

# Weatherbeta Louvre Windows

- Automatic Opening (AOW)
- Smokebeta
- Linear Motor Control (LMC)
- Manual Control





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Introduction	1	The selection of a window system which will provide the specifier with a choice of controlled ventilation, natural lighting and compatibility with building structure is very complex. Often the specifier needs to bring together different types of window product to achieve a satisfactory balance between the various building elements. Naco, Europe's leading designers of louvre window systems, have developed the Weatherbeta concept to meet modern building requirements.
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AOW/Smokebeta Additional Data	17	Weatherbeta is a quality engineered product which combines a strong aluminium frame system with ventilating blade holders produced from precision injection moulded polypropylene material. The bladeholders incorporate continuous fins which interlock and seal to the full height of the glass and provide an effective wiping action seal on the jambs. Ventilating blades are operated by an overcentre locking handle which ensures that when closed glass to glass seal is maintained.

### Materials

Head, jamb, cill, mullion and transom sections are manufactured in aluminium alloy, extruded from 6063TE.

### Finishes

Mill finish, natural, bronze or black anodised to 25 microns, or polyester powder coated in a range of different colours.

### Glazing

Louvred glass blades are 6mm, in clear float, stippolite obscure, wired, laminated or solar control glasses, single glazed only. Louvre blades are always supplied with the window.

Fixed pane glass can be 4 or 6 mm thick.

Glazing gaskets are supplied with the window.

### Fixing materials

For fixing to timber or metal, screws are supplied. For fixing to brickwork or concrete, screws or brackets are supplied as required.

### Operating control

The standard handle is designed for hand operation. Where 'out of reach' windows occur, drop rods can be fitted to the standard handle arrangement: the maximum length of a drop rod is 1500mm.

For high level installations the standard handle can be operated by pole or the window may be supplied fitted with a handle suitable for remote control gearing.

### Coupling compatibility

All Weatherbeta windows are designed for coupling horizontally or vertically with a range of transoms and mullions. Special pressed metal cills to various profiles can be supplied.

### Special glazing installations

Fully ventilating windows are available with single nib, and channel frame profile for use within various glazing systems.

### Insect screens

Insect screens are available and are normally fitted externally with simple clip fixings.

The sub-frame sections are of aluminium alloy extruded 6063TE finished to match the window. Insect screen mesh is glass grade material finished in grey PVC. Aluminium or stainless steel mesh is available as an alternative.

### Accessories

Extruded aluminium louvre blades are available in lieu of glass blades. Ventilated windows may be fitted with a restrictor to limit the opening or closing of the window. Security bars may be fitted internally on ventilating~ windows. Security bladeholders are available subject to project location.

### Special assemblies

Weatherbeta is available in three different types for use with electrical control systems. AOW. Automatic opening window, designed as a fail safe opening ventilator, normally used in projects where smoke venting of corridors, staircases or community areas is required. Smokebeta. A fail safe system designed for high level installations such as atria, shopping malls etc. LMC. Linear motor control unit providing convenient electric operation for high level installations.

### Fixing

Windows are supplied with equal or unequal frame profile for fixing into timber surrounds. For brick or concrete structures, unequal profile is normally used with fixing by means of aluminium brackets / lugs.

### Sizes

Any size of window can be made to a maximum length of 2400mm and a maximum height of 2400mm. Windows are available in single, double or treble panel units. Maximum length for a single panel ventilator unit is 1220mm, subject to design wind load.

A product designed for modern buildings



**Window type: L**  
**Fully louvred**

**Description**

In single or multiple panel, the latter assembled with integral self-mullions positioned to give equal glass length as standard, or can be off-set as purpose made.

Single glazed only.

**Ventilation**

Adjustable.

From nil to approx. 70% free air space, or with limitation to maximum opening.

Each panel is independently operated; panels having more than six blades are grouped into two or three banks, each bank individually operated to provide precise control.

**Permanent**

Windows can be manufactured:

Fully adjustable with restricted permanent ventilation through protected slots in head weatherstrip.

Adjustable, with permanent limitation on closing.

With all, or some, blades permanently fixed open to 10°, 15° or 20° from the vertical.

**Self-mullion**

Size of integral self-mullion is dictated by the overall window sizes and design wind load.

**Coupling**

Type L windows can be coupled vertically and horizontally.

**Window type: LPG**  
**Fully louvred-patent glazing.**

**Description**

Ventilating windows for installation within proprietary gasket glazing systems.

In single or multiple panel, the latter assembled with integral self-mullions positioned to give equal glass length as standard, or can be off-set as purpose made. Single glazed only. LPG single panel only.



**Sizes: Type L** (Based on 6mm annealed float glass. Sizes vary for laminated or toughened glass).

Number of panels	1	1	2	2	3	4
Edge sections	Unequal mm	Equal mm	Unequal mm	Equal m	All mm	A11 mm
Minimum length	240	240	670	670	1030	1390
Maximum length for design wind loading	900 Pa	1220	1195	2390	2365	2400
	1200 Pa	1129	1104	2199	2174	2400
	1500 Pa	1019	994	1994	1969	2400
	1900 Pa	919	894	1814	1789	2400
	2000 Pa	899	874	1739	1714	2400

Height overall window sections Unequal mm	Equal mm	Mixed mm	Number of 170mm operating blades each panel	Number of operating handles each panel
240	215	227	1	1
390	365	377	2	1
540	515	527	3	
690	665	677	4	
840	815	827	5	
990	965	977	6	
1140	1115	1127	7	2
1290	1265	1277	8	
1440	1415	1427	9	
1590	1565	1577	10	
1740	1715	1727	11	
1890	1865	1877	12	
2040	2015	2027	13	3
2190	2165	2177	14	
2340	2315	2327	15	



**Window type L**  
**Fully louvred**

Sizes (mm)  
Length: 240 to 2400  
Height: 215 to 2400

**Type: LPG**

Edge section	o/a: pvc nibs mm	metal mm
Minimum length	246	240
Maximum length for design wind loading	900 Pa	1220
	1200 Pa	1120
	1500 Pa	1025
	1900 Pa	945
	2300 Pa	890

Height overall window sections pvc nibs mm	metal mm	Number of 170mm operating blades in each panel	Number of operating handles in each panel
240	234	1	1
390	384	2	1
540	534	3	
690	684	4	
840	834	5	
990	984	6	
1140	1134	7	2
1290	1284	8	
1440	1434	9	
1590	1584	10	
1740	1734	11	
1890	1884	12	
2040	2034	13	3
2190	2184	14	
2340	2334	15	

**Description**

Works assembled windows incorporating 24 volt DC automatically opening fail safe ventilators for use with smoke detector control equipment. Offered in single or multiple panels the latter assembled with integral self mullions.

**Fittings**

Windows can be fully fail safe or have fail safe and manual ventilation combined within one frame.

**Manual override**

Fail safe ventilators incorporate an override facility to provide normal hand operation. A cover is provided to protect the fail safe release mechanism.

**Handing**

The opening mechanism for louvre ventilators may be positioned either on the left or right hand side of the window.

**Closing/re-setting**

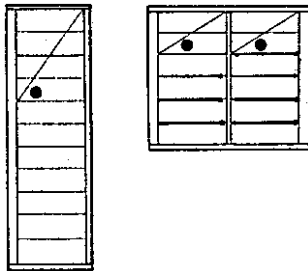
Automatic fail safe opening louvres need to be closed/re-set by hand.

**Ventilation**

Fully ventilating windows provide approx 70% free air space when fully open.

**Typical arrangements**

Typical arrangements to provide 0.5m<sup>2</sup> automatic and 1m<sup>2</sup> manual operation.



- Automatically controlled ventilators

**Control panels for automatic smoke dispersal**

The electro-magnet housed within the window frame member is supplied. **All other electrical control equipment must be obtained from a specialist supplier.** Control panels of various types can be used dependent on the number of windows and zone system required. Stand-by battery supplies can be used to prevent louvred windows opening in event of a power failure. Automatic venting of access corridors may be requested under BS 5588: Part 1(in UK).

**Electrical installation**

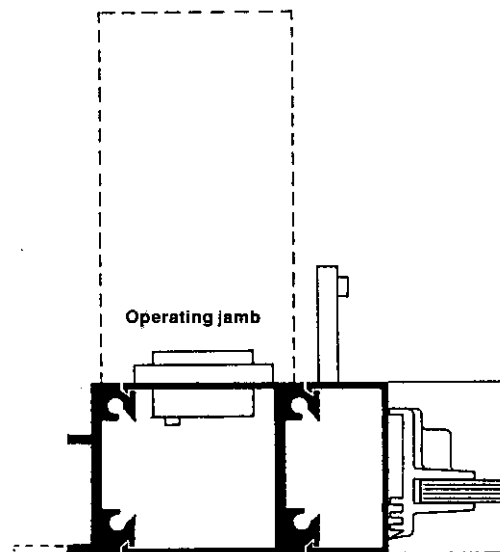
The electrical installation must only be carried out by a qualified electrical contractor in compliance with current safety regulations of the country of use. In the UK this is BS 7671 'Requirements for Electrical Installations' as published and amended by the IEE. This covers specific requirements for the earth bonding of metal windows.



**Electro-magnet specification**

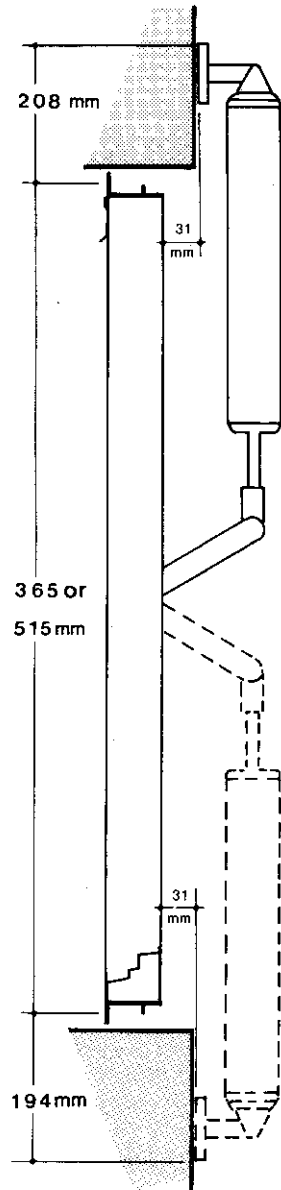
Type	58/HS
Voltage	24 Volt DC
Current	0.125amps

See P17 for typical panel arrangements and electrical data.



Automatic opening window control fitted to jamb section only.

**Typical installation**  
Window type: L  
Fully louvred



For 2 and 3 blade windows the linear motor must be fixed to the structure as shown above. A 3 blade can only be attached at the sill. The special wider jamb sections will not be supplied.

**Description**

Works assembled windows incorporating 230 volt linear motor controlled ventilators providing a simple and effective control method for high level ventilation. Offered in single or multiple panels, the latter assembled with integral self mullion.

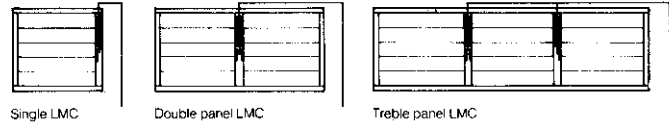
**Handing**

The mechanism for linear motor controlled ventilators may be positioned either on the left or the right hand side of the window, or centrally.

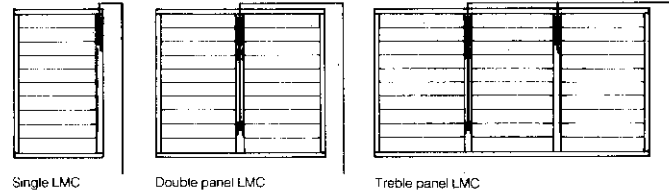
**Ventilation**

Adjustable to any required degree of ventilation from nil to approx 70% free air space. Panels having more than six blades are linked together to allow control from one linear motor.

**Typical panel arrangements**



**4, 5 and 6 blade applications**



7 to 12 blade applications have linked controls

**Linear motor specification**

Frequency	50 Hz
Voltage (single ph)	230V
Current	0.60 amps
Full	15-20 kg

**Control options**

Window	Number of blades	Number of linear motors
Singlepanel	•2-12	1
Double panel	•2-12	1
Treble panel	•2-12	2

**Installation**

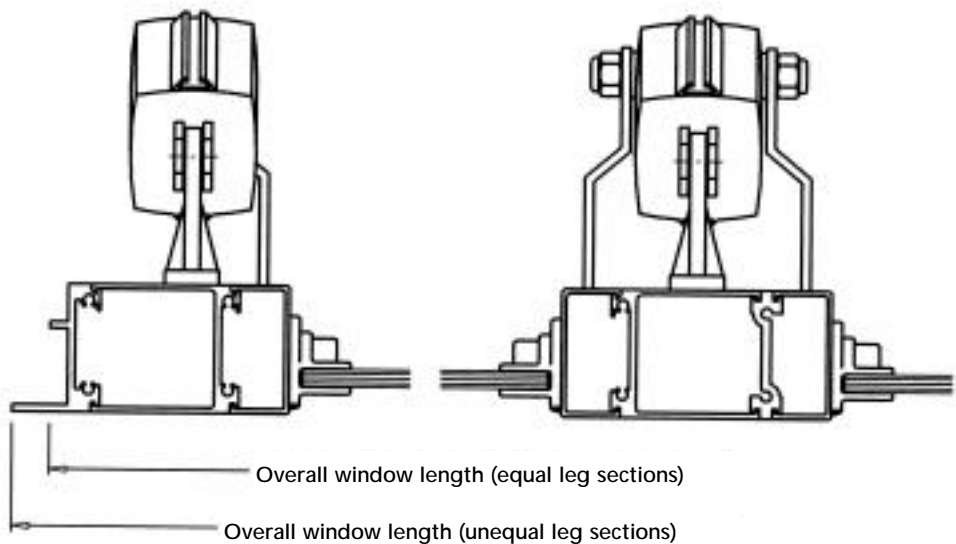
Fixed directly into Weatherbeta louvre windows with internal wiring. Flying leads terminate at head of window.

**Electrical equipment**

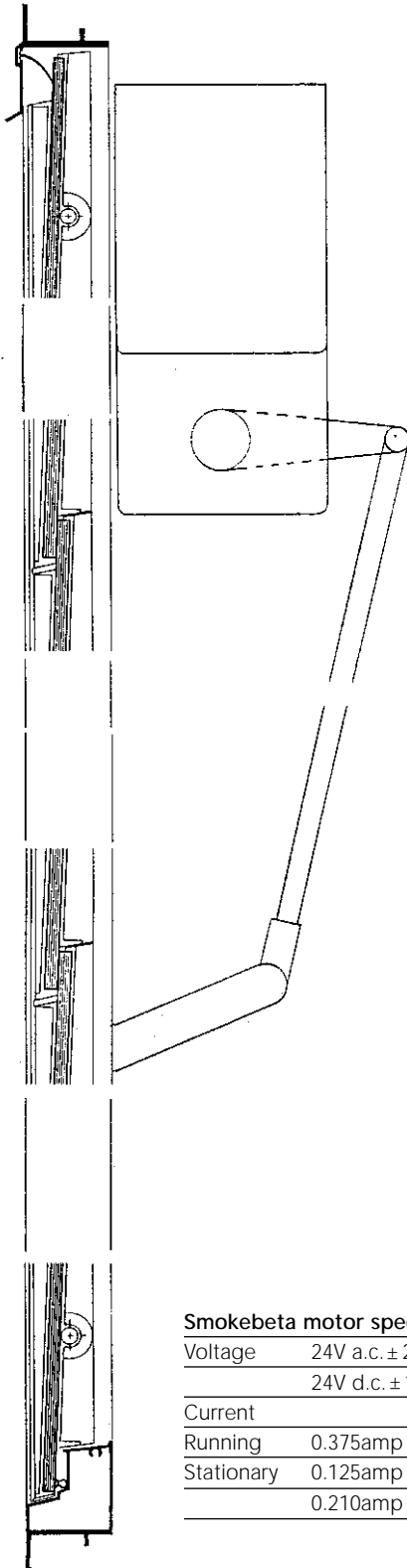
The linear motor is supplied fitted to the window. All other electrical control equipment must be obtained from a specialist supplier. The control switch must spring return to 'off'. The motor is protected by a thermal cut-out which if activated will automatically reset after 25-30 minutes. The motor contains a relay switch, therefore motors may be connected in parallel through one switch.

**Special applications**

Linear motors may be linked into control systems activated by rain, wind or heat sensors.



Typical installation



**Description**  
Works assembled windows incorporating automatic opening ventilators providing a fail safe unit for use with smoke detector/control equipment. Offered as single or multiple panels, assembled with integral self mullions. Smokebeta is fitted with 24 volt AC/DC electrically operated motor(s). For day to day ventilation control, the motor will open/close, but on signal, (cutting off electric power), the fail safe mechanism will open the window allowing venting of smoke, fumes or gases.

**Application**  
Designed for high level situations where windows are linked into fail safe control system.

**Handing**  
The mechanism for electrically controlled ventilators is positioned on the central mullion or on the jamb.

**Ventilation**  
Smokebeta louvres are either closed or fully open, giving approx. 70% free air space.  
A 24 volt AC/DC operator is available providing for variable ventilation.

**Control panels**  
Control panels and related equipment must be obtained from a specialist supplier and be designed to satisfy control requirements (not only for smoke venting but also for day to day ventilation). Control panels can be integrated with alarm detection or sprinkler system.



**Smokebeta motor specification**

Voltage	24V a.c. ± 20%
	24V d.c. ± 10%
Current	
Running	0.375amp
Stationary	0.125amp open/close control
	0.210amp variable control

See P17 for typical panel arrangements and electrical data.

**Window type M**  
**Louvres above**  
**fixed light**

**Description**

Fully ventilating areas above fixed panes glass-to-glass without transom. Single glazed only.

In single or multiple panel, the latter assembled with integral self-mullions positioned to give equal glass length (cannot be off-set). Proportions of ventilating area to fixed pane area is variable at choice.

**Coupling**

Type M windows can be coupled vertically and horizontally with other Weatherbeta windows, except types LPG.

**Self-mullion**

Size of integral self-mullion is dictated by the overall window size and design wind load.

**Fixed light**

**Glazing method**

Site glazed, dry, from inside by high performance pocket gasket method.

Pre-cut gaskets, sealing tape and setting blocks are supplied with windows.

**Ventilation**

Adjustable.

From nil to approx. 90% free air space, or with limitation to maximum opening. Each panel is independently operated; panels having more than six blades are grouped into two or three banks, each bank individually operated to provide precise control.

**Permanent.**

Windows can be manufactured Fully adjustable, with restricted permanent ventilation through protected slots in head weatherstrip. Adjustable, with permanent limitation on closing. With all, or some, blades permanently fixed open to 10°, 15° or 20° from the vertical.

**Window type F**  
**fixed light**

**Description**

Single or multiple panel, the latter assembled with integral self-mullions positioned to give equal glass length as standard, or can be off-set as purpose made. For single glazing.

**Coupling**

Type F windows can be coupled vertically and horizontally with all other Weatherbeta windows except types LPG.

**Self-mullion**

Size of integral self-mullion is dictated by the overall window size and design wind load.

**Glazing method**

Site glazed, dry, from inside by high performance pocket gasket method.

Pre-cut gaskets, sealing tape and setting blocks are supplied with windows.



**Window type M**  
 Multi-light without transom

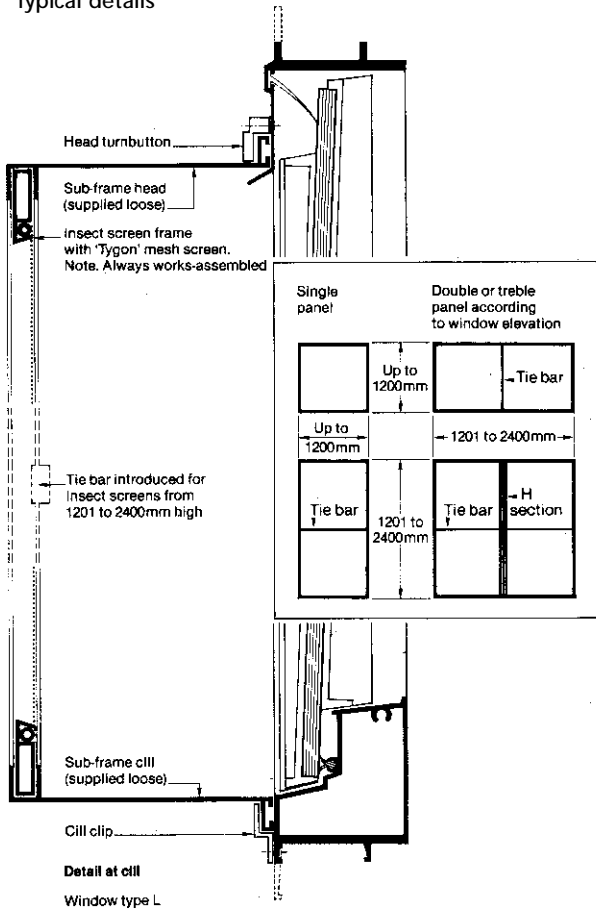
Also available:

**Window type F**  
 Fixed light

**Window type MT**  
 Multi-light with transom  
 (Type L & F coupled)

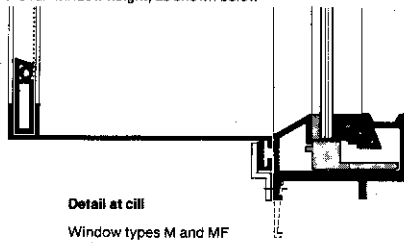


Typical details

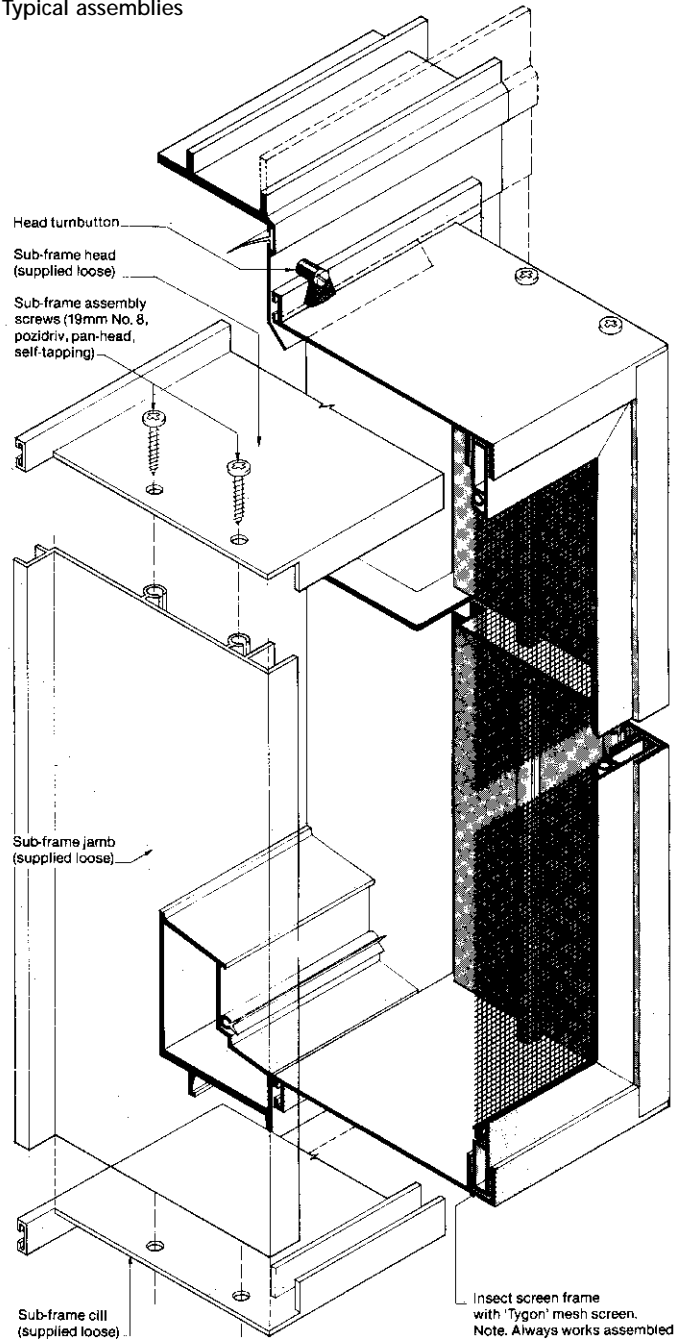


**Assembly instructions.**  
Full assembly and fixing instructions supplied with screens.

Types M and MF. Where the maximum number of blades for the window height are specified, insect screen will cover the full window height, as shown below



Typical assemblies



**Description.**

Insect screen sub-frames and glass-grade mesh screens are supplied to the required individual window sizes for assembly over the outside face, after windows have been installed. Screens are supplied to cover either the louvred ventilating area, or the full glazed area, as required.

**Finish.**

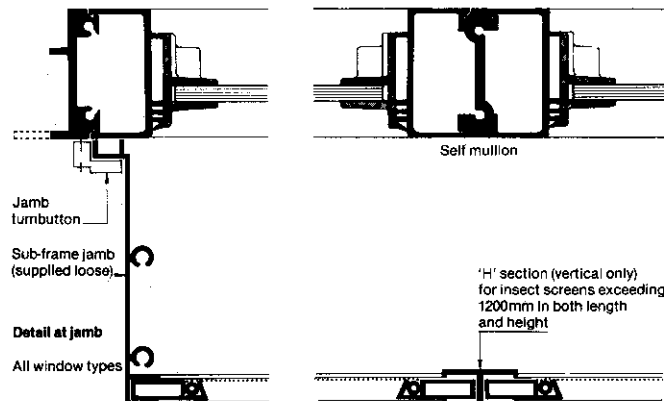
Mill finish, natural, bronze or black anodised to 25 microns or polyester powder coated in a range of different colours.

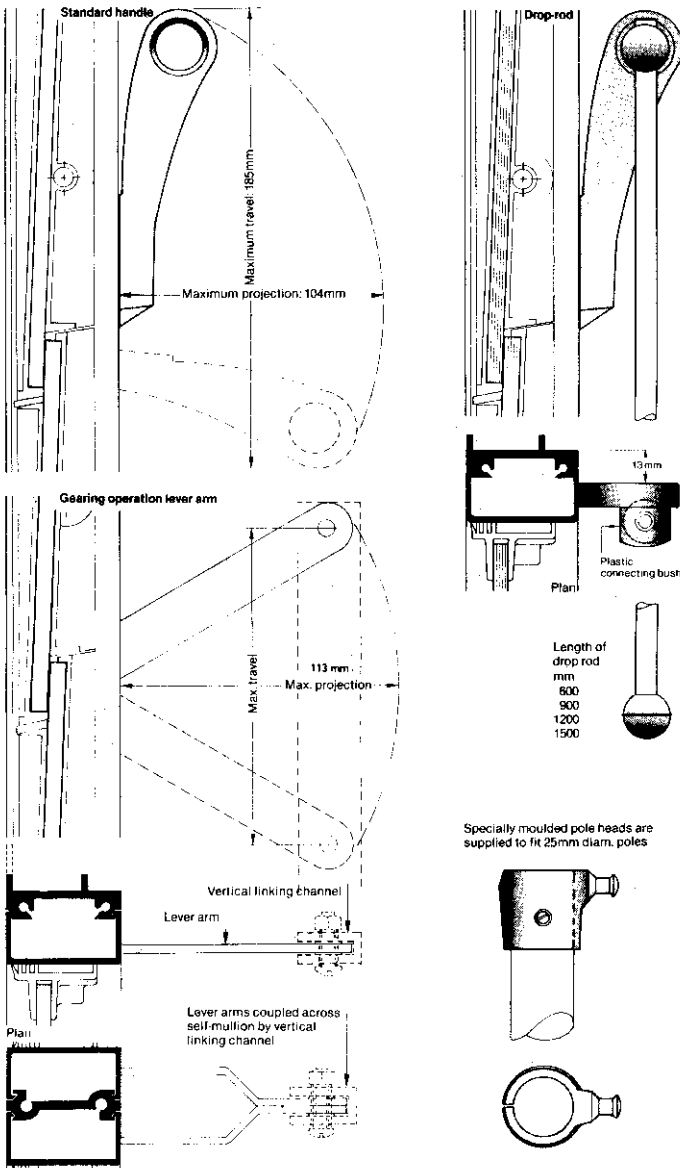
**Specification.**

**Insect screen panels.**  
Panel framing of hollow sections, extruded from aluminium alloy HE9TE and works-assembled with pre-formed cleats. Grey glass-grade insect mesh (18 x 14 threads per 25mm) inserted into framing under tension at works.

**Insect screen sub-frame.**  
Two separate sections, one for head and cill and one for jambs, are extruded from aluminium alloy HE9TE. Sections are fully fabricated at works, supplied in knocked-down form for site-assembly.

Insect screens can be fitted to the inside of window types L and M.





**Handle heights and blade banking**

Each ventilating panel is independently operated. Panels of more than six blades are grouped into more than one bank and each bank is individually operated to allow precise control.

Standard banking arrangements and handle heights are given in Tables A and B.

**Description**

All ventilating areas have a control linkage within both jamb assemblies of each louvred panel:

**Type of operation**

Standard  
Injection-moulded handle with over-centre locking action, for operation by hand or pole. Not suitable for gearing.

**Drop-rod**

8mm diameter natural or black anodised aluminium drop-rods may be fitted into standard handles, after installation, with a coupling bush.

**Gearing operation**

Natural or black anodised aluminium lever arm, drilled to receive specialist gearing. (Gearing supplied and fixed by others).

**Life of operation**

Operating cycles, based on 700 cycles annually, have been imposed on Weatherbeta linkages and fittings without visible deterioration to surface of sections or decline in operating precision and efficiency, for periods well in excess of 30 years.

\* Vertical linking channels are always supplied with panels having more than one bank of blades.

**Reinforced security RS  
general**

The RS security development is an exclusive Weatherbeta option.

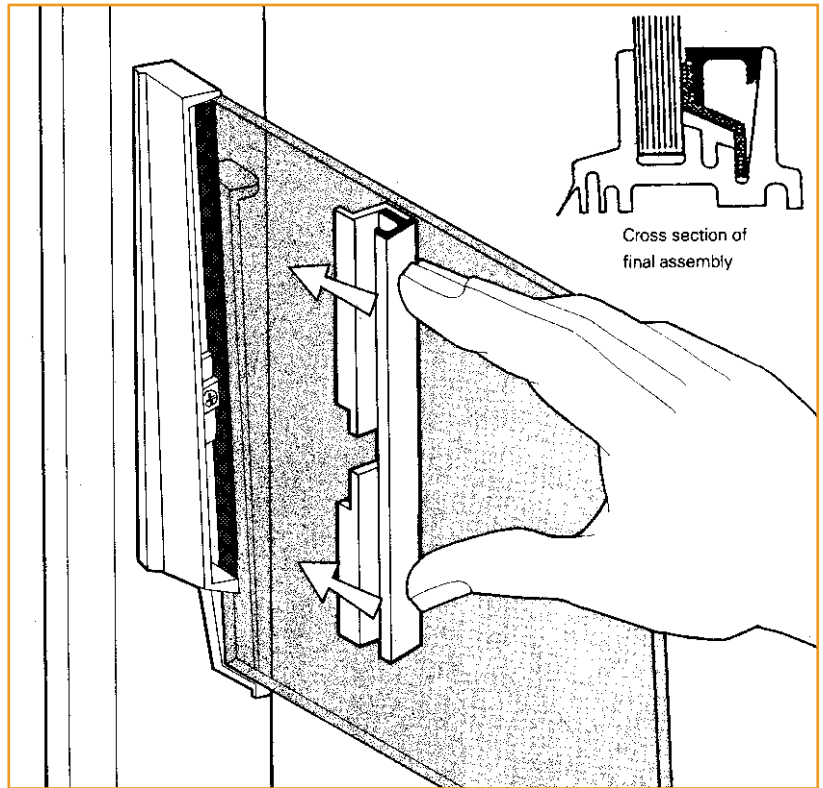
RS bladeholders have metal inserts which bond, with high impact resistant adhesive, to the full height of the glass and 'lock' the glass blade into the bladeholder.

Bonding is a simple operation at time of glazing.

Every bladeholder/drive assembly is completely protected from hacksaw attack by insertion, during manufacture, of hardened steel pins.

Right up to the point of glass breakage, the louvre blades, whether of clear or obscure glass, cannot be slid out or otherwise forcibly removed.

Because the option is equally effective when windows are open or closed, a physical obstruction to entry is maintained while maximum ventilation is available.



**RS is not available on electrically operated windows.**

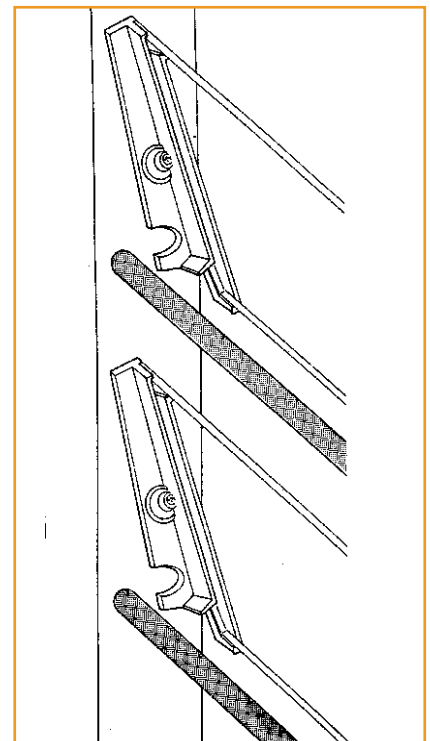
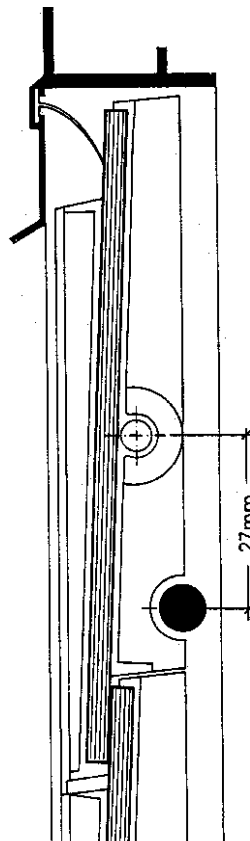
R.S. Number of blades operated by 1 handle must not exceed 4.

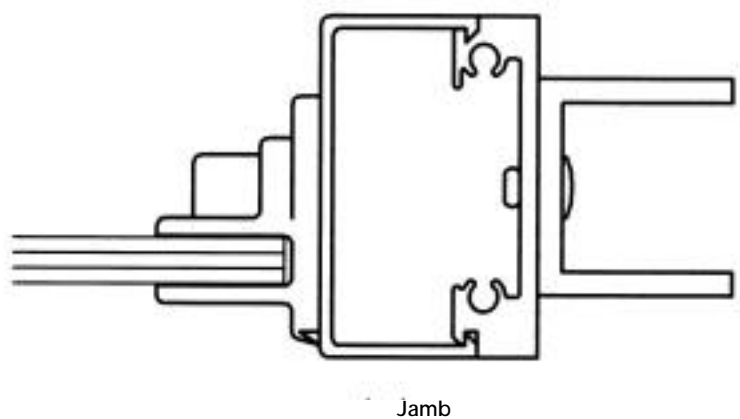
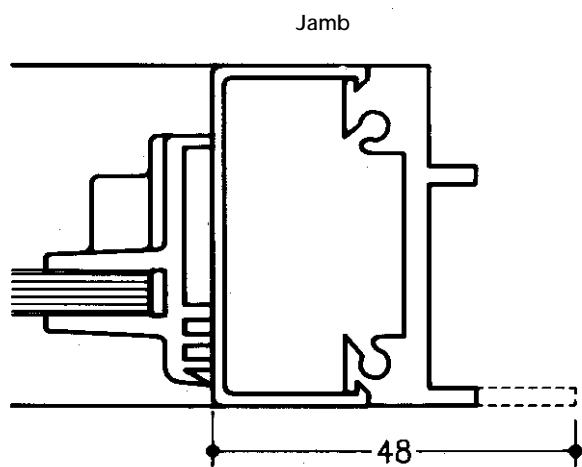
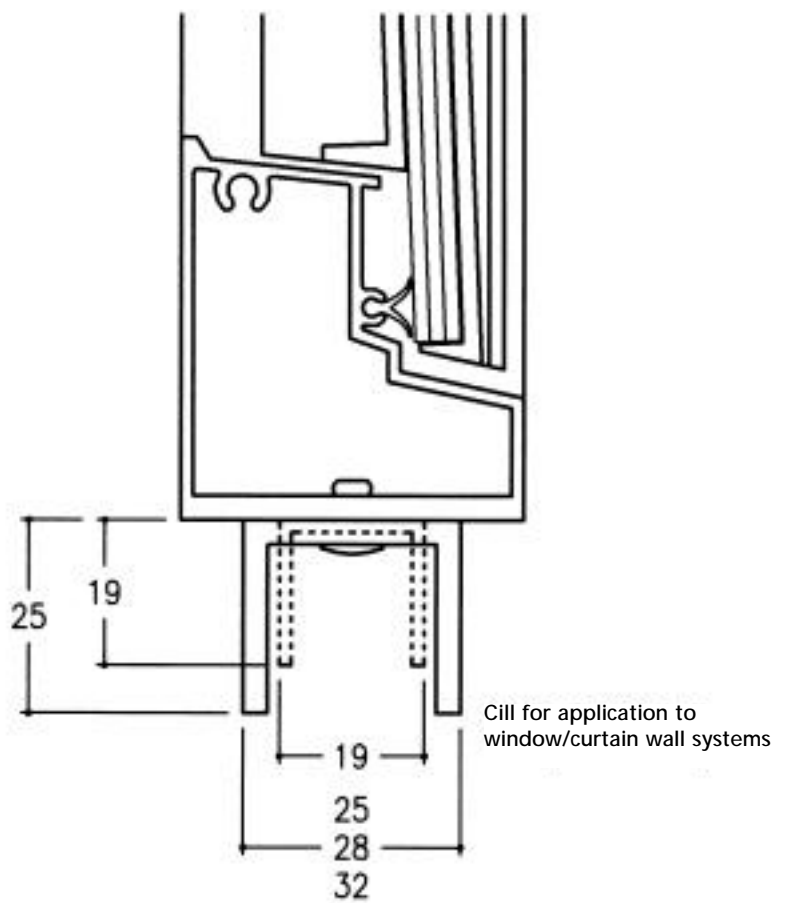
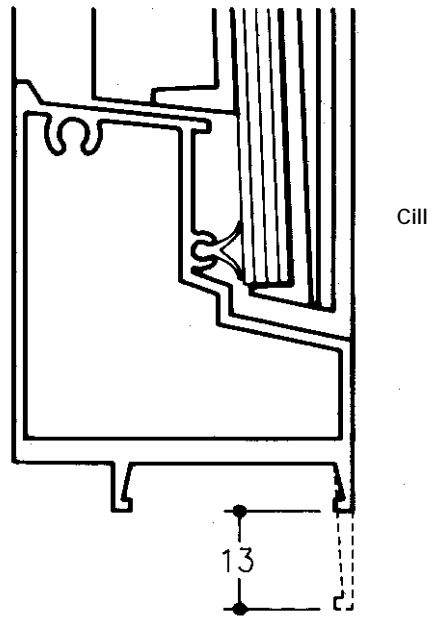
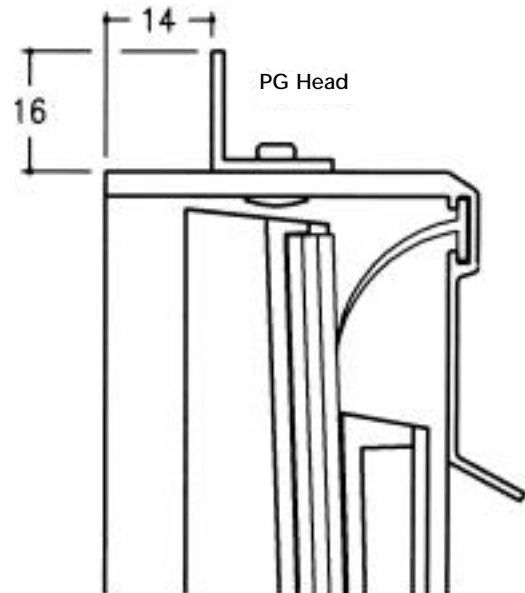
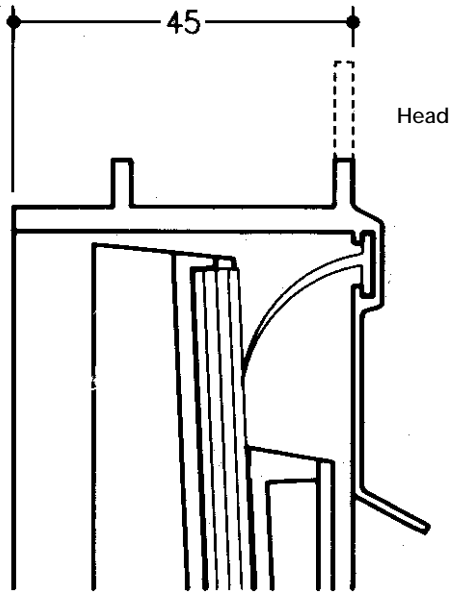
**Burglar bars**

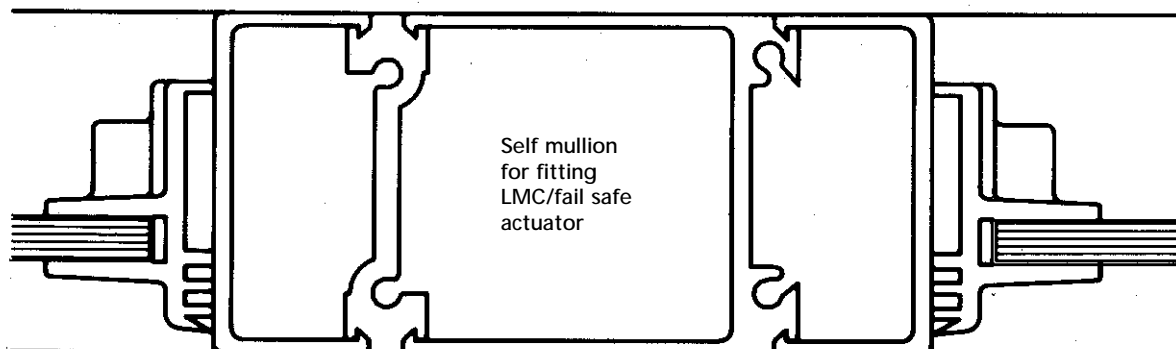
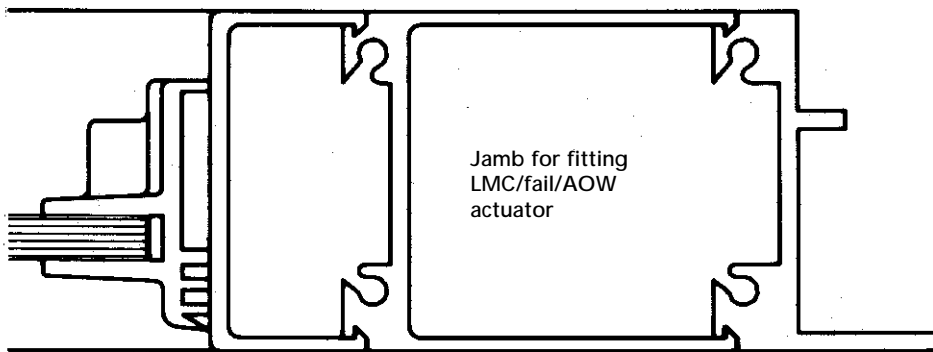
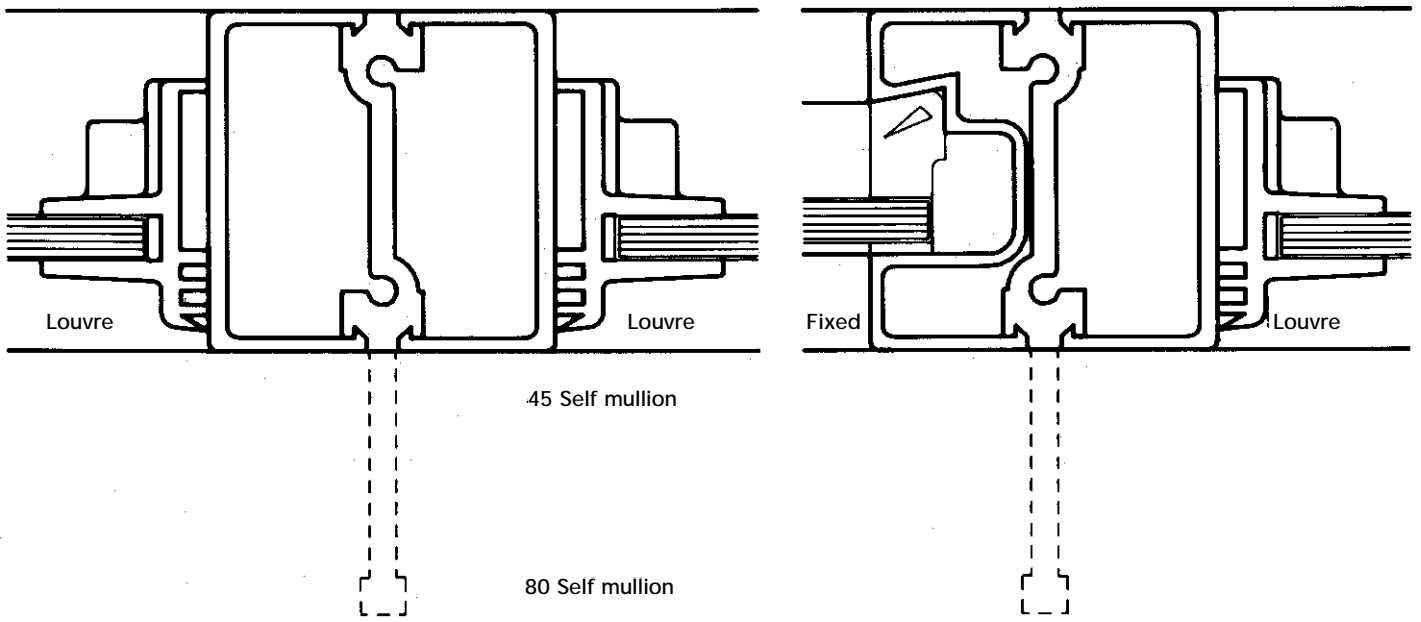
For extra protection burglar bars can be provided. They are unobtrusive and offer a real barrier in the event of glass being smashed. Burglar bars are used with standard blade holders.

The bars are manufactured from 12.70mm bright drawn mild steel rod, polyester powder coated pale grey or to match the colour of the panel frame.

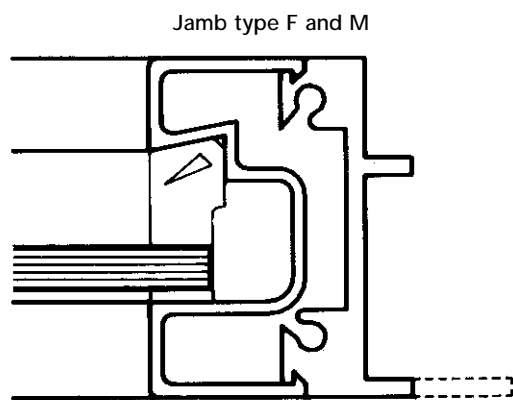
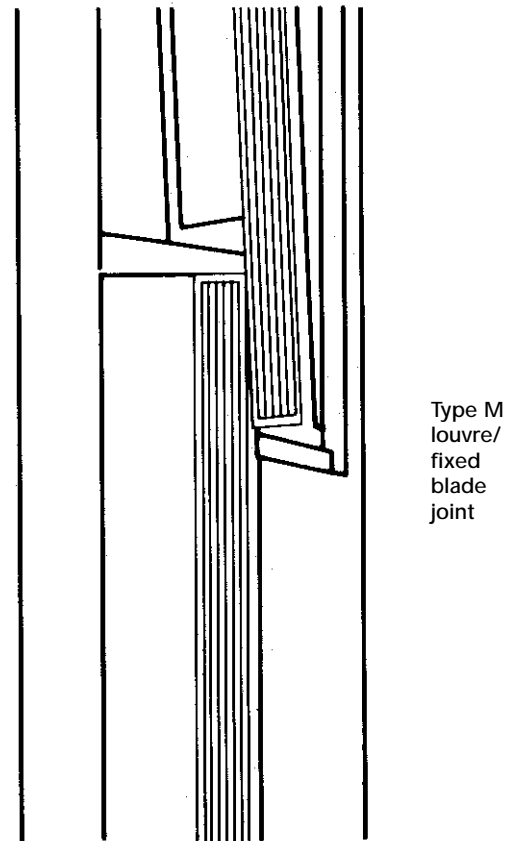
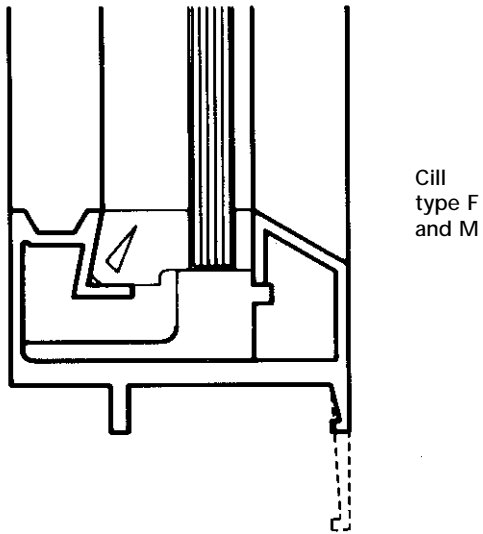
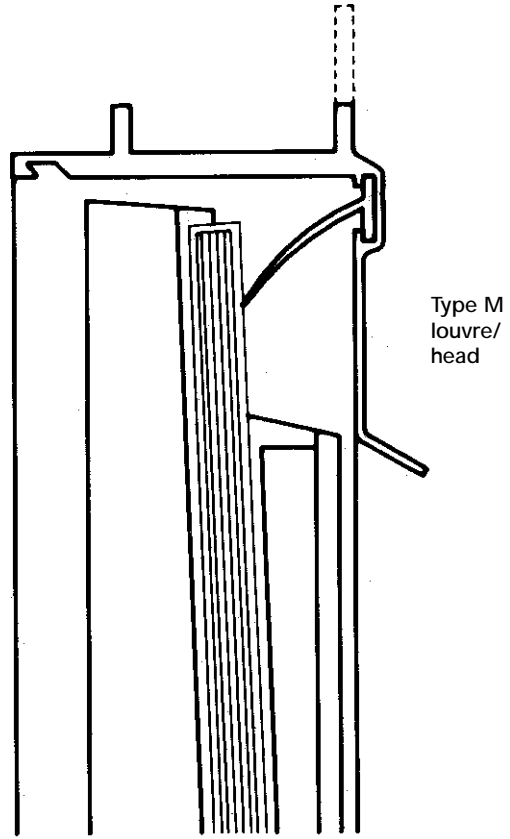
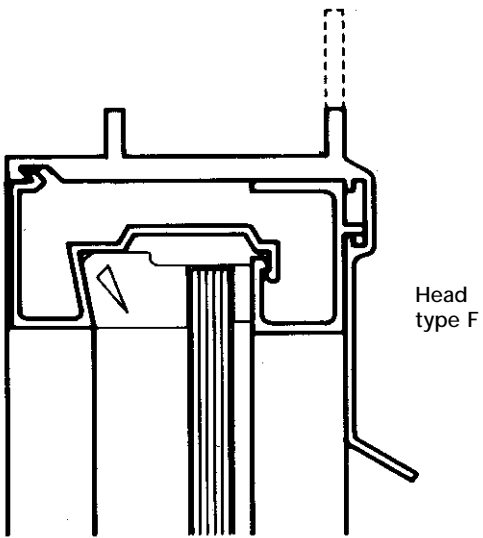
Fitted into the channel frame on the inside, they provide a permanent form of added security.

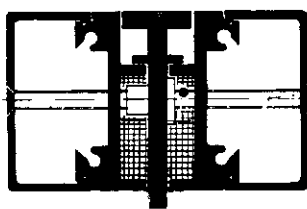
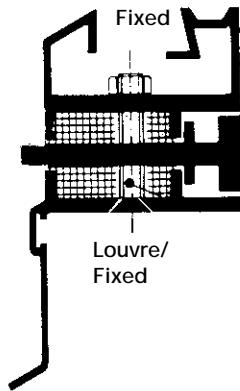
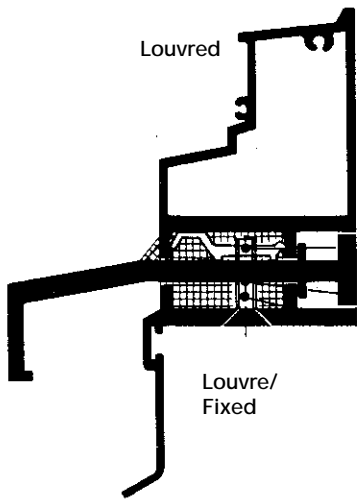




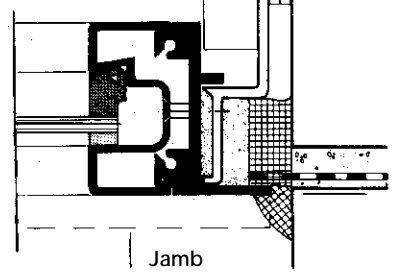
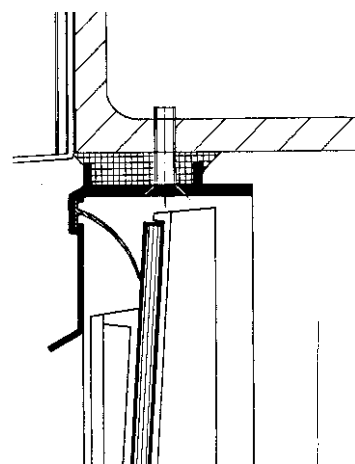
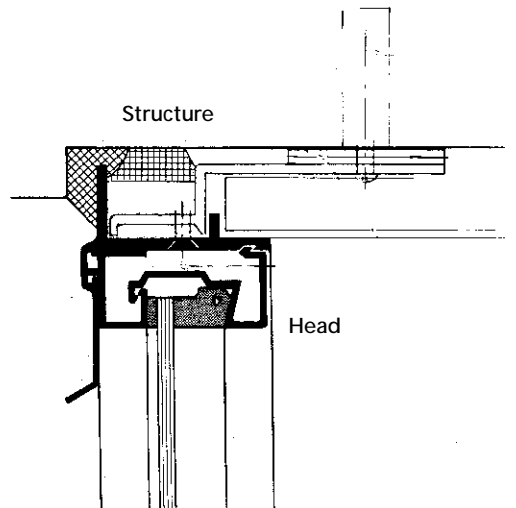
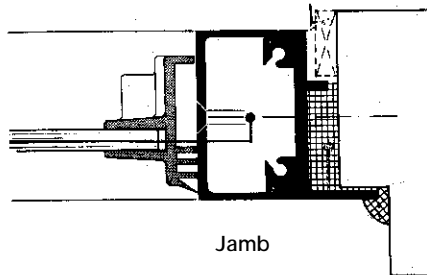
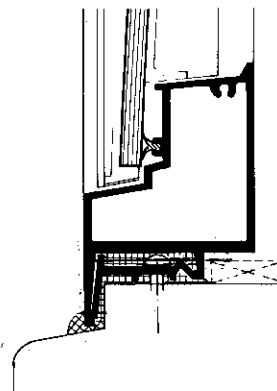
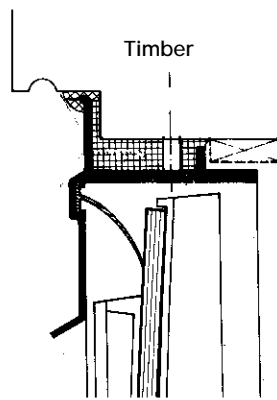
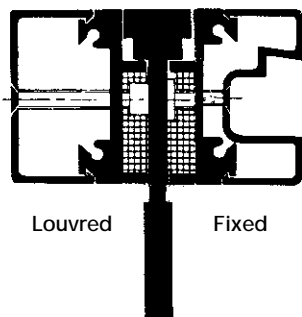


Scale 1:1

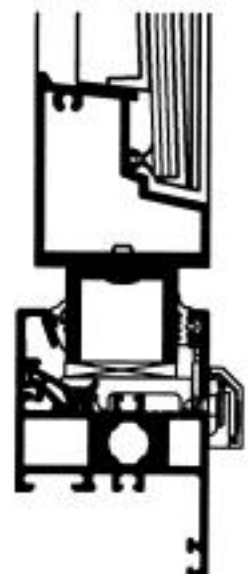
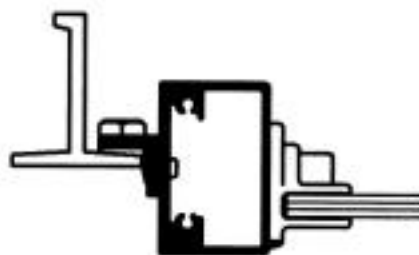




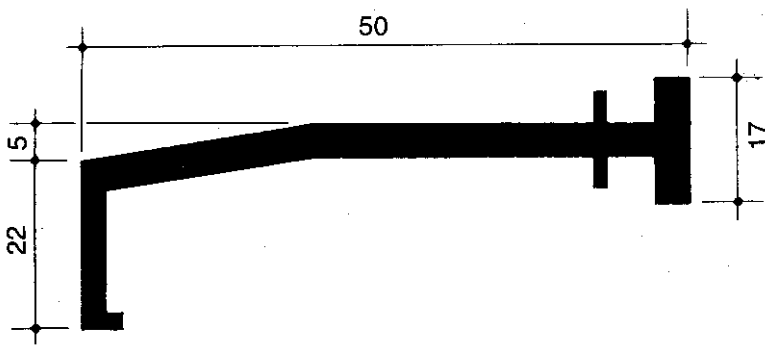
fully louvred to fully louvred



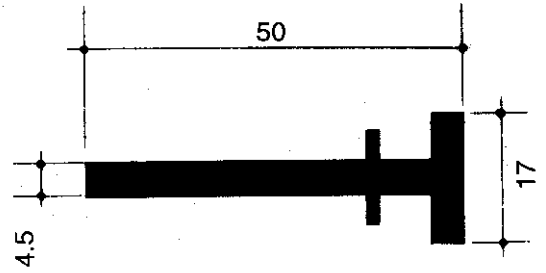
Fixings can be direct screw fix or with fixing brackets depending on structure.



# Couplings

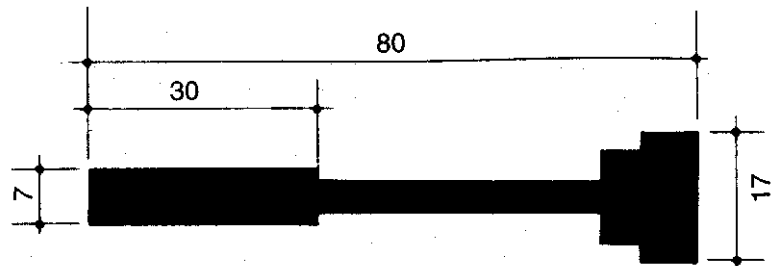


Coupling transom ET2



Coupling mullion EM1

**Note**  
EM2 and ET2 couplings are being replaced with a flat bar coupling 4.76mm x 100mm.



Coupling mullion EM2

## MULLION CHART

Wind Load	Mullion Type	Max Single panel Length	Mullion Height
up to 1500pa (sheltered)	45mm self mullion	1200	1600
up to 1900pa (moderate)	45mm self mullion	900	1500
	80mm self mullion/LMC	1000	1700
	self mullion	1200	1500
up to 2300pa (severe)	80mm self mullion/LMC	1200	1500
	self mullion	1000	1700
up to 1900pa	EM1	1200	1500
		1200	1700
	EM2	11 00	1900
		950	2000
up to 2300pa	EM2	1200	1500
		1100	1800

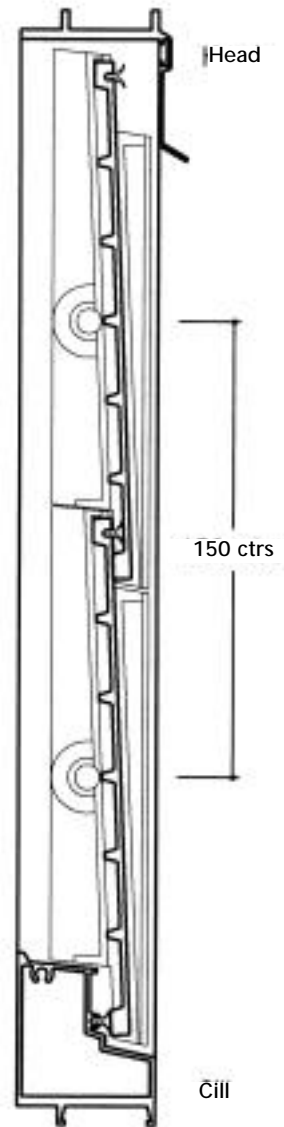
## TRANSOM CHART

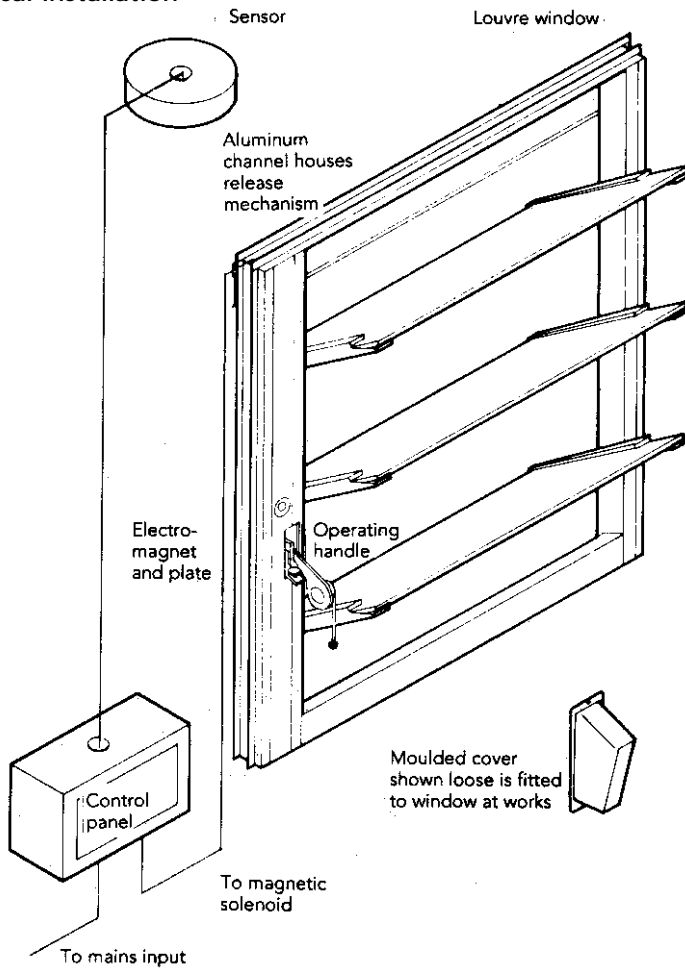
Wind Load	Transom	Max Panel Length	Transom Centres
up to 1900pa	ET2	1800 double panel	1200
up to 2300pa	ET2	1200 single panel	1700
	EM1		

