

Member IMC Group
Ingersoll
Cutting Tools

FINE GOLD

2016/2017



GOLD RUSH












GOLD



GOLD RUSH DRILLS

GOLD RUSH
GR SERIES

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FINE GOLD

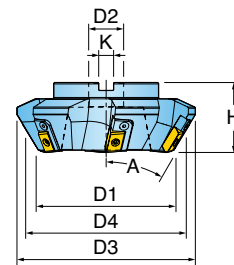
TURNING	DESCRIPTION	SERIES	PAGE
	TO TURN™	PCD Grade TD810 for Turning in Aluminum and Non-Ferrous Mat'ls	264
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Features & Benefits:

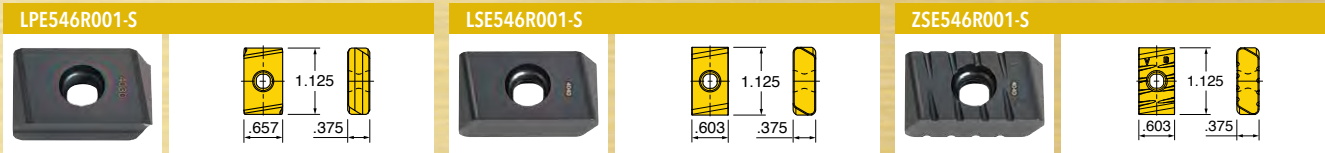
- Extreme Duty In a 30° Lead Facemill
- 4.000" to 12.000" Diameters Standard
- .750" Depth Of Cut Performance
- Well Equipped For Massive Chip Loads in Cast, Forged and Rolled Steels, Irons and Stainless Steels
- Three Inserts, Each Capable Of Powerful Performance

SUPERMAX™ SERIES 9M2L

HEAVY DUTY 60° FACE MILL WITH 4 INDEXES



Cutter Number	D1 Effective Diameter	D3 Max. Dia.	D4 Body O.D.	A Angle	H Height	D2 Bore Dia.	K Keyway	Bolt Circle	Number of Inserts
9M2L-04R01	4.000	4.90	5.66	30.0	3.000	1.500	0.625	NA	5
9M2L-06R01	6.000	6.90	7.66	30.0	3.000	1.500	0.625	NA	6
9M2L-08R01	8.000	8.90	9.66	30.0	3.000	2.500	1.000	4.00	8
9M2L-10R01	10.000	10.90	11.66	30.0	3.000	2.500	1.000	4.00	10
9M2L-12R01	12.000	12.90	13.66	30.0	3.000	2.500	1.000	4.00, 4.75, 7.00	12



Part Number	Application	Grades		
		IN2530	IN4030	IN4040
LPE546R001-S	Multi-Purpose - 0.059" Wiper			
LSE546R001-S	Heavy-Duty - 0.090" R w/.022" Wiper			
ZSE546R001-S	Serrated - 0.090" R w/.022" Wiper			

HARDWARE					
	SM50-160-R0	SE-03-65	NE143R13	DS-A00T	DS-T206B

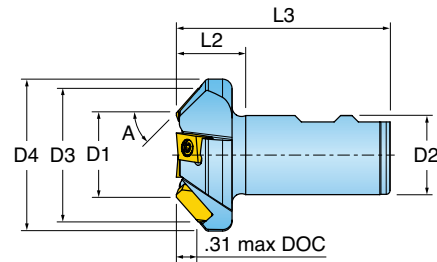
● = P ● = M ● = K ● = N ● = S ● = H

Features & Benefits:

- Heavy Duty 45 degree lead Facemill series is ideally suited for massive chip-loads in forged steels, cast steels and irons
- Ingersoll's "Shear-Clear" combines an extremely strong insert with high axial shear, "a unique combination of insert strength and shear."
- High insert-to-pocket preload provides stable chip formation in the most demanding applications.
- Integral and ground wiping flats deliver exceptional surface finishes

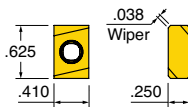
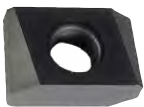
BLACKMAX™ SERIES 19N1A

45° END MILL WITH 4 INDEXES



Cutter Number	D1 Minor Dia.	D3 Major Dia.	D4 Body O.D.	A Angle	L2 Extension Length	L3 Overall Length	D2 Shank Size/Style	Number of Inserts
19N1A-1001180R01	1.000	1.560	1.84	47.8	1.13	3.38	1.000" Weldon	4
19N1A-1501181R01	1.500	2.120	2.40	45.1	1.13	3.38	1.250" Weldon	4
19N1A-2001181R01	2.000	2.640	2.90	44.1	1.13	3.38	1.250" Weldon	6

LSE324R045-S



Part Number	Application	Grades	IN4030	IN4040
LSE324R045-S	Multi-Purpose - 0.038" Chamfer			

HARDWARE



Screw

SM40-140-R0



Driver Handle

DS-A00T

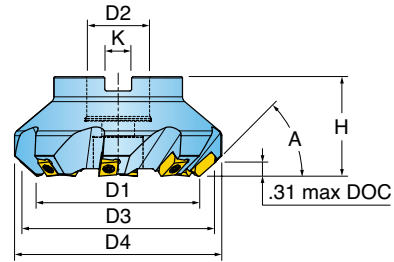


Screw Driver Blade

DS-T156B

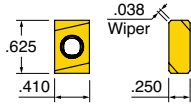
● = P ○ = M ● = K ● = N ● = S ○ = H

45° FACE MILL WITH 4 INDEXES



Cutter Number	D1 Effective Diameter	D3 Max. Dia.	D4 Body O.D.	A Angle	H Height	D2 Bore Dia.	K Keyway	Number of Inserts
9N6A-02R01	2.000	2.64	2.90	44.1	1.750	0.750	0.312	4
9N6A-02R02	2.000	2.64	2.90	44.1	1.750	1.000	0.375	6
9N6A-03R01	3.000	3.66	3.95	43.3	1.750	1.000	0.375	6
9N6A-04R01	4.000	4.67	4.95	42.9	2.375	1.500	0.625	8
9N6A-06R01	6.000	6.68	7.00	42.5	2.375	1.500	0.625	8

LSE324R045-S



Part Number	Application	Grades	IN4030	IN4040
LSE324R045-S	Multi-Purpose - 0.038" Chamfer			

HARDWARE				
	Screw	Retention Bolt	Driver Handle	Screw Driver Blade
9N6A-02R01	SM40-140-R0	SD-06-46	DS-A00T	DS-T156B
9N6A-02R02	SM40-140-R0	SD-08-46	DS-A00T	DS-T156B
9N6A-03R01	SM40-140-R0	SD-08-46	DS-A00T	DS-T156B
9N6A-04R01	SM40-140-R0	SD-12-82	DS-A00T	DS-T156B
9N6A-06R01	SM40-140-R0	SD12-01	DS-A00T	DS-T156B

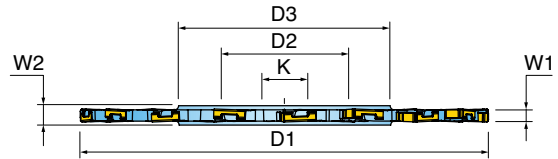
● = P ● = M ● = K ● = N ● = S ○ = H

Features & Benefits:

- Fastened-Up For Reliable Accuracy In a Thin Slotter
- Slotter Diameters From 1.500" to 8.000"
- Slotter Widths From .125" to .500"
- 4 Edge Economy (2RH + 2LH per Insert)
- Significant Advances in Durability, Accuracy & Rigidity


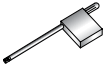


GOLD SLOT SERIES 3VJ4V (AXIAL DRIVE)

LIGHT - MEDIUM DUTY SLOTTERS



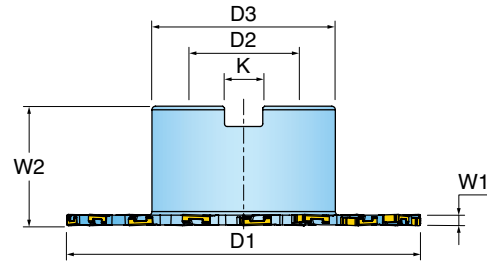
Cutter Number	W1 Cutter Width	D1 Nom. Dia.	D2 Bore Dia.	W2 Hub Width	D3 Hub Diameter	K Keyway	Total No. of Inserts	No. of Effective Inserts	Insert Series
3VJ4V-03012AF-01	0.125	3.000	1.000	0.375	1.56	0.250	10	5	IXH211
3VJ4V-04012AF-01	0.125	4.000	1.000	0.375	1.75	0.250	14	7	IXH211
3VJ4V-03015AF-01	0.156	3.000	1.000	0.375	1.56	0.250	10	5	IXH311
3VJ4V-04015AF-01	0.156	4.000	1.000	0.375	1.75	0.250	12	6	IXH311
3VJ4V-06015AG-01	0.156	6.000	1.250	0.375	1.87	0.312	18	9	IXH311
3VJ4V-03018AF-01	0.187	3.000	1.000	0.375	1.56	0.250	10	5	IXH312
3VJ4V-04018AF-01	0.187	4.000	1.000	0.375	1.75	0.250	12	6	IXH312
3VJ4V-05018AG-01	0.187	5.000	1.250	0.375	1.87	0.312	14	7	IXH312
3VJ4V-06018AG-01	0.187	6.000	1.250	0.375	1.87	0.312	18	9	IXH312
3VJ4V-04025AF-01	0.250	4.000	1.000	0.375	1.75	0.250	10	5	IXH412
3VJ4V-05025AF-01	0.250	5.000	1.000	0.375	1.87	0.250	12	6	IXH412
3VJ4V-06025AG-01	0.250	6.000	1.250	0.375	1.87	0.312	14	7	IXH412
3VJ4V-08025AH-01	0.250	8.000	1.500	0.375	2.75	0.375	18	9	IXH412
3VJ4V-04031AG-01	0.312	4.000	1.250	0.375	1.87	0.312	10	5	IXH413
3VJ4V-06031AG-01	0.312	6.000	1.250	0.375	1.87	0.312	14	7	IXH413
3VJ4V-08031AH-01	0.312	8.000	1.500	0.375	2.75	0.375	18	9	IXH413
3VJ4V-04037AG-01	0.375	4.000	1.250	0.375	1.87	0.312	10	5	IXH414
3VJ4V-06037AG-01	0.375	6.000	1.250	0.375	1.87	0.312	14	7	IXH414
3VJ4V-08037AH-01	0.375	8.000	1.500	0.375	2.75	0.375	18	9	IXH414
3VJ4V-04050AG-01	0.500	4.000	1.250	0.375	1.75	0.312	10	5	IXH415
3VJ4V-05050AH-01	0.500	5.000	1.500	0.375	2.25	0.375	12	6	IXH415
3VJ4V-06050AH-01	0.500	6.000	1.500	0.375	1.87	0.375	14	7	IXH415
3VJ4V-08050AK-01	0.500	8.000	2.000	0.375	3.07	0.500	14	7	IXH415

See Page 11 for insert options.

HARDWARE				
	Screw	Driver	Screw Driver Blade	Driver Handle
3VJ4V-03012AF-01	SM25-025-80	DS-T06F	-	-
3VJ4V-04012AF-01	SM25-025-80	DS-T06F	-	-
3VJ4V-03015AF-01	SM35-034-50	DS-T09W	-	-
3VJ4V-04015AF-01	SM35-034-50	DS-T09W	-	-
3VJ4V-06015AG-01	SM35-034-50	DS-T09W	-	-
3VJ4V-03018AF-01	SM35-042-50	DS-T09W	-	-
3VJ4V-04018AF-01	SM35-042-50	DS-T09W	-	-
3VJ4V-05018AG-01	SM35-042-50	DS-T09W	-	-
3VJ4V-06018AG-01	SM35-042-50	DS-T09W	-	-
3VJ4V-04025AF-01	SM40-055-50	-	DS-T156B	DS-A00T
3VJ4V-05025AF-01	SM40-055-50	-	DS-T156B	DS-A00T
3VJ4V-06025AG-01	SM40-055-50	-	DS-T156B	DS-A00T
3VJ4V-08025AH-01	SM40-055-50	-	DS-T156B	DS-A00T
3VJ4V-04031AG-01	SM40-070-50	-	DS-T156B	DS-A00T
3VJ4V-06031AG-01	SM40-070-50	-	DS-T156B	DS-A00T
3VJ4V-08031AH-01	SM40-070-50	-	DS-T156B	DS-A00T
3VJ4V-04037AG-01	SM40-080-50	-	DS-T156B	DS-A00T
3VJ4V-06037AG-01	SM40-080-50	-	DS-T156B	DS-A00T
3VJ4V-08037AH-01	SM40-080-50	-	DS-T156B	DS-A00T
3VJ4V-04050AG-01	SM40-100-00	-	DS-T156B	DS-A00T
3VJ4V-05050AH-01	SM40-100-00	-	DS-T156B	DS-A00T
3VJ4V-06050AH-01	SM40-100-00	-	DS-T156B	DS-A00T
3VJ4V-08050AK-01	SM40-100-00	-	DS-T156B	DS-A00T


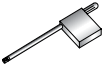



GOLD SLOT SERIES 3VJ4V (RADIAL DRIVE)

LIGHT - MEDIUM DUTY SLOTTERS



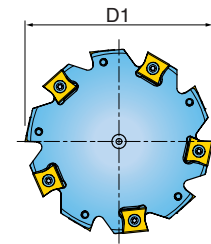
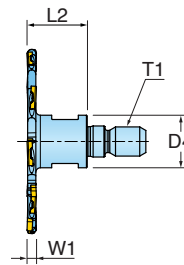
Cutter Number	W1 Cutter Width	D1 Nom. Dia.	D2 Bore Dia.	W2 Hub Width	D3 Hub Diameter	K Keyway	Total No. of Inserts	No. of Effective Inserts	Insert Series
3VJ4V-02012D1R01	0.125	2.500	0.750	1.375	1.18	0.312	8	4	IXH211
3VJ4V-03012D1R01	0.125	3.000	0.750	1.500	1.50	0.312	10	5	IXH211
3VJ4V-04012D3R01	0.125	4.000	1.000	1.500	1.75	0.375	14	7	IXH211
3VJ4V-02015D1R01	0.156	2.500	0.750	1.375	1.18	0.312	8	4	IXH311
3VJ4V-03015D1R01	0.156	3.000	0.750	1.500	1.50	0.312	10	5	IXH311
3VJ4V-04015D3R01	0.156	4.000	1.000	1.500	1.75	0.375	12	6	IXH311
3VJ4V-0601558R01	0.156	6.000	1.500	2.000	3.07	0.625	18	9	IXH311
3VJ4V-02018D1R01	0.187	2.500	0.750	1.375	1.18	0.312	8	4	IXH312
3VJ4V-03018D1R01	0.187	3.000	0.750	1.500	1.50	0.312	10	5	IXH312
3VJ4V-04018D3R01	0.187	4.000	1.000	1.500	1.75	0.375	12	6	IXH312
3VJ4V-05018D3R01	0.187	5.000	1.000	1.500	2.25	0.375	14	7	IXH312
3VJ4V-0601858R01	0.187	6.000	1.500	2.000	3.07	0.625	18	9	IXH312
3VJ4V-02025D1R01	0.250	2.500	0.750	1.500	1.18	0.312	6	3	IXH412
3VJ4V-03025D1R01	0.250	3.000	0.750	1.500	1.50	0.312	8	4	IXH412
3VJ4V-04025D3R01	0.250	4.000	1.000	1.500	1.75	0.375	10	5	IXH412
3VJ4V-05025D3R01	0.250	5.000	1.000	1.500	2.25	0.375	12	6	IXH412
3VJ4V-0602558R01	0.250	6.000	1.500	2.000	3.07	0.625	14	7	IXH412
3VJ4V-04031D3R01	0.312	4.000	1.000	1.500	1.75	0.375	10	5	IXH413
3VJ4V-0603158R01	0.312	6.000	1.500	2.000	3.07	0.625	14	7	IXH413
3VJ4V-0803158R01	0.312	8.000	1.500	2.000	3.80	0.625	18	9	IXH413
3VJ4V-04037D3R01	0.375	4.000	1.000	1.500	1.75	0.375	10	5	IXH414
3VJ4V-05037D3R01	0.375	5.000	1.000	1.500	2.25	0.375	12	6	IXH414
3VJ4V-0603758R01	0.375	6.000	1.500	2.000	3.07	0.625	14	7	IXH414
3VJ4V-0803758R01	0.375	8.000	1.500	2.000	3.80	0.625	18	9	IXH414
3VJ4V-04050D3R01	0.500	4.000	1.000	1.500	1.75	0.375	10	5	IXH415
3VJ4V-05050D3R01	0.500	5.000	1.000	1.500	2.25	0.375	12	6	IXH415
3VJ4V-0605058R01	0.500	6.000	1.500	2.000	3.07	0.625	14	7	IXH415
3VJ4V-0805058R01	0.500	8.000	1.500	2.000	3.80	0.625	18	9	IXH415

See Page 11 for insert options.

HARDWARE					
	Screw	Driver	Retention Bolt	Screw Driver Blade	Driver Handle
3VJ4V-02012D1R01	SM25-025-80	DS-T06F	SD-06-46	-	-
3VJ4V-03012D1R01	SM25-025-80	DS-T06F	SD-06-46	-	-
3VJ4V-04012D3R01	SM25-025-80	DS-T06F	SD-08-46	-	-
3VJ4V-02015D1R01	SM35-034-50	DS-T09W	SD-06-46	-	-
3VJ4V-03015D1R01	SM35-034-50	DS-T09W	SD-06-46	-	-
3VJ4V-04015D3R01	SM35-034-50	DS-T09W	SD-08-46	-	-
3VJ4V-0601558R01	SM35-034-50	DS-T09W	-	-	-
3VJ4V-02018D1R01	SM35-042-50	DS-T09W	SD-06-46	-	-
3VJ4V-03018D1R01	SM35-042-50	DS-T09W	SD-06-46	-	-
3VJ4V-04018D3R01	SM35-042-50	DS-T09W	SD-08-46	-	-
3VJ4V-05018D3R01	SM35-042-50	DS-T09W	SD-08-46	-	-
3VJ4V-0601858R01	SM35-042-50	DS-T09W	-	-	-
3VJ4V-02025D1R01	SM40-055-50	-	SD-06-46	DS-T156B	DS-A00T
3VJ4V-03025D1R01	SM40-055-50	-	SD-06-46	DS-T156B	DS-A00T
3VJ4V-04025D3R01	SM40-055-50	-	SD-08-46	DS-T156B	DS-A00T
3VJ4V-05025D3R01	SM40-055-50	-	-	DS-T156B	DS-A00T
3VJ4V-0602558R01	SM40-055-50	-	-	DS-T156B	DS-A00T
3VJ4V-04031D3R01	SM40-070-50	-	SD-08-46	DS-T156B	DS-A00T
3VJ4V-0603158R01	SM40-070-50	-	-	DS-T156B	DS-A00T
3VJ4V-0803158R01	SM40-070-50	-	-	DS-T156B	DS-A00T
3VJ4V-04037D3R01	SM40-080-50	-	SD-08-46	DS-T156B	DS-A00T
3VJ4V-05037D3R01	SM40-080-50	-	SD-08-46	DS-T156B	DS-A00T
3VJ4V-0603758R01	SM40-080-50	-	-	DS-T156B	DS-A00T
3VJ4V-0803758R01	SM40-080-50	-	-	DS-T156B	DS-A00T
3VJ4V-04050D3R01	SM40-100-00	-	SD-08-46	DS-T156B	DS-A00T
3VJ4V-05050D3R01	SM40-100-00	-	SD-08-46	DS-T156B	DS-A00T
3VJ4V-0605058R01	SM40-100-00	-	-	DS-T156B	DS-A00T
3VJ4V-0805058R01	SM40-100-00	-	-	DS-T156B	DS-A00T

GOLD SLOT SERIES 3VJ4V (TOP-ON DRIVE)

LIGHT - MEDIUM DUTY SLOTTERS



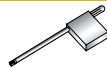
Cutter Number	D1 Nom. Diam.	W Width of Cut	L1 Exten.	T1 Thread Size	Wrench Size	D4 Neck Dia.	Total No. of Inserts	No. of Effective Inserts	Insert Series
3VJ4V-01512X5R01	1.500	0.125	0.80	M08	10mm	0.50	6	3	IXH211
3VJ4V-02012X6R01	2.000	0.125	0.80	M10	15mm	0.70	8	4	IXH211
3VJ4V-02512X6R01	2.500	0.125	0.80	M10	15mm	0.70	10	5	IXH211
3VJ4V-02015X6R01	2.000	0.156	1.00	M10	15mm	0.70	6	3	IXH311
3VJ4V-02515X6R01	2.500	0.156	1.00	M10	15mm	0.70	8	4	IXH311
3VJ4V-02018X6R01	2.000	0.187	1.20	M10	15mm	0.70	6	3	IXH312
3VJ4V-02518X6R01	2.500	0.187	1.20	M10	15mm	0.70	8	4	IXH312
3VJ4V-02525X6R01	2.500	0.250	1.40	M10	15mm	0.70	10	5	IXH412

See Page 11 for insert options.

