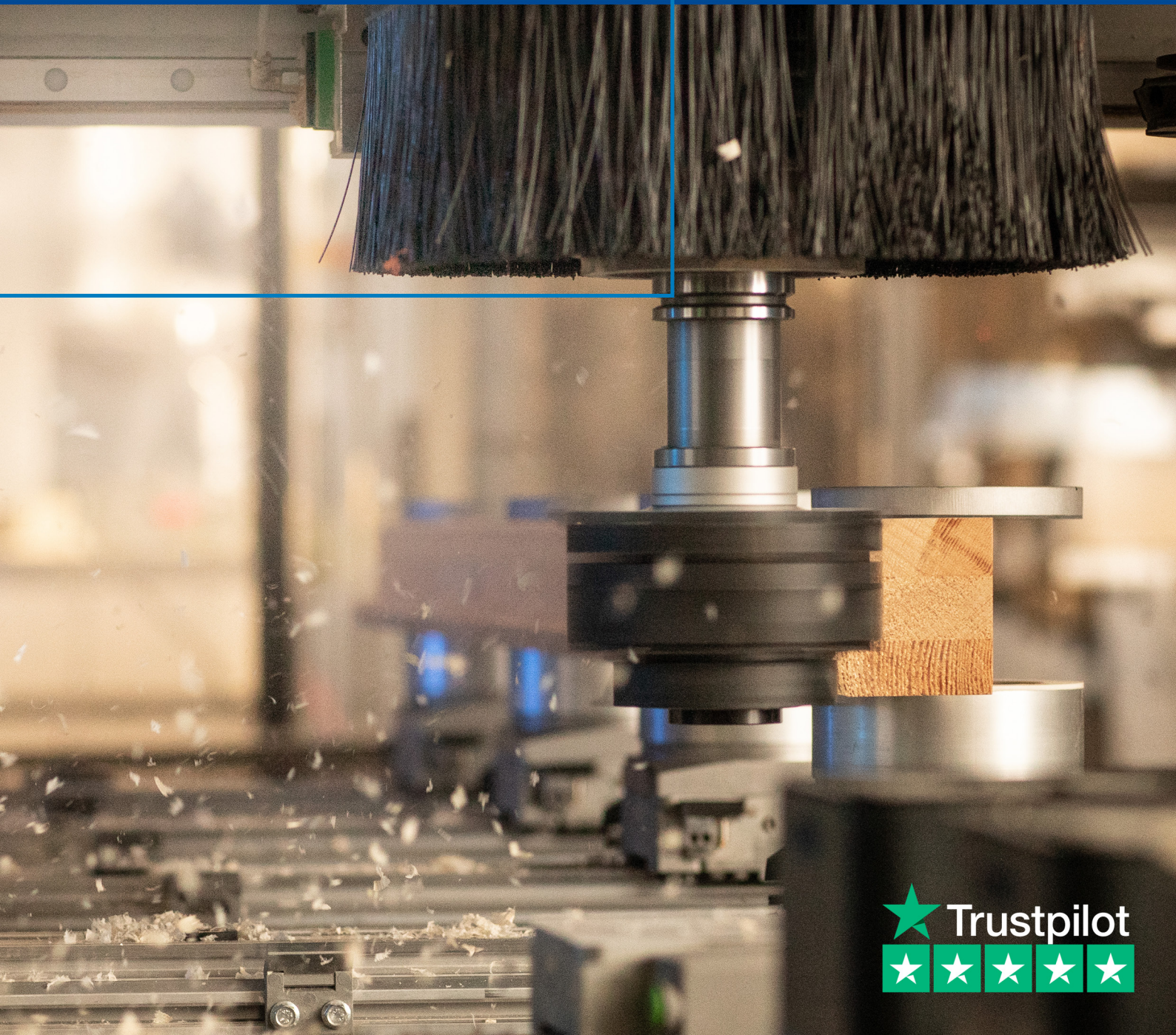




Lignum™ CNC Window & Door Tooling

Efficient, Compliant, Certified.



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Lignum™ Window System



PAS 24:2016/2022
Security



Secured by Design
System



Document Q
Compliant



Document L
Compliant



Document M
Compliant



BS6375-1 2009
Weather Tightness



Double or Triple
Glazing



Easy to
Manufacture



Increased
Productivity



Internally
Beaded



Slim
Sightlines



Energy
Efficient

Lignum. The UK's first fully certified,
independent timber window & door suite.

Leitz has worked closely with the Joinery Network to develop an exclusive tooling system for Lignum. The result is a high-quality timber window and door suite that is easier to manufacture and delivers increased productivity across a wide choice of machinery for spindles to CNC and window lines.

Lignum Manufacturing Support

The Joinery Network along with Leitz Tooling created Lignum for joinery companies looking to grow their business making superior timber windows and doors. The set up for Lignum manufacturing includes consultancy and operative training, to help your team manufacture consistent superior products and optimise production efficiencies. Full technical drawings are available when signing up to the Lignum range.

Lignum Marketing Support

The Lignum marketing support pack includes a great quality retail brochure, specification datasheets and product imagery to help you sell more windows and doors.



The Joinery Network



What Is The Joinery Network?

The Joinery Network has a clear vision – to help joinery companies build a profitable and sustainable future by manufacturing superior timber windows and doors.

Quite simply, The Joinery Network brings together leading organisations and specialists with the know-how, products and services to help you move your business forward. We're supported by our Founders and Affiliate Partners, who provide valuable expertise and opportunities to the fast-growing network of joinery companies manufacturing fully certified timber windows and doors.

Inherit Product Certifications From A License:

Lignum is the only timber system certified to PAS 24:2022 by a UKAS accredited test house and approved by Secured by Design. Companies manufacture the Lignum timber window & door system under an annual license from The Joinery Network. This typically reduces set up to just one third of the cost of going it alone. License holders can be confident that every product is expertly designed, and the testing is always up to date.

Lignum product testing includes PAS 24:2022 secure, BS6375-1,2& 3 for weather performance and operational performance. We also offer the fully tested thermal calculation data and will give you C E Mark DoP, which are needed for new build. All of this for an annual license fee for each product.

Dedicated Technical And Marketing Support:

The Joinery Network offers end-to-end support and practical advice to get you started in manufacturing fully certified timber windows & doors. Our experts are with you every step of the way to help you increase sales, productivity and profit. In addition to tooling and technical support from Leitz, The Joinery Network provides customers with drawings for every Lignum product and personalised literature.

Lignum brochures and datasheets can be personalised with your company branding and contact details. Save costs and time by using the striking Joinery Network marketing material and simply re-brand them to suit your business.

All members have access to full technical data sheets which are a 2-page document that shows the product sections and all the options and tested performance available. These can be used to tender for projects.

The compulsory Joinery Network training is a one-off fee which will help set you up and illustrate the whole manufacturing process. In this training you have access to over 40 years of technical knowledge and over 450, A3 drawing and method details on how to make the products. There are also architect drawings to assist you in tendering.

GUTMANN-LIGNUM

Aluminium Cladded Lignum Windows

Combining Gutmann's excellence in engineering wood-aluminium glazing with the technical joinery expertise of The Joinery Network, the GUTMANN-LIGNUM Lignum range is a collection of high quality products offering superior performance.

GUTMANN-LIGNUM Wood-Aluminium Suite:

Developed from the proven Lignum flush window and door system, GUTMANN-LIGNUM windows and doors feature a low-maintenance aluminium clad exterior. With a service life of 50-plus years, the wood-aluminium combination offers a sustainable solution for both houses and commercial properties. The GUTMANN-LIGNUM range features a flush window and door solution including single and doubles that open in and open out. There is also an option for Bi-folding doors opening out.

