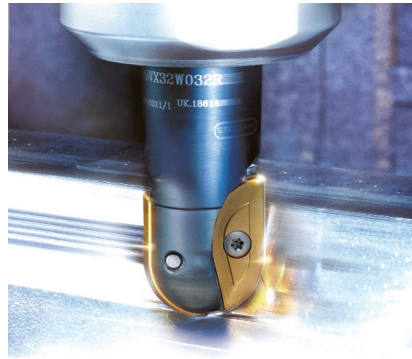


Grade Selection

Successful results start from the grade! Grade selection is crucial to meeting today's strict quality requirements and technical challenges, while maximizing productivity. **Sandvik Hard Materials Co.** has a new comprehensive GOOD, BETTER, BEST program, which is the solution for all your business and application challenges. It is the optimum combination of high quality and consistent grades in an extensive product offering. The company's latest Rotary Tool Blank catalog contains complete information regarding the program. Telephone: (248) 236-4109.

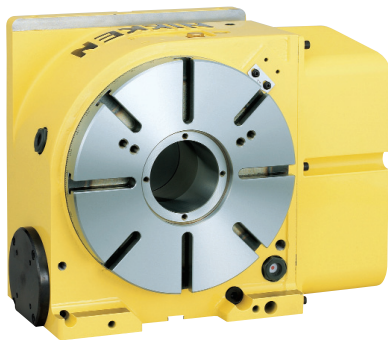


Milling Tools

The 5505VX series of milling tools and inserts from **Stellram** is for roughing complex profiles. The tool bodies are available in several diameters with Weldon or Morse taper shanks. The SC3025 insert is for milling cast and nodular irons and the X400 insert is for hardened steels, up to 56 HRC. The extra-thick inserts have variable edges, with heavy preparation around the radius where impact is greatest to cope with the heat and forces generated when roughing hard materials. Telephone: (800) 232-1200.

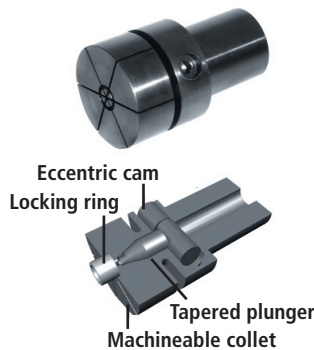
Specialty Drills

Onsrud Cutter LP offers specialty drills for machining composite and plastic materials. The solid-carbide drills have an 8-facet point design, which reduces cutting forces; are wear-resistant; and can be coated for longer tool life. The company's HSS drills are for holemaking in hard and soft plastic. The company says the 60° point eliminates cracking and chipping and the 0° rake angle eliminates grabbing as the drill exits a through-hole. Telephone: (800) 234-1560.



Rotary Table

Although the CNC260 rotary table from **Lyndex-Nikken Inc.** features a smaller motor body and a reduced footprint, the table diameter is 10mm larger than the company's CNC250 model. Also, vertical and horizontal workload capacity has increased by 25 kg and 50 kg, respectively, and the through-hole is larger. An optional hydraulic breaking system provides five times the torque when compared to similarly sized rotary tables. Telephone: (800) 543-6237.



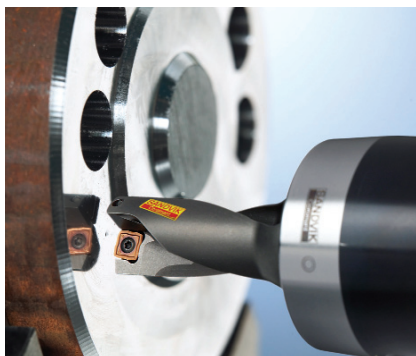
Expanding Collet

Rovi Products Inc. adds the Econo-Loc to its line of expanding collets. The collet is operated by manually turning the socket head's eccentric cam, which pushes a tapered plunger inside and causes the tool to expand. The collet is dead length and, according to Rovi, ideal for producing blind-hole parts because there is no expanding screw in front of the collet. Available with a 1½" or 1" shank, the collet's machineable range is 2.093" to 0.690". Telephone: (800) 423-5145.



