

Basket moving type Thermal shock chamber ▶▶

ETSP-TS series

ETSP-TS series (basket moving type) are designed for thermal shock test of components or equipment, submitting them to rapid temperature changes as defined in IEC 60068-3-5:2001, MIL STD 810G, NATO STANAG 4370

Therefore they are suitable for quality control laboratories or in production plants for the screening of components or equipments. **ETSP-TS** series allows users to carry out a wide range of tests necessary to determine thermal characteristics. It is possible to offer standard or custom-designed models.



General Features

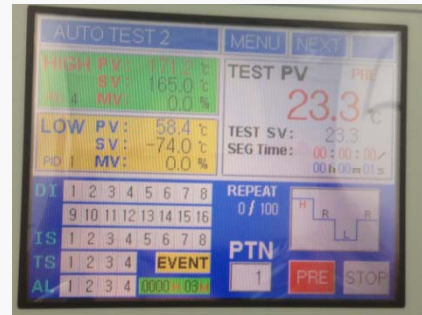
- Fast thermal response with continuous and linear control over the whole range.



- Low level of vibration when basket movement by using pneumatic cylinder and guide rail.



- Friendly, flexible, up-to date control and management systems.



- Rapid cooling with low noise level by using silent compressors and ecologically friendly refrigerants.



Basket moving type horizontal Thermal shock chamber ETSP-TS series

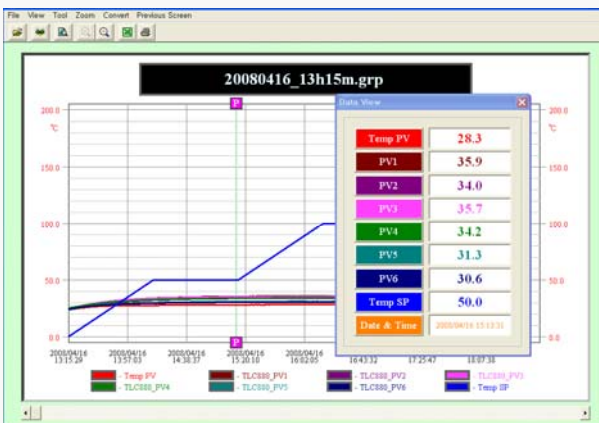
- Reduced the air mixing between the cold and hot chambers by using double gasket(packing).



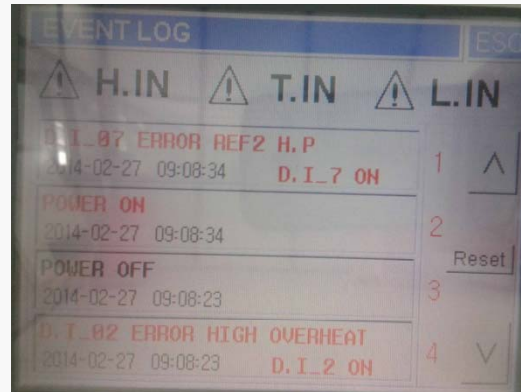
- Excellent air and temperature distribution in space.



- RS232/485 oven networking with free control software



- Allows easy servicing and upgrades by error diagnosis system and inspection system.



- Friendly, flexible, up-to date control and management systems.



- High reliability and operator safety.



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Technical Features

- **Temperature range:** Cold zone -70°C ~ -10°C , Hot zone Ambient ~ 200 °C
- **Temperature accuracy:** less than ± 0.3 °C
- **Temperature stability(inside temperature fluctuation):** less than ± 0.5 °C
- **Hot zone pre-heating upper limit:** +230°C
- **Hot zone heat up rate** Room temperature to +200°C within 15 minutes
- **Cold zone pre-cool limit** :-75 °C
- **Cold zone cool-down rate:** Room Temperature to -70 °C within 45minutes
- **Temperature recovery time** : within 5~15 minutes(depend on test conditions)



- **Input Power Requirements** : 3PH 220V/ 380V, 50Hz/60Hz
(Changeable according to customer specification.)

Included accessories

- 2 Shelves
- RS232/485 oven networking with control software
- Caster for moving



- Three color tower light
- Temperature calibration certificate for controller
- Real time clock (Auto start)
- End of cycle, Hi & low limit audible alarm
- Automatic defrost

- Hard copy/soft copy instruction and maintenance manual

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Technical Specification

| Model | Test area dimensions | Shelf dimensions | External dimensions |
|------------|-----------------------------|------------------------|-------------------------------|
| ETSP-TS50 | 300 x 300 x 300 (WxDxH) mm | 280 x255x20 (WxDxH) mm | 1210 x 1995 x 2002 (WxDxH) mm |
| ETSP-TS60 | 380 x 410 x 380 (WxDx H) mm | 320 x365x20 (WxDxH) mm | 1290 x 2175 x 2250 (WxDxH) mm |
| ETSP-TS100 | 400 x 400 x 400 (WxDx H) mm | 380 x355x20 (WxDxH) mm | 1310 x 2165 x 2290 (WxDxH) mm |
| ETSP-TS115 | 450 x 640 x 400 (WxDx H) mm | 430 x615x20 (WxDxH) mm | 1360 x 2645 x 2290 (WxDxH) mm |
| ETSP-TS150 | 500x 500x 500 (Wx D x H) mm | 480 x455x20 (WxDxH) mm | 1400 x 2470 x 2440 (WxDxH) mm |
| ETSP-TS220 | 750x 650x 450 (Wx D x H) mm | 730x605x20 (WxDxH) mm | 1650 x 2650 x 2340 (WxDxH) mm |
| ETSP-TS300 | 580x 580x 470 (Wx D x H) mm | 560 x535x20 (WxDxH) mm | 1480 x 2550 x 2380 (WxDxH) mm |

Controller: LCD touch screen programmable type (Max. 120 patterns, Max. 1,200 segments, Segment time Max 99hr 59min.)
Automatic defrost system, Set resolution: temperature 0.1°C, Automatic recording and show graphs for temperature

Refrigeration system: Mechanical Cascade refrigeration system (Dual refrigeration system)

CFC free refrigerant: R404A, R23

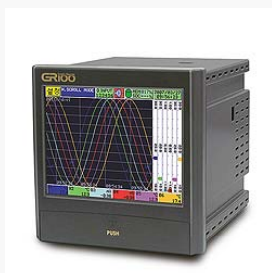
Safety devices : Leakage breaker, circuit breaker, overheat protector,
compressor high and low pressure switch, Low oil pressure trip for compressor,
Phase monitoring relay (Trip off in case of a phase failure),
compressor built-in protector, Electrical over current relay,
Motor reverse-prevention relay, emergency shut off switch.

Options

- Port hole and rubber plug
(selectable among 50,80,100mm)



- Paperless digital chart recorder
(selectable among 6CH, 8Ch, 12CH, 18CH)



- Door lock system



- Viewing window at each zones
(heater wire included, reinforced window)
- Additional stainless steel shelves
- Customization available