



SUPER PRECISION PRODUCTS

Corporate Profile & Product Catalog

Solutions in Carbide |
HSS | Special Tools

www.sppknp.com



Overview

- 02** About Our Company
- 03** Mission and Vision
- 04** Industries Served
- 05** Our Products
- 06** Carbide Tools
- 17** Carbide Tip Brazed Tools
- 22** Special Tools
- 26** HSS Tools
- 29** Our Services
- 31** Facilities





About Our Company

Super Precision Products has been a trusted name in cutting tool manufacturing since 2000. Based in Kanpur, India, we specialize in the production of high-performance carbide and HSS cutting tools, engineered to meet the evolving needs of modern machining.

With over two decades of experience, we have earned a reputation for delivering precision, reliability, and value. Our product portfolio includes carbide endmills, drills, reamers, tip brazed tools, and custom-designed form tools – serving a wide range of industries with tailored solutions.

In addition to manufacturing, we provide professional regrinding and recoating services to help our customers maximize tool life and maintain optimal performance.

We are proud to be ISO 9001:2015 certified, a reflection of our commitment to quality, consistency, and continuous improvement.

Mission & Vision

Our Vision

We aim to be the global leader in cutting tool technology, offering cutting-edge solutions that empower industries. Our vision is to drive continuous innovation, ensuring that our products contribute to the advancement of manufacturing and help customers achieve long-term success.

Our Mission

Our mission is to deliver high-precision carbide cutting tools that enhance performance, durability, and efficiency. We strive to provide innovative, custom solutions that meet the diverse needs of industries, driving success and productivity for our global clients

VISION



MISSION



Industries Served

AEROSPACE



Automotive



Die & Mold



Metal Cutting



Power & Energy



Oil & Gas



OUR PRODUCTS



CARBIDE TOOLS

As a manufacturer, we produce high-performance carbide tools designed for precision machining. Made from premium-grade tungsten carbide, our tools offer exceptional hardness, wear resistance, and thermal stability, ensuring high-speed cutting efficiency and long tool life.



CARBIDE TIPPED TOOLS

Our carbide-tipped tools combine the toughness of a steel body with the superior cutting capability of carbide tips. Manufactured using advanced brazing techniques, these tools provide enhanced durability and are ideal for heavy-duty and high-precision applications.



SPECIAL TOOLS

With our expertise in custom tooling solutions, we manufacture special tools designed for specific machining challenges. Whether it's form cutters, T-slot cutters, chamfer cutters, or custom profiles, we deliver precision-engineered tools to enhance productivity and performance.



HSS TOOLS

We manufacture high-speed steel (HSS) tools in various grades, including M2, M35, and M42, to meet diverse machining needs. Our HSS tools offer excellent toughness, edge retention, and versatility, making them suitable for a wide range of milling, drilling, and cutting operations.

CARBIDE TOOLS

Our range of solid carbide tools is engineered to meet the demands of high-speed and high-accuracy machining. Manufactured using premium-grade carbide and advanced CNC grinding technology, these tools deliver excellent surface finish, longer tool life, and consistent performance across a wide variety of materials. We offer solutions for drilling, milling, and all precision machining operations, tailored to meet the diverse needs of modern manufacturing.



2-Flute Square End Mill

Features

- Premium micrograin solid carbide construction
- Two-flute design for smooth chip evacuation
- Center cutting – suitable for plunge and slotting
- Precision-ground edges for superior surface finish

Applications

- Slotting, pocketing, and contour milling
- Works well on aluminum, mild steel, copper
- Ideal for CNC machining, aerospace, and die-mold work

Range

- Metric: Ø1 mm – Ø25 mm
- Imperial: 0.04" – 1.00"



3-Flute Square End Mill

Features

- Micrograin solid carbide for high wear resistance
- 3-flute design balances chip flow and tool strength
- Center cutting – ideal for plunge and slot milling
- Precision-ground for tight tolerances and smooth finish

Applications

- High-speed machining of aluminum and non-ferrous metals
- Suitable for profile cutting and cavity milling
- Common in general engineering and precision parts production

Range

- Metric: Ø1 mm – Ø25 mm
- Imperial: 0.04" – 1.00"



4-Flute Standard Carbide Endmill

Features

- 4-Flute Design for efficient chip evacuation and stability
- Precision Ground for tight tolerances and smooth finishes
- Versatile Cutting: Suitable for roughing and finishing operations up to 45 HRC hardness

Applications

- General machining of steel, stainless steel, cast iron, and non-ferrous metals
- Ideal for profile cutting, slot milling, and precision part production

Range

- Metric: Ø2 mm – Ø20 mm (Standard, Long, Extra Long)
- Imperial: 0.04" – 1" (Standard, Long, Extra Long)



4-Flute Variable Helix Endmill

Features

- 4-flute variable pitch reduces vibration and chatter
- High-performance carbide with wear-resistant coating
- Optimized helix for smooth cutting and chip removal
- Precision ground for excellent finish and accuracy

Applications

- Ideal for steels, stainless steels, and aluminum alloys
- Perfect for high-speed and dynamic milling operations
- Reduces harmonics in thin-wall machining
- Suitable for both roughing and finishing passes

Range

- Metric Sizes: 2mm – 20mm diameter
- Imperial Sizes: 0.04" – 1" diameter
- Length Options: Standard, Long, Extra Long
- Shank Types: Straight shank and Weldon shank available



4-Flute High Performance Endmill

Features

- 40-45° high helix angle for reduced cutting forces
- Reinforced core with body clearance for tool rigidity
- Variable pitch flute design for vibration suppression
- Ultra-fine carbide with thermal-resistant coating

Applications

- Precision machining of aerospace titanium alloys (Ti-6Al-4V)
- Medical-grade stainless steel component production
- High-temp alloy milling (Inconel 718, Waspaloy)
- Die/mold applications requiring extended tool life

Range

- Metric: Ø3mm – Ø20mm
- Imperial: 0.1" – 1"



6-Flute Endmill

Features

- 6-flute geometry designed for ultra-smooth cutting
- Ideal for finishing operations with minimal chatter
- Precision-ground flutes for consistent dimensional control
- Available with cylindrical or Weldon shank as per requirement
- Offered in standard, long, and extra-long lengths for deeper reach

Applications

- Best suited for finishing in aluminum and non-ferrous materials
- Ideal for fine profiling and surface finishing in general machining
- Performs well in high-speed applications on CNC machines

Range

- Metric: Ø6 mm – Ø25 mm
- Imperial: 0.24" – 1.00"



6-Flute Endmill for Ti/SS/Super Alloys

Features

- Made from carbide with high cobalt content for toughness
- Small chamfer at cutting edge enhances flute strength
- High helix angle for smooth cutting in tough materials
- Larger core diameter increases rigidity and reduces deflection

Applications

- Designed for finishing in titanium, stainless steel, and Inconel
- Ideal for aerospace, medical, and energy machining
- Performs well under high-speed, high-load cutting on CNC and VMC machines

Range

- Metric: Ø6 mm – Ø25 mm
- Imperial: 0.24" – 1.00"



Multi-Flute Finishing Endmill

Features

- High flute count enables superior surface finish in one pass
- Available in variable and uniform flute designs for stability and chip control
- Strong core geometry supports low radial engagement and tool rigidity
- Reduced chip load per tooth allows smoother, quieter cutting

Applications

- Ideal for finishing in hardened/tool steels
- Excellent in mold polishing, cavity surfacing, and fine profiling
- Suitable for high-speed machining where chatter control is critical

Range

- Metric: Ø10 mm – Ø25 mm
- Imperial: 0.39" – 1.00"



2-Flute Ball Nose End Mills

Features

- 2-flute design for high chip evacuation and smooth cutting
- General-purpose carbide offers good wear resistance
- Standard geometry suitable for various operations
- Economical choice with reliable performance

Applications

- 3D profiling and contouring in basic mold shapes
- Roughing/finishing in aluminum, wood, plastics, mild steel
- Suitable for pocketing, slotting, and general cuts
- Ideal for training, prototyping, and light-duty machining

Range

- Metric: Ø1 mm – Ø25 mm
- Imperial: 0.04" – 1.00"



2-Flute Hard-Mill Ball Nose

Features

- High-performance carbide for superior wear resistance
- Advanced coating boosts heat resistance and tool life
- Reinforced edges for strength in tough applications
- Precision-ground to maintain tight tolerances

Applications

- For hardened steel and high-hardness alloys
- Ideal for tool, die, and mold cavity machining
- Withstands abrasion in demanding materials
- Ensures accuracy in hardened mold finishing

Range

- Metric: Ø1 mm – Ø25 mm
- Imperial: 0.04" – 1.00"



4-Flute Ti/SS/Superalloy Ball Nose

Features

- 4-flute design enables higher feed rates and fine finish
- Geometry tailored for titanium, stainless steel, and superalloys
- Advanced coating resists heat and tool wear
- Chip path optimized for difficult-to-machine materials

Applications

- For aerospace-grade component machining
- Ideal for medical-grade implant finishing
- Suitable for energy sector parts and high-temp alloys
- Performs in strong, heat-resistant metals

Range

- Metric: Ø3 mm – Ø25 mm
- Imperial: 0.12" – 1.00"



Variable Helix Ball Nose Endmill

Features

- Variable helix reduces vibration and chatter
- Improved chip flow enhances tool life and removal rate
- Delivers excellent surface finish on complex profiles
- Lower cutting forces increase tool durability

Applications

- Precision 3D contouring in mold and die work
- Ideal for high-speed machining with stable cutting
- Reduces deflection in thin-walled components
- Best choice where chatter and vibration are critical