Gutmann Is The Joinery Network's Development Partner:

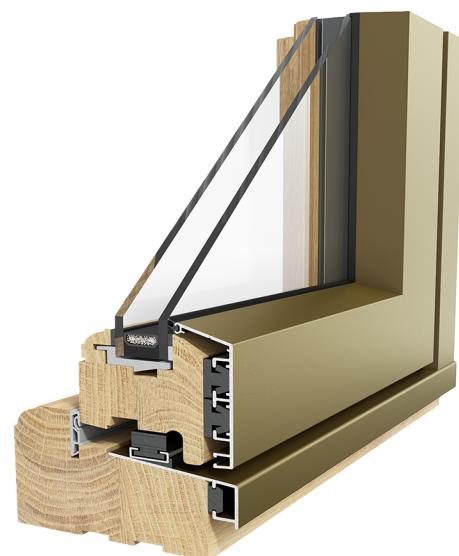
As a global leader with over 80 years of industry expertise, Gutmann specialises in state-of-the-art aluminium systems and aluminium-timber fenestration solutions.

Collaborating closely with architects, planners & house builders, Gutmann brings diverse visions to life through sustainable solutions and efficient recycling practices to guarantee top-quality, eco-friendly products.

The GUTMANN-LIGNUM Aluminium clad range offers benefits such as strong weather resistance, low maintenance and suitability for commercial, residential and municipal buildings.

Be Bold With Bronze:

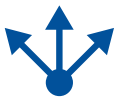
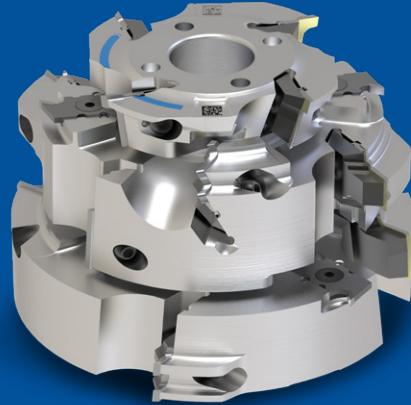
Get inspired with the metals colour collection from the Gutmann Colour Box. The GUTMANN-LIGNUM range is available in any RAL colour and all of our coatings are GSB and QUALICOAT certified.



ProfilCut Q

For highest precision and cutting quality

A profile tool system proves its superiority when it covers a wide range of applications and at the same time ensures outstanding cut quality with long tool life. The Leitz ProfilCut Q cutterhead system offers these advantages and sets the standard in the industry.



FLEXIBILITY

The system with the unbeatable versatility

- Most types of profile can be implemented
- Use to the majority of conventional machines is possible
- A wide range of materials can be processed
- Different cutting material and knife combinations possible



QUALITY

Highest machining quality over the entire life cycle

- Excellent surface quality through extra-sharp cutting edges and low vibration lightweight construction
- Reduced splintering on the wood due to the profiled chip breaker
- Optimally matching HW grades can be combined with diamond



PRODUCTIVITY & EFFICIENCY

More production with easy handling and less maintenance

- Less machine downtime and longer runs in use due 30 % longer tool life
- Fewer rejects and rework due to surfaces in finish quality
- Quick set-up times through automatic knife positioning without setting devices
- Low maintenance due to dustproof elements
- Optimised costs through the combination of several knife types such as turnblades, profile cutting edges, edge rounders, spurs etc.

YOUR BENEFITS

- For most profiling tasks
- Excellent cut quality over the entire tool life
- Long tool life
- Minimum set-up times
- Easy handling

AT A GLANCE

- For cutting speeds (v_c) up to 90 m/s
- Tool body mostly manufactured from light metal
- Suitable for all conventional machines
- Applicable in solid wood, wood derived materials and plastics
- TC cutters with Marathon high-performance coating

Testimonials & Case Studies

Don't just take our word for it...

The Lignum tooling system has impacted joinery businesses across the UK.

Read on to discover how it has impacted their growth, profitability, efficiency and success.



"Since we adopted the Lignum tooling system for timber windows and doors, we have more than doubled our revenue since 2019 including lower costs, less downtime and higher profit margin!

The finish quality has dramatically reduced our need to sand down or re work a project and the de-nibbing process has gotten shorter too."

John Fanthrope
JF Joinery

"Working with The Joinery Network has improved both our manufacturing processes and end products. We are able to manufacture windows and doors faster, thanks to the tooling from Leitz and training from Owen. Owen is always on hand to offer advice and quickly respond to any questions."

Mark Law
Law & Lewis of Cambridge Ltd

"Lignum products have opened up the new build market for us and enhanced our business. We can now offer a full product range to new builds where previously we could not. We are a lot more confident offering Lignum products to replace many traditional windows, there is much less risk compared to traditional joinery."

Gary Grange,
DGM Joinery

"Leitz have been extremely helpful in getting us set up with the correct window tooling, CNC tooling and saw blades. With their high quality service, and great customer service by their sales rep, we managed to increase our manufacturing significantly. We highly recommend for other joinery businesses that are looking for tooling to use Leitz."

Mentor Breganaku,
MB Design & Construct Ltd

We highly recommend the Leitz Harlow team to any joineries in search of professional support.

The ideas and tools they provide are truly exceptional. We were thoroughly impressed by the level of professionalism displayed during the Leitz seminar about sash windows.

Monica Zaparty,
Skylon Joinery

Thanks to Leitz for their great knowledge when it comes to window and door tooling. They are very helpful and always comes to see us every week for a check up, to collect and drop off anything we need sharpening for. If there's one thing we know, leitz are very good for there blades .

Ben Hunt,
Landmark Joinery

JF Joinery

JF Joinery Doubles Revenue with Lignum

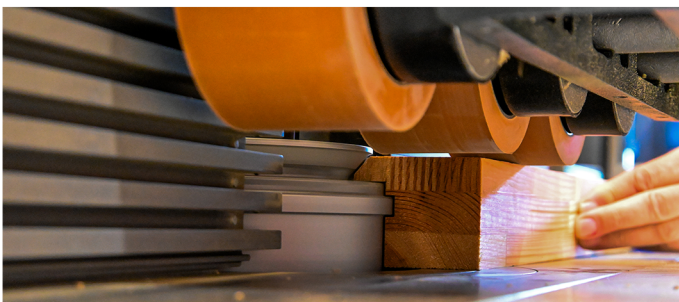
“Since we adopted the Lignum tooling system for timber windows and doors, we have more than doubled our revenue since 2019 including lower costs, less downtime and higher profit margin!”

**- John Fanthrope,
Director of JF Joinery**

JF Joinery is five star rated manufacturer based out of Exmoor and has been producing timber doors, windows and joinery products since 1976. JF joinery is an affiliate of The Joinery Network and since then, has grown the business dramatically thanks to the Leitz Lignum tooling system for timber doors and windows and support from The Joinery Network. Today, JF Joinery operates in two markets: joinery and flooring.

Leitz Tooling is a founding member of The Joinery Network and provides tooling and technical support to members and affiliates. The Joinery Network was established in 2018 to help UK manufacturers of timber doors and windows get into the market by reducing startup costs by at least 65%. The network also lowers barriers to entry, as manufacturers using the tooling system inherit both required and coveted certifications, such as energy efficiency ratings, suitability for new and restoration builds or the police secure by design accreditation.

Quite simply, The Joinery Network brings together leading organisations and specialists from the market with the know-how, advice, products and services to help you move your business forward. JF joinery, the first customer of The Joinery Network to receive the Lignum system back in 2019, achieved remarkable enhancements in production efficiency, product quality, and overall business operations. Integrating the Lignum system from Leitz has streamlined JF joinery's machining process, resulting in a significant boost in production volumes.



