



## GV Standard VisionVent

Patent GB2514119

Operation and Maintenance Manual

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*"Technical experts in the design, manufacture and supply of precision engineered, architectural rooflights for residential and commercial buildings."*

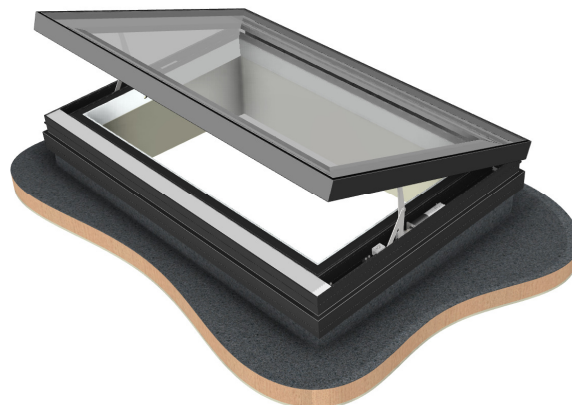


## Contents

<b>Section Description</b>	<b>Page</b>
Contents and introduction	2
Controls and operation	3
Manual override	4
Operation of the manual Access Hatch	6
Operation of the manual VisionVent	7
Glazing Vision remote control	8
Cleaning the VisionVent	9
General maintenance and safety	9
Troubleshooting	10
Standard glass specification and breakage	12
COSHH and safe disposal	13
Warranty information	13

## Introduction

Thank you for purchasing a Glazing Vision VisionVent (*Figure 1*). We hope that it gives you many years of service. The VisionVent is designed to open to approximately 20°.

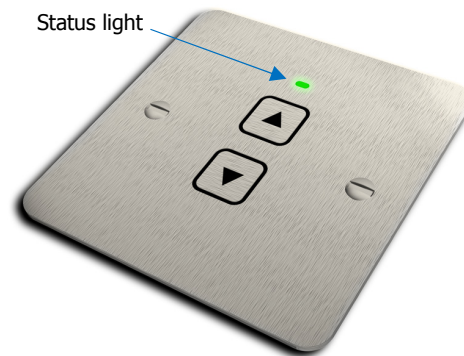


*Figure 1 – Electric VisionVent*

## Controls and Operation

### Control Switch:

The standard operation is via the supplied wall switch (*Figure 2*) and can be operated using two different methods as explained below:



*Figure 2 –Wall mounted control switch*

1. **'One touch' operation** – Press and release the control switch in either the up or down (open/closed) direction as required. The rooflight will open or close fully. Press the control again to stop the rooflight if you want it partially open or closed.
2. **Conventional 'hold' operation** – Press and hold the control switch until the rooflight has reached the position you want, When you release the switch the rooflight will stop in that position. If you continue to press the switch the rooflight will stop when it becomes either fully open or closed.

### Status Light:

The status light (LED) will illuminate green if the Rooflight is working normally or intermittent green when closing due to rain. If the status light displays another colour please refer to the troubleshooting section.

### Remote Control (Optional):

The remote control (*Figure 3*) has 3 control buttons, open, stop and close. It operates as one touch only and the stop button can be used for partial opening.

To replace the batteries, remove the small hex screws found on the rear of the remote to allow access inside. The remote is powered by 2 x AAA batteries.



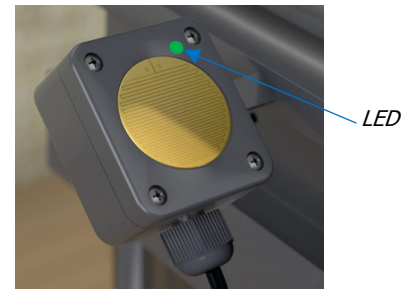
*Figure 3 – Remote control*

### Building Management (Optional):

The VisionVent can be connected to Building Management Systems. Please contact Glazing Vision Ltd for further details if required.

