




1 Buildings (빌딩)

 <p>감옥</p>	<p>1.1 Prison cells, southern part of England (UK)</p> <p><i>AQUASYS developed a water mist system for protecting prison cells in southern part of England and executed real scale fire tests for those scenarios.</i></p> <p>Project period: 2018 – 2019 Cooperation partner: Protec UK</p> <p>Project description:</p> <ul style="list-style-type: none"> – Protection of prison cells to prevent spread of fire to neighbour cells or corridors and protection of personnel and occupants in the event of a fire – Pump room build in a 10ft container adjusted for outdoor and high security area serving a system divided into 18 sections – AQUASYS has provided a compact test unit for local fire tests – Integration of the system in close coordination with the british authorities – Installation and project management by local partner
 <p>실험실</p>	<p>1.2 3S Laboratory, Berlin - Brandenburg (Germany)</p> <p><i>AQUASYS water mist system protects the new state laboratory based in the four-storey building located in Berlin – Brandenburg.</i></p> <p>Project period: 2018 – 2019 Cooperation partner: Caverion Deutschland GmbH</p> <p>Project description:</p> <ul style="list-style-type: none"> – The water mist system is installed in a total area of 249m² and protects laboratory rooms as well as technical rooms – The compact pump unit with a water flow of 112l/min serving a wet system divided into 11 sections – Areas are equipped with closed nozzles – The design of the system is in accordance to the requirements of VdS – Installation and project management by local partner
 <p>박물관</p>	<p>1.3 Odunpazari Modern Museum (Turkey)</p> <p><i>AQUASYS water mist system protects the works of art and the building structure from damage in an emergency.</i></p> <p>Project period: 2018 – 2019 Cooperation partner: Arasco</p> <p>Project description:</p> <ul style="list-style-type: none"> – Protection over four levels, including exhibition and gastronomy areas – In total 182 high-pressure nozzles for false ceiling and room protection – Installation and project management by local partner

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호텔
(소방시스템 개조)

1.4 Retrofit system for existing hotel (Germany)

AQUASYS water mist system protects an existing Hotel in Germany and designed a retrofit solution therefore.

Project period: 2018
Cooperation partner: Marang GmbH

Project description:

- Diesel Power pack with 810 l/min water flow situated in a 40ft container and Tank with 48m³ useable water volume
- The system with in total 4.700m piping is divided by three alarm valves and ten flow switch valves
- In total 490 nozzles are installed for room and false ceiling protection
- Installation and project management by local partner



빌딩

1.5 Gesiba Gemeinnützige Siedlungs- & Bau AG headquarters, Vienna (Austria)

AQUASYS water mist to protect the listed building in Vienna's first district.

Project period: 2017
Project management: Siemens AG

Project description:

- Protection of the eight-floor building
- Protection of the office spaces
- Collaboration with Siemens AG as the general contractor for the technical building services
- Commissioning and acceptance by AQUASYS



타워
(30층 고층 건물)

1.6 Maakri 19/21 Tower, Tallinn (Estonia)

AQUASYS fire-fighting system for 30-storey skyscraper in the centre of Tallinn.

Project period: 2016–2017
Project management: Antifire Tuleohutuslahendused OÜ

Project description:

- Protection of office areas, technical areas and car parks in the skyscraper in Tallinn's Maakri Kvartal district
- Installation and project management by local partner
- 2464 nozzle heads and 11,623 m of pipeline installed in total
- Building height 110 m

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지하철역
(헝가리 역사적인 역)

1.7 M2 metro station, Budapest (Hungary)

Water mist fire-fighting system to protect the historical Hungarian metro stations that date back to 1896.

Project period: 2015–2017
Cooperation partner: SPIE AGIS Fire & Security Kft.

Project description:

- Protection of listed stations, including commercial premises, on the M2 line
- Installation in compliance with the Hungarian authorities' requirements for monument protection
- Expansion of the existing fire-fighting system



철도역
(유럽 주요역, 파리)

1.8 Gare de Lyon, Paris (France)

High-pressure water mist system for protecting the station hall at one of Europe's most important railway stations.

