

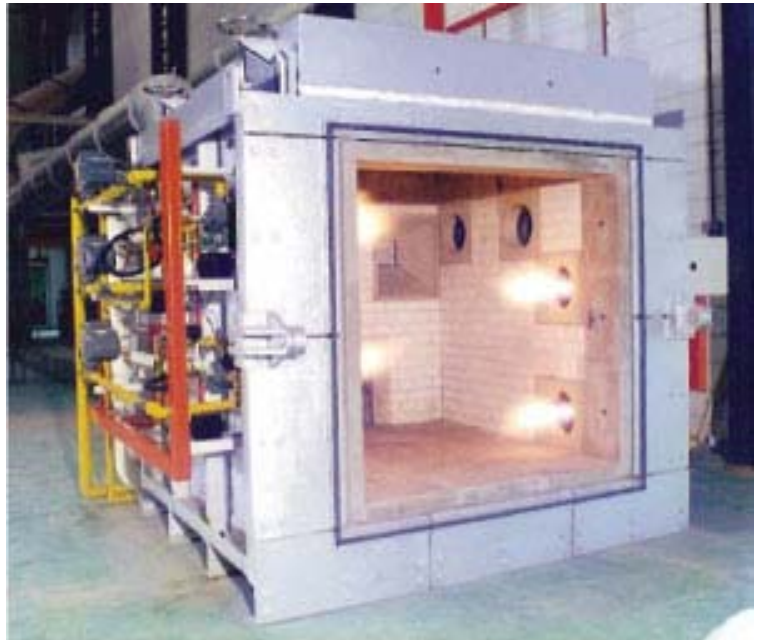
INDICATIVE FIRE RESISTANCE TEST FURNACES FOR VERTICAL & HORIZONTAL TEST SPECIMENS

The fire resistance properties of a material can be used to consider its behaviour when subjected to specific heating conditions. The FTT Indicative Test Furnaces use only a fraction of the material required with the large full scale furnaces and provide a method of quantifying the ability of a material or assembly to withstand exposure to high temperatures. This furnace is also ideal for evaluating the fire performance of dampers and penetration seals for building services. FTT supply two Indicative Fire Resistance Test Furnaces with internal chambers of 1000 mm(W) x 1000 mm (H) x 1000 mm (D) or 1500 mm(W) x 1500 mm (H) x 1500 mm (D).

Four sides of the walls are lined with special high temperature insulating fire bricks on the hot face and pre-cast refractory castables at the edges exposed to the specimen restraint frame as well as mineral boards on the cold face.

A refractory lined Blank-Out Wall with lifting hooks is also supplied; this enables the user to close one side of the furnace wall when either a vertical or a horizontal test specimen is mounted for testing.

A set of two self locking clamps are used to secure the test specimen restraint frame to the furnace. An air cooled viewing port made of heat resistant quartz glass is installed at rear wall to enable the operator to see the behaviour of the entire test specimen during a fire test.



A sliding shutter door made of light weight alumina fibreboard supplied to shield off the furnace heat when the viewing port is not in use.

LP Gas Fuel Burners

For the 1m x 1m x 1m Furnace Instrumentation: 2 burners, based on an upright furnace position are installed on the opposite side of the furnace wall. A third burner is installed near the top of the furnace. For the 1.5m x 1.5m x 1.5m Furnace Instrumentation: 5 burners are supplied. At any one time, 3 out of these 5 burners can be fired. Each burner is designed to use liquefied petroleum gas and all necessary flame safety systems, intermittent pilot systems, and temperature sensors are incorporated.

Lifting and Restraint Frames for Test Specimens

A Non Load Bearing Restraint Frame for mounting vertical or horizontal test specimen is supplied. A customized lifting frame with two side hooks is provided for lifting the specimen restraint frame into the furnace.

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Combustion Air Blower to Furnace Burners

The combustion air system is pre-piped and tested before dispatch.

Temperature Sensors and Manometer

The system is supplied with 2 Type K thermocouples and plate thermometers.

PLC System

The PLC System is comprised of a Siemens PLC CPU and a Siemens compatible remote I/O. The system is capable of communicating with a SCADA system and the software supplied is configured to meet the heating requirements of BS 476 Part 20 - 24, EN 1363 and IMO Hydrocarbon test curve. Other standard Time-Temperature curves can also be pre-programmed into the system.

The PLC controller comprises a built-in operator interface, contains the required recording and programming capabilities and includes all necessary motor starters for all motors in the system.

The SCADA system is programmed to provide real time heating curves and display all furnace control information on the computer screen.