

Weatherbeta Louvre Windows

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



Louvres Sunscreens Natural Ventilators

Ruskin Air Management Limited
www.ruskinuk.co.uk

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Introduction	1	<p>Materials Head, jamb, cill, mullion and transom sections are manufactured in aluminium alloy, extruded from 6063T6.</p> <p>Finishes Mill finish, natural, bronze or black anodised to 25 microns, or polyester powder coated in a range of different colours.</p> <p>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.</p> <p>Alternatively 8mm toughened glass is available.</p> <p>Extruded aluminium blades are available in lieu of glass.</p> <p>Fixed Lights Outside glazed fixed lights can be provided to suit project requirements.</p> <p>Fixing materials For fixing to timber or metal, screws are supplied. For fixing to brickwork or concrete, screws or brackets are supplied as required.</p> <p>Operation Weatherbeta can be operated manually or electro-mechanically.</p> <p>Manual 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.</p> <p>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.</p> <p>Motorised controls 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 .</p>
Photographs	2	<p>Controls & Ancillaries Ventilation control panels are available for Weatherbeta. For single unit to multi-zone control.</p> <p>Open / close switches, room thermostats, indoor air quality & rain sensors are also available.</p> <p>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 .</p> <p>Special glazing installations Fully ventilating windows are available with single nib, and channel frame profile for use within various glazing systems.</p> <p>Insect screens Insect screens are available and are normally fitted externally with simple clip fixings.</p> <p>The sub-frame sections are of aluminium alloy extruded 6063T6 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.</p> <p>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.</p> <p>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.</p> <p>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.</p>
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**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	900 Pa	1220	1195	2390	2365	2400
for design wind loading	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	

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	



Window type L Fully louvred

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

Automatic opening window AOW

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

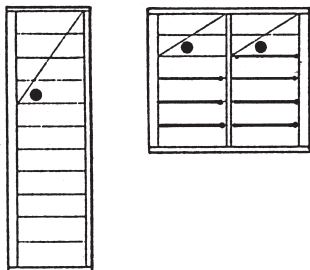
Automatic fail safe opening louvres need to be closed/re-set by hand.

Ventilation

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

Typical arrangements

Typical arrangements to provide 0.5m² automatic and 1m² manual operation.



- Automatically controlled ventilators

Control panels for automatic smoke dispersal

The electro-magnet housed within the window frame member is supplied. Commercially available control panels of various types can be used dependent of the number of windows and zone systems required. Battery back-up systems are recommended to prevent windows opening in the event of a power failure.

Naco can offer a range of approved control panels and ancillaries. Please consult our Sales Office for more information.

Electrical installation

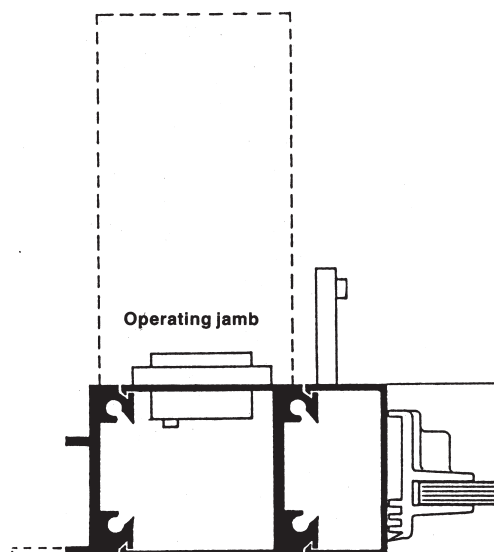
The electrical installation must only be carried out by a qualified electrical contractor in compliance with current safety regulations of the country of use. In the UK this is BS 7671 'Requirements for Electrical Installations' as published and amended by the IEE. This covers specific requirements for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



Electro-magnet specification

Type	58/HS
Voltage	24 Volt DC
Current	0.125amps

See P15 for typical panel arrangements and electrical data.



Automatic opening window control fitted to jamb section only.

Linear motor control LMC

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.

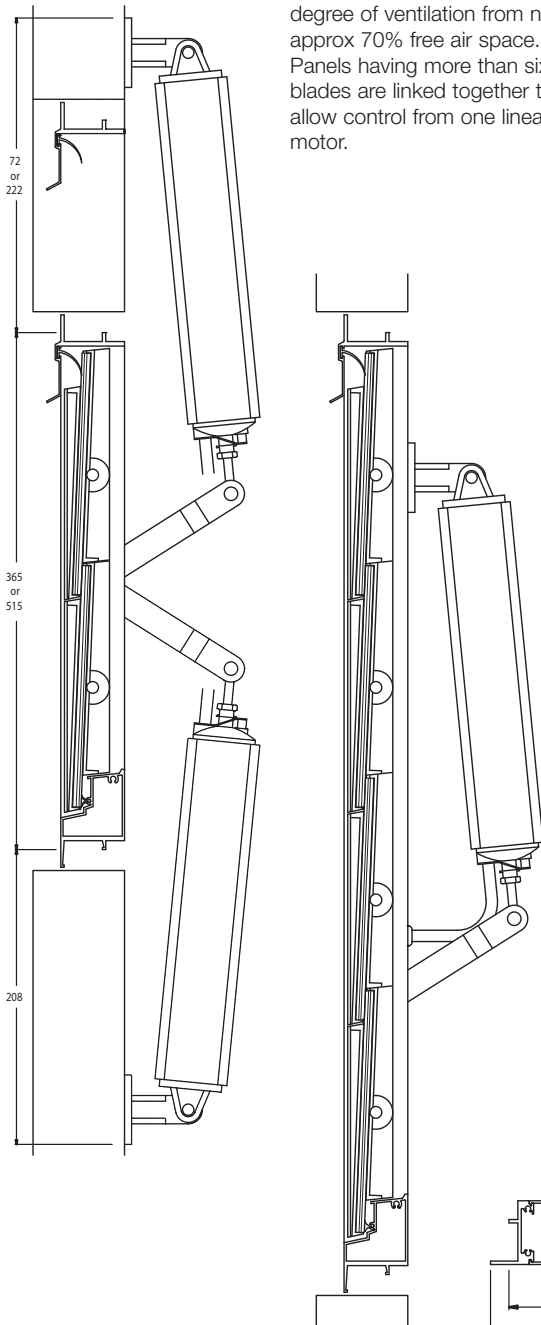
Handing

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

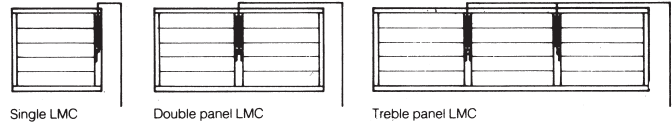
Ventilation

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 installation Window type: L Fully louvred



