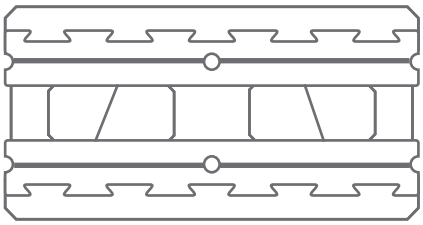
ENERGY UPGRADE

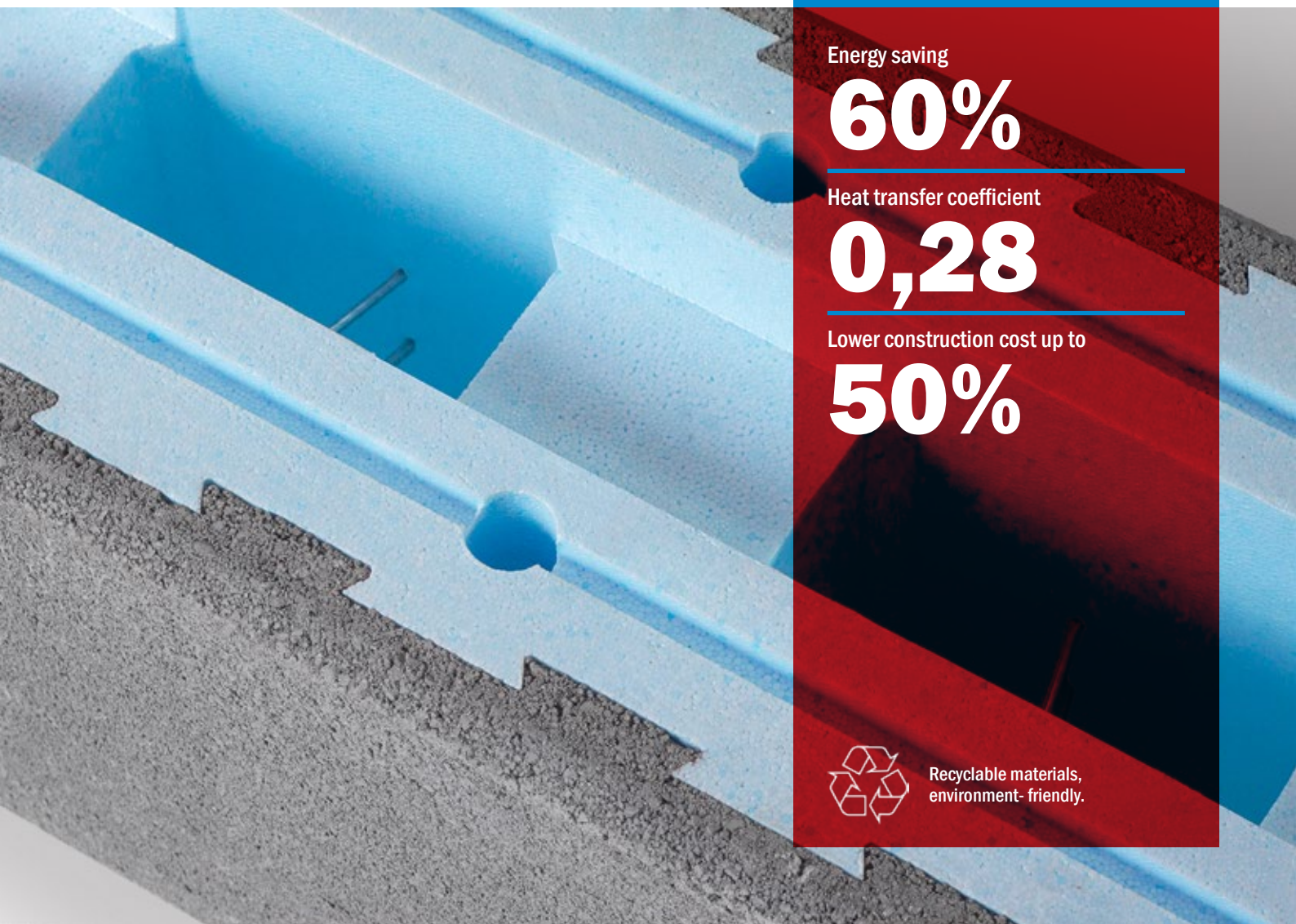
THERMOPAK
CONTEMPORARY THERMAL INSULATING SYSTEMS



Exterior Wall Building Block

BSP

Economy, quality, reliability for a lifetime!

