

• Stronger • Sharper • Superior



IT **Hrithik Tools**
• Stronger • Sharper • Superior

Celebrating

25TH
YEAR'S
Silver

★ *Jubilee Years* ★

DIRECTOR'S DESK



Suresh Mittal



Hrithik Mittal

Dear All,

Founded in 2000 by Mr. Suresh Mittal, Hrithik Tools began as a CNC regrinding service company in Pune, India. Over the next seven years, the company expanded its expertise to include carbide tools and regrinding services across India. In 2008, Hrithik Tools made a significant leap into the field of PVD (Physical Vapor Deposition) coating services. Through collaboration with a renowned European company, we installed state-of-the-art coating plants, enabling us to offer high-quality PVD coating services for a range of applications, from commercial to industrial and medical uses.

Today, under the dynamic leadership of Mr. Hrithik Mittal, Hrithik Tools has become a trusted name in the industry, providing top-notch PVD coating services and carbide cutting tools to over 400 cutting tools companies throughout India. Our commitment to quality and innovation continues to drive us forward, ensuring we meet the evolving needs of our clients with excellence and reliability.

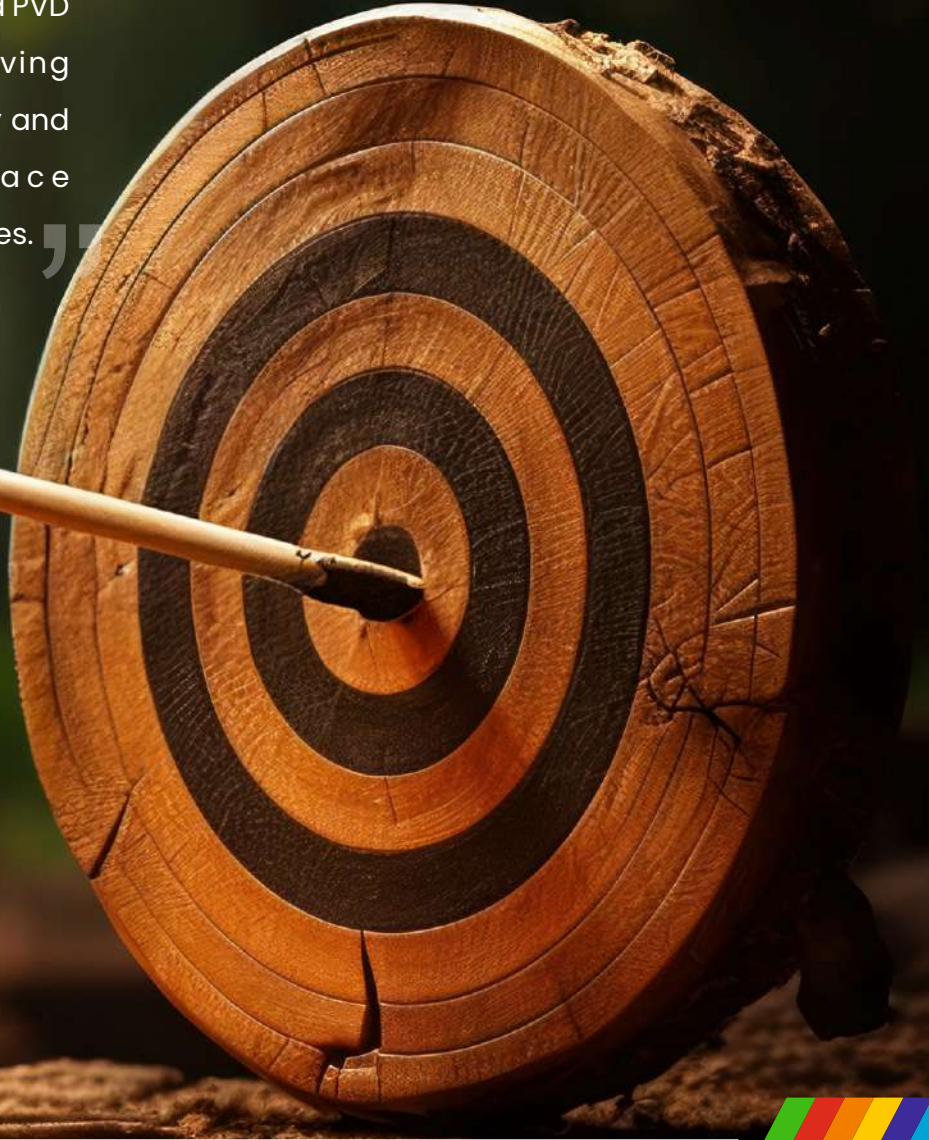
MISSION

“ We are committed to delivering cutting-edge surface coating solutions that exceed customer expectations. Through relentless innovation, advanced technology, and a dedication to environmental sustainability, we aim to enhance the performance, durability, and aesthetics of products across various industries. Our mission is to empower our clients to achieve new levels of success by providing them with Carbide Cutting Tools and superior PVD coatings, exceptional service, and unparalleled expertise. ”



VISION

“ To be the global leader in Carbide Cutting Tools and PVD Coating Solutions, driving innovation, sustainability and excellence in surface enhancement technologies. ”



ABOUT US

Hrithik Tools is a leading provider of Carbide Cutting Tools and PVD coating services, dedicated to delivering high-quality surface enhancement solutions to meet the diverse needs of industries worldwide. With a relentless focus on innovation, quality, and customer satisfaction, we have established ourselves as a trusted partner for companies seeking to improve the performance, durability, and aesthetics of their products.

