



FORM MASTER PRO™

MILLING PRODUCTS

Insert Styles:

RCLT12 (CC1, CC2, CP, PH2)
RCLT16 (CC1, CC2, CP, PH, PH2)

Face Mills:

5E6H
5E6K

End Mills:

15E1H, 15E1K

Grades:

IN2005, IN2030, IN2035,
IN4015, IN4030, IN05S

Applications:

Die & Mold
Aero Space
General Machining

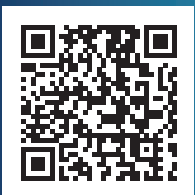


Special Duty Indexable Button Roughers

Form Master Pro is a unique indexable button milling solution for standard & demanding long reach milling applications. Inserts are offered in 12mm & 16mm IC sizes, in standard round and serrated types. Economy is provided with standard round inserts having 8 indexes & serrated inserts having 4 indexes.

Features & Benefits:

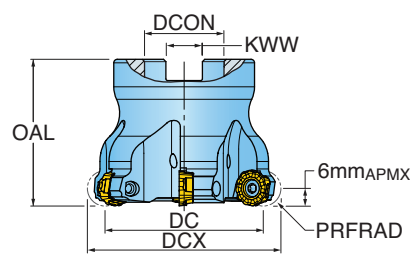
- Face mills & modular cutter types
- 12 mm & 16 mm IC button sizes
- Well-designed indexable button insert geometries, round & serrated
- Serrated inserts for extended length applications, chip evacuation, heat management
- Premium milling grades to cut all materials
- Strong clamping insert screw for secure and stable insert seating
- Anti-rotation insert clamping for maximum stability
- Ultra-reliable & stable milling performance!





FORMMASTER^{PRO}™ SERIES 5E6H

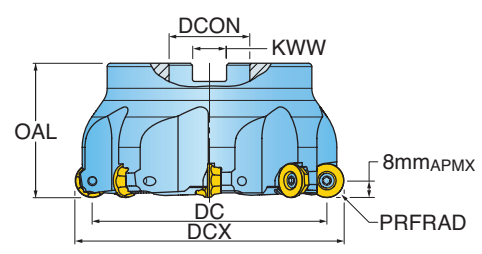
12MM BUTTON FACE MILL



Part Number	DCX Cutting Dia. Max.	DC Cutting Dia.	OAL Overall Length	ZEFF Effective Teeth	PRFRAD Profile Radius	DCON Shank Dia.	KWW Keyway
5E6H-20R01	2.000	1.528	1.750	5	6.00 mm	0.750	0.312

FORMMASTER^{PRO}™ SERIES 5E6K

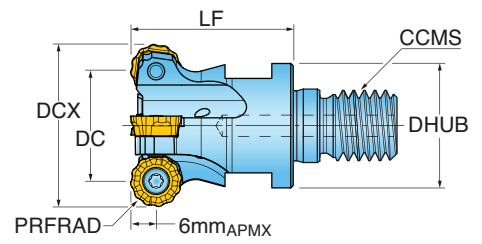
16MM BUTTON FACE MILL



Part Number	DCX Cutting Dia. Max.	DC Cutting Dia.	OAL Overall Length	ZEFF Effective Teeth	PRFRAD Profile Radius	DCON Shank Dia.	KWW Keyway	CSP Coolant
5E6K-02R01	2.000	1.370	1.750	4	8.00 mm	0.750	0.312	Yes
5E6K-03R01	3.000	2.370	1.750	6	8.00 mm	1.000	0.375	Yes
5E6K-04R01	4.000	3.370	2.000	7	8.00 mm	1.250	0.500	No
5E6K-06R01	6.000	5.370	2.500	9	8.00 mm	1.500	0.625	No

FORMMASTER^{PRO}™ SERIES 15E1H (TOP-ON STYLE)

