

highline®

WINDOW  
CONTROL



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## INTRODUCTION

ARE YOU LOOKING FOR WAYS TO REDUCE YOUR BUILDING'S ENERGY CONSUMPTION?

Using windows and/or rooflights to naturally ventilate your building can improve the indoor air quality, reduce carbon emissions and improve your learning or working environment.

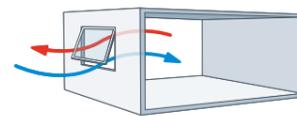
**HIGHLINE** is a manual window control system designed to operate high level windows or rooflights from an easy to reach location. The system is modular allowing it to be used on almost any window size, style or material.

## BENEFITS

COST EFFECTIVE  
ZERO ENERGY  
CARBON NEUTRAL  
LOW MAINTENANCE  
NATURAL

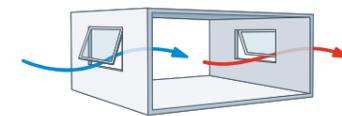
## BUILDING TYPES

SCHOOLS  
GYMNASIUMS  
HOSPITALS  
OFFICES  
MUSEUMS  
ART GALLERIES



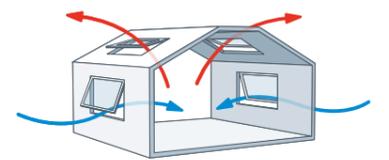
### SINGLE VENTILATION

Opening vents to one side of the room will provide a basic ventilation system.



### CROSS VENTILATION

Opening vents on two or more sides to create cross ventilation.



### UPFLOW VENTILATION

A mixture of vertical and flat/pitched roof vents to create upflow ventilation.

