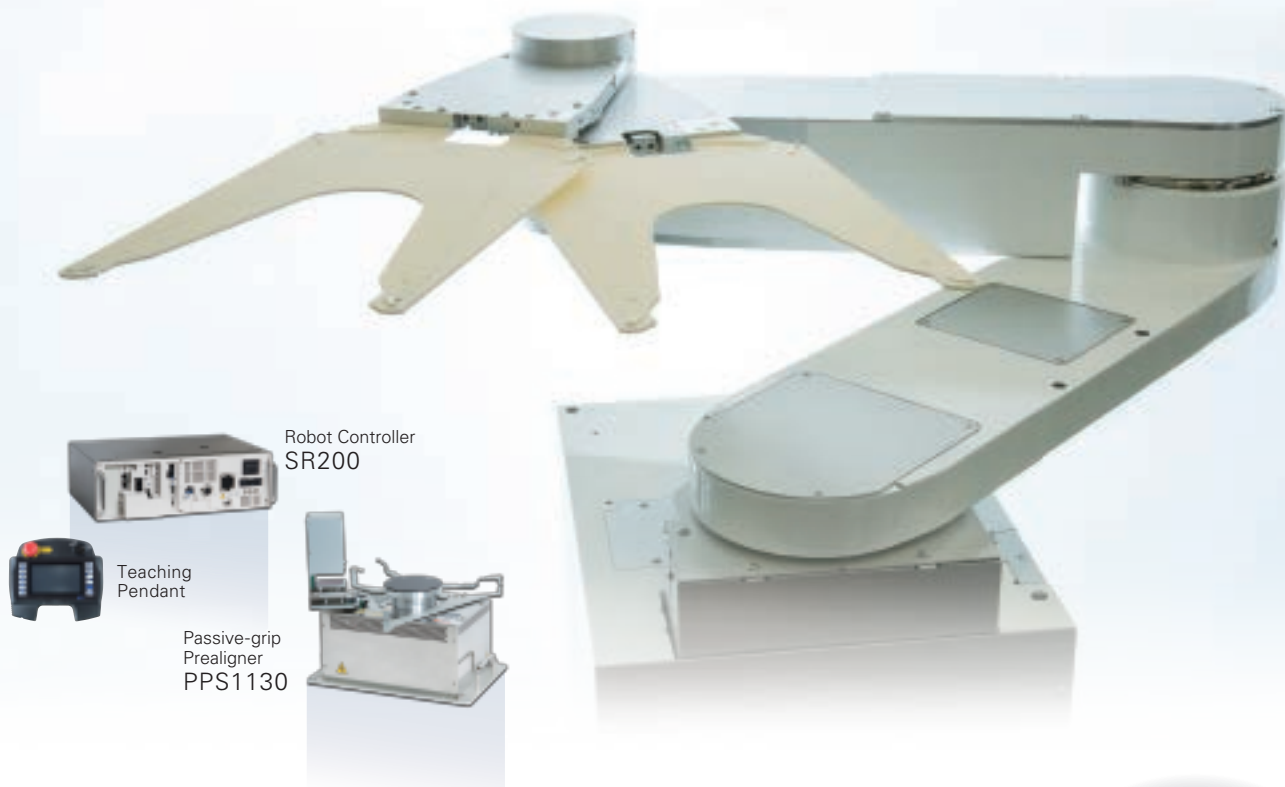


Perfect for the semiconductors of tomorrow

## DD Motor Driven Wafer Transfer Robot



Clean Robot for Semiconductor Wafer Transfer

# SEMISTAR- GEKKO MD124D

Introducing a robot optimized for the near future of miniaturization and multi-layering.

The GEKKO MD124D powered by direct drive motors achieves precise and quick transfer with minimum stress to wafers.

Vibration acceleration **0.25** G or less\*1

Repeatability **0.02** mm

Absolute positioning accuracy **0.05** mm

\*1: This value represents the vertical direction of the end effector when the arm extends or retracts.

Note: The above values are just some examples of results obtained using Yaskawa's in-house measurement conditions and are not official product specifications.