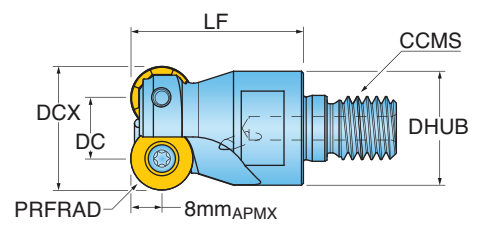
12MM BUTTON END MILL



Part Number	DCX Cutting Dia. Max.	DC Cutting Dia.	LF Functional Length	ZEFF Effective Teeth	PRFRAD Profile Radius	DHUB Hub Dia.	CCMS Connection Code Machine Side	Wrench Size
15E1H-10015X7R01	1.000	0.528	1.50	2	6.00 mm	0.83	TopOn M12	17 mm
15E1H-12015X8R01	1.250	0.778	1.50	3	6.00 mm	1.13	TopOn M16	22 mm
15E1H-15015X8R01	1.500	1.028	1.50	4	6.00 mm	1.13	TopOn M16	22 mm

FORMMASTER^{PRO}™ SERIES 15E1K (TOP-ON STYLE)

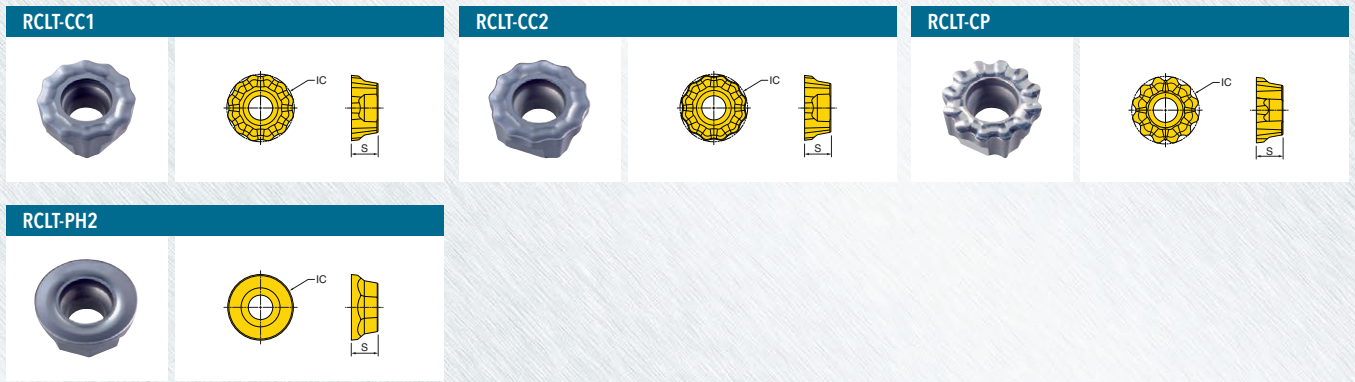
16MM BUTTON END MILL



Part Number	DCX Cutting Dia. Max.	DC Cutting Dia.	LF Functional Length	ZEFF Effective Teeth	PRFRAD Profile Radius	DHUB Hub Dia.	CCMS Connection Code Machine Side	Wrench Size
15E1K-12017X8R01	1.250	0.620	1.75	2	8.00 mm	1.13	TopOn M16	22 mm
15E1K-15017X8R01	1.500	0.870	1.75	3	8.00 mm	1.13	TopOn M16	22 mm

