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TECHNOLOGY GROUP

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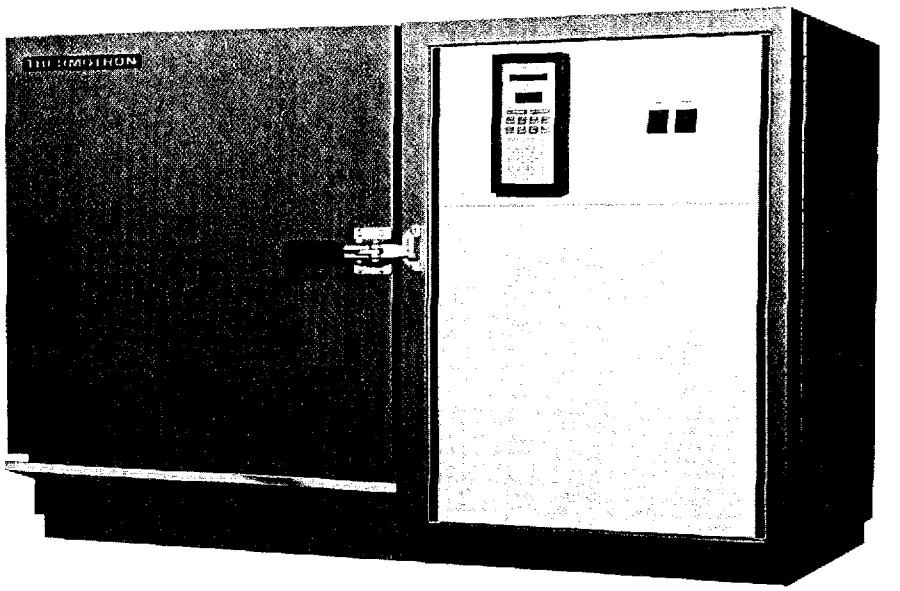
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Established 1981
Advanced Test Equipment Rentals
www.atecorp.com 800-404-ATEC (2832)

Thermotron Industries, Inc.
291 Kollen Park Drive
Holland, Michigan 49423 U.S.A.
Phone (616) 392-1491 TWX 810-292-6164



- **Two Standard models**
- **Standard sizes available: 1.2, and 5.5 cubic feet**
- **Maximum temperature range from −90°F to +350°F (−67.8°C to +177°C)**
- **Immediate operation with suitable power connection**
- **High volume air circulation fan**
- **Thermotron one-year limited warranty**
- **Nationwide field service**
- **Programmable temperature controller with digital displays.**
- **Standard units available from stock**
- **Stainless steel access port with plug**

Cabinet:

- The entire chamber is built of high-quality steel. No wood, fiberboard, plastic or similar materials are used in the construction.
- The interior is constructed of 304 Series, high-nickel content stainless steel with 2B finish. The liner is heliarc welded for hermetic sealing to prevent moisture migration to insulation space.
- The exterior shell is constructed of die-formed, 16 gauge galveneal, then finished in "Thermotron Blue" lacquer, Federal Standard #595-25184, sprayed over a cleaned and primed surface.
- A floating liner allows minimum thermal contact between the interior and the exterior of the chamber.
- Breaker strips are all stainless steel.
- Nonsettling insulation used has a "K" factor of .26. It is capable of being exposed to temperatures in excess of +350°F (+177°C).
- Gaskets are extruded, designed to be used with seamless corners. Two separate gaskets are installed to insure minimum heat loss from the chamber—a silicone inner gasket and a vinyl outer gasket.
- The circulator motor is located outside the chamber. It has a solid stainless steel shaft; no extensions are used. Ball bearings are lubricated for life and located out of the conditioned area.
- A hinged instrument panel makes service and calibration easier.

Electrical System:

- The chamber has a solid state, photo-isolated, zero-voltage switching, heat-power relay.
- Chamber has a fusible link heater cut off at +460°F (+238°C). Product safety devices are options.
- All motor electrical components, switches, and fuses

are located in a self-contained panel.
- All components are fused.
- Chamber wiring is contained in "panel channel" and is accessible without completely unlacing or unthreading any wires.
- All wires are identified.
- Master heat and humidity heat contactors are provided.
- A step-down transformer provides 115 volts for the control circuit on 5.5 model.
- Identification provided on pilot lights and switches for all major circuits.
- Wiring meets NEC and NEMA standards.

Refrigeration System:

- Refrigeration system has all silphosed or silver soldered joints—no soft solder is used.
- The system is air cooled and capable of starting under various ambient conditions.
- The condensers are manufactured to meet our exacting standards
- Cooling coils are heavy-duty copper tubing with specially designed aluminum fins.
- The system is sealed and balanced to achieve the ultimate in performance and reliability.

