CO_2 Incubators

Evolve. Expand. Excel.

Thermo Scientific™ Vios™ iDx CO_2 Incubators



thermo scientific

Expanding discovery with every evolution

The Thermo Scientific™ Vios™ line of CO_2 Incubators has been the global leader in cell culture incubation technology for over 10 years. Robust performance based on product innovation has cemented Vios CO_2 Incubators as the number one choice for cell scientists. At every stage of research and development, and every stage of your career, you can count on Vios iDx CO_2 Incubators to help you tackle the ever-evolving challenges of your most critical applications.

Ready to excel

As a cell scientist shaping the future of human health, ensuring the integrity of your work is paramount. Choose any Vios iDx CO_2 Incubator with confidence, knowing it is meticulously designed for optimal cell growth and minimal contamination risk.

Proven performance and protection for sensitive cell cultures

Designs that are ready for where your discoveries take you

Seamless operations for modern labs

- Connectivity-ready for data management and remote monitoring, including front-access USB port, Thermo Scientific™ Connected Solutions and OPC-UA™ integration
- Large 7-inch touchscreen display for quicker at-a-glance monitoring of chamber conditions
- A variety of shelving options are available including Thermo Scientific™ Cell Locker™ Systems for sample protection and Thermo Scientific™ CultiMaxx™ Systems to support scale-up processes





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Thermo Scientific Vios iDx CO_2 Incubators at a glance



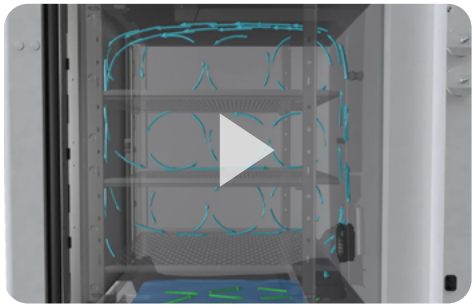
	A premium discovery partner	Ideal for extra capacity	Certified cleanroom ready	For larger cleanroom production	For automated labs
Model	**Vios iDx 165**	**Vios iDx 255**	**Vios iDx CR 165**	**Vios iDx CR 255**	**Vios iDx AD 255**
Capacity	165 L (5.8 cu. ft.)	255 L (9.0 cu. ft.)	165 L (5.8 cu. ft.)	255 L (9.0 cu. ft.)	255 L (9.0 cu. ft.)
Exterior housing	Powder-coated cold-rolled steel		Brushed stainless steel		Powder-coated cold-rolled steel or brushed stainless steel
Inner chamber	Electropolished stainless steel or 100% pure copper				Electropolished stainless steel
Segmented inner door	Optional	Optional	Optional	Optional	–
Cleanroom certified particle emission control	–	–	✔	✔	–
ISO Class 5/EU GMP Grade A/B certified for cleanroom use	–	–	✔	✔	–
Automation integration	–	–	–	–	✔
IP54 rated electronics	–	–	✔	✔	–

Proven performance and protection for sensitive cell cultures

We know that performance and culture quality are paramount. That's why each Vios iDx CO_2 Incubator features active airflow, high-temperature sterilization, and in-chamber HEPA filtration so that you're always ready to excel.

Achieve optimal culturing conditions with THRIVE Active Airflow technology

Your cells experience total recovery of all critical growth parameters in 10 minutes or less after a 30-second door opening.* The in-chamber fan ensures consistent results by evenly distributing filtered, conditioned air for homogeneous culturing throughout the chamber.



* Based on internal testing standards for a 30-second door opening, recovery time calculated to 98% of starting value for temperature and CO_2 and 95% of starting value for humidity.

Eliminate microbial contaminants with high-temperature sterilization when using the Steri-Run High Temperature Sterilization Cycle

This simple overnight routine provides fast, easy elimination of microbial contaminants and eliminates the need for separate autoclaving of parts.

