
萬 爾 國 際 有 限 公 司
Manspace Development Limited
Distributor for
Kent
Smoke and Fire Curtains

萬爾國際有限公司
Manspace Development Limited


**ABOUT US:**

Manspace Development Limited is trading and engineering company in HK and specialize for Fire Services projects and products. We are professional in **Smoke and Fire Curtains, various types of Shutters, Water and Fire pumps, Valves and fittings, Expansion Joint, CBS** and whatever.

We are providing design, supply, install, maintenance services of these products and satisfied most of customers in HK and Macau. E.g. EMSD, MTR, Galaxy Macau, 1881 HERITAGE, HK STP.....

We are the authorised distributor of below brands:

Kent Smoke and Fire Curtains

LOWARA a xylem brand

Aquaxis

Manspace Development Limited
Website: www.manspace.com.hk / Email: info@manspace.com.hk / Tel: +852 2838 0180
Address: Room A, 10/F, Capital Trade Centre, 62 Tsun Yip Street, Kwun Tong, Kowloon, Hong Kong

## Introduction:

KENT Brands SMOKE AND FIRE CURTAINS are manufacturing at DUBAI in UAE, and manufacturing by modernization factory and operating by good experience teams. Also, most of production processes are mechanization or automation. So, KENT Brands SMOKE AND FIRE CURTAIN SYSTEMS with good quality and stabilization, and comply with **BS, BSEN, UL Listed, NFPA** and many international standards, and now become to popular in the WORLD.

KENTs products are installed in most of Shopping Malls, Hotels, Hospitals, Airports, Public transportations .....in worldwide.

So, it should be satisfied you!!!

Let us show you more details, please read continue .....

Kent
Smoke and Fire Curtains

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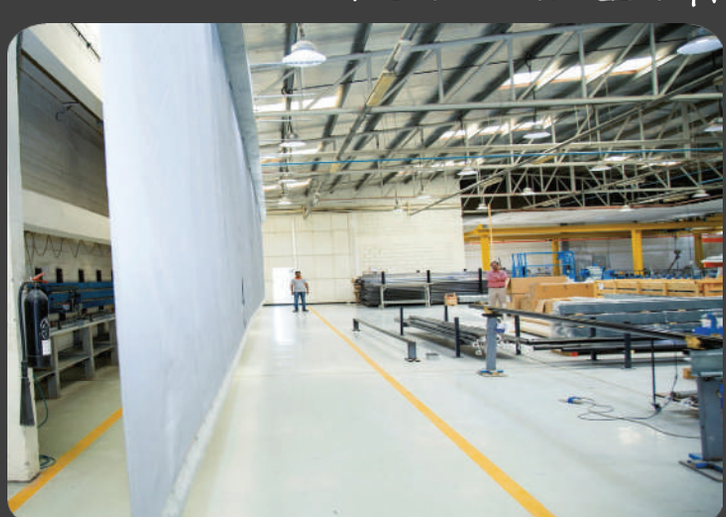
# MODERNIZATION FACTORY

## CNC Fabrication

## Automatic Cutting and Stitching

## R&D and In HOuse Test



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# CERTIFICATION AND APPROVALS










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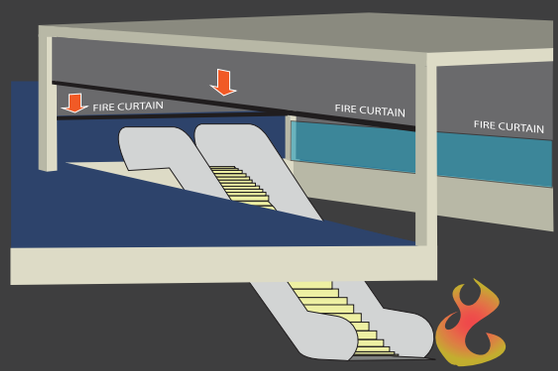
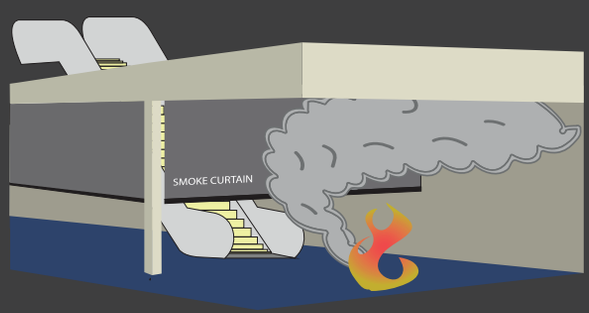
# APPLICATIONS

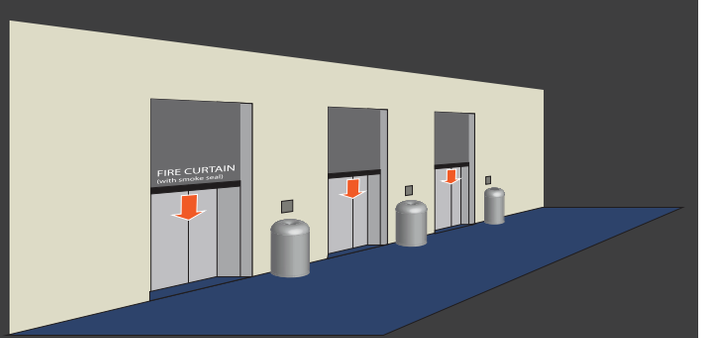
## 1. Void Edge Separation



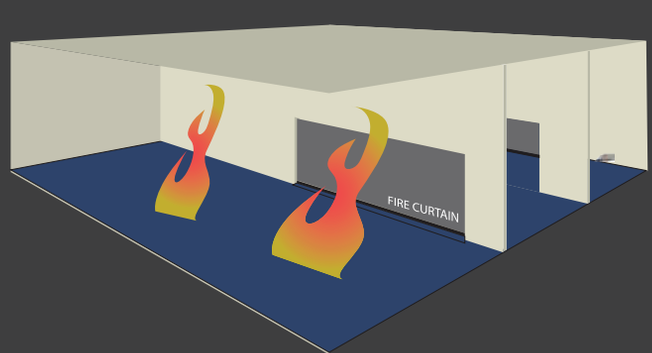

## 2. Smoke Reservoirs



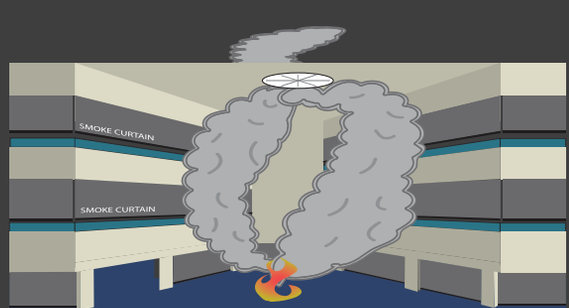

## 3. Lift Lobby & Elevator Separation




## 4. Fire Compartmentalization




## 5. Fire & Smoke Strategy

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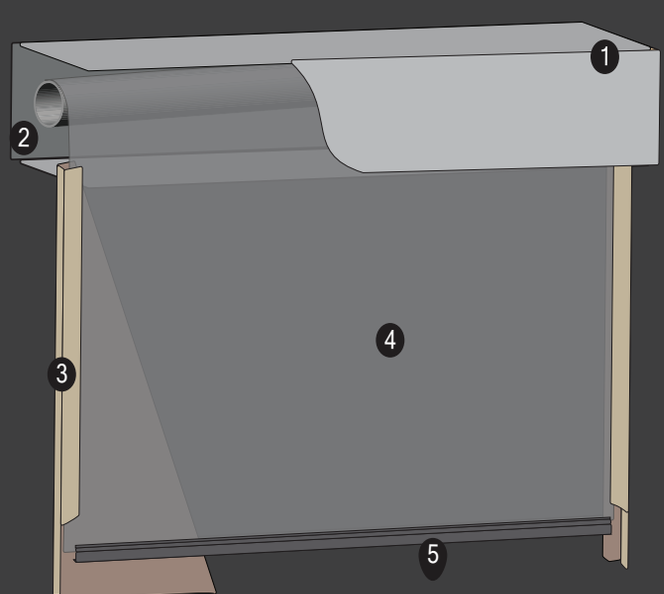
# SINGLE ROLLER ASSEMBLY

1. **HEADBOX**
   The steel headbox houses the roller, fabric and motor within the casing creating a small compact package that remains virtually invisible above the ceiling.

2. **ROLLER AND TUBULAR MOTOR**
   A tubular motor drives a steel roller tube to retract and deploy the fabric from normal position in the headbox to its operational position.

3. **GUIDE RAIL**
   During deployment, slim steel side guides prevent derailment of the fabric during operation ensuring integrity of the system when faced by positive or negative pressures of a real fire.

4. **FABRIC CURTAIN**
   Woven fiberglass wire reinforced fabric with individual panels stitched and hemmed using stainless steel thread.




SINGLE ROLLER ASSEMBLY
Smaller widths can be spanned by a single roller assembly.

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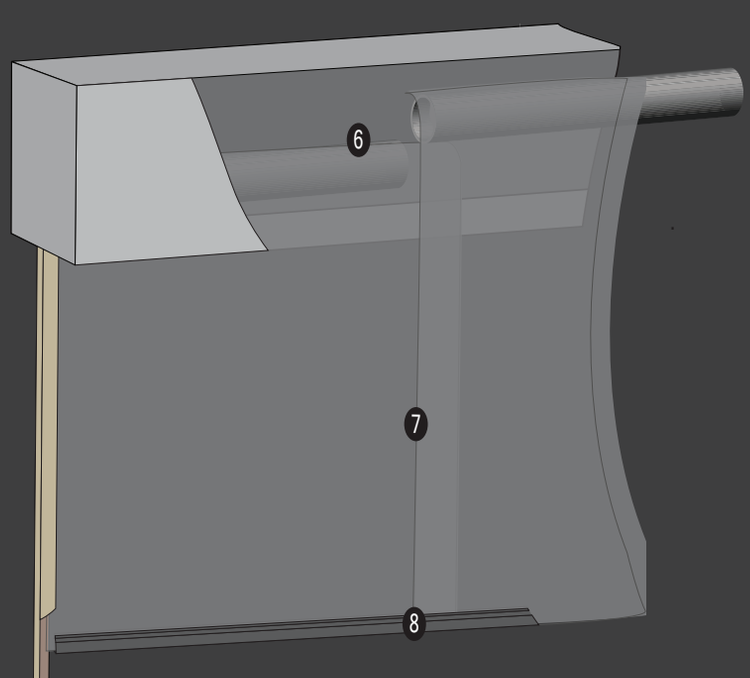
# MULTIPLE ROLLER ASSEMBLY


5 **STEEL BOTTOM BAR**
The Kent profile bottom bar provides weight and stability to the system ensuring a gravity fail safe deployment.

6 **OVER-UNDER ROLLER ARRANGEMENT**
An over-under or side by side arrangement of the barrels (to suit the project requirements) allows multiple rollers to be enclosed in a single compact headbox.

7. **FABRIC OVERLAP**
Multiple rollers utilize the use of a 380mm overlap arrangement which removes the need for intermediate side guides and minimizes the potential for roller bounce.

8. **CONJOINED BOTTOM BAR**
A conjoined bottom bar runs the entire width of the curtain.




**MULTIPLE ROLLER ASSEMBLY**
To achieve a virtually unlimited width without the need for intermediate guide rails, multiple rollers are arranged in an 'over-under' (as illustrated) or side by side arrangement and neatly encased within the headbox.

