

Incubating & Incubating Cooling Shakers



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

Incubating & Incubating Cooling Selection Guide



Product Family	Incubating Cooling Thermal Shakers	Incubating Light Duty Orbital Shaker	Incubating Light Duty Orbital Shakers
Model	ISTHBLCTS (Heat/Cool) ISTHBLHTS (Heat)	ISLD04HDG	ISLDMPHDG ISLDMPHDGL (Opaque Lid)
Temperature Range	17 below ambient to 100°C / 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	3.6 kg	4 Microplates / 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 Protection	●	—	—
Overload Protection	●	●	●
User Calibration (Temperature)	●	●	●
User Calibration (Speed)	●	—	—
Interface	USB	—	—
Overall Dimensions (L x W x H)	26 x 24.8 x 13.2 cm	43.2 x 27.9 x 26.7 cm	43.2 x 27.9 x 19.7 cm
Included Tray (L x W)	N/A	27.9 x 19.7 cm	27.9 x 19.7 cm
Platform Options (L x W)	N/A	N/A	N/A

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

Incubating & Incubating Cooling Selection Guide



Product Family	Incubating Cooling Light Duty Orbital Shaker	Incubating Rocking Shaker	Incubating Waving Shaker
Model	ISICMBCDG	ISRK04HDG	ISWW02HDG
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 2 Modular Blocks	4.5 kg**	2.3 kg**
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 Protection	—	—	—
Overload Protection	●	●	—
User Calibration (Temperature)	—	—	—
User Calibration (Speed)	—	—	—
Interface	—	—	—
Overall Dimensions (L × W × H)	45.5 × 27.9 × 26.7 cm	43.2 × 27.9 × 26.7 cm	43.2 × 27.9 × 26.7 cm
Included Tray (L × W)	N/A	25.4 × 19.1 cm	23.5 × 18.4 cm
Platform Options (L × W)	N/A	N/A	N/A



Yes

* 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 high-speed 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 & Incubating Cooling Shakers

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°C, maximum 80% relative humidity, non-condensing.



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	
Thermal Shaker	4°C above ambient to 100°C
Cooling Thermal Shaker	17°C below ambient to 100°C
Temperature Accuracy	
Thermal Shaker	± 1°C between 20°C and 45°C ± 2°C above 45°C
Cooling Thermal Shaker	± 0.5°C between 20°C and 45°C ± 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
Cooling Rate	above ambient 2-3°C/min below ambient 0.5-1.0°C/min
Heating Rate	5°C/min
Overall Dimensions (L × W × H)	26 × 24.8 × 13.2 cm
Ship Weight	5.4 kg

Description	Model	Item Number
Thermal Shaker	ISTHBLHTS	30392005
Cooling Thermal Shaker	ISTHBLCTS	30391998

Incubating Cooling Thermal Shakers Modular Blocks



Microplate Block

Sample Type	Well Size	Well Depth	Dimensions (L x W x H)	Item Number
Microplate Thermal Block with Lid	10.7 x 7.1 x 0.25 cm	2.30 cm	11.9 x 16.3 x 7.6 cm	30400126

Sample Type	Well Diameter	Well Depth	Dimensions (L x W x H)	Item Number
384 Well Plate Thermal Block with Lid	0.40 cm	0.81 cm	11.9 x 16.3 x 7.6 cm	30400127
0.2 mL PCR Plate Thermal Block with Lid	0.64 cm	1.27 cm	11.9 x 16.3 x 7.6 cm	30400128

Tube Blocks

Sample Type	No. of Wells	Well Diameter	Well Depth	Dimensions (L x W x H)	Item Number
0.5 mL Microtubes*	30	0.79 cm	2.46 cm	10.2 x 14.2 x 4.6 cm	30400129
1.5 mL Microtubes*	24	1.11 cm	3.53 cm	10.2 x 14.2 x 5.3 cm	30400130
2.0 mL Microtubes*	24	1.15 cm	3.53 cm	10.2 x 14.2 x 5.3 cm	30400131
5-7 mL Tubes	24	1.20 cm	3.61 cm	10.2 x 14.2 x 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 x W x H)	Item Number
2.0 mL Cryo Tubes	24	1.26 cm	3.6 cm	10.2 x 14.2 x 5.6 cm	30400133

Conical Tube Blocks

Sample Type	No. of Wells	Well Diameter	Well Depth	Dimensions (L x W x H)	Item Number
5 mL Eppendorf Tube Block	9	1.68 cm	4.9 cm	10.4 x 14.5 x 7.1 cm	30400134
15 mL Conical Tubes	9	1.73 cm	10.44 cm	10.7 x 14.7 x 12.7 cm	30400135
50 mL Conical Tubes	4	3.0 cm	10.09 cm	10.2 x 14.5 x 12.2 cm	30400136

Incubating Light Duty Orbital Shakers



OHAUS Incubating Light Duty Shakers are designed to incubate samples from 10° below ambient to 65°C depending on the model. The Incubating Mini Shaker has an 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°C 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.

