



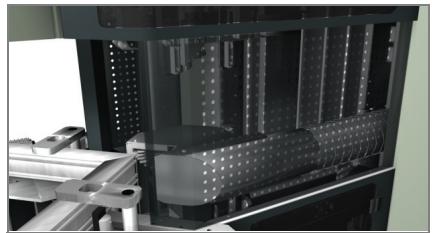
emmegi

A
Aluminium
S
Steel
P
Pvc

en #3

Trimmer 4A

Corner cleaning machine

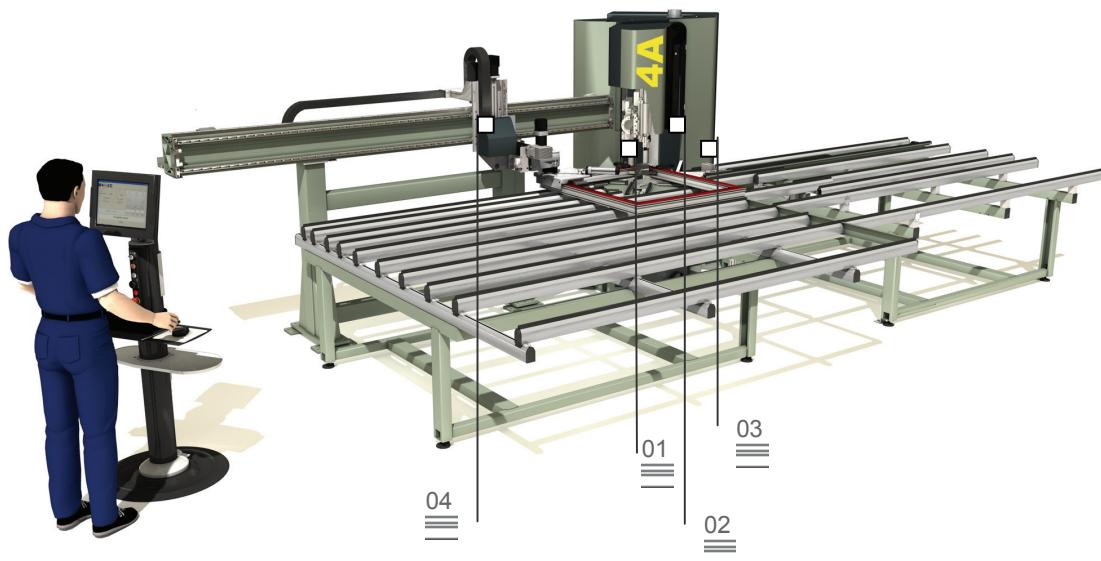


Internal reference and
external clamping

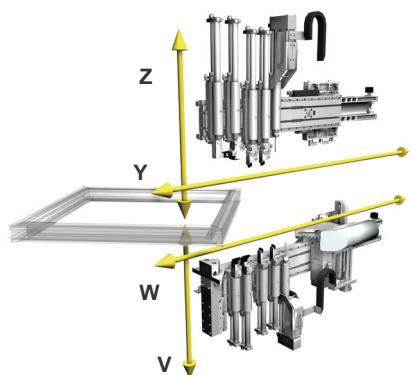
01

Ergonomic design and
safety

02

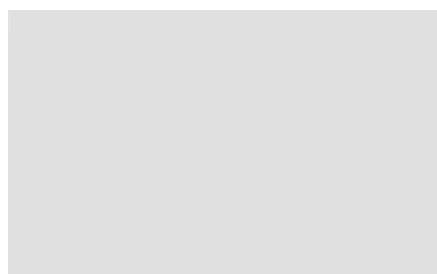


Trimmer 4A is a CNC corner cleaning machine for PVC frames with 4 interpolated axes and automatic cycle which, when suitably configured, is able to recognize the size of the profile to be cleaned. It has a 275 mm diameter knife which allows, with different work programs, cleaning the outer corner on various profiles. Trimmer 4A also has top and bottom units with knife for cleaning the welding beads plus top and bottom units with knives for cleaning the inner corners. Machining of the inner and outer corners can be completed with the top and bottom drilling/milling units for cleaning the corners or gasket grooves. The machining units can be programmed independently from each other via a CNC PC which controls programming of the profiles and machine operation (manual or automatic mode). When the machine is suitably configured with the necessary tools, it can handle all types of standard profiles including acrylic and coated profiles. Trimmer 4A is available in three models: a manual version, a semiautomatic version (with turntable) and an automatic version (with turntable and outfeed table).