Range

- Metric: Ø3 mm – Ø25 mm
- Imperial: 0.12" – 1.00"



4-Flute corner radius End Mills

Features

- 4-flute geometry enables higher feed rates with smooth finish
- Corner radius strengthens cutting edge and prevents chipping
- More durable than square-end tools in harder materials
- Suitable for roughing and finishing with one tool

Applications

- Contouring and profiling in mold, die, and tooling steels
- Ideal for 3D forms with edge strength requirements
- Chamfering, rounding, and semi-finishing cuts
- Performs well in interrupted or high-load cuts

Range

- **Metric:** Ø3 mm – Ø25 mm
- **Imperial:** 0.12" – 1.00"



6-Flute CR Ti/SS/Superalloy

Features

- 6 flutes ensure excellent surface finish and stability
- Corner radius reduces edge chipping and improves strength
- Engineered for titanium, stainless steel, and nickel-based superalloys
- Advanced coating resists heat and abrasion

Applications

- Precision finishing in aerospace components
- For medical implants with tight surface specs
- Ideal for energy parts in heat-resistant alloys
- Used where finish and tool stability are critical

Range

- **Metric:** Ø6 mm – Ø25 mm
- **Imperial:** 0.24" – 1.00"



4-Flute High-Feed Cutter

Features

- Designed for very high feed rates with shallow DOC
- Strong core for maximum tool stability
- Optimized flutes for fast chip evacuation
- Removes material rapidly in roughing cycles

Applications

- High-speed roughing in large part machining
- Fast cutting in aerospace and automotive sectors
- Ideal for large, flat surface machining
- Best suited where cycle time is critical

Range

- **Metric:** Ø6 mm – Ø25 mm
- **Imperial:** 0.24" – 1.00"



High Feed Endmill (Necked)

Features

- Necked design for extended reach and deep cavity access
- High-feed geometry for fast material removal
- Strong core maintains stability in deep cuts
- Built for efficient deep pocketing

Applications

- Deep pocket and cavity machining
- 3D forms with deep features
- Mold and die cavity work
- Ideal for applications with deep reach requirements

Range

- **Metric:** Ø1 mm – Ø6 mm
- **Imperial:** 0.04" – 0.24"



2-Flute Alu Endmill

Features

- Large flute volume for smooth chip evacuation
- Sharp edges reduce burring and improve cut quality
- High rake angle lowers cutting force and heat
- Polished flutes prevent chip sticking

Applications

- Milling aluminum, brass, and non-ferrous metals
- Roughing and finishing in soft materials
- Slotting and pocketing with clean surface finish

Range

- Metric: Ø1 mm – Ø25 mm
- Imperial: 0.04" – 1.00"



3-Flute Alu Endmill

Features

- 3-flute design allows higher feed rates
- Improved finish over 2-flute endmills
- High rake angle for clean, efficient cutting
- Optimized flute shape for chip evacuation

Applications

- High-speed milling of aluminum and soft alloys
- Finishing where smooth surface is critical
- Profiling and contouring in non-ferrous materials
- Ideal when both speed and finish are needed

Range

- Metric: Ø3 mm – Ø25 mm
- Imperial: 0.12" – 1.00"



2-Flute Alu Ball Nose

Features

- Ball nose geometry ideal for smooth 3D contouring
- Large flute volume for efficient chip flow in soft metals
- Sharp cutting edges reduce burrs and improve finish
- Polished flutes prevent chip buildup in aluminum

Applications

- 3D profiling and finishing in aluminum and non-ferrous alloys
- Mold cavity and die form machining
- Ideal for rounded forms, slots, and pockets
- Used where accurate surface finish and shape control are essential

Range

- Metric: Ø1 mm – Ø25 mm
- Imperial: 0.04" – 1.00"



4-Flute Alu Endmill

Features

- Delivers ultra-smooth surface finish
- Stable geometry ensures precise machining
- Optimized flutes for easy chip removal
- Supports high feed rates

Applications

- Finishing where surface quality is critical
- High-precision milling of aluminum & soft metals
- Profiling and contouring with smooth finish
- Ideal where top-class finish is required

Range

- Metric: Ø3 mm – Ø25 mm
- Imperial: 0.12" – 1.00"



Taper Flat Endmill

Features

- Tapered design for angled cuts and draft applications
- Flat tip for machining flat surfaces on inclined planes
- Available in 2, 3, or 4 flutes for varied finishes
- Custom taper angles and lengths available

Applications

- Mold and die making with draft requirements
- Machining angled features, slots, and pockets
- Used in plastic injection molds and die casting dies
- Milling on tapered or sloped surfaces

Range

- Tip (Cutting Diameter): Ø0.5 mm – Ø6 mm
- Shank Diameter: Ø4 mm – Ø16 mm
- Inch Equivalent: 0.02" – 0.24" (tip), 0.16" – 0.63" (shank)



Taper Ballnose

Features

- Tapered design for 3D contouring on angled surfaces
- Ball nose end for smooth profiling and complex shapes
- Available in 2, 3, or 4 flutes for varied finishes
- Custom taper angles and lengths available

Applications

- 3D machining of molds and dies with draft angles
- Contouring and finishing of complex angled surfaces
- Ideal for automotive and aerospace mold production
- Used for creating smooth, contoured geometries

Range

- Ball Radius: R0.25 mm – R3 mm
- Shank Diameter: Ø4 mm – Ø16 mm
- Inch Equivalent: 0.01" – 0.12" (radius), 0.16" – 0.63" (shank)



Long Neck Endmill

Features

- Extended neck for deep pocketing and hard-to-reach areas
- Strong core for stability during deep cutting
- Available in 2, 3, or 4 flutes to suit materials and finishes
- Custom neck lengths available for specific applications

Applications

- Deep pocket and cavity machining
- Complex 3D shapes with deep features
- Mold and die work involving deep cavities
- Ideal for intricate parts in electronics and medical industries

Range

- Cutting Diameter: Ø1 mm – Ø8 mm
- Neck Length: Customizable up to 10×D
- Inch Equivalent: 0.04" – 0.31"



Long Neck Ballnose

Features

- Extended neck for deep 3D contouring and profiling
- Ball nose end for smooth shapes in deep cavities
- Available in 2, 3, or 4 flutes for varied finishes
- Custom neck lengths for specialized cavity machining

Applications

- 3D machining of deep molds and dies
- Contouring complex forms in deep cavities
- Finishing intricate 3D features
- Used in turbine blade and impeller mold production

Range

- Cutting Diameter: Ø1 mm – Ø8 mm
- Neck Length: Customizable up to 10×D
- Inch Equivalent: 0.04" – 0.31"



4-Flute Roughing Endmill

Features

- Aggressive geometry for high metal removal rates
- Coarse tooth profile forms large, breakable chips
- Rigid core enhances stability under load
- 4-flute configuration balances roughing and finish

Applications

- Roughing in steel, cast iron, and hardened materials
- High-volume stock removal in heavy machining
- Pre-finishing cuts in general engineering
- Ideal where time-saving and heavy cuts are key

Range

- Metric: Ø6 mm – Ø25 mm
- Global: 0.24" – 1.00"



AluRough 4 – Non-Ferrous

Features

- Chipbreaker grooves split chips for better control
- Reduced cutting forces improve stability and tool life
- Enhanced chip evacuation avoids buildup and recutting
- 4-flute design balances speed and surface quality

Applications

- Machining non-ferrous metals with stringy chip formation
- Deep slotting and pocketing with chip control
- Roughing operations needing improved surface finish
- Ideal for aluminum, brass, and copper machining

Range

- Metric: Ø6 mm – Ø25 mm
- Global: 0.24" – 1.00"



HardCut 4-Flute Chip Breaker Endmill

Features

- Reinforced cutting edges for extended tool life
- Advanced coatings resist heat and wear
- Chipbreaker grooves for controlled chip size

Applications

- Machining hardened steels (up to 65 HRC)
- Tool and die component production
- High-abrasive material roughing
- Ideal when chip control in hardened workpieces is critical

Range

- Metric: Ø4 mm – Ø20 mm
- Global: 0.16" – 0.79"



3-Flute Alu Chipbreaker

Features

- Engineered for aluminum and non-ferrous materials
- 3-flute design ensures high feed rates and smooth chip flow
- Chipbreaker grooves break chips for easier evacuation
- High rake angles provide clean, burr-free cuts

Applications

- High-speed machining of aluminum alloys
- Deep pocketing and slotting in soft metals
- Ideal where long, stringy chips are problematic
- Used in precision aluminum component manufacturing

Range

- Metric: Ø6 mm – Ø25 mm
- Global: 0.24" – 0.98"



General Purpose Drill

Features:

- Diameter Range: Ø1 mm – Ø25 mm
- Point Angle: 130°–142° for reduced thrust and better centering
- 2-Flute Design with 4-Facet Point for accurate positioning
- Parabolic Flute: Enhances chip evacuation and cutting efficiency
- Coating: AlTiN for extended tool life and heat resistance
- Shank: DIN 6535 HA (Optional: Whistle-Notch Flat HE / Weldon Flat HB)
- Tolerances: Shank h6 | Cutting +0.000mm / -0.012mm

Applications:

- General-purpose drilling in steel, cast iron, and non-ferrous materials
- Suitable for both CNC and conventional machines
- For through holes and blind hole operations



High-Performance Drills

Features:

- Diameter Range: Ø1 mm – Ø25 mm
- Point Angle: 130°–142° for reduced cutting forces
- SP-V Point Geometry: Ensures accurate positioning & chip control
- Advanced Flute Design: For high-speed drilling & smooth chip flow
- AlCrN Coating: Offers excellent wear & heat resistance
- Flute Lengths: D3, D5, D8, D12
- Shank Type: DIN 6535 HA (Optional: HE / HB Flats)
- Tolerances: Shank h6 | Cutting +0.000 / -0.012 mm