### Rain Sensor Operation (Optional):

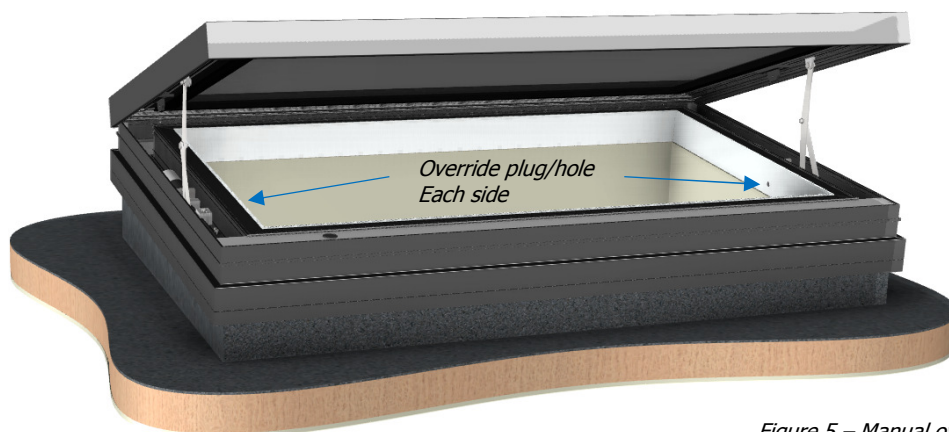
When the Rooflight is opened the LED on the front face of the rain sensor (*Figure 4*) toggles through the three colours red, green and blue. It also activates the built in heater for 60 seconds to evaporate any surface moisture. The rain sensor will automatically close the Rooflight if the sensor is wet and at the same time the LED will illuminate green. The control switch LED will also flash intermittent green indicating a closure due to rain. The rain sensor should be positioned to ensure it is exposed to the rain and must be kept clean to function correctly.



*Figure 4 –Rain sensor*

### Manual Override

The VisionVent is equipped with a manual override function. This is an emergency fail safe should the unit not open or close for any reason. The override holes are located on the inside of the unit approximately 320mm from the opening edge (*Figure 5*).



*Figure 5 – Manual override location*

To override the electric mechanism, the cover caps for the override holes should be removed (these are just press fit plugs); insert a 5mm Allen key (supplied with the Rooflight) through the hole and engage with the cap head bolts (*Figure 6*).

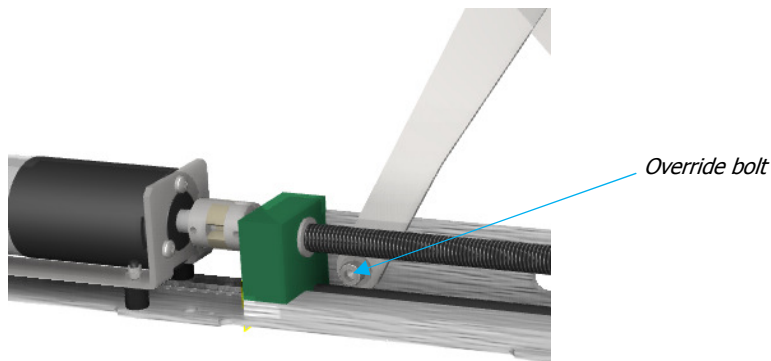


Figure 6 – Manual override bolt location

Support the weight of the lid and unscrew the bolts by turning anti-clockwise. Once both override bolts have been removed the main link arm will be free to move within the VisionVents slide channel. With both override bolts removed the lid can either be opened approximately 130mm at the opening edge or fully closed. The unit should be water tight however it will not be mechanically locked.

To open the lid for access once the override pins have been removed, it is advised that you prop open the unit's lid (it is important to use soft wood to avoid damage to the aluminium extrusion). Located at the end of each link arm is a hexagon head pivot pin (*Figure 7*) screwed into the sliding shoe, these can then be unscrewed using a 13mm spanner to free the lid.

