



Special Purpose Machines for Window Production

One-off-and small-batch orders are manufactured with unit times of serial production

The HEMAG FS Process which was initially a revolutionary new idea some years ago, now has come to a complete success. At present, thousands of FS-machined windows are manufactured every day. The number of enthusiastic users in many European countries is increasing permanently. Also you could use the outstanding advantages of the HEMAG FS Process. Ask us for details! The workpieces for sash and frame are clamped together and, after jointly passing through only a few machining stations, are finished at the same time, ready to receive their fittings! Habitual intermediate sorting, stocking of partially machined window members,

and usual set-up times are abolished almost completely! There is only a size-setting for the external frame dimensions – the sash is growing simultaneously with the required measurements, and every time fits with the correct clearance. Advantages: simplification of job planning and supervision, elimination of former sources of error, enormous time-savings, reduction of required space, maximum flexibility in date planning! There is no need of production in great quantities: one-off windows and small-batch orders are manufactured with the unit times usual in mass production.

HEMAG Finamat

Double-sided superfinisher, illustrated with a transfer from a throughfeed moulder, working like a smoothing plane from 2 sides. Instead of sanding, this way of finish-planing gives unrivalled quality of the surfaces, without sanding marks, and eliminates roughening. High output, automatic adjustment for the thickness. Optional accessories: chopping unit for the plane shavings.

HEMAG Tenoning Rotor ZR 351

Fully programmable heavy duty tenoning machine with 5 turret spindles, storing 15-25 tenon-and slot profiles, equipped with automatic feed, additional top saw, and rear slotting unit. – Optional accessories: mitering unit for the glass-bar (simultaneously with the tenoning). Machine also available as "ZRH" with manual feed (convertable into automatic feed even subsequently).

HEMAG Moulding Rotor type 191 and type 252

Fully programmable heavy duty moulder for severe running conditions with 7 turret spindles for the change of 14 tools, without set-up time. 3 spindle speeds can be preelected by turning a lever. The basic model can be completed as an "Automatic Rebating Rotor" by reason of a modular system. Optional accessories: circular saw and stapling device for glass-bar, stroke-mechanism, additional work spindles for complete external rebating. **Type 252 with 7 turret spindles for tools up to 250 mm Ø.**

