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### Introduction:

This brochure contains brief overview of our manufacturing excellence. We are group of engineering professionals with huge experience in the field of Carbide Tooling and Wear Parts. Established in Mumbai, India,

we exist amongst the leading and trusted manufacturers and suppliers of Tungsten Carbide Tooling and Wear Parts across the globe. Beyond a quality product, We are dedicated in providing a quality experience to our customers after purchase.

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### Thank you for considering Mikron Engineers.

### Vision:

To provide world class products with higher performance at an competitive price range.

### Mission:

To cater each and every requirement of our clients by deploying higher level of engineering and innovation.

## **Our Belief:**

"Delivering quality products with excellent services"



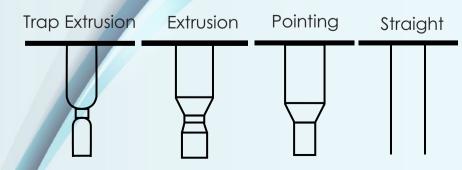
#### **Tooling for Fastener Industries**



In our state-of-the-art manufacturing unit, different grades of Carbides are developed to cater to the different tooling applications for enabling the tool to find its optimum performance. We are known for manufacturing higher grade tools for fasteners Industries.- Such as Dies , Quill- wire die – Cutter Open & Bush cutter , 1<sup>st</sup> punch , Die & Punch case.

Mikron Engineers manufactures all types of heading dies suitable for Fastener Industries. These are used for manufacturing headed screw, rivets, Pop up rivets, Bolts, Nuts, for special fastener etc in different material. To give our customers full satisfaction, we feel happy to share the solution for fastener tooling from Manufacturing and Execution based on our experience

We also manufacture tools for various machines such as CHUN ZU, SACMA, National etc. Most of the sizes are in stock and can be supplied within 1-2 weeks. The various types of profile such has Extrusion, Pointing, Trap Extrusion, Countersunk, Washer face etc are some of our regular manufacturing products whereas we also manufacture the Special dies with hexagon profiles. We can also supply tooling in semi finish condition for tools and fastener manufacturing. We are also manufacturing tooling for bimetal rivets.



#### **Different Profile of Dies**



### Carbide shoe and Grinding positioning bush

We are one of the largest supplier of the Clamping plates that are widely used for holding the races against the Driving plate during the grinding of Inner and Outer races in the process of Grinding and Lapping. These are used in Linköping Machines.

Due to the demanding requirement, we make the Clamping plates by utilizing the solid one piece sintered carbide of wear resistant grade which further ensures the higher level of surface finish and geometrical accuracy. We have also develop diamond tooling (PCD) for certain application.



### Tooling For Bearing Industry



We provide high quality Driving plates that are made of composite construction viz: a wear resistant carbide ring strongly brazed to a carbon steel body and clubbed with the carbide ring in the end phase which gives very high level of surface finish and geometrical accuracy. Apart from driving plates, we also manufacture grinding positioning bush for Duplex grinder, clamping plates, work rest blades, carbide shoe, etc.

We also manufacture many different Geometry of Driving plates to supply our valued clients spread across the world.

Driving / Backing plates for bearing



Tooling for Collapsible tubes and Can (Combine Dies and Carbide rings)

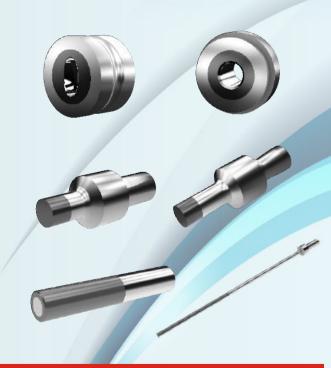
Mikron engineers has introduced Carbide rings for manufacturing of Aluminum Collapsible Tubes in India. We have been successfully developed the Combine die that helps in forming the tubes along with the nozzle, that results in reducing the setting time and increase in productivity.

Further research in the field has helped us to develop dies for Aerosol Can, Aluminum Bottle Manufacturing and this replacement of steel dies with carbide Rings has bought substantial revolution in the industry. We have also developed Bidding roller for Aerosol Can in carbide. This is used for necking operation. Development of steel tooling for Aerosol Can top tool, Necking die punch holder etc is under process.



