



# LUMON<sup>®</sup> Glazing

Products for innovative architecture,  
better residential environment  
and improved living comfort.

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## **The Lumon Glazings**

Lumon Glazings are divided in two types. The Lumon Glazing Retractable and The Lumon Glazing Sliding

The Lumon Glazing Retractable has multiple features. It can be fitted with 3 types of telescopic profiles and has two kinds of lower profiles. The Glazing can be installed on top of a railing or as a room high glazing. The lower profile can be a low threshold or even embedded totally.

When the height of the building, the location or the glazing height set special requirements the components are replaced with stronger ones. With the Lumon Glazing Retractable, we can provide glazings for all balconies in the entire world. We also need glazing products with sliding glass panes, The Lumon Glazing Sliding has been developed for this purpose. The Lumon Glazing Sliding can be installed on top of a railing or as a room high glazing.

The Lumon Glazing Sliding is low bearing, as the Lumon Glazing Retractable is upper bearing and need stable upper constructions. With these products, we can cover both terraces and balconies.



The Lumon Glazing Systems consist of two horizontal aluminium profiles attached to the balcony ceiling and the floor, a parapet or a railing. Toughened glass panes are attached to the profiles through separate mechanisms allowing the panes to slide and to turn (Lumon Glazing Retractable), or just slide (Lumon Glazing Sliding).

The panes of the glazings are 6, 8, 10 or even 12mm toughened glass. The Table of Recommended Glass Pane Sizes shows the optimal glass thicknesses for each balcony. Toughened glass is not easily broken but in case it does break, it will crumble into small, blunt-edged fragments that do not pose a serious risk of injury. The glazing systems consist of glazings with upper and lower bearing. The plastic parts of the glazing are always dark grey.

### **Ventilation**

Ventilation on the balcony is provided through the 2-3 mm gaps between the panes. The first pane can be locked in the ventilating position where it remains ajar.

**IMPORTANT!** Ventilation is essential to prevent the condensation of moisture and to keep the balcony structures in good condition.

### **Sealing**

Lumon terrace glazing provides protection from wind and weather. However, due to necessary ventilation, the glazing is not fully airtight and, in certain conditions, rain or snow may enter the terrace.

### **Thermal insulation**

The Lumon glazing systems consist of uninsulated aluminium profiles and single glass panes. A glazed terrace is not a warm space, and its characteristics are not comparable to those of normal warm living spaces. Even after the terrace has been glazed, heat insulation of the building continues to be provided by the insulated wall, the windows facing the terrace and the terrace door.

### **Noise control**

Lumon glazings reduce traffic noise by 8-16 dB. The results vary due to the thickness of the panes and the environmental conditions. A decrease of 10 dB corresponds to half as much audible noise.

### **Cleaning**

Both the inner and outer surfaces of the panes can be washed with a mild detergent.

### **Manufacturing**

Lumon glazings are custom made for each terrace. All materials and components related to the basic product (upper and lower profiles and the equipped glazing panes) are supplied by the factory, whereas accessories are delivered with the order. Fasteners are not included in the order.

### **Official regulations**

Balcony glazing systems are subject to permission. The local official regulations relating to balcony glazing systems must be checked beforehand. Balcony glazing causes minimal changes to the visual appearance of the building as it is made of transparent, colourless glass and no vertical profiles are used.

**Feature Table:**

Features	Lumon Glazing Retractable	Lumon Glazing Retractable (strong)	Lumon Glazing Retractable Low threshold	Lumon Glazing Sliding
Bearing	Upper	Upper	Upper	Lower
Max height on top of balustrade	2500	2500	2500	2500
Max height from floor to ceiling	3000	3000	3000	3000
Pane width mm	280-1000	280-1000	280-1000	300-1200
Max weight/pane	50kg	75kg	50kg / *75kg	65kg
Max amount of panes	12+12 (and 2+2 fixed)	12+12 (and 2+2 fixed)	12+12 (and 2+2 fixed)	5+5 (and 5+5 fixed)
System angles	80-280°	80-280°	80-280°	80-280°
Start and end angles	40-140°	40-140°	40-140°	40-140°
Opening angle for opening glass	60-130°	80-105°	60-130° / *80-105°	-
Corner bypass (2+ panes on opening side)	90-270°	90-270°	NO	NO
Corner bypass to 1 pane side	YES	YES	NO	NO
Lock for latch	YES	YES	NO	NO
12mm glass	NO	YES	NO / *YES	NO
6mm glass	YES	NO	YES / *NO	YES
Middle handle	YES	YES	YES	NO
Middle latch	YES	YES	YES	NO
Latch	YES	YES	NO	NO
Pane knobs for high glazings	YES	YES	YES	NO
Hinge relocation	YES	YES	YES	NO
Sliding	YES	YES	YES	YES
Outwards opening	YES	YES	YES	NO
Vertical frames	NO	NO	NO	NO/YES
Embedding	NO	NO	YES	YES

