

C-EVO Temperature & Humidity Test Chambers

Since 1932 Tenney has pioneered the design and manufacturing of environmental testing equipment.

Designed for value, reliability and performance, C-EVO is a world class environmental cycling test chamber loaded with standard features and advanced technological upgrades:

- Smallest equipment footprint in the industry
- Superior heat capacity (kW), cooling capacity (HP/BTU) and air flow capacity (CFM) deliver the best temperature change rates and uniformity in the industry
- Redundant user and equipment safety features are standard



Features

- Smart 1.1™ controller
- Ethernet & RS485 communications
- USB port
- Heated viewing glass window
- Chamber light
- Two 3" cable ports
- Solid-state humidity sensor
- Platinum RTD temperature sensor
- Heavy-duty leveling casters
- Nichrome wire air heater
- Semi-Hermetic reciprocating compressors
- Thermal expansion valves
- FM approved safety OTP
- Backup safety thermal cutoff
- Main electrical disconnect LOTO
- Chamber vent port
- One shelf standard

Consult your Tenney Environmental Sales Representative for a full list of available options.

C-EVO Temperature / Humidity Test Chamber Specifications																
Model	C10S	C10C	C10RS	C10RC	C20S	C20C	C20RS	C20RC	C30S	C30C	C30RS	C30RC	C40S	C40C	C40RS	C40RC
Cubic Feet	10				20				30				40			
Liters	283				566				850				1132			
Work Space (WxDxH)	24" x 36" x 28" 609 mm x 660 mm x 711 mm				30" x 32" x 36" 762 mm x 812 mm x 914 mm				36" x 40" x 36" 914 mm x 1016 mm x 914 mm				40" x 44" x 40" 1016 mm x 1117 mm x 1016 mm			
Exterior (WxDxH)	34" x 59" x 75" 863 mm x 1498 mm x 1905 mm				40" x 65" x 78" 1016 mm x 1651 mm x 1981 mm				46" x 73" x 78" 1168 mm x 1854 mm x 1981 mm				50" x 77" x 82" 1270 mm x 1955 mm x 2082 mm			
Approx Unit Weight (lbs)	1295	1429	1367	1531	1511	1664	1596	1754	1656	1864	1775	2100	1831	2184	1951	2296
Cooling Rates (empty chamber) Min (°C/min)																
180 C to -65°C		72(3.4)		72(3.4)		111(2.2)		111(2.2)		136(1.8)		136(1.8)		160(1.5)		160(1.5)
125 C to -35°C		37(4.5)		37(4.5)		53(3.1)		53(3.1)		63(2.6)		63(2.6)		76(2.2)		76(2.2)
85 C to -20°C	22(4.8)		22(4.8)		33(3.2)		33(3.2)		40(2.6)		40(2.6)		54(1.9)		54(1.9)	80(1.3)
85 C to -40°C		30(4.1)		30(4.1)		45(2.8)		45(2.8)		54(2.3)		54(2.3)		65(1.9)		65(1.9)
ambient to -40°C		15(4.3)		15(4.3)		23(2.8)		23(2.8)		28(2.3)		28(2.3)		35(1.9)		35(1.9)
ambient to -68°C		40(2.3)		40(2.3)		66(1.4)		66(1.4)		85(1.1)		85(1.1)		108(0.9)		108(0.9)
Heating Rates (empty chamber) Min (°C/min)																
-65°C to 180°C		42(5.9)		42(5.9)		64(3.8)		64(3.8)		84(2.9)		84(2.9)		102(2.4)		102(2.4)
-20°C to 85°C	18(6)		18(6)		26(4.0)		26(4.0)		32(3.3)		32(3.3)		40(2.6)		40(2.6)	50(2.1)
-40°C to 85°C		21(6.0)		21(6.0)		31(4.0)		31(4.0)		38(3.3)		38(3.3)		46(2.7)		46(2.7)
-35°C to ambient	10(6.2)		10(6.2)		14(4.2)		14(4.2)		17(3.5)		17(3.5)		21(2.8)		21(2.8)	27(2.2)
-68°C to ambient		15(6.2)		15(6.2)		22(4.2)		22(4.2)		25(3.5)		25(3.5)		33(2.8)		33(2.8)
Live Load Capacity																
Live Load Watts @ -18°C	1200	1700	1200	1700	1160	1650	1160	1650	1120	1610	1120	1610	630	1260	630	1260
Live Load Watts @ -40°C		1400		1400		1330		1330		1260		1260		1150		1150
Live Load Watts @ -54°C		1100		1100		1010		1010		940		940		750		750
General Specifications																
Temperature Uniformity	±2°C @ 65°C															
Temperature Control	± 1.0°C after stabilization															
Standard Temperature Range	Single stage (S,RS models) -35°C to 180°C								Cascade (C,RC models) -68°C to 180°C							
Optional Temperature Range	Single stage (S models) -35°C to 200°C				Single stage (RS models) -35°C to 180°C				Cascade (C models) -73°C to 200°C				Cascade (RC models) -73°C to 180°C			
Humidity Range	(RS,RC models only) 20% to 95% in the dry bulb range of 20°C to 85°C as limited by a 5°C dewpoint															
Control Tolerances	Temperature: ± 1°C after stabilization Humidity: ± 5% RH after stabilization															
Air Flow Rate	500 CFM															
Heat Capacity	3KW															
Humidifier Capacity	1.5KW (RS,RC models only)															
Refrigeration	Single stage (S,RS models) 2 HP								Cascade (C,RC models) (2) 2 HP							
Condenser	Air Cooled or Water Cooled															
Heat of Rejection	Single stage (S,RS models) 15,000 BTUH								Cascade (C,RC models) 24,000 BTUH							
Load Per Shelf	100lbs evenly distributed (Maximum chamber load including shelf and floor load not to exceed 400 lbs)															
Max Number of Shelves	6 shelves															
Decibel Level	Less than 78 dBA measured 3 feet from the chamber, 5 feet from the floor at right angles															
Chamber Spacing Requirement	18" / 458mm on all sides															
Floor Load Rating	200 lbs evenly distributed, no point load															
Electrical Requirements																
Power	208V - 230V 1PH 60HZ															
Amp - Fuse	40	60	50	60	40	60	50	60	40	60	50	60	40	60	50	60
Amp - Under Load	32	45	40	45	32	45	40	45	32	45	40	45	32	45	40	45
Power	460V - 1PH 60HZ															
Amp - Fuse	20	30	30	30	20	30	30	30	20	30	30	30	20	30	30	30
Amp - Under Load	16	23	20	23	16	23	20	23	16	23	20	23	16	23	20	23
Model	C10S	C10C	C10RS	C10RC	C20S	C20C	C20RS	C20RC	C30S	C30C	C30RS	C30RC	C40S	C40C	C40RS	C40RC

Performance is based upon an empty chamber operating at 24°C (75°F) ambient air.
On 50Hz or higher than 24°C ambient, performance may be reduced. Consult factory regarding any special cooling requirements.



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