

# VELUX flat glass ISU 2093

**VELUX®**



The VELUX flat glass rooflight top unit has an elegant glass-to-edge flat shape with straight lines that almost becomes one with the roof. The outer glass is toughened making this a highly durable top unit that has increased resistance to wind, snow and hail. The flat glass top unit can be installed in roof pitches from 2°- 15° and is compatible with all glass rooflight base units (CFU/CVU).

- Sleek modern edge-to-edge flat glass design blends seamlessly with the lines of your roof.
- Suitable for the majority of flat roofs down to 2° roof pitch and offers natural drainage at 5°.
- The outer glass of the top unit is strength-tested in tough weather conditions.
- Toughened outer glass is attached with high-strength weather-proof sealant.
- Discretely placed blackout or awning blind lets you enjoy maximum daylight influx and a stylish interior design at all times.
- Easy and safe transportation of the top unit from ground to roof; no need for manual lifting.
- Special threaded installation screws for fast installation of the top unit.



## Application guidance

The flat glass top unit ISU 2093 can be installed within the roof pitch range of 2°-15° together with the base units compatible with our glass rooflight range (CVU, CFU, CXU).



Combine the ISU 2093 flat glass top with a base unit that meets your need for daylight only, or daylight and ventilation. Choose the electric or solar vented CVU for fresh air at the touch of a button or the fixed CFU if your primary need is to bring maximum daylight into the room. For combined daylight, ventilation, and convenient access to the roof for maintenance technicians, choose the CXU base unit.

## Available sizes and daylight area

Dimensions in the size diagram indicate the roof opening. For electrically operated windows, an additional clearance (typically 1 cm) must be provided on the side designated for cable installation, as specified in the applicable installation guidelines.

	600	800	900	1000	1200	1500	2000
600	ISU 060060 (0.29) [0.15]		ISU 090060 (0.45) [0.19]				ISU 200060 (1.04) [0.35]
800		ISU 080080 (0.54) [0.19]				ISU 150080 (1.06) [0.29]	
900			ISU 090090 (0.70) [0.21]		ISU 120090 (0.95) [0.26]		
1000				ISU 100100 (0.88) [0.24]		ISU 150100 (1.35) [0.31]	ISU 200100 (1.82) [0.38]
1200					ISU 120120 (1.3) [0.28]	ISU 150120 (1.64) [0.32]	
1500						ISU 150150 (2.07) [0.35]	



## Net Weight

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Please note that a complete flat roof window consists of a top unit and a base unit supplied separately. The total weight of the complete solution must therefore be calculated by adding the unit weight of the top unit and the unit weight of the base unit, as specified in their respective data sheets.

	060060	080080	090060	090090	100100	120090	120120	150080	150100	150120	150150	200060	200100
Net Weight (kg)	14.567	20.280	18.450	23.575	27.182	28.770	40.631	45.332	42.188	60.095	71.264	47.314	66.359

