

Article Overview

An optical cable sheath corrugating machine forms a flexible, corrugated metal or polymer sheath around optical fibers by passing the material through rollers or dies that shape it into a continuous corrugated profile.

Basic Operation

The corrugating machine works by feeding a metal or polymer strip (such as aluminum or copper) through a series of forming rollers that impart the corrugated shape. The strip is guided over a central mandrel or tube, which serves as the core around which the sheath is formed. The rollers are precisely positioned and adjustable to accommodate different cable diameters and corrugation pitches, ensuring uniformity along the cable length .

Key Components

- o Mounting Disc and Central Tube: The mounting disc holds the central tube coaxially, providing a stable axis for the sheath to wrap around. The central tube ensures the optical fibers or inner core remain centered during corrugation .
- o Roller and Roller Fixing Frame: The roller, mounted on a circular shaft within a fixing frame, shapes the sheath into the corrugated profile. Limiting gaskets and screws allow fine adjustment of roller position to handle different cable specifications without changing molds .
- o Top Cap and Limit Screws: These components secure the roller assembly and allow precise control of the corrugation depth and spacing, which is critical for maintaining mechanical flexibility and protection of the optical fibers .
- o Extrusion Integration: In some systems, the corrugating machine is combined with an extrusion line, where a polymer sheath is extruded over the optical fibers before corrugation, or a metal strip is welded into a tube and then corrugated .

Working Principle

- o Material Feeding: The metal strip or polymer sheath is continuously fed into the machine.
- o Forming: The strip passes through the corrugating rollers, which deform it into a helical or sinusoidal corrugated shape.
- o Centering: The central tube or mandrel ensures the sheath maintains the correct diameter and alignment around the optical fibers.
- o Adjustment: Limit screws and gaskets allow operators to fine-tune the corrugation depth and pitch for different cable specifications, reducing downtime and mold costs .
- o Continuous Production: The corrugated sheath exits the machine as a flexible, protective layer ready for further processing, such as taping, jacketing, or spooling .

Advantages

- o Flexibility: Corrugated sheaths provide mechanical protection while allowing bending and installation in tight spaces.
- o Customization: Adjustable rollers and mandrels enable production of various cable diameters and corrugation patterns without changing molds.
- o Integration: Can be combined with welding, extrusion, and taping units for a fully automated optical cable production line . In summary, the optical cable sheath corrugating machine mechanically forms a protective, flexible corrugated layer around optical fibers using rollers, a central mandrel, and adjustable components, ensuring consistent quality and adaptability for different cable specifications.

The Cable Cutting Machines & Stripper Tools category features a comprehensive selection of manual, semi-automatic, and

1.Wide Product Compatibility : Configurable with various combinations including gantry pay-off, frog-type pay-off stand, loose tube

Designed for high-efficiency production, this machine automates the entire sheathing process, including feeding, extrusion, cooling,

The FBT-3000 automatic fiber peeling machine is a new type of optical cable end processing equipment,

Optical Fibre Cable Testing Equipment (OFC Testers) Torontech is a global leader in providing a full range of Optical Fibre Cable

Extremely versatile metal tape-forming and welding technology for high- and extra-high

MicroWEMA® is used for the production of small tubes and cable sheaths made of aluminum, copper,

Our comprehensive range of equipment for processing of cables, wires and corrugated tubing ranges from bench-top cut-to-length

Outdoor optical cable sheathing line This is an outdoor fiber cable sheathing line, used to sheath different

Optical Cable Sheath Extrusion Line An optical cable sheath extrusion production line is a specialized set of automated industrial

The ADSS fiber production line equipment is used to produce the

This machine is mainly used for rolling the shielding layer of cable core of optical cable and communication

Electric and fiber optic cable manufacturing machinery Specialists in electric & fiber optic cable manufacturing machinery Whether

Fiber Cable Slitters Choose from Specialized Products" selection of fiber cable slitters and cable stripping tools from the top brands in

Dongguan Gongfei Smart Technology Co.,Ltd, are a professional and high-quality optical cable equipment

A metallic sheath for an electric cable with a ratio of inner diameter D_i to outer diameter D_o of at least 0.9, comprises a

Web: <https://in-au.co.za>

