

Engineering progress
Enhancing lives

Specifier Guide

For windows, doors and curtain walling

REHAU

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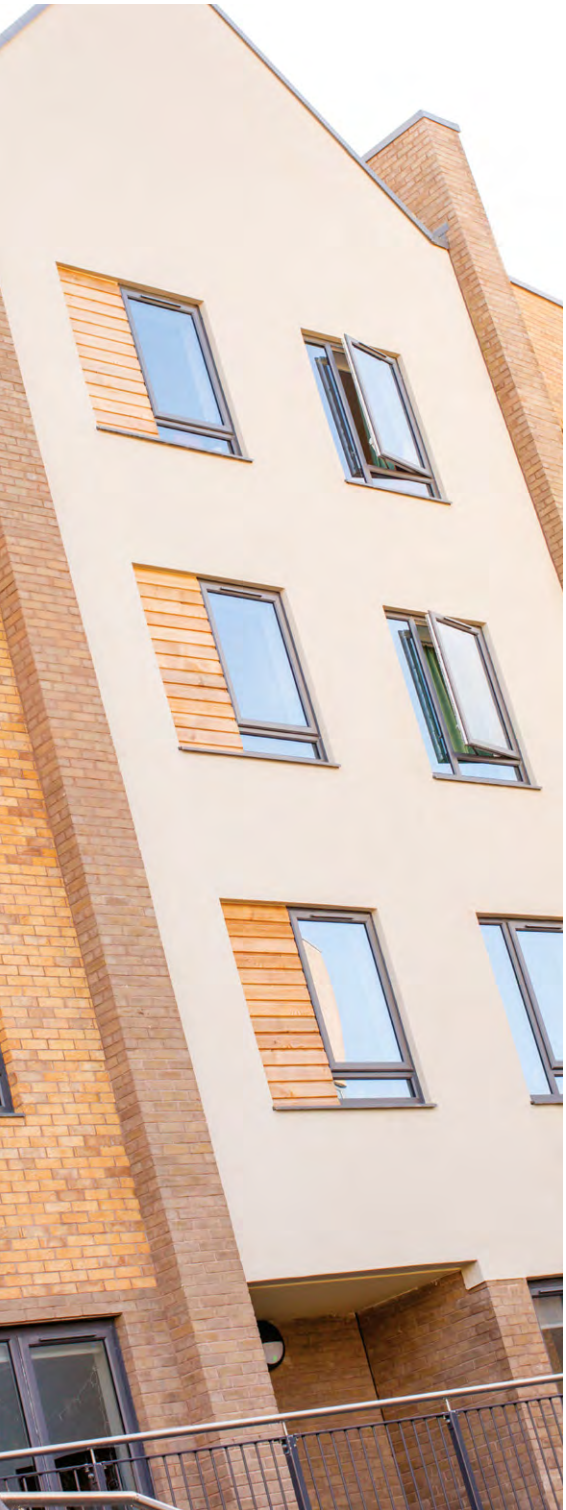
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Casement Windows TOTAL70

REHAU PVCu Casement Windows offer a comprehensive range of window styles, suitable for all types of buildings. All provide exceptional levels of energy efficiency as well as a choice of aesthetics.



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

Within the system there is a choice of profile designs. REHAU TOTAL70C is a chamfered system resembling a traditional 'putty line' finish. The chamfered system is simple yet elegant, helping to create our beautiful contemporary frames.

REHAU TOTAL70S is a suite of fully sculptured profiles offering heightened style to both modern and traditional properties.

The two systems are fully compatible and supported with a full range of ancillary profiles for all installation requirements.
Both designs are available in a range of foil laminate options for complete personalised profile design. Our complete range of foil laminate options can be seen on our colour page or the REHAU Colour Brochure.

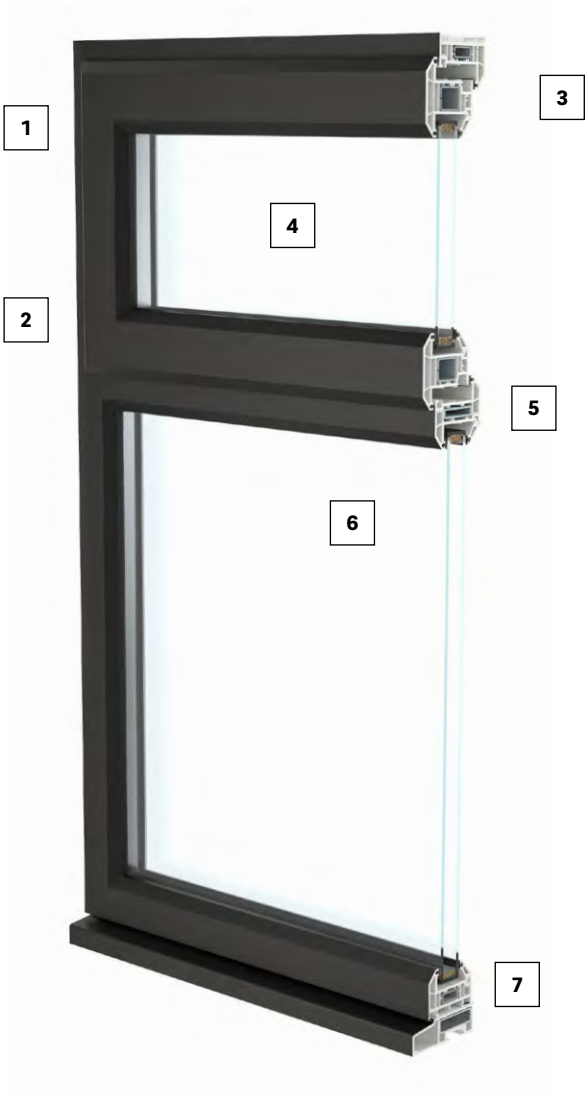
The TOTAL70C system is available with a co-extruded profile made up of 75% post-consumer waste and boasts severe weather performance credentials and unparalleled technical, thermal and noise reduction efficiency



REHAU TOTAL70c Casement Window (Chamfered)

1. Larger reinforcement chambers allow for additional strength / rigidity when necessary
2. Optional features include a part sculptured T Sash
3. Ideal replacement for British timber Casement Windows due to 70mm depth
4. 4mm to 44mm double or triple glazing
5. Wide range of styles and combinations eg. French, Bay and Bow windows
6. Can achieve U-Values of 0.8 W/m²K using the triple glazed Argon sealed units.
7. Complies with Building Regulations

Feature	Specification
Profile depth	70mm
Maximum window size	900 x 1500mm (Side Hung)
	1300 x 1000 (Top Hung)
Thermal performance	Can achieve 0.8 W/m²K
Maximum sash weight	40kg
Glass width	4 – 44mm
Accreditations	See page 60

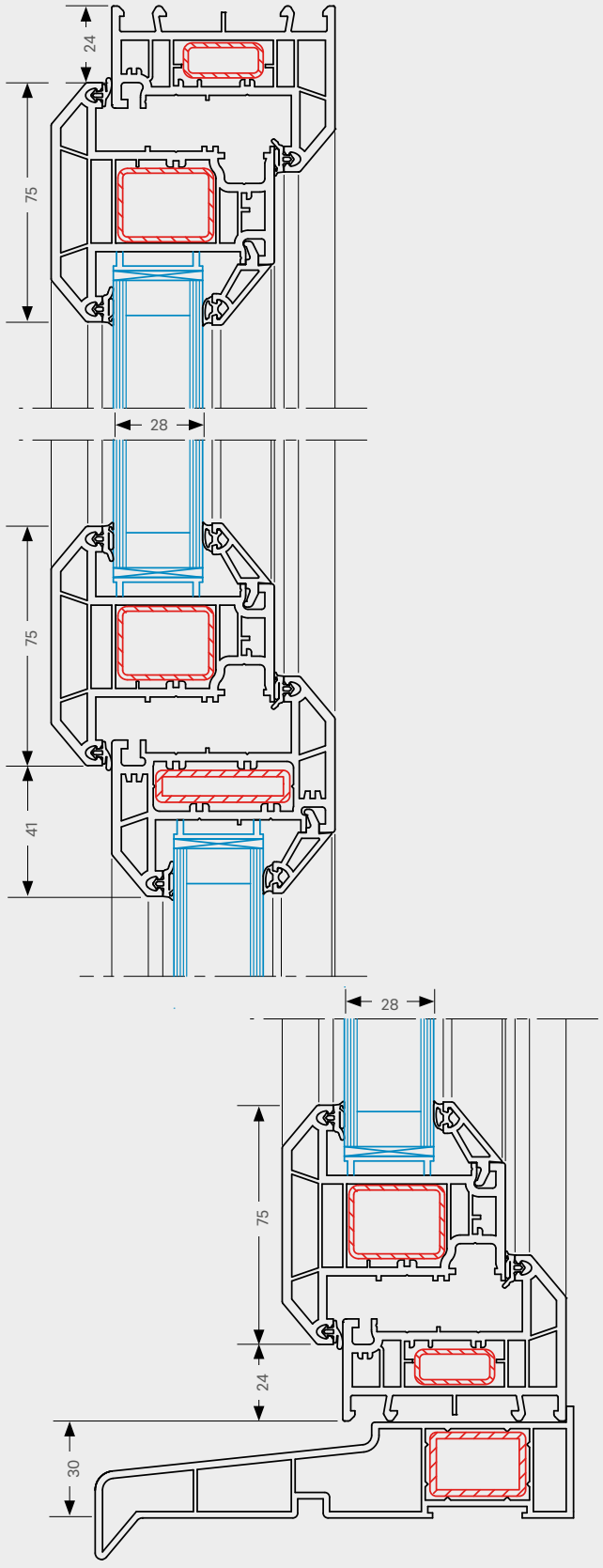




Exceptional levels of energy efficiency as well as a choice of aesthetics.

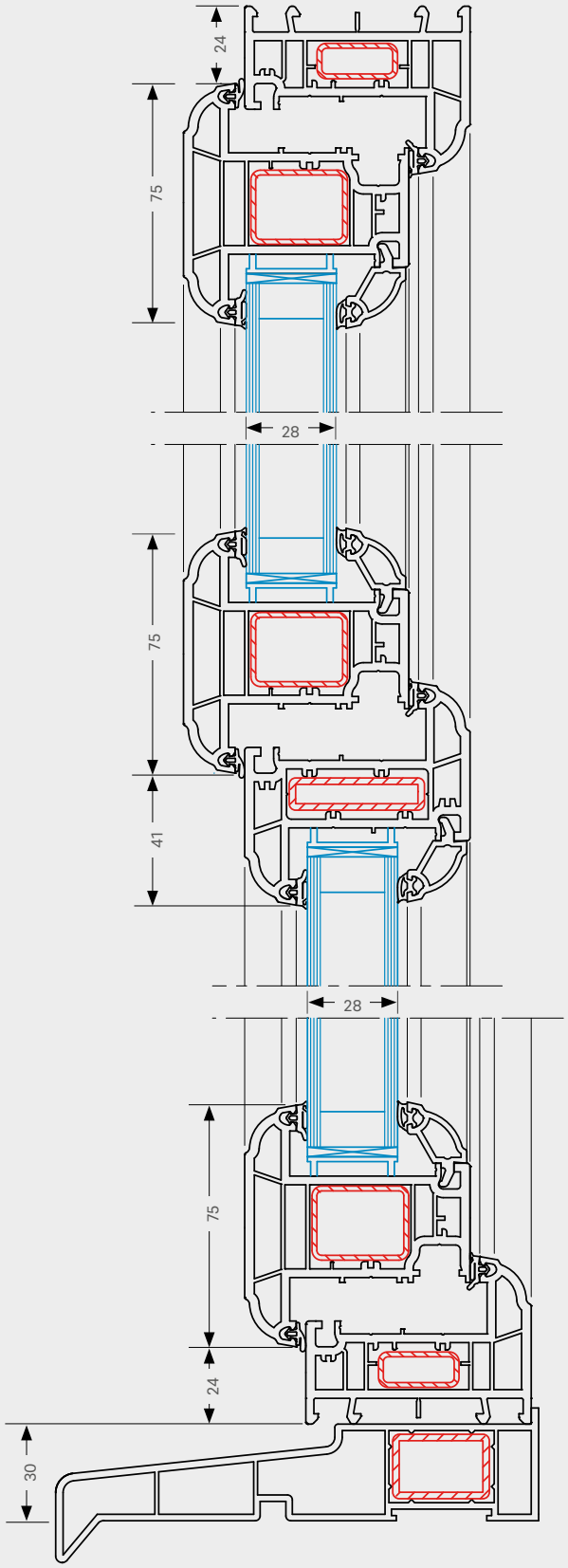
Casement Windows TOTAL70

Below: Vertical Section (Chamfered)

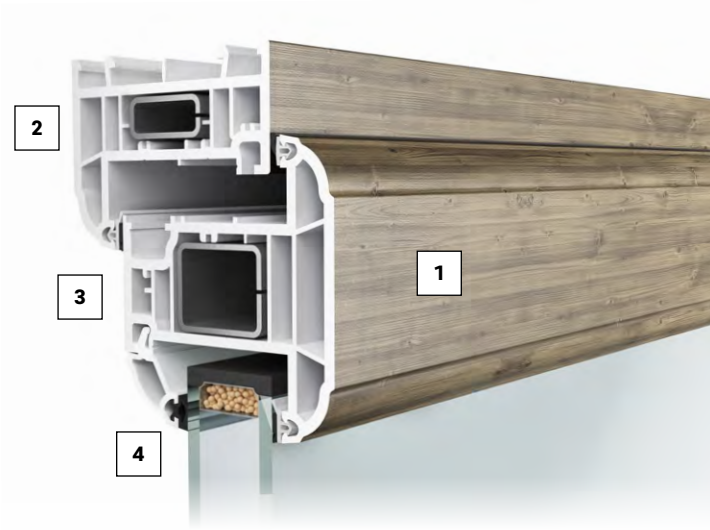


Detailed drawings are available on request

Below: Vertical Section (Sculptured)



Detailed drawings are available on request

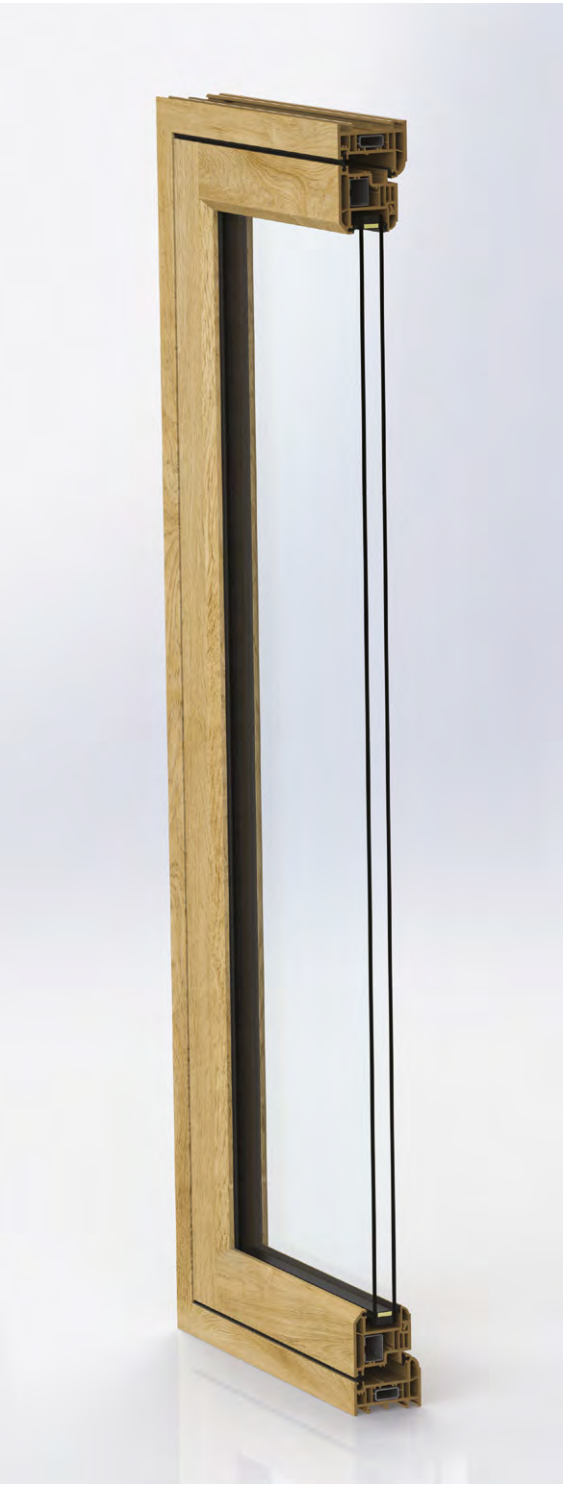


REHAU TOTAL70S Casement Window (Sculptured)

1. Interchangeable profiles allow for multiple style combinations to be manufactured
2. Fully sculptured detail for enhanced style to both modern and traditional properties
3. Optional features include run through sash horn, clip-on Georgian bars and various glazing bead style options
4. Various combinations of fixed and opening sections make this window extremely versatile

Flush Fit Windows Rio

The REHAU Rio Flush Fit window combines the realistic look and feel of timber, with all the benefits of uPVC.



