



Incubating Cooling Thermal Shakers Incubating Light Duty Orbital Shakers Incubating Rocking & Waving Shakers



# **Ingeniously Practical**

# Incubating & Incubating Cooling Selection Guide







| Product Family                      | Incubating Cooling<br>Thermal Shakers              | Incubating Light Duty<br>Orbital Shaker | Incubating Light Duty<br>Orbital Shakers |
|-------------------------------------|--|---|--|
| Model                               | ISTHBLCTS (Heat/Cool)<br>ISTHBLHTS (Heat)          | ISLD04HDG                               | ISLDMPHDG<br>ISLDMPHDGL                  |
| Temperature Range                   | 17 below ambient to 100°C /<br>ambient +4 to 100°C | Ambient +5° to 65°C                     | Ambient +5° to 65°C                      |
| Speed Range                         | 300 to 3000 rpm                                    | 100 to 1200 rpm                         | 100 to 1200 rpm                          |
| Timer                               | 1 minute to 99 hours, 59 min                       | 1 second to 160 hours                   | 1 second to 160 hours                    |
| Motion                              | Orbital  | Orbital                                 | Orbital                                  |
| Orbit                               | 3 mm   | 3 mm                                    | 3 mm                                     |
| Max Weight Capacity                 | 1 Block  | 8 lbs                                   | 4 Microplates /<br>2 Micro-Tube Racks    |
| Audible Alarm                       | •  | •                                       | •  |
| Load Sensor                         | •  | _                                       |  |
| Drive System                        | _  | Triple Eccentric                        | Triple Eccentric                         |
| Motor Type                          | Brushless DC Motor                                 | Brushless DC Motor                      | Brushless DC Motor                       |
| Set-Point Retention                 | Displays Last Setting                              | Displays Last Setting                   | Displays Last Setting                    |
| Restart/Power Out                   | •  | •                                       | •  |
| Ramp to Speed                       | •  | •                                       | •  |
| Temperature Overshoot<br>Protection | •  | _                                       | _  |
| Overload Protection                 | •  | •                                       | •  |
| User Calibration (Temperature)      | •  | •                                       | •  |
| User Calibration (Speed)            | •  | _                                       | _  |
| Interface                           | USB  |   | _  |
| Overall Dimensions (L × W × H)      | 10.25 × 9.75 × 5.2"                                | 17 × 11 × 10.5"                         | 17 × 11 × 7.75"                          |
| Included Tray (L × W)               | N/A  | 11 × 7.75"                              | 11 × 7.75"                               |
| Platform Options (L × W)            | N/A  | N/A                                     | N/A                                      |



\* Maximum speed/tilt angle may vary with heavy or unbalanced loads. \*\* Centered on tray.

# Incubating & Incubating Cooling Selection Guide







| Product Family                      | Incubating Cooling<br>Light Duty<br>Orbital Shaker | Incubating<br>Rocking Shaker | Incubating<br>Waving Shaker |
|-------------------------------------|--|------------------------------|-----------------------------|
| Model                               | ISICMBCDG  | ISRK04HDG                    | ISWV02HDG                   |
| Temperature Range                   | 10°C Below Ambient to 65°C                         | Ambient +5° to 65°C          | Ambient +5° to 65°C         |
| Speed Range                         | 100 to 1200 rpm                                    | 1 to 50 rpm                  | 1 to 30 rpm                 |
| Timer                               | 1 second to 160 hours                              | 1 second to 160 hours        | 1 second to 160 hours       |
| Motion                              | Orbital  | Rocking                      | Waving                      |
| Orbit                               | 3 mm   | Tilt Angle: 0 to 15° *       | Tilt Angle: 0 to 20° *      |
| Max Weight Capacity                 | 2 Microplates<br>2 Modular Blocks                  | 10 lbs**                     | 5 lbs**                     |
| Audible Alarm                       | •  | •                            |                             |
| Load Sensor                         | _  | _                            |                             |
| Drive System                        | Triple Eccentric                                   | Cable                        | Cable                       |
| Motor Type                          | Brushless DC Motor                                 | Stepper Motor                | Stepper Motor               |
| Set-Point Retention                 | Displays Last Setting                              | Displays Last Setting        | Displays Last Setting       |
| Restart/Power Out                   | •  | •                            |                             |
| Ramp to Speed                       | •  | •                            |                             |
| Temperature Overshoot<br>Protection | _  | _                            | _                           |
| Overload Protection                 | •  | •                            |                             |
| User Calibration (Temperature)      | _  |                              | _                           |
| User Calibration (Speed)            | _  | _                            |                             |
| Interface                           | _  | _                            |                             |
| Overall Dimensions (L × W × H)      | 17.9 × 11 × 10.5"                                  | 17 × 11 × 10.5"              | 17 × 11 × 10.5"             |
| Included Tray (L × W)               | N/A  | 10 × 7.5"                    | 9.25 × 7.25"                |
| Platform Options (L × W)            | N/A  | N/A                          | N/A                         |



\* Maximum speed/tilt angle may vary with heavy or unbalanced loads. \*\* Centered on tray.

# Incubating Cooling Thermal Shakers



Thermal Shakers are designed for applications that require consistent and precise highspeed shaking with temp. control to 100°C. With heating & shaking capabilities, our shakers use interchangeable blocks to accommodate tubes & microplates. Intuitive LCD touchscreen allows the user to save & track progress of 5 user-defined programs, each with 5 individual steps. Enhanced electronics provide dependable temp. settings across the operating range.

- Program Control for Five, 5-Step Programs
- Enhanced Electronics Provide Accurate Temperatures Across the Range
- Store and Transfer Data Easily with the Multi-Functional USB

## Incubating Cooling Thermal Shakers

- 4.3" color LCD touch screen display provides an intuitive interface
- Rapid heating, cooling and high speed shaking ability
- Internal memory stores five separate 5-step programs, unlimited with USB

The OHAUS Thermal Shakers and Cooling Thermal Shakers are designed for applications that require consistent and precise results. With heating, cooling and shaking capabilities. These shakers use interchangeable blocks to accommodate a wide variety of tubes and microplates. The easy-to-use, 4.3", color, LCD touch screen allows the user to save and visibly track progress through the live status bar for five user defined programs, each with five individual steps. The unit's enhanced electronics and dual temperature sensors provide accurate, dependable temperature settings across the operating range.

### **Operating Features:**

**Low Profile Design:** The low profile design minimizes the unit's footprint on the bench.

**LCD Touch Screen:** Enables faster setting of temperature, speed, and time which can all be viewed at once. Display features on-screen help topics with operational tips available in six languages. Touch screen is compatible with rubber gloves used in labs. USB port can transfer information to a flash drive for data logging, program storage and software updates.

**Program Control:** Program control capabilities allow user programmable operation for automated use and memory. Storage for five separate 5-step programs, or unlimited number of programs with the use of the USB.

**Temperature ramp rate:** Adjustable temperature ramp rate feature separately defines the heating and cooling rate in increments of 0.5°C/min. **Single Point Calibration Mode:** For maximum temperature accuracy, the single point calibration procedure allows the user to calibrate up to 6 different user defined temperatures.

**Pulse Mode Feature:** The unit is equipped with a pulse mode feature for quick vortex applications.

### Safety Features:

**Cool Touch Housing:** Constructed from a high-quality, heat and chemical resistant polymer. The unit's housing remains cool to the touch throughout normal operating temperatures.

**Maximum Temperature Limiting Function:** Ensures the temperature will not exceed preset limits, allowing the user control of temperature sensitive samples.

Hot Top Indicator: A hot top warning light will illuminate when the temperature reaches 40°C, and will remain lit until the unit is sufficiently cooled.

Audible Alarm: In timed mode, an alarm will sound when the time reaches zero or set-point temperature is reached. Additionally, the heat function will automatically shut off if the unit recognizes an internal issue.

### **Operating Conditions:**

Unit can operate in conditions from 5 to 35  $^\circ\rm C$  (41 to 95  $^\circ\rm F),$  maximum 80% relative humidity, non-condensing.

| Description            | Model     | Item Number |
|------------------------|-----------|-------------|
| Thermal Shaker         | ISTHBLHTS | 30392003    |
| Cooling Thermal Shaker | ISTHBLCTS | 30391996    |



### **Applications:**

Cell cultures, DNA, RNA, and protein studies.

