the rear wheel and/or stability.</td>
</tr>
<tr>
<td><strong>Posture support:</strong></td>
<td>Adjustment options and addition of PSDs allow use by users with range of posture support</td>
</tr>
<tr>
<td><strong>Frame</strong></td>
<td>3 or 4 wheels</td>
</tr>
<tr>
<td></td>
<td>Folding/rigid frame</td>
</tr>
<tr>
<td></td>
<td>Push handles optional requirement and may be integrated or add-on Armrest design minimal profile</td>
</tr>
<tr>
<td></td>
<td>Longer wheelbase than urban active wheelchair</td>
</tr>
<tr>
<td></td>
<td>May have longer overall length than urban chair, but not longer than transport wheelchair. Similar or smaller turning circle as transport wheelchair.</td>
</tr>
<tr>
<td><strong>Rear wheels</strong></td>
<td>Quick-release for rigid frames</td>
</tr>
<tr>
<td></td>
<td>Quick-release optional requirement for folding frames</td>
</tr>
<tr>
<td></td>
<td>Camber: 0 degrees (rear wheel perpendicular to ground) to 1 to 3 degrees (off from the vertical)</td>
</tr>
<tr>
<td></td>
<td>Diameter: Appropriate for self-propelling and size of wheelchair</td>
</tr>
<tr>
<td></td>
<td>Diameter: 22-26”</td>
</tr>
<tr>
<td></td>
<td>Width: 1 3/8”-1.75”</td>
</tr>
<tr>
<td><strong>Front castors:</strong></td>
<td>Front castor size multiple: larger diameter 8” x minimum 2” wide or smaller diameter minimum 4” x minimum 3” wide, wider</td>
</tr>
<tr>
<td><strong>COG frame adjustments</strong></td>
<td>Required adjustment options (through wheel/frame adjustments):</td>
</tr>
<tr>
<td></td>
<td>○ access to the rear wheels</td>
</tr>
<tr>
<td></td>
<td>○ front/back stability</td>
</tr>
<tr>
<td><strong>Frame size range</strong></td>
<td>Size width range to be appropriate for the population profile and include child, adult and bariatric sizes as appropriate</td>
</tr>
</tbody>
</table>

For all service levels:
- Back height adjustment or frame back height options
- Push handles: optional requirement
- Seat depth adjustability or seat extension options or frame depth options
- Backrest contouring options e.g. tension adjustable backrest or solid backrest with depth-, angle- and height adjustment, including separate padded cover
- Footrest height adjustability
- Armrests: optional requirement
- Required adjustment options (through wheel/frame adjustments):
  - access to the rear wheels
  - front/back stability
- Solid rear wheels and front castors. Pneumatic optional requirement.
- Appropriate cushion to be added according to user’s needs and which matches the wheelchair seat size configurations
- If any of the add-on mobility components for active wheelchairs (Wheelchair accessories are required), this should be specified with the tender

Additional features for intermediate and advanced level services:
- Removable backrest upholstery with frame capabilities to accept 3rd party backrests
- Adjustments for postural support:
  - Tilt in space (seat and backrest angle backwards together). Tool adjustable mechanism through wheel/frame adjustments. Maximum 15 degrees.
needs from basic to advanced but who do not need daily adjustable tilt in space.

| Size range in 1-2” (25 - 50mm) increments
| Seat depth adjustability or seat extension options or frame seat depth options

### 2.3 Active long wheelbase Uneven Terrain Wheelchair (Adult and Child)

**Environment:** Primarily used outdoors over uneven, sloped, steep or rough terrain, including unpaved tracks or roads and softer ground surfaces such as sand and grass. Designed to roll-over larger obstacles.

**Function:** Typically used by both permanent wheelchair users for full-time active use during daily activities, primarily for independent self-propulsion but also for assisted mobility, and also for temporary wheelchair users who want to access areas of uneven terrain on a short-term basis.

