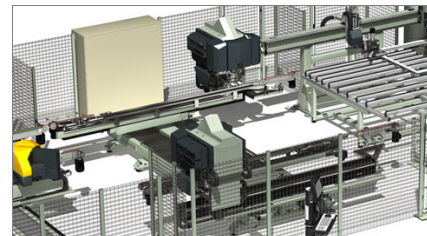


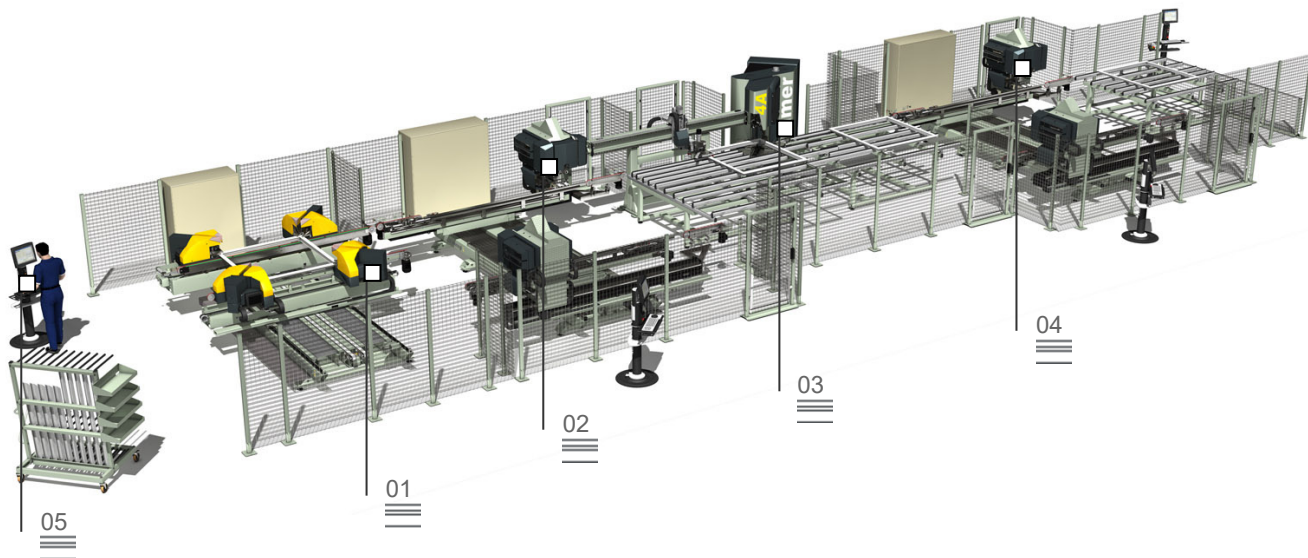
4-head horizontal welding machine 01



First milling station 02

Integra Q

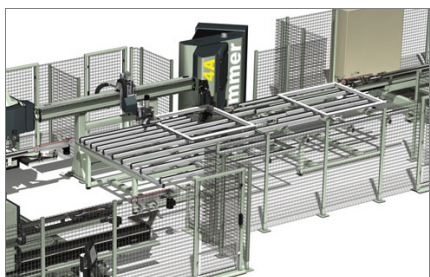
welding, milling and corner cleaning line



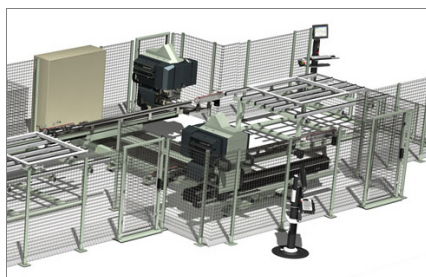
The welding, machining and corner cleaning line for INTEGRA Q1 PVC profiles consists of 5 main elements: the FUSION 4H horizontal welding machine (in all range models) with frame outfeed unit included, a Q-MATIC unit for machining on two sides of the welded frame, the turntable, the 4-axis corner cleaning machine (TRIMMER 4A) and, lastly, the line outfeed table. It can be extended to the INTEGRA Q2 model with a second Q-MATIC module that receives the frame rotated by 90°. Compared to the first one, it can perform the machining operations required on the other two sides.

Thanks to the double feeding (from right and from left) of all elements that compose it, the entire line allows choosing, during configuration, the flow of operations from left to right or vice versa. Based on the welding machine installed in the line, INTEGRA Q1/Q2 can manage variable size frames in a completely automated way. When duly configured, the line can process all types of standard, acrylic and lined profiles.