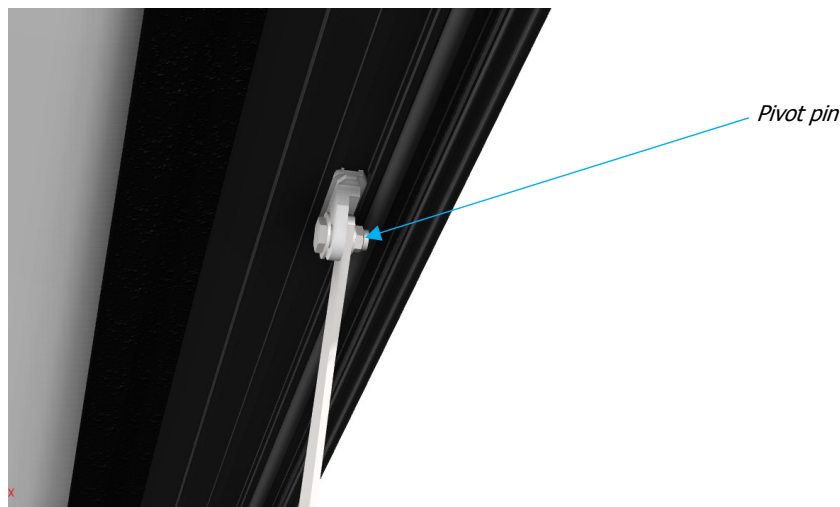


Figure 7 – Manual disconnect

With the lid no longer supported by the mechanisms it is important an alternative means of support is provided to avoid damage to any part of the VisionVent. Please do not open the lid past 90°, otherwise the lid will disengage from its extruded hinge and become detached from the base frame. If your VisionVent has failed please contact Glazing Vision Ltd for further assistance. We recommend that only one of our qualified Service Engineers maintain your rooflight.

## Operation of the Manual Access Hatch

### 1. Opening the Manual Access Hatch

The hatch is opened by unlocking and rotating the handle 90° clockwise. The hatch can then be opened using the handle to lift the lid. Access Hatches are fitted with gas struts to aid with opening the lid and to fix it in the open position (approximately 85°) during periods of required access.

**NOTE:** When opening the hatch be careful not to let the unit spring open under the full force of the gas struts as this may cause damage to the product.

### 2. Closing the Manual Access Hatch

To close the hatch, simply pull down using the handle. When the unit is closed rotate the locking handle counter clockwise to hold in position. The key lock can then be locked if required.



*Figure 8 - Lock handle operation*

## Operation of the manual VisionVent

### Opening and closing the manual VisionVent:

The vent is opened and closed by turning the hook eye on the end of the telescopic spindle (*Figure 9*) with the supplied crank handle. When viewed from below, a clockwise rotation opens the vent.



*Figure 9 – Opening / closing spindle*

**Please Note:** As with all mechanical parts, Regular maintenance is needed. Please lubricate the winder thread every 3 months or as necessary. For instance if the unit develops a squeak or it's difficult to turn the crank handle, then maintenance is needed. We recommend using a silicone based lubricant (available in spray) to alleviate noise and ensure smooth running of the rooflight.

## Glazing Vision Remote Control

As previously stated, the remote control (figure 11) is an optional item only available for use with electric versions of the VisionVent.

In order to preserve the battery, the remote control will switch itself off after a brief period of inactivity. It will switch itself on when any of the buttons on the remote control are pressed.

This section explains how to pair or delete a remote control device to your VisionVent.

To add or delete a remote control ensure that the Rooflight is fully closed. Press & hold the CLOSE (Down arrow) button on the wall-mounted switch (figure 10), then press & hold the OPEN (Up arrow) button. As soon as the LED starts flashing, release both buttons. The LED will now flash red and blue alternately for 30 seconds. You have a 2 minute window in which to pair the remote to the controller



Figure 10 – Wall mounted control switch



Figure 11 – 3 button remote control

### To add a remote:

Press any of the buttons on the remote control during the 2 minute pairing window. Wait for approximately 30 secs and then press either the open or close buttons. The Rooflight should now be paired to the remote and the green LED should illuminate when the Rooflight is in motion.

### To delete a remote:

Ensure there has been at least 2 minutes since either the controller was first powered up or from when the pairing procedure was initiated. Press all three buttons together on the remote control and immediately release them. The LED on the remote should turn red for a few seconds and then turn off. If it turns green or amber you should try pressing the 3 buttons again. When the red LED turns off the remote should now be un-paired from the controller.



## **Cleaning the VisionVent**

Due to the VisionVent's unique bonding method and the slight pitch built into the kerb, there should be no water ponding on the glass when installed correctly. To clean the glass, any standard glass-cleaning product can be used. Routine cleaning of the powder coated finish must be implemented for the warranty to be valid, and a record of cleaning schedules will be required in the case of a claim. This should be done every 6 months.

