ZUANI | SOUKUP Design

Timber Windows

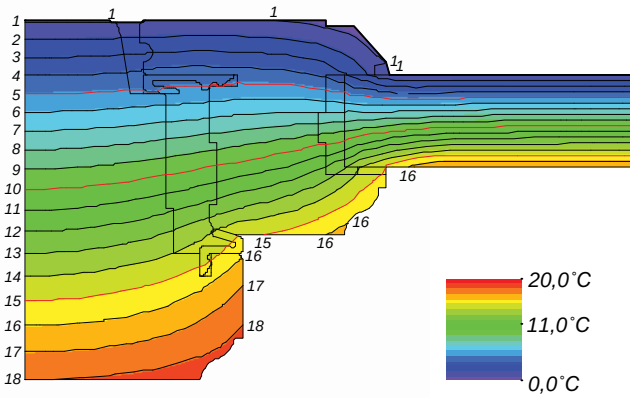
Tooling solutions for bespoke
and serial manufacturing of windows and doors

Ultimate Success Is Born from a Complete Fenestration Solution

The correct choices of window manufacturing machinery coupled with the careful preparation of the window design in cooperation with a tooling manufacturer are the key factors to future production success. Our team has the technical knowledge and practical experience to cope with the most demanding projects and can offer tailor made solutions for your business.

Practical design of the selected window models in combination with multi-use tooling will significantly reduce your tooling costs and brings together a variable manufacturing system. The variability of profile mould offers window details important for listed buildings in conservation areas and a modern look for multi-storey apartment blocks.

Technical details will meet Building Regulation requirements for mechanical, thermal, weather and acoustic performance of windows. A BFRC Energy Efficient Window can be achieved and will allow for increased sales through carefully structured marketing, CE marking is now a reality for all fenestration manufacturers and requires dedicated window designs for this to be achieved, that is why we have put together a standard set of designs for the most popular windows in the UK.



The proposed window designs will optimize production utilizing industrial hardware for enhanced security and full factory finishing. Carefully designed features of current bespoke products can simplify your miscellaneous existing window details in order to gain all the benefits of productive machine window manufacturing.

Traditional Window System

The Traditional Window System with common flush appearance is essential for all bespoke manufactures focused on window replacement in conservation areas.
The system offers a complete solution for side or top hung outward opening casements with mullions, transoms and fixed glazed frames, also designed for main entrance doors using traditional ironmongery.

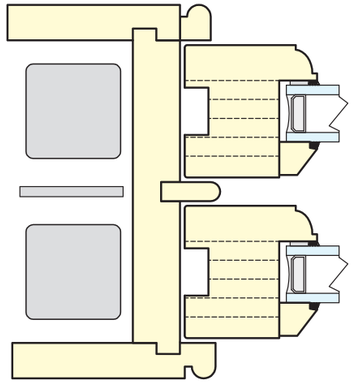
Sliding Sash Window

The Traditional Sliding Sash Window is a very popular window throughout the British Isles. The technical design allows single glazing or high-performance double glazing with the application of perimeter gaskets using traditional weights and pulleys or spring balances with a tilt facility as an option.
The right tooling and equipment enables the manufacturing of all parts necessary for the construction, meeting rails can incorporate many different gaskets and decorative horns details can be infinitely variable. Sash design in several thicknesses will allow for single or slimline double glazing which can meet almost all requirements for existing sash window refurbishment.

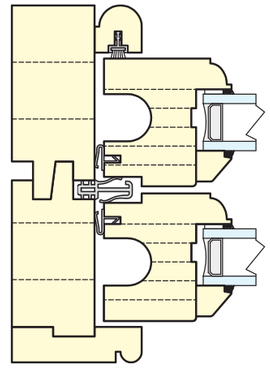
Technical solutions

The design of sliding sashes is strictly individual and starts with a research of all requirements of the window manufacturer. The optimized technical solution can cover needs of sash replacement in existing boxes and the serial production of sliding sash windows. The tooling system can be used for single tenons when the sashes are thin or a comb joint for double glazed sash sections.

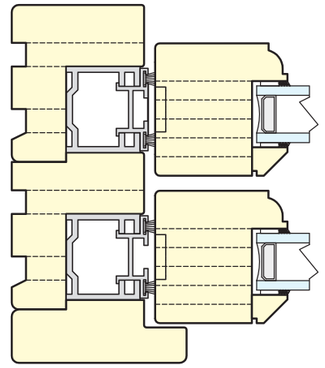
Boxes for sliding sashes



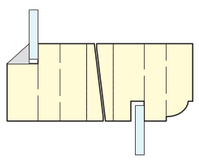
Traditionally manufactured box for sliding sashes balanced by lead weights.

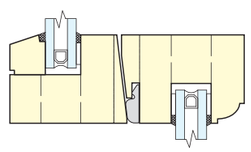


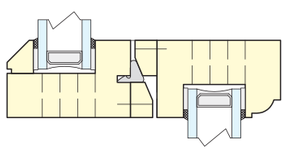
Industrial solution for sliding sash windows with spiral balances in a sash or in a box construction with a tilt mechanism. Individual design for parting beads, weather-seals or piles. Boxes consist of tenoned frames, fully machined on the window centre.

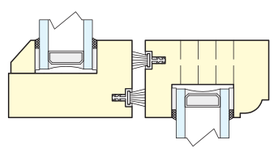


Meeting rails









Traditional meeting rails for sash window refurbishment when a slim design for single glazing is required or for double glazing when limited by existing box depths. Design of cutters allows moulding of glass rebates or grooving even the different meeting rail bevels on the machining centre.

Simplified meeting rails for 24 mm double glass unit with stapled beads and a gasket with a pair of piles frequently used in the serial manufacturing.

Flexible Tooling System for Casements

Stormproof Window

The Storm-proof window is characterized by the casement being overlapped or rebated past the front face of the window frame. This design became popular due to its looses tolerances allowing for past industrial window manufacturing. The hardware system needs special stormproof hinges on the sides or friction stays often seen as top hung. A special drainage groove in the cavity between the casement and the frame stops water ingress.

Entrance Doors

Design of inward and outward opening entrance doors is based on Traditional Window System and enables using aluminium thresholds or plastic door frame threshold weatherbars.

High Performance Triple Glazed Window

The High Performance Flush Window with a triple glazed unit meets the highest of requirements. The casement extension with a deeper glazing rebate for higher thermal efficiency does not disturb the flush exterior line. The projected glazing bead allows for required casement ventilation.

Mock Sash Window

The timber Mock Sash Window is used as a less expensive alternative to keep the authenticity of the look of the Sliding Sash Window. The system is based on a High Performance Flush Window design utilising scribed sash horns to maintain the traditional appearance. The superior sash opens outwards using either stormproof top hung hinges or friction stays. A dummy bottom sash ensures equal sight lines of the window. The bottom sash can be side hung when a fire escape window is required.

Aluminium Faced Window

The Aluminium Faced Timber Window with a contemporary design gives low maintenance and modern styling to the exterior with a traditional timber frame on the interior.
The aluminium clad profiles from leading European manufacturers can be applied on the High Performance Flush Window or on the Flush Window system even with fully reversible hardware. The combination of windows, doors and conservatory components give us a complete multi-light frame facade system.

Other window types

The window design project can also include not frequently used or particular types of windows and doors:

- Tilt and Turn Window popular in mainland Europe
- Pivot Hung Window used for roof and 'bulls eye' circular windows
- Horizontally sliding window
- Bi-folding or Lift and Slide doors

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