

PolTherma CS X

I. GENERAL CHARACTERISTICS

a. Purpose

PolTherma CS X is a specialized wall sandwich panel with a core made of rigid polyurethane foam PU and it is installed onto the support construction with the use of self-drilling screws (so called visible fastening). It's allowed to install the panels onto the steel, reinforced concrete and wooden construction in both horizontal and vertical layout. PolTherma CS X is dedicated to use as an envelope of cooling chambers, freezers. Additionally to cold storage dedication, the CS Series is suitable to all of the applications where thermal properties of wall is most important..

Wall panels PolTherma CS X should be used in accordance to a technical design prepared for a particular building, taking into consideration technical parameters of the panels declared by the producer. Application of PolTherma CS X must be in compliance with existing regulations and norms, including the legal authorities' guides and requirements. Cooling applications are when the temperature on one side of the partition is to be maintained below +4 OC (constant or controlled temperature). For correct installation of the CS X panel, it is required to use butyl mass in the panel's joint at least on the warmer side of the partition.

b. Cechy charakterystyczne

PolTherma CS X panels are characterized by very good thermo insulation, and air and water tightness plus easiness in installation in both vertical and horizontal layout. CS X panels don't have the side gasket in the panels' joint.

PolTherma CS X panels are available in vary modular widths and thickness:

- modular width:	1000*, 1100*, 1130*, 1150 (standard one), 1200*
- thicknesses:	120, 140, 160, 180, 200 mm

* optional width, available on individual request

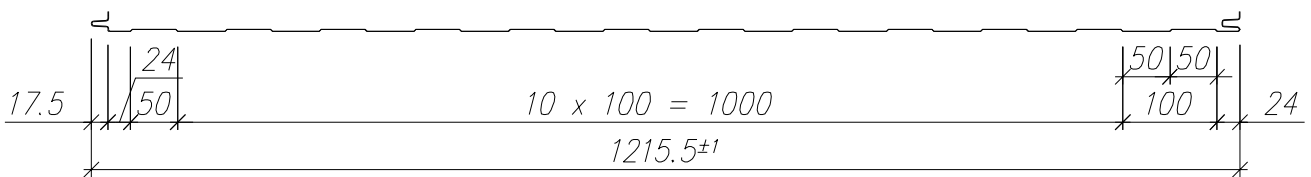
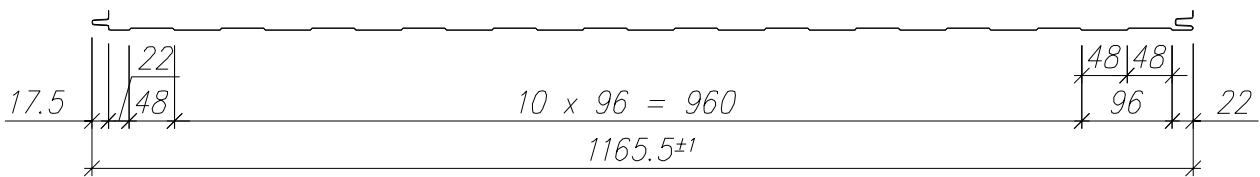
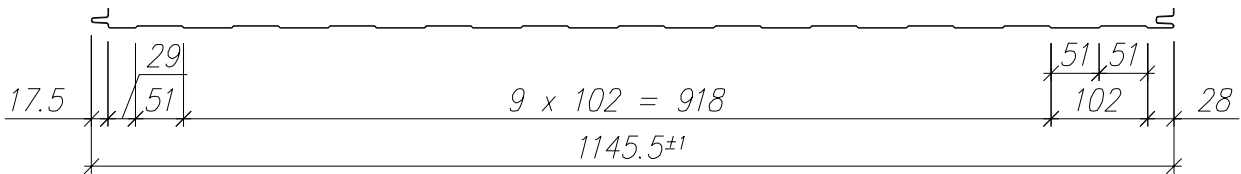
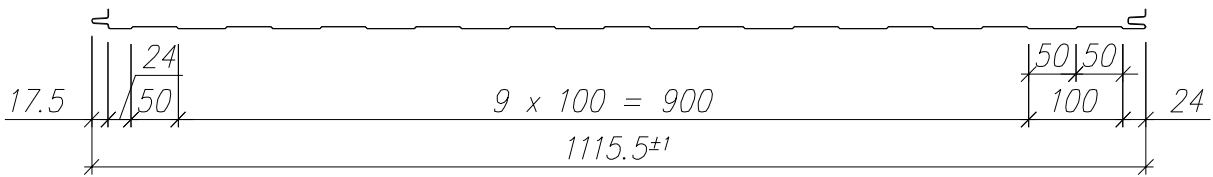
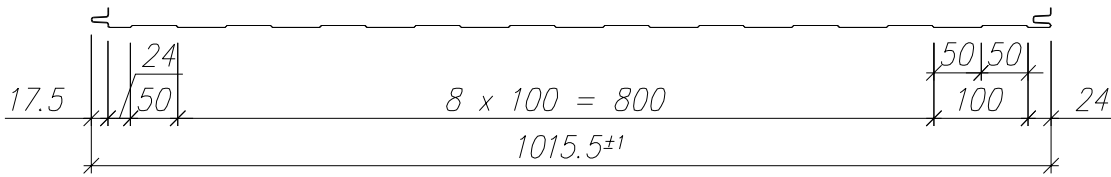
I. PHYSICAL PROPERTIES, TECHNICAL DATA

