



# GLASS HANDLING CATALOGUE

World leaders in Glass, Windows and  
Flat Panel Handling & Transport Solutions



**metalcraft**  
GLASS RACKING

# ABOUT US

## World leading. New Zealand made. Built to last.

Based in Christchurch, Metalcraft Engineering and Glass Racking is a New Zealand manufacturer specialising in the design and fabrication of flat panel handling and transportation equipment. We serve the glazing, window, and wider flat panel industries with both custom-built solutions and a proven range of handling, transport, and storage systems.

Proudly NZ made and exported worldwide, our equipment is recognised as a world leader in design and innovation. Every product is built to deliver exceptional quality, reliability, and longevity, ensuring our customers gain maximum return on investment through safer handling, reduced damage, and longer service life.

Our investment in the industry includes ownership of 17 aluminium extrusion dies, 8 polymer dies, and 11 plastic injection moulding dies. These resources allow us to create unique components, safeguard intellectual property, and provide true product differentiation.

Since 1991, our guiding principle has been **Innovative by Design**. Combining strong engineering expertise with 3D CAD design and CNC machining, we consistently improve production quality, reduce costs, and deliver equipment trusted across New Zealand and international markets.

# CAPABILITIES

At Metalcraft, our strength lie in the skills of our people, supported by advanced technology and robust systems. With more than 30 years of experience, we combine design, fabrication, and project management expertise to deliver solutions that are innovative, practical, and built to last.

## Experience

With a problem-solving mindset, our team thrives on tackling complex challenges in glass, window, and panel handling and transport. Leveraging deep industry expertise, we develop best practices and innovative techniques that improve efficiency, safety, and reliability.

- **Experienced leadership.** Our leadership team brings extensive expertise in operations, product development, and CAD design, combining strategic oversight with a hands-on approach that drives innovation and efficiency.
- **Design excellence.** Design teams specialises in solution conception, product development, and design for manufacture, utilising full CAD and 3D modeling capabilities.
- **Project management & QS.** Accurate costing, efficient scheduling, and clear communication ensure projects are delivered on time and within budget.
- **Production leadership.** Skilled supervisors oversee workflow on the floor, ensuring efficiency and precision across fabrication processes.
- **Skilled tradespeople.** Fabrication teams work confidently with mild steel, stainless steel, brass, and aluminium, supported by apprenticeships that develop the next generation of tradespeople.

## Expertise

The combination of skilled staff, advanced tooling, and proven systems allows us to deliver small one-off jobs to large commercial projects. Whether it's a unique custom solution or the manufacture of an entire product range, Metalcraft remains flexible, responsive, and committed to quality craftsmanship.



NEW ZEALAND  
MADE



GLOBAL  
LEADER



QUALITY &  
LONGEVITY



INNOVATION &  
DESIGN



EFFICIENCY &  
EASE OF USE



SAFETY &  
PROTECTION



# CONTENTS

## GLASS HANDLING

Trolleys.....	4
Tooth Systems .....	6
Glass Cutting Tables .....	8
Glass Lifting Equipment.....	10
Glass Storage.....	12

## RETENTION & PROTECTION

Load Retention.....	13
ProFoam Protection.....	15



# GLASS HANDLING

## TROLLEYS

Purpose-built trolleys and safety systems designed for strength, durability, and safer movement of flat panels within the factory.



Metalcraft Glass Racking offers a comprehensive range of factory handling solutions for the flat panel industry, designed to combine durability, safety, and ease of use.

### Key Features Include:

- Heavy-duty mild steel construction for strength and durability
- Hot dip galvanised (or pre-galv for larger items) for extended service life
- High-quality designed castors, rated to 450kg each
- Polymer bearing surfaces to protect panels from damage
- Optional load-securing arms for added safety

Our trolley systems are purpose-built and refined over more than 30 years, with every development shaped through collaboration with the glazing industry. We understand that moving product around cutting tables, furnaces, double-glaze lines, CNC machines, and vehicles requires a strong focus on health and safety. Combined with our lifting equipment and training systems, these solutions significantly reduce the risk of accidents and product damage.

Safety Arms provide a quick, simple, and secure way to stabilise loads on A-frame or L-frame trolleys. Finished in gold zinc for high visibility, they make it easy for staff to identify whether they are in use. Many companies have now made Safety Arms a mandatory part of their health and safety policies, reflecting their proven value in protecting both staff and product.



