



MILLING - INDEXABLE

Cutter Series (Depth of Cut)

TG1V (.039)
1TG1V (.039)

Insert Series

UNLV (6 mm)

Diameter Range

0.625-2.00"

Insert Grades

IN2504
IN2505
IN2530
IN6537
IN2036
IN7036

Applications

Aerospace
Power Generation
Defense
Die & Mold

Materials

- Steel
- Stainless Steel
- Cast Iron/Iron
- High-Temp Alloys
- Hardened Steel

DIFEEDWIN V™



Next-Gen High Feed Performance, with New V-Bottom Clamping

- » V-bottom clamping for super secure performance.
- » 4 cutting edges per insert offer great economy.
- » Higher cutter densities deliver great productivity.



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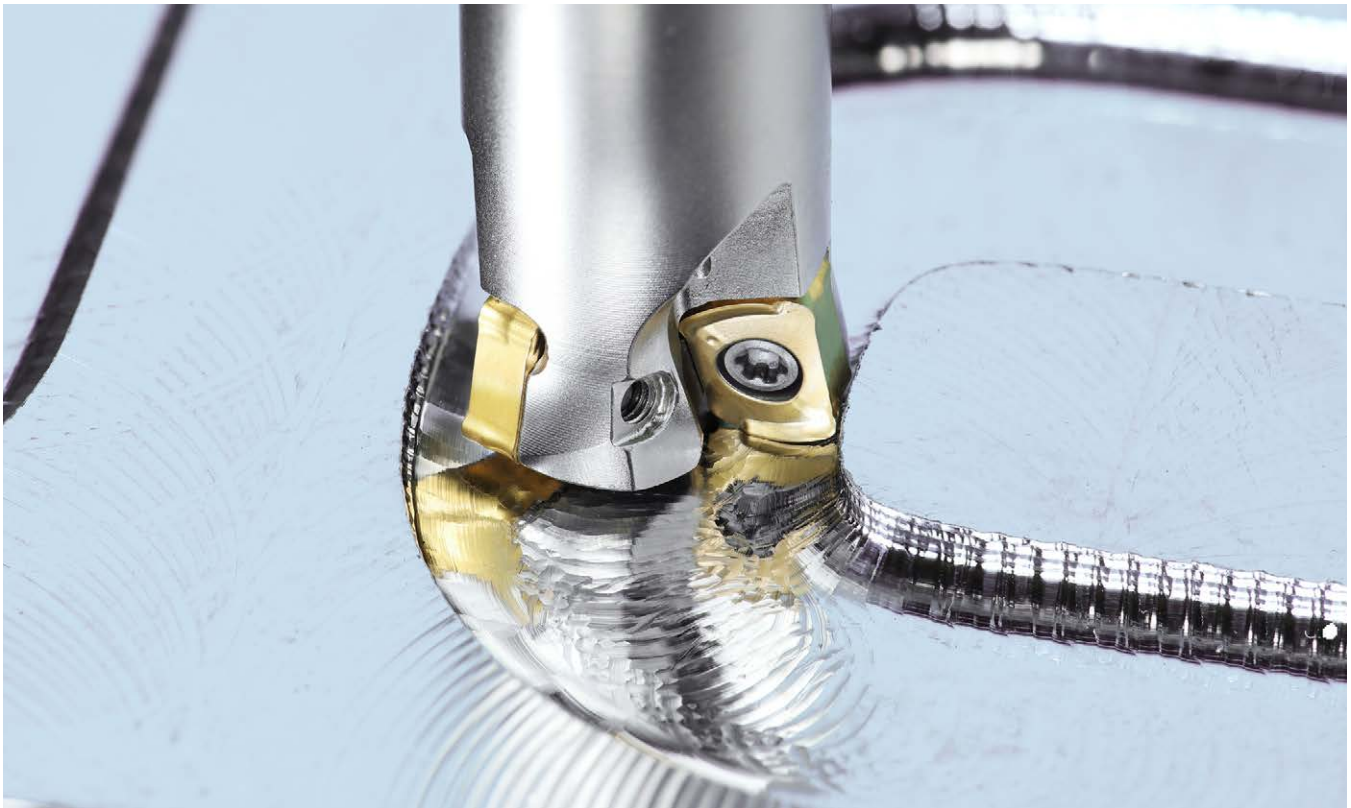
ingersoll-imc.com   

DiFeedWinV's cutters are the next-generation high feed milling solution.

