



Polycrystalline Diamond Dies

Approach The Die Specialists Today!

Experience the BI Competitive Edge

- **Lowest Price Per Cost**

High Quality Raw-Material used by us reduces hidden costs associated with lower quality products.

- **Precision Parts & Superior Design**

Our Products have long-lasting lifespan, thereby ensuring lesser die-requirement, helping achieve saving on downtime, labor and dies cost, as fewer dies do MORE!

- **Premium Customer Service**

For any rush or any clarification about your dies, don't worry! Rest assured! We are dedicated to your success, making your job easier!

Contact Us

Address:

M/S Bharat Industries,
C-30, 1st Floor,
Road Number 16,
Wagle Industrial Estate,
Thane(W)-400604

Phone:

Office: (+91)-22-25821221
Mobile: (+91)-9820184994

Connect With Us:

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MANUFACTURER'S & SUPPLIER'S OF QUALITY PRODUCTS:

WIRE, TUBES & ROD DRAWING DIES - DIAMOND - PCD - COMPACTING - COATING - WIRE STRAIGHTENING
- HEADING - GRIPPER - EXTRUSION DIES - WIRE GUIDING NOZZLES - POWDERED & GRANULAR CHARCOAL -
WIRE DRAWING LUBRICANTS - WIRE CUTTERS - PULLING-IN-DOGS - METALLURGICAL MICROSCOPE FOR DIE TESTING



Today, wire drawing dies are available of numerous materials including Tungsten Carbide, Natural Diamond, Synthetic Diamond as well as Polycrystalline Diamond. Selection of any of these as die-material depends on material being drawn as well as desired finish of wire-surface. However, in any case, withstanding the demanding wear of the die is a necessity.

Polycrystalline Diamond has a very predictable wear along with a very high thermal stability, enabling it to resist fracture to a greater degree. This in turn is very economical for the industry with a lesser downtime. Bharat Industries, with its stringent quality provides you Polycrystalline diamond dies, with an unproblematic performance from manufacturing to refurbishing.

Polycrystalline Diamond is prepared by sintering a mass of diamond crystals and catalyst cobalt into a coherent, larger structure under combination of strong heat and pressure. This procedure converts the mass into a single unit with the diamond particles inter-grown to each other.

Special attributes

- **Superior Toughness:** Polycrystalline Diamond has hardness value of 50GPa, being much more tough than single-crystal diamond, largely due to random orientation of grains.
- **High Thermal Conductivity & Hardness:** Polycrystalline Diamond is thermally very stable till approximately 650°C. It can function in certain cases even over 650°C, conditioned other degradation processes such as oxidation and graphitization are absent.

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- **Resistant to Fracture:** Polycrystalline Diamond has a transverse rupture strength of approximately 1800MPa, providing excellent resistance to die fracture as well as breakage.
- **Uniform Wear:** Polycrystalline Diamond has a uniform wear in contrast to single-crystal diamond. Eventually, when wear occurs, it occurs evenly in all directions, contrasting to other diamond dies, which can develop unacceptable ovality. Thus, the Price/Performance of Polycrystalline Diamond is much better as compared to other variants of Diamond dies.



Technical Specifications:

| PCD Grade | Bore Size(mm) |
|--------------|---------------|
| 5-25 microns | 0.050-15.00 |

Applications

Polycrystalline Diamond Dies can be used in almost any wire-drawing operations ranging from rod-size to intermediate to very fine wire sizes. It can be used in drawing of various ferrous and non-ferrous metal wires including copper, aluminum, stainless steel and many others.