## A-Frame Trolley

This general purpose A-frame factory trolley is designed for storage and movement of glass and window items around your factory. All bearing surfaces are clad in our non-marking inserted polymer to reduce the risk of damage and scratching to the load. Quality 150mm castors rated at 460kgs each ensure ease of movement around your factory and longevity.



## Finger / Specialist Trolley

Finger trolleys are designed for laying glass items horizontal between processing stages. The bearing surfaces are clad in Metalcraft non-marking polymer inserts to protect the items. The rear of the trolley can also be clad in polymer to provide a soft bumper for units which are slid into the trolley. Quality 460kg rated castors ensure that the trolley is maneuverable.



## Harp Trolleys

The Single Glaze Harp Trolley is the most common style used for pairing panes prior to double-glaze production. Glass sits securely in slots within the routed HDPE plastic base, allowing units to slide smoothly in and out of position. Plastic-coated 8mm steel bars retain the glass while minimising marking or scratches, and non-marking polymer inserts in the end frames protect sheet ends while keeping the trolley compact in width. Handles make movement simple, while rear lock-down feet hold the trolley steady for safe loading. Models with additional top support bars are available for storing taller units such as door panels.



## Tooth Trolley

Metalcraft offer an alternative to harp trolleys, using a vertical storage approach to secure flat panels safely and efficiently. The DGU Tooth Trolley is the most common tooth trolley, designed for storing double glaze units like a toaster. Access to individual units is quicker, safer, and with less chance for damage to the glass. DGU's of various thicknesses and sizes are secured by the teeth allowing easy movement around a factory. The footprint is minimized by efficient space storage.



## Z Harp Trolleys

These compliment the standard 50 slot single glaze harp trolley, and are suited to taller glass items. The plastic coated 8mm steel bars of the harp and top " supports retain the glass items and reduce marking. The glass items sit in slots in the plastic base. The end frames of the trolley have Metalcraft non-marking inserted polymer to protect the ends sheets and minimize overall trolley width. The handles simplify movement of the trolley, and the rear lock down feet hold the trolley in position for safe loading.

# TOOTH SYSTEMS

## Mobile Handling & Transport

The Metalcraft Tooth Trolley System is a unique solution for the safe movement and transport of flat glass within factories and onto vehicles. Its sloped tooth profile locks panels securely, preventing shifting while allowing quick loading and unloading.

### Design & Components

- Hot-dip galvanised mild-steel frames for strength and longevity.
- Castor system: two swivel and two fixed high-quality 150 mm designed castors for easy maneuverability.
- Polymer-coated teeth secure glass without abrasive contact, reducing scratches and marks.

### Design Options

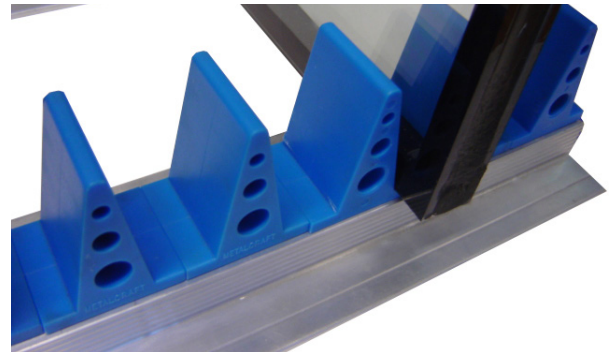
- Adjustable spacing (18–35 mm) to secure thin panes and wider flat panels.
- Retrofit capability – existing trolley frames can be upgraded with the Tooth System, extending service life.

### Unique Advantages

- Supports awkward profiles: aluminium and PVC extrusions, even with uneven undersides, sit securely due to the angled tooth sides.
- Glass edge protection: panels are held firmly without abrasive surface contact.
- Durable and versatile: proven in continuous heavy-duty use for glass transport.

### Benefits Include

- Safe, efficient factory-floor handling and truck loading.
- Cost-effective alternative to harp trolleys (typically around two-thirds the cost).





## Fixed Static, High-Density IGU & Glass Storage

The Metalcraft Fixed Tooth Storage System provides static, space-efficient storage for insulated glass units (IGUs) and flat glass products. Rows of non-marking ABS polymer teeth slot into steel or aluminium channels, holding panels upright in a secure “toaster-style” layout that prevents contact and damage.

### Key Components

- ABS teeth (non-marking): withstand continuous loading/unloading while supporting both thin and thick IGUs.
- Grooved channels: steel or aluminium sections compatible with our wider handling equipment.
- Hardwood ply front plate: allows larger units to roll forward for safe lifting and unloading.
- Protective finishes: aluminium extrusions supplied with plastic end caps.
- Optional extras: pre-drilled fixings, numbered ID strips, and end safety bars.

