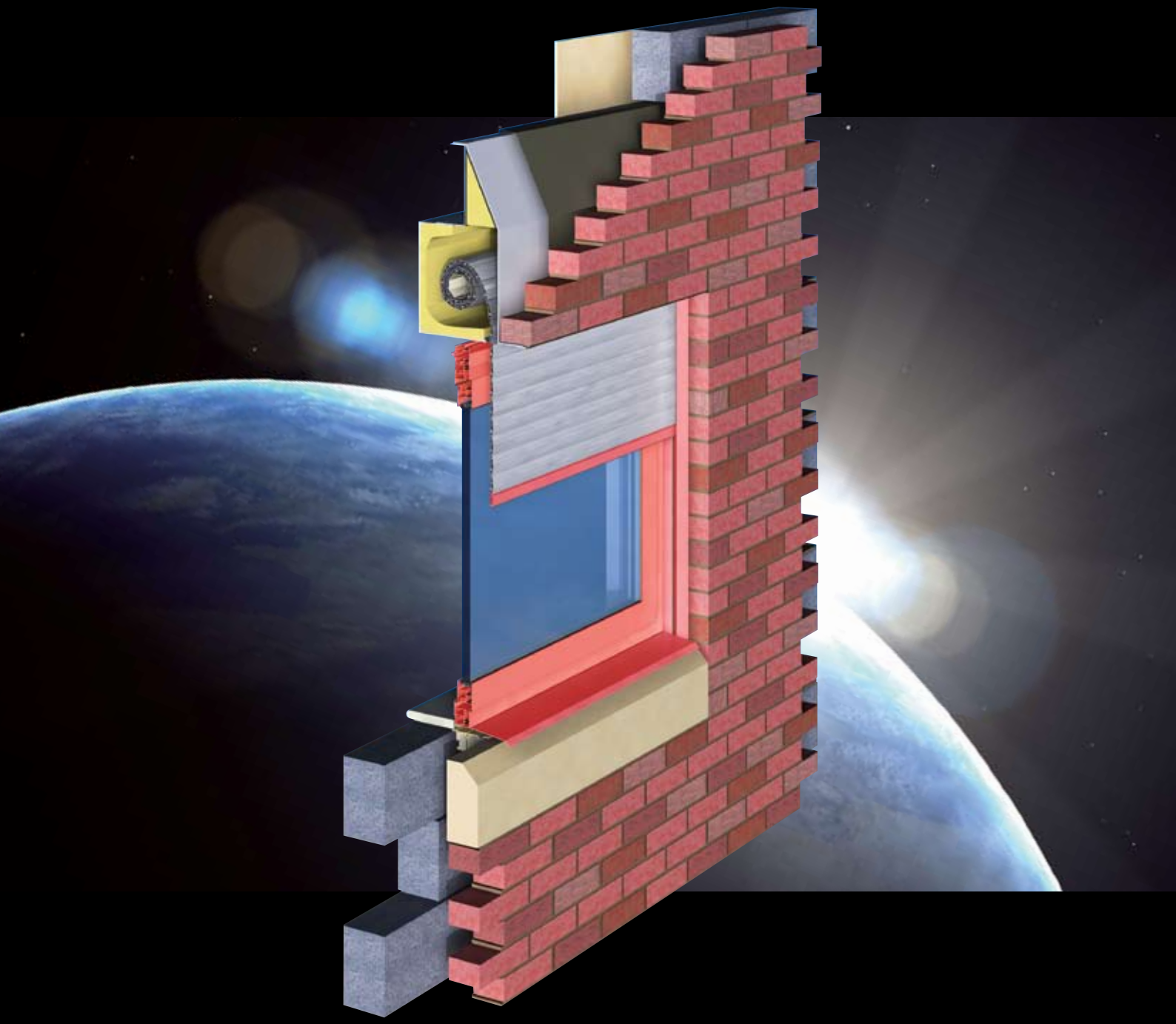
A New Dawn

SPECIALIST ROLLER SHUTTER LINTEL SYSTEM



Warm Protection
PRODUCTS LIMITED®

SPECIALIST ROLL SHUTTER SYSTEMS
by Warm Protection Products Limited

DESIGN | SECURITY | STYLE



The Specialist

Based in the North East of England, Warm Protection Products Ltd are widely respected manufacturers of new build and plant-on Roller Shutter Systems supplying a network of national approved agents in the roller shutter industry. Our main objective is to provide high quality, trouble free Roller Shutter Systems at competitive prices. With our dedication to excellence we pride ourselves on our Technical Advisory Service from initial design to final installation.

With our ongoing research and development programme, we are confident that all Warm Protection Roller Shutter Systems are the most advanced in design, strength, durability and style. National installations include schools, medical centres, factories, offices, golf clubs, private houses, local authority buildings, computer rooms, kiosks - literally anywhere security is required.

Warm Protection
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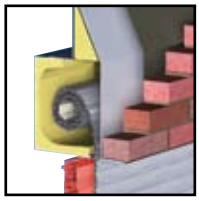
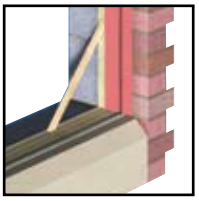




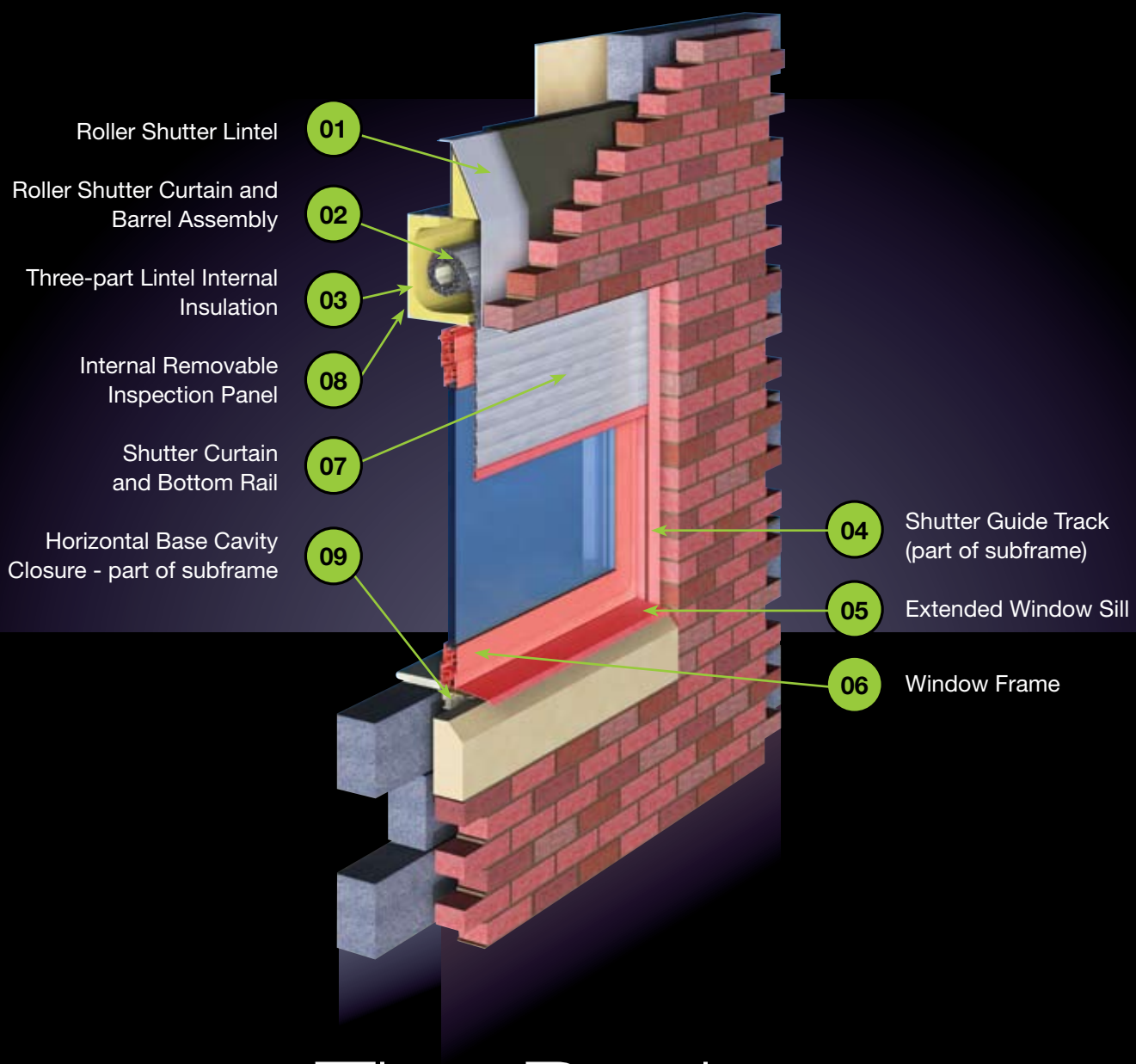
A New Dawn

With vandalism and burglary becoming a more common occurrence, it is now widely recognized that there is a need to incorporate security shutters into the building structure as opposed to an afterthought.

The Warm Protection Products Specialist Roller Shutter Lintel System has been designed to allow an attractive roller shutter to be constructed within the building fabric, using a special lintel and cavity closure, enabling the roller shutter to be totally concealed behind the building structure.

Manufactured to the highest possible standards our Roller Shutter Lintel Systems are designed to achieve a trouble free solution to new build projects. To ensure our products meet the highest standards all our profiles are wind pressure tested then security tested to European Standards FIFT and TÜV.

Warm Protection PRODUCTS LIMITED®



The Basics

The Warm Protection Products Specialist Roller Shutter Lintel System is a high security roller shutter that is concealed within a special purpose made lintel.

Roller shutter tracks are concealed within the cavity for ultimate security.

Roller shutter tracks are fitted onto purpose made cavity closure subframes which are built around during construction.

The combined subframe and roller shutter guide track allow for a thermal break in the cavity and acts as a vertical damp proof course.

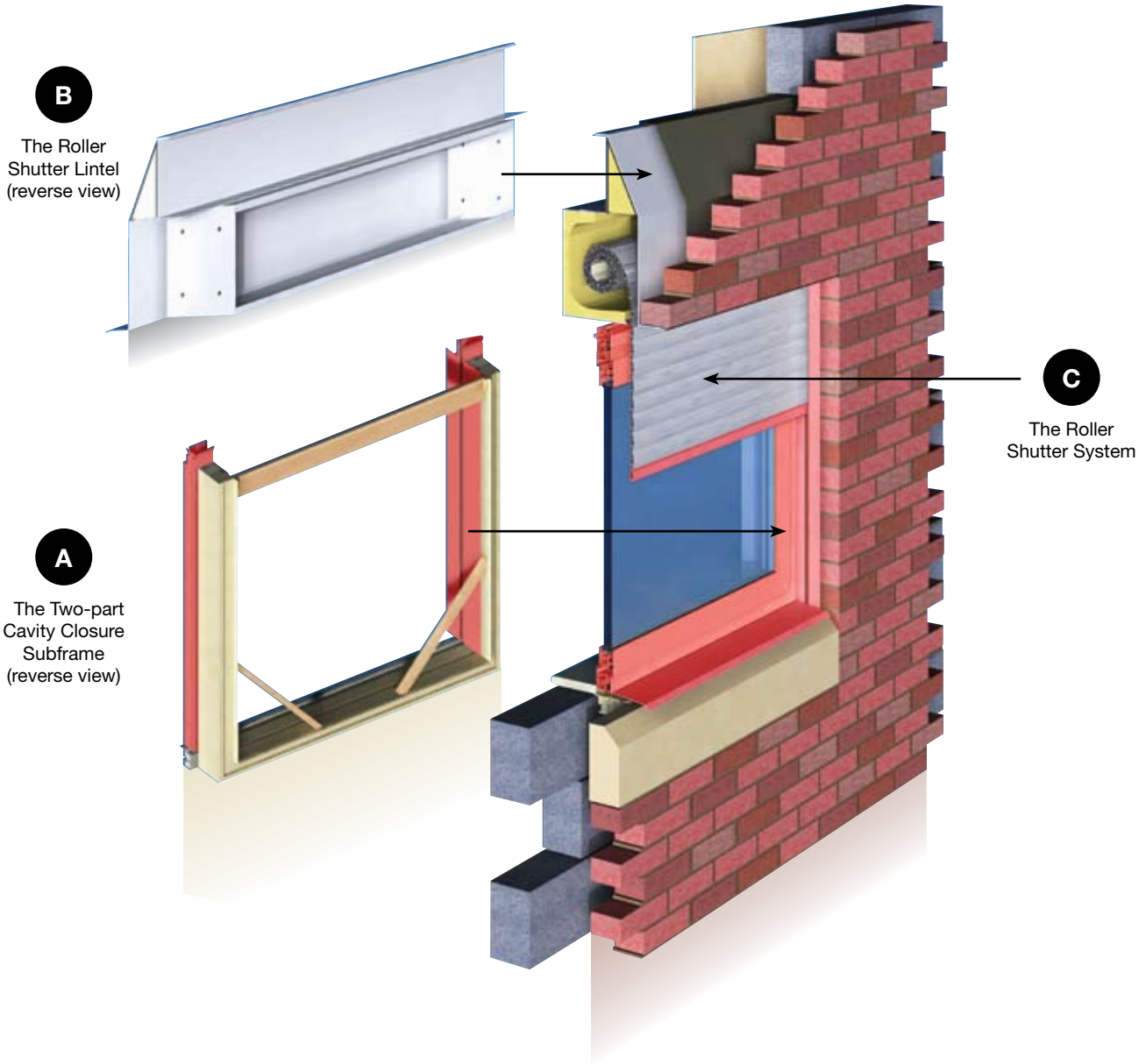
The subframe two-part section ties both the brick and blockwork and has a substantial face return for fixing window/door frames.

Lintels are fitted with a three-part internal insulation section, fitted after roller shutter installation, this ensures high performance internal insulation and acoustic properties.

The System

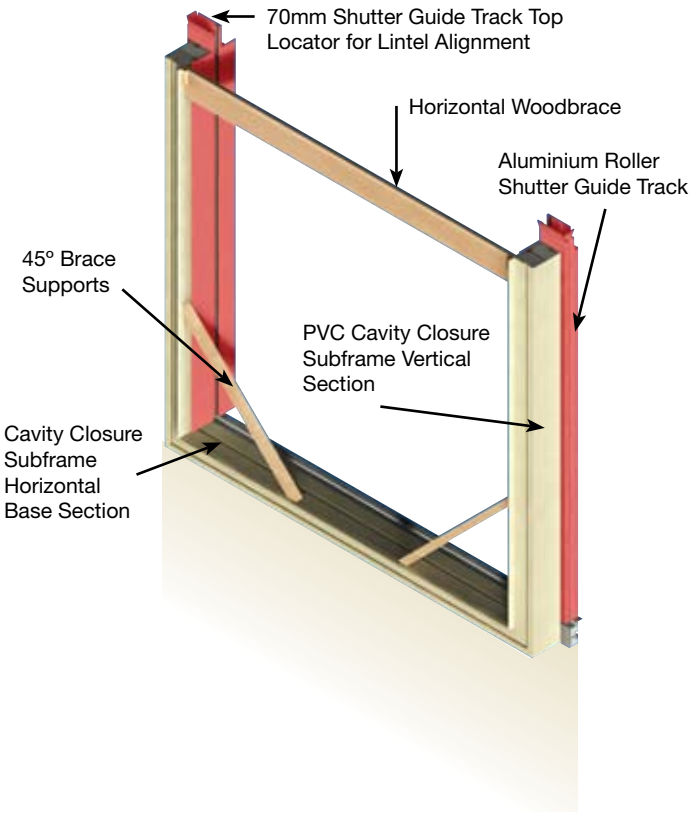
The Warm Protection New Build Roller Shutter Lintel System consists of three major components:

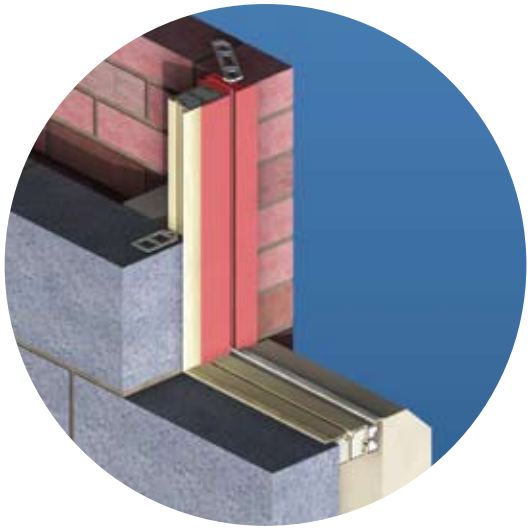
- **A** An insulated two-part cavity closure subframe incorporating roller shutter guide tracks.
- **B** Purpose made hot dipped galvanised steel lintel with roller shutter bracketry and insulation.
- **C** High security roller shutter system with electronic Somfy motors and controls.

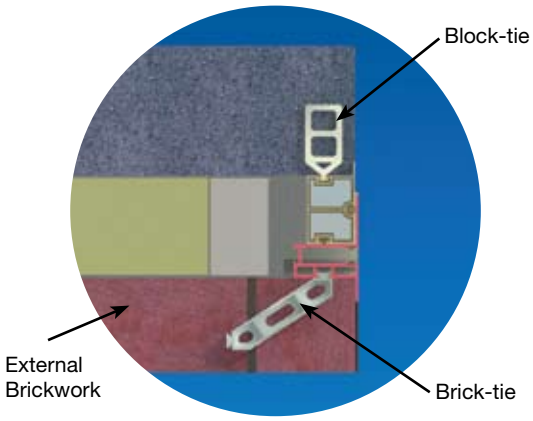


For technical details on these major components please turn to technical page 10 through to page 17

A The Two-part Cavity Closure Subframe







Subframes are manufactured to suit builders opening sizes. The complete combined unit comes assembled ready for installation by the builder.

The two-part subframe consists of an insulated PVC cavity closure and aluminium roller shutter guide track. The complete subframe allows for a thermal break in the cavity and acts as a vertical damp proof course.

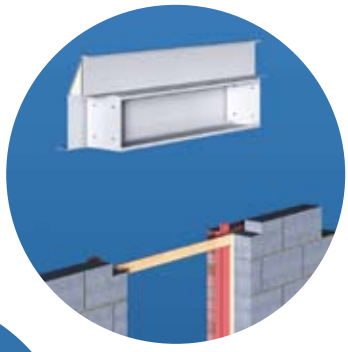
The brickwork/blockwork is built up around the subframe to ensure an exact fit and finish during construction. The top of the roller shutter guide track extends above the subframe to act as a location point for lintel alignment. Subframes are held square by wooden braces which are removed after final completion of brickwork/blockwork.

Internal blockwork is stepped at opening height to allow the roller shutter lintel endplates to project inwards. Roller shutter guide tracks locate onto the horizontal base of the subframe to prevent water ingress into the cavity.

Subframes are delivered direct to site complete with brickwork and blockwork wall-ties. All subframes are individually marked for site location.

For technical details on the cavity closure subframe and ordering details please turn to technical page 10 & 11

B The Roller Shutter Lintel



Lintel is lowered onto stepped blockwork locating over subframe extended guide section

Close up showing guide section located into Lintel.

Lintels are centred and brickwork/blockwork continues.

The Warm Protection Roller Shutter Lintel has been designed to ensure a trouble free installation.

The purpose made lintels are manufactured to builders requirements and sizes.

When the lintels are manufactured they are delivered direct to site. All lintels are individually marked for site location.

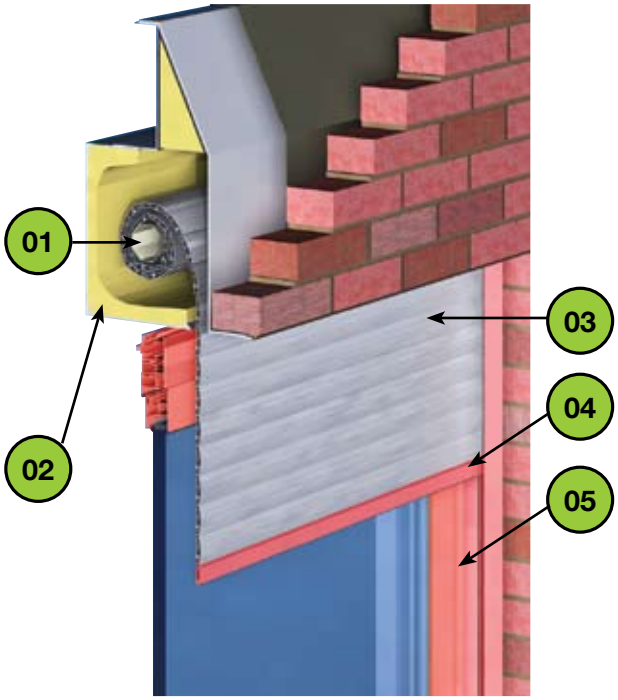
The lintel is lowered onto the stepped blockwork locating over the roller shutter guide track. The lintel is then positioned to give an equal overhang for load bearing at each side.

All lintels are manufactured from mild steel then hot dipped galvanised to a minimum zinc coating of 65 microns.

Lintels are constructed with bottom base plates to allow a substantial fixing point for window or door head fixings.

For technical details on the lintel, including how to calculate and ordering details please turn to technical page 12 & 13

c The Roller Shutter System



01 Roller Shutter barrel assembly incorporating roller shutter electric Somfy motor.

02 Three-part internal insulation which is installed after shutter installation.

03 High security double skinned extruded aluminium profile for security, powder coated to RAL/BS colours.

04 Double skinned security bottom rail complete with rubber base seal to ensure no metal to metal contact on window sills.

05 Deep, thick cut aluminium extruded guide rail track complete with neoprene seals to ensure smooth and quiet operation.

WP36 Double Skinned Extruded Profile

Rubber Bottom Rail Gasket

After lintel installation the roller shutter barrel assembly and bracketry is installed between the lintel endplates then the roller shutter curtain profiles are installed.

A wide range of profiles are available including, Double Skinned Extruded Profiles, Resin filled Aluminium Profiles or Punched/Perforated Aluminium Profiles. Extruded Profiles are available to suit any standard RAL/BS colours. Resin Profiles are available in standard factory finish colours.

The Warm Protection range has a system to suit all applications.

Following roller shutter curtain installation the electronic motor limits and security locking systems are set and tested.

An internal three-part insulation is then fitted within the lintel and sealed. A removable MDF facia and soffit board can then be fitted to the back of the lintel to complete the installation.
Care must be taken not to allow screws to project beyond 20mm when screwing through the lintel base plate or facia as this would obstruct or damage the roller shutter curtain profiles.

Warm Protection installs Somfy tubular motors who are the world leaders in roller shutter automation. Various switching arrangements can be made but must comply with health and safety directives. For more information contact our Technical Dept.

For technical details on the shutter maximum and minimum sizes please turn to technical page 14 & 15

The Process

Stage 1

The builder or construction company must calculate their subframe and lintel sizes. They then place their order with Warm Protection allowing 4-6 weeks for delivery.

Stage 2

Subframes and lintels are delivered direct to site from Warm Protection Products Ltd.

Stage 3

The builder or construction company build around the subframes using supplied brick and blockwork wall-ties. Brick and blockwork are built up to opening heights where internal blockwork is then stepped.

Stage 4

Lintels are then lowered onto the top of the subframe guide track locators. Lintels are then centred to allow equal overhang of the shutter lintel endplates at each side of the opening. Lintels are then levelled for the next stage.

Stage 5

Construction of brickwork and blockwork is continued around and above the lintel until complete.

Stage 6

Once installation of the lintel and subframe is complete, the support timbers and braces from the subframe can be removed. Windows/doors can be installed between the subframes ensuring no projection of handles, vent or sashes fall in the line of the shutter guide track. Projections of door/windows should be set back at least 20mm from the shutter line.

Stage 7

Installation of roller shutter barrel assembly and bracketry followed by installation of roller shutter curtain assembly and internal lintel roller shutter insulation. Mechanical limits and locking systems for shutters are then tested and commissioned.

Stage 8

Plastering around lintel installation. (Not facia.)

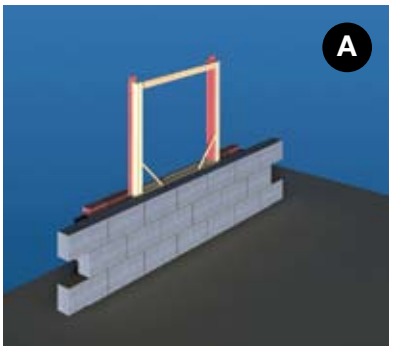
Stage 9

Final electrical fix, spur and switch installation and connection by others.
Installation of MDF Facia and Soffit Board by Contractor.

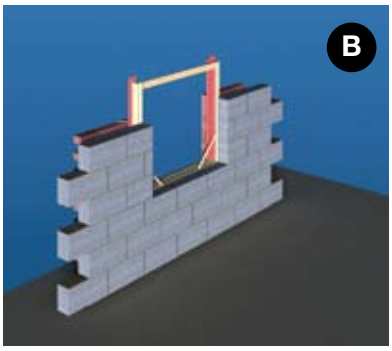
Stage 10

Final check on shutters before handover.

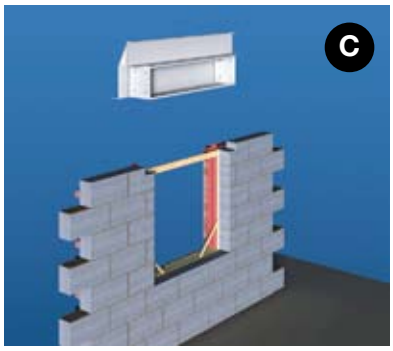
The Build



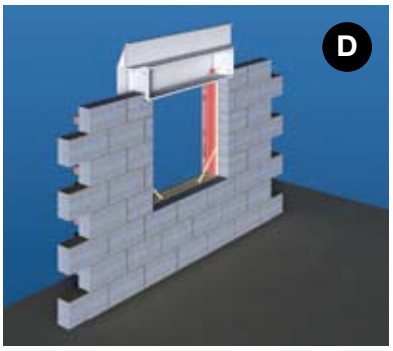
Subframe positioned.



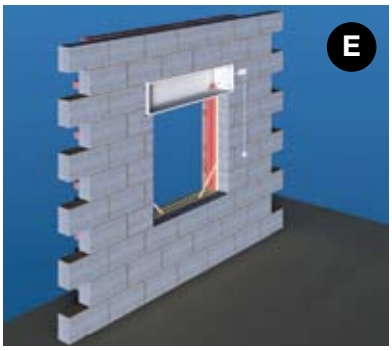
Brick and blockwork around subframe.



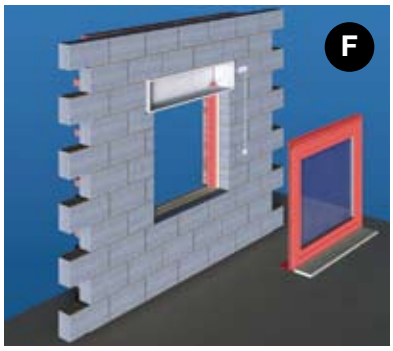
Blockwork stepped at opening height for lintel location.



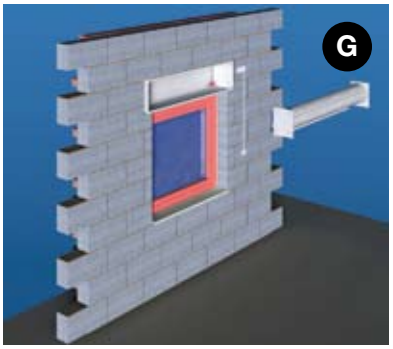
Lintel located over subframe guide locator and supported on stepped blockwork.



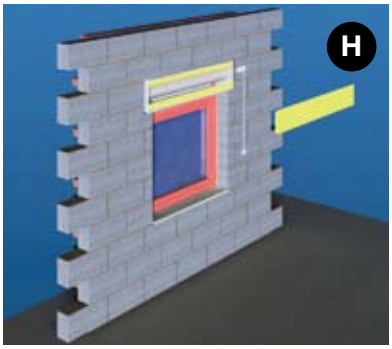
Brick and blockwork complete around lintel, subframe and electrical first fix.



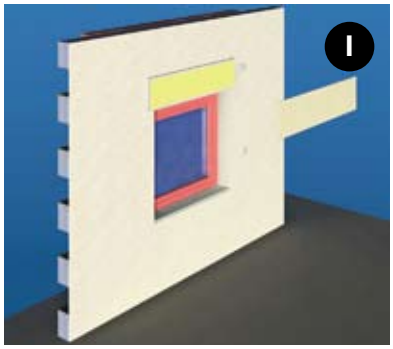
Removal of timber supports and installation of window/door frame.



Installation of roller shutter bracketry and roller shutter.

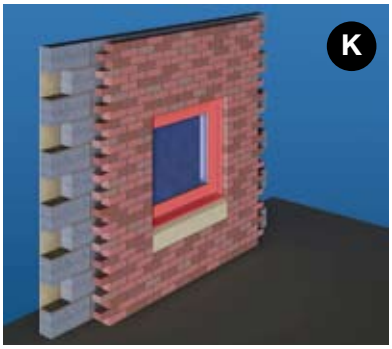


Installation of insulation.

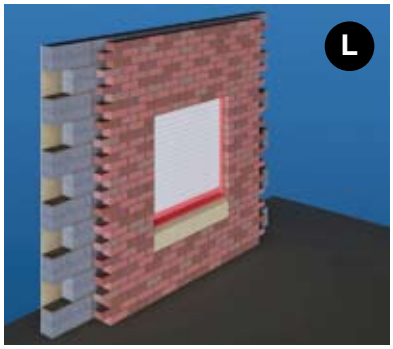


Internal plastering and soffit board installation plus removable access panel.

Check on mechanical settings.



External view of shutter fully open.



External view of shutter fully lowered.

Subframe Technical Details

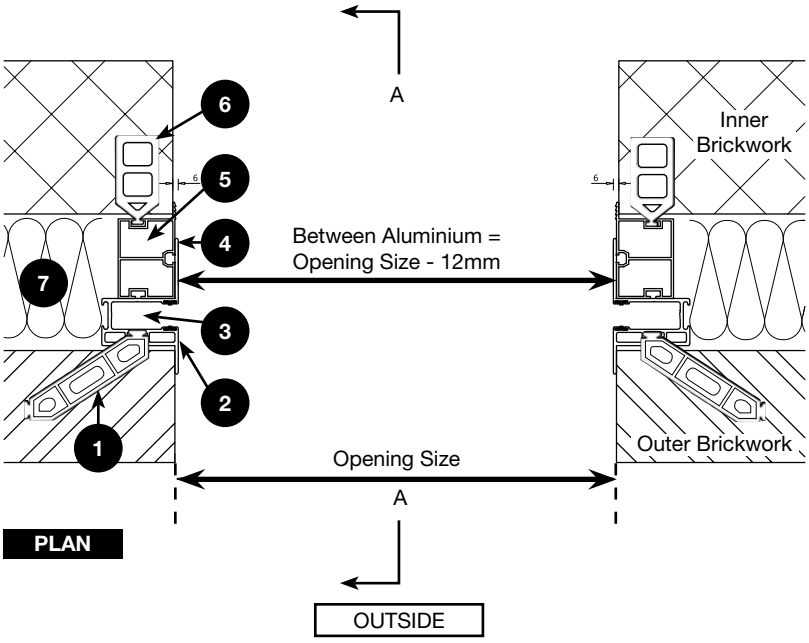
- Subframes are manufactured to suit builders structural opening sizes.
- Each subframe is marked with the site address, window/doorway reference and structural opening size.
- All subframes are manufactured to suit a 125mm cavity.
- All subframes are supplied with timber strut supports and brickwork/ blockwork wall-ties. Timber strut supports must remain in place until the mortar has hardened.

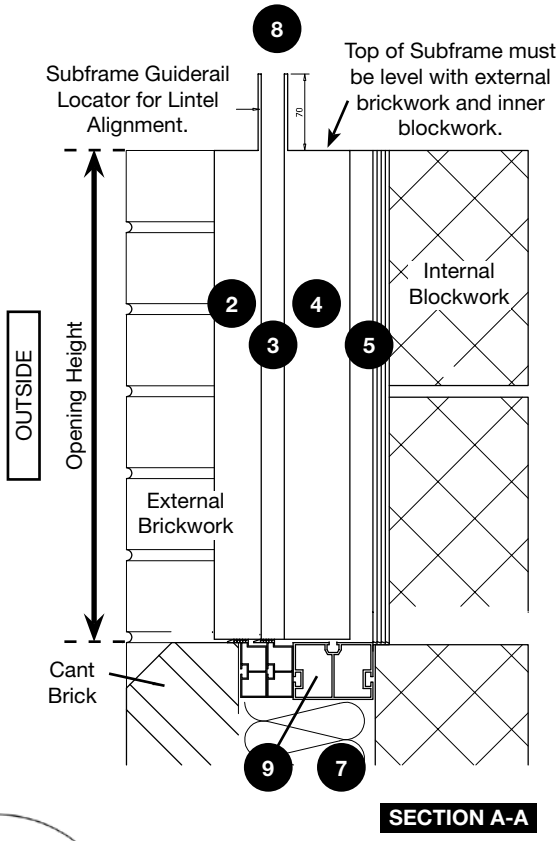
Subframe Installation

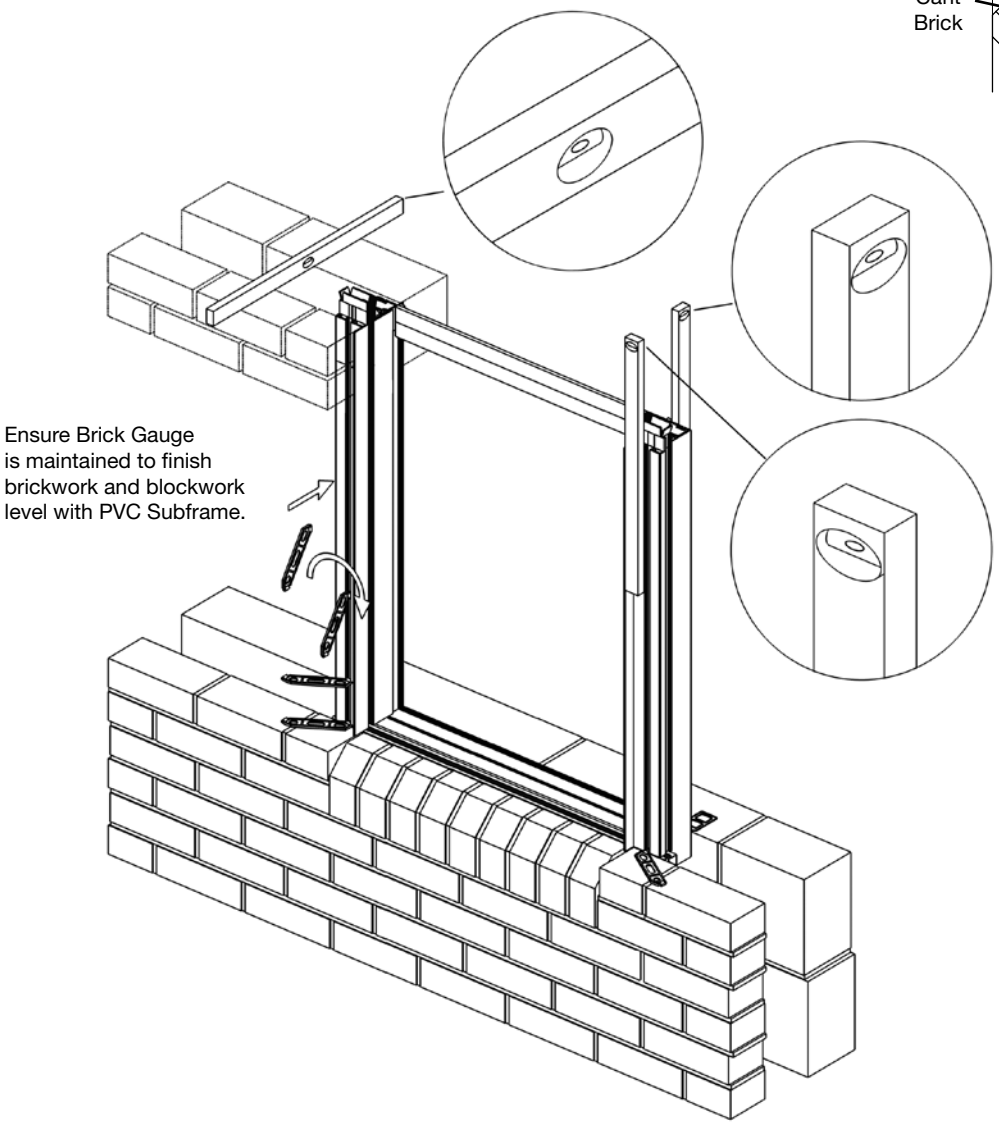
Using a 125mm cavity, finish the brickwork/blockwork up to window cill level ensuring the external cill and outer/inner blockwork are level, then install the subframe into the cavity as shown.
Ensure the subframe is installed the correct way around with the aluminium shutter guide track facing the external elevation of the building.
Ensure the subframe is positioned true and vertical and support with a temporary prop if required.
Build the brick/blockwork in the normal way making sure not to distort the jambs of the subframe.
Subframes are manufactured to suit the brickwork gauge of the project. Ensure that the brickwork/ blockwork gauge is maintained throughout the height of the subframe, to ensure a flush finish with the top of the PVC subframe, to allow a correct level and line for the lintel alignment.
Supplied brick-ties should be inserted into the subframe section and twisted 90º into position.
White brick-ties are for the external brickwork and black ties are for the internal blockwork. Ties should be inserted at 225mm centres (3 brick courses) alternately tying into both inner and outer courses. A minimum of 3 ties per jamb must be used.
Finish the brickwork and blockwork level with the PVC subframe height. (Not the aluminium guide rail locator height.) Leave all timber strut supports in place until mortar is set and the lintel has been installed.

- **CARE MUST BE TAKEN TO ENSURE THE SUBFRAME IS SET UP AND CHECKED FOR LEVEL DURING CONSTRUCTION.**
- **BRICK GAUGE MUST BE MAINTAINED THROUGHOUT BUILD TO ENSURE SUBFRAME OPENING HEIGHT IS LEVEL WITH EXTERNAL BRICKWORK/BLOCKWORK.**
- **SUBFRAMES MUST BE CAREFULLY OFF-LOADED AND STORED IN A SAFE AND SECURE ENVIRONMENT, TO ENSURE DAMAGE DOES NOT OCCUR BEFORE INSTALLATION.**

Typical Detail showing surrounding Brickwork with Warm Protection Subframe



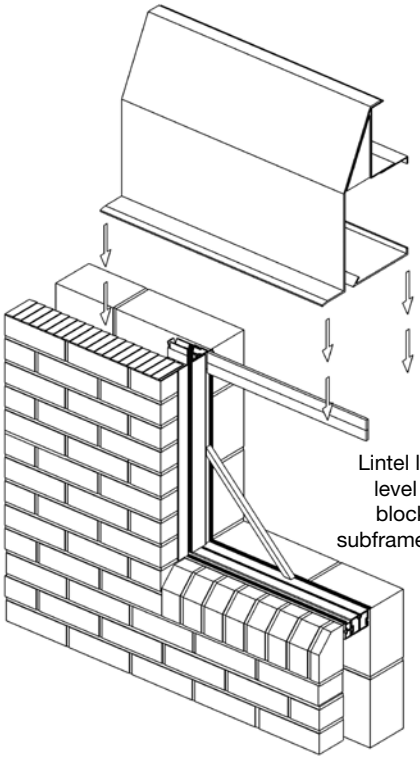




1. Brick-tie.
2. Return angle to close external brickwork.
3. Shutter guidetrack.
4. Return angle over cavity closure.
5. PVC insulated subframe.
6. Internal Block-tie.
7. 125mm cavity.
8. Guiderail Lintel Locator (extends above subframe for Lintel alignment).
9. Horizontal base of Subframe.

Lintel Technical Details

- Lintels are manufactured to suit the builders requirements.
- Lintel charts are calculated for maximum load in KN based on using a 100/125/100 cavity wall.
- All lintels are delivered direct to site and are marked with site address, weight, overall size and lintel reference number.
- Lintels must be offloaded using appropriate lifting equipment. Care must be taken to ensure the lintels are removed, stored and fitted in the correct manner.
- Lintels must be positioned level, and square ensuring an equal horizontal overhang at each side for load bearing.
- Lintels must be bedded onto a maximum 5mm mortar bed.



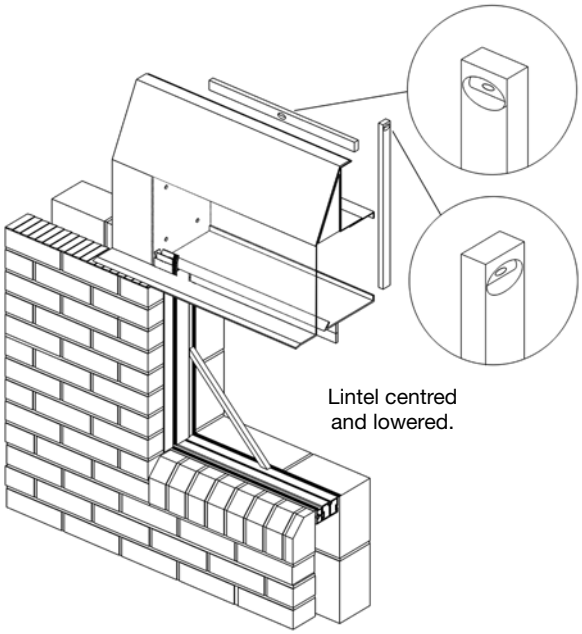
Material: All lintels are manufactured with the BSI Kite Mark. Lintels are fabricated from mild steel to BS EN 10025 Fe430 having a minimum yield stress of 300Nmm^2.

Corrosion Resistance: All lintels are hot dipped galvanised after manufacture with a minimum zinc coating thickness of 65 microns. All edges, welds etc are fully protected.

Insulation: Insulation within the lintel is CFC, HCFC and HFA free.

Lintel Installation

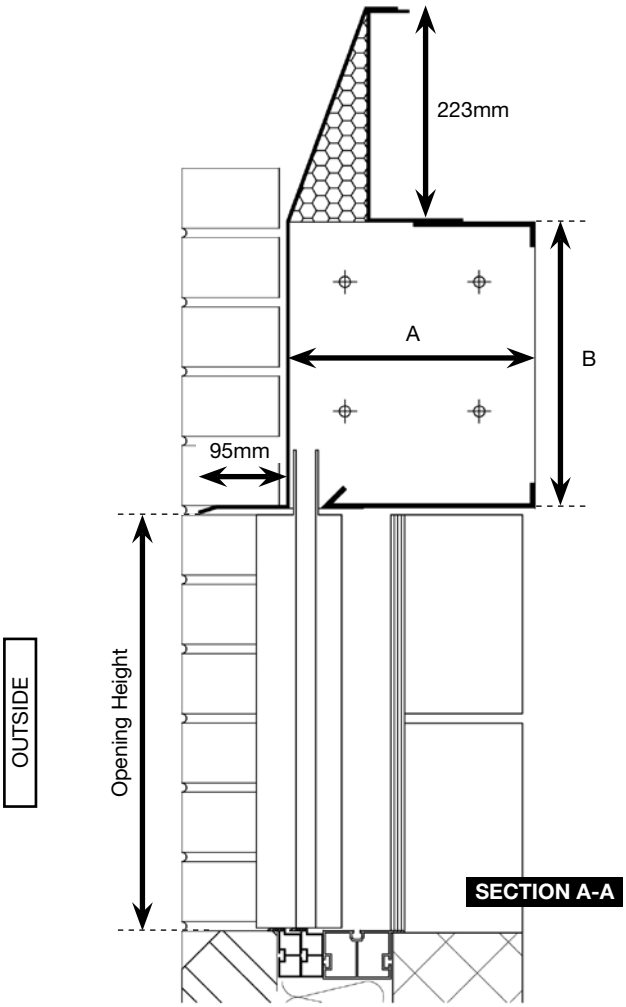
Prior to lintel installation ensure the subframe opening height is level with the external brickwork and inner blockwork. Lintels should then be lifted using the appropriate lifting straps located on the top of the lintel and lowered over the subframe guide locators. The lintel should then be set onto a maximum 5mm mortar bed situated on the external brickwork and inner blockwork. Lintels are levelled and equally distributed for load bearing at each side of the opening. Lintels are then levelled horizontally and vertically and set in place. Once the mortar has set the rest of the lintel can be built around until completion.



- **ENSURE LINTELS ARE LIFTED USING THE LIFTING STRAPS LOCATED ON THE LINTEL (LARGE LINTELS ONLY).**
- **ENSURE THE LINTEL IS EQUALLY DISTRIBUTED FOR EQUAL OVERHANG AT EACH SIDE FOR LOAD BEARING.**
- **ENSURE LINTELS ARE SET LEVEL HORIZONTALLY AND VERTICALLY.**
- **LINTELS SHOULD BE BEDDED ONTO A MAX 5mm MORTAR BED.**

Lintel Types, Sizes and Loadings

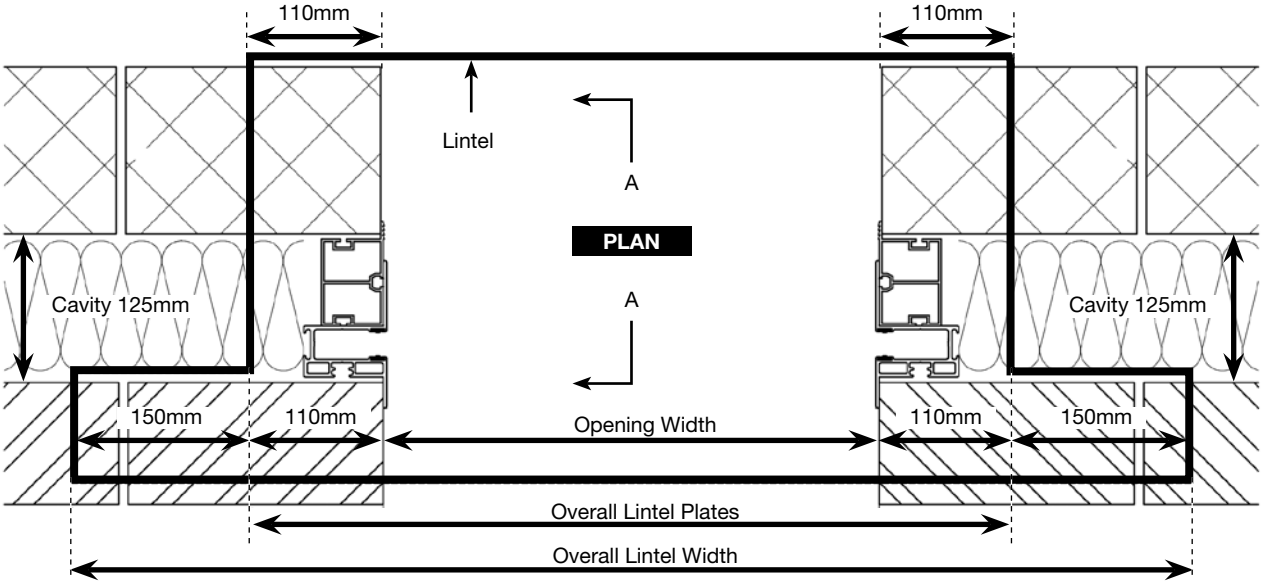
Lintel types vary depending on the opening height and the roller shutter profiles used. See charts below showing lintel types, sizes and loadings. To calculate which lintel to use see the shutter profile lintel chart on the technical page of the roller shutter system or contact our Technical Department.



Lintel Type 1 ref: PM21737				
Opening Width	Max Load kn	Weight per mtr	Size A	Size B
530-1570	70kn	35.3 kgm	265	310
1570-2480	60kn	35.3kgm	265	310
2480-3380	50kn	35.3 kgm	265	310
3380-4280	40kn	39.5 kgm	265	310
4280-5000	Designed to Specific Applications			

Lintel Type 2 ref: PM21738				
Opening Width	Max Load kn	Weight per mtr	Size A	Size B
530-1570	70kn	36.4	330	360
1570-2480	60kn	36.4	330	360
2480-3380	50kn	36.4	330	360
3380-4280	40kn	40.6	330	360
4280-5000	Designed to Specific Applications			

Lintel Type 3 ref: PM21739				
Opening Width	Max Load kn	Weight per mtr	Size A	Size B
530-1570	70kn	45.1	425	460
1570-2480	60kn	45.1	425	460
2480-3380	50kn	45.1	425	460
3380-4280	40kn	45.1	425	460
4280-5000	Not Available			



• Note all lintel widths = opening width + 520mm • Ensure corner windows have brick pier to locate lintel overhang.
• Lintel plates set in 110mm each side from opening width. • Maximum opening width 5000mm.

Roller Shutter Technical Details

Warm Protection offers two types of curtain profile.
The first profiles are designed for smaller openings up to 3000mm wide. They are tight coiling to obtain small lintel box sizes. All profiles are security and wind pressure tested to UK and European standards and are available with vision if required by alternating solid and see through sections to keep security paramount. Profiles available are WP36 Extruded, WP38 Resin, WP42 Punched and WP42 Perforated.

Large profiles are only available in solid format and are suitable for larger opening widths up to 5000mm. Larger profiles have larger coils and increase the lintel size. Larger profiles may be used on smaller openings to keep the appearance the same. All larger profiles are security tested and wind pressure tested to UK and European standards. Profiles available are WP53 Extruded and WP53 Resin filled.

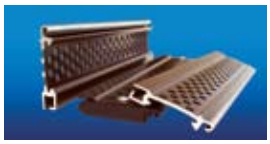
Curtain Specification

Small Profile

WP36mm. Constructed from extruded aluminium alloy with polyamide screw in endlock system. Factory finish standard colours are white or dark brown with RAL/BS colours available at a surcharge. Maximum usable size 8sqm. Weight per sqm 11kg. High security profile.

WP38 Resin. Constructed from roll formed aluminium alloy with chemical hard resin infill for acoustic, security and thermal benefits with screw in polyamide endlock system. Factory finish colours only available in white, brown, grey, silver and light beige. Maximum usable size 8sqm. Weight per sqm 8kg. Medium-high security profile.

WP42 Punched. Constructed from extruded aluminium alloy with alternate WP36 profiles for security and strength. Punched sections have 100 x 22mm slots with 20mm solid section between. For additional security punched sections can have a polycarbonate infill to cover the punched sections. Standard factory finish colours are white or dark brown with RAL/BS colours available at a surcharge. Maximum usable size 7sqm. Weight per sqm 8.5kg. Medium security profile.



WP42 Perforated. Constructed from extruded aluminium alloy with alternate WP36mm profiles for security and strength. Perforated sections have 330 x 5mm holes per lin mtr. Standard factory finish colours are white or dark brown with RAL/BS colours available at a surcharge. Maximum usable size 7sqm. Weight per sqm 9.5kg. Medium security profile.

Large Profile

WP53 Extruded. Constructed from double skinned extruded aluminium alloy with polyamide screw in endlock system. Factory finish colours are white or dark brown with RAL/BS colours available at a surcharge. Maximum usable size 15sqm. Weight per sqm 12kg. High security profile.

WP53 Resin. Constructed from roll formed aluminium alloy with chemical hard resin infill for acoustic, security and thermal benefits with polyamide screw in endlock system. Factory finish colours only available in white, brown, grey, silver and light beige. Maximum usable size 12sqm. Weight per sqm 10kg. Maximum opening width 4000mm. Medium-high security profile.

All roller shutter profiles are fitted with an extruded double skinned bottom rail with rubber seal to protect window cills.

Roller Shutter Profile Lintel Calculation Charts

Operation

Motor Operation

All lintel roller shutters are powered by Somfy tubular motors. To comply with health and safety directives, doorway/ fire exit shutters should be fitted with safety brakes and manual override facility for use in the event of a power failure. Additional battery backup units can be specified. Switching is normally by individual rocker or keyswitch on a hold to run basis. Group control/zoned control is available. To comply with strict health and safety directives roller shutters must be in view of the operator whilst in operation. For further information on our control systems please contact our Technical Department.

Locking Systems

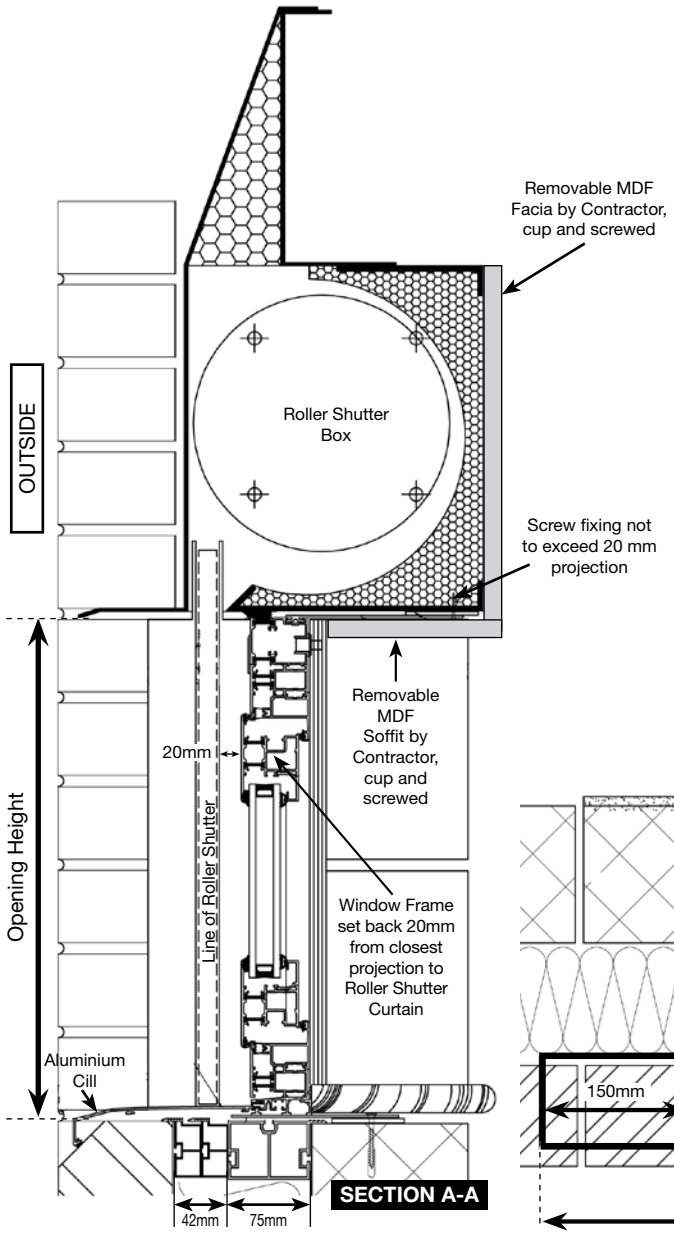
All shutters are fitted with an automatic locking system, which automatically locks the shutter when fully lowered. Locking systems are approved to European FIFT ratings.

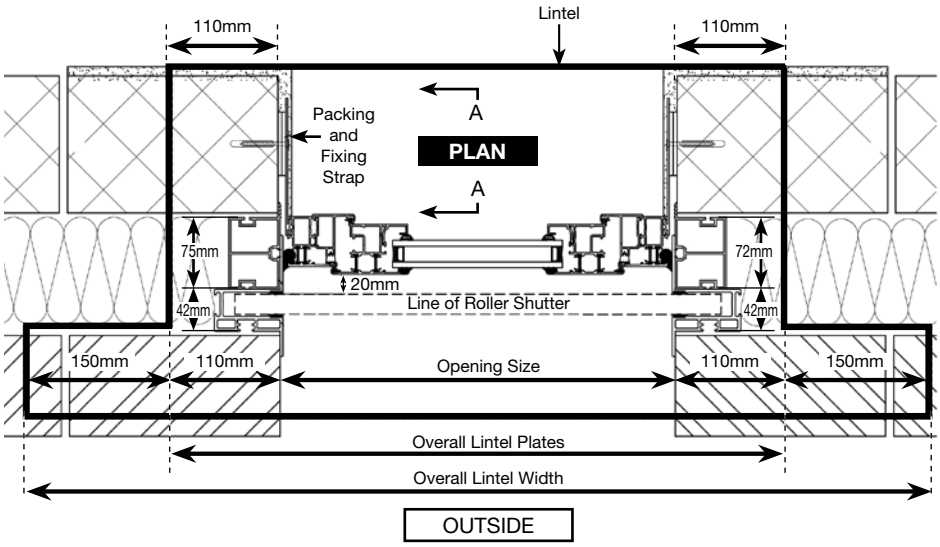
Small Profiles: WP36 Extruded, WP38 Resin, WP42 Punched/Perforated

Opening Height Up To	Opening Width up to a maximum 3000mm				
	1000	1500	2000	2500	3000
1000	Lintel 1	Lintel 1	Lintel 1	Lintel 1	Lintel 1
2000	Lintel 1	Lintel 1	Lintel 1	Lintel 1	Lintel 1
3000	Lintel 1	Lintel 1	Lintel 1	Lintel 1	X
4000	Lintel 2	Lintel 2	Lintel 2	X	X
5000	Lintel 3	Lintel 3	X	X	X

Large Profiles: WP53 Extruded, WP53 Resin

Opening Height Up To	Opening Width up to a maximum 5000mm				
	1000	2000	3000	4000	5000
1000	Lintel 1	Lintel 1	Lintel 1	Lintel 1	Lintel 1
2000	Lintel 1	Lintel 1	Lintel 1	Lintel 2	Lintel 2
3000	Lintel 2	Lintel 2	Lintel 2	Lintel 2	X
4000	Lintel 3	Lintel 3	Lintel 3	X	X
5000	Lintel 3	Lintel 3	X	X	X





Electrical Specifications

Motorisation is the most common and practical solution to newbuild shutter systems. With various switching methods available, the simple touch of a button activates the motorised shutter to open or close stopping automatically when fully open or closed. All Warm Protection Products newbuild electric shutters are powered by Somfy tubular motors who are market leaders in the motorisation of shutters and blinds. All products are backed by a comprehensive warranty.

Systems: To comply with recent health and safety/machinery directives, roller shutters need to be assessed if motorised on a risk assessment basis. Due to this, we would suggest individual control per shutter or group control operated from within an area where all shutters can be seen by the operator whilst being operated. All doorway and fire exit roller shutters should be fitted with manual override and hold to run switching or incorporate a safety edge/safety device. For extra security main entrances can be fitted with a remote control operation on a hold to run basis using the Rollatec Remote Control Unit which comes with 2 handsets as standard.

Key Points

- All motors are pre-wired with 0.75mm² pvc flexible cable, which should be terminated at a junction box within 1 metre of the shutter.
- Only approved switches, relays and control systems should be used.
- Individual motor models may vary but load currents are typically 0.45-1.25 amps.

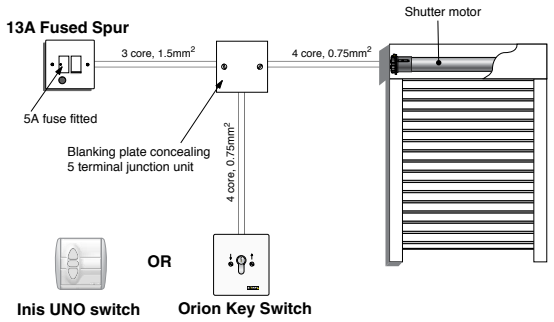
Somfy Integrated Controls

for security shutters in new buildings

somfy

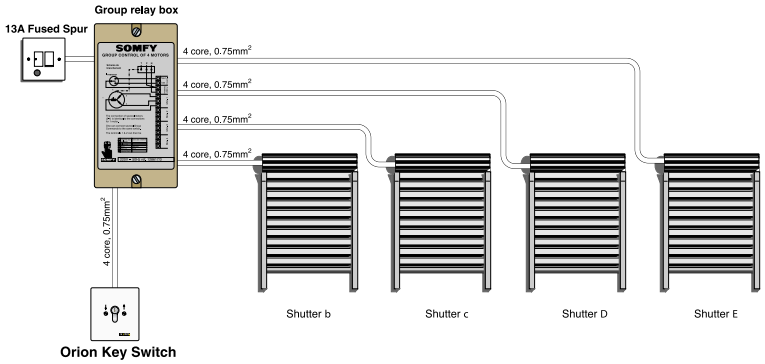
Individual Motor Control

- Allows individual operation of one shutter from one switch.
- Keyswitch or push button switch can be used.
- **Main Application: Individual control per shutter.**
- For public areas we would recommend hold to run key switch operators



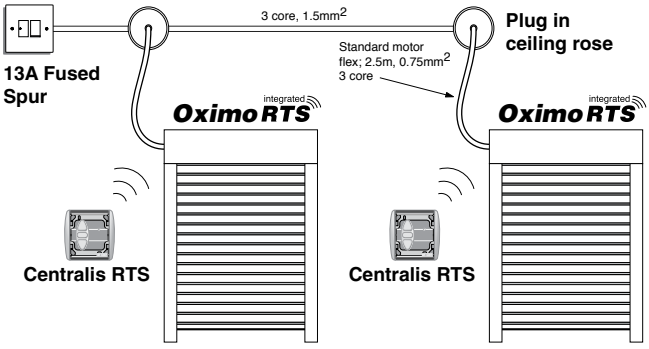
Group Control via Group Command Modules

- Group command control allows simultaneous operation of numerous motors from one switch.
- Each group command module operates up to 4 motors but can be linked to other group command modules for multiple operation.
- Keyswitch or Push button switches can be used.
- **Main Application: Group room operation.**
- For public areas we would recommend hold to run key switch operators or digipad operators



Wireless Control (For inward opening windows only.)

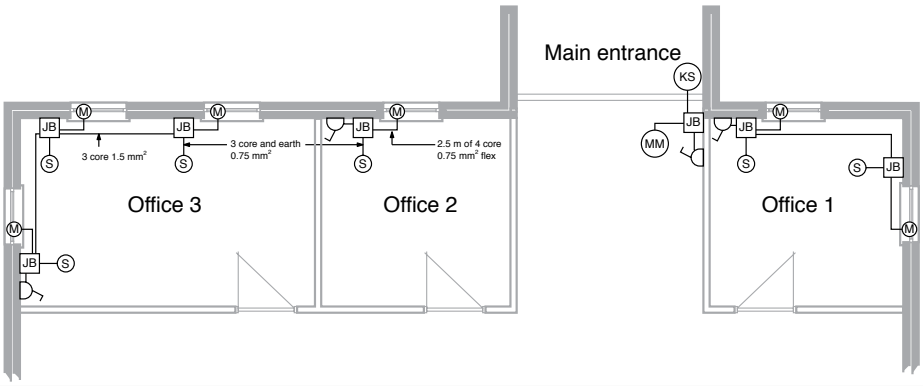
- The RTS motor has a built in remote control receiver so no wiring is required between the motor & switch.
- The switch can be sited near the shutter and transmits a radio signal to the motor to open or close when pressed.
- RTS motors can be linked together for multiple operation without the use of group command modules. Operation Range is 20m through 2 concrete walls.
- RTS motors are available with manual override but cannot be used on doorways.
- **Main Application: Individual, group and zoned control.**
- In public areas or classroom/workplace areas we would recommend a remote switch or digipad operator to reduce the risk of false operation by untrained users.



Telis Composio Remote Handset gives 20 channels for multiple operation of specific areas or zones, ideal for caretakers.

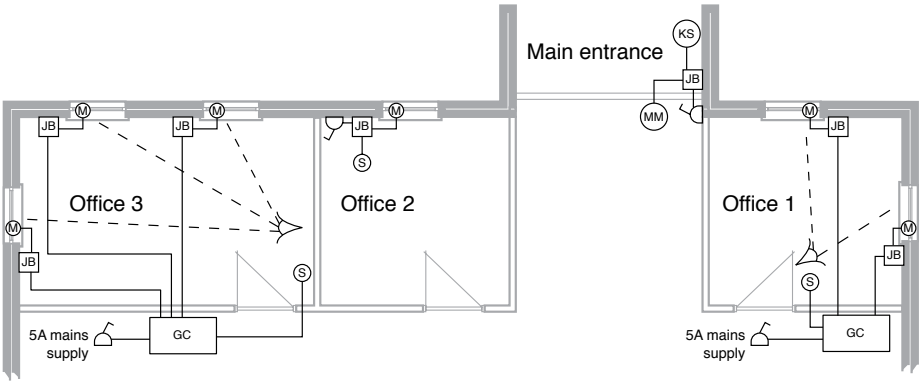
Typical Schematic diagrams of various switching arrangements

Individual operation via Inis Uno Switch with key switch to main entrance



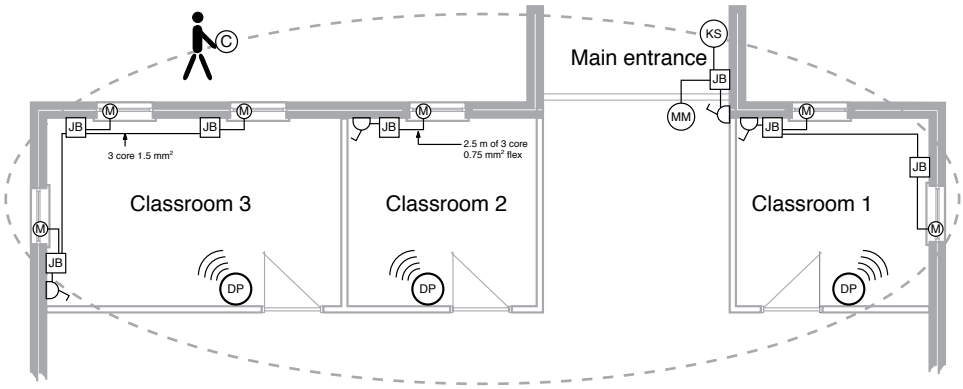
- Switched fused connection unit (5A fuse)
- JB 5 terminal junction box
- S 'Uno' switch
- M Somfy tubular motor, pre-wired with 2.5 m, 4 core 0.75mm² flexible PVC cable
- KS Flush mounted key switch
- MM Somfy tubular motor with manual override facility in case of power failure, pre-wired with 2.5 m, 4 core 0.75mm² flexible PVC cable

Group operation via Uno Switch with key switch to main entrance



- Switched fused connection unit (5A fuse)
- JB 5 terminal junction box
- S 'Uno' switch
- M Somfy tubular motor, pre-wired with 2.5 m, 4 core 0.75mm² flexible PVC cable
- KS Flush mounted key switch
- MM Somfy tubular motor with manual override facility in case of power failure, pre-wired with 2.5 m, 4 core 0.75mm² flexible PVC cable
- Indicates line of sight, supervised operation
- GC Group command relay unit

Remote Control operation with key switch to main entrance



- Switched fused connection unit (5A fuse)
- JB 5 terminal junction box
- KS Flush mounted key switch
- M Somfy RTS tubular motor, pre-wired with 2.5 m, 3 core 0.75mm² flexible PVC cable
- MM Somfy tubular motor with manual override facility in case of power failure, pre-wired with 2.5 m, 4 core 0.75mm² flexible PVC cable
- DP Digipad Operator
- C Composio Handheld Transmitter

Battery Back-up Unit

Battery Back-up Units can be fitted to main entrance or fire exit shutters. One battery back-up unit is required per shutter. The units stay in standby mode until required during a power failure. The units wake up on activation of a switch allowing the shutter to operate. The Battery Back-up Units can create approximately 5 total operations whilst the mains supply is down and should only be used as a back-up. Battery Back-up Units can only be woken up by a wireless key switch, handheld transmitter or wireless digipad.

Switches

Inis Uno
hard wired switch

Centralis
wireless switch

Keyswitch wired or wireless
if using RTS motors

Digipad
wired or wireless

Telis Composio
handheld wireless

SPECIALIST ROLL SHUTTER SYSTEMS
by Warm Protection Products Limited

BBSA BRITISH BLIND & SHUTTER ASSOCIATION

TÜV CERT

CERTIFIED TO BRITISH STANDARD
EN 845-2:2003
KM07598

warrington apt
ARCHITECTURALPRODUCT TESTING

BBA BRITISH BOARD OF AGRÉMENT

somfy

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APPROVED AGENT

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