



## REHAU TRITEC 60MM WINDOW AND DOOR SYSTEM

### SYSTEM DESCRIPTION

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### TECHNICAL INFORMATION

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#### General Description

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

The main profiles are three-chamber construction with a depth of 60mm. They allow for combinations of most windows and doors to be manufactured in customised styles to the following window types/styles:

- Casement window (internally and externally beaded)
- French window (internally and externally beaded)
- Doors – residential, tilt/slide and French doors
- Multi-fold doors
- Tilt and turn window
- Pivot window
- Conservatory

There are two sash options to choose from, chamfered standard 76mm and a part-sculptured slimline 70mm available in both 'T' and 'Z'.

The whole range of profiles are available in an un-gasketed and in a pre-gasketed (IG) version. The IG system is fully weldable and our integrated gaskets can be replaced if necessary as it is cold rolled inserted gasket and therefore easy to remove.

Windows are generally fully welded, however transom/mullion/door mid-rails can be mechanically jointed (if required) using dedicated injection mouldings .

Glazing thickness from 4 to 32mm can be accommodated (double or triple glazing) with either internal or externally fitted glazing beads, 24mm is the more common option. Single glazing can be incorporated as an internally beaded option.

Galvanised steel reinforcement sections are available for all main profiles to meet most specification requirements. The main profiles are extruded in accordance with BS EN 12608. The system holds both the BSI (Kitemark) and is BBA approved.

#### Range of Colours

REHAU Tritec is available in white and a range of woodgrain laminate options as follows:

- Mahogany, Rosewood and Golden Oak one side on a White base
- Mahogany and Rosewood both sides on a Brown base
- Golden Oak both sides on an Acorn base
- A further range of woodgrain and solid colour laminate options are available on special order.
- Profiles can also be finished in over 150 RAL colours using the REHAU Acryl II Colour Coating System

#### Fittings

All modern standard fittings and hardware (including shootbolts, hook locks and 'dog' bolts) can be used and are available from various fitting suppliers. Other features include an in-board eurogroove for improved security performance and positive hinge location to ease fabrication.

#### Product Options

The various window and door options can be manufactured in custom styles, sizes and finishes. Product differentiation can be achieved with the use of different shaped low level glazing beads (putty line/ogee) and/or glazing gasket colours (silver grey/black/white).

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## Material

REHAU window profiles are manufactured from high performance, weather-resistant and impact modified RAU-PVC 1406, a material that has proven itself in twenty five years of window system production and that has all of the physical characteristics laid down in the BS EN 12608 requirements.

## Quality Assurance

REHAU profiles are subjected to the most stringent in-house quality controls incorporating a quality assurance system to BS EN/ISO 9001 ensuring consistency of quality. The following procedures are carried out, starting with checks on incoming raw materials and finishing with inspections on finished goods.

### a) Goods Inward Control

All raw materials delivered to us are sampled and subjected to stringent tests as laid down by a set of required standards. Any products that do not meet these requirements are sent back to the supplier.

### b) Control of the blending process

A sealed system ensures the consistent quality of the blending process. This is achieved by an automatic process that constantly monitors the system and updates the mixture.

### c) Profile checks for correct dimensions and surface quality

- Profile dimensional checks
- Checks on surface flatness and smoothness
- Colour consistence checks
- Checks on profile twist or bow

### d) Checks on the chemical and physical properties of the profile

- Deviation checks from required dimensions
- Impact resistance at low temperatures
- Notched impact strength
- Methyl-chloride test
- Corner weld strength test
- Weather resistance tests

## Environment

REHAU's manufacturing process complies with ISO 14001 which specifies the actual requirements for an environmental management system. It applies to those environmental aspects which the organization has control and over which it can be expected to have an influence.

## Quality control of independent bodies

In order to confirm the values produced by ourselves, we invite independent test institutes to test both our profiles and our windows.

We have test certificates for the REHAU Tritec window system with BSI and BBA. Further requirements to meet BS6375 Part 1 (Wind resistance and weather performance), BS7950 (Security) and PAS 23/24 (Security performance for doors) have been achieved.

## Performance of REHAU Tritec

### - Thermal Insulation

As a three-chamber system the REHAU Tritec system meets all the modern requirements for thermal performance including complying fully Part L (England and Wales) Part J (Scotland) Building Regulations for Conservation of Fuel and Power.

