



REHAU®

Unlimited Polymer Solutions



REHAU S706 AND REHAU EDGE 70MM WINDOW SYSTEM SYSTEM DESCRIPTION

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TECHNICAL INFORMATION

General Description

The REHAU S706/REHAU Edge Window and Door System comprises of a range of multi-chambered profiles that are designed to meet the requirements of the new build, commercial and domestic refurbishment markets.

There are two aesthetic options to choose from S706 is predominantly a chamfered system with a sculptured 'T' Sash option and REHAU Edge is a suite of fully sculptured profiles.

The main profiles are three-chamber construction with a depth of 70mm. They allow for combinations of most windows and doors to be manufactured in customised styles to the following window types/styles:

- Internally beaded casement window
- Externally beaded casement window *
- Doors – residential, tilt/slide and French doors
- Multi-fold doors
- Tilt and turn window
- Pivot window-horizontal *
- Fully reversible window - horizontal and vertical *
- Conservatory

The whole range of profiles is 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 42mm can be accommodated (double or triple glazing) with either internal or externally* fitted glazing beads, 28mm

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 REHAU S706 system has been proven over many years. 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 S706/REHAU Edge 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. REHAU Edge is also available in Mahogany 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.

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 (black/white).

*Doesn't apply to REHAU Edge

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

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 S706 window system with BSI and BBA. Furthermore the fully reversible system has been tested by MACDATA. 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 S706/REHAU Edge

- Thermal Insulation

As a three-chamber system S706/REHAU Edge 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 the REHAU S706 profiles are:

Main Frame with Sash:

(Non-reinforced) 1.4 W/m²K (U-value)

(Reinforced) 1.7 W/m²K (U-value)

Under the BFRC energy scheme, S706 and REHAU Edge 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.

