

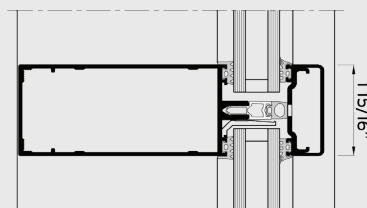
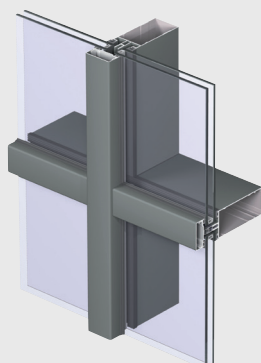


CONCEPT WALL 50

Unlimited creative freedom and maximum entrance of light



Reynaers
Aluminium



CW 50 is a façade and roof system that offers unlimited design freedom and allows maximum transparency. As such, CW 50 meets all requirements of contemporary architecture. Innovative solutions contribute towards the tendency of big, heavy, and thick glass panes. CW 50 supports up to 1,540 lbs in various glass support configurations- even more glass weight can be offered in bespoke solutions. The system is available in several designs and glazing variants, like steel beam look, standard pressure plates, structurally glazed, and structurally clamped solutions. Specified levels of fire-resistance, burglar-proof classes, and thermal insulation, down to $U_f = 0.14 \text{ Btu/hr}\cdot\text{ft}^2\cdot^\circ\text{F}$, are provided by different technical variants. In addition to that, dedicated opening types can also be seamlessly integrated: a parallel opening window, a top hung window, a hidden vent turns and tilt window, but also an attic window for integration in roof applications of CW 50. The CW 50 stands for an extensive range of profiles, gaskets, accessories, and tools. It is specially developed for easy fabrication and installation.



Description opening types*:

1. TOP HUNG WINDOW - THW:

The Top Hung Window allows integrating opening elements with large opening spans, which can be operated manually or automatically. The design choice between the solution with glazing bead or structural silicone glazing (SSG) characterizes the total appearance of the façade.

This THW can be integrated into the overall strategy of the building's Smoke & Heat Exhaust Ventilation Systems (SHEVS).

2. PARALLEL OPENING WINDOW - POW

The opening concept, Parallel Opening Window, allows an ultimate airflow for small or tall windows, which results in better natural ventilation, improving indoor air quality, thermal comfort, and a healthy indoor climate for building users. Aesthetically, the parallel way of the opening gives a uniform impression: the reflection of the building remains the same for opened or closed vents. An additional advantage of this opening type is that it realizes ventilation without creating unwanted access to the building (e.g. night ventilation). Furthermore, the POW can be used for large opening elements, operated both manually or automatically, and is suited to be integrated into Smoke & Heat Exhaust Ventilation Systems. The glazing of the window can be done with glazing beads or with structural sealed glazing (SSG).

3. HIDDEN VENT TURN AND TILT WINDOW - HV-TUTI:

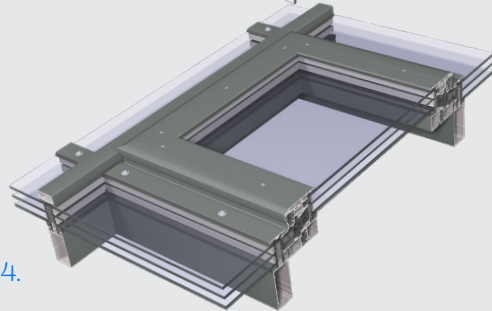
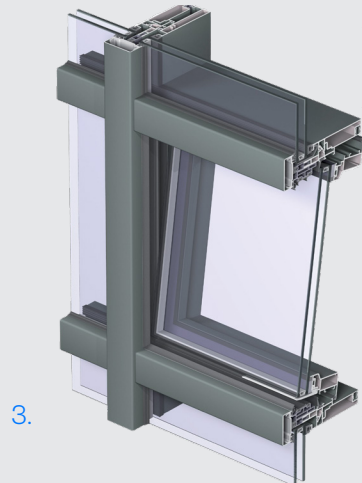
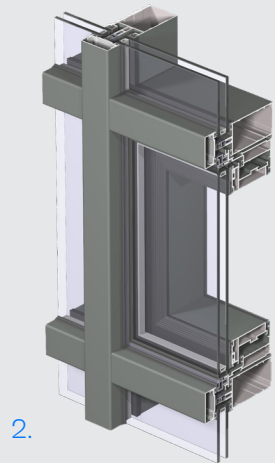
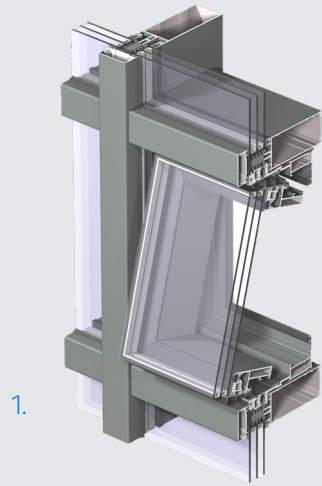
A special type of Inward Opening Window, also known as the hidden vent, is a structural sealed glazing solution that can be applied in a standard curtain wall façade or a structurally clamped façade. Its main advantage is that the exterior doesn't differ from a fixed glazing panel in the façade. Therefore, it doesn't affect the façade geometry. From the inside, this system uses a half mullion, resulting in a minimal visible width. The water tightness is assured by the use of a central gasket.

