Thermo Scientific HERAcell 150i and 240i

>> *Surround your valuable cultures with an environment you can trust.*

The HERAcell i series is available in two convenient sizes: 150L (5.3 cu ft) and 240L (8.5 cu ft)

You can choose between stainless steel and 100% pure copper interior.

2 year warranty

Thermo Scientific HERAcell i series CO_2 incubators provide the ideal *in vitro* environment: clean, reliable and easy to use, protecting your valuable samples while optimizing cell growth.

NEW: iCAN™ (Interactive Control Access Navigator) Touchscreen

Exclusive iCAN simplifies operation and enables rapid access of important information for each critical parameter in the incubator. iCAN provides trend analysis for convenient evaluation of your unit's performance.

With our HERAcell i series, your valuable samples will be:

- **Secured:** Our innovative ContraCon moist heat decontamination technology is proven for simple and worry-free cleaning and operation.
- **Protected:** Proven contamination control is offered with our unique 100% pure solid copper interiors – antimicrobial protection on contact, naturally.
- **Thriving:** Designed to provide optimal growth conditions, delivering superior parameter recovery rates that enhance cell growth.

Intelligent design, promoting superior cell growth

>> Our HERAcell i series offers a range of features that maximize safe, dependable cell growth

Our HERAcell incubators are renown for their accuracy, uniformity and quick recovery rates – attributes that contribute to optimal culturing conditions.

- High quality sensors are mounted directly within the chamber for precise environmental measurements.
- Highly efficient fan-assisted convection ensures the uniformity of the critical temperature, CO_2 and humidity-for all samples, no matter their location within the incubator.

Gas sensors

For precise and dependable automatic CO_2 control, you can choose between thermal conductivity (TC) or our patented Dual Beam infrared (IR) sensor technology based upon your preferences and experimental need.

TC sensors provide accurate CO_2 control in applications where temperature and humidity values are consistent. IR sensors are recommended where temperature and humidity values fluctuate frequently. Both sensors are thermostable, do not require removal for cleaning, and may remain in place during our exclusive ContraCon decontamination routine.

Optional O_2 control

For those seeking to establish hypoxic or hyperoxic culturing conditions, the HERAcell i series offers two optional O_2 control ranges. Choose between 1 to 21% O_2, or a wide-range setting from 5 to 90% O_2. The advanced maintanence free sensor technology is calibrated automatically (auto-cal) and can remain in place during our high temperature ContraCon decontamination.

Integrated gas guard

An optional, integrated gas tank switcher for CO_2 and O_2/N_2 allows the connection of two gas supplies. When the first supply is empty, the controller switches automatically to the second supply.

A visual alert will appear on the touchscreen display when the gas supply is low and needs changing.

Patented humidity system for faster recovery rates

Our HERAcell i series incorporates a unique integral humidity water reservoir that provides a high relative humidity (rH) and allows rapid recovery of optimal humidity level after door openings. A water level sensor indicates when a refill is needed – via a convenient prompt on the touchscreen display – to avoid the desiccation of important cultures. This pan-less system reduces handling and provides recovery rates up to five times faster than ordinary tray humidified incubators, due to:

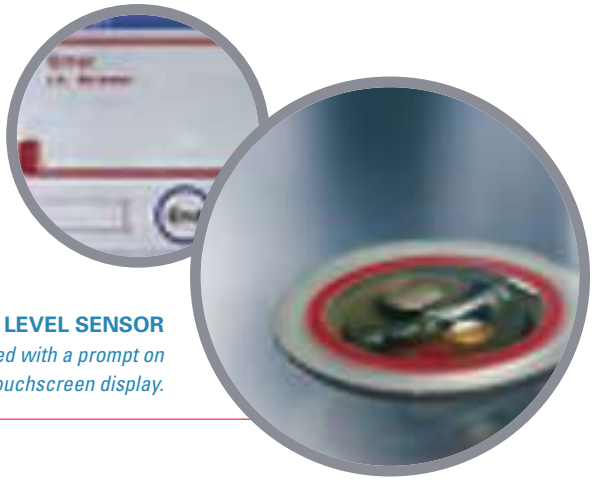
- A surface area larger than ordinary humidity water pans (provided by a water reservoir with inclined and rounded corners)
- A patented floor heating system that operates after door opening
- Direct heat-transfer from heated floor to humidity reservoir

Review performance trends etc...to better manage your culturing process.