Sump Cleaner

The SP50 sump cleaner from **Cecor Inc.** uses a 20-hp propane engine to power a lobe-type, positive-displacement pump. The pump creates a vacuum in the tank with a suction lift to 13" Hg (mercury) and pumps up to 110 gpm. The filter holds 5 cu. ft. of solids. The tank features overflow protection and all discharge ports are valved. The sump cleaner's transport base allows for movement in tight spaces. Telephone: (800) 356-9042.



Drill

The CoroDrill 880 from **Sandvik Coromant Co.** accepts inserts with four cutting edges. According to the company, the drill's uniquely shaped center insert is able to smoothly enter into the workpiece and balance cutting forces, which enables feeds to be increased 100 percent. The drill is able to perform helical interpolation, plunge drilling and boring. The latest versions cover a range from 0.473" to 2.5". Telephone: (201) 794-5000.



Endmilling System

Seco-Carboly offers a high-feed cutting geometry for its Minimaster small-diameter endmills. The inserts are for achieving high-production rates in small cavities and pockets. Available in four sizes—8mm, 10mm, 12mm and 16mm—the company reports the insert design increases the metal-removal rate six to eight times. Two grades are available: F30M for roughing and F15M for finishing. A variety of tool shanks are available, including those with long overhang requirements. Telephone: (800) 832-8326.



Broaching Machine

Broachman LLC sells and services Stenhøj Hydraulik's long-life broaching process. The broaching machine is aimed at increasing broaching tool life, as well as improving tolerances and surface quality of broached parts. The process allows for optimal vibration conditions for broaching tools. According to the company, the machine eliminates runout, concentricity issues and lead error problems. Broachman is hosting a broaching seminar Oct. 11 in Dearborn, Mich. Telephone: (231) 768-5860.



Online CAD/CAM Training

CNC Software Inc.'s latest product, Mastercam Art, has training available online at www.streamingteacher.com, a subscription-based training program using streaming audio and video. Mastercam Art CAD/CAM software is for anyone who needs to add artistic qualities to his products. The software allows the user to craft 2-D sketches, clip-art, photos and CAD files on-screen and cut them with specialized toolpaths. Telephone: (800) 228-2877.



Tooling

THINBIT is offering its tooling to universities and vocational schools for use in classroom settings. The tools are available at competitive rates. The company hopes to generate excitement among students involved in manufacturing programs, exposing them to the types of tools they will see in the manufacturing sector. Telephone: (888) 844-6248.

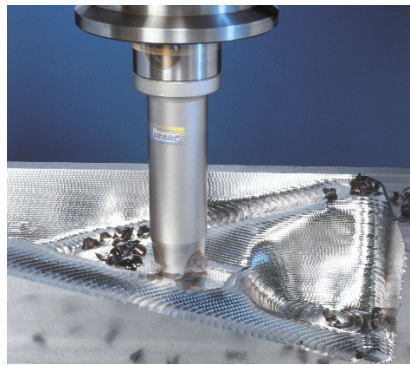


Collets

Pratt Burnerd America is offering Crawford multibore collets and multi-bore DIN-style collets, which provide a 1/8" range per collet. Several other collet types are available including 5C, R8, 16C, B42, B60 and ER collets. The company also markets a variety of collet chucks including pull-back and dead-length versions. Telephone: (800) 253-0820.

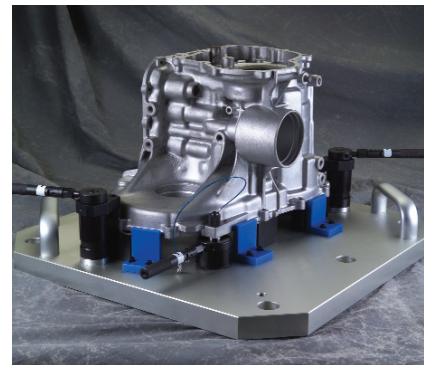
Jobber Drill

The GT series HSS drills from **Precision Twist Drill Co.** have a 118° split point and improved flute geometry for efficient chip evacuation. The TiN-coated tip reportedly improves machining conditions without decreasing tool life and the self-centering split point is said to reduce thrust when drilling. The drills are available in 3/32" to 1/2", 42 to 1, and A to Z diameter ranges. Telephone: (800) 877-3745.



High-Feed Milling Tools

Iscar Metals Inc.'s new Feedmill cutting tools enable milling at feed rates of up to 0.138 ipt. The facemills and endmills accept three types of trigon-like inserts. Cylinders on the bottoms of the inserts sit in a pocket in the cutting tool. This provides firm clamping and relieves stress on the clamping screw. The large-radius, cutting-edge configuration directs cutting forces axially toward the spindle. Telephone: (817) 258-3200.



