



New Brunswick Shakers

eppendorf

Eppendorf and New Brunswick

"In Touch with Life" Gets "A Culture of Innovation"

New Brunswick's world renowned Shakers, CO₂ Incubators, ULT Freezers and Fermentors/Bioreactors are now sold through Eppendorf North America, in the US and Canada.

The New Brunswick product line perfectly complements the Eppendorf product range of liquid handling, centrifugation, PCR, sample prep, detection and cell biology instrumentation and consumables.

New Brunswick Shakers

With 3 product lines to choose from, Innova, I-Series or Excella series, there's a shaker suited to your exact needs and budget. The world famous, reliable, triple-eccentric drive mechanism with cast iron top plate, found in the Innova and I-series, provides decades worth of durability. Shakers sold in the 1950's are still going strong today. Every New Brunswick shaker drive is individually CAM'd for precise tolerances and dependability for years of trouble free service.



 ${
m CO_2}$ incubators—sized from a compact 14 L up to 170 L. Fanless design eliminates a key source of contamination and vibration for the proper growing of cells- including ones positioned on the top shelf! 6-sided dry heat technology and InfraRed ${
m CO_2}$ sensor are standard features to ensure even and accurate incubation.

Numerous options are available including O_2 control, inner door options and even a fully lined copper chamber.



Energy-efficient **-86** °C ULT freezers are available in upright or chest configurations and feature two model ranges and 12 different sizes. Innova series freezers utilize space-saving vacuum insulation panels for increased internal capacity with a small footprint and Excella series utilize traditional insulation. A standard feature found on all New Brunswick freezers is the built-in heated vent port to release vacuum after the door is shut to gain easy access to samples.



State-of-the-art **bioreactors and fermentors** handle volumes from scale-up 1L, all the way up to 3000 L. Configurations are available with single-use vessels, autoclavable vessels, up to sterilize in place (SIP) systems. Interface options, impellers, air flow controllers and gas mixing options are all completely customizable to suit your EXACT application needs.



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New Brunswick shakers—dependable and reliable

Description

New Brunswick Scientific laboratory shakers are known throughout the world for dependable operation and innovative design. New Brunswick manufactures the widest selection of shakers in the industry, with more than 40 models available to suit your exact needs. Select from a broad range of open-air incubated, or incubated/refrigerated models, as well as the new Innova® 41 incubator shaker with advanced CO₂ control.

Our top-of-the-line **Innova Lab Shakers** feature New Brunswick's triple-eccentric drive for uniform motion and superb reliability under the most adverse conditions. Innova temperature-controlled models provide the convenience of programmable controls to automate ramping temperature and speed up and down, and cycling optional photosynthetic and UV lighting on and off at pre-set intervals. Budget-saving **Excella®** shakers feature microprocessor-controls for accurate control, and heavy-duty counterbalanced drives for dependable performance.

Innovative designs and unparalleled fabrication provide you with day-in and day-out worry-free operation, often for decades of continuous use.

Product features

- Advanced microprocessor controls ensure reproducible results and operator convenience
- "Set it and forget it" programming in our newest models enable you to store and recall multiple parameter multistep programs for convenient, automated operation
- Numerous safety features are built in to protect you, your cultures and your shaker
- We offer the largest selection of shakers in the industry over 20 models in our Innova line alone, to meet virtually any culturing or molecular biology application



For incubator shakers, see pages 8–27. For open-air shakers, see pages 30–43. For water bath shakers, see pages 44–47.

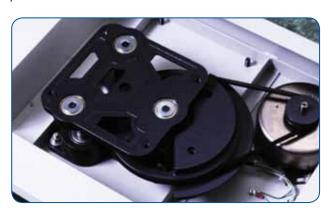


What makes Innova® shakers so reliable?

Description

Dependable operation is due in large part to the New Brunswick triple-eccentric counterbalanced drive. Other shaker manufacturers may offer triple-eccentric drives in their shakers. But only New Brunswick offers a broad-based cast-iron support mechanism—the most stable in the industry—properly sized to each shaker and specifically designed to support high-speed applications and heavy workloads.

Our **Excella® Shaker** line provides excellent performance and value for less demanding applications. We also offer the I26 stackable incubator shaker with triple-eccentric drive, high temperature water bath shakers, as well as a wide range of platforms and accessories.



Product features

- Components are fabricated to exacting specifications.
 Drive shafts, for example, are machined to tolerances of .0002", ensuring stable vibration-free operation even when operated at speeds up to 500 rpm
- Ultimate precision is ensured as each and every tripleeccentric mechanism is checked and measured using a Computer Aided Measurement (CAM) System.
 They are NOT batch tested.
- With the highest quality materials, superior design and precision fabrication, we guarantee our shakers will provide worry-free operation for many years to come

New Brunswick's often-imitated but never duplicated heavy-duty, counterbalanced triple-eccentric drive ensures uniform motion is imparted to every flask, regardless of position on the platform. Heavy-duty construction allows us to guarantee that our shakers will perform to our specifications, even when fully loaded and operating at top speed.

Selecting the correct platform for your New Brunswick shaker

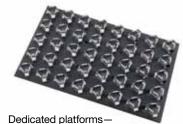
Platforms for New Brunswick shakers must be purchased separately. A wide range of interchangeable accessory platforms are offered to accommodate all your glassware.

Universal platforms—have multiple holes enabling you to mix different-sized clamps, as well as mount an assortment of microtiter plates and test tube racks onto a single platform, for maximum versatility. Clamps and accessories for Universal Platforms are sold separately (see pages 28 and 29.)

Dedicated platforms—when just one size flask will be used on the shaker, (i.e., 250 mL flasks), dedicated platforms come with flask clamps already mounted. Dedicated platforms generally will hold a greater number of flasks than the universal platform, but do not offer the versatility.



Universal platform shown with accessory clamps, test tube racks and sticky tape.



when a single-size flask will be used, these platforms maximize capacity, and come with clamps already mounted.

New Brunswick shaker selection guide—incubated/refrigerated models

Enclosed incubator shakers				Inno	ova®					
Motor type			Solid		brushless	motor				
Audible and visual alarms					es					
ETL and CE marked					es					
Timer					9.9 hrs					
Warranty					ears ²					
Model	41	40	40R	42	42R	43	43R	44	44R	
Wiodei	NEW!	40	1 0N		42N	70	-1 0N	77	74N	
(Images not to scale)	NEW!								3 units shown	
Page	8	1	0	1	2	1	4	1	6	
Accessories page	28	2	8	2	.8	2	.8	2	8	
Platform size (W x D), in	24 x 14	18 >	x 18	18:	x 18	30	x 18	30 2	k 18	
Benchtop (B), Under bench (U),	C, S (x2)		3		S (x2)		2	C, S		
Console (C) or Floor stackable (S)	5, 5 (1.2)	_		2, 0,	0 (//			0, 0	(1.0)	
Balanced drive mechanism	Quad-eccentric		Triple of	oontrio wi	th norman	ently lubric	atad ball k	pooringo1		
Orbit diameter	1"	3/4"			or 1"	entry lubric 1" c		1" c	or 2"	
	· · · · · · · · · · · · · · · · · · ·						500			
rpm range	25 to 400		500		400				400	
Temperature range (in °C)	A +4 to 50	A +5 to	A –15	A +5	A –20	A +5	A –20	A +5	A –20	
[A = Ambient]	A –10 to 50 (opt)	80	to 80	to 80	to 80	to 80	to 80	to 80	to 80	
CO ₂ control	Yes									
Refrigerated	Optional		Yes		Yes		Yes		Yes	
Active humidification	Optional									
Multi-step programming		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Space saving glide up doors								Yes	Yes	
Slide out platform								Yes	Yes	
In chamber power receptacle				Yes	Yes				.00	
Internal convenience light	Yes			Yes	Yes			Yes	Yes	
Com port	USB	RS-232	RS-232	RS-232		RS-232	RS-232	RS-232	RS-232	
Com port	OOD	110-202	110-202		options	110-202	110-202	110-202	110-202	
O ₂ control	Yes			Available	ориона					
Humidity monitor	163			Yes	Yes	Yes	Yes	Yes	Yes	
•				165	Yes	165	Yes	162	Yes	
Photosynthetic lighting	Diversit OO intert			\/				\/		
Gassing manifold	Direct CO ₂ inlet			Yes	Yes	Yes	Yes	Yes	Yes	
UV germicidal lamp	Yes				Yes		Yes		Yes	
Maximum capacity	•				d platform					
50 mL Erlenmeyer flasks			4		64		08			
125 mL Erlenmeyer flasks		3			14		0		0	
250 mL Erlenmeyer flasks	24	2			!5		0		0	
500 mL Erlenmeyer flasks	15	1			6		4	-	4	
1 L Erlenmeyer flasks	11				9	15			5	
2 L Erlenmeyer flasks		Ę	5		5	1	2	1	2	
2.8 L Fernbach flasks		4	4		4	6		6		
4 L Erlenmeyer flasks		-	-		4		3	(3	
6 L Erlenmeyer flasks		-			2		4		-	
Maximum capacity					l platform					
10 mL Erlenmeyer flasks	60	10	09		09	1	33	15	37	
25 mL Erlenmeyer flasks	60		4		64		2		3	
50 mL Erlenmeyer flasks	60	4			·5		2	9		
125 mL Erlenmeyer flasks	20	2			. <u></u>		9		9	
250 mL Erlenmeyer flasks	16		8		8		0		0	
500 mL Erlenmeyer flasks	12		4		4		8		4	
1 L Erlenmeyer flasks	10		3		8		2	-	4	
2 L Erlenmeyer flasks	4		5		5		3	-	3	
2.8 L Fernbach flasks	3	4	4		4		3		3	
4 L Erlenmeyer flasks	3	-	-		4		3		3	
5 L Erlenmeyer flasks		-	-		4		S ³	6	3	
6 L Erlenmeyer flasks		-		:	2		1 ³		-	
Dimensions (W x D x H), inches	27 x 26.7 x 34.4	22 x 3	0 x 24	25 x 29.	7 x 32.2	45.5 x 3	2 x 40.6	53 x 34	l.4 x 26	
			175	217	267		475	523	566	

¹ Innova 41 uses four eccentric drive shafts. ²3-years parts, 2-years labor. ³ Max flask size is 4 L when using photosynthetic lighting option.

New Brunswick shaker selection guide—incubated/refrigerated models

I-Series					Exc	ella®			
Solid state, DC brushless motor					Solid state, DC brushless motor				
		Ye				Yes Yes			
		Ye							
		0.1 - 9						9.9 hrs	
		2-ye						ears	
124	I24R	126	I26R	12500	12500KC	E24	E24R	E25	E25R
- E	City .		2 shown on optional base			6		5	
1	8	2	0		22	2	24	2	26
	28	2			28		28		28
18:	x 18	30 >		30	x 18		x 18	30	x 18
	В	S (x3)		С		В		С
		ic with perman	ently lubricated				with permaner		
	and 1"	1			1"		/4"		1"
	500	25 to			o 500		o 400		o 400
A +7	A –15	A +5	A –15	A +5	A –15	A +7	A –15	A +7	A –15
to 60	to 60	to 60	to 60	to 80	to 80	to 60	to 60	to 60	to 60
							السيسم		
	Yes		Yes		Yes		Yes		Yes
				., ,					
				Yes (c	ptional)				
		Yes	Yes				-		
RS-232	RS-232	RS-232	RS-232			RS-232	RS-232	RS-232	RS-232
NO-232	NO-232	NO-202	NO-202	Availah	le options	NO-232	NO-232	NO-232	NO-232
				Availab	е ориона				
	•			Dedicate	ed platform				•
6	64	-	-		08	(64	1	08
	34	6	0		60	(34		60
	25	4	0		40		25	4	40
1	6	2			24		16		24
	9	1			15		9		15
	5	1			12		5		12
	4		6		6		4		6
	_		-		6				6
	_	-	-	11. *	4		_		4
4.	00		77		al platform		00		
	09	18			83		09		
	34 15	9			92 92		64 45		<u>–</u> 91
	15 21	3	9		9 <u>2</u> 39		45 21		<u>91</u> 39
	8	3			30		18		30
	4	2			18		14		18
	8	1			12		8		12
	5 5		3		8		5		8
	<u></u> 4		3		6		4		6
			-		6		_		6
	_				6 ³		_		_
					0 4 ³		_		4
					4-				
22 x 3	- 30 x 24	50.5 x 30	0.3 x 27.6		32 x 40.6	22 x 3	30 x 24).5 x 41.7

Innova® 41 CO₂ incubator shakers



This versatile instrument combines a ${\rm CO_2}$ incubator with a biological shaker. It can be used under-the-counter, on the floor or double stacked for space-savings.

