



# Incubator Shaker Guide

CellXpert®, Innova®, and New Brunswick Lab Shakers from Eppendorf



# »Consistency across runs, reliability across generations.«

Eppendorf life science solutions have been helping scientists for almost 80 years. This history allowed for the evolution of engineering principles, refined over many years, with the long-term view of one of the most well-known & trusted brands in the life science industry.

The result: our customers are at the cutting edge of science and we are evolving to accommodate their requirements.



## An innovative legacy

- > For almost 80 years, New Brunswick shakers have set the benchmark for robust laboratory orbital shakers
- > Orbital shakers built with customer applications in mind – long run times and increasing throughput



## Drive mechanisms built to last

- > The Eppendorf Triple Eccentric Drive made from cast iron for dependability and stability
- > The Eppendorf X-Drive is designed from the ground up for shaking greater loads at greater speeds
- > Well-suited for routine applications



## Your source for scale-up

- > From the smallest plate on the smallest benchtop up to triple-stacked high capacity shakers for process optimization - Eppendorf products facilitate you along your scale-up journey
- > Eppendorf is your source for when your processes demand the exacting control of bioprocess vessels
- > Applications support to guide you along the way

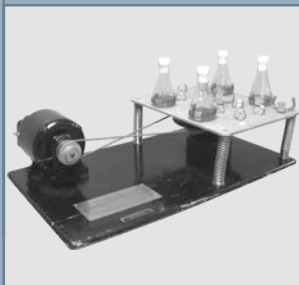
# An Innovative Legacy

The legacy began in 1946: the first shaker was developed for Dr. Selman Waksman, who was awarded the Nobel Prize in Medicine for discovering the first antibiotic successfully used against tuberculosis. Eppendorf shakers continue that tradition of innovation and reliability.

## **Eppendorf Shakers continue to be a global market leader**

- > Each generation of shakers has outperformed its predecessor
- > Many shakers have been in operation for over 40 years and remain in operation today
- > Pioneering stackable and microprocessor controlled shakers
- > There are added features and expanded options with each new generation, but the same Eppendorf quality exists today

1946



The first shaker is developed by the Freedman Brothers and New Brunswick Scientific is born. Dr. Selman Waksman of Rutgers uses an updated version of the first New Brunswick Shaker and is awarded the Nobel Prize in Medicine for the first antibiotic that successfully treats Tuberculosis.

1972



The G-Series, the first incubated shakers, are developed. The triple eccentric drive mechanism is born and is still in use today. For the first time, scientists can grow microbial cultures and solutions under controlled conditions of temperature and high rates of agitation.

1997



The introduction of the C-Series and the first Innova line of shakers. State of the art microprocessor controls provide researchers enhanced temperature accuracy and uniformity. The first stackable shaker is developed, providing users more capacity without increasing the necessary space.

2007



New Brunswick introduces an enhanced line of Innova® shakers, recognized as the gold standard for orbital shakers. Excella replaces the C-Series of shakers, built for both performance and value. New Brunswick becomes part of Eppendorf; aligning the market leader in shakers with a leader in lab products.

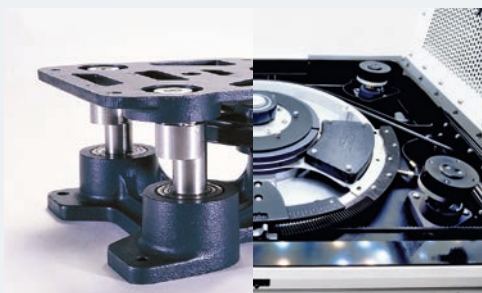


## Eppendorf Shakers

### keep pace with the modern lab

As the requirements and demands of your applications continue to expand, Eppendorf has continued the proud New Brunswick legacy of meeting your needs with our expanding product lines.

- > Introducing new technologies for more substantial shakers
- > Cultivating convenience and ease-of-use
- > Expanding customer support to keep you running at all times
- > Increasing throughput to keep your lab competitive



Our drives have grown and gotten smarter



Our controls and software offer greater flexibility and control



Our devices are more ergonomic and comfortable to use



Our capacities and options have expanded to meet expanding requirements

# 2017



Eppendorf introduces the Innova S44i incubator shaker and the latest in drive technology—the Eppendorf X-Drive. With optimized agitation and control, along with increased capacity and application options.

# 2024



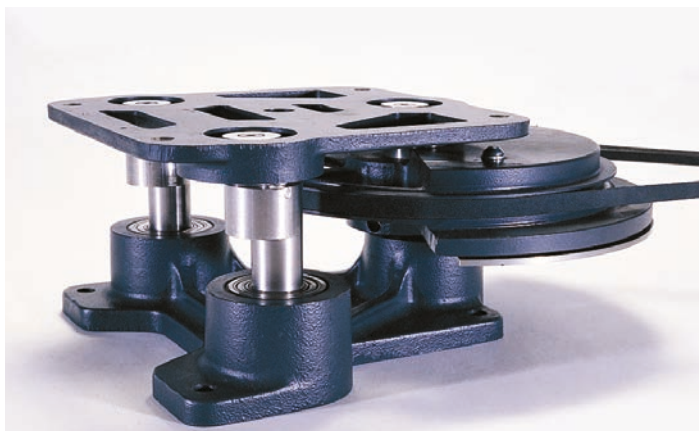
Eppendorf introduces the CellXpert CS220 – the first CO<sub>2</sub> incubator shaker that applies the rigorous sterilization standards of CO<sub>2</sub> incubator-based cell cultivation, including an integrated 180 °C sterilization routine and a seamless, stainless-steel chamber.



# Built to Perform & Last

## Driving growth and excellence

Since its introduction more than 50 years ago, the cast iron triple-eccentric drive from Eppendorf has been the gold-standard in shaker drive technology. It is the foundation upon which Eppendorf shakers and the trust of the scientific community are built. Eppendorf has now designed the next-generation shaker drive to offer you optimal performance, flexibility, and peace-of-mind. We proudly unveil the patented<sup>1</sup>, Eppendorf X-Drive.



Eppendorf triple-eccentric drive, available in other Innova models



Eppendorf X-Drive, available in Innova S44i CellXpert CS220 models

## Built to last

Heavy-duty construction of the triple-eccentric drive gives you confidence that our shakers will perform to your specifications, even when fully loaded and operating at top speed.

- > Components are fabricated to exacting specifications ensuring stable, vibration-free operation
- > Drive mechanisms properly sized to each shaker, and specifically designed to support high-speed applications and heavy workloads, around-the-clock
- > Made of the highest-quality materials, with superior design and precision fabrication, Innova shakers with triple-eccentric drives have provided scientists with decades of worry-free operation and will continue to do so for many decades to come.

## Shake with ease

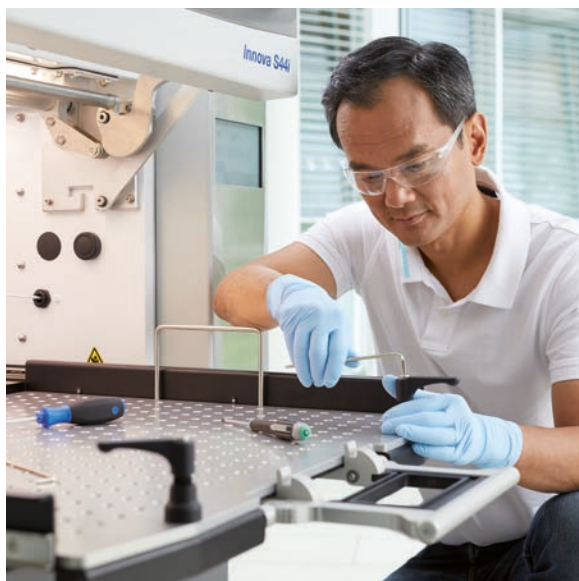
The Eppendorf X-Drive is precisely engineered with five-eccentric shafts to balance even heavy loads while providing consistent and smooth shaking.

- > The robust and industrial construction of the drive is designed for around-the-clock operation.
- > Intelligent counterbalance technology of the Eppendorf X-Drive ensures vibration-free shaking even with uneven loads
- > Available in orbit sizes of 2.5 or 5.1 cm (1 or 2 in)



> For more information go to [www.eppendorf.com/shakers](http://www.eppendorf.com/shakers)

# Peace of Mind – Your Service Options



We accompany you every step of the way – from the installation and maintenance of your lab instrument or software to the support of your quality and regulatory conditions.

Biological shakers are required to be in continuous use for years. Small and short-term variations in shaker operation can influence culturing outcomes, with negative effects on yields and/or cell expression. Ensure consistent, reliable shaker performance with our shaker services.

## Our Service Agreements – Your Advantages

With our basket of Service Agreement solutions, we take the load off your shoulders by simplifying your ordering and budgeting process for various services over the full lifetime of your instruments.

Your costs become reduced and predictable, thereby assuring continuous productivity and a long service life. In addition, our agreements include repair costs – fully or partially – and discounts on other services.

