SECURITYDIRECT
ROLLER SHUTTERS | INDUSTRIAL DOORS
STEEL DOORS | SECURITY GRILLES

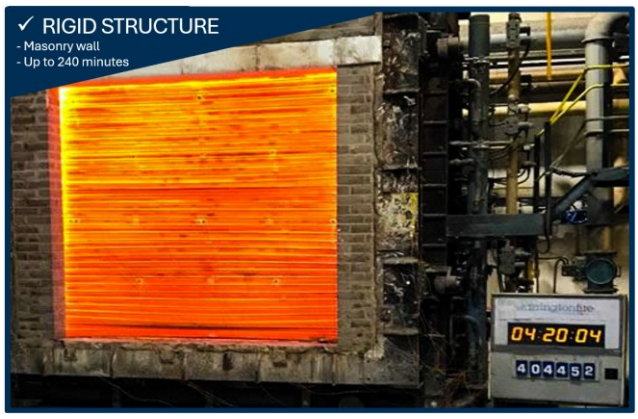
INSTALLATION MANUAL

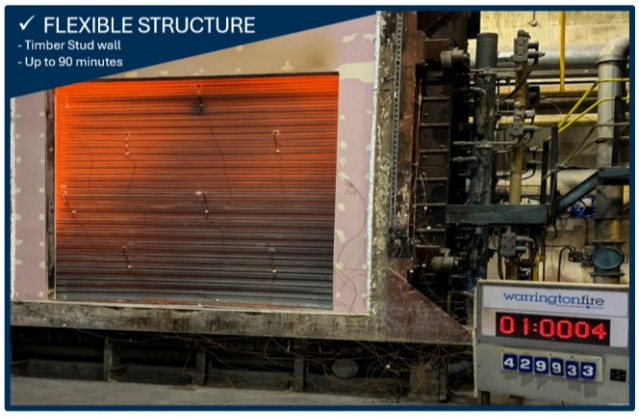
FLAME ARMOUR™ PRODUCT RANGE

Security Direct Product Ltd accepts no liability for any personal injury, property damage, or consequential loss arising from improper, incomplete, or non-compliant installation of the product, including failure to follow fire safety regulations or relevant standards.

Prior to ordering the product, during the surveying stage, you must clearly identify which product range you require. This can be determined by the supporting construction type as explained below. Upon submitting a quotation this needs to be clearly outlined to the manufacturer. Failure to disclose such information may result in a non-complaint installation, it the is the responsibility of the installer to undertake a detailed site survey.

FLAME ARMOUR (STANDARD) FIRE-RESISTANT PRODUCT RANGE:

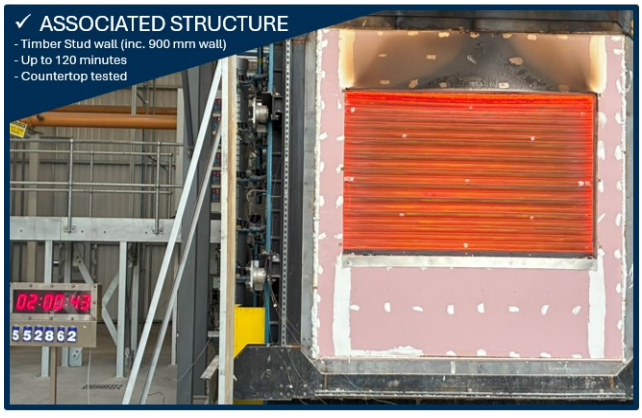




The **Flame Armour** fire-resistant roller shutter product range has been tested to both a standard 'rigid' supporting construction (e.g. masonry wall) and also tested to a 'flexible' supporting construction (e.g. timber stud partition).

FLAME ARMOUR+ (SERVERY HATCH) FIRE-RESISTANT PRODUCT RANGE:

The **Flame Armour+** fire-resistant roller shutter product has been tested to an associated supporting construction (e.g. timber stud partition), which included a 900 mm wall and stainless-steel countertop. The **Flame Armour+** product range has been purposely designed and tested for the installation to servery hatch applications. This product range includes additional components which need to be considered and carefully installed to ensure the product complies with the tested specification.



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SAFETY INFORMATION

Using the following installation manual as guidance for installation the '**Flame Armour**' & '**Flame Armour+**' roller shutter products. It is highly recommended that you follow each step carefully and do not skip ahead.

Prior to proceeding with the installation of the product, you must be aware of the potential dangers to yourself and others, particularly in regard to the use of machinery and equipment such as electrical tools. Roller shutters doors can be manufactured to various sizes and can often be quite large, this imposes the risk of crushing or entrapment during the installation process. Due to the moveability of components and associated parts, it is advisable that you comply with the instructions within this booklet.

The manufacturer highly recommends that all works are carried out in accordance with **The Door & Hardware Federation's** (DHF) Technical Specification documents **DHF TS 012: 2019** & **TS 013-4:2025**. It is assumed by the manufacturer that a competent installer, ideally someone who holds voluntary **third-party accreditation** for the installation of fire-resistant products, is undertaking the installation.

If an installation becomes hazardous and has the chance to impose a risk of injury or fatality, to the installer or others, the manufacturer recommends a 'STOP WORK' policy. Once the perceived risk has been correctly identified and resolved, then proceed with the installation.

Please review the following potential hazards and the suggested preventative measure which can be undertaken to mitigate them.

POTENTIAL HAZARD:		PREVENTATIVE MEASURE:
	**PINNED OR CRUSHED BY CLOSING DOOR**	• Keep yourself and any other person(s) clear of the opening whilst the doors are being installed, or in motion. • Do not allow others to stand near, or operate the door, unless fully qualified to do so. • Do not operate if the door becomes jammed or broken. • Ensure the working area is correctly cornered off.
	**ELECTRICAL SHOCK**	• Ensure that only a qualified electrician wires the electronic components (such as motor, panel or operator). • Make sure electrical operators are correctly grounded. • Ensure that all power sources are turned off prior to installing the panels, motor or writing into the mains power source. • Avoid pinching wires when installing the motor cover or canopy.
	**FALLING FROM HEIGHT**	• The shutter must be installed in a safe manner in accordance with the Work at Height Regulations (2005) and the Manual Handling (Operations) Regulations (1992). • You must comply with these regulations and use the correct equipment and appliances, were appropriate use a restraint system (if necessary).
	**PINCHED BY MOVABLE COMPONENTS**	• Make sure that the motor is turned off and unplugged before working with moving parts (sprocket, gears or hand-chain). • Identify potential pinch points prior to installation. • Do not operate the door whilst someone is nearby.
	**OBJECTS FALLING FROM HEIGHT**	• Ensure that the correct supplied fixings are used as instructed. • Ensure all bolts are correctly tightened and are secured. • Always wear protective head gear when installing the product. • Ensure all components are correctly installed.

We recommend using the following as a minimum:

PRE-INSTALLATION CHECKS

To ensure that the Flame Armour fire shutter has been correctly installed and complies with the regulations, please complete the following installation checks.

- ✓ Upon delivery, check the condition of each of the components for potential damage.
  If damages have occurred during transportation, the installation should not proceed.

