**Table of Contents**

**Introduction** ........................................... .i–xvii

**Services and Support** .................................. xviii–xxxi

**Stationary Tools**

- **Turning** Introduction .................................. .A0–A3
- ISO Inserts ................................................. .B0–B130
- PCD/PCBN Inserts ........................................... .B132–B197
- O.D./I.D. Tooling ........................................... .C0–C147
- Grooving and Cut-Off ..................................... .D0–D145
- Threading .................................................... .E0–E103
- Application Specific ...................................... .F0–F131

**Rotating Tools**

- **Holemaking** Introduction ............................. .0–9
- Solid Carbide Drills ....................................... .G0–G97
- Modular Drills .............................................. .H0–H47
- Combination Tools ......................................... .I0–I23
- Indexable Drills ............................................ .J0–J79
- Hole Finishing .............................................. .K0–K205
- Taps .......................................................... .L0–L117

- **Solid End Milling** ...................................... .M0–M143

- **Indexable Milling** Introduction ..................... .N0–N19
- Face Mills .................................................. .O0–O153
- Shoulder Mills .............................................. .P0–P87
- Slotting Cutters ............................................. .Q0–Q61
- Copy Mills ................................................... .R0–R123
- Thread Mills ................................................ .S0–S15

**Index by Order Number** .................................. .T2–T65

**Index by Catalogue Number** ............................ .T66–T135

**Global Contacts** ......................................... .U2–U3

**Icon Legend** .............................................. .U4–U7
Beyond BLAST™
An entirely different approach to machining high-temperature alloys. We determined that the most effective way to deliver coolant would be to channel it through the insert — ensuring that it hits exactly where it does the most good. That means, more efficient coolant delivery at a fraction of the cost of high-pressure coolant systems. By precisely controlling coolant application, Beyond BLAST enables you to lower your energy consumption, saving you even more money and reducing your impact on the environment.

For more information, see pages F2–F11.

Superhard Materials • PCBN and PCD
Abrasion resistance and toughness are the two most important properties in assessing the efficiency of cutting tool materials. Abrasion resistance is primarily a function of hardness, and, in this respect, diamond (PCD) and cubic boron nitride (CBN) are superior to all other known materials.

For more information, see pages B132–B197.
Beyond™ PVD Grades

Advanced PVD coatings using Beyond technology are well suited to resist the high temperatures associated with machining tough alloys. By offering increased tool life (by 30–40%), the general engineering, transportation, aerospace, energy, and earthworks markets can experience benefits in their profitability. They can also realise benefits by utilising the strength of the new PVD coating in combination with the broad product offering to perform turning, grooving, and cut-off operations in a wide array of materials and applications while maintaining consistent chip control and minimising insert edge wear.

For more information, see pages B2–B115.

Grooving and Cut-Off : -CL and -GUP Geometries

The A2™ CL geometry maximises your cut-off productivity. The A2-CL geometry offers tighter chipbreaker capabilities when machining low-carbon steel, excellent chip evacuation in low-feed applications, and improved stability and rigidity. The A4-GUP geometry, available in moulded and precision-ground styles, provides a positive rake angle, enhanced chip control, and lower cutting forces. The -GUP geometry offers up to 180% longer tool life and higher productivity in steel, stainless steel, and high-temperature alloy materials.

For more information, see pages A2-CL: D13  
A4-GUP: D70, D73–D74.

Kennametal Select

Kennametal Select products make it simple to get the most out of your inserts — and your money. Every insert is gold, which exposes wear as the tool continues to be used. This makes it easy to detect when an insert is ready to be changed — maximising the product’s value and protecting the workpiece. Also, because Kennametal Select inserts can be used in most applications, a single insert can take on any number of tasks, thus reducing your inventory. Kennametal Select products are also reliable enough to cut steel, stainless steel, cast iron, and high-temperature alloys, enabling quick changes in workpiece materials without the need to swap inserts, saving time and money.

