

RENLITA Series 3200 2-leaf FOLDAWAY DOORS

Application:

Renlita Foldaway Series 3200 doors are developed for use in large openings where a single-spanning solid door is desired. An engineered door system, it can be designed to meet various wind-loading requirements including cyclonic conditions. It offers a wide selection of cladding materials including timber, metal and glass and can therefore be found in places ranging from classy shopping complexes to warehouses and heavy industries.

Its excellent speed of operation makes it ideal for emergency installations like Fire Stations and military installations, where speedy mobilisation is important. In warehouses, it can be used in place of perimeter walls, thereby forming multiple accesses capable of facilitating simultaneous activities.

The Renlita Foldaway door also offers design convenience. It does not require any top or bottom sliding tracks. The door weight is transferred to the side columns without imposing additional load onto the lintol and floor. And as the door opens by folding upwards, minimal side room is required.

Doors up to 10.0 m wide x 3 m high can be manually operated. Beyond this size, motorised operation is recommended.



Fully-glazed Fire Station Doors

SERIES 3200



A fully-cladded industrial door fitted with an access door for personnel convenience.

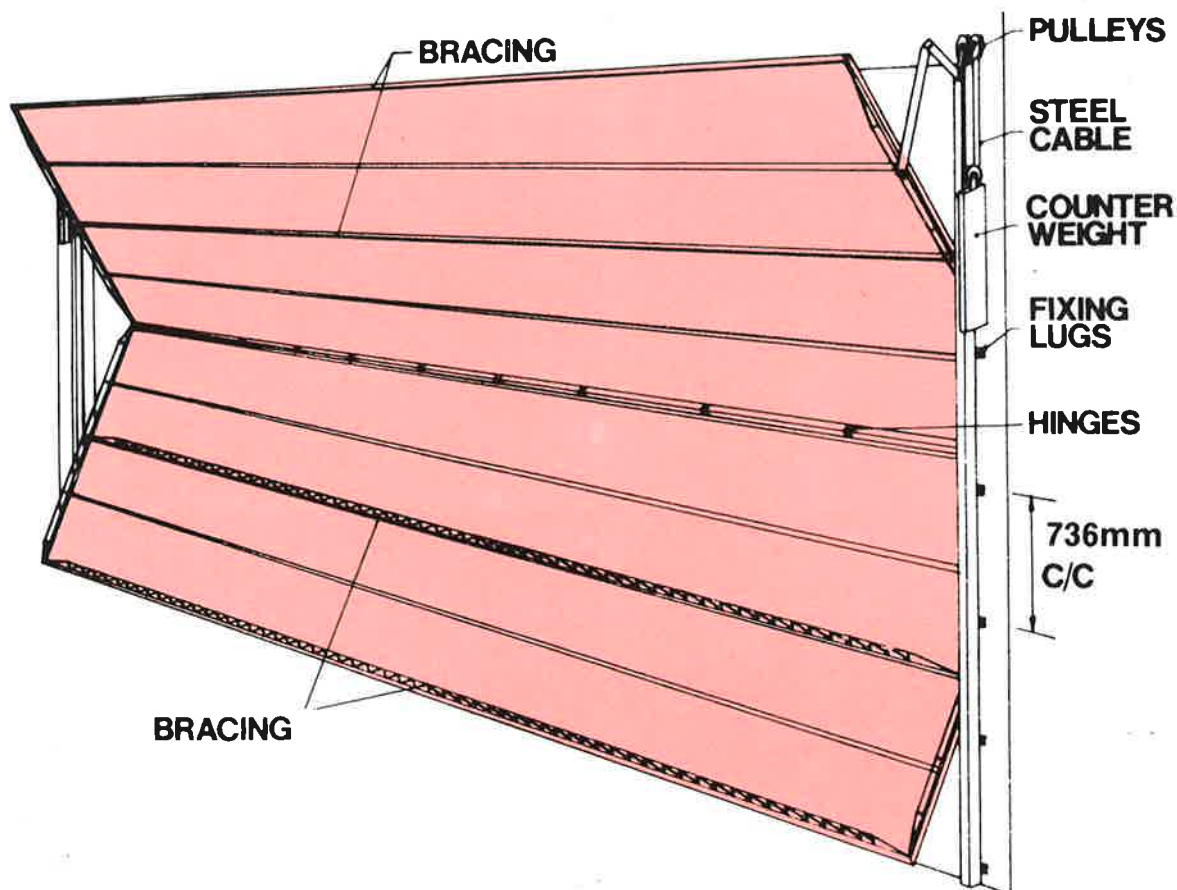


Doors can have one leaf glazed or just fitted with vision panels.

