

## FLAME ARMOUR FIRE SHUTTER DATASHEET



There are three types of fire shutters which can be manufactured depending on the specifications stated in the Extended Application Report, which is supplied by a notified/approved body upon accreditation of BS EN 16034:2014 (harmonised standard).

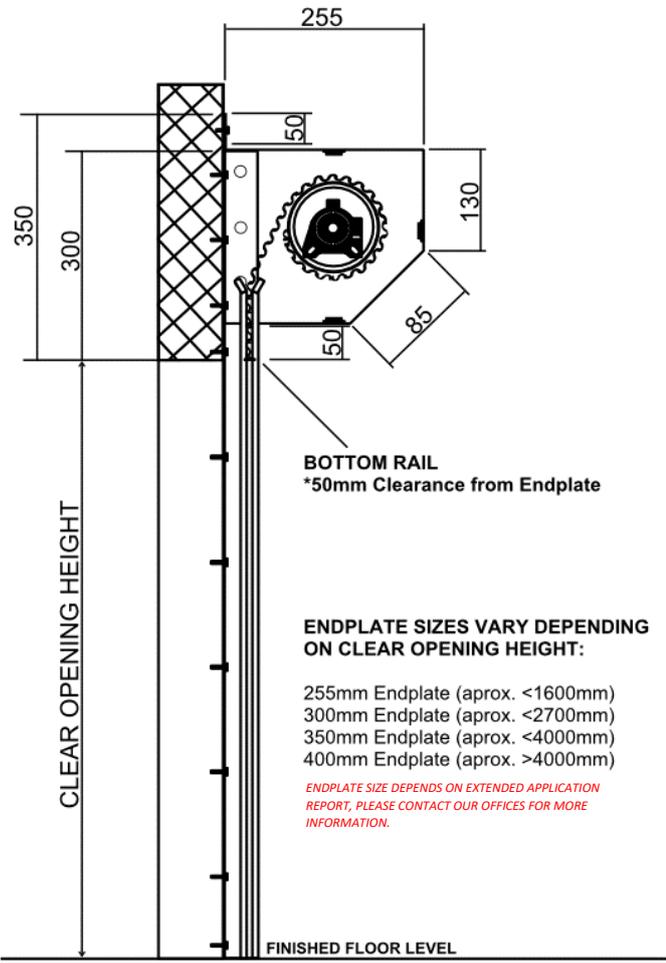
Tubular motor fire shutters can be manufactured to a given parameter in relation to dimensions, once this is exceeded then an external chain-driven fire motor is required. An external motor is referred to as an Inline fire shutter, this motor is external to the coil casing and is compliant as per BS EN 15269-10 (section G.1.1). It is also possible to manufacture, supply, and install a fire shutter with a gravity fail-safe motor. The gravity fail-safe motor is a 24v DC tubular motor fire shutter which will still operate as intended even when the electrical power supply is compromised.

Below is a detailed explanation of the components which can be used in the manufacturing of a Flame Armour fire shutter:

<p><b>CURTAIN (LATH):</b> The fire shutter curtain is constructed from either; a 75mm 22swg interlocking solid scrolled lath (0.7mm thickness) or 50mm 22swg flat interlocking solid lath (0.7mm thickness). The lath is manufactured with a galvanised finish and is securely held in position by cast steel end locks. The top section is punched in line with the welded studs on the barrel and the bottom T rail allows for expansion under fire conditions.</p>	<p>The three types of fire shutters:</p> <p><b>STANDARD TUBULAR MOTOR FIRE SHUTTERS:</b> A single phase tubular motor is installed into the barrel and can be operated by a signal from the control panel. However, in the event of a power failure to the building then a battery backup unit is required to ensure that the roller shutter is still operational under fire conditions. If the fire alarm is triggered, then a signal is sent to FDI-UPS relay panel (or other) and this then activates the descent of the fire shutter.</p> <p><b>GRAVITY FAIL-SAFE MOTOR FIRE SHUTTERS:</b> This is identical to a standard tubular motor fire shutter however it has been altered to include a gravity fail-safe motor. The gravity fail-safe is designed to operate even when the electrical supply is compromised, as an internal brake will be released which is on a controlled gravity descent. This motor has a maximum lifting capacity of 80kg.</p> <p><b>INLINE MOTOR OPERATION</b> A single or three phase motor is installed on a separate external motor plate which is connected to the barrel shaft via a chain. As BS EN 15269-10 states and in compliance with our Factory Production Control file, we can use an external drive set such as an inline fire motor. These can be activated by solenoid release mechanism and fusible link backup, which allows for a controlled gravity descent. Or, if required a signal from the fire alarm can trigger also allow a controlled descent.</p>
<p><b>GUIDES (CHANNELS):</b> There are two vertical guide channels that are fabricated from cold rolled galvanised steel. The standard guide dimensions are 65mm x 31.4mm x 3mm channels however this must increase in accordingly as stated in BS EN 15269-10, this is dependent upon the increase in the clear opening width of the shutter. The guide channels are bolted onto the angle.</p>	<p><b>MAXIMUM DIMENSIONS AND WEIGHTS</b> The desired fire rating and sizes will result in the type of fire shutter operation that is required, as states in the guidance supplied in the Extended Application Report.</p> <p>10000mm clear opening width x 10000mm clear opening height Approximately 62kg for a 1000m<sup>2</sup> Fire Shutter.</p>
<p><b>BARREL:</b> The Extended Application Report (BS EN 15269-1) provides guidance for which mild steel barrel is required, this depends on the fire rating and dimensions of the clear opening. The reason that the barrel size increases is due to the previous standard relying on the integrity to fail under fire conditions and being caught by 'support brackets'. These 'support brackets' are no longer necessary as the barrel size increases and this therefore ensures that the barrels integrity is not compromised under fire conditions. A barrel would deflect and bend under fire conditions, therefore the EXAP report states which barrel to utilised depending on the specifications to ensure stability and not compromise the performance of the fire shutter.</p>	<p><b>ADDITIONAL EXTRAS</b> The following additional extras can be included:</p> <ul style="list-style-type: none"> <li>• RAL or British Standard polyester powder coating finish.</li> <li>• Audio Visual Panels (FCP-LITE or FCP03).</li> <li>• Repeater (Slave) panel or Sound beacons.</li> <li>• (Sleep mode) Battery backup units.</li> <li>• Heat or smoke detectors</li> <li>• Lockable, Test and Rest push button station</li> </ul>
<p><b>SAFETY BRAKE:</b> A safety brake is required as per British/European standard BS EN 12453:2017 and BS EN 12604. This then ensures that the fire shutter has anti-fail protection in place in the event of a malfunction or failure. The safety brake size will be dependent on two variables, the axle diameter of the shaft and the overall weight of the curtain.</p>	
<p><b>CANOPY &amp; FASCIA:</b> The Flame Armour fire shutter was tested with a canopy that had punched fixing slots that allows for expansion under fire conditions. They are manufactured from galvanised steel and the dimensions depend upon the end plate size. A 50mm punched top lip is required and can be supplied loose in the event of a reveal fixing arrangement.</p>	

Flame Armour fire shutter diagram:

### TUBULAR MOTOR FIRE SHUTTER:



**ENDPLATE SIZES VARY DEPENDING ON CLEAR OPENING HEIGHT:**

255mm Endplate (approx. <1600mm)  
 300mm Endplate (approx. <2700mm)  
 350mm Endplate (approx. <4000mm)  
 400mm Endplate (approx. >4000mm)

ENDPLATE SIZE DEPENDS ON EXTENDED APPLICATION REPORT, PLEASE CONTACT OUR OFFICES FOR MORE INFORMATION.

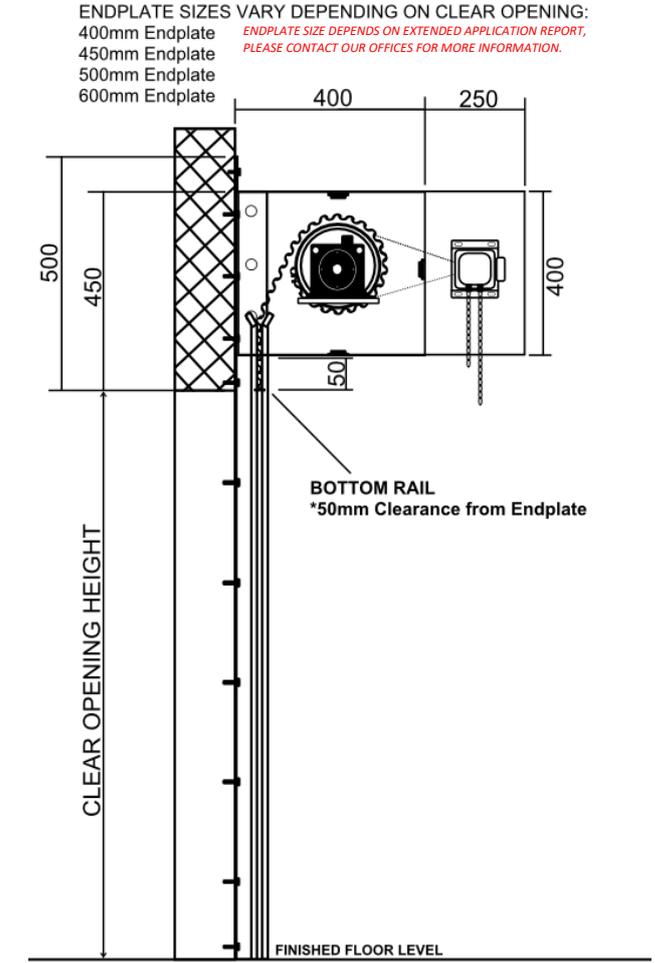
**FINISHED FLOOR LEVEL**

**PLAN**

### INLINE EXTERNAL MOTOR FIRE SHUTTER:

ENDPLATE SIZES VARY DEPENDING ON CLEAR OPENING:  
 400mm Endplate  
 450mm Endplate  
 500mm Endplate  
 600mm Endplate

ENDPLATE SIZE DEPENDS ON EXTENDED APPLICATION REPORT, PLEASE CONTACT OUR OFFICES FOR MORE INFORMATION.



