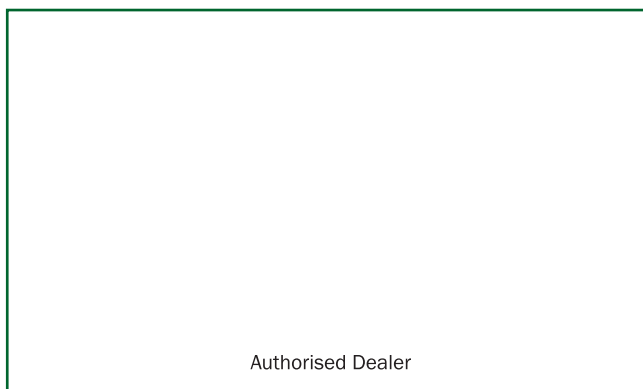


## Our Five Steps Towards Durability by Design

1. avoid trapped moisture
2. control timber movement
3. invest in machining accuracy
4. develop the “components for the job” - no short cuts!
5. invest in the “complete finishing process”

The above steps demonstrate our commitment to “durability by design - a way forward for sustainability”

**Accreditations:** The dempsey product range has a range of BM Trada and BSI accreditations covering the quality, durability, security and energy efficiency features present on selected products. All timber products available from Dempsey Dyer are manufactured under a BSI registered quality management system.



Authorised Dealer

### Additional Information

You can obtain additional information on the dempsey range of high performance timber window, door and conservatory products by contacting dempsey dyer using the details below.

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# durability by design

a way forward for sustainability



high performance timber window, door & conservatory products



Dempsey Dyer Ltd



Dempsey Dyer Ltd

## A History of Innovation

The dempsey timber product offering benefits from over 33 years of in-house design experience. Our products continue to be re-designed and improved to meet and exceed the demands of our clients - a concept we call 'durability by design'.

All our timber products are designed and manufactured from one site in the UK. We do not outsource any part of our production process and therefore have full control in the conversion of raw materials into factory glazed, fully finished products.

Major design improvements were made in 1993 when our products were re-engineered to allow any water that penetrates the external seals, to dry out through ventilation and, in extreme cases, drain out. This concept is at the heart of 'durability by design' which is further explained in this leaflet.

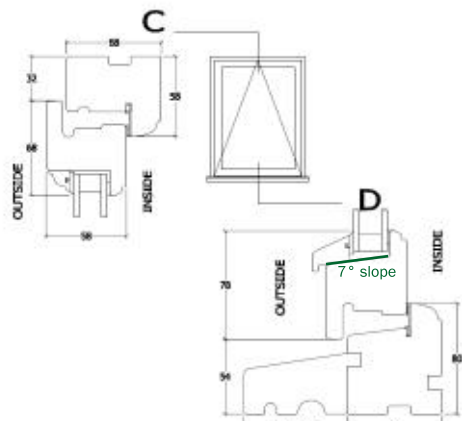
## Avoiding Trapped Moisture

Water can penetrate 'weak points' of the external glazing seals on all windows which can lead to failings in the paint finish and, in more extreme circumstances, timber rot.

Our products are designed to shed water quickly, through the provision of a minimum slope to all horizontal surfaces where water could stand.

This built-in 'insurance' is achieved with a minimum 7° slope alongside a ventilation and drainage bead to all bottom glazing rebates. Therefore any moisture that does penetrate the external seals is allowed to dry out and, in more extreme cases, drain out. (Figure D).

This one design detail is critical to the long term performance of the whole window and it also has the added benefit of protecting the double glazed unit from failing (condensation between two panes of glass).



## Controlling Timber Movement

Moisture penetration through the end grain of the timber can have adverse effects on the long term performance of external joinery products. To control this, all our end grains are coated with an impermeable 'end-grain sealant' to prevent any moisture absorption (Fig.1).

All our joints are bonded with DIN 4 glue (Fig.2) which itself can be classed as an end grain sealer. However, as a further control measure, we insure all 'critical' joints with an additional 'v-joint' sealant thereby providing further protection for the joint and paint finish from external moisture.

By targeting only the end grain of the timber with the above moisture control methods, the majority of the timber surface is allowed to 'breathe' through the micro porous water-based paint system ensuring long term durability and an attractive, high quality finish.

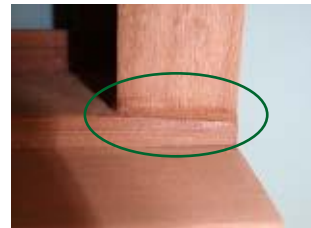


Figure 1



Figure 2

## Manufacturing Accuracy

Our CNC saws, moulders and routers together with our dedicated tooling systems produce accurate profiles and jointing. Without this we cannot rely on accurate components for the precision assembly of the finished product.

Our 5 axis CNC machines are capable of working to tolerances of +0.5mm thereby ensuring our components and the resulting assemblies fit together perfectly.



## Components for the Job

All our timber components are designed specifically for their application with dedicated components for head, jambs, transoms, mullions, cills, sash stiles and rails. Our 7° slopes, for example, demand dedicated components for transoms, cills and sash bottom rails helping us to achieve "durability by design".

We do not compromise on tooling costs, machining costs, timber profile material costs and assembly costs by producing fewer components. We produce the correct component for the job and then compliment the range with robust ironmongery and double glazed units, which also play an important role in the durability and sustainability of the product.

## The "Complete" Finishing Process

All our products are factory finished using a 3 part water-based paint system with a fourth "preservative" process added to meet any class species durability requirement.

The basecoat is applied to the product by "deluge" in our flowcoater. This process, as opposed to a "spray applied finish, is designed to penetrate all areas including "hidden areas" of the timber assembly thereby providing increased durability to the paint system.

Top coats are then applied by "air assisted spray finish" in a dust and temperature controlled environment guaranteeing a consistent, high quality finish in accordance with the "Teknos" paint system.



## Benefits for our Clients

Our proven products are durable, have a long service life and therefore are sustainable. They are also aesthetically pleasing. You, our client, will not incur more cost in the future renewing poorly designed defective window frames. New window frames consume further energy and materials!

We offer a wide range of bespoke design options from our dedicated joinery team and our products usually can be tailored to your exact requirements whilst maintaining our commitment to "durability by design".

33 years of experience in manufacturing timber products together with an ongoing continuous capital investment program (£370,000 invested in the last 12 months alone) places dempsey dyer as an innovator of well designed and durable timber windows, doors and conservatories and the ideal partner for your project.