Applications:

- High-speed drilling in steel, stainless steel, and hardened alloys
- Suitable for demanding production environments
- Ideal for deep-hole and precision drilling in CNC machining



Through Coolant Drills

Features:

- Diameter Range: Ø3 mm – Ø25 mm
- Point Angle: 130°–142°
- Flute Length: Up to D30
- Coatings: AlCrN / TiAlN for thermal and wear resistance
- Helix Angle: 26°–35°, Right Hand Spiral
- Point Geometries: SP-V, 4-Facet, Spiral Point, S-Shape
- Internal Coolant: Through-coolant holes for effective cooling & chip evacuation
- Cutting Tolerance: +0.000 / -0.012 mm

Applications:

- High-speed drilling in alloy steel, stainless steel, and hardened materials
- Deep-hole drilling with improved chip evacuation
- Ideal for high-volume and heat-sensitive production machining



Extra Long Drills

Features:

- Point angle: 130°–140° for precise centering and reduced thrust
- 2-flute design for efficient chip evacuation
- Flute length up to D30 for deep hole drilling
- Polished flutes for smooth chip flow and better surface finish
- AlCrN and TiAlN coatings for high wear and heat resistance
- Right-hand spiral with 28°–32° helix angle
- SP-V spiral point geometry for accurate starts
- Diameter range: 4 mm to 16 mm
- Extended length for deep and hard-to-reach drilling applications

Applications:

- Ideal for deep drilling in auto, aero, and engineering
- Suitable for steel, cast iron, and non-ferrous materials
- Excellent for precision drilling with coolant-assisted chip evacuation



Step Drills

Features:

- Ø 3–25 mm (multi-step)
- Point angle: 90°–140°
- 2 flutes for chip evacuation
- Step-wise flute length
- Coated with AlCrN / TiAlN
- Right-hand spiral, 20°–32° helix
- SP-V / 4-Facet / Conical points
- Optional through-coolant
- Precision-ground steps (tapered/straight)

Applications:

- Multi-diameter holes in one pass
- Used in auto, aero, fabrication
- For steel, aluminum, cast iron
- Reduces tool change, keeps concentricity



Multi Margin Drills

Features:

- Point angle: 130°–140°
- 2-flute design with multi-margin geometry
- Extra margins act as secondary cutting edges
- Reduces vibration and improves stability
- Polished flutes for smooth chip flow
- Coatings: AlCrN, TiAlN
- Right-hand spiral
- Diameter: 4 mm to 16 mm
- Through-coolant channels for better cooling

Applications:

- For stable, high-precision drilling
- Works well in steel, cast iron, and alloys
- Used in automotive, aerospace, and die industries



Flat Bottom Drills

Features:

- 180° point angle (true flat)
- 2–3 flutes for stability
- Carbide grade: K20–K30
- Diameter: 3–20 mm
- Coating: TiAlN
- Helix angle: 15°–30°
- Cylindrical or Weldon shank
- Internal coolant (optional, up to 70 bar)
- Optional corner radius
- Margin: single (std) / double (premium)

Applications:

- For flat-bottom holes without spot drilling
- Ideal for counterbores and angled surfaces
- Suitable for steel, cast iron, and alloys



NC Spot Drills

Features:

- 2-flute design
- Angles: 60°, 75°, 90°, 120°, 140° (custom on request)
- Diameter: 1–25 mm
- Coatings: TiAlN, AlCrN, AlTiN, TiSiN, DLC (optional)
- Right or left-hand spiral
- Polished flutes for smooth chip flow
- Edge prep: 0.02–0.2 mm hone

Applications:

- Ideal for chamfering, deburring, and countersinking
- Suitable for steels, aluminum, and hard alloys
- Used in precision machining and finishing operations



Reamer Helical Flute

Features:

- Left-hand spiral, right-hand cut for smooth chip evacuation
- Reduces chatter in blind or interrupted holes
- Available in 4, 6, or 8 flutes
- Reduced neck for deep hole access
- Custom diameter, flute length, and OAL

Applications:

- Ideal for blind holes, cross holes, and soft/ductile materials
- Suitable for high-speed CNC operations



Reamer Straight Flute

Features:

- Rigid straight flutes for accurate hole sizing
- Available with 4, 6, or 8 flutes
- Neck diameter reduced below flute OD for clearance
- Custom diameter and length available
- Suitable for H7 tolerance holes

Applications:

- Ideal for through holes in steel, cast iron, and aluminum
- Used in lathes, VMCs, and manual machines



Multi Margin Drills

Features:

- Combines two or more diameters in a single reaming tool
- Maintains high concentricity between steps
- Available with 4 or 6 flutes for better chip flow and rigidity
- Custom step sizes, lengths, and transition angles as per part design
- Necked-down shank or clearance between steps to avoid rubbing
- Manufactured in solid carbide or carbide-tipped

Applications:

- Ideal for multi-diameter holes in a single operation
- Saves machining time by reducing tool changes
- Used in automotive engine blocks, hydraulic parts, molds, and precision housings
- Suitable for CNC machining, transfer lines, and fixture setups

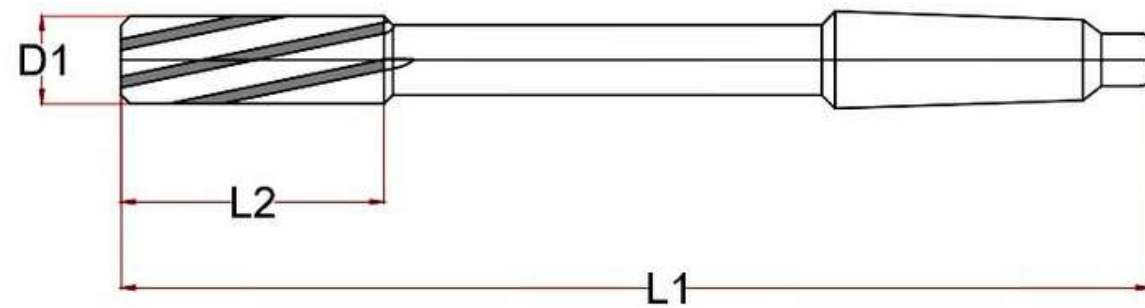


CARBIDE TIP BRAZED TOOLS

We offer a comprehensive range of carbide tip brazed tools designed for high-strength machining operations. These tools feature precisely ground carbide tips brazed onto hardened steel bodies, ensuring excellent wear resistance, toughness, and performance under heavy cutting loads. Available in both standard and custom profiles, they are suitable for milling, reaming, and slotting applications.

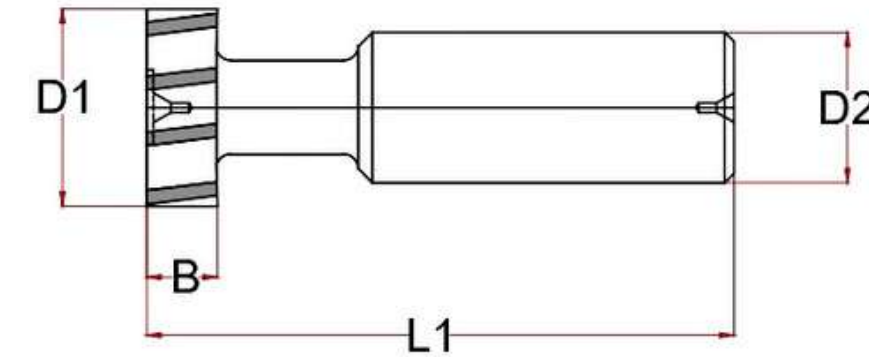


Carbide Tipped Reamers



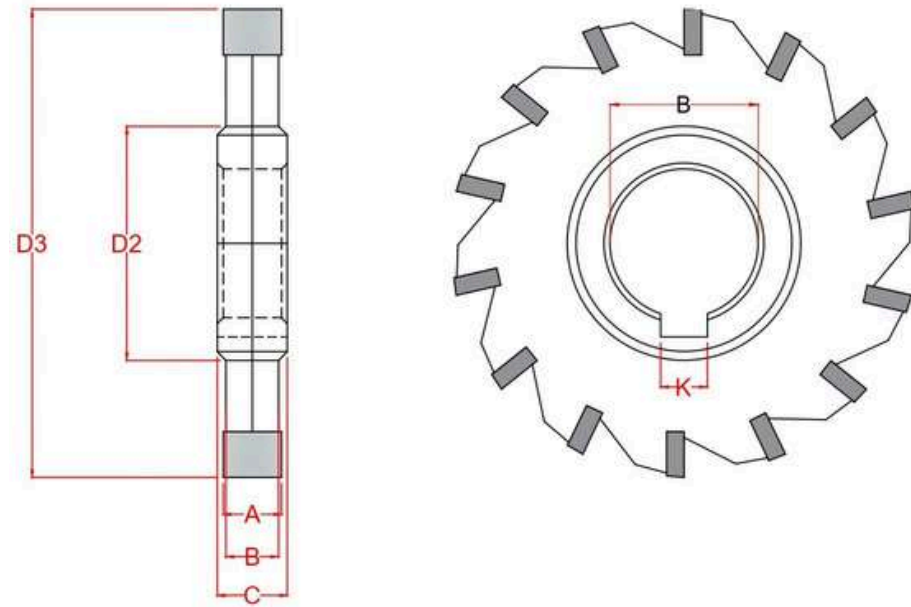
- Custom sizes 10 mm to 50 mm
- Closer tool diameter tolerance High precision
- End chamfer Options other than 45°
- Flute options 4, 6, or 8 flutes available
- Cutting type End cutting or corner radius
- Shank types Taper, Weldon, or Parallel
- Internal coolant Available for better cooling
- Coating TiN, AlTiN, TiSiN for wear resistance
- Flute type Helical or straight flute