The best method of cleaning is by regular washing of the coating using a solution of warm water and mild detergent. All surfaces should be cleaned using a soft cloth or sponge, using nothing harsher than natural bristle brushes. If atmospheric pollution has resulted in heavy soiling of the coating, then nothing harsher than white spirit should be used. Under no circumstances should chlorinated hydrocarbons, esters, ketones or abrasive cleaners be used.

## **General Maintenance & Safety**

To keep the VisionVent in good working order there are a few basic points that should be observed:

- Do not place anything on the lid or cause obstruction to the lid of the VisionVent when opening the unit as this may cause damage to the unit's mechanisms.
- Do not walk on the unit.
- Apply grease to each of the mechanism lead screw threads every 200 cycles / 3 months whichever is first (or as necessary).
- Make sure fingers and other obstructions are clear of the vent before closing the unit (although there is a circuit board overload cut out, severe damage/injury may be caused).
- Do not touch the motors after operating the unit, as they will become hot.
- It is recommended that a general inspection is carried out on the unit wherever possible at least once every 6 months.
- Glazing Vision, if required, can offer a service / maintenance contract. Please contact our project office for further details.
- Do not remove the plastic cover plate protecting the printed circuit board (PCB), as this may allow the PCB to become damaged.
- Keep the frame clear of general dirt and debris particularly around the opening mechanism.
- Do not allow unauthorised persons (e.g. Children) to operate the rooflight as this may lead to injury or damage to the product.
- Apply lubrication to manual vent winders regularly to ensure smooth running of the winder. (silicone based lubricants work well)

## Troubleshooting

The Visionvent control board monitors the operation of the rooflight. If a fault is detected, the board will disable the rooflight to prevent possible damage. Fault and standard conditions are indicated by the status light on the control switch (*Figure 2*). The following table shows the various status light displays and their meanings:

Status light shown	Meaning
Continuous Green	Displayed whilst rooflight is in motion with no faults present. If rooflight is one-touch opened or closed LED will remain lit until motion stops.
Intermittent Green	Flashes whilst rooflight closes due to rain sensor. Flashing will stop when motion stops.
Continuous Blue	Indicates a mechanism synchronisation fault. i.e. a mechanism timing fault. LED remains lit and control switch is disabled until control board is reset. See below.
Intermittent Blue	Indicates an overcurrent or undercurrent condition. Flashes and control switch is disabled until control board is reset. See below.
Continuous Red	This status light indicates the rooflight is in the "initialise" state. The rooflight needs to be closed to restore normal operation.
Intermittent Red	LED flashes Red when the Rooflight is in motion during synchronisation.
Continuous Amber	Indicates that an unrecoverable fault has been detected.

If a fault occurs please refer to guidance below. Some faults and solutions are indicated in the table. Some faults with the unit may be easily corrected without the need for a site engineer. However, if you are unsure please contact Glazing Vision Ltd. Some faults can be cleared by resetting the board. To reset the system switch off mains power briefly then switch the power back on again. In some cases the Visionvent will now operate as normal. In other cases the fault will re-occur, if so, please contact Glazing Vision Ltd.

### **Fault recovery**

BLUE lights may indicate a fault such as an obstruction or obstacle. This fault state can be reset from the control switch by pressing the close button. The rooflight responds to this in two different ways depending on the fault condition:

#### **Overcurrent Fault**

(Blue light flashing)

- Cleared immediately when the close button is pressed. The user will be able to continue to operate the rooflight.

#### **Synchronisation Fault**

(Blue light continuous)

- When the close button is pressed the motors will be driven briefly to attempt to correct the error and bring the motors back into synchronisation. This is indicated by a flashing AMBER light. If the correction is successful the led will turn RED.
- If the sync fault cannot be recovered the rooflight enters a fault state where further operation is prevented. This is indicated by a continuous AMBER light.

#### **Initialisation state**

(Red light continuous)

- The rooflight is now in a state where it may be closed from the control switch. Use the press and hold function to close the rooflight.