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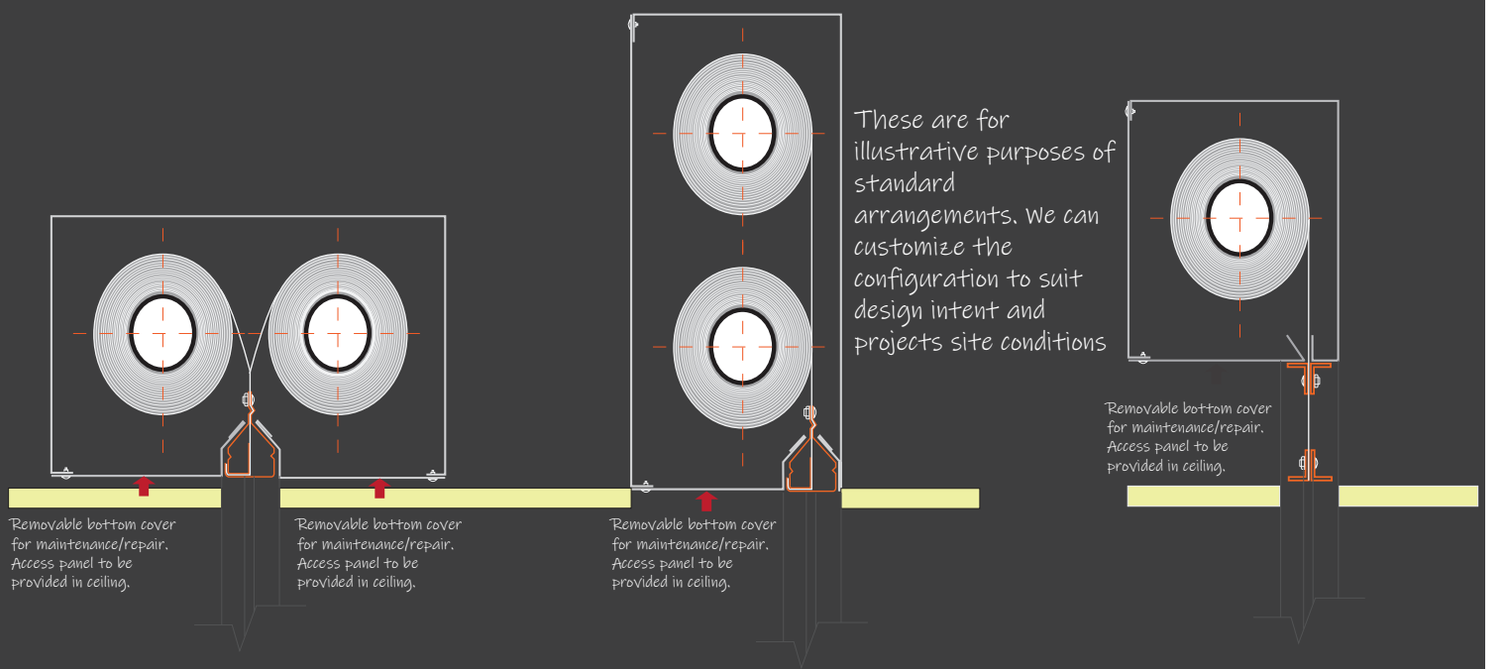
# HEADBOX

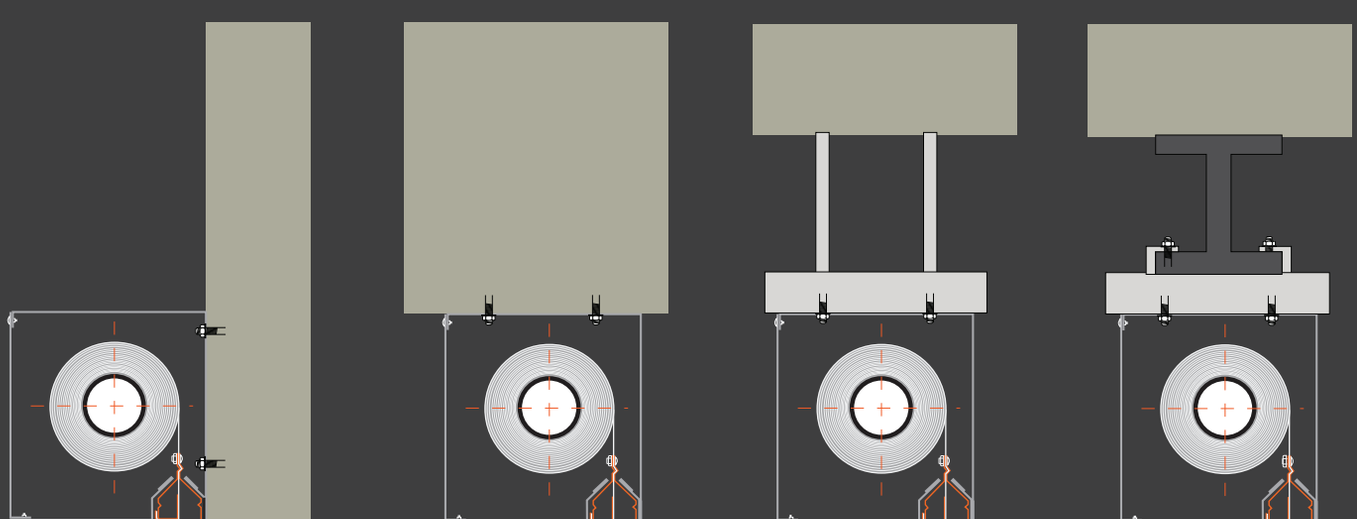



These are for illustrative purposes of standard arrangements. We can customize the configuration to suit design intent and projects site conditions

MULTPLE ROLLER ASSEMBLIES SHOWING OVER-UNDER AND SIDE BY SIDE ARRANGEMENT WITH BOTTOM BAR FLUSH WITH UNDERSIDE OF HEAD BOX

SINGLE ROLLER ASSEMBLY WITH ALTERNATE BOTTOM BAR DROPPED TO CEILING

## Headbox Fixing



FACE FIXED
Fixed directly to the lintel above an opening.

SOFFIT FIXED
Fixed directly to the underside of the soffit slab.

SOFFIT SUSPENDED
Suspended from soffit via unistruts and drop rods.

I-BEAM
Clamped to a steel beam.

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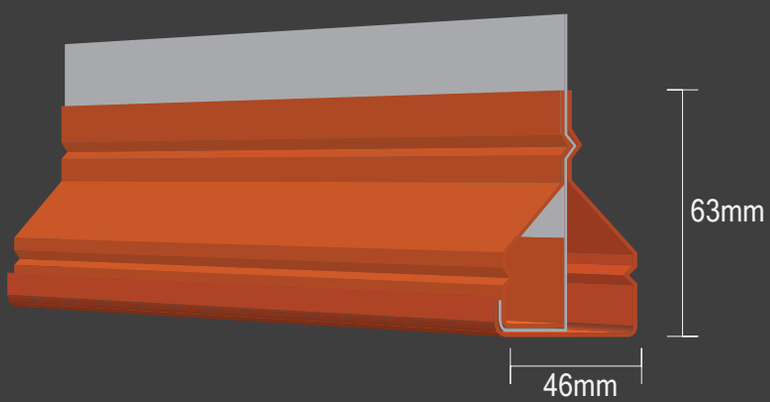
# BOTTOM BAR



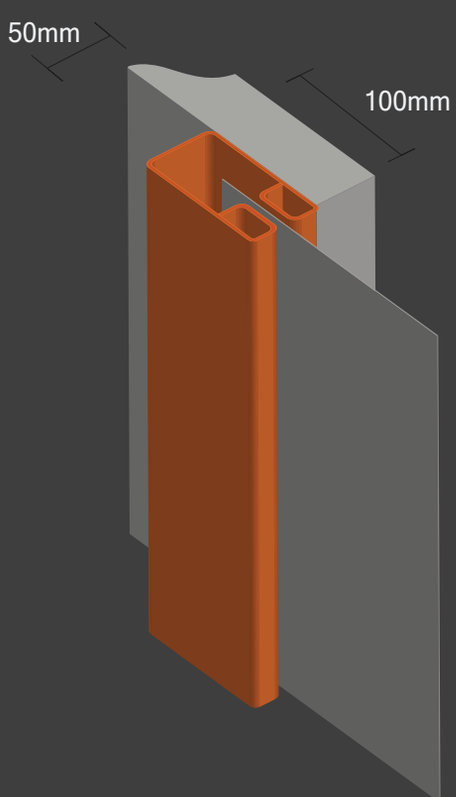

**BOTTOM BAR**

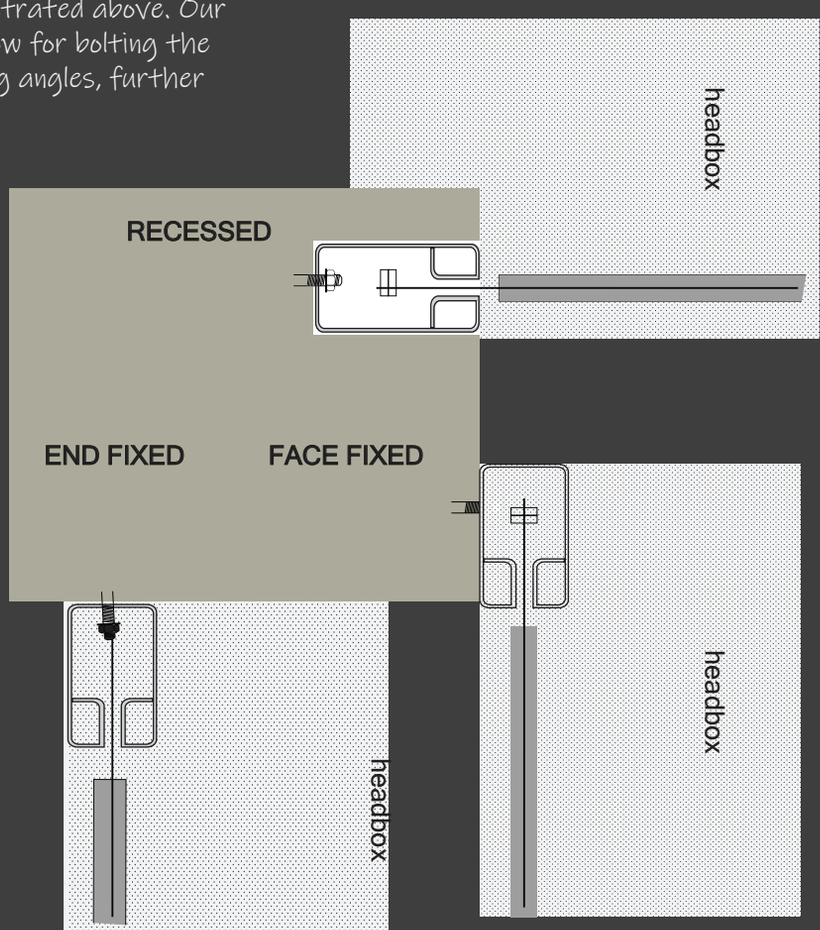
Our bottom bar profile is designed to provide the necessary weight to draw the curtain down during a gravity safe deployment and to stablize the curtain during descent. Rolled from galvanized steel, we can powdercoat the bottom bar to match

# SIDE GUIDES

Our fire curtain steel side guides can be powdercoated to blend in with the surround wall. In a real fire, these guides help the curtains withstand positive and negative pressures. The stitched fabric inserted into the guide rail is provided with retainer tabs for added strength.

Designed to be slim and as unobtrusive as possible, the side guides can be fixed to the building structure in 3 ways illustrated above. Our side guides are provided with capped holes that allow for bolting the guides to the wall without the need for visible fixing angles, further reducing the guide footprint.

