

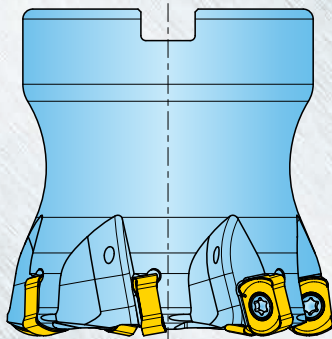
## Hi-Feed Cutter 09mm IC Insert Series



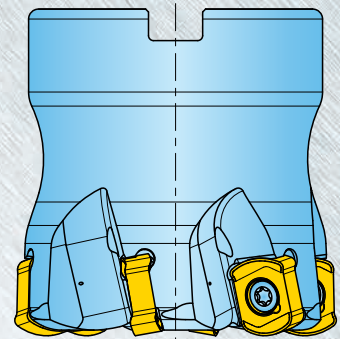
## Increased Depth of Cut!

### Features & Benefits include:

- Available in end mill, modular head and face mill type
- .060" (1.5mm) DOC capability, equals increased productivity
- 4 indexes provide for cost effective machining
- Strong positive insert rake face angles for efficient milling.
- Rigid clamping with unique pocket design & high tensile clamping screw, M3.5
- High-Density cutters
- Through coolant, face mills and end mills



HI-FEED MINI



HI-FEED MIDI™

All the advantages of the Hi-FeedMini, but with an increased Depth of Cut!

### Insert Series:

- UNLU0904

### Face Mills:

- TG1G
- TG2G

### End Mills:

- 1TG1G

### Insert Grades:

- IN2505
- IN2530
- IN2035
- IN7035

### Applications:

- Die & Mold
- Aerospace
- General Purpose





#### END MILLS, 09MM IC INSERT SERIES



Ramping

Corkscrew

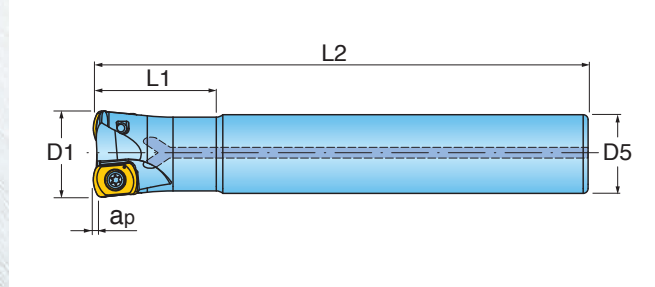
Pocket

Facing

Contour

Channeling

Coolant



#### INCH

Cutter Number	D1 Nominal Diameter	L1 Extension Length	L2 Overall Length	D5 Shank Size/Style	ap Max. DOC	Number of Inserts	Coolant
1TG1G-10019S1R03	1.000	1.970	7.000	1.000 Cylindrical	0.060	3	Yes
1TG1G-10020S1R03	1.000	2.000	10.000	1.000 Cylindrical	0.060	3	Yes
1TG1G-12027E2R03	1.250	2.750	5.750	1.250 Weldon	0.060	3	Yes
1TG1G-12027E2R04	1.250	2.750	5.750	1.250 Weldon	0.060	4	Yes
1TG1G-12047E2R03	1.250	4.750	7.750	1.250 Weldon	0.060	3	Yes
1TG1G-15016E2R04	1.500	1.690	6.000	1.250 Weldon	0.060	4	Yes
1TG1G-15016E2R05	1.500	1.690	6.000	1.250 Weldon	0.060	5	Yes

#### METRIC

Cutter Number	D1 Nominal Diameter	L1 Extension Length	L2 Overall Length	D5 Shank Size/Style	ap Max. DOC	Number of Inserts	Coolant
1TG1G025070T5R00	25mm	70mm	150mm	25mm	1.5mm	2	Yes
1TG1G025070T5R01	25mm	70mm	150mm	25mm	1.5mm	3	Yes
1TG1G025110T5R02	25mm	110mm	200mm	25mm	1.5mm	3	Yes
1TG1G032070U7R00	32mm	70mm	160mm	32mm	1.5mm	3	Yes
1TG1G032120U7R00	32mm	120mm	220mm	32mm	1.5mm	3	Yes
1TG1G032070U7R02	32mm	70mm	160mm	32mm	1.5mm	4	Yes
1TG1G032120U7R02	32mm	120mm	220mm	32mm	1.5mm	4	Yes

See tech page for programming information.