## Eppendorf Service Agreements



### Services Agreement

Full preventive maintenance

Priority support\*<sup>1</sup>

Spare parts, labor, travel on repairs

Discount on additional services (e.g. IQ/OQ)

### AdvancedCare

For assured instrument reliability  
an uptime

1/year



20% discount

10%

### PremiumCare

For assured instrument reliability,  
uptime and financial plannability

1/year



included

10%

\*<sup>1</sup> Subject to local business conditions, and based on a »best effort« practise. For more information please contact your local service organization.

## Be prepared for your internal and external audits with our GxP compliant documentation

Are you working in a regulated environment? We now offer specifically created and revised Installation Qualification and Operational Qualification services including GxP compliant documentation.

## Qualification Services



### Installation Qualification & Operational Qualification services

Check of delivery status, and installation environment

Installation incl. configuration and functional checks

Detailed IQ report

Test of alert functions

Verification of instrument parameters (e.g. temperature, speed)

Detailed OQ report and handling of deviation list

Signed approval by customer and service technician

### IQ/OQ GxP

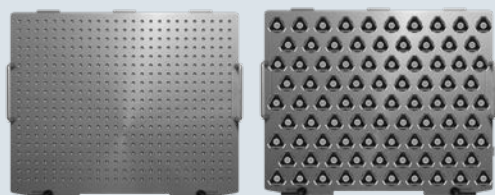


### OQ GxP

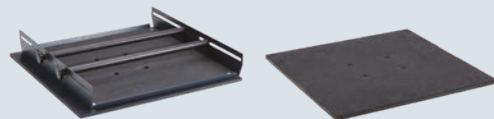


# Ready for Your Application

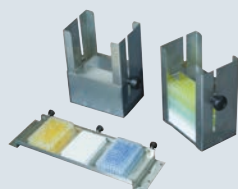
Eppendorf offers a wide range of accessories for lab shakers to provide full flexibility for your processes



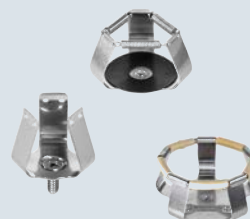
Different lab shaker platforms are available to provide you with the right balance between vessel capacity, vessel type flexibility, handling speed, and regarding necessary shaking speeds. **Universal platforms** (left) are the most versatile platform solution as they come with a screw hole pattern, that allows you to combine virtually any combination of Eppendorf shaker accessories, for example different sized clamps, test tube racks and microplate racks. **Dedicated platforms** (right) come complete with clamps of one size pre-installed. They hold a greater number of clamps than the universal platforms, but do not offer the versatility to mix different vessel formats.



**Utility carrier** (left) and **utility tray** (right) are stand-alone platforms that do not require a universal platform. The utility carrier holds racks and vessels between adjustable cushioned cross bars. The utility tray comes with a non-skid rubber surface for low-speed applications that do not require fixation.



**Microplate racks** for universal platforms are available in two formats: for stacks (three deep-well plates or nine standard plates) or single layers for aeration (five plates). In addition, universal lab shaker platforms are also compatible with microplate screening systems like the Duetz System.



**Flask clamps** for lab shakers are mostly made of a single piece stainless-steel construction (not spot welded or riveted) for added strength and safety. All flask clamps come with coiled wire springs for added safety and stability at higher shaking speeds.



**Sticky pads** are adhesive mats and a clamp alternative for flat bottom vessels and low-speed applications (max. 200/250 rpm at 2/1 in (50/25 mm) orbit). They are re-usable and can be re-positioned simply by peeling it from the surface. Sticky pads require an anodized aluminum platform and are thus directly compatible with universal platforms of New Brunswick S41i, Innova S44i, and CellXpert CS220. All other shakers require a sticky pad adapter kit for universal platforms (Order no. M1250-9504) or a dedicated sticky pad platform (see table at individual shakers).



**Test tube racks** for universal platforms come in 18 formats for 8–30 mm tube diameter. The side knobs let you quickly adjust the shaking angle or release the insert rack from the holder, for easy transport to the bench. Racks come with a tube height-support, are made of stainless steel. Plastic inserts help to retain tubes and prevent them from spinning in the rack.



> Find the right accessory for your vessel format and application

Shaker Accessory Guide

[www.eppendorf.com/shaker-accessory-guide](http://www.eppendorf.com/shaker-accessory-guide)



# Smart Cultivation with VisioNize®



Stay connected to critical information about your shakers, even when you are not in the lab, with remote monitoring and notifications enabled by VisioNize. Pre-installed, customer-programmed tasks and alerts can be easily set directly at the VisioNize touch interface.

Establish specific cell-conserving user habits in your lab and relieve the burdens of daily routines.

## Easy and Comprehensive Documentation

The demands in cell culture labs have increased and became more complex. This is especially true for process standardization and documentation, e.g. to increase reproducibility of results and prove constant growth conditions in audits and publications. Monitor your biological shakers from anywhere with VisioNize Lab Suite and track device parameters, such as temperature, speed as well as remaining program runtime. You can track back with only one click what happened during cultivation with VisioNize Lab Suite.

## Standard and Customized Tasks

Pre-installed and customer-programmed tasks can be set with the VisioNize touch interface to remind you of regular tasks, e.g. cleaning, refilling the water reservoir, or performance checks with external sensors.

## Be Confident About Your Growth in Motion

Define critical values e.g. door-opening time or orbital speed that trigger a highly visible on screen and audible alarm. In addition, you can receive SMS or e-mail notifications by VisioNize Lab Suite. This way, you can ensure a stable environment for your cultured cells and establish cell-conserving user habits in your lab.



Learn more at:  
[www.eppendorf.com/VisioNize](http://www.eppendorf.com/VisioNize)

# Incubator Shakers



<b>Model</b>	<b>CellXpert® CS220</b>	<b>Innova® S44i</b>	<b>Innova® 44/44R</b>
<b>Positioning</b>	High-capacity, stackable (2–3x) CO <sub>2</sub> shaker with 180 °C sterilization routine	High-capacity, stackable (2–3x) shaker ready for high yield plasmid/microbial protein expression protocols	Stackable (2-3x) incubator shaker with high vessel capacity
<b>Capacity</b>	extra large	extra large	large
<b>Platform size (cm/in)</b>	93 x 51 cm (37 x 20 in)	76 x 62 cm (30 x 24 in)	76 x 46 cm (30 x 18 in)
<b>Max. vessel volume (without static shelf, depending on flask format)</b>	5 L	5 L	5 L
<b>Application-related features</b>			
<b>Bacteria, Yeast, Fungi, Insect cells</b>	■ Insect culture, depending on application	■	■
<b>Algae/plant cells</b>	–	■ (LED-light, tunable intensity to simulate day/night-cycles)	■ (fluorescent bulbs, no intensity modulation)
<b>Mammalian cells (CO<sub>2</sub> control &amp; humidification)</b>	■	–	–
<b>Parallel static cultivation</b>	–	■ (static shelf optional)	–
<b>Orbit</b>	2.5/5.1 cm (1/2 in)	2.5/5.1 cm (1/2 in)	2.5/5.1 cm (1/2 in)
<b>Temperature range</b>	Ambient +8 °C to 60 °C	Incubated: 10 °C above ambient to 80 °C; Refrigerated: 20 °C below ambient (min. 4 °C) to 80 °C.	Incubated: 10 °C above ambient to 80 °C; Refrigerated: 20 °C below ambient (min. 4 °C) to 80 °C (max. 70 °C with PS-light, 60 °C with rH-monitoring).
<b>Speed range</b>	2.54 cm (1 in) orbit: 20 – 300 rpm 5.1 cm (2 in) orbit: 20 – 250 rpm	2.5 cm orbit: 20 – 400 rpm 5.1 cm orbit: 20 – 300 rpm	25 – 400 rpm with 2.5 cm orbit; 25 – 300 rpm with 5.1 cm orbit or 2 stacked units; 25 – 250 rpm with 3 stacked units
<b>Ergonomics, programming, VisioNize connectivity</b>			
<b>Door opening</b>	glide up	glide up	glide up
<b>Platform type</b>	slide out	slide out	slide out
<b>Programming steps / storable programs</b>	unlimited/unlimited	unlimited/unlimited	15/4
<b>VisioNize connectivity</b>	VisioNize touch enabled	VisioNize touch enabled	VisioNize box enabled
<b>Additional information</b>			
<b>Drive mechanism</b>	Eppendorf X-Drive	Eppendorf X-Drive	triple-eccentric counterbalanced drive
<b>Dimensions (W x D x H)</b>	131.8 x 80.5 x 66.1 cm / 51.9 x 31.7 x 26.0 in	118.2 x 86.9 x 63 cm / 46.5 x 34.2 x 24.8 in	134.9 x 84.3 x 66 cm / 53.1 x 33.2 x 26 in
<b>Device weight without accessories (non-refrigerated / refrigerated)</b>	237 kg (522.5 lbs)	181 kg (400 lbs) / 188 kg (415 lbs)	238 kg (525 lbs) / 259 kg (570 lbs)



