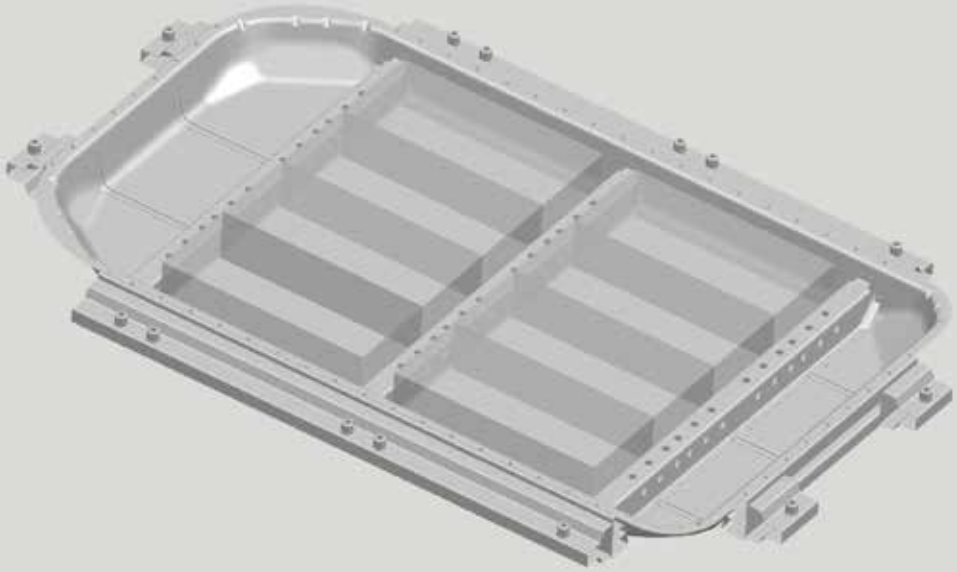
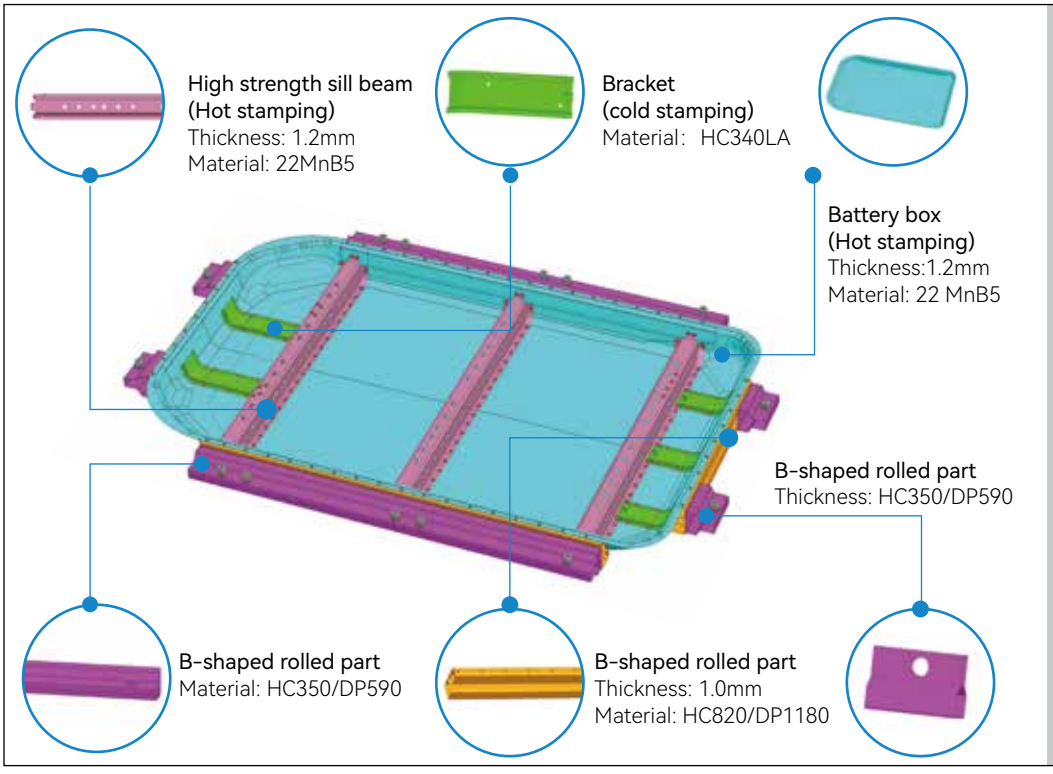
PRESSLER



Ultra-high strength & Corrosion resistance Steel battery pack solution

With a focus on cost reduction, weight loss and high performance. Pressler has developed an ultra-high strength hot stamping, galvanizing and TRB forming process. The integrated battery pack structure has excellent anti-collision and anti-extrusion performance and has been designed and developed to provide excellent side impact protection for the internal cell and battery module. Our solution provides our customers with a comprehensive advantage in cost, performance, lightweighting and other aspects.

