



HKO

HEAT PROTECTION | [TRUST THE EXPERTS](#)

HIGH-TEMPERATURE SEALINGS


TRUST THE EXPERTS

About HKO

HKO GmbH was founded in 1974 in Oberhausen. Originally, HKO GmbH focussed on providing heat protection products, primarily as replacements for asbestos fibres for use in industrial applications. After asbestos fibres were classified as a health hazard HKO began to concentrate on developing and establishing fibreglass products as a replacement for asbestos, and performed pioneering work in this area.

Over the past 30 years, our company, which started off with just 5 employees, progressed as an innovative developer and leading international manufacturer of future-oriented, sustainable speciality products for use in extreme temperature ranges. Our modern production facilities in Germany and China, our sales and engineering offices in France and the USA, as well as our large number of cooperation and distribution partners across the world are a reflection of our internationally-recognized expertise.





We are known not only for our high quality standards, but also for our intelligent advice and attentive professional service provided by our sales, technology, research and development experts.

Highly skilled and dedicated staff – a sure guarantee for intelligent solutions

YOUR NEEDS ARE OUR DRIVING FORCE

The number of patents we register and apply – which is well above the industry average – is further testimony of the close collaboration between our sales and technology departments. Provided with the latest laboratory equipment, our engineers' and technicians' passion for and knowledge about their work are a sure guarantee that our research and development work always yields results that will serve both the market and our customers efficiently for the long term. Our close partnerships with renowned universities and leading institutes further ensure that our research projects are highly diverse.

All of our production and engineering staff constantly participate in additional training – which is our way of assuring that our products are always of the highest quality and of protecting these quality standards in the future. Our innovative and modern production facilities and procedures are a sure guarantee that we are able to meet our customers' requirements with flexibility, in line with market requirements, and to offer them tailor-made solutions. Additionally, we are also very aware that efficient logistics and distribution services are also vital for long-term and consistently successful collaborations. As a result, we take great pride in our modern storage system, which is testimony to the fact that we always guarantee the availability of our standard products to provide reliable delivery of customer specific components and products. Our global logistics system enables us to deliver our products efficiently and rapidly to any place that our customers' may need them.

Our customers' needs are our driving force – for the present and the future. As one of our customers, you can depend on us as a reliable, trustworthy and solution-driven partner.

Introduction

Packings



Cords



Ribbons



Profiled seals





Fritz Kämper, Deutschland,
Vorarbeiter in einem Gießereibetrieb

Ideen entwickeln – Visionen verwirklichen

GEMEINSAM MIT DEM KUNDEN ZIELE ERREICHEN

Energieeinsparung, Erhalt von Prozesswärme, Abschirmung gegen Hitze und Schall – für uns als Hersteller von textilen Hochleistungswerkstoffen für den Einsatz in thermischen Prozessanlagen sind all dies Anforderungen, wie sie täglich an uns herangetragen werden. Unser Qualitätsanspruch ist es, Anlagen wie z.B. Industrieöfen, Kamine, Trockner und Wärmeaustauscher energieeffizient und sicher abzudichten.

Ob Packungen aus Aramid, Thermo-E-Glas oder Silikat, Strickschnüre, Schnüre und Bänder aus Kalzium-Silikat oder CMS-Bio, konfektionierte Fahnen- und Kederprofile, Bänder und Dichtungsprofile – unsere Produkte gewährleisten in Anlagen von Gießereien, Kokeereien und Kraftwerken sowie im Ofenbau und in der Schwermetall- und Stahlindustrie eine perfekte Dichtung auch unter extremen Belastungen.

Unser Team begegnet den kontinuierlich steigenden Anforderungen des Marktes mit Know-how, Erfahrung und Leidenschaft. So bieten wir mit unseren Spezialanwendungen neue Produkte, neue Technologien und neue Rohstoffe, die ganz auf die Erfordernisse der verschiedenen Sparten zugeschnitten sind. Die Experten der Entwicklungsabteilung arbeiten stetig an der Optimierung der Produkte. Dabei ist es uns wichtig, dass wir eng mit unseren Kunden zusammenarbeiten. Nur so können optimale Ergebnisse erzielt werden. Eine kontrollierte und durchdachte Projektarbeit sorgt dafür, dass wir die mit dem Kunden gesteckten Ziele erreichen.

Gemeinsam mit Ihnen entwickeln wir Ideen und verwirklichen Visionen!



Steel plant / Coking plant



Aluminium industry / Electrolysis



Boiler / Heat exchanger



Industrial furnace



Power station

Packings

WE HAVE A GO!

The requirements on seals are increasing steadily due to the demand for cost-conscious process security, increasing environmental consciousness, and of course statutory regulations. As a result of the experience gained during decades of working with different industries, we are able to provide proven products that are specifically designed for the various applications.