**Posture support:** Adjustment options and addition of PSDs allow use by users with range of posture support needs from basic to advanced but who do not need daily adjustable tilt in space feature.

| Frame
| 3 or 4-wheel frame format
| Folding/rigid frame
| Long wheelbase (longer than dual terrain wheelchair)
| Large overall length and large turning circle
| Push handles optional requirement and may be integrated or add-on
| Integrated stability options for feet
| Low centre of gravity compared to other active wheelchairs

| Wheels and Castors
| Rear wheels
| Quick-release rear wheels for rigid frames for transportability
| Quick-release optional requirement for folding frames Camber:
| Minimum 3 degrees (off from the vertical)
| Diameter: Appropriate for self-propelling and size of wheelchair
| Diameter: 24-26”
| Width: 1 3/8”-1.75”
| Wider or larger tread tyres

| Front castors: Diameter: More than 8”
| Width: Minimum 2”

| COG Frame adjustments
| Required adjustment options (through wheel/frame adjustments):
  - access to the rear wheels
  - front/back stability

| Additional features for intermediate and advanced level services
- Removable backrest upholstery with frame capabilities to accept 3rd party backrests
- Adjustments for postural support:
  - Tilt in space (seat and backrest angle backwards together).
  - Tool adjustable mechanism through wheel/frame adjustments. Maximum 15 degrees.
- Vertical backrest angle adjustment to increase seat to backrest angle (backrest recline). Tool adjustable) mechanism. Minimum 12 degrees

Mechanism or adjustment options to maintain stability with increased tilt and/or recline settings

For all service levels
- Back height adjustment or frame back height options
- Push handles: optional requirement
- Seat depth adjustability or frame depth options
- Backrest contouring options e.g. tension adjustable backrest or solid backrest with depth-, angle- and height adjustment, including separate padded cover
- Footrest height adjustability
- Armrests: optional requirement
- Required adjustment options (through wheel/frame adjustments):
  - access to the rear wheels
  - front/back stability
- Solid rear wheels and front castors. Pneumatic optional requirement.
- Appropriate cushion to be added according to user’s needs and which matches the wheelchair seat size configurations
- If any of the add-on mobility components for active wheelchairs (Wheelchair accessories are required), this should be specified with the tender
### Wheelchairs, manual with postural support

#### 3.1 Wheelchair, manual with postural support (Adult and child)

**Environment:** Indoor, urban and dual terrain.

**Function:** Users who self-propel or who cannot propel manually and need assisted mobility.

**Posture support:**
For users with intermediate and advanced postural support needs who require:
- Variable quick-release (daily adjustable) tilt in space, or
- Large range static tilt in space and/or recline adjustment.

**Frame**
As base frame with capabilities to add a range of PSDs, or as complete chair with a range of predetermined PSDs
- 3 or 4 wheels
- Folding/rigid frame
- Push handles
- Longer wheelbase compared to temporary use wheelchair
- Similar overall length as temporary use wheelchair or longer
- Solid seat (quick-release removable on folding frame)
- Armrests and/or tray table

**Wheels and castors**
- Rear wheels
  - Self-propelling rear wheels quick-release on rigid frames, optional for folding frames
  - Diameter: Self-propelling frame
  - Appropriate for self-propelling and size of wheelchair 22-28”.
  - Attendant propelling frame from 8” up

**COG frame adjustments**
Required adjustment options (through wheel and/or frame adjustments):
- access to the rear wheels (if appropriate)
- front/back stability
- Large range (minimum 20 degrees) vertical backrest angle (tool adjustable)

**For all intermediate and advanced service levels:**
- Wheelchair with integrated PSDs
  - Backrest height fixed at least at shoulder height or is height-adjustable
  - Solid backrest system with option for contouring to optimise pelvis and trunk support
  - Horizontal and vertical adjustable pelvis and trunk side supports
  - Solid seat (seat quick-release removable on folding frame designs)
  - Seat depth adjustability/frame depth options of minimum 4” (10 cm)
  - Headrest (forward/backward, height and angle adjustment)
  - Pelvis strap, adjustable length
  - Shoulder harness optional requirement
  - Knee separator (adjustable and removable) standard on child size
  - Height adjustable footrests
  - Calf and/or foot straps
  - Arm support (tray or flip-up and/or removable armrests armrest) height- and horizontal adjustable and removable
  - Large range (minimum 20 degrees) vertical backrest angle (tool adjustable) to change seat to backrest angle
  - Appropriate cushion to be added according to user’s needs and which matches the wheelchair seat size configurations