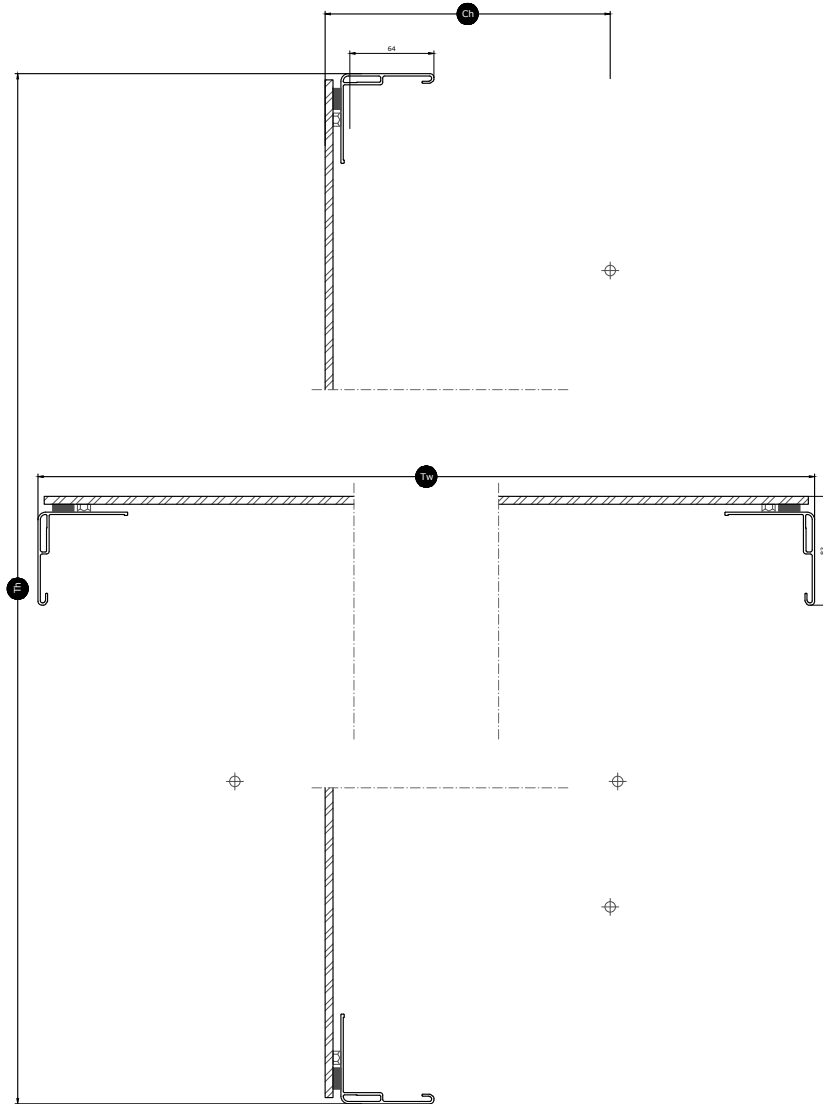
## Technical values

Overview of technical values for the product, covering among other, CE marking in accordance with EN 1873 or EAD 200062-00-0401

Window characteristics	CFU 20Q + ISU 2093	CFU 25Q + ISU 2093	CVU 20Q + ISU 2093	CVU 25Q + ISU 2093	CXU 20U + ISU 2093	CXU 25U + ISU 2093
Air permeability	4	4	4	4	4	4
Thermal transmittance $U_{rc,ref300}$ (CE-marked) (U-value)	0.75	0.60	0.75	0.60	0.80	0.70
Arc, ref300 (U-value transmission area)	4.1	4.1	4.1	4.1	4.1	4.1
Light transmittance ( $\tau$ )	0.68	0.63	0.68	0.63	0.68	0.63
Sound insulation $R_w$ dB [dB]	39	41	39	41	39	41
Total solar energy transmittance (g)	0.52	0.49	0.52	0.49	0.52	0.49
Ultraviolet transmittance ( $\tau_{uv}$ )	0.05	0.05	0.05	0.05	0.05	0.05
Burglar resistance window	RC2	RC2	RC2	RC2	NPD	NPD
Frame factor	0.1	0.1	0.1	0.1	0.1	0.1
Air permeability	4	4	4	4	4	4
Reaction to fire	C-s2, d2	C-s2, d2	C-s2, d2	C-s2, d2	C-s2, d2	C-s2, d2
Bonding of cover glass (glass of top unit) [class]	$\Delta X \geq 0.75$	$\Delta X \geq 0.75$	$\Delta X \geq 0.75$	$\Delta X \geq 0.75$	$\Delta X \geq 0.75$	$\Delta X \geq 0.75$
External fire performance - European	Broof(t4)	Broof(t4)	Broof(t4)	Broof(t4)	Broof(t4)	Broof(t4)
External fire performance - British	NPD	NPD	NPD	NPD	NPD	NPD
Impact resistance	3	3	3	3	3	3
Impact resistance large soft body	N/A	N/A	N/A	N/A	N/A	N/A
Impact resistance small hard body	N/A	N/A	N/A	N/A	N/A	N/A
Rain noise	44 dB	44 dB	44 dB	44 dB	44 dB	44 dB
Resistance to downward loads	N/A	N/A	N/A	N/A	N/A	N/A
Resistance to fire	NPD	NPD	NPD	NPD	NPD	NPD
Resistance to snow load	*	*	*	*	*	*
Resistance to upward load	N/A	N/A	N/A	N/A	N/A	N/A
Resistance to wind load	C3	C3	C3	C3	C3	C3
Water tightness	9A	9A	9A	9A	9A	9A

# Cross section dimensions

Please note that the view of the cross section is from bottom to top.



	060060	080080	090060	090090	100100	120090	120120	150080	150100	150120	150150	200060	200100
Ch: External frame height (mm)	216	216	216	216	217	217	217	219	219	219	219	221	221
Top unit glass thickness (mm)	5	5	5	5	6	6	6	8	6	8	8	8	8

## Blinds and awnings

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Complete your VELUX glass rooflight with a blind for complete comfort. Choose between an anti-heat blind to maintain a cool room on hot days or a blackout blind to block outside light for total darkness. The blinds are discreetly placed and do not compromise daylight and design when not in use. You also have the option of adding an insect screen that lets you enjoy fresh air without any insects.

Use VELUX App Control or VELUX ACTIVE with NETATMO for smartphone control of your vented glass rooflight and blinds.

## Cleaning and maintenance

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Cleaning of the top unit is only possible from the outside. When cleaning the top unit on vented glass rooflights, switch off the mains supply, ie do not open the rooflight!

To clean the inner surface of the top unit and the outer glass surface of the base unit, remove cover caps and screws to remove the top unit and fasten them again after cleaning.

In regions with heavy snowfall, snow masses on the flat-roof window must be removed on a regular basis.

## Guarantee period

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The full terms and conditions of the VELUX Product Guarantee are available on our website [www.velux.co.uk](http://www.velux.co.uk) or [www.velux.ie](http://www.velux.ie)

## Further information

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We reserve the right to make technical changes.

For more information on our products, please visit <https://www.velux.co.uk> or <https://www.velux.ie>.