## Lumon Glazing Retractable



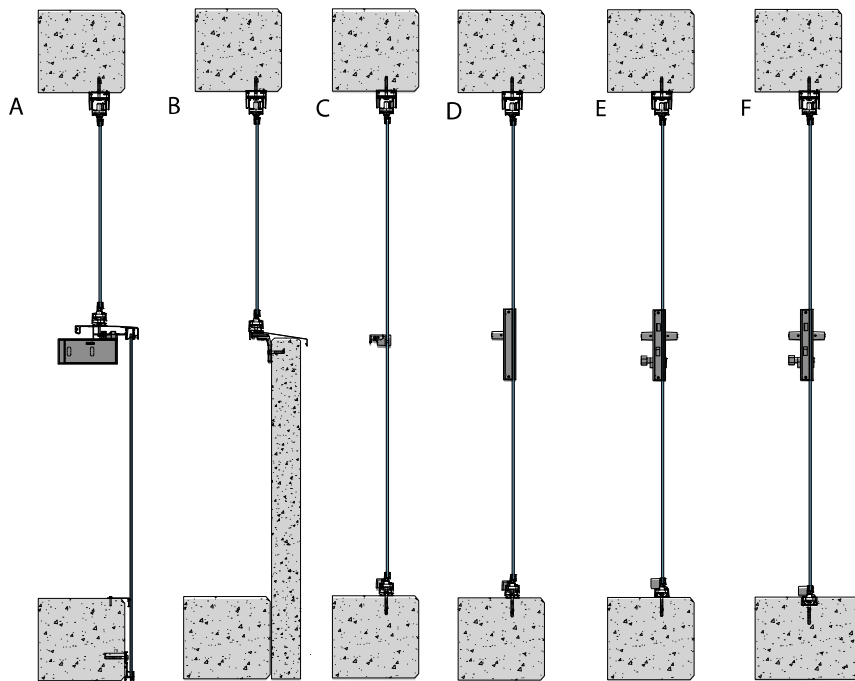
- A balcony and terrace glazing system with sliding and hinged opening mechanism that scales according to the space, demands of the conditions, and customer needs.
- The frameless glazing system is inward and outward opening and upper bearing, that is developed for use worldwide on balconies and terraces.
- The system consists of an upper and a lower aluminum profile which are mounted to the balcony ceiling and on handrail or floor. Toughened glass panes, with glass beads top and bottom, are mounted between the upper and lower profiles.
- The glass panes slide and fold open with the help of roller bearings and hinge components that are fixed to each glazing bead.
- Vertical and lateral silicone and rubber sealing profiles are used to cover gaps and openings between the glazing system and the surrounding structures to ensure sufficient water, wind and sound proofing.
- The Lumon Glazing Retractable has two strength classes: normal and strong. The normal strength is used in conventional conditions and low glazings, as the strong version of the glazing with stronger components are for challenging conditions and high glazings. The selection between normal and strong is automatic and made by the functional calculation.
- 6, 8, 10 or 12 mm tempered glass.
- A locking groove is milled to the top and bottom of the glass to ensure a fail-proof connection between the glass and the glass bead in addition to the adhesively bonded connection.

## Lumon Glazing Retractable

An upper bearing glazing product for normal and demanding conditions. The glass panes can be open both to the inside and outside. The glazing with a low threshold can also be embedded. No vertical frames.