Characteristics
The Rio Flush Fit system allows manufacturers and installers to replicate the details of a traditional timber flush fit window in the most authentic way possible.

This is achieved through the three jointing solutions that provide different aesthetics to suit any style of property:

Full Weld Joint
The same as a standard casement window offering the most cost effective option.

Full Mechanical Joint
The most realistic timber flush fit window appearance for ultimate authenticity.

Mechanical/Weld Joint (MechWeld)
Offering the appearance of mechanical-style timber joints on the outside with a fully welded detail inside.

The TOTAL70 compatibility factor truly enables installers to 'fit and forget' due to familiarity and ease of installation. Rio Flush Fit is a high-quality product, achieving excellent weather performance credentials along with PAS24 security accreditation.

Available in both chamfered and sculptured frame options from the TOTAL70 range, Rio can suit any installation and both designs are available with the option of 20 colour combinations as standard for a true personalised product. Rio also has the potential to incorporate a grey base with its foiled both sides grey combinations.

The Rio Flush Fit French window has a hidden dummy mullion end cap that is over moulded with a gasket for a seamless finish.
It also utilises the Heritage bead for a low-level sight line.
REHAU Heritage Georgian bars can be used to provide a chamfered finish outside and sculpture inside for that traditional look.

Our latest innovations to the Rio flush fit range is the new Deep bottom rail which combines the period style visuals of timber sash windows when mechanically jointed on the bottom of the sash to create an authentic look.

The new square edge bead allows for a more contemporary style flush fit window to be manufactured for greater versatility and styling and maintains the low level detail that is an integral part of the REHAU range.



Flush Fit Windows

The Rio Flush Fit system allows manufacturers and installers to replicate the details of a traditional timber flush fit window in the most authentic way possible.



Flush Fit Windows Rio

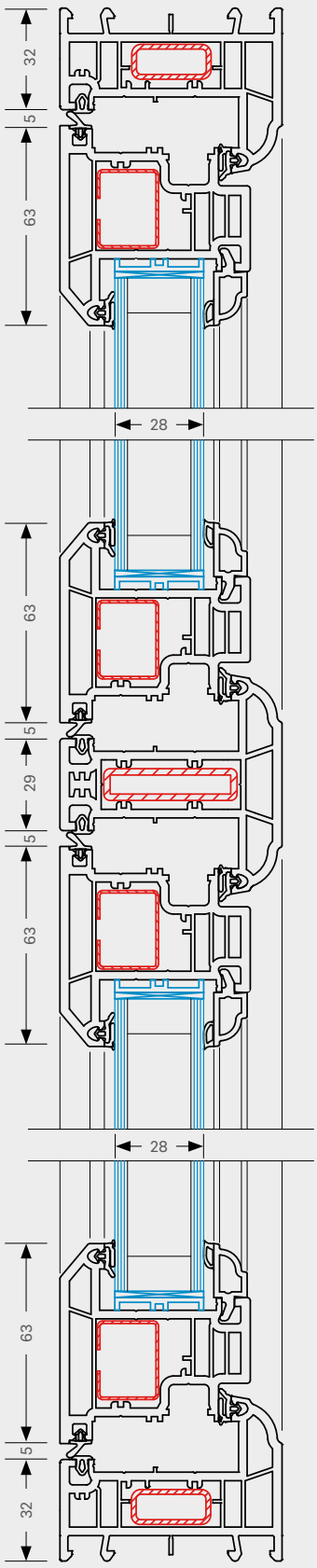
1. Same Eurogroove position as TOTAL70
2. 28mm Glazing as standard with option for 34mm Triple Glazing
3. Detailed external chamfer for softer aesthetics
4. Three jointing options: Mechanical Joint, Fully Welded & Mech Weld
5. Exceeds weather performance standards as well as PAS24 accreditation
6. TOTAL70 frame detail
7. Optional deep bottom rail profile
8. Square edge bead for a contemporary aluminium look

Feature	Specification
Profile depth	70mm
Maximum sash size	1200 x 1200mm
Thermal performance	1.3 W/m^{2}K
Maximum sash weight	35kg (Fully Welded) 30kg (Mechanical Joint)
Glass Width	28mm & 34mm
Accreditations	See page 60



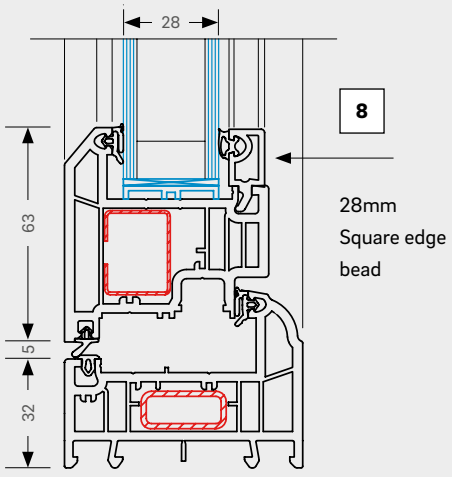


Below: Vertical Section



Detailed drawings are available on request

Below: Vertical Section with square edge bead



Fire Rated Windows RAUFERNO

Not restricted by traditional fire rated materials and construction techniques, the RAUFERNO Fire Resistant Window gives you the freedom to use a PVC-U fire resistant system and still comply fully with 2010 Building Regulations for most protected areas, due to full certification to BS476 Parts 20 and 22.



Characteristics
Fire rated windows from REHAU provide a design option for you to install throughout a building using fixed windows only.
The system uses intumescent strips, which expand with heat to create a barrier, utilising the reinforcement and fire retardant glass panel for at least a 30-minute fire rating.

RAUFERNO provides you with all the safety and security of traditional fire rated products but with PVCu's inherent benefits of improved thermal insulation, sound proofing, excellent security options and low maintenance.

Our fixed light windows have been tested to BS476 Part 20/22.

Fixed Light Testing (Integrity Glass)
- BS 476: Part 22 1987 – clauses 6 and 7 (30 minutes)
- Warrington Fire Research Certificate No. C81844

Fixed Light Testing (Insulated Glass)
- BS 476: Part 22 1987 – 30 minute assessment
- Warrington Report 185641





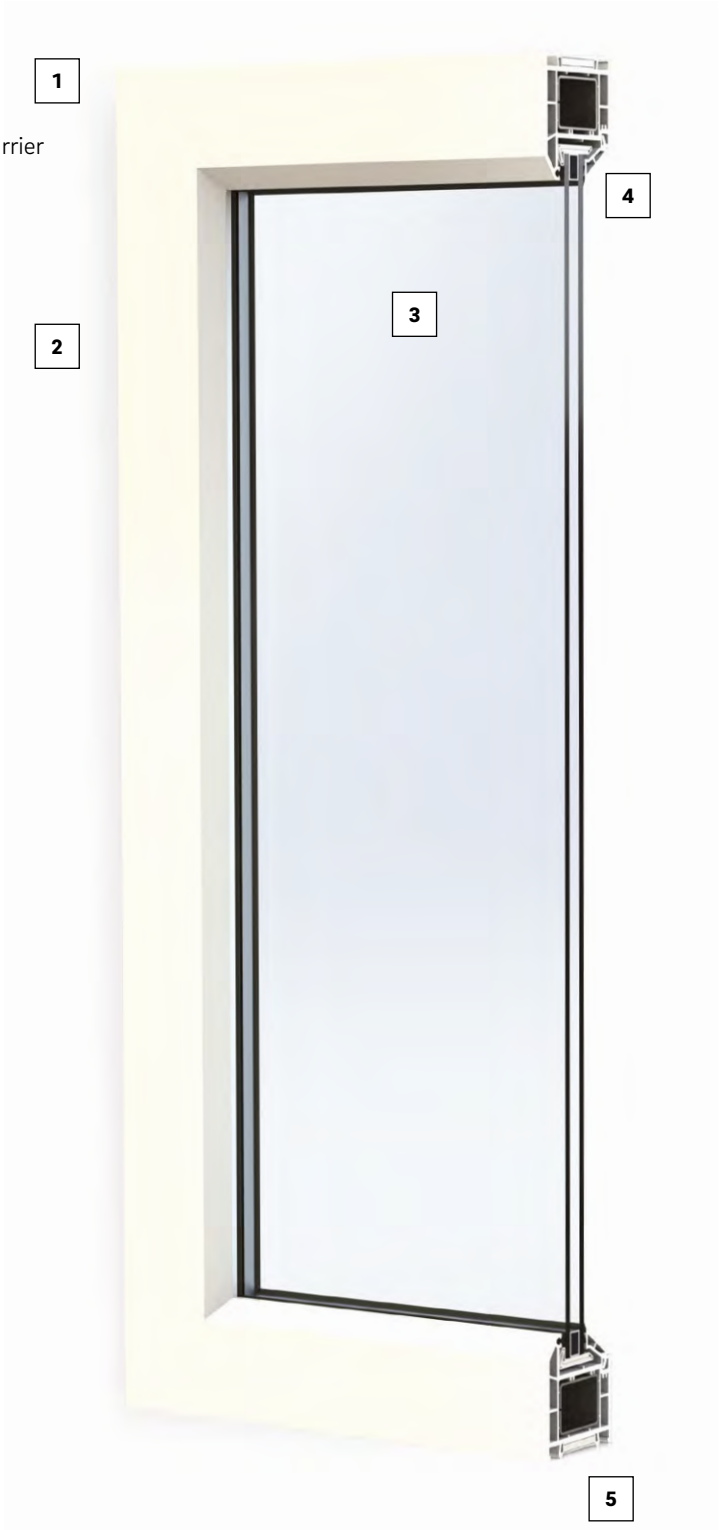
REHAU RAUFERNO PVCu fire resistant windows, a patented industry first.



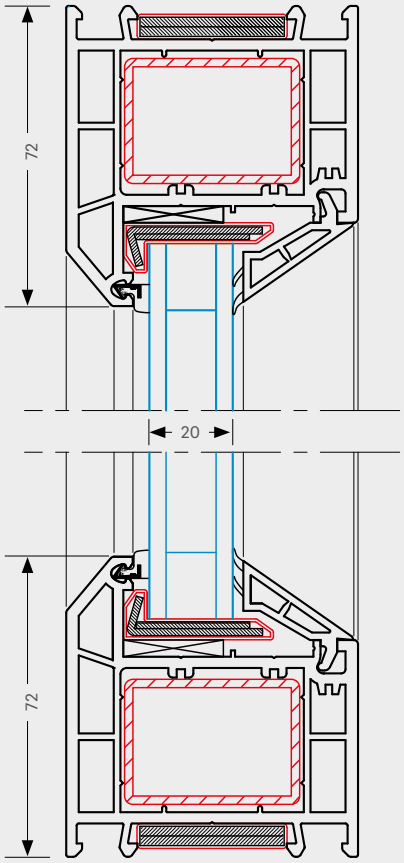
Fire Rated Windows RAUFERNO

1 Fixed light system
2 70mm frame depth
3 20mm Glazing
4 Intumescent strips which expand with heat to create a barrier
5 Tested to BS476 Part20/22

Feature	Specification
Profile depth	70mm
Maximum sealed unit size	1200 x 1200mm Max Area. 1.44m^2 (52mm Frame Only)
	600 x 1486mm Max Area. 0.89m^2 (72mm Frame with Transom)
Thermal performance	1.4 W/m^{2}K
Glass Width	20mm
Accreditations	See page 60



Below: Vertical Section



Detailed drawings are available on request

Fully Reversible Windows TOTAL70

Our PVCu Reversible Windows give a contemporary appearance to any building and are designed to maximise natural light. Their unique full rotation reversible action allows for a high level of ventilation as well as easy maintenance, where the external face can be cleaned from the inside of the room.



Characteristics
The reversible window system (TOTAL70R) has been designed with a square edge on external sections of the frame to create slimmer sightlines for a sleeker aesthetic.

A range of combinations are available including top turn or side turn with the option of fixed lights available using a dedicated transom/mullion.

It is also fully compatible with the TOTAL70 ancillary range.
The system also fully complies with the requirements of the building regulations covering Conservation of Fuel and Power Part L (England and Wales) and Part J (Scotland) when glazed using the correct type of sealed unit.

TOTAL70R is available in a range of foil laminate options allowing for complete personalised profile design. Our complete range of foil laminate options can be seen on our colour page.

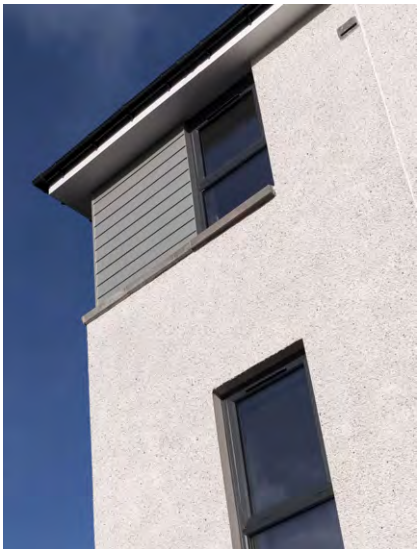
Fully Reversible Windows TOTAL70

Their unique full rotation reversible action allows for a high level of ventilation as well as easy maintenance, where the external face can be cleaned from the inside of the room.









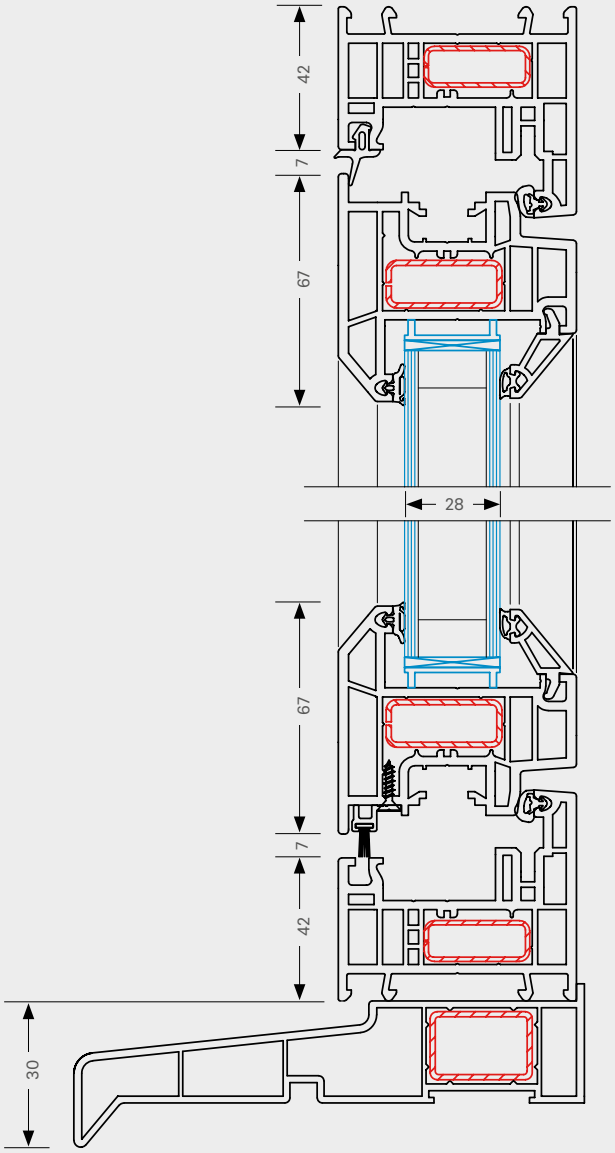
Fully Reversible Windows TOTAL70

1. Square edges on external sections of the frame to create slimmer sightlines
2. Reversible window gives a contemporary appearance to any building and is designed to create maximum light
3. 180° degrees reversible action to allow cleaning from the inside of the room
4. High level of natural ventilation
5. Easy maintenance
6. New optional brushpile adaptor to conceal hinges

Feature	Specification
Profile depth	70mm
Maximum window size	1400 x 1400mm
Thermal performance	1.0 W/m^{2}K
Maximum sash weight	60kg
Glass Width	Up to 44mm
Accreditations	See page 60



Below: Vertical Section



Detailed drawings are available on request

Tilt & Turn Windows TOTAL70

REHAU PVCu Tilt & Turn Windows allow maximum opening widths with the option of a full or limited amount of ventilation. With the Tilt & Turn opening system, this stylish PVCu window can be tilted inwards from the top for normal ventilation or can be fully opened from the side for full ventilation. This also allows for easy cleaning and maintenance.



Characteristics
A choice of chamfered profiles are available using TOTAL70C or fully sculptured using TOTAL70S; both systems offer slim sightlines and enhanced aesthetic appeal.

Inward opening configurations for an effective fire escape and easy cleaning are ideal where there is restricted external space for outward opening configurations.

A 16mm integrated Eurogroove allows for a maximum choice of standard fittings including the tilt before turn option, as well as restrictors.

