UAB „Aperte"

Original glass solutions

A standard production possibilities of Company are presented here. Any non-standard should be consulted with the manufacturer directly.

CUTTING			
Dimensions range		Thickness range	Notes
Minimal	Maximal		
	9000 x 3210	2 - 19	Dimensional tolerances: ±0,5 mm

WATER JET CUTTING GLASS			
Dimensions range		Thickness range	Notes
Minimal	Maximal		
	3210 x 2500	**3 - 19**	Cutting is done by a water jet mixed with abrasive material at high pressure. This method of glass cutting enables performance of more complex shapes than other type tooling we offer. Glass edges cutting of water jet are made in matt and does not require additional treatment.

PERIPHERAL GRINDING

Dimensions range		Thickness range	Edge type	Notes
Minimal	Maximal			
80 x 80	**6000 x 3000**	**3* - 19**	The line for edge grinding	C-bevel Trapezoid ** Blunted *** The matt or polished edges
	6000 x 2800	**3* - 19**	Double edge processing	C-bevel Trapezoid ** The matt or polished edges
	3600 x 2200	**3* - 19**	Four edge processing	C-bevel Trapezoid ** The matt or polished edges

c-bevel

trapezoid

cut corner

* Glass with a thickness of 3 mm we don't finish of trapezoidal profile.
**Finishing of trapezoidal profile is performed by peripheral grinding wheels with not adjustable width phase of 0.5 mm.
***Blunting is performed on customer request in order to prevent of accidental laceration during glass installation, as well as in the case of glass designed for tempering, if any treatment of edges foreseen.

CHAMFERING

Dimensions range			Thickness range	Edge type	Notes
Minimal	Maximal	Phase width			
100 x 100		3 – 20 mm 4 – 28 mm 5 – 30 mm 6 – 35 mm 8-19 – 40 mm	3 – 19	C-bevel* Trapezoid ** The matt or polished edges	Dimensions tolerances - ±0,5mm Phase width tolerances - ±0,5 mm

* Edge type for glass of thickness 3-6mm. Matt treatment.
** Edge type for glass above of the 6mm. This treatment is carried out as an additional operation on customer request.

DRILLING

Dimensions range			Thickness range	Notes
The minimal diameter of the holes	The maximal diameter of the holes	Glass min. max. size		
Ø 5*	Ø 70 - Ø 500**	180 x 50 6000 x 3200	3 – 19**	Hole diameter tolerance 0 / -0.2 mm Hole spacing tolerance - ± 0.5

Holes without chamfer Holes with chamfer

* The minimal hole diameter should not be less than the thickness of the drill glass.
** It Is possible to make holes with larger diameter and thicker glass using CNC machines.

CNC PROCESSING

Dimensions range		Thickness range
Minimal	Maximal	
200 x 100	6000 x 3210	3 - 19

Treatment	Notes
 Peripheral treatment.	The matt or polished edges.
 Writing on glass	The pen maximum width of 3 mm. Writing on glass is made only in the mat.
 Engraving	The maximum width of 7.7 mm engraving. Engraved pattern is performed both in glass matt and polished.
 Cutouts in the glass	Minimal inner radius for the ground edge - R8 Minimal inner radius for the edge polished - R25 The glass minimal width from the outer edge of the glass to the edge of the cut - 100 mm

SCREEN PRINTING DECORATIVE GLASS

Dimensions range		Thickness range	Notes
Minimal	Maximal		
270 x 50	**6600 x 2800**	3** – 19	Painting is made by lead-free, ceramic paints* and UV

* Glass decorated of ceramic paints has to be tempered.
** Glass of thickness 3mm painted of ceramic paints is subjected to only the paint curing process. Glass for the indicated thickness is not tempered glass.

DIGITAL PRINTING *

Dimensions range		Thickness range	Notes
Minimal	Maximal		
250 x 150 mm	**6000 x 3300**	4 – 19	Resolution up to 1410 x 1410dpi Printing is done **with ceramic paints** Type of material: • glass • metal • plexi • other
150 x 100 mm	**3000 x 1600**	2 – 19	Resolution up to 1440 x 1440dpi Printing is done **with water paints** Type of material: • glass • metal • plexi • other


We make a large format printing on a normal and tempered glass possible to applying also in the space between-the furniture in the kitchen, in the bathroom as a glass shower cubicles or as housing of wardrobes. **(Reikia dar6yti, kad tinka stiklo fasadams)**

PAINTING * (ENAMELLED GLASS)

Dimensions range		Thickness range	Notes
Minimal	Maximal		
270 x 50	**6000 x 2600**	**3** – 19**	Painting is made of lead-free, ceramic paints.

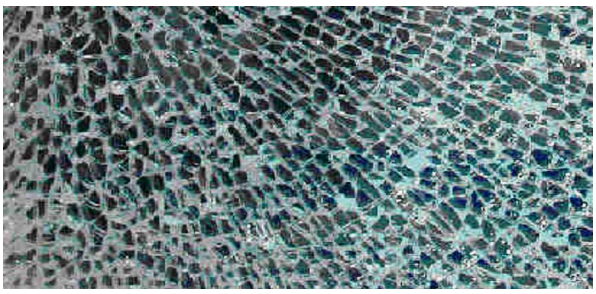
* Painting is carried out by applying a layer of paint on a shaft over the entire surface of the glass. Glass painted this method has to be tempered.
** 3mm glass is only subjected to the paint curing process. Glass for the indicated thickness is not tempered glass.