### **Ordering Information**

Unit includes a detachable, 3-wire cord and plug . Unit is also supplied with a 1.5 mL block, clear rack, and cover.

| Specifications   |   |
|--|---|
| Temperature Range<br>Thermal Shaker<br>Cooling Thermal Shaker    | 4°C above ambient to 100°C<br>17°C below ambient to 100°C   |
| Temperature Accuracy<br>Thermal Shaker<br>Cooling Thermal Shaker | ± 1°C between 20°C and 45°C<br>± 2°C above 45°C<br>± 0.5°C between 20°C and 45°C<br>± 2°C below 20°C and above 45°C |
| Speed Range  | 300 to 3000 rpm   |
| Speed Accuracy   | ± 2%  |
| Timer  | 1 minute to 99 hours, 59 minutes  |
| Orbit  | 3 mm (0.12")  |
| Cooling Rate   | above ambient 2-3°C/min<br>below ambient 0.5-1.0°C/min  |
| Heating Rate   | 5°C/min   |
| Overall Dimensions $(L \times W \times H)$                       | 10.25 × 9.75 × 5.2"<br>(26 × 24.8 × 13.2 cm)  |
| Ship Weight  | 11.9 lbs (5.4 kg)   |

# Accessories Incubating Cooling Thermal Shakers Modular Blocks



### **Microplate Block**

| Sample Type                             | Well Size                                    | Well Depth      | Dimensions (L $\times$ W $\times$ H)                         | Item Number |
|---|--|-----------------|--|-------------|
| Microplate Thermal Block with Lid       | 4.21 × 2.81 × 0.1"<br>(10.7 × 7.1 × 0.25 cm) | 0.9" (2.30 cm)  | 4.7 × 6.4 × 3.0" (11.9 × 16.3 × 7.6 cm)                      | 30400126    |
| Sample Type                             | Well Diameter                                | Well Depth      | Dimensions (L $\times$ W $\times$ H)                         | Item Number |
| 384 Well Plate Thermal Block with Lid   | 0.16" (0.40 cm)                              | 0.32" (0.81 cm) | $4.7\times6.4\times3.0"~(11.9\times16.3\times7.6~\text{cm})$ | 30400127    |
| 0.2 mL PCR Plate Thermal Block with Lid | 0.25" (0.64 cm)                              | 0.50" (1.27 cm) | $4.7 \times 6.4 \times 3.0$ " (11.9 × 16.3 × 7.6 cm)         | 30400128    |

### **Tube Blocks**

| Sample Type        | No. of Wells | Well Diameter   | Well Depth      | Dimensions (L $\times$ W $\times$ H)                              | Item Number |
|--------------------|--------------|-----------------|-----------------|---|-------------|
| 0.5 mL Microtubes* | 30           | 0.31" (0.79 cm) | 0.97" (2.46 cm) | $4.0 \times 5.6 \times 1.8$ " (10.2 × 14.2 × 4.6 cm)              | 30400129    |
| 1.5 mL Microtubes* | 24           | 0.44" (1.11 cm) | 1.39" (3.53 cm) | $4.0 \times 5.6 \times 2.1$ " (10.2 × 14.2 × 5.3 cm)              | 30400130    |
| 2.0 mL Microtubes* | 24           | 0.45" (1.15 cm) | 1.39" (3.53 cm) | $4.0 \times 5.6 \times 2.1$ " (10.2 × 14.2 × 5.3 cm)              | 30400131    |
| 5-7 mL Tubes       | 24           | 0.47" (1.20 cm) | 1.42" (3.61 cm) | $4.0 \times 5.6 \times 2.2"$ (10.2 $\times$ 14.2 $\times$ 5.6 cm) | 30400132    |

\* Supplied with clear rack and cover

### **Racks and Covers**

| Description                             | Item Number |
|---|-------------|
| Rack For 30 X 0.5 mL Tube Block         | 30400250    |
| Rack For 24X1.5 / 24X2.0 mL Tube Blocks | 30400251    |
| Cover For 0.5mL/1.5mL/2.0mL Tube Blocks | 30400252    |

### **Cryo Tube Block**

| Sample Type       | No. of Wells | Well Diameter   | Well Depth     | Dimensions (L $\times$ W $\times$ H)                                 | Item Number |
|-------------------|--------------|-----------------|----------------|--|-------------|
| 2.0 mL Cryo Tubes | 24           | 0.50" (1.26 cm) | 1.42" (3.6 cm) | $4.0 \times 5.6 \times 2.2"~(10.2 \times 14.2 \times 5.6~\text{cm})$ | 30400133    |

### **Conical Tube Blocks**

| Sample Type               | No. of Wells | Well Diameter   | Well Depth       | Dimensions (L $\times$ W $\times$ H)                                  | Item Number |
|---------------------------|--------------|-----------------|------------------|---|-------------|
| 5 mL Eppendorf Tube Block | 9            | 0.66" (1.68 cm) | 1.93" (4.9 cm)   | $4.1\times5.7\times2.8"~(10.4\times14.5\times7.1~\text{cm})$          | 30400134    |
| 15 mL Conical Tubes       | 9            | 0.68" (1.73 cm) | 4.11" (10.44 cm) | $4.2 \times 5.7 \times 5.0"$ (10.7 $\times$ 14.7 $\times$ 12.7 cm)    | 30400135    |
| 50 mL Conical Tubes       | 4            | 1.18" (3.0 cm)  | 3.97" (10.09 cm) | $4.0 \times 5.7 \times 4.8"~(10.2 \times 14.5 \times 12.2~\text{cm})$ | 30400136    |

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# Incubating Light Duty Orbital Shakers



OHAUS Incubating Light Duty Shakers are designed to incubate samples from 10°C below ambient to 65°C depending on the model. The Incubating Mini Shaker has an 8 lb (3.6 kg) capacity while the Incubating Microplate Shaker can hold up to four standard or deep well plates. Incubating-Cooling Mini Shaker is designed to hold two microplates or two optional modular tube blocks. All models feature LED displays with touchpad controls.

- Microprocessor-Controlled for Consistent Shaking Action
- Triple Eccentric Drive Provides Reliable Service and Continuous Duty
- Safety Features Include Speed Ramping and Overload Protection

## Incubating Light Duty Orbital Shakers

- · LED displays for temperature, speed and time
- Timer with audible alarm
- Calibration mode for temperature

The OHAUS Incubating Light Duty Orbital Shakers are designed to heat and shake a variety of samples.

### **Operating Features:**

**Microprocessor Control:** The variable speed microprocessor control provides consistent uniform shaking action. Microprocessor will display last set-point and will restart if power is interrupted.

**PID Temperature Controller:** Maintains precise temperature control from ambient  $+5^{\circ}$ C to  $65^{\circ}$ C. Easy-to-use controls allow users to adjust temperature in  $1^{\circ}$ C increments.

Triple Eccentric Drive: Permanently lubricated ball bearings and maintenance free, brushless DC motor provide reliable service and continuous duty operation. LED Display: Touch pad controls with easy-to-read, independent LED displays for temperature, speed and time allow operator to view all settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

**Temperature Calibration Mode:** Allows user to calibrate unit to an external temperature device.

### **Safety Features:**

**Overload Protection:** Audible and visual signals will activate when system detects an obstruction or overload of the tray.

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing.

Audible Alarm: In timed mode, alarm will sound when the time reaches zero. Caution Hot Indicator: Symbol illuminates when the temperature of the air in the chamber reaches 40°C and remains lit until temperature cools down.

**Spill-Resistant Design:** Channels fluids away from internal components. **Polycarbonate Lid:** Permits viewing of samples without disturbing internal temperature.

### **Operating Conditions:**

Unit can be run in conditions from 5 to  $40^{\circ}$ C (41 to  $104^{\circ}$ F), maximum 80% relative humidity, non-condensing.

### Applications:

Cell cultures, bacterial suspensions, and hybridizations.

