

PHT

Link To The World

PHT Inc.

6F Sen Shu Building, 2-69-2 Akabane, Kita-ku, Tokyo 115-0045, Japan

TEL:03-6751-7153 FAX:03-6761-8935

E-Mail:info@pht.co.jp

<https://www.pht.co.jp>

Glass Substrate Cleaning Robot

PHT2200



Product Features

This product is a horizontal multi-joint glass substrate transport robot designed for use in clean rooms and specifically for interposer applications. It is capable of forward/backward (X-axis), rotational (θ -axis), and up/down (Z-axis) movements, supporting wafer transportation in atmospheric conditions. The drive motors are AC servo motors, with all axes equipped with absolute encoder specifications.

Product Overview

Model	PHT2200
Environment Settings	Inside a cleanroom, atmospheric conditions, temperature 10°C to 35°C, humidity below 70% RH.
Arm	Single Arm Material: Aluminum, CFRP (Carbon Fiber Reinforced Plastic), Ceramic
Range of Motion	X-axis: 500mm, θ -axis: 340 degrees, Z-axis: 300mm
Motion Speed (Maximum)	X-axis: 500 mm/sec, θ -axis: 200 deg/sec Z-axis: 250 mm/sec
Payload Capacity	10 kg (Total weight of hand base, hand, and workpiece)

Robot Standard Specifications

Robot Model	PHT-R-3-2200
Transported Object	Up to 300mm wafer (Flexible customization is available for other special workpieces, shapes, and materials as well.)
Wafer Holding Method	Vacuum Suction, Edge Clamp, Edge Hold
Mechanical Structure Type	Horizontal Multi-Joint Type, Cylindrical Coordinate System
Control Axes	3 axes
Motor Type	AC servo motor, absolute encoder specification
Weight	Main unit weight: approximately 47kg;
Control Cable	3m (standard), 5m, 10m
Control Specifications (1)	Parallel interface - 32 input points, 32 output points
Control Specifications (2)	Serial Interface: RS-232C × 1 line
Repeatability	±0.1mm or less
Drive Source	Extension, Rotation, Up/Down – 3-axis AC Servo Drive
Cleanliness	ISO Class 2 (0.1µm or larger, 10 particles/m ³ or less)
Transport Hand	CFRP (Carbon Fiber Reinforced Plastic) + PEEK (Polyetheretherketone), Wafer Drop-in Method
Mapping	Photoelectric transmission-type sensor
Utility	Rated Voltage: Single-phase AC 200–230V ±10% Rated Current: 5A Vacuum: -80kPa or less, 10 NL/min or more