Incubators

B.O.D., CO2, Humidified, Shaking





Sheldon Manufacturing, Inc. is an ISO 9001:2008 certified manufacturer of high quality and innovative constant temperature equipment to the global market. Major product lines include incubators, humidity test chambers, ovens, water and bead baths, and anaerobic chambers for the life science, pharmaceutical, biomedical, environmental and industrial markets. Founded in 1970, Sheldon utilizes over 40 years of manufacturing expertise to aggressively pursue new product opportunities that add value to our customers' portfolio. Sheldon markets a complete line of products under the SHEL LAB and Lab Armor brands, which compliment our OEM manufacturing capabilities.

Contact us: US toll free - 1 (888) 227-1410 or (503) 640-3000

Visit our websites at www.shellab.com and www.labarmor.com.







SHEL LAB Microbiological Incubators Laboratory Series Air Jacket Economy Large Capacity	Pg. 4-8 Pg. 5 Pg. 6 Pg. 7
SHEL LAB Refrigerated Incubators Under Counter Large Capacity Peltier Cooled Diurnal Plant Chamber Drosophila Chamber	Pg. 9-13 Pg. 9 Pg. 10 Pg. 11 Pg. 12 Pg. 13
SHEL LAB CO2 Incubators Water Jacket Economy Water Jacket Series High Heat Decontamination Air Jacket Series Air Jacket Large Capacity	Pg. 14-19 Pg. 15 Pg. 16 Pg. 17 Pg. 18 Pg. 19
SHEL LAB Humidified CO2 Incubators	Pg. 20
SHEL LAB Humidity Cabinets Test Chambers Refrigerated Test Chambers	Pg. 21-22 Pg. 21 Pg. 22
SHEL LAB Shaking Incubators Mini Shaker Bench Model Floor Model Large Capacity	Pg. 23-27 Pg. 24 Pg. 25 Pg. 26 Pg. 27

Microbiological Incubators



SHEL LAB General Purpose Incubators are the ideal solution for industrial protocols, biological research and environmental studies that demand accurate and repeatable results. Their best in class temperature uniformity is usually found only in more expensive, application specific incubators. SHEL LAB General Purpose Incubator's wide temperature and size range make them a perfect solution for any lab.

Applications include:

- Biochemical Studies
- Hematological Studies
- Bacterial Culturing and Research
- Microbiological Determinations
- Pharmaceutical Stability Assays
- Food Processing Quality Control
- Large Scale Roller Apparatus Applications



Microbiological Incubators Laboratory Series



Heated doors and a unique air jacket design achieve precise temperature uniformity. An independent secondary temperature controller offers the added safety and security of over temperature production.

The laboratory incubator series models include a sealed, inner glass door which provides a view into the chamber without compromising samples or the chamber environment. Stainless steel panels and doors reduce contamination, provide durability and allow for easy cleaning.



Adjustable, No Tip Shelf Design

SMI6





Outlet

Precise Temperature Control -**Superior Uniformity**

- Independent Over Temperature Thermostat
- Over Temperature Alarm
- Temperature Uniformity +/-0.35°C at 37°C
- Temperature Range Ambient +8°C to 70°C



Throughwall **Access Port**





SMI12



		Model Number					
General Purpose Laboratory Incubators		SMI2	SMI7	SMI11	SMI6	SMI12	
Laboratory Incubators	Details	Bench Top	Under Counter	Double Doors	Floor Model	Dual/Stacked	
Exterior Dimensions	Inches	22.0 x 22.0 x 27.3	30.0 x 31.8 x 32.3	42.5 x 27.0 x 38.0	25.5 x 27.3 x 38.0	25.5 x 27.3 x 75.8	
(wxdxh)	cm	55.9 x 55.9 x 66.1	76.2 x 80.7 x 82.0	108 x 68.6 x 96.6	64.8 x 69.3 x 96.6	64.8 x 69.3 x 192.5	
Chamber Dimensions (wxdxh)	Inches	15.0 x 15.0 x 15.0	23.7 x 24.0 x 19.7	36.2 x 20.0 x 25.7	19.2 x 20.0 x 25.7	19.2 x 20.0 x 25.7	
	cm	38.1 x 38.1 x 38.1	60.3 x 60.9 x 50.2	92.0 x 50.8 x 65.4	48.9 x 50.8 x 65.4	48.9 x 50.8 x 65.4	
Incubator Chamber Capacity	cu ft	2	6.5	10.8	5.7	5.7 (each)	
	L	56	184	306	162	162 (each)	
Number of Shelves	Included	2	2	6	3	3 (each)	
	Maximum	6	9	12	12	12 (each)	

Microbiological Incubators

Air Jacket Economy Line



Precise Temperature Control - Superior Uniformity

- Temperature Uniformity +/- 0.5°C at 37°C
- Temperature Range Ambient + 5.0°C to 70°C

SHEL LAB general purpose incubators deliver a degree of temperature uniformity usually found only in more expensive, application specific models. Efficient gravity convection heating is supplied by economical low watt density heating elements. The heating element has a unique shield to protect against spills inside the chamber.

The rigidly constructed chamber is insulated with 2" of industrial fiberglass, minimizing heat loss and maximizing temperature uniformity.

The hydraulic controller is dependable and regulates the chamber temperature. Incubator door, with its positive door latch, is tightly sealed with a 1/2" silicone gasket. Glossy white interior enables easy contamination detection.

Model SMI1EM has a microprocessor based controller, for greater temperature accuracy.



