intisi

Fire Engineered Fabrics

ACTIVE FIRE CURTAINS INTISI 7
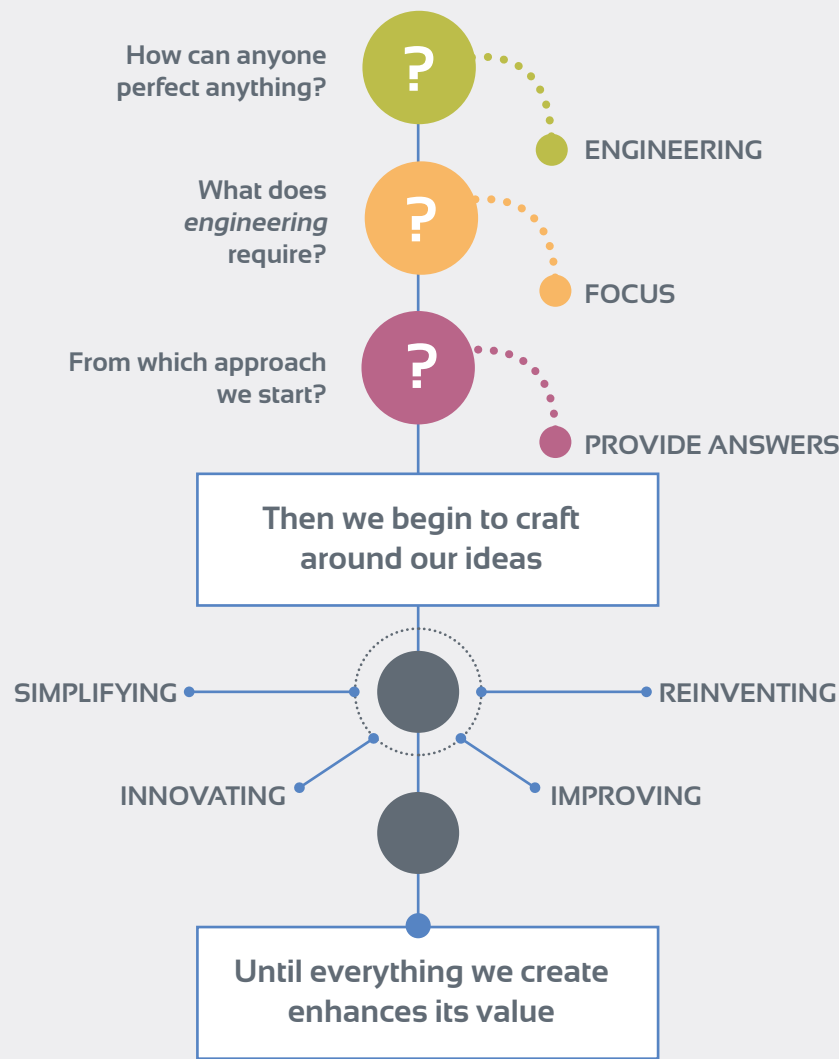
For invisible
fire partitions

www.intisigroup.com

Fire Engineered Fabrics

INTISI was founded to become the technological partner of active fire curtains and smoke barriers.

By recognizing the importance and convenience of providing architects with the confidence and freedom to design without compromising fire regulations, we became specialized by offering the most innovative fire partition solutions.

Our full range of products have been certified by the most demanding certification bodies according to the latest International Quality Standards in strict adherence to ISO 9001 quality management system. Our success is driven by our "INNOVATIVE POTENTIAL" that enables us to improve ways to safeguard life and property.

How can anyone perfect anything?

? ..... **ENGINEERING**

What does *engineering* require?

? ..... **FOCUS**

From which approach we start?

? ..... **PROVIDE ANSWERS**

Then we begin to craft around our ideas

SIMPLIFYING • • REINVENTING

INNOVATING • • IMPROVING

Until everything we create enhances its value

intisi

PERSONALISED PERIPHERAL SERVICES
- Technical advice and consultancy
- Repair of curtains at own Technical Service facilities
- Development of personalised solutions

Invisible Fire Partitions by Means of Active Fire Curtains

REQUIREMENT

Construction regulations require dividing zones to:

- Limit the spread of fire and smoke

- To allow access to protected escape routes without any loss of fire resistance, and to limit smoke entry into these routes.

The standard EN 1634-1 regulates fire resistance tests and classifies as an asymmetric enclosure.

OBJECTIVE PARTITIONS

Create fire partitions under different protection requirements according to EN 13501-2 standard.

In order to ensure the integrity against fire on both sides, **asymmetrical fire curtains** must be tested against fire on the side where its components are located (supporting items, guide rails and motor).

E

➕ Integrity ➕ Guarantee for containing flames and hot gases on the side exposed to fire.

EI

➕ Integrity ➕ Guarantee for containing flames and hot gases on the side exposed to fire.

➕ Insulation ➕ Guarantee that heat transfer does not cause a fire on the side not exposed to the flames.*

* Thermal insulation by means of sprinklers with low pressure closed nozzles and quick response thermal-fuses

EW

➕ Integrity ➕ Guarantee for containing flames and hot gases on the side exposed to fire.

➕ Reduced heat radiation ➕ Limiting of heat radiation transfer, preventing ignition of materials and people damages on the side not exposed to the fire.

intisi 7
Active Fire Barrier. Design

Operable Fabric Fire Curtain
Fire resistant doorset constructed from technical fabrics which functions as a rolling shutter by means of the ISF Gravity Fail Safe system®.

❶ Chassis

Metal chassis with dimensional stability to house the fabric and different system components. Its blunt edge design limits its friction with the fabric to ensuring full integrity and durability of the different components.

❷ Ltp24 Motor Block

24V high performance tubular motor block, now more silent and reliable.

❸ Tubular Shaft With Easy-Fast System

Roller that contains the LTP24 motor block and rolls the Intisi tex fabric effectively.
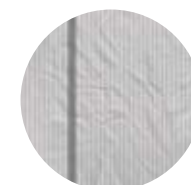
❹ Anchoring System With Skatip Design

Up to 20 mm thickness, securing mechanism designed to guarantee the integrity of the system even under the direct exposure to fire.

❺ Telescopic Roller Bridge

A bridge mechanism with telescopic ROLBRID system to support and align large size Intisi fire curtains (WIDE series).

❻ Intisi tex TECHNICAL FABRICS

Latest generation technical fabrics made from fibreglass reinforced with stainless wire to guarantee integrity at high temperatures.

