

### INTRODUCTION

A second shower is almost a necessity in a busy household.

It is rare to find a home these days that does not boast at least one shower, but if you have a large family or frequently entertain house guests, a second shower will take the pressure off the bathroom. You could build a shower cubicle into the corner of a bedroom, in a downstairs toilet or utility room, or even under the stairs. And if space is limited, there's no need to install a purpose-built cubicle - just screen off the bath and fit a shower unit to the wall above.

### SKILL LEVEL ●●●●●

Building a shower cubicle requires some experience in carpentry and tiling. You also need a degree of expertise in wiring and plumbing in order to install a shower unit.

### SAFETY FIRST

By all means construct the shower cubicle yourself, but it is safer to hire professionals if you are not competent to install electrical wiring and plumbing.

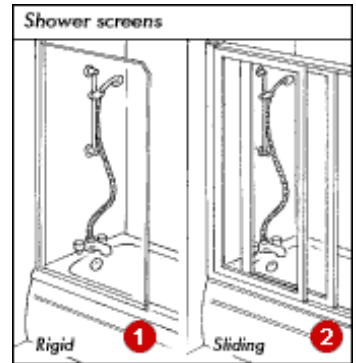
## TO COMPLETE THIS PROJECT YOU WILL NEED...

- Claw hammer
- Copper Pipe
- Core Bit
- Craft Knife
- Electric Screwdriver
- Grout (suitable for the surface)
- Hacksaw
- Hole Saw
- Pipe Connectors
- Power drill (Cordless)
- Screws
- Shower Curtain/Screen
- Shower Tray
- Shower Unit
- Silicone Sealant
- Spanners
- Spirit Level
- Timber framing
- Tube Cutter
- Boss Fitting
- Plasterboard
- Plastic wastepipe and fittings
- Plywood - Exterior-grade
- Solvent Cement
- Trap

# HOW TO: BUILD A SHOWER CUBICLE

## 1 - FITTING A SHOWER SCREEN

The simplest way to screen off a bath shower is to hang a simple waterproof curtain that is long enough to drape inside the bath rim. However, unless you remember to tuck the curtain against the wall each time you take a shower, you always seem to end up spraying the bathroom with water. A rigid shower screen overcomes the problem. There are various screen kits to choose from. Some are designed to shield just the end of the bath where the shower is located ❶. Others enclose the entire bath. To provide access, complete screens have hinged or sliding doors ❷. Hinged screens take up space when open and need good flexible seals.

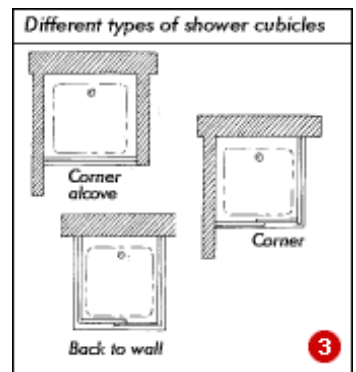


To erect a fixed screen, fasten the channel to the wall with screws. Apply sealant behind the channel before tightening up the screws, or run a bead of sealant down the joint after fixing. Fit the glazed panel and seal between it and the bath rim.

Fit a hinged or sliding screen following the manufacturer's instructions, making sure you correctly install the seals provided with the screen.

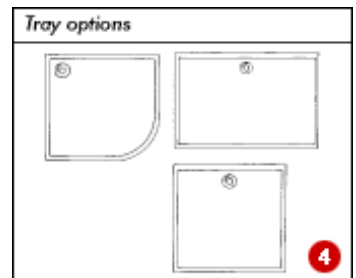
## 2 - SHOWER CUBICLES

Shower-cubicle components come in practically every combination imaginable, from self-contained cabinets to screen panels for enclosing alcoves, building into a corner or against a flat wall ❸.



A range of sliding, hinged and bi-fold doors are available to fit all the various shaped shower trays on the market ❹.

A shower cubicle, fitted in a bedroom or some other part of the house, must be at least 2.5m (8ft) from the nearest electrical socket - move the socket if necessary.



Decide on the most convenient position for your shower, taking into consideration the pipe runs for supply and waste. Check also on the electrical-wiring requirements for instantaneous electric showers and pumped power showers.

## 3 - BUILDING A STUD PARTITION

You can incorporate any existing wall into your shower cubicle, provided it is sound enough to be lined with ceramic tiles.