General Purpose	Model Number					
Economy Incubators	Details	SMI1E	SMI1EM	SMI2E	SMI4E	SMI6E
Exterior Dimensions	Inches	16.8 x 17.8 x 22.3	16.8 x 17.8 x 22.3	21.5 x 18.0 x 25.5	21.0 x 24.5 x 31.5	24.5 x 25.0 x 36.5
(wxdxh) cm	cm	42.7 x 45.2 x 56.6	42.7 x 45.2 x 56.6	54.6 x 45.7 x 64.8	53.4 x 61.2 x 80.0	62.3 x 63.5 x 92.8
Chamber Dimensions	Inches	12.0 x 12.0 x 14.0	12.0 x 12.0 x 14.0	17.0 x 12.0 x 17.0	16.0 x 19.0 x 22.0	20.0 x 19.0 x 28.0
(wxdxh)	cm	30.4 x 30.4 x 35.5	30.4 x 30.4 x 35.5	43.1 x 30.4 x 43.1	40.6 x 48.2 x 55.8	50.8 x 48.2 x 71.1
Incubator Chamber	cu ft	1	1	2	4	6
Capacity -	L	28	28	56	113	170
Number of Shelves	Included	2	2	2	2	2
	Maximum	6	6	6	6	6

All specifications are determined by using average values on standard equipment at an ambient temperature of 25°C (77°F) and line voltages within +/-10% of unit type (115V/230V). Temperature specifications follow DIN 12880 methodology.

We reserve the right to change specifications at any time.

<u>Microbiological Incubators</u> Large Capacity





Precise Temperature Control - Superior Uniformity

- Independent Over Temperature Thermostat
- Over Temperature Alarm
- Temperature Uniformity +/-0.8°C at 37°C
- Temperature Range Ambient +8°C to 70°C

OPTIMIZED FLOOR SPACE

Large capacity incubators provide 30.8 & 38.6 cu.ft. chamber capacities while minimizing the amount of floor space used. Both models incorporate our microprocessor controller to achieve precise temperature uniformity. An independent, secondary temperature controller offers the added security of over temperature protection. The chamber floors are reinforced to support roller apparatus or shakers. Both models are supplied with six shelves capable of supporting the weight of benchtop instruments.

FEATURES

- Four (4) Interior Electrical Outlets
- Prewired Panel for Chart Recorder
- Tempered Glass Viewing Window

2 Year Limited Warranty!

Large Capacity/Reach-In		Model	Number
General Purpose Incubators	Details	SMI31	SMI39
Exterior Dimensions	Inches	38.5 x 34.0 x 75.3	41.5 x 34.8 x 87.5
(wxdxh)	cm	97.8 x 86.4 x 191.2	105.4 x 88.3 x 222.3
Chamber Dimensions (wxdxh)	Inches	32.2 x 26.0 x 63.5	35.0 x 26.0 x 73.2
	cm	81.9 x 66.0 x 161.2	88.9 x 66.0 x 186.0
Incubator Chamber Capacity	cu ft	30.8	38.6
	L	872	1092
Interior Outlet	Number	110V-4/ 220V-4	110V-4 / 220V-4
Access Port	Number	1	1
Number of Shelves	Included	6 (16 max)	6 (20 max)

Refrigerated Incubators



SHEL LAB Refrigerated Incubators (often called B.O.D. Incubators or Low Temperature Incubators) are commonly used for applications such as B.O.D. Determinations, Plant and Insect Studies, Fermentation Studies, and Bacterial Culturing.

Units are equipped with a hermetically-sealed compressor, a circuit breaker to protect from electrical overload, and

an easy-to-clean, fully insulated chamber. Gentle, continuous forced-air circulation ensures temperature uniformity and reproducible test conditions.



BOD Incubator Applications

- APHA Method at 20°C
- Plant Cell Growth
- Fermentation Studies
- Bacterial Culturing
- Mycology Studies

BOD Application

Biochemical Oxygen Demand (B.O.D.) incubators enable end users to determine levels of organic matter and nitrogen in wastewater samples. This wastewater must be effectively measured for contaminates, treated and then released back into the environment without posing a threat to the water supply system. Increased enforcement by government regulatory agencies charged with monitoring air and water quality has forced a greater number of organizations to actively test and treat their wastewater. B.O.D. incubators facilitate the storage of wastewater samples, and the SHEL LAB Low Temperature Incubators accommodate from 62 to 345 BOD bottles.

Refrigerated Incubators Under Counter





Precise Temperature Control - Superior Uniformity

- Independent Over Temperature Thermostat
- Over Temperature Alarm
- Temperature Uniformity +/- 0.5°C at 20°C
- Temperature Range 0°C to 45°C at 20°C
 Ambient

The SRI3 space-saving low temperature incubator is ideal for small volume workloads and meets APHA specifications for Biochemical Oxygen Demand (B.O.D.) analysis.

Units are equipped with a hermetically-sealed compressor, a circuit breaker to protect from electrical overload, and an easy-to-clean fully insulated chamber that is corrosion-resistant. Gentle, continuous forcedair circulation ensures temperature uniformity and reproducible test conditions. Each unit also includes an independent over temperature safety controller, two shelves (adjustable in two inch increments), and a one amp interior outlet to allow the use of shakers, stirrers, roller bottles or other apparatus. This unit has a steel exterior with welded seams and corners and a double-coated, baked enamel finish. It is supplied with adjustable leveling feet and a condensation drip tray.



