

Saint Peter's Church Spire, Latvia



Project Outline

Contractor	Dominik's
Location	Riga, Latvia
Sector	Leisure & Tourism
Disciplines Covered	Fire Alarm Aspirating Detection

Project Overview

St Peter's Church in Riga dominates the skyline of the Old Town of Latvia's capital city. It has the city's tallest spire and is one of the oldest and most valuable monumental and architectural buildings in the Baltic States, dating back to the Middle Ages.

The Challenge

Protec's partner in Riga, Dominik's were awarded the contract to replace and upgrade the fire alarm system with a Protec digital addressable fire detection system incorporating a front-end Hercules Graphics system.

One of Dominik's main challenges was protecting the church's spire, changing environments in the tower due to the extreme weather conditions across the four seasons. The height and shape of the spire would also mean typical point detection would not be suitable. Therefore, considered thought was required to pick the correct detection fit for purpose and suited to this ever-changing restricted environment.

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The Solution

Fire Alarm - A Protec 6000 series digital addressable system protects the church, monitored by our Hercules front end graphics package. The system provides a series of graphic screens showing the position of all the installed devices and provides a visual indication of their status.

Aspirating Detection - Protec verified the proposed sampling pipe layout and Dominik's set to work on the aspirating pipe installation up to the full height of the building (72m) with sampling holes at each of the nine stair levels.

Protec have several aspirating sensors that provide unique solutions for detecting fires and smoke at the earliest possible stage. The Cirrus HYBRID was selected to protect the tower from a fire on this project. It combines our unique 'Cloud Chamber Detection' (CCD) technology to identify invisible fire particles (unseen by any laser/LED detector). While high performance optical 'Scatter Chamber Detectors' (SCD) identify small and large smoke particles.

The HYBRID offers the most extensive sensitivity range of any aspirating detector. It is immune to false alarms from dust, humidity and temperature changes, therefore ideal for the changing environments in the tower due to the extreme weather conditions in the changing seasons.

The detector is positioned adjacent to the entrance to the stairwell. The aspirating pipework rises the height of the building to the steeple. The system was commissioned and tested to confirm the functionality and performance of the Cirrus HYBRID detector.

The device has a user-friendly 7" touch screen display that enables users to view "live" fire levels, change sensitivity settings and airflows, and give complete system information.

The Aftercare

All Protec Fire Detection PLC equipment in the St Peter's Church in Riga is certified to EN 54 and carry the European standard CE mark. Holding various worldwide accreditations across our product range ensures that Protec equipment is an ideal life safety solution for projects across Europe.