



SPECIFICATION

SUMMARY

Client: Creative Support

Project: PVCU window and door specification

Prepared by: Rob Benn

Date: 14/06/2024

REHAU reference: Hastings Avenue

All PVC-U fenestration profiles shall be supplied by a current member of the B.P.F.
(British plastics Federation)

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Quality & Environmental Management:

Quality	Profiles manufactured under guidelines: BS EN ISO 9001-2015 with the systems company holding the relevant accreditation.
Environmental	Profiles manufactured under guidelines: BS EN ISO 14001-2015 with the systems company holding the relevant accreditation.
Materials PVCu	Manufactured from REHAU extruded hollow PVC-U to BS EN 12608-1 Class A and be "S" Severe weather rated, reinforced with steel sections to the recommendations in British Plastics Federation publication 323/1. Nominated profiles to include recycled content in strict accordance with this standard.

Authority & Performance standards

BS 7412:2007	Performance: Plastic windows made from PVC-U extruded hollow profiles.
BS 6375: Part 1,2 & 3	Performance: Windows and doorsets, classification for weathertightness, specification for operation and strength characteristics and general performance criteria.
PAS 24-2016	Security: Specification for enhanced security performance of casement windows for domestic applications.
PAS 24 – 2016	Enhanced Security for PVCu doors.
BS 6399: Part 2: 1997	Design: Loadings for buildings.
BS EN ISO 10077-2-2017	Thermal performance of windows, doors, and shutters. Calculation of thermal transmittance. Simplified method.
BS 8213: Part 1:2004	Window energy rating to BFRC 'A' rating.
BS 8213: Part 1:2004	Safety: Windows doors and roof lights. Design for safety in use and during cleaning of windows, including door-height windows and roof windows.
BS8213: Part 4: 2016	The survey and installation of windows and doors.

Glass Glazing

All glazing to be carried out in accordance with the requirements of the Building Regulations. Glass to comply with BSEN 14351-1.

Safety glass to comply with BSEN 126001-1 with regard to impact performance and the marking of glass to indicate type and classification and with BSEN 126001-1 with regard to minimum thicknesses for certain pane sizes.

Laminated glass to comply with BSEN14449-1

BS EN 1279 -1, 2, 3 This standard covers double glazed units.

1. **INTRODUCTION**

This Performance Specification is for the supply and installation of PVC-U windows and is to include for all the fittings required to complete the installation, and to ensure the full, effective, and safe operation of the window.

All windows and detailing to strictly comply with current British standards, building regulations and planning requirements with due regard to: -

- Fire egress.
- Ventilation.
- Access to buildings.
- Conservation of fuel and power.
- Protection of falling.
- Glazing Safety.
- Acoustic requirements.
- Any severe exposure ratings.

2. **EXTENT / LOCATION OF WORKS**

The contractor is deemed to have visited site or worked from Status A drawings / Window schedules to determine the full extent of the works, with regards to the existing / proposed building fabric, designs, quantities, and proposed specification.

No claim for want or lack of knowledge will be entertained by the contract administrator, for queries arising that have not been brought to the C.A. attention at tender stage.

3. **STANDARDS**

The frames are to comply with all relevant British Standard Specification, Code of Practice, and Statutory Requirements (including all revisions and amendments), as well as the guides and recommendations laid down by the relevant trade organisation relating to their performance, constituent materials, methods of assembly and use. Any exceptions to the above are to be confirmed in writing by the Specifier.

PVC-u window profiles to be designed and manufactured by REHAU to BS EN 12608-1 under a BS EN ISO 9001 Management System.

PVC-U window profiles to be manufactured by an approved systems company under Environmental Systems BS EN ISO 14001:

Manufactured from REHAU extruded hollow PVC-U to BS EN 12608-1 reinforced with REHAU steel sections to the REHAU manufacturing recommendations.

The fabricated product is to conform to BS 7412:2007 and BS 6375 Parts 1, 2 & 3.

The window extrusion manufacturer must also comply with PAS 24-2016 "Enhanced Security of Windows."

Windows materials Specification

Shall be manufactured from profiles supplied by REHAU RIO Flush casement windows.