Refrigerated		Model Number
Incubators	Details	SRI3
Exterior Dimensions	Inches	24.0 x 21.0 x 33.8
(wxdxh)	cm	61.0 x 53.4 x 85.8
Chamber Dimensions (wxdxh)	Inches	16.0 x 12.0 x 21.5
	cm	40.6 x 30.4 x 54.6
Incubator Chamber	cu ft	2.4
Capacity	L	68
Interior Outlet	Number	110V -1 / 220V-2
Bottle Capacity	Number	62
Number of Shelves	Included	2

Refrigerated Incubators

Large Capacity



The SHEL LAB Low Temperature Incubators have a temperature range of 20°C degrees below ambient to 45°C. The Refrigerated Incubators also include an independent over temperature safety controller, adjustable shelves in two inch increments and a one amp interior outlet to allow the use of shakers, stirrers, roller bottles or other apparatus.

Precise Temperature Control - Superior Uniformity

- Independent Over Temperature Thermostat
- Over Temperature Alarm
- Temperature Uniformity +/- 0.5°C at 20°C
- Temperature Range 0°C to 45°C at 20°C Ambient

2 Year
Limited
Warranty!

		Madal Noodban	
Refrigerated Incubators	Details	Model Number SRI20	,
Exterior Dimensions	Inches	34.5 x 34.5 x 77.5	
(wxdxh)	cm	87.7 x 87.7 x 196.9	
Chamber Dimensions	Inches	27.0 x 23.0 x 56.5	
(wxdxh)	cm	68.5 x 58.4 x 143.5	
Incubator Chamber	cu ft	20.3	
Capacity	L	574	
Interior Outlet	Number	110V-1 / 220V -2	
Bottle Capacity	Number	345	
Number of Shelves	Included	4	

^{**}All specifications are determined by using average values on standard equipment at an ambient temperature of 25°C (77°F) and line voltages within +/-10% of unit type (115V/230V). Temperature specifications follow DIN 12880 methodology. We reserve the right to change specifications at any time.

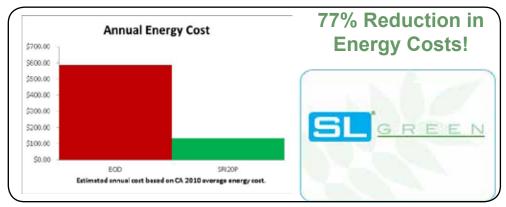
Refrigerated Incubators

Peltier Cooled Series





Innovative peltier cooling technology, eliminates the need for a refrigeration compressor in the peltier cooled series. These units use 78% less power than alternative models and reduce room air conditioning loads by 75%. They also include 75 pound capacity shelves, which eliminates sagging. These incubators meet APHA specifications for Biochemical Oxygen Demand (B.O.D.) and include a mechanical convection system to ensure even air distribution, digital temperature set controller, over temperature limit control, and a digital temperature display.





Precise Temperature Control - Superior Uniformity

- Independent Over Temperature Thermostat
- Over Temperature Alarm
- Temperature Uniformity +/- 0.5°C at 20°C
- Temperature Range 15°C to 40°C at 20°C Ambient



		Model Number			
BOD Incubators		SRI6P	SRI2OP		
	Details	Under Counter	Large Capacity		
Exterior Dimensions	Inches	30.0 x 31.5 x 33.5	30.0 x 31.5 x 69.5		
(wxdxh) -	cm	76.2 x 80.1 x 85.1	76.2 x 80.1 x 176.6		
Chamber Dimensions (wxdxh)	Inches	25.5 x 24.0 x 18.5	25.5 x 24.0 x 54.5		
	cm	64.7 × 60.9 × 46.9	64.7 × 60.9 × 138.4		
Incubator Chamber Capacity	cu ft	6.5	19.3		
	L	185	546		
Interior Outlet	Number	120V -1 / 230V-2	120V-1 / 230V -2		
Bottle Capacity	Number	120	300		
Number of Shelves	Included	2	5		

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We reserve the right to change specifications at any time.

Refrigerated Incubators Diurnal Plant Chamber



- LED Display of Set point and Chamber Temperature
- High and Low Limit Temperature Protection
- Day/Night Light and Temperature Control
- Fan Assisted/Forced-Air Circulation
- Hermetically Sealed Compressor
- Interior Electrical Outlet

SHEL LAB Diurnal growth chambers are designed for studies requiring day and nighttime simulation. This unit features dual-program selector dials, which allows control of two temperature conditions and an ON/OFF illumination cycle relative to the program selected. Each system operates independently allowing for simulation of a diurnal cycle, such as an eight hour day cycle of 30°C with light followed by a sixteen hour night cycle of 18°C without light. Forced air circulation ensures the most reproducible test conditions. The chamber air is gently and continuously circulated at a rate that ensures temperature uniformity of all test samples.

The unit is equipped with a hermetically-sealed compressor and an independent over temperature safety controller. In addition, a one amp interior outlet allows use of shakers, stirrers, roller bottles or other apparatus. This chamber is ideal for plant growth studies.

Precise Temperature Control - Superior Uniformity

- Independent Over Temperature Thermostat
- Temperature Range 0°C to 45°C at 20°C Ambient
- Temperature Uniformity +/- 0.5°C at 20°C



Diurnal Plant Chamber	Model Number		
Diumat Flant Chamber	Details	SRI21D	
Exterior Dimensions	Inches	34.5 x 34.5 x 77.5	
(wxdxh)	cm	87.7 x 87.7 x 196.9	
Chamber Dimensions	Inches	27.0 x 23.0 x 56.5	
(wxdxh)	cm	68.5 x 58.4 x 143.5	
Incubator Chamber Capacity	cu ft	20.3	
	L	574	
Interior Outlet	Number	110V - 1 / 220V - 2	
Number of Shelves	Included	4	
Bottle Capacity	Number	317	
		·	

Refrigerated Incubators Drosophila Chamber





Precise Temperature Control - Superior Uniformity

- Independent Over Temperature Thermostat
- Temperature Range 0°C to 29°C

The SHEL LAB Drosophila specific low temperature incubator that takes advantage of the range of temperatures acceptable in Drosophila culture allowing the condensing coil adequate cycling time, thus avoiding ice build-up. This incubator addresses all of the major performance issues associated with other fly-specific incubators on the market.

