

# Can you design a frameless shower enclosure that doesn't leak?

With proper design and installation frameless shower enclosures should not have any problems with water leakage, but they are not 100 percent watertight.

Fixed glass panels are sealed at the base of the floor and along the sides with clear silicone sealant. Most water escapes from the frameless glass door which needs at least 6mm clearance space along the bottom and opening side, hinge side is dictated by the hinges themselves shown on their drawings. There are some simple things you can keep in mind when planning your frameless shower enclosure to minimize the amount of water that gets out:

## DOs

- Install a seal with drip rail onto the bottom of your frameless glass shower door (SH/GGA/S04) to close the gap and deflect any water running down the door back into the tray. If there are uneven tiles on the floor or a dip in the tray lip you may need to silicone down a water bar threshold.
- Add a hinge side seal to the rear of the door (SH/GGA/S05, S06, S09 or S16) and cut it correctly between the hinges as per the instructions.
- Use a magnetic seal if possible as it will positively hold the door closed and provide the best barrier to water spray (SH/GGA/S01), if you are not keen on the look of a magnetic seal you can use one of our translucent fin seals (SH/GGA/S06 to a wall or SH/GGA/S10 to another glass panel). These are less effective than the magnetic seals but will still provide suitable protection.

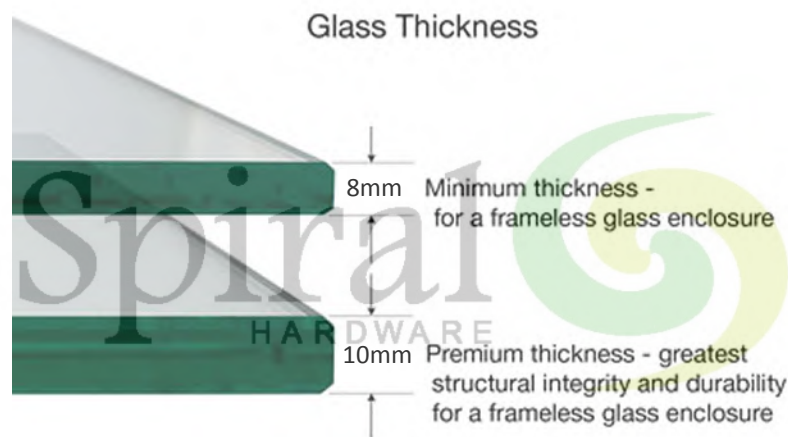
## DON'Ts

- Do not direct water spray at the frameless shower door!! Your protective seals improve watertightness but a glass shower isn't an aquarium. We automatically seal door hinges to give them a protective property as well, but the hinges aren't waterproof.
- Do not neglect replacing seals. Over time seals may need replacing from the constant movement so if your frameless glass shower suddenly seems less watertight, check your seals.

# What goes into making my frameless glass shower enclosure?

Even if you know what you want your frameless shower to look like, understanding key components of a frameless shower will make the ordering and installation an easy and understandable process.

**Glass Thickness:** As a standard we use 8mm clear toughened safety glass. Depending on the size of panel you require we may have to go up to 10mm for greater rigidity on larger panels (typically over 1200mm wide and/or 2100mm high). Some people prefer the look of 10mm thick glass even if the panel doesn't need to be that thick for structural reasons, this is perfectly fine as all of our hardware will take both sizes just remember thicker glass will be more expensive and heavier.



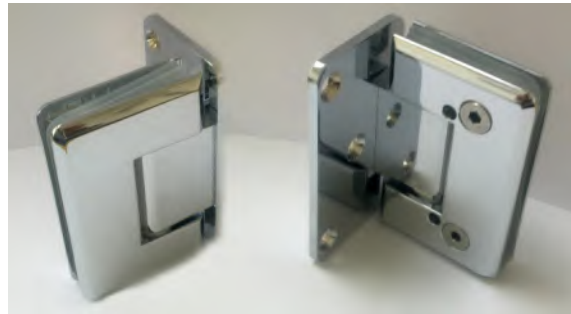
**Glass Style:** We have a wide range of glass styles other than standard clear glass:

- Acid Etched (Satin, frosted finish all over, easier to clean than sandblasted)
- Low-Iron (Ultra-Clear glass, no green tint to the edges)
- Coloured tints (Certain colours available, still transparent)
- Back Painted (Colours from Ral chart, ideal for hiding side of a unit/bath. Opaque)
- Sandblasted Manifestations (Patterns on clear glass to identify it's there)
- Easy Clean Coating (A surface treatment to prevent staining, needs maintenance and eventually replacing every 3 years or so). We recommend if you want this to buy a home application kit from Clearshield and apply it after the panels are sealed as it can also prevent the silicone sticking to the edges creating leaks, makes panels slippery to carry and gives you a stock to re-apply when necessary. You could also apply to the tiles as well.

**Hinge Type:** We offer 2 main types of hinges to connect your glass door to the wall, free-swinging or spring loaded and each has their own benefits and flaws depending on what you are trying to do. The free-swinging hinges only open in one direction, as a result the hinge side seal can be run the entire length of the glass edge without cutting it (also only requires 2 holes so the glass will be cheaper). However they have no centering force to keep in the closed position so a magnetic closure seal is a must. Spring loaded hinges will self centre (to within a few degrees) and can open 90 degrees inwards / outwards from this point, this means you can use the lower profile fin seals but they will need to be cut correctly to fit. By their construction they are less watertight than the free-swinging hinges with the pivot point being inboard of the glass edge, they also require detailed cut-outs which can increase the glass price.

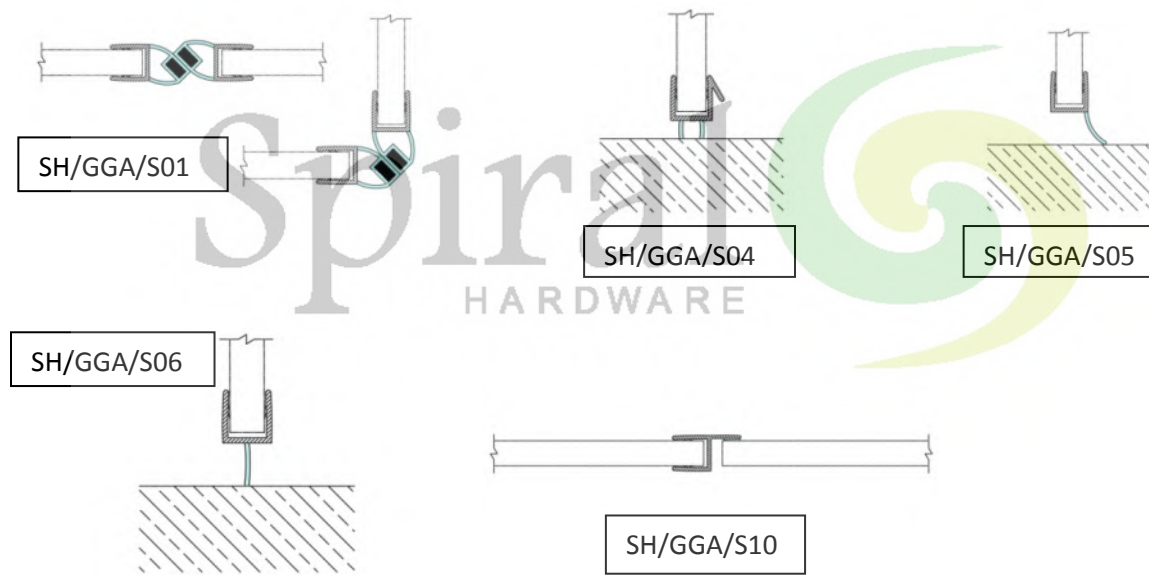


**Free-swing hinge SH/ATU/H09**



**Spring loaded hinge SH/GGA/H01-AD**

**Seal Types:**



## Connecting Hardware Types:

**Brackets:** are only about 50mm square and require a hole in the glass, up to 2m high you will need 2 up the wall and one on the base per fixed panel. They come in either chrome or satin nickel plated brass and satin stainless steel. For a corner joint between glass panels you will have to use brackets to mechanically fix them together then use a clear silicone to seal the gaps in between.



