

TSR

INSTRUMENTS AND SOLUTIONS



ENVIRONMENTAL CHAMBER

TSR-I&S

-40~+100°C ENVIRONMENTAL CHAMBER

Model		TSR EC-40100		
System		Balanced Temperature & Humidity Control (BTHC) system		
Temp. performance	Temperature range	-40 to +100°C		
	Sensitivity	+1 deg		
	Temp. rate of change	Heat up rate	6K/min.	
		Pull down rate	6K/min.	
	Temperature extremes achievement time	Heat up time	-40°C to +100°C 40 min.	
		Pull down time	+100°C to -40°C 40 min.	
Temp. & humid.	Allowable heat load	4500W		
Temp. & humid.	Temp. & humid. range	+10 to 95°C / 10 to 98%rh		
	Humid. fluctuation	±2.5%rh		
	Allowable heat load	Test area conditions: +85°C / 85%rh 500W		
Exterior material		Mild steel plate/with Powder Coating		
Test area material		Stainless steel plate: 18-8 Cr-Ni stainless steel plate, BA polish		
Heater		Nichrome strip wire heater		
Humidifier		Sheathed heater		
Cooler / Dehumidifier		Plate fin cooler		
Refrigerator	System	Mechanical cascade refrigeration		
	Compressor	4.47kW×4.47kW		
	Condenser	Water-cooled condenser		
	Expansion system	Electronic expansion valve		
	Refrigerant	R449A/R508A		
Capacity		100 L		
Inside dimensions mm		W450×H500×D450		
Outside dimensions mm		W650×H700×D650		
Weight		610 kg		
Utility	Ambient conditions	0 to +40°C (+32 to +104°F) / 75%rh max.		
	Power supply (selectable)	220V AC 3φ50Hz	42A	
	Cooling water flow rate (Reference water temp.+25°C)	1200 L/h		
Noise level		58dB		
Sensor		PT-100, RTD, Class A sensor is used to show the temperature Inside the chamber		
Controller		Digital temperature controller		
Insulation		PUF (High Density Polyurethane Foam) and ceramic blanket is used to retain the heating /cooling process in the product & to avoid temperature loss.		
Compressor safety		High and Low stage compressor provided for TOLR, Timer and MCB port hole, drain facility, visibility, specimen protection for temp cut off		
Alarm		Door open safety alarm		
Uniformity		Forced air circulation using electrical fan		
Optional		Gas/smoke detection (CO, CO ₂ , VOC sensors).		

