BOEKEL™
Boekel Scientific

Hybridization Apparatus

DOMINGUEZ & ASOCIADOS SAS

Big SHOT III™ Hybridization Oven

Models 230402 and 230402-2

Features:

- PID temperature controller for rapid heat up and excellent temperature stability
- Forced air convention
- User settable over temperature safety thermostat
- Fully programmable digital timer - up to 99 hours, 59 minutes
- Carousel speed up to 60 RPM in 1 RPM increments
- Reversible door
- Stackable
- Easy to remove stainless steel drip pan
- UL/CSA/CE Certified

	Model 230402 (115 VAC)	Model 230402-2 (230 VAC)
Vessel Capacity (standard carousel included)	10 - 35 mm x 300 mm, or 10 - 35 mm x 225 mm, or 20 - 35 mm x 150 mm, or 20 - 35 mm x 100 mm bottles	
Temperature Range	Ambient +10°C to 100°C	
Temperature Set Range	0°C to 100°C	
Stability	+/-0.2°C	
Accuracy	Ambient +65°C in 25 minutes	
Heat-up Time	+/-0.25°C at 65°C	
Overall Dimensions (Width x Length x Height)	47.6 cm x 35.9 cm* x 47.9 cm (18.75 in x 14.12 in x 18.87 in)	
Chamber Dimensions (Width x Length x Height)	34.3 cm x 25.7 cm x 27.3 cm (13.5 in x 10.12 in x 10.75 in)	
Speed	5 to 60 RPM (variable)	
Timer	Up to 99 hr 59 min	
Net Weight	19.1 kg (42 lb)	
Shipping Weight	24.5 kg (65 lb)	
Electrical	115 VAC 60 Hz 320 W (UL/ CSA)	230 VAC 50/60 Hz 325 W (CE)

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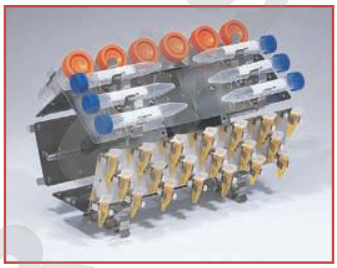
Big SHOT III™ Accessories

Carousels and Clips



Model 230442 - The Multi-Tube Carousel works with a variety of interchangeable clip sizes to hold a combination of 50 mL, 15 mL, 2.0 mL, and 1.5 mL tubes, allowing for simultaneous processing of multiple sized tubes. The clips are supplied with mounting hardware, and mount onto the plates on the carousel. Depending on the tube size, the tubes may be positioned horizontally, vertically, or at an angle.

Number of Plates on Carousel	Tube Sizes Held	Maximum No. and Orientation of Tubes per Plate		Total Number of Tubes Held (carousel fully loaded)	Corresponding Clips (Bags of 50)
5	50 mL	5 6	Horizontal Vertical	25 30	230250
5	15 mL	6 7	Horizontal Vertical	30 35	230215
5	2.0/ 1.5 mL	20	Any orientation	100	230210

Carousel for Microplates

Model 230426 - These carousels hold standard microplates or deep well plates. (Plates must be sealed before use in carousel.)

Microplate Carousel	No. of Plates Held per Carousel
230426	10

Large Bottle Carousel

Model 230440 - For processing large membranes, this carousel holds four 70 mm x 220 mm (750 mL) acrylic bottles, or four 55 mm x 180 mm (400 mL) acrylic bottles.

Rocker Platform

Model 230420 - Use the Rocker Platform for incubation of large blots in flat-bottomed containers.

Platform dimensions	21.5 cm x 28.0 cm x (8.5 in x 11 in)
Weight capacity	5.0 kg (11 lb)
Speed	5 - 60 strokes per minutes, variable speed
Rocking angle	16°

Large Acrylic Bottles and Gaskets

Large bottles are constructed of beta-blocking acrylic. Designed with screw-on cap and leak-proof gasket.

