



DRILL GUIDE FOR PROPER HELICAL TIE INSTALLATION

Should you use an electric hammer drill (3-jaw chuck) or a rotary hammer drill (SDS)?

If you're confused about what drill type and method to use when installing helical ties, you're not alone. This is one of the most common questions we get, and it's really important to get this part right. That's because using the wrong tool could result in further damage to your masonry.

When installing PROSOCO helical ties, contractors will need both an electric hammer drill (also known as a 3-jaw chuck drill) and a rotary hammer (also known as a Slotted Drive Shaft, or SDS drill). To avoid confusion, we will refer to the two types as 3-jaw chuck and SDS.

Which one should you use for which purpose? The 3-jaw chuck is used only for drilling, while the SDS drill is used with setting tools for facade stabilization, and for drilling into hard substrates.



3-jaw chuck



SDS



DRILL GUIDE

3-jaw chuck drill

The way this drill works is via rotary motion, which is designed to be accelerated with a gentle tapping. A light tap increases the drill rate while also enabling the drill to work on delicate substrates like CMU, brick, mortar and terra cotta, without causing damage. This kind of drill typically has a chuck speed up to 2500 rpm and 30,000 to 40,000 taps per minute.

SDS drill

This drill performs via hammering action and is ideal for drilling into harder substrates like reinforced concrete, sandstone and limestone. It also works for blind holes, and can work when drilling into mortar. However, it should not be used on cavity walls due to the risk of spalling.

SDS drills have a chuck speed range of 600-800 rpm with around 4,000 hammer strikes per minute. An amperage between 6.9 and 7.8 suffices with this type of drill.

Drill and drill bit recommendation:

MATERIAL	DRILL TYPE	8mm Anchor drill bit size	10mm Anchor Drill bit size
Clay Tile	3-jaw chuck	3/16"	1/4"
Terra cotta	3-jaw chuck	3/16"	1/4"
Concrete	SDS	1/4"	5/16"
Multiwythe Brick	SDS	1/4"	5/16"

