



Robotic Packaging Line Vacuum Gripper

This part was designed for stiffness and low inertia to enable a much higher throughput of product on the customer's packaging line. By using generative design, which can only be produced economically with additive manufacturing, it is possible to create extremely lightweight end effectors. This coupled with the very high stiffness-to-weight ratio of FDM® Nylon CF-10 material, means the robot can accelerate at much higher speeds than when fitted with a traditional gripper. There's less inertia to overcome and also, the added stiffness of the carbon fiber in the material prevents vibration or deflection of the vacuum grippers during use. As a result, the robot is able to pick and place 400 contact lens molds every minute.

System	F370®CR
Material	FDM® Nylon-CF10
Build Time	13 hrs, 22 mins
Material Used	59.84 in ³ (152 cm ³)
Support Material Used	33.1 in ³ (84 cm ³)