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 construcon 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 construcons in both horizontal and vercal 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 partion walls and suspended ceilings.
PolTherma TS panels should be used in accordance to a technical design prepared for a parcular building, taking into consideraon technical parameters of the panels declared by the producer. Application of PolTherma TS must be in compliance with binging regulaons and norms, including the guidelines from the legal authorities.

b. Characteristics

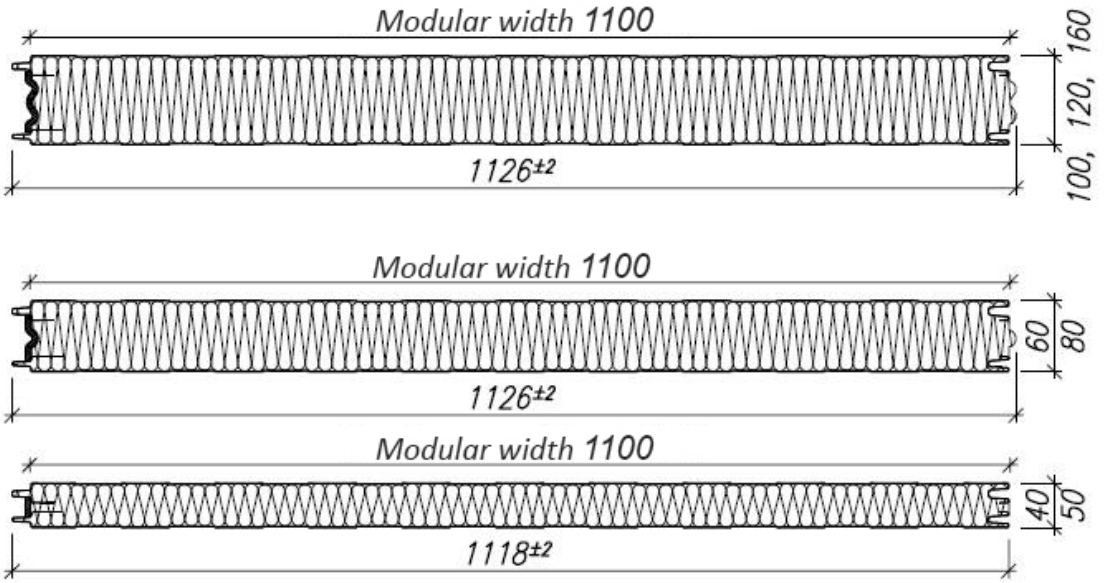
PolTherma TS panels are characterized by very advantageous durability and acousc parameters, very good thermo insulaon and air and water tightness, and easiness in installaon in both vercal and horizontal layout. Depending on the thickness of the panel, there are two options regarding the shape of the joint:

- **Flat** for thicknesses:	40, 50, 60 and 80 mm (TS40, TS50, TS60, TS80)
- **Double bulge** for thicknesses:	100, 120, 160 and 200 mm (TS100, TS120, TS 160, TS200)

