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Sales and Technical Support +44 (0) 1206 713801  www.titon.co.uk
About Titon

Titon is a long established company specialising in ventilation. It was founded in 1972 by John Anderson, its current Deputy Chairman, and is based in Colchester, Essex. It floated on the London Stock Exchange in 1988 as Titon Holdings Plc. Titon employs over 200 people divided between its head office in Colchester and its factory in Haverhill, Suffolk.

Titon manufactures and supplies ventilation and window products – ranging from its signature trickle ventilator to window handles, locking systems and hinge systems, as well as powered ventilation products such as whole house systems and extract fans.

As a manufacturer, Titon also invests heavily in research and development, which enables the company to use the latest technology to keep its products both innovative and cost effective.

Concentrating primarily on new build and social housing, Titon works with house builders to assist in compliance with certain aspects of Building Regulations and Standards, particularly ventilation in housing.

Titon’s focus is the importance of indoor air quality in the home. To this end the company is a comprehensive resource of information on ventilation legislation, how it affects house design, and offers tools such as CPD (Continuing Professional Development) seminars for architects and consultants.
Titon has specialist divisions focusing on its main market areas – Window & Door Hardware and Ventilation Systems.

These divisions have their own dedicated sales teams which cover the UK. They are supported from Colchester with full administration and marketing departments. Additionally, a state-of-the-art manufacturing base at Haverhill is home to the production and research and development departments.

As you would expect, Titon places a strong emphasis on quality, testing and customer service and is also affiliated to a number of industry organisations.

In addition to its UK activities, Titon exports its products to a range of overseas markets. The USA market is supplied through its wholly owned subsidiary; Titon Inc. Elsewhere Titon has distributors within most major world markets.

Titon works closely with these distributors to supply its products effectively and to support them in providing the high level of service synonymous with the Titon brand.
Quality/Testing/Guarantees

When it comes to quality, Titon is committed to excellence and the total satisfaction of its customers and their specific requirements. It strives to be an efficient supplier and to offer its customers a prompt, courteous and effective service. As a company, Titon endeavours to handle and deliver its products in a manner that is not detrimental to the environment, the health and safety of its staff and customers, or the general public (both in and outside its facilities).

Titon’s objective of consistent high quality performance is met by mandatory adherence to procedures, through staff training and the development of personal responsibility for all employees, together with the provision of adequate resources, according to the principles of Quality Assurance.

Titon has full ISO 9001 Certification and the Standard ensures standards are met and monitored in eight core quality management areas, including customer focus, leadership, the involvement of people, a process approach, a systematic approach to management, continual improvement, a factual approach to decision making and mutually beneficial supplier relationships.

In 2007, Titon celebrated the recognition of its green credentials following the award of its ISO 14001 Environmental Management Standard certification.

Titon has a large research, development and testing department in Haverhill, Suffolk.

All of Titon’s products are subjected to a rigorous regime of quality testing to ensure they meet the performance criteria specified, as well as delivering reliability and optimum performance.

To enable Titon to demonstrate its quality, it will test products, wherever applicable, to the latest British and European standards – including full CE approval.
Titon has a strong sales and specification presence throughout the UK and overseas. The company employs specialists for each market sector in regional locations, in order to give fast and efficient support to customers and specifiers. The sales teams have a technical background to assist in application problems and offer ‘hands-on’ advice.

At Colchester, dedicated sales and technical offices supporting each division offer peace of mind to callers via modern systems and extensive product knowledge. Many Titon employees have years of experience in the window and door hardware sector or in domestic ventilation products and this is reflected in the company’s high service levels.

This is unique in an industry where the traditional route to market is through wholesalers or distributors, who by definition cannot provide the same standard of service and expertise. It is therefore very important to the company to retain its existing research, design, development and manufacturing focus, benefiting the sales team with a more empathetic approach to market demands.

Orders can be placed by emailing the sales office, or online at www.titondirect.co.uk.

Regional sales and specification managers can be contacted to arrange an appointment, either on site or on premises, which allows for more productive discussions.

Titon prides itself on the regulatory and standards knowledge, and can visit to disseminate this information in the structured and unbiased form of CPD presentations.

Titon’s position as experts on domestic ventilation is re-enforced by the publication of regular email newsletters to update subscribers on new products, information and services. Subscription to these newsletters is simple via the Titon website or www.partf.co.uk.

Titon: The knowledge behind the products.
The truth revealed

AREA 24 is Titon’s extensive hi-tech product development laboratory. Its primary function is the testing and launching of hardware products to achieve PAS 24 security levels on timber, PVCu and composite aluminium windows and doors.

SAFE AND SECURE

Fully compliant

Meeting the needs of PAS 24
Many of Titon’s hardware products can assist windows and doors in meeting the criteria of PAS 24, as long as they have been designed and manufactured to applicable levels.

PASS THE TEST

Setting new standards
No matter the door or window type, security testing remains paramount. That’s why Titon’s expert AREA 24 hardware development facility runs regular durability and indicative testing to help fabricators achieve full PAS 24 certification.

Police approved
In addition, a number of Titon products are now Secured By Design certified, further highlighting their crime prevention capabilities.

FIND OUT MORE

Visit the website www.titonarea24.co.uk to try out the various security hardware combinations available – and discover which products can be grouped together to achieve PAS 24 status.
Security has become an extremely important issue for the specifiers and fabricators of windows. The strength of windows and their ability to resist intrusion has improved over recent years, with the introduction of more stringent standards and better performing products.

Many products in the Titon range have enhanced security versions, and when fitted to a suitably manufactured window can significantly increase performance and ultimately give the building occupant peace of mind.

Enhanced security fittings are available for commercial as well as domestic applications.

A typical domestic side hung casement window fitted with security products would feature the following:

- **Securistyle Defender Friction Hinge with Vector Excluder**
  - With metal end caps to resist ‘jammying’.

- **Titon Espagnolette locking handles**
  - Improved window security compared to a Cockspur handle using a wedge. Self latching closure and key locking also ensure proper closure.
  - High security tilt and turn sets are available; please phone for further details.

- **Maco Shootbolt Espagnolette**
  - For shootbolt locking at the top and bottom as well as mushroom locking on the side of the sash.

- **Titon Trickle Ventilators**
  - To give background ventilation without compromising security. A night vent position on the window is not secure.
The Need For Ventilation

Energy efficiency is the order of today. Seal up and insulate houses to reduce heating requirements and therefore green house gases. But getting the ventilation right is vital.

"Titon is a major source of knowledge on ventilation and offers advice on all aspects of the subject."

Ventilation, heating and insulation are the three factors which combine to affect a building’s performance, and also the occupants’ health. Ventilation is key to reducing condensation and associated mould growth – protecting both the building fabric and the wellbeing of the homeowners.

To achieve improved levels of ventilation, heating and insulation and the balance between them, the Building Codes and Technical Standards in the US, as well as other countries, are being regularly updated, but the emphasis continues towards more whole building ventilation solutions.

For domestic situations there are more involved requirements which take into account the total ventilation levels throughout the dwelling.

In non-domestic buildings, as before, each project has its own set of design issues and to allow for this there are various documents available which give guidance according to the building type. These are referred to within the Codes and Technical Standards.

Titon’s ventilation range includes full whole house systems, which have come to the fore due to the emphasis on improved energy efficiency, as well as trickle vents and window opening systems.

Titon is supporting BEAMA’s ‘My Health My Home’ initiative, which is publicising the issues surrounding poor indoor air quality in the UK.

The campaign, which commenced in October 2014, has highlighted how effective ventilation can improve indoor air quality and reduce the risk of Toxic Home Syndrome. For further information visit, www.myhealthmyhome.com.
Titon is a major source of knowledge on ventilation and offers advice on all aspects of the subject. A dedicated information website www.partf.co.uk is regularly updated with news on legislative developments. The site also runs a subscription service to those interested in receiving updates via email. Titon has also produced a number of publications to help the window fabricator and specifier learn more.
**Recommended Systems**

An overview of the most commonly used ventilation systems in the UK

**System 1**

**Intermittent extract fans and background ventilators**

*Where can it be used?*

System 1 is suitable for use in houses and many flats or apartments with multi façades. In some circumstances, it can be difficult to comply with System 1, especially in dwellings with a single façade. For new build or refurbishment.

*How does it work?*

The System comprises of background ventilators, usually trickle ventilators fitted to windows and extract fans fitted in moisture producing areas or "wet rooms" such as kitchens and bathrooms.

The background ventilators provide the whole building ventilation and also supply air to the intermittently operated extract fans which provide the extract ventilation removing odours and excessive humidity.

**System 3**

**Continuous Mechanical Extract and background ventilators**

*Where can it be used?*

System 3 is used mainly in new build dwellings due to the need to incorporate ductwork within the building fabric. System 3 is particularly suited to dwellings with single façades.

*How does it work?*

The System uses background ventilators, usually trickle ventilators fitted in windows and one centrally located continuously running mechanical extract fan with ducts running to the moisture producing areas or "wet rooms" such as kitchens and bathrooms.

A boost facility where applicable provides rapid extraction when necessary to remove higher levels of pollutants. As an alternative, continuously running localised fans may be used in place of a centrally located continuously running mechanical extract fan ducted to extract areas.

Animated clips to show how Systems 1, 3 and 4 work can be viewed at www.titon.co.uk/allsystems

Titon would like to thank the NHBC Foundation for permission to use the ventilation system artwork from its ‘Part F 2010 - Where To Start: An introduction for house builders and designers’ publication
Continuous Mechanical Supply & Extract with Heat Recovery

**Where can it be used?**
System 4 is suitable for new build houses and flats or apartments, usually in premium developments due to the higher cost of purchase and installation.

**How does it work?**
A centrally located continuously running mechanical supply and extract fan extracts air via ducts from moisture producing areas or “wet rooms” such as kitchens and bathrooms to remove odours and excessive humidity. This air is passed over a heat exchanger, which transfers a high proportion of the heat of the extracted air to the incoming air, which is then distributed to the habitable rooms via ducts. Whole building ventilation is maintained by a constant flow of air between input and extract points. A boost facility provides rapid extraction when necessary to remove higher levels of pollutants. As an alternative, every room may have an individual unit as opposed to a centrally located and ducted unit. No background ventilators are required in this System.

Other systems

Other systems may offer compliance with the ventilation requirements of the Building Regulations (England & Wales) and the Technical Standards (Scotland). Titon do not offer products to comply with System 2, Passive Stack Ventilation and can explain why on request. Other products in the Titon range can offer alternative approved compliance, for instance a Mechanical Supply Ventilation System, based on the Sonair product. Please phone or email for further details.

Animated clips to show how Systems 1, 3 and 4 work can be viewed at www.titon.co.uk/allsystems
Window & Door Hardware for PVCu, Aluminium or Timber
Titon products are designed to be used on specific window materials. Each product page specifies which window materials are suitable for that product along with a description and list of features and benefits.

The technical information on each page is separated by the following headings:

**Manufactured from**
A summary of the main materials used in the manufacture of the product. Full product material specifications are available on request.

**Recommended screws**
The most suitable screw type and sizes are specified, although equivalents can be used.

**Standards**
A summary of the standards any particular product performs to or has been designed to meet.

**Performance**
The most pertinent test result/compliance is shown. Full test reports are available on request.

**Finishes**
Standard product finishes are specified. Non standard finishes are available for some products. Please phone for details.

**Size/Capacity**
The maximum size or capacity a product is designed for.

**More information**
Further information on all of our products is available from the Titon website (www.titon.co.uk).
Slot Ventilators

- Fitted onto the window sash or frame or mounted on an overhead section
- Metal or plastic models
- Canopies and grilles give protection against ingress of rain and insects
- Marked with equivalent area figure achieved with standard vent and canopy/grille combination

Trimvent ventilators
- Deflect the incoming air in all directions
- Ventilator opening cannot be obstructed by a reveal
- Used successfully for the last forty years

Trimvent Select ventilators
- As Trimvent products but with the added unique feature of an adjustable tilting T-bar
- Allows building occupant to control both the direction and the amount of incoming air
- Trimvent Select ventilators are part of the Select Suite of products, the first matching window handle and trickle ventilator range

Trimvent Select Xtra ventilators
- As Trimvent Select range, with less tilt but considerably improved equivalent area
- Slot sizes as standard, however products approximately 60% more efficient for airflow

Slot dimensions
Slot sizes shown in the ‘Details’ tables are for round ended slots. Fully detailed scale slot diagrams and dimensions for square ended slots available on request.

Placing a slot ventilator order
All product codes are listed in the ‘Details’ table on each product page. Please ensure both an internal ventilator and an external grille or canopy are ordered for each particular window.

Some Titon ventilators are available in vent and canopy packs, full details are available on request.

Glazed-in Ventilators

- Easy to glaze-in, can be treated as an extension of the glass
- Can be cut to length and assembled by the customer or supplied made to measure
- Integral canopy for protection against ingress of rain and insects
- Marked with equivalent area figure per metre

Placing a glazed-in ventilator order
All made to measure ventilator product codes are listed in the ‘Details’ table on each product page. As every made to measure glazed-in ventilator is produced specifically for each order, please quote the following information when placing an order:

- The overall vent length
- The glass thickness
- Plastic or aluminium canopy
- Finish (inner and outer)
- Equivalent area or free area required
- Quantity

To calculate the overall vent length see diagram:

The 20mm dimensions are always constant, Therefore the body length is always 40mm shorter than the overall length. Please make any allowances for fittings beads, gaskets etc, or for manufacturing tolerances.

An exact glass reduction dimension is not given for each product. Consideration must be given to the glazing method.

For glazed-in ventilators in bar length, please contact us for ordering details.
Ventilators

Ventilators

- Trimvent® Select S13 18
- Trimvent® Select Xtra S13 20
- Trimvent® Select Xtra S16 22
- Trimvent® Select Xtra R16 24
- Trimvent® Select E18 26
- Trykvent 28
- SF Xtra Vent 30
- SF Xtra Sound Attenuator Vent 32
- Trimvent® 90 Hi Lift 34
- Trimvent® 4000 Hi Lift 36
- Trimvent® SM 38
- Gas Regulations Ventilator 40
- Maxiglaze 42
- Variglaze 44
- Vent-Trex 46
- Other Ventilators 48

Amendments to the product range are made on an ongoing basis to meet changing market demands. For the most up-to-date information, please go to www.titon.co.uk.
Trimvent® Select S13 Ventilator

Suitable for:
PVCu, Aluminium, Timber

Trimvent Select S13 is a surface mounted plastic slot ventilator that fits over a 13mm slot in a window. It provides an Equivalent Area (EA) of 1700mm² or 2700mm² and can be fitted with a C13 canopy or GS13 grille.

The S13 is ideal for refurbishment situations using any window material and is available in a variety of colours. Trimvent Select ventilators have been specified and fitted on millions of windows throughout the UK and mainland Europe over the last 20 years.

Features and Benefits

→ Deflects air up or down, or both
→ Unique occupant controllable tilting T-bar
→ Rounded unobtrusive shape
→ Can be fitted on the sash, frame or overhead section
→ For use over 13mm slot
→ Based on successful Trimvent® principle
→ Sculpted finger recess
→ Screw fix or clip fix versions (GS13 clip fix only)
→ Patented and registered design
→ Available in vent and canopy packs
→ Remote control vent available
→ Wide range of colours and wood grain finishes available
→ When specified correctly complies with Building Regulations
## Details

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<th>(W) Width</th>
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EA figures above and marked on vents are achieved when fitted to manufacturer’s recommendations. Tested in accordance with BS:EN 13141-1 (2004). See Titon fixing instructions for full details.

This product does feature some protrusion into the slot. If the recommended slot size has been cut then the protrusion will not affect fitting or claimed performance. Please contact us if you are using an existing slot which is different to that shown. Using a product without locators could affect the stability of the product in certain extreme conditions.

### Manufactured from

Vent – PBTP (UV Stable) & POM, Canopy – PVCu

### Recommended screws

C13 – 3.5mm (No.6) Pan Head or equivalent
S13 – No.7 or No.8 countersunk heads

### Standards

Tested in accordance with BS EN 13141-1:2004 (airflow, air leakage and weather tightness)


### Performance

(Full test details available on request)

Equivalent Area – see above
Free Area – see above
Air Leakage (m³/hr @ 50Pa)
1700EA version (screw fix) – 1.61
27000EA version (screw fix) – 2.61
Water Resistance (Pa) – 1700EA and 2700EA – 600 Pa
Acoustic Dn,e,w (+/-) 2700EA version – vent open 33 (-1;0), vent closed 45 (-1,-2)

### Finishes

Suffix product code with:
-392 (white), -315 (brown), -496 (bright white), -662 (toffee)
Other colour options available. Please contact sales for details.

### More information

enquiries@titon.co.uk / 01206 713801
Trimvent® Select Xtra S13 is a surface mounted plastic slot ventilator that fits over a 13mm slot in a window and provides an Equivalent Area (EA) of 4400mm² or 5000mm². It can be fitted with an XC13 canopy or GS22 grille.

The XS13 is ideal for both new build and refurbishment situations using any window material, and is available in a variety of colours.

The Xtra design improves the Trimvent Select range to offer increased ventilation. It gives optimum airflow (and therefore EA) utilising existing Trimvent Select slot sizes and vent lengths, making them 60% more efficient than previous models. It has been specifically developed for recent revisions to Part F of the Building Regulations for Ventilation (England & Wales), is optimised for use with the Scottish Technical Standards and to improve performance for requirements throughout the UK and Europe.

Trimvent Select ventilators have been specified and fitted on millions of windows throughout the UK and mainland Europe over the last 20 years.
Details

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<tr>
<th>Product</th>
<th>Product Code</th>
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<th>(W)</th>
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<th>EA (mm²)</th>
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Sleeve

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Finishes

EA figures above and marked on vents are achieved when fitted to manufacturer’s recommendations. Tested in accordance with BS:EN 13141-1 (2004). Typically used for overhead sections.

This product does feature some projection into the slot. If the recommended slot size has been cut then the projection will not affect fitting or claimed performance. Please contact us if you are using an existing slot which is different to that shown. Using a product without locators could affect the stability of the product in certain extreme conditions.

Manufactured from

Vent – PBTP (UV Stable) & POM, Canopy – PVCu

Recommended screws

3.5mm (No.6) Pan Head or equivalent

Standards

Tested in accordance with BS EN 13141-1:2004 (airflow, air leakage and weather tightness)


Performance

(Full test details available on request)

Equivalent Area – see above

Free Area – see above

Air Leakage (m³/hr @ 50Pa) – screw fix – 2.42, clip fix – 7.29, 5000 version screw fix – 4.57, clip fix – 5.69

Water Resistance (Pa) – 4400EA version – 600Pa 5000EA version – 450Pa

Acoustic Dn,e,w (+/-) – 4400EA version – vent open 32 (0;1), vent closed 41 (0;-1). 5000EA version – vent open 32 (-1;0), vent closed 35 (0;0)

More information

enquiries@titon.co.uk / 01206 713801
Trimvent® Select Xtra S16 is a surface mounted plastic slot ventilator that fits over a 16mm slot in a window and provides an Equivalent Area (EA) of 4600mm² when fitted with the XC16 canopy.

The XS16 is ideal for both new build and refurbishment situations using any window material, and is available in a variety of colours.

The Xtra design improves the Trimvent Select range to offer increased ventilation. It gives optimum airflow (and therefore EA) utilising existing Trimvent Select slot sizes and vent lengths, making them 60% more efficient than previous models. It has been specifically developed for recent revisions to Part F of the Building Regulations for Ventilation (England & Wales), is optimised for use with the Scottish Technical Standards and to improve performance for requirements throughout the UK and Europe.

Trimvent Select ventilators have been specified and fitted on millions of windows throughout the UK and mainland Europe over the last 20 years.
EA figures above and marked on vents are achieved when fitted to manufacturer’s recommendations. Tested in accordance with BS:EN 13141-1 (2004). This product does feature some protrusion into the slot. If the recommended slot size has been cut then the protrusion will not affect fitting or claimed performance. Please contact us if you are using an existing slot which is different to that shown. Using a product without locators could affect the stability of the product in certain extreme conditions.

Manufactured from
Vent – PBTP (UV Stable) & POM, Canopy – PVCu

Recommended screws
3.5mm (No.6) Pan Head or equivalent

Standards
Tested in accordance with BS EN 13141-1:2004 (airflow, air leakage and weather tightness)

Performance
(Full test details available on request)
Equivalent Area – See above
Free Area – See above
Air Leakage (m³/hr @ 50Pa) – 2.12
Water Resistance (Pa) – 600
Acoustic $D_{n,e,w}^{+/-}$ – vent open 31 (0;0), vent closed 41 (-1;-2)

Finishes
Suffix product code with:
-392 (white), -315 (brown), -496 (bright white), -662 (toffee)
Other colour options available. Please contact sales for details.

More information
enquiries@titon.co.uk / 01206 713801

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
<th>(L) Length</th>
<th>(W) Width</th>
<th>(P) Projection Closed-Open</th>
<th>EA (mm²)</th>
<th>Free Area (mm²)</th>
<th>Slot Detail / Free Area of Slot (mm²)</th>
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<td>Sleeve</td>
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Trimvent Select Xtra R16 is a fully recessed plastic slot ventilator that fits over a 16mm slot in a window and provides an Equivalent Area (EA) of 4600mm² when fitted with the XHD16 grille or XC16 canopy. The XR16 is ideal for both new build or refurbished situations using timber windows and is available in a variety of colours.

The Xtra design improves the Trimvent Select range to offer increased ventilation. It gives optimum airflow (and therefore Equivalent Area) utilising existing Trimvent Select slot sizes and vent lengths, making them 60% more efficient than previous models.

It has been specifically developed for recent revisions to Part F of the Building Regulations for Ventilation (England & Wales), and to improve performance for requirements throughout the UK and Europe.

Trimvent Select ventilators have been specified and fitted on millions of windows throughout the UK and mainland Europe over the last twenty years.

Features and Benefits

➔ Uprated design to improve performance and Regulations compliance
➔ Unique occupant controllable tilting T-bar
➔ No projection (when closed) for ease of window stacking
➔ Recesses over 16mm slot
➔ Based on successful Trimvent® principle
➔ Sculpted finger recess
➔ Patented and registered design
➔ Supplied with paint protection adhesive cover
➔ When specified correctly complies with Building Regulations
**Details**

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
<th>(L) Length</th>
<th>(W) Width</th>
<th>(P) Projection Closed-Open</th>
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<td>XC16 364 canopy</td>
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<td>XHD16 grille **</td>
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</tbody>
</table>

* Slot detail should also include a 352 x 22 x 16 recess for the ventilator.  
** Special preparation required for XHD16 Grille. See Titon Fixing Instructions for full details.  
EA figures above and marked on vents are achieved when fitted to manufacturer’s recommendations. Tested in accordance with BS:EN 13141-1 (2004).

