

Vertical edging machines

EM_HT Series



Vers. 01

TECHNOLOGICAL CHARACTERISTICS					
Dimensional characteristics	EM04020HT	EM04525HT	EM05028HT	EM06033HT	EM09033HT
Maximum pane length	4000 mm	4500 mm	5000 mm	6000 mm	9000 mm
Maximum pane height	2000 mm	2500 mm	2800 mm	3300 mm	3300 mm
Minimum pane dimensions	320 mm x H=260 mm ("polished edge" min. 670 mm x H=260 mm)				
Processing pane thickness	3 ÷ 25 mm ("polished edge" Max. 19 mm)				
Maximum transportable pane thickness	25 mm				
Maximum transportable pane weight	200 kg/m				
Maximum processing pane weight (suction cup carriage)	200 kg/m (with clean and dry pane)				
Process characteristics	EM04020HT	EM04525HT	EM05028HT	EM06033HT	EM09033HT
Number of operating heads	1				
Processing operations that can be performed	arrissing – "rough edge" grinding – "polished edge" grinding				
Processing of shaped panes	optional				
Executable shapes	according to FOREL Catalogue				
Maximum pane length in "self-learning" operating mode	3500 mm	4500 mm	4500 mm	5000 mm	7500 mm
Maximum pane length in "shaped panes" operating mode	4000 mm	4500 mm	5000 mm	6000 mm	9000 mm
Position of the "Low-emissivity" coating	operator side				
Processing of corner fittings	✓				
Control and management of pane curvature	Max. 2.5 mm/m				
Tool diameter	200 mm				
Tool pack capacity	80 mm (Max.)				
Constructional characteristics	EM04020HT	EM04525HT	EM05028HT	EM06033HT	EM09033HT
Presetting of diamond grinding wheel	✓				
Polishing grinding wheel automatic regenerator tool	✓				
Pane transport height	640 mm (min. 620 mm)				
Machine body weight	~ 6000 kg	~ 6250 kg	~ 6400 kg	~ 6700 kg	~3600 kg + ~6800 kg
Water supply	EM04020HT	EM04525HT	EM05028HT	EM06033HT	EM09033HT
Possibility of connection to a centralized purification plant (customer's responsibility)	minimum flowrate 100 l/min				

TECHNICAL CHARACTERISTICS	
Applied standard	CEI EN 60204-1
Power supply	400 V ±10% Freq. 50/60 Hz ±1% 3P+PE
Environmental conditions	min. +5°C, max. +40°C temperature
	humidity < 80%
	altitude < 1000 m a.s.l.
Type of grounding system	TT (ground isolated from neutral)

(data concerning the technological/electrical characteristics of the article treated in this data sheet are not binding since they are subject to change).

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TOOLS SUPPLIED

The machine is supplied with 2 grinding wheel arms, one of which is equipped with:

- 1 flat diamond grinding wheel for ROUGH EDGE (Th. 15 mm)
- 1 diamond grinding wheel for ARRISSING (Th. 3 ÷ 12 mm)
- 1 trapezoidal/shaped diamond grinding wheel for EDGE GRINDING and ARRISSING (Th. 8 mm)
- 1 grinding wheel for POLISHING (Th. 15 mm)

OPTIONALS AVAILABLE ON REQUEST

EMHT-01	Diagnostic supervisor system
EMHT-02	Processing of shaped panes
EMHT-03	Additional tools holder cone (2 cones already supplied)
EMHT-04	Additional rinsing module
WF00000ES	WATER FILTERING SYSTEM (centrifuge)
BC00000ES	BARCODE READER