Both systems are available in a range of foil laminate options allowing for complete personalised profile design. Our complete range of foil laminate options can be seen on our colour page or the REHAU Colour Brochure.

Tilt & Turn Windows TOTAL70

With the tilt & turn opening system, this stylish PVCu window can be tilted inwards from the top for normal ventilation or can be fully opened from the side for full ventilation.







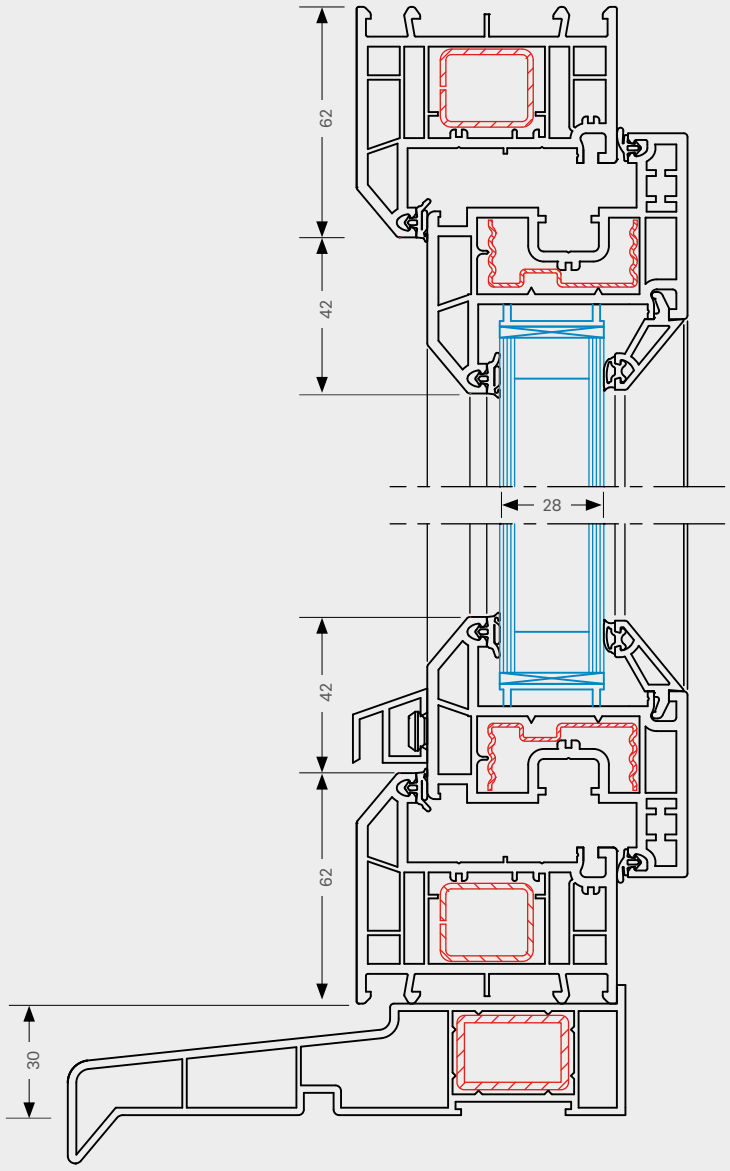
Tilt & Turn Windows TOTAL70

1. 16mm integrated Eurogroove allowing for hardware options
2. Can tilt for minor ventilation or turn and open to feel the full benefits
3. Inward opening for effective fire escape and where restricted outside space makes outward opening hazardous
4. Slimmer sightlines for enhanced aesthetic appeal

Feature	Specification
Profile depth	70mm
Maximum window size	1288 x 1588mm
Thermal performance	Exceeds 1.0 W/m^{2}K
Maximum sash weight	60kg
Glass Width	Up to 44mm
Accreditations	See page 60



Below: Vertical Section



Detailed drawings are available on request

Tilt & Turn Windows GENEO & GENEO ALUTOP

GENEO is a Tilt & Turn Fibre Composite Window and Door system made from RAU-FIPRO – an innovative material originally developed for aircraft construction and the auto industry. Lightweight but with high stability and torsional stiffness, less reinforcement is required when installing these windows, saving time and money. With high thermal performance (U-value of 0.73 W/m^{2}K achievable), GENEO has been certified to Passivhaus standards.



Characteristics
The high level of thermal performance with six chambers and three seals provides the best possible level of sound insulation (to 47 dB), as well as excellent security protection. The first 'self-reinforced' window and door profile giving large element sizes for maximum solar gain and contemporary architecture. Available in a large range of foil laminate options as well as standard white, the product certainly stands out from the crowd.

GENEO AluTop
Robust and weather resistant, GENEO AluTop is an aluminium profile that clicks into place over the top of GENEO external profiles giving modern aluminium aesthetics. The high energy efficiency of RAU-FIPRO for strength and performance is still maintained plus a wide range of RAL colours are available.

Tilt & Turn Windows
GENEO & GENEO ALUTOP

Lightweight but with high stability and torsional stiffness, less reinforcement is required when installing these windows, saving time and money.







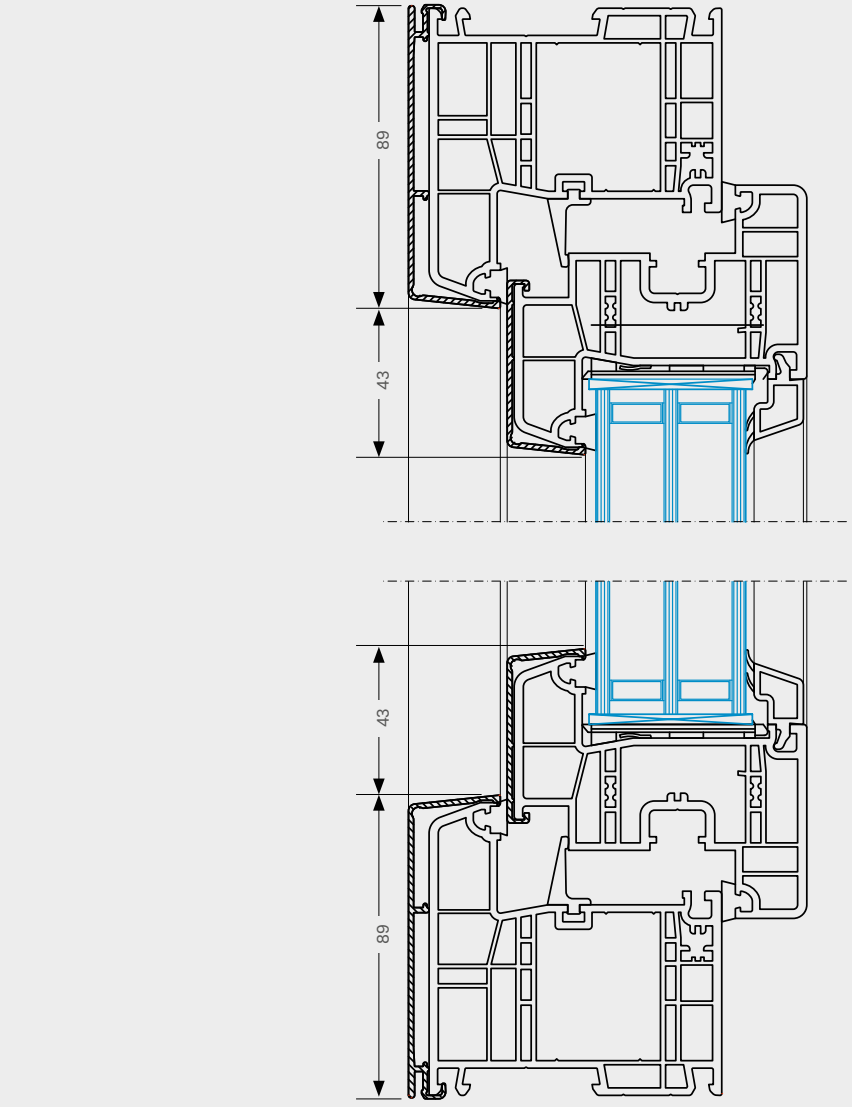
Tilt & Turn Windows GENEO & GENEO ALUTOP

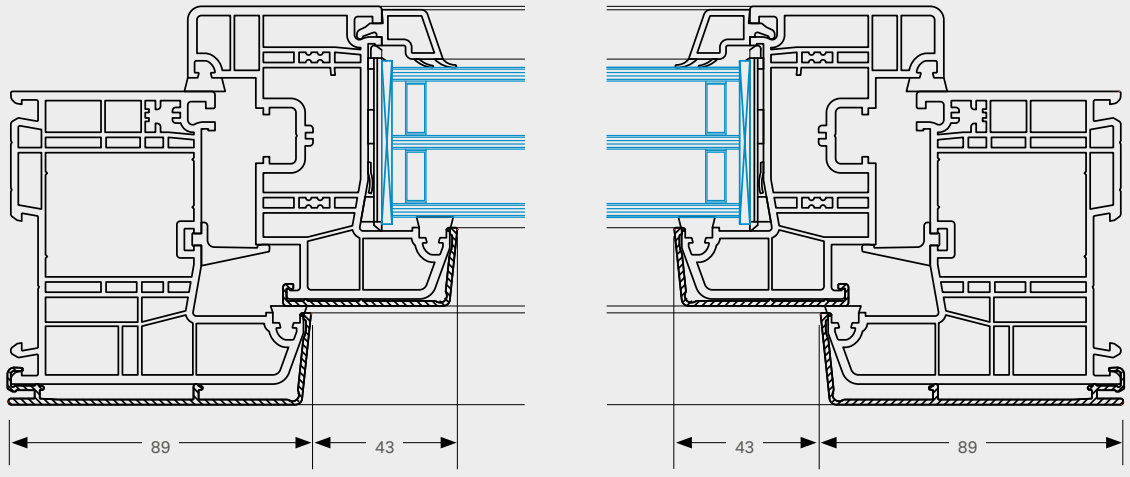
1. RAUFIPRO high-tech composite material
2. Clip on Alutop system
3. Larger frame sizes
4. Passivhaus certified by the Passivhaus Institute
5. Exceptional acoustic performance

Feature	Specification
Profile depth	86mm / 6 Chambers
Maximum window size	2700 x 1600mm (RAUFIPRO)
Thermal performance	0.73 W/m^{2}K with triple glazing
Maximum sash weight	90kg
Glass Width	Large rebate 66mm enables use of sealed units to 53mm
Accreditations	PAS24 compliant



Below: Vertical Section





Detailed drawings are available on request

Vertical Sliding Windows Heritage

The REHAU Heritage Vertical Slider with traditional timber sash window aesthetics is ideal for energy efficient replacement windows in Victorian, Georgian and Edwardian buildings as well as for use in traditional style new build.



Characteristics
The system has two sashes built into the frame which slide in opposing directions and will remain in any position.

The Heritage system's deep bottom rail has been designed to replicate the aesthetics of a traditional timber window and can be used with either a slim-intermediate sash combination or intermediate-large sash combination.

The window has been designed to tilt inwards to enable the window to be cleaned from the inside of the property for easy, fast and safe cleaning and maintenance.

The Heritage vertical slider can achieve an A rating for energy efficiency and complies with the requirements of the building regulations Part L (England and Wales) and Part J (Scotland) when glazed using the correct glazing option. The issue of draughts with timber sash windows is negated with the REHAU Heritage vertical slider; triple brush seals are incorporated into the innovative system, creating a highly effective method of draught proofing.

The REHAU Heritage vertical sliding system is available in a range of foil laminate options allowing for complete personalised profile design. Our complete range of foil laminate options can be seen on our colour page or the REHAU Colour Brochure.



1. 24mm & 28mm glazing options
2. Triple brush seals in the frame create a barrier against wind and air
3. 4 Sash options
4. Georgian bars for an authentic appearance
5. Standard balances of 14mm or up to 19mm diameter can be used
6. Optional deep bottom rail profile



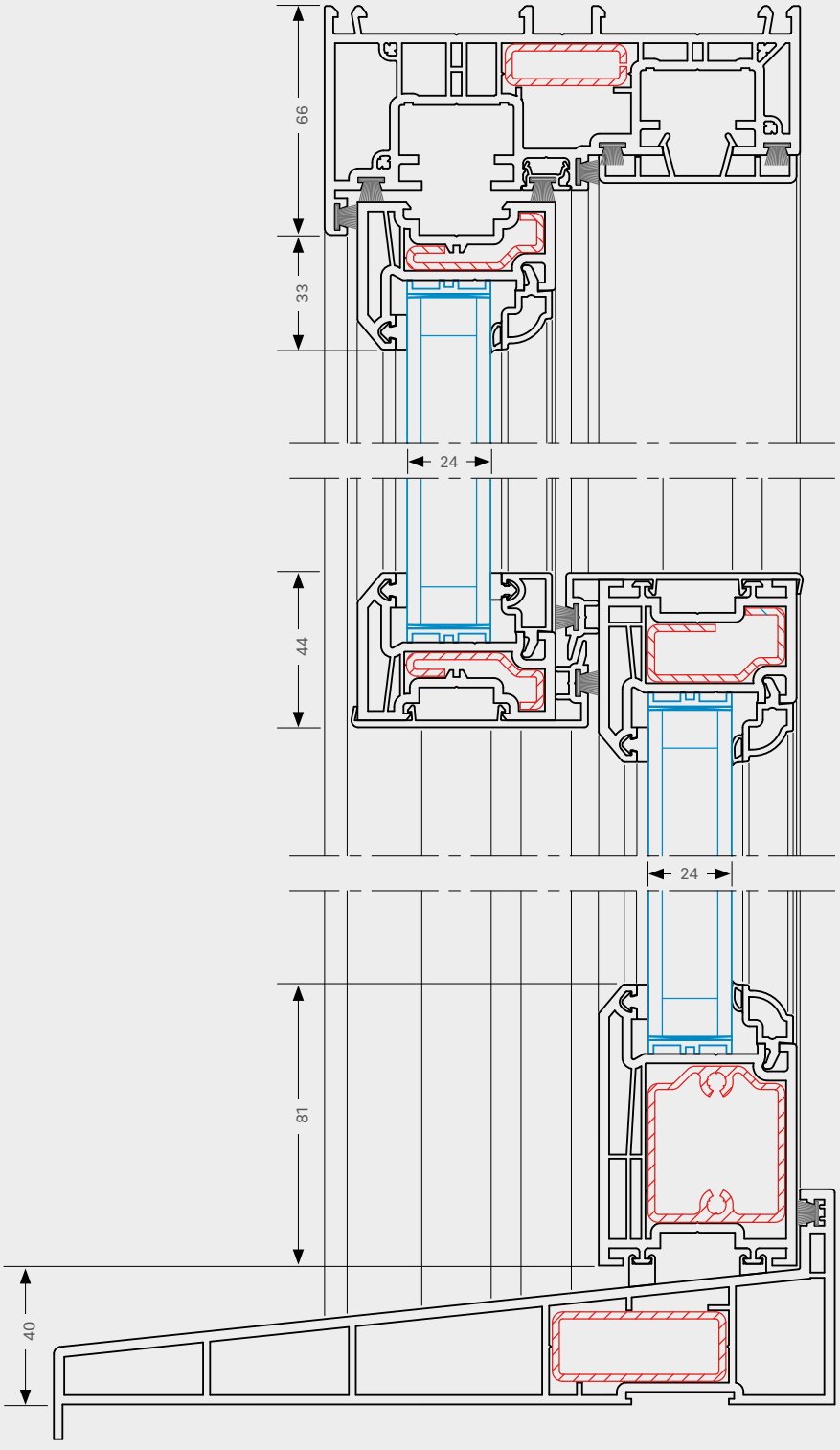
Feature	Specification
Profile depth	137mm
Maximum window size	1800 x 3500mm
Thermal performance	Exceeds 1.1 W/m²K
Maximum sash weight	60kg
Further options	Georgian bars
	Fixed or run through sash horns
	Sliding latches allowing for tilting
Glass width	24 & 28mm
Accreditations	See page 60

Approved for use in conservation areas around the UK.



