TaeguTec Milling Line

September 2021

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1/5

NPN

New Product News

new

Speed to Feed

MAXI RUSH

INDEXABLE SOLID HEADS

The Indexable MAXI-RUSH Solid Carbide Heads for 5-axis Profiling

ADVANCE MACHINING

TaeguTec Industry 4.0

INDUSTRY 4.0

TaeguTec

Member IMC Group

KEY POINT

TaeguTec has added new solid carbide heads for 5-axis profiling to the MAXI-RUSH line.

Profiling with solid carbide ball type end mills on 5-axis machines has disadvantages: excessive machining time and poor surface finish. To solve these problems, TaeguTec has added oval and lens shape solid carbide heads that are 3D profiling capable.
The new heads are designed for high-pitch, semi-finishing and finishing profiling parts used in the aerospace, power generation, medical and mold and die industries.
Even in high pitch conditions, the same surface finish can be obtained compared to solid carbide ball type end mills, therefore the new heads are capable of high productivity machining.

Features

- Reduced machining time, increased productivity and similar surface finish even in higher pitch conditions compared to solid carbide ball type end mills
- In the same pitch and machining time conditions, solid carbide heads provide better surface finish over solid carbide ball type end mills
- Wider cutting edge contact for improved machining stability and longer tool life
- Ideal for machining difficult-to-cut materials such as titanium alloy, Inconel and stainless steel

