



# FIREMAC QUEEN ELISABETH HOSPITAL

**Product:** Firemac FM Fire Duct System  
**Sector:** Hospital  
**Spec:** Kitchen & Smoke Extract  
**Location:** Glasgow, UK



## Project Description

Multiple Firemac FM Fire Duct systems were installed throughout the newly built 1,677-bed acute hospital located in Glasgow, Scotland. The hospital is built on the site of the former Southern General Hospital and opened at the end of April 2015.

The new 14 floor Hospital is one of the largest acute hospitals in the UK and home to major specialist services such as Renal Medicine, Transplantation and Vascular Surgery, with state-of-the-art Critical Care, Theatre and Diagnostic Services.

## System Specification

- Smoke Extract
- Kitchen Extract

## Performance Summary

Within the kitchen zone, the kitchen canopy provides an inlet for the fire – and so there is no way of preventing the fire entering the duct. The Firemac FM120 Fire Duct System is thus designed to ensure the system stays in the air (stability) and encases the fire as it travels past the kitchen compartment walls and/or floors and through the ductwork to the external of the build (integrity).

Where an open-plan kitchen/dining area exists, there may be a concern that fire within an adjacent compartment could ignite the combustible lining within the duct. This could cause a fire to occur within the duct and exit through into the open plan kitchen and dining area. The Firemac FM60K Fire Duct System is thus designed to ensure the system stays in the air (stability), the fire does not enter the duct (integrity), and the fire does not cause the combustible lining within the duct to ignite (insulation).

Within certain projects, a smoke extract system may be required to assist in enabling persons within the building a safe route of egress during the early stages of a fire. The Firemac FM120 Fire Duct System is designed to maintain 75% of its cross-sectional area during the early stages of a fire i.e. pre-flashover, as well as stability and integrity, and insulation up to a specified temperature.

## Testing

The Firemac FM120 Fire Duct System has been successfully tested to provide 120min stability and integrity in accordance with BS 476: Part 24: 1987 (ISO 6944: 1985), as well as providing smoke extract at the early stages of a fire, in accordance with supporting evidence.

All Firemac testing has been done at a UKAS accredited (or equivalent) laboratory, with the involvement of a relevant 3rd party certification body.