This incubator functions within the range of temperature preferred by fruit flies. The elements only activate if the chamber temperature goes below the programmed lowest acceptable level. The compressor will shut off and rest while the chamber temperature slowly rises in response to a door opening or heat from fan or optional light. This results in a longer lasting unit with less maintenance, reduced heat output and less noise from the compressor.

- Microprocessor controlled interior light mimics diurnal cycles that foster breeding
- Conformal coated refrigeration coils
- Robust, programmable heating and cooling control

		Model Nu	ımber
Drosophila Chamber		SRI21F	SRI21FV
	Details	Drosophila	Viewing Door
Exterior Dimensions	Inches	34.5 x 34.5 x 77.5	34.5 x 34.5 x 77.5
(wxdxh)	cm	87.7 x 87.7 x 196.9	87.7 x 87.7 x 196.9
Chamber Dimensions	Inches	27.0 x 23.0 x 56.5	27.0 x 23.0 x 56.5
(wxdxh)	cm	68.5 x 58.4 x 143.5	68.5 x 58.4 x 143.5
Incubator Chamber Capacity	cu ft	20.3	20.3
	L	574	574
Interior Outlet	Number	110V - 1 / 220V - 2	110V - 1 / 220V - 2
Number of Shelves	Included	8	8

CO₂ Incubators

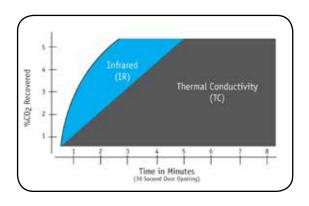


CO2 Incubator Applications

- Cell and Tissue Culture
- Immunology
- Genetic Engineering
- Protein Synthesis
- Virology
- Neurology

Infrared (IR) CO2 Sensors

For the fastest CO₂ recovery and most stable performance, this series features IR sensors.



- Pharmacology
- In vitro Fertilization
- **Human Vaccines**
- **Veterinary Vaccines**
- Carcinogenicity Testing
- Monoclonal Antibodies

Contamination Control

Extensive use of copper in the CO2 sample port, heated CO2 feed line, housing of the patented HEPA filtration system, and humidity pan with a copper SL decontamination token, adds reassurance that foreign microbes will not affect test results. Cleanup is a breeze with the all stainless steel chamber, and autoclavable door gasket.

Optional copper shelves are available for most units for even

more contamination control.

copper shelving option



CO2 IncubatorsWater Jacket Economy





The SHEL LAB economy incubator was designed and manufactured to accommodate tight budgets, while maintaining the fundamental needs of quality and precision. These units have PID microprocessor controllers, a heated outer door and a tempered-glass inner door. They provide exceptional temperature uniformity, while minimizing cold spots that lead to condensation and ultimately, contamination. Although they do not have a humidity display, the extremely stable temperature environment maintains constant humidity through evaporation at up to 95%.

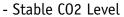
The audible/visual alarms for temperature and CO2 respond to out-of-tolerance conditions. They offer an independent overtemperature safety control to protect samples from overheating, and an optional CO2 tank switch/alarm to prevent prematurely exhausting the gas supply.

Precise Temperature Control - Superior Uniformity

- Independent Over Temperature Thermostat
- Over Temperature & CO2 Alarm
- Inner Glass Viewing Door
- Temperature Uniformity +/- 0.2°C at 37°C
- Temperature Range Ambient + 8°C to 60°C
- CO2 Range 0 20%
- CO2 Recovery Rate < 5 Minutes
- Relative Humidity Up to 80%

Tissue & Cell Culture Applications

These incubators control three essential variables related to replicating the mammalian environment;



- Controlled Temperature
- Relative Humidity (RH)



copper shelving option

We stand behind our product quality, ShelLab CO₂ Incubators come with the most extensive warranties in the industry.

5 years parts (labor included in the US)

- 7 years IR sensor
- Lifetime water jacket chamber

5 Year Limited Warranty!

			Model Number
Water Jacket CO2 Incubators		SC06WE	SC012WE
col incubators	Details	Floor Model	Dual/Stacked Chambers
Exterior Dimensions	Inches	26.0 x 26.3 x 40.3	26.0 x 25.8 x 51.0
(wxdxh)	cm	66.0 x 66.7 x 102.3	66.1 x 65.5 x 203.2
Chamber Dimensions (wxdxh)	Inches	20.2 x 19.7 x 25.2	20.5 x 20.0 x 25.5 each
	cm	51.4 x 50.1 x 64.1	52.0 x 50.8 x 64.7 each
Incubator Chamber Capacity	cu ft	6	12 (6 each)
	L	165	342
Number of Shelves	Included	3 (16 Max)	3 each chamber (16 Max)

CO2 Incubators

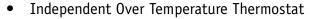
Water Jacket Series



This series of CO2 Incubators offer dependable Infrared (IR) CO2 Sensor control and are ideal for sensitive tissue and cell culture applications. They provide the benefits of contamination control and uncompromising temperature uniformity for even the most demanding incubations.

