



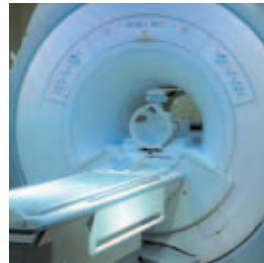
› Electrical engineering



› Energy technology



› Automotive



› Medical technology



› Transportation



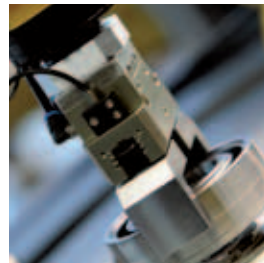
› Construction industry



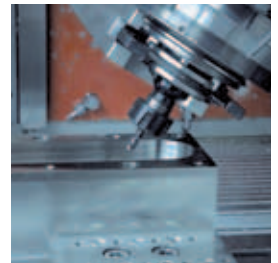
› Precision engineering



› Aviation and aerospace



› Hydraulics and industry



› Mechanical engineering

## TRUST THE NUMBER ONE IN FASTENING AND SEALING TECHNOLOGY

Whether you need to choose the best possible fastening or sealing element, or are looking to develop a special solution for complex operational process and design work flows, KVT is your trusted partner. At KVT, efficiency and project security are our priorities. Find out about our wide range of products and solutions for your fastening needs, today!

For further information please visit

› [www.kvt-koenig.com](http://www.kvt-koenig.com)

### **KVT-Koenig AG**

Dietikon/Zürich | Switzerland  
info-CH@kvt-koenig.com

### **KVT-Koenig Brasil Comércio Importação e Exportação Ltda**

São Paulo/SP | Brazil  
info-BR@kvt-koenig.com

### **KVT-Koenig Trading Co., Ltd. Beijing**

Beijing | China (P.R.C.)  
info-CN@kvt-koenig.com

### **KVT-Koenig GmbH**

Illerrieden | Germany  
info-DE@kvt-koenig.com

### **KVT-Koenig GmbH**

Asten/Linz | Austria  
info-AT@kvt-koenig.com

### **KVT-Koenig Sp. z o.o.**

Gdańsk | Poland  
info-PL@kvt-koenig.com

### **KVT-Koenig S.R.L.**

București | Romania  
info-RO@kvt-koenig.com

### **KVT-Koenig spol. s.r.o.**

Bratislava | Slovakia  
info-SK@kvt-koenig.com

### **KVT-Koenig d.o.o.**

Ljubljana | Slovenia  
info-SI@kvt-koenig.com

### **KVT-Koenig s.r.o.**

Brno | Czech Republic  
info-CZ@kvt-koenig.com

### **KVT-Koenig Kft.**

Budapest | Hungary  
info-HU@kvt-koenig.com

### **KVT-Koenig LLC**

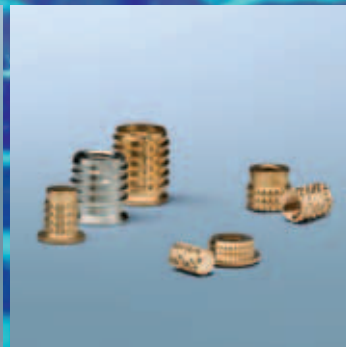
North Haven | USA  
info-US@kvt-koenig.com

## JOINED TO LAST.

**KVT**  
SOLUTIONEERING GROUP

# PLASTICS & COMPOSITES

## THE BEST FASTENERS FOR THE MOST MODERN MATERIALS



JOINED TO LAST.



### **THERMOPLASTIC MATERIALS**

... can be reformed, depending on the temperature. This process is reversible and can be repeated at will.



### **THERMOSET MATERIALS**

... possess a high thermo-mechanical strength; compared to metals, a low specific weight.



### **ELASTOMERS**

... are called dimensionally stable but flexible plastics. They will be deformed under tensile and compressive loads but will return to their original form.