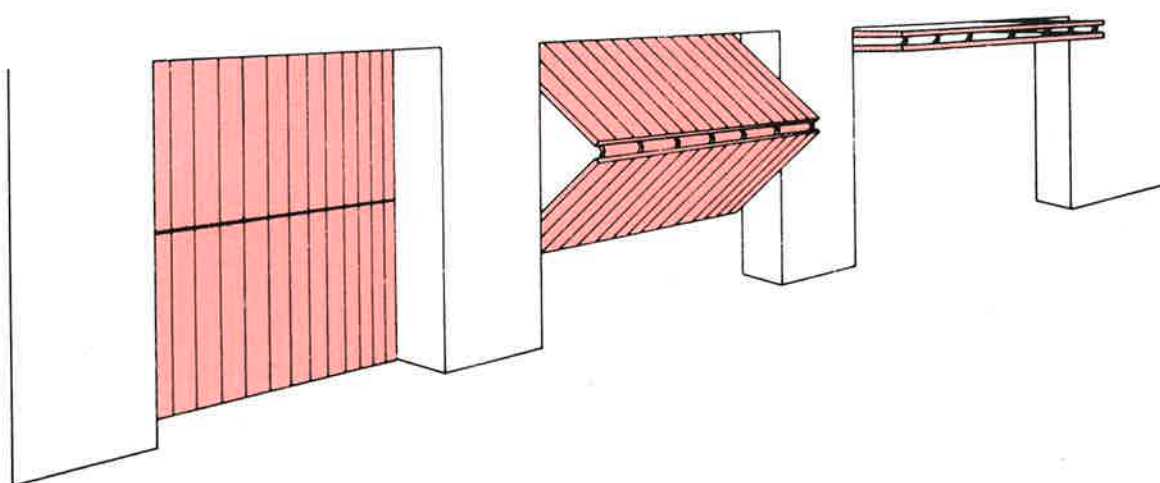


A wide-spanning glass shopfront, providing 24 hr. sales appeal
When opened, it "disappears" into a bulkhead.

RENLITA SERIES 3200 FOLDAWAY TWO LEAF DOORS



General perspective of the Foldaway door showing the operating principle and various parts from inside.



STANDARD SPECIFICATIONS AND DESIGN (Model 3200)

Renlita 3200 is a two leaf bi-folding overhead door hinged along the horizontal joint as illustrated on opposite page.

The framework is all welded and fabricated from rolled hollow section steel members which are braced where necessity demands.

Standard finish on the frames and channels is zinc chromate primer.

Standard cladding is Lysaght "V" crimp zincalume steel sheeting, fixed in the vertical plane with waterproof Imex rivets. Other claddings are available. Please see "Alternative Claddings" section on page 5.

Both leaves are balanced with counterweights which are in constant suspension.

Movement is controlled by guide rollers operating in vertical channel sections, with connecting link arms activating the top leaf.

N.B. These channels are fixed to the INNER face of the jambs, piers or nibs which form the sides of the opening. (See diagram page 9).

Channels are fixed by means of –

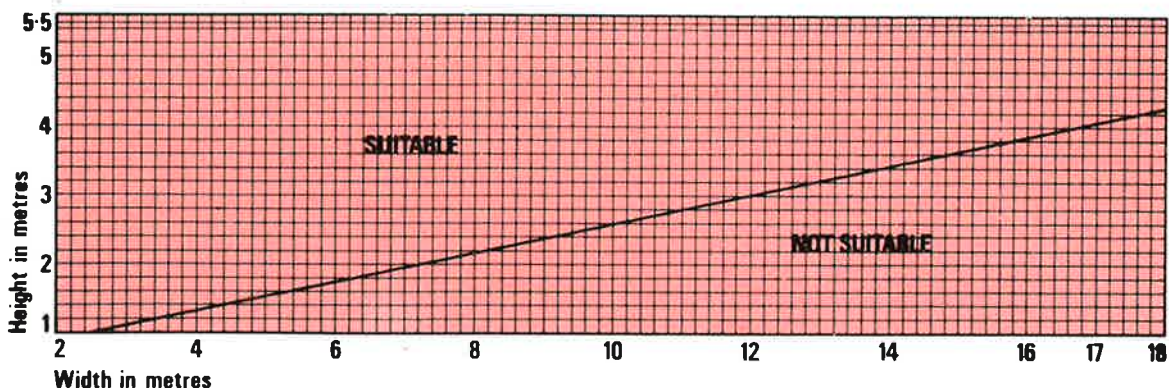
- A) Bolting lugs directly to brickwork, concrete, timber or solid cement blocks.
- B) Welding directly to steel columns, e.g. channels, angles, UB, UC, box sections, etc. but NOT to round pipe.