Building on the success of the DIPOSFEED, UNLU insert series, Ingersoll has launched a new powerful and premium high feed milling solution, **DiFeedWinV**. This new innovative high feed line boasts a new **UNLV** insert design that is superior to the former version.

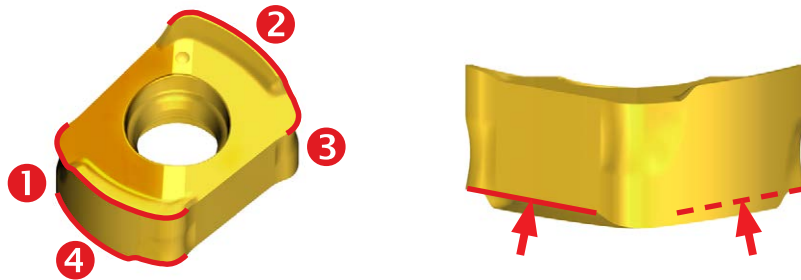
The new **UNLV** insert series utilizes special V-shaped contact seating faces to securely immobilize the insert during ramping and plunging operations. This seating design contributes to steady machining performance and increased productivity. This new clamping system along with new profile and cutting-edge enhancements not only allows for a higher ramping angle but also enables for more aggressive machining, boosts productivity, and provides an increased range of machining entry options.

The 6 mm I.C. size inserts are available in an M, MM and ML type chip former. Additionally, supportive cutter bodies are available in end mill, Top-On, Chipsurfer and face mill styles.

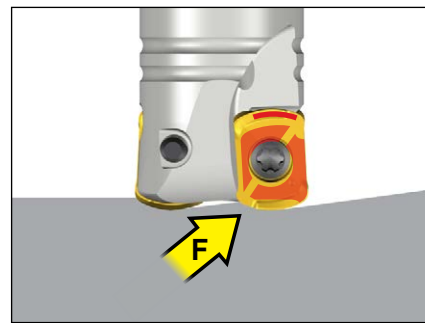
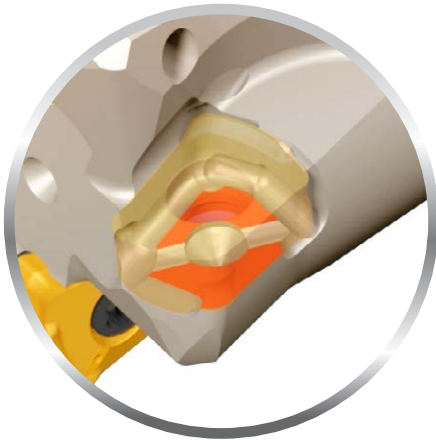


Features

- Double-sided 4-corner insert
- Stronger clamping due to the insert's top/bottom face V-shaped design