For more information, see pages F105–F130.
Hole Finishing with Kennametal

Only Kennametal is capable of offering you the best, customised solution for your application. Kennametal owns the entire process chain, from raw material, insert pressing, tool body design, brazing, sintering, grinding, coating, and so on, up to reconditioning. Kennametal is the only source in the metalworking industry from where you can get all types of hole finishing tooling, from reaming and fine boring to motion tooling, directly from one hand. Therefore, Kennametal can offer you the best-fitting solution for your machining challenge, giving you the choice of tooling without any limitations in regard to portfolio or capability.

For more information, see pages K1–K204.

Drill Fix™ DFS™

Drill Fix DFS combines the economical squared-outboard insert with the superior centring capabilities of the trigon inboard insert. The DFS indexable drills offer increased metal removal rates combined with high surface quality and hole straightness.

For more information, see pages J14–J22.

GOdrill™ • Kennametal’s First Microdrill

The all-new GOdrill addresses drilling operations in a diameter range of 1–12,7mm (.0394–.5”) in a broad variety of materials and applications, such as fuel systems or medical components. Due to its very unique design, the GOdrill expands the advantages of modular drills into the small diameter range: high-end grades, wear-indicator coating, and new, patented geometries enable full utilisation of the drill’s tool life capacity.

For more information, see pages G5–G14.
HP Beyond™ Drills for Steel and Stainless Steel

HP Beyond Series Solid Carbide Drills are designed specifically for stainless steel and steel applications, offering high performance and long tool life in regular steel, titanium, and iron materials. By combining unique Kennametal technologies, such as the HP point, flute geometry, and a new Beyond grade technology into one tool, the B2_HP Beyond is the ultimate high-volume production tool.

For more information, see pages G21–G37.

KSEM PLUS™ Modular Drill System

The KSEM PLUS drill concept is simple but effective. It combines the benefits of the KSEM™ modular drill (high feeds and length-to-diameter [L/D] ratios) with the benefits of an indexable drill (high speeds and low consumable costs).

For more information, see pages H36–H47.

Beyond™ High-Performance Solid Carbide Taps

Solid carbide taps offer higher productivity and outstanding performance in a wider range of materials than formerly possible. Get more production from a single tool and superior accuracy of product thread that surpasses the competition. Kennametal High-Performance Solid Carbide Taps are available in various specifications with enhanced precision and design, which translates into longer tool life, excellent performance, and exceptional wear resistance.

For more information, see pages L2–L29.
HARVI™ High-Performance End Mills for Roughing and Finishing with One Tool
HARVI takes high-performance roughing, semi-finishing, slotting, and profiling to the next level. The line is designed to provide maximum metal removal rates and achieve supreme surface conditions. A wide range of diameters and corner radii are available from stock.
For more information, see pages M10–M25.

KenFeed™ End Mills for High-Feed Milling
A unique tool with new, 6-flute style for high productivity, the KenFeed end mill is specifically engineered to machine hardened steel up to 67 HRC at extreme speeds and feeds. Necked shanks provide extended reach in deep cavities and high feed rates up to 0.6mm per tooth on a 20mm tool. Machine hardened materials at 2–3x the metal removal rate of competitive end mills. Wide range of cutting diameters, down to 6mm for small- and medium-pocket work. Innovative new geometry maximises metal removal rates and lowers manufacturing costs.
For more information, see pages M26–M30.

KCN05™ Diamond Coated Carbide Routers
Kennametal has the correct milling solutions engineered for machining difficult CFRP (Carbon-Fibre Reinforced Polymer) and non-ferrous components. KCN05 solid carbide router products provide excellent tool life and produce smooth finishes with improved edge quality. The unique geometries are free cutting, reduce heat generation, and provide high-quality machined surfaces.
For more information, see pages M65–M71.
GOmill™ • The Economical Milling Cutter Line

The GOmill line is specifically engineered to work on short length-of-cut applications in multiple workpiece materials, like soft and hard steels up to 48 HRC, stainless steels, high-temperature alloys, and cast iron. With the very short overall length and soft cutting geometries, the line is made to conform to the growing market of mill-turn machines. The 3-flute sharp and 4-flute chamfer versions support roughing, semi-finishing, and finishing applications; the 3-flute ball nose tool supports roughing and semi-finishing applications; and the 2-flute ball nose version supports finishing applications. All three geometries work in slotting as well as side milling applications up to 1 x D depth of cut.