### Ordering Information:

Unit includes a detachable, 3-wire cord and plug.



| Specifications                              |  |
|---|--|
| Temperature Range                           | Ambient +5°C to 65°C                         |
| Temperature Uniformity                      | ± 0.5°C at 37°C                              |
| Speed Range                                 | 100 to 1200 rpm                              |
| Speed Accuracy                              | $\pm$ 2% of set speed                        |
| Timer                                       | 1 second to 160 hours                        |
| Orbit                                       | 3 mm (0.12")                                 |
| Maximum Weight Capacity                     | 8 lbs (3.6 kg)                               |
| Tray Material                               | Aluminum                                     |
| Tray Dimensions (L $\times$ W)              | 11 × 7.75" (27.9 × 19.7 cm)                  |
| Interior Dimensions $(L \times W \times H)$ | 11.3 × 8.3 × 5.7"<br>(28.7 × 21.1 × 14.5 cm) |
| Overall Dimensions $(L \times W \times H)$  | 17 × 11 × 10.7"<br>(43.2 × 27.9 × 27 cm)     |
| Ship Weight                                 | 30 lbs (13.6 kg)                             |

| Description                          | Model     | Item Number |
|--------------------------------------|-----------|-------------|
| Incubating Light Duty Orbital Shaker | ISLD04HDG | 30391924    |

# Incubating & Incubating Cooling Shakers Incubating Light Duty Orbital Shakers

- LED displays for temperature, speed and time
- Timer with audible alarm
- Available with opaque lid for light sensitive samples

The OHAUS Incubating Microplate Shakers are optimized for shaking microplates, deep-well plates, or micro-tubes.

### **Operating Features:**

**Microprocessor Control:** The variable speed microprocessor control provides consistent uniform shaking action. Microprocessor will display last set-point and will restart if power is interrupted.

**PID Temperature Controller:** Maintains precise temperature control from ambient  $+5^{\circ}$ C to  $65^{\circ}$ C. Easy-to-use controls allow users to adjust temperature in  $1^{\circ}$ C increments.

Triple Eccentric Drive: Permanently lubricated ball bearings and maintenance free, brushless DC motor provide reliable service and continuous duty operation. LED Display: Touch pad controls with easy-to-read, independent LED displays for temperature, speed, and time allow operator to view all settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

**Temperature Calibration Mode:** Allows user to calibrate unit to an external temperature device.

### Safety Features:

**Overload Protection:** Audible and visual signals will activate when system detects an obstruction or overload of the tray.

**Speed Ramping Feature:** Slowly increases speed to desired set-point to avoid splashing.

Audible Alarm: In timed mode, alarm will sound when the time reaches zero. Caution Hot Indicator: Symbol illuminates when the temperature of the air in the chamber reaches 40°C and remains lit until temperature cools down.

Spill-Resistant Design: Channels fluids away from internal components.

**Polycarbonate Lid:** Clear lid permits viewing of samples without disturbing internal temperature. Opaque lid prohibits light exposure to light sensitive samples.

### **Operating Conditions:**

Unit can be run in conditions from 5 to  $40^{\circ}$ C (41 to  $104^{\circ}$ F), maximum 80% relative humidity, non-condensing.

### **Applications:**

Immunoassays and hybridizations.

### **Ordering Information:**

Units include a detachable, 3-wire cord and plug.



| Specifications                             |  |
|--|--|
| Temperature Range                          | Ambient +5°C to 65°C                       |
| Temperature Uniformity                     | ± 0.5°C at 37°C                            |
| Speed Range                                | 100 to 1200 rpm                            |
| Speed Accuracy                             | ± 2%                                       |
| Timer                                      | 1 second to 160 hours                      |
| Orbit                                      | 3 mm (0.12")                               |
| Maximum Weight Capacity                    | 4 microplates or<br>2 micro-tube racks     |
| Tray Material                              | Aluminum                                   |
| Tray Dimensions (L $\times$ W)             | 11 × 7.75" (27.9 × 19.7 cm)                |
| Overall Dimensions $(L \times W \times H)$ | 17 × 11 × 7.75"<br>(43.2 × 27.9 × 19.7 cm) |
| Ship Weight                                | 30 lbs (13.6 kg)                           |

| Description                                  | Model      | Item Number |
|--|------------|-------------|
| Incubating Microplate Shaker                 | ISLDMPHDG  | 30391938    |
| Incubating Microplate Shaker with Opaque Lid | ISLDMPHDGL | 30391931    |

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# Incubating Cooling Orbital Shakers



OHAUS Incubating Cooling Orbital Shakers are designed to incubate samples from 10°C below ambient to 65°C. Incubating Cooling Mini Shaker is designed to hold two microplates or two optional modular tube blocks in a variety of configurations. All models feature touchpad controls with easy-to-read, independent LED displays for temperature, speed and time. Microprocessor control provides consistent uniform shaking action.

- Microprocessor-Controlled for Consistent Shaking Action
- Triple Eccentric Drive Provides Reliable Service and Continuous Duty
- Safety Features Include Speed Ramping and Overload Protection

# Incubating Cooling Orbital Shakers

- Heats to 65°C and cools to 10°C below ambient
- LED displays for temperature, speed and time
- Calibration mode for temperature

The OHAUS Incubating/Cooling Orbital Shaker is microplate ready without the need for any additional accessories. Optional modular blocks can accommodate micro-tubes, centrifuge tubes, vials, or culture tubes. Unit holds microplates or modular blocks with a 5" (12.7 cm) tall interior capacity. Ideal for analyses that require a stable, controlled temperature.

### **Operating Features:**

**Microprocessor Control:** The variable speed microprocessor control provides consistent uniform shaking action. Microprocessor will display last set-point and will restart if power is interrupted.

**PID Temperature Controller:** Maintains precise temperature control from 10°C below ambient to 65°C. Easy-to-use controls allow users to adjust temperature in 1°C increments.

Triple Eccentric Drive: Permanently lubricated ball bearings and maintenance free, brushless DC motor provide reliable service and continuous duty operation. LED Display: Touch pad controls with easy-to-read, independent LED displays for temperature, speed, and time allow operator to view all settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

**Temperature Calibration Mode:** Allows user to calibrate unit to an external temperature device.

### **Safety Features:**

**Overload Protection:** Audible and visual signals will activate when system detects an obstruction or overload of the tray.

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing.

Audible Alarm: In timed mode, alarm will sound when the time reaches zero. Alarm has optional mute function which can be set from the touch pad control. Caution Hot Indicator: Symbol illuminates when the temperature of the air in the chamber reaches 40°C and remains lit until temperature cools down.

Spill-Resistant Design: Channels fluids away from internal components.

Polycarbonate Lid: Permits viewing of samples without disturbing internal temperature.

### **Operating Conditions:**

Unit can be run in conditions from 5 to  $40^{\circ}$ C (41 to  $104^{\circ}$ F), maximum 80% relative humidity, non-condensing.

### **Applications:**

Cell and bacterial cultures, hybridizations, and enzyme reactions.

### **Ordering Information:**

Unit includes a detachable, 3-wire cord and plug . Units are also supplied with an adapter bracket to hold optional modular blocks. See page 35-36 for block options.

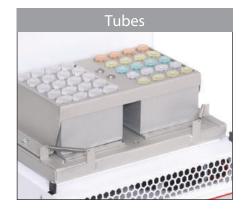


| Specifications                             |  |
|--|--|
| Temperature Range                          | 10°C below ambient to 65°C                   |
| Temperature Uniformity                     | ± 0.5°C at 37°C                              |
| Speed Range using Microplates              | 100 to 1200 rpm                              |
| Speed Range using Modular Blocks           | 100 to 600 rpm                               |
| Speed Accuracy                             | ± 2%   |
| Timer                                      | 1 second to 160 hours                        |
| Orbit                                      | 3 mm (0.12")                                 |
| Maximum Weight Capacity                    | 2 microplates or<br>2 modular blocks         |
| Overall Dimensions $(L \times W \times H)$ | 17.9 × 11 × 10.5"<br>(45.5 × 27.9 × 26.7 cm) |
| Ship Weight                                | 34 lbs (15.4 kg)                             |

| Description                          | Model     | Item Number |
|--------------------------------------|-----------|-------------|
| Incubating Cooling Light Duty Shaker | ISICMBCDG | 30391945    |

# Accessories Incubating Light Duty Orbital Shakers Modular Blocks







# **Modular Blocks**

Modular Blocks are constructed from a solid anodized aluminum block. The close contact of tubes to block walls allow for maximum temperature transfer. **Block dimensions** (L × W × H):  $3.75 \times 3 \times 2^{"}$  (9.5 × 7.6 × 5.1 cm) **Applications:** Cell cultures, hybridizations, and extraction procedures

### OHAUS modular blocks also fit in the OHAUS Dry Block Heaters.

Constructed of anodized aluminum, this material is ideal for its temperature conducting and corrosion resistant properties.

