

CUTTING PIPE ENTRIES USING A HOLESAW

– INSTRUCTIONS

ACO strongly recommends wet cutting, wet drilling and/or wet grinding of polymer concrete products in a well-ventilated area with the use of personal protective equipment (including masks).



Recommended Drill Requirements

Holesaws up to 80mm in diameter

- 18V cordless drill - (minimum)
- 600W power drill - (minimum)

Holesaws above 80mm in diameter

- 800W to 1500W power drill

If using a SDS Plus drill, ensure you have purchased the correct arbour. (Figure 1)

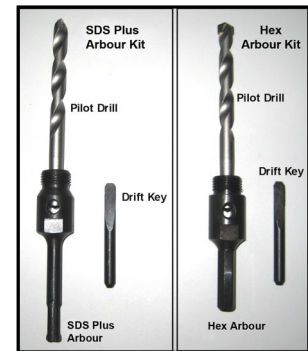


Figure 1

1. To begin, mark out the location for the required penetration.
2. Pre-drill a 12mm pilot hole using a masonry drill bit (Figure 2). Wet drilling recommended.
3. Assemble the components for the holesaw. The pilot drill is a taper lock style and only requires to be knocked into the arbour to secure it. Use the provided drift key to remove the pilot drill when required.
4. **Turn OFF hammer function.** Only drilling action is required. The use of the hammer setting will “blow out” the polymer concrete being cut and damage the holesaw.
5. Start off drilling by keeping the drill level and use the speed of the drill to do the cutting. Avoid using excess pressure, let the diamonds do the cutting (Figure 3). Wet cutting recommended.



Figure 2

Wet drilling recommended.



Figure 3

Wet cutting recommended.

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6. Once the hole is around 1/3 deep to aid dust clearance and therefore increase the speed of cut, make small circular motions with the drill. This allows dust to escape easier and can aid in the elimination of jamming the bit in the hole (Figure 4).



Figure 4
Wet cutting recommended.

7. It is necessary to cool the diamond cutting edge of the holesaw on a regular basis. For every 1.5 to 2 minutes of drilling, rinse and cool the holesaw in a shallow container of water (Figure 5). This will extend the life of the holesaw; keep the holesaw cutting at a faster rate and will stop the diamonds from 'glazing', which simply means they stop biting into the polymer concrete.



Figure 5

8. Depending on the size of the holesaw used, penetrations should take between 45 seconds and 3 minutes (Figure 6). This also depends on the wattage and RPM of the drill being used. RPM should be started on a slower speed to begin with, building up as you go. The speed can always be increased as required.

9. If the holesaws performance starts to slow over time, it may be that new diamonds need to be exposed and some of the alloy encasing those diamonds needs to be removed. To do this, drill a hole into some waste sandstone, limestone or concrete with sand added to the hole. Use water to irrigate as you drill. These materials are very abrasive and will wear away the old fatigued diamonds and alloy, and expose new diamond cutting surfaces. 1 to 4 minutes should be ample time to refresh a holesaw.



Figure 6
Wet drilling recommended.

ACO offers a range of holesaws to facilitate this operation, refer to page 43 in the ACO Cablemate brochure.

For pit installation details, refer to page 79 in the ACO Cablemate brochure.



Figure 7