Bottle Size	Model Number
70 mm x 220 mm (750 mL) bottle, each	502-0009
55 mm x 180 mm (400 mL) bottle, each	502-0010
Gasket for 502-0009, package of 2	A1902701
Gasket for 502-0010, package of 2	A1902702

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Little SHOT III™ and Bambino™ Hybridization Ovens

Models 230502 and 230502-2 | Models 230301 and 230301-2

Little SHOT III™ medium capacity hybridization oven

- PID temperature controller for rapid heat up and excellent temperature stability
- Lift off lid for full access to heating chamber
- Stainless steel drip pan
- Forced air convection delivers excellent uniformity
- UL/CSA/CE Certified

Bambino™ compact hybridization oven

- Holds up to four 50 mL, six 15 mL or twelve 2.0/ 1.5 mL polypropylene conical centrifuge tubes
- Forced air convection delivers excellent uniformity
- Highly compact, yet offers the same features found in larger, more expensive units
- Tubes rotate within the chamber at an adjustable rate of 6 - 20 RPM
- A stainless steel heating chamber with sealed floor seam for easy cleaning and a clear acrylic lid
- UL/CSA/CE Certified

	Little SHOT III™		Bambino™	
	Model 230502 (115 VAC)	**Model 230502-2 (230 VAC)**	**Model 230301 (115 VAC)**	**Model 230301-2 (230 VAC)**
Vessel Capacity (standard carousel included)	4- 35 mm x 300 mm, or 4 - 3 m x 25 mm, or 8 - 35 mm x 150 mm, or 8 - 35 mm x 100 mm bottles		4 - 50 mL conical tubes	
Temperature Range	Ambient + 10°C to 75°C		Ambient + 10°C to 80°C	
Temperature Set Range	0°C to 100°C		0°C to 80°C	
Stability	+/-0.5°C		+/-0.1°C	
Accuracy	+/-0.5°C		+/-0.5°C	
Heat-up Time	Ambient to 65°C in 20 minutes		Ambient to 70°C in 25 minutes	
Speed	5 to 60 RPM (variable)		6 to 20 RPM (variable)	
Timer	Up to 99 hr 59 min		NA	
Overall Dimensions (Width x Length x Height)	22.9 cm x 59.1 cm x 33.0 cm (9.0 in x 23.25 in x 13.0 in)		25.4 cm x 26.7 cm x 16.2 cm (10.0 in x 10.5 in x 6.5 in)	
Chamber Dimensions (Width x Length x Height)	17.1 cm x 32.4 cm x 22.2 cm (6.75 in x 12.75 in x 8.75 in)		15.0 cm x 15.0 cm x 14.0 cm (6.0 in x 6.0 in x 5.5 in)	
Net Weight	12.5 kg (27.5 lb)		4.4 kg (10 lb)	
Shipping Weight	14.8 kg (32 lb)		5.9 kg (13 lb)	
Electrical	115 VAC 60 Hz 290 W (UL/ CSA)	230 VAC 50/60 Hz 290 W (CE)	115 VAC 50/60 Hz 90 W	230 VAC 50/60 Hz 90 W

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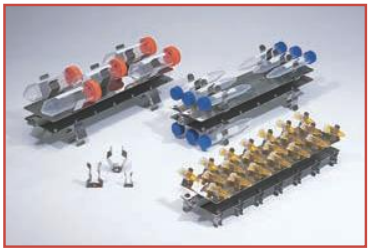
Little SHOT III™ & Bambino Accessories

Carousels and Clips

Models 230552 & 230332 - The Multi-Tube Carousels work with a variety of interchangeable clip sizes to hold a combination of 50 mL, 15 mL, 2.0 mL, and 1.5 mL tubes, allowing for simultaneous processing of multiple sized tubes. The clips are supplied with mounting hardware, and mount onto the plates on the carousel. Depending on the tube size, the tubes may be positioned horizontally, vertically, or at an angle.



Multi-Tube Carousels for Little SHOT III

Multi-Tube Carousels for Bambino

Multi-tube Carousel for Model 230502

Number of Plates on Carousel	Tube Sizes Held	Maximum No. and Orientation of Tubes per Plate		Total Number of Tubes Held (carousel fully loaded)	Corresponding Clips (Bags of 50)
2	50 mL	6	Horizontal	10	230250
2	15 mL	6	Horizontal	12	230215
2	2.0/ 1.5 mL	20	Any orientation	40	230210

Multi-tube Carousel for Model 230301

Number of Plates on Carousel	Tube Sizes Held	Maximum No. and Orientation of Tubes per Plate		Total Number of Tubes Held (carousel fully loaded)	Corresponding Clips (Bags of 50)
2	50 mL	2	Horizontal	4	The following clips are included with the carousel: 4 - 50 mL clips 6 - 15 mL clips 12 - 2.0/1.5 mL clips
2	15 mL	3	Horizontal	6	
2	2.0/ 1.5 mL	6	Any orientation	12	

Little SHOT III™ Carousel for Microplates

Model 230710 - These carousels hold standard microplates or deep well plates. (Plates must be sealed before use in carousel.)