/ TYPES OF OPENING



Outward Opening Window

Pages 8/9



Inward Opening Window

Pages 10/11



Louvre Window

Pages 12/13



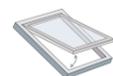
Centre-Pivot Window

Pages 14/15



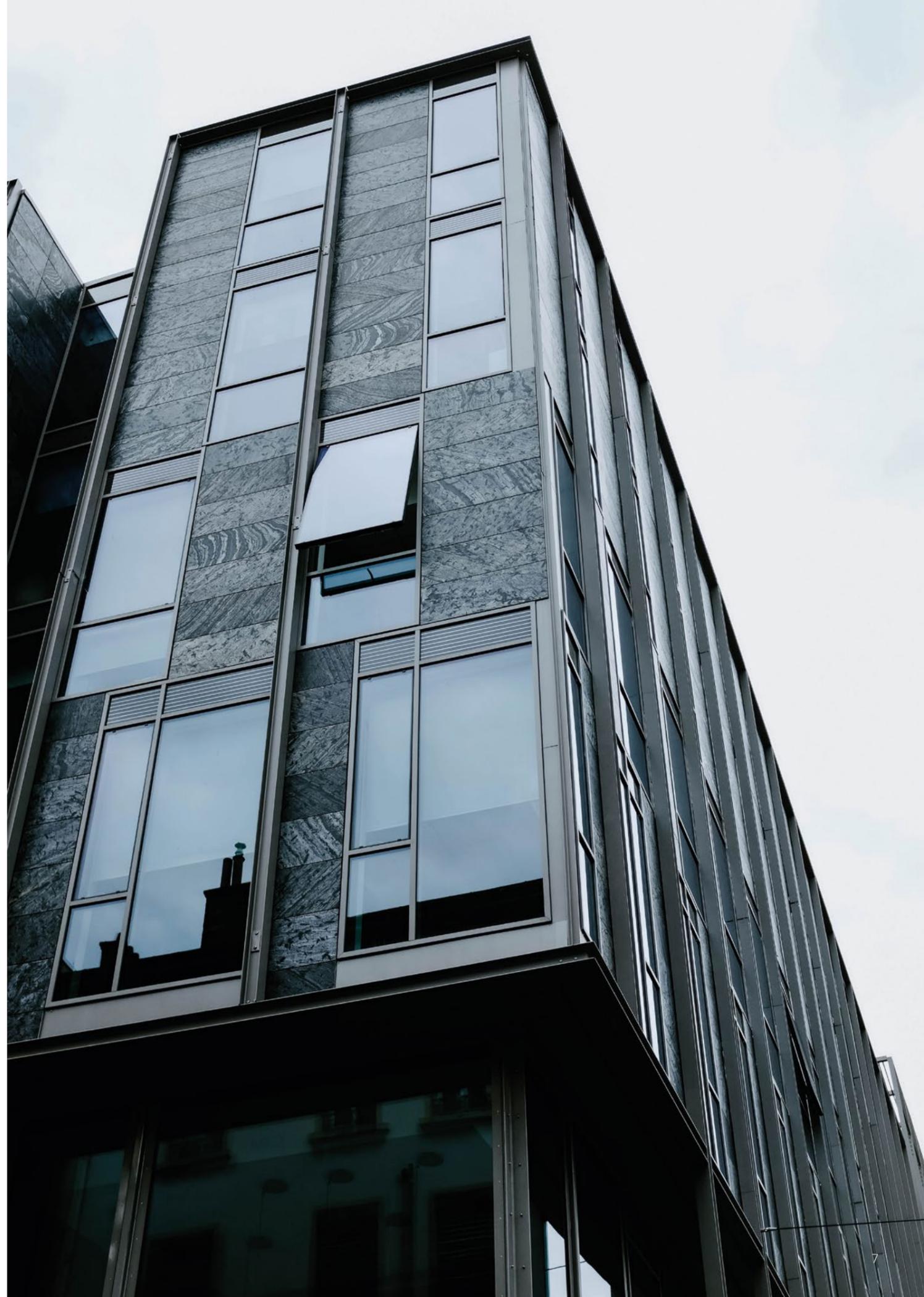
Pitched Rooflight

Pages 14/15



Roof Dome

Pages 14/15



## CHAIN OPENER

Manual Chain Opener used to drive open or close a high level or hard to reach window. Maximum opening stroke of 250 mm (T100) or 380 mm (T150) (adjustable). Can be fitted to most window types Aluminium, Timber or uPVC. Individual or multiple T100/T150 Chain Openers can be controlled from a single T200, T210, T250 or T300 Operator. Various fixing brackets available (each sold separately). Supplied complete with vent bracket.

### CHAIN OPENER

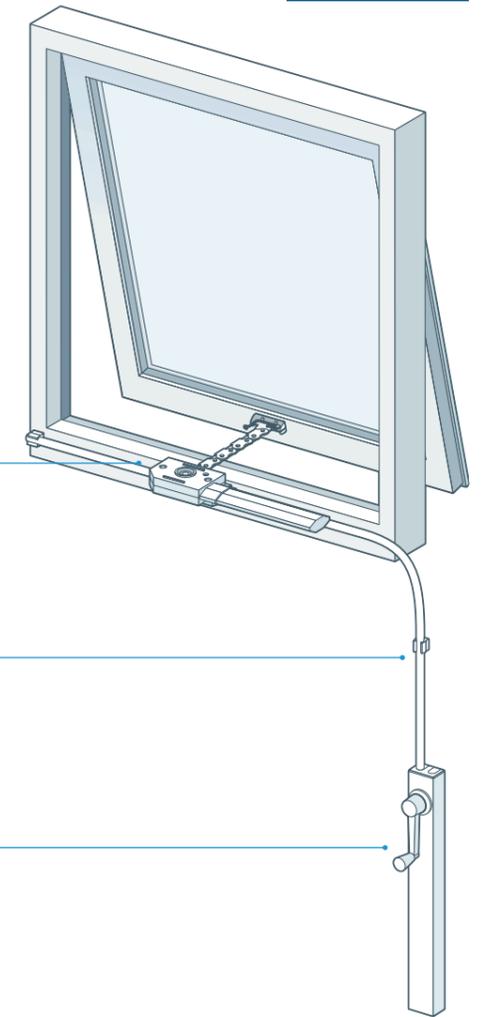
Fixed to the outer frame of the opening vent.  
When cable is driven through the unit the opener will push to open or pull to close the opening vent.