All joints are to be fully welded and finished with a shadow groove joint to all frames, sashes, transoms, and mullions.

Windows shall be fabricated strictly in accordance with the requirements of the relevant Rehau Technical Manual and all specialist contractors must be trained and approved by the systems company.

The window designs are to be that as detailed on the window schedule and drawings; all windows must comply with current building regulations.

- REHAU RIO Flush Casement windows colour white internally, External colour Foiled Textured White.
- Top hung and side hung outward opening casements windows and fixed lights where specified.
- PVCu external projecting cill (exact size TBC from site visit).
- Concealed drainage to frames and sashes.
- All windows to be vertically coupled and reinforced to meet the requirements of wind loading and comply with the requirements of BS7412 and the REHAU fabrication manual.
- Trickle vents to meet the requirements of Approved Document (F) to heads of outer frame.

REHAU Window profiles – Casement Windows

62mm Outer frame (5 chambers): Article number 586826

62mm Outer frame steel reinforcing: Article number 216392

Flush Casement sash 63mm: Article number 586015

Casement T sash 75mm steel reinforcing: Article number 328180

Steel reinforcing to be confirmed with REHAU technical department to achieve local conditions for “Ix” values.

All framing members are to be reinforced with steel to REHAU technical manual recommendations.

Hinges: Yale side hung, and top hung friction stays, All tested to BS6375-1, 2 – 2015.

Handles: Yale Quartus White key locking in line handle with 15mm spindle, tested to BS6375-2.

Locking: Yale shootbolt window lock either croppable or extendable variant.

Restrictors: Restrictors to be included to all window frames – Pro-5 by Jackloc Key-Locking Cable Window Restrictor

Keeps: offering a “night vent” position.

PVCu Doors

Shall be manufactured from profiles supplied by REHAU TOTAL70C reinforced with steel, to comply with REHAU manufacturing recommendations and the wind loads for the site of installation.

All joints are to be fully welded and finished with a shadow groove joint.

All doors to be compliant to PAS 24:2016.

Doors shall be fabricated strictly in accordance with the requirements of the relevant REHAU Technical Manual and all specialist contractors must be trained and approved by the systems company.

REHAU Door profiles

Door outer frame to be REHAU 72mm 5 Chamber profile: Article 586836

Door outframe Full Steel Reinforcing: Article 216393.

Design of doors to be confirmed with client prior to installation

Door Hardware:

Door lock to be the Yale Lockmaster 21, with 3 hook and 2 rollers, where doors are sited in particularly exposed areas. Then the 3 hook and 4 roller locking option should be selected to offer increased compression on locking. With sprung lock cases to front doors and un sprung lock cases to rear doors. Locks to incorporate Yale one-piece 13mm axis keep providing PAS 24: 2016 compliance as part of a door set.

Door locks to have Yale TS007:2014, 3 star credited, anti-bump, anti-snap anti-pick accredited to BS EN 1303:2015.

Door handles to be Yale Sparta corrosion tested to BSEN 1670, load tested to BS6462 and conforming to BS1906.

Door hinge to be the Yale Athena colour white, 3 number per door sash, with security hook PAS 24 option.

Letter plates for PAS 24: 2016 compliance to be the Yale Postmaster professional TS008 colour white.

All doors to have an aluminium drained low threshold compliant with Approved Document M of the Building Regulations. The threshold must have been subject to weather testing as outlined in Section 8. Doors to sit on 150mm projecting external cill, complete with end caps.

Inward opening doors to incorporate a mechanically fixed weather bar.

4. REINFORCEMENT

Windows to be reinforced with REHAU steel reinforcement, wind loads to be determined and satisfied based on this material only.

5. APPEARANCE & DESIGN

Please refer to the design / drawings for the designs of each window and door. A sample window, complete with all ironmongery shall be provided, for approval by client and the Local Planning Authority where required prior to start on site.

6. FINISHING

Standard finish for all coupling profiles, extension pieces and external trims to be white.

7. GASKETS

All gaskets should be supplied and fitted by the systems company in bar length prior to frame manufacture thus ensuring gasket is welded in each corner.