Budget Lock



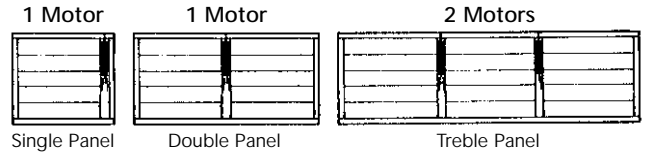
Aluminium Blade option



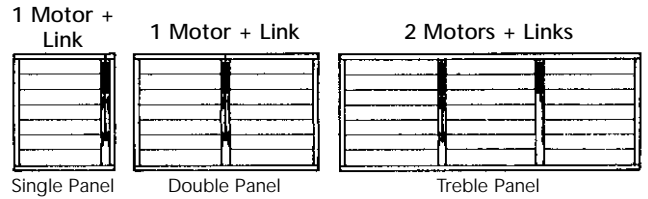


Smokebeta  
Typical panel arrangement

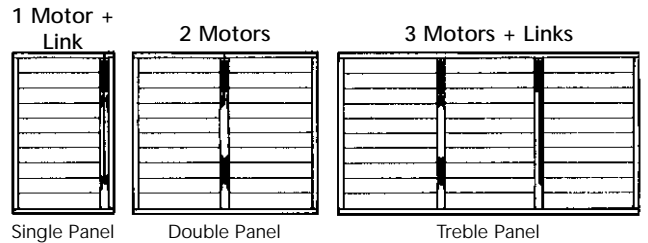
4, 5, 6 Blade



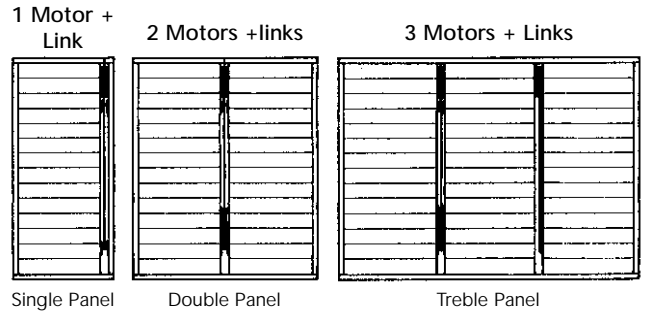
7-8 Blade - linked handles



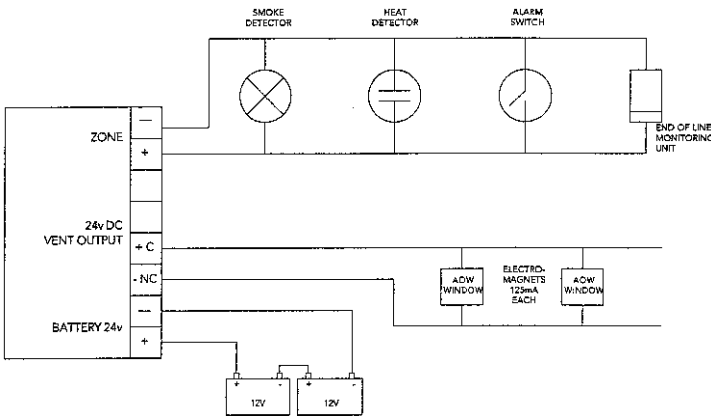
9-12 Blade - linked handles for single panels only



13-15 Blade - linked handles

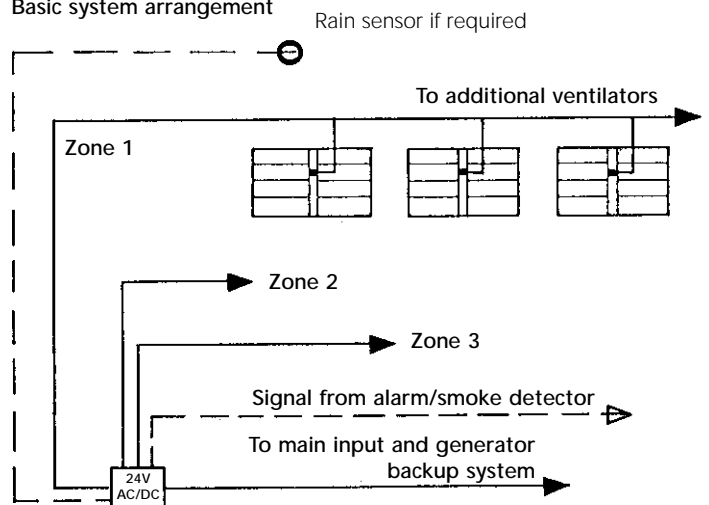


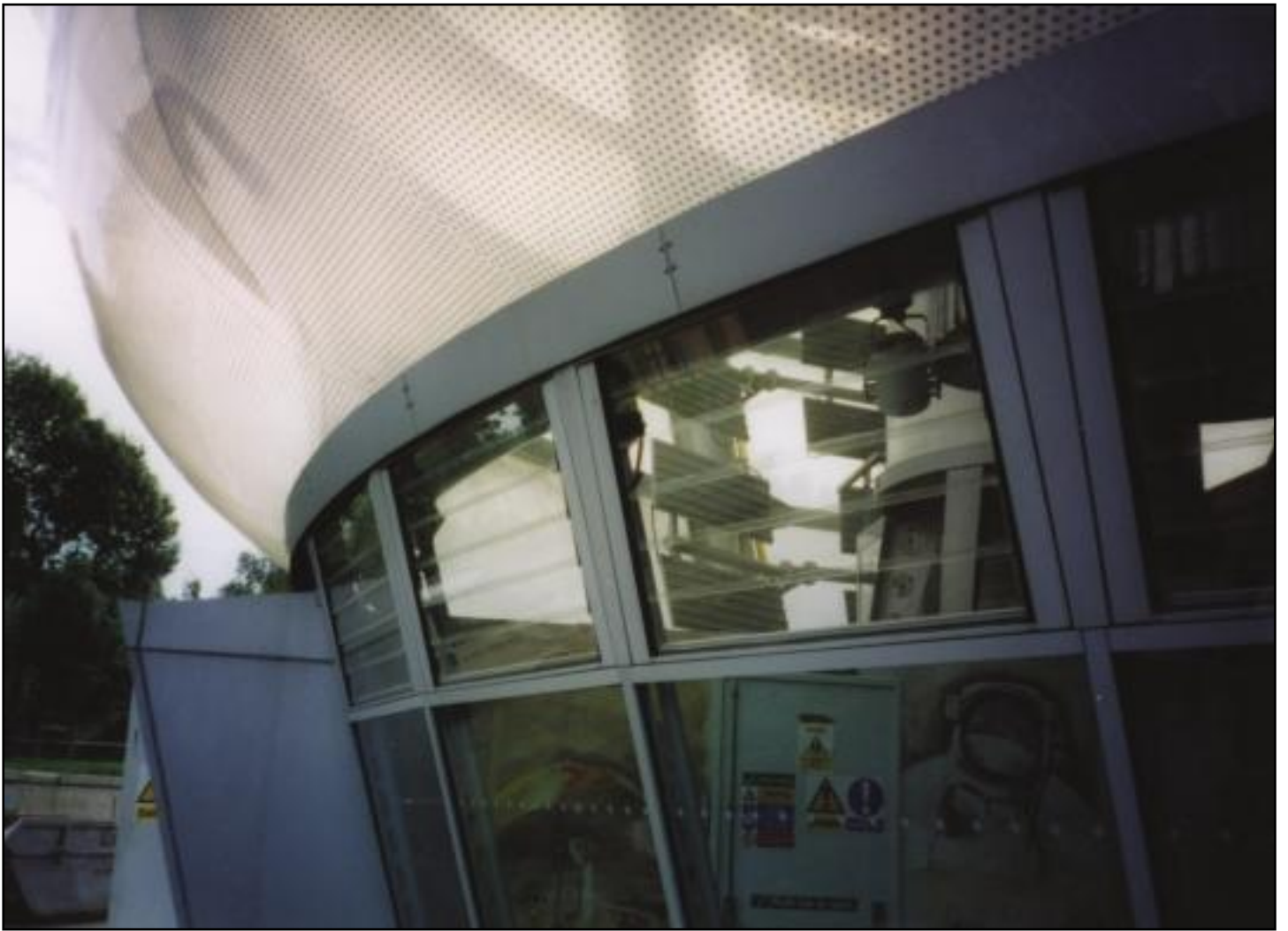
Typical Schematic Installation (Windows constantly energised)



**Electrical installation**  
The electrical installation must only be carried out by a qualified electrical contractor in compliance with current safety regulations of the country of use. In the UK this is BS 7671 'Requirements for Electrical Installations' as published and amended by the IEE. This covers specific requirements for the earth bonding of metal windows.

Smokebeta  
Basic system arrangement





# Ruskin Air Management Ltd

a BS EN ISO 9000 registered company

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Due to a policy of continuous product development the specification and details contained herein are subject to alteration without prior notice.

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