- Improved tool life even in ramping and step-down machining operations

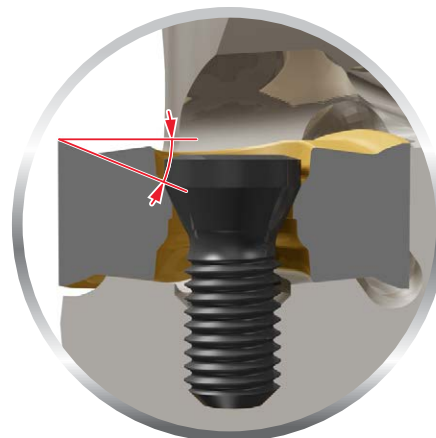


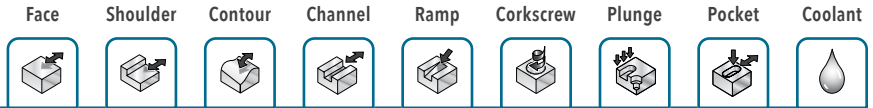
Ramping

- Insert design includes a higher ramp and rake angles for improved productivity



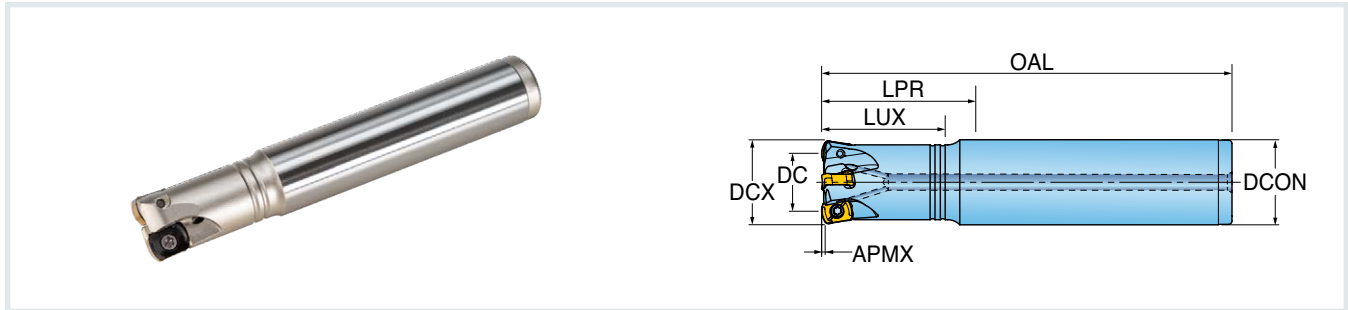
UNLV



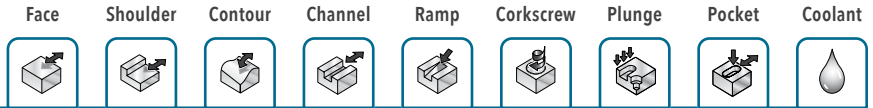


Series 1TG1V

END MILL - CYLINDRICAL

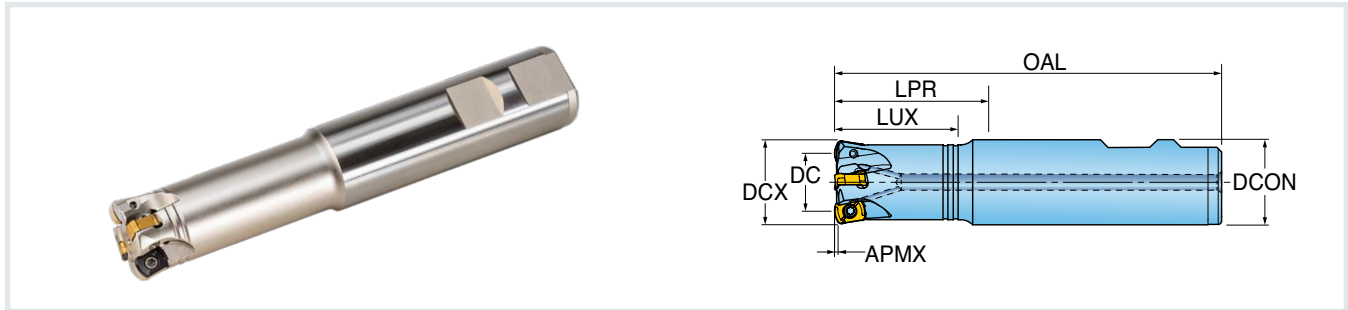


Part Number	DCX Cutting Dia. Max.	DC Cutting Dia.	APMX Depth of Cut Max.	LUX Usable Length Max.	LPR Protruding Length	OAL Overall Length	ZEFF Eff. Teeth	DCON Shank Dia.	CSP Coolant	RMPX Ramp Angle Max.
INCH										
1TG1V-06014S6R01	0.625	0.354	0.028	1.26	1.40	4.00	2	0.625"	Yes	5.1
1TG1V-06017S6R01	0.625	0.354	0.028	1.60	1.71	6.00	2	0.625"	Yes	5.1
1TG1V-06014ULR01	0.625	0.354	0.028	1.26	1.40	4.00	2	15.50 mm	Yes	5.1
1TG1V-07017UMR01	0.750	0.436	0.039	1.50	1.66	5.00	3	18.50 mm	Yes	2.7
1TG1V-07017UMR02	0.750	0.436	0.039	1.50	1.66	6.25	3	18.50 mm	Yes	2.7