Our state-of-the-art facilities are equipped with the latest Carbide Cutting Tools and PVD coating technology, allowing us to offer a wide range of coating options tailored to specific customer requirements.



PRODUCTS

CUTTING TOOLS

MANUFACTURING & RESHARPENING





Solid Carbide Step Drill

A complete range of high performance, general purpose, finishing, roughing, high-speed, micro, and material-specific S/C Step drill for high productivity and extended tool life.

X-helix coating for higher life, SC drill that offers a one-pass solution in steels and irons in traditional tap sizes to reduce cycle time and increase productivity. Drilling and chamfering in one shot. The highly polished surface ensures superior chip evacuation even when low-pressure coolant is applied.

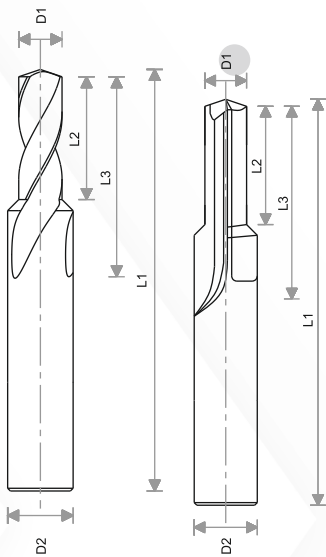
Drill or drill machining tools used for making round holes in solid material. Drilling tools are End cutting tools designed for producing holes in work piece.

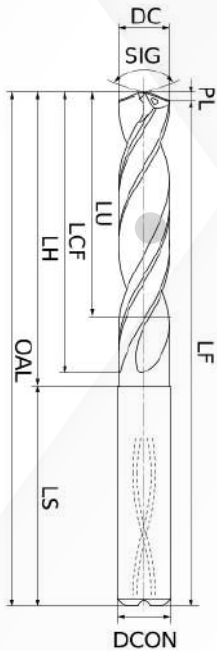
FEATURES

- 2, 3 or 4 flute
- Helical or straight flute
- Single or double margin
- Solid or coolant through
- Single or multiple diameter

APPLICATION

- Specific point geometries
- Micro engineered edge prep
- Automotive Industry
- Industrial Application
- Suitable for drilling tap holes with countersinks
- Coated to maximize performance, the high efficiency in drilling





Solid Carbide Double Margine Long Drills

Design with wide chip pockets for excellent chip control and chip evacuation. The new X-helix COATING exclusively for drills, enables stable and long tool life over a wide variety of work materials and applications. Provides stable drilling with no wobbling for small machines, better hole finish with double margin.

Guiding areas on two cutting edges enable reliable high quality hole machining in relation to the cylindricity and straightness including close hole tolerance, premium surface roughness and production stability which provide By us.

FEATURES

- Improved surface quality
- Borehole cylindricity and straightness
- X-helix Coating for longer tool life
- Recommended cutting data are same as for single margin solidcarbide drill

APPLICATION

- Best suited for steel machining
- ALUMIMIUM machining
- Aerospace Industry



Solid Carbide Micro Drill

Micro twist drill bits are excellent for producing smooth, precision holes and drilling through all hard metals.

We offers a family of small diameter carbide micro drill for precision drilling in medical, aerospace and the automotive industry.

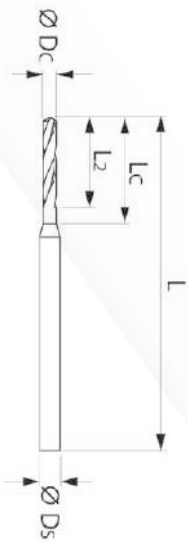
- The Exclusive Line of high precision carbide drills are available in solid and coolant fed carbide designs from 0.30 mm to 3.0 mm diameter.

FEATURES

- Strong geometry
- Smooth flute form
- High Accuracy
- Reliable high quality hole

APPLICATION

- Automotive Industry
- Aerospace Industry
- Medical Equipment Industry
- It is used in small part of production in general engineering Industry



Solid Carbide Drills

Solid carbide drills are high-performance cutting tools used for drilling holes in a variety of materials. Here's detailed information about their features and applications.

Manufactured from solid carbide, providing superior hardness, wear resistance, and heat resistance compared to high-speed steel (HSS) drills.

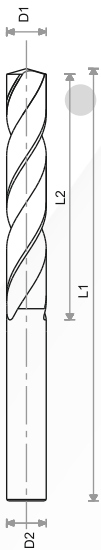
Ensures extended tool life and reduced tool wear, especially in demanding machining environments.

FEATURES

- Improved surface quality
- Extremely hard and thin tool coating
- Recommended cutting data are same as for single margin solid carbide drill

APPLICATION

- General Purpose Drilling
- High-Speed Drilling
- Deep-Hole Drilling
- Hardened Material Drilling
- Precision Drilling in Aerospace and Automotive Industries



Solid Carbide Center Drill

Hrithik Tools make center drills are used in Automotive, Aerospace & other manufacturing industry.