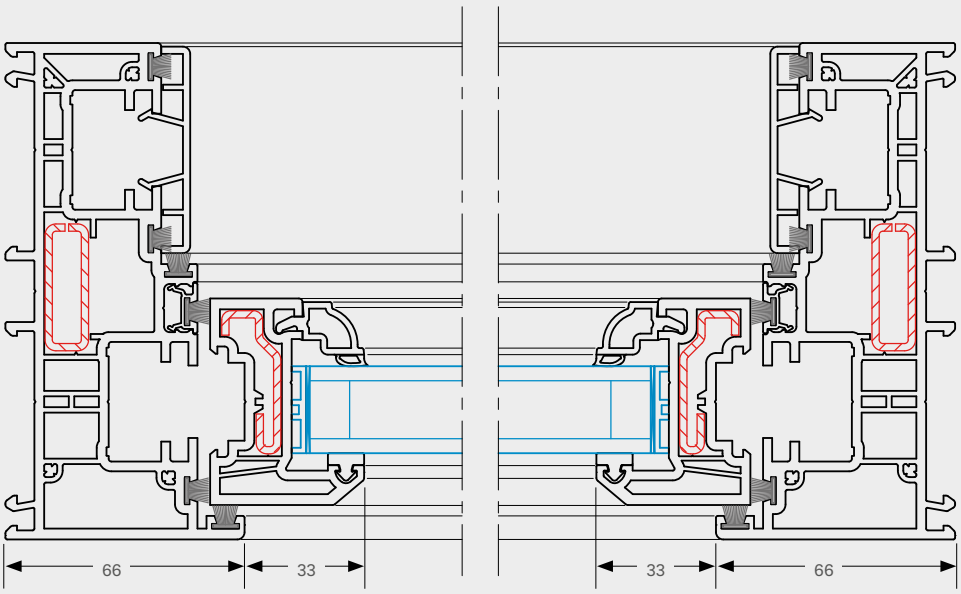
Vertical Sliding Windows Heritage

Below: Vertical Section

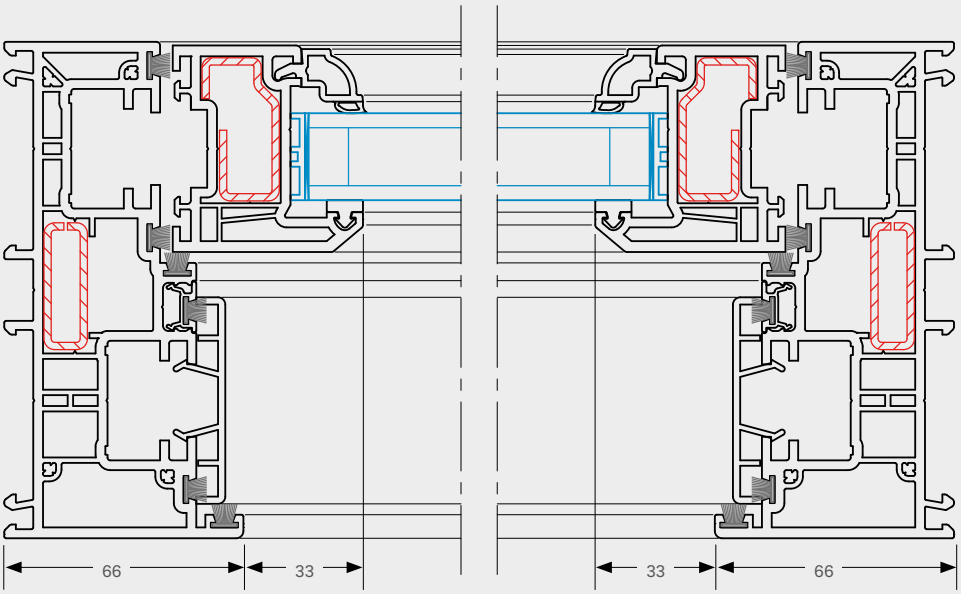


Detailed drawings are available on request

Top Sash



Bottom Sash



Composite Doors AGILA

The REHAU AGILA Composite Door provides a range of versatile profiles allowing for a multitude of door combinations and styles. The classic chamfered design integrates the composite door seamlessly with the TOTAL70C window system.



Characteristics
PVC benefits such as durability, low maintenance and excellent thermal properties are included without compromising on the looks of a traditional wooden door.

Combining a dedicated outer frame and transom with the well-established trademark of TOTAL70C allows for fitting of standard 44mm composite door panels.

A slim transom, which can be welded or mechanically jointed replicating a traditional wooden frame, can be used for top lights.

A multi-function groove detail in the outer frame allows for both brush pile and standard REHAU glazing beads. The profile also integrates a double brush pile seal for clear drainage paths for internally and externally opening doors.

Composite doors are available in a range of foil laminate options allowing for complete personalised profile design. Our complete range of foil laminate options can be seen on our colour page or the REHAU Colour Brochure.





Durable, low maintenance and excellent thermal properties.





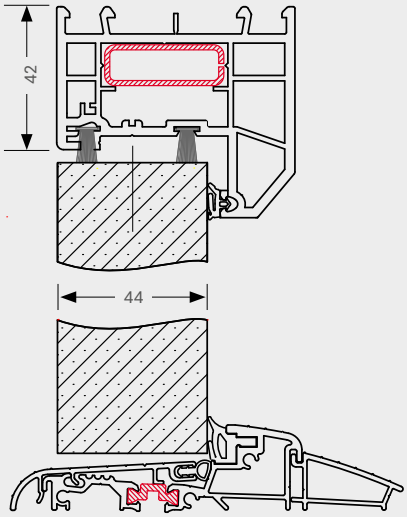
Composite Doors AGILA

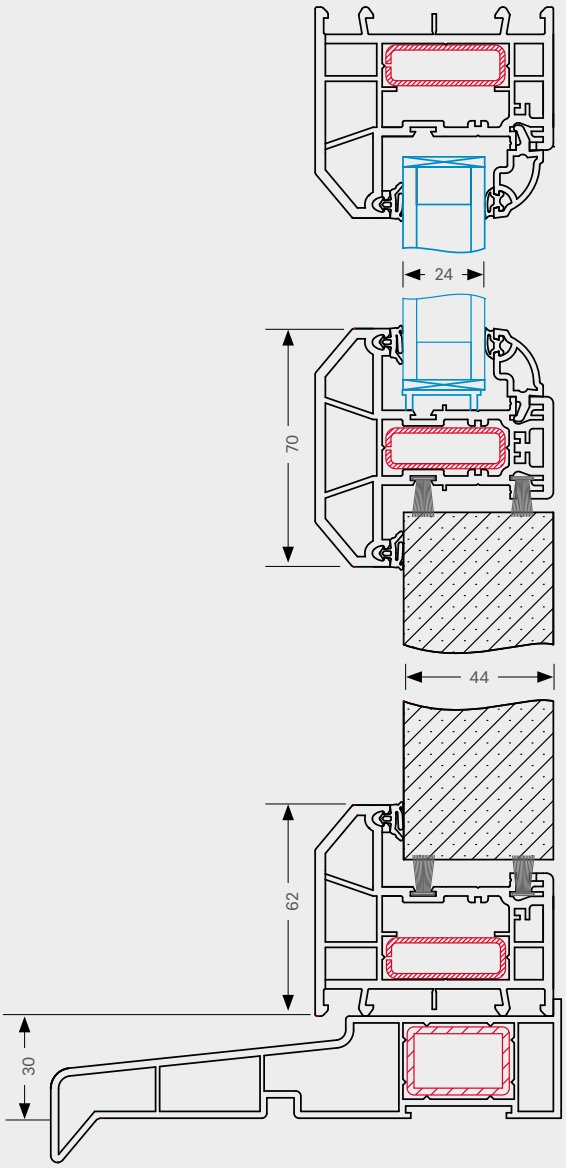
1 Dedicated transom allows for top light glazing and greater flexibility
2 Opening vent option using REHAU Tritec sash
3 Slimmer sightlines enabling narrower door openings such as small cottage doors and older properties
4 Suitable for standard 44mm door slabs
5 Mechanical joint option available on transom
6 Dual brush pile seal for enhanced weather performance

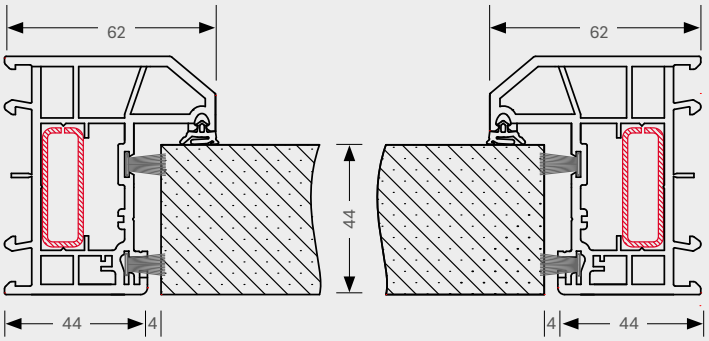
Feature	Specification
Profile depth	70mm
Maximum slab weight	100kg
Maximum door size	996 x 2105mm
Panel width	44mm
Further options	Dedicated low threshold options for Part M compliance
	Mechanical joint
	Dedicated frame and transom
Accreditations	See page 60



Below: Vertical Section







Detailed drawings are available on request

Entrance Doors TOTAL70

Available in a wide range of colour options, REHAU Entrance Doors will meet all requirements, making them a natural choice for the specifier and trade markets, where they can be utilised in new build and refurbishment projects.



Characteristics
REHAU entrance doors comprise a range of multi-chambered profiles that are designed to meet the requirements of the new build, commercial and domestic refurbishment markets and allow for excellent thermal insulation.

With a choice of chamfered profiles using TOTAL70C or fully sculptured using TOTAL70S, there is a full range and has a full range of ancillary profiles for all installation requirements.

The 70mm door system allows the latest security hardware to be fitted and features pre-routed steel on locking side for continuous reinforcement.

Both designs are available in a range of foil laminate options allowing for complete personalised profile design. Our complete range of foil laminate options can be seen on our colour page or the REHAU Colour Brochure.









Entrance Doors TOTAL70

The 70mm door system allows the latest security hardware to be fitted, ensuring Part Q compliance of the building regulations.

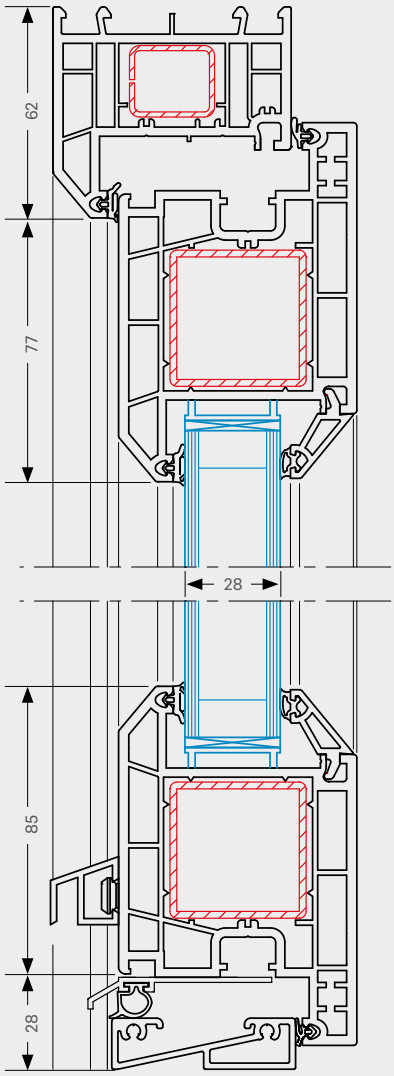
Entrance Doors TOTAL70

1 Open-in and open-out styles available for a variety of installations
2 Can accommodate most standard locking mechanisms including high security bolt systems, flag and butt hinges
3 Pre-routed reinforcement on locking side ensures continuous reinforcement
4 Choice of chamfered or sculptured profiles available

Feature	Specification
Profile depth	70mm
Maximum door size	1000 x 2200mm
Thermal performance	Exceeds 1.0 W/m^{2}K
Maximum sash weight	100kg
Glass Width	4 – 44mm
Further options	Low threshold options for Part M compliance
Accreditations	See page 60

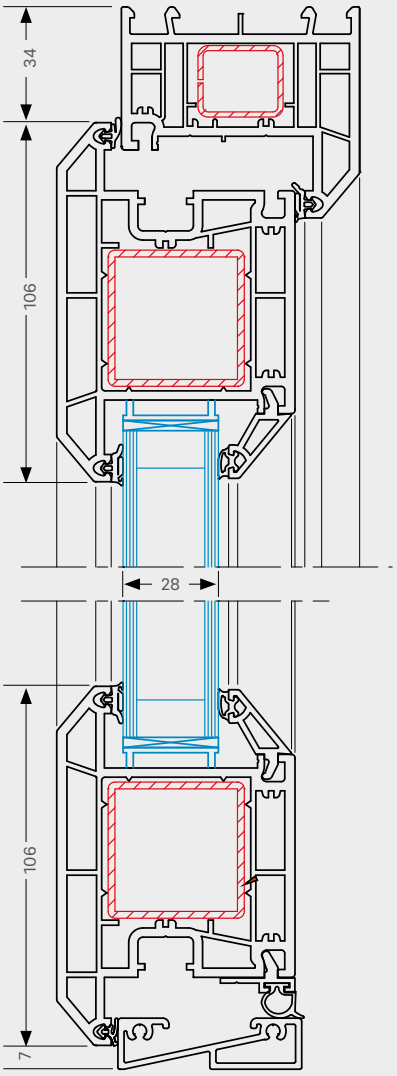


Below: open in vertical section



Detailed drawings are available on request

Below: open out vertical section



French Doors TOTAL70

REHAU offers a wide range of possibilities when a large opening is required to let the outside in. Our French Doors provide great aesthetics, durability and are energy efficient.



Characteristics
REHAU French doors comprise a range of multi-chambered profiles that are designed to meet the requirements of the new build, commercial and domestic refurbishment markets and allow for excellent thermal insulation.

Available in open-in and open-out styles, with equal or non-equal split panes, and with flag, butt or cranked hinges for an all-round design.

Dummy mullion allows for full aperture opening.

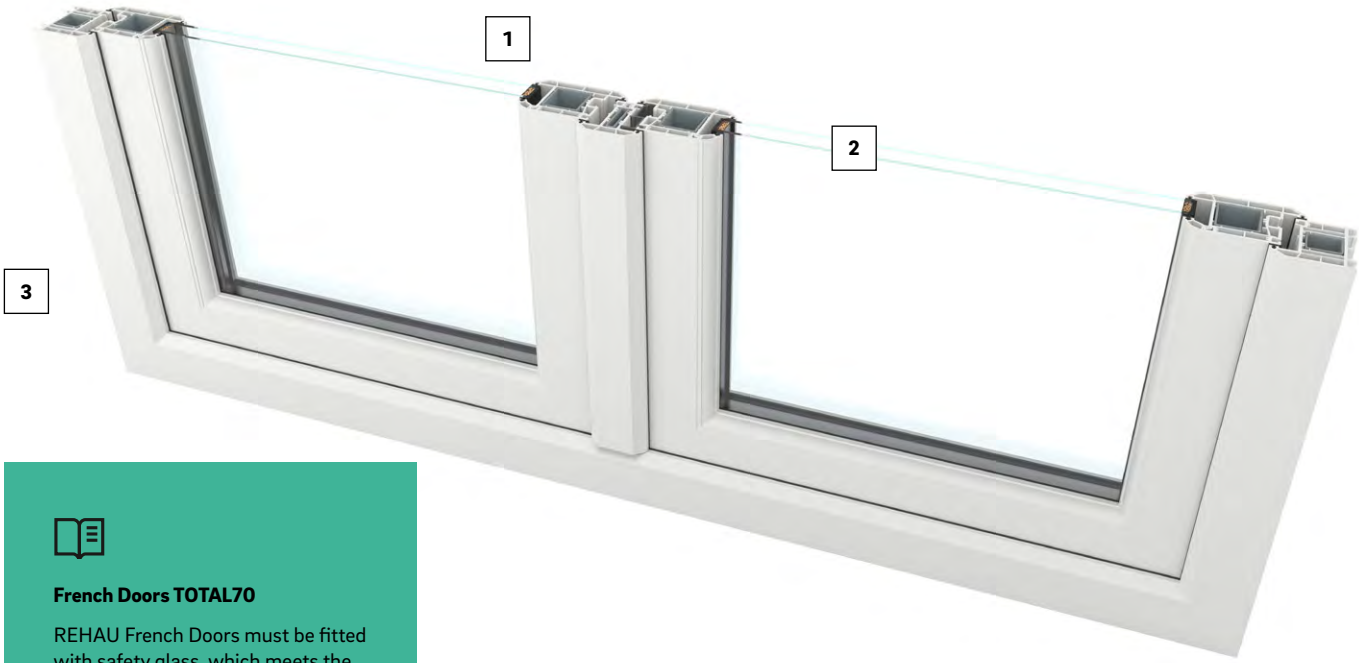
French doors are available in a range of foil laminate options allowing for complete personalised profile design. Our complete range of foil laminate options can be seen on our colour page or the REHAU Colour Brochure.





