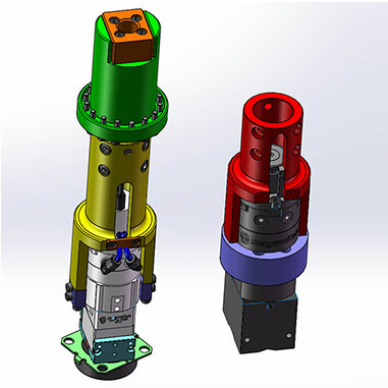

Nowadays, automotive components suppliers need to increase productivity while mitigating production costs.

The production means have to be more reliable, more available, more versatile and cheaper to fulfill the industrial goals.

When it comes to alternators components that can be grabbed by a magnet, the technical challenge is to find a tool that offers compactness for easy access inside narrow spaces and power to handle those heavy winding parts. Moreover, the tools shall withstand high duty cycle to follow production flow.

The switchable magnet AR series offered by PES perfectly meets the above-mentioned expectations. They combine power and compactness for full structured bin picking capabilities.

Indeed, the robot shall slip into the parts to touch the magnet working surface that are hard to access but EOAT size is also critical for access in bin corners at different depths.

Key Features

- High power/contact ratio
- High duty cycle to support production flow needs
- Pneumatically actuated, no need for energy during the handling operation
- Custom poles shape (pole shoes) to better fit to the target

PES Support Outcomes

- Tool dimensioning and selection
- Pole shoes design and integration follow-up and validation

Advantages

- Fail-safe
- Easy integration by avoiding complex gripping issues
- Flexible, can be used for several parts size or shape
- Minimize EOAT size

Benefits

- PES support and expertise minimize project risks
- Increased productivity
- Low maintenance
- Unique magnetic gripper reference reducing invetory management efforts

Facts & Figures

- Magnet field actuation time is measured in milliseconds
- Lifetime can reach **3 million of operation cycles** depending on gripping conditions
- **Customer plant example : ~10 cells equipped, bin pick and place cycle time 7s**