ADEXON®

ADEXON-FC120ew
Technical Information

2021

ADEXON-FC120ew
Description

ADEXON-FC120ew is an Automatic Fire Curtain that limits and controls the spread of fire and reduces radiation emission to less than 15 kW/m2.K at a distance of 1m from the fabric, with classification EW120.

The Fire Curtain is composed of: fibreglass fabric embedded with reinforced steel wire, layered with aluminium foil on both sides of the curtain and fixed to a 78mm diameter steel roller, complete with galvanised steel head-box, side guides and bottom bar, which can be powder-coated to a full range of RAL colours (other non-standard colours are available upon request).

The fire curtain is operated by a 24V dc tubular motor and controlled by an electronic board, ADEXON'S CRM (Control and Regulation for Motor), with a gravity fail-safe system. The nominal input voltage for the control panel is 115Vac or 220Vac, with an output voltage of 24Vdc. Uninterruptible Power Supply (UPS System) with up to 6 hours exists in our control panels.

Tested and approved to UNE EN 1634-1, UNE EN 1363-1 and EN 16034 with CE certification.

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OPERATION

The system can be activated by a fire alarm contact, internal fire and smoke detection devices, SHEV (smoke and head exhaust ventilation), or manual emergency buttons. In the event of a fire, the ADEXON Control Panel (CBM), receives the signal alarm, and the curtain deploys automatically, with a controlled constant speed of descent, even upon gravity fail-safe descent following total power loss. If there is a false alarm, the curtains will automatically return to their fire ready positions after resetting the alarm at the main fire management/ building management system. In the case of complete power loss, the curtain has 6 hours of battery back-up to ensure it stays in the fire ready position long enough to restore the mains power.

FABRIC

The fibreglass fabric resists up to 1100°C and has low radiation properties. Radiation is less than 15 $kW/m^2.K$ at a 1-meter distance. All seams are sewn with reinforced stainless-steel wires coated with Kevlar.

HEADBOX

Manufactured from 1.2mm thick galvanised steel. The shape of the headbox can be adapted to suit any architectural and maintenance requirements. Headbox dimensions vary depending on the size of the curtain (height and width).

SIDE GUIDES

Manufactured from 1.5 to 3mm thickness galvanised steel. Guide thickness varies depending on the size of the curtain (height and width).

ROLLER

Manufactured from 1.5mm thick galvanised steel with a diameter of 78mm. The fabric is affixed to the roller using the ADEXON proprietary slide system.

BOTTOM BAR

Manufactured from 1.5mm thick galvanised steel, with a two-parts fixing system for easy mounting.

ELECTRIC MOTOR

ADEXON 24Vdc tubular motor

Maximum power: 24 W/18.5Nm

Maximum current: 3 A

Average linear speed: 0.11 m/s

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CRM MOTOR REGULATION BOX

IP56 rated polyester box to house the electronic control board that controls the motor movement.

Dimensions: 120mmW x 160mmH x 75mmD

CMB CONTROL PANEL

Receives the alarm signal and controls the movement of the curtain, alongside visual and acoustic alert systems.

Dimensions: 300mm-400mmW x 230mm-500mmH x 140mm-210mmD
(varies depending on the number of curtains being controlled by one panel)
Input: 115 or 220 Vac 50Hz
Output: 24Vcc
Battery: 2 x 12Vcc 7.5 Ah rechargeable (up to 6 hours)
Maximum capacity: up to 12 motors

OPTIONAL EXTRAS

RAL coating: headbox, side guides, bottom bar, and false ceiling extra accessories.
Stainless steel elements: headbox, side guides, bottom bar, screws, and rivets.
Headbox: customisation for specific architectural or special operational requirements.
Side guides: customisation for specific architectural or special operational requirements.
Bottom bar: aluminium profile painted to RAL 9003 (white) for use with false ceiling accessories.
False ceiling accessories: aluminium profiles painted RAL 9003 to hide headbox over a false ceiling.
Electric motor: special 24Vdc motors up to 80Nm without CRM; special 230Vac motors up to 120Nm without CRM.
CRM: customised board for high-speed deployment.
CBM control panel: special design can operate up to 48 motors from one control panel, with additional information output, micro switches, communication with other devices, special battery backup, and delayed curtain deployment.
Escape button: the button retracts the curtain allowing persons to escape through the opening; the curtain automatically redeploys after 30 seconds.
Emergency button: the button immediately deploys the curtain.