Feature	Specification
Profile depth	70mm
Maximum door size	1900 x 2200mm
Thermal performance	Exceeds 1.0 W/m^{2}K
Maximum sash weight	100kg
Glass width	4 – 44mm
Further options	Low threshold options for Part M compliance
	Decorative glass
Accreditations	See page 60

1 Dummy mullion allows for full aperture opening
2 Open-in and open-out styles available for increased versatility
3 Slim sightlines, perfectly suited to open up conservatories

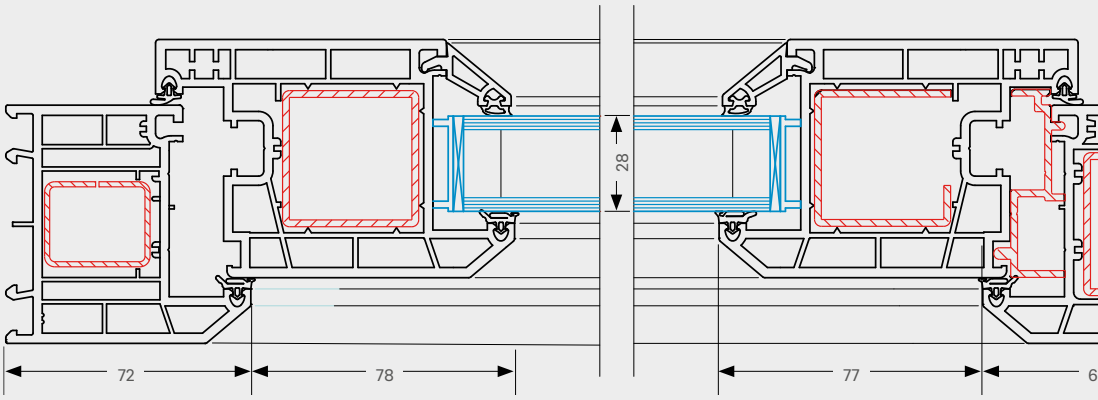


French Doors TOTAL70

REHAU French Doors must be fitted with safety glass, which meets the requirements of BS 6262.

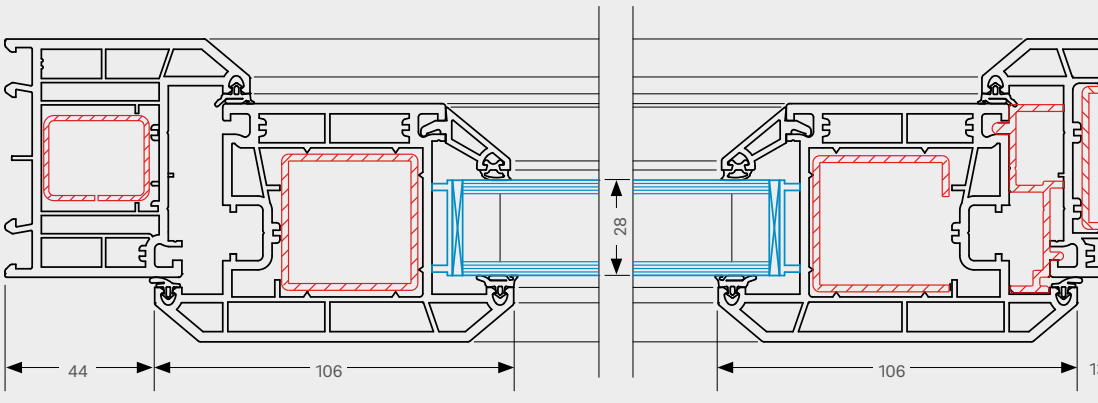
French Doors TOTAL70

Below: Open in vertical section

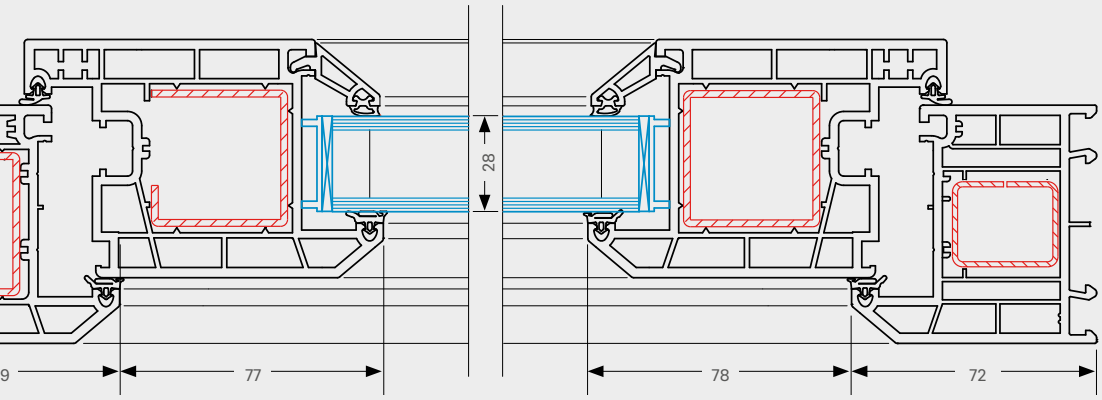


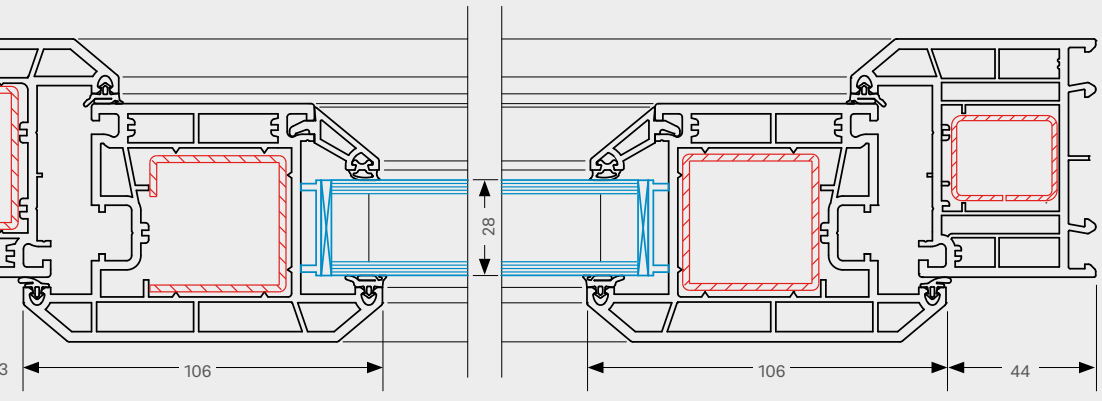
Detailed drawings are available on request

Below: Open out vertical section



Detailed drawings are available on request


28
9
77
78
72


28
3
106
106
44

Sliding Doors AGILA

AGILA sliding doors are perfect for modern living, combining superior design and engineering to bring outstanding versatility and create a feeling of openness in any home. Versatile and good-looking, the sliding door offers slim sightlines, adding light and freedom.



The AGILA sliding door can easily achieve a Door Energy Rating of `A´.

Characteristics
The AGILA sliding door provides a variety of styles, maximising glazing and viewing areas whilst also maintaining versatility and an expansive range of sizes.

A number of opening styles from two panes up to six and with a maximum opening width of 5m and heights of up to 2.4m are achievable with the AGILA sliding door. Two panes allow for a maximum opening of 50% and the triple track frame with a three-pane slider allows for a maximum opening of 75%. The further option of a range of foil laminate options allows for a personalised design solution.

Although the AGILA sliding door has been designed with structural integrity in the forefront, this does not take away its excellent thermal performance. With standard argon filled, double glazed units, the AGILA sliding door can easily achieve a Door Energy Rating of `A´. To go further, the glazing units can be improved, as the AGILA sliding door will accommodate up to 36mm triple glazed units for the maximum possible thermal performance.

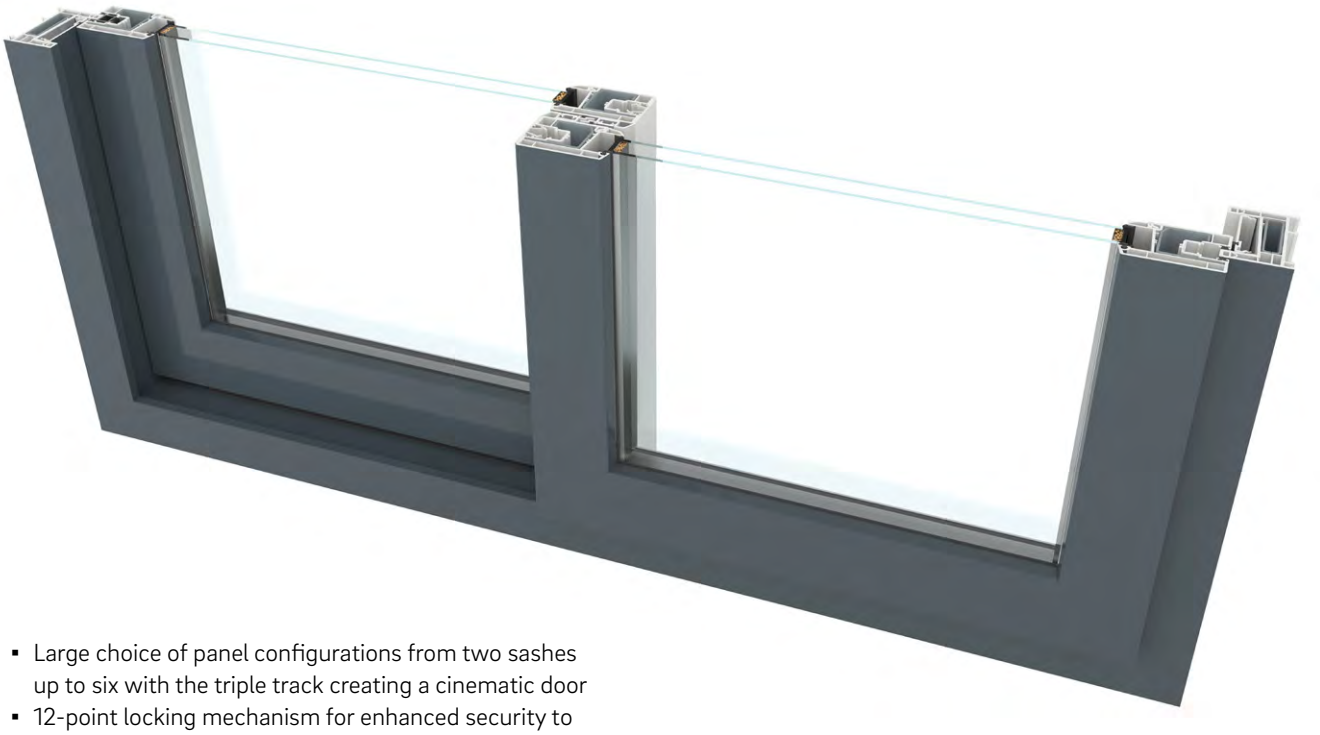
REHAU offers a complete solution with bespoke branded hardware including handles, rollers and locking mechanisms with up to 12 point locking and additional corner hooks for advanced security and Part Q of the building regulations compliance.

Large steel section reinforcements allow for larger size doorsets.





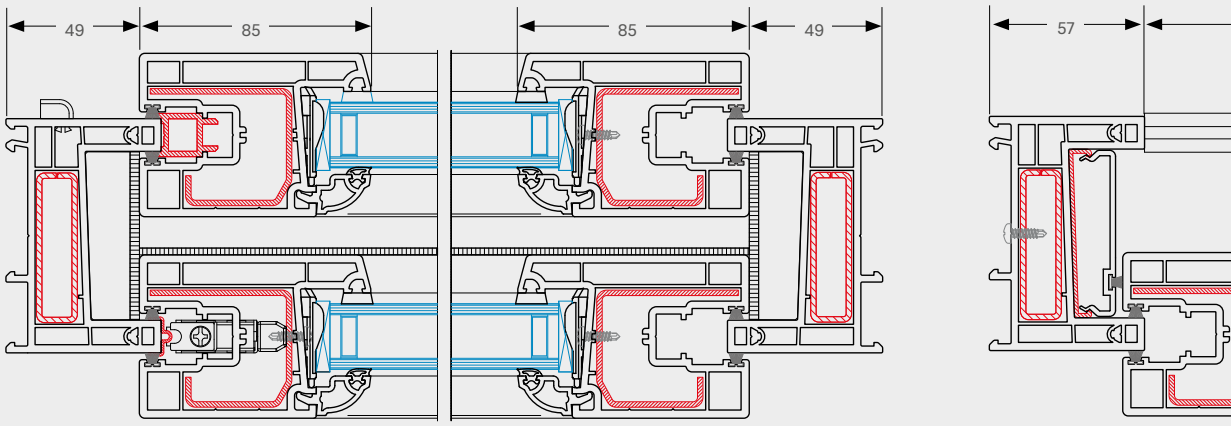
Feature	Specification
Profile depth	86mm/160mm
Maximum door size	Up to 5m x 2.4m (dependent on configuration)
Thermal performance	1.4 W/m^{2}k
Maximum sash weight	75kg per door using 3 wheel roller 110kg per door using 5 wheel roller
Glass width	4 – 36mm
Further options	Mechanical joint for larger sizes and ease of manoeuvrability
Accreditations	See page 60



- Large choice of panel configurations from two sashes up to six with the triple track creating a cinematic door
- 12-point locking mechanism for enhanced security to achieve PAS 24
- Triple track maximum width of 5m
- Practical and versatile
- Increased door sizes and slim sightlines allow more light with less vertical breaks in your visual area
- Opening from either the left, right or even from the centre for complete flexibility