“Our cycle times are massively decreasing, since we adopted the Lignum system we have more than doubled our revenue since 2019. This is mainly due to faster cycle times, in fact we spend far more time assembling and decorating our products than we do machining them at no cost to quality. If we hadn't invested in Lignum, we wouldn't be in business now.” - John (JF Joinery).

By streamlining tool setups and reducing downtime, JF joinery has achieved reduced production cycles, enabling them to meet the ever-growing demand for their high-quality timber products. “Since we joined the network, production times have decreased significantly and it has done so in many areas.

Firstly, the finish quality of the system has dramatically reduced our need to sand down or re work a project, meaning we can get straight to assembly and decorations like painting and the de-nibbing process has gotten shorter too. Secondly, our set up times have been massively reduced, this means we can replace tools easily and not have to worry about replacements and tool changes impacting production time, the tools last a very long time so since moving to Lignum, we are replacing our tooling far less.”



Image property of JF Joinery



Image property of JF Joinery

Moreover, the Leitz Lignum tooling has empowered JF joinery to expand its market reach and secure new sales opportunities. Manufacturers using Lignum tooling inherit compliance with industry standards, such as PAS:24, Secure by Design and building regulations Q, L, & M. Eliminating the need for costly and time-consuming product certifications, granting JF joinery a competitive edge and opening doors to new customer segments.

Not to mention, the massive saving in money and time that would have been required to pass over 7 forms of testing including weather tightness and energy efficiency. "Back when we started in joinery, certifications were not really a thing and our traditional designs would not have passed testing. Now, they change so much its hard to keep up to date.

Without The Joinery Network, there is no way we would have been able to keep up with changing regulations like PAS:24. As a joiner you cannot afford to not cater to all areas of joinery (New build and conservation), as the Lignum products inherit compliance, the value is immeasurable and it has been vitally important to our success – the Lignum design is streets ahead and we now exclusively manufacture Lignum products."

Furthermore, Lignum tooling has significantly reduced JF joinery's start-up costs. The comprehensive tooling system, with its meticulously designed tool sets, has eliminated the need for extensive product testing and validation to meet building standards.



The network has already bore the brunt of the arduous and expensive testing process, streamlining the development process, allowing JF joinery to bring new product designs to market faster and more efficiently. "Since Brexit and Covid, its no secret that margins are getting cut by high material costs and joiners are facing massive increases in running costs, something JF Joinery never really considered until Covid19. It has been much more affordable doing it this way. Initially I thought, hell this is a lot of money, then you do a cost analysis and compare the initial investment to faster production times, reduced downtime, accurate tools, no testing and less re work and the cost becomes negligible."



Leitz & The Joinery Network are constantly testing new designs, tools and materials so that manufacturers of timber doors and windows can stay up to date with the latest designs and trends. As recently as the 2nd of November 2023, The Joinery Network became the first UK company to offer Accoya timber products to PAS24:2022 standards.

In essence, Lignum tooling from Leitz has proven to be a gamechanger for JF joinery, enabling the company to achieve remarkable advancements in production efficiency, product quality, and overall business operations. The combination of increased production volumes, expanded sales opportunities and reduced start-up costs has propelled JF joinery to new heights of success, solidifying its position within the local market.

DGM Joinery

DGM Joinery Overcomes PAS:24 & Enters New Markets

“Lignum products have opened up the new build market for us and enhanced our business. We can now offer a full product range to new builds where previously we could not.”

**- Gary Grange,
Director of DGM Joinery**

DGM Joinery are traditional and bespoke joiners based in Kings Lynn. They offer their services to Kings Lynn and across the Norfolk coastline. DGM joinery produce a massive range of products including furniture, bespoke pieces, architectural mouldings, conservation work and now, products from the Lignum range of timber doors and windows.

Having historically focused on conservation work across the coast line, DGM joinery has always prioritised their quality policy in all their work. Founded in 1981, DGM are now operating out of a recently expanded workshop on Linden road. The workshop contains a variety of machinery but DGM are renowned for their spindle moulding abilities. DGM Joinery became an affiliate of The Joinery Network mid 2021 and since being involved with the network have expanded their capabilities and their business. The business has been using the Lignum system alongside regular tooling from Leitz.

Leitz Tooling is a founding member of The Joinery Network and provides tooling and technical support to members and affiliates. The Joinery Network was established in 2018 to help UK manufacturers of timber doors and windows get into the market by reducing startup costs by at least 65%. The network also lowers barriers to entry, as manufacturers using the tooling system inherit both required and coveted certifications, such as energy efficiency ratings, suitability for new and restoration builds or the police secure by design accreditation.



The Joinery Network brings together leading organisations and specialists from the market with the know-how, advice, products and services to help you move your business forward. From drawings to process optimisation, The Joinery Network enables joiners to quickly produce high quality Lignum products and bespoke joinery at no cost to quality; enabling faster production.

Having manufactured Lignum products since 2021, DGM directors Shawn and Gary open up about how the network has impacted their business operations and growth. “The main benefit of becoming an affiliate has to be that the Lignum products have opened up the new build market for us and enhanced our business. We can now offer a full product range to new builds where previously we could not. Additionally, The Joinery Network has helped us technically, without a doubt. The drawings provided by the network have seriously improved our lead time for Lignum style products”.

The cost involved in testing joinery products to PAS:24 quality has major financial and logistical implications for most small joinery firms, meaning for most companies it is simply unrealistic to test their products to consistently changing regulations. “Without the Lignum system, we would not have PAS:24, the cost is appears high. But, joinery companies not following the current regulations may find that their demand decreases alongside new and more restrictive legislation.”



As a traditional joinery company, DGM has always put their quality policy above all else. Despite moving from traditional joinery with their own DGM line, DGM is able to maintain their exacting standards with the Lignum products. “We feel confident that we can manufacture these new Lignum products to the same high quality our customers have grown to expect and keep in line within our own policies. We don’t have to check it, we know it’s right. The major thing for us, is complete confidence in the tooling”.

The DGM directors also reflected on the network itself. “The support from the network is great, these are all companies where you can ask questions and receive help and technical support. What surprised us is that people from the network call to check up and make sure things are running smoothly. The network has helped us to improve our profitability.”

Thanks to innovative solutions from Leitz Tooling, DGM has improved reduced their set up times drastically and improved their cycle times for new build projects. “It is definitely quicker replacing blocks and not worrying about fences and heights. Having the tooling all set to the same radius is far easier and means we don’t have to worry about it. For part Q products, our cycle time has also come down significantly. We can produce a lot of windows and doors, faster than we can produce our traditional or bespoke joinery. It has also led to a much faster process of preparing our work for painting as we have no need to sand joints thanks to the Lignum jointing system.”



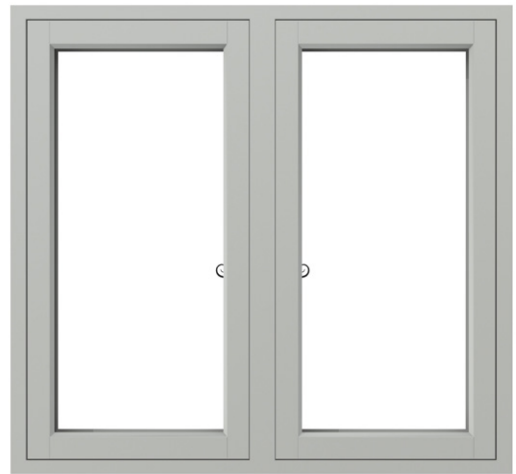
We have used Leitz Tooling since before we joined the network. We trust Leitz for tooling that is in continuous use because we noticed the cutters tend to last much longer. Especially after switching over from HSS tools to carbide. We also appreciate the disposable tip system – this approach has saved us time and a lot of money.” DGM also use Leitz servicing to ensure their tools last longer and are always at peak performance.

