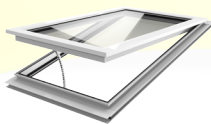


OPENING VENTS

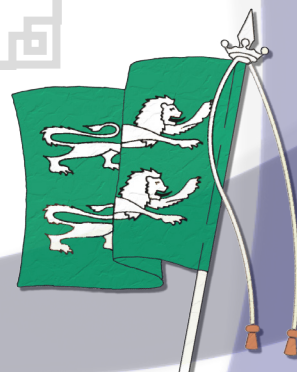
thermally broken aluminium



OPENING VENTS



100 YEARS OF SERVICE
RAISING THE STANDARD SINCE 1902



The Standard

Opening Ventilators

Most Glazing Applications will benefit from the use of ventilation, giving the user greater control over their internal environment when necessary.

The versatile design of our opening ventilators enables them to be incorporated into all of our glazing systems with any infill material from 6mm to 28mm thick.

Our opening lights are low profile and offer slender sightlines in comparison to other roof vents available elsewhere. They have been designed to be operated by a wide variety of Manual, Remote Controlled and Electrical gearing.

Our top and bottom hung range is suitable for installation in both sloping and vertical applications and is generally manufactured to a maximum size of 750mm wide by 1500mm deep.

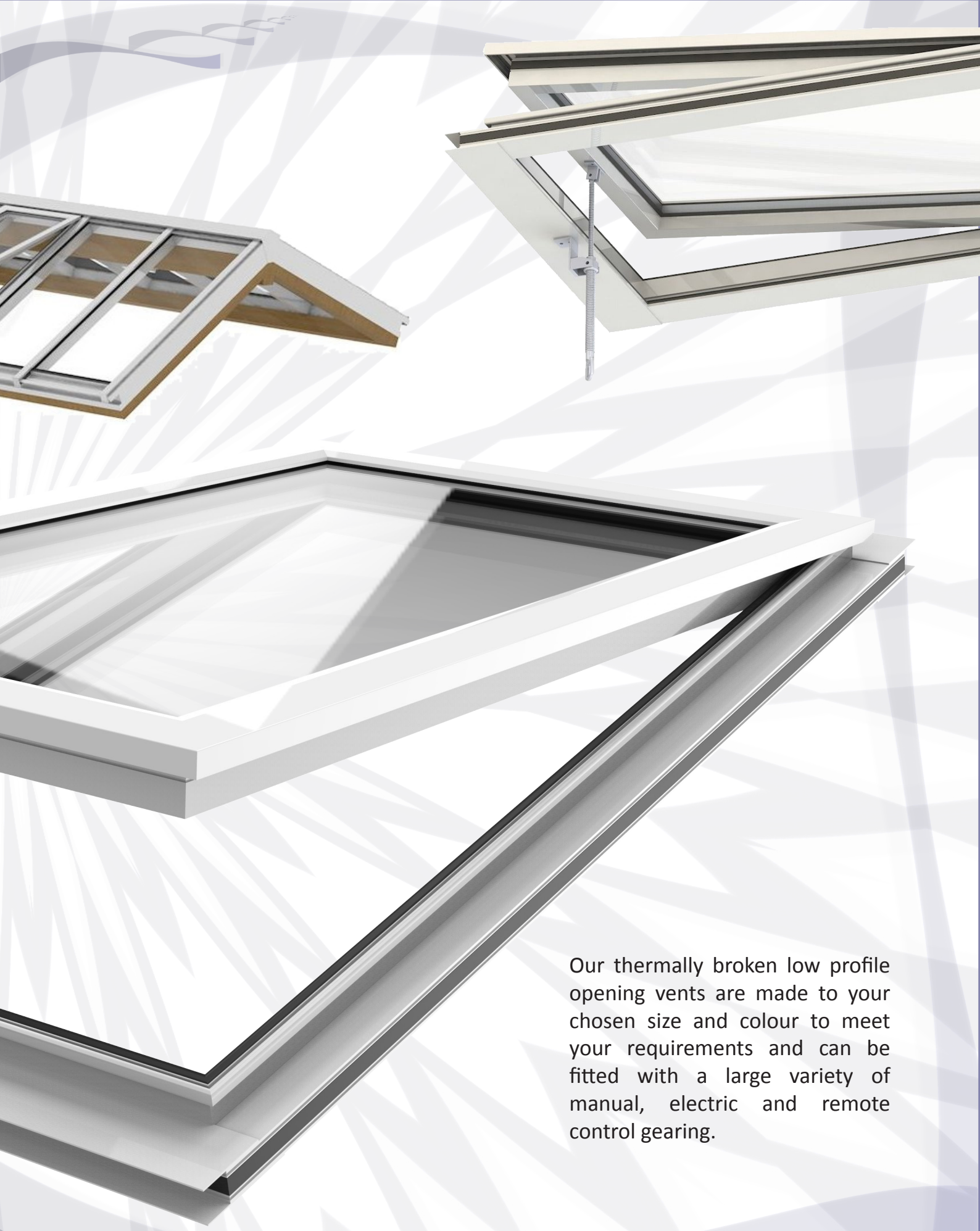
In a typical roof application, their recommended location will be at the top of the patent glazing, although in certain instances these vents can be positioned in the centre or lower parts of the glazing by using alternative top and bottom insulated panel sections.