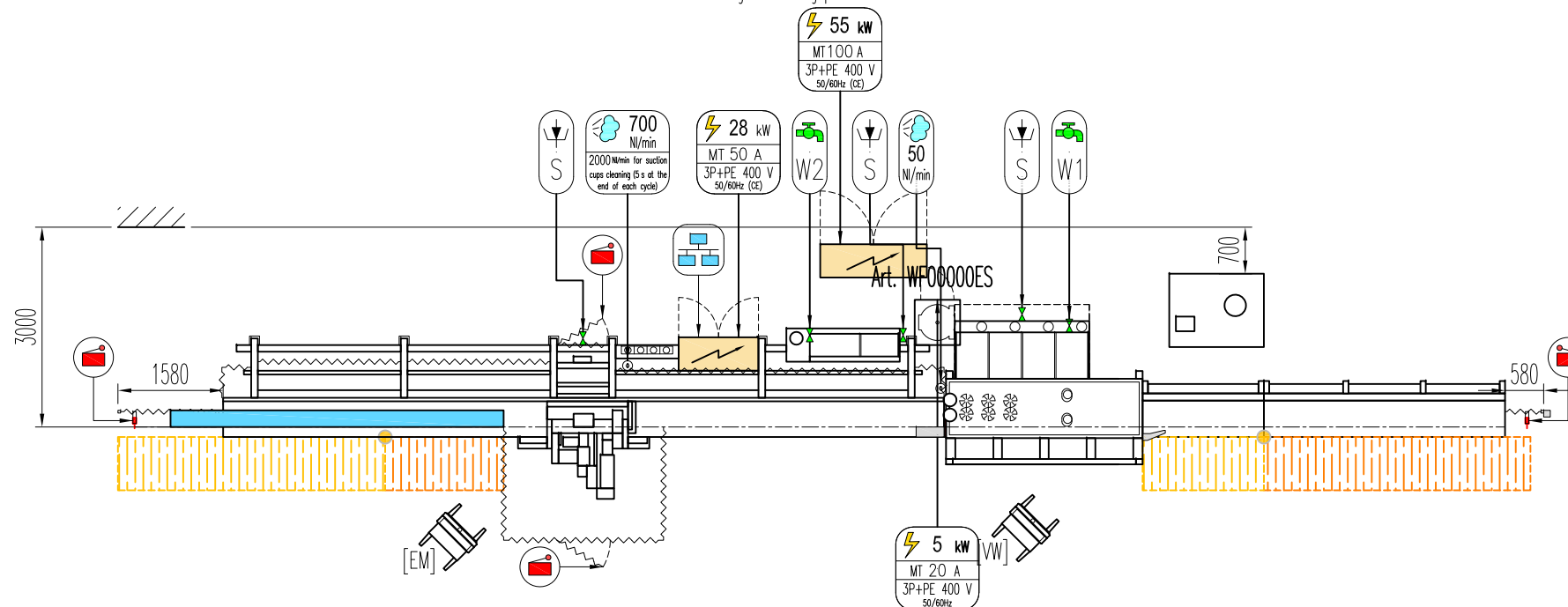
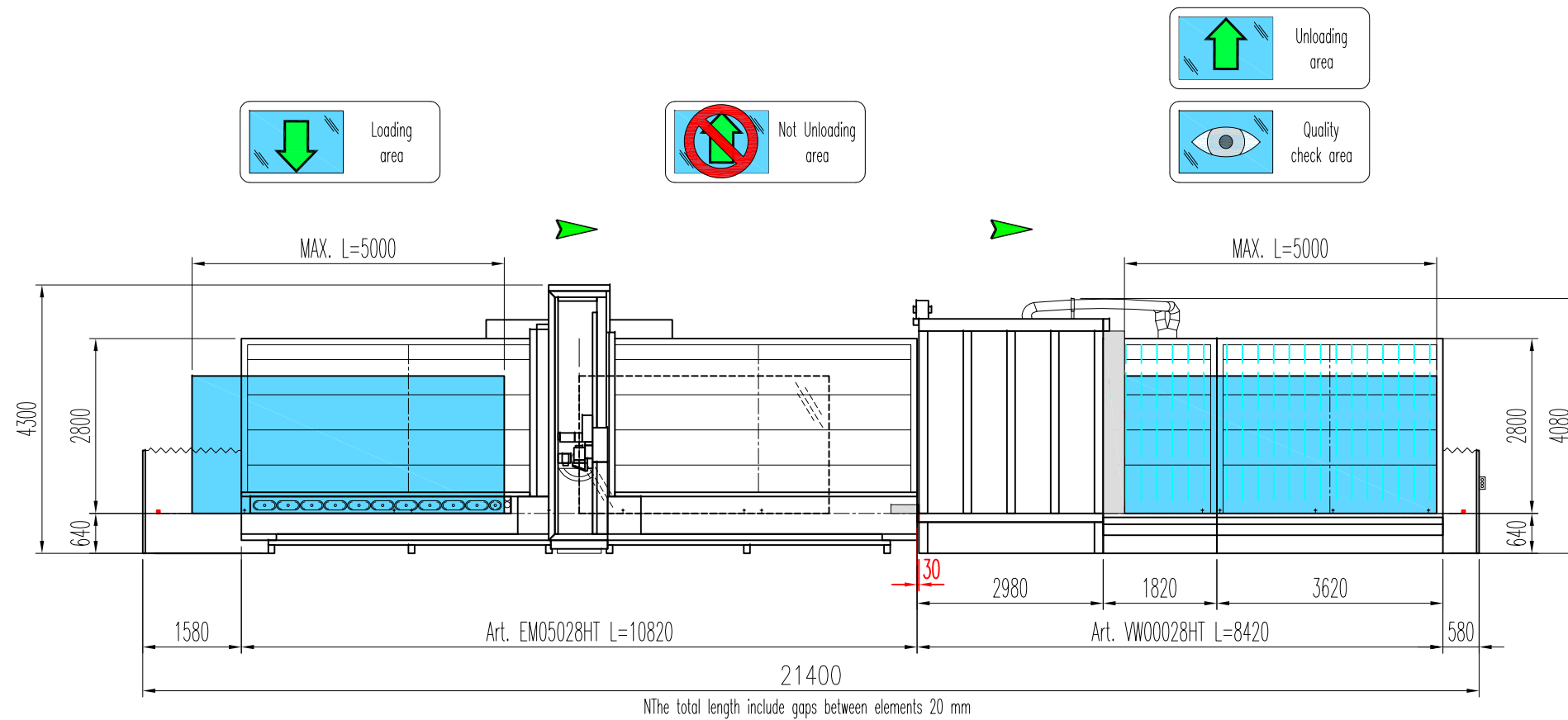
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MAIN DIMENSIONAL CHARACTERISTICS OF THE GRINDING WHEELS USED