All the above materials to be of a quality and strength sufficient to carry the weight of the door.

Door locking is effected by internal pad bolts to each side unless otherwise specified.

SIZE

Renlita Foldaway doors up to 17 metres (56 ft.) wide and 5.5 metres (18 ft.) high can be manufactured in standard design. Doors above these dimensions should be referred to our design department before specification.



DESIGNING FOR RENLITA

The basic requirements for fitment of a Renlita Foldaway door are that –

- A) The opening is plumb and true. Please refer to "Measuring Instructions" on page 6.
- B) There is sufficient clearance above and behind the head or lintel to accommodate counterweight pulleys and arc of travel of the door. (see page 7 and 8).
- C) There is sufficient clearance behind the nib on both sides of the door to accommodate counterweights (see page 7 and 8)
- D) There is no obstruction inside or outside the door opening to interfere with travel of the door.

N.B. The dimensions given on page 8 are intended only as a general guide to installation requirements. In some cases a degree of variation can be achieved to suit special requirements, but only after consultation with the manufacturer.

OPTIONAL EXTRAS

Glass Panels

Doors can be produced either partly glazed to admit light or give inspection windows or fully glazed for showrooms and service stations etc.

Standard glass is 4mm thick clear float to a maximum individual panel size of 1830mm (6 ft.) by 915mm (3 ft.)

Heavier grade and ornamental glass should be specified only after consulting the Renlita manufacturer, due to the weight and deflection involved.

Glazing is effected by means of high security double section aluminium glazing bead fixed to the tubular steel frame.

Fully glazed doors are fitted with sheet metal kick plates of a minimum height of 200mm (8") and increasing in height in accordance with increases in door width.

Access Doors

Access doors can be fitted in the lower leaf. Standard size is 700mm (2'3") wide by 1220mm (4 ft.) high and ranging up to 915mm (3 ft.) by 2000mm (6'6") according to leaf size being able to accommodate the selected size. Standard locking on access doors is by Lockwood's Series 201 night latch or similar. (Other locks available as optional extras.) Normal hinging is to open inwards.

Cladding

Doors can be clad in most sheeting materials and profiles, but door prices and delivery times vary according to cladding costs, availability and special fixing methods (if required). It is recommended, wherever possible, to standardise on more common profiles such as Lysaght "V" crimp, Spandek, Trimdek etc. in either zincalume or colorbond finishes.

