





Free workers from heavy manual work Compatible Controller YRC1000/DX200

## Hand Guiding Function

Improve productivity with the hand guiding function that allows workers and conventional industrial robots to work in collaborative operation!

-  **Allows intuitive operation of the robot**
-  **Can replace a hand crane**
-  **Pick up workpieces without using a camera**
-  **Reduce time for manual conveyance of a workpiece**



▲ Hand guiding device



### Applications

Heavy manual work  
(Installing, picking, assembling, palletizing, etc.)  
◀ Installation of automobile seat

## Application Examples

### Assist for conveying heavy objects

Facilities can be further automated since transferring of heavy objects can be replaced from using a hand crane to using a robot mounted with a hand guiding function\*1.

#### Application Conveying liquid



**1** Robot moves near to workpiece position

**2** Worker operates the hand guiding device to pick up the workpiece

**3** Robot automatically conveys workpiece\*2



\*1: The hand guiding function can be applied to 6-axis vertically articulated robots compatible with the YRC1000/DX200 robot controller after conducting a risk assessment and taking risk reduction measures.

\*2: The robot can operate at maximum speed when automatically conveying a workpiece since the presence detection sensor monitors the area to make sure that workers are not in the area where the robot is in motion.

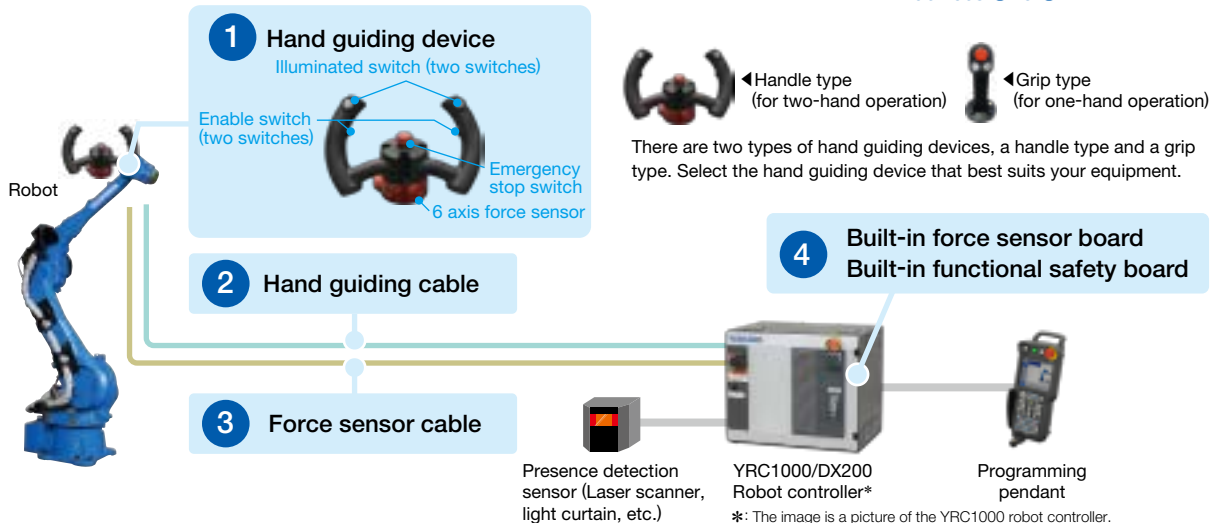
\*3: Workers can perform other tasks outside the area where the robot is in motion.

◀ An introductory video is available on our products and technologies website "e-mechatronics.com".

# Hand Guiding Function

## System Configuration

Hand guiding function includes devices ① to ④.



**Supported models** 6-axis vertically articulated robots compatible with the YRC1000/DX200 robot controller. Contact your Yaskawa representative for details.

## Specifications of hand guiding function

Customers' needs	Solution	Details
Intuitive operation of robot	Assist function	Robot moves according to the force applied on the hand guiding device, only when the enable switch is "on".
Low speed operation when positioning the robot	Speed switching function	Set ratio of robot motion speed in regards to the force applied on hand guiding device.
Perform translational and rotational motion	Motion mode switching function	Switch between translation mode for translational motion as a result of force applied and rotation mode for rotational motion as a result of moment applied.
Prevent collision of workpiece and robot	Area limiting function	When the TCP position moves outside the set range, it is restricted so that it does not move farther away from the set range.

### Notes

- Hand guiding function includes devices ① to ④ of the above system configuration. Check the product specifications sheet for more details.
- Attach hand guiding device to your end-effector.
- Cabling for the hand guiding device is not included in this product. (Cabling between controller and hand guiding device, controller and force sensor, installation of a force sensor to the manipulator or cabling for the hand guiding device are not included)
- Presence detection sensor is not included in this product.
- When applying the hand guiding function, it is necessary to perform a risk assessment and to take measures to reduce the dangers to personnel to an acceptable level.

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In the event that the end user of this product is to be the military and said product is to be employed in any weapons systems or the manufacture thereof, the export will fall under the relevant regulations as stipulated in the Foreign Exchange and Foreign Trade Regulations. Therefore, be sure to follow all procedures and submit all relevant documentation according to any and all rules, regulations and laws that may apply. Specifications are subject to change without notice for ongoing product modifications and improvements.

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