

Merkel Sealing Technology

Seals and Sealing Systems for the Metal Processing Industry



Merkel
Heavy Industry

Strong seals for the Metal Processing Industry

Merkel Heavy Industry: sealing technology acknowledged worldwide

Merkel Heavy Industry is the market leader in the field of seals for the heavy industry. With innovative solutions and pathbreaking products for all branches of activity, we belong to the most renowned specialists in the sector of sealing technology at international level. The excellent quality of Merkel seals is known all over the world.

The high degree of functional reliability, coupled with excellent static and dynamic sealing properties, is acknowledged worldwide by all our clients and throughout all branches of activity in comparative tests at regular intervals.

With our standard service program we provide first-class, high-performance and durable sealing solutions. All individual components are a perfect match of material and functionality.

With our tailor-made solutions for demanding requirements we bring you the benefits of our combined expertise in application engineering, our outstanding materials know-how in cooperation with Freudenberg Research Services, and of our sophisticated manufacturing technology.



Merkel seals: meeting all requirements

Merkel sealing systems are renowned for their outstanding material quality, coupled with high extrusion stability and a perfectly matched geometry.

Absolute performance under high pressures, at high speeds or in adverse weather is a matter of course for Merkel sealing systems.

With Merkel sealing systems your processing equipment will operate

- a lot faster
- better
- more economic
- and safer.



This will not only give you the cutting edge, but will result in less downtime, less maintenance and significantly reduced repair costs.

Merkel Heavy Industry

Merkel Heavy Industry belongs to Merkel Freudenberg Fluidtechnic GmbH in Hamburg. Some 800 employees develop, produce and distribute seals and sealing systems for industrial applications.

Merkel Freudenberg Fluidtechnic GmbH is a company of Freudenberg Seals and Vibration Control of the globally operating Freudenberg Group and is, therefore, tied to the largest global partner and distribution networks for sealing technology.



Top Performance with Merkel Seals

Merkel Heavy Industry: Seals expertise known all over the world

Merkel Heavy Industry is one of the leading manufacturers of sealing systems for the heavy industry.

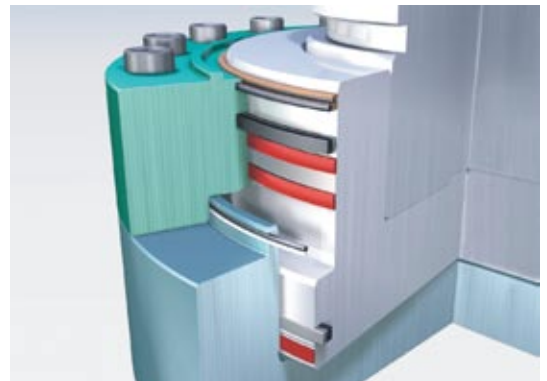
Major plant engineering and construction companies in the metallurgical industry rely on the outstanding quality of Merkel products and the high standard of Merkel sealing technology. Close cooperation during development projects ensures a realisation that is close to the market, field-experienced and tailor-made for the application, even in harsh environments.

Our experienced team of material scientists and design engineers have developed a complete range of high performance sealing elements using Finite Element Analysis and other modern design tools. Our seals are offered in a uniquely wide range of highly engineered materials including premium polyurethanes, PTFE compounds, NBR, fluoroelastomers, and many others.

For a diverse number of metal processing applications Merkel Heavy Industry offers high performance sealing systems, such as:



Take advantage of our superior product range for your systems, and rely on the expertise and know-how of a leading company.