Center Drills are used for providing centering holes on shafts faces, so to hold them between centers for other CNC job work.

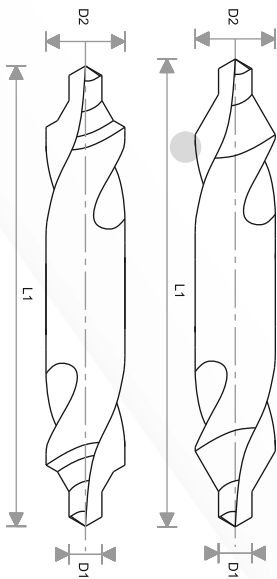
- Carbide Center Drill bits are Good for large batch production. Carbide Center Drills comes with varied chamfer angles of $45^\circ / 60^\circ$ or as per customer request or drawings

FEATURES

- Better Life & productivity
- Made from Micro-Fine Carbide Grade
- X-Power Coating for less wear
- Carbide Center Drills comes with 118° Point angle

APPLICATION

- Automotive Industry
- Aerospace Industry
- Other manufacturing Industry
- Spring Manufacturing Industry
- Bearing Industry Furniture manufacturing





Solid Carbide Double Margine Drills

Design with wide chip pockets for excellent chip control and chip evacuation. The new X-Power/X-Helix Coating exclusively for drills, enables stable and long tool life over a wide variety of work materials and applications. Provides stable drilling with no wobbling for small machines, better hole finish with double margin.

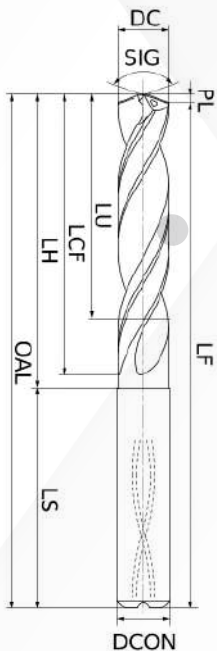
Guiding areas on two cutting edges enable reliable high quality hole machining in relation to the cylindricity and straightness including close hole tolerance, premium surface roughness and production stability which provide By us.

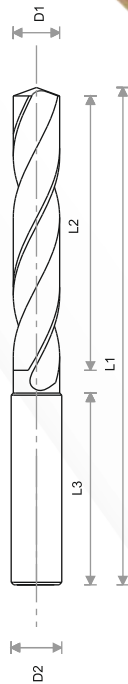
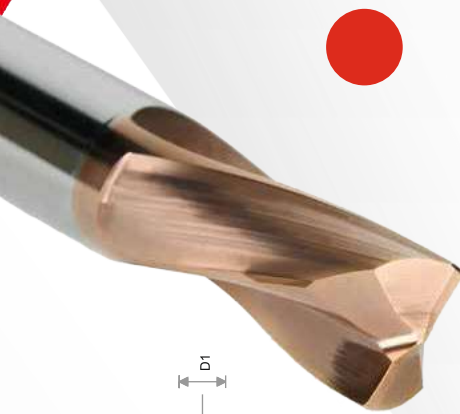
FEATURES

- Hrithik Tools Drills stays on center
- It is highly Water-Resistant helping to maintain hole size accuracy
- Cutting Edge and special flute geometry to promote smooth chip evacuation
- Smooth curled chips are produced Good chip control is due to efficient chip breaking

APPLICATION

- Used for all Stel and Castiron and SS material
- Aerospace Industry
- Energy Industry





Solid Carbide Ratio Drill

High ratio generally used for the machining of mining bits, Hrithik Tools provide the best solution for this.

The bits which require high accuracy hole as tolerance given, We make ratio drills used for drilling a high accuracy holes with higher parameters.

No react line, no burr folding. Eliminate the 180° end mill in flat-bottom drilling, geometry-combinations available to cover most common materials.

FEATURES

- strong break point geometry
- Reliable high quality hole
- Smooth flute form
- Tolerance achieved within 7 micron
- High accuracy Creates a true flat-bottom hole from O.D. to center

APPLICATION

- Machining of mining bits
- Heat-treatable stills

Solid Carbide Endmill 4 Flute

(2, 6 & 8 Flute Endmill available as per requirements)

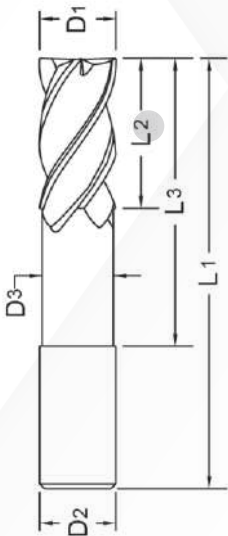
Our end mill available in 25 TO 40 degree helix , used for general milling is most of medium hardness materials such as steel, SS, brass, iron and non ferrous material made from premium sub micron grade. Most supplied in Die and mould, Automobile sectors, Aerospace industries etc. Solid Carbide Cutting Tools for milling up to 65-HRc hardened die steel & tool steel like D2, D3, H13 etc. End mill is a cutting tool used for end milling operations.