### **Microcentrifuge Tube Blocks**

### Single block

| Sample Type | No. of Wells | Well Diameter | Well Depth | Item Number |
|-------------|--------------|---------------|------------|-------------|
| 0.5 mL tube | 30           | 7.9 mm        | 27.6 mm    | 30400157    |
| 1.5 mL tube | 20           | 11.1 mm       | 39.1 mm    | 30400159    |
| 2 mL tube   | 20           | 11.5 mm       | 38.1 mm    | 30400191    |



### **Conical-Bottom Centrifuge Tube Blocks**

### Single block

| Sample Type | No. of Wells | Well Diameter | Well Depth | Item Number |
|-------------|--------------|---------------|------------|-------------|
| 15 mL tube  | 12           | 17.1 mm       | 44.5 mm    | 30400172    |
| 50 mL tube  | 5            | 29.0 mm       | 47.6 mm    | 30400168    |



# **Incubating Light Duty Orbital Shakers Modular Blocks**

### **Standard Test Tube Blocks**

### Single block

| Sample Type   | No. of Wells | Well Diameter | Well Depth | Item Number |
|---------------|--------------|---------------|------------|-------------|
| 6 mm tube     | 30           | 8.3 mm        | 48.4 mm    | 30400158    |
| 10 mm tube    | 24           | 10.7 mm       | 48.4 mm    | 30400151    |
| 12/13 mm tube | 20           | 13.9 mm       | 48.4 mm    | 30400152    |

### **Centrifuge Tube Combination Block**

### Single block

These blocks have been designed for variable sized samples.

| Sample Type           | No. of Wells                | Well Diameter | Well Depth | Item Number |  |
|-----------------------|-----------------------------|---------------|------------|-------------|--|
| Test Tube Combination |                             |               |            |             |  |
| 6 mm                  | 6                           | 8.3 mm        | 48.4 mm    |             |  |
| 12/13 mm              | 5                           | 13.8 mm       | 48.4 mm    | 30400156    |  |
| 25 mm                 | 3                           | 26.2 mm       | 48.4 mm    |             |  |
| Centrifuge Tube C     | Centrifuge Tube Combination |               |            |             |  |
| 1.5 mL                | 4                           | 11.1 mm       | 39.1 mm    |             |  |
| 15 mL                 | 3                           | 17.1 mm       | 44.5 mm    | 30400193    |  |
| 50 mL                 | 2                           | 29.0 mm       | 47.6 mm    |             |  |
| Micro-Tube Comb       | ination                     |               |            |             |  |
| 0.5 mL                | 6                           | 7.9 mm        | 27.6 mm    |             |  |
| 1.5 mL                | 10                          | 11.1 mm       | 39.1 mm    | 30400194    |  |
| 2 mL                  | 5                           | 11.5 mm       | 38.1 mm    |             |  |



Accessories





### **Vial Blocks**

### Single block

Designed for sample/serum and scintillation vials.

| Sample Type | No. of Wells | Well Diameter | Well Depth | Item Number |
|-------------|--------------|---------------|------------|-------------|
| 12 mm vial  | 20           | 12.7 mm       | 30 mm      | 30400182    |
| 15 mm vial  | 20           | 15.8 mm       | 35 mm      | 30400183    |
| 16 mm vial  | 15           | 16.4 mm       | 45 mm      | 30400190    |
| 17 mm vial  | 12           | 17.8 mm       | 45 mm      | 30400184    |
| 19 mm vial  | 12           | 19.7 mm       | 45 mm      | 30400185    |
| 21 mm vial  | 9            | 21.7 mm       | 45 mm      | 30400186    |
| 23 mm vial  | 8            | 23.8 mm       | 45 mm      | 30400187    |
| 25 mm vial  | 8            | 25.8 mm       | 45 mm      | 30400188    |
| 28 mm vial  | 6            | 28.8 mm       | 45 mm      | 30400189    |



# Incubating Rocking & Waving Shakers



OHAUS Incubating Rocking and Waving Shakers are designed to incubate samples from 5°C above ambient to 65°C to provide accurate and repeatable results. Rocking shakers provide a see-saw like motion, while waving shakers offer a smooth, low-foaming three-dimensional "wave" motion. All models feature LED displays with touchpad controls. Both models include safety features that protect both the user and samples.

- Independent LEDs and Touchpad Control for Temperature, Speed/Tilt Angle and Time
- Microprocessor Control with PID Temperature Control for Precise Control
- Electronic Tilt Adjustment While Unit Is Operating

## Incubating Rocking & Waving Shakers

- Electronic tilt adjustment from 0 to 15° while unit is operating
- LED displays for temperature, speed and tilt angle, and time
- Timer with audible alarm

The OHAUS Incubating Rocking Shaker combines smooth rocking motion and general purpose incubation in one compact bench top unit.

### **Operating Features:**

**Microprocessor Control:** The microprocessor control provides electronic tilt angle adjustment which allows user to easily adjust rocking angle from 0 to 15° while unit is operating. Precise speed control provides smooth, low-speed rocking motion down to 1 rpm.

**PID Temperature Controller:** Maintains precise temperature control from ambient  $+5^{\circ}$ C to  $65^{\circ}$ C. Easy-to-use controls allow users to adjust temperature in  $1^{\circ}$ C increments.

**LED Display:** Touch pad controls with easy-to-read, independent LED displays for temperature, speed and tilt angle, and time allow operator to view all settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

### **Safety Features:**

**Overload Protection:** Audible and visual signals will activate when system detects an obstruction or overload of the tray.

**Speed Ramping Feature:** Slowly increases speed to desired set-point to avoid splashing.

Audible Alarm: In timed mode, alarm will sound when the time reaches zero. Caution Hot Indicator: Symbol illuminates when the temperature of the air in the chamber reaches 40°C and remains lit until temperature cools down. Spill-Resistant Design: Channels fluids away from internal components.

**Polycarbonate Lid:** Permits viewing of samples without disturbing internal temperature.

### **Operating Conditions:**

Unit can be run in conditions from 5 to 40  $^{\circ}$  C (41 to 104  $^{\circ}$  F), maximum 80 % relative humidity, non-condensing.

### **Applications:**

Cell cultures, staining and destaining gels, hybridization procedures, and blotting techniques.

### **Ordering Information:**

Unit includes a detachable, 3-wire cord and plug.



| Specifications                              |   |
|---|---|
| Temperature Range                           | Ambient +5°C to 65°C                          |
| Temperature Uniformity                      | ± 0.5°C at 37°C                               |
| Speed Range                                 | 1 to 50 rpm *                                 |
| Speed Accuracy                              | ± 1 rpm                                       |
| Tilt Angle                                  | 0 to 15° *                                    |
| Timer                                       | 1 second to 160 hours                         |
| Maximum Weight Capacity                     | 10 lbs (4.5 kg) **                            |
| Tray Material                               | Aluminum                                      |
| Tray Dimensions (L $\times$ W)              | 10 × 7.5" (25.4 × 19.1 cm)                    |
| Interior Dimensions $(L \times W \times H)$ | 10.75 × 7.75 × 3.8"<br>(27.3 × 19.7 × 9.7 cm) |
| Overall Dimensions $(L \times W \times H)$  | 17 × 11 × 10.5"<br>(43.2 × 27.9 × 26.7 cm)    |
| Ship Weight                                 | 22 lbs (10 kg)                                |

\* Maximum speed/tilt angle may vary with heavy or unbalanced loads. \*\* Centered on tray.

| Description               | Model     | Item Number |
|---------------------------|-----------|-------------|
| Incubating Rocking Shaker | ISRK04HDG | 30391980    |

# Incubating Rocking & Waving Shakers

- Electronic tilt adjustment from 0 to 20° while unit is operating
- LED displays for temperature, speed and tilt angle, and time
- Timer with audible alarm

The OHAUS Incubating Waving Shaker combines the unique vertical and horizontal "wave" motion with general purpose incubation in one compact bench top unit.

### **Operating Features:**

**Microprocessor Control:** The microprocessor control provides electronic tilt angle adjustment which allows user to easily adjust waving angle from 0 to 20° while unit is operating. Precise speed control provides smooth, low-speed waving motion down to 1 rpm.

