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Kawasaki Robotics website

<https://kawasakirobotics.com/>



Kawasaki Robotics brand site XYZ

<https://robotics.kawasaki.com/ja1/xyz/en/>



Kawasaki Robostage (showroom)

<https://robotics.kawasaki.com/ja1/robostage/en.html>



Kawasaki Robot

Wafer Transfer Robots

Small-to-medium robots
up to 80kg payload

Large robots
up to 300kg payload

Extra large robots
up to 1,500kg payload

Dual-arm Collaborative robots

Explosion-proof painting robots

Sealing robots

Arc welding robots

Palletizing robots

Medical & pharmaceutical robots

Picking robots

Wafer transfer robots

Global Network

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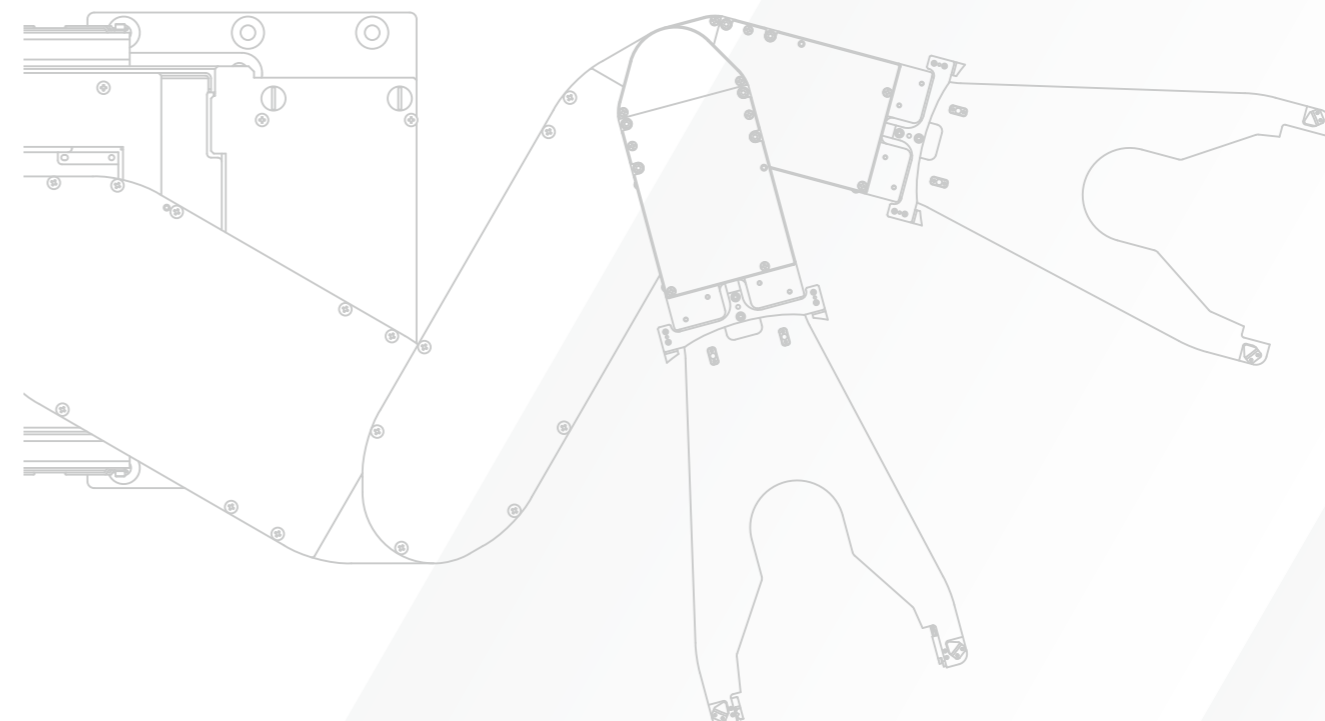
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CAUTIONS TO BE TAKEN TO ENSURE SAFETY

- For those persons involved with the operation / service of your system, including Kawasaki Robot, they must strictly observe all safety regulations at all times. They should carefully read the Manuals and other related safety documents.
- Products described in this catalogue are general industrial robots. Therefore, if a customer wishes to use the Robot for special purposes, which might endanger operators or if the Robot has any problems, please contact us. We will be pleased to help you.
- Be careful as Photographs illustrated in this catalogue are frequently taken after removing safety fences and other safety devices stipulated in the safety regulations from the Robot operation system.



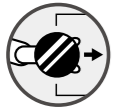
Wafer Transfer Robots

Kawasaki has the No.1 market share in the wafer transfer clean robots. The original drive mechanism provides highly accurate and rigid operations. A single robot can access 2, 3 and 4FOUPs of EFEM without a track. Compatible with SEMI-F47 and SEMI-S2 standards. Transfers of ring frames and substrates are possible.
* Contact Kawasaki representative for details.

NTJ series

Original drive mechanism provides highly accurate and smooth operations.

[Applications]



Wafer transfer



Grip edge hand



Vacuum hand



NTJ10/NTJ20

Standard Specifications

		NTJ10	NTJ20
Type		Horizontal articulated type	
Degree of freedom (axes)		4	5
Motion range	θ1axis (rotation JT2) (°)	±170	
	Zaxis (up-down JT3) (mm)	470	
	θ2axis (rotation JT4) (°)	±170	
	H1axis (rotation JT6) (°)	±190	
	H2axis (rotation JT7) (°)	-	±190
Max. reach (mm)		1,067.2 (for 350mm hand length)	
Min. rotational radius (mm)		-	R500
No. of FOUPs		Max. 3	
Position repeatability*1 (mm)		±0.05	
Cleanliness*2		class 1	
Hand type		grip edge hand/vacuum hand	
Controller/Power requirements		F60/0.5kVA	

*1: The result is based on the measurement conditions set by Kawasaki, using the wafer center position of Kawasaki standard end effector (in compliance with ISO 9283: 1998/JIS B 8432: 1999).
*2: Measured in our clean booth.

