

TECHNICAL INFORMATION

Explore the comprehensive capabilities of Pearsons Glass in processing a wide array of mirror and glass products



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CUTTING

Minimum and maximum size limitations for varying thicknesses are displayed below:

Glass Thickness	Туре	Min (W)	Min (H)	Diagonal	Max (W)	Max (H)
4mm	Float/Mirror	50mm	50mm	250mm	1500mm	2500mm
5mm	Float	50mm	50mm	250mm	1800mm	2800mm
6mm	Float/Mirror	50mm	50mm	250mm	2000mm	3170mm
8mm	Float	50mm	50mm	250mm	1500mm	3150mm
10mm	Float	50mm	50mm	250mm	1500mm	3130mm
l2mm	Float	60mm	60mm	250mm	1500mm	3090mm
15mm	Float	80mm	80mm	250mm	1500mm	3050mm

Tolerance

When supplying clean-cut products, the below tolerances apply:

	M in Length	
Up to	3	+2mm/-1mm
Over	3	+3mm/-1mm

	 	 		-	-	_
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When supplying clean-cut products, the below squareness tolerances apply:

Height	+/- 3mm
Width	+/- 2mm
Maximum difference	+/- 5mm

Clean Cut Products

Any products supplied clean-cut are to be handled with the upmost care. Pearsons Glass holds no liability for injury caused in the handling of clean-cut glass by our customers or any third-party.

Edgework of clean-cut products can contain shelling and imperfection that are deemed acceptable.





Double Sockets

- A Larger than 4 X thickness of glass
- B Larger than 50mm
- C Larger than 4 X thickness of glass 9mm* RADS standard

Large Cut-Outs

- W Cut-out width no bigger than 50% glass width
- H Cut-out hight no bigger than 50% glass height 9mm* Standard RADS

Large Diameter Cut-Out

D Diameter no bigger than 50% glass width D Diameter no bigger than 50% glass height D1 Larger than 50mm

Disclaimer: Please see page 7 for internal radius options*

MATERIAL THICKNESS

Overall material thickness can vary across every product supplied. Below details the tolerances across varying thickness:

Table 1 - Tolerance on nominal thickness

Nominal Glass thickness	Tolerances
4mm	<u>+</u> 0,2mm
5mm	<u>+</u> 0,2mm
6mm	<u>+</u> 0,2mm
8mm	<u>+ 0</u> ,3mm
10mm	<u>+</u> 0,3mm
12mm	<u>+</u> 0,3mm
15mm	<u>+</u> 0,5mm

STRAIGHT LINE EDGE POLISHING & FLAT GROUND

The below table outlines the minimum and maximum sizes we can polish:

Glass Thickness	Туре	Min (W)	Min (H)	Max (W)	Max (H)
4mm	Float/Mirror	50mm	50mm	1500mm	2500mm
5mm	Float	50mm 50mm		1500mm	2800mm
6mm	Float/Mirror	50mm	50mm	1500mm	3170mm
8mm	Float	50mm	50mm	1500mm	3150mm
10mm	Float	50mm	50mm	1500mm	3130mm
12mm	Float	60mm	60mm	1500mm	3090mm
15mm	Float	80mm	80mm	1300mm	3050mm

Tolerance

The below table outlines tolerances for SLE products:

Squareness

The below table outlines tolerances for squareness of products supplied with an SLE polish:

	Length m			Length m	
Up to	3	+1mm/-1mm	Up to	3	+1mm/-1mm
Over	3	+1mm/-1mm	Over	3	+1mm/-2mm

SHAPE POLISHING

Shape Polishing can be undertaken via either our CNC machines or a hand-processing machine.

Hand-Processing

The below table outlines the minimum and maximum sizes of shapes we can polish:

	Min (W)		Min (H)	Max (W)		Max (H)
Shape Top	150mm	x	350mm	1500mm*	X	1850mm*
Diameter	170mm	x	170mm	1850mm*	X	1850mm*

Internal Radius

Internal radius must be no smaller than 60mm due to the wheel sizes – Please see CNC for details on smaller internal radius.

Tolerance

Tolerances of +/-1mm apply to all products that are hand-polished.

