

# PedTec™

## Single Weld Gun Solution



## Solutions for Spot Welding



Ver. 1.0

CenterLine (Windsor) Limited  
CENTERED ON SOLUTIONS

# PedTec™ Integrated Solutions

## Pedestal Mounted Weld Guns with Integrated KapTec™ Cap Maintenance

### Engineered for Efficiency

Pedestal Mounted Spot Weld Guns are ideal for robotic weld lines where material handling (MH) robots transfer assemblies between welding operations. MH robots are more agile making them great for re-spot welding, while improving their utilization.

### Key Advantages



#### Lower Capital Costs

- A MH robot with a PedTec pedestal-mounted spot welding gun can eliminate the need for a spot welding robot.
- The MH robot gripper reduces the tooling required to locate and clamp the assembly for robotic spot welding.
- The MH robot can present the part to the pedestal-mounted spot weld gun to access welds on multiple planes that are inaccessible in a single geo fixture.



#### Cycle Time Optimization

- Allows work to take place in the cell while an operator is loading work pieces into the geo fixture.
- MH robots are typically more agile and faster than spot welding robots.



#### Robot Utilization

- The MH robot picks up re-spot welds, which reduces the spot weld robot cycle time at the geo weld fixture.



#### Reduces Floor Space

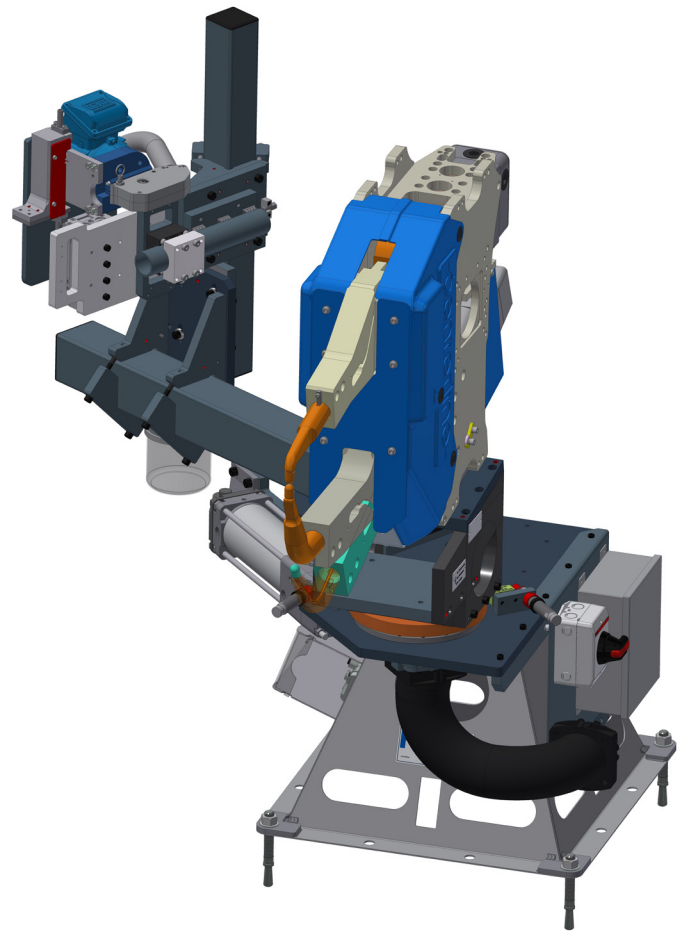
- The MH robot can replace a spot welding robot, reducing floor space.
- The pedestal-mounted spot weld gun is compact and pivots to the dresser.
- Easier to integrate into existing cells when a volume increase is required.



#### Weld Cap Maintenance

- Pedestal-mounted weld guns pivot to the cap dresser. The MH robot performs the weld cap change using the robot EOAT with a robot-mounted changer.
- KapTec floor-mounted dressers and changers are used for robot-mounted weld guns.