Technical specifications

Description	Innova 41		
Platform size (W x D)	24 x 14 in		
Temperature range			
Innova 41	Ambient +4°C to 50°C		
Innova 41 (with	10°C below ambient to 50°C		
optional cooling)			
Temperature uniformity	+/-0.25 °C at 37 °C		
Speed (rpm)	25 to 400		
Orbit	1"		
CO₂ range	0.2 to 20%		
O ₂ range (with	1 to 19%		
optional O ₂ control)			
Active humidification option	Up to 85%, non condensing		
Innova control programmer			
Memory	Non volatile with automatic		
	power failure restart		
Tracking and trending	Track and trend operational		
capabilities	data including:		
	Speed		
	Temperature		
	 CO₂ concentrations 		
	 Optional O₂ concentrations 		
	Humidity		
Maximum stacking	2 units		
Dimensions (W x D x H)	27 x 26.7 x 34.4 in		
	(59 in depth with door open)		
Stacked height	72.8 in		
Net weight	350 lb		

Product features

- Unique, CO₂ incubator shaker—combines two instruments into one for advanced cell culturing needs
- New color touchscreen controls—allows you to effortlessly set and monitor operating parameters as well as other critical information
- Large chamber with stationary shelf—allows for simultaneous platform shaking and static incubation
- Fanless incubation design and sealed inner and outer doors—provides uniform heating and incubation without wasting CO₂
- Quad-eccentric four eccentric drive shafts make for unparalleled gentle shaking
- Accommodates shake flasks up to 4 L
- Optional O, control—for even greater flexibility
- Ideal for stem cell culturing and for hypoxic applications
- Optional active, non-condensing humidification system—reduces sample evaporation
- Standard high-temperature disinfection feature ensures a clean and disinfected culture environment

Description

This innovative and unique CO_2 incubator shaker precisely controls temperature, shaking speed, CO_2 , and optionally O_2 to provide the ideal environment for growing mammalian, insect and plant suspension cultures. Accepts flasks up to 4 L. Includes a stationary shelf for incubating added samples. It incorporates many features of our Innova shakers and $\mathrm{Galaxy}^{\otimes}\,\mathrm{CO}_2$ incubators in a single system, including unique fanless incubation, high-temperature disinfection, sealed inner and outer doors, InfraRed (IR) CO_2 sensor, and seamless one-piece chamber.



Innova® 41 CO₂ incubator shakers



Grow cultures in shake flasks and perform static culture on the adjustable-height stationary shelf.

Ordering information

Model	Power supply	Options	Catalog No.
		_	SI41-120-0100
Innova 41		Active Humidification (AHS)	SI41-120-0102
CO ₂ incubator shaker,	100 \//00 -	O ₂ Control (1 - 19%)	SI41-120-0101
1" orbit (platform sold	120 V/60 Hz	Cooling	SI41-120-1100
separately)		O ₂ Control and Cooling	SI41-120-1101
		O ₂ Control and AHS	SI41-120-0103

Note: Units equipped with optional Cooling System not available with high-temperature disinfection.

Description	Clamps	Catalog No.				
Innova 41 interchangeable platforms, 24" x 14" phenolic resin unless otherwise stated.						
For a complete list of flask clamps and platform attachments, see pages 28-29.						
Universal platform, aluminum	_	M1334-9920				
250 mL Erlenmeyer flask dedicated platform	24	M1334-9922				
500 mL Erlenmeyer flask dedicated platform	15	M1334-9923				
1 L Erlenmeyer flask dedicated platform	11	M1334-9924				
Stacking kit, required when stacking 2 units	_	M1334-0802				
Additional shelf, perforated	_	M1334-9351				

Innova® 40 benchtop incubator shakers and 40R with added refrigeration



Product features

- Compact benchtop model fits on the bench and holds flasks up to 3 L
- Programmable Innova controls—automatically changes temperature and speed at timed intervals
- See-through lid—provides clear visibility to view cultures. Lifts easily to access all samples.
- Innova 40 can be upgraded with refrigeration

Description

Innova 40 incubator shakers provide very broad temperature capabilities for culturing a wide variety of organisms in flasks up to 3 L. Refrigeration module is built into the Innova 40R, or can be easily added to Model 40, at any time.

Technical specifications

Description	Innova 40 Innova 40R			
Platform size (W x D)	18 x	18 in		
Temperature range	Ambient	15°C below		
	+ 5 °C to 80 °C			
		80°C (min. 4°C)		
Speed (rpm)	25 to	500		
Orbit	3/4" a	and 1"		
Temperature uniformity	+/-0.25°0	C at 37°C		
Innova control programmer				
Timer	0.1 to 99.	9 hours +		
	continuous	operation		
Memory	Non volatile v	vith automatic		
	power failure restart			
Available program modes	Constant spe	ed		
	and temperat	ure		
	Timed shaking	g		
	Programmabl	e multi-steps		
	RS-232 contr	ol		
Multi-step programming				
Stored programs	4			
Steps per program	15			
Dimensions (W x D x H)	22 x 30 x 24 in			
	(40 in depth with lid open)			
Net weight	133 lb 175 lb			



Easy to view LCD display shows all important parameter settings at a glance.

Prog 1	STEP #1	STEP #2
Time	0 : 00	9 :0 0
C	37.0	45.0
RPM	250	350
UV	Off	Off
***	Save	Cancel

Multi-step programming and program storage provides reproducible runs, time after time.

Innova® 40 benchtop incubator shakers and 40R with added refrigeration

Ordering information

Model	Power supply	Catalog No. 3/4" orbit	Catalog No. 1" orbit			
40 Incubated	120 V, 60 Hz	M1299-0080	M1299-0090			
40R Incubated/ Refrigerated	120 V, 60 Hz	M1299-0084	M1299-0094			
Factory installed options						
Refrigerated module	M1299-0061					
Remote alarm			M1320-8029			

Shaker does not include 18" x 18" platforms which must be ordered separately.

Description	Clamps	Catalog No.
Innova 40 and 40R interchangeable platforms, 18" x 18" phenolic resin unless oth	erwise stated.	
For a complete list of flask clamps and platform attachments, see pages 28–29.		
Universal platform, aluminum	_	M1250-9902
Drip pan for universal platform M1250-9902	_	M1250-9906
Utility carrier holds glassware between rubber-cushioned cross bars	_	M1194-9909
Rod kit for utility carrier (one additional rod)	_	M1194-9923
Utility tray with non-skid surface	_	M1194-9910
50 mL Erlenmeyer flask dedicated platform, phenolic resin	64	M1194-9903
125 mL Erlenmeyer flask dedicated platform, phenolic resin	34	M1194-9904
250 mL Erlenmeyer flask dedicated platform, phenolic resin	25	M1194-9905
500 mL Erlenmeyer flask dedicated platform	16	M1194-9906
1 L Erlenmeyer flask dedicated platform	9	M1194-9907
2 L Erlenmeyer flask dedicated platform	5	M1194-9908
2.8 L Fernbach flask dedicated platform	4	M1233-9932
Sticky pad platform, (pads sold separately)	_	M1250-9903
Quick-change platform kit, enables platform attachment without tools	_	M1192-9901



Shown stacked two units high. Stationary shelf and internal power receptacle are standard.

Technical specifications

Description	Innova 42	Innova 42R	
Platform size (W x D)	18 x	18 in	
Temperature range	Ambient	20°C below	
	+5°C to 80°C	ambient to	
		80°C	
Speed (rpm)	25 to	400	
Orbit	3/4"	or 1"	
Temperature uniformity	+/-0.25°C	Cat 37°C	
Internal electric receptacle			
Innova control programmer			
Timer	0.1 to 99.	9 hours +	
	continuous operation		
Memory	Non volatile w	vith automatic	
	power fail	ure restart	
Available program modes	 Constant spe 		
	and tempera		
	Timed shakin	ıg	
	Programmab	le multi-steps	
	RS-232 contr	rol	
Multi-step programming			
Stored programs	4		
Steps per program	15		
Dimensions (W x D x H)	25 x 29.7 x 32.2 in		
	(51.2 in depth with door open)		
Net weight	217 lb 267 lb		

Product features

- Our most versatile model—fits on the bench, under the counter, on the floor or double stacked to provide large capacity in minimal space.
- Programmable Innova controls—automatically changes temperature, speed and optional photosynthetic and UV germicidal lights at timed intervals
- Internal moisture-proof power receptacle—allows for the use of powered equipment inside the incubator
- Large viewing window and internal light—for easy viewing of samples without the need to open the door
- Accommodates flasks up to 6 L

Description

The Innova 42 and refrigerated Innova 42R provides labs with the most flexible options. These units are compact enough to fit on top of a lab bench, underneath the counter, or can be stacked 2-high on the floor for maximum capacity with minimal floor space.



New Brunswick's unique culture drawer option reduces sample desiccation while the samples are incubating.

Innova® 42 stackable, on- or under-bench incubator shakers and 42R with added refrigeration

Ordering information

Model	Power supply	Catalog No. 3/4" orbit	Catalog No. 1" orbit
42 Incubated	120 V, 60 Hz	M1335-0000	M1335-0010
42R Incubated/ Refrigerated	cubated/ 120 V, 60 Hz M1		M1335-0014
Factory installed o	ptions		
Photosynthetic light	M1335-0300		
UV germicidal light,	M1335-0400		
12-port gassing ma	M1335-0600		
Humidity monitor	M1335-0500		
Remote alarm	M1320-8029		

Shaker does not include 18" x 18" platforms which must be ordered separately.

Description	Clamps	Catalog No.	
Innova 42 and 42R interchangeable platforms, 18" x 18" phenolic resin unless otherwise stated.			
For a complete list of flask clamps and platform attachments, see pages 28–29.		_	
Universal platform, aluminum	_	M1250-9902	
Drip pan for universal platform M1250-9902	_	M1250-9906	
Utility carrier holds glassware between rubber-cushioned cross bars	_	M1194-9909	
Rod kit for utility carrier (one additional rod)	_	M1194-9923	
Utility tray with non-skid surface	_	M1194-9910	
50 mL Erlenmeyer flask dedicated platform, phenolic resin	64	M1194-9903	
125 mL Erlenmeyer flask dedicated platform, phenolic resin	34	M1194-9904	
250 mL Erlenmeyer flask dedicated platform, phenolic resin	25	M1194-9905	
500 mL Erlenmeyer flask dedicated platform	16	M1194-9906	
1 L Erlenmeyer flask dedicated platform	9	M1194-9907	
2 L Erlenmeyer flask dedicated platform	5	M1194-9908	
2.8 L Fernbach flask dedicated platform	4	M1233-9932	
4 L Erlenmeyer flask dedicated platform	4	M1233-9930	
Sticky pad platform, (pads sold separately)	_	M1250-9903	
Quick-change platform kit, enables platform attachment without tools	_	M1192-9901	
Culture drawer, prevents plates from drying	_	M1335-0501	
Stacking kit, required when stacking 42/42R units (see also M1335-0810 below)		M1335-0800	
Stacking kit, to stack Innova 42/42R units on Innova 4200/4230 shakers		M1335-0810	
Additional shelf and brackets		M1335-0080	

Innova® 43 console incubator shakers and 43R with added refrigeration—programmable



Product features

- Console style shaker/incubator with triple-eccentric drive—provides large capacity shaking for flasks up to 6 L
- Programmable Innova controls—automatically changes temperature, speed and optional photosynthetic and UV germicidal lights at customer programmed timed intervals
- Top mounted controls and display—for easy, ergonomic viewing and setting
- Foot pedal release with easy opening lid provides hands free operation
- Lighted interior—for easy sample viewing thru thermal glass
- RS-232 port for data logging and control
- Multi-function reservoir with built in drain humidifies chamber to reduce sample evaporation and protects unit from spills

Description

The large capacity Innova 43 and refrigerated Innova 43R incubator shakers accommodate numerous culture flasks, up to 6 L. Flask loading and unloading is easily accomplished with the foot pedal release and easy open lid design. Standard swivel casters provide easy mobility.

Technical specifications

Description	Innova 43	Innova 43R	
Platform size (W x D)	30 x 18 in		
Temperature range	Ambient +5 °C to 80 °C	20°C below ambient to 80°C	
Temperature uniformity	+/-0.25°C	Cat 37°C	
Speed (rpm)			
1" orbit	25 to	500	
2" orbit	25 to	300	
Innova control programmer			
Timer	0.1 to 99.9 hours + continuous operation		
Memory	Non volatile with automatic power failure restart		
Available program modes	 Constant speed and temperature Timed shaking Programmable multi-steps RS-232 control 		
Multi-step programming			
Stored programs	4		
Steps per program	15		
Dimensions (W x D x H)	44.5 x 32 x 40.6 in		
	(63.5 in depth with door open)		
Net weight	445 lb 475 lb		



Foot pedal activated door for hands free opening.