**PID Temperature Controller:** Maintains precise temperature control from ambient  $+5^{\circ}$ C to  $65^{\circ}$ C. Easy-to-use controls allow users to adjust temperature in  $1^{\circ}$ C increments..

**LED Display:** Touch pad controls with easy-to-read, independent LED displays for temperature, speed and tilt angle, and time allow operator to view all settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer will display elapsed time or, when programmed to user defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off.

### **Safety Features:**

**Overload Protection:** Audible and visual signals will activate when system detects an obstruction or overload of the tray.

Speed Ramping Feature: Slowly increases speed to desired set-point to avoid splashing.

Audible Alarm: In timed mode, alarm will sound when the time reaches zero. Caution Hot Indicator: Symbol illuminates when the temperature of the air in the chamber reaches 40°C and remains lit until temperature cools down.

Spill-Resistant Design: Channels fluids away from internal components.

**Polycarbonate Lid:** Permits viewing of samples without disturbing internal temperature.

### **Operating Conditions:**

Unit can be run in conditions from 5 to  $40^{\circ}$ C (41 to  $104^{\circ}$ F), maximum 80% relative humidity, non-condensing.

### **Applications:**

Cell cultures, hybridization procedures, and blotting techniques.

### **Ordering Information:**

Unit includes a detachable, 3-wire cord and plug.



| Specifications                              |   |
|---|---|
| Temperature Range                           | Ambient +5°C to 65°C                          |
| Temperature Uniformity                      | ± 0.5°C at 37°C                               |
| Speed Range                                 | 1 to 30 rpm *                                 |
| Speed Accuracy                              | ± 1 rpm                                       |
| Tilt Angle                                  | 0 to 20° *                                    |
| Timer                                       | 1 second to 160 hours                         |
| Maximum Weight Capacity                     | 5 lbs (2.3 kg) **                             |
| Tray Material                               | Aluminum                                      |
| Tray Dimensions $(L \times W)$              | 9.25 × 7.25"<br>(23.5 × 18.4 cm)              |
| Interior Dimensions $(L \times W \times H)$ | 10.75 × 7.75 × 3.4"<br>(27.3 × 19.7 × 8.6 cm) |
| Overall Dimensions $(L \times W \times H)$  | 17 × 11 × 10.5"<br>(43.2 × 27.9 × 26.7 cm)    |
| Ship Weight                                 | 22 lbs (10 kg)                                |

\* Maximum speed/tilt angle may vary with heavy or unbalanced loads. \*\* Centered on tray.

| Description              | Model     | Item Number |
|--------------------------|-----------|-------------|
| Incubating Waving Shaker | ISWV02HDG | 30391987    |

# Open Air and Incubating & Incubating Cooling Shakers Accessories

### **Universal Platforms**

Allows for mounting of flask clamps, test tube racks, and bottle clamps. Platform slides over top of included tray and is tightened with adjustment screws. Optional accessories screw directly into mounting point openings. The two-tier braces allow stacking of platforms with a 10" clearance (available for select sizes). An optional non-skid rubber mat can be placed on the platform for an added non-slip surface. The platform is constructed of type 304 stainless steel.



Accessories

| Description  | Used on Shakers  | Item Number |
|--|--|-------------|
| $11 \times 13$ " (27.9 $\times$ 33 cm) Universal Platform    | Analog/Digital 16 kg Shakers and Reciprocating Shakers           | 30400052    |
| $13 \times 13$ " (33 × 33 cm) Universal Platform             | Analog/Digital 16 kg Shakers and Reciprocating Shakers           | 30400053    |
| $18 \times 18$ " (45.7 $\times$ 45.7 cm) Universal Platform* | Analog/Digital 16 kg Shakers and Reciprocating Shakers**         | 30400054    |
| $18 \times 24$ " (45.7 $\times$ 61 cm) Universal Platform*   | Analog/Digital 16 kg & 23 kg Shakers and Reciprocating Shakers** | 30400056    |
| $24 \times 24$ " (61 $\times$ 61 cm) Universal Platform      | Digital 45 kg Shakers  | 30400057    |
| $18 \times 30$ " (45.7 $\times$ 76.2 cm) Universal Platform* | Analog/Digital 23 kg Shakers                                     | 30400058    |
| $24 \times 36$ " (61 $\times$ 91.4 cm) Universal Platform    | Digital 68 kg Shakers  | 30400059    |
| Two-Tier Braces (set of 4)                                   | Analog/Digital 16 kg & 23 kg Shakers                             | 30400051    |

### **Rubber Mats**

| Description  | Used on Shakers   | Item Number |
|--|---|-------------|
| 11 $	imes$ 13" (27.9 $	imes$ 33 cm) Rubber Mat                 | Analog/Digital 16 kg Shakers and Reciprocating Shakers                                    | 30400060    |
| 13 $\times$ 13" (33 $\times$ 33 cm) Rubber Mat                 | Analog/Digital 16 kg Shakers and Reciprocating Shakers                                    | 30400061    |
| 18 × 18" (45.7 × 45.7 cm) Rubber Mat                           | Analog/Digital 16 kg Shakers and Reciprocating Shakers                                    | 30400062    |
| $18 \times 24^{\prime\prime}$ (45.7 $\times$ 61 cm) Rubber Mat | Analog/Digital 16 kg Shakers, Reciprocating Shakers<br>and Analog Digital 23kg Shakers 30 |             |
| $24 \times 24$ " (61 × 61 cm) Rubber Mat                       | Digital 45 kg Shakers   | 30400064    |
| 24 × 36" (61 × 91.4 cm) Rubber Mat                             | Digital 68 kg Shakers   | 30400065    |

### **Culture Platforms**

Ideal for slow speed applications; Petri dishes, culture flasks, and other flat bottom, low profile vessels. The two-tier braces (available for both sizes) allow stacking of platforms with a 10" clearance. The platform is constructed of type 304 stainless steel. The platform has a non-skid rubber surface.



| Description  | Used on Shakers  | Item Number |
|--|--|-------------|
| $18 \times 18$ " (45.7 $\times$ 45.7 cm) Culture Platform* | Analog/ Digital 16 kg Shakers* and Reciprocating Shakers**         | 30400066    |
| $18 \times 24$ " (45.7 × 61 cm) Culture Platform*          | Analog/ Digital 16 kg* & 23 kg Shakers and Reciprocating Shakers** | 30400067    |
| Two-Tier Braces (set of 4)                                 | Analog/ Digital 16 kg & 23 kg shakers                              | 30400051    |

\* Two-tier ready

\*\*Stacking of platforms is not recommended for Reciprocating Shaker

# Accessories Open Air and Incubating & Incubating Cooling Shakers Accessories

### **Dedicated Platforms**

Pre-mounted flask clamps for maximum utilization of platform space for flasks of all one size. The two-tier braces allow stacking of platforms with a clearance (available for select sizes). Platform is constructed of type 304 stainless steel. Flask clamps are constructed of PVC. Ideal for polycarbonate flasks.

| Description   | Flask<br>Capacity | Used on Shakers  | Item Number |
|---|-------------------|--|-------------|
| 13 $\times$ 13" (33 $\times$ 33 cm) Dedicated Platform / 125 mL Flask Clamp | 16                | Analog/Digital 16 kg Shakers and Reciprocating Shakers   | 30400075    |
| 13 $\times$ 13" (33 $\times$ 33 cm) Dedicated Platform / 250 mL Flask Clamp | 12                | Analog/Digital 16 kg Shakers and Reciprocating Shakers   | 30400076    |
| 13 $\times$ 13" (33 $\times$ 33 cm) Dedicated Platform / 500 mL Flask Clamp | 8                 | Analog/Digital 16 kg Shakers and Reciprocating Shakers   | 30400077    |
| 13 × 13" (33 × 33 cm) Dedicated Platform /<br>1 L Flask Clamp               | 4                 | Analog/Digital 16 kg Shakers and Reciprocating Shakers   | 30400078    |
| 18 × 18" (45.7 × 45.7 cm) Dedicated Platform /<br>125 mL Flask Clamp*       | 27                | Analog/Digital 16 kg Shakers and Reciprocating Shakers** | 30400079    |
| 18 × 18" (45.7 × 45.7 cm) Dedicated Platform / 250 mL Flask Clamp*          | 20                | Analog/Digital 16 kg Shakers and Reciprocating Shakers** | 30400080    |
| 18 × 18" (45.7 × 45.7 cm) Dedicated Platform / 500 mL Flask Clamp*          | 13                | Analog/Digital 16 kg Shakers and Reciprocating Shakers** | 30400081    |
| 18 × 18" (45.7 × 45.7 cm) Dedicated Platform /<br>1 L Flask Clamp           | 9                 | Analog/Digital 16 kg Shakers and Reciprocating Shakers   | 30400081    |
| Two-Tier Braces (set of 4)  |                   | Analog/Digital 16 kg Shakers                             | 30400082    |