Instrumentation:

- Fully programmable single mode controller with proportional-integral algorithm for time proportioned output.
- Chamber operation via manual setpoint mode or previously entered program.
- Input and indication of temperature in °C or °F.
- 10 character alphanumeric display, 4 digit numeric display, and 10 chamber status indicators.
- Internal RAM storage for up to 10 programs with full program review, edit, expand, and delete capabilities
- Program entry by response to English language prompts via 23 character keypad.
- Setpoint and display resolution of 1° C or 1° F, typical measuring accuracy of 0.25% of span.
- Other features include software calibration, alarm and event outputs, lithium battery back-up, keyboard lockout and timed soak.

Safety Features:

- Overload protection is inherent, preventing the compressors from exceeding specification limits.
- Chamber has a fusible link heater cut off at +460°F (+238°C), product safety devices are options.
- All machinery is enclosed for personnel safety.

Thermotron S Series Bench-Top Temperature Test Chamber Performance	TEMPERATURE CHAMBERS	
THERMOTRON MODEL NUMBER	S 1.2	S 5.5C
TEMP PULL DOWN FROM +75°F (+23°C) AMBIENT WITHOUT LOAD	Minutes	Minutes
0°F (−17.8°C)	—	8
−20°F (−28.9°C)	—	12
−40°F (−40°C)	20	15
−65°F (−53.9°C)	30	22
−90°F (−67°C)	40	55
−100°F (−73.3°C)	45	N/A
TEMP (+23°C) HEAT-UP FROM 75°F AMBIENT WITHOUT LOAD		
+230°F (+110°C)	18	13
+350°F (+177°C)	45	30
CAPACITY FOR HOLDING WATTS LIVE LOAD		
0°F (−17.8°C)	350	750
−40°F (−40°C)	250	500
−65°F (−53.9°C)	200	400
−85°F (−65°C)	200	100

Performance:
Performance is based on 60 Hz operation and +75°F (23°C) ambient air.

Temperature Control:
The chamber conditioning and circulating equipment will enable a temperature stability within ±2°F dry bulb temperatures from control point after stabilization at the control sensor.

Specifications subject to change.

THERMOTRON

Thermotron S Series Bench Top Temperature Chamber Specifications

		TEMPERATURE MODELS	
		S 1.2	S 5.5C
WORKSPACE	LITERS	34	155
VOLUME	CU.FT.	1.2	5.5
VOLTAGE, ±10% (SPECIFY 1 OR 3 PHASE)		115/1/60	230/1/60 or 230/3/60
RECOMMENDED MINIMUM SERVICE AMPS AT 230 VOLTS	1 PH	20	40
	3 PH	N/A	30
TEMPERATURE RANGE	°F	−100 to +350	−90 to +350
	°C	−73 to +177	−67.8 to +177
APPROX. SHIPPING WEIGHT	LB.	320	700
	KG.	138	317
CHAMBER HEATER WATTAGE		500	2000
COMPRESSOR SIZE		(2) 1/3 HP IN CASCADE	(2) 1 HP IN CASCADE
CIRCULATOR MOTOR		1/15 HP 3000 RPM	1/15 HP 3000 RPM
WINDOW	IN CM	OPTIONAL	12"x12" 30"x30"
ACCESS PORT (DIAMETER)		2"	2"

Chamber Options

1. Access Ports w/Plugs (additional or substituted for standard)
2. Boost System (CO_2)
3. Boost System (LN_2)
4. Electrical Door Interlock
5. Refrigeration Gauges
6. Shelves, Stainless Steel
7. Transformers (for other than 230 volt power)
8. Cart with casters

