# Prismatic Cell Stacking

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**Industry Trends in next 5 years**

- EV will replace 70% ICE
- Long range EV
- Long life EV
- Fast charging for EV

**Market Drivers to the trends**

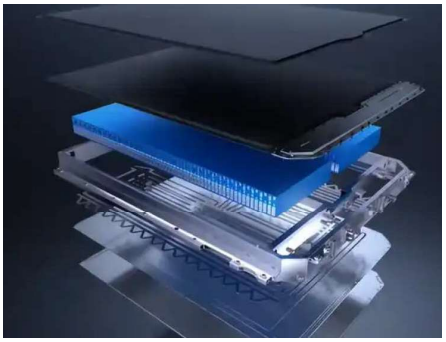
- Environment protection
- Shortage of traditional energy
- Smart driving
- Cost saving on OEMs

**Customers Product**

- Li-ion Prismatic Blade Cell
- CTP Pack, that means “the cell is integrated to pack directly without module phase”

**Outstanding Features/Designs to meet 5Y Trends**

- High-energy density and safe battery
- Low-cost battery
- Long life battery
- Stable and high-efficiency automated production



**Outstanding Performance provided by the Application**

- Cost saving on the battery Pack
- Space saving on the battery Pack
- Increase the energy density of the battery Pack

# Prismatic Cell Stacking

**Application Description**

- Dispensing PSA and PUR on the edge of the prismatic cell surface before stacking to replace the foam tape
- Spraying PSA on the prismatic cell to bonding the thermal insulation material before stacking to replace the double-side tape

**Components Characters**

- Prismatic Cell need stacking to put into the pack together and the gap between each cell need be filled
- Thermal insulation material is for EV safety

**Application Requirements**

- Precise control of the glue weight and bead size
- Full automated production
- Short dispensing time within 3 seconds

**Challenges or Problems from other solutions**

- Foam tape and double-side tape will need additional labor and increase the material cost
- Foam tape and double-side tape will need more cycle time

**Nordson Solution Description**

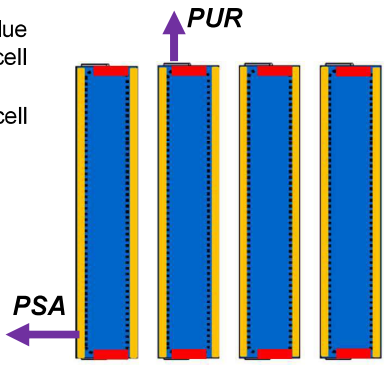
- Nordson dispense the PSA and PUR with AltaBlue and VersaPUR system on the prismatic cell surface
- Nordson also spray the PSA on the prismatic cell to bond the thermal insulation material

**Application Performance and Benefits**

- Save cost and space of the whole pack
- Increase the energy density of the battery Pack

**Nordson Equipment/System Description**

- VersaPUR
- AltaBlue Plus / AltaBlue TT
- SureBead
- AltaSpray
- 2xVersaPUR + 5xAltablue systems for each 1GW line




**Glue Description**

- PSA:

1. Enough bonding strength between the cell and insulation material

- PUR:

1. Enough bonding and shear strength between the prismatic cell

# Prismatic Cell Stacking

**Competition/alternative solutions Pro/Con**

- Foam tape/double-side tape
- Pros: Less equipment investment in the initial stage
- Cons: High cost of tape
- Cons: Hard to achieve full automation
- Cons: Long cycle time

**Nordson Solution Benefits/Value to Customers**

- Save the cost of the whole battery pack
- Increase the energy density of the battery Pack
- Increase the production efficiency
- Implement full automation and no labor

**Key Application Winning Principles**

- Good performance of Nordson VersaPUR and AltaBlue system
- Rich application experience accumulated from pervious EV projects that competitors did not have

**Target Customers Identifications**

- Top Prismatic battery manufacturers
- Top system integrators

**Approach and keys to decision-making**

- Makes the designers of top Prismatic battery manufacturers interested with the application
- Face-to-face talk to present the solution to their expert and designers
- Show the successful reference in top customers

**Partners Identifications**

- Key system integrators
- Glue suppliers: like H.B,fuller, Henkel and other local suppliers.

**Success References of customer name & product**

- Vremt (Geely)
- IBT (GAC)