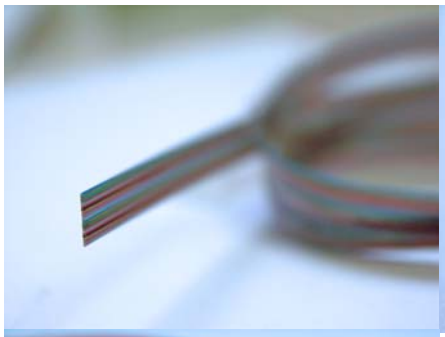
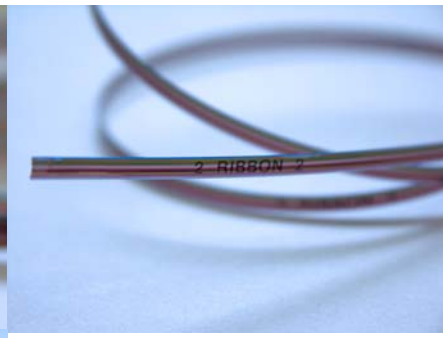
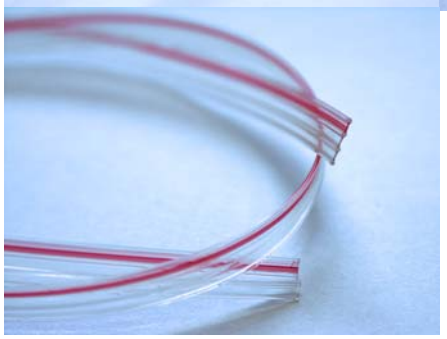
Fiber Ribbon Production Systems

FRP 05

Horizontal high speed ribbon processing of up to 24 primary coated and colored optical fibers at operational speeds of up to 1000 m/min.







UV curing unit

- High performance curing with process adapted irradiators.
- UV-output supervision and automated process speed adaptation

- ***Auto-traversing pay-off units***

Design speed 2100 m/min
Pay-off with advanced servo drive and microcontroller supervision
Only two contact points (guide rollers) in front of ribbon head

- ***Resin supply and ribbon head:***

Quick fiber feed (all fibers simultaneously)
High life time
Acurate pressure control for resin supply
Bubble free high volume resin supply
Outstanding planarity results

Applications

- Fiber ribbon processing of up to twelve (max. 24) primary coated and colored optical fibers.

Modular Design

- The system basically comprises the following components:

- Pay-off unit TPO with the specified number of fiber payoff stations
- Ribbon processing unit including, on a common rack,
- Resin supply VCE
- Ribbon processing head RD (configured for the specified number of fibers required for ribbon production)
- UV curing unit CCD1-FRP Capstan and
- Take-up unit RCT
- Control cabinet PCI

MEDEK & SCHÖRNER GMBH
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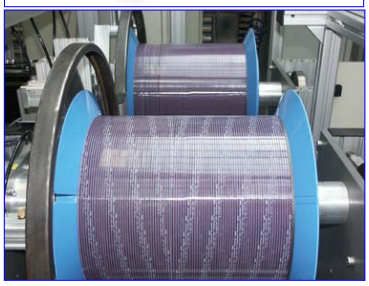

Capstan and take-up unit

- Perfect traversing at speeds up to 1000 m/min
- Flange to flange or trapezoid traversing with auto flange detection
- Automated servo drives with micro controller supervision for Take-up and Capstan

Control and Visualization unit

- CAN Network OLE-Server
- Easy adjustment of all production parameters
- Production protocol (ISO 9000)
- Network connection (modem/Ethernet)
- Real-time visualizing of all process data (Tension, UV-intensity, etc ...)

Equipment Data

Fiber spools - pay-off	Maximum flange diam. 405 mm Standard max. traverse width 220 mm Optional maximum traverse width 300 mm
Fiber pay-off tension range	30 to 100 grams
Fiber pay-off process tension range	45 to 65 grams
Take-up ribbon tension range	20 to 300 grams
Take-up ribbon process tension range	100 to 140 grams
Ribbon bobbins - take-up	Maximum flange diam. 600 mm Maximum traverse width 470 mm
Design speed	2100 m/min
Production speeds (exemplary data for planarity ≤ 50µ):	
for 4 fiber ribbon	1000 m/min
for 6 fiber ribbon	850 m/min
for 8 fiber ribbon	750 m/min
for 12 fiber ribbon	650 m/min
Planarity for up to 12 fibers	better than 25µ
Attenuation increase at 1310 and 1550 nm	Max. <0.02 dB/km - average <0.01 dB/km
Noise level for ribbon proc. at 800 m/min	< 82 dBA
Air supply Nitrogen supply	Dry air input - min. 4 bar, max. 6 bar Purity 99.95% - min. 4 bar, max. 6 bar
Process controls	M&S process adapted micro PLCs
Maximum power consumption	27 kW