

Battery Parts Pick-n-Place System

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- Existing setup is restrictive.
- 6 ~ 8 hours for changing the mechanical system configuration.
- No system monitoring or tweaking capability
- Product length varies, input spacing is random.
- Need more accurate placement.

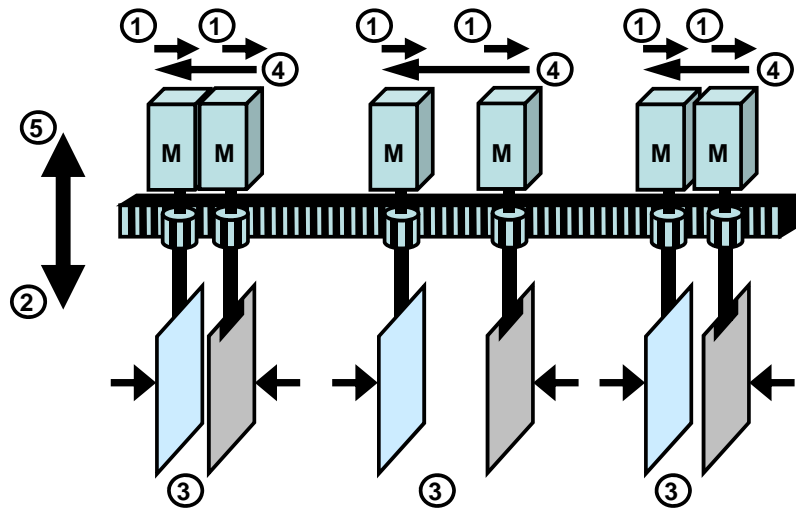
Controller: MP2300Siec
Controller Software: MotionWorks IEC
Solution Code: n/a
Servo: (6) Sigma-5
Power Level: 400 w
Voltage Level: 230 VAC, 1 Ph.

Performance Achieved

Throughput: Over 10 Pick-n-Place cycles per minute
Accuracy: +/- 0.10" placement
Auxiliary Functions: Pneumatics and clamps control



MotionWorks IEC



Application Description

This is a pick-n-place application. The six servo axes are placed vertically and in parallel on a rack and pinion system. The assembly is part of a larger integrated system and can move up and down. There are different operation recipes stored in Red-lion HMI, which also provides manual control, monitoring, and system maintenance. When a recipe is selected, the axes start moving together to the right, each to its designated target position. After the assembly moves down, axes 1, 3 and 5 push against axes 2, 4 and 6, respectively, grouping and holding a number of parts together. Then, axes 1&2, 3&4 and 5&6 move together to the left of the assembly, over the placing area and release the parts. The recipes can include 1, 2 and/or 3 grouping zones. The overall machine controller is SLC 505.

Differentiating Solution Features	Resulting Solution Benefits
- Non-restrictive system configuration.	- Easy and speedy changeover
- Solution was implemented with no change to the overall system mechanical layout.	- Reduced impact and wear on mechanics, less power consumption.
- Axes able move in sync using just absolute positioning instead of gearing to a virtual master.	- Simpler programming
- Solution was integrated with the existing machine controller.	- Quicker Return on Investment