

# 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.

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### 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 <sup>2</sup>
Elevator	635 mm	750 mm/s	2000 mm/s <sup>2</sup>
Elbow (rotate)	Infinite	360 °/s	1440 °/s <sup>2</sup>
Wrist (rotate)	Infinite	720 °/s	2880 °/s <sup>2</sup>

### 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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