FEATURES

- Multiple helix and index options
- Straight or tapered
- Helix changes along flutes
- Square, chamfer or radius corner
- Single or multiple diameter
- Small corner radius for added

APPLICATION

- Die & Mould Industry
- Automobile Industry
- Aerospace Industry





Solid Carbide Taper Ball Nose

Solid Carbide Taper Ball Nose End Mills are precision cutting tools engineered to excel in various machining operations. Here's what distinguishes our taper ball nose end mills.

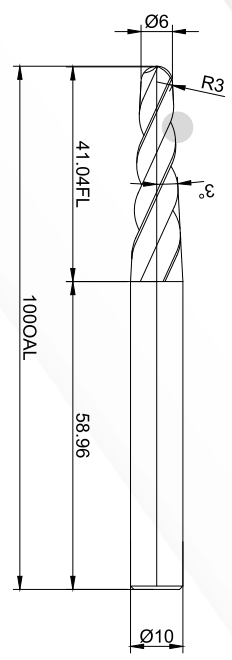
Crafted from high-quality solid carbide, ensuring exceptional durability, wear resistance, and longevity. Ideal for demanding machining applications where tool longevity is essential.

FEATURES

- Suitable for machining special components such as impellers, blisks, turbine blades
- Manufactured in 2-Flute & 4-Flute on request
- Taper Ballnose comes with different coatings depending upon your application

APPLICATION

- 3D Contouring and Profiling
- Die and Mold Machining
- Engraving and Detailing
- High-Speed Machining



Solid Carbide Ball Nose 2 Flute

Cutting Tools manufactures a variety of roughers for a wide range of materials and conditions. Heavy cuts can be achieved because our roughing end mills have a much higher effective feed per tooth than a conventional end mill. Normally a 20% reduction in effective horsepower is used. Roughers have chip-breaker cutting edges, the “peaks” on each cutting edge provide the cutting action producing short fat chips rather than long stringy chips produced by conventional mills.

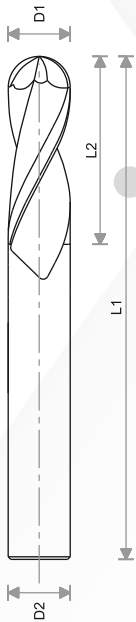
Hrithik Tools roughers remove more metal in less time than other types of end mill. Our tools can take heavier cuts at higher speeds with less chatter and vibration. The tooth form, both coarse and fine pitch, provides excellent heat dissipation during heavy cutting operations, making the tool especially effective for cutting high tensile steels.

FEATURES

- Chip breaking geometry
- Special flute shape geometry
- X-Power/X-Helix Coating for longer tool life
- Excellent heat dissipation during heavy cutting operations

APPLICATION

- Power generation Industry
- Medical Industry
- Aerospace Industries
- Die & Mould Industries



Solid Carbide Hole Mill

A Hole-mill is normally an undersized reamer with a boring geometry i.e. the size of the hole-mill is normally 0.2–0.6mm more than the size of the drill so that there are no drill marks on the hole plus the hole axis is corrected for subsequent reaming operation.

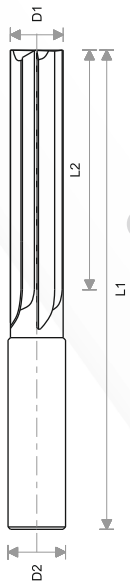
Generally used for axis correction before reaming as drilled holes are taper. holemill give corrct shapes to hole as need for reaming

FEATURES

- Titanium 0.2–0.3 mm
- Steel & CI 0.3–0.4 mm
- Aluminium 0.5–0.6 mm
- Reliable
- Fine finish

APPLICATION

- Aerospace Industry
- Used in different industrial Application
- Hole mill give correct shapes to hole as need for reaming
- It is generally used for axis correction before reaming as drilled holes are taper





Solid Carbide Thread Mill Cutter

Hrithik Tools Thread mills are used to produce threads on machining centers which are capable of helical interpolation. The benefits of thread milling versus tapping are specific to the needs of the customer.

Short run jobs especially in expensive parts where thread finish is critical are favourable for thread milling. Difficult to machine materials such as inconel, hard steels or titanium and short run jobs requiring taper pipe threads can be thread milled with good results.

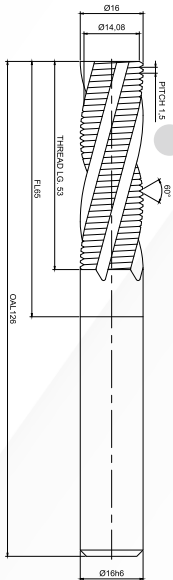
Our solid carbide X-helix coated thread mills are helical fluted to cut freely like an end mill and with AlTiN multi-layer coating provide much longer tool life and allow milling in harder materials.