Finally, the directors from DGM discuss how manufacturing Lignum products has become crucial for joinery companies, given the massive shortage of experienced and skilled labour on the job market. This means companies can grow the skill set of their current staff and be confident new hires will quickly pick up the process. “Non-skilled bench workers and joiners can be easily trained to manufacture Lignum products. We are a lot more confident offering Lignum products to replace many traditional windows, there is much less risk compared to traditional joinery thanks to all the certifications and accreditations.”

DGM Joinery has experienced significant benefits by becoming an affiliate of The Joinery Network and adopting the Lignum system. They have expanded their product offerings, improved their manufacturing efficiency, and reduce their reliance on skilled labour. The Lignum system has also helped them to achieve PAS:24 amongst other certifications, which is essential for competing in the new build market. Overall, DGM Joinery is another perfect example of how The Joinery Network and Leitz Tooling can help joinery companies to grow, diversify and succeed.



Casement Windows



BENEFITS

- Designed to suit both traditional and contemporary house styles.
- Clean, slim sightlines and internal Ovolo detailing makes the windows easy to clean. Ovolo glazing beads are standard with other options available on request.
- PAS 24 security certified as standard for new build applications. A narrow rail option is also available for refurbishment projects only.
- Internally beaded for easy installation. Glazing is done from the inside to reduce access costs and comply with health and safety regulations.
- Cills feature optional extensions and window board groove.
- Certification available when licenses are purchased from The Joinery Network.

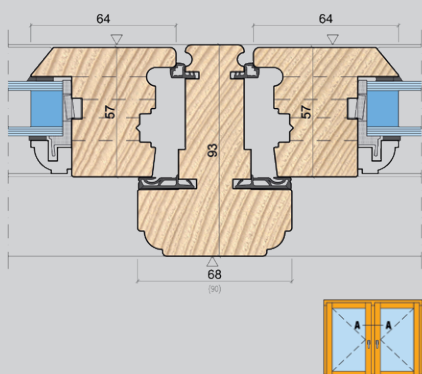
AT A GLANCE

- Flush Casement Window
- Stormproof Casement Window

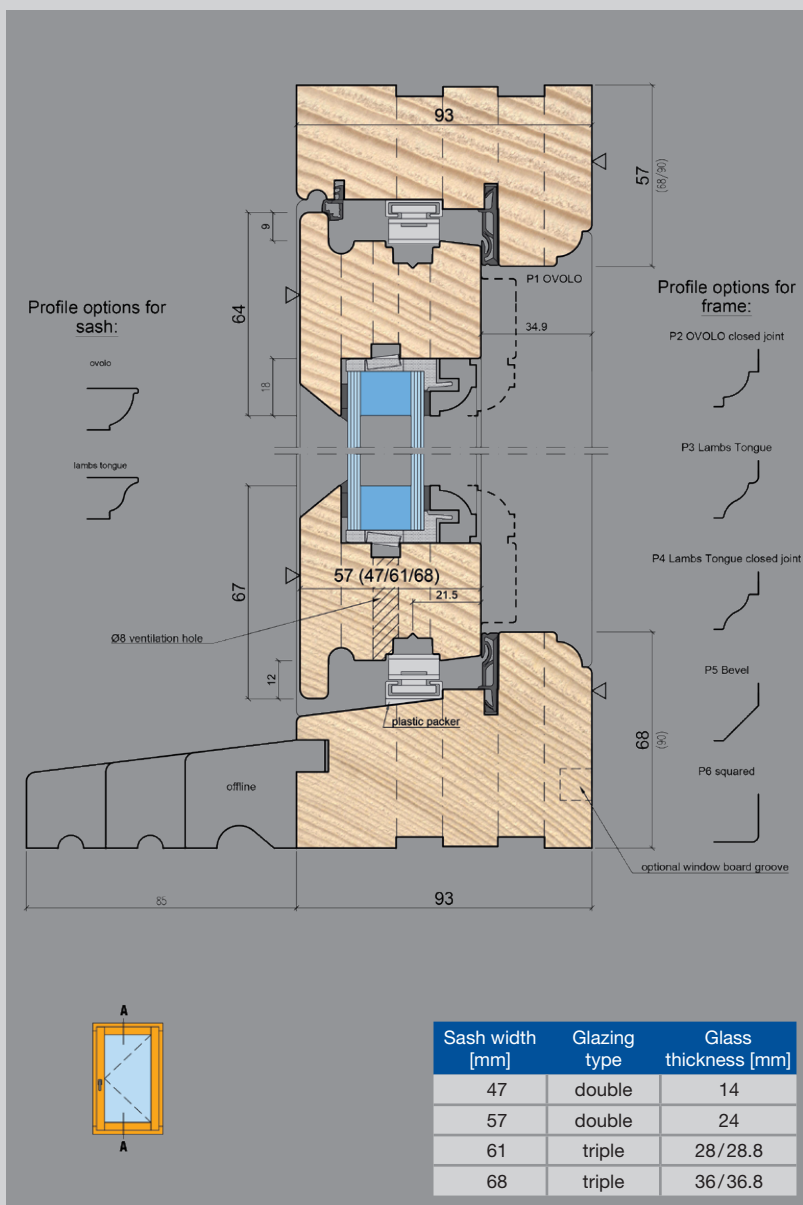
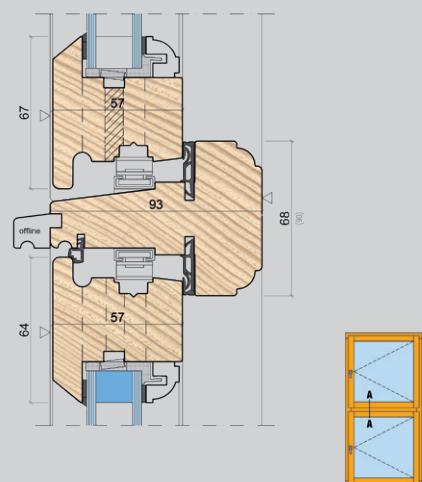
Flush Casement Window IV 57 (47/61/68)/93

Window sections

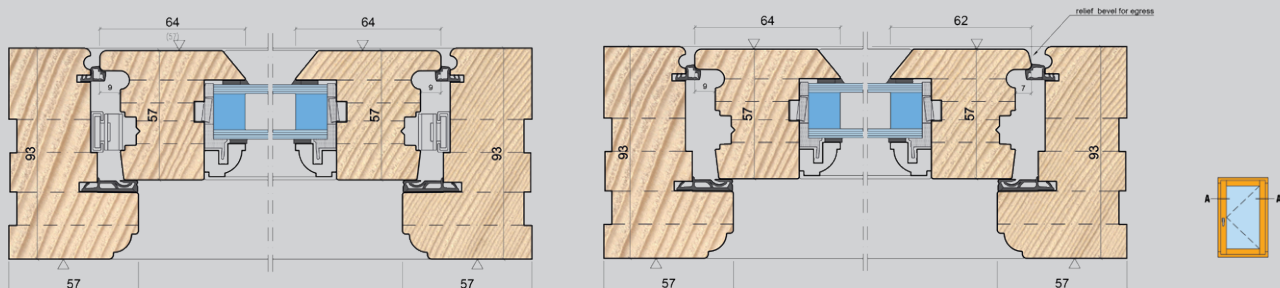
Mullion



Transome section



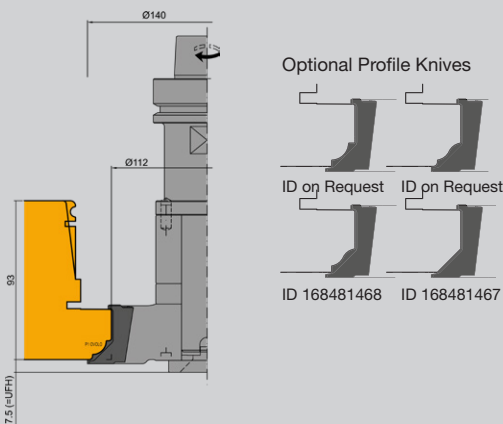
Jamb details



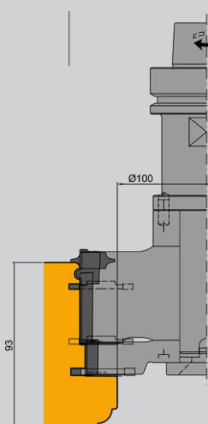
Flush Casement Window IV 57(47/61/68)/93

