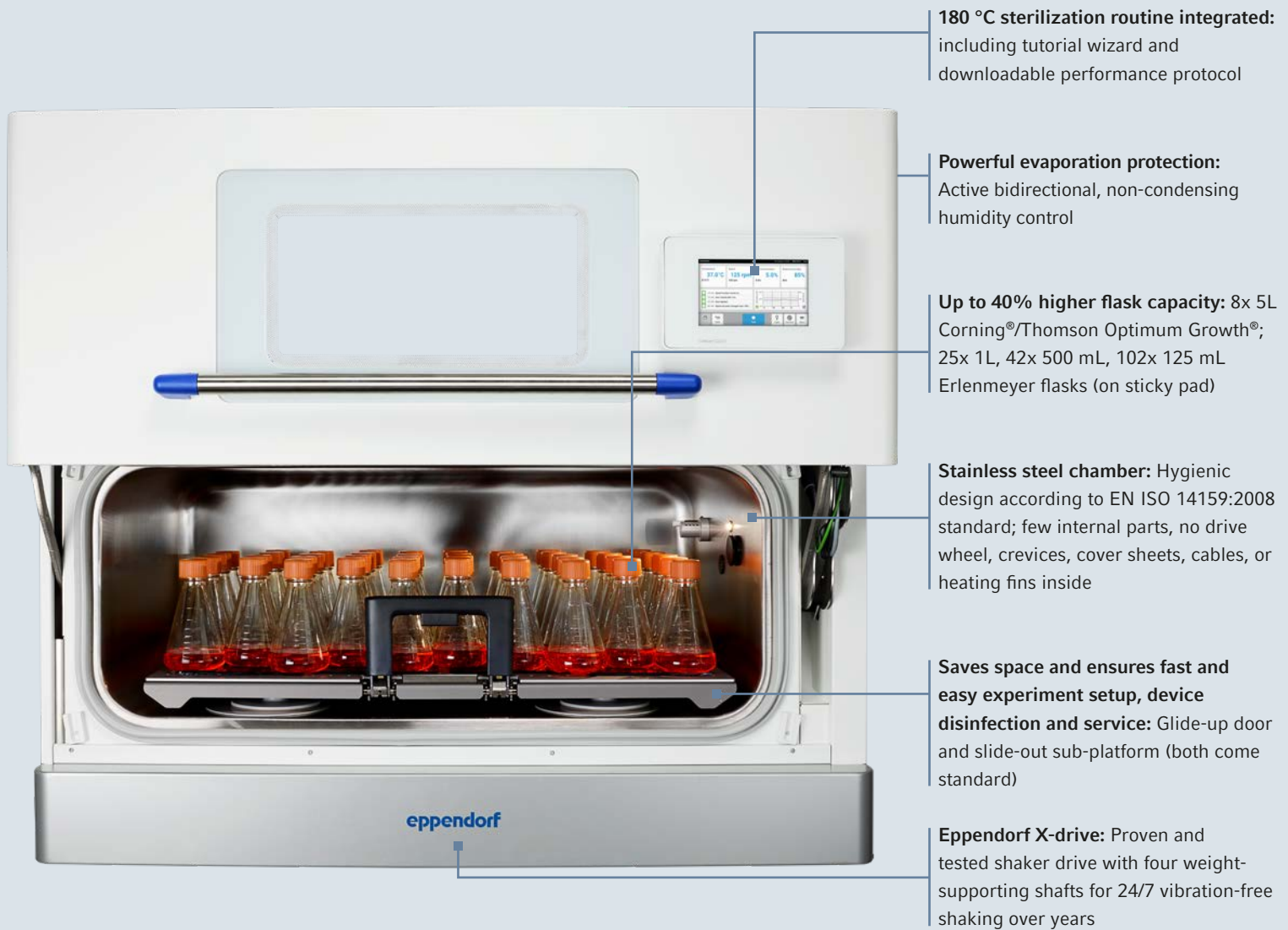


Raise your mammalian  
cell culture research  
to the next level



# Accelerate Your Growth

The New CellIXpert® CS220 CO<sub>2</sub> Incubator Shaker



# High Throughput

## Large, 3x 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.

## Recommended applications:

- > Expansion of mammalian cells in suspension, e.g., CHO or HEK293 for:
  - > Protein expression
  - > Screening
  - > Cell line development
  - > Early process development
  - > Viral vector production in mammalian cells, e.g., Ad, AAV, LV
  - > Bioreactor inoculum preparation
- > MSC/iPSC-cultivation in normoxic conditions e.g., microcarrier-based for reprogramming or exosome production

> Learn more: [www.eppendorf.link/accelerate-your-growth](http://www.eppendorf.link/accelerate-your-growth)



# More Flasks Per Run, Less Space Required

## Up to 40 % higher flask capacity

Accelerate your research by increasing the culture volume and ensuring the same growth conditions for more flasks per run. The extra-large platform of the CellXpert CS220 (4780 cm<sup>2</sup>/1882 in<sup>2</sup>) offers more capacity than most other CO<sub>2</sub> shakers.

