

Guidance for the Installation of Cable Ducts and Cable Protection Tape by Customers for Rent-A-Jointer and Jointer Only activity

Overview

For UK Power Networks to install cables for our Jointer Only and Rent-A-Jointer service provision, customers must install black protective tubing – known as ducting – placed inside their excavation, along with a draw cord and cable protection tape.

The ducting must be terminated in a 250mm radius bend at the base of the street furniture. The ducting must have a draw-cord installed within it to allow UK Power Networks to pull the service cable through.

Customers should check that all ducts are checked and cleared of obstructions before UK Power Networks are asked to pull cables through it.

Prior to the reinstatement of the ground all cable ducts and cables must be covered with a cable protection tape. This needs to be a specific size and marked 'UK Power Networks'.

If the incorrect type of cable duct and/or warning tape is used, UK Power Networks may not be able to complete the work on the day and it would need to be rearranged for a later date after the customer has corrected their works.

All cable ducts must comply with ENA 12-24 (Energy Networks Association Technical Specification for Plastic Ducts for Buried Electric Cables 12-24).

Customers can purchase ducting from any supplier whose ducting meets UK Power Networks' safety and design standards; the following types of ducting are approved and used by UK Power Networks

- 32mm Polyduct (Single Phase)
- 50mm Polyduct (Three Phase)
- 32mm Polyduct Coupling
- 50mm Polyduct Coupling
- 125mm Ridgiduct 3m (Road Crossing)

For 25 amp unmetered services and 100 amp single phase services within the footpath and verge, customers should install 32mm diameter Polyduct.

For 100 amp three phase services within the footpath and verge, customers should install 50mm diameter Polyduct.

For all service types within the carriageway, e.g. road crossings, customers should install 125mm diameter Rigiduct.

Customers should refer to ECS 02-0019 which details the minimum requirements acceptable for the installation of new low voltage cables, including; cable depths; installation of cable protection covers; minimum internal duct diameter and bending radius; support and blinding of cables; reinstatement of trenches. This document can found within our G81 design standards library here <http://library.ukpowernetworks.co.uk/library/en/g81/>.

32mm and 50mm Polyduct

These ducts must have a smooth inner and outer wall, be coloured black on both the internal and external surfaces, and marked with "ELECTRIC CABLE DUCT". See Fig. A & Fig. B

They must be impact resistant, water, mould and chemical resistant, and heat resistant for short periods.

These ducts are supplied in coilable rolls.



Fig. A



Fig. B

125mm Rigiduct

These ducts must have a smooth inner wall and ridged outer wall, be coloured black on both the internal and external surfaces, and marked with "ELECTRIC CABLE DUCT". See Fig. C & Fig. D

They must be impact resistant, water, mould and chemical resistant, and heat resistant for short periods.

These ducts are supplied in straight lengths.



Fig. C



Fig. D

Size and positioning of the duct markings (as set-out in ENA G12/24 Section 7)

- minimum print size of 6mm for ducts of 50mm outside diameter and less
- minimum print size of 8mm for ducts of more than 50mm outside diameter
- the marking shall be repeated three times per metre
- the marking shall be on two print lines, 180° apart

Draw-Cord

The draw-cord is made of strong, thin rope. It should be similar to that shown in Fig. E



Fig. E

Cable Protection Tape

Once the ducts have been laid, they must be covered with Cable Protection Tape, also known as Tile Tape. This tape must be 200m wide and 2.5mm thick and must be labelled, 'UK Power Networks'.

This tape shall be installed so that it fully covers the width of the cable duct or cable below it.

Fig. F and Fig. G provide an example of what this tape looks like, but the type used must be marked with UK Power Networks name.



Fig. F



Fig. G

Specifications and Approved Suppliers

All ducts and cable protection tape installed by customers must comply with UK Power Networks' Approved Equipment List **EAS 02 0000a**, which also contains contact details for our approved suppliers. This document can be found within our G81 design standards library here <http://library.ukpowernetworks.co.uk/library/en/g81/>

Cable Depths

All Low Voltage (LV) cables shall be installed to the following minimum depths, measured to the top of the duct:

- Footways, grass verges or private property = 450mm
- Carriageways (including road crossings) = 600mm
- Normal agricultural land (not subject to deep ploughing) = 1050mm
- Agricultural land subject to deep ploughing = 1200mm.