The upper profile is attached to the ceiling by screwing through the profile or to an overhang by using a separate continuous bracket. The lower profile is installed to the floor by screwing through the profile. The lower profile can also be installed on top of a balustrade. Corrosion-resistant or stainless-steel fasteners, approved by the manufacturer, must be used when attaching the system to the terrace structures. Rainwater is drained off by using water sills made of a plastic-coated steel or aluminium sheet. Seals can be used to cover the gap between the wall and the glazing.

Low glazings are installed on top or at the side of a railing. High glazings are installed between the ceiling and the floor.



A: Lumon Glazing Retractable on top of a balustrade

B: Lumon Glazing Retractable with flanged lower profile installed at the side of a railing

C: Lumon Glazing Retractable high middle lift handle

D: Lumon Glazing Retractable high with 1-sided handle

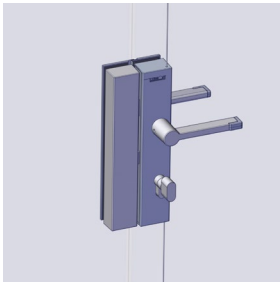
C: Lumon Glazing Retractable high with low threshold profile and handle with lock

D: Lumon Glazing Retractable high embedded with low threshold profile and handle with lock

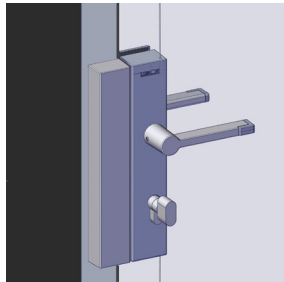
## Handle types

### Handles and locks

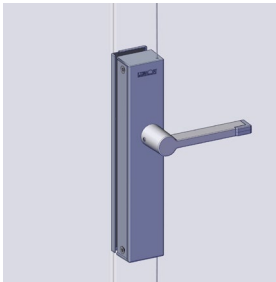
A



B



C



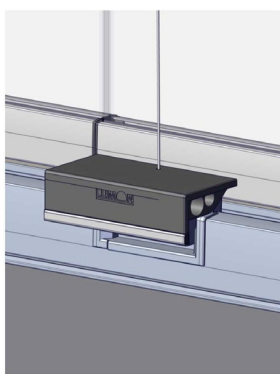
A: 1 or 2-sided handle with lock (Key + knob or key + key) + glass counterpart

B: 1 or 2-sided middle handle with lock (Key+ knob or key + key) + wall profile counterpart

C: Handle without lock, no counterpart

### Lift handles

A



B



A: Lift handle (child lock can be added)

B: Middle lift handle (child lock can be added)