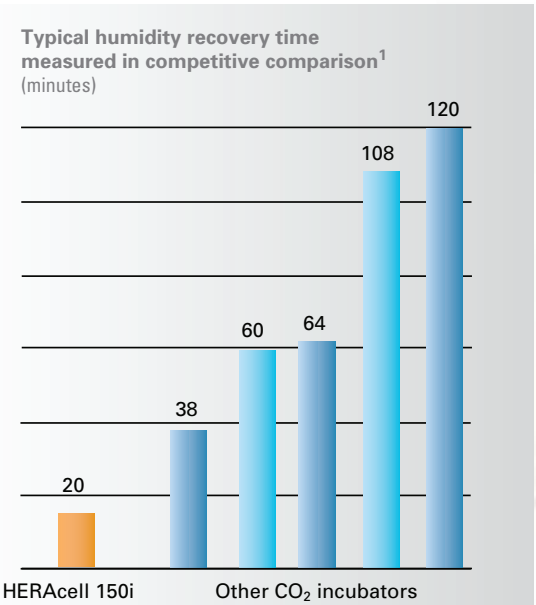
View instructions and monitor progress of ContraCon decontamination routine, directly on the iCAN display.

>> *Constant humidity for cell protection and optimal growth*

Short humidity recovery times are critical to cell growth – especially when the incubator door is opened frequently or when low volumes of media are used.

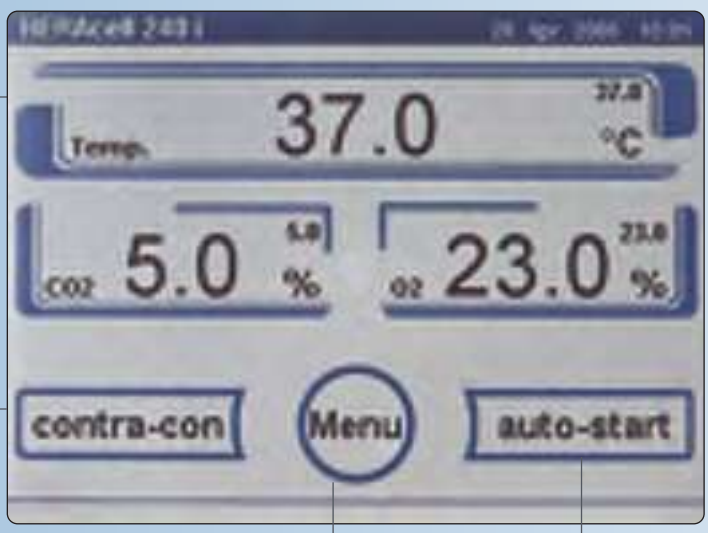


WATER LEVEL SENSOR
Supported with a prompt on the touchscreen display.



[1] *Based upon a 30 second door opening.*

Thermo Scientific iCAN touchscreen – places total control and complete information at your fingertips



iCAN touchscreen improves your visibility and control of important incubator information helping you to achieve your culturing goals

- Door mounted for easy accessibility and viewing
- Easy to use: convenient on-screen user prompts
- Select from a variety of languages
- Visibility to changes in culture environment: on screen logs and usage recording
- Monitor alarm alerts visually on the display

Keeps a running log of all user interactions with the incubator, which can be accessed as needed.

Automatically calibrating all electronic measurement and control functions for you.

> *interactive*
Complete information at your fingertips.

> *intuitive*
Easy to use with simple icons and menu prompts to guide you, reducing the potential for costly errors.

> *intelligent*
Graph performance trends over established timeframes and run event history logs– protected with user passcodes and control lockouts.

