



emmegi

A  
Aluminium  
S  
Steel  
P  
Pvc

en #1

## Integra 4H

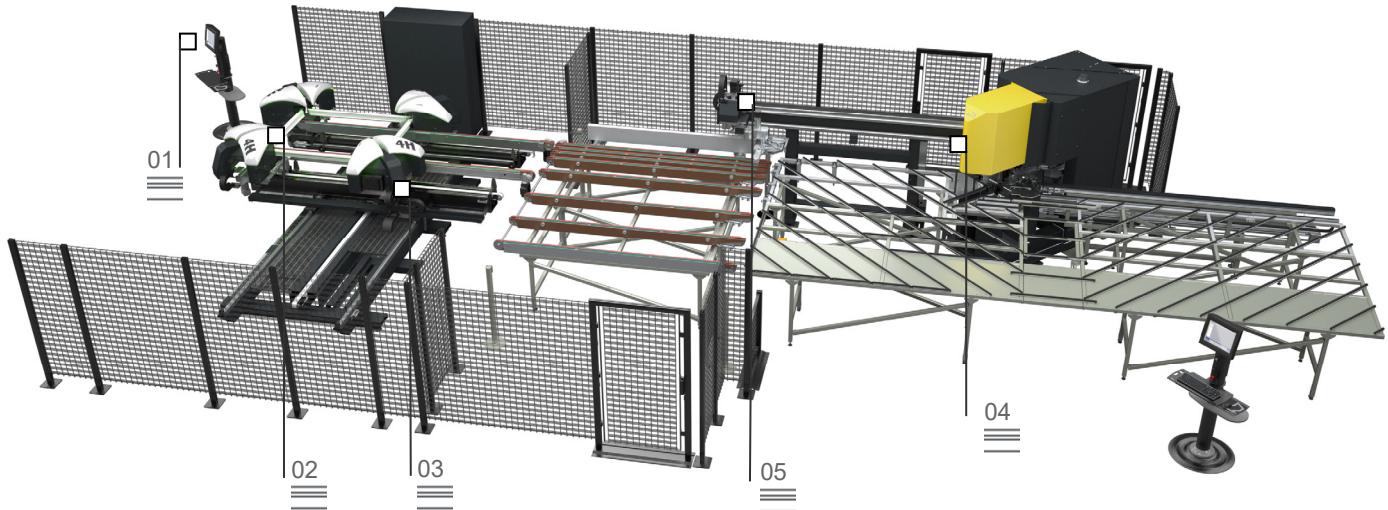
Corner welding and cleaning line

Built-in operator interface

01

Automatic welding bead control

02



The INTEGRA 4H corner welding and cleaning line for PVC profiles consists of 5 main units: the horizontal welding machine FUSION 4H (in all its models) including the frame unloading unit, the cooling bench, the turntable, the 2- or 4-axis corner cleaning machine (TRIMMER 2A or 4A) and lastly the in-line outfeed table. Due to the predisposition for double feed on both sides (right and left) of all units making up INTEGRA 4H, the flow of operations on the entire line can be selected, from left to right or vice versa, during the configuration phase. Depending on the welding machine installed in the line, INTEGRA 4H can handle frames of various sizes, in a fully automated mode. When the line is suitably configured, it can handle all types of standard profiles including acrylic and coated profiles.

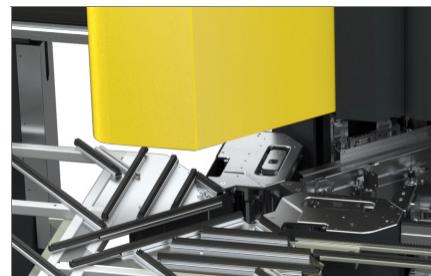
Field bus connection system

03



Internal reference and external clamping

04



Frame handling system

05



The images are only given for illustrative purposes

# Integra 4H

Corner welding and cleaning line

**01**

## Built-in operator interface

Integra is extremely simple to use and highly flexible: the operation of the system can in any case be controlled by a single operator (from the loading station of the Fusion 4H welding machine), while all information about the machining process (data about the frames and the types of profiles machined) can be displayed on any interface connected to the line. The serial connection enables the necessary data to be shared and machining process data to be sent and/or collected from a single workstation. These interfaces use advanced graphical solutions thus improving man-machine communication and comprehension of the information.

**02**

## Automatic welding bead control

FUSION 4H welding machine can also provide software automatic control of the welding bead size (from 0.2 to 2 mm) thanks to a digital adjustment system controlling the welding cycle. FUSION 4H, in combination with counterblocks using Seamless technology, allows obtaining a perfect seamless welding. Precision is ensured thanks to the handling of PVC profiles with controlled axes. Such system allows reducing and significantly simplifying the next machining cycle, with major benefits in terms of production rate and obtained quality.

**03**

## Field bus connection system

Design of interconnection between the central unit and the welding heads is based on the use of a field bus. Such solution allows remote control and supervision directly on the operating units. Thus it is possible to implement wiring which is both very simple and accessible to ensure quick and ready accessibility for maintenance thanks to an efficient network of communication between the various mechanical, pneumatic and electronic components of the machine.

**04**

## Internal reference and external clamping

The precision guaranteed by Emmegi 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.

**05**

## 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. 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.

### MACHINING CAPACITY

Max. frame size (mm)	3.500 x 2.700
Max. frame size with automatic feeding (mm)	2.500 x 2.500, (2,8 kg/m)
Min. frame size with automatic feeding, external measurement (mm)	400 x 350
Min. frame size, internal measurement (mm)	210 x 210
Max. profile height (mm)	200
Min. profile height (mm)	35
Max. profile thickness (mm)	150

### MODE OF OPERATION OF THE MACHINE

Unit for unloading frame from welding machine	•
Positioning of the frame: automatic with turntable	•
Automatic cooling bench	•
Unloading of the frame: automatic with outfeed table	•
Compatibility of seamless counterblocks	•
Heating plate temperature check (°C)	200 ÷ 300
Machining allowance parameter (mm)	3

### OVERALL DIMENSIONS AND POWER CONSUMPTION

Overall dimensions (width x length x height) (mm)	7.900 x 16.200 x 2250
Average power consumption (kW), version with TRIMMER 2A	25
Average power consumption (kW), version with TRIMMER 4A	27

### SAFETY DEVICES AND GUARDS

Perimeter enclosure guard of the line	•
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