Usability, Style and Safety:

A Specifier's Guide to Accessible Shower Screens

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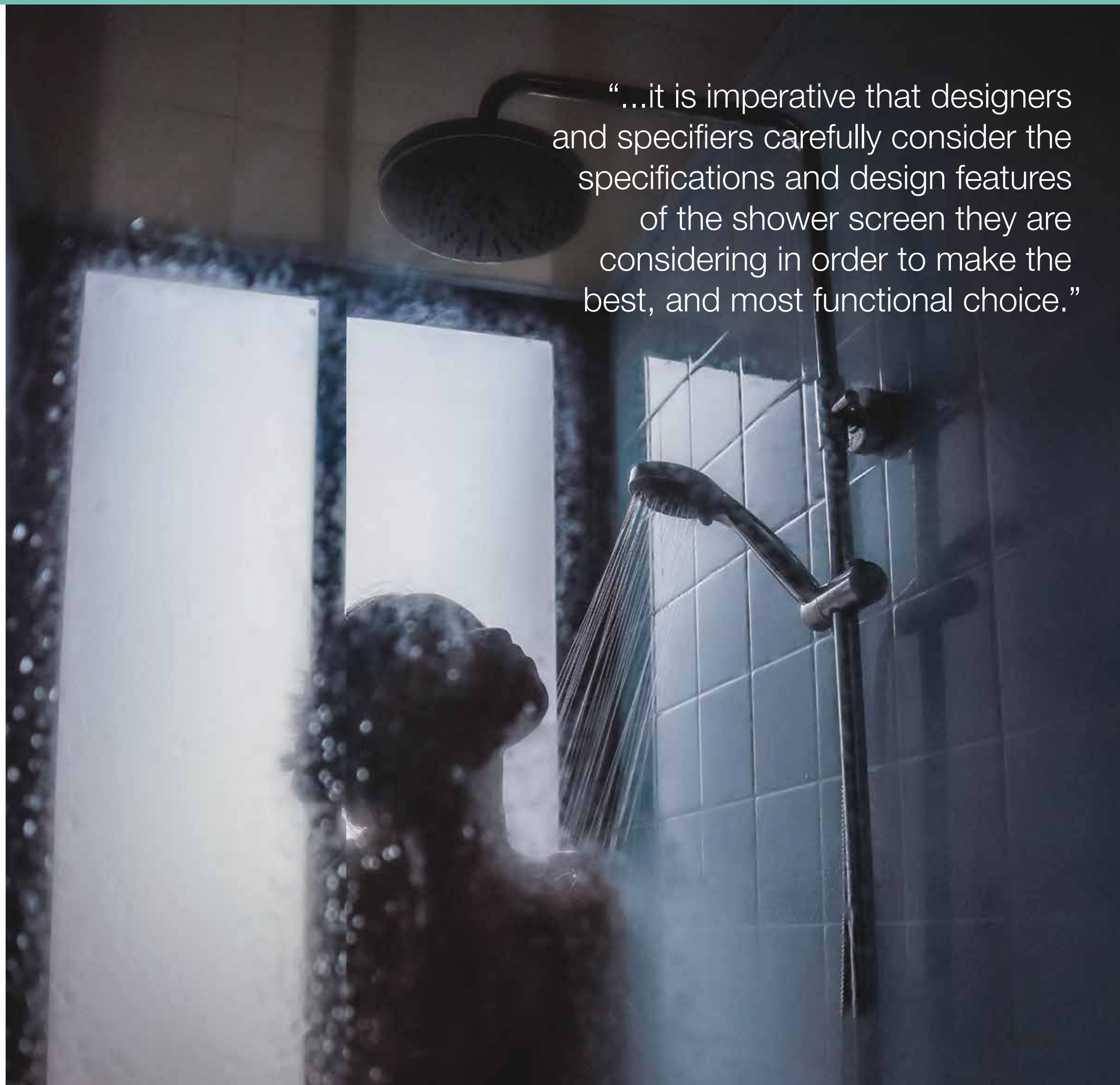
INTRODUCTION

The Australian Network on Disability estimates that up to 3.4 million Australians suffer a physical disability,[1] and accessible design is now widely considered an essential aspect of any architectural project. The Disability Discrimination Act 1992 (Cth) legislates that any place accessible to the public (such as a park, shopping centre or office building)[2] must be fully accessible to people with disabilities, however this legislation does not apply to residential homes. While there is no legislation that specifically covers accessible home design, there are a number of guidelines such as the Livable Housing Design Guidelines that can assist specifiers in designing accessible residential projects.[3] However, with more Australians choosing to age at home,[4] many more are choosing to design livable houses in order to future-proof their homes as they begin to age.

