SFEEDUP HIGH SPEED & FEED

INDUSTRY 4.0 PRODUCT ANNOUNCEMENT •UPDATE• 2023

MAXSFEED™

MILLING PRODUCTS

Cutter Series:
1EJ5A End Mills
1EJ5C End Mills
EJ5C / EJ6C Face Mills
EJ5D / EJ6D Face Mills

Diameters:
.500"-6.000"

Insert Series:
CGM101R / CGX101R
CGM313R / CGX313R
CGM324R / CGX324R

Grades:
IN2515/IN4015
IN2505/IN4005
IN2530/IN4030
IN2535/IN4035

Materials:
Iron, Steel, Stainless Steel, Super Alloys, Aluminum

Innovative Combinations - Unprecedented Versatility

Three comprehensive series of tangential endmills and facemills feature versatility, productivity and economy.

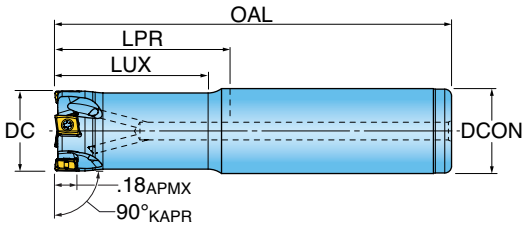
FEATURES & BENEFITS:

- Insert sizes of 5, 11, and 13 mm offer new combinations of diameters, densities and lengths-of-cut.
- Starting in diameters as small as .500"!
- Dovetailed insert mounting for increased edge-life and improved cutter reliability
- High performance, ground-profile inserts are shaped to minimize lap-lines when shouldering, available in both heavy and light geometries
- Economical utility inserts for situations not requiring the performance benefits of ground-profile inserts
- MaxSFeed is capable of ramping and spiral interpolation!

Member IMC Group Ingersoll Cutting Tools

MAXSFEED™ 05 SERIES 1EJ5A (CYLINDRICAL SHANK)

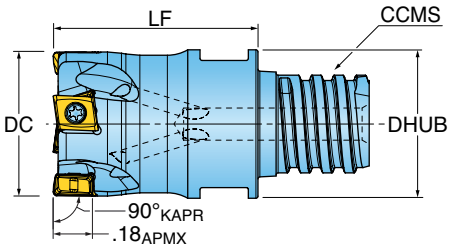
90° END MILL (5MM INSERT)



Part Number	DC Cutting Dia.	LUX Usable Length Max.	LPR Protruding Length	OAL Overall Length	ZEFF Effective Teeth	DCON Shank Dia.	RMPX Ramp Angle Max.
1EJ5A-05009S4R01	0.500	0.800	1.000	2.780	2	0.500	1.60
1EJ5A-05009S4R02	0.500	0.800	1.000	2.780	3	0.500	1.60
1EJ5A-07015S7R01	0.750	1.300	1.500	3.500	3	0.750	0.97
1EJ5A-07015S7R02	0.750	1.300	1.500	3.500	4	0.750	0.97
1EJ5A-10015S1R01	1.000	1.300	1.500	3.750	5	1.000	0.69
1EJ5A-10015S1R02	1.000	1.300	1.500	3.750	6	1.000	0.69

MAXSFEED™ 05 SERIES 1EJ5A (CHIP•SURFER STYLE)

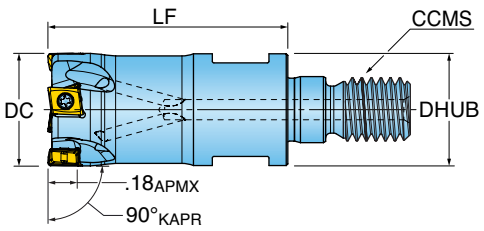
90° END MILL (5MM INSERT)



Part Number	DC Cutting Dia.	LF Functional Length	ZEFF Effective Teeth	CCMS Connection Code Machine Side	DHUB Hub Dia.	RMPX Ramp Angle Max.
1EJ5A-05006T8R01	0.500	0.65	2	ChipSurfer T08	0.485	1.60
1EJ5A-05006T8R02	0.500	0.65	3	ChipSurfer T08	0.485	1.60
1EJ5A-07010TSR01	0.750	1.00	3	ChipSurfer T12	0.725	0.97
1EJ5A-07010TSR02	0.750	1.00	4	ChipSurfer T12	0.725	0.97