CNC Tooling

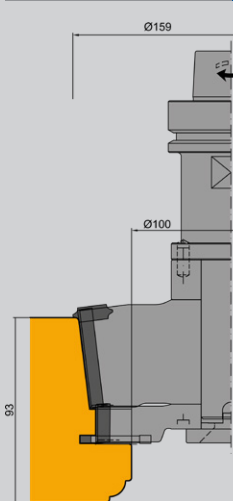
Inner Frame - Ovolo ID L170158414



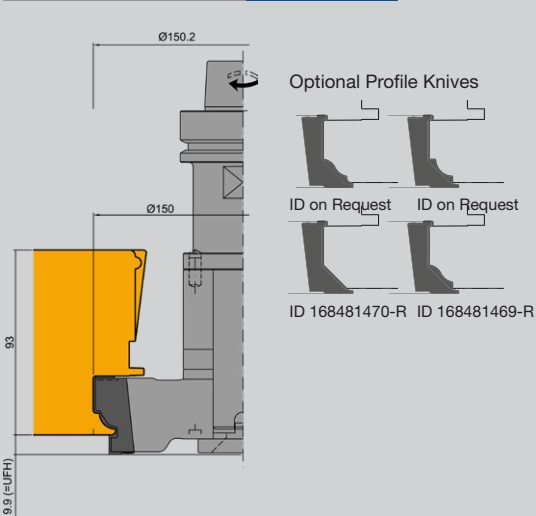
Inner Frame - Rebate ID L170158415



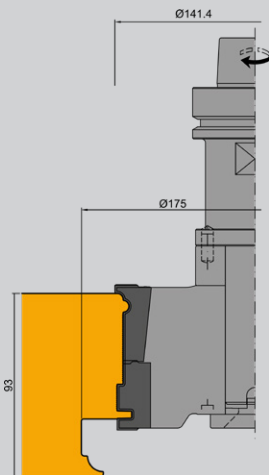
Inner Cill ID L170158416



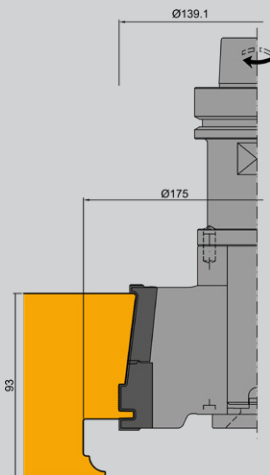
Frame Cill profile (Ripple) ID L170158417



Frame Counter Profile (Ripple) ID L170158418



Cill Counter Profile (Ripple) ID L170158419

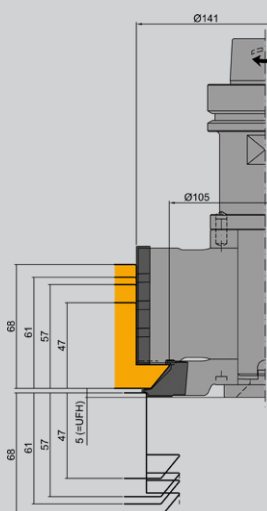


Flush Casement Window IV 57(47/61/68)/93

CNC Tooling

Glazing Rebate (Inside Sash)

ID L170158420



Optional Profile Knives

P2: OVULO closed joint



ID on Request

P3: LAMBS T



ID on Request

P4: LAMBS TONGUE closed joint



ID on Request

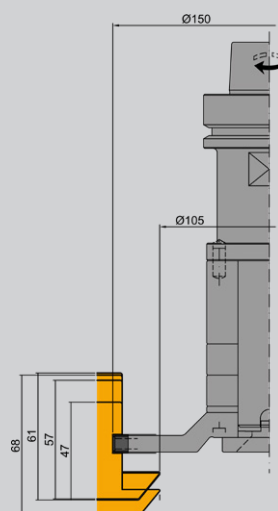
P5: BEVEL



ID on Request

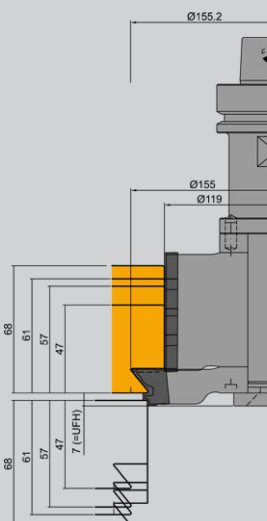
Glazing Clip Groove

ID L170158421



Sash Counter Profile (Glazing)

ID L170158422



Optional Profile Knives

P2: OVULO closed joint



ID on Request

P3: LAMBS TONGUE



ID on Request

P4: LAMBS TONGUE closed joint



ID on Request

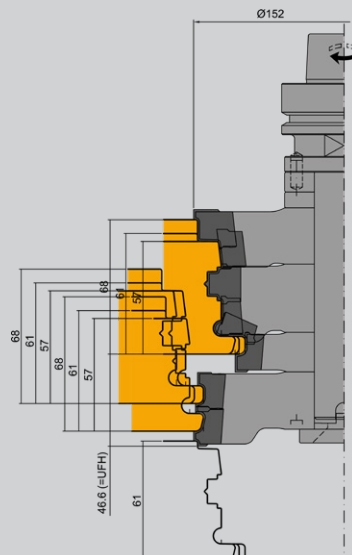
P5: BEVEL



ID on Request

Outside Sash Profile

ID L170158423



Box Sash Windows



BENEFITS

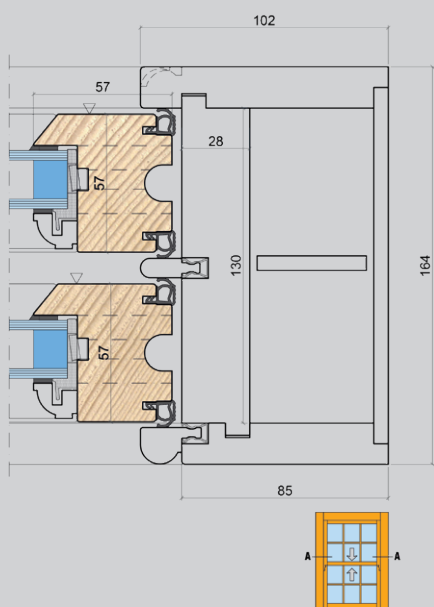
- Document Q compliant and designed for both new-build and also refurbishment projects.
- The external box liners are available in a choice of square, Ovolo or beaded profiles to suit traditional or contemporary property styles.
- Special PAS 24 security catches are available and glazing options accommodate glass units from 12 mm slim heritage up to 24.8 high security insulated glass units.
- Glazing bars are available in range of sizes including 18 mm and 22 mm.
- Cills feature optional extensions and window board groove.
- Certification available when licenses are purchased from The Joinery Network.

