

# WINSHIELD | Shielded Windows W Shielding



## Edge Bonded Windows | WG Shielding:

Edge bonded windows use the same substrates and mesh as the fully laminated windows but are laminated around their edges, outside the 'viewing area', only and are lower cost. They are not as suitable for stepped construction but if the windows are relatively small or when the viewing area remains smaller than the smallest of the two pieces (i.e. bezel mounted where the edge remains covered albeit stepped) it is not a major problem. Standard edge bonded windows are a cost-effective solution for most commercial applications.

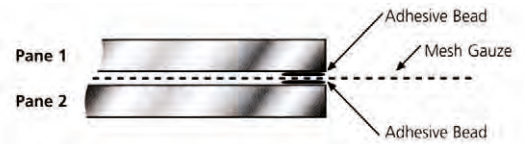
## Cast Plastic Windows | WC Shielding:

Cast windows are formed by encapsulating the mesh within a thermosetting plastic or resin substrate. The process has advantages inherent to the manufacturing technique, such as surface finishes, tints, minimum thickness and physical strength. The process necessitates a silver busbar termination although a stepped construction is possible during the machining of the cast blank. Cast windows cost more than edge laminated ones but are more robust for specialist applications.

## Gasket Options:

1. Flying mesh windows generally bond both the window and the flying mesh to a convenient point on the equipment. However, the window and/or the mesh can be fitted with most gasket types. The mesh can be wrapped around a sponge material and clipped into position.
2. Silver busbar windows can be supplied with gaskets made from oriented wires in silicone, knitted mesh or conductively loaded silicone.
3. Extended mesh options (with or without foil busbar) are readily fitted with various forms of gaskets such as knitted mesh, conductive fabric or oriented wires in silicone.

Please contact us to discuss your gasket or frame requirements.



BASIC CONSTRUCTION: EDGE BONDED - Square Edge

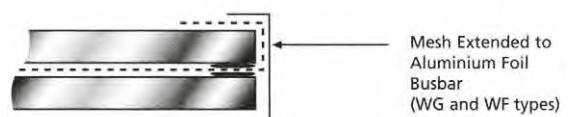
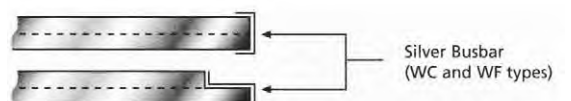
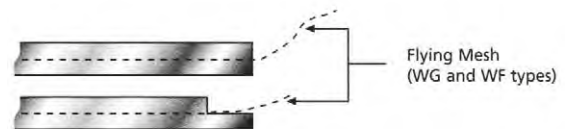


BASIC CONSTRUCTION: EDGE BONDED - Stepped Edge



BASIC CONSTRUCTION: CAST WINDOWS - Integral Mesh

## TERMINATION METHODS



P & P Technology Ltd  
Unit 5 Cherry Tree  
Wethersfield Road  
Halstead, Essex CO9 3LZ

T: +44 (0) 1376 550 525  
W: www.p-p-t.co.uk  
E: info@p-p-t.co.uk

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## Specifications and material types available

### Glazing media:

Glass, including clear, diffused and toughened.

Polycarbonate, including clear, hard-faced, anti-reflective, tinted, polarised and filtered.

Polycarbonate can also be conductively coated with ITO (Indium Tin Oxide) but this is a restricted option as a minor scratch on ITO can dramatically reduce its shielding effectiveness.

### Mesh Media:

Woven copper (which can be anti-reflective treated) or stainless steel mesh. Typically 100 OPI.

Other wire types including knitted meshes, finishes and OPI configurations are available to order - minimum quantities apply, please contact us for more information.

### Tolerances:

Glass thickness	± 0.5 mm
Overall dimensions	± 1.0 mm to 300mm, ± 1.5 mm to 600 mm
Plastics thickness	± 0.5 mm per piece
Overall dimensions	± 0.5 mm to 300 mm, ± 1.0 mm to 600 mm

### Performance:

Shielding effectiveness in dB, typical values tested in accordance with MIL-STD-285 with test samples of woven copper mesh 300 x 300 mm

It is important to note that a smaller test sample would return a far higher attenuation and all manufacturers data should be compared on this basis to avoid misinterpretation.

FREQUENCY	FIELD	100 OPI	50 OPI
10 KHz	H	20	15
100 KHz	H	40	35
1 MHz	H	50	45
1 MHz	E	>100	>100
10 MHz	E	>100	>100
100 MHz	E	80	75
1 GHz	P	60	55
10 GHz	P	30	20

### How to order:

Generally by description and customers drawings indicating dimensions, finishes, fixings, gasket type and method plus the generic window group e.g. WC Shielding. Please contact us to discuss your individual requirements.

### Window Meshes | WM Shielding:

We also supply Woven Copper and Stainless Steel meshes for customers to make their own screens. Untreated (non-blackened) mesh material is available pre-cut although it is advisable to order this by the linear metre to avoid handling and fraying problems. Blackened copper mesh can be pre-cut and packed in bulk or single sheets for ease of handling.

### Material types available:

Copper and Stainless Steel.

### Material width:

Normally 1200 mm which we will confirm at time of order.

### Openings per inch (OPI):

Standard = 100  
Special = 50, 70 and 145 (minimum quantities apply)

### Wire diameters:

.002" and .001" (.051 and .025 mm)

### How to order:

Generally by description, stating wire type, finish, size and tolerances if cut pieces.



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