Depending on the size of opening light and gearing type used the general maximum opening size/stroke length achieved will be in the region of 300-400mm.

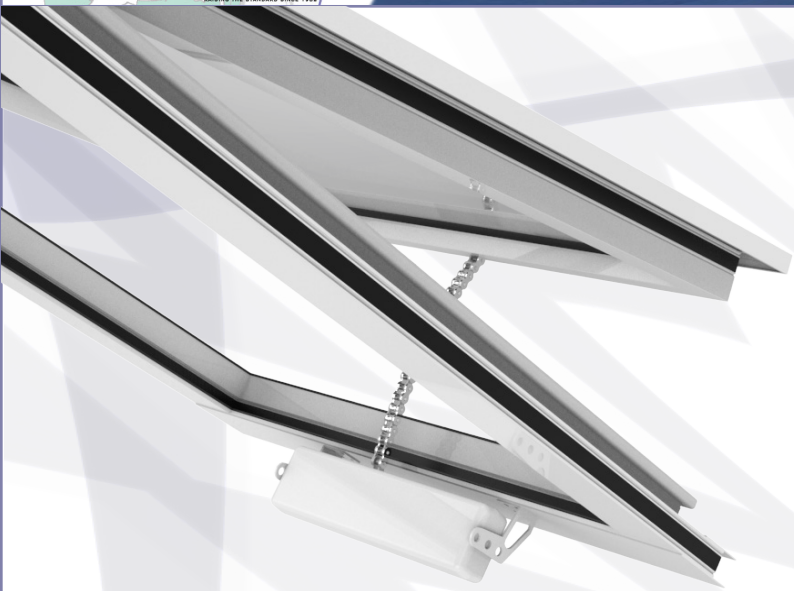
Available in any standard RAL polyester powder colour or anodised finish to suit your requirements.

To guarantee water tightness, roof vents must be installed to a minimum pitch of 15°.





Our thermally broken low profile opening vents are made to your chosen size and colour to meet your requirements and can be fitted with a large variety of manual, electric and remote control gearing.



Gearing Overview

Our opening ventilators can be operated by a variety of means to suit individual projects. Electric, manual and remote control are the three most common devices available.

Electric

Electrically controlled systems to operate our opening lights have become the most popular devices in recent times. Reliability combined with low relative cost make electrically controlled opening lights the number one choice for the majority of projects that we undertake.

The actuators can be controlled by either a simple wall mounted on/off switch or a more sophisticated control panel that can combine automatic temperature control, rain and wind sensors. On larger commercial projects the control panels can be supplied with options to open the vents in banks and can include timers and key switches or be linked to a separate Building Management System (BMS) to allow for smoke control.