4. ATTIC WINDOW - AW:

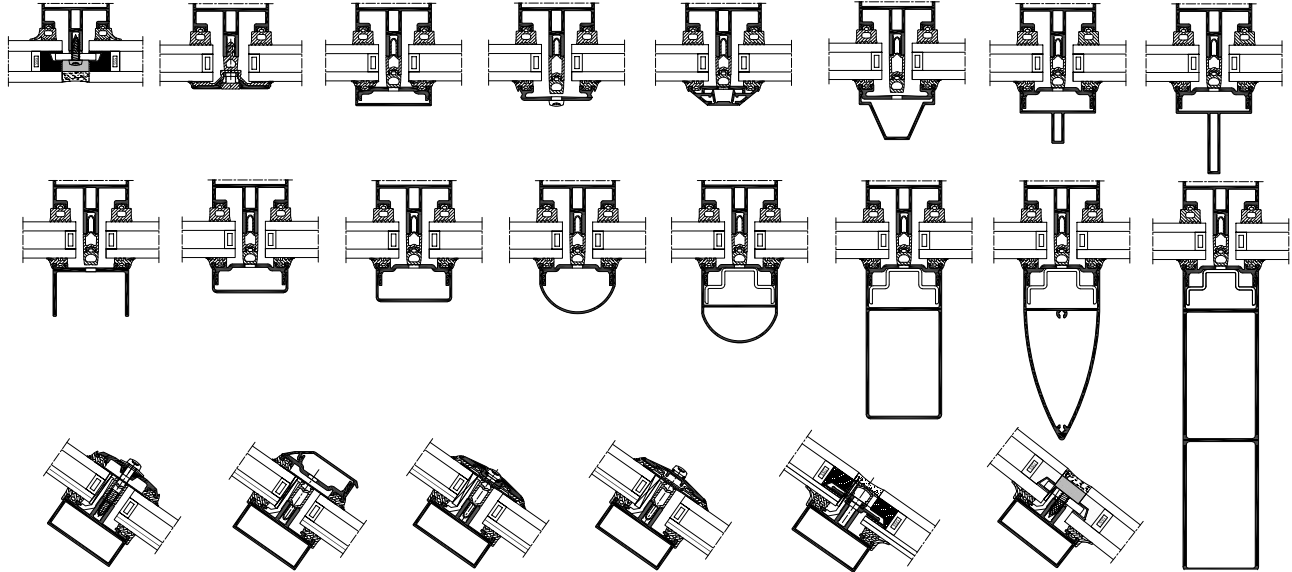
The Attic Window is fully reviewed to meet today's standards to provide a perfect watertight and high insulating solution for open elements in glass roofs. Different glazing options are available for glazing: either a cost-efficient glazing bead version for standard glass or a more aesthetic version with stepped glass. Both glass variants can be combined to create a zero water threshold on the bottom side to allow inclinations down to 5°. The superior High Insulation variant assures increased insulation by using additional gaskets and smart insulation strips including low-e foil. The possibility to integrate 2 7/16" glass in this 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. The Attic window can be applied together with CW 50-RA and CW 60-RA.

5. INTEGRATION OF REYNAERS WINDOW AND DOOR SYSTEMS

Several aesthetical connection profiles allow a concealed integration of other Reynaers window and door systems.