The current values achieved with REHAU Tritec profiles are:

- Main Frame with Sash:  
(Non-reinforced) 1.5 W/m<sup>2</sup>K (U-value)  
(Reinforced) 1.7 W/m<sup>2</sup>K (U-value)
- Under the Window Energy Rating scheme, REHAU Tritec can achieve up to an 'A' rating on the basis of standard profile and reinforcement.

### - Sound Insulation

For windows and doors, the sound insulation largely depends on the glazing units used, in particular the variation of glass thickness and air space dimensions.

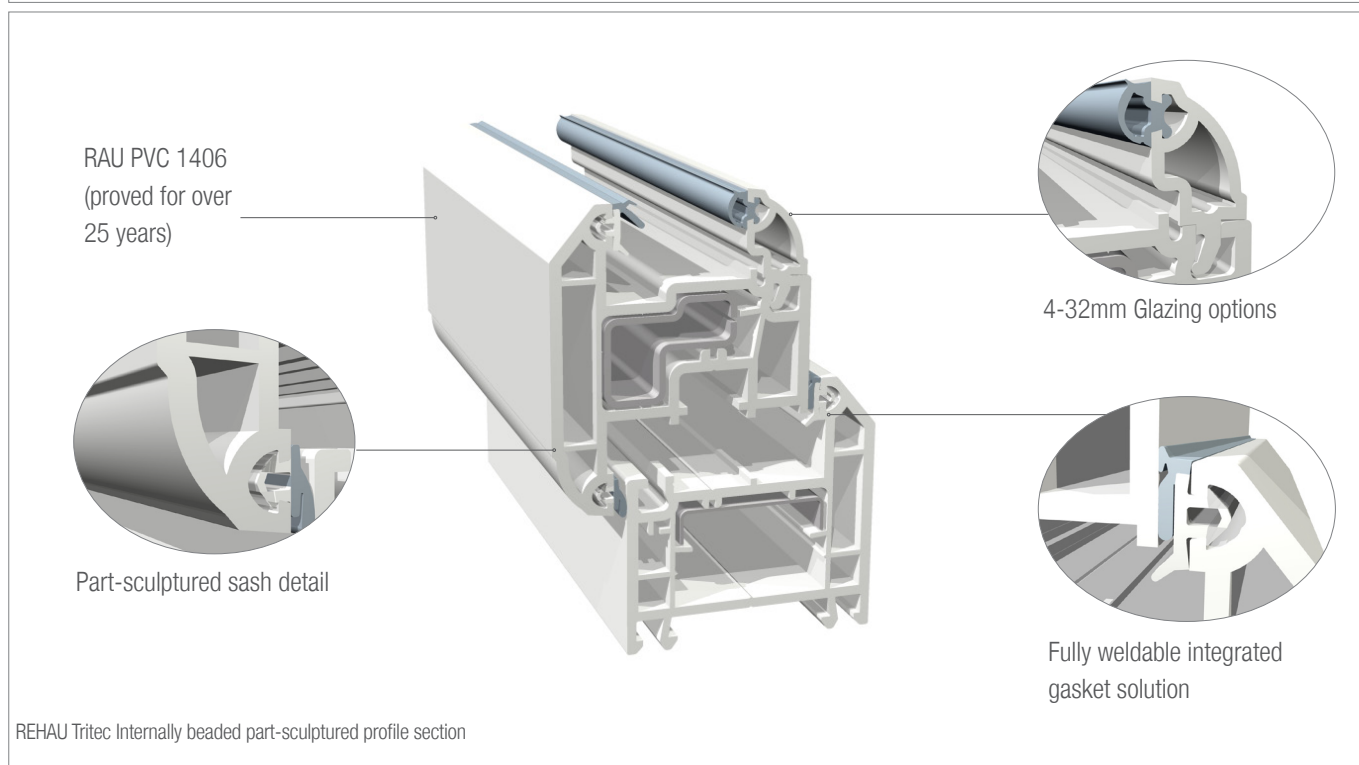
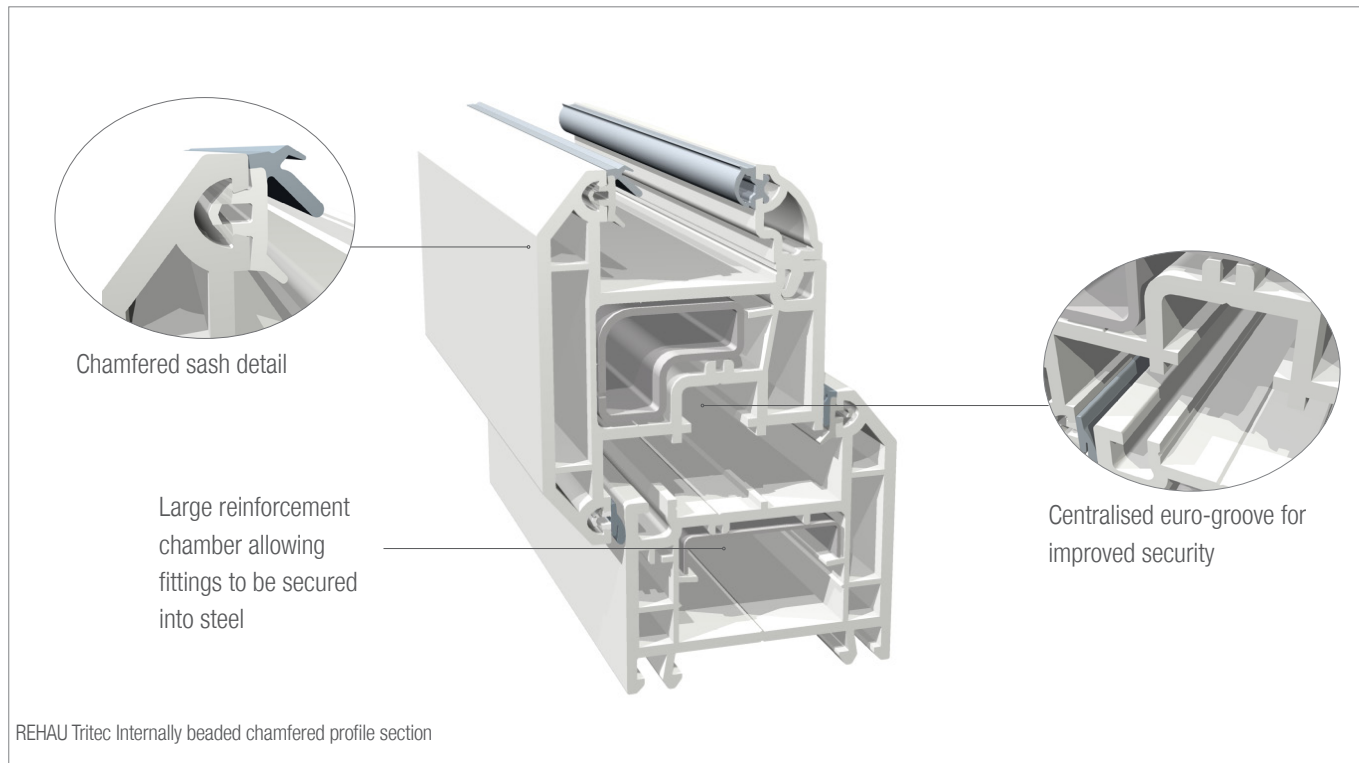
For example:

- Double glazing 4-12-4mm: 30dB
- Double glazing 6-12-4mm: 34dB

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### Why 60mm?

- REHAU Tritec 60mm system is ideal for new build installations due to slimmer sightlines and depth for a modern finish.
- Large windows and elements can be manufactured.
- Fittings and hardware can be fixed into steel if required.
- Good thermal efficiency; low U-value and 'A' rating achievable with standard set-ups.
- Can incorporate single, double and triple glazing 4-32mm.
- BS7950 enhanced security performance achievable using minimum reinforcement.

### Technical notes/technical sales arguments

All main profiles are triple chamber, which ensures good thermal insulation (low U-value) while keeping the drainage route separate from the reinforcement chamber.

A large reinforcement chamber enables galvanised steel to be inserted for additional strength/rigidity when necessary.

Screw ports are extruded to secure fastenings of espagnolettes and/or hinges when required. Hardware can also be fastened into steel reinforcement for added security.

The height of the REHAU Tritec glazing rebate optimises edge cover to give good protection to the sealed units.

An 8mm sash to frame overlap allows the whole seal to remain in contact with the PVC-U. The twin compression seals in EPDM, Integral gasket or high quality silicone gaskets ensure excellent air and water tightness even after many years of use, which exceed the requirements of BS 4255 and BS 7412.

Sashes and frames can be concealed drained/vented through dedicated internal chambers via drilling or routing.

The leg details of REHAU Tritec are compatible with other REHAU European systems and allow the use of a wide range of REHAU supplementary and connection profiles.

Single leg glazing beads clip in along their whole length and are available in a wide range of different styles and sizes.

There is an extensive range of sills, which allow concealed drainage and are available in widths of 95mm, 150mm, 180mm and 225mm. They have a standard stack height of 30mm to simplify window size calculations.

REHAU Tritec offers load bearing bay, bow bay and corner post options which include the popular 90° and 135° fixed angles, as well as a variable option.

For commercial applications REHAU Tritec can be used in conjunction with REHAU structural linking elements to form ribbon/screen walling, providing fenestration solutions for offices schools, hospitals etc.

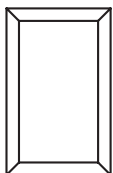
All main profiles are delivered with protective tape covering the visible faces – including the chamfered and sculptured details.

The REHAU Tritec window and door systems are tried and tested with third party accreditation and certification. They hold the prestigious BSI Kitemark, BBA approval and are extruded in accordance to BS EN 12608.

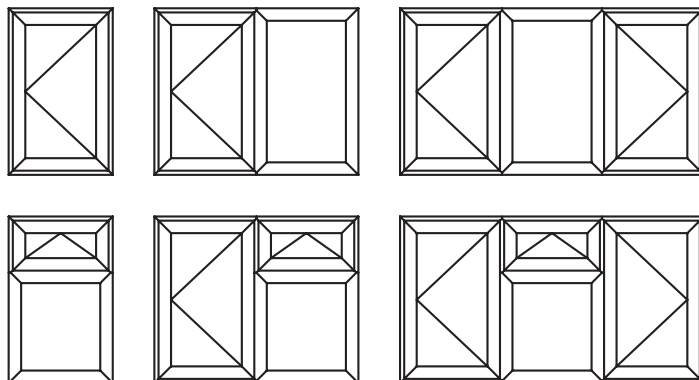
# STYLES AND SHAPES

## Window styles and shapes

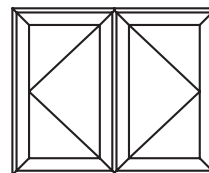
1. Fixed light



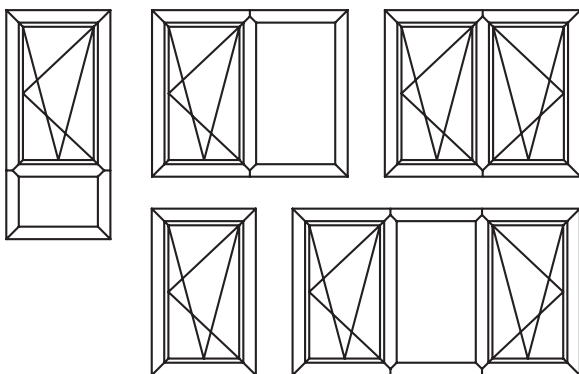
2. Casement windows



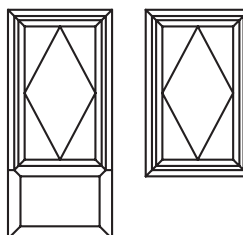
3. French windows



4. Tilt and turn windows

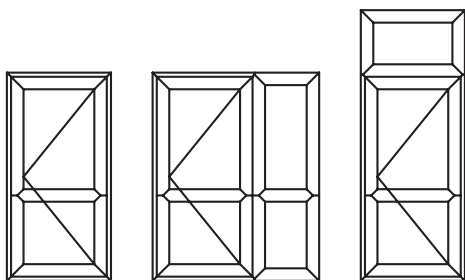


5. Pivot windows

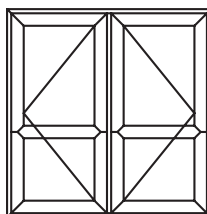


## Door styles and shapes

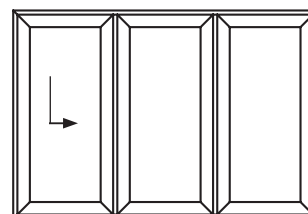
1. Residential doors (low threshold available)



