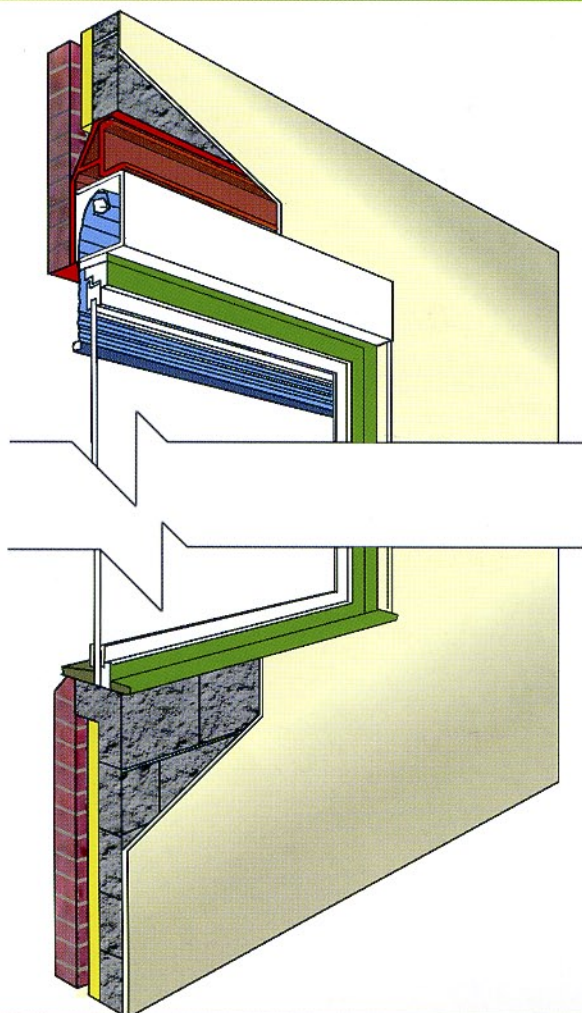


Warm Protection Products are widely respected manufacturers of Newbuild Shutter Systems supplying a network of national approved agents in the shutter industry. Our aim is to provide the best trouble free Newbuild Shutter Systems for architects, specifiers and construction companies. With our dedication 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 the Warm Protection Newbuild System is the most advanced in design, strength, durability and style. National installations include schools, medical centres, factories, local authority buildings, hospitals, and private dwellings, basically anywhere security is required. With a choice of standard factory finish colours or other RAL/BS colours available at a surcharge, our system will enhance and complement any development.



The First Stage

The first stage is for the builder/construction company to fabricate the building using standard steel or concrete lintels, which need to be stepped to create a void for the roller shutter box to be concealed behind.

Alternatively we would strongly recommend a one-piece specially fabricated lintel which can be obtained from Birtley Building Products, ref. NB1 or NB2. This lintel has been designed by Birtley Building Products and ourselves to create a problem free made to measure solution to the New Build shutter system by ensuring sufficient room and tolerance for the roller shutter box to be housed behind.

The Builder/Construction Company also steps back the inner leaf of blockwork or brickwork by 70mm at each side of the opening to conceal the shutter guide rails. A cant brick cill is also recommended. (For more information see builder's details.)

The Second Stage

The second stage is for the window suppliers to fabricate their windows with the addition of a subframe surround. The windows should have an extended cill in depth and also in width, which needs to extend to the overall frame width including the subframe. Sub-frame surrounds should be in the same material as the window frame ie aluminium, wood or PVC

(For more information see window details.)

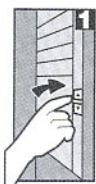
The Third Stage

The third stage is for the Roller Shutter Supplier to install the PVC roller shutter boxes and aluminium shutter guide rails onto the window/doorframes prior to window installation. The installation of the shutter box and guide rails is normally carried out at the Shutter Suppliers factory. (But can be carried out at the Window Suppliers factory if agreed.) The windows are then collected from the Shutter Suppliers factory, by the Window Contractor who then installs the combined units into the prepared openings.

The Fourth Stage

Once the combined units are installed the Roller Shutter Contractor would install the roller shutter curtains, set motor limits, set all locking systems and commission to ensure that all parts are working correctly. (For electrically operated shutters the use of 240v is requested via generator if only 110v is available on site.)

Operations



1. Somfy Tubular Electric Motors - Motors can be installed on large and small roll shutters. The minimum size for electric operation is 750mm overall shutter width. All motors are single phase 240v 50HZ and are IP rated to IP44. Each motor is equipped with a thermal overload protector. All motors are fitted within the axle of the roll shutter and draw up to 3 amps. Internal operation is by rocker switch, with external or internal options of key switch or remote control. For larger installations group or zoned control is available with central or master switching. A manual override can be specified to raise and lower the shutters internally or externally (but not both) in the event of a power failure. We would recommend that these should be used on fire exit doors and main entrance doors or on specific windows that are to be used as fire escapes. As an optional extra battery backup units are available. All electric shutters have the automatic WP Safe Lock System which has been tested to withstand 1.5 tons of lifting pressure applied and has been awarded with the European ER3 Standards rating. For more information on wiring and systems available please consult our technical department.



2. Rod Crank Winding Handle - Shutters up to 33 kilograms in weight can be lifted by this operator. Shutters are raised and lowered from inside the building by the rod crank winding handle which hangs down vertically and secures onto a clip when not in use. The WP Safe Lock System locks the shutter when fully lowered.



3. Spring Loaded Operation - A counterbalanced spring assembly unit is installed within the axle of the shutter. The system allows manual operation lifting vertically up and down. A manual transverse keylock in the bottom rail locks the shutter down when fully lowered.

Shutter Care and Maintenance

Warm Protection roll shutters do not require lubrication. However they should be cleaned at regular intervals to ensure their effective operation. Roll shutters exposed to salt air must be washed regularly. Remedial and maintenance work will be avoided if instructions regarding the correct and careful use of all roll shutter systems are given to all users. Commercial installations should have a maintenance check every year.

LIMITATIONS

The Warm Protection newbuild shutter system can only be fitted to windows and doors up to overall frame size of 2800mm.

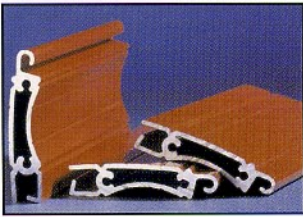
The minimum size for electric operation is 750mm.

The minimum size for spring loaded operation is 1000mm.

For larger openings we would recommend our plank system which can be adapted using different construction details. Contact our technical department for more details.

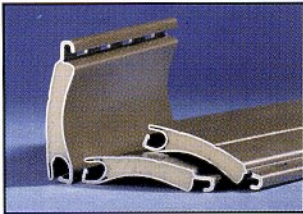
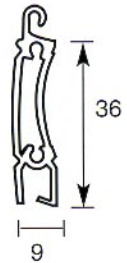
SPECIFICATION

Curtain Types



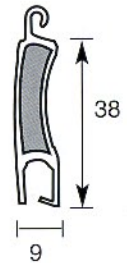
WP36

WP36 - DOUBLE SKINNED EXTRUDED PROFILE 36mm x 9.5mm weight per sq/m 11kg. Screw in endlock system. Suitable where security is paramount, advantages include insulation and acoustic benefit. Constructed from double skinned extruded aluminium alloy 6036-T6 produced to BS1474 with special design and shaping to ensure security and compactability. Each alternate profile is secured with a polyamide endlock which is self-tapped into special sections of the extruded profile using double threaded screws to ensure smooth and quiet operation. A double skinned extruded bottom rail with large solid base and rubber seal are fitted as standard to the base of the roll shutter. Curtain colours available are white or dark brown as standard with other RAL/BS colours available at a surcharge. Bottom rail colours available are white or dark brown as standard with other RAL/BS colours available at a surcharge.

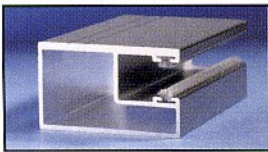


WP38

WP38 - RESIN FILLED PROFILE 38mm x 9.5mm weight per sq/m 7.5kg. Screw in endlock system. Suitable for high security domestic or commercial sites, advantages include high insulation and high acoustic benefit. Constructed from double skinned roll formed pre-stove enamelled aluminium sheet with high abrasive resistance. Each profile has a hardened chemical infill for security, insulation and acoustic benefit. Each alternate profile is secured with a polyamide endlock which is self-tapped into the resin by double threaded screws to ensure smooth and quiet operation. A double skinned extruded bottom rail with large solid base and rubber seal are fitted as standard to the base of the roll shutter. Ventilation and light slots are available with this profile which close up to give total seal and blackout when the shutter is fully lowered and locked. Curtain colours available are white, cream and brown only. Bottom rail colours available are white or dark brown as standard with other RAL/BS colours available at a surcharge.

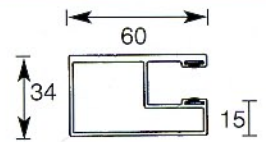


Guide Rail Type

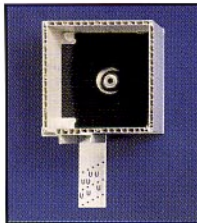


Guide Type NB69

GUIDE TYPE - NB60 60mm x 35mm Constructed from extruded aluminium alloy with integral brush pile seals to ensure no metal to metal contact with smooth quiet operation. Guide rail colours are available in white or dark brown as standard with other RAL/BS colours available at a surcharge.

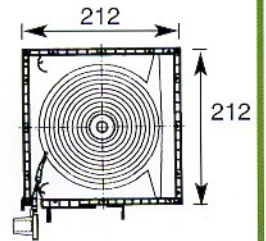


Box Type



Box - NB212

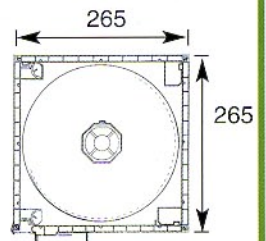
BOXES - NB212 Size 212mm x 212mm for frame height up to 2100mm. Constructed from extruded white UPVC honeycomb sectional box with tight fitting clip seals and moulded and hardened plastic endplates which are secured via special screws self tapped into honeycomb chambers. A removable inspection panel on the inside of the property allows access to all moving parts. Plastic clip plates are installed to the external ends of the endplates for a plaster line to butt up to if required. Steel support straps are installed to the endplates of the box for fixing onto the window frame packers. Special fixings through the base of the UPVC box into the window frame seal the complete unit.



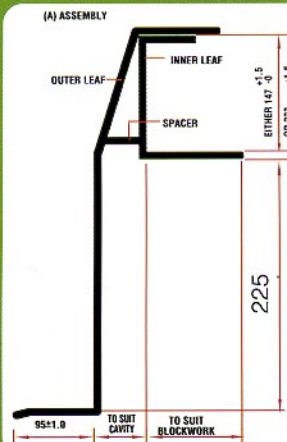
Box - NB265

BOXES - NB265 Size 265mm x 265mm for frame height over 2100mm up to 2850mm.

Constructed from extruded white UPVC honeycomb sectional box with tight fitting clip seals and moulded hardened plastic endplates which are secured via special screws self-tapped into honeycomb chambers. A removable inspection panel on the inside of the property allows access to all moving parts. Elongated steel support straps are installed to the endplates of the box for fixing into window frame packers. Please note when using 265 x 265 box, guide rails are set in from back of the shutter box by 7mm per side. See detail on page 7.



NB1 for 212 x 212 Shutterbox



Special Lintel Types

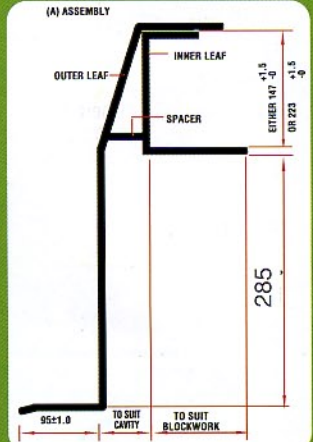
These drawings show the standard details of the NB1 and NB2 lintels available from Birtley Building Products. Tel 0191 410 6631

All Lintels are hot dipped galvanised after manufacture. Lintels come complete with polystyrene or foam insulation section.

KEYPOINT

Ensure size of lintel (width) allows for stepback of inner blockwork.

NB2 for 265 x 265 Shutterbox

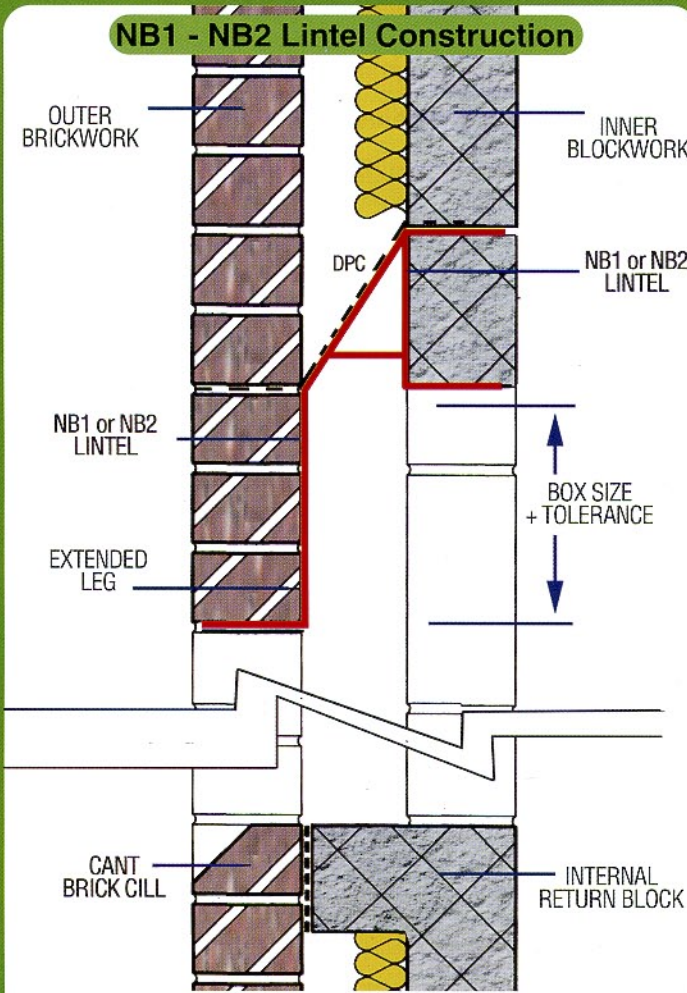


Technical Details For Building Construction

Builders Requirements for the Warm Protection New Build System

Below are standard details showing basic construction requirements using special and Standard Lintel Systems. The details below are for illustration purposes only.

NB1 - NB2 Lintel Construction

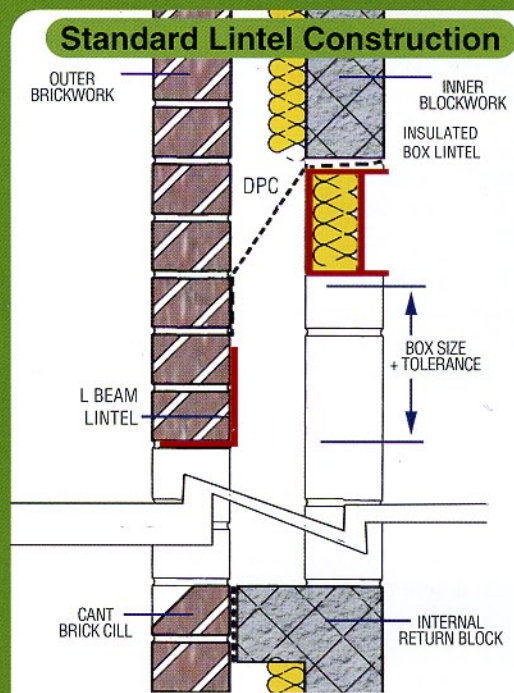


CLEAR OPENING HEIGHT	LINTEL SIZE
UP TO 2100	NB1
2100 UP TO 2850	NB2

Keypoints for NB1-NB2 lintel construction.

- Ensure lintels are fitted tight into the brickwork.
- Ensure inside of brickwork is neat.
- Ensure lintels are ordered long enough to allow for the stepback in blockwork.

Standard Lintel Construction

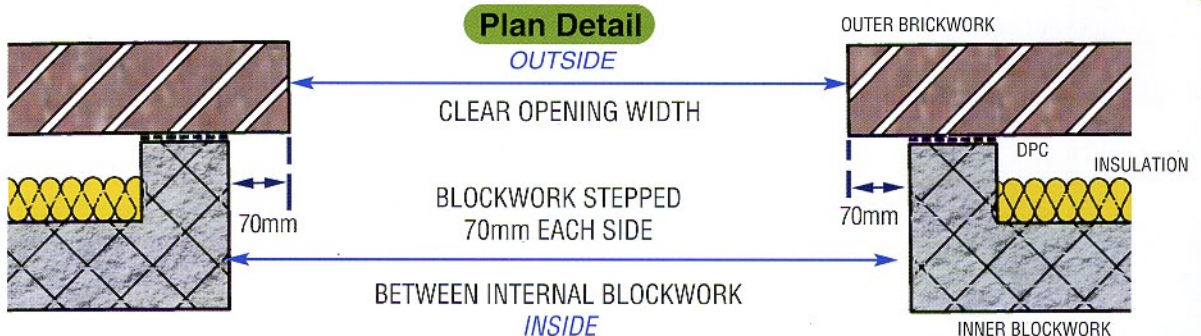


CLEAR OPENING HEIGHT	SHUTTER BOX SIZE
UP TO 2100	212 x 212
2100 UP TO 2850	265 x 265

Keypoints for standard lintel construction.

- Ensure L beam has no 45° flanges off the top vertical face.
- Ensure L beam is set tight up to brickwork.
- Ensure inside face of brick is neat.
- Ensure DPC tray is kept clear of mortar to allow the shutter box to fit tight back to the L beam lintel.
- Ensure upper lintel position allows sufficient tolerance.
- Ensure lintels are ordered long enough to allow for the stepback in the blockwork.

Plan Detail



Technical Details for Window Company

Windows suppliers should fabricate their windows and doors with the addition of a subframe surround. The next stage is for the roller shutter company to install the roller shutter PVC box and aluminium guide rails onto the window/ door frames prior to window/ door installation. The installation of the shutterbox and guide rails is normally carried out at the shutter suppliers factory but can be carried out at the window suppliers factory if agreed. The windows are then collected by the window contractor who then installs the combined units into the prepared openings. Windows suppliers must take into account the key points itemised.

WINDOW COMPANY REQUIREMENTS

On this page are details based on outward opening wooden windows. However UPVC and aluminium window systems can also be used.

The sub-frame shown is constructed from wood to match the window. For aluminium windows aluminium box section can be used as a sub-frame.

For UPVC windows UPVC sections can be used as a sub-frame (reinforcement bars required).

If the windows require specially sized sub-frames then wooden sub-frames can be used which can be pre-cloaked in a trim to suit the window frame material.

(See figure 1a-2a)

KEYPOINTS FOR CONSTRUCTION OF WINDOWS

Ensure windows are sent with sub-frame fitted, windows must be unglazed and have cills fitted or template of cill sent with windows.

Ensure window cill continues underneath the sub-frame side packers to the end of the sub-frame.

Ensure the sub-frame is 60mm wide and is deep enough to miss any vents, drips, sashes or door handles.

Ensure head sub-frame packer is deep enough to allow for outward opening windows/doors when the shutter is fully raised. (Bottom of shutter hangs below box by 45 or 60mm dependant on operator used.)

If UPVC frames are used ensure sub-frame and window have reinforcement bars fitted.

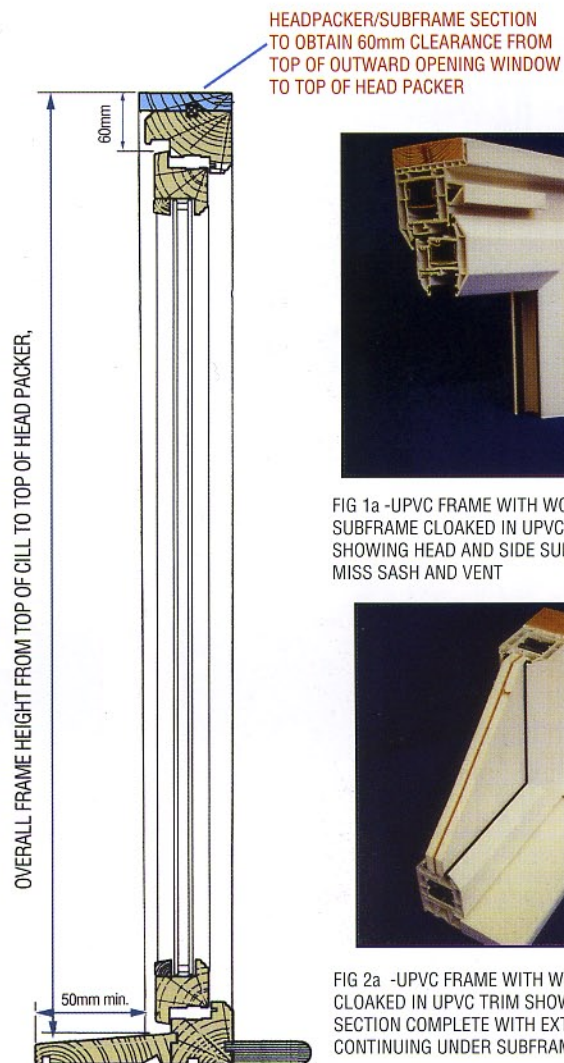
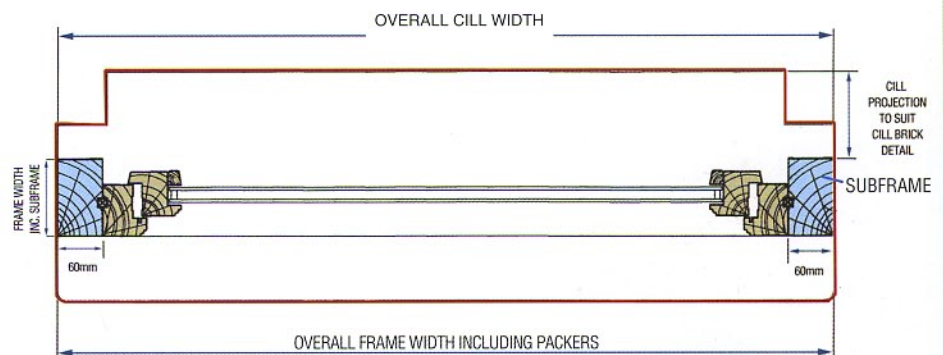


FIG 1a -UPVC FRAME WITH WOOD SUBFRAME CLOAKED IN UPVC TRIM SHOWING HEAD AND SIDE SUB FRAME TO MISS SASH AND VENT

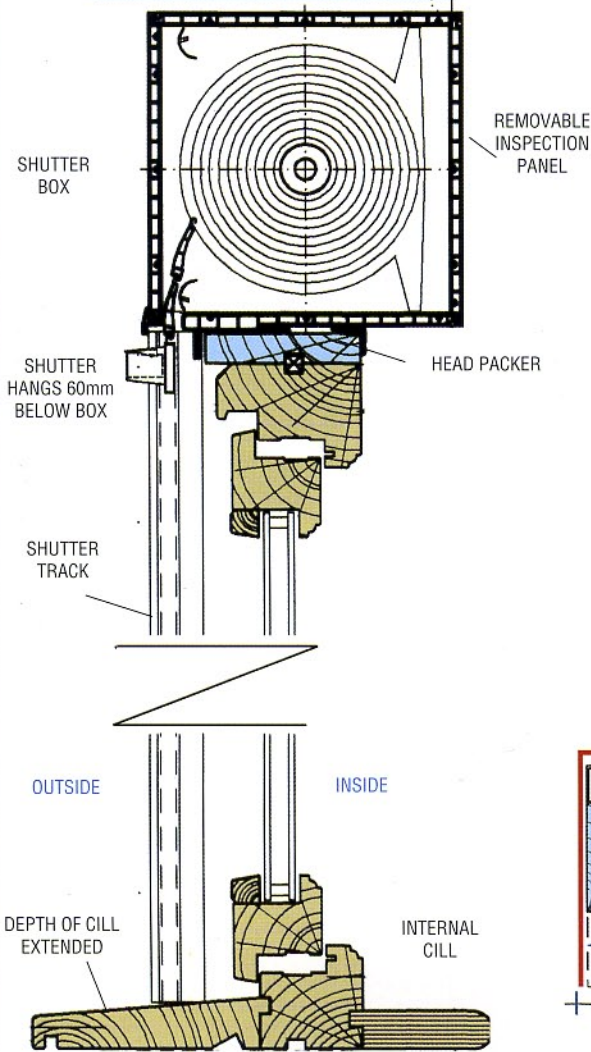
FIG 2a -UPVC FRAME WITH WOOD SUBFRAME CLOAKED IN UPVC TRIM SHOWING SIDE SECTION COMPLETE WITH EXTENDED CILL CONTINUING UNDER SUBFRAME



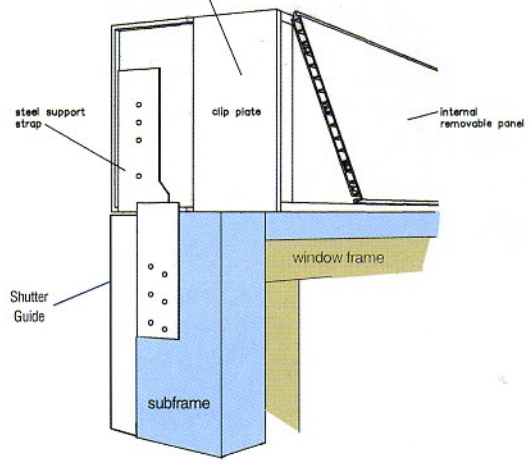
Combined Window and Shutter

Shown on this page is the detail of the combined window and shutter prior to installation into the prepared opening.

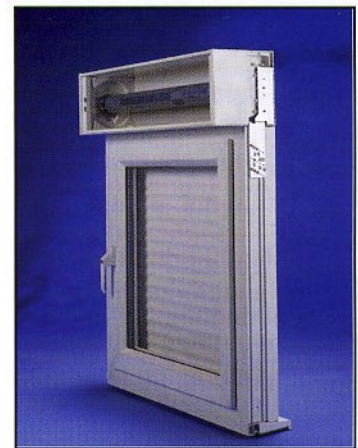
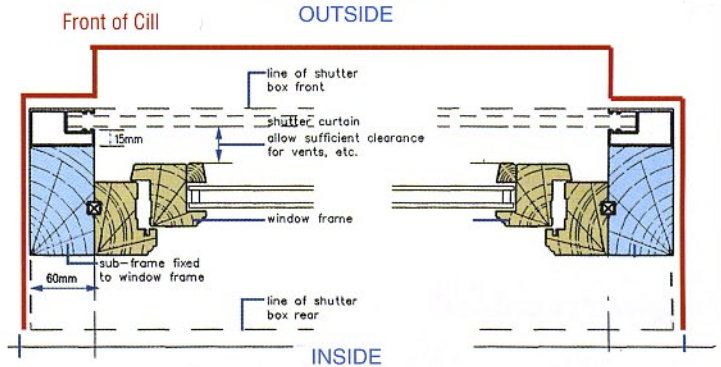
Section Through Detail



SHUTTER BOX



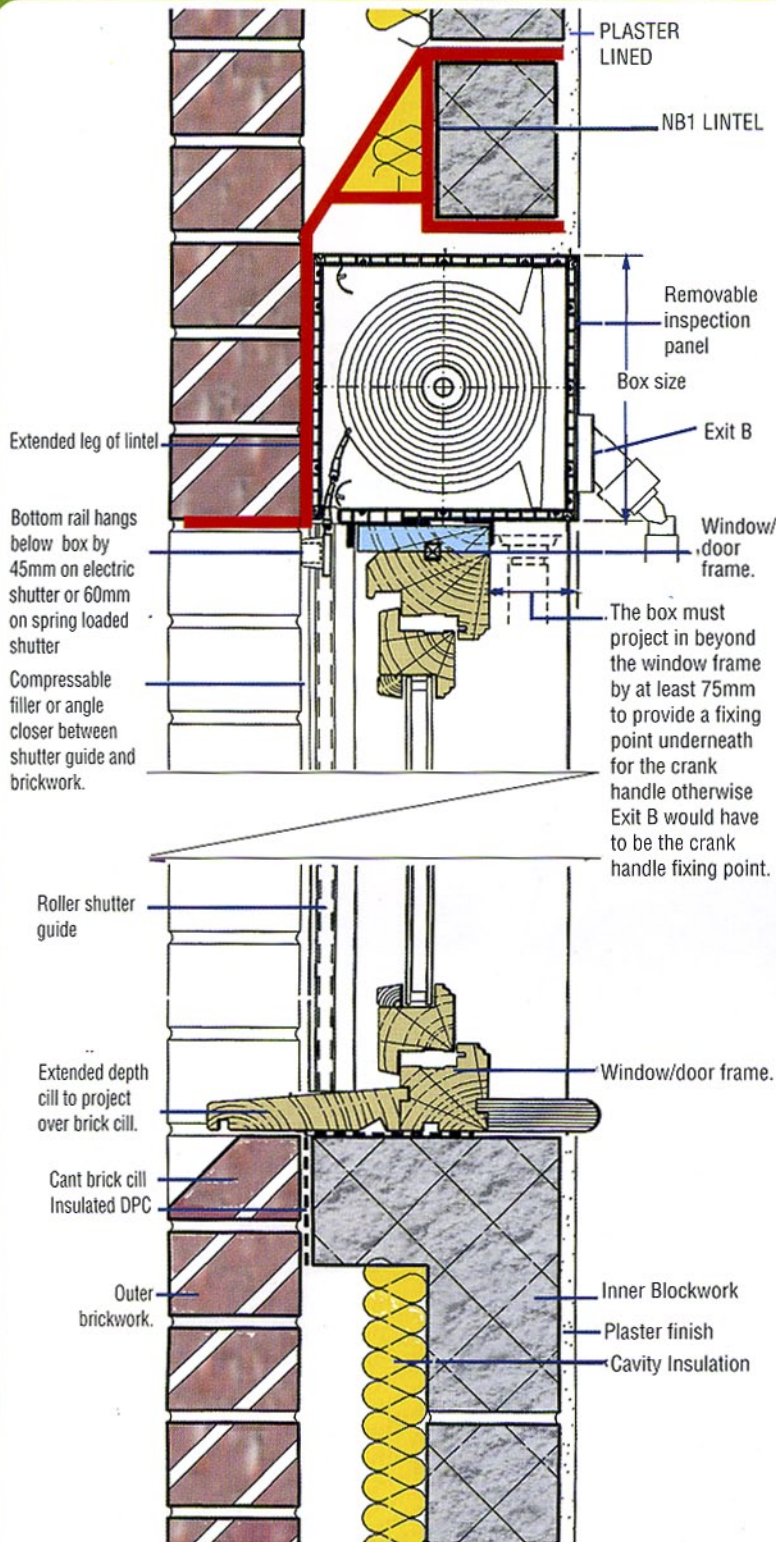
Plan Detail



Shown above are pictures of a typical window complete with shutter prior to installation. The internal panel has been removed to show the internal parts of the shutter.

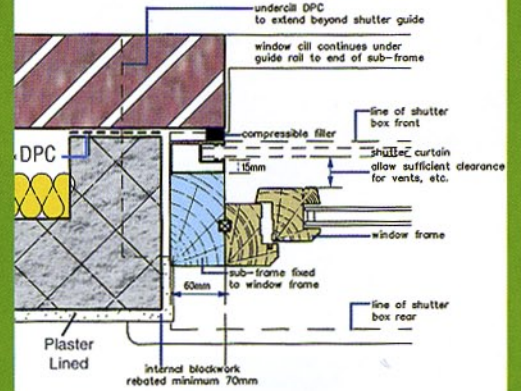
Technical Detail

The combined window and shutter detail fitted into the opening structure using NB1 Lintel



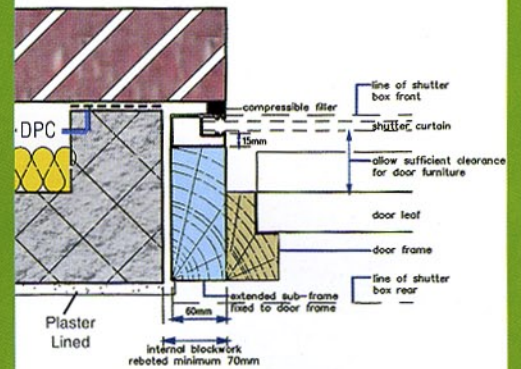
Section Through Detail

OUTWARD OPENING WINDOW JAMB DETAIL WITH INNER LEAF RETURN

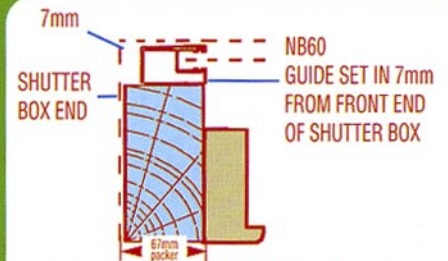


Plan Detail

OUTWARD OPENING DOOR JAMB DETAIL WITH INNER LEAF RETURN



Plan Detail



When using 265 x 265 shutter box, note guide rails are set in 7mm from each end of the box. i.e 67mm packer required or overhang of 7mm on 60mm packer

KEYPOINTS TO REMEMBER

- Do not obstruct the removable inspection panel
- When using plaster finish - only plaster over ends of box by 5mm
- Do not fix to the shutter box as this may interfere with internal movement of the shutter

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.

Key Points

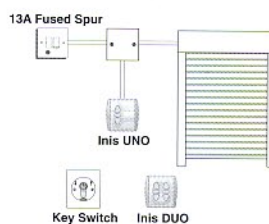
- All motors are pre wired with 0.75mm² pvc flexible cable which should be terminated at a junction box within 1 metre of the shutter.
- Only approved switches, relays and control systems should be used.
- Individual motor models may vary but load currents are typically 0.45-1.25amps.

SOMFY® Integrated controls

for security shutters in new buildings

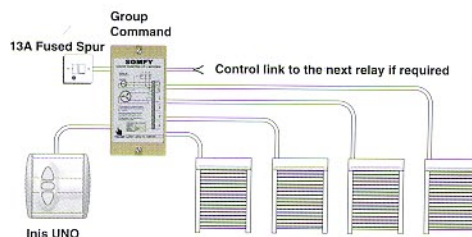
Individual Motor Control

- Allows individual operation of one shutter from one switch.
- Keyswitch or push button switch can be used.
- Main application: Individual control per shutter



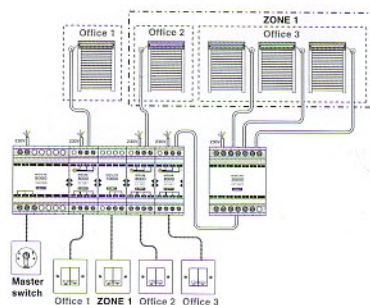
Group control via Group command modules

- Group command control allows simultaneous operation of numerous motors from one switch.
- Each group command module operates upto 4 motors but can be linked to other group command modules for multiple operation.
- Key switch or Push button switches can be used.
- Main application: Group room operation.



Moduline Control

- Moduline is a centralised modular control system that provides group, subgroup and individual control options for multiple shutters
- Control modules are designed for din rail mounting and are easily integrated into standard electrical distribution cabinets.
- Separate control modules can be plugged together to create a control system tailored to any application
- A special feature allows connection of magnetic sensors to be fitted to windows/doors which cancels the signal to the shutter motors if the windows/doors are left open.
- Keyswitch or push button switches can be used.
- Main application: group, zoned and master control.



Wireless control (For inward opening windows only)

- The Orea RTS motor has a built in remote control receiver so no wiring is required between the motor and switch.
- The switch can be sited near the shutter and transmits a radio signal to the motor to open or close when pressed.
- Orea RTS motors have an automatic detection system for the drive down WP safe lock system and switch themselves off automatically when fully lowered.
- Orea RTS motors can be linked together for multiple operation *without* the use of group command modules. Operation range is 6m through 2 concrete walls.
- Orea RTS motors are not available with manual override.
- Main application: Individual, group, zoned and master control.