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# KENT CONTROL SYSTEMS

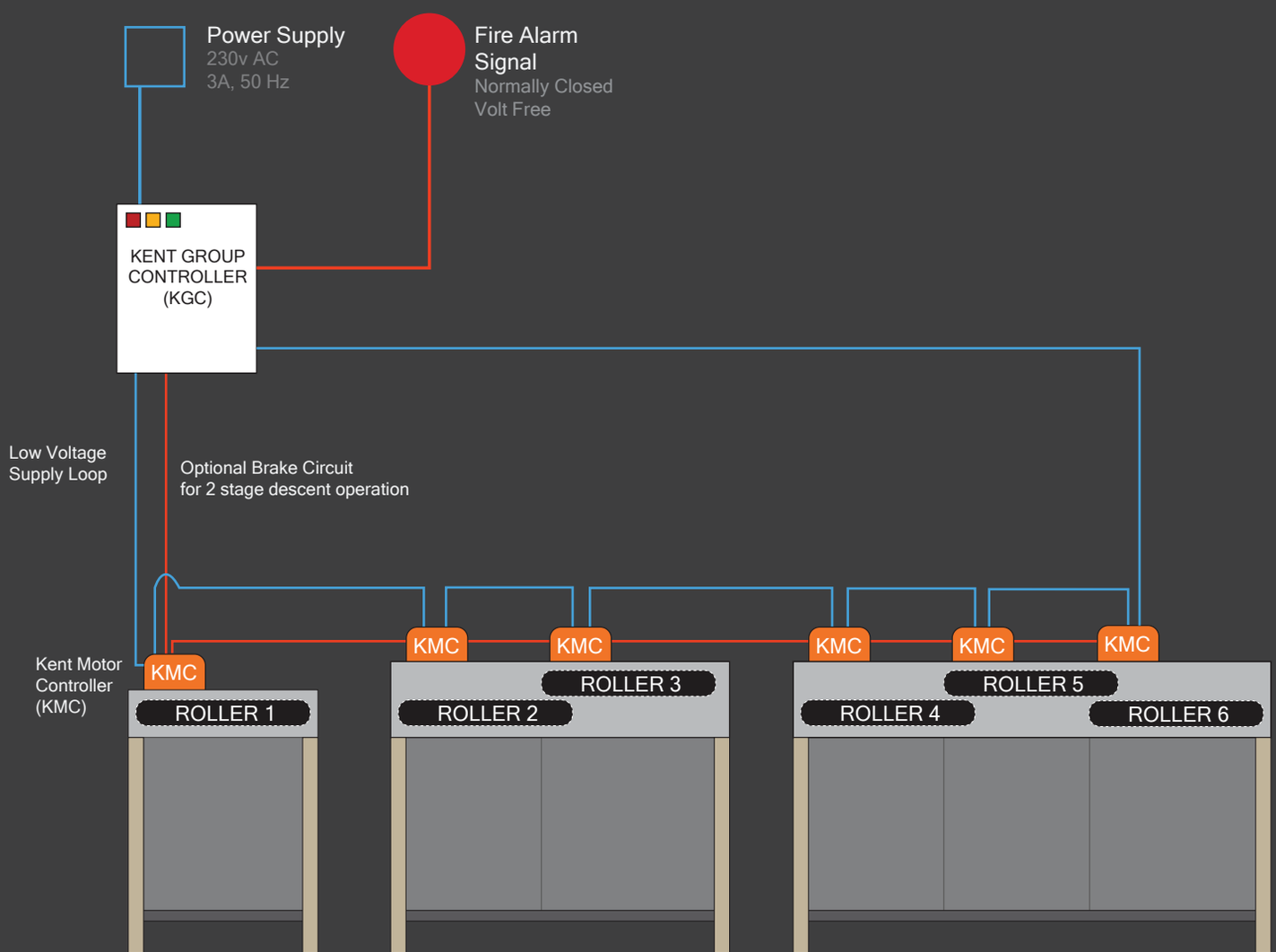
## OPERATION IN A FIRE SCENARIO (FIRE ALARM SIGNAL RECEIVED)

The Kent Group Controller (KGC) is powered by a **230v AC, 3 Amp 50 Hz** power supply. A pair of normally-closed, volt-free fire alarm contacts supplies the fire alarm signal when commanded by the Building Management system. In its stored position within the headbox, the curtains remains retracted and held in place by a low voltage supply **(24v DC)** to the curtain motors. Upon receipt of a fire alarm signal, the supply to the motor controller is removed, which releases the curtains . Using Kent's Guaranteed Gravity Fail Safe System, the curtains deploy to the operational position at a controlled rate under the force of gravity. No power source is required for curtain deployment.

## OPERATION IN CASE OF LOSS OF POWER (NON-FIRE SCENARIO)

In the event of a mains power failure, each KGC is supplied with a battery back-up system providing up to a minimum of **60 minutes** of power to the curtain motors. This prevents unintentional deployment of the curtain in a non-emergency situation. Upon exhausting the battery back-up, the curtain will descend safely under gravity.

## CURTAIN TESTING




One KGC has the ability to control a **maximum of 6 no.x 20 Watt motor**. If the number of motor **exceeds 6, KGC's can be linked** together. This avoids the need for each KGC to be sipplied with its own fire alarm signal. This set up also ensures synchronous descent of multiple curtains. Should a 2 stage descent is required, a brake is added to the motor which is energised by an additinal brake cable shown in the schematic.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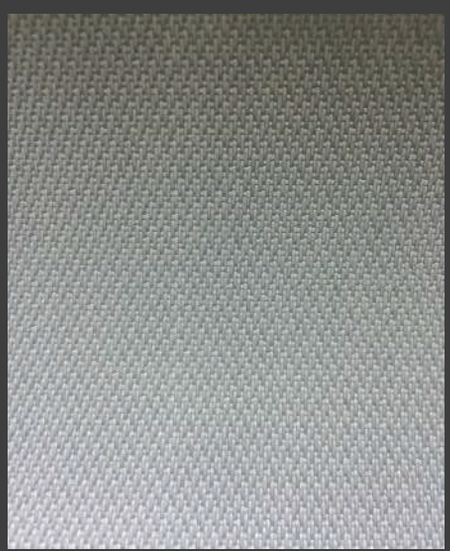
# CURTAIN FABRICS

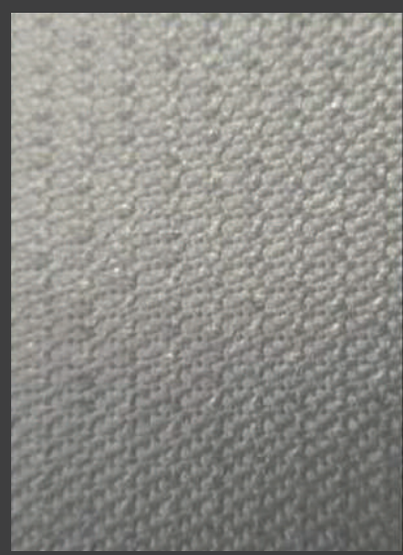
An important component of a fire and smoke curtain system is the fabric. The fabric is designed to withstand heat, smoke, fire, including temperatures upto 1100°C.

When tested in accordance with BS EN 1634-1 using the Kent VWG 690 and VWG520 material, the complete assembly achieved an integrity performance of up to 180 minutes and 120 minutes respectively. Both fabrics are woven glass wire reinforced with stainless steel and coated with a fire retardant polyethylene including aluminum pigment on both sides. The finished product is sewn with stainless steel thread at hem and seam locations ensuring a factory produced, code compliant product.
VG455 is a specially formulated light weight fibreglass fabric, coated with aluminum pigmented polyurethane on both sides of the fabric which creates a reflective heat shield and enhances durability and flexibility of the fabric. The range of Kent fabrics are tested to BS 476 Pt 6 (fire propagation) and Pt 7 (surface spread of flame) and achieved a class 0 classification.



VG 455

VWG 520



VWG 690

| Properties | VG 455 | VWG 520 | VWG 690 |
|---|---|---|---|
| Integrity Duration | D120/DH 60 | 120 Minutes | Up to 180 Minutes |
| BS476 Pt 6&7 | Class 0 | Class 0 | Class 0 |
| Classification EN 13501-1 | A2-S1, d0 | | A2-S1, d0 |
| Thickness | 0.41mm | 0.60mm | 0.54mm |
| Base Fabric Weight | 415gm/m2 | 470gm/m2 | 640gm/m2 |
| Coated Fabric Weight | 455gm/m2 | 520gm/m2 | 690gm/m2 |
| Stainless Steel Wire Reinforced | No | yes | yes |
| Coated Side | Both Sides | | |
| Coating | Fire Retardant Polyurethene with aluminium pigment | | |
| Thread | Stainless Steel | | |
| Standard Color | Grey | | |

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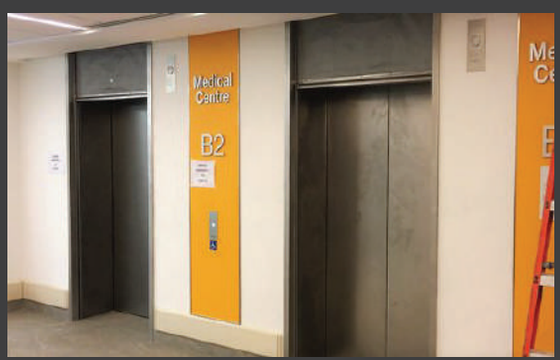
# ASC & AFC Series




## DESCRIPTION

Kent Automatic Fire Curtains are life safety systems that are designed to arrest the spread of fire in a building. The assembly comprises a fire resistant fiberglass fabric wound around a roller which is encased in a compact head box that is typically installed above the ceiling to be virtually invisible until activated. The Fire Curtains create a barrier to fire, remaining virtually invisible when the curtains are stored in its retracted position within the compact head-box. The curtain descends at a controlled speed upon receipt of signal from a fire alarm and provides resistance for upto 180 minutes

## SYSTEM TESTED IN ACCORDANCE WITH

- BS EN 1634-1:2014 (Fire Resistance)
- BS EN 1634-3:2014 (Smoke Control Test)
- UL 10D
- UL 1784
- BS 476 Part 20:1987 & BS 476 Part 22
- Fabric Tested to BS 476 Pt 6 & Pt 7. Class 0
- BS 5234-2:1992 Method of Test as set out within BS 8524-1:2013 Double Severe Duty Impact Test
- System tested in Single & Multiple Barrel Orientation

## COMPLIANCE

- CERTIFIRE- Third Party Accreditation
- System compliant with 13501-1:2007 + A1 2009
- BS EN Oversize Certification upon Request
- UL Oversize Certification upon Request
- Dubai Civil Defence Approved
- Kuwait Civil Defence Approved

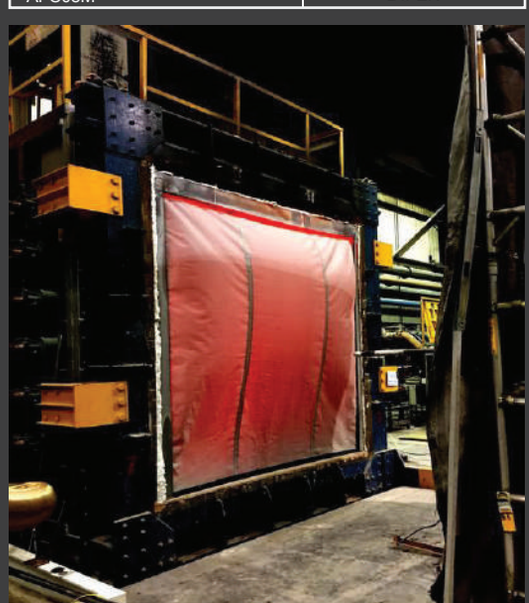
## FIRE INTEGRITY (E)

