KOMET KUB® Drillmax
High-performance drills for small diameters
Inch-size program, 5xD, 7-8xD
High-performance drill for small diameters – Inch-size program – Ø 0.120" - 0.750"

The new inch program for the KUB® Drillmax high-performance solid carbide drills completes our range of metric drills. The inch drills are available in diameters of 0.120" to 0.750" and length/diameter ratios of 5xD and 7-8xD*.

Optimized, special flutes are ideal for removing chips and for highly productive machining.

Details:
- Drill diameter (5xD): 0.120 – 0.750 inch
- Drill diameter (7-8xD): 0.120 – 0.500 inch
- Hole tolerance: IT9 (achievable)
- Drilling depth: 5xD, 7-8xD
- Shank shape: HA, HE and HB (DIN 6535)
- Coating: TiAlN
- Point angle: 140°
- Helix angle: 30°
- Internal coolant supply

BENEFITS for you:
- Inch program designed for the North American market
- Excellent hole tolerances
- Optimum chip removal thanks to special flutes
- Optimum machining result thanks to good coordination of carbide and coating with drill geometry
- Long tool edge life thanks to effective coating
- Double margins for optimum alignment and stability (7xD and longer)

*Please refer to the KomPass Bore Machining & Tools Plus Ideas catalogs for the complete metric program.
Note: with whistle notch clamping surface conforming to DIN 6535 HE / HB.
Other diameters on request.

Guideline values for solid drilling: page 6
## Guidelines for solid drilling

<table>
<thead>
<tr>
<th>Material group</th>
<th>Strength min lb/in²</th>
<th>Hardness HB</th>
<th>Material example ANSI / SAE</th>
<th>Cutting speed v, ft/min</th>
<th>Feed f in/rev</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>min</td>
<td>opt.</td>
<td>max</td>
<td>min</td>
<td>opt.</td>
</tr>
<tr>
<td>P</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤27500</td>
<td>1.0</td>
<td></td>
<td></td>
<td>12.0</td>
<td></td>
</tr>
<tr>
<td>72500-130000</td>
<td>2.0</td>
<td></td>
<td></td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>≤27500</td>
<td>2.1</td>
<td></td>
<td></td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>&gt;130000-147000</td>
<td>4.0</td>
<td></td>
<td></td>
<td>16.0</td>
<td></td>
</tr>
<tr>
<td>&gt;174000</td>
<td>4.1</td>
<td></td>
<td></td>
<td>17.0</td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>250</td>
<td></td>
<td></td>
<td>58000</td>
<td></td>
</tr>
<tr>
<td>≤87000</td>
<td>5.1</td>
<td></td>
<td></td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td>≤87000</td>
<td>6.0</td>
<td></td>
<td></td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td>≤87000</td>
<td>7.0</td>
<td></td>
<td></td>
<td>8.0</td>
<td></td>
</tr>
<tr>
<td>≤87000</td>
<td>8.0</td>
<td></td>
<td></td>
<td>9.1</td>
<td></td>
</tr>
<tr>
<td>≤87000</td>
<td>9.0</td>
<td></td>
<td></td>
<td>10.0</td>
<td></td>
</tr>
<tr>
<td>≤87000</td>
<td>10.0</td>
<td></td>
<td></td>
<td>12.0</td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>250</td>
<td></td>
<td></td>
<td>4346</td>
<td></td>
</tr>
<tr>
<td>≤87000</td>
<td>300</td>
<td></td>
<td></td>
<td>3000</td>
<td></td>
</tr>
</tbody>
</table>

### Notes
- **Material group**
  - P: Non-ferrous alloys
  - S: Stainless steels
  - M: Other steels
  - K: Other materials
  - N: Other materials
  - H: Hardened steels

### Cutting Speeds
- **Material examples**
  - A570.36, 1213, A573.81
  - 5120, 1055, 5115
  - 12L13
  - 4140, 1064
  - H13, H21
  - HSS

### Feed Rates
- **Special alloys**
  - Nimonic® 718, Nimonic® 80A

### Drillmax Specifications
- **KOMET KUB® Drillmax Ø 0.120 – 0.750 inch**
- **Guidelines for solid drilling**
- **5xD / 7-8xD**
- **Hardness HB**
- **Cutting Speed v, ft/min**
- **Feed f in/rev**
1. Starting on uneven surfaces (cast surfaces)
   • depending on the quality of the surface or when spot drilling, reduce the feed

2. Starting on angled surfaces
   • spot face surface before starting bore

3. Angled bore exit
   • reduce feed by 50 % in the exit area

4. Starting on curved surfaces
   • drilling on centre with reduced feed is possible
   • spot facing is required if the bore start point is outside the radius centre

5. Drilling through a cross bore
   • half feed rate at interruption

6. Starting on a groove or large centering bore
   • end-face the seam or center beforehand where applicable
   • possible under certain conditions, reduce feed where necessary

7. Drilling a chamfer
   • not possible

8. Starting on an edge
   • not possible (start point must be flat)

9. Starting on a welded seam
   • spot face surface before starting bore

10. Drilling through stacked plates
    • possible in principle
    • good workpiece clamping required
    • avoid large spaces between elements

11. Roughing
    • 5xD and 7-8xD possible