❼ GI Side Guides

Tear proof guiding system to guarantee tightness and integrity of the Intisi fire curtain against gases and flames in the event of a fire with low friction inner guiding bar.
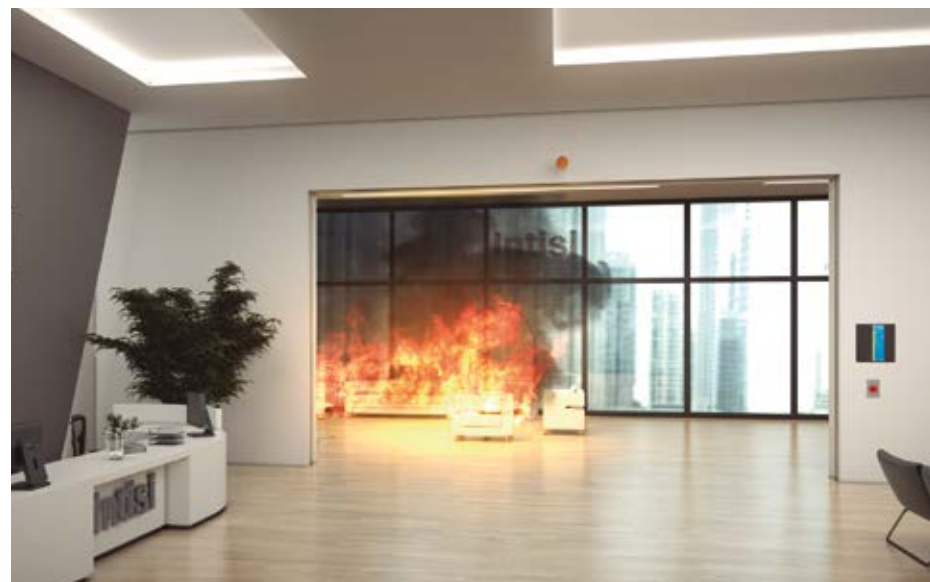
❽ Sealing Strip

A compact angular rigid counterweight mechanism to guarantee the secure operation of the Intisi fire curtain without electrical power by means of ISF Gravity Fails Safe technology at a controlled speed.
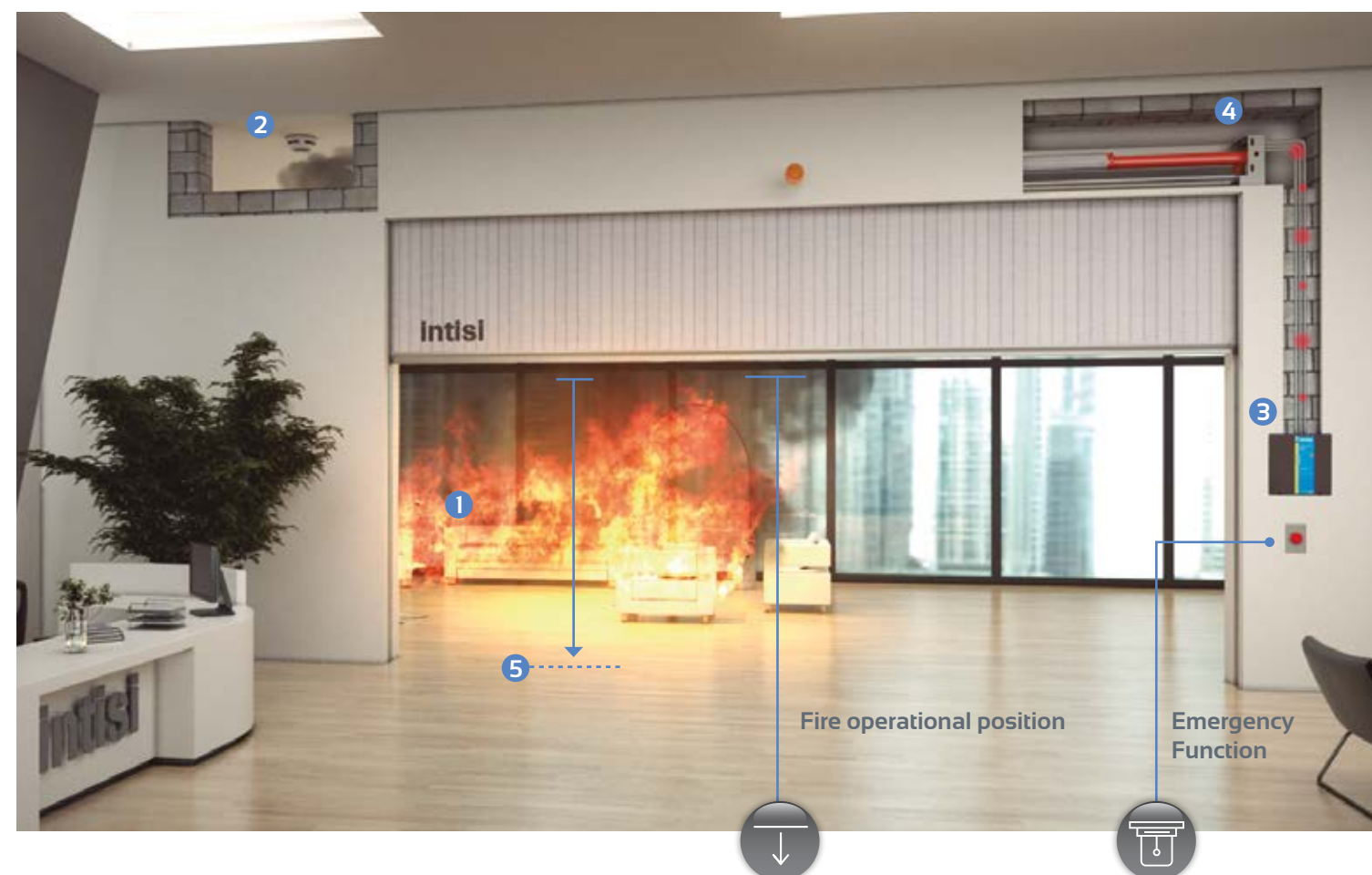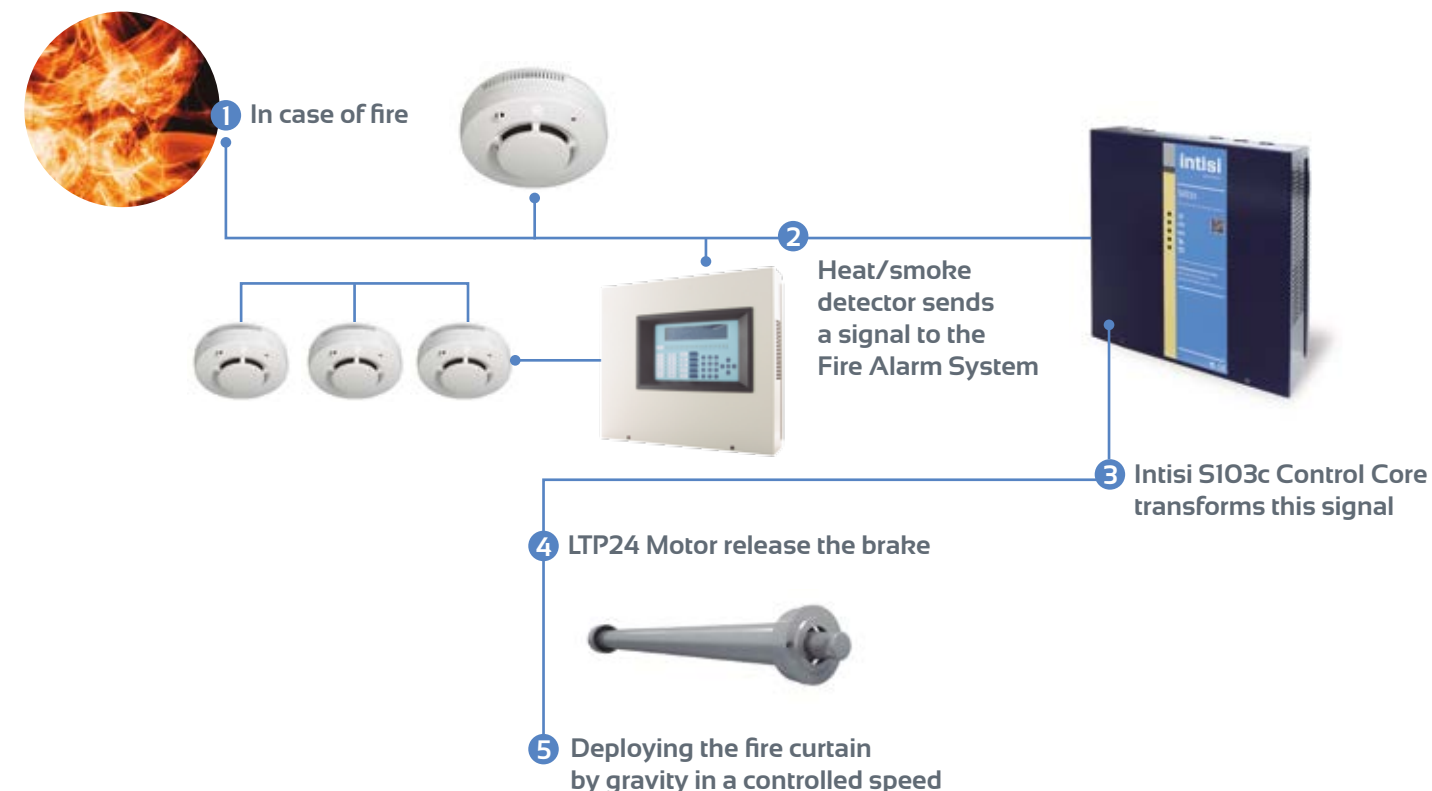
intisi 7
Active Fire Curtains