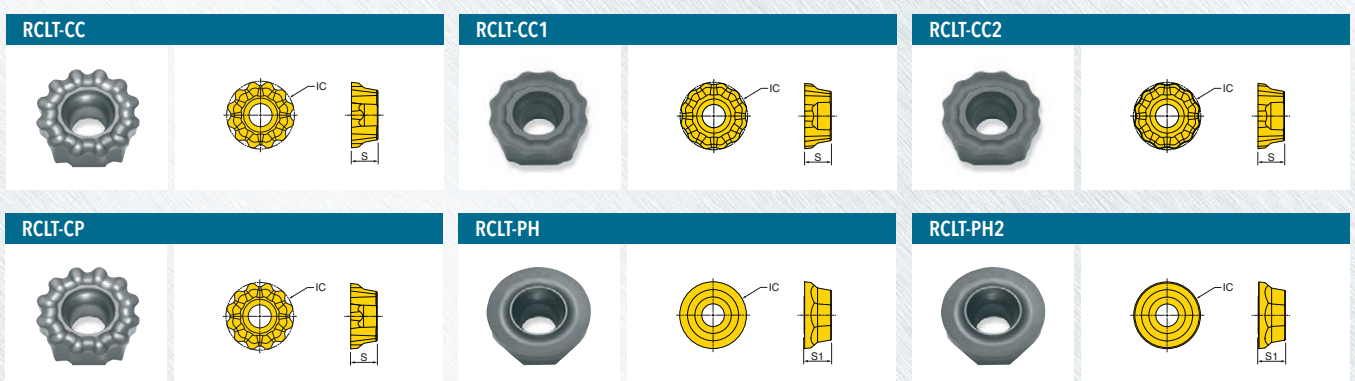


FORMMASTER^{PRO}™ 12MM INSERTS



Part Number	Application	IC Inscribed Circle Dia.	S Thickness	NOI Number of Indexes	IH Insert Hand	Grade	IN05S	IN2005	IN2030	IN2035	IN4015	IN4030
RCLT1204M0N-CC1	Standard	12mm	0.187	4	Neutral			•			•	•
RCLT1204M0N-CC2	Heavy-Duty	12mm	0.187	4	Neutral			•			•	•
RCLT1204M0N-CP	Grd/Pol for Al	12mm	0.187	4	Neutral		•					
RCLT1204M0TN-PH2	Heavy-Duty	12mm	0.190	8	Neutral			•	•			•

FORMMASTER^{PRO}™ 16MM INSERTS



Part Number	Application	IC Inscribed Circle Dia.	S Thickness	NOI Number of Indexes	IH Insert Hand	Grade	IN05S	IN2005	IN2030	IN2035	IN4015	IN4030	IN4040
RCLT1606M0N-CC	Standard	16mm	0.256	4	Neutral			•				•	
RCLT1606M0N-CC1	Standard	16mm	0.256	4	Neutral			•	•		•	•	
RCLT1606M0N-CC2	Heavy-Duty	16mm	0.256	4	Neutral			•					
RCLT1606M0N-CP	Grd/Pol for Al	16mm	0.256	4	Neutral		•						
RCLT1606M0TN-PH	Standard	16mm	0.256	8	Neutral			•	•		•		
RCLT1606M0TN-PH2	Heavy-Duty	16mm	0.256	8	Neutral			•					•



FORMMASTER^{PRO}™ HARDWARE

	Insert Screw	Retention Bolt	Driver Handle	Driver Bit	TopOn Wrench	**OPTIONAL** Torque Driver Handle	**OPTIONAL** Torque Driver Bit	**OPTIONAL** Preset Torque Bit	**OPTIONAL** Retention Bolt w/Coolant
5E6H-20R01	SM40-090-00	SD-06-46	DS-A00T	DS-T156B	-	DS-A00-.25-T	DS-T15B1	DT-30-.25	SD-06-89
5E6K-02R01	SM50-120-10	SD-06-46			-	DS-A00-.25-T	DS-T20B1	DT-44-.25	SD-06-89
5E6K-03R01	SM50-120-10	SD-08-46			-	DS-A00-.25-T	DS-T20B1	DT-44-.25	SD-08-92
5E6K-04R01	SM50-120-10		DS-A00T	DS-T206B	-	DS-A00-.25-T	DS-T20B1	DT-44-.25	SD-10-99
5E6K-06R01	SM50-120-10	SD-12-82			-	DS-A00-.25-T	DS-T20B1	DT-44-.25	SD-12-99
15E1H-10015X7R01	SM40-090-00	-	DS-A00T	DS-T156B	617MM	DS-A00-.25-T	DS-T15B1	DT-30-.25	-
15E1H-12015X8R01	SM40-090-00	-	DS-A00T	DS-T156B	622MM	DS-A00-.25-T	DS-T15B1	DT-30-.25	-
15E1H-15015X8R01	SM40-090-00	-	DS-A00T	DS-T156B	622MM	DS-A00-.25-T	DS-T15B1	DT-30-.25	-
15E1K-12017X8R01	SM50-105-10	-			622MM	DS-A00-.25-T	DS-T20B1	DT-44-.25	-
15E1K-15017X8R01	SM50-105-10	-			622MM	DS-A00-.25-T	DS-T20B1	DT-44-.25	-

FORMMASTER^{PRO}™ OPERATING GUIDELINES - RCLT...CC/CC1

Materials				Vc Cutting Speed SFM	fz* Feed/Tooth (inch)	Harder <-----> Tougher						Coolant
ISO	Mat'l Group #VDI 3323	Type	Examples			IN4040	IN4015	IN2505	IN055	IN4030	IN2030	
P	1 - 5	Non-alloy Steel	1018, A36, 1045, A572, 1070	500-750	.007-.012			1	2	3		No
	6 - 9	Low-alloy Steel	4140, 4340, P20, 8620, 300M	500-750	.007-.012			1	2	3		No
	10 - 11	High-alloy Steel	H13, A2, D2, M2, T1	450-600	.007-.010			1	2	3		No
M	12 - 13	Stainless Steel (Ferritic & Martensitic)	410, 416, 440	250-525	.006-.010			4	2	3	1	Yes
	14	Stainless Steel (Austenitic)	303, 304, 316, 15-5, 17-4	250-525	.006-.010			4	2	3	1	Yes
K	15 - 16	Gray Cast Iron	CLS. 20, 30, 45	525-825	.008-.012		1	2	3			Yes
	17 - 20	Nodular Cast Iron	60-40-18, 100-70-03	450-600	.007-.010		1	2	3			No
S	31 - 35	High-Temp Alloys	Inconel, Hastelloy, Nimonic, Monel	60-250	.006-.010			4	2	3	1	Yes
	36 - 37	Titanium Alloys	6Al-4V, 5Al-5Mo-5V-3Cr	60-250	.006-.010			4	2	3	1	Yes

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.



FORMMASTER^{PRO}™ OPERATING GUIDELINES - RCLT...CP

Materials				Vc Cutting Speed SFM	fz* Feed/Tooth (inch)	Harder <-----> Tougher						Coolant
ISO	Mat'l Group #VDI 3323	Type	Examples			IN4040	IN4015	IN2505	IN055	IN4030	IN2030	
N	21 - 30	Aluminum	7075, 6061	1000-3250	.008-.012			1				Yes

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.

FORMMASTER^{PRO}™ OPERATING GUIDELINES - RCLT...PH/PH2

Materials				Vc Cutting Speed SFM	fz* Feed/Tooth (inch)	Harder <-----> Tougher						Coolant
ISO	Mat'l Group #VDI 3323	Type	Examples			IN4040	IN4015	IN2505	IN055	IN4030	IN2030	
P	1 - 5	Non-alloy Steel	1018, A36, 1045, A572, 1070	500-750	.007-.025	4		1	2	3		No
	6 - 9	Low-alloy Steel	4140, 4340, P20, 8620, 300M	500-750	.007-.025	4		1	2	3		No
	10 - 11	High-alloy Steel	H13, A2, D2, M2, T1	450-600	.007-.020	4		1	2	3		No
M	12 - 13	Stainless Steel (Ferritic & Martensitic)	410, 416, 440	250-525	.006-.020			4	2	3	1	Yes
	14	Stainless Steel (Austenitic)	303, 304, 316, 15-5, 17-4	250-525	.006-.020			4	2	3	1	Yes
K	15 - 16	Gray Cast Iron	CLS. 20, 30, 45	525-825	.008-.020	2	1	3				Yes
	17 - 20	Nodular Cast Iron	60-40-18, 100-70-03	450-600	.007-.020	2	1	3				No
S	31 - 35	High-Temp Alloys	Inconel, Hastelloy, Nimonic, Monel	60-250	.004-.012				2	3	1	Yes
	36 - 37	Titanium Alloys	6Al-4V, 5Al-5Mo-5V-3Cr	60-250	.005-.012				2	3	1	Yes

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.