OVERVIEW EXTERIOR LOOKS



TECHNICAL CHARACTERISTICS

Style variants	CW 50	CW 50-HI	CW 50-SC	CW 50-HL	
	functional	ultimate thermal comfort	structural clamped glazing	aesthetical horizontal lining	
Interior visible width	1 15/16"	1 15/16"	1 15/16"	1 15/16"	
Exterior visible width	1 15/16"	1 15/16"	joint: 13/16"	vertical: 13/16" joint horizontal: 1 15/16"	
Depth mullions	from 1 5/8" - 11 13/16"	from 1 5/8" - 11 13/16"	from 1 5/8" - 11 13/16"	from 1 5/8" - 11 13/16"	
Depth transoms	from 3/16" - 7 5/8"	from 3/16" - 7 5/8"	from 3/16" - 7 5/8"	from 3/16" - 7 5/8"	
Inertia mullions (lx: wind load)	min 14 cm ⁴ - max 2690 cm ⁴	min 14 cm ⁴ - max 2690 cm ⁴	min 14 cm ⁴ - max 2690 cm ⁴	min 14 cm ⁴ - max 2690 cm ⁴	
Inertia transoms (lx: wind load)	min 4 cm ⁴ - max 612 cm ⁴	min 4 cm ⁴ - max 612 cm ⁴	min 4 cm ⁴ - max 612 cm ⁴	min 4 cm ⁴ - max 612 cm ⁴	
Intertia transoms (ly: glass load)	min 8 cm ⁴ - max 59 cm ⁴	min 8 cm ⁴ - max 59 cm ⁴	min 8 cm ⁴ - max 59 cm ⁴	min 8 cm ⁴ - max 59 cm ⁴	
Exterior face caps	different shapes available	different shapes available	not applicable	different shapes available	
Glazing	fixing by pressure plates	fixing by pressure plates	continuously clamped and locally clamped solution	vertical: continuously clamped and locally clamped solution horizontal: fixation by pressure plate	
Rebate height	13/16"	13/16"	structural sealed glazing	13/16" / structural sealed glazing	
Glass thickness	from 1/4" - 2 3/8"	from 7/8" - 2 3/8"	from 1 1/16" - 2 1/2"	from 7/8" - 1 7/8"	
Opening types (see description)	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 5	1 - 2 - 3 - 5	
Roof application	yes	yes	yes	no	
Style variants	CW 50-VL	CW 50-SG	CW 50-SL	CW 50 ON STEEL	CW 50-TT
	aesthetical vertical lining	structural sealed glazing	slender appearance	designed for steel structure	rationalized system
Interior visible width	1 15/16"	1 15/16"	9/16" 1 15/16"	1 15/16"	1 15/16"
Exterior visible width	vertical: 1 15/16" horizontal: 13/16" joint	EPDM gasket (width 11/16")	1 15/16"	1 15/16"	1 15/16"
Depth mullions	from 1 5/8" to 11 13/16"	from 1 5/8" to 11 13/16"	from 4 14/16" to 6 5/8"	2"	-
Depth transoms	from 3/16" to 7 5/8"	from 3/16" to 7 5/8"	from 3 7/16" to 6 13/16"	from 3/16" to 2 5/16"	from 3 5/16" to 9 1/8"
Inertia mullions (lx: wind load)	min 14 cm ⁴ - max 2690 cm ⁴	min 14 cm ⁴ - max 2690 cm ⁴	min 160 cm ⁴ - max 381 cm ⁴	-	-
Inertia transoms (lx: wind load)	min 4 cm ⁴ - max 612 cm ⁴	min 4 cm ⁴ - max 612 cm ⁴	min 73 cm ⁴ - max 436 cm ⁴	min 4 cm ⁴ - max 16 cm ⁴	min 74 cm ⁴ - max 937 cm ⁴
Intertia transoms (ly: glass load)	min 8 cm ⁴ - max 59 cm ⁴	min 8 cm ⁴ - max 59 cm ⁴	min 9 cm ⁴ - max 24 cm ⁴	min 8 cm ⁴ - max 13 cm ⁴	min 23 cm ⁴ - max 68 cm ⁴
Exterior face caps	different shapes available	N/A	different shapes available	different shapes available	different shapes avail- able
Glazing	vertical: fixation by pressure plate horizontal: continuously clamped & locally clamped solution	structural glazing glued on cassettes	fixing by pressure plates / clamped	fixing by pressure plates / clamped	fixing by pressure plates / clamped
Rebate height	13/16" / structural sealed glazing	structural sealed glazing	13/16"	13/16"	13/16"
Glass thickness	from 1 1/16" - 1 9/16"	from 15/16" - 1 7/16"	from 1/4" - 2 3/8"	from 1/4" - 2 3/8"	from 7/8" - 1 7/8"
Opening types (see description)	1 - 2 - 3 - 5	1 - 2 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 4 - 5	1 - 2 - 3 - 5
Roof application	yes	no	yes	yes	no

Performance Specifications ⁽¹⁾			CW 50		CW 50-SlimLine		CW 50-SC	
	ENERGY							
	Thermal Insulation ⁽²⁾ (Btu/hr·ft²·°F) per NFRC 102	Glazing	Double	Triple	Double	Triple	Double	Triple
		Uw	0.23	0.14	0.23	0.14	0.23	0.14
		SHGC	0.25	0.18	0.25	0.18	0.25	0.18
	COMFORT							
	Acoustic performance ⁽³⁾ ASTM E90-09/1332	STC	41		41		39	
		OITC	35		35		34	
	Air tightness, max. test pressure ⁽⁴⁾ (cfm/ft²)		0.02		0.02		0.04	
	Water tightness ⁽⁵⁾ (psf)		15		15		15	
	AAMA Rating AAMA/WDMA/CSA 101/I.S.2/A440, NAFS		90 Structural Overload		90 Structural Overload		90 Structural Overload	

This table shows classes and values of performances, which can be achieved for specific configurations and opening types.

(1) All results based on gateway sizes; vary depending on glass/profile combinations | Above Uw & SHGC values do not necessarily work in combination.

(2) Uw is the measure of heat transfer through the fenestration product with glass. The lower the Uw, the better the thermal insulation of the element.

(3) The sound reduction index measures the capacity of the sound reduction performance of the frame and glass.

(4) The air tightness test measures the volume of air that would pass through a closed window at a certain air pressure.

(5) Water tightness testing applies a specified air pressure differential while simultaneously spraying water on to the ext. face of the assembly at the rate of 5 gal/hr/ft².

REYNAERS CANADA

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Architect: Ivane Kenelashvili
Photo: Architects of Invention