Top mounting controls for easy viewing and setting.

Innova® 43 console incubator shakers and 43R with added refrigeration

Ordering information

Model	Power supply	Catalog No. 1" orbit	Catalog No. 2" orbit
43 Incubated	120 V, 60 Hz	M1320-0000	M1320-0010
43R Incubated/ Refrigerated	120 V, 60 Hz	M1320-0004	M1320-0014
Factory installed options			
Photosynthetic light bank (Innova 43R only)			M1320-0300
UV germicidal light, in the airflow path outside the chamber reduces the bio-burden of circulated air (Innova 43R only)			M1320-0400
12-port gassing manifold, permits direct gassing into flasks		M1320-0500	
Humidity monitor		M1320-0600	
Remote alarm	Remote alarm		M1320-8029

Shaker does not include 30" x 18" platforms which must be ordered separately.

Description	Clamps	Catalog No.		
Innova 43 and 43R interchangeable platforms, 30" x 18" aluminum.	Innova 43 and 43R interchangeable platforms, 30" x 18" aluminum.			
For a complete list of flask clamps and platform attachments, see pages 28–29.				
Universal platform	_	M1250-9920		
Microplate platform. Holds 105 standard or 21 deepwell plates.	_	M1243-2500		
Utility tray with non-skid surface	_	AG-00		
50 mL Erlenmeyer flask dedicated platform	108	M1191-9908		
125 mL Erlenmeyer flask dedicated platform	60	M1191-9909		
250 mL Erlenmeyer flask dedicated platform	40	M1191-9910		
500 mL Erlenmeyer flask dedicated platform	24	M1191-9911		
1 L Erlenmeyer flask dedicated platform	15	AG-1		
2 L Erlenmeyer flask dedicated platform	12	AG-2		
2.8 L Fernbach flask dedicated platform	6	AG-28		
4 L Erlenmeyer flask dedicated platform	6	AG-4		
6 L Erlenmeyer flask dedicated platform, (cannot be used with light bank)	4	AG-6		
Sticky platform, (sticky pads sold separately)	_	M1250-9904		
Utility basket for incubating/refrigerating stationary glassware	_	M1320-0700		

Innova® 44 stackable incubator shakers and 44R with added refrigeration-programmable



3 shakers shown with standard slide-out mechanism

Technical specifications

Description	Innova 44 Innova 44		
Platform size (W x D)	30 x 18 in		
Temperature range	Ambient	20°C below	
	+5°C to 80°C	ambient to 80°C	
Temperature uniformity	+/-0.25°(
Speed (rpm)			
1" orbit	25 to	400	
2" orbit	25 to	300	
Innova control programmer			
Timer	0.1 to 99.	9 hours +	
	continuous operation		
Memory	Non volatile with automatic		
	power failure restart		
Available program modes	Constant speed		
	and temperature		
	Timed shaking		
	Programmab	le multi-steps	
	RS-232 contr	rol	
Multi-step programming			
Stored programs	4		
Steps per program	15		
Dimensions (W x D x H)	53 x 34.4 x 26 in		
	(open door requires		
	additional 21 in height)		
Net weight	523 lb 566 lb		

Product features

- Innova programmable controller—provides "set it and forget it" convenience. Automatically changes temperature, speed, optional photosynthetic and UV germicidal lights at customer programmed timed intervals.
- Slide-out platform mechanism—provides easy and effortless access to flasks located in the front and back of the shaker/incubator
- Glide up front door—requires very little space when opened
- Stackable up to three units for maximum space savings
- Double pane thermal glass—provides excellent insulation with easy viewing
- Interior chamber light
- Holds flasks up to 5 L
- Multi-function reservoir with built-in drain—humidifies chamber to reduce sample evaporation and protects unit from spills

Description

The flagship Innova shaker line provides superior shaking and control with its triple-eccentric drive mechanism for worry-free, 24/7 shaking and incubation. Large LCD panel displays all pertinent parameters. The Innova 44/44R system provides space-saving design with stacking capabilities, glide up door and an ergonomic slide-out platform.



Universal platform shown with accessory clamps, test tube racks and sticky tape.



Dedicated platforms—when a single-size flask will be used, these platforms maximize capacity, and come with clamps already mounted.

Innova® 44 stackable incubator shakers and 44R with added refrigeration—programmable

Ordering information

Model	Power supply	Power supply Catalog No.	
		1" orbit	2" orbit
44 Incubated	120 V, 60 Hz	M1282-0000	M1282-0010
44R Incubated/Refrigerated	120 V, 60 Hz	M1282-0004	M1282-0014
Factory installed options			
Photosynthetic light bank (for 44R Model only)			M1282-9922
12-port gassing manifold			M1282-0291
Humidity monitor			M1282-5011
UV germicidal light (for 44R Model only)			M1282-9921
Remote alarm			M1282-8038

Shaker does not include 18" x 18" platforms which must be ordered separately.

Ordering information

Description	Clamp	Catalog No.	
Interchangeable 30" x 18" aluminum platforms for Innova 44/44R. (Not interchangeable with other 30" x 18" platforms).			
For a complete list of flask clamps and platform attachments, see pages 28-29.			
Universal platform, (can be used with sticky pad/tape)	_	M1282-9904	
125 mL Erlenmeyer flask dedicated platform	60	M1282-9905	
250 mL Erlenmeyer flask dedicated platform	40	M1282-9906	
500 mL Erlenmeyer flask dedicated platform	24	M1282-9907	
1 L Erlenmeyer flask dedicated platform	15	M1282-9908	
2 L Erlenmeyer flask dedicated platform	12	M1282-9909	
2.8 L Fernbach flask dedicated platform	6	M1282-9910	
4 L Erlenmeyer flask dedicated platform	6	M1282-9911	
Sticky pad platform (pads sold separately)	_	M1282-9913	
Heavy duty 3/8" universal platform, 30" x 18", aluminum plate.			
For a complete list of flask clamps and platform attachments, see pages 28-29.			
Heavy-duty platforms are recommended for shaking full loads of flasks, 1 L and larger,			
containing more than 20% volume or with baffles.			
Universal platform	_	M1282-9915	
1 L Erlenmeyer flask dedicated platform	15	M1282-9925	
2 L Erlenmeyer flask dedicated platform	12	M1282-9926	
2.8 L Fernbach flask dedicated platform	6	M1282-9927	
4 L Erlenmeyer flask dedicated platform	6	M1282-9928	

Ordering information, optional accessories

Description	Catalog No.	
Riser bases, increases the height of the shaker for easier access		
4" base riser, short	M1282-0600	
12" base riser, medium	M1282-0800	
16" base riser, tall	M1282-0700	
Stacking kit, bolts together shakers for secure mounting		
Stacking kit, for stacking one additional 44 or 44R	M1282-0500	

1 Series incubator shakers

Description

I Series biological shakers come in 3 sizes: benchtop, console, and space-saving stackable models, each offered with incubation only or incubation and refrigeration. All feature New Brunswick's triple-eccentric counterbalanced shaking mechanism for uniform motion, and years of quiet, dependable operation. Microprocessor controls with digital display enable easy operation and accurate setpoint regulation. A large assortment of platforms, clamps, test tube holders and other accessories allow configuration to meet your exact needs.

124 benchtop incubator shakers and 124R with added refrigeration



Product features

- Microprocessor controls precisely regulate temperature, speed and running time
- User-friendly keypad with large LED display is clearly visible and easy to set
- Audible and visual alarms alert you to setpoint deviations or end of study
- A wide selection of interchangeable platforms accommodate varying size clamps
- Accepts a wide variety of flasks up to 2.8 L in size
- Provides the ability to calibrate the speed and temperature directly through the keypad

Description

Compact shakers fit on your bench. A large clear lid enables easy viewing of your culture media.

Technical specifications

·			
Description	124	I24R	
Platform size (W x D)	18 x	18 in	
Temperature range	Ambient	15°C below	
	+5°C to 60°C	ambient to	
		60°C	
Speed (rpm)	25 to	500	
Orbit	3/4" a	and 1"	
Dimensions (W x D x H)	22 x 30 x 24 in		
Net weight	135 lb 180 lb		

124 stackable incubator shakers and 124R with added refrigeration

Ordering information

Model	Power supply	Catalog No. 3/4" orbit	Catalog No. 1" orbit
I24 Incubated	120 V, 60 Hz	M1344-0000	M1344-0010
I24R Incubated/Refrigerated	120 V, 60 Hz	M1344-0004	M1344-0014

Shaker does not include platform which must be ordered separately.

Description	Clamps	Catalog No.
I24 and I24R interchangeable platforms.		
Clamps and accessories sold separately. See pages 28–29.		
Universal platform	-	M1250-9902
Utility tray with non-skid surface	_	M1194-9910
Sticky pad platform (pads sold separately)	_	M1250-9903
50 mL Erlenmeyer flask dedicated platform	64	M1194-9903
125 mL Erlenmeyer flask dedicated platform	34	M1194-9904
250 mL Erlenmeyer flask dedicated platform	25	M1194-9905
500 mL Erlenmeyer flask dedicated platform	16	M1194-9906
1 L Erlenmeyer flask dedicated platform	9	M1194-9907
2 L Erlenmeyer flask dedicated platform	5	M1194-9908
2.8 L Fernbach flask dedicated platform	4	M1233-9932

126 stackable incubator shakers and 126R with added refrigeration



Stacks up to 3 shakers. 2 shakers shown on a medium base

Product features

- Advanced features, including triple-eccentric drive, at an economical price
- Stack up to 3 units for maximum capacity while taking up minimal space
- Large LED display can be easily seen from across the room
- Accepts flasks up to 2.8 L

Description

Stackable, incubated I26 and incubated/refrigerated Model I26R shakers feature New Brunswick's triple-eccentric drive for uniform motion and dependable operation. Based on the design concepts of the Innova® shakers, the I26 and I26R offer excellent performance at a value price.



Universal platform shown with clamps, test tube racks and sticky tape.



Technical specifications

Description	126	I26R	
Platform size (W x D)	30 x 18 in		
Temperature range	Ambient	15°C below	
	+5°C to	ambient to	
	60°C	60°C	
Temperature uniformity	+/-0.25°0	C at 37°C	
Speed (rpm)			
1" orbit	25 to 400		
Innova control programmer			
Timer	0.1 to 99.9 hours +		
	continuous operation		
Memory	Non volatile v	vith automatic	
	power failure restart		
Dimensions (W x D x H)	50.5 x 30.3 x 27.6 in		
	(open door requires additional		
	19.1 in depth)		
Net weight	370 lb 410 lb		

126 stackable incubator shakers and 126R with added refrigeration

Ordering information

Model	Power supply	Catalog No. 1" orbit
I26 Incubated	120 V, 60 Hz	M1324-0000
I26R Incubated/ Refrigerated	120 V, 60 Hz	M1324-0004

Shaker does not include platform which must be ordered separately.

Ordering information

Description	Clamps 1 Shaker	Clamps 2 Shaker	Clamps 3 Shaker	Catalog No.
I26 and I26R interchangeable platforms, slide-out, 30" x 18" aluminum. (Platforms are not interchangeable with other 30" x 18" platforms). Clamps and accessories sold separately. See pages 28–29.				
Universal platform	_	_	_	M1324-9904
125 mL Erlenmeyer flask dedicated platform	60	120	180	M1324-9905
250 mL Erlenmeyer flask dedicated platform	40	80	120	M1324-9906
500 mL Erlenmeyer flask dedicated platform	24	48	72	M1324-9907
1 L Erlenmeyer flask dedicated platform	15	30	45	M1324-9908
2 L Erlenmeyer flask dedicated platform	12	24	36	M1324-9909
2.8 L Fernbach flask dedicated platform	6	12	18	M1324-9910
Sticky pad platform, (sticky pads sold separately)	_	_	_	M1324-9911

Ordering information, optional accessories

Description	Catalog No.	
Riser bases, increases the height of the shaker for easier access		
4" base riser, short	M1324-0600	
13" base riser, medium	M1324-0800	
17" base riser, tall	M1324-0700	
Stacking kit, bolts together shakers for secure mounting		
Stacking kit, for stacking one additional I26 or I26R	M1324-0500	

12500 incubated, 12500KC incubated/refrigerated, and 12500KC with a programmable timer



Product features

- Large capacity console style incubated shakers feature a 1" orbit and accepts flasks up to 6 L in volume
- Choose incubated, incubated refrigerated and incubated/ refrigerated with a dual temperature timer and on/off agitation cycler
- Includes a foot pedal for hands free opening of the lid
- Large viewing window to check cultures without opening the lid
- Ability to calibrate the speed and temperature via the key pad

Description

I2500 Series shakers are ideal for large-load requirements. This floor-mounted shaker accepts up to 6 L flasks, and features easy-open lid with foot-pedal release for hands-free operation.