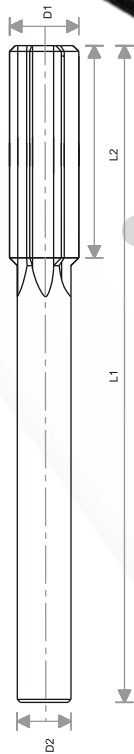
FEATURES

- Heavy duty
- X-helix coating for tool life
- Finish and Accuracy
- Threads with excellent form

APPLICATION

- Industrial Applications
- Machining Industry





Solid Carbide Reamer

Our reamer is a type of rotary cutting tool used for surface finishing operation along with controlled tolerated hole. A typical reamer geometry consists of parallel/ straight or helical cutting edges along the length of a cylindrical body. All cutting edge are ground at a slight angle and with a slight undercut below the cutting edge. This ensures a long life for the reamer and a superior finish to the hole. having X-helix and Alcorna coating for good surface finish and less wear of tool. using high parameters with the best design.

FEATURES

- Multiple flute options
- Helical or straight flute
- Solid or coolant through
- Super finishing reamer technology
- Straight, tapered or step designs

APPLICATION

- Power generation Industry
- Medical Industry
- Aerospace Industries
- Die & Mould Industries

Solid Carbide Rougher Endmill

Hrithik Tools Cutting Tools manufactures a variety of roughers for a wide range of materials and conditions. Heavy cuts can be achieved because our roughing end mills have a much higher effective feed per tooth than a conventional end mill. Normally a 20% reduction in effective horsepower is used. Roughers have chip-breaker cutting edges, the “peaks” on each cutting edge provide the cutting action producing short fat chips rather than long stringy chips produced by conventional mills.

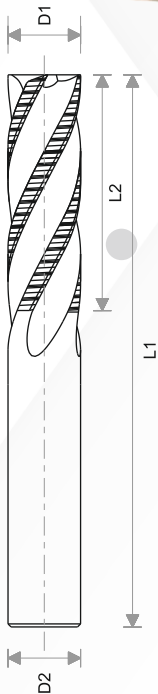
Hrithik Tools roughers remove more metal in less time than other types of end mill. Our tools can take heavier cuts at higher speeds with less chatter and vibration. The tooth form, both coarse and fine pitch, provides excellent heat dissipation during heavy cutting operations, making the tool especially effective for cutting high tensile steels.

FEATURES

- Chip breaking geometry
- Special flute shape geometry
- X-helix Coating for longer tool life
- Excellent heat dissipation during heavy cutting operations

APPLICATION

- Power generation Industry
- Medical Industry
- Aerospace Industries
- Die & Mould Industries



Solid Carbide Injector Bore Reamer

Hrithik Tools offers training to customers on the shop floor on selection, proper utilisation and application of the reaming tools. Used in automobile industries Hrithik Tools provide the best solution for this.

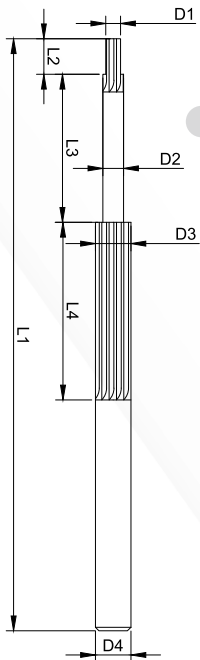
Often reamers are manufactured by combining several steps thereby drastically reducing the cycle time and at the same time ensuring highest geometrical accuracies. All High Precision bores in Steel & cast Iron in the range of IT7 – IT9 class of tolerance. Finish Ream Fuel Injector Bore Coated Solid Carbide Tool High Pressure Through Coolant 345 RPM, 227 mm/min.

FEATURES

- Increased Tool Life 2x
- Super surface finish
- Enhanced Feature TIR
- Lowered CPU
- Excellent Roundness and Size Control

APPLICATION

- Automobile Industry





Solid Carbide Combination Reamer

A combination reamer has two or more cutting diameters. The advantage of using a combination reamer is to reduce the number of operations, while more correctly holding depths, internal diameters and ensuring aligned centrality.

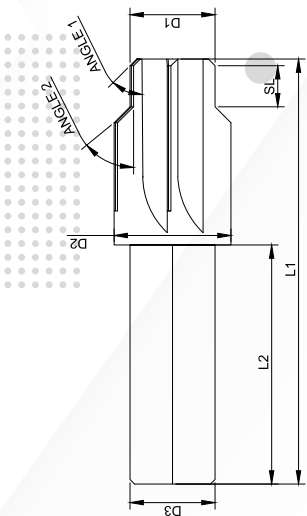
Suitable for all steel stainless steel, harden steel and mix alloyed steel material. X-helix coating get good tool life and less wear resistant.