- ✓ If the installation is stopped due to damages, undertake the following steps:
  - ☐ Take pictures of the damaged components
  - ☐ Do not move the material from the point of delivery, if possible refuse the delivery
  - ☐ Do not continue to unpack the product.
  - ☐ Refer to the product drawing and check which component is affected
  - ☐ Using the RSD number stated on the product drawing, or your reference, contact the manufacturer directly and highlight the potential issue (Office No. 01204 853 243).

- ✓ How to return the damaged component or part:
  - ☐ If there is a technical issue with the installation of a component (i.e. motor or control panel), please contact our offices to discuss this further. If the panel or motor provider is known, it is possible to contact them directly for further guidance.
  - ☐ If a part breaks during the installation and cannot be fixed, please contact the manufacturer to arrange for a replacement to be issued.
  - ☐ If the dimensions of the aperture were incorrectly measured or specified, such as the type of product required (e.g. Flame Armour+ required), then please liaise directly with the manufacturer. It is not possible for the installation engineer to modify the door onsite as this would result in a specification which is outside the manufacturer's certification.
  - ☐ Arrange any returns with the manufacturer prior to sending components back.

- ✓ Returns regarding shipment or container:
  - ☐ Obtain permission from the carrier to return the component or product
  - ☐ Route the return shipment via the identical carrier(s) involved in the original shipment
  - ☐ Notify the manufacturer when the shipment is returned

- ✓ Check that the following components have been supplied:
  - ☐ Product (manufacturing) drawing(s)
  - ☐ Labels / stickers
  - ☐ Declaration of Performance document (located within OMMs)

- ☐ Handover document (OMM)
- ☐ Fitting instructions
- ☐ All appropriate Fixings are provided (particular for the substrate type)
- ☐ Check the guide channel to the drawing specifications
- ☐ Check the fixing angles to the drawing specifications
- ☐ Check the barrel to the drawing specifications
- ☐ Check the curtain (Lath type and quantity) to the drawing specifications
- ☐ Check the canopy (incl. motor cover or fascia) to the drawing specifications
- ☐ Check the correct motor has been included
- ☐ Check the battery backup has been supplied (if applicable)
- ☐ Check the correct control panel has been supplied (if applicable)
- ☐ Check the correct operator has been supplied (if applicable)
- ☐ Ensure the battery backup has been fully charged prior to installing
- ☐ Download the applicable wiring diagram from the manufacturers website

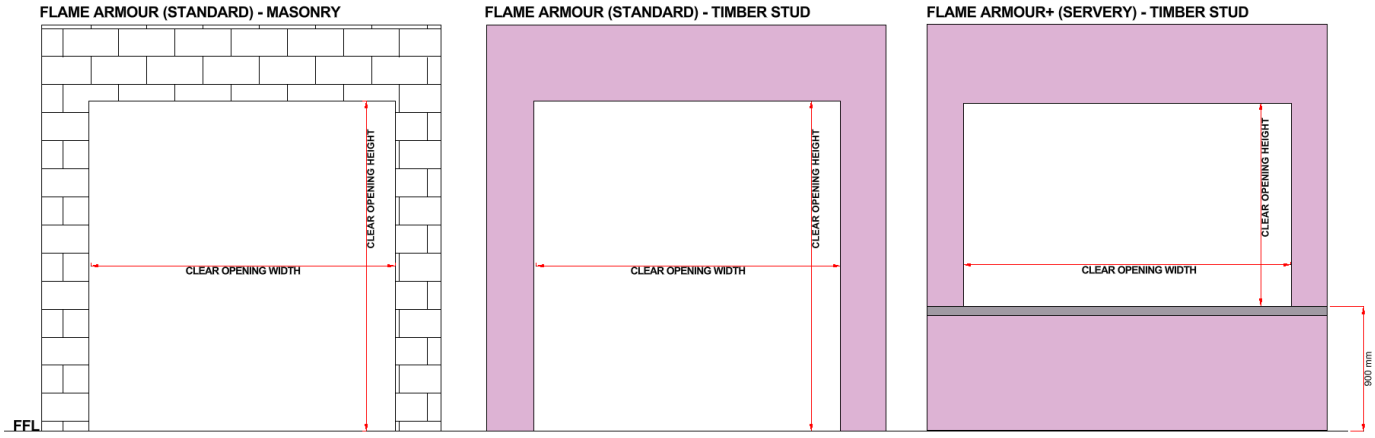
Please take the time and care to read the entirety of this installation manual, the manufacturer cannot be held responsible for any changes or damages incurred due to improper installed components.

- ✓ Only a fully trained and qualified engineer should perform measures and installations
- ✓ Only a qualified electrical engineer should wire the motor, control panel or ancillaries
- ✓ Only a certified fire alarm installation company should connect the fire shutter to the fire alarm system to ensure that it works as intended and is compliant with the applicable regulations and standards.
- ✓ Refer to the drawings and documentation at all times
- ✓ If there are multiple fire-resistant roller shutters within a single order, ensure that the correct documentation, RSD number and Job Reference are aligned to the correct door. It should be noted that the products are not designed to be interchangeable and are bespoke to each enquiry.

If the opening dimensions differ from the those on the product drawings, do not proceed with the installation. Contact the manufacturer and check to ensure that the calculations for the product are correct.

To ensure that the installation is as smooth as possible, ensure that the environment and area around the aperture is clear and appropriately prepared. The clear opening should be prepared and cleaned prior to the installation, before the installation begins.

Ensure that all debris or rough surfaces do not impede upon the installation.



SURVEY CONSIDERATIONS (PRIOR TO ORDERING):

The following considerations must have already been taken into account prior to proceeding with the ordering of the Flame Armour™ product. The manufacturer cannot be held accountable for incompetent site surveys being conducted. Therefore, the following considerations must be considered during the initial inspection of the site:

- ☐ Is the aperture suitable for the installation of a fire-resistant roller shutter
- ☐ Does the fire-resistant roller shutter close to the floor level
- ☐ If a servery hatch application is required, does it align with the structural recommendations on the manufacturer's website
- ☐ Is there access to a 240v mains power supply
- ☐ Is there access to a fire alarm system
- ☐ Is the fire-resistant roller shutter being installed on a 'means of escape', if so then according to Building Regulations (**ADB**) a heat detector or fusible link must be the sole source of activation in the event of a fire
- ☐ Has the responsible person, i.e. building manager, owner or fire officer been involved in assessing the risks of the product
- ☐ Can the fire-resistant roller shutter be manually operated as required by the Building Regulations (**ADB**)
- ☐ Do you require an audio-visual control panel on both sides of the aperture
- ☐ Has considerations for the 50 mm top canopy lip been taken into consideration
- ☐ Has the local risk assessment of the product been undertaken

INSTALLATION STATEMENT

The Flame Armour™ fire-resistant roller shutter product range has undergone extensive testing, the manufacturer has obtained certification for the product range. Practical testing in-house testing has been undertaken by the manufacturer and were necessary, under control conditions, third-party testing has been undertaken for both mechanical and fire-related performance (e.g. 'wind resistance' testing to EN 13241 or fire testing to EN 1634-1, conducted by an Approved body).

To ensure that the integrity of the fire-resistant roller shutter is not compromised, the supporting construction and type must be identified upon enquiry. All the necessary fixings will be provided with the product to ensure that they comply with the manufacturers Extended Application Report and are appropriate for use. The supporting construction and fixings must have an equal too, or greater, fire-resistant performance than the Flame Armour™ product.

