BLUE M
Humid-Flow® AIR-COoled TEMPERATURE/HUMIDITY CABINETS
with Solid-State Electronic Instrumentation

The most accurate, reliable and economical chamber ever developed for long-term high temperature/humidity testing. Ideal for such steady state requirements as MIL-202F, Method 103B, Condition D — continuous operation for 56 days.

Blue M’s exclusive vertical air-flow Air-Cooled Temperature/Humidity Cabinets let air do the work — not conditioned water or mechanical refrigeration. Typical unit can save thousands of gallons a year. Eliminating compressor and tap water circulating systems eliminates such components as solenoid valves and timers — assures more trouble-free operation. Ambient room air temperature in most installations is more stable than varying tap water temperatures, making chamber conditions equally stable. This, coupled with the inherent efficiency of the electronic instrumentation for temperature and humidity regulation, provides unusual accuracy plus built-in constant differential control throughout the range shown on the chart. Air volume is adjustable from 0-30 complete changes of entire work chamber volume per minute.

While this range is limited as compared to other Blue M Temperature/Humidity Cabinets, minimal power requirements and insignificant water consumption sharply reduce operating costs. Specially designed motor/blower cooling system, under control of a separate switch, is not even needed for many standard tests — cutting operating expense even more. In design, operating efficiency and economy, Blue M Air-Cooled Cabinets represent a truly revolutionary development in environmental equipment.

PIPE VENT
SEPARATE SOLID-STATE ELECTRONIC WET AND DRY BULB MONITORING RECORDER
TWO ADJUSTABLE ALLOY WIRE SHELVES
DEMERNALIZING CARTRIDGE
AUTOMATIC SOLID-STATE WATER LEVEL SYSTEM
MAX-SET OVERTEMPERATURE PROTECTION
DRAIN

STAINLESS CONSTRUCTION
TYPE 316, 17-12 INTERIOR
TYPE 304, 18-8 EXTERIOR
MECHANICAL VERTICAL AIR-FLOW
3" DIA.
LEAD-IN PORT
INNER GLASS DOOR
SOLID-STATE ELECTRONIC INSTRUMENTATION
CHAMBER IS NOT DESIGNED OR INTENDED FOR USE WITH VOLATILE, FLAMMABLE OR HAZARDOUS MATERIALS.
OVENS DESIGNED FOR THESE APPLICATIONS ARE SHOWN ELSEWHERE IN THIS CATALOG.

EQUIPMENT COVERED
BY OUR EXCLUSIVE PARTS WARRANTY AND REPLACEMENT SERVICE PROGRAM

WARRANTY SEE PAGE

A UNIT OF GENERAL SIGNAL
BLUE ISLAND, ILLINOIS 60406
GENERAL SPECIFICATIONS

CONTROL SYSTEM

SOLID-STATE ELECTRONIC INSTRUMENTATION — for precise temperature/humidity regulation.

MAX-SET™ OVERTEMPERATURE PROTECTION

SEPARATE MONITORING RECORDER — 10" diameter. Range: — 18°C. to + 93°C.; 0°F. to +200°F. Low mass RTD sensors. 100 ohm Platinum. Electronic, fully solid-state. Blind set overtemperature protection; operates from dry bulb. Not connected electrically or mechanically to control system. Monitors and provides records only.

WET BULB TIME DELAY — exclusive feature allows a substantial reduction in condensation when loading or unloading at set temperatures. Automatically drains heated water from conditioning chamber when inner door is opened. After unit is reloaded, wet bulb heat is held off until reservoir is refilled with cool water.

PILOT LIGHTS • AUTOMATIC ELECTRONIC WATER LEVELER • COMPLEMENTARY MOTOR/BLOWER SYSTEMS AND OVERLOAD PROTECTION

CONSTRUCTION

HOUSING — heli-arc welded, all polished stainless.

INTERIOR — type 316, 17-12 stainless. Heli-arc welded and passivated.

EXTERIOR — type 304, 18-8 stainless.

INSULATION — fiberglass.