Technical specifications

Description	12500	12500KC
Platform size (W x D)	30 x 18 in	
Temperature range	Ambient	15°C below
	+7°C to 60°C	ambient to
		60°C
Temperature uniformity	+/-0.25°C at 37°C	
Speed (rpm)	25 to 500	
Orbit	1"	
Dimensions (W x D x H) ¹	45 x 28 x 37 in	
Net weight	410 lb	415 lb

¹When using 1 unit on the floor, height is 27"

Ordering information

Model	Power supply	Catalog No. 1" orbit
I2500 Incubated	120 V, 60 Hz	M1284-0000
I2500 KC Incubated/Refrigerated	120 V, 60 Hz	M1284-1010
I2500 KC Incubated/Refrigerated with Programmable Timer	120 V, 60 Hz	M1284-1014

Shaker does not include platform which must be ordered separately.

Description	Clamps	Catalog No.
I2500 Series interchangeable platforms		
Clamps and accessories sold separately. See pages 28–29.		
Universal platform, aluminum	-	M1250-9920
Utility tray with non-skid surface	-	AG-00
Sticky pad platform, (sticky pads sold separately)	-	M1250-9904
50 mL Erlenmeyer flask dedicated platform	108	M1191-9908
125 mL Erlenmeyer flask dedicated platform	60	M1191-9909
250 mL Erlenmeyer flask dedicated platform	40	M1191-9910
500 mL Erlenmeyer flask dedicated platform	24	M1191-9911
1 L Erlenmeyer flask dedicated platform	15	AG-1
2 L Erlenmeyer flask dedicated platform	12	AG-2
2.8 L Fernbach flask dedicated platform	6	AG-28
4 L Erlenmeyer flask dedicated platform	6	AG-4
6 L Erlenmeyer flask dedicated platform	4	AG-6
Microplate platform holds 105 standard or 21 deepwell plates	_	M1243-2500

Excella® E24 benchtop incubator shakers and E24R with added refrigeration



Product features

- Heavy-duty counterbalanced drive provides long life and quiet and dependable operation under moderate loads
- Large 18" x 18" accessory platform (sold separately) accommodates flasks up to 2.8 L
- Microprocessor controls enable precise settings of speed and incubation temperature
- Unique acceleration/deceleration circuitry prevents sudden starts and stops protecting your cells
- Open lid cut off switch immediately stops shaking when lid is open
- Clear large lid provides excellent visibility minimizing the need to open the lid

Description

The benchtop Excella E24 (incubated) and E24R (incubated/ refrigerated) shaker provides superior performance and advanced features at an affordable price. A wide variety of platforms, clamps and test tube racks provide for virtually unlimited flexibility.

Technical specifications

Description	Excella E24	Excella E24R
Platform size (W x D)	18 x	18 in
Temperature range	Ambient	15°C below
	+7°C to 60°C	ambient to
		60°C
Temperature uniformity	+/-0.25°0	C at 37°C
Speed (rpm)	50 to	400
Orbit	3/4"	
Dimensions (W x D x H)	22 x 30 x 24 in (open lid	
	requires additional 21" height)	
Net weight	133 lb	175 lb

Excella® E24 benchtop incubator shakers and E24R with added refrigeration

Ordering information

Model	Power supply	Catalog No. 0.75" orbit
E24 Incubated	120 V, 60 Hz	M1352-0000
E24R Incubated/ Refrigerated	120 V, 60 Hz	M1352-0004

Shaker does not include 18" x 18" platforms which must be ordered separately.

Description	Clamps	Catalog No.
Excella E24 and E24R interchangeable platforms, 18" x 18" phenolic resin unless otherwise stated.		
Clamps and accessories sold separately. See pages 28–29.		
Universal platform, aluminum	_	M1250-9902
Drip pan for universal platform M1250-9902	_	M1250-9906
Utility carrier holds glassware between rubber-cushioned cross bars	_	M1194-9909
Rod kit for utility carrier (one additional rod)	_	M1194-9923
Utility tray with non-skid surface	_	M1194-9910
50 mL Erlenmeyer flask dedicated platform	64	M1194-9903
125 mL Erlenmeyer flask dedicated platform	34	M1194-9904
250 mL Erlenmeyer flask dedicated platform	25	M1194-9905
500 mL Erlenmeyer flask dedicated platform	16	M1194-9906
1 L Erlenmeyer flask dedicated platform	9	M1194-9907
2 L Erlenmeyer flask dedicated platform	5	M1194-9908
2.8 L Fernbach flask dedicated platform	4	M1233-9932
Quick-change platform kit, enables platform attachment without tools	_	M1192-9901
Sticky pad platform, (sticky pads sold separately)	_	M1250-9903
Spare parts kit, E24 and E24R	_	M1352-6000

Excella® E25 console incubator shakers and E25R with added refrigeration



Product features

- Heavy-duty counterbalanced drive provides long life and quiet and dependable operation under moderate loads
- Large 30" x 18" accessory platform (sold separately) accepts flasks up to 6 L
- Easy-open lid
- Large insulated viewing window in the lid allows for clear viewing of the samples without opening the chamber
- Microprocessor controls enable precise setting of speed and incubation temperature
- RS-232 provided for data logging

Description

The large capacity console Excella 25 (Incubated) and Excella 25R (Incubated/refrigerated) shaker provides superior performance, large capacity and advanced features at an affordable price. A wide variety of platforms, clamps and test tube racks provide for virtually unlimited flexibility. The microprocessor controls precisely control temperature and shaking speed and the feedback control and fans provide for rapid temperature recovery when lid is open and accurate and uniform temperatures.

Technical specifications

Description	Excella E25	Excella E25R	
Platform size (W x D)	30 x 18 in		
Temperature range	Ambient	15°C below	
	+7°C to 60°C	ambient to	
		60°C	
Temperature uniformity	+/-0.25 °C at 37 °C		
Speed (rpm)	50 to 400		
Orbit	1"		
Dimensions (W x D x H)	50 x 30.5 x 41.7 in (open door		
	requires additional		
	23.3" height)		
Net weight	367 lb 431 lb		

Excella® E25 console incubator shakers and E25R with added refrigeration

Ordering information

Model	Power supply	Catalog No. 1" orbit
E25 Incubated	120 V, 60 Hz	M1353-0000
E25R Incubated/ Refrigerated	120 V, 60 Hz	M1353-0004

Shaker does not include 30" x 18" platforms which must be ordered separately.

Description	Clamps	Catalog No.
Excella E25 and E25R interchangeable platforms, 30" x 18" aluminum.		
Clamps and accessories sold separately. See pages 28–29.		
Universal platform	_	M1250-9920
Utility tray with non-skid rubber surface	_	AG-00
50 mL Erlenmeyer flask dedicated platform	108	M1191-9908
125 mL Erlenmeyer flask dedicated platform	60	M1191-9909
250 mL Erlenmeyer flask dedicated platform	40	M1191-9910
500 mL Erlenmeyer flask dedicated platform	24	M1191-9911
1 L Erlenmeyer flask dedicated platform	15	AG-1
2 L Erlenmeyer flask dedicated platform	12	AG-2
2.8 L Fernbach flask dedicated platform	6	AG-28
4 L Erlenmeyer flask dedicated platform	6	AG-4
6 L Erlenmeyer flask dedicated platform	4	AG-6
Platform for sticky pad, (sticky pads sold separately)	_	M1250-9904
Microplate platform holds 105 standard or 21 deepwell plates	_	M1243-2500

Clamps and accessories for universal platforms

	41	40/40R	42/42R	
Model		I24/I24R, E24/E24R		
Accessory		,		
10 mL Erlenmeyer flask clamp	60	109	109	
25 mL Erlenmeyer flask clamp	60	64	64	
50 mL Erlenmeyer flask clamp with spring retainer	60	45	45	
125 mL Erlenmeyer flask clamp with spring retainer	20	21	21	
250 mL Erlenmeyer flask clamp with spring retainer	16	18	18	
500 mL Erlenmeyer flask clamp with spring retainer	12	14	14	
1 L Erlenmeyer flask clamp	10	8	8	
2 L Erlenmeyer flask clamp	4	5	5	
2 L Lauber Thompson clamp	4	5	5	
2.8 L Fernbach clamp	3	4	4	
4 L Erlenmeyer flask clamp	3	-	4	
5 L Erlenmeyer flask clamp		-	4	
6 L Erlenmeyer flask clamp		-	2	
Microplate rack (stack), holds 10 microplates		8	8	
Microplate rack (1 layer)		2	2	
Small test tube rack		5	5	
Medium test tube rack		5	5	
Large test tube rack		4	4	
Platform size, inches	24 x 14	18 x 18	18 x 18	

 $^{^{1}\}mbox{Less}$ when used with optional photosynthetic lights. $^{2}\mbox{Using sticky}$ tape-less capacity with clamps.

Small racks					
Diameter	Tubes/rack	Catalog No.			
8–11 mm	48	M1289-0001			
12–15 mm	34	M1289-0002			
15–18 mm	24	M1289-0003			
18–21 mm	18	M1289-0004			
22–26 mm	13	M1289-0005			
26–30 mm	12	M1289-0006			

Large racks						
Diameter	Tubes/rack	Catalog No.				
8–11 mm	80	M1289-0100				
12–15 mm	60	M1289-0200				
15–18 mm	42	M1289-0300				
18–21 mm	30	M1289-0400				
22–26 mm	22	M1289-0500				
26–30 mm	20	M1289-0600				

Medium racks						
Diameter Tubes/rack Catalog No						
8–11 mm	60	M1289-0010				
12–15 mm	44	M1289-0020				
15–18 mm	31	M1289-0030				
18–21 mm	23	M1289-0040				
22–26 mm	16	M1289-0050				
26–30 mm	16	M1289-0060				

Description	Catalog No.
Sticky tape, 16.4" x 1.6"	M1250-9600
Sticky pad, 8" x 8"	M1250-9700
Sticky pad adapters, 18" x 6", set of 2	M1250-9504
Angled test tube rack holder	TTR-210
Spacer for TTR-210	TTR-215
1 L media bottle clamp	ACSB-1000S

Clamps and accessories for universal platforms

43/43R	44/44R	I26/I26R	I2500/I2500KC	Catalog No.
E25/ E25R				
				·
183	187	187	183	ACE-10S
92	93	93	92	M1190-9004
92	91	93	92	M1190-9000
39	39	39	39	M1190-9001
30	30	30	30	M1190-9002
18	24	24	18	M1190-9003
12	14	12	12	ACE-1000S
8	8	8	8	ACE-2000S
8	8	8	8	M1190-9005
6	6	6	6	ACFE-2800S
6	6	-	6	ACE-4000S
6 ¹	61,2	-	6 ¹	ACE-5000S
4 ¹	-	-	4 ¹	ACE-6000S
				<u> </u>
16	16	16	16	M1289-0700
4	4	4	4	TTR-221
9	9	9	9	see below
9	9	9	9	see below
7	7	7	7	see below
30 x 18	30 x 18	30 x 18	30 x 18	



Sticky pad (shown)/sticky tape

Sticky tape and sticky pad can be used instead of clamps for low-speed applications. Not for use in water bath shakers. Sticky pad requires an anodized aluminum surface.



Utility trays

Utility trays provide a non-slip surface for low-speed applications



Utility carriers

Utility carriers secure vessels between adjustable, cushioned rods



Universal platform shown with accessory clamps, test tube racks and sticky tape



Flask clamp, of one piece stainless steel, fitted with springs for stability at elevated speeds. Includes mounting screws.



