

Electrical 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 and black. 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.

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 and are also available with a remote-controlled key fob which will operate the vents by radio signal.

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.



Typical standard open/close wall mounted switch



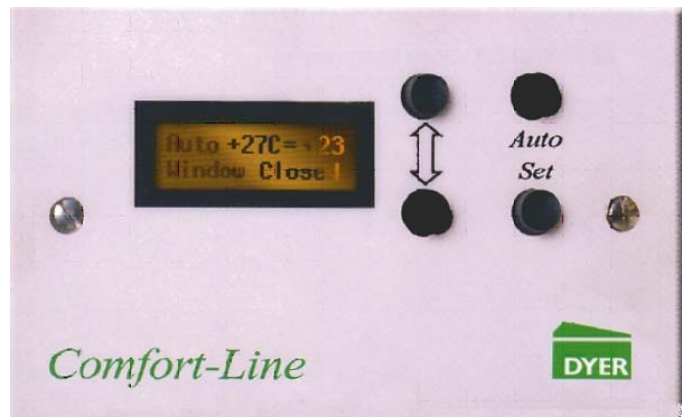
Rain sensor



Thermostat box



The ACK4 230 volt or 24 volt electrically operated Chain Actuator



Wall mounted Control Panel used with thermostat and rain sensor above