- 60 minutes for VG 455
- 120 minutes for VWG 520 (BS EN ONLY)
- 180 minutes for VWG 690

## RADIATION PROTECTION (W)

- Upto 85 minutes < 15kW/m²

| PRODUCT DESIGNATION | |
|---|---|
| MODEL NO | STANDARD |
| AFCO1S-455 | UL |
| AFCO1M-455 | UL |
| AFCO3S-690 | UL |
| AFCO3M-690 | UL |
| AFCO1S-455 | UL |
| AFCO1M-455 | UL |
| AFCO3S-690 | UL |
| AFCO3M-690 | UL |
| AFC01-455 Accordion | UL |
| ASC01-455 Accordion | UL |
| AFC03-690 Accordion | UL |
| ASC03-690 Accordion | UL |
| ASC01DH | BS EN |
| AFC02S | BS EN |
| AFC02M | BS EN |
| AFC03S | BS EN |
| AFC03M | BS EN |



Single Barrel

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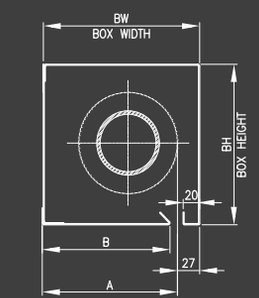
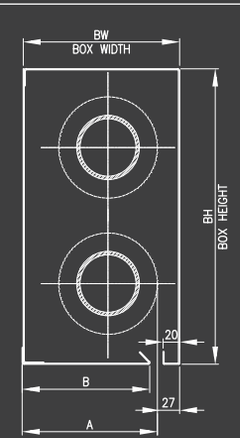
# Fire Curtain Boxes



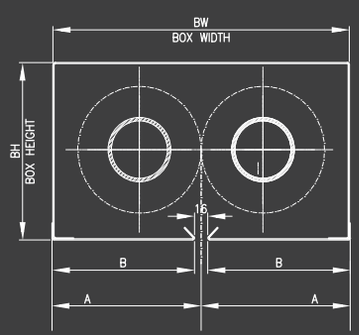

BACK OF BOTTOM COVER-DROP LINE

| CURTAIN DROP | SINGLE ROLLER BOX - TYPE 1 | | | |
|---|---|---|---|---|
| | WIDTH(BW) | HEIGHT(BH) | A | B |
| UP TO 3m | 190mm | 190mm | 163mm | 155mm |
| 3m TO 7m | 210mm | 210mm | 183mm | 175mm |
| 7m TO 12m | 280mm | 280mm | 253mm | 245mm |



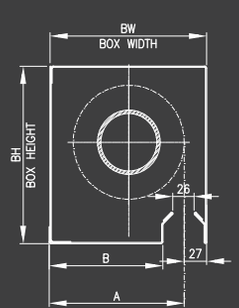

BACK OF BOTTOM COVER-DROP LINE

| CURTAIN DROP | MULTIPLE ROLLER BOX - TYPE 2 | | | |
|---|---|---|---|---|
| | WIDTH(BW) | HEIGHT(BH) | A | B |
| UP TO 3m | 190mm | 350mm | 163mm | 155mm |
| 3m TO 7m | 210mm | 390mm | 183mm | 175mm |
| 7m TO 12m | 280mm | 500mm | 253mm | 245mm |



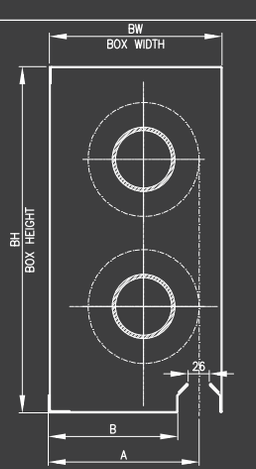

BACK OF BOTTOM COVER-DROP LINE BACK OF BOTTOM COVER-DROP LINE

| CURTAIN DROP | MULTIPLE ROLLER BOX - TYPE3 | | | |
|---|---|---|---|---|
| | WIDTH(BW) | HEIGHT(BH) | A | B |
| UP TO 3m | 320mm | 190mm | 160mm | 153mm |
| 3m TO 7m | 370mm | 210mm | 185mm | 178mm |
| 7m TO 12m | 480mm | 280mm | 240mm | 233mm |



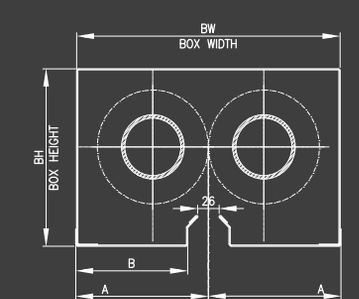

BACK OF BOTTOM COVER-DROP LINE

| CURTAIN DROP | SINGLE ROLLER BOX - TYPE 1 | | | |
|---|---|---|---|---|
| | WIDTH(BW) | HEIGHT(BH) | A | B |
| UP TO 3m | 190mm | 210mm | 163mm | 138mm |
| 3m TO 7m | 210mm | 230mm | 183mm | 158mm |
| 7m TO 12m | 280mm | 300mm | 253mm | 228mm |




BACK OF BOTTOM COVER-DROP LINE

| CURTAIN DROP | MULTIPLE ROLLER BOX - TYPE 2 | | | |
|---|---|---|---|---|
| | WIDTH(BW) | HEIGHT(BH) | A | B |
| UP TO 3m | 190mm | 370mm | 163mm | 138mm |
| 3m TO 7m | 210mm | 410mm | 183mm | 158mm |
| 7m TO 12m | 280mm | 520mm | 253mm | 228mm |




BACK OF BOTTOM COVER-DROP LINE BACK OF BOTTOM COVER-DROP LINE

| CURTAIN DROP | MULTIPLE ROLLER BOX - TYPE3 | | | |
|---|---|---|---|---|
| | WIDTH(BW) | HEIGHT(BH | A | B |
| UP TO 3m | 320mm | 210mm | 160mm | 136mm |
| 3m TO 7m | 370mm | 230mm | 185mm | 161mm |
| 7m TO 12m | 480mm | 300mm | 240mm | 216mm |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# ASC Series


Pink - DFC

## DESCRIPTION

Kent Automatic Smoke Curtains assist the management of smoke in a building, channelising the movement of smoke to smoke extraction points in the building or creating reservoirs to slow down the spreading of smoke.

The curtains remain virtually invisible in their retracted position within the compact head-box.

When signalled by a local detector or fire alarm system, the curtain descends to the operational level using the gravity fail safe system.

## SYSTEM TESTED IN ACCORDANCE WITH

- BS476:Part 20/22: 1987
- BS EN 12101-1 Annex B (Reliability, Response time & Material Durability)
- BS EN 12101-1 Annex C (Air Leakage)
- BS EN 12101-1 Annex D (Fire Resistance Test)
- BS 476 Part 20:1987 & BS 476 Part 22
- UL 10D, UL 1784
- Fabric Tested to BS 476 Pt 6 & Pt 7, Class 0
- BS 5234-2:1992 Method of Test as set out within BS 8524-1:2013 Severe Duty Impact Test (with Side Guides)
- System tested in single & Multiple Barrel Orientation
- Tested to ASTME 84 & UL 723 for VG455 Fabric

| PRODUCT DESIGNATION | |
|---|---|
| MODEL NO | STANDARD |
| ASCO1S-455 | UL |
| ASCO1M-455 | UL |
| ASCO3S-690 | UL |
| ASCO3M-690 | UL |
| ASCO1S-455S | UL |
| ASCO1M-455S | UL |
| ASCO3S-690S | UL |
| ASCO3M-690S | UL |
| AFC01-455 Accordion | UL |
| ASC01-455 Accordion | UL |
| AFC03-690 Accordion | UL |
| ASC03-690 Accordion | UL |
| ASC01 D | BS EN |
| ASC01 DH | BS EN |

## COMPLIANCE

- CERTIFIRE- Third Party Accreditation
- CE Labelled D120
- 13501-1:2007 + A1 2009
- UL Listed & Classified
- Dubai Civil Defence Approved
- Kuwait Civil Defence Approved
- Hong Kong Fire Services Department Approval

## FIRE INTEGRITY (E)

- 120 minutes at 600°C time-temperature curve (BS EN 12101-1 Annex D)
- 60 minutes at 1000°C time-temperature curve (BS EN 12101-1 Annex D)


Carluccios - Doha Festival City

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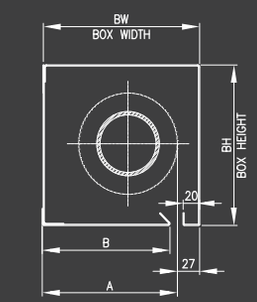
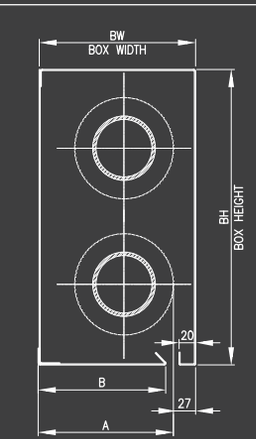
Kent
Smoke and Fire Curtains

# Smoke Curtain Boxes



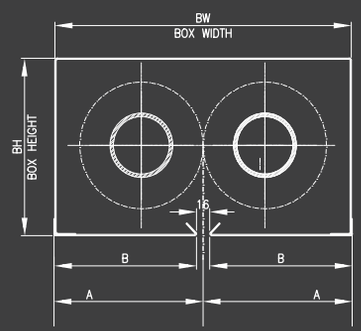

BACK OF BOTTOM COVER–DROP LINE

| CURTAIN DROP | SINGLE ROLLER BOX - TYPE 1 | | | |
|---|---|---|---|---|
| | WIDTH(BW) | HEIGHT(BH) | A | B |
| UP TO 3m | 190mm | 190mm | 163mm | 155mm |
| 3m TO 7m | 210mm | 210mm | 183mm | 175mm |
| 7m TO 12m | 280mm | 280mm | 253mm | 245mm |



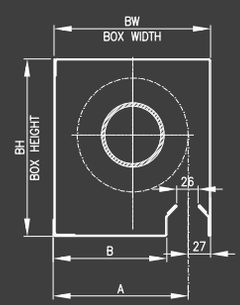

BACK OF BOTTOM COVER–DROP LINE

| CURTAIN DROP | MULTIPLE ROLLER BOX - TYPE 2 | | | |
|---|---|---|---|---|
| | WIDTH(BW) | HEIGHT(BH) | A | B |
| UP TO 3m | 190mm | 350mm | 163mm | 155mm |
| 3m TO 7m | 210mm | 390mm | 183mm | 175mm |
| 7m TO 12m | 280mm | 500mm | 253mm | 245mm |




BACK OF BOTTOM COVER–DROP LINE BACK OF BOTTOM COVER–DROP LINE

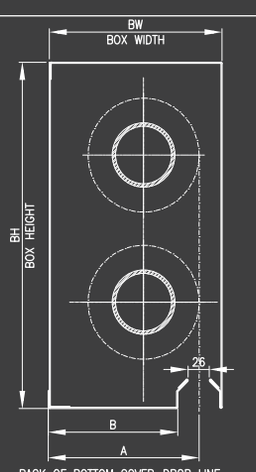
| CURTAIN DROP | MULTIPLE ROLLER BOX - TYPE3 | | | |
|---|---|---|---|---|
| | WIDTH(BW) | HEIGHT(BH) | A | B |
| UP TO 3m | 320mm | 190mm | 160mm | 153mm |
| 3m TO 7m | 370mm | 210mm | 185mm | 178mm |
| 7m TO 12m | 480mm | 280mm | 240mm | 233mm |