Microplate racks



Test tube racks, small, medium and large



Dedicated platforms come with clamps of one size pre-installed

Shaker selection guide—open-air models

Open-air shakers				Innova®				
Balanced drive mechanism		Triple-eccentric with permanently lubricated ball bearings						
Motor type		Solid state, DC brushless motor						
Audible and visual alarms		Yes						
cETL, UL, CSA and CE marked		Yes						
Timer				0.1 – 99.9 h	nrs			
Warranty				3-years ¹				
(Images not to scale)			#		4141111			
Model	2000	2050	2100	2150	2300	2350	5000	
Page	33	33	34	34	35	35	37	
Accessories page	48	48	48	48	48	48	48	
Platform size (W x D), inches	13 x 11	16 x 12	18 x 18	24 x 18	30 x 18	36 x 24	Up to Six 32.5 x 26.8	
Benchtop (B) or Console (C)	В	В	В	В	В	В	С	
Orbit diameter	3/4"	3/4"	3/4"	3/4"	1" or 2"	1" or 2"	2"	
rpm range	25–500	25–500	25–500	25–500	25–500	25–500	25–350	
rpm control	±1 rpm	±1 rpm	±1 rpm	±1 rpm	±1 rpm	±1 rpm	±1 rpm	
Maximum capacity			D	edicated pla	tform			
10 mL Erlenmeyer flasks	60	86	-	-	-	-	300 x 6 (1800)	
25 mL Erlenmeyer flasks	32	48	-	-	-	-	248 x 6 (1488)	
50 mL Erlenmeyer flasks	20	35	64	80	108	-	161 x 6 (966)	
125 mL Erlenmeyer flasks	12	20	34	48	60	96	99 x 6 (594)	
250 mL Erlenmeyer flasks	8	12	25	35	40	70	64 x 6 (384)	
500 mL Erlenmeyer flasks	6	8	16	20	24	40	42 x 6 (252)	
1 L Erlenmeyer flasks	-	6	9	12	15	24	23 x 6 (138)	
2 L Erlenmeyer flasks	-	3	5	8	12	15	70	
2.8 L Fernbach flasks	-	-	4	5	6	12	42	
4 L Erlenmeyer flasks	-	-	4	4	6	12	18	
5 L Erlenmeyer flasks	-	-	4	_	_	_	-	
6 L Erlenmeyer flasks	-	-	-	4	4	6	16	
Maximum capacity			Ų	Jniversal plat	tform			
10 mL Erlenmeyer flasks	60	86	109	-	183	-	264 x 6 (1584)	
25 mL Erlenmeyer flasks	20	32	64	_	92	_	143 x 6 (858)	
50 mL Erlenmeyer flasks	15	32	45	63	92	-	143 x 6 (858)	
125 mL Erlenmeyer flasks	11	16	21	35	39	75	72 x 6 (432)	
250 mL Erlenmeyer flasks	6	10	18	24	30	50	42 x 6 (252)	
500 mL Erlenmeyer flasks	4	8	14	20	18	30	33 x 6 (198)	
1 L Erlenmeyer flasks	-	-	8	12	12	24	17 x 6 (102)	
2 L Erlenmeyer flasks	-	-	5	6	8	15	12 x 6 (72)	
2.8 L Fernbach flasks	-	=	4	5	6	12	8 x 6 (48)	
4 L Erlenmeyer flasks	-	-	4	5	6	10	16	
5 L Erlenmeyer flasks	-	-	4	4	6	10	12	
6 L Erlenmeyer flasks	-	-	2	3	4	8	12	
Temperature range (in °C) [A = Ambient]								
Automatic water level control								
Dimensions (W x D x H), inches	14 x 14.5 x 5.75	17 x 14.5 x 5.75	19 x 21.9 x 6.4	24 x 23.3 x 6.4	30 x 23.3 x 6.4	36 x 24 x 6.4	62 x 38 x 53	
Net weight (lbs)	33	35	75	80	105	115	1554	

 $^{^{\}rm 1}3\text{-years}$ parts, 2-years labor. $^{\rm 2}\text{Half-size}$ platforms also available.

Shaker selection guide—open-air models

	Exc	ella®		Water ba	th shakers
Hea	vy-duty with permaner	ntly lubricated ball bear	rings	Triple-eccentric	Eccentric
		brushless motor		DC brushless	Variable speed AC
				Yes	Yes
		es		CSA, CE	cETL
		9.9 hrs		0.1–99.9 hrs	0.1–99.9 hrs
	2-ye	3-years ¹	2-years		
Service Co.	State State	The Page Trace	The part of the part of	The state of the s	T
E1	E2	E 5	E10	Innova 3100	C76
38	39	40	42	44	46
48	48	48	48	48	48
13 x 11	13 x 11	18 x 18	30 x 18	12 x 16.5	12 x 16.5
В	В	В	В	В	В
3/4"	3/4"	3/4"	1"	1/2"	1/2"
50–400	50–400	50–400	50–400	25–400	50–300
±2 rpm	±2 rpm	±2 rpm	±2 rpm		
		d platform	r	Dedicate	d platform ¹
60	60	_	_	_	_
32	32	_	_	_	_
20	20	64	108	31	31
12	12	34	60	22	22
8	8	25	40	13	18
6	6	16	24	8	8
_	_	9	15	6	6
_	_	5	12	2	2
_	_	4	6	_	
_	_		6	_	_
		_		_	
			4		
-	Universa		4	- Universe	l platform
60	60	109	183	59	59
_					
20	20	64	92	35	35
15	15	45	92	18	18
11	11	21	39	18	18
6	6	18	30	8	8
4	4	14	18	6	6
-	=	8	12	4	4
-	-	5	8	2	2
-	-	4	6	-	-
-	-	4	6	-	-
-	-	4	6	-	-
-	-	2	4	-	-
				A+5 to 100	A+7 to 80
				Yes	No
15.8 x 17.9 x 8.5	15.8 x 17.9 x 8.5	20.5 x 17.9 x 8.5	30 x 27 x 8.5	28 x 27.5 x 14.5	21.4 x 26.9 x 18.5
35	35	85	93	115	115

Innova® 2000, 2100 and 2300 Series benchtop open-air shakers



Description

Low-profile shakers with triple-eccentric drive for uniform motion and microprocessor controls for accurate regulation of shaking speed, 25–500 rpm (less with baffled flasks). Includes audible and visual alarms, timer (0–99.9 hrs) with continuous operation or automatic shut-off at the end of the study. Models 2000, 2100 and 2300 provide for small, intermediate and large-capacity shaking, respectively. Models 2050, 2150 and 2350 come with additional stabilizing feet and/or counterweight to balance larger loads on oversized platforms.

Technical specifications

Model No.	Innova 2000	Innova 2050	Innova 2100	Innova 2150	Innova 2300	Innova 2350
Page	33	33	34	34	35	35
Platform size (in)	13 x 11	16 x 12	18 x 18	24 x 18	30 x 18	36 x 24
Capacity/ flask size¹	6 x 500 mL	3 x 2 L	5 x 2 L	8 x 2 L	4 x 6 L	6 x 6 L
Orbit (in)	0.75	0.75	0.75	0.75	1 or 2	1 or 2
Overall dimensions, W x D x H (in)	14 x 14.5 x 5.75	17 x 14.5 x 5.75	19 x 21.9 x 6.4	24 x 23.3 x 6.4	30 x 22.3 x 6.4	36 x 24 x 6.4
Net weight (lbs)	33	35	75	80	105	115

¹Indicates number of largest flask size with dedicated platform. Universal platform capacity may be less.

Description

Dependable operation is due in large part to the New Brunswick triple-eccentric counterbalanced drive. Other shaker manufacturers may offer triple-eccentric drives in their shakers. But only New Brunswick offers a broad-based cast-iron support mechanism—the most stable in the industry—properly sized to each shaker and specifically designed to support high-speed applications and heavy workloads.

Our **Excella® Shaker** line provides excellent performance and value for less demanding applications. We also offer the I26 stackable incubator shaker with triple-eccentric drive, high temperature water bath shakers, as well as a wide range of platforms and accessories.



Product features

- Components are fabricated to exacting specifications.
 Drive shafts, for example, are machined to tolerances of .0002", ensuring stable vibration-free operation even when operated at speeds up to 500 rpm
- Ultimate precision is ensured as each and every tripleeccentric mechanism is checked and measured using a Computer Aided Measurement (CAM) System.
 They are NOT batch tested.
- With the highest quality materials, superior design and precision fabrication, we guarantee our shakers will provide worry-free operation for many years to come

New Brunswick's often-imitated but never duplicated heavy-duty, counterbalanced triple-eccentric drive ensures uniform motion is imparted to every flask, regardless of position on the platform. Heavy-duty construction allows us to guarantee that our shakers will perform to our specifications, even when fully loaded and operating at top speed.

Innova® 2000 and 2050 Series benchtop open-air shakers





Ordering information

Description	Clamps	Catalog No.
Innova 2000, 120 V, 50/60 Hz (platform sold separately)		M1190-0000
Innova 2000 interchangeable platforms and accessories, 13" x 11" stainless steel.		
Clamps and accessories sold separately. See pages 48–49.		
Universal platform	-	M1001-0240
Utility carrier holds a variety of glassware between rubber-cushioned cross bars	_	AG2-UT
Utility tray with non-skid rubber surface	_	AG2-00
Rod kit for utility carrier (one additional rod)	_	M1001-9920
10 mL Erlenmeyer flask dedicated platform	60	AG2-10
25 mL Erlenmeyer flask dedicated platform	32	M1190-9919
50 mL Erlenmeyer flask dedicated platform	20	M1190-9915
125 mL Erlenmeyer flask dedicated platform	12	M1190-9916
250 mL Erlenmeyer flask dedicated platform	8	M1190-9917
500 mL Erlenmeyer flask dedicated platform	6	M1190-9918
Capacity upgrade kit, converts Model 2000 to a Model 2050	_	M1190-9910
Temperature and speed monitoring kit for recording on an external chart recorder	_	M1190-9909

orading mornaudi		
Description	Clamps	Catalog No.
Innova 2050, 120 V, 50/60 Hz (platform sold separately)		M1190-0010
Innova 2050 interchangeable platforms, 16" x 12" stainless steel.		
Clamps and accessories sold separately. See pages 48–49.		_
Universal platform	_	M1190-9900
Utility carrier holds a variety of glassware between rubber-cushioned cross bars	_	M1190-9907
Rod kit for utility carrier (one additional rod)	_	M1190-9920
Utility tray with non-skid rubber surface	_	M1190-9908
10 mL Erlenmeyer flask dedicated platform	86	M1190-9901
25 mL Erlenmeyer flask dedicated platform	48	M1190-9902
50 mL Erlenmeyer flask dedicated platform	35	M1190-9903
125 mL Erlenmeyer flask dedicated platform	20	M1190-9904
250 mL Erlenmeyer flask dedicated platform	12	M1190-9905
500 mL Erlenmeyer flask dedicated platform	8	M1190-9906
1 L Erlenmeyer flask dedicated platform	6	M1190-9911

Innova® 2100 and 2150 Series benchtop open-air shakers





Innova 2150 with stabilizing feet and larger platform for increased capacity

Ordering information

Description	Clamps	Catalog No.
Innova 2100, 120 V, 50-60 Hz (platform sold separately)		M1194-0000
Innova 2100 interchangeable platforms and accessories, 18" x 18" phenolic resin unless oth	erwise stated.	
Clamps and accessories sold separately. See pages 48–49.		
Universal platform, aluminum	_	M1250-9902
Drip pan to catch accidental spills for use with universal platform M1250-9902	_	M1250-9906
Utility carrier holds a variety of glassware between rubber-cushioned cross bars	_	M1194-9909
Rod kit for utility carrier (one additional rod)	_	M1194-9923
Utility tray with non-skid rubber surface	_	M1194-9910
50 mL Erlenmeyer flask dedicated platform	64	M1194-9903
125 mL Erlenmeyer flask dedicated platform	34	M1194-9904
250 mL Erlenmeyer flask dedicated platform	25	M1194-9905
500 mL Erlenmeyer flask dedicated platform	16	M1194-9906
1 L Erlenmeyer flask dedicated platform	9	M1194-9907
2 L Erlenmeyer flask dedicated platform	5	M1194-9908
2.8 L Fernbach flask dedicated platform	4	M1233-9932
Sticky pad platform (sticky pad sold separately)	_	M1250-9903
Capacity upgrade kit to convert a Model 2100 to a Model 2150	_	M1194-9926
Quick-change platform kit, enables platform attachment without tools	_	M1192-9901
Temperature and speed monitoring kit for recording on an external chart recorder.	_	M1194-9924
For Models 2100, 2150, 2300 and 2350 shakers.		

