



TC Series Cycling Test Chamber

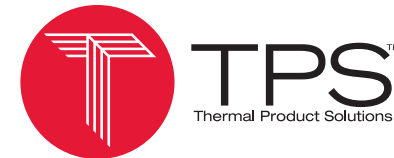
Tenney has brought back the widely popular "Tenney Classic" series of reach in chambers. The "TC" series chambers have many of the same design characteristics of our more advanced C-EVO product line. These include a high volume horizontal-down type air circulation system with an electric heating system, and a mechanical refrigeration system. Some models are also equipped with a vapor injection type humidification system to condition the product with relative humidity. A diverse selection of additional options can also be employed to this chamber to enhance conditioning.

► Features

- Watlow F4T controller
- Ethernet communications
- USB Port
- Two 3" cable ports
- Semi-Hermetic reciprocating compressors
- Data logging and Graphical trend chart for Watlow F4T controller
- Thermal expansion valves
- Chamber vent port
- Solid state humidity sensor
- Platinum RTD temperature sensor
- Heavy-duty leveling casters
- Nichrome wire air heater
- Solid-state pressure switches
- Backup safety thermal cutoff

► Options

- RS 232 or RS485 communications
- 5 gallon water reservoir*
- Recirculating system for humidity water*
- Water demineralizer*
- External dryer for obtaining humidity levels as low as 5%*
- Additional ports
- Viewing window
- Interior lighting
- Shelving, adjustable and removable
- Automatic CO2 or LN2 cooling boost system
- Boost heating system
- GN2 purge system
- Recording instruments
- TempGard IV Over-temperature Protection
- NIST Calibration
- Tenney Environmental offers calibration services accredited to the ISO17025 standard
- Additional engineered to order custom configurations available
- * Humidity Model Only



**Baker Furnace, Blue M, Gruenberg, Lindberg/MPH,
Lunaire, Tenney, Wisconsin Oven**

Address: 2821 Old Route 15 | New Columbia, PA 17856-9396 | USA
Phone: (570) 538-7200 | Toll Free (800) 586-2473 | Fax: (570) 538-7380
info@thermalproductsolutions.com

Specifications and Product Information are subject to change without notice.

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

»» Baker Furnace »» Blue M »» Gruenberg »» Lindberg/MPH
»» Lunaire »» Tenney »» Wisconsin Oven

Tenney TC Series Temperature / Humidity Test Chamber Specifications

Model	TC10S	TC10C	TC10RS	TC10RC	TC20S	TC20C	TC20RS	TC20RC	TC30S	TC30C	TC30RS	TC30RC	TC40S	TC40C	TC40RS	TC40RC	TC64S	TC64C	TC64RS	TC64RC
Cubic Feet	10				20				30				40				64			
Liters	283				566				850				1132				1812			
Work Space (WxDxH)	24" x 26" 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				48" x 48" x 48" 1219 mm x 1219 mm x 1219 mm			
Exterior (WxDxH)	34" x 59" x 78" 863 mm x 1498 mm x 1982 mm				49" x 65" x 78" 1016 mm x 1651 mm x 1982 mm				55" x 73" x 78" 1397 mm x 1854 mm x 1982 mm				59" x 78.5" x 82" 1499 mm x 1994 mm x 2083 mm				67.5" x 83" x 90" 1473 mm x 2109 mm x 2286 mm			
Approx Unit Weight (lbs)	1295	1429	1367	1531	1511	1664	1596	1754	1656	1864	1775	2100	1831	2184	1951	2296	2308	2653	2420	2765

Cooling Rates (empty chamber) Min (°C/min)

180 C to -65°C		87(2.7)		87(2.7)		133(1.7)		133(1.7)		163(1.4)		163(1.4)		192(1.2)		192(1.2)		253(0.9)		253(0.9)
125 C to -35°C		45(3.6)		45(3.6)		64(2.5)		64(2.5)		76(2.1)		76(2.1)		91(1.7)		91(1.7)		130(1.1)		130(1.1)
85 C to -20°C	27(3.9)		27(3.9)		40(2.6)		40(2.6)		48(2.1)		48(2.1)		65(1.5)		65(1.5)		108(0.8)		108(0.8)	
85 C to -40°C		36(3.3)		36(3.3)		54(2.2)		54(2.2)		65(1.8)		65(1.8)		78(1.5)		78(1.5)		119(0.9)		119(0.9)
ambient to -40°C		18(3.4)		18(3.4)		27(2.2)		27(2.2)		34(1.8)		34(1.8)		42(1.5)		42(1.5)		61(0.9)		61(0.9)
ambient to -68°C		48(1.8)		48(1.8)		79(1.1)		79(1.1)		102(0.8)		102(0.8)		216(0.7)		216(0.7)		216(0.4)		216(0.4)

Heating Rates (empty chamber) Min (°C/min)

-65°C to 180°C		50(4.7)		50(4.7)		77(3)		77(3)		101(2.3)		101(2.3)		122(1.9)		122(1.9)		181(1.1)		181(1.1)
-20°C to 85°C	22(4.8)		22(4.8)		31(3.2)		31(3.2)		39(2.6)		39(2.6)		48(2.1)		48(2.1)		68(1.3)		68(1.3)	
-40°C to 85°C		25(4.8)		25(4.8)		37(3.2)		37(3.2)		45(2.6)		45(2.6)		55(2.2)		55(2.2)		78(1.4)		78(1.4)
-35°C to ambient	12(5)		12(5)		17(3.4)		17(3.4)		21(2.8)		21(2.8)		25(2.3)		25(2.3)		37(1.4)		37(1.4)	
-68°C to ambient		18(5)		18(5)		26(3.4)		26(3.4)		30(2.8)		30(2.8)		40(2.3)		40(2.3)		55(1.4)		55(1.4)

Live Load Capacity

Live Load Watts @ - 18°C	960	1360	960	1360	930	1320	930	1320	890	1275	892	1275	500	1000	500	1000	450	965	450	965
Live Load Watts @ - 40°C		1120		1120		1065		1065		1000		1000		920		920		850		850
Live Load Watts @ - 54°C		880		880		800		800		750		750		600		600		500		500

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	250 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	40	60	50	60
Amp - Under Load	32	45	40	45	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	20	30	30	30
Amp - Under Load	16	23	20	23	16	23	20	23	16	23	20	23	16	23	20	23	16	23	20	23

Model	TC10S	TC10C	TC10RS	TC10RC	TC20S	TC20C	TC20RS	TC20RC	TC30S	TC30C	TC30RS	TC30RC	TC40S	TC40C	TC40RS	TC40RC	TC64S	TC64C	TC64RS	TC64RC
-------	-------	-------	--------	--------	-------	-------	--------	--------	-------	-------	--------	--------	-------	-------	--------	--------	-------	-------	--------	--------

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.