### PedTec Solution Weld Gun Pivots to the KapTec Dresser



*Custom applications available upon request.*

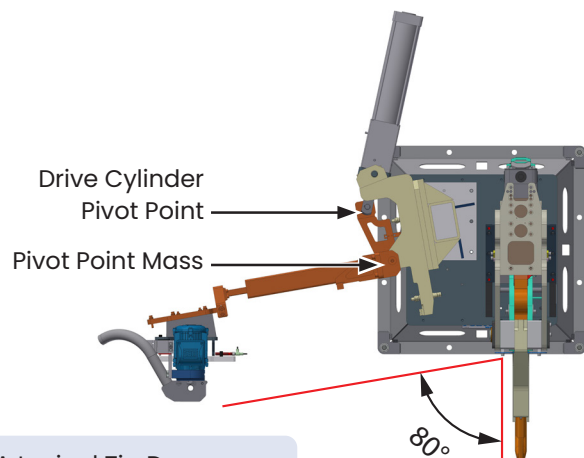
# PedTec Weld Gun Mounting

## Weld Gun Pivot Bearing and Dresser Arm Assembly

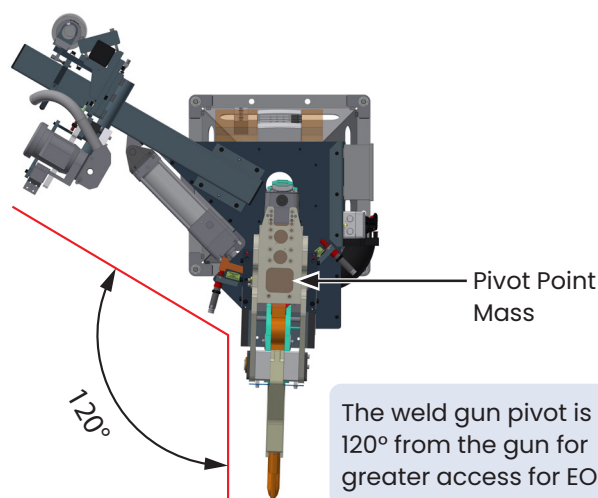
**Robust design for maximum stability:** Our weld gun pivots away from the weld area to a fixed position for cap dressing. This provides proven stability compared to a commercial bolt on swing arm with a heavy dresser mounted on the end of the arm. The arm swings the dresser into the weld zone.

### Features

- Integrated flexible solution that improves safety where the gun pivots to the dresser.
- Reduced floor space requirements.
- Ensure precise alignment to the weld tips.
- Shock absorbers protect the spot weld gun from vibration.
- Pivot cylinder with rod lock.
- Adjustable window for mounting the cap dresser with flexibility to cover a wide range of weld gun designs.



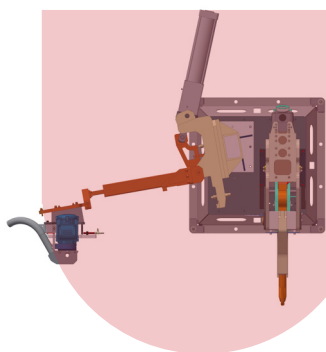
A typical Tip Dress Swing Arm is 80° from the gun.



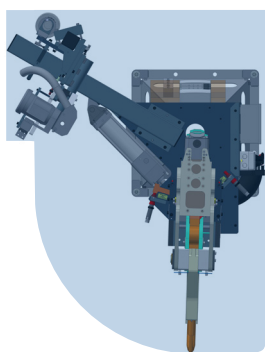
The weld gun pivot is 120° from the gun for greater access for EOAT.

## Floor Space Savings

### Swing Arm Dresser

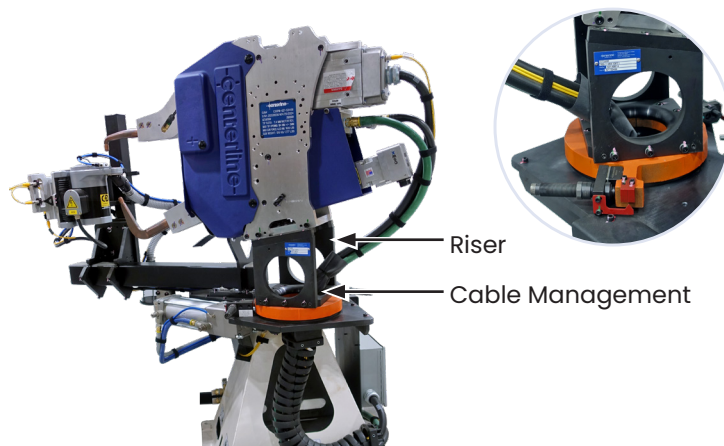


### Weld Gun Pivot



The Swing Arm Dresser has a larger arc than the Weld Gun Pivot. The Weld Gun Pivot results in floor space savings.