Simplicity
is not something simple

ISF Gravity Fail Safe Technology
Gravity closure at a controlled speed.

Intelligence
All components are conferred with technology to enable fire curtains to solve problems.

Ultra Compact
The small size of the system means it can be fully integrated in the space.

Emergency Function
Programmed timed emergency retract function.

Certified Quality
Intisi 7 fire curtains have been tested to the most demanding international standards.

Ultra Size
The biggest non overlapped fire curtains in the world certified according with EXAP prEN 15269-11.

Reversible
They are the only fire curtains certified to protect 2 fire sectors.

One Click Assembly
The design of each part is ideal for simple assembly and maintenance.

Anti Crushing
Guaranteed controlled speed without any power supplies.

Guaranteed Safety
All the advantages of Intisi 7 fire curtains are meant to provide complete safety against fire.

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Active Fire Curtain Performance

1 **In case of fire**

2 **Heat/smoke detector sends a signal to the Fire Alarm System**

3 **Intisi SIO3c Control Core transforms this signal**

4 **LTP24 Motor release the brake**

5 **Deploying the fire curtain by gravity in a controlled speed**

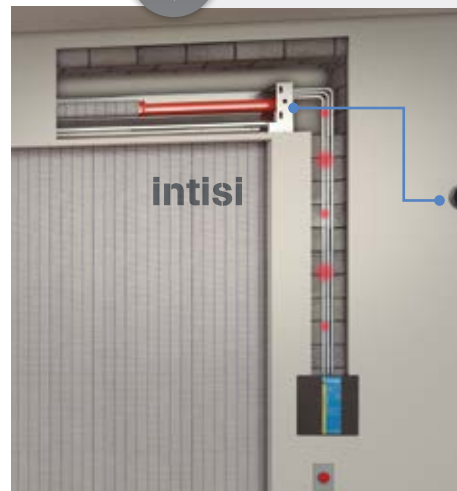**Fire operational position**

Emergency Function

intisi 7
Active Fire Curtain Performance

ISF Gravity Fail Safe Technology®

Ability of the Intisi 7 fire curtain to move to its fire operational position in a safe and controlled manner when all consumable primary and auxiliary power supplies are removed.

The LTP24 Motor keeps the fire curtain retracted and controls the deployment speed by means of the powers supplies.