HARDWARE



Screw



Driver



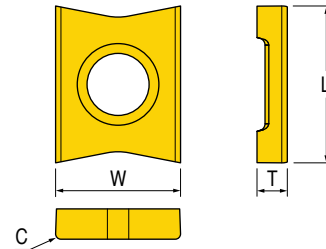
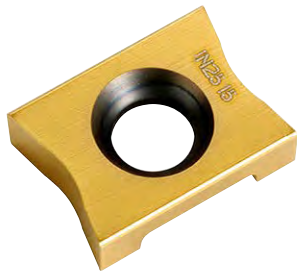
Screw Driver Blade



Driver Handle

Cutter Number	Screw	Driver	Screw Driver Blade	Driver Handle
3VJ4V-01512X5R01	SM25-025-80	DS-T06F	-	-
3VJ4V-02012X6R01	SM25-025-80	DS-T06F	-	-
3VJ4V-02512X6R01	SM25-025-80	DS-T06F	-	-
3VJ4V-02015X6R01	SM35-034-50	DS-T09W	-	-
3VJ4V-02515X6R01	SM35-034-50	DS-T09W	-	-
3VJ4V-02018X6R01	SM35-042-50	DS-T09W	-	-
3VJ4V-02518X6R01	SM35-042-50	DS-T09W	-	-
3VJ4V-02525X6R01	SM40-055-50	-	DS-T156B	DS-A00T

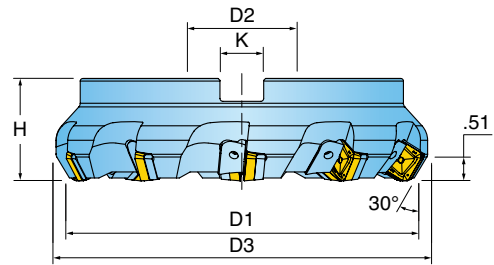
MILLING INSERT



Part Number	L Length	W Width	T Thickness	C Corner	Hand	Grades	IN05S	IN2530	IN2535	IN4005	IN4015	IN4030
IXH211-G01	0.330	0.310	0.070	0.015 R	Neutral				●	●		●
IXH211-G01-P	0.330	0.310	0.070	0.015 R	Neutral	●						
IXH311-G01	0.440	0.350	0.085	0.015 R	Neutral			●		●	●	●
IXH311-G01-P	0.440	0.350	0.085	0.015 R	Neutral	●						
IXH311-G02	0.440	0.350	0.085	0.031 R	Neutral			●	●			●
IXH311-G02-P	0.440	0.350	0.085	0.031 R	Neutral	●						
IXH312-G01	0.468	0.350	0.124	0.015 R	Neutral			●	●	●	●	●
IXH312-G01-P	0.468	0.350	0.124	0.015 R	Neutral	●						
IXH312-G02	0.468	0.350	0.124	0.031 R	Neutral			●	●			●
IXH312-G02-P	0.440	0.350	0.085	0.031 R	Neutral	●						
IXH412-G01	0.550	0.420	0.162	0.015 R	Neutral			●	●	●	●	●
IXH412-G01-P	0.550	0.420	0.162	0.015 R	Neutral	●						
IXH412-G02	0.550	0.420	0.162	0.031 R	Neutral			●	●	●	●	●
IXH412-G02-P	0.550	0.420	0.162	0.031 R	Neutral	●						
IXH412-G03	0.550	0.420	0.162	0.062 R	Neutral				●			●
IXH413-G01	0.551	0.420	0.200	0.015 R	Neutral			●	●	●	●	●
IXH413-G01-P	0.551	0.420	0.200	0.015 R	Neutral	●						
IXH413-G02	0.551	0.420	0.200	0.031 R	Neutral			●	●			●
IXH413-G02-P	0.551	0.420	0.200	0.031 R	Neutral	●						
IXH414-G01	0.551	0.426	0.240	0.015 R	Neutral			●		●		●
IXH414-G01-P	0.551	0.426	0.240	0.015 R	Neutral	●						
IXH414-G02	0.551	0.426	0.240	0.031 R	Neutral				●			●
IXH414-G02-P	0.551	0.426	0.240	0.031 R	Neutral	●						
IXH414-G03	0.551	0.426	0.240	0.062 R	Neutral							●
IXH415-G01	0.555	0.428	0.300	0.015 R	Neutral					●		●
IXH415-G01-P	0.555	0.428	0.300	0.015 R	Neutral	●						
IXH415-G02	0.555	0.428	0.300	0.031 R	Neutral				●			●
IXH415-G02-P	0.555	0.428	0.300	0.031 R	Neutral	●						
IXH415-G03	0.555	0.428	0.300	0.062 R	Neutral					●		●
IXH415-G03-P	0.555	0.428	0.300	0.062 R	Neutral	●						

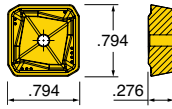
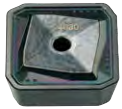
● = P ○ = M ● = K ● = N ● = S ○ = H

HEAVY DUTY 60° SHEAR CLEAR FACE MILL RH

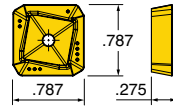


Cutter Number	D1 Effective Diameter	D3 Overall Diameter	Number of Inserts	H Height	D2 Bore Dia.	K Keyway	Bolt Circle
5C2M-04R01	4.000	4.67	6	2.500	1.500	0.625	NA
5C2M-06R01	6.000	6.67	6	2.375	1.500	0.625	NA
5C2M-06R02	6.000	6.67	8	2.375	1.500	0.625	NA
5C2M-08R01	8.000	8.67	8	2.375	2.500	1.000	4.00
5C2M-08R02	8.000	8.67	10	2.375	2.500	1.000	4.00
5C2M-10R01	10.000	10.67	10	2.375	2.500	1.000	4.00
5C2M-10R02	10.000	10.67	12	2.375	2.500	1.000	4.00, 7.00
5C2M-12R01	12.000	12.67	12	2.375	2.500	1.000	4.00, 4.75, 7.00
5C2M-12R02	12.000	12.67	14	2.375	2.500	1.000	4.00, 4.75, 7.00
5C2M-14R01	14.000	14.67	14	2.375	2.500	1.000	4.00, 4.75, 7.00
5C2M-14R02	14.000	14.67	16	2.375	2.500	1.000	4.00, 4.75, 7.00

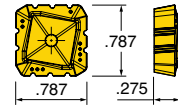
SPEN2007DPTR-MR



SPKN2007DPTR-HD



ZPKN2007DPTR-HD



Part Number	Application	Grades	IN4005	IN4015	IN4030	IN4040
SPEN2007DPTR-MR	Multi-Purpose - 0.090" Wiper w/Radius					
SPKN2007DPTR-HD	Heavy-Duty - 0.090" Wiper w/Radius					
ZPKN2007DPTR-HD	Serrated - 0.090" Wiper w/Radius					

HARDWARE



Screw

SM50-130-R0



Driver

DS-H04T



Wedge

WSC8R-21



Seat

PAR0748



Wedge Screw

TS80200W



Driver Handle

DS-A00T

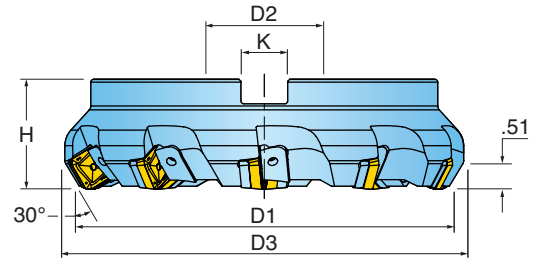


Screw Driver Blade

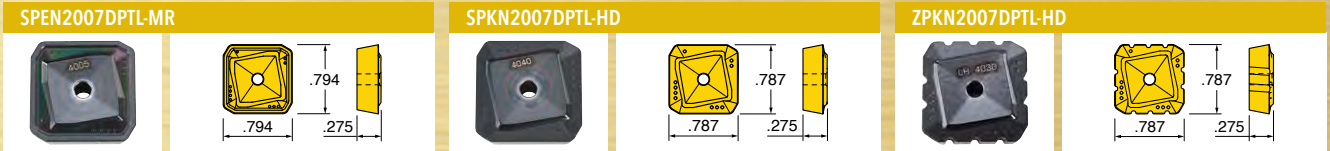
DS-T206B

● = P ● = M ● = K ● = N ● = S ○ = H

HEAVY DUTY 60° SHEAR CLEAR FACE MILL LH



Cutter Number	D1 Effective Diameter	D3 Overall Diameter	Number of Inserts	H Height	D2 Bore Dia.	K Keyway	Bolt Circle
5C2M-08L01	8.000	8.67	8	2.375	2.500	1.000	4.00
5C2M-08L02	8.000	8.67	10	2.375	2.500	1.000	4.00
5C2M-10L01	10.000	10.67	10	2.375	2.500	1.000	4.00
5C2M-10L02	10.000	10.67	12	2.375	2.500	1.000	4.00, 7.00
5C2M-12L01	12.000	12.67	12	2.375	2.500	1.000	4.00, 4.75, 7.00
5C2M-12L02	12.000	12.67	14	2.375	2.500	1.000	4.00, 4.75, 7.00
5C2M-14L01	14.000	14.67	14	2.375	2.500	1.000	4.00, 4.75, 7.00
5C2M-14L02	14.000	14.67	16	2.375	2.500	1.000	4.00, 4.75, 7.00



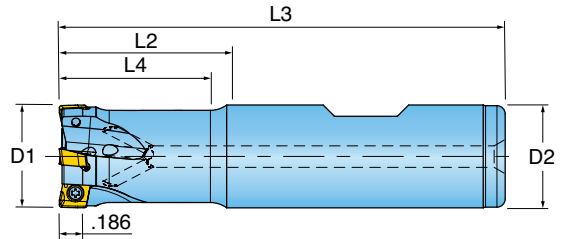
Part Number	Application	Grades				
			IN4005	IN4015	IN4030	IN4040
SPEN2007DPTL-MR	Multi-Purpose - 0.090" Wiper w/Radius					
SPKN2007DPTL-HD	Heavy-Duty - 0.090" Wiper w/Radius					
ZPKN2007DPTL-HD	Serrated - 0.090" Wiper w/Radius					

HARDWARE							
	Screw	Driver	Wedge	Seat	Wedge Screw	Driver Handle	Screw Driver Blade
	SM50-130-R0	DS-H04T	WSC8L-21	PAL0748	TS80200W	DS-A00T	DS-T206B

● = P ● = M ● = K ● = N ● = S ○ = H

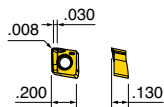
DIPOSOTETRA™ SERIES 1TJ1C (5MM INSERT)

90° END MILL WITH 2 INDEXES

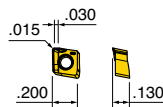


Cutter Number	D1 Nominal Diameter	L2 Extension Length	L3 Overall Length	L4 Projection Length	D2 Shank Size/Style	Number of Inserts	Ramp Angle
1TJ1C-05012S4R01	0.500	1.22	3.00	0.75	.500" Cylind.	2	6.9
1TJ1C-0600779R01	0.625	0.75	2.66	0.72	.625" Weldon	3	4.4
1TJ1C-06020S6R01	0.625	2.09	4.00	1.25	.625" Cylind.	3	4.4
1TJ1C-0701284R01	0.750	1.25	3.25	1.22	.750" Weldon	4	3.3
1TJ1C-07030S7R01	0.750	3.00	5.00	1.25	.750" Cylind.	4	3.3
1TJ1C-1001780R01	1.000	1.75	4.00	1.72	1.000" Weldon	6	2.2
1TJ1C-1001784R01	1.000	1.75	3.75	1.75	.750" Weldon	5	2.2
1TJ1C-10037S1R01	1.000	3.75	6.00	1.25	1.000" Cylind.	5	2.2

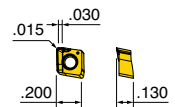
ENHU050302R



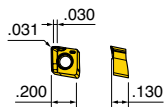
ENHU050304R



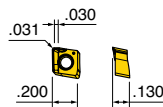
ENHU050304R-PH



ENHU050308R



ENHU050308R-PH



Part Number	Application	Grades	IN2504	IN2505	IN2510	IN2530	IN6515	IN7035
			ENHU050302R	Multi-Purpose - 0.008" R		●		●
ENHU050304R	Multi-Purpose - 0.015" R	●	●	●	●	●		
ENHU050304R-PH	SS/Hi-Temp/Ti - 0.015" R				●		●	
ENHU050308R	Multi-Purpose - 0.031" R	●	●	●	●	●	●	
ENHU050308R-PH	SS/Hi-Temp/Ti - 0.031" R		●		●		●	

HARDWARE



Insert Screw



Driver



Torque Driver Handle (Optional)



Torque Driver Blade (Optional)

SM20-043-00

DS-TP06S-NEU

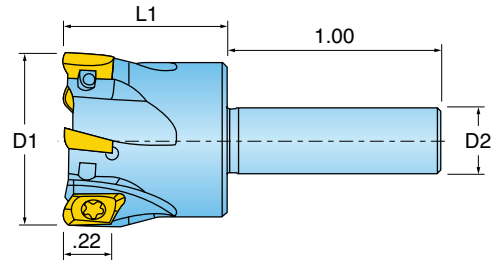
DTN005S

DS-TP06TB

● = P ○ = M ● = K ● = N ● = S ○ = H

DIPOSO TETRA™ SERIES 1TJ1C (5MM INSERT)

90° END MILL WITH 2 INDEXES (SHANK FOR LIVE TOOLING & SWISS)



Cutter Number	D1 Nominal Diameter	L1 Extension Length	L2 Overall Length	D2 Shank Size/Style	Number of Inserts	Ramp Angle
1TJ1C-0700777R01	0.750	0.75	1.75	.375" Cylind.	4	3.3
1TJ1C-1000777R01	1.000	0.75	1.75	.375" Cylind.	5	2.2
1TJ1C-15007S4R01	1.500	0.75	1.75	.500" Cylind.	7	1.3
1TJ1C-20007S6R01	2.000	0.75	1.75	.625" Cylind.	7	.9

ENHU050302R 	ENHU050304R 	ENHU050304R-PH
ENHU050308R 	ENHU050308R-PH 	

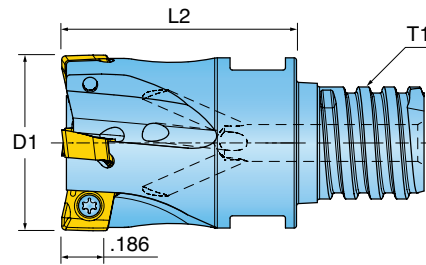
Part Number	Application	Grades	IN2504	IN2505	IN2510	IN2530	IN6515	IN7035
ENHU050302R	Multi-Purpose - 0.008" R			●		●		
ENHU050304R	Multi-Purpose - 0.015" R		●	●	●	●	●	
ENHU050304R-PH	SS/Hi-Temp/Ti - 0.015" R					●		●
ENHU050308R	Multi-Purpose - 0.031" R		●	●	●	●	●	
ENHU050308R-PH	SS/Hi-Temp/Ti - 0.031" R			●		●		●

HARDWARE				
	SM20-043-00	DS-TP06S-NEU	DTN005S	DS-TP06TB

● = P ○ = M ● = K ● = N ● = S ○ = H

DIPOSOTETRA™ SERIES 1TJ1C (5MM INSERT)

90° END MILL WITH 2 INDEXES (CHIP-SURFER STYLE)



Cutter Number	T1 Thread Size	D1 Nominal Diameter	Number of Inserts	L2 Extension Length	Ramp Angle
1TJ1C-05006T8R01	T08	0.500	2	0.65	6.9
1TJ1C-06008TRR01	T10	0.625	3	0.80	4.4
1TJ1C-07007T8R01	T08	0.750	4	0.75	3.3
1TJ1C-07010TSR01	T12	0.750	4	1.00	3.3
1TJ1C-10007T8R01	T08	1.000	5	0.75	2.2
1TJ1C-10012TUR01	T15	1.000	5	1.25	2.2

ENHU050302R	ENHU050304R	ENHU050304R-PH
ENHU050308R	ENHU050308R-PH	

Part Number	Application	Grades	IN2504	IN2505	IN2510	IN2530	IN6515	IN7035
			ENHU050302R	Multi-Purpose - 0.008" R				
ENHU050304R	Multi-Purpose - 0.015" R							
ENHU050304R-PH	SS/Hi-Temp/Ti - 0.015" R							
ENHU050308R	Multi-Purpose - 0.031" R							
ENHU050308R-PH	SS/Hi-Temp/Ti - 0.031" R							

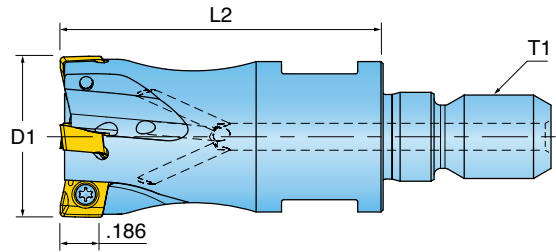
HARDWARE						
	Insert Screw	Driver	Thin Wrench	Torque Wrench (Optional)	Torque Driver Handle (Optional)	Torque Driver Blade (Optional)
1TJ1C-05006T8R01	SM20-043-00	DS-TP06S-NEU	WS-0030	DT-130-10	DTN005S	DS-TP06TB
1TJ1C-06008TRR01	SM20-043-00	DS-TP06S-NEU	WS-0044	DT-250-13	DTN005S	DS-TP06TB
1TJ1C-07007T8R01	SM20-043-00	DS-TP06S-NEU	WS-0030	-	DTN005S	DS-TP06TB
1TJ1C-07010TSR01	SM20-043-00	DS-TP06S-NEU	WS-0059	DT-250-16	DTN005S	DS-TP06TB
1TJ1C-10007T8R01	SM20-043-00	DS-TP06S-NEU	WS-0059	-	DTN005S	DS-TP06TB
1TJ1C-10012TUR01	SM20-043-00	DS-TP06S-NEU	WS-0061	-	DTN005S	DS-TP06TB

● = P ○ = M ● = K ● = N ● = S ○ = H

FINE GOLD

DIPOSOTETRA™ SERIES 1TJ1C (5MM INSERT)

90° END MILL WITH 2 INDEXES (TOP-ON STYLE)



Cutter Number	D1 Nom. Dia.	T1 Adaption	L2 Extension Length	Number of Inserts	Wrench Size	Ramp Angle
1TJ1C-06010X5R01	0.625	M8	1.00	3	10mm	4.4
1TJ1C-07015X6R01	0.750	M10	1.50	4	15mm	3.3
1TJ1C-10015X7R01	1.000	M12	1.50	5	17mm	2.1

ENHU050302R 	ENHU050304R 	ENHU050304R-PH
ENHU050308R 	ENHU050308R-PH 	

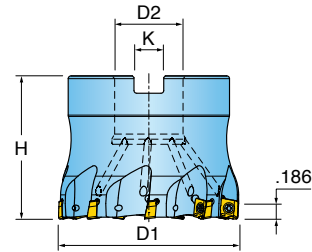
Part Number	Application	Grades	IN2504	IN2505	IN2510	IN2530	IN6515	IN7035
ENHU050302R	Multi-Purpose - 0.008" R			●		●		
ENHU050304R	Multi-Purpose - 0.015" R		●	●	●	●	●	
ENHU050304R-PH	SS/Hi-Temp/Ti - 0.015" R					●		●
ENHU050308R	Multi-Purpose - 0.031" R		●	●	●	●	●	
ENHU050308R-PH	SS/Hi-Temp/Ti - 0.031" R			●		●		●

HARDWARE					
	Insert Screw	Driver	Wrench (Optional)	Torque Driver Handle (Optional)	Torque Driver Blade (Optional)
1TJ1C-06010X5R01	SM20-043-00	DS-TP06S-NEU	610MM	DTN005S	DS-TP06TB
1TJ1C-07015X6R01	SM20-043-00	DS-TP06S-NEU	615MM	DTN005S	DS-TP06TB
1TJ1C-10015X7R01	SM20-043-00	DS-TP06S-NEU	617MM	DTN005S	DS-TP06TB

● = P ● = M ● = K ● = N ● = S ○ = H

DIPOSOTETRA™ SERIES TJ1C (5MM INSERT)

90° FACE MILL WITH 2 INDEXES



Cutter Number	D1 Nominal Diameter	Number of Inserts	H Height	D2 Bore Dia.	K Keyway	Ramp Angle
TJ1C-15R01	1.500	8	1.570	0.500	0.250	1.3
TJ1C-20R01	2.000	9	1.570	0.750	0.312	.9

ENHU050302R	ENHU050304R	ENHU050304R-PH
ENHU050308R	ENHU050308R-PH	

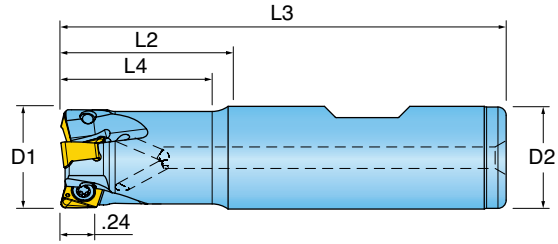
Part Number	Application	Grades	IN2504	IN2505	IN2510	IN2530	IN6515	IN7035
			ENHU050302R	Multi-Purpose - 0.008" R		●		●
ENHU050304R	Multi-Purpose - 0.015" R	●	●	●	●	●		
ENHU050304R-PH	SS/Hi-Temp/Ti - 0.015" R				●		●	
ENHU050308R	Multi-Purpose - 0.031" R	●	●	●	●	●		
ENHU050308R-PH	SS/Hi-Temp/Ti - 0.031" R		●		●		●	

HARDWARE						
	Insert Screw	Driver	Retention Bolt	Torque Driver Handle (Optional)	Torque Driver Blade (Optional)	Coolant Bolt (Optional)
TJ1C-15R01	SM20-043-00	DS-TP06S-NEU	SD-04-46	DTN005S	DS-TP06TB	-
TJ1C-20R01	SM20-043-00	DS-TP06S-NEU	SD-06-46	DTN005S	DS-TP06TB	SD-06-89

● = P ○ = M ● = K ● = N ● = S ○ = H

DIPOSOTETRA™ SERIES 1TJ1D (6MM INSERT)

90° ROUGH & RAMP END MILL WITH 4 INDEXES



Cutter Number	D1 Nominal Diameter	L2 Extension Length	L3 Overall Length	L4 Projection Length	D2 Shank Size/Style	Number of Inserts	Ramp Angle
1TJ1D-0600779R01	0.625	0.75	2.66	0.72	.625" Weldon	2	3.1
1TJ1D-06020S6R01	0.625	2.09	4.00	1.25	.625" Cylind.	2	3.1
1TJ1D-0701284R01	0.750	1.25	3.25	1.20	.750" Weldon	3	4.1
1TJ1D-07030S7R01	0.750	3.00	5.00	1.25	.750" Cylind.	3	4.1
1TJ1D-1001780R01	1.000	1.75	4.00	1.72	1.000" Weldon	4	4.8
1TJ1D-1001784R01	1.000	1.75	3.75	1.72	.750" Weldon	4	4.8
1TJ1D-10037S1R01	1.000	3.75	6.00	1.25	1.000" Cylind.	4	4.8
1TJ1D-1201781R01	1.250	1.75	4.00	1.72	1.250" Weldon	5	3.6
1TJ1D-1201784R01	1.250	1.75	3.75	1.75	.750" Weldon	5	3.6
1TJ1D-12042S9R01	1.250	4.25	6.50	1.25	1.250" Cylind.	5	3.6
1TJ1D-1501784R01	1.500	1.75	3.75	1.75	.750" Weldon	6	2.8
1TJ1D-1502281R01	1.500	2.25	4.50	2.25	1.250" Weldon	6	2.8
1TJ1D-15047S5R01	1.500	4.75	7.00	1.25	1.500" Cylind.	6	2.8

MNHU060308R 	MNHU060308R-PH 	MNHU060316R
MNHU060316R-PH 		

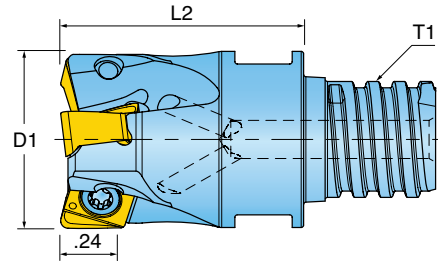
Part Number	Application	Grades	IN2035	IN2505	IN2510	IN2530	IN6515
MNHU060308R	Multi-Purpose - 0.031" R						
MNHU060308R-PH	SS/Hi-Temp/Ti - 0.031" R						
MNHU060316R	Multi-Purpose - 0.062" R						
MNHU060316R-PH	SS/Hi-Temp/Ti - 0.062" R						

HARDWARE				
	Screw	Screw Driver	Torque Driver Handle (Optional)	Driver Bit (Optional)
	SM30-068-30	DS-T08W	DTQ-18W	DS-T08QB

● = P ○ = M ● = K ● = N ● = S ○ = H

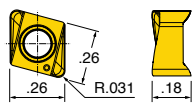
DIPOSOTETRA™ SERIES 1TJ1D (6MM INSERT)

90° ROUGH & RAMP END MILL WITH 4 INDEXES (CHIP SURFER STYLE)

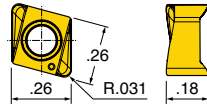


Cutter Number	T1 Thread Size	D1 Nominal Diameter	# Effective	L2 Extension Length	Ramp Angle
1TJ1D-06008TRR01	T10	0.625	2	0.80	3.1
1TJ1D-07010TSR01	T12	0.750	3	1.00	4.1
1TJ1D-10012TUR01	T15	1.000	4	1.25	4.8

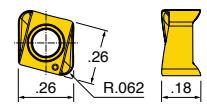
MNHU060308R



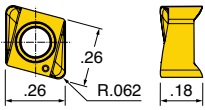
MNHU060308R-PH



MNHU060316R



MNHU060316R-PH

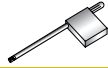


Part Number	Application	Grades	IN2035	IN2505	IN2510	IN2530	IN6515
MNHU060308R	Multi-Purpose - 0.031" R			●	●	●	●
MNHU060308R-PH	SS/Hi-Temp/Ti - 0.031" R		●	●	●	●	●
MNHU060316R	Multi-Purpose - 0.062" R			●	●	●	●
MNHU060316R-PH	SS/Hi-Temp/Ti - 0.062" R		●	●	●	●	●

HARDWARE



Screw



Screw Driver



Thin Wrench



Torque Wrench (Optional)



Torque Driver Handle (Optional)



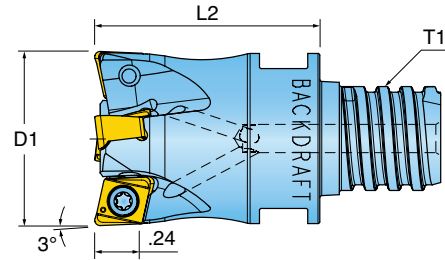
Driver Bit (Optional)

1TJ1D-06008TRR01	SM30-068-30	DS-T08W	WS-0044	DT-250-13	DTQ-18W	DS-T08QB
1TJ1D-07010TSR01	SM30-068-30	DS-T08W	WS-0059	DT-250-16	DTQ-18W	DS-T08QB
1TJ1D-10012TUR01	SM30-068-30	DS-T08W	WS-0061	-	DTQ-18W	DS-T08QB

● = P ○ = M ● = K ● = N ● = S ○ = H

DIPOSOTETRA™ SERIES 1TV1D (6MM INSERT)

BACKDRAFT ROUGH & FINISH END MILL WITH 4 INDEXES (CHIP SURFER STYLE)



Cutter Number	T1 Thread Size	D1 Nominal Diameter	# Effective	L2 Extension Length	Ramp Angle
1TV1D-07010TSR02	T12	0.750	3	1.00	4.7
1TV1D-10012TUR02	T15	1.000	4	1.25	3.9

Recommend .020" max axial step down on straight wall finish applications. Well suited for long reach applications.