Main Structure



Battery pack

- size

2400mm x 1516mm x 152mm

- weight

75.04kg

- side pilot tunneling method

A single battery module

- size

620mm x 1060mm x 120mm

- charged amount

90KWH

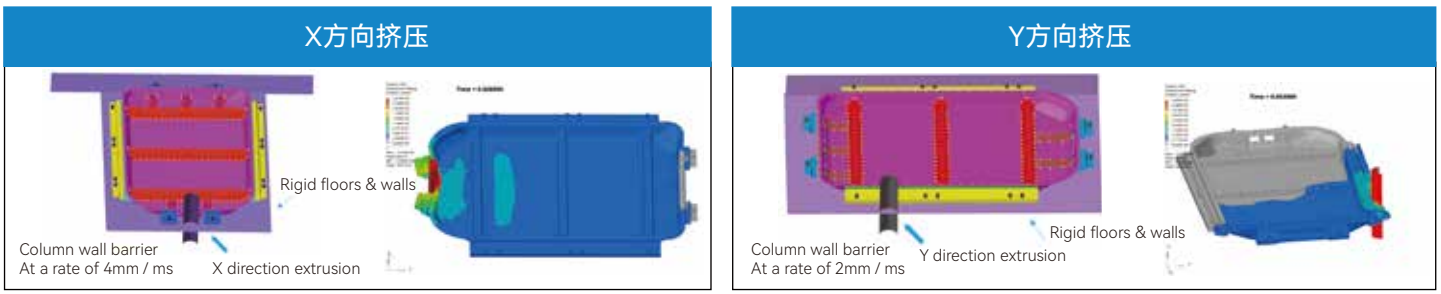
- 2 large modules

Features

- Ultra-high strength bottom protection plate, large size hot stamping container takes into account hardness and collision performance, providing better fire and impact resistance;
- The lower tray adopts hot stamping integrated forming process, no welding connection, good sealing performance;
- Using hot pressing galvanizing process, the coating is completely not affected by heating, with excellent corrosion resistance;
- Steel parts are used to reduce the material cost.

Performance

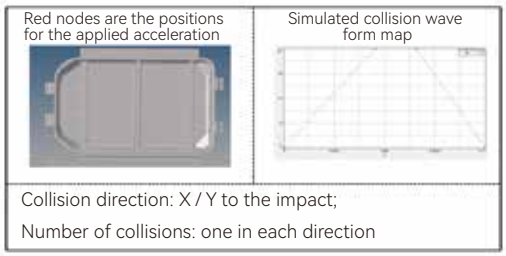
Squeeze simulation



According to the national industry standard GB38031-2020, Pressler high-strength integrated battery tray, the collision simulation meets the standard.

Collision simulation

component	material	+X	+Y	Tensile strength	Evaluation criterion
		Mises stress (MPa)	Mises stress (MPa)	(MPa)	
B-shaped rolled part	HC820/DP1180	30.53	36.23	1180	Stress Vs. materials Anti-pull limit, then there is no risk of cracking
Convex Shape rolled part	HC350/DP590	62.08	171.94	647	
body/ sill beam	22Mnb5	9.51	65.57	1518	



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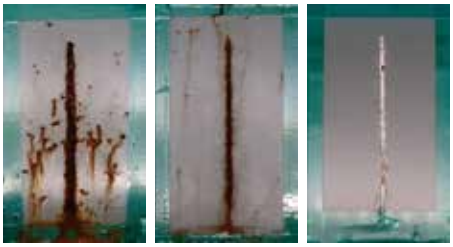
Sealing property

The battery pack mainly uses FIPFG closed hole foaming, low water absorption rate, and the compression rate can reach more than 50%, the sealing effect is good;

Pressler Hot forming battery pack integrated forming, only the upper cover and the lower box need to be sealed.

Corrosion resistance

From the ten-week cyclic corrosion resistance test, we found that the Pressler vacuum hot formed electro-galvanized blank has good anodic protection effect. (Rusting Ri 0 level，Blistering B 0level，Rust creeps Ud (mm) 0mm).



22MnB5　22MnB5+AlSi　22MnB5+EG

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