



SM 4H PRO FAST

Welding and cleaning
machines



SM4H PRO FAST is a CNC horizontal welding machine designed for welding PVC profiles. It enables the production of frames by simultaneously welding all four 90° corners. It can perform welds in the traditional mode, producing welding beads that are mechanically removed in a subsequent phase of the production process, or in Seamless mode, which involves a simple profile preparation step that allows for beadless welds on the visible surfaces of the frame.

The frame welding process is carried out in symmetrical (bidirectional) mode, with simultaneous movement of the slides along both longitudinal and transverse axes. This profile alignment method improves the polymerization of the molten material by completely eliminating transverse micro-slippages. The machine can also be configured for asymmetrical (unidirectional) welding mode, which is necessary for completing structures with a transom.

The PRO FAST version is specifically designed to optimize Seamless welding technology by integrating knives into the welding units to control the quality of the finish. This solution allows the use of simpler counterblocks, reducing costs and testing time. The Seamless welding technology also significantly reduces and simplifies the subsequent processing cycle, delivering major benefits in terms of productivity and final quality.

In traditional mode, the generated welding bead is precisely controlled to ensure optimal aesthetic quality after removal. The thickness of the welding bead can be automatically managed within a range from a minimum of 0.2 mm to a maximum of 2 mm.

The machine is configured for manual loading and automatic unloading. Designed to best meet the principles of ergonomics and safety, the light indicators and movements of the welding heads make the interaction between the operator and the machine simple and intuitive: both during the profile loading phase and in the subsequent heating and welding phases, the lights on the heads indicate the machine's operating status; when required, the pair of heads approaches the operator to allow correct and easy positioning of the piece.

All the cycle variables (times, speeds, etc.) are programmable and can be set automatically in the machine.