Typical panel arrangements

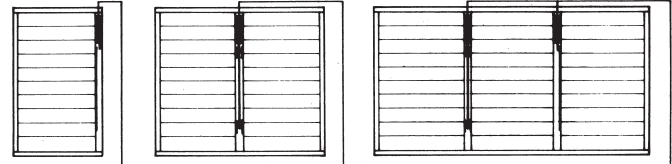


Single LMC

Double panel LMC

Treble panel LMC

4, 5 and 6 blade applications



Single LMC

Double panel LMC

Treble panel LMC

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

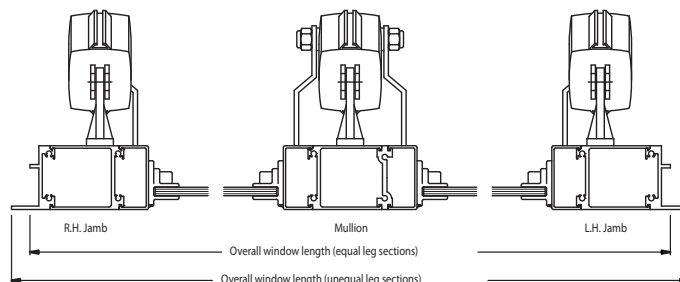
The linear motor is supplied fitted to the window. The control switch must spring return to "off". The motor is protected by a thermal cut-out which if activated will automatically reset after 25-30 minutes.

The motors contain a relay switch, therefore motors may be connected in parallel through one switch.

Naco can offer a range of approved control panels and ancillaries. Please consult our Sales Office for more information.

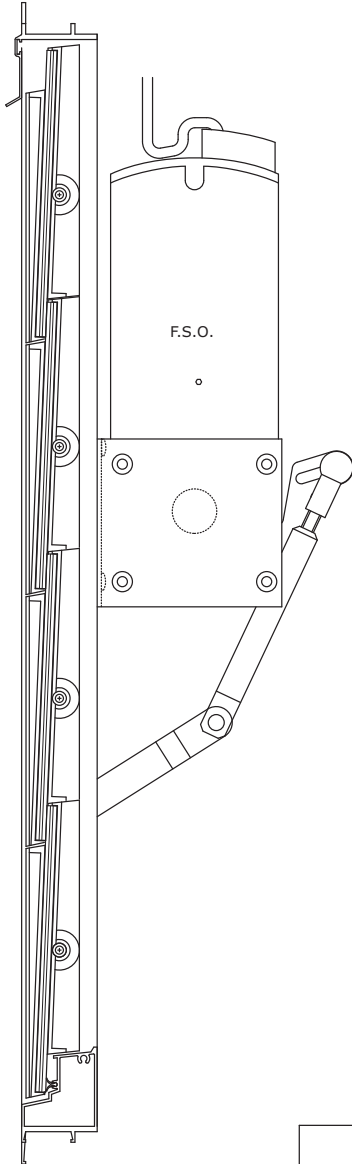
Special applications

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



Smokebeta Failsafe window

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

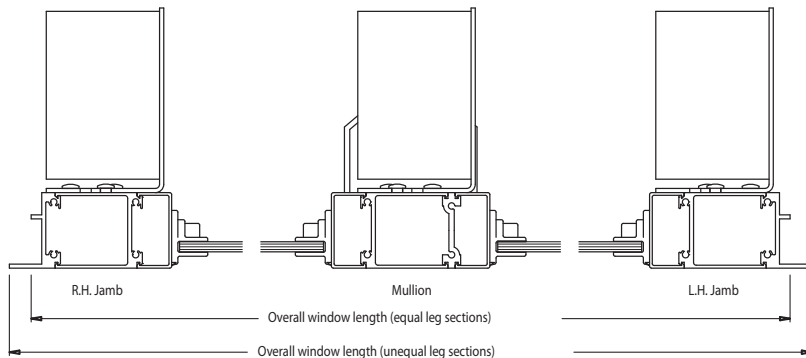
Smokebeta louvres are either closed or fully open, giving approx. 70% free air space.

A 24 volt AC/DC operator is available providing for variable ventilation.

Control panels

Commercially available control panels of various types can be used dependent of the number of windows and zone systems required.

Naco can offer a range of approved control panels and ancillaries. Please consult our Sales Office for more information.



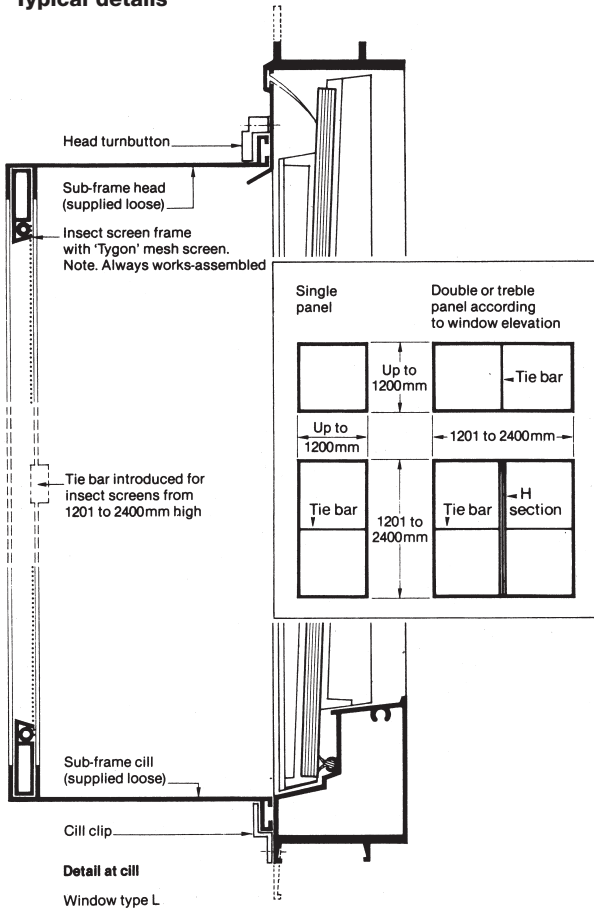
Smokebeta motor specification

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

See P15 for typical panel arrangements and electrical data.

