



**THRAKON blocks**  
Complete Building Solution





# THRAKON blocks

## 1 WAY OF BUILDING

**THRAKON blocks** are used for wall constructions in all kinds of building projects, either as filling wall or as bearing wall, up to two (2) floors. Building with **THRAKON blocks** is quick and easy due to the fact that the material is very light, it has exact dimensions and can be easily cut and formed. It is worth to note that with 6.6 pieces of **THRAKON blocks** 1m<sup>2</sup> wall can be built independent of its thickness.

## 2 BUILDING WITH THRAKON blocks

The wall substrate surface must be clean and wet. The first wall row can be built with **THRAKON** masonry mortar **MIX 280**, leveling the blocks carefully by length and width. The second and all next rows have to be built with **THRAKON** AAC adhesive **PAW 290**. The adhesive is spread only on the horizontal block side as a layer of no more than 1-2 mm. To achieve the appropriate adhesive's spreading thickness, use the special spatula. On the vertical joints, at the cases where the blocks are profiled (positive-negative) the application of adhesive is needless. In case where the blocks are cut even, adhesive is then applied.

Corners and vertical wall connections have to be built cross-wise to strengthen the wall construction. Wherever lintels are needed, use **THRAKON blocks** lintels (of standard dimensions). They should be placed with a minimum settling length of 10 cm (left and right). Alternatively you may use a concrete lintel. Total horizontal lintel over all walls is only needed where wall specifications require one (e.g. for strengthening very high walls). Wedging of wall fillings at columns and ceiling must be performed exclusively by use of a thin layer (no more than 1–2 cm) of polyurethane foam. Wedging must be done very carefully so that the polyurethane foam is spread on the total block surface without any breaks and spaces.

## 3 Preparation of THRAKON blocks adhesive

The preparation of **THRAKON blocks** adhesive **PAW 290** is done in a clean bucket. Add the specified amount of fresh water and then gradually add under continuous stirring **PAW 290** using a low speed mixer until a uniform paste is formed. Leave the mixture 5 minutes to settle and then stir again. The fresh mortar is ready to use for the next 3 – 4 hours.



## THRAKON AAC BLOCKS

### TECHNICAL DATA

QUALITY	DRY APPARENT WEIGHT	SHIPPING WEIGHT	THERMAL CONDUCTIVITY COEFFICIENT	SPECIFIC HEAT CAPACITY	WATER VAPOUR PERMEABILITY	CONTRACTION EXPANSION
PP 2	Kg/m <sup>3</sup> 423	Kg/m <sup>3</sup> 600	$\lambda$ (W/mW) 0,11	c (J/kgK) 1000	$\mu$ 5 - 10	mm/m 0,2
QUALITY	MODULUS OF ELASTICITY	COMPRESSIVE STRENGTH	FLEXURAL STRENGTH	TENSILE STRENGTH		
PP 2	N/mm <sup>2</sup> 1300	N/mm <sup>2</sup> 2,6	N/mm <sup>2</sup> 1,2	N/mm <sup>2</sup> 0,8		

### PROPERTIES - FIRE RESISTANCE

TYPE OF ELEMENT	MASONRY	F 30 min A	F 60 min A	F 90 min A	F 120 min A	F 180 min A
DIN 4165/4166		REQUIRED THICKNESS IN CM				
THRAKON blocks	without plaster plaster inside-outside	7,5 5	7,5 7,5	10 7,5	12,5 7,5	15 12,5

F= resistance to fire

A= incombustible material



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## 4 Electrical and water tubes installations

a) The electrical and water tubes installation can be performed with simple and easy-to-use **THRAKON blocks** tools, as well as with electrical router, appropriate for creating joints for the work of the electrician. These works are very simple to be done because the material is very easy to be scratched and formed.

b) Mounting on walls made of **THRAKON blocks** is done in the same way as on common walls. You need special anchors for porobeton (HILTI, FISCHER, UPAT etc.) which are available in various sizes, depending on the bearing load you wish to place on the wall.

c) In the same simple way you can fasten wooden or metallic window and door frames on **THRAKON blocks** walls.

## 5 Instructions for Coating systems

Prior to plastering, walls must be primed with the acrylic primer **GLX 290** that has to be diluted with water: **GLX 290** to water = 1 : 4 . Use a brush or roller.

All connections between walls and bearing frames, lintels and joints with electrical cables etc. should be covered with **THRAKON** glass fiber mesh (223 gr/m<sup>2</sup>) before plastering. The glass fiber mesh is applied with **PAW 290** and it is totally covered. The coating application should not be done in very hot (>35°C) or freezing (<5°C) weather conditions.