a. Dimensions

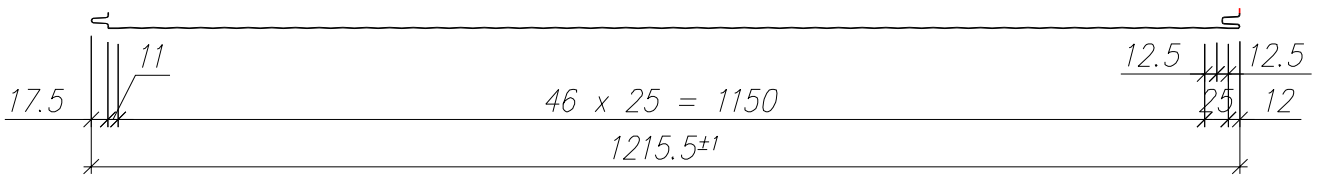
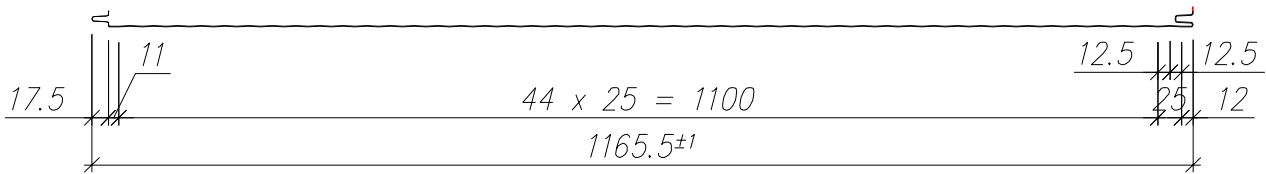
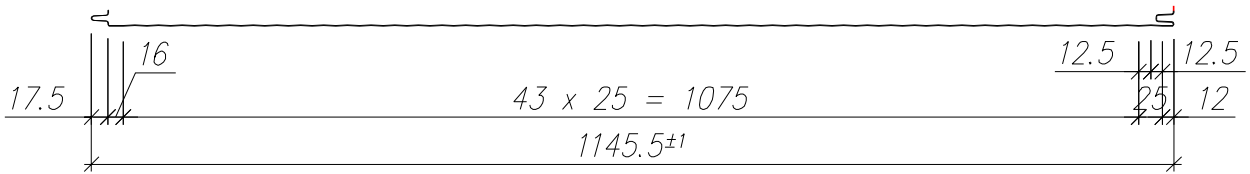
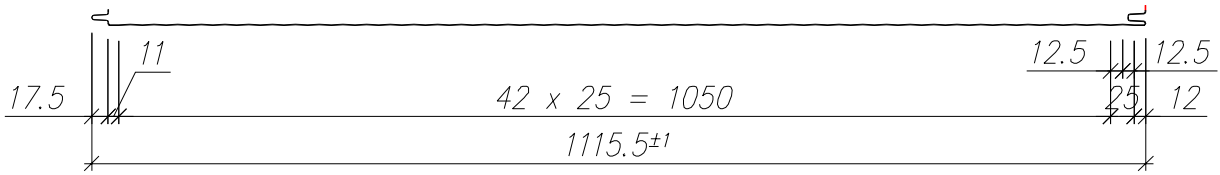
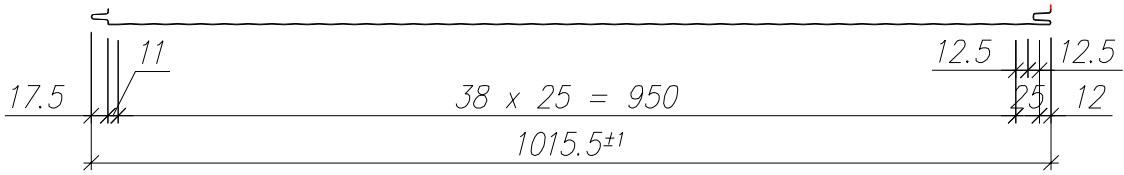
MODULAR WIDTH (COVERING AREA) [mm]:	1000, 1100, 1130, 1150 , 1200
TOTAL WIDTH [mm]:	1017 (1000), 1117 (1100), 1147 (1130), 1167 (1150) , 1217 (1200)
AVAILABLE LENGTHS [mm]:	minimum: standard 2100 maximum: 18 500
AVAILABLE THICKNESSES (CORE) [mm]:	120; 140, 160; 180, 200