MNHU060308R	MNHU060308R-PH	MNHU060316R
MNHU060316R-PH		

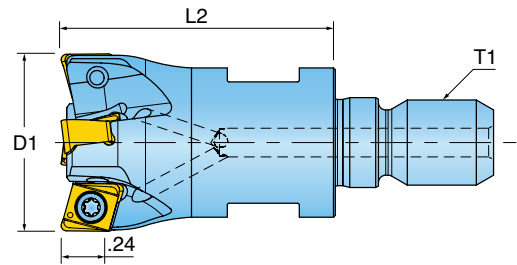
Part Number	Application	Grades	IN2035	IN2505	IN2510	IN2530	IN6515
MNHU060308R	Multi-Purpose - 0.031" R						
MNHU060308R-PH	SS/Hi-Temp/Ti - 0.031" R						
MNHU060316R	Multi-Purpose - 0.062" R						
MNHU060316R-PH	SS/Hi-Temp/Ti - 0.062" R						

HARDWARE						
	Screw	Screw Driver	Thin Wrench	Torque Wrench (Optional)	Torque Driver Handle (Optional)	Driver Bit (Optional)
1TV1D-07010TSR02	SM30-068-30	DS-T08W	WS-0059	DT-250-16	DTQ-18W	DS-T08QB
1TV1D-10012TUR02	SM30-068-30	DS-T08W	WS-0061	-	DTQ-18W	DS-T08QB

● = P ○ = M ● = K ● = N ● = S ○ = H

DIPOSOTETRA™ SERIES 1TJ1D (6MM INSERT)

90° ROUGH & RAMP END MILL WITH 4 INDEXES (TOPON STYLE)



Cutter Number	D1 Nom. Dia.	T1 Adaption	L2 Extension Length	Number of Inserts	Wrench Size	Ramp Angle
1TJ1D-07015X6R01	0.750	M10	1.50	3	15mm	4.1
1TJ1D-10015X7R01	1.000	M12	1.50	4	17mm	4.8
1TJ1D-12017X8R01	1.250	M16	1.75	5	22mm	3.6
1TJ1D-15017X8R01	1.500	M16	1.75	6	22mm	2.8

MNHU060308R	MNHU060308R-PH	MNHU060316R

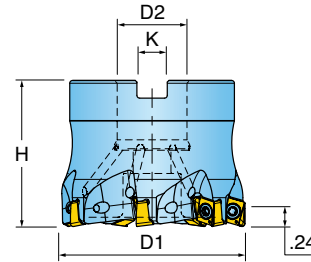
Part Number	Application	Grades				
		IN2035	IN2505	IN2510	IN2530	IN6515
MNHU060308R	Multi-Purpose - 0.031" R					
MNHU060308R-PH	SS/Hi-Temp/Ti - 0.031" R					
MNHU060316R	Multi-Purpose - 0.062" R					
MNHU060316R-PH	SS/Hi-Temp/Ti - 0.062" R					

HARDWARE					
	Screw	Screw Driver	Wrench (Optional)	Torque Driver Handle (Optional)	Driver Bit (Optional)
1TJ1D-07015X6R01	SM30-068-30	DS-T08W	615MM	DTQ-18W	DS-T08QB
1TJ1D-10015X7R01	SM30-068-30	DS-T08W	617MM	DTQ-18W	DS-T08QB
1TJ1D-12017X8R01	SM30-068-30	DS-T08W	622MM	DTQ-18W	DS-T08QB
1TJ1D-15017X8R01	SM30-068-30	DS-T08W	622MM	DTQ-18W	DS-T08QB

● = P ○ = M ● = K ● = N ● = S ○ = H

DIPOSO TETRA™ SERIES TJ1D (6MM INSERT)

90° ROUGH & RAMP FACE MILL WITH 4 INDEXES



Cutter Number	D1 Nominal Diameter	Number of Inserts	H Height	D2 Bore Dia.	K Keyway	Ramp Angle
TJ1D-15R01	1.500	6	1.570	0.500	0.250	2.8
TJ1D-20R01	2.000	7	1.570	0.750	0.312	2.0

MNHU060308R	MNHU060308R-PH	MNHU060316R
MNHU060316R-PH		

Part Number	Application	Grades	IN2035	IN2505	IN2510	IN2530	IN6515
MNHU060308R	Multi-Purpose - 0.031" R						
MNHU060308R-PH	SS/Hi-Temp/Ti - 0.031" R						
MNHU060316R	Multi-Purpose - 0.062" R						
MNHU060316R-PH	SS/Hi-Temp/Ti - 0.062" R						

HARDWARE						
	Screw	Retention Bolt	Screw Driver	Torque Driver Handle (Optional)	Driver Bit (Optional)	Coolant Bolt (Optional)
TJ1D-15R01	SM30-068-30	SD-04-46	DS-T08W	DTQ-18W	DS-T08QB	-
TJ1D-20R01	SM30-068-30	SD-06-46	DS-T08W	DTQ-18W	DS-T08QB	SD-06-89

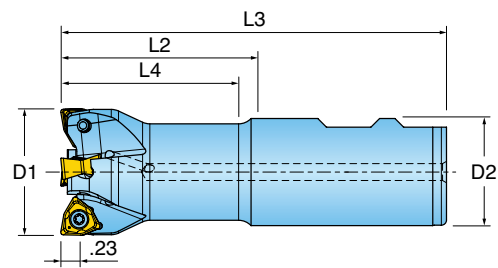
● = P ● = M ● = K ● = N ● = S ○ = H

Features & Benefits:

- Economical and free-cutting 90 degree shoulder milling geometry
- 2-side technology applied with 6 cutting edges (3+3)
- Aggressive roughing and ramping capabilities at .230 depth of cut
- Equipped with fine pitched densities for high productivity machining
- Surface finishes between 63 - 125+ Ra (dependant upon corner radius & feed rate)

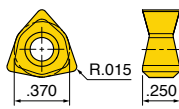
DIPOS HEXA™ SERIES 1WJ1F (6MM INSERT)

90° ROUGH & RAMP END MILL WITH 6 INDEXES

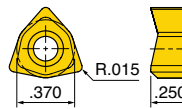


Cutter Number	D1 Nominal Diameter	L2 Extension Length	L3 Overall Length	L4 Projection Length	D2 Shank Size/Style	Number of Inserts	Ramp Angle
1WJ1F-1001780R01	1.000	1.75	4.00	1.72	1.000" Weldon	2	2.7
1WJ1F-1202281R01	1.250	2.25	4.50	2.22	1.250" Weldon	3	2.0
1WJ1F-1502281R01	1.500	2.25	4.50	2.22	1.250" Weldon	4	1.6

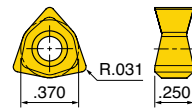
WNCU060608FN-P



WNMU060604N



WNMU060608N



Part Number	Application	Grades				
		IN10K	IN2504	IN2505	IN2530	IN6535
WNCU060608FN-P	Aluminum - 0.031" R	●				
WNMU060604N	Multi-Purpose - 0.015" R		●	●	●	●
WNMU060608N	Multi-Purpose - 0.031" R	●	●	●	●	●

HARDWARE



Screw

SM35-088-60



Driver Handle

DS-A00T



Screw Driver Blade

DS-T106B



Driver Bit (Optional)

DS-T10B



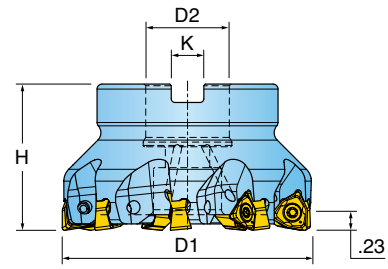
Torque Driver Handle (Optional)

DT-28-01

● = P ○ = M ● = K ● = N ● = S ○ = H

DIPOS[®]HEXA™ SERIES WJ5F (6MM INSERT)

90° ROUGH & RAMP FACE MILL WITH 6 INDEXES



Cutter Number	D1 Nominal Diameter	Number of Inserts	H Height	D2 Bore Dia.	K Keyway	Ramp Angle
WJ5F-20R01	2.000	6	1.570	0.750	0.312	1.4
WJ5F-25R01	2.500	7	1.570	0.750	0.312	1.8
WJ5F-30R01	3.000	9	1.750	1.000	0.375	2.1
WJ5F-40R01	4.000	11	2.375	1.500	0.625	2.2

Part Number	Application	Grades	IN10K	IN2504	IN2505	IN2530	IN6535
WNCU060608FN-P	Aluminum - 0.031" R		●				
WNMU060604N	Multi-Purpose - 0.015" R			●	●	●	●
WNMU060608N	Multi-Purpose - 0.031" R		●	●	●	●	●

HARDWARE							
	Screw	Retention Bolt	Coolant Bolt (Optional)	Driver Handle	Screw Driver Blade	Driver Bit (Optional)	Torque Driver Handle (Optional)
WJ5F-20R01	SM35-088-60	SD-06-46	SD-06-89	DS-A00T	DS-T106B	DS-T10B	DT-28-01
WJ5F-25R01	SM35-088-60	SD-06-46	SD-06-89	DS-A00T	DS-T106B	DS-T10B	DT-28-01
WJ5F-30R01	SM35-088-60	SD-08-46	SD-08-92	DS-A00T	DS-T106B	DS-T10B	DT-28-01
WJ5F-40R01	SM35-088-60	SD-12-82	SD-12-99	DS-A00T	DS-T106B	DS-T10B	DT-28-01

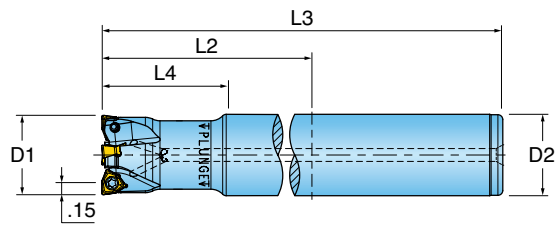
● = P ● = M ● = K ● = N ● = S ○ = H

Features & Benefits:

- 6 smooth cutting edges (3+3)
- Geometry produces a Flat Bottom on the piece part
- Multiple corner radii, grades and geometries for all materials
- Ideal for roughing in unstable conditions
- Same insert used with end mills and face mills

DIPOS HEXA™ SERIES FHU (4MM INSERT)

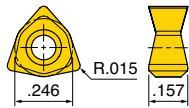
FLAT BOTTOM PLUNGE ROUGHING MILLS WITH 6 INDEXES (STRAIGHT SHANK STYLE)



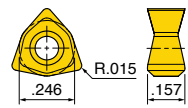
Cutter Number	D1 Eff. Dia.	L2 Extension Length	L3 Overall Length	L4 Projection Length	D2 Shank Size/Style	Number of Inserts
FHU-0703057R01	0.750	3.00	5.00	1.50	.750" Cylind.	3
FHU-1003251R01	1.000	3.25	5.50	1.50	1.000" Cylind.	4

Cutter body can be modified; shorten by cutting off back end or add projection length by turning back neck diameter.

WNCU04T304FN-P



WNMU04T304N



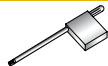
Part Number	Application	Grades					
			IN10K	IN2504	IN2505	IN2530	IN6535
WNCU04T304FN-P	Aluminum - 0.015" R		●				
WNMU04T304N	Multi-Purpose - 0.015" R		●	●	●	●	●

HARDWARE



Screw

SM25-064-00



Screw Driver

DS-T08W



Torque Driver Handle (Optional)

DTQ-11W



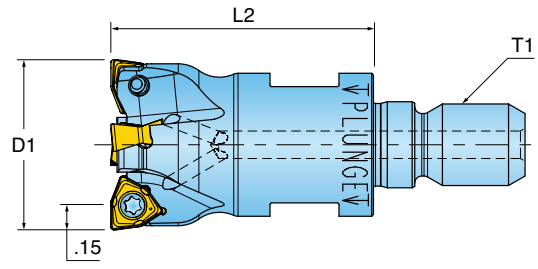
Torque Driver Bit (Optional)

DTQ-11WK

● = P ● = M ● = K ● = N ● = S ○ = H

DIPOSOHEXA™ SERIES FHU (4MM INSERT)

FLAT BOTTOM MODULAR PLUNGE ROUGHING MILLS WITH 6 INDEXES (TOPON STYLE)



Cutter Number	D1 Nominal Diameter	T1 Adaption	L2 Extension Length	Number of Inserts	Wrench Size
FHU-07012X6R01	0.750	M10	1.25	3	15mm
FHU-10015X7R01	1.000	M12	1.50	4	17mm

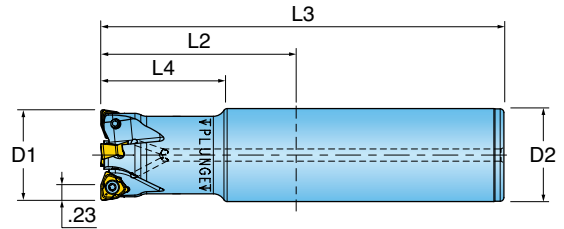
Part Number	Application	Grades				
		IN10K	IN2504	IN2505	IN2530	IN6535
WNCU04T304FN-P	Aluminum - 0.015" R	●				
WNMU04T304N	Multi-Purpose - 0.015" R	●	●	●	●	●

Cutter Number	HARDWARE				
	Screw	Screw Driver	Wrench (Optional)	Torque Driver Handle (Optional)	Torque Driver Bit (Optional)
FHU-07012X6R01	SM25-064-00	DS-T08W	615MM	DTQ-11W	DTQ-11WK
FHU-10015X7R01	SM25-064-00	DS-T08W	617MM	DTQ-11W	DTQ-11WK

● = P ● = M ● = K ● = N ● = S ○ = H

DIPOSOHEXA™ SERIES FHU (6MM INSERT)

FLAT BOTTOM PLUNGE ROUGHING MILLS WITH 6 INDEXES (STRAIGHT SHANK STYLE)



Cutter Number	D1 Eff. Dia.	L2 Extension Length	L3 Overall Length	L4 Projection Length	D2 Shank Size/Style	Number of Inserts
FHU-1203759R01	1.250	3.75	6.00	2.00	1.250" Cylind.	3
FHU-1503855R01	1.500	3.84	6.50	2.00	1.500" Cylind.	4

Cutter body can be modified; shorten by cutting off back end or add projection length by turning back neck diameter.

Part Number	Application	Grades	Material Grades				
			IN10K	IN2504	IN2505	IN2530	IN6535
WNCU060608FN-P	Aluminum - 0.031" R		●				
WNMU060604N	Multi-Purpose - 0.015" R			●	●	●	●
WNMU060608N	Multi-Purpose - 0.031" R		●	●	●	●	●

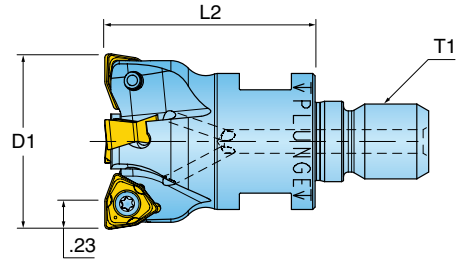
HARDWARE					
	Screw	Driver Handle	Screw Driver Blade	Driver Bit (Optional)	Torque Driver Handle (Optional)
	SM35-088-60	DS-A00T	DS-T106B	DS-T10B	DT-28-01

● = P ○ = M ● = K ● = N ● = S ○ = H

FINE GOLD

DIPOSOHEXA™ SERIES FHU (6MM INSERT)

FLAT BOTTOM MODULAR PLUNGE ROUGHING MILLS WITH 6 INDEXES (TOPON STYLE)



Cutter Number	D1 Nominal Diameter	T1 Adaption	L2 Extension Length	Number of Inserts	Wrench Size
FHU-12017X8R01	1.250	M16	1.75	3	22mm
FHU-15017X8R01	1.500	M16	1.75	4	22mm

Part Number	Application	Grades				
		IN10K	IN2504	IN2505	IN2530	IN6535
WNCU060608FN-P	Aluminum - 0.031" R	●				
WNMU060604N	Multi-Purpose - 0.015" R		●	●	●	●
WNMU060608N	Multi-Purpose - 0.031" R		●	●	●	●

HARDWARE						
	SM35-088-60	DS-A00T	DS-T106B	622MM	DS-T10B	DT-28-01

● = P ● = M ● = K ● = N ● = S ○ = H

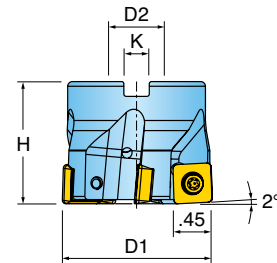
GOLD^QQUAD **Plunging**

Features & Benefits:

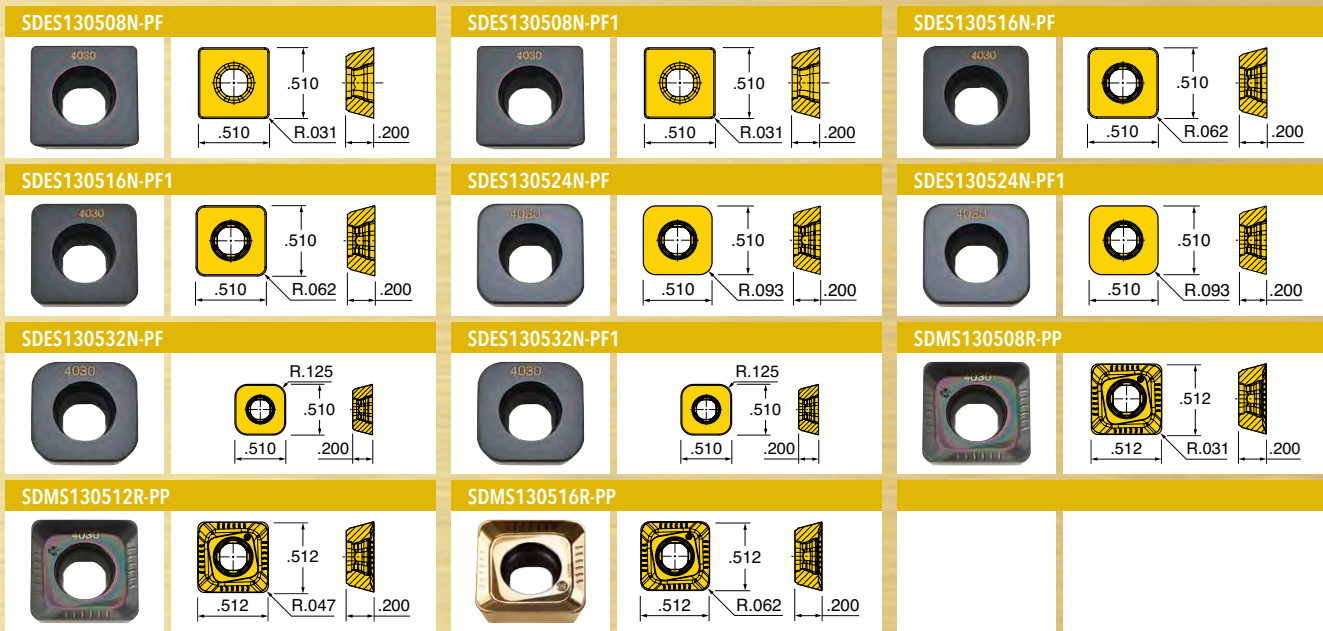
- .45" max. radial depth of cut capability (depending on corner radius)
- Excels in general purpose roughing and long reach plunge applications
- Perfect for roughing on small spindle machines
- Inserts offered with clean shearing Hi-Temp Alloy geometry and strong Flat Top geometry
- Internal coolant supply (face mills only)

GOLD^QQUAD SERIES QHU (13MM INSERT)

PLUNGE ROUGHING MILL (SHELL MILL STYLE)



Cutter Number	D1 Effective Diameter	Number of Inserts	D2 Bore Dia.	K Keyway	H Height
QHU-20015D1R01	2.000	5	0.750	0.312	1.570
QHU-20015D1R02	2.000	4	0.750	0.312	1.570
QHU-25015D1R01	2.500	5	0.750	0.312	1.570
QHU-30017D3R01	3.000	7	1.000	0.375	1.750
QHU-30017D3R02	3.000	5	1.000	0.375	1.750
QHU-40023D5R01	4.000	9	1.500	0.625	2.375
QHU-40023D5R02	4.000	7	1.500	0.625	2.375



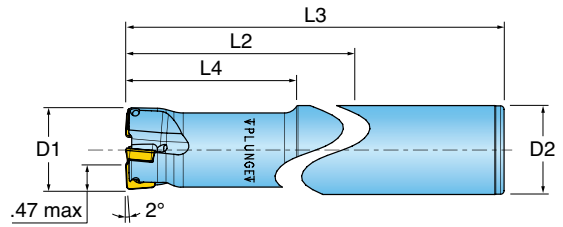
Part Number	Application	Grades					
		IN2530	IN2535	IN4005	IN4015	IN4030	IN4035
SDES130508N-PF	Flat Top - Landed Edge - 0.031" R			●	●	●	●
SDES130508N-PF1	Flat Top - Keen Edge - 0.031" R				●	●	●
SDES130516N-PF	Flat Top - Landed Edge - 0.062" R			●	●	●	●
SDES130516N-PF1	Flat Top - Keen Edge - 0.062" R				●	●	●
SDES130524N-PF	Flat Top - Landed Edge - 0.093" R			●		●	
SDES130524N-PF1	Flat Top - Keen Edge - 0.093" R				●	●	●
SDES130532N-PF	Flat Top - Landed Edge - 0.125" R			●		●	
SDES130532N-PF1	Flat Top - Keen Edge - 0.125" R				●	●	●
SDMS130508R-PP	Positive Geometry - 0.031" R						●
SDMS130512R-PP	Positive Geometry - 0.047" R					●	●
SDMS130516R-PP	Positive Geometry - 0.062" R	●	●	●		●	●

Hardware					
	Screw	Retention Bolt	Coolant Bolt (Optional)	Driver Handle	Screw Driver Blade
QHU-20015D1R01	SM40-100-R0	SD-06-46	SD-06-89	DS-A00T	DS-T156B
QHU-20015D1R02	SM40-100-R0	SD-06-46	SD-06-89	DS-A00T	DS-T156B
QHU-25015D1R01	SM40-100-R0	SD-06-46	SD-06-89	DS-A00T	DS-T156B
QHU-30017D3R01	SM40-100-R0	SD-08-46	SD-08-92	DS-A00T	DS-T156B
QHU-30017D3R02	SM40-100-R0	SD-08-46	SD-08-92	DS-A00T	DS-T156B
QHU-40023D5R01	SM40-100-R0	SD-12-82	SD-12-99	DS-A00T	DS-T156B
QHU-40023D5R02	SM40-100-R0	SD-12-82	SD-12-99	DS-A00T	DS-T156B

● = P ● = M ● = K ● = N ● = S ○ = H

GOLDQUAD SERIES QHU (13MM INSERT)

PLUNGE ROUGHING MILL (STRAIGHT SHANK STYLE)



Cutter Number	D1 Eff. Dia.	L2 Extension Length	L3 Overall Length	L4 Projection Length	D2 Shank Size/Style	Number of Inserts
QHU-15073S5R01	1.500	7.34	10.00	3.00	1.500" Cylind.	3

Cutter body can be modified; shorten by cutting off back end or add projection length by turning back neck diameter.