Carbide Tipped T-Slot Cutter

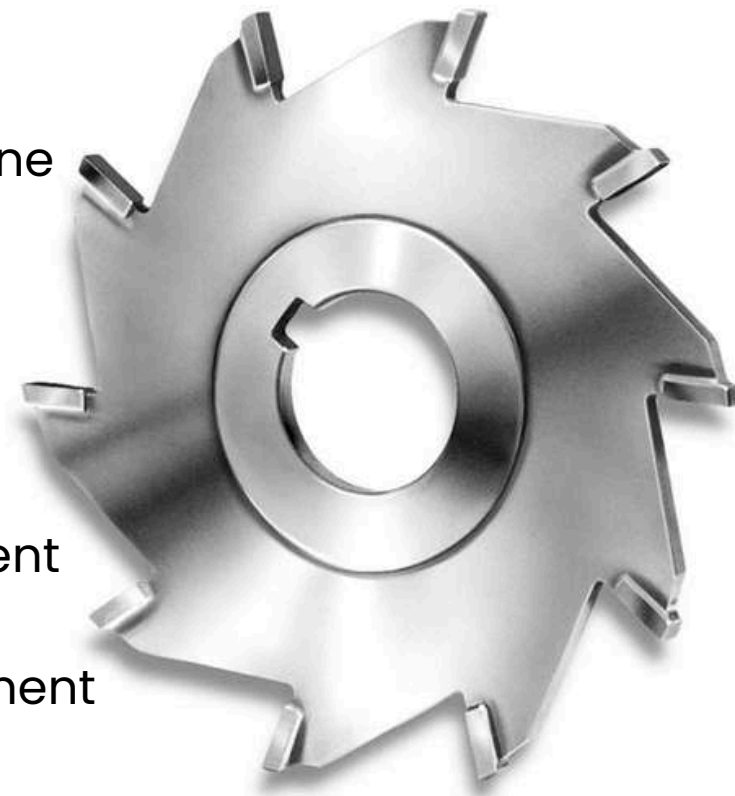


- Modified Tool Diameter $\varnothing 12$ mm to $\varnothing 100$ mm
- Neck Diameter & Length Customizable for optimal stability and performance
- Staggered Teeth Available for enhanced cutting performance
- Number of Teeth 2 to 16, for versatile applications
- Corner Radius/Chamfer Available on both sides or single side
- Cutting Width Customizable as per requirements
- Straight & Helical Flutes For efficient chip evacuation
- Flat on Shank Available for secure clamping
- Coating Options TiN, AlTiN, TiSiN for enhanced tool performance and durability

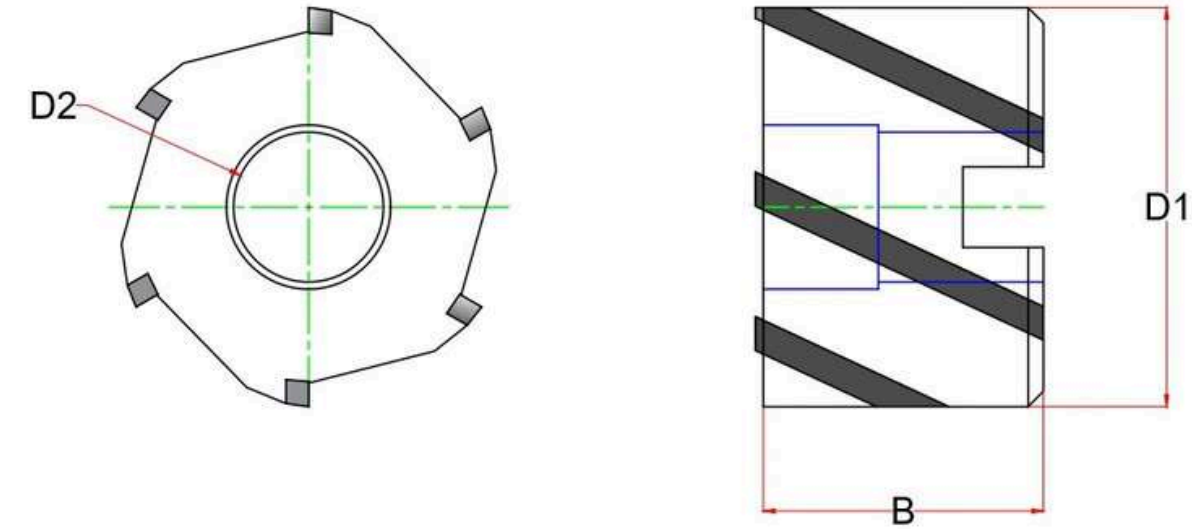
Side & Face Cutter



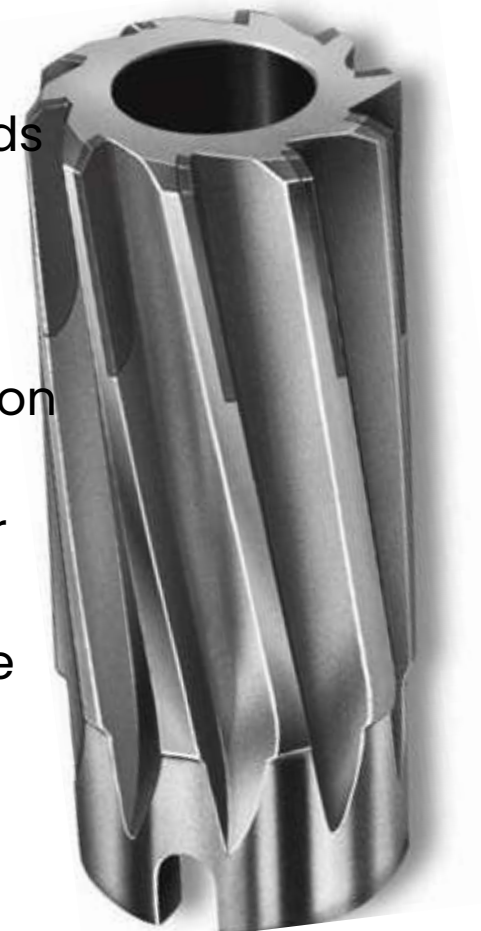
- Diameter Up to 180 mm
- Alternate chamfer Every other tooth
- Corner options Chamfer or radius on one side or both sides
- Full ball & full angle Options available
- Closer tool diameter tolerance High precision
- Chip breakers For efficient chip control
- Keyway slot Available as per requirement
- No. of teeth 6 to 32
- Bore size Customizable as per requirement



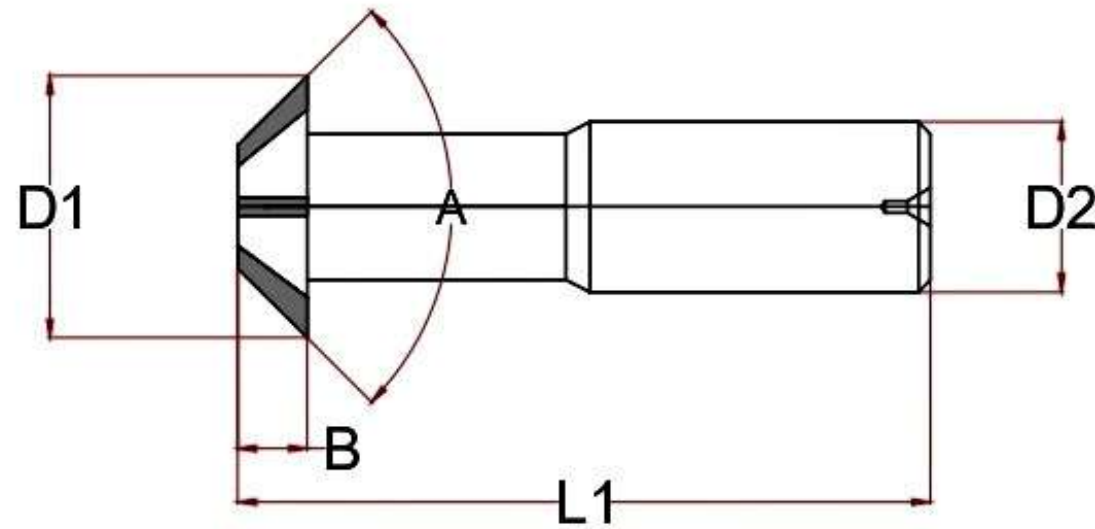
Shell Endmill Cutter



- Diameter Up to 90 mm for various machining needs
- Arbor hole Tapered for secure fitting
- Spiral options Left spiral, right spiral, or straight for different cutting conditions
- Chip breakers Designed for efficient chip evacuation and smooth cutting
- Corner options Radius or chamfer available as per application requirements
- Flutes 6, 8, 10, 12 for enhanced cutting performance
- Closer tool diameter tolerance High precision for superior machining accuracy



