

SHEL LAB®



SCO Series Large Capacity Units

SHEL LAB CO₂ Incubators



Ideal for Clinical, Analytical, and General Laboratory Applications

SCO large capacity CO₂ incubators provide the uniform temperatures and highly stable CO₂ environments necessary to prevent shocks to cell samples.

Features and Benefits

Contamination control, data logging capabilities, and automatic CO₂ deviation alarm protect the SCO large capacity CO₂ incubators against microbiological contamination.



SCO31

- 1 Infrared (IR) sensor for quick recovery of CO₂ levels after door openings.
- 2 USB data logging capabilities.
- 3 Advanced PID temperature control system for sensitive response.
- 4 Independent over temperature set point and operational control override for additional safety.
- 5 Side-mounted access port, 1.75" diameter (44.5 mm) for independent cables, instrumentation.
- 6 Infrared (IR) sensor for quick recovery of CO₂ levels after door openings.
- 7 USB data logging capabilities.
- 8 Advanced PID temperature control system for sensitive response.
- 9 Independent over temperature set point and operational control override for additional safety.
- 10 Side-mounted access port, 1.75" diameter (44.5 mm) for independent cables, instrumentation.
- 11 Stainless steel interior construction for long life operation, easy cleaning.
- 12 Condensed connection panel includes; 4-20 mA, dry contact alarm, CO₂ inlet, and CO₂ sample port.
- 13 Autoclavable shelving system.
- 14 Crafted forced-air conduction provides excellent temperature uniformity of +/-0.5°C at 37°C.
- 15 Roller track ensures ease of use with roll-in bottle racks.
- 16 Sealed glass window allows for viewing without disturbing the critical growth atmosphere and allows for improved gas utilization and condensate reduction.
- 17 Safety certified CAN/CSA, UL, EN, IEC 61010, and compliant with CE.



Made in the USA

Contamination Control

Extensive use of copper in the humidity heated CO₂ feed line and precise airflow management designed to prevent condensation adds reassurance that foreign microbes will not affect test results. Cleanup is a breeze with the all stainless steel chamber.

Applications:

- Cell Culture
- Microbiology
- Plant Cell Culture
- Stem Cells
- Tissue Culture
- Food Analysis



SCO58



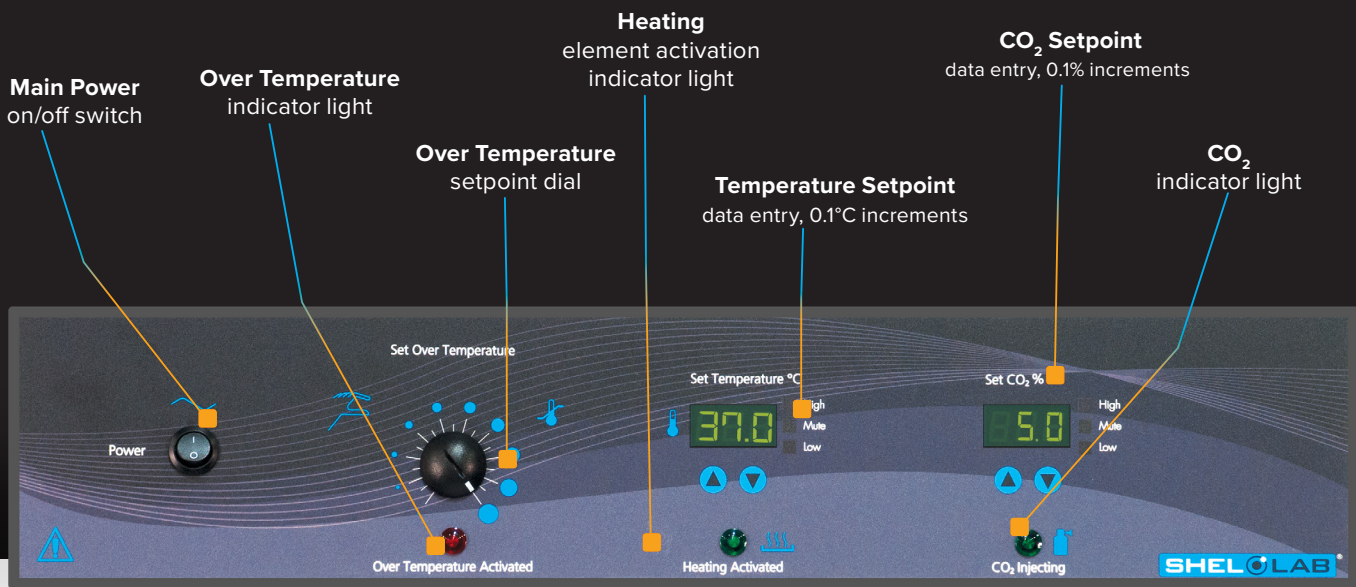
SCO40

Controls and Monitoring

The advanced PID (proportional, integral, derivative) controller commands proportional power to the heating elements and CO₂ injection frequency to provide the most accurate and responsive control. Each controller is matched to the incubator chamber volume to assure faster response to setpoint without overshoot, and quicker recovery following door openings. Indicator lights are included for visual status feedback on critical functions.

