

# Ergonomic mounting advice

# Guidelines for the installation of products in sanitary facilities

Hinged and fixed arm supports	
Sturdy arm supports on both sides of toilet <sup>1</sup>	symmetrical support
Protrudes beyond the front of the toilet and the shower seat <sup>2</sup>	200 mm
Height of arm supports (on both sides) above toilet and/or shower seat <sup>2</sup>	min 250 mm, max 300 mm
Distance between top of arm supports and surface of floor <sup>3</sup>	750 mm
Distance between inside of arm supports and side wall <sup>2</sup>	≥ 350 mm
Distance between centre of toilet and/or shower seat and arm supports <sup>1</sup>	350 mm
Distance between armsupports <sup>1</sup>	700 mm
Walls suitable for installation of sturdy arm supports <sup>1</sup>	
Arm supports can be grasped firmly <sup>1</sup>	
Essential components are sturdy and robust <sup>1</sup>	
Toilets	
Distance between centre of toilet and side wall <sup>1</sup>	≥ 550 mm
Height of backrest above toilet (measured from toilet seat to bottom of backrest) <sup>3</sup>	min 230 mm, max 300 mm
Shower seats (wall mounted) and commode / shower chairs	
Seat height (= top of shower seat from surface of floor) <sup>1</sup>	min value 400 mm, average value 470 mm, max value 540 mm
Distance between centre of shower seat and side wall (corner installations) <sup>1</sup>	550 mm
Seat depth <sup>1</sup>	between 400 – 450 mm
Total depth of shower seat from rear wall <sup>2</sup>	≥ 515 mm
Seat area, width x length <sup>1</sup>	700 x 900 mm
Free space next to shower seat on both sides, minimum <sup>1</sup>	350 x 1200 mm
Free space next to shower seat for sideways transfers and care, minimum 1 side <sup>1</sup>	900 x 1200 mm
Free space at front of shower seat <sup>2</sup>	≥ 1200 x 1200 mm
Standard shower area, preferably sloping towards drainage <sup>1</sup>	900 x 900 mm
Support: sturdy armrests, distance above seat <sup>1</sup>	200 – 330 mm
Support: distance between armrests approx. <sup>1</sup>	500 mm
Grab rails, horizontally installed	
Horizontal surface, rail height (above floor or stairs) <sup>1</sup>	between 850 – 900 mm
Height of second rail (above floor or stairs) <sup>1</sup>	600 mm
Hand must be able to hold onto rail easily, space around rail <sup>1</sup>	≥ 50 mm
Hand must be able to move along the rail easily <sup>1</sup>	
Horizontal rail in combination with Click-On frame for shower seat (centre of tube) <sup>3</sup>	920 mm
Grab rails (and shower rail where appropriate), vertically installed	
Distance to sidewall <sup>2</sup>	≥ 50 mm
Reach envelope, height <sup>1</sup>	average value 400 – 1350 mm, max value 1800 mm
Grab rail as shower rail, length <sup>2</sup>	≥ 1000 mm
Height of shower head on shower rail from surface of floor <sup>1</sup>	min 950 mm, max 2200 mm
Grab rails, diagonally installed	
Installation at an angle of 45 degrees <sup>3</sup>	
Grip point is at the bottom corner, within comfortable reach of the user <sup>1</sup>	average value 400 – 1350 mm, max value 1800 mm

## Definitions:

Minimum value <sup>1</sup> = minimum value for shorter users  
 Average value <sup>1</sup> = average value or preferred value for shared use  
 Maximum value <sup>1</sup> = maximum value for taller users  
 Critical value <sup>1</sup> = recommended range, limit values

### Grab rails and other components (shelves, taps, toilet handles etc.)

Walls suitable for installation of sturdy grab rails / arm supports <sup>1</sup>

Form and function: component can be identified by touch <sup>1</sup>

Essential components are sturdy, robust and can be grasped firmly <sup>1</sup>

Distance from an internal angle (in the shower, outside shower spray) <sup>1</sup>	≥ 500 - 550 mm
Height of components (e.g. shower tap) above surface of floor <sup>1</sup>	optimum value 1050 mm, average value 900 – 1200 mm critical value 400 – 1350 mm, max value 1800 mm
Height of alarm cord, round at wall, above surface of floor <sup>2</sup>	400 mm
(Grab) rail over full width of door, height from surface of floor <sup>2</sup>	900 mm

### Washbasin adjustment system and washbasin rails

Height for use when sitting, measured from surface of floor to top of tube <sup>1</sup>	min value 620 mm, average value 700 mm, max value 820 mm
To accommodate wheelchair users <sup>1</sup>	820 mm

### Shower stretchers and trolleys

Height for standing carer, measured from surface of floor to lying surface <sup>1</sup>	min value 800 mm, average value 1000 mm, max value 1250 mm
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### Mirrors

Height of mirror from surface of floor, standing <sup>1</sup>	min 1050 mm, max 1950 mm
Height of mirror from surface of floor, sitting <sup>2</sup>	min 600 mm, max 1450 mm

### Space required in bathrooms and toilets

#### Transfer space

In front of and beside toilets and (area for possible) shower seat <sup>1</sup>	≥ 900 x 1200 mm
With assistance, on one side of toilet <sup>1</sup>	≥ 900 x 1800 mm
With assistance, on other side of toilet <sup>1</sup>	≥ 900 x 1200 mm
With lift <sup>2</sup>	≥ 900 x 1200 mm
Visitor's toilet in dwelling, free corridor width <sup>1</sup>	≥ 1100 mm
<b>Walking space</b> between sanitary items such as toilet, washbasin and shower area <sup>1</sup>	≥ 900 mm
<b>Turning space</b> /turning circle <sup>1</sup>	≥ 1500 x 1500 mm
<b>Standing space for wheelchair</b> , (partially) under washbasin <sup>1,2</sup>	≥ 900 x 1200 mm

#### Sitting space

Distance from backrest <sup>2</sup>	≥ 850 mm
Sitting space, including backrest, width x length <sup>1,2</sup>	≥ 700 x 900 mm
Sitting space, wheelchair user, width x length <sup>2</sup>	≥ 900 x 1200 mm
<b>Leg room</b> , height x width x depth <sup>1</sup>	≥ 600 x ≥ 600 x 600 mm
<b>Foot space</b> , height x depth <sup>1</sup>	≥ 200 x ≥ 800 mm

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Critical value <sup>1</sup> = recommended range, limit values

#### Sources:

1. Handboek voor Toegankelijkheid, Over de ergonomie van buitenruimten, gebouwen en woningen (Accessibility Manual, The ergonomics of outdoor spaces, buildings and dwellings), M Wijk 7th Edition, ISBN 978-90-12-58505-7.
2. Handboek voor Toegankelijkheid, Over de ergonomie van buitenruimten, gebouwen en woningen (Accessibility Manual, The ergonomics of outdoor spaces, buildings and dwellings), M Wijk 6th Edition, ISBN 978-90-6228-685-0.
3. Handicare, your professional partner for functional, durable sanitary products.

Handicare is a wide range of high quality safety products designed to provide ergonomic support, comfort and increased independence for the user in various bathing, showering and toileting situations.