**Manufactured from**  
Vent – PBTP (UV Stable) & POM, XHD16 – PP,  
Canopy – PVCu

**Recommended screws**  
3.5mm (No.6) Pan Head or equivalent

**Standards**  
Tested in accordance with BS EN 13141-1:2004 (airflow, air leakage and weather tightness)  

**Performance**  
(Full test details available on request)  
Equivalent Area – See above  
Free Area – See above  
Air Leakage (m³/hr @ 50Pa) – 6.04 (with XHD16), 2.43 (with XC16)  
Water Resistance (Pa) – Vent & Canopy 600, Vent & Grille 300  
Acoustic Dn,e,w (+/-) – vent open 31 (0;1), vent closed 40 (-1;-1)

**Finishes**  
Suffix product code with: -392 (white), -315 (brown)  
Other colour options available. Please contact sales for details.

**More information**  
enquiries@titon.co.uk / 01206 713801

*Through Frame (with XC16)*  
*Through Frame (with XHD16)*
Trimvent Select E18 is a semi-recessed clip-fix plastic slot ventilator that fits into an 18mm slot in a window overhead section or cavity closer and provides an Equivalent Area (EA) of 4200mm² when fitted with a pair of GS18 grilles.

The E18 is ideal for both new build and refurbishment situations using PVCu windows and is available in a variety of colours.

Trimvent Select ventilators have been specified and fitted on millions of windows throughout the UK and mainland Europe over the last 15 years.

Features and Benefits

- Revised design to improve performance and Regulations compliance
- Unique occupant controllable tilting T-bar
- Deflects air up or down, or both
- Ideal for overhead sections
- Push to fit, no tools or screws required
- Minimal projection (when closed) for ease of window stacking during transit
- Flange covers slot edges
- Clips into an 18mm slot
- For use with GS18 grilles
- Based on successful Trimvent® principle
- Sculpted finger recess
- Patented and registered design
- When specified correctly complies with Building Regulations
**NOTE:** Vent can only be used on sections with wall thickness of 2-2.5mm. Slot tolerances of ± 0.5mm are required.

EA figures above and marked on vents are achieved when fitted to manufacturer’s recommendations. Tested in accordance with BS:EN 13141-1 (2004).

This product does feature some protrusion into the slot. If the recommended slot size has been cut then the protrusion will not affect fitting or claimed performance.

**Manufactured from**

Vent – PBTP (UV Stable) & POM, GS18 – PP

**Standards**

Tested in accordance with BS EN 13141-1:2004 (airflow, air leakage and weather tightness)


**Performance**

(Full test details available on request)

Equivalent Area – See above

Free Area – See above

Air Leakage (m³/hr @ 50Pa) – 2.31 (with GS18)

Acoustic $D_{n,e,w}$ (+/-) – vent open 31 (-1;-1), vent closed 43 (-1;-2)

**Finishes**

Suffix product code with:

-392 (white), -315 (brown)

**More information**

enquiries@titon.co.uk / 01206 713801

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**Ventilators**

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
<th>(L) Length</th>
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**Overhead Section**
The Trykvent is an unobtrusive semi-recessed plastic ventilator that fits over a 16mm slot in a timber window.

The Trykvent is specifically designed for high performance timber windows and is ideal for both new build or refurbished situations. It is available in white, brown or grey.

When fitted correctly, the Trykvent seals extremely well when closed, while offering a higher EA than most other similar vents available.

**Features and Benefits**

- Specifically designed for high performance timber windows
- Press to open and close principle
- High airtightness in closed position
- Easily removed without damage to product
- Thermal insulation all plastic with gas injection moulded T-bar
- Gasket seal between T-bar and channel
- Unique auto drop down opening
- High quality, robust operating mechanism
- Unobtrusive low profile design
- Latching mechanism in closed position
- High airflow or 4300mm² free area
- GF Polyester
## Details

**Manufactured from**
Ventilator: Glass filled PBT & POM  
Canopy: Aluminium 6063 HIT T6 & PP (UV Stable)

**Standards**
Tested in accordance with BS EN 13141-1:2004 (airflow, air leakage and weather tightness)

**Performance**
(Full test details available on request)  
Equivalent Area – See above  
Free Area – See above  
Air Leakage – 0.40m³/hr @ 50 Pascal  
Water Resistance – No test data available

**Finish**
Suffix product code with:  
-392 (white), -315 (brown), -464 (grey) matches RAL9006

**More information**
enquiries@titon.co.uk / 01206 713801

<table>
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<th>Product</th>
<th>Product Code</th>
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<th>(P) Projection Closed-Open</th>
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* Slot detail should also include a 386 x 23 x 22 recess for the ventilator.  
** Slot detail should also include a 280 x 23 x 22 recess for the ventilator.
The SF Xtra is a high performance, surface mounted aluminium slot ventilator. It is the shortest vent available to provide 5000mm² EA. This product is equally suitable for domestic and non-domestic applications.

There are two width variants, one for use over a 13mm slot, the other for a 16mm slot. The SF Xtra is also available in made-to-measure sizes or bar length for self-assembly.

All versions can be used with either a plastic or aluminium canopy.

Features and Benefits

→ Shortest vent available to provide 5000mm² EA*
→ Simple construction to aid painting, self-assembly & fitting
→ High performance gasket combined with compression closing action improves sealing in adverse conditions
→ For use over a 13 or 16mm slot
→ Ideal for retrofit applications, over a slot or series of holes**
→ Ideal for use in non-domestic installations
→ Available in bar length for cutting to size by customer (details on request)
→ Bar length product available in mill finish for customer painting
→ Special paint finishes available
→ When specified correctly complies with Building Regulations
→ Can be mounted to deflect air upwards or downwards

* This vent is designed for use where no protection from weathering required or for ventilation of a habitable room through another room or conservatory.

** This may not achieve the marked Equivalent Area.
**Ventilators**

### Details

#### Product

<table>
<thead>
<tr>
<th>Product Code</th>
<th>(L)</th>
<th>(W)</th>
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<th>EA (mm²)</th>
<th>Free Area (mm²)</th>
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*This vent is designed for use where no protection from weathering required or for ventilation of a habitable room through another room or conservatory.

### Performance

- **Full details available on request**
- Equivalent Area – See above
- Free Area – See above
- Air Leakage (m³/hr @ 50Pa) – 0.11m³/hr @ 50Pa (SFX 4000EA version)
- Water Resistance (Pa) – 750Pa
- Acoustic Dn,e,w
  - 13mm slot version – vent open 32 (-1.0), vent closed 52 (-2.4)
  - 16mm slot version – vent open 32 (0.0), vent closed 55 (-1.4)

**For optimum performance the ventilator should be installed on a flat surface free from defects**

### More Information

enquiries@titon.co.uk / 01206 713801

---

**Manufactured from**

Aluminium 6063A T6, component parts POM

**Recommended screws**

3.5mm (No.6) Round Head or equivalent

**Standards**

Tested in accordance with BS EN 13141-1:2004

**Finishes**

Suffix product code with: -020 (white), -023 (brown)

Brown vents fitted with black end caps

Other colours available contact sales for details

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**Sales and Technical Support +44 (0) 1206 713801 www.titon.co.uk**
The SF Xtra Sound Attenuator ventilator is a slot ventilator which provides high levels of sound attenuation compared to similar ‘acoustic’ products, in a compact size.

The SF Xtra Sound Attenuator can be purchased in a number of combinations based on different sizes of inner (ventilator) and outer (canopy). Combinations can be chosen depending on the sound attenuation requirement and can achieve up to $D_{w,e,w} (C;Ctr) = 44 (-2;-3)\,\text{dB}$ when the vent is open.

The product is a cost effective method of reducing incoming noise in situations where conventional slot ventilators are unable to assist with acoustic issues.

The SF Xtra Sound Attenuator comes fitted with a Titon SF Xtra Ventilator and/or SF Canopy and fits the 2500mm$^2$ EA version over the standard SF, Trimvent Select or Select Xtra slot size.

**Features and Benefits**

- Cost effective sound attenuating ventilator
- 2500mm$^2$ EA and 5000mm$^2$ EA versions available
- Vent sizes available: V25, V50, V75 and canopy sizes: C25, C50 and C75
- Can provide up to 44 $D_{w,e,w}$ attenuation, depending on combination
- Suitable for use in domestic or non-domestic installations
- Ideal for retrofit applications, over an existing slot
- Available in a range of combinations to suit different acoustic specifications
- Fits over a standard SF, Trimvent Select or Trimvent Select Xtra slot size
- Supplied with SF Xtra Ventilator and/or SF Canopy fitted
- High performance gasket combined with compression closing action improves sealing in adverse conditions
- Can be mounted to deflect air upwards or downwards
- For use over a 13mm slot
- Special paint finishes available
Details

<table>
<thead>
<tr>
<th>Product</th>
<th>Code</th>
<th>Length</th>
<th>Width</th>
<th>Projection Closed-Open</th>
<th>Free Area (mm²)</th>
<th>Slot Detail</th>
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<tr>
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<td>SF 418 Canopy only</td>
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Through sash

**Acoustic Ratings**

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<th>Product</th>
<th>Open</th>
<th>Closed</th>
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<tr>
<td>V75 + C75 (2500EA)</td>
<td>D_{50,C;Ctr} = 44 (-2;3)dB</td>
<td>D_{50,C;Ctr} = 55 (-1;5)dB</td>
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<td>V75 + C50 (2500EA)</td>
<td>D_{50,C;Ctr} = 42 (-1;2)dB</td>
<td>D_{50,C;Ctr} = 55 (-2;5)dB</td>
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<td>V75 + standard canopy (2500EA)</td>
<td>D_{50,C;Ctr} = 40 (-1;2)dB</td>
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<td>V50 + C25 (2500EA)</td>
<td>D_{50,C;Ctr} = 39 (-1;2)dB</td>
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<tr>
<td>V50 + standard canopy (2500EA)</td>
<td>D_{50,C;Ctr} = 38 (-1;2)dB</td>
<td>D_{50,C;Ctr} = 55 (-2;5)dB</td>
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<td>V25 + C25 (2500EA)</td>
<td>D_{50,C;Ctr} = 36 (-0;2)dB</td>
<td>D_{50,C;Ctr} = 55 (-1;5)dB</td>
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<tr>
<td>V25 + standard canopy (2500EA)</td>
<td>D_{50,C;Ctr} = 35 (-0;1)dB</td>
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<tr>
<td>Standard vent + C25 (2500EA)</td>
<td>D_{50,C;Ctr} = 35 (-0;1)dB</td>
<td>D_{50,C;Ctr} = 55 (-1;5)dB</td>
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<td>Standard vent + standard SF canopy (2500EA)</td>
<td>D_{50,C;Ctr} = 32 (-1;2)dB</td>
<td>D_{50,C;Ctr} = 52 (-2;4)dB</td>
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<tr>
<td>V75 + C75 (Hi Spec Foam) (5000EA)</td>
<td>D_{50,C;Ctr} = 40 (-2;3)dB</td>
<td>D_{50,C;Ctr} = 51 (-1;4)dB</td>
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**Manufactured from**

Aluminium 6063A T6, component parts POM

**Recommended screws**

4mm (No.8) Round Head or equivalent
When fitting to PVCu screw must go through two walls or into reinforcement

**Standards**

Tested in accordance with BS EN 13141-1:2004 (airflow air leakage and weather tightness)

**Finishes**

Suffix product code with -20 (white)
Other colour options available. Please contact sales for details.

**Performance**

(Full details available on request)
Equivalent Area – See above
Free Area – See above
Air Leakage – 0.11m³/hr @ 50Pa (Vent and Canopy only)
Water Resistance (Pa) – 750Pa
Acoustic Dₜₜₑₜₑ – see above
NB: For optimum performance the ventilator should be installed on a flat surface free from defects, and sealant should be used along all edges to achieve the desired acoustic result.

**More information**

enquiries@titon.co.uk / 01206 713801
Trimvent® 90 Hi Lift Ventilator

Suitable for:
- PVCu
- Aluminium
- Timber

Trimvent 90 Hi Lift is a semi-recessed aluminium slot ventilator that fits over a 16mm slot in a window and provides an Equivalent Area (EA) of up to 8600mm² when fitted with the Hi Flow canopy. The TV90 Hi Lift is ideal for both new build or refurbished situations using any window material, and is also available in a variety of colours.

The Hi Lift design improves the Trimvent range to offer increased ventilation. It gives optimum airflow (and therefore EA) utilising existing Trimvent slot sizes and vent lengths, making them 60% more efficient than previous models.

It has been specifically developed for recent revisions to Part F of the Building Regulations for Ventilation (England & Wales), is optimised for use with the Scottish Technical Standards and to improve performance for requirements throughout the UK and Europe.

The Trimvent 90 range of ventilators has been specified and fitted on millions of windows throughout the UK and mainland Europe over the last 35 years.

Features and Benefits

- Uprated design to improve performance and Regulations compliance
- T-bar deflects air up and down
- Compression closing action
- For use on 16mm slot
- Based on successful Trimvent® principle
- Unique linkages ensure constant friction and smooth action
- Canopy features integral screw covers
- Special colours available on request
- Felted gasket for increased performance
- When specified correctly complies with Building Regulations
EA figures above and marked on vents are achieved when fitted to manufacturer’s recommendations. Tested in accordance with BS:EN 13141-1 (2004). This product does feature some protrusion into the slot. If the recommended slot size has been cut then the protrusion will not affect fitting or claimed performance.

**Manufactured from**
Aluminium 6063 HIT T6, component parts PVCu, POM & PP (UV Stable)

**Recommended screws**
3.5mm (No.6) Round Head or equivalent

**Standards**
Tested in accordance with BS EN 13141-1:2004 (airflow, air leakage and weather tightness)

**Performance**
(Full test details available on request)
Equivalent Area – See above
Free Area – See above
Air Leakage (m³/hr @ 50Pa) – 1.09 (4300EA version)
Water Resistance (Pa) – 600
Acoustic $D_{n,e,w} (\pm)$ – vent open 31 (0;1), vent closed 42 (-1;-2)

**Finishes**
Suffix product code with:
-020 (white), -001 (SAA) (Canopy -026), -023 (brown)
Other colour options available. Please contact sales for details.

**More information**
enquiries@titon.co.uk / 01206 713801

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**Ventilators**

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<tr>
<th>Product Code</th>
<th>Product Code</th>
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<th>(W) Width (mm)</th>
<th>(P) Projection Closed-Open</th>
<th>EA (mm²)</th>
<th>Free Area (mm²)</th>
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</table>

**Through sash**

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Sales and Technical Support +44 (0) 1206 713801 www.titon.co.uk
Trimvent® 4000 Hi Lift is an aluminium slot ventilator that fits over a 13mm slot in a window and provides an Equivalent Area (EA) of up to 6000mm² when fitted with the Hi Flow canopy. The TV4000 Hi Lift is ideal for both new build or refurbished situations using any window material and is available in a variety of colours.

The Hi Lift design improves the Trimvent range to offer increased ventilation. It gives optimum airflow (and therefore EA) utilising existing Trimvent slot sizes and vent lengths, making them 60% more efficient than previous models.

It has been specifically developed for recent revisions to Part F of the Building Regulations for Ventilation (England & Wales), is optimised for use with the Scottish Technical Standards and to improve performance for requirements throughout the UK and Europe.

Trimvent 4000 ventilators have been specified and fitted on millions of windows throughout the UK and mainland Europe for 25 years.

Features and Benefits

- Revised design to improve performance and Regulations compliance
- Compression closing action
- For use on 13mm slot
- Based on successful Trimvent® principle
- T-bar deflects air up and down
- Unique linkages ensure constant friction and smooth action
- Vent supplied with screw covers, canopy features integral screw covers
- Special colours available on request
- Felted gasket for increased performance
- When specified correctly complies with Building Regulations
# Details

## Ventilators

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Length (mm)</th>
<th>Width (mm)</th>
<th>EA (mm²)</th>
<th>Free Area (mm²)</th>
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EA figures above and marked on vents are achieved when fitted to manufacturer’s recommendations. Tested in accordance with BS:EN 13141-1 (2004). This product does feature some protrusion into the slot. If the recommended slot size has been cut then the protrusion will not affect fitting or claimed performance.

## Manufactured from

Aluminium 6063 HIT T6, component parts POM & PP (UV Stable)

## Recommended screws

3.5mm (No.6) Round Head or equivalent

## Standards

Tested in accordance with BS EN 13141-1:2004 (airflow, air leakage and weather tightness)


## Performance

(Full test details available on request)

Equivalent Area – See above

Free Area – See above

Air Leakage (m³/hr @ 50Pa) – 0.99 (4000EA version)

Water Resistance (Pa) – 600

Acoustic Dₜₜₑₜₑ (±/−) – vent open 32 (0;1), vent closed 43 (0;1)

## Finishes

Suffix product code with:

-020 (white), -001 (SAA) (Canopy -026), -023 (brown)

Other colour options available. Please contact sales for details.

## More information

enquiries@titon.co.uk / 01206 713801

### Through sash

![Through sash](image)

### Through add-on section

![Through add-on section](image)
Trimvent® SM Ventilator

Suitable for:
PVCu  ALUMINIUM  TIMBER

Trimvent SM vent is a surface mounted aluminium slot ventilator that fits over a 10mm or 12mm slot in a window and provides an Equivalent Area (EA) of up to 5000mm² when fitted with an SM canopy. The Trimvent SM is available in made to measure sizes or in bar length in a variety of colours.

Features and Benefits

- Compression closing action
- For use over 10mm or 12mm slot, ideal for slim sections
- Flexible PVCu seal for improved weather tightness
- Ideal for retrofit applications, over a slot or series of holes*
- Available in bar length for cutting to size by customer (details on request)
- Special paint finishes available
- Based on successful Trimvent® principle
- Deflects air up and down
- Thermally insulated
- Matching screw covers
- Patented design
- When specified correctly complies with Building Regulations

*This may not achieve the marked Equivalent Area
Details

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
<th>(L) Length</th>
<th>(W) Width</th>
<th>(P) Projection Closed-Open</th>
<th>EA</th>
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<tr>
<td>SM 1500EA pack</td>
<td>TA952</td>
<td>457</td>
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<td>15.5 - 23</td>
<td>4000</td>
<td>6027</td>
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<tr>
<td>SM 2900EA 457 vent (12mm slot)</td>
<td>TA903</td>
<td>445</td>
<td>17</td>
<td>24.5</td>
<td>5000</td>
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<td>SM 445 plastic canopy</td>
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<td>SM 445 aluminium canopy</td>
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<td>SM 2900EA pack</td>
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<tr>
<td>SM 532 plastic canopy</td>
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<td>SM 3500EA pack</td>
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<tr>
<td>SM 4000EA 635 vent (12mm slot)</td>
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<td>635</td>
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<td>17</td>
<td>24.5</td>
<td></td>
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</tr>
</tbody>
</table>

Manufactured from
Vent – Aluminium 6063 HIT T6 & PVCu seal, canopy – Aluminium 6063 HIT T6, PP (UV Stable)

Recommended screws
3.5mm (No.6) Pan or Round Head or equivalent

Standards
Tested in accordance with BS EN 13141-1:2004 (airflow, air leakage and weather tightness)

Performance
(Full test details available on request)
Equivalent Area – See above
Free Area – See above
Air Leakage (m³/hr @ 50Pa) – 1.72 (2900EA version)
Water Resistance (Pa) – 750
Acoustic Dₘₐₓₑᵥₑ (¹/₁) – 2900EA version – vent open 33 (-1:0), vent closed 51 (-1;-4)

Finishes
Suffix product code with:
-020 (white), -023 (brown), -002 (black), PVCu Canopy: -393 (white)
Other colours available contact sales for details

More information
enquiries@titon.co.uk / 01206 713801
Gas Regulations Ventilator

Suitable for:
- PVCu
- ALUMINIUM
- TIMBER

The Gas Regulations vent is a surface mounted aluminium slot ventilator that fits over a 13mm or 16mm slot in a window.

Gas Regulations ventilator can provide a Free Area of up to 10000mm² permanent ventilation when fitted with a Gas Regulations canopy. The Gas Regulations vent is available in white or brown paint.

Features and Benefits

- Complies with BS 5440 Part 2 & Building Regulations Part J
- For use mounted over a 13mm or 16mm slot
- Integral screw covers for concealed fixing
- Four sizes available; 4000mm² Free Area for use with 7kW to 15kW open flue boilers, 7500mm² Free Area for 15 to 22kW open flue boilers, 5000mm² for use with certain flueless appliances
- Two ventilators supplied per pack (one fitted internally, one fitted externally)
- Supplied with warning label, screws and fixing instructions
- PLEASE REFER TO A QUALIFIED GAS PROFESSIONAL FOR ADVICE ON CORRECT SIZING OR USAGE OF GAS REGULATIONS VENTILATORS
## Details

### Ventilators

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
<th>(L) Length</th>
<th>(W) Width</th>
<th>(P) Projection Closed-Open</th>
<th>EA (mm²)</th>
<th>Free Area (mm²)</th>
<th>Slot Detail / Free Area of Slot (mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4000 Free Area GR ventilator pack</td>
<td>TA934</td>
<td>389</td>
<td>24</td>
<td>17</td>
<td>-</td>
<td>4000</td>
<td>160 10 160 13</td>
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<tr>
<td>5000 Free Area GR ventilator pack</td>
<td>TA937</td>
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<td>24</td>
<td>17</td>
<td>-</td>
<td>5000</td>
<td>200 20 200 13</td>
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<td>7500 Free Area GR ventilator pack</td>
<td>TA938</td>
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<td>24</td>
<td>17</td>
<td>-</td>
<td>7500</td>
<td>295 10 295 13</td>
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<tr>
<td>10000 Free Area GR ventilator pack</td>
<td>TA939</td>
<td>787</td>
<td>24</td>
<td>17</td>
<td>-</td>
<td>10000</td>
<td>320 20 320 16</td>
</tr>
</tbody>
</table>

Orientation of ventilator varies according to slot width

### Manufactured from

Aluminium 6063 HIT T6, component parts PP (UV Stable)

### Recommended screws

3.5mm (No.6) Pan Head Self Tapping or equivalent

### Standards


### Performance

(Full test details available on request)
Free Area – See above

### Finishes

Suffix product code with:
-020 (white), -023 (brown)

### More information

enquiries@titon.co.uk / 01206 713801
Maxiglaze is an energy efficient glazed-in aluminium ventilator that provides an Equivalent Area (EA) of 12000mm² per metre of extrusion (equal to vent length minus 57mm).

Optimum performance over length requires fewer vents to be fitted to achieve total requirement.

The Maxiglaze is available in made to measure sizes or in bar length in a variety of colours.

Suitable for:
PVCu  ✔️ ALUMINIUM  ✔️ TIMBER  ✔️

Suitability on timber windows dependent on bead fitting method and sealing. Please phone for further details.