## Pane knobs

A



B



C



A: Pane knob

B: Pane knob chamfered

C: Pane knob with seal

## Accessories

### Stacking device

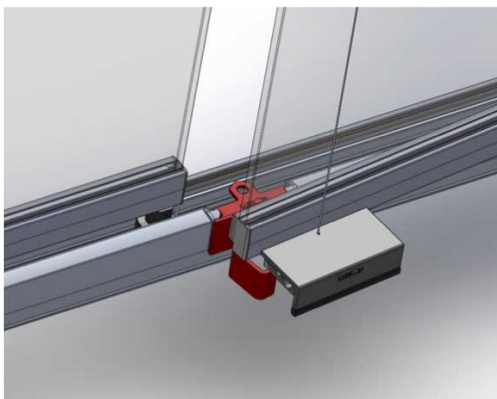
A



Accessory. Available for 6 and 12 panes

### Ventilation child lock

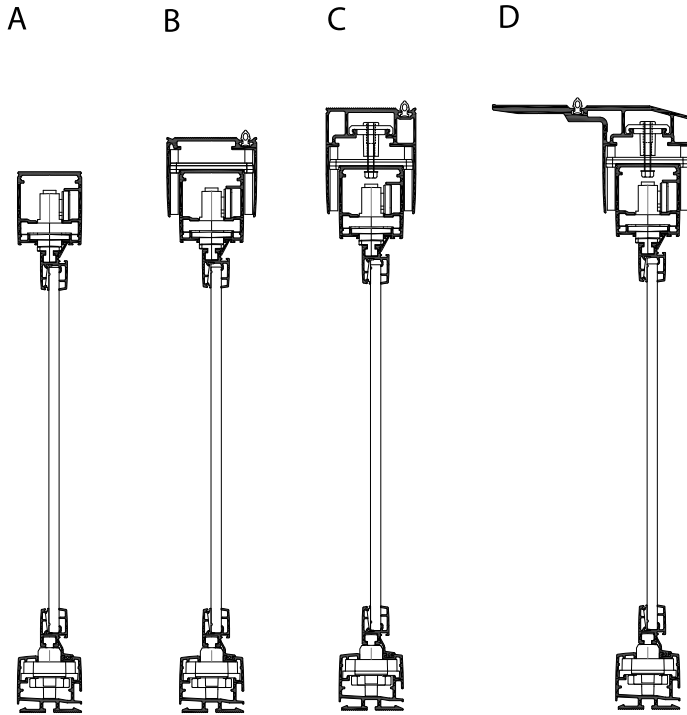
A



Accessory. Makes it possible to lock the opening pane when used with the latch lock

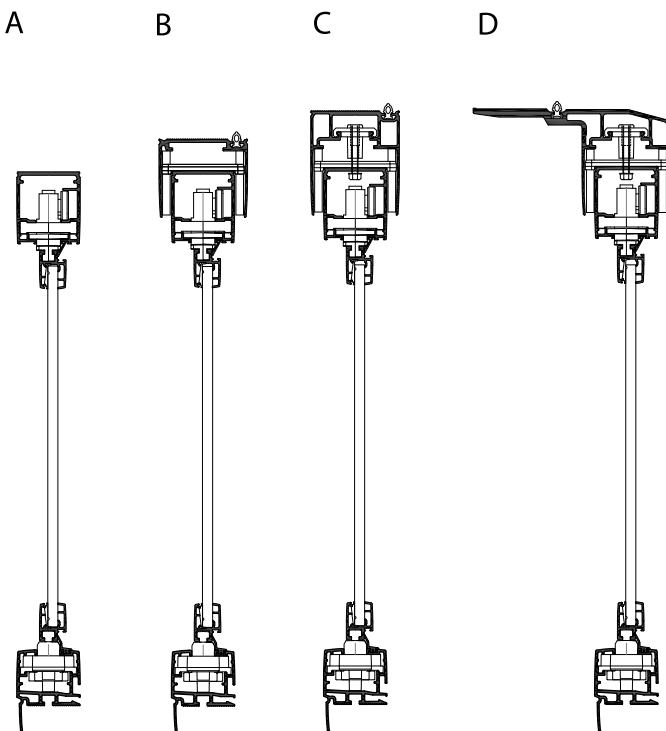


### Sections of the Lumon Glazing Retractable



- A: Glazing without telescopic profile
- B: Glazing with telescopic profile
- C: Glazing with high telescopic profile
- D: Glazing with flanged telescopic profile

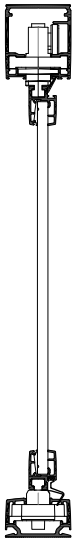
### Sections of the Lumon Glazing Retractable with flanged lower profile



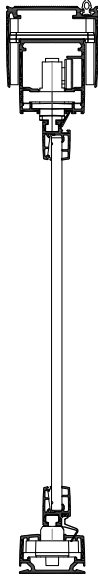
- A: Glazing without telescopic profile
- B: Glazing with telescopic profile
- C: Glazing with high telescopic profile
- D: Glazing with flanged telescopic profile