In case all the consumable power supplies were removed, the **ISF Gravity Fail Safe Technology**® ensures the deployment of the Intisi 7 fire curtain by gravity in a controlled speed.
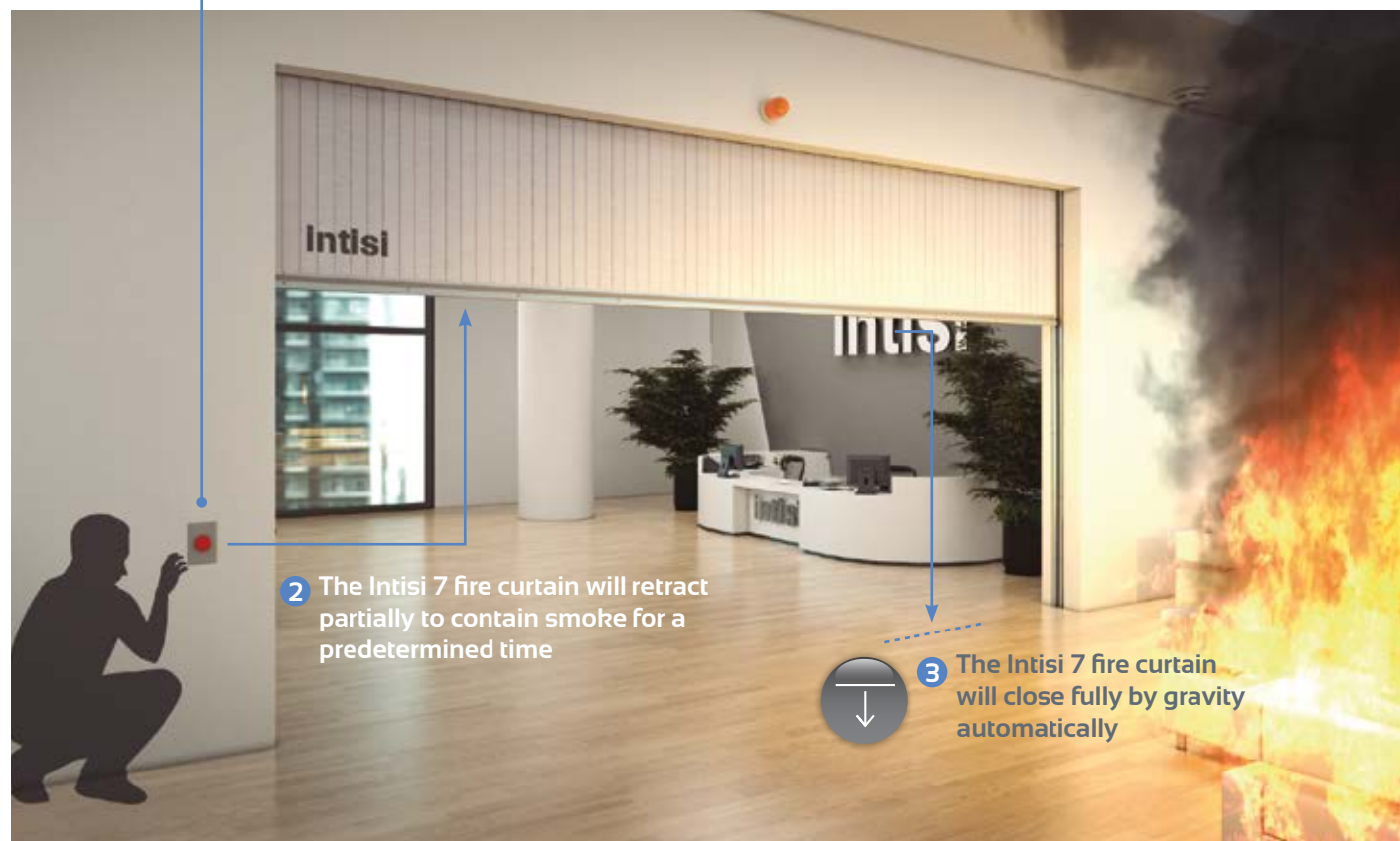
Emergency Function

Programmed timed emergency retract function:
• Trapped people could escape
• Fire service override switch

1 **Press the push button to enter or escape**

2 **The Intisi 7 fire curtain will retract partially to contain smoke for a predetermined time**

3 **The Intisi 7 fire curtain will close fully by gravity automatically**

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intisi 7
Active Fire Curtain. Reversible

Suitable for protecting two fire sectors

The fire curtains are ASSYMETRIC fire separating elements by nature.

The EN 1634-1 standard sets out that to guarantee the fire resistance of a fire curtain, it shall be tested with the supporting elements (headbox and side guides) exposed to the direct attack of fire.

Fire curtain tested with the supporting elements (headbox and side guides) NON exposed directly to fire.

Valid for protecting areas with fire in **1 single fire sector.**

1100°C

Fire curtain tested with the supporting elements (headbox and side guides) exposed directly to fire.

Valid for protecting areas with a fire affecting **2 fire sectors.**

1100°C

Approvals

Intisi 7 fire curtains prove their high quality and accuracy in many tests, certificates and approvals by accredited official laboratories, in accordance with the European standards.

UNE EN 1634-1 Fire resistant test: specifies a method for determining the fire resistance of the fire curtains as a fire compartimentation element.

UNE EN 13501-2 Fire Resistance classification: define a harmonised procedure for the classification for resistance to fire of fire curtains.

EXAP prEN 15269-11 Extended application of test results: scale the tested dimensions of the fire curtains during the UNE EN 1634-1 Fire resistant test up to bigger dimensions.

UNE EN 14600 Self-closing durability test: requirements and methods of conformity necessary to demonstrate the capability of a fire curtain to cover their designed working life.

How to read tests, certifications and approvals reports?

• The fire classification specified in the UNE EN 13501-2 Fire Resistance classification report should comply with the fire classification requested in the project (E120, EW120, EI120).

• The UNE EN 13501-2 Fire Resistance classification report specifies the exposure conditions during the UNE EN 1634-1 Fire resistant test. To ensure if the fire curtains are capable to resist the direct attack from fire, the structural components (Head box and lateral guides) should be placed on the exposed side to fire during the UNE EN 1634-1 Fire resistant test.

• The UNE EN 13501-2 Fire Resistance classification report specifies the overall dimensions of the fire curtain during the UNE EN 1634-1 Fire resistant test. If the fire curtain should have bigger dimensions, they should be calculated according to EXAP prEN 15269-11 Extended application of test results.

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Active Fire Curtain Product Index

intisi 7 E120

Fire Resistance	Max. Width	Max. Height	Test Installation
2 hours fire resistance	22 meters [1]	10 meters [1]	Structural components (headbox and side guides) inside the furnace.

intisi 7 EW120

Fire Resistance	Max. Width	Max. Height	Test Installation
2 hours fire resistance	15 meters [1]	5,5 meters [1]	Structural components (headbox and side guides) inside the furnace.

intisi 7 EI120

Fire Resistance	Max. Width	Max. Height	Test Installation
2 hours fire resistance [2]	22 meters [1]	10 meters [1]	Structural components (headbox and side guides) inside the furnace.

(1) Dimensions in one continuous roller certified as per EXAP prEN 15269-11
(2) Intisi-SC Sprinkler System required

intisi 7
Active Fire Curtain E120

A change of perspective

Big fire-separating elements are technically possible with the Intisi 7 E120 fire curtains. Its advanced components, in compliance to European Standards, provide 120 minutes integrity under EN 1634-1 with only one continuous roller. The Intisi 7 E120 fire curtain has been optimized to can be integrated in small spaces.

The technologically advanced fire resistant fiberglass fabric reinforced with stainless steel wire of only 0,65mm thickness; and its compact structural components (headbox, side guides and bottom bar) tested in direct exposure to fire, make it the perfect solution to replace a nonloadbearing wall and open up exciting design possibilities.

Fire classification

Fire classification	Max. Width	Max. Height
INTEGRITY E120	22 meters[1]	10 meters[1]

(1) Dimensions in one continuous roller certified as per EXAP prEN 15269-11

Series

Light

Intisi 7 E120 active fire curtains up to 6 meters width. The roller is fixed in one side.