SDES130508N-PF 	SDES130508N-PF1 	SDES130516N-PF
SDES130516N-PF1 	SDES130524N-PF 	SDES130524N-PF1
SDES130532N-PF 	SDES130532N-PF1 	SDMS130508R-PP
SDMS130512R-PP 	SDMS130516R-PP 	

Part Number	Application	Grades	IN2530	IN2535	IN4005	IN4015	IN4030	IN4035
SDES130508N-PF	Flat Top - Landed Edge - 0.031" R				●	●	●	●
SDES130508N-PF1	Flat Top - Keen Edge - 0.031" R					●	●	●
SDMS130508R-PP	Positive Geometry - 0.031" R						●	●
SDMS130512R-PP	Positive Geometry - 0.047" R						●	●
SDES130516N-PF	Flat Top - Landed Edge - 0.062" R				●	●	●	●
SDES130516N-PF1	Flat Top - Keen Edge - 0.062" R					●	●	●
SDMS130516R-PP	Positive Geometry - 0.062" R		●	●	●		●	●
SDES130524N-PF	Flat Top - Landed Edge - 0.093" R				●		●	●
SDES130524N-PF1	Flat Top - Keen Edge - 0.093" R						●	●
SDES130532N-PF	Flat Top - Landed Edge - 0.125" R				●		●	●
SDES130532N-PF1	Flat Top - Keen Edge - 0.125" R						●	●

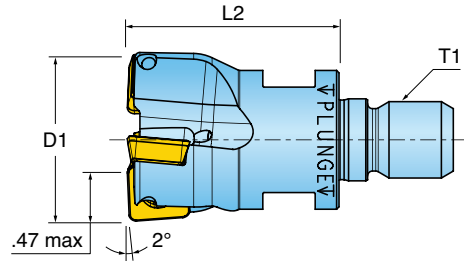
HARDWARE			
	SM40-100-R0	DS-A00T	DS-T156B

● = P ● = M ● = K ● = N ● = S ○ = H



GOLDQUAD SERIES QHU (13MM INSERT)

MODULAR PLUNGE ROUGHING MILL (TOPON STYLE)



Cutter Number	D1 Nominal Diameter	T1 Adaption	L2 Extension Length	Number of Inserts	Wrench Size
QHU-15017X8R01	1.500	M16	1.75	3	22mm

SDES130508N-PF 	SDES130508N-PF1 	SDES130516N-PF
SDES130516N-PF1 	SDES130524N-PF 	SDES130524N-PF1
SDES130532N-PF 	SDES130532N-PF1 	SDMS130508R-PP
SDMS130512R-PP 	SDMS130516R-PP 	

Part Number	Application	Grades	IN2530	IN2535	IN4005	IN4015	IN4030	IN4035
SDES130508N-PF	Flat Top - Landed Edge - 0.031" R							
SDES130508N-PF1	Flat Top - Keen Edge - 0.031" R							
SDMS130508R-PP	Positive Geometry - 0.031" R							
SDMS130512R-PP	Positive Geometry - 0.047" R							
SDES130516N-PF	Flat Top - Landed Edge - 0.062" R							
SDES130516N-PF1	Flat Top - Keen Edge - 0.062" R							
SDMS130516R-PP	Positive Geometry - 0.062" R							
SDES130524N-PF	Flat Top - Landed Edge - 0.093" R							
SDES130524N-PF1	Flat Top - Keen Edge - 0.093" R							
SDES130532N-PF	Flat Top - Landed Edge - 0.125" R							
SDES130532N-PF1	Flat Top - Keen Edge - 0.125" R							

HARDWARE				
	Screw	Driver Handle	Screw Driver Blade	Wrench (Optional)
	SM40-100-R0	DS-A00T	DS-T156B	622MM

● = P ○ = M ● = K ● = N ● = S ○ = H

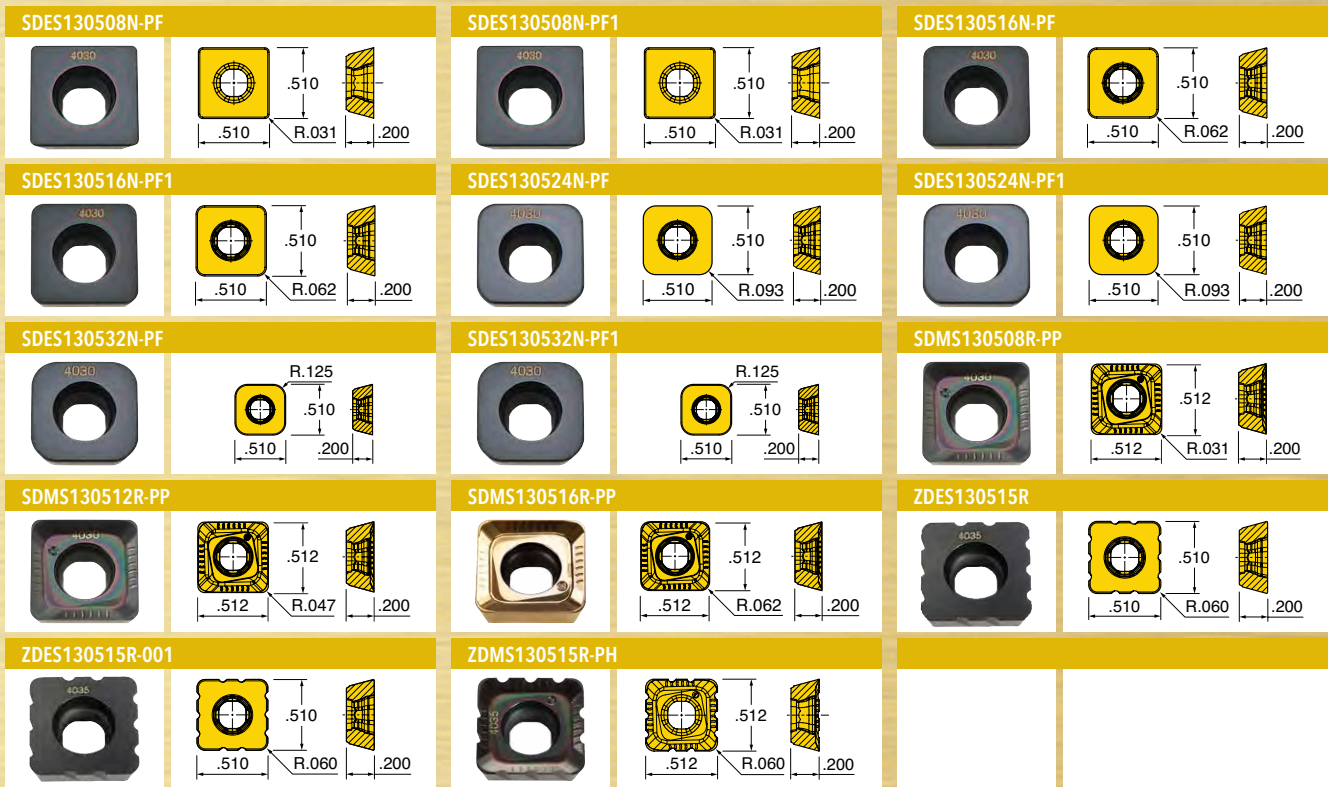
GOLD•QUAD 90° Shoulders

Features & Benefits:

- 90° shoulder milling geometry with 4 indexes
- .45" depth of cut availability
- Corner radius options R.031", .047", .062", .093", .125", & .250"
- Rake face insert geometries for hi-shear and hi-efficiency
- Flat-top insert geometries for edge strength
- Chip splitter geometry available
- Utilizes same insert pocket as GOLD•QUAD long edge, plunge and hi-feed lines
- Coolant through the tool

GOLD•QUAD SERIES 5J5P (13MM INSERT)

90° FACE MILL						
Cutter Number	D1 Effective Diameter	Number of Inserts	H Height	D2 Bore Dia.	K Keyway	Ramp Angle
5J5P-20R01	2.000	5	1.570	0.750	0.312	3.0
5J5P-25R01	2.500	6	1.570	0.750	0.312	2.0
5J5P-30R01	3.000	8	1.750	1.000	0.375	1.5
5J5P-40R01	4.000	10	2.375	1.500	0.625	1.0



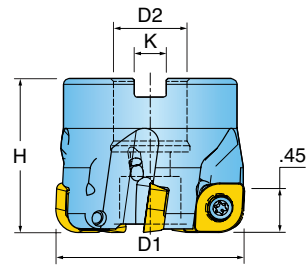
Part Number	Application	Grades					
		IN2530	IN2535	IN4005	IN4015	IN4030	IN4035
SDES130508N-PF	Flat Top - Landed Edge - 0.031" R			●	●	●	●
SDES130508N-PF1	Flat Top - Keen Edge - 0.031" R					●	●
SDMS130508R-PP	Positive Geometry - 0.031" R						●
SDMS130512R-PP	Positive Geometry - 0.047" R					●	
SDES130516N-PF	Flat Top - Landed Edge - 0.062" R			●	●	●	●
SDES130516N-PF1	Flat Top - Keen Edge - 0.062" R					●	●
SDMS130516R-PP	Positive Geometry - 0.062" R	●	●	●		●	●
SDES130524N-PF	Flat Top - Landed Edge - 0.093" R			●		●	
SDES130524N-PF1	Flat Top - Keen Edge - 0.093" R					●	●
SDES130532N-PF	Flat Top - Landed Edge - 0.125" R			●		●	
SDES130532N-PF1	Flat Top - Keen Edge - 0.125" R					●	●
ZDES130515R	Flat Top - Splitters - Landed Edge - 0.060" R			●	●	●	
ZDES130515R-001	Flat Top - Splitters - Keen Edge - 0.060" R						●
ZDMS130515R-PH	Positive - Splitters - 0.060" R						●

HARDWARE							
	Screw	Retention Bolt	Coolant Bolt (Optional)	Driver Handle	Screw Driver Blade	Driver Bit (Optional)	Torque Driver Handle (Optional)
5J5P-20R01	SM40-100-R0	SD-06-46	SD-06-89	DS-A00T	DS-T156B	DS-T15B1	DT-35-02
5J5P-25R01	SM40-100-R0	SD-06-46	SD-06-89	DS-A00T	DS-T156B	DS-T15B1	DT-35-02
5J5P-30R01	SM40-100-R0	SD-08-46	SD-08-92	DS-A00T	DS-T156B	DS-T15B1	DT-35-02
5J5P-40R01	SM40-100-R0	SD-12-82	SD-12-99	DS-A00T	DS-T156B	DS-T15B1	DT-35-02

● = P ● = M ● = K ● = N ● = S ○ = H

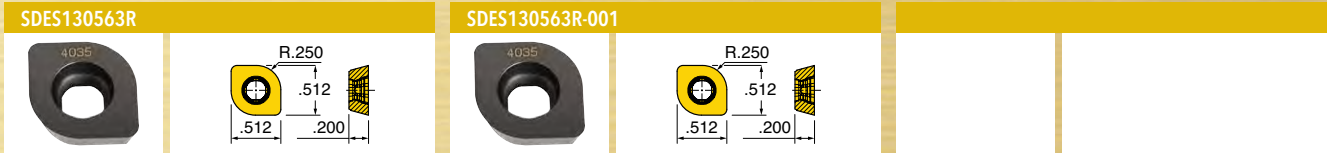
GOLD[®]QUAD SERIES 5J5P-R (13MM INSERT)






90° FACE MILL FOR LARGE CORNER RADIUS










Cutter Number	D1 Effective Diameter	Number of Inserts	H Height	D2 Bore Dia.	K Keyway	Ramp Angle
5J5P-20R01-R	2.000	5	1.570	0.750	0.312	3.0
5J5P-25R01-R	2.500	6	1.570	0.750	0.312	2.0
5J5P-30R01-R	3.000	8	1.750	1.000	0.375	1.5
5J5P-40R01-R	4.000	10	2.375	1.500	0.625	1.0

Recommend .125" or less depth of cut increments



Part Number	Application	Grades	IN4005	IN4030	IN4035
SDES130563R	Flat Top - Landed Edge - 0.250" R				
SDES130563R-001	Flat Top - Keen Edge - 0.250" R				

HARDWARE							
	Screw	Retention Bolt	Coolant Bolt (Optional)	Driver Handle	Screw Driver Blade	Driver Bit (Optional)	Torque Driver Handle (Optional)
5J5P-20R01-R	SM40-100-R0	SD-06-46	SD-06-89	DS-A00T	DS-T156B	DS-T15B1	DT-35-02
5J5P-25R01-R	SM40-100-R0	SD-06-46	SD-06-89	DS-A00T	DS-T156B	DS-T15B1	DT-35-02
5J5P-30R01-R	SM40-100-R0	SD-08-46	SD-08-92	DS-A00T	DS-T156B	DS-T15B1	DT-35-02
5J5P-40R01-R	SM40-100-R0	SD-12-82	SD-12-99	DS-A00T	DS-T156B	DS-T15B1	DT-35-02

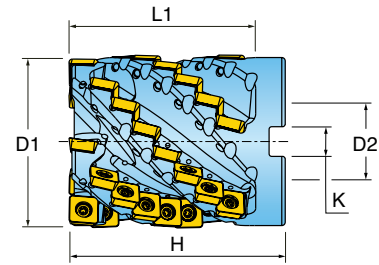
● = P ● = M ● = K ● = N ● = S ○ = H

Features & Benefits:

- Extreme geometry promotes high-shearing action for efficient cutting of Stainless Steels and Nickel Alloys
- Corner radius offerings of .031", .060", .125" & .250"
- R.031 & R.060 inserts may be used in both end and side stations
- Rake face insert geometry for optimum shear
- Flat top insert geometry for strength & durability
- Chip splitter insert geometry for vibration resistance & channel cut efficiency
- Internal coolant supply

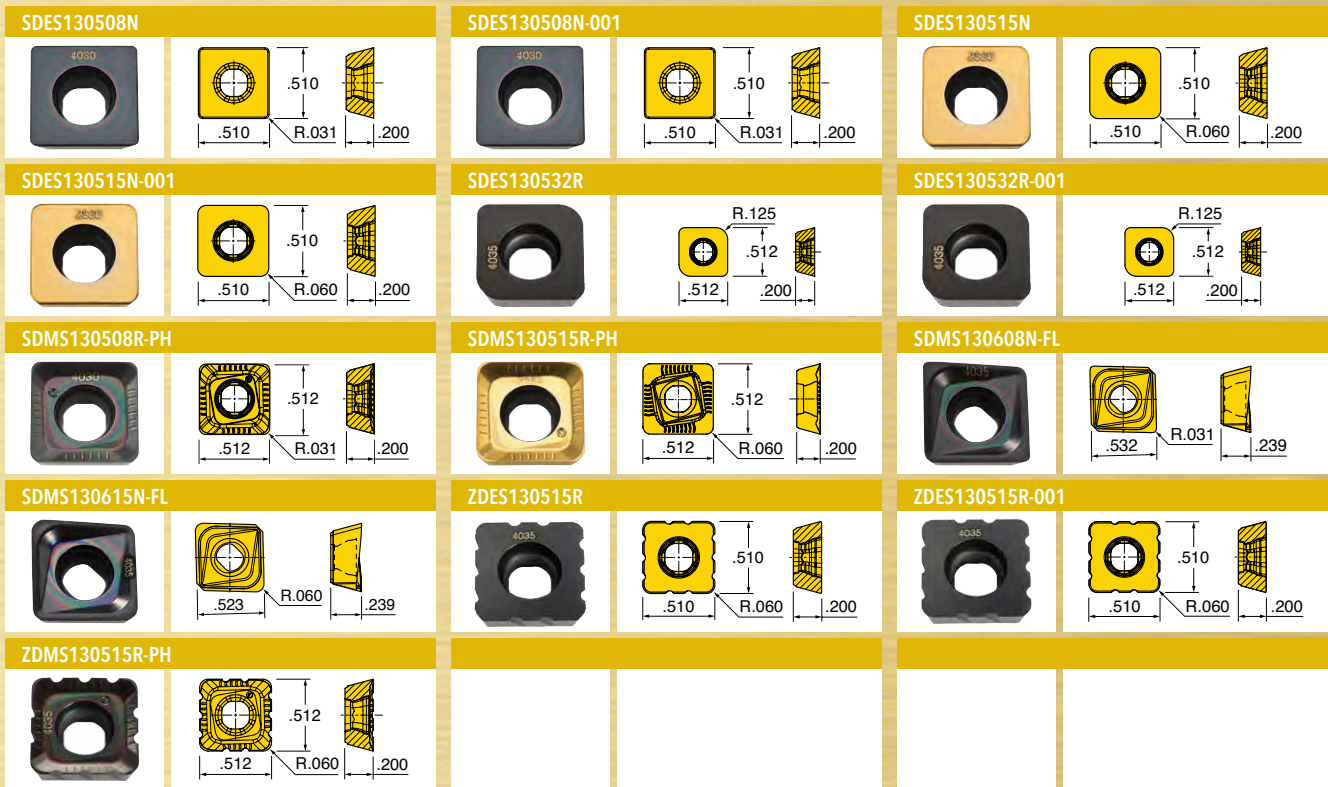
GOLD^QQUAD SERIES 25J3P (13MM INSERT)

90° HIGH SHEAR EXTENDED FLUTE MILL (SHELL MILL STYLE)



Cutter Number	D1 Nom. Dia.	L1 Length of Cut	H Height	D2 Bore Dia.	Keyway Width	No. of Flutes Effective	No. of Flutes Total	Total Inserts
25J3P-20023D1R01	2.000	1.53	2.35	0.750	0.312	3	3	12
25J3P-20023D1R02	2.000	1.53	2.35	0.750	0.312	4	4	16
25J3P-20030D1R01	2.000	1.90	3.00	0.750	0.312	3	3	15
25J3P-20030D1R02	2.000	1.90	3.00	0.750	0.312	4	4	20
25J3P-20035D1R01	2.000	2.60	3.50	0.750	0.312	3	3	21
25J3P-20035D1R02	2.000	2.60	3.50	0.750	0.312	4	4	28
25J3P-25040D3R01	2.500	3.00	4.00	1.000	0.375	4	4	32
25J3P-30037D4R01	3.000	3.00	3.75	1.250	0.500	5	5	40
25J3P-30050D4R10	3.000	4.08	5.00	1.250	0.500	5	5	55
25J3P-40050D5R01	4.000	4.08	5.00	1.500	0.625	5	5	55

2.00 diameter x 4 flute cutters must use ZDES/ZDMS (chip splitters) if radial width of cut is over .50".
Nose insert is tipped on a slight angle and may fall outside true form up to .010", depending on insert corner radius.