FEATURES

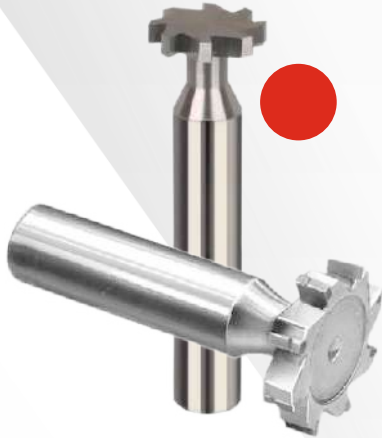
- Multi step
- Super surface finish
- Super surface finish
- Productivity improvement

APPLICATION

- Suitable for all steel stainless steel, hardened steel
- Mix alloyed steel material



Solid Carbide K Way / T Slot Cutter



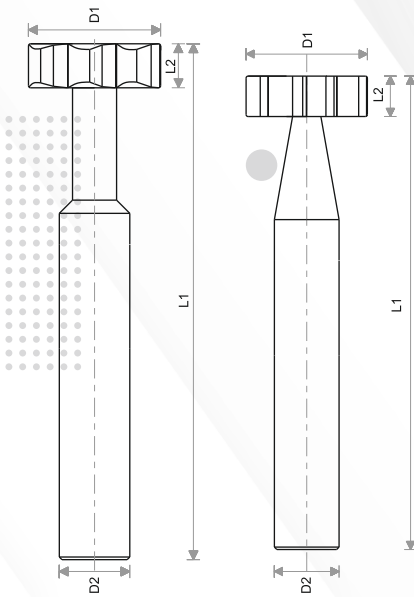
Hrithik Tools offers a complete range of Solid Carbide TIP T-Slot Cutter with high performance, general purpose, finishing, roughing, high-speed, micro, and material-specific Solid Carbide tip T-Slot Cutter for high productivity and extended tool life. T-Slot / Carbide cutter suitable for T-grooving and milling. Unlike with key sheaths, both side faces are bladed so it is also suitable for processing T grooves. Made from solid carbide tip to support high precision groove machining.

FEATURES

- Best grade material
- Compact size
- Superior Quality
- Strong body
- Due to alternate set teeth (staggered), high cutting performance is achieved.

APPLICATION

- Die and Mould Industry
- Automotive Industry
- Applicable Machinery : CNC and TRaditional Lathe





HRITHIK TOOLS

• Stronger • Sharper • Superior



LINX





FACILITY

CUTTING TOOLS

MANUFACTURING & RESHARPENING



www.hrithiktools.com 



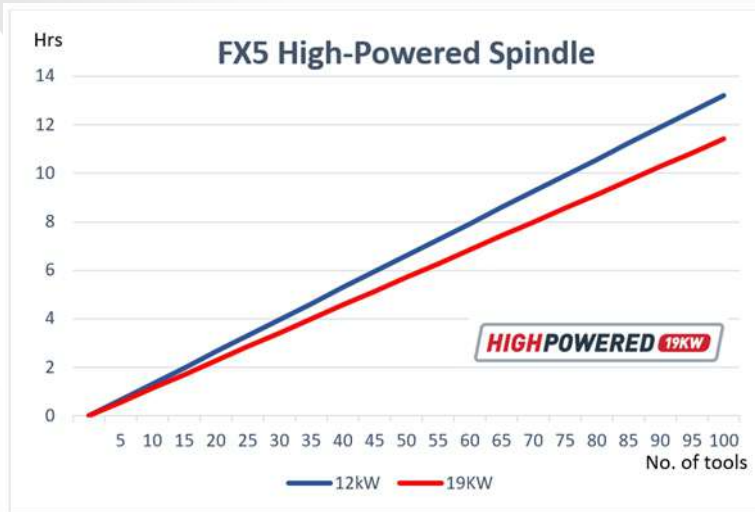
ENHANCED ACCURACY UPGRADED TECHNOLOGY

The FX5 features a new 12kW grinding spindle and also has an automatic 2-wheel changer for an increased range of wheels and tool types. Together with the automatic headstock clamping, the machine is “loader ready” and can provide unattended operation and the flexibility to handle small volumes.

The ANCA-designed AR300 SCARA robot is ideal for mixed batches of tools.

The popular ANCA FX5 gets a power-boost with a new 19kW grinding spindle and an even stronger upgrade option



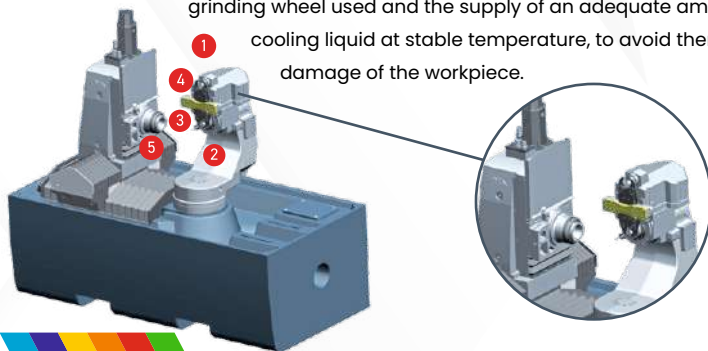


*Spindle load analysis results: 12mm two flute endmill was ground at 40% spindle load in one pass in six minutes and 51 seconds

The new FX5 upgrade option features a striking high-powered decal indicating it has been fitted with the more powerful 19kW spindle.

For complex cutting tools, there can be of course further factors which influence actual grind cycles besides the tool geometry. These include the quality of the grinding wheel used and the supply of an adequate amount of

cooling liquid at stable temperature, to avoid thermal damage of the workpiece.



1. SPINDLE DESIGN

HSK40F taper provides increased rigidity and accuracy for improved tool surface finish results.