### **Adjustable Platforms**

Adjustable clamping bars accommodate various vessel types. Constructed of stainless steel. The base tray has a non-skid rubber surface.



| Description               | Bar Size       | Overall Dimensions           | Used on Shakers              | Item Number |
|---------------------------|----------------|------------------------------|------------------------------|-------------|
| 2-bar Adjustable Platform | 8.6" (21.8 cm) | 8.6 × 11.7" (21.8 × 29.7 cm) | Digital 4 kg Shakers         | 30400121    |
| 4-bar Adjustable Platform | 18" (45.7 cm)  | 18 × 18" (45.7 × 45.7 cm)    | Analog/Digital 16 kg Shakers | 30400068    |
| 4-bar Adjustable Platform | 18" (45.7 cm)  | 18 × 24" (45.7 × 61 cm)      | Analog/Digital 23 kg Shakers | 30400069    |

### **Replacement Parts**

| Description  | Used with Platforms | Item Number |
|--|---------------------|-------------|
| 8.6" (21.8 cm) Adjustable Bar (with Mounting Hardware) | 30400121            | 30400122    |
| 18" (45.7 cm) Adjustable Bar (with Mounting Hardware)  | 30400068 & 3040069  | 30400073    |

\* Two-tier ready



<sup>\*\*</sup>Stacking of platforms is not recommended for Reciprocating Shaker

# Open Air and Incubating & Incubating Cooling Shakers Accessories

### Large Vessel Carrier Platforms

Ideal for large sample containers like carboys, jugs and bottles. The platform's high side walls secure samples, has a heavy-duty design and is constructed of stainless steel. The base tray has a non-skid rubber surface.



Accessories

| Description                         | Bar Size      | Overall Dimensions (L $\times$ W $\times$ H)             | Used on Shakers              | Item Number |
|-------------------------------------|---------------|--|------------------------------|-------------|
| 4-bar Large Vessel Carrier Platform | 18" (45.7 cm) | $30.1 \times 18.1 \times 13.9$ " (76.4 × 45.9 × 35.3 cm) | Analog/Digital 23 kg Shakers | 30400070    |
| 4-bar Large Vessel Carrier Platform | 24" (61 cm)   | $24.4 \times 24.3 \times 14.2$ " (61.9 × 61.7 × 36.0 cm) | Digital 45 kg Shakers        | 30400071    |
| 5-bar Large Vessel Carrier Platform | 24" (61 cm)   | $36.9 \times 24.3 \times 14.2$ " (93.7 × 61.7 × 36.0 cm) | Digital 68 kg Shakers        | 30400072    |

| Replacement Part                                      | Used with Carrier   | Item Number |
|---|---------------------|-------------|
| 18" (45.7 cm) Adjustable Bar (with Mounting Hardware) | 30400070            | 30400073    |
| 24" (61 cm) Adjustable Bar (with Mounting Hardware)   | 30400071 & 30400072 | 30400074    |

### **Separatory Funnel Platform**

Holds 3 funnels at once on an  $18 \times 18$ " (45.7  $\times$  45.7 cm) platform. Platform can accommodate 500 mL to 2 L separatory funnels and is constructed of stainless steel. Includes platform, clamps and hardware to secure 3 funnels.



| Description   | Used on Shakers  | Item Number |
|---|--|-------------|
| 18" (45.7 cm) Adjustable Bar (with Mounting Hardware) | Analog/Digital 16 kg Shakers and Reciprocating Shakers | 30400083    |

### **Microplate Clamp**

Can hold one standard microplate or deep-well plate. Constructed of type 304 stainless steel.

| Platform Capacities for Microplate Clamps |                         |                      |  |
|---|-------------------------|----------------------|--|
| Platform<br>Size                          | Platform<br>Item Number | Microplate<br>Clamps |  |
| 11×13                                     | 30400052                | 4                    |  |
| 13 × 13                                   | 30400053                | 6                    |  |
| 18 × 18                                   | 30400054                | 12                   |  |
| 18×24                                     | 30400056                | 18                   |  |
| 18 × 30                                   | 30400057                | 21                   |  |
| 24 × 24                                   | 30400058                | 24                   |  |
| 24 × 36                                   | 30400059                | 36                   |  |



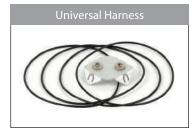
| Description      | Used on Shakers                                     | Item Number |
|------------------|---|-------------|
| Microplate Clamp | Analog/Digital 16 kg, 23 kg, 45 kg, & 68 kg Shakers | 30400104    |

# Accessories Open Air and Incubating & Incubating Cooling Shakers Accessories

### **Universal Harness**

Attaches to tray to secure low-profile plates.

| Description       | Used on Shakers                       | Item Number |
|-------------------|---------------------------------------|-------------|
| Universal Harness | Digital 4 kg Open Air Orbital Shakers | 30400123    |



### **Dimpled Mat**

Designed to hold centrifuge tubes, vials, culture tubes, and micro-tubes securely in place. Mat can easily be removed for cleaning and transporting of tubes from bench to tray.

| Description  | Used on Shakers                | Item Number |
|--|--------------------------------|-------------|
| Dimpled Mat, $12.75 \times 10"$ ( $32.4 \times 25.4$ cm) | Digital Rocking Shaker         | 30400140    |
| Dimpled Mat, 11.75 × 8.75" (29.9 × 22.2 cm)              | Digital Waving Shaker          | 30400142    |
| Dimpled Mat, 10 × 7.5" (25.4 × 19.1 cm)                  | Incubating Rocking Shaker      | 30400141    |
| Dimpled Mat, 9.25 × 7.25" (23.5 × 18.4 cm)               | Incubating Waving Shaker       | 30400143    |
| Dimpled Mat, 11.75 × 8.75" (29.9 × 22.2 cm)              | Open Air 4 kg Orbital Shaker   | 30400124    |
| Dimpled Mat, 14 × 11" (35.6 × 27.9 cm)                   | Analog Rocking & Waving Shaker | 30400144    |



### **Stacking Tray**

Easily attaches to the units' included tray to add a second tier for higher capacity applications. Second tier tray mounts 3.5" (8.9 cm) above lower tray. The tray includes hardware and a rubber mat.

| Description   | Used on Shakers        | Item Number |  |
|---|------------------------|-------------|--|
| Stacking Tray, 12.75 $\times$ 10" (32.4 $\times$ 25.4 cm) | Digital Rocking Shaker | 30400137    |  |
| Stacking Tray, 11.75 × 8.75" (29.9 × 22.2 cm)             | Digital Waving Shaker  | 30400138    |  |
| Stacking Tray, $14 \times 11$ " (35.6 $\times$ 27.9 cm)   | Analog Rocking Shaker  | 30400139    |  |

Stacking Tray

**Dilution Cup Tray** 

### **Dilution Cup Tray**

Constructed of type 304 stainless steel. Holds  $24 \times 28$  mm dilution vials.

| Description                 | Used on Unit                          | Item Number |
|-----------------------------|---------------------------------------|-------------|
| 1.5 to 2 mL Micro-Tube Rack | Digital 4 kg Open Air Orbital Shakers | 30400125    |

### **Micro-Tube Rack**

Optional 1.5 to 2 mL Micro-Tube Rack attaches to tray to hold up to  $70 \times 1.5$  mL or 2 mL micro-tubes. Tray can accommodate up to 2 micro-tube racks.

| Description |   | Used on Unit                                      | Item Number |
|-------------|---|---|-------------|
|             | Stacking Tray, $12.75 \times 10^{"}$ ( $32.4 \times 25.4$ cm) | Digital Open Air and Incubating Microplate Shaker | 30400114    |



# **Open Air and Incubating & Incubating Cooling Shakers Accessories**

### **Stainless Steel Flask Clamps**

Designed to hold Erlenmeyer flasks from 10 mL to 6 L. Constructed of type 302 and 304 stainless steel. Includes hardware for easy attachment to platforms. Flask clamps 50 mL and higher are supplied with a spring to hold the flask in place. The 2.8 L clamp is designed to hold a Fernbach flask. Media bottle clamps feature the same details as flask clamps.