Description	Clamps	Catalog No.
Innova 2150, 120 V, 50–60 Hz (platform sold separately)		M1194-0010
Innova 2150 interchangeable platforms and accessories, 24" x 18" phenolic resin.	·	
Clamps and accessories sold separately. See pages 48–49.		
Universal platform	_	M1194-9912
Utility carrier holds a variety of glassware between rubber-cushioned cross bars	_	M1194-9921
Rod kit for utility carrier (one additional rod)	_	M1194-9925
Utility tray with non-skid rubber surface for low-speed applications	_	M1194-9922
50 mL Erlenmeyer flask dedicated platform	80	M1194-9915
125 mL Erlenmeyer flask dedicated platform	48	M1194-9916
250 mL Erlenmeyer flask dedicated platform	35	M1194-9917
500 mL Erlenmeyer flask dedicated platform	20	M1194-9918
1 L Erlenmeyer flask dedicated platform	12	M1194-9919
2 L Erlenmeyer flask dedicated platform	8	M1194-9920
Temperature and speed monitoring kit for recording on an external chart recorder.		M1194-9924
For Models 2100, 2150, 2300 and 2350 shakers.		
Quick-change platform kit, enables platform attachment without tools	_	M1194-9927

Innova® 2300 and 2350 Series benchtop open-air shakers



Innova 2300



Innova 2350 with stabilizing feet and larger platform for increased capacity

Ordering information

Description	Clamps	Catalog No.			
Innova 2300, 1" orbit, 120 V, 50-60 Hz (platform sold separately)		M1191-0000			
Innova 2300, 2" orbit, 120 V, 50-60 Hz (platform sold separately)		M1191-0020			
Innova 2300 interchangeable platforms and accessories, 30" x 18" aluminum.	Innova 2300 interchangeable platforms and accessories, 30" x 18" aluminum.				
Clamps and accessories sold separately. See pages 48–49.					
Universal platform	_	M1250-9920			
Drip pan to catch accidental spills for use with universal platform, M1250-9920	_	M1250-9921			
Utility tray with non-skid rubber surface for low-speed applications	_	AG-00			
50 mL Erlenmeyer flask dedicated platform	108	M1191-9908			
125 mL Erlenmeyer flask dedicated platform	60	M1191-9909			
250 mL Erlenmeyer flask dedicated platform	40	M1191-9910			
500 mL Erlenmeyer flask dedicated platform	24	M1191-9911			
1 L Erlenmeyer flask dedicated platform	15	AG-1			
2 L Erlenmeyer flask dedicated platform	12	AG-2			
4 L Erlenmeyer flask dedicated platform	6	AG-4			
6 L Erlenmeyer flask dedicated platform	4	AG-6			
2.8 L Fernbach flask dedicated platform	6	AG-28			
Sticky pad platform (sticky pad sold separately)	_	M1250-9904			
Capacity upgrade kit to convert a Model 2300 to a Model 2350	_	M1191-9905			
Quick-change platform kit, enables platform attachment without tools		M1191-9904			
Temperature and speed monitoring kit for recording on an external chart recorder.	_	M1194-9924			
For Models 2100, 2150, 2300 and 2350 shakers.					
Microplate platform holds 105 standard or 21 deepwell plates	_	M1243-2500			

Description	Clamps	Catalog No.	
Innova 2350, 1" orbit, 120 V, 50-60 Hz (platform sold separately)		M1191-0010	
Innova 2350, 2" orbit, 120 V, 50-60 Hz (platform sold separately)		M1191-0030	
Innova 2350 interchangeable platforms and accessories, 36" x 24" marine plywood unless otherwise stated.			
Clamps and accessories sold separately. See pages 48–49.			
Universal platform	_	PTL-386	
Universal platform, aluminum	_	PTL-393	
Utility tray with non-skid rubber surface	_	AG-21-00	
125 mL Erlenmeyer flask dedicated platform	96	M1191-9912	
250 mL Erlenmeyer flask dedicated platform	70	M1191-9913	
500 mL Erlenmeyer flask dedicated platform	40	M1191-9914	
Temperature and speed monitoring kit for recording on external recorder.	_	M1194-9924	
For Models, 2100, 2150, 2300 and 2350 shakers.			

lnnova® 5050/5051 racking systems for lnnova 2300 shakers



Innova 5050 and 5051 Extension Racks shown. Shakers sold separately.

Product features

- Each unit includes an electrical strip for powering the shakers. Shakers must be ordered separately.

 See page 35 for Innova 2300 shaker and platform ordering information.
- Maximum speed—400 rpm for 1" orbit, and 300 rpm for 2" orbit shakers. See chart below for rack capacities.
- Overall dimensions 5050 or 5051 —
 W x D x H: 39 x 27 x 72 in
- Net weight—500 lbs. (227 kg)

Description

Model 5050 consists of a sturdy, stainless-steel rack to hold up to 4 Innova 2300 shakers. Innova 5051 rack extension can be added to support an additional 4 shakers, bringing the total number to 8 Innova 2300 shakers.

Ordering information

Model	Description	Power supply	Catalog No.
Innova 5050	5050 Rack System	120 V, 50/60 Hz	M1232-0100
and 5051	5051 Rack Extension	120 V, 50/60 Hz	M1232-0110 ¹

Technical specifications

Flask size	Max. shakers per rack	Max. flasks with Innova 2300	Max. flasks with Innova 5050 Rack	Max. flasks with Innova 5051 Extension
50 mL	4	108	432	864
125 mL	4	60	240	480
250 mL	4	40	160	320
500 mL	4	24	96	192
1 L	3	15	45	90
2 L ²	3	12	36	72

¹Must be used with Model 5050 rack system. ²Larger flasks can be used by removing one or more adjustable-height shelves.

lnnova® 5000 multi-tier shaker—an industrial workhorse



Simultaneously agitate hundreds of samples on up to 6 accessory platforms.

Product features

- Speed: 25 to 350 rpm (less for baffled flasks)
- Orbit: 2" counterbalanced shaker provides uniform agitation to all samples without being bolted to the floor. Cantilevered design provides unobstructed access to all glassware.
- 6 removable platforms—32.5 x 26.75 inches accommodate flasks 10 mL to 6 L. (Platforms sold separately.)
 Digital display indicates speed, setpoint, running time and alarm conditions.
- Overall dimensions—W x D x H: 62 x 38 x 53 in
- Net weight: 1,410 lbs

Description

Culture hundreds of samples on this industrial workhorse.

Ordering information

Model	Power supply	Catalog No.
Innova 5000	120 V, 50/60 Hz 220 V, 50/60 Hz	M1196-0000 M1196-0002

Description	No. of flasks per platform	No. of flasks per machine	Catalog No.	
Clamps and accessories sold separately. See pages 48–49.				
Universal platform (each)	_	_	M1196-9447	
125 mL Erlenmeyer flask dedicated platform	99	594	M1196-9900	
250 mL Erlenmeyer flask dedicated platform	64	384	M1196-9901	
500 mL Erlenmeyer flask dedicated platform	42	252	M1196-9902	
1 L Erlenmeyer flask dedicated platform	23	138	M1196-9903	
2 L Erlenmeyer flask dedicated platform	14	70	M1196-9904 ¹	
2.8 L Fernbach flask dedicated platform	9	54	M1196-9905 ¹	
4 L Erlenmeyer flask dedicated platform	9	18	M1196-9906 ²	
6 L Erlenmeyer flask dedicated platform	8	16	M1196-9907 ²	

¹When used on bottom tier, can only use front half of platform. ²For use on top tier only.

Excella® shakers—excellent performance and value

Description

These biological shakers from New Brunswick Scientific are offered in 8 models to suit a wide variety of culturing applications. Excella shakers combine sleek looks, microprocessor controls and heavy-duty counterbalanced drives to provide years of continuous, quiet operation. User-friendly keypad and digital displays are provided on all models except the analog E2. Excella shakers are available with a large selection of accessories to accommodate a wide range of flasks, test tubes and general labware. Platforms are interchangeable with those used on current as well as earlier New Brunswick models. All Excella shakers meet ETL and CE standards.

Excella E1 analog-controlled compact open-air shakers



Product features

- Benchtop shakers for agitating test tubes and flasks up to 500 mL with analog control
- Heavy-duty, counterbalanced drive with DC brushless motor and permanently lubricated ball bearings provide a long life and is virtually maintenance-free
- Reference calibrations allow the shaker to be set manually for reproducible results from one run to the next

Technical specifications

Description	Excella E1	
Platform size (W x D)	13 x 11 in	
Controls	Analog dial	
Speed (rpm)	50 to 400	
Orbit	3/4"	
Dimensions (W x D x H)	15.75 x 17.9 x 8.5 in	
Net weight	35 lb	

Description

Compact and economical E1 shakers easily fit your budget and your bench!

Excella E2 microprocessor controlled and E1 analog-controlled compact open-air shakers



Product features

- Benchtop shakers for agitating test tubes and flasks up to 500 mL with microprocessor control
- Acceleration circuit prevents sudden starts and stops to minimize splashing in Excella E2
- Heavy-duty, counterbalanced drive with DC brushless motor and permanently lubricated ball bearings provide a long life and is virtually maintenance-free

Technical specifications

Description	Excella E2	
Platform size (W x D)	13 x 11 in	
Controls	Digital LCD	
Speed (rpm)	50 to 400	
Orbit	3/4"	
Timer	0.1 to 99.9 hrs, or continuous	
Alarms	Audible and visual	
	End of run	
	Speed deviates +/-5 rpm	
	from setpoint	
Dimensions (W x D x H)	15.75 x 17.9 x 8.5 in	
Net weight	35 lb	

Description

Compact and economical E2 shakers easily fit your budget and your bench. E2 offers microprocessor control for precise setting of speed and running times.

Ordering information

Model	Power supply Catalog No. 0.75" or	
E2 Open-Air	120 V, 50/60 Hz	M1350-0000
E1 Open-Air	120 V, 50/60 Hz	M1354-0000

Shakers do not include 13" x 11" platforms which must be ordered separately.

Description	Clamps	Catalog No.	
Excella E2 and E1 interchangeable platforms, 13" x 11" stainless steel.			
Clamps and accessories sold separately. See pages 48–49.			
Universal platform	_	M1001-0240	
Utility carrier holds a variety of glassware between rubber-cushioned cross bars	_	AG2-UT	
Utility tray with non-skid rubber surface	_	AG2-00	
Rod kit for utility carrier (one additional rod)	_	M1001-9920	
10 mL Erlenmeyer flask dedicated platform	60	AG2-10	
25 mL Erlenmeyer flask dedicated platform	32	M1190-9919	
50 mL Erlenmeyer flask dedicated platform	20	M1190-9915	
125 mL Erlenmeyer flask dedicated platform	12	M1190-9916	
250 mL Erlenmeyer flask dedicated platform	8	M1190-9917	
500 mL Erlenmeyer flask dedicated platform	6	M1190-9918	



Product features

- Mid-sized shaker accommodates flasks as large as 2.8 L on a dedicated platform or flasks up to 6 L on a universal platform
- Accessory universal platform accommodates tubes, plates and flasks
- Heavy-duty counterbalanced drive with DC brushless motor and permanently lubricated ball bearings provides long life and is virtually maintenance free

Description

Microprocessor-controlled benchtop platform shakers for agitating test tubes and flasks up to 6 L.

Technical specifications

reclinical specifications		
Description	Excella E5	
Platform size (W x D)	18 x 18 in	
Speed (rpm)	50 to 400	
Orbit	3/4"	
Timer	0.1 to 99.9 hrs	
Alarms	Audible and visual	
	End of run	
	Speed deviates +/-5 rpm	
	from setpoint	
Dimensions (W x D x H)	20.5 x 17.9 x 8.5 in	
Net weight	85 lb	

Excella® E5 mid-sized benchtop open-air shakers

Ordering information

50/60 Hz M1355-0000
٧,

Shaker does not include 18" x 18" platforms which must be ordered separately.

Description	Clamps	Catalog No.
Excella E5 interchangeable platforms, 18" x 18" phenolic resin unless otherwise stated. Clamps and accessories sold separately. See pages 48–49.		
Universal platform, aluminum	_	M1250-9902
Drip pan to catch accidental spills for use with universal platform M1250-9902	_	M1250-9906
Utility carrier holds a variety of glassware between rubber-cushioned cross bars	_	M1194-9909
Rod kit for utility carrier (one additional rod)	_	M1194-9923
Utility tray with non-skid rubber surface	_	M1194-9910
50 mL Erlenmeyer flask dedicated platform	64	M1194-9903
125 mL Erlenmeyer flask dedicated platform	34	M1194-9904
250 mL Erlenmeyer flask dedicated platform	25	M1194-9905
500 mL Erlenmeyer flask dedicated platform	16	M1194-9906
1 L Erlenmeyer flask dedicated platform	9	M1194-9907
2 L Erlenmeyer flask dedicated platform	5	M1194-9908
2.8 L Fernbach flask dedicated platform	4	M1233-9932
Sticky pad platform, (sticky pads sold separately)	_	M1250-9903

Excella® E10 large-capacity benchtop open-air shakers



Product features

- Durable, large capacity shaker holds up to 4 6 L flasks
- Easy to program control panel and bright LED readout displays all important parameters
- Heavy-duty, counterbalanced drive with DC brushless motor and permanently lubricated ball bearings provide a long life and is virtually maintenance-free

Description

Large-capacity, microprocessor-controlled shakers with digital display.