It is the installers responsibility to ensure that this information is correct and provided to the manufacturer prior to proceeding with the manufacture of the product. The installer is liable for any non-compliant installation to substrates which are outside the scope of the certified product range.

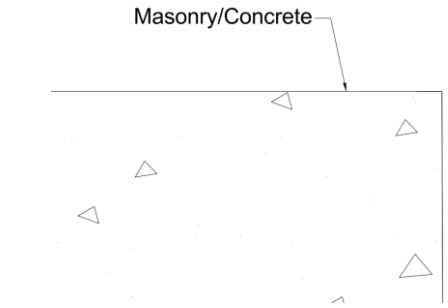
INTENDED USE OF THE PRODUCT:

The Flame Armour™ product range is a fire-resistant roller shutter product which has the sole intended use for '*Fire Compartmentation and/or escape routes'.* This product is not designed to be operated as a standard (non-fire) roller shutter. This product is intended to exclusively be used for two cycles per day (e.g. opened in the morning and closed during the evening). The product is not designed for continual operations and will thermally throttle the motor if overused.

SUBSTRATE TYPES

The **Flame Armour™** product range has been tested to various supporting constructions. The manufacturer advises that the structural recommendations documentation, located on their website, is to be consulted and adhered to when conducting a site survey, prior to obtaining a quotation and proceeding with the installation of the product.

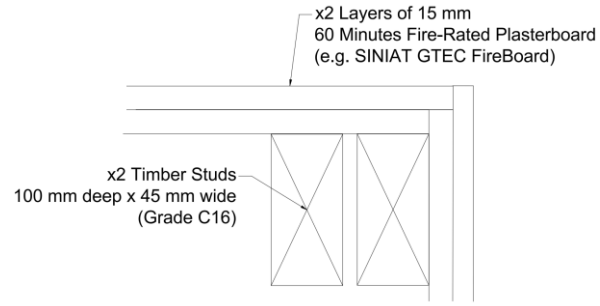
MASONRY / CONCRETE SUPPORTING CONSTRUCTION



In accordance with **Test Report No. 404452** & **Extended Application Report No. 416673**, the **Flame Armour™** product can be installed into either a masonry or concrete supporting construction.

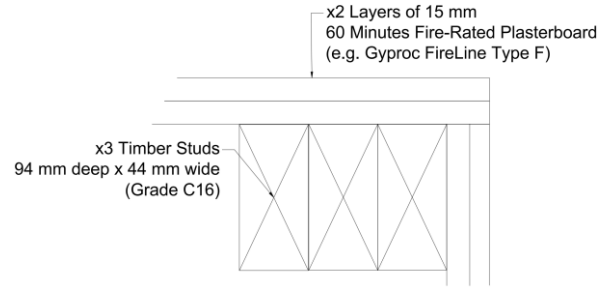
This substrate type has shown by direct test evidence that the product will be able to achieve 240 minutes Integrity performance *(Classified as **E240** in accordance with BS EN 13501-2)*.

TIMBER STUD PARTITION SUPPORTING CONSTRUCTION



In accordance with **Test Report No. 429933** & **Extended Application Report No. 416673**, the **Flame Armour™** product can be installed into a timber stud partition.

This substrate type has shown by direct test evidence that the product will be able to achieve 90 minutes Integrity performance *(Classified as **E90** in accordance with BS EN 13501-2)*.

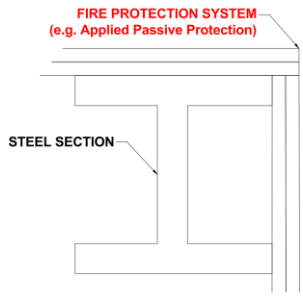


In accordance with **Test Report No. 552862**, the Flame Armour+ product can be installed into a timber stud partition (servery hatch).

This substrate type has shown by direct test evidence that the product will be able to achieve 120 minutes Integrity performance *(Classified as **E120** in accordance with BS EN 13501-2)*.

PROTECTED STRUCTURAL STEEL SUPPORTING CONSTRUCTION

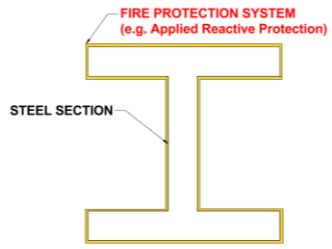
In accordance with **Extended Application Report No. 416673**, the **Flame Armour™** product can be installed into 'protected structural steel supporting construction' as per rule J.2.1. In order for the installer to ensure compliance, the structural steel must be protected in accordance with the guidance stated within the manufacturer's structural recommendations documentation.



Applied Passive Protection (EN 13381-4)

The steel supporting construction must have a sectional factor of less than 230m^{-1}. This calculation must be undertaken with the assumption that the steel work is exposed to fire on all four sides. This rule applies to both vertical and horizontal steel sections of the support frame.

The Fire Protection System must be shown by test to EN 13381 to maintain the steel temperature 400ºC or less to retain strength and minimise the effects of thermal expansion in the steel section.



Applied Reactive Protection (EN 13381-8)

The steel supporting construction must have a sectional factor of less than 230m^{-1}. This calculation must be undertaken with the assumption that the steel work is exposed to fire on all four sides. This rule applies to both vertical and horizontal steel sections of the support frame.

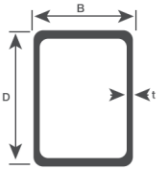
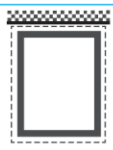
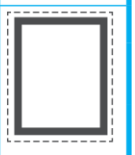
The Fire Protection System must be shown by test to EN 13381 to maintain the steel temperature 400ºC or less to retain strength and minimise the effects of thermal expansion in the steel section.

The manufacturer accepts no responsibility, and cannot provide guidance or comment, or be held accountable in regarding to the installation of a fire-resistant roller shutter into a 'protected structural steel supporting construction'. Responsibility for carrying out the necessary inspection, calculations and ensuring compliance rests solely with the installer, who must determine the suitability of the substrate for this application. If there is any uncertainty regarding the substrate type, calculations or fire protection system employed, the installer must consult a qualified Fire Engineer. If deemed necessary, a Field of Application Report may be required for the specific intended application, all costs associated with this process are the sole responsibility of the installer.

If the guidance within the manufacturers 'Structural Recommendations' is followed completely, and the product satisfies the requirements of the **Extended Application (EN 15269-10: 2011) Rule J.2.1**, then the installation to 'protected structural steel' will be deemed compliant. It should be noted that unprotected structural steel installations are not permitted.

In Fire Engineering, the sectional factor of an unprotected hot rolled open section, hot finished/formed hollow section or fabricated girder is defined as the heated perimeter (H_p) which is the length of the steel in contact with the fire per unit length, divided by the cross-sectional area of the steel section (A), measured in units of m^{-1}.

Using Promat's '*The Passive Fire Protection Handbook: Chapter 3 – Structural Steel*' as an example, it is possible to check the sectional factor to ensure the structural steel section would be compliant and suitable for the installation of a fire-resistant roller shutter.