Worry free 24/7 protection against contamination

>> *Thermo Scientific HERAcell i incubators offer unmatched contamination prevention*

ContraCon – 90°C moist heat decontamination

Exclusive to all HERAcell i series incubators is the high-temperature, ContraCon 90°C moist heat decontamination process. It's an automatic, on-demand routine that is proven effective in eliminating bacteria, molds, fungal spores and mycoplasma. ContraCon simplifies cleaning and eliminates variability in disinfection. Also, the cleaning process does not require the disassembly and removal of sensors, hardware or other components for separate autoclaving.

ContraCon has been independently proven to be effective against an assortment of commonly encountered contaminants, including:

- *Bacillus subtilis*
- *Bacillus stearothermophilus (USP 23)*
- *Enterococcus faecalis*
- *Escherichia coli*
- *Pseudomonas aeruginosa*
- *Staphylococcus epidermidis*
- *Corynebacterium xerosis*
- *Aspergillus niger*

Unique gas-tight segmented door option

For additional contamination protection, all HERAcell incubators now offer an optional three door (HERAcell 150i) or six door (HERAcell 240i) inner glass door assembly, which allows access to defined sections of the incubator without disturbing the entire inner atmosphere. This minimizes recovery times, gas usage and the risk of contamination.

Less means more when it comes to cleaning and maintenance

HERAcell i series incubators have a completely smooth inner casing with rounded corners, reducing unnecessary internal surfaces where contamnation can hide.

- Faster, more effective cleaning and disinfection
- Surfaces that can be easily contaminated, such as ceiling panels, air ducts and screws are avoided
- High quality electropolished stainless steel finish

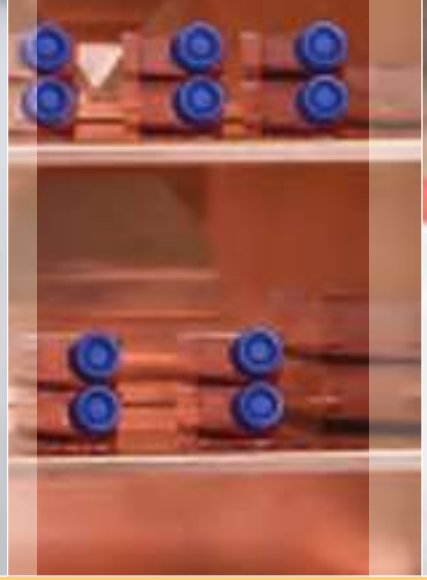
100% pure copper antimicrobial interior available

The HERAcell i series offers antimicrobial copper interiors that provide maximum protection against contaminants potentially introduced through door openings or sample handling. Ideal for shared-use environments, copper delivers non-stop bactericidal and fungicidal properties on contact.

- Chamber, fan and shelving system are constructed of 100% pure antimicrobial copper
- No ineffective copper alloys or plating finishes

COMPLETELY VISIBLE AND ACCESSIBLE THROUGHOUT
Minimal assembly and 50% less contamination prone surfaces.

Minimize cleaning time and maximize contamination protection.

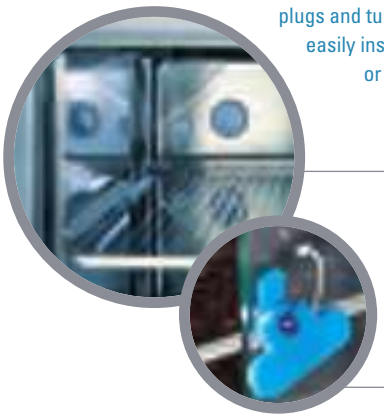


SECURED:
Our ContraCon moist heat decontamination cycle is proven to eliminate contaminants, for simple and reliable cleaning.

PROTECTED:
100% pure copper interior eliminates microbial growth on contact.

THRIVING:
Patented rapid-response humidity system provides superior recovery time upon door openings.

ACCESS PORT
HERAcell i series incubators are supplied with a 42 mm (1.6 in) access port as standard. This allows cables, plugs and tubing to be easily inserted into or out of the chamber.



GLASS DOORS HAVE A RELIABLE DOOR LATCH
preventing the inner door from accidentally not being closed and compromising culture conditions.

