



## Press Information

### **For an outstanding cut: Kyocera's industrial precision knives are now available on the European market**

**The industrial precision knives are used in cutting and slicing processes of all kinds. The products are characterised by exceptional hardness and durability.**

**Kyoto/London, November 13<sup>th</sup>, 2020.** Precision with every cut – this is the guarantee of Kyocera's industrial precision knives. Applications range from functional films, rubber products, paper and cardboard, adhesive tapes to electronic devices such as LCD displays, lithium-ion batteries, FPCs, TAB and COF tapes and aluminium electrolytic capacitors. The products will be presented for the first time in March 2021 at ICE Europe, the leading international trade fair for the finishing and processing of paper, film and foil.

#### **It's all about the materials**

Fine ceramics expert Kyocera uses three high-quality materials for its precision industrial knives: ultra-fine grain carbide, cermet, and zirconium oxide. The first of these is suitable for a wide range of industrial applications due to its high density, hardness and break resistance. It is also very well suited for EDM. The composite material Cermet, which is composed of TiC, TiN, NbC with Co and Ni, among other materials, is known for its good wear resistance and low affinity to metal. This material can also be spark eroded (EDM) and brazed. Zirconium oxide is the third substance used in Kyocera industrial precision knives. It is a tough ceramic with excellent corrosion resistance. It is neither magnetic nor electrically insulating. This makes it suitable for a wide range of applications, for example in knives and scissors.

Knife blades made of the above-mentioned materials are treated with Kyocera's own satin coating process. This is known as Micro Finishing® and makes costly polishing or coating superfluous. In a special process, the surfaces of the blades are roughened to prevent build-up on adhesive materials. The result is a Satin Surface® that reduces the frictional resistance of the knives. This not only prevents the spread of dust through friction, but also helps prevent materials, such as synthetic fibres, from sticking to the cutting edges. Further advantages include cost savings at the time of purchase, no rounding of the cutting edge due to coating or polishing of the blade, and build-up on the cutting edge due to material sticking to the blade is avoided.



All in all, the industrial precision knives extend service life many times over thanks to the innovative combination of materials. At the same time, the surfaces are cut much more precisely than with conventional metal blades and, unlike these, they offer an excellent cut surface. The fine grain size also ensures high intensity, very tough, and highly break-resistant material. Another advantage: the blades can be re-sharpened by Kyocera at any time.

**Kyocera offers various industrial precision knives for a wide range of applications:**

**1. Industrial ultrasonic cutters**

The ultrasonic cutters are ideal for cutting soft, porous and unstable materials with fragile joints. Using ultrasound eliminates the risk of deformation of the products, so even delicate materials can be cut without hesitation. Thanks to the minimised surface friction, even the smallest surfaces can be machined cleanly and accurately. The blades are designed in such a way that they do not bond with the material, which is why there are no chipping or burring. They impress not only with high productivity and minimum cleaning time, but also with high processing speed, energy-saving efficiency and low environmental impact.

**2. Gabel and Gang knives**

These knives are not only extremely precise, but also durable. The longitudinal slitting knives are manufactured using proven and optimised production technology. The substrate selection consists of a combination of the aforementioned materials ultra-fine grain carbide, cermet and zirconium dioxide, thus combining the advantages of the individual substances in one blade.

**3. Ring knives**

Sharp-edged and highly precise – this is what makes Kyocera's ring knives so special. The sharpened edges and surface treatment are ideal for cutting everything from individual films to dressing materials.

**4. Creasing and cutting blades**

The blades are made of very hard, finest grain tungsten carbide. Thanks to the precise edge sharpening technology, not only do the blades have a longer service life, but they are also ideal for cutting cardboard boxes.

**5. Straight-edge knives**

In addition to the optimised quality, the knives also impress with their superior surface treatment. Both factors contribute to reducing emissions during the cutting process. In addition, productivity is significantly improved thanks to interrupted cuts in fibre production due to the good wear resistance and sharpness.



## 6. Die and punch forms and shaped knives

These knives combine optimum material selection with high-precision processing technology. This results in high-quality, high-precision wear-resistant blades for a wide range of applications. The blades are also manufactured in cermet, which is particularly suitable for reducing scratches on the surfaces of finished products due to its low affinity to metal.

In addition to the industrial precision knives mentioned above, Kyocera also manufactures custom knives on request. This ensures that the customer's cutting requirements are taken into account to the greatest possible extent and the processes are adapted to suit the individual requirements.

**For more information on Kyocera:** [www.kyocera.co.uk](http://www.kyocera.co.uk)

### About Kyocera

Headquartered in Kyoto, Japan, Kyocera Corporation is one of the world's leading manufacturers of fine ceramic components for the technology industry. The strategically important divisions in the Kyocera Group, which is comprised of 298 subsidiaries (as of March 31, 2020), are information and communications technologies, products which increase quality of life, and environmentally friendly products. The technology group is also one of the most experienced producers of smart energy systems worldwide, with more than 40 years of know-how in the industry.

The company is ranked #549 on Forbes magazine's 2020 "Global 2000" listing of the world's largest publicly traded companies. With a global workforce of over 75,500 employees, Kyocera posted sales revenue of approximately €13,33 billion in fiscal year 2019/2020. The products marketed by the company in Europe include printers, digital copying systems, semiconductor-, fine ceramic-, automotive- and electronic components as well as printing devices and ceramic kitchen products. The Kyocera Group has two independent companies in the United Kingdom: Kyocera Fineceramics Ltd. and Kyocera Document Solutions.

The company also takes an active interest in cultural affairs. The Kyoto Prize, a prominent international award, is presented each year by the Inamori Foundation — established by Kyocera founder Dr. Kazuo Inamori — to individuals worldwide who have contributed significantly to the scientific, cultural, and spiritual betterment of humankind (converted at approximately €828,000 per prize category).

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### Contact

Kyocera Fineceramics Ltd.  
Daniela Faust  
Manager Corporate Communications  
Hammfelddamm 6  
41460 Neuss  
Germany  
Tel.: +49 (0)2131/16 37 – 188  
Fax: +49 (0)2131/16 37 – 150  
Mobile: +49 (0)175/727 57 06  
Mail: [daniela.faust@kyocera.de](mailto:daniela.faust@kyocera.de)  
[www.kyocera.co.uk](http://www.kyocera.co.uk)