Accessible design is especially important when it comes to bathrooms. Maintaining personal hygiene - whether on their own or with assistance from a carer - is fundamental to the dignity of people with disabilities,[5] and it's essential that architects, designers and specifiers create spaces that make this as easy as possible. Shower screens are an area that requires particular attention.

Many shower screens render a shower area inoperable for people with restricted mobility. This can occur through a number of design features such as the need for a hob or step, an over-bath design, a narrow doorway or a sill that runs along the entrance to the shower area. Thus, it is imperative that designers and specifiers carefully consider the specifications and design features of the shower screen they are considering in order to make the best, and most functional choice.

This whitepaper will take a detailed look at the considerations for designers and specifiers when selecting high quality accessible shower screens.



CONSIDERATIONS FOR SPECIFIERS

STANDARDS AND GUIDELINES - THE AS1428 SUITE

The AS1428 - Design for Access and Mobility set is the umbrella standard that guides the design of accessible spaces in Australia.[6] Within this set, there is general guidance as well as requirements that relate specifically to certain disabilities such as hearing or vision impairment. AS1428.1 outlines general requirements for new building work and is widely considered to be the baseline for accessible design. The Standard mandates that entrances to shower recess spaces must be without hobs, raised steps or steps down, which is of particular importance when specifying a compliant shower screen. It also sets out circulation space and gradient requirements which may be pertinent to the specification of accessible shower screens. It is important to note that the AS1428 is a public access standard and therefore does not apply to private homes.[7] However, as per Australian Government guidance, accessible houses must also meet the requirements in AS1428.1,[8] which makes it a valuable reference tool for specifiers who are designing accessible spaces, regardless of the application.

HINGE TYPE

Specifiers should carefully consider shower screen hinge types and the various strengths and drawbacks of each. Full length hinges are common for shower screens due to the possibility of double swing capacity and perceived strength, however they are frequently unsightly and can also cause functional problems. Pivot hinges provide an ideal solution to these issues. They require only a small fixture at the top and bottom of the door, providing minimal aesthetic interruption and excellent functionality.

However, not all pivot hinges are created equal. Where possible, specifiers should opt for hinges made from strong, corrosion-resistant materials such as brass and stainless steel. Similarly, certain types of pivot hinges have the added benefit of requiring minimal glasswork, eliminating the need for multiple glass cutouts and thus reducing cost. In these models, the pivot pin is incorporated into the door clamp for frameless designs, or into the frame for semi and fully-framed designs. Where possible, specifiers should opt for pivot hinges with nylon bearings. Nylon bearings are suitable for heavy screens and will not rust, extending the lifespan of the screen overall. Similarly, specifiers should ensure that the hinge and clamp system does not require any protruding legs to stabilise or add strength. In addition to being unsightly they can create trip hazards.

EASE OF CLEANING

Mold and mildew build up on shower screens generally occurs around the frame and hinges. This means that cleaning a screen with a full length hinge would be extremely difficult for a wheelchair-bound person. In addition, getting into the tight corners around hinges and frames can be problematic for those with restricted mobility. Excessive mold buildup can have detrimental health effects including allergic reactions and respiratory problems. Therefore, specifiers should opt for smaller hinges that provide maximum access to glass panes and minimise metal components.

