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STANDARD REQUIREMENTS

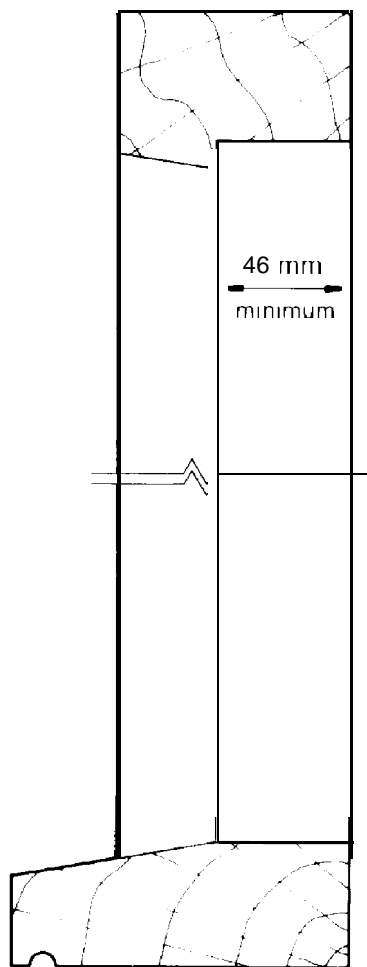
- 0 CROSS-CUT OR PIVOT SAW WITH MINIMUM TRAVERSE FOR 100mm (4") SECTION.
NOTE!
TUNGSTEN TIPPED SAW-BLADES (REQUIRE LESS SHARPENING AND GIVE LONGER WORKING LIFE).
- 2 ELECTRIC/HAND DRILL.
- 3 FELT OR RUBBER COVERED GLAZING BENCH.
- 4 SASH CRAMP AND EXTENSION BAR TO GIVE MINIMUM HOLD OF 2440mm (8' 0").
- 5 No. 2 POINT 'POZIDRIV'SCREWDRIVER.
- 6 CUTTING WAX FOR SCREW GROOVES.

RECOMMENDED REQUIREMENTS

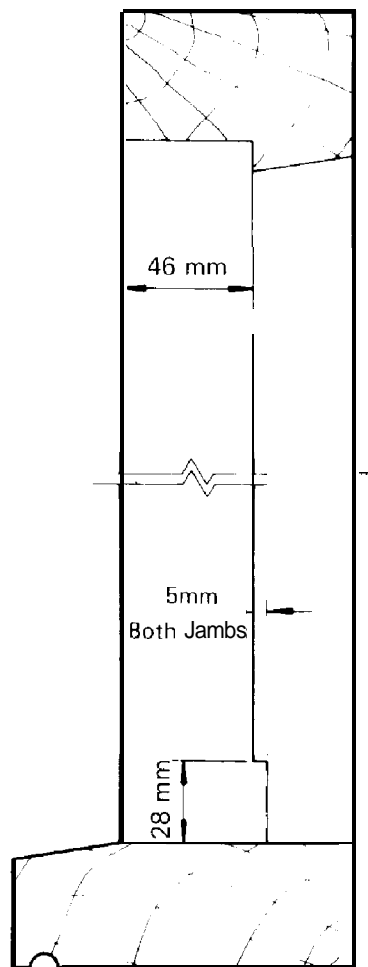
- 7 STILE DRILL JIG + DRILL – C928
- 8 RAIL DRILL JIG+ DRILL – C929
- 9 SIMPLE PILLAR DRILL + BENCH.
- 10 ALLEN KEY SET. A601

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REBATING DETAILS FOR TIMBER SUB-FRAMES



INWARD OPENING



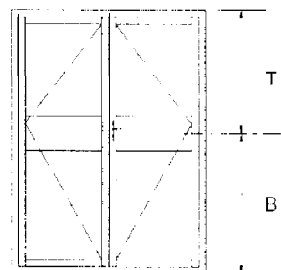
OUTWARD OPENING

STANDARD MIDRAIL HEIGHTS - underside of frame to centre of midrail

A - 887.5mm
B - 814mm

GLASS BREAKDOWN FOR NON-STANDARD MIDRAIL HEIGHTS

	STANDARD		NO DRAINAGE TRAY	
	A	B	A	B
TOP PANE (T)	T-132.5	T-176	T-132.5	T-176
BOTTOM PANE (B)	B-173.5	B-217	B-159.5	B-203





GLASS SCHEDULE AND GASKET CALL UP FOR DOORS WITHOUT PANEL VENTILATOR

WITHOUT MID-RAIL

WOOD SUB-FRAME		ALUM SUB-FRAME		GLASS		GASKET/ KIT
KIT SIZE WIDTH	KIT SIZE HEIGHT	KIT SIZE WIDTH	KIT SIZE HEIGHT	WIDTH	HEIGHT	
838	2057	838	2043	669	1831	5.1m
914	2057	914	2043	745	1831	5.2m
1638	2057	1638	2043	667	1831	10.2m
914	2133	914	2119	745	1907	5.3m
1790	2133	1790	2119	743	1907	10.6m

WITH MID-RAIL

WOOD SUB-FRAME		ALUM SUB-FRAME		MID-RAIL TYPE	TOP PANE		BOTTOM PANE		GASKET/ KIT
KIT SIZE WIDTH	KIT SIZE HEIGHT	KIT SIZE WIDTH	KIT SIZE HEIGHT		WIDTH	HEIGHT	WIDTH	HEIGHT	
838	2057	838	2043	A or AL	669	1036	669	715	6.4m
914	2057	914	2043	A or AL	745	1036	745	715	6.5m
1638	2057	1638	2043	A or AL	667	1036	667	715	12.8m
914	2133	914	2119	A or AL	745	1112	745	715	6.6m
1790	2133	1790	2119	A or AL	743	1112	743	715	13.2m
838	2057	838	2043	B or BL	669	1066	669	598	6.2m
914	2057	914	2043	B or BL	745	1066	745	598	6.4m
1638	2057	1638	2043	B or BL	667	1066	667	598	12.4m
914	2133	914	2119	B or BL	745	1142	745	598	6.4m
1790	2133	1790	2119	B or BL	743	1144	743	598	12.8m

MID-RAIL INFILL PANELS

WOOD SUB-FRAME		ALUM SUB-FRAME		TYPE	INFILL PANELS WOOD AND ALUM SUB-FRAMES	
KIT SIZE WIDTH	KIT SIZE HEIGHT	KIT SIZE WIDTH	KIT SIZE HEIGHT		WIDTH	HEIGHT
838	2057	838	2043	B or BL	669	127
914	2057	914	2043	B or BL	745	127
1638	2057	1638	2043	B or BL	667	127
914	2133	914	2119	B or BL	745	127
1790	2133	1790	2119	B or BL	743	127

GLASS FORMULAE FOR NON-STANDARD DOORS

24mm THERMAL BARRIER RESIDENTIAL DOOR

WITHOUT MID-RAIL

WOOD SUB-FRAME

DOOR TYPE	GLASS WIDTH	GLASS HEIGHT
SINGLE LEAF	W-169	H-226
DOUBLE LEAF	$\frac{W-304}{2}$	H-226

ALUMINIUM SUB-FRAME

DOOR TYPE	GLASS WIDTH	GLASS HEIGHT
SINGLE LEAF	W-169	H-212
DOUBLE LEAF	$\frac{W-304}{2}$	H-212

WITH 3 EQUAL PANELS

WOOD SUB-FRAME

DOOR TYPE	GLASS WIDTH	GLASS HEIGHT
SINGLE LEAF	W-169	$\frac{H-266}{3}$
DOUBLE LEAF	$\frac{W-304}{2}$	$\frac{H-266}{3}$

ALUMINIUM SUB-FRAME

DOOR TYPE	GLASS WIDTH	GLASS HEIGHT
SINGLE LEAF	W-169	$\frac{H-252}{3}$
DOUBLE LEAF	$\frac{W-304}{2}$	$\frac{H-252}{3}$

WITH MID-RAIL

WOOD SUB-FRAME

DOOR TYPE	MID-RAIL TYPE	TOP PANE		BOTTOM PANE	
		WIDTH	HEIGHT	WIDTH	HEIGHT
SINGLE LEAF	A or AL	W-169	H-1021	W-169	715
DOUBLE LEAF	A or AL	$\frac{w-304}{2}$	H-1021	$\frac{w-304}{2}$	715
SINGLE LEAF	B or BL	W-169	H-991	W-169	598
DOUBLE LEAF	B or BL	$\frac{w-304}{2}$	H-991	$\frac{w-304}{2}$	598

WITH MID-RAIL

ALUMINIUM SUB-FRAME

DOOR TYPE	MID-RAIL TYPE	TOP PANE		BOTTOM PANE	
		WIDTH	HEIGHT	WIDTH	HEIGHT
SINGLE LEAF	A or AL	W-169	H-1007	W-169	715
DOUBLE LEAF	A or AL	$\frac{w-304}{2}$	H-1007	$\frac{w-304}{2}$	715
SINGLE LEAF	B or BL	W-169	H-977	W-169	598
DOUBLE LEAF	B or BL	$\frac{w-304}{2}$	H-977	$\frac{w-304}{2}$	598

MID-RAIL INFILL

FOR WOOD AND ALUMINIUM SUB-FRAMES

DOOR TYPE	MID-RAIL TYPE	PANEL	
		WIDTH	HEIGHT
SINGLE LEAF	B or BL	W-169	127
DOUBLE LEAF	B or BL	$\frac{W-304}{2}$	127

NOTE

When a panel ventilator is to be fitted, deduct 90mm from the height of the appropriate glass panel.

Q. B. All dimensions are in millimetres unless otherwise stated.



FORMULAE TO CALCULATE COMPONENT LENGTHS

24mm THERMAL BARRIER RESIDENTIAL DOORS

Notes

- 1 All dimensions are in mm
- 2 Where components have an angled bar-end preparation dimensions are taken over longest edge of the angle.
- 3 W is total metal-to-metal width of entrance door outer frame.
- 4 H is total metal-to-metal height of entrance door outer frame.
- 5 Please use cutting schedule after reading cutting down details in Monarch Workshop procedure manual for Entrance Door.

FOR ALUMINIUM SUB-FRAMES ONLY

It is advisable to leave 1mm clearance between the door outer frame and the aluminium sub-frame, on width and height, to facilitate fitting without damaging the sub-frame. It should also be noted that a drainage tray is not used with an aluminium sub-frame.

SPECIAL NOTE 1

Before cutting down and/or glazing, be sure to decide on the handing and opening direction of the door.

SPECIAL NOTE 2

Double doors for frame widths of 1450mm or less an extra 1mm should be taken off all rails, i.e. 2mm Total.

COMPONENT	SINGLE DOOR		DOUBLE DOOR	
	WOOD SUB-FRAME	ALUM SUB-FRAME	WOOD SUB-FRAME	ALUM SUB-FRAME
Head	W	W	W	W
Cill	W	W	W	W
Drainage tray	W	--	W	--
Rail: top	W-189	W-189	$\frac{w-344}{2}$	$\frac{w-344}{2}$
middle	W-189	W-189	$\frac{w-344}{2}$	$\frac{w-344}{2}$
bottom	W-189	W-189	$\frac{w-344}{2}$	$\frac{w-344}{2}$
Jamb: locking	H-14	H	--	--
hinge	H-14	H	H-14	H
Stile: locking	H-51	H-37	H-51	H-37
hinge	ti-51	H-37	H-51	H-37
Weather Bar(s) for inward opening door	W-58		One @ W - (218 + Rail Length) One @ W - (188 + Rail Length)	
Weather Bar(s) for outward opening door	w-33		One @ W (206 + Rail Length) One @ W - (176 + Rail Length)	

} See Special Note 2

CUTTING DOWN HORIZONTAL SECTIONS

HEAD CILL & DRAINAGE TRAY

Calculate the difference between the kit width and the required width, divide it by 2 and cut down each end by that amount.



HEAD & CILL

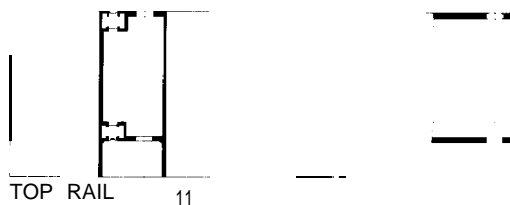


DRAINAGE TRAY

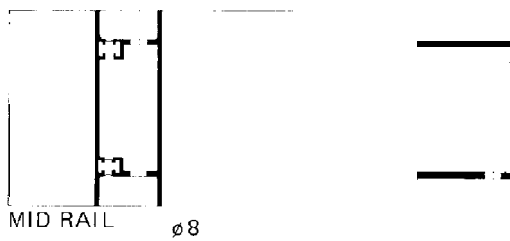
**RAILS (INCLUDING TYPE A MID-RAIL):
SINGLE DOOR/DOUBLE DOOR**

Remove the tension block from the plain end of each rail.

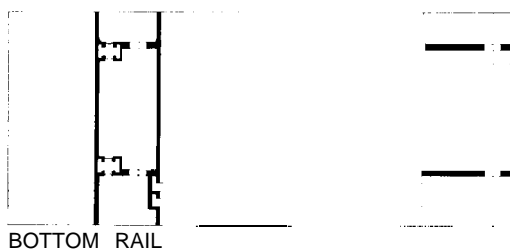
Calculate the new length required and cut down the unprepared end to this length. Drill 2 x $\varnothing 8.0$ mm holes 10mm in from the cut down end. ENSURE THAT THEY ARE DRILLED IN LINE BY USING DRILLING JIG. C928.



TOP RAIL $\dots 11$



MID RAIL $\dots \varnothing 8 \dots 10$



BOTTOM RAIL

HORIZONTAL SECTIONS CONTINUED

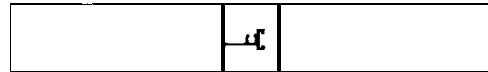
MID-RAIL: TYPE AL

Calculate the new length required (remove tension block pack from mid-rail) cut down the mid-rail by an equal amount either side. Prepare ends to suit.

N.B. The equal cutting is important to maintain the letterplate central.

MID-RAIL: TYPE B and BL

Calculate the cut down required. Cut down each rail, from one end only, by that amount.



MID-RAIL B & BL

WEATHER BAR: OUTWARD OPENING

For a STANDARD width door no preparation is required.

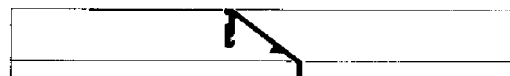
For a NON-STANDARD width SINGLE door calculate the cut down required and remove that amount from one end of the bar.

for a NON-STANDARD width DOUBLE door calculate the cut down required, divide it by 2 and remove that amount from one end of each bar.

WEATHER BAR: INWARD OPENING

For a STANDARD width door remove 25mm from one end of the bar, 12mm from each bar on a double door.

For a NON STANDARD width door calculate the cut down amount(s) as for outward opening but increase the final cutdown amount(s) by an EXTRA 25mm. on single door bar and 12mm on each double door bar.

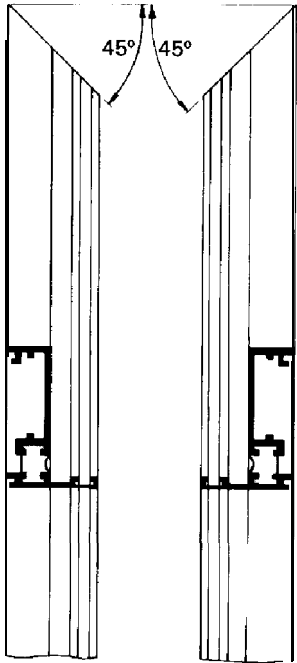


WEATHER BAR

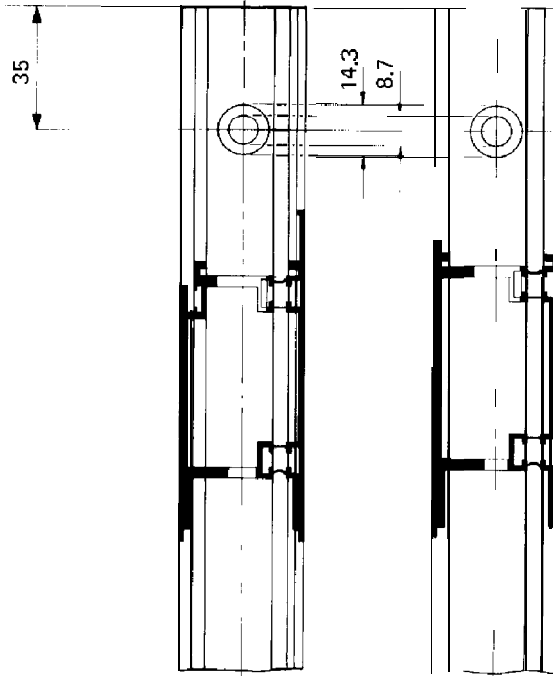
CUTTING DOWN VERTICAL SECTIONS

JAMBS & STILES

Cut down from the TOP only. Calculate the new lengths required and cut the sections to these lengths and if necessary m-prepare the ends.



HINGE/LOCKING JAMB



LOCKING STILE/
MEETING STILE
(Double Doors)

HINGE STILE
LOCKING STILE

GLAZING INSTRUCTIONS

SPECIAL NOTE

All glazing should be carried out in strict accordance with BS 6262

THESE INSTRUCTIONS COVER 20, 22, 24, 25 AND 26mm DOUBLE AND 4 AND 6mm SINGLE GLAZED UNITS.

THE GASKET MUST NOT BE STRETCHED DURING FITTING OTHERWISE SHRINKAGE WILL OCCUR LATER.



SINGLE GLASS

C1274-4mm
C1218-6mm



DOUBLE GLASS

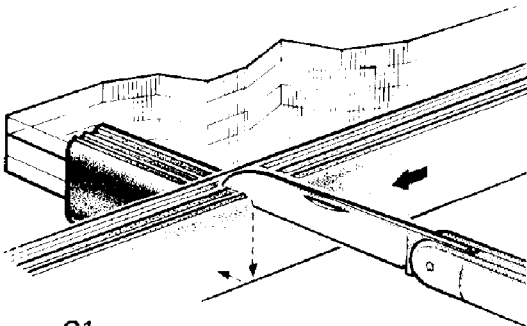
C1224-20mm
C1225-22mm
C1203-24mm



C1253-25mm
C1254-26mm

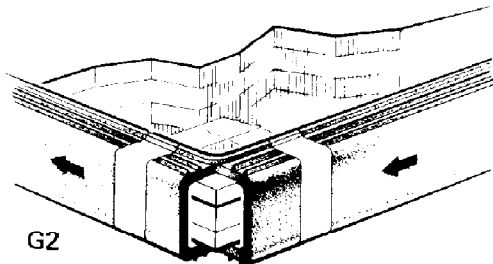
A. Check the contents of the box and lay the panel sections on trestles in the order of assembly. Leave the outer frame members in the box.

B. Support the glass panel on two trestles that are narrower than the width of the panel. Select the correct glazing gasket and cut a length sufficient to wrap round all the edges of the panel, plus approximately 100mm (4'') for overlap and cutting. Cut one additional section of glazing gasket approximately 50mm (2'') long for use as a slicing template.



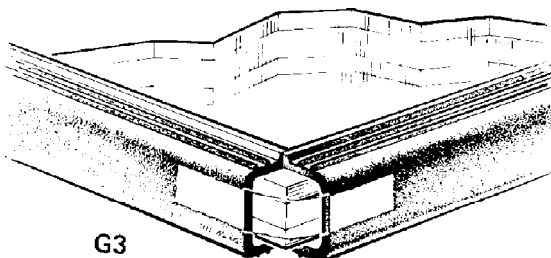
G1

C. Start approximately 12mm (½'') from the top right-hand corner of the panel, wrap the channel of the glazing gasket along the edge of the glass and allow it to extend beyond the bottom corner of the panel. Place the slicing template on the adjacent edge of the glass, butting up to the gasket. Cut through the body of the gasket in line with the raised edge of the slicing template, but **DO NOT CUT THROUGH THE RAISED EDGE OF THE GASKET THAT IS BEING FITTED.** G1.



G2

D. Bend the gasket 90° round the bottom corner of the panel and hold it in position with adhesive tape. G2.



G3

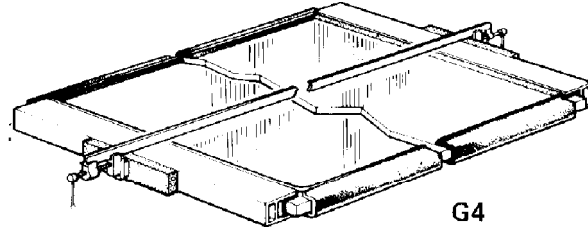
E. Continue wrapping the gasket along the edge of the panel and repeat the slicing process at each corner. When all the edges have been covered, use the already fitted gasket as the template for the final cut and hold the two ends in position by placing adhesive tape along the exposed back of the gasket ends. G3.

F. When using patterned glass, it is recommended that the patterned glass side is glazed to the inside to ensure maximum sealing of glass to gasket on the outside.

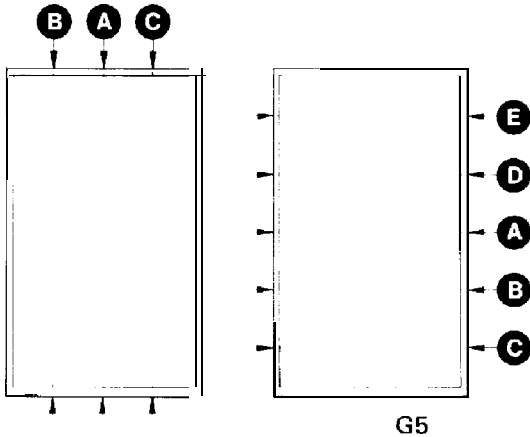
FITTING THE ALUMINIUM FRAME SECTIONS

IMPORTANT: READ THE HEEL AND TOEING PROCEDURE (PAGES 10.1 AND 10.2) BEFORE PROCEEDING.

A Place the top and bottom rails on to the appropriate edges of the panel, leaving an equal amount of panel showing at either end. Carefully cramp into position using 300mm minimum (12") packing blocks to prevent damage. G4.

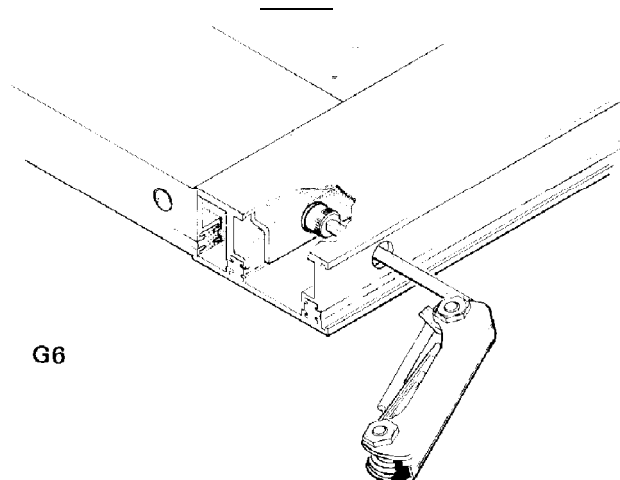


B Place the vertical sections on to the right-hand and left-hand edges of the panel with the ends in line with the outer edges of the already fitted sections. Check that the vertical sections are correctly handed then cramp them carefully into position using the packing blocks. Take care that the ends of the top and bottom rails fit snugly into the recesses of the vertical sections and that the glazing gasket is seated all round with the edge of the raised section flush against the metal frame.



C Ensure that the frame sections are straight and not bowed by carefully re-cramping them lengthwise and breadthwise in the alphabetical sequence shown. G5.

D Secure the frame joints by tightening the M8 x 50mm long socket-head cap-screws through the access holes provided in the stiles. Ensure that a spring washer and spreader plate are placed under the head of each screw and that the joints are pulled tightly together. G6.

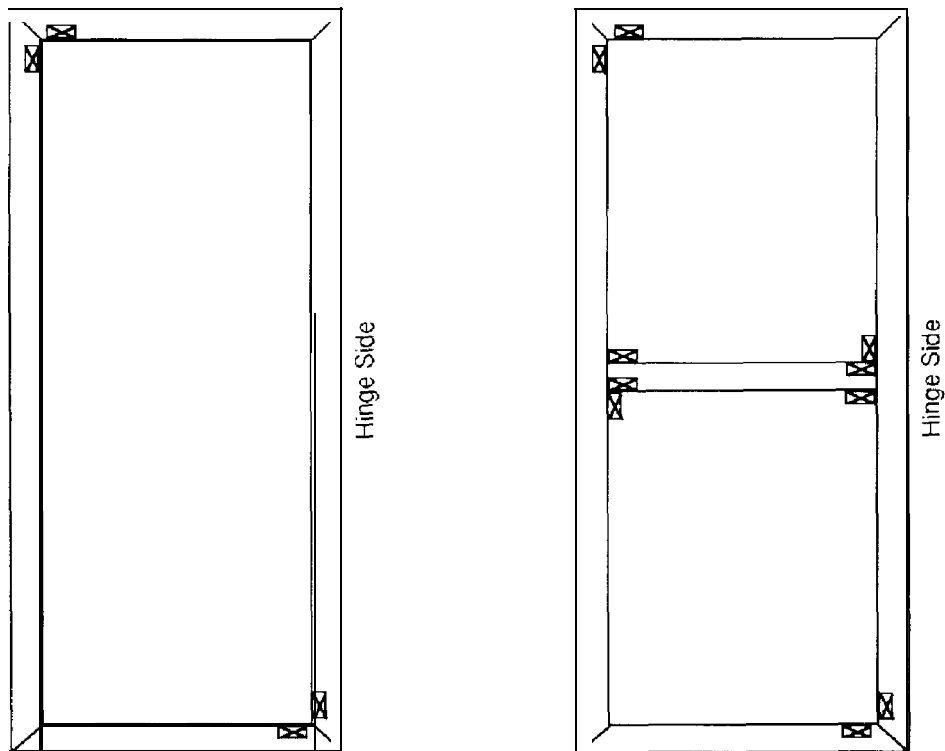


NOTE: For meeting stile on double door refer to page WP P

HEEL AND TOEING PROCEDURE

The following procedure is recommended:-

1. Fit the glazing gasket as normal
2. Fit top and bottom rails and mid rails where applicable, in the usual way.
3. Select the optimum size wedge packers and then loosely position them in the rails between gasket and rail flange as illustrated. The serrations must face the rails.
4. Fix the self adhesive pads to the stiles as illustrated, approximately 25mm up from the inside edge of the rail.
5. Fit the stiles and complete the assembly of the door leaf



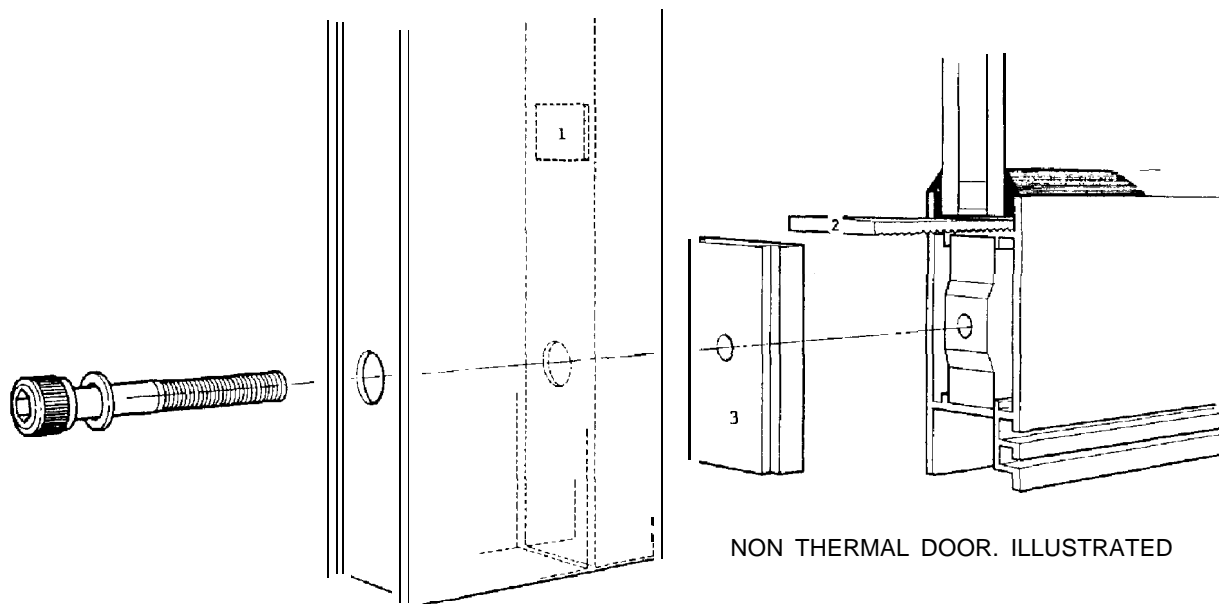
Packing Doors fitted with **Midrails**

When glazing up doors fitted with a midrail, particularly the 'B' type with infill panel, it may be advantageous to pack both sides of the aluminium to ensure the door leaf is completely rigid.

GLASS PACKERS ACCESSORY PACK

To allow you to hold a small stock of glass packers, Accessory Pack AI 033 has been introduced, comprising:-

CI 033	Self adhesive packer	50
CI526	Wedge Packer - green	25
CI527	Wedge Packer - blue	25
CI528	Wedge Packer - black	25



NON THERMAL DOOR. ILLUSTRATED

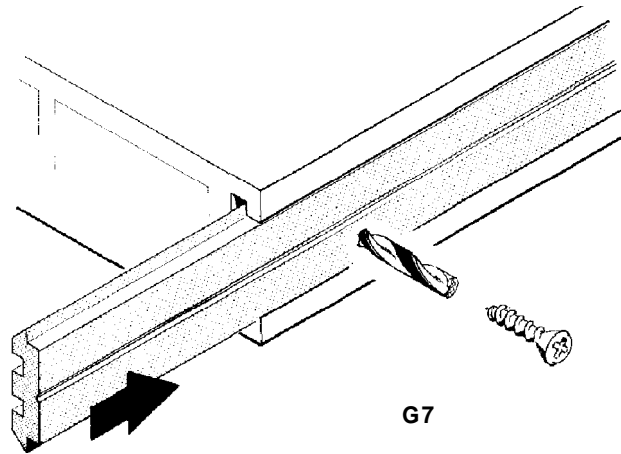
1. CI033 Self adhesive packer
2. CI526 Wedge packer Green
CI527 Wedge packer Blue
CI528 Wedge packer Black
3. CI490 Corner block

FITTING THE ALUMINIUM SECTIONS CONTINUED

E Blank off the screw holes by cutting the cover strips to the required lengths, and sliding them into the slots provided (V groove facing outwards). G7.

for the hinge Stile cut a 1357mm length of strip to slide between the hinges. Determine the length of strip required above and below the hinges when the door has been hung.

For the Locking Stile measure off the assembled door the lengths required.



F At each corner of the door only drill a 3.25mm dia hole through the cover strip and the mating face of the stile. Countersink the holes in the cover strips and secure each strip with a No. 6 x 1/2" long countersunk-head self-tapping screw. G7.

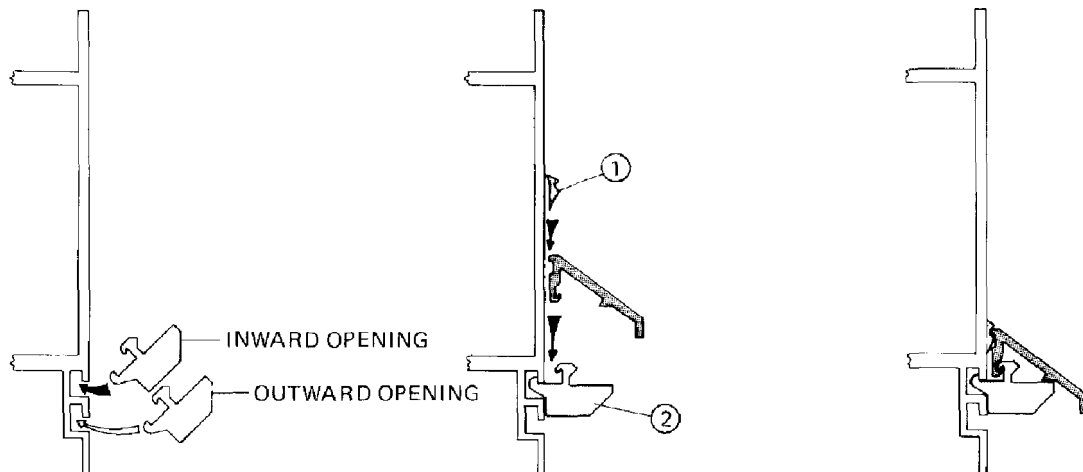
FITTING THE WEATHER BAR

A Measure the visible length of the Bottom rail between the two stiles.

Cut the black weatherseal ① to the measured length.

B Position the weather bar at the bottom of the door to suit the type of opening G8.

Secure the bar to the door using the 3No. plastic fixing clips ② and black weatherseal ①

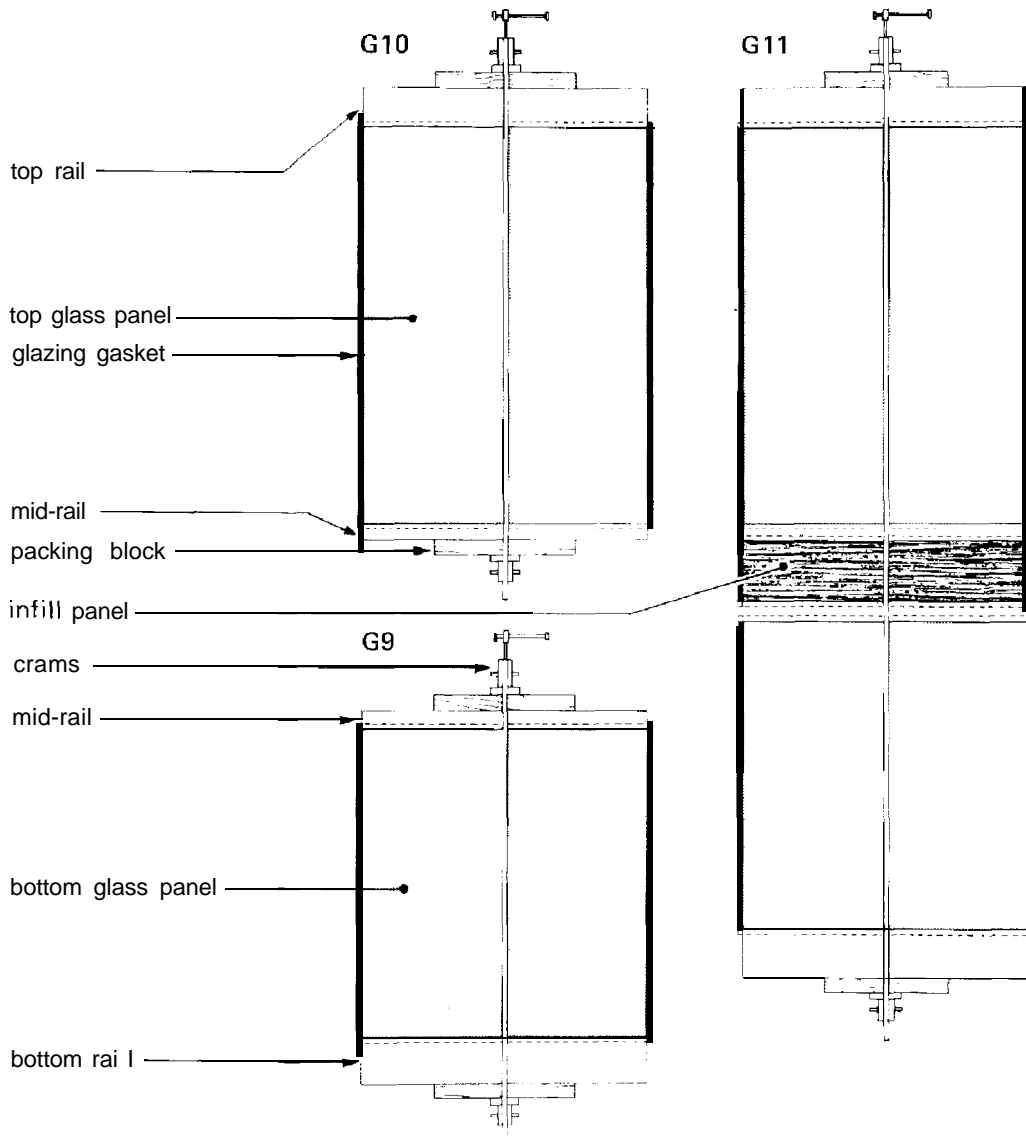


G8

GLAZING WITH MID-RAILS TYPE B – BL

IMPORTANT: READ THE HEEL AND TOEING PROCEDURE (PAGES 10.1 AND 10.2) BEFORE PROCEEDING.

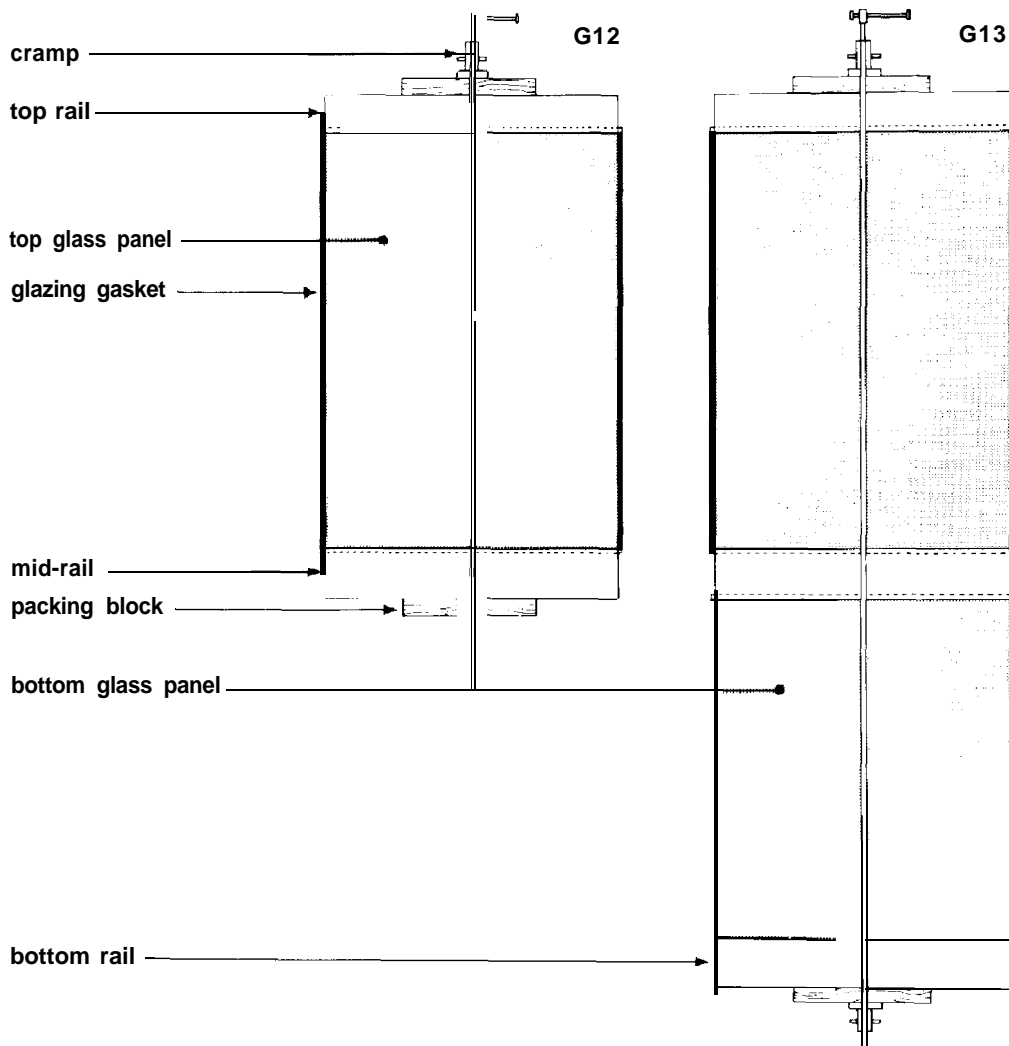
- A Carry out procedure described on page 9 of instructions for both glass panels and for infill panel.
- B Place one of the mid-rails and the bottom rail onto the appropriate edges of the bottom panel, leaving an equal amount of panel showing at either end. Carefully clamp the middle and bottom rails into position using 300mm minimum (12") packing blocks to prevent damage G9. Repeat this procedure using the remaining mid-rail, the top rail and the top glass panel G10.
- C Place the mid-rails of the above units onto the top and bottom edges of the infill panel leaving an equal amount of panel showing at either end. Position the infill panel by carefully cramping over the top and bottom rails using 300mm minimum (12") packing blocks to prevent damage G11
- D Follow procedure described on pages 10 and 11 of instructions, but before positioning the cover strips, secure the mid-rail sections by driving No.10x1½" pan head, self-tapping screws through the access holes in the vertical sections. Ensure that the joints are pulled tightly together.



GLAZING WITH MID-RAILS TYPE A – AL

IMPORTANT: READ THE HEEL AND TOEING PROCEDURE (PAGES 10.1 AND 10.2) BEFORE PROCEEDING.

- A Carry out procedure described on page 9 of instructions for both glass panels.
- B Place the top-rail and mid-rail sections onto the appropriate edges of the top panel leaving an equal amount of panel showing at either side. Carefully cramp the top rail and mid-rail into position using 300mm minimum (12”) packing blocks to prevent damage G12.
- C Offer the bottom panel onto the mid-rail and the bottom rail onto the appropriate edge of the bottom panel. Position the bottom panel by carefully cramping over the top and bottom rails using 300mm minimum (12”) packing blocks to prevent damage G13.
- D Follow procedure described on pages 10 and 11 of the instructions, but before positioning the cover strips secure mid-rail through access holes provided in vertical sections, using the M8 x 50mm long socket cap-head screws provided (No washers).



PREPARATION FOR RIM NIGHTLATCH

FOLLOW CLOSELY THE INSTRUCTIONS SUPPLIED WITH THE RIMLATCH USING THE BACKPLATE AS A TEMPLATE. DRILL TWO 3mm HOLES THROUGH THE **INSIDE** FACE OF THE STILE. USE THE No.6 x 1/2" LONG COUNTERSUNK-HEAD SELF-TAPPING SCREWS TO SECURE THE BACKPLATE TO THE STILE.

SPRING LATCH HANDING

MULTI-POINT AND MORTICE LOCKS

Before a door kit leaves the factory the handing of the spring latch must be checked and changed if necessary. This is best done on the bench before the door leaf is assembled.

To reverse the latch insert a 'Pozidriv' screwdriver into the screw (A) G14.1, push in and turn through 180° until the latch springs back into position.

After assembly G14.2

With the faceplate off grip the spring latch firmly with molegrips or similar, pull it clear of the lock body, turn it through 180° then release it carefully.

FIG. G14.1

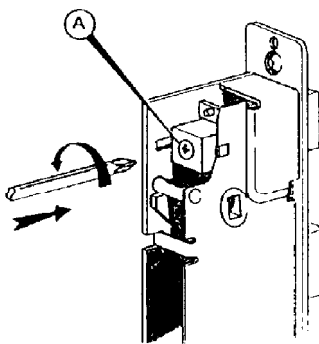
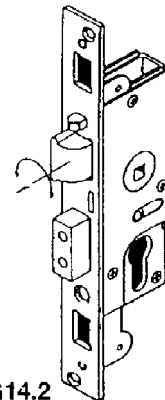


FIG. G14.2



FITTING THE HANDLES

STANDARD SPINDLE

- A. Attach the handle end caps (A), FIG. G15 with the screws provided.
- B. Place the square operating spindle through the lock ensuring that the flat on the spindle is in alignment with the grub screw. (B), FIG. G15.
- C. Slide each handle/cover plate over the square spindle and clip on to the end caps with firm hand pressure.
- D. Tighten the grub screws to firmly locate the handles on to the spindle.

NOTE: Tool No. G1466 is available if required to assist in the removal of the handle cover plates.

SPLIT SPINDLE

- A. Attach the handle end caps with the screws provided.
- B. From the outside face of the door feed the longer end of the split spindle assembly through the lock - ensuring the flats on the spindle are correctly aligned with the handle grub screws - until the washer on the spindle contacts the lock.

- C. Slide the internal handle onto the spindle, clip it onto the end caps, and - ensuring the washer stays in contact with the lock - tighten the grub screw.
- D. Install the outer handle as normal.
- E. Check the operation of the handles:

Inside handle operates the spring latch and hook locks.

Outside handle operates the hook locks ONLY. Use the key to operate the centre deadbolt and to withdraw the springlatch from the outside.

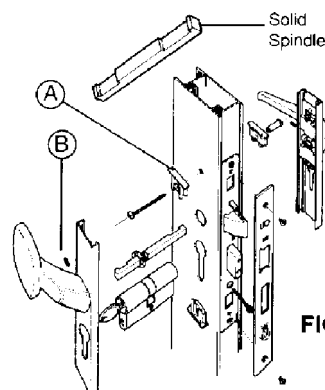


FIG. G15

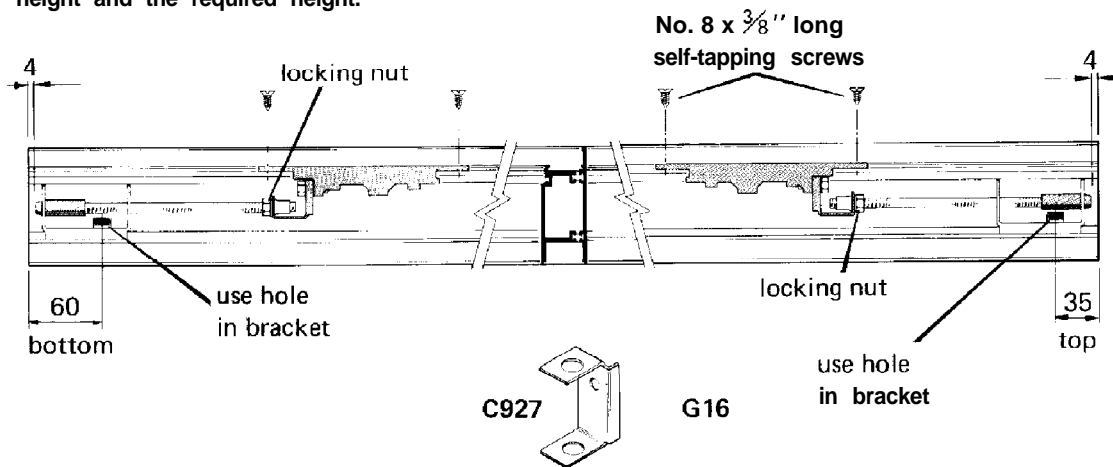
ASSEMBLY OF FLUSH BOLT FOR DOUBLE DOOR

NOTE: SHOOT BOLT LOCATORS C3121

A When glazing use the special angle brackets to secure the corner joints top and bottom on the meeting stile along with the single coil spring washer and M8 screw supplied G16.

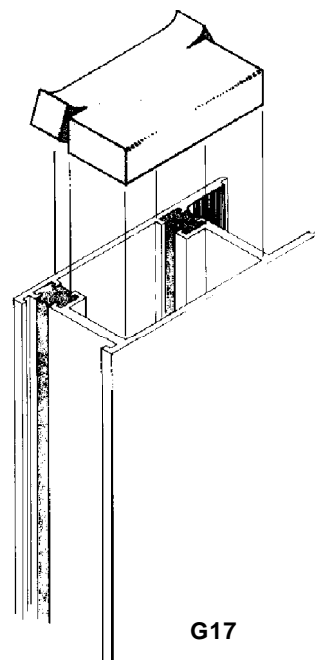
B Where no cut down is required assemble and fit the flush bolt in the Top and Bottom ends of the meeting stile as shown Fig. G16.

Where a cut down is required shorten the 5/16" screwed rod by the difference between the kit height and the required height.



FITTING THE STILE END CAPS

A Cut the white plastazote end caps and compress into the top ends of the locking and Hinge Stiles so that they remain flush with the top of the door.



STANDARD SIDE PANEL

For fitting a completed side panel into an aluminium subframe refer to booklet No. C2023 (Residential Door Section). This will cover all information required to install a side panel into an aluminium subframe.

A wooden subframe would require to be fabricated with provision for glueing and screwing a retaining bead to secure the panel in position. The thickness of a side panel is 36mm.

The following items are required to make up a side panel assembly.

ITEM	CODE	DESCRIPTION	QUANTITY
1	M705	Stile Section	Consult formulae
2	M715	Top rail Section	Consult formulae
3	M707	Bottom rail Section	Consult formulae
4	No. 10 x 1"	Pan-head self-tapping screw (F26)	4

GLASS SCHEDULE

H = overall height of aluminium frame W = overall width of aluminium frame

WITHOUT MID-RAIL

GLASS	
WIDTH	HEIGHT
W-54	H-88

FOR USE IN ALUMINIUM OR
WOOD SUBFRAMES

NOTE: FOR ALUMINIUM SUBFRAME
WIDTH CALCULATIONS SEE MANUAL C2023

WITH MID-RAIL

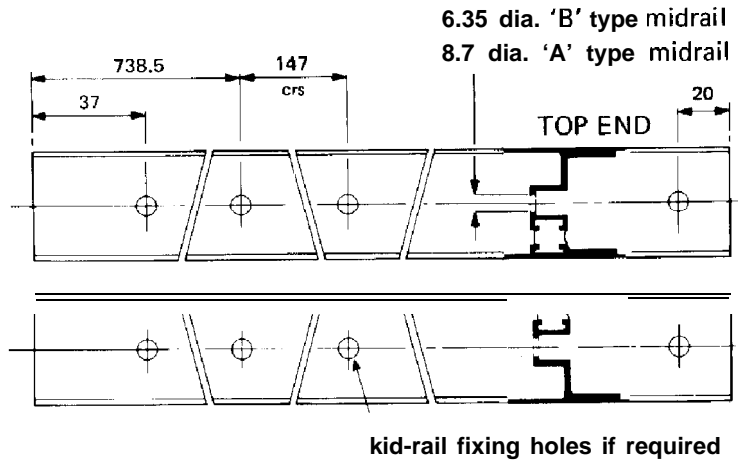
TYPE	WOOD SUBFRAME			ALUMINIUM SUBFRAME	
	GLASS WIDTH	GLASS HEIGHT		GLASS HEIGHT	
		TOP PANEL	BOTTOM PANEL	TOP PANEL	BOTTOM PANEL
A-AL	w-54	H-956	787	H-942	773
B-BL	w-54	H-926	670	H-912	656

COMPONENT LENGTH FORMULAE

COMPONENT	LENGTH	
	WOOD SUBFRAME	ALUMINIUM SUBFRAME
Stiles	As rebate height less any fitting allowance	For these details refer to aluminium subframe booklet No. C2023
Top--Bottom and Mid-Rails	w - 74	

CUTTING AND PREPARATION DETAILS

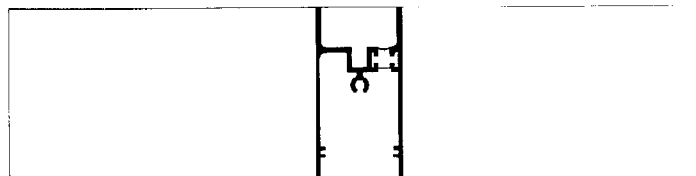
STILES



TOP RAIL



BOTTOM RAIL



GLAZING

A Carry out the glazing procedure described on page $\frac{WP}{K}$ of these procedures placing the top and bottom rails on the panel first. Secure the corner joints with No. 10 x 1 1/2" pan-head self-tapping screws.

PANEL VENTILATORS

- A. Prepare the top end of the stiles as shown.
- B. When cutting down dismantle the complete assembly and cut down each extrusion separately using a common stop to ensure equality of lengths.
- C. Re-assemble and check that the vent functions correctly. (See G18 overleaf).

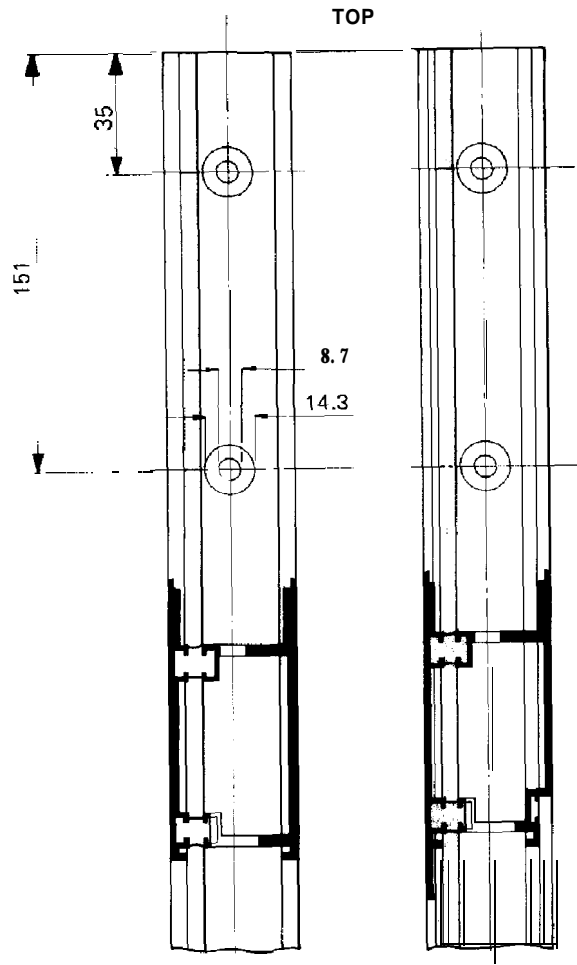
WARNING:
WHERE CUTTING DOWN FROM ONE END WOULD EITHER FOUL THE MAGNET AND KEEP PLATE OR BRING THEM CLOSE TO A BRACKET, DIVIDE THE AMOUNT OF **CUTDOWN** BY TWO AND CUT DOWN EACH END OF THE MAGNET HOUSING SECTION AND FLAP BY THAT AMOUNT.

- D. For assembly on to glass panel, ease on to the top edge of the glass panel using hand pressure, but DO NOT use a mallet or sash cramps at this stage.
- E. Glaze the rest of the panel in the normal way and where sash cramps or a mallet becomes necessary across the height, support the full length of the top rail with a sturdy piece of timber.
- F. Fix the top rail and ventilator to the stiles using the self-tapping screws provided.

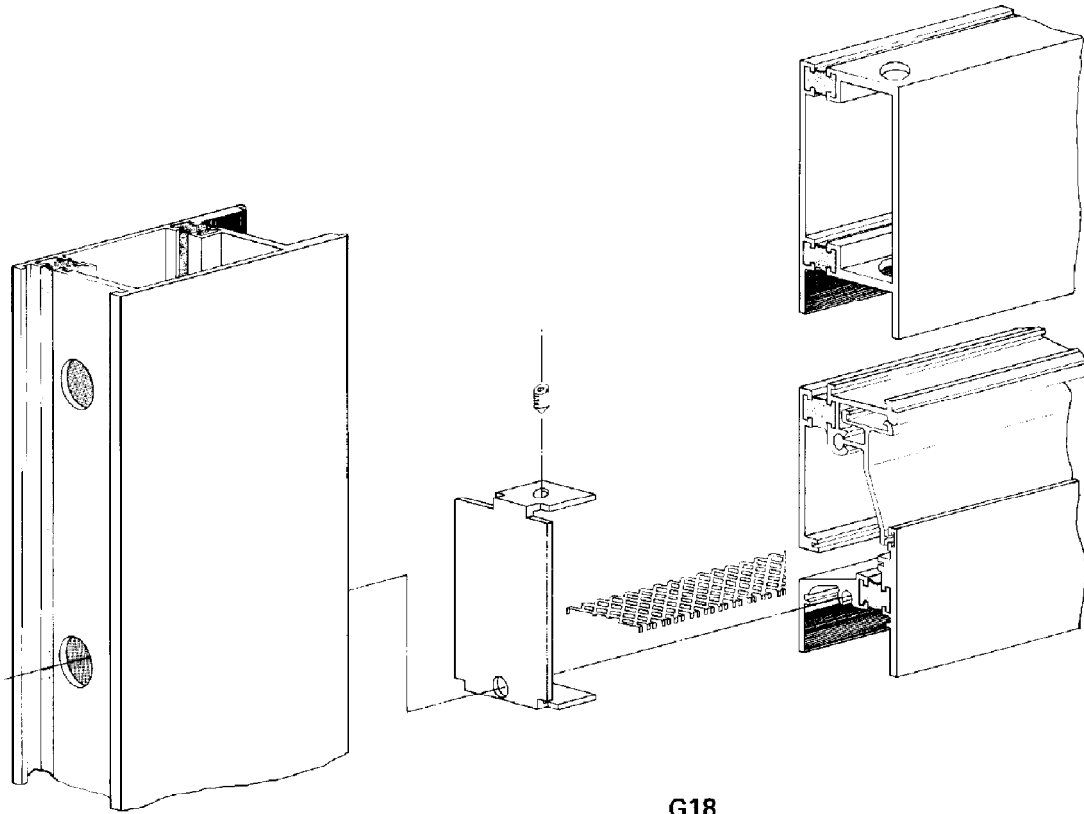
WARNING:
ON COMPLETION OF GLAZING CHECK ONCE **AGAIN** THAT THE VENTILATOR FUNCTIONS CORRECTLY AND THAT THE FLAP IS OPERABLE FROM THE INSIDE FACE OF THE PANEL.



PANEL VENTILATORS CONTINUED



PANEL VENT ASSEMBLY



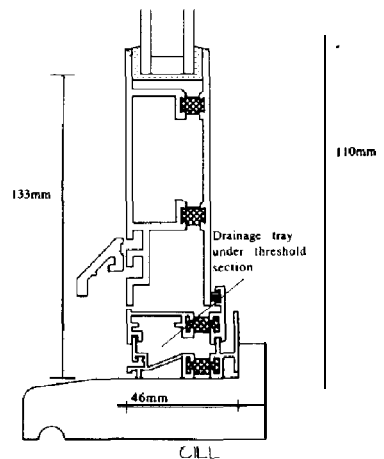
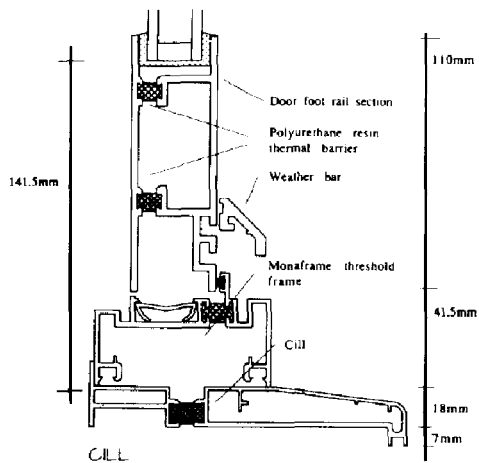
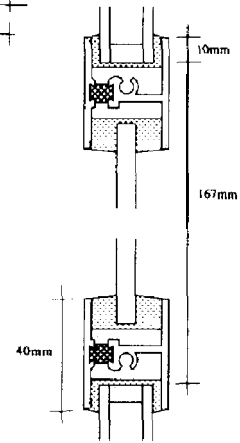
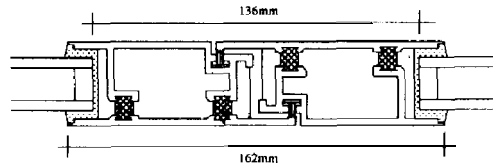
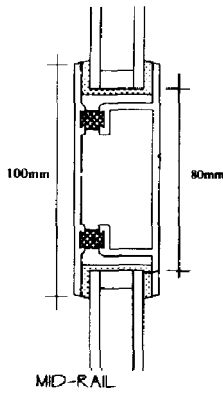
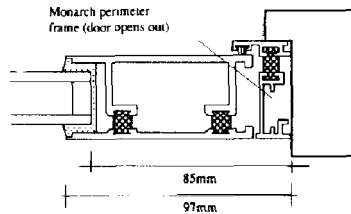
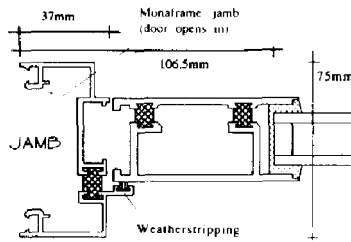
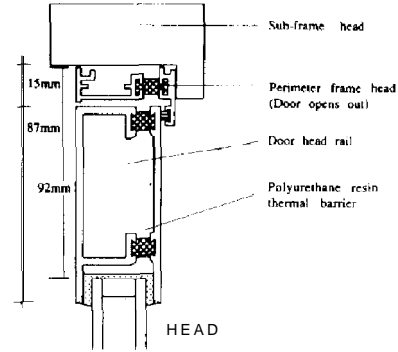
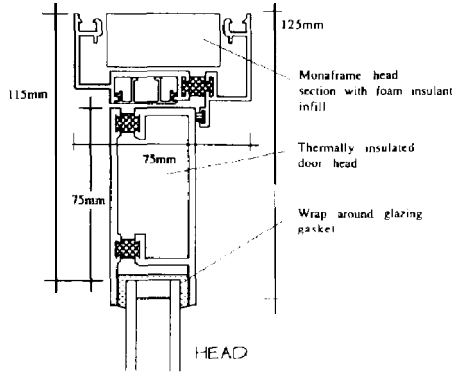
G18



MONAFRAME

SUB-FRAME

TERMAL
NON THERMAL
ARE IDENTICAL



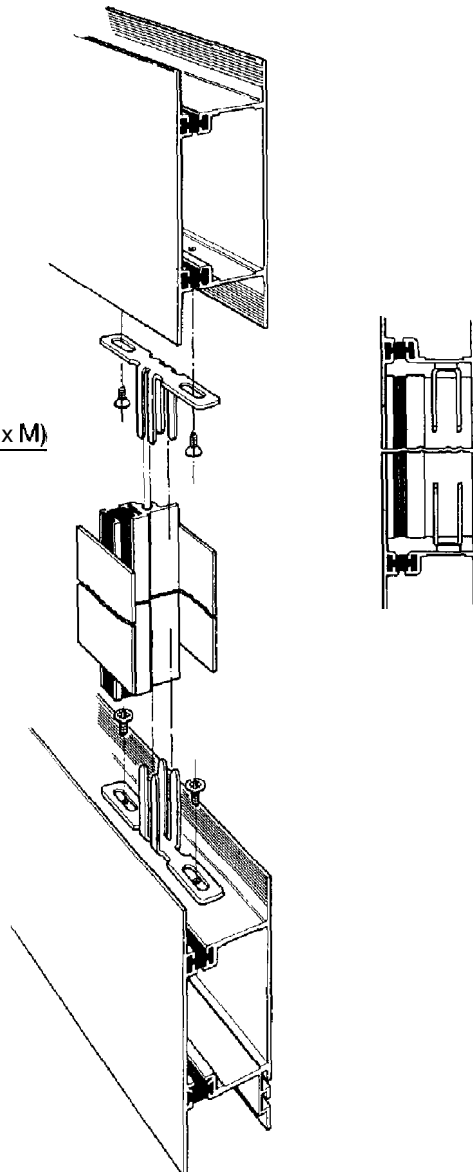
FIXING OF VERTICAL MULLIONS IN DOOR LEAF

The 'H' section extrusion (M715) is often used to vertically split door leaves into several panels, either full height or above and below an 'A' type midrail.

On full height models both ends can be screw fixed. However, when midrails are involved this is not possible at the midrail ends.

To provide a positive location the thermal patio fixed interlock top bracket (AI 103) can be used as shown in the following illustration. Use No 8 x 1/2" pozi pan head screws (AF18) to fix the brackets.

For added strength and a neater finish the flanges of the mullion can be milled back by 1 Omm as well, and the joint sealed with suitable sealant.



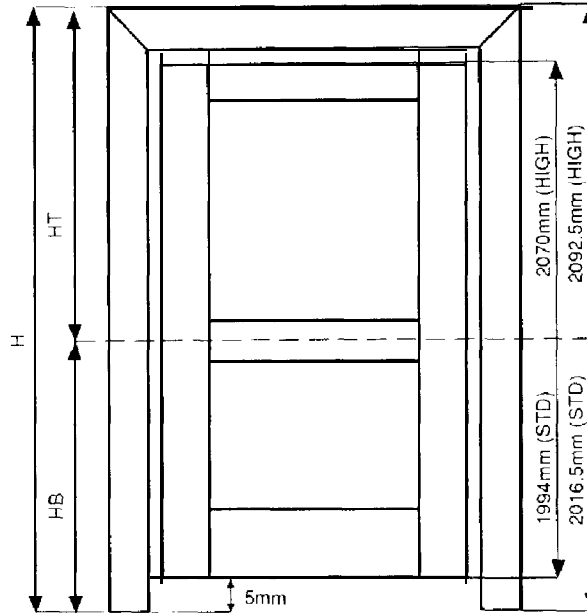
EFFECTIVE WIDTH OF MULLION = 20mm

∴ GLASS WIDTH PER PANEL ≈

$$\frac{\text{FULL GLASS WIDTH (NO MULLIONS)} - (20 \times M)}{P}$$

WHERE M = NUMBER OF MULLIONS
P = NUMBER OF PANELS

WOODFIX GOAL POST DOOR



Where a door is required minus drainage tray, cill and with a 5mm gap from underside of jambs, the following procedure should be used:-

1. Lay out components and establish handing required;
2. From the bottom of the kit as handed square cut jambs:-
 - a. Reduce jamb length to 2016.5mm (Std. kit);
 - b. Reduce jamb length to 2092.5mm (High kit);
3. From the bottom of the stiles:-
 - a. Reduce stile length to 1994mm and re-prep bottom rail fixing hole (Std. kit);
 - b. Reduce stile length to 2070mm and re-prep bottom rail fixing hole (High kit);
4. For further reduction in height:-
 - a. Mitre cut jamb from the top to the new length required;
 - b. The stile length, cutting from the top only, will be the same reduction as the jamb.
5. Glass formulae:-

Note: All dimensions taken from the outer end of jambs to centre line of midrail ('B' midrail to centre line of infill panel).

	'A' Midrail	'B' Midrail
Full height pane	H- 197	H- 197
Top pane	HT - 132.5	HT- 176
Bottom pane	HB - 144.5	HB - 188

Note: Handle and midrail heights will now be 41mm lower than normal height.

IMPORTANT

TO ENSURE THAT THE RESIDENTIAL DOOR FUNCTIONS PERFECTLY, THE WOODEN SUBFRAME AND ALUMINIUM OUTER FRAME MUST BE INSTALLED AS DETAILED IN THESE INSTRUCTIONS. DO NOT PROCEED TO STAGE 4 UNTIL YOU HAVE CHECKED THAT STAGES 1- 3 HAVE BEEN COMPLETED CORRECTLY.

STAGE 1 - INSTALLING THE WOODEN SUB-FRAME

- A. Check that the masonry opening is to the correct size; then place the sub-frame in position.
- B. Pack out where necessary and use rule, plumb-line and spirit level to make sure the internal dimensions are correct, the sub-frame square, the upright members truly vertical and the top and bottom members perfectly flat.
- C. Confirm the squareness of the sub-frame by checking that the diagonals are identical. FIG 1. If they are unequal adjust the frame and recheck.
- D. Secure the sub-frame to the masonry using additional packing where necessary
- E. Recheck with rule, plumb-line and spirit level to ensure the sub-frame is perfectly square and truly vertical.
- F. Seal between the masonry and wooden sub-frame with silicon or equivalent sealant to create a weathertight joint.

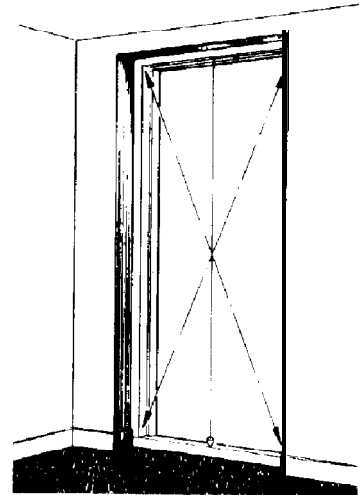


FIG. 1

NB If an existing wooden sub-frame is being used, check that it is sound and ensure that points B and C above are correct.

STAGE 2 - ASSEMBLING THE ALUMINIUM OUTER FRAME

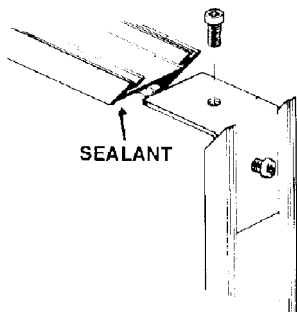


FIG. 2

A. Lay the frame sections on a flat surface in the order in which they are to be assembled taking care to ensure that adequate protection is used to prevent damage to the faces of the extrusions.

B. Tap the corner cleats into both ends of each jamb and secure by tightening the screws. FIG. 2.

C. Apply small gap sealant to the ends of the head and cill and push them on to the appropriate cleat making sure that the mitred ends butt tightly. FIG. 3. Tap lightly with a rubber faced mallet if necessary. Secure the cleats by tightening the screws.

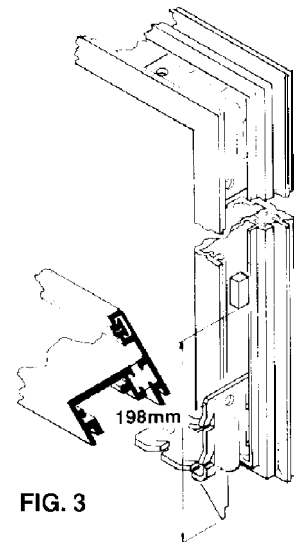


FIG. 3

STAGE 3 - INSTALLING THE ALUMINIUM OUTER FRAME

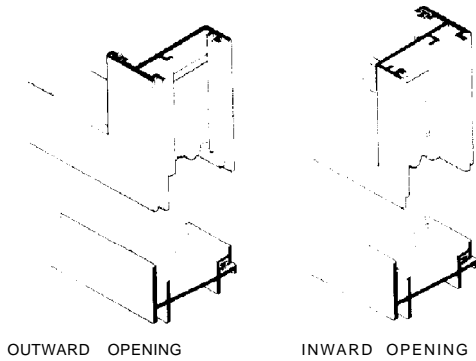


FIG. 4

A. Apply silicon or equivalent sealant to the inner under channel of the drainage tray and place it into position in the sub-frame. FIG. 4.

B. Apply silicon or equivalent sealant to each end of the drainage tray to ensure a fully water-tight seal between the ends of the tray and the wooden sub-frame.

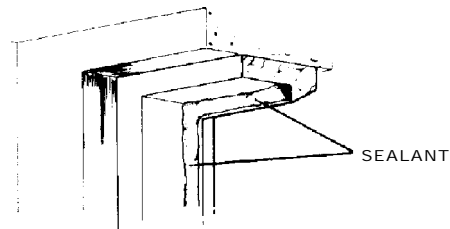


FIG. 5

C. Apply silicon or equivalent sealant into the rebate of the sub-frame. FIG. 5.

D. Offer the base of the aluminium outer frame to the sub-frame, swing it upright into position and press it firmly against the back of the sealant coated rebate. FIG. 6.

Secure the outer frame by driving countersunk-head screws through the ready-made holes using No.8 x 1 1/2" long on the head and jambs, No.8 x 2" long on the cill. Fixings not supplied.

E. Re-check again with rule, plumb-line and spirit level to ensure that the entire assembly is perfectly square. Measure the diagonals of the aluminium outer frame and ensure that they are equal. Check that the horizontal members are level and the upright members vertical.

F. Apply a final bead of silicon or equivalent sealant under the front edge of the drainage tray.

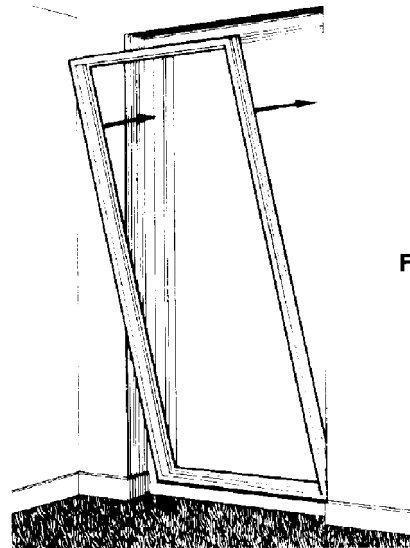


FIG. 6

STAGE 4 - INSTALLING THE DOOR LEAF

IMPORTANT

SUPPORT THE WEIGHT OF THE DOOR LEAF TO PREVENT DAMAGE TO THE THREADED HOLES IN THE HINGE STILE.

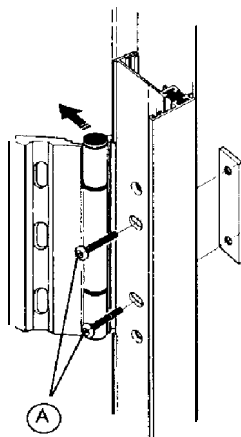


FIG. 7

A. Push the hinges fully into the jamb and tighten the button head screws (A).

B. Hang the door leaf on the hinges using the M6 x 20mm countersunk socket cap screws.

C. Check the door closes smoothly. If the door binds or there is undue resistance slacken off the button head screws and move the hinges away from the jamb upstand - tighten the screws.

D. When the door is closing smoothly use a 5.5mm drill to make clearance holes in the hinges using the prepared holes in the jamb as guides. Countersink the jamb then lock the assembly by fitting the No. 8x1 1/2" CSK woodscrews. 2 per hinge.

NB For double doors repeat the procedure for each door leaf.

STAGE 5 - FITTING THE HANDLES

STANDARD SPINDLE

- A. Attach the handle end caps (A). FIG. 8 with the screws provided.
- B. Place the square operating spindle through the lock ensuring that the flat on the spindle is in alignment with the grub screw. (B), FIG. 8.
- C. Slide each handle/cover plate over the square spindle and clip on to the end caps with firm hand pressure.
- D. Tighten the grub screws to firmly locate the handles on to the spindle.

NB Tool No C1466 is available if required to assist in the removal of the handle cover plates.

SPLIT SPINDLE

- A. Attach the handle end caps with the screws provided.
 - B. From the outside face of the door feed the longer end of the split spindle assembly through the lock - ensuring the flats on the spindle are correctly aligned with the handle grub screws - until the washer on the spindle contacts the lock.
 - C. Slide the internal handle onto the spindle, clip it onto the end caps, and - ensuring the washer stays in contact with the lock-tighten the grub screw.
 - D. Install the outer handle as normal
 - E. Check the operation of the handles:
 - Inside handle operates the spring latch and hook locks.
 - Outside handle operates the hook locks
- ONLY.** Use the key to operate the centre deadbolt and to withdraw the springlatch from the outside.

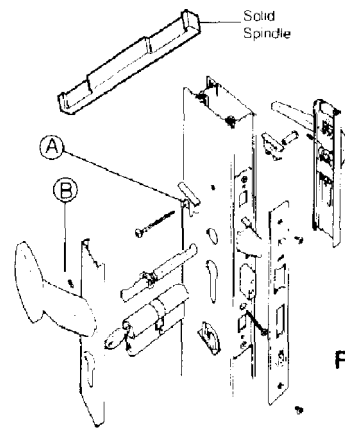


FIG. 8

TO CHANGE HANDING OF THE INTERNAL SNIB HANDLE

(HANDLE ASSEMBLIES AI 570 / 1571)

To reverse the Internal 'snib' handle rotate the handle through 180 degrees as shown. Fig. 9.1

OPERATION With one hand depress the handle to approximately 45 degrees while sliding the snib button down with the other hand until you feel the retaining mechanism engage.

IMPORTANT NOTE

There are two 'hold back' positions. Always check that you have depressed the handle enough to engage the lower one by looking to see that the spring latch is being held in the fully withdrawn position i.e. it will clear the keep when the door is closed.

TO CHANGE HANDING OF THE SPRING LATCH

Remove faceplate (if fitted).

Using molegrips, or similar pliers: Fig. 9.3

- firmly grab the springlatch,
- pull it out of the lock just enough to clear the casing,
- rotate it 1/2 a turn,
- gently relocate it in the casing
- refit the faceplate.

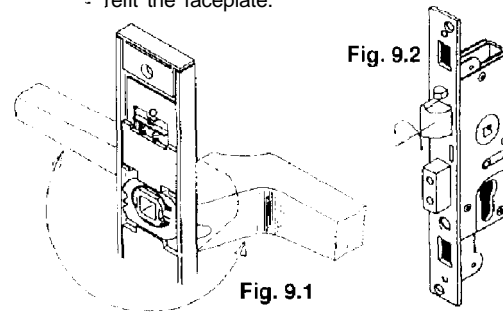


Fig. 9.1

Fig. 9.2

STAGE 6 - FITTING THE RIMLATCH AND STAPLE (24mm DOORS ONLY)

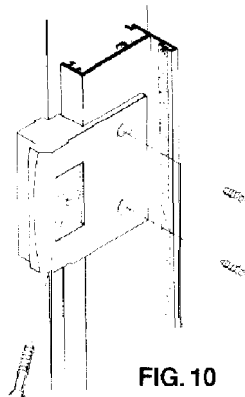


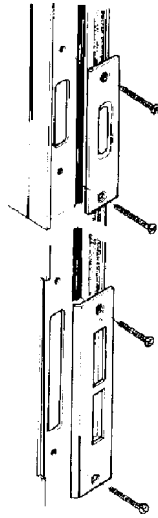
FIG. 10

- A. Follow the instructions enclosed with the rimlatch, securing the backplate with the No.6 x 1/2" long countersunk-head self-tapping screws provided.
- B. With the door in the closed position, line up the staple with the rimlatch and mark its position on the locking jamb. File off the small lip locally to allow the staple to sit flush against the face of the jamb.
- C. Rebate the sub-frame locally to accept the staple and use the staple as a template to drill two 3mm diameter holes through the outer frame. Fit the No.8 x 1/2" long countersunk self-tapping screws provided.
- D. Secure the staple to the timber sub-frame with a No.8 x 1 1/2" long countersunk-head screw. FIG. 10.

STAGE 7 - FITTING THE LOCK KEEPS

NOTES

1. The same strike plates are used for the Mortice lock and the Multipoint lockcentre units.
2. Double door strike plates are factory fitted using M4 Pozi CSK M/C screws into rivnuts.
3. The fitting instructions for the optional shootbolt pack are included with the accessory pack.



SINGLE DOORS

Fix the top, centre and bottom strike plates through the prepared holes in the jamb into the subframe with suitable countersunk screws (not supplied). FIG 11.1



DOUBLE DOOR

Strike plates are factory fitted. FIG 11.2.

FIG. 11.1.

FIG. 11.2.

STAGE 8 - FITTING THE SHOOT BOLT LOCATION PLATE (DOUBLE DOORS ONLY)

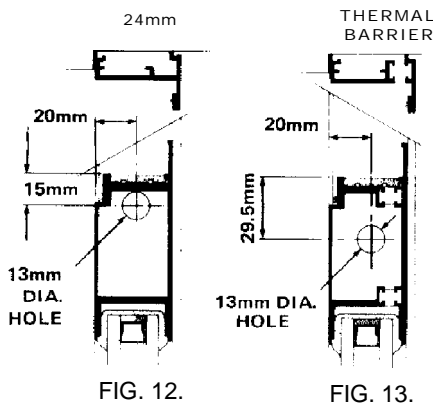


FIG. 12.

FIG. 13.

A. Close the door leaf carrying the shoot bolts and carefully mark in pencil the position of the stile on the head and cill

B. Mark the centre position of the shoot bolt as detailed in FIGS. 12 and 13. Drill a 13mm diameter hole in the head and cill taking care not to drill into drainage tray.

C. Locate the shoot bolt location plates over the 13mm diameter holes and fix in position as detailed in FIG. 14 using No.8 x 3/8" countersunk, self-tapping screws. Adjust as necessary to ensure the door closes firmly against the seals.

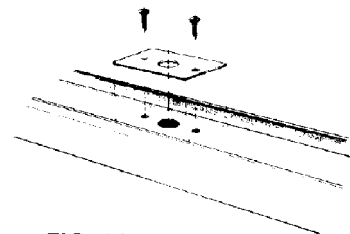


FIG. 14.

STAGE 9 - INSTALLING THE SIDE PANEL

A. Apply silicon or equivalent sealant into the rebate of the sub-frame.

B. Offer the complete panel into the sub-frame and press hard into the sealant coated rebate. Retain in position all round with a suitable timber beading section. FIG. 15.

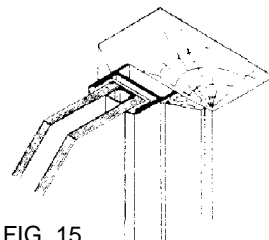


FIG. 15.

STAGE 10 - FINISHING OFF

A. Provide awatertight seal with silicon or equivalent sealant between masonry, sub-frame and aluminium frame.

B. Remove any excess sealant and clean down with warm soapy water as necessary.



Monarch Aluminium Limited has been granted the BSI Registration of Firms of Assessed Capability in accordance with BS EN ISO 9001:1994



Granges Building Systems Limited
Ashchurch, Tewkesbury, Gloucestershire GL20 8NB
Telephone 01684 853500 Fax 01684 293904





STANDARD REQUIREMENTS

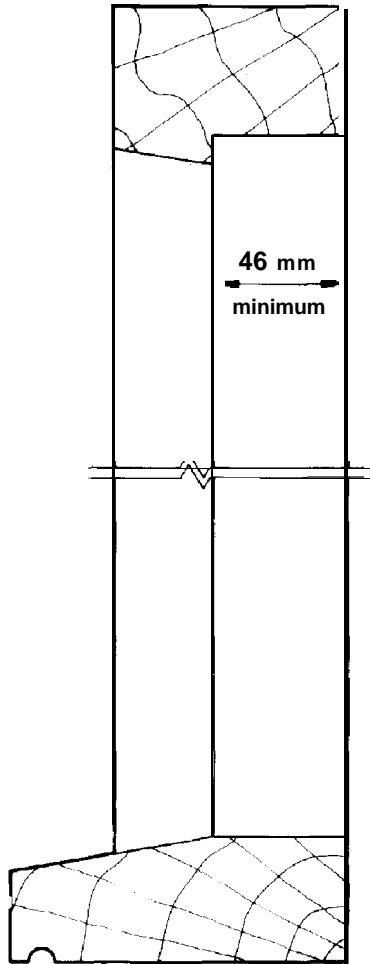
- ① CROSS-CUT OR PIVOT SAW WITH MINIMUM TRAVERSE FOR 100mm (4") SECTION.
NOTE!
TUNGSTEN TIPPED SAW-BLADES. (REQUIRE LESS SHARPENING AND GIVE LONGER WORKING LIFE).
- ② ELECTRIC/HAND DRILL.
- ③ FELT OR RUBBER COVERED GLAZING BENCH.
- ④ SASH CRAMP AND EXTENSION BAR TO GIVE MINIMUM HOLD OF 2440mm (8' 0").
- ⑤ No. 2 POINT 'POZIDRIV'SCREWDRIVER.
- ⑥ CUTTING WAX FOR SCREW GROOVES.

RECOMMENDED REQUIREMENTS

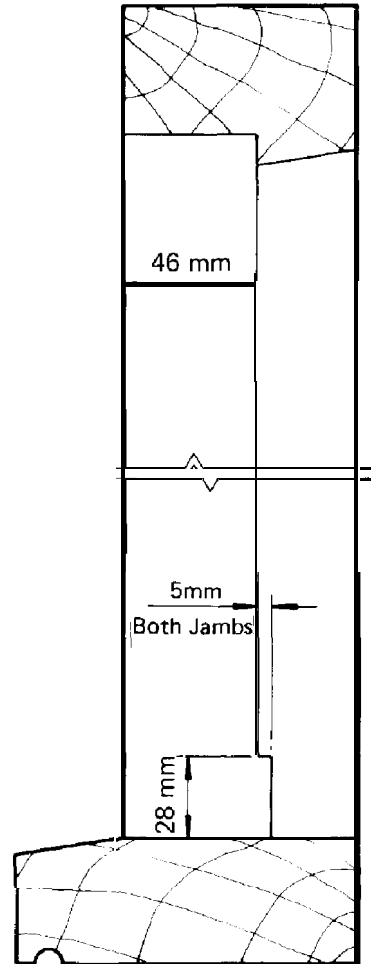
- ⑦ STILE & RAIL DRILL JIG + DRILL — **C928**
- ⑧ SIMPLE PILLAR DRILL + BENCH,
- ⑨ ALLEN KEY SET. **A601**

Gränges Building Systems Limited
Ashchurch, Tewkesbury, Gloucestershire, GL208NB
Tel: **(01684) 853500** Fax: (01684) 293904

REBATING DETAILS FOR TIMBER SUB-FRAMES



INWARD OPENING



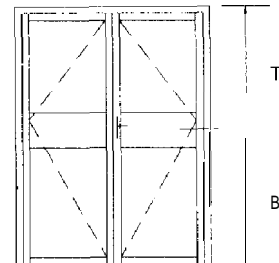
OUTWARD OPENING

STANDARD MIDRAIL HEIGHTS - underside of frame to centre of midrail

A - 887.5mm
B - 814mm

GLASS BREAKDOWN FOR NON-STANDARD MIDRAIL HEIGHTS

	STANDARD		NO DRAINAGE TRAY	
	A	B	A	B
TOP PANE (T)	T-I 32.5	T-I 76	T-I 32.5	T-176
BOTTOM PANE (B)	B-i 73.5	B-217	B-I 59.5	B-203





GLASS SCHEDULE AND GASKET CALL UP FOR DOORS WITHOUT PANEL VENTILATOR

WITHOUT MID-RAIL

WOOD SUB-FRAME		ALUM SUB-FRAME		GLASS		GASKET/ KIT
KIT SIZE WIDTH	HEIGHT	KIT SIZE WIDTH	HEIGHT	WIDTH	HEIGHT	
838	2057	838	2043	669	1831	5.1m
914	2057	914	2043	745	1831	5.2m
1638	2057	1638	2043	667	1831	10.2m
914	2133	914	2119	745	1907	5.3m
1790	2133	1790	2119	743	1907	10.6m

WITH MID-RAIL

WOOD SUB-FRAME		ALUM SUB-FRAME		MID-RAIL TYPE	TOP PANE		BOTTOM PANE		GASKET/ KIT
KIT SIZE WIDTH	HEIGHT	KIT SIZE WIDTH	HEIGHT		WIDTH	HEIGHT	WIDTH	HEIGHT	
838	2057	838	2043	A or AL	669	1036	669	715	6.4m
914	2057	914	2043	A or AL	745	1036	745	715	6.5m
1638	2057	1638	2043	A or AL	667	1036	667	715	12.8m
914	2133	914	2119	A or AL	745	1112	745	715	6.6m
1790	2133	1790	2119	A or AL	743	1112	743	715	13.2m
838	2057	838	2043	B or BL	669	1066	669	598	6.2m
914	2057	914	2043	B or BL	745	1066	745	598	6.4m
1638	2057	1638	2043	B or BL	667	1066	667	598	12.4m
914	2133	914	2119	B or BL	745	1142	745	598	6.4m
1790	2133	1790	2119	B or BL	743	1142	743	598	12.8m

MID-RAIL INFILL PANELS

WOOD SUB-FRAME		ALUM SUB-FRAME		TYPE	INFILL PANELS WOOD AND ALUM SUB-FRAMES	
KIT SIZE WIDTH	HEIGHT	KIT SIZE WIDTH	HEIGHT		WIDTH	HEIGHT
838	2057	838	2043	B or BL	669	127
914	2057	914	2043	B or BL	745	127
1638	2057	1638	2043	B or BL	667	127
914	2133	914	2119	B or BL	745	127
1790	2133	1790	2119	B or BL	743	127



GLASS FORMULAE FOR NON-STANDARD DOORS

24mm STANDARD RESIDENTIAL DOORS

WITHOUT MID-RAIL

WOOD SUB-FRAME

DOOR TYPE	GLASS WIDTH	GLASS HEIGHT
SINGLE LEAF	W-169	H-226
DOUBLE LEAF	$\frac{W-304}{2}$	H-226

ALUMINIUM SUB-FRAME

DOOR TYPE	GLASS WIDTH	GLASS HEIGHT
SINGLE LEAF	W-169	H-212
DOUBLE LEAF	$\frac{W-304}{2}$	H-212

WITH 3 EQUAL PANELS

WOOD SUB-FRAME

DOOR TYPE	GLASS WIDTH	GLASS HEIGHT
SINGLE LEAF	W-169	$\frac{H-266}{3}$
DOUBLE LEAF	$\frac{W-304}{2}$	$\frac{H-266}{3}$

ALUMINIUM SUB-FRAME

DOOR TYPE	GLASS WIDTH	GLASS HEIGHT
SINGLE LEAF	W-169	$\frac{H-252}{3}$
DOUBLE LEAF	$\frac{W-304}{2}$	$\frac{H-252}{3}$

WITH MID-RAIL

WOOD SUB-FRAME

DOOR TYPE	MID-RAIL TYPE	TOP PANE		BOTTOM PANE	
		WIDTH	HEIGHT	WIDTH	HEIGHT
SINGLE LEAF	A or AL	W-169	H-1021	W-169	715
DOUBLE LEAF	A or AL	$\frac{W-304}{2}$	H-1021	$\frac{W-304}{2}$	715
SINGLE LEAF	B or BL	W-169	H-991	W-169	598
DOUBLE LEAF	B or BL	$\frac{W-304}{2}$	H-991	$\frac{W-304}{2}$	598

WITH MID-RAIL

ALUMINIUM SUB-FRAME

DOOR TYPE	MID-RAIL TYPE	TOP PANE		BOTTOM PANE	
		WIDTH	HEIGHT	WIDTH	HEIGHT
SINGLE LEAF	A or AL	W-169	H-1007	W-169	715
DOUBLE LEAF	A or AL	$\frac{W-304}{2}$	H-1007	$\frac{W-304}{2}$	715
SINGLE LEAF	B or BL	W-169	H-977	W-169	598
DOUBLE LEAF	B or BL	$\frac{W-304}{2}$	H-977	$\frac{W-304}{2}$	598

MID-RAIL INFILL

FOR WOOD AND ALUMINIUM SUB-FRAMES

DOOR TYPE	MID-RAIL TYPE	PANEL	
		WIDTH	HEIGHT
SINGLE LEAF	B or BL	W-169	127
DOUBLE LEAF	B or BL	$\frac{W-304}{2}$	127

NOTE

When a panel ventilator is to be fitted, deduct 90mm from the height of the appropriate glass panel.

N. B. All dimensions are in millimetres unless otherwise stated.



FORMULAE TO CALCULATE COMPONENT LENGTHS

24mm STANDARD RESIDENTIAL DOORS

Notes

- 1 All dimensions are in mm.
- 2 Where components have an angled bar-end preparation dimensions are taken over longest edge of the angle.
- 3 W is total metal-to-metal width of entrance door outer frame.
- 4 H is total metal-to-metal height of entrance door outer frame.
- 5 Please use cutting schedule after reading cutting down details in Monarch Workshop procedure manual for Entrance Door.

FOR ALUMINIUM SUB-FRAMES ONLY

It is advisable to leave 1mm clearance between the door outer frame and the aluminium sub-frame, on width and height, to facilitate fitting without damaging the sub-frame. It should also be noted that a drainage tray is not used with an aluminium sub-frame.

SPECIAL NOTE 1

Before cutting down **and/or** glazing, be sure to decide on the handing and opening direction of the door.

SPECIAL NOTE 2

Double doors for frame widths of 1450mm or less an extra 1mm should **be** taken off all rails, **i.e. 2mm** Total.

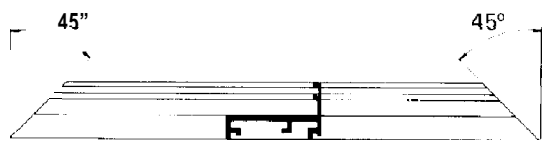
COMPONENT	SINGLE DOOR		DOUBLE DOOR	
	WOOD SUB-FRAME	ALUM SUB-FRAME	WOOD SUB-FRAME	ALUM SUB-FRAME
Head	W	W	W	W
Cill	W	W	W	W
Drainage tray	W	--	W	--
Rail: top	W-189	W-189	$\frac{w-344}{2}$	$\frac{w-344}{2}$
middle	W-189	W-189	$\frac{w-344}{2}$	$\frac{w-344}{2}$
bottom	W-189	W-189	$\frac{w-344}{2}$	$\frac{w-344}{2}$
Jamb: locking	H-14	H	--	--
hinge	H-14	H	H-14	H
Stile: locking	H-51	H-37	H-51	H-37
hinge	H-51	H-37	H-51	H-37
Weather Bar(s) for inward opening door	W-58		One @ W - (218 + Rail Length) One @ W - (188 + Rail Length)	
Weather Bar(s) for outward opening door	w-33		One @ W - (206 + Rail Length) One @ W - (176 + Rail Length)	

} See Special Note 2

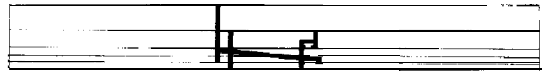
CUTTING DOWN HORIZONTAL SECTIONS

HEAD CILL & DRAINAGE TRAY

Calculate the difference between the kit width and the required width, divide it by 2 and cut down each end by that amount.



HEAD & CILL



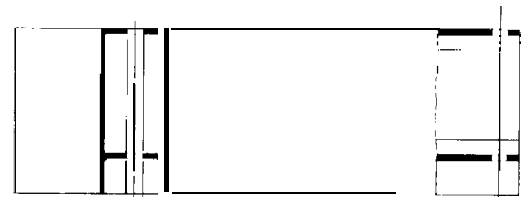
DRAINAGE TRAY

**RAILS (INCLUDING TYPE A MID-RAIL):
SINGLE DOOR/DOUBLE DOOR**

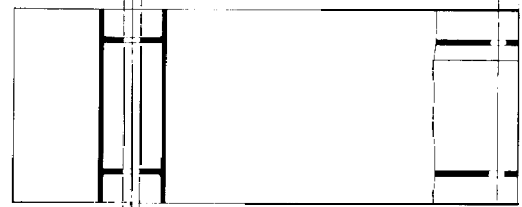
Remove the tension block from the plain end of each rail.

Calculate the new length required and cut down the unprepared end to this length.

Drill 2 x $\varnothing 8.0$ mm holes 10mm in from the cut down end. ENSURE THAT THEY ARE DRILLED IN LINE BY USING DRILLING JIG. C928.



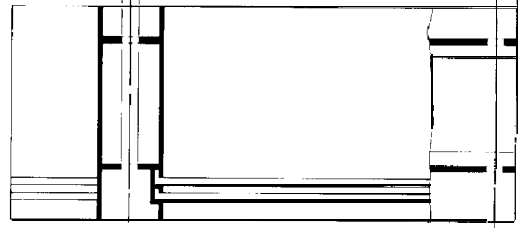
TOP RAIL



MIDRAIL

$\varnothing 8$

10



BOTTOM RAIL

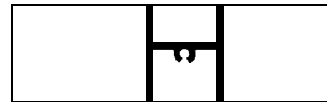
HORIZONTAL SECTIONS CONTINUED**MID-RAIL: TYPE AL**

Calculate the new length (remove tension block pack from mid-rail) cut **down the mid-rail** by an equal amount either side. Prepare ends to suit.

N.B. The equal cutting is important to maintain the letterplate central.

MID-RAIL: TYPE B and BL

Calculate the cut down required. Cut down each rail, from one end only, by that amount.

**MID-RAIL B & BL****WEATHER BAR: OUTWARD OPENING**

For a STANDARD width door no preparation is required.

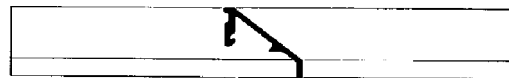
For a NON-STANDARD width SINGLE door calculate the cut down required and remove that amount from one end of the bar.

For a NON-STANDARD width DOUBLE door calculate the cut down required, divide it by 2 and remove that amount from one end of each bar.

WEATHER BAR: INWARD OPENING

For a STANDARD width door remove 25mm from one end of the bar, 12mm from each bar on a double door.

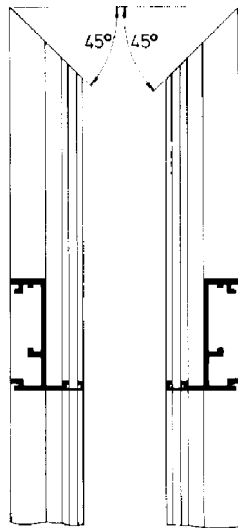
For a NON STANDARD width door calculate the cut down amount(s) as for outward opening but increase the final cutdown amount(s) by an EXTRA 25mm. on single door bar and 12mm on each double door bar.

**WEATHER BAR**

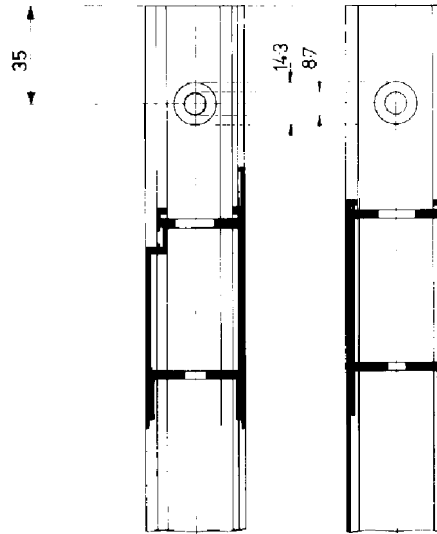
CUTTING DOWN VERTICAL SECTIONS

JAMBS & STILES

Cut down from the TOP only calculate the new length required and cut the sections to these lengths and if necessary re-prepare the ends.



HINGE/LOCKING JAMBS



MEETING STILE
LOCKING STILE
(DOUBLE DOORS)

HINGE STILE
LOCKING STILE

GLAZING INSTRUCTIONS

SPECIAL NOTE

All glazing should be carried out in strict accordance with BS 6262

THESE INSTRUCTIONS COVER 20, 22, 24, 25 AND 26mm DOUBLE AND 4 AND 6mm SINGLE GLAZED UNITS.

THE GASKET MUST NOT BE STRETCHED DURING FITTING OTHERWISE SHRINKAGE WILL OCCUR LATER.



C1274-4mm
C1218-6mm

SINGLE GLASS



C1224-20mm
C1225-22mm
C1203-24mm

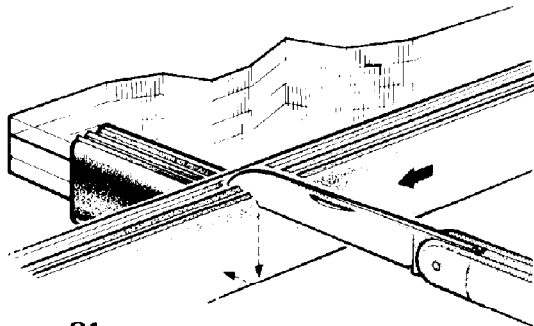
DOUBLE GLASS



C1253-25mm
C1254-26mm

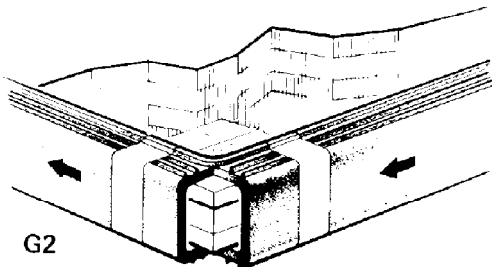
A. Check the contents of the box and lay the panel sections on trestles in the order of assembly. Leave the outer frame members in the box,

B. Support the glass panel on two trestles that are narrower than the width of the panel. Select the correct glazing gasket and cut a length sufficient to wrap round all the edges of the panel, plus approximately 100mm (4'') for overlap and cutting. Cut one additional section of glazing gasket approximately 50mm (2'') long for use as a slicing template.



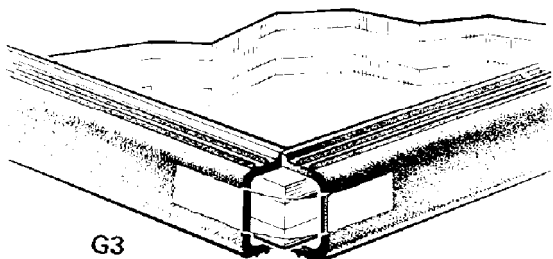
G1

C. Start approximately 12mm (½'') from the top right-hand corner of the panel, wrap the channel of the glazing gasket along the edge of the glass and allow it to extend beyond the bottom corner of the panel. Place the slicing template on the bottom edge of the glass, butting up to the gasket. Cut through the body of the gasket in line with the raised edge of the slicing template, but DO NOT CUT THROUGH THE RAISED EDGE OF THE GASKET THAT IS BEING FITTED. G1.



G2

D. Bend the gasket 90° round the bottom corner of the panel and hold it in position with adhesive tape. G2.



G3

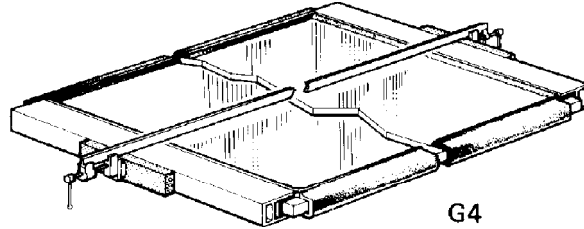
E. Continue wrapping the gasket along the edge of the panel and repeat the slicing process at each corner. When all the edges have been covered, use the already fitted gasket as the template for the final cut and hold the two ends in position by placing adhesive tape along the exposed back of the gasket ends. G3.

F. When using patterned glass, it is recommended that the patterned glass side is glazed to the inside to ensure maximum sealing of glass to gasket on the outside.

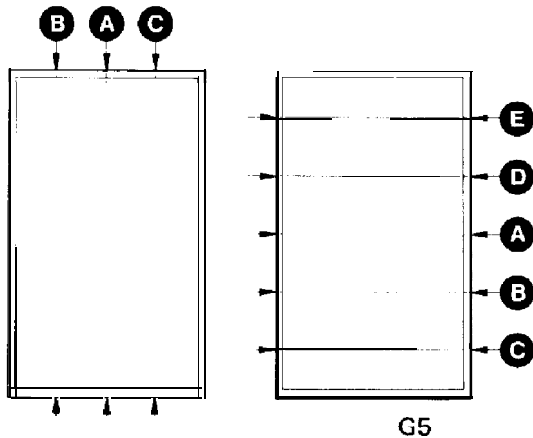
FITTING THE ALUMINIUM FRAME SECTIONS

IMPORTANT: READ THE HEEL AND TOEING PROCEDURE (PAGES 10.1 AND 10.2) BEFORE PROCEEDING.

A Place the top and bottom rails on to the appropriate edges of the panel, leaving an equal amount of panel showing at either end. Carefully cramp into position using 300mm minimum (12") packing blocks to prevent damage. G4.



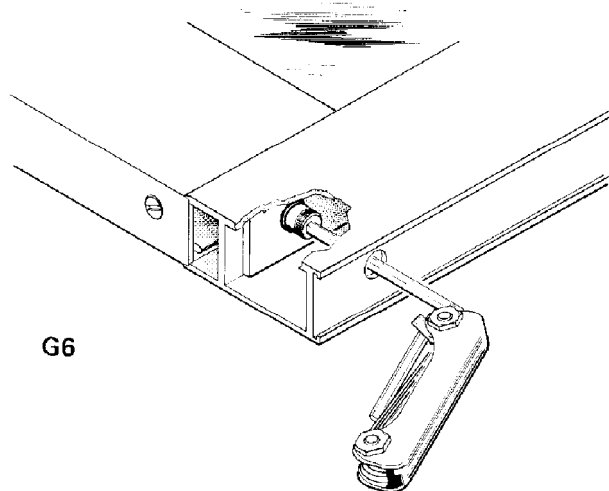
B Place the vertical sections on to the right-hand and left-hand edges of the panel with the ends in line with the outer edges of the already fitted sections. Check that the vertical sections are correctly handed then cramp them carefully into position using the packing blocks. Take care that the ends of the top and bottom rails fit snugly into the recesses of the vertical sections and that the glazing gasket is seated all round with the edge of the raised section flush against the metal frame. G5.



C Ensure that the frame sections are straight and not bowed by carefully re-cramping them lengthwise and breadthwise in the alphabetical sequence shown. G5.

D Secure the frame joints by tightening the MS x 50mm long socket-head cap-screws through the access holes provided in the stiles. Ensure that a spring washer and rectangular washer are placed under the head of each screw and that the joints are pulled tightly together. G6.

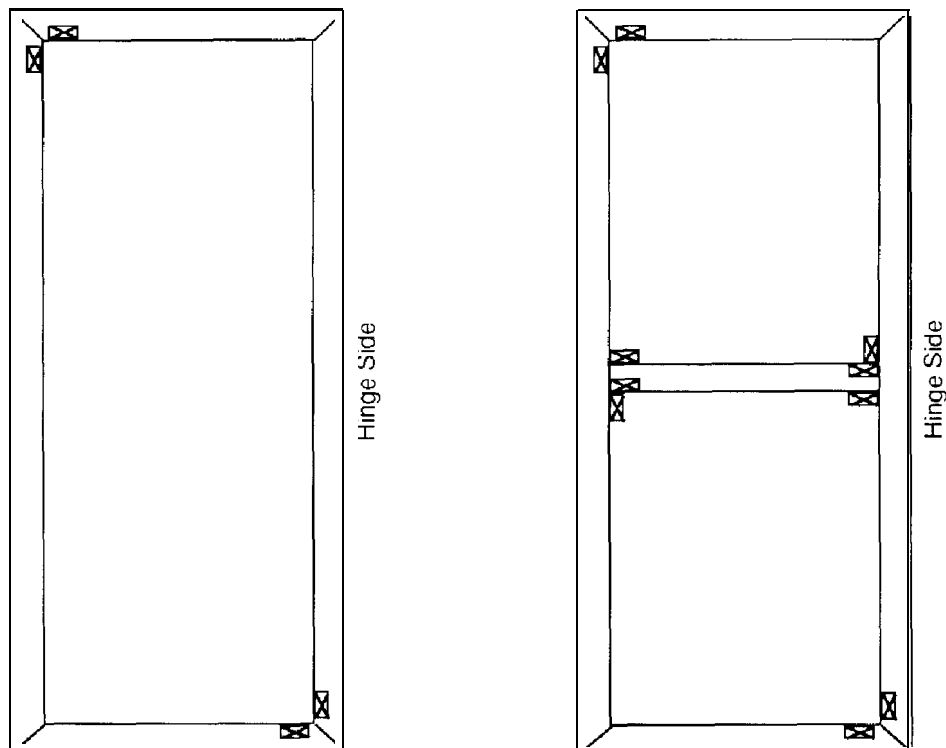
NOTE: For meeting stile on double door refer to page WP P



HEEL AND TOEING PROCEDURE

The following procedure is recommended:-

1. Fit the glazing gasket as normal
2. Fit top and bottom rails and mid rails where applicable, in the usual way
3. Select the optimum size wedge packers and then loosely position them in the rails between gasket and rail flange as illustrated. The serrations must face the rails.
4. Fix the self adhesive pads to the stiles as illustrated, approximately 25mm up from the inside edge of the rail
5. Fit the stiles and complete the assembly of the door leaf.



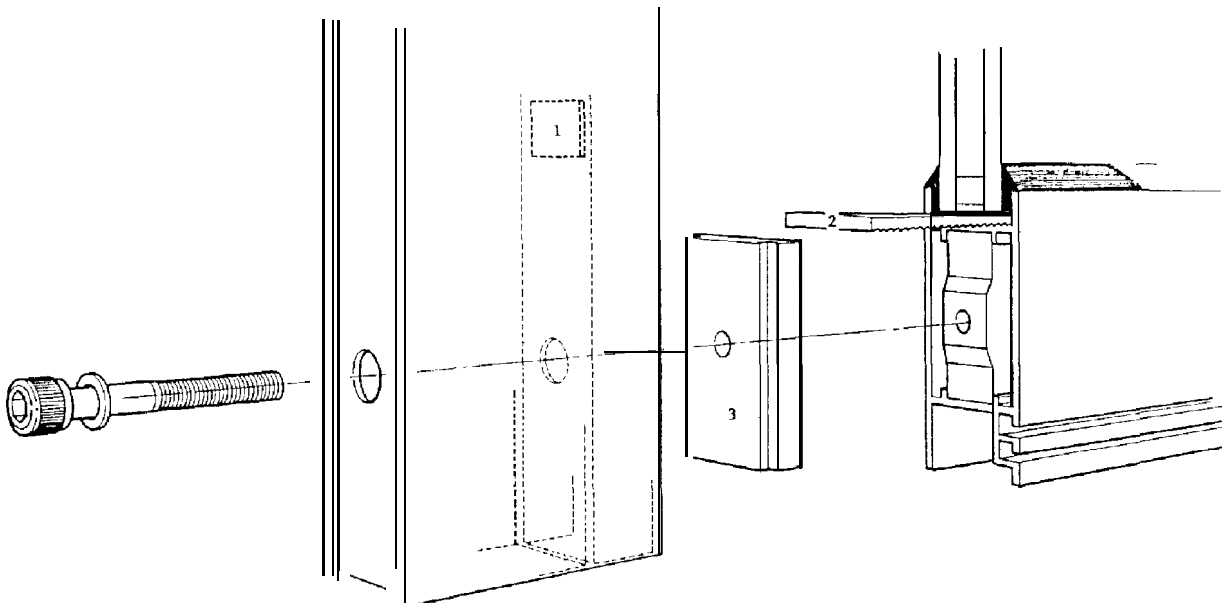
Packing Doors fitted with Midrails

When glazing up doors fitted with a midrail, particularly the 'B' type with infill panel, it may be advantageous to pack both sides of the aluminium to ensure the door leaf is completely rigid.

GLASS PACKERS ACCESSORY PACK

To allow you to hold a small stock of glass packers, Accessory Pack AI 033 has been introduced, comprising:-

C1033	Self adhesive packer	50
C1526	Wedge Packer green	25
C1527	Wedge Packer - blue	25
C1528	Wedge Packer - black	25



1. C1 033 Self adhesive packer
2. C1526 Wedge packer - Green
C1527 Wedge packer - Blue
C1528 Wedge packer - Black
3. C1490 Corner block

Corner Blocks - Non Thermal Doors

Corner Block To provide extra rigidity at the rail/stile joints we have introduced these components (C1490) on non-thermal doors, and screw kits have been changed accordingly.

Always ensure they are correctly positioned (See diagram) so that the rebated face is towards the stile.

Please note that the tension blocks must be positioned with the centre boss facing the middle of the rail. The longer socket head bolts (F91), as used on thermally broken doors, are now included in the screw kits.

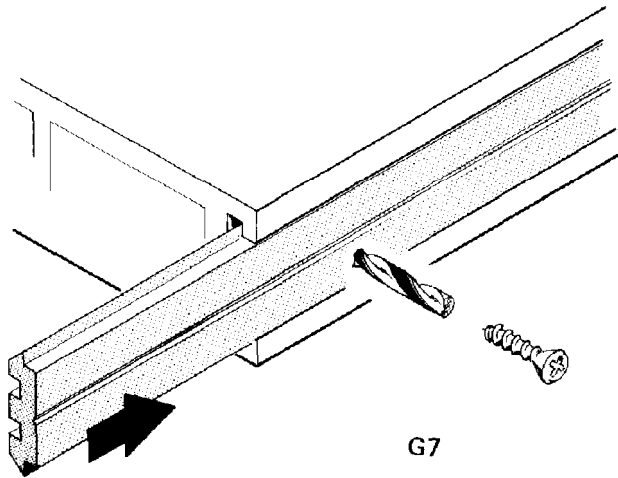
Please do not forget that it is vital that the door frame is installed square, plumb and packed as necessary to eliminate any twist. Similarly the door leaf must be square, and adjusted to give maximum clearance at the bottom.

FITTING THE ALUMINIUM SECTIONS CONTINUED

E Blank off the screw holes by cutting the cover strips to the required lengths, and sliding them into the slots provided (V groove facing outwards). G7.

For the hinge Stile cut a 1357mm length of strip to slide between the hinges. Determine the length of strip required above and below the hinges when the door has been hung.

For the Locking Stile measure off the assembled door the lengths required.



F At each corner of the door only drill a 3.25mm dia hole through the cover strip and the mating face of the stile. Countersink the holes in the cover strips and secure each strip with a No. 6 x 1/2" long countersunk-head self-tapping screw. G7.

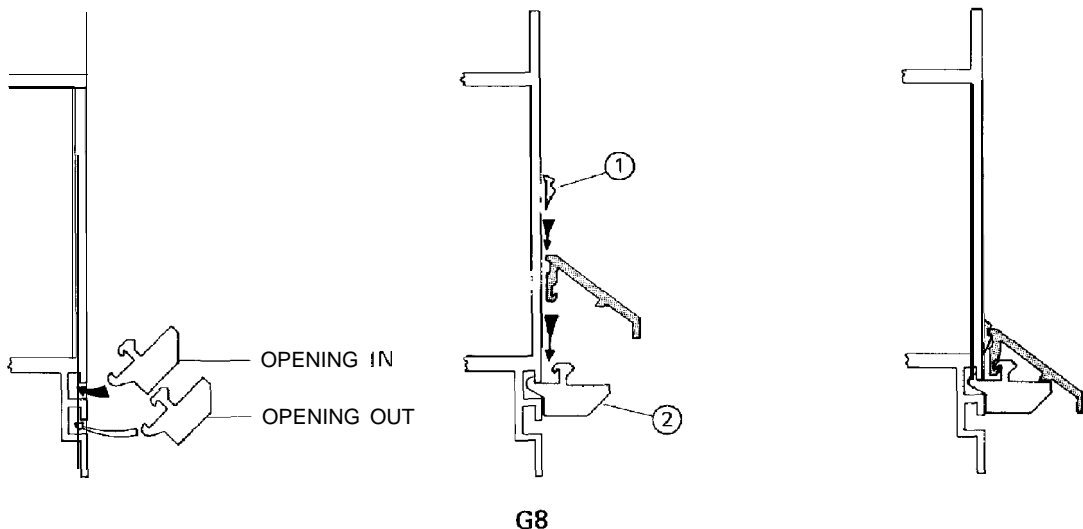
FITTING THE WEATHER BAR

A Measure the visible length of the Bottom rail between the two stiles.

Cut the black weatherseal ① to the measured length.

B Position the weather bar at the bottom of the door to suit the type of opening G8.

Secure the bar to the door using the 3No. plastic fixing clips ② and black weatherseal ①



GLAZING WITH MID-RAILS TYPE B – BI

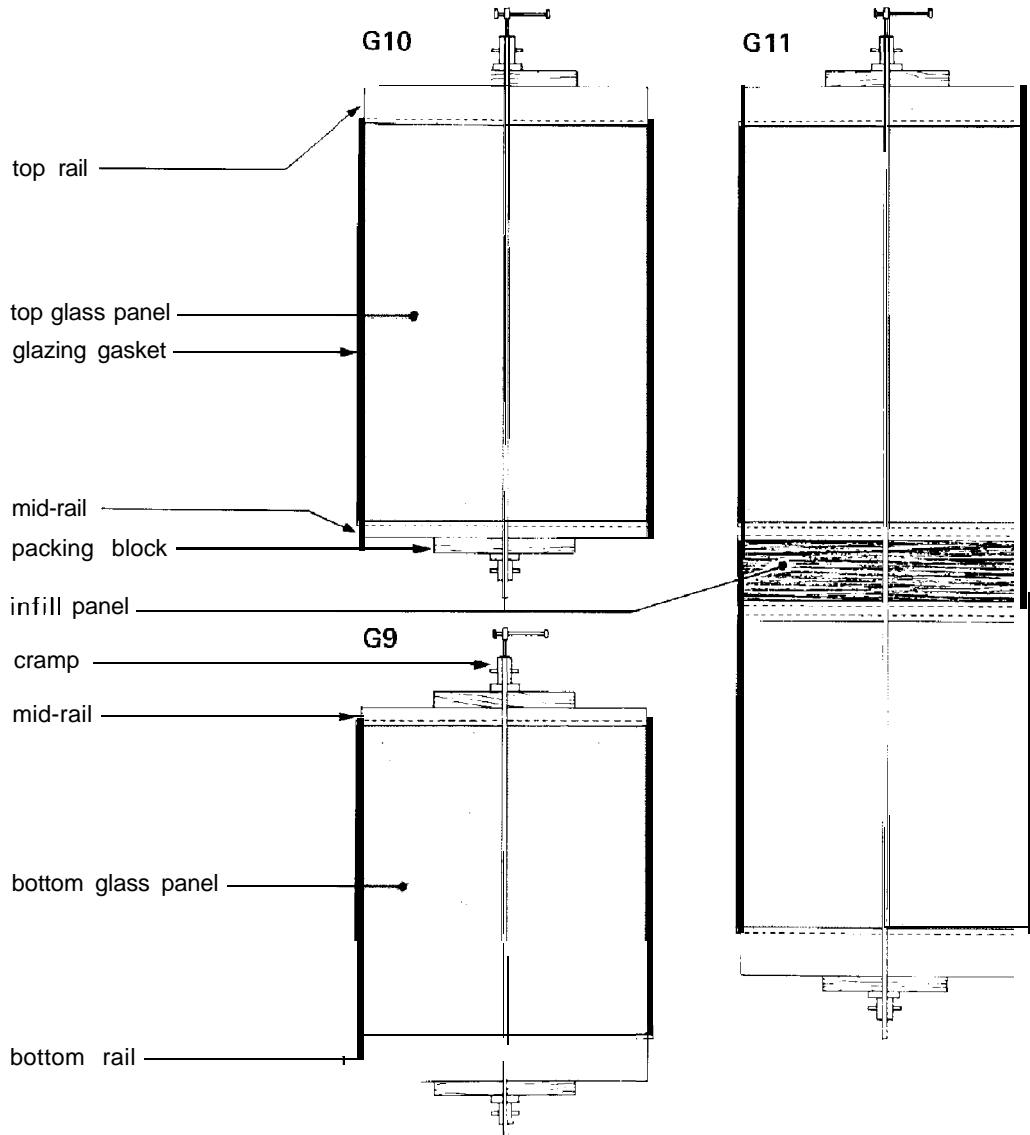
IMPORTANT: READ THE HEEL AND TOEING PROCEDURE (PAGES 10.1 AND 10.2) BEFORE PROCEEDING.

- A** Carry out procedure described on page 9 of instructions for both glass panels and for infill panel.

- B** Place one of the mid-rails and the bottom rail onto the appropriate edges of the bottom panel, leaving an equal amount of panel showing at either end. Carefully cramp the middle and bottom rails into position using 300mm minimum (12") packing blocks to prevent damage G9. Repeat this procedure using the remaining mid-rail, the top rail and the top glass panel G10.

- C** Place the mid-rails of the above units onto the top and bottom edges of the infill panel leaving an equal amount of panel showing at either end. Position the infill panel by carefully cramping over the top and bottom rails using 300mm minimum (12") packing blocks to prevent damage G1 1.

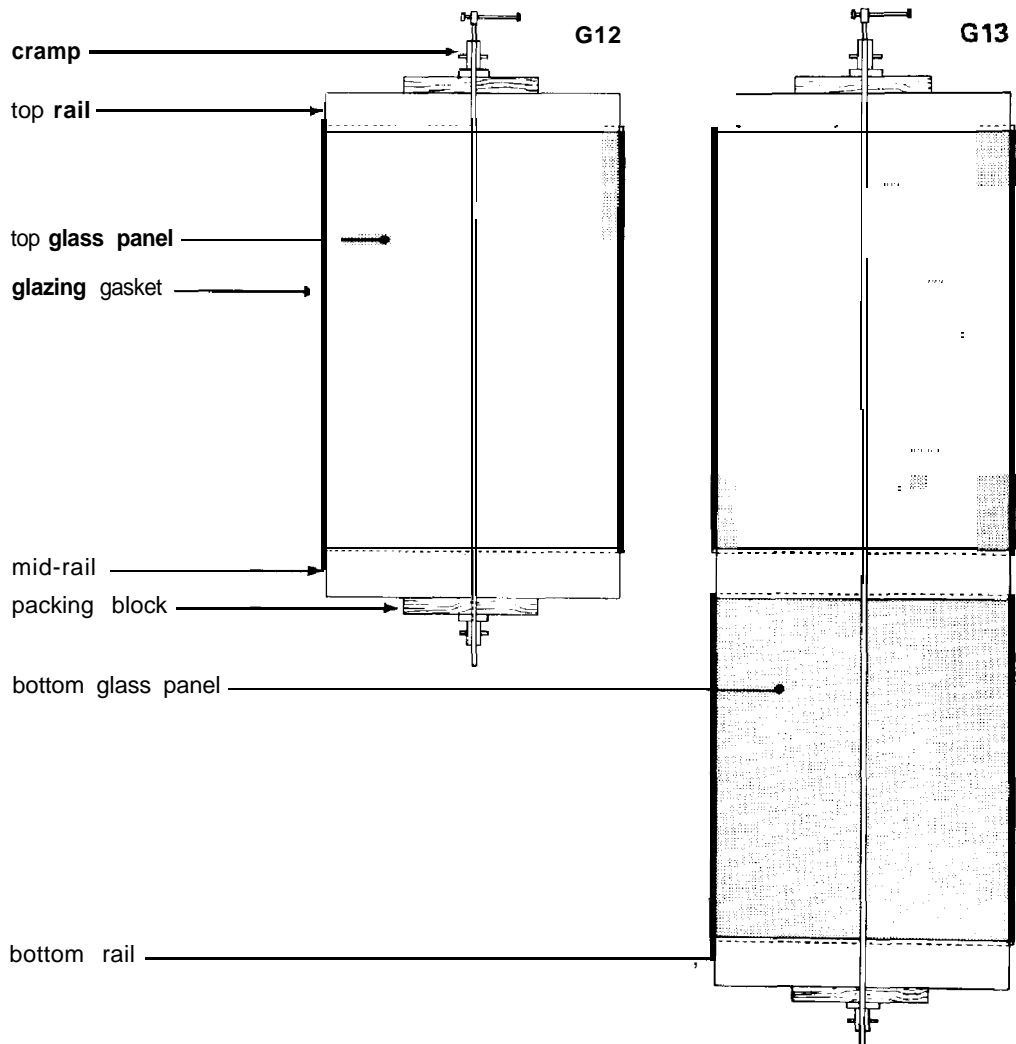
- D** Follow procedure described on pages 10 and 11 of instructions, but before positioning the cover strips, secure the mid-rail sections by driving No.10x1½" pan head, self-tapping screws through the access holes in the vertical sections. Ensure that the joints are pulled tightly together.



GLAZING WITH MID-RAILS TYPE A – AL

IMPORTANT: READ THE HEEL AND TOEING PROCEDURE (PAGES 10.1 AND 10.2) BEFORE PROCEEDING.

- A Carry out procedure** described on page 9 of instructions for both glass panels.
- B** Place the top-rail and mid-rail sections onto the appropriate edges of the top panel leaving an equal amount of panel showing at either side. Carefully clamp the top rail and mid-rail into position using 300mm minimum (12") packing blocks to prevent damage G 12.
- C** Offer the bottom panel onto the mid-rail and the bottom rail onto the appropriate edge of the bottom panel. Position the bottom panel by carefully cramping over the top and bottom rails using 300mm minimum (12") packing blocks to prevent damage G13.
- D** Follow procedure described on pages 10 and 11 of the instructions, but before positioning the cover strips secure mid-rail through access holes provided in vertical sections, using the M8 x 50mm long socket cap-head screws provided (No washers).



PREPARATION FOR RIM NIGHTLATCH

FOLLOW CLOSELY THE INSTRUCTIONS SUPPLIED WITH THE RIMLATCH USING THE BACKPLATE AS A TEMPLATE. DRILL TWO 3mm HOLES THROUGH THE **INSIDE** FACE OF THE STILE. USE THE No.6 x 1/2" LONG COUNTERSUNK-HEAD SELF-TAPPING SCREWS TO SECURE THE BACKPLATE TO THE STILE.

SPRING LATCH HANDING

MULTI-POINT AND MORTICE LOCKS

Before a door kit leaves the factory the handing of the spring latch must be checked and changed if necessary. This is best done on the bench before the door leaf is assembled.

To reverse the latch insert a 'Pozidriv' screwdriver into the screw (A) G14.1, push in and turn through 180° until the latch springs back into position.

After assembly G14.2

With the faceplate off grip the spring latch firmly with molegrips or similar, pull it clear of the lock body, turn it through 180° then release it carefully.

FIG. G14.1

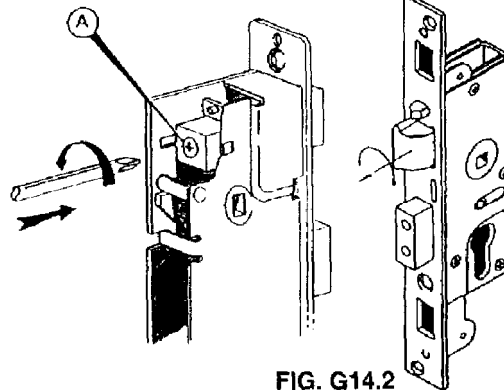


FIG. G14.2

FITTING THE HANDLES

STANDARD SPINDLE

- A. Attach the handle end caps (A), FIG. G15 with the screws provided.
- B. Place the square operating spindle through the lock ensuring that the flat on the spindle is in alignment with the grub screw. (B), FIG. G15.
- C. Slide each handle/cover plate over the square spindle and clip on to the end caps with firm hand pressure.
- D. Tighten the grub screws to firmly locate the handles on to the spindle.

NOTE: Tool No. G1466 is available if required to assist in the removal of the handle cover plates.

SPLIT SPINDLE

- A. Attach the handle end caps with the screws provided.
- B. From the outside face of the door feed the longer end of the split spindle assembly through the lock - ensuring the flats on the spindle are correctly aligned with the handle grub screws - until the washer on the spindle contacts the lock.

- C. Slide the internal handle onto the spindle, clip it onto the end caps, and - ensuring the washer stays in contact with the lock-tighten the grub screw.
- D. Install the outer handle as normal.
- E. Check the operation of the handles:

Inside handle operates the spring latch and hook locks.

Outside handle operates the hook locks **ONLY**. Use the key to operate the centre deadbolt and to withdraw the springlatch from the outside.

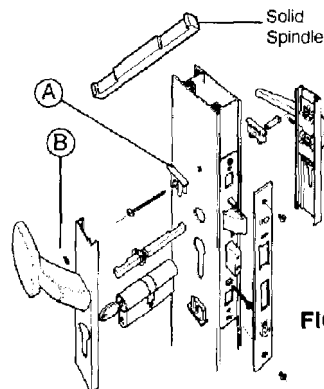


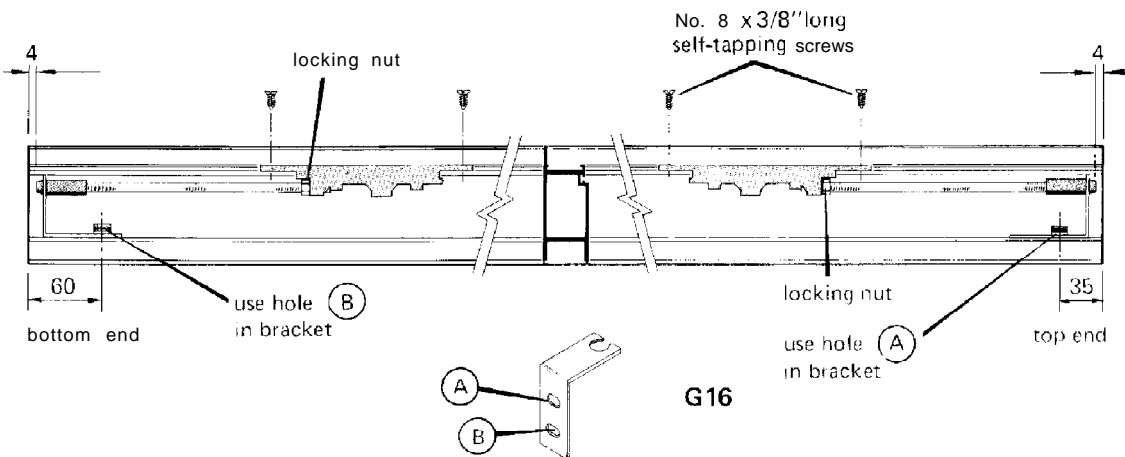
FIG. G15

ASSEMBLY OF FLUSH BOLT FOR DOUBLE DOOR

A When glazing use the special angle brackets to secure the corner joints top and bottom on the meeting stile along with the single coil spring washer and M8 screw supplied G16.

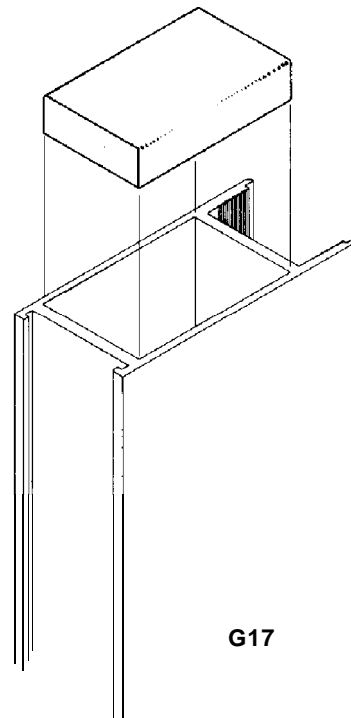
B Where no cut down is required assemble and fit the flush bolt in the Top and Bottom ends of the meeting stile as shown G16.

Where a cut down is required shorten the 5/16" screwed rod by the difference between the kit height and the required height.



FITTING THE STILE END CAPS

A Compress the white plastazote end caps into the top ends of the locking and Hinge Stiles so that they remain flush with the top of the door.



STANDARD SIDE PANEL

THE COMPLETED PANEL REQUIRES FITTING INTO A REBATED SUB-FRAME OF EQUAL OR SLIGHTLY LARGER DIMENSIONS THAN THE PANEL ITSELF, WITH PROVISION FOR GLUEING AND SCREWING A RETAINING BEAD TO SECURE IT IN POSITION. THE THICKNESS OF THE PANEL IS 36mm.

THE FOLLOWING ITEMS ARE REQUIRED TO MAKE UP A SIDE PANEL ASSEMBLY.

WARNING. Thermal barrier **sections must be used to** fabricate a side panel **when an aluminium subframe is being used.** Refer to thermal barrier residential door manual C930, page 16.

ITEM	CODE	DESCRIPTION	QUANTITY
1	M805	Stile Section	Consult formulae
2	M815	Top rail Section	Consult formulae
3	M807	Bottom rail Section	Consult formulae
4	No. 10 x 1"	Pan-head self-tapping screw (F26)	4

NOTE: For fitting a completed side panel into an aluminium subframe refer to booklet No. C2023 (Residential Door section). This will cover all information required to install a side panel into an aluminium subframe.

GLASS SCHEDULE

H = overall height of aluminium frame W = overall width of aluminium frame

WITHOUT MID-RAIL

GLASS	
WIDTH	HEIGHT
W-33	H-82

WITH MID-RAIL

TYPE	GLASS WIDTH	GLASS HEIGHT	
		TOP PANEL	BOTTOM PANEL
A-AL	w-33	H-956	793
B-BL	w-33	H-926	676

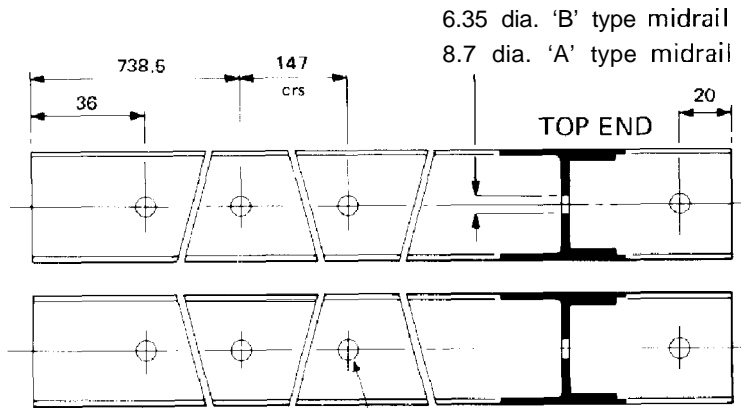
COMPONENT LENGTH FORMULAE

COMPONENT	LENGTH
Stiles	As rebate height less any fitting allowance
Top--Bottom and Mid-Rails	W-53



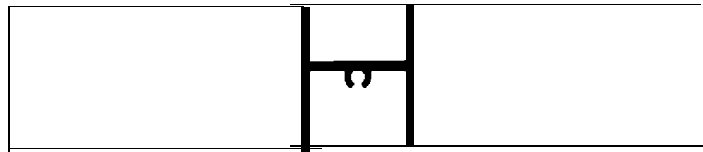
CUTTING AND PREPARATION DETAILS

STILES

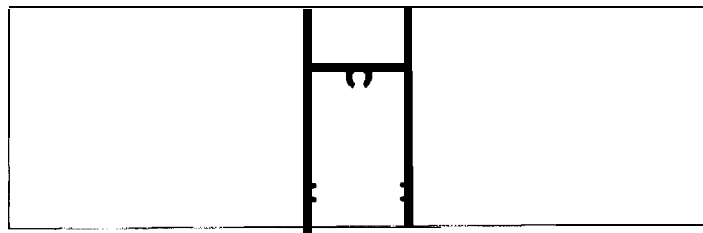


hid-rail fixing holes if required

TOP RAIL



BOTTOM RAIL



GLAZING

A Carry out the glazing procedure described on page ^{WP}/_K of these procedures placing the top and bottom rails on the panel first. Secure the corner joints with No. 10 x 1/4" pan-head self-tapping screws.

PANEL VENTILATORS

- A. Prepare the top end of the stiles as shown.
- B. When cutting down dismantle the complete assembly and cut down each extrusion separately using a common stop to ensure equality of lengths.
- C. Re-assemble and check that the vent functions correctly. (See G 18 overleaf).

WARNING:

WHERE CUTTING DOWN FROM ONE END WOULD EITHER FOUL THE MAGNET AND KEEP PLATE OR BRING THEM CLOSE TO A BRACKET, DIVIDE THE AMOUNT OF **CUTDOWN** BY TWO AND CUT DOWN EACH END OF THE MAGNET HOUSING SECTION AND FLAP BY THAT AMOUNT.

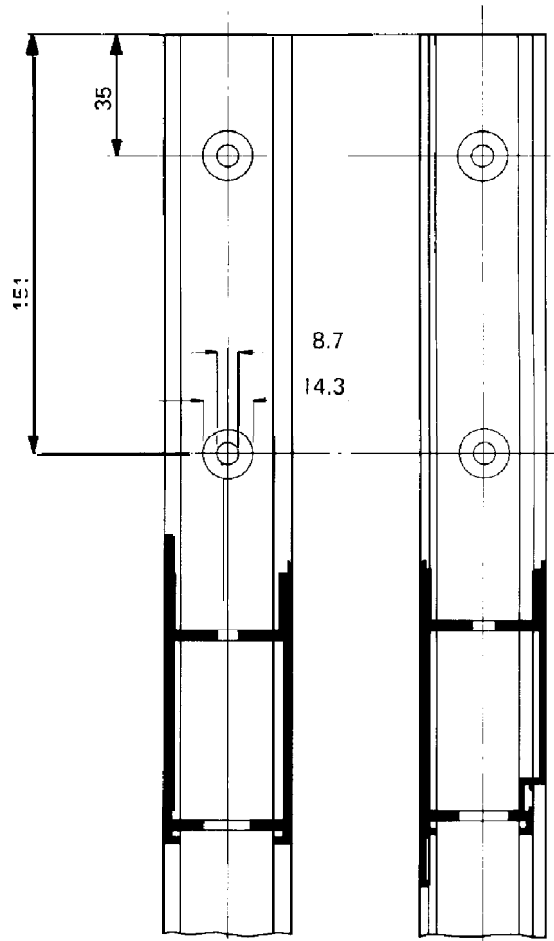
- D. For assembly on to glass panel, ease on to the top edge of the glass panel using hand pressure, but **DO NOT** use a mallet or sash cramps at this stage.
- E. Glaze the rest of the panel in the normal way and where sash cramps or a mallet becomes necessary across the height, support the full length of the top rail with a sturdy piece of timber.
- F. Fix the top rail and ventilator to the stiles using the self-tapping screws provided.

WARNING:

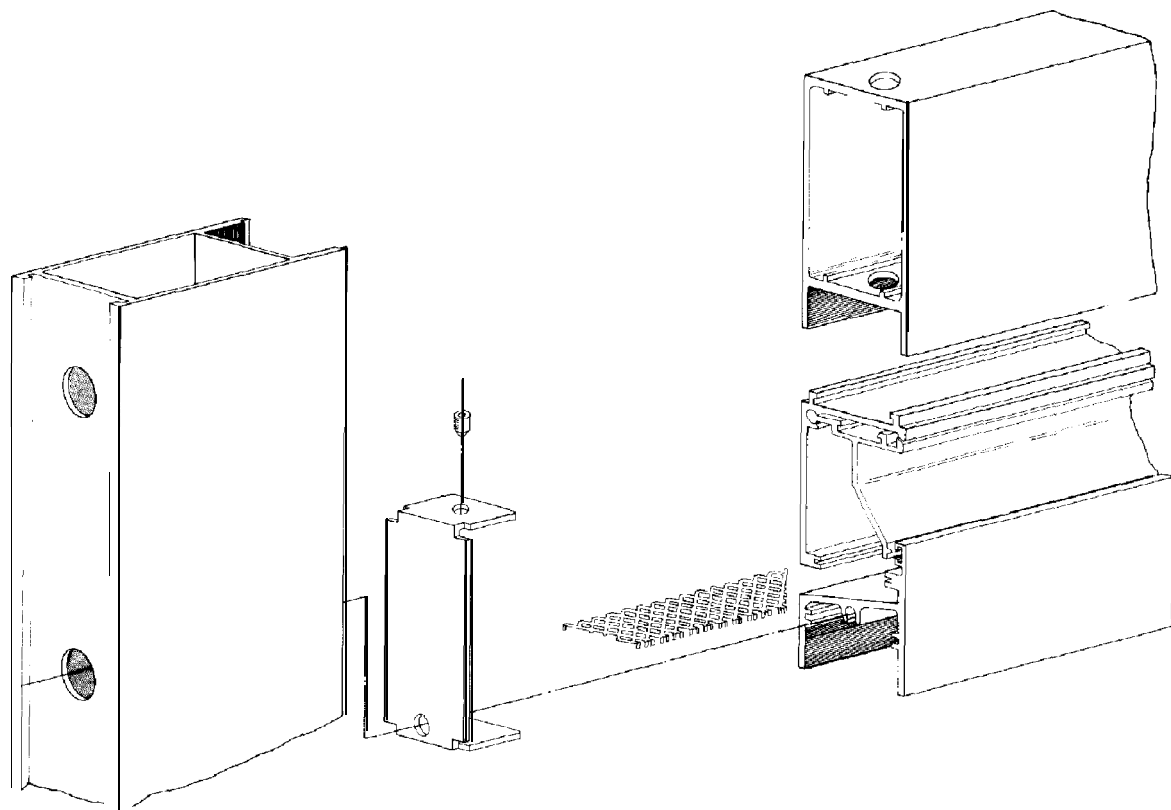
ON COMPLETION OF GLAZING CHECK ONCE AGAIN THAT THE VENTILATOR FUNCTIONS CORRECTLY AND THAT THE FLAP IS OPERABLE FROM THE INSIDE FACE OF THE PANEL.



PANEL VENTILATORS CONTINUED



PANEL VENT ASSEMBLY



G18

MONAFRAME

SUB-FRAME

**THERMAL
 NON THERMAL
 ARE IDENTICAL**

