



KOENIG EXPANDER®

The highest level of perfection in seal technology
and flow rate control

The center of excellence for high-performance sealing technologies and flow control

KVT-Fastening is an expert for high-quality fastening and sealing applications and offers engineering solutions based on the wide product portfolio of the leading manufacturers in the market. Beyond that, we also offer fluid technology solutions for sealing and flow control.



Mechanical engineering | Automotive | Electrical engineering | Energy | Precision engineering | Fluid power | Transportation | Off-shore and Marine | Medical equipment
Aviation and aerospace | Construction industry | Watch manufacturing industry

www.kvt-fastening.com



High-performance solutions from KVT-Fastening are found wherever absolutely safe and secure connections and seals are essential. These small but extremely resilient components play key roles where it matters most – whether in the electronics and energy sector, the automotive and transportation industries, aviation and aerospace, engineering and construction, precision engineering, or medical equipment.

KVT-Fastening does not just supply standard products and individual components, but also provides close and active customer support in the search for ideal solutions, particularly when specific requirements must be fulfilled. This portfolio is complemented by a range of innovative tools and

machines as well as, if needed, the integration into automated serial production workflows.

Ever since 1927, KVT-Fastening has stood for experience, solution-driven know-how, unique expertise in development and consultancy as well as the ultimate in reliability. Since December 2012, KVT-Fastening is a member of the Bossard Group. Bossard is a leading provider of intelligent solutions for industrial fastening technology. The range includes global sales, technical consulting (engineering) and logistics of fastening technology components and bolts. Customers benefit from the extension of competencies in industrial fastening technology and from an optimally enhanced product or service portfolio.



Tried-and-tested precision and reliability

As the global leader in seal technology, the KOENIG EXPANDER® ensures that bores are securely sealed for the process. Highly diverse in the application in a variety of material designs, it can even withstand pressures of up to 500 bar. These components have proven themselves in a wide variety of applications and are the ideal solution for secure sealing and flow rate control. As an excellent sealing system, the KOENIG EXPANDER® proves itself in applications such as engines, transmission drive trains, brake systems and injection components. In fluid technology in mechanical engineering, mobile hydraulics, conveyor technology and mold making, it is excellently suited for controlling and regulating flow rates. We possess all manufacturing and branch-specific certifications.

Your challenge - our solution

In fluid technology, media is transported through ducts. With respect to fabrication, these ducts have to be drilled into from outside and then sealed again so they are pressure-proof and without leaks.

The KOENIG EXPANDER® allows bores to be quickly and securely sealed at low production costs and is sufficiently secure even under extreme stress. The production costs of other sealing methods such as screw plugs with copper gaskets and sealants, pressing in pins, welding bores closed, etc. and they cannot be reproduced in a manner that meets the process requirements.

Solutions for flow rate control

KOENIG RESTRICTOR® and KOENIG CHECK VALVE® are reliable solutions that are easy to install. They can be easily installed in a wide variety of applications such as passenger car drive technology, utility vehicles, construction equipment, medical devices and agriculture equipment as well as in a variety of fluid technology systems.

Advantages

- Safe and fast sealing
- Extremely durable up to 500 bar
- Fast and easy installation



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For more information, please request our main catalog.

Pressure-spreading EXPANDER

Series MB | CV

The concept, which is based on the pressure-spreading principle, utilizes a ball as a spreading element and an expansion sleeve. These components are equipped with a toothed sleeve which expands when the ball is pressed in which expands the component until the bore is sealed. Suitable for use in base materials with low to medium hardness, in particular at high pressures (KOENIG EXPANDER® MB and CV up to 450 bar).

- Sealing plugs for an operating pressure of up to 450 bar / 6500 psi
- Wide range of sizes from Ø 3 mm – 22 mm
- Corrosion-resistant version available
- Fast and easy installation



Series MB (steel/stainless steel)

Series CV (aluminum/stainless steel)

Pressure EXPANDER

Series LP

Our low-pressure EXPANDERS are equipped with a conical press-in sleeve and work according to the press-fit and anchoring principle. During installation, the press-in sleeve adjusts to fit the bore and the teeth grip into the wall of the bore.