Accessories



| Clamp Style                    | 10 mL<br>Erlenmeyer<br>Flask Clamp | 25 mL<br>Erlenmeyer<br>Flask Clamp | 50 mL<br>Erlenmeyer<br>Flask Clamp | 125 mL<br>Erlenmeyer<br>Flask Clamp | 250 mL<br>Erlenmeyer<br>Flask Clamp | 500 mL<br>Erlenmeyer<br>Flask Clamp | 1 L<br>Erlenmeyer<br>Flask Clamp | 2 L<br>Erlenmeyer<br>Flask Clamp |
|--------------------------------|------------------------------------|------------------------------------|------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|----------------------------------|----------------------------------|
| Material                       | Stainless Steel                    | Stainless Steel                    | Stainless Steel                    | Stainless Steel                     | Stainless Steel                     | Stainless Steel                     | Stainless Steel                  | Stainless Steel                  |
| Item Number                    | 30400084                           | 30400085                           | 30400086                           | 30400087                            | 30400088                            | 30400089                            | 30400090                         | 30400091                         |
| Tray or Platform               |                                    |                                    | Num                                | ber of Flask Clam                   | ps per Tray or Plat                 | tform                               |                                  | ·                                |
| 11.75 × 8.75" (29.9 × 22.2 cm) |                                    |                                    |                                    |                                     |                                     |                                     |                                  |                                  |
| Open Air Digital 4 kg Shakers  | 35                                 | 20                                 | 15                                 | 12                                  | 6                                   | 4                                   | N/A                              | N/A                              |
| 11 × 7.75" (27.9 × 19.7 cm)    |                                    |                                    |                                    |                                     |                                     |                                     |                                  |                                  |
| Incubating 4 kg Shakers        | 35                                 | 20                                 | 12                                 | 8                                   | 5                                   | N/A                                 | N/A                              | N/A                              |
| 11 × 13" (27.9 × 33 cm)        |                                    |                                    |                                    |                                     |                                     |                                     |                                  |                                  |
| Analog/Digital 16 kg Shakers   | 60                                 | 25                                 | 13                                 | 10                                  | 9                                   | 7                                   | 4                                | N/A                              |
| Digital Reciprocating Shakers  | 60                                 | 25                                 | 13                                 | 10                                  | 9                                   | 7                                   | 4                                | N/A                              |
| 13 × 13" (33 × 33 cm)          |                                    |                                    |                                    |                                     |                                     |                                     |                                  |                                  |
| Analog/Digital 16 kg Shakers   | 60                                 | 30                                 | 15                                 | 12                                  | 12                                  | 8                                   | 4                                | 3                                |
| Digital Reciprocating Shakers  | 60                                 | 30                                 | 15                                 | 12                                  | 12                                  | 8                                   | 4                                | 3                                |
| 18 × 18" (45.7 × 45.7 cm)      |                                    |                                    |                                    |                                     |                                     |                                     |                                  |                                  |
| Analog/Digital 16 kg Shakers   | 113                                | 64                                 | 32                                 | 20                                  | 20                                  | 13                                  | 8                                | 5                                |
| Digital Reciprocating Shakers  | 113                                | 64                                 | 32                                 | 20                                  | 20                                  | 13                                  | 8                                | 5                                |
| 18 × 24" (45.7 × 61 cm)        |                                    |                                    |                                    |                                     |                                     |                                     |                                  |                                  |
| Analog/Digital 16 kg Shakers   | 158                                | 88                                 | 44                                 | 28                                  | 28                                  | 20                                  | 12                               | 6                                |
| Digital Reciprocating Shakers  | 158                                | 88                                 | 44                                 | 28                                  | 28                                  | 20                                  | 12                               | 6                                |
| Analog/Digital 23 kg Shakers   | 158                                | 88                                 | 44                                 | 28                                  | 28                                  | 20                                  | 12                               | 6                                |
| 18 × 30" (45.7 × 76.2 cm)      |                                    |                                    |                                    |                                     |                                     |                                     |                                  |                                  |
| Analog/Digital 23 kg Shakers   | 203                                | 112                                | 56                                 | 36                                  | 36                                  | 26                                  | 15                               | 8                                |
| 24 × 24" (61 × 61 cm)          |                                    |                                    |                                    |                                     |                                     |                                     |                                  |                                  |
| Digital 45 kg Shakers          | 221                                | 121                                | 61                                 | 41                                  | 41                                  | 25                                  | 16                               | 9                                |
| 24 × 36" (61 × 91.4 cm)        |                                    |                                    |                                    |                                     |                                     |                                     |                                  |                                  |
| Digital 63 kg Shakers          | 336                                | 160                                | 94                                 | 61                                  | 64                                  | 40                                  | 24                               | 14                               |

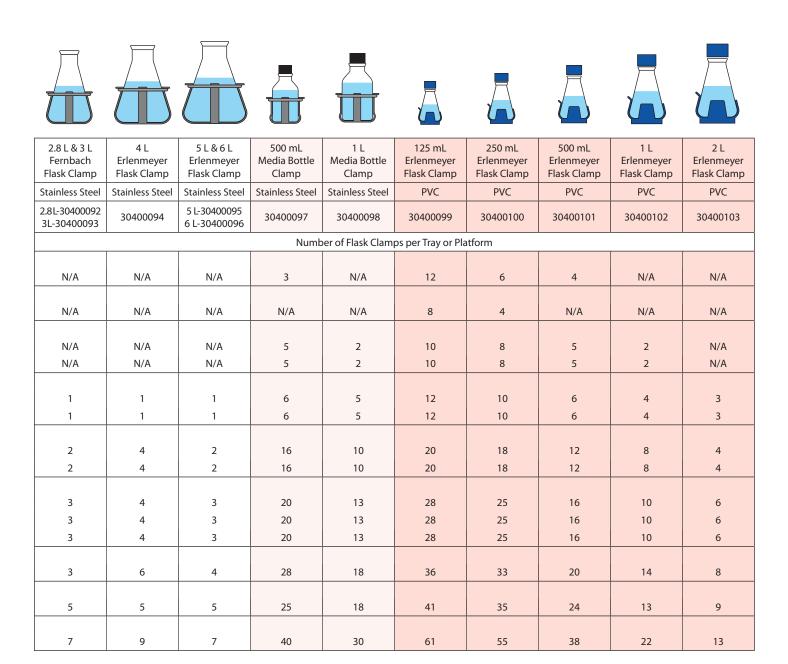
\*All units require a universal platform for mounting flask clamps or test tube racks with the exception of the digital open air and incubating 4 kg shakers

# Accessories Open Air and Incubating & Incubating Cooling Shakers Accessories

### **PVC Flask Clamps**

Constructed of one piece, molded PVC. Autoclavable. Will not scratch or mark flask like other clamps. Includes hardware for easy attachment to universal platforms. The attachment and removal of flasks is quick and easy. Ideal for polycarbonate flasks.