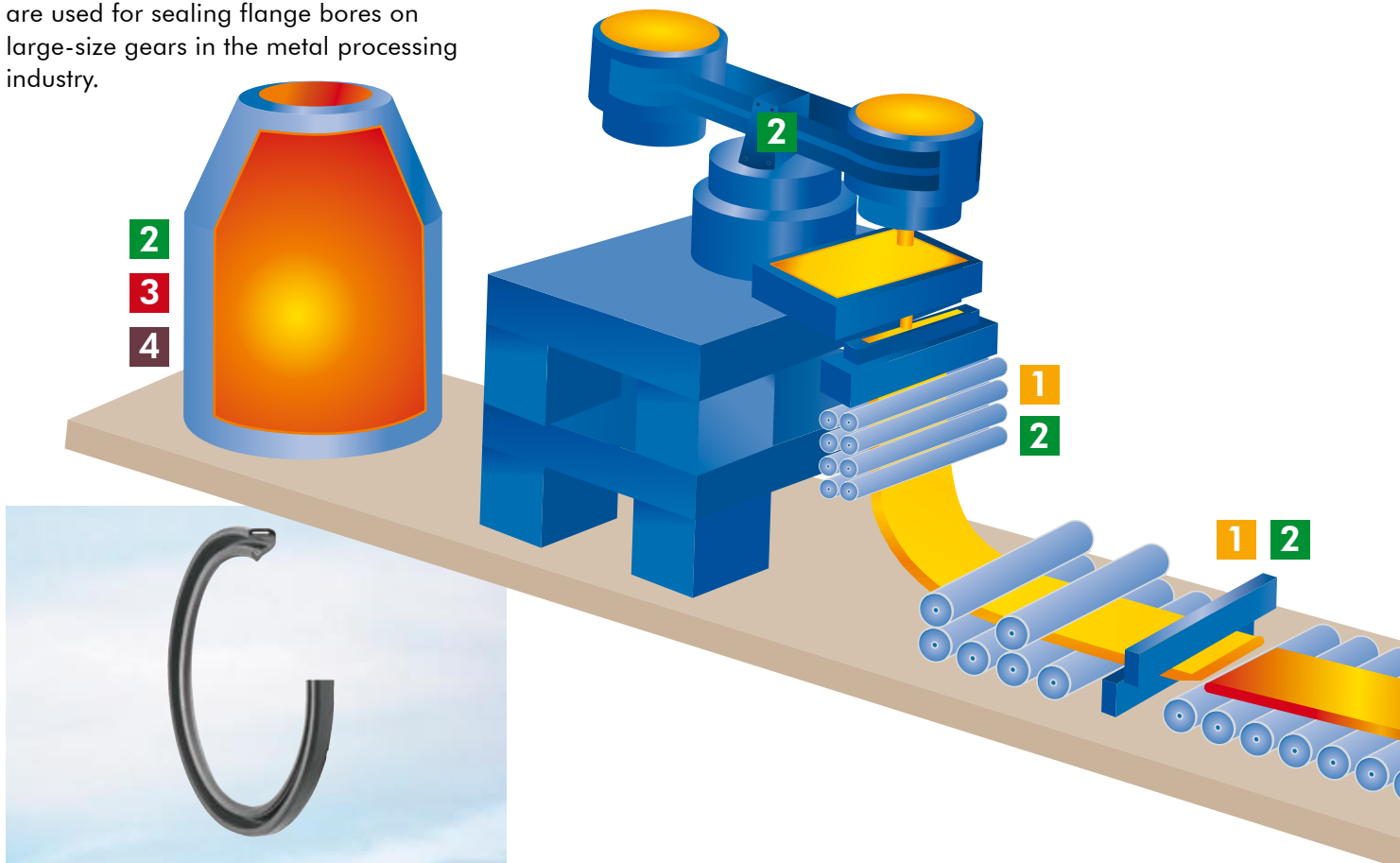


- Automatic gauge control cylinders
- Caster segment cylinders
- Work-roll bending cylinders
- Back-up roll balancing cylinders
- Roll-neck bearings
- Strand guide cylinders
- Hydraulic quick change cylinders
- Coiler and looping cylinders
- Straightening withdrawal unit segment cylinders
- General hydraulic and pneumatic cylinders
- Pumps, valves, etc.

Merkel Seals and Sealing Systems for the Metal Processing Industry

1 Rotary seals

Merkel Simmerrings Radiamatic RHS 51 are used for sealing flange bores on large-size gears in the metal processing industry.



Two functionally adapted elastomer components and an integrated steel strip ensure a high level of functional reliability.

The system incorporating the high-speed rotary shaft seal Radiamatic RHS 51 and the water guard Type WA 74 will offer you ideally suited sealing effects. Merkel Simmerrings Radiamatic RHS 51 will continue to provide a safe sealing effect even on

shafts offset by up to **3 mm**, while ensuring reliable speeds of more than **35 m/s**.

The Radiamatic RHS 51 is self-locking and incorporates a new type of spring system in order to achieve a uniform contact pressure.

