

Raise your mammalian
cell culture research
to the next level



Accelerate Your Growth

The New, GMP-compatible CellIXpert® CS220 CO₂ Incubator Shaker

GMP-compatible 180 °C sterilization routine integrated: Certified 6 log microbial reduction; downloadable performance protocol; heat-resistant IR for consistent CO₂ control

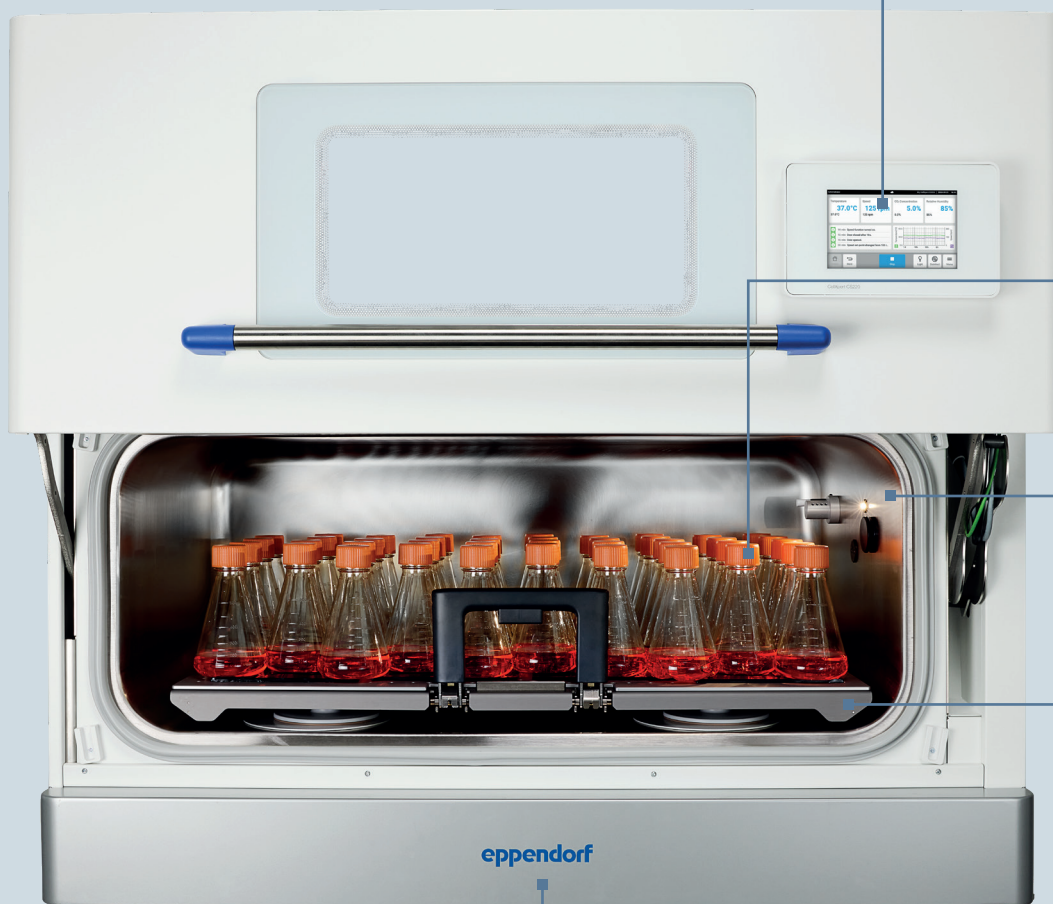
Powerful evaporation protection: Active humidity control including dehumidification and direct heating of chamber walls

Up to 40% higher flask capacity: 8x 7/5L Corning®/Thomson Optimum Growth®; 25x 1L, 42x 500 mL, 102x 125 mL Erlenmeyer flasks (on sticky pad)

Stainless steel chamber: Hygienic design according to EN ISO 14159:2008 standard; few, quick-removable internal parts; chamber depth of just 58 cm / 22.8 in make it easy to access even the back wall of the chamber

Saves space and ensures fast and easy experiment setup, device disinfection and service: Glide-up door and slide-out, quick-release platform (both come standard)

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



High Throughput

Large, 3x stackable CO₂ 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 CO₂ incubator shaker in the market with an integrated 180 °C sterilization with certified anti-microbial effectiveness 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. Profit from almost 80 years of experience developing shakers.

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



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 cm²/1882 in²) offers more capacity than most other CO₂ shakers.

Capacity examples, Erlenmeyer flasks (sticky pad on universal platform)

- > 8x 7/5 L Corning / Thomson Optimum Growth
- > 15x 2 L Corning / 2.8 L Thomson
- > 18x 1.6 L Thomson
- > 25x 1 L Thomson
- > 42x 500 mL Corning / Thomson
- > 57x 250 mL Corning / Thomson
- > 102x 125 mL Corning / Thomson



Excellent use of lab space: Greatest platform size to footprint ratio of large CO₂ shakers in the market

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: Optional single-device storage base for easy access and plenty of storage space underneath.



Nowhere for contaminants to hide: Seamless, stainless steel chamber

Hygienic design according to EN ISO 14159:2008 standard plus only a few screws and quick-removeable internal parts, shaker drive outside the chamber; no 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, certified 180 °C sterilization routine

Almost all current CO₂ 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 CO₂ 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!

- > Externally certified anti-microbial effectiveness
- > 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
- > External certification confirms anti-microbial effectiveness

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 a chamber depth of just 58 cm / 22.8 in provide easy access to the seamless, stainless steel chamber and ensure that proper disinfection for your next batches and projects is easy and fast.