- Fully automated cycle is shown to reach 180 °C at 48 locations, ensuring all chamber surfaces achieve a 12-log sterility assurance level.
- Avoids the physical constraints and variation associated with UV germicidal lamps and the ongoing costs, handling, and storage of potentially toxic germicides.
- The Steri-Run High-Heat Sterilization Cycle has been proven by independent third-party tests.

Read the data

Read how it works

Why choose heat?

Protect cells from airborne contaminants with in-chamber HEPA filtration

Airborne particulates are a primary source of contamination in most lab settings. Our advanced HEPA filtration technology protects cultures, providing ISO Class 5 air quality conditions within only 5 minutes after a 30-second door opening. The entire chamber air volume is filtered every 60 seconds, the filter lasts for one year and is easily replaced without tools.

Read the data

Find out more





Designs that are ready for where your discoveries take you

Your Vios iDx CO_2 Incubator is carefully designed with technologies based on decades of innovation to help ensure ultra-consistent growth conditions – so your precious cells flourish.

Culture confidently with our exclusive condensation-free humidification system

Our covered, integrated humidity reservoir maximizes relative humidity without condensation. The incubation chamber stays dry, and the design helps limit contamination in the water.

Read more





Sensor options help you manage cultures your way

Temperature and gas sensors are strategically positioned within the incubation chamber to swiftly respond to any deviations in desired conditions.

- Our Thermo Scientific IR180Si infrared CO_2 sensor features silicon MEMS emitter technology for improved stability and long service life. This sensor is recommended for labs working under good manufacturing practices (GMP) or conducting time course studies with many door openings.
- Our proprietary TC180 sensor offers the performance advantages of traditional IR technologies without the limiting lifespan, and is excellent for everyday cell culture applications.

Why IR180Si

Why location matters

Seamless operations in modern labs

Vios iDx CO_2 Incubator features

Simplified interior maintenance

- Choose electropolished stainless steel or 100% pure copper interior, both with easy-to-install shelving systems and easy-to-clean curved chamber corners.
- Electropolishing significantly reduces surface roughness, decreasing bacterial attachment by up to 90%, enhancing corrosion resistance, and easing manual cleaning and disinfection.
- 100% pure natural copper option can help you combat contamination. Copper is easily maintained with mild detergent and 70% ethanol, improves through oxidation over time, and is safe for incubated cells. This makes it an excellent solution for busy research labs.

Read more

Ease of use and ergonomics

- Large 7-inch touchscreen display for quicker at-a-glance monitoring of chamber conditions. Set language* and programmable access code for added security.
- Ergonomic door design to make routine loading, unloading, and checking on cultures easy. Electromagnetic door lock comes standard.
- Integrated, covered 3-L water reservoir may be filled or drained without removing shelves or cultures.

*** Available language options include: English, Spanish, German, French, Italian, Japanese, and Mandarin.**

Flexibility and customization

- Tri-gas options offer variable oxygen control for full culturing flexibility. Simulate hypoxic (1-21% O_2) or hyperoxic (5-90% O_2) conditions based on application need and cell type.
- Connectivity-ready for data management including front-access USB port and optional 4-20 mA signal output or Gateway for OPC-UA for remote monitoring with external data collection solutions, ideal for GMP environments meeting CFR-21 compliance.
- 165 L models offer enhanced protection for valuable samples when configured for Thermo Scientific Cell Locker Systems. Find out more
- 255 L models offer increased culturing capacity when configured for Thermo Scientific CultiMaxx Shelving Systems. Find out more