### Benefits

- High density: stores IGUs with 20% more space-efficient than harp systems, 75% more than foam-separator systems.
- Quick, safe access: individual panes can be removed without disturbing others.
- Mixed job lots: handles glass of varying thicknesses in one system.
- Damage reduction: no abrasive surfaces or pane-to-pane contact.

### Unique Advantages

Retrofit capability: existing fixed storage or trolley systems can be upgraded with the Tooth System, delivering modern handling benefits without replacing the whole investment.





# GLASS CUTTING TABLES

Metalcraft Glass Racking supplies a full range of glass cutting and processing tables, designed to meet the needs of glass companies of all sizes — from small workshops processing half-sheets, through to high-volume operations handling full stock sheets daily.

## Manual Glass Cutting Tables

Manual glass cutting tables are ideal for smaller companies who process half-sheets or use the table intermittently and cannot justify the investment in an air table.

### Standard Features:

- Sturdy steel sub-structure
- High-quality fire-retardant felt covering
- Timber edging to allow glass to be removed without damage
- Heavy-duty designed castors, 150 mm / 460 kg rated, for mobility

### Configuration Options:

- Manual tilting
- Manually operated breaking bars (X, Y, or both)
- Height adjustment to align with variable free fall heights



## Air Float Glass Cutting & Transfer Tables

Air float cutting tables are suited to companies that use cutting systems frequently and require the ease and safety of floating glass for positioning during processing.

- Built to customer specification
- Strength to withstand frequent free falling of heavy glass
- High-quality construction with proven durability

### Standard Features Include:

- Sturdy steel sub-structure
- High-quality fire-retardant felt covering
- Timber edging to allow glass to be moved without damage
- Heavy-duty castors, 150 mm / 460 kg rated, for mobility
- Integrated air system configured to float glass up to 19 mm thick



### Configuration Options:

- Automatic tilting (controls can be mounted or remote)
- Automatic load transfer arms for loading and unloading
- Automatically operated breaking bars (X, Y, or both)
- Height adjustment to align with variable freefall heights
- Remote-controlled operation

### Benefits:

- Tables tailored to customer requirements
- High-quality components ensure reliability and long service life
- Strength to handle frequent freefalling of heavy glass sheets





# GLASS LIFTING EQUIPMENT

Metalcraft Glass Racking provides a comprehensive range of factory lifting solutions, including Light Rail Overhead Crane Systems, Gantry Cranes, Jib Cranes, Crane Forks, and Packlifters. All systems are designed to reduce manual handling, improve safety, and optimise productivity in glass factories.

## Packlifters



Packlifters are engineered to secure, lift, and transport entire packs of glass safely within a factory.

### Applications:

- Lifting packs out of containers
- Moving packs around the factory
- Transferring glass into and out of storage

### Features:

- Glass secured against an engineer-certified steel frame with top hook for crane attachment
- Packlifters sized for specific stock sheet sizes (multiple packlifters may be required for varied sheet ranges)
- Glass rests on plastic-coated feet and is retained by plastic-coated arms
- Top eye for crane attachment; handles at each end for manual positioning
- Engineer-certified for specific lifting weights

### Specifications:

- Bearing surfaces clad with non-marking polymer bearers or plastic coatings to protect glass
- All designs and manufacture engineer-certified with painted finish

## Export Packlifters



Export Packlifters extend the functionality of standard packlifters, with added safety and portability features.

### Applications:

- Safe lifting for export and long-distance shipping
- Handling packs in factories, from containers to storage areas
- Designed to be broken down for shipping

### Features:

- Additional retention arms and adjustments for increased safety
- Sized to secure and lift stock sheet sizes (multiple packlifters may be required for different ranges)
- Glass rests on plastic-coated feet and is retained with plastic-coated arms
- Crane eye at top; handles at each end for movement and engineer-certified for specified glass weights

### Specifications:

- Bearing surfaces clad with non-marking polymer bearers or plastic for glass protection
- All designs and manufacture engineer-certified with painted finish



## Light Rail Overhead Crane



Our Light Rail Overhead Crane System is a freestanding structure designed for lifts up to 500kg, ideal for loading and unloading glass within a factory or dispatch area. The system combines German-designed Helm Technology tracks and running gear with a locally engineered and fabricated supporting structure, creating a cost-effective, tailored solution.

