

Shri Pandurang Hira Udyog

SPHU Tools



**Manufacturer & Supplier of
Diamond Tools, CBN Tool, PCD Turning Tools**

Profile

With in-depth industrial knowledge, technical expertise, and sound infrastructure, we, Shree Pandurang Hira Udyog , Manufacturer and Supplier a comprehensive range of world-class tools. Incepted in the year 1997 , we are one of the leading manufacturers, suppliers, and traders of a sophisticated range of tools. Our range comprises Diamond Tools, Diamond Cutting Tools, Pcd Tools, Pcd Inserts, Diamond Dresser, and other related products. We offer these tools with minimum wastage market leading prices in order to attain maximum client satisfaction. Further, our state-of-the-art infrastructure helps us in meeting the customized requirements of the clients, within committed time frame. Moreover, our products are thoroughly quality tested in every stage of production so as to ensure defect-free range to the clients.

We have successfully served numerous clients over the years. With our high quality standards, innovation, state-of-the-art infrastructure, competitive prices, and sound business policies, we have been able to carve a niche for ourselves in the national market.

Product Portfolio:

We are one of the prominent manufacturers, suppliers, and traders of a wide gamut of Tools. These are manufactured using basic materials that are procured from reliable and authorized vendors of the industry. Our entire range of products are easy to use, simple in design, and can be availed at most reasonable prices. Our range includes:

- Diamond Tools
- Diamond Cutting Tools
- Diamond Dresser
- Pcd Tools

- Pcd Inserts
- Cbn Tools
- Single Point Diamond Dresser
- Multi point Diamond dresser

Introduction

PCD (POLEX) diamond tool blanks have Laminated structure of a polycrystalline diamond layer bonded to a tungsten carbide substrate. This structure is achieved by use of high - pressure, high - temperature process giving the product excellent and uniform physical properties, which make it highly suitable for cutting and milling tools.

SPHU PCD Tools are capable of high material removal rates in production boring, Turning and milling operations while providing consistently fine surface finishes. In addition, the polycrystalline diamond layer has very high thermal conductivity which allows greater cutting tool heat dissipation in finish and rough machining of wide range of nonferrous and nonmetallic materials.

Advantages of SPHU PCD Tools:

- 1) Substantially longer life.
- 2) Considerable reduction of nonproductive time e.g. setting-up time.
Now a day cost factor of the first rank
- 3) better surface finish.
- 4) Rough and precision machining in single operation, more particularly for automatic lathe works.
- 5) Large production before regrind.

MATERIALS : PCD Tools are recommended for machining operations on NON-FERROUS ALLOYS and NON-METALLIC Materials
Such as :

- Aluminum alloys
- Silicon-aluminum with inclusion of hard refractory materials and silicon
- Brass and bronze alloys
- Copper and copper alloys
- Zinc and Manganese alloys
- Pre-sintered and sintered tungsten carbide
- Titanium
- Gold, silver, platinum
- Phenolic and epoxy resins
- Rubber
- Fiberglass composites and carbon fiber containing composites
- Plastic such as Acrylic, Plexiglas, Polyamid, nylon, Teflon etc.
- Carbon, graphite, vulcanized fiber
- Ceramics and porcelain



MACHINING OPERATIONS :

TURNING
FACING
BORING
PLUNGE CUTTING
UNDER CUTTING
RECESSING
GROOVING
CHAMFERING
COUNTER BORING
SPOT FACING
FLY CUTTING
FACE MILLING
SIDE MILLING
SHELL MILLING etc.

Product:-

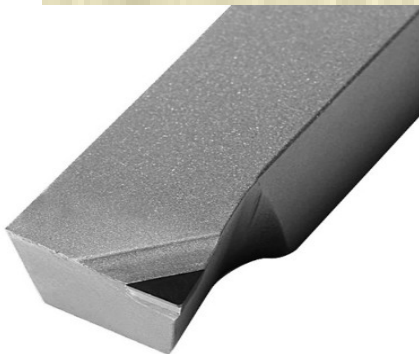
PCD Inserts

Manufacturing of All types of ISO PCD Inserts For Turning, Boring ,Threading and Milling operation .



