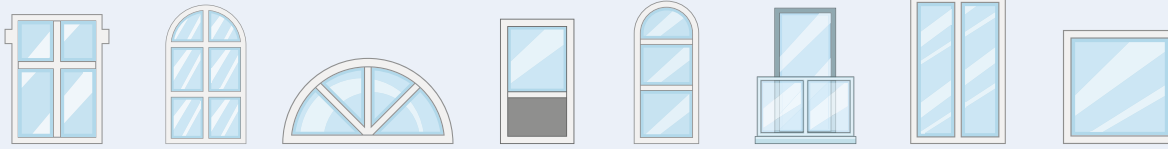


Recommended Fixings Manual



REHAU

Total 70 Chamfered + Sculptured

“ REHAU are World leaders in extrusion technology and window & door design. We work closely with other leaders in their respective field. Having worked with Rapiertstar for many years we have found that they are experts in what they do. We can count on them for sound advice on correct fastener selection for the applications that we design ” .

Paul Pell – REHAU Technical Team



The REHAU TOTAL70 Window and Door System comprises of a range of multi-chambered profiles that are designed to meet the requirements of the new build, commercial and domestic refurbishment markets.

For casement windows there are two aesthetic options to choose from. REHAU TOTAL70C is predominantly a Chamfered system with a part sculptured 'T' Sash option. This chamfered system is simple yet elegant, helping to create our beautiful contemporary frames. REHAU TOTAL70S is a suite of fully Sculptured profiles offering heightened style to both modern and traditional properties.

Crafted using PVC, both systems guarantee maximum energy efficiency and performance for your investment.

The REHAU TOTAL70 PVCu profiles have been stylishly designed with a chamfered or sculptured detail with matching single leg beads to provide easy but secure on-site glazing. The system is suitable for both New Build and Refurbishment projects.

70mm depth allows for the replacement of 3" timber frames with less trimming up. Noise reduction. The double-glazed sealed units considerably reduce outdoor noise levels.

Safety and security - REHAU TOTAL70 window and door systems can achieve the British Standard BS7950 and PAS 23/24 security standards. The multi-internal chambers allow further installation of larger steel reinforcements, if required.

Low maintenance - Our systems contain a unique compound with a smooth gloss finish – guaranteeing they retain their pristine appearance. It also means they will never warp, rot or need painting.

Energy efficiency - For excellent thermal properties and to achieve greater energy savings, the REHAU TOTAL70 window system easily achieves an A rating, the highest possible Window Energy Rating (WER) for thermal efficiency.

REHAU TOTAL70 windows will comply with Part L Building Regulations, providing the correct glazing unit is used. This requirement is an overall U-Value of 1.6 W/m²K. REHAU TOTAL70 can achieve U-Values of 0.8 W/m²K using triple glazed Argon sealed units. This means that the systems are suitable for Passivhaus - currently the most energy efficient specification for a building throughout Europe.



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| 2 Chart of screws recommended for Legend system | 4 |
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SPECIAL NOTES WITH REFERENCE TO DOOR HINGE FASTENERS

Due to the extensive range and specification of door hinge hardware, the recommendations within this manual are intended as a guide only. It is therefore essential that you contact Rapiertstar Technical Department for advice on correct fastener selection for your individual requirements.



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 9000, is a family of standards relating to quality management and are designed to help organisations ensure they meet the needs of customers. **rapierstar®** is an ISO 9001:2015 registered company and all our window screws are manufactured by ISO 9000 certificated companies. Full traceability is maintained so long as the screws remain in the box in which they were supplied.

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.


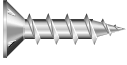
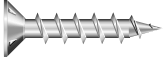




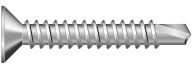




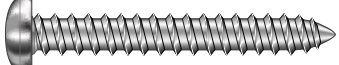




Enhanced Martensitic Stainless Steel - 410

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.

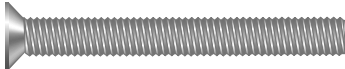
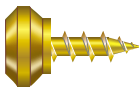
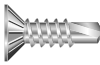
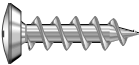

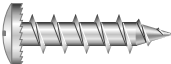
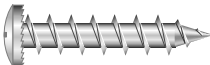






Bi-Metallic

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 50 | Z - | Low threshold |
| 2 |  | CFG 4.3 X 16 | Z S | Security glazing clips, cavity locking blocks into un-reinforced profile, mech joint plug retention, flag hinges |
| 3 |  | CFG 4.3 X 20 | Z S | Tilt & turn gearing to sash profile |
| 4 |  | CFG 4.3 X 25 | Z S | Keeps to frame (un-reinforced), cavity locking block, Gearing to sash, rebated hinges, concealed hinges |
| 5 |  | CFG 4.3 X 30 | Z S | Cover plate, MACO M Spag |
| 6 |  | CFG 4.3 X 45 | Z S | Optional screw for mechanical joints |
| 7 |  | CSR 3.9 X 19 | Z S | Security glazing clips, cavity locking wedge into reinforcement, low threshold adaptor blocks |
| 8 |  | CSR 3.9 X 25 | Z S | Low threshold plastic adaptor blocks, open out door restrictor, run up blocks, gearing to sash |
| 9 |  | CSR 3.9 X 32 | Z S | French door Adaptor profile attachment to sash, weather seal under the door sash |
| 10 |  | CSR 3.9 X 38 | Z S | False mullion attachment to adaptor profile, door keeps into steel reinforcement |
| 11 |  | CSR 4.8 X 25 | Z - | Composite door butt hinges to outer frame |
| 12 |  | CSR 4.8 X 38 | Z S | Flag hinges to door outer frame and door sash |
| 13 |  | EST 5.5 X 40 | - S | Mechanical transom/mullion joints |
| 14 |  | EST 5.5 X 65 | - S | Mechanical transom/mullion joints |
| 15 |  | MJS 4.8 X 70 | Y - | Mechanical sash corner joints |
| 16 |  | MJS 4.8 X 80 | Y - | Low threshold to adaptor block, mechanical transom |
| 17 |  | MS M5 X 20 | Z S | Handles |







 Colour key: Carbon Steel Zinc Stainless Steel Carbon Steel Yellow

| Item | Screw | Code | Option Code | Application |
|------|---|--------------|-------------|--|
| 18 |  | MS M5 X 45 | Z S | Handles |
| 19 |  | NFG 4.3 X 12 | Y - | Weatherbar to sash profiles door and T&T |
| 20 |  | RSR 3.9 X 13 | Z S | Reinforcement retention |
| 21 |  | SFG 4.3 X 16 | Z S | Friction stay to frame (un-reinforced) |
| 22 |  | SFG 4.3 X 32 | Z - | Adaptor profile attachment to sash if no reinforcing |
| 23 |  | SFG 4.8 X 20 | Z S | Hinge protectors to small profiles |
| 24 |  | SFG 4.8 X 25 | Z S | Hinge protectors to standard profiles |
| 25 |  | SSR 3.9 X 16 | Z S | Friction stays to steel reinforced profile, hinge protectors into reinforced profile |
| 26 |  | SSR 3.9 X 19 | Z S | Adaptor profile attachment to sash |
| 27 |  | SSR 3.9 X 28 | Z S | Adaptor profile attachment to reinforced sash, hinge protector to door sash |
| 28 |  | WSR 4.8 X 50 | Z - | Small outer frame to bay post |
| 29 |  | WSR 4.8 X 60 | Z - | Large outer to straight coupler, small outer frame to bay pole |
| 30 |  | WSR 4.8 X 80 | Z - | Large outer to bay pole, mechanical outer frame corner joint, flush casement window |

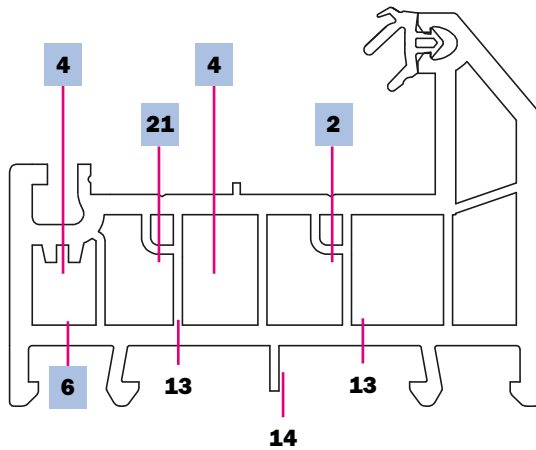
Colour key:  Carbon Steel Zinc  Stainless Steel  Carbon Steel Yellow

Colour Key:

| | | | |
|-----------------|---|---|---|
| Material Finish |  Carbon Steel Zinc |  Stainless Steel |  Carbon Steel Yellow |
|-----------------|---|---|---|







| | | | |
|---------------|---|--|---|
| Fastener Type |  Drill Point |  Gimlet Point |  Machine Screw |
| |  Multi-Purpose Screw |  AB Point |  Miscellaneous |

OUTER FRAMES 1

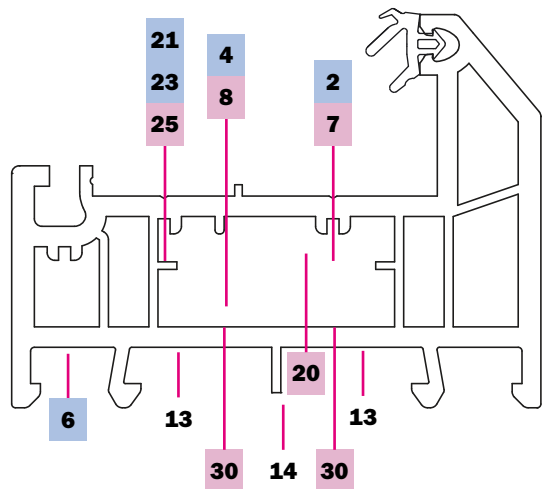


546845

6 Chamber Casement Slim Outer Frame 52mm

| | | | |
|-----------|---|--------------|---|
| 2 |  | CFG 4.3 X 16 | Security glazing clips into PVC |
| 4 |  | CFG 4.3 X 25 | Keep to frame (un-reinforced), cavity locking block |
| 6 |  | CFG 4.3 X 45 | Optional mechanical joint screw |
| 13 |  | EST 5.5 X 40 | Mechanical joints - aluminium reinforcement |
| 14 |  | EST 5.5 X 65 | Mechanical joints - using 261209 |
| 21 |  | SFG 4.3 X 16 | Friction stay to frame (un-reinforced) |

OUTER FRAMES 2



216391 1.5mm Steel
or
318555 1.0mm Steel

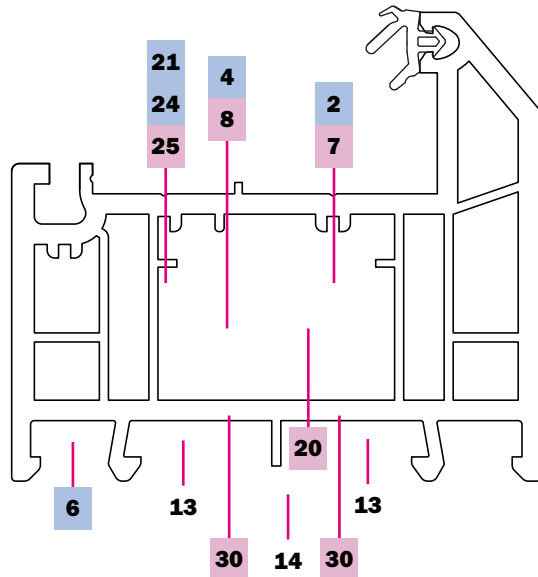


328219 Flush Casement Outer Frame Aluminium

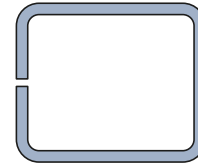
546815
Casement Slim Outer Frame 52mm
+
546415
Sculptured Casement Slim Outer Frame 52mm

| | | | |
|-----------|--|--------------|--|
| 2 | | CFG 4.3 X 16 | Security glazing clips, cavity locking blocks into un-reinforced profile |
| 4 | | CFG 4.3 X 25 | Keeps, run up blocks to Frame (un-reinforced) |
| 6 | | CFG 4.3 X 45 | Optional mechanical joint screw |
| 7 | | CSR 3.9 X 19 | Security glazing clips, cavity locking blocks into reinforcement |
| 8 | | CSR 3.9 X 25 | Keeps, run up blocks into reinforcement |
| 13 | | EST 5.5 X 40 | Mechanical joints - aluminium reinforcement |
| 14 | | EST 5.5 X 65 | Mechanical joints - using 261209 |
| 20 | | RSR 3.9 X 13 | Steel reinforcement retention, retention of 328219 |
| 21 | | SFG 4.3 X 16 | Friction stay to frame (un-reinforced) |
| 23 | | SFG 4.8 X 20 | Hinge protectors |
| 25 | | SSR 3.9 X 16 | Hinge protectors into reinforcement |
| 30 | | WSR 4.8 X 80 | Mechanical outer frame corner joint, flush casement window |

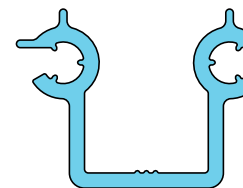
OUTER FRAMES 3




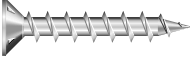










546825
Casement Intermediate Outer Frame 62mm
+
546425
Sculptured Casement Intermediate Outer Frame 62mm



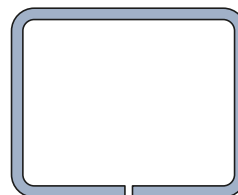
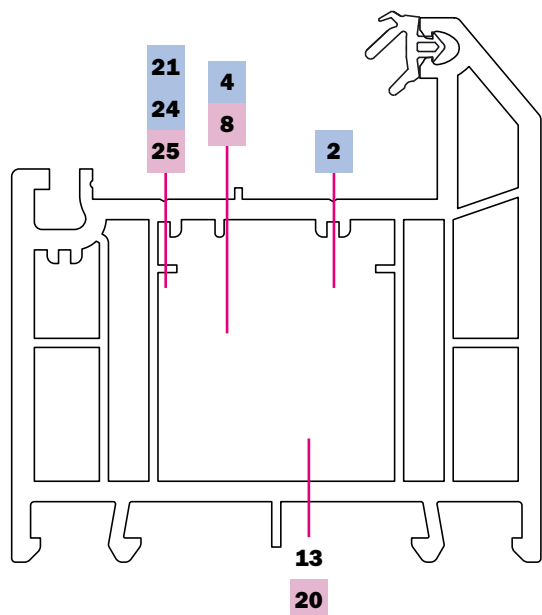
216392 1.5mm Steel
or
318565 1.0mm Steel



329891 Flush Casement Outer Frame Aluminium







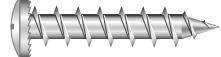

| | | | |
|-----------|---|--------------|--|
| 2 |  | CFG 4.3 X 16 | Security glazing clips, cavity locking blocks into un-reinforced profile |
| 4 |  | CFG 4.3 X 25 | Keeps, run up blocks to Frame (un-reinforced) |
| 6 |  | CFG 4.3 X 45 | Optional mechanical joint screw |
| 7 |  | CSR 3.9 X 19 | Security glazing clips, cavity locking blocks into reinforcement |
| 8 |  | CSR 3.9 X 25 | Keeps, run up blocks into reinforcement |
| 13 |  | EST 5.5 X 40 | Mechanical joints - aluminium reinforcement |
| 14 |  | EST 5.5 X 65 | Mechanical joints - using 261209 |
| 20 |  | RSR 3.9 X 13 | Steel reinforcement retention, retention of 328219 |
| 21 |  | SFG 4.3 X 16 | Friction stay to frame (un-reinforced) |
| 24 |  | SFG 4.8 X 25 | Hinge protectors |
| 25 |  | SSR 3.9 X 16 | Hinge protectors into reinforcement |
| 30 |  | WSR 4.8 X 80 | Mechanical outer frame corner joint, flush casement window |

OUTER FRAMES 4

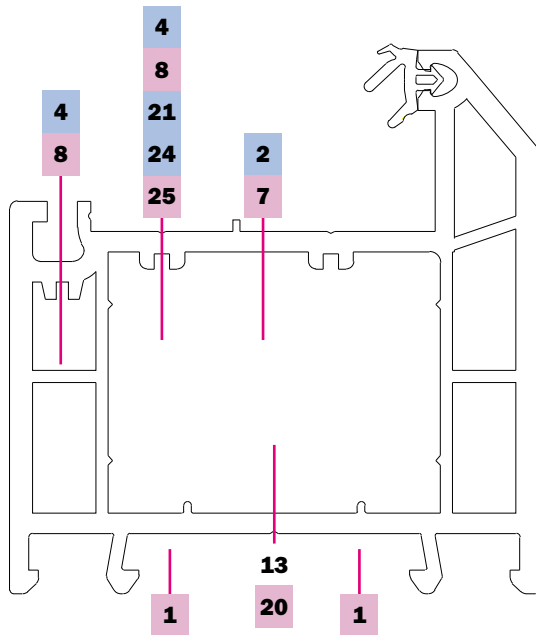


216393 1.5mm Steel
or
318575 1.0mm Steel

546836
5 Chamber Casement Universal Outer Frame 72mm
+
546435
Sculptured 5 Chamber Casement Universal Outer Frame 72mm

| | | | |
|-----------|---|--------------|---|
| 2 |  | CFG 4.3 X 16 | Security glazing clips, cavity locking blocks into un-reinforced profile |
| 4 |  | CFG 4.3 X 25 | Keeps, run up blocks to Frame (un-reinforced) |
| 8 |  | CSR 3.9 X 25 | Keeps, run up blocks into reinforcement, security glazing clips, cavity locking blocks into reinforcement |
| 13 |  | EST 5.5 X 40 | Mechanical joints |
| 20 |  | RSR 3.9 X 13 | Steel reinforcement retention, retention of 328219 |
| 21 |  | SFG 4.3 X 16 | Friction stay to frame (un-reinforced) |
| 24 |  | SFG 4.8 X 25 | Hinge protectors |
| 25 |  | SSR 3.9 X 16 | Hinge protectors into reinforcement |

OUTER FRAMES 5



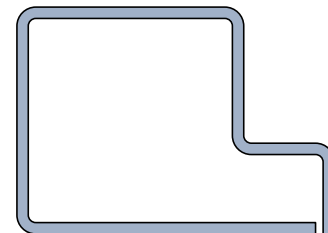
546185
Universal Outer Frame 72mm
+
546655
Sculptured Universal Outer Frame 72mm











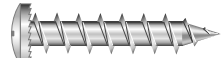

261958 1.5mm Steel



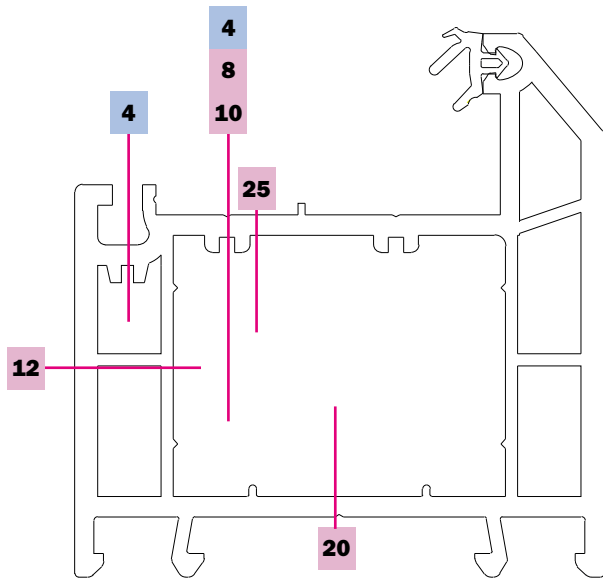
249848 1 mm Steel








200327 1.5mm Steel

| | | | |
|-----------|---|--------------|--|
| 1 |  | BSR 4.2 X 50 | Low threshold |
| 2 |  | CFG 4.3 X 16 | Security glazing clips, cavity locking blocks into un-reinforced profile |
| 4 |  | CFG 4.3 X 25 | Keeps, run up blocks to Frame (Un-reinforced) |
| 7 |  | CSR 3.9 X 19 | Security glazing clips, cavity locking blocks into reinforcement |
| 8 |  | CSR 3.9 X 25 | Keeps, run up blocks into reinforcement |
| 13 |  | EST 5.5 X 40 | Mechanical joints |
| 20 |  | RSR 3.9 X 13 | Steel Reinforcement Retention |
| 21 |  | SFG 4.3 X 16 | Friction Stay to Frame (Un-reinforced) |
| 24 |  | SFG 4.8 X 25 | Hinge protectors |
| 25 |  | SSR 3.9 X 16 | Friction stays, hinge protectors into reinforcement |

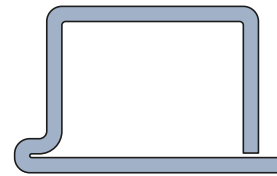
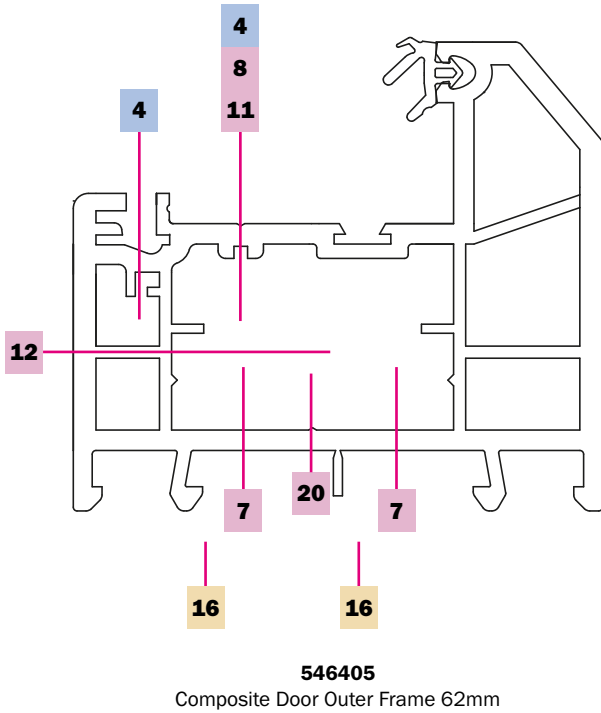
OUTER FRAMES 5 (CONTINUED)



546185
Universal Outer Frame 72mm
+
546655
Sculptured Universal Outer Frame 72mm

| | | | |
|-----------|---|--------------|--|
| 4 |  | CFG 4.3 X 25 | Keeps |
| 8 |  | CSR 3.9 X 25 | Low threshold plastic adaptor blocks, open out restrictor, run up blocks |
| 10 |  | CSR 3.9 X 38 | Keeps into steel reinforcement |
| 12 |  | CSR 4.8 X 38 | Flag hinges to reinforced outer frame |
| 25 |  | SSR 3.9 X 16 | Hinge protectors into reinforcement |

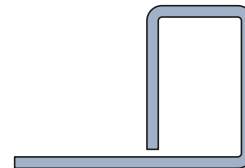
OUTER FRAMES 7







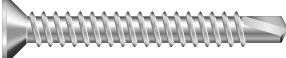


200023 1.5mm Steel



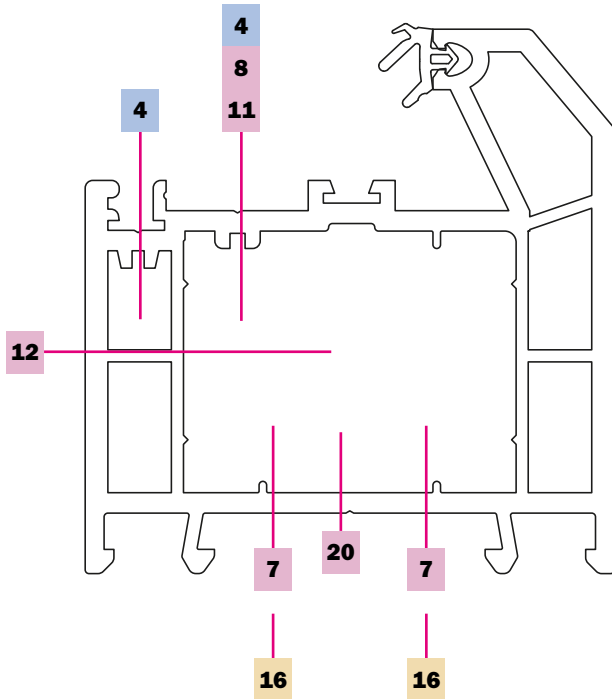
287798 1.5mm Steel



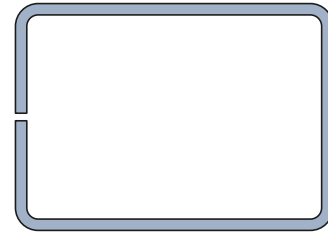
217899 Steel

| | | | |
|-----------|---|--------------|--|
| 4 |  | CFG 4.3 X 25 | Keeps, run up blocks to frame (un-reinforced) |
| 7 |  | CSR 3.9 X 19 | Low threshold adaptor block to outer frame |
| 8 |  | CSR 3.9 X 25 | Keeps, run up blocks into reinforcement |
| 11 |  | CSR 4.8 X 25 | Butt hinges to outer frame |
| 12 |  | CSR 4.8 X 38 | Flag hinges to reinforced outer frame |
| 16 |  | MJS 4.8 X 80 | Low threshold to adaptor block, mechanical transom |
| 20 |  | RSR 3.9 X 13 | Steel reinforcement retention |

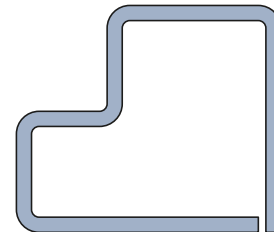
OUTER FRAMES 8



546760
Composite Door Outer Frame 72mm



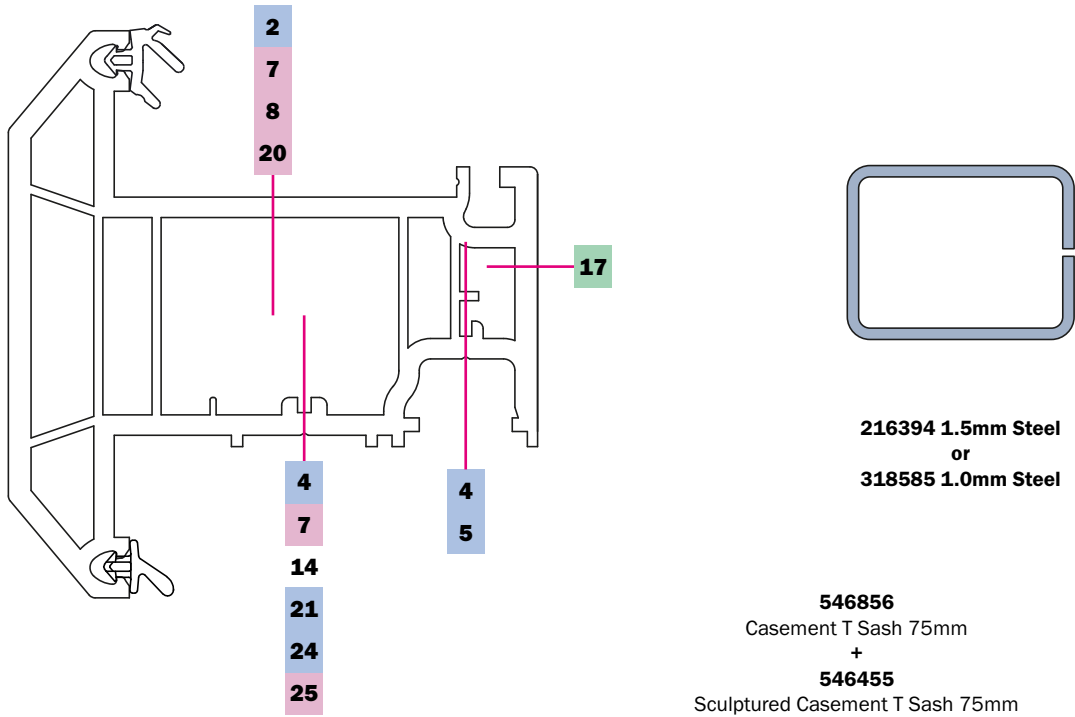
261958 1.5mm Steel






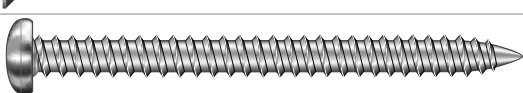
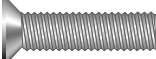


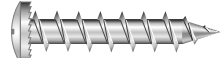



200022 1.5mm Steel

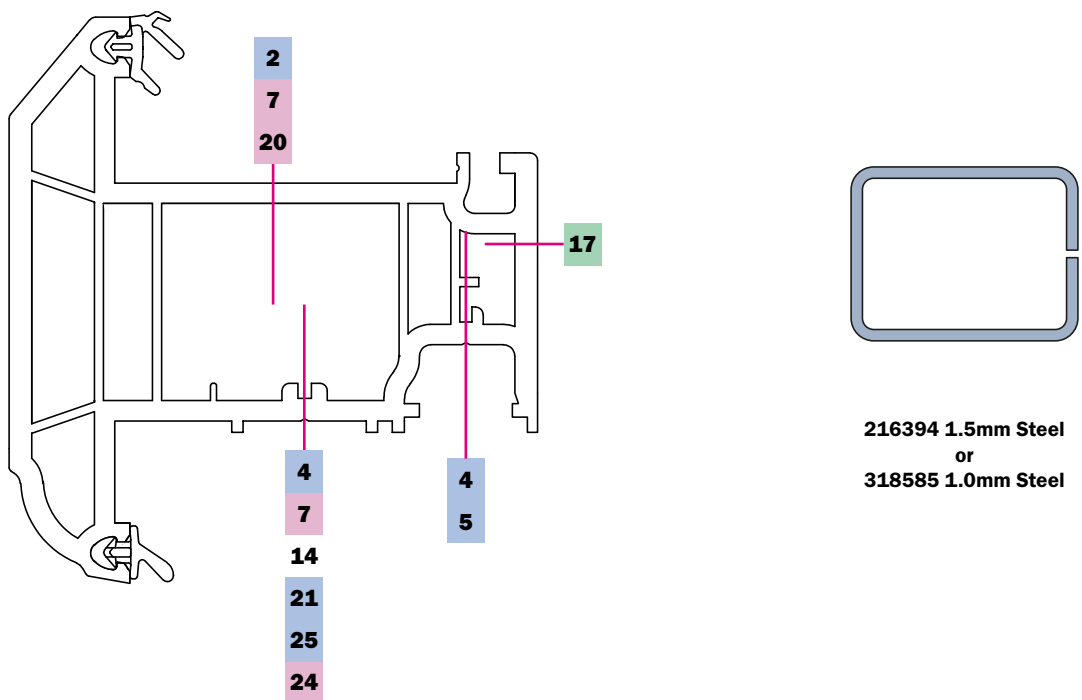
| | | | |
|-----------|--|--------------|--|
| 4 | | CFG 4.3 X 25 | Keeps, run up blocks to frame (un-reinforced) |
| 7 | | CSR 3.9 X 19 | Low threshold adaptor block to outer frame |
| 8 | | CSR 3.9 X 25 | Keeps, run up blocks into reinforcement |
| 11 | | CSR 4.8 X 25 | Butt hinges to outer frame |
| 12 | | CSR 4.8 X 38 | Flag hinges to reinforced outer frame |
| 16 | | MJS 4.8 X 80 | Low threshold to adaptor block, mechanical transom |
| 20 | | RSR 3.9 X 13 | Steel reinforcement retention |

SASHES 1





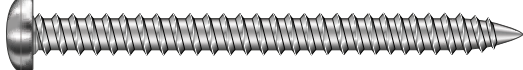



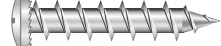



| | | | |
|----|---|--------------|---|
| 2 |  | CFG 4.3 X 16 | Security glazing clips into un-reinforced profile |
| 4 |  | CFG 4.3 X 25 | Gearing to sash, cavity locking wedge |
| 5 |  | CFG 4.3 X 30 | MACO M Spag centre section |
| 7 |  | CSR 3.9 X 19 | Security glazing clips, cavity locking wedge into reinforcement |
| 8 |  | CSR 3.9 X 25 | Run through sash horns |
| 14 |  | EST 5.5 X 65 | Mechanical joints used with 261209 |
| 17 |  | MS M5 X 20 | Handles |
| 20 |  | RSR 3.9 X 13 | Steel reinforcement retention |
| 21 |  | SFG 4.3 X 16 | Friction stays to un-reinforced profile |
| 24 |  | SFG 4.8 X 25 | Hinge guards to un-reinforced profile |
| 25 |  | SSR 3.9 X 16 | Friction stays & hinge guards to steel reinforced sash |

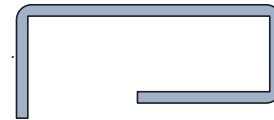
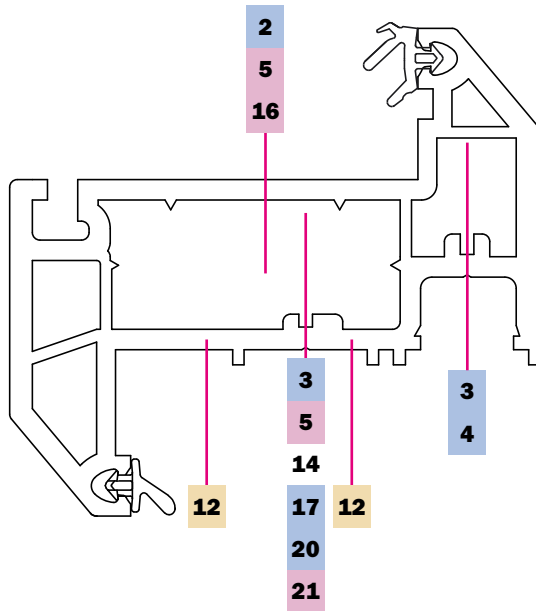
SASHES 2



546885
Part Sculptured Casement T Sash





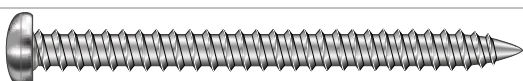
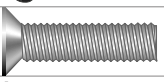


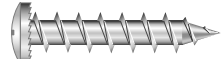

| | | | |
|-----------|---|--------------|---|
| 2 |  | CFG 4.3 X 16 | Security glazing clips into un-reinforced profile |
| 4 |  | CFG 4.3 X 25 | Gearing to sash, cavity locking wedge |
| 5 |  | CFG 4.3 X 30 | MACO M Spag centre section |
| 7 |  | CSR 3.9 X 19 | Security glazing clips, cavity locking wedge into reinforcement |
| 14 |  | EST 5.5 X 65 | Mechanical joints used with 261209 |
| 17 |  | MS M5 X 20 | Handles |
| 20 |  | RSR 3.9 X 13 | Steel reinforcement retention |
| 21 |  | SFG 4.3 X 16 | Friction stays to un-reinforced profile |
| 24 |  | SFG 4.8 X 25 | Hinge guards to un-reinforced profile |
| 25 |  | SSR 3.9 X 16 | Friction stays & hinge guards to steel reinforced sash |

SASHES 3

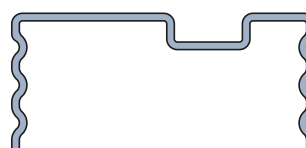
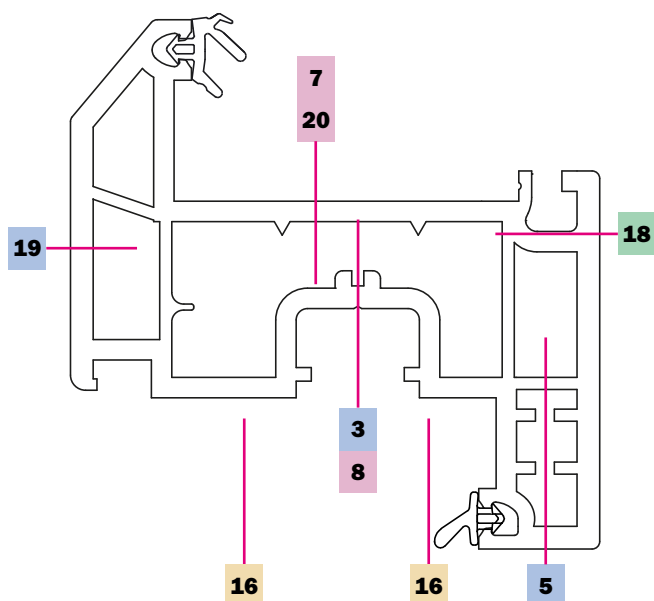


261938 1.5mm Steel
or
287786 1.0mm Steel

546066
Casement Z Sash 75mm







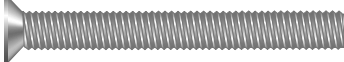


| | | | |
|-----------|---|--------------|---|
| 2 |  | CFG 4.3 X 16 | Security glazing clips into un-reinforced profile |
| 4 |  | CFG 4.3 X 25 | Gearing to sash, cavity locking wedge |
| 5 |  | CFG 4.3 X 30 | MACO M Spag centre section |
| 7 |  | CSR 3.9 X 19 | Security glazing clips, cavity locking wedge into reinforcement |
| 14 |  | EST 5.5 X 65 | Mechanical transom/mullion joints |
| 17 |  | MS M5 X 20 | Handles |
| 20 |  | RSR 3.9 X 13 | Steel reinforcement retention |
| 21 |  | SFG 4.3 X 16 | Friction stays to un-reinforced profile |
| 24 |  | SFG 4.8 X 25 | Hinge guards to un-reinforced profile |
| 25 |  | SSR 3.9 X 16 | Friction stays & hinge guards to steel reinforced sash |

SASHES 4

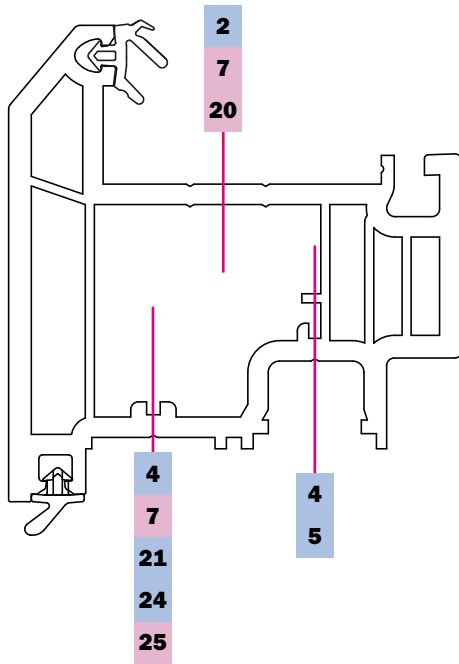


287779 1.0mm Steel

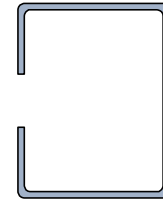
546776
Tilt & Turn 70mm Sash
+
546695
Sculptured Casement T Sash 75mm

| | | | |
|-----------|---|--------------|-----------------------------------|
| 3 |  | CFG 4.3 X 20 | Gearing to sash |
| 4 |  | CFG 4.3 X 25 | Rebated hinges, concealed hinges |
| 5 |  | CFG 4.3 X 30 | Face fixed hinges |
| 7 |  | CSR 3.9 X 19 | Security glazing clips |
| 8 |  | CSR 3.9 X 25 | Gearing to reinforced sash |
| 16 |  | MJS 4.8 X 80 | Mechanical jointing dummy transom |
| 18 |  | MS M5 X 45 | Handle screw |
| 19 |  | NFG 4.3 X 12 | Weather bar |
| 20 |  | RSR 3.9 X 13 | Reinforcement retention |

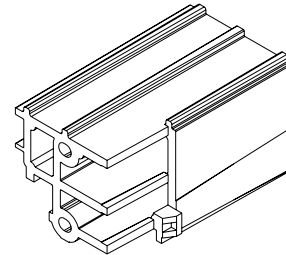
SASHES 5












546015
63mm Flush Sash



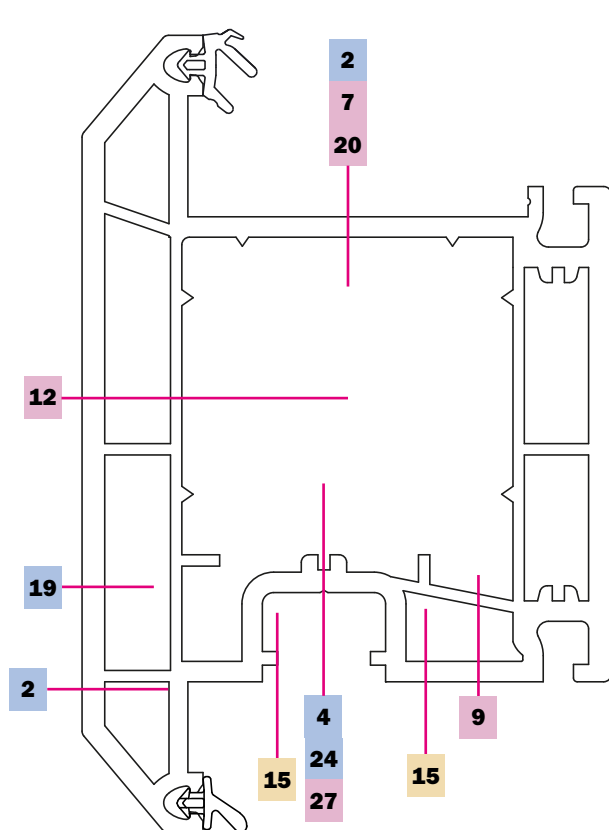
328180 0.8mm Steel



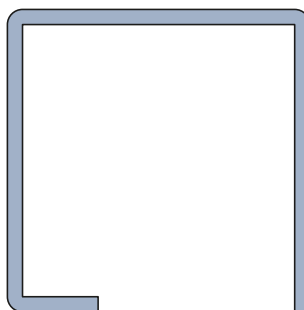
328222 Plug

| | | | |
|-----------|---|--------------|--|
| 2 |  | CFG 4.3 X 16 | Security glazing clips into un-reinforced profile, mech joint plug retention |
| 4 |  | CFG 4.3 X 25 | Gearing to sash, cavity locking wedge |
| 5 |  | CFG 4.3 X 30 | MACO M Spag centre section |
| 7 |  | CSR 3.9 X 19 | Security glazing clips, cavity locking wedge into reinforcement |
| 15 |  | MJS 4.8 X 70 | Mechanical sash corner joints |
| 20 |  | RSR 3.9 X 13 | Steel Reinforcement Retention |
| 21 |  | SFG 4.3 X 16 | Friction stays to un-reinforced profile |
| 24 |  | SFG 4.8 X 25 | Hinge guards to un-reinforced profile |
| 25 |  | SSR 3.9 X 16 | Friction stays & hinge guards to steel reinforced sash |

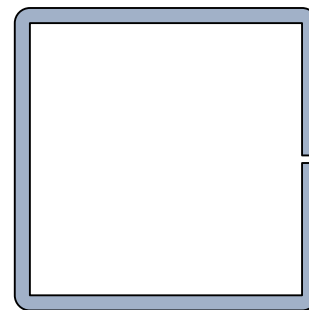
SASHES 6



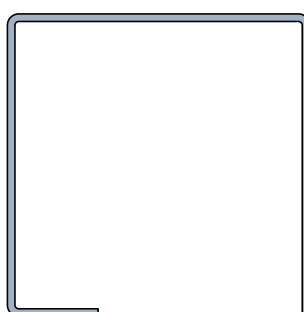
546635
Door T Sash/Mid-rail 105.5mm
+
546725
Sculptured Door T Sash T Sash 105.5mm



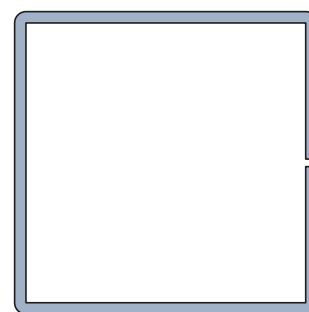
252827 2.0mm Steel



258841 2.0mm Steel

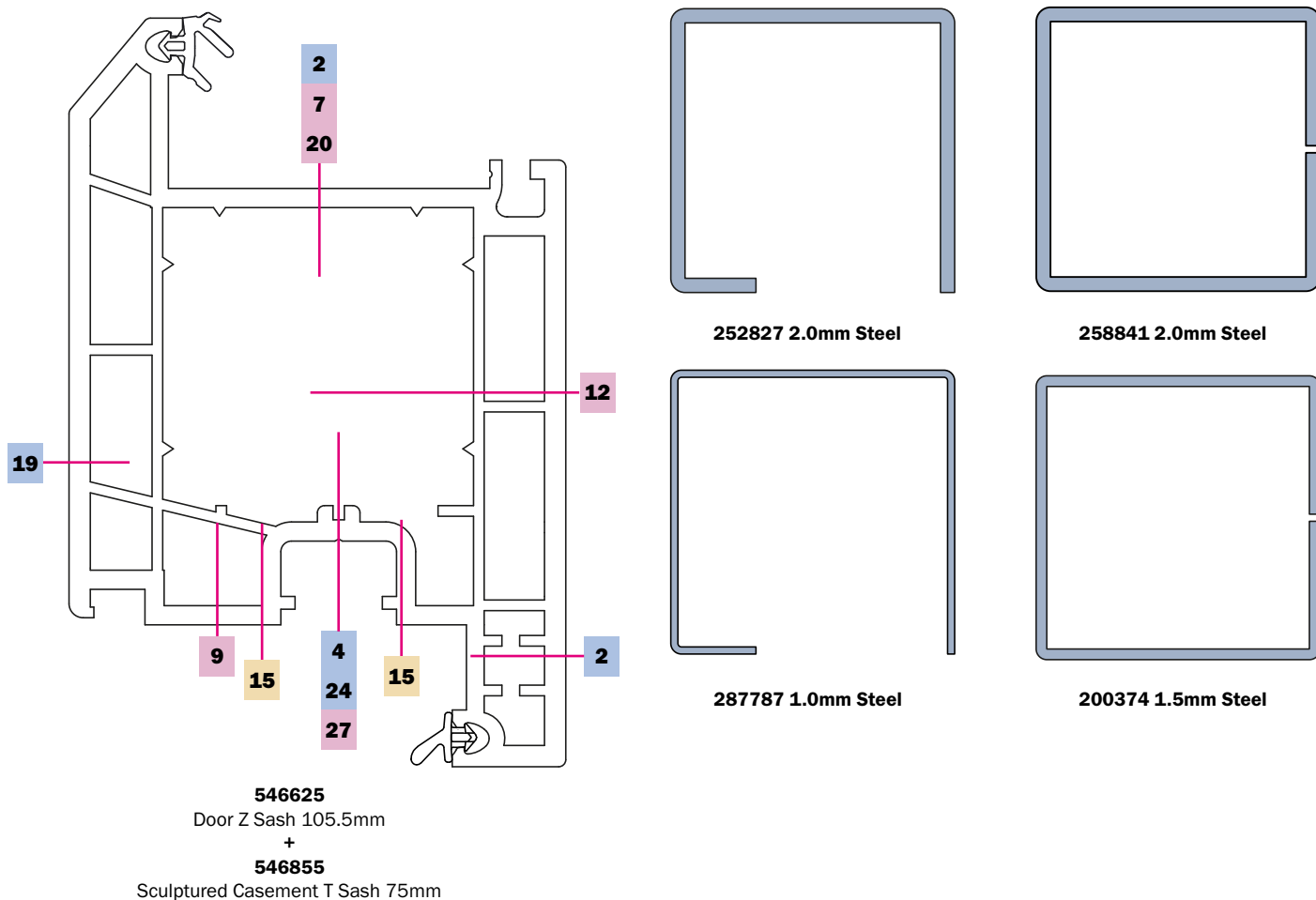












287787 1.0mm Steel



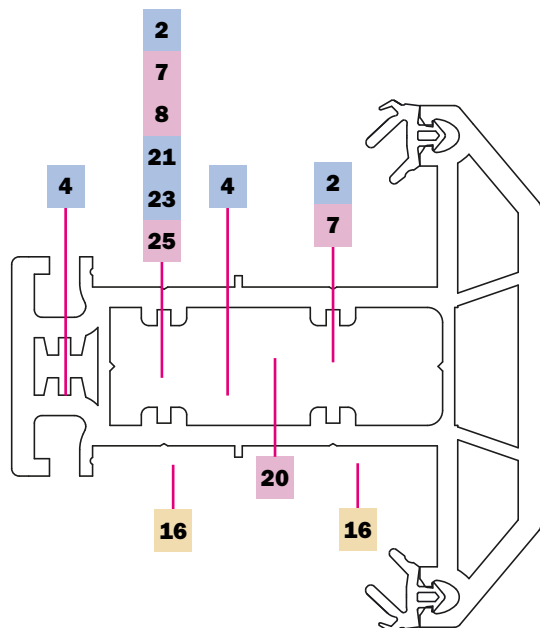
200374 1.5mm Steel

| | | | |
|-----------|--|--------------|--|
| 2 | | CFG 4.3 X 16 | Security glazing clips into un-reinforced profile, flag hinges |
| 4 | | CFG 4.3 X 25 | Door lock |
| 7 | | CSR 3.9 X 19 | Security glazing clips into reinforcement |
| 9 | | CSR 3.9 X 32 | Weather seal under the sash |
| 12 | | CSR 4.8 X 38 | Flag hinges |
| 15 | | MJS 4.8 X 95 | Mechanical mid-rail joints (pre-drilled) |
| 19 | | NFG 4.3 X 12 | Weather Bar |
| 20 | | RSR 3.9 X 13 | Steel Reinforcement Retention |
| 24 | | SFG 4.8 X 25 | Hinge protectors |
| 27 | | SSR 3.9 X 28 | Hinge protectors into reinforcement |

SASHES 7


| | | | |
|-----------|---|--------------|--|
| 2 |  | CFG 4.3 X 16 | Security glazing clips into un-reinforced profile, flag hinges |
| 4 |  | CFG 4.3 X 25 | Door lock |
| 7 |  | CSR 3.9 X 19 | Security glazing clips into reinforcement |
| 9 |  | CSR 3.9 X 32 | Weather seal under the sash |
| 12 |  | CSR 4.8 X 38 | Flag hinges |
| 15 |  | MJS 4.8 X 70 | Mechanical mid-rail joints (pre-drilled) |
| 19 |  | NFG 4.3 X 12 | Weather Bar |
| 20 |  | RSR 3.9 X 13 | Steel Reinforcement Retention |
| 24 |  | SFG 4.8 X 30 | Hinge protectors |
| 27 |  | SSR 3.9 X 25 | Hinge protectors into reinforcement |

TRANSOMS/MULLIONS 1



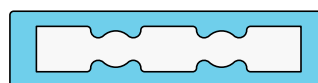
546085
Slim Transom/Mullion T 69mm
+
546665
Sculptured Slim Transom/Mullion T 69mm












261748 2.0mm Steel



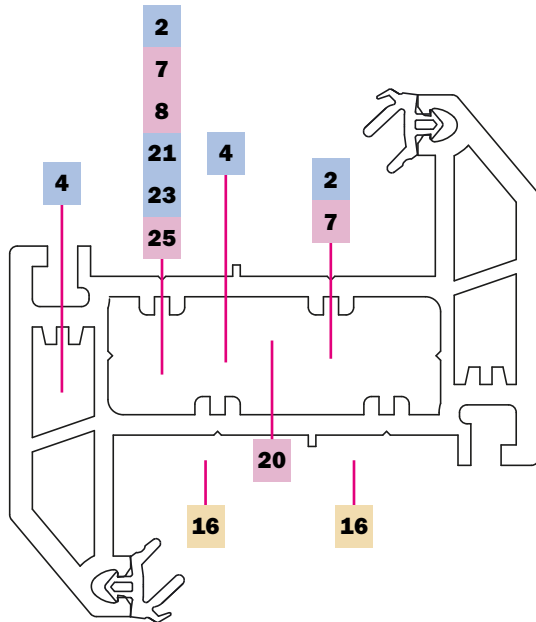
249838 1.0mm Steel



261948 Aluminium

| | | | |
|-----------|---|--------------|--|
| 2 |  | CFG 4.3 X 16 | Security glazing clips, cavity locking blocks into un-reinforced profile |
| 4 |  | CFG 4.3 X 25 | Keeps, run up blocks to Frame (un-reinforced) |
| 7 |  | CSR 3.9 X 19 | Security glazing clips, cavity locking blocks into reinforcement |
| 8 |  | CSR 3.9 X 25 | Keeps, run up blocks into reinforcement |
| 16 |  | MJS 4.8 X 80 | Mechanical joints |
| 20 |  | RSR 3.9 X 13 | Steel reinforcement retention |
| 21 |  | SFG 4.3 X 16 | Friction stay to frame (un-reinforced) |
| 23 |  | SFG 4.8 X 20 | Hinge protectors |
| 25 |  | SSR 3.9 X 16 | Friction stays, hinge protectors into reinforcement |

TRANSOMS/MULLIONS 2



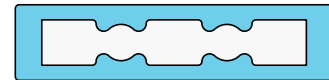
546095
Slim Transom/Mullion Z 69mm
+
546675
Sculptured Slim Transom/Mullion Z 69mm








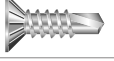

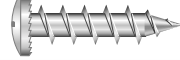

261748 2.0mm Steel



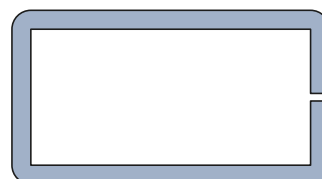
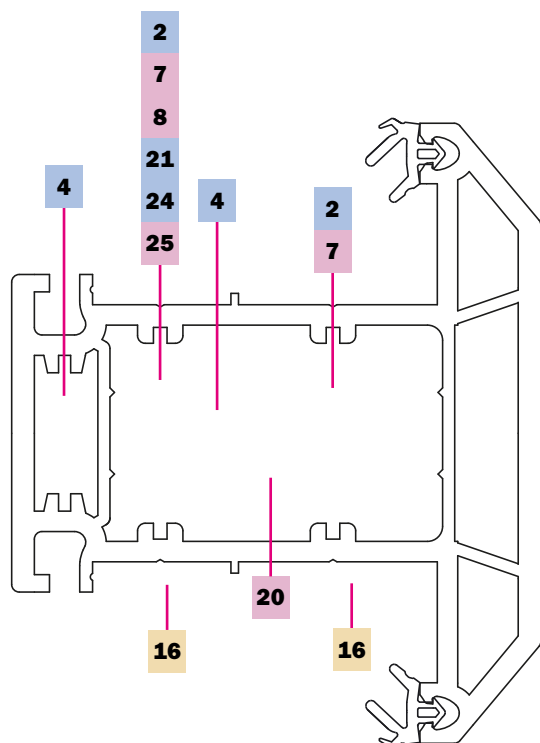
249838 1.0mm Steel



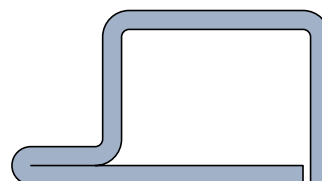
261948 Aluminium

| | | | |
|-----------|---|--------------|--|
| 2 |  | CFG 4.3 X 16 | Security glazing clips, cavity locking blocks into un-reinforced profile |
| 4 |  | CFG 4.3 X 25 | Keeps, run up blocks to Frame (un-reinforced) |
| 7 |  | CSR 3.9 X 19 | Security glazing clips, cavity locking blocks into reinforcement |
| 8 |  | CSR 3.9 X 25 | Keeps, run up blocks into reinforcement |
| 16 |  | MJS 4.8 X 80 | Mechanical joints |
| 20 |  | RSR 3.9 X 13 | Steel reinforcement retention |
| 21 |  | SFG 4.3 X 16 | Friction stay to frame (un-reinforced) |
| 23 |  | SFG 4.8 X 20 | Hinge protectors |
| 25 |  | SSR 3.9 X 16 | Friction stays, hinge protectors into reinforcement |

TRANSOMS/MULLIONS 3



261738 2.5mm Steel
or
287776 2.0mm Steel

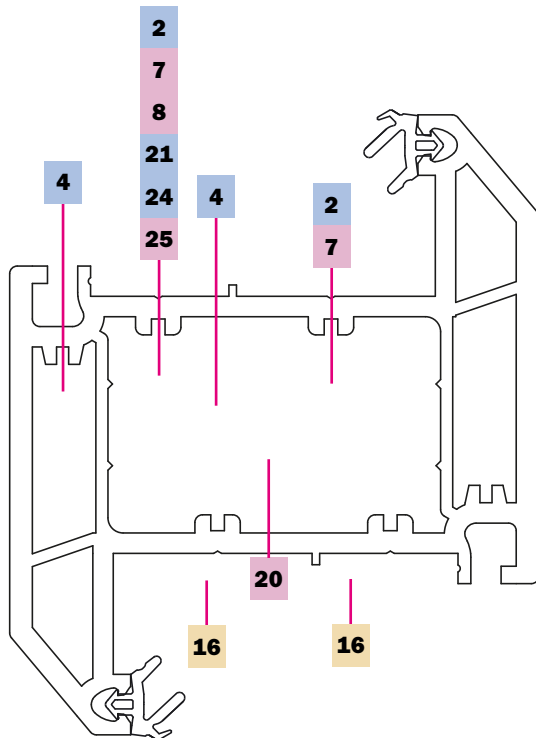


200347 2.5mm Steel

546475
Large Transom/Mullion T 82mm
+
546745
Sculptured Large Transom/Mullion T 82mm








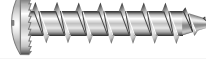

| | | | |
|-----------|--|--------------|--|
| 2 | | CFG 4.3 X 16 | Security glazing clips, cavity locking blocks into un-reinforced profile |
| 4 | | CFG 4.3 X 25 | Keeps, run up blocks to Frame (un-reinforced) |
| 7 | | CSR 3.9 X 19 | Security glazing clips, cavity locking blocks into reinforcement |
| 8 | | CSR 3.9 X 25 | Keeps, run up blocks into reinforcement |
| 16 | | MJS 4.8 X 80 | Mechanical joints |
| 20 | | RSR 3.9 X 13 | Steel reinforcement retention |
| 21 | | SFG 4.3 X 16 | Friction stay to frame (un-reinforced) |
| 24 | | SFG 4.8 X 25 | Hinge protectors |
| 25 | | SSR 3.9 X 16 | Friction stays, hinge protectors into reinforcement |

TRANSOMS/MULLIONS 4

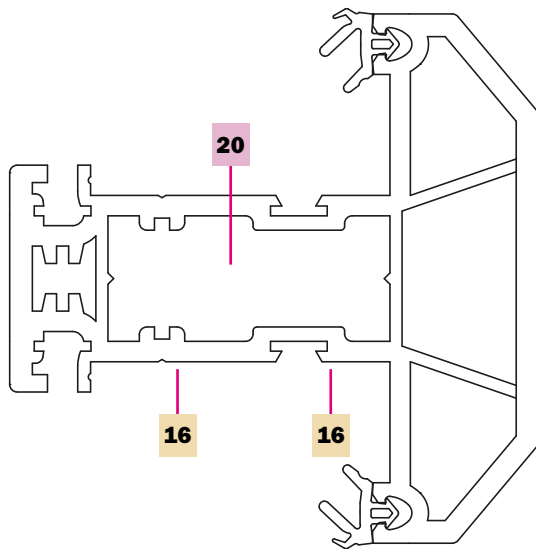


261738 2.5mm Steel
or
287776 2.0mm Steel

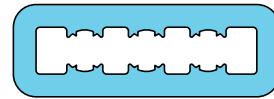
546465
Large Transom/Mullion Z 82mm
+
546755
Sculptured Large Transom/Mullion Z 82mm

| | | | |
|-----------|---|--------------|--|
| 2 |  | CFG 4.3 X 16 | Security glazing clips, cavity locking blocks into un-reinforced profile |
| 4 |  | CFG 4.3 X 25 | Keeps, run up blocks to Frame (un-reinforced) |
| 7 |  | CSR 3.9 X 19 | Security glazing clips, cavity locking blocks into reinforcement |
| 8 |  | CSR 3.9 X 25 | Keeps, run up blocks into reinforcement |
| 16 |  | MJS 4.8 X 80 | Mechanical joints |
| 20 |  | RSR 3.9 X 13 | Steel reinforcement retention |
| 21 |  | SFG 4.3 X 16 | Friction stay to frame (un-reinforced) |
| 24 |  | SFG 4.8 X 25 | Hinge protectors |
| 25 |  | SSR 3.9 X 16 | Friction stays, hinge protectors into reinforcement |

TRANSOMS/MULLIONS 5





287798 Steel



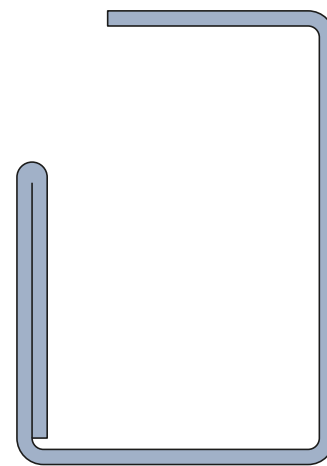
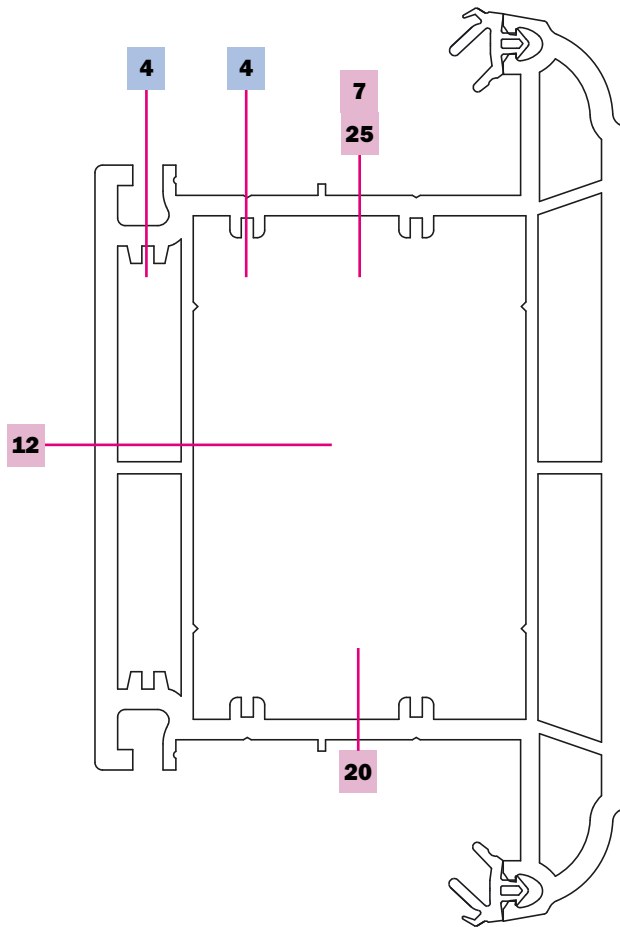
200509 Aluminium

546406

Composite Door Transom 70mm
Only Used With Outer Frame 546405

| | | | |
|-----------|---|--------------|--------------------------------|
| 16 |  | MJS 4.8 X 80 | Low threshold to adaptor block |
| 20 |  | RSR 3.9 X 13 | Steel reinforcement retention |

TRANSOMS/MULLIONS 6

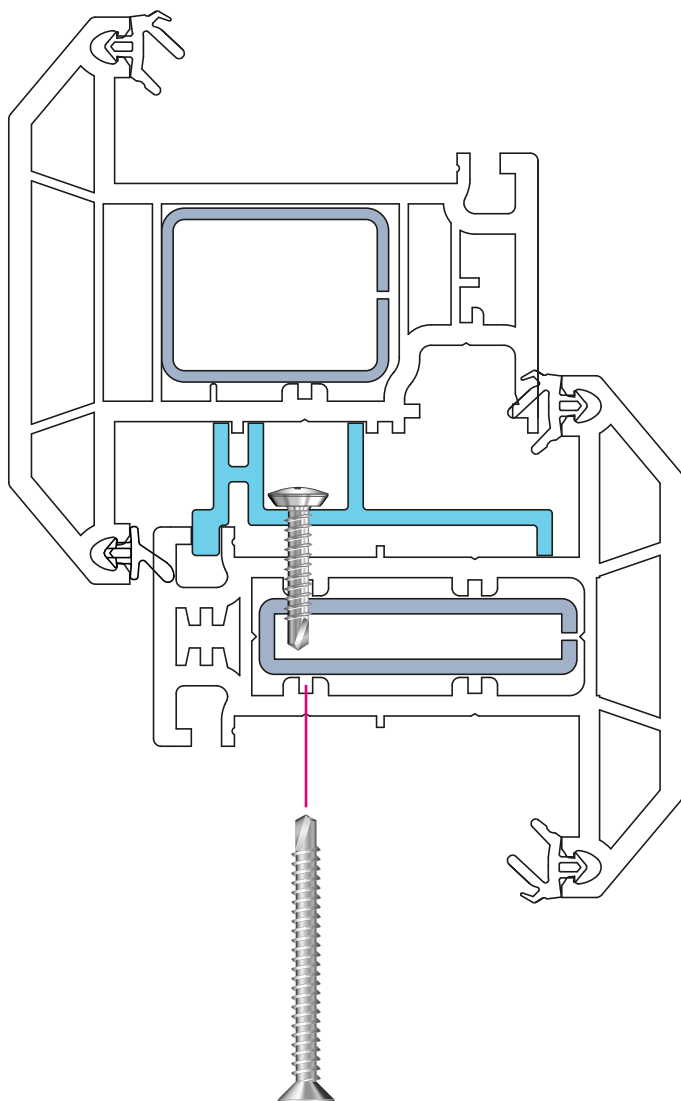


287066 Steel

546705
Extra Large Transom/Mullion T 120mm

| | | | |
|-----------|---|--------------|---------------------------------------|
| 4 |  | CFG 4.3 X 25 | Keeps |
| 7 |  | CSR 3.9 X 19 | Security glazing clips |
| 12 |  | CSR 4.8 X 38 | Flag hinges to reinforced outer frame |
| 20 |  | RSR 3.9 X 13 | Steel reinforcement retention |
| 25 |  | SSR 3.9 X 16 | Hinge protectors into reinforcement |

FRENCH CASEMENT WINDOW





Pre-drill the adaptor profile with 4.0mm holes. Fit the adaptor to the false mullion using SSR 3.9 x 19 Z screws as shown.

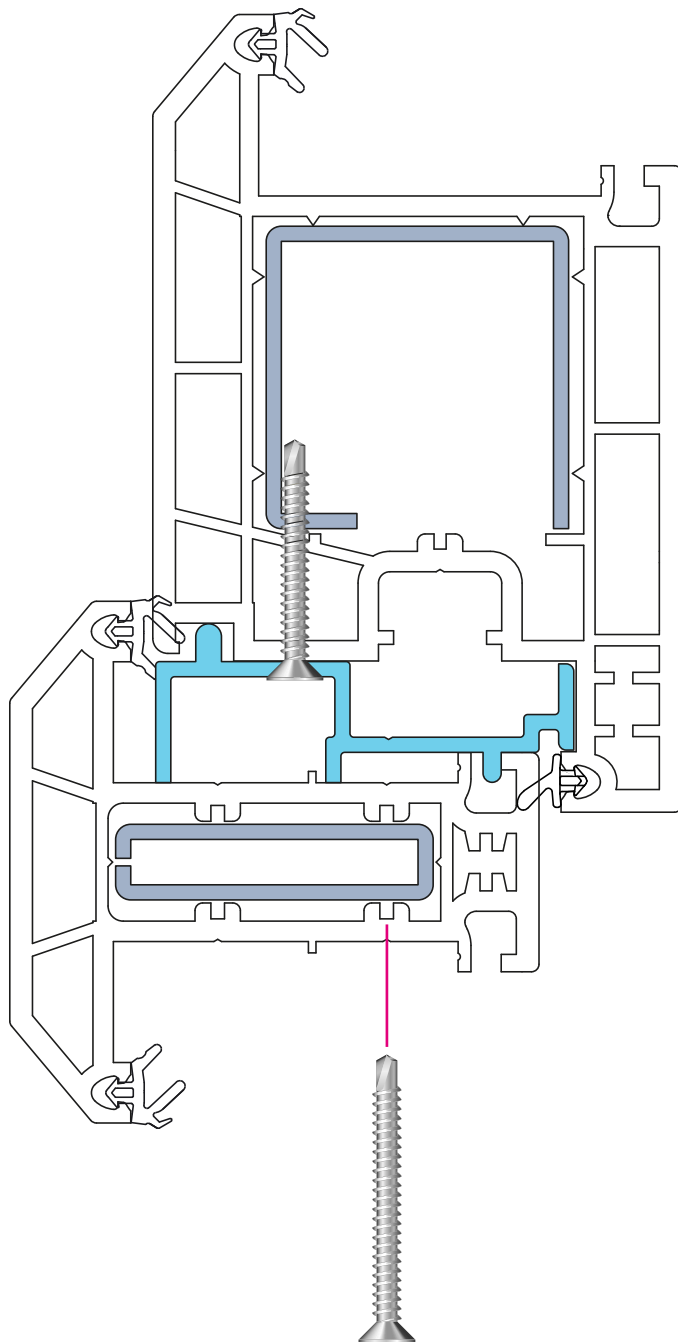
Clamp the false mullion to the sash in the correct position.

Pre-drill 4.0mm hole in false mullion, steel and the adaptor profile then screw straight through into the sash steel using CSR 3.9 x 38 Z as shown

Both screws are on the same axis but staggered (*screws shown in this position for illustration only*)

| | | | |
|-----------|---|--------------|---|
| 10 |  | CSR 3.9 X 38 | False mullion attachment to adaptor profile |
| 26 |  | SSR 3.9 X 19 | Adaptor profile attachment to sash |

FRENCH DOOR





Pre-drill adaptor profile 200367 with a 4.0mm drill and then counter sink the holes, as per the REHAU technical manual.

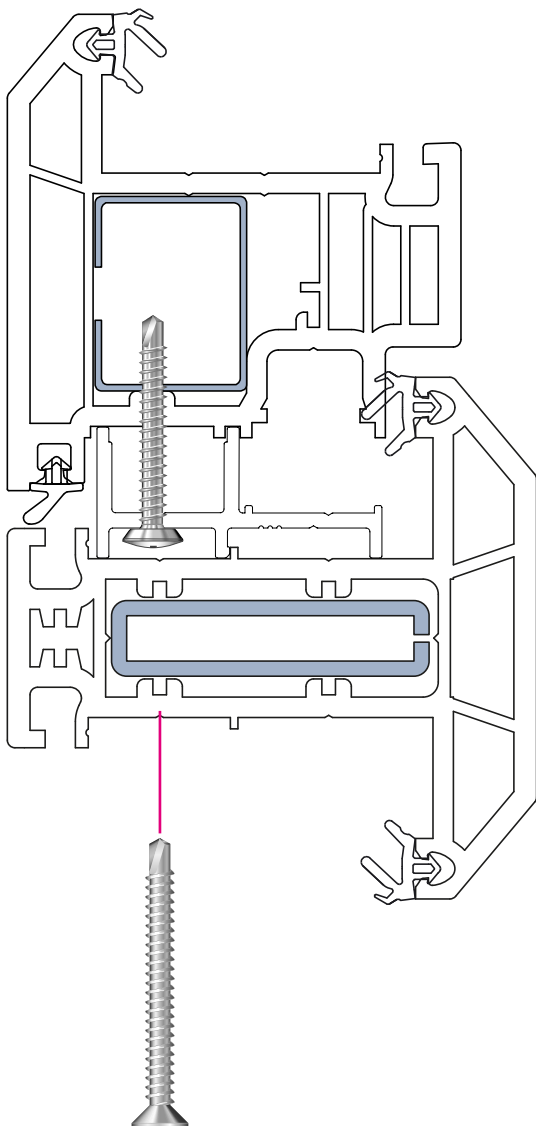
Fix adaptor profile to door sash using CSR 3.9 x 32 Z screws as shown.

Clamp the false mullion to the sash in the correct position.

Pre-drill 4.0mm hole in false mullion and counter sink, as per the REHAU technical manual, then screw straight through into the adaptor profile using CSR 3.9 x 38 Z

| | | | |
|----|---|--------------|---|
| 9 |  | CSR 3.9 X 32 | Adaptor profile attachment to sash |
| 10 |  | CSR 3.9 X 38 | False mullion attachment to adaptor profile |

FRENCH FLUSH CASEMENT WINDOW






Pre-drill the adaptor profile 328223 with 4.0mm hole. Fit the adaptor using SSR 3.9 x 28 Z screws as shown.

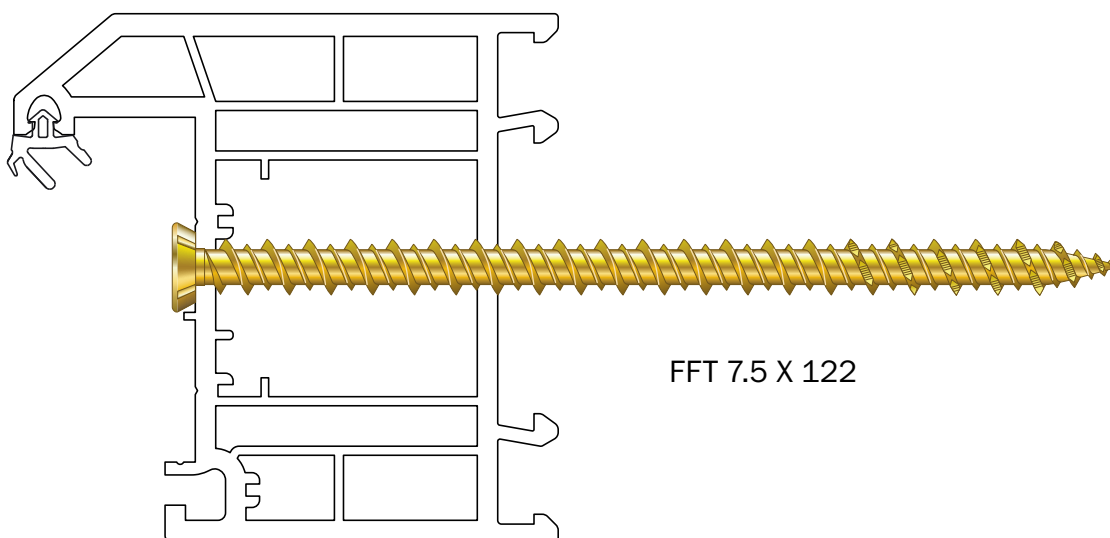
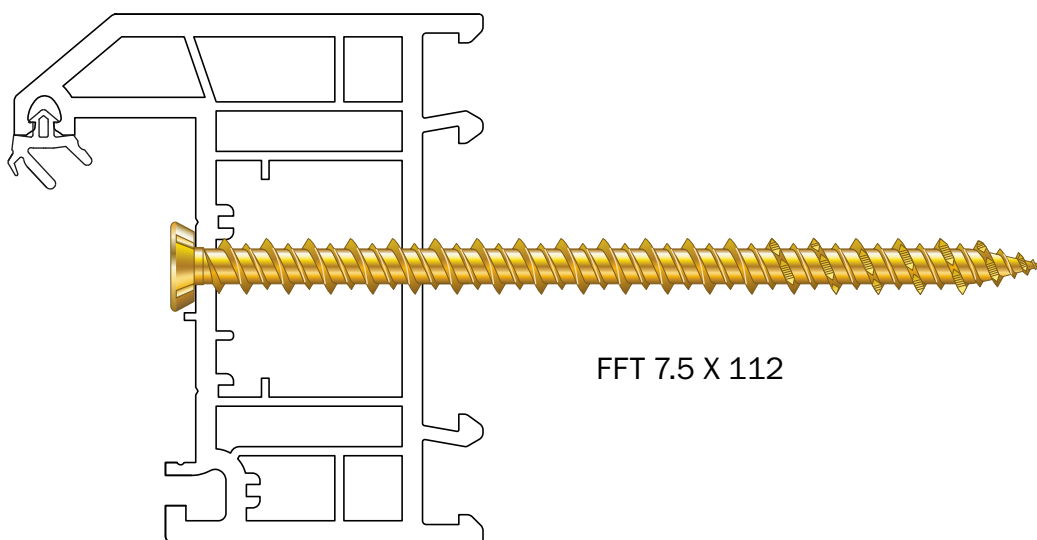
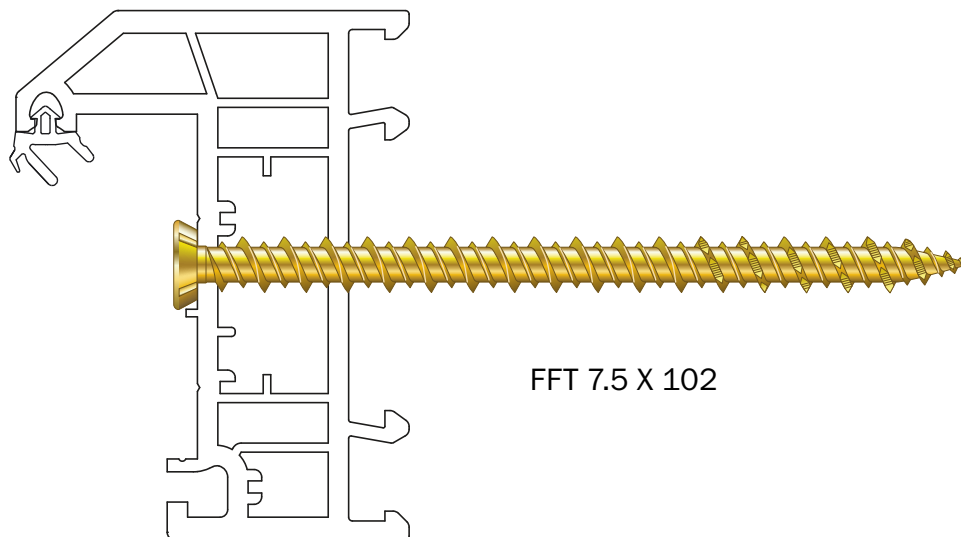
Clamp the false mullion to the sash in the correct position.

Pre-drill 5.0mm hole in false mullion, steel and the adaptor profile then screw straight through into the sash steel using CSR 3.9 x 38 Z as shown

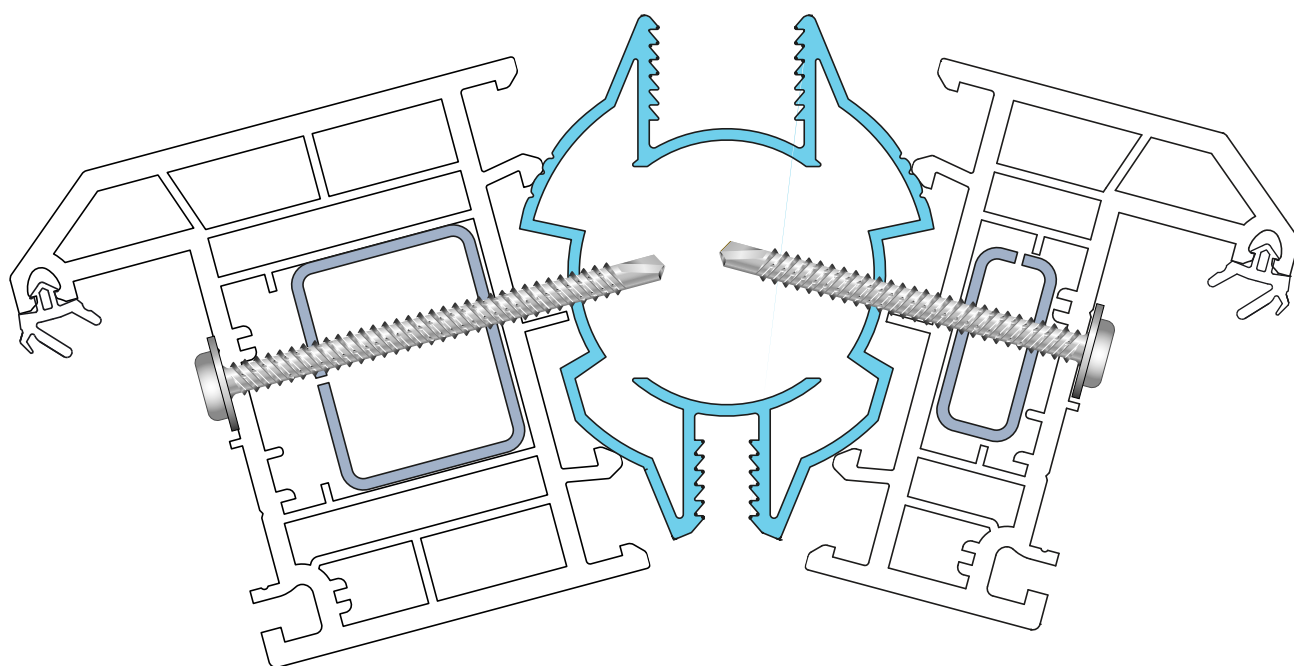
Both screws are on the same axis but staggered (*screws shown in this position for illustration only*)



| | | | |
|-----------|---|--------------|--|
| 10 |  | CSR 3.9 X 38 | False mullion attachment to adaptor profile |
| 22 |  | SFG 4.3 X 32 | Adaptor profile attachment to sash if no reinforcing |
| 27 |  | SSR 3.9 X 28 | Adaptor profile attachment to sash |

FRAME INSTALLATION

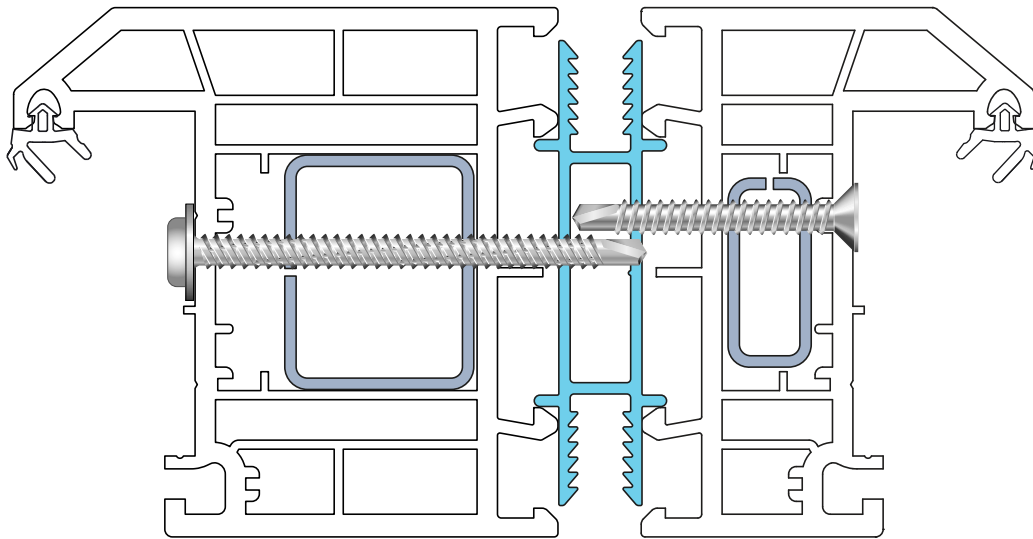


ANCILLARY ITEMS 1



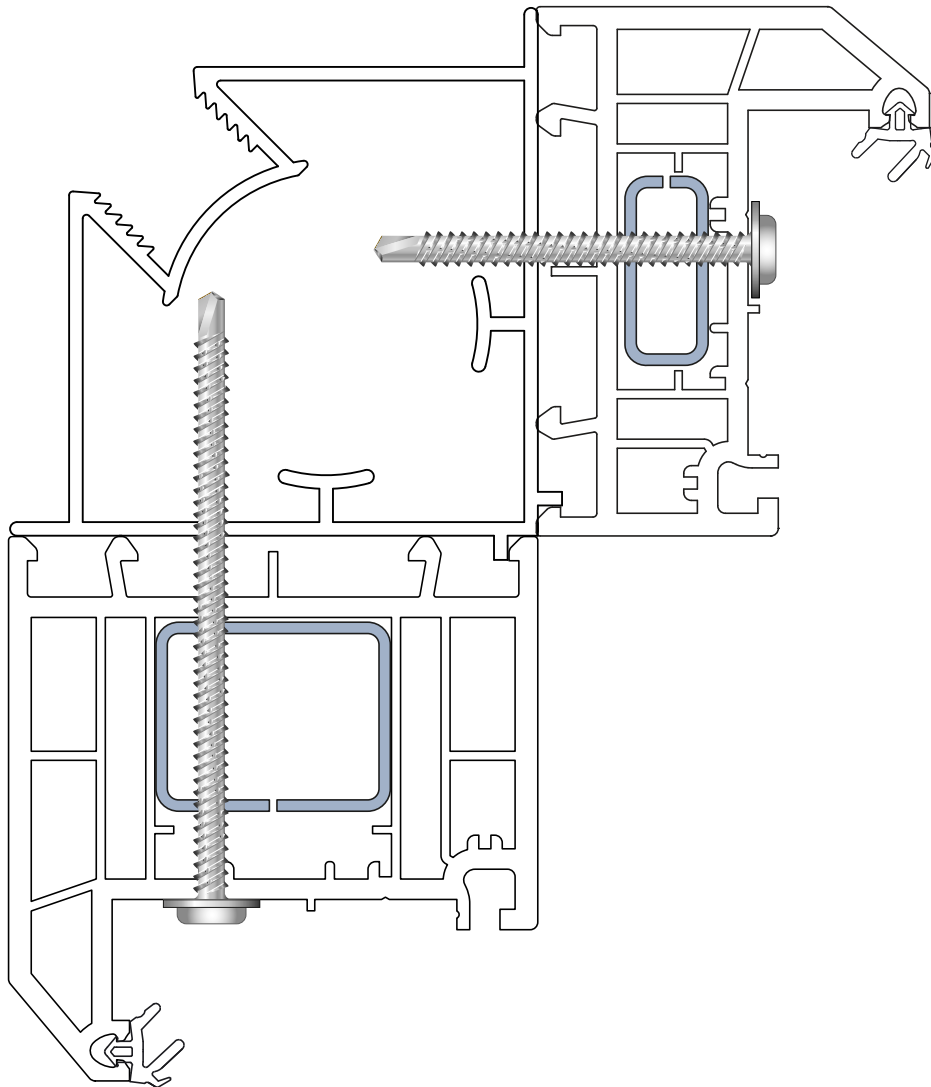
| | | | |
|----|---|--------------|-------------------------------|
| 28 |  | WSR 4.8 X 50 | Small outer frame to bay post |
| 29 |  | WSR 4.8 X 65 | Large outer to bay post |

ANCILLARY ITEMS 2



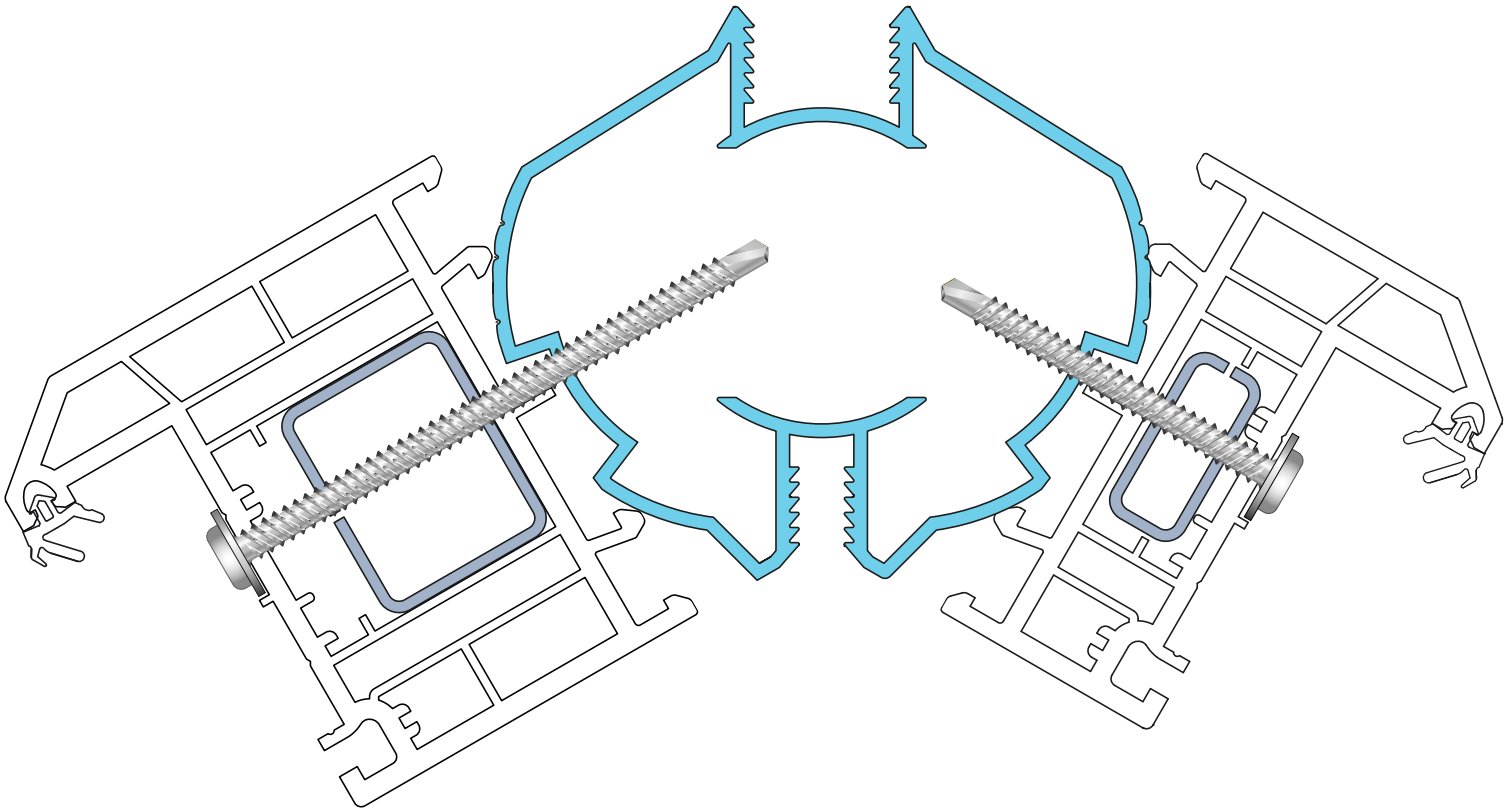
| | | | |
|----|---|--------------|---------------------------------------|
| 12 |  | CSR 4.8 X 38 | Small outer frame to straight coupler |
| 29 |  | WSR 4.8 X 60 | Large outer to straight coupler |

ANCILLARY ITEMS 3



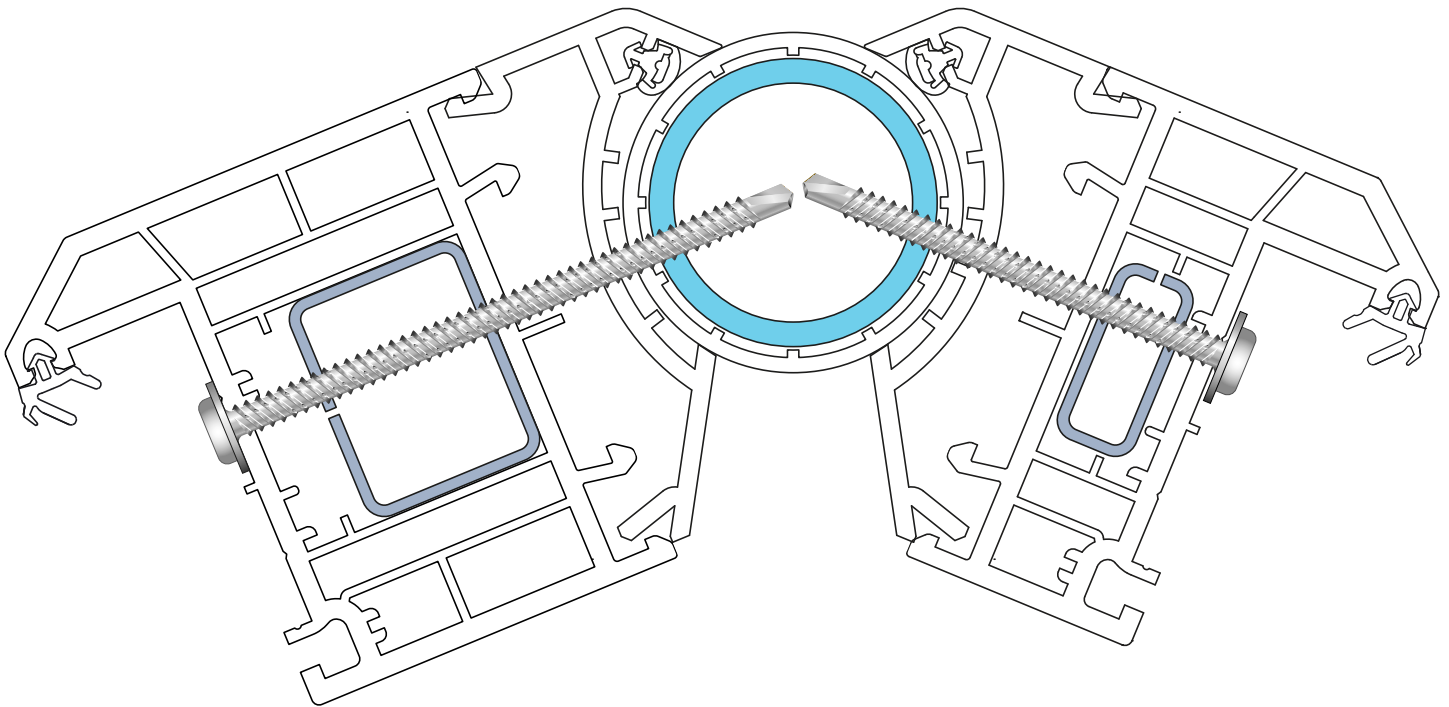
| | | | |
|----|---|--------------|-------------------------------|
| 28 |  | WSR 4.8 X 50 | Small outer frame to bay post |
| 30 |  | WSR 4.8 X 80 | Large outer to bay post |

ANCILLARY ITEMS 4



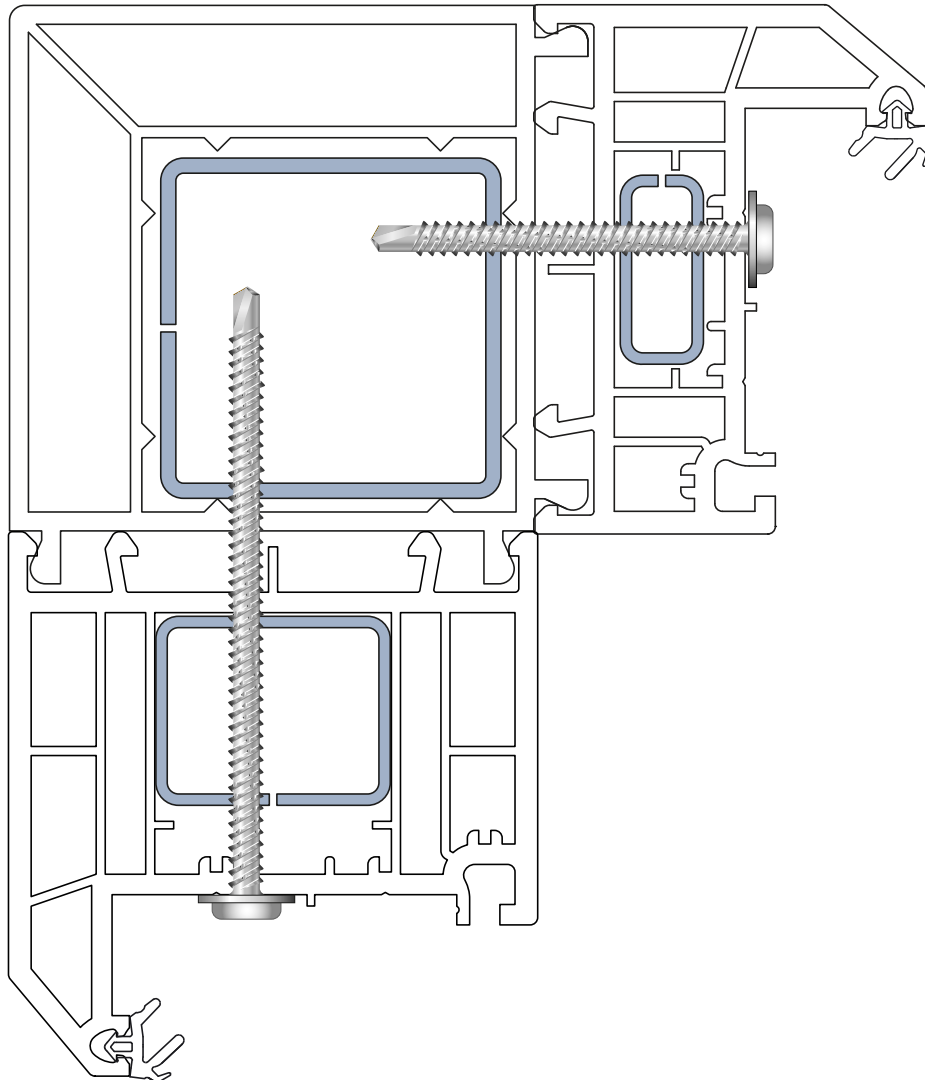
| | | | |
|----|---|--------------|-------------------------------|
| 28 |  | WSR 4.8 X 50 | Small outer frame to bay post |
| 30 |  | WSR 4.8 X 80 | Large outer to bay post |



ANCILLARY ITEMS 5



| | | | |
|----|---|--------------|-------------------------------|
| 29 |  | WSR 4.8 X 60 | Small outer frame to bay pole |
| 30 |  | WSR 4.8 X 80 | Large outer to bay pole |

ANCILLARY ITEMS 6



| | | | |
|----|---|--------------|-------------------------------|
| 28 |  | WSR 4.8 X 50 | Small outer frame to bay post |
| 30 |  | WSR 4.8 X 80 | Large outer to bay post |



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