Project period: 2016
Project management: Uxello Risques Spéciaux


Project description:


- Protection and cooling of the structure and its load-bearing elements with water mist
- Successful simulation for verifying the effectiveness
- Improved safety for the station's 83 million passengers per year
- Installation and project management by local partner


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 <p>소방서</p>	<h3>1.9 Barnard Castle Emergency Station, Durham (England)</h3>
	<p><i>Historical fire station protected by AQUASYS high-pressure water mist system.</i></p>
	<p>Project period: 2016 Cooperation partner: PROTEC CAMERFIELD LTD</p>
	<p>Project description:</p> <ul style="list-style-type: none"> – Modernisation of the building, first constructed in 1948 – Protection of the entire building with water mist – Installation and project management by local partner – Commissioning and acceptance by AQUASYS


 <p>양로원</p>	<h3>1.10 Care home, Oslo (Norway)</h3>
	<p><i>AQUASYS fire-fighting system to protect a care home for the elderly.</i></p>
	<p>Project period: 2016 Project management: Norges Rørleggerbedrift AS</p>
	<p>Project description:</p> <ul style="list-style-type: none"> – Complete protection across a total of three floors comprising living areas, entertainment rooms and utility rooms – Elimination of the need for extensive upgrade work on the public water pipeline thanks to the use of water-saving water mist technology – Combined wet and dry system installation


 <p>대학교 (공학, 응용과학 보호)</p>	<h3>1.11 A'Sharqiyah University, Ibra (Oman)</h3>
	<p><i>Fire protection system for the University of Business Administration, Engineering and Applied Sciences in the north of the A'Sharqiyah region.</i></p>
	<p>Project period: 2015 Cooperation partner: Vision Safety LLC</p>
	<p>Project description:</p> <ul style="list-style-type: none"> – Protection of more than 8600 books and 2133 students – Protection of the three-storey library via six different fire areas – Manual fire-fighting with additionally installed AQUASYS Water Mist Guns – Project execution by local partner



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 <p style="text-align: center;">고층빌딩</p>	<p>1.12 Dreischeibenhaus, Düsseldorf (Germany)</p>
	<p><i>AQUASYS high-pressure water mist for protecting the listed high-rise building in Düsseldorf.</i></p>
	<p>Project period: 2015 Cooperation partner: Caverion Deutschland GmbH</p> <p>Project description:</p> <ul style="list-style-type: none"> – Installation of a water mist system on the second basement floor during general renovations – Protection of the exhibition areas on the 21st, 22nd and 23rd floors at a height of approximately 70 m – Project execution and installation by local partner

 <p style="text-align: center;">대학교 도서관 (190만권이상 장서보호)</p>	<p>1.13 Philipps University of Marburg (Germany)</p>
	<p><i>AQUASYS fire-fighting system for the central library at the Philipps University of Marburg.</i></p>
	<p>Project period: 2015–2017 Cooperation partner: Caverion Deutschland GmbH</p> <p>Project description:</p> <ul style="list-style-type: none"> – Protection of the university library with more than 1.9 million books on sliding and rolling shelves – Improved safety for 26,726 students per year – Approximately 3450 nozzle heads and 9000 m of stainless steel pipeline installed – Installation and project execution by local partner

  <p style="text-align: center;">박물관</p>	<p>1.14 Museum of Estonian Architecture, Tallinn (Estonia)</p>
	<p><i>Water mist technology for Estonia's architecture museum in a salt storage building that is more than 100 years old.</i></p>
	<p>Project period: 2014–2015 Client: Riigi Kinnisvara AS</p> <p>Project description:</p> <ul style="list-style-type: none"> – Replacement of the existing sprinkler system with a modern water mist system due to its longer lifespan and shorter installation time – Protection of the entire exhibition area, including staff and utility rooms – Protection of the 10-metre-high atrium – Installation by local partner, supervision by AQUASYS

쇼핑몰



1.15 Shopping Mall, Taipei (Taiwan)

High-pressure water mist system for the shopping mall.

Project period: 2014
Cooperation partner: PAO AN FIRE EQUIPMENT CO., LTD

Project description:

- Protection of the atrium and emergency escape routes in the 16-floor shopping centre
- Measures to prevent flames from spreading to higher floors in the event of a fire
- Water mist offers ideal protection against spreading flames due to its excellent cooling properties

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슈퍼마켓

1.16 Choithrams Supermarket, Dubai (United Arab Emirates)

AQUASYS fire-fighting system to protect a supermarket in a shopping centre.

Project period: 2013–2014
Cooperation partner: Vision Safety LLC

Project description:

- Complete protection of the retail space across three floors
- Project management and supervision by AQUASYS
- Assembly and installation by local partner

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럭셔리 호텔

1.17 Derag Livinghotel De Medici, Düsseldorf (Germany)

AQUASYS water mist system for a luxury hotel in Düsseldorf's historical old town hall, a listed building.