Manual (for day to day ventilation)

Manual gearing can only be used where the operator can physically open the vents with their hands, via a detachable mechanical pole or endless cord. The most appropriate type that we provide is the well established screwjack gear which is available in a chrome or brass finish. The gearing device is either 150mm or 300mm long and has an eyelet attached to its base which accepts a hook attached to the detachable long arm. Once a connection has been established the user is then able to wind the handle at the bottom of the long arm to open and close the opening light. Long arms can be supplied in quality mahogany and brass or mahogany and chrome finishes for domestic projects and high end commercial contracts and are also available in a basic metal version with plastic handles.

Manual (for access to or from a building)

We are able to provide opening lights for either internal or external access. We normally attach pneumatic gas struts to the openers which provide a safe way to take the weight of the unit which could reach up to 30 kgs.

Remote Control (Teleflex Gearing)

The Teleflex gearing system is based upon a unique form of cabling. The cable, enclosed in a rigid conduit, drives the mechanism to open and close the vents. The conduit is installed from the gearing on the opening light to a suitable location on the wall where the operator uses a wall mounted winding handle for operation. The handles can be provided so that they can be detached to prevent unauthorised control. occurring in schools and public buildings, etc. This specialist system is usually included in our glazing package, however, we sub-contract this element of work out to one of our experienced Teleflex sub-contractors.



Electrically Controlled Gearing

There are two main types of electric actuators that are available to control opening lights. These are Linear actuators and Chain actuators.

Linear Actuators



These devices incorporate a rigid rod that is driven by the motor to open and close. The depth of a linear actuator will be at least 200mm greater than the opening stroke therefore to open a vent to a typical distance of 300mm will require an actuator that extends at least 500mm into the building space. Although these types of actuator are considered more robust than Chain actuators for roof glazing applications, aesthetics will generally require a less obtrusive device for this purpose.

Chain Actuators



These clever devices do not have a rigid rod. Instead a stainless steel chain (similar to a bicycle chain) is housed inside the unit. When the motor is engaged the chain is unwound and as it leaves the unit it becomes semi-rigid and is able to push the vent open. Due to its compact and unobtrusive design the chain actuator is considered the most appropriate choice for our roof opening lights.



Chain actuators of the ACK4 series remain our first choice for most of our contracts based on pleasing aesthetics and an impressive proven history of this device. They are available in 230 volt models for general use and also in 24 volt for integration with battery back-up control panels.

The electronic chain position control allows for seven opening lengths ranging from 100mm to 400mm and is capable of lifting weights of up to 30 kgs.

The actuator casing is die-cast and polyester powder coated in standard colours of white, black, and silver. They can also be supplied in any RAL colour for an extra cost. The electric parts are built with double insulation (therefore earth wire is not necessary) and contained in a body of plastic material to ensure a high protection level with an impressive IP55 rating.

Switches and Control Panels

The actuators can be simply controlled by a standard wall mounted on/off switch. Alternatively an increasingly popular more advanced system is available which incorporates a control panel with separate thermostatic control and rain sensor device. These can be programmed to open or close at defined temperatures and include a manual override.

A typical control panel or standard switch will allow up to twelve opening lights to operate simultaneously. On contracts where there are a very large number of openers we would suggest using a commercial control panel. Such a device would be capable of opening many vents, either simultaneously or divided into zones. Other possible options are to have timer controls for public buildings, wind sensors for exposed buildings and even humidity and light sensors. Some control panels are also suitable for connection to a BMS (Building Management System).

The wiring of the system is always excluded from our package, as this should always be carried out by a qualified Electrician. We are able to offer commissioning on some of the more complex commercial control systems.

A typical control panel incorporating temperature and rain sensor



Manual Gearing

The most economical solution, when conditions dictate, is to control our opening lights with a manual gear. Please note that Manual gearing can only be used where the operator can physically open the vents with their hands, via a detachable mechanical pole or an endless cord.