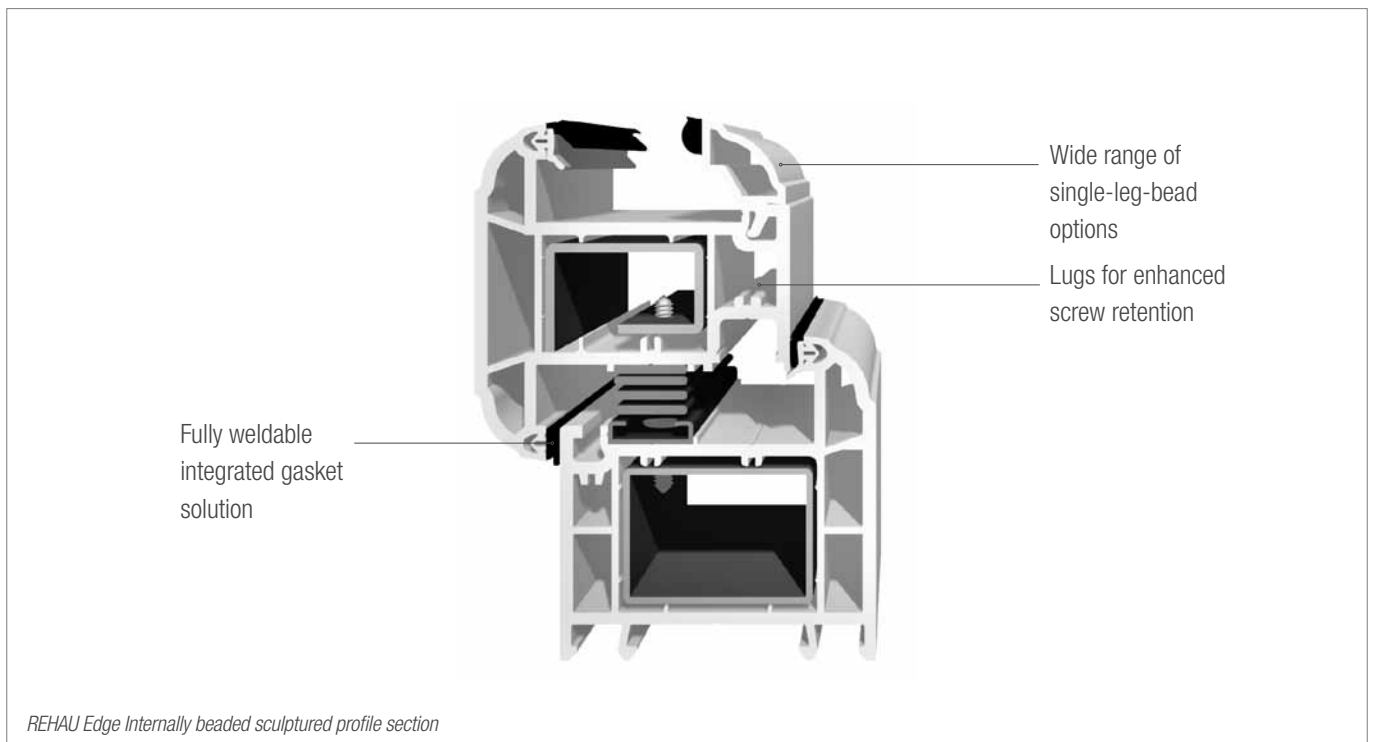
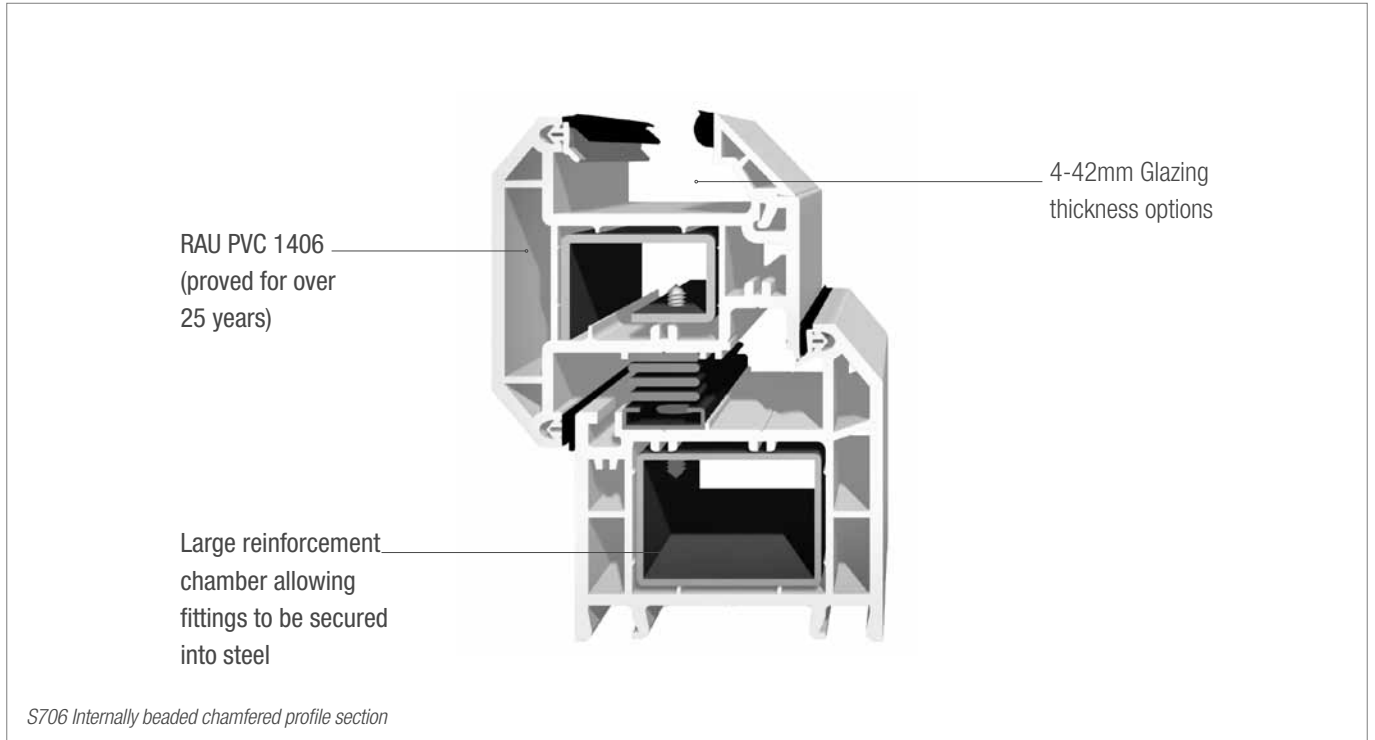
For example:

Double glazing 4-12-4mm: 30dB

Double glazing 6-12-4mm: 34dB

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Why 70mm?