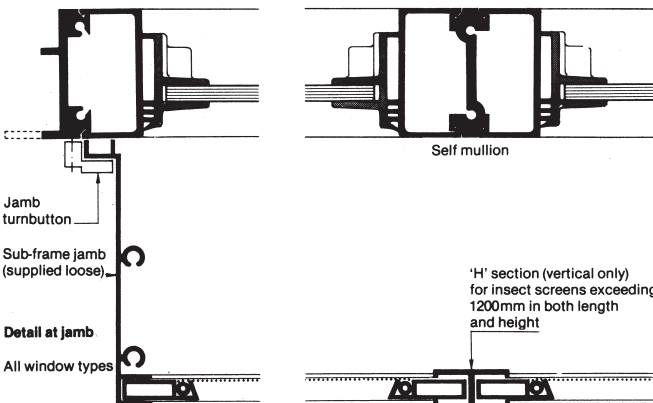
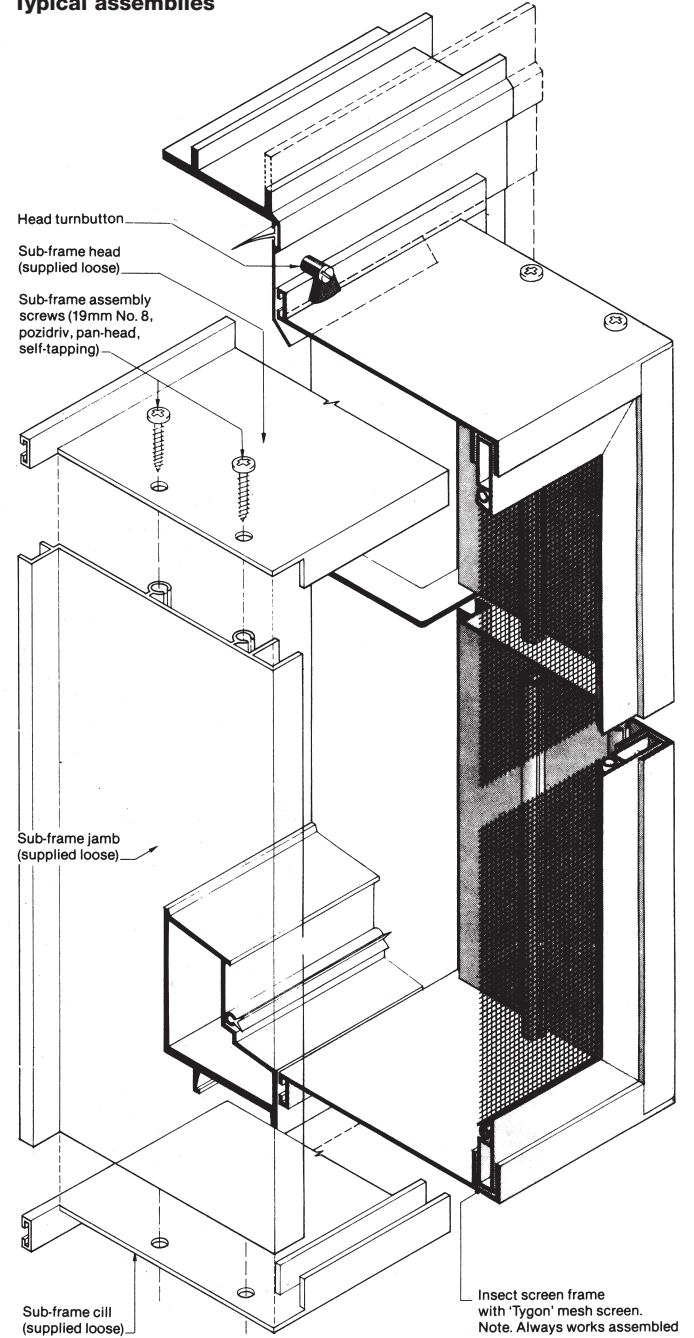
External insect screens

Typical details



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

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.

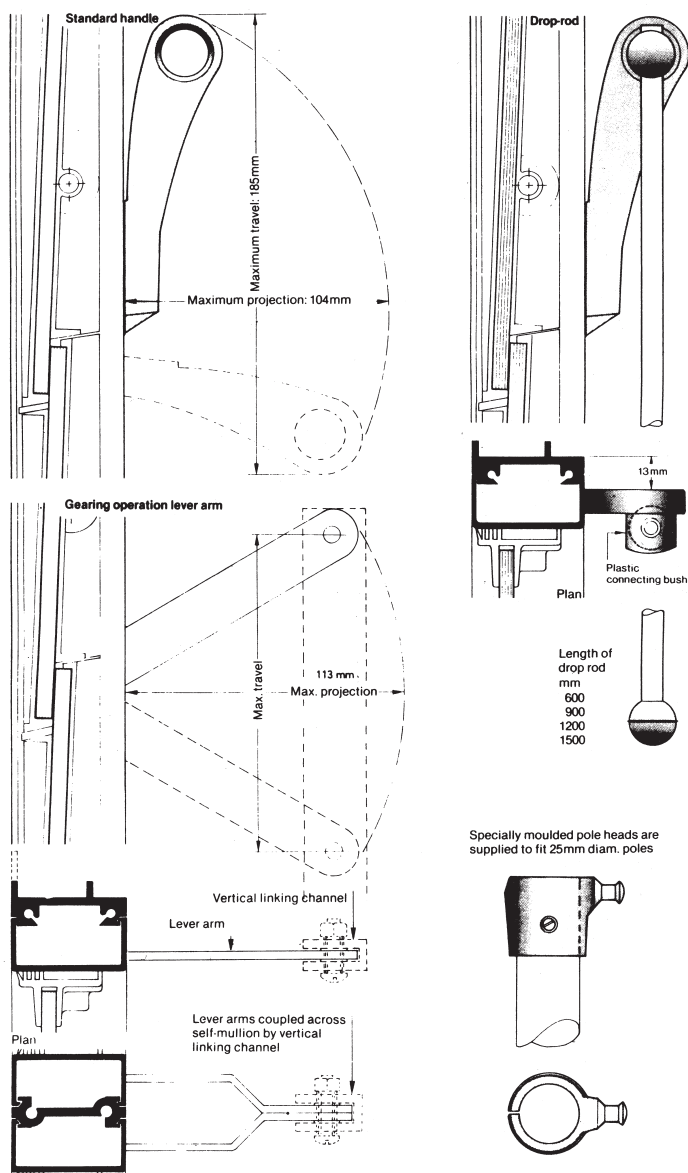
Finish.
Mill finish, natural, bronze or black anodised to 25 microns or polyester powder coated in a range of different colours.

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

Operating control All window types



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.



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).

Reinforced security RS general

The RS security development is an exclusive Weatherbeta option.

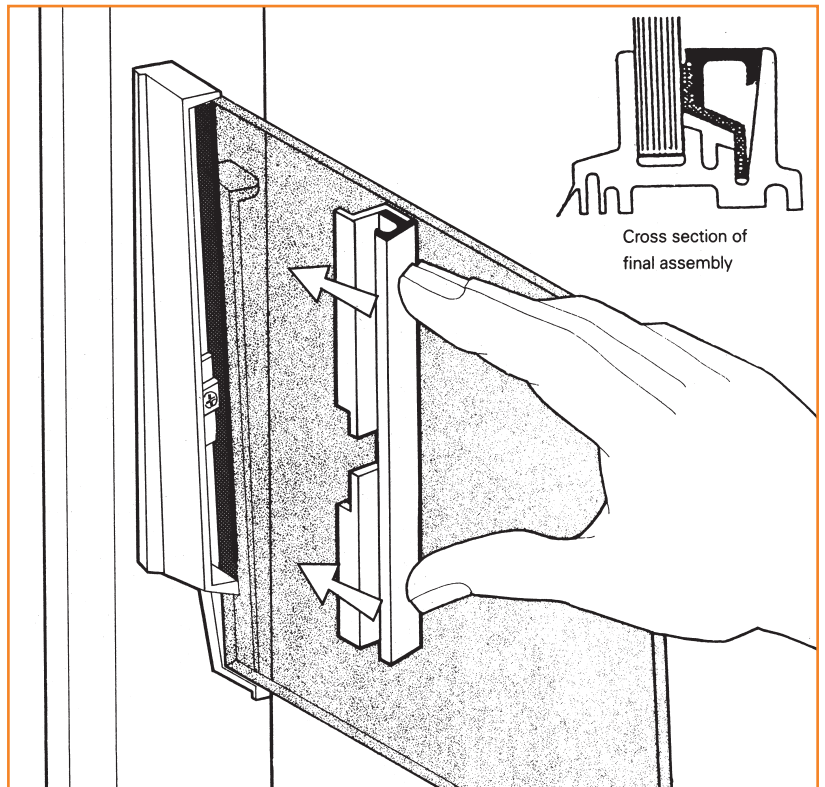
RS bladeholders have metal inserts which bond, with high impact resistant adhesive, to the full height of the glass and 'lock' the glass blade into the bladeholder.

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.

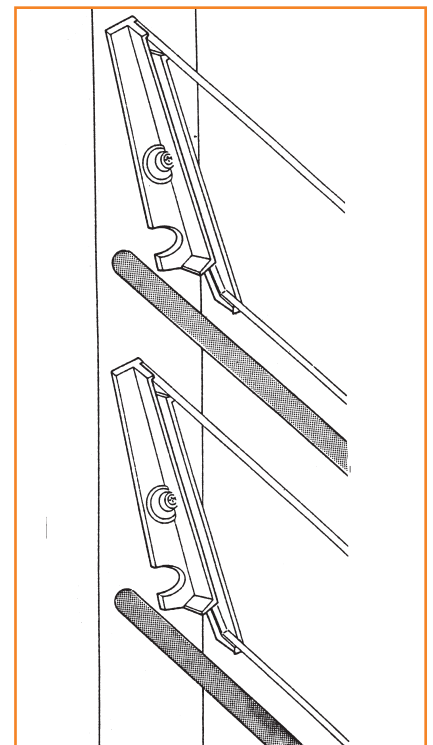
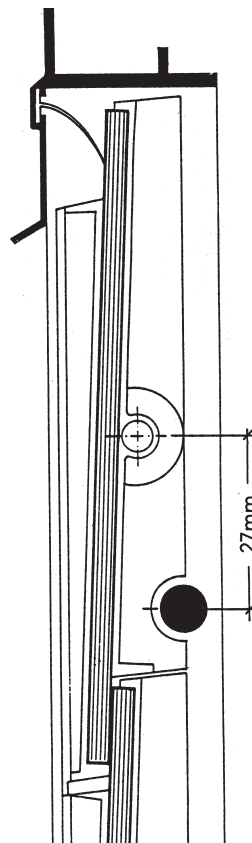
R.S. Number of blades operated by 1 handle must not exceed 4.

Burglar bars

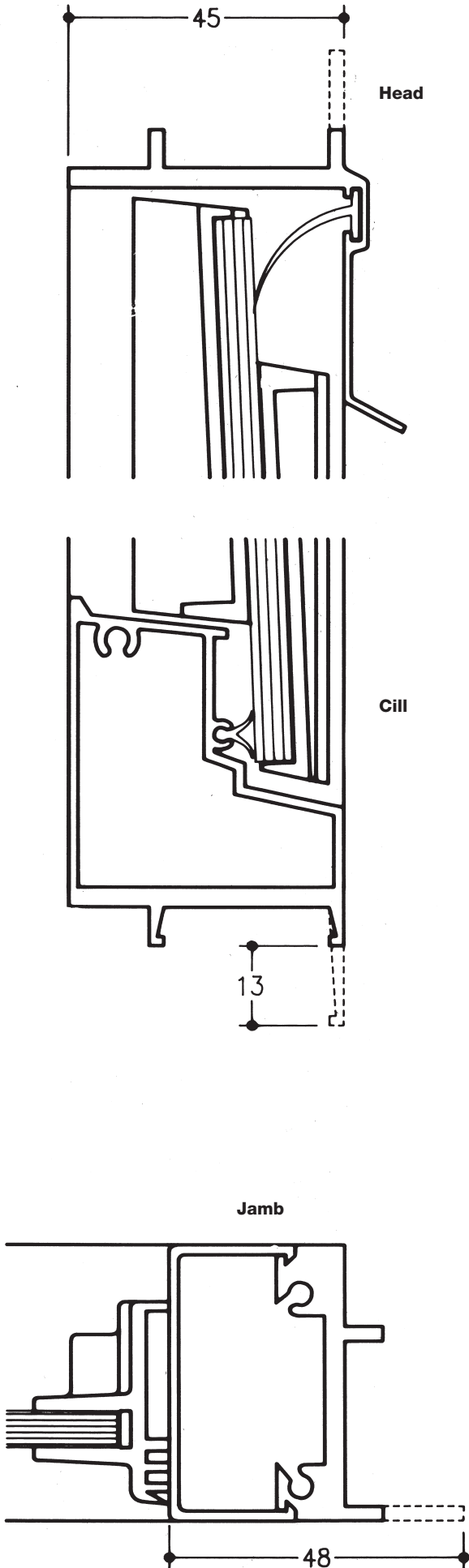
For extra protection burglar bars can be provided. They are unobtrusive and offer a real barrier in the event of glass being smashed. Burglar bars are used with standard blade holders.

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.

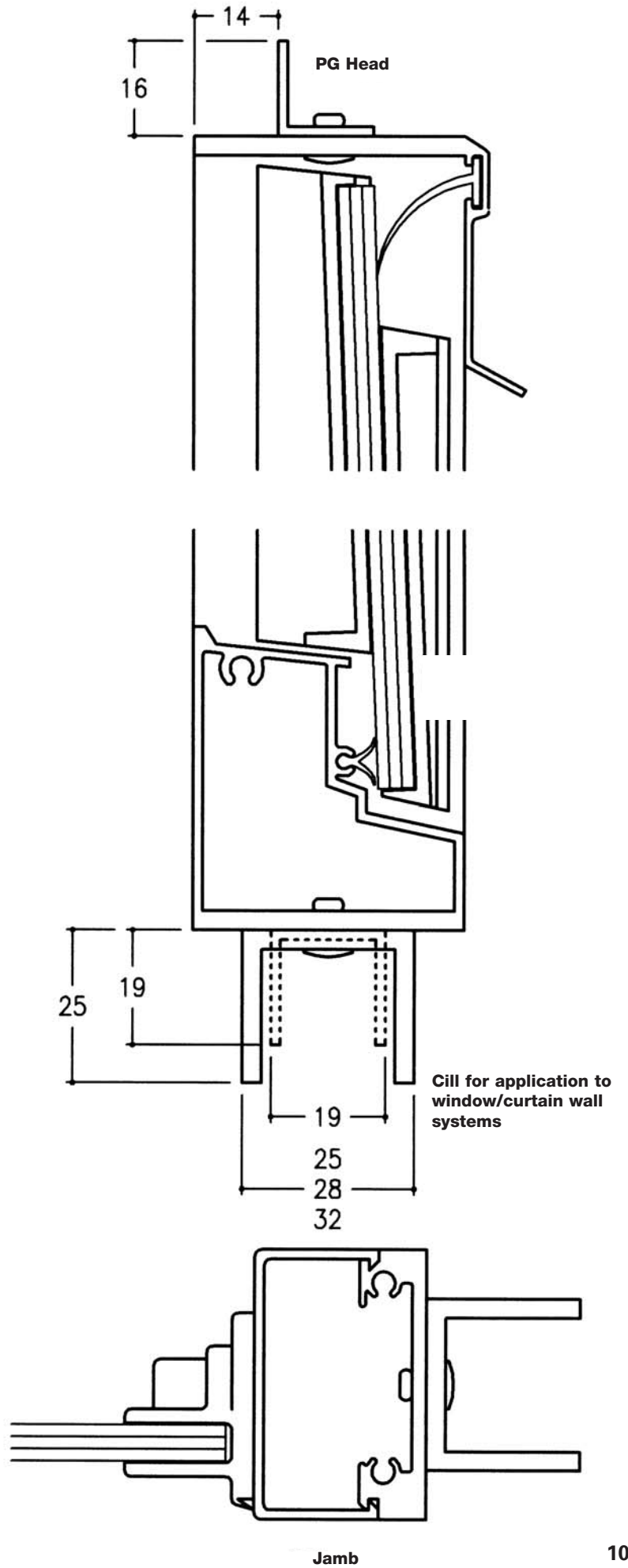
Fitted into the channel frame on the inside, they provide a permanent form of added security.

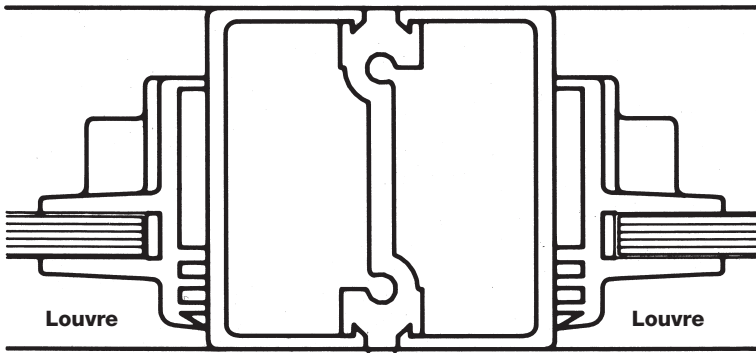


Type L

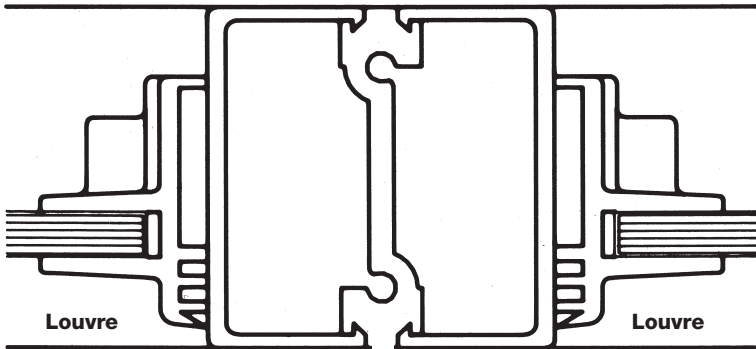


Type LPG

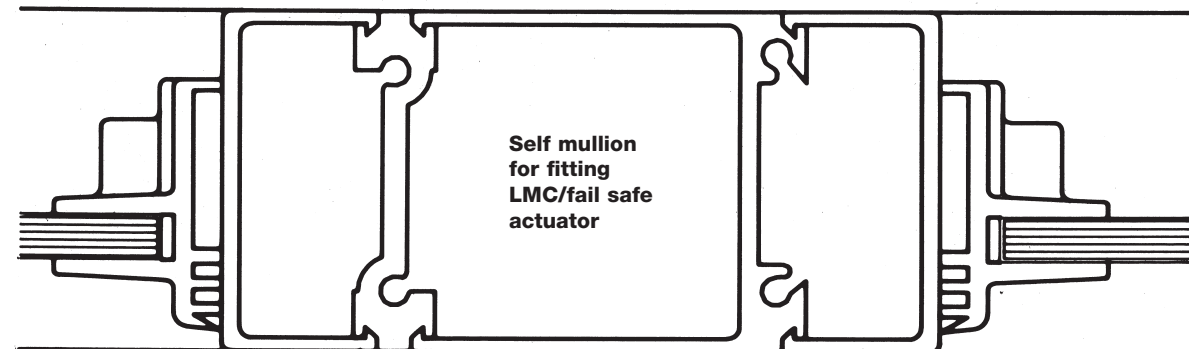
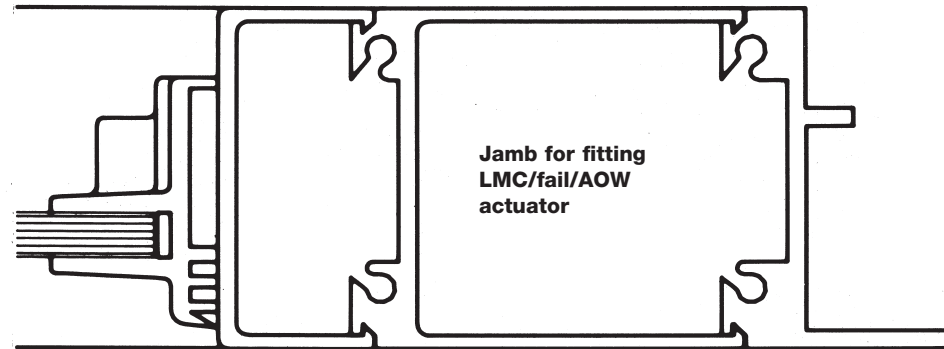




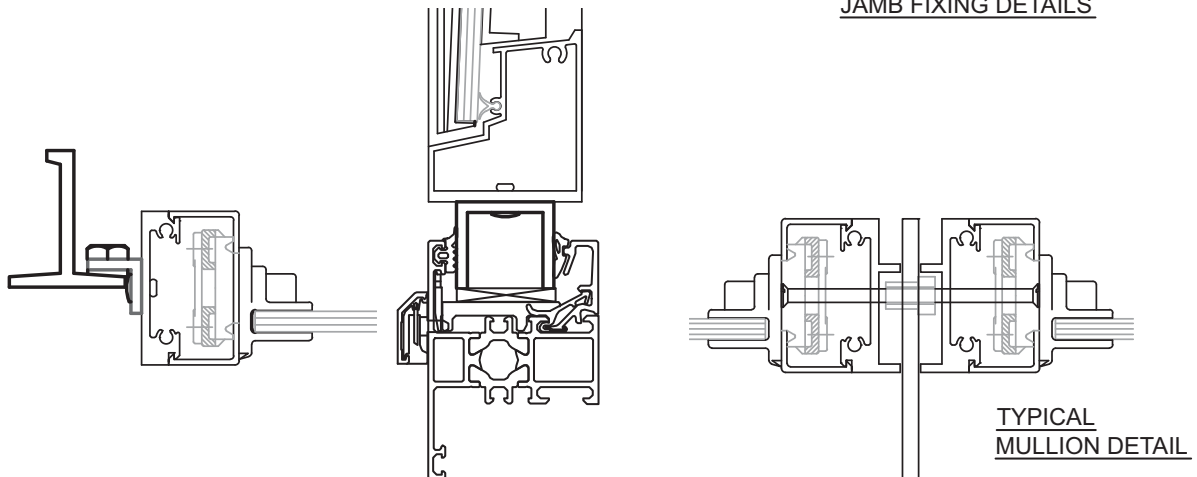
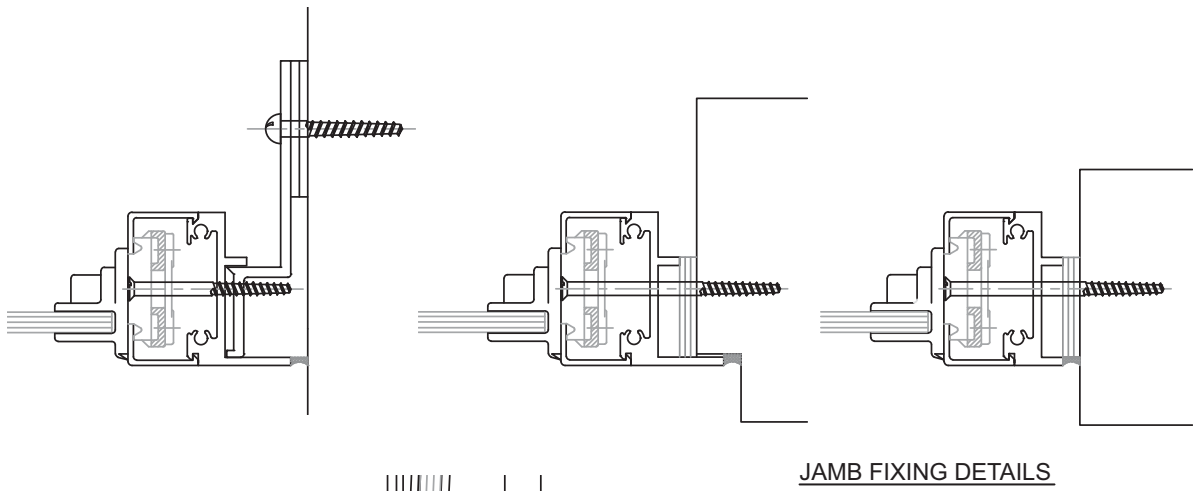
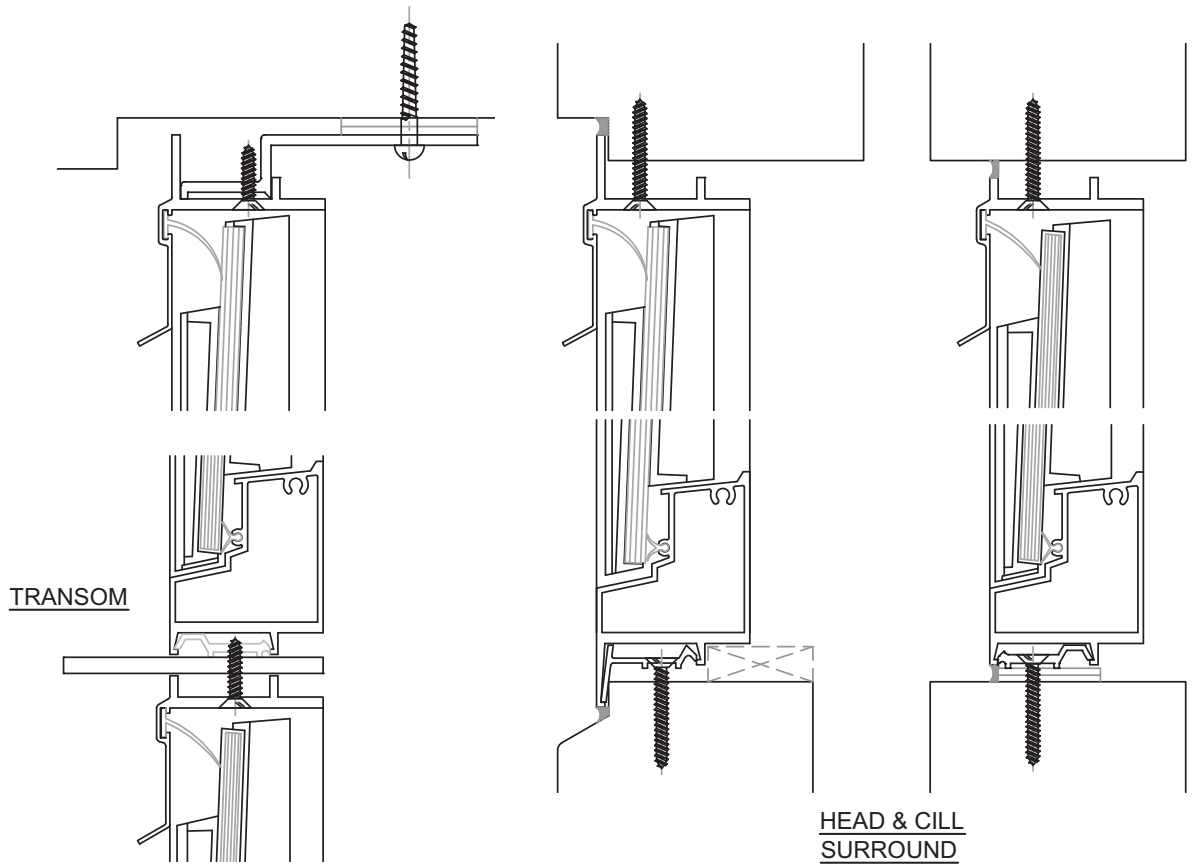
45 Self mullion



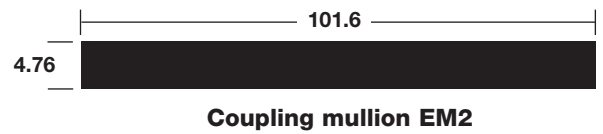
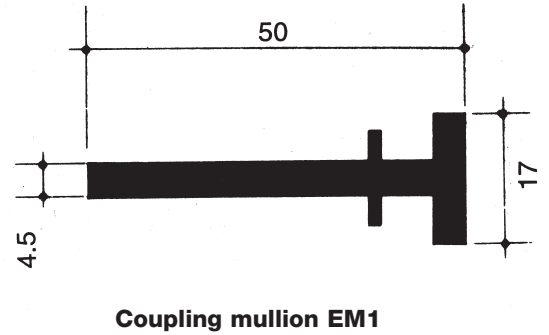
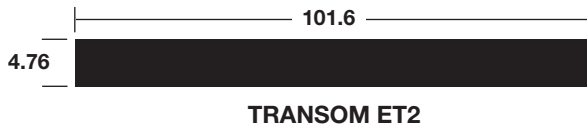
80 Self mullion



Scale 1:1



Couplings



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 or 45mm self mullion/LMC	1000	1700
		1200	1500
up to 2300pa (severe)	80mm self mullion or 45mm self mullion/LMC	1200	1500
		1000	1700
up to 1900pa	EM1 EM2	1200	1500
		1200	1700
		1100	1900
		950	2000
up to 2300pa	EM2	1200	1500
		1100	1800

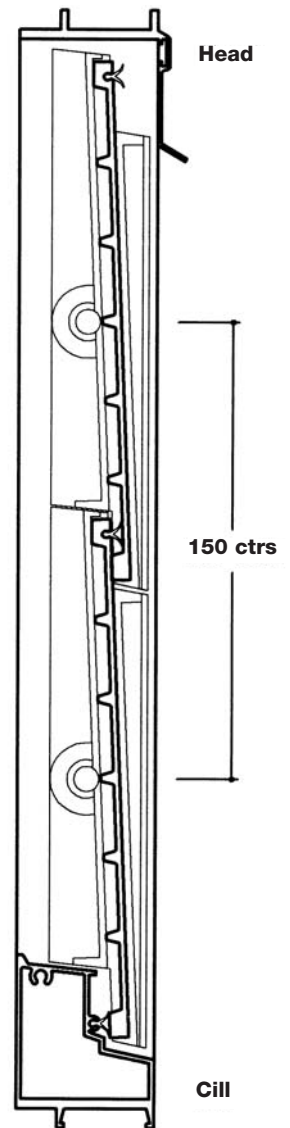
TRANSOM CHART

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

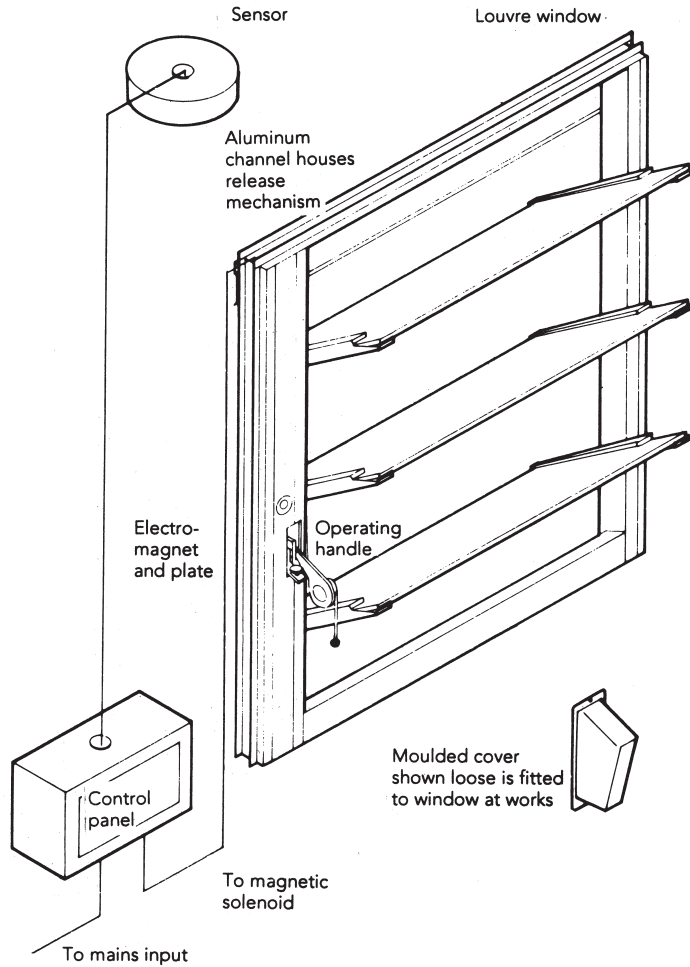
Budget Lock



Aluminium Blade option

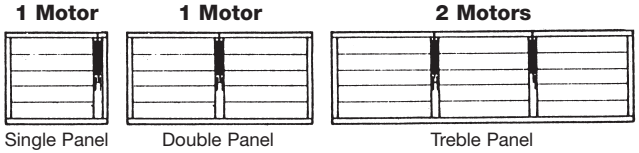


**AOW
Typical Installation**

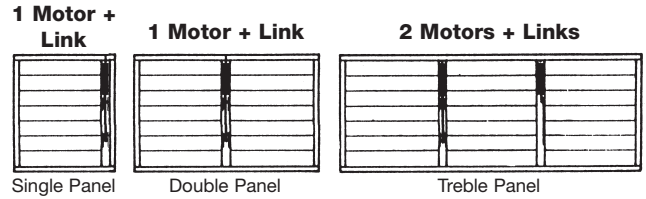


**Smokebeta
Typical panel arrangement**

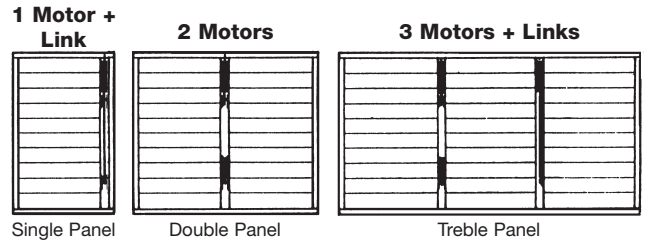
4, 5, 6 Blade



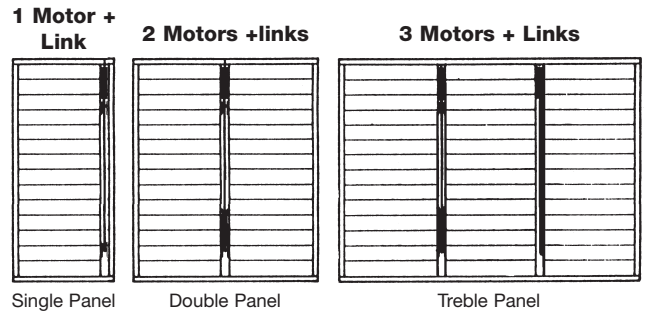
7-8 Blade - linked handles



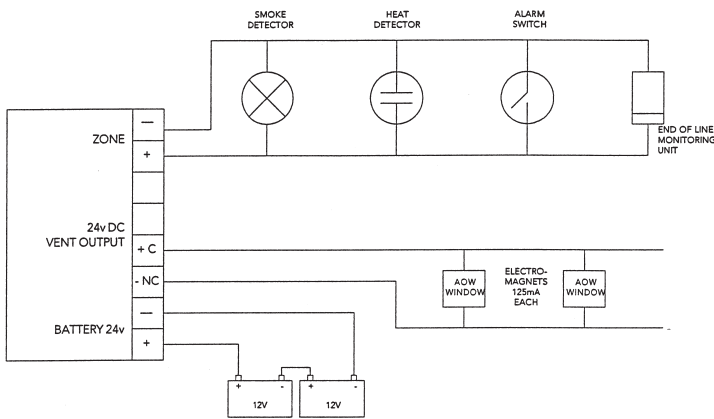
9-12 Blade - linked handles for single panels only



13-15 Blade - linked handles

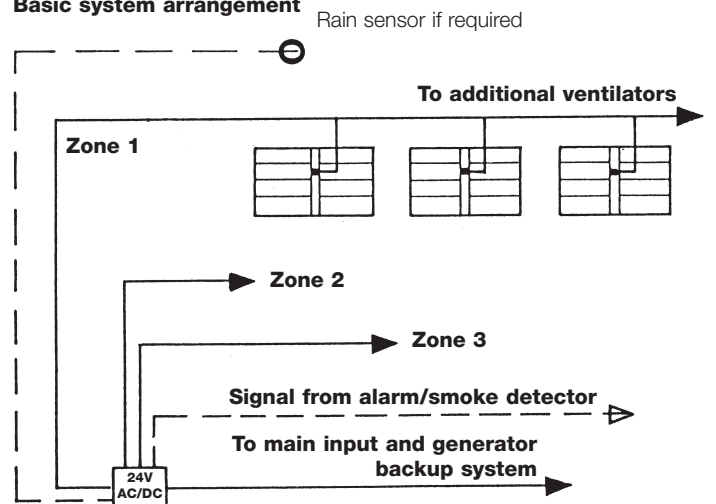


Typical Schematic Installation (Windows constantly energised)



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**



Naco Product Range

Metal Louvres

Our comprehensive range of standard and high performance louvres covers everything from simple screen work to specialist applications, including acoustic, drainable and sandtrap louvres.

Natural air ventilators

A natural and practical alternative to openable windows and roof mounted air systems, our range of natural air ventilators (NAVs) ensure consistent air flow while preventing carbon dioxide build up.

Solar shading

Sunscreens continue to be popular for many applications in commercial buildings, meeting the needs for control of solar gain and energy conservation while offering designers a palette of possible effects with the external cladding.

Nacoscreen

Our Nacoscreen system can be used as a heat / chill barrier in front of primary windows, or as an adjustable or fixed glass louvre system, as a sunscreen or as a fixed vision screen.

Single glazed louvre windows

Our Weatherbeta single glazed louvre is an exceptionally efficient glazed ventilator particularly effective when thermal properties are not an issue, used widely in many countries around the world.

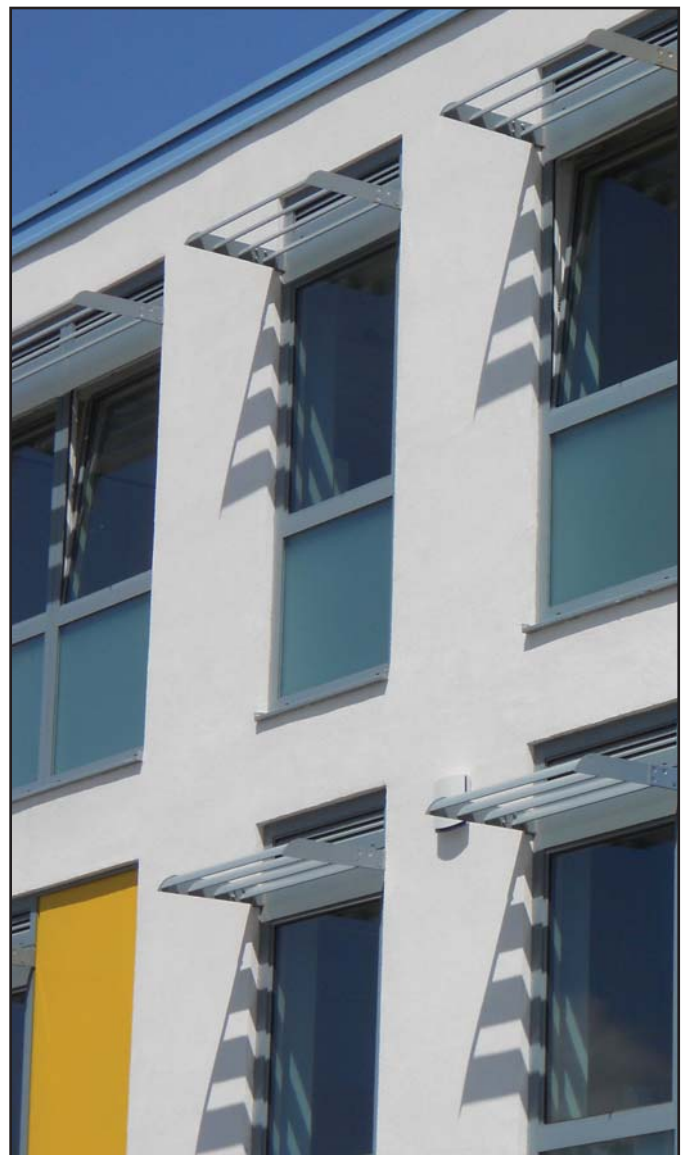
Naco Thermal Break Double Louvre Windows

High quality, double glazed thermal break aluminium louvre window system offering high quality solutions for all your natural and smoke ventilation needs. Available in bespoke sizes, and in an extensive range of colours and finishes, it's both fit for purpose – and fits to your exact building requirements

Installation

All products are offered on a supply or supply and fix basis. We offer a full site survey, design and fixing service where required.







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company

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Louvres Sunscreens Natural Ventilators