

NTK Tooling Selection Machining Aluminum Components







Features

- More teeth = More productivity
- Light weight aluminum body
- Diameters range from 50mm up to 125mm
- Adjustable edge height
- Produces outstanding surface finishes
- Polycrystalline diamond PD1 grade inserts double chamfer style available for less tool pressure
- Internal coolant supply
- Inserts can be reground up to 4 times marked with a star to indicate how many times reground
- Guaranteed setup service is available



	Work Material	Grade	Dry	Wet	Cutting Speed (SFM)										Feed (IPT)						Depth of Cut	
					1000) 300	00 5	5000	7000	9000	11000	13000	15000	17000	19000	.002	.004	.006	.008	.010	.012	Depth of Cut (inch)
	N																					
	Aluminum Alloy (Si≦13)	PD1	0	•																		250
	Aluminum Alloy (Si≧13)	PD1	0	•																		250





Features

- Diameters range from φ.787" φ3.937"
- Excellent rigidity with steel cutter body achieves exceptional reliability
- Selection of fixed pocket cutters, so no presetting is required
- Adjustable style insert pockets to set edge height
- Polycrystalline diamond- PD1 grade inserts with edge radius or chamfer
- PVD Coated Carbide TM1 grade inserts with chipbreaker
- Wiper on all inserts for superior surface finish

Work	Grade	Dry	Wet		Cutting Speed (SFM)											Feed (IPT)						
Material				1000	300	0 5000	7000	9000	11000	13000	15000	17000	19000	.002	.004	.006	.008	.010	.012	(inch)		
N Aluminum Alloy	PD1	0																		~.200		
(Si≦13)	TM1	0	•																	~.200		
Aluminum Alloy	PD1	0																		~.200		
(Si≧13)	TM1	0	•																	~.200		

Options for our Swiss Tooling

PD1

PCD (Polycrystalline Diamond)

Features

- Sharp cutting edge
- Enables high precision and stable machining by controlling the potential for built-up edge
- Faster cutting speed than carbide

Thin: TiN-TiCN-TiAIN coated carbide

- Recommended for cutting aluminum and copper alloys thanks to its excellent adhesion resistance
- Incorporates a very sharp cutting edge

TM4 / TM1



Features

- Excellent dimensional stability and tool life thanks to triple titanium layers with superb adherence to insert substrate
- Balance of wear resistance and adhesion resistance
 Insert edge sharpness



Features

PCD (Polycrystalline Diamond)



- Super micro grain PCD maintains sharp cutting edges with increased chipping resistance
- Good chip control due to the high rake angle on the insert
- 3D Chipbreaker is now available

VM1



Thin: TiCN coated carbide

Features

- Sharp cutting edge
- High precision machining of small diameter parts even in high-speed range
- Especially for machining free cutting steels (SUM materials) - like 7075-T6 Aluminum alloys
- For high-precision machining with longer tool life even in the high-speed machining range
- Excellent wear resistance

KM1

Uncoated carbide

Features

- Very sharp cutting edges with uncoated Micro-grain carbide
- Excellent adhesion resistance because of mirror-finish
- A wide range of cutting tools in various types available for Swiss-type lathes
- Good for non-ferrous materials like PEEK, Brass, Copper, and Aluminum alloys like 6061 and 5056
- TM4, VM1, and KM1 insert geometries available for: Front turning Back turning Cut-Off Grooving Threading ID Boring Shaper Duo (machining square, hexagon, hexalobular sockets) Indexable End Mills



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