## Riser and Cable Management



Gun pivot tested to 500K cycles to simulate approximately fifteen years of service.

# Integrator Mechanical Assembly

## Flexible Integration Options

- **Without Weld Gun and Controls**

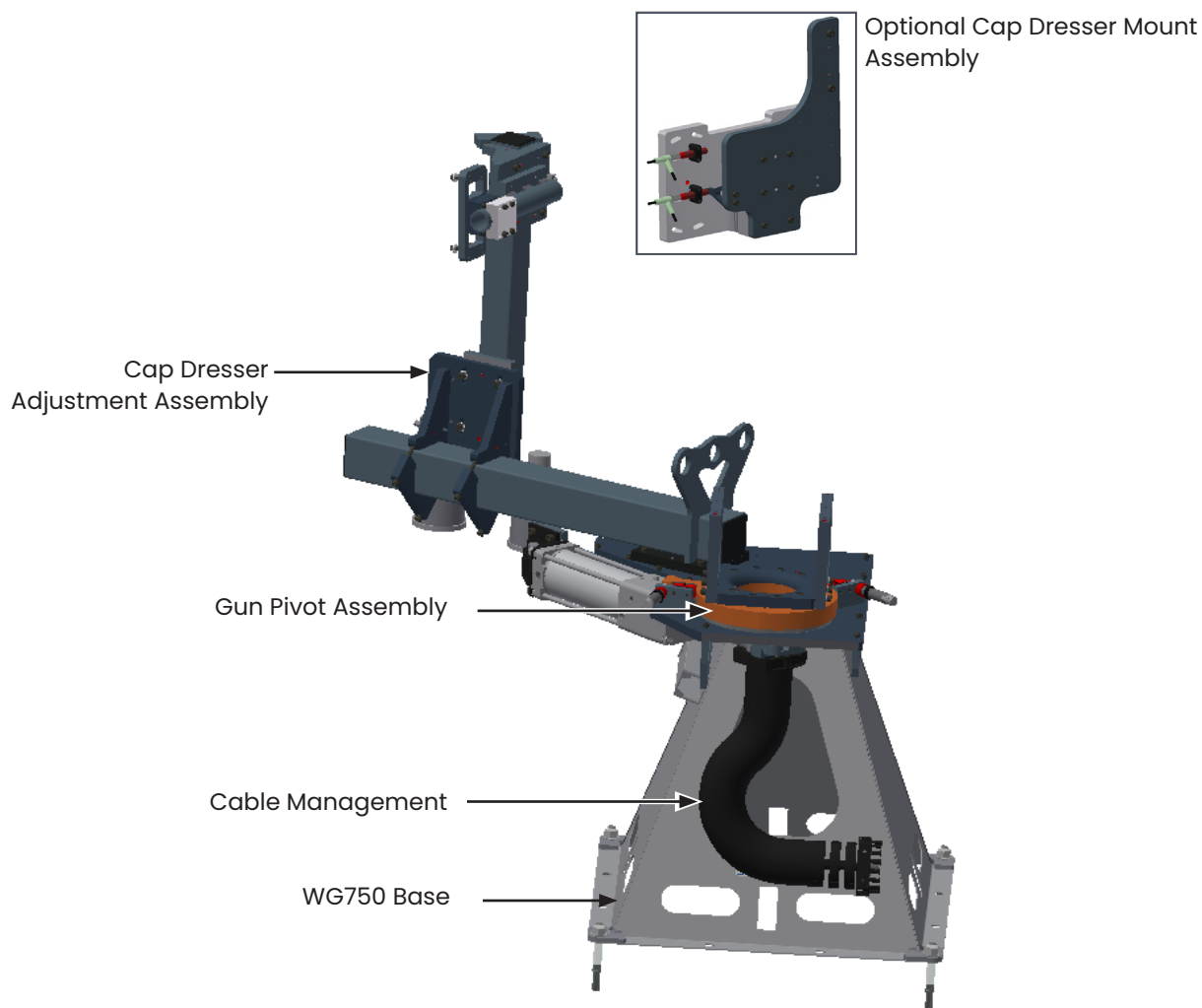
- Complete mechanical assembly **without** controls and pneumatics.
- CAD model for design.
- Generic electrical and pneumatic drawings.
- Sequence chart to support programming.
- Spare parts list.