1TG1V-07022S7R01	0.750	0.436	0.039	2.00	2.17	5.00	3	0.750"	Yes	2.7
1TG1V-07032S7R01	0.750	0.436	0.039	3.00	3.15	6.25	3	0.750"	Yes	2.7
1TG1V-08019UNR01	0.875	0.561	0.039	1.75	1.93	7.75	3	21.50 mm	Yes	2.4
1TG1V-10022S1R01	1.000	0.684	0.039	2.00	2.17	10.00	4	1.000"	Yes	2.4
1TG1V-10022T5R01	1.000	0.684	0.039	2.00	2.16	7.00	4	25.00 mm	Yes	2.4
1TG1V-10032S1R01	1.000	0.684	0.039	2.00	3.17	7.00	4	1.000"	Yes	2.4

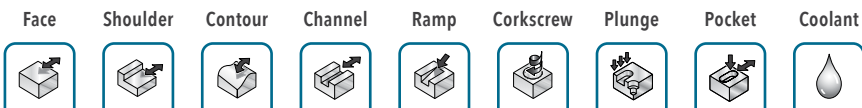


Series 1TG1V

END MILL - WELDON

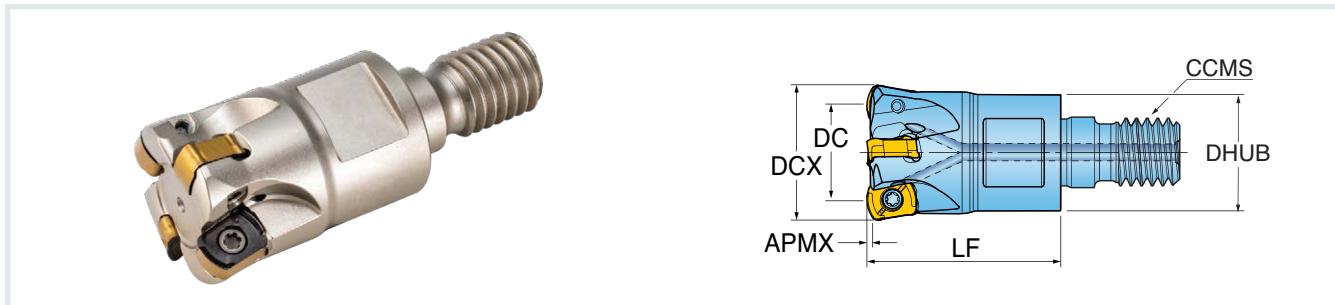


Part Number	DCX Cutting Dia. Max.	DC Cutting Dia.	APMX Depth of Cut Max.	LUX Usable Length Max.	LPR Protruding Length	OAL Overall Length	ZEFF Eff. Teeth	DCON Shank Dia.	CSP Coolant	RMPX Ramp Angle Max.
INCH										
1TG1V-1203081R01	1.250	0.93	0.039	2.77	2.91	6.00	5	1.2500	Yes	1.45
1TG1V-1205081R01	1.250	0.93	0.039	4.75	4.92	8.00	5	1.2500	Yes	1.45
1TG1V-1501081R01	1.500	1.18	0.039	-	1.00	5.00	6	1.2500	Yes	1.15
1TG1V-1503081R01	1.500	1.18	0.039	-	3.00	6.00	6	1.2500	Yes	1.15