BACK OF BOTTOM COVER–DROP LINE

| CURTAIN DROP | SINGLE ROLLER BOX - TYPE 1 | | | |
|---|---|---|---|---|
| | WIDTH(BW) | HEIGHT(BH) | A | B |
| UP TO 3m | 190mm | 210mm | 163mm | 138mm |
| 3m TO 7m | 210mm | 230mm | 183mm | 158mm |
| 7m TO 12m | 280mm | 300mm | 253mm | 228mm |

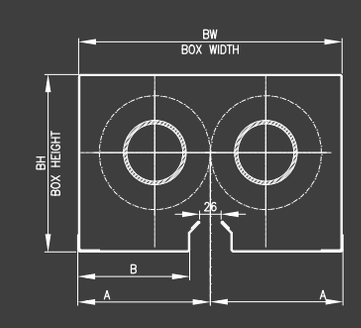
| CURTAIN DROP | SMOKE CURTAINS WITHOUT GUIDES | | | |
|---|---|---|---|---|
| | WIDTH(BW) | HEIGHT(BH) | A | B |
| UP TO 1.5m | 160mm | 180mm | 133mm | 108mm |




BACK OF BOTTOM COVER–DROP LINE

| CURTAIN DROP | MULTIPLE ROLLER BOX - TYPE 2 | | | |
|---|---|---|---|---|
| | WIDTH(BW) | HEIGHT(BH) | A | B |
| UP TO 3m | 190mm | 370mm | 163mm | 138mm |
| 3m TO 7m | 210mm | 410mm | 183mm | 158mm |
| 7m TO 12m | 280mm | 520mm | 253mm | 228mm |

| CURTAIN DROP | SMOKE CURTAINS WITHOUT GUIDES | | | |
|---|---|---|---|---|
| | WIDTH(BW) | HEIGHT(BH) | A | B |
| UP TO 1.5m | 160mm | 320mm | 133mm | 108mm |




BACK OF BOTTOM COVER–DROP LINE BACK OF BOTTOM COVER–DROP LINE

| CURTAIN DROP | MULTIPLE ROLLER BOX - TYPE3 | | | |
|---|---|---|---|---|
| | WIDTH(BW) | HEIGHT(BH) | A | B |
| UP TO 3m | 320mm | 210mm | 160mm | 136mm |
| 3m TO 7m | 370mm | 230mm | 185mm | 161mm |
| 7m TO 12m | 480mm | 300mm | 240mm | 216mm |

| CURTAIN DROP | SMOKE CURTAINS WITHOUT GUIDES | | | |
|---|---|---|---|---|
| | WIDTH(BW) | HEIGHT(BH) | A | B |
| UP TO 1.5m | 280mm | 180mm | 140mm | 116mm |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# Accordion

Accordion Curtain - Retracted

## DESCRIPTION

Kent Automatic Fire Curtains are life safety systems that are designed to arrest the spread of fire in a building. The assembly comprises a fire resistant fiberglass fabric stacked inside the headbox that is typically installed above the ceiling to be virtually invisible untill activated. The curtain descents at a controlled speed upon receipt of signal from a fire alarm and provides resistance for upto 240 minutes.

## PRODUCT ADVANTAGES

- Lightweight & Compact - Reduced headroom requirement compared to a rolling fire shutter.
- State of Art Technology - Manufactured with intricacy using advanced machinery.
- Flexible Design Solution - Meeting Bespoke requirements.
- Improved Aesthetics & Mechanics - Negates the requirement for corner support columns and in some cases, side guides.
- Kent Gravity Fail Safe System - Guaranteed deployment of the curtains at a controlled descent rate using our gravity fail safe system. Applies under any scenario such as mains power failure and damage to control systems.

## SYSTEM TESTED IN ACCORDANCE WITH

- UL Listed and classified under the UL follow up third party accreditation service
- UL 10D
- Method of Test NFPA 252
- Compliance with NFPA 80
- Classified to UL 10D for a period of 240 minutes ( 690 Fabric)
- Classified to UL 10D for a period of 60 minutes ( 455 Fabric)
- Fabric Tested in accordance with BS 476 Pt 6 & Pt 7 and achieved Class 0
- Tested to ASTM E84 & UL 723 for VG455 Fabric
- Fabric Impact Tested in accordance with BS 5234-2:1992

Accordion Curtain - Deployed

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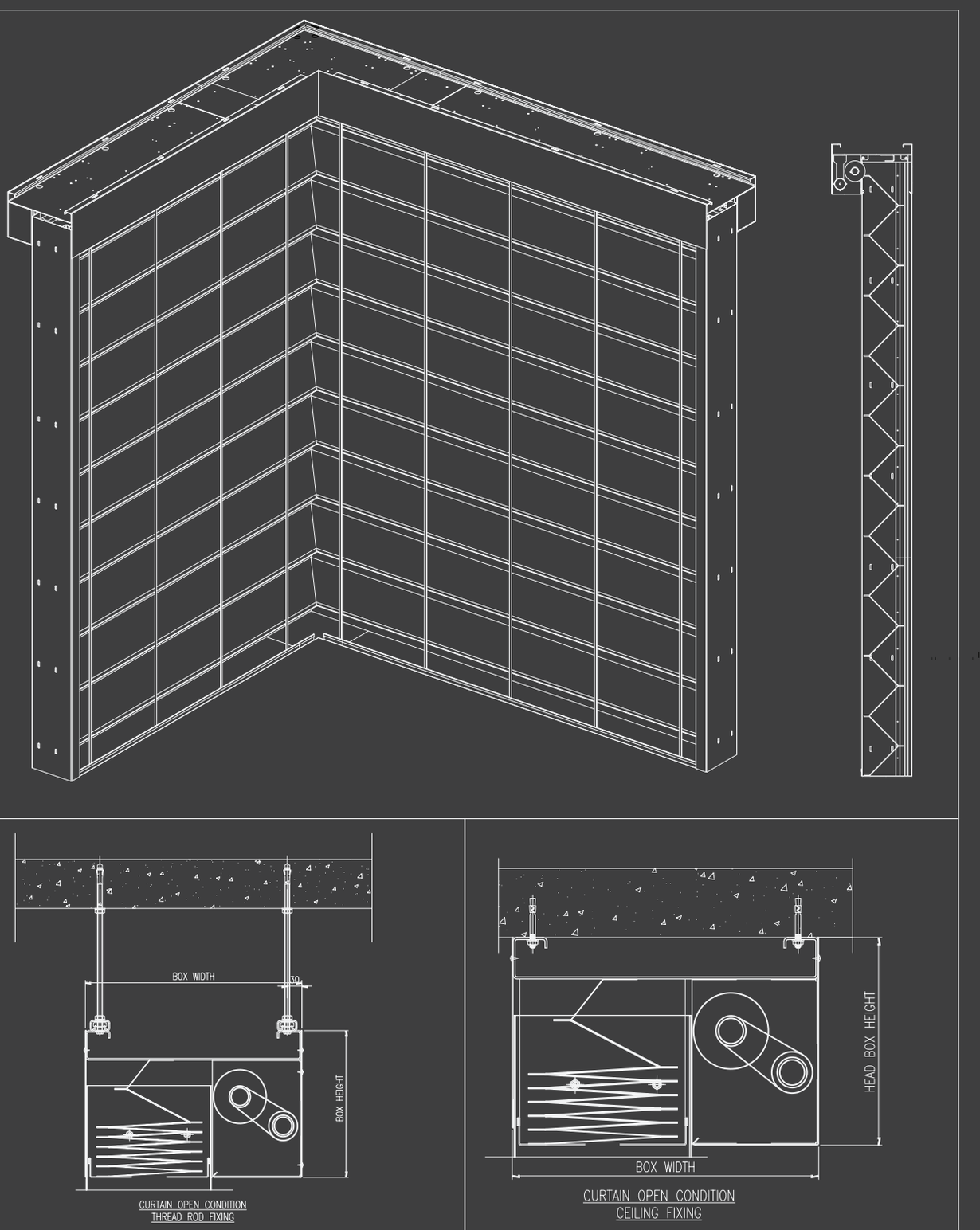
Kent
Smoke and Fire Curtains

# Accordion

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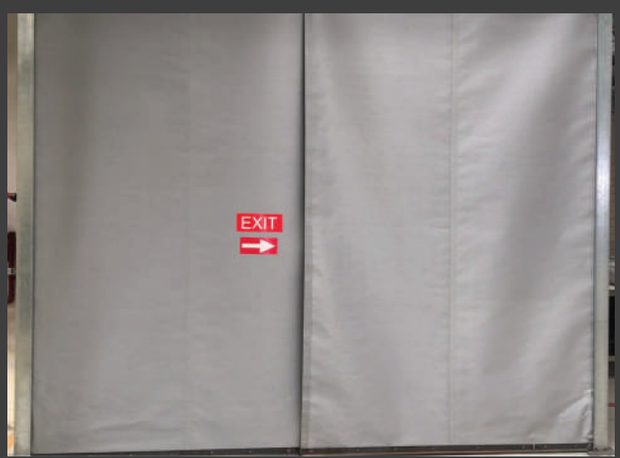
# Egress




Kent Egress Curtain

## DESCRIPTION

Kent Automatic Egress Curtains provide cross corridor fire separation without inhibiting the passage of occupants evacuating the building by utilizing an egress door that allows people to pass without retracting the curtain. It is used as a secondary means of escape.

Kent Egress curtains are used in elevator lobbies, cross corridors, staircase, and emergency exits. The curtain descends at a controlled speed upon receipt of a signal from a fire alarm using Kent's Guaranteed Gravity Fail-Safe System.

## SYSTEM TESTED IN ACCORDANCE WITH

- Classified to UL 10D for a period of 180 minutes ( 690 Fabric)
- Classified to UL 10D for a period of 60 minutes ( 455 Fabric)
- UL 1784
- ASTM - E84 - VG 455 Fabric - Test Method for surface Burning characteristics of Building Material
- Fabric Impact Tested in accordance with BS 5234-2:1992
- BS 476 Pt 6 (fire propagation) & Pt 7 (surface spread of flame)
- Achieved class 0

