

## PROFIL® Compression Limiter: Delivering 55% Faster Install for Electric Vehicle Application

### OVERVIEW

Customer:  
**Electric Vehicle  
Manufacturer**

Application:  
**Battery Tray**

Solution:  
**Compression Limiter  
(C-Frame Installation)**



By switching from a weld fastener to a PROFIL® solution, this customer achieved significantly faster part installation along with improved structural integrity for the EV battery tray application.

### CHALLENGE

Labor-intensive install, weak structural integrity from use of weld fasteners

- 20+ weld fasteners used on battery tray support rails
- Welding process required for fastener installation – yielding weak joints from thermal stress
- Weak joint connections compromised the battery tray support
- Likelihood of corrosion between fastener/tray due to welding process



### SOLUTION

**PROFIL® Compression Limiter  
(C-frame installation)**

- Mechanically attached solution – no secondary welding operation needed
- Structural advantage – designed to maintain joint integrity
- Withstands compressive force when mating screw is tightened
- Corrosion-resistant – can plate with zinc/zinc nickel with no corrosion over time



### RESULTS

Installation time reduced by **55%**

- Fastener installation time reduced from 11 seconds to 5 seconds
- Repeatable PROFIL® install consistently meets performance requirements
- Welding process eliminated – removing risk of weak joint connections
- No risk of corrosion between fastener/support rails
- Custom-engineered solution creates opportunities for new EV applications