Pcd Turning & Boring Tools:-

SPHU PCD Shanked tools High precision work in turning & Boring operation for non-ferrous metals and highly abrasive non-metallic materials, including: Brass, Magnesium, Aluminum, Copper, Rubber, Columbium, Reinforced Plastics, Graphite, Ceramics, Wood, Fiberglass, and many composite materials and the life is much longer than that of carbide, etc.



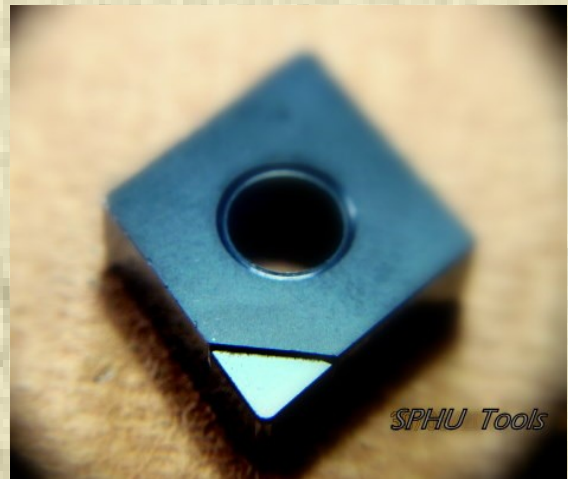
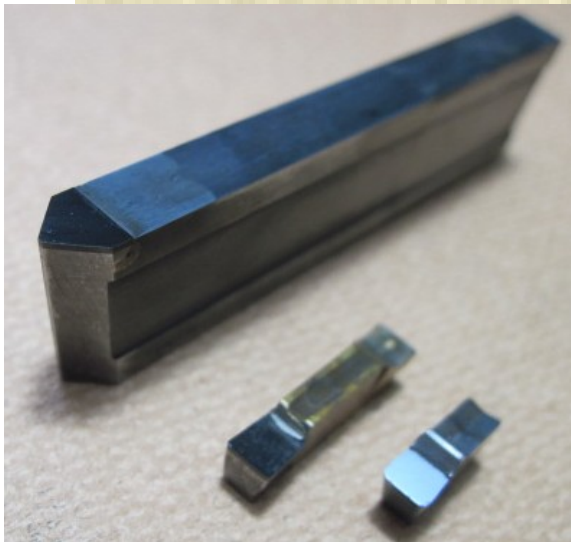
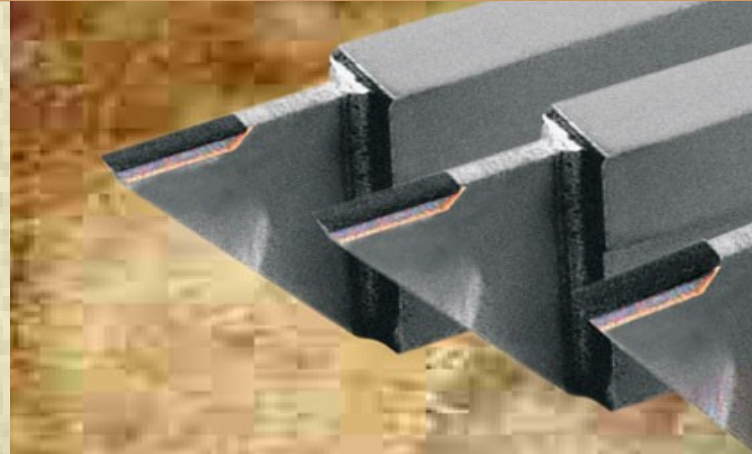
PCD Grooving Tools:-SPHU PCD and PCBN grooving tools are successfully used in many automobile and engineering industries for grooving / machining of aluminum and non-ferrous and

ferrous metals. SPHU grooving tools are offered in Various cutting widths ranging from 0.80 millimeters with carbide shanks. dimensions, tolerances and cutting geometries of the specific application.

