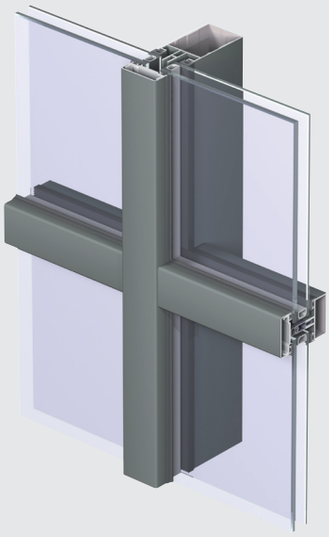
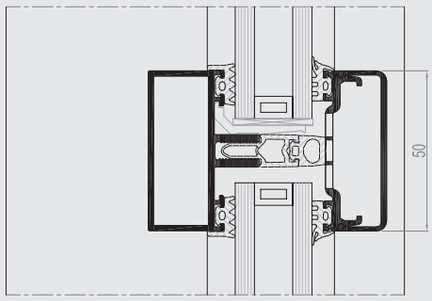
CW 50

Maximum natural light

REYNAERS
aluminium





CW 50 is a curtain wall façade and roof system that offers unlimited creative freedom and allows maximum entrance of light into the building. The system offers 11 individual styles with various outside appearances.

Any combination of vertical and inclined planes are possible together with the integration of different types of vents. The extensive range offers technical solutions for the different performance requirements of a façade such as fireproof and high insulating solutions.

Reynaers curtain walls are designed to meet the requirements of contemporary architecture. In extension to that, additional more practical features to these curtain walls, like different opening types, should not disrupt the global design of the building.

Top Hung Window – THW:

The Top Hung Window allows integrating big opening elements with big opening spans, which can be operated manually or automatically. Choosing for a glazing bead or in structural silicone glazing (SSG) can stress the opening elements or make them fade in the general curtain wall view. Enhanced thermal properties are available with increased insulation and glass thicknesses.
The THW can be included in the strategy of the building's Smoke&Heat Exhaust Ventilation Systems (SHEVS).

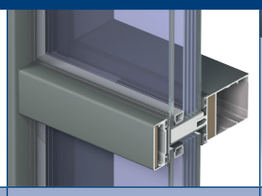
Parallel Opening Window – POW:

The Parallel Opening Window allows better airflow for smaller dimensions, because it's typical opening concept. This makes it ideal for ventilation without creating unwanted access to the building (e.g. Night ventilation). Better natural ventilation results in a better indoor air quality, thermal comfort and healthy indoor climate for building users.
Aesthetically, this opening type makes that the overall impression or reflection of the building remains the same with opened or closed vents.
Furthermore, the POW has similar advantages as the THW solution: big opening elements, manual or automatically operation increased insulation, SHEVS and glazing bead or with structural silicone glazing (SSG).

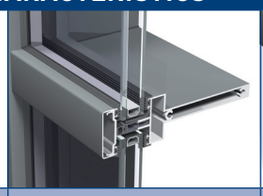
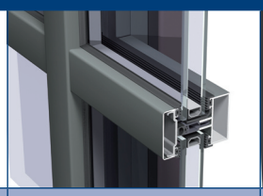

Top Hung Window – THW


Parallel Opening Window: POW

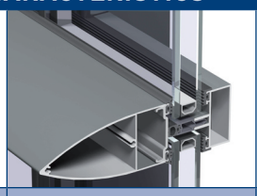
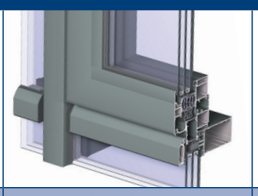
TECHNICAL CHARACTERISTICS

