Disclaimer:

SCHÜCO

1. Facade Information

Profile system:

Facade major mullion:

Major mullion weight:

Facade minor mullion:

Minor mullion weight:

Facade transom:

Transom weight:

Insulating glass

Block distance:

Glass ID	Weight	Makeup

2. Applied Load

Peak velocity pressure(q_p) *kN/m²*

Pressure coefficient (c_p) c_{pe} c_{pi+} c_{pi-}

Horizontal live load (q_H) *kN/m* **Horizontal live load height** *mm*

Dead load	Glass density	Aluminum density	Steel density
	2500 *kg/m³*	2700 *kg/m³*	7800 *kg/m³*
Load factors	Wind load	Horizontal live load	Dead load
	γ_W =	γ_H =	γ_g =

Load combinations

Ultimate Limit States (ULS)	Load combination 1 (LC1)	γ_W*Wind load + 0.7*γ_H*Live load
	Load combination 2 (LC2)	0.6*γ_W*Wind load + γ_H*Live load
	Load combination 3 (LC3)	γ_g*Dead load
Serviceability Limit States (SLS)	Load combination 4 (LC4)	Wind load
	Load combination 5 (LC5)	Dead load

3. Codes and Specifications

[1] DIN EN 1991-1-1, Actions on structures – Part 1-1: General actions – Densities, self-weight, imposed loads for buildings, 2010-12.

[2] DIN EN 1991-1-1, National Annex – Nationally determined parameters, Actions on structures – Part 1-1: General actions – Densities, self-weight, imposed loads for buildings, 2010-12.

[3] DIN EN 1991-1-4, Actions on structures – Part 1-4: General actions – Wind actions, 2010-12.

[4] DIN EN 1991-1-4, National Annex – Actions on structures – Part 1-4: General actions – Wind actions, 2010-12.

[5] DIN EN 1999-1-1, Design of aluminum structures – Part 1-1 General structural rules, 2014-03.

[6]

4. Allowable Deflection

In Out-of-Plane (horizontal) direction, allowable deflection follows

In In-Plane (vertical) direction, allowable deflection is

5. Materials

	Young's modulus (E)	Poisson's ratio (υ)	0.2% apparent limit of elasticity ($\beta_{0.2}$)	Partial ratio for material (γ_M)
Extrusion	70 GPa	0.33		1.1
Reinforcement (Aluminum)	70 GPa	0.33		1.1
Reinforcement (Steel)	210 GPa	0.30		1.1