b. Outer facing profiling

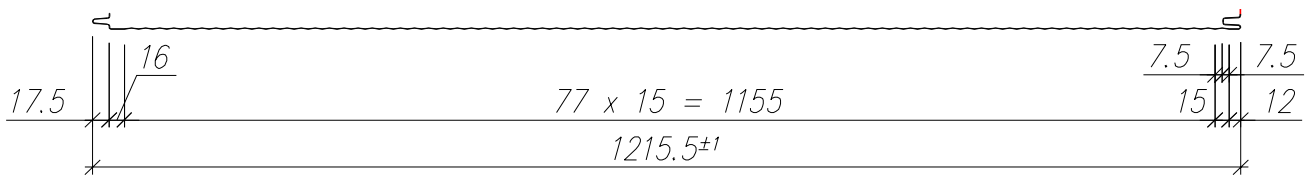
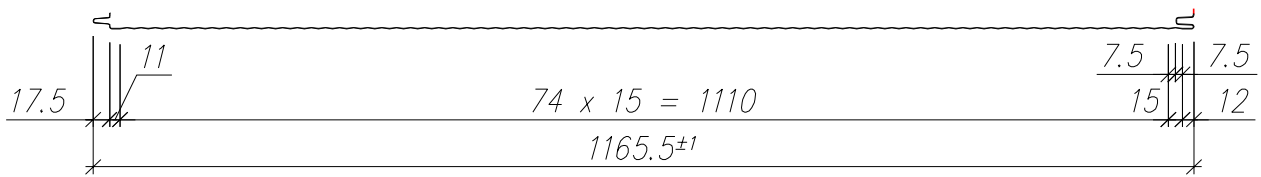
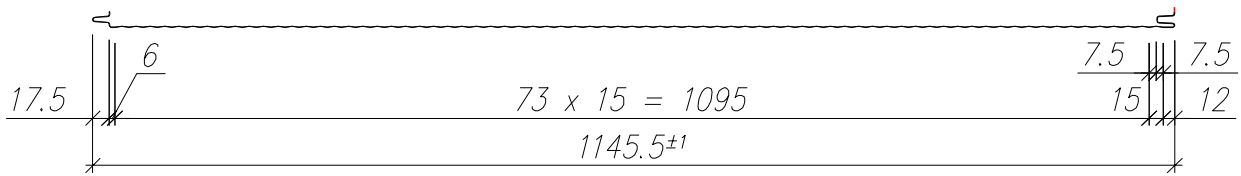
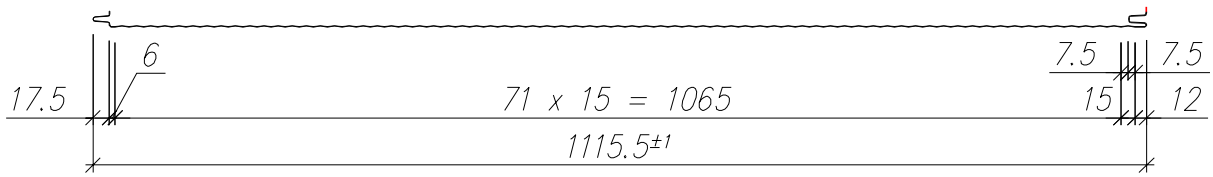
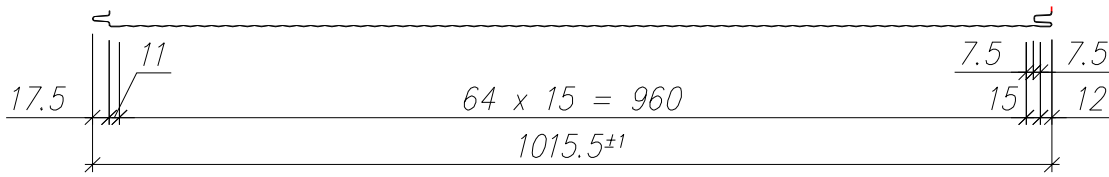
- Linear (L):



- Micro (M):