## Innova® 42/42R

Space-saving, stackable (2x) incubator shaker with high versatility regarding lab positioning and options

medium

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46 × 46 cm (18 × 18 in)

6 L



## Innova® 40/40R

Benchtop orbital shaker with compact design and capacity for flasks with a volume up to 3 L

medium

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46 × 46 cm (18 × 18 in)

3 L



## New Brunswick S41i

Medium size, versatile and 2x stackable  
CO<sub>2</sub> shaker, ideal for growing labs








medium

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36 × 61 cm (14 × 24 in)

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4 L

		
		Insect culture, depending on application
 (fluorescent bulbs, no intensity modulation)	–	–
–	–	
 (one static shelf included, culture drawer for Agar plates optional)	–	 (one static shelf included, second shelf optional)
1.9/2.5 cm (0.75/1 in)	1.9/2.5 cm (0.75/1 in)	2.5 cm (1 in)
Incubated: 10 °C above ambient to 80 °C; Refrigerated: 20 °C below ambient (min. 4 °C) to 80 °C (max. 70 °C with PS-light, 60 °C with rH-monitoring).	Incubated: 10 °C above ambient to 80 °C; Refrigerated: 15 °C below ambient (min. 4 °C) to 80 °C.	Ambient +4 °C to 50 °C
25 – 400 rpm; 25 – 300 rpm when using flasks > 500 mL in stacked devices	50 – 400 rpm	25 – 400 rpm (25 – 250 rpm if stacked)
opening to front	top opening hood	opening to front
fixed	fixed	fixed
15/4	15/4	–
VisioNize box enabled	VisioNize box enabled	VisioNize box enabled
triple-eccentric counterbalanced drive	triple-eccentric counterbalanced drive	triple-eccentric counterbalanced drive
63.5 × 74.5 × 81.8 cm / 25 × 29.3 × 32.8 in	55.9 × 76.2 × 61 cm / 22 × 30 × 24 in	87.5 × 73 × 85 cm / 34.4 × 28.7 × 33.5 in
98 kg (217 lbs) / 121 kg (266 lbs)	60 kg (133 lbs) / 79 kg (175 lbs)	154 kg (340 lbs)

# Universal Platforms for Incubated Shakers

Universal Platforms and Clamps for Incubated Shakers

	Innova® S44i	Innova® 44/44R	Innova® 42/42R	Innova® 40/40R
Order no. universal platform	S44i040001	M1282-9904	M1250-9902	M1250-9902
	Clamps	Clamps	Clamps	Clamps
10 mL Erlenmeyer flasks	238	187	109	109
25 mL Erlenmeyer flasks	238	96	64	64
50 mL Erlenmeyer flasks	130	96	45	45
125 mL Erlenmeyer flasks	81	39	24	24
250 mL Erlenmeyer flasks	48	31	19	19
500 mL Erlenmeyer flasks	36	24	14	14
1 L Erlenmeyer flasks	20	14	8	8
2 L Erlenmeyer flasks*	14 <sup>1)</sup>	11	6	6
3 L Erlenmeyer flasks	9 <sup>1)</sup>	6	4	4
4 L Erlenmeyer flasks	8 <sup>1)</sup>	6	4	
5 L Erlenmeyer flasks	6 <sup>1)</sup>	6 <sup>2)</sup>	4 <sup>3)</sup>	
6 L Erlenmeyer flasks			2 <sup>3)</sup>	
2 L Lauber Thomson*	13	11	6	6
2.8 L Fernbach flasks	8	6	4	4
500 mL media bottle flasks	30	24	14	14
1 L media bottle flasks	20	13	8	8
Microplate rack, single layer	4	4	2	2
Microplate rack, stack	20	16	8	8
Test tube rack, small, 30 × 8 × 12.9 cm	12	9	5	5
Test tube rack, medium, 36 × 8 × 12.9 cm	10	8	4	4
Test tube rack, large, 45 × 8 × 12.9 cm	7	6	4	4
Platform size (cm/in)	76 × 62 cm (30 × 24 in)	76 × 46 cm (30 × 18 in)	46 × 46 cm (18 × 18 in)	46 × 46 cm (18 × 18 in)

\* Note to 2 L clamps: ACE-2000S fits 2 L wide neck Erlenmeyer flasks (DIN-ISO 24450), max. bottom diameter ~158 mm. For 2 L narrow neck Erlenmeyer (DIN-ISO 1773), Thomson, or Corning flasks with max. bottom diameter of 166 mm refer to clamp M1190-9005 (Clamp, for 2 L Thomson flasks).

<sup>1)</sup> S44i: Maximum flask capacity limited to 1 L with installed shelf (removable), distance platform to ceiling ~43.7 cm, platform to shelf ~27 cm, platform to photosynthetic light bank ~40.6 cm. <sup>2)</sup> Innova43/44: Maximum flask size limited to 4 L with installed photosynthetic light bank. I44: Distance platform to ceiling ~46 cm, platform to photosynthetic light bank ~40 cm. I43: Distance platform to ceiling ~48 cm.

<sup>3)</sup> Innova 42: Maximum flask size limited to 4 L with installed drawer, shelf or photosynthetic light bank (shelf and drawer removable, shelf adjustable in height). Distance platform to ceiling: ~47.7 cm, platform to drawer ~35.3 cm, platform to shelf (in position 5 from top) ~36.8 cm. <sup>4)</sup> New Brunswick S41i: Max. flask size with shelf in lower position limited to 250 mL Erlenmeyer or 500 mL Thomson Optimum Growth. Max. flask size with shelf in upper position limited to 1 L Erlenmeyer or 2.8 L Thomson Optimum Growth. Max. flask size without shelves 3 L and 5 L Corning and 5 L Thomson Optimum Growth. No fit of standard 5 L Erlenmeyer flasks (nn/wn). Platform to ceiling: ~40 cm, platform to lower shelf: ~18.5 cm, platform to upper shelf ~27.5 cm. <sup>5)</sup> CellXpert CS220 specialized clamps are available (180 °C resistant, metric screws M4x7). <sup>6)</sup> Capacity data not available at time of publication. Please contact your Eppendorf representative for more information.

Dedicated Platforms and Clamps for Incubated Shakers

	Innova® S44i		Innova® 44/44R		Innova® 43/43R	
	Clamps	Order no.	Clamps	Order no.	Clamps	Order no.
125 mL Erlenmeyer flasks	86	S44i040002	60	M1282-9905	60	M1191-9909
250 mL Erlenmeyer flasks	53	S44i040003	40	M1282-9906	40	M1191-9910
500 mL Erlenmeyer flasks	39	S44i040004	24	M1282-9907	24	M1191-9911
1 L Erlenmeyer flasks	23	S44i040005	15	M1282-9908	15	AG-1
2 L Erlenmeyer flasks*	15	S44i040006	12	M1282-9909	12	AG-2
2 L Lauber Thomson*	15	S44i040010				
Sticky pad platform**	Not required <sup>1)</sup>		M1282-9913		M1250-9904	
Platform size (cm/in)	76 × 62 cm (30 × 24 in)		76 × 46 cm (30 × 18 in)		76 × 46 cm (30 × 18 in)	

\* Note to 2 L clamps: For 2 L wide neck Erlenmeyer flasks (DIN-ISO 24450), max. bottom diameter ~158 mm refer to 2 L Erlenmeyer flask platforms. For 2 L narrow neck Erlenmeyer (DIN-ISO 1773), Thomson, or Corning flasks with max. bottom diameter of 166 mm refer to 2 L Lauber Thomson platforms.

\*\* Sticky pads to be ordered separately see page 26

<sup>1)</sup> The universal platform of the Innova S44i and the New Brunswick S41 are designed to be compatible with sticky pads directly.



