Thermax®

THERMAX® Moulded Parts

for biomass, oil and gas-fired condensing boiler technology

Individually produced moulded thermal insulation parts for combustion chambers, ash and cleaning doors

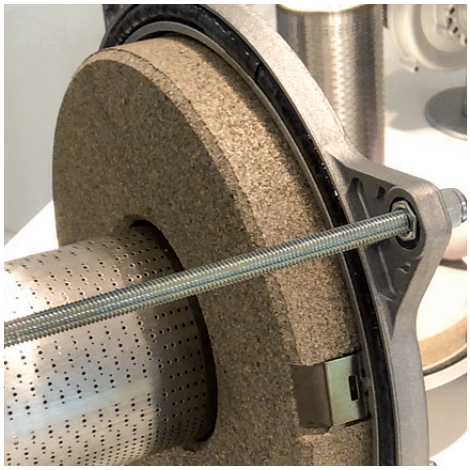
Effective and environmentally friendly: Combustion technology with THERMAX® thermal insulation

With a uniquely versatile and individually tailored portfolio, THERMAX® moulded parts for biomass, oil and gas-fired condensing boiler technology offer the optimum fitout, for example, for combustion chamber, ash and cleaning doors. THERMAX® fulfils all requirements for low thermal conductivity for the protection and long life of your plants, with very good thermal cycling / thermal shock resistance. THERMAX® combines efficient use of raw materials with careful and sustainable use of resources at the highest level.

THERMAX® moulded parts: As individual as your requirements

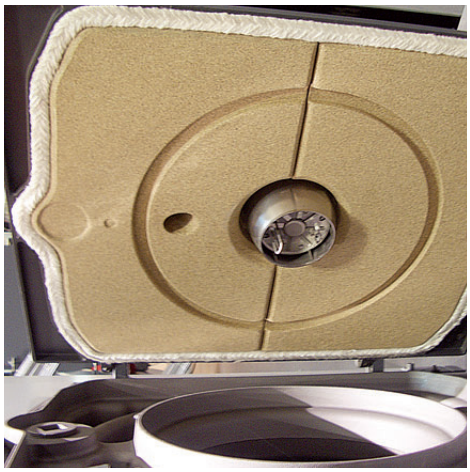
What is THERMAX® thermal insulation made of?

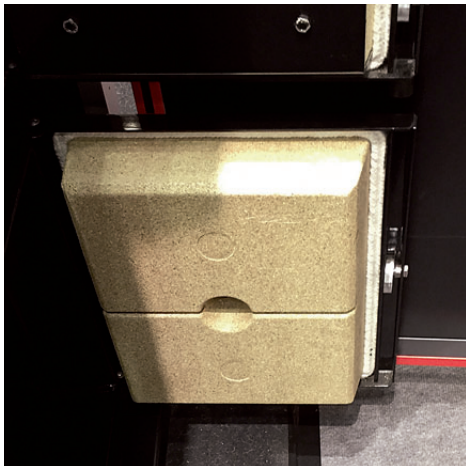
The basic raw material in THERMAX® products is vermiculite, a clay mineral obtained by opencast mining. Mineralogically, it is closely related to the better-known mica. Just like the raw material, THERMAX® is also ecological, has no negative effects on health and is free from asbestos, ceramic and mineral fibres.
THERMAX® products are manufactured initially by a thermal process. The expanded vermiculite produced is pressed together with special inorganic binders to produce large-format THERMAX® panels or in individually produced moulds to form THERMAX® moulded parts. Alternatively, high-precision CNC milling is used to form any required THERMAX® shape.

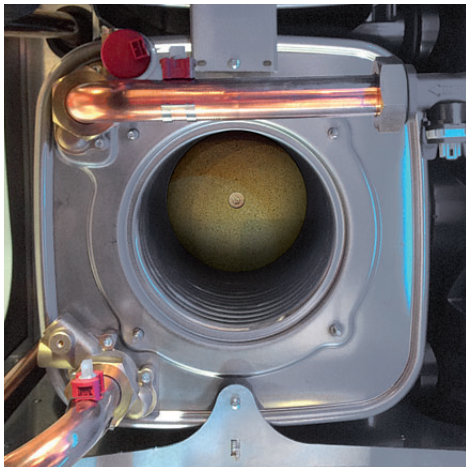


What other properties and advantages do THERMAX® moulded parts offer?

Most THERMAX® moulded parts are high-precision products, produced to individual customer's wishes and to meet specific requirements. Moulds for more efficient production are made for large quantities. THERMAX® can be supplied with different qualities, for example, in condensate resistant THERMAX® HR quality for condensing boiler technology or in high-temperature resistant H-quality, classified up to 1200 °C.







Good thermal cycling/thermal shock resistance, low fracture susceptibility:

THERMAX® moulded parts and panels have a special layered structure: The individual vermiculite grains within a panel are interlocked. Resulting stresses caused by temperature change are effectively compensated for by thermal insulation made of THERMAX®.

Advantages of using pure inorganic binders

By using special inorganic binders, no substances or odours are released by thermal loading. Additionally condensate-resistant THERMAX® products (HR quality) can be produced for condensing boiler equipment. Contact us!

Ecological aspects

THERMAX® thermal insulation offers a sustainable and environmentally aware alternative to conventional fibre-based and refractory parts. The possibility of producing individual compression moulds for precise-fitting parts leads to careful use of raw material resources (100 % material use).

The material residues or offcuts produced by the production of milled parts are also completely added back into the production process.

We supply THERMAX® in special sizes and thicknesses on request. We can also produce compression moulded parts, milled parts, blanks or cut-to-size panels to your drawing specifications. The classification temperature is not the same as the maximum use temperature

– especially where physical conditions such as tensile or compressive loads play a role. Lower temperatures must be used for high-temperature insulation applications. In these cases, the engineering department of our company provides you with help and support. You can request thermal transmittance calculations for THERMAX® from our engineering department.

THERMAX®:
Safe. Individual. High-precision.

Technical data

THERMAX® thermal insulation		SF 400	SF 450	SF 600
Classification temperature	°C	1100	1100	1100
Bulk density ± 5%	kg/m³	400	475	625
Cold compressive strength	N/mm²	1.5	2.5	4.0
Modulus of rupture	N/mm²	0.8	1.2	2.5
Thermal conductivity (at mean temperature in W/mK)	200 °C 400 °C 600 °C	0.14 0.16 0.18	0.15 0.17 0.19	0.16 0.18 0.20
Thermal shrinkage (1100 °C/12h)	%	< 2.0	< 2.0	< 2.0
Thermal expansion, linear (20 – 700 °C)	%	0.9	0.9	0.9
Specific heat capacity	kJ/kg K	1.15	1.15	1.15

THERMAX® thermal insulation at a glance:

- Customised production
- Environmentally friendly
- Use of inorganic binders
- Free from asbestos, ceramic or mineral fibres
- Physiologically safe
- Low-dust
- Non-flammable
- Thermal cycling/thermal shock resistant
- Careful use of resources
- Recyclable
- High quality
- Condensate resistant (HR quality)
- Suitable for automated production

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