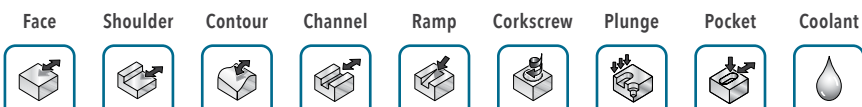


Series 1TG1V

END MILL - TOPON

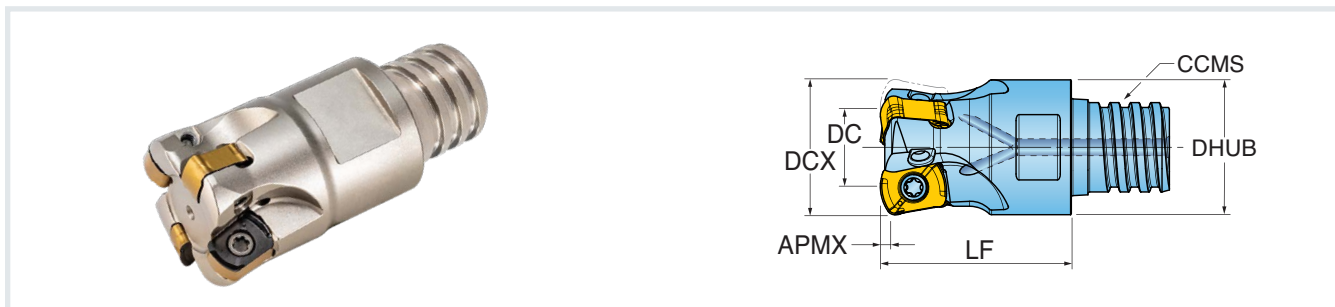


Part Number	DCX Cutting Dia. Max.	DC Cutting Dia.	APMX Depth of Cut Max.	LF Functional Length	ZEFF Eff. Teeth	DHUB Hub Dia.	CCMS Connection Code Machine Side	CSP Coolant	RMPX Ramp Angle Max.
INCH									
1TG1V-06010X5R01	0.625	0.354	0.028	0.98	2	0.51	TopOn M08	Yes	5.1
1TG1V-07011X6R01	0.750	0.436	0.039	1.18	3	0.71	TopOn M10	Yes	2.7
1TG1V-10013X7R01	1.000	0.684	0.039	1.37	4	0.82	TopOn M12	Yes	2.4
1TG1V-12015X8R01	1.250	0.933	0.039	1.57	5	1.14	TopOn M16	Yes	1.45
1TG1V-15015X8R01	1.500	1.183	0.039	1.57	6	1.14	TopOn M16	Yes	1.15
1TG1V-15017X9R01	1.500	1.183	0.039	1.75	6	1.42	TopOn M20	Yes	1.15

