



# Blast Resistance

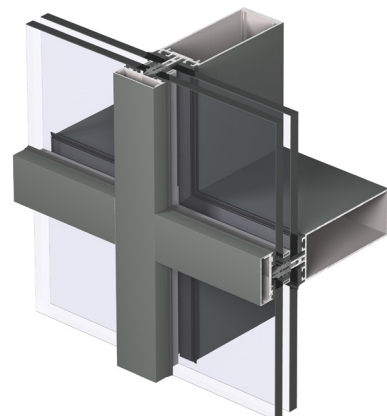
Reynaers Aluminium Safety Solutions



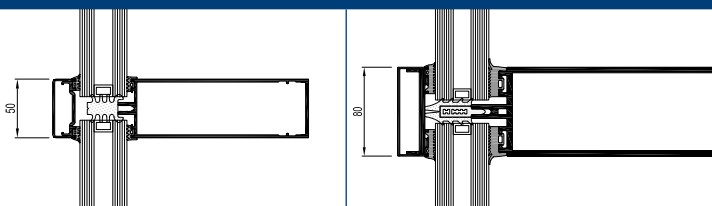
Scan the QR-code  
to watch our  
**Blast Resistance  
Test Video**

Based on thorough research and independent testing, Reynaers adds 2 Blast Resistant curtain wall systems to its portfolio of safety solutions. Indistinguishable from other curtain wall systems by looks alone, but underneath that appearance it packs the technology to protect the lives inside of the building.

The **ConceptWall 50-EP** & **ConceptWall 80-EP** are tested in according to the ISO 16933 standard, classifying up to **EXV 33** and **EXV 15** respectively, enabling use in high-risk buildings like embassies, airports, and power plants, without sacrificing the application of very large transparent surfaces.









## BLAST RESISTANCE



## TECHNICAL CHARACTERISTICS

Variants	ConceptWall 50-EP	ConceptWall 80-EP
Min. visible width	50 mm	80 mm
Rebate height	15 mm	29.5 mm
Glazing method	dry glazing with EPDM	dry glazing with EPDM or structural glue

## PERFORMANCES

ENERGY			
	Thermal Insulation <sup>(1)</sup> EN 12631:2017	Uf-value down to 0.91 W/m <sup>2</sup> .K <sup>(2)</sup>	Uf-value down to 0.73 W/m <sup>2</sup> .K <sup>(2)</sup>
COMFORT			
	Acoustic performance <sup>(3)</sup> EN ISO 10140-3; EN ISO 717-1	$R_w(C;C_{tr}) = 43 (-2;-4)$ dB, depending on glazing type	
	Air tightness, max. test pressure <sup>(4)</sup> EN 12153; EN12152	Up to AE 1950 (1950Pa)	Up to AE 1950 (1950Pa)
	Water tightness <sup>(5)</sup> EN 12155; EN1254	Up to RE 1950 (1950Pa)	Up to RE 1950 (1950Pa)
	Wind load resistance, max. test pressure <sup>(6)</sup> EN 12179; EN 13116	Up to 2400Pa	Up to 2400Pa
SAFETY			
	Blast resistance <sup>(7)</sup> - Hazard rating ISO 16933:2007	C	B/C
	Blast resistance <sup>(7)</sup> - Blast loading Classification ISO 16933:2007	Up to EXV 33	Up to EXV 15

This table shows possible classes and values of performances. Performances depend on the specific combination of profiles and element sizes.

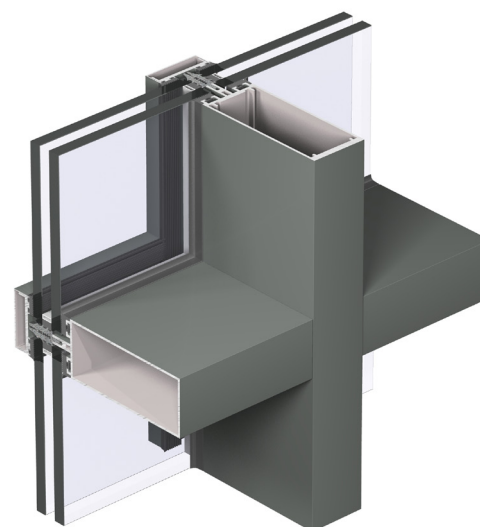
- (1) The Uf-value measures the heat flow. The lower the Uf-value, the better the thermal insulation of the curtain wall.
- (2) Value without screw influence.
- (3) The sound reduction index (R<sub>w</sub>) measures the capacity of the sound reduction performance of the curtain wall.
- (4) The air tightness test measures the volume of air that would pass through a curtain wall at a certain air pressure.
- (5) The water tightness testing involves applying a uniform water spray at increasing air pressure until water penetrates the curtain wall.
- (6) 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.
- (7) Each blast resistance classification corresponds with a mean peak pressure (kPa) and a mean positive impulse (kPa.ms) listed below, which allows for correlation with other blast sources or test standards. Maximum tested glass panel size WxH: 1780x3560mm.

### Blast loading classifications according to EN ISO 16933:2007

Classification	Peak pressure (kPa)	Positive impulse (kPa.ms)
EXV 45	30	180
EXV 33	50	250
EXV 25	80	380
EXV 19	140	600
EXV 15	250	850

### Hazard level according to EN ISO 16933:2007

Hazard level	Security	Hazard
B	Very high	No risk
(Glass breaks but remains completely in the frame, no opening in the glass and no splinters in the room)		
C	High	Minimal risk
(Glass breaks, but remain completely in the frame. Dirt or very small fragments on the window sill or floor are acceptable)		



The system was tested in a specific design defined during R&D, but can be adapted to the specific needs of your project. For project inquiries, please reach out to your local Reynaers representative.