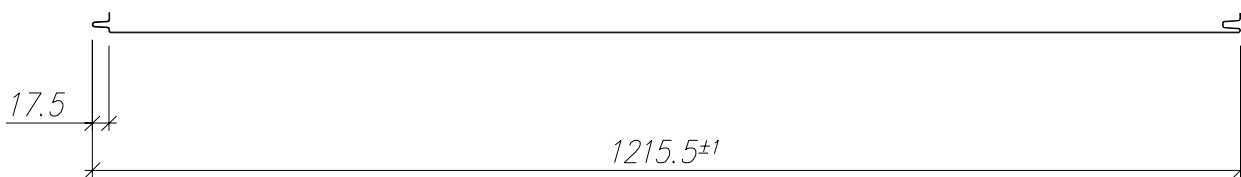
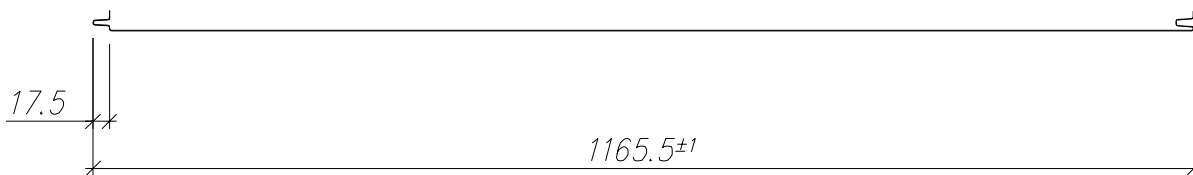
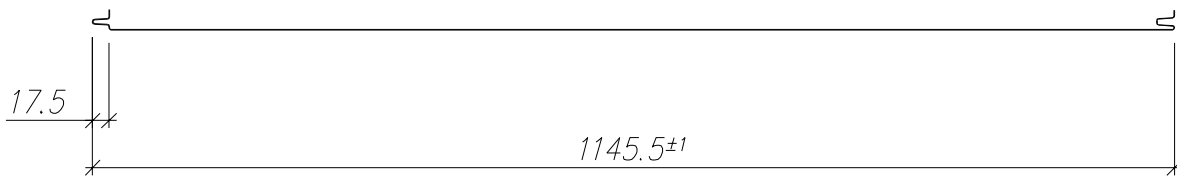
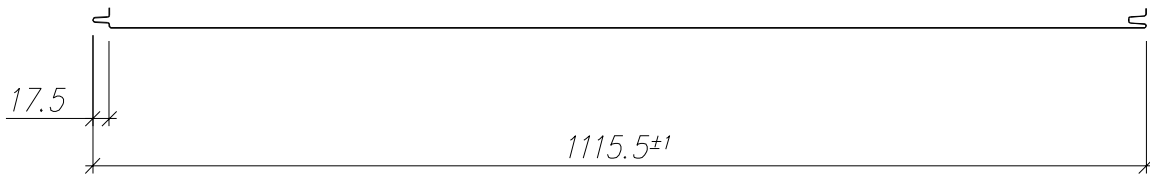
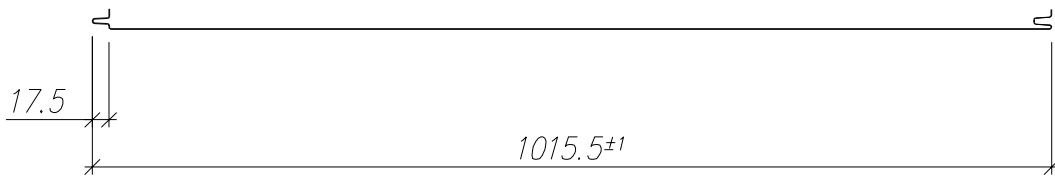


- Super-micro (SM):