**SH/APH/B07 Wall Mount Bracket**



**SH/APH/B02 Glass to Glass Bracket**

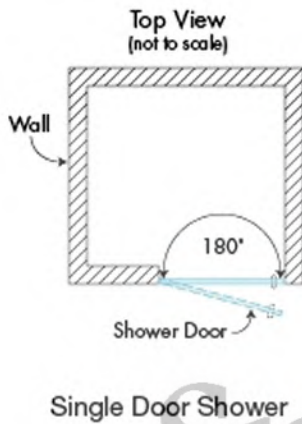
If the wall and tray aren't plumb then you can use a glazing channel to absorb the run-out, screwed to the wall then silicone seal the glass in place. To achieve a more concealed fixing (if you are in a position to do so) attach the channel to the wall before tiling up to it, we have polished (SH/GGA/C32, C50) and brushed finish (SH/GGA/C40) to match any bathroom fixtures or a natural anodized for a cost-effective option (SH/GGA/C29).



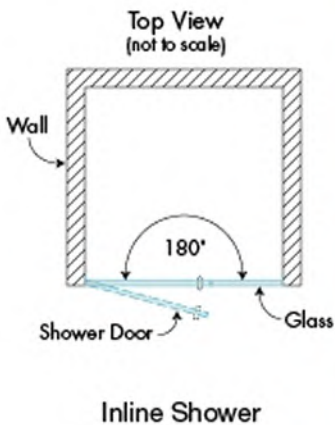
**SH/GGA/C32 U Channel**

## Configuration:

- **Single Doors:** You can choose if you want the door to open to the left or right, if you want it to run to the ceiling or not. Generally they are designed not to be handed so makes no difference to the panel

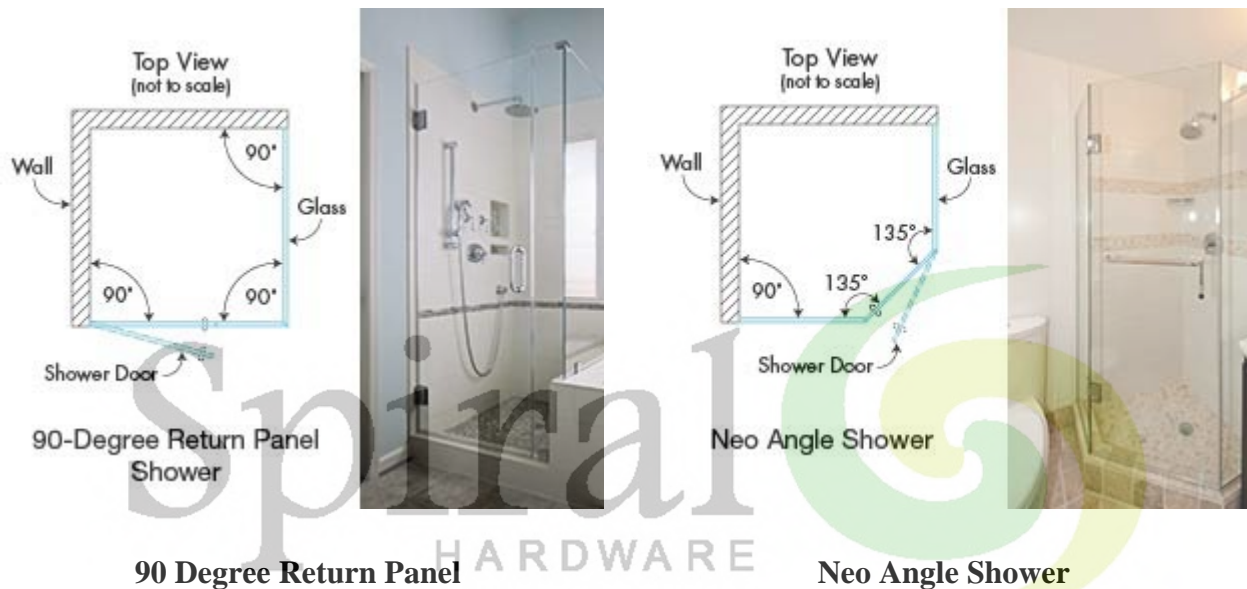


- **Inline Opening:** For wider openings there are 2 choices for how to screen it off, hinged door and side panel(s) or a sliding shower screen, be aware that with a slider the largest opening you can get will only ever be half the overall width. For bathrooms with restricted space you could consider double doors that magnetically seal in the middle.





