(someco)

a voilàp company

# EV 4A

WELDING AND CLEANING MACHINES

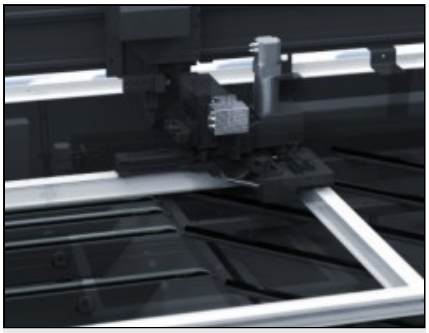



EV 4A is a CNC corner cleaning machine for PVC frames with 4 interpolated axes and automatic cycle which, when suitably configured, is able to recognize the size of the profile to be cleaned. It has a 275 mm diameter blade which allows, with different work programs, cleaning the outer corner on various profiles. EV 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. EV 4A is available in three models: a manual version, a semiautomatic version (with turntable) and an automatic version (with turntable and outfeed table).

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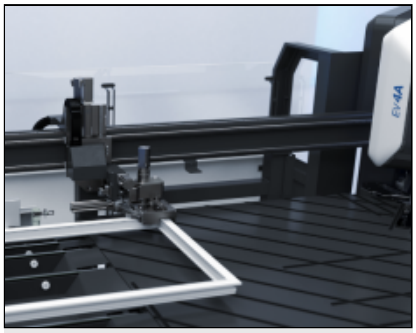
## Internal reference and external clamping

The precision guaranteed by Someco 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.




## Ergonomic design and safety

Great care has been taken over the ergonomic aspects of the machine: the special machine look is a result of the 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.



## 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. Such system is independent from the actual corner cleaning machine where the tools for the cleaning cycle are located.

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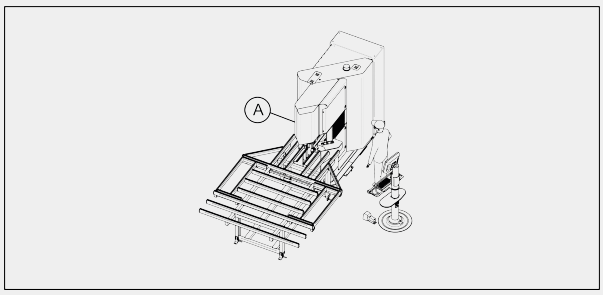
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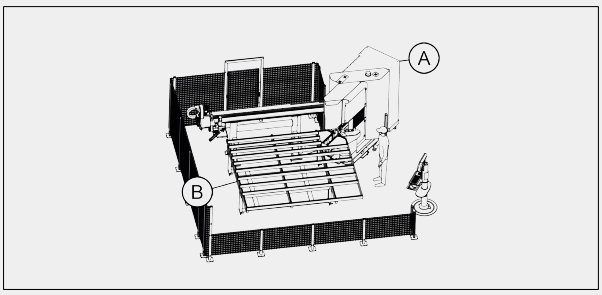
## **EV 4A** / WELDING AND CLEANING MACHINES

### LAYOUT

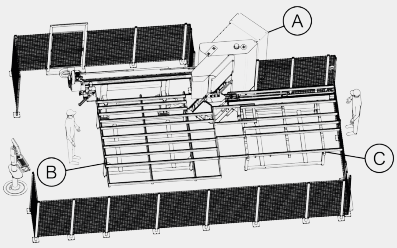
**Manual version**




**Semiautomatic version**




**Automatic version**




A - Corner cleaning machine EV 4A
B - Turntable
C - Outfeed table

### EV, POSITIONING SPEED

| | |
|---|---|
| Y AXIS (m/min) | 100 |
| Z AXIS (m/min) | 40 |
| V AXIS (m/min) | 100 |
| W AXIS (m/min) | 40 |

### MANIPULATOR, POSITIONING SPEED

| | |
|---|---|
| X AXIS (m/min) (linear movement of the gripper) | 170 |
| Q AXIS (m/min) (vertical movement of the gripper) | 9 |
| H AXIS (m/min) (cross movement of the gripper) | 9 |
| C AXIS (°/min) (rotary movement 0 – 90° of the gripper) | 3.000 |

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## OUTFEED TABLE, POSITIONING SPEED

| | |
|---|---|
| U AXIS (m/min) | 40 |

## MODES OF OPERATION

| | |
|---|---|
| Positioning of the frame: manual or automatic with turntable (depending on model) | ● |
| Milling of different profiles | ○ |
| Drilling for hinges | ○ |

## MACHINABLE SURFACES

| | |
|---|---|
| With blade tool (external profile) | 1 |
| With top and bottom units plus knife (top and bottom surfaces, internal profile) | 3 |
| With milling unit (top and bottom surfaces) | 2 |

## WORK AREA

| | |
|---|---|
| Maximum dimensions of the frame manually loaded: unlimited | ● |
| Maximum dimensions of the frame automatically loaded (rotation table optional) (mm) | 2.300 x 2.300 (3,7 kg/m) / 2.500 x 2.500 (2,8 kg/m) |
| Minimum dimensions of the frame, external measurement (mm) | 350 x 350 |
| Minimum dimensions of the frame, internal measurement (mm) | 210 x 210 |
| Maximum profile height (mm) | 200 |
| Minimum profile height (mm) | 35 |
| Maximum width of the profile (mm) | 150 |

## BLADE

| | |
|---|---|
| Blade diameter (mm) | 275 |
| Blade support diameter (mm) | 32 |
| Blade speed (r.p.m.) | 3.000 |
| Electro spindle power (kW) | 1,1 |

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## SAFETY DEVICES AND PROTECTIONS

| | |
|---|---|
| Photoelectric barrier system to protect access to work zone for EV 4A automatic and semi-automatic version | ● |
| Perimeter enclosure guard for EV 4A automatic and semi-automatic version | ● |

## BASEMENT

| | |
|---|---|
| Electrically welded and normalized steel basement | ● |

## OVERALL DIMENSIONS AND POWER

| | |
|---|---|
| Overall dimensions (width x length x height) (mm), manual version | 3.560 x 3.780 x 2.250 |
| Overall dimensions (width x length x height) (mm), with turntable | 4.550 x 6.170 x 2.250 |
| Overall dimensions (width x length x height) (mm), with turntable and outfeed table | 5.530 x 9.000 x 2.250 |
| Weight (kg), manual version | 2.100 |
| Weight (kg), with turntable | 3.000 |
| Weight (kg), with turntable and outfeed table | 3.400 |
| Average power consumption (kW), manual version | 8 |
| Average power consumption (kW), with turntable / with turntable and outfeed table | 10 |
| Compressed air consumption (Nl/min), manual version | 80 |
| Compressed air consumption (Nl/min), with turntable / with turntable and outfeed table | 110 |

Included ● Available ○

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