Microplate Carousel	No. of Plates Held per Carousel
230710	4

Big SHOT III™ & Little SHOT III™ Glass Hybridization Bottles

All glass bottles are supplied with blue caps and silicone “O” ring.

Bottle Size	Model Number
35 mm x 300 mm, package of 2	502-0300
35 mm x 225 mm, package of 2	502-0225
35 mm x 150 mm, package of 2	502-0150
35 mm x 100 mm, package of 2	502-0100

Caps and “O” Rings for Glass Hybridization Bottles

Description	Model Number
Blue caps with silicone “O” rings, package of 2	505-0001
Replacement silicone “O” rings for blue caps, package of 10	502-0500
Red caps with liners, package of 2	509-0009

Nylon Mesh

Mesh Size	Model Number
15 cm x 10 cm, package of 5	230415
23 cm x 23 cm, package of 5	230423

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Boekel InSlide Out™ Hybridization Oven

Models 241000 and 241000-2

Features:

- PID temperature controller for rapid heat up and excellent temperature stability
- 20 slide capacity
- Unique sealed aluminum tray maintains temperature and humidity during incubation
- Optional polycarbonate slide holder insert accommodates 18 slides 1 x 3, and may be placed directly into a water bath for wash procedures
- UL/CSA/CE Certified

Accessories	Model Number
Polycarbonate slide holder insert for up to 18 slides	C2403765
Aluminum tray assembly (tray and lid - included)	C2403973
Stainless steel rack insert for tray (included)	C2403754

	Model 241000 (115 VAC)	Model 241000-2 (230 VAC)
Temperature Range	Ambient + 10°C to 75°C	
Temperature Setting Range	0°C to 75°C	
Stability	+/- 0.2°C	
Accuracy	+/- 1°C at 65°C	
Display Resolution	0.1°C	
Heat-up Time (ambient to 50°C)	Chamber: 20 minutes	
Heat-up Time (ambient to 50°C)	Tray: 25 minutes	
Overall Dimensions (Width x Length x Height)	45.7 cm x 45.1 cm x 15.2 cm (18 in x 17.75 in x 6 in)	
Chamber Dimensions (Width x Length x Height)	19.4 cm x 29.5 cm x 1.9 cm (7.5 in x 11.5 in x .75 in)	
Height Above Stainless Steel Rack	9.5 mm (.375 in)	
Capacity with Stainless Steel Rack	20 - 1 in x 3 in slides, or various other sizes	
Capacity with Plastic Slide Holder	18 - 1 in x 3 in slides only	
Net Weight	9.5 kg (21 lb)	
Shipping Weight	10.9 kg (26 lb)	
Electrical	115 VAC 50/60 Hz 155 W (UL/ CSA)	230 VAC 50/60 Hz 155 W (CE)

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Boekel Slide Moat™ Hybridization Bath

Models 240000 and 240000-2

Features:

- 30 standard microscope slide capacity
- PID temperature controller for easy temperature selection
- Tempered glass lid which seals with integral gasket on heating base
- Excellent temperature uniformity and stability
- UL/CSA/CE Certified

NOTE: Boekel strongly recommends using covered and sealed slides for higher temperatures (> 37° C) or prolonged period incubations (> 1 hour).

Accessories	Model Number
Light shield cover	C1303205

	Model 240000 (115 VAC)	Model 240000-2 (230 VAC)
Temperature Range	Ambient + 5°C to 100°C	
Heat-up Time	Ambient to 65°C in 20 minutes	
Temperature Setting/ Display	PID/ LED	
Stability	Typically +/- 0.2°C or better throughout operating temperatures	
Uniformity	+/- 35°C at 37°C; +/- 0.7°C at 65°C	
Capacity	30 - 1 in x 3 in slides, 3 rows of 10	
Overall Dimensions (Width x Length x Height)	40.6 cm x 34.9 cm x 14.6 cm (16 in x 13.75 in x 5.75 in)	
Clearance between lid and slide pedestal	1.0 cm (.48 in)	
Net Weight	8.2 kg (18 lb)	
Shipping Weight	10.4 kg (23 lb)	
Electrical	115 VAC 50/60 Hz 200 W (UL/ CSA)	230 VAC 50/60 Hz 155 W (CE)