Disclaimer

For larger sizes, please see CNC section*



Horizontal CNC

The below table outlines the minimum and maximum size capabilities on our Horizontal CNC:

Glass Thickness	Туре	Min (W)	Min (H)	Max (W)	Max (H)
4mm	Float	238mm	244mm	1500mm	3000mm
5mm	Float	238mm	244mm	1500mm	3000mm
6mm	Float	238mm	244mm	1500mm	3000mm
8mm	Float	238mm	244mm	1500mm	3000mm
10mm	Float	238mm	244mm	1500mm	3000mm
l2mm	Float	238mm	244mm	1500mm	3000mm
15mm	Float	238mm	244mm	1500mm	3000mm
4mm	Mirror	238mm	244mm	1500mm	3000mm
6mm	Mirror	238mm	244mm	1500mm	3000mm



Horizontal CNC

Internal cut-out radius

Below is the minimum radius offered in varying thicknesses of toughened glass:

Glass Thickness	Туре	7mm	8mm	9mm	10mm	llmm	12mm	13mm	14mm	15mm
4mm	Toughened	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5mm	Toughened	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6mm	Toughened	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8mm	Toughened	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10mm	Toughened	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
12mm	Toughened	No	No	No	No	No	Yes	Yes	Yes	Yes
15mm	Toughened	No	No	No	No	No	No	No	No	Yes

Squareness

The below table outlines tolerances for squareness of products supplied via either Horizontal or Vertical CNC:

	m2	
Up to	3	+1mm/-1mm
Over	3	+1mm/-1mm



Vertical CNC

The below table outlines the minimum and maximum size capabilities on our Vertical CNC:

Glass Thickness	Туре	Min (W)	Min (H)	Max (W)	Max (H)
4mm	Float	350mm	650mm	1500mm	3000mm
5mm	Float	350mm	650mm 1500mm		3000mm
6mm	Float	350mm	650mm	650mm 1500mm	
8mm	Float	350mm	50mm 650mm 1500mm		3000mm
10mm	Float	350mm	650mm 1500mm		3000mm
l2mm	Float	350mm	650mm	1500mm	3000mm
15mm	Float	350mm	650mm 1500mm		3000mm
4mm	Mirror	350mm	650mm	650mm 1500mm	
6mm	Mirror	350mm	650mm	1500mm	3000mm



Vertical CNC

Internal cut-out radius

The below table outlines the minimum radius offered in varying thicknesses of toughened glass:

Glass Thickness	Туре	7mm	8mm	9mm	10mm	llmm	12mm	13mm	14mm	15mm
4mm	Toughened	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5mm	Toughened	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6mm	Toughened	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8mm	Toughened	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10mm	Toughened	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
12mm	Toughened	No	No	No	No	No	Yes	Yes	Yes	Yes
15mm	Toughened	No	No	No	No	No	No	No	No	Yes

Squareness

The below table outlines tolerances for squareness of products supplied via either Horizontal or Vertical CNC:

	m2	
Up to	3	+1mm/-1mm
Over	3	+1mm/-1mm

DRILLHOLE TOLERANCES (PNEUMATIC DRILL)

Hole Spacing

The below graphic outlines the required distance of a hole from the edge and corner of a panel:



IF HOLES ENCROACH INTO THE EDGE OR CORNER ZONE, CHECK WITH MANAGEMENT OR OFFICE BEFORE TOUGHENING

Diameter and positioning tolerances

The below table outlines the tolerance for both diameter size and positioning of holes:

Hole size mm	mm
6-20mm	+/-1.0mm
21-50mm	+/-2.0mm

Restrictions on countersink holes

in this area

When countersinking, the maximum you can countersink into the glass is 50% of the glass thickness.