Features and Benefits

- Optimum air opening over length
- 2500mm² EA / 4600mm² Free Area at 270mm long, 5000mm² EA / 8900mm² Free Area at 470mm long
- Supplied made-to-measure or in bar length
- Designed for easy cutting and assembly from bar length
- Suitable for 24 or 28mm glass thicknesses
- Available in mill finish bar length for customer painting (24mm version only)
- Vent Injection Process (VIP); rapid sealing method to improve weather tightness
- Aluminium or (white) plastic canopy
- Dual colour (inner and outer) finish available
- Thermally improved (not mill finish version)
- Channel gasket
- Available in Gas Regulations version
- Cord and rod control versions
- Patented design
- When specified correctly complies with Building Regulations

Maxiglaze

Cord operation
Rod operation

All dimensions in mm.
A minimum dimension of 68 (including gasket) should be considered for glass reduction. This dimension should be increased for any allowances in fitting beads, gaskets etc., or for manufacturing tolerances.
## Details

### Manufactured from
Aluminium 6063 HIT T6, component parts PVCu, POM, PA6 & PP (UV Stable)

### Standards
Tested in accordance with BS EN 13141-1:2004 (airflow, air leakage and weather tightness)


### Performance
(Full test details available on request)
Equivalent Area (EA) (mm²) – 12000 per metre of extrusion
Free Area (mm²) – 21476 per metre of extrusion* (‘extrusion length should be calculated as the overall length minus 57mm)
Air Leakage (m³/hr @ 50Pa) – 500mm overall length – 0.98
Water Resistance (Pa) – 600
Acoustic Dn,e,w (+/−) – 500mm overall length – vent open 29 (0;0), vent closed 48 (-1;-3)

### Finishes
Suffix product code with:
-387 (white with PVCu canopy), -020 (white with white aluminium canopy), -475 (white with black aluminium canopy)
*This product cannot be supplied anodised

### More information
enquiries@titon.co.uk / 01206 713801

### Ventilators

<table>
<thead>
<tr>
<th>Product Code</th>
<th>24mm Glass Thickness</th>
<th>28mm Glass Thickness</th>
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</thead>
<tbody>
<tr>
<td>207-399</td>
<td>GV18401</td>
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<td>400-499</td>
<td>GV18402</td>
<td>GV18502</td>
</tr>
<tr>
<td>500-599</td>
<td>GV18403</td>
<td>GV18503</td>
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<tr>
<td>600-699</td>
<td>GV18404</td>
<td>GV18504</td>
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<tr>
<td>700-799</td>
<td>GV18405</td>
<td>GV18505</td>
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<tr>
<td>800-899</td>
<td>GV18406</td>
<td>GV18506</td>
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<td>900-999</td>
<td>GV18407</td>
<td>GV18507</td>
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<td>1000-1099</td>
<td>GV18408</td>
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<td>1100-1199</td>
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<td>1200-1299</td>
<td>GV18410</td>
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<td>1300-1399</td>
<td>GV18411</td>
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<td>1600-1699</td>
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<td>1700-1799</td>
<td>GV18315</td>
<td>GV18315</td>
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<tr>
<td>Cord control</td>
<td>TA18002/012 Black or TA18002/392 White</td>
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<tr>
<td>Rod control 600mm rod pack</td>
<td>TA18003/012 Black or TA18003/392 White</td>
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</tr>
<tr>
<td>Rod control 1000mm rod pack</td>
<td>TA18004/012 Black or TA18004/392 White</td>
<td></td>
</tr>
</tbody>
</table>

Vent supplied with unrestricted Equivalent Area over length. Product can be supplied with Equivalent Area limited to 2500 or 5000mm² EA figures marked on vents are achieved when fitted to manufacturer’s recommendations. Tested in accordance with BS:EN 13141-1 (2004).

Vent injection process

Over glass
Variglaze is a thermally improved glazed-in aluminium ventilator that provides an Equivalent Area (EA) of 5400mm² per metre of extrusion (equal to vent length minus 78mm).

Its slim size minimises impact on window sight size. The Variglaze is available in made to measure sizes or in bar length in a variety of colours.

Suitable for:

- PVCu
- Aluminium
- Timber

*Suitability for timber windows dependent on bead fitting method and sealing. Please phone for further details.

**Features and Benefits**

- Slim size minimises impact on window sight size
- 2500mm² EA at 540mm long
  5000mm² EA at 1005mm long
- Supplied made-to-measure or in bar length (pre painted only)
- Bar length for cutting to size by customer (pre painted only)
- Suitable for 20, 22, 24 or 28mm glass thicknesses
- Aluminium or white plastic canopy
- Dual hardness flap gasket improves weather tightness
- Minimal projection for inline patio doors
- Thermally improved
- Available in Gas Regulations version, complies with BS5440 Part 2
- Retrofit or fitted cord control unit
- When specified correctly complies with Building Regulations

All dimensions in mm

A minimum dimension of 53 (including gasket) should be considered for glass reduction. This dimension should be increased for any allowances in fitting beads, gaskets etc., or for manufacturing tolerances.
Ventilators Details

EA figures above and marked on vents are achieved when fitted to manufacturer’s recommendations. Tested in accordance with BS:EN 13141-1 (2004).

Manufactured from
Aluminium 6063 HIT T6, component parts PVCu, POM, PA6 & PP (UV Stable)

Standards
Tested in accordance with BS EN 13141-1:2004 (airflow, air leakage and weather tightness)

Performance
(Full test details available on request)
Equivalent Area (EA) (mm²) – 5400 per metre of extrusion*
Free Area (mm²) – 9650 per metre of extrusion* (*extrusion length should be calculated as the overall length minus 78mm)
Air Leakage (m³/hr @ 50Pa) – 500mm overall length – 2.49
Water Resistance (Pa) – 300
Acoustic Dn,e,w (+/-) – 500mm overall length – vent closed 48 (-1;-1), vent open 33 (0;-2)

Finishes
Suffix product code with:
-387 (white with white PVCu canopy), -020 (white with white aluminium canopy), -475 (white with black aluminium canopy)

More information
enquiries@titon.co.uk / 01206 713801

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
</tr>
</thead>
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<td>178-299</td>
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<td>300-399</td>
<td>GV12302</td>
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<td>400-499</td>
<td>GV12303</td>
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<td>GV12304</td>
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<td>600-699</td>
<td>GV12305</td>
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<td>700-799</td>
<td>GV12306</td>
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<td>800-899</td>
<td>GV12307</td>
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<td>900-999</td>
<td>GV12308</td>
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<tr>
<td>1000-1199</td>
<td>GV12309</td>
</tr>
<tr>
<td>1200-1500</td>
<td>GV12310</td>
</tr>
</tbody>
</table>

Over glass
Vent-Trex is a unique combined overhead extract fan and trickle ventilator for kitchens and bathrooms that fits within the aperture on top of the window frame.

Vent-Trex is ideal for refurbishment situations where wall penetration is undesirable, as it does not damage the fabric of the building or where external aesthetics need to be preserved.

It provides a trickle ventilation performance Equivalent Area (EA) of 2500mm² minimum and extract ventilation rates to suit either kitchens or bathrooms.

Features and Benefits

- Unique combined extract fan/trickle ventilator
- Suitable for all window types
- Integral with window, ideal for refurbishment situations
- Avoids damage or penetration of building fabric
- Easy to install
- Saves wall space
- Low installation costs compared to traditional extract ventilators
- Bathroom version – single speed (15 l/s)
- Kitchen version – two speed (60 l/s and 30 l/s)
- 2500mm² EA minimum
- Low energy usage
- Easy to clean
- Easy to maintain
- IP24 rating
- Pull cord switch and power light (dependant on model)
- Humidistat option available (integral or remote)
- Available with remote PSU (SELV) option for bathrooms
- Continuous power or continuous running versions
- Variable speed version
- Suitable for use in conservation areas
- 2-year guarantee
**Configurations**

Handing – pull cord and cable entry can be either on the left or right side (viewed from inside the property).
Flex entry to the unit can be either from the front or the end.

**Optional Extras**

Units can be supplied with or without external mesh.
Units can be supplied as permanent ventilators, i.e. no slide (Not available for cord control units).

**Meanings**

Remote PSU
To provide extra low voltage capability for use in bathrooms SELV.

Standard
Pull cord or ceiling switch must be pulled to switch unit on and to allow humidity sensing to operate.

Continuous Power
Pull cord or ceiling switch manually operates the fan, unit will always respond to humidity change.

Continuous Running
Fan will run at low speed continuously and increase to the higher speed on pulling the pull cord.

Cord Control
The unit has two pull cords one each side.
One to open the slide, one to close the slide.
Also switching the unit on & off.

Variable Speed
Variable boost speed – used to reduce fan boost speeds in conjunction with open flued appliances, to avoid fumes being pulled back into property. (integral potentiometer adjustment).

Humidistat
Measures a change in humidity to trigger the fan to run or increase in speed.

Ceiling Switch
Momentary switch (M) – using pull cord to break contacts.
Latching switch (L) using normally open and common contacts.
Fitting, wiring and operation instructions are available, please contact Titon Technical Dept.

**Performance**

Equivalent Area (EA) – 2500mm² (minimum)
Free Area (mm²) – Bathroom model:
Integral PSU (length 520-2500mm): 5280mm² min
Remote PSU (length 405-2500mm): 5280mm² min
Kitchen model: Length 880-2500mm: 9000mm²

**Details**

230V AC Voltage / Power Consumption (standard version)
12V Bathroom – 3.96W @ 15 l/s (540mm length) (Integral PSU)
24V Kitchen – 21W @ 60 l/s (1200mm length) (Integral PSU)
Motor protection: IP24 Rating CE marked according to LVD and EMC directives

**Finishes**

White finish as standard to RAL 9010. Can be supplied in different colours. External canopy and internal fan can be coloured independently. Details available on request.

**More information**

enquiries@titon.co.uk / 01206 713801

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**Ventilators**

**Bathroom Fan Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Minimum Unit Length mm</th>
<th>Minimum Unit Length to achieve stated airflow mm</th>
<th>Airflow l/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Integral PSU + Pull Cord</td>
<td>420</td>
<td>520</td>
<td>15 *</td>
</tr>
<tr>
<td>Standard Remote PSU + Pull Cord</td>
<td>390</td>
<td>505</td>
<td>15 *</td>
</tr>
<tr>
<td>Standard Remote PSU + Ceiling Switch</td>
<td>290</td>
<td>405</td>
<td>15 *</td>
</tr>
<tr>
<td>Standard Integral PSU + Pull Cord + Humidistat</td>
<td>420</td>
<td>520</td>
<td>15 *</td>
</tr>
<tr>
<td>Standard Remote PSU + Pull Cord + Humidistat</td>
<td>390</td>
<td>505</td>
<td>15 *</td>
</tr>
<tr>
<td>Standard Remote PSU + Ceiling Switch (L) + Humidistat</td>
<td>390</td>
<td>505</td>
<td>15 *</td>
</tr>
<tr>
<td>Continuous Power Integral PSU + Pull Cord + Humidistat</td>
<td>420</td>
<td>520</td>
<td>15 *</td>
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<tr>
<td>Continuous Running Integral PSU + Pull Cord</td>
<td>420</td>
<td>520</td>
<td>8.6/11.8 *</td>
</tr>
</tbody>
</table>

**Kitchen Fan Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Minimum Unit Length mm</th>
<th>Minimum Unit Length to achieve stated airflow mm</th>
<th>Airflow l/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Integral PSU + Pull Cord</td>
<td>450</td>
<td>1200</td>
<td>30/60 *</td>
</tr>
<tr>
<td>Standard Integral PSU + Ceiling Switch (L)</td>
<td>450</td>
<td>1200</td>
<td>30/60 *</td>
</tr>
<tr>
<td>Standard Integral PSU + Pull Cord + Humidistat</td>
<td>450</td>
<td>1200</td>
<td>30/60 *</td>
</tr>
<tr>
<td>Standard Integral PSU + Ceiling Switch (L) + Humidistat</td>
<td>450</td>
<td>1200</td>
<td>30/60 *</td>
</tr>
<tr>
<td>Continuous Power Integral PSU + Pull Cord + Humidistat</td>
<td>450</td>
<td>1200</td>
<td>30/60 *</td>
</tr>
<tr>
<td>Continuous Power Integral PSU + Ceiling Switch (M) + Humidistat</td>
<td>450</td>
<td>1200</td>
<td>30/60 *</td>
</tr>
<tr>
<td>Continuous Running Integral PSU + Pull Cord</td>
<td>520</td>
<td>1200</td>
<td>8.7/21.6 *</td>
</tr>
<tr>
<td>Cord Control Integral PSU</td>
<td>450</td>
<td>1200</td>
<td>30/60 *</td>
</tr>
<tr>
<td>Variable Speed Integral PSU</td>
<td>450</td>
<td>1200</td>
<td>30/60 *</td>
</tr>
</tbody>
</table>

* Single speed  x Two speed

Please contact sales quoting unit type to receive Vent-Trex quotation/order sheet.
Other Ventilators

Alternative or supplementary types of ventilation

When good or best practice calls for more background ventilation than can be provided through window trickle ventilators, Titon offers a range of products to assist with compliance in domestic situations.

Some products also work in conjunction with, or instead of, window trickle ventilators, to provide the extract and whole building ventilation rates required in an up-to-date, energy efficient dwelling.

Central Mechanical Extract Ventilation

Filtered Supply Ventilation with Sound Attenuation

Extract Fans

Mechanical Ventilation with Heat Recovery

Accessories

Please refer to the Titon Ventilation Systems catalogue or www.titon.co.uk for further information on all these ranges.
Amendments to the product range are made on an ongoing basis to meet changing market demands. For the most up to date information, please go to www.titon.co.uk.
Overture espagnolette handles are part of Titon’s Overture suite of window and door hardware.

This stylish range has been designed by Titon to provide specifiers with a collection of window handles, door handles, letter plates and more.

The Overture E is ergonomically designed to include a solid and sculptured grip, and is available in straight or handed versions, in a variety of finishes.

**Suitable for:**

- PVCu
- Aluminium
- Timber

**Features and Benefits**

- Suitable for timber, PVCu or aluminium windows
- Ergonomic design; solid and sculptured grip
- Please contact us for the latest test results
- Straight or handed versions
- Non-locking and fire escape retrofit options
- 90 degree lock movement for easy recognition
- Double entry key
- Push-in screw covers
- Supplied bagged with machine screws
- 15mm, 25mm, 30mm or 40mm x 7mm spindle options available

Right hand – satin chrome – on timber

Straight – white – on PVCu
Details

Available in straight or handed versions with 15mm, 25mm, 30mm or 40mm x 7mm spindles. Non-locking and fire escape retrofit options are also available.

Manufactured from
Zinc Alloy to BS EN 1774 ZL3
Aluminium to BS EN 1490 LM20

Recommended screws
M5 machine screws

Standards
Please contact us for the latest test results

Finishes
White, Polished chrome, Satin chrome, Brown, PVD gold and Black

More information
enquiries@titon.co.uk / 01206 713801

Handle fixing detail

Right hand handle

Straight handle

A = Spindle length

All dimensions in mm
The Tilt & Turn handle is designed for use on PVCu, aluminium or timber tilt & turn windows.

It is available as a locking only handle and comes in a wide range of finishes.

Features and Benefits

- Tilt & Turn locking handle
- Part of the fully suited Overture product range
- Range of finishes available – please phone for availability
- Push to open
- 35mm x 7mm spindle
- Locking or fire escape versions
- Supplied with screws, key & non-locking insert as standard
- 10-year mechanical guarantee
- BBA approved
- Please contact us for the latest test results
Details
Available in straight versions with 35mm x 7mm spindles.
Locking or fire escape versions are also available.

Manufactured from
Zinc Alloy to BS EN 1774 ZL3
Aluminium to BS EN 1490 LM20

Recommended screws
M5 machine screws

Standards
Please contact us for the latest test results

Finishes
White, Polished chrome, Gold,
Satin Silver and Black

More information
enquiries@titon.co.uk / 01206 713801

Handle fixing detail
All dimensions in mm

Window Hardware

Sales and Technical Support +44 (0) 1206 713801 www.titon.co.uk
Select Standard is a locking espagnolette handle for PVCu, aluminium or timber windows.

Select Standard features a strong ergonomic grip and is ideal for larger sashes. The handle is available in handed versions and in a variety of plated or painted finishes.

Features and Benefits

- Suitable for PVCu, aluminium or timber windows
- Available in handed versions
- Locking, non-locking or fire escape versions
- Smooth handle action and streamlined design
- Ideal for larger sashes, fully reversible or pivot windows
- Ergonomic grip for ease of operation in limited access environments
- Non standard spindle sizes available on request
- Registered design
- Patented
- 30mm, 40mm x 7mm spindle lengths as standard
## Details

### Window Hardware

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select Standard Espagnolette right hand handle – locking, 7 x 30mm spindle</td>
<td>TF1430RH7</td>
</tr>
<tr>
<td>Select Standard Espagnolette left hand handle – locking, 7 x 30mm spindle</td>
<td>TF1430LH7</td>
</tr>
<tr>
<td>Select Standard Espagnolette straight hand handle – locking, 7 x 30mm spindle</td>
<td>TF1430NH7</td>
</tr>
<tr>
<td>Select Standard Espagnolette right hand handle – non-locking, 7 x 30mm spindle</td>
<td>TF1430RH7DM</td>
</tr>
<tr>
<td>Select Standard Espagnolette left hand handle – non-locking, 7 x 30mm spindle</td>
<td>TF1430LH7DM</td>
</tr>
<tr>
<td>Select Standard Espagnolette straight hand handle – non-locking, 7 x 30mm spindle</td>
<td>TF1430NH7DM</td>
</tr>
<tr>
<td>Select Standard Espagnolette right hand handle – fire escape, 7 x 30mm spindle</td>
<td>TF1430RH7FE</td>
</tr>
<tr>
<td>Select Standard Espagnolette left hand handle – fire escape, 7 x 30mm spindle</td>
<td>TF1430LH7FE</td>
</tr>
<tr>
<td>Select Standard Espagnolette straight hand handle – fire escape, 7 x 30mm spindle</td>
<td>TF1430NH7FE</td>
</tr>
<tr>
<td>Large Key</td>
<td>TF1206</td>
</tr>
</tbody>
</table>

Other spindle sizes available upon request. (Standard key supplied with each handle.)

### Manufactured from
Zinc Alloy to BS EN 1774 ZL3

### Recommended screws
M5 machine screws

### Standards
Please contact us for the latest test results.

### Finishes
Suffix product code with:
- -020 (white paint), -023 (brown paint), -825 (satalyte chrome),
- -818 (bright nickel), -102 (albrafin gold)

**NOTE:** Plated finishes are not suitable for use in coastal or highly corrosive environments

### More information
enquiries@titon.co.uk / 01206 713801

### Handle fixing detail

All dimensions in mm

---

Sales and Technical Support +44 (0) 1206 713801 www.titon.co.uk
Select Compact is a locking espagnolette handle for PVCu, aluminium or timber windows.

Select Compact features a compact design that has a very low 28mm stack height for ease of window transit and is available in a variety of plated or painted finishes.

### Features and Benefits

- Suitable for timber or PVCu windows
- Very low 28mm stack height for ease of window transit and ideal for use behind window blinds or shutters
- Unique compact design
- Locking, non-locking or fire escape versions
- Smooth handle action and streamlined design
- Non standard spindle sizes available on request
- Registered design
- Patented

**Suitable for:**

- PVCu
- Aluminium
- Timber

Right hand - brown paint

Large key

Standard key
# Details

## Window Hardware

### Product

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select Compact Espagnolette right hand handle – locking, 7 x 30mm spindle</td>
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<tr>
<td>Select Compact Espagnolette left hand handle – locking, 7 x 30mm spindle</td>
<td>TF1330LH7</td>
</tr>
<tr>
<td>Select Compact Espagnolette right hand handle – non locking, 7 x 30mm spindle</td>
<td>TF1330RH7DM</td>
</tr>
<tr>
<td>Select Compact Espagnolette left hand handle – non locking, 7 x 30mm spindle</td>
<td>TF1330LH7DM</td>
</tr>
<tr>
<td>Select Compact Espagnolette right hand handle – fire escape, 7 x 30mm spindle</td>
<td>TF1330RH7FE</td>
</tr>
<tr>
<td>Select Compact Espagnolette left hand handle – fire escape, 7 x 30mm spindle</td>
<td>TF1330LH7FE</td>
</tr>
<tr>
<td>Large Key</td>
<td>TF1206</td>
</tr>
</tbody>
</table>

Non-standard spindle sizes available upon request. (Standard key supplied with each handle.)

### Manufactured from

Zinc Alloy to BS EN 1774 ZL3

### Recommended screws

M5 machine screws

### Standards

Please contact us for the latest test results.

### Finishes

Suffix product code with:

-020 (white paint), -023 (brown paint), -825 (satalyte chrome),
-818 (bright nickel), -102 (albrafin gold)

**NOTE:** Plated finishes are not suitable for use in coastal or highly corrosive environments

### More information

enquiries@titon.co.uk / 01206 713801

### Handle fixing detail

All dimensions in mm
Select Cockspur handle

Suitable for:

TIMBER

Select Cockspur is a locking window handle for timber windows that is available with a suited casement stay.

Select Cockspur features a compact design that has a very low 28mm stack height for ease of window transit. It is available in a variety of plated or painted finishes and has the option of plastic or metal keeps.

Features and Benefits

- Specifically designed for timber windows
- Minimal projection for ease of window stacking
- Unique lead-in on handle nose
- Section related non-handed narrow wedge which acts as a sash aligner
- Handle incorporates sash lift
- Locking, non-locking or fire escape versions
- Metal keep option for added security
- Handle uses same lock and key as Select Casement Stay
Details

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select Cockspur right hand handle – locking</td>
<td>TF1200</td>
</tr>
<tr>
<td>Select Cockspur left hand handle – locking</td>
<td>TF1201</td>
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<tr>
<td>Select Cockspur right hand handle – non locking</td>
<td>TF1200DM</td>
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<tr>
<td>Select Cockspur left hand handle – non locking</td>
<td>TF1201DM</td>
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<tr>
<td>Select Cockspur right hand handle – fire escape</td>
<td>TF1200FE</td>
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<tr>
<td>Select Cockspur left hand handle – fire escape</td>
<td>TF1201FE</td>
</tr>
<tr>
<td>Metal flat keep</td>
<td>TF1264</td>
</tr>
<tr>
<td>Metal bevelled keep</td>
<td>TF1265</td>
</tr>
<tr>
<td>Plastic flat keep</td>
<td>TF1243</td>
</tr>
<tr>
<td>Plastic bevelled keep</td>
<td>TF1244</td>
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<tr>
<td>Large key</td>
<td>TF1208</td>
</tr>
</tbody>
</table>

(Standard key supplied with each handle)

Manufactured from
Zinc Alloy to BS EN 1774 ZL3,
Component Parts – POM, PA6

Recommended screws
4mm (No.8) countersunk head

Standards
Please contact us for the latest test results.

Finishes
Suffix product code with:
-020 (white paint), -023 (brown paint),
-825 (satalyte chrome), -818 (bright nickel),
-102 (albrazin gold)
Plastic keep:
-012 (black), -315 (brown), -392 (white)

NOTE: Plated finishes are not suitable for use in coastal or highly corrosive environments.

More information
enquiries@titon.co.uk / 01206 713801

Handle & metal keep fixing
All dimensions in mm

Handle & plastic keep fixing
All dimensions in mm

Diagram showing dimensions and options for handles and keeps.

Sales and Technical Support +44 (0) 1206 713801 www.titon.co.uk
Select Casement Stay is a locking casement stay for timber windows that is available with a suited cockspur handle.

Select Casement Stay features a compact design and comes with a variety of accessories including pegs and rests.