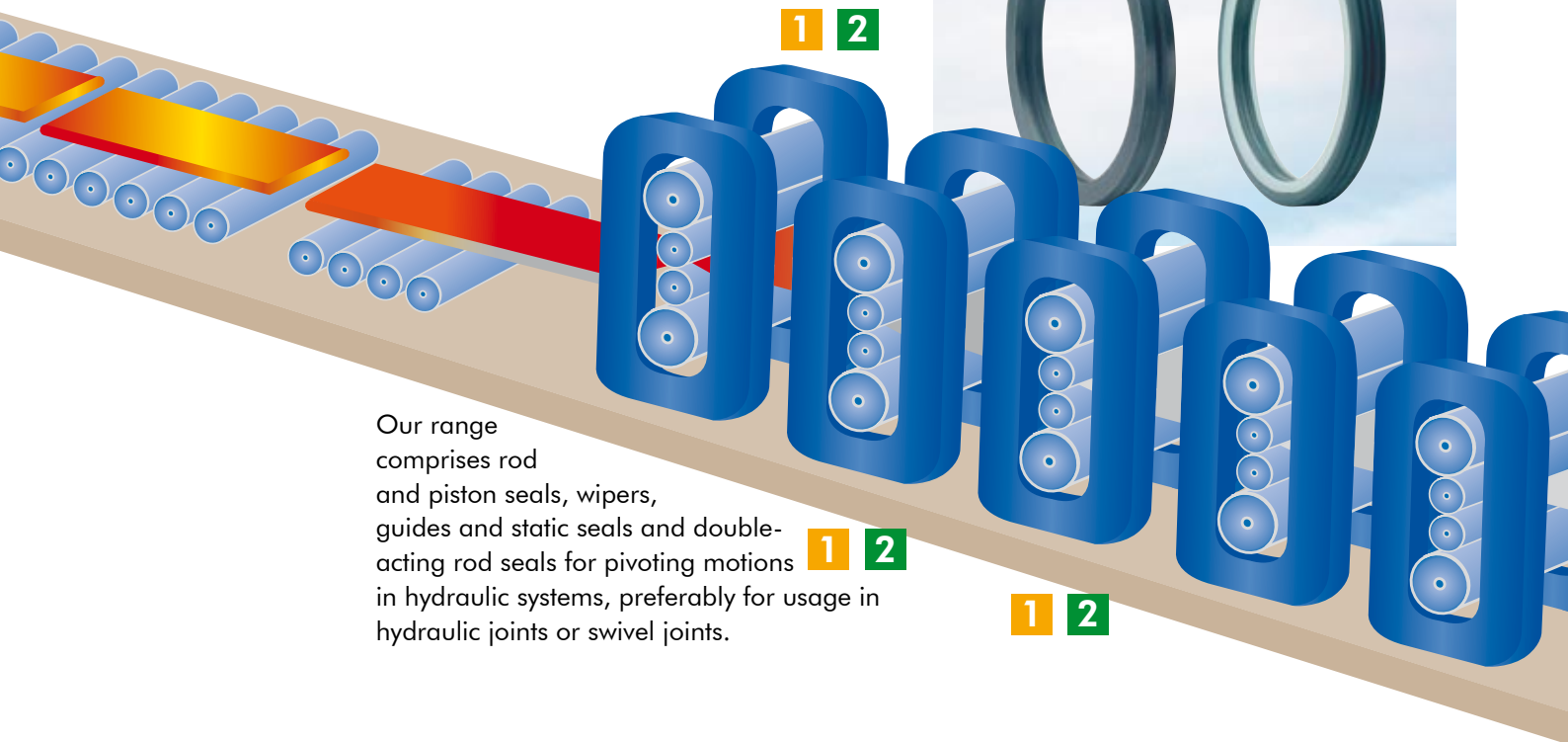
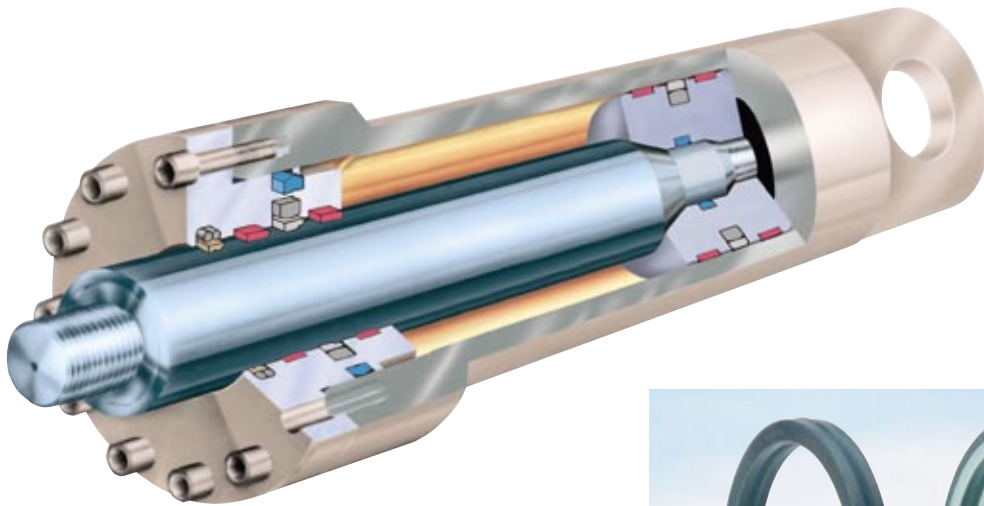
Merkel Heavy Industry supplies the whole range of Radiamatic shaft seals (e. g. Radiamatic R 35, Radiamatic R 37 or Radiamatic R 58) and the full Simmerring program.

