

# Thermal Shock Testing

Thermal Tanks, for the determination of resistance to thermal shock of ceramic tiles, according to ISO 10545 part 9.



According to the standard, each sample should be subjected to 10 heating and cooling cycles. The sample should be heated in an oven and cooled in accordance with the two different methods, depending on the water absorption of the tile samples being tested.

Tiles with a low porosity (water absorption of less than 10%) are immersed in water (Thermal).

Glazed tiles with a water absorption of over 10% are indirectly cooled without being immersed (Thermal-W tank.)

The cooled temperature should be controlled at 15°C (±5°C), and the heated temperature is controlled at 145°C (±5°C). We can offer a range of laboratory ovens on request.

## THERMAL

For glazed tiles with an absorption coefficient of less than 10%, they should be immersed in tank "THERMAL" with a water flow of 4 lt/min and a temperature maintained at 15 ± 5 °C, with a sufficient depth to allow the tiles to be placed vertically, immersed and so that are not in contact with each other.

The tank is fitted with a flowmeter and tap, and a stainless steel basket for keeping tiles separated.



## THERMAL-W

For glazed tiles with an absorption coefficient of greater than 10% tank THERMAL-W should be used .An aluminium plate is placed in the tank. The underside of the aluminium plate will be in contact with a water flow of 4 lt/min. while the upper surface will be covered covered with a 5mm thick layer of aluminium granules (with diameter from 0,3 up to 0,6 mm).

The tile is laid glazed face down and the tem-

## Silent Water Chiller

|                         |                     |
|-------------------------|---------------------|
| Temperature range:      | +8°C to +35°C       |
| Temperature stability:  | ± 0,1°C             |
| Temperature controller: | Colour touch screen |
| Cooling capacity:       | 1500 Watts @ 25°C   |
| Pump capacity:          | 5L/min @ 60psi      |
| Liquid tank capacity:   | 4L                  |
| Refrigerant:            | R134A               |
| Power supply:           | 230V ±10% - 50/60Hz |