Width (A)	Height (H)
≤ 6 meters	≤ 10 meters
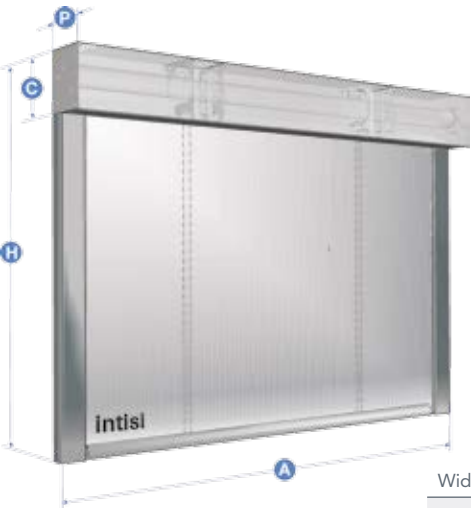
Wide

Intisi 7 E120 active fire curtains from 6 meters to 22 meters width. The roller floats on a double roller system.

Width (A)	Height (H)
> 6 – 22 meters	≤ 10 meters

Headbox Range

Headbox	Headbox Size (PxC)	Series LIGHT height (H)	Series WIDE height (H)
COMPACT	190x200 mm	≤ 3 meters	-
COMPACT+	236 x290 mm	> 3 – 10 meters	≤ 7 meters
COMPACT$_{pro}$	286x445 mm	-	> 7 – 10 meters

Optionally available in any RAL color

Side Guide Range

Side guide	Dimensions (GxF)	Height (H)	Width (A)
GL130	130 x 74 mm	≤ 6 meters	≤ 13 meters
GL175	175 x 105 mm	> 6 ≤10 meters	≤ 22 meters

Optionally available in any RAL color

intisi 7
Active Fire Curtain EW120

Innovation and precision

Intisi 7 EW120 reaches a new level of innovation and precision. Its entire design offers a limited heat radiation zone.

The Intisi 7 EW120 fire curtain remain invisibly retracted until its activation, at which time they close safely to their fire operational position. Its technologically advanced fire resistant fabric of 2mm thickness, when exposed to high temperatures, creates an internal insulating layer, providing a thermal insulation barrier during 120 minutes.

The complex structure of the tex-EW120 fabric consists of multi-layer fabric finished with aluminum foil in both sides, in conjunction with the compact structural components (headbox, side guides and bottom bar), tested in direct exposure to fire, minimizes the heat transmission to under 15 kW/m² for over 2 hours, while, at the same time, limits the passage of flames and gases to the other side.

Fire classification

Fire classification	Max. Width	Max. Height
INTEGRITY and REDUCED HEAT RADIATION EW120	15 meters[1]	5,5 meters[1]

(1) Dimensions in one continuous roller certified as per EXAP prEN 15269-11

Series

Light
Intisi 7 EW120 active fire curtains up to 6 meters width. The roller is fixed in one side.

Width (A)	Height (H)
≤ 6 meters	≤ 5,5 meters

Wide
Intisi 7 EW120 active fire curtains from 6 meters to 15 meters width. The roller floats on a double roller system.

Width (A)	Height (H)
> 6 – 15 meters	≤ 5,5 meters

Headbox Range

Headbox	Headbox Size (PxC)	Series LIGHT height (H)	Series WIDE height (H)
COMPACT	190x200 mm	≤ 1,8 meters	-
COMPACT+	236 x290 mm	> 1,8 – 5 meters	≤ 4 meters
COMPACT pro	286x445 mm	-	> 4 – 5,5 meters

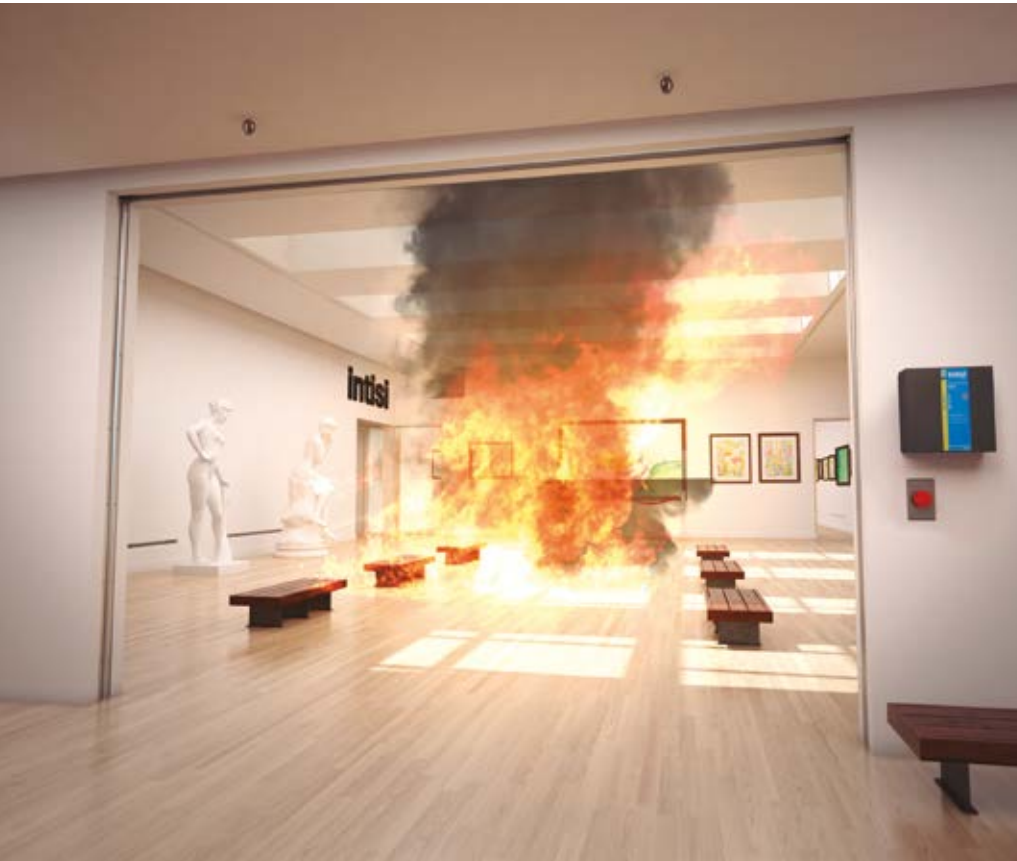Optionally available in any RAL color

Side Guide Range

Side guide	Dimensions (GxF)	Height (H)	Width (A)
GL130	130 x 74 mm	≤ 4 meters	≤ 15 meters
GL175	175 x 105 mm	> 4-5,5 meters	≤ 15 meters

Optionally available in any RAL color

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Active Fire Curtain EI120

Advanced Technology

Intisi 7 EI120 dramatically improves the performance of the active fire curtains. It provides the first smart fire invisible partition.