Fixturing Components

Fixtureworks introduces a line of dedicated and modular fixturing components. The workholding products include precision fixturing clamps, setup and tooling accessories, and stops and supports. Clamp configurations include pull, swing, side, hook, wedge, cam and push and come with accompanying accessories. Stops are available in hex and block shapes and adjustable and swivel versions. Telephone: (888) 794-8687.



Solid-Carbide Endmills

The variable-helix angle of **Melin Tool Co.**'s MVH solid-carbide endmills reportedly increases stability during cutting. Available in five flute styles, the tools are coated with AlTiN for longer tool life and feature a small corner radius for increased strength. The endmills are designed for machining at higher feed rates with reduced chatter. Stub, standard and long lengths are available. Telephone: (800) 521-1078.



Tool Monitoring System

Techna-Tool Inc. offers the BK Mikro tool monitoring system. The scanner mounts near the tool and the encoder system stores the tool location in its memory. The scanning wand then checks for tool presence on every cycle of the machine. The system is for monitoring drills, taps and reamers on assembly, rotary transfer, screw and CNC machines. Telephone: (262) 367-8665.



Milling Cutters

Tool Fabrication Corp. offers roughing and finishing ballnose, backdraft and flat-bottom milling inserts. The tool bodies are available with steel or carbide shanks. Applications include contour milling and moldmaking. The Super Finisher ball insert has a free-cutting helical edge preparation.



Carbide Thread Mills

New inch and metric solid-carbide thread mills from **Carbide Cutting Tools SC Inc.** are for machining a variety of materials. The Thread-Pro tools are available with or without a TiAlN coating. Telephone: (864) 224-1485.



Drill

Mitsubishi Materials U.S.A. Corp.'s TAW 5 X D drill allows the user to install various size inserts into one drill body. The concave/convex drill design reportedly maintains edge sharpness and a serrated geometry allows for high clamping accuracy. The VP15TF insert is for cutting steel, stainless steel and cast iron at high speeds and feeds. Telephone: (800) 523-0800.



Expanding Mandrels

K.O. Lee Co. introduces expanding mandrels for grinding, turning and milling. Sized to fit 3/8" to 5 1/2" holes, the tools feature a large bearing surface on all sleeves to prevent slipping, chatter and, when holding thin sleeves and bushings, distortion. Precision ground arbors and sleeves are accurate to at least 0.001". The company also offers auxiliary centers, which prevent damage to the arbor center and prolong arbor life. Telephone: (605) 225-5820.



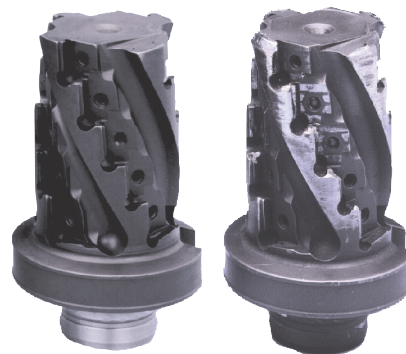
Twist Drills

YG-1 Tool Co. Ltd. introduces twist drills designed to increase productivity. The TiN-coated drill tip increases wear resistance at the cutting edge. The drills have a split-point design, which eliminates wandering in machine and hand-held applications. The jobber-length drills are available in parabolic and standard helix styles. Telephone: (800) 765-8665.



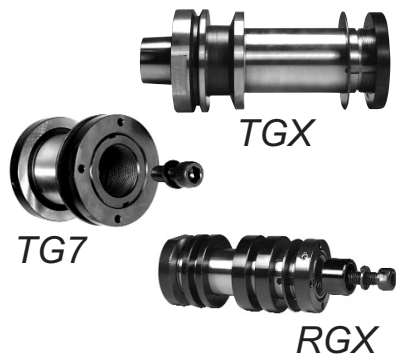
Spindle Speeders

Spindle speeders from **TPS International Inc.** operate on standard low-rpm machines and increase the speed up to 18,000 rpm. Special designs allow up to 24,000 rpm. The speeders are ideal for finishing and difficult operations on machining centers, lathes and transfer machines. Telephone: (800) 423-4031.