Direct  
drive  
motor

Low  
vibration  
High  
accuracy

Low  
wafer  
stress

# SEMISTAR-GEKKO MD124D

## Manipulator Specifications

Model		SEMISTAR-GEKKO MD124D	SEMISTAR-GEKKO MD124D CR
Specification		Standard	Corrosion-resistant
Applicable Wafer Size		300 mm (SEMI compliant)	
Wafer Grip Method		Passive grip (Vacuum and edge grips are also available)	
Length of Standard End Effector		345 mm	
Degree of Freedom		5 degrees of freedom	
Range of Motion	EX-axis (Extension)	1215 mm*3	
	TH-axis (Rotation)	330°	
	Z-axis (Elevation)	480 mm	468 mm
	H-axis (End Effector Rotation)	440°	
Minimum Rotation Radius		510 mm	
Repeatability*1		0.05 mm (P-P)	
Mass		86 kg	93 kg
Clean Rating*2		ISO class 1	

\*1: Conforms to ISO 9283 pose repeatability.

\*2: Based on Yaskawa's recommended installation conditions when used in a downflow environment of 0.3 m/s

\*3: Center of manipulator rotation to center of wafer when using Yaskawa's standard 300-mm end effector

## Praligner Specifications

Model	PPS1130
Applicable Wafer Size	300 mm (SEMI compliant)
Wafer Grip Method	Passive grip (PG) [Edge grip (EG) is also available]
Detection Target	Notch
Material of Wafer*1	Silicon
Alignment Accuracy*2	PG: $\pm 0.1^\circ$ , EG: $\pm 0.03^\circ$
Alignment Time*2	PG: 5.0 s or less, EG: 1.7 s or less
Mass	8.5 kg

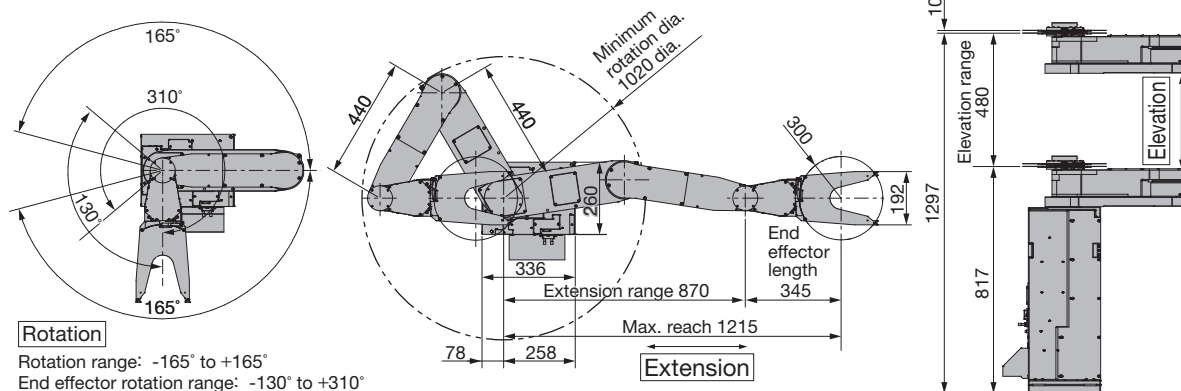
\*1: Yaskawa has a track record with special wafers, including quartz wafers. Contact your Yaskawa representative for assistance with special wafer use. Related parameters need to be adjusted and evaluated.

\*2: Values for a SEMI compliant wafer (300-mm silicon wafer, notch)

## Controller Specifications

Model		SR200
Controller	Dimensions	425 (W) × 300 (D) × 133 (H) mm (Protrusions are not included)
	Approx. Mass	13 kg max.
	Power Supply	Three-phase 200 VAC to 240 VAC (+10% to -15%), 50/60 Hz Single-phase 200 VAC to 240 VAC (+10% to -15%), 50/60 Hz
	Communications (Connection to Host)	Ethernet (10BASE-T/100BASE-TX) 2 ports
	Optional Board Slot	2 slots
	Number of Control Axes	8 axes max.
	Applicable Standards	SEMI S2, S8, F47, UL61010-1 ISO 13849-1, Category 3 (PL=d), etc.
Teaching Pendant	Dimensions	191 (W) × 71 (D) × 169 (H) mm
	Approx. Mass	0.50 kg (1.30 kg (includes cable))
	Display	4.3-inch color TFT LCD
	Protection Rating	IP54
	Cable Length	8 m

## Dimensions Units: mm



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# YASKAWA

YASKAWA ELECTRIC CORPORATION

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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