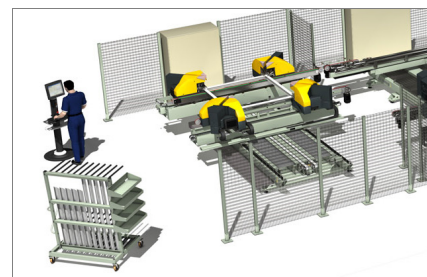
4-axis corner cleaning machine 03



Second milling station 04



Line supervision 05



Integra Q

welding, milling and corner cleaning line

01

4-head horizontal welding machine

FUSION 4H is the completely digital horizontal welding machine with Numeric Control for PVC profile welding. Produced in two sizes, the 4-head model allows manufacturing frames through the simultaneous or selectable welding of the four 90° angles. Preset for manual loading, FUSION 4H automatically unloads the finished product on the milling machine surface. All the cycle variables (times, speeds, etc.) are programmable and can be set automatically in the machine.

02

First milling station

The machining on the two sides of the frame in the Q-matic 1 milling centre is continuously managed and monitored by devices that ensure its control and absolute care for the external surfaces. The matching of conveying belts and mobile vices, in different areas of the module, allows obtaining smooth movements of the frame and total synchronism during the passages between the different handling systems in the different cycle phases.

03

4-axis corner cleaning machine

Trimmer 4A is an NC corner cleaning machine for PVC frame corners, with 4 interpolated axes and automatic cycle, able to check the size of the workpiece to be machined, if duly configured. It is equipped with a 275mm diameter blade that allows cleaning the external corner of different profiles with different machining programs. Trimmer 4A features also upper and lower units with knife for bead cleaning, and upper and lower units with knife for internal corner cleaning. The machining of the internal and external corner can be completed through the upper and lower milling/drilling units for the cleaning of corners or gasket seats.

04

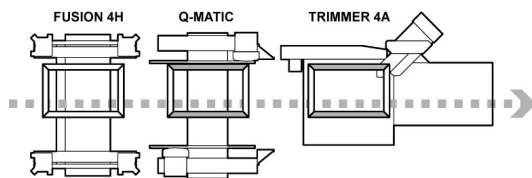
Second milling station

The second Q-matic 2 milling centre that receives the frame rotated by 90° allows machining the other two sides of the frame in the welding and corner cleaning line. The productivity level has been achieved with the management of two carriages that, in a completely independent way, can carry out machining operations on two sides of the frame at the same time, without any type of functional or time limit. The two carriages are managed in "parallel", achieving the productivity of two separate modules. The control unit supervises their respective position and coordinates the machining operations, thus minimising the cycle time.

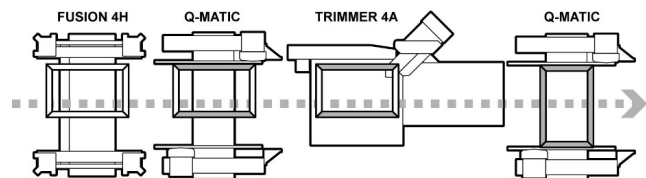
05

Line supervision

Integra is easy to use and characterised by a particular flexibility: system operation can be managed by a single operator (from the Fusion 4H welding machine loading workstation), while any information concerning the machining in progress (data relevant both to the frames being machined and to the types of machined profiles) can be displayed via any interface connected to the line. The serial connection ensures that the required data are shared and allows distributing and/or collecting process information from a single point.



INTEGRA line for PVC with 1 Q-matic



INTEGRA line for PVC with 2 Q-matic

PROFILE DIMENSIONS (*)

Frame external maximum dimensions (mm)	2,500 x 2,500 (2.8 kg/m)
Frame external minimum dimensions (mm)	400 x 350
Frame internal minimum dimensions (mm)	350 x 300
Max. height of the profile to be machined in the line	120
Max. height of the profile to be transferred without machining on Q-MATIC	180
Minimum profile height (mm)	40
Maximum profile width (mm)	150

LINE FUNCTIONS

Heating plate temperature check (°C)	200 ÷ 300
Welding bead size (mm)	2 (standard) 0.2 ÷ 2 (optional)
Welding bead restrictor temperature check (°C)	Up to 70
Light indicator and head protection	●
Unit for frame outfeed from welding machine	●
Gasket check system	○
Drilling for wall mounting	○
Drilling for crosspiece fastening	○
Scutch drilling	○
Machining for cremone bolt	○
Drilling for frame hinges	○
Drilling for door hinges	○
References for striker plate screwing (tack welds)	○
Fan slots	○
Condensate drain slots	○
Automatic frame transfer	●
Unloading on gravitational bench	○
Frame positioning: automatic with turntable	●
Milling of different profiles	○
Drilling for hinges	○

(*) Performance to be verified after the analysis of specific profiles and relevant machining

- Included
- Available

2018/11/01

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The images are only given for illustrative purposes