- **Compatible with other manufacturers' weld guns.**

- **Optional** weld gun mounting plates and accessories available.

- **Dresser Mounting Assemblies**

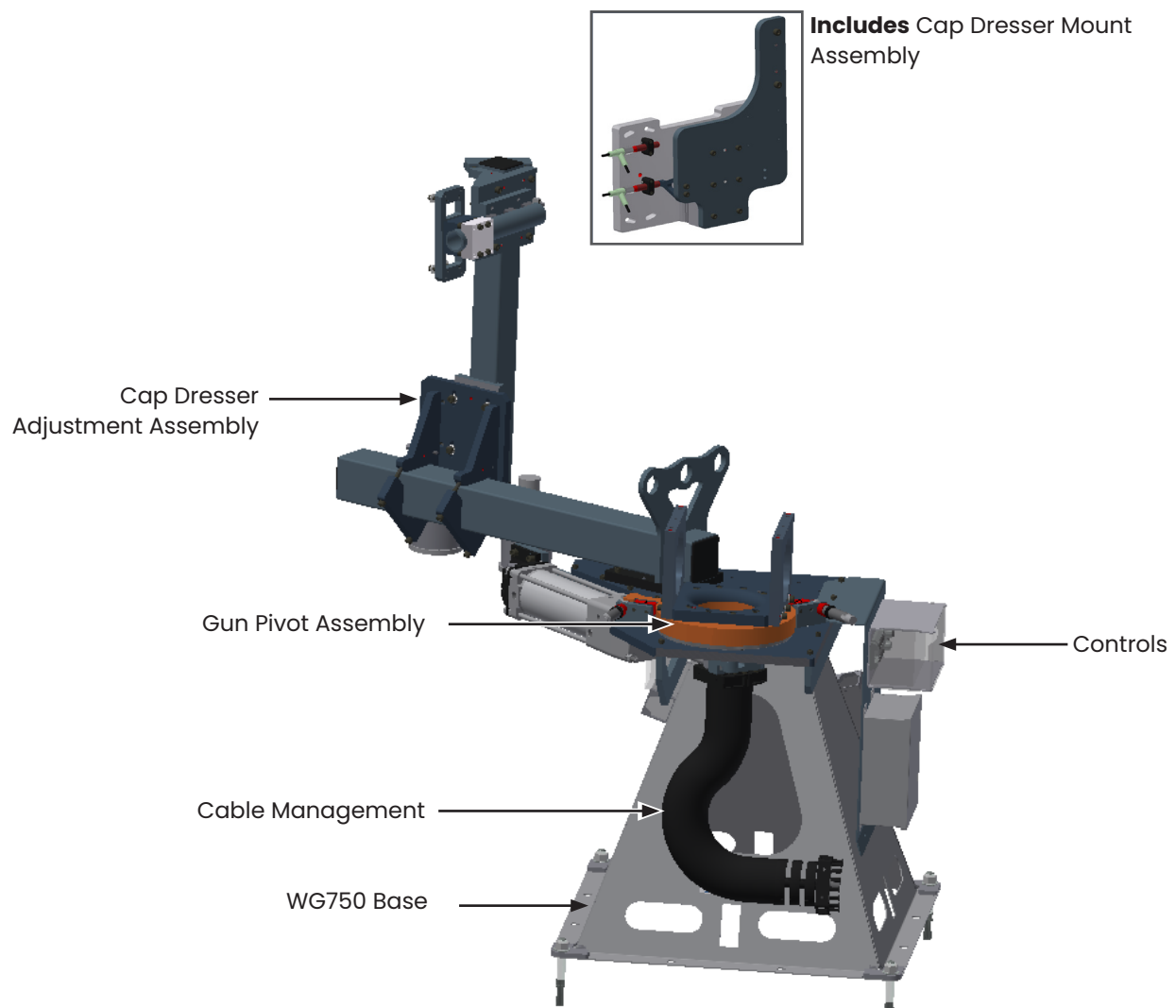
- Pre-designed mounting plates with pneumatic lifter for cap dressers from other manufacturers.