Project period: 2013
Client: Derag Livinghotels Düsseldorf GmbH

Project description:

- Installation of the water mist system under strict conditions for preserving the building's original character
- 2000 m of pipeline and 650 nozzle heads distributed across four storeys
- Protection of the entire hotel area in the 17th-century building
- Protection of the owner's private art collection



주립 도서관

1.18 RheinMain University and State Library, Wiesbaden (Germany)

Fire-fighting system for the seven-storey state library of Hesse.

Project period: 2013
Client: Hesse Construction Management

- Project description:**
- Protection of the entire library space in the seven-storey building
 - Protection of some 600,000 volumes, printed texts and manuscripts
 - Installation and project management by AQUASYS



극장
(무대 개조화 함께
소방시스템 개조)

1.19 Volkstheater Rostock, Rostock (Germany)

Retrofitting of a fire-fighting system during renovation of the theatre to protect the stage and its equipment, the storage areas and the foyer.

Project period: 2012
Client: Volkstheater Rostock

- Project description:**
- Supply unit built to customised design due to limited space
 - Protection of the stage and its equipment, storage areas and foyer
 - Roof heights of up to 15 m implemented
 - Installation and project management by AQUASYS



고층빌딩

1.20 High-rise office building, Frankfurt (Germany)

Water mist replacing sprinklers for modernisation of a high-rise building in Frankfurt.

Project period: 2011–2012
Project management: ARUP
Client: Major German bank

- Project description:**
- Surface area of 30,000 m² protected across 25 floors
 - Protection of offices, equipment rooms and an atrium over three floors
 - Installation performed only at weekends to avoid interrupting operations
 - Only one pump room required to supply the entire 96-metre-high building

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왕세자 거주지
(아부 다비)

1.21 Residence of the Crown Prince of Abu Dhabi (United Arab Emirates)

AQUASYS fire-fighting system protects Crown Prince Sheikh Saif bin Zayed Al Nahyan.

Project period: 2011
Client: Emirate of Abu Dhabi

- Project description:**
- Protection of equipment rooms and supply systems at the residence
 - Installation and project management by local partner
 - Commissioning and acceptance by AQUASYS



NBD 은행 보관소

1.22 Emirates NBD bank archives, Dubai (United Arab Emirates)

Fire-fighting water mist system to protect the archives at Dubai's largest bank

Project period: 2010
Client: Emirates NBD

- Project description:**
- Real-life tests to verify that the water mist causes minimal damage
 - Protection of the steel shelf archives with a capacity of 45,000 m³
 - Archiving of documents on four floors
 - 1500 nozzle heads installed



주립 도서관

1.23 Upper Austrian State Library, Linz (Austria)

Installation of a fire-fighting system by AQUASYS during expansion and modernisation of the library. Because of the limited space available, a tailor-made solution was required.

Project period: 2008–2009
Client: State of Upper Austria

- Project description:**
- Protection of the six-floor library in Linz
 - Upgrade to a water mist system as part of the modernisation work
 - Tailored system solution due to limited space
 - Archiving of documents on four floors
 - 1500 nozzle heads installed

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시청 및 우체국
(역사적인 건물)

1.24 Palacio de Cibeles, Madrid (& main post office of the City of Madrid [Spain])

Water mist to protect the historical town hall and post office in Madrid

Project period: 2008
Client: City of Madrid

- Project description:**
- Simulation to verify the effectiveness of the water mist system
 - Protection of the building structure and emergency escape routes
 - Installation by local partner, supervision by AQUASYS



1.25 Musikverein concert hall, Vienna (Austria)

Protection for the home of the Vienna Philharmonic Orchestra with a fire-fighting water mist system.

Project period: 2007
Client: Wiener Gesellschaft der Musikfreunde (Viennese Friends of Music Society)

- Project description:**
- Protection of the box corridors, stage and dressing rooms at the large concert hall, which has a capacity of 1700 seated and 300 standing places
 - Protection of the traditional concert hall's roof structure, which is difficult for emergency services to access
 - Space-saving installation of the water mist system in the basement

비엔나 필하모니 오케스트라 홀



1.26 Enercon office building, Magdeburg (Germany)

Water mist walls to replace structural fire barriers.

Project period: 2006
Client: Enercon

- Project description:**
- Replacement of the structural fire barriers with water mist walls for architectural reasons
 - Additional protection for the six-storey atrium
 - Delivery, installation and commissioning by AQUASYS

사무실 빌딩
(미분무수로 방화벽 대체)

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