### **COMPOSITES**

... are materials with two or more related materials, combining the material properties of the used components.

# OUTSTANDING ABILITIES IN INNOVATIVE FASTENING AND SEALING TECHNOLOGY

The KVT Solutioneering Group is an internationally renowned specialist in high quality fastening and sealing applications. In both areas KVT offers engineering solutions based on the broad product portfolio of the leading manufacturer in the market.

In electronics and energy technology, in automobiles and transport, in air travel and space travel, in machine and equipment building, in fine mechanics and in medical technology — around the world highly productive solutions from KVT are in use wherever absolutely secure fastenings are involved. The items are small but can bear extreme loads, and they occupy fundamental key positions.

Not only does KVT supply standard products and individual elements, but it actively works with its customers in finding solutions, in particular for individual requirements.

In processing plastics and composites, KVT also stands behind its customers with an extensive selection of products. Sealing and attaching lighter, softer, or porous materials is possible with no problems and with great security.

With over 70 years of experience, with solution oriented expertise and unique skills in development and consultation, the KVT Solutioneering Group stands for the utmost reliability.

**JOINED TO LAST. KVT**



**KVT**  
SOLUTIONEERING GROUP

The logo features the letters 'KVT' in a bold, red, sans-serif font. The letters are composed of horizontal bars, giving them a textured, industrial appearance. Below the letters, the words 'SOLUTIONEERING GROUP' are written in a smaller, black, sans-serif font.

**FASTENERS FOR COMPOSITES**

Ultra light body components can be assembled without crack formation and loss of hardness.

**FASTEKS KD-TECH® BLIND RIVET NUT**

The Fasteks KD-Tech® blind rivet nut forms a bulge without brace and force transmission. Replaced by a controlled deformation. Brittle materials can be connected safely and without stress with this technology. The bulge will be formed with a specified and resilient thickness in composites.

**TOOLS**

All quoted products can be processed with the related tools. These ensure easy handling, stability and high quality, all of which increase production efficiency.



**THREAD INSERTS**

prevent pulling out of threads in plastics and light metals.

**RIVETS**

Whether load spreading rivets with special load spreading feature or rivets with large secondary expansions for constant pull-up capability – KVT delivers perfect products for fastening outstanding blown and refractory materials.



# KVT SOLUTIONS IN KEY POSITIONS


Latest and most modern fastening technology is necessary to create a safety connection in CFK- and GFK structures, refractory or easily breakable materials. Therefore KVT affords absolutely reliable fasteners especially for plastic and composites.

KVT products are especially relevant to railway and aerospace industries, shipbuilding and automotive engineering. Metal assemblies are currently being replaced by stressable plastics in these industrial sectors because they are lighter and more economical.


## › CREATE FIXING POINTS

Fastener step for installation the fastener	Materials	Process	Fastener
Master molding	› Thermoplastic materials	› Molding › Rotation molding	› Tappex® Himould thread insert › bigHead® fastener
Master molding	› Thermoset plastics	› Molding or different laminating methods	› Tappex® Himould thread insert › bigHead® fastener
After molding	› Thermoplastic materials	› Press-fitting, ultrasonic insertion, heat insertion › Self-tapping › Bonding › Riveting	› Tappex® Multisert and Microbarb thread inserts › Tappex® Trisert thread insert › bigHead® fastener for sandwich materials › Fasteks KD-Tech® blind rivet nut › Rivet with special load distributing feature
After molding	› Thermoset plastics	› Self-tapping › Bonding › Riveting	› Tappex® Trisert thread insert › bigHead® fastener for sandwich materials › Fasteks KD-Tech® blind rivet nut › Rivet with special load distributing feature
After molding	› Wood › Expanded materials › Soft plastics	› Self-tapping › Bonding › Riveting	› Tappex® Foamsert thread insert › bigHead® fastener for sandwich materials › Fasteks KD-Tech® blind rivet nut › Rivet with special load distributing feature › Jack-Nut® blind rivet nut
After molding	› Sandwich materials	› Bonding › Riveting	› bigHead® fastener for sandwich materials › Fasteks KD-Tech® blind rivet nut › Rivet with special load distributing feature › Jack-Nut® blind rivet nut