1.5 t

DRILLHOLE TOLERANCES (PNEUMATIC DRILL)

Hole Size

The below table outlines the hole sizes within varying thickness of annealed glass:

Glass Thickness	Туре	6mm	7mm	8mm	9mm	10mm	11mm	12mm	13mm	14mm	15-34mm	35mm+
4mm	Annealed/ mirror	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	CNC
5mm	Annealed	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	CNC
6mm	Annealed/ Mirror	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	CNC
8mm	Annealed	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	CNC
10mm	Annealed	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	CNC
12mm	Annealed	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	CNC
15mm	Annealed	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	CNC

DRILLHOLE TOLERANCES (PNEUMATIC DRILL)

Hole Size

The below table outlines the hole sizes within varying thickness of toughened glass:

Glass Thickness	Туре	6mm	7mm	8mm	9mm	10mm	11mm	12mm	13mm	14mm	15-34mm	35mm+
4mm	Toughened	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	CNC
5mm	Toughened	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	CNC
6mm	Toughened	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	CNC
8mm	Toughened	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	CNC
10mm	Toughened	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	CNC
12mm	Toughened	No	No	No	No	No	No	Yes	Yes	Yes	Yes	CNC
15mm	Toughened	No	No	No	No	No	No	No	No	No	Yes	CNC

TOUGHENING

The below table outlines the minimum and maximum panel sizes we can toughen:

Glass Thickness	Туре	Min (W)	Min (H)	Diagonal	Max (W)	Max (H)
4mm	Toughened	200mm	200mm	250mm	1500mm	2500mm
5mm	Toughened	200mm	200mm	250mm	1500mm	2800mm
6mm	Toughened	200mm	200mm	250mm	1500mm	3050mm
8mm	Toughened	200mm	200mm	250mm	1500mm	3050mm
10mm	Toughened	200mm	200mm	250mm	1500mm	3050mm
12mm	Toughened	200mm	200mm	250mm	1500mm	3050mm
15mm	Toughened	200mm	200mm	250mm	1300mm	3050mm

Bowing

The below table outlines the bowing tolerances for toughened glass:

		Maximum values			
Toughening process	Glass type	Overall bow mm/mm	Local bow mm/300mm		
Horizontal	Float to EN 572-2	0.003	0.5		
	Others	0.004	0.5		
Vertical	All	0.005			

TOUGHENING

Stamp Guidelines

Face Stamp

Pearsons Glass company profile for stamping is outlined on the image to the right:





Edge Stamp

Upon request, Pearsons Glass can also offer a discreet line stamp, that will be placed on the edge thickness, as outlined on the image to the right:

BEVELLING

The below table outlines the minimum and maximum panel sizes we can produce with a bevel:

Glass Thickness	Туре	Min (W)	Min (H)	Max (W)	Max (H)
4mm	Float/Mirror	80mm	80mm	1500mm	2500mm
5mm	Float	80mm	80mm	1500mm	2800mm
6mm	Float/Mirror	80mm	80mm	1500mm	3000mm
8mm	Float	80mm	80mm	1500mm	3000mm
10mm	Float	80mm	80mm	1500mm	3000mm
12mm	Float	80mm	80mm	1500mm	3000mm
15mm	Float	80mm	80mm	1300mm	3000mm

Bevel Sizes

The below table outlines the minimum and maximum bevel we can produce on varying thickness, for both Straight-Line bevels and shaped bevels:

	Straight-Line Bevel		Shape	e Bevel	
Glass Thickness	Minimum	Minimum Maximum		Maximum	
4mm	6mm	25mm	N/A	N/A	
5mm	6mm	38mm	6mm	38mm	
6mm	6mm	38mm	6mm	38mm	
8mm	6mm	38mm	6mm	38mm	
10mm	6mm	38mm	6mm	38mm	
12mm	6mm	38mm	6mm	38mm	
15mm	6mm	38mm	6mm	38mm	

Disclaimer : Max weight for individual panels is 90kg*



Bevel Profile

The below diagram and table shows our bevelling profiles:

Bevel	5 RAD	10 RAD	15 RAD	20 RAD	25 RAD
6mm-38mm Bevel	SQ	SQ	SQ	SQ	SQ

26 RAD	27 RAD	28 RAD	29 RAD	30 RAD	35 RAD	40 RAD
6mm	7mm	8mm	9mm	10mm	15mm	20mm



UV BONDING

The below table outlines the minimum and maximum sizes of a bonded unit Pearsons Glass can manufacture:

	Minimum		Maximum	
UV Bonding	250mm	250mm	1510mm	2500mm

*Any case longer than 1600mm is recommended to include a divider – Units can be supplied without but Pearsons Glass will accept no liability in doing so.

