



**Model:STF**

## Steiner Tunnel Test Chamber

UL910 covers the test method for determining values of flame-propagation distance and optical smoke density for electrical and optical-fiber cables that are intended to be installed in ducts, plenums, and other spaces used to transport environmental air without the cables being enclosed in raceways in those spaces.

The purpose of this test is to determine whether the flame-propagation and smoke-generating characteristics of cables without raceways are within the limits specified in the National Electrical Code (NEC). Cables having adequate fire-resistant and low-smoke-producing characteristics need not comply with general wiring methods when the cables are installed (without raceways) in environmental-air ducts, concealed hollow building spaces used as ducts for environmental air, and other environmental-air-handling spaces not specifically excluded (areas involving grease and flammable dust, vapor, and the like). This test method is essentially the same as the test method described in the Standard Method of Test for Fire and Smoke Characteristics of Wires and Cables, NFPA 262.

## I. Main feature

1. The fire test chamber is exactly the same as that of UL fire lab.
2. The fire test chamber is a rectangular horizontal duct with a removable lid.
3. The sides and base of the chamber are lined with an insulating firebrick.
4. One side of the fire testing chamber is provided with double quartz observation windows with the inside pane flush mounted.
5. Multiple windows are located along the tunnel so that the entire length of the test sample is observable from outside the fire chamber.
6. The lid is consist of a removable noncombustible metal and mineral composite structure.
7. The lid covers the fire test chamber and the test samples maintains in an unwarped and flat condition.
8. Two NFP elbow gas burners delivering flames upward against the surface of the test samples.
9. Remote spark ignition mode, to ensure the safety.
10. An air intake shutter is located upstream of the burner.
11. Six refractory firebricks along the side walls of the chamber for proper combustion.
12. The static pressure meter inserted through the top at the midwidth of the tunnel below the ceiling.
13. The exhaust end is fitted with a gradual rectangular-to-round transition piece.

- 14.The exhaust duct is insulated with high temperature mineral composition material.
- 15.An exhaust fan is installed at the end of the exhaust duct.
- 16.The air flow and draft pressure are controlled by automatically damper and Frequency converter.
- 17.A photometer system consisting of a lamp and photocell mounted on a horizontal section, and with the light beam directed upward along the vertical axis of the vent pipe.
- 18.Thermocouples installed inside and outside the floor of the test chamber.
- 19.Data acquisition system and software.

## **II.Standards**

- **NFPA 262**
- **UL910**
- **ASTM D84**

## **III.Installation requirements**

- 1.Electrical: 115 Volts AC 60Hz / 230 Volts AC 50Hz; 380 Volts AC, 20KW
- 2.Ambient Temperature: Operating 15°C to 35°C
- 3.Dimension:21300 mm (L) x 1100 mm (D) x 2100 mm (H)
- 4.Weight:1700KG

5. Gas: Methane and air compressor

6. Utility: crane