Vios iDx CO_2 Incubators specifications

	Vios iDx 165	Vios iDx 255
Exterior housing	Powder-coated cold-rolled steel	
External dimensions (w x h x d)	637 x 900 x 880 mm (25.1 x 35.4 x 34.6 in.)	774 x 969 x 934 mm (30.5 x 38.2 x 36.8 in.)
Internal dimensions (w x h x d)	470 x 607 x 576 mm (18.5 x 23.9 x 22.7 in.)	607 x 670 x 629 mm (23.9 x 26.4 x 24.8 in.)
Capacity	165 L (5.8 cu. ft.)	255 L (9.0 cu. ft.)
Operating weight (without accessories)	82 kg (180.8 lbs.)	105 kg (231 lbs.)
Shelving dimensions (w x d)	423 x 465 mm (16.7 x 18.3 in.)	560 x 500 mm (22.05 x 19.68 in.)
Shelving no.	3 std. / 11 max., perforated, adjustable	3 std. / 12 max., perforated, adjustable
Max. load per shelf	10 kg (22 lbs.) CU & SST models	10 kg (22 lbs.) CU models, 14 kg (30.9 lbs.) SST models
Temperature control	±0.1°C	
Temperature range	3 °C above ambient to 55 °C	
Temperature uniformity	< ±0.3 °C	
Sterilization cycle temperature	180 °C on all internal surfaces	
Sterilization cycle duration	≤12 hrs	
Constant humidity at 37 °C	High humidity mode: approx. 93 %, Low humidity mode: approx. 90 %	
CO_2 control	± 0.1%	
CO_2 range	1-20 %	
O_2 control*	± 0.1%	
O_2 range*	1-21% or 5-90%	

* O_2 control available as a factory-installed option.

Selecting a Vios iDx CO_2 Incubator

120 V | 230 V | 100 V



Advanced incubation

Our most advanced Vios iDx CO_2 Incubators and accessories are designed to meet your discovery needs at the pace of innovation. Whether you need enhanced protection for valuable cultures, to scale up production quickly without expanding your incubator footprint, to move into a cleanroom, or produce a drug product with limited human intervention, we have an option to fit your purpose.

So you're always ready for the next big thing.



Advanced incubation

Protect and expand valuable cell cultures

Protected chambers for your most sensitive cells

You'll gain enhanced culture security and protection when using the Cell Locker System. It divides the CO_2 incubator into six individual segregated chambers, with individual glass doors, uniquely preserving critical conditions for sensitive cells by isolating cultures from door openings.

The Cell Locker System should be ordered as a factory-installed option. Individual Cell Locker Chambers sold separately.

In-depth look **Preventing entry of microorganisms**

Cell Locker and stem cells

Expand your incubation capacity with specialized shelving

As you scale out your cell therapy manufacturing, our special CultiMaxx Shelving System – available for the Vios iDx 255 CO_2 Incubator in standard, CR, and AD models – offers additional vessel capacity and/or improved access for specialized cell culture vessels such as Wilson Wolf G-Rex® 500M-CS bioreactors, Thermo Scientific™ Nunc™ Cell Factory systems, or 1 L cell culture bags. This allows you to expand your incubation.

The electropolished stainless-steel reinforced shelves can be ordered as accessory and can be self-installed.

Learn more **G-Rex bioreactors & Vios Incubation**



Cell Locker System | CultiMaxx Shelving System | CultiMaxx for select vessels

Advanced incubation

Clean room incubation with Vios iDx CR CO_2 Incubators

These third-party certified, clean-room compatible CO_2 incubators are designed for production of advanced therapies in ISO Class 5, GMP Grade A/B environments. They leverage all of the features previously outlined with our standard models, configured with our THRIVE Active Airflow, Steri-Run High Temperature Sterilization Cycle, IR180Si sensors, in-chamber HEPA filtration, variable oxygen control to simulate hypoxic (1-21% O_2) or hyperoxic (5-90% O_2) conditions, and more:

- Independently evaluated design meets ISO Class 5 and GMP Grade A/B environments according to DIN EN ISO 14644-1 and VDI 2083 Part 9.1 in both standard operating and sterilization modes.
- Steri-Run High Temperature Sterilization Cycle reaches 180 °C with proven 12-log efficacy according to international pharmacopeias.
- Rugged design stands up to clean room cleaning procedures inside and out due to electropolished stainless steel inner chamber and brushed stainless steel exterior casing with IP54 compliance.
- Compatible with common GMP facility protocols and cleanroom procedures including STERIS™ dry process systems using vaporized hydrogen peroxide (VHP) biodecontamination technology.
- Connectivity-ready for data management including front-access USB port and optional 4-20 mA signal output or Gateway for OPC-UA for remote monitoring with external data collection solutions, ideal for GMP environments meeting CFR 21 compliance.
- Factory acceptance test (FAT) documentation package with each unit, includes:
  - Regulatory certificates
  - Recommended protocols
  - Certificates of conformance, calibration, sensor calibration, and technical specifications
  - Third-party certificate of compatibility with ISO Class 5 and GMP Grade A/B cleanroom environments.



Learn about cleanroom certification

GMP cleaning & disinfection

Five reasons to use CTS series

Five reasons for a cleanroom CO_2 incubator

Advanced incubation

Integration into automated laboratories with Vios iDx AD CO_2 Incubators

Leveraging the standard features and configurations of the Vios iDx 255 CO_2 Incubators, the Vios iDx AD CO_2 Incubator incorporates technologies that allow it to integrate into automated laboratories for scale-out of production.

The added innovation of an automated door control means that our leading incubators bring their outstanding recovery and uniformity to emerging automated cell therapy production processes 24/7, 365.

- When integrated into a centralized system, the door can be operated without direct human contact, automatically opening and closing as programmed
- Simplified door design setup, well suited for robotic interface
- Automatic stop if an obstruction is encountered
- Optional foot pedal configuration for hands-free door opening.



Vios iDx CO_2 advanced incubator specifications

	Vios iDx CR 165	Vios iDx CR 255	Vios iDx AD 255
Exterior housing	Brushed stainless steel exterior casing with IP54 compliance		Powder-coated cold-rolled steel or brushed stainless steel
External dimensions (w x h x d)	637 x 900 x 880 mm (25.1 x 35.4 x 34.6 in.)	774 x 969 x 934 mm (30.5 x 38.2 x 36.8 in.)	
Internal dimensions (w x h x d)	470 x 607 x 576 mm (18.5 x 23.9 x 22.7 in.)	607 x 670 x 629 mm (23.9 x 26.4 x 24.8 in.)	
Capacity	165 L (5.8 cu. ft.)	255 L (9.0 cu. ft.)	
Operating weight (without accessories)	82 kg (180.8 lbs.)	105 kg (231 lbs.)	
Shelving dimensions (w x d)	423 x 465 mm (16.7 x 18.3 in.)	560 x 500 mm (22.05 x 19.68 in.)	
Shelving no.	3 std. / 11 max., perforated, adjustable	3 std. / 12 max., perforated, adjustable	
Max. load per shelf	10 kg (22 lbs.) CU & SST models	10 kg (22 lbs.) CU models, 14 kg (30.9 lbs.) SST models	
Temperature control	±0.1°C		
Temperature range	3 °C above ambient to 55 °C		
Temperature uniformity	< ±0.3 °C		
Sterilization cycle temperature	180 °C on all internal surfaces		
Sterilization cycle duration	≤ 12 hrs.		
Cleanroom certification	ISO Class 5, GMP Grade A/B		No
Constant humidity at 37 °C	High humidity mode: approx. 93 %, Low humidity mode: approx. 90 %		
CO_2 control	± 0.1%		
CO_2 range	1-20 %		
O_2 control*	± 0.1%		Option: ± 0.1%
O_2 range*	Option: 1-21% or 5-90%		Option: 1-21%

* O_2 control available as a factory-installed option.
All advanced Vios iDx CO_2 Incubator models come with IR180Si CO_2 sensor and a 4-20 mA data output.
All model variations can be stacked for additional capacity within the same lab footprint by purchasing stacking adapter kit (see accessories table).