#### MODULAR END MILLS, 09MM IC INSERT SERIES



Ramping



Corkscrew



Pocket



Facing



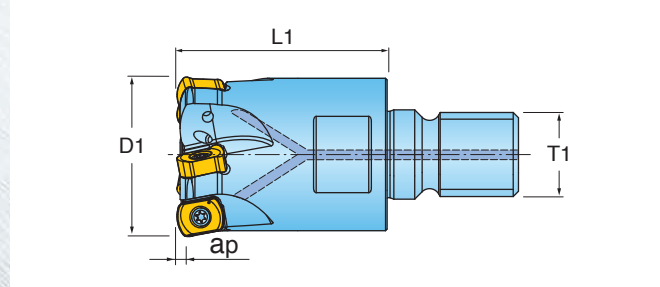
Contour



Channeling



Coolant



#### INCH

Cutter Number	D1 Nominal Diameter	L1 Extension Length	T1 Connection	ap Max. DOC	Number of Inserts	Coolant
1TG1G-10015X7R03	1.000	1.570	M12	0.060	3	Yes
1TG1G-12015X8R04	1.250	1.570	M16	0.060	4	Yes

#### METRIC

Cutter Number	D1 Nominal Diameter	L1 Extension Length	T1 Connection	ap Max. DOC	Number of Inserts	Coolant
1TG1G025035X7R00	25mm	35mm	M12	1.5mm	2	YES
1TG1G025035X7R01	25mm	35mm	M12	1.5mm	3	YES
1TG1G032043X8R00	32mm	43mm	M16	1.5mm	3	YES
1TG1G032043X8R01	32mm	43mm	M16	1.5mm	4	YES
1TG1G035043X8R00	35mm	43mm	M16	1.5mm	4	YES

See tech page for programming information.



#### FACE MILLS, 09MM IC INSERT SERIES



Ramping



Corkscrew



Pocket



Facing



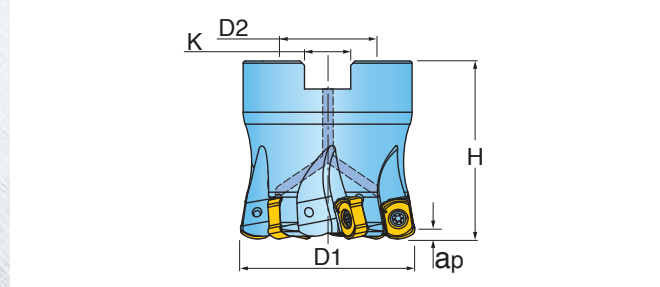
Contour



Channeling



Coolant



#### INCH

Cutter Number	D1 Max. Diameter	D2 Bore Diameter	H Effective Extension	ap Max. Depth of Cut	Number of Inserts	K Keyway	Coolant
TG2G-20R01	2.000	0.750	1.970	0.060	6	0.312	Yes
TG1G-20R01	2.000	0.750	1.970	0.060	7	0.312	Yes
TG2G-30R01	3.000	1.000	1.750	0.060	7	0.375	Yes
TG1G-30R01	3.000	1.000	1.750	0.060	9	0.375	Yes

#### METRIC



Cutter Number	D1 Max. Diameter	D2 Bore Diameter	H Effective Extension	ap Max. Depth of Cut	Number of Inserts	K Keyway	Coolant
TG3G050R00	50mm	22mm	50mm	1.5mm	5	10.4mm	Yes
TG2G050R00	50mm	22mm	50mm	1.5mm	6	10.4mm	Yes
TG1G050R00	50mm	22mm	50mm	1.5mm	7	10.4mm	Yes
TG2G052R00	52mm	22mm	50mm	1.5mm	6	10.4mm	Yes
TG1G052R00	52mm	22mm	50mm	1.5mm	7	10.4mm	Yes
TG3G063R00	63mm	22mm	50mm	1.5mm	6	10.4mm	Yes
TG2G063R00	63mm	22mm	50mm	1.5mm	7	10.4mm	Yes
TG1G063R00	63mm	22mm	50mm	1.5mm	8	10.4mm	Yes
TG4G080R00	80mm	27mm	50mm	1.5mm	7	12.4mm	Yes
TG3G080R00	80mm	27mm	50mm	1.5mm	8	12.4mm	Yes
TG2G080R00	80mm	27mm	50mm	1.5mm	9	12.4mm	Yes
TG1G080R00	80mm	27mm	50mm	1.5mm	10	12.4mm	Yes

See tech page for programming information.