**For all intermediate and advanced service levels:**
- Base frame only:
  - Back post height fixed at at least shoulder height or height-adjustable
  - Ability to accept 3rd party backrests
<p>| | | | |</p>
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</table>
|   |   | change seat to backrest angle  
   |   | ● Large range (minimum 20 degrees) quick-release adjustable tilt  
   |   | ● Integrated mechanism or adjustment options to maintain stability with tilt and/or recline engaged  |
|   |   | Size range  
   |   | Size width range to be appropriate for the population profile and include paediatric, adult and bariatric sizes as appropriate  
   |   | Size range in 1-2” (25 - 50mm) increments  
   |   | Range of seat depth options  |
|   |   |   |   |
|   |   | Solid seat (seat quick-release removable on folding frame designs)  
   |   | Seat depth adjustability/frame depth options of minimum 4” (10 cm)  
   |   | Attachment point for headrest (horizontal and vertical adjustment)  
   |   | Pelvis strap  
   |   | Height adjustable footrests  
   |   | Calf and/or foot straps  
   |   | Arm support (tray or armrest) height- and horizontal adjustable and removable  
   |   | Optional seat to backrest angle adjustment (recline) up to 20 degrees  
   |   | Appropriate cushion to be added according to user’s needs and which matches the wheelchair seat size configurations  |

4 Wheelchair mobility accessories: Add-on mobility components for active wheelchairs

Please note: To ensure mobility accessories are compatible with a particular wheelchair, the need for the specific accessory has to be added to the ‘Requirements for standard configuration’ section of the relevant wheelchair

<p>| | | |</p>
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</table>
| 4.1 | Removable large-diameter castor | Used by users of active manual 4-wheel wheelchairs to improve outdoor access over long distances and/or uneven terrain  
   | Detachable, large diameter swivel castor wheel  
   | Quick-release attachment/detachment  
   | Storage bracket on rear of wheelchair  
   | Complete with all attachments for storage and use  
   | For folding frame - additional adaptor bar to be included  |
| 4.2 | One-arm drive unit | Used by users of manual wheelchairs who have limited or no arm and hand function on one side of their body. Designed to be self-propelled with one hand/arm only  
   | The unit consists of 2 pushrings on one side. Each pushrim can be used independently, to change direction, or used together to go in a straight line  
   | To be clamped onto the frame of the wheelchair, if folding frame, unit should allow the frame to fold with unit attached  
   | Range of width options or adjustability  | Not Applicable  |
| 4.3 | Clamp-on propelling levers | Often intended for users who are traveling long distances and over uneven terrain. Designed to require less force to move the wheelchair.  
   | A left and right lever attached to the rear wheels with a mechanism designed to allow wheel propulsion via two levers that replace hand ring propulsion.  
   | A gearing system can be used to allow easier propulsion up steep slopes  
   | A left and right arm lever and attaching mechanism allowing the propulsion of the manual wheelchair.  
   | The manual wheelchair frame should include the specific intended category requirements as listed above  |
### 4.4 Removable Trike-attachment

| Removable Trike-attachment | Used by users of active manual wheelchairs to improve efficiency of mobility over long distances, and removable to allow wheelchair access into small spaces such as buildings and homes. Designed to be self-propelled by user | Quick-release attachment/detachment trike attachment lifts front castor wheels off the ground when locked in place. Hand powered drive train to front drive wheel | Not Applicable |

### 5 Posture support devices

| Add-on postural support devices for active wheelchairs and posture support wheelchair base frames | To provide appropriate posture support for users using active wheelchairs or posture support base frame wheelchairs to support: Trunk and pelvis Head Arms Thighs, legs and feet | Includes, but not limited to: Tension adjustable backrests (range of back height options) Solid backrests with no or low profile side supports with option to be fitted with trunk, or trunk and pelvis side supports (range of back height options/adjustability) Solid backrests with medium or deep profile to provide appropriate level of trunk and/or pelvis support (range of back height options/adjustability) Head supports Tray tables Range of armrests and arm supports Range of footrests with hanger angle and footplate angle options/adjustability Range of straps/harnesses for trunk, pelvis, thighs, lower legs, feet | Each item in appropriate range of adult and child sizes and to match wheelchair configuration Include mounting systems where appropriate |

#### Purpose of 2.2

Brief and clear description of general product performance requirements and overall qualities (e.g. stability, strength, durability, waterproof, etc).

