



**TPS**  
Thermal Product Solutions

»» Tenney

ETCU Temperature Humidity Cycling Chambers

## ETCU Temperature Humidity Cycling Chambers

The Tenney ETCU Ultimate Series Temperature Humidity Cycling Chamber features scroll compressor technology that provides quiet operation, fast transition rates, and reliable operations.

The chambers incorporate a ceiling plenum to diffuse conditioned air vertically through the chamber. The top-to-bottom air circulation guarantees stable and consistent performance over the testing period.

Multiple heating and cooling systems are available, as well as a diverse list of options that together will create the chamber to accommodate your specific application.

### ► Features

- Quiet operation
- Fast transition rates
- High reliability refrigeration system
- Temperature and humidity testing
- Versa Tenn V control system
- Automatic humidity vent

### ► Options

- IEEE488 Interface
- LinkTenn 32 for Windows® that permits your computer to control up to 5 chambers
- 6-Event relay board
- Water demineralizer system
- Circular recording instruments
- Alternate refrigeration and/or heating systems for faster temperature change rates or increased product load-handling capabilities
- Additional ports

Contact Thermal Product Solutions for details and availability. All performance data are for 230 or 460V / 60Hz operations. Chamber operations utilizing 50Hz power utility will derate performance approximately 17%.



Model	ETCU-09			ETCU-16			ETCU-30				ETCU-64				
Interior Volume	9 cu. ft.			16 cu. ft.			30 cu. ft.				64 cu. ft.				
	256 liters			460 liters			850 liters				1,812 liters				
Interior Dimensions	24 x 25 x 26			36 x 26 x 30			40 x 36 x 36				48 x 48 x 48				
WxDxH - inches (mm)	(610 x 635 x 660)			(914 x 660 x 762)			(1016 x 914 x 914)				(1219 x 1219 x 1219)				
Exterior Dimensions	34 x 73 x 78			46 x 74 x 82			50 x 87 x 88				58 x 99 x 100				
WxDxH - inches (mm)	(864 x 1854 x 1983)			(1169 x 1881 x 2084)			(1271 x 2211 x 2237)				(1474 x 2516 x 2542)				
Nominal Horsepower	3.5 x 3.5	6 x 6	10 x 10	3.5 x 3.5	6 x 6	10 x 10	3.5 x 3.5	6 x 6	10 x 10	15 x 15	3.5 x 3.5	6 x 6	10 x 10	15 x 15	
Rated Horsepower	2.5 x 2.5	5 x 5	10 x 10	2.5 x 2.5	5 x 5	10 x 10	2.5 x 2.5	5 x 5	10 x 10	15 x 15	2.5 x 2.5	5 x 5	10 x 10	15 x 15	
Compressor Type	Scroll			Scroll			Scroll				Scroll				
Noise (dBA)	Heating	60	60	60	60	60	60	60	60	60	60	60	60	60	
	Cooling	68	75	75	68	75	75	68	75	75	75	68	75	75	
Heating Elements (Kw)	230/460	6	12	12	6	12	12	6	12	12	24	6	12	12	24
	208V	4.5	9	9	4.5	9	9	4.5	9	9	18	4.5	9	9	18

All specifications are subject to change without notice.

Model	ETCU-09			ETCU-16			ETCU-30				ETCU-64			
Cooling Rate (min)														
190°C to -65°C	49	34	14	78	36	19	155	76	31	20	256	125	52	42
71°C to -65°C	36	26	11	40	28	15	119	59	26	17	197	97	44	33
85°C to -40°C	27	18	8	32	20	12	95	42	21	12	157	69	36	24
Heating Rate (min)														
-65°C to 190°C	35	16	16	32	22	22	60	30	30	20	110	53	53	27
-65°C to 71°C	17	8	8	14	11	11	27	13	13	10	45	23	23	13
-40°C to 85°C	16	8	8	12	10	10	27	13	13	11	45	23	23	14
Water Cooled	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Air Cooled	Y			Y	Y		Y	Y			Y	Y		
208/230V-1 Ph	Y	N/A	N/A	Y	N/A	N/A	Y	N/A	N/A	N/A	Y	N/A	N/A	N/A
208/230V-3 Ph	Y	Y	N/A	Y	Y	N/A	Y	Y	N/A	N/A	Y	Y	N/A	N/A
460V-3 Ph	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Air Delivery (Blower HP)	.5 HP			(2) .5 HP			(2) .75 HP				(2) .75 HP			
Airflow (CFM)	750			1600			1600				1600			
Temp Unif. (Std Dev/9 Pt)	+/-0.5°C/+/-1°C			+/-0.5°C/+/-1°C			+/-0.5°C/+/-1°C				+/-0.5°C/+/-1°C			
Temp Control	+/-0.3°C			+/-0.3°C			+/-0.3°C				+/-0.3°C			

- Single Stage Refrigeration Temperature Range: -35°C to 200°C
- Performance is based upon an empty chamber operating at 24°C (75°F) ambient air and may vary slightly at other ambient temperatures. Voltages below those listed may affect performance. All performance data are for 240 or 480V / 60Hz operation.
- Liquid nitrogen is available as an option on all systems. When liquid nitrogen is provided, the heater kW is automatically upgraded to the maximum for that chamber size. Consult factory for current draw of any liquid nitrogen-equipped chambers.
- Airflow circulation is based on blower wheel performance curves. Actual circulation rate will vary depending on the cooling option selected.
- Temperature uniformity standard deviation from mean, measured at -25°C and 100°C.
- 9 Point: Uniformity measured in accordance with ASTM E145 section 4 at temperatures of -25°C and 100°C. The test chamber performance may be affected by the addition of certain optional accessories.
- Chamber operation utilizing 50Hz power utility will derate performance approximately 17%
- It is Thermal Product Solutions' policy to constantly improve quality, features and performance. Thermal Product Solutions reserves the right to change specifications without notice.

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