Integrated Welding Tray Production

Overview

The product integrates various new unit technologies currently developed, such as visual positioning systems, weld seam tracking systems, robot systems, intelligent control systems, intelligent production management systems, etc., especially for long welds . As CTP (Cell to Pack) technology completely subverts the traditional battery pack structure, the "role" of the battery tray has shifted from passive load-bearing to active integration. The requirements of lightweight (wall thickness. Fiber laser welding, a method that has been widely adopted by leading E-Mobility manufacturers, both creates strong aluminum welds virtually free of cracks and porosity and is faster, more reliable, and more easily automated than other welding methods. Learn how we combine laser expertise with. Aumann provides highly automated manufacturing solutions for battery boxes. Aumann is experienced in sophisticated fixture. Battery Management Systems (BMS) monitor and control the temperatures during the charging and discharging processes of the battery. As they are integrated into the coolant circuit to regulate the temperature of the battery, these circuits of battery trays, stator housings and heat exchangers. What Is Friction Stir Welding (FSW)?

FSW is a pressure welding process. During this innovative welding process, metals are stirred at their seam with a rotating tool and – in comparison to the arc and laser beam welding processes—are not melted. TRUMPF provides a unique complete solution for electromobility for the tightness, crash safety, productivity and flexibility requirements. This means that you can weld all interior components.

Article Content

Jan 05, 2026

Integrated welding cell helps major agricultural machinery

An ABB robotic welding cell is enabling agricultural machinery manufacturer Shelbourne Reynolds to dramatically reduce production times for its range of articulated hedge cutting tractor

Dec 27, 2025

Friction Stir Welding applications for E-Mobility | Stirtec

Suitable for inverter housing and e-mobility, we lead the production of battery trays combined with the quality of high welding.

Mar 16, 2026

Robot-based Friction Stir Welding: Production line for battery trays ...

Friction stir welding (FSW) is the optimum joining process for non-ferrous metals with low melting temperatures and for mixed metallic joints. In e-mobility in particular, this technology has

Mar 02, 2026

Challenges and opportunities in laser welding of 6xxx high strength ...

This paper reviews current challenges and opportunities for construction of battery tray using aluminium alloys with laser welding process.

Jul 23, 2025

Battery Packs

The unmatched capabilities of IPG lasers enable high-speed battery pack and tray welding that creates high-strength joints faster and more reliably than any other laser welding solution on the market.

Feb 21, 2026

Friction stir welding in the automotive industry | Grenzebach

Grenzebach supports the automotive industry in the production of heat exchangers and battery trays, which are mainly

Jun 26, 2025

New Energy Battery Tray Laser Welding

The product integrates various new unit technologies currently developed, such as visual positioning systems, weld seam tracking systems, robot systems,

Jul 09, 2025

Battery packs – laser welding and laser cleaning | TRUMPF

We cover the entire sheet metal process chain with our many years of comprehensive expertise in sheet metal processing. Our 2D laser cutting

Mar 03, 2026

Battery trays welded by Friction Stir Welding

Discover how Friction Stir Welding delivers lightweight, crash-resistant aluminium battery trays with leak-tight joints and lower manufacturing costs.

Sep 18, 2025

FSW: Battery Trays

Benchmarking of Friction Stir Welding and Other Processes for Battery Trays of Compact Crossovers such as VW ID.4 or Ford Mach-E.

Jun 25, 2026

Friction Stir Welding at Scale with Integrated CNC Platforms

Discover how integrated CNC machining and friction stir welding platforms support large-scale manufacturing across aerospace, EV, rail, energy, and marine industries.

Apr 08, 2026

CMT Welding: Innovation in Aluminum Battery Tray

CMT welding has the advantages of low heat input, no spatter transfer and intelligent parameter control, providing innovative solutions for battery tray manufacturing.

Jan 04, 2026

Aluminium welding and assembly line for battery tray and modules

A new production line is specifically designed for the prototype production of battery trays and modules structures, and subframes in aluminium hybrid construction.

Oct 22, 2025

Battery trays

Our core expertise is in process knowledge in the subjects of welding, automation and handling. We also specialise in providing solutions for downstream, end-of-line processes. Aumann is experienced in

Oct 05, 2025

Streamlining H-Beam Production with Integrated

In steel fabrication, efficiency is king, and integrated assembly, welding, and straightening machines are revolutionizing H-beam production. At

Apr 27, 2026

Welding Systems Integration

The aim of the Welding Systems Integration (WSI) team is to provide the next generation of smart autonomous welding systems based upon TWI''s world-class process knowledge, developed within

Nov 26, 2025

Welding expertise with battery trays

If required, we equip our customers'' series production with robotic welding cells. As a solution provider, we offer complete solutions from a single source, both for

Sep 09, 2025

Cable Tray Wire Mesh Welding Machine

The DAPU cable tray wire mesh welding machine is engineered for high-efficiency production of welded cable trays with precise dimensions and consistent quality.

Jun 01, 2026

Mechanically Joined Extrusion Profiles for Battery Trays

These findings suggest that the production of leak-tight linear joints of aluminum extrusion profiles is not only feasible but also suitable for integration into battery trays.

Sep 02, 2025

(PDF) Challenges and opportunities in laser welding of

This paper reviews current challenges and opportunities for construction of battery tray using aluminium alloys with laser welding process.

Jun 07, 2026

SKS: Battery Tray Systems

Battery tray systems are a relatively new field of application in automotive engineering, which is growing very rapidly due to the worldwide promotion of e

Jan 09, 2026

CTP Battery Tray Welding Solutions | Tech Innovation & Quality

The welding production line needs to support mixed production of multiple models of trays, be able to achieve "one-click change of type", and be compatible with tray structures of

Apr 25, 2026

ERTC 2008 Paper_Designing High Performance Trays

Through a look at the evolution of trays from their simplest designs to their high performance counterparts, 2 case studies will be presented to show the positive impact of high performance trays

Dec 06, 2025

UNLOCK AUTOMOTIVE EFFICIENCY

Manufacturers are making cars lighter and using more aluminum and high-strength steel in battery tray manufacturing, as well as new joining methods to join dissimilar materials, such as plastic and metal

Aug 07, 2025

Enhancing Efficiency with Thermoformed Healthcare

In the fast-paced world of healthcare and pharmaceuticals, thermoformed automation trays, also known as work-in-process (WIP) trays, are

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