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## TSE-11-A TWO ZONE THERMAL SHOCK CHAMBER

### GENERAL SPECIFICATIONS

Temperature Ranges:	
Cold Temperature Chamber:	-65°C to 0°C (precool to -80°C)
Hot Temperature Chamber:	60°C to 200°C
Performance:	
Test Performance:	150 to -65°C shock (Mil-Std 883E 1010.7, 883F 1010.8)
Temperature Recovery:	15 min. at the product
Test Load:	4 kg. (8 lb.) plastic ICs
Dimensions:	
Test Area (WxDxH):	32 x 23 x 15 cm      12.5" x 9.1" x 5.8"
External Dimensions (WxDxH):	68 x 105 x 163 cm      26" x 42" x 64"
Utilities Required:	
Electric Service:	208 V / 3 Ø / 60 Hz / 35 Amps
Condensate Drain:	0.375" FPT (one outlet)

### STANDARD FEATURES

#### Chamber Design Features:

- Vertical-lift thermal shock chamber with separate hot and cold temperature zones
- Direct-drive system for reliable transfer between zones (maximum load 13 lb.)
- Compact design with integrated mechanical refrigeration
- Exterior is painted ESPEC beige, interior is stainless steel
- Two specimen baskets (maximum 2 kg. (4 lbs.) each)
- Tube for cables to test load, 2" diameter
- Specimen power supply terminal
- Includes caster and leveling pads for easy movement
- Designed for performance with maximum load (lighter loads need additional mass performance)





Refrigeration and Plenum:

- Refrigeration maintains user-set low temperature in cold zone
- Two sirocco blower motors circulate the air (one per zone)
- Non-CFC cascade refrigeration system using 2hp compressors
- Quiet operation with sound levels below 60dB

ESPEC's Exclusive SCP-220TS Programmer:

- User-friendly touch-screen operation with 6.5" active-matrix color display
- The trend-graph display shows a record of setpoints and actual values
  - This feature may eliminate the need for a chart recorder
- Cycle-time reduction function can automatically advance to the next step
- 20 user-definable programs can be saved with alphanumeric names
- System alarms are stored in memory for historical review
  - Activated alarms provide on-screen troubleshooting help
- Built-in timer functions allow the chamber to be started or shut down automatically
- RS-485 communication port is standard

Included Accessories (shown as optional in catalog):

- Emergency stop, red mushroom button type
- Total cycle counter

## OPTIONS

Strip chart recorder, 100mm (records test area, hot zone, & cold zone temperatures)

Paperless Recorder with color display (Yokogawa 3-channel FX103)  
—Secure CompactFlash storage (32M card included), plus PC software

Paperless Recorder with color display (Yokogawa 6-channel FX106)  
—Ethernet connection, secure CompactFlash storage, plus PC software

Computer Interface RS-232 in place of RS-485

Computer Interface GP-IB (IEEE-488) in place of RS-485

Additional product basket (capacity 4 lbs.)

Factory calibration certificate (for chamber controller)

Factory calibration certificate (for recorder)