INGENIA

Ingenious engineering.

Ingenia GmbH
Hauptstrasse 72 · DE 56858 Altlay
Phone +49 6543 5049-0
Fax +49 6543 5049-29
Mail info@ingenia-gmbh.de
Web www.ingenia-gmbh.de

Technical Data – Profile Butt Welding Machine Model 1.0 X-PV

INGENIA 1.0 X-PV

Profile Butt Welding Machine Model 1.0 X-PV

INGENIA butt-welding machines, model X-PV, are modular machines for the fabrication of any thermoplastic profiles and small sheets. The welding cycle is running automatically, the setup of the main welding parameters is realized via display. The horizontal working machine may be equipped with an angle adjustment for angles between 30 and 180°.

Structure of the machine:
The main frame is designed as a solid rectangular- hollow- steel profile construction. The welding tables are machined after the machine has been assembled. It is of solid aluminum construction. The tables are designed to avoid misalignment of the resulting weld by torsion and load stress even in high frequent usage. The machine is driven directly by pneumatic cylinders. Permanently lubricated ball bearings with solid dimensioning guarantee precision for lifetime.

The clamping plates consist of solid aluminum plates driven by pneumatic cylinders. The Teflon- coated heating- element is designed for long-term applications at max. 260° C. The heating plate is covered by Teflon film with automatic strapping system

The simple to operate push button controls and standard PLC- panel is integrated in a control desk. It is located at the front of the machine.

Operation of the machine:
A standard PLC- processor executes the welding process. All operating elements are located in the control desk.

The main welding parameters have to be setup by the user. The welding forces are set up manually with a pressure regulation valve.

Technical data of standard profile welding machine, model 1.0 X-PV:

	Unit	
Main dimensions		
Length	mm	730
Width	mm	690
Height/ height of table	mm	1300/910
Machinery weight	kg	250
Range of application		
Width of heating element/ optional	mm	280/420
Clamping heigth/ optional	mm	120/180
Weldable angle	°	30-180
Energy supply		
Electrically		230V, 50/60 Hz
Performance	kW	1,5 to 1,8
Pneumatic	bar	min. 6 / max.10
Forces		
Clamping at 6 bar/ 8 bar	N	3000 / 4000
Welding forces at 3 bar/ 6 bar/ 8 bar*	N	935/1870/2450*
Heating unit		
Heating plate, with holding and stretching device for Teflon film	mm	200 x 280 x15

*max. welding force. The maximum weldable dimension/ surface is depending to the material

Basic equipment:

Fixed control panel at front side

Machinery control via Moeller “EASY” PLC

Welding cycle according DVS: alignment, heating, joining, and cooling

Meltaway controlled by calibrated end stops

Tables with INGENIA pneumatic-direct-drive

Digital setup of heating time

Digital setup of cooling time

Temperature regulation system and digital temperature read out

Temperature control integrated in start process of weld cycle. If temperature out of tolerated temperature range the machine will not release start

Pneumatic control system made of single valve technology (service friendly)

Heating element 200 x 280 mm with Teflon-film covering, T_{max} = 260^{0}C, connected with plug and socket for easy exchange

Integrated alignment plate for easy sheet feeding

Separated clamping left and right side

Mechanical setup of alignment travel

Mechanical setup of joining travel

Clamping with 2 Step-pressure security

Angle adjustment 30-180°

Paint: red / grey

**** changes in technical details possible ****