







CS 77 is a high insulation window and door system that offers elevated thermal insulation, stability, and security. The system's HI+ variant achieves UF values down to 1.2 W/m²K and the UF value of a frame/vent section with 115 mm visible width is 1.7 W/m²K.

CS 77 is available in a variety of styles to match your aesthetic needs whilst offering all types of both inward and outward opening windows and doors. The system's performance meets the most severe European standards for fire resistance, water and air tightness and acoustics. Furthermore, CS 77 is available in different burglar resistance levels (RC2 & RC3) making it an extremely secure system.



PERFORMANCES										
ENERGY Thermal Insulation(1) EN ISO 10077-2 COMFORT	Uf-value down to 1.2 W/m²K depending on the frame/vent combination and the glass thickness.									
Acoustic performance (2) EN ISO 140-3; EN ISO 717-1	Rw (C; Ctr) = 36 (-1; -4) dB / 42 (-2; -4) dB, depending on glazing type									
Air tightness, max. test pressure (3) EN 1026; EN 12207	1 (150 Pa)			2 (300 Pa)			3 (600 Pa)		4 (600 Pa)	
Water tightness (4) EN 1027; EN 12208	1A (0 Pa)	2A (50 Pa)	3A (100 Pa)	4A (150 Pa)	5A (200 Pa)	6A (250 Pa)	7A (300 Pa)	8A (450 Pa)	9A (600 Pa)	E900 (900 Pa)
Wind load resistance, max. test pressure(5) EN 12211; EN 12210	1 (400 Pa)		2 (800 Pa)		3 (1200 Pa)		4 (1600 Pa)			Exxx (> 2000 Pa)
Wind load resistance to frontal deflection (5) EN 12211; EN 12210	A (≤ 1/150)			B (≤ 1/200)			C (≤ 1/300)			
SAFETY Burglar resistance (6) EN 1627-1630	RC 1			RC 2			RC 3			
Fire resistance (7) - EN 13501-2, EN 1364-1, EN 1634-1 - NEN 6069					EI EI 60, EW					
Bullet resistance (8) EN 1522	FB 1 FI		B 2 FB 3 FSG		FE	3 4	FB 5 Kalas	FB 6 hnikow		

This table shows possible classes and values of performances. The values indicated in green are the ones relevant to this system.

- (1) The Uf-value measures the heat flow. The lower the Uf-value, the better the thermal insulation of the frame
- (3) 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.

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  (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.

  There are up to five levels of wind resistance (1 to 5) and three deflection classes (A,B,C). The higher the number, the better the performance.

  (6) The burglar resistance is tested by statistical and dynamic loads, as well as by simulated attempts to break in using specified tools.

  (7) The performance is defined by directly exposing the construction to fire in order to determine the stability, thermal insulation and radiation insulation over a certain

- (8) The bullet resistance of the window or door is evaluated for different classes of weapons and ammunition: hand guns, (automatic) rifles and shot guns.