Our team also embraces new challenges with professional competency and know-how, and creates materials through continuous development and innovation that meet customers' individual requirements. From chamber frame seals in coking plants to the sealing of smelting furnaces in the primary aluminium industry, the sealing of doors, covers and hatches in industrial boiler construction, including application in power stations and the glass industry - the diversified fields of application of our packings speak for themselves.

This is not only due to the top quality of our materials, but in particular because our packings are characterised by high efficiency due to low shrinkage and loss on ignition, mechanical strength, a high sealing effect and are safe for humans.

Tell us your technical challenges. We promise to find a solution that leaves nothing to be desired.

Packings

■ Braided square and rectangular

- Temperature resistance of approx. 350 °C – 1000 °C
- Made from Hakamid®, thermal E-glass, and Silontex®, 5 – 80 mm
- Made from Hakotherm®-1200, 4 – 80 mm

Square and rectangular-braided packings



■ Braided round

- Temperature resistance of approx. 350 °C – 1000 °C
- Made from Hakamid®, 6 – 80 mm diameter
- Made from thermal E-glass, 3 – 80 mm diameter
- Made from Silontex®, 4 – 80 mm diameter
- Made from Hakotherm®-1200, 4 – 80 mm diameter

Round-braided packings



■ Tube packings

- Temperature resistance of approx. 750 °C – 1000 °C
- Made from Silontex®, 15 – 120 mm diameter
- Made from Hakotherm®-1200, 12 – 120 mm diameter
- Optionally available with chrome steel wire reinforcement
- The core can optionally be produced from CMS-Bio, Hakotherm®-800 or Hakotherm®-1200

Tube packings



■ Types of finish

For example FH1000 or graphite

- To increase temperature resistance
- To increase mechanical strength
- To improve non-adhesive characteristics



Cords

THE BEST ANSWER TO YOUR REQUIREMENTS

Complex designs of thermal plants and process-dependent varying gap sizes as well as limited space for seals due to the design require flexible solutions. Flexible and adaptable seals are the prerequisite for meeting such specific demands.

Due to our broad range of cords we are able to provide the best solutions also for complex and the most varied applications.

Our many different types of ropes are preferred for the sealing of doors in the construction of chimneys and laboratory furnaces, but also barrier seals of casting launders. Twisted cords on the other hand are preferred in the foundry for ingot mould seals as well as for exhaust gas plants in the thermal processing industry. Our braided cords are used in air conditioning and ventilation systems in the thermal processing industry.

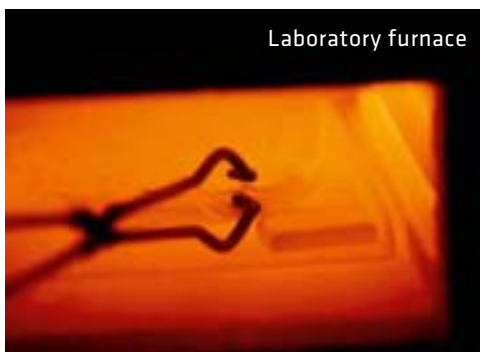
Furnace construction



Casting launder



Laboratory furnace



Thermal processing plants



Cords

■ Twisted

- Temperature resistance of approx. 350 °C – 1000 °C
- Made from Hakamid®, thermal E-glass, Silontex® and Hakotherm®-1200,
- 3 – 30 mm diameter

■ Knitted ropes

- Temperature resistance of approx. 400 °C – 1000 °C
- Made from thermal E-glass, 3 – 30 mm diameter, available in white and anthracite
- Hakotherm®-1200, 3 – 30 mm diameter

■ Knitted ropes with metal braiding

- Temperature resistance of approx. 350 °C – 1000 °C
- Available in Hakamid® to Hakotherm®-1200

■ Braided cord

- Temperature resistance of approx. 400 °C – 1000 °C
- Braided wide-meshed or close-meshed
- Made from thermal E-glass, 3 – 40 mm diameter
- Silontex® and Hakotherm®-1200, 3 – 35 mm diameter

Ropes



Ropes with metal braiding





Conveyor plant for power stations



Industrial furnace



Furnace

Belts

THE PERFECT SOLUTION FOR YOUR PLANTS

Having a thickness of up to 50 mm they are often used as partial surface covers, as conveyor belts or to prevent electrical discharge.

This material is preferred in the construction of furnaces as door seal and as inner insulation for the glass screen, in the construction of industrial furnaces as door seal or in coal-fired power stations and in the cement industry as permeable conveyor belt.

We are providing belts in different designs that are finished or coated for particular applications. This way you always get the best product from us because the special finish is adapted to your requirements and thus optimises the life span, the down-times, resistance to wear, the sealing properties and at the same time reduces thermal bridges. Moreover, the application of different weaving techniques and material components provide an opportunity to influence the technical characteristics such as tensile strength, wear resistance and touch allowing it to adapt perfectly for the respective application.