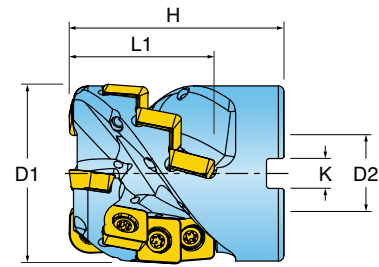
Part Number	Application	Station	Grades						
				IN2505	IN2530	IN4005	IN4015	IN4030	IN4035
SDES130508N	Flat Top - Landed Edge - 0.031" R	End & Side				●	●	●	
SDES130508N-001	Flat Top - Keen Edge - 0.031" R	End & Side						●	●
SDMS130508R-PH	Positive Geometry - 0.031" R	End & Side							●
SDMS130608N-FL	Positive Geometry - 0.031" R	End: True 90						●	●
SDES130515N	Flat Top - Landed Edge - 0.060" R	End & Side	●	●	●	●	●	●	
SDES130515N-001	Flat Top - Keen Edge - 0.060" R	End & Side	●	●				●	●
SDMS130515R-PH	Positive Geometry - 0.060" R	End & Side	●	●	●			●	●
SDMS130615N-FL	Positive Geometry - 0.060" R	End: True 90						●	●
SDES130532R	Flat Top - Landed Edge - 0.125" R	End			●			●	
SDES130532R-001	Flat Top - Keen Edge - 0.125" R	End						●	●
ZDES130515R	Flat Top - Splitters - Landed Edge - 0.060" R	End & Side			●	●	●		
ZDES130515R-001	Flat Top - Splitters - Keen Edge - 0.060" R	End & Side							●
ZDMS130515R-PH	Positive - Splitters - 0.060" R	End & Side							●

Hardware	Hardware Components						
	Screw	Retention Bolt	Driver Handle	Screw Driver Blade	Driver Bit (Optional)	Torque Driver Handle (Optional)	
25J3P-20023D1R01	SM40-100-R0	SD-06-50	DS-A00T	DS-T156B	DS-T15B1	DT-35-02	
25J3P-20023D1R02	SM40-100-R0	SD-06-50	DS-A00T	DS-T156B	DS-T15B1	DT-35-02	
25J3P-20030D1R01	SM40-100-R0	SD-06-79	DS-A00T	DS-T156B	DS-T15B1	DT-35-02	
25J3P-20030D1R02	SM40-100-R0	SD-06-79	DS-A00T	DS-T156B	DS-T15B1	DT-35-02	
25J3P-20035D1R01	SM40-100-R0	SD-06-B2	DS-A00T	DS-T156B	DS-T15B1	DT-35-02	
25J3P-20035D1R02	SM40-100-R0	SD-06-B2	DS-A00T	DS-T156B	DS-T15B1	DT-35-02	
25J3P-25040D3R01	SM40-100-R0	SD-08-D3	DS-A00T	DS-T156B	DS-T15B1	DT-35-02	
25J3P-30037D4R01	SM40-100-R0	SD-10-54	DS-A00T	DS-T156B	DS-T15B1	DT-35-02	
25J3P-30050D4R10	SM40-100-R0	SD-10-04	DS-A00T	DS-T156B	DS-T15B1	DT-35-02	
25J3P-40050D5R01	SM40-100-R0	SD-12-79	DS-A00T	DS-T156B	DS-T15B1	DT-35-02	

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD[®]QUAD SERIES 25J3P-R (13MM INSERT)

90° HIGH SHEAR EXTENDED FLUTE MILL, FOR LARGE CORNER RADIUS (SHELL MILL STYLE)



Cutter Number	D1 Nom. Dia.	L1 Length of Cut	H Height	D2 Bore Dia.	Keyway Width	No. of Flutes Effective	No. of Flutes Total	Total Inserts
25J3P-20023D1R01-R	2.000	1.53	2.35	0.750	0.312	3	3	12
25J3P-20023D1R02-R	2.000	1.53	2.35	0.750	0.312	4	4	16
25J3P-20030D1R01-R	2.000	1.90	3.00	0.750	0.312	3	3	15
25J3P-20030D1R02-R	2.000	1.90	3.00	0.750	0.312	4	4	20
25J3P-20035D1R01-R	2.000	2.60	3.50	0.750	0.312	3	3	21
25J3P-20035D1R02-R	2.000	2.60	3.50	0.750	0.312	4	4	28
25J3P-25040D3R01-R	2.500	3.00	4.00	1.000	0.375	4	4	32
25J3P-30037D4R01-R	3.000	3.00	3.75	1.250	0.500	5	5	40
25J3P-30050D4R10-R	3.000	4.08	5.00	1.250	0.500	5	5	55
25J3P-40050D5R01-R	4.000	4.08	5.00	1.500	0.625	5	5	55



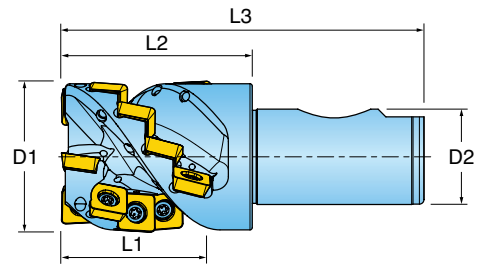
Part Number	Application	Station	Grades	IN2505	IN2530	IN4005	IN4015	IN4030	IN4035
SDES130515N	Flat Top - Landed Edge - 0.060" R	Side		●	●	●	●	●	
SDES130515N-001	Flat Top - Keen Edge - 0.060" R	Side		●	●			●	●
SDES130563R	Flat Top - Landed Edge - 0.250" R	End				●		●	
SDES130563R-001	Flat Top - Keen Edge - 0.250" R	End						●	●
SDMS130508R-PH	Positive Geometry - 0.031" R	Side							●
SDMS130515R-PH	Positive Geometry - 0.060" R	Side		●	●	●		●	●
ZDES130515R	Flat Top - Splitters - Landed Edge - 0.060" R	Side				●	●	●	
ZDES130515R-001	Flat Top - Splitters - Keen Edge - 0.060" R	Side							●
ZDMS130515R-PH	Positive - Splitters - 0.060" R	Side							●

Hardware						
	Screw	Retention Bolt	Driver Handle	Screw Driver Blade	Driver Bit (Optional)	Torque Driver Handle (Optional)
25J3P-20023D1R01-R	SM40-100-R0	SD-06-50	DS-A00T	DS-T156B	DS-T15B1	DT-35-02
25J3P-20023D1R02-R	SM40-100-R0	SD-06-50	DS-A00T	DS-T156B	DS-T15B1	DT-35-02
25J3P-20030D1R01-R	SM40-100-R0	SD-06-79	DS-A00T	DS-T156B	DS-T15B1	DT-35-02
25J3P-20030D1R02-R	SM40-100-R0	SD-06-79	DS-A00T	DS-T156B	DS-T15B1	DT-35-02
25J3P-20035D1R01-R	SM40-100-R0	SD-06-B2	DS-A00T	DS-T156B	DS-T15B1	DT-35-02
25J3P-20035D1R02-R	SM40-100-R0	SD-06-B2	DS-A00T	DS-T156B	DS-T15B1	DT-35-02
25J3P-25040D3R01-R	SM40-100-R0	SD-08-D3	DS-A00T	DS-T156B	DS-T15B1	DT-35-02
25J3P-30037D4R01-R	SM40-100-R0	SD-10-54	DS-A00T	DS-T156B	DS-T15B1	DT-35-02
25J3P-30050D4R10-R	SM40-100-R0	SD-10-04	DS-A00T	DS-T156B	DS-T15B1	DT-35-02
25J3P-40050D5R01-R	SM40-100-R0	SD-12-79	DS-A00T	DS-T156B	DS-T15B1	DT-35-02

● = P ● = M ● = K ● = N ● = S ○ = H

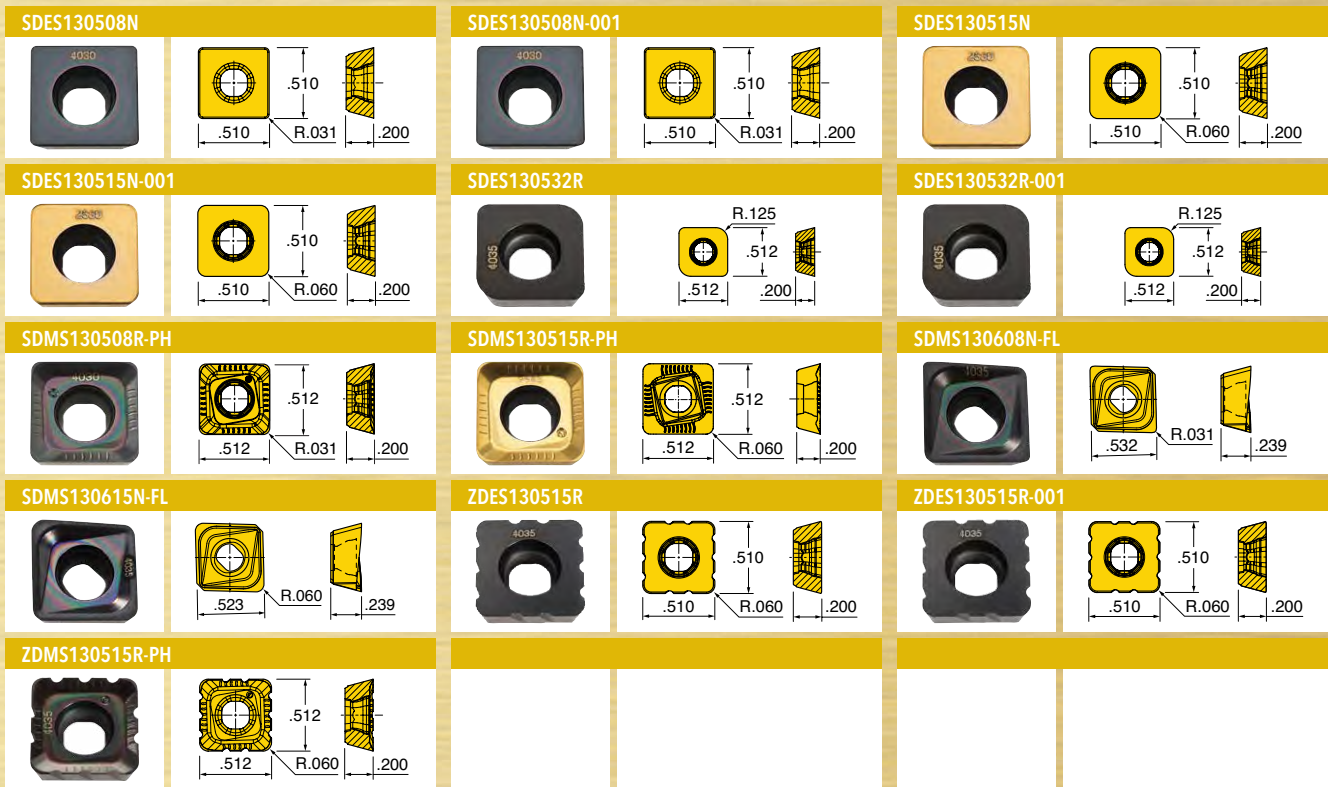
GOLD[®]QUAD SERIES 25J3P (13MM INSERT)

90° HIGH SHEAR EXTENDED FLUTE END MILL (STRAIGHT SHANK STYLE)



Cutter Number	D1 Nom. Dia.	L1 Length of Cut	L2 Extension Length	L3 Overall Length	D2 Shank Size/Style	Number of Effective Flutes	Number of Flutes Total	Number of Inserts
25J3P-2002581R01	2.000	1.90	2.50	4.75	1.000" Weldon w/Flange	3	3	15

Nose insert is tipped on a slight angle and may fall outside true form up to .010", depending on insert corner radius.



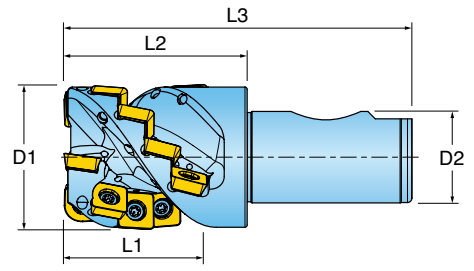
Part Number	Application	Station	Grades						
				IN2505	IN2530	IN4005	IN4015	IN4030	IN4035
SDES130508N	Flat Top - Landed Edge - 0.031" R	End & Side				●	●	●	
SDES130508N-001	Flat Top - Keen Edge - 0.031" R	End & Side						●	●
SDES130515N	Flat Top - Landed Edge - 0.060" R	End & Side	●	●	●	●	●	●	
SDES130515N-001	Flat Top - Keen Edge - 0.060" R	End & Side	●	●			●	●	
SDES130532R	Flat Top - Landed Edge - 0.125" R	End			●		●		
SDES130532R-001	Flat Top - Keen Edge - 0.125" R	End					●	●	
SDMS130508R-PH	Positive Geometry - 0.031" R	End & Side							●
SDMS130515R-PH	Positive Geometry - 0.060" R	End & Side	●	●	●		●	●	●
SDMS130608N-FL	Positive Geometry - 0.031" R	End: True 90						●	●
SDMS130615N-FL	Positive Geometry - 0.060" R	End: True 90						●	●
ZDES130515R	Flat Top - Splitters - Landed Edge - 0.060" R	End & Side			●	●	●		
ZDES130515R-001	Flat Top - Splitters - Keen Edge - 0.060" R	End & Side							●
ZDMS130515R-PH	Positive - Splitters - 0.060" R	End & Side							●

HARDWARE					
					
Screw	Driver Handle	Screw Driver Blade	Driver Bit (Optional)	Torque Driver Handle (Optional)	
SM40-100-RO	DS-A00T	DS-T156B	DS-T15B1	DT-35-02	

● = P ○ = M ● = K ● = N ● = S ○ = H

GOLD^QQUAD SERIES 25J3P-R (13MM INSERT)

90° HIGH SHEAR EXTENDED FLUTE END MILL FOR LARGE CORNER RADIUS (STRAIGHT SHANK STYLE)



Cutter Number	D1 Nom. Dia.	L1 Length of Cut	L2 Extension Length	L3 Overall Length	D2 Shank Size/Style	Number of Effective Flutes	Number of Flutes Total	Number of Inserts
25J3P-2002581R01-R	2.000	1.90	2.50	4.75	1.000" Weldon w/Flange	3	3	15

Nose insert is tipped on a slight angle and may fall outside true form up to .010", depending on insert corner radius.



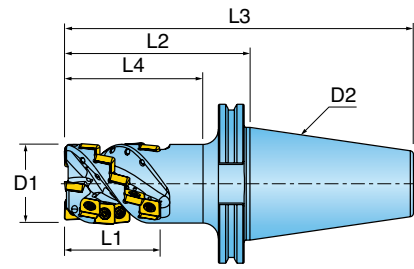
Part Number	Application	Station	Grades						
				IN2505	IN2530	IN4005	IN4015	IN4030	IN4035
SDES130515N	Flat Top - Landed Edge - 0.060" R	Side		●	●	●	●	●	●
SDES130515N-001	Flat Top - Keen Edge - 0.060" R	Side		●	●			●	●
SDES130563R	Flat Top - Landed Edge - 0.250" R	End				●		●	
SDES130563R-001	Flat Top - Keen Edge - 0.250" R	End						●	●
SDMS130508R-PH	Positive Geometry - 0.031" R	Side							●
SDMS130515R-PH	Positive Geometry - 0.060" R	Side		●	●	●		●	●
ZDES130515R	Flat Top - Splitters - Landed Edge - 0.060" R	Side				●	●	●	
ZDES130515R-001	Flat Top - Splitters - Keen Edge - 0.060" R	Side							●
ZDMS130515R-PH	Positive - Splitters - 0.060" R	Side							●

Hardware					
	Screw	Driver Handle	Screw Driver Blade	Driver Bit (Optional)	Torque Driver Handle (Optional)
	SM40-100-R0	DS-A00T	DS-T156B	DS-T15B1	DT-35-02

● = P ● = M ● = K ● = N ● = S ○ = H

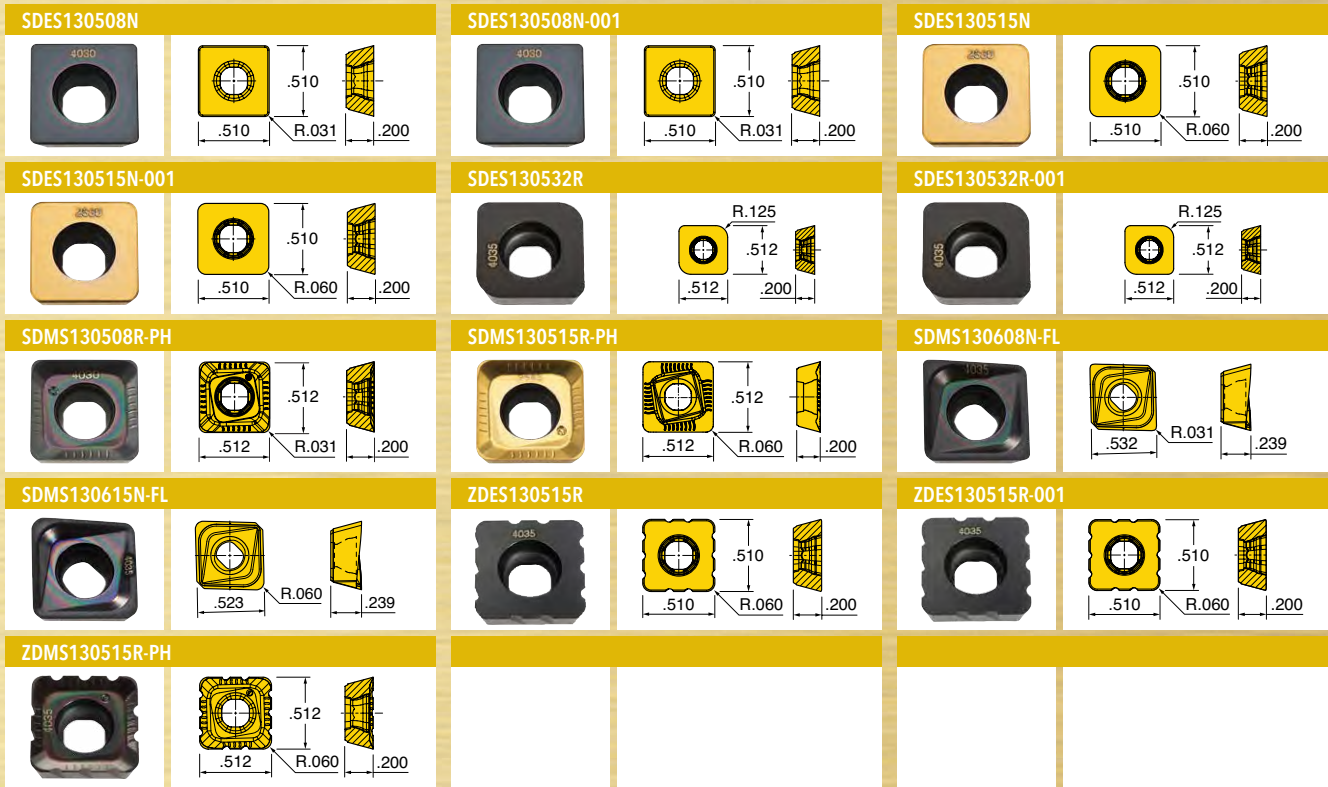
GOLD[®]QUAD SERIES 25J3P (13MM INSERT)

90° HIGH SHEAR EXTENDED FLUTE END MILL (TAPERED SHANK STYLE)



Cutter Number	D1 Effective Dia.	L1 Length of Cut	L2 Extension Length	L3 Overall Length	L4 Projection Length	D2 Adaption Style	Number of Effective Flutes	Number of Total Flutes	Number of Inserts
25J3P-2004548R01	2.000	2.62	4.50	8.50	3.12	ICT #50 V-Flange	3	3	21
25J3P-2004548R02	2.000	2.62	4.50	8.50	3.37	ICT #50 V-Flange	4	4	28
25J3P-2006248R01	2.000	4.08	6.25	10.25	5.12	ICT #50 V-Flange	3	3	33

2.00 diameter x 4 flute cutters must use ZDES/ZDMS (chip splitters) if radial width of cut is over .50".
Nose insert is tipped on a slight angle and may fall outside true form up to .010", depending on insert corner radius.



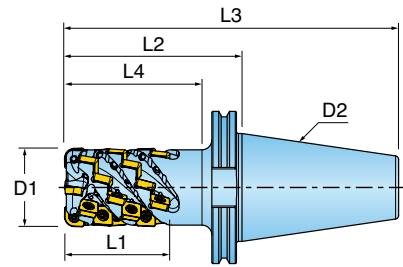
Part Number	Application	Station	Grades						
				IN2505	IN2530	IN4005	IN4015	IN4030	IN4035
SDES130508N	Flat Top - Landed Edge - 0.031" R	End & Side				●	●	●	
SDES130508N-001	Flat Top - Keen Edge - 0.031" R	End & Side						●	●
SDES130515N	Flat Top - Landed Edge - 0.060" R	End & Side	●	●	●	●	●	●	
SDES130515N-001	Flat Top - Keen Edge - 0.060" R	End & Side	●	●			●	●	
SDES130532R	Flat Top - Landed Edge - 0.125" R	End			●		●		
SDES130532R-001	Flat Top - Keen Edge - 0.125" R	End					●	●	
SDMS130508R-PH	Positive Geometry - 0.031" R	End & Side							●
SDMS130515R-PH	Positive Geometry - 0.060" R	End & Side	●	●	●		●	●	●
SDMS130608N-FL	Positive Geometry - 0.031" R	End: True 90						●	●
SDMS130615N-FL	Positive Geometry - 0.060" R	End: True 90						●	●
ZDES130515R	Flat Top - Splitters - Landed Edge - 0.060" R	End & Side			●	●	●		
ZDES130515R-001	Flat Top - Splitters - Keen Edge - 0.060" R	End & Side							●
ZDMS130515R-PH	Positive - Splitters - 0.060" R	End & Side							●

HARDWARE					
	SM40-100-RO	DS-A00T	DS-T156B	DS-T15B1	DT-35-02

● = P ○ = M ● = K ● = N ● = S ○ = H

GOLD[®]QUAD SERIES 25J3P-R (13MM INSERT)

90° HIGH SHEAR EXTENDED FLUTE END MILL FOR LARGE CORNER RADIUS (TAPERED SHANK STYLE)



Cutter Number	D1 Effective Dia.	L1 Length of Cut	L2 Extension Length	L3 Overall Length	L4 Projection Length	D2 Adaption Style	Number of Effective Flutes	Number of Total Flutes	Number of Inserts
25J3P-2004548R01-R	2.000	2.62	4.50	8.50	3.12	ICT #50 V-Flange	3	3	21
25J3P-2004548R02-R	2.000	2.62	4.50	8.50	3.12	ICT #50 V-Flange	4	4	28
25J3P-2006248R01-R	2.000	4.08	6.25	10.25	5.12	ICT #50 V-Flange	3	3	33

2.00 diameter x 4 flute cutters must use ZDES/ZDMS (chip splitters) if radial width of cut is over .50"



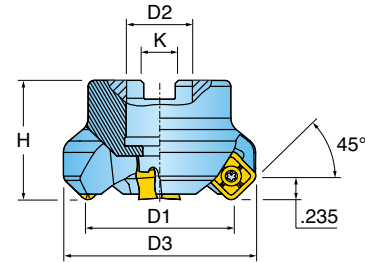
Part Number	Application	Station	Grades	IN2505	IN2530	IN4005	IN4015	IN4030	IN4035
SDES130515N	Flat Top - Landed Edge - 0.060" R	Side		●	●	●	●	●	
SDES130515N-001	Flat Top - Keen Edge - 0.060" R	Side		●	●			●	●
SDES130563R	Flat Top - Landed Edge - 0.250" R	End				●		●	
SDES130563R-001	Flat Top - Keen Edge - 0.250" R	End						●	●
SDMS130508R-PH	Positive Geometry - 0.031" R	Side							●
SDMS130515R-PH	Positive Geometry - 0.060" R	Side		●	●	●		●	●
ZDES130515R	Flat Top - Splitters - Landed Edge - 0.060" R	Side				●	●	●	
ZDES130515R-001	Flat Top - Splitters - Keen Edge - 0.060" R	Side							●
ZDMS130515R-PH	Positive - Splitters - 0.060" R	Side							●

HARDWARE					
	Screw	Driver Handle	Screw Driver Blade	Driver Bit (Optional)	Torque Driver Handle (Optional)
	SM40-100-R0	DS-A00T	DS-T156B	DS-T15B1	DT-35-02

● = P ● = M ● = K ● = N ● = S ○ = H

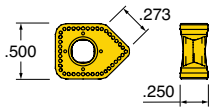
ISOPLUS SERIES DN6H DN5H (12 MM INSERT)