Selecting a Vios iDx CO_2 Incubator for advanced incubation



Factory-installed options

	Vios iDx 165	Vios iDx 255	Vios iDx CR 165	Vios iDx CR 255	Vios iDx AD 255
Door hinge side					
Right hinge door configuration	included				
Left hinge door configuration	51900293		–		51900293
Outer casing material					
Powder-coated cold rolled steel	included		–		included
Brushed stainless steel	–		included		51901126
Inner door					
Single glass door	included		included		–
3-segment inner door	51901144	–	51901144	–	–
6-segment inner door	51901221	51901127	51901221	51901127	–
Shelving configurations					
6 half-width shelves each, stainless steel	–	51901123	–	51901123	–
6 half-width shelves each, copper	–	51901122	–	51901122	–
3 reinforced shelves with 3 clip bars for installation, stainless steel	51901375	51901377	51901375	51901377	–
3 reinforced shelves with 3 clip bars for installation, copper	51901374	51901376	51901374	51901376	–
O_2 Control					
1–21% O_2 control	51901137				
5–90% O_2 control	51901138				–





Factory-installed options, continued

	Vios iDx 165	Vios iDx 255	Vios iDx CR 165	Vios iDx CR 255	Vios iDx AD 255
Combined options					
1-21% O_2 control with 6-segment inner door and 3 shelves with 2 half-width shelves each (made of chamber material)	–	51901133	–	51901133	–
5-90% O_2 control with 6-segment inner door and 3 shelves with 2 half-width shelves each (made of chamber material)	–	51901134	–	51901134	–
Gas-tight 6-segment inner door with 3 Cell Locker System shelves*, stainless steel	51901222	–	51901222	–	–
Gas-tight 6-segment inner door with 3 Cell Locker System shelves*, copper	51901223	–	51901223	–	–
Other					
Internal 4-20 mA analog data output	51901143		Included		
Active CO_2 reduction	51901491				
Rear water access	–				51901521
Power cord options					
Switzerland	51900300				
Great Britain	51900303				
Italy	51900306				
Australia	51900449				
Denmark	51900481				
China	51900900				

*** Cell Locker Chambers are not automatically included with the Cell Locker System configuration and are available as accessories.**
All incubators ship with a standard power cord – 100 V, 120 V, or 230 V EU version. Additional power cord options fit 230 V models only.

Accessories

	Vios iDx 165	Vios iDx 255	Vios iDx CR 165	Vios iDx CR 255	Vios iDx AD 255
Support frames and stacking adapters					
Support frame for dual stack with castors, 182 mm height	50170980	–	–	–	–
Low-profile roller base for dual stack with castors, 85 mm height	50171152	50171157	–	–	50171157
Cleanroom-compatible low-profile roller base for dual stack with castors, 76 mm height	–	–	50173664	50173665	–
Support frame for single incubator, without casters, 780 mm height	50171568	50171747	50172676	50172677	50171747
Stacking adapter kit	50171244	50171746	50173122	50173125	50171746
Stacking adapter kit for stacking Vios iDx model on top of Heracell 150i	50148172	–	–	–	–
Stacking adapter kit for stacking Vios iDx model on top of Heracell 240i	–	50148175	–	–	50148175
O_2/CO_2 control accessories, including filters					
Replacement in-chamber HEPA filter	50141920				
Replacement pre-filter	50144774				
CO_2 gas regulator, 2-stage, for gas tank	3429937				
N_2 gas regulator, 2-stage for gas tank	3429942				
O_2 gas regulator, 2-stage for gas tank	3429943				
External gas guard automatic change-over to reserve tank, 120 V, 50/60 Hz	50059043				
External gas guard automatic change-over to reserve tank, 230 V, 50/60 Hz	50046033				
Infrared gas tester with travel case, for advanced calibration and testing purposes for CO_2 model	50121515				