## › RIVET TECHNOLOGY

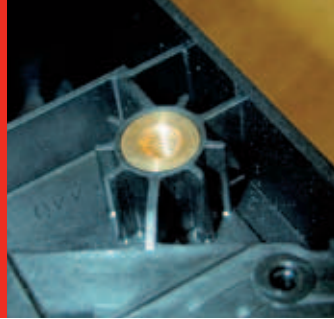
Product	Feature	Tools
 <p><b>FASTEKS KD-TECH® BLIND RIVET NUT</b></p>	<ul style="list-style-type: none"> <li>› Blind rivet nut for installation in refractory, soft and laminated materials. With controlled deformation the bulge is formed without brace and force transmission on the backing material.</li> <li>› Extremely resilient threads</li> <li>› Material: steel zinc plated, aluminum stainless steel</li> <li>› M4 – M12</li> <li>› Flat head, flush head</li> </ul>	<ul style="list-style-type: none"> <li>› Hand tool</li> <li>› Hydro pneumatic tool</li> </ul>



Product	Feature	Tools
<p><b>JACK-NUT® BLIND RIVET NUT</b></p> 	<ul style="list-style-type: none"> <li>› Blind rivet nut with big bearing face on rear side of material for installation in refractory and soft materials</li> <li>› Excellent fit for oversized hole diameters</li> <li>› Large grip range</li> <li>› Material: steel zinc plated</li> <li>› M4 – M6</li> </ul>	<ul style="list-style-type: none"> <li>› Hand tool</li> <li>› Direct screw coupling</li> </ul>
<p><b>PEEL RIVET</b></p> 	<ul style="list-style-type: none"> <li>› Rivet with load spreading feature ideal for joining softer and refractory materials</li> <li>› Excellent fit for oversized hole diameters</li> <li>› Large clamped thickness</li> <li>› Material: aluminum</li> <li>› Ø 3,2 mm – 4,8 mm</li> </ul>	<ul style="list-style-type: none"> <li>› Hand tool</li> <li>› Hydro pneumatic tool</li> </ul>
<p><b>LSR-LOAD SPREADING RIVET</b></p> 	<ul style="list-style-type: none"> <li>› Rivet with load spreading feature ideal for joining softer and refractory materials</li> <li>› Excellent fit for oversized hole diameters</li> <li>› Large clamped thickness</li> <li>› Material: aluminum, steel</li> <li>› Ø 3,2 mm – 4,8 mm</li> <li>› Domed head or large flange head</li> </ul>	<ul style="list-style-type: none"> <li>› Hand tool</li> <li>› Hydro pneumatic tool</li> </ul>
<p><b>MGR-MULTIGRIP- RIVET-LARGE FLANGE</b></p> 	<ul style="list-style-type: none"> <li>› Rivet with large flange head for better load spreading in soft or thin materials</li> <li>› Recommended for oversized hole diameters on head side and slotted holes</li> <li>› Expanded clamped thickness</li> <li>› Material: aluminum, steel</li> <li>› Ø 3,2 mm – 4,8 mm</li> </ul>	<ul style="list-style-type: none"> <li>› Hand tool</li> <li>› Hydro pneumatic tool</li> </ul>
<p><b>HR-RIVET-LARGE FLANGE</b></p> 	<ul style="list-style-type: none"> <li>› Rivet with large flange head and large secondary expansions for better load spreading in hard plastics</li> <li>› High pull-up capability and positively retained stem</li> <li>› Recommended for oversized hole diameters on head side and long holes</li> <li>› Expanded clamped thickness</li> <li>› Material: steel</li> <li>› Ø 4,8 mm – 6,4 mm</li> </ul>	<ul style="list-style-type: none"> <li>› Hand tool</li> <li>› Hydro pneumatic tool</li> </ul>
<p><b>SPEED RIVETS STANDARD</b></p> 	<ul style="list-style-type: none"> <li>› Speed rivets with their magazine system assure a fast installation with high productivity and less waste</li> <li>› The speed rivet is able to connect plastics, soft materials and steel</li> <li>› The design of the rivet with its large secondary expansions and large head style gives a high pull-up capability and absorbs high shear performances</li> <li>› The large head style is fit for applications in softer materials</li> <li>› Material: zinc plated steel, aluminum, stainless steel</li> <li>› Ø 3,2 mm – 4,8 mm</li> </ul>	<ul style="list-style-type: none"> <li>› Hydro pneumatic tool with a variety of external boosters <ul style="list-style-type: none"> <li>- pantograph tool stud</li> <li>- vertical from the top</li> <li>- vertical from the bottom</li> </ul> </li> <li>› Hand tool with integrated booster</li> </ul>