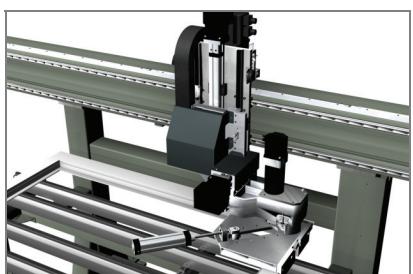
Field Bus connection
system

03



Frame handling system

04



Trimmer 4A

Corner cleaning machine

01

Internal reference and external clamping

The precision guaranteed by Emmgi in the PVC corner cleaning machines is obtained through the use of an N/C stop that allows the frame to be positioned in the machine by making reference to the internal corner of the frame. This ensures accurate centering and no limitations due to any difference in width of the profiles making up the frame. In such solution, efficient clamping of the corner is through the independent action of two clamping systems (horizontal and vertical) mounted on two slides. As these slides move along two perpendicular directions, they refer the corner to the machine working direction.

02

Ergonomic design and safety

Great care has been taken over the ergonomic aspects of the machine: the special machine look is a synthesis of objective regarding safeguarding and accessibility. The machine has provision for connection to a swarf exhaust system in both the area mainly involved in cleaning (knife for cleaning around the outside of the corner) and the bottom area of the machine where the swarf tends to build up.

03

Field bus connection system

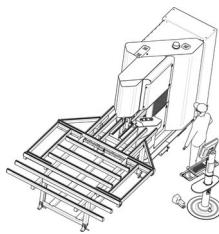
The choice of interconnection between the control unit, peripherals and machining units is based on the use of field bus: such solution allows remote control over the supervisory and monitoring functions directly on the machining units as well as implementing accessible wiring of very simple structure. This ensures quick and ready accessibility for maintenance purposes with an efficient communication network between the various mechanical, pneumatic and electrical machine components.

04

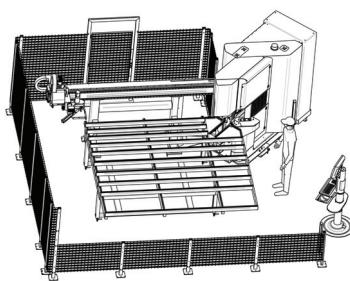
Frame handling system

The objective of concentrating all the frame handling functions in a device that ensures highly dynamic positioning phases and accurate positioning of the product in all phases of the work cycle has been achieved thanks to the 4-axis manipulator (semiautomatic and automatic versions of the Trimmer). Such system is independent from the actual corner cleaning machine where the tools for the cleaning cycle are located. Hence it can be easily retrofitted (after a simple electrical preparation) on manual machines. As the device has controlled axes, the product feed, rotation and unloading cycle parameters are optimized automatically by the CNC in relation to the dimensions and weight of the frame to be handled, thus ensuring minimum cycle time with maximum accuracy and care of the surfaces in contact with the machine.

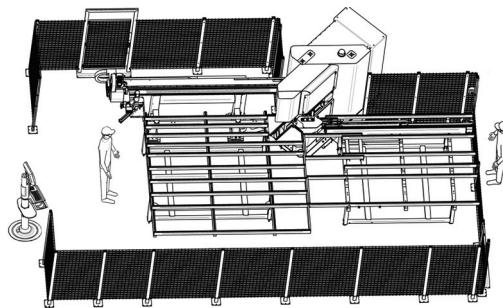
MANUAL version



SEMIAUTOMATIC version



AUTOMATIC version



MODE OF OPERATION

Manual positioning of the frame (MANUAL version)

104

Automatic positioning of the frame with turntable (SEMIAUTOMATIC / AUTOMATIC version)

MACHINE CHARACTERISTICS

Max. frame size with manual feeding	unlimited
Max. frame size with automatic feeding (optional turntable) (mm)	2.300 x 2.300 (2,7 kg/m) 2.500 x 2.500 (2,5 kg/m)
Min. frame size, external measurement (mm)	350 x 350
Min. frame size, internal measurement (mm)	210 x 210
Max. profile height (mm)	120 200 (optional)
Min. profile height (mm)	40
Max. profile width (mm)	150
Cutter holder shaft diameter (mm)	32
Cutter speed (depending on cutter diameter) (rpm)	0 ÷ 12.000
Cutter diameter (mm)	275
Cutter motor power rating (kW)	2,4
Places available for top / bottom units	5 / 5
MACHINABLE SURFACES	

MACHINABLE SURFACES

With cutter (external profile)	1
With top and bottom units with knife (top and bottom surfaces, internal profile)	3
With milling unit (top and bottom surfaces)	2

SAFETY DEVICES AND GUARDS

Perimeter enclosure guard for semiautomatic and automatic TRIMMER 4A