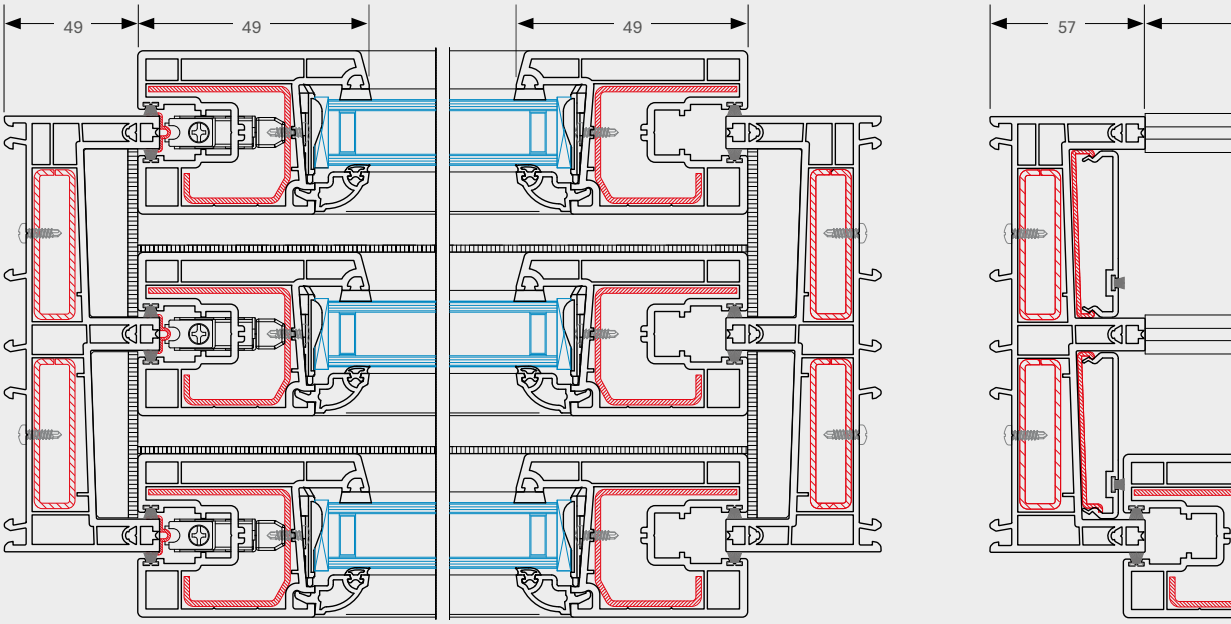
Sliding Doors AGILA

Below: 2 track horizontal section

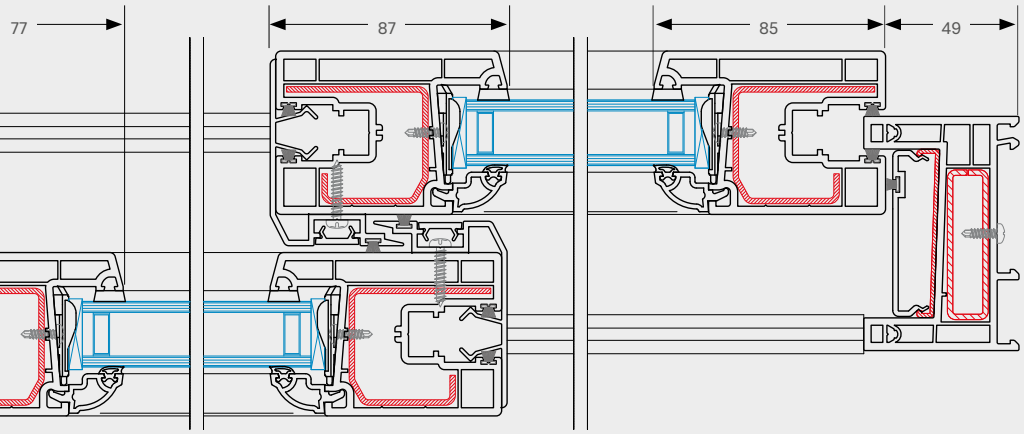


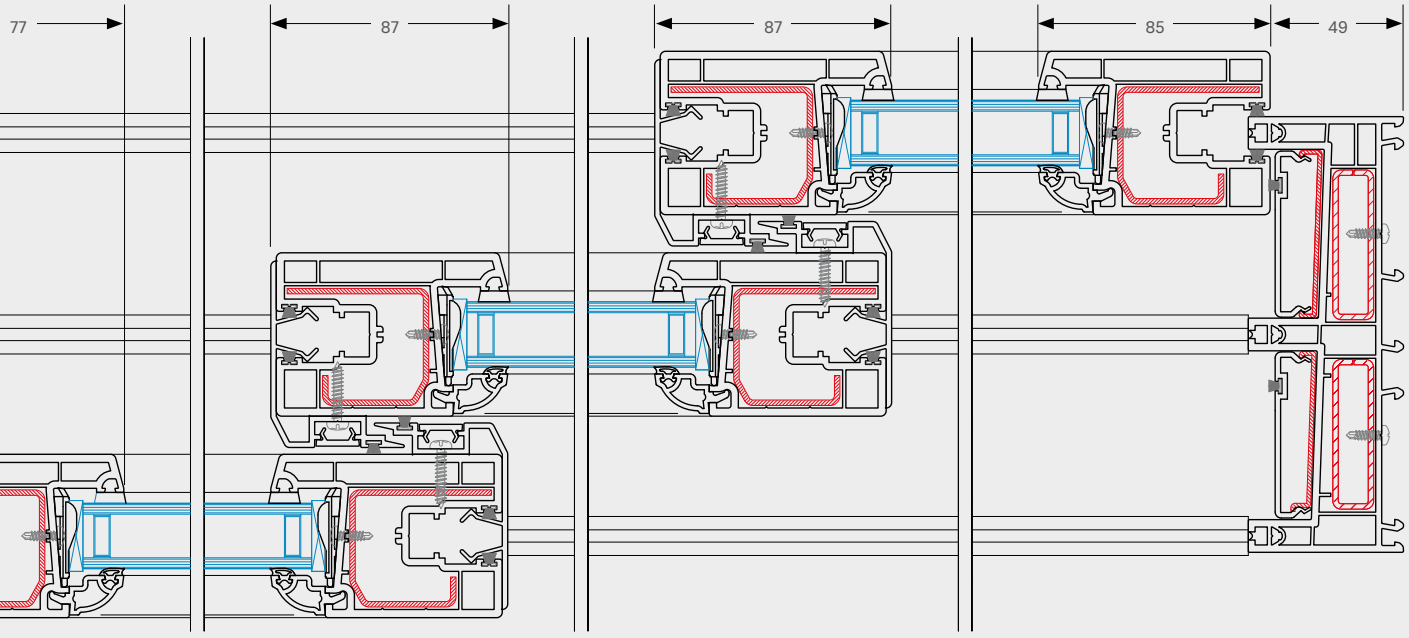
Detailed drawings are available on request

Below: 3 track horizontal section



Detailed drawings are available on request


77
87
85
49


77
87
87
85
49

Multi-Fold Doors AGILA

A popular alternative to more traditional PVC French doors and PVC sliding doors, the AGILA Multi-Fold Door can create an open plan feel for any type of building. The multifaceted panes of the multi-fold door fold back to allow a wide opening offering unrestricted access and bringing the outside in.



Characteristics
The AGILA multi-fold door offers an extensive range of styles and combinations. There is something to suit the widest variety of door apertures with a choice of up to seven opening sashes. The flexibility of the design means that the doors can open from left, right or centre allowing maximum versatility.

With a choice of two outer frames, three chamber 72mm or five chamber 76mm, the door can be produced in a range of styles and configurations.

Slim sightlines allow for more light inside and an enhanced view. A dedicated low threshold running track with clip-on sill is available to integrate a thermally broken low threshold, reducing heat loss and lessening the chance of condensation gathering on the inside.

A reversible track detail allows for the choice of opening inwards or outwards. The integrated track detail sits directly onto the brickwork to reduce movement in the roller mechanism; meaning less chance of the door rollers needing to be adjusted over time.

A coarse brush pile has been designed to minimise dirt ingress allowing smoother roller action.

Multi-fold doors are available in a range of foil laminate options allowing for complete personalised profile design. Our complete range of foil laminate options can be seen on our colour page or the REHAU Colour Brochure.







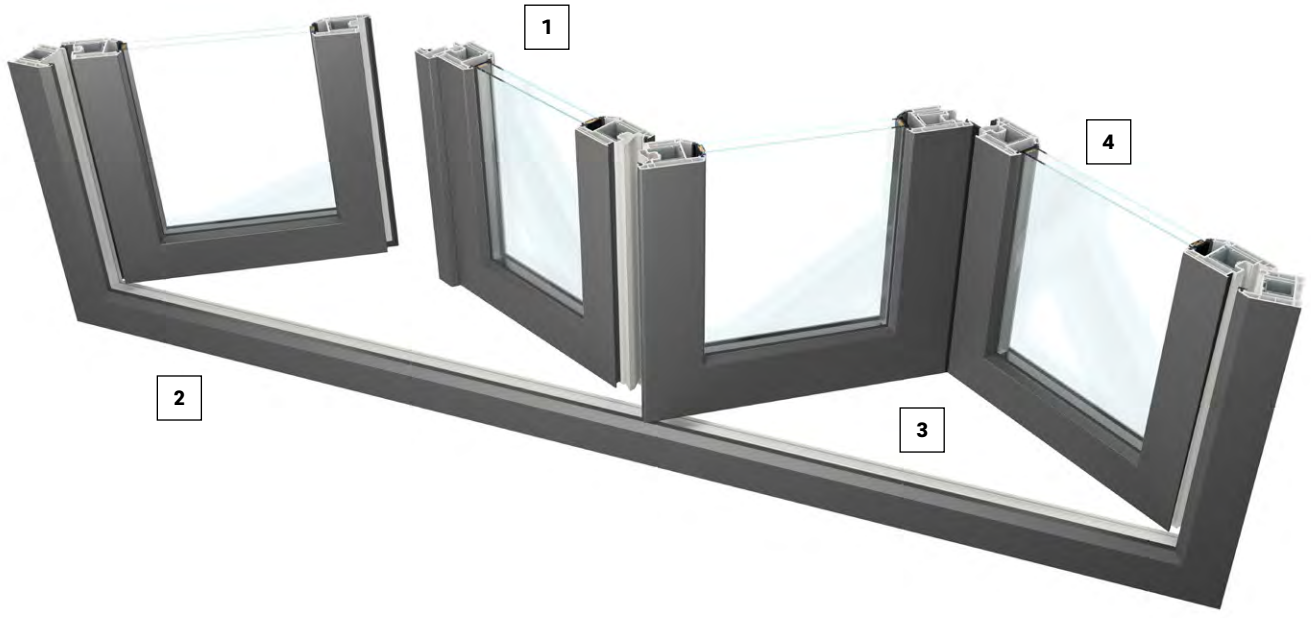


Slim sightlines allow for more light inside and an enhanced view.

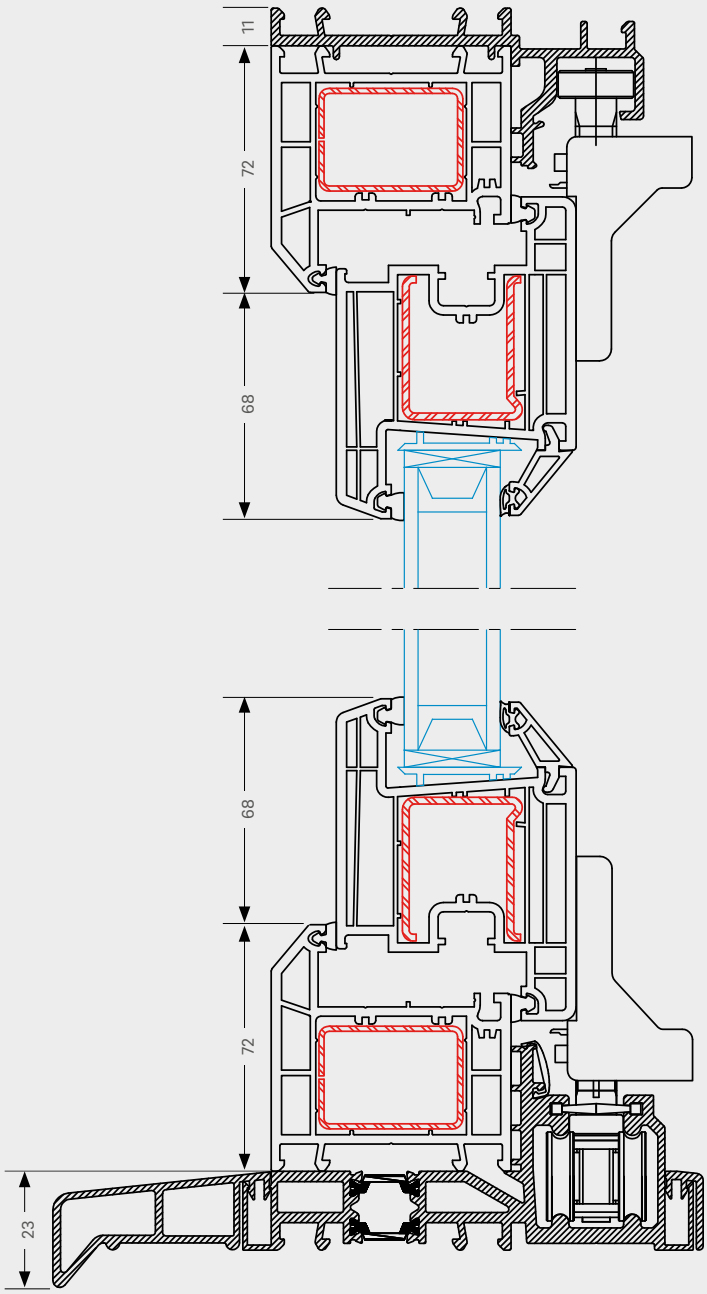
Multi-Fold Doors AGILA

1. Multifaceted panes fold back to allow the widest aperture, offering unrestricted access and maximum viewing
2. Dedicated low threshold allows for a reversible open-in / open-out configuration
3. Possibility of up to seven panes and various style configurations
4. Master door can be located on the right or left side, offering total flexibility

Feature	Specification
Profile depth	70mm
Maximum door size	2300 x 4000mm (White)
	2200 x 3000mm (Coloured/Foiled)
Thermal performance	1.4 W/m^{2}k
Maximum sash weight	80kg
Glass Width	4 – 44mm
Accreditations	See page 60



Below: Vertical Section



Detailed drawings are available on request

SKYFORCE Juliet Balcony

SKYFORCE is the juliet balcony that doesn't compromise on style. All the visible parts can be customised to match the finish of the windows and doors, so SKYFORCE fits perfectly and discreetly into the clean lines of modern homes, and because it's made of glass, you'll always have the best view in the house. The SKYFORCE juliet balcony is compatible with REHAU's TOTAL70, and GENEO window systems.



Seamless integration
SKYFORCE system component parts are available in anodised aluminium, anthracite grey (RAL 7016) and white (RAL 9016). The balcony can also be powder-coated to match your windows in any RAL colour. Together with its concealed attachment system, it all makes for a thoroughly stylish appearance. SKYFORCE doesn't have to be fitted to face brickwork or render detail hence there's no obtrusive bracket details on the buildings facade.

Certified Safety
REHAU have developed a combined window, door and SKYFORCE juliet balcony solution with specially designed and dedicated reinforcements which are structurally engineered to be fully certified and building regulations compliant giving protection from falling, collision and impact.

Versatile application

The SKYFORCE juliet balcony is compatible with REHAU's TOTAL70 system, extruded and manufactured in the United Kindgom, as well as our GENEO window system.



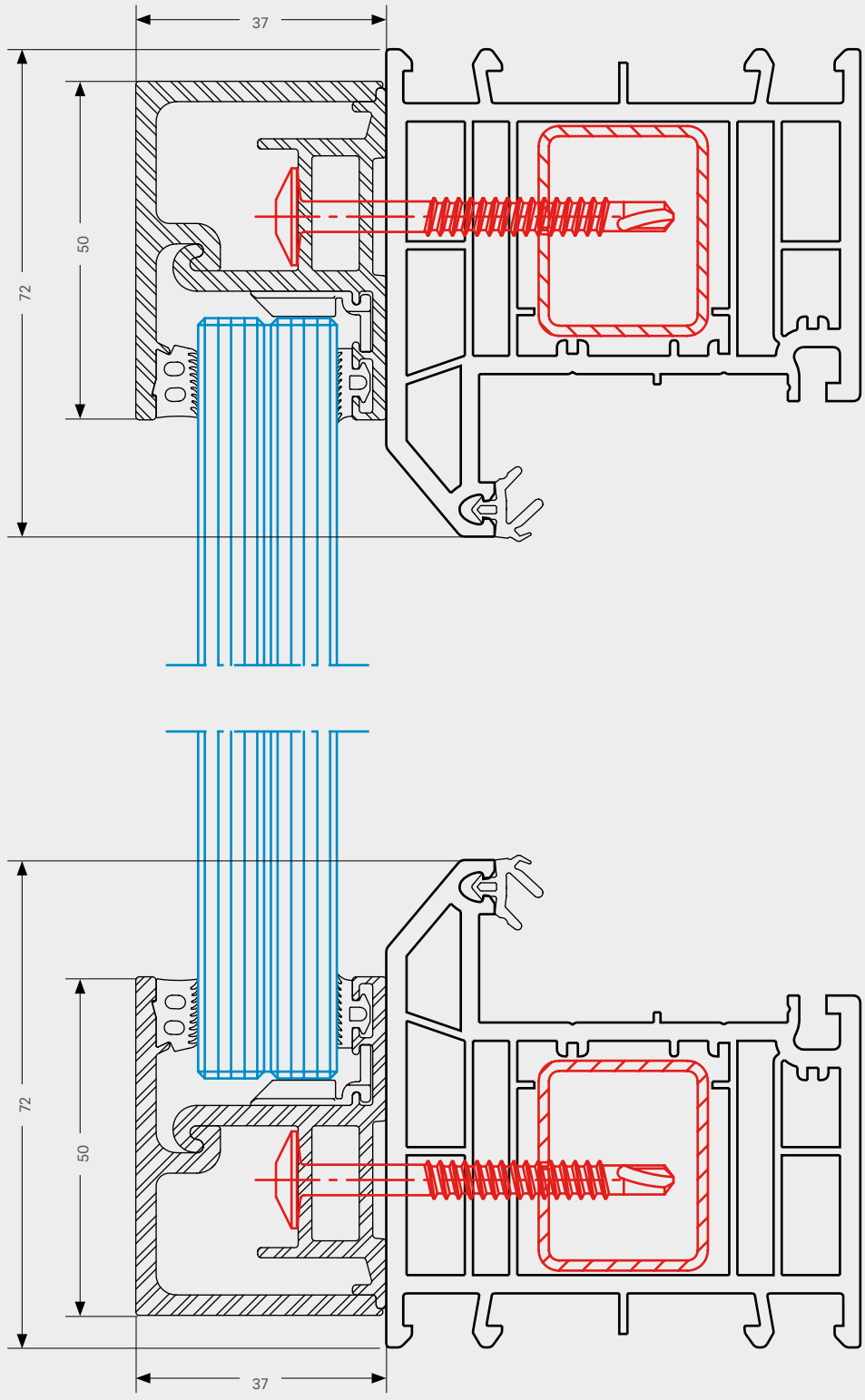


SKYFORCE Juliet Balcony

Feature	Specification
Frame Sets	Pre-assembled frame sets of 1000mm height, glass thickness 12.76mm or 21.52mm (excludes laminated glass).
Sightlines	Slim external and frameless appearance from internal viewing.
Finishes	Mill Finish, Anodised aluminium E6/C0(EV1), RAL 7016 anthracite grey, RAL 9016 white (Further surface finishes available on request).
Anchor Screw	REHAU specified Stainless Steel Installation Screws for strength and longevity.
Reinforcements	Essential REHAU specified Reinforcements are used with both TOTAL 70 and GENEO systems (see Technical Information Guide).
Glass Edge Protector	Glass edge protector including glass mounting tape for safety and aesthetics.
Standards & Testing	
	Tested in accordance with BS 6180
	REHAU Ltd SKYFORCE Technical Information Guide must be adhered to in full and the completed project to be approved by a competent person.

Note: Project includes installation of SKYFORCE manufactured with specified components plus the door frame to the fabric of the building.