45° FACE MILL WITH 8 INDEXES

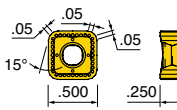


Cutter Number	D1 Nominal Diameter	D3 Overall Diameter	D2 Bore Dia.	K Keyway	H Height	Number of Inserts	Coolant
DN5H-20R01	2.000	2.57	0.750	0.312	1.750	6	Yes
DN6H-20R01	2.000	2.57	0.750	0.312	1.750	4	Yes
DN6H-25R01	2.500	3.07	1.000	0.375	1.750	6	Yes
DN5H-30R01	3.000	3.57	1.000	0.375	1.750	10	Yes
DN6H-30R01	3.000	3.57	1.000	0.375	1.750	7	Yes
DN5H-40R01	4.000	4.57	1.500	0.625	2.375	12	Yes
DN6H-40R01	4.000	4.57	1.500	0.625	2.375	8	Yes
DN6H-50R01	5.000	5.57	1.500	0.625	2.375	9	Yes
DN5H-60R01	6.000	6.57	1.500	0.625	2.000	20	No
DN6H-60R01	6.000	6.57	1.500	0.625	2.000	12	No

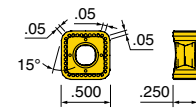
SNGS1205ANN-W



SNGU1205EFN-P



SNGU1205ENN



Part Number	Application	Grades									
			IN10K	IN2035	IN2505	IN2510	IN2530	IN2540	IN4015	IN4030	
SNGS1205ANN-W	Wiper - Wiper				●	●					
SNGU1205EFN-P	Grd/Pol for Aluminum	●									
SNGU1205ENN	Multi-Purpose		●	●	●	●	●	●	●	●	●

HARDWARE



Screw

Retention Bolt

Coolant Bolt (Optional)

Driver Handle

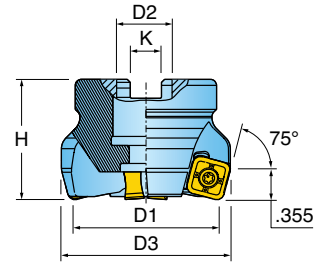
Screw Driver Blade

DN5H-20R01	SM40-100-R0	SD-06-46	SD-06-89	DS-A00T	DS-T156B
DN6H-20R01	SM40-100-R0	SD-06-46	SD-06-89	DS-A00T	DS-T156B
DN6H-25R01	SM40-100-R0	SD-08-46	SD-08-92	DS-A00T	DS-T156B
DN5H-30R01	SM40-100-R0	SD-08-46	SD-08-92	DS-A00T	DS-T156B
DN6H-30R01	SM40-100-R0	SD-08-46	SD-08-92	DS-A00T	DS-T156B
DN5H-40R01	SM40-100-R0	SD-12-82	SD-12-99	DS-A00T	DS-T156B
DN6H-40R01	SM40-100-R0	SD-12-82	SD-12-99	DS-A00T	DS-T156B
DN6H-50R01	SM40-100-R0	SD-12-82	SD-12-99	DS-A00T	DS-T156B
DN5H-60R01	SM40-100-R0	-	-	DS-A00T	DS-T156B
DN6H-60R01	SM40-100-R0	-	-	DS-A00T	DS-T156B

● = P ○ = M ● = K ● = N ● = S ○ = H

ISOPLUS SERIES DL6H DL5H (12 MM INSERT)

75° FACE MILL WITH 8 INDEXES



Cutter Number	D1 Nominal Diameter	D3 Overall Diameter	D2 Bore Dia.	K Keyway	H Height	Number of Inserts	Coolant
DL5H-20R01	2.000	2.30	0.750	0.310	1.750	6	Yes
DL6H-20R01	2.000	2.30	0.750	0.310	1.750	4	Yes
DL6H-25R01	2.500	2.80	1.000	0.370	1.750	6	Yes
DL6H-30R01	3.000	3.30	1.000	0.370	1.750	7	No
DL6H-40R01	4.000	4.30	1.500	0.620	2.000	8	No
DL6H-50R01	5.000	5.30	1.500	0.620	2.000	10	No
DL5H-60R01	6.000	6.30	1.500	0.620	2.000	20	No
DL6H-60R01	6.000	6.30	1.500	0.620	2.000	12	No

Part Number	Application	Grades	IN10K	IN2035	IN2505	IN2510	IN2530	IN2540	IN4015	IN4030
SNGU1205EFN-P	Grd/Pol for Aluminum	●								
SNGU1205ENN	Multi-Purpose		●	●	●	●	●	●	●	●

HARDWARE					
	Screw	Retention Bolt	Coolant Bolt (Optional)	Driver Handle	Screw Driver Blade
DL5H-20R01	SM40-100-R0	SD-06-46	SD-06-89	DS-A00T	DS-T156B
DL6H-20R01	SM40-100-R0	SD-06-46	SD-06-89	DS-A00T	DS-T156B
DL6H-25R01	SM40-100-R0	SD-08-46	SD-08-92	DS-A00T	DS-T156B
DL6H-30R01	SM40-100-R0	-	-	DS-A00T	DS-T156B
DL6H-40R01	SM40-100-R0	-	-	DS-A00T	DS-T156B
DL6H-50R01	SM40-100-R0	-	-	DS-A00T	DS-T156B
DL5H-60R01	SM40-100-R0	-	-	DS-A00T	DS-T156B
DL6H-60R01	SM40-100-R0	-	-	DS-A00T	DS-T156B

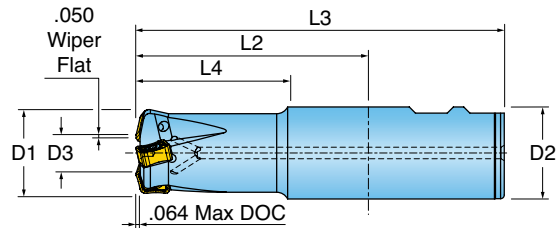
● = P ● = M ● = K ● = N ● = S ○ = H

Features & Benefits:

- Value with 8 strong cutting edges (4 + 4).
- Near net shape flexibility with .065" axial depth of cut capability.
- Chip evacuation via coolant through the tool capability.
- Deck surface finish capability with .050" integrated wiper flat.
- Clearance angles for corkscrew and ramping applications.
- Utilizes the same insert used on our 45° lead (series DN6H) and 15° lead (series DL6H) cutters.

ISOPLUS SERIES 1DD1H (12 MM INSERT)

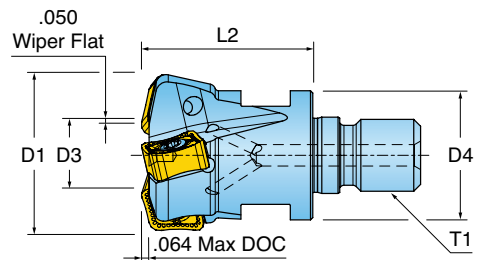
HIGH FEED END MILL WITH 8 INDEXES



Cutter Number	D1 Nom. Dia.	D3 Min. Dia.	D2 Adaption	L4 Projection Length	L2 Extension Length	L3 Overall Length	Number of Inserts	Ramp Angle
1DD1H-1502586R01	1.500	0.773	1.500" Weldon	2.50	3.75	6.00	3	0

ISOPLUS SERIES 1DD1H (12 MM INSERT)

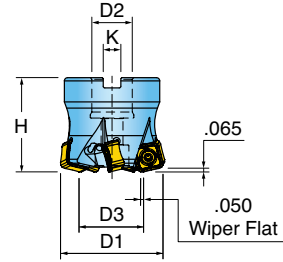
HIGH FEED MODULAR END MILL WITH 8 INDEXES (TOPON STYLE)



Cutter Number	D1 Eff. Dia.	D3 Minor Dia.	T1 Adaption	D4 Neck Diameter	L2 Exten. Length	Number of Inserts	Ramp Angle	Wrench Size
1DD1H-15015X8R01	1.500	0.773	M16	1.13	1.50	3	0	22mm

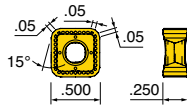
ISOPLUS SERIES DD6H (12 MM INSERT)

HIGH FEED FACE MILL WITH 8 INDEXES



Cutter Number	D1 Effective Diameter	D3 Inner Diameter	D2 Bore Dia.	H Height	Number Effective Inserts	K Keyway	Ramp Angle
DD6H-20R01	2.000	1.250	0.750	1.650	5	0.312	1.14
DD6H-25R01	2.500	1.750	0.750	1.650	6	0.312	.86
DD6H-30R01	3.000	2.250	1.000	1.750	7	0.375	.66
DD6H-40R01	4.000	3.250	1.500	2.375	9	0.625	.45
DD6H-50R01	5.000	4.250	1.500	2.375	11	0.625	.34
DD6H-60R01	6.000	5.250	1.500	2.375	13	0.625	.27

SNGU1205ENN



Part Number	Application	Grades	IN2035	IN2505	IN2510	IN2530	IN2540	IN4015	IN4030
			SNGU1205ENN	Multi-Purpose					

HARDWARE



Screw

Retention Bolt

Coolant Bolt (Optional)

Driver Handle

Screw Driver Blade

Wrench (Optional)

1DD1H-1502586R01	SM40-100-R0	-	-	DS-A00T	DS-T156B	-
1DD1H-15015X8R01	SM40-100-R0	-	-	DS-A00T	DS-T156B	622MM
DD6H-20R01	SM40-100-R0	SD-06-47	SD-06-A6	DS-A00T	DS-T156B	-
DD6H-25R01	SM40-100-R0	SD-06-47	SD-06-A6	DS-A00T	DS-T156B	-
DD6H-30R01	SM40-100-R0	SD-08-46	SD-08-92	DS-A00T	DS-T156B	-
DD6H-40R01	SM40-100-R0	SD-12-82	SD-12-99	DS-A00T	DS-T156B	-
DD6H-50R01	SM40-100-R0	SD-12-82	SD-12-99	DS-A00T	DS-T156B	-
DD6H-60R01	SM40-100-R0	-	-	DS-A00T	DS-T156B	-

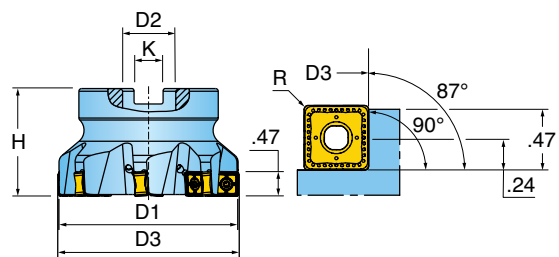
● = P ● = M ● = K ● = N ● = S ○ = H

Features & Benefits:

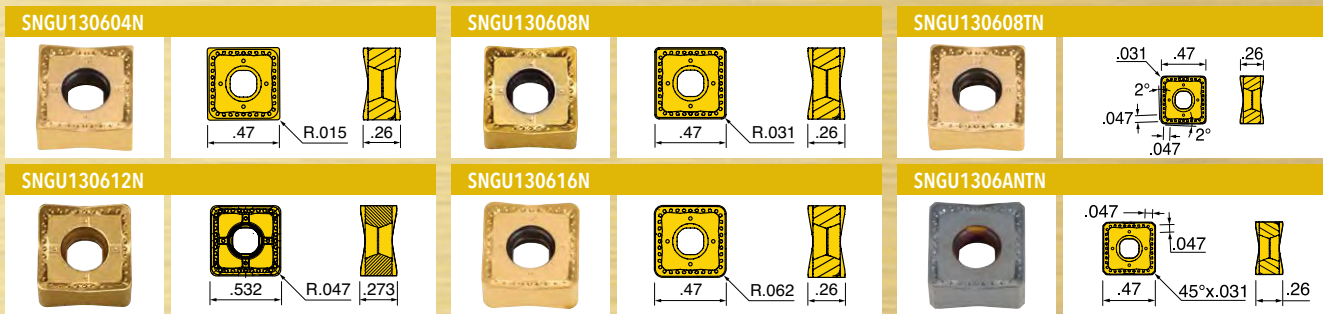
- 90° face mill for roughing and finishing
- 85° face mill for roughing with less face contact
- 8 positive cutting edges
- .50" max depth of cut, .24" depth of cut along shoulder
- Medium and high density cutter offerings
- 2.00 – 8.00" diameter range

ISOPLUS SERIES DJ6T, DJ5T (13 MM INSERT)






90° ROUGH & FINISH FACE MILL WITH 8 INDEXES



Cutter Number	D1 Nominal Diameter	D3 Overall Dia.	Number of Inserts	H Height	D2 Bore Dia.	K Keyway	Bolt Circle	Coolant
DJ6T-20R01	2.000	2.025	5	1.570	0.750	0.312	NA	Yes
DJ6T-25R01	2.500	2.523	6	1.570	0.750	0.312	NA	Yes
DJ5T-30R01	3.000	3.021	8	1.750	1.000	0.375	NA	Yes
DJ6T-30R01	3.000	3.021	7	1.750	1.000	0.375	NA	Yes
DJ5T-40R01	4.000	4.020	10	2.375	1.500	0.625	NA	Yes
DJ6T-40R01	4.000	4.020	8	2.375	1.500	0.625	NA	Yes
DJ6T-50R01	5.000	5.018	10	2.375	1.500	0.625	NA	Yes
DJ5T-60R01	6.000	6.016	17	2.375	1.500	0.625	NA	No
DJ6T-60R01	6.000	6.018	12	2.375	1.500	0.625	NA	No
DJ5T-80R01	8.000	8.016	21	2.375	2.500	1.000	4.00	No
DJ6T-80R01	8.000	8.016	14	2.375	2.500	1.000	4.00	No



Part Number	Application	Grades	IN2505	IN2510	IN2530	IN2540	IN4015	IN4030	IN71N
SNGU130604N	Positive Geometry - 0.015" R		●	●	●				●
SNGU130608N	Positive Geometry - 0.031" R		●	●					●
SNGU130608TN	Positive Geometry - 0.031" R w/.047" Wiper		●	●	●	●	●	●	
SNGU130612N	Positive Geometry - 0.047" R		●	●					
SNGU130616N	Positive Geometry - 0.062" R		●		●	●	●		●
SNGU1306ANTN	Positive Geometry - 0.031" Chamfer 45 deg. Wiper		●	●		●	●		

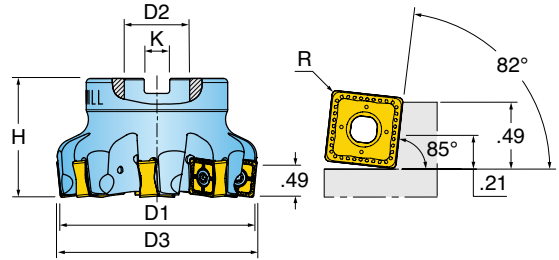
Hardware					
	Screw	Retention Bolt	Coolant Bolt (Optional)	Driver Handle	Screw Driver Blade
DJ6T-20R01	SM40-100-R0	SD-06-46	SD-06-89	DS-A00T	DS-T156B
DJ6T-25R01	SM40-100-R0	SD-06-46	SD-06-89	DS-A00T	DS-T156B
DJ5T-30R01	SM40-100-R0	SD-08-46	SD-08-92	DS-A00T	DS-T156B
DJ6T-30R01	SM40-100-R0	SD-08-46	SD-08-92	DS-A00T	DS-T156B
DJ5T-40R01	SM40-100-R0	SD-12-82	SD-12-99	DS-A00T	DS-T156B
DJ6T-40R01	SM40-100-R0	SD-12-82	SD-12-99	DS-A00T	DS-T156B
DJ6T-50R01	SM40-100-R0	SD-12-82	SD-12-99	DS-A00T	DS-T156B
DJ5T-60R01	SM40-100-R0	-	-	DS-A00T	DS-T156B
DJ6T-60R01	SM40-100-R0	-	-	DS-A00T	DS-T156B
DJ5T-80R01	SM40-100-R0	-	-	DS-A00T	DS-T156B
DJ6T-80R01	SM40-100-R0	-	-	DS-A00T	DS-T156B

Insert screw torque for carbide: 30-35 in lbs. Use Torque wrench DT-35-02 with DS-T15B1 bit.
 Insert screw torque for SiNi: 28 in lbs. Use Torque wrench DT-28-01 with DS-T15B1 bit.

● = P ● = M ● = K ● = N ● = S ○ = H

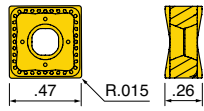
ISO PLUS SERIES DL6T, DL5T (13MM INSERT)

85° ROUGHING FACE MILL WITH 8 INDEXES

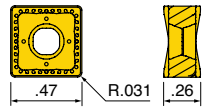


Cutter Number	D1 Nominal Diameter	D3 Overall Diameter	Number of Inserts	D2 Bore Dia.	H Height	K Keyway
DL6T-20R01	2.000	2.11	5	0.750	1.570	0.312
DL6T-25R01	2.500	2.61	6	0.750	1.570	0.312
DL5T-30R01	3.000	3.11	8	1.000	1.750	0.375
DL5T-40R01	4.000	4.11	10	1.500	2.375	0.625
DL5T-50R01	5.000	5.11	13	1.500	2.375	0.625
DL5T-60R01	6.000	6.11	17	1.500	2.375	0.625

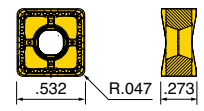
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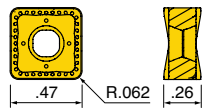
SNGU130608N



SNGU130612N



SNGU130616N



Part Number	Application	Grades						
			IN2505	IN2510	IN2530	IN2540	IN4015	IN71N
SNGU130604N	Positive Geometry - 0.015" R		●	●	●			●
SNGU130608N	Positive Geometry - 0.031" R		●	●				●
SNGU130612N	Positive Geometry - 0.047" R		●	●				●
SNGU130616N	Positive Geometry - 0.062" R		●		●	●	●	●

HARDWARE



Screw



Retention Bolt



Driver Handle



Screw Driver Blade

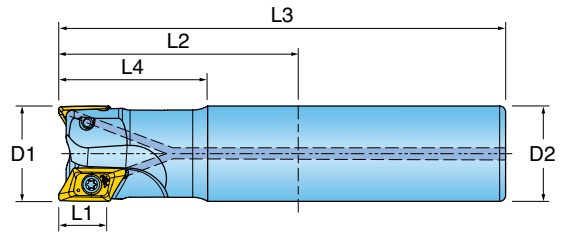
DL6T-20R01	SM40-100-R0	SD-06-46	DS-A00T	DS-T156B
DL6T-25R01	SM40-100-R0	SD-06-46	DS-A00T	DS-T156B
DL5T-30R01	SM40-100-R0	SD-08-46	DS-A00T	DS-T156B
DL5T-40R01	SM40-100-R0	SD-12-82	DS-A00T	DS-T156B
DL5T-50R01	SM40-100-R0	SD-12-82	DS-A00T	DS-T156B
DL5T-60R01	SM40-100-R0	-	DS-A00T	DS-T156B

Insert screw torque for carbide: 30-35 in lbs. Use Torque wrench DT-35-02 with DS-T15B1 bit.

Insert screw torque for SiNi: 28 in lbs. Use Torque wrench DT-28-01 with DS-T15B1 bit.

● = P ○ = M ● = K ● = N ● = S ○ = H

90° HIGH-SPEED ROUTER END MILL (ALUMINUM)



Cutter Number	D1 Nominal Diameter	L1 Extension Length	L2 Overall Length	D2 Shank Size/Style	Number of Inserts	Ramp Angle
1AX2K-10022S1R01	1.000	2.20	6.00	1.000" Cylind.	2	22.0
1AX2K-10032S1R01	1.000	3.20	8.00	1.000" Cylind.	2	22.0
1AX2K-12022S9R01	1.250	2.20	6.00	1.250" Cylind.	3	16.5
1AX2K-12032S9R01	1.250	3.20	8.00	1.250" Cylind.	3	16.5
1AX2K-15032S9R01	1.500	3.20	10.00	1.250" Cylind.	3	11.5

Ramp angle measured using insert XEVT160508FR-P.