**Features and Benefits**

- Specifically designed for timber windows
- Minimal projection for ease of window stacking
- Non-handed
- Locking or non-locking versions
- Integral stay clip
- Stay uses same lock and key as Select Cockspur handle to aid end user
Details

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
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</thead>
<tbody>
<tr>
<td>Casement stay</td>
<td>TR61</td>
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<tr>
<td>Short Casement stay</td>
<td>TR61</td>
</tr>
<tr>
<td>Locking rest</td>
<td>TR202</td>
</tr>
<tr>
<td>Rest</td>
<td>TR53</td>
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<tr>
<td>Single peg</td>
<td>TR54</td>
</tr>
<tr>
<td>Large key</td>
<td>TF1206</td>
</tr>
</tbody>
</table>

(Standard key supplied with each handle)

Manufactured from
Zinc Alloy to BS EN 1774 ZL3,
Component Parts – POM, PA6

Recommended screws
4mm (No.8) countersunk head

Standards
Please contact us for the latest test results.

Finishes
Suffix product code with:
-020 (white paint), -023 (brown paint),
-825 (satalyte chrome), -818 (bright nickel),
-102 (albrafin gold)

NOTE: Plated finishes are not suitable for use in coastal or highly corrosive environments.

More information
enquiries@titon.co.uk / 01206 713801

Window Hardware

Casement Stay fixing details
Casement Stay A = 147 mm
Short Stay A = 95 mm

Sash

Frame

15 – May vary for flat/splay sections

All dimensions in mm
Derwent is a substantial locking window handle with options of cockspur, espagnolette or a combination of both.

Derwent is suitable for aluminium, PVCu or timber windows and is available in a variety of plated or painted finishes.

Features and Benefits

- Substantial handed grip
- Particularly suitable for use by the elderly
- Cockspur available in short or long nose versions
- Espagnolette available with or without nose
- Fire escape version available
- Supplied with key and screw covers
- Large key and key guide can be supplied to aid users with limited dexterity
- Non standard spindle sizes available on request
Details

**Window Hardware**

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Derwent Cockspur right hand locking handle – long nose</td>
<td>TF500LN</td>
</tr>
<tr>
<td>Derwent Cockspur left hand locking handle – long nose</td>
<td>TF501LN</td>
</tr>
<tr>
<td>Derwent Cockspur right hand locking handle – short nose</td>
<td>TF509SN</td>
</tr>
<tr>
<td>Derwent Cockspur left hand locking handle – short nose</td>
<td>TF509LN</td>
</tr>
<tr>
<td>Derwent Espagnolette right hand locking – no nose 7 x 30mm spindle</td>
<td>TF530R7</td>
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<tr>
<td>Derwent Espagnolette left hand locking – no nose 7 x 30mm spindle</td>
<td>TF530L7</td>
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<tr>
<td>Derwent Espagnolette right hand locking – with nose 7 x 30mm spindle</td>
<td>TF630R7</td>
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<tr>
<td>Derwent Espagnolette left hand locking – with nose 7 x 30mm spindle</td>
<td>TF630L7</td>
</tr>
<tr>
<td>(Suffix code with ‘F’ for Fire escape version)</td>
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<tr>
<td>Double lead-in keep</td>
<td>TF203</td>
</tr>
<tr>
<td>Flat night vent keep</td>
<td>TF205</td>
</tr>
<tr>
<td>Bevelled night vent keep</td>
<td>TF246</td>
</tr>
<tr>
<td>Derwent Espagnolette right hand locking – no nose 7 x 30mm spindle</td>
<td>TF530R7</td>
</tr>
<tr>
<td>Derwent Espagnolette left hand locking – no nose 7 x 30mm spindle</td>
<td>TF530L7</td>
</tr>
<tr>
<td>Derwent Espagnolette right hand locking – with nose 7 x 30mm spindle</td>
<td>TF630R7</td>
</tr>
<tr>
<td>Derwent Espagnolette left hand locking – with nose 7 x 30mm spindle</td>
<td>TF630L7</td>
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<tr>
<td>(Suffix code with ‘F’ for Fire escape version)</td>
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<tr>
<td>Large key</td>
<td>XF20201LK</td>
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<td>Key guide for right hand handle</td>
<td>TF247R</td>
</tr>
<tr>
<td>Key guide for left hand handle</td>
<td>TF247L</td>
</tr>
</tbody>
</table>

(Standard key supplied with each handle)

**Manufactured from**
Zinc Alloy to BS EN 1774 ZL3, Keep – POM

**Recommended screws**
M5 machine screws or 4mm (No.8) countersunk head

**Standards**
Please contact us for the latest test results.

**Finishes**
Suffix product code with:
-020 (white paint), -023 (brown paint),
-818 (bright nickel), -102 (abratin gold)
**NOTE:** Plated finishes are not suitable for use in coastal or highly corrosive environments.

**More information**
enquiries@titon.co.uk / 01206 713801

---

**Flat night vent keep**

- Cockspur (long nose)
  - Flat night vent keep
  - Cockspur (long nose)
  - Espagnolette (no nose)

- Espagnolette fixing detail
  - Cockspur and keep fixing detail

All dimensions in mm
Virage and Fireman’s Axe
Cockspur handle and resistant fittings

Suitable for:
PVCu ☑ ALUMINIUM ☑ TIMBER ☑

Virage

- Handed grip
- Key locking or re escape option
- Available in white, silver and black

Fireman’s axe

- A range of products is available for use. Due to the complexities and variations in each application, there is not a single solution. We are happy to discuss your requirements and provide customised solutions where applicable
- Other “Fireman’s axe” fittings are available
- Powder coated or anodised finishes available
- NOTE: The final choice of product is the responsibility of the specifier
Details - Virage

Available in straight versions with 35mm x 7mm spindles. Locking or fire escape versions are also available.

Manufactured from
Zinc Alloy to BS EN 1774 ZL3
Aluminium to BS EN 1490 LM20

Recommended screws
M5 machine screws

Standards
Please contact us for the latest test results.

Finishes
White, silver and black

More information
enquiries@titon.co.uk / 01206 713801
Suitable for:
- PVCu
- Aluminium
- Timber

Multipoint locking espagnolette for side hung or top hung applications with adjustable mushroom cams.

Designed for profiles with eurogroove, the Maco Inline Espagnolette is available in various non-croppable lengths with two backsets and three cam heights. The Maco Inline Espagnolette is compatible with all standard espag handles with 43mm fixing centres with a 7mm square spindle.

Features and Benefits
- Suitable for use on windows with a 16mm eurogroove
- Mushroom head cams aid security
- Keeps can be supplied without night-vent position
- Adjustable locking cams
- Can be fitted in either a standard or shallow eurogroove
- 7.7mm, 9mm or 10.5mm cam heights
- 20mm and 22mm backset versions available
- Available in sizes ranging from 100mm to 1200mm
- Keeps/striker plates are profile related, please phone for suitability
### Window Hardware

#### Maco Inline Espagnolette - 20mm backset version

<table>
<thead>
<tr>
<th>Length</th>
<th>7.7mm Mushroom Height</th>
<th>9mm Mushroom Height</th>
<th>10.5mm Mushroom Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>MA 58486</td>
<td>MA 58488</td>
<td>MA 204251</td>
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<tr>
<td>260</td>
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<td>MA 58501</td>
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<td>800</td>
<td>MA 58515</td>
<td>MA 58516</td>
<td>MA 58514</td>
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<td>MA 58522</td>
<td>MA 58523</td>
<td>MA 58521</td>
</tr>
<tr>
<td>1200</td>
<td>MA 58528</td>
<td>MA 58529</td>
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#### Maco Inline Espagnolette - 22mm backset version

<table>
<thead>
<tr>
<th>Length</th>
<th>7.7mm Mushroom Height</th>
<th>9mm Mushroom Height</th>
<th>10.5mm Mushroom Height</th>
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</thead>
<tbody>
<tr>
<td>100</td>
<td>MA 58490</td>
<td>MA 58492</td>
<td>MA 204253</td>
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<tr>
<td>260</td>
<td>MA 58496</td>
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<td>MA 58498</td>
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<tr>
<td>400</td>
<td>MA 58504</td>
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<td>MA 58503</td>
</tr>
<tr>
<td>600</td>
<td>MA 58511</td>
<td>MA 58512</td>
<td>MA 58510</td>
</tr>
<tr>
<td>800</td>
<td>MA 58518</td>
<td>MA 58519</td>
<td>MA 58517</td>
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<tr>
<td>1000</td>
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</tr>
<tr>
<td>1200</td>
<td>MA 58530</td>
<td>MA 58531</td>
<td>MA 204258</td>
</tr>
</tbody>
</table>

### Size capacity
100 to 1200mm espagnolette lengths

### Manufactured from
Mild steel

### Finish
Silver Chromate

### Recommended screws
Espagnolette/Shootbolt – 4mm/No.8 countersunk head
Handle fitting – M5 machine screw or suitable alternative

### Performance
(Full test details available on request.) Conforms to BS644, BS4873 and BS 7412: 2002 corrosion resistance, tested in accordance with BS EN 1670: 2007 Grade 5 Silver Chromate

### When ordering please specify:
1. Espagnolette type
2. Sash size (preferably espagnolette length)
3. Backset size
4. Cam size
5. Profile name and number

### More information
enquiries@titon.co.uk / 01206 713801

### Espagnolette dimensions

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### Lockcase dimensions

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### Espagnolette dimensions

<table>
<thead>
<tr>
<th>Length</th>
<th>BS</th>
<th>A - mm</th>
<th>B - mm</th>
<th>C - mm</th>
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</thead>
<tbody>
<tr>
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<td>20mm</td>
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<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
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<td>164</td>
</tr>
<tr>
<td>400</td>
<td>20mm</td>
<td>71</td>
<td>N/A</td>
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</tr>
<tr>
<td>600</td>
<td>20mm</td>
<td>71</td>
<td>N/A</td>
<td>498</td>
</tr>
<tr>
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<td>20mm</td>
<td>71</td>
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</tr>
<tr>
<td>1000</td>
<td>20mm</td>
<td>71</td>
<td>294</td>
<td>584</td>
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<td>1200</td>
<td>20mm</td>
<td>71</td>
<td>394</td>
<td>684</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Length</th>
<th>BS</th>
<th>A - mm</th>
<th>B - mm</th>
<th>C - mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
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<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>260</td>
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<td>58</td>
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<tr>
<td>400</td>
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<tr>
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</tr>
<tr>
<td>800</td>
<td>22mm</td>
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</tr>
<tr>
<td>1000</td>
<td>22mm</td>
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<td>584</td>
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<tr>
<td>1200</td>
<td>22mm</td>
<td>71</td>
<td>394</td>
<td>684</td>
</tr>
</tbody>
</table>
Maco Offset

Suitable for:
PVCu ✓ ALUMINIUM ✓ TIMBER ✓

Multipoint locking espagnolette for side hung or top hung applications with adjustable mushroom cams.

The gearbox is offset, suitable for profiles with or without a eurogroove, the Maco Offset Espagnolette is available in various non croppable lengths with two backsets and two cam heights.

The Maco Offset Espagnolette is compatible with all standard espagnolette handles with 43mm fixing centres with a 7mm square spindle.

Features and Benefits

- Suitable for use on windows with or without a 16mm eurogroove
- Mushroom head cams aid security
- Keeps can be supplied without night-vent position
- Adjustable locking cams
- Can be fitted in a eurogroove
- 7.7mm or 9mm cam heights
- 20mm and 25mm backset versions available
- Available in sizes ranging from 310mm to 1200mm
- Keeps/striker plates are profile related, please phone for suitability
Details

Window Hardware

Macouf Offset Espagnolette – 20mm backset version

<table>
<thead>
<tr>
<th>Length</th>
<th>7.7mm Mushroom Height</th>
<th>9mm Mushroom Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>310</td>
<td>MA 57151</td>
<td>MA 57157</td>
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<tr>
<td>400</td>
<td>MA 57152</td>
<td>MA 57158</td>
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<td>600</td>
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<td>MA 57159</td>
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<tr>
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<tr>
<td>1200</td>
<td>MA 57156</td>
<td>MA 57162</td>
</tr>
</tbody>
</table>

Macouf Offset Espagnolette – 25mm backset version

<table>
<thead>
<tr>
<th>Length</th>
<th>7.7mm Mushroom Height</th>
<th>9mm Mushroom Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>310</td>
<td>MA 57163</td>
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<tr>
<td>400</td>
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<td>1000</td>
<td>MA 57167</td>
<td>MA 57173</td>
</tr>
<tr>
<td>1200</td>
<td>MA 57168</td>
<td>MA 57174</td>
</tr>
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</table>

Size capacity
310 to 1200mm espagnolette lengths

Manufactured from
Mild steel

Finish
Silver Chromate

Recommended screws
Espagnolette/Shootbolt – 4mm/No.8 countersunk head
Handle fitting – M5 machine screw or suitable alternative

Performance
Full test details available on request.) Conforms to BS644, BS4873 and BS 7412: 2002 corrosion resistance, tested in accordance with BS EN 1670: 2007 Grade 5 Silver Chromate

When ordering please specify:

More information
enquiries@titon.co.uk / 01206 713801

Espagnolette dimensions

<table>
<thead>
<tr>
<th>Length</th>
<th>BS</th>
<th>A - mm</th>
<th>B - mm</th>
<th>C - mm</th>
<th>D - mm</th>
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</thead>
<tbody>
<tr>
<td>310</td>
<td>20mm</td>
<td>61</td>
<td>N/A</td>
<td>230</td>
<td>291</td>
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<tr>
<td>400</td>
<td>20mm</td>
<td>61</td>
<td>N/A</td>
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<tr>
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<td>20mm</td>
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<td>20mm</td>
<td>61</td>
<td>N/A</td>
<td>720</td>
<td>781</td>
</tr>
<tr>
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<td>20mm</td>
<td>61</td>
<td>346</td>
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<td>981</td>
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<tr>
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<td>20mm</td>
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<td>446</td>
<td>1120</td>
<td>1181</td>
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<table>
<thead>
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<th>Length</th>
<th>BS</th>
<th>A - mm</th>
<th>B - mm</th>
<th>C - mm</th>
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<td>61</td>
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<td>320</td>
<td>381</td>
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<tr>
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<td>25mm</td>
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<td>N/A</td>
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<td>1000</td>
<td>25mm</td>
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<td>920</td>
<td>981</td>
</tr>
<tr>
<td>1200</td>
<td>25mm</td>
<td>61</td>
<td>446</td>
<td>1120</td>
<td>1181</td>
</tr>
</tbody>
</table>
Multipoint locking espagnolette for side hung or top hung applications with adjustable mushroom cams, designed for profiles with eurogroove.

Available in a range of lengths with two backsets and three cam heights.

The Maco R.A.I.L. Espagnolette is compatible with all standard espag handles with 43mm fixing centres with a 7mm square spindle and is capable of achieving PAS 24.

Features and Benefits

- Reverse action locking system which clamps to both sides of the striker plate
- Designed for PAS 24 security windows
- Fits into eurogroove
- R.A.I.L. Reach version available for low handle height situations
- 7.7, 9 or 10.5mm cam heights
- 20 and 22mm backset versions available
- Available in sizes ranging from 200mm to 1200mm
- Keeps/striker plates are profile related, please phone for suitability

Suitable for:

- PVCu
- ALUMINIUM
- TIMBER

Maco R.A.I.L. and R.A.I.L. Reach

Security espagnolette

Suitable for:

- PVCu
- ALUMINIUM
- TIMBER

Maco R.A.I.L. and R.A.I.L. Reach

Security espagnolette
Details

Window Hardware

Maco R.A.I.L. Espagnolette – 20mm backset version

<table>
<thead>
<tr>
<th>Length</th>
<th>7.7mm Mushroom Height</th>
<th>9mm Mushroom Height</th>
<th>10.5mm Mushroom Height</th>
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</thead>
<tbody>
<tr>
<td>200</td>
<td>MA206893</td>
<td>MA208705</td>
<td>MA208691</td>
</tr>
<tr>
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<td>MA206896</td>
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<td>MA208688</td>
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<td>MA206897</td>
<td>MA208709</td>
<td>MA208687</td>
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<td>1200</td>
<td>MA206898</td>
<td>MA208710</td>
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Maco R.A.I.L. Espagnolette – 22mm backset version

<table>
<thead>
<tr>
<th>Length</th>
<th>7.7mm Mushroom Height</th>
<th>9mm Mushroom Height</th>
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<tr>
<td>200</td>
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<td>MA208711</td>
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<td>MA208713</td>
<td>MA208683</td>
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<td>800</td>
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<td>1200</td>
<td>MA202704</td>
<td>MA208716</td>
<td>MA208679</td>
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Maco R.A.I.L. Reach Espagnolette – 20mm backset version

<table>
<thead>
<tr>
<th>Length</th>
<th>7.7mm Mushroom Height</th>
<th>9mm Mushroom Height</th>
<th>10.5mm Mushroom Height</th>
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</thead>
<tbody>
<tr>
<td>600</td>
<td>MA208627</td>
<td>MA208637</td>
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<tr>
<td>800</td>
<td>MA208628</td>
<td>MA208638</td>
<td>-</td>
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<tr>
<td>1000</td>
<td>MA208629</td>
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<td>-</td>
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<tr>
<td>1200</td>
<td>MA206630</td>
<td>MA206840</td>
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Maco R.A.I.L. Reach Espagnolette – 22mm backset version

<table>
<thead>
<tr>
<th>Length</th>
<th>7.7mm Mushroom Height</th>
<th>9mm Mushroom Height</th>
<th>10.5mm Mushroom Height</th>
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</thead>
<tbody>
<tr>
<td>600</td>
<td>MA208631</td>
<td>MA208642</td>
<td>-</td>
</tr>
<tr>
<td>800</td>
<td>MA206832</td>
<td>MA206844</td>
<td>-</td>
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<tr>
<td>1000</td>
<td>MA208635</td>
<td>MA208645</td>
<td>-</td>
</tr>
<tr>
<td>1200</td>
<td>MA208636</td>
<td>MA208646</td>
<td>-</td>
</tr>
</tbody>
</table>

Size capacity

200 to 1200mm espagnolette lengths (Standard)
600 to 1200mm espagnolette lengths (Reach)

Manufactured from

Mild steel

Finish

Silver Chromate
Tricoat (high corrosion resistance) also available

Recommended screws

Espagnolette/Shootbolt – 4mm/No.8 countersunk head
Handle fitting – M5 machine screw or suitable alternative
For Tricoat finish, ensure Tricoat screws are used

Performance

(Full test details available on request.) Conforms to BS644, BS4873 and BS 7412: 2002 corrosion resistance, tested in accordance with BS EN 1670: 2007 Grade 5 Silver Chromate

When ordering please specify:

1. Espagnolette type
2. Sash size (preferably espagnolette length)
3. Backset size
4. Cam size
5. Profile name and number

More information

enquiries@titon.co.uk / 01206 713801

Lockcase dimensions

R.A.I.L. Espagnolette dimensions

Sales and Technical Support +44 (0) 1206 713801 www.titon.co.uk
Maco M-SPAG
Shootbolt espagnollette

Suitable for:
PVCu ✓ ALUMINIUM ✓ TIMBER ✓

Telescopic shootbolt espagnollette allows for the fabrication of a wide range of easy to operate window styles from a single high security locking system.

Four telescopic sizes and one croppable size, covering an application range of 320mm up to 1500mm, with two backsets and two cam heights. The module design allows extension pieces to be fitted to increase the sash rebate size, to position the handle off-centre, to increase the number of striker plates and to be used on French casement windows.

Features and Benefits

→ Suitable for sash rebate sizes from 320mm up to 1500mm
→ Fitting extension pieces will enable larger sash rebate sizes
→ 20mm or 22mm backset versions available
→ 7.7mm or 9mm mushroom cam heights
→ Low handle height option for limited access situations
→ Can be used on French casement windows by using French casement night vent strikes and slave espag
→ Centre locks can be fitted to enable the construction of tall top hung windows
→ Suitable for use on windows with a minimum 5mm eurogroove
→ Capable of achieving PAS 24
→ Endurance tested to Grade 5, 25,000 cycles EN 13126 Part 4
→ Keeps/striker plates are profile related, please phone for suitability

Profile detail

Handle
Fixing detail

To suit espagnollette (nom. 12mm)

Routing detail

BS20 = 27.2
BS22 = 29.2

BS20 = 27.2
BS22 = 29.2

Routing length = 120 mm
Routing width = 12 mm

Sales and Technical Support +44 (0) 1206 713801 www.titon.co.uk
## Window Hardware

### Details

<table>
<thead>
<tr>
<th>Size</th>
<th>Backset (mm)</th>
<th>7.7mm Mushroom Cams</th>
<th>Mushroom Strikes per Espag</th>
<th>9mm Mushroom Cams</th>
<th>Sash Rebate Size min (mm)</th>
<th>Sash Rebate Size max (mm)</th>
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</thead>
<tbody>
<tr>
<td>GR 0</td>
<td>20</td>
<td>MA227990</td>
<td>3</td>
<td>MA228000</td>
<td>501</td>
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<tr>
<td>GR 1</td>
<td>20</td>
<td>MA227991</td>
<td>3</td>
<td>MA228001</td>
<td>601</td>
<td>700</td>
</tr>
<tr>
<td>GR 2</td>
<td>20</td>
<td>MA227992</td>
<td>3</td>
<td>MA228002</td>
<td>701</td>
<td>900</td>
</tr>
<tr>
<td>GR 3</td>
<td>20</td>
<td>MA227993</td>
<td>3</td>
<td>MA228003</td>
<td>901</td>
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</tr>
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<td>MA227994</td>
<td>3</td>
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<td>1201</td>
<td>1500</td>
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<tr>
<td>GR 0</td>
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<td>MA227995</td>
<td>3</td>
<td>MA228005</td>
<td>501</td>
<td>600</td>
</tr>
<tr>
<td>GR 1</td>
<td>22</td>
<td>MA227996</td>
<td>3</td>
<td>MA228006</td>
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<td>700</td>
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<tr>
<td>GR 2</td>
<td>22</td>
<td>MA227997</td>
<td>3</td>
<td>MA228007</td>
<td>701</td>
<td>900</td>
</tr>
<tr>
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<td>3</td>
<td>MA228008</td>
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<td>1200</td>
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<td>GR 4</td>
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<td>MA227999</td>
<td>3</td>
<td>MA228009</td>
<td>1201</td>
<td>1500</td>
</tr>
</tbody>
</table>

Striker plates – Dependent on profile, please phone for availability

M-spag is also available in a croppable version to cover sashes 320-1400mm

### Size capacity

320 to 1500 espagnolette lengths

### Manufactured from

Mild steel

### Finish

Silver Chromate

### Recommended screws

Espagnolette/Shootbolt – 4mm/No.8 countersunk head
Handle fitting – M5 machine screw or suitable alternative

### Performance

(Full test details available on request) Conforms to BS644, BS4873 and BS 7412: 2002 corrosion resistance, tested in accordance with BS EN 1670: 2007 Grade 5 Silver Chromate.