#### 2.2 General design requirements

The wheelchair must be designed in a size adequate to the intended user (pediatric vs adult, proper width and depth options), durable for the intended user and environment, and has the ability for wearable frequently serviced components to be replaced (casters, wheels, tires, upholstery, wheel locks). If intended for self-propelling the large drive wheels should be designed to be in a position that is optimally placed for the user to reach.

#### Purpose of 2.3

Details of existing or in-progress national or international standards should be provided here, whether freely or commercially available.
## 2.3 Standards

All documentation must be in English and available in an editable format that allows for local language translation.

*Current product standards for manual wheelchair:*

The manual wheelchair should be tested and satisfy the requirements of ISO 7176 series (parts relevant to manual wheelchair), EN 12183, or equivalent.

*Examples:*

- **EN 12183:2014 Manual wheelchairs – Requirements and test methods, or a more recent version or equivalent.**
- **ISO 7176-1 Wheelchairs - Part 1: Determination of static stability**
- **ISO 7176-3 Wheelchairs - Part 3: Determination of effectiveness of brakes**
- **ISO 7176-5 Wheelchairs - Part 5: Determination of dimensions, mass and manoeuvring space**
- **ISO 7176-8 Wheelchairs - Part 8: Requirements and test methods for static, impact and fatigue strengths**
- **ISO 7176-16 Wheelchairs - Part 16: Resistance to ignition of postural support devices**

*Documentation:*

A report from a third-party test laboratory confirming fulfilment of the test requirements. The report should be dated and signed.

*Specific product standard for manual wheelchairs to be used as seating in a motor vehicle:*

The manual wheelchair to be used in motor vehicles should be tested and satisfy the requirements of ISO 7176-19:2008 Wheeled mobility devices for use as seats in motor vehicles or equivalent. The test should be executed with a head support attached to the wheelchair.

*Documentation:*

A report from a third-party test laboratory confirming fulfilment of the test requirements. The report should be dated and signed.

### Purpose of 2.4

A certificate of conformity confirms that a product conforms to applicable national and/or international regulations. If a certificate is required for the specific assistive product, this information should be requested, e.g., CE (Europe), COC (Japan), GCC (USA).

### 2.4 Certificate of conformity

A certificate that the product conform with applicable national or international regulations and standards must be provided (for example, a declaration of conformity with the medical device directive or the medical device regulation of the European Union).

If the product does not conform with applicable national or international regulations and standards, the supplier must provide a certificate that the product complies with the requirements in this call for tender and is safe and effective for use by the typical user.

The certificate must specify the product, all applied standards, if any, and the name and contact information of the supplier and be provided with the tender. The certificate of conformity is a legal document and must be signed by an authorized person at the supplier.

The certificate of conformity must be supplied in English and available in a document format that allows for local language translation.

### Purpose of 2.5

Lists the relevant scope of information required to identify the appropriate size and weight of the assistive product in its standard configuration (specific dimensions may be given if appropriate).
| 2.5 Size and weight | 1. Information about the overall width, height, length of manual wheelchair must be provided. If applicable, dimensions in operating and folded modes must be provided.  
2. The overall weight of the wheelchair and the configuration of how it is weighed must be provided.  
3. Seat width and depth availability, front seat to floor height, back height range, rear wheel diameter and width, front caster diameter and width must be provided. |
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<td>Purpose of 2.6</td>
<td>Lists the relevant scope of information that should be provided to service providers (e.g. how to select, assemble, fit, adapt, follow up, maintain, repair, refurbish the assistive product). The desired language(s) in which the technical information should be provided should be stated.</td>
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| 2.6 Technical information (for service providers) | Information on how to assemble and adapt the manual wheelchair must be provided.  
Instructions on how to maintain, service, repair and refurbish the manual wheelchair must be provided.  
The technical information must be provided in English and available in a document format that allows for local language translation. |
| Purpose of 2.7 | Lists the scope of information, and its format, that should be provided to end-users to show how to safely use the assistive product. |
| 2.7 Instructions for use | A user manual with instructions for use of the manual wheelchair must be provided by the supplier. It must provide instructions on how to safely and effectively use the product, and how to maintain and clean it. It is intended for the user and/or care-giver.  
The user manual must be provided in English and available in a document format that allows for local language translation.  
The user manual may be provided in print or electronic format. |
| Purpose of 2.8 | Refers to the various weather and other environmental conditions, e.g., temperatures, humidity, rain, snow, sunshine, that the assistive product should be able to withstand. |
| 2.8 Environment of use | The intended environment for which the manual wheelchair is designed should be noted. The manual wheelchair frame should withstand the environment in which it is designed to be used in given normal usage and maintenance. |
| Purpose of 2.9 | Refers to the duration of the warranty period and the details of the warranty the manufacturer/supplier should provide within the specified period. |
| 2.9 Warranty | The warranty policy and period must be stated for the manual wheelchair. Components that are warranted should be named. The same must apply for spare parts and accessories.  
A process should be outlined that allows for complaints of a manufacturer’s defect and if found the process and responsibility for response. |
| Purpose of 2.10 | Refers to the expected duration, in years, of the assistive product. Documents describing how this is ensured must be provided. |
| 2.10 Lifespan | The manual wheelchair expected lifespan must be stated given intended usage and maintenance. |
| Purpose of 2.11 | Lists the scope of information required in packaging and labeling the assistive product. Explains the state of assembly the assistive product should be in when received by the end-user. |
### 2.11 Packaging, labelling, and state of assembly

