



# HOW TO CUT PORCELAIN TILES

## OVERVIEW

Unlike fired ceramic tiles that have a hard glaze over a relatively softer substrate; porcelain tiles are vitreous fired meaning that the mass of the tile has melted into a uniform glass-like mass.

This makes porcelain exceedingly hard and difficult to cut with just a simple tile cutter. For this reason it is customary to use an electric tile cutting machine with a fine blade to stop chipping as the best way of cutting porcelain tiles.



If you have never cut porcelain floor tiles or wall tiles before then practice supporting and cutting a spare tile while following a guideline. This will help condition a new blade and reduce the likelihood of chipping. It is really important to support any overhang as porcelain tiles, while tough are very brittle and may fracture as the cutting proceeds

## MARKING OUT

Measure the tile and mark the line to be cut using a suitable wax pencil. Make sure to allow for the spacing of the tile so that grout lines will remain consistent. You can also tape along the edge using a suitable masking tape which will help reduce the risk of chipping

## SCORING PORCELAIN WITH A TILE CUTTER

You can make clean cuts using a traditional cutting point. Line up the tile; making sure the tile stays level with the cutting head. Slide the point along the tile; making sure to stay on line. With firm, continuous pressure; bend the tile downwards until it snaps. Clean up the edge gently with an abrasive block to match the original edges.

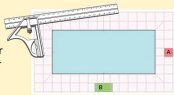


## CUTTING PORCELAIN WITH A DIAMOND WET WHEEL



There are 2 types of wet cutting for stone and porcelain tiles: those with an overhanging blade that moves over the tile surface and those like a saw bench where the tile to be cut is passed across a stationary rotating blade. They are essentially the same so we will describe the saw bench method as this type of equipment is most often acquired for DIY tiling.

Make sure to arrange the bench and support your porcelain tile from one side of the cut to the other. This may mean making a surround or makeshift support from plywood for the large 600mm porcelain floor tiles.



Align your guide mark with the cutting wheel making sure to bisect or follow the line edge depending upon your preferred marking method. Slowly yet smoothly guide the tile towards the rotating cutting blade and feed the tile across the blade until the cut is complete. Don't try and force the tile or apply uneven pressure as this may cause it to chip

## DRILLING PORCELAIN TILES - CUTTING AND DRILLING HOLES IN PORCELAIN



You may need a clean hole in porcelain to fit fixing screws, prepare cut outs for sockets or provide a space for radiator or plumbing pipes. The technique is relatively straightforward and can be used with diamond points for small holes or tubular guided cutters for larger diameter holes.

Fix the tile to prevent torque suddenly shifting the tile if the cutter starts to stick. Use the drill on its slowest setting to cut the hole and make sure it doesn't overheat or the tool may stick.

You may be able to cut small holes of a few mm over a scrap of plywood as a support; mark the position of the hole to be cut and cover with thick tape.

This will reduce chipping and make it easier for the drill point to cut into the tile without wandering.

Support the tile on a scrap of plywood with a pre-cut hole to accept the core cutter once the hole is completed.

You can also use a pre-cut hole in plywood accurately mounted on top of the tile to prevent wandering as the grinding/cutting operation takes place.

Larger holes may need an initial drill hole as a guide but diamond core cutters should be mounted in a rigid pillar drill.

## CUTTING PORCELAIN TILES WITH AN ANGLE GRINDER

You may find you need a way of cutting porcelain tiles around toilet or pedestal openings for pipes and waste but need a curved cut rather than a hole. An angle grinder is perfectly suited to cutting curves in tiles.



Mark out the curve to be cut and make it clear which side is waste. It's easy to get carried away and get score marks on the wrong side if you're not careful. A cross of electricians tape is a useful marker. Make sure to mark the curve on the front and rear of the tile.

Once you have the curve cut, you can tidy the edge using an abrasive wheel or abrasive curved block. The level of finishing depends upon how much of the cut is visible and whether you are using polished porcelain tiles.

## CUTTING PORCELAIN TILES - TIPS TO AVOID CHIPS



Cutting outwards from the body of the tile towards the edge can result in breakout where small chips of tile fly away the pressure and speed of the cutting tool: avoid breakout by notching both sides of the tile before making the full cut. This should help control breakout.

Use tape - It's an old trick joiners, carpenters and tilers use to reduce chipping. Simply use tape along the cuts to reduce chips.

Work slowly and avoid jerks - Try and avoid forcing cutting tools. Your job is to keep the cut on course but the cutting edge will abrade the tile smoothly if it is allowed to maintain a steady cut, jerking and jamming are both likely to cause chips so it's better taking a little while longer to complete the cut rather than push for a faster finish.

## SAFETY IS PARAMOUNT WHEN CUTTING PORCELAIN TILES



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