Precision is easily maintained with push-button calibration of both temperature and CO2, and audio/visual alarms that signal high/low temperature and CO2 conditions. Modular controls and backup systems ensure confidence for incubating valuable samples, providing the dependable assurance you expect from a SHEL LAB incubator.

Precise Temperature Control -**Superior Uniformity**



- Over Temperature & CO2 Alarm
- Inner Glass Viewing Door
- Temperature Uniformity +/- 0.2°C at 37°C
- Temperature Range Ambient + 8°C to 60°C
- CO2 Range 0 20%
- Infrared (IR) CO2 Sensor Accuracy +/- 0.1%
- CO2 Recovery Rate < 5 Minutes
- Relative Humidity Up to 95%



Patented Copper Coated HEPA Filter

A "Bacteriostatic" copper cage to trap particulate matter and reduce potential for chamber contamination. This filter removes 99.97% of all airborne microbes and isolated microbes 0.3 microns or larger.

Year

Limited

Warranty

We stand behind our product quality, ShelLab CO2 Incubators come with the most extensive warranties in the industry.

7 years IR sensor

Lifetime water jacket chamber

5 years parts (labor included in the US)

Water Tester		Model Number			
Water Jacket CO2 Incubators		SC02W	SC05W	SC010W	
cor mediators	Details	Bench Top	Floor Model	Dual/Stacked Chambers	
Exterior Dimensions	Inches	21.0 x 22.5 x 27.0	26.0 x 25.5 x 40.3	26.0 x 25.5 x 80.6	
(wxdxh)	cm	53.4 x 57.2 x 68.6	66.1 x 64.8 x 102.3	66.1 x 64.8 x 204.6	
Chamber Dimensions	Inches	15.7 x 15.7 x 10.2	19.2 x 19.7 x 23.0	19.2 x 19.7 x 23.0 each	
(wxdxh)	cm	40.0 x 40.0 x 26.0	48.9 x 50.1 x 58.4	48.9 x 50.1 x 58.4 each	
Incubator Chamber Capacity	cu ft	1.5	5	10 (5 each)	
	L	42	143	286	
Number of Shelves	Included	3	3	3 each	

CO2 Incubators

High Heat Decontamination





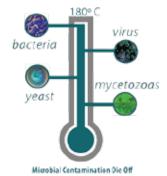
The model SCO6AD features a dry heat decontamination cycle, that maintains 180°C for 120

minutes. This industry best time and temperature relationship satisfies all global standards for decontamination.

This is decontamination at its fastest easiest and most effective - it is not necessary to remove the IR CO₂ sensor prior to activating the decontamination process and we feature the shortest cycle time on the market. This is a more convenient approach and eliminates potential damage to the sensitive IR sensor.

Other features of the SCO6AD include a USB interface for software communication, precise temperature control microprocessor and an independent over temperature safety controller.

The SHEL LAB SCO6AD is designed to stop microbial



contamination caused by mycetozoa, yeast, viruses, and bacteria and the range of other microorganisms that thrive in incubator environments.

We stand behind our product quality, Warranty Shel Lab CO₂ Incubators come with the most extensive warranties in the industry.

- 5 years parts (labor included in the US)
- 7 years IR sensor

		Model Number
Incubators, Infrared (IR) CO ₂ Sensor	Details	SC06AD
Exterior Dimensions	chesDe	28.8 x 30.3 x 39.3
(wxdxh)	cm	73.1 x 76.8 x 99.7
Chamber Dimensions	Inches	20.2 x 20.0 x 25.5
(wxdxh)	cm	51.4 x 50.8 x 64.7
Incubator Chamber	cu ft	5.9
Capacity -	L	167
CO ₂ Range	%	0-20%
CO ₂ Sensor Accuracy	at 5%	+/-0.1%
CO ₂ Recovery Rate	to 5%	<5 Minutes to 95% of Setpoint
Relative Humidity	at 37°C	Up to 95%
Temperature Range	Celsius	Ambient +5°C to 60°C
Temperature Uniformity	Celsius	+/- 0.25°C at 37°C
Over Temperature Protection	Yes/No	Yes
Temperature Alarm	Yes/No	Yes
CO ₂ Alarm	Yes/No	Yes
Number of Shelves	Included	3
Aliti		

Al specifications are determined by using average values on standard equipment at an ambient temperature of 25°C (77°F) and line voltages within +/-10% of unit type (115V/230V). Temperature specifications follow DIN 12880 methodology.

We reserve the right to change specifications at any time.

CO2 IncubatorsAir Jacket Series



The air jacket series of CO2 Incubators offer dependable Infrared (IR) CO2 Sensor control and are ideal for sensitive tissue and cell culture applications. They provide the benefits of contamination control and uncompromising temperature uniformity for even the most demanding incubations.

Precision is easily maintained with push-button calibration of both temperature and CO2, and audio/visual alarms that signal high/low temperature and CO2 conditions. Modular controls and backup systems ensure confidence for incubating valuable samples, providing the dependable assurance you expect from a SHEL LAB incubator.

Patented Copper Coated HEPA Filter

A "Bacteriostatic" copper cage to trap particulate matter and reduce potential for chamber contamination. This filter removes 99.97% of all airborne microbes and isolated microbes 0.3 microns or larger.





- Over Temperature & CO2 Alarm
- Inner Glass Viewing Door
- Temperature Uniformity +/- 0.25°C at 37°C
- Temperature Range Ambient + 8°C to 60°C
- CO2 Range 0 20%
- Infrared (IR) CO2 Sensor Accuracy +/- 0.1%
- CO2 Recovery Rate < 5 Minutes
- Relative Humidity Up to 95%

We stand behind our product quality, ShelLab CO₂ Incubators come with the most extensive warranties in the industry.