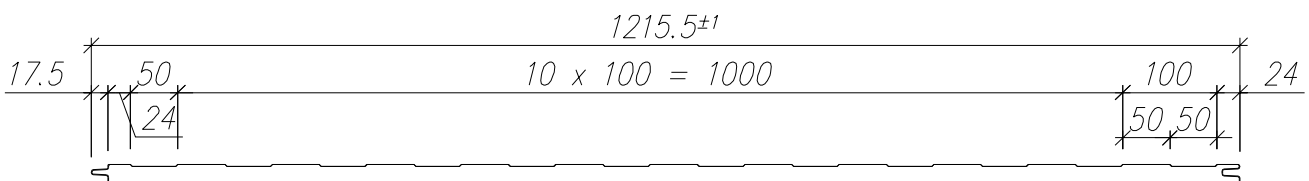
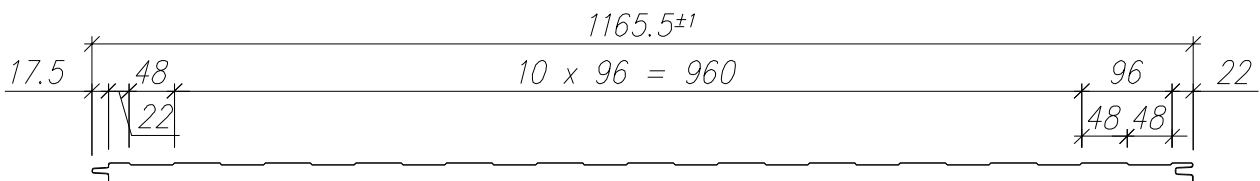
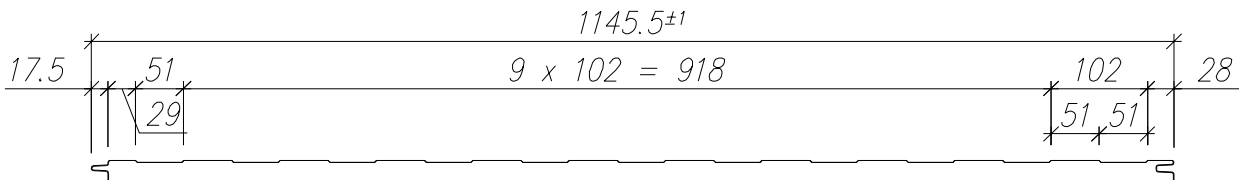
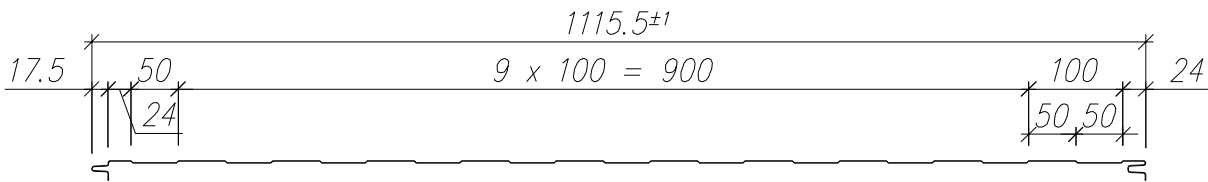
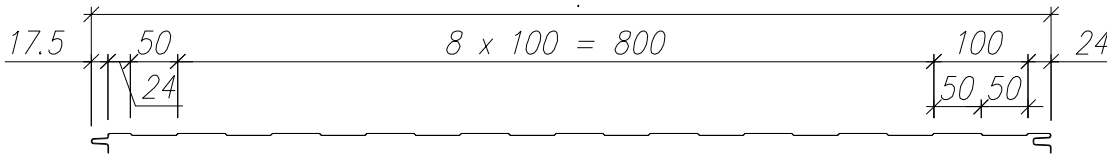
Option for claddings of thickness $\geq 0,5\text{mm}$:

- Flat (P):

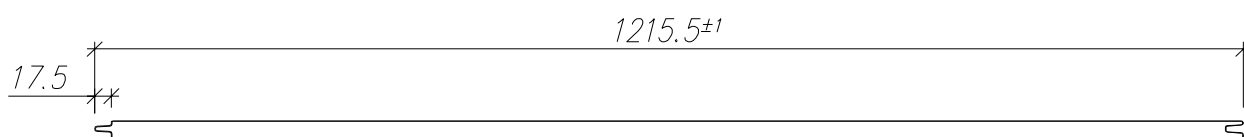
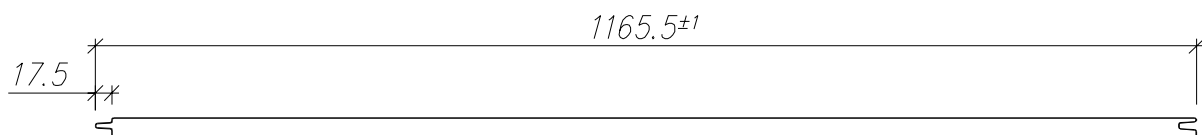
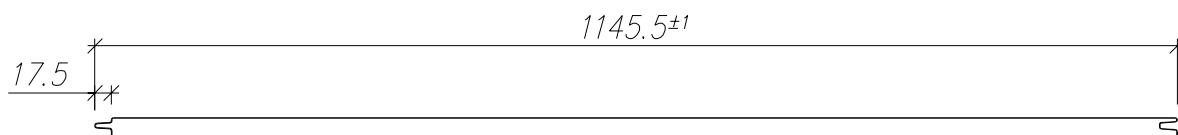
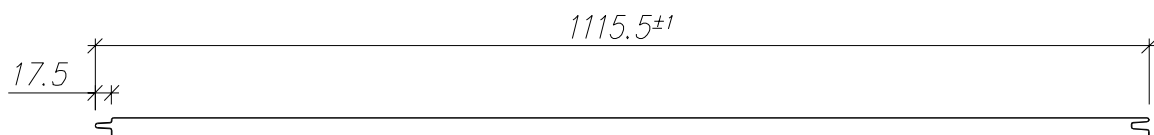
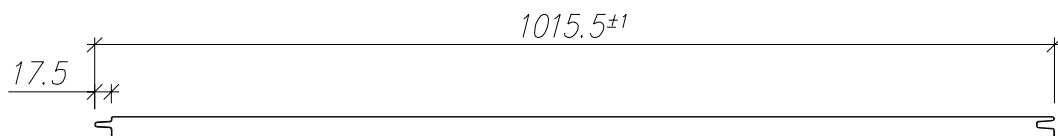