## COMPLIANCE

- NFPA 80 Compliance
- NFPA 101 Compliance
- NFPA 105 Compliance


Egress allows safe passage


Curtain stays closed after occupants pass through

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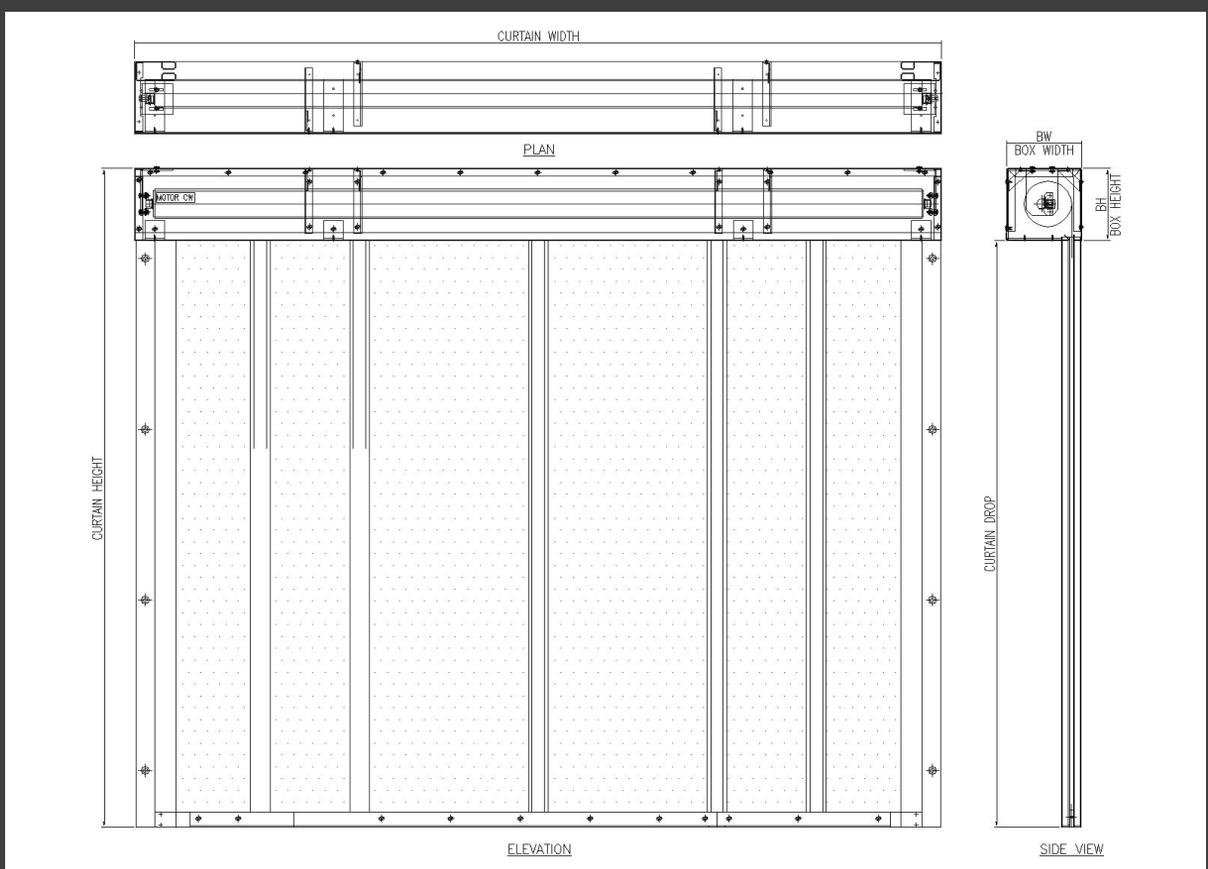
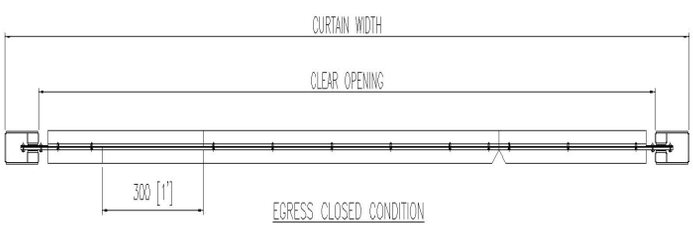
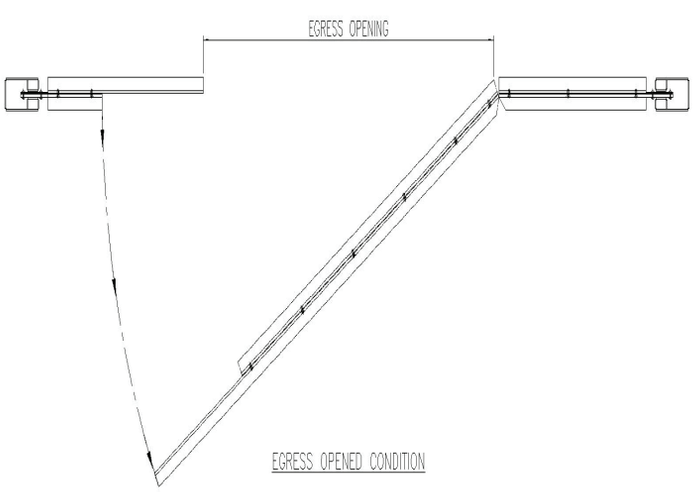
# Egress

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# Horizontal

## DESCRIPTION

The Kent Horizontal Curtain is a fire rated assembly designed to function as a horizontally deploying opening protective.
The system is activated upon receipt of a signal from the:

- General Fire Alarm
- Smoke Detection System
- BMS Module

The system is driven by a 24V DC motor arrangement or 230V AC motor subject to size. If a 230V motor is selected it should be connected to an independant UPS system in case of power failure.

## PRODUCT ADVANTAGES

- Lightweight & Compact: Reduced headroom requirement.
- Flexible Design Solution: Meeting Bespoke requirements.
- Improved Aesthetics: An optional trim is available to interface with the finished ceiling.
- Mounting Options: Above the slab or Under the slab.

## SYSTEM TESTED IN ACCORDANCE WITH

- System tested in accordance with BS EN 1634 Part 1 for up to 240 minutes.
- System tested in accordance with UL 10D for 180 minutes
- Method of Test NFPA 252
- Compliance with NFPA 80
- Fabric: VWG690
- Stitch Load Test: Fabric tested to 500Pa of Pressure.
- Fabric Impact Test: Fabric tested in accordance with BS 5234-2 to double severe duty.

## SYSTEM COMPONENTS

- Headbox: The steel headbox houses the roller, fabric and motor within the casing creating a small compact package that remains virtually invisible
- Fabric: Woven Fiberglass wire reinforced fabric with individual panels stitched and hemmed using stainless steel thread
- Bottom Bar: The bottom bar is 3mm GI sheet material which provides opening and holding of the fabric in a conditioned way.
- Side guide: During Deployment, slim steel side guides fabricated from 2 mm GI rolled Profile prevent derailment of the fabric during operation ensuring integrity of the system when faced by positive or negative pressures of fire.

Horizontal Fire Curtain

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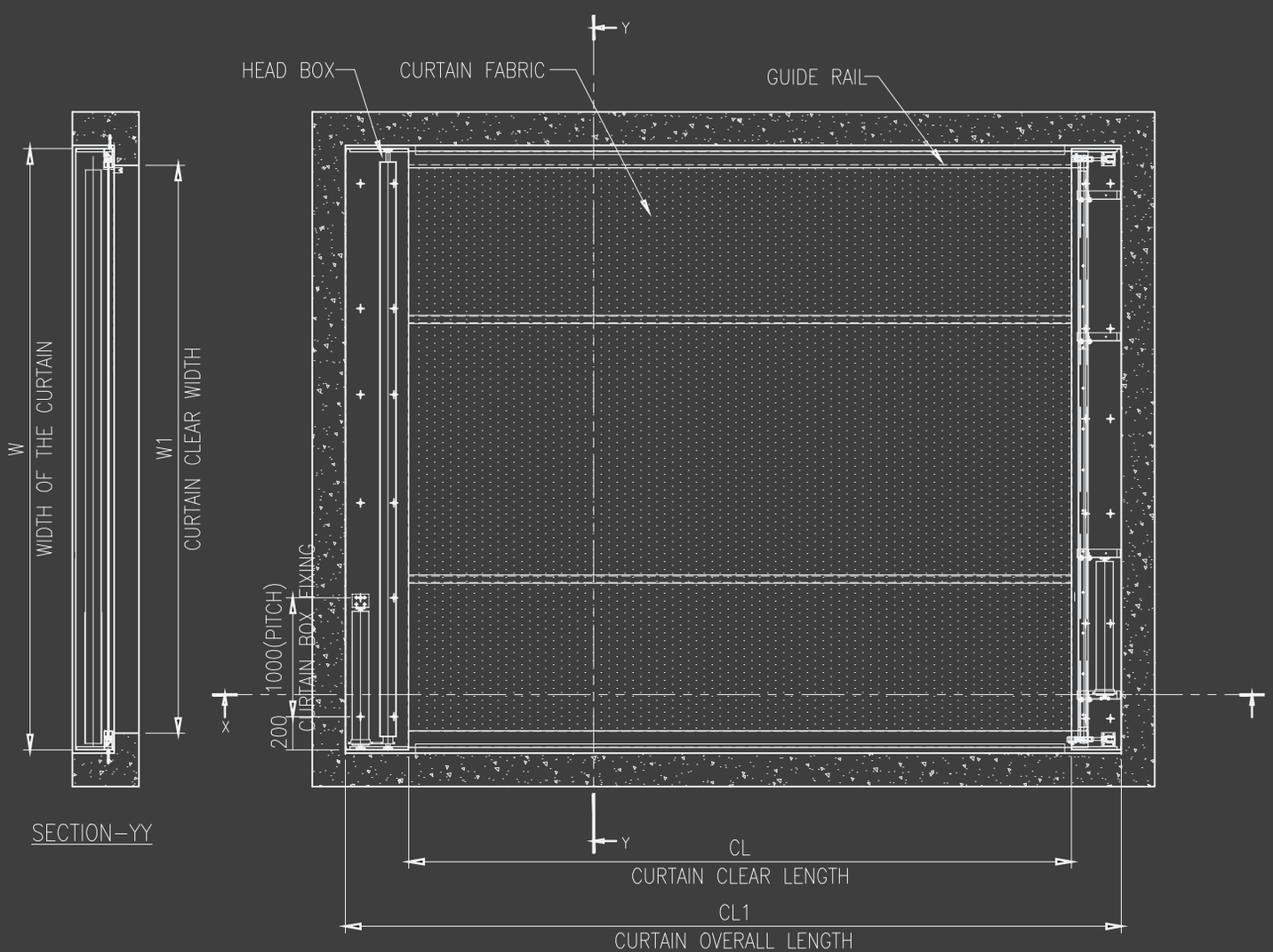
# Horizontal


SECTION–XX




SECTION–YY

CURTAIN PLAN

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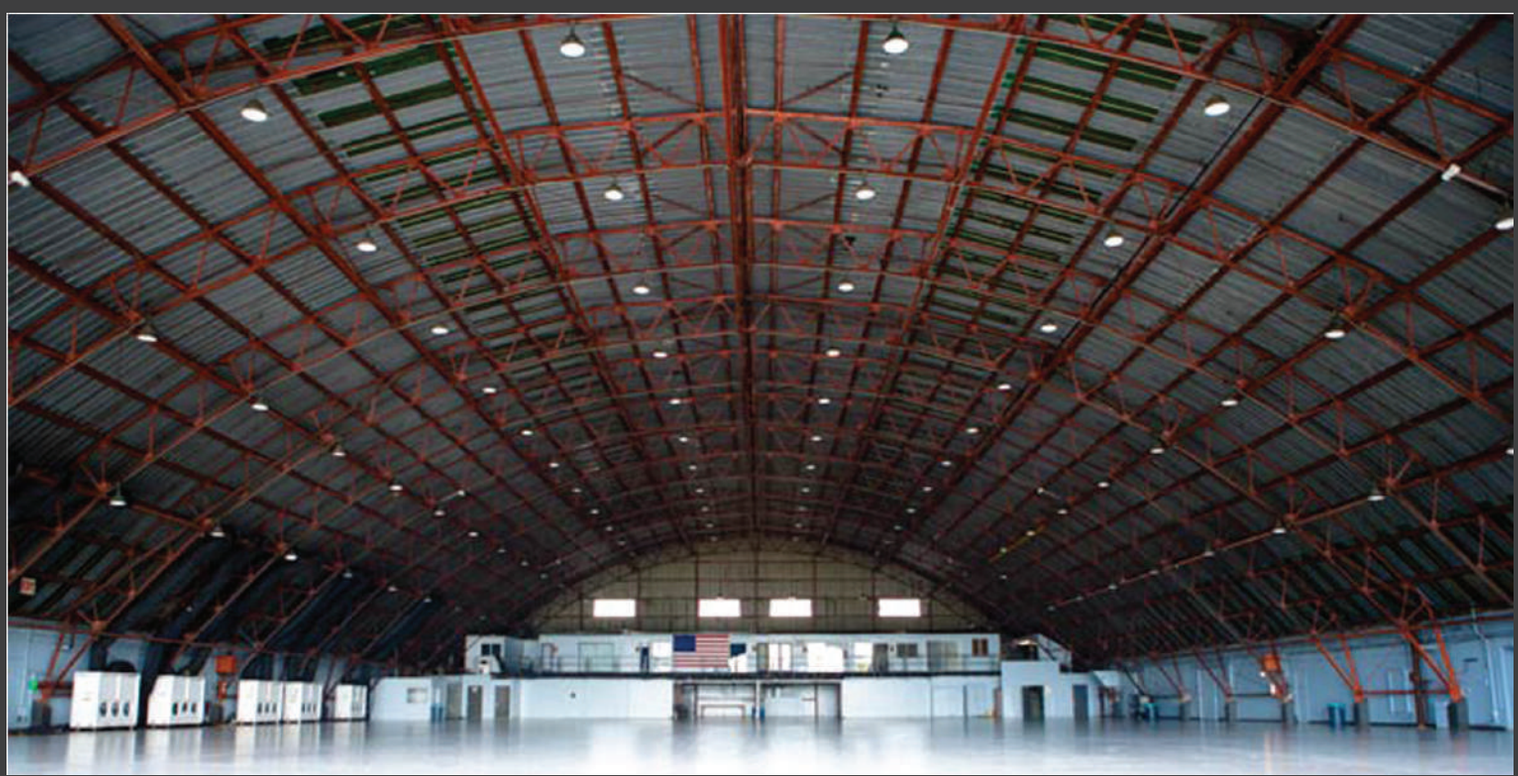
# Static Draft Curtains