### When ordering please specify:

1. Espagnolette type
2. Sash size (preferably espagnolette length)
3. Backset size
4. Cam size
5. Profile name and number

### More information

enquiries@titon.co.uk / 01206 713801
Suitable for:
PVCu ✓ ALUMINIUM ✓

Multipoint locking shootbolt espagnolette for side hung or top hung applications with adjustable shootbolts and mushroom cams, designed for profiles with eurogroove.

The Maco Mk1 Shootbolt Espagnolette has a separate centre lock box with various different types of croppable extensions with two backsets and three cam heights. The Maco Mk1 Shootbolt Espagnolette is compatible with all standard espag handles with 43mm fixing centres with a 7mm square spindle and is capable of achieving PAS 24.

Features and Benefits

→ Designed to give greater security in line with PAS 24 and Secured By Design
→ Suitable for use on windows with a 16mm eurogroove
→ Integral shootbolts with selectable 10mm or 13mm bolt throw
→ Interlocking keeps for improved strength
→ Suitable for sash rebate sizes from 320mm to 1400mm
→ Fitting extension pieces will enable larger sash rebate sizes
→ 20 or 22mm backset versions available
→ 7.7mm, 9mm or 10.5mm mushroom cam heights
→ Can be used to offer a low handle height on sash for limited access situations
→ Blanking plug available to remove night-vent position on keep
→ Adjustable compression via mushroom headed cams
→ Keeps / striker plates are profile related, please phone for suitability
→ French casement option available

NOTE: Typical PAS24 configuration shown.

Sales and Technical Support +44 (0) 1206 713801  www.titon.co.uk
Size capacity
320-1400mm sash rebate size
250mm extension available
400 to 600mm extension available

Manufactured from
Mild steel

Finish
Silver Chromate

Recommended screws
Espagnolette/Shootbolt – 4mm/No.8 countersunk head
Handle fitting – M5 machine screw or suitable alternative

Performance
(Full test details available on request.) Conforms to BS644, BS4873 and BS 7412: 2002 corrosion resistance, tested in accordance with BS EN 1670: 2007 Grade 5 Silver Chromate.

When ordering please specify:

More information
enquiries@titon.co.uk / 01206 713801

End detail
End piece for PVCu profiles
Maco Mk2 Shootbolt
Shootbolt espagnolette

Suitable for:
- PVCu
- Aluminium
- Timber

Multipoint locking shootbolt espagnolette for side hung or top hung applications with adjustable shootbolts and mushroom cams, designed for profiles with eurogroove.

The Maco Shootbolt Espagnolette has a separate centre lock box with locking cams and various different types of croppable and non croppable extensions with two backsets and three cam heights.

The Maco Shootbolt Espagnolette is compatible with all standard espag handles with 43mm fixing centres with a 7mm square spindle and is capable of achieving PAS 24. Predominately for use on PVCu profiles.

Features and Benefits
- Designed to give greater security in line with PAS 24 and Secured By Design
- Suitable for use on windows with a 16mm eurogroove
- Integral shootbolts with selectable 10mm or 13mm bolt throw
- Interlocking keeps for improved strength
- Suitable for sash rebate sizes from 500mm to 1400mm (non croppable and 382mm to 1400mm (croppable)
- 20mm or 22mm backset versions available
- 7.7mm or 9 mushroom cam heights
- Croppable version can be used to offer a low handle height on sash for limited access situations
- Blanking plug available to remove night-vent position on keep
- Features centre locking point
- Adjustable compression via mushroom headed cams
- Keeps / striker plates are profile related, please phone for suitability

Profile detail

Lockcase routing detail
**Details**

**Maco Mk2 Shootbolt Espagnolette – rapid fix non croppable lock box**

<table>
<thead>
<tr>
<th>Lockbox</th>
<th>Mushrooms</th>
<th>7.7mm Mushroom Height</th>
<th>9mm Mushroom Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>20mm Backset</td>
<td>2</td>
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<td>MA11035</td>
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<tr>
<td>22mm Backset</td>
<td>2</td>
<td>MA11034</td>
<td>MA11037</td>
</tr>
</tbody>
</table>

**Other croppable codes on request – Maco Mk2 Shootbolt Espagnolette – rapid fix non croppable extension pieces**

<table>
<thead>
<tr>
<th>Extension pieces to suit sash rebate size</th>
<th>Size</th>
<th>Mushrooms Per Extension</th>
<th>7.7mm Mushroom Height</th>
<th>9mm Mushroom Height</th>
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</thead>
<tbody>
<tr>
<td>500-600</td>
<td>Gr.1</td>
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<td>MA58140</td>
<td>MA58140</td>
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<tr>
<td>601-700</td>
<td>Gr.2</td>
<td>1</td>
<td>MA58141</td>
<td>MA58149</td>
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<tr>
<td>701-800</td>
<td>Gr.3</td>
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<td>MA58144</td>
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<td>1301-1400</td>
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<td>MA206508</td>
<td>MA206509</td>
</tr>
</tbody>
</table>

**Size capacity**

- 500 - 1400mm sash rebate size
- 250mm extension available
- 400 to 600mm extension available

**Manufactured from**

Mild steel

**Finish**

Silver Chromate

**Recommended screws**

Espagnolette/Shootbolt – 4mm/No.8 countersunk head
Handle fitting – M5 machine screw or suitable alternative

**Performance**

(Full test details available on request.) Conforms to BS644, BS4873 and BS 7412: 2002 corrosion resistance, tested in accordance with BS EN 1670: 2007 Grade 5 Silver Chromate.

**When ordering please specify:**

1. Espagnolette type
2. Sash rebate size
3. Backset size
4. Cam size
5. Profile name and number

**More information**

enquiries@titon.co.uk / 01206 713801
The Venture friction hinge range is suitable for domestic applications on side or top hung windows. Venture has been developed by Titon’s experienced window fittings team and is tested to the latest hardware standards. All Venture hinge dimensions and opening geometries have been calculated and designed to fit most window profiles. There are a number of versions in the range including top hung, side hung, 13/14mm -16/17mm stack height and Egress Easy Clean.

The addition of the Tenure Hinge Security Guard means that the Venture hinge is capable of meeting the requirements of PAS 24 as part of a compliant window system.

Suitable for:
PVCu ☑️ ALUMINIUM ☑️ TIMBER ☑️

Features and Benefits

- Suitable for domestic and light commercial applications
- Adjustable and controlled friction for smooth operation
- Extended enclosed end cap for enhanced weather sealing
- 13/14mm and 16/17mm stack heights
- Designed to meet the requirements of PAS 24 as part of a compliant window system
- Austenitic stainless steel version available for high corrosion resistance - please contact us for the latest test results
- Egress Easy-Clean version
- Additional arm available
- Fully dimensioned technical sheet available for each hinge
- Free profile/selection suitability advice available from the Titon Technical Department

Venture Friction hinge

Additional arm

Tenure Hinge Security Guard for use with Venture friction hinges

Data sheets for each hinge size are available on request
## Details

### Window Hardware

#### Venture Side Hung

<table>
<thead>
<tr>
<th>13/14mm Stack</th>
<th>16/17mm Stack Height</th>
<th>Hinge Size (°)</th>
<th>Hinge Size (mm)</th>
<th>Max Sash Weight (kg)</th>
<th>Min Sash Width (mm)</th>
<th>Max Sash Width (mm)</th>
<th>Max Sash Height (mm)</th>
<th>Hinge Projection (mm)</th>
<th>Opening Angle (+/-2.5°)</th>
<th>Box Quantity (pairs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TN5001</td>
<td>TN5024</td>
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<td>18</td>
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<td>85</td>
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<tr>
<td>TN5002</td>
<td>TN5025</td>
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<td>311</td>
<td>24</td>
<td>311</td>
<td>600</td>
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<td>86</td>
<td>25</td>
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<td>TN5003</td>
<td>TN5026</td>
<td>16</td>
<td>414</td>
<td>26</td>
<td>414</td>
<td>700</td>
<td>1800</td>
<td>241</td>
<td>83</td>
<td>25</td>
</tr>
</tbody>
</table>

#### Venture Top Hung

<table>
<thead>
<tr>
<th>13/14mm Stack</th>
<th>16/17mm Stack Height</th>
<th>Hinge Size (°)</th>
<th>Hinge Size (mm)</th>
<th>Max Sash Weight (kg)</th>
<th>Min Sash Height (mm)</th>
<th>Max Sash Height (mm)</th>
<th>Initial Hinge Projection (mm)</th>
<th>Easy Clean Projection (mm)</th>
<th>Opening Angle (+/-2.5°)</th>
<th>Box Quantity (pairs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TN5004</td>
<td>TN5018</td>
<td>8</td>
<td>210</td>
<td>10</td>
<td>210</td>
<td>300</td>
<td>1200</td>
<td>82</td>
<td>64</td>
<td>50</td>
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<tr>
<td>TN5005</td>
<td>TN5019</td>
<td>10</td>
<td>260</td>
<td>16</td>
<td>260</td>
<td>450</td>
<td>1400</td>
<td>121</td>
<td>57</td>
<td>50</td>
</tr>
<tr>
<td>TN5006</td>
<td>TN5020</td>
<td>12</td>
<td>311</td>
<td>21</td>
<td>311</td>
<td>600</td>
<td>1600</td>
<td>172</td>
<td>64</td>
<td>25</td>
</tr>
<tr>
<td>TN5007</td>
<td>TN5021</td>
<td>16</td>
<td>414</td>
<td>22</td>
<td>414</td>
<td>750</td>
<td>1800</td>
<td>162</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td>TN5008</td>
<td>TN5022</td>
<td>20</td>
<td>514</td>
<td>24</td>
<td>514</td>
<td>900</td>
<td>2000</td>
<td>144</td>
<td>42</td>
<td>25</td>
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<tr>
<td>TN5009*</td>
<td>TN5023*</td>
<td>24</td>
<td>616</td>
<td>50</td>
<td>616</td>
<td>1500</td>
<td>2000</td>
<td>144</td>
<td>38</td>
<td>25</td>
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</tbody>
</table>

#### Venture Egress Easy-Clean Side Hung**

<table>
<thead>
<tr>
<th>13/14mm Stack</th>
<th>16/17mm Stack Height</th>
<th>Hinge Size (°)</th>
<th>Hinge Size (mm)</th>
<th>Max Sash Weight (kg)</th>
<th>Min Sash Height (mm)</th>
<th>Max Sash Height (mm)</th>
<th>Initial Hinge Projection (mm)</th>
<th>Easy Clean Projection (mm)</th>
<th>Opening Angle (+/-2.5°)</th>
<th>Box Quantity (pairs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TN5022</td>
<td>TN5031</td>
<td>12</td>
<td>321</td>
<td>18</td>
<td>321</td>
<td>600</td>
<td>1400</td>
<td>42</td>
<td>121</td>
<td>80</td>
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<tr>
<td>TN5012</td>
<td>TN5029</td>
<td>16</td>
<td>443</td>
<td>21</td>
<td>443</td>
<td>650</td>
<td>1600</td>
<td>48</td>
<td>240</td>
<td>85</td>
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</table>

#### Bottom Hinge Packer 6-7 degrees

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TY212</td>
<td>305</td>
</tr>
<tr>
<td>TY216</td>
<td>408</td>
</tr>
</tbody>
</table>

#### Venture additional arm (used to provide additional friction and limit window opening)

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Arm Length (°)</th>
<th>Arm Length (mm)</th>
<th>Box Quantity (Pairs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TN5030</td>
<td></td>
<td>10 nominal</td>
<td>270</td>
</tr>
</tbody>
</table>

#### Tenure Hinge Guard (4 of required for window)

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Stack Height (mm)</th>
<th>Box Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>TN5034</td>
<td>13/14 Stack Nom</td>
<td>100</td>
</tr>
<tr>
<td>TN5035</td>
<td>16/17 Stack Nom</td>
<td>100</td>
</tr>
</tbody>
</table>

All operating parameters are indicative and will vary according to window profile design and operating characteristics. Larger hinges may require an additional arm to achieve maximum performance.

Range developed and tested to enable windows to pass BS EN 14351-1

* Window restricted to 15° to pass clause 5.2.2 “Racking Class 3” when tested in accordance with BS 6375-2:2009

** Compliance to Approved Document ‘B’ is the window manufacturer’s responsibility

### Manufactured from

Ferritic stainless steel

### Performance

Tested to 25,000 cycles (hinge only)

### More information

enquiries@titon.co.uk / 01206 713801

---

#### Venture with bottom hinge packer section details

![Venture with bottom hinge packer section details](image1)

#### Venture section details

![Venture section details](image2)
The Adventure friction hinge is suitable for many commercial or heavy sash domestic applications on side or top hung windows.

Adventure has been developed by Titon’s experienced window fittings team and is tested to the latest hardware standards. All Adventure hinge dimensions and opening geometries have been calculated and designed to provide solutions on most window profiles.

The range is manufactured from high grade SS304 austenitic stainless steel, including the enclosed metal end cap, fitted for added strength compared to a standard hinge.

Suitable for:
- PVCu
- Aluminium
- Timber

Features and Benefits
- Suitable for larger, heavier sashes or commercial applications
- Adjustable and controlled friction for smooth operation
- Enclosed metal end cap for added strength
- 16mm stack height
- Made from austenitic stainless steel for high corrosion resistance
- Dimensioned drawings (including opening geometries) available on request
- Additional arm available
- Fully dimensioned technical sheet available for each hinge
- Free profile/section suitability advice available from the Titon Technical Department

Additional arm

Tenure Hinge Security Guard for use with Adventure Heavy Duty friction hinges

Data sheets for each hinge size are available on request
### Adventure Side Hung

<table>
<thead>
<tr>
<th>Code</th>
<th>Hinge Size (°)</th>
<th>Hinge Size (mm)</th>
<th>Max Sash Weight (kg)</th>
<th>Opening Angle (+/-2.5°)</th>
<th>Min Sash Width (mm)</th>
<th>Max Sash Width (mm)</th>
<th>Max Sash Height (mm)</th>
<th>Box Quantity (pairs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TN5013A</td>
<td>10</td>
<td>271</td>
<td>34.5</td>
<td>83/50</td>
<td>271</td>
<td>660</td>
<td>1800</td>
<td>25</td>
</tr>
<tr>
<td>TN5014A</td>
<td>16</td>
<td>414</td>
<td>32/42/42</td>
<td>90/50/30</td>
<td>414</td>
<td>762</td>
<td>2000</td>
<td>25</td>
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</table>

### Adventure Top Hung

<table>
<thead>
<tr>
<th>Code</th>
<th>Hinge Size (°)</th>
<th>Hinge Size (mm)</th>
<th>Max Sash Weight (kg)</th>
<th>Opening Angle (+/-2.5°)</th>
<th>Min Sash Height (mm)</th>
<th>Max Sash Height (mm)</th>
<th>Max Sash Width (mm)</th>
<th>Box Quantity (pairs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TN5013A</td>
<td>10</td>
<td>271</td>
<td>50</td>
<td>50</td>
<td>271</td>
<td>650</td>
<td>2000</td>
<td>25</td>
</tr>
<tr>
<td>TN5014A</td>
<td>16</td>
<td>414</td>
<td>55/100</td>
<td>50/30</td>
<td>414</td>
<td>800</td>
<td>2000</td>
<td>25</td>
</tr>
<tr>
<td>TN5015A</td>
<td>22</td>
<td>570</td>
<td>80/100</td>
<td>45/20</td>
<td>570</td>
<td>1500</td>
<td>2000</td>
<td>10</td>
</tr>
<tr>
<td>TN5016A</td>
<td>26</td>
<td>690</td>
<td>120/150</td>
<td>20/10</td>
<td>690</td>
<td>2500</td>
<td>2000</td>
<td>10</td>
</tr>
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</table>

### Additional Arm (used to provide additional friction and limit window opening)

<table>
<thead>
<tr>
<th>Code</th>
<th>Arm Length (°)</th>
<th>Arm Length (°)</th>
<th>Box Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>TN5031A</td>
<td>10 nominal</td>
<td>250</td>
<td>25</td>
</tr>
</tbody>
</table>

### Tenure Hinge Guard (4 off required for window)

<table>
<thead>
<tr>
<th>Code</th>
<th>Stack Height (mm)</th>
<th>Box Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>TN5035 (1 Hinge Guard)</td>
<td>16 Stack</td>
<td>100</td>
</tr>
</tbody>
</table>

All operating parameters are indicative and will vary according to window profile design and operating characteristics. Larger hinges may require an additional arm to achieve maximum performance.

Range developed and tested to enable windows to pass BS EN 14351-1

*Restricted to 15° to pass clause 5.5 “Resistance to repeated opening and closing”

Class 2 when tested in accordance with BS 6375-2:2009

1  Sash weight of 55kg to limit of 100kg, opening must be restricted to 30° using integral limit stop
2  Sash weight of 80kg to limit of 100kg, opening must be restricted to 20° using integral limit stop
3  Sash weight of 120kg to limit of 150kg, opening must be restricted to 10° using 2 x additional stay TN5031 or similar

**NOTE:** The above are general minimum requirements, further limitations may be found necessary following customer trials/tests on their specific application.

Integral stops are not suitable for use as a safety restrictor.

### Manufactured from

Austenitic stainless steel (hinge only)

### Performance

Please contact us for the latest test results.

### More information

enquiries@titon.co.uk / 01206 713801

---

### Adventure section details

As small as possible for optimum performance
Suitable for:

PVCu  ALUMINIUM  TIMBER

The Securistyle Defender friction hinge is suitable for domestic applications on side or top hung windows.

All versions of the Defender friction hinge are available in both ferritic and austenitic stainless steel in a variety of sizes and stack heights. Restricted, non restricted, easy clean and easy clean egress versions are available.

Features and Benefits

→ Defender hinges suitable for domestic applications
→ Adjustable and controlled friction for smooth operation
→ Efficient locating system by means of a patented asymmetrical end cap
→ Extended enclosed end cap for enhanced weather sealing
→ 13mm stack height as standard
→ Austenitic stainless steel versions available for high corrosion resistance
→ Can be supplied with built-in restrictor
→ Easy clean and fire egress versions available
→ Vector Excluder Security device available to improve security
→ Defender Plus version offers increased carrying capacity

Defender section details

Defender with bottom hinge packer section details

Defender egress position  Defender easy clean position

Defender restricted

Standard projecting
## Window Hardware

**Defender Side Hung Hinges**

<table>
<thead>
<tr>
<th>Description</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottom Hinge Packer 6-7 degrees</td>
<td>TY212</td>
</tr>
<tr>
<td>Bottom Hinge Packer 8-10 degrees</td>
<td>TY216</td>
</tr>
<tr>
<td>Vector Excluder Security Device (13mm stack height)</td>
<td>ASD1</td>
</tr>
</tbody>
</table>

**Defender Side Hung Hinges**

<table>
<thead>
<tr>
<th>Manufacturer from</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defender Ferritic – 1.4016 grade stainless steel, components – nylon and acetal</td>
</tr>
<tr>
<td>Defender Austenitic – 1.4301 high grade stainless steel, components – nylon and acetal</td>
</tr>
</tbody>
</table>

**Recommended screws**

Stainless steel No.8 or equivalent

<table>
<thead>
<tr>
<th>Description</th>
<th>Hinge Size (mm)</th>
<th>Max Sash Weight (kg)</th>
<th>Max Sash Width (mm)</th>
<th>Min Sash Width (mm)</th>
<th>Hinge Projection (mm)</th>
<th>Opening Angle (+/- 2.5°)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED8</td>
<td>209</td>
<td>18</td>
<td>400</td>
<td>200</td>
<td>119</td>
<td>65°</td>
</tr>
<tr>
<td>EDS12</td>
<td>310</td>
<td>22</td>
<td>600</td>
<td>300</td>
<td>172</td>
<td>60°</td>
</tr>
<tr>
<td>EDS16</td>
<td>412</td>
<td>24</td>
<td>700</td>
<td>400</td>
<td>170</td>
<td>60°</td>
</tr>
<tr>
<td>EDSH16A (Defender Plus)*</td>
<td>412</td>
<td>40</td>
<td>1000</td>
<td>400</td>
<td>-</td>
<td>60°</td>
</tr>
</tbody>
</table>

*Item only available in Austenitic 13½, 16½ and 17½ stack heights.

**Defender Top Hung Hinges**

<table>
<thead>
<tr>
<th>Description</th>
<th>Hinge Size (mm)</th>
<th>Max Sash Weight (kg)</th>
<th>Max Sash Height (mm)</th>
<th>Min Sash Height (mm)</th>
<th>Hinge Projection (mm)</th>
<th>Opening Angle (+/- 2.5°)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDT6</td>
<td>159</td>
<td>10</td>
<td>300</td>
<td>150</td>
<td>63</td>
<td>50°</td>
</tr>
<tr>
<td>ED8</td>
<td>209</td>
<td>12</td>
<td>350</td>
<td>200</td>
<td>119</td>
<td>65°</td>
</tr>
<tr>
<td>EDT10</td>
<td>259</td>
<td>16</td>
<td>400</td>
<td>275</td>
<td>131</td>
<td>80°</td>
</tr>
<tr>
<td>EDT12</td>
<td>310</td>
<td>20</td>
<td>550</td>
<td>350</td>
<td>164</td>
<td>80°</td>
</tr>
<tr>
<td>EDT16</td>
<td>412</td>
<td>21</td>
<td>780</td>
<td>500</td>
<td>229</td>
<td>80°</td>
</tr>
<tr>
<td>EDT20</td>
<td>513</td>
<td>26</td>
<td>1100</td>
<td>700</td>
<td>215</td>
<td>50°</td>
</tr>
<tr>
<td>EDT24</td>
<td>615</td>
<td>40</td>
<td>1300</td>
<td>850</td>
<td>156</td>
<td>37.5°</td>
</tr>
<tr>
<td>EDT24A (Defender Plus)</td>
<td>615</td>
<td>50</td>
<td>1500</td>
<td>850</td>
<td>156</td>
<td>32°</td>
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**Defender Egress Easy Clean**

<table>
<thead>
<tr>
<th>Description</th>
<th>Hinge Size (mm)</th>
<th>Max Sash Weight (kg)</th>
<th>Max Sash Width (mm)</th>
<th>Min Sash Width (mm)</th>
<th>Initial Hinge Projection (mm)</th>
<th>Easy Clean Projection (mm)</th>
<th>Opening Angle (+/- 2.5°)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSE12</td>
<td>310</td>
<td>22</td>
<td>600</td>
<td>300</td>
<td>54</td>
<td>163</td>
<td>80°</td>
</tr>
<tr>
<td>EDSE16</td>
<td>413</td>
<td>24</td>
<td>700</td>
<td>400</td>
<td>57</td>
<td>268</td>
<td>90°</td>
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</table>

**Defender Side Hung Restricted**

<table>
<thead>
<tr>
<th>Description</th>
<th>Hinge Size (mm)</th>
<th>Max Sash Weight (kg)</th>
<th>Max Sash Width (mm)</th>
<th>Min Sash Width (mm)</th>
<th>Restricted Opening Angle</th>
<th>Opening Angle (+/- 2.5°)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDS12R Unrestricted</td>
<td>310</td>
<td>22</td>
<td>600</td>
<td>300</td>
<td>13°</td>
<td>58°</td>
</tr>
<tr>
<td>EDSR12L Restricted</td>
<td>310</td>
<td>22</td>
<td>600</td>
<td>300</td>
<td>13°</td>
<td>58°</td>
</tr>
<tr>
<td>EDS12L Unrestricted</td>
<td>310</td>
<td>22</td>
<td>600</td>
<td>300</td>
<td>13°</td>
<td>58°</td>
</tr>
<tr>
<td>EDSR12R Restricted</td>
<td>310</td>
<td>22</td>
<td>600</td>
<td>300</td>
<td>13°</td>
<td>58°</td>
</tr>
<tr>
<td>EDS16R Unrestricted</td>
<td>412</td>
<td>24</td>
<td>700</td>
<td>400</td>
<td>11°</td>
<td>58°</td>
</tr>
<tr>
<td>EDSR16L Restricted</td>
<td>412</td>
<td>24</td>
<td>700</td>
<td>400</td>
<td>11°</td>
<td>58°</td>
</tr>
</tbody>
</table>

**Defender Top Hung Restricted**

<table>
<thead>
<tr>
<th>Description</th>
<th>Hinge Size (mm)</th>
<th>Max Sash Weight (kg)</th>
<th>Max Sash Height (mm)</th>
<th>Min Sash Height (mm)</th>
<th>Restricted Opening Angle</th>
<th>Opening Angle (+/- 2.5°)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTR12</td>
<td>310</td>
<td>20</td>
<td>550</td>
<td>350</td>
<td>14°</td>
<td>65°</td>
</tr>
<tr>
<td>EDTR16</td>
<td>413</td>
<td>21</td>
<td>780</td>
<td>500</td>
<td>10°</td>
<td>59°</td>
</tr>
<tr>
<td>EDTR20</td>
<td>513</td>
<td>26</td>
<td>1100</td>
<td>700</td>
<td>7°</td>
<td>50°</td>
</tr>
<tr>
<td>EDTR24</td>
<td>615</td>
<td>40</td>
<td>1300</td>
<td>850</td>
<td>6°</td>
<td>37.5°</td>
</tr>
</tbody>
</table>

**Defender Egress Restricted**

Restricted Top Hung hinges provided in pairs. Other stack heights available on request.