Technical specifications

Description	Excella E10
Platform size (W x D)	30 x 18 in
Speed (rpm)	50 to 400
Orbit	1"
Timer	0.1 to 99.9 hrs
Alarms	Audible and visual
	End of run
	Speed deviates +/-5 rpm
	from setpoint
Dimensions (W x D x H)	30 x 27 x 8.5 in
Net weight	140 lb

Excella® E10 large-capacity benchtop open-air shakers

Ordering information

Model	Power supply	Catalog No. 1" orbit	
E10	120 V. 50/60 Hz	M1351-0000	
Open-Air	120 1, 00,001.12		

Shaker does not include 3" x 18" platforms which must be ordered separately.

Description	Clamps	Catalog No.	
Excella E10 interchangeable platforms, 30" x 18" aluminum.			
Clamps and accessories sold separately. See pages 48–49.			
Universal platform	_	M1250-9920	
Drip pan to catch accidental spills, for universal platform M1250-9920	_	M1250-9921	
Utility tray with non-skid rubber surface	_	AG-00	
50 mL Erlenmeyer flask dedicated platform	108	M1191-9908	
125 mL Erlenmeyer flask dedicated platform	60	M1191-9909	
250 mL Erlenmeyer flask dedicated platform	40	M1191-9910	
500 mL Erlenmeyer flask dedicated platform	24	M1191-9911	
1 L Erlenmeyer flask dedicated platform	15	AG-1	
2 L Erlenmeyer flask dedicated platform	12	AG-2	
2.8 L Fernbach flask dedicated platform	6	AG-28	
4 L Erlenmeyer flask dedicated platform	6	AG-4	
6 L Erlenmeyer flask dedicated platform	4	AG-6	
Platform for sticky pad, (sticky pads sold separately)	_	M1250-9904	
Microplate platform holds 105 standard or 21 deepwell plates	_	M1243-2500	



For flasks up to 2 L



Half-size platforms with clamps already mounted, provide maximum capacity for shaking different sized flasks on a single water bath shaker.

Technical specifications

Description	Innova 3100		
Platform size (W x D)	12 x 16.5 in		
Temperature range	Ambient		
	+ 5 °C to 100 °C		
Temperature uniformity	+/-0.25 °C at 37 °C		
Speed (rpm)			
1/2" orbit	25 to 400		
Innova control programmer			
Timer	0.1 to 99.9 hours +		
	continuous operation		
Memory	Non volatile with automatic		
	power failure restart		
Dimensions (W x D x H)	17 x 27.5 x 14.5 in		
Net weight	115 lb		

Product features

- Adjustable water-level control automatically replenishes evaporated water. Has drain, water-in and overflow lines.
- Acceleration circuit builds up speed slowly avoiding sudden stop/starts and unwanted splashing
- Deep bath with rounded corners and baffles allow elevated speeds with minimal splashing or turbulence
- Heat loss is minimized with use of optional gable covers
- Cooling coil optional for near-ambient and below ambient applications

Description

High-temperature water bath shakers for temperatures up to 100 °C. Large-capacity orbital shakers with microprocessor control of speed and temperature. One-piece stainless steel bath.



For high-temperature applications up to 100 °C, choose the stainless steel gable cover.



Optional Plexiglas® gable cover minimizes evaporation and speeds heat-up, in applications up to 60°C.

Innova® 3100 high-temperature water bath shakers

Ordering information

Model	Power supply	Catalog No. 0.5" orbit
3100 Water Bath (platform sold separately)	120 V, 50/60 Hz 220/230 V, 50/60 Hz	M1231-0000 M1231-0002

Elevated temperatures attained with aid of a gable cover using bath liquid with a high boiling point to minimize evaporation. For lower temperatures an optional cooling assembly is available.

Ordering information

Description	Clamps	Catalog No.		
Innova 3100 interchangeable platforms, 12" x 16.5" stainless steel.				
Clamps and accessories sold separately. See pages 48–49.				
Universal platform	_	M1231-9930		
50 mL Erlenmeyer flask dedicated platform	31	M1231-9933		
125 mL Erlenmeyer flask dedicated platform	22	M1231-9934		
250 mL Erlenmeyer flask dedicated platform	13	M1231-9935		
500 mL Erlenmeyer flask dedicated platform	8	M1231-9936		
1 L Erlenmeyer flask dedicated platform	6	M1231-9937		
2 L Erlenmeyer flask dedicated platform	2	M1231-9938		
Sub-platform for mounting dedicated half-size platforms containing flasks	_	M1231-9939		
and test-tube racks. Sub-platform holds 2 half-size flask platforms or 4 racks.				
Gable cover, Plexiglas®, for temperatures ≤60 °C		M1231-2010		
Gable cover, stainless steel		M1231-2000		
Cooling coil, factory-installed		M1231-9920		
Spare set of suspension arms		M1231-0730		
Space-saving dolly, for under lab bench operation, 18" W x 28.25" L.		M1195-1020		
Height, shaker on cart 20".				
Portable cart, 22.5" W x 32.25" L. Height, shaker on cart 42.5".		M1020-1220		

Ordering information

Description	Half platforms per bath	Clamps per platform	Catalog No.	
Innova 3100 half-size dedicated platforms, (half platforms require sub-platform listed above)				
50 mL Erlenmeyer flask half platform	2	13	AG7-50	
125 mL Erlenmeyer flask half platform	2	8	AG7-125	
250 mL Erlenmeyer flask half platform	2	5	AG7-250	

Ordering information

Description		Racks per bath	Tubes per rack	Catalog No.
Innova 3100 test tube racks, (racks require sub-platform	listed above)			1 1 1 1 1
Rack for 13 mm tubes		4	60	AG7-TT13
Rack for 16 mm tubes		4	36	AG7-TT16
Rack for 20 mm tubes		4	29	AG7-TT20
Rack for 25 mm tubes		4	18	AG7-TT25

For additional options see pages 48-49.

C76 high-temperature water bath shakers



Shown with accessory Plexiglas® gable cover

Product features

- High capacity shaking water bath for all your critical incubations
- 1 piece seamless bath with rounded corners ensures even heating and easy cleaning
- Feedback control of temperature and agitation rate for reproducible results
- Holds up to two 2 L flasks

Description

Microprocessor-controlled orbital shaker for applications up to $80\,^{\circ}\text{C}.$



Deep-drawn round-cornered bath has no seams or crevices to simplify cleaning. Front and rear snap-in baffles, which minimize splashing, have been removed to show details.

Technical specifications

Description	C76
Platform size (W x D)	12 x 16.5 in
Temperature range	Ambient
	+ 7°C to 80°C
Speed (rpm)	50 to 300
Orbit	1/2"
Timer	0.1 to 99.9 hours +
	continuous operation
Dimensions (W x D x H)	21.4 x 26.9 x 18.5 in
Net weight	115 lb

C76 high-temperature water bath shakers

Ordering information

Model	Power supply	Catalog No. 0.5" orbit
C76 Water Bath	120 V, 50/60 Hz	M1248-0002

Shaker does not include platform which must be ordered separately. See below. Elevated temperatures attained with aid of a gable cover using bath liquid with a high boiling point to minimize evaporation. For lower temperatures an optional cooling assembly is available.

Ordering information

Description	Clamps	Catalog No.		
C76 interchangeable platforms and accessories, 12" x 16.5" stainless steel.				
Clamps and accessories sold separately. See pages 48–49.				
Universal platform	_	M1231-9930		
50 mL Erlenmeyer flask dedicated platform	31	M1231-9933		
125 mL Erlenmeyer flask dedicated platform	22	M1231-9934		
250 mL Erlenmeyer flask dedicated platform	13	M1231-9935		
500 mL Erlenmeyer flask dedicated platform	8	M1231-9936		
1 L Erlenmeyer flask dedicated platform	6	M1231-9937		
2 L Erlenmeyer flask dedicated platform		M1231-9938		
Sub-platform for mounting half-size platforms containing flasks and	_	M1231-9939		
test tube racks. Sub-platform holds 2 half-size flask platforms or 4 racks.				
Gable cover, stainless steel		M1231-2000		
Gable cover, Plexiglas®, for temperatures ≤60 °C		M1231-2010		
Cooling coil, factory-installed		M1231-9920		
Spare set of arms for affixing platform to water bath		M1248-0730		

Ordering information

Description	Half platforms per bath	Clamps per platform	Catalog No.	
C76 half-size dedicated platforms, (half platforms require sub-platform listed above)				
50 mL Erlenmeyer flask half platform	2	13	AG7-50	
125 mL Erlenmeyer flask half platform	2	8	AG7-125	
250 mL Erlenmeyer flask half platform	2	5	AG7-250	

Ordering information

		Racks	Tubes	
Description		per bath	per rack	Catalog No.
C76 test tube racks, (racks require sub-platform liste	d above)			
Rack for 13 mm tubes		4	60	AG7-TT13
Rack for 16 mm tubes		4	36	AG7-TT16
Rack for 20 mm tubes		4	29	AG7-TT20
Rack for 25 mm tubes		4	18	AG7-TT25

For additional options see pages 48-49.

Clamps and accessories for universal platforms—open-air shakers and water baths

Innova® models	2000	2050	2100			
Excella® models	E1,E2		E5			
Accessory						
10 mL Erlenmeyer flask clamp	60	86	109			
25 mL Erlenmeyer flask clamp	20	32	64			
50 mL Erlenmeyer flask clamp with spring retainer	15	32	45			
125 mL Erlenmeyer flask clamp with spring retainer	11	16	21			
250 mL Erlenmeyer flask clamp with spring retainer	6	10	18			
500 mL Erlenmeyer flask clamp with spring retainer	4	8	14			
1 L Erlenmeyer flask clamp	-	-	8			
2 L Erlenmeyer flask clamp	-	-	5			
2.8 L Fernbach clamp	-	-	4			
4 L Erlenmeyer flask clamp	-	-	4			
5 L Erlenmeyer flask clamp	-	-	2			
6 L Erlenmeyer flask clamp	-	-	2			
Microplate rack (stack)	3	6	8			
Microplate rack (1 layer)	-	-	2			
Small test tube rack	3	4	5			
Medium test tube rack	-	3	5			
Large test tube rack	-	-	4			
Platform size, inches	13 x 11	16 x 12	18 x 18			

Small racks				
Diameter	Tubes/rack	Catalog No.		
8–11 mm	48	M1289-0001		
12–15 mm	34	M1289-0002		
15–18 mm	24	M1289-0003		
18–21 mm	18	M1289-0004		
22–26 mm	13	M1289-0005		
26–30 mm	12	M1289-0006		

Large racks				
Diameter	Tubes/rack	Catalog No.		
8–11 mm	80	M1289-0100		
12–15 mm	60	M1289-0200		
15–18 mm	42	M1289-0300		
18–21 mm	30	M1289-0400		
22–26 mm	22	M1289-0500		
26–30 mm	20	M1289-0600		

Medium racks				
Diameter	Catalog No.			
8–11 mm	60	M1289-0010		
12–15 mm	44	M1289-0020		
15–18 mm	31	M1289-0030		
18–21 mm	23	M1289-0040		
22–26 mm	16	M1289-0050		
26–30 mm	16	M1289-0060		

Description	Catalog No.
Sticky tape, 16.4" x 1.6"	M1250-9600
Sticky pad, 8" x 8"	M1250-9700
Sticky pad adapters, 18" x 6", set of 2	M1250-9504
Angled test tube rack holder	TTR-210
Spacer for TTR-210	TTR-215
1 L media bottle clamp	ACSB-1000S

Clamps and accessories for universal platforms—open-air shakers and water baths

2150	2300	2350	3100	Catalog No.
	E10		C76	
	183		59	ACE-10S
	92		35	M1190-9004
63	92		18	M1190-9000
35	39	75	18	M1190-9001
24	30	50	8	M1190-9002
20	18	30	6	M1190-9003
12	12	24	4	ACE-1000S
6	8	15	2	ACE-2000S
5	6	12	-	ACFE-2800S
5	6	10	-	ACE-4000S
4	6	10	-	ACE-5000S
3	4	8	-	ACE-6000S
12	16	27	6	M1289-0700
3	4	8	-	TTR-221
8	9	18	4	see below
7	9	13	3	see below
6	7	12	-	see below
24 x 18	30 x 18	36 x 24	12 x 16.5	



Universal platform shown with accessory clamps, test tube racks and sticky tape



Flask clamp, of one piece stainless steel, fitted with springs for stability at elevated speeds. Includes mounting screws.



