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Technical Data – Palette Surface Welding Machine – Model: Y-P-SF

INGENIA 12.10 Y-P-SF

Butt welding machinery Y-P-SF

INGENIA butt-welding machinery, model Y-P-SF, are robust all-round machines to weld large surface part like palettes, sheets, and boxes, with horizontal weld plain. The welding cycle is running automatically, the main welding parameters are stored in a database, which is linked to the PLC-control. The machinery is designed to weld standard thermoplastics as PE, PP as well as recycling material.

Structure of the machine:
The main frame is designed as a solid rectangular- hollow- steel profile construction. The tables are designed to avoid misalignment of the resulting weld by torsion and load stress even in high frequent usage. This press type of the machine is done by a direct drive. Permanently lubricated ball bearings (Deutsche Star) with solid dimensioning, guarantee precision for lifetime.

The clamping system consists of 2 vacuum plates with vacuum supply and security system. The plates are formed according the shape of the material. The heating plate is Teflon coated and designed for a max. working temperature of 260°C.

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 SIEMENS PLC- processor executes the welding process. All operating elements are located in the control desk.

The main welding parameters may be stored in an optional database for all standard plastics. All parameters meet the requirements established by DVS e. V. However all parameters may be adopted individually by the user. The welding forces are set up manually with a pressure regulation valve. Optional the processor may execute the setup of the welding forces via an optional proportional valve. An optional printer may be linked to the processor to prepare a welding report.

However, with any grade of automation, the machine is performing in automatic cycle.

Standard equipment:

Fixed control panel mounted to right side of frame

Machinery control via **SIEMENS** S7 PLC

Welding cycle according DVS 2207-1 resp. 11: alignment, heating, joining, and cooling

Free programmable Database for different parameter and material

Safety stop in case of pressure drop below 6,5 bar (95 psi)

Multiple Temperature regulation system and digital temperature read out

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

PLC information in clear words. All problems of the machinery are shown in the display in clear words.

Possibility to interrupt or extend single times

Parameters stored in data base for PE / PP (other materials on request)

Possibility to interrupted or extend actual program step

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

Pair of vacuum clamping plates with supply unit and security system

Heating element with Teflon- coating, T_{max} = 260^{0}C, connected with plug and socket for easy exchange within 5 minutes. If necessary, tools fitted to the shape of the weldable parts.

Safety lines or safety stops alongside of the machine for possible emergency case

Safety measure according EN regulations

Paint: red / grey

Technical Data of the standard machine, Model Range xx.xx Y-PSF:

	Unit	12.08 Y-P-SF	12.10 Y-P-SF	12.12 Y-P-SF
Main dimensions				
Length	mm	2500	2500	2500
Width	mm	3500	3500	4300
Height/ height of table	mm	2000/600	2500/600	2500/600
Machinery weight(approx.)	to	3,2	3,2	3,8
Arbeitsbereich				
Maximum part dimensions	mm	1200 x 800	1200x1000	1200x1200

Energy supply				
Electrically			230/400 V	50 – 60 HZ
Performance	kW	30	30	40
Electrical Plug	CEE	32A	32A	32A
pneumatic	bar	7	7	7
Machine force				
Minimum weld force	N	1000	1000	1200
Maximum weld force	N	60.000	60.000	60.000
Heating unit				
Heating plate		1200 x 800	1200x1000	1200x1200

**** Changes in technical details possible ****