AT A GLANCE

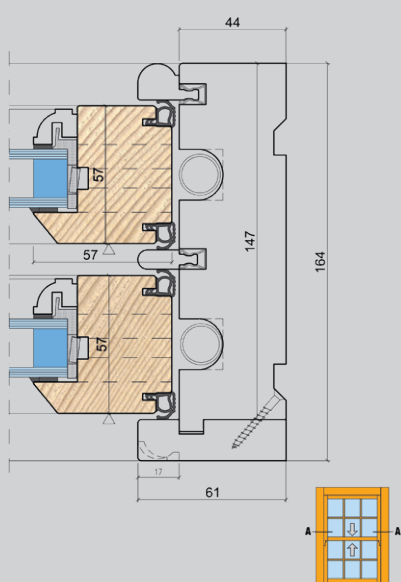
- Box Sash Window
- Spring Balanced Window

Box Sash Window IV 57(47/61/68)/164(144/172/186)

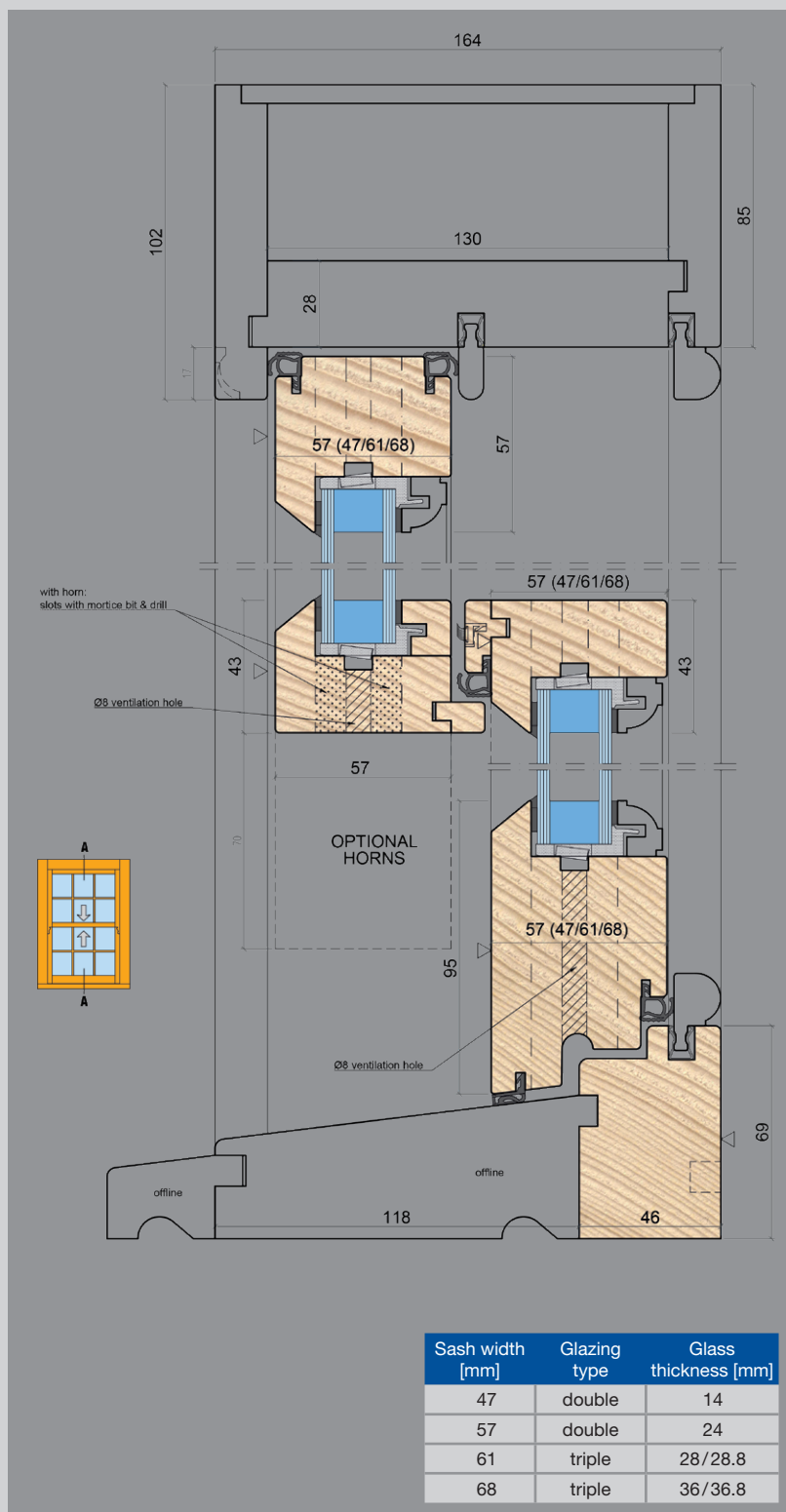
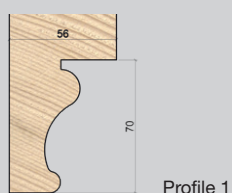
Window sections



Spring balanced version



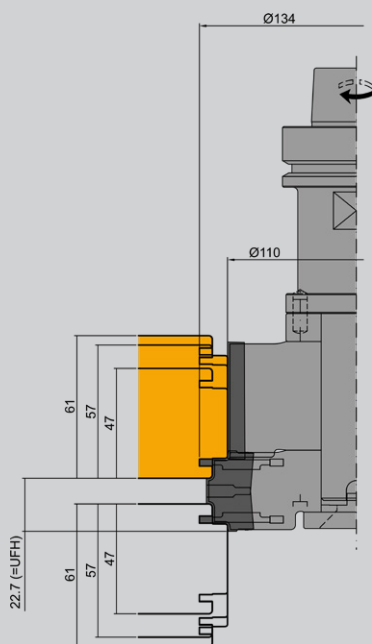
Optional horn



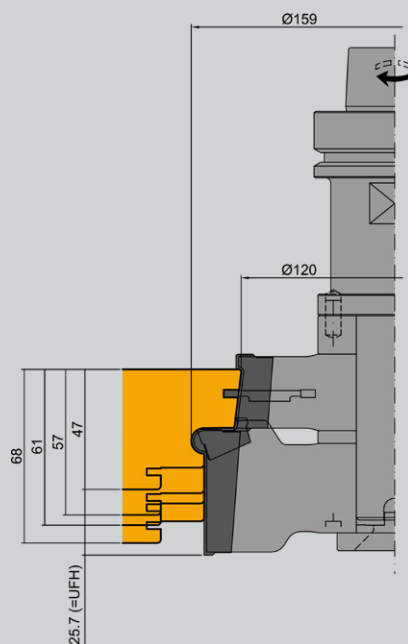
Box Sash Window IV 57(47/61/68)/164(144/172/186)

CNC Tooling required (In Addition to Flush Casement Tooling)