- REHAU S706/REHAU Edge 70mm frames cover the old mastic line left when replacing the majority of timber windows (less trimming up)
- Large windows and elements can be manufactured
- Fittings and hardware can be fixed into steel if required
- Good thermal efficiency (low U-value)
- Can incorporate a wide range of single, double and triple glazing 4-42mm
- Can incorporate heavy-duty hardware

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.

The height of the REHAU S706/REHAU Edge 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 the REHAU S706/REHAU Edge are compatible 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 also a choice of sills available, which allow concealed drainage and are available in a width of 95mm, 150mm and 180mm and use a standard stack height of 30mm to simplify window size calculations.

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

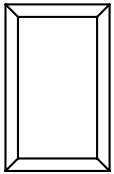
Comprehensive ranges of load bearing bay, bow bay and corner post details are available. A clever 'internal butt' system allows angles from 120° - 135° and 150° - 170° to be manufactured without change to the frame sizes. The popular 90° and 135° angles are also manufactured as fixed angle solutions.

The REHAU S706/REHAU Edge 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.

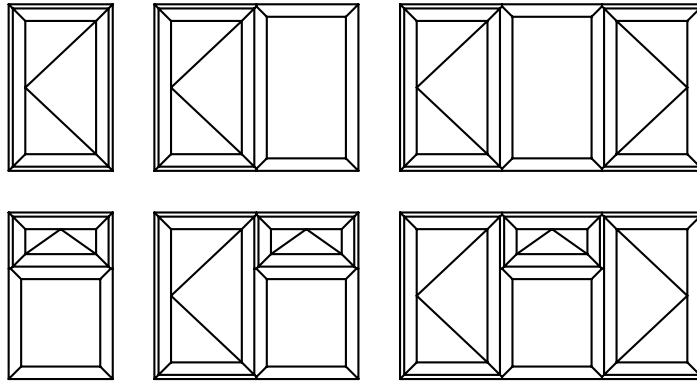
STYLES AND SHAPES

Window styles and shapes

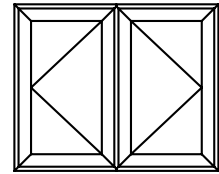
1. Fixed light



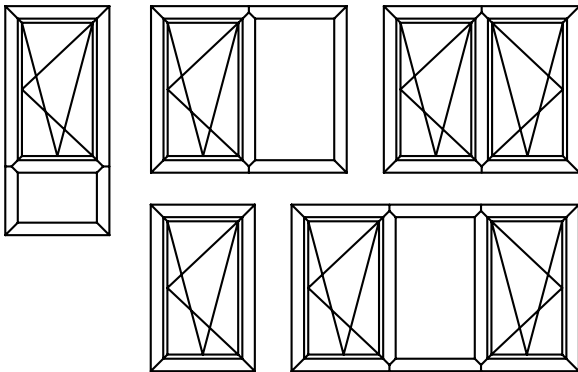
2. Casement windows



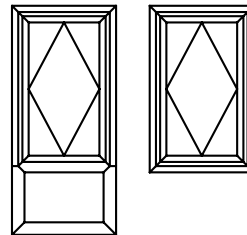
3. French windows



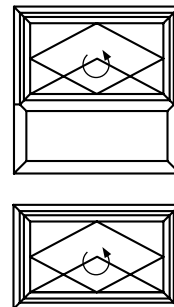
4. Tilt and turn windows



5. Pivot windows

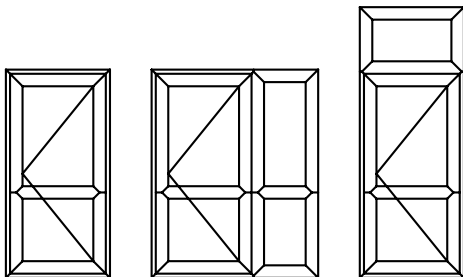


6. Fully reversible windows

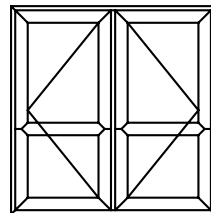


Door styles and shapes

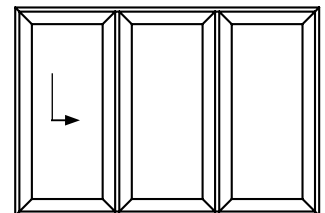
1. Residential doors - inward or outward opening; also with low threshold



2. French doors - inward or outward opening; also with low threshold



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



S706 REHAU EDGE

MAX. SIZES FOR ELEMENTS AND UNITS

| S706/REHAU Edge | | Windows (outer dimension of sash profile) | | | | | | | | | | | |
|------------------|-----------|---|---------------------|--------|-----------|---------------------|--------|---------------|---------------------|--------|----------------|---------------------|--------|
| Sash Style | Colour | Side hung | | | Top hung | | | Tilt and Turn | | | French Windows | | |
| | | w x h (m) | a (m ²) | m (kg) | w x h (m) | a (m ²) | m (kg) | w x h (m) | a (m ²) | m (kg) | w x h (m) | a (m ²) | m (kg) |
| T sash | White | 0.9x1.5 | 1.35 | 40 | 1.2x1.2 | 1.44 | 40 | - | - | - | 0.8x1.5 | 1.2 | 40 |
| | Woodgrain | 0.9x1.5 | 1.35 | 40 | 1.2x1.2 | 1.44 | 40 | - | - | - | 0.8x1.5 | 1.2 | 40 |
| Z sash | White | 0.9x1.5 | 1.35 | 40 | 1.2x1.2 | 1.44 | 40 | - | - | - | 0.8x1.5 | 1.2 | 40 |
| | Woodgrain | 0.9x1.5 | 1.35 | 40 | 1.2x1.2 | 1.44 | 40 | - | - | - | 0.8x1.5 | 1.2 | 40 |
| Tilt and Turn | White | - | - | - | - | - | - | 1.2x1.5 | 1.8 | 60 | - | - | - |
| | Woodgrain | - | - | - | - | - | - | 1.2x1.5 | 1.8 | 60 | - | - | - |
| Fully reversible | White | 0.9x1.2 | - | 60 | 1.38x1.38 | - | 60 | - | - | - | - | - | - |
| | Woodgrain | 0.9x1.2 | - | 60 | 1.38x1.38 | - | 60 | - | - | - | - | - | - |

| S706/REHAU Edge | | Doors (outer dimension of door profile) | | | | | | | | | | | |
|-----------------|-----------|---|---------------------|--------|-------------|---------------------|--------|----------------|---------------------|--------|----------------------------------|---------------------|--------|
| Sash Style | Colour | Residential Door | | | French Door | | | Tilt and Slide | | | Multi-fold Door (inward opening) | | |
| | | w x h (m) | a (m ²) | m (kg) | w x h (m) | a (m ²) | m (kg) | w x h (m) | a (m ²) | m (kg) | w x h (m) | a (m ²) | m (kg) |
| T Door sash | White | 1.0x2.2 | - | 100 | 0.85x2.2 | - | 100 | - | - | - | - | - | - |
| | Woodgrain | 1.0x2.1 | - | 100 | 0.7x2.1 | - | 100 | - | - | - | - | - | - |
| Z Door sash | White | 1.0x2.2 | - | 100 | 0.85x2.2 | - | 100 | 1.5x2.3 | - | 100 | 0.9x2.1 | - | 80 |
| | Woodgrain | 1.0x2.1 | - | 100 | 0.7x2.1 | - | 100 | 1.1x2.3 | - | 100 | 0.9x2.1 | - | 80 |



Maximum sizes shown are calculated using the maximum gauge steel reinforcement shown within the 706.695EN S706 & REHAU Edge 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 = 6.0m²

Max. profile length for multi-lights = 4.0m; max. area = 6.0m²

Tilt and Slide Patio Door; max. area = 8.0m²

Coloured/Woodgrain Profile

Max. profile length for fixed lights = 3m; max. area = 4.0m²

Max. profile length for multi-lights = 3m; max. area = 4.0m²

Tilt and Slide Patio Door; max. area = 6.0m²

Multi-fold Doors: For details on combinations and overall sizes refer to Multi-fold Door Manufacturing Recommendations 706.708EN/454.

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 3m in length an expansion joint must be provided.

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