Note: other requirements and customised solutions are available on request.

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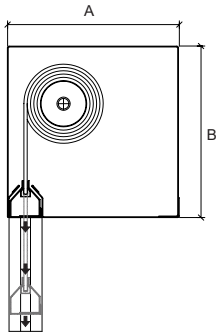
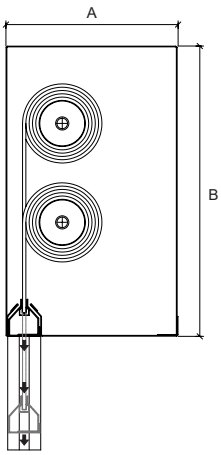
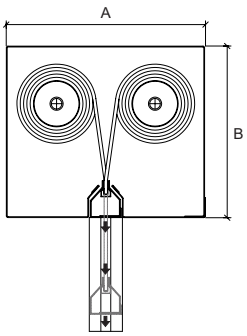
HEADBOX



SINGLE ROLLER
A:180-260mm
B:180-260mm

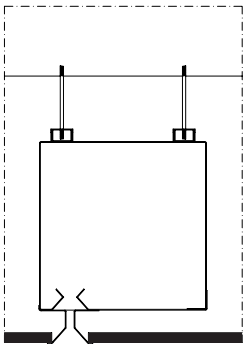


MULTI ROLLER VERTICAL
A: 190-270mm
B: 300-500mm

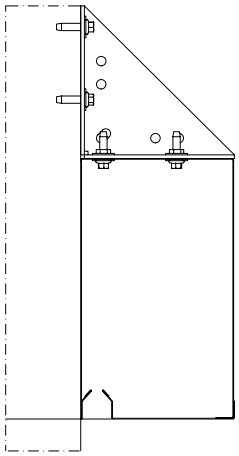


MULTI ROLLER HORIZONTAL
A: 250-400mm
B: 170-260mm

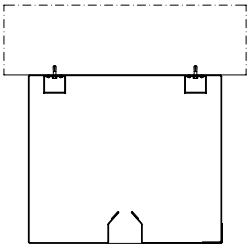
HEADBOX FIXING



HANGING/FALSE CEILING

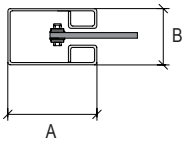


WALL



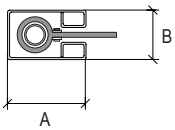
TOP CEILING

SIDE GUIDE FIXING



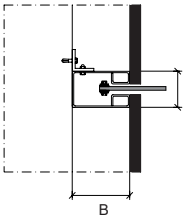
