

TECHNICAL DATA SHEET

STRUCTURAL THERMAL BREAK PLATE

Structural thermal break plates are designed to support and separate load-bearing components in structural joints. They transfer compressive loads between elements while interrupting thermal bridges and preventing direct metal-to-metal contact, thereby eliminating galvanic / contact corrosion between steel parts at connection points such as steel-to-reinforced-concrete joints, façade brackets, balcony slab supports, girder joints and prefabricated element bearings.

Areas of application:

- Supports for precast and cast-in-place reinforced concrete structures;
- Head plate connections (steel-to-concrete and steel-to-steel);
- Façade and curtain wall bracket connections;
- Stair, balcony, parapet and cantilever connections;
- Other structural joints requiring simultaneous load transfer, thermal insulation and corrosion separation.



THERMO X

THERMO X is a load-bearing structural thermal break plate manufactured from high-performance composite. The plate is dimensionally stable, with high compressive strength, low creep and low water absorption. It is supplied with a declared compressive strength $f_{c,k} \geq 200 \text{ N/mm}^2$ (perpendicular to the surface) and a thermal conductivity $\lambda = 0.28 \text{ W/(m·K)}$. Plates are cut into project geometry, including holes, slots, cut-outs and chamfered edges, in accordance with the structural drawing.

INSTALLATION

THERMO X plates shall be installed on surfaces that are flat, clean and free of indentations or protrusions. Before installation, ensure that the contact surfaces (concrete, steel, timber) are clean and free of debris, grease, solvents, ice or oil. The plate shall fully cover the bearing area in accordance with the structural drawing. Bolts, anchors and other connectors must pass through pre-machined holes; do not drill through an installed plate without prior consultation. Ensure correct orientation when chamfered, slotted or shaped edges are specified. For multi-layer or composite assemblies, follow the project specific detail.

SIZES, SHAPES AND DIMENSIONAL TOLERANCES

The maximum standard sheet format is 1220 × 2040 mm; other formats are available on request. Standard plate thicknesses are 10, 15 and 20 mm. Non-standard thicknesses up to 50 mm are available on special order.

Tolerances:

- Length $\pm 5 \text{ mm}$;
- Width $\pm 3 \text{ mm}$;
- Thickness $\pm 0.5 \text{ mm}$;
- Hole position $\pm 1 \text{ mm}$.

Available plate shapes with:

- Chamfered edge;
- Rectangular hole;
- Round hole;
- Slot;
- Rectangular cut-out;
- Cut corner;
- Oblique cut.

TECHNICAL PROPERTIES

Property	Value	Unit
Material	High-performance composite	—
Density	2.00	g/cm ³
Declared compressive strength $f_{c,k}$ (⊥)	≥ 200	N/mm ²
Modulus of elasticity (compression)	≈ 25 000	N/mm ²
Tensile strength	≥ 200	N/mm ²
Thermal conductivity λ	0.28	W/(m·K)
Service temperature range	−40 to +100	°C

Values shown are declared minimum / typical values for serial production. Project-specific testing can be arranged on demand.

TENDER / SPECIFICATION TEXT**TENDER / SPECIFICATION TEXT**

Supply and installation of THERMO X load-bearing thermal break plate between steel and reinforced concrete components. The plate shall be manufactured from high-performance composite, with a declared compressive strength $f_{c,k} \geq 200$ N/mm² (perpendicular to the surface) and a thermal conductivity $\lambda = 0.28$ W/(m·K).

Plate thickness (10 / 15 / 20): _____ mm

Plate format a × b: _____ mm

Holes / cut-outs: _____ pcs

Quantity: _____ pcs

STORAGE AND HANDLING

Store THERMO X plates flat on a clean, dry surface, protected from direct sunlight and mechanical damage. Keep packaging closed until installation. There is no shelf-life limitation under proper storage conditions. Handle with care to avoid sharp impacts on edges and corners.