# Lab Shaker Clamps

New Brunswick S41i M1334-9920		Clamps	Clamps	CellXpert® CS220 6740 070 012		Clamps for CellXpert® CS220
Clamps	Dimensions (W × H)	Order no.		Clamps	Order no.	
110	31 × 26 mm	ACE-10S				
60	23 × 22 mm	M1190-9004				
60	51 × 26 mm	M1190-9000				
23	68 × 37 mm	M1190-9001		60 <sup>5)</sup>	6740070	
18	91 × 47 mm	M1190-9002		50 <sup>5)</sup>	6740070	
15 <sup>4)</sup>	102 × 48 mm	M1190-9003		30 <sup>5)</sup>	6740070	
10 <sup>4)</sup>	130 × 64 mm	ACE-1000S		20 <sup>5)</sup>	6740070	
6 <sup>4)</sup>	158 × 72 mm	ACE-2000S		14 <sup>5)</sup>	6740070	
3 <sup>4)</sup>	189 × 112 mm	ACE-3000S		6 <sup>5)</sup>	6740070	
3 <sup>4)</sup>	210 × 99 mm	ACE-4000S				
3 <sup>4)</sup>	222 × 145 mm	ACE-5000S		6 <sup>5)</sup>	6740070	
	244 × 100 mm	ACE-6000S				
6 <sup>4)</sup>	165 × 112 mm	M1190-9005		6 <sup>1)</sup>		
3 <sup>4)</sup>	203 × 73 mm	ACFE-2800S		6 <sup>1)</sup>	6740070	
15 <sup>4)</sup>	92 × 108 mm	ACSB-500S		28	ACSB-500S	
8 <sup>4)</sup>	108 × 150 mm	ACSB-1000S		6 <sup>1)</sup>	ACSB-1000S	
		TTR-221		4	TTR-221	
		M1289-0700		19	M1289-0700	
6		see page 26		15	see page 26	
3		see page 26		11	see page 26	
3		see page 26		10	see page 26	
46 × 46 cm (18 × 18 in)				51.4 × 93 cm (20.2 × 36.6 in)		

Innova® 42/42R		Innova® 40/40R		New Brunswick S41i		Clamps
Clamps	Order no.	Clamps	Order no.	Clamps	Order no.	Dimensions (W × H)
34	M1194-9904	34	M1194-9904	32	M1334-9921	68 × 37 mm
25	M1194-9905	25	M1194-9905	24	M1334-9922	91 × 47 mm
16	M1194-9906	16	M1194-9906	15	M1334-9923	102 × 48 mm
9	M1194-9907	9	M1194-9907	11	M1334-9924	130 × 64 mm
5	M1194-9908	5	M1194-9908	6	M1334-9925	158 × 72 mm
						165 × 112 mm
	M1250-9903		M1250-9903		Not required <sup>1)</sup>	
46 × 46 cm (18 × 18 in)		46 × 46 cm (18 × 18 in)		36 × 61 cm (14 × 24 in)		

Find the right accessory for your vessel format and application, along with detailed specifications and information!

Eppendorf Shaker Accessory Guide  
[www.eppendorf.com/shaker-accessory-guide](http://www.eppendorf.com/shaker-accessory-guide)



# CellXpert® CS220

**Up to 40% higher flask capacity:** 8x 5L Corning®/Thomson Optimum Growth®, 25x 1L, 42x 500 mL, 102x 125 mL Erlenmeyer flasks (on sticky pad)

**180 °C sterilization routine integrated:** Including guided wizard and downloadable performance protocol; no locally restricted UV-airflow/surface-disinfection



**Stainless steel chamber:** Hygienic design according to EN ISO 14159:2008 standard with few internal parts and no drive wheel, crevices, cover sheets, cables, or heating fins inside

**Evaporation protection:** Active bidirectional, non-condensing humidity control up to 85 % relative humidity

**Eppendorf X-drive:** Proven and tested shaker drive with four weight-supporting shafts for 24/7 vibration-free shaking over years

## Large, stackable CO<sub>2</sub> incubator shaker for high throughput

Do you want to accelerate your research while minimizing the risk of costly delays for your mammalian suspension cultures? Discover the only CO<sub>2</sub> incubator shaker in the market with an integrated 180 °C sterilization and an outstanding capacity-to-footprint ratio. Learn more about the cost- and time-saving features that will help your team remain focused on the tasks critical to your success.



**Nowhere for contaminants to hide:** Only two components (platform and sub-platform) must be removed for full access to chamber walls, all within 90 secs – no cover sheets, that hide more



**Don't waste an inch of lab space** for lab equipment that isn't fully designed for highest throughput per footprint – with the highest platform size vs. footprint ratio in the CO<sub>2</sub> incubator shaker market.

## Ordering information

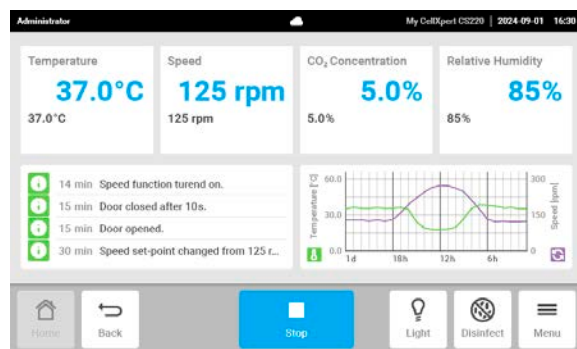
Description	Order no.
<b>CellXpert® CS220, 224 L, CO<sub>2</sub> incubator shaker, , non-refrigerated, stackable up to 3-fold</b>	
2.5 cm (1 in ) or 5.1 cm (2 in) orbit, Please order separately: platform, clamps, sticky pads, storage base or feet, water supply package ; Optional: 1-2 stacking kits and water tank holder	<a href="#">see online*</a>
<b>Universal platform</b> , resistant to 180 °C sterilization, 93.0 x 51.3 cm (36.6 x 20.2 in), anodized aluminum, compatible with sticky pads: 8 necessary to cover platform (sold separately, order no: M1250-9700, no cutting required) , includes 25 x screws for CS220 clamps and 25x screws for microplate/test tube rack	6740 070 012
<b>Lab shaker clamp</b> , for 100 – 125 mL Erlenmeyer flasks (standard, narrow/wide neck), 125 mL Corning® / Thomson® / Nalgene® , 180 °C resistant, autoclavable, stainless steel, incl. M4x7 screws	6740 070 152
<b>Lab shaker clamp</b> , for 200 – 250 mL Erlenmeyer flasks (standard, narrow/wide neck), 250 mL Corning® / Thomson® / Nalgene®, 180 °C resistant, autoclavable, stainless steel, incl. M4x7 screws	6740 070 160
<b>Lab shaker clamp</b> , for 500 mL flasks: Erlenmeyer flasks (standard, narrow/wide neck) / Corning® / Thomson® / Nalgene® , 180 °C resistant, autoclavable, stainless steel, incl. M4x7 screws	6740 070 179
<b>Lab shaker clamp</b> , for 1 L flasks: Erlenmeyer (standard, narrow/wide neck) / Corning® / Thomson® / Nalgene®, 180 °C resistant, autoclavable, stainless steel, incl. M4x7 screws	6740 070 187
<b>Lab shaker clamp</b> , for 2 L flasks: Erlenmeyer (standard, narrow neck) / Corning® / Thomson® / Nalgene® , 180 °C resistant, autoclavable, stainless steel, incl. M4x7 screws	6740 070 195
<b>Lab shaker clamp</b> , for 2.8 L Fernbach flasks e.g., 2.8 L Nalgene®, 180 °C resistant, autoclavable, stainless steel, incl. M4x7 screws	6740 070 209
<b>Lab shaker clamp</b> , for 5 L Erlenmeyer (standard, narrow neck), 3/5 L Corning®, 5 L Thomson®, 180 °C resistant, autoclavable, stainless steel, incl. M4x7 screws	6740 070 225
<b>Storage base</b> , 65 cm (25.6 in) height, for single device only, adjustable feet for levelling, allows easy cleaning below device and access with standard forklift to move devices, Eppendorf service required for installation	6740 070 055
<b>High feet, 9 cm (3.5 in)</b> , 1 fixed and 3 height-adjustable, for single device or 2-3x stack, for easy cleaning below device and access with standard forklift to move devices, 9 cm/3.5 in minimal feet height, Eppendorf service required for installation	6740 070 039
<b>Low feet, 2 cm (0.8 in)</b> , 1 fixed and 3 height-adjustable, for easiest access to top device in 3x stack , Eppendorf service required for installation	6740 070 020
<b>Stacking kit</b> , 2x stack: 1 kit, 3x stack: 2 kits necessary, Eppendorf service required for installation	6740 070 047
<b>Water supply package</b> , 1 package suitable for single device or 2x/3x stack, Includes 1 water tank 5L (autoclavable), 1 tank venting filter (0.2 µm pore size), 1 adaptor for tubing connection, 3 water tubings, 1 tubing weight, 3 water filters (35 µm pore size); order water tank holder separately	6740 070 080
<b>Water tank holder</b> , For water tank 5L (674070.071)	6740 070 098
<b>Water tank &amp; adaptors</b> , Includes 1 water tank 5L (autoclavable), 1 tank venting filter (0.2 µm pore size), 1 tubing weight, 1 adaptor for tubing connections	6740 070 071
<b>Water tubing package</b> , Includes 1 water tubing, 1 water filter (35 µm pore size)	6740 070 063
<b>VisioNize® Lab Suite (VisioNize® box required)</b> , remote parameter and status monitoring, alert notifications via email or SMS, response-based alert escalation + more. <b>Check availability in your country</b> – sign up and connect 3 devices for free.	<a href="#">Sign up online</a>

\*To find the correct order number for your country, please check [www.eppendorf.link/cellxpert-cs220](http://www.eppendorf.link/cellxpert-cs220) or contact your local sales representative.

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**Convenience by design:**  
Optional storage base for a single device



**Full control and fast root-cause analysis:** See all setpoints and current parameters at a glance; direct visual overview of logged data/events including door openings, alerts, and user management



**Glide-up door and slide-out platform:**  
Saves space and ensures fast and easy experiment setup, cleaning, and service – even at the back of the chamber.