Integrated Control Panel

All controls are centrally located on the main panel including manual power, independent over temperature control, digital temperature/CO₂ adjustments, and indicator lights for all functions.



SCO Large Capacity CO₂ Incubators Specification Chart

	SCO31	SCO40	SCO58
Interior Volume, Nominal	31.4 cu.ft. (890.7 liters)	39.5 cu.ft. (1118 liters)	58 cu.ft. (1641 liters)
Interior Dimensions W x D x H	32.9" x 26.1" x 63.3" 836 x 663 x 1608 mm	34.7" x 25.8" x 76.2" 881 x 655 x 1935 mm	43.0" x 34.5" x 67.5" 1092 x 876 x 1715 mm
Exterior Dimensions W x D x H	39.6" x 33.7" x 76.2" 1005 x 851 x 1936 mm	42.2" x 33.5" x 88.0" 1071 x 851 x 2235 mm	51.0" x 44.8" x 81.0" 1295 x 1137 x 2057 mm
Interior Construction	300 series stainless steel	300 series stainless steel	300 series stainless steel
Exterior Construction	20 gauge steel, powder coated	20 gauge steel, powder coated	20 gauge steel, powder coated
Shelves (See Accessories)*	6 standard, 30 total	6 standard, 30 total	6 standard, 30 total
Maximum Weight Per Shelf*	50 lb / 22.7 kg	50 lb / 22.7 kg	50 lb / 22.7 kg
Permitted Total Load	300 lb / 136.1 kg	300 lb / 136.1 kg	300 lb / 136.1 kg

*Extra standard and reinforced shelves available. See Accessories.

SCO Large Capacity CO₂ Incubators Selection Chart

Order Model Number, Voltage Specific	SCO31		SCO40		SCO58	
	SCO31	SCO31-2	SCO40	SCO40-2	SCO58	SCO58-2
Electrical, 50/60Hz, AC, 1Ø						
Voltage	110V-120V	220V-240V	110V-120V	220V-240V	110V-120V	220V-240V
Full Load Amps	14.5	8.0	15.0	9.0	15.0	8.0
Nominal Power (watts @37°C)	321	300	365	340	385	350
Recommended Breaker, Amps	15	16	20	16	20	16
Power Cord Supplied	NEMA5-20P	EU1-16P	NEMA5-20P	EU1-16P	NEMA5-20P	EU1-16P
CO₂ Range	1-20%	1-20%	1-20%	1-20%	1-20%	1-20%
Recovery CO₂ at 5%	< 5min.	< 5 min.	< 5 min.	< 5 min.	< 5 min.	< 5 min.
Sensor Type	Infrared	Infrared	Infrared	Infrared	Infrared	Infrared
Temperature Recovery 37°C						
Recovery after 30 sec. Door Opening at 37°C	8.0 min.	8.0 min.	7.0 min.	7.0 min.	7.0 min.	7.0 min.
Temperature Uniformity						
At 37°C	± 0.5°C	± 0.5°C	± 0.5°C	± 0.5°C	± 0.5°C	± 0.5°C
Temperature Range Ambient +8°C to 60°C	✓	✓	✓	✓	✓	✓



DIN 12880 Compliance

SHEL LAB SCO Large Capacity CO₂ Incubators are designed to meet or exceed the performance criteria established through DIN 12880:2007:05 and ASTM E1292-94 (Reapproved 2006.)

Note: DIN 12880 is an international standard for measuring the performance of electrical laboratory ovens and incubators based on Deutsches Institut Fur Normung E.V. (German National Standard), 05/01/2007.



Site Preparation and Installation Guides

	SCO31	SCO40	SCO58
Wall Clearance, Sides	4.0" (100 mm)	4.0" (10.0cm)	4.0" (10.0cm)
Wall Clearance, Roof	2.0" (50 mm)	2.0" (5.0cm)	2.0" (5.0cm)
Access Port (Inner Diameter)	1.75" (44.5 mm)	1.75" (4.45cm)	1.75" (4.45cm)
Unit Weight Empty	500 lb (227 kg)	574 lb (260 kg)	950 lb (431 kg)
Shipping Weight	579 lb (262 kg)	682 lb (309 kg)	1085 lb (492 kg)

Options and Accessories

	SCO31	SCO40	SCO58
Caster Platform	9000591	9000592	9000585
Chart Recorder Option	912-950-0014	912-952-0014	912-950-0011
Extra Shelf, Stainless Steel, Max. Weight 50 lb (22.7kg)	995-00003	9750551	995-00014
Extra Shelf, Reinforced, Max Weight 75 lb (34.0kg)	912-975-0006	912-975-0005	N/A
Extra Shelf Clips, 4 Required Per Shelf	1250512	1250512	1250512*

Options must be specified when ordering. Contact SHEL LAB for additional information.

*6 Shelf Clips Required for SCO58



Sheldon Manufacturing, Inc.

300 N. 26th Avenue • PO Box 627 • Cornelius, OR 97113 USA
 +1 503-640-3000 • sheldonmfg.com • sales@sheldonmfg.com

Specifications subject to change without notice. Sheldon Manufacturing P/N 0740558.

7/19