

Fireplace slab VARMSSEN®

NAME OF PRODUCT

FIREPLACE SLAB VARMSSEN®

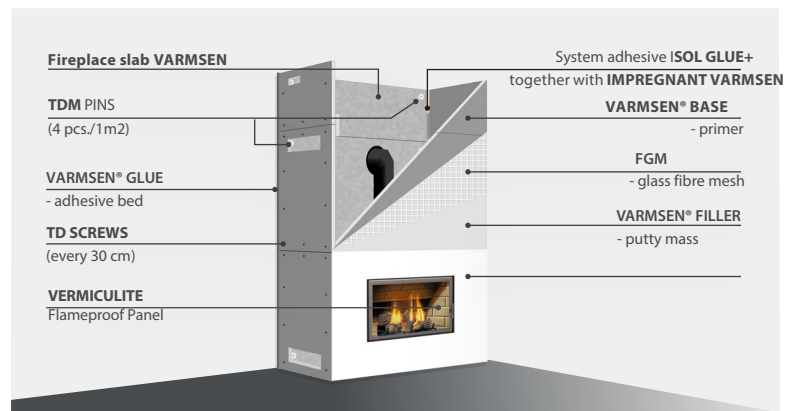
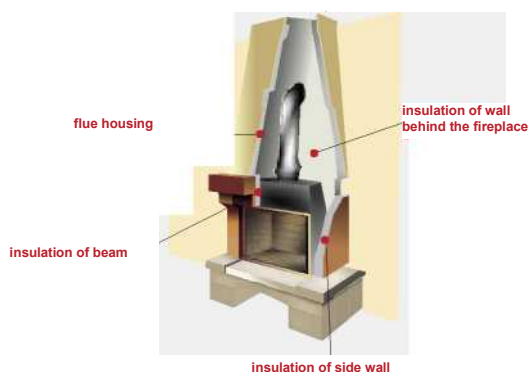
DESCRIPTION OF PRODUCT

The slab VARMSSEN® is silicate and calcium insulating slab, with excellent insulation value, designed for applications in maximum temperatures reaching 1000°C. The fireplace slab VARMSSEN® is self-bearing construction slab, with high strength parameters, designed among the others for making the construction elements for housings of heating fireplaces. The fireplace slab VARMSSEN® is safe and health-friendly product - non-fibrous. The processes of surface hardening and autoclave under the production phase make the fireplace slab VARMSSEN® a dust-free product.


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The slab VARMSSEN® due to its properties is perfect for insulation of all devices related to burning or action of high temperatures such as: fireplaces, furnaces, ovens, boilers, soaking pits, network regenerators, etc. Thank to high resistance to carbon monoxide and hydrocarbons, silicate and calcium slab VARMSSEN®, it may be used in the furnaces with reducing atmosphere. After exposing for 200 hours to CO effect at temperature 450°C the carbon deposit decomposition is not found. The slabs VARMSSEN® are also used as the insulation supporting all fire-resistant constructions - dense chamotte bricks, insulating fire-resistant bricks, casting products, fire-resistant plastics, etc.

Fig. 1: Application of the slabs VARMSSEN® - traditional fireplace Fig. 2: Application of the slabs VARMSSEN® - modern fireplace




PROPERTIES AND ADVANTAGES



2,8 MPa
compressive strength

The slabs VARMSSEN® are more than the fireplace insulation, they are also the structural element for building the flue and being excellent insulator at the same time; they are perfect for the insulation of beam, side walls and wall behind the fireplace, which makes them universal solution. The slabs VARMSSEN® save time - the low weight and standardisation of sizes allow for non-problem transportation of products to the building square; you may use basic woodworking tools for machining the slabs, and therefore the assembly is cheaper and simpler; for cutting the slabs VARMSSEN® you can use only common wood saw, and for the assembly: impregnant (A), adhesive ISOL GLUE+(B) and TD screws and TDM pins.



natural product

The slabs VARMSSEN® are healthy non-fibrous product; the special production process makes that the slabs do not make dust - they are not allergenic. They are toxicologically safe products, produced from natural materials, and therefore the slabs VARMSSEN® are resistant to attacks of bacteria, any mould and mildew. The confirmation of health-friendly properties of the slabs VARMSSEN® is the certificate from National Institute of Hygiene (HK/B679/02/2013) and the CE certificate of quality (0845-CPD- - CXO10001).