Screwjack Gearing



The most popular types of manual gears are Screwjacks. These devices can be supplied to open to either a maximum of 150mm or 300mm in either a brass or chrome finish. They are supplied with either a neat handle (if the gear can be reached by hand) or an eyelet at the base for operation by means of a hooked detachable crank handle. Once a connection has been established with the crank handle and gear the user is then able to wind the handle at the bottom end to open and close the opening light.

The gears are threaded throughout the whole shaft and as they are turned the corresponding integral threaded bracket attached to the outer frame of the opening light drives the vent open in the same manner as the mechanism of a typical nut and bolt.

The detachable crank handles can be supplied in brass or chrome with quality mahogany handles for high end commercial contracts or domestic projects and are also available in a less ornate aluminium version with black and grey plastic handles.

Endless Cord Gears

Where it is not possible to use screwjack gears due to the opening lights being installed over 3.5 metres from floor level or if there is a restricted opening below the glazing an endless cord gear may be considered. These gears incorporate a 5 metre deep endless cord (10 metres in total) and are operated by pulling on either end of the cord to allow opening and closing. These devices can be supplied to open to a maximum of 300mm or 500mm

Other Gearing types

In vertical applications it is usual to install a folding opener. These devices can be supplied in single or double types. Our access opening lights are fitted with either pneumatic gas struts or manual hold open stays.

Access Ventilators

Our Side Hung Access Opening Lights offer a means of occasional external access to the building or internal access to the roof space where laylights prevent access from below. This product utilises the same extrusions as our main top hung opening light and can be supplied to any size up to 750mm wide by 1250mm deep.

Access vents are mainly used by maintenance workers to gain entry to the roof area and the use of either a ladder or tower scaffolding to safely climb through the opening may be required.

If the access lights are to be used on a more regular basis then it is suggested that the building designer incorporates a permanent structure below to provide a safe passage for the user.

This product is fitted with either pneumatic gas struts or manual hold open stays and can be supplied with internal locking handles and external pull handles with safety and security in mind.



Remote Controlled Teleflex Gearing

The need for controlling high level ventilation in buildings is universally appreciated, and wherever out of reach ventilators are incorporated there is a requirement for simple, economic and unobtrusive type of gear.

This range of products is used extensively in Schools, Hospitals, Disabled Housing, Factories and every type of Commercial Building. The Product is designed for easy fitting and is adaptable to every type of application.

The Teleflex system is based upon a unique form of cabling having an helix wire to form a flexible rack. This cable, enclosed in a rigid conduit, engages a suitably hobbled wheel in the operator and head unit, where in a push pull action, imparted by rotation of the handle, drives the mechanism to open and close the opening lights. The non-ferrous aluminium construction guarantees maximum reliability and maximum working life.

The unique "Clearline" conduit, used exclusively in all Teleflex Control opening systems has many features. Protected by a PVC outer cover, the basic construction is of tinned steel further complimented by 'Rigidex' low friction liner. On-site decisions regarding conduit routing can be made to suit the prevailing conditions.

A mechanically irreversible action allows the screwjack to be utilised for heavy applications where its design enables a considerable reduction on load on both the window gear and the operator.

The wall mounted winding handles are supplied in a white polyester powder coated finish to match the screwjack openers and feature No-back clutches for security and wind loading.

Teleflex Gearing is installed after the completion of the Patent Glazing by one of our specialist Teleflex sub-contractors.

The gearing is face-fixed to finished surfaces, which must be fully decorated prior to installation.

Safe access must be provided by the Contractor/ Client to allow the cable to be installed between the bottom of the ventilators and the pre-determined operating handle positions.

Teleflex Screwjack Gear



Teleflex conduit

Teleflex wall mounted winding handle



Fire & Smoke Control Systems

Based on our experience with specialist smoke and ventilation sub contractors we have outlined below important points regarding fire and smoke controlled systems.

Fire and Smoke control systems require a far greater input from the specifier or client compared with the normal ventilation products that we offer.

Before specifying and procuring a smoke ventilation control system, we would ask you to give full consideration to these points.