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°C, 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	± 2% of set speed
Timer	1 second to 160 hours
Orbit	3 mm
Maximum Weight Capacity	3.6 kg
Tray Material	Aluminum
Tray Dimensions (L × W)	27.9 × 19.7 cm
Interior Dimensions (L × W × H)	28.7 × 21.1 × 14.5 cm
Overall Dimensions (L × W × H)	43.2 × 27.9 × 27 cm
Ship Weight	13.6 kg

Description	Model	Item Number
Incubating Light Duty Orbital Shaker	ISLD04HDG	30391919

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°C 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.

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°C, 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
Maximum Weight Capacity	4 microplates or 2 micro-tube racks
Tray Material	Aluminum
Tray Dimensions (L x W)	27.9 x 19.7 cm
Overall Dimensions (L x W x H)	43.2 x 27.9 x 19.7 cm
Ship Weight	13.6 kg

Description	Model	Item Number
Incubating Microplate Shaker	ISLDMPHDG	30391933
Incubating Microplate Shaker with Opaque Lid	ISLDMPHDGL	30391926

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 & Incubating Cooling Shakers

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 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°C, 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
Maximum Weight Capacity	2 microplates or 2 modular blocks
Overall Dimensions (L × W × H)	45.5 × 27.9 × 26.7 cm
Ship Weight	15.4 kg

Description	Model	Item Number
Incubating Cooling Light Duty Shaker	ISICMBCDG	30391940

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): 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



Combination Blocks

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	30400156
12/13 mm	5	13.8 mm	48.4 mm	
25 mm	3	26.2 mm	48.4 mm	
Centrifuge Tube Combination				
1.5 mL	4	11.1 mm	39.1 mm	30400193
15 mL	3	17.1 mm	44.5 mm	
50 mL	2	29.0 mm	47.6 mm	
Micro-Tube Combination				
0.5 mL	6	7.9 mm	27.6 mm	30400194
1.5 mL	10	11.1 mm	39.1 mm	
2 mL	5	11.5 mm	38.1 mm	



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 & Incubating Cooling Shakers

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°C to 65°C. Easy-to-use controls allow users to adjust temperature in 1°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°C, 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	4.5 kg **
Tray Material	Aluminum
Tray Dimensions (L x W)	25.4 x 19.1 cm
Interior Dimensions (L x W x H)	27.3 x 19.7 x 9.7 cm
Overall Dimensions (L x W x H)	43.2 x 27.9 x 26.7 cm
Ship Weight	10 kg

* Maximum speed/tilt angle may vary with heavy or unbalanced loads.

** Centered on tray.

Description	Model	Item Number
Incubating Rocking Shaker	ISRK04HDG	30391975

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°C to 65°C. Easy-to-use controls allow users to adjust temperature in 1°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°C, 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	2.3 kg **
Tray Material	Aluminum
Tray Dimensions (L × W)	23.5 × 18.4 cm
Interior Dimensions (L × W × H)	27.3 × 19.7 × 8.6 cm
Overall Dimensions (L × W × H)	43.2 × 27.9 × 26.7 cm
Ship Weight	10 kg

* Maximum speed/tilt angle may vary with heavy or unbalanced loads.

** Centered on tray.

Description	Model	Item Number
Incubating Waving Shaker	ISWW02HDG	30391982

Accessories

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 25.4 cm 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.