For more information, see pages M117, M122, M126, M130.

MaxiMet™ Carbide End Mills for High Metal Removal Rates and Superior Surface Finishes

Designed to significantly reduce machining time in aluminium! The innovative geometry designs include a wiper facet for superior surface finish on aluminium parts. MaxiMet takes roughing and finishing cuts with one tool. Slotting is effective up to full 1 x D axial depth. Side milling is effective up to 0,5 x D radial and 1,5 x D axial depth. The 3-flute series uses unequal flute spacing for chatter-free performance. Effective in a full range of machine speeds. Multiple corner radii and extended neck configurations are available as standard.

For more information, see pages M50–M53.
Dodeka™ Series • Leader in Advanced Face Milling Applications

Dodeka Mini and Dodeka MAX™ are the most comprehensive face milling boosters on the market today. Twelve true cutting edges per insert mean low cost per edge and high productivity. With Beyond™ premium milling grades, you will see up to 30% higher Metal Removal Rates (MRR), 25% lower cutting forces due to real soft cutting action, and up to 35% better tool life in light to heavy machining.

For more information, see pages O2–O29.

MEGA Series • Superior Heavy-Duty Milling

With four true cutting edges per heavy-duty MEGA insert, you know you are getting the low cost per edge and high productivity you need and have come to expect from Kennametal. The soft cutting edge design enables 30% lower cutting forces, and the carbide shim provides protection to the cutter body. Choose MEGA inserts for all of your steel and cast iron indexable milling needs.

For more information, see pages O30–O47.
Mill 1™ • High-Performance Shoulder Milling Platform

The multifunctional Mill 1 platform works with all tool materials in shoulder, ramp, slot, plunge, and helical milling with one insert style to improve productivity and reduce inventory and machining costs. The super positive cutting rake, soft cutting action, and low cutting forces enable higher feed rates and spindle protection. Innovative insert and cutter body designs offer improved ramping capabilities.

For more information, see pages P2–P62.

Beyond BLAST™ • More Than Just the Right Tool — The Ultimate Solution

The Beyond BLAST KSSM™ 45° and KSRM™ platforms utilise Precision Coolant Technology (PCT) to aggressively apply coolant directly to the cutting area. Not only does this reduce heat at the cutting edge, but it also assists with reducing tool and chip friction, increasing chip evacuation, and relieving shear stress.

For more information, see pages O48–O53.

Rodeka™ • The New Round Insert Generation

Kennametal introduces a new and revolutionary double-sided round milling insert capable to run in multiple types of milling operations and workpiece materials, providing the latest double-sided insert technology to boost your productivity with the most efficient cost per edge.

For more information, see pages R12–R19.
New Comprehensive Tooling Systems Catalogue

Kennametal is proud to present the latest Kennametal Tooling Systems catalogue with innovative products on more than 1,100 pages! In this catalogue, you will find information about KM Micro™, KM Mini™, KM™ Quick Change, KM4X™, HSK shank tools, BTKV and CVKv shank tools, BT shank tools, CV shank tools, DV shank tools, QC and R8 shank tools, straight shanks, collets and sleeves, and thermo shrinking machines.

To view the PDF, please go to www.kennametal.com
KM4X™ • The New Choice for Heavy-Duty Milling

KM4X is the latest version of the KM™ spindle interface targeted at heavy-duty machining operations and is a top choice for machining large, structural, tough-to-machine materials, like titanium, for the aerospace industry. The portfolio consists of rotating adaptors and static tooling to support the tough and heavy machining markets. Additional products include spindle component packages as well as static clamping units to support turning and mill-turn opportunities.