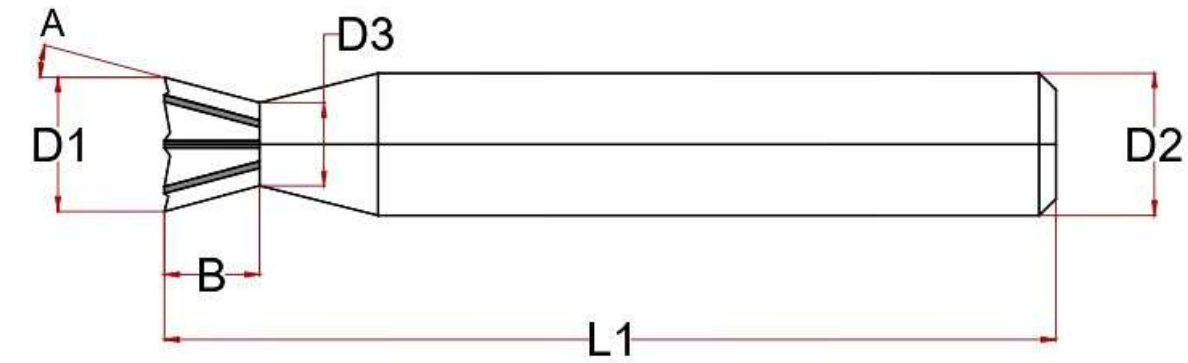
Chamfer Tool



- Chamfer Angles 45°, 60°, 90°, 120° available
- Shank Types Taper, Weldon, or Parallel for secure holding
- Polished Tips For higher surface finishing
- Flute Type Helical or straight for different cutting conditions
- Flute Options 4, 6, or 8 for optimized performance
- Cutting Tip Premium brazed carbide for durability
- Coating TiN, AlTiN, TiSiN for enhanced wear resistance



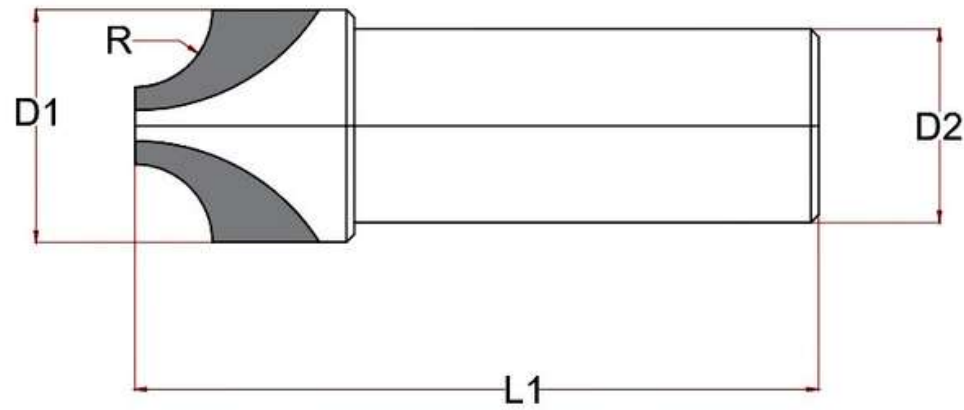
Dovetail Cutter



- Custom Sizes Available as per requirement
- Angle As per application needs
- Shank Type Weldon available for secure holding
- Neck Design Reduced neck diameter and extended neck length for deep cutting
- Corner Options Radius on corners available as required
- Coating TiN, AlTiN, TiSiN for enhanced wear resistance
- Cutting Tip High-grade carbide for superior performance



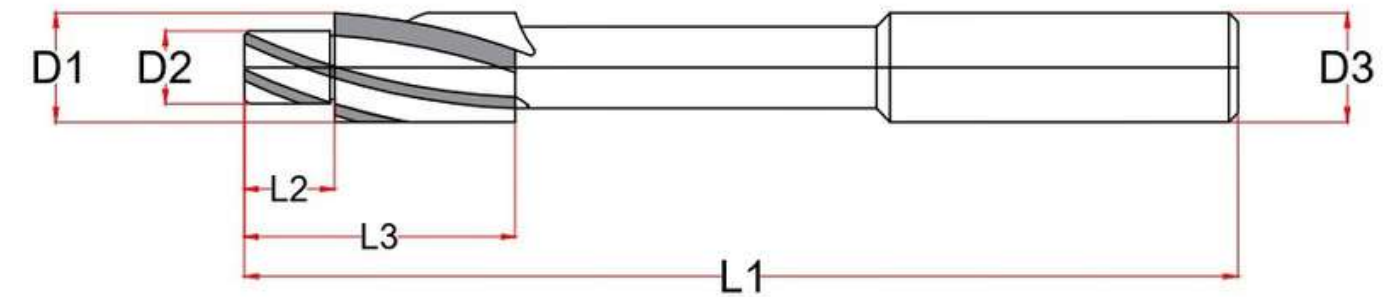
Internal Radius Tool



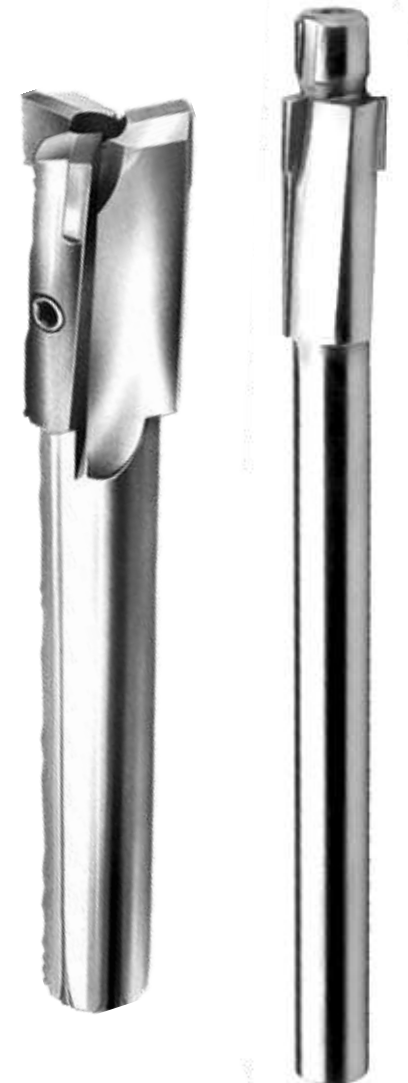
- Radius Options Various internal radius sizes as per application
- Shank Type Weldon, Taper, or Parallel for secure holding
- Flute Options 3-flute and 4-flute for optimized cutting performance
- Precision Radius accuracy within 0.01 mm
- Tool Design Geometry & carbide grade optimized for the material being machined
- Coating TiN, AlTiN, TiSiN for enhanced wear resistance and tool life



Counterbore & Spot Face Cutter



- Pilot Options Interchangeable pilot & carbide brazed pilot
- Flute Type Right spiral flute for smooth cutting
- Body Material Tip brazed to tough hardened steel body for durability
- Shank Type Taper shank and parallel shank available
- Flute Options 3-flute and 4-flute for optimized cutting performance
- Corner Options Radius or chamfer available as per requirement



SPECIAL TOOLS

We provide special-purpose tools engineered for critical machining operations where standard tools are not suitable. Our range includes T-slot cutters, chamfer cutters, form tools, lollipop cutters, and other complex geometries, developed to meet specific component requirements. These tools ensure high precision, repeatability, and productivity in challenging and high-tolerance applications.



Combined Drill



- Drills and chamfers both entry and exit in one operation
- Customizable drill diameter and chamfer angles
- Ideal for through holes in sheet metal and thin components
- Reduces cycle time and tool changes

Countersink Cutter



- Pilot-guided for concentric spot facing or chamfering
- Ensures accurate countersink on pre-drilled holes
- Customizable pilot, chamfer angle, and body diameter
- Suitable for flat-bottom spot facing and bolt seating surfaces

Engraving Tools



- Available in different angles – 15°, 30°, 45°, 60°, 90°
- Tip options: pointed, flat, or corner radius
- Custom tip diameter and shank size available
- Suitable for metal, plastic, wood, and composite engraving

2-Flute Engraving Tools



- Available in straight or helical flutes
- Used for marking and engraving on metals
- Helical for smooth finish, straight for sharp detail
- Custom tip angle and profile available

Double-Ended Corner Radius Endmill



- Different corner radius possible on each end
- Available in 2 & 4 flute options
- Ground on center for plunge capability
- Suitable for profiling and edge break applications

Carbide Profile Tool



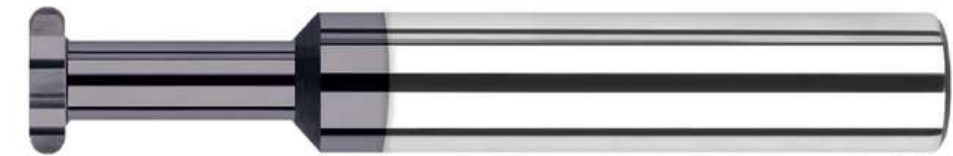
- Precision-ground for internal gear tooth profiles
- Suitable for spline, spur, and special forms
- Profile geometry as per component drawing or standard

Carbide T-Slot Cutter



- Standard with straight flutes, staggered teeth also available
- Slot edges can be made with corner radius or chamfer
- Custom neck diameter and length for deep or narrow slots
- High-performance solid carbide for long tool life

Carbide Ball T-Slot Cutter



- Profiled with a ball radius for smooth bottom transitions
- Ideal for undercuts, radius-bottom slots, and keyways
- Available in straight and helical flute designs
- Customizable neck length, radius, and slot width
- Made from solid carbide for high precision and durability

Double Angle Cutter



- Symmetrical angles for dovetailing, V-grooves, and undercuts
- Pointed cutting edges on both sides for precise profile generation
- Available in straight and helical flute configurations
- Custom angle, neck diameter, and cutting width as per requirement