### Benefits Include:

- Reduces manual lifting of large items and the hook allows a variety of securing options
- Operates underneath larger factory cranes, simple, easy-to-use system
- Freestanding design avoids building connections, lowering engineering costs and allowing relocation if required
- Cost-effective installation and individually designed to fit workflow and space

### Specifications:

- Width determined by required weight, typically up to 5 m. Length designed to suit customer requirements
- Bridge runs the length of the crane; trolley traverses the bridge and connects to customer-supplied lifting gear
- Multiple bridges can be incorporated into one system
- Supports can be freestanding or engineered to connect to building structure, Painted finish
- All light crane systems are designed using **3D CAD** software to ensure precision and efficiency.

### Specifications:

- Bearing surfaces clad with non-marking polymer bearers or plastic for glass protection
- All designs and manufacture engineer-certified with painted finish

## Jib Cranes (Swing Cranes)



Jib cranes, also known as swing cranes, provide a cost-effective lifting solution for heavy glass items. They are commonly used beneath gantry cranes and are ideal for lifting items onto and off machinery or vehicles.

### Features:

- Custom-designed for the customer's operating area and requirements
- Quality German tracks and running gear to minimise strain on operators
- Locally engineered posts, supports, and installation for robust performance
- The bridge runs the crane's length; trolley traverses the bridge and connects to lifting gear
- Swing angle (degrees of rotation) specified at design stage
- Supports can be freestanding or connected to building structure with Painted finish

### Benefits Include:

- Reduces lifting strain, operator injury, and fatigue
- Tailored design ensures safe and efficient lifting in specific work zones

### Specifications:

- Bearing surfaces clad with non-marking polymer bearers or plastic for glass protection
- All designs and manufacture engineer-certified with painted finish

# GLASS STORAGE

Metalcraft provides a range of storage systems that help factories conserve valuable floor space while allowing quick, safe, and efficient access to flat glass products. Traditional A-frame systems remain a low-cost option, but they are inefficient in terms of space utilisation. As product ranges expand and factory space becomes more valuable, our advanced storage solutions deliver proven cost and space savings.

## Concertina Racks

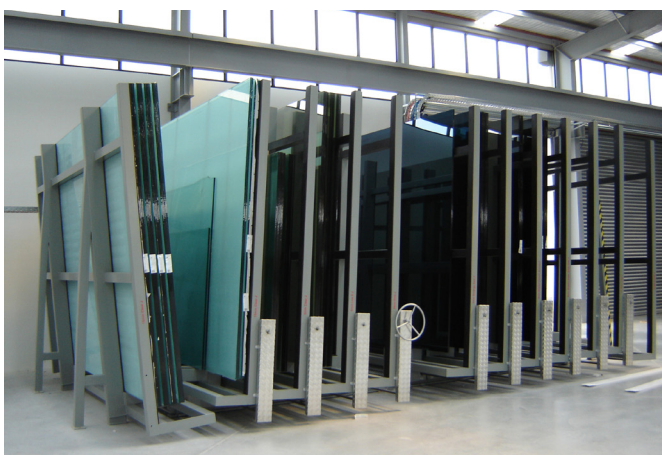
Concertina racks provide bulk storage on leaning bays mounted to a fixed steel structure. Users simply wind the bays to open spaces for access to the required product. Because all bays lean the same way (unlike A-frames), the floor space required is reduced by over 50%.

### Advantages:

- Over 50% floor space savings compared with traditional A-frames
- Faster product selection and reduced damage
- Suited for glass sheet sizes ranging from 2130 × 1830 mm up to 5100 × 3200 mm jumbo sheets
- Easier, safer handling of bulk packs

### Examples:

- 2130 × 1830 mm Concertina Glass Storage System – 10 Bay system with 200 mm load foot
- 3660 × 2440 mm Bulk Glass Storage System – 25 Bay system with 350 mm load foot
- 5100 × 3200 mm Jumbo Glass Storage System – 12 Bay system with 350 mm load foot



## Swing Racks

Swing racks use pivoting leaves to hold flat glass panels, operating on the same principle as concertina racks. The leaves are swung open manually to access specific products. As with concertina systems, all glass leans in the same direction, halving the floor space required compared with A-frames.

### Advantages:

- Up to 50% floor space savings compared with A-frames
- Simple manual operation
- Faster, safer access to individual packs





# RETENTION & PROTECTION

## LOAD RETENTION

Metalcraft designs and manufactures a complete range of retention poles and components to secure flat panel products during storage and transport. These systems are fitted to the external and internal rails and racks of vans, utes, trucks, and trailers, ensuring loads remain safe, stable, and damage-free.