It is easy to construct an alcove in the corner of your room by building a stud partition to enclose the third side. Measure your shower tray carefully to ensure you can make a good fit all round. It is usually best to remove the skirtings and, if necessary, hack off some of the plaster from the existing walls. This will enable you to set the rim of the tray into the walls to make a waterproof seal after tiling.

A stud partition provides a convenient wall on which to mount the shower unit, because all the services can be run within the frame.

## HOW TO: BUILD A SHOWER CUBICLE

Construct the partition from 100 x 50mm (4 x 2in) softwood treated with preservative. Erect four uprights nailed to a similar-size piece of wood, known as a sole plate, screwed to the floor. Nail them at the top to a head plate screwed to the ceiling. Screw into the joists whenever possible. If need be, fit timber bearers between the joists to provide fixing points.

Fix noggings between the uprights to stiffen the frame, but leave a clear path for the plumbing (and wiring) down the centre. **5**

### 4 - FITTING THE SHOWER TRAY

Shower trays are usually made from moulded plastic or are cast with a gel coat. Most trays have an integral side skirt that is made to stand on the floor. Others have a wooden or metal underframe fitted with adjustable feet. **6** A separate plinth panel is fitted to this type of shower tray to conceal the underframe and provide access to the waste system.

The most important aspect when fitting a tray is to ensure that the tray is level and that it is correctly bedded down. Manufacturers generally suggest a sand/cement mix of 5:1. This is to ensure that the tray is fully supported and also helps with levelling.

The next issue to address is whether or not the tray will need raising off the floor. This will depend on whether installation is onto a timber or solid/restricted access floor. If it is a timber floor, there should be sufficient room to allow for the waste, trap and pipework. If the floor is solid or there is restricted access, a plinth will need to be constructed which is capable of accommodating the trap which is to be used.

The wastepipe must have sufficient fall (slope) for the water to drain properly. Access must be provided in order to clean out the shower trap.

You can fit a shallow-seal trap **7** when draining into a two-pipe waste system, but if you are connecting directly to a soil pipe you must use a deep-seal trap.

If this gives you problems with clearance under the shower tray, fit a deep-seal running trap in the pipe run. Cut an access hatch in the floor.

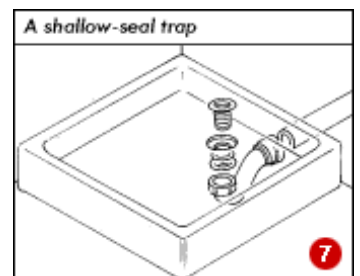
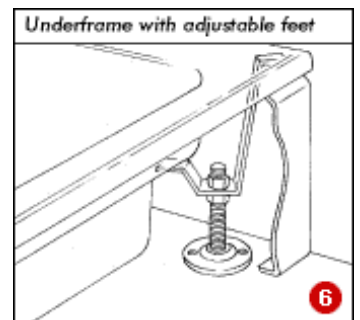
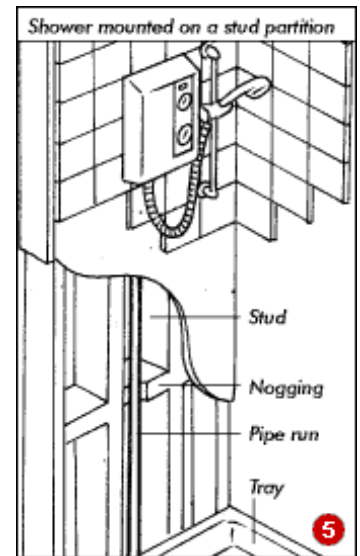
Some traps have a twist-out grille that provides access to a detachable chamber for removing blockages.

### 5 - THE WASTE SYSTEM

Attach a 40mm (1.5in) plastic wastepipe to the trap. The wastepipe can be run through the wall and discharged into the hopper head of a two-pipe waste system, or you can connect the pipe directly to the soil pipe of a single-stack drainage system.

Try to run the wastepipe between the floor joists, providing sufficient fall - 6mm (1/4in) for every 300mm (1ft) run - otherwise you may have to build a support frame to raise the shower tray to a higher level. If this results in the rim of the shower tray being more than 225mm (9in) above the floor, you should construct a step to provide safe access to the cubicle.

Having established the exit point for the wastepipe, use a power drill fitted with a core bit to bore a hole through the wall of the house.