Dovetail Cutter



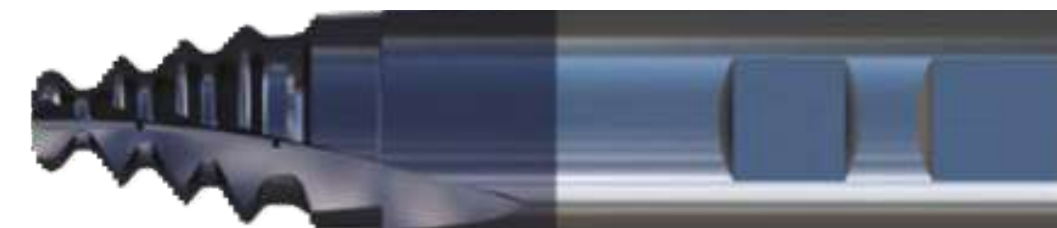
- Designed for angular undercuts and dovetail slots
- Available in specific included angles (e.g., 45°, 60°, 90°)
- Straight or helical flutes for optimized cutting conditions
- Customizable neck length, angle, and cutting diameter
- Made from solid carbide for rigidity and wear resistance

Corner Radius Dovetail Cutter



- Material: Micrograin carbide for superior hardness and wear resistance
- Included Angle: 60° / 90° (customizable as per requirement)
- Corner Radius: Customizable as per component design
- Coating: TiAlN / AlCrN for high-performance machining

Carbide Fir Tree Cutter



- Profile: Custom fir tree geometry for turbine disc root machining
- Accuracy: Tight tolerance grinding for perfect root fit and finish
 - Coating: TiAlN / AlTiN for heat resistance and longer tool life

Carbide Chamfer Cutter



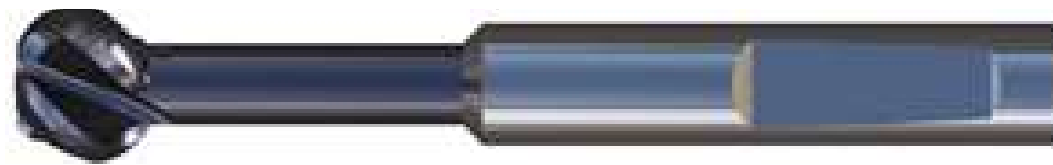
- Angle: 45°, 60°, 90° (customizable as per application)
- Flutes: 2 to 4 flutes for smooth chamfering and deburring
- Shank: Straight or Weldon shank as per machine compatibility
- Application: Suitable for edge breaking, countersinking, and chamfering

Front & Back Chamfer Cutter



- Angle: Standard 45° (customizable on request)
- Flutes: 2 to 4 flutes for balanced cutting on both sides
- Design: Cuts chamfer on front and back in a single pass
- Application: Ideal for through holes and deburring operations

Carbide Lollipop Cutter



- Ball Profile: 200°, 240°, and 300° for deep undercuts
- Neck: Taper neck for improved reach and rigidity
- Flutes: 3, 4, or 6 flutes for balanced cutting and finish
- Use: Perfect for undercuts, 5-axis, and complex shapes

Carbide Boring Tool



- Elliptical neck for strength and reduced vibration
- Helical flute for high shear and better finish
- ALTiN coating for long life and heat resistance
- Outperforms standard tools by up to 2x

Carbide Internal Grooving Tool



- Suitable for radius and angle grooves in small bores
- Precision-ground profile for accurate groove geometry
- Solid carbide body ensures rigidity and long tool life
- Ideal for internal circlip, recess, and form grooves

Carbide Face Grooving Tool



- Designed for face grooves with any custom profile
- Available in full radius, corner radius, or flat profiles
- Solid carbide construction for stability and wear resistance
- Ideal for O-ring grooves, seal faces, and precision recessing

HSS TOOLS

We supply high-performance high-speed steel (HSS) tools in M2, M35, and M42 grades, suitable for general machining across a wide range of materials. These tools offer a balanced combination of hardness and toughness, delivering consistent results in low to medium speed operations on mild steel, cast iron, and non-ferrous metals.



HSS Endmill

- Available in M35 and M42 grades
- 2F / 3F / 4F / 6F options
- Diameter range: Ø3 mm to Ø32 mm
- Roughing endmills also available
- Suitable for steel, alloy steel & stainless steel
- Excellent wear resistance and tool life
- Helix angles optimized for smooth chip flow
- Precision ground for tighter tolerances
- Available in both long and short series



HSS Taper Endmill

- Available in M2, M35, and M42 grades
- 2F / 3F / 4F options
- Taper angles as per customer requirement
- Diameter range: Ø3 mm to Ø25 mm
- Suitable for die, mold, and cavity machining
- High strength for deep and angular cutting
- Precision ground for accuracy and finish
- Available in both short and long flute lengths



HSS Shell Endmills

- Available in M2, M35, and M42 grades
- Helical and straight flute designs
- Bore diameter: H7 ground finish
- Flute count: 6 to 12
- Overall length up to 120 mm
- Suitable for heavy-duty face and side milling
- High rigidity and excellent surface finish
- Compatible with standard shell mill arbors



HSS Countersink Cutters

- Available in M35 and M42 grades
- Standard & non-standard angles: 60°, 82°, 90°, 100°, 120°
- Single, 3-flute, and 6-flute designs available
- Diameter range: Ø6 mm to Ø32 mm
- Ideal for deburring, chamfering & countersinking
- Precision ground for chatter-free performance
- Suitable for steel, stainless steel & tough alloys



HSS Dovetail Cutters

- Available in M2, M35, and M42 grades
- Standard & non-standard angles: 45°, 60°, 90°
- Diameter up to Ø80 mm
- Straight and staggered tooth options available
- Precision ground for accurate profile and fit
- Ideal for T-slots, keyways & angular grooves
- Suitable for steel, alloy steel & cast iron
- Custom sizes available on request



High-Performance Drills

- Available in M2, M35, and M42 grades
- Hand reamers, machine reamers & chucking reamers
- Straight, spiral, and taper cutting flute designs
- Taper reamers also available
- All types of shanks available – straight and taper shank
- Diameter up to Ø50 mm
- Precision ground for close tolerances and fine surface finish
- Suitable for steel, stainless steel, cast iron & alloys
- Custom sizes and flute lengths available on request



HSS T-Slot Cutters

- Available in M2, M35, and M42 grades
- Standard and non-standard dimensions
- Diameter up to Ø80 mm
- Weldon or cylindrical shank available
- Precision ground teeth for clean slotting
- Ideal for cutting T-slots in tables, jigs & fixtures
- Suitable for steel, cast iron & alloy steels
- Custom sizes and profiles available on request

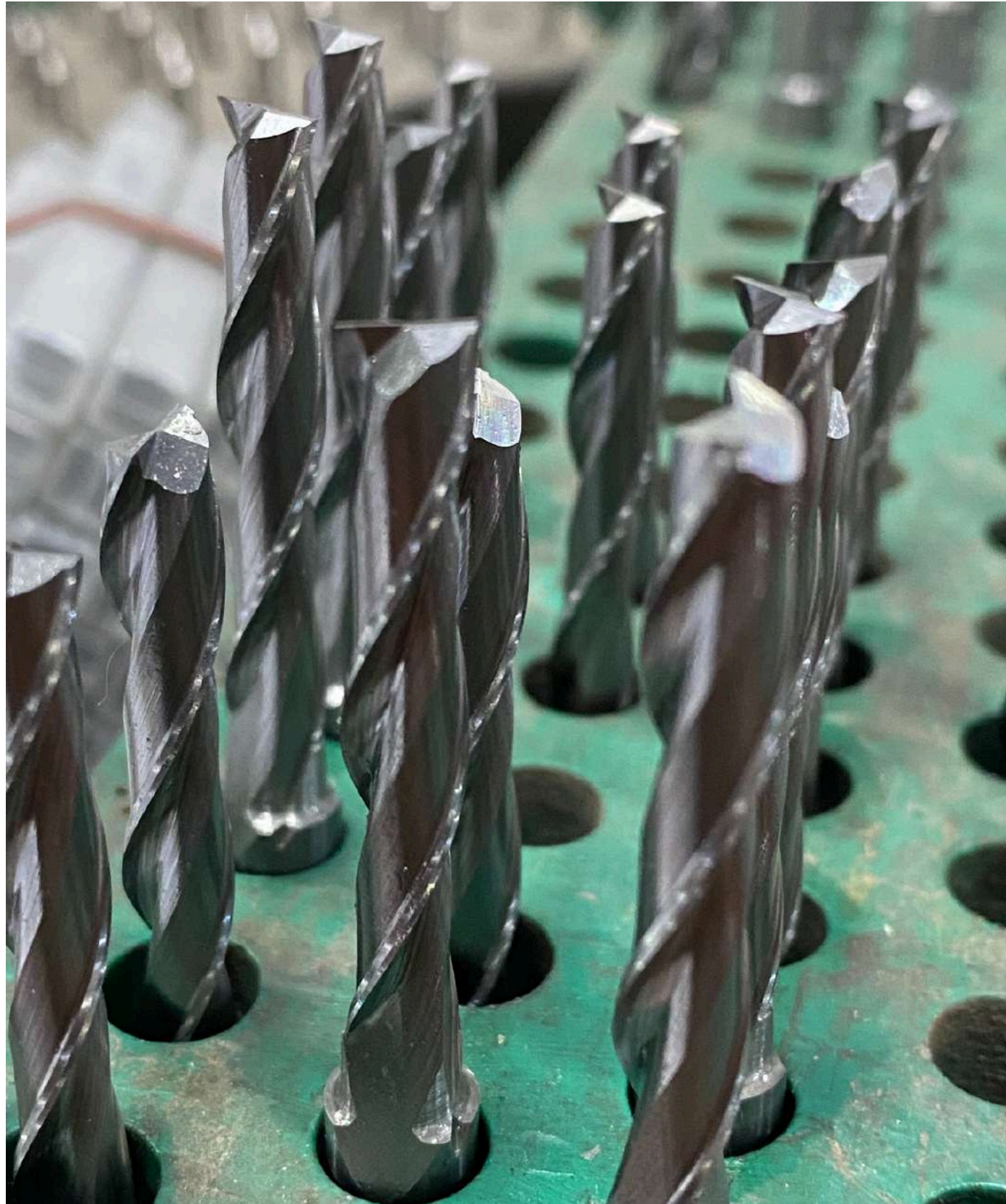


HSS Drills

- Available in M35 and M42 grades
- Helical flute design for efficient chip evacuation
- Diameter range: Ø3 mm to Ø30 mm
- Split point geometry for easy centering
- Suitable for alloy steel, stainless steel & hard metals
- High heat resistance for high-speed drilling
- Available in jobber, stub, and long series
- Custom lengths and coatings available on request