Tool Repair

Carbide Tool Services Inc. repairs all brands of indexable-insert holders, including endmills, drills, facemills and lathe tools. The company, which is ISO 9001:2000 certified, reports customers can save up to 70 percent by repairing damaged tools vs. replacing them with new ones. Telephone: (800) 243-9577.



Grinder Adapters

Adapters to fit ANCA CNC tool and cutter grinding machines, including the TGX, RGX, TG7, DM7, MG7, RG7 and TG4, are available from **William Sopko & Sons Co. Inc.** Ground both concentric and square with thread-ground hubs to provide rigidity for positive wheel locking, most adapters are in stock for immediate delivery. In addition, precision spacers to separate stacked wheels are available. Telephone: (888) 967-6756.

ADVERTORIAL



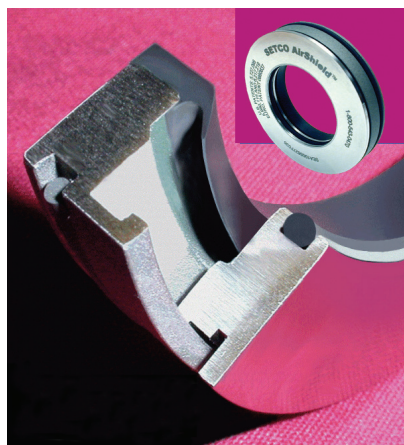
Cutoff Inserts

Manchester Tool Co. introduces its MTC-Separator Xtra cutoff inserts. Designed to fit exclusively into MTC integral-shank toolholders, the inserts have a double-V design to enhance stability and application-specific geometry to minimize cutting pressure and impart finer finishes. The inserts are available in four grades: M40, M45, M43 and M93. Telephone: (800) 237-8789.



Deburring Tools

Heule Tool Corp. introduces its 4mm and 5mm COFA deburring tools. The tools use a unique cutting blade to deburr elliptical and round holes and irregular and round parts. The standard TiN-coated carbide blade is said to allow increased feeds and speeds and provide longer tool life. The tools can deburr hole diameters from 0.158" to more than 4" to create a tapered edge break from 0.005" to 0.020", depending on tool size. Telephone: (513) 860-9900.



Spindle Seal

The Universal AirShield spindle seal from **Setco Sales Co.** is available in 26 standard ID sizes ranging from 25mm to 250mm. The seal reportedly offers dynamic and static protection to eliminate spindle failures due to bearing contamination. The company says the seal is ideal for high-failure spindle rebuilds that need an improved seal design. Telephone: (800) 543-0470.



Measuring Software

Walter Grinders Inc.'s QCM measuring software allows users to follow a wizard to write programs for all common tool types. Users can modify programs or add wizards to grind special features. The software enables measurement of one tool feature or all features. Setup can be accomplished off- or on-line. Earlier Walter measuring programs can be run without exiting the newer QCM software. Telephone: (540) 710-2408.



Endmill

The Ferocious 2000 series, 2-flute endmill from **Commercial Grinding Service** allows for high-speed machining of aluminum, plastics and other nonferrous materials. The tool is available coated or uncoated and a complete reconditioning program is offered. The 55° helix allows for maximum shearing action and chip evacuation. A micropolished circular land improves surface finishes. Sizes range from 1/8" through 1" with many flute lengths available. Telephone: (800) 379-1433.



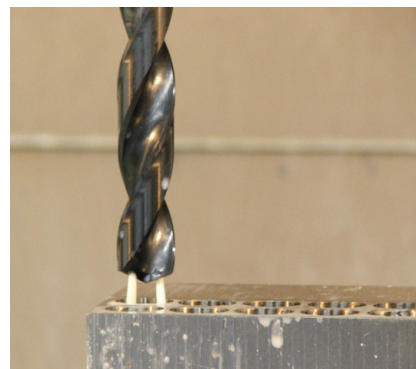
Tool Kit

GKI Inc. announces its new Zip Kit package, which includes the components needed—shim seats, screws, pins and clamps—for turning tools in one recloseable bag. The bag is marked with the corresponding tool number for easy identification. The company says the kit is ideal for tool vending machines. Telephone: (888) GKI-TOOL.