Applications: * Grooving in aluminum pistons and non ferrous parts

* Direct machining of precast cylinders without preliminary machining.

* Where ever perfect form and high accuracy are needed



Relapping & Retipping

SPHU Tools provide Relapping & Re pcd tipping on your used any ISO & non standard Inserts & tools it helps reduce your production cost.

PCD Reamers ,Endmill cutters, PCD Drills for reduce your cycle time and CPC.



PCD Reamer.



PCD Step Reamer.



PCD Helical End mill cutter.



PCD Step End mill cutter.



PCD Form cutter.



PCD Drill.



PCD Step Drill.



PCD Drill cum combination Reamer.



PCD Guide Pad Reamer.

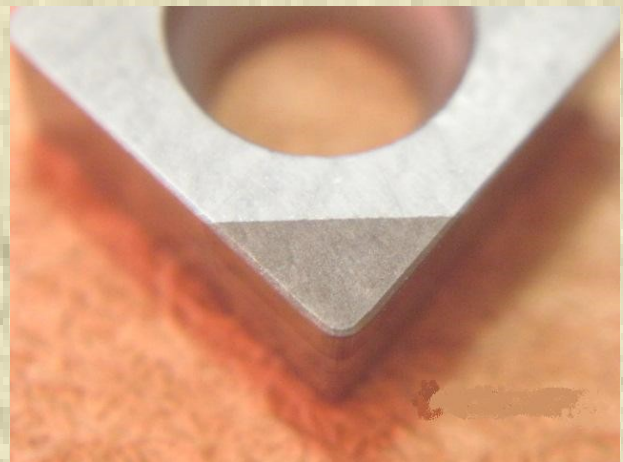
CBN Tools -Cubic Boron Nitride

What is CBN

SPHU CBN is material sintered under ultra - high prssure and ultra - high temperature mainly containing CBN (Cubic Boron Nitride) with special bonding ceramic agent it has higher hardness and higher heat resistance than conventional tool materials. These features allow it to cut hard processing material such as hardened steel and high hardened cast iron. In addition, it has a lot of superior performance such as realization of longertool life in high speed finishing of cast iron.

Advantages

Cubic boon nitride (CBN) inserts are available in Seven different grades. sintered metals, super alloys, hardened steel, and cast iron. Machining of heat treated, hardened steel with CBN provides high surface quality and eliminates, in many cases, grinding - a process that is normally required when machining steel with a hardness over 45 HRc. The use of CBN provides significant improvement in productivity and economy utilizing high speed machining and hard machining.



SPHU DIAMOND DRESSER introduced A wide range of Diamond Dresser which gives gurrantee thequality of the product. We are manufactured Diamond dresser from selected & hi quality diamonds. Diamond Drresser are following types and also capable to provide any type of diamond dresser as per requirement & drawing.

Single Point Diamond Dresser

Single Point Diamond Dresser are available in two Diamond Shape :-

- 1) Fourface Type
 - 2) Round Bruted point & Different Qualities with Different carate & shank size to suit every requirement
- Diamond is set in sintared metal ensuring that the diamond is firmly bonded to the steel shank & the heat generated wheels dressing is transferred properly. This tool can be used on soft wheel, medium to hand wheel & very hard type of wheels. Resharpening service is available.