2. C-AXIS PIVOT POINT

As the grinding wheel is positioned on the centreline of the C-Axis motor axis motion is reduced which is ideal for ballnose grinding to ensure accuracy is maintained.

3. EASY MACHINE ACCESS

Ergonomically designed for the operator. Easy access to the headstock workholding, wheel pack and spindle for quick set-up and job change-over.

4. WHEEL CHANGER

Options for 2 and 6 station wheel changer for maximum flexibility and productivity.

5. TOOL-SUPPORT

Options include Steady bed, Pop-Up Steady and MicroPlus systems to increase accuracy (Z-axis mounting).



Quality Assurance



speroni

precision by design

The STP Magis line of tool presetting and measuring systems has revolutionized the value of mid-range tool measurement.

STP Magis 400 is equipped with an automatic spindle.

The innovative software controls deliver all of the needed measuring features and functions in a user-friendly, clear and trouble-free single-screen user interface.



High Precision Automatic Spindle



Hi-Res camera with 45X magnification optics





PVD COATING

F A C I L I T Y





YOUR PARTNER IN
COATING TECHNOLOGY

**Hauzer
Rapid Tool Coater 850**



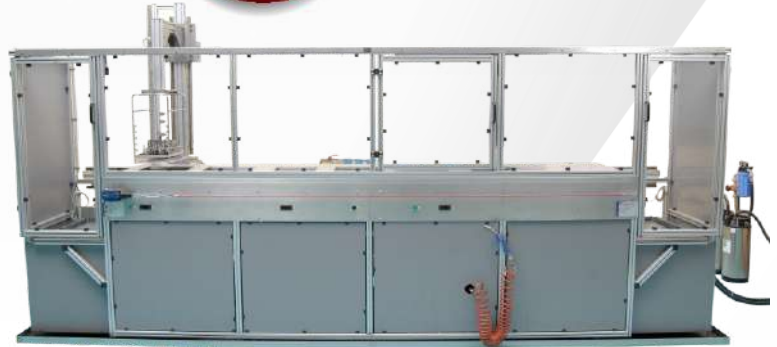
The Hauzer Rapid Tool Coater 850, also known as the Flexicoat 850, is a state-of-the-art Physical Vapor Deposition (PVD) system engineered to meet the high demands of modern industrial applications. Renowned for its versatility, efficiency, and robust performance, the Flexicoat 850 is a preferred choice across various sectors, including automotive, tooling, and research and development.



Automatic Robotic Ultrasonic Cleaning Line

The decentralization of cleaning into robot cells has many benefits. However, it calls for solutions that provide short cycle times, compact sizes and high usage rates. Hrithik Tools has just the solution to meet these needs.

Robotic
Cleaning
Line



Precision De-Coating

Our Facilities are special suitable for de-coating of :

- Carbide-Tools
- HSS-Tools
- DLC Automotive
- Components
- Racks and fixturings
- Optical glases

Absolut Cheme
Decoating
Technology



OTEC Drag Finish Machine

(For Pre-Post Treatment)

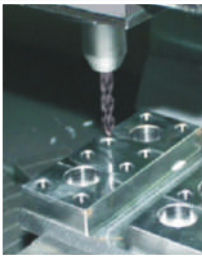


Finishing Processes

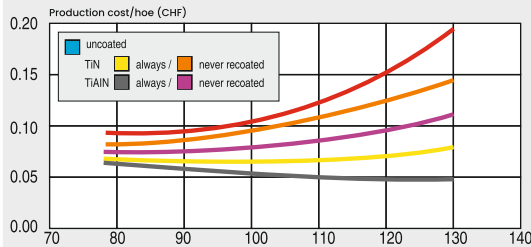
- Precision finishing
- Polishing
- Smoothing
- Rounding
- Deburring

Improved surface quality entails increased percentage contact area, less friction and less wear. The advantage over the traditional Superfinishing process is that OTEC's precision finishing process gives a high-quality finish and at the same time deburs and rounds to a specified degree.