Year

Limited

- 5 years parts (labor included in the US)
- 7 years IR sensor

Copper Shelf Options	Part Number
Copper Shelf Kit (3 Shelves, 6 Slides)	89409-632
Copper Shelf Slides	89409-594
Copper Shelf	89409-592

		Model Num	ber
Air Jacket CO2 Incubators		SC05A	SCO10A
COL INCUBATORS	Details	Standard	Dual/Stacked Chambers
Exterior Dimensions	Inches	27.3 x 28.0 x 37.8	27.3 x 28.0 x 75.6
(wxdxh)	cm	69.3 x 71.2 x 95.9	69.3 x 71.2 x 191.8
Chamber Dimensions (wxdxh)	Inches	20.5 x 19.7 x 21.5	20.5 x 19.7 x 21.5 each
	cm	52.0 x 50.1 x 54.6	52.0 x 50.1 x 54.6 each
Incubator Chamber Capacity	cu ft	5	10 (5 each)
	L	142	284
Number of Shelves	Included	3	3 each
•		•	·

CO2 IncubatorsAir Jacket Large Capacity





- Independent Over Temperature Thermostat
- Temperature Uniformity +/- 0.5°C at 37°C
- Temperature Range Ambient + 8°C to 60°C
- CO₂ Range 0 20%
- Infrared (IR) CO2 Sensor Accuracy +/- 0.1%
- CO₂ Recovery Rate < 5 Minutes

These units are well suited for roller bottle apparatus and high-volume tissue culture applications and are ideal for cell harvesting.

This large capacity incubator maximizes laboratory space in a convenient floor model design. Its chamber floor is specifically designed for easy movement of roller bottle apparatus by use of a flip-out ramp. Supplied with four one amp interior electrical outlets and gentle mechanical air convection that ensures excellent temperature uniformity, and eliminates cold spots. An infrared system accurately controls CO2 levels, provides fast CO2 recovery after door openings, and is not affected by temperature or humidity. This unit is supplied with six stainless steel shelves, which are adjustable on 1/2 inch increments.

SHEL LAB reach-in CO2 incubators are available in 31 cu.ft., 40 cu.ft., and 58 cu.ft. sizes.



Air Jacket		Model Number			
CO2 Incubators	Details	SC031	SC040	SC058	
Exterior Dimensions	Inches	39.5 x 33.8 x 75.3	42.5 x 34.5 x 87.0	51.0 x 44.8 x 80.0	
(wxdxh)	cm	100.4 x 85.8 x 191.2	108.0 x 87.7 x 221	129.6 x 113.7 x 203.2	
Chamber Dimensions	Inches	32.7 x 26.0 x 63.0	35.0 x 26.0 x 75.5	43.0 x 34.5 x 67.5	
(wxdxh)	cm	83.1 x 66.0 x 160.0	88.9 x 66.0 x 191.7	109.2 x 87.6 x 171.4	
Incubator Chamber Capacity	cu ft	31	40	58	
	L	879	1125	1641	
Number of Shelves	Included	6	6	6	
Interior Outlet	Included	4	4	4	

Humidified CO2 Incubators



Precise Temperature Control - Superior Uniformity

Independent Over Temperature Thermostat

• Temperature Uniformity +/- 0.5°C at 37°C

• Temperature Range Ambient + 5°C to 50°C

CO2 Range 0 - 20%

• Infrared (IR) CO2 Sensor Accuracy +/- 0.1%

CO2 Recovery Rate < 5 Minutes

• Relative Humidity Up to 95%

Temperature & CO2 Alarms

SHEL LAB Model SCO26H, is the newest addition to the large capacity CO2 incubator line. This 26.1 cubic foot incubator features active humidity control up to 95%.

This unit has exceptional CO2 and temperature uniformity, along with a user controllable humidity system that is more accurate and responsive to door openings than a traditional water pan humidity system.

The SCO26H humidity system provides less evaporation of culture media and eliminates a potential source for contamination. Contamination is minimized by the heated glass door and an antimicrobial copper drain.

The triple-paned glass door allows for easy viewing of samples without having to open the incubator door, so samples can thrive in the stable environment within the chamber.

A gentle horizontal airflow heating system is used for quick temperature recovery after door openings. This airflow system obtains superior temperature control with minimal drying or disturbance of sample conditions. The CO2 is accurately controlled with an IR sensor, providing overall CO2 stability.



Humidified	Model Number		
CO2 Incubators	Details	SCO26H	
Exterior Dimensions	Inches	39.3 x 37.0 x 78.5	
(wxdxh)	cm	99.7 x 94.0 x 199.4	
Chamber Dimensions	Inches	30.7 x 26.0 x 56.5	
(wxdxh)	cm	78.1 x 66.0 x 143.5	
Incubator Chamber Capacity	cu ft	26.1	
	L	740	
Number of Shelves	Included	6	

Humidity Chambers **SHELOLAB**





SHEL LAB Humidity Test Cabinets provide a controlled environment for a wide range of industrial and biotechnology testing applications. This line is designed to duplicate a natural condition, which allows testing the limitations of a sample when exposed to various temperature and moisture fluctuations.

Microprocessor controls maintain temperature and humidity in approximate ranges of 35-70°C and 40-95%RH, respectively. An extra large water jacket minimizes condensation inside the chamber and supports optimum temperature uniformity.

