DAIHEN **Collaborative Robots Automate Welding of Large Structures**

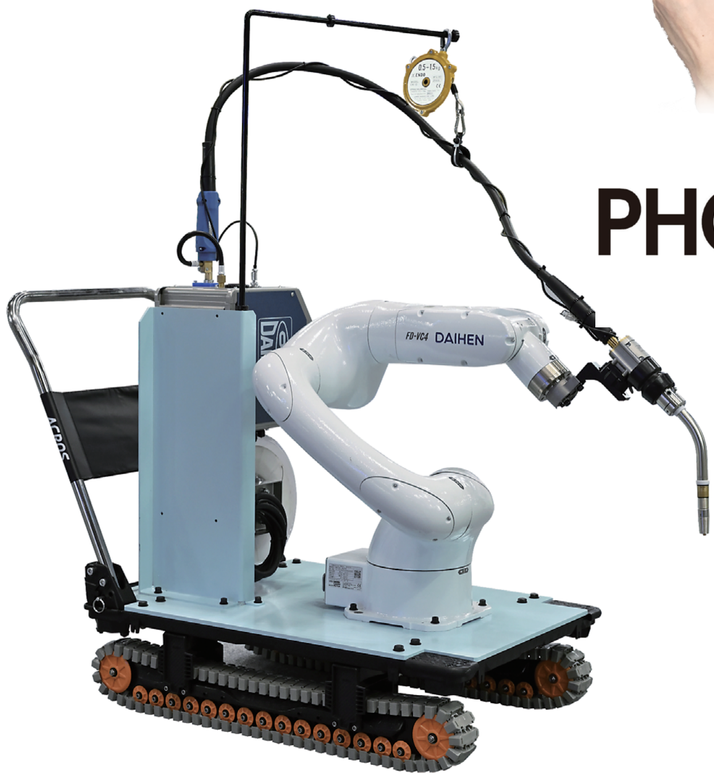
# Automated Solutions for Shipbuilding Welding Shops

## Achieving cooperation with people at various sites

- Long Arm Collaborative Robotic VC4L Optimized for Arc-Welding
- The robot is transported to the workpiece position and welded in situ.
- Capable of riding on steps of max. 40mm
- Direct teaching is also supported.


## Roboless Teach Function **Industry's first**

- Simple teaching with camera shooting without a robot
- Realizes parallel operation of robot production and teaching
- Automatically avoids interference with workpieces and peripheral devices




PHOTOUCH TEACH

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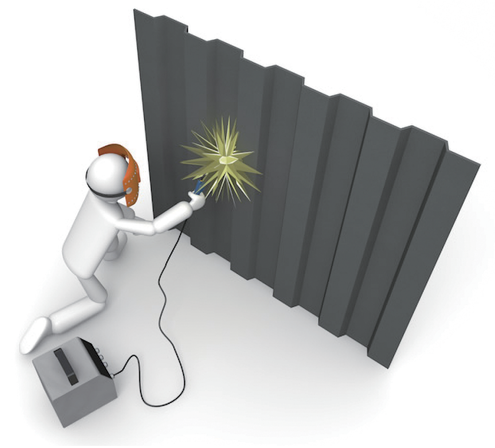
# Challenges in Introducing Robots to Shipbuilding Welding Sites

## Robots cannot be easily installed.

- Numerous welding points are scattered over a large welding site in shipbuilding.
- The welding object is large and difficult to move close to the robot.
- Difficult to install industrial robots that require safety fences.



## Teaching work is time consuming and automation is unprofitable.

- Robot must be moved for each welding point
- Teaching work is required for each move, and it takes time to weld.