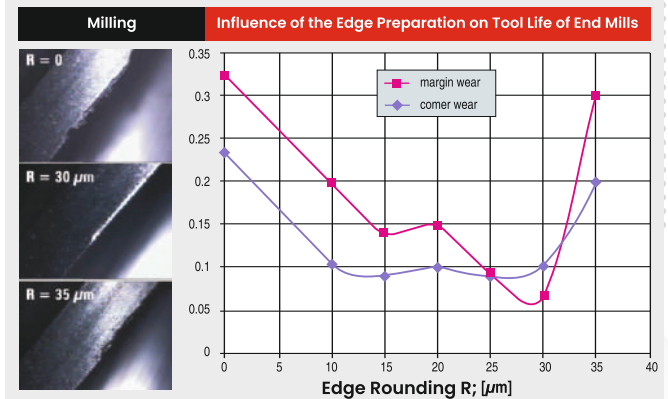
Cost Advantage



Production Costs with Solid Carbide Drills



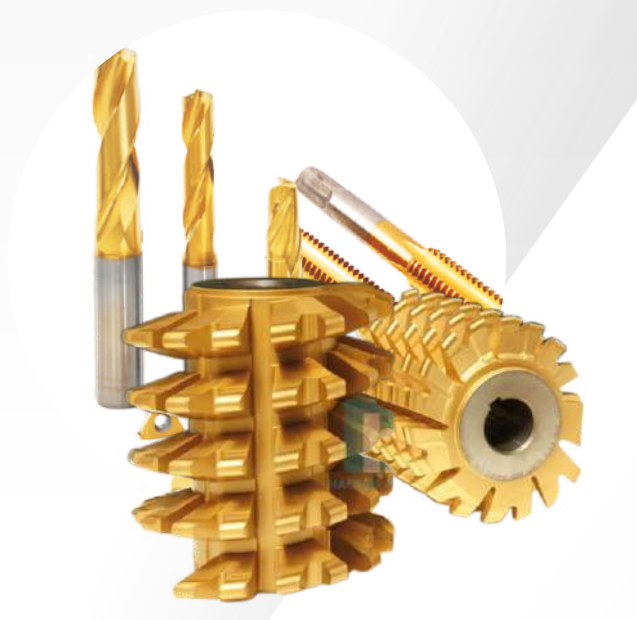
Application of OTEC Treatment





X-TiN is a standard titanium nitride coating with optimized density to limit columnar growth.

TiN Coating has been the pioneer in PVD Coating field. Even today people are obsessed with colour gold due to which this coating has many users even after so many years of introduction.



Properties of TiN+ Coating

Coating Material	TiN
• Microhardness (HV 0.05)	2'500
• Maximum service temperature (°C)	600
• Coefficient of friction	0.4
• Coating structure	Monolayer
• Coating colour	Yellow (Gold)

Industries

This coating is a popular solution for the following industries:

- Aerospace
- Automotive
- Diesel
- Energy
- Marine
- Medical
- Metal Forming
- Military
- Molds
- Motorsports
- Nuclear
- Oil and Gas
- Weaponry
- General Manufacturing



Calico Aluminum Titanium Nitride (TiAlN) is a hard coating that solves many tribological problems with components that can be coated at temperatures of 450°C - 475°C. Calico-TiAlN is normally applied to steels, hardened steels, and stainless steel materials where high wear resistance and lubricity are needed. TiAlN coating provides exceptional oxidation resistance and extreme hardness. That's why this coating works well in very demanding cutting tool applications, especially when tools are being pushed to the max.

Properties of X-power Coating

Coating Material	X-power
• Microhardness (HV 0.05)	3'200
• Maximum service temperature (°C)	900
• Coefficient of friction	0.3
• Coating structure	Multilayer
• Coating colour	Bluish Grey
• Residual stress (GPa)	-3



Industries

This coating is a popular solution for the following industries:

- Aerospace
- Automotive
- Diesel
- Energy
- Marine
- Medical
- Metal Forming
- Military
- Molds
- Motorsports
- Nuclear
- Oil and Gas
- Weaponry
- General Manufacturing





While the grain sizes of conventional PVD coatings are in the range of 30–80 nanometers depending on the type of coating, the grain sizes of nanocomposite coatings are usually around 10 nanometers. For this reason, the columnar grain structure of conventional PVD coatings seen in the electron microscope cross-section photographs is not seen in nanocomposite coatings; the structure has an amorphous-like appearance.



Properties of X-helix Coating

Coating Material	X-helix
• Microhardness (HV 0.05)	3'000
• Maximum service temperature (°C)	1'100
• Coefficient of friction	0.25
• Coating structure	Multilayer
• Coating colour	Copper
• Residual stress (GPa)	-3

Industries

This coating is a popular solution for the following industries:

- Aerospace
- Automotive
- Diesel
- Energy
- Marine
- Medical
- Metal Forming
- Military
- Molds
- Motorsports
- Nuclear
- Oil and Gas
- Weaponry
- General Manufacturing



X-Press is a universal high-quality coating developed for a wide range of applications for wet and dry machining:

Optimized coating properties (hardness, modulus, morphology) with advanced plasma parameters. Higher productivity and deposition rate through increased process performance. Advanced BIAS strategy for optimized residual stress distribution. Use of multi-alloyed targets for maximum productivity



Properties of X-press Coating

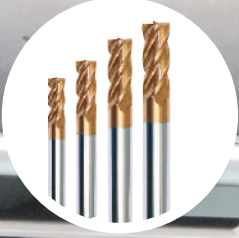
Coating Material	X-press
• Microhardness (HV 0.05)	3'000
• Maximum service temperature (°C)	1'100
• Coefficient of friction	0.5
• Coating structure	Multilayer
• Coating colour	Black
• Residual stress (GPa)	-5

Industries

This coating is a popular solution for the following industries:

- Aerospace
- Diesel
- Marine
- Metal Forming
- Molds
- Nuclear
- Weaponry
- Automotive
- Energy
- Medical
- Military
- Motorsports
- Oil and Gas
- General Manufacturing







Our Services ■





Hrithik *Tools* Pvt. Ltd.

📍 EL 37/4, 'J' Block, M.I.D.C., Bhosari, Pune - 411 026 (MH) India.

☎ +91 20 4676 8002 / 9422 52 3771 / 8408 83 6666

✉ hrithiktools@gmail.com

🌐 www.hrithiktools.com