A1
Inflammable
fire classification

CE
Quality
NR 0845-CPD-CXO10001

The slabs VARMSSEN® due to the excellent thermal resistance endure continuous action of high temperatures in given range; low thermal conductivity provides excellent insulation in the whole range of temperatures. The slabs VARMSSEN® are inflammable product classified in the class A1; during the operation of fireplace when the internal side of the slabs is exposed to high temperatures, the external side is still at the temperature safe for people.

TECHNICAL PARAMETERS

FIRE CLASSIFICATION (EN 13501-1;2007 + A1:2009)	A1 - inflammable
MAX. TEMP. OF USE	1000°C
BULK DENSITY (EN 1094-4)	225 kg/m³
COMPRESSIVE STRENGTH (EN 1094-5: 1995)	2.8 MPa
FLEXURAL STRENGTH (EN 993-6: 1995)	1.4 MPa
SPECIFIC HEAT	0.84 kJ/(kgxk)
THERMAL EXPANSION COEFFICIENT	5.5x10⁻⁶ K⁻¹
THERMAL CONDUCTIVITY (ASTM C - 182)	for 200°C 0.08 W/(mxK) for 400°C 0.10 W/(mxK) for 600°C 0.12 W/(mxK)
TYPICAL CHEMICAL COMPOSITION	SiO₂ (45%), CaO (45%)
COLOUR	grey

DIMENSIONS AND PACKING

STANDARD FORMATS

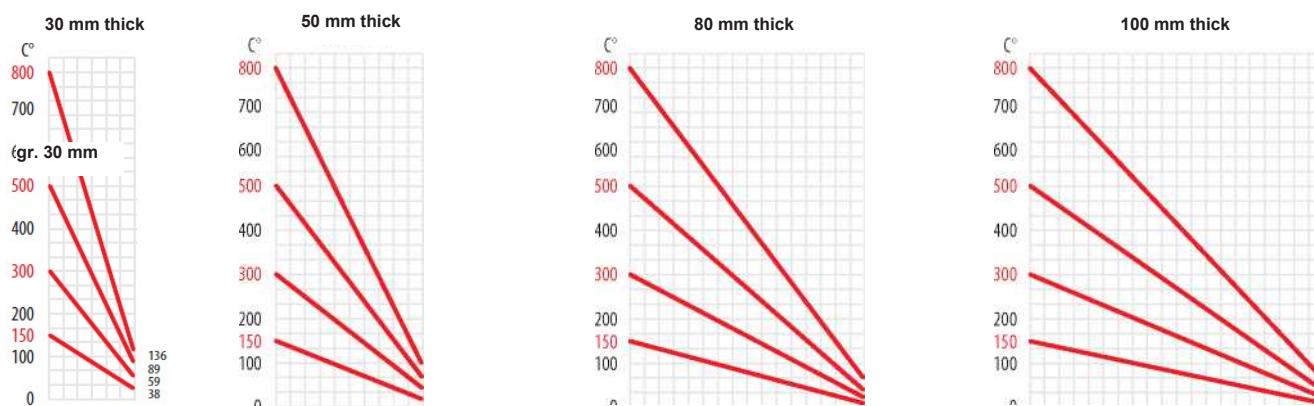
length x width	1000x610 mm
thickness	30 mm

TOLERANCE OF STANDARD FORMAT DIMENSIONS

length and width	+ / - 2,5 mm
thickness	+ / - 1,5 mm

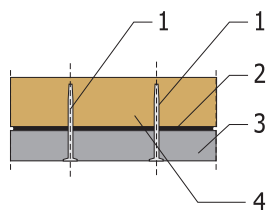
PACKING	pallets / cardboards
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DISTRIBUTION OF TEMPERATURES



