

Introduction

In the telecommunications world particularly in the head end exchanges (also known as central offices) where the electronic active equipment is located, there are several options to link this active equipment with the external fibre network.

One of the options is shown in figure 1, the schematic shows two identical racks and a cross connect 'jumper' cable that links the racks with a capacity of more than 200 fibre circuits. One of the racks is the interface to the external fibre network which connects businesses and residential properties, and the other with active electronic equipment. The cable that forms the 'jumper' between the 2 rack is normally a 3mm patchcord. This patchcord consists of a secondary coated fibre, 900um diameter, with a Kevlar buffer and these components are oversheathed with Low Smoke Zero Halogen (LSOH) material, as shown in figure 3. This cable is fusion spliced in fibre management trays, located in each rack, to either a cable facing towards the external network or the electronic equipment. Thus, forming a continuous path from the active equipment to the external network.

To splice the jumper cable to the internal cables 'facing' the external network and the electronics, jumper cable sheath needs to be removed to expose the fibre element within the cable.

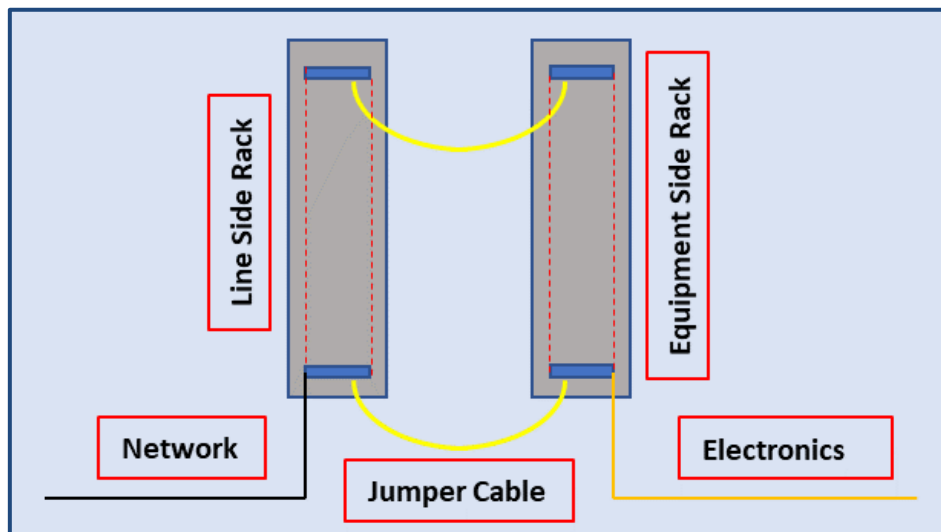


Figure 1

OPT have developed a tool to remove the sheath prior to the fusion splicing operation. This design ensures that the blade depth was set to enable a repeatable depth of cut in two planes, with the blades set diametrically opposite each other. The enabled a longitudinal cut along the cable sheath, splitting the sheath in two as shown in figure 3. The critical feature during this cutting operation is that the fibre element within remains undamaged.

The stripper cross section consists of four individual, plastic moulded, right-angled sections. The top two right angled mouldings have one circular blade ‘sandwiched’ between these two sections and likewise another blade the bottom two sections, as shown in figure 2.

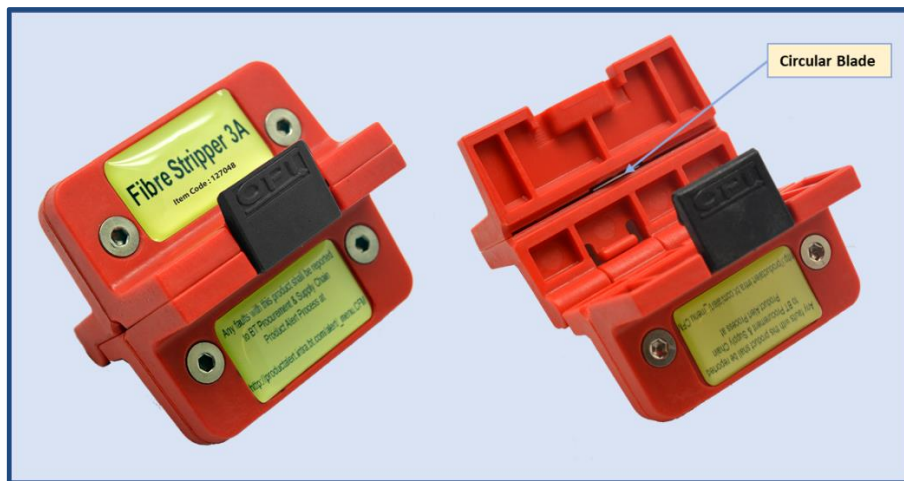


Figure 2.

To perform the sheath cutting operation the 3mm cable is placed in the central groove in the lower stripper half at a point where the fibre element within the cable needs to be exposed. The top half is then closed, and the two halves clipped together. Closing the two halves results in the blades penetrating the cable outer sheath. The stripper is then ‘drawn’ longitudinally along the cable axis cutting the cable sheath into two sections, as shown in figure 3. These two sections can be removed using side cutters and the Kevlar also removed.

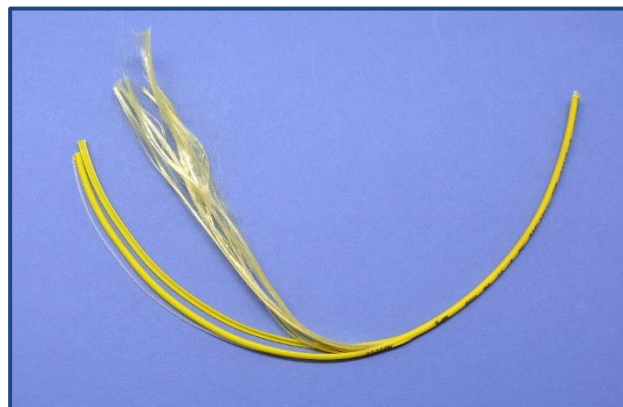


Figure 3

Part No.	Description	Information
OPT-T0199	Jumper Cable Sheath Stripper	Yellow Label