#### **Initialisation- closing state**

(Red light flashing)

- The motors will run slowly until the rooflight is closed while the LED flashes RED on the control switch. If there is any indication of a fault release the switch immediately.

#### **Fault lockout state**

(Amber light continuous)

Indicates that a fault has been detected that the controller is unable to reset. NB This state can be cleared by removing power from the rooflight.

If the fault occurs repeatedly cease any further attempts to operate the rooflight electrically and switch off the power to prevent any further operation. Refer to the MANUAL OVERRIDE instructions to close the rooflight and contact Glazing Vision if you require assistance.

<b>Problem</b>	<b>Possible Cause</b>	<b>Action</b>
Overcurrent Fault (Blue light flashing)	Is there a mechanical obstruction preventing the lid from moving?	If possible, look at the mechanisms and remove any obvious obstructions.
	Is the lid frozen to the base?	Attempt to open the vent once ice has melted.
	Has the vent been left inactive for a long period (a month or longer)?	An overcurrent fault is likely after a long period of inactivity. Reset the fault and try again.
Input/output Fault (Blue light continuous)	There is a problem with one of the mechanisms.	Attempt a fault reset as previously outlined.
Visionvent closes for no apparent reason.	This should only occur if a rain sensor is fitted and indicates that the sensor head is dirty or still wet.	Open Visionvent and isolate power supply, then clean the rain sensor head.
Initialisation state (Red light continuous)	After replacing the controller and the mechanisms are not already in the closed position	Press the close button on the control switch to initiate synchronisation of the mechanism. LED will flash Red during synchronisation
Rain Sensor not working	Rain sensor located in a position where the rain head is shielded from the rain or the head is dirty.	Move the rain head to a more exposed position. (A GV Service Engineer will be required for this task.) Clean the rain sensor head.

## **Standard Glass Specification and Breakage Instructions**

### **Glass Specification**

The standard glass used within the VisionVent comprises a 6mm HST toughened outer pane, a 20mm warm edge spacer argon filled black silicone sealed cavity and a 6mm HST soft coat Low E toughened inner pane. However, various options are available at time of order. If specific data is required for the glazing please contact Glazing Vision for a glass data sheet for the specification installed within your rooflight.

### **Breakage Instructions**

Should the double glazed unit break for any reason, due to the unique method of bonding the glass unit into the frame, a new lid would need to be supplied. Glass breakage is not covered by the product warranty unless the breakage is a direct result of Glazing Vision Limited or its product failing. In the event of the glass being damaged please contact Glazing Vision for assistance.

## **COSHH and Safe Disposal**

There are no hazardous materials used in the construction of the VisionVent. Wherever possible when disposing of the VisionVent recycle as much as possible. Do not burn any plastic materials. The following materials are used throughout the VisionVent:

### **Framework**

- Aluminium extrusion
- Aluminium corner brackets
- Stainless steel fixings
- Stainless steel slider strips
- Low modulus silicone
- PVC foam tape
- Acrylic adhesive (corner joints)
- Polyester powder coated finish
- Closed cell PIR foam insulation
- EPDM rubber gaskets
- Polyamide thermal break strips
- Polyethylene backing rod
- Toughened glass panes
- Warm edge spacer bar
- White polypropylene (PP) cover plate
- Grey polyvinyl chloride (PVC) cover plate (integrated unit)

### **Mechanisms and control**

- Stainless steel fixings
- Stainless steel base plate
- Stainless steel side guide plate
- Stainless steel link arms
- Stainless steel lead screw
- Stainless steel coupling
- Anodised aluminium slider support
- Oilon lead screw block
- Nylon end blocks
- Nylon sliding shoe
- Printed circuit boards (PCBs)
- SPST rocker switch
- Copper wiring
- Electric motor
- Limit switches
- Standard insulated spade terminals
- Stainless steel push switch (access)
- HIPS electronics enclosure
- 626Z Bearing
- Brass telescopic spindle (manual)

### **Access Units**

- Aluminium gas strut brackets
- Gas struts

## **Product Warranty**

A warranty document will be provided with the rooflight. If this is misplaced it can be found at [www.glazingvision.co.uk/resources/warranties/](http://www.glazingvision.co.uk/resources/warranties/).