

PNC740 Load Cell with Suction Cup Interface

A Custom Load Cell for a Special Application



Moving and positioning heavy components on a moving assembly line without damaging them can be a challenge, especially when space is limited. Luckily, robots can perform these tasks with precision, speed, and consistency. But sometimes the problem that needs to be solved is how to pick up the component being handled.

Ideally, grasping an item near its center of gravity gives the best balance and keeps undue stresses from the robotic arm, but you cannot always 'grab' an item in the best place. Sometimes the clamping forces themselves may be enough to damage the component.

How about a giant suction cup? This would enable the robotic arm to pick up and position large flat panels, and record the load forces being encountered by the unit. For this application, the ideal load cell needed to attach to the existing robotic arm and also connect to the suction cup assembly built for this operation.

Stellar Technology's load cell engineers were able to provide the perfect sensor solution: a 200-pound Model PNC740 'pancake-style' load cell with two unique fixtures. The load cell has a custom base plate which includes a clamp and adjustor screw to connect the load cell to the actuator arm of the robot, and also a unique interface to accommodate the suction cup assembly. This is one of many examples of Stellar Technology providing a special sensor application solution.



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