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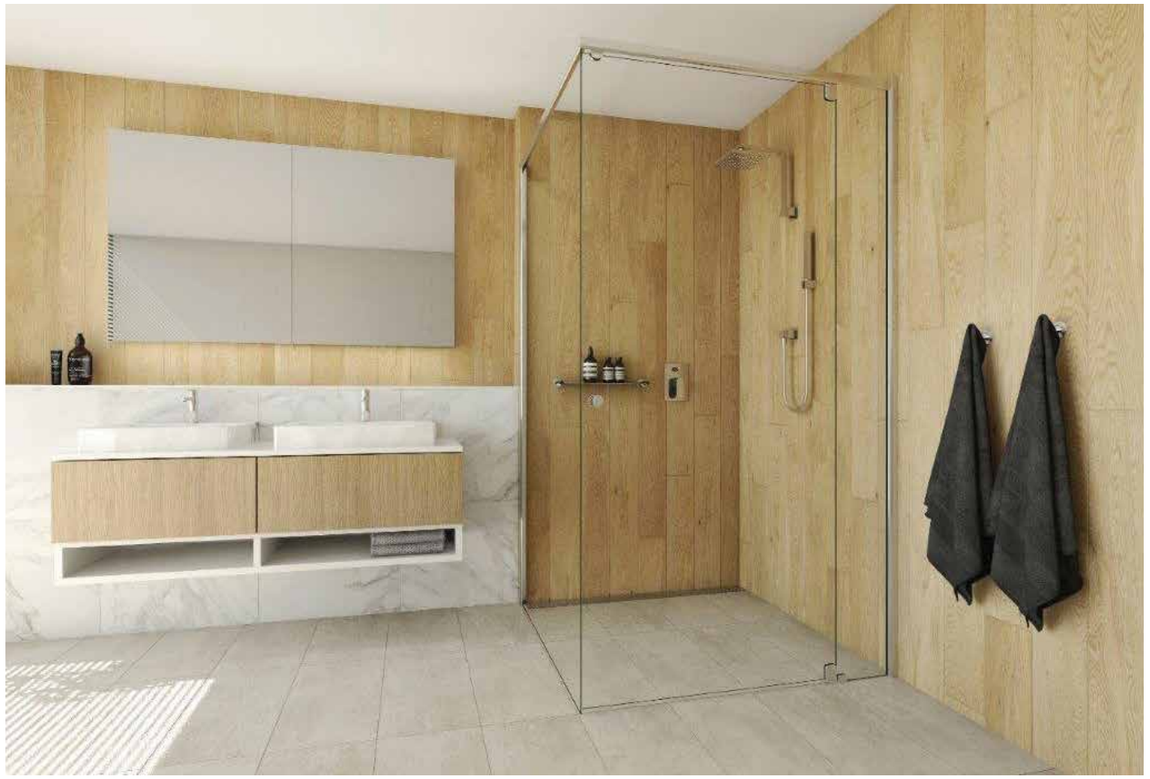

DOOR SIZING

Specifiers must allocate careful consideration to shower screen door sizing requirements when designing accessible spaces. As per AS1428.1, minimum doorway openings should be 850mm[9] to accommodate wheelchairs, and this also applies to shower screens. It is worth noting that this measurement is taken from the most narrow point of the open door face to the door stop, not just the size of the frame. In order to be sure that these requirements will be met, specifiers should opt for full-open doors where possible. This means that hinges are attached to the back of the glass door panel itself, rather than part way along the door as can be the case with some models - a design flaw that can remove as much as 100mm of door width in real terms. Full open, pivot hinge screen models are available in up to 1000mm widths, providing ample space for wheelchair and carer access. In general, specifiers should opt for the widest door width possible without compromising the functionality of the space in order to provide maximum comfort to users.

DURABILITY

Hinges and framing elements will generally see the most wear and tear in shower screens - the lifespan of glass in these applications is, for all intents and purposes, infinite. However accidents can happen and if screen glass is too thin it may shatter easily. Too thick and the additional weight may cause the moving parts to age prematurely. Glass thickness of 6mm is a good rule of thumb for most accessible shower screen applications. When it comes to hinges and frame elements, it's imperative that specifiers opt for fittings made from high-quality, durable materials. Aluminium alloy is excellent for frames as it is lightweight yet very strong, making it easy to install but with a good lifespan. When it comes to hinges, brass, for example, is low iron and hence highly rust resistant, while high chromium stainless steel also offers excellent strength while being resistant to corrosion.[10] Specifiers should opt for hinges that use a combination of these materials wherever possible.

FRAMING

Depending on client preference, specifiers can opt for either frameless, semi-frameless or fully framed shower screen designs. Choice of frame will change requirements for some parts, for example clamp systems will only apply to semi-frameless models. In framed models the pivot can be inserted directly into the back of the door frame, meaning no clamps are required. Any of these frame options will still provide full accessibility. However, specifiers should avoid silled designs. Sills running along the entrance to the shower recess can make it difficult for people in wheelchairs to access the space and also create a trip hazard for those with otherwise restricted mobility.

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Danmac is a glazing industry leader in the design and distribution of aluminium. The company prides itself on commitment to excellence and innovation in the design of shower screens. Danmac also offers a wide range of shower screen products suitable for accessible showers. With a focus on customer service and delivering high-performance products that can be tailored to suit any project.

The Affinity 18 sill-less system is ideal for accessible showers and features a full opening pivot system and door width up to 1000mm. It is available in semi-framed and fully-framed designs. Affinity 18 features a high performance aluminium alloy frame, brass alloy pivot base with stainless steel pin and nylon bearing. All materials are selected to be cost effective and long-lasting and this is backed by a 10-year warranty.

The Ultimate Sill-less pivot clamp is an innovative glass clamp for use in semi-frameless applications. By incorporating the pivot pin into the clamp itself, the requirement for glass cutouts is drastically reduced, with only a single hole required top and bottom to stabilise the screen door. The door can open 90 degrees in both directions or set to swing out only.

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