Humidity is controlled by utilizing a low-pressure water vapor generator injecting saturated water vapor into the recirculating air duct. This process



Humidity	Model Number			
Cabinets	Details	Medium (SHC10)	Large (SHC28)	
Exterior Dimensions	Inches	44.3 x 32.8 x 57.0	42.5 x 37.0 x 85.0	
(wxdxh)	cm	112.4 x 83.2 x 144.8	108.0 x 94.0 x 215.9	
Chamber Dimensions	Inches	30.0 x 21.0 x 30.0	30.2 x 26.0 x 62.0	
(wxdxh)	cm	76.2 x 53.3 x 76.2	76.8 x 66.0 x 157.4	
Incubator Chamber	cu ft	10	28	
Capacity	L	309	799	
Temp. Range	Celsius	40°C to 70°C	Ambient +10°C to 70°C	
Temp. Uniformity	Celcsus	+/-0.5°C at 37°C	+/-0.5°C at 37°C	
Relative Humidity	Percent	Ambient + 10% to 95%	Ambient + 10% -to 95%	
Number of Shelves	Included	3	6	

All specifications are determined by using average values on standard equipment at an ambient temperature of 25°C (77°F) and line voltages within +/-10% of unit type (115V/230V). Temperature specifications follow DIN 12880 methodology.

We reserve the right to change specifications at any time.

Humidity Chambers

Refrigerated



SHEL LAB Humidity Test Cabinets provide a controlled environment for a wide range of industrial and biotechnology testing applications. This line is designed to duplicate a natural condition, which allows testing the limitations of a sample when exposed to various temperature and moisture fluctuations. These humidity test chambers incorporate a refrigeration system that dramatically increases the operational range of the cabinet

Microprocessor controls maintain temperature and humidity in approximate ranges of 10-70°C and 40-95%RH, respectively. An extra large water jacket minimizes condensation inside the chamber and supports optimum uniformity conditions.

A low-pressure water vapor generator, injecting saturated water vapor into the recirculating air duct,

controls chamber humidification. This process is preferable to steam generation because steam introduces additional heat to the chamber atmosphere, which then compromises temperature control.



Humidity		Model Number	
Cabinets Refrigerated	Details	Medium (SHC10R)	Large (SHC28R)
Exterior Dimensions	Inches	44.3 x 32.8 x 57.0	42.5 x 37.0 x 85.0
(wxdxh) -	cm	112.4 x 83.2 x 144.8	108.0 x 94.0 x 215.9
Chamber Dimensions	Inches	30.0 x 21.0 x 30.0	30.2 x 26.0 x 62.0
(wxdxh) -	cm	76.2 x 53.3 x 76.2	76.8 x 66.0 x 157.4
Incubator Chamber	cu ft	10	28
Capacity -	L	309	799
Temp. Range	Celsius	40°C to 70°C	10°C to 70°C
Temp. Uniformity	Celsius	+/- 0.5°C at 37°C	+/- 0.5°C at 37°C
Relative Humidity	Percent	Ambient + 10% to 95%	Ambient + 10% to 95%
Number of Shelves	Included	3	6

Shaking Incubators **SHELOLAB**



Shaking incubators, also know as environmental shakers, are often used for cell culturing, cell aeration, and solubility studies. In addition to stable temperature conditions, they use an orbital agitation at variable speeds to affect the growth of cell cultures.

This is why the SHEL LAB SI6 and SI6R Shaking Incubators have adjustable stroke lengths to accommodate various cells and applications. This gives flexibility in adjusting the speed and orbit to meet each application.

Most models come equipped with a universal shaking platform, independent alarms, and microprocessor

controls for temperature and speed adjustment.

Applications include:

- Cell Cultures
- Cell Aeration
- Microbiology
- **Increasing Solubility Rates**
- **Metabolism Studies**
- **Bacterial Cultures**
- Bacteriology

Full Selection of Accessories

The easily removable rotation platform is included with each SHEL LAB unit.





Flask holders and accessories can be arranged in several combinations on the platform according to what best suits your application.

Shaking Incubators

Mini Shaker

The SHEL LAB Mini Shaker is the most compact shaking incubator in its class. The standard platform (included) features a non-slip, rubber coated surface, ideal for tissue culture flasks, petri dishes and staining



Flask holders and accessories can be arranged in several combinations on the platform according to what best suits your application.



trays. A convenient universal magnetic platform is also available for use with Erlenmeyer flasks and test tube racks. The unique, magnetic attachment method is the easiest way to instantly change between flask clamps of different sizes.

A constant monitoring system verifies and maintains accuracy through the duration of the program. Sophisticated over-temperature and over-speed controls ensure long life, safety and sample integrity.

Precise Temperature Control - Superior Uniformity

- Independent Over Temperature Thermostat
- Over Temperature Alarm
- Orbital-Shaking Speed Alarm
- Digital Timer



Shaking		Model Number		
Incubator	Details	SSI2		
Exterior Dimensions	Inches	11.3 x 15.8 x 11.5		
(wxdxh)	cm	28.6 x 40.1 x 29.3		
Chamber Dimensions	Inches	11.0 x 13.2 x 8.0		
(wxdxh)	cm	27.9 x 33.6 x 20.3		
Incubator Chamber	cu ft	0.5		
Capacity	L	13		
Temperature Range	Celsius	5°C + Ambient to 60°C Increments of 0.1°C		
Temperature Uniformity	Celsius	+/- 0.25%		
Orbital-Shaking Range	RPM	30-300		
Timer Functionality	Minutes	1-999		

