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how to weld: battery housing

V-FSWC1060

HIGH-PERFORMANCE FRICTION STIR WELDING UNIT



Specifications

The Stirtec V-FSWC1060 is seen as high-productive Friction Stir Welding center following the production of application within the automotive industry for midsize battery systems for PHEV and cooling system e.g. heat sinks. The machine type of V-FSWC1060 is a globally unique solution that synthesizes latest FSW technology with upgradeable milling functionality in a single production center (Stirtec 2-in-1 concept).

- ▶ STIRlytics process software for 100% traceability
- ▶ FSW force and position control system for optimum welding results
- ▶ suitable for all aluminum alloys and die casting components
- ▶ automatic tool change system for 24 tool pockets
- ▶ upgradeable milling functionality in a single production center

MACHINE INFORMATION

machine dimensions	2750 x 2120 x 3100 mm
spindle orientation	vertical

OPERATING TRAVELS (3-AXIS FSW UNIT)

X-axis binder	1016 mm
Y-axis cross slide	610 mm
Z-axis slide ram	760 mm

FSW WELDING FORCES & FEED RATES

max. welding force in Z-direction	11,5 kN; spindle rotation speed 6.000 rpm
rapid traverse in X, Y, Z-axes	40.000 mm/min
positioning accuracy in X, Y, Z-axes	0,008 mm

CONTROL SYSTEM

control system	SIEMENS 840D sl / Sinumerik one
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MACHINING TABLE (DIMENSIONS)

table dimensions	1270 x 590 mm
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- ✓ battery housings, cooling units and heat exchanger with part size up to L 950 x W 450 mm
- ✓ high-volume production with optional automatic pallet change system (APC)
- ✓ robust and stiff machine design allows the achievement of high welding speeds