HERATRAYS ENABLE CONVENIENT TRANSPORT
of samples; fit readily on shelves.

FLEXIBLE SET UP
Doors can be set up for left- or right-handed use to optimize the work space in your laboratory. All door gaskets can be removed by hand and have smooth surfaces for easy cleaning.

Thermo Scientific HERAtrays
HERAtrays are shelves for the convenient transportation of your cultures and can be used to divide incubator shelves up to four sections. They work well with a three or six inner glass door configuration. HERAtrays are available in stainless steel or copper.

Support frames
The carts provide protection against floor contamination. Choose between a height of 200 mm (8 in) or 780 mm (31 in). The support frames can also be castor-mounted for easy maneuverability.

Unique new roller bottle system
The HERAcell 240i can be equipped with up to four rows of bottle-turning devices for roller bottles between 58 to 186 mm in diameter, each with independent speed control.

Thermo Scientific IR-CO_2 gas tester
The handheld IR-CO_2 gas tester is equipped with a maintenance-free infrared cell to monitor CO_2 concentration inside the chamber. Data download and calibration functions are possible by using optional PM-COM software. The IR-CO_2 gas tester performs to GMP/GLP standards.

Gas-tight inner glass doors
All HERAcell i series incubators now offer an optional three door (HERAcell 150i) or six door (HERAcell 240i) inner glass door, which allow access to defined sections of the incubator without disturbing the inner atmosphere. This minimizes recovery times and the risk of contamination.

Half-width shelves
These can be used to subdivide the HERAcell 240i's interior to reduce the possibility of mixing up samples, especially when there are multiple users.

Thermo Scientific AquaTec™ water preservation cell
Simply place the 3-inch cell into the water reservoir of your CO_2 incubator. AquaTec prevents infection from most common contaminants for up to six months without harsh germicidal chemcials.

Each unit is lightweight and readily stackable without hardware or tools.

Type	Unit	HERAcell 150i	HERAcell 240i
Dimensions			
Internal Volume:	l	150 (5.3 cu.ft.)	240 (8.4 cu.ft.)
External (w x h x d)	mm	637 x 867 x 782	780 x 934 x 834
	inch	25.1 x 34.1 x 30.8	30.7 x 36.8 x 32.8
Internal (w x h x d)	mm	470 x 607 x 530	607 x 670 x 583
	inch	18.5 x 23.9 x 20.9	23.9 x 26.4 x 23.0
Weight (excl. accessories)	kg	70	81
	lbs.	154	178
Shelves			
Shelves full width (w x d)	mm	423 x 465	560 x 500
	inch	16.7 x 18.3	22.0 x 19.7
No. of shelves standard/maximum	no.	3/10	3/12
Max. load per shelf/total load	kg	10/30	10/30
	lbs.	22/66	22/66
Shelves half width (w x d)	mm	–	260 x 500
	inch	–	10.2 x 19.7
No. of shelves standard/maximum	no.	–	6/16
Max. load per shelf/total load	kg	–	5/30
	lbs.	–	11/66
Material			
Interior chamber		stainless steel/solid copper	stainless steel/solid copper
Shelves, fan impeller		stainless steel/solid copper	stainless steel/solid copper
ContraCon decontamination routine		verified by accredited laboratories	verified by accredited laboratories
Decontamination phase, on all surfaces	°C/hrs	90/9	90/9
Period (ambient temperature 20°C)	hrs	25	25
Efficiency spectrum		bacteria, fungi, spores (USP 23), mycoplasma	bacteria, fungi, spores (USP 23), mycoplasma
Temperature		air jacket temperature control	air jacket temperature control
Temperature control range	°C	T_A[1] +3 … 55	T_A[1] +3 … 55
Temperature deviation, time[2]/spatial[2]	K	± 0.1/± 0.5	± 0.1/± 0.5
Ambient temperature range	°C	+18 … 33	+18 … 33
Humidity			
Constant humidity[3]	%rH	95 ± 3	95 ± 3
Fill amount/water quality	l	max. 3 distilled/autoclaved and demineralized	max. 4.5 distilled/autoclaved and demineralized
CO_2			
Measure and control range	Vol – %	0 … 20	0 … 20
Control accuracy	Vol – %	± 0.1	± 0.1
Inlet pressure	bar	0.8 … max. 1	0.8 … max. 1
Gas purity	%	99.5, medical quality min.	99.5, medical quality min.
O_2			
Measure and control range	Vol – %	1..21 / 5..90	1..21 / 5..90
Control accuracy	Vol – %	± 0.2	± 0.2
Inlet pressure	bar	0.8… max. 1	0.8… max. 1
Gas purity	%	99.5; medical quality min.	99.5; medical quality min.
Electrical Data			
Rated voltage	V	1/N/PE AC; 230 (120)	1/N/PE AC; 230 (120)
Rated output	kW	0.58 (0.62)	0.64 (0.65)
Rated frequency	Hz	50/60	50/60
Heat emission to environment			
at 37°C	kWh/h	0.06	0.07
with ContraCon	kWh/h	0.11	0.25