TTJ series

High-speed transfer in high and low pass-lines, thanks to a unique high-rigidity telescopic mechanism.

[Applications]



Wafer transfer



Grip edge hand



Vacuum hand



TTJ10/TTJ20

Standard Specifications

		TTJ10	TTJ20
Type		Horizontal articulated type	
Degree of freedom (axes)		5	
Motion range	θ1axis (rotation JT2) (°)	±170	
	Zaxis (up-down JT3) (mm)	740	
	θ2axis (rotation JT4) (°)	±170	
	H1axis (rotation JT6) (°)	±190	
	H2axis (rotation JT7) (°)	-	±190
Max. reach (mm)		1,067.2 (for 350mm hand length)	
Min. rotational radius (mm)		-	R500
No. of FOUPs		Max. 3	
Position repeatability*1 (mm)		±0.05	
Cleanliness*2		class 1	
Hand type		grip edge hand/vacuum hand	
Controller/Power requirements		F60/0.5kVA	

*1: The result is based on the measurement conditions set by Kawasaki, using the wafer center position of Kawasaki standard end effector (in compliance with ISO 9283: 1998/JIS B 8432: 1999).
*2: Measured in our clean booth.

NTH series

The long arm that is offset from the center of the base can access 4FOUP without a track.

[Applications]



Wafer transfer



Grip edge hand



Vacuum hand



NTH20

Standard Specifications

		NTH20
Type		Horizontal articulated type
Degree of freedom (axes)		5
Motion range	θ1axis (rotation JT2) (°)	±170
	Zaxis (up-down JT3) (mm)	470
	θ2axis (rotation JT4) (°)	±170
	H1axis (rotation JT6) (°)	±190
	H2axis (rotation JT7) (°)	±190
Max. reach (mm)		1,226.6 (for 350mm hand length)
Min. rotational radius (mm)		R500
No. of FOUPs		Max. 4
Position repeatability*1 (mm)		±0.05
Cleanliness*2		class 1
Hand type		grip edge hand/vacuum hand
Controller/Power requirements		F60/0.5kVA

*1: The result is based on the measurement conditions set by Kawasaki, using the wafer center position of Kawasaki standard end effector (in compliance with ISO 9283: 1998/JIS B 8432: 1999).
*2: Measured in our clean booth.

NX series

Installation in a small space is possible, thanks to its compact arm construction.

[Applications]



Wafer transfer



Grip edge hand



Vacuum hand



NX420

Standard Specifications

		NX420
Type		Horizontal articulated type
Degree of freedom (axes)		5
Motion range	θ1axis (rotation JT2) (°)	+313 - -323
	Zaxis (up-down JT3) (mm)	330
	θ2axis (rotation JT4) (°)	+180 - -150
	H1axis (rotation JT6) (°)	±190
	H2axis (rotation JT7) (°)	±190
Max. reach (mm)		736(for 320mm hand length)
Min. rotational radius (mm)		R514
No. of FOUPs		Max. 2
Position repeatability*1 (mm)		±0.04
Cleanliness*2		class 1
Hand type		grip edge hand/vacuum hand
Controller/Power requirements		F60/0.5kVA

*1: The result is based on the measurement conditions set by Kawasaki, using the wafer center position of Kawasaki standard end effector (in compliance with ISO 9283: 1998/JIS B 8432: 1999).
*2: Measured in our clean booth.

Controller

F60



Features

- Compact and light weight
- Equipped standard with Ethernet port for high-speed communications.
- Comforms to SEMI standard and CE Marking to be used worldwide.

Standard Specifications

Dimensions (mm)		W320×D300×H130
Type		Open structure with direct cooling system (IP20 or equivalent)
Number of controlled axes		Max. 6 (robot 5axes, aligner 1axes)
Memory capacity (MB)		16
I/O signals	External signals	emergency stop, external hold signal, etc.
	Input (Channels)	16
	Output (Channels)	16
Cable length	Robot-controller (m)	5
	Teach pendant (m)	5
Mass (kg)		9 (Max.)
Power requirements		AC200 - AC230V ±10%, 50/60Hz, 1Φ Max. 1.5kVA
Installation environment	Ambient temperature (°C)	0 - 45
	Relative humidity (%)	35 - 85 (No dew, nor frost allowed)
Teach pendant (Option)		TFT color LCD with touch panel, emergency stop switch, teach lock switch and enable switch
Operation box (optional)		Teach/Repeat switch

Software

K-Fast

Software that makes application studies and robot introduction much easier.

Designing operation paths

Setting controller software

Programming

Checking operations

KRET

Layout and path planning can be done easily.

KMterm

enables Parameter setting/infor display/data backup,connecting with the controller.

KSUtility Lite

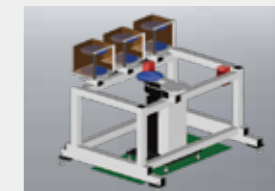
Robot operations are possible from the host PC.

KR3D

enables easy off-line operation checking.

KSUtility

Robot operations are possible from the host PC.



Simulation image

Aligner (Optional)

Features

- High-speed alignment (2.5 seconds for alignment alone)
- Supports glass wafers, etc.