- Corner Opening:** The most popular shower configurations join two glass panels at a 90-degree angle to close up the space. One of these side panels will be a hinged door or a combination of door with smaller fixed glass panel.  
 The other popular corner opening is a **neo angle shower**. Three glass panels (one being a door) kink between the two existing walls at 135-degree angles. This layout prevents the enclosure from encroaching too far into the bathroom by diagonally cutting across the front of the shower area.



Other corner options are a corner sliding unit if there is restricted space outside the enclosure or a bi-parting corner with 2 doors.

#### Additional thoughts about your shower configuration:

- Header:** All fixed glass needs support at the top front corner, the neatest and strongest form of this is to screw a bracket or channel to the ceiling and engage into this.
- Support Bar:** A support bar is used when the shower glass cannot be taken full height for weight/size issues; this is also the cheaper option depending on your ceiling height.
- Vinyl Seals:** These are used to improve the water tightness of your shower. If you know in advance that you'll want to try removing these we can design the glass to suit but water WILL escape. Some steps would be installing the door furthest away from the shower head and out of direct line of shower spray, maybe use a threshold to keep standing water back.
- Angles/Size:** Try and plan your shower around 90, 135, 180 degree angles as most shower hardware is designed to use these angles, this will give you a more cost effective and easier to install shower. Also make sure the size of panel you want will fit through the house (and if applicable up the stairs) into the bathroom.



