PolTherma PS

I. GENERAL CHARACTERISTICS

a. Application

PolTherma PS is a wall sandwich panel with a core made of rigid polyurethane foam PUR or PIR and it is installed onto the support construction with the use of fasteners in an invisible to see way (so called invisible fastening). It is allowed to install the panels onto the steel, reinforced concrete and wooden constructions. PolTherma PS is dedicated as wall material in buildings of versatile purposes ranging from agricultural buildings, through warehouses to industrial buildings.

PolTherma PS 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 PS 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).

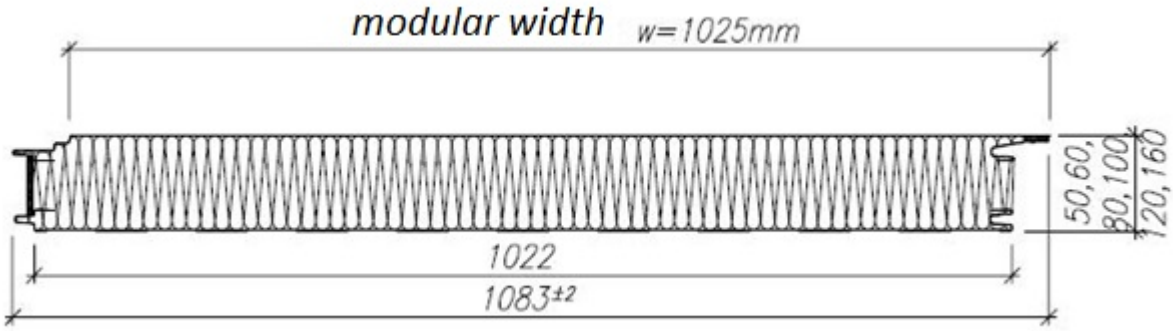
b. Characteristics

PolTherma PS panel is characterized by its above-average modular width, which is 1025mm, very advantageous acoustic and durability parameters, very good thermo insulation and air and water tightness, and easiness in installation in both vertical and horizontal layout. The biggest advantage of PolTherma PS panels is the invisible fastening method, which allows to preserve the elegance and the modern style of a façade, especially in the vertical layout of the panels.

II. PHISICAL PROPERTIES, TECHNICAL DATA

a. Dimensions

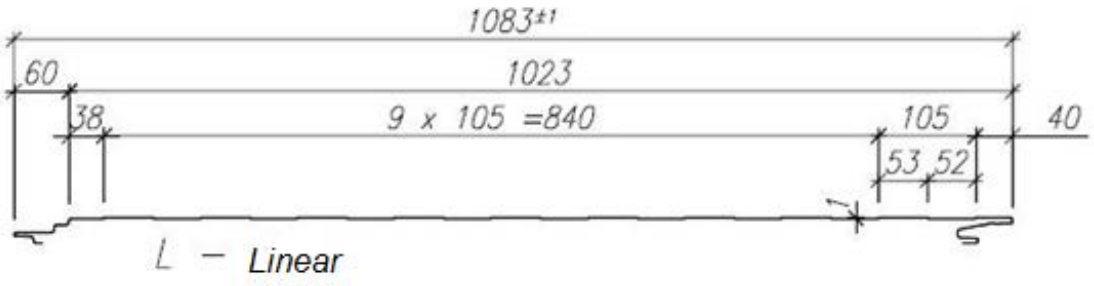
MODULAR WIDTH (COVERING AREA) [mm]:	1025
TOTAL WIDTH [mm]:	1083
AVAILABLE LENGTHS [mm]:	minimum: standard 2800, shorter sections may be cut for an extra fee
	maximum: 12000 (for PS50 panel) and 18000 for the remaining thicknesses
AVAILABLE THICHNESSES (CORE) [mm]:	50; 60; 80; 100; 120; 160



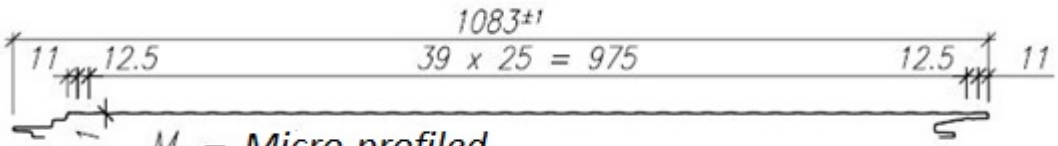
b. Outer facing profiling

Standard:

- Micro-profiled (M), - Linear (L)



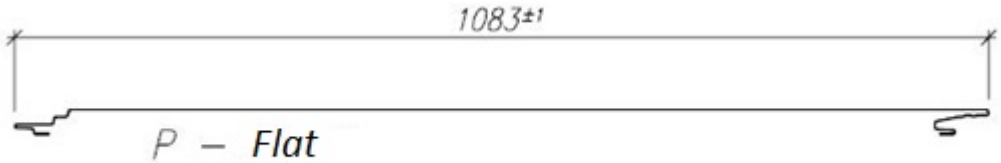
L – Linear



M – Micro-profiled

Option:

- Flat (P)