II. PHISICAL PROPERTIES, TECHNICAL DATA

a. Dimensions

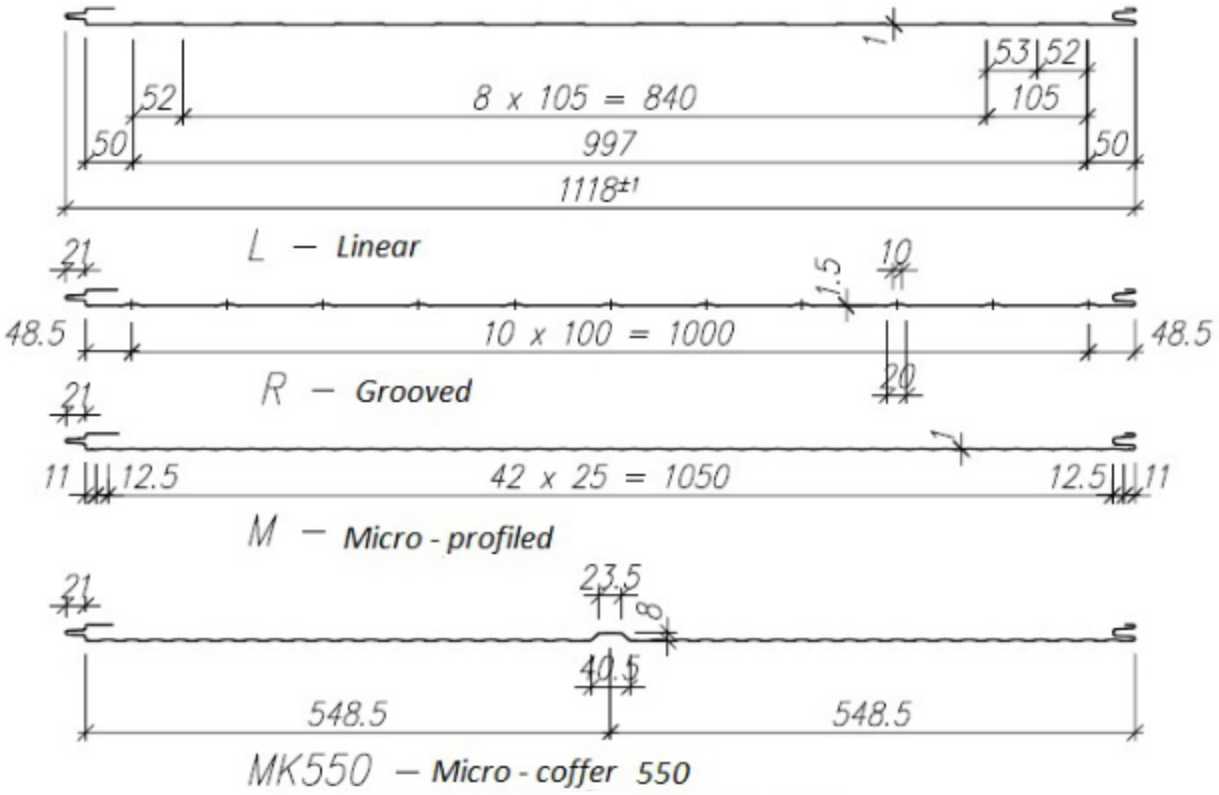
MODULAR WIDTH (COVERING AREA) [mm]:	1100
TOTAL WIDTH [mm]:	1118 (TS40, TS50); 1126 (TS60, TS80, TS100, TS120, TS160, TS200)
AVAILABLE LENGTHS [mm]:	Minimum: standard 2800, shorter sections may be cut for an extra fee
	Maximum: 12000 (for panels TS40 and TS50) and 18000 for the remaining thicknesses
AVAILABLE THICHNESSES (CORE) [mm]:	40; 50; 60; 80; 100; 120; 160; 200



b. Outer facing profiling

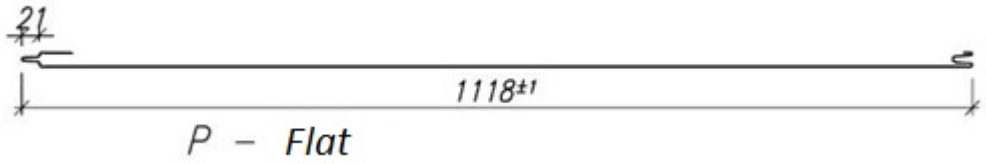
Standard:

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



Option:

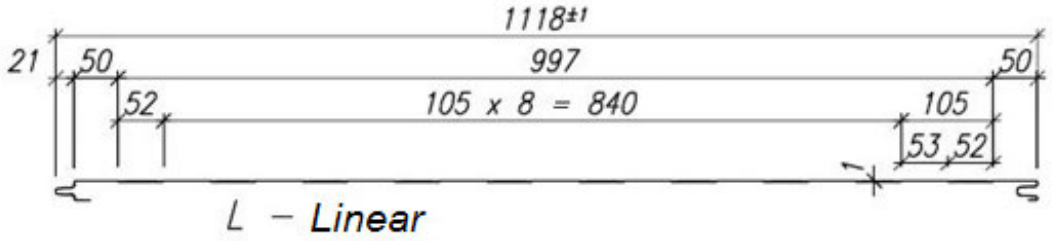
- Flat (P)



