

mahlo

trendsetting technology. worldwide.



Quality made
in Germany



ORTHOMAT RFMC-12



Fully automatic weft-control system

Measurement

Control

Automation

ORTHOMAT RFMC-12

The Orthomat straightener in two basic forms

Self-contained:

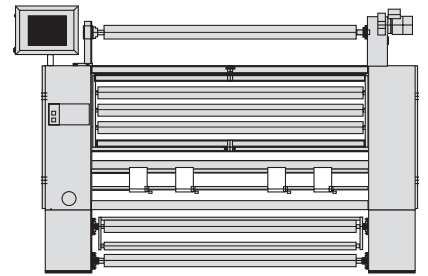
The electronics and monitor are an interwired, integral part of the machine. The ideal option for a location offering easy access to the electronic and hydraulic panels.

Semi self-contained:

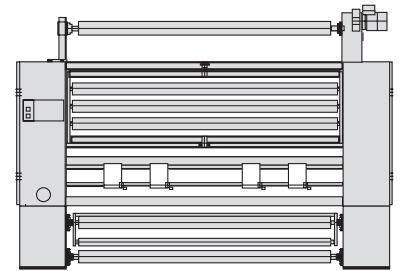
The electronics are an interwired, integral part of the machine, but the touch-screen is a separate entity. Ideal for situations where the machine cannot be located within reach of the operator, yet is still easily accessible. Separate control panel for letting into instrument bridges or consoles

The complete machine is supplied as standard with:

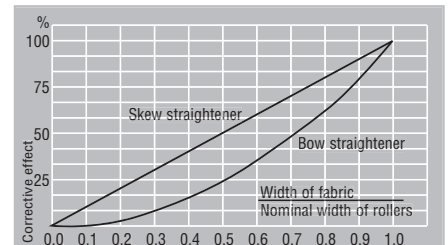
- A straightener, with 3 skew and 2 bow rollers, all steplessly controlled by the built-in hydraulic assembly; photo-electric scanners and lamps, adjustable automatically to product width; servo-electronics to adjust the setting of the bow and skew rollers, and a tachogenerator to provide a reference of line-speed.
- A touch screen colour monitor, indicating quite clearly and graphically the lie of the weft and trend, and including configuration, system-settings, servicing and control functions.



Self-contained



Semi self-contained



Indication of straightening effect

Optional:

Tension control, mounting stands (with and without roller), scroll rollers, additional bow roller, various roller attachments and more.



„Piggyback“ version

ORTHOMAT RFMC-12

Applications

There are numerous ways and means of straightening distorted textiles. Some methods have proved to be ideal for certain kinds of fabric and at key processing stages, but all can be automated with an Orthomat scanner.

At the feed end of a stenter

Automated straighteners with conventional bow and skew rollers correct even badly distorted cloth to acceptable standards. They are to be found at the rope-opening stage and the feed end of not only stenters, but also squeeze mangles, laminators, coating ranges and printing machines.

Inside overfeed frames

Fine-tune straighteners between stenter overfeed-frames are advisable if the path between straightener and chains has to be kept as short as possible, a vital requirement when dealing with, say, lightweight knitgoods.

At the delivery end of a stenter

Any residual or stenter-induced bow and skew can be realigned to very fine tolerances by a draw or expander roller at this point and by independently driven stenter chains (differential drive).

Combi-systems

A combi, comprising an RFMC-12 straightener at the feed end and a scanner assembly (T, EP or an MFRC Orthomat) at the delivery end of a stenter, is the system to use when the cloth has to be straightened to very fine tolerances.

As the scanners at the delivery are connected to the RFMC-12's electronics, the total outlay is less than it would be with two separate systems. A unique feature involves automatic control of preset bias.

The signals from any bow and skew at the delivery end apply sufficient bias to the RFMC-12 at the feed end to offset the residual.



RFMC-12 in combination ...



... with MFRC



Classical feed-end straightener

ORTHOMAT RFMC-12 Technical data

Signal generation:	Photoelectric sensors with oscillating lens 4-16 scanners
Signal processing:	Digital signal processor DSP in each scanner. Signals from scanners processed by micro-controller, and imaged by touch-screen PC
Auto-control:	Software PID control, line-speed and distortion related, independent control of bow and skew rolls
Setup dimensions, weights, power supply	
Richteinheit:	3 skew rollers, 2 bow rollers (optional 3); Drive: hydraulic control: servo; Straightening capacity (b = 1800 mm): max. skew ± 750 mm, max. bow ± 220 mm (2 rolls), (3rd bow roller + 50%) Roller movement limit to limit (variable): minimum of 4-5 seconds at maximum travel Max. line-speed without tension controller 250 m/min or. 150 m/min with. Dimensions: see below Weight: (b=1800 mm): ~950 kg Material content: ~3700 mm (2 bow rollers), ~4450mm (3 bow rollers) Power supply: 380/440 V 3~ 50/60Hz without neutral line; (other voltages catered for by transformer terminal), ca. 1kVA
Display and control station:	touch-screen, colour monitor Dimensions: 520 x 400 x 252 mm (B x H x T)

ORTHOMAT RFMC-12 (tension control, scroll roller, 3. bow roller)