- Particularly suitable for low pressures up to 60 bar/850 psi
- Short installation instructions
- Metal pressure-fit seal



Series LP 900

Tension-spreading EXPANDER

Series SK | HK | LK

Our tension-spreading EXPANDERS are equipped with an integrated pin which guides the expander plugs into the bore. This KOENIG EXPANDER® does not require a stepped bore and is often used for slanted ducts or in the event of limited accessibility. They are ideal for installation in areas with space or weight limits. The spreading element in the tension-spreading EXPANDER will automatically break off at the rated breaking point after reaching the defined force.

Series SK

- Sealing plugs for high operating pressure of up to 500 bar / 7200 psi
- Comprehensive product range from \varnothing 4 mm – 12 mm
- Generous processing tolerance 0/+0.12 mm
- Extended pin for deeper installation

Series HK

- Sealing plugs for an operating pressure of up to 350 bar / 5100 psi
- Comprehensive product range from \varnothing 3 mm – 10 mm
- Extended pin for deeper installation
- Normal processing tolerance

Series LK

- Sealing plugs for low pressure of up to 60 bar / 850 psi
- Comprehensive product range from \varnothing 4 mm – 18 mm
- Generous processing tolerance 0/+0.12 mm
- Short installation instructions



Series SK

Flow rate control

The KOENIG RESTRICTOR® controls the flow rate in hydraulics systems and is available in a wide range of dimensions. The KOENIG CHECK VALVE® controls the flow rate of fluids and is available in a variety of opening variants.

CHECK VALVES

- Available for supply and return
- Operating pressure of up to 300 bar/4350 psi
- Standard elements are available in a variety of designs
- The opening pressure can be adapted to system requirements
- The stainless steel version is the standard
- Available in a wide range of standard diameters and flow volumes

Nozzles (RESTRICTORS) series RE

- Use in fluids and gases
- Available, as the standard, in stainless steel
- The throttle opening can be designed for the flow volumes you want
- Expansion RESTRICTORS are manipulation-proof



CHECK VALVES



Nozzles (RESTRICTORS)

Setting tools

A variety of setting tools with the corresponding equipment are available for installing the KOENIG EXPANDER®.

- EXPRESS 3000 – Hydro-pneumatic table press
- EXPRESS 5000 – Hydro-pneumatic table press
- EXTOOLS 030, 040-1 and 040-2 – Hydro-pneumatic manual setting tools
- KW-002 – HK pliers and accessories
- KW-003 – HK tool for manual installation
- HKW-003908 – HK ratchet wrench (for KW-003)
- KW-008 – Manual level including accessories
Ø 4 – 6 mm



EXPRESS 3000/5000



EXTOOL 030/040



KW-008

KVT-Fastening – Fastening technology



Blind rivet nuts



Blind rivet technology



Thread inserts



Self-clinching fasteners



Stud welding systems¹⁾



Lock nuts



Bonding fasteners



Access solutions



Quick fastening elements and clips



Quick release pins and spring plungers



Adhesives and sealants¹⁾



Construction fasteners²⁾



Special processes²⁾



Plugs



Pressure intensifiers³⁾



Installation technology



Quick connectors⁴⁾

Fastening, sealing and flow control solutions for complex applications

The extensive KVT-Fastening portfolio offers optimal solutions for your most challenging applications. The products included in this catalog represent only a selection from our entire product portfolio. Upon request, we will be pleased to provide additional information or an individual consultation to you.

Intelligent logistic systems

Bossard SmartBin and SmartLabel are intelligent logistics systems which monitor stock with total reliability and ensure stock replenishment automatically. An online system transmits the data to our server, and this – if necessary – triggers an order. These systems ensure quick and easy availability of C-parts while production is running.



Logistic systems

Competent analysis for efficient solutions

KVT-Fastening's highly qualified experts analyze the given task at hand. Based on this sound understanding of the project, they then develop ideal solutions that are economical, efficient, and safe.



Solutioneering

For more information about our range of products and order at our E-shop, please visit www.kvt-fastening.com

¹⁾ Not available in Germany. ²⁾ Only available in Switzerland. ³⁾ Not available in Switzerland. ⁴⁾ Not available in Austria.

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