## Sections of the Lumon Glazing Retractable with low threshold profile

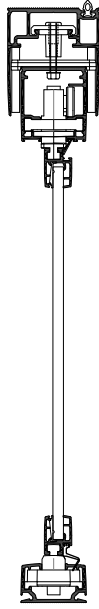
A



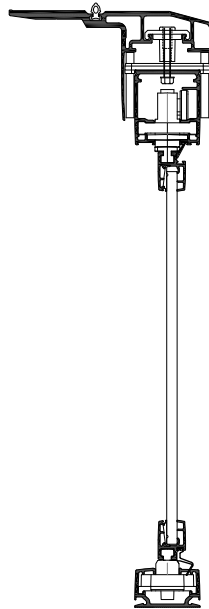
B



C



D



A: Glazing without telescopic profile

B: Glazing with telescopic profile

C: Glazing with high telescopic profile

D: Glazing with flanged telescopic profile

## Lumon Glazing Sliding



- A balcony and terrace glazing system with sliding glasses that scales according to the space, demands of the conditions, and customer needs.
- The frameless glazing system has glasses that slide interleadingly and is lower bearing, that is developed for use worldwide on balconies and terraces.
- The system consists of an upper and a lower aluminum profile which are mounted to the balcony ceiling and on handrail or floor. Toughened glass panes, with glass beads on the bottom, are mounted between the upper and lower profiles.
- The glass panes slide open with the help of roller bearing components that are fixed to each glazing bead.
- Vertical and lateral silicone and rubber sealing profiles are used to cover gaps and openings between the glazing system and the surrounding structures to ensure sufficient water, wind and sound proofing.

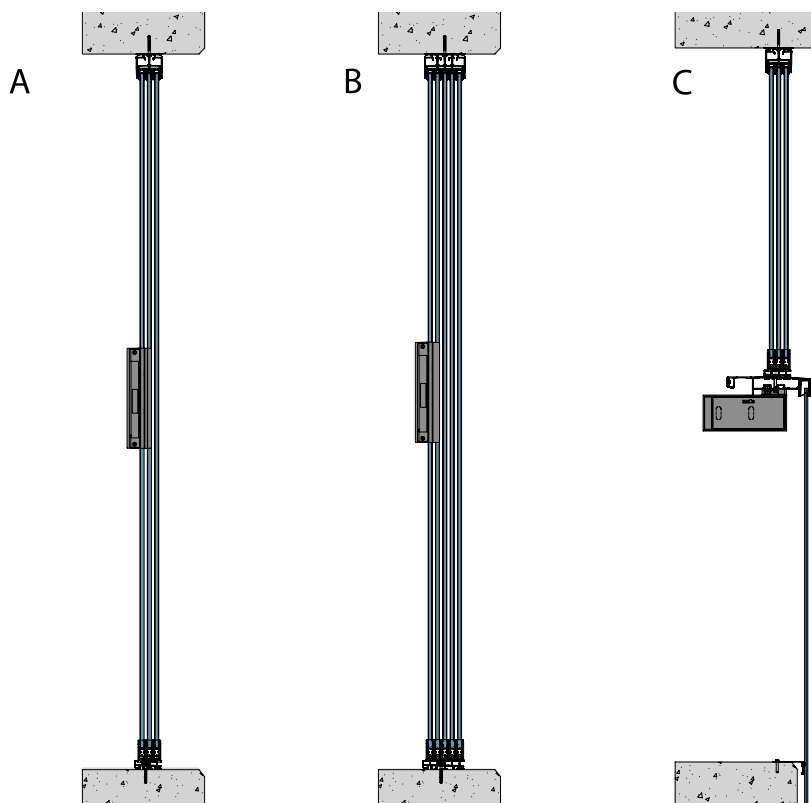
## Lumon Glazing Sliding

Lower bearing glazing product for normal conditions. The glass panes can be open both to the inside and outside. The glazing can be fitted with aluminium vertical frames or vertical seals.

The upper profile is attached to the ceiling by screwing through the profile or to an overhang by using a separate continuous bracket. The lower profile is installed to the floor by screwing through the profile. The lower profile can also be installed on top of a balustrade. Corrosion-resistant or stainless-steel fasteners, approved by the manufacturer, must be used when attaching the system to the terrace structures. Rainwater is drained off by using water sills made of a plastic-coated steel or aluminium sheet. Seals can be used to cover the gap between the wall and the glazing.

Low glazings are installed on top or at the side of a balustrade.

High glazings are installed between the ceiling and the floor.



A: Lumon Glazing Sliding 3-railed installed on top of a balustrade

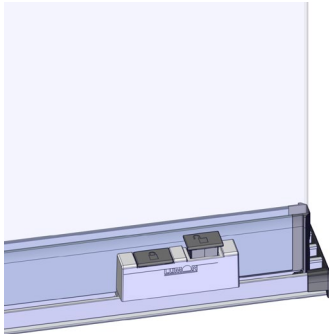
B: Lumon Glazing Sliding 3-railed

C: Lumon Glazing Sliding 5-railed

## Handle types

### Lower latch

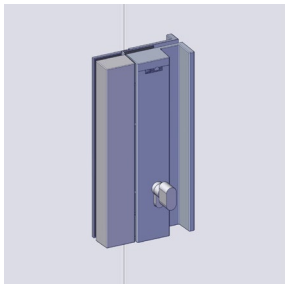
A



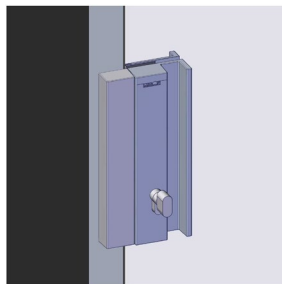
A: Lower latch, can be fitted with a lock