**Defender Top Hung Restricted**

- Tested in accordance with BS6375 pt2
- BSEN1670 (Ferritic grade 4, Austenitic grade 5)

**More information**

enquiries@titon.co.uk / 01206 713801
The Securistyle Sterling friction hinge is suitable for many commercial applications on side or top hung windows.

It is manufactured from high grade austenitic stainless steel and is available in a variety of sizes. The Securistyle Sterling friction hinge gives superior window balancing and offers excellent weight carrying, particularly for curtain walling applications.

Suitable for:
- PVCu
- Aluminium
- Timber

Features and Benefits

- Heavy duty hinge suitable for many commercial applications
- Adjustable and controlled friction for smooth operation
- Efficient locating system by means of a patented asymmetrical metal end cap
- Improved weather sealing and draught proofing performance
- Easy clean version available
- 16mm stack height
- Made from austenitic stainless steel for high corrosion resistance

Sterling friction hinge

Sterling section details

- 19.3mm min.
- 16.0mm to 18.0mm
- As small as possible for optimum performance

---

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Sterling friction hinge

Sterling section details

- 19.3mm min.
- 16.0mm to 18.0mm
- As small as possible for optimum performance

---
## Details

**Sterling Top Hung**

<table>
<thead>
<tr>
<th>Hinge Size (mm)</th>
<th>Max Sash Weight (kg)</th>
<th>Max Sash Height (mm)</th>
<th>Min Sash Height (mm)</th>
<th>Opening Angle (+/-2.5°)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPT10</td>
<td>262</td>
<td>40</td>
<td>640</td>
<td>267</td>
</tr>
<tr>
<td>SPT12</td>
<td>313</td>
<td>50</td>
<td>800</td>
<td>640</td>
</tr>
<tr>
<td>SPT16/W</td>
<td>415</td>
<td>65</td>
<td>1100</td>
<td>800</td>
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<tr>
<td>SPTH16*</td>
<td>415</td>
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<td>600</td>
</tr>
<tr>
<td>SPT22*</td>
<td>567</td>
<td>100</td>
<td>1500</td>
<td>1090</td>
</tr>
<tr>
<td>SPT22W*</td>
<td>567</td>
<td>100</td>
<td>2000</td>
<td>1500</td>
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<td>SPT26*</td>
<td>680</td>
<td>180</td>
<td>2500</td>
<td>2000</td>
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**Sterling Side Hung**

<table>
<thead>
<tr>
<th>Hinge Size (mm)</th>
<th>Max Sash Weight (kg)</th>
<th>Max Sash Width (mm)</th>
<th>Min Sash Width (mm)</th>
<th>Opening Angle (+/-2.5°)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPS10</td>
<td>262</td>
<td>38</td>
<td>660</td>
<td>300</td>
</tr>
<tr>
<td>SPSH16</td>
<td>415</td>
<td>55</td>
<td>838</td>
<td>450</td>
</tr>
</tbody>
</table>

*Vents of 100kg must be fitted with S7280 cam adjustment devices, which are optional on lighter vents.*

**Manufactured from**

- High grade 1.4301 stainless steel, components – nylon and acetal

**Recommended screws**

- Stainless steel No.10 or equivalent

**Performance**

- Tested in accordance with BS6375 pt2
- BSEN1670 (Ferritic grade 4, Austenitic Grade 5)

**More information**

- enquiries@titon.co.uk / 01206 713801
For casement window systems, the Mega Egress Friction Hinge is suitable for all side hung applications.

Due to the design’s superior integral strength, one hinge size covers all frame widths up to 900mm at a maximum load of 40kg (345mm version) or 33kg (220mm version).

Suitable for:
- PVCu ✅
- Aluminium ✅
- Timber ✅

Features and Benefits:
- 220mm and 345mm suits all side hung applications up to 600mm and 900mm sash widths respectively
- True 90° opening for egress compliance
- For use on casement window systems
- 13.5mm and 16.5mm stack heights
- Maximum 40kg vent weight
- Reduced possibility of finger entrapment
- Stainless Steel – Grade 430
- Tested to PAS 24 security test as part of a window system
Details

Manufactured from
Stainless Steel parts – Grade 430
Plastics parts – GF Nylon

Recommended screws
Stainless steel No.10 or equivalent

Performance
Tested to BS EN 1670 and has exceeded Grade 5 classification for ultimate corrosion resistance

More information
enquiries@titon.co.uk / 01206 713801
Roto Uni System is designed to give flexible yet standardised manufacture of windows.

Common profiling of all window types allows optimum utilisation of production machinery.

Available in top hung projecting, Top Swing, Side Hung projecting. Accessories are available for enhancement of window performance.

Features and Benefits

→ All versions utilise the same section details
→ All versions give a universal external appearance to all windows
→ Available in Top Swing fully reversible, Side Hung easy clean, Side Hung or Top Hung projecting versions
→ Safe and smooth operating action
→ Fully reversible models allow safe cleaning of window from within the building
→ Open outwards with no projection into the room
→ Top Swing features two point restrictor and reverse positions
→ Side Hung suitable for fire egress opening
→ Top Swing supplied with cavity alignment wedge to ensure correct positioning of gear arms within window cavity when closing
→ COMBI System also available from Titon, please phone for details

Suitable for:
PVCu  ALUMINIUM  TIMBER
Details

**Size capacity**
Top Swing
Sash height: 358-1700mm

Top and Side Hung sizes are dependant on window material. Details on request

**Weight capacity**
Maximum sash weight:
Top Swing – 60kg
Projecting Top Hung – 60kg
Projecting Side Hung – 50kg
Side Hung – 50kg

**Performance**
BSEN1670 grade 4
Restrictor tested to BS6375 pt 2

Manufactured from
Electro galvanised mild steel, anodised aluminium, stainless steel, delrin, Silver Chromate Eloc 6

More information
enquiries@titon.co.uk / 01206 713801

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**Uni section dimensions**

[Diagram showing dimensions]

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Top Hung (interior)
Top Hung (exterior)
Top Hung (hinge detail)
The 490 Pivot is suitable for horizontal or vertical applications carrying sashes up to 180kg (horizontal) or 120kg (vertical).

Profile specific, the 490 Pivot is available in restricted (with 10, 15 or 22 degrees of restriction to a maximum of 100mm) or in unrestricted versions. 490 Pivot allows the sash to fully reverse and lock out for cleaning the outside face of the window from the inside. The thumb-turn restrictor type has an automatic restriction engagement/re-engagement and the key operation type restrictor is semi-automatic (it only re-engage after full reversal).

Suitable for:
- PVCu
- Aluminium
- Timber

Features and Benefits
- For horizontally or vertically pivoted sections
- Available with integral automatic restrictor with stop at 10, 15 or 22 degrees and automatically engaging reverse stop at 170 degrees
- Restrictor available in three different designs
- Pivot design is profile related
- Adjustable friction mechanism
- Demountable or non-demountable versions
- Integral skirts and sealed angular legs for optimum weathering – optional on some models
- Key operated semi-automatic integral restrictor available
- Elongated semi-automatic integral restrictor available
- Elongated fixing holes on some models for adjustment during installation
- Pivot compatibility design service for new profiles
- Examples of timber section details available
Details

Size capacity
Maximum sash weight:
Horizontal – 180kg
Vertical – 120kg

Manufactured from
Aluminium alloy

Recommended screws
Stainless steel M5 machine screws/dependent on window profile

Performance
Tested in accordance with DD CEN/TS 13126-9:2004 and BS 6375 Part 2:2004

More information
enquiries@titon.co.uk / 01206 713801

Closed

Restricted

‘K’ type restrictor

‘T’ type restrictor

‘V’ (key) type restrictor
Luna pivots for horizontal and vertical applications will carry up to 180kg (horizontal) and 120kg (vertical).

Profile specific, the Luna is available with 10 or 15 degrees of restriction to a maximum of 100mm. Unrestricted versions are also available. Allows the sash to fully reverse and lock out for cleaning outside face internally. All restrictors are located on the front face and have automatic restriction engagement / re-engagement, with optional key operation. The push button restrictor, has a two stage operation and has been designed to be child resistant.

Features and Benefits

- For horizontally or vertically pivoted windows
- Available with integral automatic restrictor with stop at 10 or 15 degrees and automatically engaging reverse stop at 170 degrees
- Restrictor design reduces risk of accidental operation
- Restrictor on front face of pivot for easy access
- Pivot design is profile related
- Adjustable friction mechanism
- Demountable or non-demountable versions possible
- Integral skirts and sealed angular legs for optimum weathering
- Key operated restrictor available
- Elongated fixing holes for adjustment during installation
- Pivot compatibility design service for new profiles

Suitable for:

- PVCu
- Aluminium

Closed position

Fully reversed position
Details

Size capacity
Maximum sash weight:
Horizontal – 180kg
Vertical – 120kg

Manufactured from
Aluminium alloy

Recommended screws
Dependent on window profile

Performance
Tested in accordance with DD CEN/TS 13126-9:2004 and BS 6375 Part 2:2004

More information
enquiries@titon.co.uk / 01206 713801

Closed
Restricted
‘A’ type restrictor
‘C’ type restrictor
‘C’ type key
Suitable for:

- ALUMINIUM

Features and Benefits

- Suitable for most aluminium link bar profiles
- Standard, high security French casement and fully concealed hinge versions available
- No cutting or drilling of link rods required
- Assembly in under five minutes using revolutionary rod system
- Maximum sash heights: up to 2800mm
- Maximum sash weight: Up to 170kg
- Choice of handle designs and types
- Self-locating clamp-on hinges
Details

Size capacity
1700(w) x 2800(h)

Weight capacity
170kg

Manufactured from
Non-corroding material

Finish
More than 450 RAL colours available

Recommended screws
All screws supplied

More information
enquiries@titon.co.uk / 01206 713801
Maco Multi Matic

Tilt and turn window gear (tilt before turn) for windows up to 1630mm wide, 2250mm high and sash weights up to 130kg.

Maco Multi Matic is open in only, has a tilt mode position for ventilation and a turn mode for cleaning. An enhanced security version is available to comply with PAS 24. Also available with concealed hinges (Matic Invisible).

Suitable for:
PVCu  ✔  TIMBER  ✔

Features and Benefits

- Symmetrical hinge positions for easy fitting
- Anti-slam device
- Three dimensional hinge adjustment
- Adjustable sash lifter prevents sash drop
- No hinge contact with water bar to improve thermal resistance
- Eurogroove fixing corner support allows for decorative rebate edge
- High security version available
- Fits smaller mullion profiles
### Window Hardware

#### Details

**Size capacity**
- Sash widths 220 – 1630mm
- Sash heights 470 – 2250mm
- For sizes close to these limits, phone for details

**Weight capacity**
- Maximum sash weight – PVCu 100-120kg (depending on hinge type), timber 130kg

**Manufactured from**
- Mild steel

**Standards**
- BS EN 1670 Class 5

#### Finish

- Silver Chromate
- Tricoat (high corrosion resistance) also available

#### Recommended screws

- 4mm/No.8 countersunk head
- Handle fitting – M5 machine screw or suitable alternative
- For Tricoat finish ensure Tricoat screws are used

#### More information

enquiries@titon.co.uk / 01206 713801

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**Bottom hinge - Timber**

**Bottom hinge - PVCu**
Suitable for:

- PVCu
- TIMBER

Tilt and turn window gear (tilt before turn) for windows up to 1400mm wide, 2250mm high and sash weights up to 150kg.

Maco Multi Matic Invisible is open in only, has a tilt mode position for ventilation and a turn mode for cleaning. An enhanced security version is available to comply with PAS 24.

Features and Benefits

- Anti-slam device
- Three dimensional hinge adjustment
- Adjustable sash lifter prevents sash drop
- Enhanced security version available
- Fits smaller mullion profiles
Details

Size capacity
Sash widths 385 – 1400mm (Maco Multi Power-370-1400mm)
Sash heights 470 – 2250mm (Maco Multi Power-370-1400mm)
For sizes close to these limits, phone for details

Weight capacity
Maximum sash weight – 100kg (Maco Multi Power – 150kg)

Manufactured from
Mild steel

Standards
BS EN 1670 Class 5
BS EN 13126-8
BS EN 13126-5

Finish
Silver Chromate
Tricoat (high corrosion resistance) also available

Recommended screws
4mm/No.8 countersunk head
Handle fitting - M5 machine screw or suitable alternative
For Tricoat finish, ensure Tricoat screws are used

More information
enquiries@titon.co.uk / 01206 713801

Configuration above is for timber windows only
*Maco Multi Matic Power standard for PVCu and optional for timber
Alliance is a security cam catch capable of achieving PAS 24 (dependent on window design), with a front facing lock.

Alliance is suitable for all vertical sliding windows made from PVCu or timber and has various flat and cast keep designs suitable for all profiles. Available in a variety of plated or painted finishes.

**Features and Benefits**
- Locking or non-locking versions
- Front facing lock
- Spring loaded to ensure sash clearance
- Various keep designs available
- Capable of achieving PAS 24 (dependent on window design)
- Interlocking design for increased security
- Available in painted or plated finishes
## Details

### Window Hardware

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alliance Cam Catch – non-locking</td>
<td>TL100DM</td>
</tr>
<tr>
<td>Alliance Cam Catch – key locking</td>
<td>TL100</td>
</tr>
<tr>
<td>Standard Cast Keep</td>
<td>TL120</td>
</tr>
<tr>
<td>Wide Cast Keep</td>
<td>TL121</td>
</tr>
<tr>
<td>17mm Pressed Steel Keep</td>
<td>TL122</td>
</tr>
<tr>
<td>30.5mm Pressed Steel Keep</td>
<td>TL124</td>
</tr>
<tr>
<td>38mm Pressed Steel Keep</td>
<td>TL125</td>
</tr>
</tbody>
</table>

### Manufactured from

Zinc Alloy to BS EN 1774 ZL3

### Recommended screws

4mm (No.8) countersunk head or equivalent

### Standards

Please contact us for the latest test results.

### Finishes

Suffix product code with:
-020 (white paint), -518 (bright nickel), -102 (albratin gold),
K-023 (brown paint), -825 (satin chrome)

**NOTE:** Plated finishes are not suitable for use in coastal or highly corrosive environments.

### More information

enquiries@titon.co.uk / 01206 713801

### Cast Keep

<table>
<thead>
<tr>
<th>Product</th>
<th>A'</th>
<th>B'</th>
<th>Product</th>
<th>C'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Cast Keep</td>
<td>4</td>
<td>30</td>
<td>17mm Pressed Steel Keep</td>
<td>17</td>
</tr>
<tr>
<td>Wide Cast Keep</td>
<td>9.5</td>
<td>35</td>
<td>30.5mm Pressed Steel Keep</td>
<td>30.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>38mm Pressed Steel Keep</td>
<td>38</td>
</tr>
</tbody>
</table>

### Pressed Metal Keeps

- Cast keep
- Pressed steel keep

**Manufactured from**

Zinc Alloy to BS EN 1774 ZL3

**Recommended screws**

4mm (No.8) countersunk head or equivalent

**Standards**

Please contact us for the latest test results.

**Finishes**

Suffix product code with:
-020 (white paint), -518 (bright nickel), -102 (albratin gold),
K-023 (brown paint), -825 (satin chrome)

**NOTE:** Plated finishes are not suitable for use in coastal or highly corrosive environments.

**More information**

enquiries@titon.co.uk / 01206 713801

**Cast Keep**

<table>
<thead>
<tr>
<th>Product</th>
<th>A'</th>
<th>B'</th>
<th>C'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Cast Keep</td>
<td>4</td>
<td>30</td>
<td>17</td>
</tr>
<tr>
<td>Wide Cast Keep</td>
<td>9.5</td>
<td>35</td>
<td>30.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>38</td>
</tr>
</tbody>
</table>

**Pressed steel keep**

<table>
<thead>
<tr>
<th>Product</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outer Sliding Sash - Keep Fixings</td>
<td>17</td>
<td>30.5</td>
<td>84</td>
</tr>
<tr>
<td>Inner Sliding Sash - Cam Catch Fixings</td>
<td>17</td>
<td>30.5</td>
<td>84</td>
</tr>
</tbody>
</table>

**Outer Sliding Sash - Keep Fixings**

**Inner Sliding Sash - Cam Catch Fixings**
Capture is an automatically engaging spring-loaded window safety restrictor for use on side and top hung windows to limit opening. Capture is supplied in austenitic steel.

Various pin heights are available to suit all cavity sizes and can be retrofitted.

Suitable for:
- PVCu
- Aluminium
- Timber

Features and Benefits
- Automatically engages
- Easy to fit
- No key or tools required to de-restrict
- Various pin heights
- Suits all cavity sizes
- Can be retrofitted
- Austenitic stainless steel for improved corrosion resistance
- Suitable for aluminium, PVCu and Timber windows (left and right hand versions)
- Can be used on windows without reinforcement
## Details

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capture Restrictor LH Austenitic</td>
<td>TN1121</td>
</tr>
<tr>
<td>Capture Restrictor RH Austenitic</td>
<td>TN1120</td>
</tr>
<tr>
<td>Capture Restrictor Pin 9.5mm Austenitic</td>
<td>TN1122</td>
</tr>
<tr>
<td>Capture Restrictor Pin 10.5mm Austenitic</td>
<td>TN1123</td>
</tr>
<tr>
<td>Capture Restrictor Pin 11.5mm Austenitic</td>
<td>TN1124</td>
</tr>
<tr>
<td>Capture Restrictor Pin 14.5mm Austenitic</td>
<td>TN1125</td>
</tr>
<tr>
<td>Capture Restrictor Pin 16.5mm Austenitic</td>
<td>TN1126</td>
</tr>
</tbody>
</table>

**Manufactured from**

Austenitic stainless steel 304 to BS EN 10088-2
Grade 1.4301

**Recommended screws**

Designed to accept a maximum screw diameter Ø4.8mm with a maximum head diameter Ø8mm

**Performance**

Please contact us for the latest test results.

**Finishes**

Natural

**Standards**

Tested in accordance with BS 6375 Part 2:2009
BS EN 1670 Grade 4

**More information**

enquiries@titon.co.uk / 01206 713801

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**Right handed**
The Maco Laminated restrictor is an automatically engaging spring-loaded window safety restrictor for use on side or top hung windows.

The Maco Laminated Restrictor is supplied in ferritic stainless steel.

Various pin heights to suit all cavity sizes are available. The restrictor can be retrofitted and requires a “two handed” operation to de-restrict the window, which enhances child safety.

Suitable for:
- PVCu
- Aluminium
- Timber

Features and Benefits
- Designed to comply with BS 8213
- Automatically engages
- Easy to fit
- No key or tools required to de-restrict
- De-restriction is a two handed operation
- Various pin heights
- Suits all cavity sizes
- Can be retrofitted
Details

Window Hardware

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laminated Restrictor (Double Action) LH</td>
<td>MA95032U</td>
</tr>
<tr>
<td>Laminated Restrictor (Double Action) RH</td>
<td>MA95033U</td>
</tr>
<tr>
<td>9.5mm High Striker Pin</td>
<td>MA95004U</td>
</tr>
<tr>
<td>10.5mm High Striker Pin</td>
<td>MA95007U</td>
</tr>
<tr>
<td>11.5mm High Striker Pin</td>
<td>MA95005U</td>
</tr>
<tr>
<td>14.5mm High Striker Pin</td>
<td>MA95006U</td>
</tr>
<tr>
<td>16.5mm High Striker Pin</td>
<td>MA95008U</td>
</tr>
</tbody>
</table>

**Manufactured from**
Ferritic stainless steel

**Recommended screws**
4mm (No.8) countersunk head

**NOTE:** All screws must be stainless steel

**Finishes**
Natural

**Standards**
Tested in accordance with BSEN1670 Grade 4, BS 6375 Part 2:2004 and BS 8213

**More information**
enquiries@titon.co.uk / 01206 713801

Left hand (LH) shown

Sales and Technical Support +44 (0) 1206 713801 www.titon.co.uk
Res-Lok

Tilt & turn / open in window safety restrictor

Suitable for:
PVCu ✓ ALUMINIUM ✓ TIMBER ✓

The unique Res-Lok tilt and turn restrictor has been designed to provide safety for all major types of PVCu, aluminium and timber tilt and turn windows.

