


STIRPOWER series – max power max force STIRTEC



WE FORGE HARDER THAN THOR!

High-strength Steel up to 25mm 

Titanium up to 25mm 

Copper up to 30mm 

Aluminum up to 70mm 

High-strength Aluminum up to 30mm 

The machines in this series are conceived as 2- or 3-axis heavy-duty steel welding machines.

The implemented high sophisticated FSW- software enables highest flexibility.

The STIRPOWER series is offering high-end and high-quality steel FSW production machines. All machines are equipped with Stirtec's **MaXstir™** FSW-Software including a full traceability for each part.

STIRPOWER series

Jog-mode for weld control

Speed-range of up to 3 000 rpm and high power / torque

High resolution force measurement system

Realtime process measurement and control

Available as:

-  **STIRPOWER50**
-  **STIRPOWER100**
-  **STIRPOWER150**

SIEMENS SINUMERIK 840D control system

FSW process data collection and monitoring

Z-Axis FSW force control system up to 150 kN



HEAVY DUTY
Friction Stir Welding

STIRPOWER series – max power max force

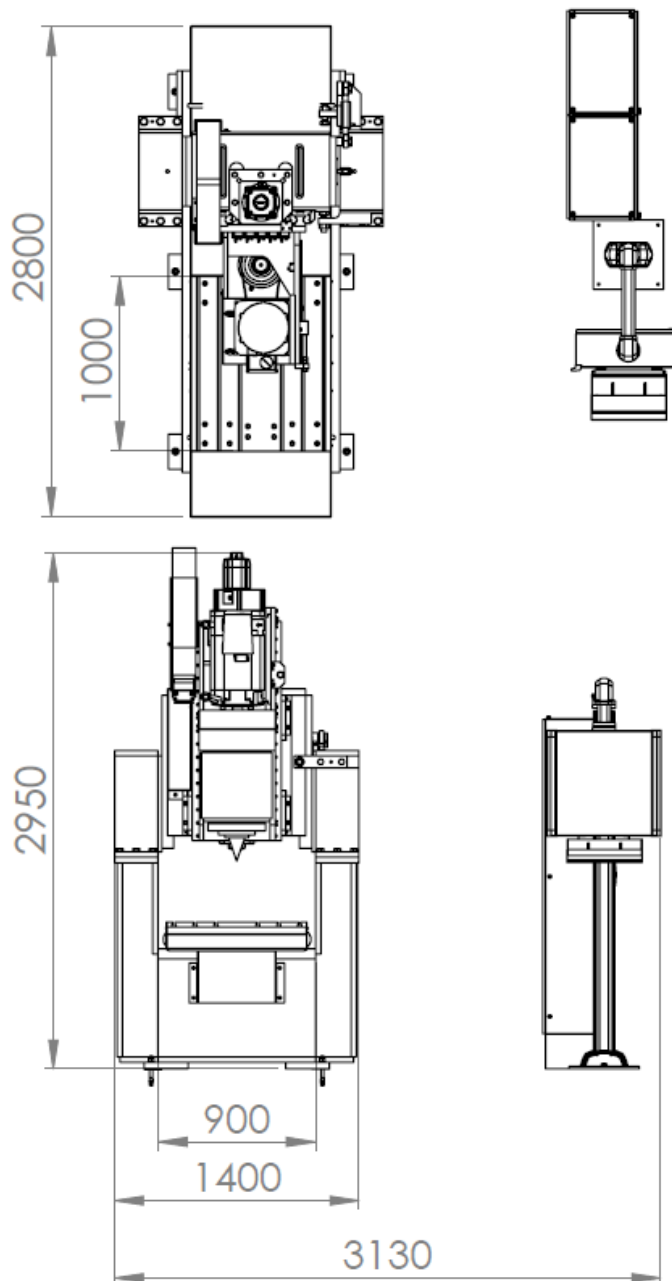


Standard Machine Configuration

- ✔ SIEMENS SINUMERIK 840D SL
- ✔ SIEMENS SINAMICS S120 digital
- ✔ FSW Spindle 750 - 3 000 rpm
- ✔ FSW force measuring system
- ✔ Safety fence
- ✔ Full protection guarding of all moving items on the machine
- ✔ All electrical devices comply with CE
- ✔ Interface for remote diagnostic service

Options

- ✔ Additional Y-axis
- ✔ Individual workspace adaption
- ✔ Water cooled tool holder including chiller
- ✔ Gas shield
- ✔ Inductor
- ✔ Round table (e.g. pipe welding)
- ✔ Video system



Operating Travels

X-axis	1 000 mm
Z-axis	350 mm
B-axis (tilting)	0-5°

Feed Rates

Cutting feed rate in X, Z axes	500 mm/min
Rapid traverse in X, Z axes	1 000 mm/min

Accuracy (VDI/DGQ 3441)

Positioning P X, Z axes	0,04 mm
Repeatability PS X, Z axes	0,03 mm

Spindle FSW	Stirpower	50	100	150
Speed (rpm)		3 000	1 500	750
Torque (Nm)		300	600	1 200
Max. force in Z-axis (kN)		50	100	150
Max. force in X-axis (kN)		20	40	60

Tool clamping taper	Short taper flange
Control concept	Force and position

Control System

SIEMENS	SINUMERIK 840D sl
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Work Table

Table dimension	1 000 x 800 mm
Number of T-slots	6
Maximum load	200kg

Electric Power Requirements

Mains voltage rating	3 x 400 V / 50 Hz
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Weight Data

machine and electric cabinet (depending on options)	approx. 6 000kg
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Machine size

Machine width x depth	1 400 x 2 800 mm
Machine height	2 950 mm



We do our best to improve continuously the performance of our machines. Please note that therefore some specifications may have changed.



**STIRPOWER
SERIES**



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