<u>Shaking Incubators</u> Bench Model



The SSI3 has a transparent hood that lifts up via a hydraulic system, so it can function in tight places. All of our shaking incubators feature stainless steel interiors which provide excellent durability and an easy-to-clean surface. Each unit has an easy-to-read LED display. The rotation platform is included with each unit and is self-centering for easy installation. The SSI3 includes a convenient, user adjustable counterbalance that provides optimal load flexibility





Precise Temperature Control Superior Uniformity

- Independent Over Temperature Thermostat
- Over Temperature Alarm
- Orbital-Shaking Speed Alarm
- Digital Timer
- Adjustable Orbit

2 Year Limited Warranty!

Chalden		Model Number
Shaking Incubator	Details	SSI3
Exterior Dimensions	Inches	22.0 x 25.5 x 28.0
(wxdxh)	cm	55.9 x 64.8 x 71.2
Chamber Dimensions	Inches	19.0 x 18.0 x 16.5
(wxdxh)	cm	48.2 x 45.7 x 41.9
Incubator Chamber	cu ft	3.3
Capacity	L	92
Temperature Range Celsius		8°C + Ambient to 60°C
Temperature Uniformity Celsius		+/-0.5°C at 37°C
Orbital-Shaking Range	RPM	30-400
Timer Functionality	Minutes	1-999

Shaking Incubators

Floor Model



Precise Temperature Control - Superior Uniformity

- Independent Over Temperature Thermostat
- Over Temperature Alarm
- Orbital-Shaking Speed Alarm

Versatile and Robust

Shaking incubators, also know as environmental shakers, are often used for cell culturing, cell aeration, and solubility studies. In addition to stable temperature conditions, they use an orbital agitation at variable speeds to affect the growth of cell cultures.

This is why the SHEL LAB Shaking Incubators have adjustable stroke lengths to accommodate various cells and applications. This gives flexibility in adjusting the speed and orbit to meet each application. The SSI5R-HS achieves speeds up to 850 RPMs.

All models come equipped with a universal shaking platform, independent alarms, and microprocessor controls for temperature and speed adjustment.





Chaldan	Model Number				
Shaking Incubators		SSI5	SSI5R	SSI5R-HS	
Incubators	Details	Floor	Floor Refrigerated	High RPM	
Exterior Dimensions	Inches	28.5 x 29.5 x 40.5	28.5 x 29.5 x 40.5	28.5 x 29.5 x 40.5	
(wxdxh)	cm	72.4 x 75.0 x 102.9	72.4 x 75.0 x 102.9	72.4 x 75.0 x 102.9	
Chamber Dimensions	Inches	19.0 x 20.5 x 22.5	19.0 x 20.5 x 22.5	19.0 x 20.5 x 22.5	
(wxdxh)	cm	48.2 x 52.0 x 57.1	48.2 x 52.0 x 57.1	48.2 x 52.0 x 57.1	
Incubator Chamber	cu ft	5	5	5	
Capacity -	L	144	144	144	
Temperature Range	Celsius	8°C + Ambient to 60°C	10°C to 60°C	10°C to 60°C	
Temperature Uniformity	Celsius	+/-0.8°C at 37°C	+/-0.8°C at 37°C	+/-0.8°C at 37°C	
Platform Capacity	lbs (kg)	22 (10)	22 (10)	22 (10)	
Orbital-Shaking Range	RPM	30-400	30-400	30-850	
Timer Functionality	Minutes	1-999	1-999	1-999	
Number of Shelves	Included	1	1	1	

Shaking IncubatorsLarge Capacity





Precise Temperature Control - Superior Uniformity

- Independent Over Temperature Thermostat
- Over Temperature Alarm
- Orbital-Shaking Speed Alarm

The SHEL LAB SSI10 delivers all the features you appreciate in the SHEL LAB Shaking Incubator line, with even greater load capacity. The unit performs from 30-400 RPM's with a smooth, quiet oscillation. The door of the SSI10 is designed with hydraulic pistons making it easy to lift during loading and unloading.

These state of the art orbital shaking incubators feature a universal shaker platform, which accommodates a wide range of flask clamps, test tube racks and micro titer plate clamps. To support the loads over many years of use, four load-bearing positions are incorporated for optimal weight distribution.

For maximum load flexibility, the unique counter-balanced weighting system is adjustable to accommodate off-center loads and varying capacities.





CL 1:		Model	Number
Shaking Incubators		SSI10	SSI10R
Incabators	Details	Standard	Refrigerated
Exterior Dimensions	Inches	55.0 x 33.5 x 33.5	55.0 x 33.5 x 33.5
(wxdxh) –	cm	139.7 x 85.1 x 85.1	139.7 x 85.1 x 85.1
Chamber Dimensions	Inches	35.5 x 25.5 x 19.7	35.5 x 25.5 x 19.7
(wxdxh) –	cm	90.1 x 64.7 x 50.1	90.1 x 64.7 x 50.1
Incubator Chamber	cu ft	10.3	10.3
Capacity -	L	293	293
Platform Dimensions	Inches	32 x 22 x 3	32 x 22 x 3
_	cm	81 x 56 x 7	81 x 56 x 7
Temperature Range	Celsius	8°C + ambient to 60°C	10°C - 60°C
Temperature Uniformity	Celsius	+/-0.5°C at 37°C	+/-0.5°C at 37°C
Platform Weight Capacity	lbs (kg)	45 (20)	45 (20)
Orbital-Shaking Range	RPM	30-400	30-400
Timer Functionality	Minutes	1-999	1-999