Each manual wheelchair must be delivered in an individual package with a label clearly stating details of the product. All necessary parts must be included in the package.

The manual wheelchair must be delivered to such an extent that the remaining assembly can be carried out with the use of commonly available screwdrivers or wrenches. If any special tool is required, it must be included with the delivery.

#### Purpose of 2.12

Refers to additional product requirements, depending on the specific assistive product, e.g., material, corrosion-resistance, adjustability, foldability, etc.

### 2.12 Other product requirements

In the tender, the supplier must provide the following information about the manual wheelchair:

- Dimensions as requested under the specific characteristics and standard configurations of the product variations
- Specifications as requested under the specific characteristics and standard configurations of the product variations
- Standard features and components
- Optional accessories as requested in point 4 wheelchair mobility accessories and point 5 posture support devices

### 3. Supply and service requirements

From the information provided below, only those supply and service requirements considered applicable may be used in a procurement bid.

The purpose of this section is to describe key supply and service requirements that are needed in order to ensure that the assistive product is received in due time, operational, being maintained/repairede and refurbished.

#### Purpose of 3.1

Lists the scope of information to be requested on how the assistive product will be transported to the place of delivery.

#### 3.1 Transportation

Information on how the manual wheelchair will be transported must be provided and responsibility for freight and delivery costs.

#### Purpose of 3.2

Specifies the time between placing an order and receiving delivery of the assistive product (e.g. that it should not exceed 30 calendar days).

#### 3.2 Delivery time

Required delivery time should be specified.

#### Purpose of 3.3

Refers to the specific details of the various accessories and spare parts available for the assistive product, including pricing and availability.
3.3 Accessories and spare parts

The supplier must offer the following accessories and spares:

- All parts that the manual wheelchair consists of, and which may be replaced at some stage, must be offered as spare parts. If any part such as the frame is not available as a spare part it should be noted.
- The supplier must state which variations of manual wheelchair the accessories and spare parts are meant for.
- When an accessory consists of one part, the same part must not be offered both as an accessory and a spare part, but only as an accessory.
- When an accessory consists of several parts that can be replaced, all replaceable parts must be offered as spare parts.

Spare parts must be made available for a period of at least 5 years after the last order of a manual wheelchair. The price of the spare parts should be noted as per part or per set (pair).

| Purpose of 3.4 | Provides information regarding required maintenance services the supplier will provide, including the timeframe and frequency. |
| Purpose of 3.5 | Provides information regarding required repairment services the supplier will provide, including the timeframe and frequency. |
| Purpose of 3.6 | Provides information regarding required refurbishment services the supplier will provide, including the timeframe and frequency. |
| Purpose of 3.7 | Specifies if training service providers is required by suppliers, and the key elements included in the training (e.g. selection, assembly, fit, maintenance and repair of the assistive product). Refers to detailed training contents or materials, if available and applicable. |
| Purpose of 3.8 | Specifies if training users is required by suppliers, and the key elements included in the training (e.g. training to users should include fit, use, maintenance and cleaning of the assistive product). Refers to detailed training contents or materials, if available and applicable. |
| Purpose of 3.9 | Provides information regarding other supply and service requirements. |
| Purpose of 3.10 | As per the tender contract specifications. |