## Capacity examples, Erlenmeyer flasks (sticky pad on universal platform, tested with Corning flasks)

- > 8x 5 L
- > 15x 2 L
- > 25x 1 L
- > 42x 500 mL
- > 57x 250 mL
- > 102x 125 mL



## Excellent use of lab space: Greatest platform size to footprint ratio in the market

Is your lab space at a premium, and do you need to maximize its usage? Don't waste an inch of your lab on equipment that isn't fully designed for the highest throughput.



## Convenience by design

**Left:** The space-saving door glides up and out of your way to ensure easy vessel loading onto the slide-out platform. The platform is simply locked and unlocked with the ergonomic platform handle. In addition, the slide-out sub-platform can be quickly and easily removed for full access to the chamber bottom, facilitating cleaning and maintenance.

**Right:** The optional storage base for a single device with plenty of space underneath.



### Nowhere for contaminants to hide: Stainless steel chamber without bells and whistles

Hygienic design according to EN ISO 14159:2008 standard plus only a few screws and internal parts, no drive wheel, crevices, cover sheets, cables, or heating fins inside. Platform and sub-platform can be removed easily in under 90 seconds for full access to all chamber walls for fast cleaning – no cover sheets that hide more.

## Unique Contamination Protection

### Unique and effective contamination risk mitigation: Integrated 180 °C sterilization routine

Almost all current CO<sub>2</sub> incubator shakers use UV-lights that irradiate the airstream or chamber surfaces that are in the line of sight of the UV-light. Therefore, UV-light irradiation is locally restricted to line-of-sight and does not cover all critical areas where media spills and moisture can be expected, like underneath the platform. The CellXpert CS220 is the first shaker to apply the established, high contamination-protection standards of CO<sub>2</sub> incubators – a 180 °C sterilization. And the best part: You don't need to pay extra, it is always included as a standard feature. Don't let contamination get in your way!

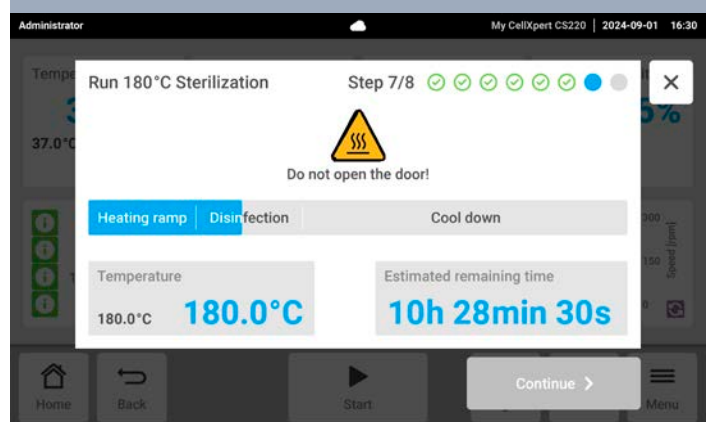
- > All chamber components and the platform are resistant to the 180 °C sterilization routine
- > Downloadable performance protocol
- > Process wizard provides short, clear, and illustrated step-by-step instructions, to ensure a standardized and complete procedure irrespective of different users
- > Access to start the sterilization protocol can be restricted by user management

Note for stacked devices: to avoid temperature control interference during 180 °C sterilization, we recommend running the process when the device directly above is idle. The device underneath will not be affected by the sterilization process.



### If it's easy to do, it's more likely to get done

The glide-up door and the seamless, stainless steel chamber ensure that proper disinfection for your next batches and projects is easy and fast.

