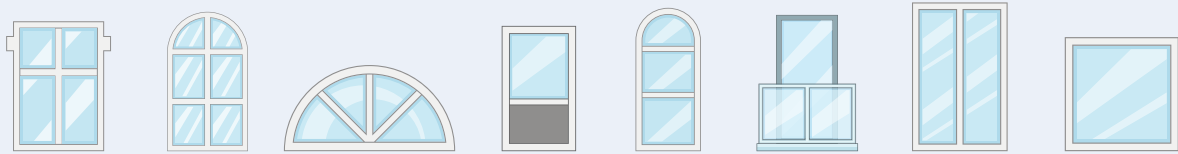


# Recommended Fixings Manual



# legend

“ Legend is Synseal’s most versatile system. Using the same range of single leg beads, it’s made it easy to fabricate both ovolo and chamfered profile options using the same system, offering maximum choice for customers. Legend is guaranteed to deliver installed good looks, energy efficiency and fail-safe performance. ”





The Legend range includes top hung or side hung casement windows, tilt and turn casement windows, multi-light combinations of fixed light and opening windows, residential doors, double doors and patio doors.

Legend has both chamfered and ovolo profile options that utilise the same range of single leg beads. Legend also has three outer frame size options, a complete series of structural reinforcements, four extension profiles, and a composite door outer frame. This makes it one of the most comprehensive window suites available, perfect for both domestic and commercial applications.

Every aspect of Synseal's manufacturing processes, from blending to extrusion, injection moulding to foil finishing, from product design and development to full-manufacture of vertical sliding sash windows and conservatory roof kits, is undertaken on-site in Huthwaite, Nottinghamshire.



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2	Chart of screws recommended for Legend system	4
3	Internally Beaded Casement Windows	5 - 20
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## The Correct Fastener

**rapierstar®** the market-leading supplier of screws to the PVC-U window industry, with its unrivalled technical expertise, has worked together with your systems company to produce this recommended fixings manual. The following pages contain advice on the correct fastener for each application.

## Star Performance

**rapierstar® StarPVCU** window screws have conformed with all relevant industry standards, guidelines and recommendations for some time and are intended to be used where mechanical resistance, stability and safety of use in the sense of the 'essential requirements' of Annex I of the Construction Products Regulation 305/2011 are to be fulfilled.

## Surpassing Standards

**rapierstar®** branded product ranges have been certified by European approved 'Notified Bodies', confirming initial type testing, assessment and verification of constancy of performance.

**BS EN 14351-1:2006+A1:2010**, Windows and doors product standard, performance characteristics. **rapierstar®** branded screws conform with the requirements of harmonised European standard BS EN 14351-1 and have been type tested to meet the standard of BS EN 14566:2008+A1:2009. By conforming with this standard, we are independently verifying, that the head/thread/point maintain consistency of design. This also guarantees that steel screws are produced to EU standards and that factory controls are in place during manufacture.

**PAS 24:2016** Windows and doors fabricated with correct **StarPVCU** screws exceed PAS 24:2016 - enhanced security performance requirements for doorsets and windows in the UK.

**BS EN 1670:2007** Electroplating coatings of **rapierstar®** products comply with the provisions of ISO 2081:2008 and exceed corrosion resistance testing to BS EN 1670 grade 4 for Carbon Steel screws and BS EN 1670 grade 5 for Stainless Steel screws.

**ISO 9001**, is defined as the international standard that specifies requirements for a quality management system (QMS). Organizations use the standard to demonstrate the ability to consistently provide products and services that meet customer and regulatory requirements. **rapierstar®** is an ISO 9001:2015 registered company and all our window screws are manufactured by ISO 9000 certificated companies.

## Screw Tips - Best Practice

**Perpendicular Insertion:** Ensure that any fastener is applied at 90° to the material at all times.

**Mechanical Damage:** It is important to replace the screwdriver bit regularly. A worn screwdriver bit may not engage fully into the recess, causing damage to the plating of the screw with the resulting likelihood of corrosion.

**Torque Setting:** The use of excessive torque may lead to stripping and failure of the fastener. The torque setting on the screwdriver should be the minimum required to effect a complete fastening.

**Screwdriver Speed:** It is recommended by the Glass & Glazing Federation and the British Plastics Federation that driver speeds between 1500 rpm and 2000 rpm are used.

## Avoid Corrosive Elements

Several factors can cause screws to rust, each of which can be accelerated depending on the situation of the application.

**Silicone sealants** - avoid acetic acid cured high and low modulus sealants. The vapour alone is sufficient to cause corrosion. Therefore a neutral curing sealant is recommended.

**Acrylic fillers** - contact with any carbon steel component will cause corrosion.

**Cleaners** - aggressive cleaning substances, especially those containing ammonia, chlorine etc. can reduce the effectiveness of the protective plating and should be avoided.

**New-build** - screws should not come into contact with wet plaster or cement, as the lime content will cause corrosion. Also, the acid wash that is often used to clean brickwork is highly corrosive and should be avoided completely. **Where any of the above conditions are likely to exist, the use of stainless steel is recommended.**

## 100% Stainless, 100% Solution

For coastal or heavily polluted regions of the country, when attaching stainless steel hardware, or where prolonged guarantees are being offered, we recommend that stainless steel screws should be used.

### Austenitic Stainless Steel - 302

302 grade Austenitic stainless steel is ideal for use in PVC-U only applications, giving excellent corrosion resistance.







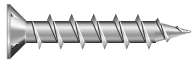
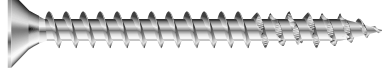


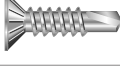
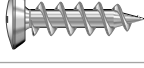





### Enhanced Martensitic Stainless Steel - 410

410 grade Martensitic stainless steel is a harder grade which is capable of self-drilling and tapping into steel reinforcement. Screws are tested by UKAS accredited test bodies to beyond 3000 hours salt spray test in accordance with BS EN ISO 9227.

### Bi-Metallic

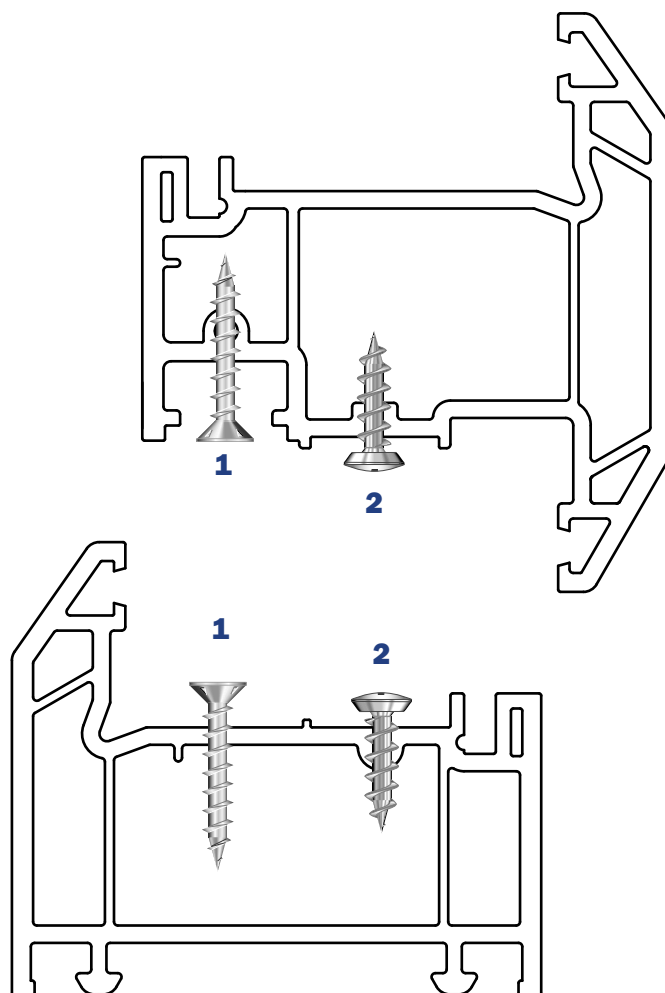
Austenitic stainless steel fastener with a carbon steel drill tip. Suitable for reinforced applications. Combination recess with square drive giving effective 'stick-fit' onto the driver bit for ease of insertion during fabrication and common Phillips no2 recess for on-site adjustment.

**In any application where fasteners are required to be guaranteed free from hydrogen embrittlement or any other form of hydrogen induced cracking (HIC), Rapierstar always recommend that fasteners manufactured from a grade of stainless steel considered suitable for the end application be specified and used.**

Item	Screw	Code	Option Code	Application
1		BSR 4.2 X 42	Z -	Flag Hinge to Frame
2		CFG 4.3 X 16	Z S	
3		CFG 4.3 X 20	Z S	PTR Retention
4		CFG 4.3 X 25	Z S	Gearing/Keep to Frame (PTR, Unreinforced)
5		CFG 4.3 X 30	Z S	
6		CFG 4.3 X 65	Z -	
7		CFG 4.8 X 25	Z S	
8		CPF 5.0 X 50	Z -	
9		CSR 3.9 X 19	Z S	Keep to frame (5RS-FT1M/L/H)
10		CSR 3.9 X 25	Z S	Keep to Frame (Reinforced)
11		RSR 3.9 X 16	Z S	Reinforcement Retention (5RS-FT1M/L/H)
12		SFG 4.3 X 16	Z S	Friction Stay to Frame (Unreinforced)
13		SFG 4.3 X 20	Z S	Friction Stay to Frame (PTR)
14		SFG 4.3 X 25	Z S	
15		SSR 3.9 X 16	Z S	Friction Stay to Frame (5RS-FT1M/L/H)
16		SSR 3.9 X 19	Z S	
17		WSR 4.8 X 50	Z -	

Colour key:  Carbon Steel Zinc  Stainless Steel  Carbon Steel Yellow

**Internally Beaded Casement Window - Unreinforced**  
**5F3 60mm Outer Frame**  
**5V2 T Sash**



CFG 4.3 x 25 Z

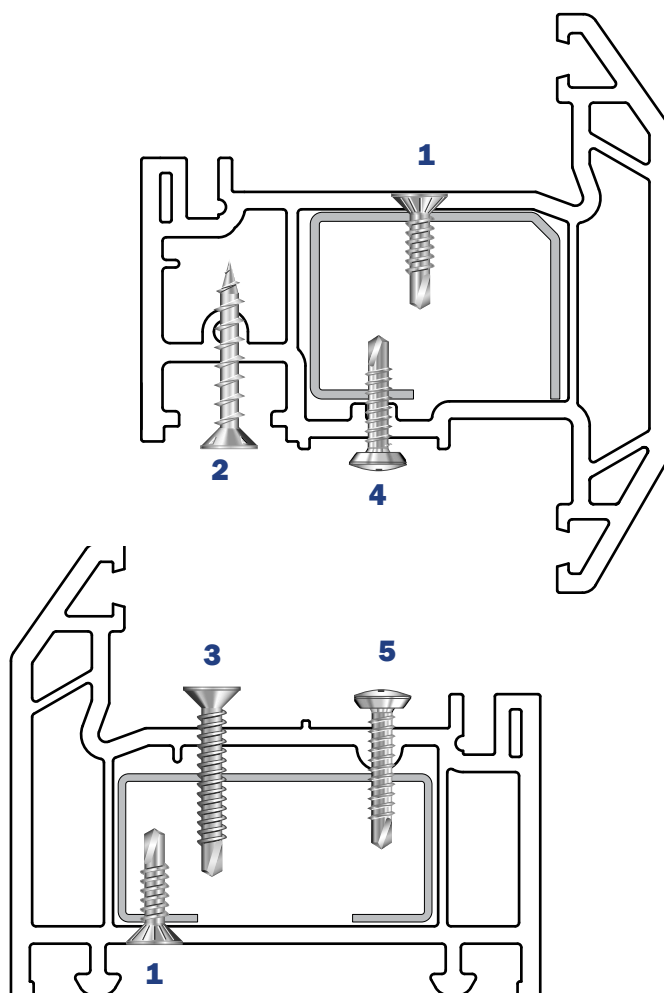
Gearing to Sash & Keep to Frame

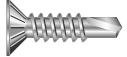






SFG 4.3 x 16 Z

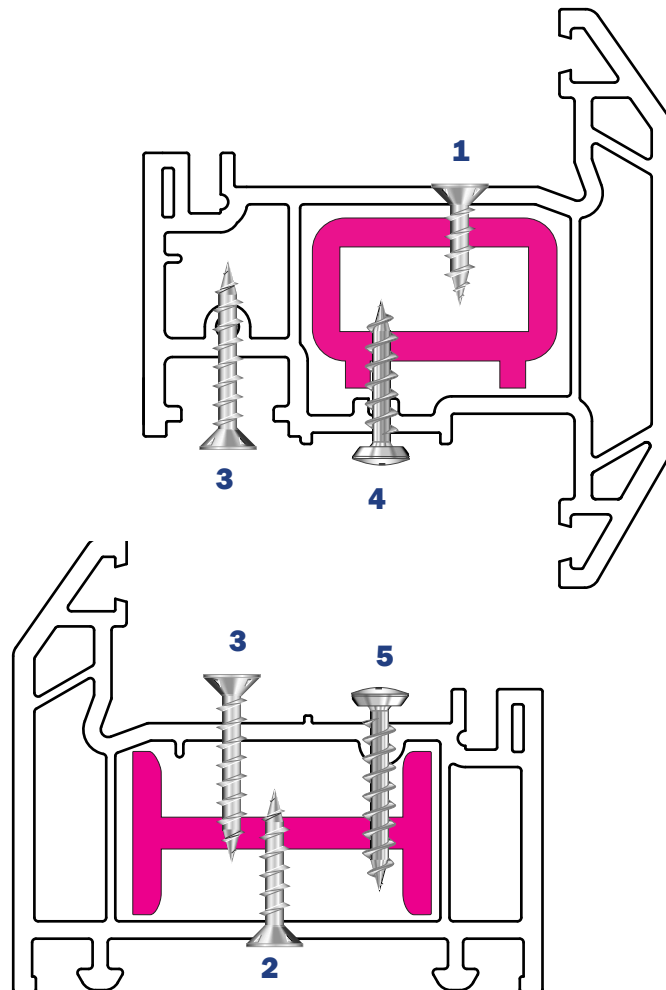
Friction Stay to Sash & Frame.




