

Thermo Scientific Spinnaker Robot

Microplate mover with integrated
barcode-imaging system

Features

- Quiet operation
- Integrated vision
- Intelligent teach-jig
- Location verification
- Sample confirmation
- On-the-fly barcode reading
- Gravity neutral
- Offset gripper standard
- Overhead gripper optional
- Infinite rotations on all axes
- Integrated regrip station
- Native lidding/de-lidding capability
- Random access or stacked storage
- Bench-top ready
- Rapid set-up
- Arrayed or radial instrument configurations
- Thermo Scientific™ Momentum™ 4.0 ready
- Thermo Scientific™ BenchTrak™ ready



Unique vision capabilities

The Thermo Scientific™ Spinnaker™ robot is the only SCARA type (Selective Compliance Articulated Robot Arm) lab automation robot with integrated vision-assisted teaching and barcode reading. This robot can see issues that result in lost samples and cycle time before they become problems. When utilized with Thermo Scientific Momentum™ 4.0 Workflow and Scheduling software, the combination delivers an unprecedented integrated solution that greatly simplifies the design, setup, and execution of automated scientific processes.

Simple, quick set-up

Utilizing its built-in vision system and the specialized teach jig included with all Spinnaker movers, teaching locations is a quick and painless process. The vision system is also equipped with a location verification procedure that inspects all nest locations prior to a run, and will automatically correct minor location discrepancies (position healing). The integrated camera on Spinnaker also acts as a barcode reader, enabling automatic confirmation of sample ID's and robust sample tracking.



Axis/Joint Specifications

Overall Height	800 mm
Radius (reach)	±597 mm
Workspace Height (above mounting surface)	-32 – 603 mm

Axis	Range	Velocity	Acceleration
Base (rotate)	Infinite	180 °/s	360 °/s ²
Elevator	635 mm	750 mm/s	2000 mm/s ²
Elbow (rotate)	Infinite	360 °/s	1440 °/s ²
Wrist (rotate)	Infinite	720 °/s	2880 °/s ²

Storage Options

Hotels

Random Access	15 plates per hotel
Sequential Access	40 plates per hotel

Maximum Capacity with Hotels

Random Access	180 plates
Sequential Access	480 plates

General Specifications

Power Requirements	100 - 240 V auto switching
Operating Environment	15 - 40 °C, non-condensing
Safety Compliances	CE, CSA
Weight	25 kg
Motion Control	Closed Loop Servo, Controlled Stepper
Control	Momentum 4.0. Directly from PC, requires Windows 7 or Windows 8 operating systems

Gripper Details

- Built-in imaging bar code reader
- Handles most SBS conforming plates
- Landscape or Portrait
- Easily handles lids
- Plate detection during grip
- Adjustable gripping force and grip distance
- Variable plate/container finger designs
- Payload 250 g

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