Controller Options

1. Real Time Clock
2. Printer Output
3. Analog output for chart recording
4. GPIB or RS-232 computer interface

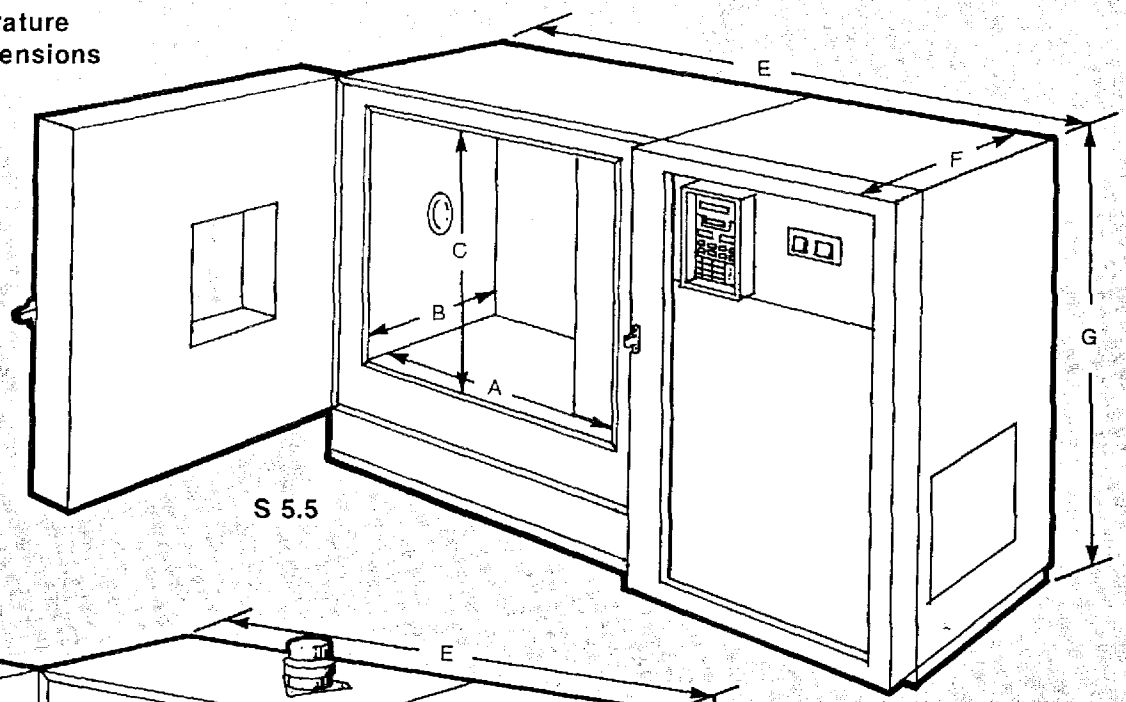
Instrumentation Options

1. Adjustable Hi/Low Temp Limits
2. Circular Chart Recorder

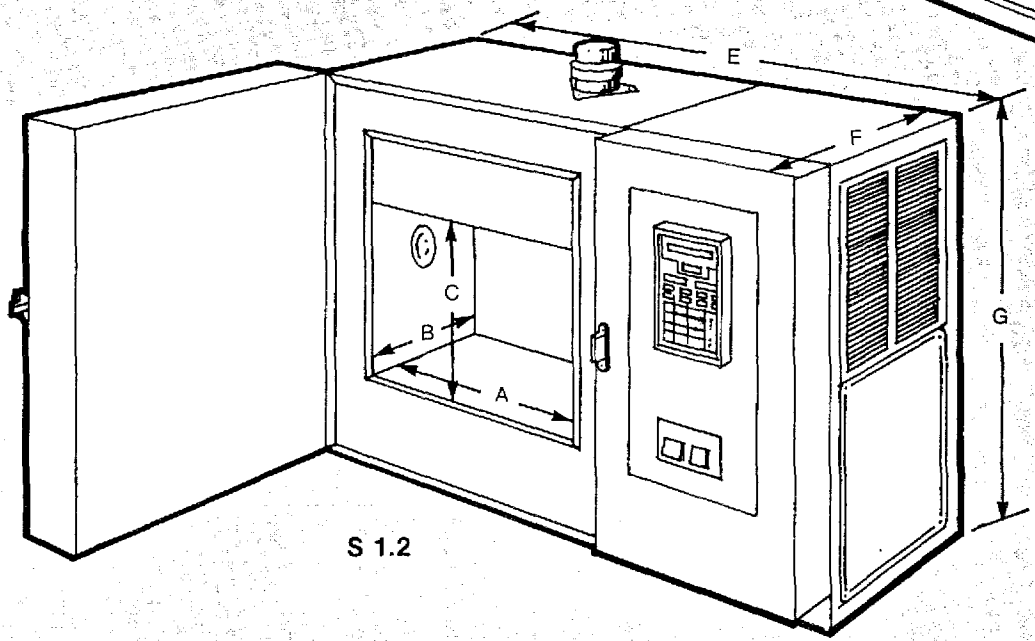
(The addition of accessories may impact performance.)

Form No. TI3-180-1-R-5-85 Printed In U.S.A.

Thermotron S Series
Bench Top Temperature
Test Chamber Dimensions



S 5.5



S 1.2

TEMPERATURE MODELS	WORKSPACE DIMENSIONS (A) WIDE IN/CM	(B) DEEP IN/CM	(C) HIGH IN/CM	PORT SIZE* DIA-METER	OVERALL CHAMBER MOVE-IN DIMENSIONS E WIDE IN/CM	F DEEP IN/CM	G HIGH IN/CM	WINDOW GLASS DIMEN-SIONS IN/CM
S 1.2	16 / 41	11 / 28	12 / 31	2"	37 / 91	23 / 58	31 / 79	OPT.
S 5.5C	20 / 51	20 / 51	20 / 61	2"	56¼ / 142	32 / 84	37½ / 95	12"x12" 30x30

*All Standard Ports are Located, Left Side, Center Workspace.

Artisan Technology Group is an independent supplier of quality pre-owned equipment

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