The Intisi 7 EI120 active fire curtain is compliant to European Standards, offering 120 minutes integrity and insulation under EN 1634-1 in conjunction with Intisi-SC sprinkler system.

The Intisi 7 EI120 fire curtain uses the same technical fire resistant fiberglass fabric, reinforced with stainless steel wire, used on the Intisi 7 E120. The Intisi-SC sprinkler system cools the fabric of the curtain thus reducing, in case of fire, the temperature on the safe side of the curtain.

Fire classification

Fire classification	Max. Width	Max. Height
INTEGRITY and INSULATION EI120	22 meters[1]	10 meters[1]

(1) Dimensions in one continuous roller certified as per EXAP prEN 15269-11

Series
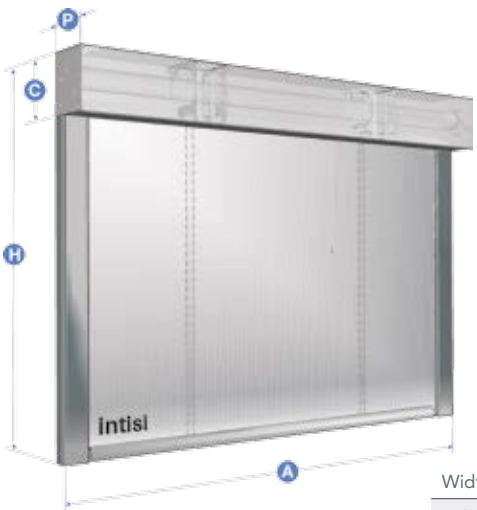

Light

Intisi 7 EI120 active fire curtains up to 6 meters width. The roller is fixed in one side.

Width (A)	Height (H)
≤ 6 meters	≤ 10 meters

Wide

Intisi 7 EI120 active fire curtains from 6 meters to 15 meters width. The roller floats on a double roller system.

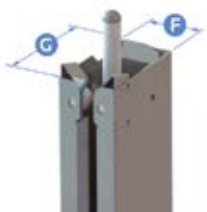| Width (A)	Height (H)
> 6 – 22 meters	≤ 10 meters

Headbox Range

Headbox	Headbox Size (PxC)	Series LIGHT height (H)	Series WIDE height (H)
COMPACT	190x200 mm	≤ 3 meters	-
COMPACT+	236 x290 mm	> 3 – 10 meters	≤ 7 meters
COMPACT_pro	286x445 mm	-	> 7 – 10 meters

Optionally available in any RAL color

Side Guide Range

Side guide	Dimensions (GxF)	Height (H)	Width (A)
GL130	130 x 74 mm	≤ 6 meters	≤ 13 meters
GL175	175 x 105 mm	> 6 ≤10 meters	≤ 22 meters

Optionally available in any RAL color

Intisi-SC Sprinkler System

- The only certified closed nozzle system
- K80 sprinkler with quick response bulb type thermal fuse
- Sprinkler fitted every two linear meter of the width of the Intisi 7 EI120
- 1.1 bar working pressure
- Sprinkler only requested to cool the fabric (not for cooling the structural components: headbox and side guides)
- First hidden sprinkler system above the false ceiling

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Smart Control Core S103c
Controlled Safety

Features

Operability. Makes the closure function of Intisi 7 fire curtains effective, in a controlled speed.

Personalised programming. The advanced processor permits a large number of programming parameters to be stored.

Intelligence. Enables Intisi 7 fire curtains to resolve problems autonomously through its permanent status of self-test.

Memory. Up to 255 fault and event log.

Communication. Users are provided information about the system status in real time, via WIFI, TCP-IP, GSM, etc.

Safety. Permits evacuation of people found in the area of the fire and action by the firefighter.

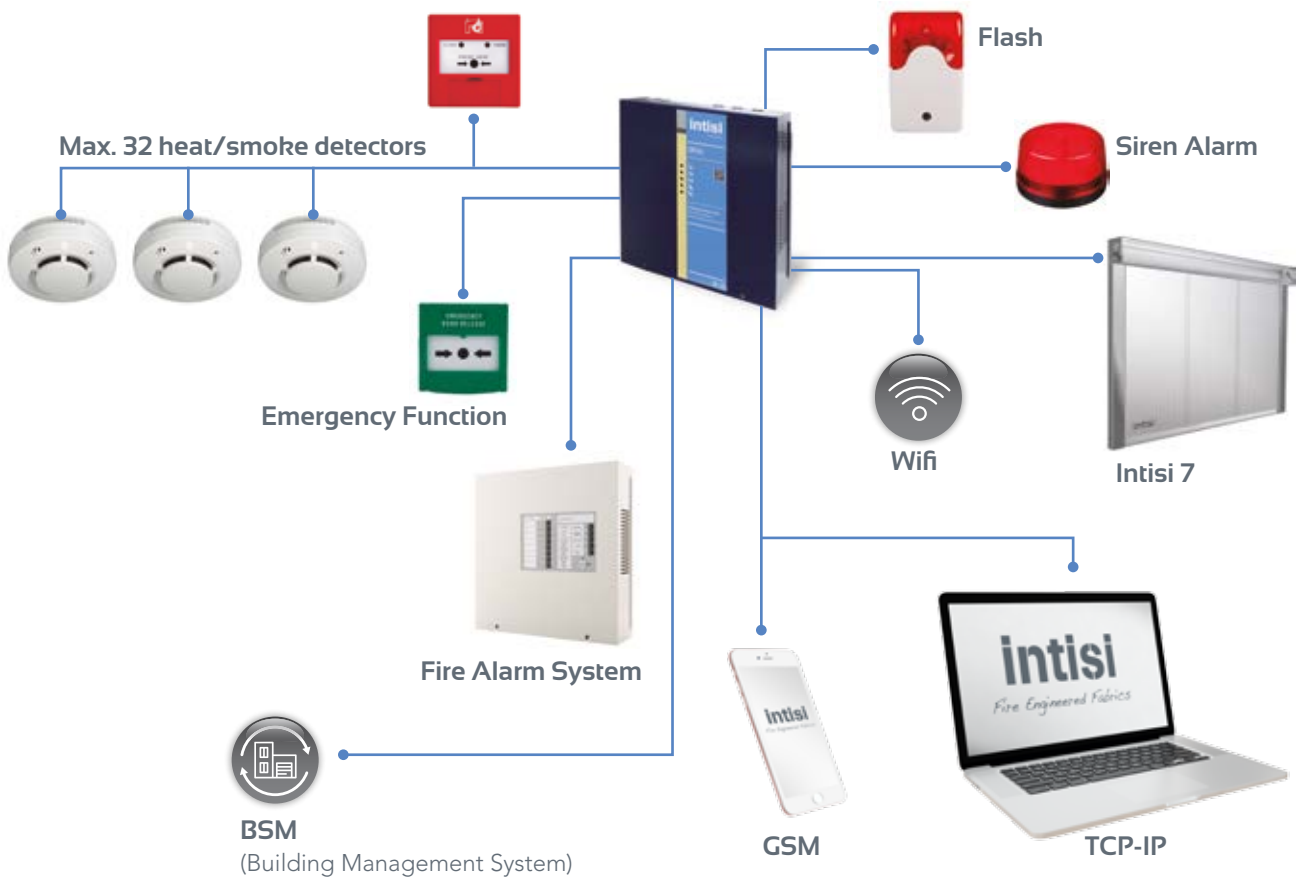**Multi-purpose.** Fitted with an area to connect fire detection devices.
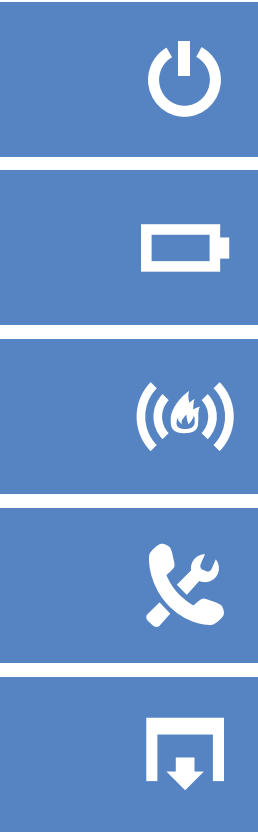
Specifications