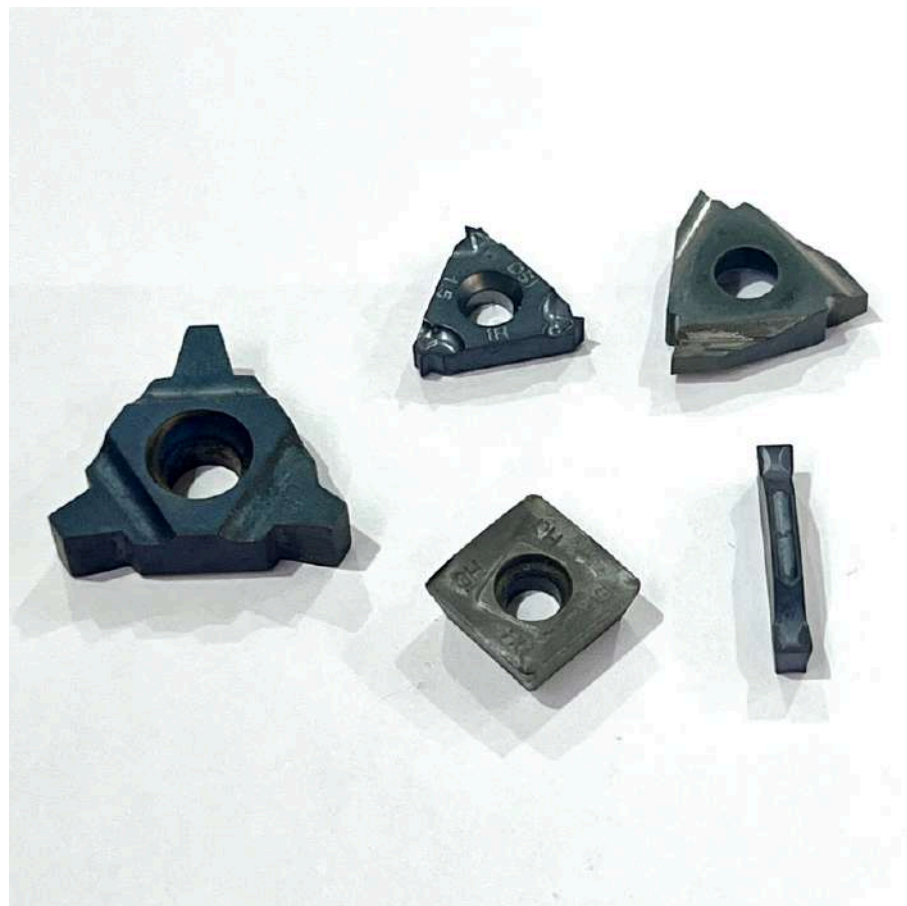
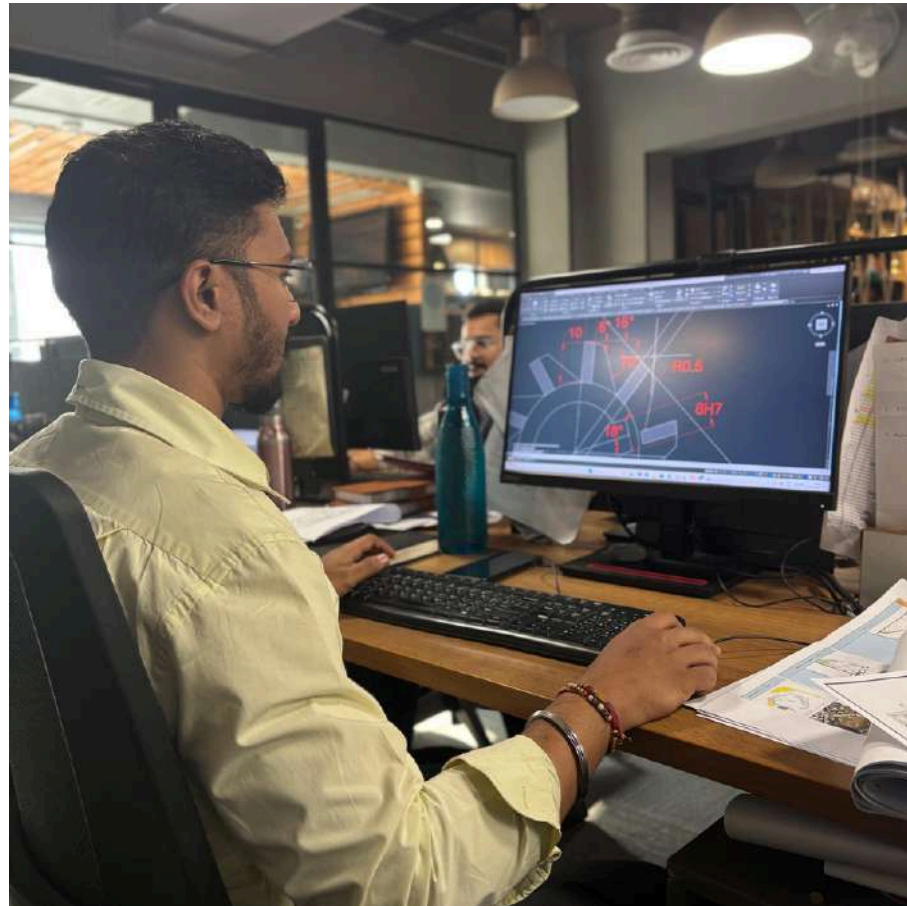


OUR SERVICES



Re-sharpening, Reconditioning & Tool Coating

We offer precision re-sharpening and reconditioning services for all types of cutting tools, including endmills, drills, reamers, form tools, and special tools. Our CNC tool grinding setup ensures accurate face and OD regrinding with consistent geometry and sharp cutting edges. Diameter modification is also available as per customer requirements. All services are completed in minimum possible lead time to help reduce your machine downtime and maintain productivity.



OUR SERVICES

Tool Design and Customization



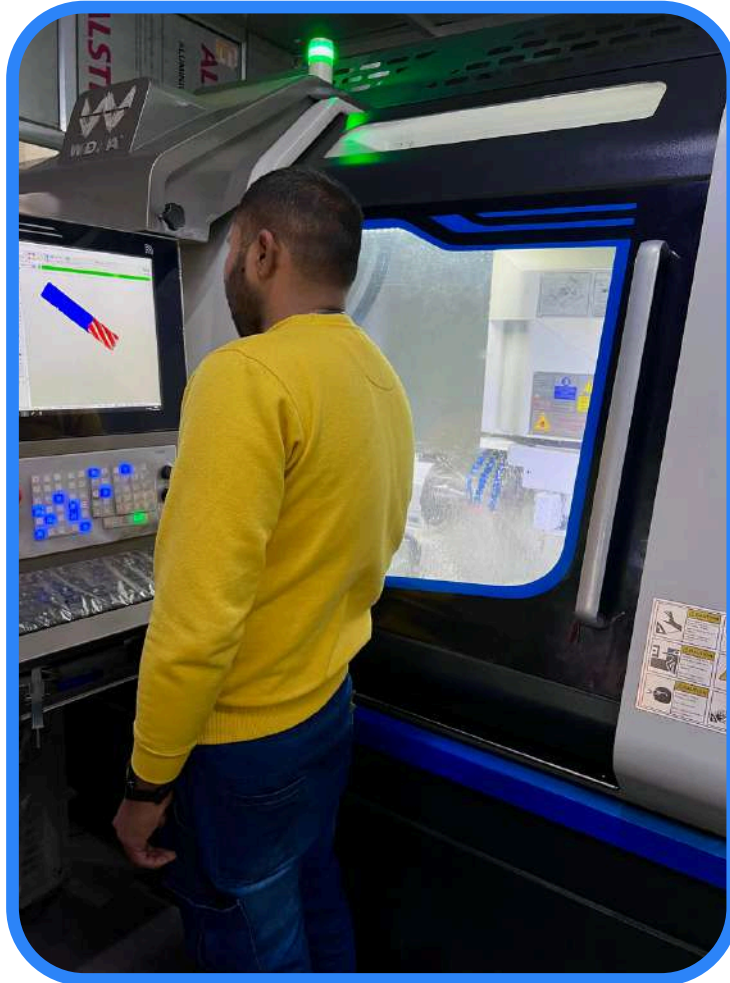
We offer tool design and customization services for standard and complex applications. Our experienced team uses AutoCAD, SolidWorks, and NUMROTO to develop optimized geometries based on customer requirements or component drawings. From form tools to combination cutters, we deliver precision solutions that enhance tool life, accuracy, and productivity.

Insert Profiling & Modification



We provide insert profiling and modification services to meet specific machining and component requirements. Whether it's creating a custom profile, adjusting geometry, or modifying corner radius, our precision grinding and inspection processes ensure consistent quality and accuracy. This service supports special applications where standard inserts are not suitable, helping customers reduce tooling costs and improve machining performance with minimal turnaround time.