### CONDUIT

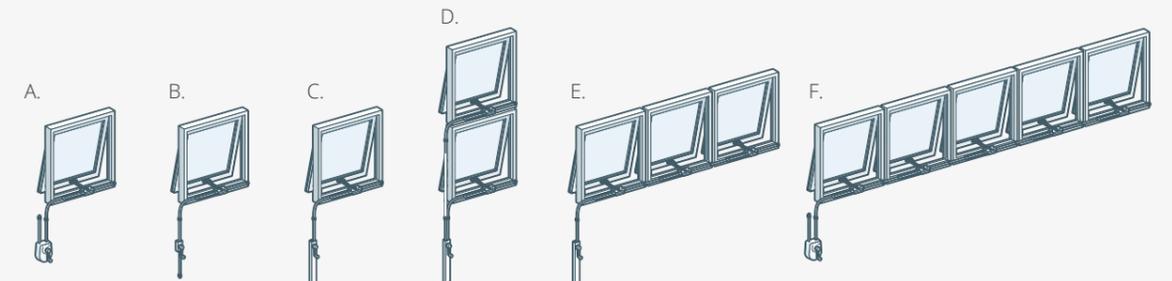
Plastic covered metal tube with nylon inner liner.  
Used to house inner cable which is driven from Operator to Opener.

### OPERATOR

Used to wind inner cable through conduit.  
The handle can be turned one way to Open the window or turned the other way to Close.



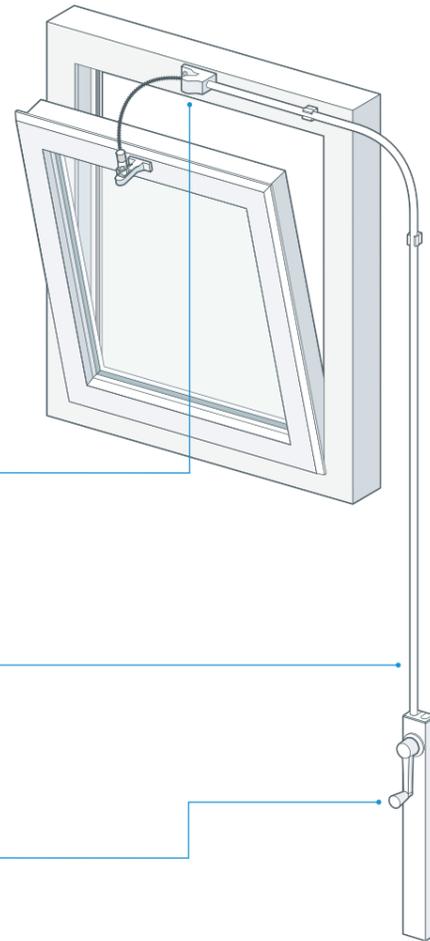
## EXAMPLES



The drawings and images in this document must not be copied, or placed at the disposal of a third party in whole or part without the permission.

## LOCKING OPENER

Manual Locking Opener for bottom hung inward opening windows. Maximum opening of 250 mm (adjustable). Can be fitted to most window types Aluminium, Timber or uPVC. Individual or multiple T175 Locking Openers can be controlled from a single T200, T210, T250 or T300 Operator.



### LOCKING OPENER

Fixed to the outer frame of the opening vent. When cable is driven through the unit the opener will push to open or pull to close the opening vent.

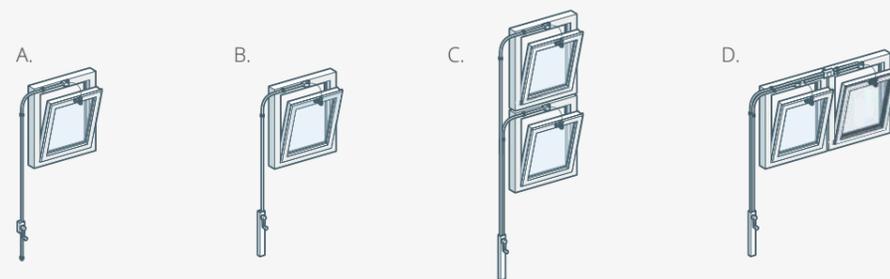
### CONDUIT

Plastic covered metal tube with nylon inner liner. Used to house inner cable which is driven from Operator to Opener.