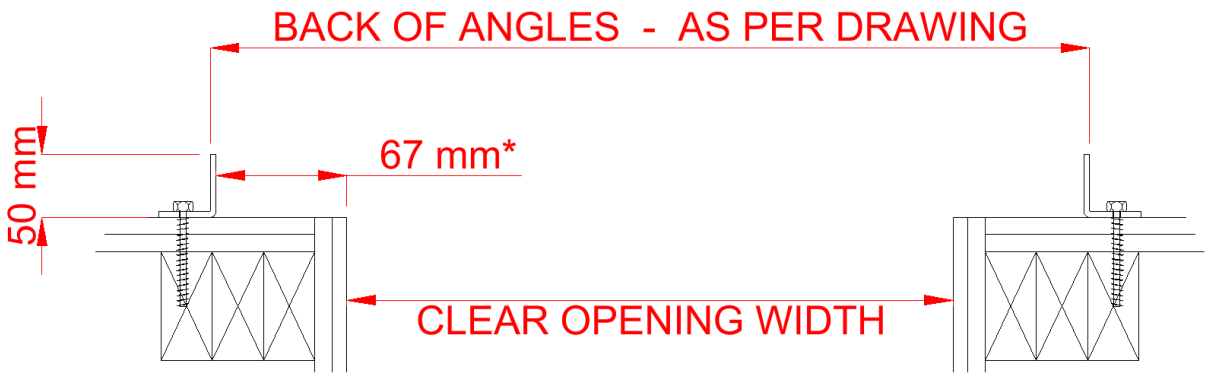
Table 3s Rectangular Hollow Sections (RHS) Dimensions to EN 10210 S355J2H Designation				Section factor A/V (Hp/A)		
				3 sides	3 sides	4 sides
						
Size D x B	Wall thickness t	Mass	Area of section A			
mm	mm	kg/m	cm²	m-¹	m-¹	m-¹
120 x 60	3.6	9.66	12.3	245	195	300
	4.0	10.7	13.6	220	180	265
	5.0	13.1	16.7	180	145	215
	6.3	16.2	20.7	145	120	175
	8.0	20.1	25.6	120	95	140
	10.0	24.3	30.9	100	80	120

The example above demonstrates that only a 120 mm x 60 mm rectangular hollow section (RHS) with a thickness of 5 mm, 6.3 mm, 8 mm or 10 mm would be suitable as the calculated sectional factor is less than the stated 230m^{-1} as required within Extended Application Rule J.2.1.

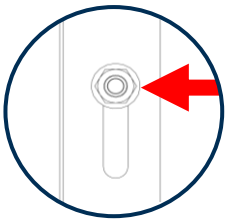
INSTALLATION OF THE FIXING ANGLES (FLAGS)

Please refer to the products manufacturing drawing when using this installation manual.

Using the provided manufacturing drawing(s), measure the back of angles and mark this distance on the supporting construction. Depending on the specified guide type (e.g. 65 mm, 75 mm or 100 mm guide channel), the distance shown in the diagram below marked with an asterisk (*) will depend upon the guide channel type.

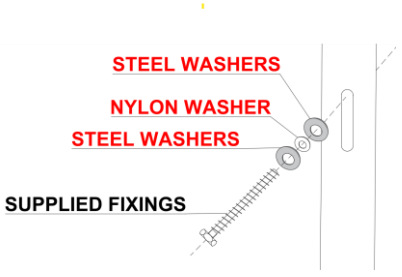


Once the flag is aligned to the substrate, mark the top of each fixing slot. Next drill holes perpendicular to the supporting construction. Ensure all debris is removed from the fixing hole and the correct drill bit is used (depends on the required bolt sizes which are supplied – these are specified in the manufacturers Extended Application Report).

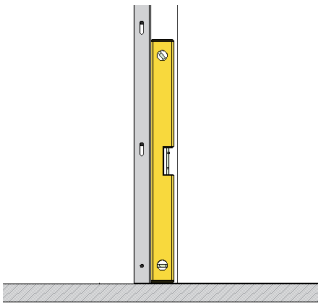


THE INSTALLER **MUST** ENSURE THAT THEY USE **THE PROVIDED FIXINGS** WHICH ARE **SUPPLIED BY THE MANUFACTURER**. THEY ALSO MUST ENSURE THAT THE **FIXINGS ARE INSTALLED** INTO THE FIXING ANGLE SO THAT THEY ARE LOCATED AT THE **TOP OF THE PUNCHED SLOT** (AS SHOWN).

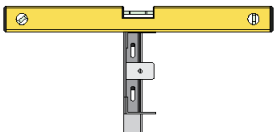
Once all of the fixings are located at the top of the punched slot within the fixing angle, ensure these fixings are secured. The reason the fixings are installed into the top part of the slotted angle to allow the thermal expansion during fire conditions. The supplied nylon washers are designed to melt during fire conditions and create a small gap that will allow the steel to thermally expand during high temperatures.



USE x2 STEEL WASHERS & x1 NYLON WASHERS WITH THE SUPPLIED FIXINGS



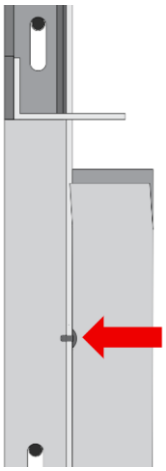
CHECK THE FIXING ANGLES ARE LEVEL VERTICALLY.



CHECK THE TOP OF THE END PLATES (FLAG) TO ENSURE THEY ARE LEVEL.

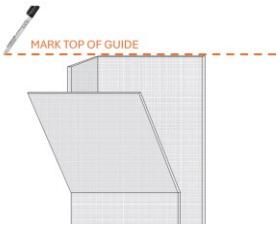
(FLAME ARMOUR+) INSTALLATION OF THE BOX SECTION & INTUMESCENT STRIP

This step is only applicable to the **Flame Armour+** product range, refer to the drawing to determine which type of Flame Armour™ product you are installing.

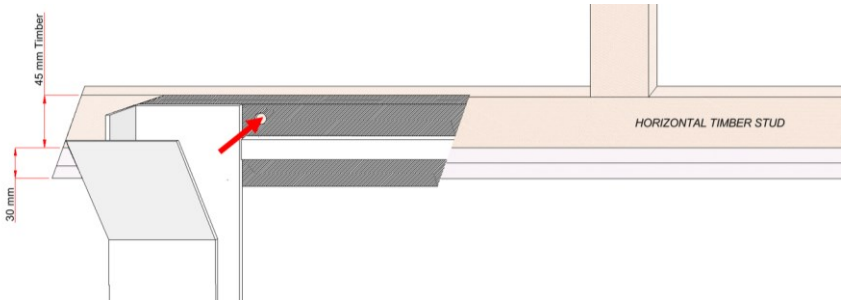


Temporarily, install the top fixing through the guide channel into the fixing angles using the bolts supplied. Ensure that the guide channel is secured momentarily, as this will be your reference point going forward.

