

Electrical and functional test

FT King System Test

High TAKT Time Productivity System for appliance performance tests

FT King System Test

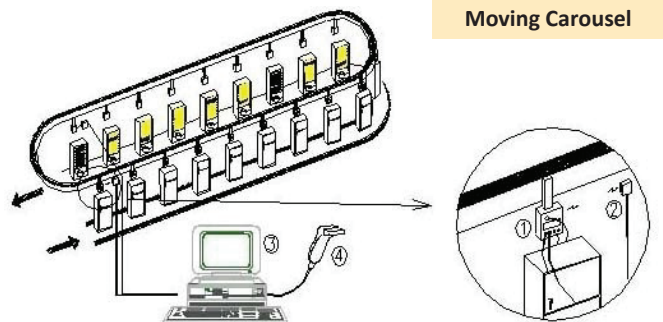
FT King System Test is designed for high speed production lines where many refrigeration units have to be tested at same time in a carousel room. FT King System Test consists of a central control unit (Server PC) and a number of acquisition boxes placed near the products to be tested.

Each acquisition box controls up to 5 temperature probes and the current absorbed by the unit under test (power load as an option). Finally, the management software creates and summarizes a final report of the temperature trend (visible in real time) and a power absorption diagram with the operating ratio based on the parameters stored for each model under test.

FT King System Test Data acquisition communication works by utilizing a radio communication on Industrial protocols RS-485 WiFi installed on the acquisition box and in the central Personal Computer that works as server receiver.

General Overview:

FT King System Test is a refrigerator temperature performance data acquisition and processing system, which is mainly used to detect the temperature inside the refrigerator and the pipeline temperature during the refrigeration process. The system can collect temperature and power data according to the device under test's setup cycle. At the outlet, the temperature and power data collected over a period of time is transmitted via radio to the computer. The computer displays the values and related curves so that the inspector can visually interpret the data. After the inspection is completed, the system can automatically determine whether the product is suitable according to the established standards. The generated reports can be exported in DB file so to be acquired by a quality elaboration system.





Technical Characteristics FT King System Test Features

Server PC with pre-installed Software and relevant drivers

Barcode reader for data input

Realtime Temperature and Power consumption charts displayed on Monitor

Up to 200 acquisition boxes that can be managed at same time for a 180 minutes test time

Wireless Board for radio data broadcasting to acquisition box

Wireless Data acquisition by continuous loop Boxes query

Reports stored in Microsoft standard Databases with SQL standardized language with all relevant function of searching and order the results

Pass/fail criteria related to particular type of fridge for model such as power consumption and temperature

Test duration up to 180 minutes

The screenshot displays the FT King System software interface. On the left, there is a control panel for a specific acquisition box (HCJ902456810000B06060349) showing a temperature of 24.5°C and a status of 'OK'. The main area features a real-time graph with multiple data series plotted against time. On the right, there is a detailed data table and a pie chart summarizing the test results. The table includes columns for '数量' (Quantity), '不合格数' (Number of Failures), and '百分比' (Percentage). The pie chart shows the distribution of results, with a legend indicating categories like '合格' (Pass) and '不合格' (Fail).

Technical Characteristics of the Acquisition Box

Acquisition Box Dimension: L = 400mm, W= 300mm, H = 350mm

up to 5 NTC digital temperature probes (range -50 ÷ +100 °C, +/-1 °C)

N. 1 amperemeter to measure the current or power absorption (0-10A +/-1 f.r.)

N. 1 Schuko electric plugs 230 V, 50 Hz (110 V 50/60 Hz on demand)

N. 1 magnetic and thermic switch device

N. 3 Service Lamps for working phases

N. 1 Wireless Radio module for communication to Server PC

On request: Onboard display for an immediate monitoring of running test