# Integration Ready Assembly

## Flexible Integration Options

- **Without Weld Gun**
  - Complete mechanical assembly **with** controls and pneumatics.
  - CAD model **will include the weld gun if CAD is supplied.**
  - Electrical and pneumatic drawings.
  - Sequence chart to support programming.
  - Spare parts list.
- **Compatible with other manufacturers' weld guns.**
  - **Includes** the weld gun mounting plates and accessories in the CAD Model.
- **Dresser Mounting Assemblies**
  - Pre-designed mounting plates with pneumatic lifter for cap dressers from other manufacturers.
- **Includes the Dresser Mounting Plate and Dresser in the CAD Model.**



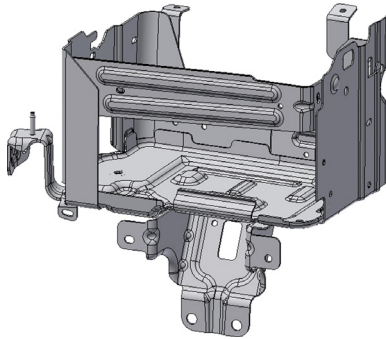
# PedTec Weld Gun Application

When to apply pedestal mounted spot weld guns in robotic weld lines:

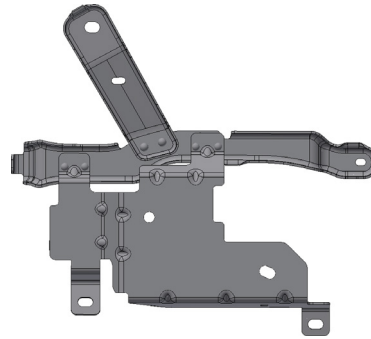
## Example: Battery Tray & Battery Strap Assembly

Pedestal Mounted Spot Weld Guns are ideal for robotic weld lines that require material handling (MH) robots to move assemblies between operations. MH robots are typically more agile and faster at doing re-spot welds. The PedTec Weld Guns can increase the MH robot utilization while balancing the spot welding robots utilization.

### Example:

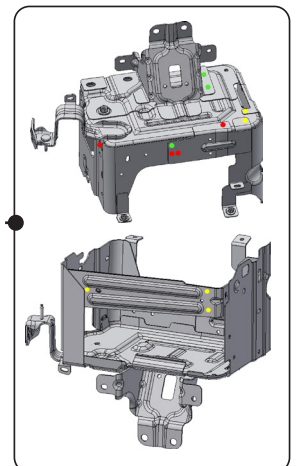


Battery Tray: 42 Spot Welds on 4 Planes



Battery Strap: 6 Spot Welds

Cell Process Description Cycle Time 72.7 seconds	Total Welds	Robot Utilization
<b>010-R01 Spot Weld Robot</b>	16	84%
OP010 Spot Weld Geo Fixture Battery Tray Bottom - 3 stampings/7 Spot Welds		
OP020 Spot Weld Geo Fixture Battery Tray Sides - add 3 Stampings/9 Spot Welds		
<b>020-R01 Spot Weld Robot</b>	18	84%
OP030 Spot Weld Geo Fixture Battery Tray Back side - add 3 stampings/10 Spot Welds		
OP040 Spot Weld Geo Fixture Battery Tray Bracket - add 1 stamping/2 Spot Welds Battery Strap - 3 stampings/6 spot welds		
<b>040-R01 Material Handling Robot</b>	12	94%
OP045 Pedestal Spot Weld Gun Battery Tray Re-Spot 12 welds on 4 different Planes		
OP050-X01 Part Marker and Plastic Shield Installation Add Plastic Shield with Push-in Pin Date Stamp both Battery Tray and Strap Dropped on Exit Conveyor		