Description	Used on Shakers	Item Number
27.9 × 33 cm Universal Platform	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400052
33 × 33 cm Universal Platform	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400053
45.7 × 45.7 cm Universal Platform*	Analog/Digital 16 kg Shakers and Reciprocating Shakers**	30400054
45.7 × 61 cm Universal Platform*	Analog/Digital 16 kg & 23 kg Shakers** and Reciprocating Shakers**	30400056
61 × 61 cm Universal Platform	Digital 45 kg Shakers	30400057
45.7 × 76.2 cm Universal Platform*	Analog/Digital 23 kg Shakers	30400058
61 × 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 × 13" (27.9 × 33 cm) Rubber Mat	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400060
33 × 33 cm Rubber Mat	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400061
45.7 × 45.7 cm Rubber Mat	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400062
18 × 24" (45.7 × 61 cm) Rubber Mat	Analog/Digital 16 kg Shakers, Reciprocating Shakers and Analog Digital 23kg Shakers	30400063
61 × 61 cm Rubber Mat	Digital 45 kg Shakers	30400064
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 25.4 cm clearance. The platform is constructed of type 304 stainless steel. The platform has a non-skid rubber surface.



Description	Used on Shakers	Item Number
45.7 × 45.7 cm Culture Platform*	Analog/Digital 16 kg Shakers* and Reciprocating Shakers**	30400066
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

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 Capacity	Used on Shakers	Item Number
33 × 33 cm Dedicated Platform / 125 mL Flask Clamp	16	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400075
33 × 33 cm Dedicated Platform / 250 mL Flask Clamp	12	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400076
33 × 33 cm Dedicated Platform / 500 mL Flask Clamp	8	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400077
33 × 33 cm Dedicated Platform / 1 L Flask Clamp	4	Analog/Digital 16 kg Shakers and Reciprocating Shakers	30400078
45.7 × 45.7 cm Dedicated Platform / 125 mL Flask Clamp*	27	Analog/Digital 16 kg Shakers and Reciprocating Shakers **	30400079
45.7 × 45.7 cm Dedicated Platform / 250 mL Flask Clamp*	20	Analog/Digital 16 kg Shakers and Reciprocating Shakers **	30400080
45.7 × 45.7 cm Dedicated Platform / 500 mL Flask Clamp*	13	Analog/Digital 16 kg Shakers and Reciprocating Shakers **	30400081
45.7 × 45.7 cm Dedicated Platform / 1 L Flask Clamp	9	Analog/Digital 16 kg Shakers and Reciprocating Shakers **	30400082
Two-Tier Braces (set of 4)		Analog/Digital 16 kg Shakers	30400051

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	21.8 cm	21.8 × 29.7 cm	Digital 4 kg Shakers	30400121
4-bar Adjustable Platform	45.7 cm	45.7 × 45.7 cm	Analog/ Digital 16 kg shakers	30400068
4-bar Adjustable Platform	45.7 cm	45.7 × 61 cm	Analog/ Digital 23 kg shakers	30400069

Replacement Parts

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

* Two-tier ready

**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 platforms' 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.



Description	Bar Size	Overall Dimensions (L x W x H)	Used on Shakers	Item Number
4-bar Large Vessel Carrier Platform	45.7 cm	76.4 x 45.9 x 35.3 cm	Analog/Digital 23 kg Shakers	30400070
4-bar Large Vessel Carrier Platform	61 cm	61.9 x 61.7 x 36.0 cm	Digital 45 kg Shakers	30400071
5-bar Large Vessel Carrier Platform	61 cm	93.7 x 61.7 x 36.0 cm	Digital 68 kg Shakers	30400072

Replacement Part	Used with Carrier	Item Number
45.7 cm adjustable bar (with mounting hardware)	30400070	30400073
61 cm adjustable bar (with mounting hardware)	30400071 & 30400072	30400074

Separatory Funnel Platform

Holds 3 funnels at once on a 45.7 x 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
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 Size	Platform Item Number	Microplate Clamps
27.9 x 33 cm	30400052	4
33 x 33 cm	30400053	6
45.7 x 45.7 cm	30400054	12
45.7 x 61 cm	30400056	18
45.7 x 76.2 cm	30400057	21
61 x 61 cm	30400058	24
61 x 91.4 cm	30400059	36



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

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, 32.4 × 25.4 cm	Digital Rocking Shaker	30400140
Dimpled Mat, 29.9 × 22.2 cm	Digital Waving Shaker	30400142
Dimpled Mat, 25.4 × 19.1 cm	Incubating Rocking Shaker	30400141
Dimpled Mat, 23.5 × 18.4 cm	Incubating Waving Shaker	30400143
Dimpled Mat, 29.9 × 22.2 cm	Open Air 4 kg Orbital Shaker	30400124
Dimpled Mat, 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 8.9 cm above lower tray. The tray includes hardware and a rubber mat.

