The Thermo Scientific™ Orbitor™ RS2 Microplate Mover is the perfect compact bench-top mover solution to automate a variety of workflows with integrated barcode scanning for greater flexibility. Its innovative bi-directional telescoping arm provides exceptional reach and precision while its expansive 360° workspace makes it a great laboratory productivity partner. This reliable, simple and robust mover easily accesses the most complicated instruments and increases efficiency as the centerpiece of various high-throughput applications.

Efficient and reliable
The Orbitor RS2 mover provides unbeatable reliability and improved process efficiency with it’s unmatched speed and accuracy. The integrated barcode scanner enables sample tracking and inventory management. While the plate detection in the gripper helps to eliminate labware handling errors and reduces the risk of lost samples. Built upon our heritage of robotics leadership and integration expertise, the Orbitor RS2 mover is a sound, reliable investment for any lab.

Develops with your needs
As one of the most flexible movers in the market, users often invest in the Orbitor RS2 mover for single instrument loading and later request additional instrumentation and integration. Orbitor RS2 mover solutions can easily be upgraded in the field, either adding multiple devices for operation pooling or with sample preparation instrumentation. It also provides a wide range of plate storage options, with combinations of sequential access stacks or random access hotels and storage carousels. The Orbitor RS2 mover can also be placed on a track axis to match your labs requirements as your workflows evolve.

Designed for safety
The Orbitor RS2 mover is inherently safe, designed to work in direct cooperation with a person in a defined, purpose built workspace without guarding or shielding. Not only does it meet the rigorous international standards for collaborative robots, novice and experienced automation users also appreciate the Orbitor RS2 movers range of integrated safety features.

The overhead gripper in the arm naturally avoids the possible issues of protruding off-set fingers used by other movers, and force control stops all movement at the slightest unexpected contact.

Maximizes uptime
When your product warranty ends, you can rely on our tiered and customizable plans to ensure your mover keeps performing reliably.
## Orbitor RS2 Specifications

### Axis/Joint Specifications

<table>
<thead>
<tr>
<th>Axis</th>
<th>Distance</th>
<th>Speed</th>
<th>Acceleration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z (height)</td>
<td>570 mm</td>
<td>750 mm/sec</td>
<td>2250 mm/sec</td>
</tr>
<tr>
<td>Radius (reach)</td>
<td>±410 mm</td>
<td>1200 deg/sec</td>
<td>3600 mm/sec^2</td>
</tr>
<tr>
<td>Theta (rotation)</td>
<td>Infinite</td>
<td>225 deg/sec</td>
<td>675 deg/sec^2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gripping Distance</th>
<th>130.4/75.4 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>(open/close)</td>
<td></td>
</tr>
</tbody>
</table>

### General Specifications

- **Power Requirements**: 120 W, 85–264 VAC, 47–63 Hz
- **Operating Environment**: 15–40°C
- **Humidity**: 10–80% rH up to 31°C, decreasing linearly to 50% rH at 40°C
  Max 80% rH Non-condensing
- **Safety Compliances**: CE, CSA, CSAu
- **Mass**: 25 kg
- **Nominal Payload**: 250 g
- **Motion Control**: Closed Loop Servo, Brushless Motor
- **Control**: Directly from PC, requires Microsoft® Windows® 10

### Storage Options

- **Random Access (Hotels)**: 8 standard plates per hotel
- **Sequential Access (Stacks)**: 40 standard plates per stack

### Maximum Capacity

- **Random Access (Hotels)**: 72 standard plates (9 hotels around the mover)
- **Sequential Access (Stacks)**: 360 standard plates (9 stacks around the mover)

### Gripper Details

- Handles most SBS-standard labware
- Landscape or Portrait
- Easily handles lids
- Plate detection in the gripper
- Adjustable gripping force and speed settings
- Compatible with many plate types

Find out more at [thermofisher.com/OrbitorRS2](http://thermofisher.com/OrbitorRS2)