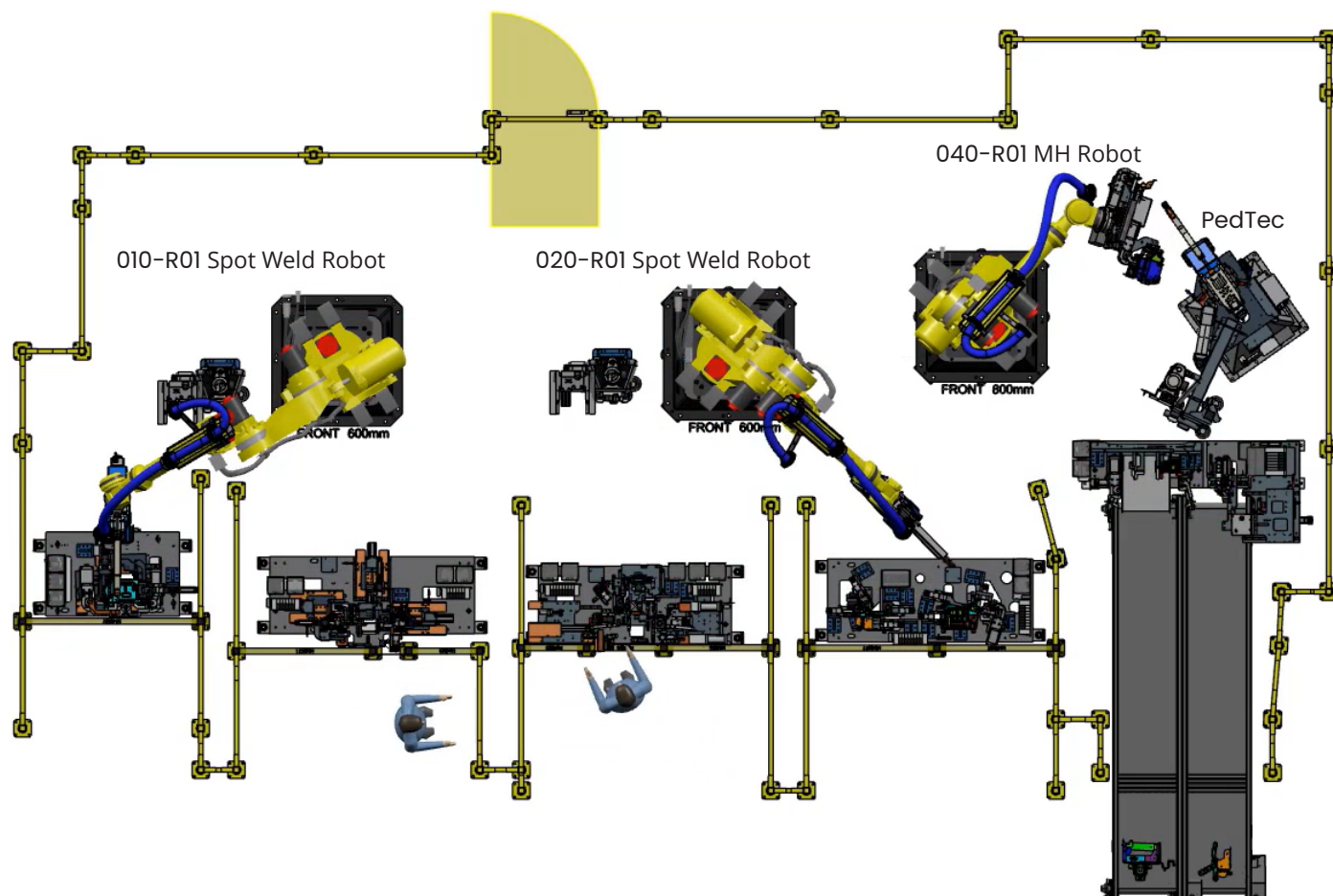


By adding a pedestal mounted spot weld gun, the MH robot completes the 12 re-spot welds on 4 different planes and completes the assembly by adding the plastic shield and part marking.



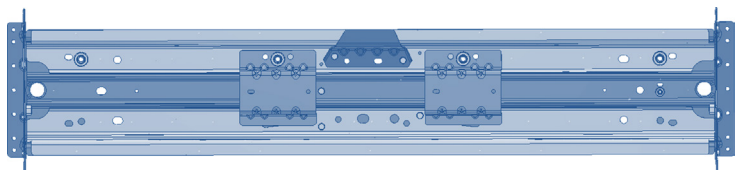
## Battery Tray & Battery Strap Assembly Cell Layout

**Optimized Welding Solution:** Using a PedTec Weld Gun eliminates the need for a third spot weld robot and extra fixture. This maximizes material handling efficiency, reduces floor space requirements, and streamlines operations. The second operator is not needed to move the battery tray through the fixture.