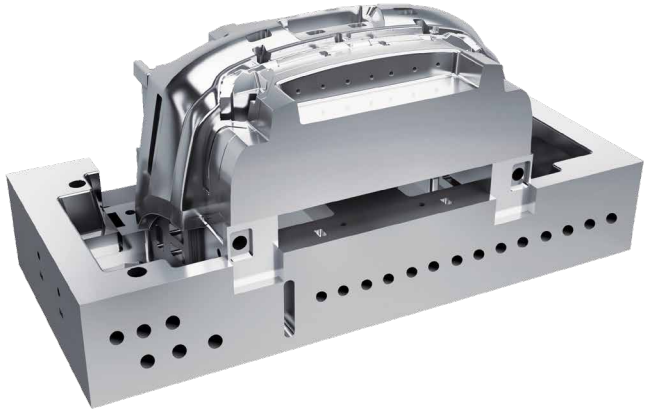
Applicable industries

Aerospace

Power generation

Medical

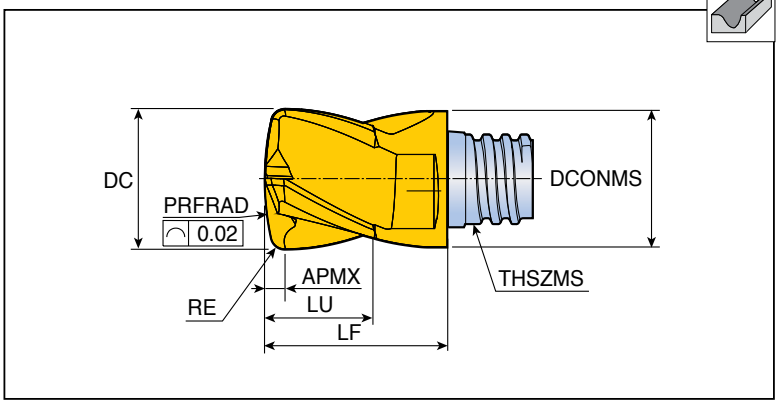
Mold & Die



MXCSL

MAXIRUSH INDEXABLE SOLID HEADS

4 flute, lens shape for 5-axis profiling



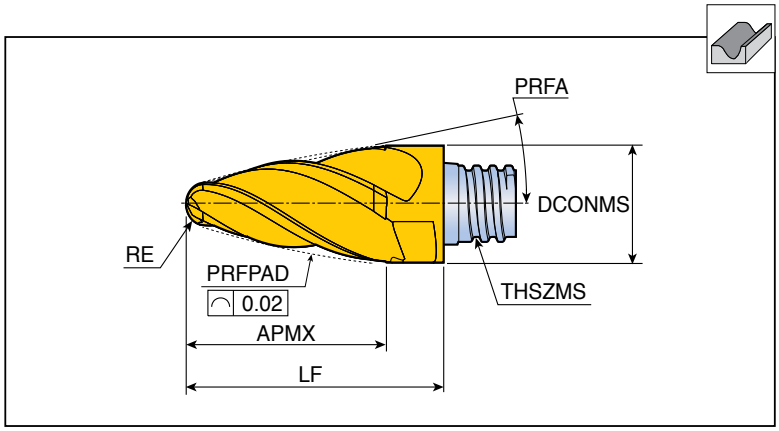
Designation		Dimension (mm)									Grade
		DC	PRFRAD	RE	APMX	LU	THSZMS	NOF	DCONMS	LF	TT5523
MXCSL	4080R016-S05	8	16	0.5	0.9	5.5	S05	4	8	10	●
	4100R020-S06	10	20	1	1.4	7.5	S06	4	10	13	●
	4120R024-S08	12	24	1	1.6	9	S08	4	12	16.5	●
	4160R032-S10	16	32	1	1.8	12	S10	4	16	20.5	●

●: Standard items

MXCSO

MAXIRUSH INDEXABLE SOLID HEADS

4 flute, oval shape for 5-axis profiling



Designation		Dimension (mm)								Grade
		PRFRAD	RE	APMX	PRFA	THSZMS	NOF	DCONMS	LF	TT5523
MXCSO	4080R080-S05	80	1.5	14.2	12	S05	4	8	18	●
	4100R085-S06	85	2	16.5	12	S06	4	10	22	●
	4120R075-S08	75	2	21.3	12	S08	4	12	27	●
	4160R075-S10	75	3	27	12	S10	4	16	33.4	●

●: Standard items

Recommended Cutting Conditions

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.	Vc m/min	Feed (mm/tooth) vs. head diameter			
								Ø 8	Ø 10	Ø 12	Ø 16
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	240-260	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
		>=0.25%C	Annealed	650	190	2	180-220	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
		<0.55%C	Quenched and tempered	850	250	3	150-180	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
		>=0.55%C	Annealed	750	220	4	150-180	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
			Quenched and tempered	1000	300	5	150-180	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	600	200	6	150-180	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
			Quenched and tempered	930	275	7	120-150	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
				1000	300	8	120-150	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
				1200	350	9	110-150	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	110-150	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
			Quenched and tempered	1100	325	11	110-150	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	100-170	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
			Martensitic	820	240	13	100-170	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
			Austenitic	600	180	14	80-110	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
K	Gray cast iron (GG)		Ferritic		160	15	80-260	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
			Pearlitic		250	16	120-240	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
	Cast iron nodular (GGG)		Ferritic		180	17	150-270	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
			Pearlitic		260	18					
	Malleable cast iron		Ferritic		130	19	150-250	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
			Pearlitic		230	20	110-220	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
N	Aluminum - wrought alloy		Not cureable		60	21	600-800	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
			Cured		100	22	600-800	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	600-800	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
			Cured		90	24	600-800	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
		>12% Si	High temp.		130	25					
	Copper alloys	>1% Pb	Free cutting		110	26					
			Brass		90	27					
			Electrolitic copper		100	28					
	Non-metallic		Duroplastics, fiber plastics			29					
			Hard rubber			30					
S	High temp. alloys	Fe based	Annealed		200	31	10-30	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
			Cured		280	32	10-30	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
		Ni or Co based	Annealed		250	33	10-30	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
			Cured		350	34	30-60	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
			Cast		320	35	30-60	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
	Titanium, Ti alloys			Rm 400		36	30-50	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
			Alpha+beta alloys cured	Rm 1050		37	30-40	0.02-0.08	0.03-0.09	0.03-0.1	0.04-0.12
H	Hardened steel		Hardened		55HRC	38					
			Hardened		60HRC	39					
	Chilled cast iron		Cast		400	40					
	Cast iron nodular		Hardened		55HRC	41					

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel