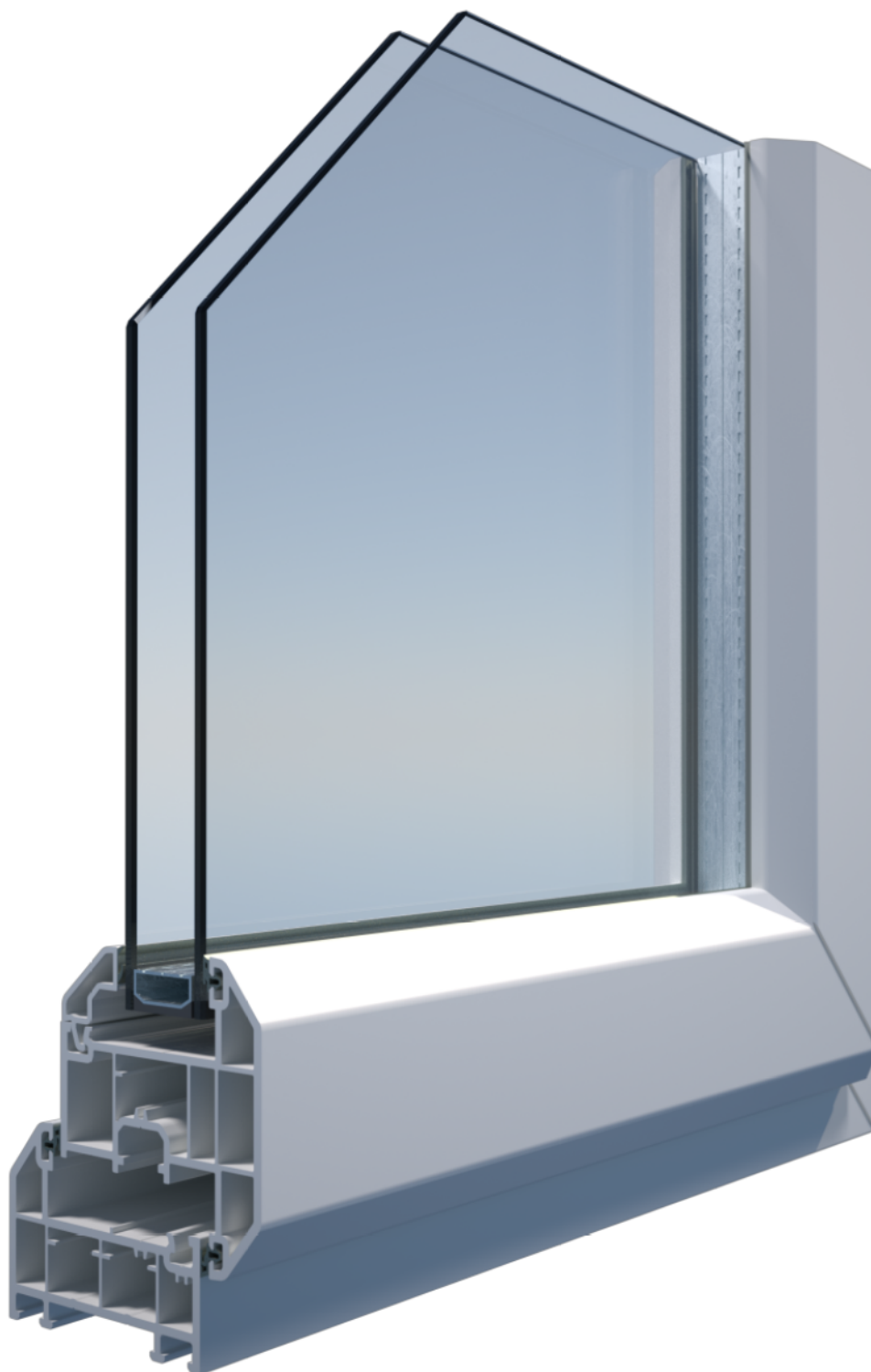


Traditional 2500

Technical file

deceuninck



Content:

1 General system / product information:

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| 1.1 Product range | 05 |
| 1.2 Maintenance | 07 |

2 Window preparation / calculation:

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Traditional 2500:

1 General system/product information

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| | |
|-------------------|----|
| 1.1 Product range | 05 |
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Traditional 2500:

1 General system/product information

deceuninck

1.1 Product range

05

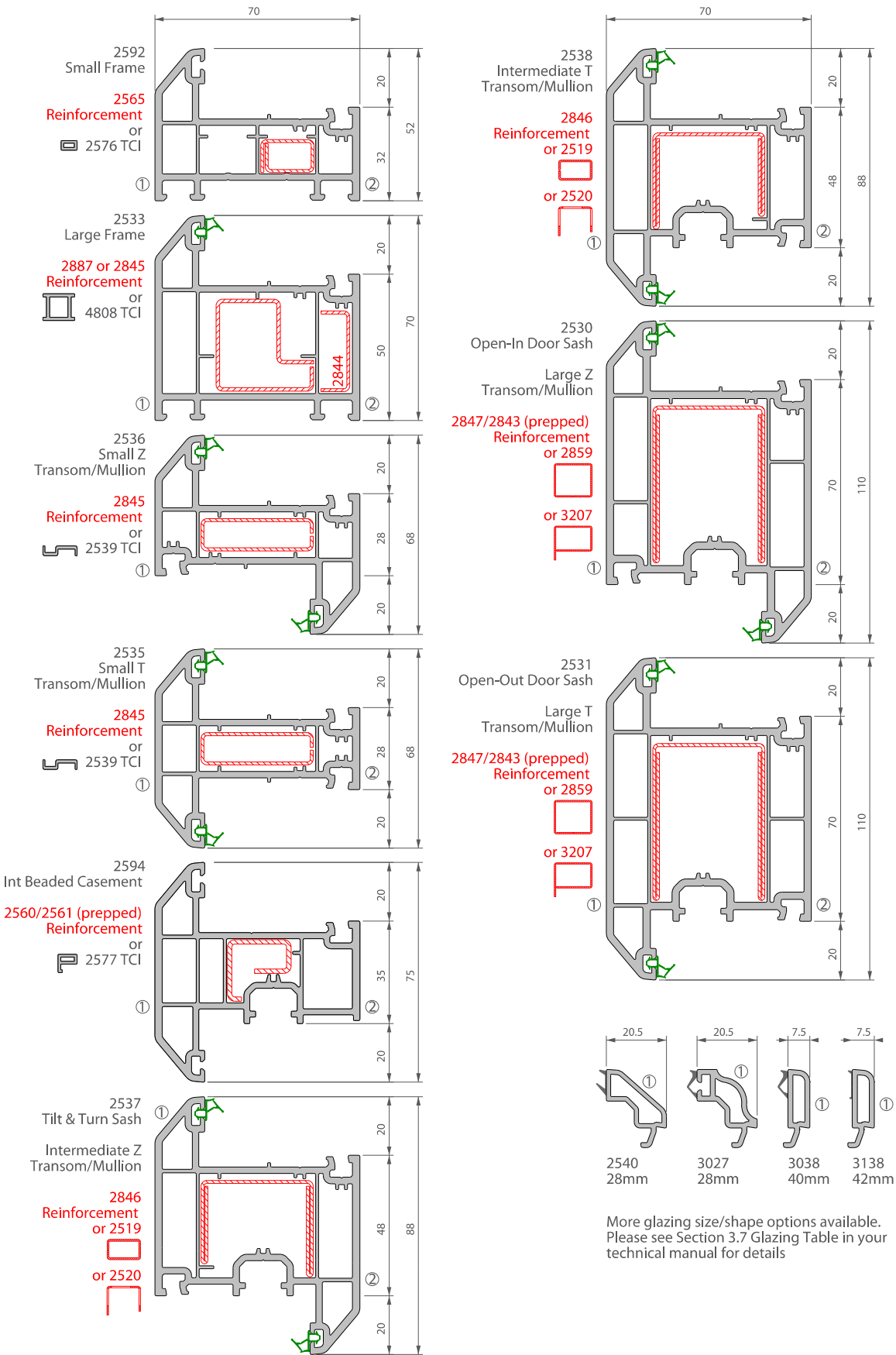
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Windows & Doors

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1.1 Product range



Traditional 2500

1 General system/product information

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1.2 Maintenance

07

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Windows & Doors

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1.2 Maintenance

Although under normal circumstances, PVC is not affected by environmental influences, minimal maintenance for cleaning the PVC profiles, seals, latches and locks has to be taken into account.

PVC

Cleaning of PVC profiles is extremely simple: the profiles are simply washed with a soft damp sponge, which may be impregnated with a non-abrasive household cleaner, water-based (non-based among other things as ammonia and chlorine-containing products such as bleach).

Not permitted is the use of abrasive, corrosive liquids and chemical solvents such as benzene, acetone, turpentine, kerosene, white spirit and similar.

An annual polishing with PVC Cleanup P 956 is recommended. Also use our Deceuninck P 964 maintenance kit. This contains a service stick for seals, oil for hardware and a special cleaner. But only to be used for PVC coloured in the mass!

Some considerations:

- Do not dry clean profiles for scratches or scrapes on the PVC surface.
- Difficult to clean PVC profiles can be treated with Cleanup P 956.
- Never paint the PVC profiles.

DECOROC STRUCTURE

METALLIC STRUCTURE

Previous guidelines are valid.

The coated profiles can easily be cleaned with a household water based cleaner (not based among other things of bleach and ammonia) with the aid of a soft sponge. The coated profiles show a good chemical resistance, except for aggressive products, such as for example, methylene chloride, hydrogen peroxide, cellulose thinner, acetone, ... (this list is not exhaustive).

COLOURED WOODGRAINS STRUCTURE

ORIGINAL WOODGRAINS STRUCTURE

Previous guidelines are valid.

Windows with acrylfoils should not be cleaned with a steam cleaner. The use of a steam cleaner makes white stains that are difficult to remove. Do not use polish (except colourless). The colour powder in the liquid penetrates the grain and is difficult to remove.

Seals

The material used for the seals is TPE (thermoplastic elastomer). In order to maintain the flexibility and the lifespan, we recommend to treat the seals annually with the service stick for seals (which is part of the P 964) or talcum powder to rub. They may not come into contact with concentrated detergents or similar products.

Hardware

PVC windows are always provided with durable window fittings. For a proper operation and a long-life, all the moving parts need to be checked at least once a year and, where necessary, lubricated. The Deceuninck P 964 contains a bottle of oil for hardware. Furthermore, we point to the settings of the hardware.

Stains

Here are some guidelines for removing stains and damage. Please when in doubt contact the technical department of Deceuninck. Once a particular treatment is applied, there is sometimes irreparable damage.

MASS COLOURED

- Scratches: If polish does not help, use sandpaper in different steps with increasingly finer grit. Polish afterwards with sheep's wool.
- Deep scratches: Can be filled with wax. This product is available in addition to other at the firm Beltraco BV. Beltraco BV Kievitsven 42 — 5249 JJ Rosmalen, Nederland
Tel: ++31 73 645 03 43, Fax: ++31 73 641 11 75
E-mail: info@beltraco.nl, www.beltraco.nl
- Glue: ether, ZEP Soy Response or similar.
- Cement, concrete, mortar, plaster...: PVC Cement Wipe-Off P 965
- Pencil marks: remove with rubber, then optionally use water and a non-abrasive household cleaner or remove with Decoclean P 961.
- Excreta fly: Innotec Multisol artikel 151

COLOUR360 STRUCTURE

METALLIC STRUCTURE

- Scratches: retouch with P 377, P 373 or P 952.
- Badly damaged (e.g. result to vandalism): spray P 952
- Glue: PVC Protect P 960, ZEP Soy Response or similar.
- Cement, concrete, mortar, plaster...: PVC Cement Wipe-Off P 965
- Felt-tip or similar products, whom can not be removed with water and household cleaners, can be treated with methanol.
- Paint:
 - acrylic (water based): Soak off with hot water and a sponge.
 - synthetic paints: ZEP Soy Response or similar.
- Excreta fly: Innotec Multisol article 151

COLOURED WOODGRAINS STRUCTURE

ORIGINAL WOODGRAINS STRUCTURE

- Glue: ether, ZEP Soy Response or similar.
- Cement, concrete, mortar, plaster...: PVC Cement Wipe-Off P 965

Approved products by Deceuninck

| DECEUNINCK PRODUCT | APPLICATION | ONLY DEUCTONE | | |
|--|---|---------------|---|-------------------------|
| | | MASS COLOURED | DECOROC STRUCTURE METALLIC STRUCTURE | WOODGRAINS STRUCTURE |
| PVC Cleanup P 956 | - Cleaning of hard PVC - Colour protection | ✓ | ✓ | ✓ |
| PVC Protect P 960 | - Protection against dust and dirt | ✓ | ✓ | ✓ |
| Deco-clean P 961 | - Remove tough dirt (e.g. pencil marks, ...) | ✓ | ✗ | ✗ |
| PVC Cement Wipe-off P 965 | - Remove cement and plaster | ✓ | ✓ | ✓ |

| NON DECEUNINCK PRODUCT | APPLICATION | ONLY DEUCTONE | | |
|----------------------------------|-------------------------------|---------------|---|-------------------------|
| | | MASS COLOURED | DECOROC STRUCTURE METALLIC STRUCTURE | WOODGRAINS STRUCTURE |
| ZEP Soy Response | - Remove grease, resins, glue | ✓ | ✓ | ✓ |
| Soudal PU Remover | - Remove polyurethane foam | ✓ | ✓ | ✓ |
| König Blanke Acryllak | - Repair of damaged acrylic | ✗ | ✗ | ✓ |

Always follow the instructions on the label/leaflet of the mentioned cleaning products.

Irreparable damage to the PVC profiles might occur when a product not falling under the above-mentioned table is used.

If so, Deceuninck can not be held responsible.

Please when in doubt always contact the technical department of Deceuninck.

Traditional 2500:

2 Window preparation/calculation

deceuninck

| | |
|----------------------------------|----|
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| 2.2 Profile combinations | 21 |
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| 2.4 Maximum dimensions | 56 |
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| 2.6 Glass sizes | 69 |

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Traditional 2500:

2 Window preparation/calculation

The Deceuninck logo, consisting of the word "deceuninck" in white lowercase letters on a blue rectangular background.




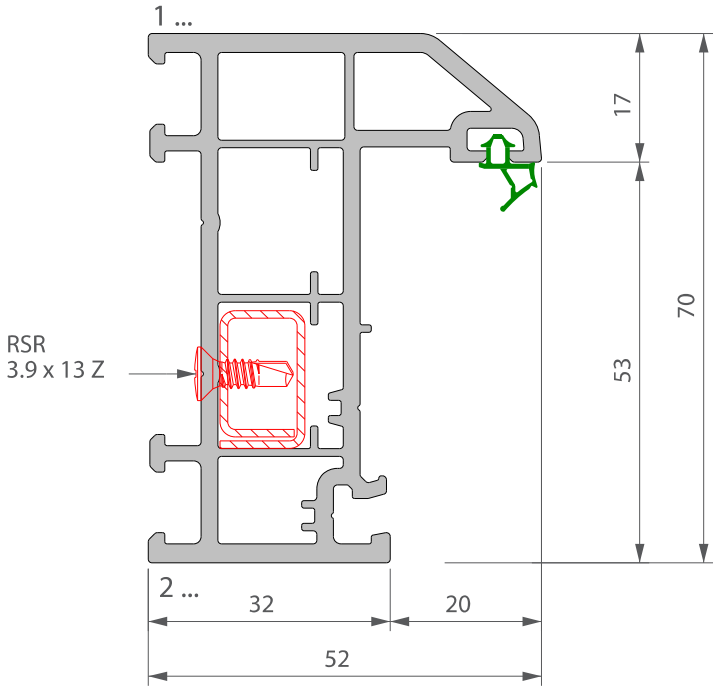




2.1 Profile sheets




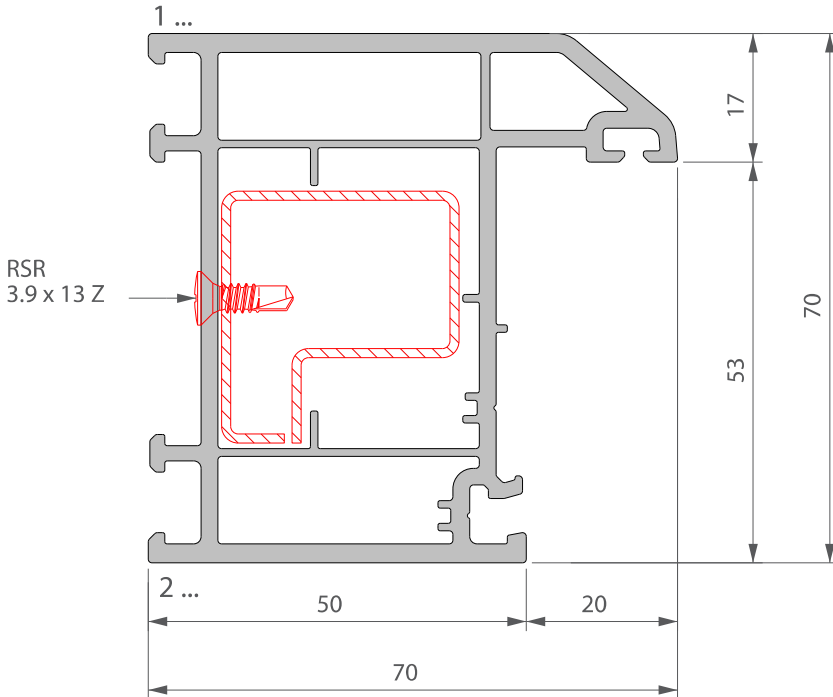







11




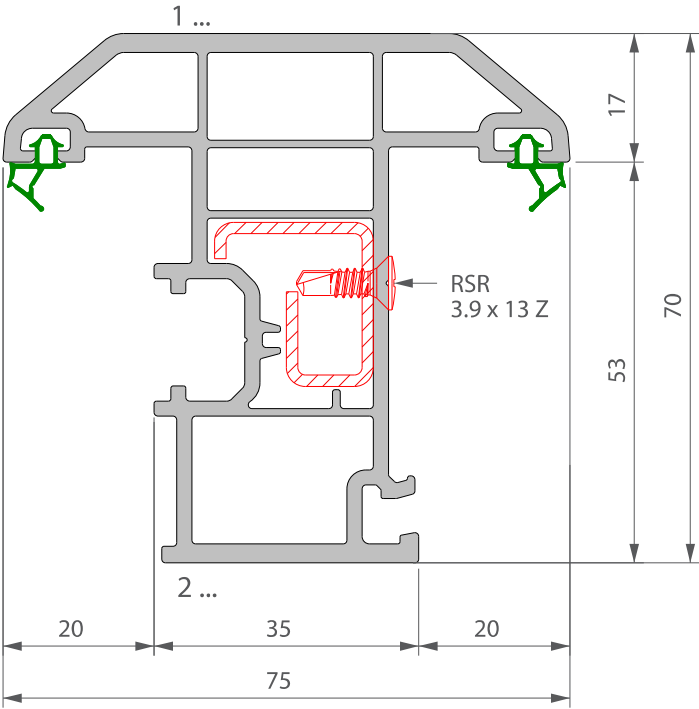




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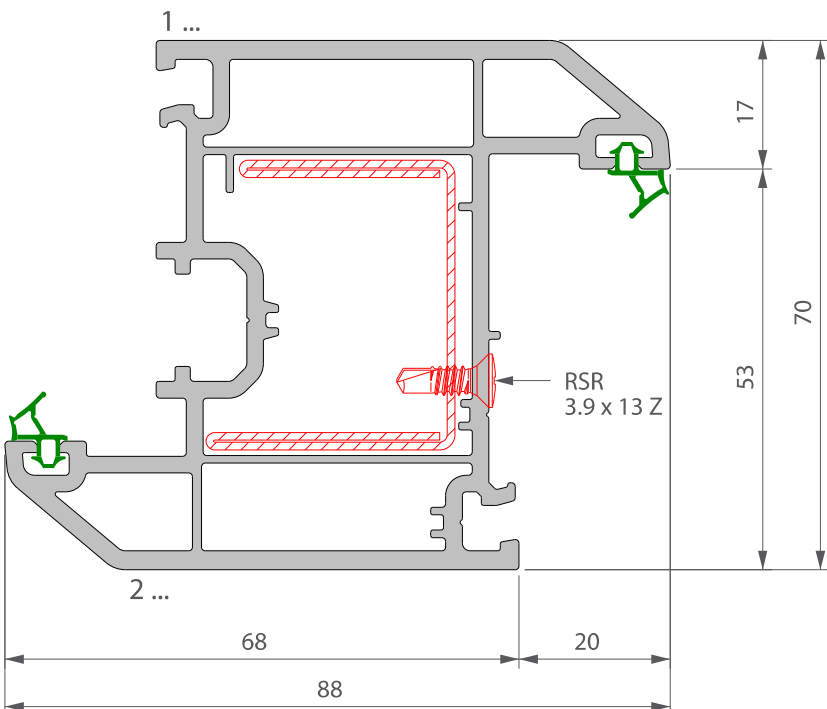




Windows & Doors




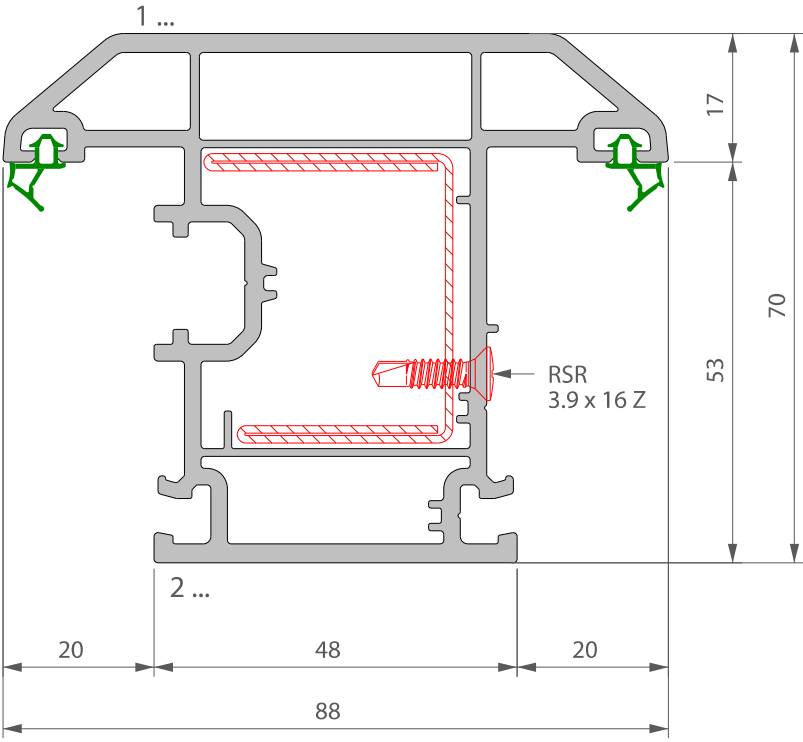
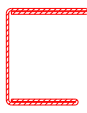



www.deceuninck.co.uk




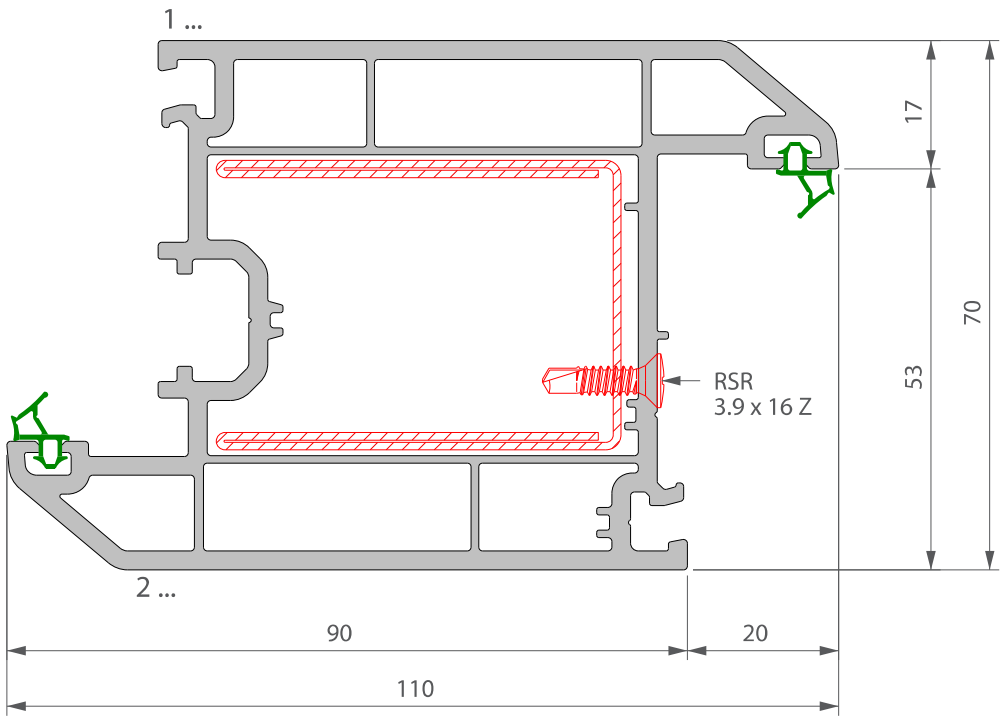



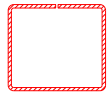

| P 2592 | | PROFILE SHEET | | | | | | |
|---|---|--------------------------|-----------------------------|-----------------------------|-------------------------------|--|--|--|
|  | | I_x (cm ⁴) | I_y (cm ⁴) | E.Ix (GN.mm ²) | E.Iy (GN.mm ²) |  |  | |
| | P 2592 | 40.55 | 11.86 | 1.01 | 0.30 | 3 ... | 8 ... | |
|  | | | | | | | | |
| Reinforcement | | s (mm) | I_x (cm ⁴) | I_y (cm ⁴) | E.Ix (GN.mm ²) | E.Iy (GN.mm ²) | Accessories | |
| P 2565 11.2 x 18.2 |  | 1.0 | 0.25 | 0.11 | 0.51 | 0.23 |  P 3291 Back of frame seal  P 3292 Glazing rebate seal | |
| P 2539 10.9 x 18.2 |  | 3.0 | 0.47 | 0.18 | 0.01 | 0.01 | | |
| | | | | | | | | |




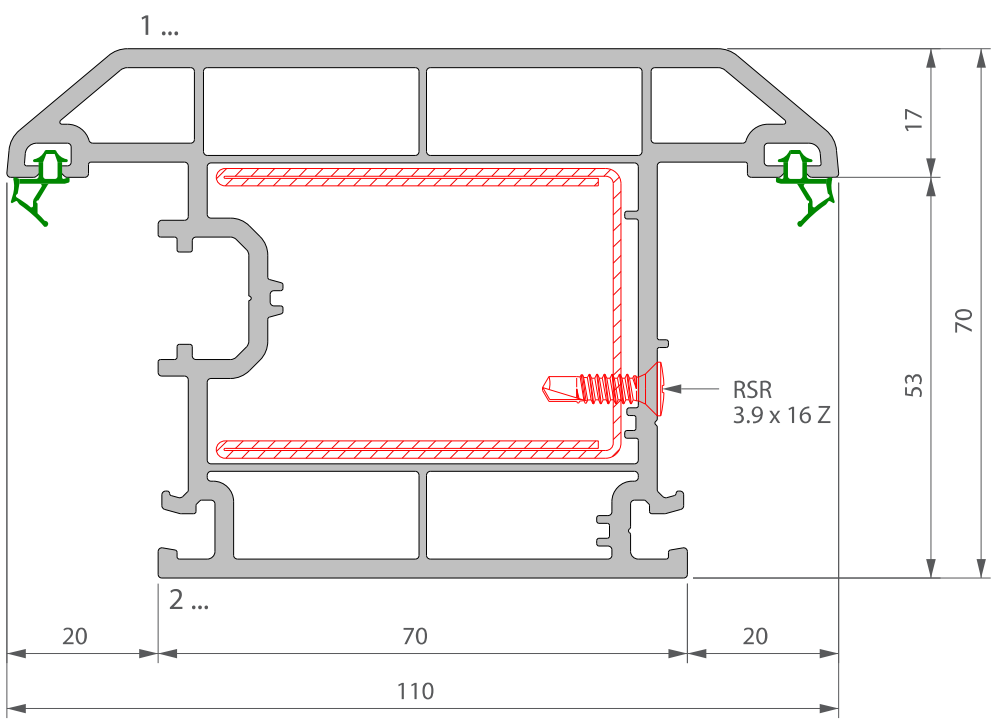



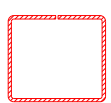
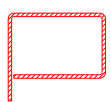
| P 2533 | | PROFILE SHEET | | | | | | |
|---|---|---|---|--|--|--|--|--|
|  | | I_x (cm ⁴) | I_y (cm ⁴) | E.I_x (GN.mm ²) | E.I_y (GN.mm ²) |  |  | |
| | P 2533 | 52.46 | 31.35 | 1.41 | 0.84 | 3 ... | | 8 ... |
|  | | | | | | | | |
| Reinforcement | | s (mm) | I _x (cm ⁴) | I _y (cm ⁴) | E.I _x (GN.mm ²) | E.I _y (GN.mm ²) | Accessories | |
| P 2887 31.4 x 33.3 |  | 1.2 | 1.78 | 1.91 | 3.65 | 3.92 |  P 3291 Back of frame seal |  P 3292 Glazing rebate seal |
| P 2845 11.0 x 38.3 |  | 1.0 | 1.43 | 0.20 | 2.93 | 0.41 |  P 2550 Composite frame wool-pile |  P 2542 Composite frame Q-lon |
| P 4808 30.3 x 36.0 |  | 3.5 | 5.17 | 5.28 | 0.14 | 0.14 | | |




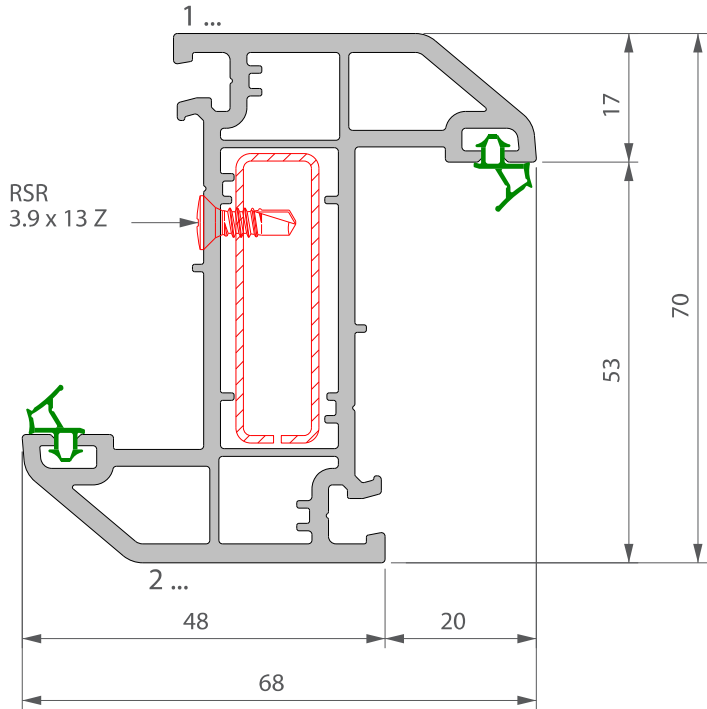



| P 2594 | | PROFILE SHEET | | | | | | |
|---|---|---|---|--|--|--|---|--|
|  | | I_x (cm ⁴) | I_y (cm ⁴) | E.I_x (GN.mm ²) | E.I_y (GN.mm ²) |  |  | |
| | P 2594 | 43.15 | 24.32 | 1.08 | 0.61 | 3 ... | 8 ... | |
|  | | | | | | | | |
| Reinforcement | | s (mm) | I _x (cm ⁴) | I _y (cm ⁴) | E.I _x (GN.mm ²) | E.I _y (GN.mm ²) | Accessories  P 2270 Euro-groove infill | |
| P 2560 21.0 x 21.7 |  | 1.5 | 0.59 | 0.36 | 1.21 | 0.74 | | |
| P 2561 21.0 x 21.7 x 1.23m |  | 1.5 | 0.007 | 0.20 | 0.01 | 0.41 | | |
| P 2577 20.7 x 21.7 |  | 3.0 | 1.00 | 0.58 | 0.03 | 0.01 | | |




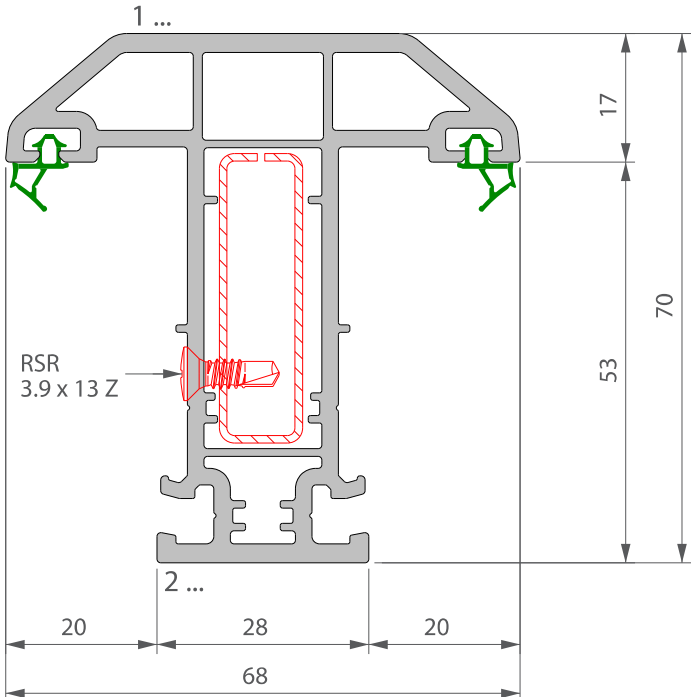



| P 2537 | | PROFILE SHEET | | | | | | |
|---|---|--------------------------|-----------------------------|-------------------------------|----------------------------------|--|--|--|
|  | | I_x (cm ⁴) | I_y (cm ⁴) | $E.I_x$ (GN.mm ²) | $E.I_y$ (GN.mm ²) |  |  | |
| | P 2537 | 58.45 | 45.46 | 1.58 | 1.23 | 3 ... | 8 ... | |
|  | | | | | | | | |
| Reinforcement | | s (mm) | I_x (cm ⁴) | I_y (cm ⁴) | $E.I_x$ (GN.mm ²) | $E.I_y$ (GN.mm ²) | Accessories | |
| P 2846 32.9 x 38.3 |  | 1.0 | 4.18 | 1.53 | 8.57 | 3.14 |  P 2270 Euro-groove infill | |
| P 2519 23.0 x 38.0 |  | 2.0 | 3.99 | 1.83 | 8.18 | 3.75 | | |
| P 2846 32.9 x 38.3 |  | 1.8 | 1.57 | 0.97 | 3.22 | 1.99 | | |

| P 2538 | | PROFILE SHEET | | | | | | |
|---|---|---|---|--|--|--|--|--|
|  | | I_x (cm ⁴) | I_y (cm ⁴) | E.I_x (GN.mm ²) | E.I_y (GN.mm ²) |  |  | |
| | P 2538 | 56.40 | 45.46 | 1.52 | 1.23 | 3 ... | 8 ... | |
|  | | | | | | | | |
| Reinforcement | | s (mm) | I _x (cm ⁴) | I _y (cm ⁴) | E.I _x (GN.mm ²) | E.I _y (GN.mm ²) | Accessories | |
| P 2846 32.9 x 38.3 |  | 1.0 | 4.18 | 1.53 | 8.57 | 3.13 |  P 2270 Euro-groove infill | |
| P 2519 23.0 x 38.0 |  | 2.0 | 3.99 | 1.83 | 8.18 | 3.75 | | |
| P 2846 32.9 x 38.3 |  | 1.8 | 1.57 | 0.97 | 3.22 | 1.99 | | |

| P 2530 | | PROFILE SHEET | | | | | | |
|---|---|--------------------------|-----------------------------|-----------------------------|-------------------------------|--|---|--|
|  | | I_x (cm ⁴) | I_y (cm ⁴) | E.Ix (GN.mm ²) | E.Iy (GN.mm ²) |  |  | |
| | P 2530 | 75.96 | 101.98 | 2.05 | 2.75 | 3 ... | 8 ... | |
|  | | | | | | | | |
| Reinforcement | | s (mm) | I_x (cm ⁴) | I_y (cm ⁴) | E.Ix (GN.mm ²) | E.Iy (GN.mm ²) | Accessories  P 2270 Euro-groove infill | |
| P 2847 53.5 x 38.3 |  | 1.0 | 7.09 | 6.84 | 14.53 | 14.02 | | |
| P 2843 53.5 x 38.3 x 1.75m |  | 1.0 | 3.53 | 5.32 | 7.23 | 10.90 | | |
| P 2859 43.0 x 38.0 |  | 1.5 | 5.16 | 6.31 | 10.58 | 3.13 | | |
| P 3207 42.9 x 38.6 |  | 1.0 | 3.22 | 5.66 | 6.60 | 11.60 | | |

| P 2531 | | PROFILE SHEET | | | | | | |
|---|---|--------------------------|-----------------------------|-----------------------------|-------------------------------|--|--|--|
|  | | I_x (cm ⁴) | I_y (cm ⁴) | E.Ix (GN.mm ²) | E.Iy (GN.mm ²) |  |  | |
| | P 2531 | 75.96 | 101.98 | 2.05 | 2.75 | 3 ... | 8 ... | |
|  | | | | | | | | |
| Reinforcement | | s (mm) | I_x (cm ⁴) | I_y (cm ⁴) | E.Ix (GN.mm ²) | E.Iy (GN.mm ²) | Accessories | |
| P 2847 53.5 x 38.3 |  | 1.0 | 7.09 | 6.84 | 14.53 | 14.02 |  P 2270 Euro-groove infill | |
| P 2843 53.5 x 38.3 x 1.75m |  | 1.0 | 3.53 | 5.32 | 7.23 | 10.90 | | |
| P 2859 43.0 x 38.0 |  | 1.5 | 5.16 | 6.31 | 10.58 | 3.13 | | |
| P 3207 42.9 x 38.6 |  | 1.0 | 3.22 | 5.66 | 6.60 | 11.60 | | |

| P 2536 | | PROFILE SHEET | | | | | | |
|---|---|--------------------------|-----------------------------|-----------------------------|-------------------------------|--|---|--|
|  | | I_x (cm ⁴) | I_y (cm ⁴) | E.Ix (GN.mm ²) | E.Iy (GN.mm ²) |  |  | |
| | P 2536 | 45.38 | 17.67 | 1.23 | 0.48 | 3 ... | 8 ... | |
|  | | | | | | | | |
| Reinforcement | | s (mm) | I_x (cm ⁴) | I_y (cm ⁴) | E.Ix (GN.mm ²) | E.Iy (GN.mm ²) | Accessories | |
| P 2845 11.0 x 38.3 |  | 1.0 | 1.43 | 0.20 | 2.93 | 0.41 |  P 3292 Glazing rebate seal | |
| P 2539 11.0 x 38.8 |  | 3.5 | 2.76 | 0.23 | 0.07 | 0.01 | | |
| | | | | | | | | |

| P 2535 | | PROFILE SHEET | | | | | | |
|---|---|--------------------------|-----------------------------|-------------------------------|----------------------------------|--|---|--|
|  | | I_x (cm ⁴) | I_y (cm ⁴) | $E.I_x$ (GN.mm ²) | $E.I_y$ (GN.mm ²) |  |  | |
| | P 2535 | 42.99 | 17.67 | 1.16 | 0.48 | 3 ... | 8 ... | |
|  | | | | | | | | |
| Reinforcement | | s (mm) | I_x (cm ⁴) | I_y (cm ⁴) | $E.I_x$ (GN.mm ²) | $E.I_y$ (GN.mm ²) | Accessories | |
| P 2845 11.0 x 38.3 |  | 1.0 | 1.43 | 0.20 | 2.93 | 0.41 |  P 3292 Glazing rebate seal | |
| P 2539 11.0 x 38.8 |  | 3.5 | 2.76 | 0.23 | 0.07 | 0.01 | | |
| | | | | | | | | |

Traditional 2500:

2 Window preparation/calculation

The logo for Deceuninck, featuring the word "deceuninck" in white lowercase letters on a blue rectangular background.

2.2 Profile combinations

21

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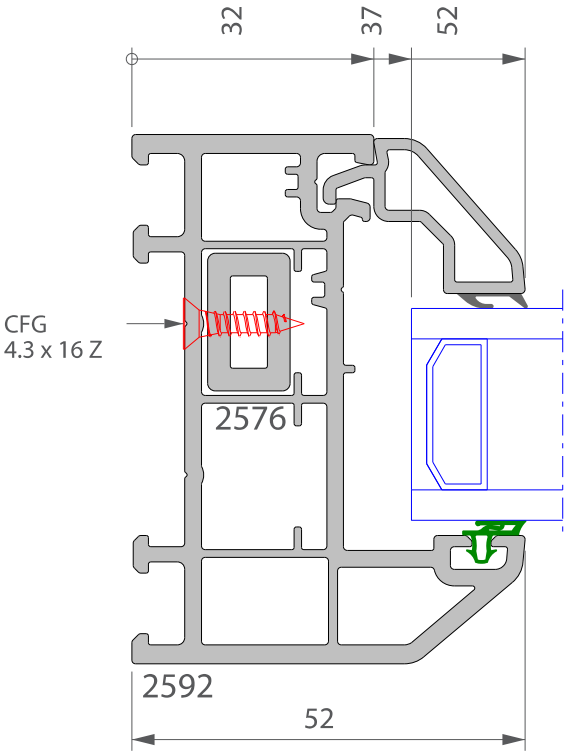
Windows & Doors

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P 2592
Fixed frame

PROFILE COMBINATION

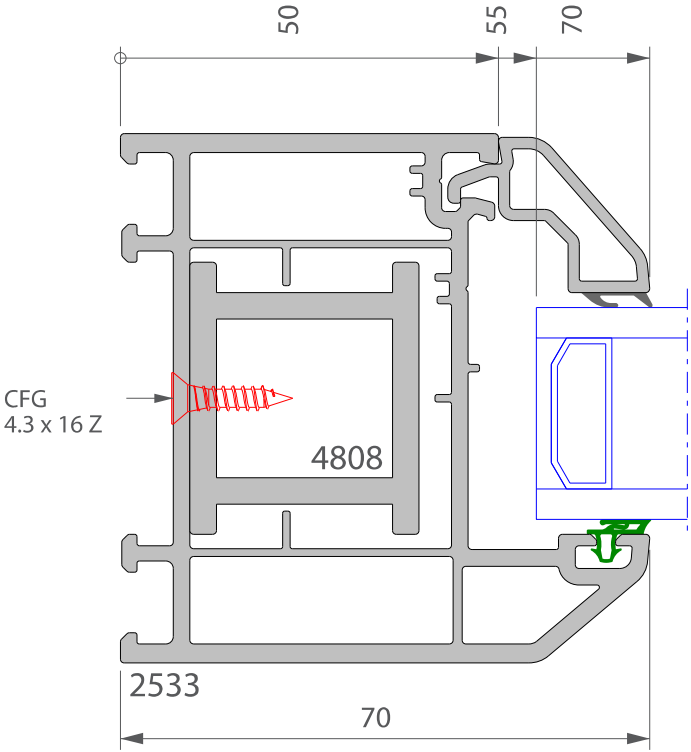
| | | |
|--------------------------|--------------------------|--|
| Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) | |
| 1.140 W/m ² K | 1.063 W/m ² K | |



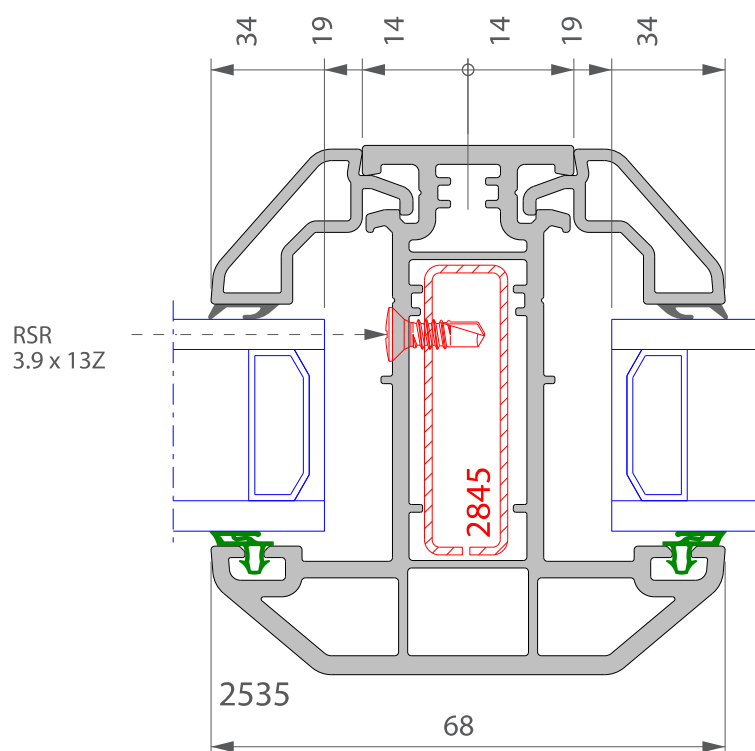
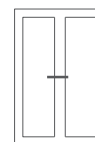
P 2533
Fixed frame

PROFILE COMBINATION

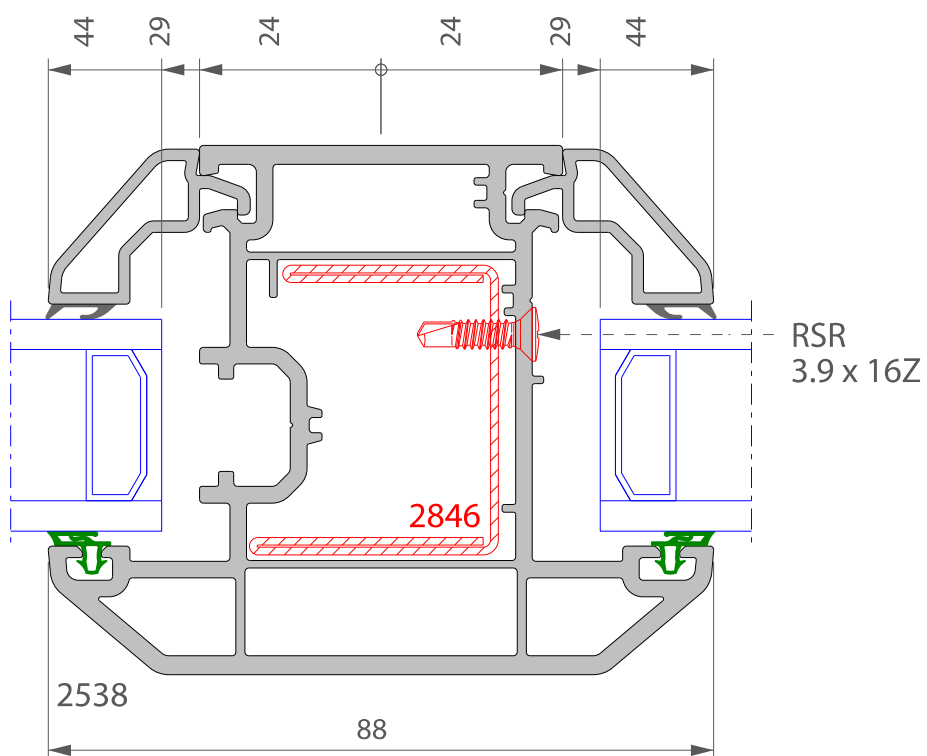
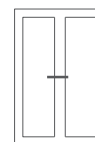
| | | |
|--------------------------|--------------------------|--|
| Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) | |
| 1.115 W/m ² K | 1.036 W/m ² K | |



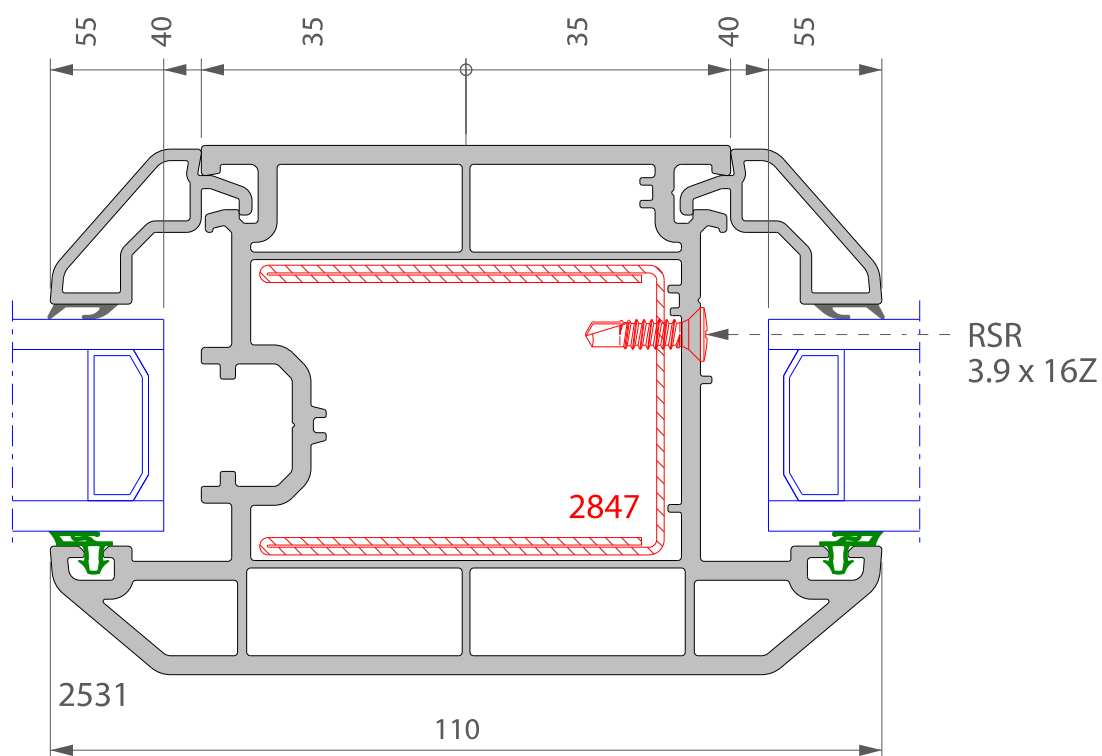
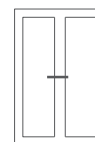
| | | | |
|----------------------------------|--------------------------|--------------------------|--|
| P 2535 Transom/mullion | PROFILE COMBINATION | | |
| | Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) | |
| | 1.511 W/m²K | 1.293 W/m²K | |
| | | | |



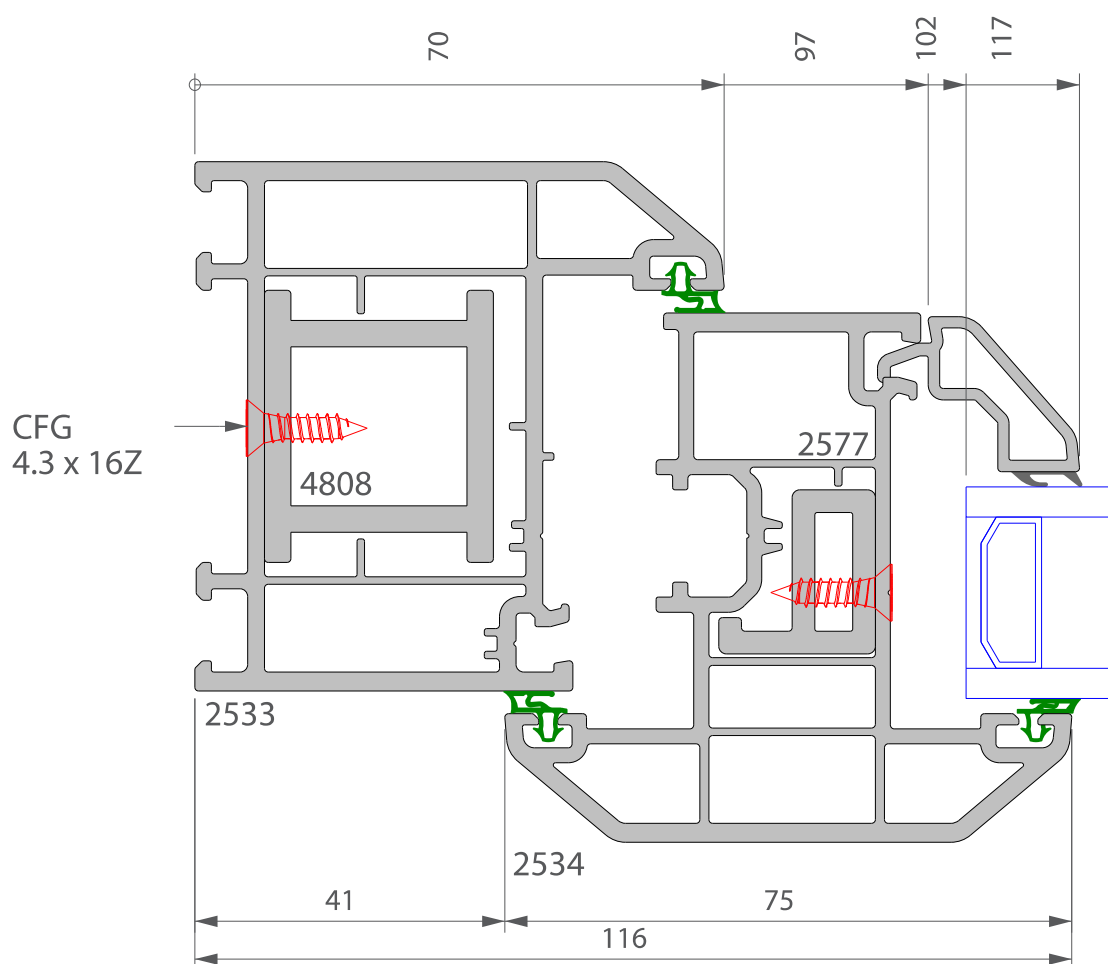
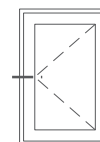
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|----------------------------------|--------------------------|--------------------------|--|
| P 2538 Transom/mullion | PROFILE COMBINATION | | |
| | Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) | |
| | 1.537 W/m ² K | 1.319 W/m ² K | |
| | | | |



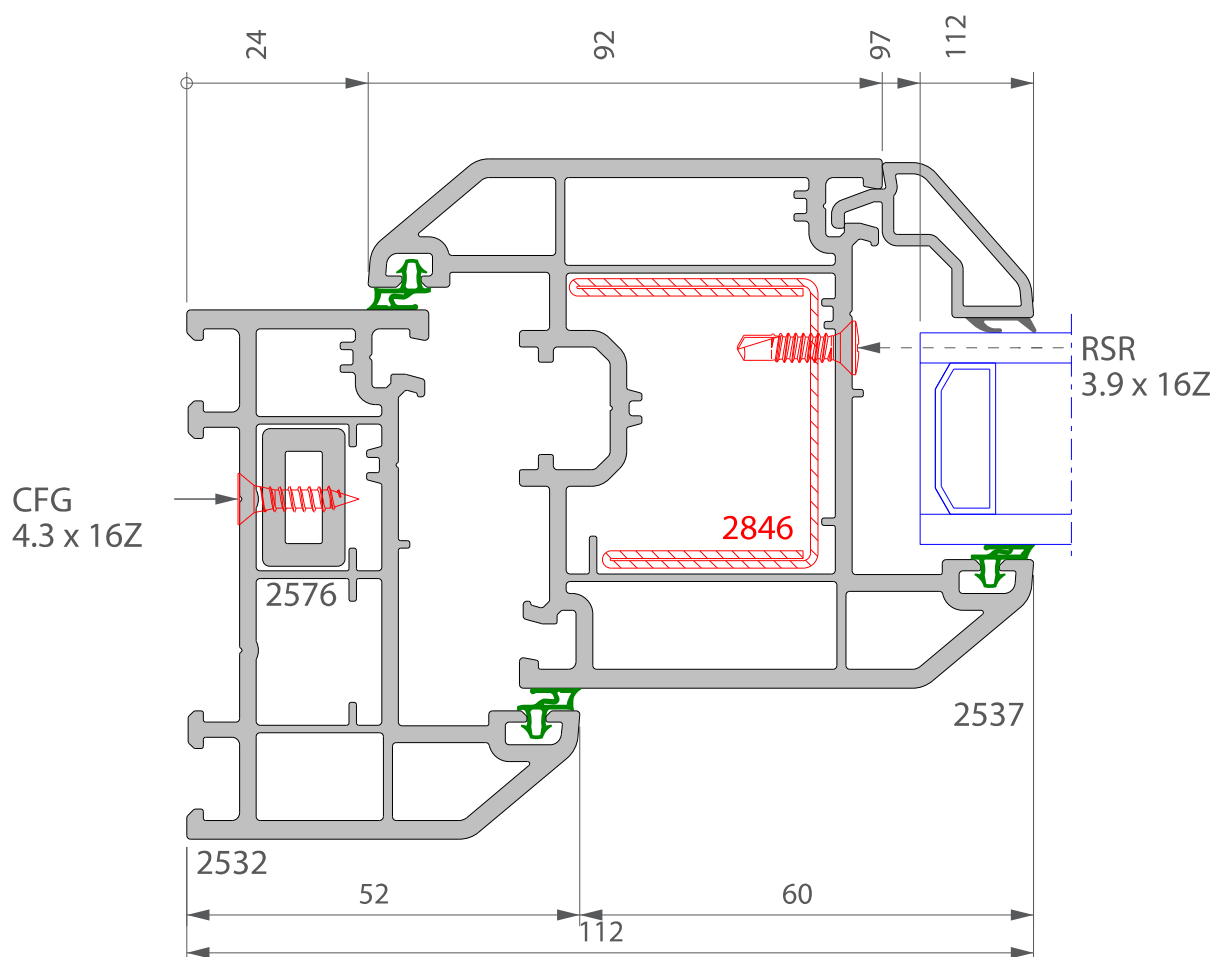
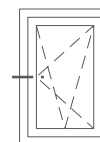
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|----------------------------------|--------------------------|--------------------------|--|
| P 2531 Transom/mullion | PROFILE COMBINATION | | |
| | Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) | |
| | 1.523 W/m ² K | 1.418 W/m ² K | |
| | | | |



| | | | |
|---|--------------------------|--------------------------|--|
| P 2533_2594 Int bead casement | PROFILE COMBINATION | | |
| | Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) | |
| | 1.246 W/m²K | 1.192 W/m²K | |
| | | | |



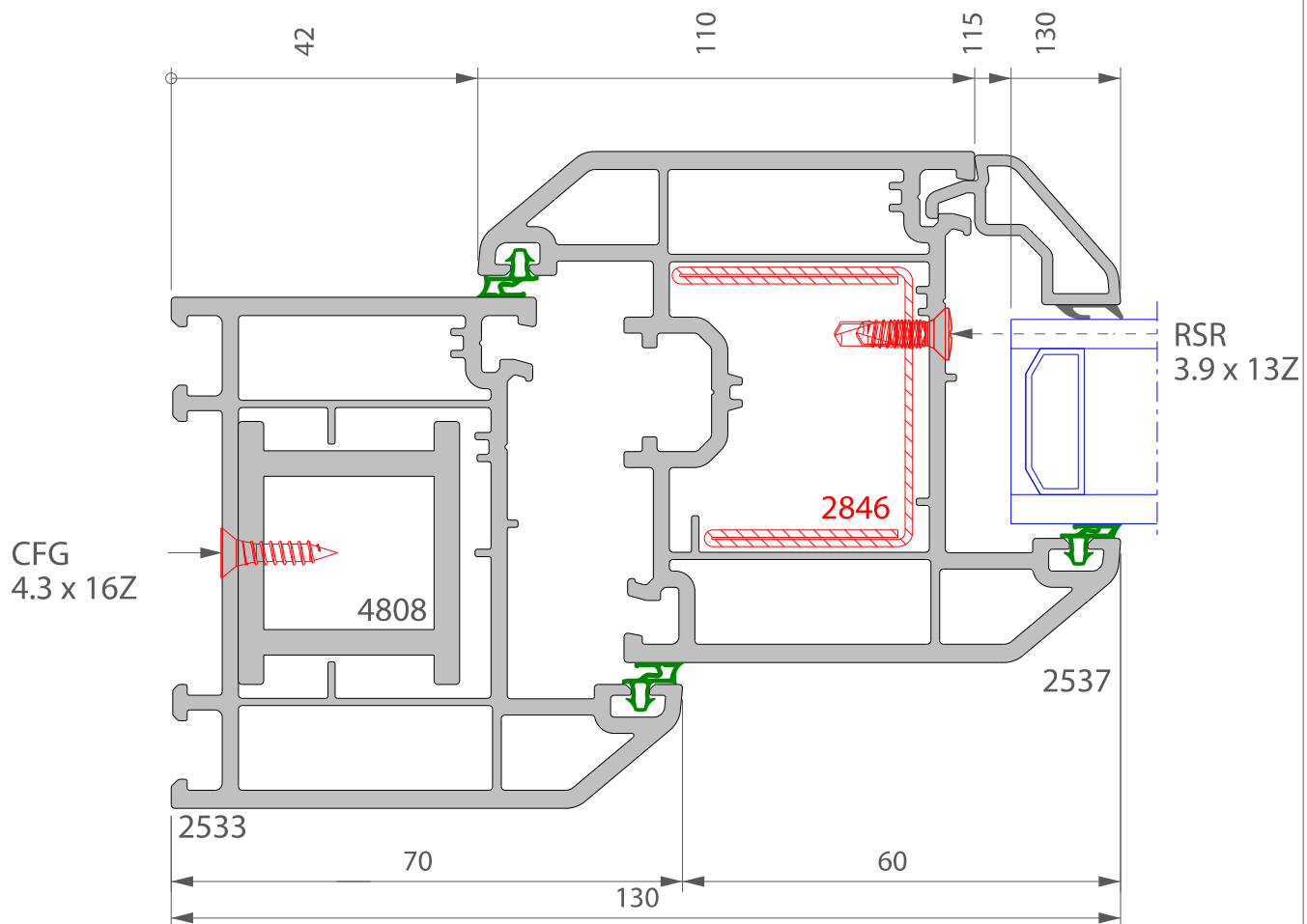
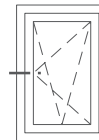
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|-----------------------------------|--------------------------|--------------------------|--|
| P 2592_2537 Tilt & turn | PROFILE COMBINATION | | |
| | Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) | |
| | 1.538 W/m²K | 1.479 W/m²K | |
| | | | |



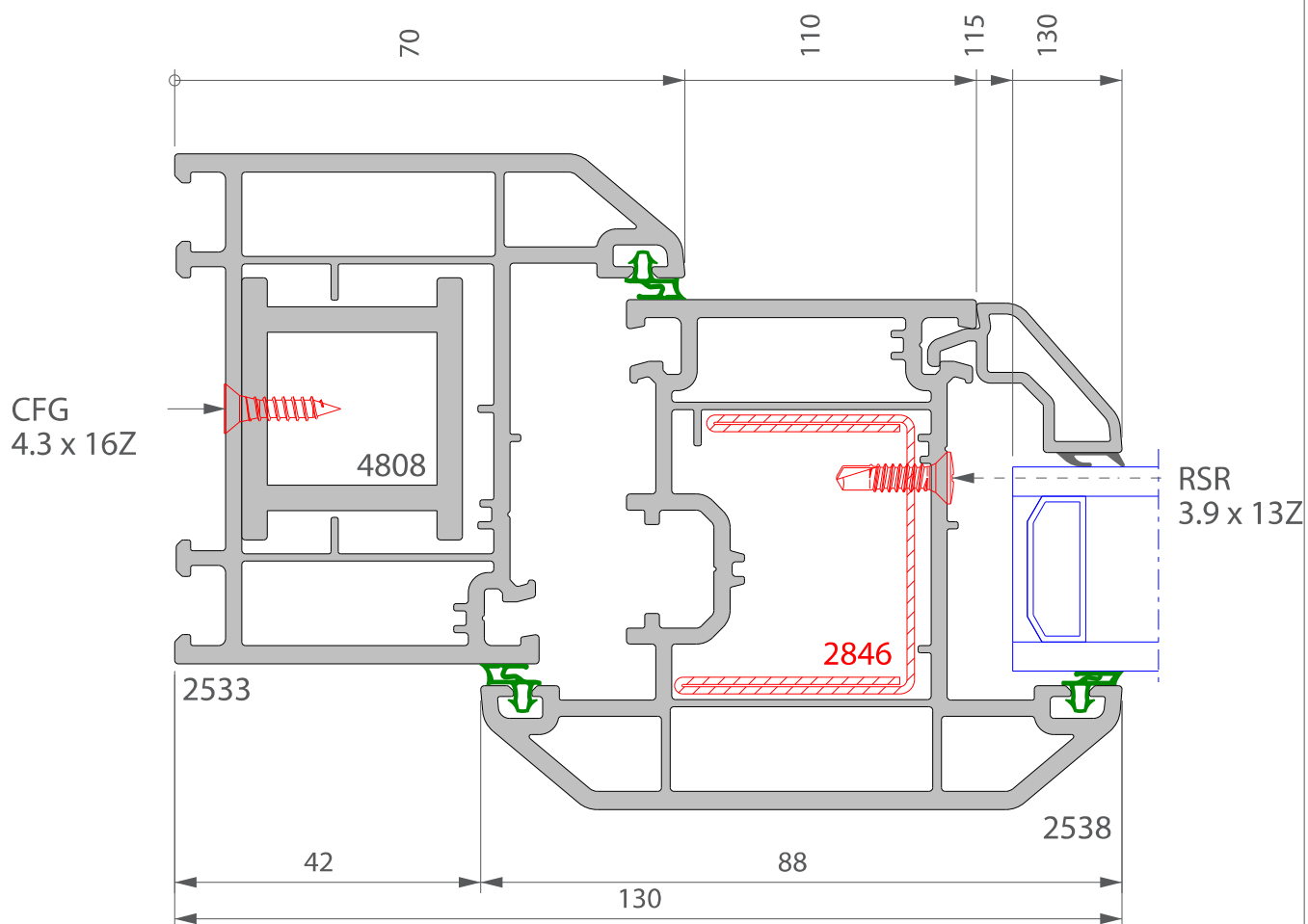
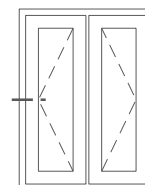
P 2533_2537
Tilt & turn

PROFILE COMBINATION

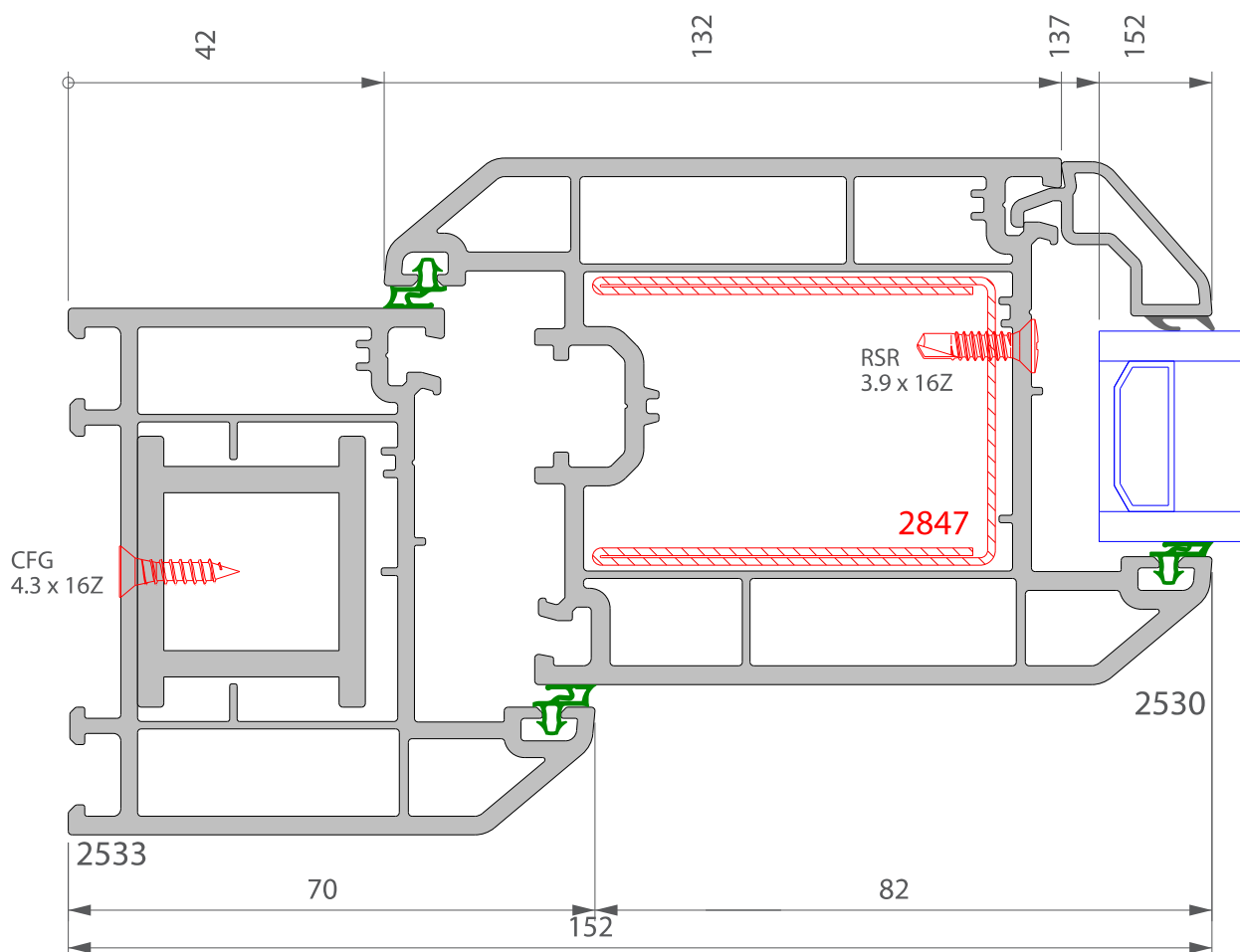
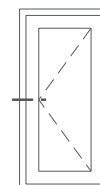
| | |
|--------------------------|--------------------------|
| Uf 28mm (EN ISO 10077-2) | Uf 28mm (EN ISO 10077-2) |
| 1.463 W/m²K | 1.428 W/m²K |



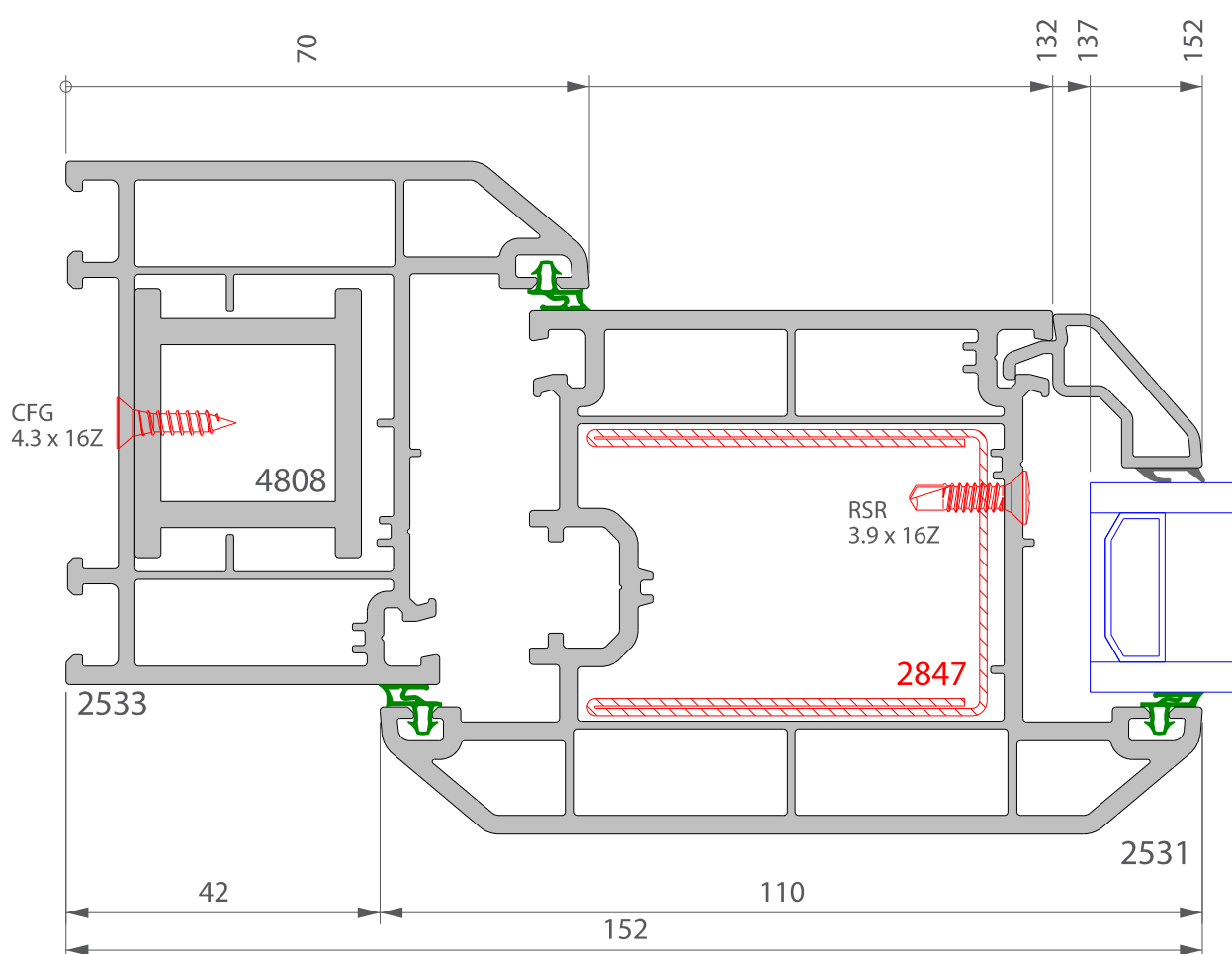
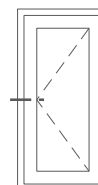
| | | | |
|---|--------------------------|--------------------------|--|
| P 2533_2538 Balcony door | PROFILE COMBINATION | | |
| | Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) | |
| | 1.440 W/m²K | 1.385 W/m²K | |



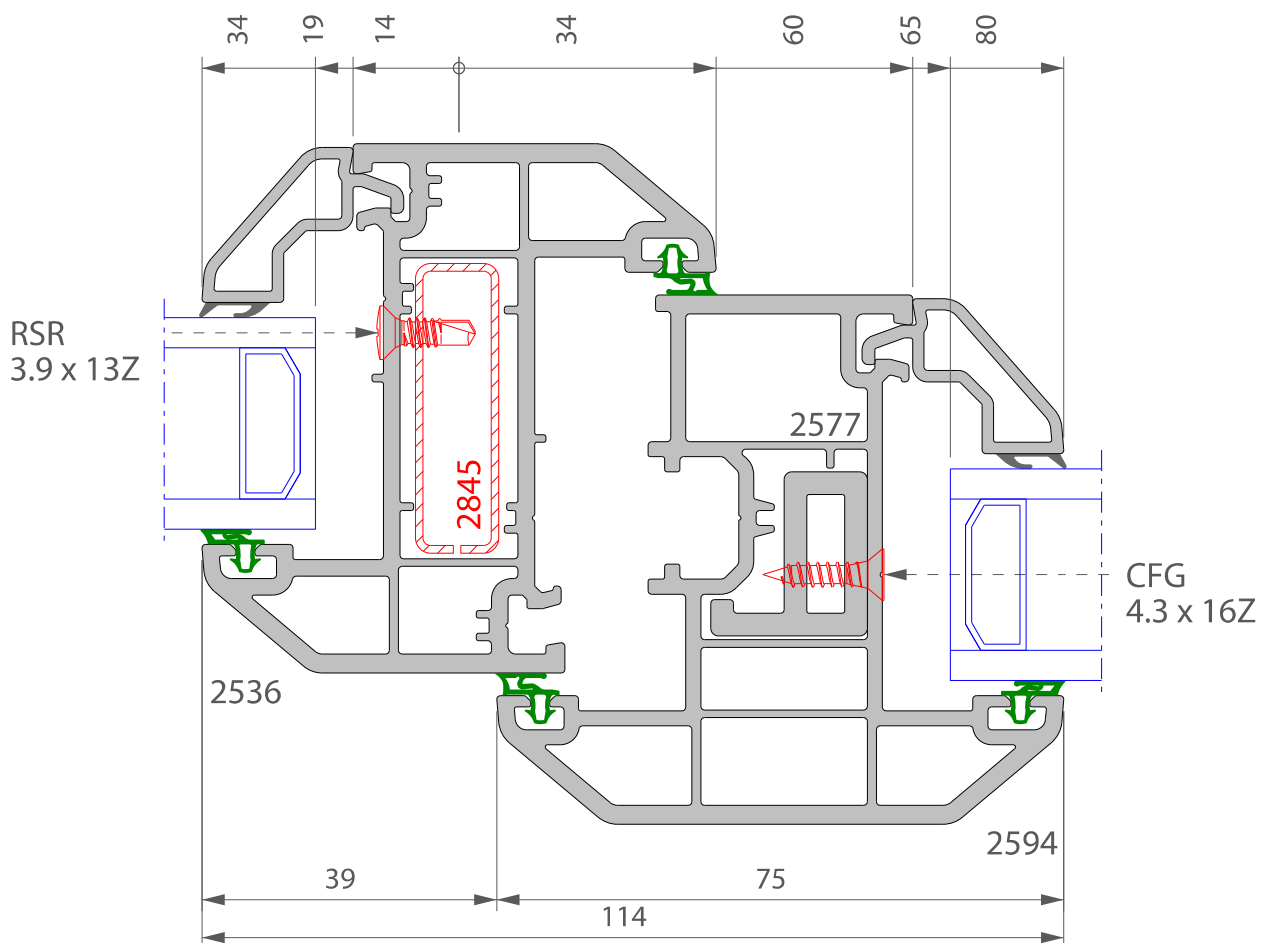
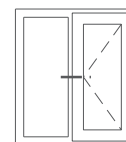
| | | | |
|----------------------------|--------------------------|--------------------------|--|
| P 2533_2530 Door | PROFILE COMBINATION | | |
| | Uf 28mm (EN ISO 10077-2) | Uf 28mm (EN ISO 10077-2) | |
| | 1.458 W/m²K | 1.416 W/m²K | |



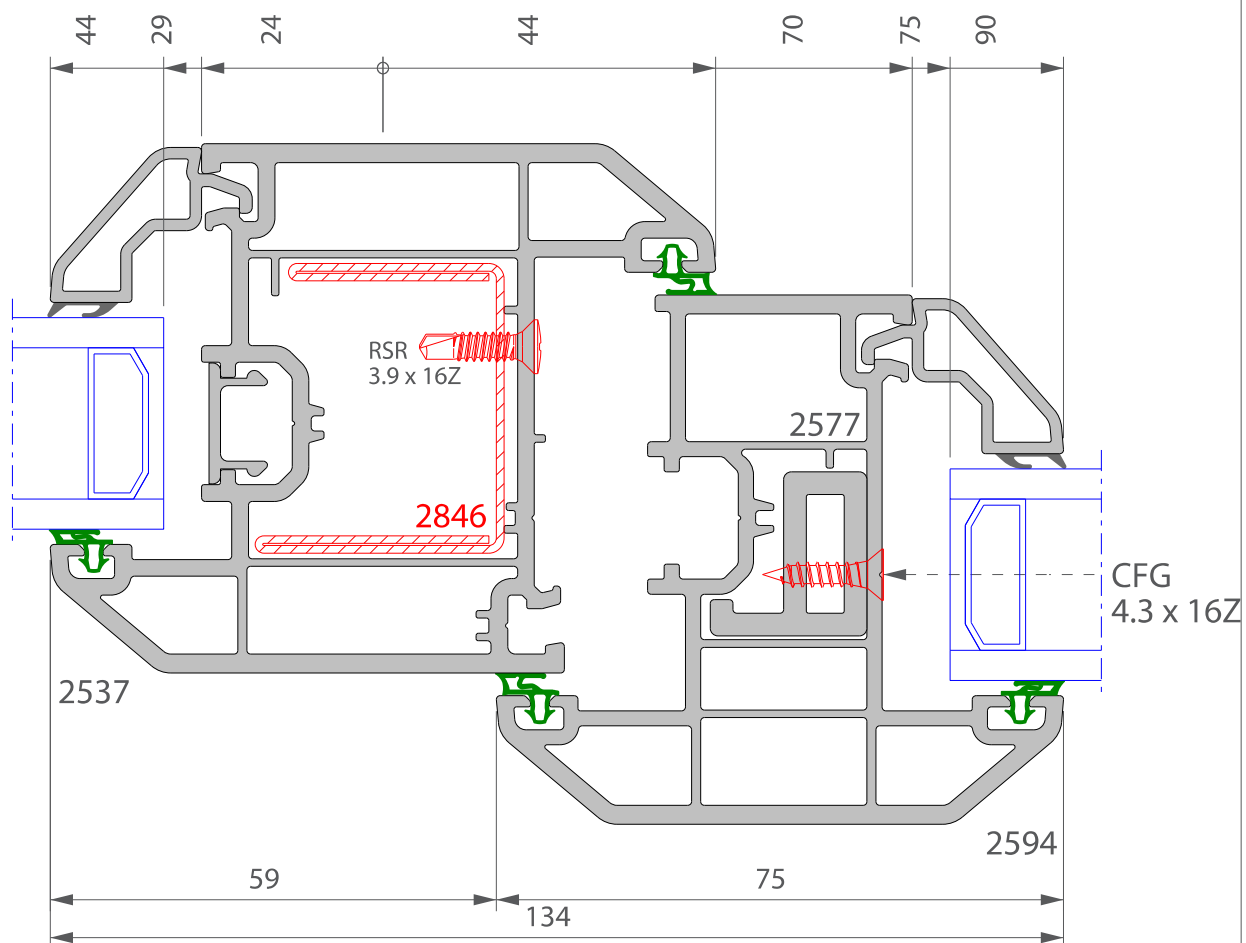
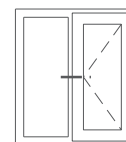
| | | | |
|----------------------------|--------------------------|--------------------------|--|
| P 2533_2531 Door | PROFILE COMBINATION | | |
| | Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) | |
| | 1.456 W/m²K | 1.400 W/m²K | |



| | | | |
|---|--------------------------|--------------------------|--|
| P 2536_2594 Int bead casement | PROFILE COMBINATION | | |
| | Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) | |
| | 1.426 W/m²K | 1.309 W/m²K | |
| | | | |



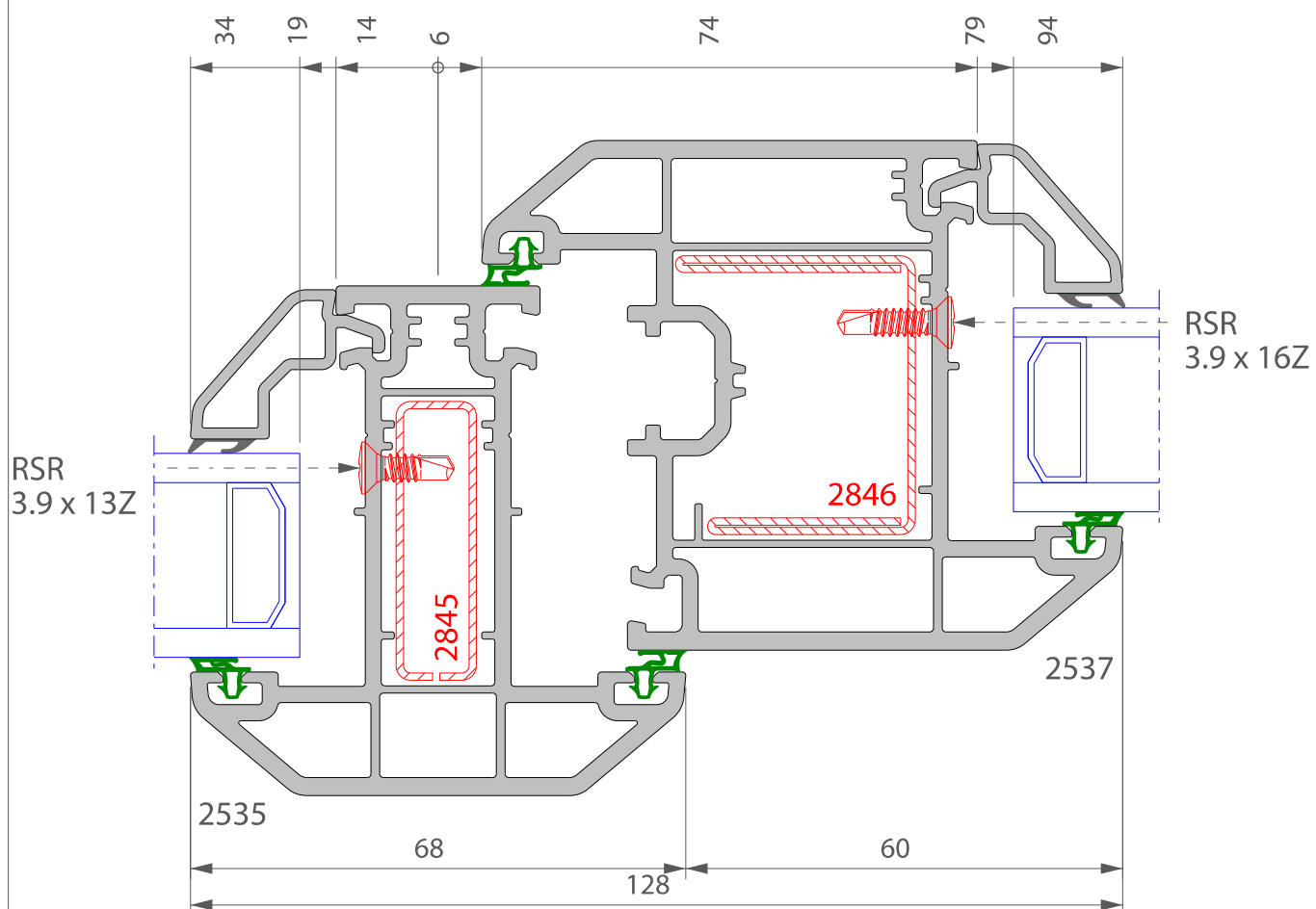
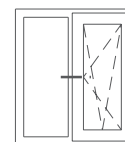
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|---|--------------------------|--------------------------|--|
| P 2537_2594 Int bead casement | PROFILE COMBINATION | | |
| | Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) | |
| | 1.422W/m ² K | 1.343 W/m ² K | |
| | | | |



P 2535_2537
Tilt & turn

PROFILE COMBINATION

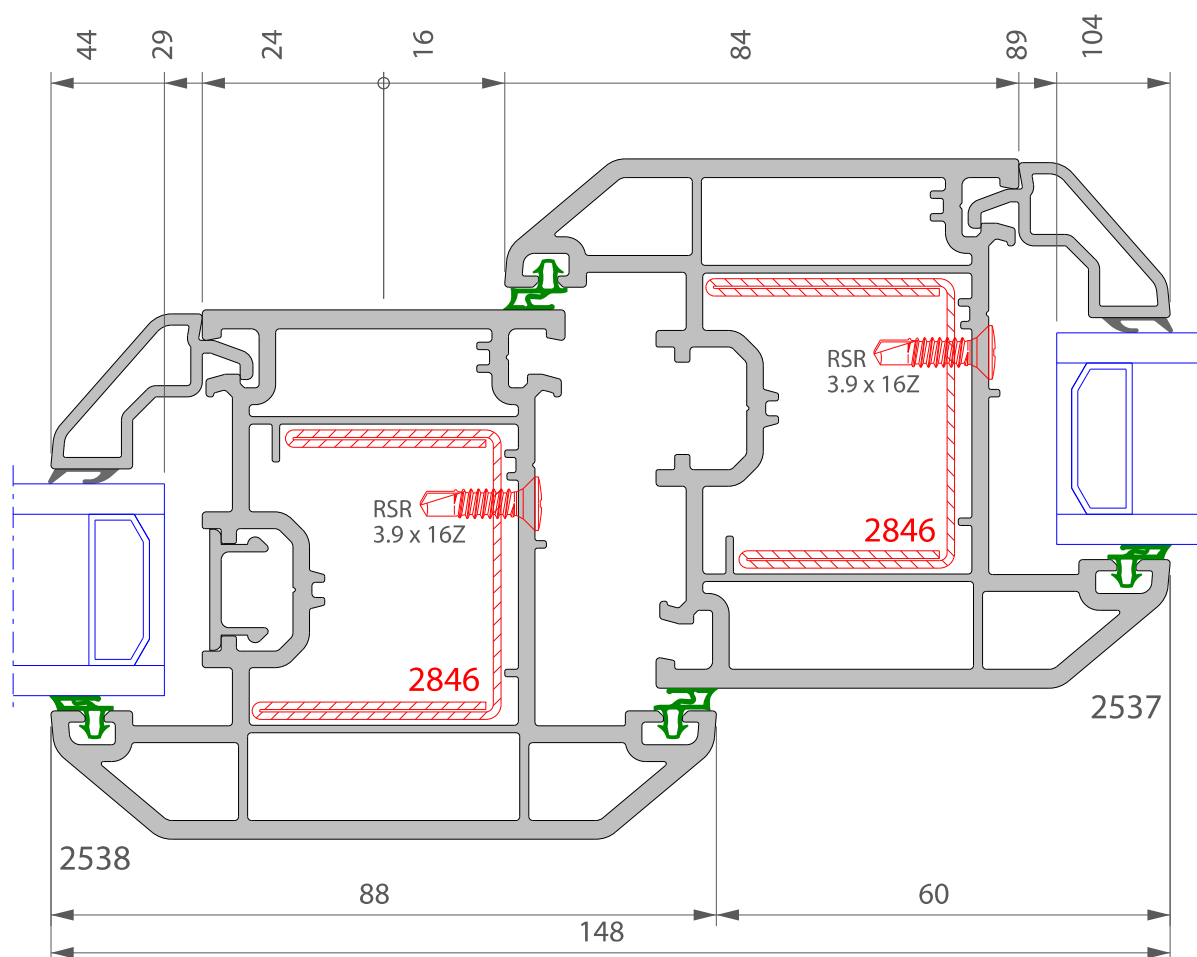
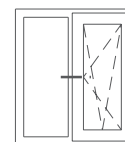
| | | |
|--------------------------|--------------------------|--|
| Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) | |
| 1.678 W/m ² K | 1.511 W/m ² K | |

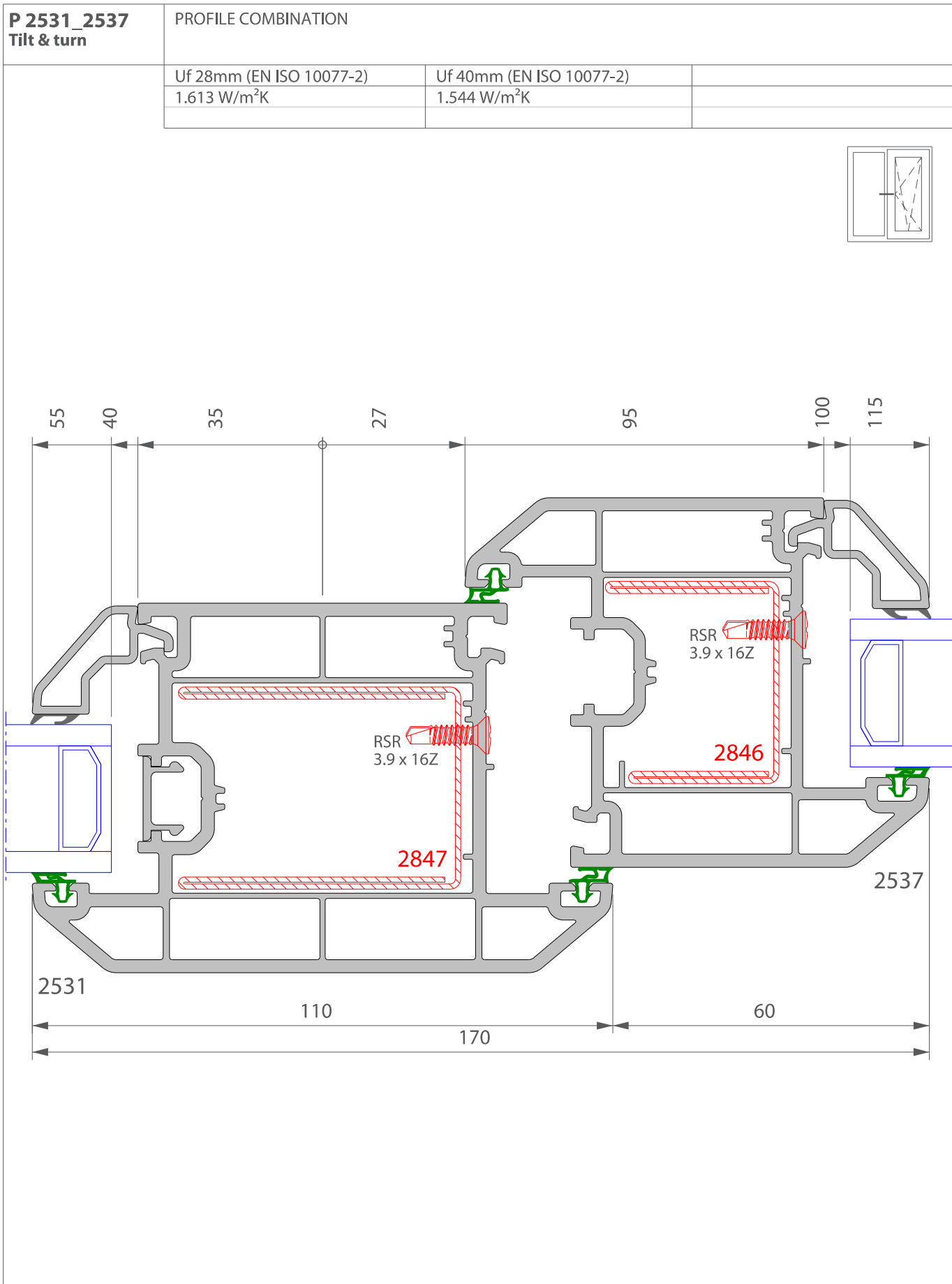


P 2538_2537
Tilt & turn

PROFILE COMBINATION

| | | |
|--------------------------|--------------------------|--|
| Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) | |
| 1.617 W/m ² K | 1.539 W/m ² K | |

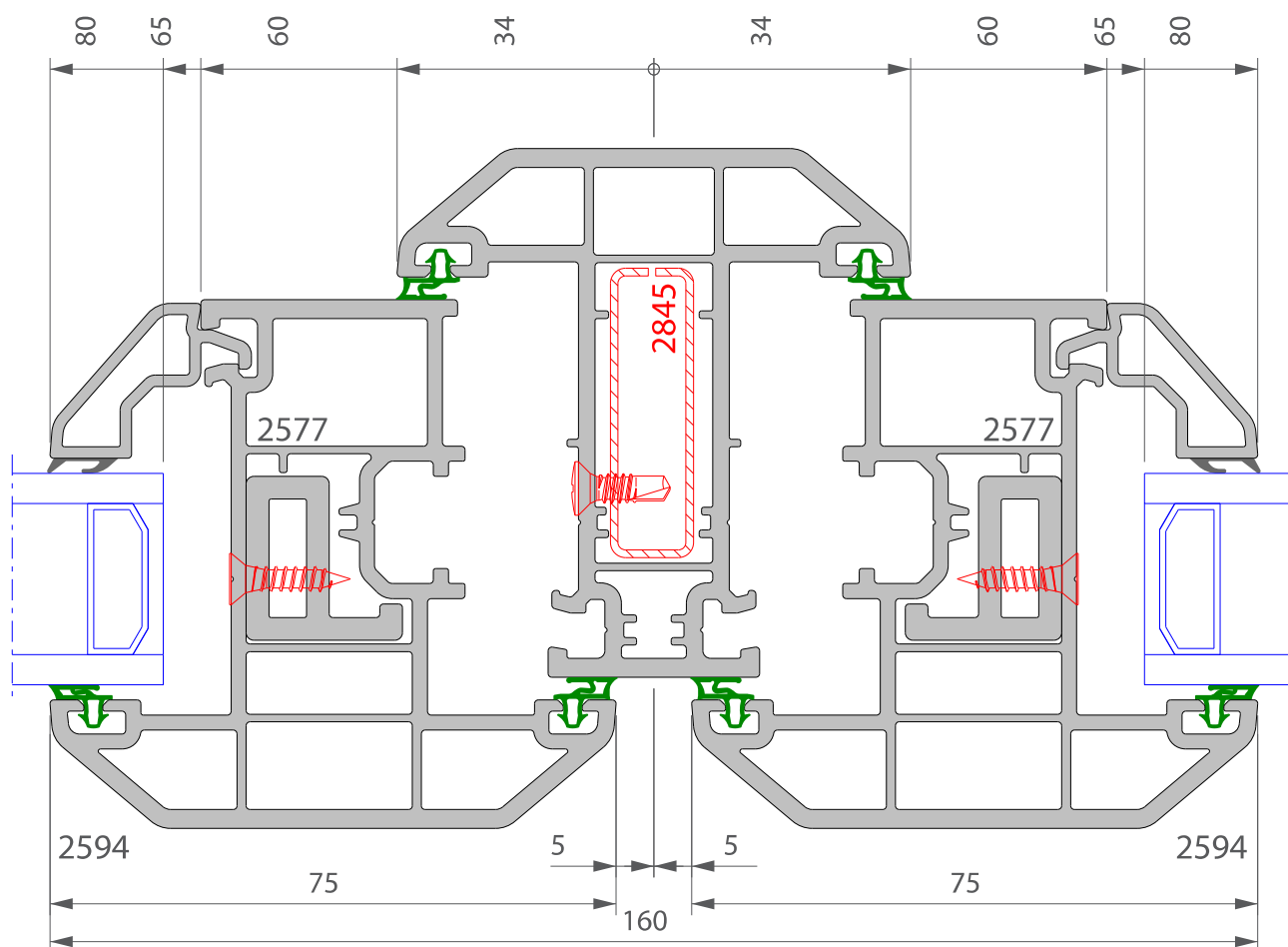
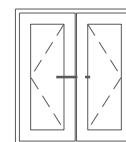




P 2535_2594
Int bead casement

PROFILE COMBINATION

| | |
|--------------------------|--------------------------|
| Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) |
| 1.446 W/m ² K | 1.315 W/m ² K |

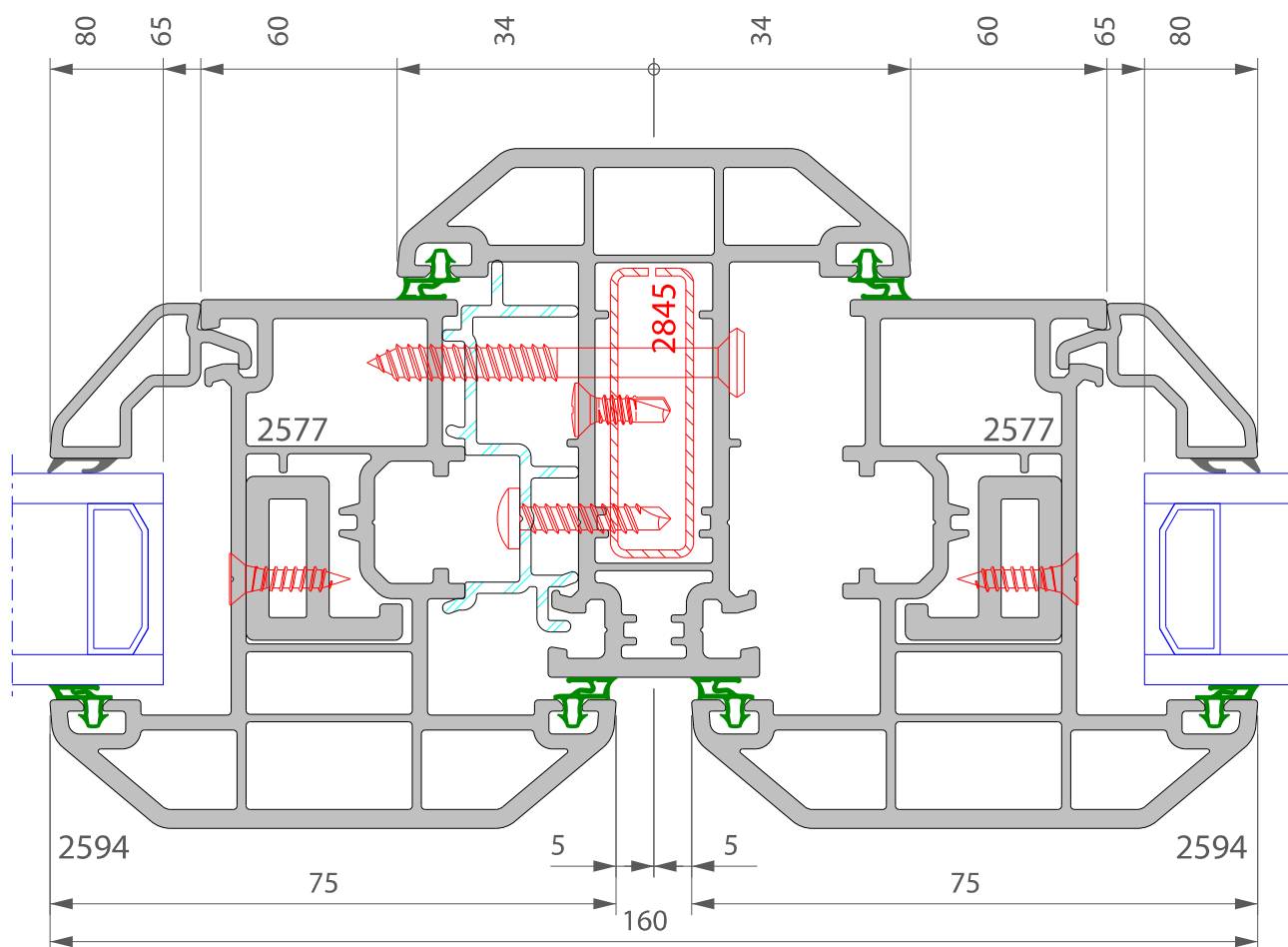
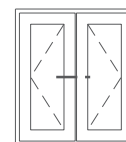


P 2535_2594
French casement

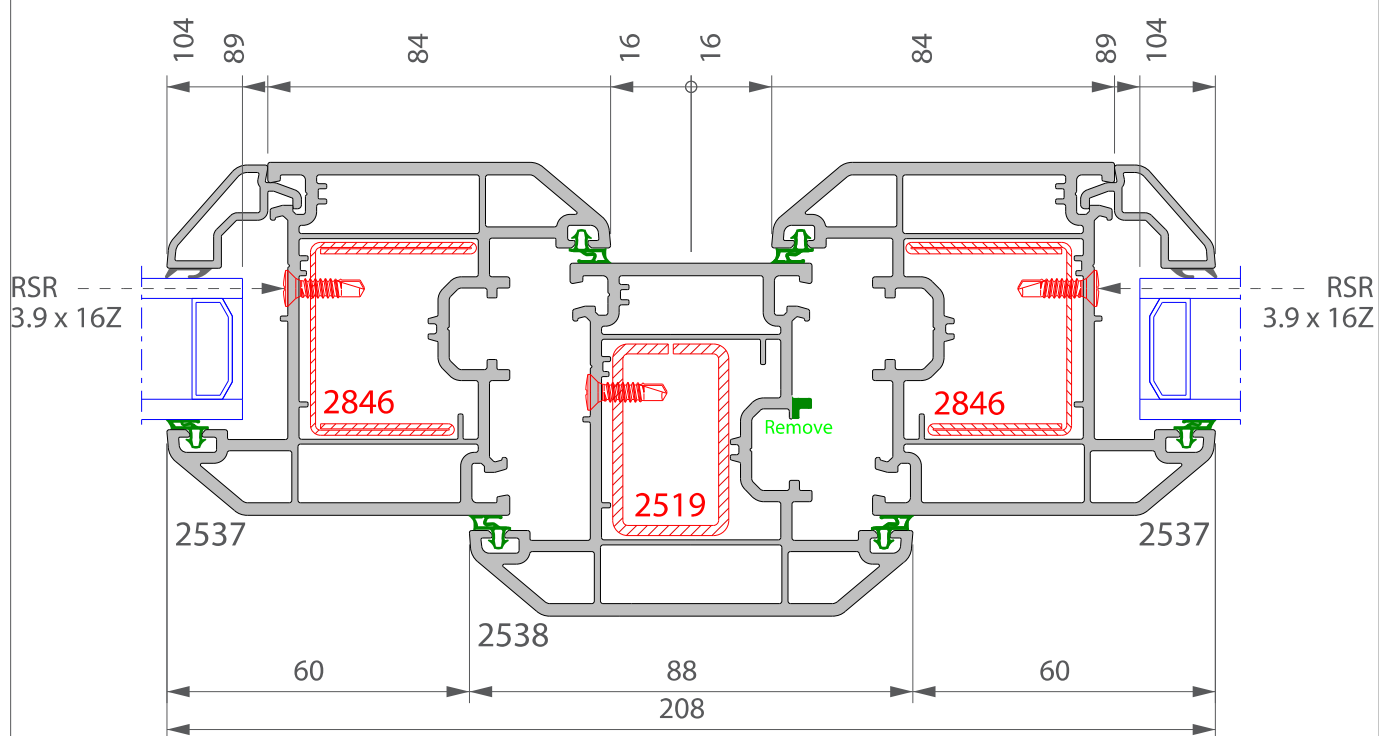
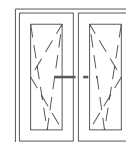
PROFILE COMBINATION

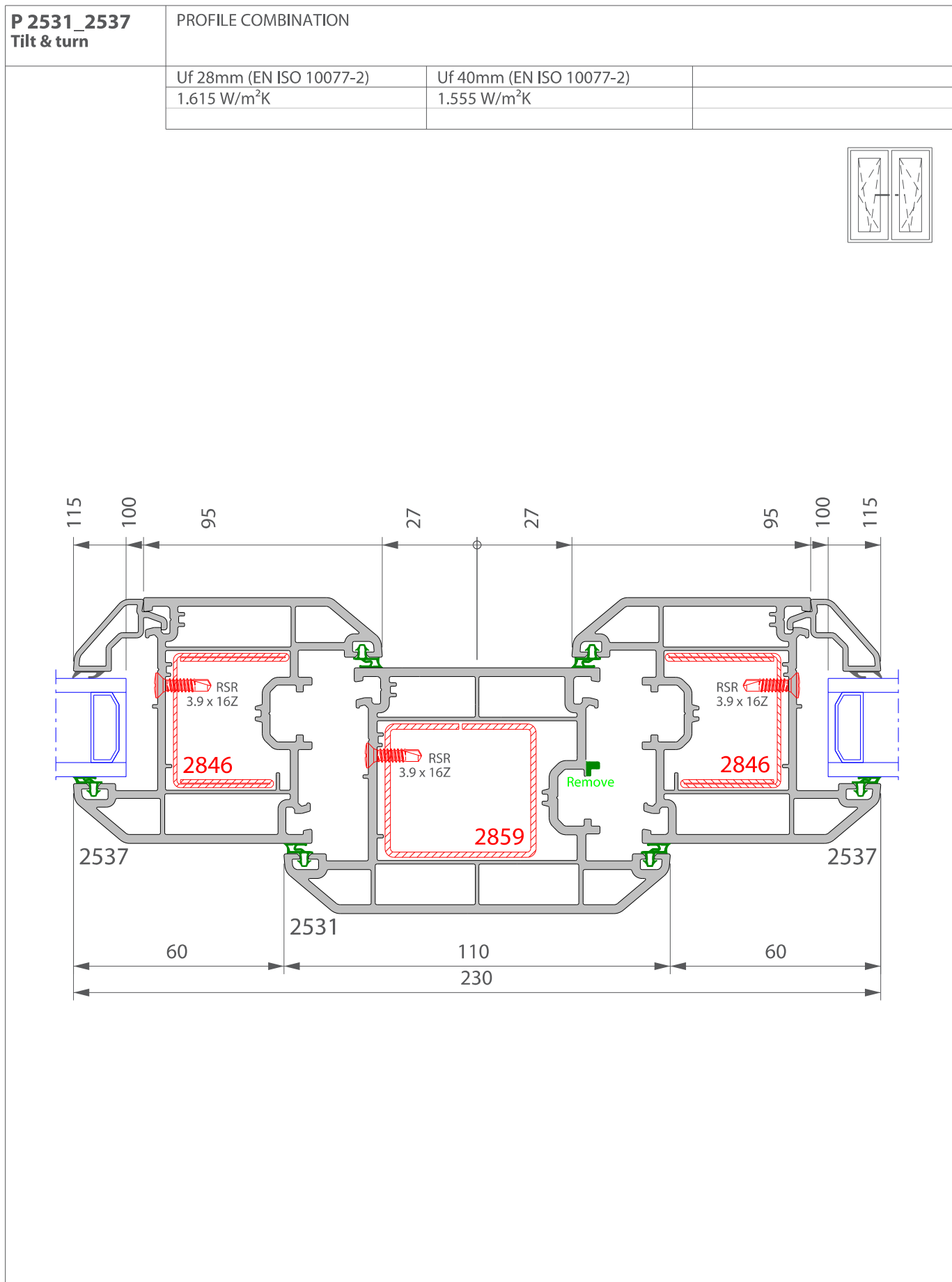
Uf 28mm (EN ISO 10077-2)
1.511 W/m²K

Uf 40mm (EN ISO 10077-2)
1.383 W/m²K



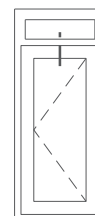
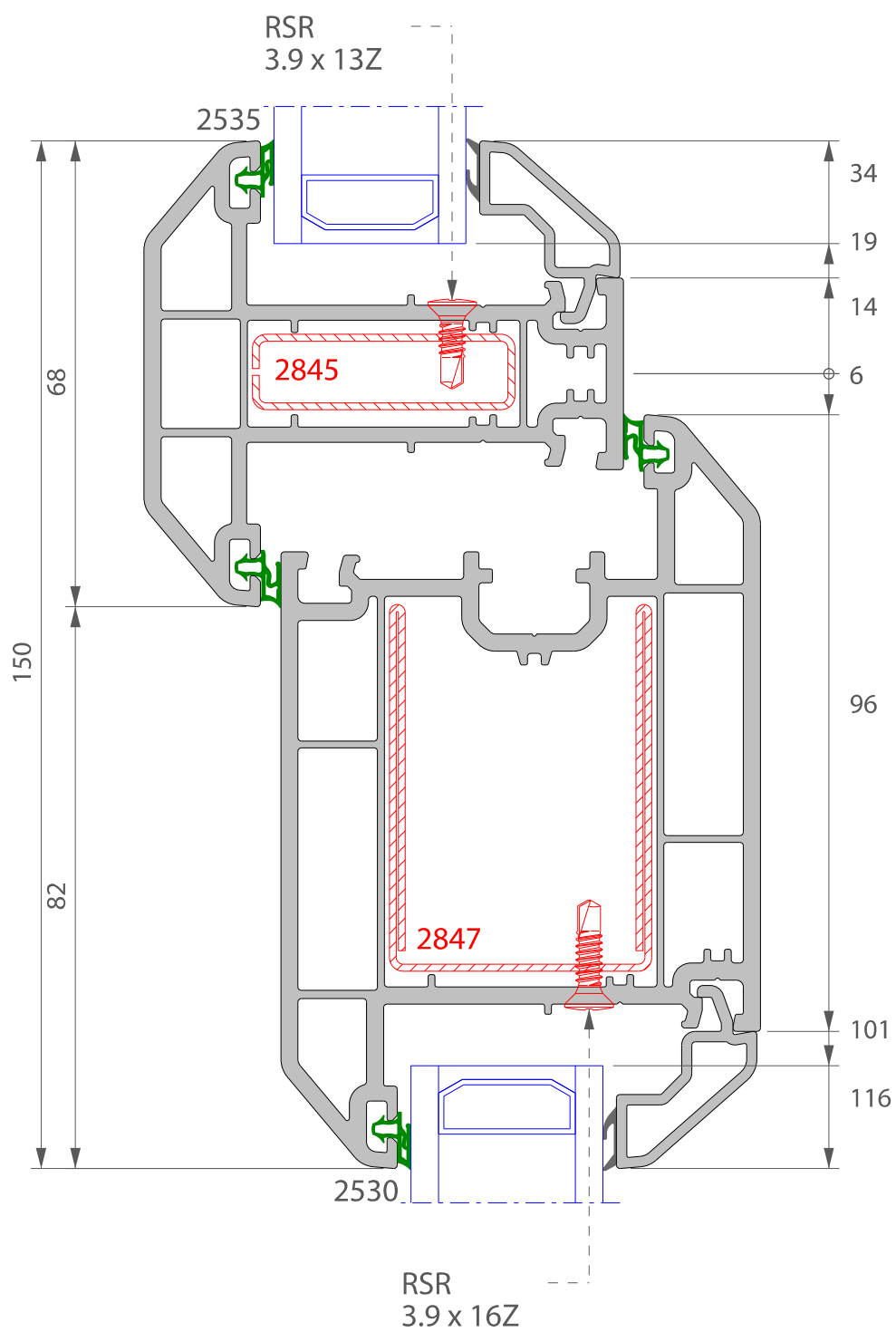
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|-----------------------------------|--------------------------|--------------------------|--|
| P 2538_2537 Tilt & turn | PROFILE COMBINATION | | |
| | Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) | |
| | 1.627 W/m²K | 1.560 W/m²K | |
| | | | |

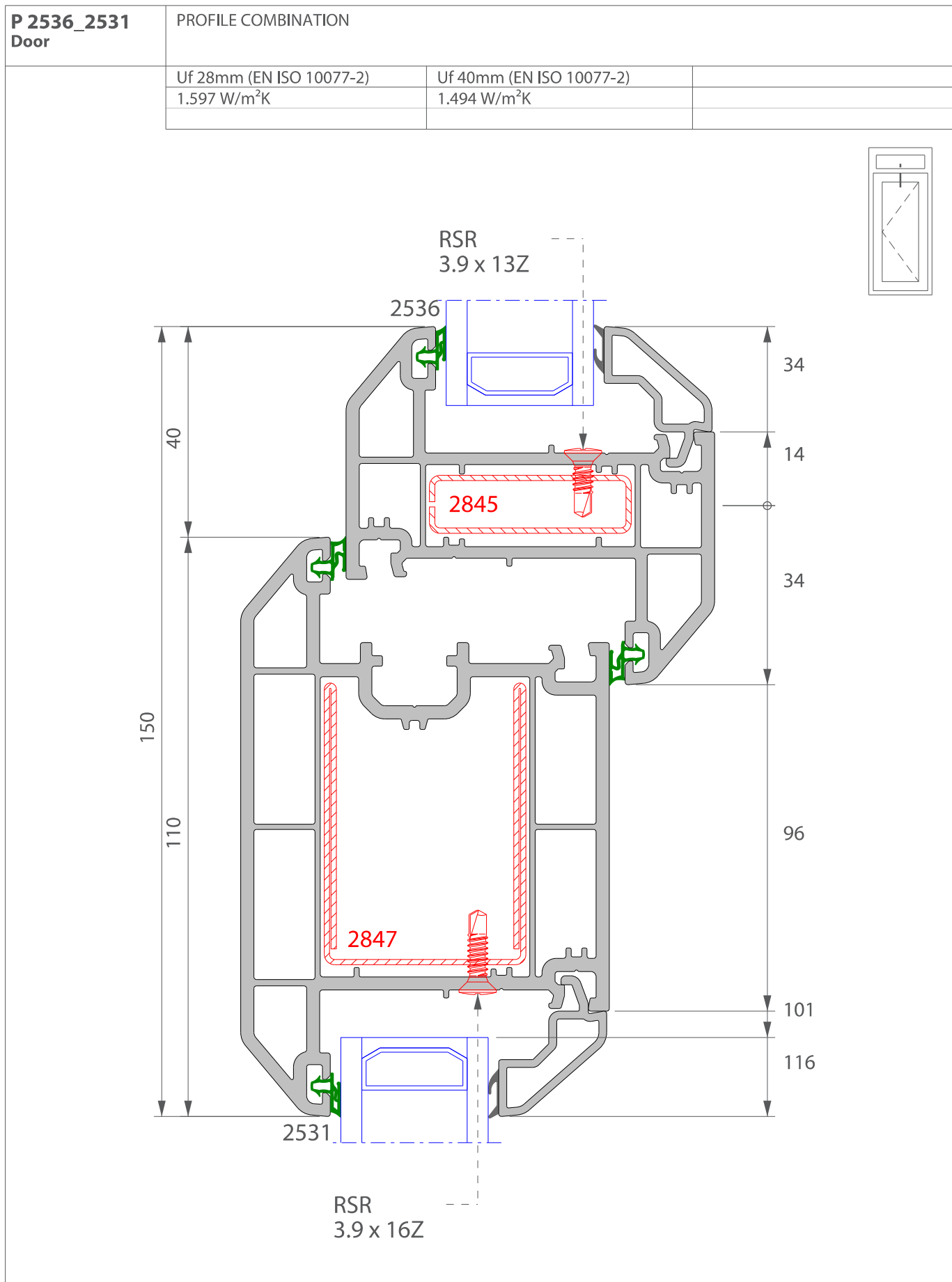




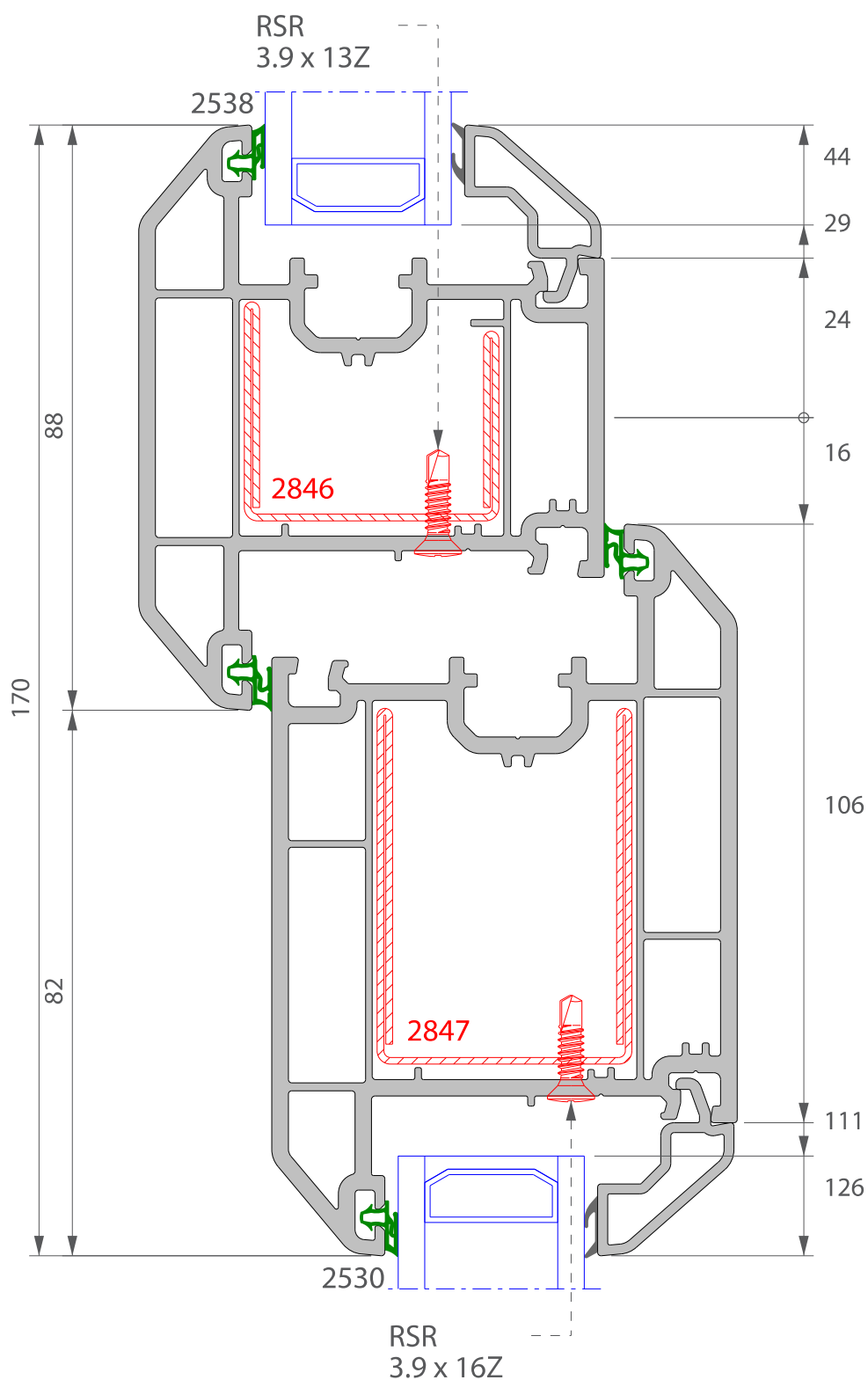
P 2535_2530
Door

| | | |
|---|---|--|
| Uf 28mm (EN ISO 10077-2) 1.600 W/m²K | Uf 40mm (EN ISO 10077-2) 1.496 W/m²K | |
|---|---|--|





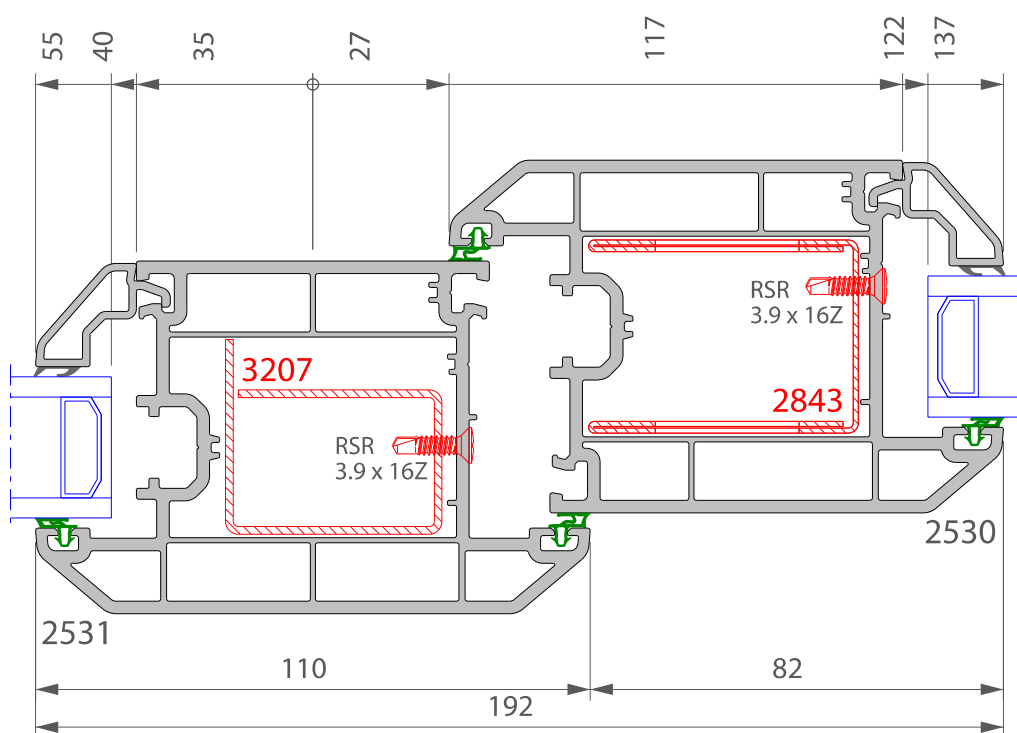
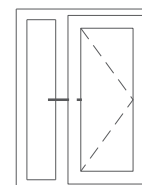
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|---------------------|--------------------------|--------------------------|
| P 2538_2530 Door | PROFILE COMBINATION | |
| | Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) |
| | 1.639 W/m ² K | 1.639 W/m ² K |



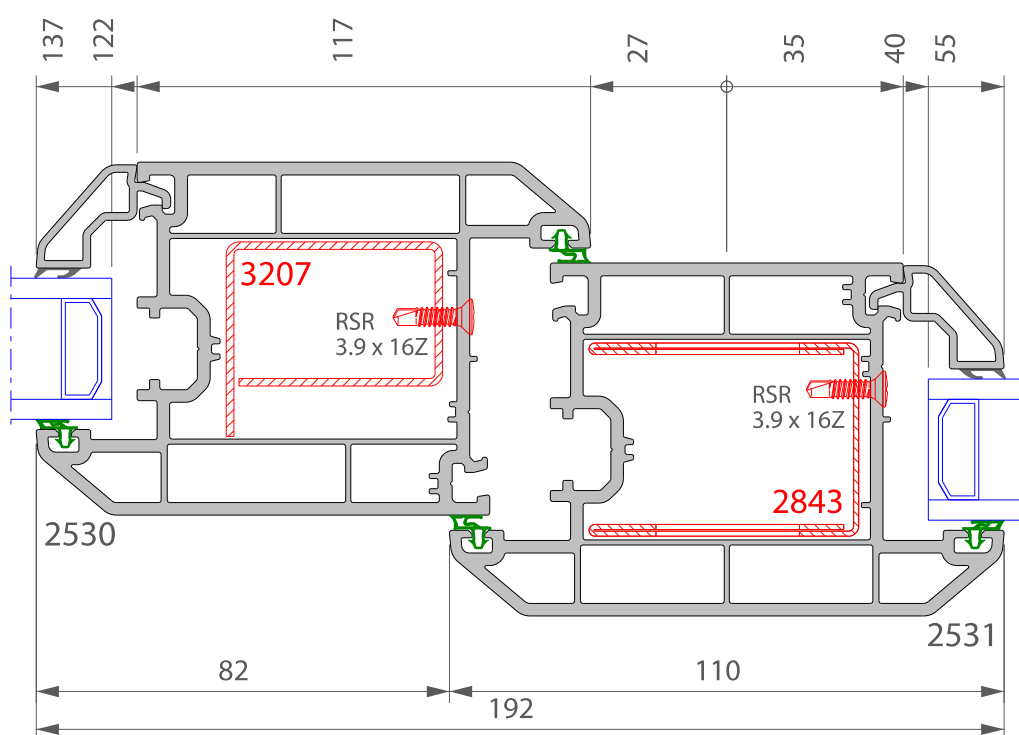
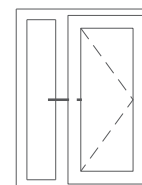
P 2531_2530
Door

PROFILE COMBINATION

| | |
|--------------------------|--------------------------|
| Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) |
| 1.538 W/m²K | 1.480 W/m²K |



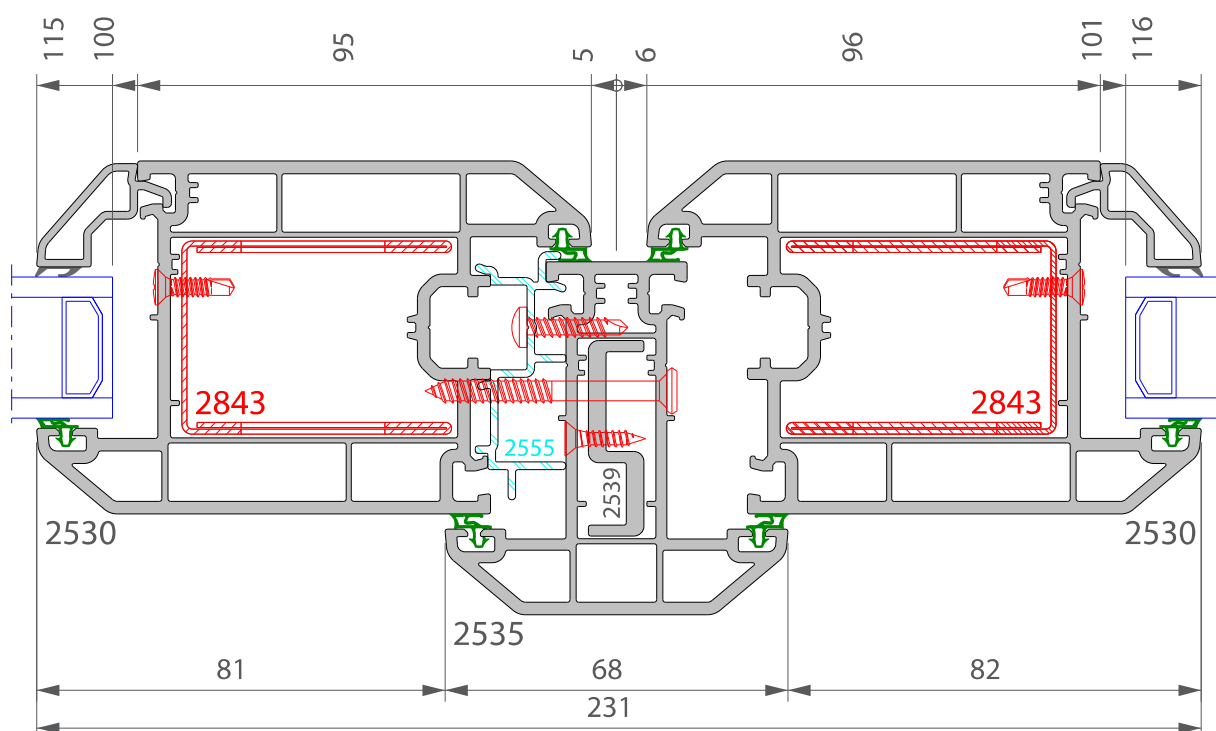
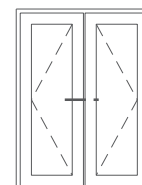
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|---------------------|--------------------------|--------------------------|--|
| P 2530_2531 Door | PROFILE COMBINATION | | |
| | Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) | |
| | 1.540 W/m ² K | 1.481 W/m ² K | |



P 2535_2530
French door

PROFILE COMBINATION

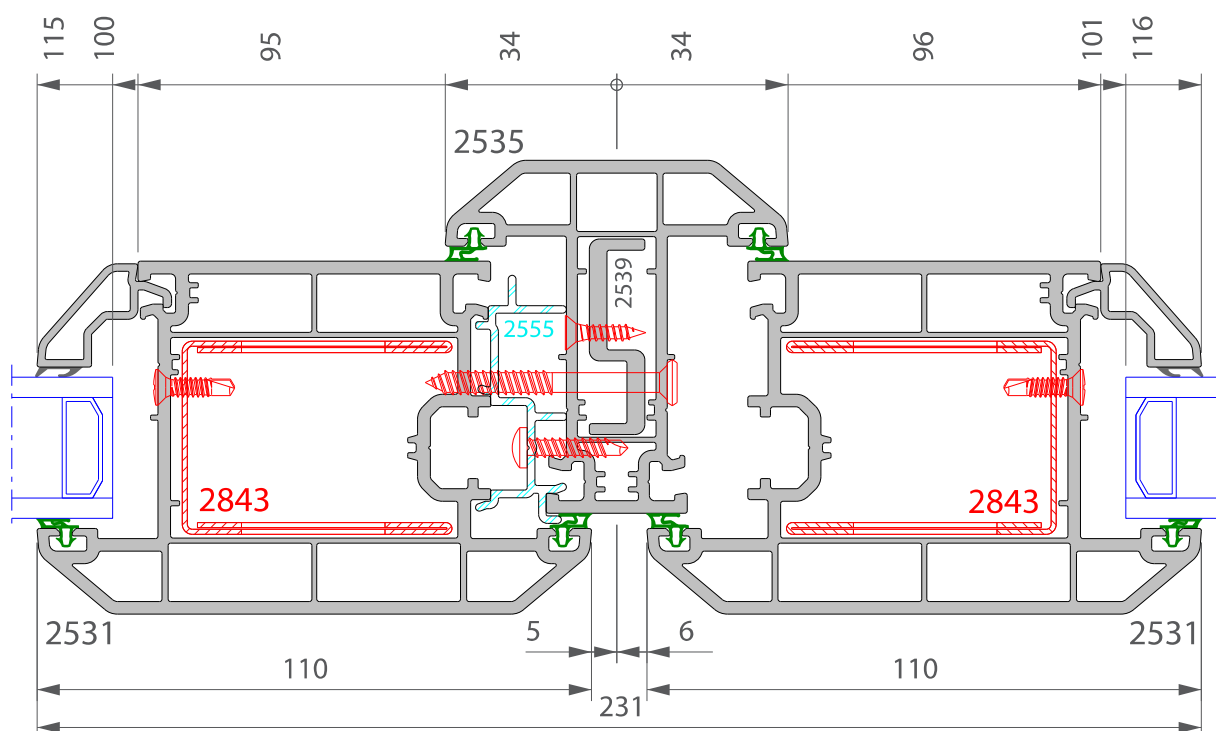
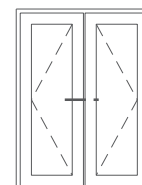
| | | |
|--------------------------|--------------------------|--|
| Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) | |
| 1.612 W/m ² K | 1.588 W/m ² K | |



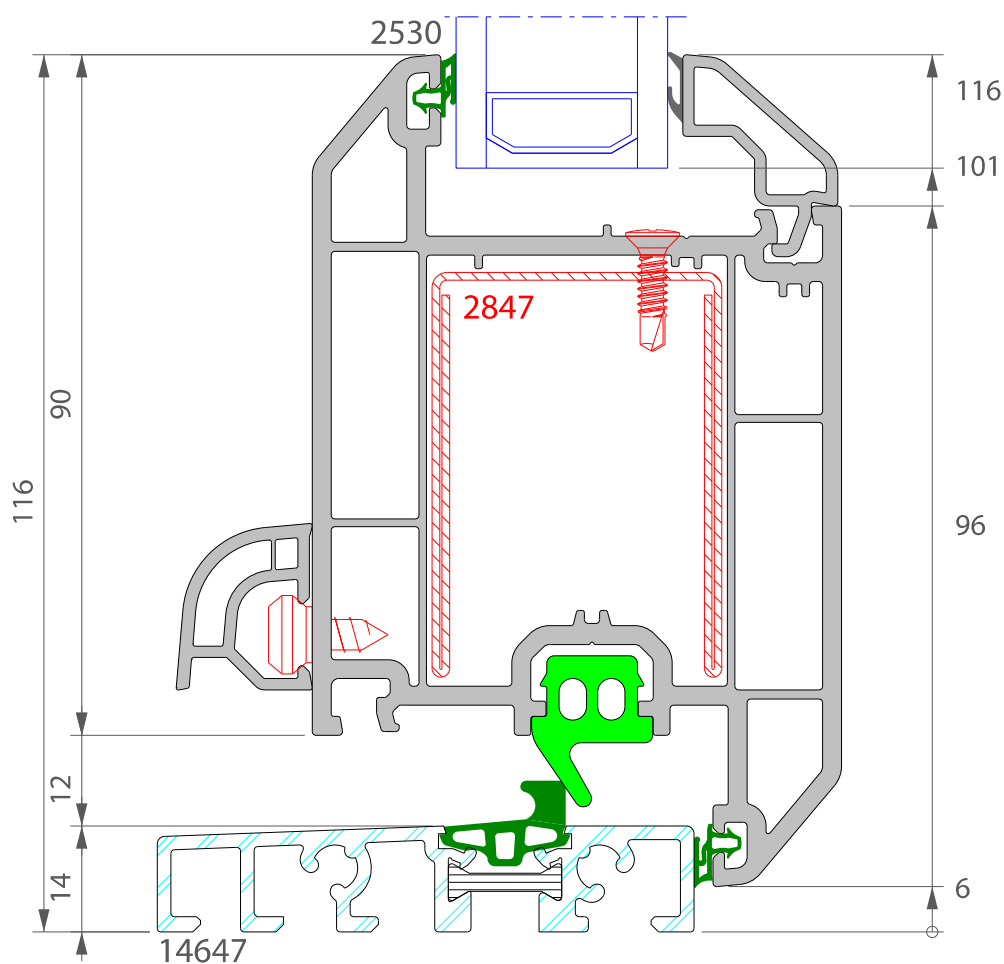
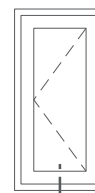
P 2535_2531
French door

PROFILE COMBINATION

| | |
|--------------------------|--------------------------|
| Uf 28mm (EN ISO 10077-2) | Uf 28mm (EN ISO 10077-2) |
| 1.638 W/m ² K | 1.575 W/m ² K |



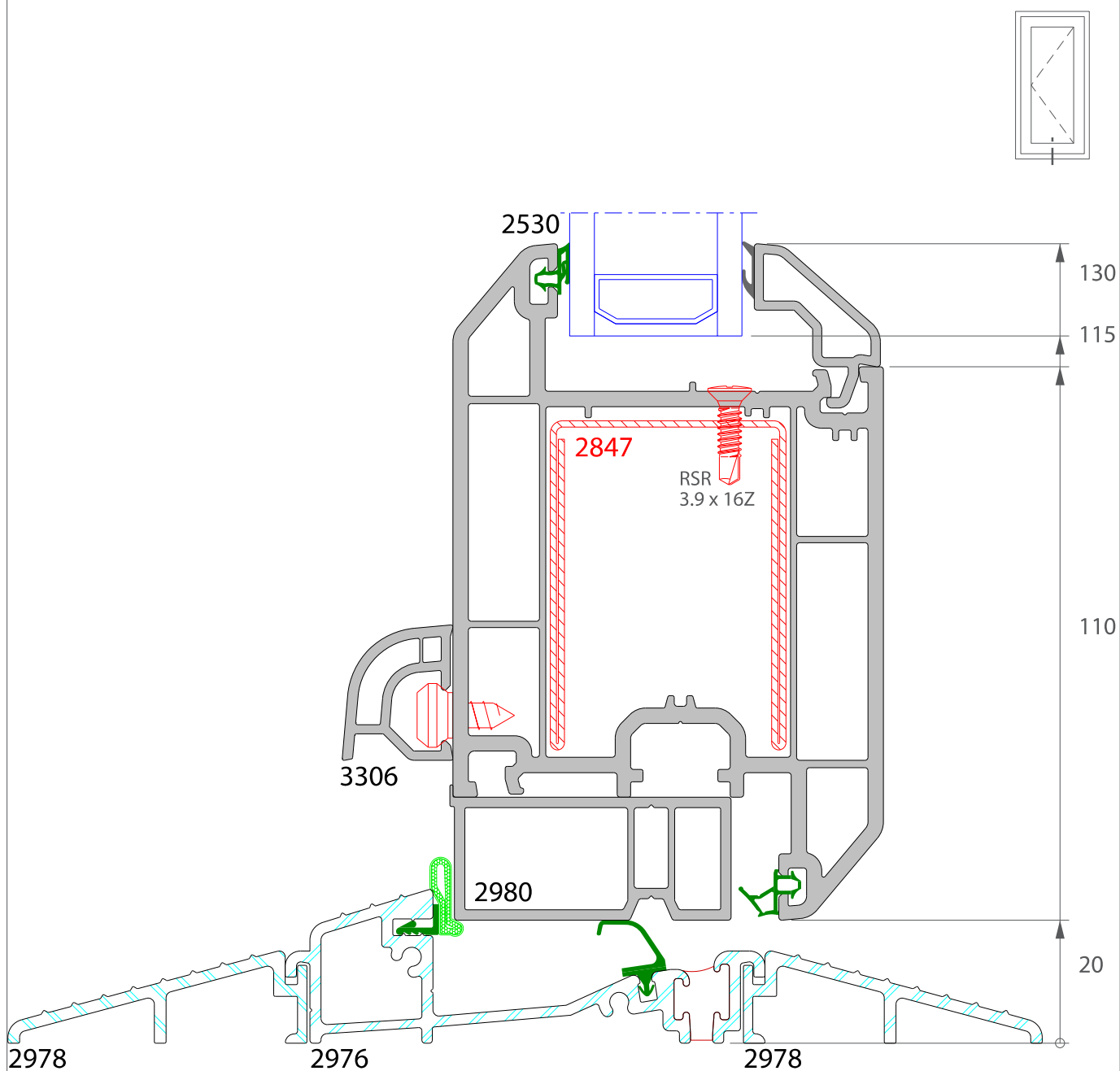
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|----------------------|--------------------------|--------------------------|
| P 14647_2530 Door | PROFILE COMBINATION | |
| | Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) |
| | 2.135 W/m ² K | 2.057 W/m ² K |



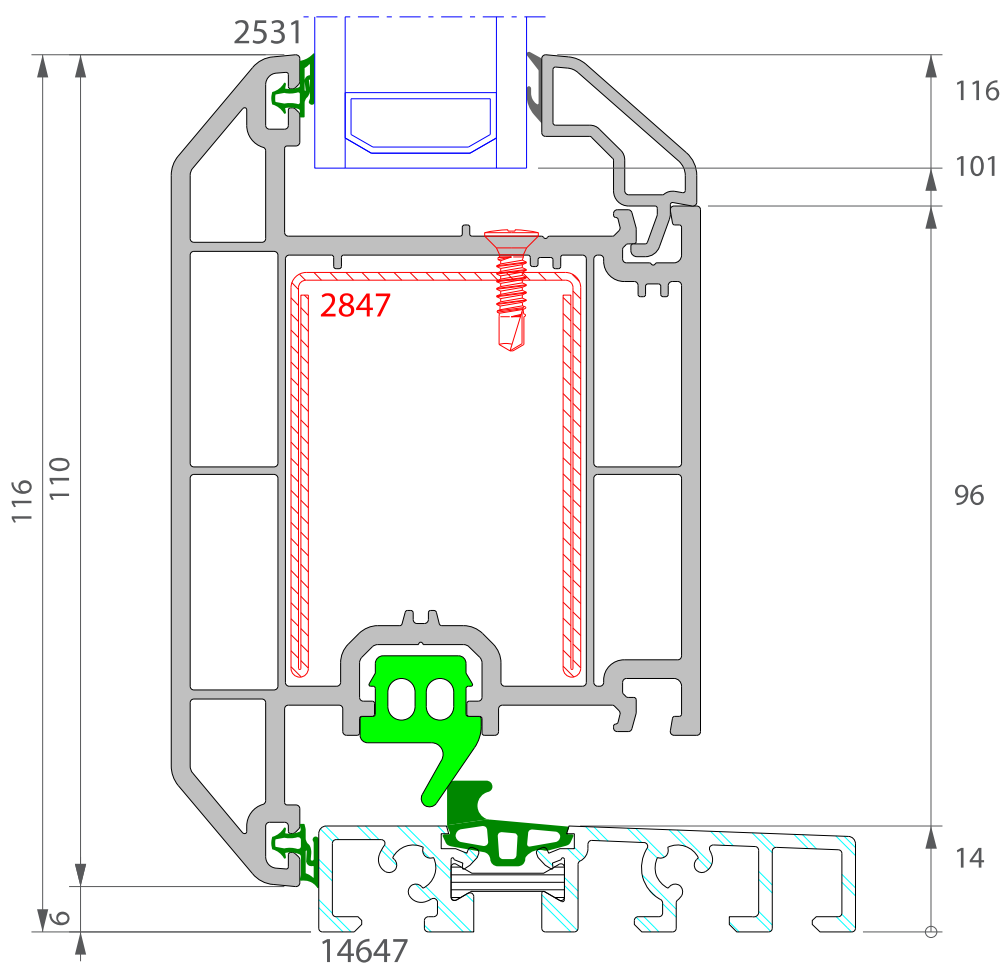
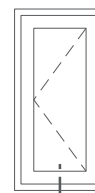
P 2976_2530
Door

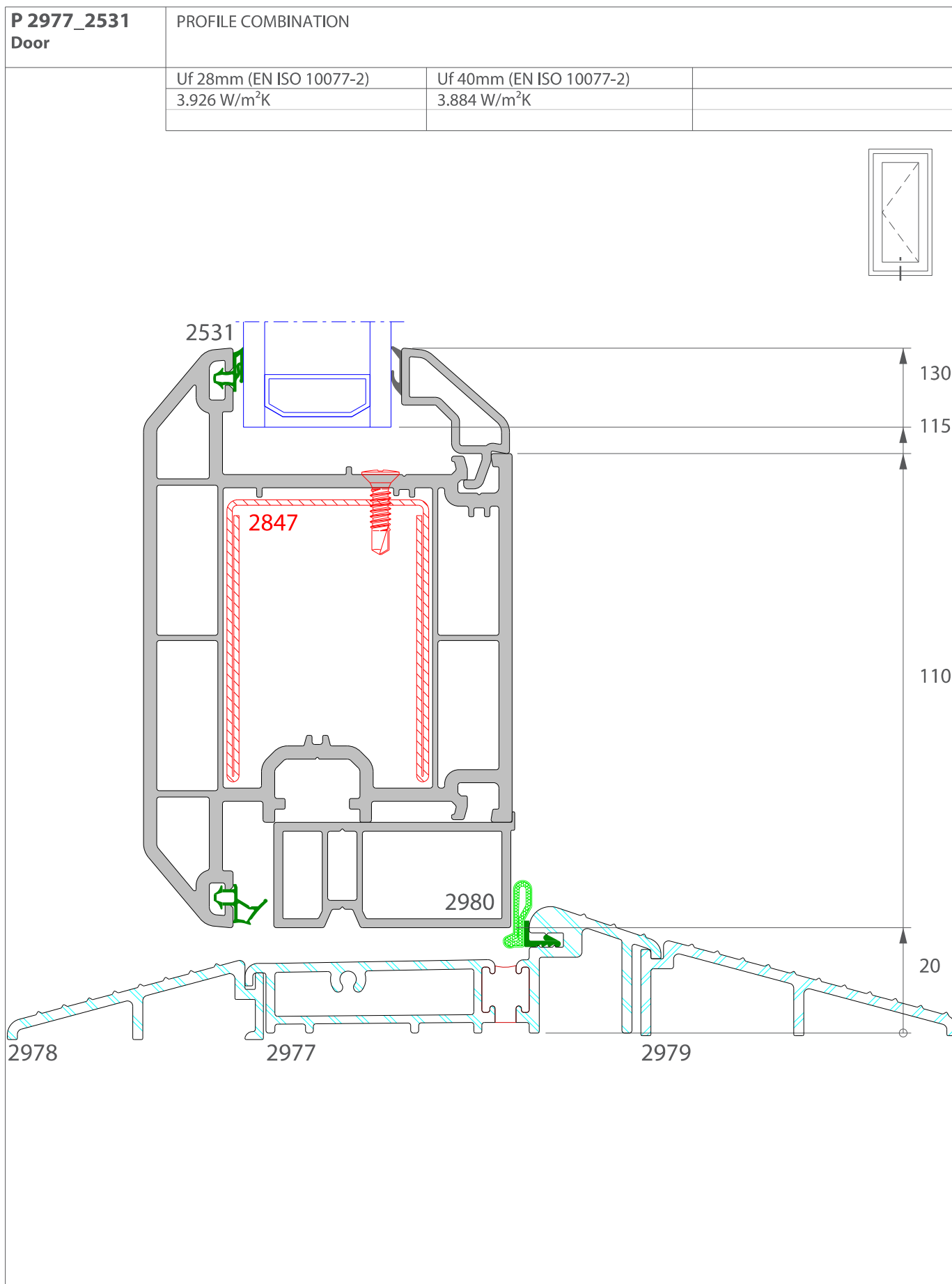
PROFILE COMBINATION

| | | |
|--------------------------|--------------------------|--|
| Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) | |
| 3.029 W/m ² K | 2.965 W/m ² K | |



| | | | |
|------------------------------------|--------------------------|--------------------------|--|
| P 14647_2531 Door | PROFILE COMBINATION | | |
| | Uf 28mm (EN ISO 10077-2) | Uf 40mm (EN ISO 10077-2) | |
| | 2.342 W/m ² K | 2.288 W/m ² K | |
| | | | |





Traditional 2500:

2 Window preparation/calculation

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2.3 Surveying of the window/door

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2.3 Surveying the window/door

Survey:

- A check should be made to confirm there are no structural defects to the aperture. Openings are measured in line with the pattern shown in fig.1
- The smallest width and height dimensions are taken to become the tightest sizes to be used
- A check across the diagonals is also made to confirm the square shape of the opening
- The preferred method of fixing is determined during the survey, usually in discussion with the client, along with any other issues affecting the installation
- Ensure that the installation can satisfy the local Building Regulations for egress.

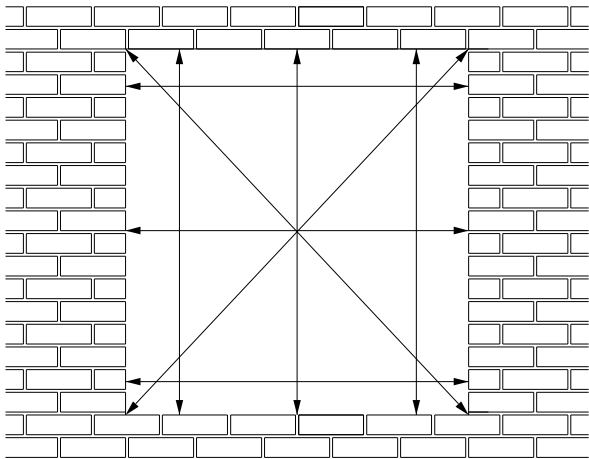


fig.1 Measurement of openings

During the survey stage, it is the responsibility of the installer to take into account the implications of all statutory regulations and health and safety issues.

Fitting tolerances:

- Fitting tolerances, or clearances, are generated from the tightest sizes recorded above. Tolerances are essential to permit expansion and contraction of the PVC-U framing.
- The table shown in fig.2 is used to determine typical tolerances .
- Once the tolerances are deducted and allowances made for things such as stub-cills, the remaining sizes are the frame 'manufacturing' sizes.

fig.2 Normal fitting tolerances

| Width/Height of opening | White PVC-U | Non White PVC-U |
|-------------------------|-------------|-----------------|
| Up to 3.0m | 5mm | 7.5mm |
| 3.0m to 4.5m | 7.5mm | 11.0mm |
| Over 4.5m | 10.0mm | 14.0mm |

Note:
The tolerances shown are per side of frame.
The thickness of any mortar bed should also be allowed for.

Frame positioning:

- Care should be taken to ensure that new frame is correctly positioned in the opening and are located with horizontal members level and vertical members plumb.
- Temporary packers/wedges should be used to position and retain the framing before fixing.

Traditional 2500:

2 Window preparation/calculation

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2.4 Maximum dimensions

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2.4 Maximum dimensions.

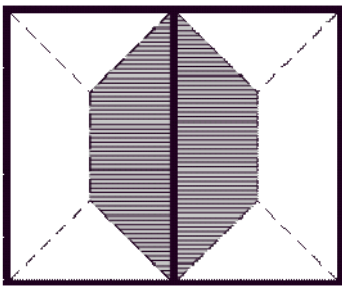
The size of a window is limited due to maximum allowable stresses and deformations, which results from all kinds of loads, like wind pressure, glazing weight and thermal expansion.

To withstand these loads it can be necessary to reinforce the PVC profiles. Other reasons which might also require reinforcement are: maintaining the profile straightness, assistance in transportation and installation, provision of local support for mechanical fixings and enhancement of security.

Due to the variety of window and door configurations, it is not possible in this guideline to cover all situations. If required, further advice can be sought by contacting the Deceuninck technical dept. For this reason, this document cannot be used in legal disputes.

2.4.1 Wind load calculation:

A window should be manufactured to resist the designed wind pressure, which can be determined according to EN 1991-1-4. The pressure on the glazing will be transferred to the surrounding window profiles. In the case of a fixed window containing one mullion, the wind pressure is arithmetically assumed to generate two distributed, trapezoidal loads causing the mullion to deflect perpendicular to the glazing plane. The deflection of the window frame is negligible, since it is fixed to the wall.



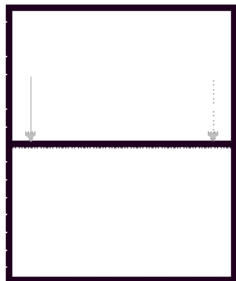
The resistance against this type of load can be characterized by the flexural stiffness $E \cdot I_x$ of the profile combination, which is the sum of the stiffness of the individual profiles. The flexural stiffness of an individual profile is the multiplication of its E-modulus (Young's modulus) and its moment of inertia about an axis perpendicular to the deflecting load.

The E-modulus is a material property that indicates the elasticity of a material. For example, PVC-U has an E-modulus of 2700 MPa, for steel it is 205000 MPa. The moment of inertia of a cross section, also called 'area' moment of inertia, is a measure of the bending resistance in a particular direction. It only depends on the geometry of the section.

The higher the flexural stiffness, the less a profile combination will deform under the same load. Reinforcing PVC-U profiles will strongly increase the total stiffness, making it possible to produce larger windows.

2.4.2 Glazing weight calculation:

The weight of standard double and triple glazing is 20 and 30 kg/m² respectively. This weight is transferred to the surrounding profiles by the glazing packers. In the case of a fixed window with one transom, two point loads arise, which bring on a vertical deflection.



The required flexural stiffness to withstand two point loads can be calculated from:

$$EI_y = \frac{Fa(3L^2 - 4a^2)}{24u}$$

with EI_y = required flexural stiffness of the transom
 F = magnitude of the point load
 a = distance to centre of support blocks
 L = load span
 u = maximum deflection (max. 2mm is advised due to the hardware)

It can be necessary to restrict a maximum relative deflection to guarantee well-functioning of an opening part. Other reasons are: to maintain a good air tightness, aesthetics or to avoid vertical loading on the glazing underneath.

2.4.3 Thermal expansion:

The elongation of a profile subject to a temperature change is given by:

$$\Delta L = L\delta\Delta T$$

with ΔL = elongation of a profile
 δ = coefficient of thermal expansion (CTE)
 ΔT = temperature change

Due to the excellent thermal insulation quality of PVC profiles, large temperature differences between the inside and outside surface can be induced. Thus, the different thermal expansion on the inside and outside surface behaves like a 'bimetallic' effect, causing the profile to deflect out of the glazing plane.

The CTE of PVC is 80.10⁻⁶ K⁻¹ which is about 6 times larger than the value for steel, i.e. 12. 10⁻⁶ K⁻¹. In order to limit the thermal expansion of PVC, reinforcement can be necessary, especially in the case of large and/or coloured units. The fact is, coloured profiles achieve higher surface temperatures due to solar radiation than white profiles typically 70°C compared with 45°C.

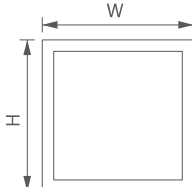
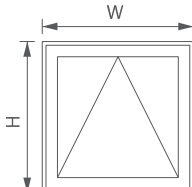
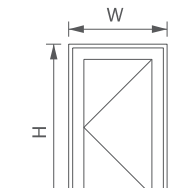
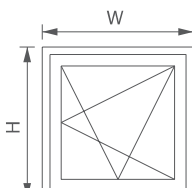
As a rule of thumb reinforcement is applied in the following cases:

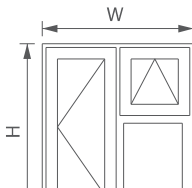
- Coloured PVC profiles: ALWAYS
- White PVC profiles:
 - outer frame from 2.0 m
 - sash profile from 1.0 m
 - transom/mullion from 1.0 m

In practice:

- 0.25 mm/m with a ΔT of 5°C
- 1 mm/m with a ΔT of 20°C

| CTE | δ |
|-------|---------------------|
| Alu | 23.10 ⁻⁶ |
| PVC | 80.10 ⁻⁶ |
| Steel | 11.10 ⁻⁶ |

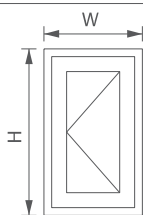
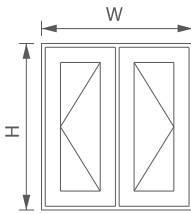
| MAXIMUM DIMENSIONS | | | | | |
|--|--------------------------|--------|----------------------------|----------------------------|--|
| Double / triple glazed | | | | | |
| Windows | | | | | |
| Product style | Minimum sash rebate (mm) | | Maximum sash rebate (mm) | | Comment |
| | Width | Height | Width | Height | |
|  Fixed light | 230 | 230 | 3000 | 3000 | Max perimeter 8000mm |
|  Top hung | 230 | 275 | 1108 | 1108 | - |
| | | | 1108 | 1408 ¹ | ¹ Product specific upgrade: Sash seal P 2503 GT Bow Constrictor |
|  Side hung | 275 | 230 | 608 | 1218 | Gearbox espag ¹ Defender Plus hinge |
| | | | 808 ¹ | | |
| | 365 | 360 | 608 | 1308 | Shootbolt espag ¹ Defender Plus hinge |
| | | | 808 ¹ | | |
|  Tilt & turn | 320 | 360 | 1375 1630 ¹¹ | 1375 2250 ¹¹ | Face fix ¹¹ Size not Kitemark approved Double glazed only |
| | 435 | 410 | 1305 | 1305 2250 ¹¹ | Concealed ¹¹ Size not Kitemark approved Double glazed only |

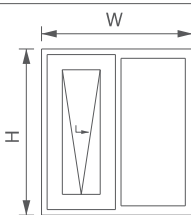
| Product style | Maximum frame (mm) | Maximum frame (mm) | Comment |
|--|--------------------|--------------------|---|
| | Width | Height | |
|  Multi-light | 2400 | 2400 | Max perimeter 7600mm Max transom length inc. frame 1450mm using 2845 reinforcement |

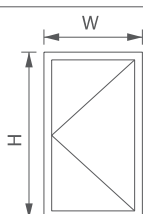
MAXIMUM DIMENSIONS

Double glazed

Doors

| Product style | Minimum sash rebate (mm) | | Maximum sash rebate (mm) | | Comment |
|---|--------------------------|--------|--------------------------|--------|---------|
| | Width | Height | Width | Height | |
|  <p>Single door</p> | 560 | 1810 | 875 | 2050 | - |
|  <p>Double door</p> | 560 | 1810 | 875 | 2050 | - |

| Product style | Maximum frame (mm) | Maximum frame (mm) | Comment |
|---|--------------------|--------------------|--|
| | Width | Height | |
|  <p>Tilt & slide</p> | 2400 | 2200 | <p>Frame height includes add-on profile at sill level</p> <p>Not Kitemark approved</p> |

| Product style | Minimum frame (mm) | | Maximum frame (mm) | | Comment |
|--|--------------------|--------|--------------------|--------|-----------------------|
| | Width | Height | Width | Height | |
|  <p>Composite</p> | x | x | 1025 | 2080 | Not Kitemark approved |

REINFORCEMENT GUIDELINES

White Kitemark Product

Standard double glazing

White Kitemark Approved Product

| Type | Profile | Profile Content | Max Rebate Width (mm) | Max Rebate Height (mm) |
|--------------------|--------------------------|-----------------|-----------------------|------------------------|
| Fixed Window | 2592 52mm frame | 2576 TCI | 1936 | 1936 |
| | 2533 70mm frame | 4808 TCI | 1900 | 1900 |
| Side Hung Casement | 2592 52mm frame | 2576 TCI | 836 | 1336 |
| | 2533 70mm frame | 4808 TCI | 800 | 1300 |
| | 2594 75mm sash | 2577 TCI | 814 | 1314 |
| Top Hung Casement | 2592 52mm frame | 2576 TCI | 1136 | 1436 |
| | 2533 70mm frame | 4808 TCI | 1100 | 1400 |
| | 2594 75mm T sash | 2577 TCI | 1150 | 1450 |
| Tilt & Turn | 2592 52mm frame | 2576 TCI | 1436 | 1436 |
| | 2533 70mm frame | 4808 TCI | 1400 | 1400 |
| | 2537 88mm Z sash | 2846 Steel | 1376 | 1376 |
| Single Door | 2592 52mm frame | 2576 TCI | 936 | - |
| | 2533 70mm frame | 4808 TCI | 900 | 2050 |
| | 2530 110mm Z sash | 2847 Steel | 876 | 2026 |
| | 2531 110mm T sash | | | |
| Double Door | 2592 52mm frame | 2576 TCI | 1736 | - |
| | 2533 70mm frame | 4808 TCI | 1700 | 2050 |
| | 2530 110mm Z sash | 2847 Steel | 813 | 2026 |
| | 2531 110mm T sash | | | |

Multi-light casement transom/mullion maximum span; 1400mm using 2845 steel
Double door false mullion maximum span; 1984mm using 2539 TCI or 2845 steel

| | | | |
|------------------------------|--|-------------------------|--|
| REINFORCEMENT GUIDELINES | | | |
| White Profile | | Standard double glazing | |
| Steel reinforcement required | | | |

| White profile that should be reinforced with steel reinforcement | | | |
|--|-------------------|-----------------|------------------------|
| Type | Profile | Profile Content | Span that exceeds (mm) |
| Outer Frame, fully supported by masonry | 2592 52mm frame | 2565 steel | 2100 |
| | 2533 70mm frame | 2845 steel | |
| | | 2887 steel | |
| Outer Frame, not fully supported by masonry | 2592 52mm frame | 2565 steel | 1500 |
| | 2533 70mm frame | 2845 steel | |
| | | 2887 steel | |
| Transom/Mullions, with no specific wind load requirement | 2535 68mm T | 2845 steel | 1200 |
| | 2536 68mm Z | | |
| Tilt & Turn Sash | 2537 88mm Z sash | 2846 Steel | 1000 |
| Door Sash | 2530 110mm Z sash | 2847 Steel | 1000 |
| | 2531 110mm T sash | | |

| | | |
|--------------------------|-------------------------|--|
| REINFORCEMENT GUIDELINES | | |
| Coloured Profile | Standard double glazing | |

| Foiled profile* that can remain unreinforced (or use TCI) | | | |
|---|-------------------------|-----------------|-------------------|
| Type | Profile | Profile Content | Maximum Span (mm) |
| Outer Frame, fully supported by masonry | 2592 52mm frame | 2576 TCI | 1500 |
| | 2533 70mm frame | 4808 TCI | |
| Outer Frame, not fully supported by masonry | 2592 52mm frame | 2576 TCI | 1000 |
| | 2533 70mm frame | 4808 TCI | |
| Transom/Mullions, with no specific wind load requirement | 2535 68mm T | 2539 TCI | 800 |
| | 2536 68mm Z | | |
| Side Hung Casement Sash, width | 2594 75mm T sash | 2577 TCI | 550 |
| Side Hung Casement Sash, height | | | 950 |
| Top Hung Casement Sash | | | 950 |

Foil Colours:

003 White, 004 Grey, 019 Warm White, 080 Heritage White, 081 Ice Cream, 096 Cream, 106 Chartwell Green, 110 Golden Oak, 143 Grey Cedar, 145 Irish Oak, 665 Agate Grey

Foiled profile at spans greater than those stated must be reinforced using steel reinforcement.

Foiled profile in colours not listed must be reinforced using steel reinforcement regardless of span.

Traditional 2500:

2 Window preparation/calculation

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2.5 Cutting sizes

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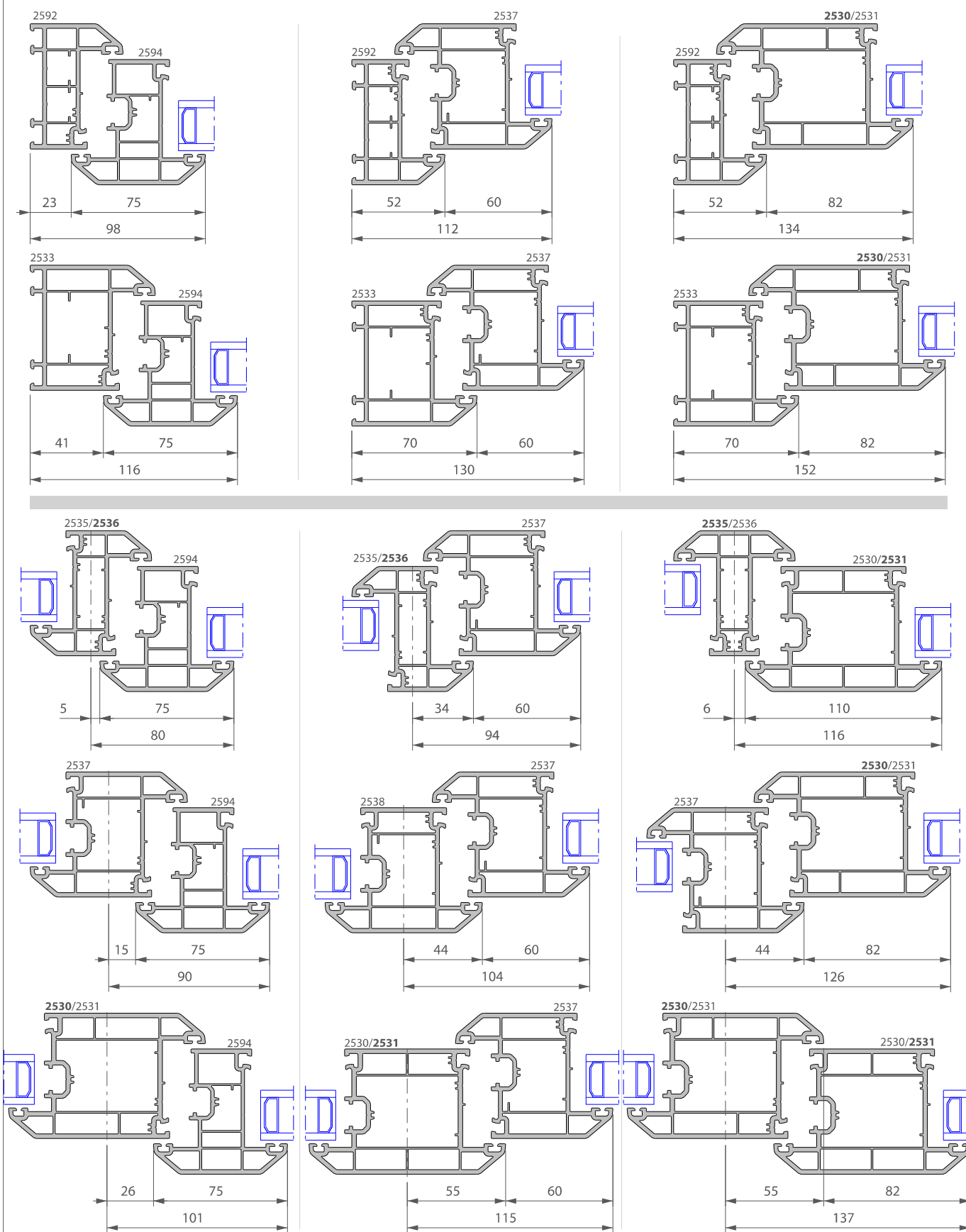
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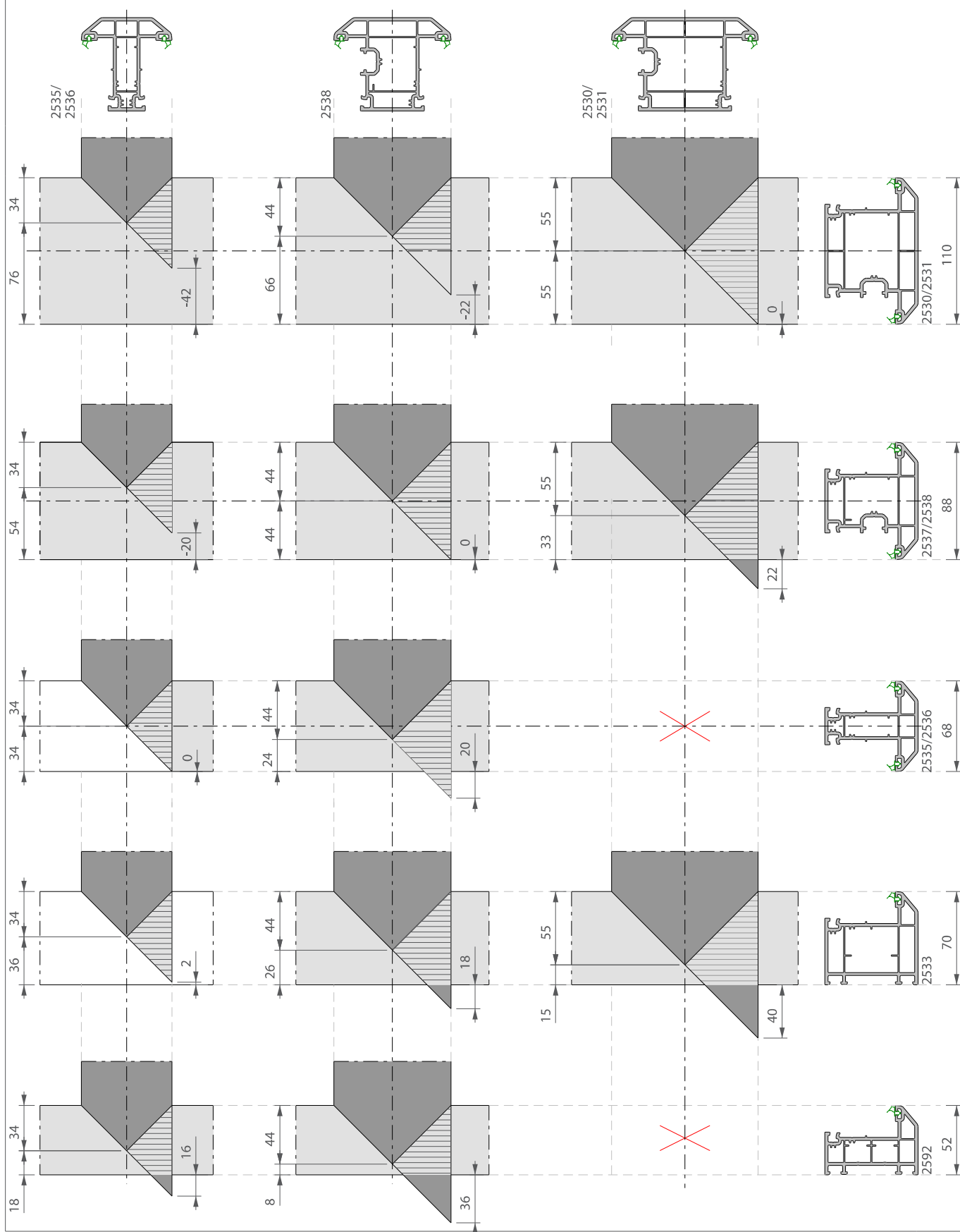
Sash & bead

Cutting Sizes



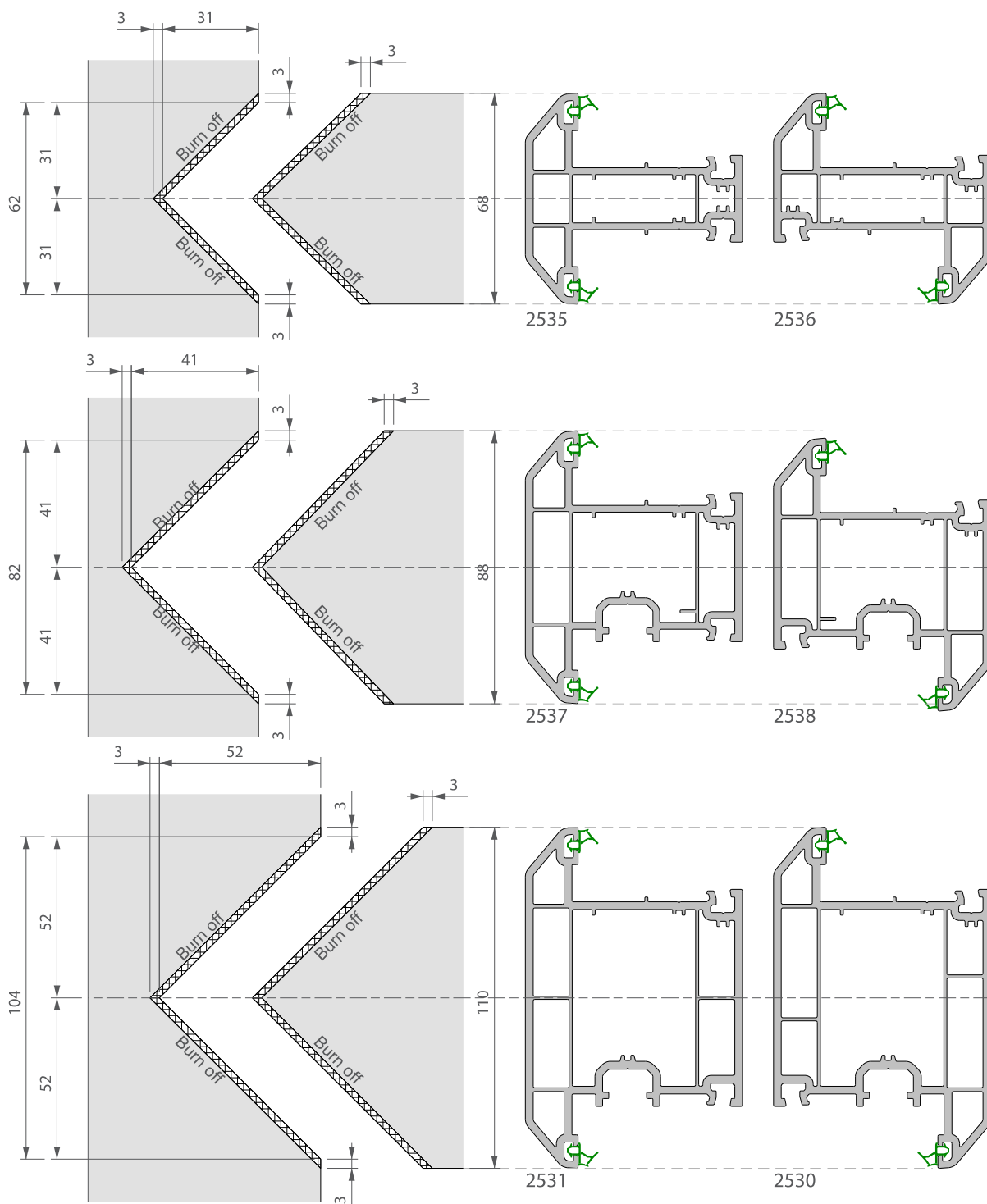
Transom/ mullion

Cutting Sizes



V-Notch

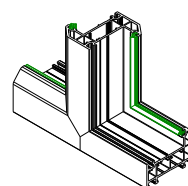
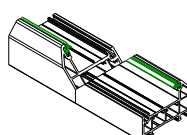
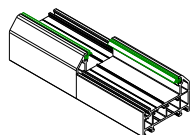
Cutting Sizes



1. Reverse butt weld

2. V-notch profile

3. Weld-in reversible



V-Notch Positions

Cutting Sizes

Outerframe to centre of V-notch

Diagram illustrating the V-notch position relative to the outer frame. The diagram shows three cross-sections of window frames (1, 2, 3) and a side view of the V-notch. The V-notch position is indicated by a dashed line, and the manufacturing size A is shown as the distance from the outer frame to the center of the V-notch.

WELDED TRANSOMS / MULLIONS
NO ALLOWANCE HAS BEEN MADE FOR WELD

| Outer Frame 1 | Transom /Mullion 2 | Transom /Mullion 3 | V Notch position |
|---------------|--------------------|--------------------|------------------|
| 2592 | 2535/2536 | 2535/2536 | A-18 |
| 2533 | 2535/2536 | 2535/2536 | A-36 |
| | 2537/2538 | 2537/2538 | A-26 |
| | 2530/2531 | 2530/2531 | A-15 |

Centre of transom/mullion to centre of V-notch

Diagram illustrating the V-notch position relative to the center of the transom/mullion. The diagram shows three cross-sections of window frames (1, 2, 3) and a side view of the V-notch. The V-notch position is indicated by a dashed line, and the manufacturing size A is shown as the distance from the center of the transom/mullion to the center of the V-notch.

WELDED TRANSOMS / MULLIONS
NO ALLOWANCE HAS BEEN MADE FOR WELD

| Transom /Mullion 1 | Transom /Mullion 2 | Transom /Mullion 3 | V Notch position |
|--------------------|--------------------|--------------------|------------------|
| 2535/2536 | 2535/2536 | 2535/2536 | A |
| 2537/2538 | 2535/2536 | 2535/2536 | A-10 |
| | 2537/2538 | 2537/2538 | A |
| | 2530/2531 | 2530/2531 | A+11 |
| 2530/2531 | 2535/2536 | 2535/2536 | A-21 |
| | 2537/2538 | 2537/2538 | A-11 |
| | 2530/2531 | 2530/2531 | A |

Edge of sash frame to centre of V-notch

Diagram illustrating the V-notch position relative to the edge of the sash frame. The diagram shows three cross-sections of window frames (1, 2, 3) and a side view of the V-notch. The V-notch position is indicated by a dashed line, and the manufacturing size A is shown as the distance from the edge of the sash frame to the center of the V-notch.

WELDED TRANSOMS / MULLIONS
NO ALLOWANCE HAS BEEN MADE FOR WELD

| Sash Frame 1 | Transom /Mullion 2 | Transom /Mullion 3 | V Notch position |
|--------------|--------------------|--------------------|------------------|
| 2537/2538 | 2535/2536 | 2535/2536 | A-54 |
| | 2537/2538 | 2537/2538 | A-44 |
| | 2530/2531 | 2530/2531 | A-33 |
| 2530/2531 | 2535/2536 | 2535/2536 | A-76 |
| | 2537/2538 | 2537/2538 | A-66 |
| | 2530/2531 | 2530/2531 | A-55 |

Traditional 2500:

2 Window preparation/calculation

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2.6 Glass sizes

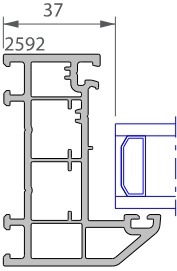
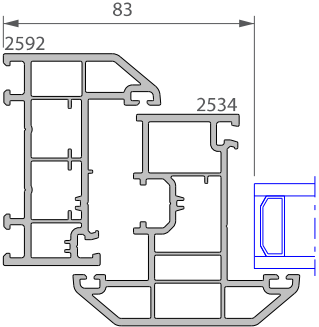
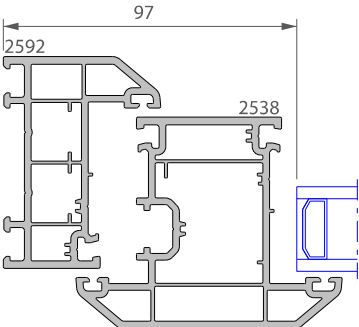
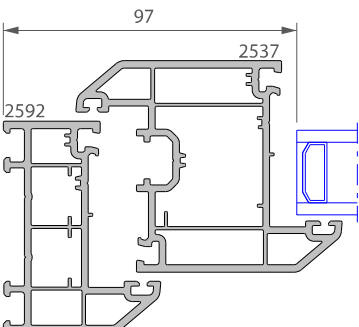
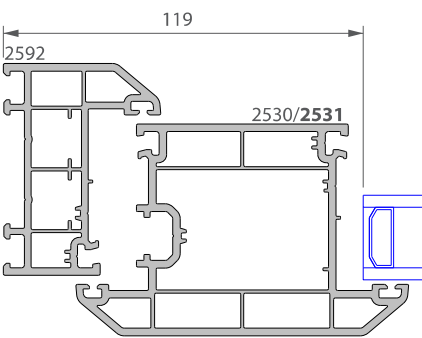
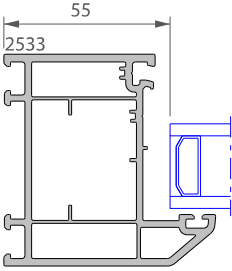
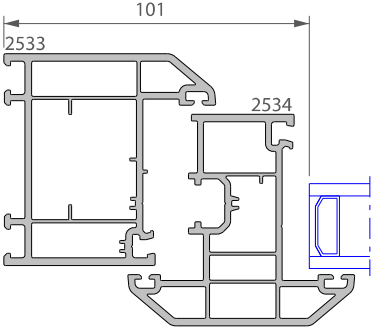
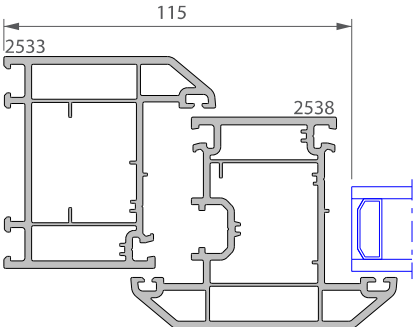
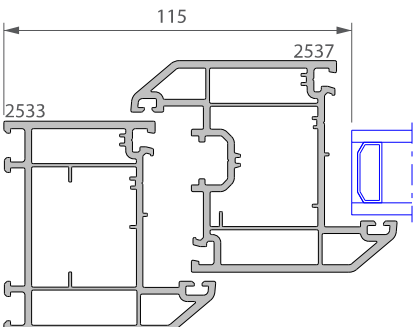
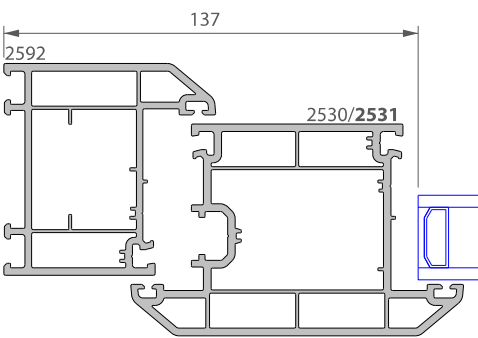
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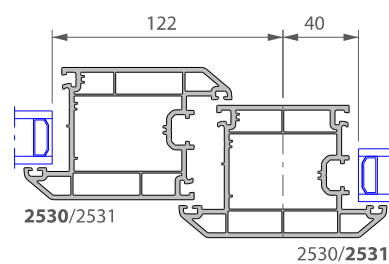
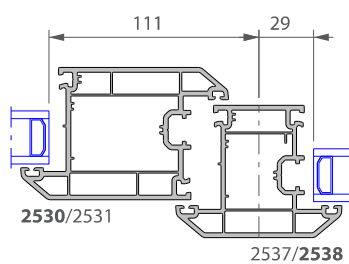
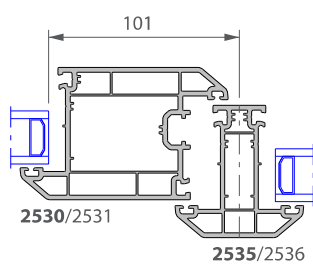
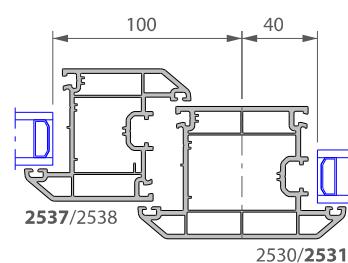
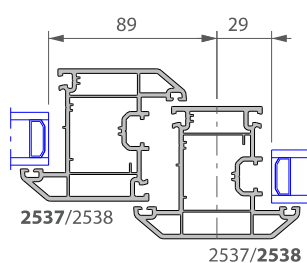
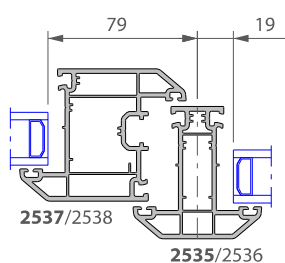
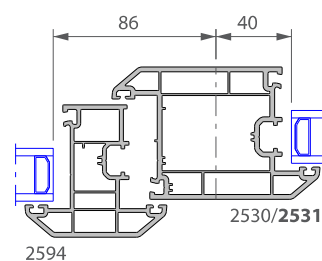
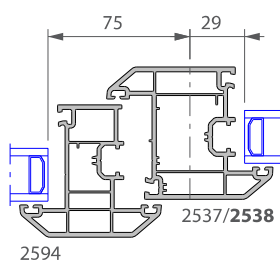
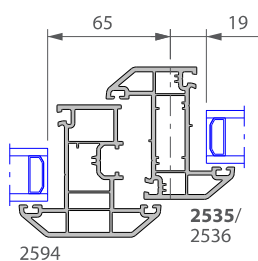
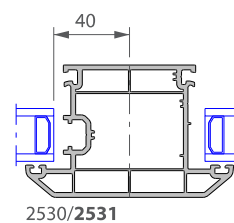
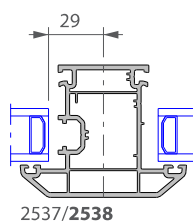
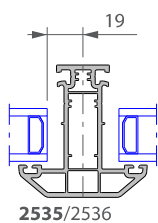
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| Frame | Glass Sizes |
|--|---|
|      |      |

Transom

Glass Sizes



Traditional 2500:

3 Fabrication process

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| | |
|--------------------------------------|-----|
| 3.1 Cutting | 73 |
| 3.2 Inserting reinforcement sections | 75 |
| 3.3 Machining | 78 |
| 3.4 Frame assembly | 97 |
| 3.5 Hardware | 102 |
| 3.6 Use of accessories | 135 |
| 3.7 Glazing | 154 |

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Traditional 2500:

3 Fabrication process

The Deceuninck logo, consisting of the word "deceuninck" in white lowercase letters on a blue rectangular background.

3.1 Cutting

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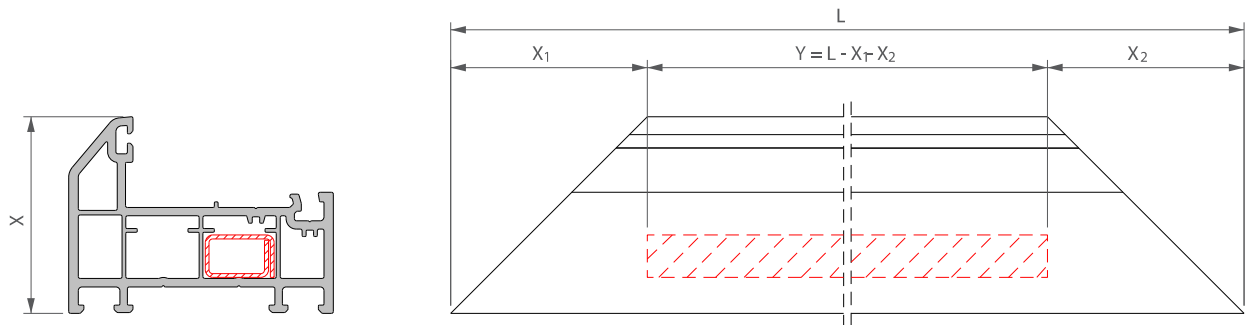
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3.1 Cutting

3.1.1 Welded profile

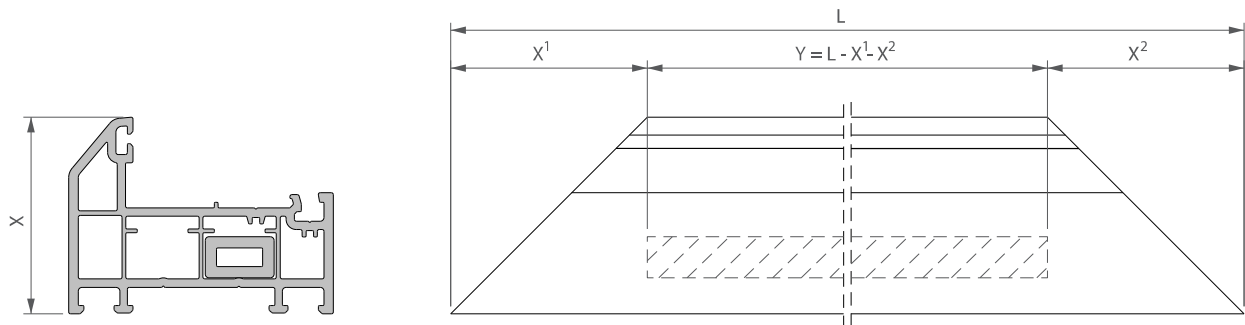
Standard steel reinforced.

Standard saws/cutting equipment must be used for standard steel reinforcements.
Cut steel reinforcement can corrode but **will not** give any functional problems.



Recycled PVC-U Thermal Chamber Inserts (TCI).

Standard saws/cutting equipment should be used for TCI profiles.
TCI profiles can be welded, in order to mitre cut the TCI profile accurately it will require securing into position during the cutting process.



3.1.2 Safety precautions

Whenever using electrical devices, we always recommend wearing a dust mask and safety goggles.
No other specific safety measures are required when processing steel reinforcement or TCI profile.

Traditional 2500:

3 Fabrication process

The Deceuninck logo, consisting of the word "deceuninck" in white lowercase letters on a blue rectangular background.

3.2 Inserting reinforcement sections

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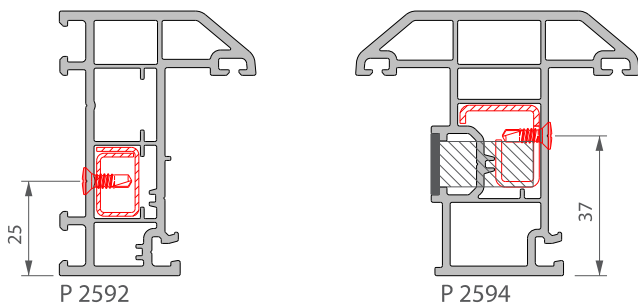
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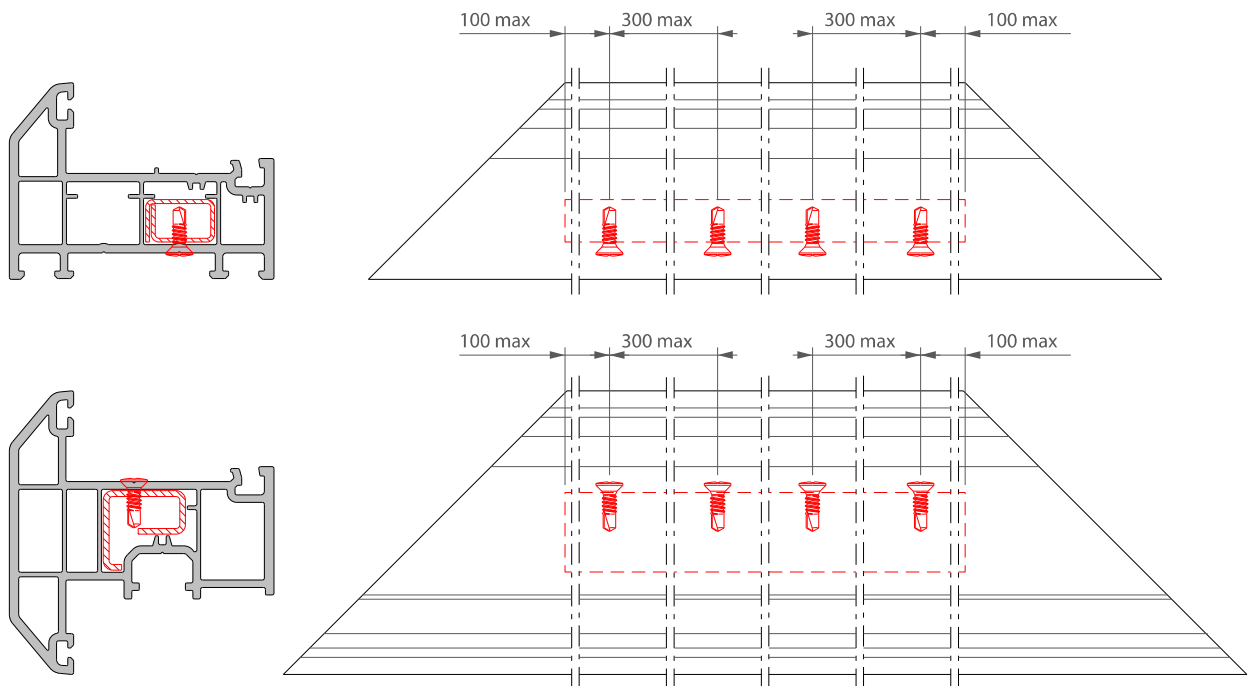
3.2 Inserting reinforcement sections

3.2.1 Standard steel reinforcements

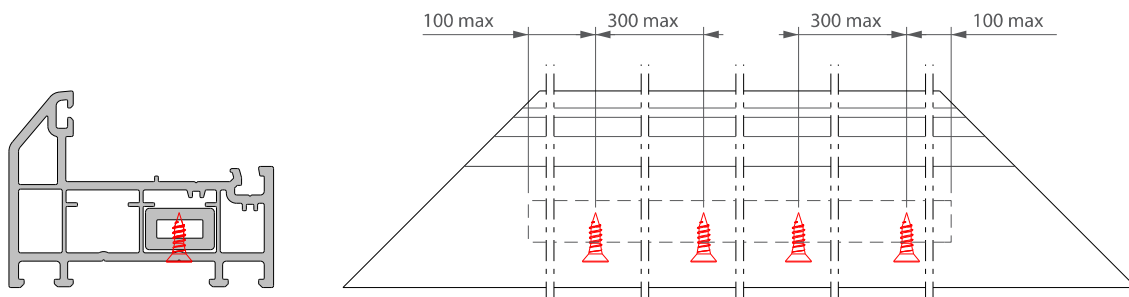


With this screw position, there should not be a conflict between the screw and the gearbox.

Steel reinforcements must be screw fixed to the PVC profile every 30 cm. The first screw must be fixed a maximum of 100mm the end of the reinforcement. Use a torque limiter.























The screw position for fixing TCI profiles is the same as for standard steel reinforcements. Like the fitting of screws for steel reinforcement the device used should be adjusted to avoid using too much or too little torque.



Details of the recommended screw types for fixing both the reinforcement and hardware are shown on the following page.

3.2.2 Screw fixing type guide

Screw type information based on successful BSI testing and therefore must be adhered to if using Deceuninck Kitemark approved test data.

| Steel Reinforced Profile | Screw Type | Application |
|---|-----------------------|---|
|  | RSR 3.9 x 13 Z | Reinforcement retention; casement frame/sash, T&T frame, door frame |
|  | RSR 3.9 x 16 Z | Reinforcement retention; T&T sash, door sash |
|  | SSR 3.9 x 19 Z | Friction stay to frame |
|  | SSR 3.9 x 25 Z | Friction stay to sash |
|  | CSR 3.9 x 25 Z | Espag to sash, keep to frame |
|  | CFG 4.3 x 30 Z | T&T keep to frame |
|  | CFG 4.3 x 25 Z | T&T perimeter gear to sash, door keep to frame, door lock to sash |
|  | CSR 4.8 x 45 Z | T&T hinge, flag or butt hinge to door frame |
|  | CFG 4.3 x 16 Z | Flag hinge to unreinforced region of door sash |
|  | CSR 4.2 x 45 Z | Flag hinge to reinforced region of door sash Available from UK Fasteners T 01242 577077 F 01242 577078 www.ukfasteners.co.uk |
|  | CFG 4.3 x 40 Z | Butt hinge to unreinforced region of door sash |
| Unreinforced Profile | Screw Type | Application |
|  | SFG 4.3 x 16 Z | Friction stay to frame |
|  | SFG 4.3 x 25 Z | Friction stay to sash |
|  | CFG 4.3 x 20 Z | Keep to frame |
|  | CFG 4.3 x 25 Z | Espag to sash |
| TCI reinforced profile | Screw Type | Application |
|  | CFG 4.3 x 16 Z | TCI retention; casement frame/sash, T&T frame, door frame |
|  | CFG 4.3 x 25 Z | Espag to sash |
|  | CFG 4.3 x 30 Z | Espag keep to frame |
|  | SFG 4.3 x 25 Z | Friction stay to frame, friction stay to sash |
|  | CPF 5.0 x 60 Z | Hinge to door outer frame |

Unless stated otherwise all screws available from Rapier Star: **T** 01260 223311 **F** 01260 223399 www.rapierstar.com

Traditional 2500:

3 Fabrication process

The Deceuninck logo, consisting of the word "deceuninck" in white lowercase letters on a blue rectangular background.

3.3 Machining

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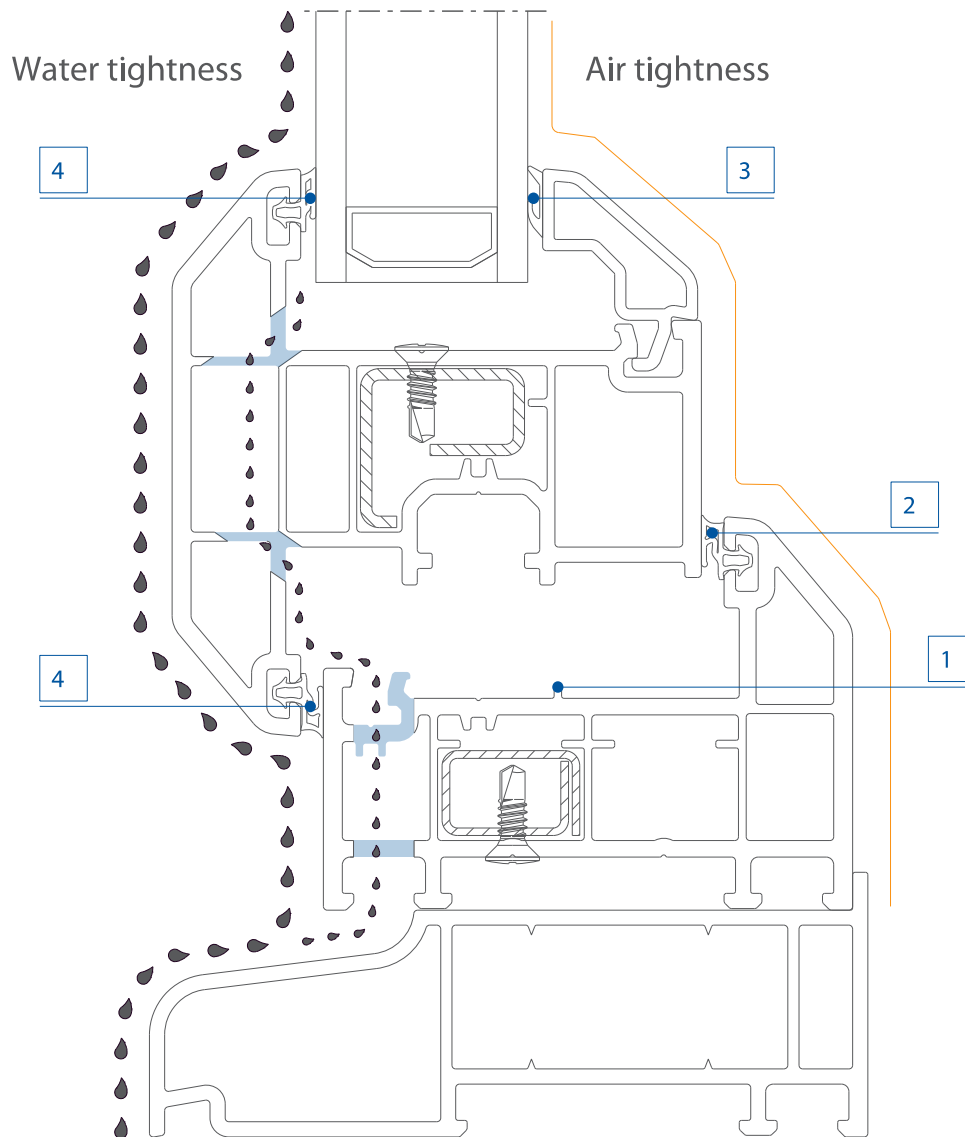
Windows & Doors

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3.3.1 Drainage & decompression principle.

Why?

- The 70mm system window is designed on a 'Pressure Equalized' basis. The correct positioning of decompression and drainage slots is essential to achieve the optimum performance capabilities of the window.
- The central chambers of the profiles are designed to retain any reinforcement required. Care must be taken to ensure that the slots do not puncture and expose the central chamber area.
- Either slots or holes can be used to decompress and drain profiles.
The recommended slot size = 27 x 5mm and the recommended hole size is \varnothing 8mm

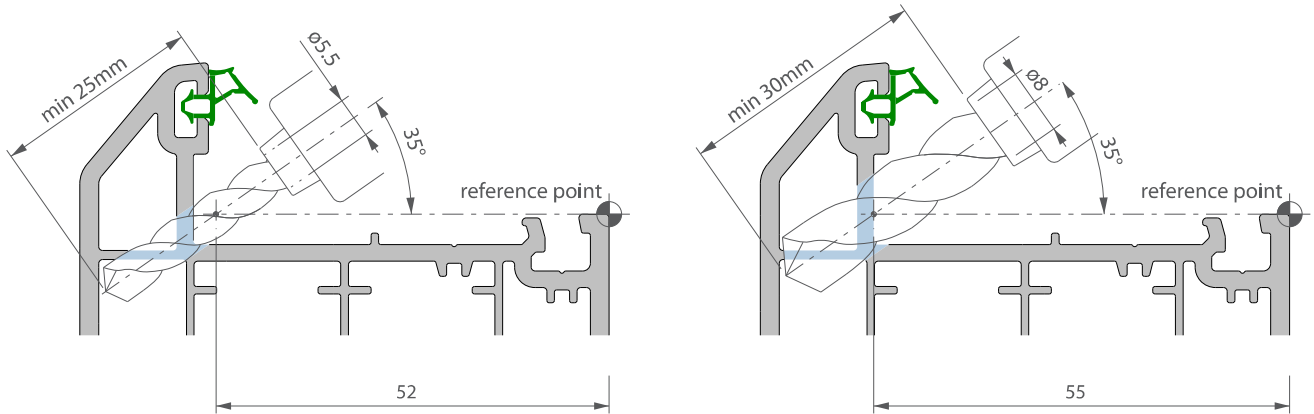


- 1 The central pip designates the two areas used for drainage and hardware. It helps to provide a positive location for hardware positioning and can prevent moisture reaching the dry zone.
- 2 Multifunctional seal on the inner rebate maximises air tightness.
- 3 The induced load on the seal from clamping on the glazing is spread equally across both fins of the seal meaning the glazing is perfectly balanced.
- 4 The linear contact surface of the gasket is increased in order to ensure consistent compression of the window, even with less accurate fabrication tolerances:
 - in function of the outer glazing gasket
 - in function of the outer frame seal
 - = maximised water tightness

Drainage & decompression principle.

Machine settings:

- The optimum setting for cavity drainage is 35°.
- With this standard setting the upper chamber of the glazing rebate is automatically vented. Below you can see how the drainage prep should be set to prevent puncturing the central reinforcement chamber, also to eliminate damaging the gasket.
- Outer chambers require venting in order to avoid heat build up with coloured profiles.



- The mill/drill needs to project a min 25mm to avoid damaging the profile or gasket.
- Ensure that the tip of the 8 mm drill breaks through both the internal webs, especially if set at 30°.

Configuration

Drain hole preparation, per profile section:

Minimum of two holes (out of each corner) per profile (see specific drawings)

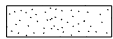
1 Cavity (drainage area):

- slot 27mm long x 5mm wide, 600mm spacing (ctr to ctr)
- or
- 8mm Ø hole, 600mm spacing (ctr to ctr)



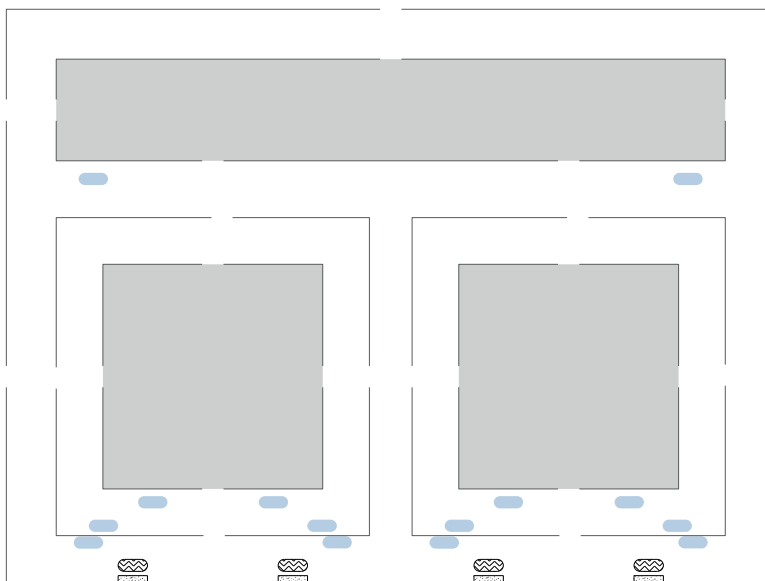
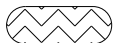
2 Concealed (drainage area):

- slot 27mm long x 5mm wide, 600mm spacing (ctr to ctr)
- or
- or 8mm Ø hole, spacing 600mm (ctr to ctr)

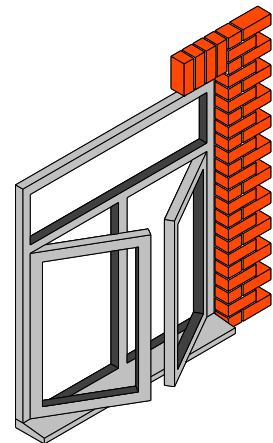


3 Face (drainage area):

- slot 27mm long x 5mm wide, 600mm spacing (ctr to ctr)
- or
- or 8mm Ø hole, spacing 600mm (ctr to ctr)

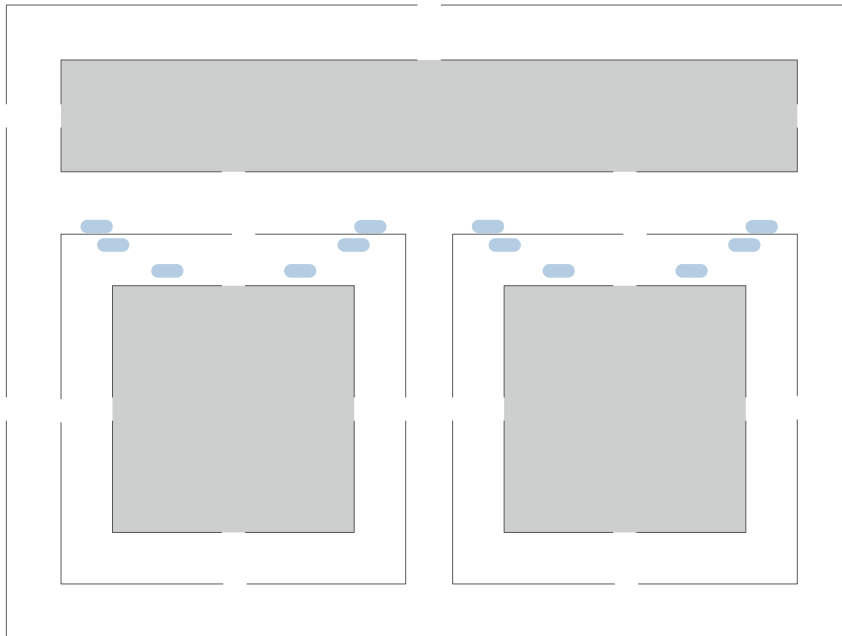


Typical drainage slot positions

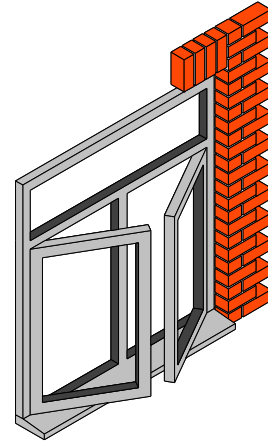


Drainage & decompression principle.

- Decompression preparation, per profile section:
Minimum of two holes
- Cavity (decompression area):
 - slot 27mm long x 5mm wide
 - or
 - 8mm Ø hole

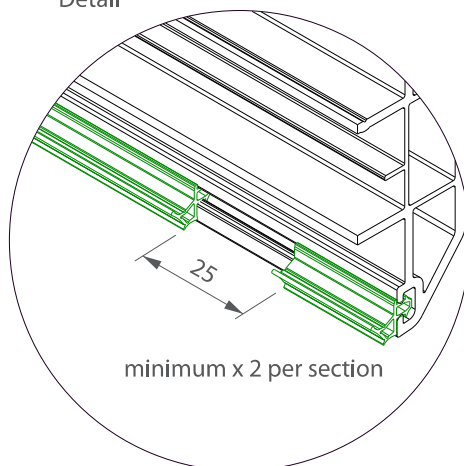


Typical decompression slot positions



- For extreme situations the decompression slots can be replaced by partially removing 25mm of the external gasket. The position of this prep should be adjacent to each of the drainage slots on the bottom of each frame.

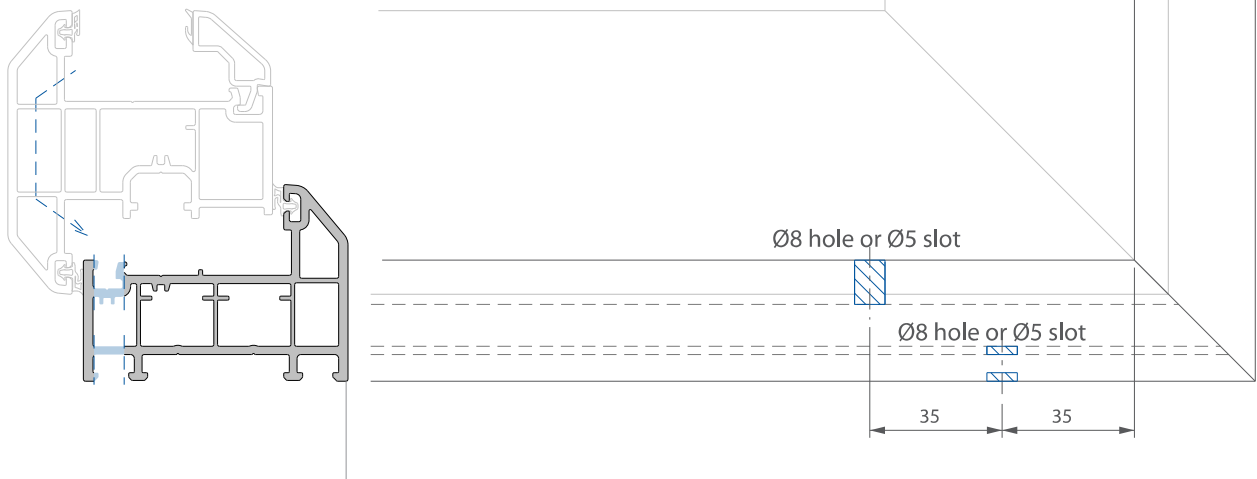
Detail



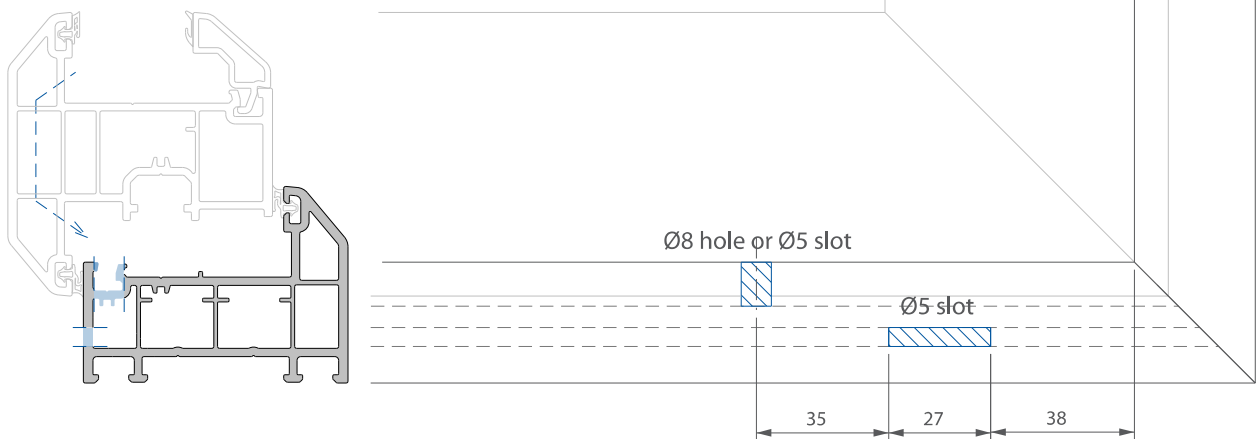
Drainage principle.

Frame detail:

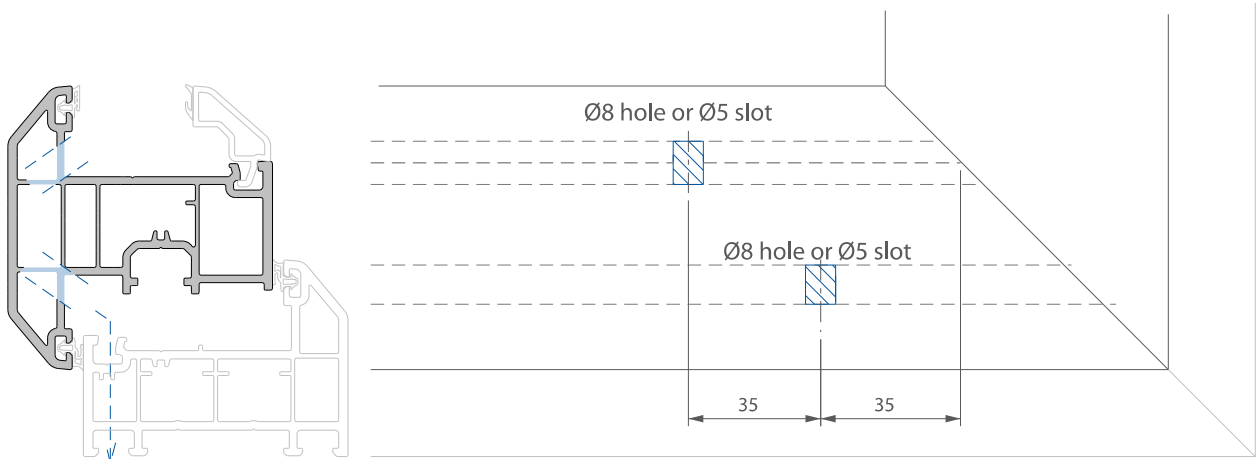
Option 1: concealed



Option 2: face

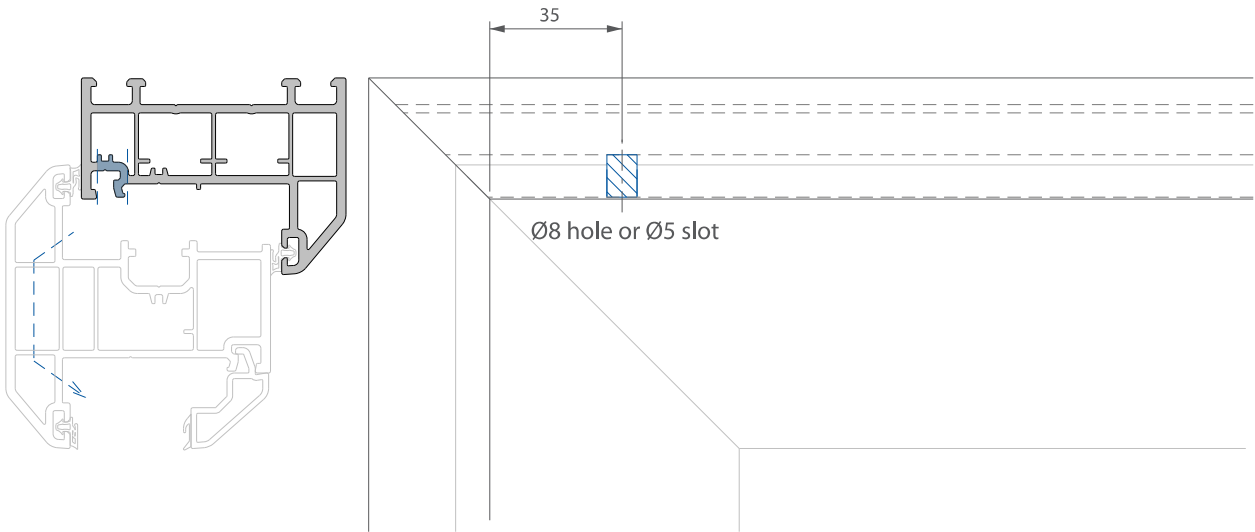


Sash detail:

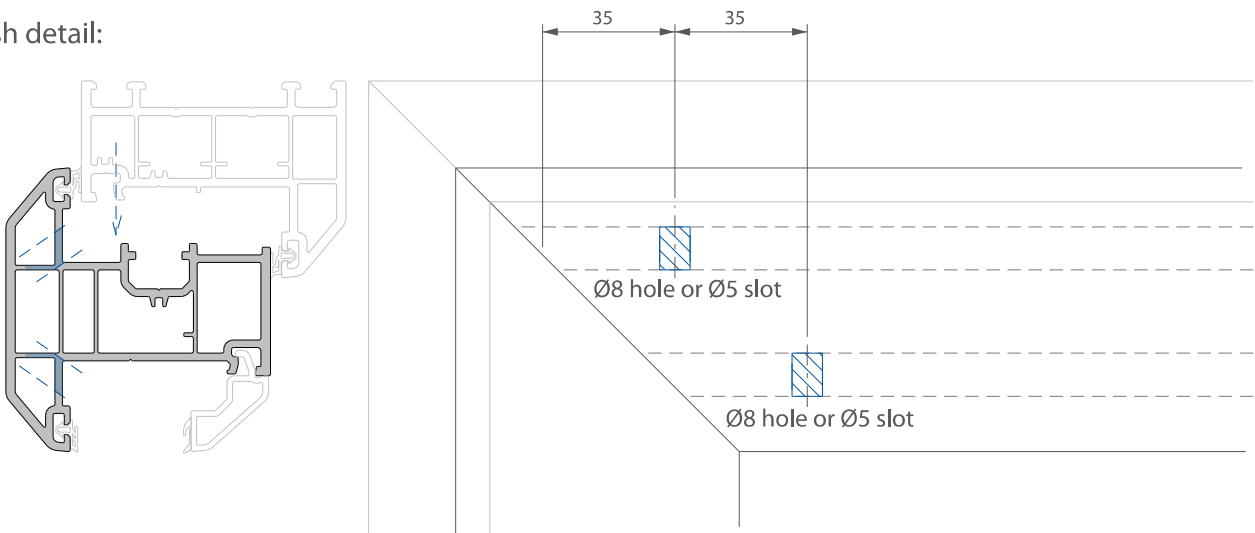


Decompression principle.

Frame detail:



Sash detail:

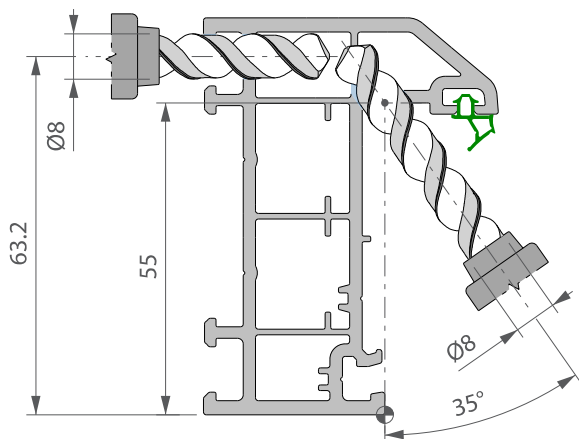


P 2592 - Ø8

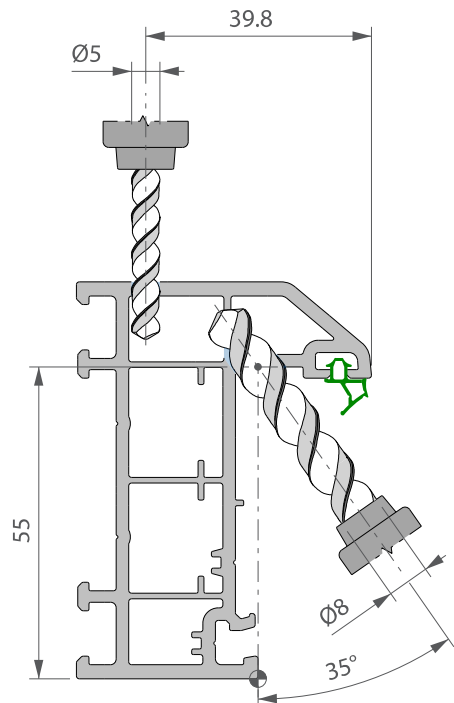
DRAINAGE & DECOMPRESSION
Frame 52 mm

Drilling 8 mm

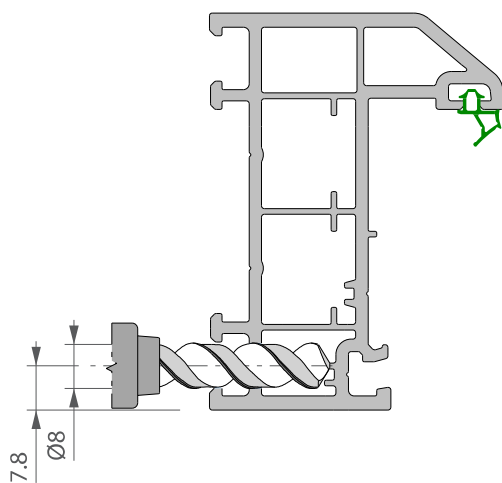
DRAINAGE
Concealed:



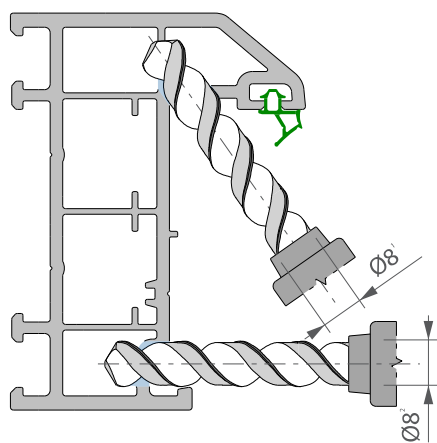
DRAINAGE
Face:



DRAINAGE
Externally beaded:



DECOMPRESSION
'Inward opener' / 'Outward opener:



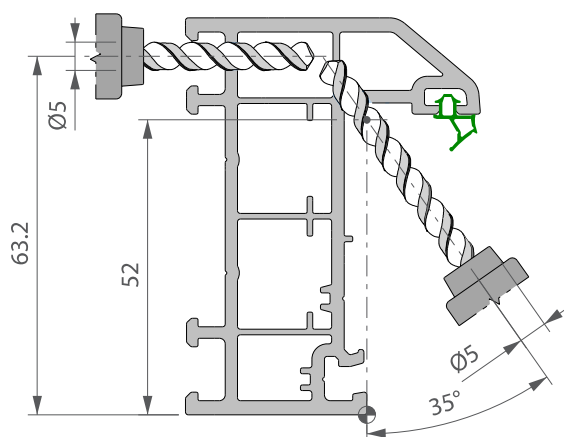
P 2532 - Ø5

DRAINAGE & DECOMPRESSION
Frame 52 mm

Milling 5 x 27 mm

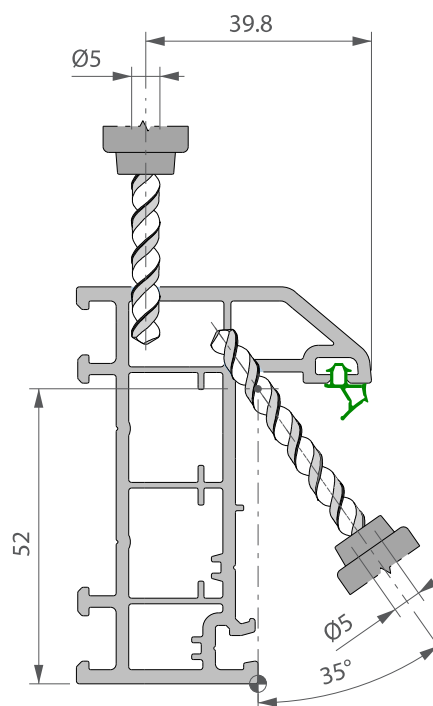
DRAINAGE

Concealed:



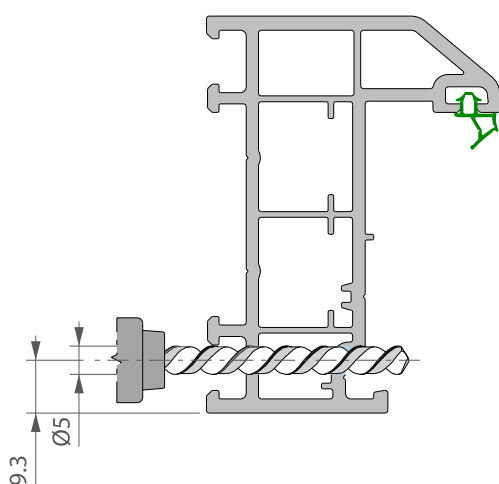
DRAINAGE

Face:



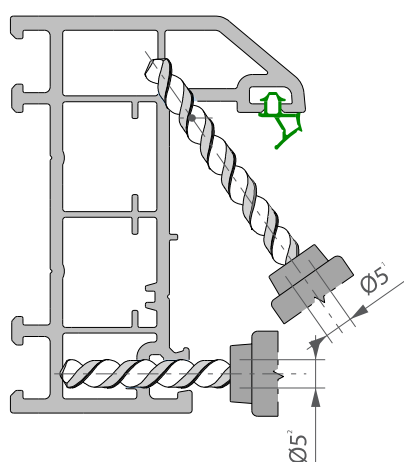
DRAINAGE

Externally beaded:



DECOMPRESSION

Inward opener / Outward opener:



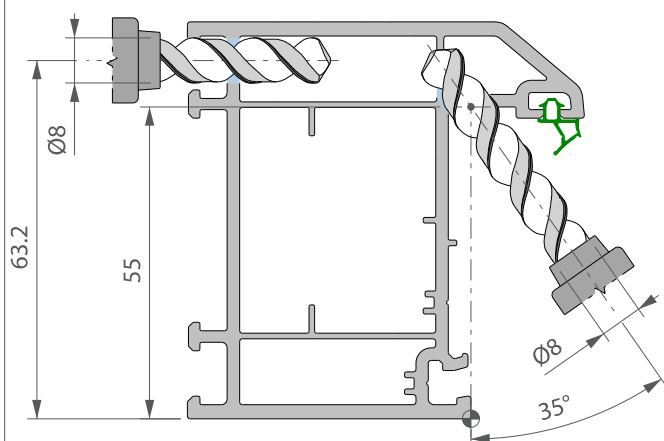
P 2533 - Ø8

DRAINAGE & DECOMPRESSION
Frame 70 mm

Drilling 8 mm

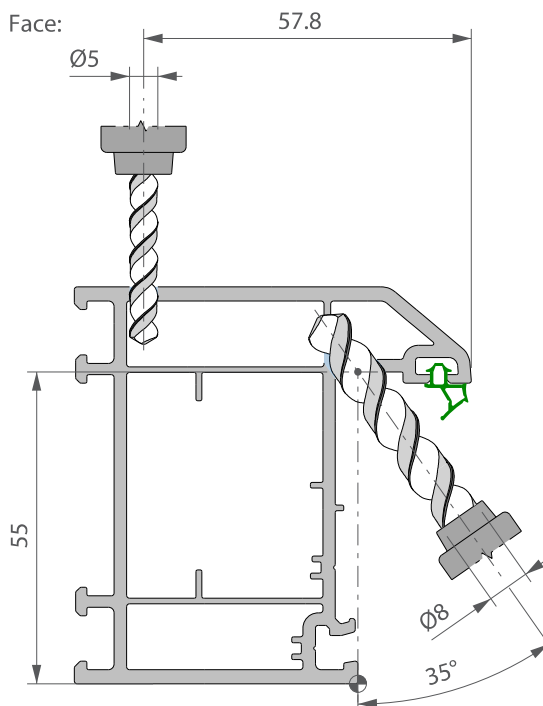
DRAINAGE

Concealed:



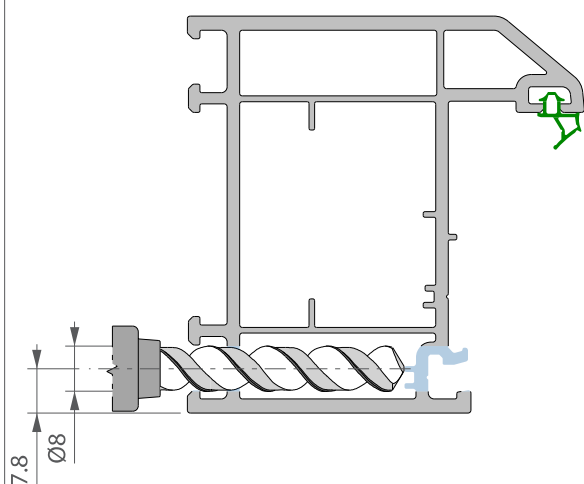
DRAINAGE

Face:



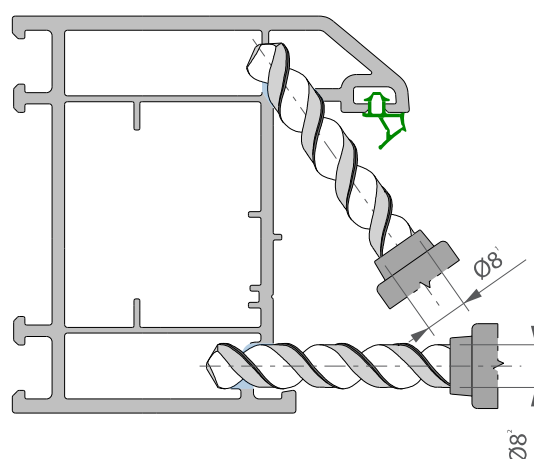
DRAINAGE

Externally beaded:



DECOMPRESSION

Inward opener / Outward opener:



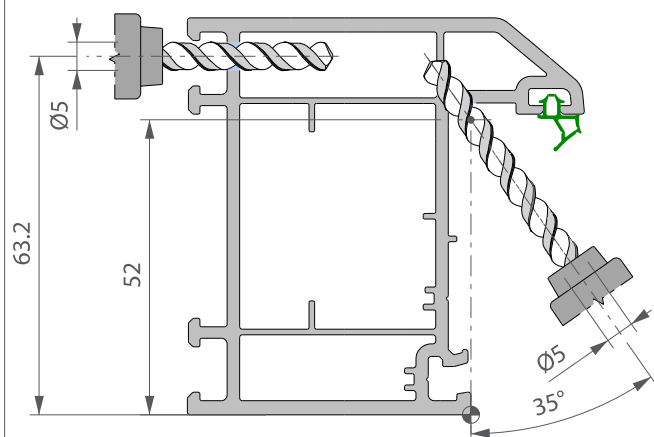
P 2533 - Ø5

DRAINAGE & DECOMPRESSION
Frame 70 mm

Milling 5 x 27 mm

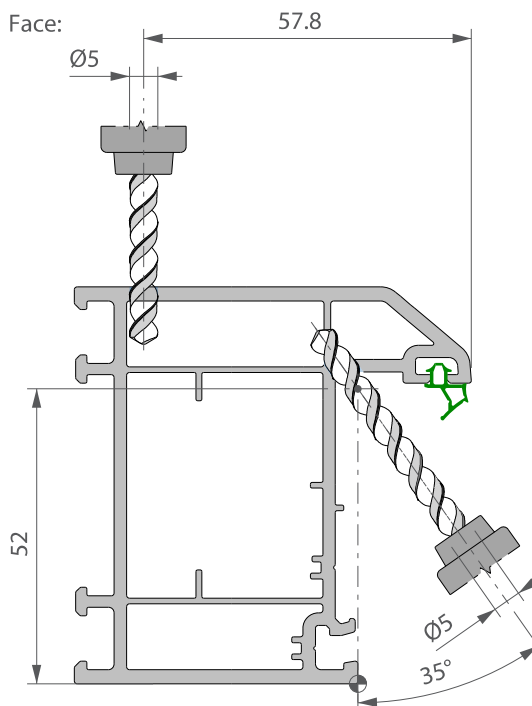
DRAINAGE

Concealed:



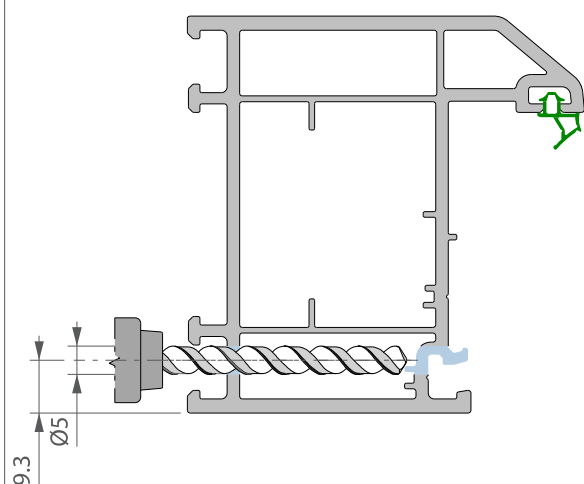
DRAINAGE

Face:



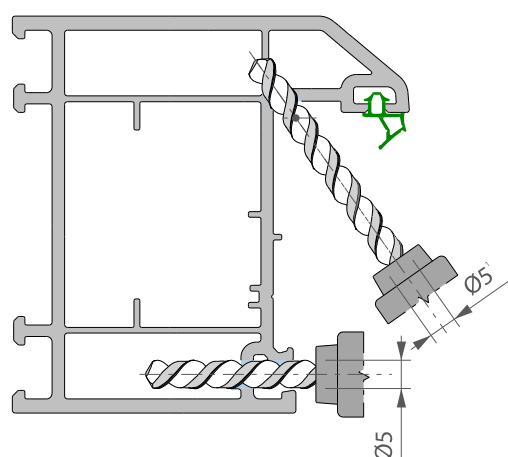
DRAINAGE

Externally beaded:



DECOMPRESSION

Inward opener / Outward opener:

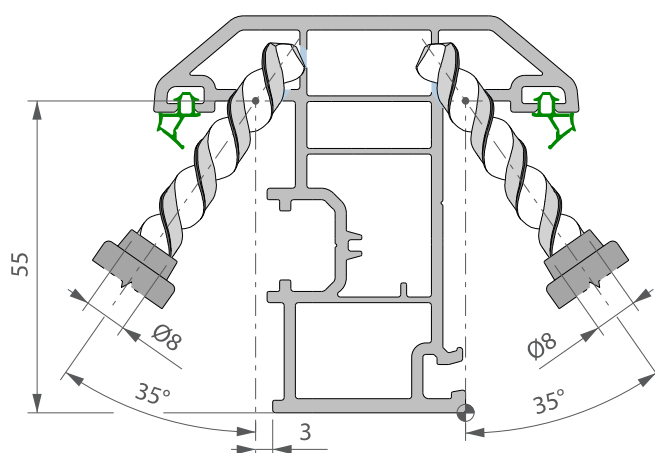


P 2594 - Ø8
P 2594 - Ø5

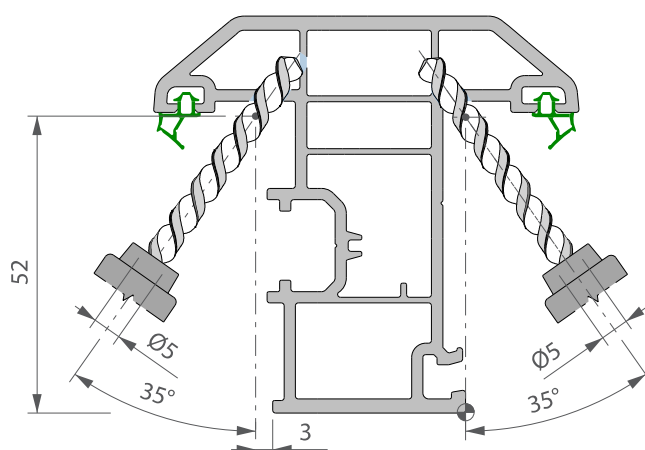
DRAINAGE & DECOMPRESSION
 Sash 75 mm

Drilling 8 mm/Milling 5 x 27 mm

Ø8 hole



Ø5 slot

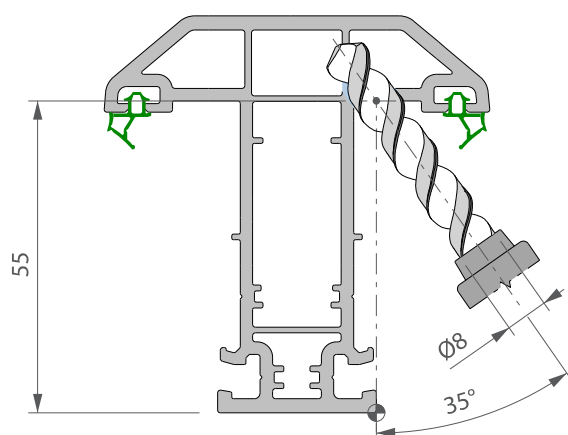


P 2535 - Ø8
P 2535 - Ø5

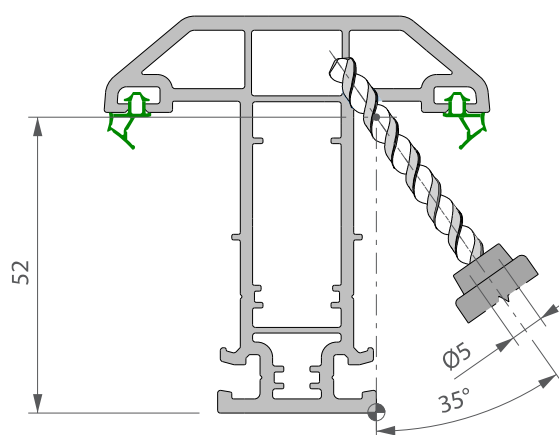
DRAINAGE & DECOMPRESSION
Transom 68 mm

Drilling 8 mm/Milling 5 x 27 mm

Ø8 hole



Ø5 slot

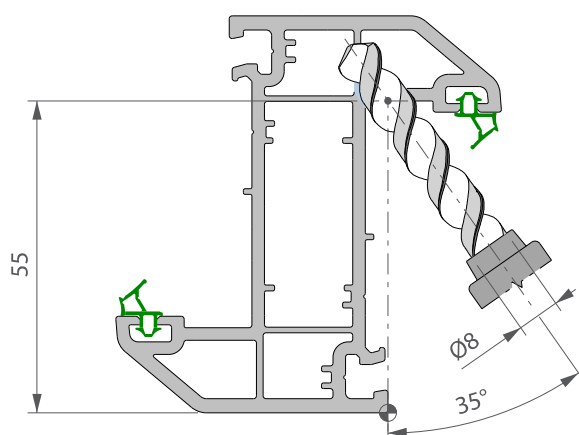


P 2536 - Ø8
P 2536 - Ø5

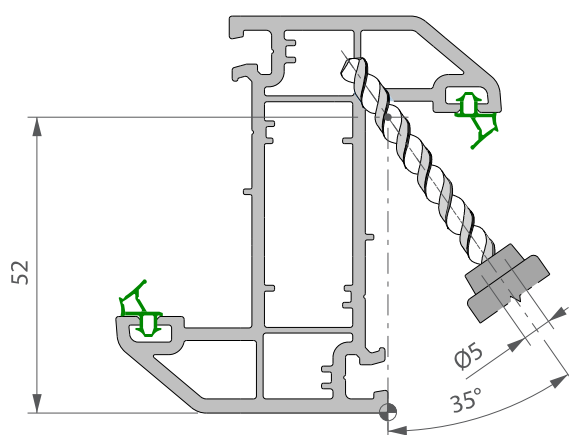
DRAINAGE & DECOMPRESSION
Transom 68 mm

Drilling 8 mm/Milling 5 x 27 mm

Ø8 hole



Ø5 slot

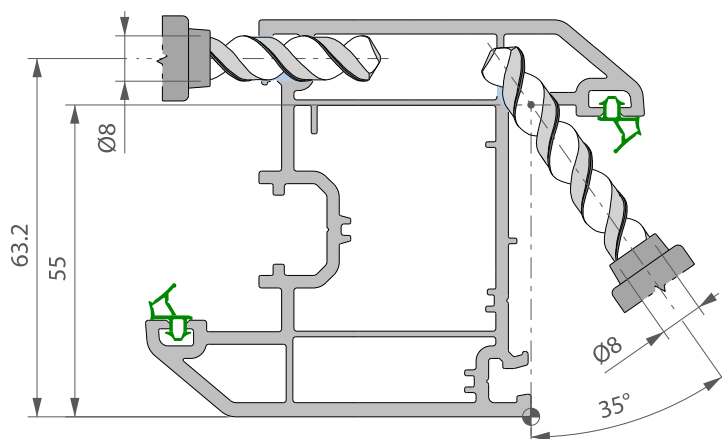


P 2537 - Ø8
P 2537 - Ø5

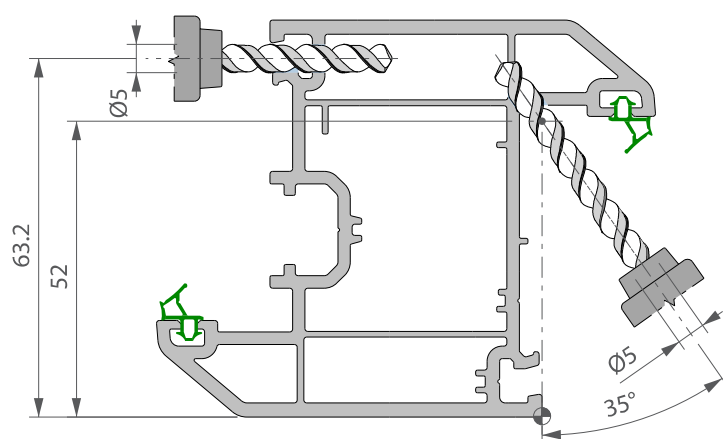
DRAINAGE & DECOMPRESSION
 Sash 88 mm

Drilling 8 mm/Milling 5 x 27 mm

Ø8 hole



Ø5 slot

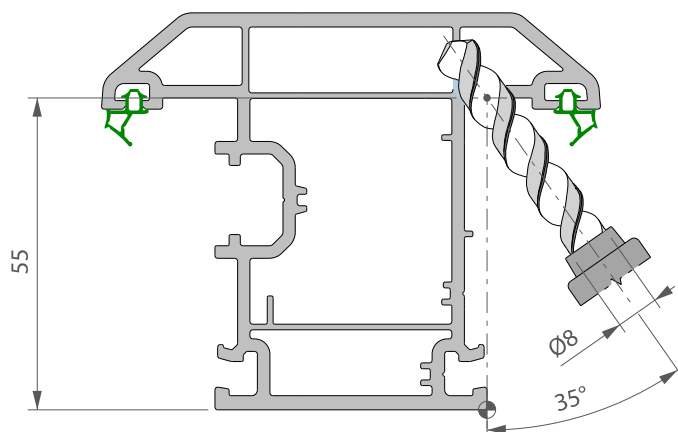


P 2538 - Ø8
P 2538 - Ø5

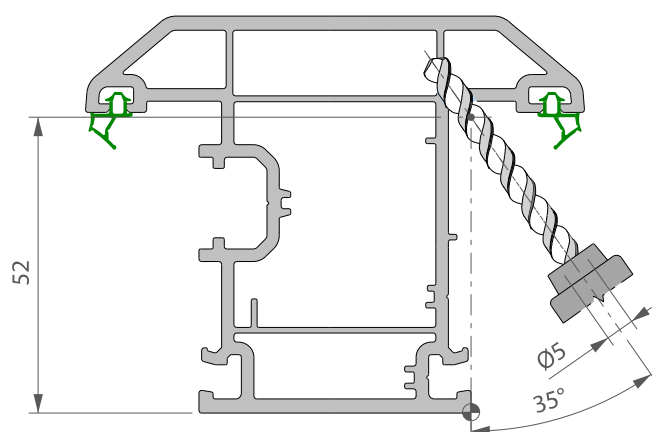
DRAINAGE & DECOMPRESSION
Transom 88 mm

Drilling 8 mm/Milling 5 x 27 mm

Ø8 hole



Ø5 slot

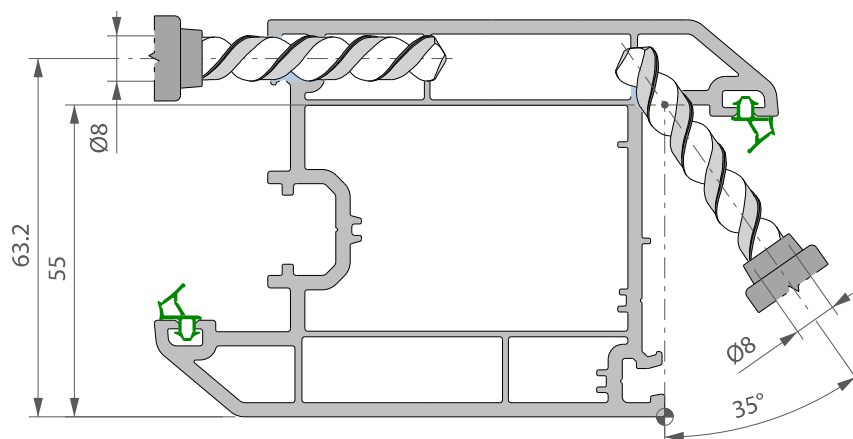


P 2530 - Ø8
P 2530 - Ø5

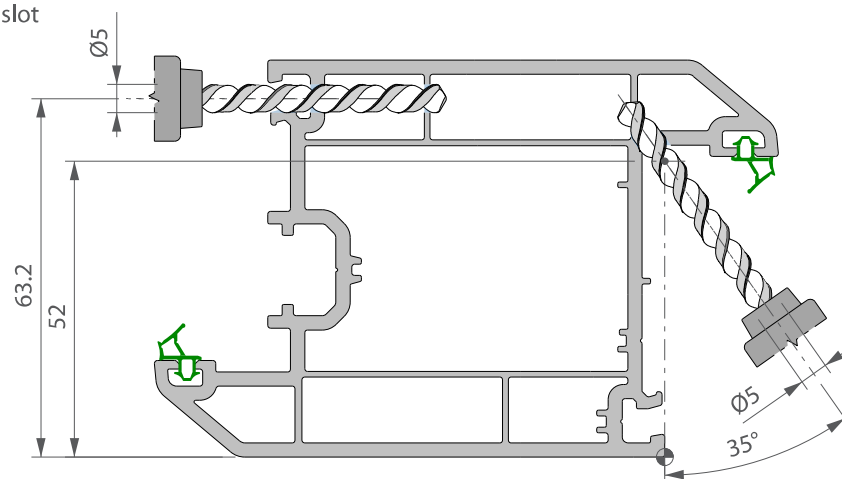
DRAINAGE & DECOMPRESSION
 Sash 110 mm

Drilling 8 mm/Milling 5 x 27mm

Ø8 hole



Ø5 slot

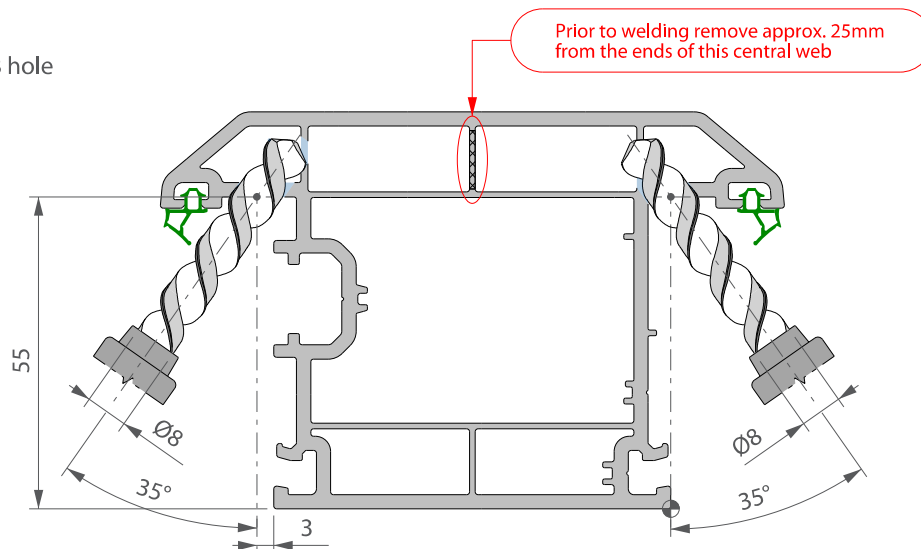


P 2531 - Ø8
P 2531 - Ø5

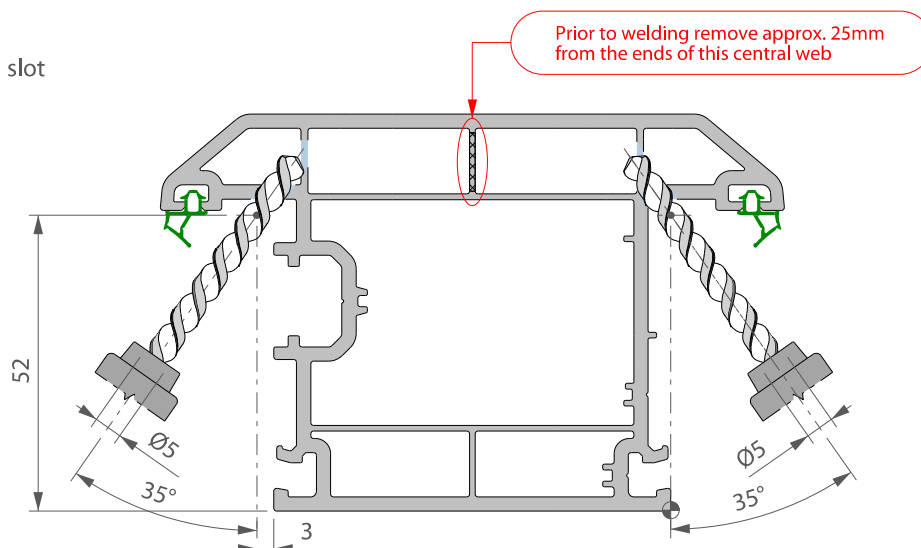
DRAINAGE & DECOMPRESSION
 Sash 110 mm

Drilling 8 mm/Milling 5 x 27mm

Ø8 hole



Ø5 slot



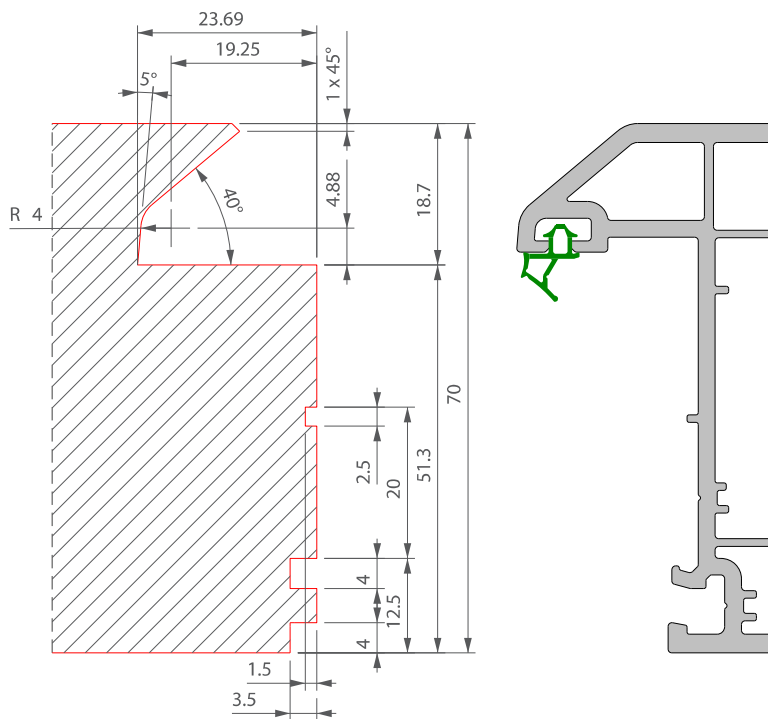
3.3.2 Ventilation

Processing coloured profiles:

- Dark coloured profiles must be reinforced with steel, this is due to dark colours achieving higher temperatures due to solar radiation.
 - Any internal chamber exposed to solar heat and sealed, should be vented, this will then have the effect of releasing any air pressure that may have built up within the internal chambers, thereby reducing the possibility of profile deformation. As a general guide, with the standard drainage provision you achieve this. For the remaining unvented chambers a 5 mm to 8 mm hole is sufficient (same as drainage/decompression).
 - The reinforcement used to reinforce dark coloured profile should only be those specified within this manufacturing guide, this stipulation is irrelevant of the size of product.
- Further advice/recommendations for working with non-white profile can be found in the Deceuninck manufacturing guideline supplement **Additional Guidelines for the Manufacture and Installation of non-white Windows and Doors**. Copies can be obtained by contacting the Deceuninck Technical Department.

3.3.6 End milling: P 2535, 2531

applies to mechanical joint; P 2558, 2559, 2837



Traditional 2500:

3 Fabrication process

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3.4 Frame assembly

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Windows & Doors

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3.4.1 Welding

A. Importance of the welding process

The joining of the corners is one of the most critical operations when manufacturing windows and doors. This takes place in the welding process, in which a number of parameters influence the quality. A good weld is essential for the strength of the frame and should resist minimal forces. Moreover, the welding is also important for obtaining the correct frame dimensions.

B. The welding cycle

After the correct positioning and clamping (clamping pressure) of the profiles, both are pushed against the welding plate (melting pressure) which is set to a particular temperature. Firstly, a quantity of material is melted due to the heat transfer and the movement (melting path) of the welding heads. Because the movement is mechanically restricted, heat transfer will only take place during a fixed time (heating time). The welding plate is then removed (interphase), after which the profiles are pressed together with a certain force (assembly pressure) and over a limited distance (assembly path). The profiles are then kept in this position for a fixed time (assembly time).

C. Requirements before the welding

The profiles must be conditioned for at least 24 hours until the temperature reaches at least 15°C over the entire section. Whilst in storage the profile should be protected against deformation, this means that the profiles must be stored horizontally, making sure that the distance between the points of support is not more than 1 meter. The packaging must be opened (e.g. at the front), or completely removed to let any condensation evaporate. Correct cutting dimensions require special attention when sawing. The saw blade needs to have a sufficient number of teeth and be sharp enough, to which the rotational speed and the profile feed must be adapted. The welding surface must be free from damage and any impurities, it's imperative to maintain a clean welding surface caused by reinforcement grease etc.

D. The welding machine

We can distinguish 2 principles depending on how the tables are moving towards each other. When the motion is perpendicular to the mirror surface this is known as parallel motion, which is mostly the case for one head welding machines. When using multi-head welding machines the movement is at a 45° angle (to the mirror surface), this is known as diagonal motion. Most machines are equipped with adjustable restrictor knives in the clamping shoes. The distance of the knives is also critical for weld quality. The optimum distance can vary between 1 and 2 mm in the end position. If the knives are heated, it is very important that the temperature does not exceed 40° C.

E. The welding process, the welding parameters

E1. Positioning

Both profiles must be positioned correctly in the machine, this means the profiles need to be level and located firmly against the support blocks. Adapted support blocks are required in order to avoid deformation during the clamping process. The pressure of the clamping shoes onto the profile needs to be sufficiently high to prevent movement.

E2. The melting

Welding plates are used to heat the profiles. The welding plate, equipped with a resistor is coated with a teflon film, this prevents the profiles from sticking to the welding plate when contact is made. The resistor must be attached in such a way that the heat build-up is spread equally over the entire surface, and that a minimum power of 2 W/cm² one-sided welding surface is guaranteed.

An initial temperature of 240-245 °C is required for the material supplied. We pass into the melting phase when the profiles are pushed against the mirror. By controlling the melting pressure we create a melting time of 10 to 15 seconds. This is the time required by the machine to reach the end of the movement, the so-called 'melting path'. This limited movement is a machine setting.

E3. The heating

The material needs to be heated sufficiently to be sure of a solid joint. In order for this to be achieved the profiles are pushed against the plates for 20 seconds. There is no further movement in this stage.

E4. The repositioning

Once the profiles have been heated the weld plate completes its cycle and is released. The stage in which this takes place must be as short as possible. However, if we interrupt the cycle at that time we can monitor the so-called 'welding interval'. During this interval the welding surfaces can be observed to provide information concerning the heat transfer.

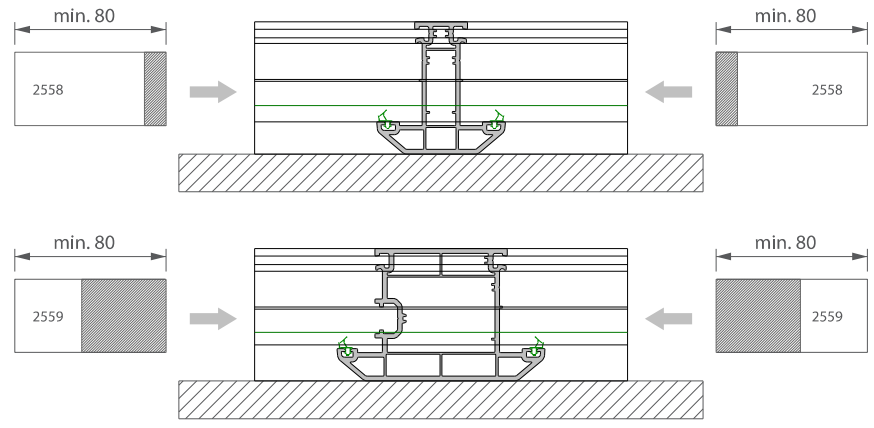
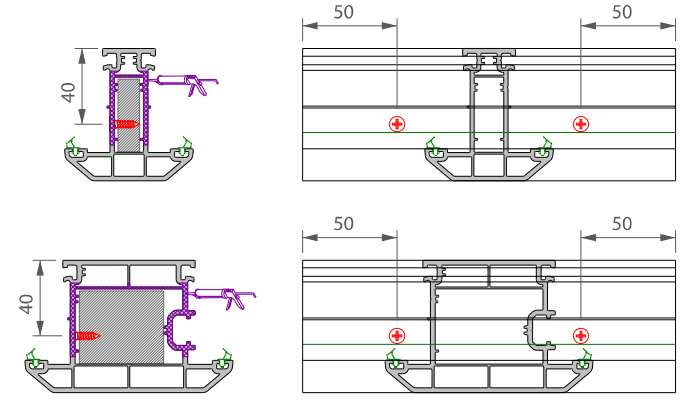
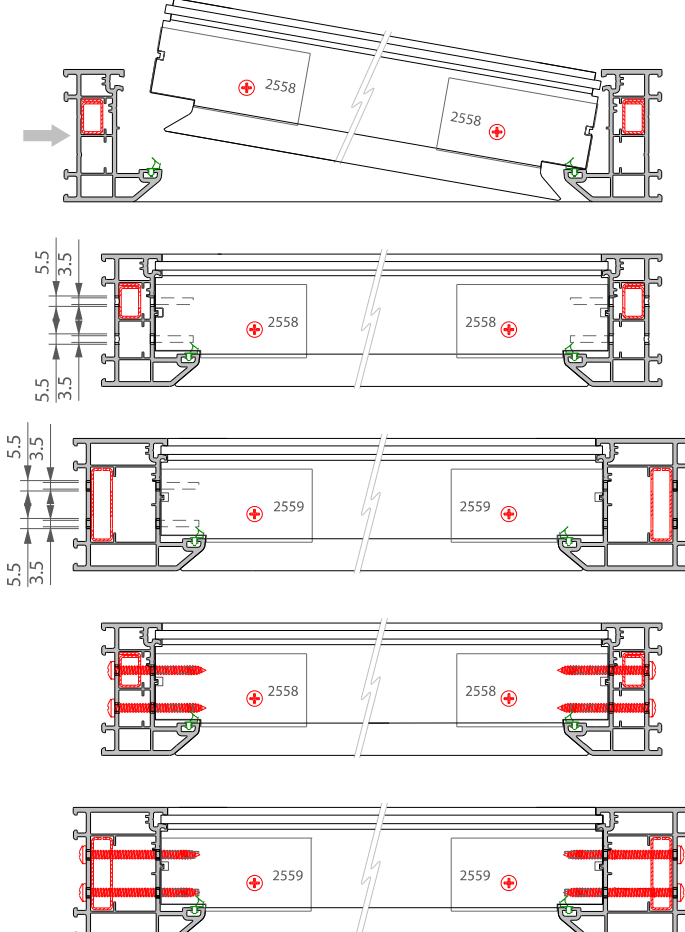
E5. The assembly and cooling

The profiles must be pushed together to form the weld. This is another movement that takes place which can be controlled by the machine setting. The profiles are kept in this position during at least 30 seconds, this period is called the assembly or cooling phase.

E6. Overview Welding parameters

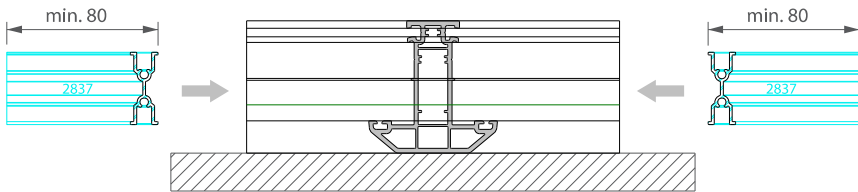
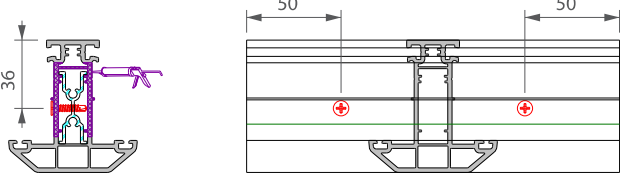

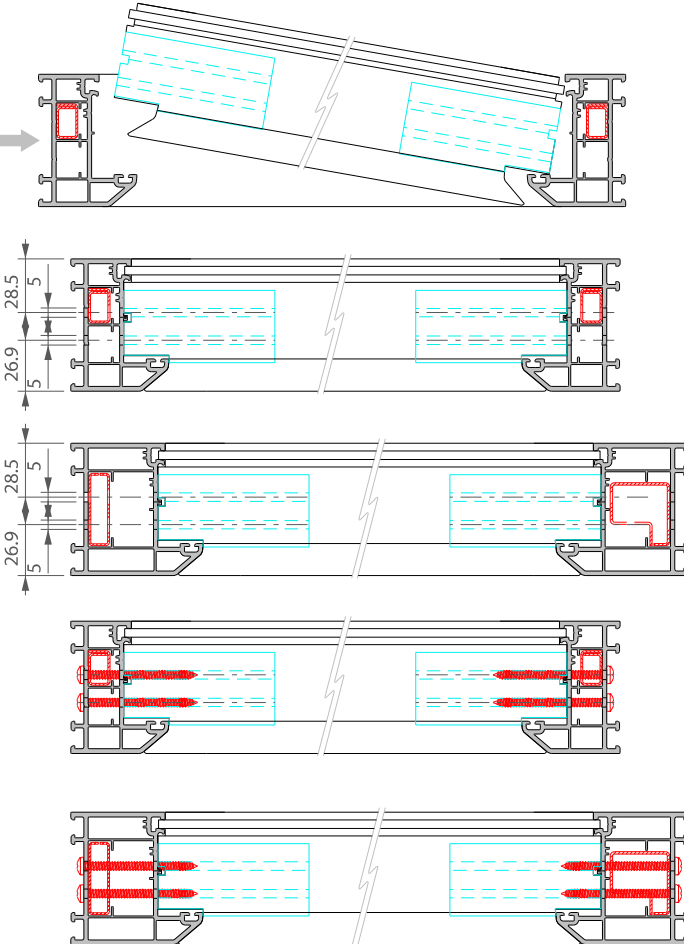
| | |
|---------------------|--|
| Temperature | |
| Mirror temperature: | - 240 to 245°C |
| Pressure | |
| Clamping pressure: | <ul style="list-style-type: none">- Minimum to prevent any movement of the profiles- Maximum so that a deformation does not occur- In general this pressure will vary between 4 and 6 bar depending on the machine |
| Melting pressure: | <ul style="list-style-type: none">- Adjust to a melting time of between 10 and 12 secs |
| Assembly pressure: | <ul style="list-style-type: none">- Regulate so that the pressure in th weld reaches 0.85 N/mm² (or between 0.5 and 1.4 N/mm²) |
| Time | |
| Melting time: | - 10 to 15 seconds |
| Heating time: | - 20 seconds |
| Cooling time: | - 30 seconds min |
| Interval: | - 2 seconds max |
| Travel | |
| Melting travel: | - $\frac{2}{3}$ total travel |
| Assembly travel: | - $\frac{1}{3}$ total travel |

3.4.3 Mechanical assembly P 2558 / P 2559

| | |
|--|--|
| <p>Step 1:</p> <ul style="list-style-type: none"> - Position cut end of PE block 2558/2559 flush with the end of the transom |  |
| <p>Step 2:</p> <ul style="list-style-type: none"> - Secure the mechanical joint into position - Mill the transom with the 2558/2559 Inserted - Silicone both ends of the milled transom |  |
| <p>Step 3:</p> <ul style="list-style-type: none"> - Position transom in the frame. - Drill Ø 3.5 pilot hole into 2558/2559 - Drill frame & reinforcement with Ø 5.5 hole - Secure 2558/2559 mechanical joint as shown |  |

We recommended that all exposed joints are sealed on site with silicone to protect against the ingress of water.

Mechanical assembly P 2837

| | |
|--|---|
| <p>Step 1:</p> <ul style="list-style-type: none"> - Position cut end of screw port aluminium flush with the end of the transom |  |
| <p>Step 2:</p> <ul style="list-style-type: none"> - Secure the screw port aluminium with the appropriate screws - Mill the transom with the 2837 inserted - Silicone both ends of the milled transom |  |
| <p>Step 3:</p> <ul style="list-style-type: none"> - Using jig 2897 drill a Ø 5.0 hole through the frame & reinforcement  <ul style="list-style-type: none"> - Position transom in the frame - Secure the 2837 mechanical joint as shown |  |

We recommended that all exposed joints are sealed on site with silicone to protect against the ingress of water.

Traditional 2500:

3 Fabrication process

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3.5 Hardware

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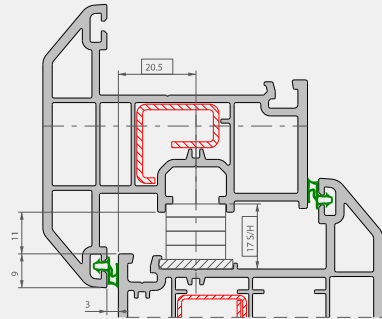
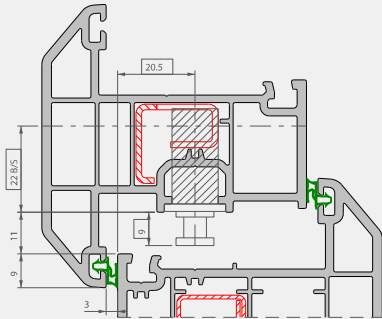
Windows & Doors

www.deceuninck.co.uk

3.5 Hardware

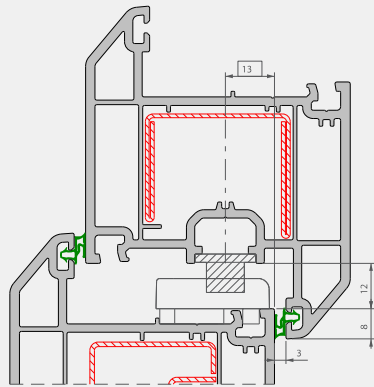
3.5.1 Concept

Casement



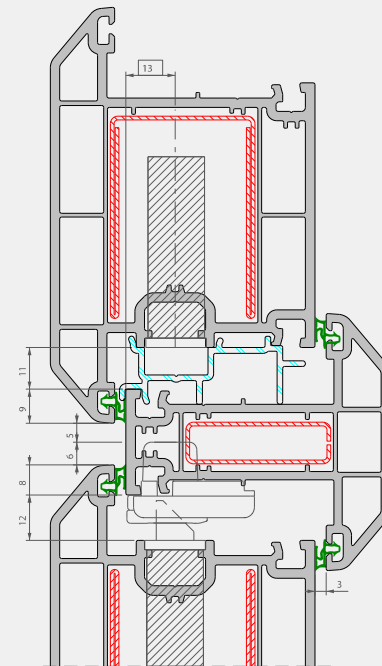
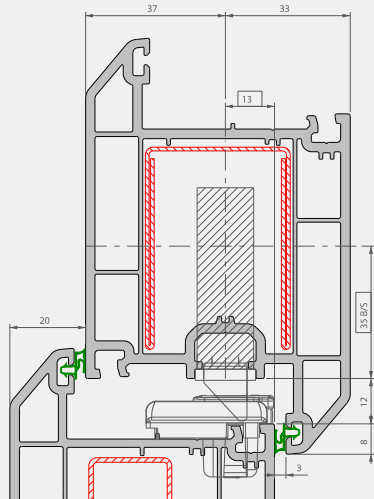
40mm spindle length

Tilt & Turn



40mm spindle length, 8mm roller cam height, 9mm mushroom height

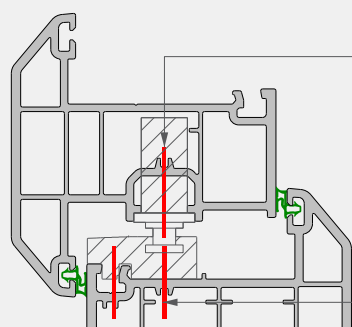
Door



Cylinder 45/50

3.5.2 Hardware fixing

Casement



Steel Reinforced
CSR 3.9 x 25 Z

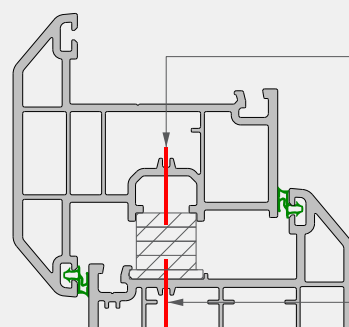
Unreinforced
CFG 4.3 x 25 Z

TCI
CFG 4.3 x 25 Z

Steel Reinforced
CSR 3.9 x 30 Z

Unreinforced
CFG 4.3 x 20 Z

TCI
CFG 4.3 x 30 Z



Steel Reinforced
SSR 3.9 x 25 Z

Unreinforced
SFG 4.3 x 25 Z

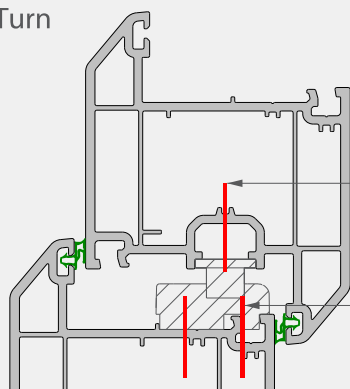
TCI
SFG 4.3 x 25 Z

Steel Reinforced
SSR 3.9 x 19 Z

Unreinforced
SFG 4.3 x 16 Z

TCI
SFG 4.3 x 25 Z

Tilt & Turn



Steel Reinforced
CFG 4.3 x 25 Z

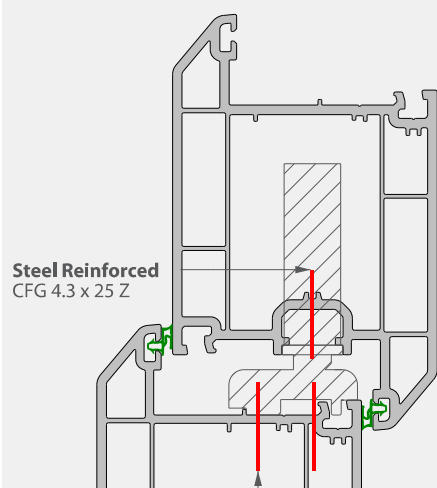
Steel Reinforced
CFG 4.3 x 30 Z



Note

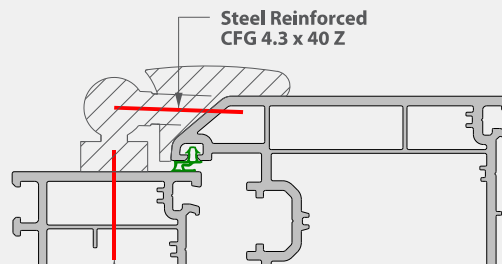
Screw type information based on successful BSI testing and therefore must be adhered to if using Deceuninck Kitemark approved test data.

Door



Steel Reinforced
CFG 4.3 x 25 Z

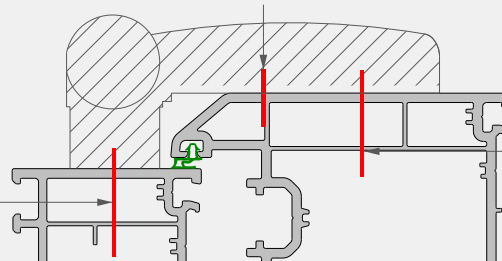
Steel Reinforced
CFG 4.3 x 25 Z



Steel Reinforced
CFG 4.3 x 40 Z

Steel Reinforced
CSR 4.8 x 45 Z

TCI
CPF 5.0 x 60 Z



Steel Reinforced
CFG 4.3 x 16 Z

Steel Reinforced
CSR 4.8 x 45 Z

TCI
CPF 5.0 x 60 Z

Steel Reinforced
CSR 4.2 x 45 Z

Available from
UK Fasteners

Unless stated otherwise all screws available from Rapier Star: **T** 01260 223311 **F** 01260 223399 www.rapierstar.com



3.5.3 Approved hardware

Approved hardware: casement

| | |
|---------|---|
| Lock: | Yale shootbolt espag, Maco M-SPAG, Kenricks Excalibur espag Yale Encloser twin cam espag, Maco R.A.I.L, Roto TSL, Kenricks Easy-Fit espag |
| Hinge: | Yale F2, Defender, Defender Plus (900 wide side hung), Cotswold HS Sinidex, Nico |
| Handle: | Greenteq Alpha, Fab & Fix Connoisseur |
| Other: | Greenteq hinge protector, GT Stay Guard, Fab & Fix Q318 restrictor P 2503 Sash seal, GT Bow Constrictor (optional for all except 1200 x 1500 top hung) GT Securi-clip for PAS24 only (optional only when glass size is increased) |

Approved hardware: tilt & turn

| | |
|-----------------|--|
| Perimeter gear: | Maco Multi-Matic (concealed or face-fit) Siegenia Favorit (concealed or face-fit) Roto Designo (concealed) |
| Handle: | Greenteq Alpha, Fab & Fix Sensei GT Securi-clip for PAS24 only (optional only when glass size is increased) |

Approved hardware: single and double doors

| | |
|---------|---|
| Lock: | Yale Mantis 3, Maco C-TS |
| Hinge: | Greenteq hybrid, SFS Dynamic 2D |
| Handle: | Greenteq Alpha, Fab & Fix Ashford/Balmoral |
| Other: | Maco Guardian 3* cylinder, Yale 3* cylinder, Ultion 3* cylinder AM3-70, AM5EX-70 thresholds Greenteq Omega letter plate, Fab & Fix Nu-Mail letter plate GT Securi-clip for PAS24 only (optional only when glass size is increased) |

Kitemark approval achieved on both double and triple glazed casement products.
Triple glazed casement sashes should adopt steel reinforcement and heavy duty hinges.

Hardware suppliers

BS 7412/PAS24 certified hardware featured on the following pages is available from:



Yale shootbolt espag
Yale Encloser
Yale Manits 3
Yale Defender
Yale F2
Yale Superior
Maco RAIL
Maco M-SPAG
Maco Multi Matic
Maco Multi Trend
Maco C-TS
Maco Guardian
Roto TSL
Roto Designo
greenteQ

VBH (GB) Ltd
VBH House
Bailey Drive
Gillingham Business Park
Gillingham
Kent
ME8 0WG
T. +44 1634 263 300
F. +44 1634 263 504

VBH (GB) Ltd
Unit 13 Hawbank Road
College Milton
East Kilbride
Glasgow
G74 5EG
T. +44 1355 263 326
F. +44 1355 571 771

VBH (GB) Ltd
Unit J8 Fulford Drive
Minworth Trade Park
Minworth
Sutton Coldfield
West Midlands
B76 1DJ
T. +44 1675 466 411
F. +44 1675 466 300

VBH (GB) Ltd
Unit K28
Ashmount Business Park
Upper Fforest Way
Swansea
SA6 8QR
T. +44 1792 794 566
F. +44 1792 701385



Securi-Clip
Stay Gaurd

GT Window Products
Unit 4203
Oakfield Close
Tewkesbury Business Park
Tewkesbury
Gloucestershire
GL20 8PF
T. +44 1684 290944
F. +44 1684 276482



SIEGENIA-AUBI Ltd
Richardson Way
Cross Point
Coventry
CV2 2TA
T. +44 2476 622000
F. +44 2476 622364



SFS Intec Ltd
153 Kirkstall Road
Leeds
LS4 2AT
T. +44 113 2085 500
F. +44 113 2085 519



Cotswold Architectural Products
Manor Park Industrial Estate
Manor Rd
Swindon Village
Cheltenham
GL51 9SQ
T +44 1242 233 993



Connoisseur
Aficionado
Ashford
Balmoral
Nu-mail
Q318

Fab & Fix
Unit 4
The Moorings Business Park
Channel Way
Exhall
Coventry
CV6 6RH
T. +44 2476 585 785
F. +44 2476 585 786



A. Kenrick & Sons
Union Street
Kenrick Way
West Bromwich
B70 6DB
T +44 121 500 3266

Yale window hinge



Side hung



| | Opening Angle (+/- 2.5°) | Hinge Size (in/mm) | Max Vent Weight (kg/lb) | Min Vent Width (mm/in) | Max Vent Width (mm/in) |
|--------------------|--------------------------|--------------------|-------------------------|------------------------|------------------------|
| F28 (13-14mm) | 65° | 8/209 | 12/26 | 200/8 | 400/15.7 |
| F2S12 (13-14mm) | 60° | 12/310 | 22/48 | 300/12 | 600/23.6 |
| F2S16 (13-14mm) | 60° | 16/412 | 24/52 | 400/16 | 700/27.6 |
| F2S9012 (13-14mm) | 90° | 12/310 | 22/48 | 300/12 | 600/23.6 |
| F2S9016 (13-14mm) | 90° | 16/412 | 24/52 | 400/16 | 700/27.6 |
| F28H (16-18mm) | 65° | 8/209 | 12/26 | 200/8 | 400/15.7 |
| F2S12H (16-18mm) | 60° | 12/310 | 22/48 | 300/12 | 600/23.6 |
| F2S16H (16-18mm) | 60° | 16/412 | 24/52 | 400/16 | 700/27.6 |
| F2S9012H (16-18mm) | 90° | 12/310 | 22/48 | 300/12 | 600/23.6 |
| F2S9016H (16-18mm) | 90° | 16/412 | 24/52 | 400/16 | 700/27.6 |

Top hung



| | Opening Angle (+/- 2.5°) | Hinge Size (in/mm) | Max Vent Weight (kg/lb) | Min Vent Height (mm/in) | Max Vent Height (mm/in) |
|------------------|--------------------------|--------------------|-------------------------|-------------------------|-------------------------|
| F28 (13-14mm) | 65° | 8/209 | 12/26 | 200/8 | 350/14 |
| F2T10 (13-14mm) | 80° | 10/259 | 16/35 | 275/11 | 400/16 |
| F2T12 (13-14mm) | 80° | 12/310 | 20/44 | 350/14 | 550/22 |
| F2T16 (13-14mm) | 80° | 16/412 | 21/46 | 500/20 | 780/31 |
| F2TF20 (13-14mm) | 50° | 20/513 | 26/57 | 700/28 | 1100/43 |
| F2T24 (13-14mm) | 38° | 24/615 | 35/77 | 850/33 | 1200/47 |
| F28H (16-18mm) | 65° | 8/209 | 12/26 | 200/8 | 350/14 |
| F2T10H (16-18mm) | 80° | 10/259 | 16/35 | 275/11 | 400/16 |
| F2T12H (16-18mm) | 80° | 12/310 | 20/44 | 350/14 | 550/22 |
| F2T16H (16-18mm) | 80° | 16/412 | 21/46 | 500/20 | 780/31 |
| F2T20H (16-18mm) | 50° | 20/513 | 26/57 | 700/28 | 1100/43 |
| F2T24H (16-18mm) | 38° | 24/615 | 35/77 | 850/33 | 1200/47 |

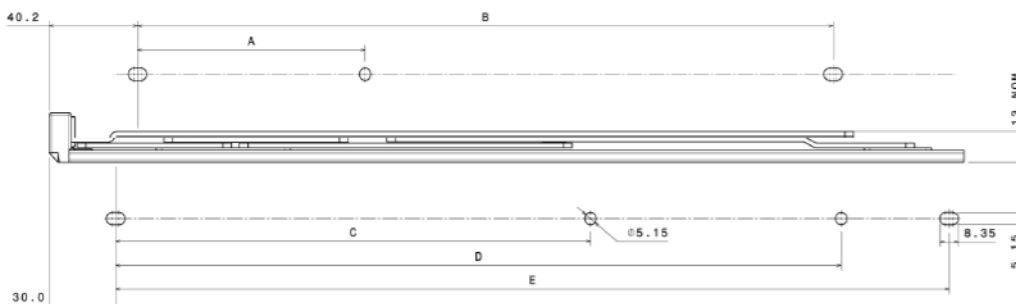
VBH order codes: Yale F2 (17mm)

- 2YFH0031 F2 8" T/H Stay
- 2YFH0032 F2 10" T/H Stay
- 2YFH0033 F2 12" T/H Stay
- 2YFH0034 F2 16" T/H Stay
- 2YFH0035 F2 20" T/H Stay
- 2YFH0036 F2 24" T/H Stay
- 2YFH0037 F2 12" S/H Stay
- 2YFH0038 F2 16" S/H Stay
- 2YFH0039 F2 12" S/H Egress Stay
- 2YFH0040 F2 16" S/H Egress Stay

F2T -> F2 Top Hung, F2S -> F2 Side Hung

Dimensions

| Description | A | B | C | D | E |
|-------------|-------|-------|-------|-------|-------|
| F28 | 14.8 | 115.2 | 141.0 | | 172.5 |
| F2T10 | 28.8 | 149.3 | 179.9 | | 223.2 |
| F2T12 | 43.8 | 184.8 | 209.5 | | 274.0 |
| F2T16 | 102.6 | 225.2 | 281.2 | | 375.6 |
| F2T20 | 167.1 | 268.3 | 246.8 | | 477.2 |
| F2T24 | 217.1 | 319.1 | 195.0 | | 578.8 |
| F2S12 | 227.4 | 241.6 | 195.0 | | 274.0 |
| F2S16 | 102.6 | 313.5 | 221.0 | 327.0 | 375.6 |





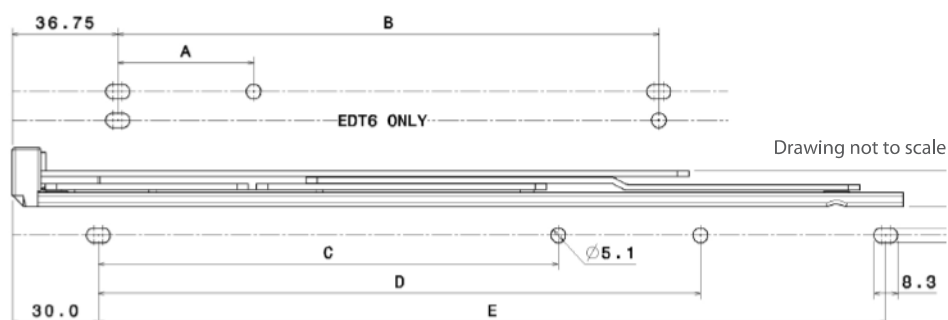
Defender window hinge

| Hinge Code (Top Hung) | Max. Vent Weight (kg) | Min. Vent Height (mm) | Max. Vent Height (mm) | Opening Angle (+/- 2.5°) |
|------------------------|-----------------------|-----------------------|-----------------------|--------------------------|
| EDT6 | 10 | 150 | 300 | 50° |
| ED8 | 12 | 200 | 350 | 65° |
| EDT10 | 16 | 275 | 400 | 80° |
| EDT12 | 20 | 350 | 550 | 80° |
| EDT16 | 21 | 500 | 780 | 80° |
| EDT20 | 26 | 700 | 1100 | 50° |
| EDT24 | 40 | 850 | 1300 | 37.5° |
| EDTH24 | 50 | 850 | 1500 | 27° |
| Hinge Code (Side Hung) | | Min. Vent Width (mm) | Max. Vent Width (mm) | |
| ED8 | 18 | 200 | 400 | 65° |
| EDS12 | 22 | 300 | 600 | 60° |
| EDS16 | 24 | 400 | 700 | 60° |
| EDSH16A * | 40 | 400 | 1000 | 60° |

Fixing Hole Centres: **ED** Defender Universal, **EDT** Defender Top Hung, **EDS** Defender Side Hung

Dimensions

| Description | A | B | C | D | E |
|---------------|-------|--------|-------|-------|-------|
| EDT6 | - | 95.0 | - | - | 122.6 |
| ED8 | 18.2 | 118.6 | 141.0 | - | 172.5 |
| EDT10 | 32.25 | 152.75 | 179.9 | - | 223.2 |
| EDT12 | 47.25 | 188.25 | 209.5 | - | 274.0 |
| EDT16 | 106.0 | 228.6 | 281.2 | - | 375.6 |
| EDT20 | 170.5 | 271.75 | 246.8 | - | 477.2 |
| EDT24 | 220.5 | 322.5 | 195.0 | - | 578.8 |
| EDTH24 | 220.5 | 322.5 | 195.0 | - | 578.8 |
| EDS12 | 230.8 | 245.0 | 195.0 | - | 274.0 |
| EDS16 | 106.0 | 322.5 | 209.5 | 327.0 | 375.6 |



VBH order codes: Defender (17mm)

2SEC0331 ED8H7 8" S/H or T/H Highline
 2SEC0171 EDT10H7 Highline T/H 10"
 2SEC0172 EDT12H7 Highline T/H 12"
 2SEC0173 EDT16H7 Highline T/H 16"
 2SEC0174 EDT20H7 Highline T/H 20"
 2SEC0175 EDT24H7 Highline T/H 24"
 2SEC0176 EDS12H7 Highline S/H 12"
 2SEC0177 EDS16H7 Highline S/H 16"
 2SEC0379 DSW12H7 Egress only S/H 12"
 2SEC0380 DSW16H7 Egress only S/H 16"

VBH order codes: Defender restricted

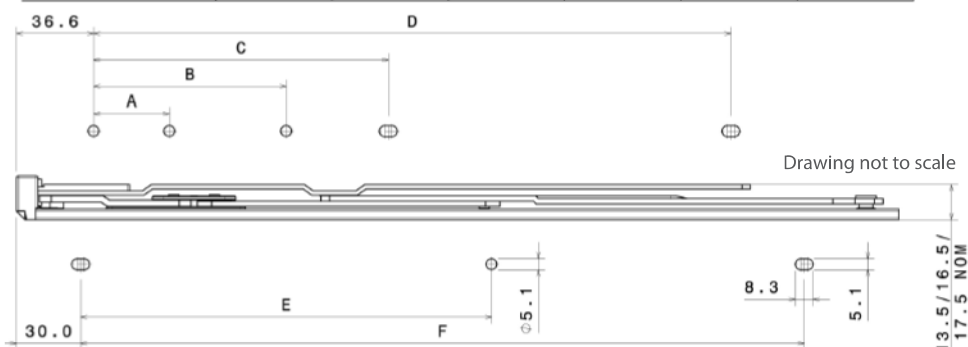
2SEC0232 EDTR12H7 T/H 12"
 2SEC0233 EDTR16H7 T/H 16"
 2SEC0234 EDTR20H7 T/H 20"
 2SEC0235 EDTR24H7 T/H 24"
 2SEC0160 EDSR12H7L S/H 12" L/H
 2SEC0161 EDSR12H7R S/H 12" R/H
 2SEC0141 EDSR16H7L S/H 16" L/H
 2SEC0142 EDSR16H7R S/H 16" R/H

Defender Plus fixing hole centres: **EDS** Defender Side Hung

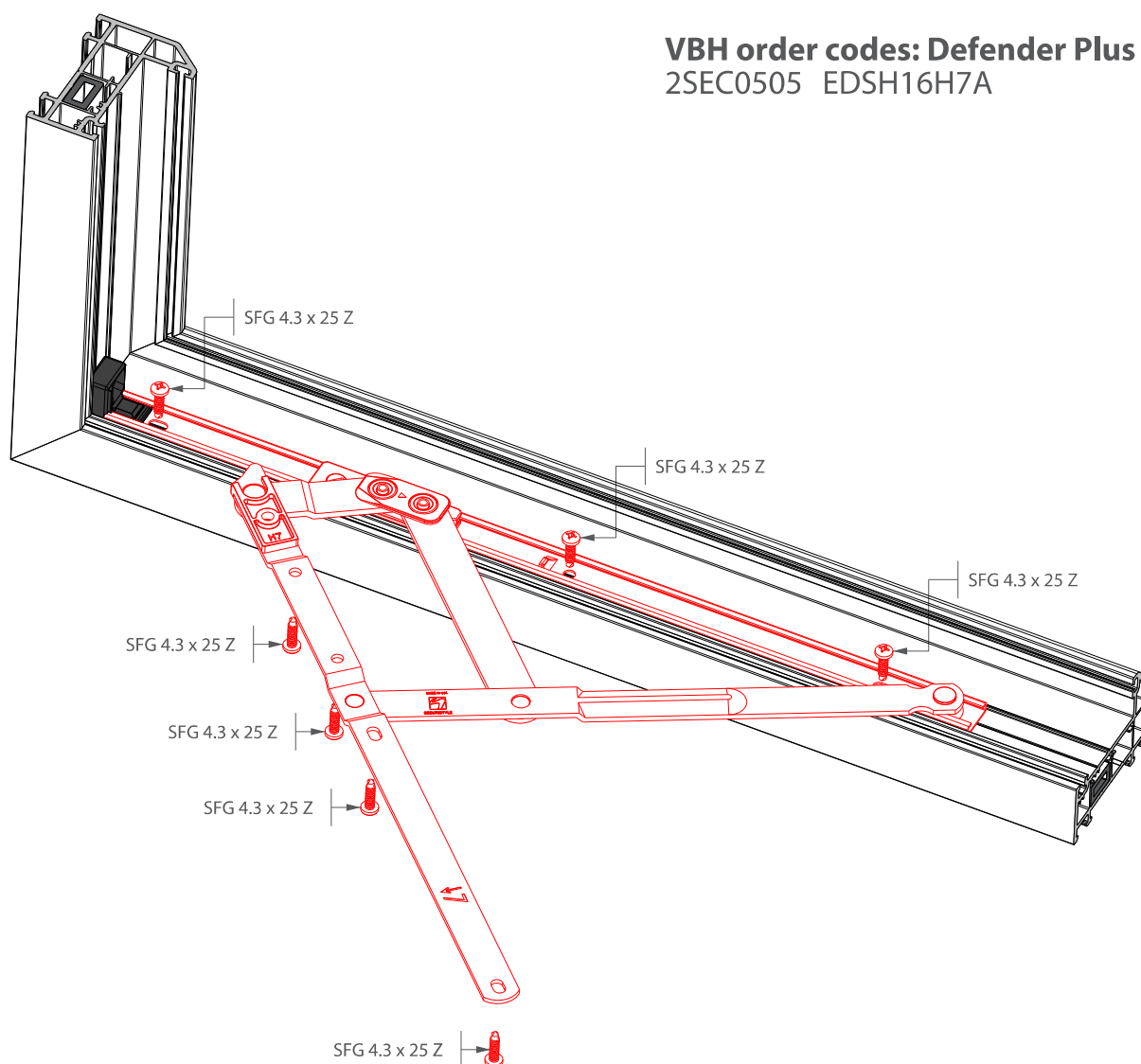


Dimensions

| Description | A | B | C | D | E | F |
|---------------|------|------|-------|-------|-------|-------|
| EDSH16H6A/H7A | 35.3 | 89.9 | 137.6 | 297.6 | 192.0 | 338.0 |



VBH order codes: Defender Plus (17mm)
2SEC0505 EDSH16H7A



Cotswold window hinge



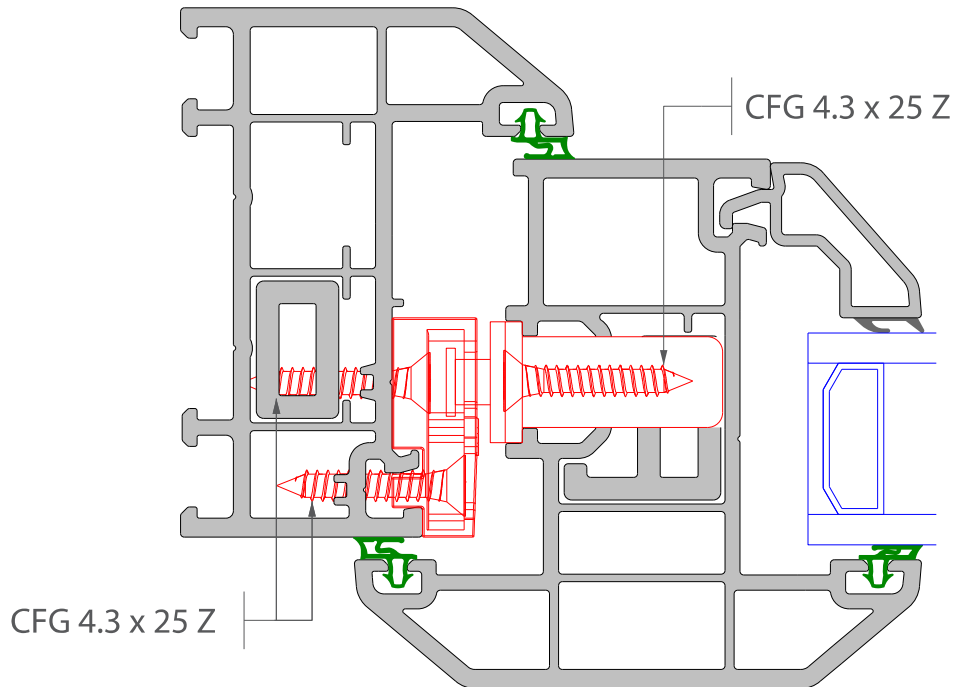
SP312/316 EZ

| PRODUCT | SIZE INS | SIZE MM | WINDOW SIZE APPROX WIDTH MM | WINDOW WEIGHT APPROX KG | STACK HEIGHT MM | OPENING ANGLE |
|-----------------|-------------|------------|--------------------------------|----------------------------|--------------------|------------------|
| SP312EZ Extreme | 12 | 311 | 700 | 30Kg | 13 & 17 | 85° |
| SP316EZ Extreme | 16 | 406 | 800 | 35Kg | 13 & 17 | 89° |

SP312/316 EZ Fire Escape/Easy Clean

| APPLICATION | PRODUCT | SIZE INS | SIZE MM | WINDOW SIZE APPROX WIDTH MM | WINDOW SIZE APPROX HEIGHT MM | WINDOW WEIGHT APPROX KG | STACK HEIGHT MM | OPENING ANGLE |
|------------------|------------------|-------------|------------|--------------------------------|---------------------------------|----------------------------|--------------------|------------------|
| SIDE HUNG | SP316EZ (HANDED) | 16 | 413 | 600 | 1200 | 21 | 13 & 17 | 89° |
| SIDE HUNG | SP312EZ (HANDED) | 12 | 311 | 600 | 1200 | 18 or 21 with Riser | 13 & 17 | 85° |

- Initial opening similar to standard side hung friction stay
- Full opening to 90° providing clear egress in excess of 500mm on a 600mm wide vent
- Easy to operate thumb catches allow the vent to slide to the easy clean position giving between 100mm and 250mm clear opening
- To reset simply close the window and re-open to go back to the egress position and close
- When fitting the SP312/316 please observe BS 8213 Part 1 Code of practice for safety in use during the cleaning of windows

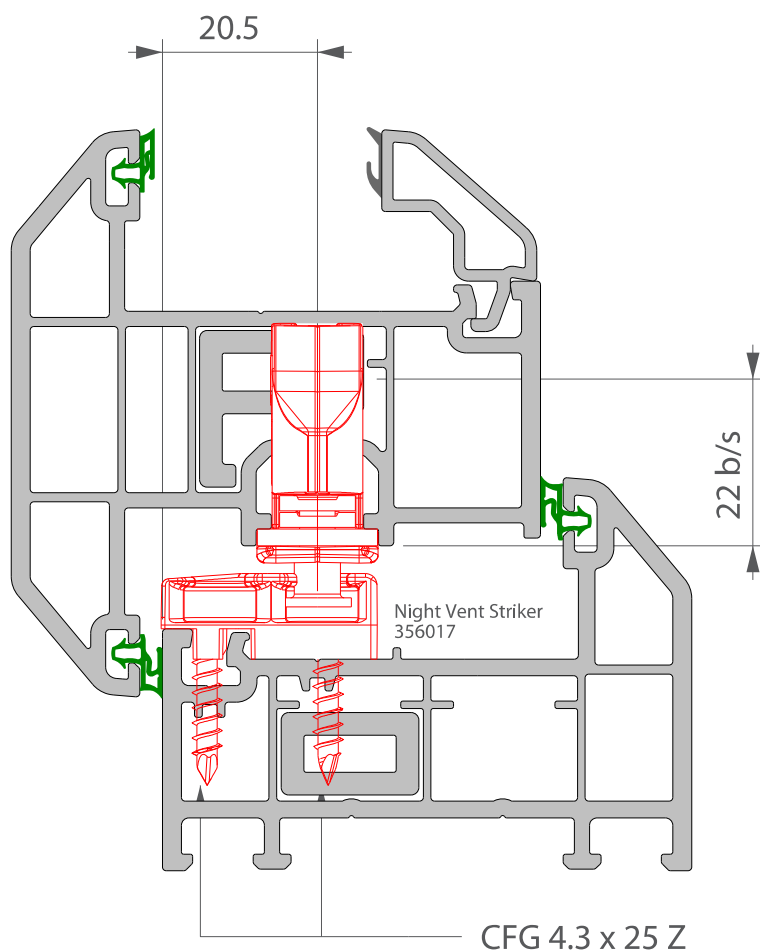

VBH order codes: Yale shootbolt espag

| | | | |
|----------|----------------------|------------|--------------|
| 2YSE2508 | Gearbox 22mm b/s | 326-1420mm | (2 x 9mm MB) |
| 2YSE2511 | Single Extension 0 | 326-474mm | (0 x MB) |
| 2YSE2514 | Single Extension 3 | 368-820mm | (1 x 9mm MB) |
| 2YSE2516 | Single Extension 5 | 708-1120mm | (1 x 9mm MB) |
| 2YSE2518 | Single Extension 7 | 970-1420mm | (1 x 9mm MB) |
| 2YSE5033 | Mushroom N/V Striker | - | - |
| 2YSE5035 | Shootbolt Striker LH | - | - |
| 2YSE5036 | Shootbolt Striker RH | - | - |

VBH order codes: Yale Encloser espag

| | | |
|----------|--------------------------|----------|
| 2YSE1011 | 250mm (2 x MB) 22mm b/s | 9.0mm MB |
| 2YSE1012 | 350mm (2 x MB) 22mm b/s | 9.0mm MB |
| 2YSE1013 | 550mm (2 x MB) 22mm b/s | 9.0mm MB |
| 2YSE1014 | 750mm (3 x MB) 22mm b/s | 9.0mm MB |
| 2YSE1015 | 900mm (3 x MB) 22mm b/s | 9.0mm MB |
| 2YSE1016 | 1050mm (3 x MB) 22mm b/s | 9.0mm MB |
| 2YSE1017 | 1200mm (3 x MB) 22mm b/s | 9.0mm MB |
| 2YSE5033 | Mushroom N/V Striker | - |

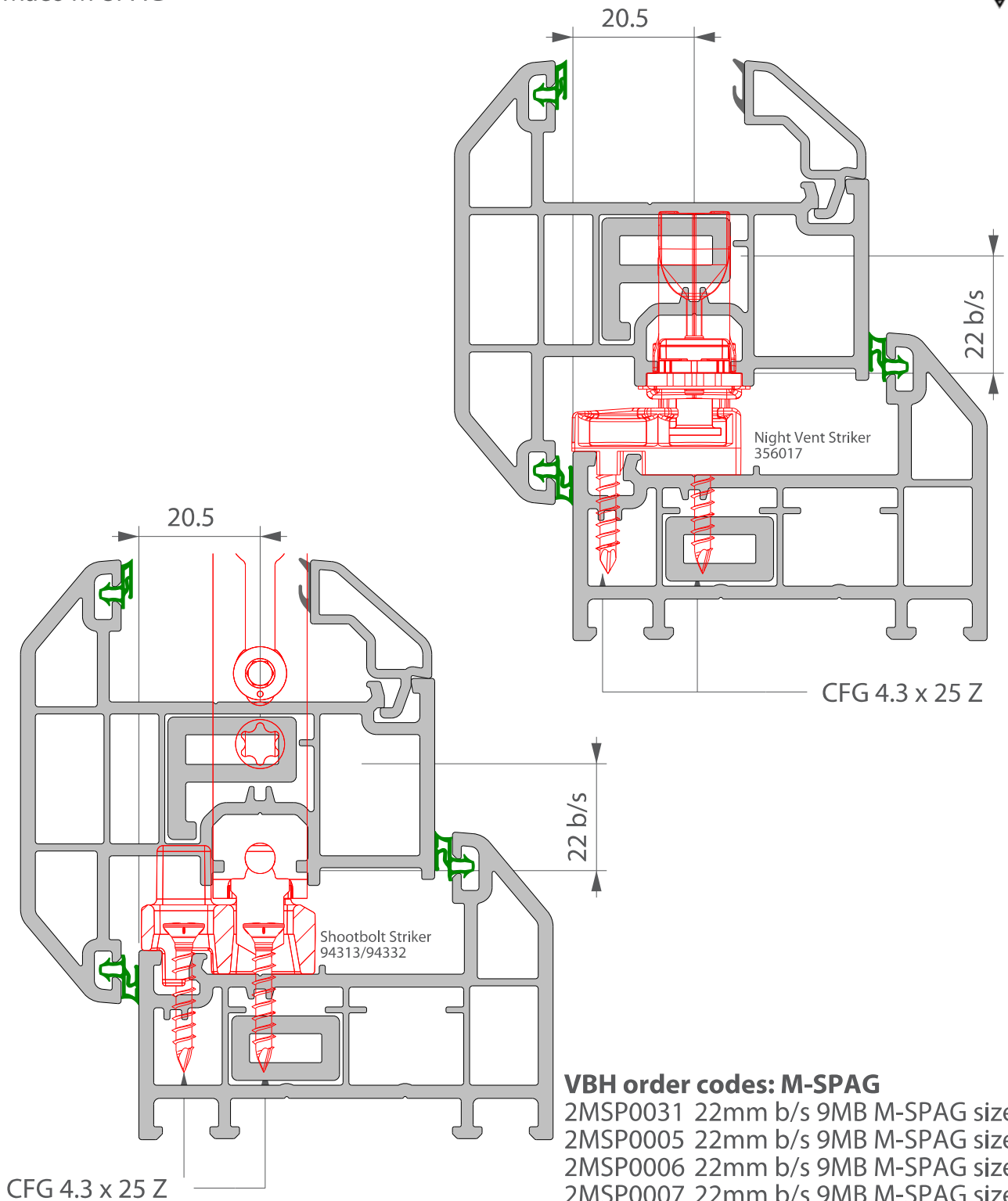
MB denotes quantity of mushroom striker plates required



VBH order codes: Maco R.A.I.L

| | | | |
|----------|----------------------|----------|----------|
| 2MSE1107 | 200mm | 22mm b/s | 9.0mm MB |
| 2MSE1108 | 400mm | 22mm b/s | 9.0mm MB |
| 2MSE1109 | 600mm | 22mm b/s | 9.0mm MB |
| 2MSE1110 | 800mm | 22mm b/s | 9.0mm MB |
| 2MSE1111 | 1000mm | 22mm b/s | 9.0mm MB |
| 2MSE1112 | 1200mm | 22mm b/s | 9.0mm MB |
| 2WES2339 | Mushroom N/V Striker | - | |

MB denotes quantity of mushroom striker plates required



VBH order codes: M-SPAG

- 2MSP0031 22mm b/s 9MB M-SPAG size 0
- 2MSP0005 22mm b/s 9MB M-SPAG size 1
- 2MSP0006 22mm b/s 9MB M-SPAG size 2
- 2MSP0007 22mm b/s 9MB M-SPAG size 3
- 2MSP0008 22mm b/s 9MB M-SPAG size 4
- 2WES2405 Mushroom N/V Striker
- 2MSE2127 Shootbolt Striker LH
- 2MSE2128 Shootbolt Striker RH
- 2MSE2325 Stabilizing plate

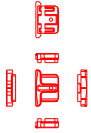
MB denotes quantity of mushroom striker plates required

Maco Multi-Matic

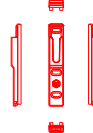


VBH order codes:

5MAC6886 casement striker
(non-handed)



5MMT0350 TBT striker
(non-handed)



5MMT4023 L/H sash lifter striker
5MMT4024 R/H sash lifter striker

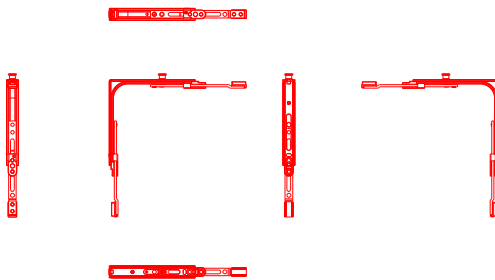


5MAC7531 mushroom iS striker
(non-handed)



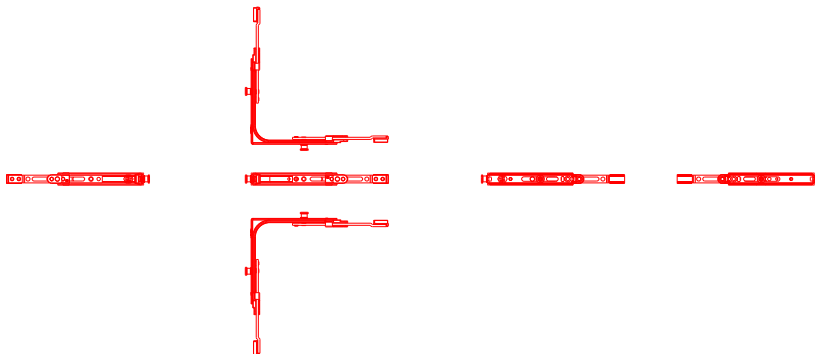
VBH order codes:

5MMT0002 corner element, iS cam x 1 (non-handed)



VBH order codes:

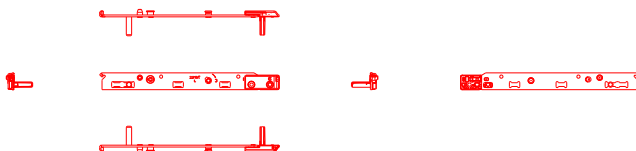
5MMT0001 corner element, iS cam x 2 (non-handed)



For the full Maco Multi-Matic tilt & turn component list please contact VBH.
For contact details please see Section 3.5/3

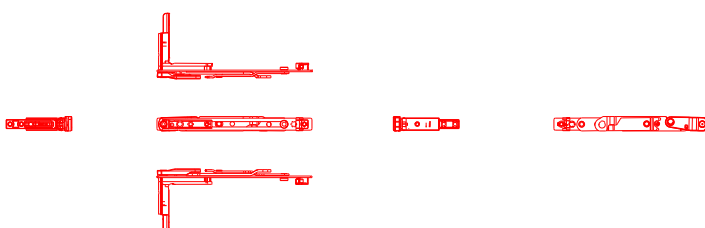
VBH order codes:

5MAC7803 L/H, 5MAC7804 R/H frame hinge (concealed gear)

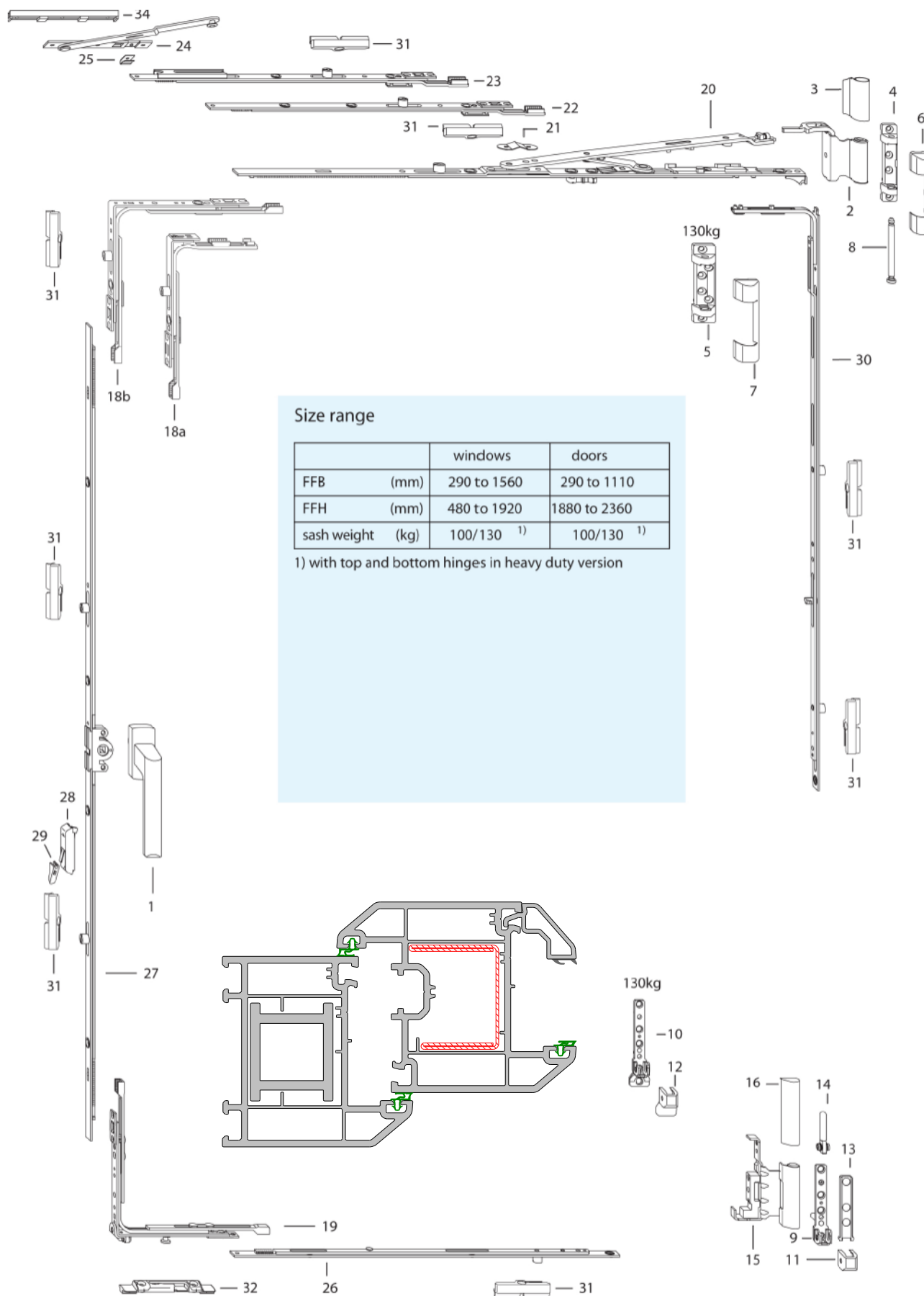


VBH order codes:

5MAC7851 L/H, 5MAC7852 R/H sash hinge (concealed gear)



Siegenia FAVORIT, standard face-fit



Siegenia FAVORIT, standard face-fit



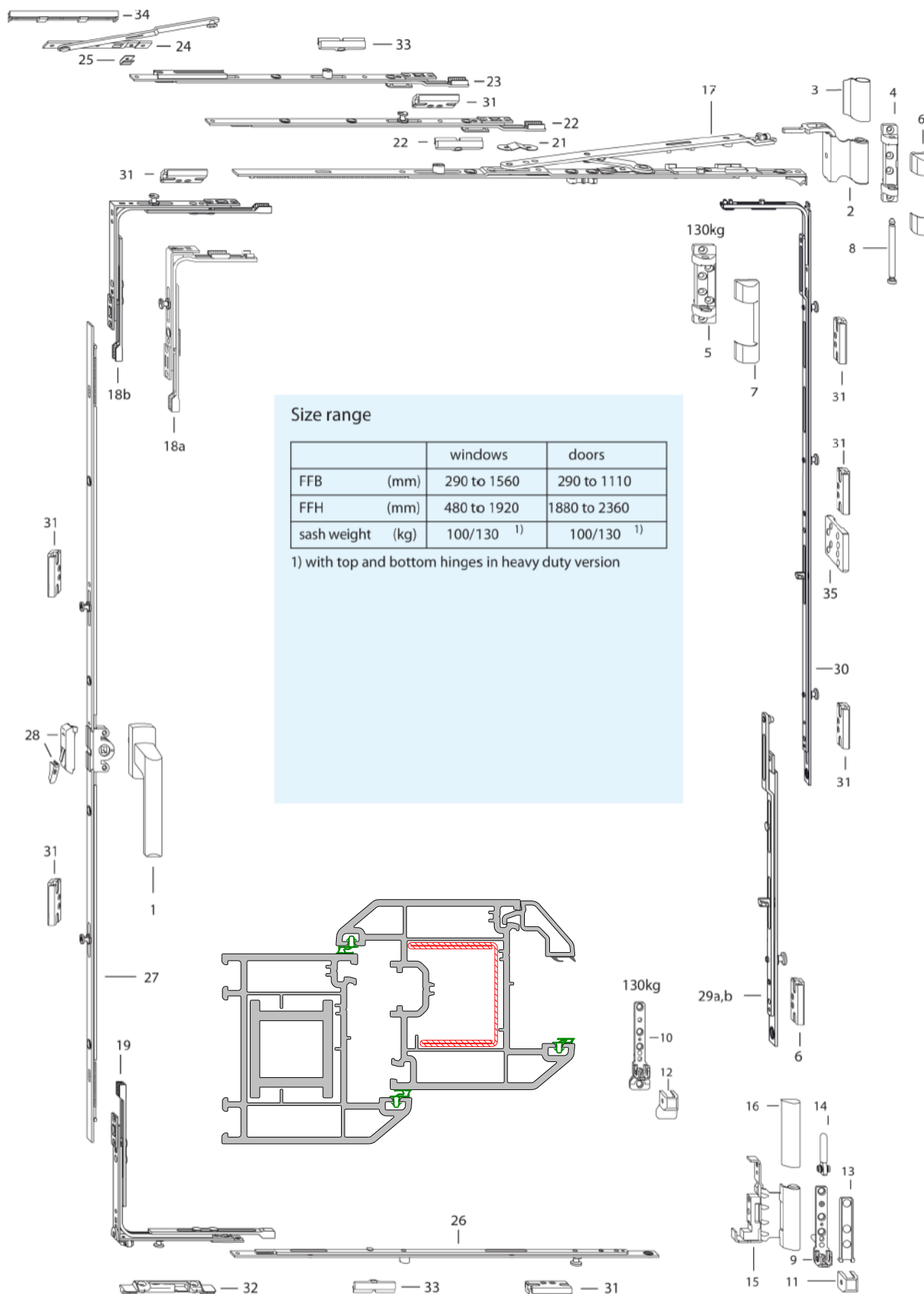
| Pos. | Material description | | Always required white | | Always required brown | | Basic bag | |
|------|------------------------------------|-----------------|-----------------------|-----|-----------------------|-----|-----------------------|-----------------------|
| | | | Material-No. | Qty | Material-No. | Qty | white Material-No. | brown Material-No. |
| 1 | handle Si-line FAV. 35 9003 white | (100) | 243947 | 1 | 243558 (10) | 1 | | |
| 2 | stay hinge KF 12/20-13 | (50) | 283653 | 1 | | | | |
| 3 | cover cap W KF | (100) | FKWB0010-002010 | 1 | FKWB0010-011060 | 1 | | |
| 4 | top hinge KF Ø 6 x 3 DH | to 100 kg (100) | FBSL0080-100060 | 1 | | | | |
| 6 | cover cap S | (100) | FKSL0010-002060 | 1 | FKSL0010-011060 | 1 | | |
| 8 | top hinge pin Ø 6 | (25) | FBSB0010-100010 | 1 | | | | |
| 9 | bottom hinge KF Ø 6 x 3 | (250) | FBEL0170-002060 | 1 | | | | |
| 11 | cover cap EL U | (100) | FKEU0010-002060 | 1 | FKEU0010-011060 | 1 | | |
| 13 | cover cap EL O | (100) | FKEO0010-002060 | 1 | FKEO0010-0110010 | | | |
| 14 | bottom hinge pin Ø 7 | (25) | FBLB0060-100060 | 1 | FBLB0060-100010 | 1 | | |
| 15 | rebate corner hinge KF-12/20-13 rh | (50) | FBFE1041-100050 | 1 | | | | |
| | rebate corner hinge KF-12/20-13 lh | (50) | FBFE1042-100050 | | | | | |
| 16 | cover cap FEB rh | (100) | FKFE0011-002060 | 1 | FKFE0011-011010 | 1 | | |
| | cover cap FEB lh | (100) | FKFE0012-002060 | | FKFE0012-011010 | 1 | | |
| 32 | tilt lock bearing rh | (100) | 313909 | 1 | | | | |
| | tilt lock bearing lh | (100) | 313916 | | | | | |
| 5 | top hinge KF Ø 6 x 12 DH | to 130 kg (100) | FBSL0030-100060 | 1 | | | | |
| 10 | bottom hinge KF Ø 6 x 12 DH | to 130 kg (100) | FBEL0120-100060 | 1 | | | | |
| 7 | cover cap S KF-S | (100) | FKSL0020-002060 | 1 | 229120 (250) | 1 | | |
| 12 | cover cap EL-S U | (100) | FKEL0010-002060 | 1 | FKEL0010-011060 | 1 | | |

| Pos. | Material description | | Material-No. | Sash width dependant (FFB/mm) | | | | | | |
|-------|-----------------------------|-------------------------------|-----------------|-------------------------------|------------|------------|-------------|----------------------------|----------------------------|----------------------------|
| | | | | 290 to 410 | 411 to 570 | 571 to 800 | 801 to 1030 | 1031 to 1260 ¹⁾ | 1261 to 1490 ¹⁾ | 1491 to 1560 ¹⁾ |
| 18a | corner drive VSO/small | (25) | 278642 | 1 | | | | | | |
| 18b | corner drive VSO | (50) | FEUL0230-100050 | | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | stay 7/TBT | size 30 (25) | 283530 | 1 | 1 | | | | | |
| | | size 35 MV (25) | 283547 | | | 1 | | | | |
| | | size 50 MV (25) | 283554 | | | | 1 | | 1 | |
| | | size 55 MV (25) | 283561 | | | | | 1 | | 1 |
| 22 | linkage | size 460 MV to 100/130kg (25) | FZSZ0050-100040 | | | | | | 1/- | |
| 23-25 | carton additional stay TBT | to 100/130kg (25) | 275016 | | | | | | 1/- | 1/1 |
| 34 | packer Z.f. additional stay | to 100/130kg (100) | FRUP0410-040060 | | | | | | 1/- | 1/1 |
| 26 | centre lock | size 50 (25) | 276266 | | | | 1 | 1 | | |
| | | size 70 (25) | 276273 | | | | | | 1 | 1 |
| | | size 90 on request (25) | 276280 | | | | | | | 1 |
| 31 | striker | (500) | FRSB0080-100080 | | | | 2 | 2 | 3 | 3 |

1) max. door width 1110 mm FFB

| Pos. | Material description | | Material-No. | Sash height dependant (FFH/mm) | | | | | | | |
|------|---|-----------------------------------|-----------------|--------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| | | | | 480 to 600 | 601 to 800 | 801 to 1060 | 1061 to 1200 | 1201 to 1460 | 1461 to 1600 | 1601 to 1880 | 1881 to 2360 |
| 21 | tilt restrictor | ²⁾ to 750 mm FFH (500) | 204498 | 1 | 1 ²⁾ | | | | | | |
| 27 | gear 3 | handle height (mm) | | 1 | | | | | | | |
| | | size 0 200 to 300 (25) | FGMK3050-100040 | | | | | | | | |
| | | size 1 300 to 400 (25) | FGMK3060-100040 | | 1 | | | | | | |
| | | size 1a MV 400 to 530 (25) | FGMK3070-100040 | | | 1 | | | | | |
| | | size 2 MV 530 to 730 (25) | FGMK3080-100040 | | | | 1 | 1 | | | |
| | | size 3 MV 730 to 960 (25) | FGMK3090-100040 | | | | | | 1 | 1 | |
| | | size 4 MV 940 to 1180 (10) | FGMK3100-100020 | | | | | | | | 1 |
| 19 | Corner drive VSU S-ES FH/13 | (25) | FEUL1080-100040 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 28 | Mishandling device FAV | (20) | 300596 | | | | | | | | 1 |
| 30 | corner drive VSU/BS | size 50 (25) | FEUL2070-100040 | | | 1 | 1 | | | | |
| | | size 70 (25) | FEUL2080-100040 | | | | | 1 | 1 | | |
| | *) on request MV extensions (not illust.) | size 90 (25) | FEUL2090-100040 | | | | | | | 1 | |
| | size 40 = 2001/2200 - 276242 | size 130/TL*) (25) | 278789 | | | | | | | | 1 |
| 31 | striker | (500) | FRSB0080-100080 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 5 |

Siegenia FAVORIT, security face-fit



Siegenia FAVORIT, security face-fit



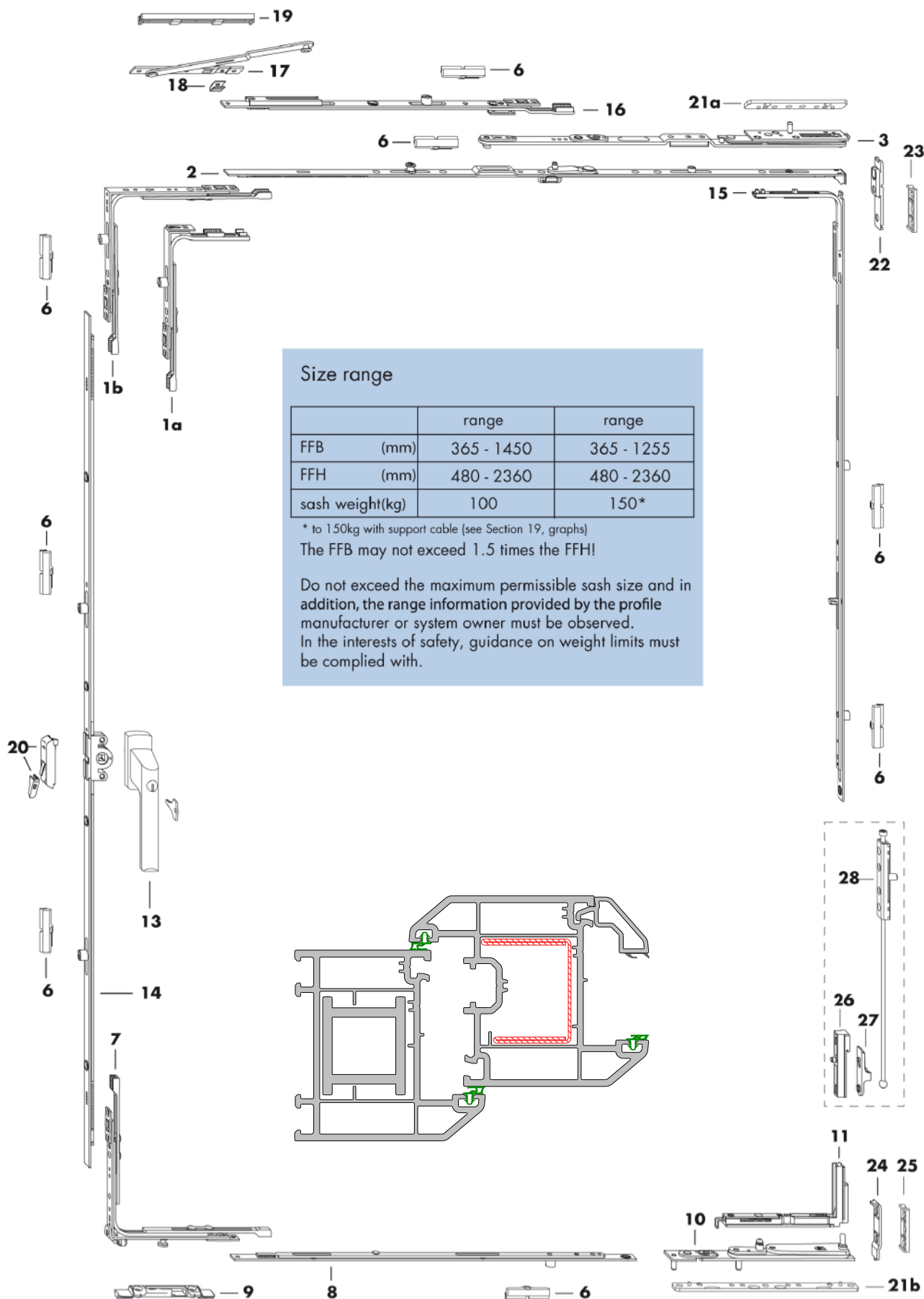
| Pos. | Material description | | Always required white | | Always required brown | | Basic bag | |
|------|------------------------------------|-----------------|-----------------------|-----|-----------------------|-----|-----------------------|-----------------------|
| | | | Material-No. | Qty | Material-No. | Qty | white Material-No. | brown Material-No. |
| 1 | handle Si-line FAV. 35 9003 white | (100) | 243947 | 1 | 243558 (10) | 1 | | |
| 2 | stay hinge KF 12/20-13 | (50) | 283653 | 1 | | | | |
| 3 | cover cap W KF | (100) | FKWB0010-002010 | 1 | FKWB0010-011060 | 1 | | |
| 4 | top hinge KF Ø 6 x 3 DH | to 100 kg (100) | FBSL0080-100060 | 1 | | | | |
| 6 | cover cap S | (100) | FKSL0010-002060 | 1 | FKSL0010-011060 | 1 | | |
| 8 | top hinge pin Ø 6 | (25) | FBSB0010-100010 | 1 | | | | |
| 9 | bottom hinge KF Ø 6 x 3 | (250) | FBEL0170-002060 | 1 | | | | |
| 11 | cover cap EL U | (100) | FKEU0010-002060 | 1 | FKEU0010-011060 | 1 | | |
| 13 | cover cap EL O | (100) | FKEO0010-002060 | 1 | FKEO010-0110010 | | | |
| 14 | bottom hinge pin Ø 7 | (25) | FBLB0060-100060 | 1 | FBLB0060-100010 | 1 | | |
| 15 | rebate corner hinge KF-12/20-13 rh | (50) | FBFE1041-100050 | 1 | | | | |
| | rebate corner hinge KF-12/20-13 lh | (50) | FBFE1042-100050 | 1 | | | | |
| 16 | cover cap FEB rh | (100) | FKFE0011-002060 | 1 | FKFE0011-011010 | 1 | | |
| | cover cap FEB lh | (100) | FKFE0012-002060 | 1 | FKFE0012-011010 | 1 | | |
| 32 | tilt lock bearing rh | (100) | 313909 | 1 | | | | |
| | tilt lock bearing lh | (100) | 313916 | 1 | | | | |
| 5 | top hinge KF Ø 6 x 12 DH | to 130 kg (100) | FBSL0030-100060 | 1 | | | | |
| 10 | bottom hinge KF Ø 6 x 12 DH | to 130 kg (100) | FBEL0120-100060 | 1 | | | | |
| 7 | cover cap S KF-S | (100) | FKSL0020-002060 | 1 | 229120 (250) | 1 | | |
| 12 | cover cap EL-S U | (100) | FKEL0010-002060 | 1 | FKEL0010-011060 | 1 | | |

| Pos. | Material description | | Material No. | Sash width dependant (FFB/mm) | | | | | |
|-------|-----------------------------|-------------------------------|-----------------|-------------------------------|------------------|------------------|-------------------|----------------------------------|----------------------------------|
| | | | | 290 to 410 | 411 to 570 | 571 to 800 | 801 to 1030 | 1031 to 1260 ¹⁾ | 1261 to 1490 ¹⁾ |
| 18a | corner drive VSO/small S ES | (25) | 278772 | 1 | | | | | |
| 18b | corner drive VSO S ES | (25) | FEUL0090-100040 | | 1 | 1 | 1 | 1 | 1 |
| 17 | stay 7/TBT | size 30 (25) | 283530 | 1 | 1 | | | | |
| | | size 35 MV (25) | 283547 | | | 1 | | | |
| | | size 50 MV (25) | 283554 | | | | 1 | 1 | |
| | | size 55 MV (25) | 283561 | | | | | 1 | 1 |
| 22 | linkage | size 460 MV to 100/130kg (25) | FZSZ0050-100040 | | | | | | 1 / - ²⁾ |
| 23-25 | carton additional stay TBT | to 100/130kg (25) | 275016 | | | | | | 1 / 1 |
| 34 | packer Z f. additional stay | to 100/130kg (100) | FRUP0410-04060 | | | | | | 1 / 1 |
| 26 | bottom extension | Gr. 0 (25) | 276327 | | 1 | | | | |
| | | Gr. 1 (25) | 276334 | | | 1 | | | |
| | | Gr. 2 (25) | 276341 | | | | 1 | | |
| | | Gr. 3 (25) | 276358 | | | | | 1 | |
| | | Gr. 4 (25) | 276365 | | | | | | 1 |
| 31 | striker S ES | (100) | 281611 | 1 | 2 | 2 | 2 | 2 | 2 / (3) ²⁾ |
| 33 | striker | (500) | FRSB0080-100080 | | | 1 | 2 | 2 | 3 / (4) ²⁾ |

1) max. door width 1110 mm FFB 2) width size 1261 - 1490 choose linkage or additional stay

| Pos. | Material description | | Material No. | Sash height dependant (FFH/mm) | | | | | | | |
|------|---|-----------------|-----------------|--------------------------------|------------------|------------------|-------------------|--------------------|--------------------|--------------------|--------------------|
| | | | | 480 to 600 | 601 to 680 | 681 to 800 | 801 to 1060 | 1061 to 1200 | 1201 to 1460 | 1461 to 1600 | 1601 to 1880 |
| 21 | tilt restrictor ³⁾ to 750 mm FFH | (500) | 204498 | 1 | 1 | 1 ³⁾ | | | | | |
| 27 | gear 3 | | | 1 | | | | | | | |
| | size 0 | (25) | FGMK3050-100040 | | | | | | | | |
| | size 1 | (25) | FGMK3060-100040 | | 1 | | | | | | |
| | size 1a (MV) | (25) | 310106 | | | 1 | 1 | | | | |
| | size 2 (2MV) | (25) | 310120 | | | | | 1 | 1 | | |
| | size 3 (2MV) | (25) | 310144 | | | | | | | 1 | 1 |
| | size 4TL (2MV) | (10) | 310168 | | | | | | | | 1 |
| 19 | Corner drive VSU S-ES FH/13 | (25) | FEUL1080-100040 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 28 | Mishandling device FAV | (20) | 300596 | | | 1 | | | | | 1 |
| 30 | corner drive BS | Gr. 20 (25) | FEUL2100-100040 | | | | | | | | |
| | | Gr. 50 (25) | 310960 | | | 1 | | | | | |
| | | Gr. 70 (25) | 311301 | | | | 1 | 1 | 1 | 1 | |
| | | Gr. 90 (25) | 311349 | | | | | | | | 1 |
| | | Gr. 130/TL (25) | 311363 | | | | | | | | 1 |
| 29a | corner slider VSU/BS ext. 40 | (25) | FVNL0010-100040 | | | | | | | | |
| 29b | corner slider VSU/BS ext. 60 | (25) | FVNL0020-100040 | | | | | | | | |
| 35 | anti-lift block | (25) | 303252 | | | | | | | | |
| 31 | striker S ES | (100) | 281611 | 1 | 1 | 3 | 3 | 4 | 4 | 4 | 5 |

Siegenia FAVORIT, standard concealed



Siegenia FAVORIT, standard concealed



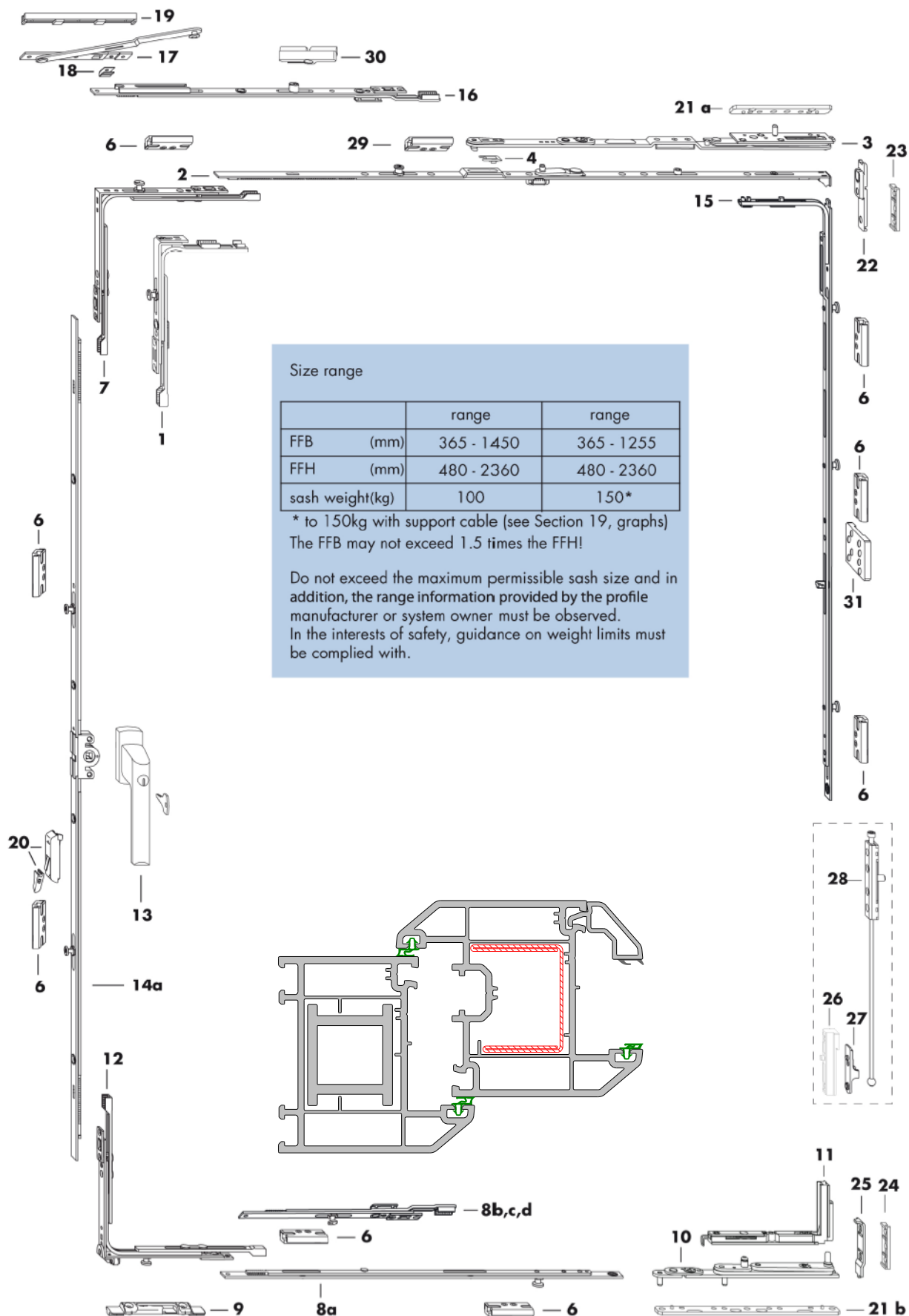
| Stay side | | | request as per FFB/mm | | | | | |
|-----------|---|--|-----------------------|-----------------|-----------------|------------------|-------------------|-------------------|
| Pos. | Material description | Material number | 365 - 480 | 481 - 680 | 681 - 850 | 851 - 1050 | 1051 - 1250 | 1251 - 1450 |
| 1 | Corner drive narrow (25) | 227787 | 1 | | | | | |
| 7 | Corner drive (25) | FEUL0090-100040 | | 1 | 1 | 1 | 1 | 1 |
| 2 | Stay sash part F2 V-V sz.1 (25) | TSSV0210-100046 | 1 | 1 | | | | |
| | Stay sash part F2 V-V sz.2+3 1S-RS (25) | TSSV0250-100043 | | | 1 | | | |
| | Stay sash part F2 V-V sz.4 1S-RS (25) | TSSV0260-100043 | | | | 1 | | 1 |
| | Stay sash part F2 V-V sz.5 1S-RS (25) | TSSV0270-100043 | | | | | 1 | |
| 29 | KoPiBo striker 1S-RS (100) | TRSK1670-100070 | | | 1 | 1 | 1 | 1 |
| 3 | Stay arm V-V 29 TBT sz.1 rh (25) | TSAV0251-100046 | 1 | 1 | | | | |
| | Stay arm V-V 29 TBT sz.1 lh (25) | TSAV0252-100046 | | | | | | |
| | Stay arm V-V 29 TBT sz.2+3 rh (25) | TSAV0261-100040 | | | 1 | | | |
| | Stay arm V-V 29 TBT sz.2+3 lh (25) | TSAV0262-100040 | | | | | | |
| | Stay arm V-V 29 TBT sz.4 rh (25) | TSAV0271-100040 | | | | 1 | | 1 |
| | Stay arm V-V 29 TBT sz.4 lh (25) | TSAV0272-100040 | | | | | | |
| | Stay arm V-V 29 TBT sz.5 rh (25) | TSAV0281-100040 | | | | | 1 | |
| | Stay arm V-V 29 TBT sz.5 lh (25) | TSAV0282-100040 | | | | | | |
| 6 | Striker plate S ES (100) | 281611 | 1 | 1 | 1 | 1 | 1 | 1 |
| 16-18 | Carton additional stay TBT (25) | 275016 | | | | | | 1 |
| 19 | Frame packer add. stay (100) | FRUP0410-040060 | | | | | | 1 |
| 30 | Striker plate S6 (500) | FRSB0080-100010 | | | | | | 1 |
| 21 | Hinge packers (a+b) | Profile related parts bag NMB50150-100050 | | | | | | |
| 22 | BSO striker | | | | | | | |
| 23 | BSO striker packer (50) | | 1 | 1 | 1 | 1 | 1 | 1 |
| 24 | Hinge support plate | | | | | | | |
| 25 | Hinge support plate packer | | | | | | | |

| Bottom side | | | request as per FFB/mm | | | | |
|-------------|---------------------------------------|-----------------|-----------------------|-----------------|------------------|-------------------|-------------------|
| Pos. | Material description | Material number | 365 - 560 | 561 - 790 | 791 - 1020 | 1021 - 1250 | 1251 - 1450 |
| 12 | Corner drive VSU S-ES FH/13 (25) | FEUL1080-100040 | 1 | 1 | 1 | 1 | 1 |
| 8a | Extension S ES sz.0 (1MV) (25) | 276327 | | 1 | 1 | 1 | 1 |
| 8b | Linkage S ES sz.230 (1MV) (25) | 289570 | | | 1 | | |
| 8c | Linkage S ES sz.460 (1MV) (25) | 285930 | | | | 1 | |
| 8d | Linkage S ES sz.690 (1MV) (25) | 310571 | | | | | 1 |
| 6 | Striker plate S ES (100) | 281611 | 1 | 1 | 2 | 2 | 2 |
| 9 | Tilt bearing S-ES TBT rh (100) | 313909 | 1 | 1 | 1 | 1 | 1 |
| | Tilt bearing S-ES TBT lh (100) | 313916 | | | | | |
| 10 | Bottom hinge V-V 29with stop rh (25) | TMEV0041-100041 | 1 | 1 | 1 | 1 | 1 |
| | Bottom hinge V-V 29 with stop lh (25) | TMEV0042-100041 | | | | | |
| 11 | Corner hinge V-V (25) | TBEB0020-100052 | 1 | 1 | 1 | 1 | 1 |

| Locking side | | | | request as per FFH/mm | | | | | | | |
|--------------|--|-----------------|-----------------|-----------------------|-----------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Pos. | Material description | Material number | 480 - 600 | 601 - 680 | 681 - 800 | 800 - 1000 | 1001 - 1200 | 1201 - 1460 | 1461 - 1600 | 1601 - 1880 | 1881 - 2360 |
| 13 | Handle Si-line FAV. Lock (31) white (10) | 242629 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 14a | Gear 3 sz.0 (25) | FGMK3050-100040 | 1 | | | | | | | | |
| | Gear 3 sz.1 (25) | FGMK3060-100040 | | 1 | | | | | | | |
| | Gear 3 sz.1a (1MV) (25) | 360101 | | | 1 | 1 | | | | | |
| | Gear 3 sz.2 (2MV) (25) | 310120 | | | | | 1 | 1 | | | |
| | Gear 3 sz.3 (2MV) (25) | 310144 | | | | | | | 1 | 1 | |
| | Gear 3 sz.4 T/L (2MV) (10) | 310168 | | | | | | | | | 1 |
| 6 | Striker plate S ES (100) | 281611 | | | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
| 20 | Mishandling device FAV (20) | 369500 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

| Hinge side | | | request as per FFH/mm | | | | | | | | |
|------------|---------------------------------|-----------------|-----------------------|-----------------|-----------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Pos. | Material description | Material number | 480 - 600 | 601 - 680 | 681 - 800 | 801 - 1000 | 1001 - 1200 | 1201 - 1460 | 1461 - 1600 | 1601 - 1880 | 1881 - 2360 |
| 15 | Corner slider VSU/BS sz.20 (25) | FEUL2100-100040 | 1 | 1 | | | | | | | |
| | Corner slider VSU/BS sz.50 (25) | 306901 | | | 1 | | | | | | |
| | Corner slider VSU/BS sz.70 (25) | 310311 | | | | 1 | 1 | | | | |
| | Corner slider VSU/BS sz.90 (25) | 311349 | | | | | | 1 | | | |
| | Corner slider BS sz.130 TL (25) | 311363 | | | | | | | 1 | 1 | 1 |
| 6 | Striker plate S ES (100) | 281611 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 |
| 31 | Anti-lift block (250) | 303252 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 26 | Sash bearing block filler (25) | TFFS0010-100040 | As required | | | | | | | | |
| 27 | Sash bearing block (25) | TBAV0030-100040 | | | | | | | | | |
| 28 | Suspension cable (25) | TBAV0020-100042 | | | | | | | | | |

Siegenia FAVORIT, security face-fit



Siegenia FAVORIT, security concealed

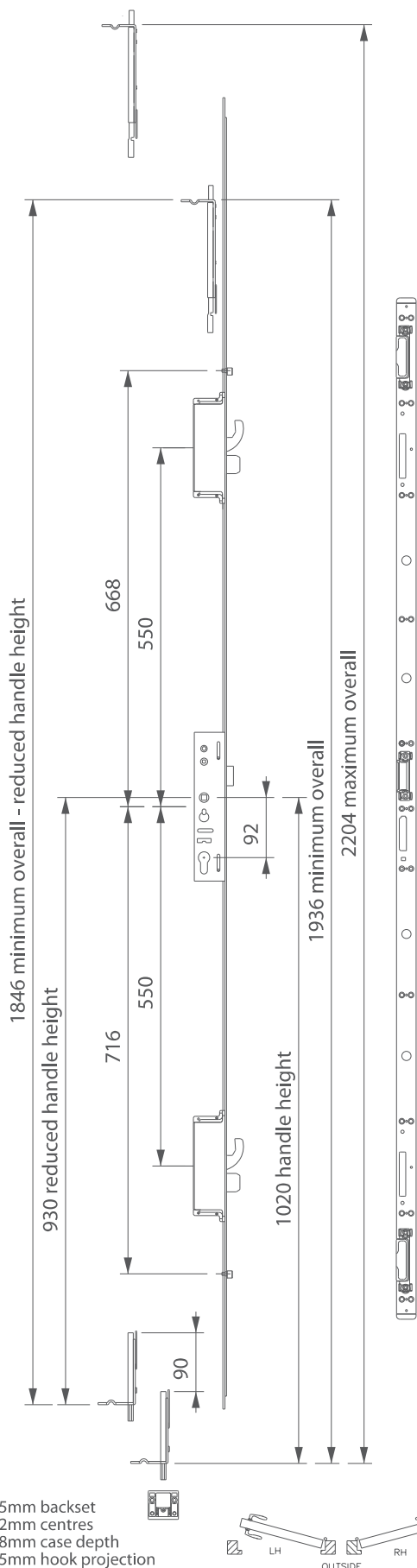


| Stay side | | | request as per FFB/mm | | | | | |
|-----------|---|--|-----------------------|-----------------|-----------------|------------------|-------------------|-------------------|
| Pos. | Material description | Material number | 365 - 480 | 481 - 680 | 681 - 850 | 851 - 1050 | 1051 - 1250 | 1251 - 1450 |
| 1 | Corner drive narrow (25) | 227787 | 1 | | | | | |
| 7 | Corner drive (25) | FEUL0090-100040 | | 1 | 1 | 1 | 1 | 1 |
| 2 | Stay sash part F2 V-V sz.1 (25) | TSSV0210-100046 | 1 | 1 | | | | |
| | Stay sash part F2 V-V sz.2+3 1S-RS (25) | TSSV0250-100043 | | | 1 | | | |
| | Stay sash part F2 V-V sz.4 1S-RS (25) | TSSV0260-100043 | | | | 1 | | 1 |
| | Stay sash part F2 V-V sz.5 1S-RS (25) | TSSV0270-100043 | | | | | 1 | |
| 29 | KoPiBo striker 1S-RS (100) | TRSK1670-100070 | | | 1 | 1 | 1 | 1 |
| 3 | Stay arm V-V 29 TBT sz.1 rh (25) | TSAV0251-100046 | 1 | 1 | | | | |
| | Stay arm V-V 29 TBT sz.1 lh (25) | TSAV0252-100046 | | | | | | |
| | Stay arm V-V 29 TBT sz.2+3 rh (25) | TSAV0261-100040 | | | 1 | | | |
| | Stay arm V-V 29 TBT sz.2+3 lh (25) | TSAV0262-100040 | | | | | | |
| | Stay arm V-V 29 TBT sz.4 rh (25) | TSAV0271-100040 | | | | 1 | | 1 |
| | Stay arm V-V 29 TBT sz.4 lh (25) | TSAV0272-100040 | | | | | | |
| | Stay arm V-V 29 TBT sz.5 rh (25) | TSAV0281-100040 | | | | | 1 | |
| | Stay arm V-V 29 TBT sz.5 lh (25) | TSAV0282-100040 | | | | | | |
| 6 | Striker plate S ES (100) | 281611 | 1 | 1 | 1 | 1 | 1 | 1 |
| 16-18 | Carton additional stay TBT (25) | 275016 | | | | | | 1 |
| 19 | Frame packer add. stay (100) | FRUP0410-040060 | | | | | | 1 |
| 30 | Striker plate S6 (500) | FRSB0080-100010 | | | | | | 1 |
| 21 | Hinge packers (a+b) | Profile related parts bag NMBS0150-100050 | | | | | | |
| 22 | BSO striker | | | | | | | |
| 23 | BSO striker packer (50) | | 1 | 1 | 1 | 1 | 1 | 1 |
| 24 | Hinge support plate | | | | | | | |
| 25 | Hinge support plate packer | | | | | | | |

| Bottom side | | | request as per FFB/mm | | | | |
|-------------|---------------------------------------|-----------------|-----------------------|-----------------|------------------|-------------------|-------------------|
| Pos. | Material description | Material number | 365 - 560 | 561 - 790 | 791 - 1020 | 1021 - 1250 | 1251 - 1450 |
| 12 | Corner drive VSU S-ES FH/13 (25) | FEUL1080-100040 | 1 | 1 | 1 | 1 | 1 |
| 8a | Extension S ES sz.0 (1MV) (25) | 276327 | | 1 | 1 | 1 | 1 |
| 8b | Linkage S ES sz.230 (1MV) (25) | 289570 | | | 1 | | |
| 8c | Linkage S ES sz.460 (1MV) (25) | 285930 | | | | 1 | |
| 8d | Linkage S ES sz.690 (1MV) (25) | 310571 | | | | | 1 |
| 6 | Striker plate S ES (100) | 281611 | 1 | 1 | 2 | 2 | 2 |
| 9 | Tilt bearing S-ES TBT rh (100) | 313909 | 1 | 1 | 1 | 1 | 1 |
| | Tilt bearing S-ES TBT lh (100) | 313916 | | | | | |
| 10 | Bottom hinge V-V 29with stop rh (25) | TMEV0041-100041 | 1 | 1 | 1 | 1 | 1 |
| | Bottom hinge V-V 29 with stop lh (25) | TMEV0042-100041 | | | | | |
| 11 | Corner hinge V-V (25) | TBEB0020-100052 | 1 | 1 | 1 | 1 | 1 |

| Locking side | | | | request as per FFH/mm | | | | | | | |
|--------------|--|-----------------|-----------------|-----------------------|-----------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Pos. | Material description | Material number | 480 - 600 | 601 - 680 | 681 - 800 | 800 - 1000 | 1001 - 1200 | 1201 - 1460 | 1461 - 1600 | 1601 - 1880 | 1881 - 2360 |
| 13 | Handle Si-line FAV. Lock (31) white (10) | 242629 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 14a | Gear 3 sz.0 (25) | FGMK3050-100040 | 1 | | | | | | | | |
| | Gear 3 sz.1 (25) | FGMK3060-100040 | | 1 | | | | | | | |
| | Gear 3 sz.1a (1MV) (25) | 360101 | | | 1 | 1 | | | | | |
| | Gear 3 sz.2 (2MV) (25) | 310120 | | | | | 1 | 1 | | | |
| | Gear 3 sz.3 (2MV) (25) | 310144 | | | | | | | 1 | 1 | |
| | Gear 3 sz.4 T/L (2MV) (10) | 310168 | | | | | | | | | 1 |
| 6 | Striker plate S ES (100) | 281611 | | | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
| 20 | Mishandling device FAV (20) | 369500 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

| Hinge side | | | request as per FFH/mm | | | | | | | | |
|------------|---------------------------------|-----------------|-----------------------|-----------------|-----------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Pos. | Material description | Material number | 480 - 600 | 601 - 680 | 681 - 800 | 801 - 1000 | 1001 - 1200 | 1201 - 1460 | 1461 - 1600 | 1601 - 1880 | 1881 - 2360 |
| 15 | Corner slider VSU/BS sz.20 (25) | FEUL2100-100040 | 1 | 1 | | | | | | | |
| | Corner slider VSU/BS sz.50 (25) | 306901 | | | 1 | | | | | | |
| | Corner slider VSU/BS sz.70 (25) | 310311 | | | | 1 | 1 | | | | |
| | Corner slider VSU/BS sz.90 (25) | 311349 | | | | | | 1 | | | |
| | Corner slider BS sz.130 TL (25) | 311363 | | | | | | | 1 | 1 | 1 |
| 6 | Striker plate S ES (100) | 281611 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 |
| 31 | Anti-lift block (250) | 303252 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 26 | Sash bearing block filler (25) | TFFS0010-100040 | As required | | | | | | | | |
| 27 | Sash bearing block (25) | TBAV0030-100040 | | | | | | | | | |
| 28 | Suspension cable (25) | TBAV0020-100042 | | | | | | | | | |



VBH order codes:

Yale Mantis door lock

- 3MML0003 unsprung lever/pad 2 hooks 2 cams
- 3MML0103 sprung lever/lever 2 hooks 2 cams
- 3MML0023 one piece standard striker plate l/h
- 3MML0024 one piece standard striker plate r/h
- 3MML5093 profile related packer

Yale Mantis 3 Slave door lock

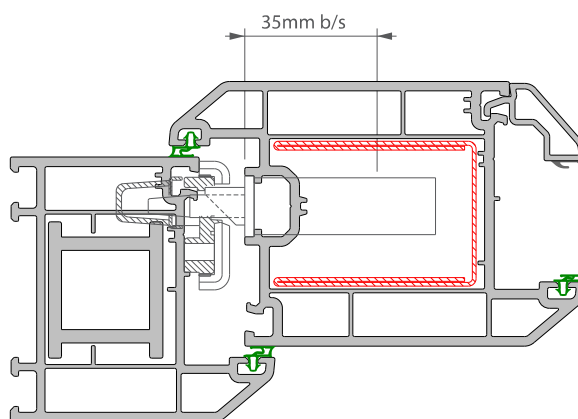
- 3MML0005 unsprung lever/pad blank faceplate
- 3MML0105 sprung level/lever blank faceplate

Master/slave shootbolts

- 3MML0015 security shootbolt set
(top 150mm, bottom 100mm)

Master/slave shootbolt strikers

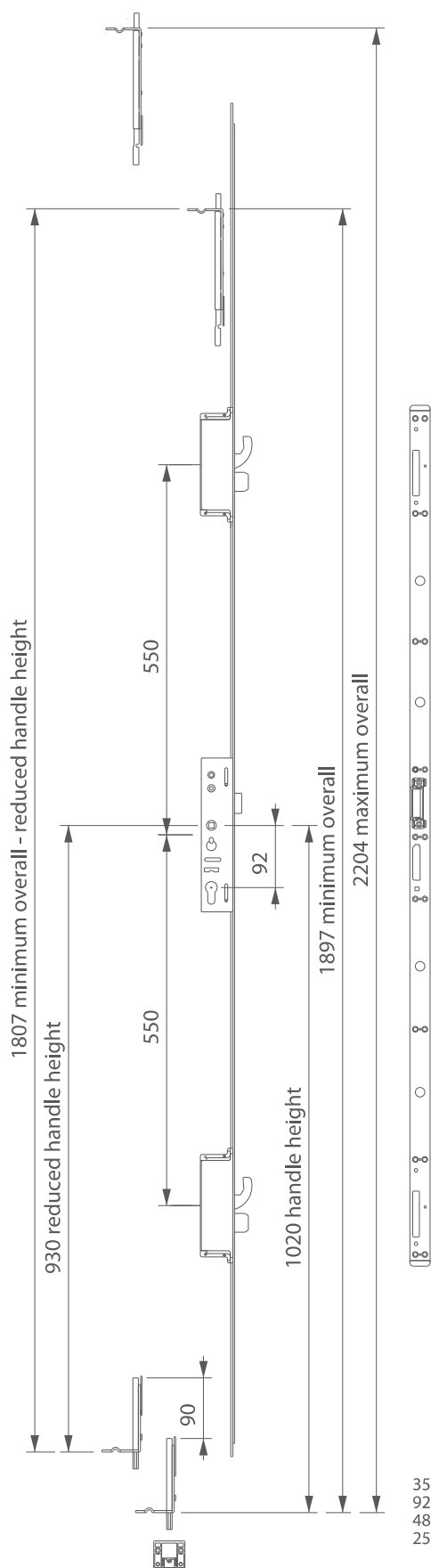
- 3MML0032 security double port shootbolt plate
- 3MML5093 profile related packer



VBH order codes: Maco 3* cylinder

- 2GCY0039 TS007 45/50 nickel
- 2GCY0040 TS007 45/50 brass
- 2GCY0539 TS007 45/50 nickel keyed
- 2GCY0540 TS007 45/50 brass keyed
- 2GCY0739 TS007 K45/50 nickel thumb turn
- 2GCY0740 TS007 K45/50 brass thumb turn
- 2GCY0337 TS007 45/ nickel (half)
- 2GCY0338 TS007 45/ brass (half)
- 2GCY0345 TS007 50/ nickel (half)
- 2GCY0346 TS007 50/ brass (half)

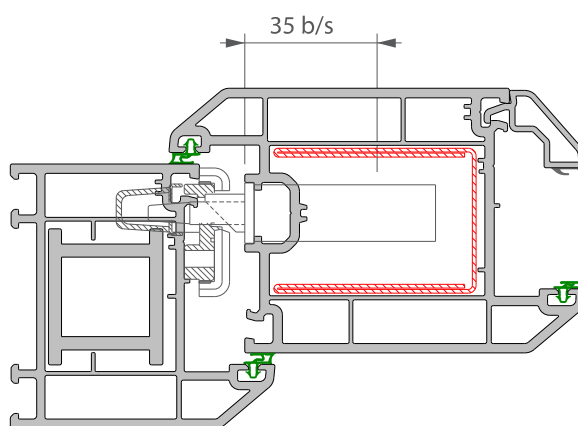
Yale Mantis MA80010SA



VBH order codes:

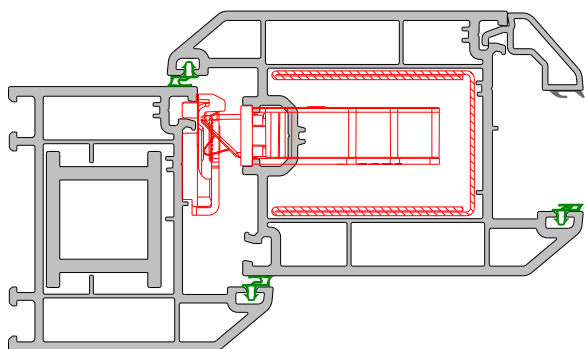
Yale Mantis MA80010SA lock (for short doors)

- 3MML0065 unsprung lever/pad 2 hooks
- 3MML0025 one piece standard striker plate l/h
- 3MML0026 one piece standard striker plate r/h
- 3MML5093 profile related packer



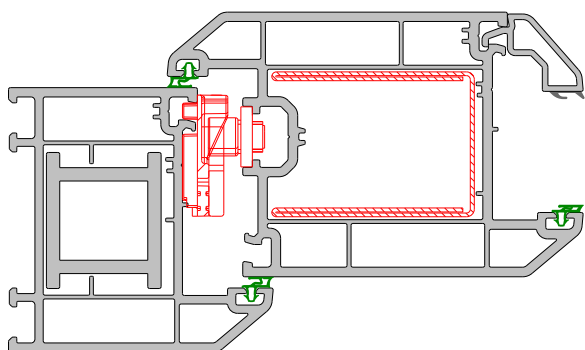
35mm backset
92mm / 62mm centres
48mm case depth
25mm hook projection





VBH order codes: Maco C-TS 35mm b/s lock

- 3CTS0003 lock 2 hooks 2 cams
- 3CTS0201 SPS striker 2-hook 2-cam l/h
- 3CTS0202 SPS striker 2-hook 2-cam r/h
- 3CTS0257 SPS striker packer
- 3CTS0248 dust box for box
- 3CTS0249 screw cover



VBH order codes: Maco C-TS double door lock

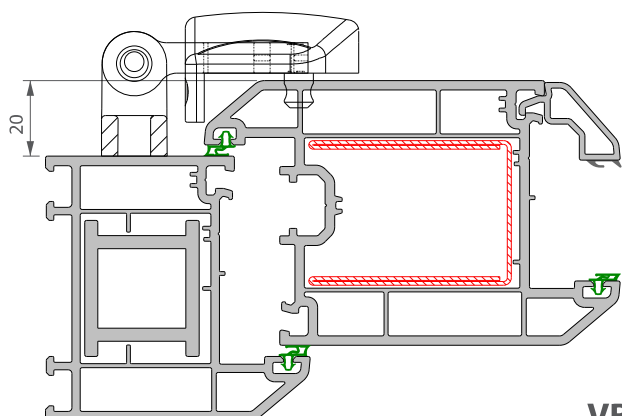
- 3CTS0005 lock, 2 hooks 2 cams, extendable
- 3CTS0205 SPS striker 2-hook 2-cam l/h
- 3CTS0206 SPS striker 2-hook 2-cam r/h
- 3CTS0257 SPS striker packer
- 3CTS0248 dust box for box
- 3CTS0249 screw cover
- 3MDL4203 in-line shootbolt 120mm bottom no cam
- 3MDL4215 reverse action shootbolt 300mm Top no cam
- 3MDL4217 reverse action shootbolt 500mm Top no cam

VBH order codes: Maco C-TS slave door lock

- 3CTS0011 slave lock
- 3MDL4203 in-line shootbolt 120mm bottom no cam
- 3MDL4205 in-line shootbolt 300mm bottom no cam
- 3MDL4215 reverse action shootbolt 300mm Top no cam
- 3MDL4217 reverse action shootbolt 500mm Top no cam
- 3MDL4607 STL double slot shootbolt striker

VBH order codes: Maco 3* cylinder

- 2GCY0039 TS007 45/50 nickel
- 2GCY0040 TS007 45/50 brass
- 2GCY0539 TS007 45/50 nickel keyed
- 2GCY0540 TS007 45/50 brass keyed
- 2GCY0739 TS007 K45/50 nickel thumb turn
- 2GCY0740 TS007 K45/50 brass thumb turn
- 2GCY0337 TS007 45/ nickel (half)
- 2GCY0338 TS007 45/ brass (half)
- 2GCY0345 TS007 50/ nickel (half)
- 2GCY0346 TS007 50/ brass (half)

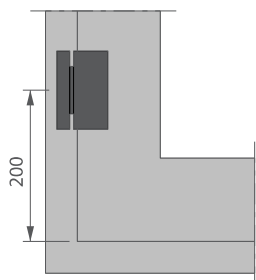
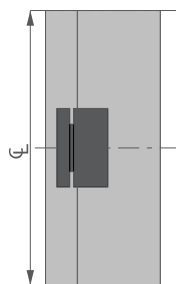
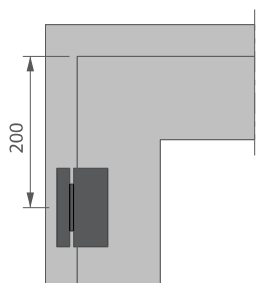


- Ample 3D adjustment
- 80Kg sash weight
- Multiple sash upstand size options
- 8 colour options to match greenteQ range
- compatible for both inward & outward doors
- only 5 main components

VBH order codes: greenteQ hybrid door hinge

- 2QHH0021 20.5mm white frame body
- 2QHH0022 20.5mm brown frame body
- 2QHH0023 20.5mm tan frame body
- 2QHH0024 20.5mm black frame body
- 2QHH0025 20.5mm polished gold frame body
- 2QHH0026 20.5mm polished chrome frame body
- 2QHH0027 20.5mm satin chrome frame body
- 2QHH0028 20.5mm smoked chrome frame body

Recommended positions:



- 2QHH0041 flag/sash cover ± 1.5 mm white
- 2QHH0042 flag/sash cover ± 1.5 mm brown
- 2QHH0043 flag/sash cover ± 1.5 mm tan
- 2QHH0044 flag/sash cover ± 1.5 mm black
- 2QHH0045 flag/sash cover ± 1.5 mm polished gold
- 2QHH0046 flag/sash cover ± 1.5 mm polished chrome
- 2QHH0047 flag/sash cover ± 1.5 mm satin chrome
- 2QHH0048 flag/sash cover ± 1.5 mm smokey chrome
- 2QHH0139 sash packer white
- 2QHH0149 sash packer black

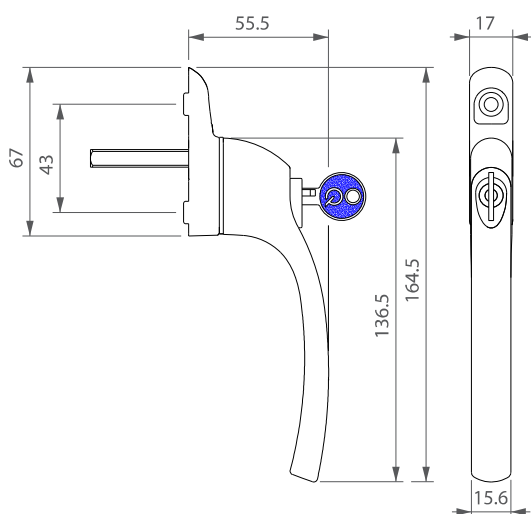
- 2QHH0130 frame packer 1mm white
- 2QHH0140 frame packer 1mm black

VBH order codes: Other PAS 24 approved greenteQ products

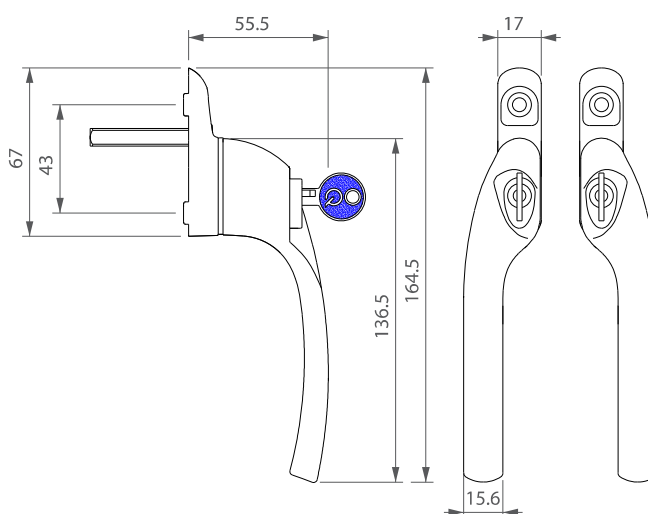


| | |
|----------|--|
| 2QEH0061 | Alpha espag handle, 40mm spindle, in-line, locking, white |
| 2QEH0062 | Alpha espag handle, 40mm spindle, in-line, locking, PVD gold |
| 2QEH0063 | Alpha espag handle, 40mm spindle, in-line, locking, polished chrome |
| 2QEH0064 | Alpha espag handle, 40mm spindle, in-line, locking, gold |
| 2QEH0065 | Alpha espag handle, 40mm spindle, in-line, locking, satin chrome |
| 2QEH0066 | Alpha espag handle, 40mm spindle, in-line, locking, black |
| 2QEH1121 | Alpha espag handle, 40mm spindle, off-set, l/h, locking, white |
| 2QEH1122 | Alpha espag handle, 40mm spindle, off-set, r/h, locking, white |
| 2QEH1123 | Alpha espag handle, 40mm spindle, off-set, l/h, locking, PVD gold |
| 2QEH1124 | Alpha espag handle, 40mm spindle, off-set, r/h, locking, PVD gold |
| 2QEH1125 | Alpha espag handle, 40mm spindle, off-set, l/h, locking, polished chrome |
| 2QEH1126 | Alpha espag handle, 40mm spindle, off-set, r/h, locking, polished chrome |
| 2QEH1127 | Alpha espag handle, 40mm spindle, off-set, l/h, locking, gold |
| 2QEH1128 | Alpha espag handle, 40mm spindle, off-set, r/h, locking, gold |
| 2QEH1129 | Alpha espag handle, 40mm spindle, off-set, l/h, locking, satin chrome |
| 2QEH1130 | Alpha espag handle, 40mm spindle, off-set, r/h, locking, satin chrome |
| 2QEH1131 | Alpha espag handle, 40mm spindle, off-set, l/h, locking, black |
| 2QEH1132 | Alpha espag handle, 40mm spindle, off-set, r/h, locking, black |

Alpha in-line, locking



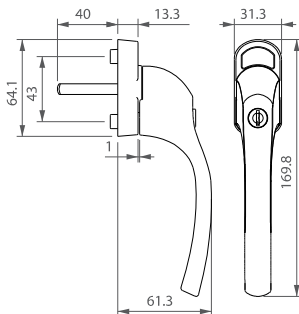
Alpha off-set, locking



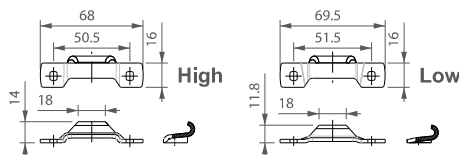
VBH order codes: Other PAS 24 approved greenteQ products



| | |
|----------|--|
| 2QTT0061 | Alpha T&T handle, 40mm spindle, locking, white |
| 2QTT0066 | Alpha T&T handle, 40mm spindle, locking, black |
| 2QTT0062 | Alpha T&T handle, 40mm spindle, locking, PVD gold |
| 2QTT0063 | Alpha T&T handle, 40mm spindle, locking, polished chrome |
| 2QTT0065 | Alpha T&T handle, 40mm spindle, locking, satin chrome |
| 2QTT0068 | Alpha T&T handle, 40mm spindle, locking, smokey chrome |
| 2QTT0261 | Alpha T&T handle, 40mm spindle, non-locking, white |
| 2QTT0266 | Alpha T&T handle, 40mm spindle, non-locking, black |
| 2QTT0262 | Alpha T&T handle, 40mm spindle, non-locking, PVD gold |
| 2QTT0263 | Alpha T&T handle, 40mm spindle, non-locking, polished chrome |
| 2QTT0265 | Alpha T&T handle, 40mm spindle, non-locking, satin chrome |
| 2QTT0268 | Alpha T&T handle, 40mm spindle, non-locking, smokey chrome |



2QFH0062 17mm stack height casement hinge protector



Fitting

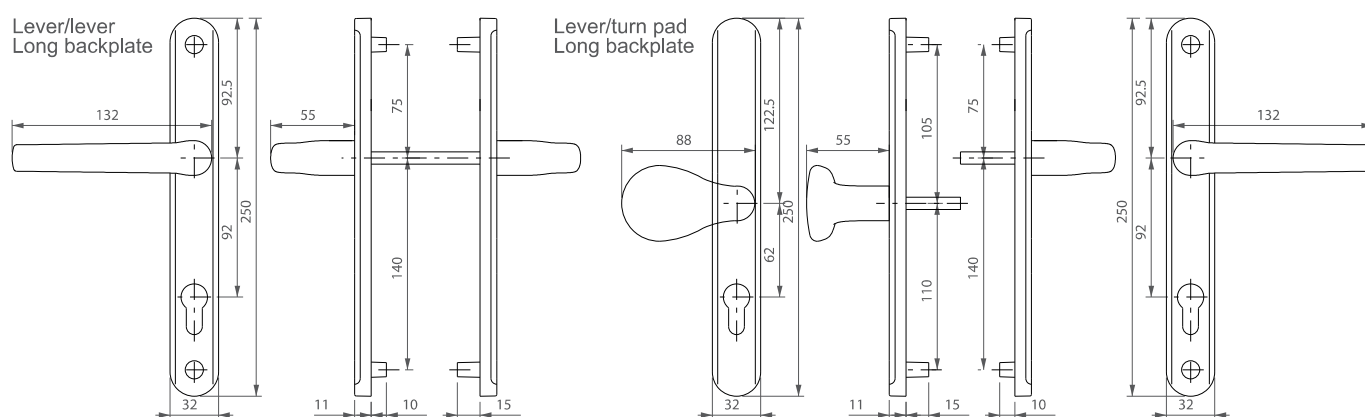
- Position the centre of the sash component 80mm in from the corner/rebate of the sash
- Position the centre of the frame component 92mm in from the corner of the frame

Adopting these positions will align the frame and sash components to be within 100mm from the hinge corner

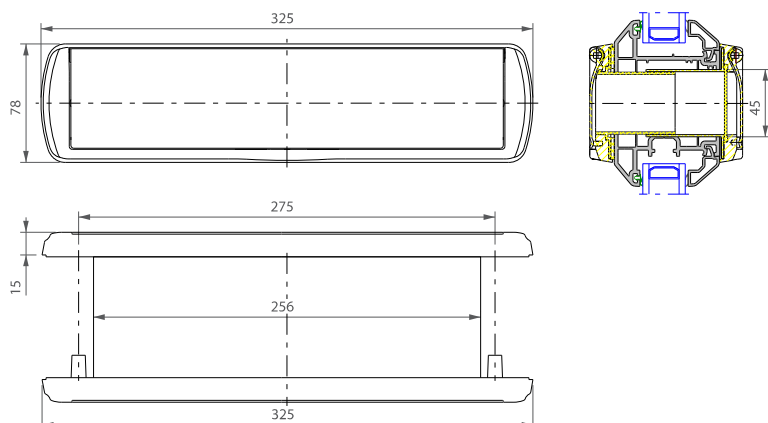
VBH order codes: Other PAS 24 approved greenteQ products



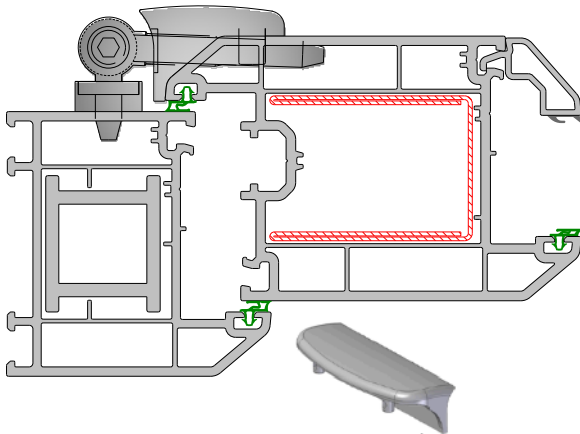
- 2QHB0101 Alpha door handle, 92 PZ, unsprung, lever/lever, white
- 2QHB0104 Alpha door handle, 92 PZ, unsprung, lever/lever, black
- 2QHB0105 Alpha door handle, 92 PZ, unsprung, lever/lever, PVD gold
- 2QHB0106 Alpha door handle, 92 PZ, unsprung, lever/lever, polished chrome
- 2QHB0121 Alpha door handle, 92 PZ, sprung, lever/lever, white
- 2QHB0124 Alpha door handle, 92 PZ, sprung, lever/lever, black
- 2QHB0125 Alpha door handle, 92 PZ, sprung, lever/lever, PVD gold
- 2QHB0126 Alpha door handle, 92 PZ, sprung, lever/lever, polished chrome
- 2QHB0127 Alpha door handle, 92 PZ, sprung, lever/lever, satin chrome
- 2QHB0128 Alpha door handle, 92 PZ, sprung, lever/lever, smokey chrome



- 2QBX0001 Omega letter plate, white
- 2QBX0004 Omega letter plate, black
- 2QBX0005 Omega letter plate, PVD gold/polished gold
- 2QBX0006 Omega letter plate, polished chrome
- 2QBX0007 Omega letter plate, satin chrome
- 2QBX0008 Omega letter plate, smokey chrome



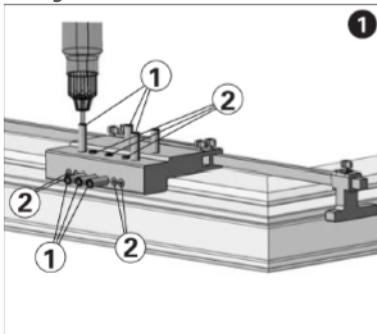
SFS 2D door hinge



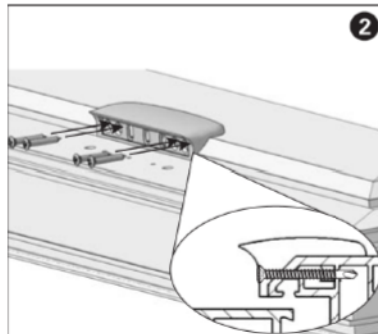
Heritage 2800 face plate

- Secured by Design registered - robust, durable & secure
- Excellent long term operational reliability - fit & forget, eliminating costly service calls
- Perfect aesthetical balance - enhancing the finished appearance of your doors
- Easy directional adjustment, if required - fabricator and installer friendly (includes downwards adjustment to optimise seal on low thresholds)
- 10 year mechanical guarantee - for your peace of mind
- Bespoke, system specific design - tailor made to your door profile
- Available in a wide range of quality finishes - to blend perfectly with your choice of coloured profiles
- Optimised modular packaging system - reduced packaging waste and easier stock control
- Excellent carrying capacity, 40Kg per hinge - easily capable of supporting triple glazing
- Slim-line - no need to fit frame extensions, in most cases (maximised door opening width)
- C E Marked

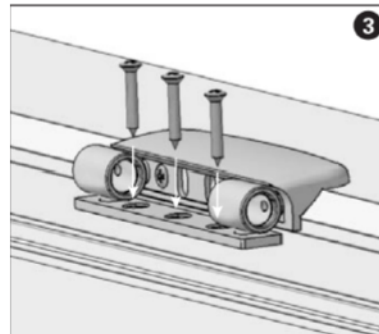
Fitting Instructions



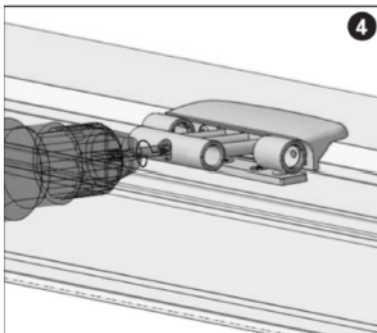
Clamp the jig in the correct position. Drill through all bushes marked 1 with a $\varnothing 7.2\text{mm}$ drill bit. Then drill through all bushes marked 2 with a $\varnothing 3.0\text{mm}$ drill bit



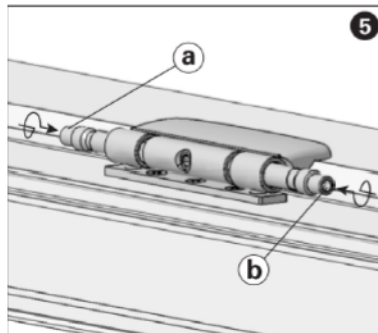
Fasten the sash plate with screws $3.9 \times 38\text{mm}$



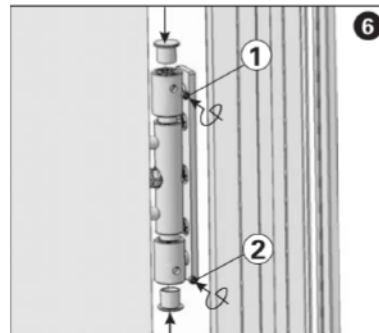
Fasten the frame plate with fastener $3.9 \times 38\text{mm}$. **IMPORTANT:** ensure that the grub screw holes are positioned towards the door sash



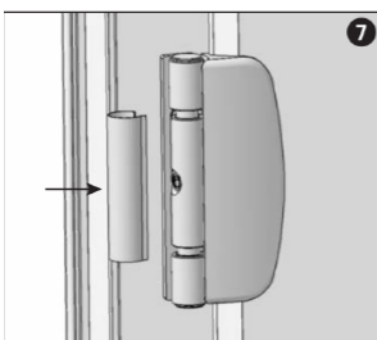
Drive in the central barrel section until it lines up with the rings in the frame plate



Drive in pin **a** flush fit to the upper ring. Drive in pin **b** till it touches the central barrel section.



Fit the caps and fasten the security screws 1 and 2

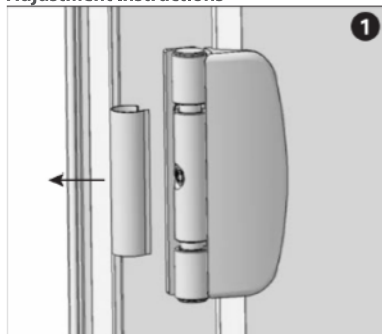


Fit the cover cap on the central barrel

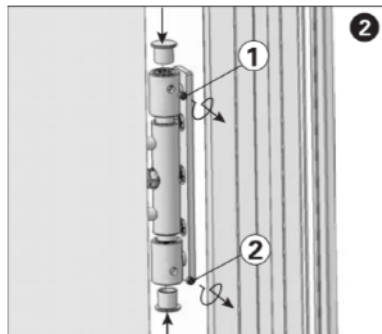
SFS 2D door hinge



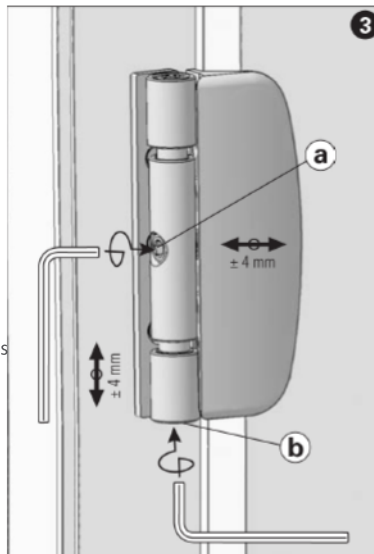
Adjustment Instructions



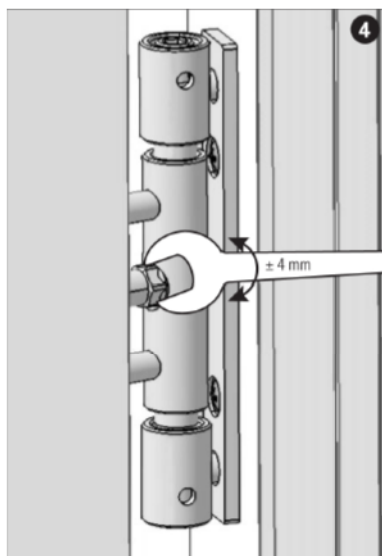
Remove the cover cap



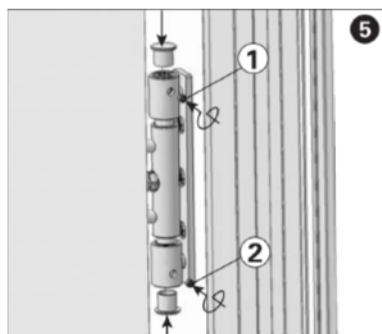
Unscrew the security screws & remove the caps



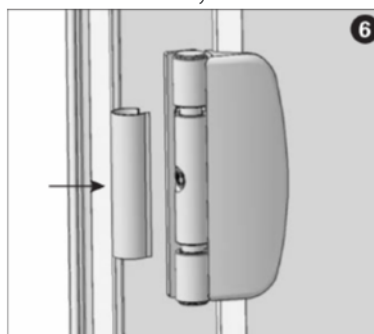
Horizontal adjustment: adjust by turning screw **a** with a 5 mm Allen Key.
Height adjustment: adjust by turning screw **b** with a 5 mm Allen Key



In difficult situations it is possible to make the horizontal adjustment from inside turning the hexagonal nut with a 9 mm spanner



Refit the caps and fasten the security screws 1 and 2



Refit the cover cap on the central barrel

Jig Sets

| | |
|--|---------|
| Jig to suit Deceuninck door profile 2800 & Zen | 1262639 |
| Jig to suit Deceuninck door profile 2500 | 1272123 |
| Square bar for multiple jigs | 298442 |
| End stops for multi jigs | 298450 |

Drill Sets & Accessories

| | |
|--|---------|
| 7.2 mm long series drill bit | 1272081 |
| 3.0 mm long series drill bit | 1272045 |
| Insert bit - 5mm ball ended | 519248 |
| 9mm spanner with 5mm hex bar tool | 701756 |
| Rolson Angle Driver (Installation Aid) | 1260583 |

Stock Colour Options: sash plates, frame nest

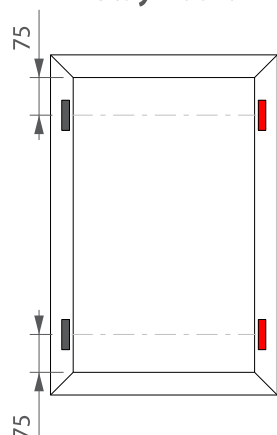
| | |
|--|---------|
| Deceuninck 2800 White - RAL 9016 | 1391531 |
| Deceuninck 2800 Cream - RAL 9001 | 1391533 |
| Deceuninck 2800 Light Brown - RAL 8003 | 1391535 |
| Deceuninck 2800 Irish Oak - RAL 1011 | 1391537 |
| Deceuninck 2800 Black - RAL 9005 | 1391543 |
| Deceuninck 2800 Grey - RAL 7016 | 1391545 |
| Deceuninck 2800 Rosewood | 1391547 |
| Deceuninck 2800 Chartwell Green | 1391548 |
| Deceuninck 2800 Gold | 1391552 |
| Deceuninck 2800 Bright Chrome | 1391558 |
| Deceuninck 2800 Matt Chrome | 1391559 |
| Deceuninck 2800 Silk Grey - RAL7044* | 1391562 |
| Deceuninck 2800 Cement Grey - RAL7033* | 1391561 |

*New colours only available with the Spring steel cover caps

GT Window Products



GT Stay Guard Elite



Fit the centre of the Stay Guard Elite approx. 75mm from the internal corner of the frame.

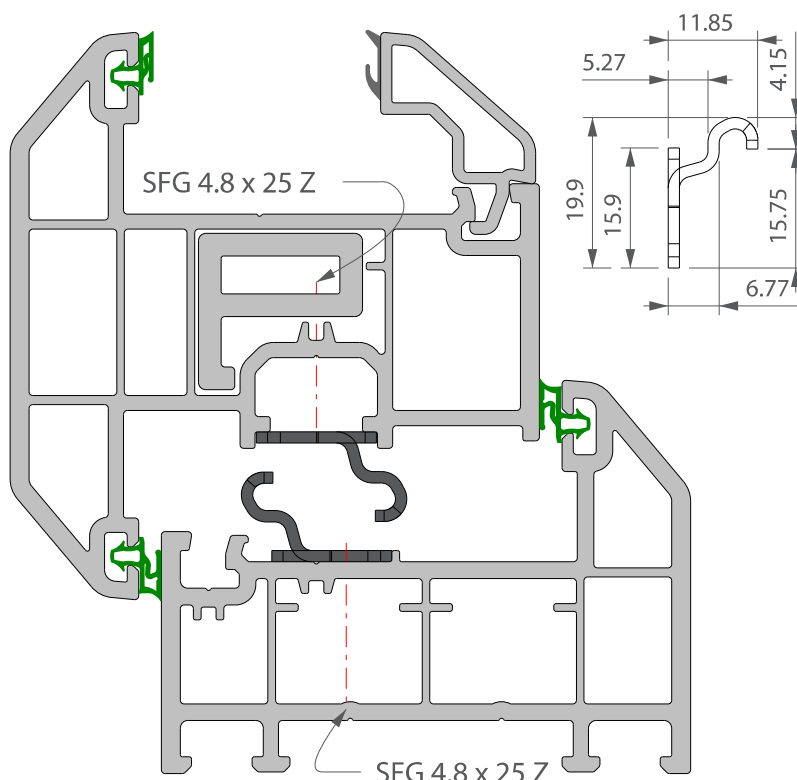
Fit run-up blocks P 2502 on the opposite side to the Stay Guard Elite and pack the unit at the same point to prevent sash movement

GT Stay Guard Elite is a simple, easy and effective method of enhancing security for windows.

The unique engineered shape and design of Stay Guard Elite goes beyond meeting the industry's most demanding security standards.

This hinge protection device which when fitted in conjunction with a friction stay, will assist in meeting the requirements of PAS 24.

Wherever possible, and to obtain the best performance, Stay-Guard Elite should be secured into reinforcement.



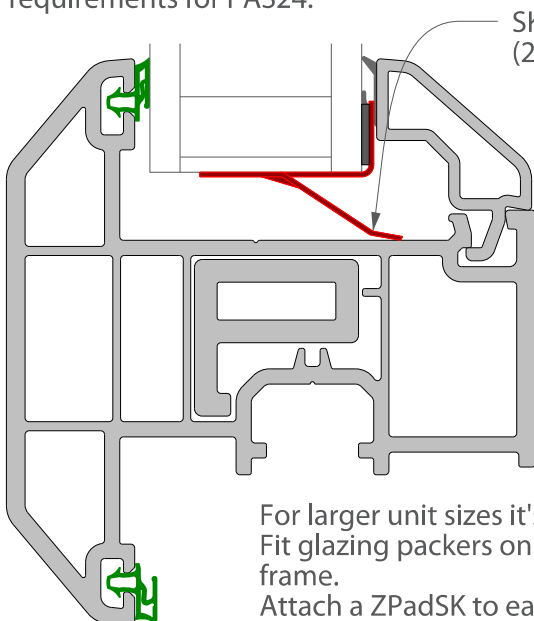
GT Stay Guard Elite

SG036 on outer frame and sash for all types of stays including egress/easy clean

GT Snap-Lok

Snap-Lok is a clip system for retaining glass units on internally glazed windows and doors.

When fitted in the appropriate numbers and positions it will assist windows and doors to meet the requirements for PAS24.



SK001 + ZPadSK
(28mm units)

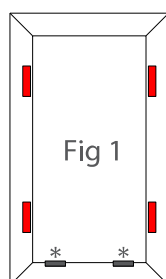


Fig 1

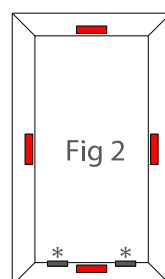


Fig 2

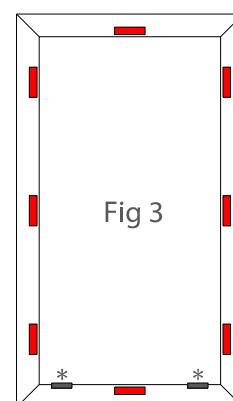


Fig 3

For 28mm units up to 900mm wide x 1200 high fit a minimum of 4 Snap-Loks as shown in Fig 1 & Fig 2.

For larger unit sizes it's advisable to fit additional clips as per Fig 3.

Fit glazing packers on the bottom rail as shown *, and place the glass unit into the frame.

Attach a ZPadSK to each clip, remove the blue cover paper, this will allow the clip to stick to the unit when in position.

Push all Snap-Lok clips into place prior to packing the unit.



Fab & Fix

Connoisseur casement espag handle

Solid die cast zinc construction
Heavyweight handles with sturdy feel

Heavy duty sprung latching wedge
Positive click on closing

Long handle with 43mm window clearance
Greater leverage and easy to operate without catching a hand on the window

Patented cover caps with colour coordinated finish
Perfectly matching components, even down to the smallest details

PAS 24 approved when fitted to Deceuninck casement products
Cascadable performance data from BSI

Key clicks into place when inserted
Won't fall out of the lock, even when pivoting the lever

Slotted spindle (40mm version only)
Allows cropping to 5mm increments



Sensei Tilt & Turn espag handle

Handle locks in both the closed position and the tilt position
Provides additional safety by preventing unwanted change in window position

Solid die cast zinc construction
Heavyweight handles with sturdy feel

Heavy duty sprung latching wedge
Positive click on closing

Long handle with 47mm window clearance
Greater leverage and easy to operate without catching a hand on the window

Patented cover caps with colour coordinated finish
Perfectly matching components, even down to the smallest details

PAS 24 approved when fitted to Deceuninck tilt & turn products
Cascadable performance data from BSI

Key clicks into place when inserted
Won't fall out of the lock, even when pivoting the lever

Slotted spindle (40mm version only)
Allows cropping to 5mm increments



Balmoral / Ashford In-Line door handle

Solid die cast zinc construction with heavy duty spring cassette
Sturdy feel and consistent 90 degree lever return

Sculpted ergonomic lever and low friction nylon bush
Easy to grip and smooth action

Wide backplate
To suit cylinder guards and accommodate larger cylinder preparation

Colour coordinated screw heads
Perfectly matching hardware, even down to the smallest details

Supplied fully assembled
Simple and quick installation, no need to fit springs or lever

Baseplate in common with all Balmoral / Ashford handles
Same routing detail regardless of product variant chosen

PAS 24 approved when fitted to Deceuninck single & double doors
Cascadable performance data from BSI

Silicon Site-Protectors available
Ensures perfect condition after installation

Each part packaged in a separate chamber, but supplied as a set
No scratching of parts during transit





Fab & Fix

Nu-mail letter plate

Fully colour matched die cast zinc flap and die cast zinc frame
Quality and durability you can see and feel

Anti-snap flap opens to 180° with fully sprung return
Easier to operate, no broken flaps, even with the Sunday papers

10" wide aperture
Meets Royal Mail standards, will easily take A4 size post

The best acoustic insulation of any letterplate on the market*
Perfect for flats, or houses near busy roads

Fully weather sealed (with rubber gasket)
No draft, no rain water

Secure through fixing ensures letterplate can only be removed from the inside of the house
Prevents burglars gaining access to the cylinder internally

Can be through fixed or face fixed
Flexible according to fabricator preference

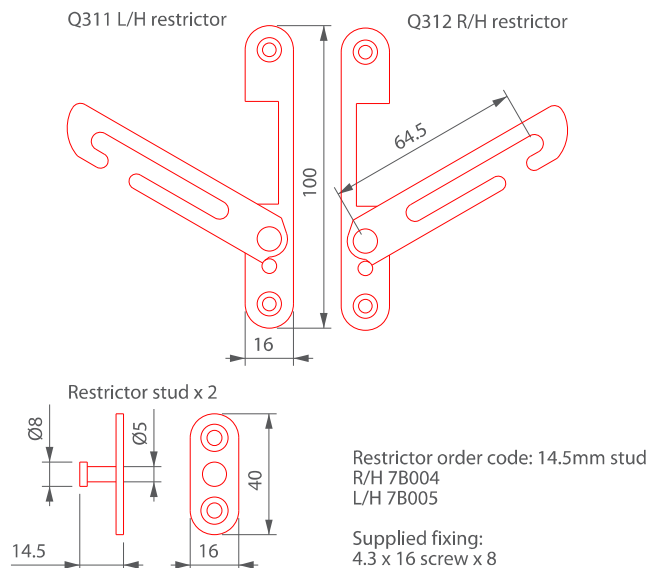
Optional restricted opening with the addition of a PAS24 Letterplate Restrictor
Possible to restrict the opening angle, or lock the flap shut

Supplied with 70mm and 45mm screws
Everything needed for installation on a variety of door thicknesses

PAS 24 approved when fitted to Deceuninck single & double doors
Cascadable performance data



Q318 Restrictor stay set



- Prevents window opening beyond a certain point from inside and outside providing additional security
- Manufactured from austenitic stainless steel for maximum corrosion resistance
- Attach to eurogroove to supplement existing devices, can be retro-fitted
- Supplied with fixing screws

Traditional 2500:

3 Fabrication process

deceuninck

3.6 Use of accessories

135

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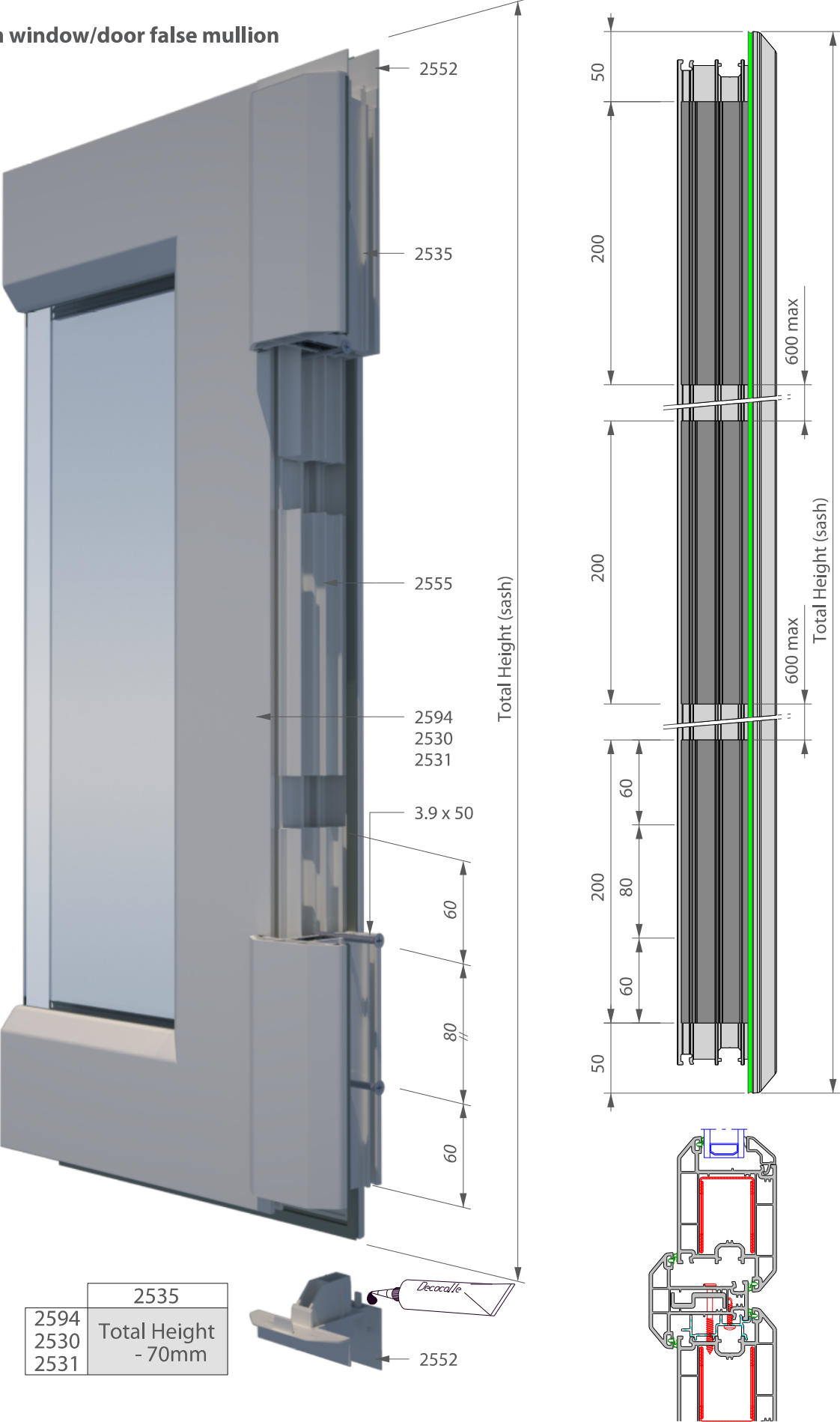
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Windows & Doors

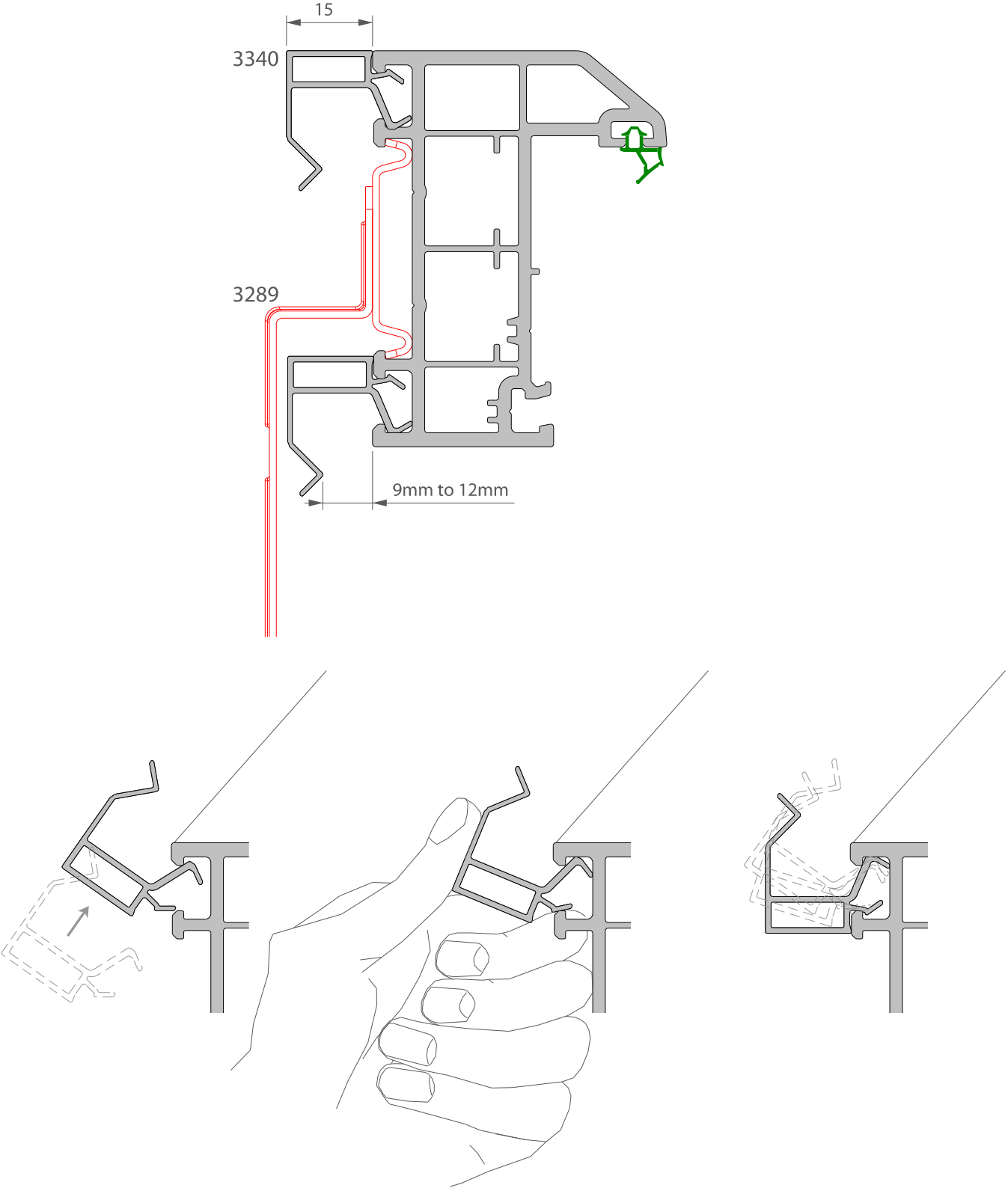
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3.6 Finishing accessories

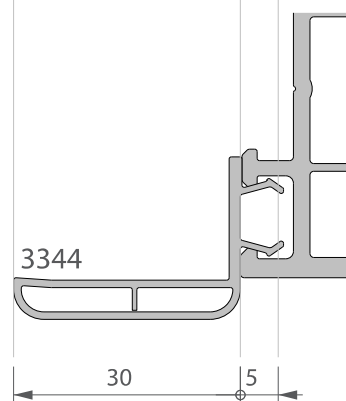
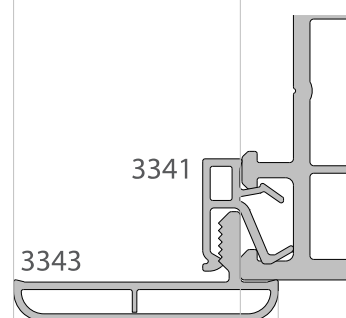
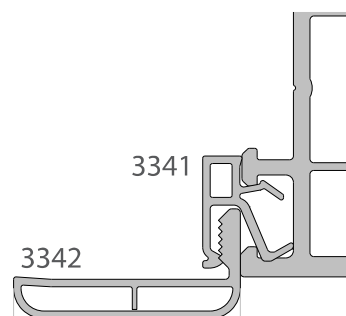
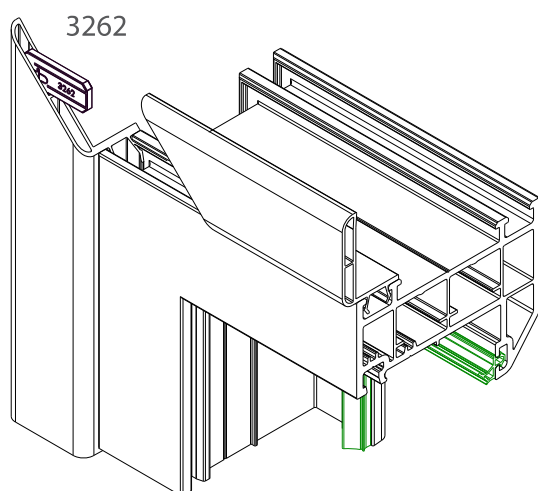
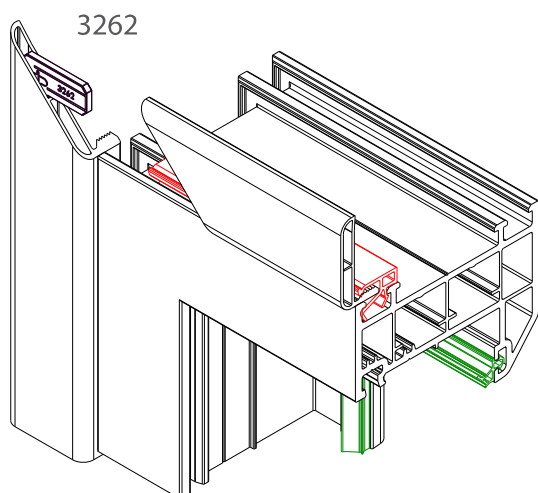
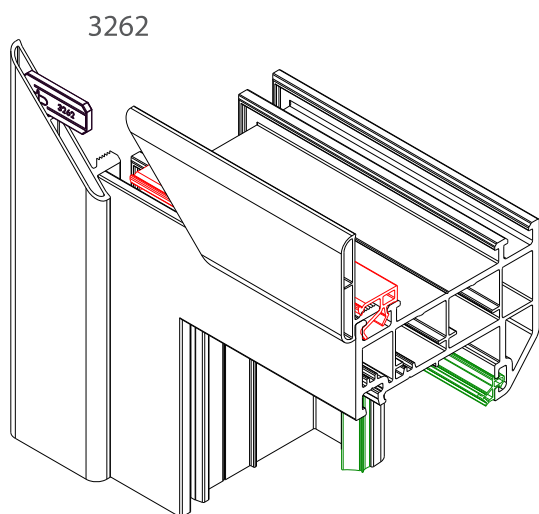
French window/door false mullion



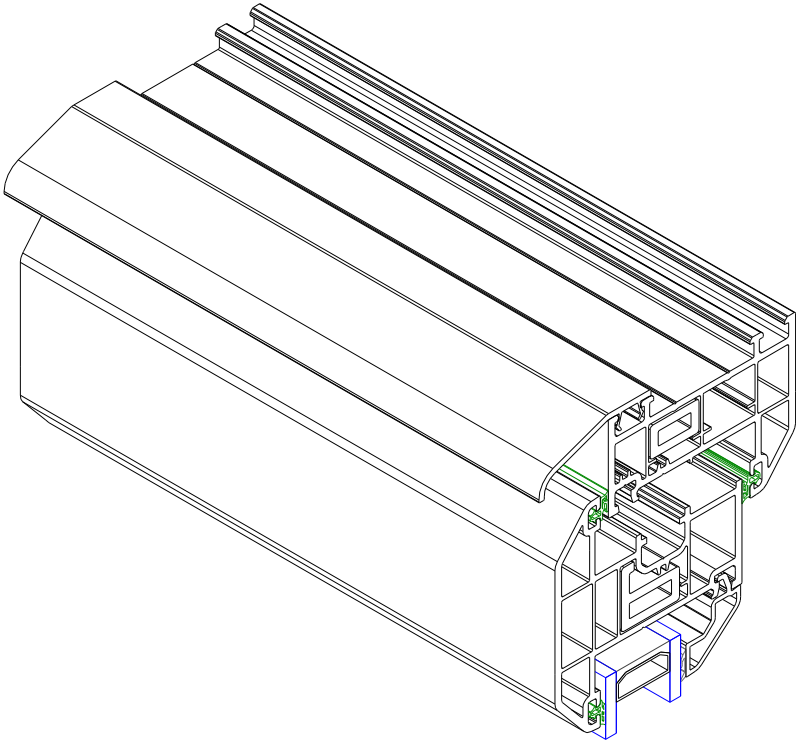
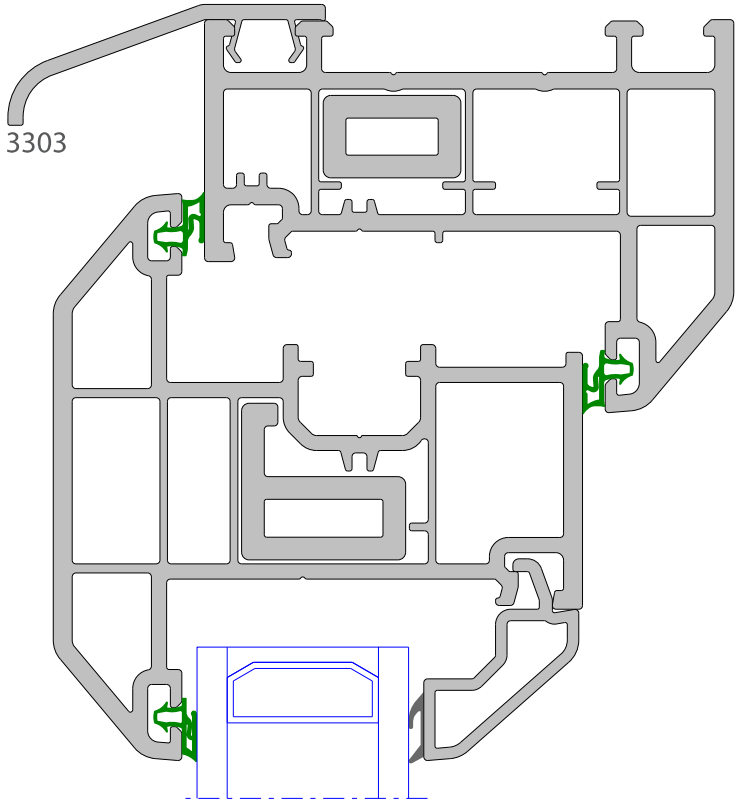
Assembly of 3340



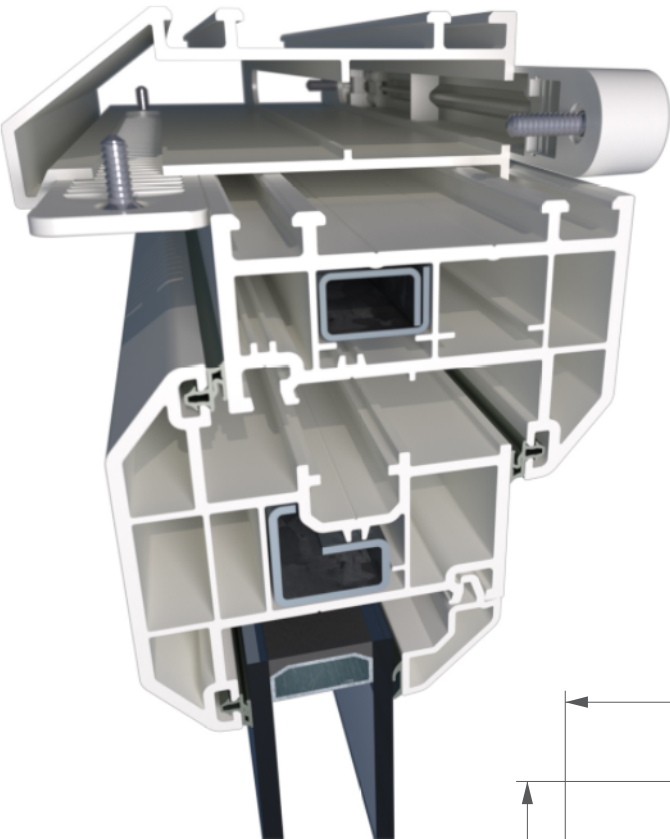
Assembly of 3341 + 3342/43, 3344



Assembly of 3303

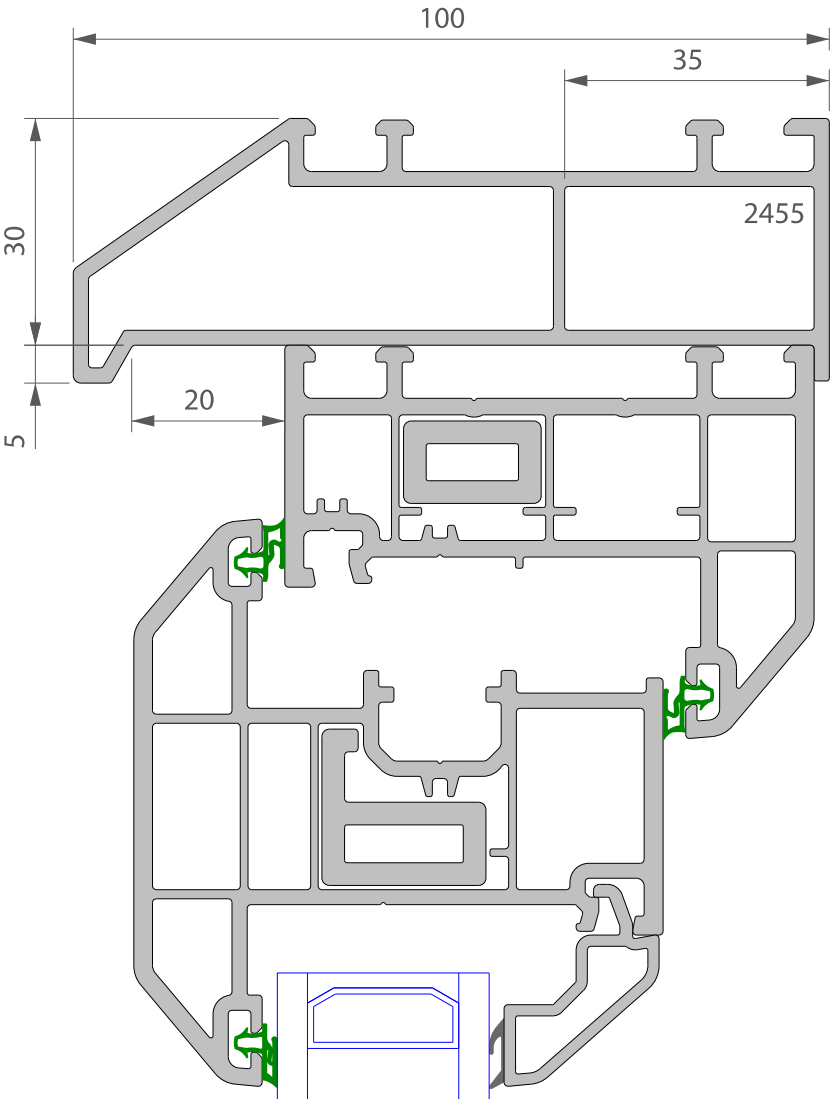


Assembly of 2455

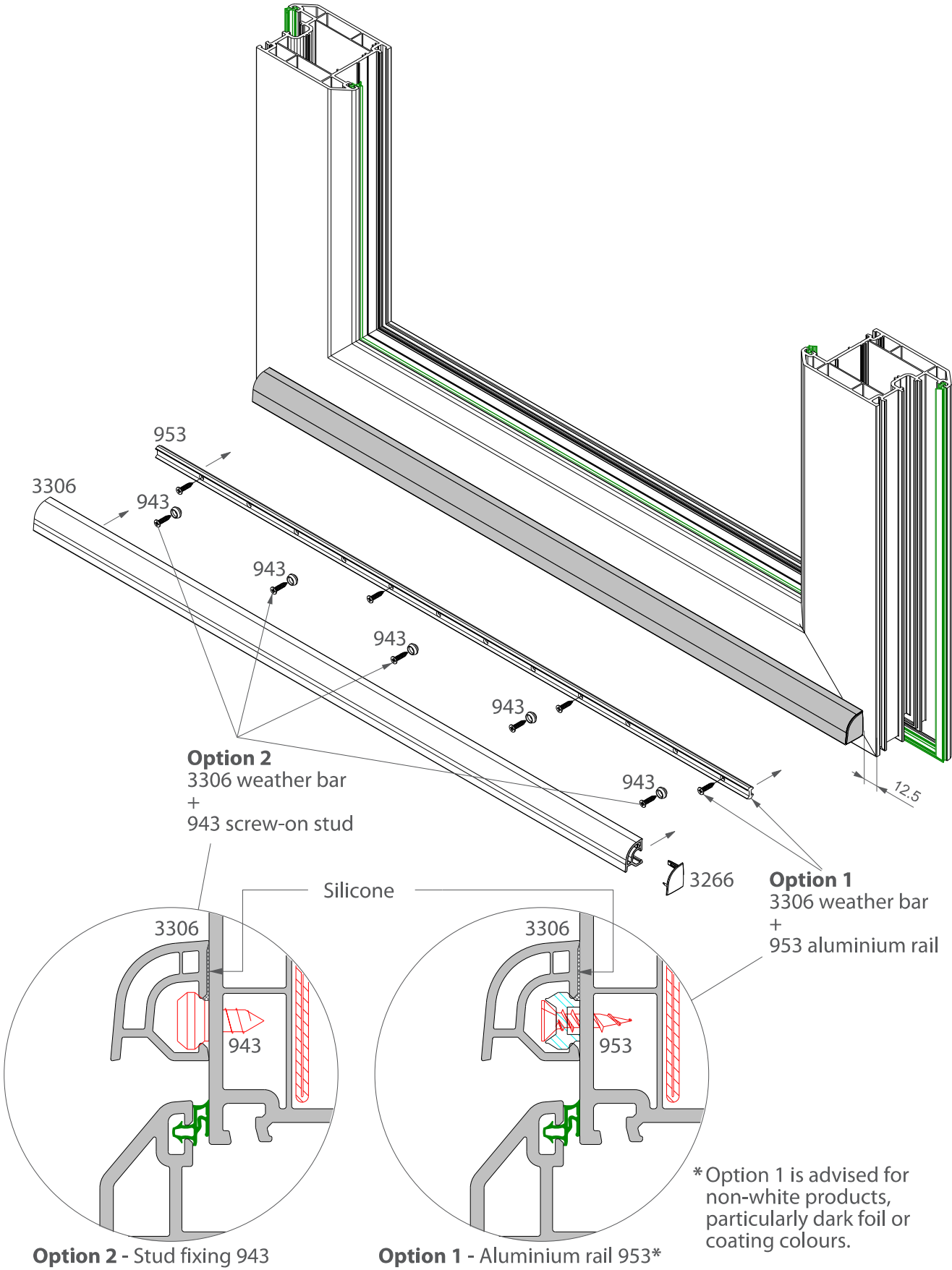


2455 head section shown with external flat grille and internal Link vent fitted.

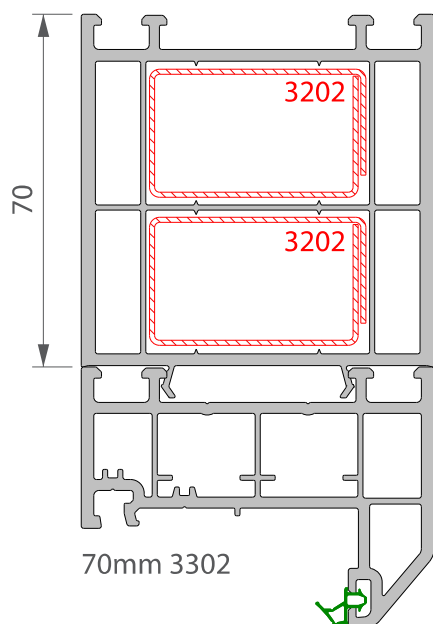
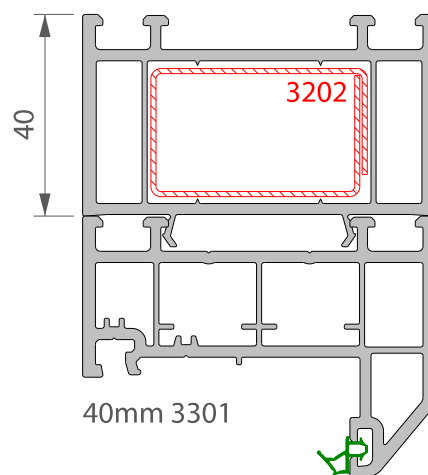
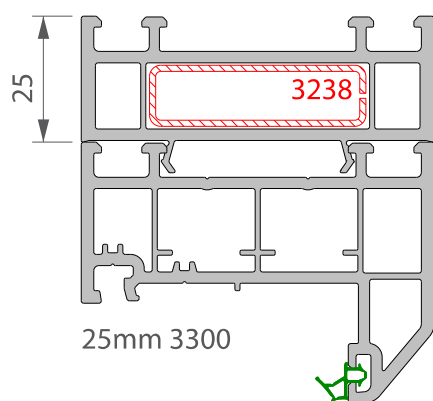
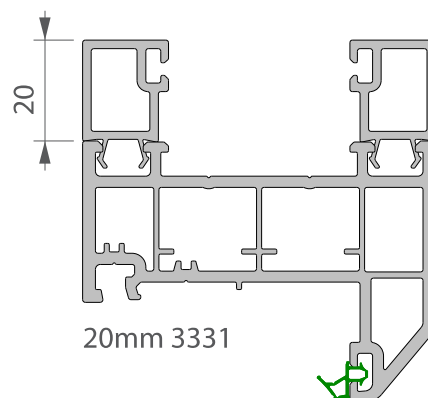
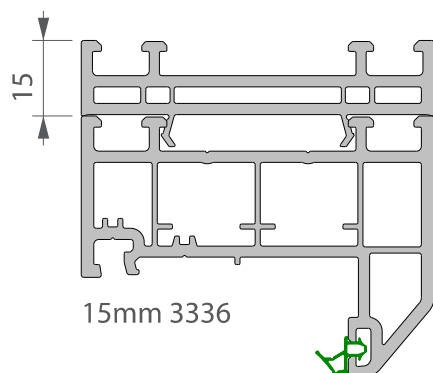
Ventilator parts available from VBH



Assembly of 3306

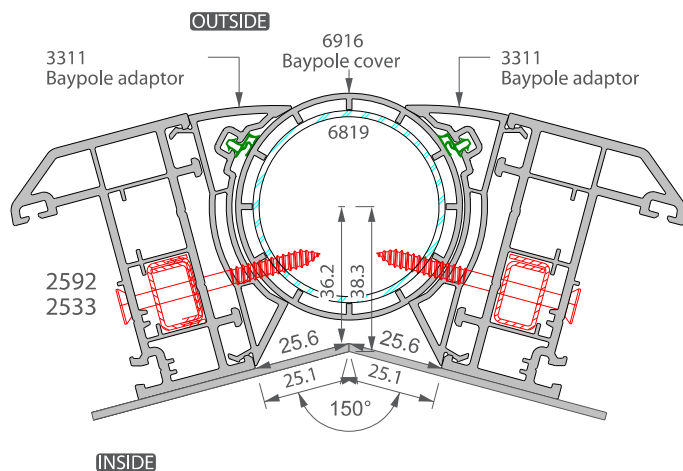


Frame extenders



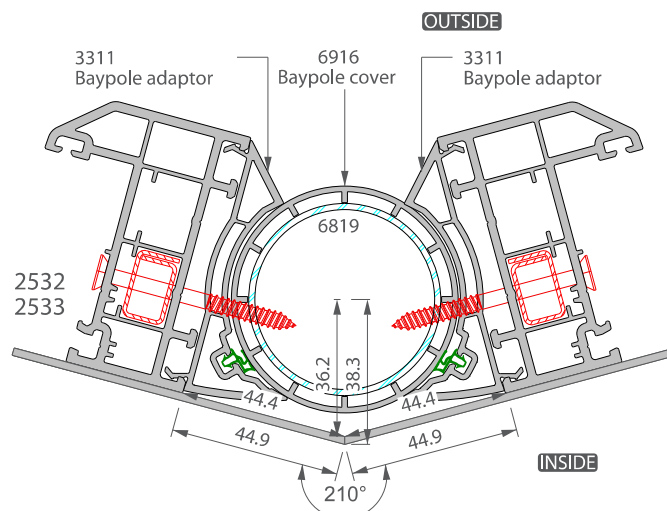
We recommended that all exposed joints are sealed on site with silicone to protect against the ingress of water.

Variable angle pole deductions



Above illustration with 150° internal cill angle;
frame deduction of 25.6mm (back of frame) or 25.1mm (back of cill),
pole centre position of 36.2mm (back of frame) or 38.3mm (back of cill)

| Internal Cill Angle | Frame Deduction | | Pole Centre | |
|------------------------|-----------------|--------------|---------------|--------------|
| | back of frame | back of cill | back of frame | back of cill |
| 180 | 35.2 | 35.2 | 34.9 | 36.9 |
| 178 | 34.6 | 34.6 | 34.9 | 36.9 |
| 176 | 34.0 | 34.0 | 34.9 | 36.9 |
| 174 | 33.4 | 33.3 | 35.0 | 37.0 |
| 172 | 32.8 | 32.7 | 35.0 | 37.0 |
| 170 | 32.1 | 32.0 | 35.0 | 37.0 |
| 168 | 31.6 | 31.4 | 35.1 | 37.1 |
| 166 | 31.0 | 30.7 | 35.2 | 37.2 |
| 164 | 30.3 | 30.0 | 35.2 | 37.3 |
| 162 | 29.7 | 29.4 | 35.3 | 37.4 |
| 160 | 29.1 | 28.7 | 35.4 | 37.5 |
| 158 | 28.5 | 28.1 | 35.6 | 37.6 |
| 156 | 27.8 | 27.4 | 35.7 | 37.7 |
| 154 | 27.2 | 26.7 | 35.8 | 37.9 |
| 152 | 26.5 | 26.0 | 36.0 | 38.0 |
| 150 | 25.6 | 25.1 | 36.2 | 38.3 |
| 148 | 25.0 | 24.4 | 36.4 | 38.5 |
| 146 | 24.3 | 23.7 | 36.6 | 38.7 |
| 144 | 23.6 | 23.0 | 36.8 | 38.9 |
| 142 | 23.0 | 22.3 | 37.0 | 39.1 |
| 140 | 22.3 | 21.5 | 37.2 | 39.4 |
| 138 | 21.6 | 20.8 | 37.5 | 39.6 |
| 136 | 20.9 | 20.1 | 37.8 | 39.9 |
| 134 | 20.1 | 19.3 | 38.0 | 40.2 |
| 132 | 19.4 | 18.5 | 38.3 | 40.5 |
| 130 | 18.7 | 17.7 | 38.6 | 40.8 |
| 128 | 17.9 | 17.0 | 39.0 | 41.2 |
| 126 | 17.2 | 16.1 | 39.3 | 41.5 |
| 124 | 16.4 | 15.3 | 39.6 | 41.9 |
| 122 | 15.6 | 14.5 | 40.0 | 42.3 |
| 120 | 14.8 | 13.6 | 40.4 | 42.7 |
| 118 | 14.0 | 12.8 | 40.8 | 43.2 |
| 116 | 13.1 | 11.9 | 41.3 | 43.6 |
| 114 | 12.3 | 11.0 | 41.7 | 44.1 |
| 112 | 11.4 | 10.0 | 42.2 | 44.6 |
| 110 | 10.5 | 9.1 | 42.7 | 45.2 |
| 108 | 9.6 | 8.1 | 43.3 | 45.7 |
| 106 | 8.6 | 7.1 | 43.8 | 46.3 |
| 104 | 7.7 | 6.1 | 44.4 | 47.0 |
| 102 | 6.7 | 5.0 | 45.0 | 47.6 |
| 100 | 5.6 | 4.0 | 45.7 | 48.3 |
| 98 | 4.6 | 2.8 | 46.4 | 49.0 |
| 96 | 3.5 | 1.7 | 47.1 | 49.8 |
| 94 | 2.4 | 0.5 | 47.9 | 50.6 |
| 92 | 1.2 | -0.7 | 48.7 | 51.4 |
| 90 | 0 | -2.0 | 49.5 | 52.3 |

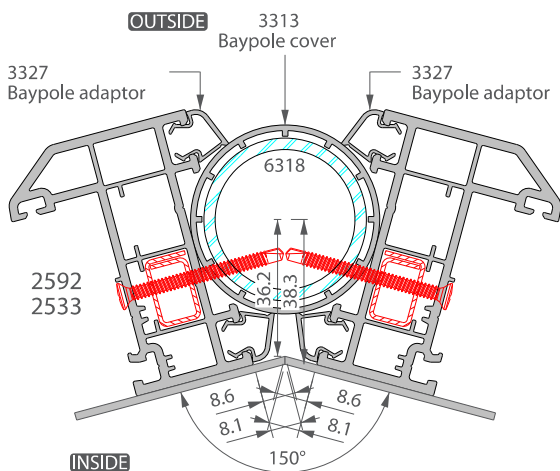


Above illustration with 210° internal cill angle;
frame deduction of 44.4mm (back of frame) or 44.9mm (back of cill),
pole centre position of 36.2mm (back of frame) or 38.3mm (back of cill)

| Internal Cill Angle | Frame Deduction | | Pole Centre | |
|------------------------|-----------------|--------------|---------------|--------------|
| | back of frame | back of cill | back of frame | back of cill |
| 180 | 35.0 | 35.0 | 35.0 | 37.0 |
| 182 | 35.6 | 35.6 | 35.0 | 37.0 |
| 184 | 36.2 | 36.3 | 35.0 | 37.0 |
| 186 | 36.8 | 36.9 | 35.0 | 37.0 |
| 188 | 37.4 | 37.6 | 35.1 | 37.1 |
| 190 | 38.1 | 38.2 | 35.1 | 37.1 |
| 192 | 38.7 | 38.9 | 35.2 | 37.2 |
| 194 | 39.3 | 39.5 | 35.3 | 37.3 |
| 196 | 39.9 | 40.2 | 35.3 | 37.4 |
| 198 | 40.5 | 40.9 | 35.4 | 37.5 |
| 200 | 41.2 | 41.5 | 35.5 | 37.6 |
| 202 | 41.8 | 42.2 | 35.7 | 37.7 |
| 204 | 42.4 | 42.9 | 35.8 | 37.8 |
| 206 | 43.1 | 43.5 | 35.9 | 38.0 |
| 208 | 43.7 | 44.2 | 36.1 | 38.1 |
| 210 | 44.4 | 44.9 | 36.2 | 38.3 |
| 212 | 45.0 | 45.6 | 36.4 | 38.5 |
| 214 | 45.7 | 46.3 | 36.6 | 38.7 |
| 216 | 46.4 | 47.0 | 36.8 | 38.9 |
| 218 | 47.0 | 47.7 | 37.0 | 39.1 |
| 220 | 47.7 | 48.5 | 37.2 | 39.4 |
| 222 | 48.4 | 49.2 | 37.5 | 39.6 |
| 224 | 49.1 | 50.0 | 37.7 | 39.9 |
| 226 | 49.9 | 50.7 | 38.0 | 40.2 |
| 228 | 50.6 | 51.5 | 38.3 | 40.5 |
| 230 | 51.3 | 52.2 | 38.6 | 40.8 |
| 232 | 52.1 | 53.0 | 38.9 | 41.2 |
| 234 | 52.8 | 53.8 | 39.3 | 41.5 |
| 236 | 53.6 | 54.7 | 39.6 | 41.9 |
| 238 | 54.4 | 55.5 | 40.0 | 42.3 |
| 240 | 55.2 | 56.4 | 40.4 | 42.7 |
| 242 | 56.0 | 57.2 | 40.8 | 43.2 |
| 244 | 56.9 | 58.1 | 41.3 | 43.6 |
| 246 | 57.7 | 59.0 | 41.7 | 44.1 |
| 248 | 58.6 | 60.0 | 42.2 | 44.6 |
| 250 | 59.5 | 60.9 | 42.7 | 45.2 |
| 252 | 60.4 | 61.9 | 43.3 | 45.7 |
| 254 | 61.4 | 62.3 | 43.8 | 46.3 |
| 256 | 62.3 | 63.9 | 44.4 | 47.0 |
| 258 | 63.3 | 65.0 | 45.0 | 47.6 |
| 260 | 64.4 | 66.0 | 45.7 | 48.3 |
| 262 | 65.4 | 67.2 | 46.4 | 49.0 |
| 264 | 66.5 | 68.3 | 47.1 | 49.8 |
| 266 | 67.6 | 69.5 | 47.9 | 50.6 |
| 268 | 68.8 | 70.7 | 48.7 | 51.4 |
| 270 | 70.0 | 72.0 | 49.5 | 52.3 |

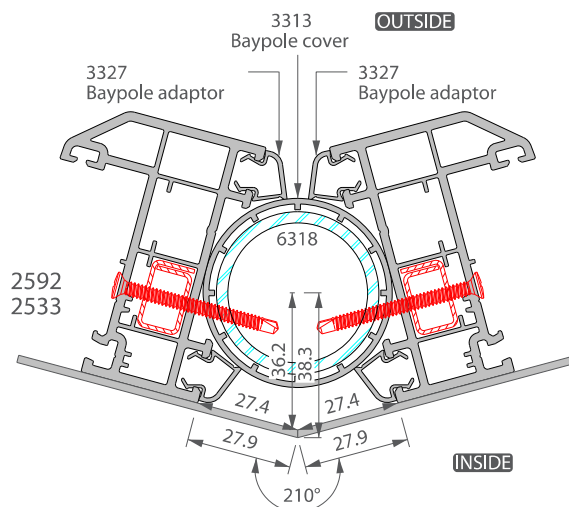
We recommended that all exposed joints are sealed on site with silicone to protect against the ingress of water.

Variable angle pole deductions



Above illustration with 150° internal cill angle;
frame deduction of 8.6mm (back of frame) or 8.1mm (back of cill),
pole centre position of 36.2mm (back of frame) or 38.3mm (back of cill)

| Internal Cill Angle | Frame Deduction | | Pole Centre | |
|---------------------|-----------------|--------------|---------------|--------------|
| | back of frame | back of cill | back of frame | back of cill |
| 180 | 18.0 | 18.0 | 35.0 | 37.0 |
| 178 | 17.4 | 17.4 | 35.0 | 37.0 |
| 176 | 16.8 | 16.7 | 35.0 | 37.0 |
| 174 | 16.2 | 16.1 | 35.0 | 37.0 |
| 172 | 15.6 | 15.4 | 35.1 | 37.1 |
| 170 | 14.9 | 14.8 | 35.1 | 37.1 |
| 168 | 14.3 | 14.1 | 35.2 | 37.2 |
| 166 | 13.7 | 13.5 | 35.3 | 37.3 |
| 164 | 13.1 | 12.8 | 35.3 | 37.4 |
| 162 | 12.5 | 12.1 | 35.4 | 37.5 |
| 160 | 11.8 | 11.5 | 35.5 | 37.6 |
| 158 | 11.2 | 10.8 | 35.7 | 37.7 |
| 156 | 10.6 | 10.1 | 35.8 | 37.8 |
| 154 | 9.9 | 9.5 | 35.9 | 38.0 |
| 152 | 9.3 | 8.8 | 36.1 | 38.1 |
| 150 | 8.6 | 8.1 | 36.2 | 38.3 |
| 148 | 8.0 | 7.4 | 36.4 | 38.5 |
| 146 | 7.3 | 6.7 | 36.6 | 38.7 |
| 144 | 6.6 | 6.0 | 36.8 | 38.9 |
| 142 | 5.9 | 5.3 | 37.0 | 39.1 |
| 140 | 5.3 | 4.5 | 37.2 | 39.4 |
| 138 | 4.6 | 3.8 | 37.5 | 39.6 |



Above illustration with 210° internal cill angle;
frame deduction of 27.4mm (back of frame) or 27.9mm (back of cill),
pole centre position of 36.2mm (back of frame) or 38.3mm (back of cill)

| Internal Cill Angle | Frame Deduction | | Pole Centre | |
|---------------------|-----------------|--------------|---------------|--------------|
| | back of frame | back of cill | back of frame | back of cill |
| 180 | 18.0 | 18.0 | 35.0 | 37.0 |
| 182 | 18.6 | 18.6 | 35.0 | 37.0 |
| 184 | 19.2 | 19.3 | 35.0 | 37.0 |
| 186 | 19.8 | 19.9 | 35.0 | 37.0 |
| 188 | 20.4 | 20.6 | 35.1 | 37.1 |
| 190 | 21.1 | 21.2 | 35.1 | 37.1 |
| 192 | 21.7 | 21.9 | 35.2 | 37.2 |
| 194 | 22.3 | 22.5 | 35.3 | 37.3 |
| 196 | 22.9 | 23.2 | 35.3 | 37.4 |
| 198 | 23.5 | 23.9 | 35.4 | 37.5 |
| 200 | 24.2 | 24.5 | 35.5 | 37.6 |
| 202 | 24.8 | 25.2 | 35.7 | 37.7 |
| 204 | 25.4 | 25.9 | 35.8 | 37.8 |
| 206 | 26.1 | 26.5 | 35.9 | 38.0 |
| 208 | 26.7 | 27.2 | 36.1 | 38.1 |
| 210 | 27.4 | 27.9 | 36.2 | 38.3 |
| 212 | 28.0 | 28.6 | 36.4 | 38.5 |
| 214 | 28.7 | 29.3 | 36.6 | 38.7 |
| 216 | 29.4 | 30.0 | 36.8 | 38.9 |
| 218 | 30.1 | 30.7 | 37.0 | 39.1 |
| 220 | 30.7 | 31.5 | 37.2 | 39.4 |
| 222 | 31.4 | 32.2 | 37.5 | 39.6 |

Baypole reinforcement load capability

We recommend that for all bay window installations the advice of a structural engineer is sought to determine if the installation is load bearing. If the bay installation is load bearing, the engineer will be able to accurately determine the load.

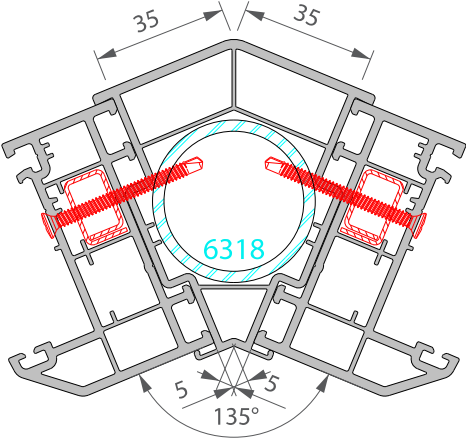
We recommended that all exposed joints are sealed on site with silicone to protect against the ingress of water.

| P 6819 | |
|---------------------|-------------------|
| Height of pole (mm) | Maximum load (kN) |
| 1000 | 15.9 |
| 1100 | 15.2 |
| 1200 | 14.5 |
| 1300 | 13.8 |
| 1400 | 13.0 |
| 1500 | 11.5 |
| 1600 | 10.2 |
| 1700 | 9.0 |
| 1800 | 8.1 |
| 1900 | 7.4 |
| 2000 | 6.7 |
| 2100 | 6.0 |
| 2200 | 5.4 |
| 2300 | 4.9 |
| 2400 | 4.6 |
| 2500 | over limit |

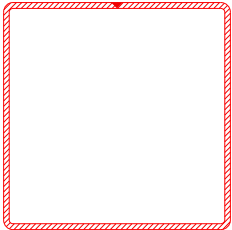
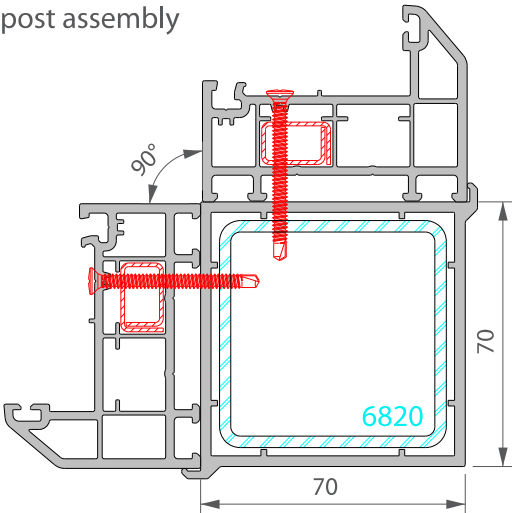
| P 6318 | |
|---------------------|-------------------|
| Height of pole (mm) | Maximum load (kN) |
| 1000 | 21.4 |
| 1100 | 20.1 |
| 1200 | 17.9 |
| 1300 | 15.3 |
| 1400 | 13.2 |
| 1500 | 11.7 |
| 1600 | 10.4 |
| 1700 | 9.1 |
| 1800 | 8.0 |
| 1900 | 7.2 |
| 2000 | over limit |
| 2100 | over limit |
| 2200 | over limit |
| 2300 | over limit |
| 2400 | over limit |
| 2500 | over limit |

Fixed angle posts

P 3196 135° Fixed angle bay post assembly



P 6920 90° Fixed angle bay post assembly



Steel reinforcement alternative 6921

Baypost reinforcement load capability

We recommend that for all bay window installations the advice of a structural engineer is sought to determine if the installation is load bearing. If the bay installation **is** load bearing, the engineer will be able to accurately determine the load.

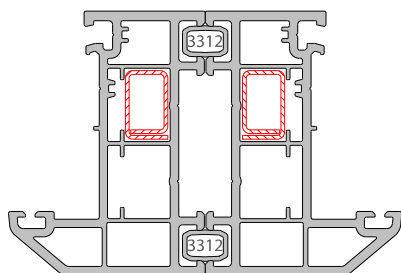
| P 6820 | |
|---------------------|-------------------|
| Height of pole (mm) | Maximum load (kN) |
| 1000 | 46.4 |
| 1100 | 44.7 |
| 1200 | 43.3 |
| 1300 | 42.1 |
| 1400 | 40.9 |
| 1500 | 39.5 |
| 1600 | 38.0 |
| 1700 | 36.6 |
| 1800 | 35.2 |
| 1900 | 33.0 |
| 2000 | 30.1 |
| 2100 | 27.4 |
| 2200 | 25.1 |
| 2300 | 22.8 |
| 2400 | 21.2 |
| 2500 | 19.8 |

| P 6921 | |
|---------------------|-------------------|
| Height of pole (mm) | Maximum load (kN) |
| 1000 | 47.7 |
| 1100 | 46.9 |
| 1200 | 46.0 |
| 1300 | 45.0 |
| 1400 | 43.9 |
| 1500 | 42.5 |
| 1600 | 40.9 |
| 1700 | 39.3 |
| 1800 | 37.7 |
| 1900 | 36.1 |
| 2000 | 34.2 |
| 2100 | 32.3 |
| 2200 | 30.5 |
| 2300 | 28.8 |
| 2400 | 27.1 |
| 2500 | 25.6 |

We recommended that all exposed joints are sealed on site with silicone to protect against the ingress of water.

Couplers

3312
2-part concealed frame-to-frame coupler

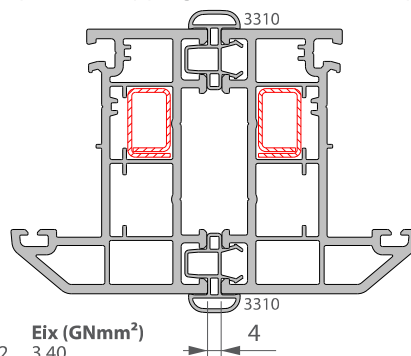


Ei values
2592(2565) x 2

Eix (GNmm²)
3.40

0

3310
2-part overlapping frame-to-frame coupler

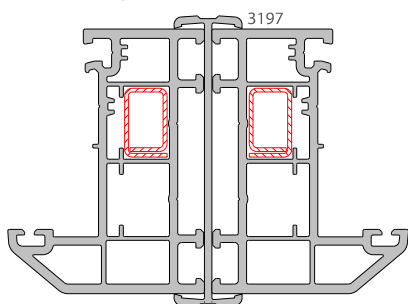


Ei values
2592(2565) x 2

Eix (GNmm²)
3.40

4

3197
Overlapping frame-to-frame coupler

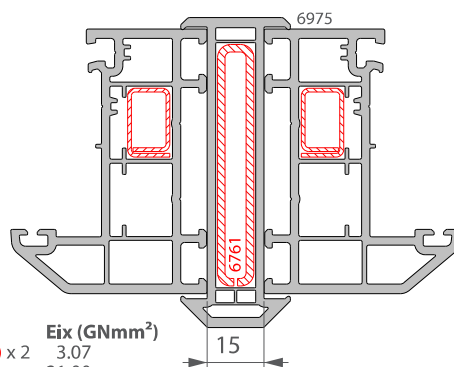


Ei values
2592(2565) x 2
3197

Eix (GNmm²)
3.07
0.39

2

6975
Reinforced frame-to-frame coupler

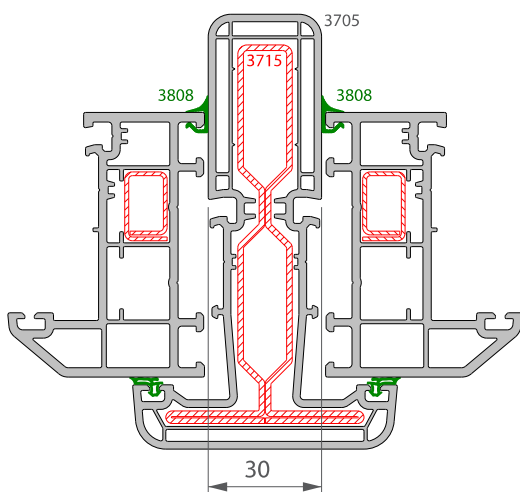


Ei values
2592(2565) x 2
6975(6761)
6975(6762)

Eix (GNmm²)
3.07
21.00
16.74

15

3705
Reinforced frame-to-frame coupler, option 1

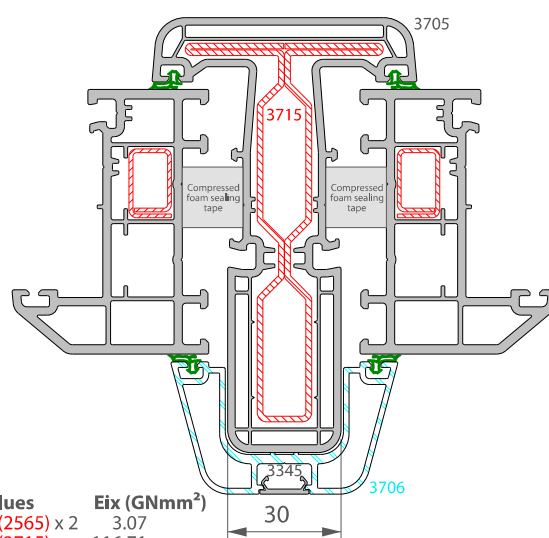


Ei values
2592(2565) x 2
3705(3715)

Eix (GNmm²)
3.07
116.71

30

3705
Reinforced frame-to-frame coupler, option 2



Ei values
2592(2565) x 2
3705(3715)
3706

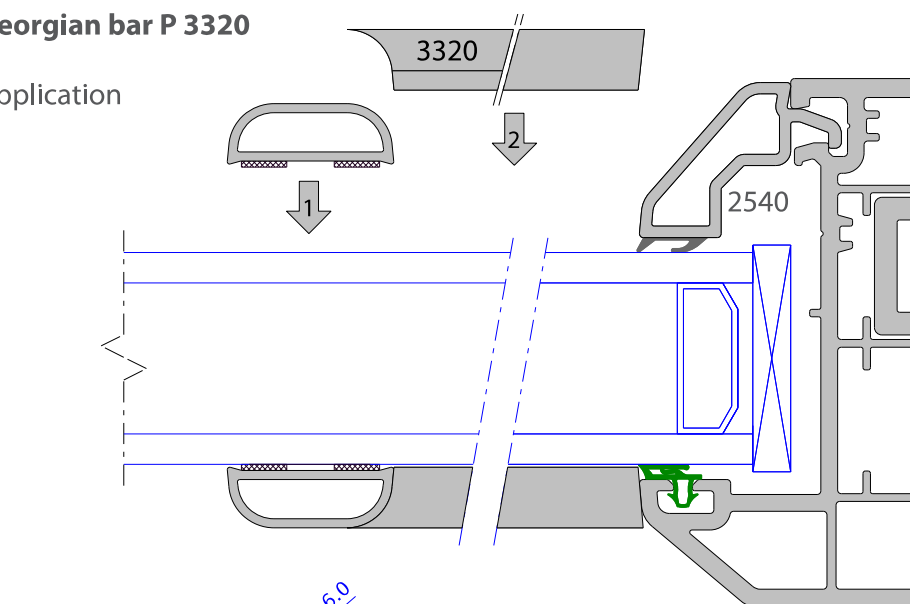
Eix (GNmm²)
3.07
116.71
3.12

30

We recommend that all exposed joints are sealed on site with silicone to protect against the ingress of water.

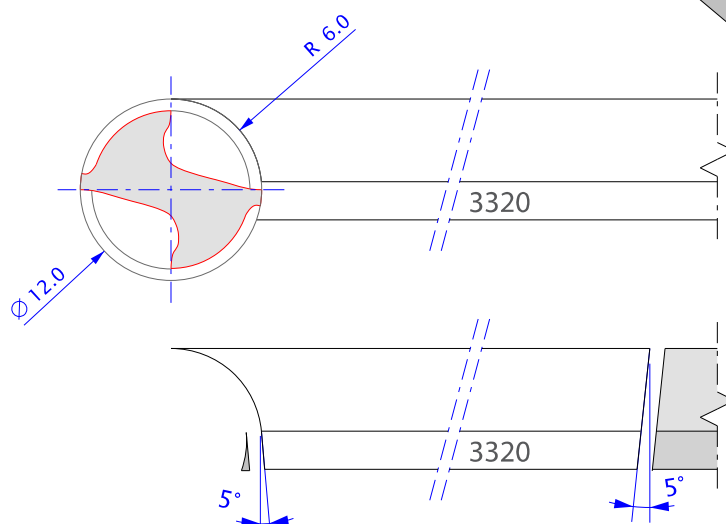
Georgian bar P 3320

Application



Ensure the bar is clean before applying the tape. Once cleaned and dried, ensure the glass is clean and dry before applying the bar.

To maximise bar adhesion we advise the use two strips of double-sided tape 6.0mm x 1.0mm to apply the Georgian bar to the glass.



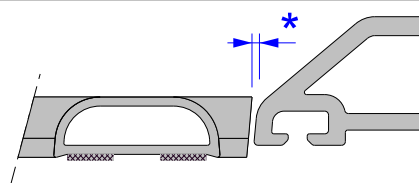
When using glazing beads other than the one illustrated below, use the list showing the cut angle relating to each bead.

| Bead | Cut Angle |
|------|------------|
| 3027 | Square Cut |
| 3028 | 5° |
| 3029 | 6° |
| 3033 | Square Cut |
| 3024 | 5° |
| 3034 | 5° |

Preparation

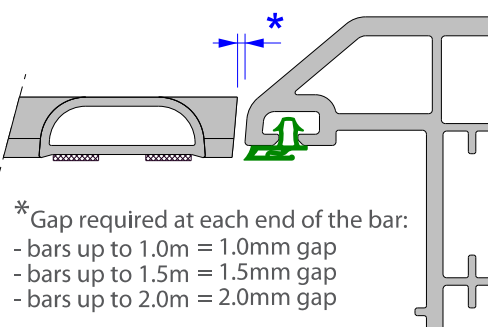
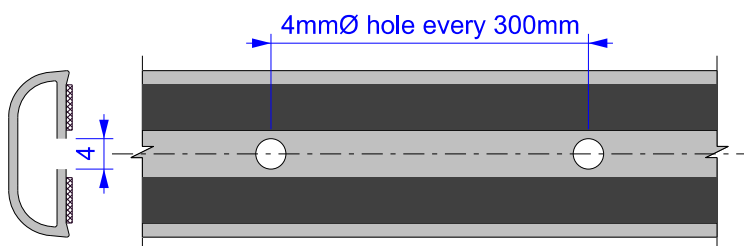
White profile

Always leave a gap at both ends between bar and frame, bar and bead*



Non-white profile

1. Always leave a gap at both ends between bar and frame, bar and bead*
2. Drill 8mmØ ventilation holes in-between the tape every 300mm



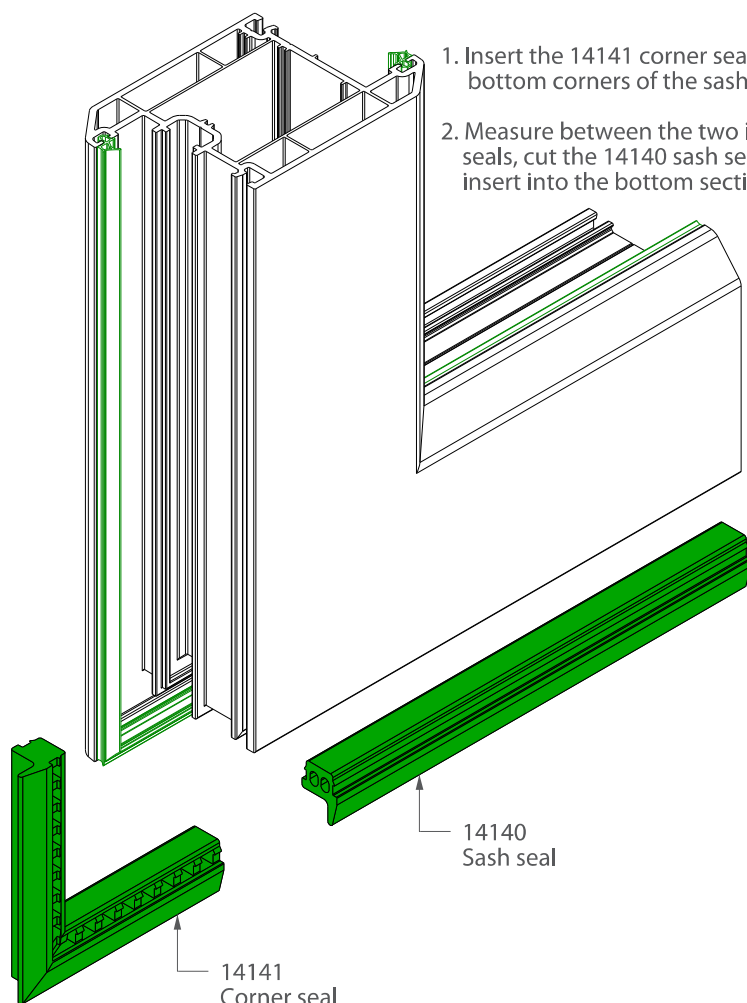
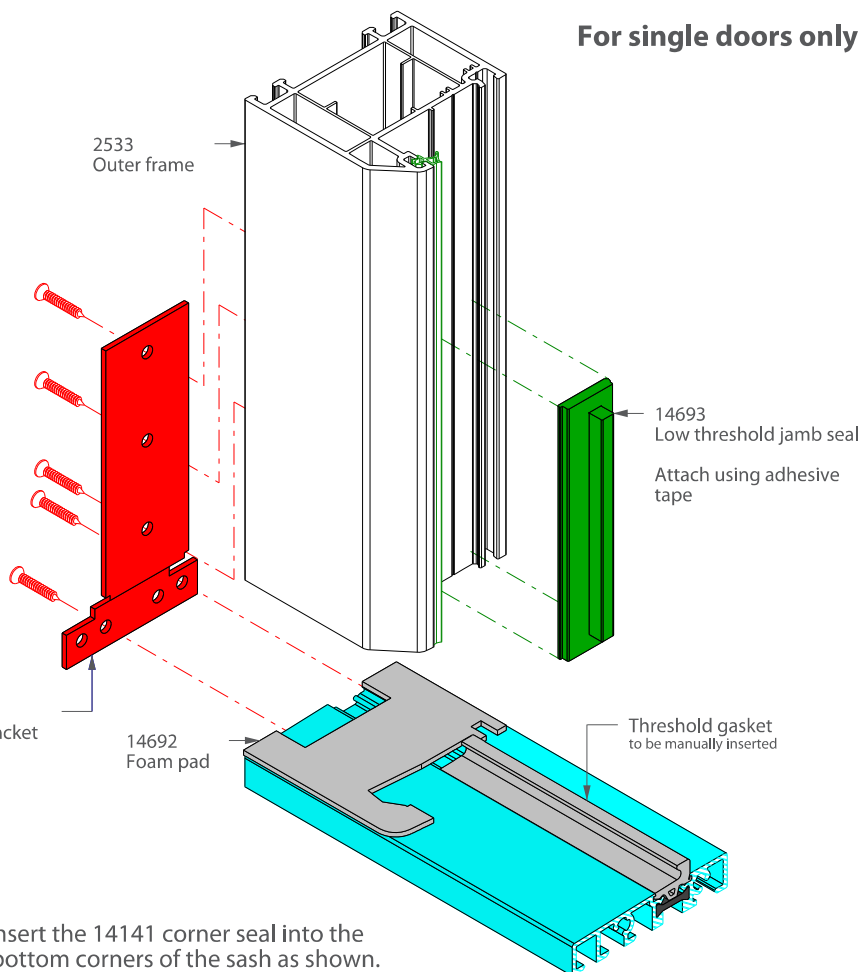
* Gap required at each end of the bar:
 - bars up to 1.0m = 1.0mm gap
 - bars up to 1.5m = 1.5mm gap
 - bars up to 2.0m = 2.0mm gap

Low threshold 14647, open-in

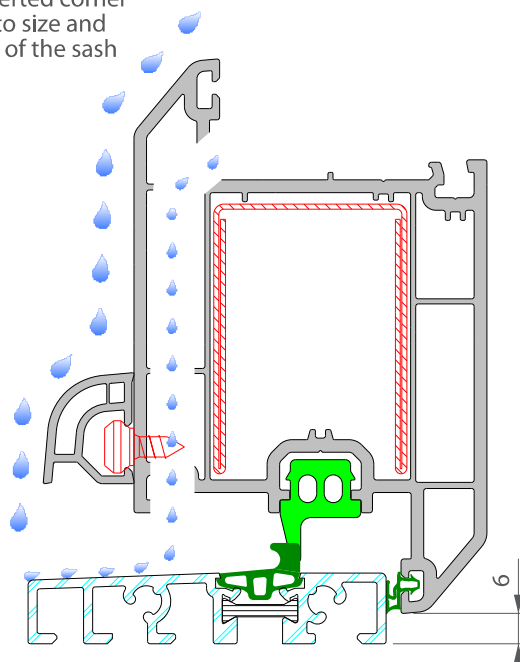
For single doors only

1. Ensure the threshold gasket is 50mm short from the end of the 14647 low threshold
2. Apply the 14692 foam pad to the low threshold as shown
3. Attach the 14693 jamb seal to the glazing face of the outer frame
4. Screw fix the 14694 fixing bracket to the low threshold using the screw ports provided
5. Position the low threshold against the bottom of the outer frame and apply hand pressure to compress the foam pad, attach the fixing bracket to the outer frame using the holes provided
6. Trim away any excess foam pad from around the outer frame

Repeat on opposing jamb



1. Insert the 14141 corner seal into the bottom corners of the sash as shown.
2. Measure between the two inserted corner seals, cut the 14140 sash seal to size and insert into the bottom section of the sash



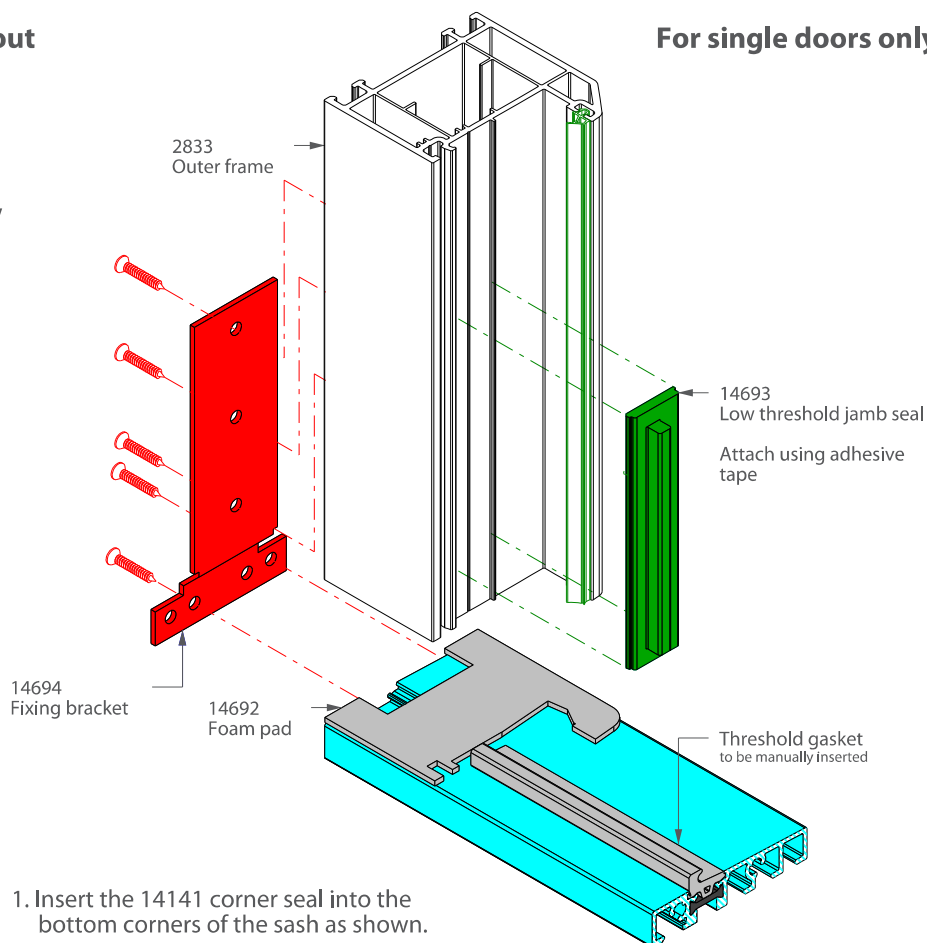
| Door Sash | Sash Height | Glass Size | | | |
|-----------|-------------|-------------|--------|---------------------|---------------------|
| | | No Mid-rail | | 2535 mid-rail (M) | 2531 mid-rail (M) |
| 2530 | H - 48 | H - 238 | Top | H - M ζ - 157 | H - M ζ - 177 |
| | | | Bottom | M ζ - 121 | M ζ - 141 |

Low threshold 14647, open-out

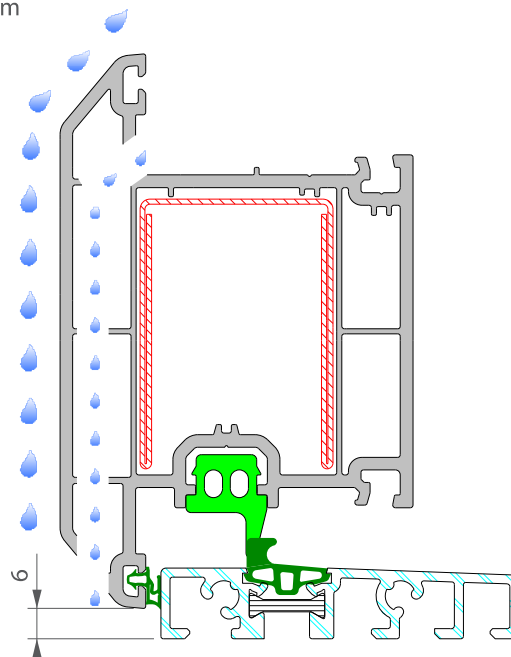
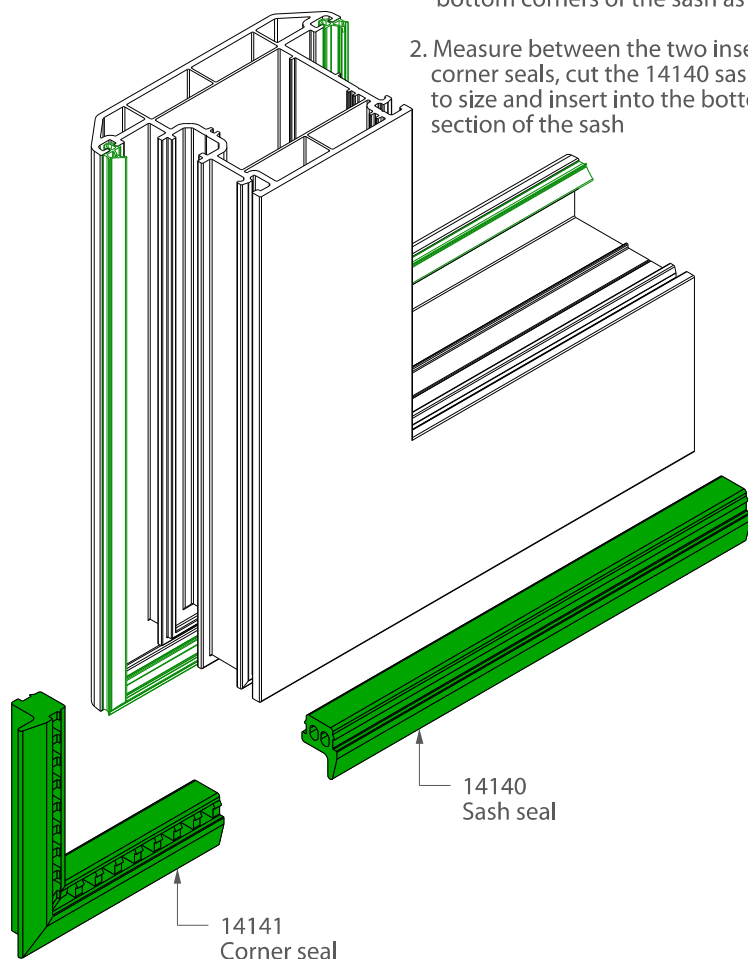
For single doors only

1. Ensure the threshold gasket is 50mm short from the end of the 14647 low threshold
2. Apply the 14692 foam pad to the low threshold as shown
3. Attach the 14693 jamb seal to the glazing face of the outer frame
4. Screw fix the 14694 fixing bracket to the low threshold using the screw ports provided
5. Position the low threshold against the bottom of the outer frame and apply hand pressure to compress the foam pad, attach the fixing bracket to the outer frame using the holes provided
6. Trim away any excess foam pad from around the outer frame

Repeat on opposing jamb



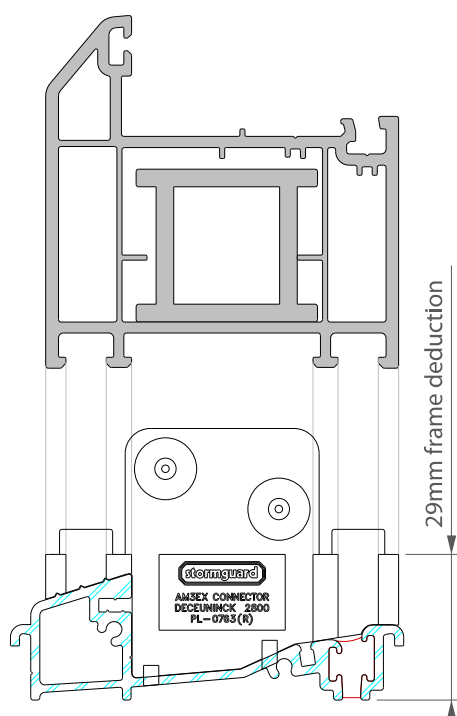
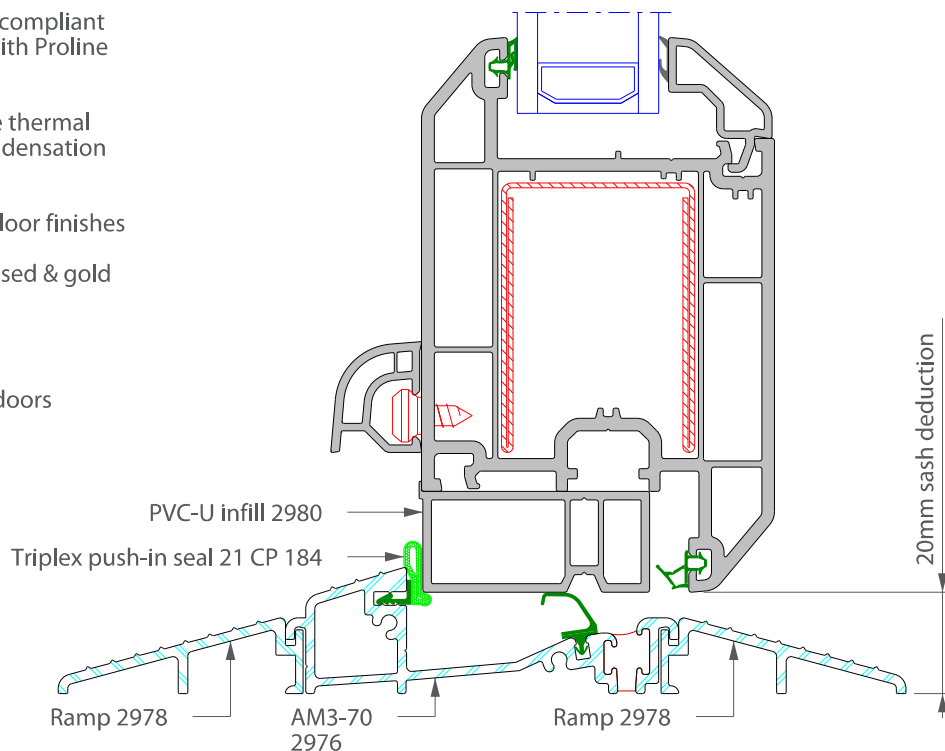
1. Insert the 14141 corner seal into the bottom corners of the sash as shown.
2. Measure between the two inserted corner seals, cut the 14140 sash seal to size and insert into the bottom section of the sash



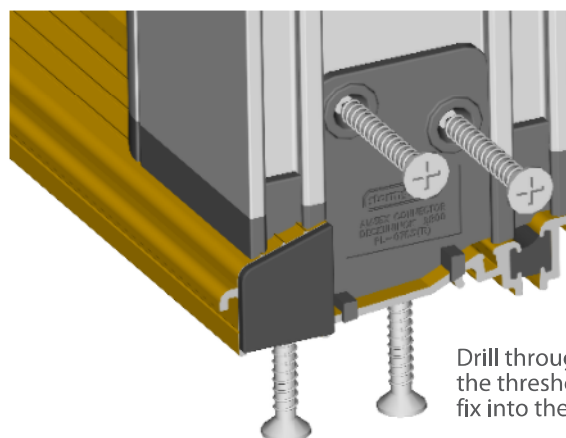
| Door Sash | Sash Height | Glass Size | | | |
|-----------|-------------|-------------|--------|---------------------|---------------------|
| | | No Mid-rail | | 2535 mid-rail (M) | 2531 mid-rail (M) |
| 2531 | H - 48 | H - 238 | Top | H - M ζ - 157 | H - M ζ - 177 |
| | | | Bottom | M ζ - 121 | M ζ - 141 |

2976 Stormguard AM3-70, open-in

- Approved Document Part M compliant (when used in conjunction with Proline ramp, as shown)
- Thermally broken to improve thermal performance and reduce condensation on the inside of the door
- Suitable for various internal floor finishes
- Available in both silver anodised & gold anodised
- Available in 3.0m lengths
- Suitable for single & double doors
- Locking keep available



Black connectors 2982

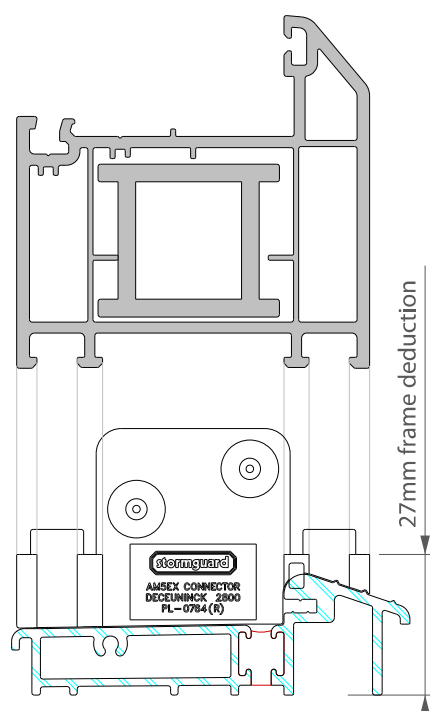
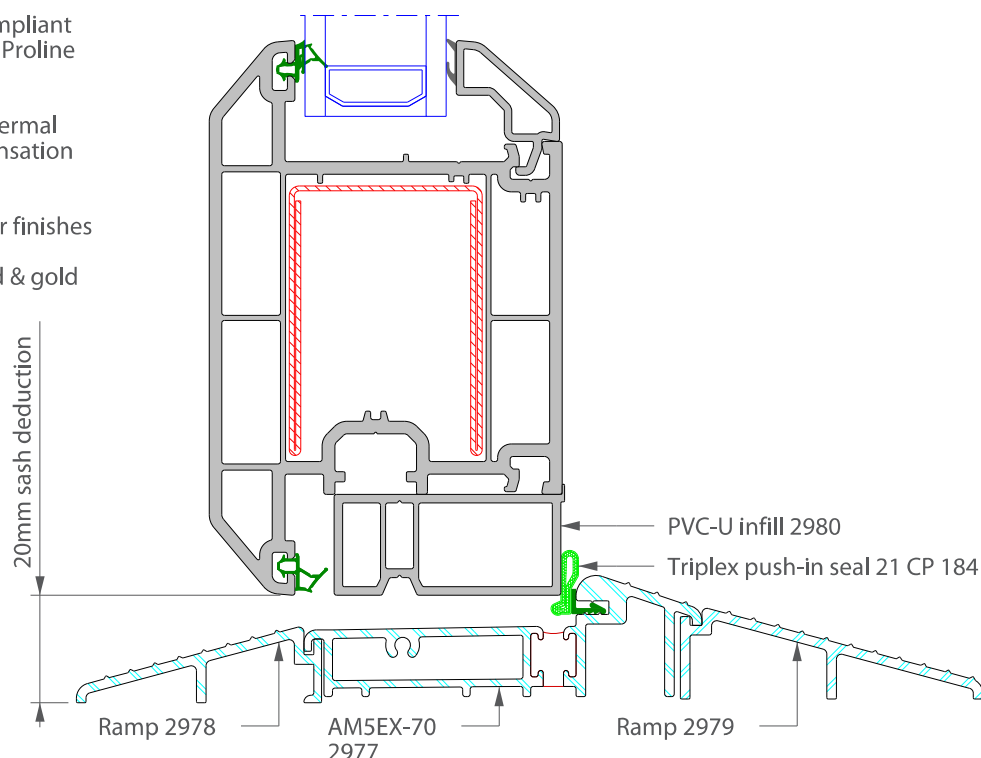


Use 4.5mm
countersunk
wood screws
to attach the
connector to
the frame

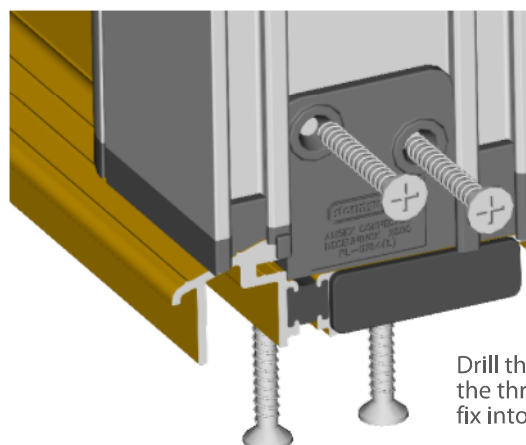
Drill through the base of
the threshold and screw
fix into the connector

2977 Stormguard AM5EX-70, open-out

- Approved Document Part M compliant (when used in conjunction with Proline ramp, as shown)
- Thermally broken to improve thermal performance and reduce condensation on the inside of the door
- Suitable for various internal floor finishes
- Available in both silver anodised & gold anodised
- Available in 3.0m lengths
- Suitable for single & double doors
- Locking keep available



Black connectors 2983

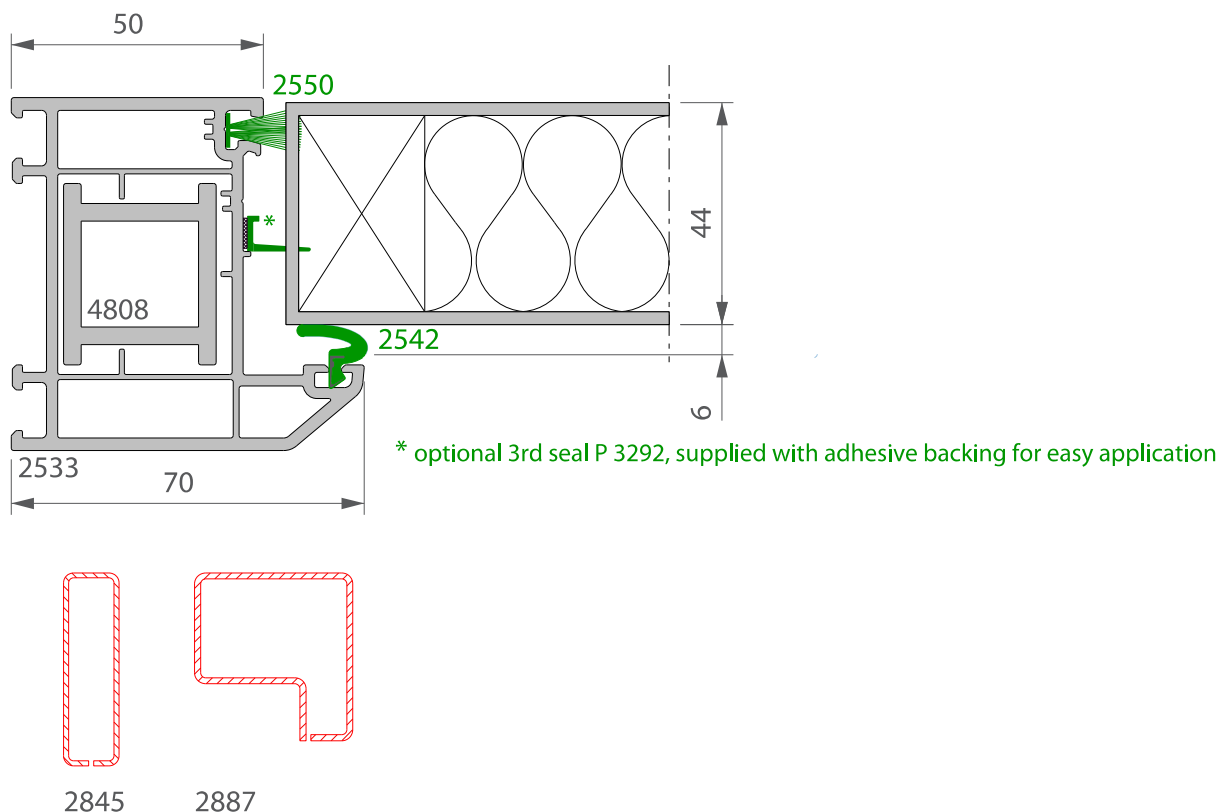


Composite door

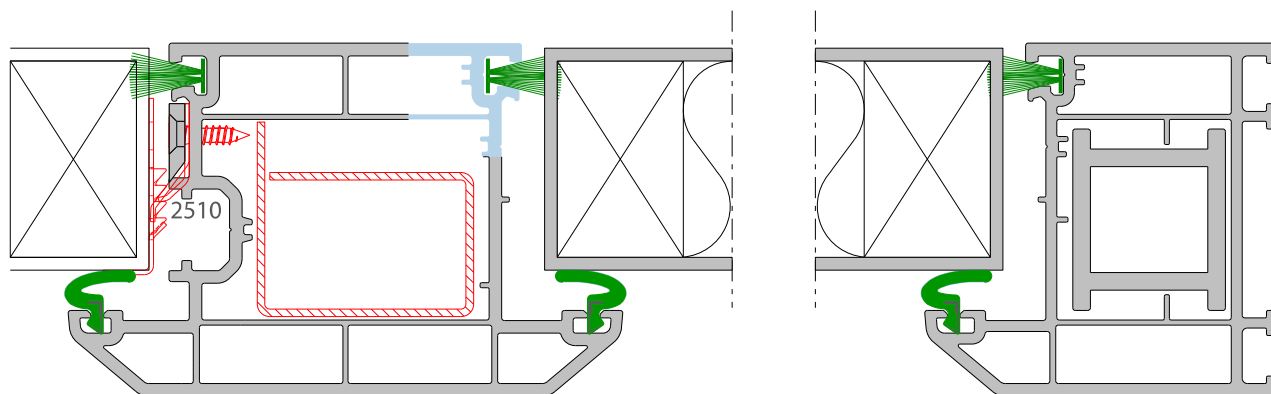
When used in association with the appropriate seal (2542) and wool pile (2550), the P 2533 outer frame provides composite door solution for slab thicknesses of 44mm.

Also available is a choice of;

- TCI (thermal chamber insert) to improve screw retention and thermal performance
- Two steel reinforcement options, for lock clearance and hinge fixing
- An optional 3rd seal for improved weather performance



P 2510 Panel-Lok is also available for 44mm composite side panels, shown here with a 110mm reinforced mullion (suitable for hook lock preparation). Full height panel = 6 to 8 sets of Panel-Lok, applied to the verticals jambs only, spaced 100mm from both corners plus 1 or 2 sets evenly spaced in between



To remove Panel-Lok use tool P 2511.

Sash Seal

Sash-Seal is a spring device designed to improve the seal of a sash at the hinged side of a window.

It consists of 1 acetal moulding and 1 spring steel component designed with a universal fit.

The simple act of closing the window causes the unique Sash Spring to push against the frame wedge to ensure an efficient seal.

Benefits

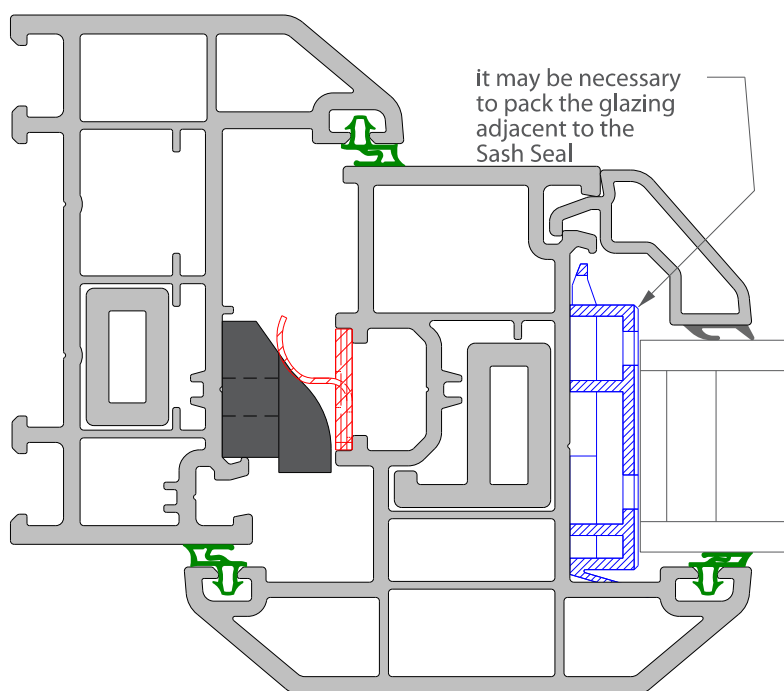
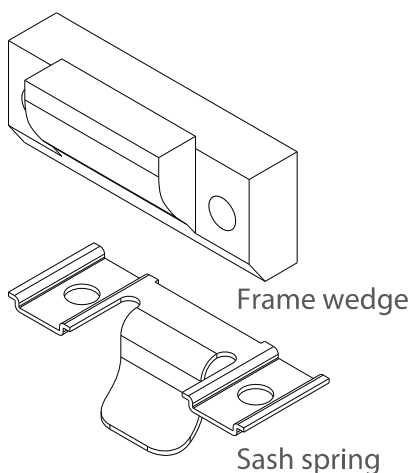
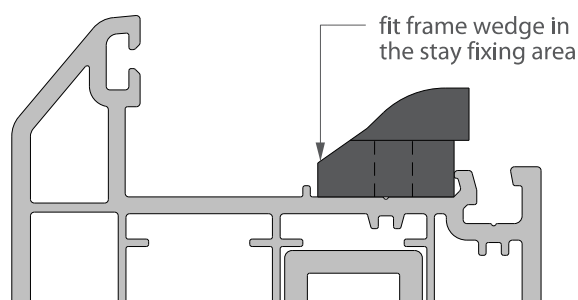
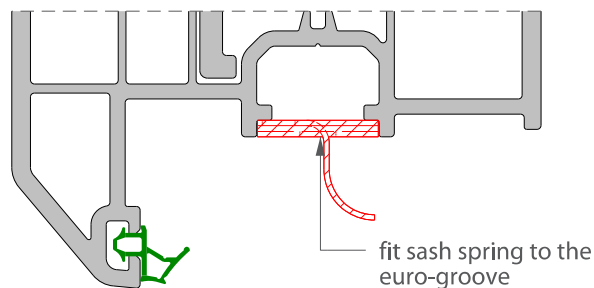
- Straight forward fit onto Traditional 2500 casement windows
- Accommodates almost all current easy-clean and egress stays available
- One spring steel component with each nylon wedge
- Prevents call out costs on windows that lack seal compression

Fitting

Locate the components on the stay fixing area as shown. Just one Sash Seal set will give an adequate seal if positioned centrally on the hinge stile.

Order codes

2503/03 sash spring & white wedge
2503/08 sash spring & brown wedge
2503/12 sash spring & black wedge
2503/61 sash spring & tan wedge



Traditional 2500:

3 Fabrication process

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3.7 Glazing

154


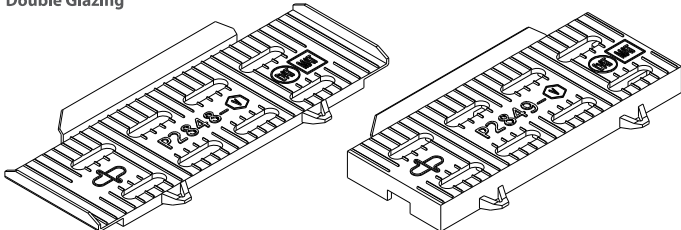
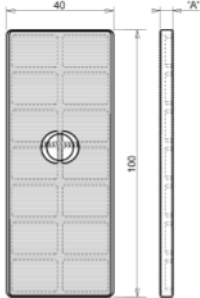
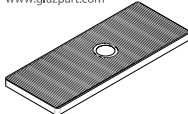
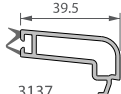
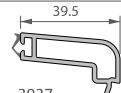
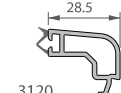
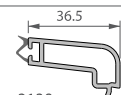
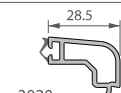
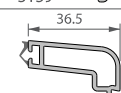
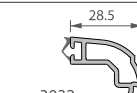


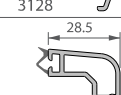
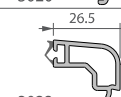
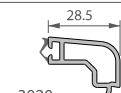
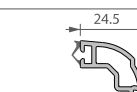
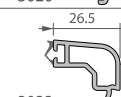
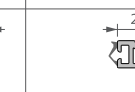
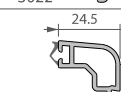
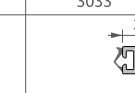
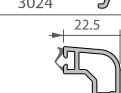

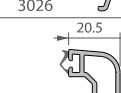
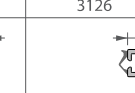
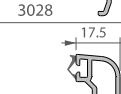
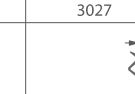
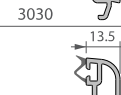
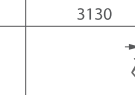
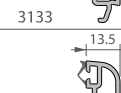

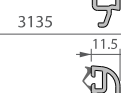


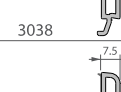
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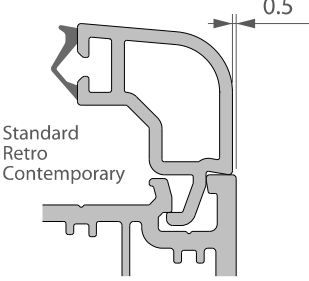
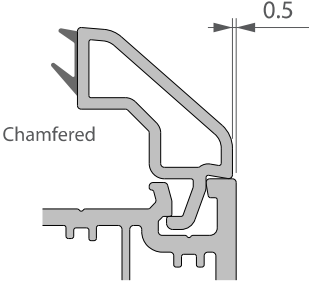
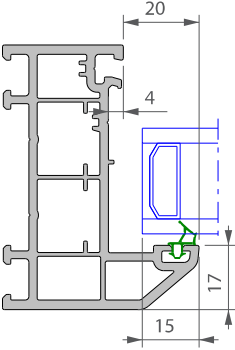
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Windows & Doors

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3.7.1 Glazing table.

| <div>mm</div> <div></div> | | STANDARD | | <div>Double Glazing</div> <div></div> <div>2848 (for use around the sides of glazing unit)2849 (for use below glazing unit)</div> <div><div>Triple Glazing</div><div>40mm glazing packers available from Glazpart T. 01295 222400 www.glazpart.com</div><div><table><thead><tr><th>PART No</th><th>COLOUR</th><th>A</th></tr></thead><tbody><tr><td>10402</td><td>BLACK</td><td>2.0</td></tr><tr><td>10403</td><td>WHITE</td><td>3.0</td></tr><tr><td>3310403</td><td>WHITE</td><td>3.0</td></tr><tr><td>110403</td><td>WHITE</td><td>3.0</td></tr><tr><td>10404</td><td>GREY</td><td>4.0</td></tr><tr><td>110404</td><td>GREY</td><td>4.0</td></tr><tr><td>10405</td><td>BLUE</td><td>5.0</td></tr><tr><td>110405</td><td>BLUE</td><td>5.0</td></tr><tr><td>10406</td><td>RED</td><td>6.0</td></tr><tr><td>10403-ALT99</td><td>WHITE</td><td>3.0</td></tr></tbody></table></div></div> | | | | PART No | COLOUR | A | 10402 | BLACK | 2.0 | 10403 | WHITE | 3.0 | 3310403 | WHITE | 3.0 | 110403 | WHITE | 3.0 | 10404 | GREY | 4.0 | 110404 | GREY | 4.0 | 10405 | BLUE | 5.0 | 110405 | BLUE | 5.0 | 10406 | RED | 6.0 | 10403-ALT99 | WHITE | 3.0 |
|--|---|---|--|---|--|--|--|---------|--------|---|-------|-------|-----|-------|-------|-----|---------|-------|-----|--------|-------|-----|-------|------|-----|--------|------|-----|-------|------|-----|--------|------|-----|-------|-----|-----|-------------|-------|-----|
| PART No | COLOUR | A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10402 | BLACK | 2.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10403 | WHITE | 3.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3310403 | WHITE | 3.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 110403 | WHITE | 3.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10404 | GREY | 4.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 110404 | GREY | 4.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10405 | BLUE | 5.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 110405 | BLUE | 5.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10406 | RED | 6.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10403-ALT99 | WHITE | 3.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 |  | <div>CONTEMPORARY</div> <div>RETRO</div> <div>CHAMFERED</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 3137 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 |  |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 3037 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 |  |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 3139 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 |  |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | 3039 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 |  |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | 3128 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 |  |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 3120 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 |  |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 3020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 |  |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | 3022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 |  |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | 3024 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 |  |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 26 | 3026 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 |  |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | 3028 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 |  |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 31 | 3030 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32 |  |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 33 | 3133 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 34 |  |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 35 | 3135 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 |  |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 37 | 3124 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 41 | 3038 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 41 |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 42 | 3138 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



Note:
Tolerances on the glass units (double/triple glazing) can occur.
Because of this, nominal and actual dimensions can be different and might result in using another glazing bead.

3.7.2 Glazing packer positions.

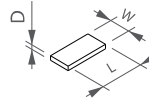
□ Supporting block = Mechanical function, transfers the weight of the glazing to the frame.

Dimensions:

L = min. 50 mm

W = min. thickness of the glazing

D = min. play between the glazing and the drainage area



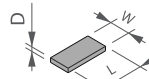
■ Distance block = Positional function, ensures the glazing is positioned correctly, prevents the unit from shifting and helps maintain the squareness of opening lights.

Dimensions:

L = min. 50 mm

W = min. thickness of the glazing

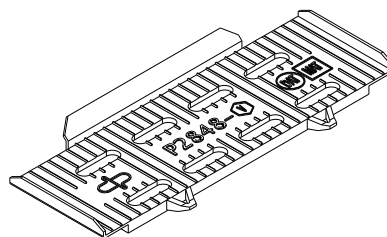
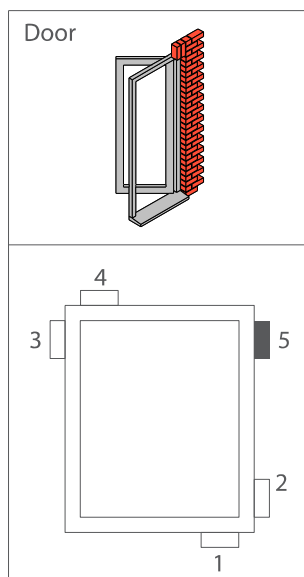
D = min. distance/play between the glazing and the drainage area



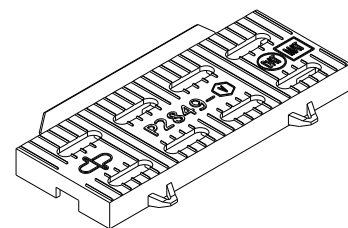
Installation: Supporting and distance blocks should be fitted at no more than 500mm centres and be a maximum of 150mm from the corner of the glass (unless otherwise stated).

Principles:

| Fixed | Top Hung | Side Hung | Tilt & Turn |
|-------|----------|-----------|-------------|
| | | | |
| | | | |



P 2848
For use at the sides of the glass



P 2849
For use below glass