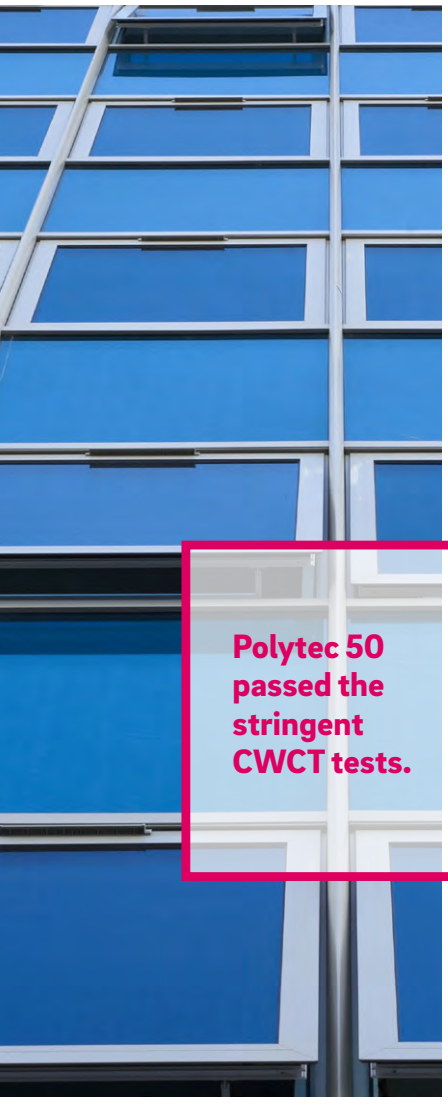
Below: Vertical section



Detailed drawings are available on request

Alu Clad Curtain Walling Polytec 50

Polytec 50 is a Curtain Walling System which is suitable for both new build and replacements, vertical or inclined curtain walling and single or multi-storey buildings.
As a warm facades (thermally broken) stick system, the REHAU Polytec 50 curtain walling system has been engineered to give you complete architectural freedom with efficient on-site assembly.



Curtain wall attributes
Externally Polytec 50 has aluminium cover caps in various style and colour options to help you create stunning glazed facades. Unlike most curtain wall systems, however, Polytec has a steel core which has much greater strength than aluminium and a PVCu inner face, providing warmth and low maintenance.

With exceptional weather performance Polytec 50 confidently passed the stringent CWCT tests whilst also meeting Passivhaus standards for excellent thermal performance with a Ucw value of up to 0.8 W/m^{2}K.

Appearance
Choose your exterior aluminium cap style from traditional to modern in any RAL colour from Anthracite Grey to Magenta to make your building individual and aesthetically stylish. Polytec 50 also has slim and attractive 50mm sightlines and can be designed for convex or concave faceted applications.

Strength of steel
Polytec 50's core is made of steel box sections from 50 x 40mm to 120 x 40mm up to 5mm thick. As steel has an E-modulus three times greater than aluminium, Polytec 50's structural capabilities outperform aluminium sections with the same geometry, making it ideal for large spans.

Insulation
Polytec 50 has been designed with thermal efficiency as a priority with a Ucw value of 0.8 W/m^{2}K, it will keep the heat in during the winter and out during the summer.

Glazing
The system is designed to work with glazing units or panels from 6 - 40mm with a maximum glazing weight of 180kg. Polytec 50S is designed to accept all REHAU window styles as "inserts" to achieve ventilation openings.

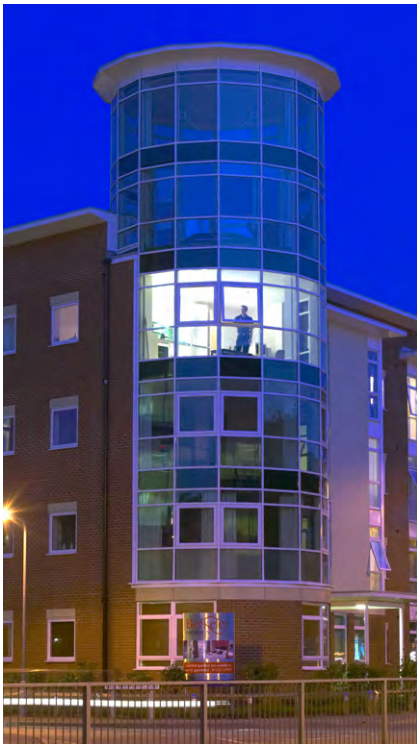
Maximum sizes
Maximum mullion and transom sizes, span and dimensions depend on design loads. Project specific calculations need to be carried out. Please contact one of our Commercial Managers or our Regional Sales Offices for assistance.

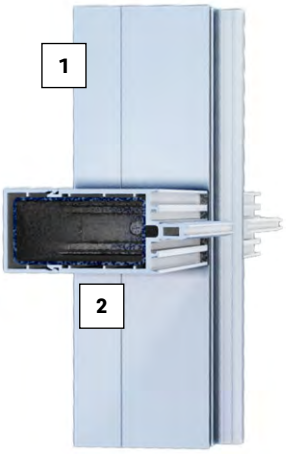
Weather performance
High weather performance because of mullion drained and pressure equalised system design.

Colour
Large range of colour options with powder coated aluminium cover profiles for the exterior and Acryl ll painted for the interior.

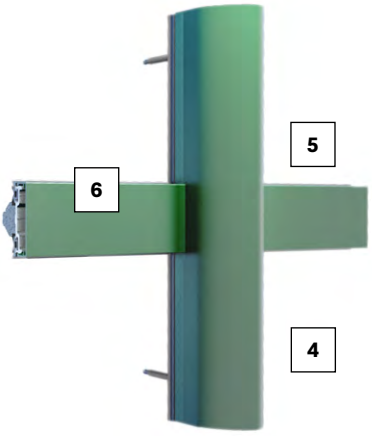
Tried and trusted
Polytec 50 has been installed throughout Europe on low-rise and high-rise buildings in many different types of topography / locations. The system has been tested according to EN 13830.

CWCT Approved
Polytec 50 has been tested to the stringent CWCT (Centre for Window Cladding Technology) weather performance standards, confidently passing all areas.









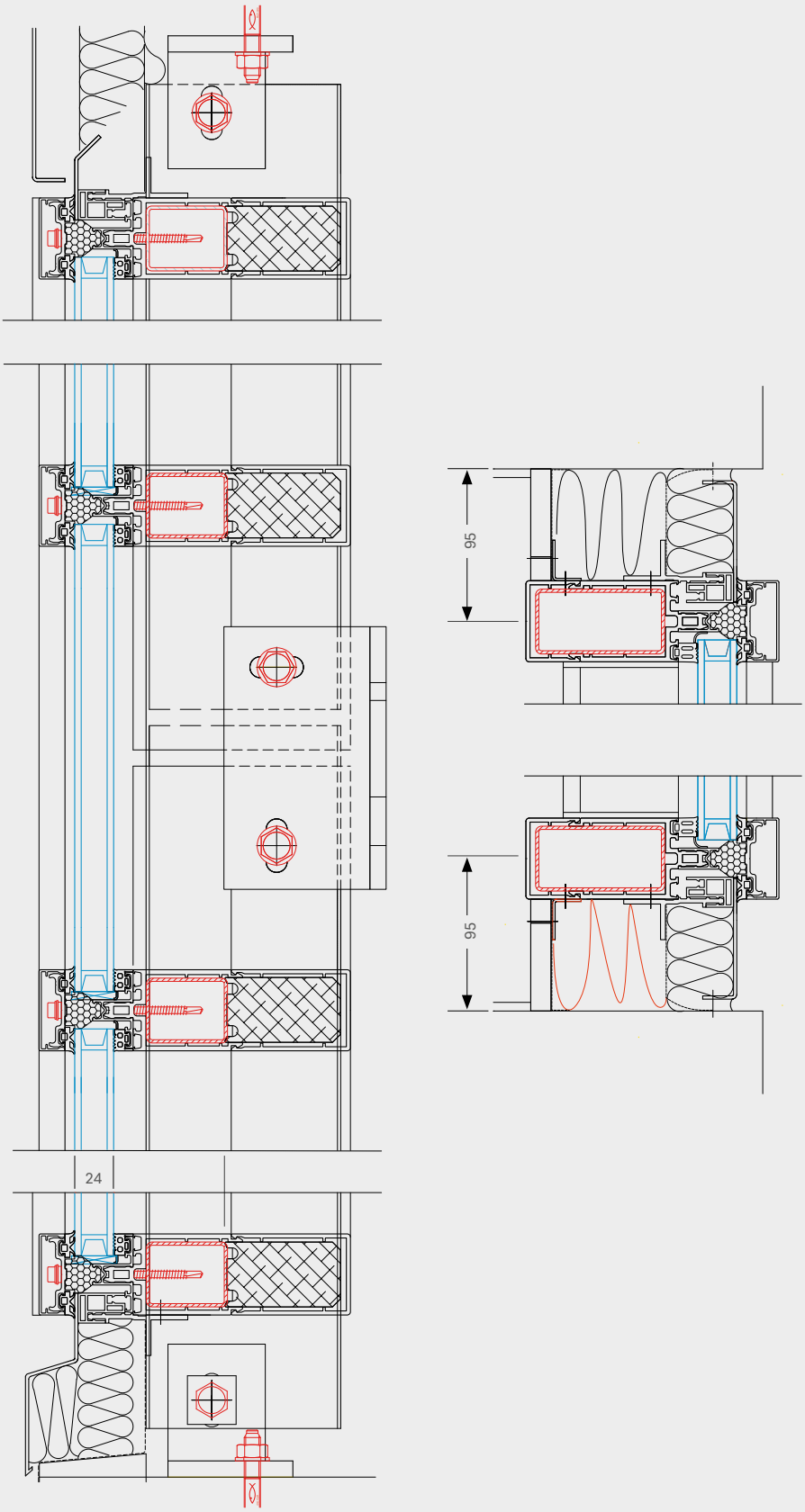


1 CWCT Compliant for maximum weather performance
2 Steel core for strength
3 Composite stick system
4 U-value of 0.8 W/m^{2}K
5 43dB sound rating
6 Slim sightlines

Alu Clad Curtain Walling Polytec 50

Feature	Specification
Sightlines	50mm
Range of profile depth	71 – 134mm (internal profile depth)
Range of glazing	Size 6 – 40mm
Maximum glazing weight	180kg
Thermal performance	Uf up to 0.74 W/m^{2}K (Passivhaus specification)
IFT Rosenheim testing:	
Water tightness	1950 Pa (BS EN 12155)
Air permeability	750 Pa (BS EN 12153)
Wind resistance	2000 Pa (BS EN 12179)
Safety test	3000 Pa (EN 13116)
Impact resistance	Pass I5 / E5 (EN 14019)
Sound insulation	Rw = 43dB (depending on glass spec.)
Colour options:	
External	Powder coating RAL colours) or Mill / Anodised finish
Internal	PVCu White RAL 9016 or painting in REHAU Acryl ll wide range of colours (REHAU Colour chart)
CWCT (Centre for Window Cladding Technology)	
	Polytec 50 Tested (2014) to CWCT Test Methods for Building Envelopes (December 2005) Sections 5,6,7,9,11,12 and 15 for Weather and Impact performance Subsequent compliance with NHBC Chapter 6.9

Below: Vertical Section



Detailed drawings are available on request

Colour

From timeless hues to statement shades



Our four collections offer a rich array of colours that meet the aesthetic desires of architects and the distinctive ideas of each and every homeowner.

Twenty two solid and woodgrain laminate finishes are available from timeless hues in Clotted Cream and Chartwell Green to contemporary expressions in different shades of grey and statement colours like Ruby Red.

All foil finishes provide high performance in different weather conditions without colour deterioration or fade. PVCu windows and doors are now not only a sensible and sustainable solution, but they're also a source of inspiration and an expression of colourful desires!

Explore the colour collections below...

The Contemporary Collection

Elephant Grey
(Grained)
Renolit
02.11.71.000047–116700
Similar to RAL 7001

Basalt Grey II
(Smooth)
Renolit
02.11.71.000039–809700
Similar to RAL 7012

Slate Grey
(Grained)
Renolit
02.11.71.000040–801300
Similar to RAL 7015

Slate Grey
(Smooth)
Renolit
02.11.71.000040–801300
Similar to RAL 7015

Anthracite Grey
(Grained)
Renolit
02.11.71.000041–116700
Similar to RAL 7016

Anthracite Grey
(Smooth)
Renolit
02.11.71.000041–808300
Similar to RAL 7016

Midnight Black
(Matt)
Renolit
02.20.01.000002–504700
Similar to RAL 9005

Black Brown
(Grained)
Renolit
02.11.81.000101–116700
Similar to RAL 8022

The Timeless Collection

Simply White
(Grained)
Continental F456-5053
Similar to RAL 9010

Clotted Cream
(Grained)
Continental F456-5054
Similar to RAL 9001

Chartwell Green
(Grained)
Renolit
02.11.61.000029–101100

Pearl Grey
(Grained)
Renolit
02.20.71.000005–116700
Similar to RAL 7038

The Traditional Collection

Irish Oak
(Grained)
Renolit 9.3211 005–114800

Turner Oak
(Grained)
Continental F470-3001

Golden Oak
(Grained)
Renolit 9.2178 001–116700

Walnut
(Grained)
Renolit 9.2718 007–116700

Dark Oak
(Grained)
Renolit 9.2052 089–116700

Rosewood
(Grained)
Renolit 9.3202 001–116700

Mahogany
(Grained)
Renolit 9.2065 021–116700

The Statement Collection

Ruby Red
(Grained)
Renolit
02.11.31.000013–116700
Similar to RAL 3011

Racing Green
(Grained)
Renolit
02.11.61.000009–116700
Similar to RAL 6009

Steel Blue
(Grained)
Renolit
02.11.51.000033–116700
Similar to RAL 5011



Accreditations

REHAU Ltd

Manufacturing Control Certification	Extrusion & Product Certification
ISO 9001 Quality Management System	**BSI KM 13358** - BS EN 12608 (BS7412) Class A
ISO 50001 Energy Management	**BSI KM 66461** - PAS 24 Doors Enhanced Security
ISO 14001 Environmental Management	**BSI KM 76189** - PAS 24 Windows Enhanced Security
VinylPlus Product Label – Certification of Approval	

Certified Profile and windows/ doors

Fabricator requirements

Fabrication Certification	Legal Requirement
BS 7412 (BS 6375) Fabrication & Performance (EN)	Building Regulations Compliant including: Part L (Thermal Efficiency, Enhance Security ADQ)
PAS 24 Doors Enhanced Security	CE Marking - BS EN 14351_1 Window & Doors Product Standard
PAS 24 Windows Enhanced Security	Factory Production Control (FPC)

Legal Requirements Met for fabrication

Route to compliance

Fabrication Certification	Scope of Compliance
Cascading of REHAU testing only →	Building Regulations
Cascading of REHAU testing & 3rd Party Certification L →	Building Regulations plus can be used to gain further approval and certification including: • Secure By Design (SBD) • Kitemark Licence (BSI), Q Mark (Exova), BBA etc.
Independent UKAS testing →	

Further Compliance Capable i.e. SBD, WER etc.

BS EN12608:2016
Unplasticized Polyvinylchloride (PVC-U) profiles for the fabrication of windows and doors - Classification, requirements and test methods. REHAU Kitemark Licence Number: KM13358. Standard for BSI approved profiles extruded in 1406 material by REHAU Ltd. All classes to be tested in accordance with standard requirements with critical criteria as set out below:

Material information

4.2 (5.8) Classification of climatic zones	Two climatic zones available: M (moderate) and S (severe) REHAU profiles extruded achieve Classification SEVERE
4.3 (5.6) Classification of resistance to impact by falling mass of main profile	For the resistance to impact by falling mass at -10°C two classes are available: Class I falling mass of 1000g at a height of 1000mm Class II falling mass of 1000g at a height of 1500mm REHAU profiles extruded achieve Classification II
4.4 (5.3.2) Classification of wall thickness of main profiles	There are three classification thicknesses available: A, B and C (as per table 3 EN12608). REHAU profiles extruded achieve Classification A



Building Solutions

Reliable. Innovative. Secure.

REHAU Building Solutions think and act with a view to future generations. We offer building products such as hygienic plumbing systems, heating systems and pre-insulated pipe for heat networks and energy centres that help you leave your legacy for generations to come.

RAUPIANO Plus: Acoustic soil and waste solution
A complete solution from family homes to large commercial buildings.

- Acoustic soil and waste system
- 17dB noise protection performance
- Full range from DN32-200
- High chemical resistance from polypropylene (PP)
- 2 bar rated push-fit system
- 30% faster installation than alternative systems
- 120 minute fire protection



RAUTITAN: For water and heat
The universal system for drinking water and heating.

- 10 bar WRAS-approved heating and plumbing system RAUTITAN Flex (PE-Xa) and Stabil (aluminium multilayer)
- REHAU EVERLOC™ compression sleeve fitting has been used over 750,000,000 times
- Independent certification of a 'cavity-free' joint Over 50 year lifespan
- Proven alternative to copper



Thermally activated building structures (TABS)

- Low investment and operating costs
- "Gentle cooling" without draft effects
- Reduced air exchange in combination with ventilation systems
- No Sick Building Syndrome
- Use of alternative energy sources
- Low flow temperatures mean efficient performance of alternative energy sources





REHAU Chilled ceiling
Reduces noise and dust allergens for a healthier working environment. Up to 20% lower energy consumption.

- No servicing and maintenance costs
- No draughts or dust allergens therefore reducing
- Sick Building Syndrome
  - Uses REHAU EVERLOC™ jointing technology
  - No compromise on planned ceiling height



Heat networks & energy centres
In the drive to reduce carbon emissions from heating, many new residential and mixed use developments are connecting to a district heat network or installing remote energy centres on site. Possible heat sources include gas CHP or renewable energy sources such as heat pumps or biomass.