	Vios iDx 165	Vios iDx 255	Vios iDx CR 165	Vios iDx CR 255	Vios iDx AD 255
O_2/CO_2 control accessories, including filters, continued					
Infrared tester for CO_2/O_2			50145789		
Infrared gas tester interface kit			50122015		
5 inlet port filters for infrared testers			50060287		
Cell Locker System accessories					
Single Cell Locker Chamber with sliding tray and transport cover, stainless steel	50151650	–	50151650	–	–
Single Cell Locker Chamber with sliding tray and transport cover, copper	50154739	–	50154739	–	–
Set of 6 Cell Locker Chambers, stainless steel	50151650X6	–	50151650X6	–	–
Set of 6 Cell Locker Chambers, copper	50154739X6	–	50154739X6	–	–
Shelving					
Additional shelf, full width with 2 support rails for installation, stainless steel	50051909	50065793	50051909	50065793	50065793
Additional shelf, full width with 2 support rails for installation, copper	50051910	50065794	50051910	50065794	50065794
Reinforced clip bar shelf, stainless steel	50160246	50160234	50160246	50160234	50160234
Reinforced clip bar shelf, copper	50160247	50160245	50160247	50160245	50160245
Set of 4 HERAtrays, 1/4 width, stainless steel	–	50065807	–	50065807	50065807
Set of 4 HERAtrays, 1/4 width, copper	–	50065808	–	50065808	50065808
Set of 3 HERAtrays, 1/3 width, stainless steel	50051913	50065805	50051913	50065805	50065805
Set of 3 HERAtrays, 1/3 width, solid copper	50051914	50065806	50051914	50065806	50065806







	Vios iDx 165	Vios iDx 255	Vios iDx CR 165	Vios iDx CR 255	Vios iDx AD 255
Shelving, continued					
Set of 2 HERAtrays, 1/2 width, stainless steel	50058672	–	50058672	–	–
Set of 2 HERAtrays, 1/2 width, copper	50061050	–	50061050	–	–
Set of 2 HERAtrays, 1/2 width for half width shelves, stainless steel	–	50065809	–	50065809	50065809
Set of 2 HERAtrays, 1/2 width for half width shelves, copper	–	50065810	–	50065810	50065810
CultiMaxx Shelving System					
Set of 8 shelves to support up to 116 1 L cell culture bags	–	50166275	–	50166275	50166275
Set of 5 shelves to support up to ten 4- or 5-layer culture vessels, such as Thermo Scientific™ Nunc™ Cell Factory™ Systems	–	50166268	–	50166268	50166268
Set of 3 shelves to support up to six 10- or 13-layer culture vessels, such as Nunc Cell Factory Systems	–	50166285	–	50166285	50166285
Set of 3 shelves to support up to ten G-Rex 500M-CS bioreactors	–	50164781	–	50164781	50164781
Monitoring accessories					
Door lock retrofit kit, key entry, to prevent unauthorized access	50145438				--
OPC-UA gateway	50168119				
Shakers for CO_2 incubators					
CO_2 Resistant shaker, 19 mm, with universal platform and flask clamp starter kit, 100 - 120 V	88881103				
CO_2 Resistant Shaker, 3 mm, with universal platform and flask clamp starter kit, 100 - 120 V	8881103B				
CO_2 Resistant shaker, 19 mm, with universal platform and flask clamp starter kit, 220 - 240 V	88881104				
CO_2 Resistant Shaker, 3 mm, with universal platform and flask clamp starter kit, 220 - 240 V	88881104B				





See accessories

Start-up and compliance services

Invest in a Vios iDx CO_2 Incubator and you can benefit not just from top-tier cell expansion performance, but from the confidence that comes with knowing you're ready to tackle whatever challenges tomorrow may bring. And sometimes that's about more than just technology. With Unity™ Lab Services, you'll have access to exceptional support service experts for help, whenever you need.

From start-up support to comprehensive service plans and compliance solutions, your support package can help you meet your individual research needs.

See service plans



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Evolve. Expand. Excel.

Thermo Scientific Vios iDx CO_2 Incubators

Learn more at **thermofisher.com/co2**

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