BONDING UV

Thickness range	Notes
6 – 15	UV method we make bonding of materials such as: • glass-glass, • glass-metal. The edges of the glass intended for bonding with each other by this method must be made in polished trapeze.

TEMPERING

Dimensions range		Thickness range	Notes
Minimal	Maximal		
The format with diagonal min. 300mm	**3000x1700**	3mm	Glass designed for tempering must be subjected to edge treatment. Blunting is a sufficient treatment. The tempered glass at APERTE meets the requirements of BS EN 12150 standard
270 x 50 Diagonal of form not less than 270 mm	**6000 x 2800**	4 – 19mm	



TEMPERED BEND GLASS I

Dimensions range		Thickness range	Notes
Minimal	Maximal		
350 x 100	**1000 x 2400**	4 - 12	Glass for bending has to be subjected to edge treatment.

Thickness of glass	Minimal bend radius	Tolerance of arc length
4	R 450	+0/-0,5 mm
5		
6		
8	R 650	+0/-1 mm
10		
12	R 800	+0/-2 mm

1. arc length **1000 mm** x height **2400 mm**

TEMPERED BEND GLASS II

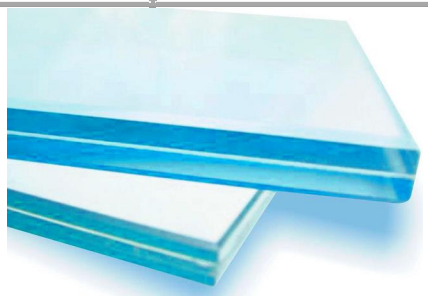
Dimensions range		Thickness range	Notes
Minimal	Maximal		
500 x 200	**2800 x 5800** **4300 x 2800**	**4 - 15**	Glass for bending has to be subjected to edge treatment.

Thickness of glass	Minimal bend radius	Tolerance of arc length
4 - 15	R 800	+0/- 3 mm

1. arc length **2800 mm** x height **5800 mm**
2. arc length **4300 mm** x height **2800 mm**

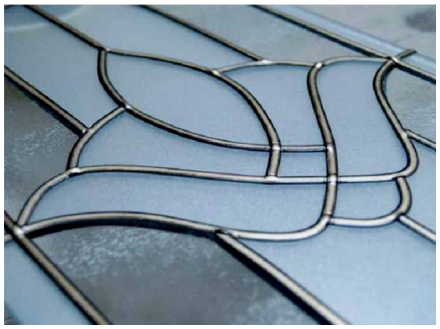
LAMINATION

Dimensions range		Max. weight kg	Notes
Minimal	Maximal		
100x100	**6000 x 2700**	**up to 500**	Glass intended for bending must be a subject of edge treatment. Sufficient treatment is blunting.



Glass lamination is putting together two or more sheets of float glass and intermediate layers of PVB or EVA film.
The film may be clear, milky or colored. Lamination ensures more safety when it comes to glass breakage glass pieces remain attached to the surface of the film. The most common use of laminated glass doors, shop windows, partitions, glass graphics, stairs, floors, railings and many more.

DECORATION GLASS USING STRIPS



Decoration glass using strips of lead is performed manually.
Available colors of tapes:

- natural,
- gold.

Fire-resistant glass

Glass type	Max. tested dimensions range	Notes
EI30	**4200 – 2200 mm**	**<u>*Fire-resistant Glass may be bended.</u>**
EI60		
EI90		
EI120		

Fire-resistant Insulated Glass Units

Glass type	Max. tested dimensions range	Notes
EW30	**4200 – 2200 mm**	*** IGUs may incorporated various types of coating e.g. LowE . They give additional functions in the form of thermal Insulation (factor U), solar protection (factor g), give a specific color of glass and reflective.** ***Fire-resistant Glass Units may be bended.**
EI30		
EI60		
EI90		
EI120		

Insulated Glass Units – technical capabilities

Maximal	Description	
3000 x 4710	with laminated glass (VSG)	DGU or TGU maximum thickness – 100 mm DGU or TGU maximum weight – 800 kg (210 kg/lm
2800 x 6000	with toughened glass (ESG)	
2800 x 4710	toughened coated glass (ESG) + laminated glass (VSG)	

We have the ability to produce and XXL insulated glass units with max dimensions 3210 x 9300 mm. For XXL insulated glass units, please contact separately.

Bended Insulated Glass Units

Maximal	**Description**	Minimal radius (R)
2000 x 4200	with toughened glass (ESG) end laminated glass (VSG)	R_{min} – 800 mm (6-8 mm glass)
4300 x 2800	with toughened glass (ESG) end laminated glass (VSG)	R_{min} – 1000 mm (10-12 mm glass) R_{min} – 2000 mm (15-19 mm glass)
2800 x 5800	with Touhened glass (ESG)	R_{min} – 1000 mm (6-8 mm glass) R_{min} – 1500 mm (10-12 mm glass)

Product range

PILKINGTON

SAINT-GOBAIN

GUARDIAN

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