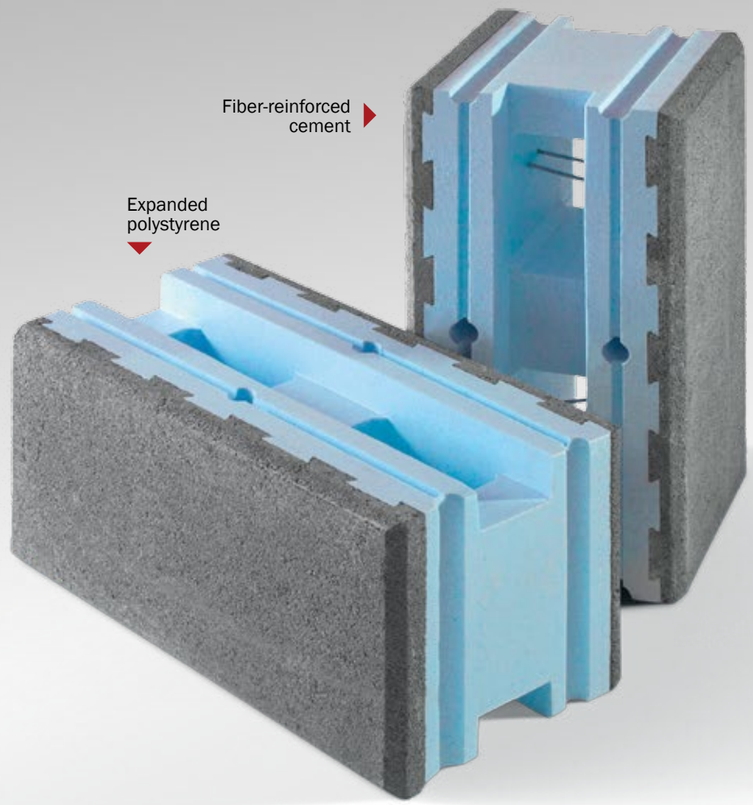


Energy saving
60%

Heat transfer coefficient
0,28

Lower construction cost up to
50%

Recyclable materials, environment- friendly.



BSP
Exterior Wall Building Block

BSP exterior wall building block of THERMOPAK is the epitome of innovationin the field of construction and the ideal solution to ensure maximum energy saving through a resilient and functional construction of external walls for your building.

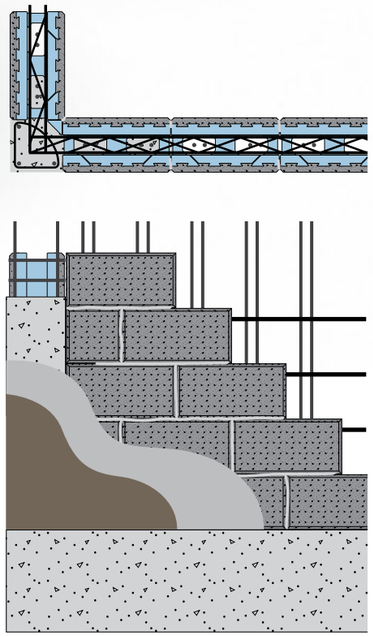
Energy saving
60%

Heat transfer coefficient
0,28

Lower construction cost up to
50%

This innovative product is a Greek patent, unique in the construction field, and is exclusively available by Papailias Constructions. Its low cost, which reaches up to 50% of conventional construction, the low heat transfer coefficient (U= 0,28), resulting in excellent thermal and sound insulation (up to 60% energy saving) combined with increased durability and seismic resistance, makes it an ideal choice for the construction of the exterior wall of every building.

Recyclable materials,
environment- friendly.



Thermopak BSP

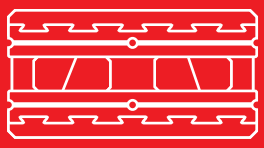
In response to modern needs for energy saving, THERMOPAK created an alternative building system of reinforced (exterior) wall with high efficiency which provides savings up to 60% compared to a conventional construction with bricks, with inversely proportional costs, which are up to 50% smaller, to a conventional one. BSP structural insulating blocks are used for the construction of your building's exterior walls and stand out for their unique properties and application flexibility.

Externally, it consists of 2.5cm two-sided integrated fiber-reinforced cement, while the interior contains two layers of blue self-extinguishing EPS 120 insulation. Between the two insulating layers it has reinforced gravel concrete. These materials, which are ecologically and environmentally friendly, offer maximum energy efficiency while preventing the growth of microorganisms and repel rodents. Through the use of structural insulating BSP blocks, we can achieve thermal and acoustic insulation up to 60% greater compared to a conventional structure, while the fact that the final construction is reinforced with steel bars both horizontally and vertically, results to it being two times more robust, durable and anti-seismic!

Our company holds a patent on the innovative BSP exterior wall building block, while it has ISO 9000 and ISO 14.000 certifications for its building systems and products.

Installation Procedure/ Building

The installation procedure of the insulating block is simple and fast. In order to start building, a concrete base is required with holes along its perimeter for the placement of the steel bars (vertical reinforcement). We place the insulating blocks in line and conclude with the reinforcement. We repeat the process until the fourth row and then we pour concrete. The procedure is continued, leaving the necessary openings for door and window frames until we reach the desired height. Finally the roof slab's molding and concrete pouring is done. At this stage our construction is ready for use, since plastering or painting is not necessary. The blocks are available in dimensions 25 x 25 x 50 cm.



Exterior Wall Building Block

BSP

ADVANTAGES

- Up to 60% better insulation compared to conventional brick construction
- Low heat transfer coefficient U= 0,28
- Up to 50% lower construction cost
- Fast construction. Time saving up to 50%
- Ergonomic blocks' size, allowing their transportation even in the most inaccessible areas
- Twice as strong, resilient and anti-seismic compared to a conventional construction
- Its materials are environment-friendly, preventing microorganisms growth and repeling rodents

TECHNICAL CHARACTERISTICS

Construction element layers	Density p.	Layer thickness d	Thermal conduct. coef. λ	Thermal resist. d/λ
	kg/m^3	m	W/(mK)	(m^{2}K)/W
Cement		0,025	1,390	0,018
Expanded polystyrene EPS100	19	0,06	0,036	1,667
Gravel B 225		0,08	1,105	0,072
Expanded polystyrene EPS100	19	0,06	0,036	1,667
Cement		0,025	1,390	0,018
Thermal transition resistances				
Thermal transition resistance (internally)		R_i	(m2K)/W	0,13
Thermal outflow resistance		R	(m2K)/W	3,442
Thermal transition resistance (externally)		R_a	(m2K)/W	0,004
Heat transfer resistance		$R_{o\lambda}$	(m2K)/W	3,612
Heat transfer coefficient		U	(m2K)/W	0,227

AlphaAlpha design

THERMOPAK
CONTEMPORARY THERMAL INSULATING SYSTEMS

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