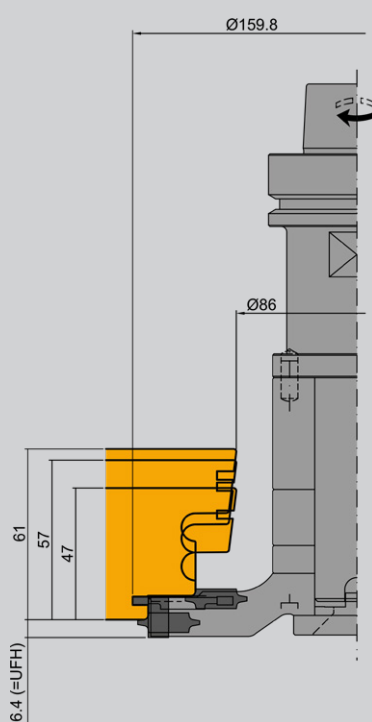
Top Rail Outer Profile ID L170158427



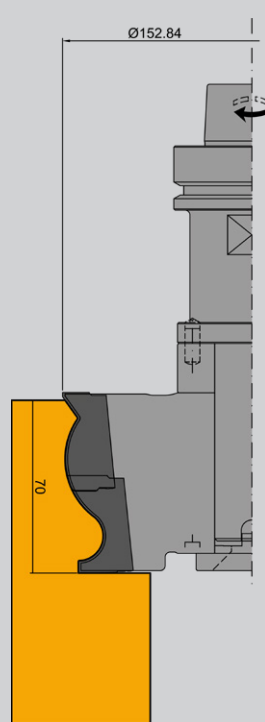
Bottom Rail Outer Profile ID L170158428



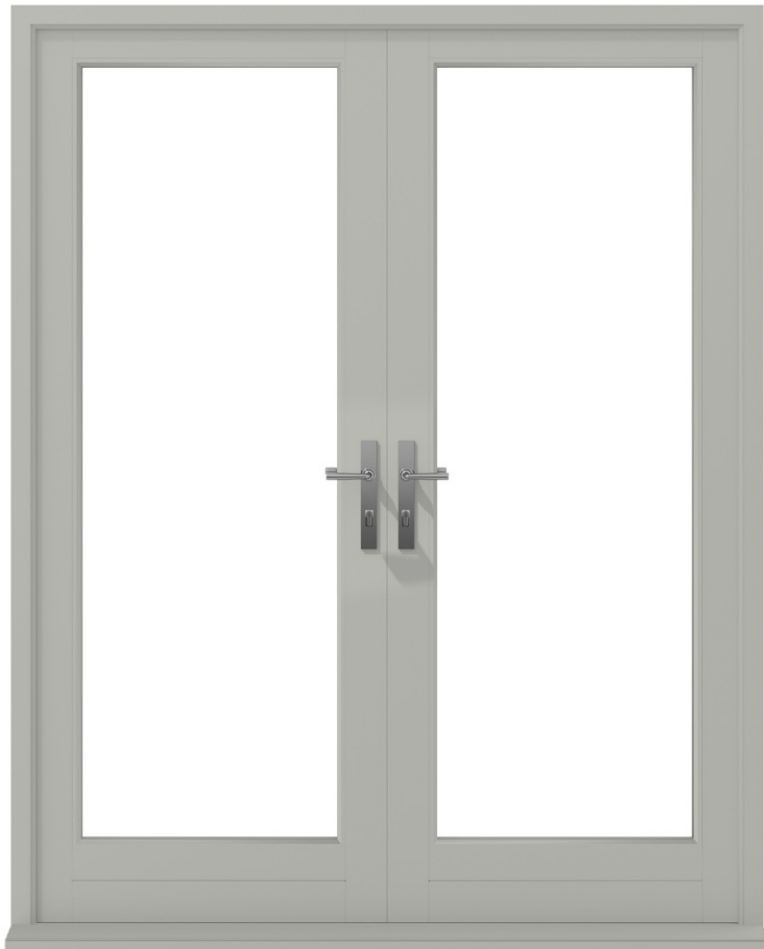
Bottom Outer Profile ID L170158429



Horn Profile ID L170158430



Doors



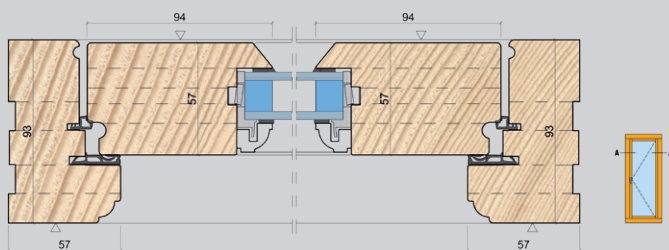
BENEFITS

- Designed to provide lots of flexibility for joinery companies to offer a wide range of door styles from traditional to modern.
- PAS24 certified, Document Q and Part M compliant for new build applications.
- High performance insulated panels offer superb energy efficiency and weather performance.
- For double door applications, an optional groove allows for additional weather capping of the meeting stiles.
- Cills are 68 mm or 90 mm as standard, with optional extensions on request.
- Certification available when licenses are purchased from The Joinery Network.