<p>DIAMOND grinding wheel</p>		<p>POLISHING grinding wheel</p>	
<p>ROUGH EDGE grinding wheel</p>	<p>ARRISSING grinding wheel</p> <p>We recommend the use of differentiated diamond grinding wheels for 3/12 mm and 10/20 mm thicknesses</p>	<p>TRAPEZOIDAL grinding wheel (for single pane thickness)</p>	<p>POLISHING grinding wheel (for single pane thickness)</p> <p>Once the impression of a pane has been impressed on the surface of the polishing grinding wheel (e.g. pane thickness 10 mm), the same grinding wheel must be used exclusively for that specific thickness</p>
<h3>GRINDING WHEEL WEAR LIMIT (following wear or dressing)</h3>			
<p>FLAT DIAMOND GRINDING WHEEL FOR ROUGH EDGE</p> <p>200 mm 180 mm (min.)</p>	<p>DIAMOND GRINDING WHEEL FOR ARRISSING</p> <p>180 mm (min.)</p>	<p>TRAPEZOIDAL/SHAPED DIAMOND GRINDING WHEEL FOR EDGE GRINDING AND ARRISSING</p> <p>180 mm (min.)</p>	<p>POLISHING GRINDING WHEEL</p> <p>200 mm 140 mm (min.)</p>



	Laser scanner
	Safety optical barrier
	Safety guards supplied by the manufacturer
	Safety limit switch
	Ethernet network supply (RJ-45 connector)
	Electrical supply (absorbed maximum: ~80%)
	Transformer supply
	Air supply (peak) Ø1/2" 6:8 bar
	W1 (Rp 1/2" Ø17 2,5 bar)
	W2 (Rp 1 1/4" Ø40 2,5 bar)
	S (Rp 1 1/4")
	G Gas supply (peak) IN=UNI11144 OUT=3/8" Rp

Line Plant made up of:

- Vertical edging machine Art. EM05028HT
- Vertical washing machine Art. VW00028HT

(the conveying surfaces are inclined by 6° with respect to the vertical surface)

Preliminary Layout

Ver.: 1 -

FOREL

Cliente: **RAVENSBY GLASS Co. Ltd**

Cod.: RAVENSBY-33

Date and Place

Stamp and Signature

Data: 26/06/2020 Dis: Loreno S. Scala: 1:100

Our ref JH/gq/GSQ53800

09 July 2020

For the Attention of Mr. Hamish Ogilvie

Ravensby Glass Co Ltd
Fowler Road
West Pitkerro Industrial Estate
Dundee
DD5 3RU

Email: HFO@densmetals.co.uk

Dear Hamish,

Re: Forel EM 5028 including Associated Items

Following your recent enquiry, I am pleased to submit our revised supply proposal, together with respective specifications for your appraisal and consideration.

