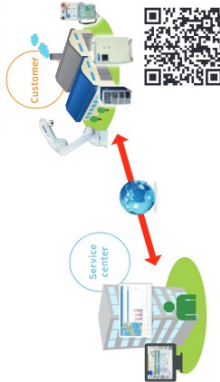


Service

Remote Maintenance



Connect the robot to a service center via the Internet and advise on robot operation and construction conditions. Safe and secure support can be provided as if a veteran service employee were present near the customer.

Customer preparations

The intranet connection environment will be prepared by the customer



- 1) Data communication charges will be borne by the customer.
- 2) This system uses communication equipment, so it may not be possible to use the function as intended due to communication status or interference.

Basic specifications and operating range

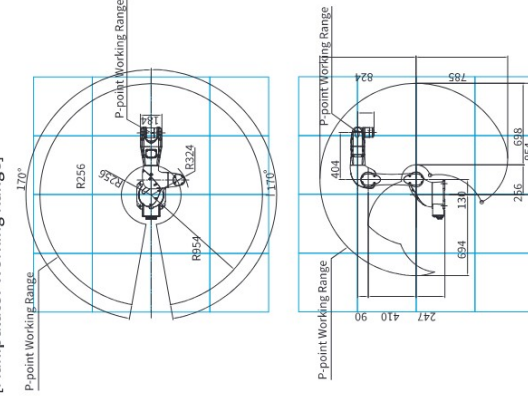
[Manipulator Specifications]

Item	Specification
Name	NUC4
Structure	Vertically articulated type
Number of Axes	6
Wrist Capacity	4 kg
Positional Repeatability	± 0.03 mm (Note 1)
Drive Method	AC servo motor
Drive Capacity	800 W
Position Feedback	Absolute encoder
Working range	J1 (Rotation) J2 (Front/Back) J3 (Up/Down) J4 (Swing) J5 (Bending) J6 (Twist)
Wrist	± 170° ± 170° ± 170° ± 170° ± 30°~± 210° ± 360°
Maximum Speed	1000mm/s (Note 2)
Wrist Allowable Load	J4 (Rotation) J5 (Bending) J6 (Twist)
Allowable moment	13.0 N · m 13.0 N · m 4.4 N · m
Allowable Moment of Inertia	0.462 kg · m ² 0.462 kg · m ² 0.048 kg · m ²
Arm Cross-section Area	1.41 m × 340°
Environmental Conditions	Temp.: 0 to 45°C, Humidity: 20~80%RH (No-condensation)
Weight	37 kg
IP code	IP65
Installation method	Floor-mounted
Paint color	Ice Blue

Note 1) Position repeatability of the tool center point (TCP) value complies with the JIS B 8432 Standard.

Note 2) Regarding the specification of the operation speed, a risk assessment in the use environment is required.

[Manipulator Working Range]



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● This product is made of FSC®-certified and other controlled material.



CAT NO.R21T06

DAIHEN

Friendly series II

Optimum Collaborative Robot for Arc Welding

FD-VC4



Easy installation and easy relocation
Active at various welding sites!

Birth of optimum collaborative robot
for arc welding with high track accuracy
and high durability!

Daihen Collaborative Robot Solves the Problem of Introduction of Robots!

Collaborative Robot for

Arc Welding

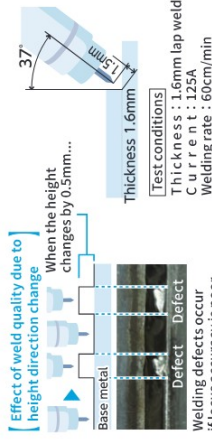
Collaborative robots active in

Various sites

Quality

Achieves high track accuracy enabling high quality welding

Collaborative robots with low trajectory accuracy may cause welding defects as shown in the figure on the right. Daihen, who knows everything about welding, has developed a new control technology to improve the trajectory accuracy of linear and circular interpolation, which affects welding quality, and installed it in collaborative robots. Achieves high-quality welding with stable trajectory accuracy equivalent to that of industrial robots.



Use

Various welding methods are selectable

CO₂/MAG welding

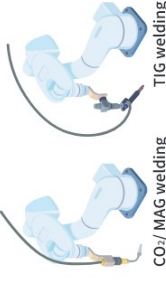
MAG pulse welding

Low-Spatter welding

Ultra-Low-Spatter Technology Synchro-feed robotic welding system

TIG welding

By adopting the same controller as an industrial robot, a wide variety of peripheral devices and functions can be used. Various welding methods such as CO₂/MAG welding, ultra-low spatter welding, and TIG welding can be selected to suit the site, and a full range of welding functions can be used, so they are applied to all welding sites.



[Extensive welding-only functions]

- Touch sensor function
- Arc sensor function
- Weaving function
- Offline Teaching System D-ST
- Robotic Welding Management-System FD-AM
- Various welding torches

Support

Teach-less system



PHOTO TOUCH TEACH

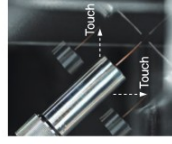
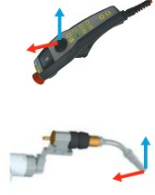
Automatically Generate Teaching Program by Tablet Only

- 1 Taking
 - 2 Selecting
 - 3 Sending
- Shoot with Camera
- Touching the weld line on screen
- Transfer generated program

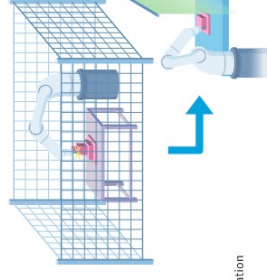


Joystick Pendant "Joy PEN"

A combination of gyro sensor and joystick makes a teaching program by intuitively operating the robot



Installation is possible even if there is no separation from people by safety fence.



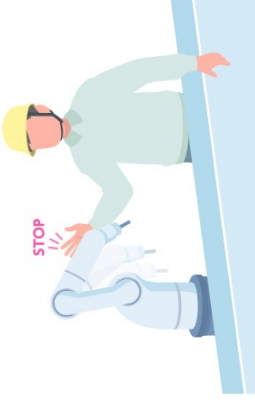
The cooperating robot can work in the same space as a person without installing a safety fence. #1

Therefore, it is no longer necessary to secure a large space for introduction like conventional industrial robots.

※ If a safety fence is not installed, a risk assessment by the customer is required.

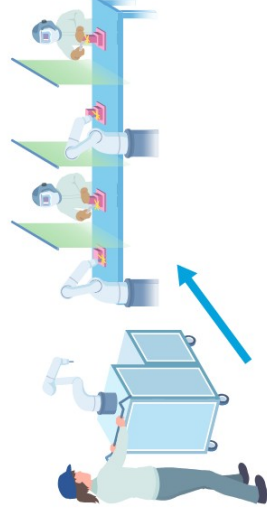
FD-VC4 complies with ISO 10218-1 safety standard for industrial robots. In addition, the robot controller conforms to the international standard "ISO 13849-1 PL d/cat.3" and safety certification by a third-party certification body has been acquired.

When contact with a human is detected, the robot stops.



The cooperative robot is equipped with a safety function that automatically stops when a force exceeding a preset contact detection level is detected. In addition, it has an arm shape that prevents pinching of hands and fingers, and a design that eliminates corners, thereby alleviating impact during contact.

Move to the site where it is needed and run immediately.



Easy-to-install, mobile, and easy-to-move collaborative robots can be easily relocated to suit customer conditions, such as changes in production volume or labor shortages. Automation in large structures, such as shipbuilding, is also possible, and will be used in a variety of welding sites.