Case Study

Applied Robotics™
Solutions in reach

MATERIAL HANDLING → HANDLE WITH CARE

Problem defined.

Downtime and broken product were plaguing an international solar energy company. They were breaking more product than they were creating. The 14" diameter parabola shaped glass bowls used to collect and distribute solar energy they made were either being dropped or being squeezed to their breaking point. They were disappointed time and again with the downtime and broken product they had suffered with what had been commercially available. Most available grippers on the market are not able to handle fragile glass objects at any speed, much less high speeds. Pneumatic grippers use air which can introduce dirt onto a smooth surface such as a glass bowl. Pneumatic grippers don't have a variable "touch" nor are they able to guarantee that they won't drop an object should they lose power. Most industry standard electric grippers are difficult to program, difficult to use and require additional control hardware. Their profits shattered, they turned to Applied Robotics for help.

Solution in reach.

The first Smart Gripper ™, Applied Robotics' Smart Gripper ™ 2.1 was originally designed to meet the accuracy and precision required in lab automation. When it comes to utilizing a gripper, such standards cross industries. The Smart Gripper ™ 3.0 has variable finger travel, allowing it to securely hold various sized objects. An integrated fail-safe brake ensures that objects, even fragile glass ones, will not be dropped if power is interrupted. A 16 bit relative closed loop encoder provides usable feedback of the finger position at all times. All motion control capability is included in the gripper housing; no auxiliary control hardware is required. No pneumatics are required to operate the gripper. It includes a USB interface that connects the gripper to a computer for programming. Programs can be stored within the gripper and activated by five discrete inputs from your robot controller or PLC. The gripper provides three discrete outputs for status such as "motion complete", "object found". Motion control programs can be developed using the included integrated development environment. The programmable Smart Gripper ™ 3.0 can move quickly for the initial motion, and then slow down to gently grip the bowl without damage.

These features all add up to a Smart Gripper ™ that handles with care, decreasing downtime and product damage and increasing productivity and profit.

Applied Robotics offers a family of Grippers and finger sets as well as tool changers and collision sensors to accommodate different needs and applications. See your representative for further details. For more information on how our products can maximize your uptime, please call Applied Robotics at (800) 309-3475 or email us at info@appliedrobotics.com visit us at www.appliedrobotics.com