### External Sprung Window Retaining Pole

- Constructed from T6 aluminium extrusion with a concave box section for improved strength and easier grip, even in wet conditions
- Spring-loaded locating pin at the top prevents the pole from bouncing out in transit and reduces rattling, with minimal moving parts to save time and avoid user error
- Locating tongue at the base slots into multiple positions on the bottom pole retainer, allowing the pole to be positioned close to the load
- Sliding non-marking polymer retaining blocks transfer pressure evenly across the product, with unlimited positioning options to suit varied load configurations



#### Options include

- Height configurations, height extensions
- Optional scissor clamps

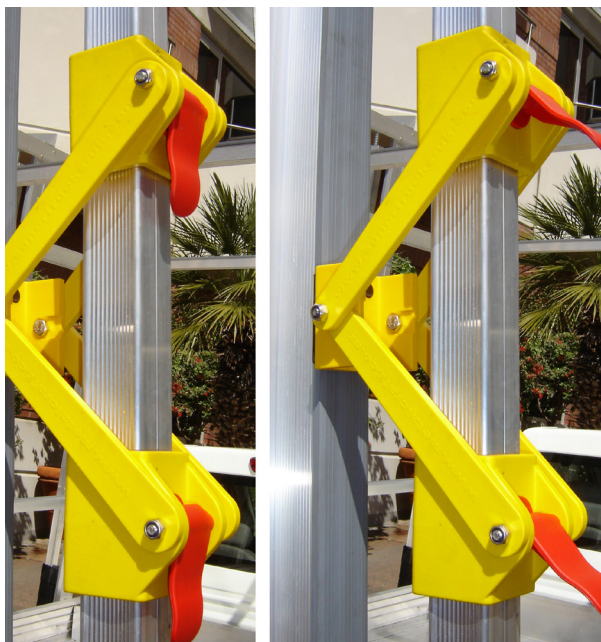
### Internal Strap Retaining Pole

- Shares the same design features and add-ons as the External Sprung Pole
- Secured at the top using a strap and cleat with locking system, rather than a spring pin
- Pole tongue locates into the base slot, while the top strap locks the pole securely to the rack frame
- Sliding polymer blocks then secure the flat panel load in position





## Optional Scissor Clamps



Our frail scissor clamps are built with one purpose in mind: making glass handling faster, safer, and more efficient. By allowing quick loading and unloading, they cut downtime and reduce labour costs, keeping your team productive and projects on schedule. Once secured, panels stay firmly in place, minimising the risk of movement or damage in transit.

Every detail has been considered with safety in mind. Smooth, unobstructive pole surfaces reduce handling hazards, while non-marking polymer components ensure that delicate glass and window finishes remain pristine. The system itself is straightforward to adopt — supported by clear training manuals that make teaching and learning simple.

Flexibility is at the heart of the design. Whether you're moving small panes or oversized flat panels, the clamps adapt easily to different sizes and load configurations, giving you confidence no matter the job. It's a solution engineered not only to protect your product, but to protect your people and your time.



## Retention Pole Systems



Our retention pole system benefits include:

- Work in conjunction with the non-marking polymer blocks for additional securing of tall or mixed-height loads
- Provide greater reach between the top of the pole and the top of the load
- Designed with minimal protrusion, so they do not affect vehicle width or create snag points
- Dual-arm sliding assembly locks with over-centre cams and red levers, which visibly indicate whether the clamp is secured — if unsecured, the red levers stand out clearly as a safety signal

## Spring or Strap Retention

Uses the same design as the Sprung and Strap Poles but replaces the sliding blocks with a continuous non-marking polymer insert

Provides full-surface contact along the length of the load, holding all parts of the flat panel securely

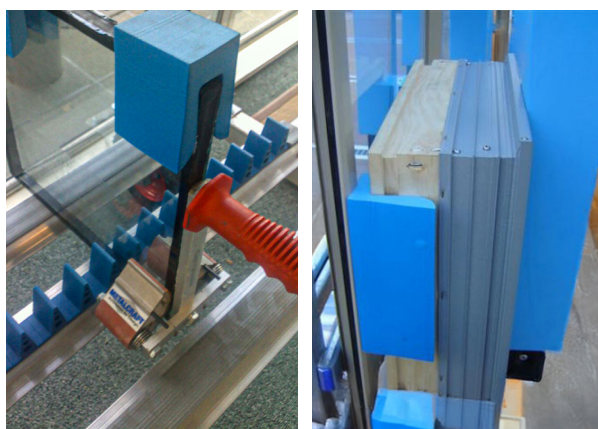
Designed to integrate with Metalcraft's wider transportation system, minimising transit damage while reducing loading and unloading times



# PROFOAM PROTECTION

Metalcraft ProFoams are purpose-designed separators that clip onto window and door reveals, providing a soft, non-marking buffer during storage and transportation. Made from durable closed-cell copolymer, their natural “springiness” ensures that once poled or strapped into place, ProFoams hold windows and doors snugly, minimising movement and reducing damage.