Coolant Filter

The VL high-performance vacuum filter from **Knoll America Inc.** filters coolant during the material-removal process, specifically grinding. Filtration is accomplished by combining vacuum technology with an endless belt and can be performed with or without paper. Options include pump-delivery pressures up to 1,500 psi and an integral coolant chiller. Telephone: (248) 588-1500.



Through-Coolant Drill

SGS Tool Co. adds the Ice-Carb through-coolant drill to its high-performance drill line. The Ice-Carb is for drilling depths up to 7 diameters deep. Its unique geometry enhances coolant flow and chip removal. Each tool comes with the company's Ti-NA-MITE-A (AlTiN) coating, which increases thermal stability and wear resistance when deep-hole drilling. Telephone: (330) 686-5700.



Indexable Milling Cutters

Ingersoll Cutting Tools introduces its Aluminator indexable milling cutters for low- and high-speed machining of aluminum. The endmills and facemills have a double-positive, deep-dish molded, rake-face geometry, which allows for free-cutting along thin walls measuring 0.100" or less without distortion. Ingersoll says the tool's 0.100" wiping flat enables fine finishes even in high-feed applications. Each insert is precision ground on the locating seats and cutting edge periphery. Telephone: (866) 690-1859.



Broaching Tools

A new line of replaceable insert broaching tools for CNC lathes and mills is available from **Horn USA Inc.** Based on the concept of reciprocating broaching, the tools allow keyway broaching to be performed on existing machine tools, eliminating secondary operations on separate machines. Available in standard metric and inch keyway widths, from 0.063" to 0.500", the line also includes standard tools for chamfering the keyways. Telephone: (888) 818-HORN.



Carbide Rods

In addition to carbide preforms and blanks, **Innovative Carbide Inc.** supplies carbide rods. The rods are produced using the company's "no-wax" process, which reportedly provides more efficient carbon control and minimizes in-field failure. The rods contain 10 percent submicron material and provide a transverse rupture strength of 500,000 psi and a compressive strength of 700,000 psi. Standard 12" rods are available, and custom unground lengths are shipped in 5 days with ground ones shipped within 7 days. Telephone: (800) 544-4338.



Grinding Center

The GrindSmart 620XS from **Rollo-matic Inc.** is a 6-axis universal tool grinding center with two clamping systems, which expand the machine's capabilities to auto load and grind replaceable and 2-sided flat turning and grooving tools. The grinding center is for the production of industrial, deburring, surgical and printed circuit board tools, as well as inserts. Rollomatic is hosting the 2005 Grinding Technology Symposium for toolmakers Oct. 5 at its U.S. headquarters in Mundelein, Ill. Telephone: (866) 713-6398.



Coolant Recycling System

Sanborn Technologies offers the T10-3-315 centrifugal coolant recycling system, which removes solids and tramp oil from coolants. The system discharges clean coolant and oil discharge into separate tanks. Solids are removed through a large rotor liner. Other components include transfer and feed pumps, a coolant makeup system, automatic valves and controls. Processing capacity is up to 90 gph. Telephone: (800) 343-3381.



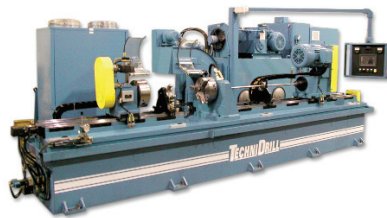
Vertical Machining Center

Hurco Cos. Inc. reports its VTXU vertical machining center is ideal for positioning 5-axis work on complex, multisided parts when accuracy and a shorter setup time are crucial. The 5-sided conversational programming requires only one part setup. The machine is compatible with most 5-axis CAM programs and includes standard features typically offered as options. Telephone: (800) 634-2416.



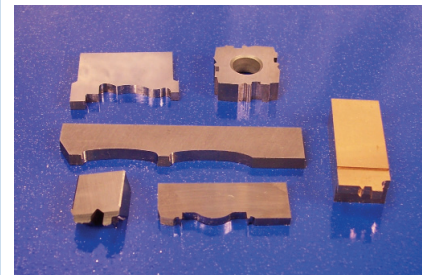
Multiple-Radius, Chamfer Cutter

Advent Tool & Manufacturing Inc. has introduced a cutter that can mill up to seven different radii per load and can chamfer mill. With two tools, 1.0" and ¼" shanks and two different 1.0"-long inserts, an end user can mill radii from ½³²" to ¼". Advent provides a tool layout for the user to determine cutting tool diameter and offset for each form. Telephone: (800) 847-3234.