## DESCRIPTION

Kent Static Draft Curtains are an effective product designed to provide protection against smoke in commercial and industrial structures. Secured to structured steel, draft curtains ensure smoke and hot gases arising from the fire to remain buoyant within the smoke zone consistent to the smoke management strategies

## PRODUCT ADVANTAGES

- Design Solution: We Ensure bespoke designs to fit all requirements and layouts.
- Maintenance: The Static Curtain entail a very low level of maintenance.
- Lightweight: Reduction in load bearing ramifications. Ease of Installation.
- Width and drops: Draft curtains are designed to cover unlimited width.

## FABRIC TESTING - VG455

- ASTME 84
- UL 723
- BS 476 Pt6
- BS 476 Pt7
- UL 10D*
- BS EN 12101 B*
- BS EN 12101 C*
- BS EN 12101 D*
- D120 - tested at 600 degree celsius time temperature curve for 120 minutes
- DIN 12546, DIN 1049
- DIN 12654, DIN EN 12127
- DIN ISO 9354, DIN ISO 4606
- DIN ESO 4603/E

* WHEN TESTED IN CONJUNCTION WITH AUTOMATIC SMOKE CURTAIN SYSTEM

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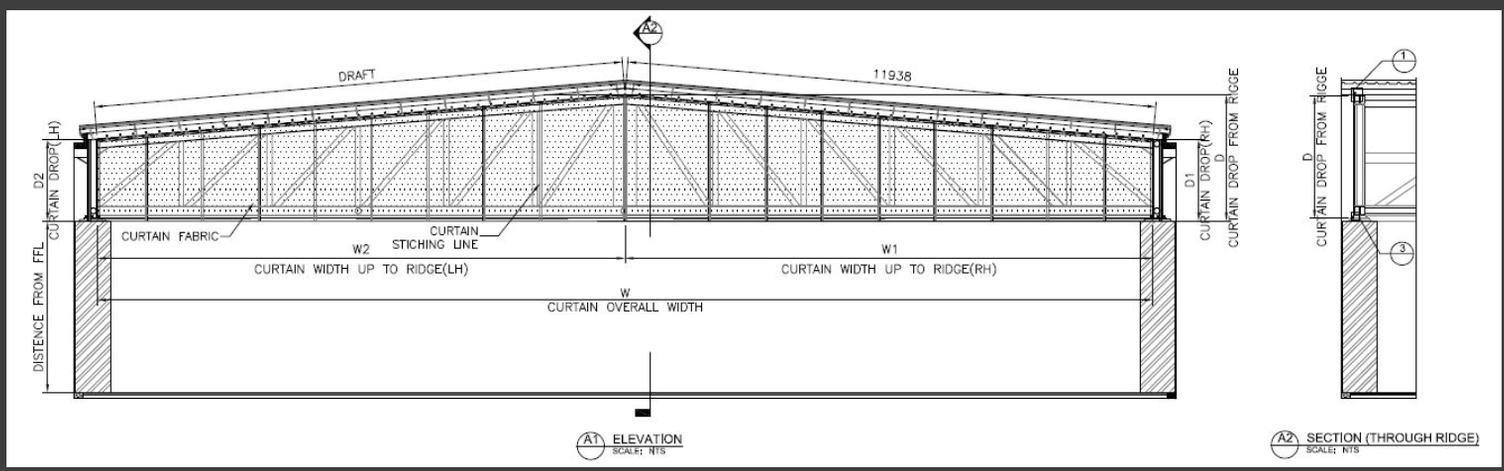
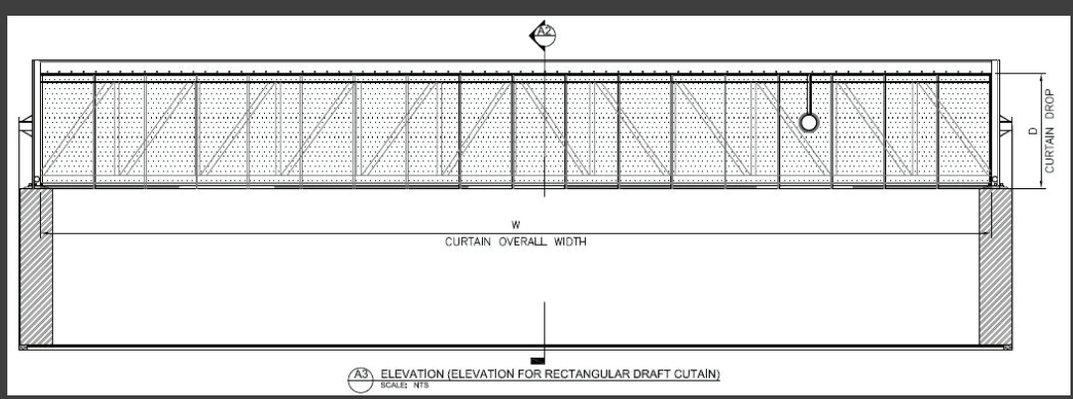
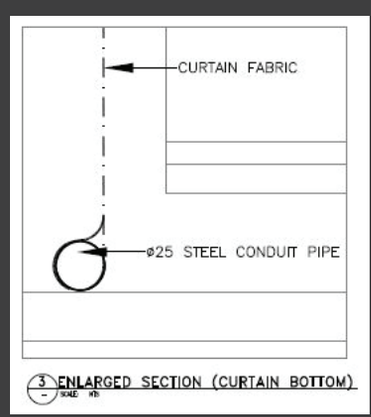
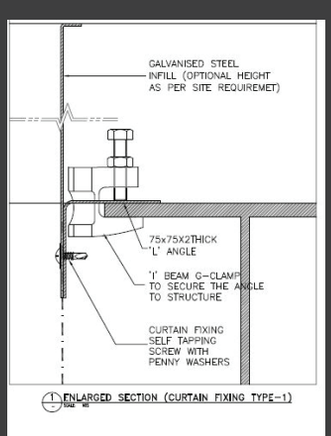
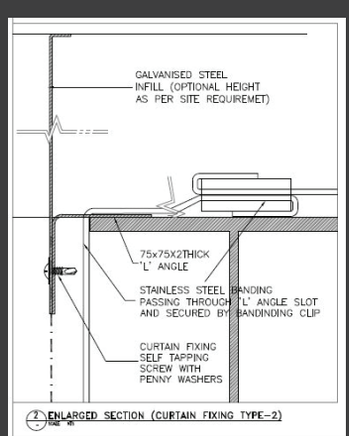
# Static Draft Curtains

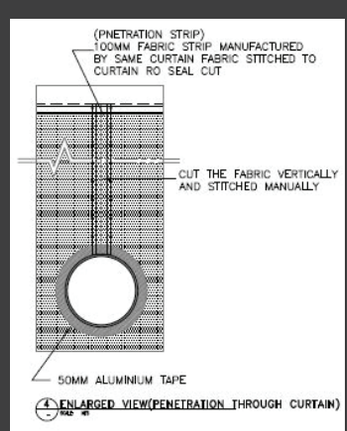


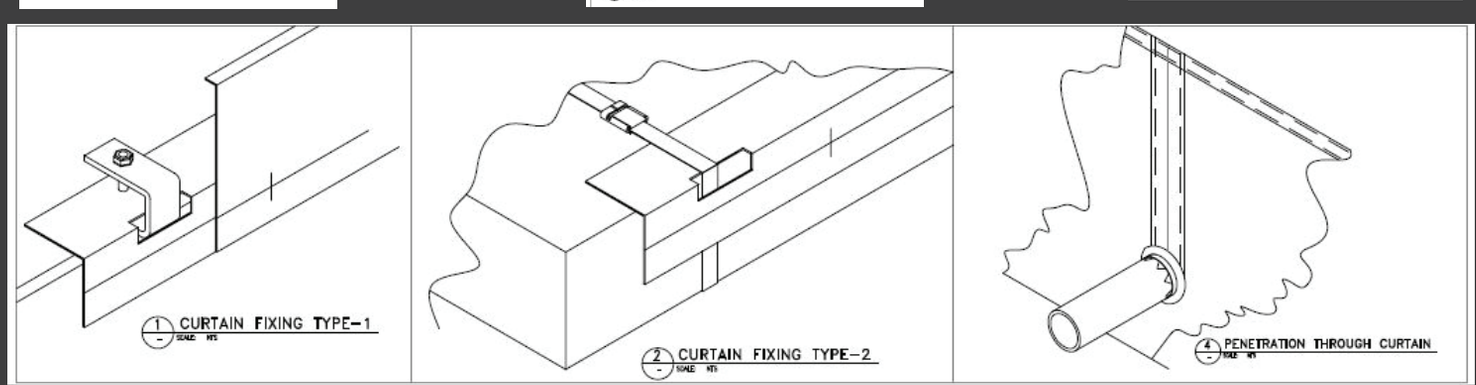

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# TUBULAR MOTOR

The Kent Tubular Motor is a permanent magnet DC electrical motor. When the curtains are retracted, the Kent Motor Controller (KMC) routes a low voltage supply to the motor which keeps it in the retracted position.

When the fire alarm signal is triggered, the low voltage supply to the KMC is removed which in turn deploys the curtains to their fire operational position under the power of gravity.