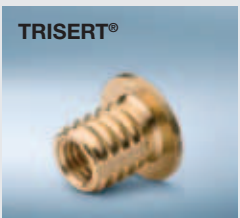




© Otto Bock







© Orderman GmbH

## › TAPPEX® THREAD INSERTS

Product	Feature	Tools
<b>MULTISERT®</b> 	<ul style="list-style-type: none"> <li>› Press-fitting insert</li> <li>› Material: brass</li> <li>› M1,6 – M12</li> <li>› Unheaded, small head diameter, large head diameter</li> </ul>	<ul style="list-style-type: none"> <li>› Tappex®- Heatinserter 074/02</li> </ul>
<b>MICROBARB®</b> 	<ul style="list-style-type: none"> <li>› Press-fitting insert with micro knurling for thin-walled materials</li> <li>› Material: brass</li> <li>› M2 – M10</li> </ul>	<ul style="list-style-type: none"> <li>› Tappex®- Heatinserter 074/02</li> </ul>
<b>TRISERT®</b> 	<ul style="list-style-type: none"> <li>› Self-tapping insert</li> <li>› Material: brass M2 – M10</li> <li>› Material: steel, stainless steel M3 – M10 (M10 also in blind ended design)</li> <li>› Bidirectional purpose because of fully internal through-threaded (double ended)</li> <li>› 3 special cutting slots prevent chips in the thread</li> <li>› Double ended, small head (the only product made of steel, stainless steel), large head</li> </ul>	<ul style="list-style-type: none"> <li>› Hand installation tool with hexagonal retainer for prototyping and small series</li> <li>› Pneumatic screwdriver with an automatic reverse torque-clutch control and optional tool stud</li> </ul>
<b>FOAMSERT®</b> 	<ul style="list-style-type: none"> <li>› Self-tapping insert for expanded materials, wood and soft plastics</li> <li>› Material: brass</li> <li>› M2,5 – M8</li> <li>› Double ended, small head diameter</li> </ul>	<ul style="list-style-type: none"> <li>› Hand installation tool with hexagonal retainer for prototyping and small series</li> <li>› Pneumatic screwdriver with an automatic reverse torque-clutch control and optional tool stud</li> </ul>
<b>HIMOULD®</b> 	<ul style="list-style-type: none"> <li>› Threaded insert for molding in</li> <li>› Material: brass</li> <li>› Highly increased pull out force by additional grooves from thread size M3</li> <li>› Free of chips and burrs after molding process</li> <li>› Very thin walled, especially suitable for thin section applications</li> <li>› Open ended design, blind ended design</li> </ul>	