### OPERATOR

Used to wind inner cable through conduit. The handle can be turned one way to Open the window or turned the other way to Close.

## EXAMPLES



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## FORK & SWIVEL OPENER

Manual Fork & Swivel Opener for opening and closing Louvre Windows. Maximum opening of 250 mm (adjustable). Individual or multiple T190 Fork & Swivel Openers can be controlled from a single T200, T210, T250 or T300 Operator.

### FORK & SWIVEL OPENER

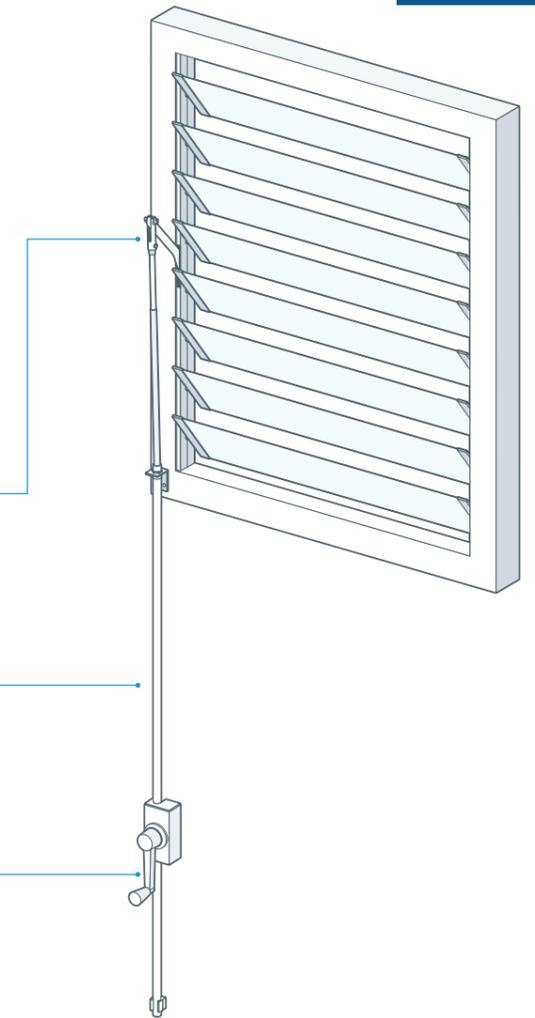
Fixed to the outer frame of the louvre. When cable is driven through the unit the opener will push to open or pull to close the louvre blades.

### CONDUIT

Plastic covered metal tube with nylon inner liner. Used to house inner cable which is driven from Operator to Opener.

### OPERATOR

Used to wind inner cable through conduit. The handle can be turned one way to Open the window or turned the other way to Close.



## EXAMPLES

A.



B.



C.



D.



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## SCREWJACK OPENER

Manual Screwjack Opener to operate high level rooflights. Maximum opening of 380 mm (adjustable). Can be fitted to most window types Aluminium, Timber or uPVC. Individual or multiple SJ138600 Screwjack Openers can be controlled from a single T200, T210 or T300 Operator. Supplied complete with fixing brackets.

### SCREWJACK OPENER

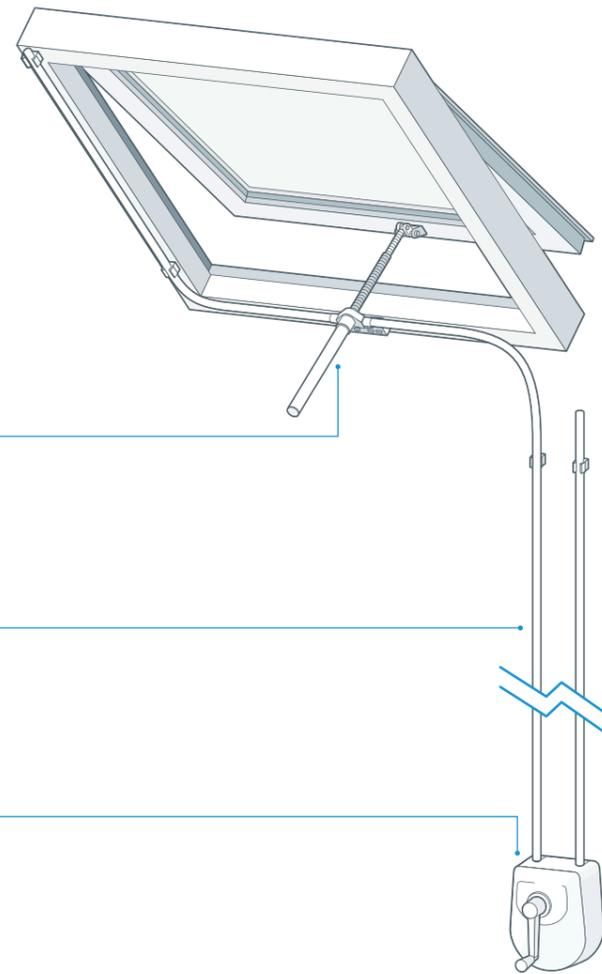
Fixed to the outer frame of the opening vent. When cable is driven through it's inner cog the spindle inside the opener will push to open or pull to close the opening vent.