[1] Ambient temperature

[2] Determined according to DIN 12880 for the standard configuration. For details refer to calibration instructions.

[3] The relative humidity inside the incubator may increase during incubation of open culture vessels

ORDERING INFORMATION

Standard equipment[1]	Description	Cat. No. HERAcell 150i		Cat. No. HERAcell 240i	
		Stainless Steel	Copper	Stainless Steel	Copper
HERAcell	single chamber with TCD CO_2 sensor, 120 V, 50/60 Hz	51026282	51026283	51026331	51026332
HERAcell	dual incubator units with support stand with TCD sensor 120 V, 50/60 Hz, complete with support frame	50116048	50116050	–	–
Additional Models[2]					
IR CO_2 Sensor	single chamber, 120 V 50/60 Hz	51026406	51026534	51026420	51026419
Internal Gas Guard CO_2	single chamber with TCD sensor, 120 V, 50/60 Hz	51026528	51026535	51026681	51026679
IR sensor with Internal CO_2 Gas Guard	single chamber, 120 V, 50/60 Hz	51026686	51026688	51026703	51026705
Tri-Gas Units[2]					
O_2 control Vol-% 1..21 incl. 3 gas tight inner doors with TCD CO_2 sensor		51026410	51026408	–	–
O_2 control Vol-% 5..90 incl. 3 gas tight inner doors with TCD CO_2 sensor		51026529	51026536	–	–
O_2 control Vol-% 1..21 incl. 6 gas tight inner doors and half-width shelves with TCD CO_2 sensor		–	–	51026423	51026422
O_2 control Vol-% 5..90 incl. 6 gas tight inner doors and half-width shelves with TCD CO_2 sensor		–	–	51026552	51026581
O_2 control Vol-% 1..21 incl. 3 gas tight inner doors with IR CO_2 Sensor		51026402	51026537	–	–
O_2 control Vol-% 5..90 incl. 3 gas tight inner doors with IR CO_2 sensor		51026530	51026538	–	–
O_2 control Vol-% 1..21 incl. 6 gas tight inner doors and half-width shelves with IR CO_2 sensor		–	–	51026556	51026533
O_2 control Vol-% 5..90 incl. 6 gas tight inner doors and half-width shelves with IR CO_2 sensor		–	–	51026557	51026582
Accessories		**Cat. No. HERAcell 150i**		**Cat. No. HERAcell 240i**	
3 gas tight inner doors[3]	for segmented access for stainless steel/copper incubator	50115496		–	
6 gas tight inner doors[3]	for segmented access for stainless steel/copper incubator	–		50115495	
Roller bottle system	One level (replacing one shelf)	–		51900572	
	Two levels (replacing two shelves)	–		51900573	
	Three levels (replacing three shelves)	–		51900574	
	Four levels (replacing three shelves)	–		51900614	
	Factory installed outlet option for field retrofit of up to 4 levels (comes with 3 shelves)	–		51900732	
USB interface for data documentation (factory installed)		51900930		51900930	
Security door lock		50072430		50072430	
Support frame	200 mm / 7.9 in (without castors)	50051376		50065754	
Support frame	185 mm / 7.3 in (with castors, height incl. castors)	50057161		50067224	
Support frame	780 mm / 30.7 in (without castors)	50051436		50065753	
Support cart with drawers/castors	780 mm / 30.7 in, three drawers, with four castors	50056459		50081774	
Castor set	100 mm / 3.9 in, four castors for support frames				
	no. 50051376, 50051436, 50065753 and 50065754	50052528		50052528	
Stack adapter	for 240i unit: for stacking two HERAcell 240	–		50068677	
HERAtray, stainless steel	shelf tray 1/2 width; two pieces	50058672		–	
HERAtray, stainless steel	shelf tray 1/3 width; three pieces	50051913		50065805	
HERAtray, stainless steel	shelf tray 1/4 width, four pieces	–		50065807	
HERAtray, stainless steel	shelf tray 1/2 width for half-width shelf, four pieces	–		50065809	
HERAtray, all copper	shelf tray 1/2; two pieces	50061050		–	
HERAtray, all copper	shelf tray 1/3 width; three pieces	50051914		50065806	
HERAtray, all copper	shelf tray 1/4 width, four pieces	–		50065808	
HERAtray, all copper	shelf tray 1/2 width for half-width shelf, four pieces	–		50065810	
Additional shelf, full-width	stainless steel, incl. two support bars	50051909		50065793	
Additional shelf, full-width	stainless steel, reinforced, incl. two support bars	–		50077367	
Additional shelf, half-width	stainless steel, incl. two support bars	–		50065795	
Additional shelf, full-width	copper, incl. two support bars	50051910		50065794	
Additional shelf, full-width	copper, reinforced, incl. two support bars	–		50077365	
Additional shelf, half-width	copper, incl. two support bars	–		50065796	
IR-CO_2 gas tester	120 - 240 VAC	50060283		50060283	
	five spare inlet port filters	50060287		50060287	
	IrDa computer interface and cable (incl. PM-COM Software)	50060289		50060289	