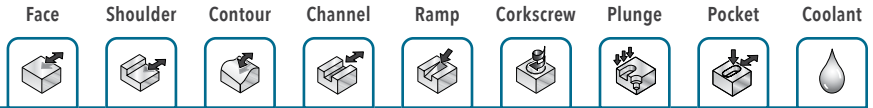


Series 1TG1F

END MILL - CHIPSURFER

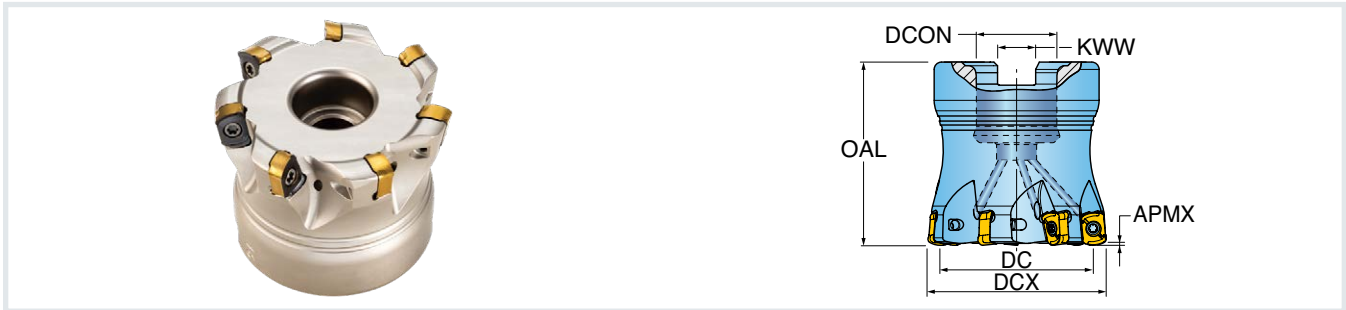


Part Number	DCX Cutting Dia. Max.	DC Cutting Dia.	APMX Depth of Cut Max.	LF Functional Length	ZEFF Eff. Teeth	DHUB Hub Dia.	CCMS Connection Code Machine Side	CSP Coolant	RMPX Ramp Angle Max.
INCH									
1TG1F-06008TRR01	0.625	0.354	0.028	0.83	2	0.60	Chip Surfer T10	Yes	5.1
1TG1F-07010TSR01	0.750	0.436	0.039	1.02	3	0.72	Chip Surfer T12	Yes	2.7
1TG1F-10012TUR01	1.000	0.683	0.039	1.26	4	0.95	Chip Surfer T15	Yes	2.4



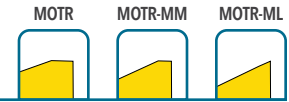
Series TG1V

FACE MILL

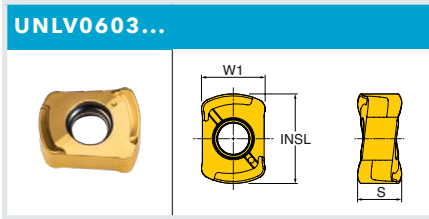


Part Number	DCX Cutting Dia. Max.	DC Cutting Dia.	APMX Depth of Cut Max.	OAL Overall Length	ZEFF Eff. Teeth	DCON Bore Dia.	KWW Keyway	CSP Coolant	RMPX Ramp Angle Max.
INCH									
TG1V-20R01	2.000	1.683	0.039	1.969	7	0.75	0.312	Yes	0.8
TG1V-25R01	2.500	2.183	0.039	1.969	8	0.75	0.312	Yes	0.6

Insert











UNLV0603...



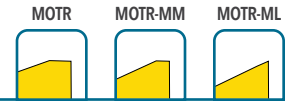
Part Number	Application	INSL Insert Length	W1 Insert Width	S Thickness Overall	NOI Number of Indexes	IH Insert Hand	REEQ Program Radius Equivalent	Grade					
								IN2504	IN2505	IN2530	IN6537	IN2036	IN7036
UNLV0603MOTR	Multi-Purpose	0.354	0.252	0.174	4	Right	0.060	•	•	•	•		
UNLV0603MOTR-MM	Multi-Purpose Keen Edge	0.354	0.252	0.174	4	Right	0.060		•	•		•	•
UNLV0603MOTR-ML	High Positive Keen Edge	0.354	0.252	0.174	4	Right	0.060		•	•		•	•

Detail	Insert Number	Description
	UNLV0603MOTR	Multi-Purpose Extra strong positive rake face geometry for machining steel and various high temp alloys
	UNLV0603MOTR-MM	Multi-Purpose - Keen Edge Strong, positive rake face geometry well-suited to machining steels and high temp alloys. The keen edge promotes lower cutting forces and free shearing action.
	UNLV0603MOTR-ML	High-Positive - Keen Edge Sharp positive rake face geometry and shearing action is well-suited to machining high temp alloys

Hardware

	Optional							
	 Screw	 Driver	 Retention Bolt	 Coolant Retention Bolt	 Torque Driver Handle	 Preset Torque Bit	 Torque Driver Bit	 Wrench
TG1V-20R01	SM25-064-01	DS-T08W	SD-06-48	SD-06-A6	DS-A00-.25T	DT-11.25	DS-0021	-
TG1V-25R01	SM25-064-01	DS-T08W	SD-06-48	SD-06-A6	DS-A00-.25T	DT-11.25	DS-0021	-
1TG1V-06014S6R01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	-
1TG1V-06017S6R01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	-
1TG1V-06014ULR01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	-
1TG1V-07017UMR01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	-
1TG1V-07017UMR02	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	-
1TG1V-07022S7R01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	-
1TG1V-07032S7R01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	-
1TG1V-08019UNR01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	-
1TG1V-10022S1R01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	-
1TG1V-10022T5R01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	-
1TG1V-10032S1R01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	-
1TG1V-1203081R01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	-
1TG1V-1205081R01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	-
1TG1V1501081R01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	-
1TG1V-1503081R01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	-
1TG1V-06010X5R01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	610 mm
1TG1V-07011X6R01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	615 mm
1TG1V-10013X7R01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	617 mm
1TG1V-12015X8R01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	622 mm
1TG1V-15015X8R01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	622 mm
1TG1V-15017X9R01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	630 mm
1TG1F-06008TRR01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	WS-0044
1TG1F-07010TSR01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	WS-0059
1TG1F-10012TUR01	SM25-064-01	DS-T08W	-	-	DS-A00-.25T	DT-11.25	DS-0021	WS-0061