c. Inner facing profiling

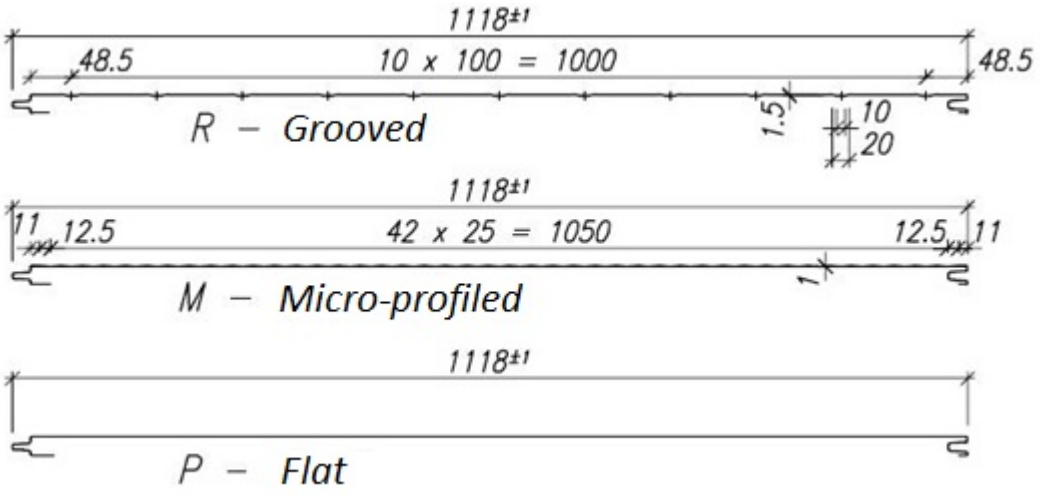
Standard:

- Linear (L)



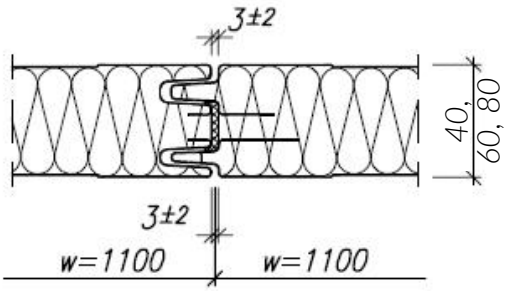
Option:

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

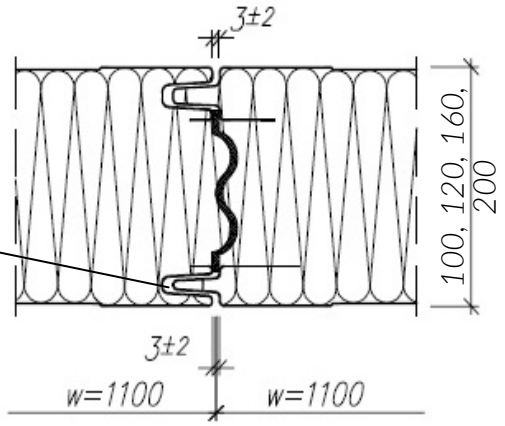


d. The panel joint

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.



Promat Promaseal AG for EI 30 (from 100 mm on)



e. Mass

PANEL THICKNESS [mm]	MASS 1 m^2 [kg]
40	9,5
50	9,9
60	10,3
80	11
100	11,8
120	12,6
160	14,1
200	15,6

f. Facings

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

g. Core

Rigid PIR foam with declared density 38±3 kg/m³ and thermal conducvity 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: K, MK550
40	0,58	0,71
50	0,45	0,53
60	0,37	0,42
80	0,28	0,3
100	0,22	0,24
120	0,18	0,20
160	0,14	0,14
200	0,11	0,11

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

Partitions built with PolTherma TS panels from 100 mm on received the following classificaon regarding the fire resistance:
- external walls: EI 30 (i ↔ o) / EW 30 (i ↔ o) max span 7,5 m (horizontal layout)
- partition walls: EI 45-ef (o → i) / EW 30-ef (o → i) max span 7,5 m (horizontal layout)

l. Reaction to fire

B-s2, d0 (40 - 80 mm)
B-s1, d0 (from 100 mm on)

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

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.