[1] Standard equipment includes air-jacket heating, ContraCon decontamination routine, right hinged door.

[2] Additional Configurations are available as special orders.

[3] Field installed. Without inner glass door. Our recommendation: apply 6 gas tight inner doors only in combination with half-width shelves or HERAtrays.

www.thermo.com/incubators

North America: USA/Canada +1 866 984 3766
Europe: Austria +43 1 801 40 0, Belgium +32 2 482 30 30, France +33 2 2803 2000, Germany national toll free 08001-536 376, Germany international +49 6184 90 6940, Italy +39 02 02 95059 434-254, Netherlands +31 76 571 4440, Nordic countries +358 9 329 100, Russia/CIS +7 (812) 703 42 15, Spain/Portugal +34 93 223 09 18, Switzerland +41 44 454 12 12, UK/Ireland +44 870 609 9203
Asia: China +86 21 6865 4588 or +86 10 8419 3588, India +91 22 6716 2200, Japan +81 45 453 9220, Other Asian countries +852 2885 4613
Countries not listed: +49 6184 90 6940 or +33 2 2803 2000

BRO-LECO2HC-US-0708

Thermo SCIENTIFIC

Thermo Scientific Heracell i CO_2 Incubators Oxygen Control

Precise environmental control for O_2-sensitive cell lines

Available in the same sizes and feature sets as the standard Heracell i incubators, the Heracell i with oxygen control delivers enhanced cell viability while stimulating cell behaviors that are more predictive of the *in vivo* environment.

- **FDA 510k registration for use with human patient samples**
- **Unsurpassed performance for culturing primary cells, including stem cells**
- **Ideal for advanced culturing, cancer research and IVF applications**

Flexible ranges of O_2 control

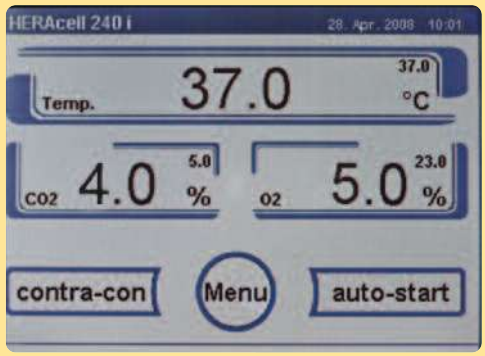
Select 1 - 21% for control at physiological or hypoxic levels, or 5 - 90% for added research flexibility and hyperoxic studies.