Description	Used on Shakers	Item Number
Stacking Tray, 32.4 × 25.4 cm	Digital Rocking Shaker	30400137
Stacking Tray, 29.9 × 22.2 cm	Digital Waving Shaker	30400138
Stacking Tray, 35.6 × 27.9 cm	Analog Rocking Shaker	30400139



Dilution Cup Tray

Constructed of type 304 stainless steel. Holds 24 × 28 mm dilution vials.

Description	Used on Unit	Item Number
Dilution Cup Tray	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 × 1.5 mL or 2 mL micro-tubes. Tray can accommodate up to 2 micro-tube racks.

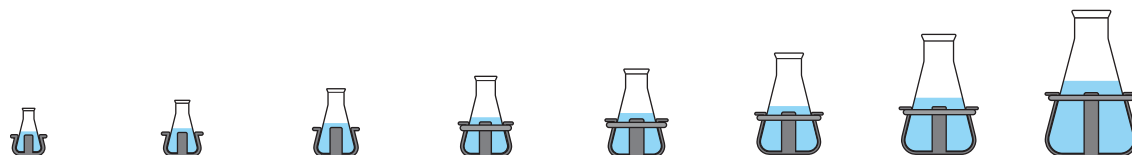
Description	Used on Unit	Item Number
Micro-Tube Rack	Digital Open Air and Incubating Microplate Shaker	30400114



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.



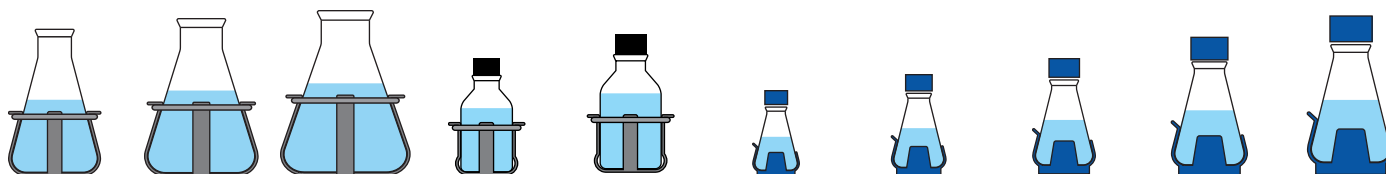
Clamp Style	10 mL Erlenmeyer Flask Clamp	25 mL Erlenmeyer Flask Clamp	50 mL Erlenmeyer Flask Clamp	125 mL Erlenmeyer Flask Clamp	250 mL Erlenmeyer Flask Clamp	500 mL Erlenmeyer Flask Clamp	1 L Erlenmeyer Flask Clamp	2 L Erlenmeyer Flask Clamp
Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Item Number	30400084	30400085	30400086	30400087	30400088	30400089	30400090	30400091
Tray or Platform	Number of Flask Clamps per Tray or Platform							
29.9 × 22.2 cm Open Air Digital 4 kg Shakers	35	20	15	12	6	4	N/A	N/A
27.9 × 19.7 cm Incubating 4 kg Shakers	35	20	12	8	5	N/A	N/A	N/A
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
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
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
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
45.7 × 76.2 cm Analog/Digital 23 kg Shakers	203	112	56	36	36	26	15	8
61 × 61 cm Digital 45 kg Shakers	221	121	61	41	41	25	16	9
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

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.



2.8 L & 3 L Fernbach Flask Clamp	4 L Erlenmeyer Flask Clamp	5 L & 6 L Erlenmeyer Flask Clamp	500 mL Media Bottle Clamp	1 L Media Bottle Clamp	125 mL Erlenmeyer Flask Clamp	250 mL Erlenmeyer Flask Clamp	500 mL Erlenmeyer Flask Clamp	1 L Erlenmeyer Flask Clamp	2 L Erlenmeyer Flask Clamp
Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	PVC	PVC	PVC	PVC	PVC
2.8L-30400092 3L-30400093	30400094	5 L-30400095 6 L-30400096	30400097	30400098	30400099	30400100	30400101	30400102	30400103
Number of Flask Clamps per Tray or Platform									
N/A	N/A	N/A	3	N/A	12	6	4	N/A	N/A
N/A	N/A	N/A	N/A	N/A	8	4	N/A	N/A	N/A
N/A	N/A	N/A	5	2	10	8	5	2	N/A
N/A	N/A	N/A	5	2	10	8	5	2	N/A
1	1	1	6	5	12	10	6	4	3
1	1	1	6	5	12	10	6	4	3
2	4	2	16	10	20	18	12	8	4
2	4	2	16	10	20	18	12	8	4
3	4	3	20	13	28	25	16	10	6
3	4	3	20	13	28	25	16	10	6
3	4	3	20	13	28	25	16	10	6
3	6	4	28	18	36	33	20	14	8
5	5	5	25	18	41	35	24	13	9
7	9	7	40	30	61	55	38	22	13