• Advanced i3 processor, designed with 32 bit architecture.

• Remote connectivity to advanced applications (WIFI, TCP-IP, GSM, etc).

• Pulse width modulation technique PWM.

• Adjustable descent speed.

• Hall effect encoder, providing over 6000 information bits per minute.

• 24V back-up UPS device with automatic monitoring and charging of its battery pack.

• Can be connected to BMS for monitoring the system.

• 230V AC / 50 Hz power supply.

• Dimensions: 315 x 320 x 85 mm.

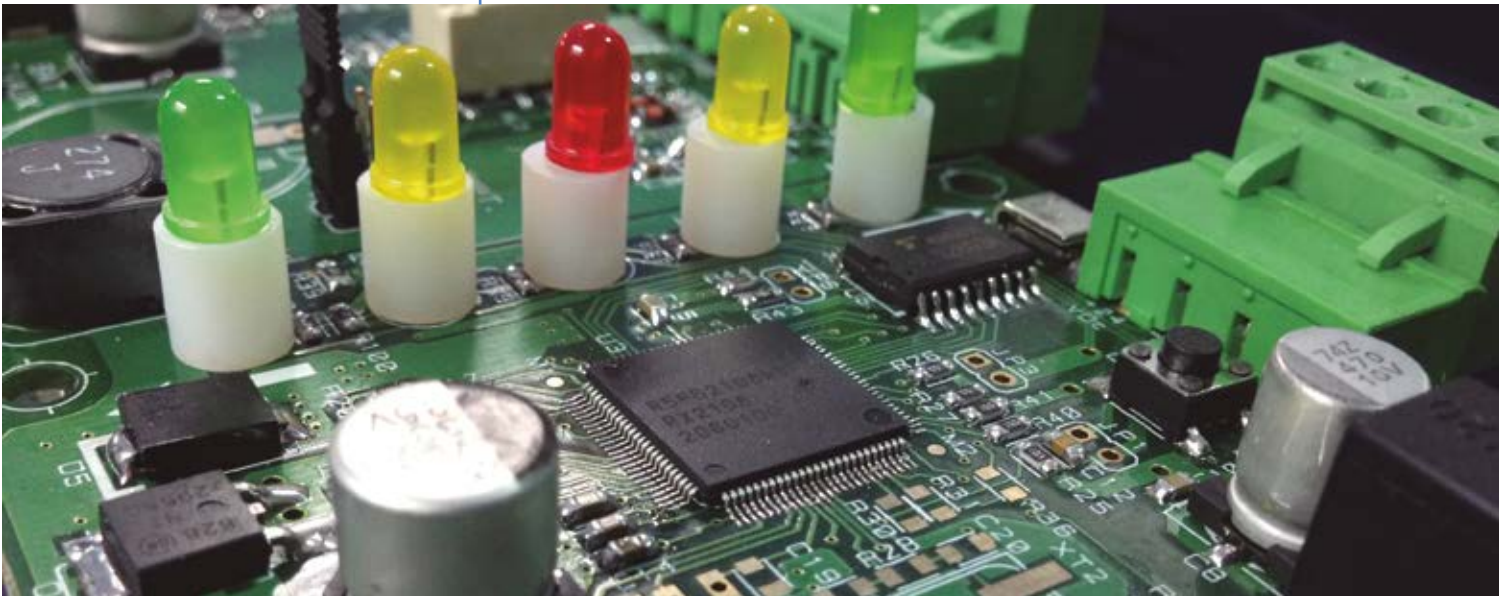• Low power consumption.

• Programmable timed emergency retract.

Programming

The advanced technology featured in the S103c Smart Core Control permits personalised programming to adapt to the requirements of each client.

• Basic programming is permitted directly from the Core Control.

• Programmable timmed emegency retract.

• Multi-positional deployment programming to provide initial smoke containment prior to full fire containment.

• Advanced programming may be carried out through the Intisoft® application.

The Intisi S103c smart control core governs the Intisi 7 fire curtains efficiently and effectively.

Max. 32 heat/smoke detectors

Flash

Siren Alarm

Emergency Function

Wifi

Intisi 7

Fire Alarm System

GSM

TCP-IP

BSM
(Building Management System)

INTISOFT®

Permits remote monitoring of events log and status (in real time) for the Intisi 7 active fire curtains

intisi 7
Installation

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Maintenance

Ensuring that your Intisi 7 active fire curtain remains operationally is not only important in order to comply with fire codes and insurance requirements, but also is critical for guarantee that your building remains protected from the effects of fire.

One Click Assembly

The effectiveness of the Intisi 7 active fire barrier assembly is ensured by a proper installation; for this reason, the Intisi 7 components and installation procedures are designed under the premise of ONE CLICK ASSEMBLY. This enables error-free installation and minimize the installation time.