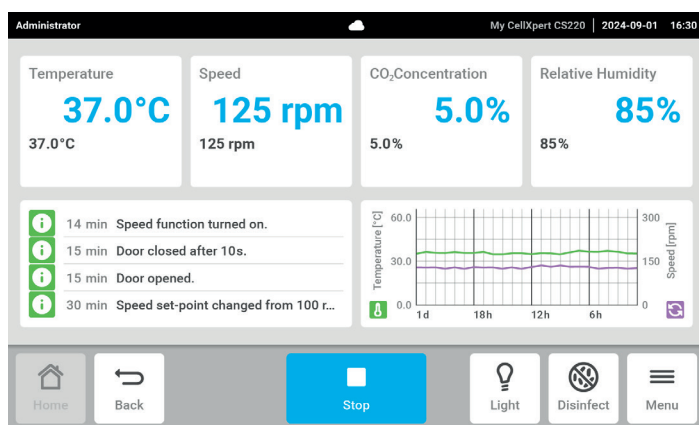




Discover More

Save money and reach sustainability goals

- > Superior 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 with de-humidification, fan-associated HEPA-filters, 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
- > Routine wipe-disinfection done in only a few minutes
- > Low gas and energy consumption



Smart cell cultivation and easy documentation with VisioNize®

- > Filter and export performance chart data, 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 and triggers 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
- > Ethernet port supports network integration via OPC DA and JSON REST API protocols



Gain hands-on experience by connecting 3 devices for free
Learn more at www.eppendorf.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 CO₂ 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

Full preventive maintenance
Priority support ^{*1}
Spare parts, labor, travel on repairs
Discount on additional services (e.g. IQ/OQ)

AdvancedCare

For assured instrument reliability and uptime

1/year
20% discount
10%

PremiumCare

For assured instrument reliability, uptime and financial plannability

1/year
included
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

Technical specifications

Power supply	100 V – 127 V $\pm$ 10 %, 50 Hz – 60 Hz 220 V – 240 V $\pm$ 10 %, 50 Hz – 60 Hz			
Orbit options	20 - 300 rpm with 2.54 cm (1 in) orbit, 20 - 250 rpm with 5.1 cm (2 in) orbit			
Capacity & maximum flask size, sticky pads on universal platform	8x 7/5 L Corning® & Thomson Optimum Growth® (max. flask size), 25x 1 L Erlenmeyer flasks, 42x 500 mL Erlenmeyer flasks, 102x 125 mL Erlenmeyer flasks			
Temperature range	8 °C above ambient temperature – 60 °C			
CO₂ range	0.1 %–20 % CO ₂			
Relative humidity range	Active bidirectional humidity control up to 85 % relative humidity, non-condensing			
Installation options	Single unit on base or high feet; Double-stack on low feet or high feet; Triple-stack on low feet or high feet			
Height of base and feet	Base: 65.7 cm (25.9 in); Low feet: 2 cm (0.8 in); High feet: 9.5 cm (3.7 in)			
Dimensions external	Height, door closed	Height, door open	Width*	Depth**
Single unit on base	133.0 cm (52.4 in)	178.5 cm (70.3 in)	131.8 cm (51.9 in)	83.8 cm (33.0 in)
Single unit on high feet	77.3 cm (30.4 in)	122.8 cm (48.3 in)	131.8 cm (51.9 in)	80.5 cm (31.7 in)
Triple-stack on low feet	202.4 cm (79.7 in)	247.9 cm (97.6 in)	131.8 cm (51.9 in)	80.5 cm (31.7 in)
Weight	237 kg (522.5 lbs) (without accessories and feet/base)			
Chamber material	Deep-drawn, seamless, stainless steel grade 304 2B			
Sterilization method	180 °C / 2 h dry heat			
Power consumption	max. 900 W , < 2.5 kWh on average/day at standard operating conditions			
Energy consumption	< 2.5 kWh per day, at standard operating conditions			
CO₂ consumption	~9 L/24 h at 5 %, without door opening			
Drive type	Patented Eppendorf X-Drive, four eccentric mounting points to support the platform load			
Motor type	Solid state, DC brushless motor			
Noise emission	<60 dB(A), Sound power level LWA (IEC 61672)			
User interface	180 mm (7 in), color touch screen (operable with gloves, cleanable)			
Data interface	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



Ordering information

Description	Order no.
CellXpert® CS220 CO₂ incubator shaker , stackable up to 3-fold, orbit 2.5 cm (1 in)	see online*
CellXpert® CS220 CO₂ incubator shaker , stackable up to 3-fold, orbit 5.0 cm (2 in)	see online*
High feet , 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
Low feet , 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
Storage base , 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
Universal platform , 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
Stacking kit , 2x stack: 1 kit, 3x stack: 2 kits necessary, Eppendorf service required for installation	6740070047
Water supply package , 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
Water tank & adaptors , 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
Water tank holder , CellXpert CS220, For water tank 5L (6740070071)	6740070098
Water tubing package , CellXpert CS220, Includes 1 water tubing, 1 water filter (35 µm pore size)	6740070063
Sticky pad , 20 x 20 cm (8 x 8 in)	M1250-9700
Additional clamps, test tube racks, and microplate racks	see online*
VisioNize® Lab Suite (VisioNize® box required) , remote parameter and status monitoring, alert notifications via email or SMS, response-based alert escalation + more. Check availability in your country – sign up and connect 3 devices for free.	Sign up online

*To find the correct order number for your country, please check 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 500 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



Your local distributor: www.eppendorf.com/contact

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www.eppendorf.link/accelerate-your-growth