b. Inner facing profiling

- Linear (L):



- Flat (P):



d. The panel joint

Aluminum tape, paper tape etc. is not used along the edges of the panels.

e. Masa

PANEL THICKNESS [mm]	MASS 1 m ² [kg]
120	12,6
140	13,3
160	14,1
180	14,8
200	15,6

f. Facings

Galvanized coated steel, S220-S320 GD grade (usually S280 GD) acc. PN-EN 10147 thickness 0,5mm (outer skin) and 0,5mm (inner skin) accordingly to standard PN-EN 10143.

g. Core

Rigid PU foam PIR, $\lambda_D = 0,022$ W/(m·K) w temp. +10°C including aging, accordingly to standard PN-EN 14509:2013-12

h. Thermo insulation

PANEL THICKNESS [mm]	U _{d,s} [W/(m ² ·K)] for profilings: L, M, SM, P
120	0,18
140	0,15
160	0,13
180	0,12
200	0,11

i. Acoustic parameters

REAL ACOUSTIC INSULATION:	R _w (C; C _{tr}) 26 (-3; -4) dB
SOUND ABSORPTION:	$\alpha_w = 0,15$

j. Tightness

AIR PERMABILITY:	$\leq 0,10$ m ³ /m ² /h
WATERPROOFNESS:	A class
VAPOR TRANSMITTANCE:	Impermeable

k. Fire resistance

NPD

l. Reaction to fire

Klasa B-s2, d0

m. Fire spreading rate

NRO

- From the inside acc. fire spreading classes
- From the outside test acc. PN-B-02867:2013-06

n. Durability

Fulfills for all colour groups

o. Corrosive tests

Basic anticorrosion protection (depending on delivery batch): AZ100, AZ140, AZ150, ZM100, ZM120, Z225 in accordance with PN-EN 10147.

Possible to use in environments A1, A2, A3 inside the building and C1, C2, C3 inside and outside of a building for standard coatings SP25 acc. PN-EN 10169. Remaining corrosive requirements need other, individual coatings.

p. Loads

Load charts have been prepared for all PolTherma CS X panels fastened directly onto a support construction, with the use of self-drilling screws that go throughout the panel. The self-drilling screws' characteristic load capacity 2,2 kN/pc. The charts are available on our website www.europanel.pl.

q. Dimension tolerance

THICKNESS:	+/- 2%
FLATNESS:	L=0,6/1,0/1,5 mm for L=200/400/>700 mm
LENGTH:	L=±5/10 mm for lengths ≤ 3000/> 3000 mm
MODULAR WIDTH:	W3 = ± 2 mm
RECTANGULARITY:	≤ 0,6%*modular width = 6,6 mm
RECTILINEARITY:	1,0 mm/m, max 5,0 mm
LONGITUDINAL BENDS:	2,0 mm/m, max 10 mm
CROSSWISE BENDS:	8,5 mm/m

III. ADDITIONAL INFORMATION

a. Documentation and certificates

Declaration of Performance Properties CE