Merkel Seals and Sealing Systems for the Metal Processing Industry

2 Hydraulic seals

Merkel hydraulic components cover a broad spectrum of applications in the hydraulic sector. They are used every time importance is attached to safety and service requirements, as well as to the aspects of costs.

Low friction forces, appropriate control options and a high degree of functional reliability will ensure short downtime periods and minimum maintenance operations.



Our range comprises rod and piston seals, wipers, guides and static seals and double-acting rod seals for pivoting motions in hydraulic systems, preferably for usage in hydraulic joints or swivel joints.



3 Stuffing-box packings

You will find at Merkel Heavy Industry a comprehensive, clearly-structured standard range of stuffing-box packings. They are developed and produced on the basis of current material research, of state-of-the-art design technology and present-day manufacturing processes.

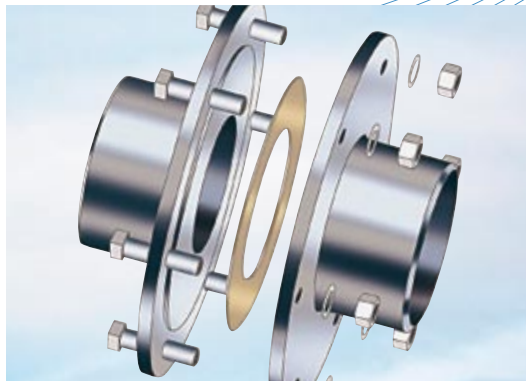
The Merkel stuffing-box packing Unival is ideally suited for pumps in the metal processing industry. The special design of Unival ensures very low friction forces and a high degree of elasticity. This guarantees, in turn, a long service lifetime and low leakage rates. Unival is high chemical and thermal resistance.



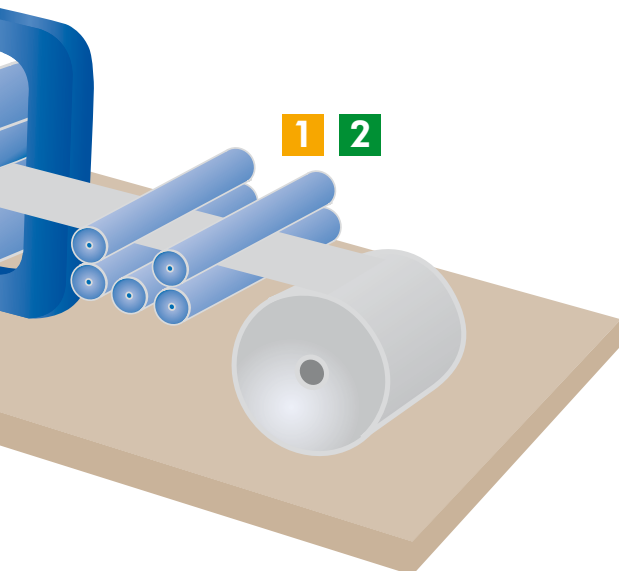
4 Gaskets

The gasket materials Flex-O-Form S and P will provide you with two convincing material versions featuring special properties.

Flex-O-Form gaskets consist either of a modified PTFE material (Flex-O-Form S) containing a small percentage of a mineral filler, or of a modified dark-gray PTFE material (Flex-O-Form P) with a small percentage of special graphite acting as a filler. They are used in critical situations involving flange joints and pipe connections.



The Flex-O-Form adapts itself to the surface in connection with harder uneven flange materials, too.



Merkel
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Merkel – at your side worldwide

Merkel Quality & Value

Enhance your success with our sealing expertise:

- Flawless sealing technology for maximum productivity
- Leading material know-how
- Extrusion-proof products with a long service lifetime and extended service intervals
- Absolute functional reliability of the seals under the most diversified extreme load conditions
- Experience gathered in sealing technology since 1899

Merkel Service

Take advantage of our excellent services around the globe:

- 120,000 widely diversified products
- Very high degree of storage availability, prompt worldwide supplies
- Built-to-order: quickly, tailor-made, cost-efficient
- Optimum solutions for challenging special cases
- Individual testing series under genuine conditions
- Immediate assistance in case of repairs

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