The configuration will vary depending on the profile of window, whilst generally consisting of:

- 1 x concealed restrictor, RH or LH in self colour (JBC413TT)
- 1 x stud plate (9.5 to 14.5mm), in self colour (JBC423-428)
- 1 x tilt & turn Res-Lok restrictor, LR or RH in silver, white or black (JBC803)

**NOTE:** Check the product will not interfere with the tilt & turn gear before fitting.

**Features and Benefits**

- Automatically engages and locks when window closes
- Dedicated key release
- Powder coated finishes
- Available as a non-key release
- Easy fixing
- Stainless steel and zinc alloy construction
- Conforms to BS 6375 part 2:2009 and BS 8213-1:2004
### Window Hardware

#### Details

<table>
<thead>
<tr>
<th>Tilt and Turn Open In Products</th>
<th>Finish</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concealed restrictor arm – LH</td>
<td>Stainless steel</td>
<td>JBC413TTLH</td>
</tr>
<tr>
<td>Concealed restrictor arm – RH</td>
<td>Stainless steel</td>
<td>JBC413TTRH</td>
</tr>
<tr>
<td>Concealed stud plate (9.5mm)</td>
<td>Stainless steel</td>
<td>JBC423</td>
</tr>
<tr>
<td>Concealed stud plate (10.5mm)</td>
<td>Stainless steel</td>
<td>JBC424</td>
</tr>
<tr>
<td>Concealed stud plate (11.5mm)</td>
<td>Stainless steel</td>
<td>JBC425</td>
</tr>
<tr>
<td>Concealed stud plate (12.5mm)</td>
<td>Stainless steel</td>
<td>JBC426</td>
</tr>
<tr>
<td>Concealed stud plate (13.5mm)</td>
<td>Stainless steel</td>
<td>JBC427</td>
</tr>
<tr>
<td>Concealed stud plate (14.5mm)</td>
<td>Stainless steel</td>
<td>JBC428</td>
</tr>
</tbody>
</table>

| Tilt and turn Res-Lok operator – including key – LH    | Silver   | JBC803LH/550 |
| Tilt and turn Res-Lok operator – including key – RH    | Silver   | JBC803RH/550 |
| Tilt and turn Res-Lok operator – including key – LH    | White    | JBC803LH/320 |
| Tilt and turn Res-Lok operator – including key – RH    | White    | JBC803RH/320 |
| Tilt and turn Res-Lok operator – including key – LH    | Black    | JBC803LH/045 |
| Tilt and turn Res-Lok operator – including key – RH    | Black    | JBC803RH/045 |
| Spare key                                               | BZP      | JBC803KEY    |

#### Manufactured from

Stainless steel

#### Recommended screws

4mm (No.8) countersunk head

#### Standards

Tested in accordance with BS 6375 |
Part 2: 2009 and BS 8213-1:2004

#### Finishes

Silver, white or black

#### More information

enquiries@titon.co.uk / 01206 713801
Suitable for:

- PVCu
- Aluminium
- Timber

The unique Res-Lok open out concealed restrictor has been designed to provide safety for all major types of PVCu, aluminium and timber open out windows. The configuration will vary depending on the profile of window.

**Features and Benefits**

- Automatic locking
- Automatic engagement
- Concealed fitting
- Restricts sash to 100mm opening
- Dedicated key release
- Retro fitting option
- Conforms to BS EN 14351:2006 Clause 4.8
- Constructed from stainless steel and zinc alloy
- Other stud sizes available
<table>
<thead>
<tr>
<th>Open Out Products</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Res-Lok kit 105mm* - LH</td>
<td>JBC327-Kit</td>
</tr>
<tr>
<td>Res-Lok kit 105mm* - RH</td>
<td>JBC328-Kit</td>
</tr>
</tbody>
</table>

*Res-Lok kits include: Key, restrictor, 11.5mm stud, 1mm and 2mm packer.

**Manufactured from**
Stainless steel

**Recommended screws**
4mm (No.8) countersunk head

**Standards**
Tested in accordance to BS EN 14351:2006 Clause 4.8

**More information**
enquiries@titon.co.uk / 01206 713801
The Securistyle Restrictor Stay is a cavity fit friction stay suitable for domestic and commercial applications and is available in detachable and non-detachable versions.

The Securistyle Restrictor Stay is designed for top or side hung applications.

Suitable for:
- PVCu
- ALUMINIUM
- TIMBER

Features and Benefits
- Withstands a force of up to 600N in restricted position
- Enhanced corrosion resistance
- Easy to fit, no routing required
- Suitable for cavities between 13 and 18mm
- Non-handed

None - Detachable

Detachable

Dimension 'B'

R7437 release key
## Details

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
<th>Cavity (mm)</th>
<th>Dimension ‘A’ (mm)</th>
<th>Dimension ‘B’ (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Detachable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4” Detachable Restrictor</td>
<td>SDR4</td>
<td>16-18</td>
<td>102</td>
<td>150</td>
</tr>
<tr>
<td>6” Detachable Restrictor</td>
<td>SDR6</td>
<td>16-18</td>
<td>152.5</td>
<td>200</td>
</tr>
<tr>
<td>8” Detachable Restrictor</td>
<td>SDR8</td>
<td>16-18</td>
<td>203.5</td>
<td>200</td>
</tr>
<tr>
<td>10” Detachable Restrictor</td>
<td>SDR10</td>
<td>16-18</td>
<td>254</td>
<td>250</td>
</tr>
<tr>
<td>Release Key</td>
<td>R7437</td>
<td>16-18</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Non-Detachable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4” Defender Restrictor (domestic)</td>
<td>RS4</td>
<td>13-14</td>
<td>95</td>
<td>150</td>
</tr>
<tr>
<td>6” Defender Restrictor (domestic)</td>
<td>RS6</td>
<td>13-14</td>
<td>148.5</td>
<td>150</td>
</tr>
<tr>
<td>9” Defender Restrictor (domestic)</td>
<td>RS9</td>
<td>13-14</td>
<td>229.5</td>
<td>150</td>
</tr>
<tr>
<td>4” Sterling Restrictor (non-domestic)</td>
<td>SR4</td>
<td>16-18</td>
<td>94</td>
<td>249</td>
</tr>
<tr>
<td>8” Sterling Restrictor (non-domestic)</td>
<td>SR8</td>
<td>16-18</td>
<td>204</td>
<td>249</td>
</tr>
<tr>
<td>16” Sterling Restrictor (non-domestic)</td>
<td>SR16BAC</td>
<td>16-18</td>
<td>400</td>
<td>401.5</td>
</tr>
</tbody>
</table>

**Manufactured from**
Austenitic 304 grade 1.4301

**Recommended screws**
Domestic – 4mm (No.8) mushroom head or specialist equivalent e.g. specialist thread for PVCu
Commercial – 5mm (No.10) self tapping, pan or mushroom head or M5 screws or M5 rivnuts e.g. specialist thread for PVCu

**Standards**

**Finishes**
Austenitic stainless steel

**More information**
enquiries@titon.co.uk / 01206 713801

Restrictor mode

Key to detach

Unrestricted
The Tech 100 is a 90° friction brake restrictor for doors (and larger windows) suitable for eurogroove profiles.

**Suitable for:**
- PVCu
- Aluminium
- Timber

**Features and Benefits**
- 90 degree brake stay and restrictor for doors
- Unique end snapper helps hold door open
- Available in silver chromate or stainless steel arms
- Adjustable friction device
- Suits all eurogroove profile systems
- Fast and simple to fit
- Non-handed
- Multiple screw ports
- Universal strike plate
## Details

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maco Tech 100</td>
<td>MA96100U-099</td>
</tr>
<tr>
<td>Maco Tech 100 (Stainless Steel)</td>
<td>MA96430U-073</td>
</tr>
</tbody>
</table>

**Manufactured from**
Plated mild steel or stainless steel arm and aluminium track

**Recommended screws**
No.8 countersunk for timber and PVCu or equivalent

**Standards**
Tested in accordance with BS 6375 Part 2:2004

**Finishes**
Silver chromate or stainless steel

**More information**
enquiries@titon.co.uk / 01206 713801

---

![Diagram of window hardware](image-url)
PN Lock Bar

Suitable for:

- PVCu
- Aluminium
- Timber

PN Lock Bar is a surface mounted restrictor/stay designed for ease of fit for factory or retrofit installation.

PN Lock Bar is available with various brackets to suit many profiles.

Features and Benefits

- Face mounted, factory fit or retrofit
- When window is open, window is securely restricted in three positions
- Can only be de-restricted when window is closed
- Designed to accommodate all sash opening angles
- Works on inward and outward opening sashes
- Retainer clip supplied
### Details

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code (White)</th>
<th>Product Code (Chrome)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PN Lock Bar</td>
<td>3850-0-05-30</td>
<td>3850-0-03-00</td>
</tr>
<tr>
<td>PN Lock Bar Slim Back Plate</td>
<td>0521-0-05-30</td>
<td>-</td>
</tr>
<tr>
<td>Angle Bracket LH</td>
<td>3851-0-05-30</td>
<td>3851-0-03-00</td>
</tr>
<tr>
<td>Angle Bracket RH</td>
<td>3852-0-05-30</td>
<td>3852-0-03-00</td>
</tr>
<tr>
<td>Flush Bracket LH</td>
<td>3853-0-05-30</td>
<td>3853-0-03-00</td>
</tr>
<tr>
<td>Flush Bracket RH</td>
<td>3854-0-05-30</td>
<td>3854-0-03-00</td>
</tr>
<tr>
<td>Flat Bracket long LH</td>
<td>0534-0-05-30</td>
<td>0534-0-03-00</td>
</tr>
<tr>
<td>Flat Bracket long RH</td>
<td>0535-0-05-30</td>
<td>-</td>
</tr>
</tbody>
</table>

### Manufactured from

- 11mm steel rod (bar)
- Pressed steel (bracket)

### Recommended screws

- No.8 countersunk screws (for timber application, 4 clutch head screws are supplied per bar)

### Standards

Please contact us for the latest test results

### Finishes

- Blue chromate or white paint
- Brackets are handed and the variations cover most window profiles
- Other finishes are available by special order

### More information

enquiries@titon.co.uk / 01206 713801

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**Standard 3850**

- Back Plate 20mm wide

**Slim back plate PVCu 0521**

- Back Plate 12mm wide

**Angle bracket (left hand shown)**

- 3851 = LH
- 3852 = RH

**Flush bracket (right hand shown)**

- 3853 = LH
- 3854 = RH

**Flat bracket long (right hand shown)**

- 3855 = LH
- 0534 = RH
- 0535 = RH
The Reflex face mounted cable safety restrictor has been designed with the intention to prevent people from inadvertently falling out of windows. Reflex is suitable for windows of all materials, inward and outward opening. There are three variations available:

1. Push to release
2. Key to release
3. Tamper resistant
   - Variation requires the use of the Pin Torx key to release (supplied separately).

**NOTE:** It is the responsibility of the duty holder to decide the suitability of product.

**Features and Benefits**

- Suitable for all window materials
- Suitable for inward and outward opening windows
- Three variations available
- Fully tested to BS and BS EN standards (see overleaf)
- White and black finishes
- Special lengths and colours available
- Ideal for retrofit applications
**Details**

### Product Code

<table>
<thead>
<tr>
<th>Product</th>
<th>White</th>
<th>Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflex Key to Release Cable Window Restrictor</td>
<td>FEN165FSL/544</td>
<td>FEN165FSL/543</td>
</tr>
<tr>
<td>Reflex Push to Release Cable Window Restrictor</td>
<td>FEN165FSN/544</td>
<td>FEN165FSN/543</td>
</tr>
<tr>
<td>Reflex Tamper Resistant Cable Window Restrictor</td>
<td>FEN165FST/5440</td>
<td>FEN165FST/543</td>
</tr>
<tr>
<td>Reflex ‘Key to Release’ Replacement Key</td>
<td></td>
<td>FEN165FSLKEY</td>
</tr>
<tr>
<td>Reflex ‘Pin-Torx’ Replacement Key</td>
<td></td>
<td>FEN165FSTKEY</td>
</tr>
</tbody>
</table>

### Manufactured from

Zinc castings. Steel cable & stainless steel bullet

### Recommended screws

- For timber – the longest & widest diameter possible depending on window section
- For PVCu – 4.8mm peel pop rivets stainless steel
- For aluminium – no. 8 x 16 BZP, CSK self drilling

### Standards

Tested in accordance with DD CEN/TS 13126-5:2004 and BS 6375 Part 2:2004

### Finishes

Available in the following finishes, suffix product code with -543 (Black), -544 (White). Other finishes available on request.

### More information

enquiries@titon.co.uk / 01206 713801
Flex is a face mounted cable restrictor device suitable for doors and windows.

The Flex safety restrictor can be fitted to all window sections and materials that are both inward and outward opening. The Flex restrictor has a dead lock button which can be blocked against accidental release, either using the key supplied or another suitable tool.

**NOTE:** It is the responsibility of the Duty Holder to decide the suitability of product.

### Features and Benefits

- Fits all window types
- Push to release
- Key operated deadlock
- Highly visible
- Special lengths and colours to order
- Retro fit (surface mounted)
- Tested to 1200N with no failure
## Details

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flex Restrictor 200mm</td>
<td>FEN200</td>
</tr>
</tbody>
</table>

### Manufactured from
Zinc castings. Steel cable & stainless steel bullet

### Recommended screws
For timber – the longest & widest diameter possible depending on window section
For PVCu – 4.8mm peel pop rivets stainless steel
For aluminium – no. 8 x 16 BZP, CSK self drilling

### Standards
Tested in accordance with BS 6375 Part 2:2004

### Finishes
Available in the following finishes, suffix product code with -543 (Black), -544 (White)
Other finishes available on request (will have black cable & screw covers)

### More information
enquiries@titon.co.uk / 01206 713801
Maco Multi Vent
Limiting restrictor

Suitable for:
PVCu ✔ TIMBER ✔

The Multi Vent limits the tilt and turn position on a tilt and turn window.
NOTE: Not suitable for use as a safety restrictor.

Features and Benefits
→ For use on tilt and turn windows
→ Automatically engages
→ Limits in tilt mode
→ Lockable as standard
→ Adjustable friction
→ Can be retrofitted
→ Also available in non locking version
→ Limiter jig available

Tilt mode restriction

Turn mode limit

Unrestricted
# Window Hardware

## Details

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-Vent limiter with 2mm spacer bar (Brown)</td>
<td>MA12361</td>
</tr>
<tr>
<td>Multi-Vent limiter with 2mm spacer bar (White)</td>
<td>MA12360</td>
</tr>
<tr>
<td>2mm spacer bar (Brown)</td>
<td>MA42499</td>
</tr>
<tr>
<td>2mm spacer bar (White)</td>
<td>MA42510</td>
</tr>
<tr>
<td>5 degree spacer bar (Brown)</td>
<td>MA42502</td>
</tr>
<tr>
<td>5 degree spacer bar (White)</td>
<td>MA42509</td>
</tr>
<tr>
<td>15 degree spacer bar (Brown)</td>
<td>MA42513</td>
</tr>
<tr>
<td>15 degree spacer bar (White)</td>
<td>MA42514</td>
</tr>
<tr>
<td>Restrictor jig</td>
<td>MA42505</td>
</tr>
</tbody>
</table>

## Manufactured from

- Lock case – zinc die cast
- Locking arm – cold rolled mild steel

## Recommended screws

- 4mm (No.8) Countersunk Head

## Finishes

- White RAL 9010
- Brown RAL 8019

## More information

enquiries@titon.co.uk / 01206 713801
Suitable for:

- PVCu
- Aluminium
- Timber

Features and Benefits

- Type ‘18’ for 100mm sash movement (top swing windows)
- Type ‘110’ & ‘112’ for 150mm sash movement
- ‘Extended’ type for 315mm sash movement
- Suitable for top hung, fully reversible and pivot windows
- Suitable for school, hospital and office applications
- Can be linked in pairs, or threes for wide windows
- Can be operated at high level by using a tandem eye & pole operator

Tandem bars

- Simple, easy to use hand operation
- Should be used on window sashes wider than 800mm

Pole operators

- Standard length 1400mm, longer or shorter poles available on request
- Supplied with large or small boss, depending on style of tandem eye

Hand operator

- Will fit any folding opener

Tandem eyes

- For use with opener linked by tandem bar with pole operation
- Fitted centrally or immediately to the side of the central folding opener
- 260, 263 used on 110 type folding openers. For use with small boss pole operator
- 262 used on 112 type folding opener. For use with large boss pole operator

Packers

- Vent bracket packers available to accommodate intermediate step sizes
- Powder coated or anodised finishes
Suitable for:
PVCu ✅ ALUMINIUM ✅ TIMBER ✅

Spring Catch and Window Stay
Limiting restrictor

Features and Benefits

- Quick and easy to install: no drilling or machining
- Spring catch clamps into eurogroove
- Maximum window movement: 165mm; Minimum vent width: 300mm
- Adjustment range: +/- 2mm.
- Used with a purpose designed, detachable window stay
- Powder coated or anodised finishes
- Connecting bars for twin catches
- Pole operator with hook for bars
- Various other designs of traditional spring catches and keeps
Titon offers a number of sophisticated door lock combinations for timber or PVCu doors, in single or double door versions. All feature dead bolts as standard and, in addition, security is heightened by mushroom, finger and hook bolts. Many configurations are available; please phone for technical advice on specific application issues.
### Door Hardware

<table>
<thead>
<tr>
<th>Product</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maco C-TS</td>
<td>126</td>
</tr>
<tr>
<td>Maco C-TS Module</td>
<td>128</td>
</tr>
<tr>
<td>Maco Z-TA Automatic and Comfort</td>
<td>130</td>
</tr>
<tr>
<td>Asterion 3-Star Cylinder</td>
<td>132</td>
</tr>
<tr>
<td>Overture DH</td>
<td>134</td>
</tr>
<tr>
<td>Overture DH Stainless Steel</td>
<td>136</td>
</tr>
<tr>
<td>Genesis</td>
<td>138</td>
</tr>
<tr>
<td>Genesis Accessories</td>
<td>139</td>
</tr>
<tr>
<td>Revelation</td>
<td>140</td>
</tr>
<tr>
<td>Overture Door Accessories</td>
<td>142</td>
</tr>
<tr>
<td>Overture FH</td>
<td>144</td>
</tr>
<tr>
<td>Sobinco Door Locks, Hinges and Fittings</td>
<td>146</td>
</tr>
<tr>
<td>Sobinco Door Locks, Hinges and Fittings</td>
<td>147</td>
</tr>
<tr>
<td>Sobinco Lift and Slide</td>
<td>148</td>
</tr>
<tr>
<td>Sobinco BT lock</td>
<td>149</td>
</tr>
</tbody>
</table>

Amendments to the product range are made on an ongoing basis to meet changing market demands. For the most up to date information, please go to www.titon.co.uk.
Maco C-TS is a highly secure combined lift lever and split spindle door lock. It enables the fabrication of a wide range of easy to operate door styles from an individual, highly secure door lock. The spindle type controls the function of the lock, with a solid spindle bar for lift lever function and split spindle pack for split spindle function.

Suitable for:
- PVCu
- TIMBER

or composite doors with a 16mm Eurogroove

Features and Benefits
- 35mm and 45mm backsets available
- Single door lock for use as a lift lever or split spindle operated door lock (split spindles sold separately)
- Smaller compact lockcases
- Single and double door configurations available – including double door mullion free version
- Dead bolt operated from lever handle reducing force required to lock door
- Non-handed lock design
- Suitable for sprung and unsprung handle sets
- Forged steel dead bolt locking hooks for increased security
- High levels of adjustability through adjustable striker plates and locking cams
- Faceplate lengths available 2200mm for single doors, 1800mm for double doors and 1500mm slave door lock
- Endurance tested to 50,000 operations
- PAS 24 capability
- Maco silver look surface treatment tested to 480 hours Class 5 EN 1670 corrosion resistance
- 16mm and 20mm faceplate available (3mm thick)
- Locking options: 2 hook, 2 hook-cam and 2 hook-cam + 2 cam
- Standard 1050mm handle height
- 92mm handle to cylinder centres
- 8mm square shaft
Details

**Cam**
Adjustable cam for compression

**Hook**
For optimum security

**Striker plates**
Profile specific
Produced from high quality zinc and steel
Adjustable individual or single piece
Available for both 1800mm and 2200mm locks
Contact Titon Technical Department for codes

**Manufactured from**
Produced from high quality zinc and steel

---

**Recommended screws**
No.8 countersunk or equivalent.

**Standards**
PAS 24 and BS6375 Parts 1 & 2
BS EN 1670 Grade 5

**Finishes**
Silver Chromate

**More information**
enquiries@titon.co.uk / 01206 713801

---

Example door lock configurations

- **Single door**
  With & without shootbolt

- **Double door**
  With finger operated shootbolt on slave door

- **Double door**
  With shootbolt on master & slave door (with Flying Mullion)
The Maco C-TS Module is a highly secure combined lift lever and split spindle door lock. It enables the fabrication of a wide range of easy to operate door styles from an individual highly secure door lock. The spindle type controls the function of the lock, with a solid spindle bar for lift lever function and split spindle pack for split spindle function. It utilises the C-TS lockcase, which enhances door flexibility whilst simplifying door preparation.

Suitable for:
- PVCu
- Timber
- Or composite doors with a 16mm Eurogroove

Features and Benefits
- 35mm and 45mm backsets available
- Single door lock for use as a lift lever or split spindle operated door lock (split spindles sold separately)
- Smaller compact lockcases
- Single and double door configurations available
- Dead bolt operated from lever handle reducing force required to lock door
- Non-handed lock design
- Suitable for sprung and unsprung handle sets
- Forged steel dead bolt locking hook bolts for increased security
- High levels of adjustability through adjustable striker plates
- Faceplate lengths available 2100mm and 1750mm for Bull Nose
- Endurance tested to 50,000 operations
- PAS 24 capability
- MACO silver look surface treatment tested to 480 hours Class 5 EN 1670 corrosion resistance
- 3mm thick faceplate
- Standard 1050mm handle height
- Double door configuration: 1500mm door lock to suit shootbolts - non modular
- Unique top hat faceplate design, 24mm wide to suit 16mm Eurogroove
- Modular design to increase or reduce heights from 1500mm to 2800mm, including:
  - Additional hook bolt modules
  - Additional dead bolt (cylinder operated) module
  - Magnetic cam for alarm systems
  - Entry guard unit
- Bull nose, radius end face plate option (20mm)
- 92mm handle to cylinder centres
- 8mm square shaft
Details

**Hook bolt**
For optimum security

**Striker plates**
Profile specific
Produced from high quality zinc and steel
Contact Titon Technical Department for codes

**Manufactured from**
Produced from high quality zinc and steel

**Recommended screws**
No.8 countersunk or equivalent.

**Standards**
PAS 24 and BS6375 Parts 1 & 2
BS EN 1670 Grade 5

**Finishes**
Silver Chromate

**More information**
enquiries@titon.co.uk / 01206 713801

---

**Example door lock configurations**

CT-S Module
Cut area max 350mm

---

Sales and Technical Support +44 (0) 1206 713801 www.titon.co.uk
Maco Z-TA Automatic and Comfort

Multi-point security locking system

Suitable for:
PVCu ✔ TIMBER ✔
or composite doors with a 16mm Eurogroove

Maco Z-TA provides 3 latch locking, with 2 hooks and a central dead bolt that are automatically deployed after the door has closed.

The lock guarantees optimum thermal and acoustic insulation in an automatic, fully interlocking door unit.