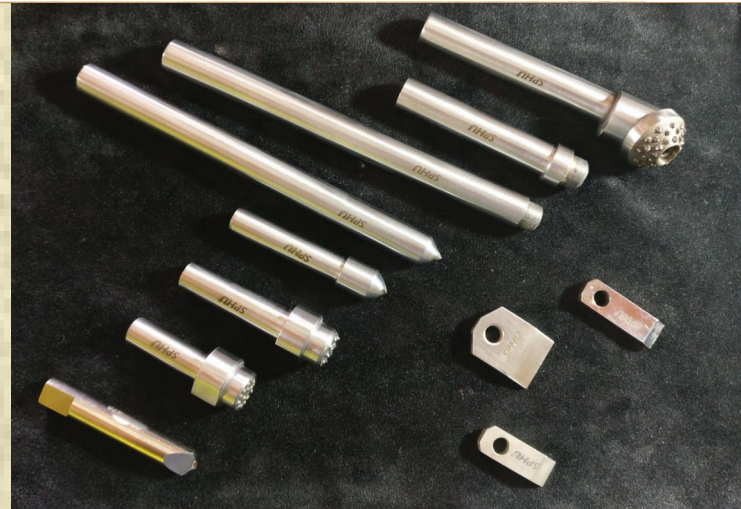
Multi Point Crown Dresser

[36 or 24 Diamond Points] :-

A Multipoint Crown Dresser are speciallly designed for high productuvity and heavy duty . Dresser is set with three or two lines of sharp point Diamonds in circular crown at right angle in hard matrix. Total diamonds on the crown completely used by readjustable type holder. You can use two more new points every time the feed may be safely increased. It can used for side dressing also.

Recommended for :-

All type larege wheels specially for cylindrcal and cenreless grinders, Resetting service is available





Chisel Type Diamond Dresser

Wherever diamond type tools can not meet these requirements due to the specific grinding wheel geometry. Precision ground shaping tools are the solution. These tools manufactured only from the highest grade for natural diamonds. Shape of diamonds of chisel dresser & polished cones used for Radius dressers, formtracers, gear grinders, thread grinders & other machines of this type.



Multi Point Blade Type Dresser

Blade Dresser are basically conceived from the Multipoint wheel dressing concept. In these tool needle type layer immediately expose, these tools replace Diamond chisel and can withstand more abuse. The thin elongated diamonds used cut the abrasive particles smoothly. The following action on the grinding wheel surface with the Blade Dresser.

- 1) A pure abrasive action - no "rubbing" action.
- 2) Proper fracture of individual grains to expose maximum abrasive area for grinding.
- 3) Minimum "Filling" of bonding cavities on the wheel surface to minimize friction during grinding operation.
- 4) Minimum "grain pull out" Blade Dresser available

in two widths and different blade thickness.

Recommended for :-

Cylindrical, Centreless angular grinding, profile grinding, automatic cycle grinding all type of large grinding wheels fine profile dressing is important.



Multy Point Impregnated Grit Dresser

In these type of dressers smaller diamond particles are mixed with a special grade of tungsten carbide powder & sintered to particular shape. When this type of dresser is used in the grinding machines the diamond particles will cut the abrasive grains and the carbide which holds the diamond particles together wears away. It has long life since the load is divided on many diamond particles in a tough durable matrix. The cutting of the dresser should be set at an angle of 90° to the grinding wheel to be dressed, so that all the cutting edges of the diamonds grit are able to make contact with the wheel face. Shanks are made to suit customer's exact requirements.

Recommended for :-

All Type of centreless, cylindrical and surface grinding machine.



Multi Point Cluster Dresser

In This tools More Than one small & Sharpe Diamonds are set in one layer for heavy duty dressing. The dressing face of the cluster Type Diamond Dresser should be set at an angle of 90° to the grinding wheel so that all the diamond points are in contact at the same time, the work load is devided

Recommended for :-

All type of large grinding wheels where fine turning is considered specially for centreless & cylindrical grinders.



Diamond Needle Files

Shri Pandurang Hira Udyog offering a wide range of regular diamond files that are manufactured from premium quality Diamonds that are at par with international standards. These are of high efficiency with long service life thus making them an important item at Shri Pandurang Hira Udyog.



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