PolTherma TS

I. GENERAL CHARACTERISTICS

a. Application

PolTherma TS is a 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 is allowed to install the panels onto the steel, reinforced concrete and wooden constructions in both horizontal and vertical layout. PolTherma TS is dedicated as a universal outside wall material in buildings of versatile purposes ranging from agricultural buildings, through warehouses to industrial buildings as well as partition walls and suspended ceilings.
PolTherma TS panels 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 TS must be in compliance with binging regulations and norms, including the guidelines from the Infrastructure Ministry Directive from 12 April 2002 concerning the location and the technical conditions that a building should fulfill. (Dz. U. nr 75/2002, position. 690 with the later changes).

b. Characteristics

PolTherma TS panels are characterized by very advantageous durability and acoustic parameters, very good thermo insulation and air and water tightness, and easiness in installation in both vertical and horizontal layout.
Depending on the thickness of the panel, there are three options regarding the shape of the joint:

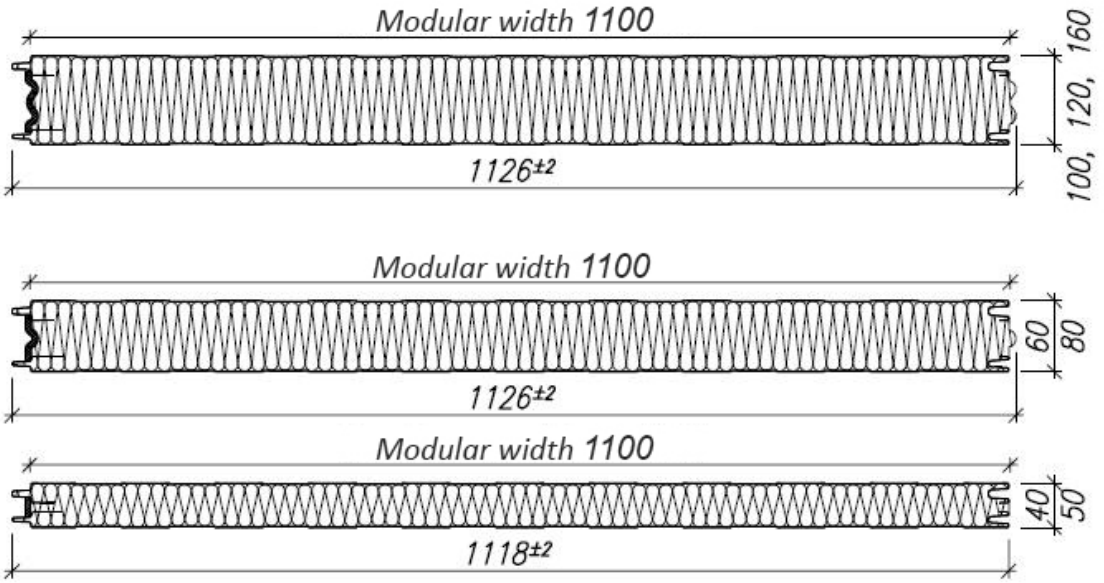
- **Flat** for thicknesses:	40 and 50mm (TS40, TS50)
- **Bulge** for thicknesses:	60 and 80mm (TS60, TS80)
- **Double bulge** for thicknesses:	100, 120 and 160 mm (TS100, TS120, TS 160)

II. PHISICAL PROPERTIES, TECHNICAL DATA

a. Dimensions

MODULAR WIDTH (COVERING AREA) [mm]:	1100
TOTAL WIDTH [mm]:	1118 (TS40, TS50); 1126 (TS60, TS80, TS100, TS120, TS160)
AVAILABLE LENGTHS [mm]:	Minimum: standard 2800, shorter sections may be cut for an extra fee
	Maximum: 12000 (for panels TS40 and TS50) and 18000 for the remaining thicknesses
AVAILABLE THICHNESSES (CORE) [mm]:	40; 50; 60; 80; 100; 120; 160; 200