Safe Assembly

The Intisi's great experience provides us with the knowledge to design each single part under the premise of SAFE ASSEMBLY.

Electronic Final Opening Adjustment

The Intisi 7 active fire curtain final opening adjustment is carried out electrically by means of the Intisi SI03c control core.

Adaptable

The Intisi 7 active fire curtains adapt completely to the building special features, providing customized solutions to satisfy the building safety needs (f.e. Intisi SI03c control core can be installed at 50 meters from the Intisi 7 active fire curtain).

Tear-free Design

The active fire curtains main distinguishing factor is the fabric. The fabric main benefits are: flexibility, low weight, reduced thickness and wide range of technological alternatives. But its main weakness is its fragility against friction in contact with the structural components, thus tearing the fabric damaging the system.

To deal with this weakness, the Intisi 7 active fire curtains design minimized the fabric risk of tear.

Event Log

The Intisi SI03c control core is in permanent status of self-test. This fault and event logs are stored in the memory of control core which can host 255 events.

The event log provides with relevant information which allows to minimize the corrective maintenance tasks and also facilitate the preventive maintenance task, thus optimizing the preservation of the system.

INTISOFT®

Software for commissioning the installation and for maintaining the Intisi 7 active fire curtain.

intisi 7
Role and Use

Role

- To maintain any compartimentation of building needed to limit the spread of fire and smoke.
- To allow access to protected escape routes, and to limit smoke entry into these routes.
- As a method of upgrading non-fire resisting elements where required for compartimentation or protecting means of escape.
- To create safety areas near combustibles.
- To optimize automatic suppression system.

Most Common Applications

- Doorways
- Windows
- Theatres
- Atrium
- Corridors
- Tunnels
- Airports
- Stadiums
- Stairs and escalators
- Shop fronts
- Serving hatches
- Electrical substations
- Basement car parks
- Lifts
- Rooflight domes or skylights

We adapt our solutions to your needs

Logistics Sector
Logistics centres are buildings that are carefully designed to optimise the logistics activity with maximum use of space.

Industrial Sector
Industrial activities require high levels of safety and protection with maximum optimisation of space.

Petro-Chemical Sector
Petro-chemical plants require a culture of preventive safety for the risks involved in their own activity.

Nuclear Power Plants
Nuclear power plants involve high specific risks which need to be controlled and foreseen.

Food And Agriculture Sector
The food and agriculture industry must ensure the healthiness, hygiene and freshness of the products, and provide a safe environment for employees and animals.
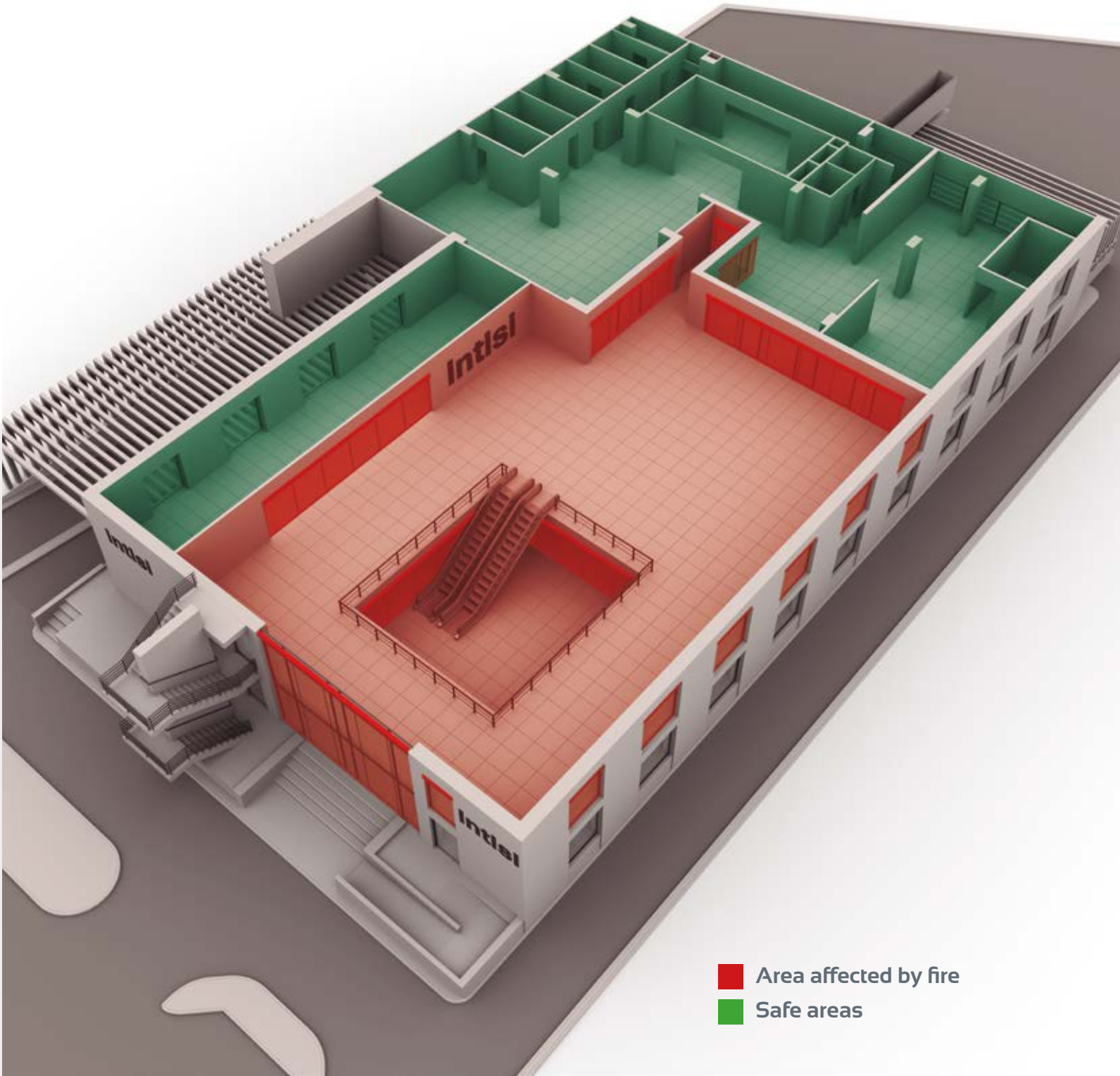
Malls And Buildings
Non-industrial establishments are pioneers in new construction rends, constantly facing new architectural challenges.

Cultural Establishments
Theatres and concert halls are public establishments, that could involve the use of equipment and activities that can be hazardous to people and pose a threat to the integrity of the building.

■ Area affected by fire
■ Safe areas

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