

Article Overview

Fiber optic cable coloring machines apply UV-curable inks to fibers for identification, ensuring precise, high-speed, and automated coloring and spooling.

Purpose and Function

Fiber optic coloring machines are used to color the surface of optical fibers to enable easy identification of individual fibers within loose tubes or micron cables, which is critical for splicing, installation, and maintenance of fiber optic networks . Coloring is typically done using UV-curable inks, which are applied in a thin, uniform layer without affecting the fiber's optical performance . The process often includes rewinding, ensuring fibers are neatly spooled and tension-controlled to prevent damage .

Key Features

- o High-speed operation: Machines can reach speeds up to 3,000 m/min for single-line systems, with multi-fiber color coding options available .
- o UV or LED curing: UV or LED lamps cure the ink quickly, providing a smooth, durable coating .
- o Automation and control: Modern machines use PLC systems for automated operation, including self-diagnosis, automatic alarming, and stopping in case of faults .
- o Tension and placement control: Electromagnetic dancers and belt-type capstans maintain precise fiber tension, while coil and spool scanners ensure accurate fiber placement on reels .
- o Multi-fiber capability: Machines can color multiple fibers simultaneously, often in full-color chromatographic patterns for easy identification .

Integration in Production Lines

Fiber coloring machines are part of a fiber optic cable production line, typically following the bare fiber drawing process and preceding secondary coating, SZ stranding, and sheathing . Proper coloring and rewinding ensure signal integrity and prevent installation errors, which is essential for high-quality, reliable fiber optic cables.

Example Specifications

- o Speed: Up to 1,800 m/min for some models .
- o Tension range: 0.3-1.2 N for single-mode fibers .
- o Power requirements: ~AC380V, 50Hz, three-phase .
- o Coloring capacity: Approximately 90 km/h .
- o Automation: Single operator can manage multiple devices with PLC control . Fiber optic coloring machines

Fiber Optic Cable Coloring Machine

are essential for efficient, precise, and high-speed fiber identification, forming a critical step in modern optical fiber manufacturing. They combine UV curing, automated tension control, and multi-fiber handling to ensure consistent quality and reliability in communication networks .

Products Optical Fibre Coloring Machine Optical fibre coloring Equipment is used to color the surface of fibre; to identify the fibres in

Features Touch Screen PLC Controls for an efficient operator interface Simple Die Design with auto ink purge for

- Optical fiber color coating systems including ring marking, tight buffering, proof testing - Production lines for optical

Several specialized machines play essential roles in this process, including the fiber coloring machine, fiber draw tower,

Yangtze Optical Electronic Co., Ltd. (YOEC) Fiber Coloring Machine is used in optic fiber and cable industry, which is mainly used for

We have many years of experience in research and development and manufacturing of optical fiber and cable production equipment.

Optical fiber coloring and rewinding machine Application Mainly used for SM, MM fiber full chromatography coloring, which is

Medek & Sch#246;rner is the global market leader for cable marking machines and optical fiber coating. Our products feature excellent

The Optical Fiber Coloring Machine is a specialized piece of equipment designed to apply colored ink

An optical fiber coloring machine is a device used in the production of optical fibers to apply color coding to

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The optical fiber coloring and rewinding machine mainly applied for coloring the surface of optic fibers, convenient to identify the multi

Deliver high-quality fiber-optic cables with 4 core machines--coloring, coating, SZ stranding



Fiber Optic Cable Coloring Machine

Our products for coating of optical fibers with UV curable inks. From compact single-line machines to production lines. The right

Fiber optic cable are colored with UV-crosslinked lacquers and dried with UV light. A particularly gentle

FBK-1800 fiber coloring rewinding machine is mainly used for full color chromatographic coloring of SM

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