The gasket sightlines shall not exceed the profile sightline to keep overall sightlines to a minimum.

8. WEATHER PERFORMANCE

Performance shall be as specified below to BS 6375, Part 1, 1989, and will achieve a Class A for mechanical testing to BS6375, Part 2

Windows:

Water Tightness: Test pressure Class E1050. Test method EN 1027

Air Permeability: Test pressure. Class 3 at 600 Pascal's. Test method EN 1026

Wind Resistance: Test pressure class E2400. Test method EN 12210

Doors:

Water Tightness: Test pressure Class 3A at 100 Pascal's. Test method EN 1027

Air Permeability: Test pressure Class 4 at 300 Pascal's. Test method EN 1026

Wind Resistance: Test pressure Class A3 at 1200 Pascal's. Test method 12210

All framing including mullions, transoms and couplers shall be capable of withstanding the design wind loadings calculated in accordance with BS6399 Pt2: 1995.

9. DRAINAGE

All horizontal lower rails of frames, transoms and sashes within a window or door shall be drained to allow water to escape. Drain slots (30mm x 5mm) to be in accordance with the product manual.

The frames are to incorporate an adequate means of concealed drainage. This is to be achieved allowing drainage through frame of window and exiting via drainage holes in the frame and sash. Glazing packers should not obstruct the drainage and profile specific bridging packers must be used.

The window system must incorporate pressure equalisation holes as per the REHAU manufacturing manual.

10. GLAZING

All glazing to comply with current Building Regulations, Approved Document K, L, and O.

All glazing to windows and doors to be secured by means of internal glazing beads.

Glazing to be hermetically sealed double-glazed 28mm units, comprising inner pane of toughened 4mm "soft coat" low emissivity glass and an outer pane of 6.8mm Laminated, with an argon filled cavity and thermally broken "warm edge" spacer bar. Whole frame window / door u value no greater than 1.2W/m²k. ***however if improved u-values are required please seek guidance from REHAU for required glass specification.***

All glass and glazing shall conform to:

BSEN 14449-1	Laminated glass
BS. EN 12600-1:	Specification for Impact Performance.
BS.6262: Parts 1-6:2005	Code of Practice for Glazing Buildings.
BS.952: 1978:	Glass for Glazing.
BSEN 12150-1	Toughened Safety Glass
BS.1279-2-3:	Specification for Hermetically Sealed Flat Double Glazed Units. Valid Kitemark certification will be required.

Recommendations of the Glass and Glazing Federation shall be adhered to for safety.

Glazing packers in accordance with BPF COP362 and should not obstruct the drainage with profile specific bridging packers used.

Where spandrel panels or insulated panels are required, these should be 28mm overall and comply with PAS 024 when required and ensure that the overall frame value of 1.2Wm²/K is maintained.

The C.A is to determine the requirements with regards to fire performance and Approved document B. Where any panels are covering block / brick work where the glazing beads cannot be accessed internally, then the frame must be reverse butt welded with external glazing beads ensuring the window meets the requirements of PAS 24 2016. The specifier must identify any fire regulation requirements and specify a suitable panel to meet these.

11. **VENTILATION**

Each window unit is to be fitted with PVC-U slot ventilators, to meet current Building Regulations 2021 Edition Approved document (F).

Habitable rooms – Two number Glazepart Link Vent MKII 4000 E.A. *(Single Story Dwellings 2no. 5000 E.A)*

Kitchens - Two number Glazepart Link Vent MKII 4000 E.A. *(Single Story Dwellings 2no. 5000 E.A)*

Utility Rooms - No minimum requirement, recommend a minimum of 4000 E.A.

Bathrooms - One number Glazepart Link Vent MKII 4000 EA *(Single Story Dwellings 5000 E.A)*

Sanitary accommodation - No minimum requirement, recommend a minimum of 4000 E.A.

The Ventilator is to be secure and adjustable, complete with internal insect screen. Ventilator is to be fitted through the head of the outer frame profile where local conditions apply. (The slot must be sleeved to isolate the reinforcing chamber).

12. **SURVEY, DIMENSIONS and DESIGN**

The window / door units supplied are to be manufactured to suit existing / prepared openings in accordance with BS 8213-4. The specialist contractor is to comply with the architects' drawings, with regards to frame position, cavity closing and frame sealing for air and water requirements.

The Specialist Contractor if requested shall provide drawings to the Main Contractor depicting all profiles, glazing, weather seals, gaskets fixings and sealants to be used and the relationship of the above to the adjacent structural detail for each window/door type.

Allow for any anomalies and variations in the size of the openings, and for out-of-square openings. This is to include for the manufacture of 'specials' as necessary.

The Specialist Contractor if required is to provide drawings showing the relationship of framing to structure, including all profiles, sealants, fixings, trims, and weather seals.

The specialist contractor is to allow for all new necessary PVCu liners, trims, and frame packers to ensure clear equal sight lines and the correct performance of opening sashes.

All frame extensions and coupling profiles to be manufactured by the window system supplier.

Notwithstanding any information within this Specification, all framing and infills shall be capable

of withstanding the design wind loadings calculated in accordance with BS6399 Pt2: 1997, and imposed loads as defined in BS6399 Pt1: 1996, and the systems company shall provide the Specialist Contractor calculations to demonstrate this upon receipt of project detail.

13 **INSTALLATION.**

Installation of fenestration systems shall be performed by a Fensa, or similar UKAS approved SCS registered REHAU fabricator / installer in accordance with issued tender documents. Installation, Fixing & glazing shall be in accordance with BS 8213-4.

Windows and door framing to be securely fixed direct to the building structure, between 150mm and 200mm from each corner and at centres not exceeding 600mm (500mm centres for coloured profiles), as laid down REHAU installation guide.

Seal all external joints between framing and structure with low modulus neutral cure silicone sealant to BS5889 (1989). Sealants shall be tested and classified in accordance with BS EN ISO 11600 and of low modulus and high elasticity, with movement capability of at least 20%, class 20LM or 25LM.

Protection & Cleaning	The sub-contractor shall be responsible for any damage to the materials under this section of the specification incurred by him during installation and shall leave the work in a clean condition. The general contractor shall be responsible for the protection of these materials from damage by other trades and shall be responsible for the final cleaning of the work.
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Guarantees periods	PVCu profiles:	10 Years
	Hardware components:	10 Years
	Double glazed units.	5 Years

Terms & Conditions	Must be supplied by supplier for approval by client.
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13 **WINDOW.ID**

REHAU Window.ID tag will be included on all window frames.

Window.ID is the digital ID card for your windows and doors. It contains all the important data and enables all relevant information to be accessed quickly and easily at all times. With Window.ID, you always have everything under control – and a direct line to your window specialist if required.

With Window.ID, you and your window specialist can always clearly identify your windows and retrieve all relevant information.

Ease of replacement is also guaranteed should a window become damaged. Time-consuming inspection or measurement appointments are now a thing of the past. If you ever have any questions, you can contact your expert window specialist easily via the app and they will always take care of your request right away.

Access all relevant documents, proofs and certificates for your windows easily and at any time via Window.ID. From information about the glazing or the thermal and sound insulation values through to test certificates: everything is stored digitally and is transparent and traceable at a glance.

14 **RECYCLING**

REHAU through an authorised Waste Collection Service will deal with all waste PVCu Frames removed from site to return to REHAU PVCr to be recycled into raw material to be used in our Co-Ex Window Profiles, creating a closed loop process.

Containers can be provided on site (space permitting with separate glass skips) which will be collected as required and taken to PVCr free of charge.

Complete old windows are separated into different materials and then recycled, e.g. glass and metal. The most crucial the PVC parts which come primarily from the old window profiles. These are processed into high-quality recycling granules. This saves up to 88% of carbon emissions compared to the production of new PVC.

The unique REHAU extrusion process enables windows to be produced that are made of recycled material on the inside. The proportion of recyclates ranges from 40% to 75% in more than 40% of REHAU profiles.

REHAU EcoPuls window profile systems are unique in the window industry in terms of closed loop recycling. The result is a saving of up to 97,000 t of CO₂ every year. EcoPuls windows also offer impressive sustainability during their service life.