Belts, woven

Temperature resistance of approx. 350 °C to 1000 °C

■ Hakamid®

- 2–20 mm thick, widths on request, with or without brass core

■ Thermal E-glass

- 1–3 mm thickness, widths on request, woven in a single layer, plain weave or twill weave
- 4–50 mm thickness, widths on request, woven in multiple layers, plain weave

■ Silontex®

- 2–3 mm thickness, 15 - 300 mm width, woven in a single layer, plain weave or twill weave
- 4–50 mm thickness, widths on request, woven in multiple layers, plain weave

■ Hakotherm®-1200

- 2–3 mm thickness, 15 - 300 mm width, woven in a single layer, plain weave or twill weave
- 4–15 mm thickness, widths on request, woven in multiple layers, plain weave

Hakamid® pneumatic conveyor belt for conveying channels

- Thickness: 4.5 mm
- Width: 150 – 700 mm
- Other thicknesses and widths available on request

Hem stitch belt

- Thermal E-Glass, Silontex® and Hakotherm®-1200
- Temperature resistance of approx. 400 °C to 1000 °C
- 2 – 6 mm thickness, other widths available on request

Light gauge belt, woven

- Temperature resistance of approx. 400 °C to 1000 °C
- Thermal E-glass, 0.1 – 0.4 mm thickness, widths available on request
- Hakotherm®-1200, 0.2 – 0.5 mm thickness, widths available on request

Belts, woven



Hakamid® pneumatic conveyor belt




Knitted belts



Knitted belt made from thermal E-glass

- Temperature resistance up to approx. 550 °C
- 2 – 4 mm thickness, 8 – 30 mm width, also available with one-sided adhesive coating for ease of assembly



Laboratory furnace

Profiled seals

WE TAKE ON EVERY CHALLENGE

Furnace construction

Some situations require dedicated solutions. If our extensive range of packings, cords and belts does not include the material for your requirements, the ideal solution could be profiled seals and multi-layered woven belts.

Our team of experts develops and manufactures the materials specifically for the requirements of your plant and provides you with numerous possible combinations and dimensions. Through professional tailoring and selection of profile components we guarantee the best possible result for your application.

Our profiled seals are used in plants where the restoring force or the shape design requires them, and are used as door and frame seals in the construction of industrial furnaces, laboratory furnaces and industrial driers.

Give us a challenge, we will meet it. Your requirement will be met with our technical know-how, experience and our top quality products.

Industrial drier

Applications of textile profiled seals and multi-layered, sewn belts

Textile profiled seals and multi-layered, sewn belts

- Taylor-made and woven
- For special applications

Designs

- Dual piping profile
- T-section profile
- With self-adhesive foil as assembly aid
- Available with additional graphitisation and high-temperature treatments
- Depending on requirements with different cores, such as stainless steel wire netting, ropes, packings
- Available in rolls or cut to measure

Dimensions and shape on request

Temperature resistance from 350°C to 1000°C



Illustrated Brochure

Product Index

Thermal Insulations

Fire and Heat Protection

Automotive

Personal Protective Equipment

Furnace Constructions



Illustrated Brochure



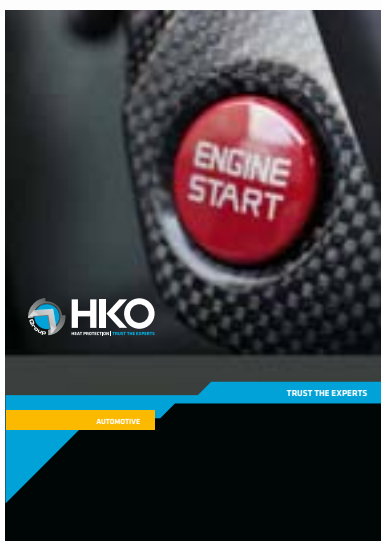
Product Index



Thermal Insulations



Fire and Heat Protection



Automotive



Personal Protective Equipment



Furnace Constructions



We are there for you!

TRUST THE EXPERTS!

HKO Heat Protection Group is an expert in all matters related to thermal insulation, high temperature seals and fire and heat protection.

Our illustrated brochure provides a brief overview of our company, products and areas of operation. The product index demonstrates the variety of our products and their design.

In addition to this brochure, more detailed information on the individual areas we operate in can also be found in two additional brochures:

- HKO materials for thermal insulation, for reducing heat loss and protecting sensitive parts
- Textile solutions for preventing and reducing the creation, spread and effects of fire and major heat

These three brochures also contain detailed information on automotive, personal protective equipment and furnace construction materials.

Please do not hesitate to contact us for further information, including information on other areas of application, or for advice. If you would like to arrange for us to come and visit you on site, or if you would like to visit us at one of our production facilities, we would be pleased to make those arrangements.

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