Part Number	Dimensions	Part Number	Dimensions	Part Number	Dimensions
XEVT160504FR-P	.881, .452, R.015, .220	XEVT160508FR-P	.881, .452, R.031, .220	XEVT160516FR-P	.838, .448, R.062, .216
XEVT160524FR-P	.795, .448, R.093, .208	XEVT160532FR-P	.755, .448, R.125, .204	XEVT160550FR-P	.720, .444, R5mm, .200

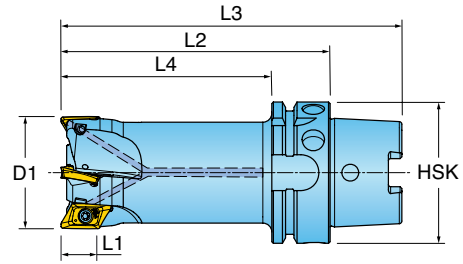
Part Number	Application	Grades	IN10K
XEVT160504FR-P	Ground/Polished for Aluminum - 0.015" R		●
XEVT160508FR-P	Ground/Polished for Aluminum - 0.031" R		●
XEVT160516FR-P	Ground/Polished for Aluminum - 0.062" R		●
XEVT160524FR-P	Ground/Polished for Aluminum - 0.093" R		●
XEVT160532FR-P	Ground/Polished for Aluminum - 0.125" R		●
XEVT160550FR-P	Ground/Polished for Aluminum - 0.197" R		●

Cutter Number	HARDWARE		
	Insert Screw	Screw Driver Blade	Driver Handle
1AX2K-10022S1R01	SM40-079-20	DS-T156B	DS-A00T
1AX2K-10032S1R01	SM40-079-20	DS-T156B	DS-A00T
1AX2K-12022S9R01	SM40-093-20	DS-T156B	DS-A00T
1AX2K-12032S9R01	SM40-093-20	DS-T156B	DS-A00T
1AX2K-15032S9R01	SM40-093-20	DS-T156B	DS-A00T

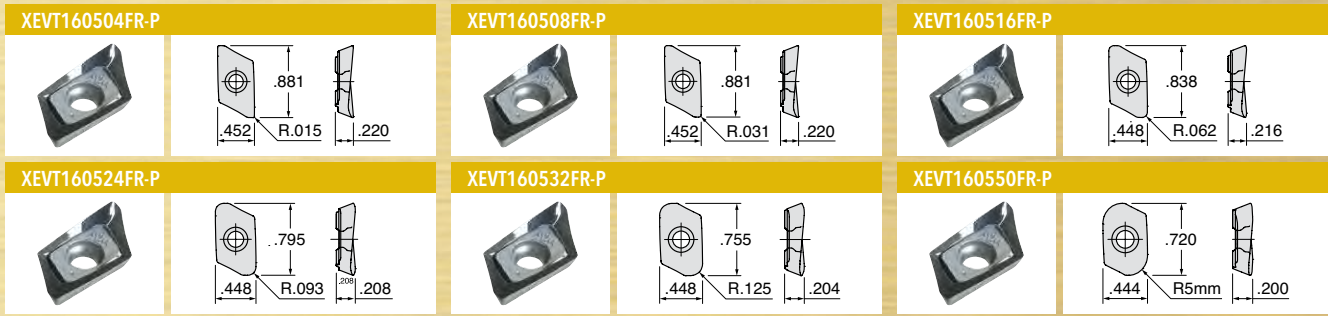
● = P ● = M ● = K ● = N ● = S ○ = H

HIPOS[®]ALU SERIES 1AX2K (HSK ADAPTION)




90° HIGH-SPEED ROUTER END MILL (ALUMINUM)



Cutter Number	D1 Nom. Dia.	L1 Extension Length	L2 Projection Length	L3 Overall Length	D2 Shank Size/Style	Number of Inserts	Ramp Angle
1AX2K-10032H5R01	1.000	3.25	2.00	4.50	HSK-63-A	2	22.0
1AX2K-10032HQR01	1.000	3.25	2.00	4.50	HSK-80-F	2	22.0
1AX2K-10042H5R01	1.000	4.25	3.00	5.50	HSK-63-A	2	22.0
1AX2K-10042HQR01	1.000	4.25	3.00	5.50	HSK-80-F	2	22.0
1AX2K-12032H5R01	1.250	3.25	2.00	4.50	HSK-63-A	3	16.5
1AX2K-12042H5R01	1.250	4.25	3.00	5.50	HSK-63-A	2	16.5
1AX2K-15042H5R01	1.500	4.25	3.00	5.50	HSK-63-A	3	11.5
1AX2K-20042H5R01	2.000	4.25	3.00	5.50	HSK-63-A	4	9.5
1AX2K-20042HQR01	2.000	4.25	3.00	5.50	HSK-80-F	3	9.5
1AX2K-20052H5R01	2.000	5.25	4.00	6.50	HSK-63-A	3	9.5
1AX2K-20052HQR01	2.000	5.25	4.00	6.50	HSK-80-F	3	9.5



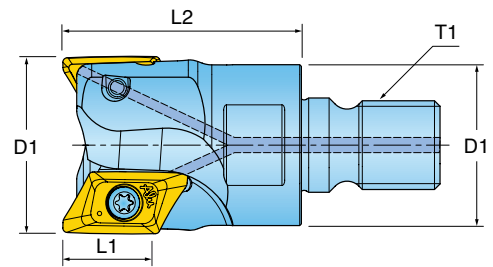
Part Number	Application	Grades	IN10K
XEVT160504FR-P	Ground/Polished for Aluminum - 0.015" R		●
XEVT160508FR-P	Ground/Polished for Aluminum - 0.031" R		●
XEVT160516FR-P	Ground/Polished for Aluminum - 0.062" R		●
XEVT160524FR-P	Ground/Polished for Aluminum - 0.093" R		●
XEVT160532FR-P	Ground/Polished for Aluminum - 0.125" R		●
XEVT160550FR-P	Ground/Polished for Aluminum - 0.197" R		●

HARDWARE			
	Insert Screw	Screw Driver Blade	Driver Handle
1AX2K-10032H5R01	SM40-079-20	DS-T156B	DS-A00T
1AX2K-10032HQR01	SM40-079-20	DS-T156B	DS-A00T
1AX2K-10042H5R01	SM40-079-20	DS-T156B	DS-A00T
1AX2K-10042HQR01	SM40-079-20	DS-T156B	DS-A00T
1AX2K-12032H5R01	SM40-093-20	DS-T156B	DS-A00T
1AX2K-12042H5R01	SM40-093-20	DS-T156B	DS-A00T
1AX2K-15042H5R01	SM40-093-20	DS-T156B	DS-A00T
1AX2K-20042H5R01	SM40-093-20	DS-T156B	DS-A00T
1AX2K-20042HQR01	SM40-093-20	DS-T156B	DS-A00T
1AX2K-20052H5R02	SM40-093-20	DS-T156B	DS-A00T
1AX2K-20052HQR01	SM40-093-20	DS-T156B	DS-A00T

● = P ● = M ● = K ● = N ● = S ○ = H

HIPOS^oALU SERIES 1AX2K (TOP-ON STYLE)

90° HIGH-SPEED ROUTER END MILL (ALUMINUM)



Cutter Number	D1 Nom. Dia.	T1 Adaption	L1 Extension Length	Number of Inserts	Wrench Size	Ramp Angle
1AX2K-10017X7R01	1.000	M12	1.75	2	17mm	22.0
1AX2K-12017X8R01	1.250	M16	1.75	2	22mm	16.5
1AX2K-12017X8R02	1.250	M16	1.75	3	22mm	16.5
1AX2K-15017X8R01	1.500	M16	1.75	2	22mm	11.5
1AX2K-15017X8R02	1.500	M16	1.75	3	22mm	11.5

Part Number	Application	Grades	IN10K
XEVT160504FR-P	Ground/Polished for Aluminum - 0.015" R	●	●
XEVT160508FR-P	Ground/Polished for Aluminum - 0.031" R	●	●
XEVT160516FR-P	Ground/Polished for Aluminum - 0.062" R	●	●
XEVT160524FR-P	Ground/Polished for Aluminum - 0.093" R	●	●
XEVT160532FR-P	Ground/Polished for Aluminum - 0.125" R	●	●
XEVT160550FR-P	Ground/Polished for Aluminum - 0.197" R	●	●

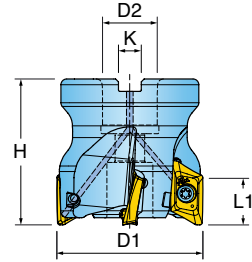
Part Number	Application	Grades	IN10K
XEVT160504FR-P	Ground/Polished for Aluminum - 0.015" R	●	●
XEVT160508FR-P	Ground/Polished for Aluminum - 0.031" R	●	●
XEVT160516FR-P	Ground/Polished for Aluminum - 0.062" R	●	●
XEVT160524FR-P	Ground/Polished for Aluminum - 0.093" R	●	●
XEVT160532FR-P	Ground/Polished for Aluminum - 0.125" R	●	●
XEVT160550FR-P	Ground/Polished for Aluminum - 0.197" R	●	●

Cutter Number	HARDWARE		
	Insert Screw	Screw Driver Blade	Driver Handle
1AX2K-10017X7R01	SM40-079-20	DS-T156B	DS-A00T
1AX2K-12017X8R01	SM40-093-20	DS-T156B	DS-A00T
1AX2K-12017X8R02	SM40-093-20	DS-T156B	DS-A00T
1AX2K-15017X8R01	SM40-093-20	DS-T156B	DS-A00T
1AX2K-15017X8R02	SM40-093-20	DS-T156B	DS-A00T

● = P ● = M ● = K ● = N ● = S ○ = H

FINE GOLD

90° HIGH SPEED ROUTER FACE MILL (ALUMINUM)L



Cutter Number	D1 Nominal Diameter	D2 Bore Size	K Keyway	H Height	#Flutes Effective	Ramp Angle
AX2K-20R01	2.000	0.750	0.312	2.000	2	9.5
AX2K-20R02	2.000	0.750	0.312	2.000	3	9.5
AX2K-25R01	2.500	1.000	0.375	2.000	3	7.0
AX2K-30R01	3.000	1.000	0.375	2.000	3	5.0
AX2K-30R02	3.000	1.000	0.375	2.000	5	5.0
AX2K-40R01	4.000	1.500	0.625	2.375	5	3.5
AX2K-60R01	6.000	1.500	0.625	2.375	7	1.5

Part Number	Application	Grades	IN10K
XEVT160504FR-P	Ground/Polished for Aluminum - 0.015" R	●	●
XEVT160508FR-P	Ground/Polished for Aluminum - 0.031" R	●	●
XEVT160516FR-P	Ground/Polished for Aluminum - 0.062" R	●	●
XEVT160524FR-P	Ground/Polished for Aluminum - 0.093" R	●	●
XEVT160532FR-P	Ground/Polished for Aluminum - 0.125" R	●	●
XEVT160550FR-P	Ground/Polished for Aluminum - 0.197" R	●	●

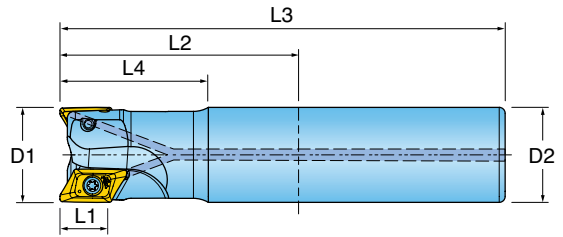
Part Number	Application	Grades	IN10K
XEVT160504FR-P	Ground/Polished for Aluminum - 0.015" R	●	●
XEVT160508FR-P	Ground/Polished for Aluminum - 0.031" R	●	●
XEVT160516FR-P	Ground/Polished for Aluminum - 0.062" R	●	●
XEVT160524FR-P	Ground/Polished for Aluminum - 0.093" R	●	●
XEVT160532FR-P	Ground/Polished for Aluminum - 0.125" R	●	●
XEVT160550FR-P	Ground/Polished for Aluminum - 0.197" R	●	●

Cutter Number	HARDWARE			
	Insert Screw	Retention Bolt	Driver Handle	Screw Driver Blade
AX2K-20R01	SM40-093-20	SD-06-47	DS-A00T	DS-T156B
AX2K-20R02	SM40-093-20	SD-06-46	DS-A00T	DS-T156B
AX2K-25R01	SM40-093-20	SD-08-47	DS-A00T	DS-T156B
AX2K-30R01	SM40-093-20	SD-08-47	DS-A00T	DS-T156B
AX2K-30R02	SM40-093-20	SD-08-47	DS-A00T	DS-T156B
AX2K-40R01	SM40-093-20	SD-12-82	DS-A00T	DS-T156B
AX2K-60R01	SM40-093-20	SD-12-82	DS-A00T	DS-T156B

● = P ● = M ● = K ● = N ● = S ○ = H

HIPOS[®]ALU SERIES 1AX2Q

90° HIGH-SPEED ROUTER END MILL (ALUMINUM)



Cutter Number	D1 Nominal Diameter	L1 Extension Length	L2 Overall Length	D2 Shank Size/Style	Number of Inserts	Ramp Angle
1AX2Q-12020S9R01	1.250	2.00	8.00	1.250" Cyliind.	2	16.9
1AX2Q-15020S9R01	1.500	2.00	10.00	1.250" Cyliind.	3	12.4

Ramp angle measured using insert XEVT220608FR-P.

XEVT220605FR-P	XEVT220608FR-P	XEVT220616FR-P
XEVT220632FR-P	XEVT220650FR-P	XEVT220664FR-P

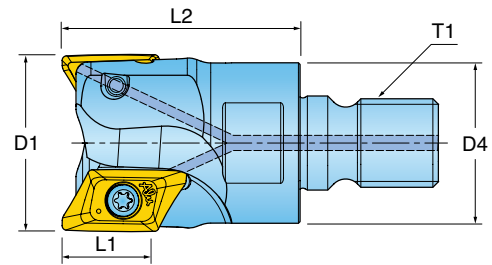
Part Number	Application	Grades	IN10K
XEVT220605FR-P	Ground/Polished for Aluminum - 0.015" R		●
XEVT220608FR-P	Ground/Polished for Aluminum - 0.031" R		●
XEVT220616FR-P	Ground/Polished for Aluminum - 0.062" R		●
XEVT220632FR-P	Ground/Polished for Aluminum - 0.093" R		●
XEVT220650FR-P	Ground/Polished for Aluminum - 0.125" R		●
XEVT220664FR-P	Ground/Polished for Aluminum - 0.197" R		●

HARDWARE			
	Screw	Driver Handle	Screw Driver Blade
1AX2Q-12020S9R01	SM50-096-20	DS-A00T	DS-T206B
1AX2Q-15020S9R01	SM50-113-20	DS-A00T	DS-T206B

● = P ● = M ● = K ● = N ● = S ○ = H

HIPOS^oALU SERIES 1AX2Q (TOP-ON STYLE)

90° HIGH-SPEED ROUTER END MILL (ALUMINUM)



Cutter Number	D1 Nom. Dia.	T1 Adaption	L1 Extension Length	Number of Inserts	Wrench Size	Ramp Angle
1AX2Q-12017X8R01	1.250	M16	1.75	2	22mm	16.9
1AX2Q-15018X8R01	1.500	M16	1.88	2	22mm	12.4

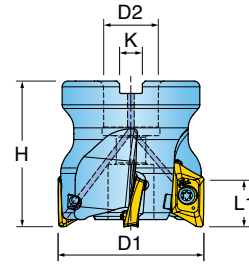
XEVT220605FR-P 	XEVT220608FR-P 	XEVT220616FR-P
XEVT220632FR-P 	XEVT220650FR-P 	XEVT220664FR-P

Part Number	Application	Grades	IN10K
XEVT220605FR-P	Ground/Polished for Aluminum - 0.015" R		●
XEVT220608FR-P	Ground/Polished for Aluminum - 0.031" R		●
XEVT220616FR-P	Ground/Polished for Aluminum - 0.062" R		●
XEVT220632FR-P	Ground/Polished for Aluminum - 0.093" R		●
XEVT220650FR-P	Ground/Polished for Aluminum - 0.125" R		●
XEVT220664FR-P	Ground/Polished for Aluminum - 0.197" R		●

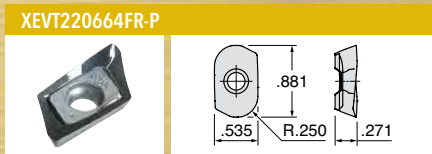
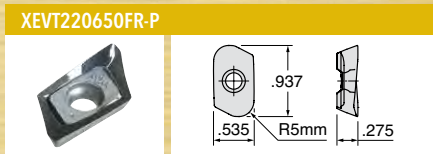
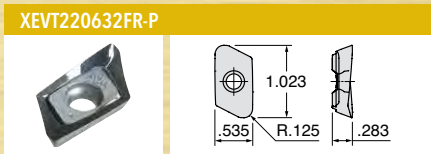
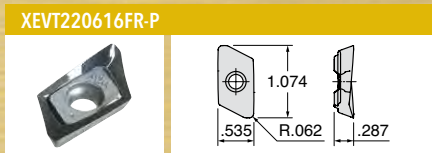
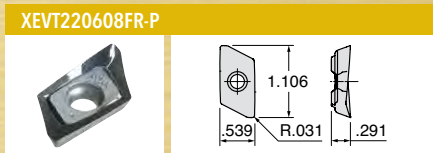
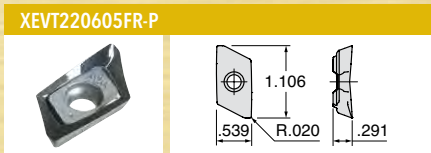
HARDWARE			
	Screw	Driver Handle	Screw Driver Blade
1AX2Q-12017X8R01	SM50-096-20	DS-A00T	DS-T206B
1AX2Q-15018X8R01	SM50-113-20	DS-A00T	DS-T206B

● = P ● = M ● = K ● = N ● = S ○ = H

90° HIGH SPEED ROUTER FACE MILL (ALUMINUM)L



Cutter Number	D1 Nominal Diameter	D2 Bore Size	K Keyway	H Height	#Flutes Effective	Ramp Angle
AX2Q-20R01	2.000	0.750	0.312	2.000	2	8.1
AX2Q-20R02	2.000	0.750	0.312	2.000	3	8.1
AX2Q-25R01	2.500	1.000	0.375	2.000	3	6.0
AX2Q-25R02	2.500	1.000	0.375	2.000	4	6.0
AX2Q-30R01	3.000	1.000	0.375	2.000	3	5.0
AX2Q-30R02	3.000	1.000	0.375	2.000	5	5.0
AX2Q-40R01	4.000	1.500	0.625	2.375	3	3.0
AX2Q-40R02	4.000	1.500	0.625	2.375	5	3.0
AX2Q-60R01	6.000	1.500	0.625	2.375	3	2.0
AX2Q-60R02	6.000	1.500	0.625	2.375	7	2.0



Part Number	Application	Grades	IN10K
XEVT220605FR-P	Ground/Polished for Aluminum - 0.015" R		●
XEVT220608FR-P	Ground/Polished for Aluminum - 0.031" R		●
XEVT220616FR-P	Ground/Polished for Aluminum - 0.062" R		●
XEVT220632FR-P	Ground/Polished for Aluminum - 0.093" R		●
XEVT220650FR-P	Ground/Polished for Aluminum - 0.125" R		●
XEVT220664FR-P	Ground/Polished for Aluminum - 0.197" R		●

HARDWARE				
	Screw	Retention Bolt	Driver Handle	Screw Driver Blade
AX2Q-20R01	SM50-113-20	SD-06-47	DS-A00T	DS-T206B
AX2Q-20R02	SM50-113-20	SD-06-47	DS-A00T	DS-T206B
AX2Q-25R01	SM50-113-20	SD-08-47	DS-A00T	DS-T206B
AX2Q-25R02	SM50-113-20	SD-08-47	DS-A00T	DS-T206B
AX2Q-30R01	SM50-113-20	SD-08-47	DS-A00T	DS-T206B
AX2Q-30R02	SM50-113-20	SD-08-47	DS-A00T	DS-T206B
AX2Q-40R01	SM50-113-20	SD-12-82	DS-A00T	DS-T206B
AX2Q-40R02	SM50-113-20	SD-12-82	DS-A00T	DS-T206B
AX2Q-60R01	SM50-113-20	SD-12-82	DS-A00T	DS-T206B
AX2Q-60R02	SM50-113-20	SD-12-82	DS-A00T	DS-T206B

● = P ● = M ● = K ● = N ● = S ○ = H

Features & Benefits:

- Suitable for high feed machining
- Low cutting forces
- Insert available with single tip, double tip and full edge
- High number of cutting edges for high productivity

TEDI FEED SERIES TRGSC

PCD/CBN END MILL




Cutter Number	D1 Nominal Diameter	D3 Minor Diameter"	L2 Extension Length	L3 Overall Length	D2 Shank Size/Style	Number of Inserts
TRGSC25D025N03-00	25.000	23.600	50.00	100.00	25mm Cylind.	3
TRGSC01I010N03-00	1.000	0.995	2.00	4.00	1.000" Cylind.	3

*D1 relates to 90 degree insert orientation. D3 relates to 75 degree insert orientation.

HARDWARE



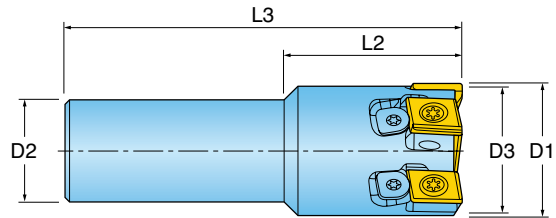

Insert Screw Wrench Kit

VX040024A TEDI FEED KIT

● = P ● = M ● = K ● = N ● = S ○ = H

TEDIFEEED SERIES TRGSC-AXIAL ADJ

PCD/CBN END MILL WITH AXIAL ADJUSTMENT



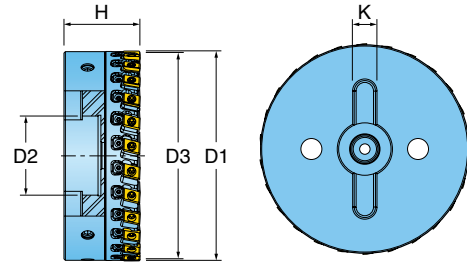
Cutter Number	D1 Nominal Diameter	D3 Minor Diameter"	L2 Extension Length	L3 Overall Length	D2 Shank Size/Style	Number of Inserts
TRGSC25D025-03-00	25.000	23.600	50.00	100.00	25mm Cylind.	3
TRGSC01I010-03-00	1.000	0.995	2.00	4.00	1.000" Cylind.	3
TRGSC01I012-05-00	1.250	1.200	2.00	4.00	1.000" Cylind.	5
TRGSC25D032-05-00	32.000	30.600	50.00	100.00	25mm Cylind.	5

*D1 relates to 90 degree insert orientation. D3 relates to 75 degree insert orientation.

Cutter Number	HARDWARE				
	Insert Screw	Wedge Screw	Adjusting Wedge	Wrench Kit	Wedge screw
TRGSC25D025-03-00	VX040024A	VX040028A	RSFTC1011	TEDIFEEED KIT	-
TRGSC01I010-03-00	VX040024A	VX040028A	RSFTC1011	TEDIFEEED KIT	-
TRGSC01I012-05-00	VX040024A	-	RSFTC1009	TEDIFEEED KIT	RSRGR5M40
TRGSC25D032-05-00	VX040024A	-	RSFTC1009	TEDIFEEED KIT	-





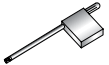

● = P ● = M ● = K ● = N ● = S ○ = H

PCD/CBN FACE MILL WITH AXIAL ADJUSTMENT

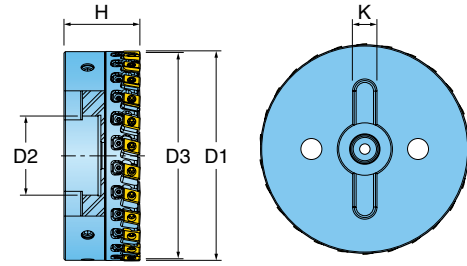


Cutter Number	D1 Nominal Diameter	D3 Minor Diameter*	H Height	Number of Inserts	D2 Bore Dia.	K Keyway
TRGSM16D040-06-00	40mm	38.600	55mm	6	NA	NA
TRGSM16I015-06-00	1.500	1.450	2.165	6	NA	NA
TRGSM22D050-08-00	50mm	48.600	55mm	8	22mm	10.4mm
TRGSM22D063-10-00	63mm	61.600	55mm	10	22mm	10.4mm
TRGSM22I020-08-00	2.000	1.950	2.165	8	22mm	10.4mm
TRGSM22I025-10-00	2.500	2.450	2.165	10	22mm	10.4mm
TRGSM27D080-12-00	80mm	78.600	58mm	12	27mm	12.4mm
TRGSM27I030-12-00	3.000	2.950	2.283	12	27mm	12.4mm
TRGSM32D100-16-00	100mm	98.600	58mm	16	32mm	14.0mm
TRGSM32I040-16-00	4.000	3.950	2.283	16	32mm	14.0mm
TRGSM40D125-20-00	125mm	123.600	58mm	20	40mm	16.0mm
TRGSM40D160-26-00	160mm	158.600	58mm	26	40mm	16.0mm
TRGSM40I050-20-00	5.000	4.950	2.283	20	40mm	16.0mm
TRGSM40I060-24-00	6.000	5.950	2.283	24	40mm	16.0mm
TRGSM60D200-30-00	200mm	198.600	63mm	30	60mm	25.7mm
TRGSM60D250-34-00	250mm	248.600	63mm	34	60mm	25.7mm
TRGSM60I080-30-00	8.000	7.950	2.480	30	60mm	25.7mm
TRGSM60I100-34-00	10.000	9.950	2.480	34	60mm	25.7mm

*D1 relates to 90 degree insert orientation. D3 relates to 75 degree insert orientation.