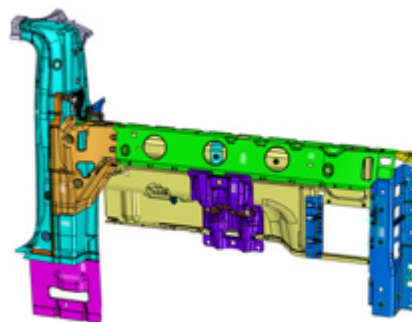
## Other Examples

Applications where adding a PedTec Spot Weld Gun increases the MH robot utilization and reduces the number of spot welding robots required.



Front Floor Assembly

115  
Welds



RH Quarter Inner Assembly

196  
Welds

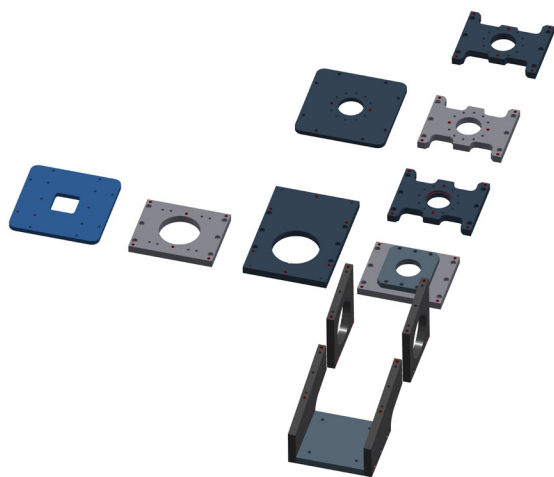
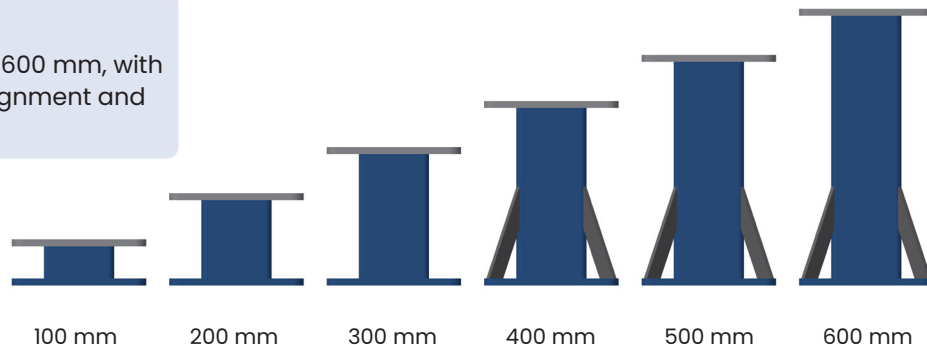


[Contact us](#) to learn how we processed these assemblies.

## Accessories

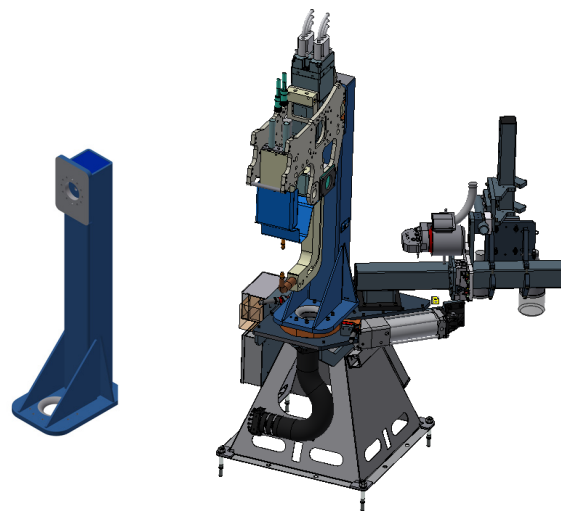
### Risers

Available in heights from 100 mm to 600 mm, with 100 mm increments for seamless alignment and ergonomic flexibility.



### Gun Mount Plates

Pre-engineered plates for multiple gun mounting configurations, ensuring quick and secure installation.



### 90° Gun Mount

Works for both LH and RH weld gun mounting for maximum adaptability.