



ORTHOMAT GRFMC

Heavy duty

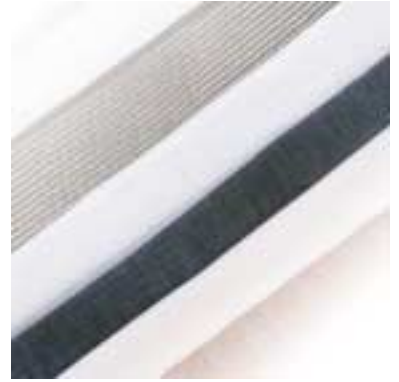
Measurement

Control

Automation



GRFMC
for denim application



ORTHOMAT GRFMC

The Product

A GRFMC is designed to withstand unusually high mechanical stresses. It is distinguished by its substantial framework, reinforced roller bearings, more powerful hydraulics for higher degrees of back-tension, and larger diameter bow and skew rollers; a veritable jumbo among straightening machines.

The scanner assembly, electronics, display and control terminal, hydraulic unit, etc. are the same as those of a standard RFMC ORTHOMAT. I.e. each scanner can be positioned laterally on GR-types as well. Process-speed capability ranges from around 3 m/min (carpeting) to 150 m/min (industrial fabrics).

Available either in conjunction with a PCS Pattern Control System or as a manually controlled GRMM straightener, or in GRFM form with provision for the addition of a retrofit scanning system.

As with standard RFMC ORTHOMATS, it can be supplied in all forms of combi-system, eg. as a GRFMC/FMC, GRFMC/GMFRC etc.

The Orthopac RVMC/REMC is also available in GRVMC/GREMC form.



Bearing arrangement of bow roller (drive end)



Bearing arrangement of bow roller



Double-chain drive of bow roller

Returns

Distortions impair a product's visual features and/or practical value, both of which are of particular significance in the case of decorative or industrial materials. With wall-to-wall carpeting, pattern continuity between the rolls depends on and demands a well-nigh distortion-free product. Failure to meet the requisite, tight tolerances will result in either fairly hefty claims, or access being barred to a more lucrative segment of the market.

Standard features

Available in working widths of 1600 to 5500 mm, with features comparable to an RFMC ORTHOMAT, but capable of coping with higher mechanical loads.

Optional

Can be supplied with tension control (load cells), with or without supporting stands, scroll rollers at the inlet and/or outlet, various roller attachments to increase straightening capacity, bow rollers with various degrees of camber, 3 bow rollers, braking device with load cell in the supporting stands, special stands for detection at the reverse side of the product, plus all the optional extras associated with the standard RFMC (alarm outputs, safety extras, data logging package, and more).



Applications

Denim: heavyweight denim qualities (> 350 g/m²), on account of their dimensional stability, and the need to apply skew bias (to counteract a denim's tendency to twist).

Industrial fabrics: extra-wide industrial material (≥ 3400 mm in width)

Raschel curtaining: wide, net curtaining (≥ 3400 mm in width)

Glass-fibre wovens: fabric woven from glass filaments

Carpeting: woven (Axminster) or tufted up to 5.5m in width. The underside of the carpeting (weft or rows of tufts) can be monitored by optoelectronic scanners or, alternatively, the face of that with printed, woven or tufted patterns by CCD-line cameras to establish any bow or skew (as an option compare PCS). Whichever way, the controlled straightener remains the same. Parallel installations with suitable software programs enable simultaneous measurement of pattern repeat as a standard for grading rolls intended for covering large areas with wall-to-wall carpet.

As your application may be of an unusual nature - as is often the case - we suggest you discuss your requirements with either our sales or practical application people.



GRFMC/FMC - combined with an FMI GRAVIMAT



Straightening fitted carpeting



GRFMC - alone



GRFMC combined with a PCS Pattern Control System

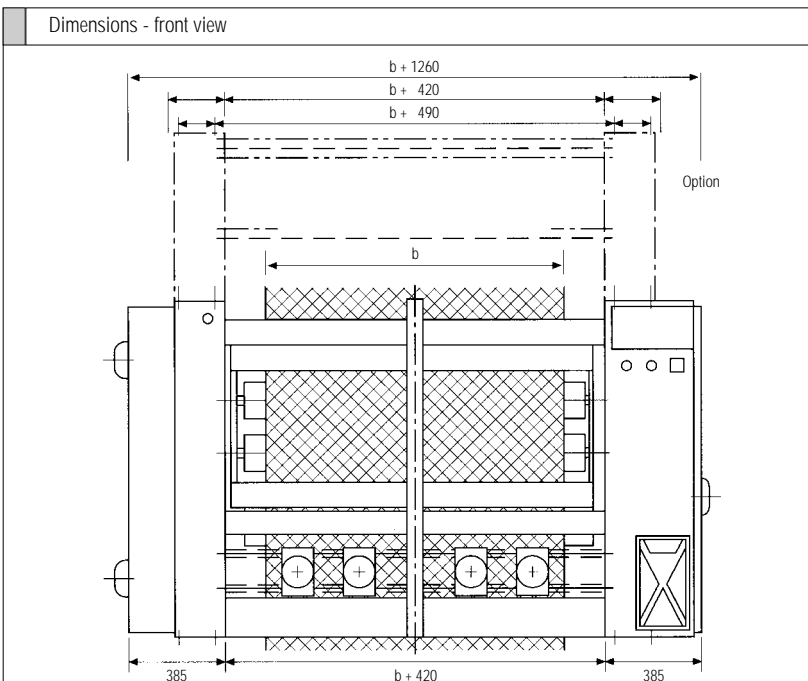
Technical data

Signal generation and processing, automatic control, display and controls, see FMC ORTHOMAT brochure for information in detail

Setup, dimensions, weights, power supply

Machine	<p>available only in partly self-contained form (separate control terminal)</p> <p>3 skew rollers, 2 bow rollers (optional 3); hydraulically activated, servo controlled;</p> <p>Straightening capacity: maximum skew +/- 550 mm, maximum bow +/- 300 mm</p> <p>Material content: 5.5 m; 6.0 m (3 bow rollers)</p> <p>Limit to limit travel of bow and skew rollers - adjustable in seconds, minimum 12</p> <p>min. line-speed 3 m/min</p> <p>max. line-speed 150 m/min</p> <p>max. permissible cloth tension: 4 kN</p> <p>Dimensions: ((b + 1260) x 1650 x 1096 mm) (W x H x D)</p> <p>available up to b = 5500 mm in width, mounting stand: 500 mm (H)</p> <p>Weight: b (5000 mm): approx. 3900 kg</p> <p>Mains supply: 380/400 V 3~ 50/60 Hz; without neutral wire (other voltages catered for by transformer terminal)</p> <p>Display: 15" touch-screen colour monitor</p>
Scanning system	<p>straightener with built-in scanners or CCD-line cameras (PCS)</p>

Dimensions - front view



Dimensions - end view