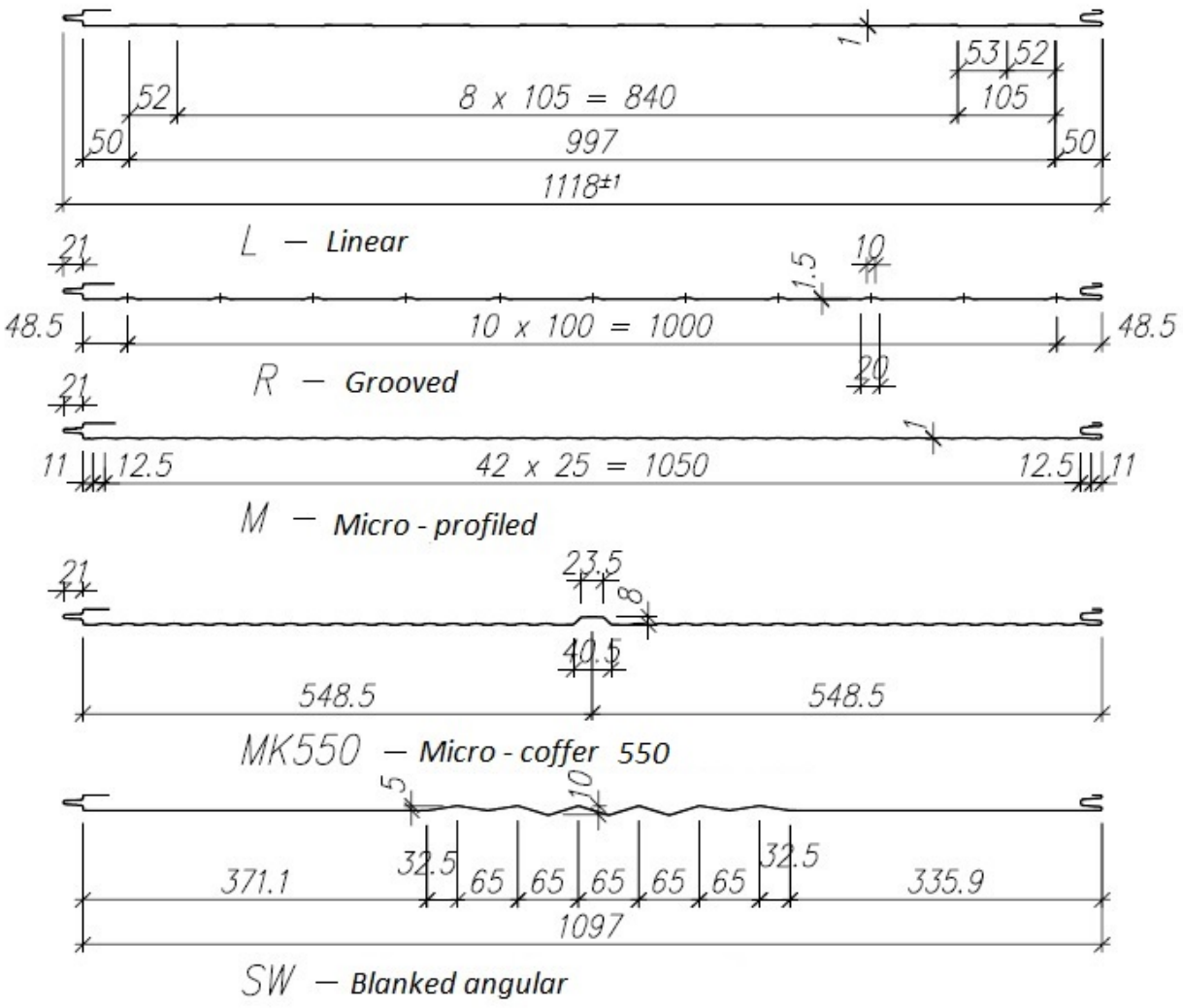
PolTherma TS



b. Outer facing profiling

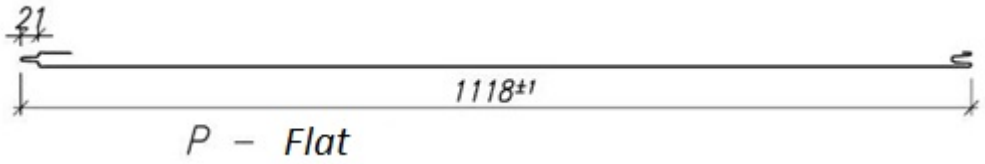
Standard:

- Micro-profiling (M), Linear (L), Grooved (R), Blanked angular (SW), Micro-Coffer 550 (MK550)