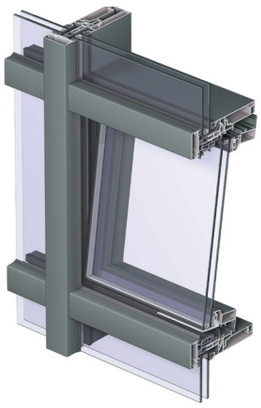
				
Style variants	**CW 50**	**CW 50 SWISS SOLUTION**	**CW 50-FP**	**CW 50-HI**
	functional	rationalized system	Fire Proof EI 30 & EI 60	ultimate thermal comfort
Interior visible width	50 mm	50 mm	50 mm	50 mm
Depth mullions	from 42 mm to 316,5 mm	from 62.5 mm to 104.5 mm	from 63 mm to 105 mm	from 41.5 mm to 316,5 mm
Depth transoms	from 5 mm to 193 mm	from 62.5 mm to 104.5 mm	from 63 mm to 105 mm	from 4.7 mm to 193.2 mm
Inertia mullions (Ix: wind load)	min 14 cm^4 to max 2690 cm^4	min 36.5 cm^4 to max 119.5 m^4	min 37 cm^4 to max 123 cm^4	min 13.5 cm^4 to max 2690 cm^4
Inertia transoms (Ix: wind load)	min 4 cm^4 to max 535 cm^4	min 36.5 cm^4 to max 119.5 cm^4	min 34 cm^4 to max 107 cm^4	min 3.5 cm^4 to max 534.7 cm^4
Inertia transoms (Iy: glass load)	min 8 cm^4 to max 57 cm^4	min 16.9 cm^4 to max 25.4 cm^4	min 18 cm^4 to max 26 cm^4	min 7.9 cm^4 to max 57 cm^4
Exterior visible width	50 mm	50 mm	50 mm	50 mm
Exterior face caps	different shapes available	different shapes available	different shapes available	different shapes available
Glazing	fixing by pressure plates	fixing by pressure plates	fixing by pressure plates	fixing by pressure plates
Rebate height	20 mm	20 mm	20 mm	20 mm
Glass thickness	from 6 mm to 62 mm	from 6 mm to 44 mm	33 mm/48 mm	from 22 mm to 62 mm
Type of vents	all Reynaers systems top hung window POW	all Reynaers systems top hung window POW	not applicable	all Reynaers systems top hung window POW (available in HI)
Roof application	yes	no	no	no

TECHNICAL CHARACTERISTICS

				
Style variants	**CW 50-SL**	**CW 50 ALU ON STEEL**	**CW 50-SG**	**CW 50-SC**
	slender appearance	designed for steel structure	structural sealed glazing	structural clamped glazing
Interior visible width	15/50 mm	50 mm	50/88 mm	50 mm
Depth mullions	from 125.5 mm to 167.5 mm	67.5 mm	from 41.5 mm to 316.5 mm	from 41.5 mm to 316,5 mm
Depth transoms	from 99.4 mm to 172.2 mm	from 5 mm to 57 mm	from 4.7 mm to 193.2 mm	from 4.7 mm to 193.2 mm
Inertia mullions (Ix: wind load)	min 159.5 cm^4 to max 339.2 cm^4	not applicable	min 13.5 cm^4 to max 2690 cm^4	min 13.5 cm^4 to max 2690 cm^4
Inertia transoms (Ix: wind load)	min 71.5 cm^4 to max 387.5 cm^4	min 4 cm^4 to max 14.6 cm^4	min 3.5 cm^4 to max 534.7 cm^4	min 3.5 cm^4 to max 534.7 cm^4
Inertia transoms (Iy: glass load)	min 9.1 cm^4 to max 10.5 cm^4	min 2.9 cm^4 to max 12.5 cm^4	min 7.9 cm^4 to max 57 cm^4	min 7.9 cm^4 to max 57 cm^4
Exterior visible width	50 mm	50 mm	EPDM gasket of 27 mm width	joint: 20 mm
Exterior face caps	different shapes available	different shapes available	not applicable	not applicable
Glazing	fixing by pressure plates	fixing by pressure plates	structural glazing glued on cassettes	clamped solution
Rebate height	20 mm	20 mm	structural sealed glazing	Structural sealed glazing
Glass thickness	up to 62 mm	up to 62 mm	from 24 mm to 36 mm	from 27 mm to 63 mm
Type of vents	all Reynaers systems top hung window POW	all Reynaers systems top hung window POW	structural top hung window	structural top hung window structural POW
Roof application	yes	yes	no	yes