Kent Tubular Motor- Octagonal

Kent Tubular Motor-Round

| Specifications | Unit | KM 20 | KM 40 |
|---|---|---|---|
| Nominal Voltage | VDC | 24 | 24 |
| Nominal Current | | | |
| Nominal Power | W | 18.5 | 37.7 |
| Gear Box | Type | Planetary | Planetary |
| Reduction Ratio | | 1-100 | 1-162 |
| Nominal Speed | rpm | 31 | 22.2 |
| Maximum Torque | Ncm | 1400 | 2400 |
| Motor Insulation | Class | E | E |
| Motor Protection | IP | 50 | 50 |
| Cable Size | | 3core 1.0mm sq. | 3core 1.0mm sq. |
| Housing Dia | mm | 64 | 64 |
| Overall Length ( with adaptors for 76mm dia tube) | mm | 380 | 380 |
| Overall Weight ( with adaptors for 76mm dia tube) | kg | 4 | 4.7 |
| Options | Brake | Additional | Additional |
| | LSOH cable | Additional | Additional |

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Kent Tubular Motor- Octagonal

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| Specifications | Unit | KM 20 | KM 40 |
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| Gear Box | Type | Planetary | Planetary |
| Reduction Ratio | | 1-100 | 1-162 |
| Nominal Speed | rpm | 31 | 22.2 |
| Maximum Torque | Ncm | 1400 | 2400 |
| Motor Insulation | Class | E | E |
| Motor Protection | IP | 50 | 50 |
| Cable Size | | 3core 1.0mm sq. | 3core 1.0mm sq. |
| Housing Dia | mm | 64 | 64 |
| Overall Length ( with adaptors for 76mm dia tube) | mm | 380 | 380 |
| Overall Weight ( with adaptors for 76mm dia tube) | kg | 4 | 4.7 |
| Options | Brake | Additional | Additional |
| | LSOH cable | Additional | Additional |

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# CONTROL SYSTEM

KGC (Large Box / Standard Box)

KMC (Standard Box)

- Push Button Emergency Override
- Individual Curtain Override
- Remote Test Key Facility
- Audio Visual Facility
- Voice Activation
- Obstruction Sensor
- Stand Alone Activation by Fusible Link, Smoke / Heat Dector
- 2 Stage Descent
- Delay Deployment
- Delay Reset
- BMS Module

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# Job Reference

## UNITED ARAB EMIRATES

Atlantis, The palm

- Atlantis, the Palm-
  Kent Automatic Fire Curtain
- AL Maktoum Hospital
  Kent Automatic Fire Curtain
- H&M Mall of Emirates
  Kent Automatic Smoke Curtain

Midfield Terminal, Abu Dhabi

- Midfield Terminal -
  Kent Automatic Smoke Curtain
- Dubai Mall Fashion Zone
  Kent Automatic Smoke Curtain
- Dubai University
  Kent Automatic Fire Curtain

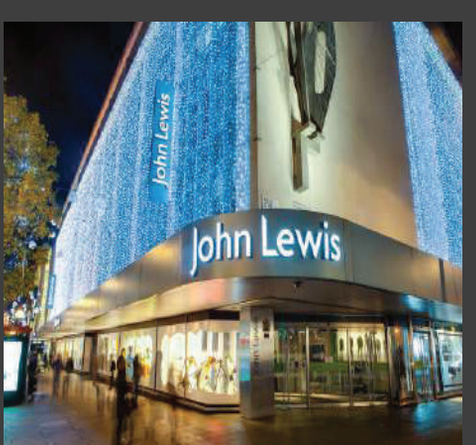
Dubai Arena

- Dubai Arena-
  Kent Automatic Fire Curtain
- Magic Planet
  Kent Automatic Smoke Curtain
- WTC SOUK
  Kent Automatic Fire Curtain

## UNITED KINGDOM

Heathrow Airport, London

- Heathrow Airport
  Kent Automatic Fire Curtain
- Liberty London
  Kent Automatic Fire Curtain
- Ardmore
  Kent Automatic Fire Curtain




JLP, Oxford Street London

- JLP Oxford Street
  Kent Automatic Fire Curtain
- Chobham Manor
  Kent Automatic Fire Curtain
- Lansdowne
  Kent Automatic Fire Curtain

St. Thomas Hospital

- St. Thomas Hospital
  Kent Automatic Fire Curtain
- Belmonte Street
  Kent Automatic Fire Curtain
- Cabot Square
  Kent Automatic Fire Curtain

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Kent
Smoke and Fire Curtains

# Job Reference

## SINGAPORE

Abbvie

- Abbvie-
  Kent Automatic Fire Curtain
- Zulin Warehouse
  Kent Automatic Fire Curtain
- 101 Eunos Commercial
  Kent Automatic Fire Curtain

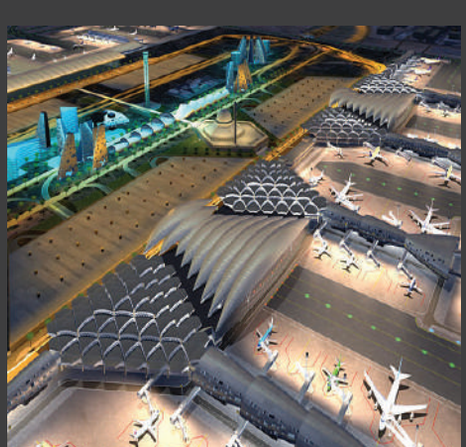
Singapore Changi Airport

- Singapore Changi Airport-
  Kent Automatic Fire Curtain
- Tulin Warehouse Tampines
  Kent Automatic Smoke Curtain
- Terminal one Airport
  Kent Automatic Fire Curtain

Sengkang Hospital

- Seng Kang-
  Kent Automatic Smoke Curtain
- Woodlands
  Kent Automatic Fire Curtain
- Terminal 2 Airport
  Kent Automatic Fire Curtain

## SAUDI ARABIA



Riyadh Airport

- Riyadh Airport-
  Kent Static Curtain
- Dr. Samir Abbas Hospital
  Kent Automatic Smoke Curtain
- Riyadh Metro
  Kent Automatic Smoke Curtain

Le Meridian Hotel

- Le Meridian-
  Kent Automatic Smoke Curtain
- Golden Tower
  Kent Automatic Smoke Curtain
- Tabayah Mall
  Kent Automatic Smoke Curtain

Samir Abbas Hospital

- Samir Abbas Hospital-
  Kent Automatic Smoke Curtain
- Mekkah Mall
  Kent Automatic Fire Curtain
- Soliman Fakeeh Hospital
  Kent Automatic Fire Curtain

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# Job Reference

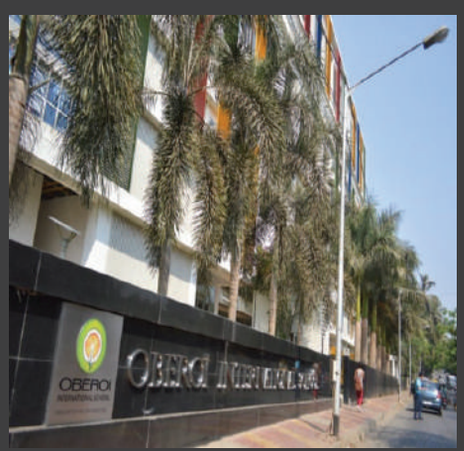
## INDIA

Indira Gandhi International Airport

- IGI Airport -
  Kent Draft Curtain
- Ambience Mall
  Kent Automatic Fire Curtain
- Citi Bank
  Kent Automatic Fire Curtain

Grand Hyatt New Delhi

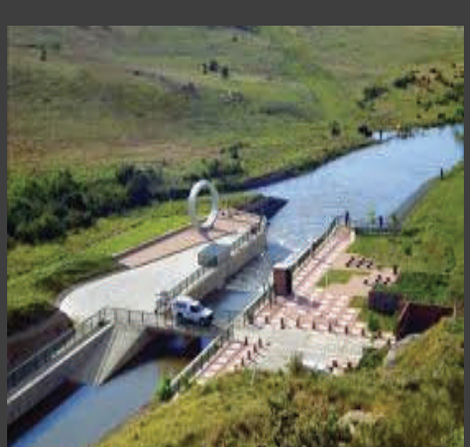
- Grand Hyatt -
  Kent Automatic Fire Curtain
- Ascot Hotel
  Kent Automatic Fire Curtain
- Swiss Air Bangalore
  Kent Automatic Fire Curtain




Oberoi International School Mumbai

- Oberoi International School
  Kent Automatic Fire Curtain
- Rolls Royace
  Kent Automatic Fire Curtain
- H&M Mall of Emirates
  Kent Automatic Smoke Curtain

## SOUTH AFRICA



Water and sanitatiion project

- Water and sanitation, Pretoria-
  Kent Automatic Fire Curtain


Dunlop- Southern Cross

- Dunlop-
  Kent Automatic Fire Curtain

Golf Club, Durban

- Golf Club -
  Kent Automatic Fire Curtain

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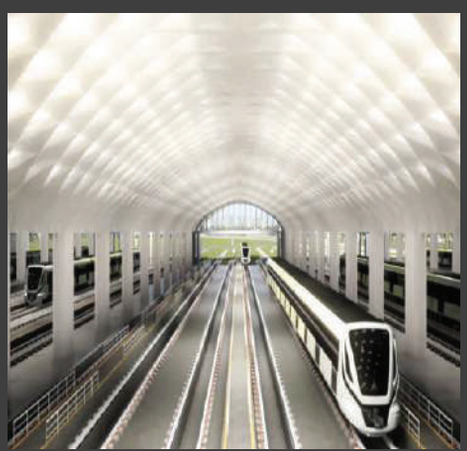
# Job Reference

## QATAR

Doha Festival City

- Doha Festival City-
  Kent Automatic Fire Curtain
- Pottery Barn
  Kent Automatic Smoke Curtain
- H&M
  Kent Automatic Smoke Curtain



Gold line metro, Doha

- Qatar Gold Line Metro-
  Kent Automatic Smoke Curtain
- Pink
  Kent Automatic SmokeCurtain
- Sephora
  Kent Automatic Smoke Curtain


Starbucks Doha

- Starbucks Doha-
  Kent Automatic SmokeCurtain
- Wojooh
  Kent Automatic Smoke Curtain
- Mango
  Kent Automatic Smoke Curtain

## NEW ZEALAND

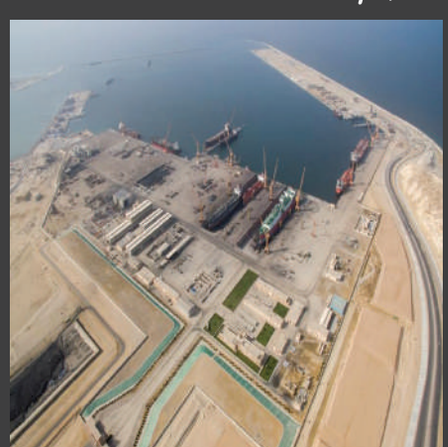
Keans Building

- Keans Building -
  Kent Automatic Smoke Curtain

## OMAN


Omantel

- Omantel Muscat-
  Kent Automatic Fire Curtain



Oman Drydock

- Oman Drydock-
  Kent Marine Curtain

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# Job Reference

## Hong Kong

EMSD (Headquarter) Kowloon bay

- G/F
  Kent Automatic Fire Curtain
- 1/F
  Kent Automatic Fire Curtain
- 3/F
  Kent Automatic Fire Curtain
- 4/F
  Kent Automatic Fire Curtain


MTR Stations (10 stations - 37 Exits)

- Hung Hom Station
  Kent Automatic Fire Curtain
- Diamond Hill
  Kent Manual Fire Curtain
- Sham Shui Po
  Kent Manual Fire Curtain
- Prince Edward
  Kent Manual Fire Curtain
- Mong Kok
  Kent Manual Fire Curtain
- Yau Ma Tei
  Kent Manual Fire Curtain

- Lo Wu Station
  Kent Automatic Fire Curtain
- Jordan
  Kent Manual Fire Curtain
- Tsim Sha Tsui
  Kent Manual Fire Curtain
- Central
  Kent Manual Fire Curtain
- Admiralty
  Kent Manual Fire Curtain
- Wan Chai
  Kent Manual Fire Curtain

1881 HERITAGE - Tsim Sha Tsui

- G/F - Stairs near Chinese Restaurant

HKSTP

- Building 5E
  Kent Automatic Smoke Curtain
- Building 10W
  Kent Automatic Smoke Curtain

## Macau

Galaxy Macau
- Phase 3C

Kent Accordion Smoke Curtain
Kent Automatic Smoke Curtain with Egress

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