Advanced O_2 Monitoring

Our maintenance-free zirconia oxide sensor technology is calibrated automatically (auto-cal) and remains in place even during ContraCon high temperature disinfection routines to simplify cleaning.

Exclusive iCAN Touch-Screen Display

O_2 data can be conveniently selected, monitored and displayed, along with other operational parameters, with quick access to important trending data, to optimize your results.

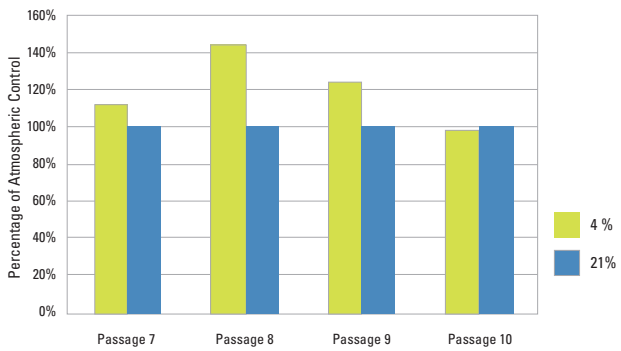


Innovative Design

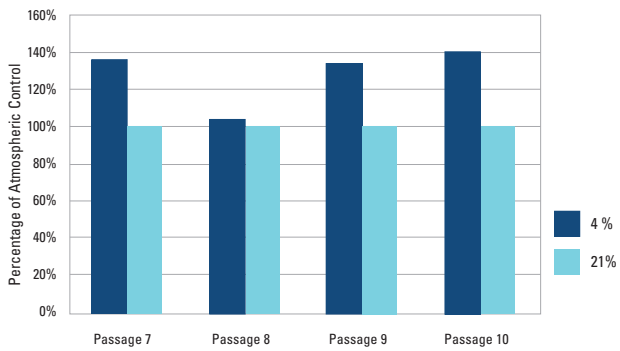
Speeds Recovery Time, Optimizes Cost

Unique gas-tight segmented inner door assembly, enables access to selected sections of the chamber without disturbing the entire environment to minimize recovery time, contamination risk and operational costs.

Precisely Controlled Oxygen Levels Benefit Stem Cell Cultures



Growth Comparison of Adipose Derived MSCs
Hypoxic (4% O_2) vs Atmospheric (21% O_2)
Viable cell counts expressed as percentage of control.



Growth Comparison of Bone Marrow Derived MSCs
Hypoxic (4% O_2) Vs atmospheric (21% O_2)
Viable cell counts expressed as percentage of control.

Reference: Wernerspach, D. , Morris, J. and Wright, M. Oxygen: Too much of a good thing. Laboratory Equipment. November 2009

THERMO SCIENTIFIC HERACELL 150i AND 240i TRI-GAS

Thermo Scientific Model No.	Description	Interior	Sensor	Volume	Voltage
51026410	**Heracell 150i, Tri-gas incubator O_2 control range 1-21%, with 3 door inner glass door assembly**	stainless steel	TC	5.3 cu. ft. (150 L)	120V/50/60 Hz
51026408		100% pure copper			
51026402		stainless steel	IR		
51026537		100% pure copper			
51026529	**Heracell 150i, Tri-gas incubator, O_2 control range 5-90%, with 3 door inner glass door assembly**	stainless steel	TC		
51026536		100% pure copper			
51026423	**Heracell 240i, Tri-gas incubator, O_2 control range 1-21%, with 6 door inner glass door assembly and 1/2 width shelves**	stainless steel	TC	8.4 cu. ft. (240 L)	
51026422		100% pure copper			
51026556		stainless steel	IR		
51026533		100% pure copper			