AT A GLANCE

- Single & Double Open In Door
- Single & Double Open Out Door

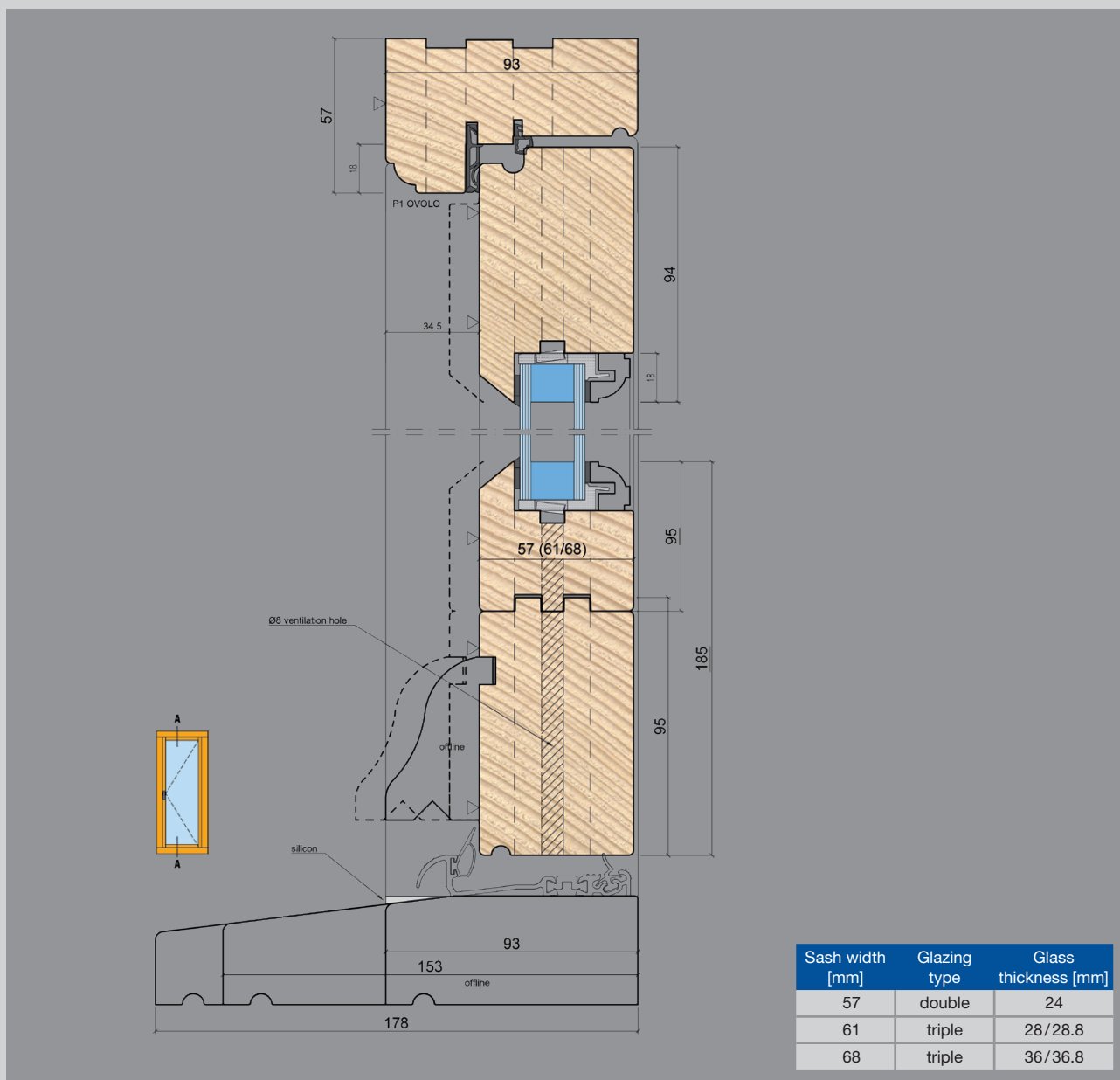
Door sections



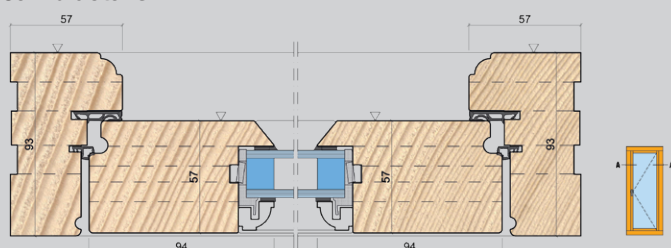
Technical drawing of a door cross-section. The drawing shows a door with a central handle and two side handles. The door is labeled with dimensions: 69.8, 40, 72, 94, 67, and 94. The door is shown in a closed position. To the right of the door is a small icon of a window with a crosshair.

Single & Double Open In Door IV 57 (61/68)/93

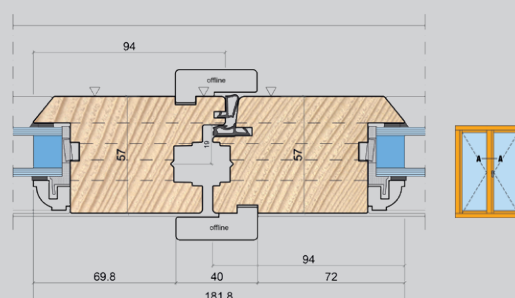
Door sections



Jamb details



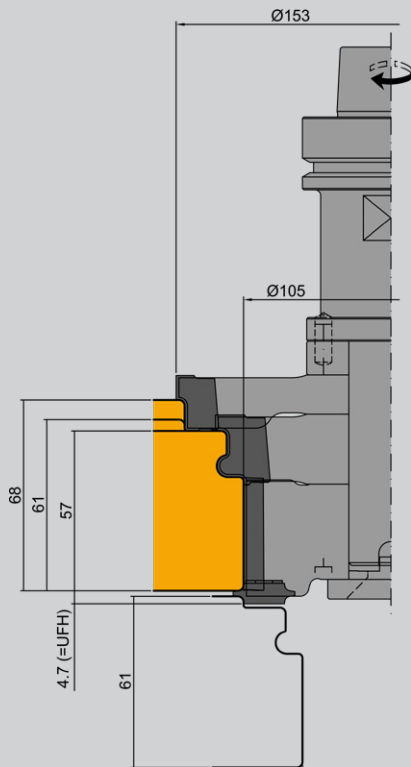
French door



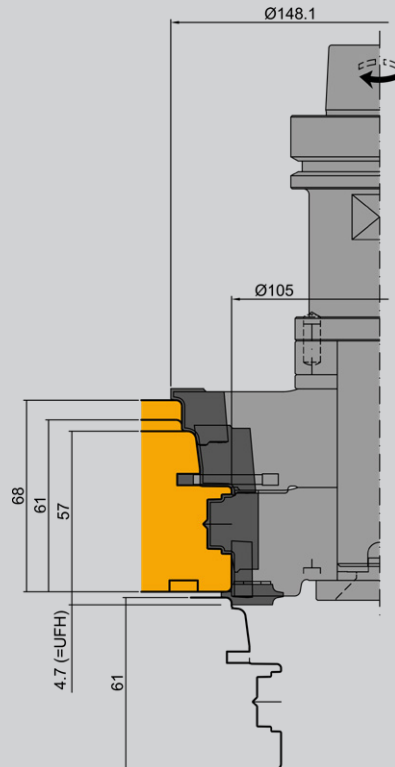
Single & Double Door IV 57 (61/68)/93

CNC Tooling required (In Addition to Flush Casement Tooling)

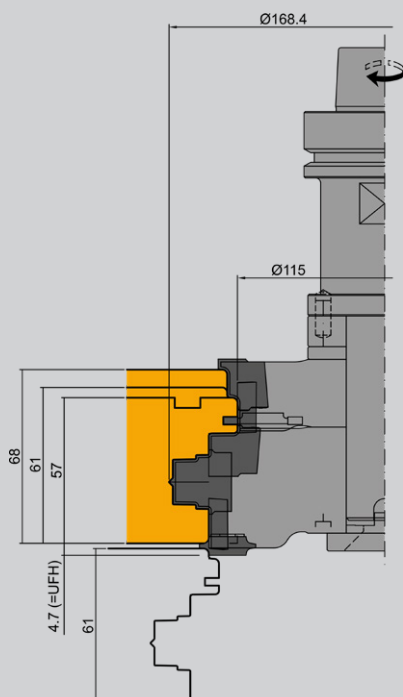
Door Outer Profile ID L170158424



French Door Outer Profile (RH) ID L170158424

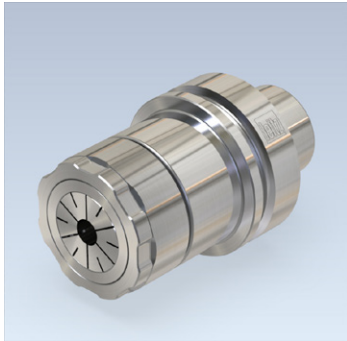


French Door Outer Profile (LH) ID L170158426



Recommended Clamping & Tooling:

High-Performance CNC Clamping & Tooling



NiRo Collet Chuck Premium With Hollow Taper Shank HSK-F63:

High-Performance collet chuck made from stainless steel for corrosion and rust resistance. Improved clamping forces and slimmer geometry for reduced power consumption.

- -100% Corrosion thanks to stainless steel design.
- 200% Higher clamping forces than conventional collet chucks.
- 15% Slimmer geometry than conventional collet chucks.



ThermoGrip© ShrinkFit Chuck With Hollow Taper Shank:

The ultimate clamping solution, ThermoGrip technology combines clamping and the tool body into one monolithic design, using heat shrinking. Enabling higher feed speeds, longer tool life and a minimal 0.010 mm runout.

- 50% Higher feed rate possible compared to collet chucks.
- 300% Longer maximum tool life than collet chucks.
- 600% Higher concentricity (clamping forces) than collet chucks.



Large Range of Precision Engineered Drill Bits:

Leitz Tooling manufactures a large range of drill bits for every material and application. For window manufacturing, we typically recommend solid carbide dowel and through hole drills for improved performance time & tool life.

- Marathon Coating for high-speed drilling & 30% increase in tool life.
- Dowel, Through hole, hinge boring, twist, countersink and step drill bits.
- Manufactured from high-grade carbide for better life and faster speeds.
- XL Twist drills available for structural timber applications.



Leitz UK-Made Spiral Router Cutters:

Leitz Tooling UK has recently launched a new range of over 450+ router cutters, specifically designed for the UK market. The new range is made from special grade carbide for improved tool performance & longevity.

- Marathon Coating for high-speed drilling & 30% increase in tool life.
- Dowel, Through hole, hinge boring, twist, countersink and step drill bits.
- Manufactured from high-grade carbide for better life and faster speeds.
- XL Twist drills available for structural timber applications.



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