**THRAKON blocks** can be plaster with the following **THRAKON** plastering systems (refer to company's leaflets and website):

1. Three coat plastering system (roughcast – base coat plaster – final coat plaster).
2. Two coat plastering system (roughcast – one coat plaster).
3. Thin layer, reinforced and elastic plastering system (elastic base coat plaster – fiber glass mesh 160gr/m<sup>2</sup> – primer – organic plaster).

### PACKAGING

BLOCKS	Mixed pallet	m <sup>3</sup> /pallet	Pieces / pallet	Consumption m <sup>2</sup> per pallet	Pallet Dimensions		
					Length(mm)	Width(mm)	Height(mm)
5cm & 15cm		0,840	88	13,20	100,00	60,00	153,00
(15cm)		-	8	1,20	100,00	60,00	
7,5cm & 10cm		0,840	64	9,60	100,00	60,00	153,00
(10cm)		-	8	1,20	100,00	60,00	153,00
10cm	-	0,840	56	8,40	100,00	60,00	153,00
12,5cm	-	0,825	44	6,60	100,00	60,00	150,50
15cm	-	0,810	36	5,40	100,00	60,00	148,00
17,5cm	-	0,840	32	4,80	100,00	60,00	153,00
20cm	-	0,840	28	4,20	100,00	60,00	153,00
22,5cm	-	0,810	24	3,60	100,00	60,00	148,00
25cm	-	0,750	20	3,00	100,00	60,00	138,00
27,5cm	-	0,660	16	2,40	100,00	60,00	150,50
30cm	-	0,720	16	2,40	100,00	60,00	133,00

## PROPERTIES - THERMAL INSULATION

HEAT PERMEABILITY FACTORS OF THE UNIT		MATERIAL	QUALITY	CONSTRUCTION	THICKNESS										
					5 CM	7,5 CM	10 CM	12,5 CM	15 CM	17,5 CM	20 CM	22,5 CM	25 CM	27,5 CM	30 CM
U <sub>w</sub>	W/m²W	BLOCKS	PP 2	without plaster	1,80	1,17	0,93	0,77	0,65	0,57	0,50	0,45	0,41	0,37	0,35
				with plaster thickness 2cm	1,49	1,11	0,89	0,74	0,63	0,55	0,49	0,44	0,40	0,37	0,34

## PROPERTIES - SOUND INSULATION

WEIGHTED SOUND REDUCTION INDEX		MATERIAL	QUALITY	THICKNESS									
				10 CM	12,5 CM	15 CM	17,5 CM	20 CM	22,5 CM	25 CM	27,5 CM	30 CM	
R <sub>w</sub> dB		Without plaster	PP 2	31-33	33-35	35-38	36-39	38-40	39-41	40-42	41-43	42-44	

# The Advantages of THRAKON blocks

**THRAKON** has been successfully developed and implemented a building system used in residential and commercial applications.

The short - and long - term benefits of these systems are realized by owners, developers, designers and contractors. The benefits are achieved by the various material properties and methods that are associated with the established approach to construction.

## **A** For the Owner

One of the main benefits of **THRAKON blocks** is safety. An owner using **THRAKON blocks** creates a sound, functional and safe building. Another benefit of the **THRAKON blocks** Building System is versatility. **THRAKON blocks** can provide many architectural features that will enhance and project a unique architectural image for the building and its owner. **THRAKON blocks** construction is insect and termite proof. Therefore, the need for expensive insect and pest treatment as well as long term maintenance costs will be greatly reduced. Furthermore, the superior thermal properties associated with all of the **THRAKON blocks** products will translate into increased energy savings.

## **B** For the Developer

The cost savings realized when using **THRAKON blocks** products, mainly related to the shorter construction time, will be dramatic. The advantages of **THRAKON blocks** include low maintenance costs, good sound insulation and excellent thermal insulation. It easily meets energy codes.

## **C** For the Designer

Creative designs cannot be realized without the use of a highly adaptable construction material. **THRAKON blocks** can be adapted to suit most architectural designs while still providing a simple construction system that can meet all load requirements.

## **D** For the Contractor

Buildings can be constructed quickly and safely using **THRAKON blocks** building systems. The product itself is lightweight; therefore easily handled. **THRAKON blocks**'s workability (e.g. anchoring, routing, and drilling characteristics) is well developed and can be easily performed. **THRAKON blocks** material also produces less waste. By using the right combination of **THRAKON blocks** products, productivity will be increased. **THRAKON blocks** will reduce the amount of time spent on job sites due to its ease of handling.

## **E** Conclusion

All these factors relate to cost, time and labor savings for the project. In general, there is no end of advantages when it comes to choosing **THRAKON blocks**'s products. We build excellence into everything we make, so that it's as good as it possibly can be.



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