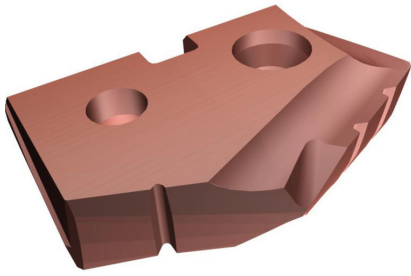
Deep-Hole Drilling System

The **TechniDrill Systems Inc.** counter-rotating BTA drilling system can drill a 1.600"-dia. hole in heat-treated, 36-HRC 15-5 stainless steel at 7.8 ipm. The counter-rotation allows for an accuracy of 0.0005" per inch of drilling. The system is also equipped with a self-centering part steady. The cooling system delivers 80 gpm of coolant at 1,000 psi. Telephone: (800) 914-5863.



Form Tools

Knight Carbide introduces a line of CNC profile-ground form tools. According to the company, profile grinding produces precise, complex geometries at economical prices. The custom tools can be designed to fit existing tooling or engineered as a complete package. Telephone: (586) 598-4888.



HSS Drill

Allied Machine & Engineering Corp. introduces its HSS GEN2 T-A drill, available in diameters from 0.4375" to 1.375". The HSS drill follows the carbide GEN2 T-A and the larger diameter 3-8 series HSS drills. It has the same features as the carbide version, including notch-point geometry, curved cutting edge and helical margins. Telephone: (800) 321-5537.



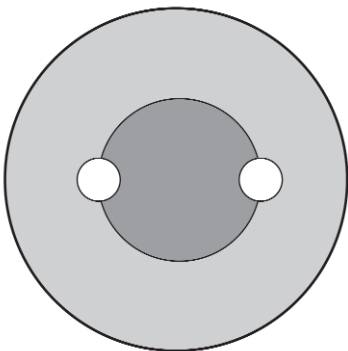
Friction Drills

Drills from **Flowdrill** create friction to produce heat and displace metal to form holes with a bushing that is three times the material thickness. This bushing can be tapped and used instead of welded, pressed or inserted nuts or clips. The drills can be applied with CNC or manual drill presses to make holes in aluminum, brass, copper, steel, stainless steel and titanium. Telephone: (314) 968-1134.



Threadmill

Carmex Precision Tools Ltd. offers its solid-carbide Mini Mill-Thread for threading titanium and high-temperature superalloys. The threadmill allows end users to thread holes as small as 0.050" and is ideal for steel hardened to 65 HRC. According to Carmex, threading provides the following advantages compared to tapping: more accurate thread profile, threading to the shoulder of the hole, lower cutting force and shorter cycle time. Telephone: (800) 964-5161.



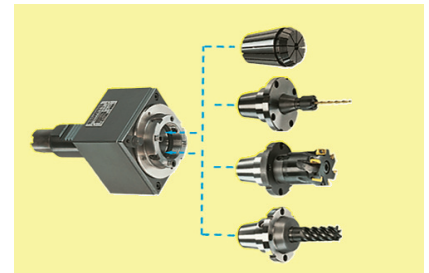
Through-Coolant Rods

ATI Firth Sterling offers composite carbide rods with integral straight and helical coolant holes. The rods have a tough carbide core and an outer body made of a harder, more wear-resistant grade. The company says this composite construction extends drill life by preventing premature breakdown of the central tip region, where the cutting speed is lowest, and premature wear of the outer cutting edges, where the cutting speed is highest. Telephone: (800) 221-4273.



Threading Tools

ISO 9001-certified **North American Tool Corp.** offers a variety of cutting tool products, including special taps, thread cutting dies, thread plug and ring gages, screw thread inserts and "Smart Cut" tapping fluid. The company's "S.O.S" (Save On Shipping) partner program is designed to save users money on next-day and second-day shipments. Telephone: (800) 872-8277.



Interchange System

Exsys Tool Inc. showcases its Preci-Flex interchange system to enable quick tooling changeovers. Adapters are available for standard drills, end-mills, taps and shell mills. The basic adapters accept standard collets in ER25, ER32 or ER40 pocket configuration and fit into the company's basic holder in an axial or radial configuration for fixed or live tools. Telephone: (800) 397-9748. △