## › BIGHEAD® FASTENERS FOR COMPOSITE MATERIALS

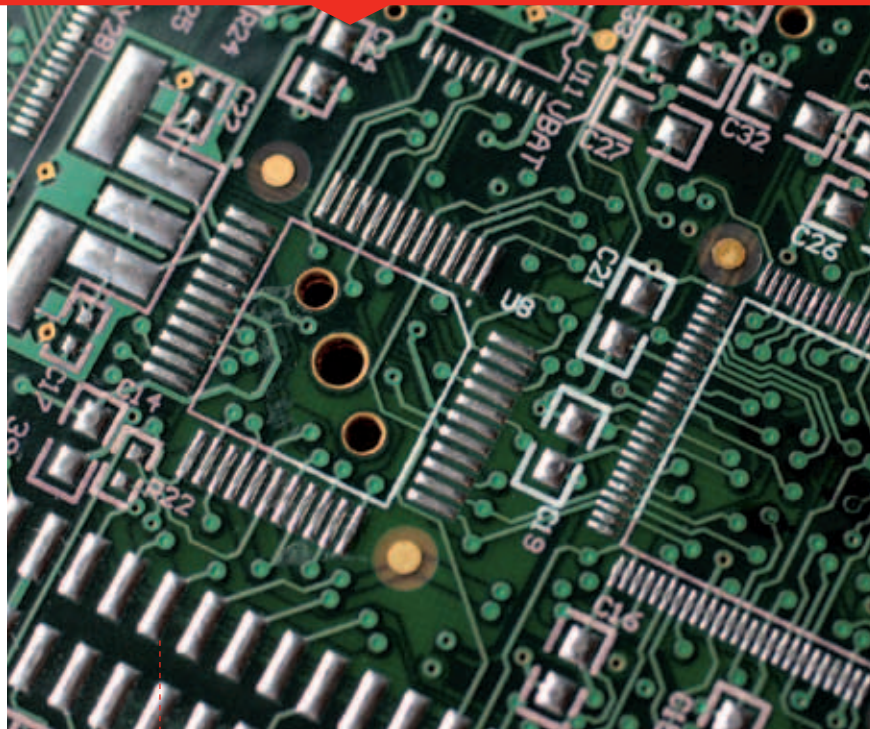
Product	Feature	Tool
<b>STANDARD FASTENER</b> 	<ul style="list-style-type: none"> <li>› Bonded fastener connected with a head shape for molding in and bonding</li> <li>› Material: steel, stainless steel</li> <li>› Threaded bolts, threaded stand-offs M4 - M10</li> <li>› Cable brackets</li> <li>› Nuts M4 - M12</li> <li>› Pins, loops, hooks in Ø 4,75 mm, nails Ø 3,00 mm</li> </ul>	<ul style="list-style-type: none"> <li>› 3M Scotch-Weld™ 7271 Hybrid structural adhesive</li> </ul>
<b>TWINDISK®</b> 	<ul style="list-style-type: none"> <li>› Special fastener for setting fixing points in composites</li> <li>› Transmission of forces to the outer layers</li> <li>› Material: steel, stainless steel</li> <li>› Variable thicknesses and head diameters</li> <li>› Male and female disk</li> </ul>	<ul style="list-style-type: none"> <li>› 3M Scotch-Weld™ 7271 Hybrid structural adhesive</li> </ul>
<b>POPPIT®</b> 	<ul style="list-style-type: none"> <li>› Click technology guarantees quick and efficient installation and removal</li> <li>› No mounting holes required</li> <li>› Disk Poppit® for bonding: available in two sizes to absorb vertical tensile forces of 2,5 kg (Ø 20 mm) and 5,0 kg (Ø 30 mm) per fastener</li> <li>› Screw Poppit® with self-drilling or self-tapping screw</li> </ul>	<ul style="list-style-type: none"> <li>› 3M Scotch-Weld™ 7271 Hybrid structural adhesive</li> <li>› BIG BOND self-adhesive pads</li> </ul>
<b>SPECIAL SOLUTION</b> 	<ul style="list-style-type: none"> <li>› Customer special fasteners for molding and bonding</li> <li>› Optional definition of fastener sort and carrier material</li> </ul>	<ul style="list-style-type: none"> <li>› 3M Scotch-Weld™ 7271 Hybrid structural adhesive</li> </ul>