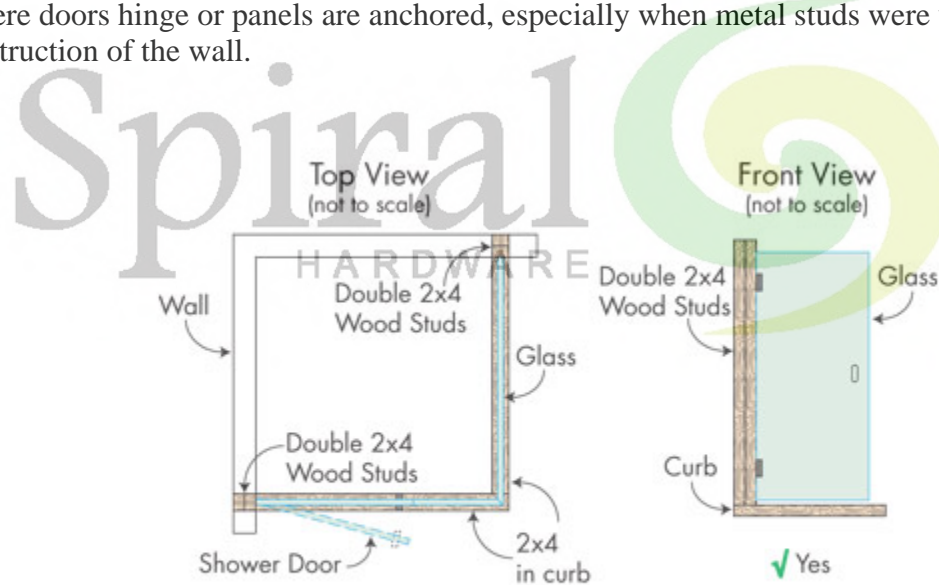
**Support Bar**



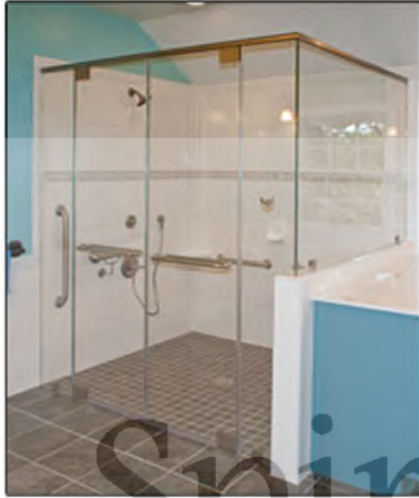
**Shower Sweep**

**Fixing Considerations**

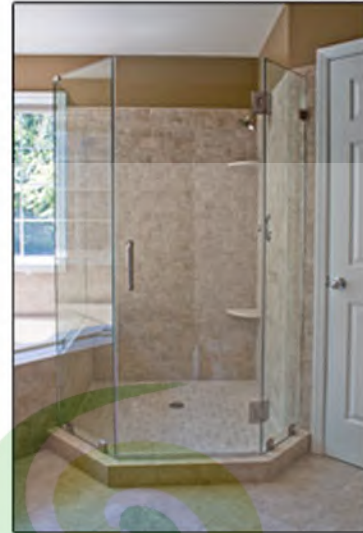
Be sure the wall on which you would like to install a hinged shower door has proper studding behind it (double 2x4 is best, though single 2x4 is acceptable). Always provide wood studs or blocking where doors hinge or panels are anchored, especially when metal studs were used in the original construction of the wall.



If you are going for a wet-room decide whether to install your shower enclosure on a curb or to have it flush with the floor. While eliminating the curb is beneficial when planning a handicap accessible shower enclosure, keep in mind that a properly constructed curb helps prevent water from leaking or pooling onto the bathroom floor.