### Handle and counterparts

A



B

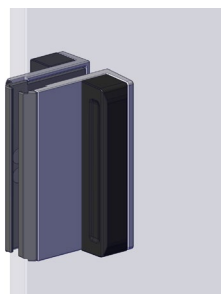


A: Glass counterpart

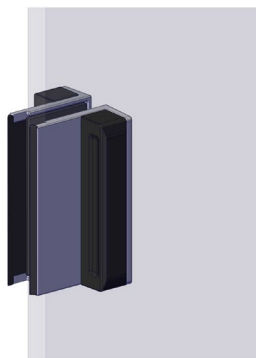
B: Wall profile counterpart

### Pane knobs used only with the lower latch

A



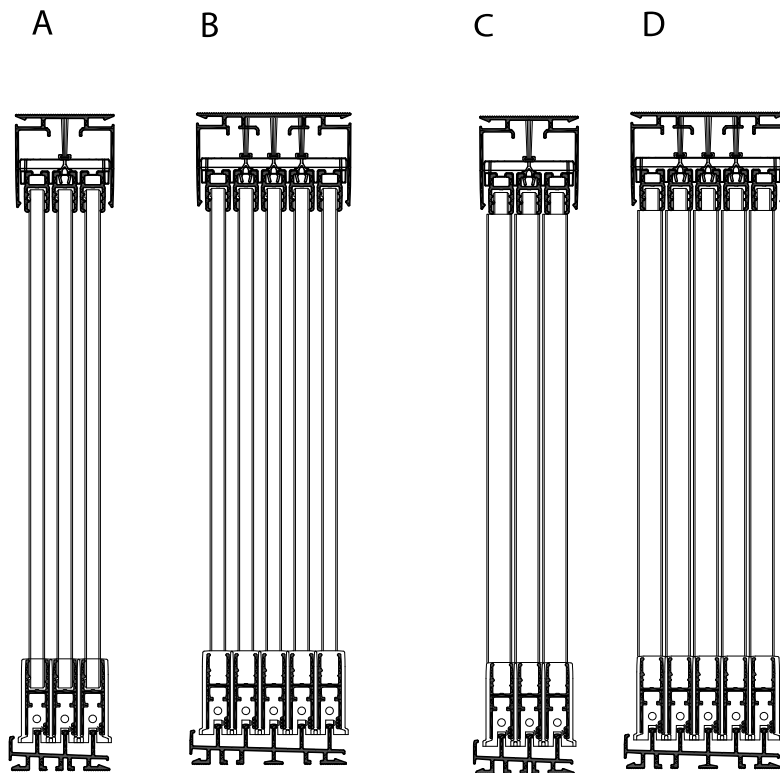
B



A: Pane knob chamfered

B: Pane knob with seal

## Sections of the Lumon Glazing Sliding



A: 3-railed Glazing without vertical frames

B: 5-railed Glazing without vertical frames

C: 3-railed Glazing with vertical frames

D: 5-railed Glazing with vertical frames

## Construction Engineering Principles

The dimensioning is based on the standards EN 1990, EN 1991-1-1, EN 1991-1-3, EN 1991-1-4 and National Annexes.

Lumon Balcony Glazing Systems are standardized structural components. Glass thickness and fastening methods must be designed in accordance with the conditions at the site. The Balcony Glazing System are subject to the following loads: the system weight (in vertical direction) and the wind load, including wind pressure and suction (in horizontal direction).