Power Operation

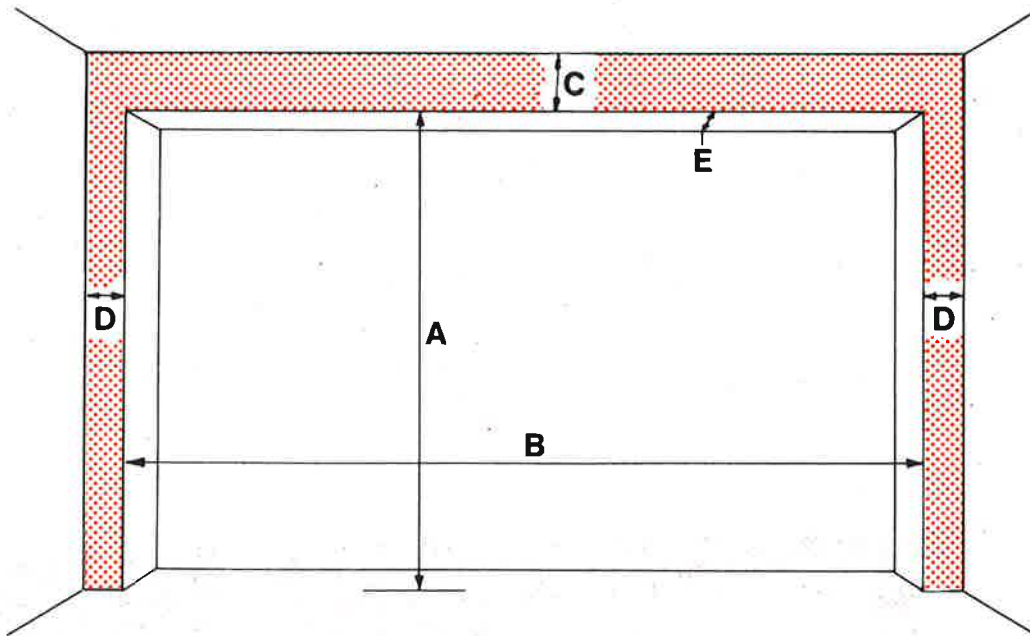
Electric operation is by a heavy duty cam drive system designed to fully open or close the door at an approximate rate of 4-5 seconds per metre of opening height.

Power is provided by a suitable continuously rated 3 phase motor, close coupled to a matched reduction gearbox and fitted with a torque limiting safety clutch.

The open and close cycles are controlled by a finely adjustable limit switch. Power drive is transmitted through an overhead shaft of suitable torsional capacity. An internal 3 button control station is positioned adjacent to doorway.

N.B. 415 volt 3 phase power with neutral, terminated at a power isolating switch where required by the supply authority, to be fitted adjacent to the side of the doorway opening. (by others)

MEASUREMENT OR DESIGN



N.B. Shaded area above and adjacent to lintel and behind nibs on internal face of opening must be kept free and clear of all obstructions, (refer detail on page 7 and 8) to allow for pulleys, counterweights, casings and door travel.

Also no obstruction can be in the area inside and outside the opening to obstruct door travel (refer J. & K. dimension page 7 and 8).

Height-A and Width-B

Check the floor and lintel with a dumpy level. Check columns or jambs with a level or plumb line. Check for variations in height and width as doors must be constructed to suit the smallest dimension between jambs or lintel, and floor in the case of height.

N.B. Variations of levels or plumb of the opening will result in variable gaps around the door perimeter when installed. If the opening is out of square it is advisable to rectify the fault by fitting correcting jambs or reconstructing the opening. If necessary, and at extra cost, doors can be constructed to suit sloping floors.

Headroom-C

Measure from the bottom of the intel to the ceiling, rafters or roof trusses. Check for any pipes, beams etc. that could foul the door or fittings. (See Fig. 3 page 7)

Nib Room-D

Measure from the doorway to the side wall or closest obstruction. These measurements are required for both sides of the doorway. Ensure that the piers, columns or jambs are suitable for fixings. Where two doors, side by side, are to be installed, measure the width of the dividing column.

N.B. Check full height of nib including allowance for dimension "C".

Depth of Head-E

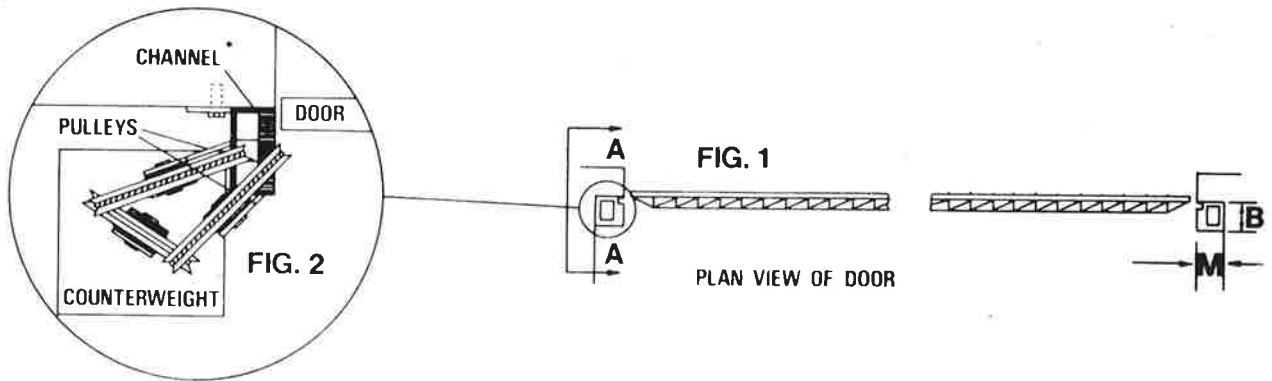
Ensure that external dimensions of opening are not smaller than internal dimensions to avoid obstruction of door travel through opening.

Locking

Check building to ascertain if inside or outside locking is required.

CLEARANCES

(For manual doors only. For power operated design refer to manufacturer.)



* Actual channel sizes refer page 9.

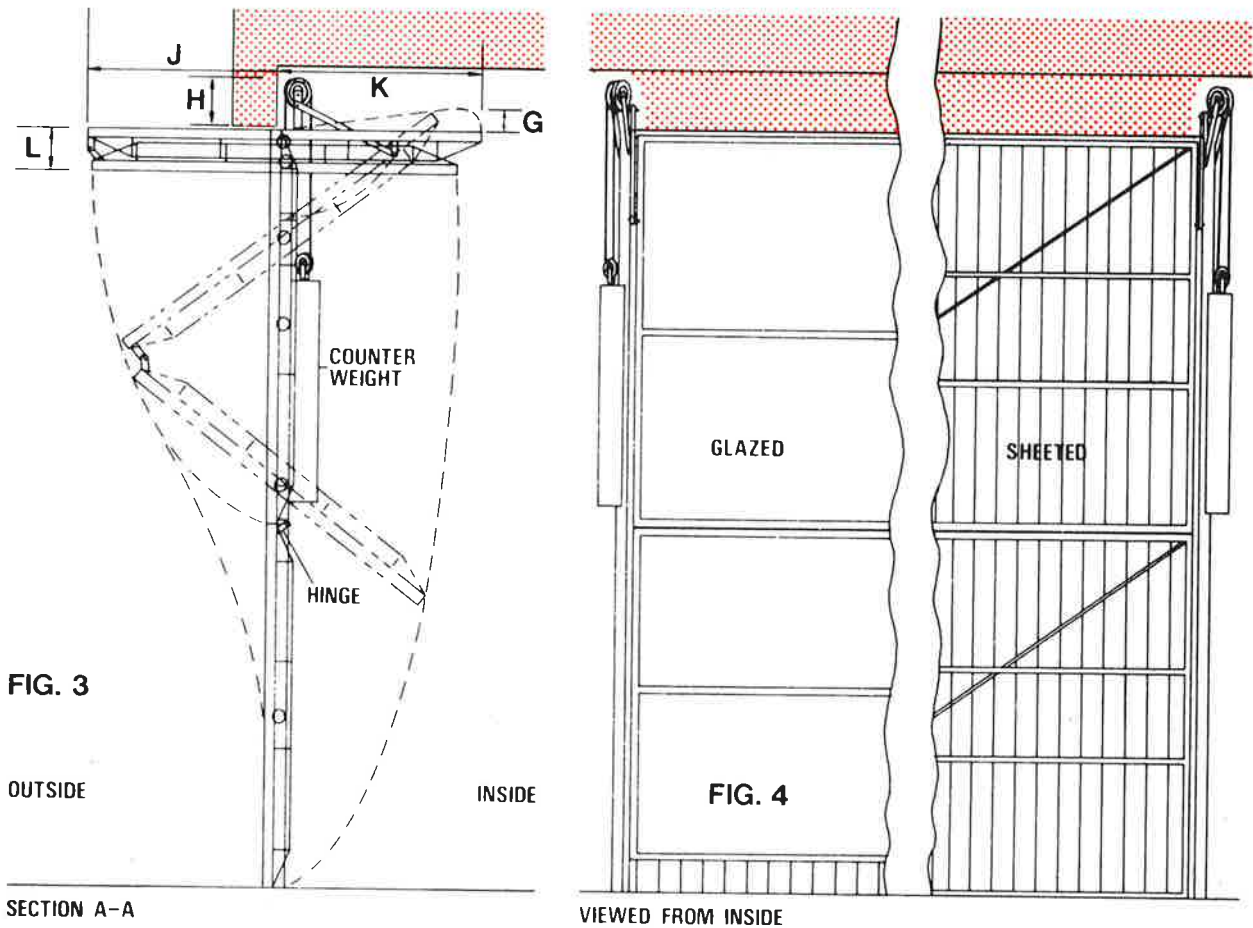


Fig. 1 – Plan drawing of door in closed position. For clearance dimensions refer to Graph B.