Option:

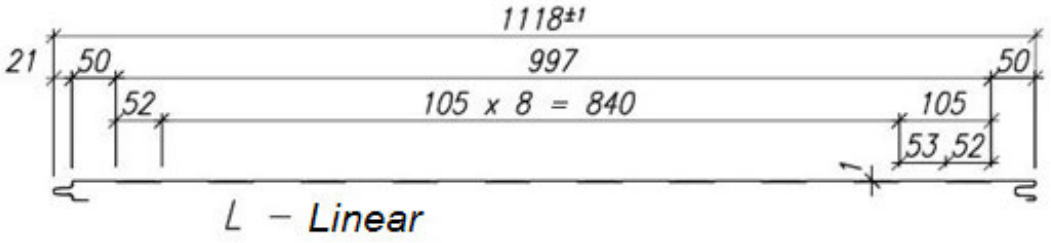
- Flat (P)



c. Inner facing profiling

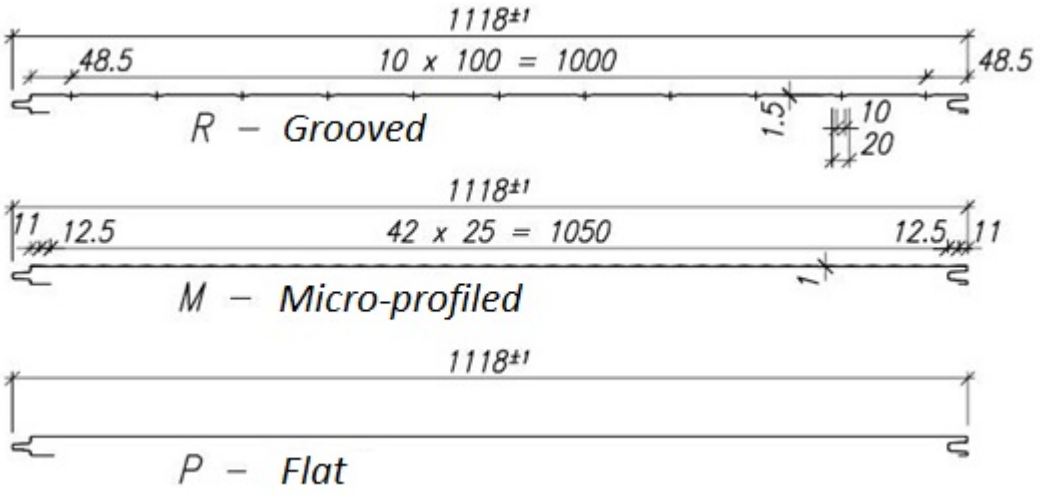
Standard:

- Linear (L)



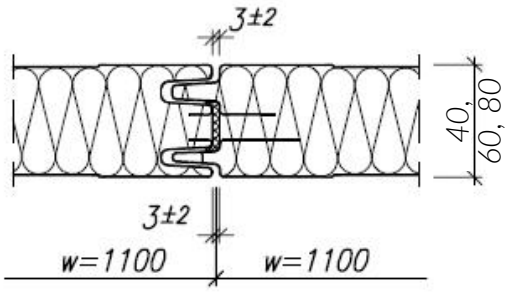
Option:

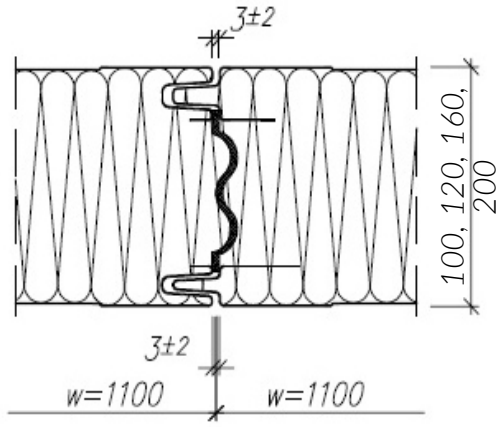
- Grooved (R), Micro-profiled (M), Flat (P)



d. The panel joint

An aluminum film is applied along one edge of the panel, along the second edge of the panel a polyurethane seal reinforced with an aluminum film is applied.





e. Mass

PANEL THICKNESS [mm]	MASS 1 m^2 [kg]
40	10,4
50	10,8
60	11,2
80	11,9
100	12,7
120	13,4
160	15,1
200	16,5

f. Facings

Steel sheet 0,5 mm thick (inner and outer facing)

g. Core

Europan PU Wall System Core — rigid PU foam with declared density 38±3 kg/m³ and thermal conductivity coefficient λ_D = 0,022 W/(m·K) at +10°C including aging, according to EN 14509:2013-12

h. Thermo insulation

PANEL THICKNESS [mm]	Thermal transmittance coefficient $U_{d,s}$ [W/(m²·K)] for profiling: M, R, L, P	Thermal transmittance coefficient $U_{d,s}$ [W/(m²·K)] for profiling: SW, MSW	Thermal transmittance coefficient $U_{d,s}$ [W/(m²·K)] for profiling: K, MK550
40	0,62	0,77	0,75
50	0,53	0,62	-
60	0,39	0,45	0,44
80	0,29	0,32	0,31
100	0,23	0,25	0,24
120	0,19	0,20	0,20
160	0,14	0,15	0,15
200	0,11	0,12	0,12

i. Acoustic parameters

REAL ACOUSTIC INSULATION:	$R_w(C; C_{tr})$ 26 (-3; -4) dB
SOUND ABSORBTION:	α_w = 0,15

j. Tightness

AIR TRANSMITTANCE:	≤0,10 $m^3/m^2/h$
WATERPROOFNESS:	Class A
VAPOR TRANSMITTANCE:	Not transmitted

k. Fire resistance

PolTherma TS panels 80, 100, 120 and 160 mm thick received the following classification regarding the fire resistance
- external walls tested from inside: EI 15 (i→o) / E 15 (i→o) / EW 20 (i→o) for support spacing 4,00 m (vertical and horizontal layout)
- external walls tested outside: EI 15-ef (o→i) / E 30-ef (o→i) / EW 30 -ef (o→i) for support spacing 4,00 m (vertical and horizontal layout) and E 15-ef (o→i) for support spacing 5,60 m (vertical layout V)

l. Reaction to fire

Class B-s2, d0

m. Fire spreading rate / Fire resistance of the roof to outside fire

NRO from outside

n. Durability

Met for all color groups

o. Corrosive tests

Possible to use in environments A1, A2, A3 inside a building and C1, C2, C3 inside and outside of a building

p. Loads

Load charts have been prepared for all PolTherma TS 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 is 2,2 kN/pc.
The charts are available on our website www.europanels.pl.

q. Dimension tolerance

THICKNESS:	± 2 mm for thickness up to 100 mm and +/- 2% for thickness >100 mm
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
Hygienic Certificate

IV. TECHNICAL DRAWINGS – FLASHINGS AND RECOMMENDED SOLUTIONS

Available on our website www.europanels.pl.