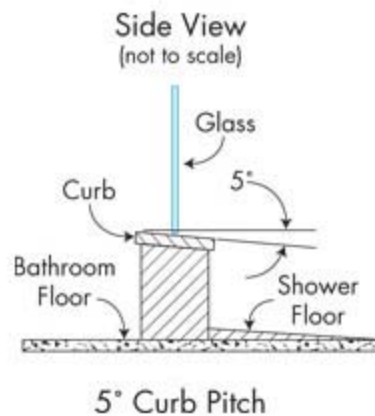
Without Curb



With Curb

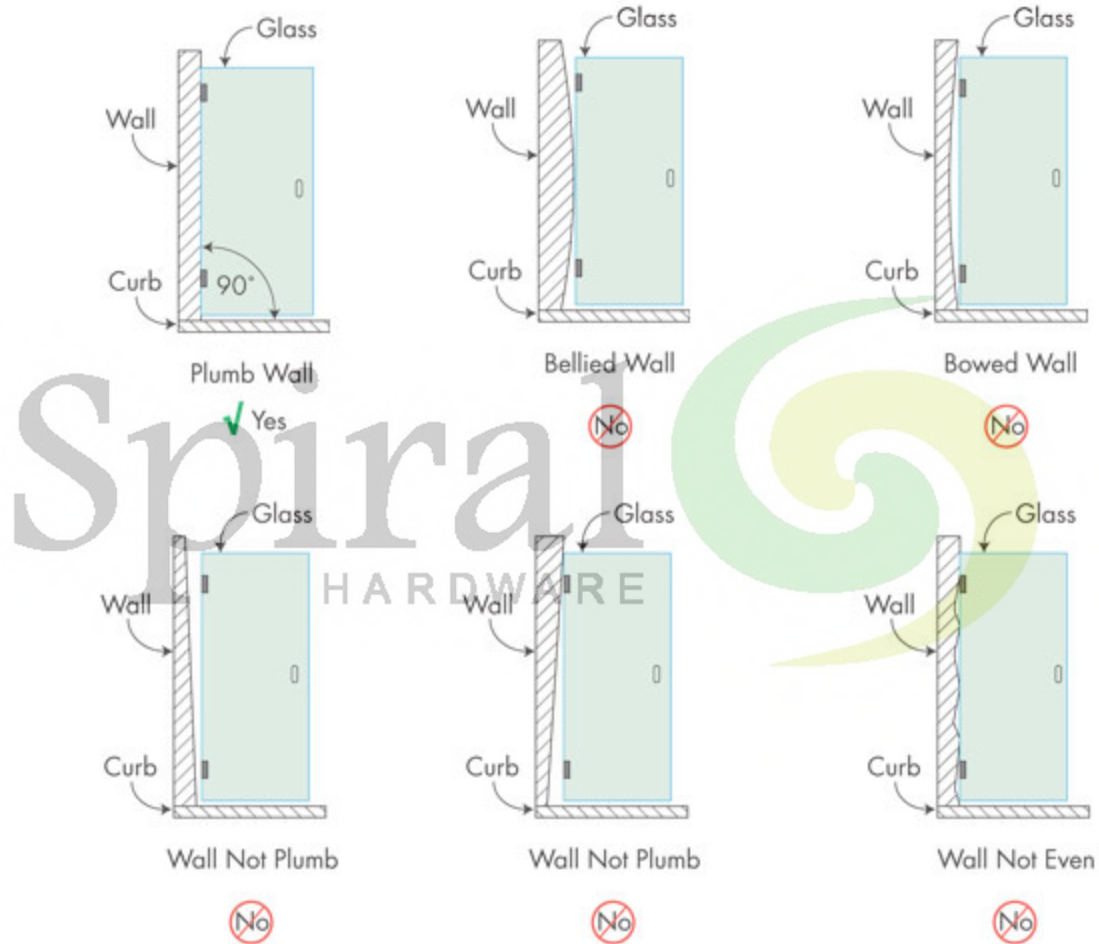
Spiral  
HARDWARE

The curb or lip around the bottom of the shower should to be slanted inward at a 5-degree slope so water flows in toward the drain. (A level curb would cause the water to stand, while a curb angled away from the drain would cause water to leak onto the bathroom floor.)



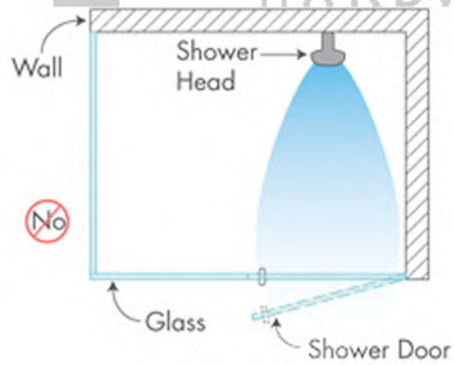
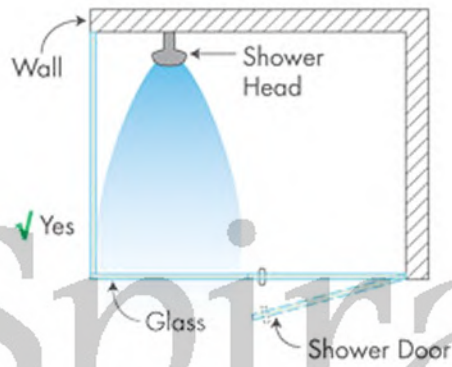
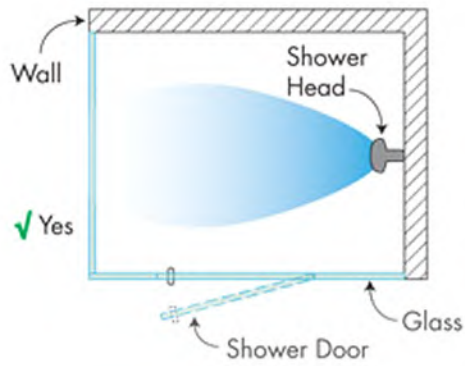


Walls which meet a door or glass panel need to be exactly vertical, or "plumb", in order to prevent gaps, uneven joints, and hinge "bind". It is possible to work with walls that are no more than 8mm out of plumb over a 2m height. Walls more than 8mm out of plumb will require a bespoke cut shaped panel and be held using glazing channel to hide the run-out, to attach a door to one will require a fixed panel to be installed first.



When designing your shower enclosure, keep in mind that each glass panel needs to be at least 170mm – 200mm wide, which is really the minimum width for supporting the hardware. Also the door would ideally be no more than 900mm wide, there is no rule as such for a minimum door width but as long as you can get in and out..

To minimize leakage, position showerheads toward tiled walls or fixed panels. Showerheads should never be positioned opposite a door or other opening. (Exceptions may be made for smaller or low-flow showerheads or showerheads that point straight down at the floor.)



