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|--|--|---|--------------------------------------|---|----------------------------------|---------------------------|--|
| E2 E2 HIGH PRECISION TOOL MATERIAL | $\lambda=35^{\circ}\text{--}38^{\circ}$ $\gamma=10^{\circ}$ CUTTING ANGLES 735-38° 710° | angle vif ACUTE ANGLE PRECISION TOOL | DUAL DIRECTION HELICAL DRILL BIT | h_1 2.2xD 2.2XD DEPTH FOR TOOLS | STANDARD TOOL WEAR INDICATOR | ADJUSTABLE ANGLE ICON | λ_2 λ_1 VARIABLE HELIX DRILL BIT |
|--|--|---|--------------------------------------|---|----------------------------------|---------------------------|--|

MATERIAL COMPATIBILITY

●●● Excellent (3/3) ●● Good (2/3) ●○ Possible (1/3) ○○○ Not recommended

| MATERIAL | SPECIFICATION | GRP | 21112D-4-6 |
|--|------------------------------|-----|------------|
| Alloyed and non-alloyed steels <small>Non-alloyed steels</small> | Rm < 450 N/mm ² | 1a | ○○○ |
| | Rm 450–700 N/mm ² | 1b | ○○○ |
| | Rm 700–900 N/mm ² | 1c | ○○○ |
| | Rm > 1200 N/mm ² | 1d | ○○○ |
| Stainless steels <small>Stainless steels</small> | Rm < 650 N/mm ² | 2a | ○○○ |
| | Rm 650–950 N/mm ² | 2b | ○○○ |
| | Rm > 950 N/mm ² | 2c | ○○○ |
| Hardened steels <small>Hardened steels</small> | 44–56 HRC | 3a | ○○○ |
| | 57–67 HRC | 3b | ○○○ |
| Exotic materials <small>Special alloys</small> | < 32 HRC | 4a | ○○○ |
| | > 32 HRC | 4b | ○○○ |
| Graphite <small>Industrial graphite</small> | | 5 | ●●● |
| Cast iron <small>Grey / nodular cast iron</small> | < 32 HRC | 6a | ○○○ |
| | > 32 HRC | 6b | ○○○ |
| Titanium <small>Titanium alloys</small> | Rm < 600 N/mm ² | 7a | ○○○ |
| | 600 < Rm N/mm ² | 7b | ○○○ |
| Nickel alloys <small>Inconel, Hastelloy</small> | Rm < 1000 N/mm ² | 8a | ○○○ |
| | Rm > 1000 N/mm ² | 8b | ○○○ |
| Copper, brass, bronze <small>Copper-based</small> | Rm < 850 N/mm ² | 9a | ●●○ |
| | Rm > 850 N/mm ² | 9b | ●●○ |
| Aluminum <small>Aluminum alloys</small> | Si < 0.5% | 10a | ●○ |
| | 0.5% < Si < 5% | 10b | ●●○ |
| | Si > 5% | 10c | ●●● |
| Synthetic materials <small>Engineering plastics</small> | Thermoplastic | 11a | ○○○ |
| | Thermoset | 11b | ○○○ |
| Composite materials <small>Reinforced composites</small> | Glass fiber / GFK | 12a | ●●● |
| | Carbon fiber / KFK | 12b | ●●● |
| Precious metals <small>Gold, platinum, silver</small> | Gold | 13a | ●○ |
| | Platinum | 13b | ●●● |

TECHNICAL DRAWING



DIMENSIONS

| NOMINAL DIMENSIONS | |
|--------------------|-------|
| D (0 / -0.01) | 4 mm |
| d (h5) | 6 mm |
| L | 57 mm |
| l1 | 11 mm |
| l3 | – |
| d3 | – |
| R | – |
| e | – |
| Z | 4 |
| Chamfer K | – |
| w° collision | 4° |