### CONDUIT

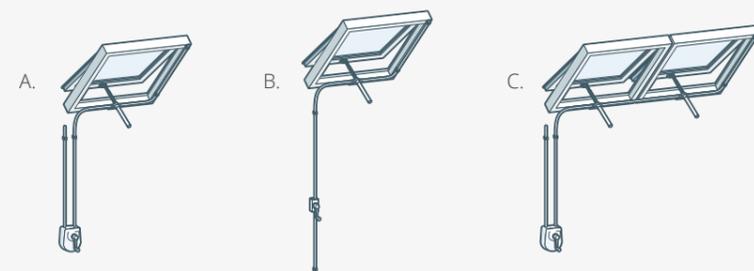
Plastic covered metal tube with nylon inner liner. Used to house inner cable which is driven from Operator to Opener.

### OPERATOR

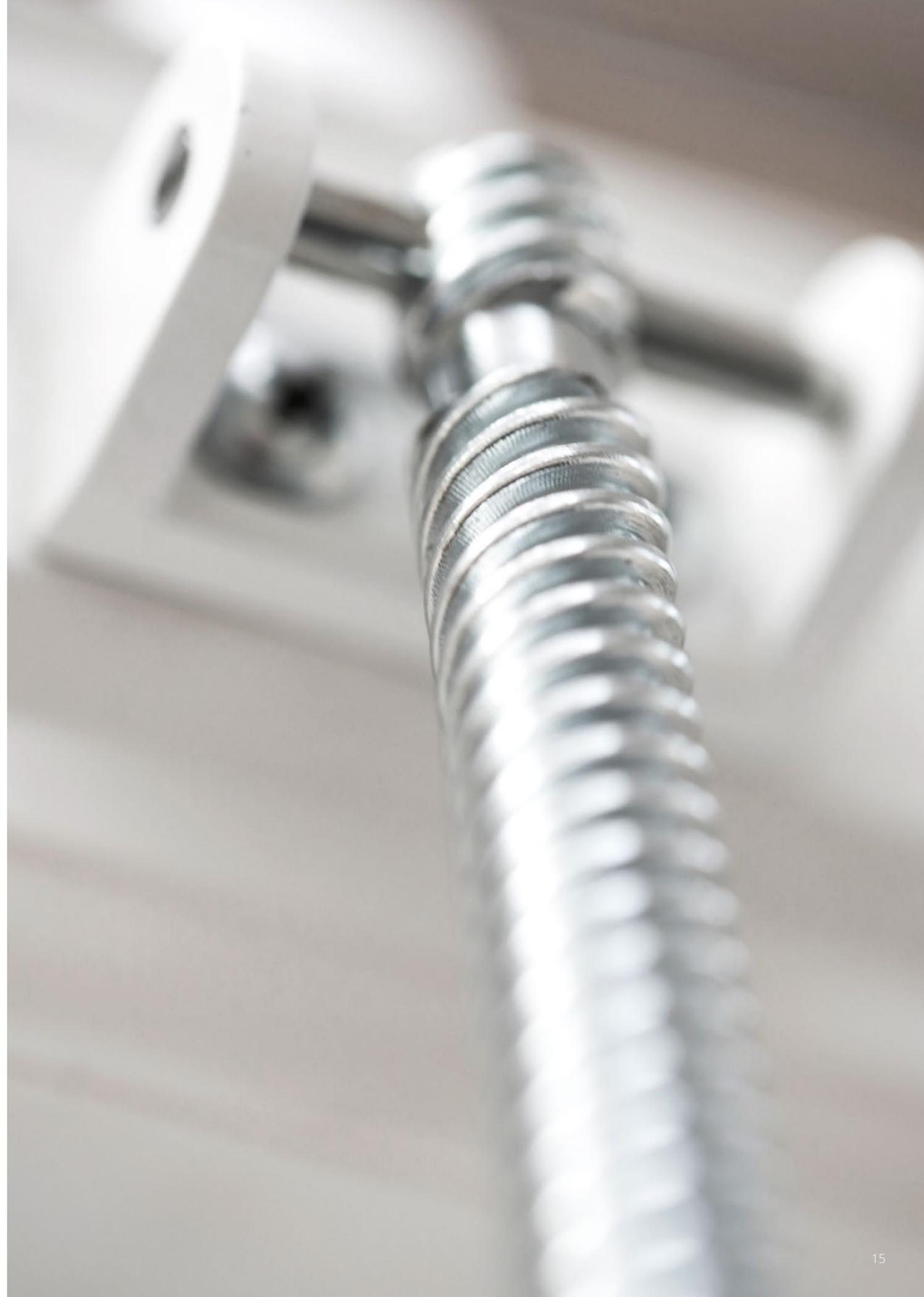
Used to wind inner cable through conduit. The handle can be turned one way to Open the window or turned the other way to Close.