The glass thickness is determined based on the following factors:

- wind load  $\text{kN/m}^2$  (terrain class and height of the building)
- width of individual panes
- glazing height

### Loads

System own weight:

glass 6 mm  $g=0,15 \text{ kN/m}^2$

glass 8 mm  $g=0,20 \text{ kN/m}^2$

glass 10 mm  $g=0,25 \text{ kN/m}^2$

glass 12 mm  $g=0,30 \text{ kN/m}^2$

### Wind pressure

Specified by national wind maps and building regulations.

### Wind suction load

The corner areas of the building are also affected by wind suction load

Lumon® Glazing Retractable Wind pressure $Q_w = 1,0 \text{ kN/m}^2$													
Pane width [mm]		305-379	380-459	460-540	541-620	621-700	701-770	771-850	851-925	926-999	1000		
Max panes/opening end		3	4	5	6	7	8	9	10	(11)	(12)		
Glazing height	Glass [mm]	1500	6	6	6	6	6	6	6	6	6	6	On top of Railing
		1600	6	6	6	6	6	6	6	6	6	6	
		1700	6	6	6	6	6	6	6	6	6	6	
		1800	8	8	8	8	8	8	8	8	8	8	
		1900	8	8	8	8	8	8	8	8	8	8	
		2000	8	8	8	8	8	8	8	8	8	8	
		2100		8	8	8	8	8	8	8	8	8	
		2200		8	8	8	8	8	8	8	8	8(12)	
		2300		10	10	10	10	10	10	10	10(11)	10(11)	
		2400		10	10	10	10	10	10	10	10(10)	10(10)	
		2500		10	10	10	10	10	10	10	10(10)	10(10)	
		2600			10	10	10	10	10	10	10(10)	10(10)	
		2700			12	12	12	12					
		2800			12	12	12	12					
		2900											
		3000											

Lumon® Glazing Retractable Low Threshold Wind pressure $Q_w = 1,0 \text{ kN/m}^2$												
Pane width [mm]		305-379	380-459	460-540	541-620	621-700	701-770	771-850	851-925	926-999	1000	
Max panes/opening end		3	4	5	6	7	8	9	10	(11)	(12)	
Glazing height	Glass [mm]	1500	6	6	6	6	6	6	6	6	6	On top of Railing
		1600	6	6	6	6	6	6	6	6	6	
		1700	6	6	6	6	6	6	6	6	6	
		1800	8	8	8	8	8	8	8	8	8	
		1900	8	8	8	8	8	8	8	8	8	
		2000	8	8	8	8	8	8	8	8	8	
		2100		8	8	8	8	8	8	8	8	
		2200		8	8	8	8	8	8	8	8	
		2300		10	10	10	10	10	10	10	10(11)	10(11)
		2400		10	10	10	10	10	10	10	10(10)	10(10)
		2500			10	10	10	10	10	10	10(10)	10(10)
		2600			10	10	10	10	10	10	10(10)	10(10)
		2700			12	12	12	12				
		2800			12	12	12	12				
		2900										
		3000										
											From floor to ceiling	

Lumon® Glazing Sliding Wind pressure $Q_w = 1,0 \text{ kN/m}^2$										
Pane width [mm]		300-400	401-500	501-600	601-700	701-800	801-900	900-1000		
Max panes/opening end		3	4	5	6	7	8	9		
Glazing height	Glass [mm]	1500	6	6	6	6	6	6	6	On top of Railing
		1600	6	6	6	6	6	6	6	
		1700	6	6	6	6	6	6	6	
		1800	8	8	8	8	8	8	8	
		1900	8	8	8	8	8	8	8	
		2000		8	8	8	8	8	8	
		2100		8	8	8	8	8	8	
		2200		8	8	8	8	8	8	
		2300		10	10	10	10	10	10	
		2400		10	10	10	10	10	10	
		2500		10	10	10	10	10	10	
		2600			10	10	10	10	10	
		2700			12	12	12			
		2800			12	12				
		2900								
		3000								
									From floor to ceiling	





**LUMON®** Glazing



**LUMON®** Railing



**LUMON®** Blinds



**LUMON®** Roof

**Lumon offers you a complete service package, taking care of everything from manufacturing through to installation.**

**Contact Lumon expert to discuss more about how we can help you in your project.**

**Lumon Oy**  
Kaitilankatu 11  
FIN-45130 Kouvola

tel: +358 20 7403 200  
info@lumon.com



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Better life  
Better world

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