



NH Eurobuilding

HI-FOG® protects NH Hotels' largest hotel in Madrid.

HI-FOG® for NH Eurobuilding

» At a Glance

Complete protection

HI-FOG® protects all spaces in the NH Eurobuilding hotel. With a central pump unit and water tank, the system protects guest rooms, corridors, bars, laundry facilities, storage rooms, event rooms, the lobby, a parking garage, and machinery spaces.

Business continuity

By using significantly less water than conventional sprinkler systems, HI-FOG® helps NH Eurobuilding keep its business running. Loss of a room due to fire directly impacts the bottom line. With HI-FOG® water and fire damage is kept to an absolute minimum. Installation of HI-FOG® was carefully planned around periods of low activity to ensure business continuity through the project.

Easy installation

The narrow tubing and compact components of HI-FOG® meant the system could be installed without any significant additional support or retrofit. The small diameter of HI-FOG® tubing was a critical factor in the successful installation because the hotel's false ceilings were filled with previous auxiliary installations for air conditioning, water and electricity.

Situated in the financial centre of Madrid alongside some of its most symbolic structures such as the Picasso Tower and Azca Center, the NH Eurobuilding is the cornerstone of NH Hotel's chain in Spain. With challenging limitations and the need for an undistruptive installation, NH Hotels turned to Marioff for a major fire protection upgrade.

A critical undertaking

The NH Eurobuilding hotel is a big building and a big business. Updating the fire protection system presented a range of challenges. Not least was keeping the flow of people through 430 guest rooms, 30 large event rooms, the premier Elysium Spa, restaurants, and bars and lounges, uninterrupted.

Protecting customers, employees and business from fire is a top priority for NH Hotels. And doing that with a solution that itself does not cause extra damage is particularly important in the hotel branch.

Conventional sprinkler systems have been the norm in hotels around the world, but

they require significant amounts of space and water. And because these systems rely on wetting to fight fire, a large volume of water is discharged, creating serious and sometimes widespread flooding problems.

NH Hotels needed a high performance solution that met National Fire Protection Association (NFPA) standards. "The HI-FOG® water mist fire protection system delivers the performance we needed and helps increase the feeling of safety for our customers," says PMG, NH Consultant.

Smooth installation

Installation of the HI-FOG® system was completed in 2009. Marioff carried out the on-site work together with an »

“The limitations put on the fire protection system by the NH Eurobuilding hotel were significant. Marioff's HI-FOG® system saved us.”

– PMG, NH Consultant

“The system leads to minimal interference to commercial activity during the installation. The reduced pipe diameter and easy assembly allowed total integration into the existing infrastructure.”

– PMG, NH Consultant



» NH Consultant, maintaining a low profile during installation, allowing hotel customers to get on with the work or play.

As with most any retrofit, space is at a premium. Added to that challenge was a key restriction: no welding was allowed on site. Both of these limitations were central to NH Hotel's selection of HI-FOG®.

The widest HI-FOG® tubing is a mere 38 mm in diameter and is only used for riser pipes. The majority of the system for NH Eurobuilding uses 12 and 16 mm tubing which is easy to fit into the narrow spaces of existing structures.

High pressure section valves and fixtures connect the stainless steel tubing, so no welding is needed for assembly.

Complete system

To protect all parts of NH Eurobuilding, a total of 2,535 HI-FOG® 2000 sprinkler heads were installed. The system uses 26 section valves and nearly 15,000 metres of HI-FOG® tubing. A HI-FOG® SPU4 pump unit delivers water at high pressure supplied by two six cubic metre water tanks. Both take up very little room, leaving the hotel more space for commercial activity. The pump unit and valves are also integrated with the building's fire detection systems.

Marioff would like to thank the personnel of NH Eurobuilding Hotel for making this case study possible. In particular we would like to thank the Director and the security and maintenance staff of the Hotel. Last but not least, we thank NH Engineering and Consultant.