1. For system longevity and performance it is critical the control system is subject to regular maintenance. BS7346 specifies a twice annual maintenance for smoke ventilation products of this nature.
2. Ventilator controls that are to be used and operated under a fire and smoke situation (in addition to natural ventilation) will always require an emergency power supply (battery backup).
3. The Building Control officer and Fire officer must also be satisfied with the level of smoke ventilation in the building as a whole (the glazing must not be a standalone item), and many criteria can affect the level of ventilation required.
4. The Smoke ventilators to the patent glazing may form part of a Building Management System (B.M.S) and therefore may be required to be compatible for inclusion within the concept as a whole.

Our general policy is for the Specialist responsible for the supply of all fire and smoke control systems to "free issue" The Standard Patent Glazing Company with the correct type and number of Smoke Vents, so that our installation team can incorporate them into the glazing system only - (totally exclusive of electrical work and wiring etc).

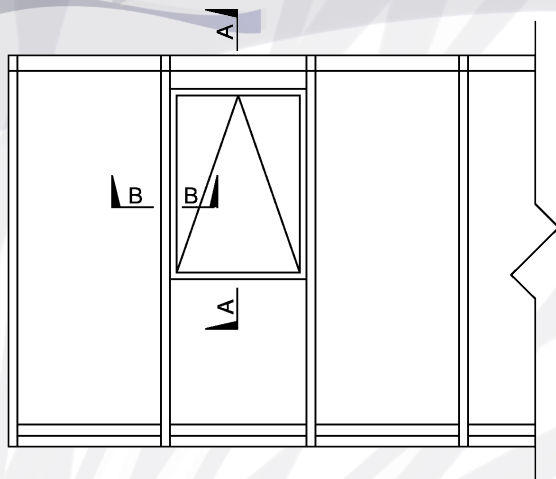
The smoke vents are then ready to accept the electrical connections of the specialist. Then at a later, pre-arranged date, the system will be commissioned by the specialist, prior to handover. By the above means the guarantee for the system will rest with the supplier/installer and split responsibility will not inconvenience the final

building user.