# Innova® S44i

## Tight temperature, speed and balance control:

Speed increment control of  $\pm 0.1$  rpm and accuracy of  $\pm 0.5$  rpm, temperature accuracy  $\pm 0.1$  °C (at 37 °C), automatic imbalance detection and semi-automatic counterweight adjustment to optimize run

## Stackable up to three units:

Making space for increased capacity

## Compatible with complementary systems:

For example, microplate-screening systems like the Duetz-system or in-flask monitoring systems like CGQ (Aquila Biolabs) or SFR Shake Flask Reader (PreSens)



## True control with touch interface:

All setpoints and current values are visible at a glance; restrict access to change settings with the user management

## Programming flexibility:

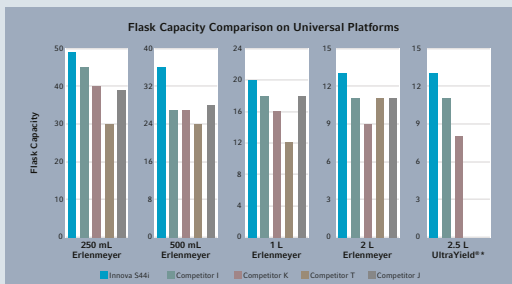
Multistep or cyclic programming of temperature or speed rampings; unlimited program storage; programmable LED intensity (optional)

## Easy documentation and tracking:

Data and event log (tracking of alerts, temperature, rpm, door openings etc.) accessible via USB/user interface or VisioNize Lab Suite

## Shake more, shake faster, shake easier

Are you looking for a stackable incubator shaker for particularly high protein expression or plasmid yields in bacteria or yeast to quickly reach your ambitious targets? The latest and most advanced incubator shaker from Eppendorf, the Innova S44i, can fit up to twice as many flasks as other shakers in the market and is ready to reliably support current high-yield expression protocols at high speeds, 24/7.



**Shake more:** The platform, drive, and chamber of the Innova S44i are optimized for high vessel capacity and high liquid load. For example, you can fit up to 13/15x 2.5L Thomson Ultra Yield® flasks or 36/39x 500 mL Erlenmeyer flasks on a universal/dedicated platform.



**Everything at a glance:** All setpoints and current values are visible, performance data can be downloaded easily via a front USB-port.



## Ordering information

Description	Order no.
<b>Innova® S44i</b> , non-refrigerated, stackable up to 3-fold, orbit 2.5 cm (1 in)	<a href="#">see online*</a>
<b>Innova® S44i</b> , refrigerated, stackable up to 3-fold, orbit 2.5 cm (1 in)	<a href="#">see online*</a>
<b>Innova® S44i</b> , refrigerated, stackable up to 3-fold, orbit 2.5 cm (1 in), photosynthetic LED light bank	<a href="#">see online*</a>
<b>Innova® S44i</b> , non-refrigerated, stackable up to 3-fold, orbit 5.1 cm (2 in)	<a href="#">see online*</a>
<b>Innova® S44i</b> , refrigerated, stackable up to 3-fold, orbit 5.1 cm (2 in)	<a href="#">see online*</a>
<b>Innova® S44i</b> , refrigerated, stackable up to 3-fold, orbit 5.1 cm (2 in), photosynthetic LED light bank	<a href="#">see online*</a>
<b>Positioning base</b> , 10.16 cm (4 in), Innova® S44i	S44I041001
<b>Positioning base</b> , 30.48 cm (12 in), Innova® S44i	S44I041002
<b>Stacking kit</b> , for double stack of Innova® S44i	S44I041005
<b>Stacking kit</b> , for Innova® S44i to Innova® 44/44R	S44I041006
<b>Stacking kit</b> , for triple stack Innova® S44i	S44I041003
<b>Static incubation shelf</b> , Innova® S44i	S44I042001
<b>Darkening window shade</b> , removable, Innova® S44i	S44I042002
<b>Universal platform for Innova® S44i</b> , 76 × 62 cm (30 × 24 in), compatible with sticky pads: 9 necessary to cover platform (sold separately, order no: M1250-9700, cutting required), anodized aluminum	S44I040001
<b>125 mL Erlenmeyer flask dedicated platform</b> , 86 clamps	S44I040002
<b>250 mL Erlenmeyer flask dedicated platform</b> , 53 clamps	S44I040003
<b>500 mL Erlenmeyer flask dedicated platform</b> , 39 clamps	S44I040004
<b>2 L Lauber Thomson flask dedicated platform</b> , 15 clamps, aluminum, for 2 L narrow neck Erlenmeyer, Thomson, or Corning flasks (DIN-ISO 1773) bottom diameter ~166 mm	S44I040010
<b>1 L Erlenmeyer flask dedicated platform</b> , 23 clamps	S44I040005
<b>2 L Erlenmeyer flask dedicated platform</b> , 15 clamps, aluminum, for 2 L wide neck Erlenmeyer flasks (DIN-ISO 24450), bottom diameter ~153 mm	S44I040006
<b>VisioNize® Lab Suite</b> , remote parameter and status monitoring, alarm notifications via email or SMS, response-based alarm escalation + more. <b>Check availability in your country</b> – sign up and connect 3 devices for free.	<a href="#">Sign up online</a>

\*To find the correct order number for your country, please check [www.ependorf.com/shakers](http://www.ependorf.com/shakers) or contact your local sales representative.

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**Built to perform and last – the patented Eppendorf X-Drive:** With its five eccentric mounting points for the shaker platform, the drive is precisely engineered to ensure long-lasting, repeatable performance with high loads over years. The four shafts in the corners and Balance Master Technology support precise vibration-free shaking on every point of the platform, including the periphery.



**Don't compromise:** Stack up to three devices without reducing orbit specific maximum shaking speed



**Easy door and platform handling:** The space-saving door provides easy service and access to samples. The slide-out platform can be operated with one hand.



**Easily update your lab:** Just stack your new Innova S44i on top of your existing Innova 44/44R incubator shaker. Expand your shaking capacity and application potential without expanding the footprint.

# Innova® 44/44R

## Tight temperature, speed and balance control:

Temperature accuracy and uniformity:  $\pm 0.1^\circ\text{C}$  and  $\pm 0.25^\circ\text{C}$ , alarm at  $\pm 0.5^\circ\text{C}$  deviation; speed control:  $\pm 0.1\text{ rpm}$  and alarm at  $\pm 5\text{ rpm}$  deviation; automatic imbalance detection

**No separate cooling unit necessary:** Every refrigerated device comes with an integrated cooling unit - for more safety and reduced space requirements

## Check your samples:

Large, double-pane, insulated viewing window and an internal light provide a clear view of the chamber contents



## Programming:

Continuous, timed, or multi-step programs with up to 15 steps, four programs storable

**Saves money:** No internal HEPA-filter that must be replaced annually to ensure sufficient airflow

**Less noise in the lab:** The heavy-duty Innova triple eccentric counterbalanced drive ensures quiet operation ( $< 65\text{ dB(A)}$ )

## Incubated, refrigerated and stackable up to three high

The Innova 44 and Innova 44R stackable incubator shakers both feature the Eppendorf triple-eccentric counterbalanced drive and are a time-proven enabler for many scientists around the world. These incubator shakers provide years of dependable operation. The cast iron support and counter balanced drive is specifically designed to enable high speed applications and heavy workloads. Innova 44/44R incubator shakers provide broad temperature capabilities and options for culturing a wide variety of organisms. The height clearance and platform size allows for multiple cultures in typical 5 L flasks.



## Grow more in the same footprint:

Innova 44 models are stackable up to three units for maximum space savings



**Easy door and platform handling:** The space-saving door glides up and out of your way for easy access to all samples and easy service.



## Flexibility for various vessel formats:

Various accessories are available including a sticky pad platform for low-speed shaking of flat bottom vessels.