## EXAMPLES



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OPERATORS



**T210**  
Maxi Operator  
(250-380mm)



**T250**  
Midi Operator (250mm)



**T260**  
Midi Operator (380mm)



**T300**  
Mini Operator  
(250-380mm)

OPENERS



**SJ138600**  
Screwjack Opener  
(380mm)



**T100**  
Chain Opener (250mm)



**T150**  
Chain Opener (380mm)



**T175**  
Locking Opener (250mm)



**T190**  
Fork & Swivel Opener  
(250mm)

ACCESSORIES



**T270**  
Large Grip  
Operator Handle



**T275**  
Operator Handle



**T350**  
Rotary Junction Box



**T400**  
Conduit



**T410/T411**  
Square Conduit



**T420**  
End Cap



**T450**  
Inner Cable



**T600**  
Conduit Saddle Bracket



**T620**  
Conduit Saddle Bracket



**T700**  
Spring Stop



**T720**  
Brass Stop



**T740**  
Narrow Fixing Plate



**T750**  
Wide Fixing Plate



**T760**  
Angled Fixing Plate



**T800**  
Conduit Connector



**T850**  
Inward Opening  
Bracket Kit



**T900**  
Conduit Groove Tool



**T950**  
Conduit Bending  
Tool

## TECHNICAL DATA

Minimum window height for full 250mm travel of T100 - 500mm

Minimum window height for full 380mm travel of T150 - 900mm

Chain openers fitted on windows less than recommended height must have opening restricted to 30% of the vent height using the T700 spring stop or T720 brass stop nuts to shorten the cable run. Use only T200, T210, T260 or T300 operator with the T150 (380mm) chain opener.

For safety reasons we recommend fitting side support stays to all bottom-hung, open-in windows. For bottom-hung applications you must fit the T850 fixing kit.