Microplate racks



Test tube racks, small, medium and large



Dedicated platforms come with clamps of one size pre-installed



Sticky pad (shown)/sticky tape

Sticky tape and sticky pad can be used instead of clamps for low-speed applications. Not for use in water bath shakers. Sticky pad requires an anodized aluminum surface.



Utility traysUtility trays provide a non-slip surface for low-speed applications



Utility carriers

Utility carriers secure vessels between adjustable, cushioned rods

New Brunswick fermentors and bioreactors

Description

For over 50 years, New Brunswick Scientific (NBS) has manufactured advanced fermentors and bioreactors for research and production. Engineered specifically for microbial and cell culture applications, these systems have been successfully used in the biomedical, pharmaceutical, environmental, food and cosmetics industries.

New Brunswick's BioFlo® fermentors are offered in 1–3,000 L capacities, and CelliGen® bioreactors in 1–650 L capacities, for producing cells and their by-products from virtually any cell line.

A wide range of support services are offered, including set-up assistance, training programs and service plans to ensure your on-going success. Uniquely, New Brunswick Scientific maintains in-house fermentation and cell culture laboratories to assist you with process development, scale-up, and contract production needs.

CelliGen cell culture bioreactors: single-use, autoclavable and sterilizable-in-place

Single-use cell culture systems



Fibra-Cel® Microcarrier Disks



CelliGen BLU (5.0 and 14.0 L)

Description

For research through production, 1-650 L.

New Brunswick Scientific manufactures a broad range of stirred-tank bioreactors for growth of mammalian, animal, plant, algal and insect cultures. All can perform batch, fed-batch and perfusion processes, and many are offered with specialized, interchangeable impellers including NBS' proprietary packed-bed basket and Cell Lift designs for high-yield production of secreted products. The CelliGen line ranges from the entry-level CelliGen 115—pre-programmed with both cell culture and fermentation operating modes to provide complete flexibility—to the SIP CelliGen Pro production systems designed for manufacturing in FDA-validated environments. For facilities seeking the rapid set-up and reduced labor of a single-use bioreactor, the new CelliGen BLU fits the bill.

Autoclavable cell culture bioreactors



BioFlo/CelliGen 115 (1.3 to 14.0 L)



CelliGen 310 (2.5 to 14.0 L)

Sterilizable-in-place cell culture systems



CelliGen 510 (19.5 and 40.0 L)



CelliGen Pro (75 to 300 L)

BioFlo® fermentation systems: autoclavable and sterilizable-in-place

Description

For research through production, 1-3,000 L.

BioFlo fermentors are ideal for growth of e.coli, pichia pastoris and streptomyces, as well as traditional anaerobic and aerobic culture from recombinant microbial, yeast and fungal cells. Set-up, calibration and control of all NBS fermentors and bioreactors are regulated through NBS' RPC Reactor Process Controller or PLC controllers. The systems use rapid-responding, easy-to-use touchscreen interfaces capable of controlling up to 32 process loops. The BioFlo and CelliGen 310 systems are capable of simultaneous control of up to 4 vessels, and over 120 process loops, from a single controller. The BioFlo/CelliGen 115 can simultaneously control up to 3 vessels—over 90 process loops.

Product features

- Dependable operation, system flexibility, compact design and advanced process control are hallmarks of all NBS fermentors and bioreactors
- All systems (except the 115 systems) are able to be validated so they can be used in a cGMP environment
- Easy-to-use touchscreen control screens simplify set-up, calibration and operation
- The 510, 610 and Pro systems feature a modular design and industry-standard components to allow rapid delivery and easy customization at any time, pre- or post-delivery
- With pre-configured packages and a wide variety of options, systems can be easily customized exactly to your exact requirements

Autoclavable fermentors



BioFlo/CelliGen 115 (1.3 to 14 L)



BioFlo 310 (2.5 to 14 L)

Sterilizable-in-place fermentors



BioFlo 415 (7 to 19.5 L)



BioFlo 510 (19.5 to 40 L)



BioFlo 610 (65 and 125 L)



BioFlo Pro (75 to 3,000 L)

For further information on these New Brunswick bioreactors and fermentors, please contact your local Eppendorf Representative at 1-800-645-3050.

Innova® freezers features

Description

Space-saving Innova freezers utilize vacuum insulation panel technology to reduce wall thickness resulting in 30% more internal capacity than freezers of equal size. 6 models are offered, U101, U360, U535, U725, C585 and C760.



Innova U101, unique on or under the counter freezer is ideal for clinical trials or labs short on space



Innova U360, ultra-slim U360 is just 26.4 inches wide including the handle

Product features

- Vacuum insulation paneling reduces wall thickness providing up to 30% more storage capacity in a similar footprint
- Quick pull down and recovery times with reliable heavy-duty compressors
- Inner doors in upright models are gasketed and insulated creating 3 separate compartments minimizing cold air loss while accessing your samples (2 in U101)
- Inner doors can be quickly removed without tools for easier defrosting
- Adjustable height shelves for storage flexibility.
 Each rack is adjustable in 1/2" increments for odd size rack setup.
- High-grade seals for outer door on all upright and chest models allow for rapid temperature recovery
- Stainless steel interior is easily cleaned and eliminates the possibility of oxidation
- Significantly reduced noise levels achieved through advanced compressor housing with noise-reducing insulation enabling placement of the freezer directly in your work area
- Unique heated air vent with plunger to clear ice buildup and to relieve vacuum formation to gain immediate access to the freezer
- Password protection of alarm and temperature setpoints to prevent unauthorized users from altering settings
- SMART Plus™ diagnostics which allows system engineers to diagnose most issues over the phone, saving you time and money
- Each freezer slides effortlessly through a standard doorway simplifying installation
- Easy-to-read LED display with display of system alarms and diagnostics
- 2-year warranty on parts and labor, with 3 additional years covering parts. 12-year warranty on vacuum insulation panels. 1-year on accessories.



Innova U535, at 18.9 ft³ of storage space, available in 120 or 220 V



Innova U725, offers the most capacity and is the most popular Innova upright, available in 208–220 V only



Innova C585, at 20.7 ft³ of storage space, available in 120 or 220 V



Innova C760, the largest ULT chest freezer available from any manufacturer at 26.9 ft³, available in 208–220 V only

Premium freezers features

Description

Economical Premium freezers are conventionally-insulated providing a cost effective alternative, with many of the same features and quality as the Innova models. Five models are available U410, U570, U700, C340 and C660.

- 3 large-capacity uprights—for easy access to samples, choose the U410, U570 or larger U700, each with 5 compartments and 4 adjustable-height shelves
- 2 chests—if a chest style is preferred, choose C340 or C660 insulated sub-lids that provide added sample protection
- CO₂ and LN₂ back-up systems, racking and more are available



Premium U410, the smallest Premium upright at 14.5 ft³ of storage space, available in 120 or 220 V



Premium U570, combines both storage capacity and energy efficiency, 120 or 220 V

Product features

- Polyurethane foam insulation provides efficient insulation protection
- Quick pull down and recovery times with reliable heavy-duty compressors
- Inner doors are insulated minimizing cold air loss while accessing your samples in one of 5 compartments
- 5 compartments, each accepts NBS racks and other brands without shelf adjustment
- Adjustable height shelves for storage flexibility.
 Each rack is adjustable in 1/2" increments for odd size rack setup.
- Low temperature outer door seals allow gaskets to remain flexible at –86 °C temperatures
- Stainless steel interior is easily cleaned and eliminates the possibility of oxidation and cross contamination
- Significantly reduced noise levels achieved through advanced compressor housing with noise-reducing insulation enabling placement of the freezer directly in your work area
- Unique heated air vent with plunger to clear ice buildup and to relieve vacuum formation to gain immediate access to the freezer
- Password protection of alarm and temperature setpoints to prevent unauthorized users from altering settings
- SMART Plus[™] diagnostics which allows system engineers to diagnose most issues over the phone, saving you time and money
- Each freezer slides effortlessly through a standard doorway simplifying installation
- 2-year warranty on parts and labor, with 3 additional years covering parts. 1-year on accessories.



Premium U700, the largest Premium upright at 25 ft³ of storage space, available in 120 or 220 V



Premium C340, the smallest chest freezer at 12 ft³, available in 120 V only



Premium C660, the largest Premium chest freezer at 23.3 ft³, available in 208–220 V only

	Innova					
Freezers	Upright		Chest			
(Images not to scale)				1		b -
Model	U101	U360	U535	U725	C585	C760
Technical specifications						
Capacity (ft³)	3.6	12.7	18.9	25.6	20.7	26.9
External dimensions (H x W x D) in	32.7 x 35.4 x 22.3	76.8 x 26.4 x 34.1	76.8 x 31.5 x 34.1	76.8 x 40.4 x 34.1	43 x 66.5 x 30.9	43 x 80.7 x 30.7
Floor weight (lb/kg)	256/116	595/270	551/250	694/315	529/240	628/285
Voltage (V)	120	120	120/220	220	120/220	220
Plug provided	5-15P	5-20P	5-20P/6-15P	6-15P	5-20P/6-15P	6-15P
Full load amp draw	13	16.5	16.5/9	10	16.5/9	10
Performance data						
Power consumption kWh/day	6.3	11.6	13.2	16.4	13.9	16.7
Watts	265	487	550	685	580	698
Pull down time (hrs)	3.5	5	5.3	5.2	4.3	5.8
Voltage stabilizer	Optional	Optional	Standard	Standard	Standard	Standard
Caster wheels	Standard	Standard	Standard	Standard	Standard	Standard
		Capac	ity			
Freezer racks						
Max racks per shelf	3	3	4	6	N/A	N/A
Number of shelves	2		3		N/A	N/A
Max racks per freezer	6	9	12	18	32	44
Rack dimensions (H x W x D) in	12.1 x 5.5 x 11.5	16.2 x 5.5 x 22.2	16.2 x 5.5 x 22.2	16.2 x 5.5 x 22.2	29.6 x 5.5 x 5.5	29.6 x 5.5 x 5.5
Box capacity per rack						
2" box	10		28		1	3
3" box	6		20			9
4" box	4		12		(3
Box capacity per freezer						
2" box	60	252	336	504	416	572
3" box	36	180	240	360	288	396
4" box	24	108	144	216	192	264
Sample capacity						
2" box	6,000	25,200	33,600	50,400	41,600	57,200
3" box	3,600	18,000	24,000	36,000	28,800	39,600
4" box	2,400	10,800	14,400	21,600	19,200	26,400

New Brunswick freezers guide

	Premium					
	Upright		Ch	Chest		
			1	la e		
U410	U570	U700	C340	C660		
		Technical specifications				
14.5	20.0	25.0	12.0	23.3		
75.4 x 31.5 x 33.5	75.8 x 40.4 x 33.5	77.1 x 44.1 x 34.3	42.3 x 52.8 x 33.1	42.3 x 80.7 x 33.1		
518/235	584/265	615/279	441/200	617/280		
120/220	120/220	120/220	120	220		
5-20P/6-15P	5-20P/6-15P	5-20P/6-15P	5-20P	6-15P		
16.5/8	16.5/9	9	16.5	8		
		Performance data				
12.9	14.1	14.9	10.3	15		
540	590	600	430	625		
4.1	5.3	5.8	3.4	6		
Optional	Optional	Optional	Optional	Optional		
Standard	Standard	Standard	Standard	Standard		
		Capacity				
		Freezer racks				
3	5	6	N/A	N/A		
	5		N/A	N/A		
15	25	30	20	40		
9.3 x 5.5 x 22.2	9.3 x 5.5 x 22.2	9.3 x 5.5 x 22.2	29.6 x 5.5 x 5.5	29.6 x 5.5 x 5.5		
		Box capacity per rack		•		
	16		1	3		
	12		9			
	8		6			
		Box capacity per freezer				
240	400	480	260	520		
180	300	360	180	360		
120	200	240	120	240		
		Sample capacity				
24,000	40,000	48,000	26,000	52,000		
18,000	30,000	36,000	18,000	36,000		
12,000	20,000	24,000	12,000	24,000		

Support and Services Directory

Contact Information

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	Phone:	800-645-3050	800-263-8715
ins		516-334-7500	905-826-5525
	Fax:	516-334-7506	905-826-5424
	Address:	Eppendorf North America, Inc.	Eppendorf Canada Ltd.
		102 Motor Parkway	2810 Argentia Road
		Hauppauge, NY 11788-5178	Unit #2
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