FACILITIES



01

WIDMA Ecogrind RX5NEO

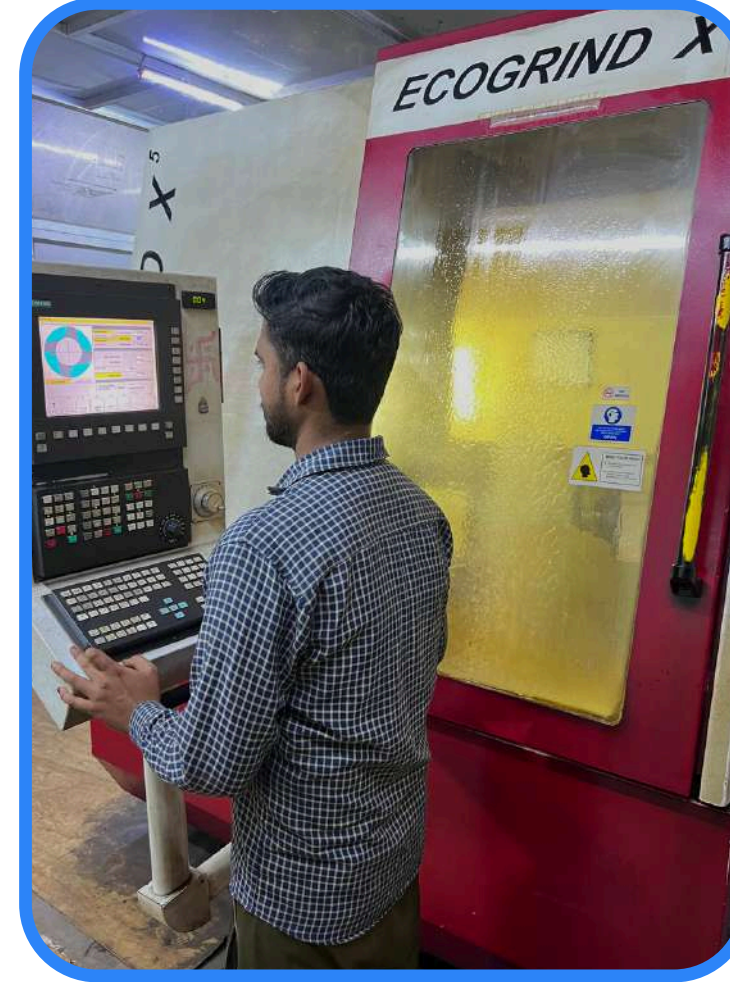
WIDMA RX5+ Neo is a 6-axis CNC grinding machine with traveling steady rest, enabling precise manufacturing of complex carbide tools and extra-long drills with excellent accuracy, finish, and repeatability.



02

WIDMA Ecogrind RX5+

WIDMA RX5+ is a 5-axis CNC tool grinding machine powered by NUMROTO software, used for manufacturing high-precision carbide endmills, drills, and reamers with complex profiles, delivering exceptional surface finish, tight tolerances, and consistent performance across batches.



03

WIDMA Ecogrind X5

Equipped with Ecogrind X5, we manufacture and re-sharpen carbide drills, endmills, ball nose, and corner radius tools with high accuracy and finish, ensuring consistent performance and precision across a wide range of cutting applications.

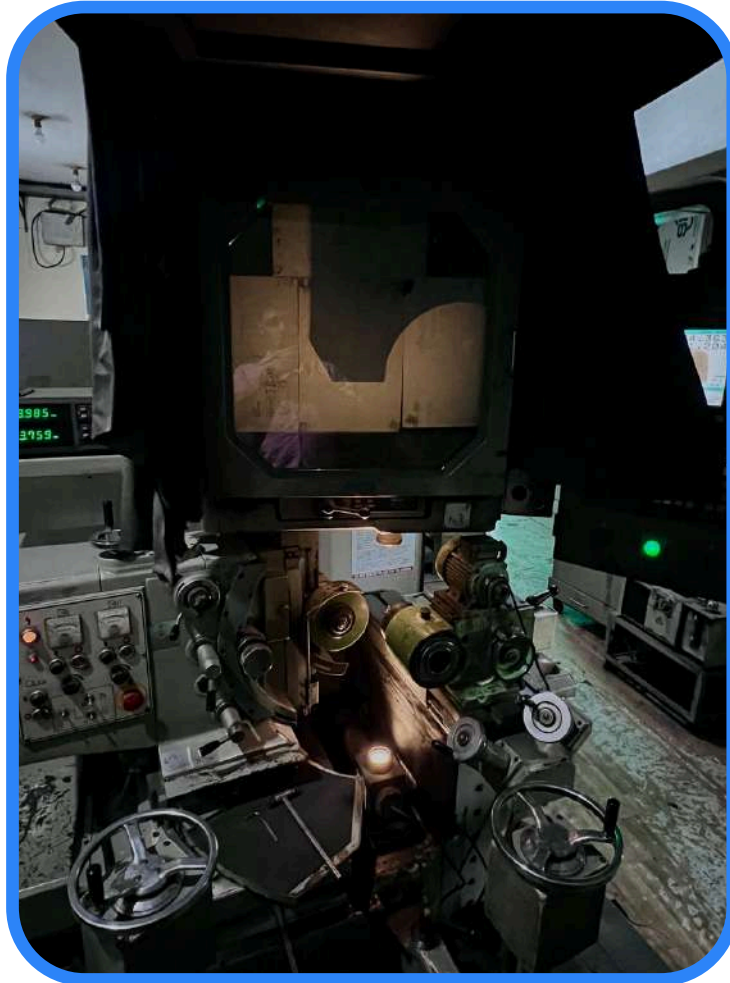


04

Manual Grinding Line

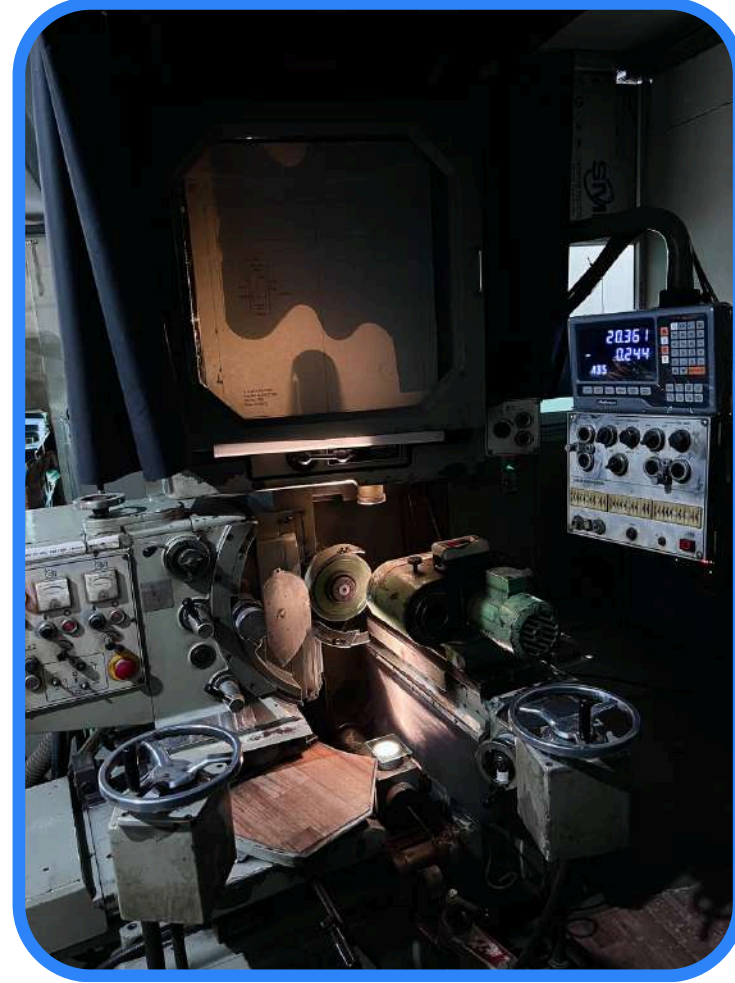
With a dedicated setup of 10 manual tool and cutter grinding machines, we perform roughing and heavy material removal—preparing tools for precision finishing on CNC machines. This ensures efficient workflow, accurate geometry, and superior tool performance.

FACILITIES



05 *(OPG)WAIDA
PGX-2000S*

The Waida PGX-2000S CNC optical profile grinder, with advanced Japanese technology, delivers sub-micron accuracy for intricate profiles—ensuring superior finish and precision in specialized carbide tools across high-performance and technically demanding applications.



06 *(OPG)WAIDA
PGX-1000S*

The Waida PGX-1000S is another high-precision CNC optical profile grinding machine in our setup. It enables accurate manufacturing of various specialized carbide tools with complex profiles and fine surface finish, supporting high-performance applications across demanding industrial segments.



07 *BFW Orbitur+ CNC
turning machine*

The Orbitur BFW CNC turning machine is used in-house for precise and consistent blank preparation of carbide-tipped tools. It ensures accurate shank dimensions and concentricity, enabling faster tool manufacturing and high-quality performance in demanding cutting applications.



08 *Manual Grinding Line*

Our in-house cylindrical grinding setup includes machines from HMT and Sharda, with a capacity of up to 800 mm length and 300 mm diameter. This ensures precise outer diameter grinding, supporting consistent quality and performance in our carbide and HSS cutting tools.



SUPER PRECISION PRODUCTS

SUPER PRECISION PRODUCTS

Thank You

Let's Connect with Us!



sppknpe10@gmail.com



www.sppknp.com



+91-9044033308

+91-7275545454

+91-7275535353

