A-03 COBOTTA PRO

DENSO

Human and Robot Kickboard Collaborative Assembly Work

– "As robotic automation continues to advance, many processes remain difficult to fully automate, such as work requiring human senses or judgment.
This demo shows assembly work performed collaboratively between humans and robots, utilizing the strengths of each.
Tasks that robots can perform well are done by robots, while tasks robots find difficult, but are easy for people, are done by humans.
Collaborative robotics reduces the burden on workers through cooperation, increasing work efficiency."

Includes functions supporting human and robot collaborative work

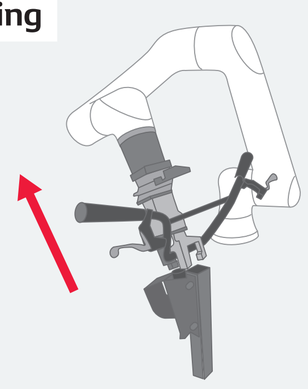
Safety and productivity are both achieved by using the "Scene Function" safety option to change the force and speed according to the work scene

Scene Function

Safety parameters, such as speed and force, can be set for each work scene, and switched from inside the robot program.

Handle removal

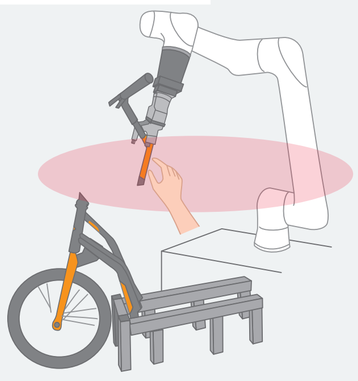
⚠ Clamping



Monitored force: Small

Movement above workpiece

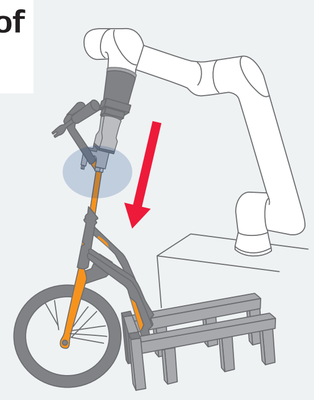
⚠ Collision from side



Monitored force: Medium

Handle insertion

Low risk of clamping



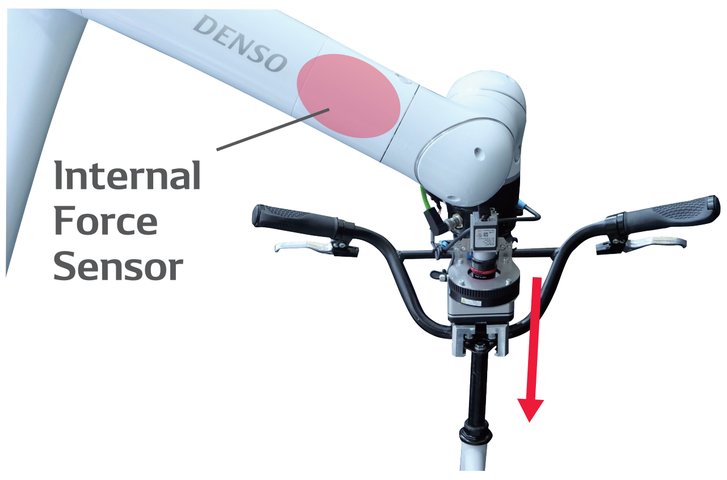
Monitored force: Large

During handdle removal or movement above the workpiece, it operates by monitoring small forces so that if contact occurs, operation can be stopped immediately…

Internal force sensors enable high-accuracy assembly work

Copying actions using COBOTTA PRO's internal force sensor enable the robot arm to be directly and manually operated up to the handle insertion position

When fitting the handle into the frame, the force is maintained in the forward direction and the force is limited along the other axes to prevent prying, achieving high-accuracy assembly work



Precise positioning with the QR position adjustment function* *Release planned

The QR code attached to the work stand is read and the robot coordinates are adjusted automatically based on the corresponding coordinate system. Even if the relative positions between the robot arm and work stand change, the coordinates are calibrated by reading the QR code, with no need for repeat teaching

QR code makes it easy to add information and give work or other instructions to the robot