2. French doors (low threshold available)



3. Tilt & slide and multi-fold doors (pivoting not shown)



# REHAU TRITEC

## MAX. SIZES FOR ELEMENTS AND UNITS

REHAU Tritec		Windows (outer dimension of sash profile)														
Sash Style	Colour	Side hung			Top hung			Tilt and Turn			French Windows			Pivot Windows		
		w x h (m)	a (m <sup>2</sup> )	m (kg)	w x h (m)	a (m <sup>2</sup> )	m (kg)	w x h (m)	a (m <sup>2</sup> )	m (kg)	w x h (m)	a (m <sup>2</sup> )	m (kg)	w x h (m)	a (m <sup>2</sup> )	m (kg)
T sash	White	0.9 x 1.6	1.2	40	1.2 x 1.2	1.0	40	-	-	-	0.8 x 1.5	1.2	40	1.6 x 1.2	1.9	100
	Woodgrain	0.9 x 1.6	1.2	40	1.2 x 1.2	1.0	40	-	-	-	0.8 x 1.5	1.2	40	1.6 x 1.2	1.9	100
Z sash	White	0.9 x 1.6	1.2	40	1.2 x 1.2	1.0	40	-	-	-	0.8 x 1.5	1.2	40	-	-	-
	Woodgrain	0.9 x 1.6	1.2	40	1.2 x 1.2	1.0	40	-	-	-	0.8 x 1.5	1.2	40	-	-	-
Tilt & Turn	White	-	-	-	-	-	-	1.5 x 1.7	2.1	100	-	-	-	-	-	-
	Woodgrain	-	-	-	-	-	-	1.5 x 1.7	2.1	100	-	-	-	-	-	-

REHAU Tritec																
Sash Style	Colour	Residential Door			French Door			Tilt & Slide Patio Door			Tilt & Turn Balcony Door			Multi-fold Door		
		w x h (m)	a (m <sup>2</sup> )	m (kg)	w x h (m)	a (m <sup>2</sup> )	m (kg)	w x h (m)	a (m <sup>2</sup> )	m (kg)	w x h (m)	a (m <sup>2</sup> )	m (kg)	w x h (m)	a (m <sup>2</sup> )	m (kg)
T Door sash	White	1.0 x 2.2	-	100	0.8 x 2.2	-	100	-	-	-	-	-	-	-	-	-
	Woodgrain	1.0 x 2.1	-	100	0.7 x 2.1	-	100	-	-	-	-	-	-	-	-	-
Z Door sash	White	1.0 x 2.2	-	100	0.8 x 2.2	-	100	1.5 x 2.3	-	100	1.1 x 2.3	2.5	100	0.9 x 2.1	-	80
	Woodgrain	1.0 x 2.1	-	100	0.7 x 2.1	-	100	1.1 x 2.3	-	100	1.1 x 2.3	2.5	100	0.9 x 2.1	-	80



Maximum sizes shown are calculated using the maximum gauge steel reinforcement shown within the 703.695EN REHAU Tritec Maximum Sash Size Recommendations & Transom, Mullion & Couplers. Windows have been calculated using a windpressure of 2400Pa and Doors 1200Pa. Sizes are subject to instructions provided by fitting suppliers.

### White Profile

Max. profile length for fixed lights = 3.0m; max. area = 6.0m<sup>2</sup>

Max. profile length for multi-lights = 4.0m; max. area = 6.0m<sup>2</sup>

Tilt and Slide Patio Door; max. area = 8.0m<sup>2</sup>

### Coloured/Woodgrain Profile

Max. profile length for fixed lights = 3.0m; max. area = 4.0m<sup>2</sup>

Max. profile length for multi-lights = 3.0m; max. area = 4.0m<sup>2</sup>

Tilt and Slide Patio Door; max. area = 6.0m<sup>2</sup>

### Multi-fold Doors:

For details on combinations and overall sizes refer to Multi-fold Door Manufacturing Recommendations 703.709EN/455.

### Coupled Subframes:

White: With element 'runs' greater than 4.0m in length an expansion joint must be provided.

Coloured/Woodgrain: With element 'runs' greater than 3.0m in length an expansion joint must be provided.

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## UK & IRELAND SALES OFFICES

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