Fig. 2 – Enlarge drawing of the nib with normal fittings.

Fig. 3 – Section A-A from plan drawing (Fig. 1). This section shows the door in the closed, semi-open and open positions (refer to Graph J & K, page 8). The thickness of the door (refer to Graph L) and the headroom required for both the pulleys and swing of the door (refer to Graph G & H).

Fig. 4 – Inside elevation of Fig. 3 showing glazed and sheeted finishes. For nib room dimensions refer to Graph M.

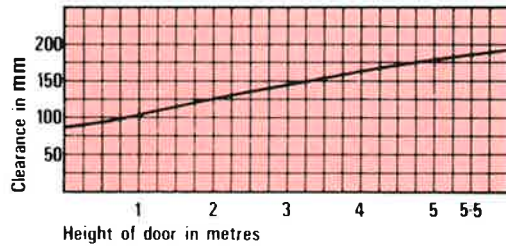
SERIES 3200

IMPORTANT: The dimensions given in these graphs are intended as a general guide to installation requirements. In some cases a degree of variation can be allowed to suit special requirements, but it is most important that the Renlita manufacturer be consulted to determine the exact figure.

HEAD CLEARANCE FOR SWING OF DOOR

MINIMUM CLEARANCE REQUIRED ABOVE LOWER FACE OF LINTEL

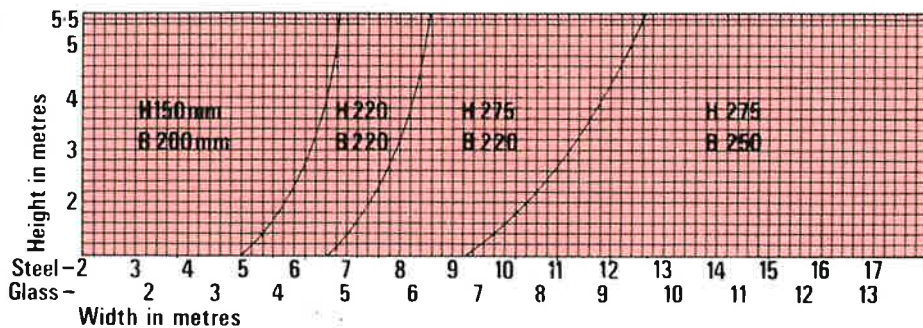
G



HEAD CLEARANCE FOR ACCOMMODATION OF PULLEYS

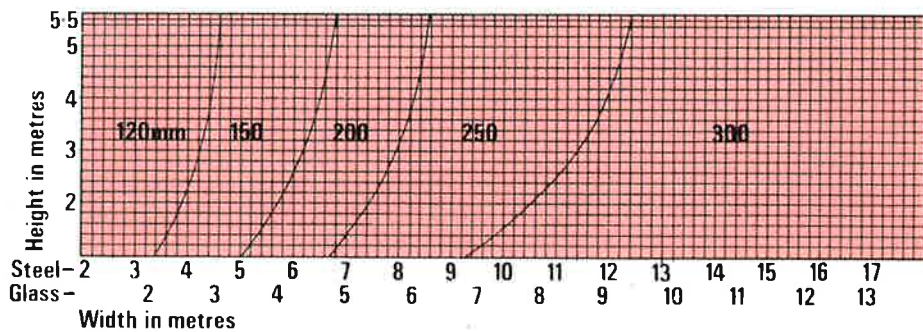
DEPTH FOR COUNTERWEIGHTS

H&B



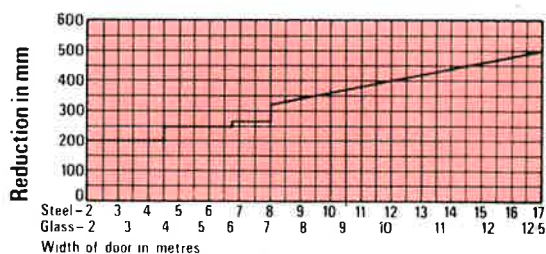
MINIMUM CLEAR WIDTH OF NIB

M



REDUCTION OF HEIGHT OF OPENING WHEN DOOR IS IN RAISED POSITION

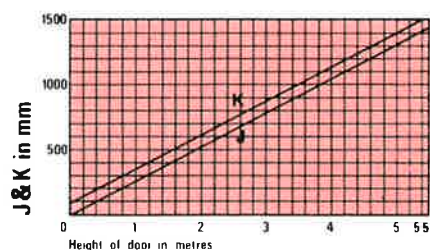
L



Figures given allow for thickness of door, frame and sheeting of 16 mm rib depth. Deeper profile sheeting will increase door thickness.

POSITION OF DOOR IN RAISED POSITION

J&K



With glass panelled doors the size of each leaf may vary to suit a particular shape and layout of the glass panels. For exact measurement, consult the Renlita manufacturer.

NOTE: Measurements J and K are given as a guide only.

CHANNEL SIZES

Standard channel sizes are –

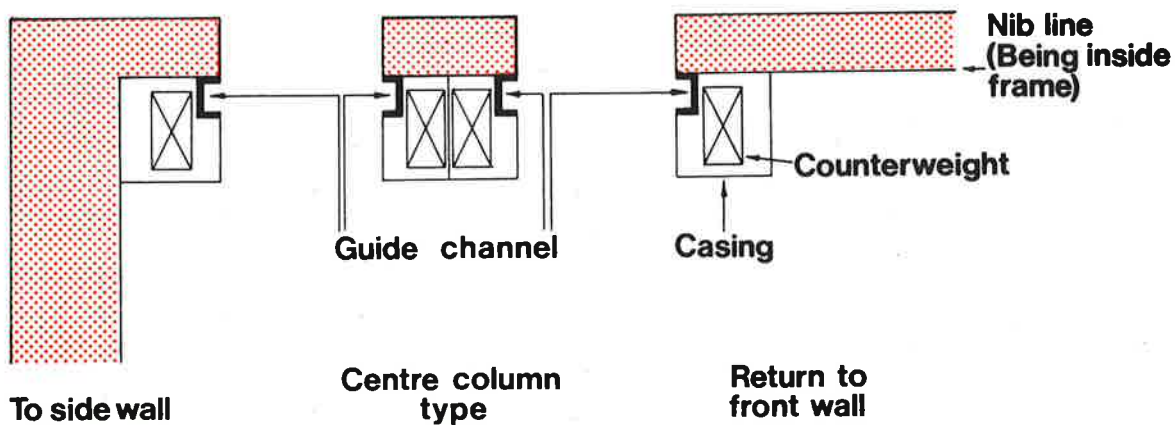