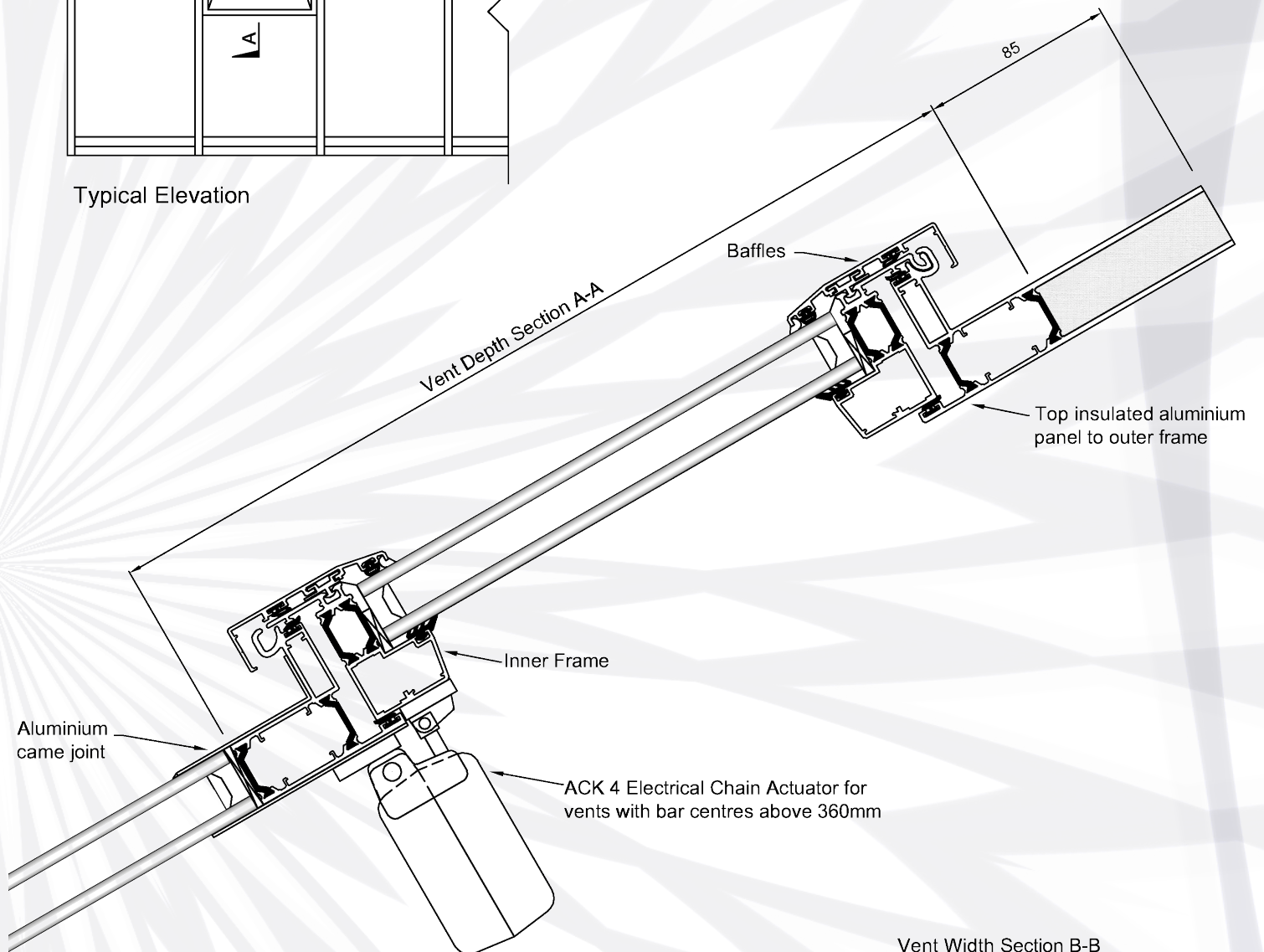
If the Designers are satisfied that the number of ventilators and sizes of each unit are sufficient for the smoke ventilation requirements for the building, then we may be able to offer the supply of a smoke control system based on information in the Tender Drawings and any specifications in your possession.

Due to the nature of this work, we would look to Sub-Let the works to a recognised Specialist Smoke and Ventilation Sub Contractor.



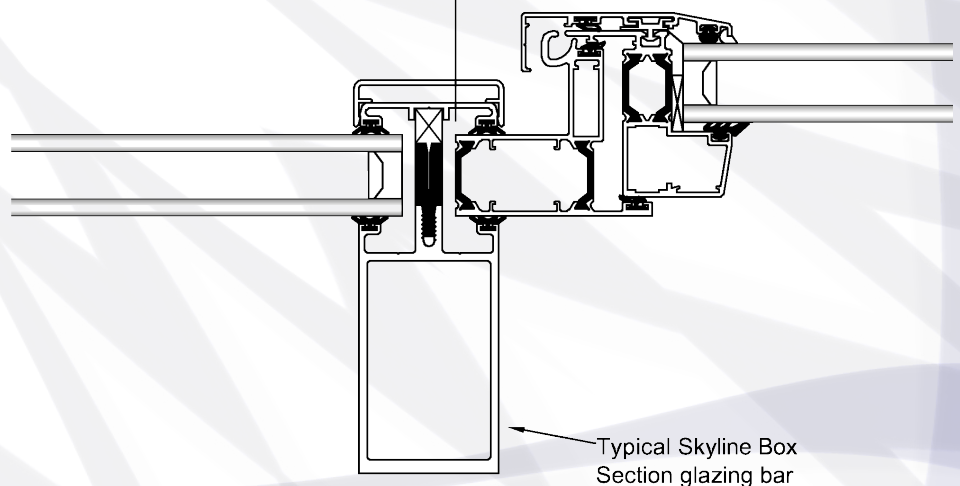


Typical Elevation



Vent Depth Section A-A

Vent Width Section B-B





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