Open Air and Incubating & Incubating Cooling Shakers Accessories

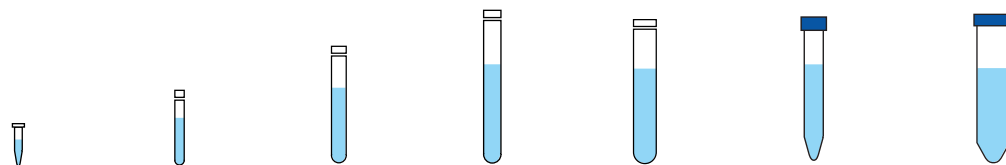
Test Tube Racks

Half Size, Stationary

Racks constructed of PVC coated steel. Includes hardware for easy attachment to platforms.

Dimensions:

12.7 × 17.8 × 10.2 cm / Micro-Tube Rack: 4.3 cm H.



Test Tube Style	1.5 to 2 mL Micro-Tube Rack Half Size, Stationary	10 to 13 mm Test Tube Rack Half Size, Stationary	14 to 16 mm Test Tube Rack Half Size, Stationary	18 to 20 mm Test Tube Rack Half Size, Stationary	22 to 25 mm Test Tube Rack Half Size, Stationary	15 mL Centrifuge Tube Rack Half Size, Stationary	50 mL Centrifuge Tube Rack Half Size, Stationary
Tube Capacity	70	63	48	35	24	35	12
Item Number	30400114	30400115	30400116	30400117	30400118	30400119	30400120
Tray or Platform	Number of Test Tube Racks per Tray or Platform						
29.9 × 22.2 cm Digital Open Air 4 kg Shakers	2	2	2	2	2	2	2
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
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
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
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
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
45.7 × 76.2 cm Analog/Digital 23 kg Shakers	8	8	8	8	8	8	8
61 × 61 cm Digital 45 kg Shakers	8	8	8	8	8	8	8
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

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

9.5 × 41.9 × 10.2 cm

Full Size, Pivoting

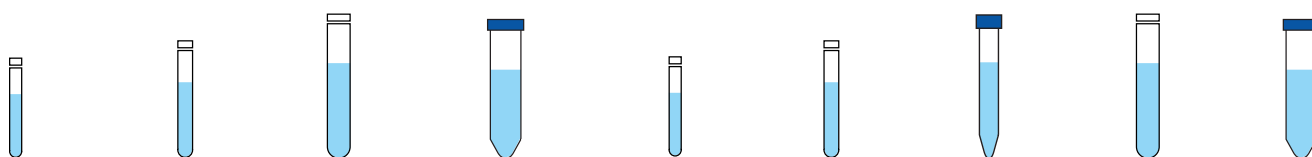
Has adjustable angle, custom tilt. Stainless steel holder includes removable plastic rack. Rack is easily removed to transport from work area to shaker.

Inside pivoting rack dimensions:

12.9 × 27.4 × 9.9 cm

Outside stationary rack dimensions:

12.7 × 27.6 × 12.7 cm



10 to 14 mm Test Tube Rack Full Size, Stationary	16 to 20 mm Test Tube Rack Full Size, Stationary	21 to 25 mm Test Tube Rack Full Size Stationary	50 mL Centrifuge Tube Rack Full Size, Stationary	13 mm Test Tube Rack Full Size, Pivoting	16 mm Test Tube Rack Full Size, Pivoting	20 mm Test Tube Rack Full Size, Pivoting	25 mm Tube Rack Full Size, Pivoting	30 mm Tube Rack Full Size, Pivoting
48	33	21	17	90	60	40	24	21
30400110	30400111	30400112	30400113	30400105	30400106	30400107	30400108	30400109

Number of Test Tube Racks per Tray 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	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
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