**Internally Beaded Casement Window - Reinforced**  
**5F3 60mm Outer Frame with 5RS-F3 Reinforcement**  
**5V2 T Sash with 5RS-V2 Reinforcement**



<b>1</b>		RSR 3.9 x 16 Z	Reinforcement Retention
<b>2</b>		CFG 4.3 x 25 Z	Gearing to Sash
<b>3</b>		CSR 3.9 x 25 Z	Keep to Frame
<b>4</b>		SSR 3.9 x 16 Z	Friction Stay to Sash
<b>5</b>		SSR 3.9 x 19 Z	Friction Stay to Frame

**Internally Beaded Casement Window - PTR Reinforced**  
**5F3 60mm Outer Frame with PT16 Reinforcement**  
**5V2 T Sash with PT14 Reinforcement**

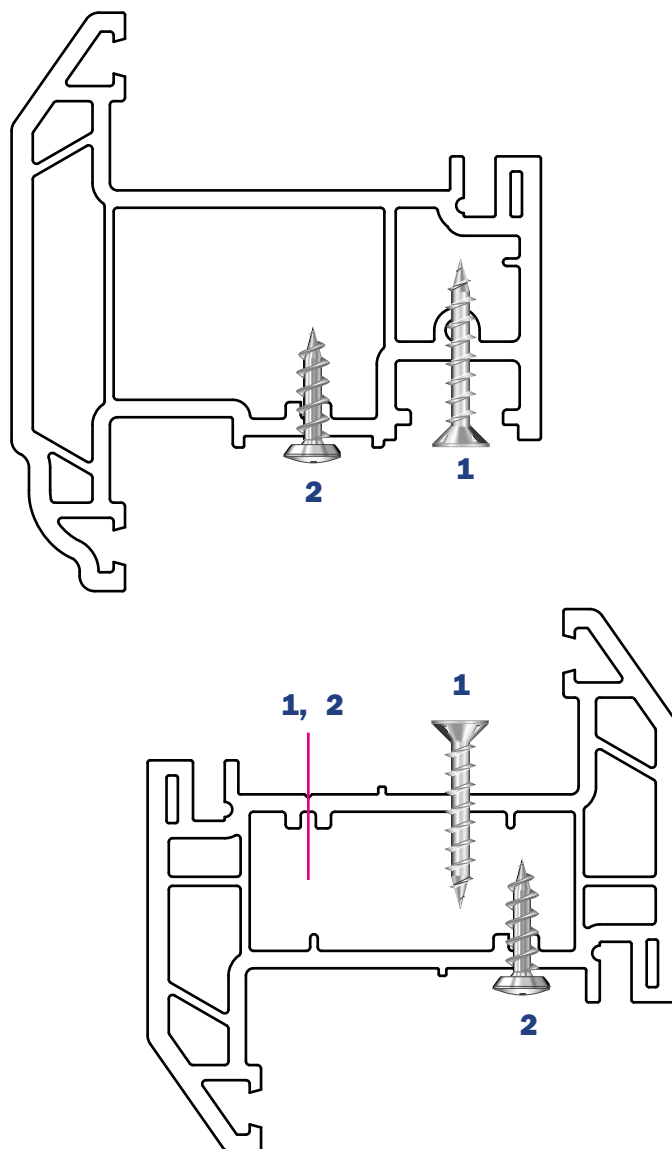




<b>1</b>		CFG 4.3 x 16 Z	PTR Retention to Sash
<b>2</b>		CFG 4.3 x 20 Z	PTR Retention to Frame
<b>3</b>		CFG 4.3 x 25 Z	Gearing to Sash & Keep to Frame
<b>4</b>		SFG 4.3 x 20 Z	Friction Stay to Sash
<b>5</b>		SFG 4.3 x 25 Z	Friction Stay to Frame

**Internally Beaded Casement Window - Unreinforced**

**5V4 Ogee T Sash**

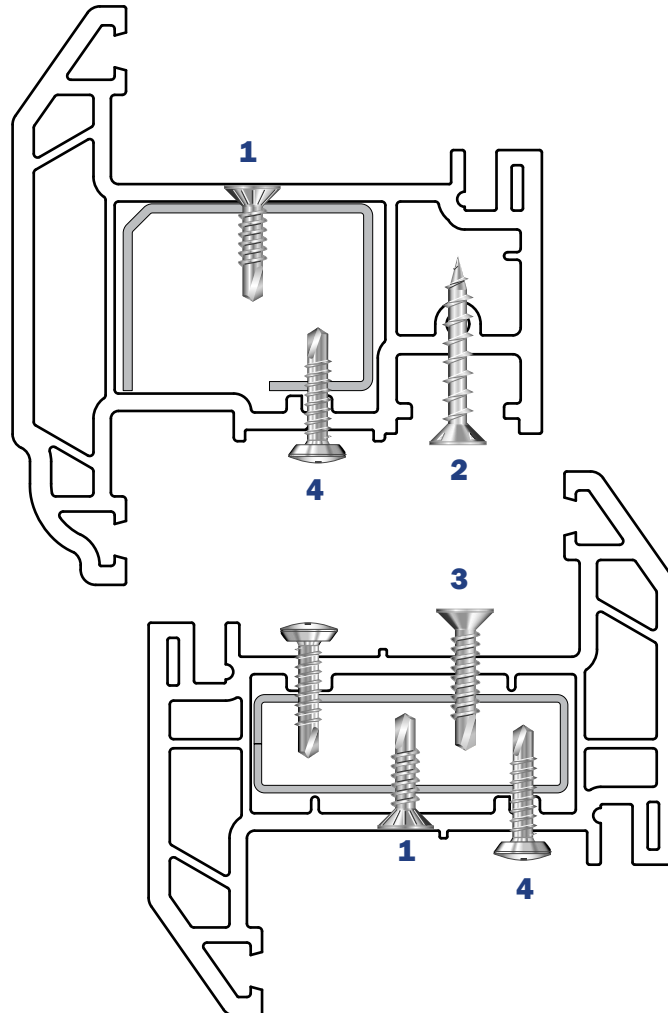
**50L1 72mm Odd Leg**







- |          |   |                |                                 |
|----------|---|----------------|---------------------------------|
| <b>1</b> |  | CFG 4.3 x 25 Z | Gearing to Sash & Keep to Frame |
| <b>2</b> |  | SFG 4.3 x 16 Z | Friction Stay to Sash & Transom |

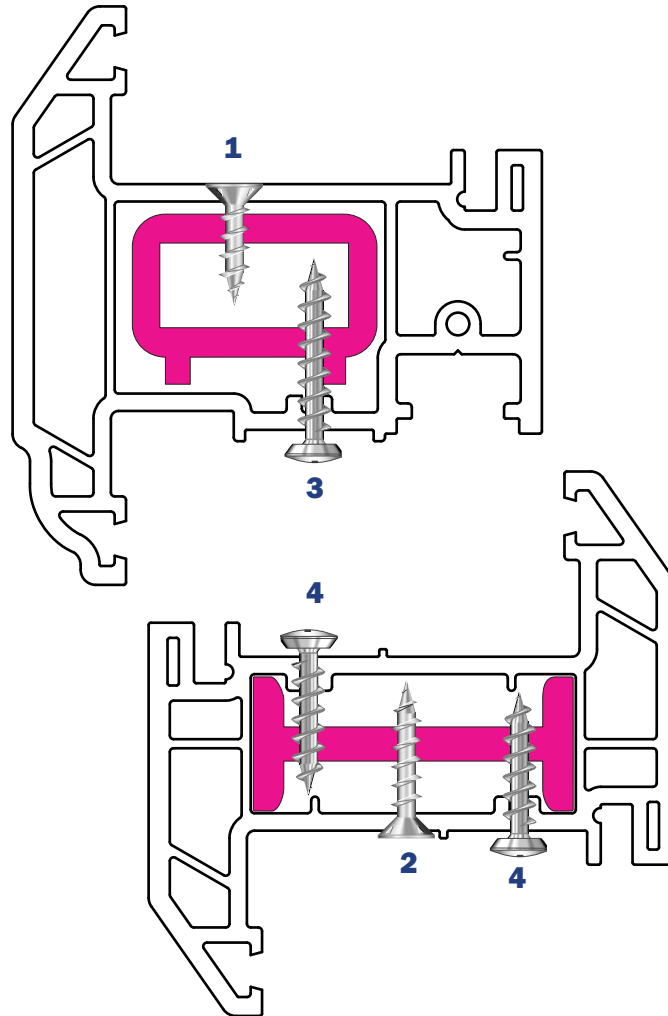






**Internally Beaded Casement Window - Reinforced**  
**5V4 Ogee T Sash with 5RS-V2 Reinforcement**  
**50L1 72mm Odd Leg with 5RS-FT1L Reinforcement**



- |          |   |                |                                 |
|----------|---|----------------|---------------------------------|
| <b>1</b> |  | CFG 4.3 x 16 Z | Reinforcement Retention         |
| <b>2</b> |  | CFG 4.3 x 25 Z | Gearing to sash                 |
| <b>3</b> |  | CSR 3.9 x 19 Z | Keep to Transom                 |
| <b>4</b> |  | SSR 3.9 x 19 Z | Friction Stay to Sash & Transom |

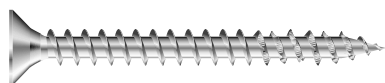
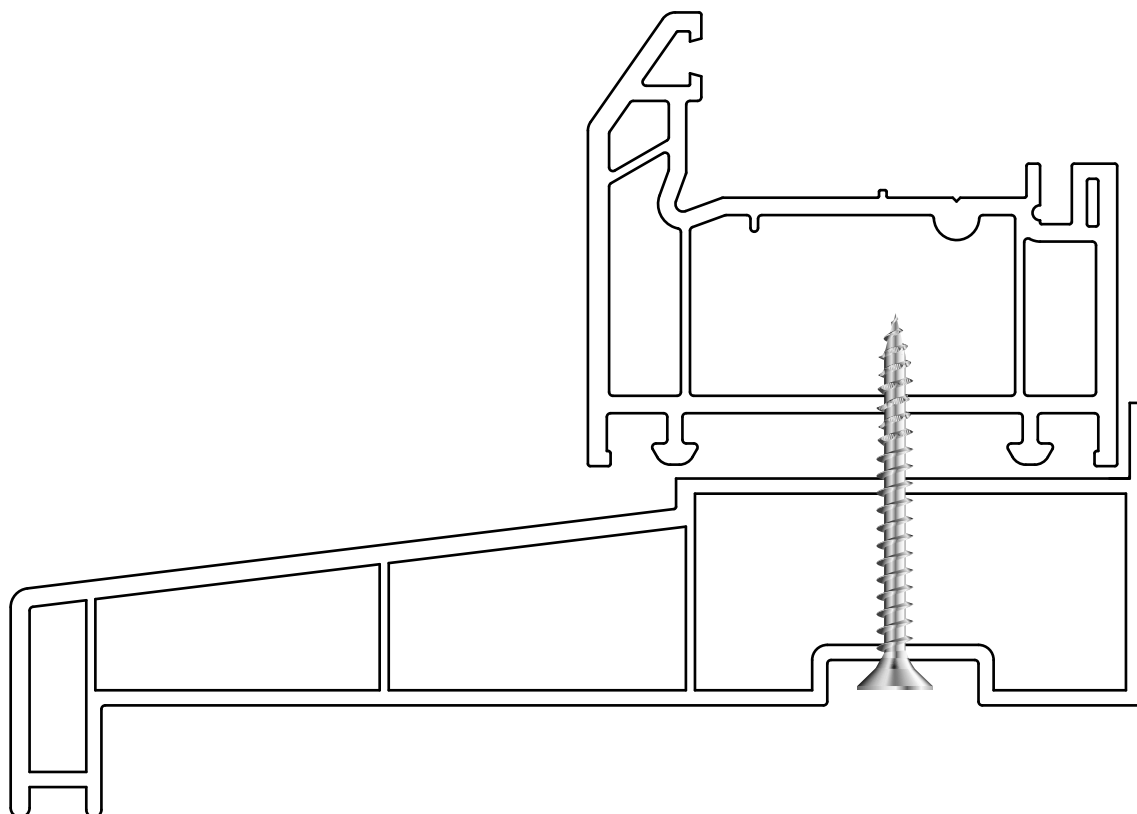
**Internally Beaded Casement Window - PTR Reinforced**  
**5V4 Ogee T Sash with PT14 Reinforcement**  
**50L1 72mm Odd Leg with PT13 Reinforcement**



<b>1</b>		CFG 4.3 x 16 Z	PTR Retention to Sash
<b>2</b>		CFG 4.3 x 20 Z	PTR Retention to Transom
<b>3</b>		SFG 4.3 x 25 Z	Friction Stay to Sash
<b>4</b>		SFG 4.3 x 20 Z	Friction Stay to Frame

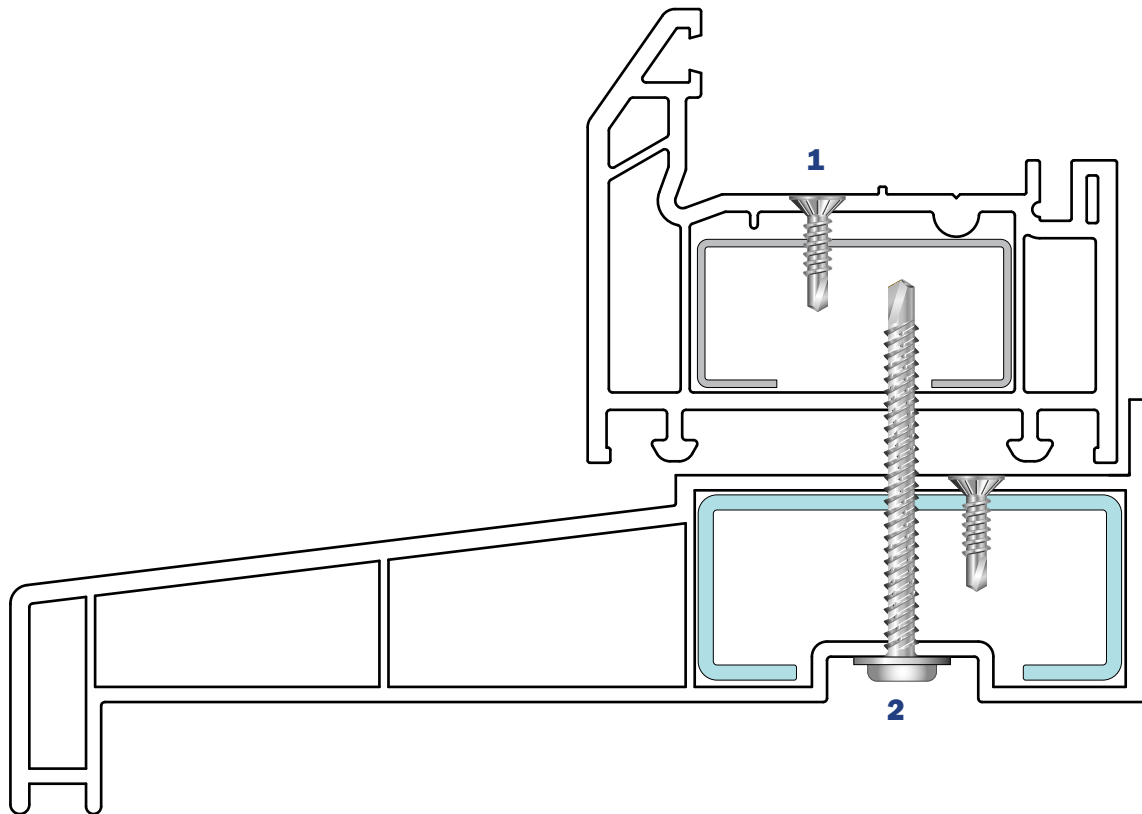
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**Internally Beaded Casement Window - Unreinforced**  
**5F3 60mm Outer Frame**  
**5S01 150mm Sill**



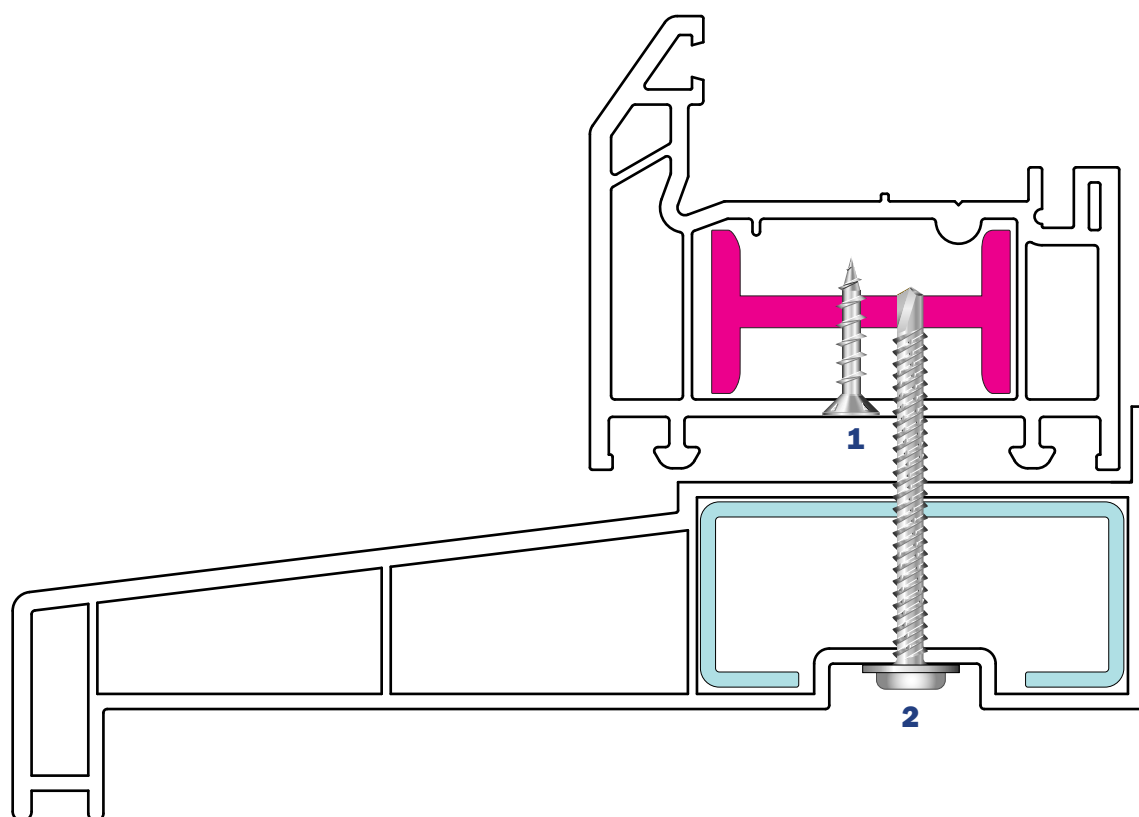
CPP 5.0 x 50 Z Sill to Frame (?)

**Internally Beaded Casement Window - Reinforced**  
**5F3 60mm Outer Frame with 5RS-F3 Reinforcement**  
**5S01 150mm Sill with 5RA-S013 Reinforcement**



- |          |  |                |                         |
|----------|--|----------------|-------------------------|
| <b>1</b> |  | RSR 3.9 x 16 Z | Reinforcement Retention |
| <b>2</b> |  | WSR 4.8 x 50 Z | Sill to Frame (?)       |

**Internally Beaded Casement Window - PTR Reinforced Frame**  
**5F3 60mm Outer Frame with PT16 Reinforcement**  
**5S01 150mm Sill with 5RA-S013 Reinforcement**



**1**



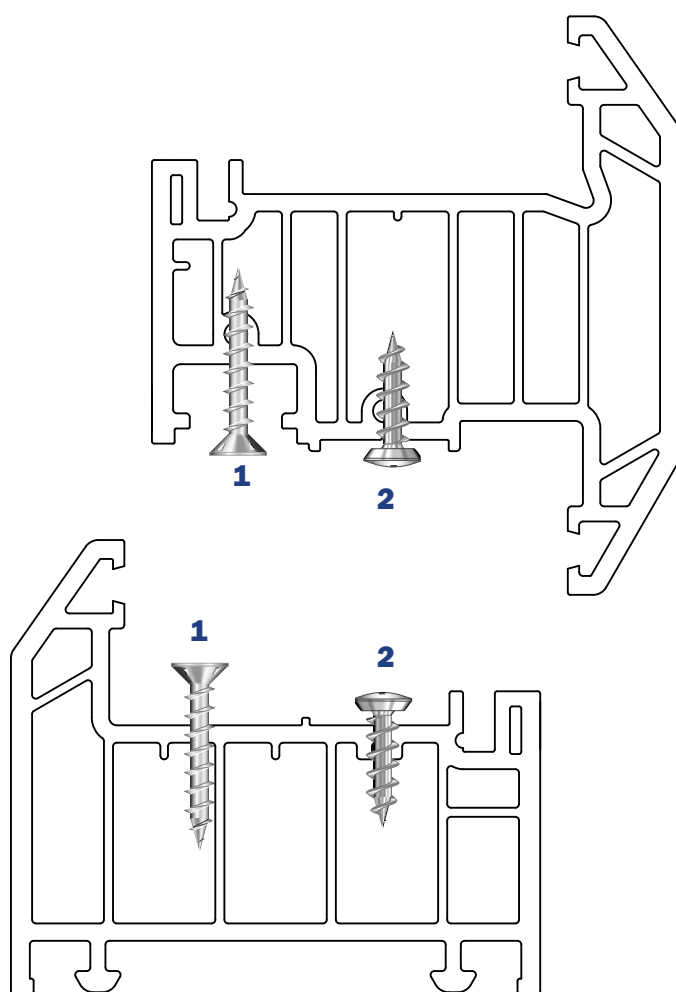
CFG 4.3 x 20 Z PTR to Frame

**2**



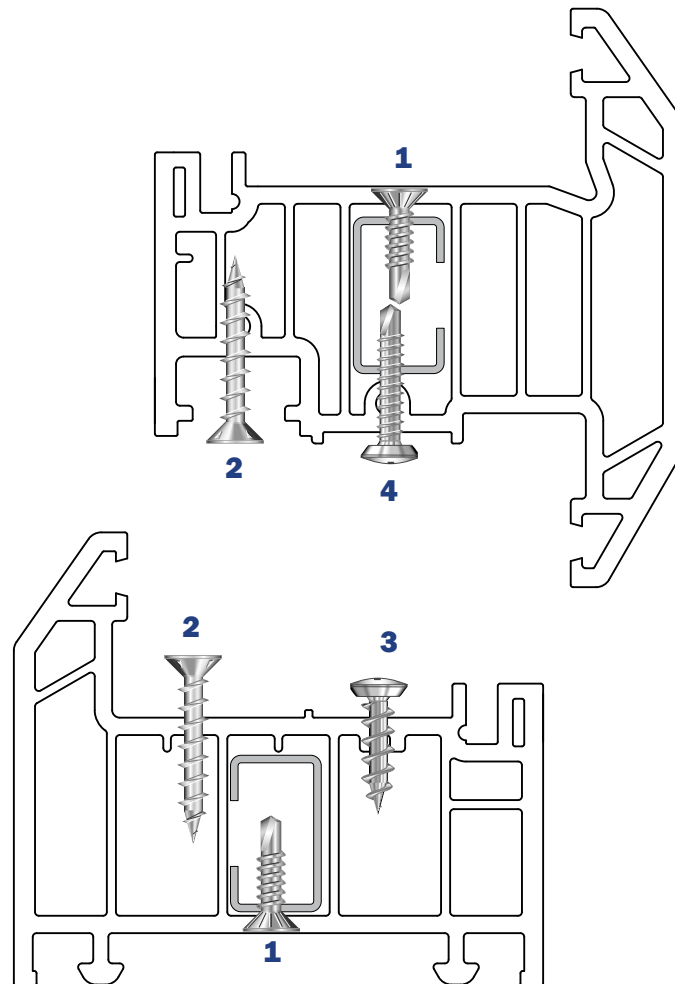
WSR 4.8 x 50 Z Cill to Frame (?)





**Internally Beaded Casement Window - Unreinforced**  
**5F5 60mm Multi-Chamber Outer Frame**  
**5V8 Multi-Chamber T Sash**



- |          |   |                |                                 |
|----------|---|----------------|---------------------------------|
| <b>1</b> |  | CFG 4.3 x 25 Z | Gearing to Sash & Keep to Frame |
| <b>2</b> |  | SFG 4.3 x 16 Z | Friction Stay to Sash & Frame   |

**Internally Beaded Casement Window - Reinforced**  
**5F5 60mm Multi-Chamber Outer Frame with 5RS-F5 Reinforcement**  
**5V8 Multi-Chamber T Sash with 5RS-F5 Reinforcement**

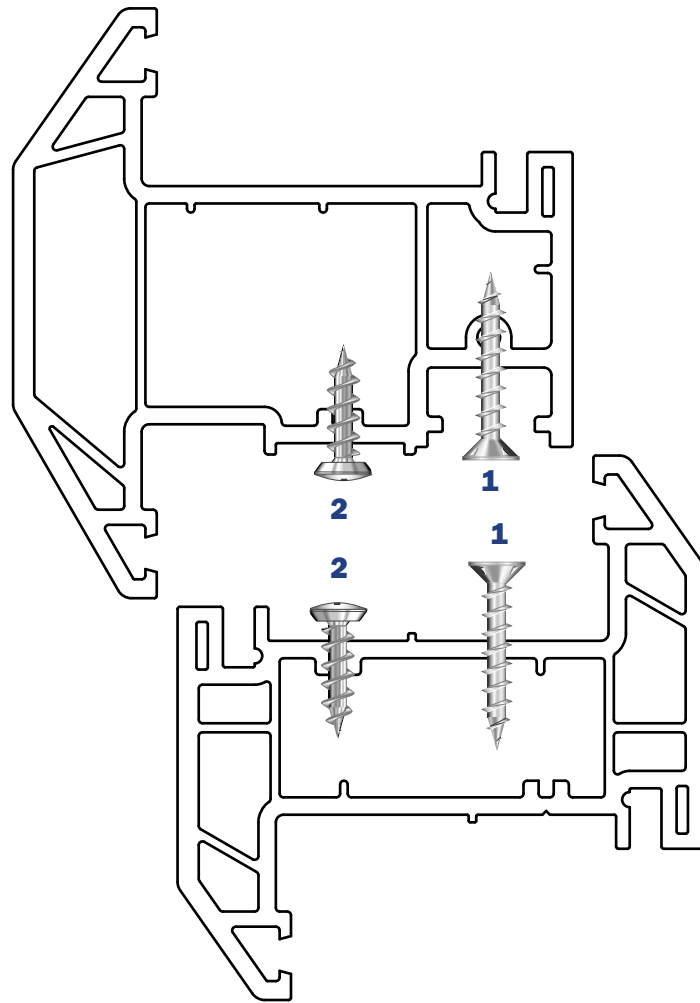


- |          |   |                |                                 |
|----------|---|----------------|---------------------------------|
| <b>1</b> |  | RSR 3.9 x 16 Z | Reinforcement Retention         |
| <b>2</b> |  | CFG 4.3 x 25 Z | Gearing to Sash & Keep to Frame |
| <b>3</b> |  | SFG 4.3 x 16 Z | Friction Stay to Frame          |
| <b>4</b> |  | SSR 3.9 x 19 Z | Friction Stay to Sash           |

**Internally Beaded Casement Window - Unreinforced**

**5V5 74mm T Sash**

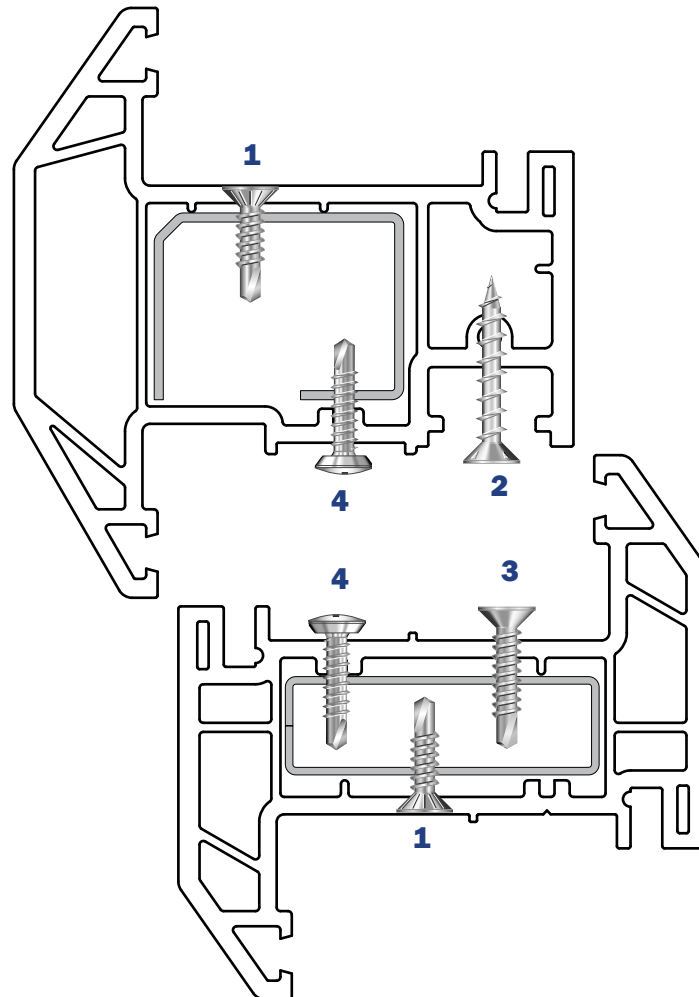
**50L01 72mm Odd Leg**



- |          |   |                |                                   |
|----------|---|----------------|-----------------------------------|
| <b>1</b> |  | CFG 4.3 x 25 Z | Gearing to Sash & keep to Transom |
| <b>2</b> |  | SFG 4.3 x 16 Z | Friction Stay to Sash & Transom   |

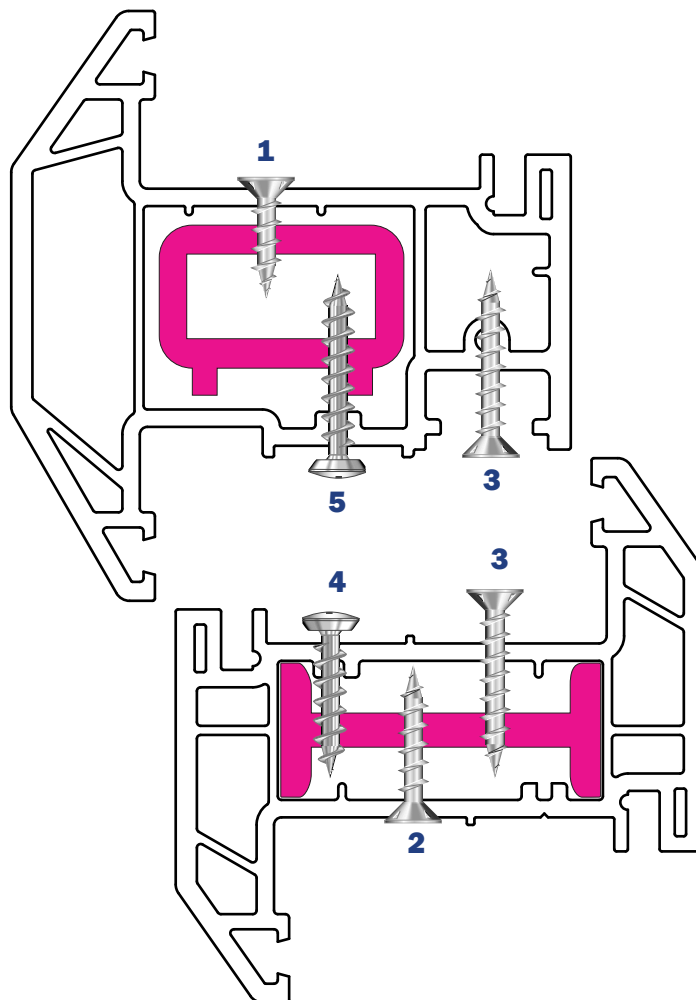







**Internally Beaded Casement Window Reinforced**  
**5V5 74mm T Sash with 5RS-V2 Reinforcement**  
**50L01 72mm Odd Leg with 5RS-FT1L Reinforcement**



- |          |   |                |                                 |
|----------|---|----------------|---------------------------------|
| <b>1</b> |  | RSR 3.9 x 16 Z | Reinforcement Retention         |
| <b>2</b> |  | CFG 4.3 x 25 Z | Gearing to Sash                 |
| <b>3</b> |  | CSR 3.9 x 19 Z | Keep to Transom                 |
| <b>4</b> |  | SSR 3.9 x 16 Z | Friction Stay to Sash & Transom |

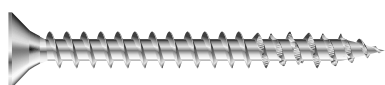
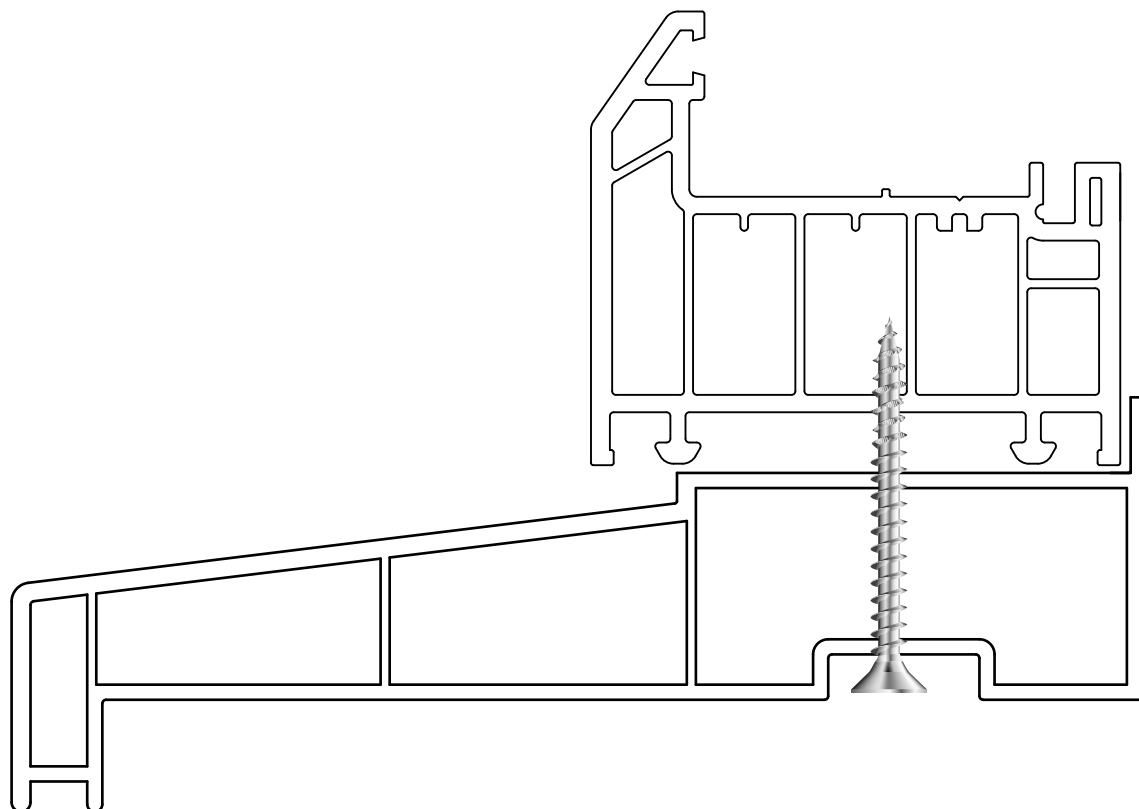
**Internally Beaded Casement Window - PTR Reinforced**  
**5V5 74mm T Sash with PT14 Reinforcement**  
**50L01 72mm Odd Leg with PT13 Reinforcement**



- |          |   |                |                                   |
|----------|---|----------------|-----------------------------------|
| <b>1</b> |  | CFG 4.3 x 16 Z | PTR Retention to Sash             |
| <b>2</b> |  | CFG 4.3 x 20 Z | PTR Retention to Transom          |
| <b>3</b> |  | CFG 4.3 x 25 Z | Gearing to Sash & Keep to Transom |
| <b>4</b> |  | SFG 4.3 x 20 Z | Friction Stay to Transom          |
| <b>5</b> |  | SFG 4.3 x 25 Z | Friction Stay to Sash             |

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**Internally Beaded Casement Window - Unreinforced**  
**5F5 60mm Multi-Chamber Outer Frame**  
**5S01 150mm Sill**

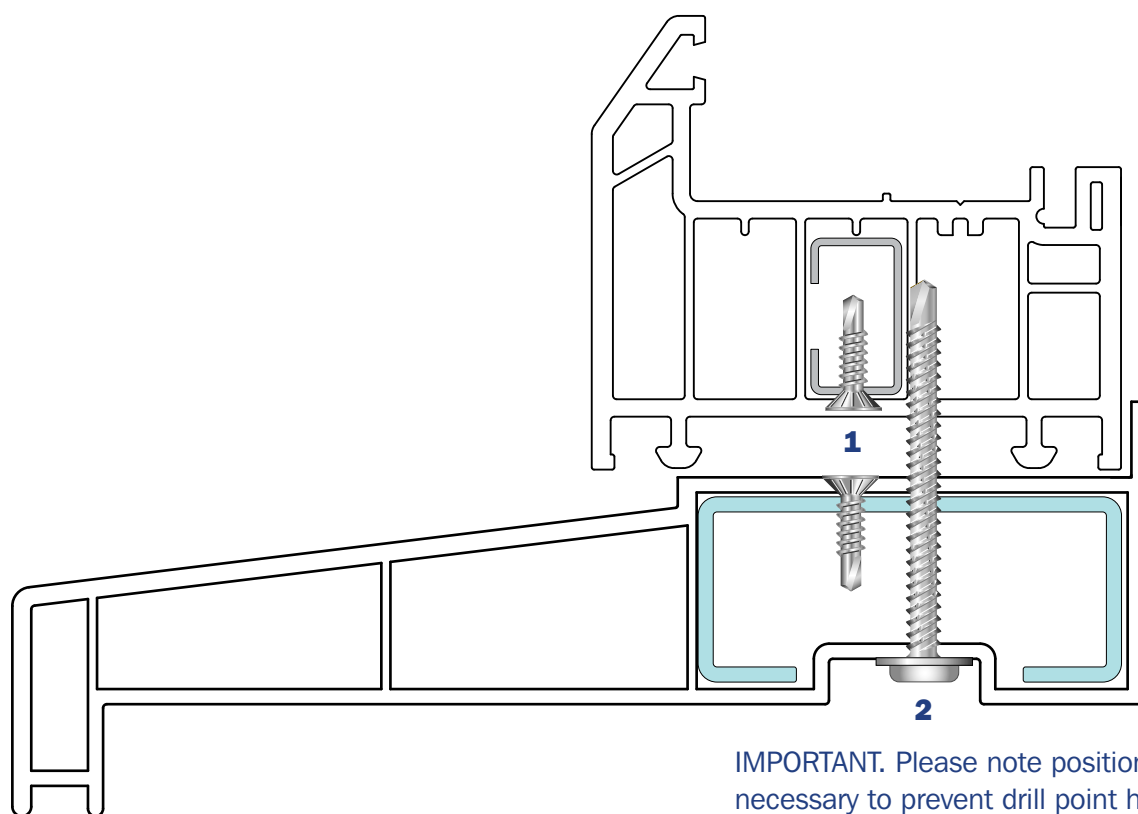


CPP 5.0 x 50 Z Sill to Frame (?)

**Internally Beaded Casement Window**

**5F5 60mm Multi-Chamber Outer Frame with 5RS-F5 Reinforcement**

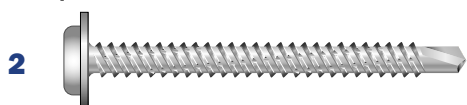
**5S01 150mm Sill with 5RA-S013 Reinforcement**



IMPORTANT. Please note positioning necessary to prevent drill point hitting edge of frame reinforcement

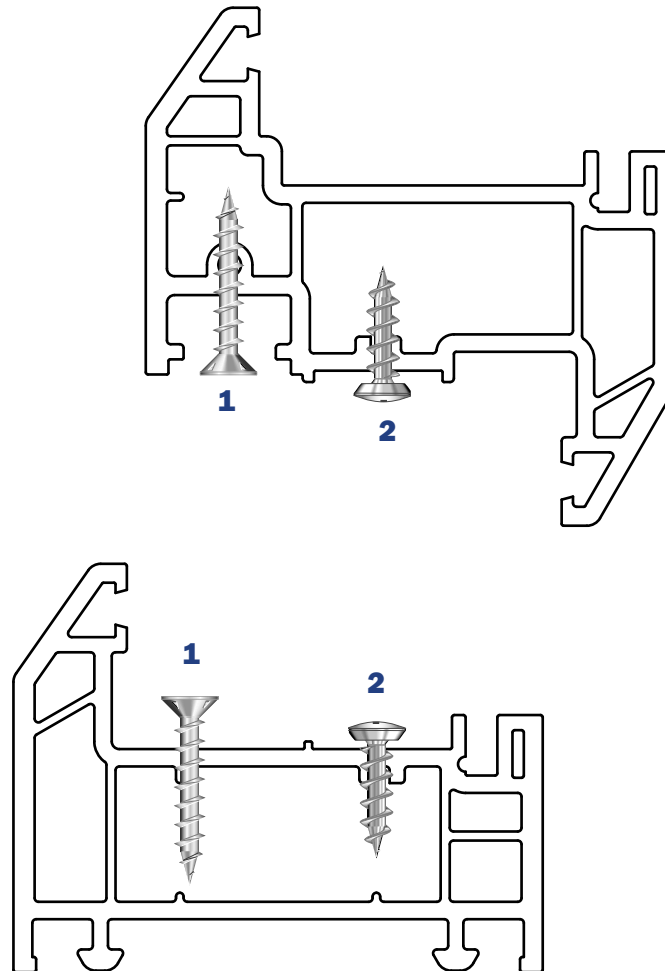




RSR 3.9 x 16 Z Reinforcement Retention



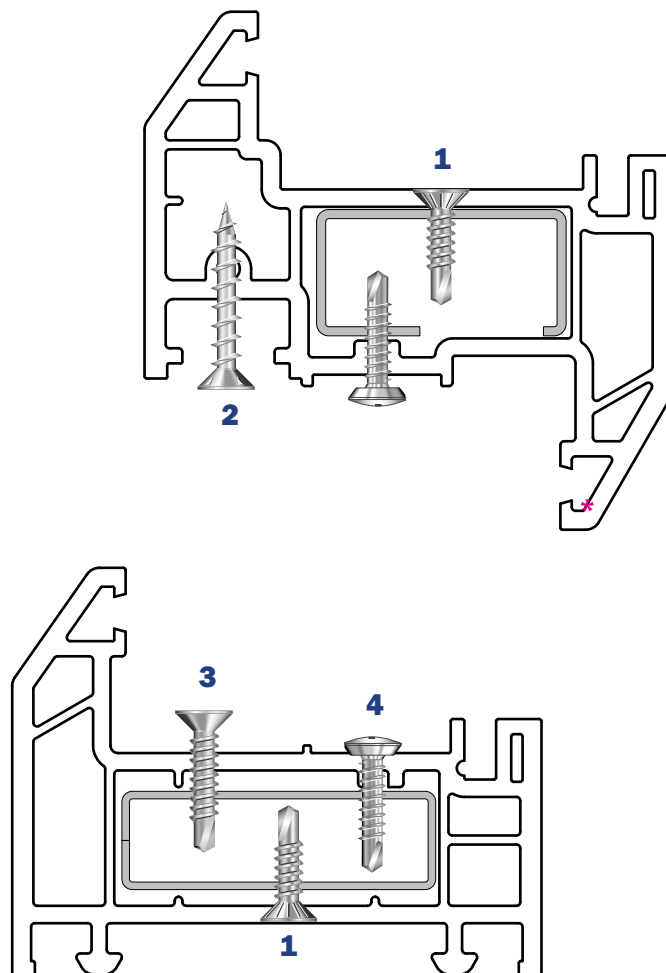
WSR 4.8 x 50 Z Sill to Frame (?)

**Externally Beaded Casement Window - Unreinforced**  
**5F1 34mm Outer Frame**  
**5V1 Z Sash**



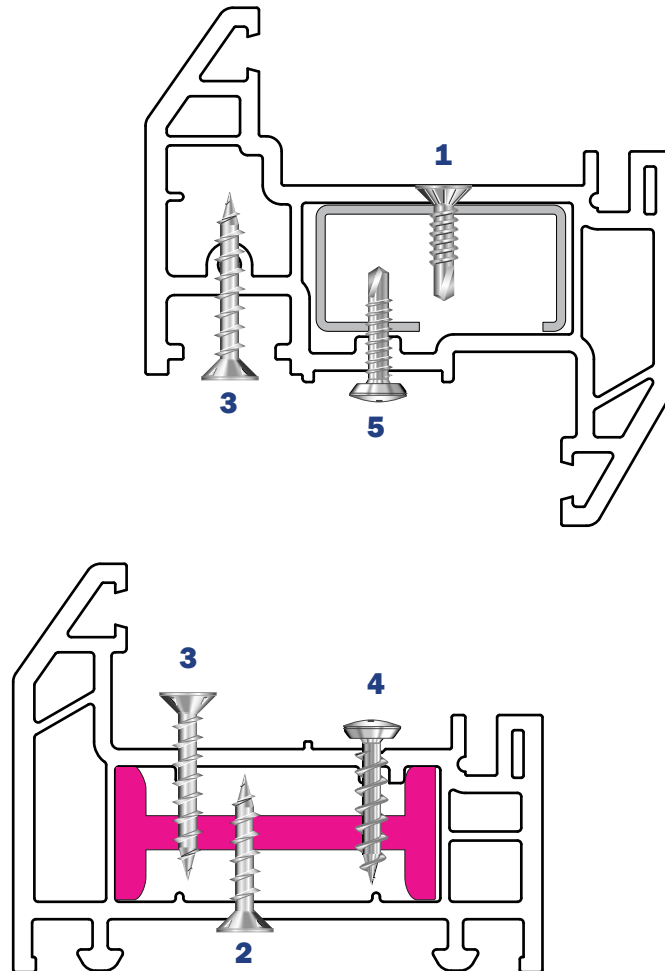
- |          |   |                |                                 |
|----------|---|----------------|---------------------------------|
| <b>1</b> |  | CFG 4.3 x 25 Z | Gearing to Sash & Keep to Frame |
| <b>2</b> |  | SFG 4.3 x 16 Z | Friction Stay to Sash & Frame   |

**Externally Beaded Casement Window - Reinforced**  
**5F1 34mm Outer Frame with 5RS-FT1L Reinforcement**  
**5V1 Z Sash with 5RS-V1 Reinforcement**



- |          |   |                |                                 |
|----------|---|----------------|---------------------------------|
| <b>1</b> |  | RSR 3.9 x 16 Z | Reinforcement Retention         |
| <b>2</b> |  | CFG 4.3 x 25 Z | Gearing to Sash                 |
| <b>3</b> |  | CSR 3.9 x 19 Z | Keep to Transom                 |
| <b>4</b> |  | SSR 3.9 x 16 Z | Friction Stay to Sash & Transom |

**Externally Beaded Casement Window - PTR Reinforced Frame**  
**5F1 34mm Outer Frame with PT13 Reinforcement**  
**5V1 Z Sash with 5RS-V1 Reinforcement**

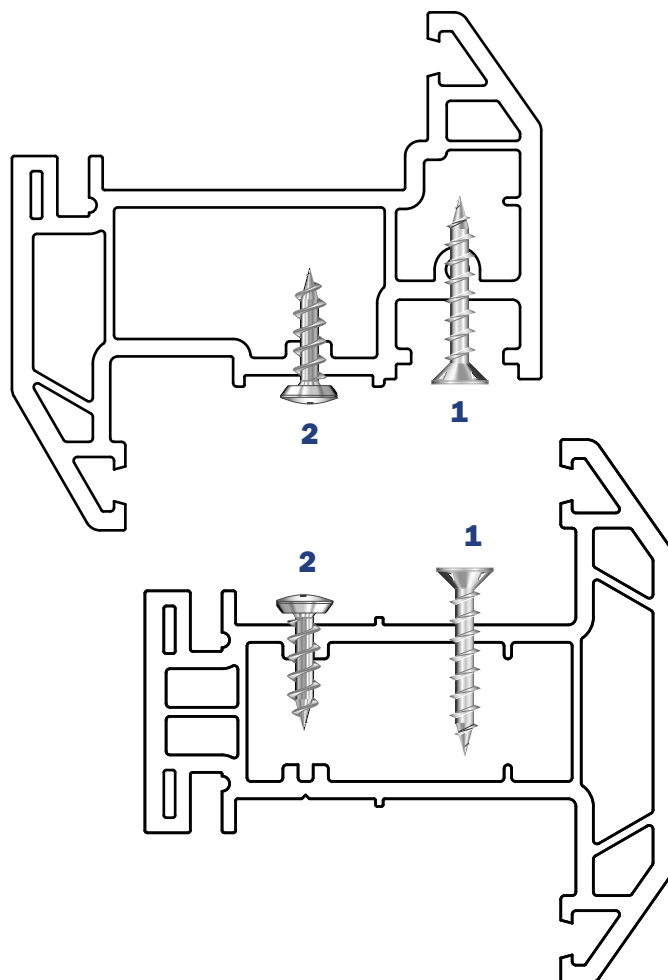


- |          |   |                |                                 |
|----------|---|----------------|---------------------------------|
| <b>1</b> |  | RSR 3.9 x 16 Z | Reinforcement Retention         |
| <b>2</b> |  | CFG 4.3 x 20 Z | PTR Retention to Transom        |
| <b>3</b> |  | CFG 4.3 x 25 Z | Gearing to Sash & Keep to Frame |
| <b>4</b> |  | SFG 4.3 x 20 Z | Friction Stay to Frame          |
| <b>5</b> |  | SSR 3.9 x 16 Z | Friction stay to Sash           |

**Externally Beaded Casement Window - Unreinforced**

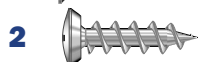
**5V1 Z Sash**

**5T1 72mm Transom**



**1**

CFG 4.3 x 25 Z    Gearing to Sash & Keep to Frame

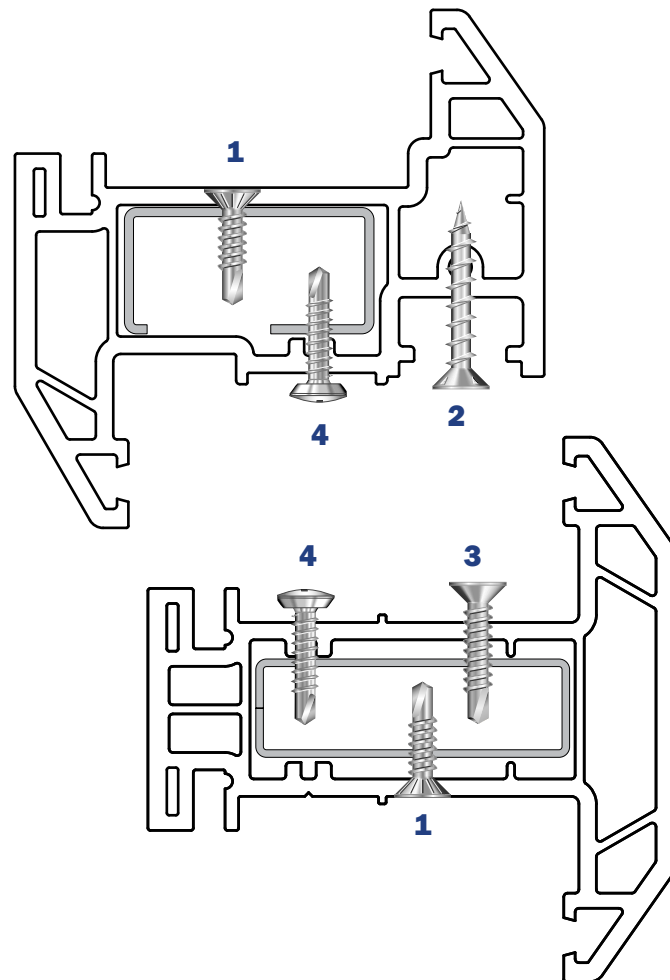


**2**

SFG 4.3 x 16 Z    Friction Stay to Sash & Frame

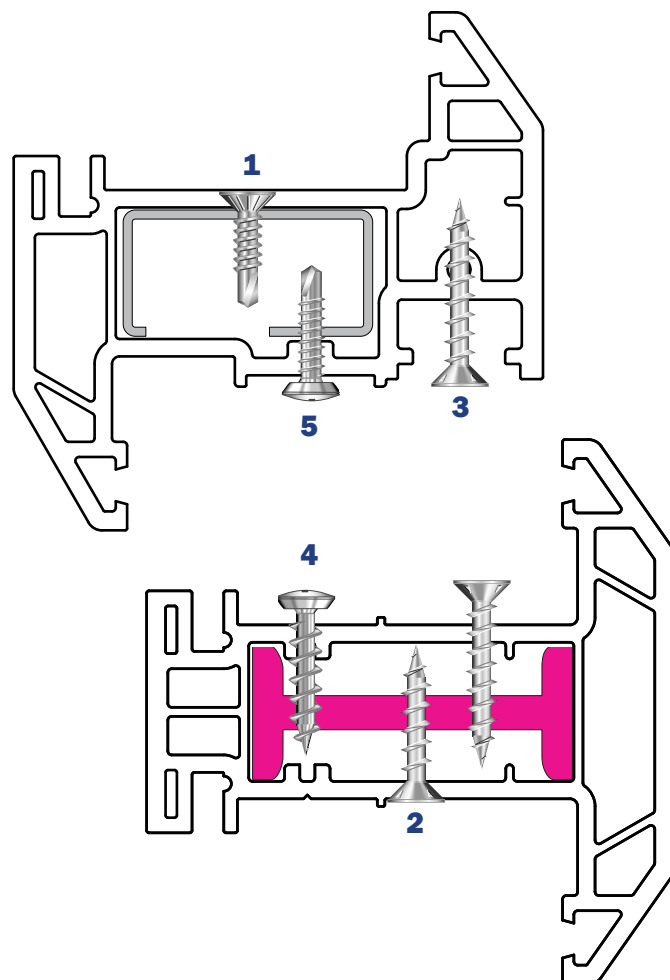


**Externally Beaded Casement Window - Reinforced**  
**5V1 Z Sash with 5RS-V1 Reinforcement**  
**5T1 72mm Transom with 5RS-FT1L Reinforcement**



- |          |   |                |                                 |
|----------|---|----------------|---------------------------------|
| <b>1</b> |  | RSR 3.9 x 16 Z | Reinforcement Retention         |
| <b>2</b> |  | CFG 4.3 x 25 Z | Gearing to Sash                 |
| <b>3</b> |  | CSR 3.9 x 19 Z | Keep to Transom                 |
| <b>4</b> |  | SSR 3.9 x 16 Z | Friction Stay to Sash & Transom |

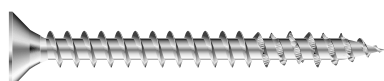
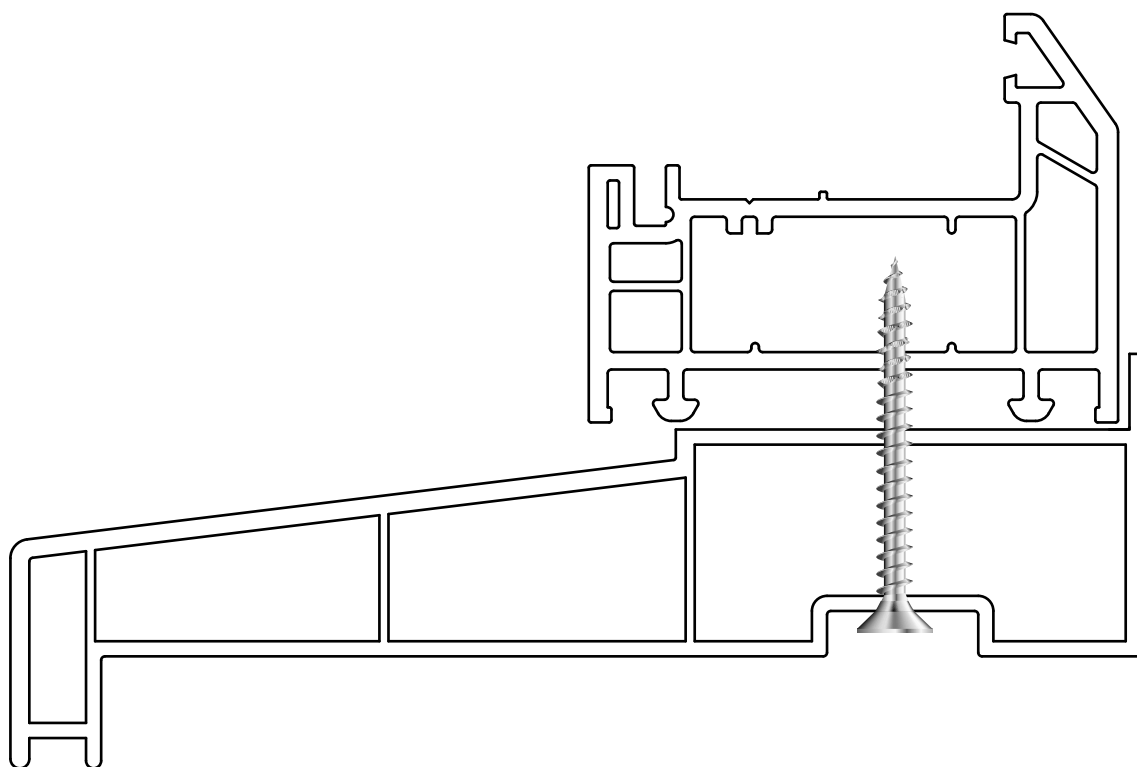
**Externally Beaded Casement Window - PTR Reinforced Transom**  
**5V1 Z Sash with 5RS-V1 Reinforcement**  
**5T1 72mm Transom with 5RS-FT1L Reinforcement**



- |          |   |                |                                 |
|----------|---|----------------|---------------------------------|
| <b>1</b> |  | RSR 3.9 x 16 Z | Reinforcement Retention         |
| <b>2</b> |  | CFG 4.3 x 20 Z | PTR Retention to Transom        |
| <b>3</b> |  | CFG 4.3 x 25 Z | Gearing to Sash & Keep to Frame |
| <b>4</b> |  | SFG 4.3 x 20 Z | Friction Stay to Frame          |
| <b>5</b> |  | SSR 3.9 x 16 Z | Friction stay to Sash           |

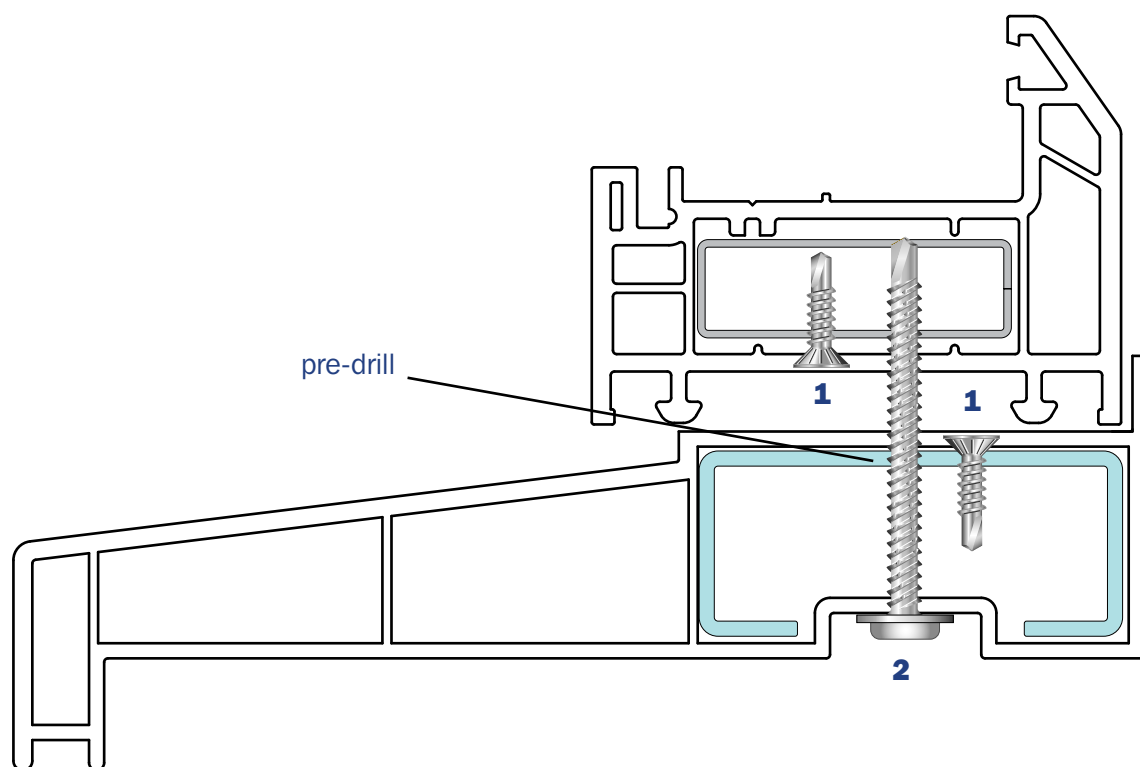
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**Externally Beaded Casement Window - Unreinforced**  
**5F1 34mm Outer Frame**  
**5S01 150mm Sill**



CPP 5.0 x 50 Z Sill to Frame (?)

**Externally Beaded Casement Window - Reinforced**  
**5F1 34mm Outer Frame with 5RS-FT1L Reinforcement**  
**5S01 150mm Sill with 5RA-S013 Reinforcement**

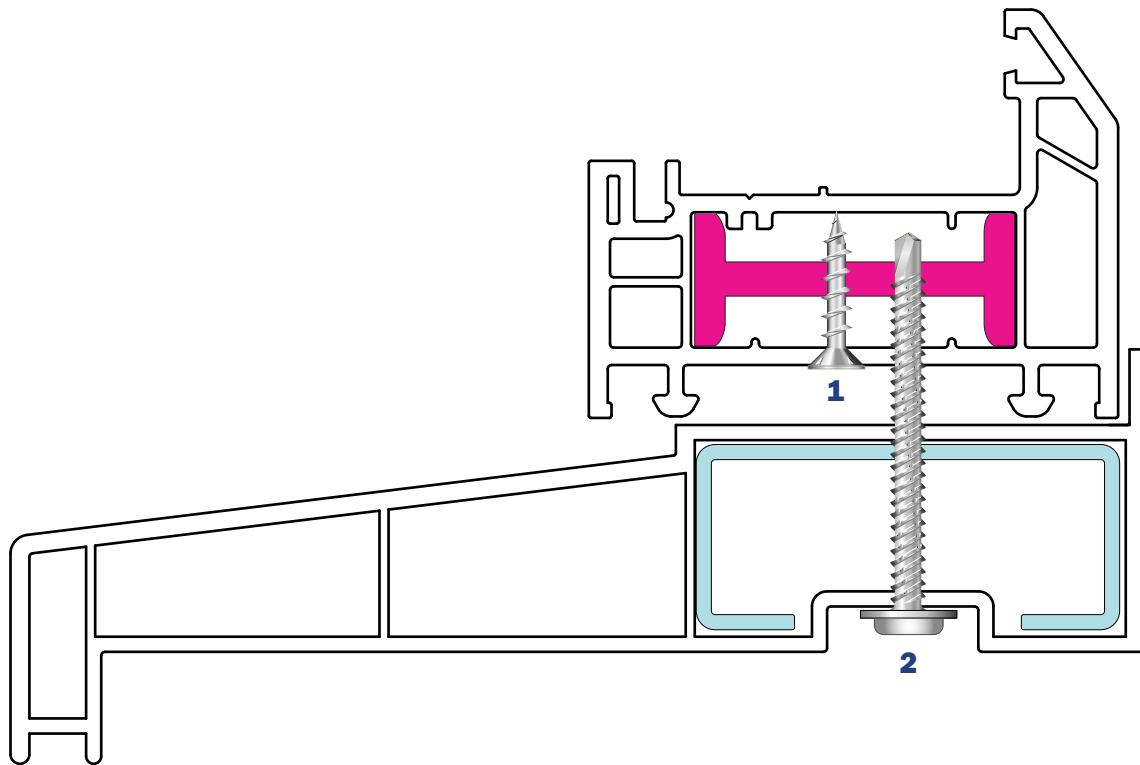


RSR 3.9 x 16 Z Reinforcement Retention



WSR 4.8 x 50 Z Sill to Frame (?)

**Externally Beaded Casement Window - PTR Reinforced Frame**  
**5F1 34mm Outer Frame with PT13 Reinforcement**  
**5S01 150mm Sill with 5RA-S013 Reinforcement**



**1**



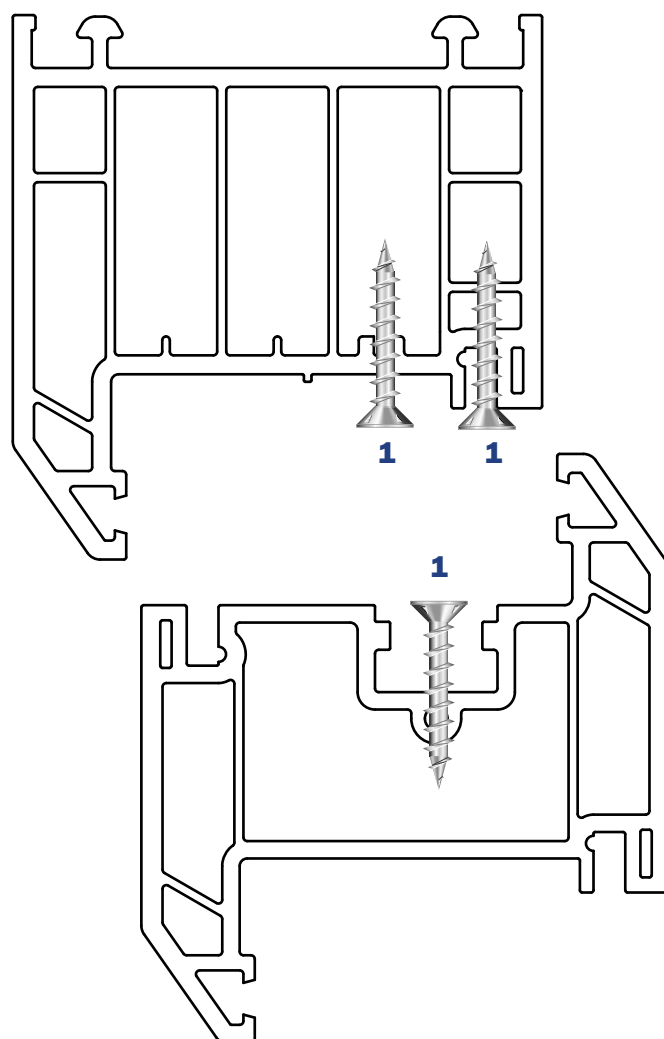
CFG 4.3 x 20 Z PTR Retention

**2**



WSR 4.8 x 50 Z Sill to Frame (?)

**Internally Beaded Tilt & Turn Casement Window - Unreinforced**  
**5F6 72mm Multi-Chamber Outer Frame**  
**5TT1 Tilt & Turn Sash**

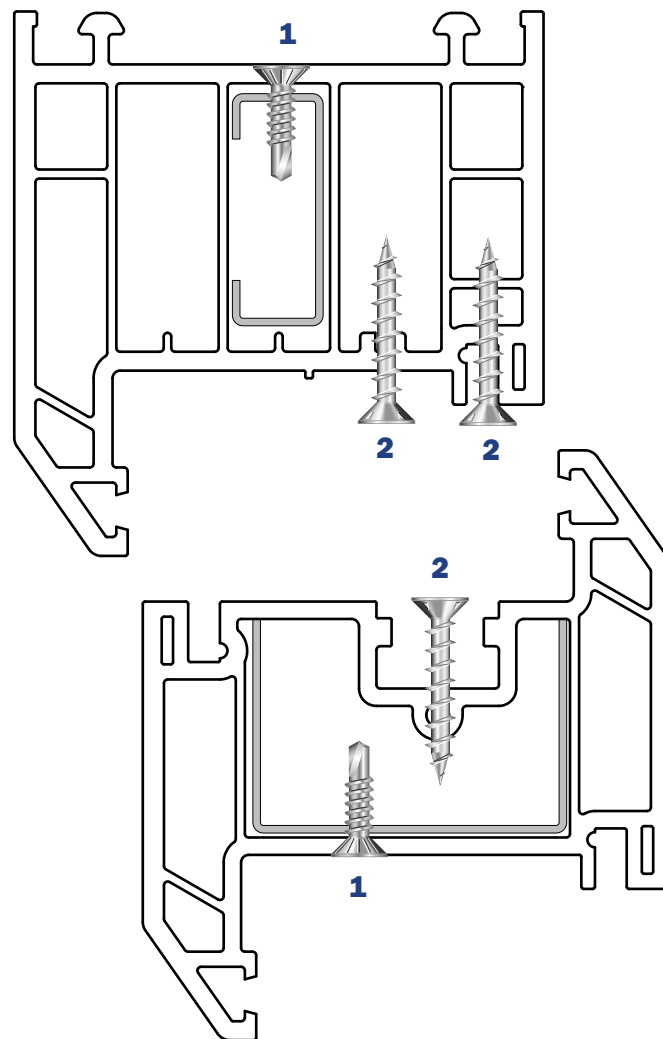




**1**



CFG 4.3 x 25 Z    Gearing to Sash & Keep to Frame

**Internally Beaded Tilt & Turn Casement Window - Reinforced**  
**5F6 72mm Multi-Chamber Outer Frame with 5RS-F6 Reinforcement**  
**5TT1 Tilt & Turn Sash with 5RS-TT1 Reinforcement**

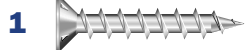
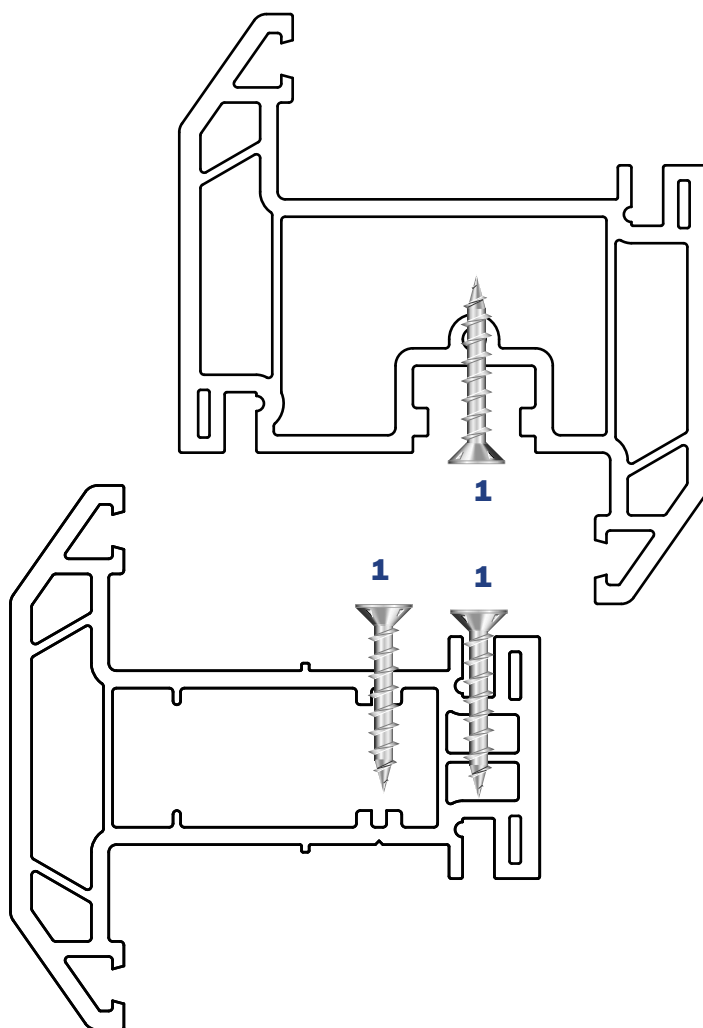


- |          |   |                |                                 |
|----------|---|----------------|---------------------------------|
| <b>1</b> |  | RSR 3.9 x 16 Z | Reinforcement Retention         |
| <b>2</b> |  | CFG 4.3 x 25 Z | Gearing to Sash & Keep to Frame |

**Internally Beaded Tilt & Turn Casement Window - Unreinforced**

**5TT1 Tilt & Turn Sash**

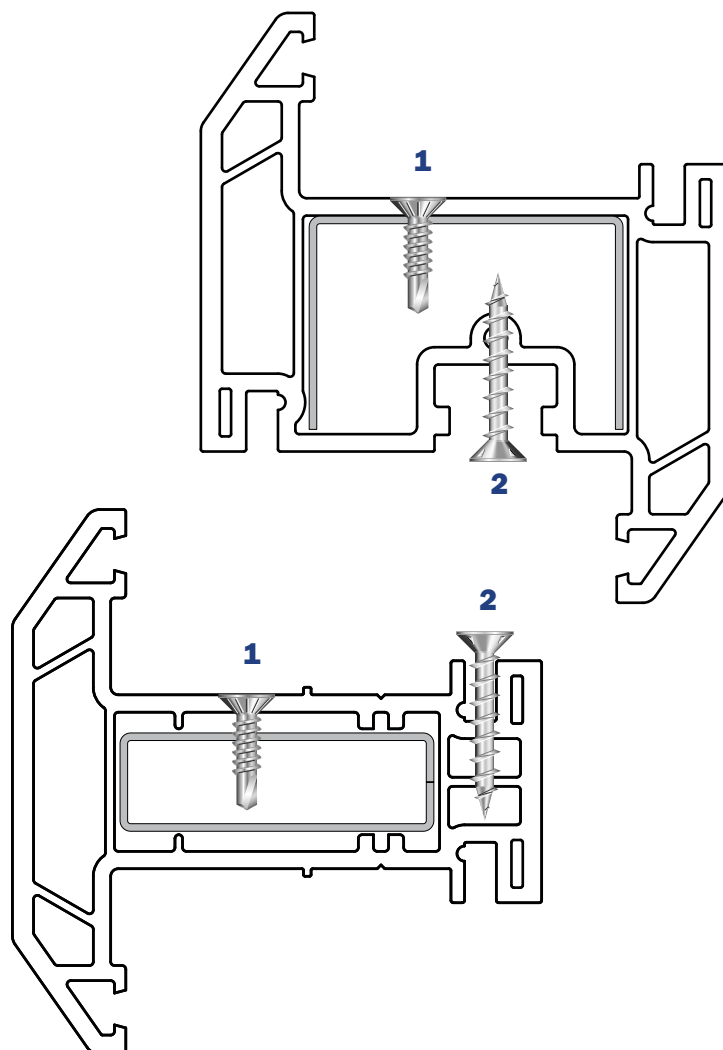
**5T1 Slim Transom**



CFG 4.3 x 25 Z    Gearing to Sash & Keep to Frame



**Internally Beaded Tilt & Turn Casement Window - Reinforced**  
**5TT1 Tilt & Turn Sash with 5RS-TT1 Reinforcement**  
**5T1 Slim Transom with 5RS-FT1L Reinforcement**

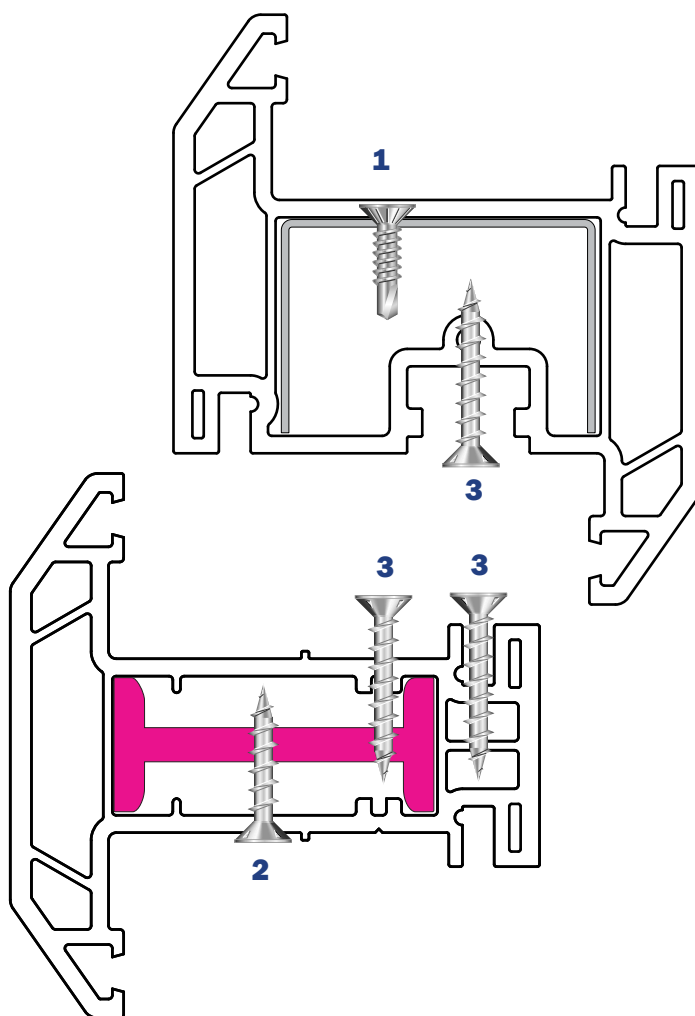



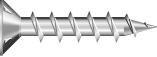

RSR 3.9 x 16 Z Reinforcement Retention



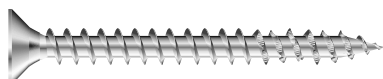
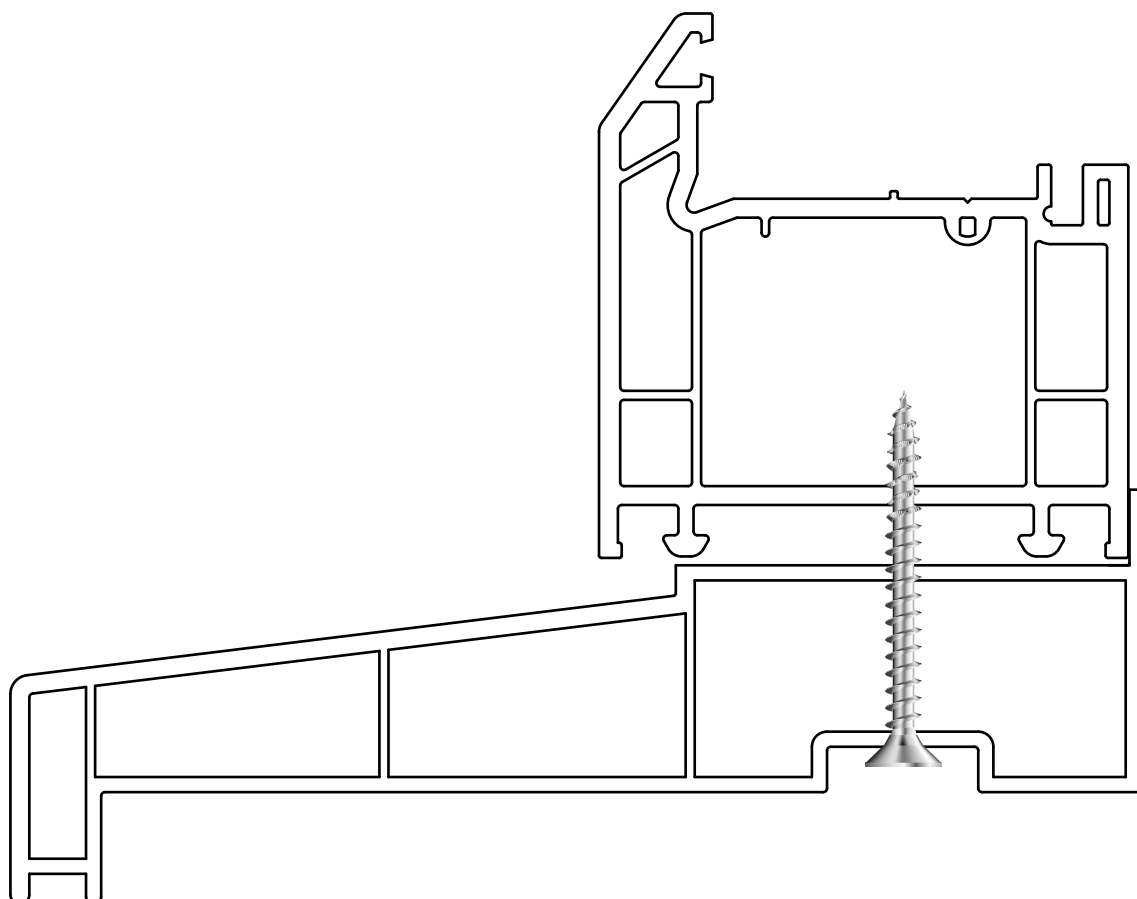
CFG 4.3 x 25 Z Gearing to Sash & Keep to Frame

**Internally Beaded Tilt & Turn Casement Window - PTR Reinforced Transom**  
**5TT1 Tilt & Turn Sash with 5RS-TT1 Reinforcement**  
**5T1 Slim Transom with PT13 Reinforcement**



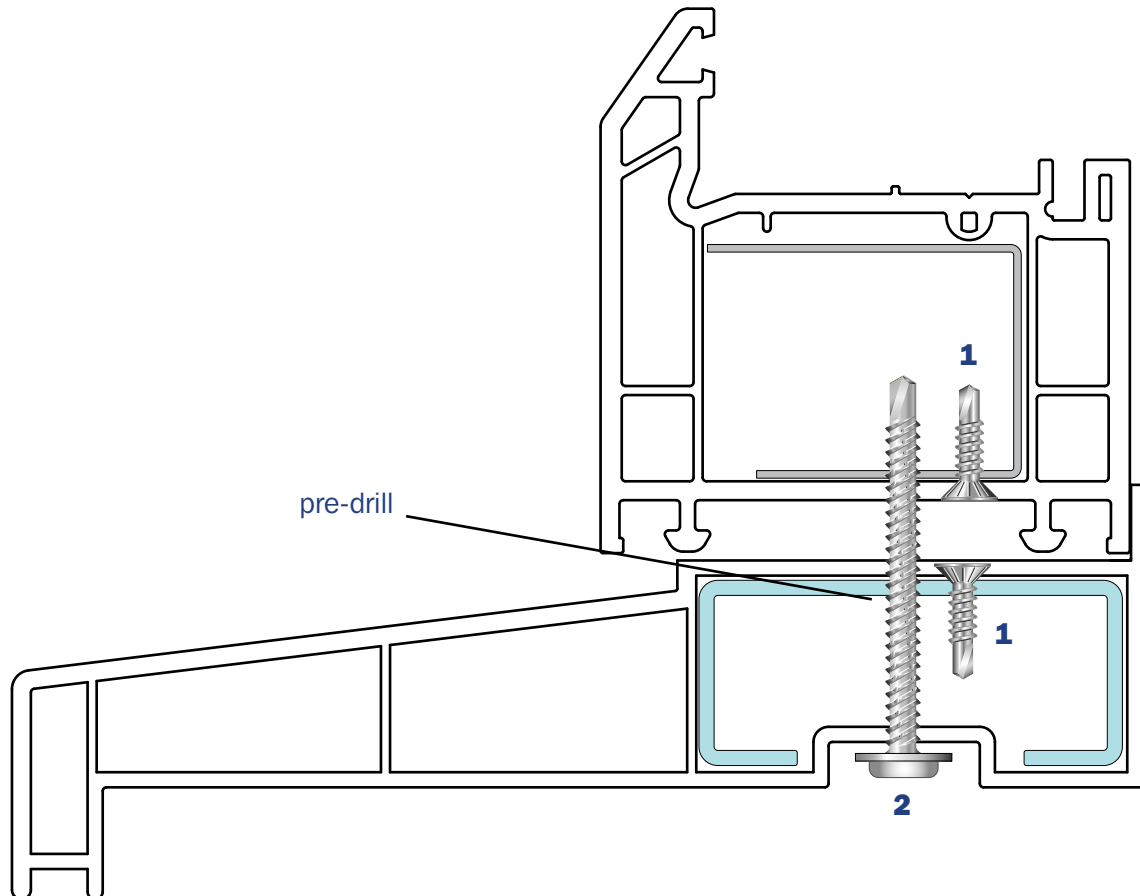
- |          |   |                |                                 |
|----------|---|----------------|---------------------------------|
| <b>1</b> |  | RSR 3.9 x 16 Z | Reinforcement Retention         |
| <b>2</b> |  | CFG 4.3 x 20 Z | PTR Retention                   |
| <b>3</b> |  | CFG 4.3 x 25 Z | Gearing to Sash & Keep to Frame |

**Internally Beaded Tilt & Turn Casement Window - Unreinforced**  
**5F2 72mm Outer Frame**  
**5S01 150mm Sill**

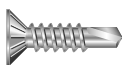


CPP 5.0 x 50 Z Sill to Frame (?)

**Internally Beaded Tilt & Turn Casement Window - Reinforced**  
**5F2 72mm Outer Frame with 5RS-F2 Reinforcement**  
**5S01 150mm Sill with 5RA-S013 Reinforcement**



**1**



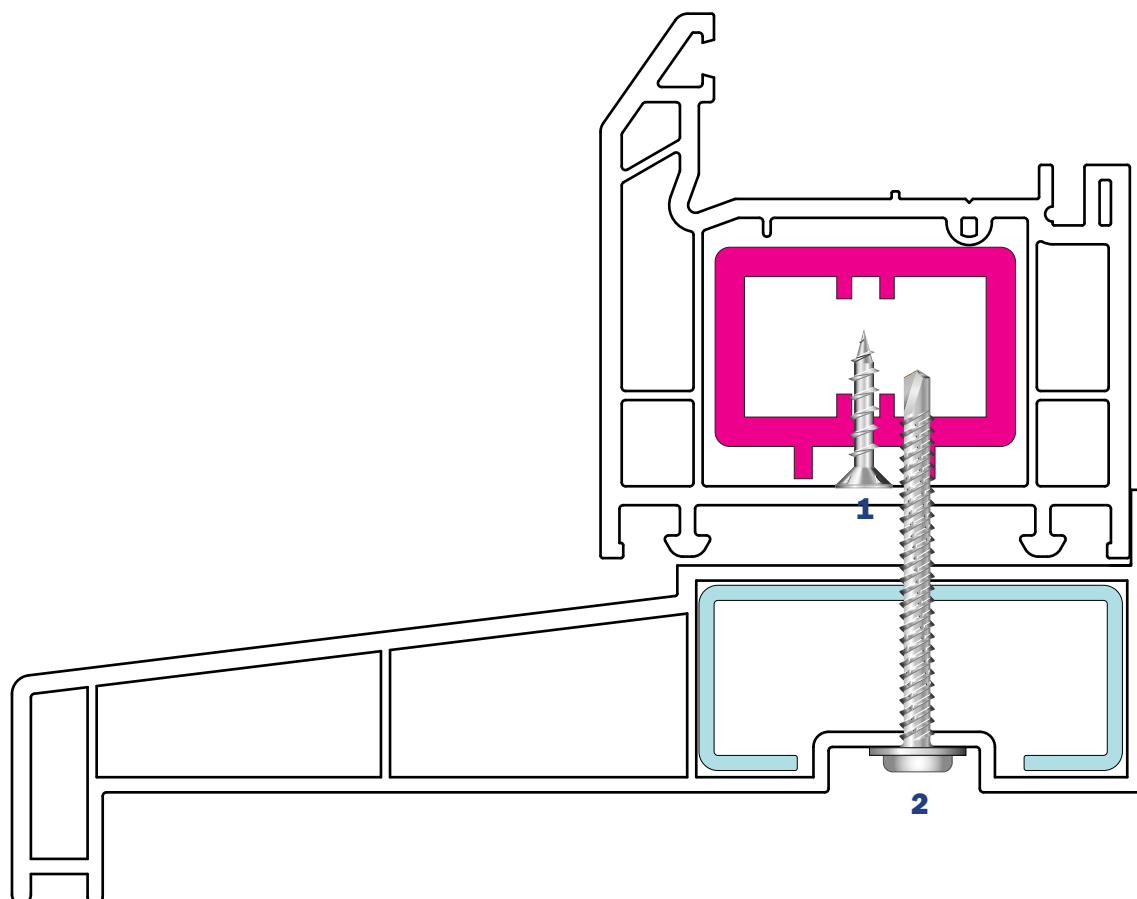
RSR 3.9 x 16 Z Reinforcement Retention

**2**



WSR 4.8 x 50 Z Sill to Frame (?)

**Internally Beaded Tilt & Turn Casement Window - PTR Reinforced Frame**  
**5F2 72mm Outer Frame with PT19 Reinforcement**  
**5S01 150mm Sill with 5RA-S013 Reinforcement**



**1**



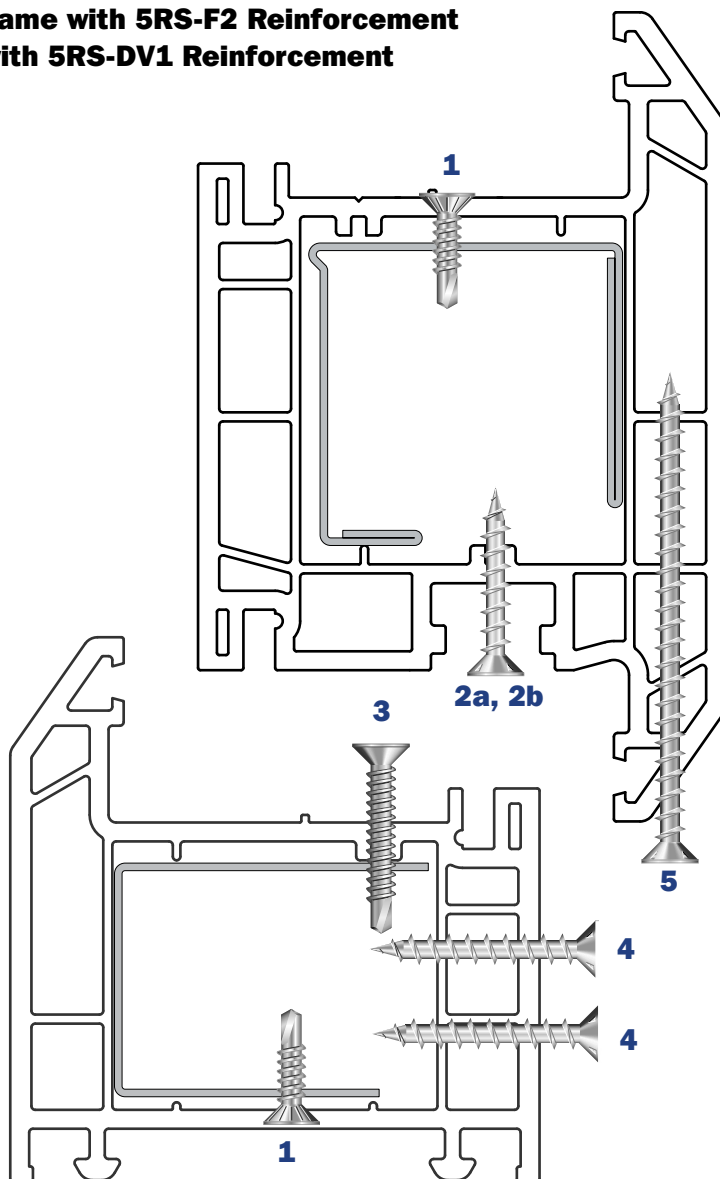
CFG 4.3 x 20 Z PTR Retention

**2**



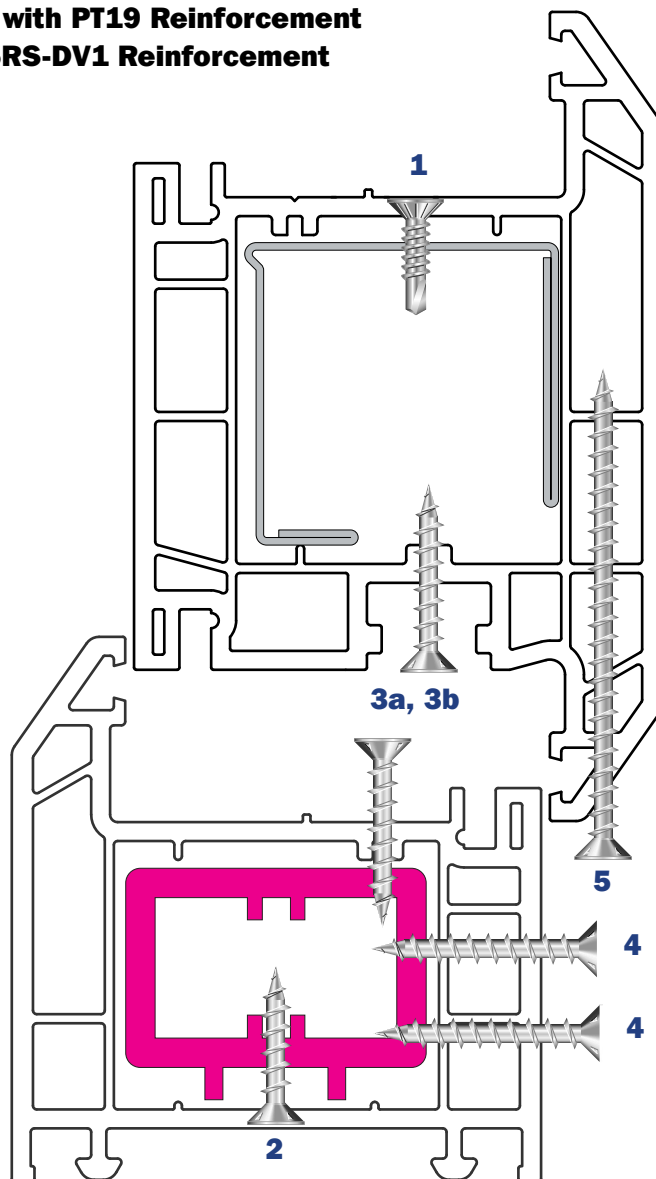
WSR 4.8 x 50 Z Sill to Frame (?)

**Double Door and Residential Door - Reinforced**  
**5F2 72mm Outer Frame with 5RS-F2 Reinforcement**  
**5DV2 T Door Vent with 5RS-DV1 Reinforcement**



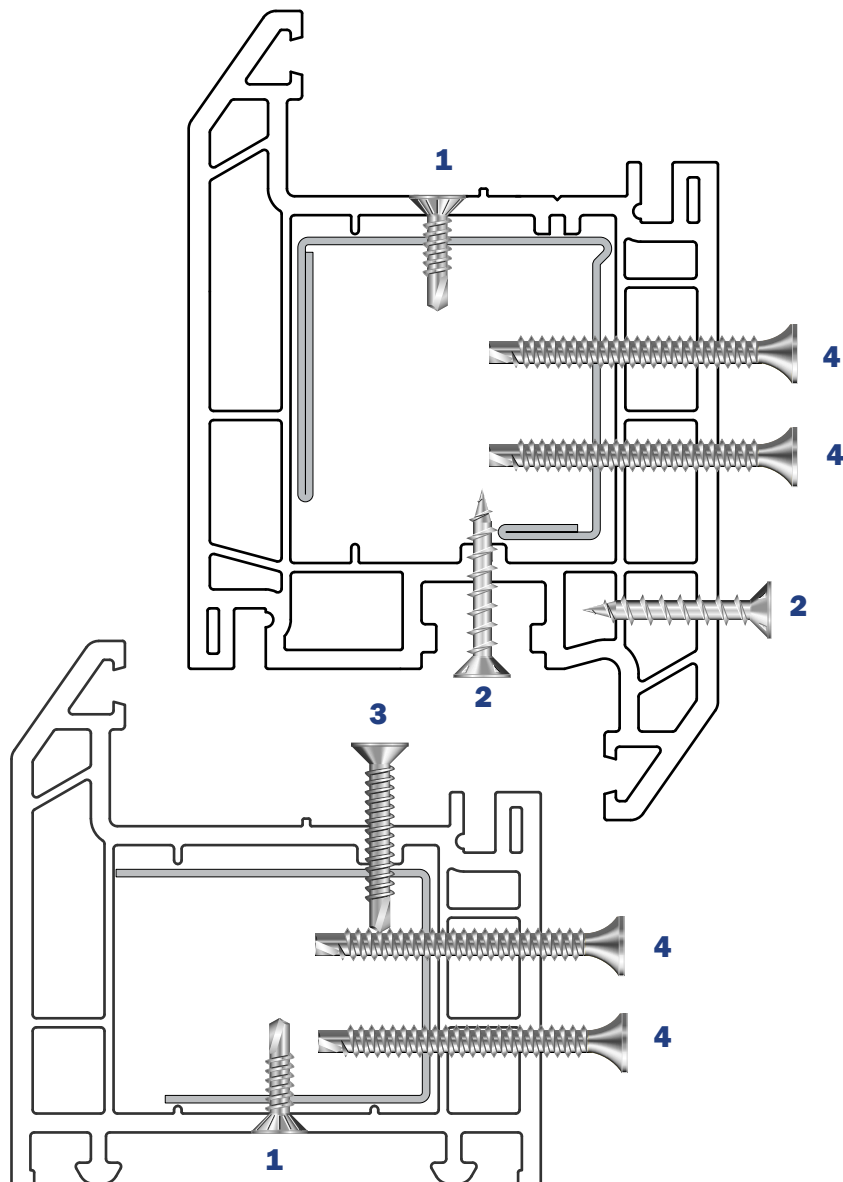
- |           |   |                |   |
|-----------|---|----------------|---|
| <b>1</b>  |  | RSR 3.9 x 16 Z | Reinforcement Retention                     |
| <b>2a</b> |  | CFG 4.3 x 25 Z | Gearing to Sash                             |
| <b>2b</b> |  | CFG 4.8 x 25 Z | Gearing to Sash, Shootbolt Extensions (SBD) |
| <b>3</b>  |  | CSR 3.9 x 25 Z | Keep to Frame                               |
| <b>4</b>  |  | CFG 4.3 x 30 Z | Butt Hinge to Frame (EVO)                   |
| <b>5</b>  |  | CFG 4.3 x 65 Z | Butt Hinges to Sash (EVO)                   |





**Double Door and Residential Door - PTR Reinforced Frame**  
**5F2 72mm Outer Frame with PT19 Reinforcement**  
**5DV2 T Door Vent with 5RS-DV1 Reinforcement**



<b>1</b>		RSR 3.9 x 16 Z	Reinforcement Retention
<b>2</b>		CFG 4.3 x 20 Z	PTR Retention
<b>3a</b>		CFG 4.3 x 25 Z	Gearing to Sash, Keep to Frame, Shootbolt Ext. (SBD)
<b>3b</b>		CFG 4.8 x 25 Z	Gearing to Sash, Shootbolt Extensions (SBD)
<b>4</b>		CFG 4.3 x 30 Z	Butt Hinge to Frame (EVO)
<b>5</b>		CFG 4.3 x 65 Z	Butt Hinges to Sash (EVO)

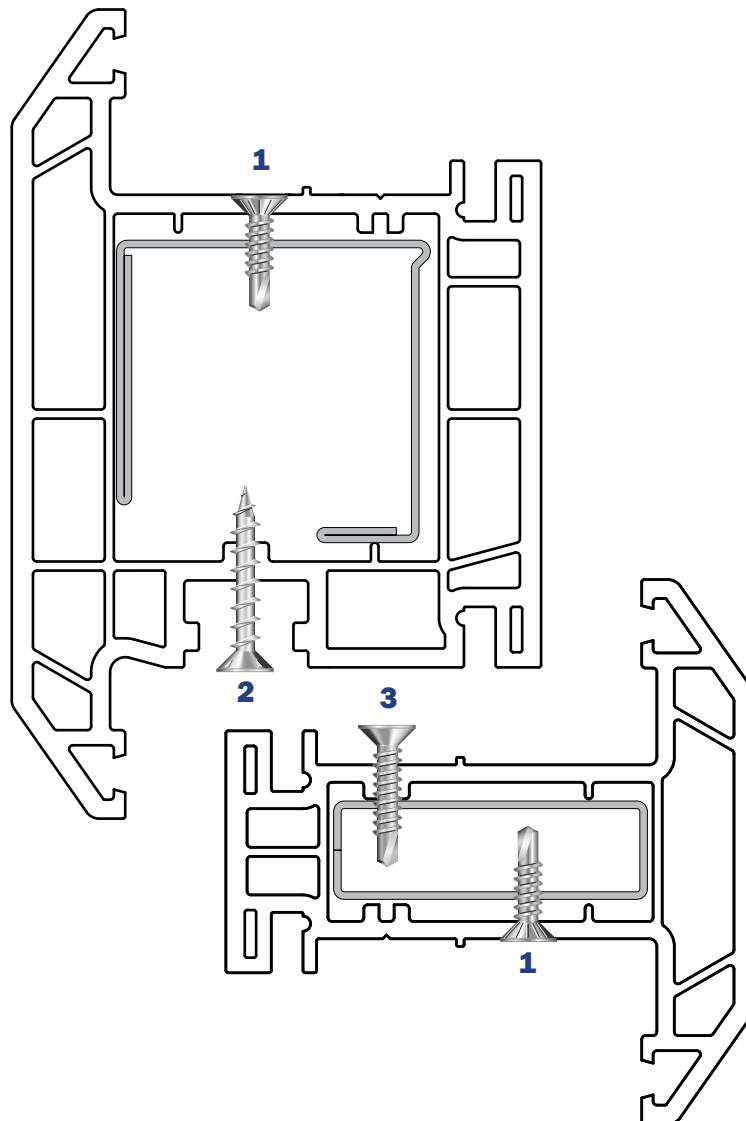
**Double Door and Residential Door - RCM Reinforced Frame**  
**5F2 72mm Outer Frame with PT19 Reinforcement**  
**5DV1 Z Door Vent with 5RS-DV1 Reinforcement**

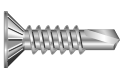




- |          |   |                |   |
|----------|---|----------------|---|
| <b>1</b> |  | RSR 3.9 x 16 Z | Reinforcement Retention                       |
| <b>2</b> |  | CFG 4.3 x 25 Z | Gearing to Sash                               |
|          |   |                | Flag Hinge to unreinforced section of profile |
| <b>3</b> |  | CSR 3.9 x 25 Z | Keep to Frame                                 |
| <b>4</b> |  | BSR 4.2 x 42 Z | Flag Hinge to Frame & Sash                    |

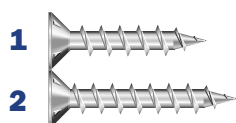
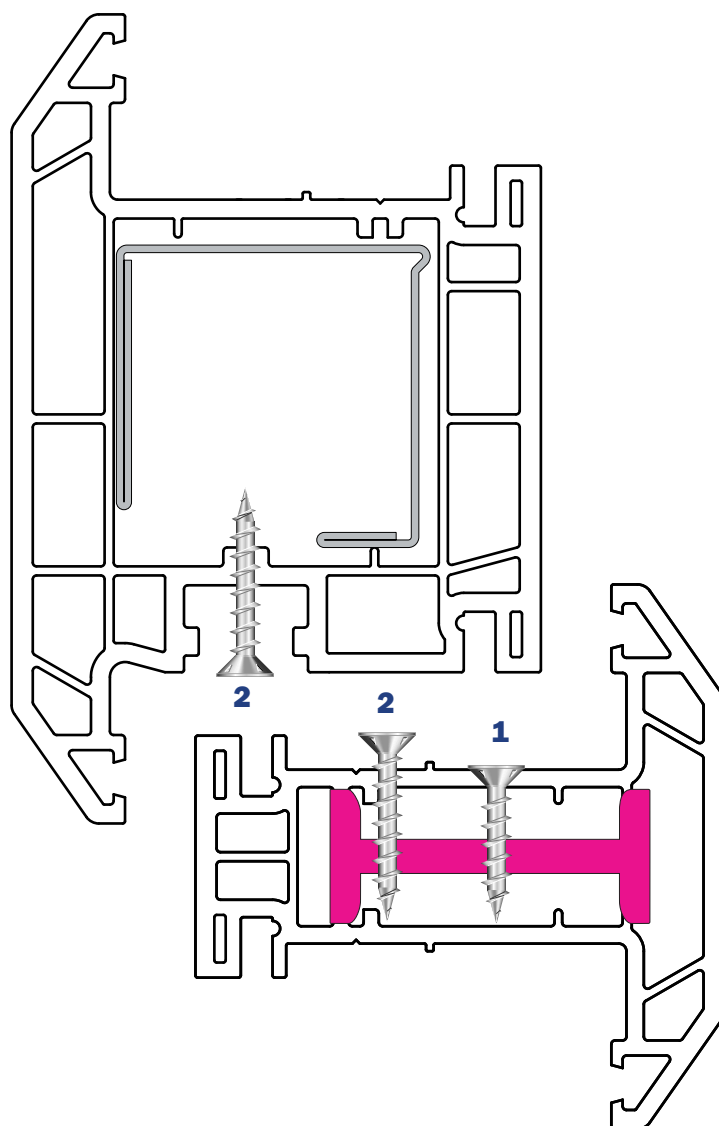


**Double Door - Reinforced**  
**5DV2 T Door Vent with 5RS-DV1 Reinforcement**  
**5T1 72mm Transom with 5RS-FT1L Reinforcement**



- |          |   |                |                         |
|----------|---|----------------|-------------------------|
| <b>1</b> |  | RSR 3.9 x 16 Z | Reinforcement Retention |
| <b>2</b> |  | CFG 4.3 x 25 Z | Gearing to Sash         |
| <b>3</b> |  | CSR 3.9 x 19 Z | Keep to Transom         |

**Double Door - PTR Reinforced Mullion**  
**5DV2 T Door Vent with 5RS-DV1 Reinforcement**  
**5T1 72mm Transom with PT13 Reinforcement Reinforcement**

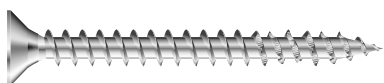
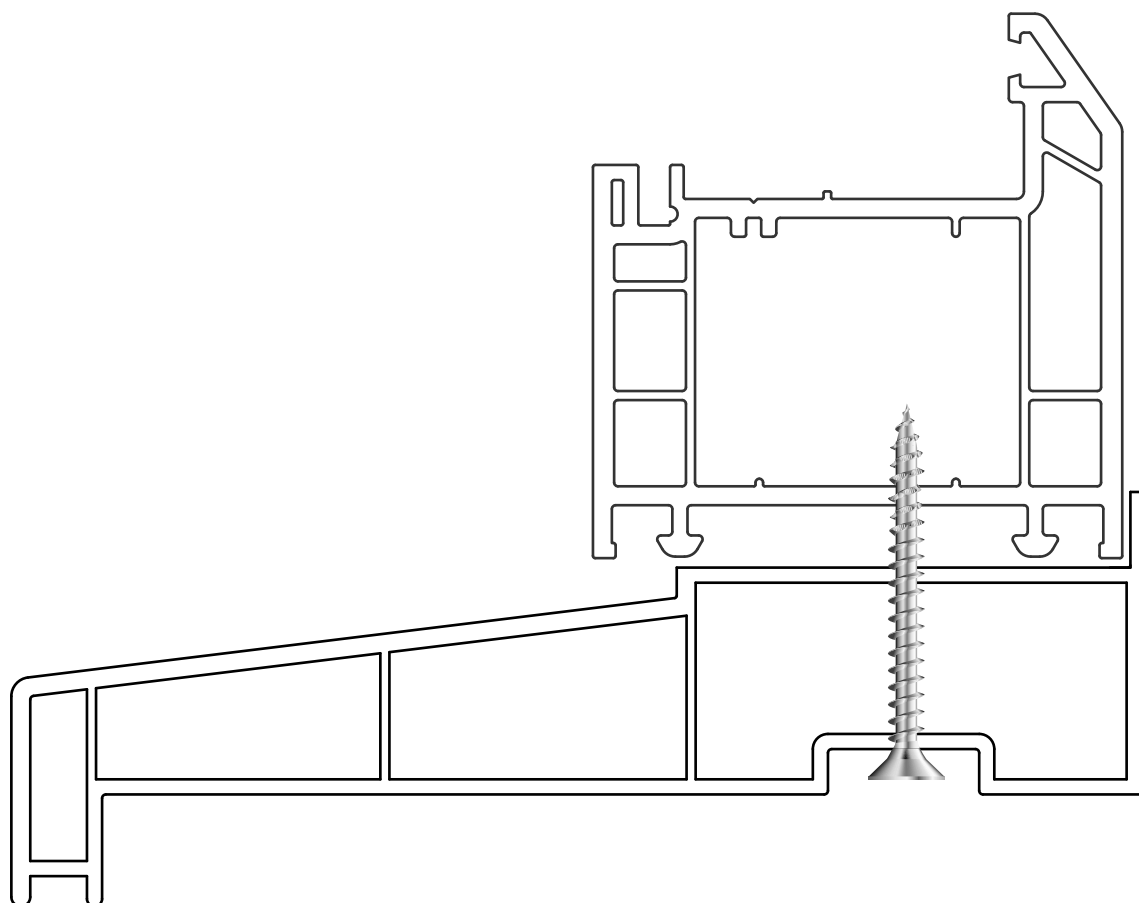


CFG 4.3 x 20 Z PTR Retention

CFG 4.3 x 25 Z Gearing to Sash & Keep to Transom

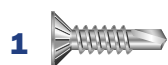
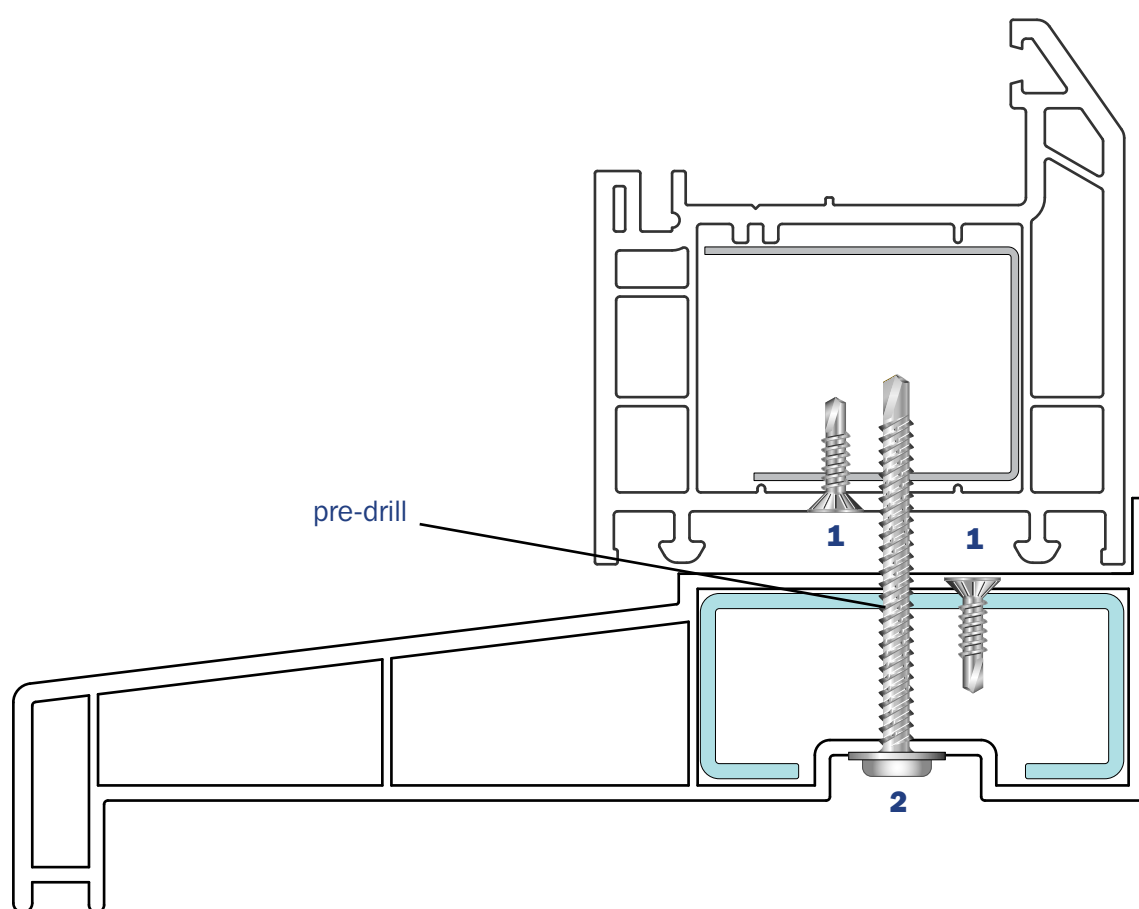
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**Residential Door - Unreinforced**  
**5F2 72mm Outer Frame**  
**5S01 150mm Sill**



CPP 5.0 x 50 Z Sill to Frame

**Residential Door - Reinforced**  
**5F2 72mm Outer Frame with 5RS-F2 Reinforcement**  
**5S01 150mm Sill with 5RA-S013 Reinforcement**



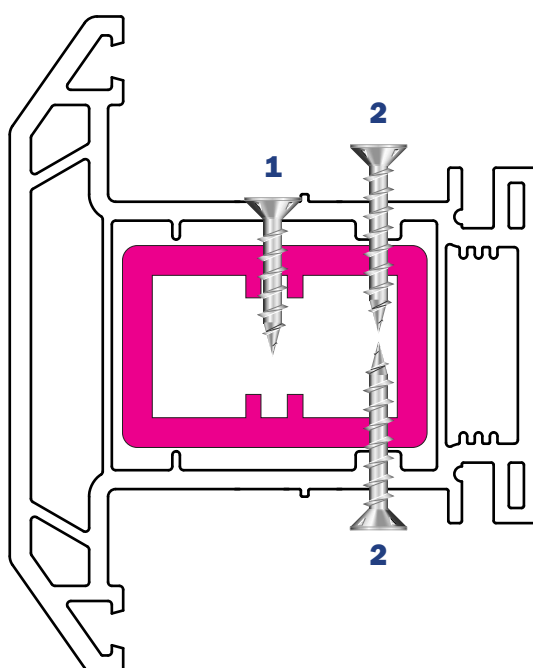
RSR 3.9 x 16 Z Reinforcement Retention





WSR 4.8 x 50 Z Sill to Frame (?)

**Residential Door**

**5T2 Intermediate Transom / Mullion with PT18 PTR Reinforcement**



- |          |   |                |               |
|----------|---|----------------|---------------|
| <b>1</b> |  | CFG 4.3 x 20 Z | PTR Retention |
| <b>2</b> |  | CFG 4.3 x 25 Z | Keeps         |



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