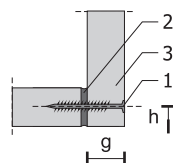
DETAILS OF CONNECTIONS

DETAILS OF FIXING WHILE USING TDM PINS

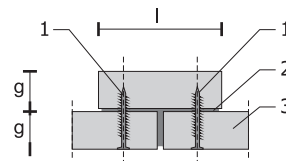


- 1 - TDM pin
- 2 - flexible adhesive mortar
- 3 - the slab Varmesen®
- 4 - bearing wall

DETAILS OF CONNECTIONS WHILE USING TD SCREWS



- 1 - TD screw (length=2xg-0,5 cm)
- 2 - adhesive ISOL GLUE+
- 3 - the slab VARMSSEN



- g - thickness the slabs VARMSSEN | - width of strengthening element
- Front connection
- $h = 1/2 g$

TREATMENT AND PROCESSING

The basic woodworking tools and machinery may be used for processing the SLABS VARMSSEN®. For assembly you can use the system components:

Adhesive mortar VARMSSEN® GLUE

Adhesive mortar for fireplace slabs VARMSSEN® is characterized by high performance and high adhesion to the ground and slabs VARMSSEN®, great workability and optimal physical properties. It is not suitable for mounting the reinforcement meshes. It is supplied in form of dry powder mixture, ready to be used after breaking up with water.

IMPREGNAT (A) for fireplace slabs VARMSSEN®

It is prepared based on sodium silicate and micro-silica. It is designed for impregnating the surface of slabs VARMSSEN®, glued with adhesive ISOL GLUE+, in order to increase their adhesion **(A+B)**.

System adhesive ISOL GLUE+ (B)

Mass is ready to be used, it is prepared based on water glass and inorganic solvents. It is designed for gluing the fireplace slabs VARMSSEN® **(A+B)**.

TD screws

Phosphate coated screws for mounting the fireplace slabs VARMSSEN® in order to stabilise the construction of fireplace housing during its making.

TDM pins

They are made of steel coated with zinc-aluminium coating. It consists of a tray with diameter 35 mm and crossed elastic sleeve. It is designed for mounting the fireplace slabs for the grounds such as: concrete, aerated concrete, full wall and wall with empty space. Openings under TDM pins should be done with drill suitable for the ground with diameter 8 mm.

Primer VARMSSEN® BASE

Ready to be used. It is designed as the strengthening primer for the fireplace slab VARMSSEN® and next layers of the system. It may be also used on typical building substrate only when direct contact of preparation with mineral components of the substrate is possible. It does not contain the solvents, it strengthens the fireplace slab VARMSSEN® and it compensates the absorbing capacity. It reduces occurrence of efflorescence.

Putty mass
VARMSEN® FILLER

Ready-made uniform mineral mass in white colour for using on the fireplace slabs VARMSEN®, as well as inside the rooms. The product is designed for preparing the wall surfaces on the fireplace under painting. It is suitable under most internal dispersion paints available in the market. The obtained surface is elastic, easily workable, it has smooth structure.

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CERTIFICATE OF QUALITY
dated 3.11.2011

CE NR 0845-CPD-CX010001

HYGIENIC CERTIFICATE PZH HK/B679/02/2013

The production and quality of slabs is confirmed
CERTIFICATE OF QUALITY ISO9001:2000

The producer guarantees quality of product but it has no effect on its application. All information herein is based on the best knowledge of the producer resulting from longstanding observations of practical use. However, it does not replace the professional training of contractor and does not release him from using the building practice, health & safety standards; therefore it shall not constitute grounds for settling disputable issues before the courts. If you have any questions or concerns, please contact the producer.

VARMSEN® is a trademark of Skamol Group

www.varmsen.com