IT'S MADE IN THE U.K.

REHAU district heating pipes:
- RAUVITHERM and RAUTHERMEX PE-Xa pipes available from 25-160mm
- PP-R pipes available up to 355mm
- Uses REHAU EVERLOC™ compression sleeve joining technology
- Largest UK stock of pre-insulated pipes with full cutting service
- RAUVITHERM is the only PE-Xa pipe made in the UK

Plastics in circulation
Resource conservation at REHAU



As a manufacturer, we are conscious of the impact of our actions on people and the environment.

The use of recycled materials is one of REHAU's strategic objectives. Our highly developed refurbishment concepts have enabled us to conserve resources and minimise waste disposal and material residues for many years now.

We just have to look at the increasingly stringent legal requirements and growing demand for sustainable construction products to know that we are on the right track. We are aiming to gradually increase the proportion of recycled materials in our products.

Previously, window profiles were primarily made via the mono-extrusion method and used virgin PVC. Co-extrusion (i.e. multi-layer extrusion) adds a second extruder to the operation that processes a second material and combines the best characteristics of both materials. If recycled material is used in the process, the advantages are clear; the return concept keeps valuable raw materials in the production cycle and thus makes it possible to re-use materials in similar product applications even after their initial product life cycle.

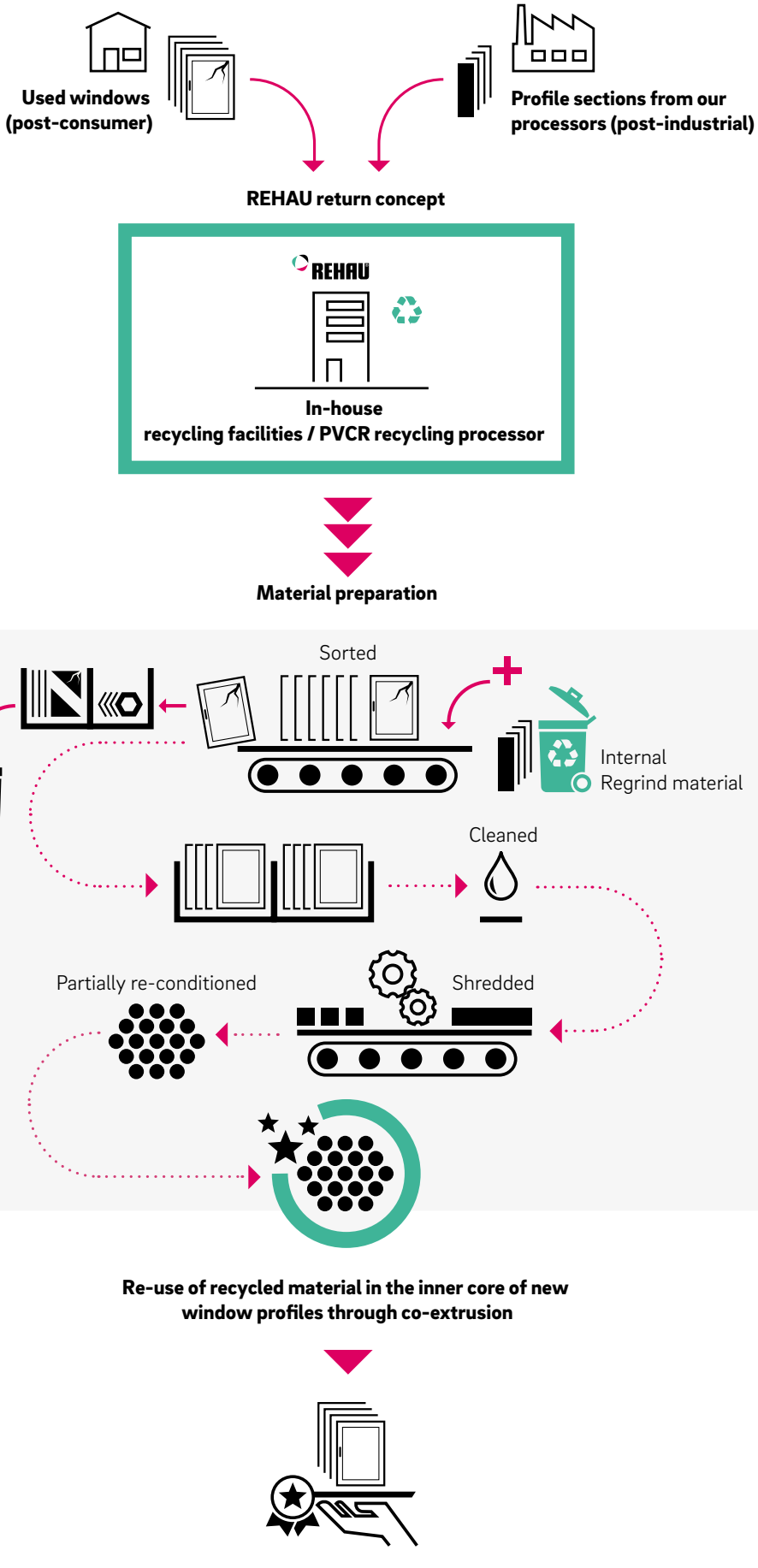
Co-extrusion is an innovative method of producing top-quality window profiles, enabling different PVC materials to be processed on the core of the profile and the outer skin.

What quality standards do our co-extrusion products meet and comply with?
Quality is the key. Using this process, the window profiles retain their outstanding characteristics, creating a unique combination of first-rate quality, innovation and sustainability.

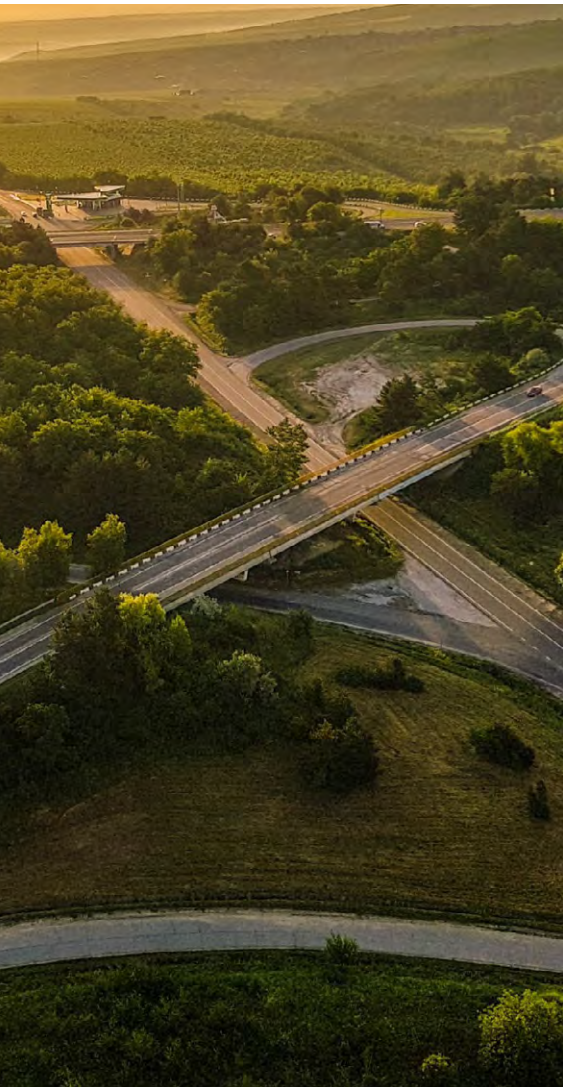
The use of recycled material means that valuable secondary raw materials can be re-used, which helps to protect the environment. This enables us to combine our responsibility to act sustainably with our commitment to offer our customers the best range of products – and thus enable them to act more sustainably themselves.

The core materials we primarily use are:
- Regrind material generated via our own extrusion and lamination processes (post-industrial waste)
- Window production regrind material from our processors (post-industrial waste)
- Materials that we extract from returned windows (post-consumer waste)

We have many years of experience in the use of co-extrusion technology.
For example, the GENEO and NEFERIA profile systems employ it in order to utilise the high-tech fibre composite RAU-FIPRO as a means of enhancing stability.
Co-extrusion is being implemented at all company locations and within TOTAL70 products.


Used windows
(post-consumer)
Profile sections from our
processors (post-industrial)
REHAU return concept
REHAU
In-house
recycling facilities / PVCR recycling processor
Material preparation
Sorted
Internal
Regrind material
Cleaned
Partially re-conditioned
Shredded
Re-use of recycled material in the inner core of new
window profiles through co-extrusion

Sustainability – Reducing our impact



We bear particular responsibility towards our customers and partners as well as our employees, but also towards the environment and society.

Polymer solutions are our core business and the base from which we want to evolve – to become the innovative technology leader that offers real value to customers and end users. While we use 70 per cent of our resources for ongoing projects in the core business, we use 20 per cent to agilely find new solutions – even without a customer order. We devote the last 10 per cent of our capacities to innovations that could replace tried and tested methods and products in the future.

We think holistically, act sustainably and invest in the future. In this way, we can use new solutions to increase added value, conserve resources and thus make a contribution to society. With our REHAU 2020 initiative we are already shaping our contribution to the future.

Joerg Ipfling
Expert Recycling Technology, WS-OPS-RT



The implementation of our strategy goals 2020

By 2020, we want to save 30% electricity. In 2016, we were already at **16.8%** compared to 2009.

We want to reduce our water consumption by 40% by 2020. In 2016 we already saved **30.5%** compared to 2009.

We have already achieved one goal in 2016: we reduced our CO_2 emissions by **26.5%**



Our Values

Reliability

Innovative materials, new environmental certificates and clever system solutions – REHAU strides reliably with its customers into the future

Innovation –Home-made innovation

At REHAU, it is particularly the employees who come up with innovations. They independently make driving a car more environmentally friendly or continuously increase the proportion of resource-conserving recyclates in window profiles.

Trust – Trust is everything

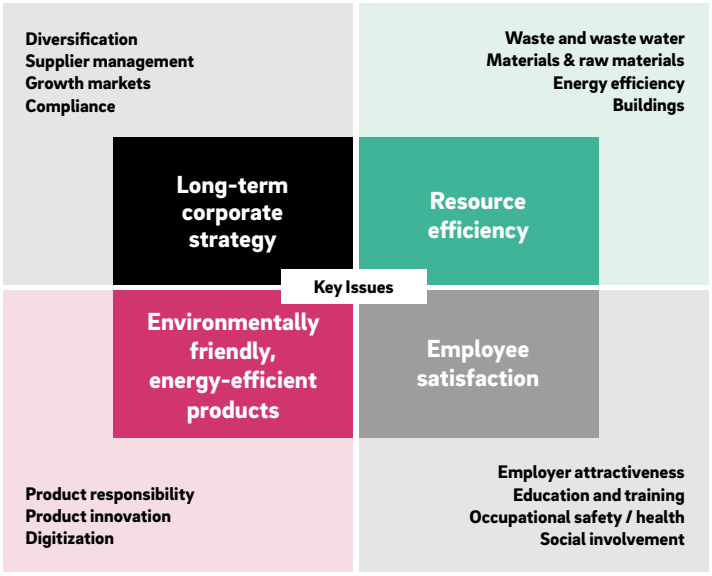
Every good and long-term relationship is based on trust. Employees, partners and customers should know that REHAU is there for them and takes responsibility.

Our sustainability committee has developed a mission statement that clearly defines our activities for sustainable management. We can systematically classify all targets and measures into four areas.

Our actions are determined by four core topics:

1. Long-term corporate strategy:
Sustainability determines our actions and is an integral part of the REHAU 2020 strategy. We bear responsibility towards employees, customers, the environment and society.

2. Environmentally friendly, energy- efficient products
We create sustainable products along the entire value chain. Our goal is to use all materials to create products and solutions that are durable and low-maintenance, and that stand out for their exceptional quality and energy efficiency. In this way, REHAU has been promoting qualified recycling concepts and expanding them further for many years



Based on the four core topics, we can define concrete sustainability targets and find concrete approaches and solutions to achieve these.

3. Resource conservation:
REHAU has extensive experience in protecting resources. For example, we work so energy-efficiently that our German locations are now all certified to the ISO standard 50001 for efficient energy management. The standard defines the development of systematic energy management in the company. An energy management system records our energy consumption, shows potential savings and helps us improve our energy efficiency.

4. Employee satisfaction:
REHAU stands for an employee-friendly personnel policy. We provide a flexible and productive work environment, nurture talent and help to achieve career goals. We invest selectively in new and digital continuing education programs that employees can choose independently.

Discover Knowledge
REHAU CPD

We are dedicated to providing our customers with the most up-to-date training available. We offer a number of CPD's, product training and design workshops, which can all be booked via the REHAU Hub.

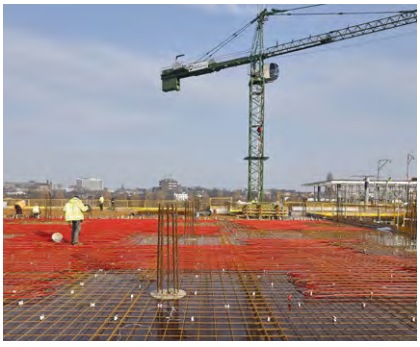




Acoustic soil and waste



Aluminium clad curtain walling

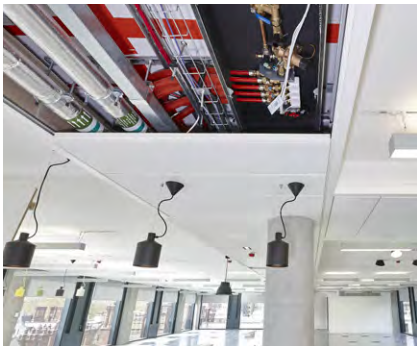


Creating energy efficient workspaces



Innovative uses of cable trunking

13 courses to choose from to enhance your professional career.



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District heating & heat networks



Fenestration



Polymer pipe for heating & plumbing



Polypropylene sewer pipe & chambers



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Renewable heat technologies



Introduction to sub-surface heating & cooling

Book a CPD today

www.rehau.uk/cpds

Discover the REHAU Hub

Education, innovation and support

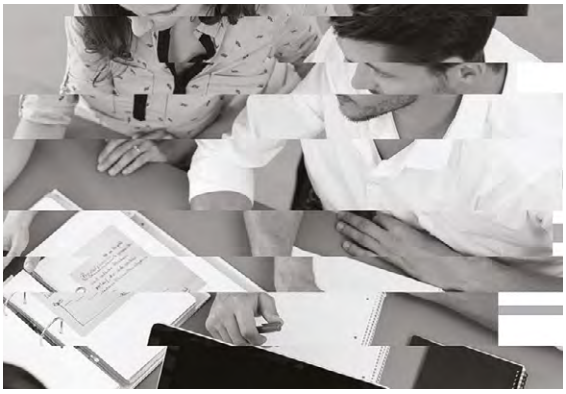
The REHAU Hub provides education, training and sales services for our customers and industry partners. By offering a proactive specification function, we promote awareness of REHAU's building products and solutions.

Services we offer

- Project specifications – concept meetings with clients, technical specifications developed
- Project specific Technical Submittals
- Concept designs including output calculations
- Full project proposals and tenders
- After sales support & site visits
- On-site training (tooling & install)
- CPD seminars

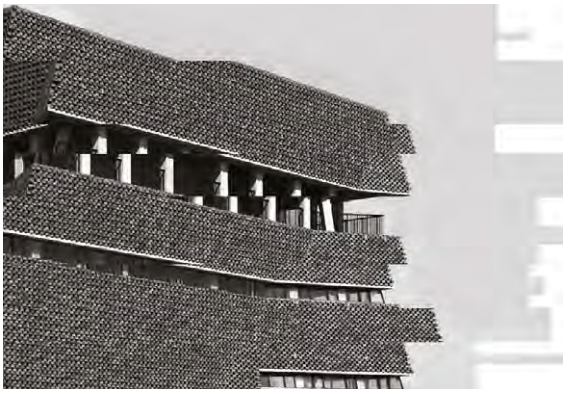


Discover



Discover knowledge

We are dedicated to providing our customers with the most up-to-date training available. We offer CPD, product training and design workshops, which can all be booked via the REHAU Hub.



Discover inspiration

Be inspired by world-class prestigious projects throughout the UK. Here you can view a selection of projects we have worked on. With tangible case studies, we can demonstrate our ability to help you realise your goals.



Discover innovation

REHAU are at the forefront of design and innovation and pride themselves on their energy efficient products, all of which can be viewed at the REHAU Hub.



Discover support

Support – We offer full on-site and off-site support for your project, through our network of window fabricators, authorised partners, and our technical support team.

Get in touch



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We recommend that a check is made as to whether the REHAU product is suitable for the envisaged purpose. Application, use and processing of the products is carried out beyond the scope of our control and is therefore carried out exclusively at your own responsibility. If liability should still apply, then this is restricted, in the case of all damage, the value of the goods supplied by us and used by you.

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