

OPTICAL FIBRE COLOURING SYSTEM

- High speed fibre processing - 3000 m/min
- Single-line system for coating, UV curing, and ring marking
- Tight buffering
- Modular construction



GFP-UV-K1

FEATURES

Fiber tension sensors ensure optimized fiber tension control.

Automatic reel size detection makes it extremely easy for the operator to adjust the traversing system.

New M550 UV irradiator with control system that constantly measures the irradiator power and automatically adjusts the power output to match the fiber speed. This ensures optimum irradiator efficiency and prevents thermal overloading of the fiber at slow speeds or at rest.

Automatic compensation for irradiator aging or quartz tube deterioration maintains flawless curing.

Top constructional speed up to 3000 m/min.

Optimum fiber protection.

Continuously adjustable, nitrogen-aided UV curing.

Automatic adjustment of processing speed to UV irradiator curing performance.

Pay-off and take-up with fiber tension-controlled drives.

Modular construction for optimum, customized solutions from ink coating to ring marking.

APPLICATIONS

Coating of optical fibers with UV curable inks.

Marking of fibers with color-code rings (using Option RSJ).

Extension for tight buffering of optical fibers individually or jointly in groups up to 1300 m/min and above.

MODULAR CONSTRUCTION

The system comprises three main components whose frames have been designed for later installation of various Options. This allows the machine to be upgraded at moderate cost as the need arises, e.g., for ring marking, higher UV curing performance, etc.



MAIN COMPONENTS

TPO1-K

Autotraversing Pay-off Unit

CCD1-K

Colouring and UV curing station

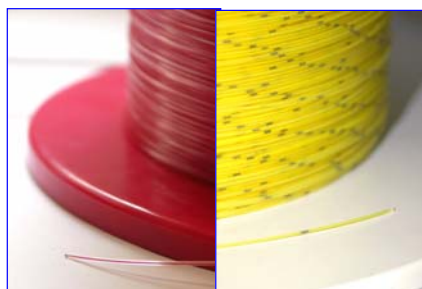
Ink supply system, high-speed coating head, and high performance M550 UV irradiator unit mounted on a common frame.

TUD1-K

Take-up

High-speed capstan and take-up system with separate control cabinet.

Control Unit PCI1-K



Options

Ring marking system for coding optical fibers with rings in a contrasting color. Option RSJ

Special high speed adapted ink jet printer with finely adjustable printhead support for marking bandmarks from one side on the fiber at speeds up to 700–800 m/min. The usual arrangement allows bandmarking in line with the ink coating process, providing irradiator units after the ink jet printhead and the ink applicator. In case that no additional UV lamp unit and only the UV lamp of the UV curing unit CCD-G unit is available, bandmarking has to be done in a separate process (either bandmarking or ink coating). The microprogram of the ink jet printer is specially adapted for ultra high speed bandmarking with automatic control of a constant bandwidth over the full speed range.

Bandmark pitch and interband distance for multiple bandmarks (double, triple, etc.) are easily programmable on the computer screen.



FLaser sensor for continuous, exact measurement and readout of the diameter of the ink coated fiber.

Option DMK

Allows permanent supervision of the ink application quality by either single axis (DMK-X) or double axis (DMK-XY) diameter measurement on the coloured fibre. Automatic input of the data to statistical evaluation is provided.



Proof Tester. Option SPC

An optional in-line Proof Tester allows defined fiber tension increase during coloring or rewinding.

Tight Buffering up to 1300 m/min

Optical fibers can be coated (tight buffered) individually or jointly in groups. For this purpose, a special resin coating head is used instead of the coloring head. Available standard system components allow two-stage online tight buffering in a single operation. A resin pressure control maintains a constant outside diameter throughout the entire processing speed range.



Additional advantages of M&S Optical Fiber Coding Equipment compared to competitors' equipment:

- No belt capstan (no squeezing / no wear)
- Real fully automatic traversing (also all our competitor's equipment dispose of such a device, but not of: independent of the dimension of the bobbin; no settings of correcting values necessary)
- Ringmarking / tight buffering / coloring without additional set-up time or any modifications
- Preventive error detection (evaluation of the tension measuring gauge between coloring head and capstan)
- No feeding tubes for coloring material

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