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how to weld: full-EV battery tray

FLATLINE FSWC-2519

ALL-ACCESS FOR NON-STOP PRODUCTION

Specifications

The Stirtec Flatline FSWC-2519 is seen as most-productive Friction Stir Welding center following the production of large full-EV battery trays and midsize battery systems. The open gantry design ensures accessibility for part handling simultaneously to the FSW welding cycle without any disruption of the production process. The machine type of the Flatline FSWC-2519 synthesizes latest FSW technology RapidStir® with the possibility for multi-spindle installation.

- ▶ STIRlytics process software for 100% traceability
- ▶ FSW force and position control system for optimum welding results
- ▶ synthesizing RapidStir® technology for welding speeds up to 5.000mm/min
- ▶ simultaneous part handling to the FSW welding cycle
- ▶ automatic tool pick-up station with 5 tool pockets
- ▶ upgradeable multi-spindle with the installation of second gantry system

MACHINE INFORMATION

machine dimensions	4500 x 2100 x 2780 mm
spindle orientation	vertical

OPERATING TRAVELS (3-AXIS FSW UNIT)

X-axis binder (table traverse)	2500 mm
Y-axis cross slide	1900 mm
Z-axis slide ram	600 mm

FSW WELDING FORCES & FEED RATES

max. welding force in Z-direction	25 kN; spindle rotation speed 5.000 rpm
rapid traverse in X, Y, Z-axes	20.000 mm/min
positioning accuracy in X, Y, Z-axes	0,02 mm

CONTROL SYSTEM

control system	SIEMENS Sinumerik one
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MACHINING TABLE (DIMENSIONS)

table dimensions	2500 x 1900 mm
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- ✓ die casting housings and full EV battery tray with part size up to L 2200 x W 1500 mm
- ✓ achievement of highest welding speeds in reference to the application (up to 5.000 mm/min)
- ✓ possibility for dual part operation simultaneously (table extension up to 5.500mm in length)