Boekel Programmable Slide Moat™

Models 280001 and 280001-2

Features:

- 12 Slide Capacity
- Programmable Digital Controls allow you define and control up to 3 ramp/timed segments
- Calibration Mode included so you can ensure accurate readings
- Friction Hinged Lid - no more trying to figure out where to put the lid when removing or placing your slides

- Four Leveling Feet - even if your surface isn't level, your unit can be!
- Small footprint frees up bench space
- Rapid Heat Up with excellent accuracy and uniformity
- Two wells for water should your protocol require humidity
- UL, CSA and CE certified

Model	280001, 280001-2 (230V)
Overall dimensions	17" W x 10"D x 4"H
Capacity	12 Slides
Temperature range	Ambient +5˚C to 100˚C
Stability	Typically +/– 0.2˚C
Heat up rate	Ambient 65˚C in 20 min.
Net weight	12.5 lbs
Shipping dimensions	22" W x 22"D x 12"H
Shipping weight	14 lbs
Electical	115 VAC 50/60 Hz 200 W (UL/ CSA) 230 VAC 50/60 Hz 155 W (CE)

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Shake 'N' Bake™ Hybridization Oven

Models 136400 and 136400-2

Features:

- PID temperature controller for rapid heat up and excellent temperature stability
- Small footprint to conserve bench space
- Gasket sealed metal and acrylic see-through door
- Shaking speed 8 to 25 RPM
- Each unit is supplied with three shelves spaced 63.5mm apart, accommodating dishes or heat sealed bags.
- UL/CSA/CE Certified

	Model 136400 (115 VAC)	Model 136400-2 (230 VAC)
Temperature Range	Ambient +5°C to 70°C	
Rocking Speed	8 to 25 strokes per minute	
Tilt Angle	5.5 to 11	
Stability Chamber	+/-0.2°C at 65°C	
Sample Vessel	+/-0.25°C at 65°C	
Overall Dimensions (Width x Length x Height)	32.0 cm x 37.0 cm x 41.0 cm (12.5 in x 14.5 in x 16 in)	
Chamber Dimensions (Width x Length x Height)	29.0 cm x 29.0 cm x 27.0 cm (11.5 in x 11.5 in x 10.5 in)	
Tray Dimensions (Width x Length x Height)	22.0 cm x 20.0 cm x 1.3 cm (8.5 in x 8 in x .5 in)	
Maximum Shelf Load	1.0 kg (2.25 lb)	
Temperature Setting/ Display	PID/ LED	
Net Weight	11.0 kg (24 lb)	
Shipping Weight	12.9 kg (28 lb)	
Electrical	115 VAC 50/60 Hz 230 W	230 VAC 50/60 Hz 230 W (CE)

UV Crosslinker

Models 234100 and 234100-2

Features:

- Unique-to-the-market, adjustable height feature provides a more accurate reading by keeping samples on the base of the chamber, at the same distance from the bulbs as the fixed UV sensor, instead of building up samples to get them closer to the bulbs. Just simply adjust the bulbs.
- Large UV protective window allows for easier process inspection
- Two modes of operation – Energy or Time
- Open Door Safety mechanism
- Energy Efficient electronic ballasts
- Small footprint
- UL/CSA/CE Certified

Ambient Temperature Operating Range	16°C to 28°C
Maximum Time Setpoint	999m 59s in 1 second increments
Maximum Energy Setpoint	9,999,900µJ in 100µJ increments
Power Rating	80W
Net Weight	30lb
Exterior Dimensions (maximum)	15 1/8"W x 14 3/8"D x 10 1/4"H
Supply Ratings	Model 234100: 120VAC, 50/60 Hz Model 234100-2: 230VAC, 50/60 Hz

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BOEKEL™ Boekel Scientific
855 Pennsylvania Boulevard • Feasterville, PA 19053 USA
800-336-6929 • Phone: 215-396-8200 • Fax: 215-396-8264
E-mail: boekel-info@boekelsci.com • Web site: www.boekelsci.com

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