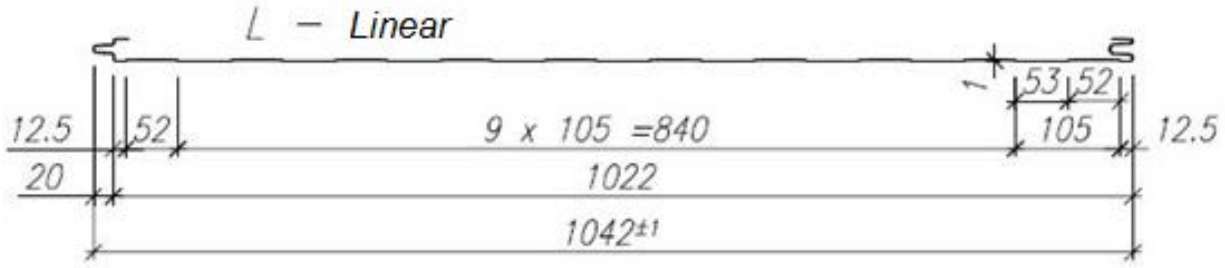


P – Flat

c. Inner facing profiling

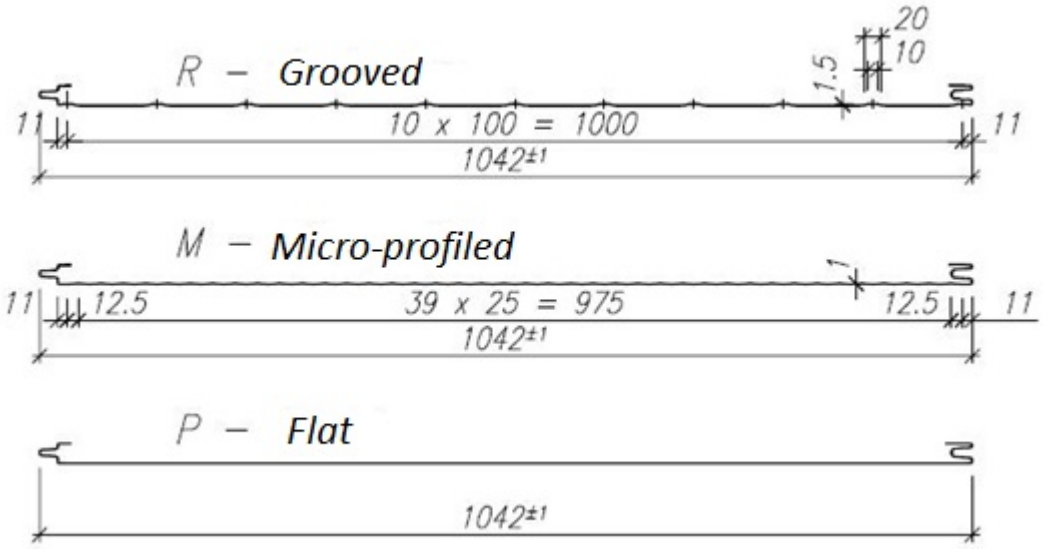
Standard:

- Line (L)



Option:

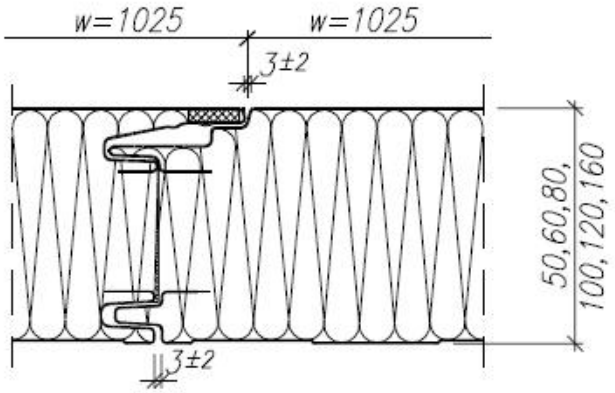
- Grooved (R), Micro-profiled (M), Flat (P)



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.

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e. Mass

PANEL THICKNESS [mm]	MASS 1 m^2 [kg]
50	11,1
60	11,5
80	12,3
100	13,0
120	13,8
160	15,3

f. Facings

Steel sheet 0,5 mm thick (outer facing) and 0,5 mm or 0,4mm (inner facing)

g. Core

Rigid polyurethane foam type PUR with density $38^{\pm 2}$ kg/m^3, thermal conductivity coefficient at +10°C temperature (declared value) $\lambda_{d+10^\circ C}$ = 0,021 W/(m*K)

h. Thermo insulation

PANEL THICKNESS [mm]	U (W/m^2*K) for walls
50	0,43
60	0,36
80	0,27
100	0,22
120	0,18
160	0,13

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 PS panels 80, 100, 120, 160 mm thick received the following classification regarding the fire resistance
- external walls tested inside: EI 15 (i→o) / E 15 (i→o) / EW 20 (i→o) for support spacing up to 4,00 m (horizontal and vertical layout) and E 15 (i→o) for support spacing up to 5,2 m (vertical layout)
- external walls tested outside: EI 15-ef (o→i) / E 15-ef (o→i) / EW 20-ef (o→i) for support spacing up to 4,00 m (vertical and horizontal layout)

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 PS panels fastened directly onto a support construction with the use of a set of fasteners which characteristic load capacity is 7,0 kN/set. The set of fasteners includes load distributor W01, W02 or W03 and two self-drilling screws that go throughout the panel.
The charts are available on our website www.europanels.pl.

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.