# SPECIAL MATERIALS – FASTEN SECURELY



## AEROSPACE INDUSTRIES

Aircraft construction requires high quality fastening due to the enormous forces occurring during lift-off, flight and landing. That is why these fasteners meet the strictest quality requirements. KVT offers a multitude of such fasteners. Their outstanding quality ensures the greatest and most durable safety in various applications in the aerospace industry.



Speed rivets were developed especially as a alternative for solder posts of conductor boards in the **ELECTRONICS INDUSTRIES**.



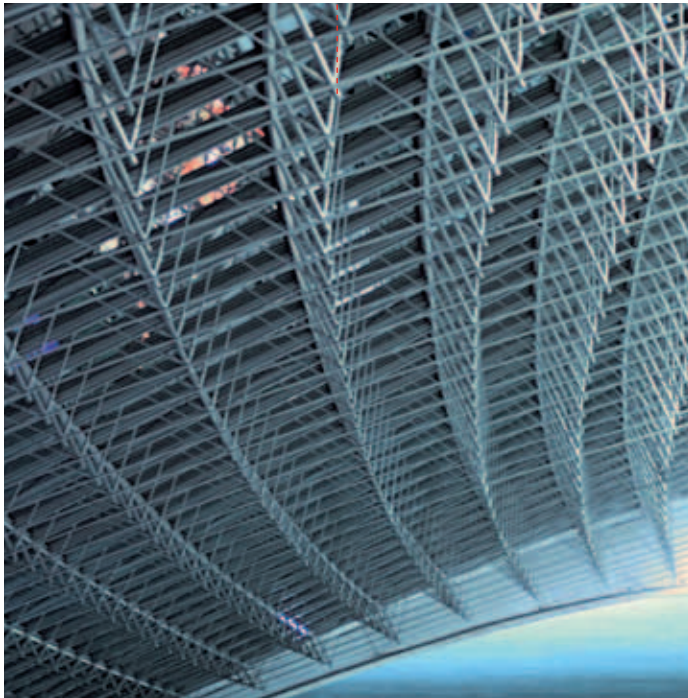
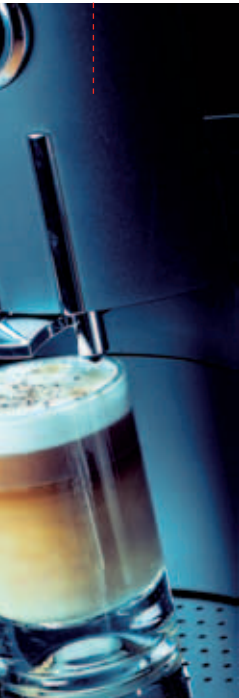
## PLANT - AND APPARATUS CONSTRUCTION

In current construction metallic materials are increasingly being replaced by high-power plastics and innovative composite materials. High capacity with considerable weight saving and freedom of design are among the factors of success for these construction materials. KVT's innovative connecting components allow the ideal combination of various materials.

The **BUILDING INDUSTRY** uses laminates for the greatest resistance and the least weight. In this case peel and load spreading rivets are the perfect fasteners.

## TRANSPORTATION

Lightweight design is the keyword for construction passenger cars, trucks, buses, railed vehicles, yachts and caravans. The KVT Solutioneering Group offers a wide-ranging product portfolio for these applications.



Applications are as numerous and as varied as are the properties and characteristics of plastics and composite materials. KVT and its products and its Solutioneering approach work with manufacturers in the appliance industry, medical, automotive, electrical, food, and construction industries.

KVT is a professional partner with its products and its Solutioneering approach.