HEMAG Moulding Rotor type 191 or 252

with special accessories for external rebating

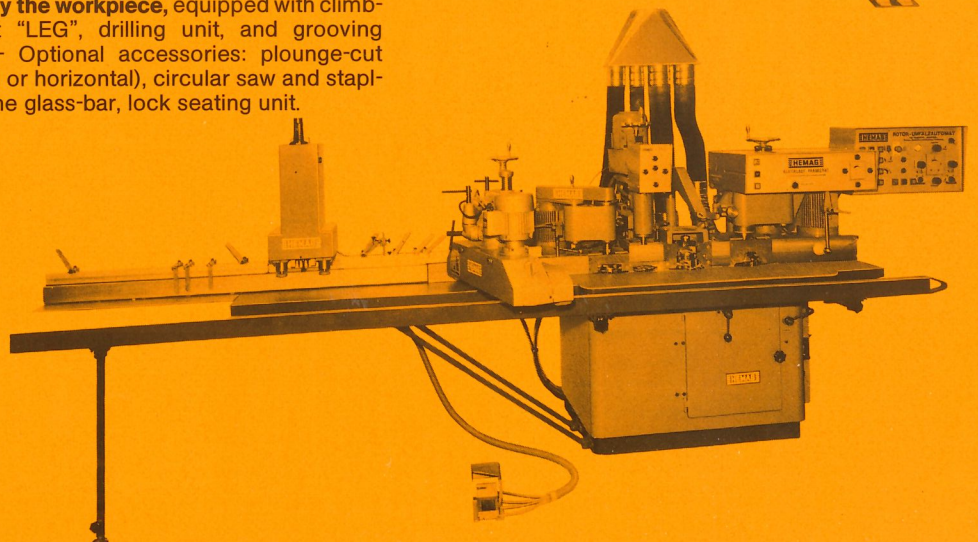
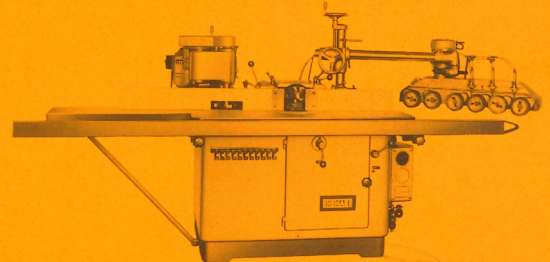
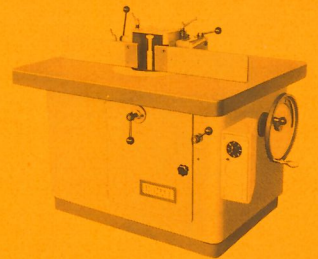
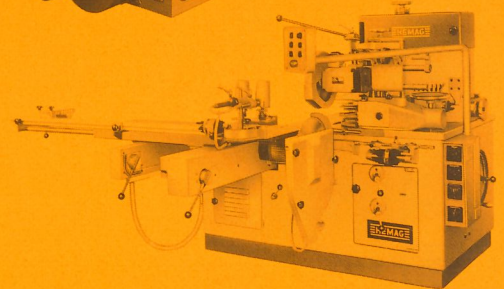
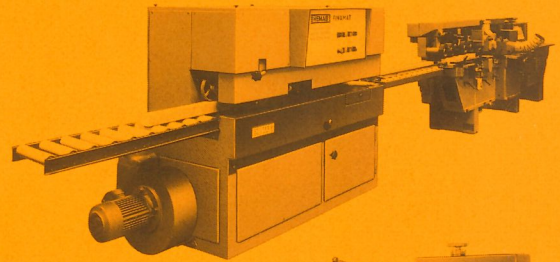
HEMAG Moulding Rotor type 191 or 252 with special accessories for external rebating, with stroke mechanism (for 1 or more turret spindles), with recess-moulding attachment "EG" for fittings, feed unit with roller control, extendable rail for large-sized workpieces, and table length extension. – Optional accessories: automatic switching system for the sequence of pre-elected profiles, climb-cut attachment "LEG", drilling unit, grooving spindle "NS", glass-bar saw and stapling device.

HEMAG Stroke-spindle Moulder HF 1

HEMAG Stroke-spindel Moulder HF 1 with single spindle especially for external sash rebating; serial equipment: 3 preelectable speeds, metal guide with 16 turret stops. – Optional accessories: recess moulding attachment "EG", special feed unit, table length extension. Can be completed as an "Automatic Rebating Rotor"!

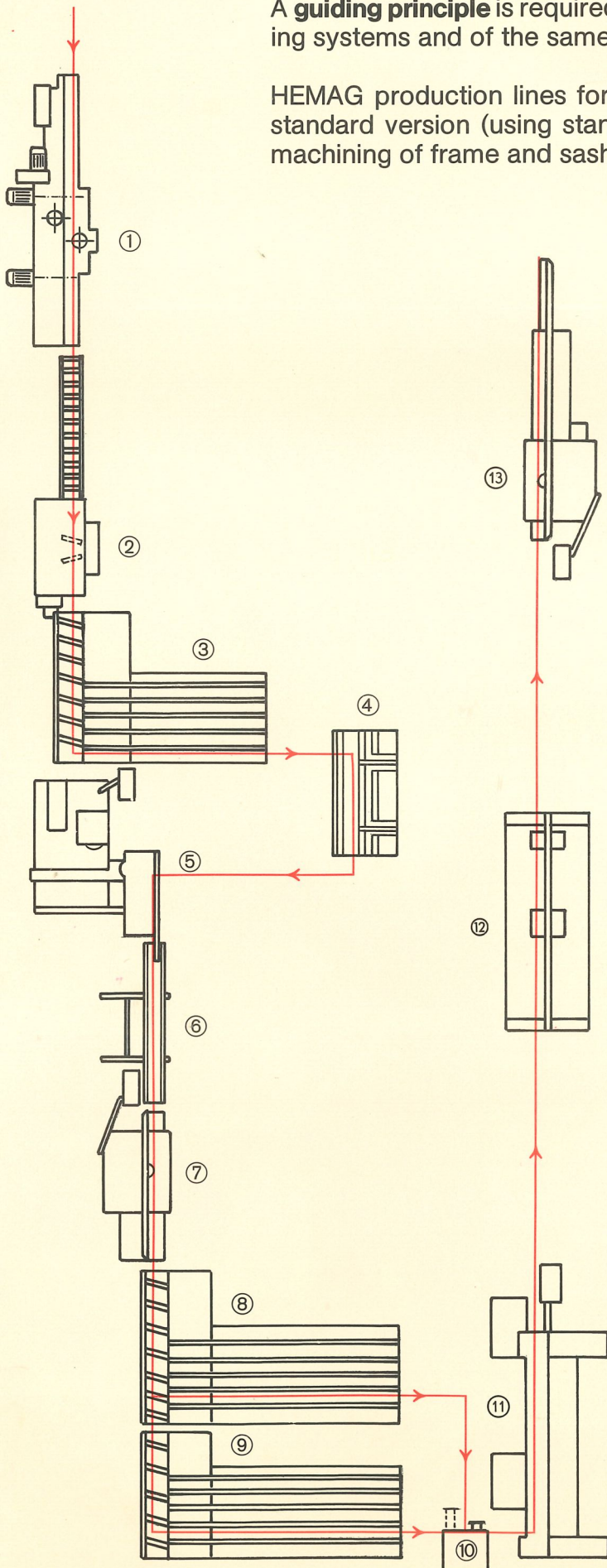
HEMAG Automatic Rebating Rotor RUA

HEMAG Automatic Rebating Rotor "RUA", type 191 or 252 for automatic sequence of pre-elected profiles, switches over by the workpiece, equipped with climb-cut attachment "LEG", drilling unit, and grooving spindle "NS". – Optional accessories: ploung-cut spindle (vertical or horizontal), circular saw and stapling device for the glass-bar, lock seating unit.



Set-up-free individual machines, linked into a production line in combination with cross-transfer units, give fantastic unit times – even for smallest batches. A **guiding principle** is required: only harmonizing individual machines of matching systems and of the same origine guarantee the desired success.

HEMAG production lines for "Windows Made to Measures" are available as standard version (using standard tools) and as FS version for simultaneous machining of frame and sash elements by the HEMAG FS Process.



- ① existing throughfeed moulder. 4-side planing of the cross-cut window members.
- ② HEMAG-Finamat, linked with the throughfeed moulder. Double sided finish-planing of the surfaces of the individual elements.
- ③ HEMAG Cross Transfer. Storage capacity 10 pcs/m. The planed and superfinished workpieces are ready for sorting – made flush at one end.
- ④ Bench for marking the elements. For FS lines: HEMAG Clamping Machine.
- ⑤ HEMAG Tenoning Rotor with mitering unit for the glass-bars. With central switch board for the following machining units 6-9.
- ⑥ HEMAG Belt Conveyor for transporting the timber to the moulder for internal sections (7). With safety stopping device during the automatic change of profiles at the internal moulder.
- ⑦ HEMAG Moulding Rotor with additional equipment for internal sections, fitted out with circular saw and stapling unit for the glass-bars. Automatic change of profiles for frame head- and sill pieces by turns.
On request: For roller-shutter grooves, sillboard rebates, and stop rebates for sash stays, the machine can be equipped with additional work spindles which are brought into work position automatically after pre-election from the central switch board.
- ⑧ HEMAG Cross Transfer for upright workpieces.
- ⑨ HEMAG Cross Transfer for horizontal workpieces. At the end of both units, the heights and widths belonging together are kept ready for being assembled.
- ⑩ Machine for glue application.
- ⑪ Frame clamp. For FS Lines: HEMAG Automatic FS Frame Press for simultaneous assembly of frame and sash.
- ⑫ HEMAG Automatic Drilling Machine for flush hinges. After the glue has set, the routing is done in a 10-second work cycle. Fully automatic size setting.
- ⑬ HEMAG Automatic Rebating Rotor for external sash rebating with the different sections required, including the drillings for the handle, by one continuous operation. Minimal feed length by reason of extremely short distances between the work spindles.

Ask for our consultancy service.