- A) 78 mm x 41 mm x 3 mm thk
- B) 80 mm x 50 mm x 5 mm thk

– according to door sizes.

Channels are mounted on the inside face of nibs as illustrated below.

COUNTERWEIGHT CASINGS

Are made to suit site dimensions and three basic arrangements are illustrated below. Counterweight casings, to a height of approximately two thirds of the height of the door, are formed out of 1.6 mm thk galvanised steel sheets.



Specifications

The Renlita Foldaway door is architecturally specified as a vertically opening, suitably trussed two-leaf door, hinged horizontally, and is capable of moving in vertical guide channels fixed to each side of the door opening. The door is connected to suitable counterweights through a medium of flexible steel cable moving over a pulley system fitted to the guide channels. Link arms are fitted to the upper leaf of the door on each side with one end pivoted on the door and the other end pivoted on the guide channel, so that the door closes upright and when open, folds horizontally under the lintol. The door is finely counterbalanced and is in constant suspension and does not slam upwards when opening or crash downwards when closing.

Electrically operated doors shall be as above described, but incorporating a 3-phase x 415V continuously-rated drive unit with thermal overload protection, push-button controls and manual chain operation facilities. Power is transmitted onto a horizontal drive shaft which in turn activates the drive-slides located at each of the guide channels. The drive-slides act on the drive-cams installed at each side of the door and are synchronised so that the door operates horizontally level at all times.

SERIES 3200



Door blends with the glass facade of the building.