## Ordering information

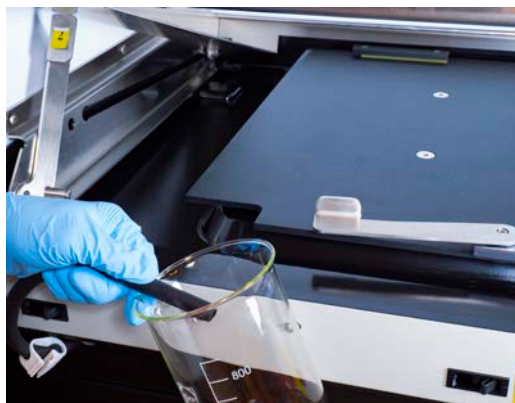
Description	Order no.
<b>New Brunswick Innova® 44</b>	
stackable up to 3-fold, orbit 2.5 cm (1 in)	<a href="#">see online*</a>
stackable up to 3-fold, orbit 5.1 cm (2 in)	<a href="#">see online*</a>
<b>New Brunswick Innova® 44R</b>	
refrigerated, stackable up to 3-fold, orbit 2.5 cm (1 in)	<a href="#">see online*</a>
refrigerated, stackable up to 3-fold, orbit 5.1 cm (2 in)	<a href="#">see online*</a>
<b>Stacking kit</b> , for stacking one additional 44 or 44R (3 × Innova® 44/44R can be placed in a single stack)	M1282-0500
<b>Remote alarm option</b> , for Innova® 44/44, Innova® 43/43, Innova® 42/42 or Innova® 40/40	M1320-8029
<b>Universal platform for Innova® 44/44R</b> , 76 × 46 cm (30 × 18 in), not interchangeable with other 76 × 46 cm platforms	M1282-9904
<b>Aluminum platform for Innova® 44/44R</b> , 76 × 46 cm (30 × 18 in), not interchangeable with other 76 × 46 cm platforms	
125 mL Erlenmeyer flask dedicated platform	M1282-9905
250 mL Erlenmeyer flask dedicated platform	M1282-9906
500 mL Erlenmeyer flask dedicated platform	M1282-9907
1 L Erlenmeyer flask dedicated platform	M1282-9908
<b>2 L Erlenmeyer flask dedicated platform for Innova® 44</b> , 76 × 46 cm (30 × 18 in), 12 clamps, aluminum, for 2 L wide neck Erlenmeyer flasks (DIN-ISO 24450), bottom diameter ~153 mm. For 2 L narrow neck Erlenmeyer, Thomson, or Corning flasks (DIN-ISO 1773) bottom diameter ~166 mm, please refer to universal platform and clamps M1190-9004	M1282-9909
<b>Sticky pad platform for Innova® 44(R)</b> , 76 × 46 cm (30 × 18 in), 7 sticky pads necessary to cover platform (sold separately, order no: M1250-9700, cutting required), anodized aluminum	M1282-9913
<b>Heavy duty 0.95 cm-thick aluminum plate platform for Innova® 44/44R only</b> , 76 × 46 cm (30 × 18 in), not interchangeable with other 76 × 46 cm platforms. Heavy-duty platforms are recommended for shaking full loads of flasks, 1 L and larger, containing more than 20 % volume or with baffles.	
Heavy duty universal platform	M1282-9915
<b>Positioning bases</b> , increases the height of the shaker for easier access, mandatory for stacked shakers	
for Innova® 44/44R, 10.2 cm, short	M1282-0600
for Innova® 44/44R, 30.5 cm, medium	M1282-0800
for Innova® 44/44R, 40.6 cm, tall	M1282-0700
<b>12-port gassing manifold</b> , for Innova® 44/44R - contact Eppendorf for installation options	M1282-0291
<b>Humidity monitor</b> , for Innova® 44/44R - contact Eppendorf for installation options	M1282-5011
<b>UV germicidal light</b> , for Innova® 44R only - contact Eppendorf for installation options	M1282-9921
<b>Photosynthetic light bank</b> , for Innova® 44/44R only - contact Eppendorf for installation options	M1282-9922
<b>VisioNize® Lab Suite (VisioNize® box required)</b> , remote parameter and status monitoring, alarm notifications via email or SMS, response-based alarm escalation + more. <b>Check availability in your country</b> – sign up and connect 3 devices for free.	<a href="#">Sign up online</a>

\*To find the correct order number for your country, please check [www.eppendorf.com/shakers](http://www.eppendorf.com/shakers) or contact your local sales representative.

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**Built to last:** The Innova triple eccentric counterbalanced drive with three weight-supporting shafts provides vibration and trouble-free operation with high loads for years. It is not to be confused with so called “triple counterbalanced” drives that usually come with only one weight support.



**Spill protected and easy to clean:** The Innova triple-eccentric drive is protected from spills by the unique drainable spill pan with rounded corners. The spill pan can also be used as water reservoir to reduced medium evaporation.



**Fast and easy service:** A service drawer ensures quick access to all electronic and heating/cooling components without the need to move or unstack the shaker.



# Innova® 42/42R

**Check your samples:** Large, double-pane, insulated viewing window and an internal light provide a clear view of the chamber contents

**Reliable 24/7 with high loads:** Proven and tested Innova triple eccentric counterbalanced drive (three weight-supporting shafts) provides vibration and trouble-free operation for years



**Ergonomical and safe interface handling:** Top mounted controls and display make bending down unnecessary, avoids accidental parameter changes, and can be reached easily even in a double stack

**Programming:** Continuous, timed, or multi-step programs with up to 15 steps, four programs storable

**High capacity in a small footprint:** for example, up to 4x 5 L or 2x 6 L Erlenmeyer flasks on universal platform (see capacities on next page and [page 13](#))

## Stackable, incubated, refrigerated shaker with stationary shelf

If versatility is what you need, look no further. The Innova 42 and Innova 42R incubator shaker is available with a large list of optional extras, allowing you to customise your shaker to your application. Furthermore, the Innova 42/42R can be stacked in pairs or tucked under a standard lab bench - either way, you'll save space. Static incubation is included via one static shelf – which can be used simultaneously whilst the Innova 42/42R is shaking other cultures. It's hard to believe that a typical 6 L flask can be used in this compact shaker.



**Lab position flexibility:** and small footprint  
The Innova 42/42R can be positioned on or under the bench – either way, you will save space with the small footprint (W x D: 63.5 x 74.5 cm / 25 x 29.3 in).



**Parallel static cultivation:** One removable, height adjustable shelf above the shaker platform is included, additional shelves are available.



**Sample desiccation and medium evaporation protection:** The optional culture drawer can be used to protect Agar plates from desiccation. A built-in spill pan and optional humidity monitoring.



## Ordering information

Description	Order no.
<b>New Brunswick Innova® 42</b>	
stackable up to 2-fold, orbit 1.9 cm (0.75 in)	<a href="#">see online*</a>
stackable up to 2-fold, orbit 2.5 cm (1 in)	<a href="#">see online*</a>
<b>New Brunswick Innova® 42R</b>	
refrigerated, stackable up to 2-fold, orbit 1.9 cm (0.75 in)	<a href="#">see online*</a>
refrigerated, stackable up to 2-fold, orbit 2.5 cm (1 in)	<a href="#">see online*</a>
<b>Stacking kit</b> , for stacking Innova® 42/42R units	M1335-0800
<b>Stacking kit</b> , for stacking Innova® 4200/4230 units on top of Innova® 42/42R shakers	M1335-0810
<b>Remote alarm option</b> , for Innova® 44/44, Innova® 43/43, Innova® 42/42 or Innova® 40/40	M1320-8029
<b>Additional perforated shelf and brackets</b> , for Innova® 42/42R	M1335-0080
<b>Platforms for Innova® 2100/40/40R/42/42R, Excella® E24/E24R</b> , 46 × 46 cm (18 × 18 in), phenolic resin (unless otherwise stated)	
Universal platform, aluminum	M1250-9902
125 mL Erlenmeyer flask dedicated platform	M1194-9904
250 mL Erlenmeyer flask dedicated platform	M1194-9905
500 mL Erlenmeyer flask dedicated platform	M1194-9906
1 L Erlenmeyer flask dedicated platform	M1194-9907
2 L Erlenmeyer flask dedicated platform, for 2 L wide neck Erlenmeyer flasks (DIN-ISO 24450), bottom diameter ~153 mm. For 2 L narrow neck Erlenmeyer, Thomson, or Corning flasks (DIN-ISO 1773) bottom diameter ~166 mm refer to universal platform and clamps M1190-9004.	M1194-9908
<b>Sticky pad platform for Innova® 40(R)/42(R)/2100, Excella® E24(R)</b> , 46 × 46 cm (18 × 18 in), 4 sticky pads necessary to cover platform (sold separately, order no: M1250-9700), anodized aluminum	M1250-9903
<b>Quick-change platform kit</b> , enables platform attachment without tools, for Innova® 2100/4000/4080/4230	M1192-9901
<b>Culture drawer</b> , (height adjustable) prevents plates from drying	M1335-0501
<b>Utility carrier</b> , holds racks and vessels between x2 rubber-cushioned cross bars, for Innova® 2100/Innova® 40 /Innova® 42/ Excella® 24	M1194-9909
<b>Rod kit</b> , for utility carrier (one additional rod), of Innova 40/42/2100 and Excella 24 lab shakers	M1194-9923
<b>Utility tray with non-skid rubber surface for Innova® 2100, 40, 42</b> , usable as a stand-alone – no other platform required	M1194-9910
<b>Drip pan</b> , to catch accidental spills, for universal platform M1250-9902	M1250-9906
<b>Photosynthetic light bank</b> , programmable, Innova® 42R only - contact Eppendorf for installation options	M1335-0300
<b>UV germicidal light</b> , programmable, Innova® 42R only - contact Eppendorf for installation options	M1335-0400
<b>Humidity monitor</b> , for Innova® 42/42R - contact Eppendorf for installation options	M1335-0500
<b>12-port gassing manifold</b> , for Innova® 42/42R - contact Eppendorf for installation options	M1335-0600
<b>VisioNize® Lab Suite (VisioNize® box required)</b> , remote parameter and status monitoring, alarm notifications via email or SMS, response-based alarm escalation + more. <b>Check availability in your country</b> – sign up and connect 3 devices for free.	<a href="#">Sign up online</a>

\*To find the correct order number for your country, please check [www.eppendorf.com/shakers](http://www.eppendorf.com/shakers) or contact your local sales representative.

