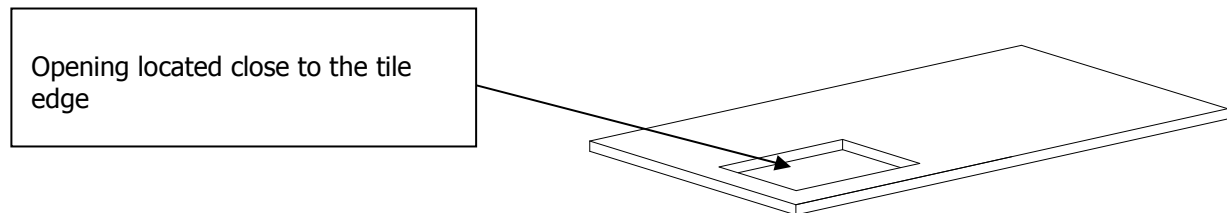


HOLE CUTTING IN PORCELAIN STONEWARE TILES

The vitreous characteristic of porcelain stoneware tiles and their extreme hardness often means that conventional tools cannot be used to make holes or cut windows in a tiled surface; the size of such windows, for example in the case of flush-mounted lavatory cisterns, is the region of 15 x 25 cm.

The risk of tile breakages increases if, as often occurs, one or two sides of the opening are located just a few centimetres from tile edge and the ceramic surround must be kept intact.



Below we outline a series of simple measures that make it possible to make holes and openings (square and rectangular) in porcelain tiles easily, handling the most challenging situations while working in a safe and professional manner.

The operation must always be executed on a flat stable surface, ideally laying the tile on a sheet of polystyrene or soft rubber to attenuate vibration and increase the level of safety during the job.

DRILLING HOLES

The quickest way of drilling holes in porcelain stoneware tiles is to use a diamond core bit compatible with a normal interchangeable disc angle grinder, such as Mondrillo core bits made by Montolit (available in diameters from 6 mm to 75 mm), which can cut a hole in just a few minutes, leaving the surface of the tile undamaged and without any chipping around the edges of the hole.

While making the hole the tool must be inclined back from the vertical and caused to follow a rotary path around the cut, without applying excessive pressure on the point of contact with the tile; the area to be drilled should be wetted and the operation should be performed in stages, wetting the area of the cut during each pause.

 *Video of hole cutting available on request*

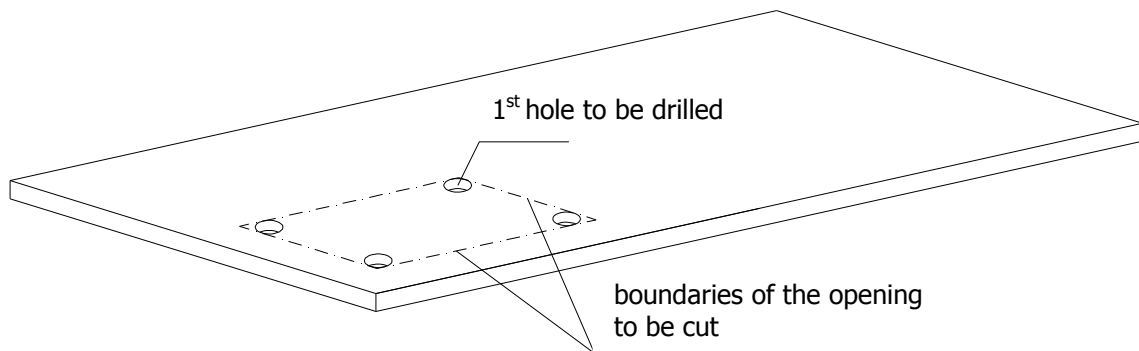
CUTTING OPENINGS

In the case of rectangular or square openings, the technique of scoring and cutting the tile using exclusively an angle grinder equipped with a cutting disc (such discs are frequently unsuitable for cutting porcelain stoneware) is extremely difficult and produces uncertain results; the stress caused by the cut and the vibration transmitted to the tile, in the precarious working conditions typically found on a construction site, can result in the emergence of cracks and breakages, even after the cut tile has been installed.

In the majority of cases these problems can be solved by proceeding as follows:

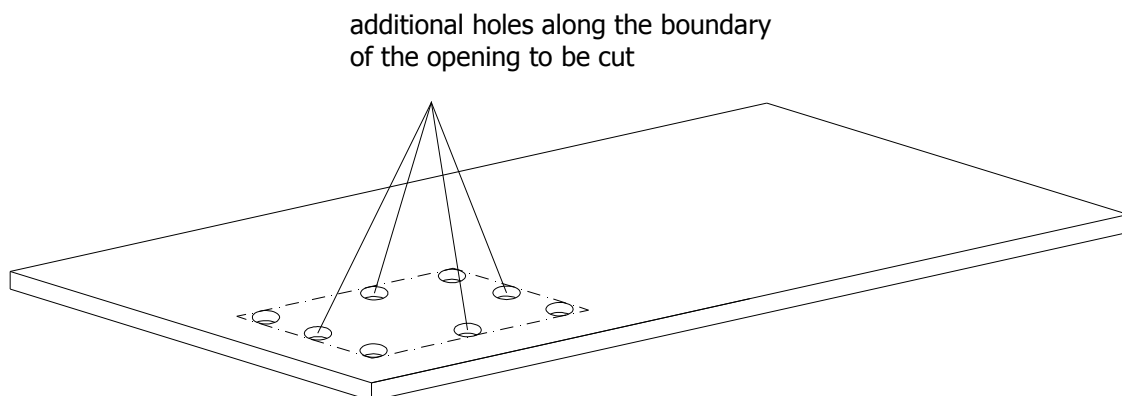
1st STAGE

Following the procedure described above for cutting holes, use a professional diamond core bit to drill 4 holes of a diameter of approximately 10-15 mm at the angles formed by the corners of the opening



2nd STAGE


If necessary, drill additional holes along the edge of the cut along the boundary of the opening, of a number that depends on the length of the sides of the opening



3rd STAGE

Gently and progressively cut the tile from hole to hole using an angle grinder with a professional diamond disc specifically designed to cut porcelain stoneware.



 *Video of drilling and cutting available on request*

In this delicate cutting procedure the quality and structure of the diamond disc are crucial: since the disc rotates at very high speed, its properties of rigidity and cutting efficiency must remain intact.

In particular, we recommend the professional diamond blades made by Montolit (art. CTX 115, art. CG 115, art. TCS 115, the latter available also in 85 mm diameter), the diamond blades made by the Japanese company SANKYO, Cer-Rosa Turbo blades by MAXIMA, and the Super Gres XT EVO blades made by CLIPPER.

To make the holes at the corners of the opening we recommend using the BOSCH GTR 30 CE tile router, which is sold complete with a range of suitable diamond core bits. This tool can handle a range of applications and its performance in even the most demanding operating conditions is proof of its quality and effectiveness in solving porcelain stoneware drilling and cutting requirements.

Casalgrande Padana spa Technical Service

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