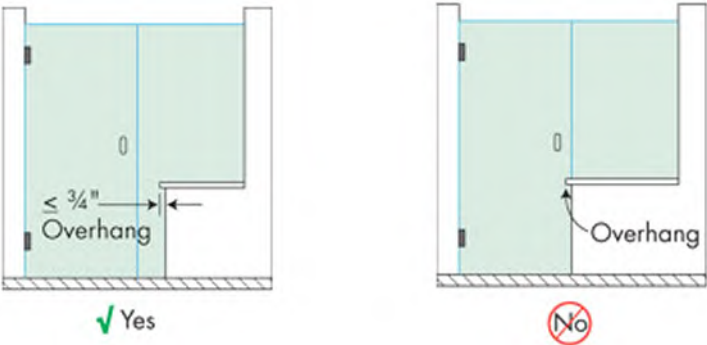
Leaks are minimized.



Greater chance of leakage

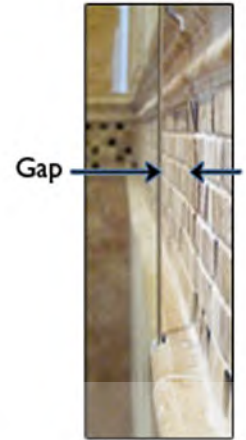
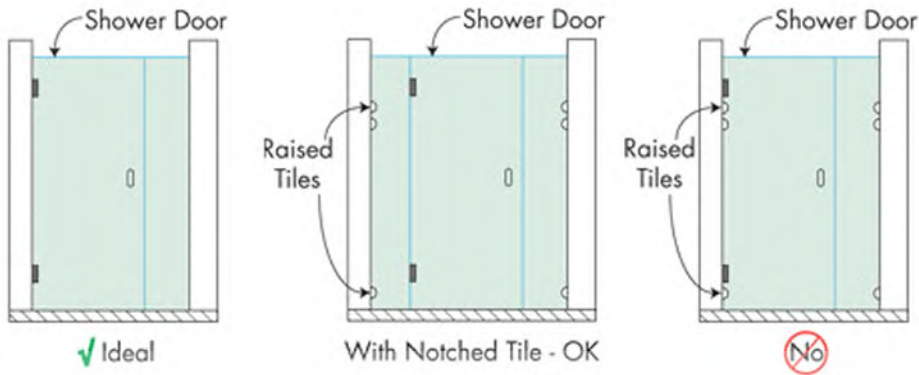
Spiral  
HARDWARE

Shower doors should be installed in such a way that nothing interferes with their movement and there are no gaps between the door and the wall. Environments that interfere with door movement are raised decorative tiles and overhanging tiles.

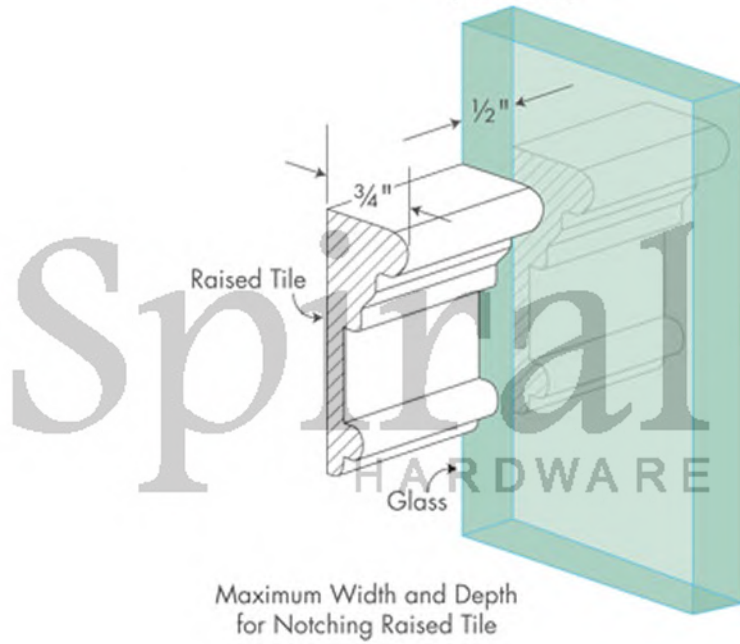


A better solution is to include a fixed panel in your design. That way, the door can align with the panel on one side, opening and closing properly with no interference. On the other side, the tile can be notched to allow the panel to line up flush against the wall.