MAXSFEED 05 SERIES 1EJ5A (TOP•ON STYLE)

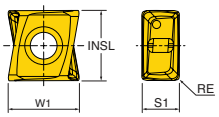
90° END MILL (5MM INSERT)



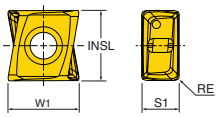
Part Number	DC Cutting Dia.	LF Functional Length	ZEFF Effective Teeth	CCMS Connection Code Machine Side	DHUB Hub Dia.	RMPX Ramp Angle Max.
1EJ5A-05010X4R01	0.500	1.00	2	TopOn 6mm	0.465	1.60
1EJ5A-05010X4R02	0.500	1.00	3	TopOn 6mm	0.465	1.60
1EJ5A-07015X6R01	0.750	1.50	3	TopOn 10mm	0.700	0.97
1EJ5A-07015X6R02	0.750	1.50	4	TopOn 10mm	0.700	0.97
1EJ5A-10015X7R01	1.000	1.50	5	TopOn 12mm	0.820	0.70
1EJ5A-10015X7R02	1.000	1.50	6	TopOn 12mm	0.820	0.70

MAXSFEED 05 INSERTS

CGM101R001-ML



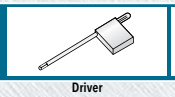
CGX101R001-M



Part Number	Application	RE Corner Radius	INSL Insert Length	W1 Insert Width	S1 Thickness	Grade	IN2510	IN2505	IN2530
CGM101R001-ML	General Purpose	0.015	0.197	0.197	0.106		•		•
CGX101R001-M	Utility	0.015	0.197	0.197	0.106		•	•	•

Insert screw tightening torque: 10-14 in*lbs.

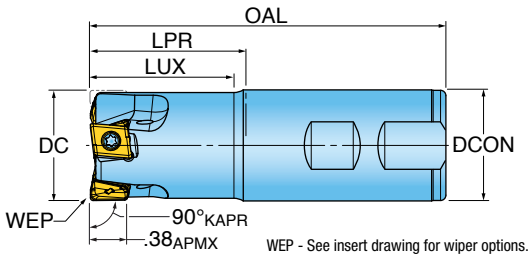
MAXSFEED 05 HARDWARE



05 Cutters	DS-TP06S-NEU	SM18-041-00

MAXSFEED™ 11 SERIES 1EJ5C (WELDON SHANK)

90° END MILL (11MM INSERT)

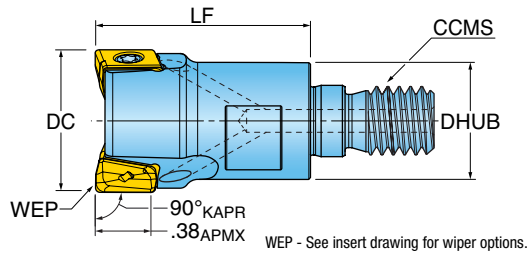


WEP - See insert drawing for wiper options.

Part Number	DC Cutting Dia.	LUX Usable Length Max.	LPR Protruding Length	OAL Overall Length	ZEFF Effective Teeth	DCON Shank Dia.	RMPX Ramp Angle Max.
1EJ5C-1001780R01	1.000	1.550	1.750	4.000	2	1.000	1.99
1EJ5C-1001784R01	1.000	1.750	1.750	3.750	2	0.750	1.99
1EJ5C-1003780R01	1.000	3.550	3.750	6.000	2	1.000	1.99
1EJ5C-1201780R01	1.250	1.750	1.750	4.000	3	1.000	1.41
1EJ5C-1201781R01	1.250	1.550	1.750	4.000	3	1.250	1.41
1EJ5C-1204281R01	1.250	4.050	4.250	6.500	3	1.250	1.41
1EJ5C-1501781R01	1.500	1.550	1.750	4.000	4	1.250	1.08
1EJ5C-1501781R02	1.500	1.550	1.750	4.000	3	1.250	1.08
1EJ5C-1504281R02	1.500	4.050	4.250	6.500	3	1.250	1.08

MAXSFEED™ 11 SERIES 1EJ5C (TOP•ON STYLE)

90° END MILL (11MM INSERT)

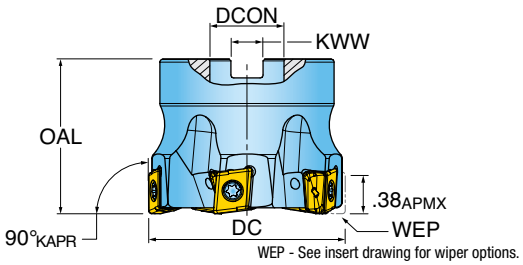


WEP - See insert drawing for wiper options.

Part Number	DC Cutting Dia.	LF Functional Length	ZEFF Effective Teeth	CCMS Connection Code Machine Side	DHUB Hub Dia.	RMPX Ramp Angle Max.
1EJ5C-10015X7R01	1.000	1.500	2	TopOn 12mm	0.820	1.99
1EJ5C-12017X8R01	1.250	1.750	3	TopOn 16mm	1.135	1.41

MAXSFEED™ 11 SERIES EJ5C, EJ6C

90° FACE MILL (11MM INSERT)

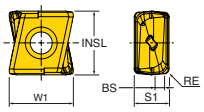


WEP - See insert drawing for wiper options.

Part Number	DC Cutting Dia.	OAL Overall Length	ZEFF Effective Teeth	DCON Bore Dia.	KWW Keyway	RMPX Ramp Angle Max.
EJ5C-01R01	1.500	1.570	5	0.500	0.250	1.08
EJ6C-01R01	1.500	1.570	4	0.500	0.250	1.08
EJ5C-02R01	2.000	1.570	6	0.750	0.312	0.76
EJ6C-02R01	2.000	1.570	5	0.750	0.312	0.76
EJ5C-02R02	2.500	1.570	7	0.750	0.312	0.58
EJ6C-02R02	2.500	1.570	6	0.750	0.312	0.58
EJ5C-03R01	3.000	2.375	9	1.000	0.375	0.47
EJ6C-03R01	3.000	2.375	7	1.000	0.375	0.47
EJ5C-04R01	4.000	2.375	13	1.500	0.625	0.34
EJ6C-04R01	4.000	2.375	9	1.500	0.625	0.34

MAXSFEED™ 11 INSERTS

CGM313R00_-ML



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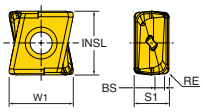


Part Number	Application	RE Corner Radius	BS Wiper Length	INSL Insert Length	W1 Insert Width	S1 Thickness	Grade	IN4015	IN2515	IN4005	IN2505	IN4030	IN2530
CGM313R001-M	General Purpose	0.031	0.079	0.433	0.436	0.236		•	•	•	•	•	•
CGM313R001-ML	General Purpose	0.031	0.079	0.433	0.436	0.236		•	•	•	•	•	•
CGM313R002-M	General Purpose	0.062	0.047	0.433	0.436	0.236		•	•	•	•	•	•
CGM313R002-ML	General Purpose	0.062	0.047	0.433	0.436	0.236		•	•	•	•	•	•
CGX313R001-M	Utility	0.031	0.079	0.433	0.436	0.236		•	•	•	•	•	•
CGX313R002-M	Utility	0.062	0.047	0.433	0.436	0.236		•	•	•	•	•	•

Insert screw tightening torque: 25-30 in*lbs.

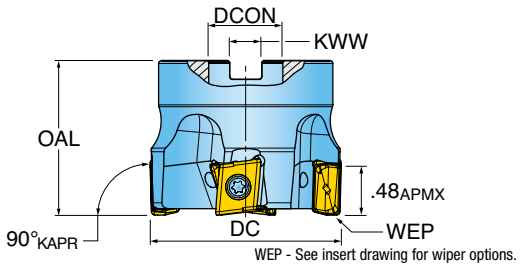
MAXSFEED™ 11 HARDWARE

							
	Driver Handle	Driver Bit	Insert Screw	Retention Bolt	**OPTIONAL** Torque Driver Handle	**OPTIONAL** Preset Torque Bit	**OPTIONAL** Torque Driver Bit
1EJ5C-1001780R01	DS-A00T	DS-T156B	SM35-095-H0	-	DS-A00-.25-T	DT-35-.25	DS-T15B
1EJ5C-1001784R01	DS-A00T	DS-T156B	SM35-095-H0	-	DS-A00-.25-T	DT-35-.25	DS-T15B
1EJ5C-1003780R01	DS-A00T	DS-T156B	SM35-095-H0	-	DS-A00-.25-T	DT-35-.25	DS-T15B
1EJ5C-1201780R01	DS-A00T	DS-T156B	SM35-107-H0	-	DS-A00-.25-T	DT-35-.25	DS-T15B
1EJ5C-1201781R01	DS-A00T	DS-T156B	SM35-107-H0	-	DS-A00-.25-T	DT-35-.25	DS-T15B
1EJ5C-1204281R01	DS-A00T	DS-T156B	SM35-107-H0	-	DS-A00-.25-T	DT-35-.25	DS-T15B
1EJ5C-1501781R01	DS-A00T	DS-T156B	SM35-107-H0	-	DS-A00-.25-T	DT-35-.25	DS-T15B
1EJ5C-1501781R02	DS-A00T	DS-T156B	SM35-107-H0	-	DS-A00-.25-T	DT-35-.25	DS-T15B
1EJ5C-1504281R02	DS-A00T	DS-T156B	SM35-107-H0	-	DS-A00-.25-T	DT-35-.25	DS-T15B
1EJ5C-10015X7R01	DS-A00T	DS-T156B	SM35-095-H0	-	DS-A00-.25-T	DT-35-.25	DS-T15B
1EJ5C-12017X8R01	DS-A00T	DS-T156B	SM35-107-H0	-	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ5C-01R01	DS-A00T	DS-T156B	SM35-107-H0	SD04-47	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ6C-01R01	DS-A00T	DS-T156B	SM35-107-H0	SD04-47	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ5C-02R01	DS-A00T	DS-T156B	SM35-107-H0	SD06-47	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ6C-02R01	DS-A00T	DS-T156B	SM35-107-H0	SD06-47	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ5C-02R02	DS-A00T	DS-T156B	SM35-107-H0	SD06-47	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ6C-02R02	DS-A00T	DS-T156B	SM35-107-H0	SD06-47	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ5C-03R01	DS-A00T	DS-T156B	SM35-107-H0	SD08-43	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ6C-03R01	DS-A00T	DS-T156B	SM35-107-H0	SD08-43	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ5C-04R01	DS-A00T	DS-T156B	SM35-107-H0	SD12-89	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ6C-04R01	DS-A00T	DS-T156B	SM35-107-H0	SD12-89	DS-A00-.25-T	DT-35-.25	DS-T15B

Insert screw tightening torque: 25-30 in*lbs.

MAXSFEED™ 13 SERIES EJ5D, EJ6D

90° FACE MILL (13MM INSERT)

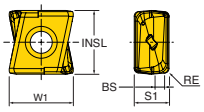


WEP - See insert drawing for wiper options.

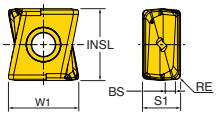
Part Number	DC Cutting Dia.	OAL Overall Length	ZEFF Effective Teeth	DCON Bore Dia.	KWW Keyway	RMPX Ramp Angle Max.
EJ5D-02R01	2.000	1.570	5	0.750	0.312	0.98
EJ6D-02R01	2.000	1.570	4	0.750	0.312	0.98
EJ5D-02R02	2.500	1.570	6	0.750	0.312	0.75
EJ5D-02R03	2.500	1.570	6	1.000	0.375	0.75
EJ6D-02R02	2.500	1.570	5	0.750	0.312	0.75
EJ5D-03R01	3.000	2.000	7	1.000	0.375	0.60
EJ6D-03R01	3.000	2.000	5	1.000	0.375	0.60
EJ5D-04R01	4.000	2.375	9	1.500	0.625	0.44
EJ6D-04R01	4.000	2.375	7	1.250	0.500	0.44
EJ6D-04R02	4.000	2.375	7	1.500	0.625	0.44
EJ6D-05R01	5.000	2.500	11	1.500	0.625	0.34
EJ6D-06R01	6.000	2.500	13	1.500	0.625	0.28

MAXSFEED™ 13 INSERTS

CGM324R00_-ML



CGM324R00_-M



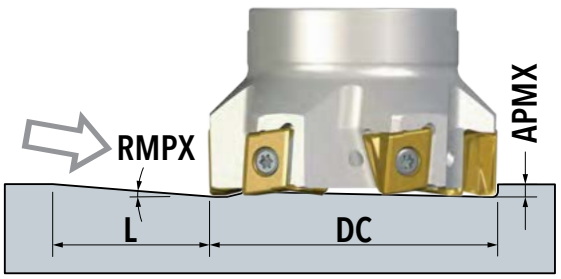
Part Number	Application	RE Corner Radius	BS Wiper Length	INSL Insert Length	W1 Insert Width	S1 Thickness	Grade	IN4015	IN2515	IN4005	IN2505	IN4030	IN2530	IN4035	IN2535
CGM324R001-M	General Purpose	0.031	0.099	0.531	0.518	0.281		•	•	•	•	•	•		
CGM324R001-ML	General Purpose	0.031	0.099	0.531	0.518	0.281		•	•	•	•	•	•	•	•
CGM324R002-M	General Purpose	0.062	0.067	0.531	0.518	0.281		•	•	•	•	•	•		
CGM324R002-ML	General Purpose	0.062	0.067	0.531	0.518	0.281		•	•	•	•	•	•	•	•
CGM324R004-M	General Purpose	0.125	0.005	0.531	0.518	0.281		•	•	•	•	•	•		
CGM324R004-ML	General Purpose	0.125	0.005	0.531	0.518	0.281		•	•	•	•	•	•	•	•
CGX324R001-M	Utility	0.031	0.099	0.531	0.518	0.281		•	•	•	•	•	•		
CGX324R002-M	Utility	0.062	0.067	0.531	0.518	0.281		•	•	•	•	•	•		

MAXSFEED™ 13 HARDWARE

					 **OPTIONAL**	 **OPTIONAL**	 **OPTIONAL**
	Driver Handle	Driver Bit	Insert Screw	Retention Bolt	Torque Driver Handle	Preset Torque Bit	Torque Driver Bit
EJ5D-02R01	DS-A00T	DS-T156B	SM40-123-H0	SD06-47	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ6D-02R01	DS-A00T	DS-T156B	SM40-123-H0	SD06-47	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ5D-02R02	DS-A00T	DS-T156B	SM40-123-H0	SD06-47	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ5D-02R03	DS-A00T	DS-T156B	SM40-123-H0	SD08-46	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ6D-02R02	DS-A00T	DS-T156B	SM40-123-H0	SD06-47	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ5D-03R01	DS-A00T	DS-T156B	SM40-123-H0	SD08-46	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ6D-03R01	DS-A00T	DS-T156B	SM40-123-H0	SD08-46	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ5D-04R01	DS-A00T	DS-T156B	SM40-123-H0	SD12-89	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ6D-04R01	DS-A00T	DS-T156B	SM40-123-H0	SD10-49	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ6D-04R02	DS-A00T	DS-T156B	SM40-123-H0	SD12-89	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ6D-05R01	DS-A00T	DS-T156B	SM40-123-H0	SD12-89	DS-A00-.25-T	DT-35-.25	DS-T15B
EJ6D-06R01	DS-A00T	DS-T156B	SM40-123-H0	SD12-89	DS-A00-.25-T	DT-35-.25	DS-T15B

Insert screw tightening torque: 30-35 in*lbs.

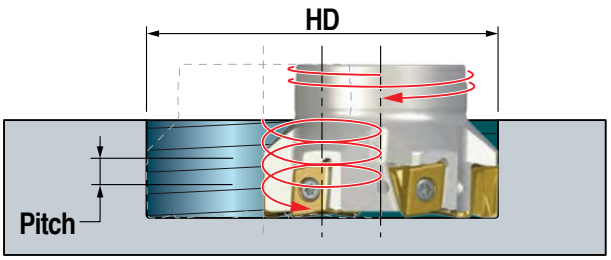
MAXSFEED 05 STRAIGHT RAMPING



DCX Cutter Diameter	RMPX Ramp Angle Max.	L	APMX Depth of Cut Max.
0.500	1.60	6.620	0.185
0.750	0.97	10.930	0.185
1.000	0.69	15.360	0.185

L in this table is the length the cutter travels to reach the max. depth of cut (.185") while traveling at the max ramp angle listed for the cutter.

MAXSFEED 05 HELICAL RAMPING



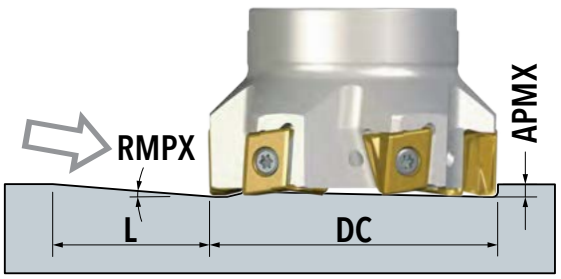
Pitch:
The max. pitch is determined to not exceed the max. depth of cut (APMX) and to not exceed the max. ramp angle (RMPX).

All ramping data is calculated with CGM101R001-ML inserts installed.

DCX Cutter Diameter	HD Min.	HD Max.	HD Min. w/o Cusp	HD Max. w/o Cusp	Max Pitch Per Revolution
0.500	0.808	1.000	0.970	0.970	0.037
0.750	1.306	1.500	1.470	1.470	0.034
1.000	1.806	2.000	1.970	1.970	0.032

Example:
1. The min. hole dia. that the .500" dia. cutter can interpolate from solid is .808" (leaving a raised cusp).
2. The max. hole dia. that the .500" dia. cutter can interpolate from solid is 1.000".
3. The max. hole dia. that the .500" dia. cutter can interpolate from solid while leaving a flat-bottom is .970" (leaving no raised cusp).

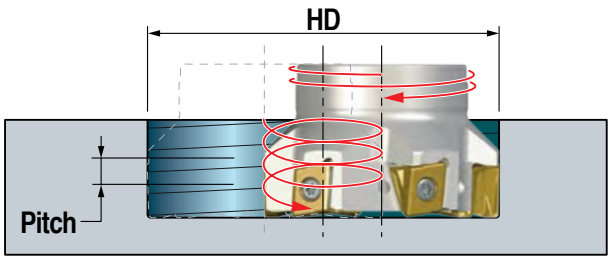
MAXSFEED 11 STRAIGHT RAMPING



DCX Cutter Diameter	RMPX Ramp Angle Max.	L	APMX Depth of Cut Max.
1.000	1.99	11.080	0.385
1.250	1.41	15.640	0.385
1.500	1.08	20.420	0.385
2.000	0.76	29.020	0.385
2.500	0.58	38.030	0.385
3.000	0.47	46.930	0.385
4.000	0.34	64.880	0.385

L in this table is the length the cutter travels to reach the max. depth of cut (.385") while traveling at the max ramp angle listed for the cutter.

MAXSFEED 11 HELICAL RAMPING



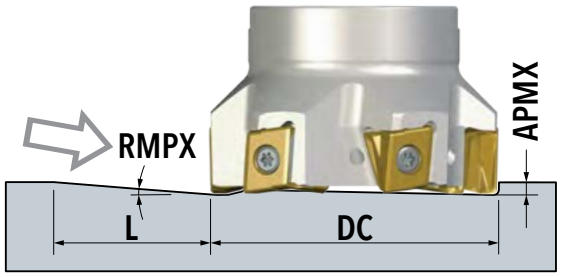
Pitch:
The max. pitch is determined to not exceed the max. depth of cut (APMX) and to not exceed the max. ramp angle (RMPX).

DCX Cutter Diameter	HD Min.	HD Max.	HD Min. w/o Cusp	HD Max. w/o Cusp	Max Pitch Per Revolution
1.000	1.568	2.000	1.780	1.938	0.093
1.250	2.066	2.500	2.280	2.438	0.082
1.500	2.566	3.000	2.780	2.938	0.076
2.000	3.566	4.000	3.780	3.938	0.071
2.500	4.566	5.000	4.780	4.938	0.068
3.000	5.566	6.000	5.780	5.938	0.066
4.000	7.566	8.000	7.780	7.938	0.063

Example:
1. The min. hole dia. that the 1.000" dia. cutter can interpolate from solid is 1.568" (leaving a raised cusp).
2. The max. hole dia. that the 1.000" dia. cutter can interpolate from solid is 2.000".
3. The max. hole dia. that the 1.000" dia. cutter can interpolate from solid while leaving a flat-bottom is 1.938" (leaving no raised cusp).

All ramping data is calculated with CGM313R001-M inserts installed.

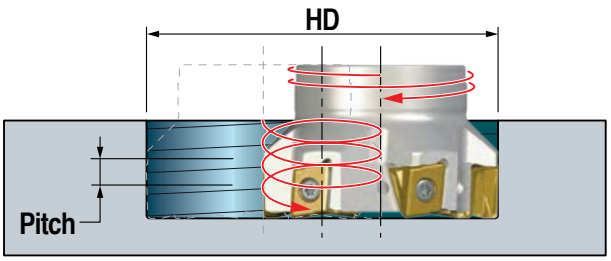
MAXSFEED 13 STRAIGHT RAMPING



DCX Cutter Diameter	RMPX Ramp Angle Max.	L	APMX Depth of Cut Max.
2.000	0.98	28.000	0.479
2.500	0.75	36.590	0.479
3.000	0.6	45.740	0.479
4.000	0.44	62.370	0.479
5.000	0.34	80.720	0.479
6.000	0.28	98.020	0.479

L in this table is the length the cutter travels to reach the max. depth of cut (.479") while traveling at the max ramp angle listed for the cutter.

MAXSFEED 13 HELICAL RAMPING



Pitch:
The max. pitch is determined to not exceed the max. depth of cut (APMX) and to not exceed the max. ramp angle (RMPX).

DCX Cutter Diameter	HD Min.	HD Max.	HD Min. w/o Cusp	HD Max. w/o Cusp	Max Pitch Per Revolution
2.000	3.470	4.000	3.740	3.938	0.091
2.500	4.470	5.000	4.740	4.938	0.087
3.000	5.470	6.000	5.740	5.938	0.084
4.000	7.470	8.000	7.740	7.938	0.082
5.000	9.470	10.000	9.740	9.938	0.079
6.000	11.470	12.000	11.740	11.938	0.078

All ramping data is calculated with CGM324R001-M inserts installed.

Example:
1. The min. hole dia. that the 2.000" dia. cutter can interpolate from solid is 3.470" (leaving a raised cusp).
2. The max. hole dia. that the 2.000" dia. cutter can interpolate from solid is 4.000".
3. The max. hole dia. that the 2.000" dia. cutter can interpolate from solid while leaving a flat-bottom is 3.938" (leaving no raised cusp).

MAXSFEED™ 05 OPERATING GUIDELINES

Materials				V_c Cutting Speed SFM	f_z Feed/Tooth (inch)	Harder <--------> Tougher			Coolant	Geometry	
ISO	Mat'l Group #VDI 3323	Type	Examples			IN2510	IN2505	IN2530		M	ML
P	1 thru 5	Non-alloy Steel	1018, A36, 1045, A572, 1070	400-850	.0015-.0030		1	2	NO	2	1
	6 thru 9	Low-alloy Steel	4140, 4340, P20, 8620, 300M	350-500	.0015-.0030		1	2	NO	2	1
	10, 11	High-alloy Steel	H13, A2, D2, M2, T1	250-500	.0015-.0030		1	2	NO	1	2
M	12 thru 13	"Stainless Steel (Ferritic & Martensitic)"	410, 416, 440	350-550	.0015-.0030		2	1	YES	2	1
	14	Stainless Steel (Austenitic)	303, 304, 316, 15-5,17-4	300-500	.0015-.0030		2	1	May not be required at high speeds	2	1
K	15 thru 16	Gray Cast Iron	CLS. 20, 30, 45	500-700	.0015-.0030	1	2	3	NO	2	1
	17 thru 18	Nodular Cast Iron	60-40-18, 100-70-03	400-650	.0015-.0030	2	1	3	NO	1	2
N	21 thru 30	Aluminum	7075, 6061	1000+	.0015-.0030	1		2			1
S	31 thru 35	High-Temp Alloys	Inconel, Hastelloy, Monel	60-130	.0015-.0030		2	1	YES	2	1
	36 thru 37	Titanium Alloys	6AL-4V, 5Al-5Mo-5V-3Cr	65-150	.0015-.0030		2	1	YES	2	1
H	38 thru 39	Hardened Steel >48	A2, 01, D2	150-400	.0015-.0030		1	2	NO	1	

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.

MAXSFEED™ 11 OPERATING GUIDELINES

Materials				V_c Cutting Speed SFM	f_z Feed/ Tooth (inch)	Harder <----------> Tougher							Coolant	Geometry	
ISO	Mat'l Group #VDI 3323	Type	Examples			IN4015	IN2515	IN4005	IN2505	IN4030	IN2530	IN2535		M	ML
P	1 thru 5	Non-alloy Steel	1018, A36, 1045, A572, 1070	400-850	.005-.012			2	1		3		NO	1	2
	6 thru 9	Low-alloy Steel	4140, 4340, P20, 8620, 300M	300-600	.005-.010			2	1		3		NO	1	2
	10, 11	High-alloy Steel	H13, A2, D2, M2, T1	300-600	.005-.010			2	1		3		NO	1	2
M	12 thru 13	"Stainless Steel (Ferritic & Martensitic)"	410, 416, 440	350-700	.005-.012					3	2	1	YES	2	1
	14	Stainless Steel (Austenitic)	303, 304, 316, 15-5,17-4	300-600	.005-.012					3	2	1	May not be required at high speeds	2	1
K	15 thru 16	Gray Cast Iron	CLS. 20, 30, 45	400-750	.005-.012	1	2	3					NO	2	1
	17 thru 18	Nodular Cast Iron	60-40-18, 100-70-03	300-650	.005-.012		1	3	2				NO	1	2
N	21 thru 30	Aluminum	7075, 6061	1000+	.004-.015		1		2				YES		1
S	31 thru 35	High-Temp Alloys	Inconel, Hastelloy, Monel	75-150	.004-.008				3		2	1	YES	2	1
	36 thru 37	Titanium Alloys	6AL-4V, 5Al-5Mo-5V-3Cr	75-200	.004-.008				3		2	1	YES		1
H	38 thru 39	Hardened Steel >48	A2, 01, D2	150-400	.002-.004				1		2		NO	1	

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.

MAXSFEED™ 13 OPERATING GUIDELINES

Materials				V_c Cutting Speed SFM	f_z Feed/ Tooth (inch)	Harder <----------> Tougher								Coolant	Geometry	
ISO	Mat'l Group #VDI 3323	Type	Examples			IN4015	IN2515	IN4005	IN2505	IN4030	IN2530	IN4035	IN2535		M	ML
P	1 thru 5	Non-alloy Steel	1018, A36, 1045, A572, 1070	400-850	.005-.014			2	1	4	3			NO	1	2
	6 thru 9	Low-alloy Steel	4140, 4340, P20, 8620, 300M	350-700	.005-.012			2	1	4	3			NO	1	2
	10, 11	High-alloy Steel	H13, A2, D2, M2, T1	300-600	.005-.012			2	1	4	3			NO	1	2
M	12 thru 13	"Stainless Steel (Ferritic & Martensitic)"	410, 416, 440	350-700	.005-.012					4	3	2	1	YES	2	1
	14	Stainless Steel (Austenitic)	303, 304, 316, 15-5,17-4	300-600	.005-.012					4	3	2	1	May not be required at high speeds	2	1
K	15 thru 16	Gray Cast Iron	CLS. 20, 30, 45	400-750	.005-.015	1	2	3						NO	2	1
	17 thru 18	Nodular Cast Iron	60-40-18, 100-70-03	300-650	.005-.015		1	3	2					NO	1	2
N	21 thru 30	Aluminum	7075, 6061	1000+	.004-.015		1		2					YES		1
S	31 thru 35	High-Temp Alloys	Inconel, Hastelloy, Monel	75-150	.004-.008						3	2	1	YES	2	1
	36 thru 37	Titanium Alloys	6AL-4V, 5Al-5Mo-5V-3Cr	75-200	.004-.008						3	2	1	YES		1
H	38 thru 39	Hardened Steel >48	A2, 01, D2	150-400	.002-.004				1		2			NO	1	

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.