6 mm • Operating Guidelines

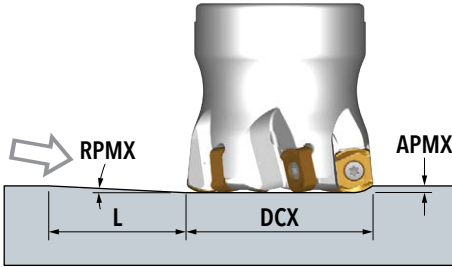


ISO	Materials			Vc Cutting Speed SFM	fz* Feed/ Tooth (inch)	Harder «----» Tougher						Coolant	Edge Prep				
	Material Group #VDI 3323	Type	Examples			IN2504	IN2505	IN2530	IN6537	IN2036	IN7036		MOTR	MOTR-MM	MOTR-ML		
P	1-5	Non-Alloy Steel	1018, A36, 1045, A572, 1070	400-1000	.015-.090		1	2	3			No	1	2			
	6-9	Low-Alloy Steel	4140, 4340, P20, 8620, 300M	300-900													
	10-11	High-Alloy Steel	H13, A2, D2, M2, T1	300-650		.010-.050	2	1	3								
M	12-13	Stainless Steel (ferritic & martensitic)	410, 416, 440	300-650	.010-.030			3		1	2	Yes		2	1		
	14	Stainless Steel (austenitic)	303, 304, 316, 15-5, 17-4	300-550													
K	15-16	Gray Cast Iron	CLS. 20, 30, 45	500-750	.020-.040	2	1	3				No	3	2	1		
	17-18	Nodular Cast Iron	60-40-18, 100-70-03														
S	31-35	High-Temp Alloys	Inconel, Hastelloy, Nimonic, Monel	65-120	.005-.030			3		1	2	Yes		2	1		
	36-37	Titanium Alloys	6Al-4V, 5Al-5Mo-5V-3Cr	100-250													
H	38 - 39	Hardened Steel >48	A2, O1, D2	160-350	.010-025	1	2					No	1	2			

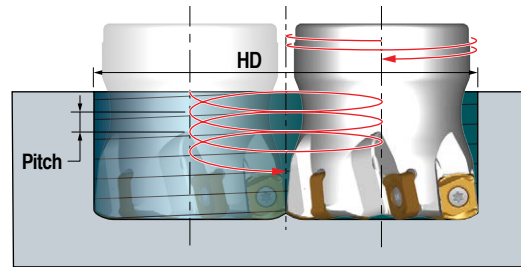
Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases. Additionally, DOC and WOC may need to be revised to optimize the tools performance.

Recommended Ramping Angle

• Straight Ramping



• Helical Milling



DCX Cutting Dia. Max.	Straight Ramp Down			Helical Ramp Down		
	RPMX Ramp Angle Max.	APMX Depth of Cut Max.	L Min. Length	HD Min. Dia.	HD Max. Dia.	Max. Pitch / Rev.
0.625	5.100	0.028	0.31	1.018	1.250	.027
0.750	2.700	0.039	0.84	1.224	1.500	.039
0.875	2.400	0.039	0.94	1.474	1.750	.039
1.000	2.400	0.039	0.94	1.724	2.000	.039
1.250	1.450	0.039	1.56	2.224	2.500	.039
1.500	1.150	0.039	1.96	2.724	3.000	.039
2.000	0.800	0.039	2.82	3.724	4.000	.039



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