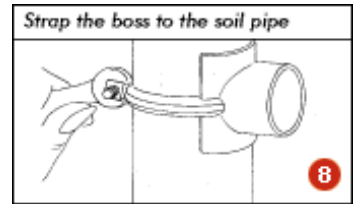


## HOW TO: BUILD A SHOWER CUBICLE

Connect an elbow to the end of the pipe to discharge water into a hopper. Use a pipe boss to join the wastepipe to a plastic soil pipe. Mark where the shower waste meets the soil pipe and cut a hole of the appropriate size, using a hole saw. Smooth the edge of the hole with abrasive paper.

Following the manufacturer's instructions, apply solvent cement to the joint and strap the boss in place. **8**

When the cement has set, push the rubber seal into the boss and insert the wastepipe.



### 6 - JOINING PLASTIC WASTEPIPES

Domestic wastepipe systems are lightweight and easy to assemble. The pipes come in standard lengths and in three sizes - 32mm (1.25in) diameter for washbasins, and 40mm (1.5in) for sink, bath and shower wastes. A 21mm (3/4in) pipe is also made for cistern overflows. The metric sizes refer to outside diameters, the imperial sizes to inside.

When buying plastic pipes and fittings make sure they are compatible - there may be slight variations in size between the ranges. For even the simplest run of wastepipe, you will have to fit joints that enable the pipe to change direction. A range of straight connectors, bends or elbows, T-joints and adapters are available for joining straight lengths of wastepipe and for connecting pipe to appliances.

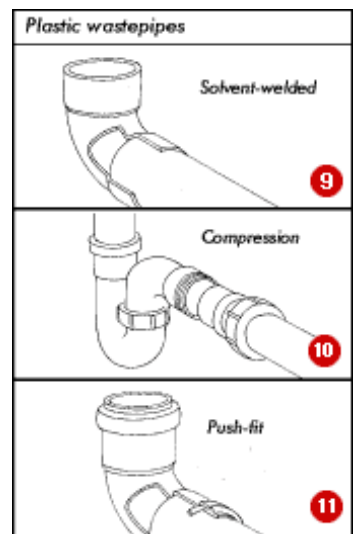
#### JOINTS ARE CONNECTED TO THE PIPE USING VARIOUS METHODS:

A welded joint **9** is made by applying a solvent cement to the mating parts just before the joint is assembled. The solvent softens the plastic, causing it to fuse together and create a waterproof seal. Welded joints are best for inaccessible pipe runs.

Compression joints **10** are often used to connect the wastepipe to the shower trap. A large threaded cap compresses a rubber washer into the neck of the joint, forming a seal. The joint can be dismantled by unscrewing the cap. This type of joint can be used to join pipes of slightly different diameters.

Push-fit joints **11** are quick and easy to assemble. When the wastepipe, which must be cut square, is pushed into the joint, a rubber O-ring inside the socket grips the end of the pipe, forming an instant watertight seal.

Smear petroleum jelly on the cut ends of the wastepipe to act as a lubricant when assembling push-fit joints.



### 7 - THE FINAL STAGES

Having installed the tray and run the wastepipe, you can now line the inside face of the partition with 9mm (3/8in) exterior-grade plywood. Seal all joints with silicone sealant and prime the panels. Cut holes for the plumbing (and electrical wiring if required), run the services and make the initial connections. Panel the outside of the partition after you have tested the plumbing for leaks. You can use plywood or plasterboard. Finish the edge of the partition with softwood mouldings, or line it with a strip of plywood as a base for tiling.


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Tile the interior of the cubicle, using waterproof tile adhesive and grout. Refit skirting boards on the outside. Make the final connections to the shower unit and fit the sprayhead.

One last but important job is to seal the joints between the tiling and shower tray. Grout is too inflexible, so use a silicone sealant to waterproof the joints. Some shower trays are made with a raised lip to allow the tiles to overlap the rim in order to improve the seal.

Clear sealant and a range of colours are available in tubes that fit into a dispenser. Cut the tip off the pointed nozzle to a slight angle.

Clean the surfaces with methylated spirit, then run a bead of sealant along each joint. Smooth the sealant with your fingertip dipped in a 50/50 solution of washing-up liquid and water.

Having fitted the shower cubicle panels, following the manufacturer's instructions, seal the joints between the framework, the walls and tray with sealant .