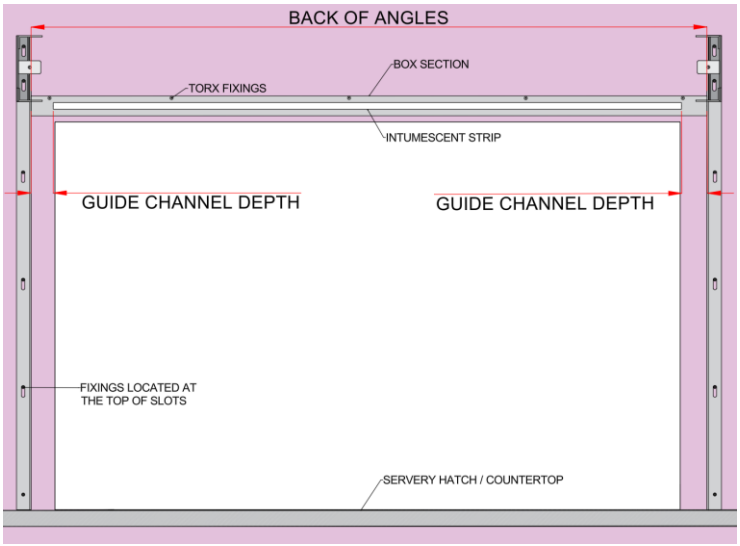
Mark the supporting construction where the **top of guide channel** is located.



The supplied 75 mm box section which includes a intumescent strip, which will be the same length as the between guide sizes, this component must be installed so that it is level with the top of the guide channel. If installed correctly, when you come to install the guides they will sit infront of the box section and the top of the guide will be level with the top of the box section (refer to the below diagram).



ONLY USE THE SUPPLIED TORX DRIVE SCREWS TO INSTALL THE BOX SECTION DIRECLTY INTO THE SUPPORTING CONSTRUCTION.

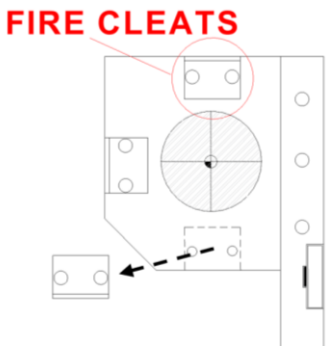


Once the box section is installed using the pre-drilled fixing holes and securely fixed to the supporting construction, it is possible to remove the guide channels from the fixing angles.

The guide channels are one of the last components to be installed. They were only required as a reference point for the installation of the 75 mm box section.

Once completed, the installation should be identical to the diagram.

INSTALLATION OF THE BARREL & SAFETY BRAKE



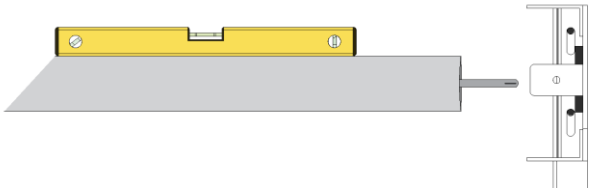
INSTALLATION TIP - Prior to installing the barrel and safety brake components, the manufacturer recommends that the installer temporarily removes the bottom 'Fire Cleat' from both endplates. These cleats are bolted onto the endplates and are required to install the canopy.

Once the 'Fire Cleats' have been removed, this will ensure easier access via the bottom of the endplates. Please ensure that once the barrel and safety brake have been secured and installed, the 'Fire Cleats' must be re-installed onto the endplate as originally supplied.

The manufacturer recommends that two people install the barrel using appropriate safety and lifting equipment. It is possible to install the barrel using ladders, however the installer must ensure that a risk assessment for this process has been undertaken prior to proceeding.

Carefully insert the axle shaft into the bore of the safety brake and secure it. Once secured, use the fixings provided and mount the safety brake to the endplate.

Once installed, ensure the barrel is level.



The standard (small) safety brake typically provided with a tubular motor fire-resistant roller shutter is mounted directly onto the endplate. The manufacturer will have already pre-drilled these fixing holes into the endplate.

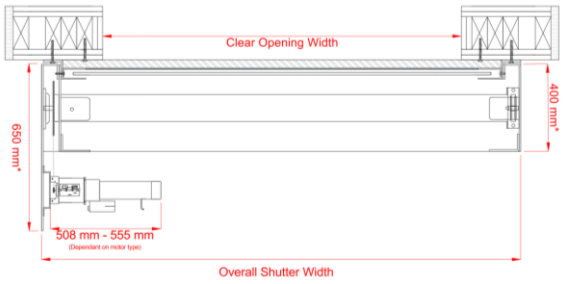
Refer to the product drawings during the installation process, this will help you determine the orientation of the brake and the type required for this application. It should be noted that larger applications require foot-mounted safety brakes, these sit onto a 'shelf' which is attached to the endplate.

Depending on the motor type, tubular or inline chain-driven motors, it may be possibe to also install the motor at the other end of the barrel. However, prior to doing so, ensure that the axle is securely inserted into the safety brake and that the safety brake is securely fixed into the endplate using the fixings provided.

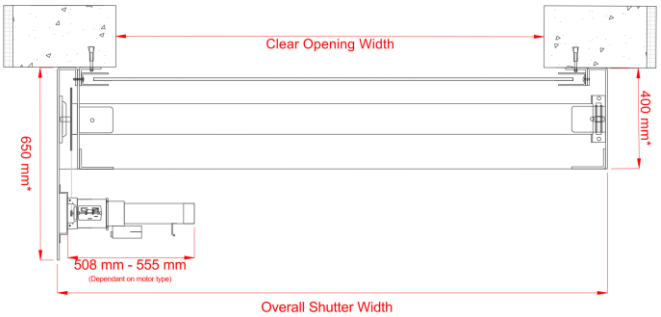
(INLINE ONLY) INSTALLATION OF THE EXTERNAL CHAIN-DRIVEN MOTOR

The manufacturer must adhere to the Extended Application Report, this document states the required specifications for fire-resistant roller shutters for the given clear opening dimensions, fire-rating and structural type. The manufacturer cannot deviate from this documentation, therefore in some cases the larger applications require components which cannot be used with the tested tubular motor. Therefore, the industrial type of chain-driven motor would be required.

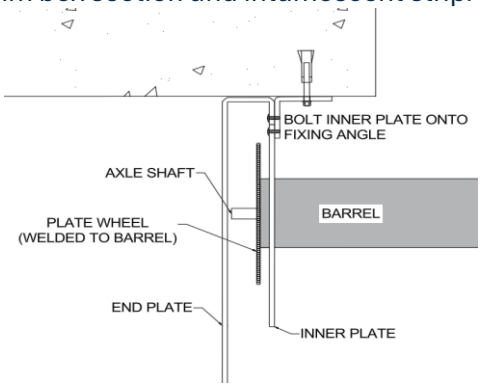
Flame Armour+



Flame Armour

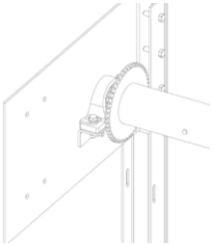


As shown above, this type of configuration has the motor located externally to the casing/hood. The only difference between the two product types is the Flame Armour+ includes the addition of the 75 mm box section and intumescent strip.



The external chain driven motor includes an additional inner endplate which is also secured to the fixing angle. The inner plate has been designed to allow the barrel to pass through into the endplate as shown in the diagram. The secondary endplate is designed to ensure that the fire-resistant roller shutters components are external to the canopy section. The barrel will be supplied with the inner plate attached and the plate wheel welded to the end of the barrel.

Once the inner plate has been secured as shown in the above diagram, the axle shaft will need to be installed into the provided bearing. Using a spirt level, ensure that both the bearing and endplate are level. Then mount the bearing to the endplate using the provided fixings and ‘shelf’. Once installed ensure that the axle patrudes into the bearing by moving the barrel through the inner plate to provide the require clearance.

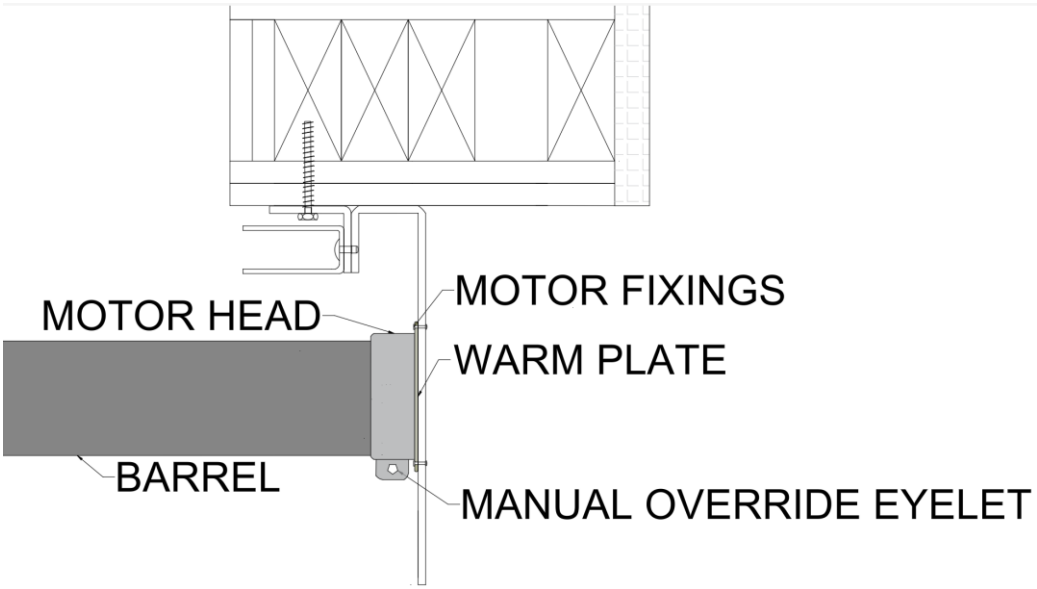


The motor side endplate has been extended to accommodate the installation of a top hat (motor mounting bracket). This will allow the installer to connect the motor to the endplate. This design allows for the motor sprocket to drive the drive-chain which is connected around the plate wheel.

Once the barrel has been secured at both ends of the door and both the safety brake and bearing are fixed into position, it is possible to install the supplied external motor (typically a NBG 800 from Link Controls Ltd). The door manufacturer recommends that the installer follow the motor supplier/manufacturer installation instructions, this includes using the correct wiring diagram for the fire control panel provided.

(TUBULAR MOTOR ONLY) INSTALLATION OF THE MOTOR

Refer to the product drawing which states the handing of the motor. The tubular motor is mounted onto a warm plate which is bolted directly onto the endplate using the provided M6 x 16 mm bolts.



Ensure that the manual override is connected through the eyelet. In order to comply with the currently Building Regulations (Approved Document B), the roller shutter must include a means of operating the door manual without the use of ladders. Therefore, the manufacturer recommends that the manual override is installed, once the fire-resistant roller shutter has been completely installed and is operational, connect the winding handle to the eyelet and test to ensure it is operation via the manual override.

CABLE ROUTING TO CONTROL PANEL

Ensure all power supplies to the fire shutter control system are isolated before commencing work. Verify that the supplied control panel corresponds to the specific shutter system being connected.

Regarding the cable routing, ensure the motor cable is vertically lowered as shown below. Do not drill the endplate or fixing angle. The vertical cable should then be connected to the control panel.

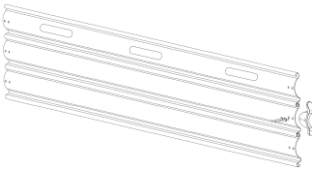
The manufacturer recommends that the cable is routed neatly as shown, preferably inserted into fire rated conduit. Ensure sufficient slack is present within the control panel to prevent strain on the terminals.

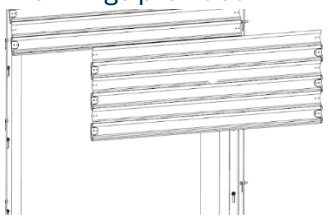
Once connected, verify the cable is secured and installed as per the control panels instructions.

EXAMPLE OF CABLE ROUTING ON A FLAME ARMOUR+ FIRE RESISTANT ROLLER SHUTTER

INSTALL THE CURTAIN (LATH)

Once the barrel has been mounted into position and is secured, either by the axle into the bearing for the inline motor application or directly onto the endplate for the tubular motor application, the curtain can now start to be installed around the barrel. The manufacturer labels the top and bottom sections of curtain (lath) in sperate bundles, locate the bundle which is marked as 'TOP'. This section of lath will include punched slots which align to the barrel studs, install this section onto the barrel using the fixings provided.





Depending on the height of the fire-resistant roller shutter, this will reflect on the number of bundles of lath which are supplied with the doorset. Carefully bend the cast endlock so that it is possible to slide the next bundle of lath onto top section of curtain which is connected to the barrel. Once the curtain is slid into place, carefully bend the cast endlock back into its original position. Install all of the bundles of lath.

WIRE THE CONTROL PANEL TO THE MOTOR

In order for the fire-resistant roller shutter to operate and be compliant with Building Regulations, the manufacturer recommends that the product is installed with an audio-visual control panel. These components are supplied with the doorset, and the wiring diagrams are stored on the manufacturers website. If an installer requires technical support when wiring the control panel, please contact the supplier directly.

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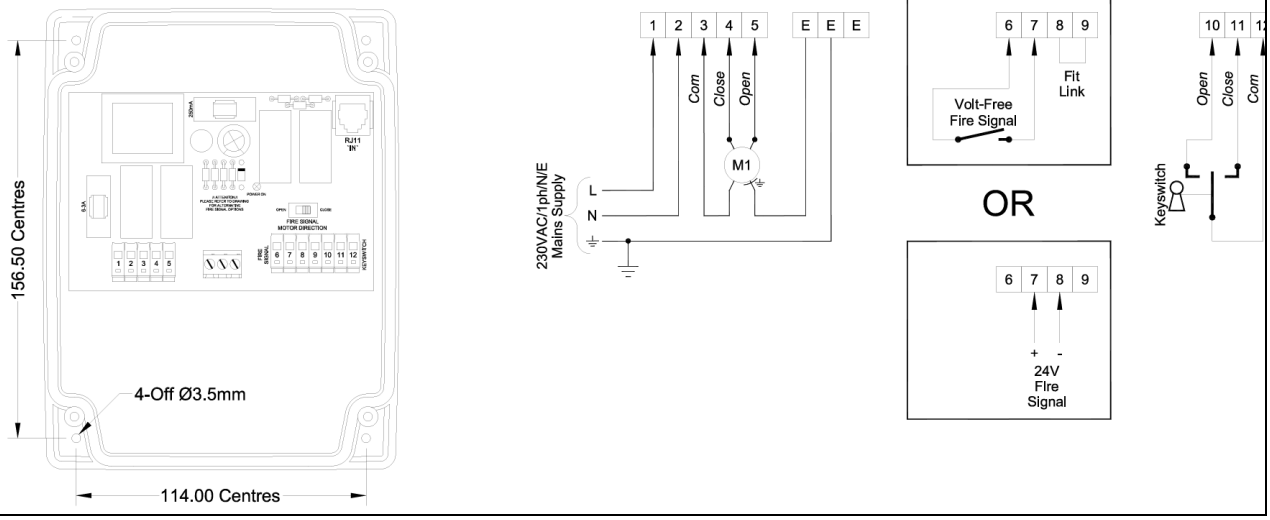
STEEL DOORS | SECURITY GRILLES

Use the manufactures drawing to identify which control panel has been supplied with the doorset.

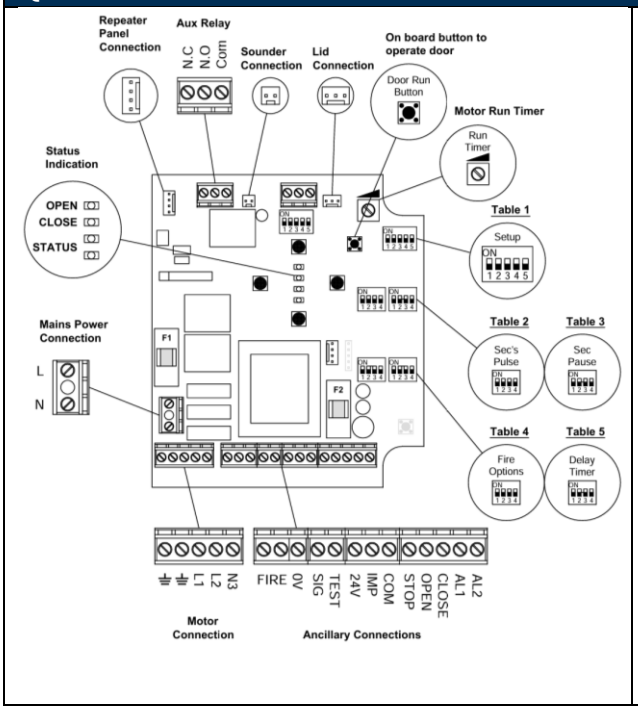
SCAN THE QR CODE USING YOUR MOBILE PHONE – THIS WILL DIRECT YOU TO THE CORRECT WIRING DIAGRAM FOR THE PANEL BELOW

FDI-UPS	FCP01	FCP03	NECO DC95G
			
SCAN ME	SCAN ME	SCAN ME	SCAN ME

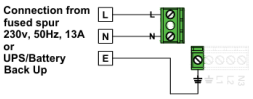
QUICK REFERENCE GUIDE FOR **FDI-UPS**



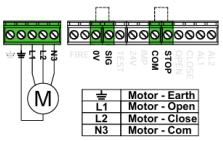
QUICK REFERENCE GUIDE FOR **FCP01**



4.1) Power Supply Connection



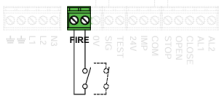
4.2) Motor Connection



⏚	Motor - Earth
L1	Motor - Open
L2	Motor - Close
N3	Motor - Com

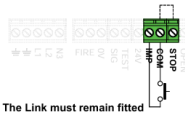
When operating check the motor direction matches the corresponding LED indication on the panel. Reverse the connections L1 + L2 to correct motor direction if necessary

4.3) Fire Signal Connection



To activate the panel connect a N.O or N.C fire signal (see Table 4, DIP SW 2 for options)

4.5) Single Impulse Button Connection



The Link must remain fitted between STOP and COM

Logic Operation
OPEN-STOP-CLOSE
-STOP

4.6) Stop Button or Safety Brake Connection

4.7) Key-switch / Push Button Connection

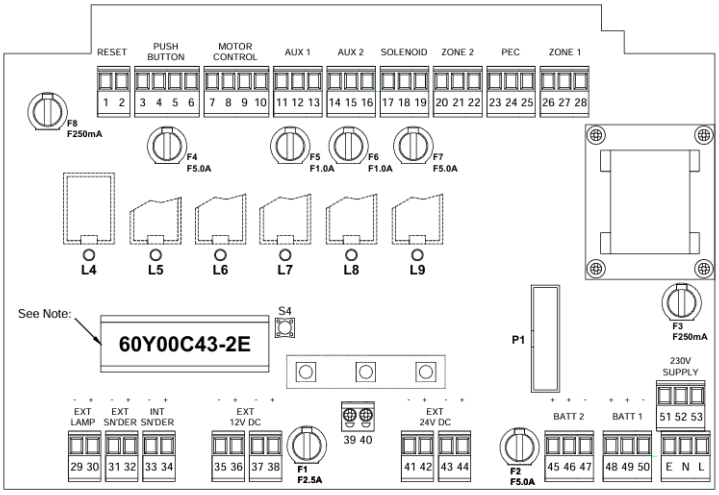
Key-switch Connection

Push Button Connection

2 control options are available

- Continuous run OPEN / CLOSE
  This requires both safety links to be fitted, momentary activation of the key switch will cause the door to open or close
- Continuous run - OPEN / Hold to Run (Dead-man) - CLOSE
  Remove Safety Link from (0v and SIG)

QUICK REFERENCE GUIDE FOR **FCP03**



Note:
Processor No 60Y00C43-2E - Fitted as standard this includes Panic Button facility but no auto re-open feature
Processor No 60Y00C51-2E - No Panic Button facility but includes auto re-open feature

Terminal		*Connection*
1	SC	MANUAL RESET BUTTON
2	INPUT	
3	SC	PUSH BUTTON INPUT
4	OPEN	
5	STOP	
6	CLOSE	
7	COM	MOTOR CONTROL
8	STOP	
9	CLOSE	
10	OPEN	
11	N/C	AUX 1 RELAY
12	COM	
13	N/O	
14	N/C	AUX 2 RELAY
15	COM	
16	N/O	
17	0V	SOLENOID RELAY
18	COM	
19	N/O	
20	SC	ZONE 2 FIRE ALARM SIGNAL
21	INPUT	
22	0V	
23	SC	PHOTOCELL
24	INPUT	
25	0V	

Terminal		*Connection*	
26	SC	ZONE 1 FIRE ALARM SIGNAL	
27	INPUT		
28	0V		
29	-	LAMP (REPEATER PANEL)	
30	+		
31	-	SOUNDER (REPEATER PANEL)	
32	+		
33	-	INTERNAL SOUNDER	
34	+		
35	-	EXTERNAL / AUX 12V DC	
36	+		
37	-	EXTERNAL / AUX 12V DC	
38	+		
39	-	INTERNAL LAMP	
40	+		
41	-	EXTERNAL / AUX 24V DC	
42	+		
43	-	EXTERNAL / AUX 24V DC	
44	+		
45	+	BATT 2	
46	+	BATT 2 (CHRG CIRCUIT)	>13.5V
47	-	BATT 2 (CHRG CIRCUIT)	