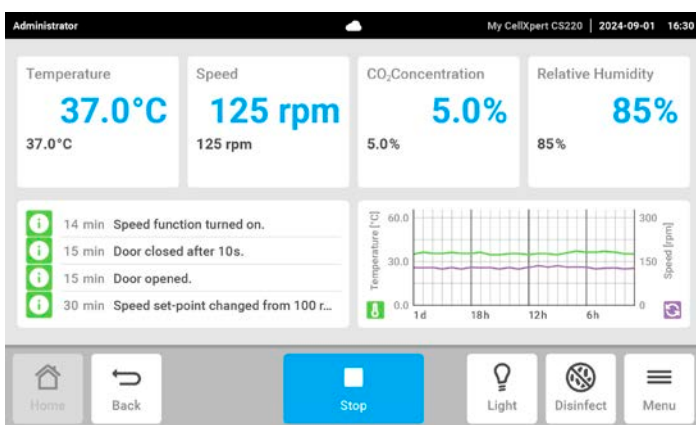




# Discover More

## Save money and reach sustainability goals

- > Increased platform size vs. footprint ratio in the market saves valuable lab space
- > While only available as costly options with most other devices in the market, the slide-out platform, rH-control, touch interface, access port, and sterilization routine (180 °C) come standard on all CellXpert CS220 packages
- > No UV-lamps or open water bath plastic inlays that require frequent exchange
- > Low gas and energy consumption



## Smart cell cultivation and easy documentation with VisioNize®

- > 7 inch VisioNize touch interface shows all setpoints and current parameters at a glance
- > Filter and export performance charts, events and more within seconds via VisioNize Lab Suite or the front-mounted USB-port
- > Pre-installed and customer-programmed reminders for tasks like performance of a sterilization cycle or maintenance
- > Integrated alert system defines critical values (such as door opening time or CO<sub>2</sub> concentration), and triggers both a highly visible on-screen notification and an audible alert.
- > Download operation records to document cultivation conditions of individual experiments
- > Set permissions and restrictions with on-board VisioNize user management
- > Remote monitoring and real-time alert notifications with VisioNize Lab Suite

 VisioNize Lab Suite

Gain hands-on experience by connecting 3 devices for free  
 Learn more at [www.ependorf.com/visionize](http://www.ependorf.com/visionize)



# Built to Perform & Last

Do you need to avoid unexpected downtime and delayed results? Are you looking to focus on more important tasks than arranging repairs for your CO<sub>2</sub> incubator shaker over the weekend? The Eppendorf X-drive with four weight-supporting shafts has been proven and tested in the market. It was designed to perform 24/7 at high loads with the Eppendorf reliability you can rely on; you can reach your goals in time and with peace of mind. Drive and drive wheel are positioned in a service drawer that opens to the front for easy access for check and maintenance.



## Peace of Mind, Your Service Options

### 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	AdvancedCare For assured instrument reliability an uptime	PremiumCare For assured instrument reliability, uptime and financial plannability
Full preventive maintenance	1/year	1/year
Priority support*1	■	■
Spare parts, labor, travel on repairs	20% discount	included
Discount on additional services (e.g. IQ/OQ)	10%	10%

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

Achieve reliable culturing results and optimized instrument performance with regular professional instrument services!  
For more information go to: [www.eppendorf.com/service](http://www.eppendorf.com/service)

## Technical specifications

<b>Power supply</b>	100 V – 127 V $\pm$ 10 %, 50 Hz – 60 Hz 220 V – 240 V $\pm$ 10 %, 50 Hz – 60 Hz			
<b>Orbit options</b>	20 - 300 rpm with 2.54 cm (1 in) orbit, 20 - 250 rpm with 5.1 cm (2 in) orbit			
<b>Capacity &amp; maximum flask size, sticky pads on universal platform</b>	8x 5 L Corning® & Thomson Optimum Growth® (max. flask size), 25x 1 L Erlenmeyer flasks, 42x 500 mL Erlenmeyer flasks, 102x 125 mL Erlenmeyer flasks			
<b>Temperature range</b>	8 °C above ambient temperature – 60 °C			
<b>CO<sub>2</sub> range</b>	0.1 %–20 % CO <sub>2</sub>			
<b>Relative humidity range</b>	Active bidirectional humidity control up to 85 % relative humidity, non-condensing			
<b>Installation options</b>	Single unit on base or high feet; Double-stack on low feet or high feet; Triple-stack on low feet or high feet			
<b>Height of base and feet</b>	Base: 65.7 cm (25.9 in); Low feet: 2 cm (0.8 in); High feet: 9.5 cm (3.7 in)			
<b>Dimensions external</b>	<b>Height, door closed</b>	<b>Height, door open</b>	<b>Width*</b>	<b>Depth**</b>
<b>Single unit on base</b>	133.0 cm (52.4 in)	178.5 cm (70.3 in)	131.8 cm (51.9 in)	83.8 cm (33.0 in)
<b>Single unit on high feet</b>	77.3 cm (30.4 in)	122.8 cm (48.3 in)	131.8 cm (51.9 in)	80.5 cm (31.7 in)
<b>Triple-stack on low feet</b>	202.4 cm (79.7 in)	247.9 cm (97.6 in)	131.8 cm (51.9 in)	80.5 cm (31.7 in)
<b>Weight</b>	237 kg (522.5 lbs) (without accessories and feet/base)			
<b>Chamber material</b>	Deep-drawn, seamless, stainless steel grade 304 2B			
<b>Sterilization method</b>	180 °C / 2 h dry heat			
<b>Power consumption</b>	max. 900 W			
<b>CO<sub>2</sub> consumption</b>	~9 L/24 h at 5 %, without door opening			
<b>Drive type</b>	Patented Eppendorf X-Drive, four eccentric mounting points to support the platform load			
<b>Motor type</b>	Solid state, DC brushless motor			
<b>Noise emission</b>	<60 dB(A), Sound power level LWA (IEC 61672)			
<b>User interface</b>	180 mm (7 in), color touch screen (operable with gloves, cleanable)			
<b>Data interface</b>	BMS-relays, USB 2.0, Ethernet, Access port, VisioNize® Lab Suite			

\* leave 20 cm (7.9 in) to each side for ventilation and water tank installation

\*\* add 43 cm (16.9 in) for platform clearance, leave 10 cm (3.94 in) to the rear for ventilation

For more technical specifications, visit [www.eppendorf.link/cellxpert-cs220](http://www.eppendorf.link/cellxpert-cs220)



## Ordering information

Description	Order no.
<b>CellXpert® CS220 CO<sub>2</sub> incubator shaker</b> , stackable up to 3-fold, orbit 2.5 cm (1 in)	<a href="#">see online*</a>
<b>CellXpert® CS220 CO<sub>2</sub> incubator shaker</b> , stackable up to 3-fold, orbit 5.0 cm (2 in)	<a href="#">see online*</a>
<b>High feet</b> , 9 cm (3.5 in), 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	6740070039
<b>Low feet</b> , 2 cm (0.8 in), 1 fixed and 3 height-adjustable, for easiest access to top device in 3x stack, Eppendorf service required for installation	6740070020
<b>Storage base</b> , 65 cm (25.6 in) height, for single device only, adjustable feet for levelling, allows for easy cleaning below devices and access with standard forklift to move devices, Eppendorf service required for installation	6740070055
<b>Universal platform</b> , 93.0 x 51.3 cm (36.6 x 20.2 in), anodized aluminum, resistant to 180 °C sterilization, 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	6740070012
<b>Stacking kit</b> , 2x stack: 1 kit, 3x stack: 2 kits necessary, Eppendorf service required for installation	6740070047
<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	6740070080
<b>Water tank &amp; adaptors</b> , CellXpert CS220, Includes 1 water tank 5L (autoclavable), 1 tank venting filter (0.2 µm pore size), 1 tubing weight, 1 adaptor for tubing connections	6740070071
<b>Water tank holder</b> , CellXpert CS220, For water tank 5L (6740070071)	6740070098
<b>Water tubing package</b> , CellXpert CS220, Includes 1 water tubing, 1 water filter (35 µm pore size)	6740070063
<b>Sticky pad, 20 x 20 cm (8 x 8 in)</b>	M1250-9700
<b>Additional clamps, test tube racks, and microplate racks</b>	<a href="#">see online*</a>
<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.

## Eppendorf Bioprocess and harvesting solutions

Are you ready to scale-up your cell culture work? Do you need to find a solution to harvest your cultures? When the time comes to scale-up, you can expand your process with Eppendorf Bioprocess solutions – we are here to bring the tools and expertise required. We offer small to pilot/production scale bioprocess systems, ranging from 60 mL to 2,400 L, fitting your specific application. To harvest your large batches, Eppendorf provides matching sample separation solutions. Especially our high-speed centrifuges can help you to save handling time and efficiently handle volumes of 4x 1.5 L or more.

### We are your source for hands-on information.

> [www.eppendorf.com/bioprocess-basics](http://www.eppendorf.com/bioprocess-basics)



### Your local distributor: [www.eppendorf.com/contact](http://www.eppendorf.com/contact)

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[eppendorf@eppendorf.com](mailto:eppendorf@eppendorf.com) · [www.eppendorf.com](http://www.eppendorf.com)

[www.eppendorf.com/accelerate-your-growth](http://www.eppendorf.com/accelerate-your-growth)