# **Open Air and Incubating & Incubating Cooling Shakers Accessories**

**Test Tube Racks** 

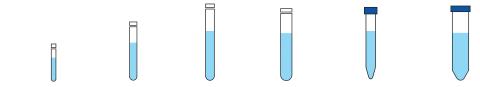
### Half Size, Stationary

Racks constructed of PVC coated steel. Includes hardware for easy attachment to platforms. **Dimensions:**  $5 L \times 7 W \times 4" H (12.7 \times 17.8 \times 10.2 \text{ cm}) / \text{Micro-Tube Rack: } 1.7" H (4.3 \text{ cm}).$ 

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Accessories



| To di Tale a Chala             | 1.5 to 2 mL<br>Micro-Tube Rack | 10 to 13 mm<br>Test Tube Rack | 14 to 16 mm<br>Test Tube Rack | 18 to 20 mm<br>Test Tube Rack | 22 to 25 mm<br>Test Tube Rack | 15 mL Centrifuge<br>Tube Rack | 50 mL Centrifuge<br>Tube Rack |
|--------------------------------|--------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Test Tube Style                | Half Size,<br>Stationary       | Half Size,<br>Stationary      | Half Size,<br>Stationary      | Half Size,<br>Stationary      | Half Size,<br>Stationary      | Half Size,<br>Stationary      | Half Size,<br>Stationary      |
| Tube Capacity                  | 70                             | 63                            | 48                            | 35                            | 24                            | 35                            | 12                            |
| Item Number                    | 30400114                       | 30400115                      | 30400116                      | 30400117                      | 30400118                      | 30400119                      | 30400120                      |
| Tray or Platform               |                                |                               | Number of Te                  | st Tube Racks per             | Tray or Platform              |                               |                               |
| 11.75 × 8.75" (29.9 × 22.2 cm) |                                |                               |                               |                               |                               |                               |                               |
| Digital Open Air 4 kg Shakers  | 2                              | 2                             | 2                             | 2                             | 2                             | 2                             | 2                             |
| 11 × 7.75" (27.9 × 19.7 cm)    |                                |                               |                               |                               |                               |                               |                               |
| Incubating 4 kg Shakers        | 2                              | 1                             | 1                             | N/A                           | N/A                           | 1                             | 1                             |
| Digital Open Air 4 kg Shakers  | 2                              | N/A                           | N/A                           | N/A                           | N/A                           | N/A                           | N/A                           |
| Incubating Microplate Shakers  | 2                              | N/A                           | N/A                           | N/A                           | N/A                           | N/A                           | N/A                           |
| 11 × 13" (27.9 × 33 cm)        |                                |                               |                               |                               |                               |                               |                               |
| Analog/Digital 16 kg Shakers   | 2                              | 2                             | 2                             | 2                             | 2                             | 2                             | 2                             |
| Digital Reciprocating Shakers  | 2                              | 2                             | 2                             | 2                             | 2                             | 2                             | 2                             |
| 13 × 13" (33 cm × 33 cm)       |                                |                               |                               |                               |                               |                               |                               |
| Analog/Digital 16 kg Shakers   | 2                              | 2                             | 2                             | 2                             | 2                             | 2                             | 2                             |
| Digital Reciprocating Shakers  | 2                              | 2                             | 2                             | 2                             | 2                             | 2                             | 2                             |
| 18 × 18" (45.7 × 45.7 cm)      |                                |                               |                               |                               |                               |                               |                               |
| Analog/Digital 16 kg Shaker    | 4                              | 4                             | 4                             | 4                             | 4                             | 4                             | 4                             |
| Digital Reciprocating Shakers  | 4                              | 4                             | 4                             | 4                             | 4                             | 4                             | 4                             |
| 18 × 24" (45.7 × 61 cm)        |                                |                               |                               |                               |                               |                               |                               |
| Analog/Digital 16 kg Shakers   | 6                              | 6                             | 6                             | 6                             | 6                             | 6                             | 6                             |
| Digital Reciprocating Shakers  | 6                              | 6                             | 6                             | 6                             | 6                             | 6                             | 6                             |
| Analog/Digital 23 kg Shakers   | 6                              | 6                             | 6                             | 6                             | 6                             | 6                             | 6                             |
| 18 × 30" (45.7 × 76.2 cm)      |                                |                               |                               |                               |                               |                               |                               |
| Analog/Digital 23 kg Shakers   | 8                              | 8                             | 8                             | 8                             | 8                             | 8                             | 8                             |
| 24 × 24" (61 × 61 cm)          |                                |                               |                               |                               |                               |                               |                               |
| Digital 45 kg Shakers          | 8                              | 8                             | 8                             | 8                             | 8                             | 8                             | 8                             |
| 24 × 36" (61 × 91.4 cm)        |                                |                               |                               |                               |                               |                               |                               |
| Digital 63 kg Shakers          | 7                              | 7                             | 7                             | 7                             | 7                             | 7                             | 7                             |

\* All units require a universal platform for mounting flask clamps or test tube racks with the exception of the digital open air and incubating 4 kg shakers

# Accessories Open Air and Incubating & Incubating Cooling Shakers Accessories

### Test Tube Racks

### Full Size, Stationary

Racks constructed of PVC coated steel. Includes hardware for easy attachment to platforms. **Dimensions**  $3.75 L \times 16.5 W \times 4" H (9.5 \times 41.9 \times 10.2 cm)$ 

### **Full Size, Pivoting**

Has adjustable angle, custom tilt. Stainless steel holder includes removable plastic rack. Rack is easily removed to transport from work area to shaker. **Inside pivoting rack dimensions:** 

 $5.1 \times 10.8 \times 3.9$ " (12.9 × 27.4 × 9.9 cm)

Outside stationary rack dimensions:

 $5.0\times10.9\times5"\,(12.7\times27.6\times12.7\text{ cm})$ 





| 10 to 14 mm<br>Test Tube Rack | 16 to 20 mm<br>Test Tube Rack | 21 to 25 mm<br>Test Tube Rack          | 50 mL Centrifuge<br>Tube Rack | 13 mm<br>Test Tube Rack | 16 mm<br>Test Tube Rack | 20 mm<br>Test Tube Rack | 25 mm<br>Tube Rack     | 30 mm<br>Tube Rack     |
|-------------------------------|-------------------------------|--|-------------------------------|-------------------------|-------------------------|-------------------------|------------------------|------------------------|
| Full Size,<br>Stationary      | Full Size,<br>Stationary      | Full Size<br>Stationary                | Full Size,<br>Stationary      | Full Size,<br>Pivoting  | Full Size,<br>Pivoting  | Full Size,<br>Pivoting  | Full Size,<br>Pivoting | Full Size,<br>Pivoting |
| 48                            | 33                            | 21                                     | 17                            | 90                      | 60                      | 40                      | 24                     | 21                     |
| 30400110                      | 30400111                      | 30400112                               | 30400113                      | 30400105                | 30400106                | 30400107                | 30400108               | 30400109               |
|                               |                               | `````````````````````````````````````` | Number of Test T              | ube Racks per Tra       | ay or Platform          |                         |                        |                        |
| N/A                           | N/A                           | N/A                                    | N/A                           | N/A                     | N/A                     | N/A                     | N/A                    | N/A                    |
| N/A                           | N/A                           | N/A                                    | N/A                           | N/A                     | N/A                     | N/A                     | N/A                    | N/A                    |
| N/A                           | N/A                           | N/A                                    | N/A                           | N/A                     | N/A                     | N/A                     | N/A                    | N/A                    |
| N/A                           | N/A                           | N/A                                    | N/A                           | N/A                     | N/A                     | N/A                     | N/A                    | N/A                    |
| N/A                           | N/A                           | N/A                                    | N/A                           | 1                       | 1                       | 1                       | 1                      | 1                      |
| N/A                           | N/A                           | N/A                                    | N/A                           | 1                       | 1                       | 1                       | 1                      | 1                      |
| N/A                           | N/A                           | N/A                                    | N/A                           | N/A                     | N/A                     | N/A                     | N/A                    | N/A                    |
| N/A                           | N/A                           | N/A                                    | N/A                           | N/A                     | N/A                     | N/A                     | N/A                    | N/A                    |
| N/A                           | N/A                           | N/A                                    | N/A                           | N/A                     | N/A                     | N/A                     | N/A                    | N/A                    |
| N/A                           | N/A                           | N/A                                    | N/A                           | N/A                     | N/A                     | N/A                     | N/A                    | N/A                    |
| 5                             | 5                             | 5                                      | 5                             | 3                       | 3                       | 3                       | 3                      | 3                      |
| 5                             | 5                             | 5                                      | 5                             | 3                       | 3                       | 3                       | 3                      | 3                      |
| 5                             | 5                             | 5                                      | 5                             | 3                       | 3                       | 3                       | 3                      | 3                      |
| 6                             | 6                             | 6                                      | 6                             | 4                       | 4                       | 4                       | 4                      | 4                      |
| 7                             | 7                             | 7                                      | 7                             | 4                       | 4                       | 4                       | 4                      | 4                      |
| 5                             | 5                             | 5                                      | 5                             | 6                       | 6                       | 6                       | 6                      | 6                      |





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