## The ProFoam Advantage



ProFoams were developed to solve the common problems fabricators experienced with traditional carpet spacers, which often slipped or failed in transit. Their shaped profile clips firmly over window and door reveals, staying securely in place under pressure. This design eliminates product movement, reduces “settling” during transport, and ensures consistent separation between units.

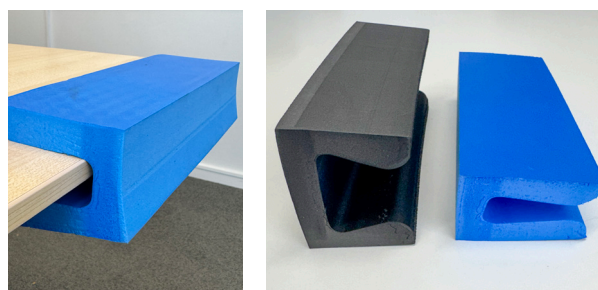
The 20 mm thick bearing surface compresses when strapped or poled into place, holding frames tightly without causing damage.

The flexibility and resilience of the copolymer material means ProFoams return to their original shape even after long periods of compression. Breakages are minimal, giving the product a long service life and making it a reliable, cost-effective choice. In addition to protecting windows and doors, many customers also use ProFoams for IGU/DGU edge protection, and longer lengths can be manufactured on request.

## Reveal Corner Face ProFoams

For aluminium surfaces meeting wooden frames, the Reveal Corner Face Foams provide tailored protection. At 100 × 100 mm wide and 60 mm high, they clip securely onto reveals at corners, shielding finishes from damage where different materials meet.

## Standard & XL ProFoams

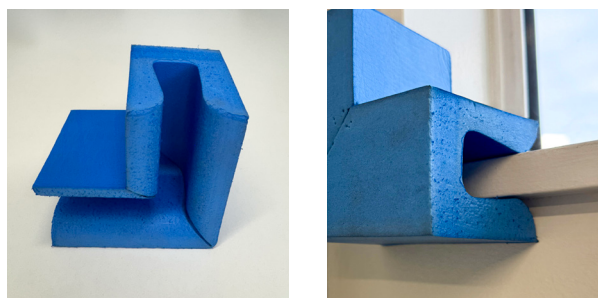
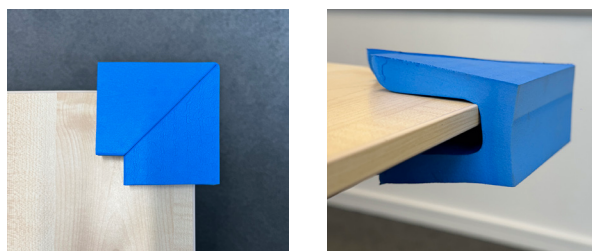


Our **Standard Profoams** (200 × 80 × 50 mm) slot into 19, 25, and 30 mm reveals, or clip easily over aluminium, PVC, and timber extrusions. Supplied in 200 mm lengths, boxed in sets of 100, they’re a flexible solution for everyday glazing.

For larger openings, the **XL Profoams** (76 × 76 mm) are designed for doors, sliders, and commercial suites — giving the same ease of use, with extra scale for heavy-duty jobs. Slot fits 38–50 mm material.

## Corners Reveals ProFoams

For extra protection at junctions, Corner Reveals clip neatly onto reveals at corners. Measuring 100 mm long on each side and 76 × 51 mm in profile, they keep vulnerable edges safe from damage.



facebook.com/glassracking



instagram.com/glassracking



# METALCRAFT GLASS RACKING

Talk to us today about a tailored transport solution. Proudly New Zealand made and trusted worldwide in glass handling.

500 A Wairakei Road, Harewood, Christchurch



info@metalcraft.co.nz



+64 3 360 3373



metalcraftglassracking.co.nz