#### Tooling For Collapsible Tubes And Cans & For Powder Compacting

core rod.



Tooling for Powder Compacting

For Pharmaceutical industries/Tableting dies. & Tooling for Abrasive/Ceramic industries, dies &

Dies and Punches required for manufacturing of Sintered products are also come in the product range of Mikron Engineers, which helps in preventing the loss of material and secure higher production outcomes.

We have developed special carbide grade for powder compacting of Abrasive/Ceramic.



Tooling for Roller Manufacturing (Bearing Industry)

Mikron Engineers have developed dies for Taper Roller and Needle Roller to fulfill the need of the major Bearing Manufacturer of India. Mikron engineers also Manufactures Cutter Insert, Cutter and Quill for Roller Manufacturing Industries with a maintained dimension within 0.01mm. All the working area are lapped and polished to attain higher degree of finishing and resulting in very high tool performance.

#### Tooling For Roller Manufacturing And Special Components



We are also affianced in producing many different products that are especially required in Automobile Industries, Oil and Gas Industries, Cigarette Industries, Electrical Industries, etc.

We also supply ground/unground rods suitable for various application carbide flats/blocks and other special components can also be manufactured as per customers requirements.

#### **Special Components**



#### **Bearing Cages for Taper Roller**





Cages have an appreciable influence on the suitability of rolling bearings. Their main purposes are:

- Keeping the rolling elements at an appropriate distance from each other and to prevent direct contact between neighboring rolling elements, in order to keep friction and thus heat generation at a minimum.
- Keeping the rolling elements evenly distributed around the complete circumference to provide even load distribution and quiet and uniform running.
- Guiding the rolling elements in the unloaded zone, to improve the rolling conditions in the bearing and to prevent damaging sliding movements.
- Retaining the rolling elements, where bearings are of a separable design and one bearing ring is removed during mounting or dismounting.

This ongoing experience of tooling has helped us to develop a new setup for manufacturing of Bearing Cages and expand our Total Production capacity of 2,50,000 / month. Development of cages for spherical roller is under process.



### Automation & Material Handling Equipments

Mikron Engineers are a diversified group providing solution to different Industry & sectors, in last 2 years we are delivering Automation and Material Handling equipments.

Under Lean manufacturing and design concepts developed entire production line for small and medium size industries.

We have a capacity to conceptualize, design and manufacture systems and process to add value to Industry growth with brilliant layouts & facilities.



#### **Few Projects We Delivered**

1. Raised Floor Tile Material Handling Solution -

A Conveyor for loading and unloading of Tiles which transfers 1 tons of material at a length of 35 meters.

#### 2. Tile Cleaning Machine -

A Machine which removes & cleans the cement particles from the semi processed tiles.

3. Valve Assembly Automation -

Highly sophisticated gas cylinder valve assembly automation which has got a productivity cycle time of 4 min per valve. The entire assembly with 8 process are automated to deliver final product.



#### **Carbide Ball Dies**

It was in 1994 when Mikron Engineers put its first step in manufacturing the Carbide Heading dies & punches that is extensively used to make the Headed ball, which after processing turns into finished ball and becomes the backbone of bearing manufacturing. To give the end product (ball) a longer tool life and an utmost shape, the expert team of Mikron Engineers utilizes its practical experience with coupling theoretical stress analysis, modern manufacturing practices and proven application engineering practices.



We manufacture dies for some of the topmost manufacturers like for National, Highland, Water berry, etc. We also manufacture as per the given drawing by the clients.

#### Carbide Tooling For Steel Ball Industries



Carbide Cutter / Quill and Finger

Cutters are used in Combination with quill and Finger to Cut the wire and position in between the die and the Punch. Encouraged with the success of Heading dies and massive customer recommendations, Mikron engineer started the development of cutters, quill & fingers

High wear resistance of carbide grade for fingers along with induction brazing and good surface finish offers high performance as for the fingers.

Good shearing strength of carbides for cutters and quills with the lapped and mirror finish of wire bore along with concentricity and perpendicularity within in 0.01mm yields good output in terms of high tool life.

High tool service life ensures less changeover time thereby reducing machine downtime in turn increasing productivity.



### Full Product Range