HARDWARE — exclusive adjustable no-slam, cam action latch and chrome-plated hinges.

DOOR(S) — same construction and insulation as cabinet. Largest model has double doors but no center mullion. Silicone rubber seal.

INNER GLASS DOOR — stainless framing, latches and fittings. Pyrex® glass viewing window allows observation of chamber interior. Silicone seal. When opened, unit automatically shuts down.

SHELVES — two, adjustable every 2". Electroplated stainless, wire type.

WATER FLOW AND LEVEL SYSTEM — quality "Y" type strainer, pressure regulator valve, flow control solenoid valves and electronic water leveler to meter water exactly on long-term basis. Alloy water receptacle permits visual inspection. Overflow outlet. No needle float valves. Nominal water use.

DEMINERALIZING CARTRIDGE — assures high purity water for many weeks operation. Minimizes corrosion.

LEAD-IN PORT

OPERATION

High efficiency blower system (A) drives ambient air through uniquely designed rear cavity, across rear heat exchanger chamber wall plate (B) and outward through vents (C) near top of cabinet. Cooling air is proportioned by damper (D). This reduces temperature of entire rear inner chamber wall surface. Internal blower system (E) forces internal air through rear plenum chamber (F), and air is cooled and controlled to proper dew point as it contacts rear wall (B). Air is then saturated and reheated to set conditions. NOTE: Cooling air does not contact conditioned air within work chamber.

D R Y B U L B T E M P E R A T U R E

( DEGREES C E N T I G R A D E )

Chart gives Relative Humidity obtainable, using + 21°C. (+ 70°F) ambient air as the cooling medium.

NOTE: Area in solid blue indicates percentage of Relative Humidity which can be accurately controlled with the motor blower which propels the cooling air being OFF. Hatch-marked area is variable depending upon ambient temperature.

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Inside Dimensions (CM.)</th>
<th>Overall Dimensions (CM.)</th>
<th>Element KW</th>
<th>Voltage 60 Hz A.C. 1 Phase</th>
<th>Line Amps</th>
<th>Cubic Feet Cap.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC-7502TD-A-3</td>
<td>20 (81) 14 (55) 20 (81)</td>
<td>38 (96) 35 (138) 54 (138)</td>
<td>1.6</td>
<td>120 V. 20.0</td>
<td>3.2</td>
<td></td>
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<tr>
<td>AC-7602TD-A-3</td>
<td>25 (100) 19 (75) 20 (81)</td>
<td>43 (109) 40 (101) 54 (138)</td>
<td>1.6</td>
<td>120 V. 20.0</td>
<td>5.5</td>
<td></td>
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<tr>
<td>AC-7702TOC-3</td>
<td>37 (146) 25 (98) 55 (138)</td>
<td>40 (101) 59 (150)</td>
<td>2.5/3.3</td>
<td>208/240V 15.0/17.0</td>
<td>10.0</td>
<td></td>
</tr>
</tbody>
</table>

*Models available for 240 V. and 208 V. / 1 Ph. operation with use of separate autoformer package complete with line cord and plug. Simple installation.

** Unit will operate at 208 V. with reduced element power.

Chamber dimensions are nominal, subject to sheet metal variations and engineering changes. If these values are critical, please contact factory for exact dimensions.

All wiring complete and enclosed to meet N.E. Code, as amended.

Several optional accessories are available for these units. Please contact the factory or your nearest Blue M office for information.

SEND FOR ADDITIONAL INFORMATION AND ALL PRICES

Arizona, Tempe 85281
California, El Monte 91731
California, Sunnyvale 94089
Delaware, Wilmington 19810
Florida, Casselberry 32707
Georgia, Atlanta 30341
Illinois, Blue Island 60406
Kansas, Overland Park 66212
Massachusetts, Millis 02054
Michigan, Livonia 48152
New York, Spring Valley 10977
New York, Syracuse 13206
North Carolina, Charlotte 28217
Ohio, Cincinnati 45237
Ohio, Hudson 44236
Texas, Garland 75042
Washington, Seattle 98108