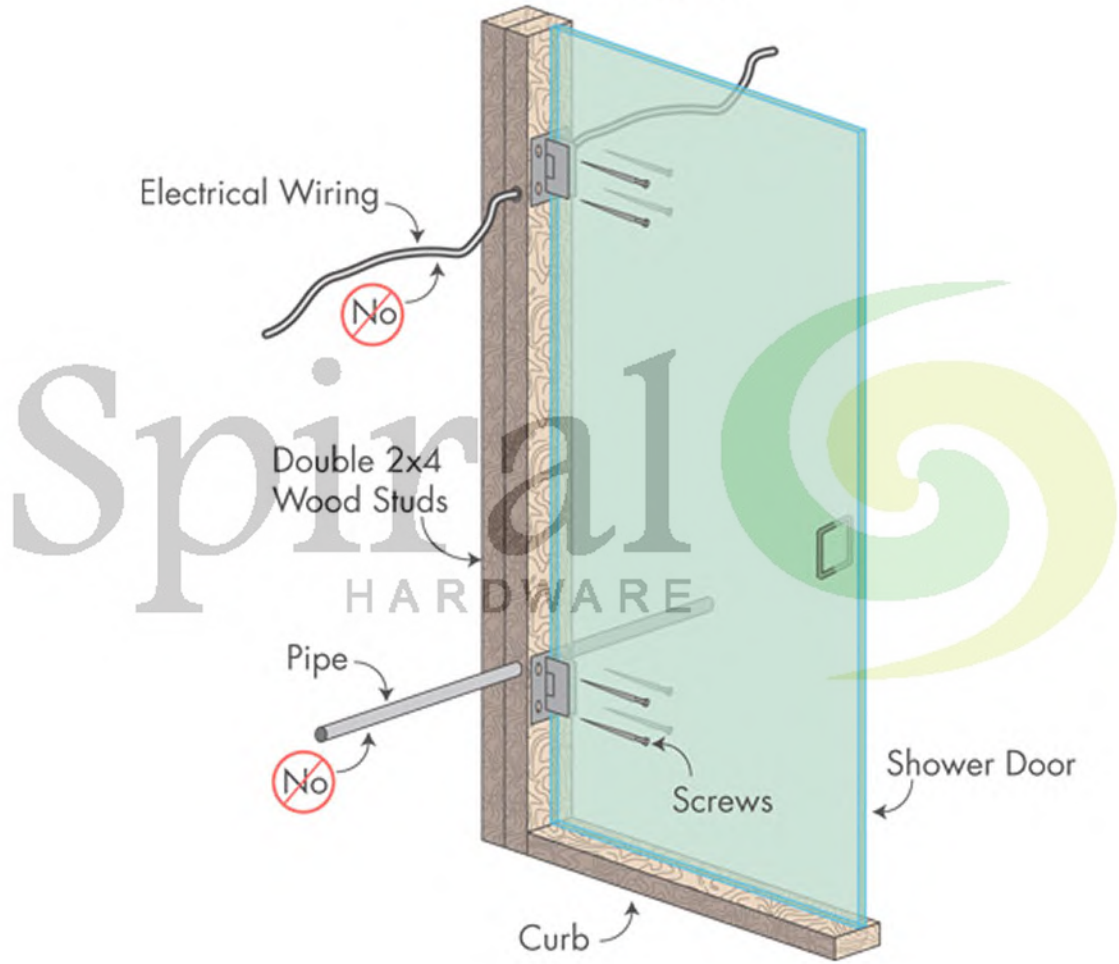
Orthographic View  
(not to scale)



Consult a tile professional.

Never run plumbing pipe or electrical wiring through walls or studs where an anchoring screw for the shower enclosure hardware might puncture it.

Orthographic View  
(not to scale)





When designing an enclosure that has a buttress or "knee" wall, plan on including an in-line panel into your design. That way, you can modify the fixed panel to accommodate the buttress wall instead of trying to modify the door.