## HI FEED MIDI™ HARDWARE

### INCH

					
Cutter Number	Screw	Driver	Driver Bit	Retention Bolt	Coolant Bolt (Optional)
TG2G-20R01	SM35-088-10	DS-A00T	DS-T106B	SD-06-48	SD-06-89
TG1G-20R01	SM35-088-10	DS-A00T	DS-T106B	SD-06-48	SD-06-89
TG2G-30R01	SM35-088-10	DS-A00T	DS-T106B	SD-08-46	SD-08-92
TG1G-30R01	SM35-088-10	DS-A00T	DS-T106B	SD-08-46	SD-08-92
1TG1G-15016E2R04	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G-15016E2R05	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G-10015X7R03	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G-12015X8R04	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G-12027E2R03	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G-12027E2R04	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G-12047E2R03	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G-10019S1R03	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G-10020S1R03	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a

### METRIC

					
Cutter Number	Screw	Driver	Driver Bit	Retention Bolt	Coolant Bolt (Optional)
TG3G050R00	SM35-088-10	DS-A00T	DS-T106B	SD06-81	n/a
TG2G050R00	SM35-088-10	DS-A00T	DS-T106B	SD06-81	n/a
TG1G050R00	SM35-088-10	DS-A00T	DS-T106B	SD06-81	n/a
TG2G052R00	SM35-088-10	DS-A00T	DS-T106B	SD06-81	n/a
TG1G052R00	SM35-088-10	DS-A00T	DS-T106B	SD06-81	n/a
TG3G063R00	SM35-088-10	DS-A00T	DS-T106B	SD06-81	n/a
TG2G063R00	SM35-088-10	DS-A00T	DS-T106B	SD06-81	n/a
TG1G063R00	SM35-088-10	DS-A00T	DS-T106B	SD06-81	n/a
TG4G080R00	SM35-088-10	DS-A00T	DS-T106B	SD012-35	n/a
TG3G080R00	SM35-088-10	DS-A00T	DS-T106B	SD012-35	n/a
TG2G080R00	SM35-088-10	DS-A00T	DS-T106B	SD012-35	n/a
TG1G080R00	SM35-088-10	DS-A00T	DS-T106B	SD012-35	n/a
1TG1G025070T5R00	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G025070T5R01	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G025110T5R02	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G032070U7R00	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G032120U7R00	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G032070U7R02	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G032120U7R02	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G025035X7R00	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G025035X7R01	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G032043X8R00	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G032043X8R01	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a
1TG1G035043X8R00	SM35-088-10	DS-A00T	DS-T106B	n/a	n/a



## HI FEED MIDI™ 09MM INSERTS

M0TR



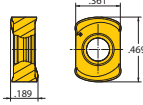
M0TR-MM



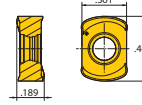
M0TR-ML



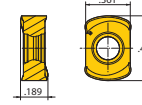
UNLU0904M0TR



UNLU0904M0TR-MM



UNLU0904M0TR-ML



Part Number	Applications	Max DOC	Grade			
			IN2505	IN2530	IN2035	IN7035
UNLU0904M0TR	Multi-Purpose	1.5mm (.059)	•	•	•	
UNLU0904M0TR-MM	Multi-Purpose - Keen Edge	1.5mm (.059)	•	•	•	
UNLU0904M0TR-ML	High-Positive - Keen Edge	1.5mm (.059)	•	•	•	•

Detail	Insert Number	Program Corner Radius	Description
	UNLU0904M0TR	.098	Multi-Purpose Extra strong positive rake face geometry for machining steel and various high temp alloys
	UNLU0904M0TR-MM	.098	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.
	UNLU0904M0TR-ML	.098	High-Positive - Keen Edge Sharp positive rake face geometry and shearing action is well-suited to machining high temp alloys

## HI FEED MIDI™ OPERATING GUIDELINES

Material	Brinnell Hardness	SFM	Feed per Insert	IN2505	IN2530	IN2035	IN7035	Coolant	
Steel	Mild 1018-1045	125 - 425	425 - 985	.010 - .046	1	2		NO	
	Low Alloy 4140, 8629, 4340	150 - 425	390 - 820	.015 - .118	1	2			
	Medium Alloy P20, S7, H13, O1, A2		300 - 900	.012 - .098	1	2			
	High Alloy A7-D2	200 - 425	275 - 600		1	2			
Hardened Steel	All	425	165 - 360	.012 - .078	1				
Stainless Steel	Free Machining 303, 416	150 - 425	260 - 560	.012 - .078		3	2	1	YES
	300 Series, 304, 310, 316					3	2	1	
	400 Series 410, 420, 15-5PH, 17-4PH		330 - 690	.015 - .078		3	2	1	
	PH Series 13-8		100 - 330	.009 - .036		3	2	1	
Titanium	6AL-4V	n/a	90 - 260	.012 - .078		3	2	1	
High Temp Alloy	Inconel	n/a	65 - 200	.008 - .040		3	2	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.