Jigs

Pearsons Glass will provide any unit up to 1200x500x500mm without a jig – Anything above this size requires the customer to supply a jig. If the customer is unable to supply a jig, Pearsons Glass will manufacture a jig that is chargeable to the customer.

Packaging

Jig used - Your unit will be shrink-wrapped securely to the jig and transported for delivery.

No Jig - Foam edge protection is applied to all exposed edges, with shrink wrap used to secure for delivery.

Order Processing

Pearsons Glass will follow the sizes provided in your order, rather than the dimensions of any jig provided, unless otherwise requested by the customer upon order receipt. If you prefer us to work to jig sizes, kindly respond to confirm. It's important to be aware that adhering to jig sizes may extend lead times, and production will commence only within 48 hours of receiving your jig.

TOUGHENED LAMINATED

Please see table below which outlines the minimum and maximum panel size we can produce for toughened laminated glass:

	Minimum			Maximum		
Lamination	200mm	x	200mm	1500mm	х	2550mm

Squareness/Alignment

Pearsons Glass allow a tolerance of +/- 1mm per panel squareness/alignment with all laminated glass.

Edge Profile

All laminated glass will show a V groove centre between two pieces of glass, example given below using two 8mm thick pieces of glass with a 0.8mm interlayer:



Pearsons Glass will clean all flat edges and the internal V groove free of laminating residue and debris.

Quality Guidelines

Glass laminating is conducted within a controlled environment, to minimise the risk of debris. However, minor imperfections will be deemed acceptable, if not visible within quality checking guidelines found <u>here</u>.

OUALITY CHECKING

Quality Checking

All products must be inspected from a distance of 1.5m, with the product positioned vertically in natural lighting. Back lighting can't be used to identify blemishes or defects.

Pearsons Glass allows 72 hours from receipt of delivery to report any concerns. Reports should be submitted via email to <u>customerservice@pearsons-glass.co.uk</u>. And must include photographic evidence.

While every effort is made to promptly replace items, Pearsons Glass reserves the right to address minor blemishes through reworking rather than panel replacement.

For urgent orders, consider raising a chargeable replacement order. Upon the return of the originals and confirmation that reworking is not feasible, a credit note will be issued against your replacement order.

Tolerances

Pearsons Glass adheres to tolerances of +/-1mm for all processes and products, unless otherwise specified in this document.

Data Sheets

All product data sheets can be downloaded here.

Packaging

All products are supplied loose, using dividing pads, unless stated otherwise in this document or with order confirmation. Pearsons Glass can offer additional chargeable packaging – <u>Please contact a member of our team to discuss.</u>

TRANSPORTATION & COLLECTIONS

Delivery Schedule

Deliveries are scheduled from Monday to Friday, operating between 7 am and 6 pm, unless alternative arrangements have been agreed upon in advance. Our delivery route map can be found <u>here</u>.

General

All products are supplied loose, using dividing pads, unless stated otherwise in this document or with order confirmations. Pearsons Glass delivery drivers are not contracted to transport glass into your premises and will remain at the back of the vehicle.

Please ensure you have appropriate assistance available to unload and carry glass during deliveries. If suitable assistance is unavailable, the driver may cancel the delivery, and the products will be returned to our premises, with a second delivery incurring an additional cost.

Pearsons Glass strives to fulfil deliveries using our fleet of specially modified vehicles designed for glass transportation. In certain situations, trusted third-party carrier services may be employed to meet deadlines. In such cases, a member of our team will contact you to provide guidance.

Collections

With prior arrangement, orders can be collected at our premises, as indicated below:

GLASS PROCESSORS & TOUGHENERS MICOR MANUFACTURERS STAINED GLASS, TOOLS & MATERIALS

arsons

LIVERPOOL 0151 207 14

Collection times are Monday to Friday between 9:00am and 3:30pm.

All products collected are supplied loose, using dividing pads, unless stated otherwise in this document or with order confirmations.

Customers are responsible for ensuring that the collecting vehicle has adequate facilities to securely store and transport the products. If there are concerns about the safe storage and transportation of the products, Pearsons Glass can provide additional chargeable packaging to aid safe transportation of products.





POLISHED EDGES

PEARSONS GLASS EN 12150 10

BEVELLED EDGES