Terminal		*Connection*	
48	+	BATT 1	
49	+	BATT 1 (CHRG CIRCUIT)	>13.5V
50	-	BATT 1 (CHRG CIRCUIT)	
51	E	230V AC MAINS SUPPLY - OUT	
52	N		
53	L		
E	E	230V AC MAINS SUPPLY - IN	
N	N		
L	L		
F1		FUSE - F2.5A (EXT 12V)	
F2		FUSE - F5.0A (EXT 24V)	
F3		FUSE - F250mA (MAINS SUPPLY)	
F4		FUSE - F1.0A (MOTOR CONTROL)	
F5		FUSE - F5.0A (AUX 1)	
F6		FUSE - F1.0A (AUX 2)	
F7		FUSE - F5.0A (SOLENOID)	
F8		FUSE - F250mA (ZONES/FIRE SIGNAL)	
LED - L4		ON - STOP CIRCUIT OK	
LED - L5	(L5 only)	ON - DOOR CLOSING	
LED - L6	(L5 + L6)	ON - DOOR OPENING	
LED - L7		ON - AUX 1 RELAY ACTIVATED	
LED - L8		ON - AUX 2 RELAY ACTIVATED	
LED - L9		ON - SOLENOID RELAY ACTIVATED	
CON - P1		CABLE CONNECTION TO LID	
S4		PANEL RESET BUTTON	

WIRE THE BATTERY BACKUP TO THE CONTROL PANEL

This section may not be applicable for inline chain-driven motor fire-resistant roller shutters. It is possible to connect a battery backup to this type of motor application however this must be discussed with the manufacturer prior to installation.

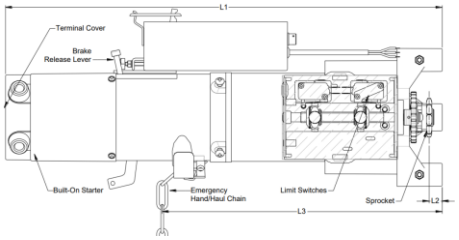
A tubular motor fire-resistant roller shutter requires a battery backup system to operation in the event of a power failure. The manufacturer strongly recommends a sleep-mode battery backup system be purchased with the doorset, this requires an additional cable which is connected into the control panel and monitors the units power draw.

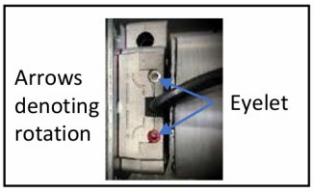
In order to install the battery backup into the control panel, in some cases, the installer will need to cut one of the supplied kettle cables and wire this directly into the control panels power terminals. The battery backup must remain plugged into the mains at all times, or alternatively you can wire the component into the fused spur.

The type of battery backup and power rating required depends on the motor type. The manufacturer recommends that the battery backup is fully charged before operating the door, refer to the manual supplied with the unit and the control panel wiring diagrams for further information.

SET THE LIMITS

For inline chain-driven industrial motor applications, the limit switches are located externally on the motor and can be adjusted accordingly. The manufacturer recommends that you consult the specific documentation provided for the model of motor supplied, within this document you will find the options for setting the operating ranges, minimum and maximum speeds and limits.



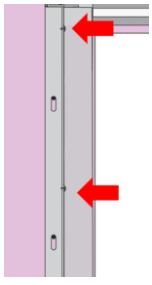


For tubular motor applications, the limit must be set using the provided wand. To set the digit limits, use the wand and rotate either hexagonal eyelet to positive or negative differentiational. Then operate the door in direction required, the shutter should move to the new set limit.
Depending on the handing of the roller shutter, this will affect the orientation of the eyelets. The arrows indicate the rotation of the motor whilst in the barrel, turn this accordingly to set the limits.

Once you have identified the correct top and bottom limits, it is possible to operate the door using the controls or operators (e.g. key switch).

INSTALL THE GUIDE CHANNEL

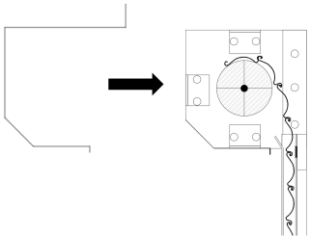
Operate the controls so that the curtain (lath) is sent to the top limit. It is recommended to stop the top limit so that the bottom rail is level with the endplate. For the **Flame Armour+** product range, it is recommended that the bottom rail stops before the 75 mm box section, which is installed above the lintel and in line with the top of the guide channel. Install the guides vertically and fix them to the angle using the pre-drilled holes. Using the M8 x 16 mm guide bolts, secure the guide directly onto the angle.



Once the guide channels have been installed, the standard **Flame Armour™** fire-resistant roller shutter can be operated. For this product range, ensure the bottom rail is situated onto the finished floor level (FFL) when in the closed position.

The **Flame Armour+** fire-resistant roller shutter has been tested in a servery hatch application and can be operated so that the bottom rail can close onto the countertop.

INSTALL THE CANOPY / HOOD



NOTE – The shape of the canopy may vary depending on the application.

Place the canopy over the endplates and align the punched slots to the fire cleats. Using the M8 bolts provided, including two steel washers and a nylon washer, secure the canopy in place. Use a spirt level to ensure that the canopy is level and has been installed correctly.

REMEMBER TO ATTACH THE CERTIFICATION LABELS TO THE DOOR FIXING ANGLES!

COMMISSIONING CHECKLIST

Once the installation of the fire-resistant roller shutter has been undertaken, the manufacturer recommends that the below checklist is to be completed in full by the competent person who commissioned the fire shutter. This includes demonstrating how to operate the product correctly, and in a safe manner, to the responsible person.

- ☐ Ensure all supporting documentation is given to the responsible person (e.g. handover documentation).
- ☐ Ensure the responsible person is fully trained in how to operate the door and are made aware of the risks involved with operating such a product.
- ☐ Ensure that a qualified Fire Engineer or Fire Officer has connected the fire alarm system to the control panel.
- ☐ Ensure that the workspace is left in a tidy manner.
- ☐ Complete the below checklist and provide it to the responsible person

COMPANY NAME (IF APPLICABLE):		
NAME OF RESPONSIBLE PERSON:		
MANUFACTURERS RSD NUMBER:		
INSTALLATION COMPANIES DETAILS:		
	Telephone:	*Email:*
INSTALLERS REFERENCE:		

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ROLLER SHUTTERS | INDUSTRIAL DOORS
STEEL DOORS | SECURITY GRILLES

COMMISSIONED BY (PRINT NAME):	

Commissioning checklist:	***Installers Initials***
The work area is clean and free of debris	
Use supplied fixings with nylon and steel washers	
All fixing holes have the correct fixings installed and are secure	
Used a spirt level during the installation and ensured the door is level prior to operating and handing over	
Ensure that the safety brake has been installed correctly	
Install the supplied battery backup, test after installation	
Ensure the correct limits are set	
Check all wiring and ensure the door operates correctly	
Check the manual override operates via the winding handle	
The canopy is secured in place	
The control panel is operation and that no faults are detected	
Demonstrate the product operating under fire conditions (e.g. show the product closing via simulating fire conditions – x1 cycle)	
(If applicable) The battery backup is charged and connected to the control panel	
The fire shutter operates as intended (demonstrate min. x3 cycles)	
(Standard Flame Armour) Ensure that the bottom rail is situated at Finished Floor Level	
(Flame Armour+ Only) Intumescent strip is present and installed on the box section which is located parallel to the top of guides	
(Flame Armour+ Only) Ensure the bottom rail is situated on a non-combustible countertop or sill	

ADDITIONAL COMMENTS:	
COMMISSIONING ENGINEERS SIGNATURE:	**DATE:**
RESPONSIBLE PERSONS SIGNATURE:	**DATE:**