SCREW SIDE GUIDES
STANDARD

A:80-100mm
B:50-50mm

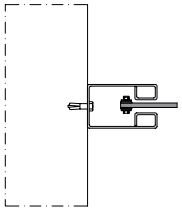


TUBE SIDE GUIDES
HIGH PRESSURE AREAS

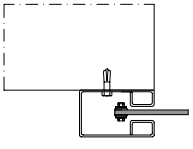
A:100-120mm
B:50-76mm



HIDDEN



REVEAL FIXED
BACK GUIDE



FACE FIXED
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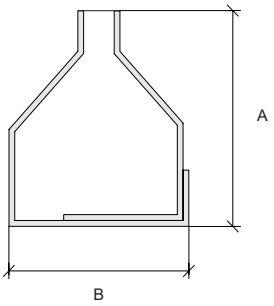
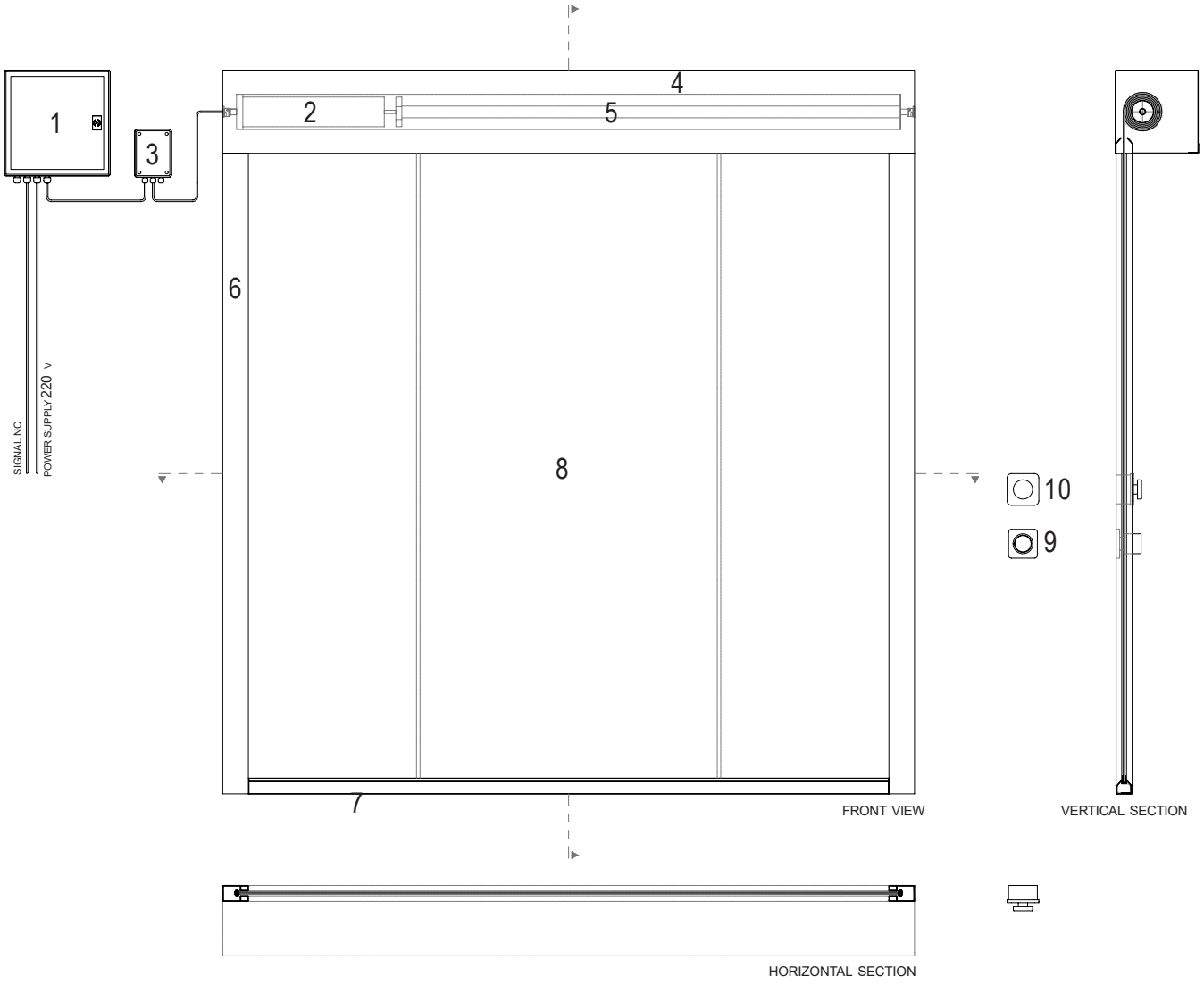
BOTTOM BAR

GALVANISED STEEL

A: 55mm
B: 47mm





1. CONTROL PANEL CBM
2. ADEXON TUBULAR MOTOR 24DC
3. CRM ELECTRONIC CONTROL BOARD
4. GALVANISED STEEL HEADBOX
5. GALVANISED STEEL ROLLER
6. GALVANISED STEEL SIDE GUIDES
7. GALVANISED STEEL BOTTOM BAR
8. FIRE-RESISTANT FABRIC
9. ESCAPE BUTTON
10. EMERGENCY BUTTON

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