

User Guide for the Flexible Duct Drill 1A
BT Item Code: 088049

Ø12.5mm Countersink Drill Bit



Drilling through expandable Foam & Soil



Drill Extension Rod (1m length)



Drilling into Duct 56 90° bend



Description

Flexible Duct Drill 1A is designed to remove debris from a Duct 56 or a Duct 56 bend which has had soil or mud ingress, or needs a pathway cleared through sealing resin or expandable foam. It may also be used to drill blockage near the joint-box duct opening, in Duct 54. The drill has been designed to make a pathway through the blockage so that cable works can be concluded without the need for civils activity to get past the obstruction.

It is recommended that a 24 Volt or heavy duty cordless drill is used with the flexible drill.

Note: The drill bit is not designed for drilling through concrete or Bitumen.

The Flexible Duct Drill 1A is 1m flexible drilling wire rope protected by 'over sheathed tube' that fits on a

standard electric portable drill. It has a crimped on join to attached additional lengths to the additional lengths can be un attached by the use of two spanner, which fits into the drill and a 12.5mm 'Countersink' drill bit at the other to drill through the mud and dirt ingress.

Safety

The drill must **NOT** be used anywhere near; Power cables, Mains water cables, Gas etc..

Prior to drilling, a GDU Gas Test must be performed to check for gas at the serving Footway chamber duct and then for monitoring at the Duct Bend during drilling.

The Flexible Duct Drill 1A must **NOT** be used to drill **through** a Swept Tee.

The electric drill should to be set for "forward/clockwise drilling" during the whole process - also when pulling the drill out of the duct.

Gloves must be worn under the drilling process for safety and to give a good grip around the Flexible rod. The drill section can be held by the 'plastic over sheath' while drilling.

Drilling Operation

The 'Countersink drill bit' has been tested in various routes and has not caused damage to existing cables in the Duct. No excess force should be placed on the drill as damage to existing cabling may occur.

The drill should only be used where there are one or two existing cables in the Duct – not congested duct, where the drill may jam between cables and cause damage.

The drill may be used by a single person. Always try to drill away from existing cables

The Flexible Duct Drill 1A can be used for removing; different resin, foams, sand, stones and other debris when copper coms cables or a Micro-duct is within the duct.

Put the Drill into the Duct or Duct Bend and start drilling. In the beginning use one hand to control the rod and the other to control the drill machine. The drill will spin freely inside the 'over sheath tube' (gloves must be worn at all times)

Help the drilling process moving forward by pushing with the drill machine, but only until the drill starts making a bend.

If the drill stops moving forward under the process, immediately pull it a bit backwards and try again.



Do not let the drill stay in the same position at an obstruction. Short, repeated attempts to drill through the blockage are recommended.

The risk of cable damage can be minimised by pulling the drill back approximately 300mm with the drill running, then pushing the drill back in when meeting an obstruction. This method can free the obstruction and allow the drill to move through minimising existing cable sheath damage. Repeatedly moving the drill back and forth can reduce the risk of cable damage and increase the chance of passing the obstruction.

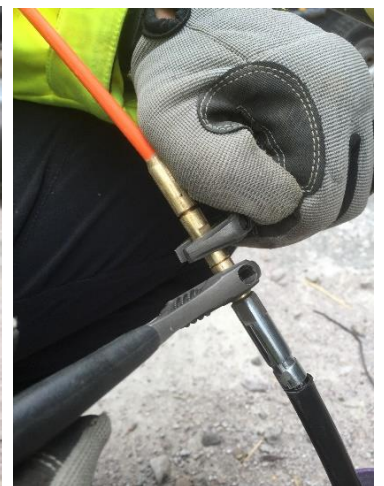
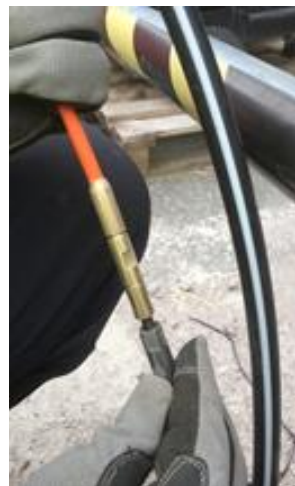
When reaching the end continue drilling but instead of pushing the drill forward, pull the drill backwards until the drill is free from the duct. No Torque settings on the drill machine has to be changed.



For blockages deeper into the duct, 1m extensions rods may be screwed onto the end of the Flexible Duct Drill 1A (see below). Attach and detach the Flexi Drill 1A extensions using two spanners.



In some circumstances, the hole may collapse when the drill is withdrawn and continue to block the duct. In this situation, once through the blockage, it may be useful to attach the 6.7mm continuous hand rod to the end of the drill string and push through to the nearest jointing chamber. The drill string may be attached to an **NGA 6.7mm Cobra Rod 100m** (item code 079989), using the **L2C Cobra Swivel** (item code 082006). Secure the swivel to the rod and drill using two spanners.



Drill Torque Settings

The electric drill torque settings should be set at 'low' when drilling. They can be changed to a higher level, but this is not necessary. The speed must follow the debris in the duct - more debris means slower speed.

Note: Do not use full force or power as this may damage the drill bit or extension couplings.

Maximum pushing force

This depends on the debris in the duct. The flexible drill should not bend at any time when it is not inside the duct. Rather than trying to force the drill through debris on a single pass, make repetitive attempts to drill through the debris, in small steps. Removing the drill from the duct and cleaning the 'Countersink drill' can also be helpful.

The **minimum bend radius** of the drill is as per the bend radius of the Duct 56, 90 degree bend seen at most home connections

Maintenance

Keep the drill clean to obtain maximum drilling capability.

When storing the drill, please keep this straight at all times. Do not bend the drill when not in use as this may cause damage to the drill

Cabling Operations

On short sections, the drill may reach the end of the duct, at which point a draw rope can be secured to the end of the drill and pulled in as the flexible drill is withdrawn.