**FINISHED FLOOR LEVEL**

**EXTERNAL INLINE MOTOR**

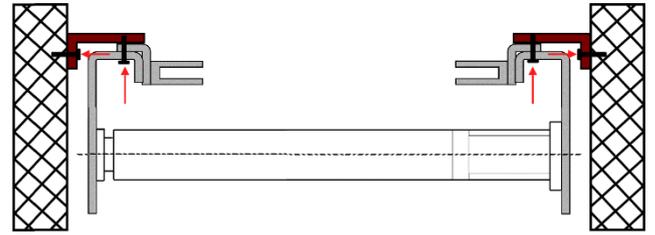
**PLAN**

TUBE MOTOR HEX ENDPLATE DIMENSIONS:	Endplate size:
(250mm) Up to 1800mm height (T.O.P)	255 x 130 x 110
(300mm) Up to 2800mm height (T.O.P)	300 x 240 x 130
(350mm) Up to 4200mm height (T.O.P)	350 x 350 x 160
(400mm) Up to 5400mm height (T.O.P)	400 x 400 x 235
INLINE SQUARE ENDPLATE DIMENSIONS:	Endplate Size:
(400mm) Up to 5000mm height (T.O.P)	400 x 400 x 235
(500mm) Up to 7000mm height (T.O.P)	500 x 500 x 250

**EXTENDED APPLICATION REPORT STATES WHICH END PLATE IS REQUIRED!**

### REVEAL FIX ARRANGEMENT

To comply with the original face fixed application of the test specimen, additional angles are required which installing a fire shutter fitted into the reveal of the wall (see below).



Please note that this fixing arrangement reduces the clear opening.

Changes from CE marking to UKCA marking:

On 1st January 2021, amendments came into force and important changes were taken into effect. As shown in Table 1, whereby it is now clear that the structure of the EU Construction Product Regulations 305/2011 is retained in its entirety.

**Table 1** - Summary of the changes from the EU Construction Product Regulations to the UK Construction Product Regulations.

	UK Construction Product Regulations:	UK Construction Product Regulations:	EU Construction Product Regulations:
Legislator:	Secretary of State	Secretary of State	European Commission
Applicable Territory:	Great Britain (England, Scotland and Wales)	Northern Ireland	EU Member States and Switzerland
Applicable Bodies:	Approved Bodies	Approved Bodies acting as Notified Bodies	Notified Bodies
Technical Specifications:	Designated Standards UK Assessment Document (UKAD)	Harmonised Standards European Assessment Document (EAD)	Harmonised Standards European Assessment Document (EAD)
Supporting Documentation	Declaration of Performance (GB) UK Technical Assessment	Declaration of Performance (NI) European Technical Assessment	Declaration of Performance (EU) European Technical Assessment
Marking:	UKCA Marking	CE & UK(NI) Marking	CE Marking
Image of Marking:			

The United Kingdom left the European Union on 31st January 2020. There followed a transition period during which the UK continued to participate in the EU Customs Union and the European single market. A Trade and Cooperation Agreement was negotiated so that the transition period ended at 11pm on 31st December 2020 with a deal called the EU-UK withdrawal agreement.

The United Kingdom Construction Industry were previously obligated to comply with the European Union Construction Products Regulations (EU CPR) which was terminated at the end of the transition period. The new standard for fire-resistant roller shutters which were introduced in November 2019 was compliant with EN 16034 for the EU Construction Product Regulations (EU CPR). In 2019, as part of the UK Government’s preparations for leaving the EU, a new statutory Instrument SI 2019 No. 4651 (the 2019 amendment) was passed combining several pieces of existing legislation for Construction Products. The UKCA mark was introduced to the industry.

These were the following:

- The EU Construction Products Regulations - Regulations (EU) No. 305/2011
- SI 2013 1387 – UK Construction Products Regulations 2013 which came into force alongside the EU CPR and made provisions for its enforcement.

The primary objective was to retain the EU Construction Product Regulations with as minimum changes as possible after the United Kingdom left the European Union. As a result of the 2019 amended which introduced the UK Conformity Assessment, which is commonly referred to as the UKCA mark, replaced CE marking and provided for UK-based Approved Bodies to fulfil the task of EU Notified bodies.

**SSS Industrial Doors Ltd hold certification for both CE and UKCA marking for their Flame Armour fire-resistant roller shutters.**

*Guidance updated (24.08.21) - It is possible to continue to CE mark for goods placed on the market in Great Britain until 1st January 2023.  
Source: [www.gov.uk/guidance/using-the-ukca-marking](http://www.gov.uk/guidance/using-the-ukca-marking)*