WP-Z2-Gr.10-TiN

2-tooth carbide indexable inserts for internal threads

Comparison of Materials

EMUGE FRANKEN

applications – material		cutting speed vc in m/min	fz in mm
P1.1 Construction steels, Free-cutting steels, etc.	<= 600 N/mm²	250 - 500	0,15 - 0,25
P2.1 Construction steels, Cementation steels, Steel castings, etc.	<= 800 N/mm²	250 - 500	0,15 - 0,25
P3.1 Cementation steels, Heat-treatable steels, Cold work steels, etc.	<= 1000 N/mm²	150 - 250	0,10 - 0,15
P4.1 Heat-treatable steels, Cold work steels, Nitriding steels, etc.	<= 1200 N/mm²	150 - 250	0,10 - 0,15
P5.1 High-alloyed steels, Cold work steels, Hot work steels, etc.	<= 1400 N/mm²	150 - 250	0,10 - 0,15
M1.1 Ferritic, martensitic	<= 950 N/mm²	80 - 150	0,10 - 0,15
M2.1 Austenitic	<= 950 N/mm²	80 - 150	0,10 - 0,15
M3.1 Austenitic-ferritic (Duplex)	<= 1100 N/mm²	60 - 120	0,08 - 0,12
M4.1 Austenitic-ferritic heat-resistant (Super Duplex)	<= 1250 N/mm²	60 - 120	0,08 - 0,12
K1.1 Cast iron with lamellar graphite (GJL)	100-250 N/mm²	180 - 400	0,15 - 0,25
K1.2 Cast iron with lamellar graphite (GJL)	250-450 N/mm²	180 - 400	0,15 - 0,25
K2.1 Cast iron with nodular graphite (GJS)	350-500 N/mm²	180 - 400	0,15 - 0,25
K2.2 Cast iron with nodular graphite (GJS)	500-900 N/mm²	180 - 400	0,15 - 0,25
K3.1 Cast iron with vermicular graphite (GJV)	300-400 N/mm²	150 - 250	0,10 - 0,15
K3.2 Cast iron with vermicular graphite (GJV)	400-500 N/mm²	150 - 250	0,10 - 0,15
K4.1 Malleable cast iron (GTMW, GTMB)	250-500 N/mm²	180 - 400	0,15 - 0,25

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Comparison of Materials

EMUGE FRANKEN

applications – material		cutting speed vc in m/min	fz in mm
N1.1 Aluminium wrought alloys	<= 200 N/mm²	400 - 500	0,15 - 0,30
N1.2 Aluminium wrought alloys	<= 350 N/mm²	400 - 500	0,15 - 0,30
N1.3 Aluminium wrought alloys	<= 550 N/mm²	400 - 500	0,15 - 0,30
N1.4 Aluminium cast alloys	Si <= 7%	400 - 500	0,15 - 0,30
N1.5 Aluminium cast alloys	7% < Si <= 12%	400 - 500	0,15 - 0,30
N1.6 Aluminium cast alloys	12% < Si <= 17%	150 - 250	0,15 - 0,30
N2.1 Pure copper, low-alloyed copper	<= 400 N/mm²	250 - 500	0,15 - 0,25
N2.2 Copper-zinc alloys (brass, long-chipping)	<= 550 N/mm²	250 - 500	0,15 - 0,25
N2.3 Copper-zinc alloys (brass, short-chipping)	<= 550 N/mm²	250 - 500	0,15 - 0,25
N2.4 Copper-aluminium alloys (alu bronze, long-chipping)	<= 800 N/mm²	150 - 250	0,10 - 0,25
N2.5 Copper-tin alloys (tin bronze, long-chipping)	<= 700 N/mm²	150 - 250	0,10 - 0,25
N2.6 Copper-tin alloys (tin bronze, short-chipping)	<= 400 N/mm²	150 - 250	0,10 - 0,25
N2.7 Special copper alloys	<= 600 N/mm²	80 - 150	0,10 - 0,15
N2.8 Special copper alloys	<= 1400 N/mm²	80 - 150	0,10 - 0,15
N3.1 Magnesium wrought alloys	<= 500 N/mm²	400 - 500	0,15 - 0,30
N3.2 Magnesium cast alloys	<= 500 N/mm²	400 - 500	0,15 - 0,30
N4.1 Duroplastics (short-chipping)		180 - 400	0,15 - 0,25
N4.2 Thermoplastics (long-chipping)		180 - 400	0,15 - 0,25
N4.3 Fibre-reinforced synthetics (fibre content <= 30%)		80 - 150	0,15 - 0,25
N4.4 Fibre-reinforced synthetics (fibre content > 30%)		80 - 150	0,15 - 0,25
S1.1 Pure titanium	<= 450 N/mm²	60 - 120	0,08 - 0,12
S1.2 Titanium alloys	<= 900 N/mm²	60 - 120	0,08 - 0,12
S1.3 Titanium alloys	<= 1250 N/mm²	60 - 120	0,08 - 0,12