Features and Benefits

- Automatic interlocking including the deadbolt
- 35mm and 45mm backsets available
- Dead bolt and hooks thrown when all 3 latches engage
- Smaller compact lockcases
- Dead bolt operated from lever handle reducing force required to lock door
- Non-handed lock design
- Suitable for sprung and unsprung handle sets
- Forged steel dead bolt locking hook bolts for increased security
- High levels of adjustability through adjustable striker plates
- Faceplate lengths available 2200mm
- Endurance tested to 50,000 operations
- PAS24 capability
- Maco silver look surface treatment tested to 480 hours Class 5 EN 1670 corrosion resistance
- 16mm and 20mm bull nose faceplates available (3mm thick)
- Locking: 3 latch, 1 dead bolt and 2 hooks
- Standard 1050mm handle height
- 92mm handle to cylinder centres, 8mm shaft
- Motorised option (Comfort) to automatically open the door
- Even gasket-compression and security over the entire door height
- Can be additionally secured by turning the key to block the mechanism
- Available for a variety of sash rebate heights
- Suitable for left and right handed application

Automatic - Hooks automatically deployed on closing

Comfort - Hooks automatically deployed on closing and opened via code, fingerprint or transponder access controls and door access systems

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Details

Hook bolt
For the highest possible level of security

Striker plates
Produced from high quality zinc and steel, adjustable with a 4mm Allen key

Manufactured from
Produced from high quality zinc and steel

Recommended screws
No.8 countersunk or equivalent

Standards
PAS 24 and BS6375 Parts 1 & 2

Finishes
Silver Chromate

More information
enquiries@titon.co.uk / 01206 713801
The Asterion 3-Star anti-manipulation profile cylinder is TS007 Kitemarked 3-Star in line with DHF (Door & Hardware Federation) and GGF (Glass & Glazing Federation) requirements. It therefore assists in compliance with Building Regulations Approved Document Q – Security – Dwellings. It has also been awarded Secured by Design (SBD) status, having gained national Police approval for providing a realistic level of resistance to criminal attack.

The anti-manipulation security features include a sacrificial break slot designed to snap off when forced, making it more difficult to gain a grip of the cylinder under attack.

Asterion 3-Star has a high security 6 pin cylinder mechanism and comes with 5 keys as standard. It is designed to withstand 5 types of attack: Anti drill, Anti pick, Anti bump, Anti snap, Anti screw and plug retraction.

Suitable for:
- PVCu
- Aluminium
- Timber

or composite doors

Features and Benefits
- Kitemarked to TS007 3-Star rating
- Designed to attain PAS 24 with standard handles
- Secured by Design police preferred specification product
- Tested to BS EN 1303:2005
- Six pin
- Available in sizes nominal 74mm to 110mm
- Supplied with five keys as standard
- Available options:
  - Double cylinder
  - Cylinder and turn
  - Keyed alike
  - Master keying possible
- Satin Nickel Plate or Satin Brass finish
- BSI Kitemark number 631878
Details

**Door Hardware**

**Manufactured from**
- Brass & stainless steel
- Hardened steel anti drill pins

**Recommended screws**
- M5 x 45mm machine screws supplied

**Finishes**
- Satin nickel plate
- Satin brass

**More information**
enquiries@titon.co.uk / 01206 713801

**Standards**
- BS EN 1303:2005 and TS007 3-Star rating

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**Cylinder Dimensions (mm)**

<table>
<thead>
<tr>
<th>Product</th>
<th>A (Overall)</th>
<th>B (External)</th>
<th>C (Internal)</th>
<th>Product Size Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Double Cylinder</strong></td>
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<td></td>
</tr>
<tr>
<td>74</td>
<td>37</td>
<td>37</td>
<td></td>
<td>Double Cyl 74 (37 Int / 37 Ext)</td>
</tr>
<tr>
<td>80</td>
<td>40</td>
<td>40</td>
<td></td>
<td>Double Cyl 80 (40 Int / 40 Ext)</td>
</tr>
<tr>
<td>85</td>
<td>45</td>
<td>40</td>
<td></td>
<td>Double Cyl 85 (40 Int / 45 Ext)</td>
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<td>87</td>
<td>50</td>
<td>37</td>
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<td>Double Cyl 87 (37 Int / 50 Ext)</td>
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<td>45</td>
<td>45</td>
<td></td>
<td>Double Cyl 90 (45 Int / 45 Ext)</td>
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<tr>
<td>95</td>
<td>50</td>
<td>45</td>
<td></td>
<td>Double Cyl 95 (45 Int / 50 Ext)</td>
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<tr>
<td>97</td>
<td>37</td>
<td>60</td>
<td></td>
<td>Double Cyl 97 (37 Int / 60 Ext)</td>
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<tr>
<td>100</td>
<td>50</td>
<td>50</td>
<td></td>
<td>Double Cyl 100 (50 Int / 50 Ext)</td>
</tr>
<tr>
<td><strong>Cylinder &amp; Turn</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>74</td>
<td>37</td>
<td>37</td>
<td></td>
<td>Turn Cyl 74 (37 Int / 37 Ext)</td>
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<tr>
<td>80</td>
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<td>Turn Cyl 85 (40 Int / 45 Ext)</td>
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<td>40</td>
<td></td>
<td>Turn Cyl 95 (45 Int / 50 Ext)</td>
</tr>
<tr>
<td>97</td>
<td>37</td>
<td>60</td>
<td></td>
<td>Turn Cyl 97 (37 Int / 60 Ext)</td>
</tr>
<tr>
<td>100</td>
<td>50</td>
<td>50</td>
<td></td>
<td>Turn Cyl 100 (50 Int / 50 Ext)</td>
</tr>
</tbody>
</table>

Other sizes available on request. Blank key option available – TN6200

Asterion double cylinder

Asterion cylinder and turn

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Sales and Technical Support +44 (0) 1206 713801 www.titon.co.uk
A high performance range of zinc and aluminium door handles suited with Overture E window handles. Available in sprung lever/leaver and lever/pad variations.

Suitable for:

- PVCu
- Aluminium
- Timber

or composite doors

Features and Benefits

- Tested to over 100,000 cycles
- All finishes tested in excess of 240 hours salt spray testing
- Short (211.5mm) and long (240mm) baseplate options
- Sprung handles
- Supplied with two spindle lengths and two screw lengths as standard
- Each pair individually packaged
- Colour coordinated screw heads
**Details**

**Door Hardware**

<table>
<thead>
<tr>
<th>Product</th>
<th>Door Width (mm)</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overture DH-Z or DH-A 210 L1/L1 (Door Handle Short Baseplate Lever1/Lever1)</td>
<td>40-70</td>
<td>TN8100, TN8104</td>
</tr>
<tr>
<td>Overture DH-Z or DH-A 210 L1/P1 (Door Handle Short Baseplate Lever1/Pad1*)</td>
<td>40-70</td>
<td>TN8101, TN8105</td>
</tr>
<tr>
<td>Overture DH-Z or DH-A 240 L1/L1 (Door Handle Long Baseplate Lever1/Lever1)</td>
<td>40-70</td>
<td>TN8102, TN8106</td>
</tr>
<tr>
<td>Overture DH-Z or DH-A 240 L1/P1 (Door Handle Long Baseplate Lever1/Pad1**)</td>
<td>40-70</td>
<td>TN8103, TN8107</td>
</tr>
</tbody>
</table>

* Split Spindle - Door lock specific spindle may be required
** Offset Spindle

NB: Reduction of spindle and/or screws may be required to achieve the full door width range

---

**Manufactured from**

Die cast aluminium
Die cast zinc

**Recommended screws**

Salt spray tested to 240 hours (BS EN1670 Grade 3)
Cycle tested to 100,000 cycles as per EN1906: 2002

**Finishes**

**NOTE:** Not all products are available in all finishes listed below. Please contact us for availability. Suffix product code with:
- -020 (White Paint), -102 (PVD Gold), -812 (Polished Chrome),
- -825 (Satin Chrome), -009 (Dark Chrome)

**More information**

enquiries@titon.co.uk / 01206 713801
Overture DH Stainless Steel

Lever door handle range

Suitable for:
PVCu ✅ ALUMINIUM ✅ TIMBER ✅
or composite doors

A high performance range of stainless steel door handles suited with Overture E window handles. Available in sprung lever/lever and lever/pad variations.

Features and Benefits

→ Tested to over 100,000 cycles
→ All finishes tested in excess of 480 hours salt spray testing
→ Long (240mm) baseplate
→ Sprung handles
→ Supplied with two spindle lengths for 44mm and 70mm doors and two screw lengths as standard
→ Available in lever/lever and lever/pad variations
→ Each pair individually packaged
→ Colour coordinated screw heads
→ Stainless steel 304
→ 10-year corrosion and mechanical guarantee

Sales and Technical Support +44 (0) 1206 713801 www.titon.co.uk
**Details**

**Door Hardware**

<table>
<thead>
<tr>
<th>Product</th>
<th>Door Width (mm)</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overture SS L2/L2 (Door Handle Short Baseplate Lever2/Lever2)</td>
<td>40-70</td>
<td>TN8108</td>
</tr>
<tr>
<td>Overture SS L2/P2 (Door Handle Short Baseplate Lever2/Pad2*)</td>
<td>40-70*</td>
<td>TN8109</td>
</tr>
</tbody>
</table>

NB: Reduction of spindle and/or screws may be required to achieve the full door width range

<table>
<thead>
<tr>
<th>Door Thickness (mm)</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>TN 8003/099</td>
</tr>
<tr>
<td>70</td>
<td>TN 8004/009</td>
</tr>
</tbody>
</table>

**Manufactured from**

Stainless steel 304
Zinc alloy cradle

**Recommended screws**

BS EN 1670 Grade 5 (480 hours)
Cycle tested to 100,000 cycles as per EN1906: 2002

**Finishes**

*NOTE:* Not all products are available in all finishes listed below. Please contact us for availability.
Suffix product code with: -102 (PVD Gold), -812 (Polished Chrome), -825 (Satin Chrome)

**More information**

enquiries@titon.co.uk / 01206 713801
Intermediate locking handle for Bi-Fold doors

Suitable for:

ALUMINIUM

Features and Benefits

- Premium product
- Can be used without the requirement for additional “D” handles
- No visible screws in the closed or open positions
- Side entry lock mechanism avoids key damage to door
- Fixing screws and spindle included
- A range of standard colours/finishes
- Special colours/finishes possible
- Non-locking option
- 13mm deep base-plate option

Gearbox

- Small dimensions
- 2 x 7mm detachable packers included
- Optional “prep” cover

43mm fixing centres

Gearbox
Door Hardware

Genesis Accessories

Sliding folding door accessories

Features and Benefits

Intermediate Hinges
- 2 x clamping machine screws
- 2 x final-fix self-tapping screws
- Profile location nibs
- Fewer components than competitor hinges
- Clamping plates grub screw fix to profiles for transportation
- Black or white options
- Special colours/finishes possible
- “D” handle option

Locking Components
- Threaded lock rods
- Various nylon rod ends to suit popular systems
- Optional end guides

Roller Sets
- Integral shroud for dust protection and aesthetics
- High quality needle roller bearings
- Strong cast construction
- Black or white options
- Special colours/finishes possible
- Adjustable or non-adjustable versions
The Revelation handle offers 3-in-1 functionality in a single piece of kit, replacing a “D” handle hinge, a key-lockable mechanism to secure panels and a foldable interior handle for better leverage when opening or closing bi-fold doors.

This bi-fold door hardware eliminates the need for intermediate pendulum handles and lock cylinders, for clean lines and appearance to your internal bi-folding door, quicker installation time and reduced hardware costs.

Features and Benefits

→ Multi functional
→ Eliminates the need for a “D” style hinge pull
→ Robust
→ Patent applied for
→ Allows for single handed door closing and shootbolt locking
→ Unique design
→ Standard fixing/spindle centres to suit most lockcases
→ A range of standard colours/finishes
→ Fixing screws and spindle included
## Details

<table>
<thead>
<tr>
<th>Base Type</th>
<th>Chrome Grip</th>
<th>Satin Chrome Grip</th>
<th>Stainless Steel Look Grip</th>
<th>Black Grip</th>
<th>9010 White Grip</th>
<th>9910 HIPCA Grip</th>
<th>7016 Matt Grip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Base</td>
<td>REVBKCH</td>
<td>REVBKSC</td>
<td>REVBKST</td>
<td>REVBK005</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9010 White Base</td>
<td>REV9010CH</td>
<td>REV9010SC</td>
<td>REV9010ST</td>
<td>REW9010</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9910 HIPCA Base</td>
<td>REV9910CH</td>
<td>REV9910SC</td>
<td>REV9910ST</td>
<td>REW9910</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7016 Matt Base</td>
<td>REV7016CH</td>
<td>REV7016SC</td>
<td>REV7016ST</td>
<td>REW7016M</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Door Hardware**

Sales and Technical Support +44 (0) 1206 713801  www.titon.co.uk
Overture Door Accessories

Suitable for:
- PVCu
- TIMBER
- or composite doors with a 16mm Eurogroove

A suited range of door furniture for all door materials including: high quality letter plate, door knocker, numerals, viewers and door chain.

Designed to be used in conjunction with the Overture DH door handle range, hinges and locks.

Features and Benefits

Fully suited range includes:
- Overture Door Knockers - Urn design door knockers with or without aperture for Overture V Door Viewer
- Overture V Door Viewers - Viewers of different lengths, with minimum view angle of 120° precision optical glass with cover. Viewers are adjustable to fit doors 35mm to 90mm thick
- Overture Letter Plate - High quality letter plate
- Overture Door Chain - Acts as a visible deterrent, enables conversation without allowing access to visitors
- Overture Numerals - Range of numerals and letters
- External fittings, in all finishes, tested to a minimum of 240 hours salt spray
Details

Manufactured from
Zinc or Aluminium

Standards
Salt spray tested to 240 hours (BS EN1670 Grade 3)
Letter Plate – Cycle tested to 50,000cycles

Finishes
NOTE: Not all products are available in all finishes listed below.
Please contact us for availability. Suffix product code with: -020 (White Paint), -102 (PVD Gold), -812 (Polished Chrome), -825 (Satin Chrome), -002 (Black Paint), -009 (Dark Chrome)

More information
enquiries@titon.co.uk / 01206 713801

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overture LP Set (Letter Plate Inner &amp; Outer)</td>
<td>TN8200</td>
</tr>
<tr>
<td>Overture DK Urn V (Door Knocker with viewer hole)</td>
<td>TN8300</td>
</tr>
<tr>
<td>Overture DK Urn (Door Knocker without viewer hole)</td>
<td>TN8301</td>
</tr>
<tr>
<td>Overture V (Door Viewer) 35mm-60mm</td>
<td>TN8303</td>
</tr>
<tr>
<td>Overture V (Door Viewer) 60mm-90mm</td>
<td>TN8302</td>
</tr>
<tr>
<td>Overture N (Numeral(s) &amp; Letters)</td>
<td></td>
</tr>
<tr>
<td>'0' - TN8409</td>
<td>'1' - TN8400</td>
</tr>
<tr>
<td>'2' - TN8401</td>
<td>'3' - TN8402</td>
</tr>
<tr>
<td>'4' - TN8403</td>
<td>'5' - TN8404</td>
</tr>
<tr>
<td>'6' - TN8405</td>
<td>'7' - TN8406</td>
</tr>
<tr>
<td>'8' - TN8407</td>
<td>'9' - TN8408</td>
</tr>
<tr>
<td>'A' - TN8410 'B'</td>
<td>'B' - TN8411</td>
</tr>
<tr>
<td>Overture SC (Door Chain) TN8500</td>
<td></td>
</tr>
</tbody>
</table>

*Refer to fixing instructions for exact routing detail
Overture flag hinge

Suitable for:

PVCu

Features and Benefits

→ Designed specifically for PVCu door applications
→ 3D adjustability:
  Lateral +5mm / -5mm
  Height +4mm / -1mm
  Compression +0.75mm / -0.75mm
→ Accommodate profiles with a step of 14.5mm – 26.5mm
→ Standard and deep body options available
→ Stainless steel stabilising pins locate into the reinforcement providing enhanced security
→ Non-handed. Suitable for inward and outward opening doors
→ Secure cover plate
→ Fixing jig available
→ Designed to meet the requirements of PAS 24 as part of a compliant door system
→ Supplied with fixing screws
  (Fixing Screws 4.8 x 29mm & Fixing Screws 4.8 x 45mm)
→ Packed in 24 off/box in trays
→ Spares packed with cover screw top and side caps
## Door Hardware Details

### Manufactured from
- Stainless steel SS 430
- Die cast zinc
- Plastic moulded nylon

### Performance
- BS EN 1670 Grade 4 (240 hours)
- 50,000 cycles with 3 hinges carrying 120kg

### More information
enquiries@titon.co.uk / 01206 713801

### Product Code
- **TN9100**: Standard Body
- **TN9200**: Deep Body

### Manufactured from
- **Stainless steel SS 430**
- **Die cast zinc**
- **Plastic moulded nylon**

### Performance
- **BS EN 1670 Grade 4 (240 hours)**
- **50,000 cycles with 3 hinges carrying 120kg**

### Finishes
- **020**: White
- **002**: Black
- **763**: Light Oak (RAL 8001)
- **965**: Dark Brown (RAL 8019)
- **825**: Satin Chrome
- **812**: Polished Chrome
- **102**: PVD Gold

### Product Code
- **TN9400-020**: Spares Pack Pk 10 – White
- **TN9400-002**: Spares Pack Pk 10 – Black
- **TN9400-763**: Spares Pack Pk 10 – Light Oak
- **TN9400-965**: Spares Pack Pk 10 – Dark Brown
- **TN9300**: Flag Hinge Drill Jig
- **TN9000-010**: Security Anti-Lift Block

### More information
enquiries@titon.co.uk / 01206 713801

---

**Compression**
- Horizontal: +/- 0.75mm
- Vertical: +/- 5mm

**Security anti-lift block**
Features and Benefits

**Sobinco Door Hinges**

- Clampable hinges
  - Hinge clamps on; no drilling or milling required
- Suitable for rebated ‘open in and out’ doors with eurogroove
- Door weight up to 180kg (3-part hinge)
- 2 dimensional adjustment

**Sobinco Door Hinges**

- Suitable for heavy duty applications; door weight up to 120kg 2-part, 180kg 3-part
- 2-part hinge available with 2D or 3D adjustment. 3-part hinge is 2D only
- Aluminium cover caps cannot be removed from the outside
- Jigs available
- Direct-screwed or clamp-block fixing options

Features and Benefits

**Sobinco Door Hinges**

- A wide range of cylinder operated door locks with many features, including integration with Orca exit-panic gear.
Sobinco Door Locks, Hinges and Fittings

Features and Benefits

**Sobinco Sobinox Handles and Pulls**

Handles
- Manufactured from high grade stainless steel AISI 304
- 8mm square spindle as standard
- Many shapes and combinations of grip/backplate
- Long and short backplates available
- Matching window handles and Sobinco door hinges

Pulls
- Various shaped designs
- Various sizes

**Stainless Steel Escutcheons and Door Knobs**

Escutcheons
- Aluminium cover caps cannot be removed from the outside

Door knobs
- Fixed and turn knobs available
- Turn knob features red-green indicator

**Features and Benefits**

**Sobinco Door Locks**

- Key/key
- Key/thumb or knob
- Half cylinders
- High-security cylinder
- Mastering
Features and Benefits

**Sobinco Lift-Slide**

- Ideal for very heavy and large doors
- Suitable for 2, 4 and 6 part lift-slide doors
- Easy operation even with very heavy doors

**Size Range**

- Vent weight: 150 – up to 250kg
- Vent width: 625 – 3265mm
- Vent height: 730 – 2860mm
Features and Benefits

**BT Lock**

- Cylinder operated two-point lock suitable for most sliding door systems
- Maximum distribution of forces by a single turn of the cylinder key or knob. Closing and unlocking by a single turn of 360° with the key
- Manufactured from high quality stainless materials
- Burglary safe:
  - Heavy anchored clamping pieces on the ends of the faceplate provide a strong resistance in case of a burglary attempt or misuse
  - Standard with a SKG**- stars certification
  - In combination with anti-lift, BT Lock meets RC2 security class
- Smooth operation
- Easy assembly of the fittings
- High corrosion resistance of grade 4 (240u – EN1670)
- Non-handed mishandling device: no damage by misuse
- Anti-tilt function

Compatible with Sobinco Horizon finger pull and Horizon security finger pull.
To ensure Titon products continue to work effectively, it is important to ensure they are installed correctly and well maintained throughout their lifecycle. Failure to do so can invalidate your product warranty.

For many products, it is sufficient to clean them using only a damp cloth and mild domestic detergent. Abrasive or corrosive cleaners should not be used.

Hinges and locking devices should be lubricated after cleaning with a light machine oil or grease with an acid free lubricant, such as petroleum jelly.

Powered ventilation products require regular servicing by a qualified engineer.

For specific details of how to care for your Titon product, visit the Titon website. Each product has a documentation section which, if relevant, includes instructions for installing, operating or maintaining each product.

Each product must be installed, used and maintained according to our written instructions (or those of our suppliers) or, if we have not produced such instructions, according to normal good working practices.

It is the customer’s responsibility to ensure product suitability in any application.
Further Information

If you require more details on Titon's products and services please, go to www.titon.co.uk. The website is full of comprehensive information on the complete Titon range. Any recent product specification changes will appear on the site and a subscription service is available to automatically inform you of updates.

To subscribe to Titon email updates go to www.titon.co.uk/subscribe

To try out the various security hardware combinations available – and discover which products can be grouped together to achieve PAS 24 status, go to www.titonarea24.co.uk

To purchase online, please go to www.titondirect.com for a range of products and accessories.

For information and advice regarding toxic home syndrome and poor indoor air quality go to www.myhealthmyhome.com

For details on the Code for Sustainable Homes rating scheme for sustainability of new dwellings, go to www.planningportal.gov.uk/codeforsustainablehomes

For Government information on Building Regulations in England & Wales, go to www.communities.gov.uk and search for ‘Building Regulations’

For Scottish Technical Standards, go to www.scotland.gov.uk/Topics/Built-Environment/Building/Building-standards

For more information on new home building and NHBC Guides, visit the NHBC foundation HYPERLINK www.nhbcfoundation.org

For information on BEAMA, the trade associations representing the energy and power industry go to www.beama.org.uk

For further information on SAP Appendix Q, how buildings are assessed for energy performance and a list of applicable products, go to www.ncm-pcdb.org.uk

The trade association for ventilation in housing is the Residential Ventilation Association (RVA), part of the Heating Ventilating & Air Conditioning Manufacturers Association, go to www.feta.co.uk/rva

The trade association for the fenestration industry, the Glass & Glazing Federation (GGF), can be found at www.ggf.co.uk

The trade association for aluminium in building, the Council for Aluminium in Building (CAB), can be found at www.c-a-b.org.uk

The trade association for timber windows, the British Woodworking Federation (BWF), can be found at www.bwf.org.uk

The trade association for the plastics industry, the British Plastics Federation (BPF), can be found at www.bpf.co.uk

For details on energy efficiency, go to the Energy Savings Trust (EST) www.energysavingtrust.org.uk

NOTE: All website addresses correct at time of going to press.
Domestic ventilation products for all types of dwellings

Ventilation has become one of the hot topics of the building industry in recent years – particularly now that the Building Regulations for England & Wales are revised on a regular basis.

We have a fully trained and experienced team which specialises in domestic ventilation. They work with house builders and developers, as well as local authorities and housing associations, to provide the right solution for any development to ensure it complies with Part F (Ventilation) of the Building Regulations and other Technical Standards.

Titon offers products to comply with Part F:

Contact: ventsales@titon.co.uk