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**Spill protected and easy to clean:** The Innova triple-eccentric drive is protected from spills by a covering spill diverter underneath the shaker platform (left). The spill diverter guides liquids to the drainable spill pan with rounded corners underneath (middle and right, tubing and connector not supplied). The built-in spill pan can also be used as water reservoir to reduce medium evaporation – humidity monitoring is optional.

# Innova® 40/40R

## Tight temperature and speed control:

Temperature accuracy and uniformity:  
 $\pm 0.1\text{ }^{\circ}\text{C}$  and  $\pm 0.25\text{ }^{\circ}\text{C}$   
(at  $37\text{ }^{\circ}\text{C}$ ), speed accuracy 1 rpm

**Easy to move on the bench:** 60 / 79g weight (incubated/refrigerated version)



## Check your samples:

Large, insulated viewing provides a clear view of the chamber contents

## Easy interface handling and programming:

The controls and display make it easy to view, set and program parameters - continuous, timed, or multi-step programs with up to 15 steps (four programs storable).

## Compact and convenient benchtop model for flasks up to 3 liters

The Innova 40 and Innova 40R incubator and refrigerated small-scale benchtop shakers are great for small scale projects, or for those looking to start small and grow. The samples are in clear view at all times and there are options for a drip pan. The user interface mirrors the benefits of the larger units and comes as standard with multi-parameter programmable steps. The drive unit is the proven and tested triple-eccentric counterbalanced drive – dependable as always. With this being the smallest benchtop incubator shaker we provide, this is the ideal starting point – with a view to grow.



**Reliable 24/7 with high loads:** The heavy-duty Innova triple eccentric counterbalanced drive (three weight-supporting shafts, solid state brushless DC motor) provides vibration and trouble-free operation for years.



**Flexibility for various vessel formats:** The Innova 40/40R accommodates flasks up to 3L. A sticky pad platform is available for low-speed shaking (200 – 250 rpm, depending on orbit) of flat bottom vessels.

## Ordering information

Description	Order no.
<b>New Brunswick Innova® 40</b>	
non-stackable, orbit 1.9 cm (0.75 in)	<a href="#">see online*</a>
non-stackable, orbit 2.5 cm (1 in)	<a href="#">see online*</a>
<b>New Brunswick Innova® 40R</b>	
refrigerated, non-stackable, orbit 1.9 cm (0.75 in)	<a href="#">see online*</a>
refrigerated, non-stackable, orbit 2.5 cm (1 in)	<a href="#">see online*</a>
<b>Remote alarm option</b> , for Innova® 44/44, Innova® 43/43, Innova® 42/42 or Innova® 40/40	M1320-8029
<b>Platforms for Innova® 2100/40/40R/42/42R, Excella® E24/E24R</b> , 46 × 46 cm (18 × 18 in), phenolic resin (unless otherwise stated)	
Universal platform, aluminum	M1250-9902
125 mL Erlenmeyer flask dedicated platform	M1194-9904
250 mL Erlenmeyer flask dedicated platform	M1194-9905
500 mL Erlenmeyer flask dedicated platform	M1194-9906
1 L Erlenmeyer flask dedicated platform	M1194-9907
2 L Erlenmeyer flask dedicated platform, for 2 L wide neck Erlenmeyer flasks (DIN-ISO 24450), bottom diameter ~153 mm. For 2 L narrow neck Erlenmeyer, Thomson, or Corning flasks (DIN-ISO 1773) bottom diameter ~166 mm refer to universal platform and clamps M1190-9004.	M1194-9908
<b>Sticky pad platform for Innova® 40(R)/42(R)/2100, Excella® E24(R)</b> , 46 × 46 cm (18 × 18 in), 4 sticky pads necessary to cover platform (sold separately, order no: M1250-9700), anodized aluminum	M1250-9903
<b>Quick-change platform kit</b> , enables platform attachment without tools, for Innova® 2100/4000/4080/4230	M1192-9901
<b>Utility carrier</b> , holds racks and vessels between x2 rubber-cushioned cross bars, for Innova® 2100/Innova® 40 /Innova® 42/ Excella® 24	M1194-9909
<b>Rod kit</b> , for utility carrier (one additional rod), of Innova 40/42/2100 and Excella 24 lab shakers	M1194-9923
<b>Utility tray with non-skid rubber surface for Innova® 2100, 40, 42</b> , usable as a stand-alone – no other platform required	M1194-9910
<b>Drip pan</b> , to catch accidental spills, for universal platform M1250-9902	M1250-9906
<b>VisioNize® Lab Suite (VisioNize® box required)</b> , remote parameter and status monitoring, alarm notifications via email or SMS, response-based alarm escalation + more. <b>Check availability in your country</b> – sign up and connect 3 devices for free.	<a href="#">Sign up online</a>

\*To find the correct order number for your country, please check [www.ependorf.com/shakers](http://www.ependorf.com/shakers) or contact your local sales representative.

Looking for *Service Agreements* including annual full preventive maintenance or IQ/OQ GxP qualification services? [See page 7](#)



**Optional drip pan:** Protects the shaker drive below by collecting spills from the overlying universal platform



**Optional utility carrier:** Stand-alone platform that quickly fixates vessels between adjustable cushioned rods (no universal platform required, extra rod available)

# New Brunswick S41i

## CO<sub>2</sub> incubator functionality:

The two optional shelves (one included) can also transform your device into a standard CO<sub>2</sub> incubator

## Reliable process planning:

Proven and tested Innova triple eccentric counterbalanced drive (three weight-supporting shafts) provides vibration and trouble-free operation for years



## Tight CO<sub>2</sub> specifications for reproducible results:

Range (control step size): 0.2–20 % (0.1 %), accuracy:  $\pm 0.2$  % (at 5 % CO<sub>2</sub>), homogeneity:  $\pm 0.1$  %

## Vessel format flexibility:

Accommodate a wide variety of vessel formats, like plates, tubes, and flasks up to 5L Corning®/Thomson Ultra Yield®

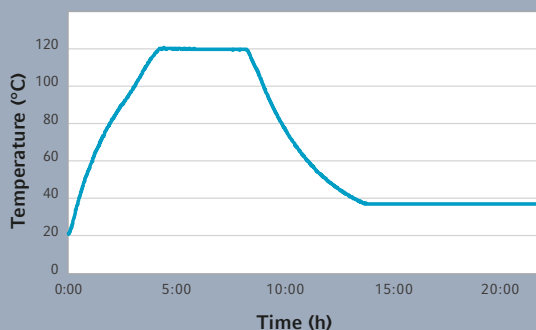
## Protect your light-sensitive expression media:

The double door system also helps protect the atmosphere inside and reduce CO<sub>2</sub> consumption

## A true alternative for open-air shakers inside traditional CO<sub>2</sub> incubators

Open-air shakers inside classic CO<sub>2</sub> incubators are often limited regarding flask capacity and vessel format, increase maintenance, may interfere with temperature control, and create contamination points that can put your results at risk. The New Brunswick S41i is a tested and proven alternative developed with these challenges in mind. It combines an integrated high-temperature disinfection and a seamless, stainless-steel chamber, with the robust, heavy-duty Innova triple-eccentric drive. The New Brunswick S41i is a reliable choice for growing labs with medium throughput and limited space or budget.

New Brunswick S41i High Temperature Disinfection (HTD) Cycle



**Peace of mind:** The integrated 120 °C disinfection is started by push of a button and ensures a fast and reliable set-up your device for the next project.



**Wiped quickly and reliably:** The deep-drawn chamber with rounded corners, the smooth, seamless surface the removable single-piece water trays make it easy to clean



**Ideal for limited lab space:** Compact design fits under the bench or stacked in a small footprint



## Ordering information

Description	Order no.
<b>New Brunswick S41i</b> , 170 L, CO <sub>2</sub> incubator shaker with inner shelf and touch screen control, 1 shelf included (optional additional shelf available), orbit 2.5 cm (1 in)	<a href="#">see online*</a>
<b>Interchangeable platform for New Brunswick S41i</b> , 36 × 61 cm (14 × 24 in)	
Universal platform	M1334-9920
125 mL Erlenmeyer flask dedicated platform, comes complete with 32 clamps installed	M1334-9921
250 mL Erlenmeyer flask dedicated platform, comes complete with 24 clamps installed	M1334-9922
500 mL Erlenmeyer flask dedicated platform, comes complete with 15 clamps installed	M1334-9923
1 L Erlenmeyer flask dedicated platform, comes complete with 11 clamps installed	M1334-9924
2 L Erlenmeyer flask dedicated platform, comes complete with 6 clamps installed	M1334-9925
<b>Stacking kit</b> , allows up to 2 each New Brunswick S41i shakers to be stacked one on top of the other	P0628-6502
<b>Additional shelf for New Brunswick S41i</b> , perforated, can easily be added to the New Brunswick S41i for static cell culture of adherent cells	P0628-6181
<b>Sticky pad adapter kit</b> , 2 anodized aluminum sheets, each 15.2 × 45.7 cm (6 × 18 in)	M1250-9504
<b>Sticky pad</b> , 20 × 20 cm (8 × 8 in)	M1250-9700
<b>VisioNize® Lab Suite (VisioNize® box required)</b> , remote parameter and status monitoring, alarm notifications via email or SMS, response-based alarm escalation + more. <b>Check availability in your country</b> – sign up and connect 3 devices for free.	<a href="#">Sign up online</a>

\*To find the correct order number for your country, please check [www.ependorf.com/shakers](http://www.ependorf.com/shakers) or contact your local sales representative.

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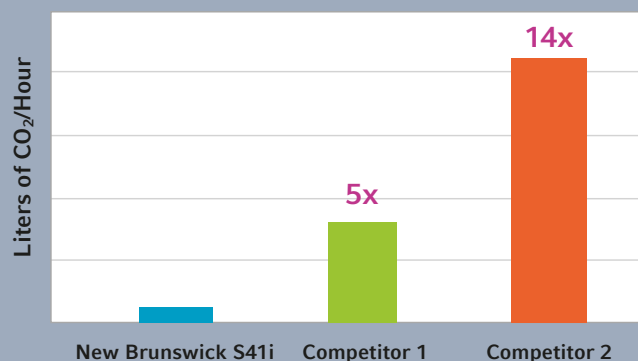


**Removable shelf:**  
enables shaking  
of suspension  
cell cultures  
while incubating  
adherent cells  
under the same  
conditions



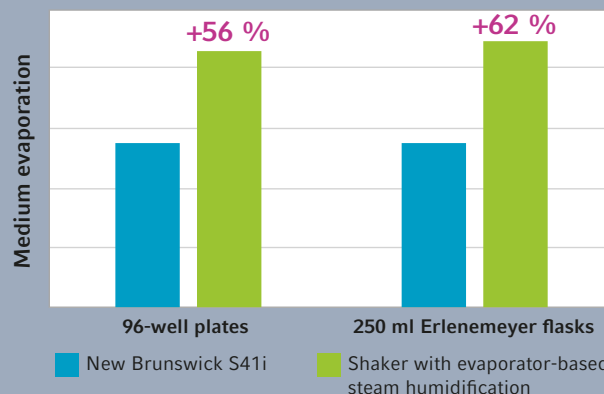
**See it in action –**  
CO<sub>2</sub> Resistant Shaker Alternative I  
New Brunswick S41i with Integrated  
High-Temperature Disinfection

### Comparison of CO<sub>2</sub> Consumption



**Save money, change gas cylinders less frequently, and support corporate sustainability goals:** Significantly reduced CO<sub>2</sub> consumption

### Medium Evaporation Over 48h



**Effective medium evaporation protection:** 95 % relative humidity at 37 °C is ensured by the 3D six-sided direct heating technology and the water tray-based humidification system applied in Eppendorf CO<sub>2</sub> incubators. Data shows the effectiveness compared to evaporator-based steam humidification

# Shaker Accessories

## Flask Clamp and Accessory Ordering Information

Description	Order no.
<b>Clamps</b>	
10 mL Erlenmeyer Clamp	ACE-10S
25 mL Erlenmeyer Clamp	M1190-9004
50 mL Erlenmeyer Clamp with spring retainer	M1190-9000
125 mL Erlenmeyer Clamp with spring retainer	M1190-9001
250 mL Erlenmeyer Clamp with spring retainer	M1190-9002
500 mL Erlenmeyer Clamp with spring retainer	M1190-9003
1 L Erlenmeyer Clamp with spring retainer	ACE-1000S
2 L Erlenmeyer Clamp with spring retainer	ACE-2000S
500 mL Media Bottle Clamp with spring retainer	ACSB-500S
1 L Media Bottle Clamp with spring retainer	ACSB-1000S
2.8 L Fernbach Flask Clamp with spring retainer	ACFE-2800S
3 L Erlenmeyer Clamp with spring retainer	ACE-3000S
4 L Erlenmeyer Clamp with spring retainer	ACE-4000S
5 L Erlenmeyer Clamp with spring retainer	ACE-5000S
6 L Erlenmeyer Clamp with spring retainer	ACE-6000S
<b>Angled Test Tube Rack Holder</b> , for user-supplied test tube racks and microplates	TTR-210
<b>Spacer Bar for TTR-210</b>	TTR-215
<b>Microplate rack</b> , for single layer of five plates	TTR-221
<b>Microplate rack</b> , stack three deepwell or nine standard plates	M1289-0700
<b>Sticky Pad Adapter Kit</b>	M1250-9504
<b>Sticky Tape</b> , 2,300 × 3.8 cm (75 ft × 1.5 in) roll	M1250-9600
<b>Sticky Pad</b> , 20 × 20 cm (8 × 8 in)	M1250-9700
<b>Drip pan</b> , for universal platform M1250-9902	M1250-9906
<b>Drip pan</b> , to catch accidental spills, for use with universal platform M1250-9920	M1250-9921

## Test Tube Racks Ordering Information

Large Racks			Medium Racks			Small Racks		
Order no.	Diameter	Tubes/Rack	Order no.	Diameter	Tubes/Rack	Order no.	Diameter	Tubes/Rack
M1289-0100	8 - 11 mm	80	M1289-0010	8 - 11 mm	60	M1289-0001	8 - 11 mm	48
M1289-0200	12 - 15 mm	60	M1289-0020	12 - 15 mm	44	M1289-0002	12 - 15 mm	34
M1289-0300	15 - 18 mm	42	M1289-0030	15 - 18 mm	31	M1289-0003	15 - 18 mm	24
M1289-0400	18 - 21 mm	30	M1289-0040	18 - 21 mm	23	M1289-0004	18 - 21 mm	18
M1289-0500	22 - 26 mm	22	M1289-0050	22 - 26 mm	16	M1289-0005	22 - 26 mm	13
M1289-0600	26 - 30 mm	20	M1289-0060	26 - 30 mm	16	M1289-0006	26 - 30 mm	12

8 - 11 mm: fits e.g. Eppendorf tubes 1.5 mL, 15 - 18 mm: fits e.g. 15 mL Conicals, 26 - 30 mm: fits e.g. 50 mL Conicals

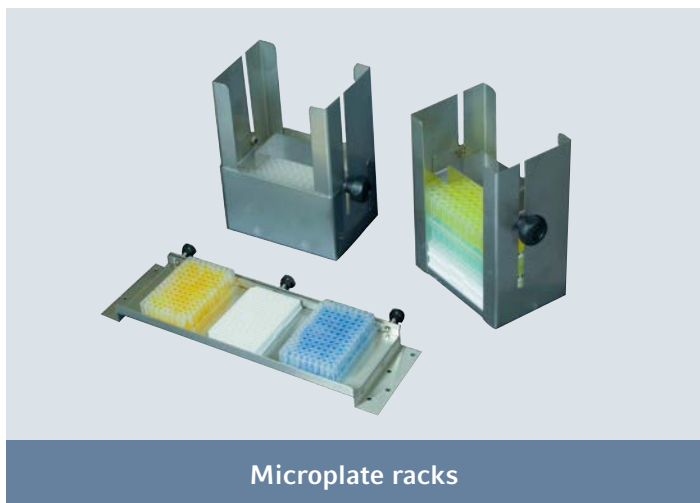
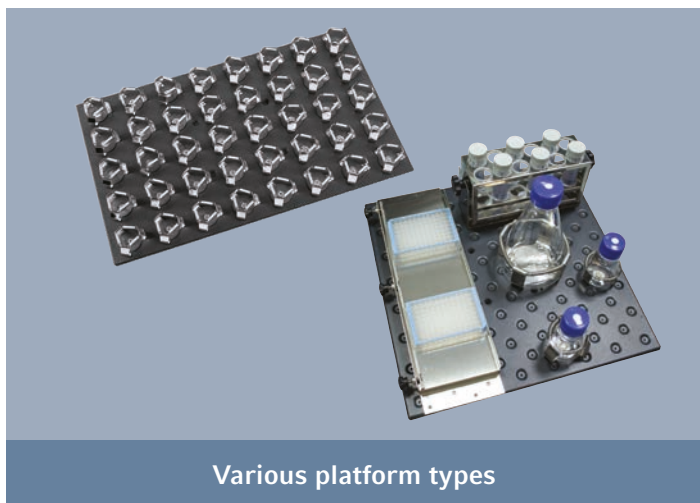
Find the right accessory for your vessel format and application, along with detailed specifications and information!

**Eppendorf Shaker Accessory Guide**

[www.eppendorf.com/shaker-accessory-guide](http://www.eppendorf.com/shaker-accessory-guide)



Test tube racks



# »Eppendorf Bioprocess and Harvesting Solutions.«

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