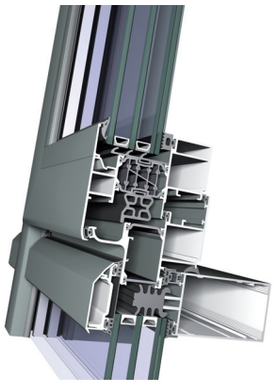
TECHNICAL CHARACTERISTICS

				
Style variants	**CW 50-HL**	**CW 50-VL**	**CW 50-RA FLUSH ROOF VENT**	**CW 50/TUTI HIDDEN VENT (CW 50-SC/TUTI HIDDEN VENT)**
	aesthetical horizontal lining	Aesthetical vertical lining	designed for special constructions	extra opening types
Interior visible width	50 mm	50 mm	50 mm	50/80 mm
Depth mullions	from 41.5 mm to 316.5 mm	from 42 to 316.5 mm	from 41.5 mm to 316,5 mm	from 83.5 mm to 146.5 mm
Depth transoms	from 4.7 mm to 193.2 mm	from 5 to 193 mm	from 4.7 mm to 193.2 mm	from 83.5 mm to 146.5 mm
Inertia mullions (Ix: wind load)	min 13.5 cm^4 to max 2690 cm^4	min. 14 cm^4 to max. 2690 cm^4	min 13.5 cm^4 to max 2690 cm^4	min 33.6 cm^4 to max 155.4 cm^4
Inertia transoms (Ix: wind load)	min 3.5 cm^4 to max 534.7 cm^4	min. 3,5 cm^4 to max. 534,7 cm^4	min 3.5 cm^4 to max 534.7 cm^4	min 33.6 cm^4 to max 155.4 cm^4
Inertia transoms (Iy: glass load)	min 7.9 cm^4 to max 57 cm^4	min. 7,9 cm^4 to max. 57 cm^4	min 7.9 cm^4 to max 57 cm^4	min 3.7 cm^4 to max 7 cm^4
Exterior visible width	vertical: 30 mm joint horizontal: 50 mm pressure plate	50 mm/joint 20 mm	50 mm	50 mm
Exterior face caps	different shapes available	different shapes available	different shapes available	different shapes available
Glazing	fixing by horizontal pressure plates	Vertical: fixation by pressure plate Horizontal: clamped solution	fixing by pressure plates and glazing beads	fixing by pressure plates structural sealed glazing (clamped solution)
Rebate height	20 mm	20 mm/structural sealed glazing	20 mm	20 mm/structural sealed glazing
Glass thickness	from 22 mm to 48 mm	from 27 mm to 40 mm	roof application : from 6mm to 45mm	opening window 22-28 mm (open. window-SC 29-32mm)
Type of vents	structural top hung window	Structural THW	flush roof vent: top hung, bottom hung max. roof inclination: 5 to 80° glass up to 52 mm handle, spindle and automated opening	turn turn-tilt bottom-hung window
Roof application	no	no	yes	no



TUTI Hidden Vent

The Inward Opening Window, also known as the hidden vent is a structural silicone glazing solution which can be applied in standard curtain wall façade or in structurally clamped façade. It's main advantage is that the exterior doesn't differ from a fixed glazing panel in the façade. Therefore it doesn't affect the even façade geometry. Water tightness is assured by the use of a central gasket.
This system uses a half mullion so it has a minimal visible width from the inside.



Flush Roof Vent:

The Flush Roof Vent has been developed to perfectly blend into the buildings' outer shell without causing any disruption to the surface and can have inclination angles of 5° up to 80°. Thus not limiting but on the contrary stimulating architectural creativity.
The superior HI variant assures an increased insulation by using additional insulation gaskets and longer insulation strips. The possibility to integrate 52 mm glass in the HI version further enhances thermal efficiency. A motor-operated version is especially convenient within building management systems or in roof windows in hard-to-reach places.

PERFORMANCES						
	ENERGY					
	Thermal insulation (1) EN 13947	Uf = value as down to 0,8 W/m²K, depending on the profile combination				
	COMFORT					
	Acoustic performance (2) EN ISO 140-3; EN ISO 717-1	RW (C;Ctr) = 33 (-1; -3) dB / 60 (-2; -6) dB, depending on glazing or panel type				
	Air tightness (3) EN 12153, EN 12152	A1 (150 Pa)	A2 (300 Pa)	A3 (450 Pa)	A4 (600 Pa)	AE 1200 (1200 Pa)
	Water tightness (4) EN 12155, EN 12154	R4 (150 Pa)	R5 (300 Pa)	R6 (450 Pa)	R7 (600 Pa)	RE 1200 (1200 Pa)
	Wind load resistance, max. test pressure (5) EN 12179, EN 13116	2000 Pa				
	Resistance against impact EN 14019	I3/E5		I5/E5		

This table shows classes and values of performances, which can be achieved for specific configurations and opening types.
(1) The Uf-value measures the heat flow. The lower the Uf-value, the better the thermal insulation of the frame.
(2) The sound reduction index (Rw) measures the capacity of the sound reduction performance of the frame.
(3) The air tightness test measures the volume of air that would pass through a closed window at a certain air pressure.
(4) The water tightness testing involves applying a uniform water spray at increasing air pressure until water penetrates the window.
(5) The wind load resistance is a measure of the profile's structural strength and is tested by applying increasing levels of air pressure to simulate the wind force.

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