KM™ Quick Change

KM Quick Change Tooling is a central component in achieving dramatic improvement in machine and cutting tool use. It’s the choice of manufacturers requiring maximum machine output. The necessary tasks of changing, setting up, and gaging tools create an excess of machine downtime. For small batch manufacturing operations requiring these frequent setups, KM Quick Change Tooling is the most efficient method for reducing lost time and improving the overall quality of the machining process by generating greater productivity and increasing profits.

HSK Shank Tools

ERICKSON™ HSK Face Contact short taper tooling is manufactured from premium materials and to the latest DIN/ISO specification standards. Form A versions are generally used in machining centres and milling machines with automatic tool changers.
Coordinated global resources with world-class manufacturing process development and implementation capabilities.

Whether it’s a single tailored tool required to address a specific part feature or the development of a comprehensive manufacturing process for use on existing or newly acquired production equipment, Kennametal’s team can manage the development, personnel training, and successful implementation of the complete solution.

Global implies just that. Globally coordinated manufacturing process development, implementation, and optimisation support at machine tool builders, end user engineering or corporate offices, and end user production facilities, regardless of their respective geographies. Well-organised, highly linked staff reside in the Americas, Europe, and Asia/Pacific regions. Globally standardised design and manufacturing systems enable highly coordinated project management and implementation results.

Key alliances with machine tool builders and other leading manufacturing technology enablers ensure a complete solution, optimising the entire process — not just portions of it. This results in the most effective and efficient manufacturing process possible, leading to low implementation time and cost and rapid return on investment.

For more information, please contact us at 1.866.646.7113.
Energy

Energy Engineered Solutions

Kennametal is more than a supplier of tooling solutions. With a thorough understanding of the energy segment’s process and application challenges, we proactively address production concerns to deliver productivity to customers seeking peak performance in demanding environments. Kennametal’s success is based on our capabilities — our ability to work with you on customised solutions to optimise your results and our willingness to engage with a broad spectrum of materials, metalworking solutions, application and custom component manufacturing, and supply expertise. Our drive for success, enabled through our advanced materials sciences, application knowledge, and commitment to a sustainable environment, results in a broad portfolio of innovative, custom, wear-resistant solutions.

Please also see the new Kennametal Energy catalogue (B-11-02786).
Automotive

Automotive Engineered Solutions

Traditionally, Kennametal has been a strong player in the transportation field, pioneering innovative solutions with automotive, shipbuilding, and railroad customers. We deliver global services and products that exceed our customers’ expectations and continually push the boundaries of science. In today’s competitive world, no one can support our customers better, and in turn, deliver the continued service and quality that has become Kennametal’s trademark.

Kennametal’s global reach has helped our customers standardise processes and products to improve both cost and quality. We offer an intimate understanding of the economics of the automotive value chain and unparalleled customised solutions tailored to your needs. We can deliver superior value by listening closely and innovating based on what our customers say. Our goal is to help you be more competitive, at home and on a global scale.

If it rolls, floats, or flies,
Aerospace

Aerospace Engineered Solutions

From lightweight composite materials to exotic alloys, Kennametal is committed to reducing risks and costs in the manufacture of aerospace and defense programs. We partner with customers to implement standard and customised solutions with minimum cost per part and high repeatability in mind. Kennametal has unique capabilities and resources to cover the total manufacturing equation from roughing to automated deburring and finishing. Kennametal’s best-in-class technologies and services deliver up to 30% cost reduction and 60% cycle time reduction.

Aerospace component surfaces are one of the key battlegrounds in environmentally friendly manufacturing. Surface treatments not only improve appearance of the part but also enhance wear resistance, provide corrosion protection, and improve friction control. These subtle manufacturing enhancements provide big dividends in the form of fuel efficiency, reliability, performance, and longer part life.

Kennametal has a solution that delivers innovation and productivity.
INNOVATIONS

MASTER CATALOGUE

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