Now a USA Stocked Item

AQUA Micro Drills

Features

- Made from Ultra micro grain carbide with Nachi’s patented Aqua Coating (Composite Multi layered TiALN + original lubrication film)
- Self-lubricating properties of Aqua Coating offers superior heat & wear resistance
- End mill type shank for highly precise and accurate drilling
- Diameter Range (0.2~1.99mm)

Applications

- Suitable for Structural Steels, Carbon Steels, Pre-hardened Steels, Mold Steels, Cast Irons, Hardened Steels (under 55 HRC), Stainless Steels & Hi-temp alloys.

Performance

- Drilling Condition:
  - Drill Diameter: 0.5mm
  - RPM: 9600
  - IPR / IPM : .0002 / 1.9
  - Peck:.005”
  - Drill Depth: .080”

![Graph showing performance comparison]
This drill is suitable for stable drilling in small diameter on many kind of materials from raw material to hardened material.

**AQUA Micro Drills**  List No. 9544

**Drilling in Wet Condition**

<table>
<thead>
<tr>
<th>Workpiece Material</th>
<th>Carbon Steels Cast Irons</th>
<th>Alloy Steels</th>
<th>Die Steels Hardened Steels (40-50HRC)</th>
<th>Hardened Steels (50-55HRC)</th>
<th>Ductile Cast Irons</th>
<th>Stainless Steels</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Drill Diameter</strong></td>
<td><strong>Metric mm</strong></td>
<td><strong>Decimal RPM</strong></td>
<td><strong>Feed (IPR)</strong></td>
<td><strong>Step Feed(mm)</strong></td>
<td><strong>RPM</strong></td>
<td><strong>Feed (IPR)</strong></td>
</tr>
<tr>
<td>D: Drill Diameter</td>
<td>0.2</td>
<td>0.0079</td>
<td>31,800</td>
<td>0.0001</td>
<td>26.500</td>
<td>0.0001</td>
</tr>
<tr>
<td></td>
<td>0.3</td>
<td>0.0177</td>
<td>26,900</td>
<td>0.0001</td>
<td>21.200</td>
<td>0.0001</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>0.0332</td>
<td>26,900</td>
<td>0.0001</td>
<td>19.800</td>
<td>0.0001</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>0.0656</td>
<td>23,900</td>
<td>0.0006</td>
<td>5.900</td>
<td>0.0006</td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td>0.1281</td>
<td>23,900</td>
<td>0.0006</td>
<td>5.900</td>
<td>0.0006</td>
</tr>
</tbody>
</table>

1) These table values are for drilling with water soluble cutting fluid.
2) Drill diameters under 1mm must be used in wet condition.
3) Adjust drilling condition when unusual vibration or different sound occurs.
4) When using low speed machines, use the maximum speed and adjust the feed rate.
5) Step feed or pecking required when using Aqua Micro Drills.

**Web Site URL:** http://www.nachiamerica.com

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