The machinery & equipment contained within this proposal is based upon the manufacturing criteria that you have initially provided but can be modified if required, to suit specific or alternative production processes.

Although Promac offers technical support for office-based software links, we take no control or responsibility for the associated output files and hardware. The customer is entirely responsible for any charges that may be issued by your software supplier.

Preventative maintenance will increase the reliability of your machinery and from as little as £100 a month Promac will provide a service contract for the equipment we have installed after the warranty expires.

If you require any further information, please do not hesitate to contact me directly on 07866 767371.

Yours sincerely

Joe Hague
Promac Group Managing Director



Machinery and Pricing Summary

CODE	DESCRIPTION	Q.TY
EM05028HT	Vertical Edging Machine – L=5000mm x H=2800mm	1
EMHT-01	Diagnostic supervisor system	1
EMHT-02	Processing of straight shaped panes	1
EMHT-03	Additional Tool Holder (X2 Already Supplied)	1
WF00000ES	Water Filtering System (CENTRIFUGE)	1
D320i	Domino LASER ETCHING PRINTER	1
VW00028HT	Washing machine 2800 mm complete with infeed and outfeed conveyors	1
VWHT-03	Stainless steel entire manufacturing	1



SALES TERMS

Training:	Operation, machine settings & functions:
Availability:	January 2021 upon receipt of order & deposit (TO BE CONFIRMED)
Installation:	As Above
Transport & Carriage:	As detailed above. Includes insurance.
Delivery:	DAP Fowler Road, West Pitkerro Industrial Estate, Broughty Ferry, DD5 3RU, Dundee, U.K. INCOTERMS®2020 I.C.C.

Warranty:

All new machinery is covered by our comprehensive 24 month warranty which includes mechanical and electrical parts, super structure and labour, based on a 40 hour working week.

Warranty Exclusions:

Wearing parts, consumable items, tooling, calibration and programming.

Any damage caused as a result of wilful neglect, misuse or abuse and third party accessories or software connected or fitted without prior written authorisation from Promac Window Machinery Sales Ltd.

Customers Responsibilities and Provision

In advance of the machines arrival and where applicable the provision of electric, pneumatic, water and drainage service isolators to within two metres of the machinery terminals including any third party software or output files. All appropriate insurance and liability cover must be in place before the delivery of the equipment to its agreed destination, where applicable the provision of the appropriate lifting equipment and manpower to offload and position the equipment.

Payment Terms

Unless otherwise agreed:-

25% deposit at order confirmation

70% before shipping (appropriate to the machinery to be shipped)

5% 45 days after commissioning (appropriate to the machinery being commissioned)

(Please note that our payment terms are unaffected by any delay from other third party suppliers including utility services, software or output files)

Continuous Improvement Policy

We reserve the right to amend specifications without notification as part of our continuous improvement policy.

Liability Insurance



Liability Insurance is a legal requirement to do business and forms an essential part of any commercial agreement. To ensure that Promac and our customers are adequately protected our insurers have provided over £15,000,000 of Employers, Public and Product liability cover.

The prices quoted are exclusive of VAT and are valid for thirty days.

Please refer to our full terms and conditions which can be viewed on our website
www.promac.co.uk

Preventative Maintenance Service Contract

Within this package, Promac Group Service will supply direct technical support on two separate occasions with the express purpose of surveying and servicing the machinery detailed above. This will take the form of a pre-service inspection of the equipment to assess the condition of the machinery and the need for any replacement of consumable or wearing parts. Depending on the requirement, we would offer a 10% discount on any parts involved in the service process, Promac would then visit the site within 2 weeks to perform the particulars gathered from the pre-service inspection.

All of the associated service time, including travelling, is free of charge within this proposal, however, if you require any servicing over any given weekend, or bank holiday we would levy an additional service charge at 50% of our published rate.

There should be no requirement to interrupt production during the pre-service inspection other than where necessary for safety.

Dates for the service can be organised by yourself directly with Promac Group Service on 01788 577887.