## MAXIMUM CONTROL RUN

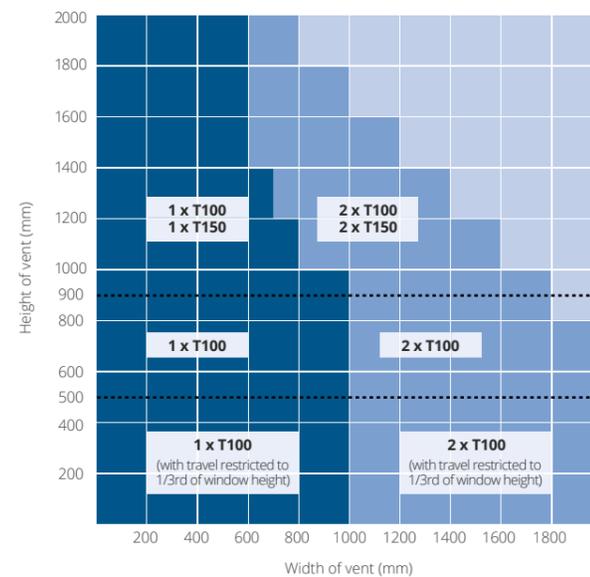
OPERATOR	MAXIMUM CONTROL RUN
T200	30 metres
T210	30 metres
T250/260	18 metres
T300	18 metres

## SPENT TRAVEL CONDUIT

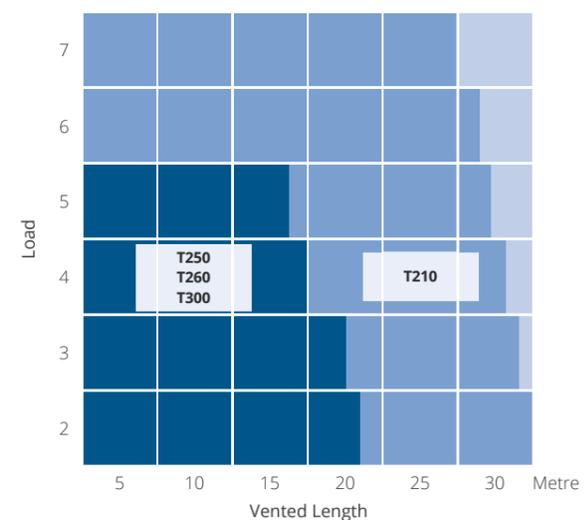
To allow for the forward/backward movement of the inner cable a length of "spent travel" conduit must be fitted at either end of the control path i.e. past the last chain/screwjack and below the operator (except the T250 & T260 operators which have an integral "spent travel" tube).

TYPE OF OPERATOR	SPENT TRAVEL CONDUIT
SJ138600 Screwjack	2.5m (for full 380mm travel)
T100 Chain Opener	0.3m
T150 Chain Opener	0.45m

## NUMBER OF OPENERS PER VENT



## TYPE OF OPERATOR



LOAD = No. of chain openers + No. of bends in conduit

The above figures are based on a single bend in the conduit path. For each additional bend deduct 1 metre from the Vented Length total.

The figures used in these charts are based on windows with 4mm double glazed units fitted to butt hinges or free pivots, not friction stays. Please refer to our sales or technical department for advice if friction stays are fitted.



CASE STUDIES



Installed by  
Ideal Window  
Automation

DUN AN RI SCHOOL  
Kingscourt



BIG DATA INSTITUTE  
University of Oxford



BATTERSEA POWER STATION  
London



SILVERSTONE WING  
Towcester



Installed by  
Ideal Window  
Automation

NIFRS  
Belfast



Installed by  
Ideal Window  
Automation

COLÁISTE CHÚ CHULAINN  
SCHOOL Dundalk

## QUALITY INSTALLATION

We believe HIGHLINE products are the best on the market. We also believe that our HIGHLINE Approved Installers are the best in the industry.

HIGHLINE Approved Installers must demonstrate the quality of their work meets the HIGHLINE standard. Their work is regularly assessed by our team ensuring the end product is always of the highest standard.

Using a HIGHLINE Approved Installer should give you peace of mind that you are getting the very best end product.



highline®

APPROVED  
INSTALLER

## MANUFACTURED IN ITALY



The HIGHLINE range of manual window control systems have been supplied and successfully installed throughout the UK and around the world since 2000.

Designed to operate high level or difficult access timber, aluminium or Upvc windows. Individual or banks of windows can be controlled from a wall mounted operator connected to window openers via length of conduit and cable.

Many thousands of sets have been successfully fitted in schools, hospitals and other commercial and domestic installations over the last 20 years.

HIGHLINE window control systems wide range of top quality products offers a perfect and reliable solution for almost every manual high level window control requirement.

*Reliable, quality products that won't let you down.*

highline®