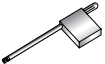
HARDWARE						
	Insert Screw	Adjusting Wedge	Clamping Bolt	Wedge screw	Wrench Kit	Faceplate
TRGSM16D040-06-00	VX040024A	RSFTC1009	VC004762I06035	RSRGR5M40	TEDIFEED KIT	-
TRGSM16I015-06-00	VX040024A	RSFTC1009	VC004762I06035	RSRGR5M40	TEDIFEED KIT	-
TRGSM22D050-08-00	VX040024A	RSFTC1008	RSFTS4050M	RSRGR5M40	TEDIFEED KIT	-
TRGSM22D063-10-00	VX040024A	RSFTC1008	VC004762I10035F	RSRGR5M40	TEDIFEED KIT	RSFTS4063M
TRGSM22I020-08-00	VX040024A	RSFTC1008	RSFTS4050M	RSRGR5M40	TEDIFEED KIT	-
TRGSM22I025-10-00	VX040024A	RSFTC1008	VC004762I10035F	RSRGR5M40	TEDIFEED KIT	RSFTS4063M
TRGSM27D080-12-00	VX040024A	RSFTC1008	VC00TEDI12040F	RSRGR5M40	TEDIFEED KIT	RSFTS4080
TRGSM27I030-12-00	VX040024A	RSFTC1008	VC00TEDI12040F	RSRGR5M40	TEDIFEED KIT	RSFTS4080
TRGSM32D100-16-00	VX040024A	RSFTC1008	VC00TANG16040F	RSRGR5M40	TEDIFEED KIT	RSFTS4100
TRGSM32I040-16-00	VX040024A	RSFTC1008	VC00TANG16040F	RSRGR5M40	TEDIFEED KIT	RSFTS4100
TRGSM40D125-20-00	VX040024A	RSFTC1008	VC00TEDI20040F	RSRGR5M40	TEDIFEED KIT	RSFTS4125
TRGSM40D160-26-00	VX040024A	RSFTC1008	VC004762I12050	RSRGR5M40	TEDIFEED KIT	RSFTS4160
TRGSM40I050-20-00	VX040024A	RSFTC1008	VC00TEDI20040F	RSRGR5M40	TEDIFEED KIT	RSFTS4125
TRGSM40I060-24-00	VX040024A	RSFTC1008	VC004762I12050	RSRGR5M40	TEDIFEED KIT	RSFTS4160
TRGSM60D200-30-00	VX040024A	RSFTC1008	VC004762I16060	RSRGR5M40	TEDIFEED KIT	RSFTS4200
TRGSM60D250-34-00	VX040024A	RSFTC1008	VC004762I16060	RSRGR5M40	TEDIFEED KIT	RSFTS4250
TRGSM60I080-30-00	VX040024A	RSFTC1008	VC004762I16060	RSRGR5M40	TEDIFEED KIT	RSFTS4200
TRGSM60I100-34-00	VX040024A	RSFTC1008	VC004762I16060	RSRGR5M40	TEDIFEED KIT	RSFTS4250

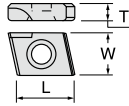
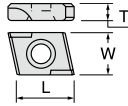
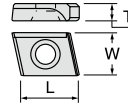
PCD/CBN FACE MILL WITH AXIAL ADJUSTMENT



Cutter Number	D1 Nominal Diameter	D3 Minor Diameter*	H Height	Number of Inserts	D2 Bore Dia.	K Keyway
TRGSM40D125-18-02	125mm	123.600	58mm	20	40mm	16.0mm
TRGSM40D160-24-02	160mm	158.600	58mm	26	40mm	16.0mm
TRGSM40I050-18-02	5.000	4.950	2.283	20	40mm	16.0mm
TRGSM40I060-22-02	6.000	5.950	2.283	24	40mm	16.0mm
TRGSM60D200-28-02	200mm	198.600	63mm	30	60mm	25.7mm
TRGSM60D250-32-02	250mm	248.600	63mm	34	60mm	25.7mm
TRGSM60I080-28-02	8.000	7.950	2.480	24	60mm	25.7mm
TRGSM60I100-32-02	10.000	9.950	2.480	34	60mm	25.7mm

*D1 relates to 90 degree insert orientation. D3 relates to 75 degree insert orientation.

HARDWARE						
	Insert Screw	Adjusting wedge	Faceplate	Clamping Bolt	Wedge screw	Wrench Kit
TRGSM40D125-18-02	VX040024A	RSFTC1008	RSFTS4125W	VC00TEDI20040F	RSRGR5M40	TEDIFEED KIT
TRGSM40D160-24-02	VX040024A	RSFTC1008	RSFTS4160W	VC004762112050	RSRGR5M40	TEDIFEED KIT
TRGSM40I050-18-02	VX040024A	RSFTC1008	RSFTS4125W	VC00TEDI20040F	RSRGR5M40	TEDIFEED KIT
TRGSM40I060-22-02	VX040024A	RSFTC1008	RSFTS4160W	VC004762112050	RSRGR5M40	TEDIFEED KIT
TRGSM60D200-28-02	VX040024A	RSFTC1008	RSFTS4200W	VC004762116060	RSRGR5M40	TEDIFEED KIT
TRGSM60D250-32-02	VX040024A	RSFTC1008	-	VC004762116060	RSRGR5M40	TEDIFEED KIT
TRGSM60I080-28-02	VX040024A	RSFTC1008	RSFTS4200W	VC004762116060	RSRGR5M40	TEDIFEED KIT
TRGSM60I100-32-02	VX040024A	RSFTC1008	-	VC004762116060	RSRGR5M40	TEDIFEED KIT

TRG_M Single-Tip

TRG_B Double-Tip

TRG_T Full Edge


Part Number	L Length	W Width	T Thickness	C Corner	Hand	Grades	CH	PB
TRGCP05BRCH	0.500	0.375	0.125	0.016 R w/.047" Wiper	Right			
TRGCP05MRCH	0.500	0.375	0.125	0.016 R w/.047" Wiper	Right			
TRGCP91BRCH	0.500	0.375	0.125	0.016 Cham 45deg w/Wip	Right			
TRGCP91MRCH	0.500	0.375	0.125	0.016 Cham 45deg w/Wip	Right			
TRGCP92BRCH	0.500	0.375	0.125	0.016 Cham 45deg w/Wip	Right			
TRGCP92MRCH	0.500	0.375	0.125	0.016 Cham 45deg w/Wip	Right			
TRGPP01BRPB	0.500	0.375	0.125	0.016 Cham 45deg w/Wip	Right			
TRGPP01MRPB	0.500	0.375	0.125	0.016 Cham 45deg w/Wip	Right			
TRGPP01TRPB	0.500	0.375	0.125	0.016 Cham 45deg w/Wip	Right			
TRGPP02BRPB	0.500	0.375	0.125	0.016 Cham 45deg w/Wip	Right			
TRGPP02MRPB	0.500	0.375	0.125	0.016 Cham 45deg w/Wip	Right			
TRGPP05BRPB	0.500	0.375	0.125	0.016 R w/.047" Wiper	Right			
TRGPP05MRPB	0.500	0.375	0.125	0.016 R w/.047" Wiper	Right			
TRGPP05TRPB	0.500	0.375	0.125	0.016 R w/.047" Wiper	Right			
TRGPP07BRPB	0.500	0.375	0.125	0.016 R w/.047" Wiper	Right			
TRGPP07MRPB	0.500	0.375	0.125	0.016 R w/.047" Wiper	Right			
TRGPP07TRPB	0.500	0.375	0.125	0.016 R w/.047" Wiper	Right			

● = P ● = M ● = K ● = N ● = S ○ = H



SERIES TRG INSERTS FOR CUTTERS >50MM IN DIAMETER



Part Number	L Length	W Width	T Thickness	C Corner	Hand	Grades	CH	PB
TRGCA05BRCH	0.500	0.375	0.125	0.016 R w/.047" Wiper	Right			
TRGCA05MRCH	0.500	0.375	0.125	0.016 R w/.047" Wiper	Right			
TRGCA91BRCH	0.500	0.375	0.125	0.016 Cham 45deg w/Wip	Right			
TRGCA91MRCH	0.500	0.375	0.125	0.016 Cham 45deg w/Wip	Right			
TRGCA92BRCH	0.500	0.375	0.125	0.016 Cham 45deg w/Wip	Right			
TRGCA92MRCH	0.500	0.375	0.125	0.016 Cham 45deg w/Wip	Right			
TRGPA01BRPB	0.500	0.375	0.125	0.016 Cham 45deg w/Wip	Right			
TRGPA01MRPB	0.500	0.375	0.125	0.016 Cham 45deg w/Wip	Right			
TRGPA02BRPB	0.500	0.375	0.125	0.016 Cham 45deg w/Wip	Right			
TRGPA02MRPB	0.500	0.375	0.125	0.016 Cham 45deg w/Wip	Right			
TRGPA05BRPB	0.500	0.375	0.125	0.016 R w/.047" Wiper	Right			
TRGPA05MRPB	0.500	0.375	0.125	0.016 R w/.047" Wiper	Right			
TRGPA05TRPB	0.500	0.375	0.125	0.016 R w/.047" Wiper	Right			
TRGPA07BRPB	0.500	0.375	0.125	0.016 R w/.047" Wiper	Right			
TRGPA07MRPB	0.500	0.375	0.125	0.016 R w/.047" Wiper	Right			
TRGPA07TRPB	0.500	0.375	0.125	0.016 R w/.047" Wiper	Right			



SERIES TRG WIPER INSERTS

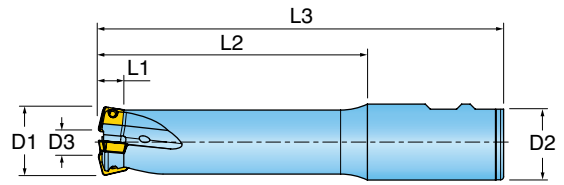


Part Number	L Length	W Width	T Thickness	C Corner	Hand	Grades	CH	PB
TRGCR92TRCH	0.500	0.375	0.125	0.016 Crowned Wiper	Right			
TRGPR02TRPB	0.500	0.375	0.125	0.016 Crowned Wiper	Right			

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD[®]QUAD SERIES 15M1P (13MM INSERT)

HIGH FEED END MILL WITH 4 INDEXES



Cutter Number	D1 Nominal Diameter	L2 Extension Length	L3 Overall Length	L4 Projection Length	D2 Shank Size/Style	Number of Inserts	Ramp Angle
15M1P-1202781R01	1.250	2.75	5.00	2.19	1.250" Weldon	2	4.7
15M1P-1204759R01	1.250	4.75	8.00	4.18	1.250" Cylind.	2	4.7
15M1P-1502786R01	1.500	2.75	5.41	2.18	1.500" Weldon	3	2.8
15M1P-1505386R01	1.500	5.34	8.00	4.77	1.500" Weldon	3	2.8

Refer to the new product announcement for detailed programming information. Note, when using inserts SDES1305MPR, SDES1305MPR-001 or SDES1305MPR-MR the nominal diameter is reduced .030 inch.

SDES130515N 	SDES130515N-001 	SDES1305MDR
SDES1305MDR-001 	SDES1305MPR 	SDES1305MPR-001
SDMS130515R-PH 	SDMS1305MDR-PH 	SDXS1305MPR-MR

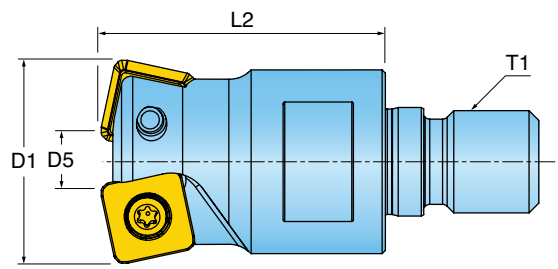
Part Number	Application	Grades	IN2505	IN2530	IN4005	IN4015	IN4030	IN4035
SDES130515N	Flat Top - Landed Edge - 0.060" R		●	●	●	●	●	
SDES130515N-001	Flat Top - Keen Edge - 0.060" R		●	●			●	●
SDES1305MDR	Flat Top - Landed Edge - 0.033" Wiper		●	●				
SDES1305MDR-001	Flat Top - Keen Edge - 0.033" Wiper		●					
SDES1305MPR	High Feed, Heavy-Duty		●	●	●			●
SDES1305MPR-001	High Feed, Heavy-Duty Keen Edge		●	●	●		●	●
SDMS130515R-PH	Positive Geometry - 0.060" R		●	●	●		●	●
SDMS1305MDR-PH	Positive Geometry - 0.033" Wiper		●	●	●		●	●
SDXS1305MPR-MR	Utility Insert - Heavy Duty				●			

HARDWARE			
	SM40-100-R0	DS-A00T	DS-T156B

● = P ○ = M ● = K ● = N ● = S ○ = H

GOLDQUAD SERIES 15M1P (13MM INSERT)

HIGH FEED MODULAR END MILL, 4 INDEXES,
INCH & METRIC CUTTER DIAMETERS (TOPON STYLE)



Cutter Number	D1 Nom. Dia.	T1 Adaption	L2 Extension Length	Number of Inserts	Wrench Size	Ramp Angle
15M1P032043X8R00	32mm	M16	43mm	2	22mm	5.0
15M1P035043X8R00	35mm	M16	43mm	2	22mm	4.0
15M1P040043X8R00	40mm	M16	43mm	3	22mm	2.7
15M1P-12017X8R01	1.250	M16	1.75	2	22mm	4.7

Refer to the new product announcement for detailed programming information. Note, when using inserts SDES1305MPR, SDES1305MPR-001 or SDES1305MPR-MR the nominal diameter is reduced .030 inch.

SDES130515N 	SDES130515N-001 	SDES1305MDR
SDES1305MDR-001 	SDES1305MPR 	SDES1305MPR-001
SDMS130515R-PH 	SDMS1305MDR-PH 	SDXS1305MPR-MR

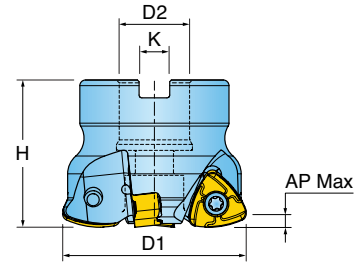
Part Number	Application	Grades	IN2505	IN2530	IN4005	IN4015	IN4030	IN4035
SDES130515N	Flat Top - Landed Edge - 0.060" R		●	●	●	●	●	
SDES130515N-001	Flat Top - Keen Edge - 0.060" R		●	●			●	●
SDES1305MDR	Flat Top - Landed Edge - 0.033" Wiper		●	●				
SDES1305MDR-001	Flat Top - Keen Edge - 0.033" Wiper		●					
SDES1305MPR	High Feed, Heavy-Duty		●	●	●			●
SDES1305MPR-001	High Feed, Heavy-Duty Keen Edge		●	●	●		●	●
SDMS130515R-PH	Positive Geometry - 0.060" R		●	●	●		●	●
SDMS1305MDR-PH	Positive Geometry - 0.033" Wiper		●	●	●		●	●
SDXS1305MPR-MR	Utility Insert - Heavy Duty				●			

HARDWARE			
	Screw	Driver Handle	Screw Driver Blade
	SM40-100-R0	DS-A00T	DS-T156B

● = P ○ = M ● = K ● = N ● = S ○ = H

POWER FEED 13+™ SERIES DG6P - DG5P

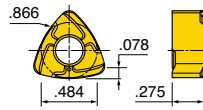
HIGH FEED FACE MILL WITH 6 INDEXES



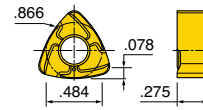
Cutter Number	D1 Effective Diameter	Number of Inserts	H Height	D2 Bore Dia.	K Keyway	Ramp Angle
DG5P-20R01	2.000	4	1.570	0.750	0.312	.8
DG6P-20R01	2.000	3	1.570	0.750	0.312	.8
DG5P-25R01	2.500	5	1.570	0.750	0.312	.6
DG6P-25R01	2.500	4	1.570	0.750	0.312	.6
DG6P-30R01	3.000	5	1.570	1.000	0.375	.4
DG6P-30R02	3.000	5	1.570	1.250	0.500	.4
DG5P-40R01	4.000	7	2.375	1.500	0.625	.3
DG6P-40R01	4.000	6	2.375	1.500	0.625	.3
DG6P-60R01	6.000	7	2.375	1.500	0.625	.2

Refer to the new product announcement for detailed programming information. Note, AP Max. = .078 inch

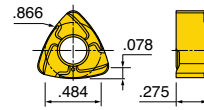
UNEU1307R-M



UNEU1307R-MM



UNEU1307R-MR



Part Number	Application	Grades	IN2035	IN2504	IN2505	IN2530	IN7035
UNEU1307R-M	Multi-Purpose - 0.138" R (pgm corner)						
UNEU1307R-MM	Multi-Purpose, Keen Edge - 0.138" R (pgm corner)						
UNEU1307R-MR	Heavy-Duty - 0.138" R (pgm corner)						

HARDWARE



Retention Bolt



Coolant Bolt



Driver Handle



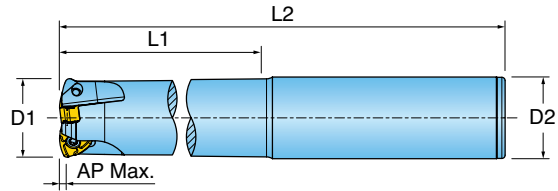
Screw Driver Blade

DG5P-20R01	SD-06-46	SD-06-89	DS-A00T	DS-T206B
DG6P-20R01	SD-06-46	SD-06-89	DS-A00T	DS-T206B
DG5P-25R01	SD-06-46	SD-06-89	DS-A00T	DS-T206B
DG6P-25R01	SD-06-46	SD-06-89	DS-A00T	DS-T206B
DG6P-30R01	SD-08-46	SD-08-92	DS-A00T	DS-T206B
DG6P-30R02	SD-10-47	SD-08-92	DS-A00T	DS-T206B
DG5P-40R01	SD-12-82	SD-12-99	DS-A00T	DS-T206B
DG6P-40R01	SD-12-82	SD-12-99	DS-A00T	DS-T206B
DG6P-60R01	SD-12-82	SD-12-99	DS-A00T	DS-T206B

● = P ● = M ● = K ● = N ● = S ○ = H

POWERFEED13+™ SERIES 1DG1P

HIGH FEED END MILL WITH 6 INDEXES



Cutter Number	D1 Nominal Diameter	L2 Extension Length	L3 Overall Length	L4 Projection Length	D2 Shank Size/Style	Number of Inserts	Ramp Angle
1DG1P-1202781R01	1.250	2.75	5.00	0.83	1.250" Weldon	2	.7
1DG1P-1204759R01	1.250	4.75	8.00	0.83	1.250" Cylind.	2	.7
1DG1P-1503386R01	1.500	3.34	6.00	0.83	1.500" Weldon	3	1.5
1DG1P-1507355R01	1.500	7.34	10.00	0.83	1.500" Cylind.	3	1.5

Refer to the new product announcement for detailed programming information. Note, AP Max. = .078 inch

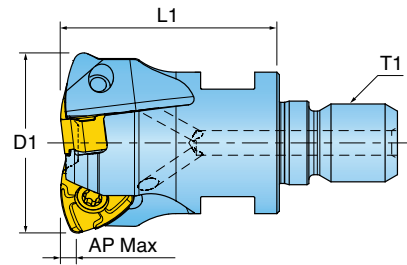
Part Number	Application	Grades				
		IN2035	IN2504	IN2505	IN2530	IN7035
UNEU1307R-M	Multi-Purpose - 0.138" R (pgm corner)	●	●	●	●	●
UNEU1307R-MM	Multi-Purpose, Keen Edge - 0.138" R (pgm corner)	●			●	●
UNEU1307R-MR	Heavy-Duty - 0.138" R (pgm corner)	●		●		●

HARDWARE	
 Driver Handle DS-A00T	 Screw Driver Blade DS-T206B

● = P ● = M ● = K ● = N ● = S ○ = H

POWER FEED 13+™ SERIES 1DG1P (TOP-ON STYLE)

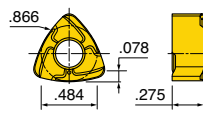
HIGH FEED MODULAR END MILL WITH 6 INDEXES



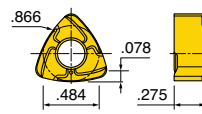
Cutter Number	D1 Nom. Dia.	T1 Adaption	L2 Extension Length	Number of Inserts	Wrench Size	Ramp Angle
1DG1P-12017X8R01	1.250	M16	1.75	2	22mm	.7
1DG1P-15017X8R01	1.500	M16	1.75	3	22mm	1.5

Refer to the new product announcement for detailed programming information. Note, AP Max. = .078 inch

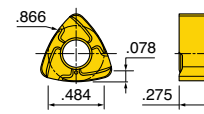
UNEU1307R-M



UNEU1307R-MM



UNEU1307R-MR



Part Number	Application	Grades	IN2035	IN2504	IN2505	IN2530	IN7035
			UNEU1307R-M	Multi-Purpose - 0.138" R (pgm corner)	●	●	●
UNEU1307R-MM	Multi-Purpose, Keen Edge - 0.138" R (pgm corner)	●			●	●	
UNEU1307R-MR	Heavy-Duty - 0.138" R (pgm corner)	●		●		●	

HARDWARE



Driver Handle



Screw Driver Blade

DS-A00T

DS-T206B

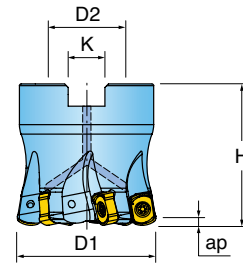
● = P ● = M ● = K ● = N ● = S ○ = H

Features & Benefits:

- 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

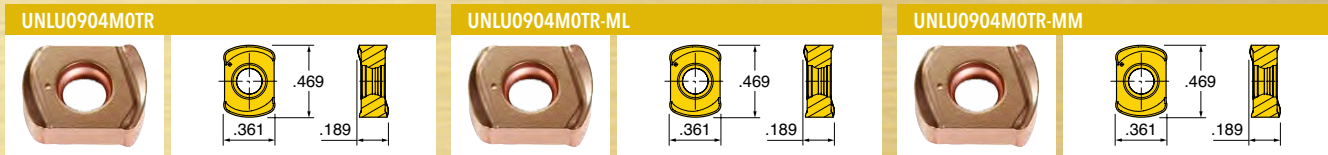
HI-FEEDTM MIDI SERIES TG1G, TG2G, TG3G, TG4G

HIGH FEED FACE MILL, 4 INDEXES



Cutter Number	D1 Effective Diameter	Number of Inserts	H Height	D2 Bore Dia.	K Keyway	Max Ramp Angle
TG1G050R00	50mm	7	50mm	22mm	10.4mm	1
TG2G050R00	50mm	6	50mm	22mm	10.4mm	1
TG3G050R00	50mm	5	50mm	22mm	10.4mm	1
TG1G-20R01	2.000	7	1.970	0.750	0.312	1
TG2G-20R01	2.000	6	1.970	0.750	0.312	1
TG1G052R00	52mm	7	50mm	22mm	10.4mm	1
TG2G052R00	52mm	6	50mm	22mm	10.4mm	1
TG1G063R00	63mm	8	50mm	22mm	10.4mm	.8
TG2G063R00	63mm	7	50mm	22mm	10.4mm	.8
TG3G063R00	63mm	6	50mm	22mm	10.4mm	.8
TG1G-25R01	2.500	8	1.970	0.750	0.312	.75
TG1G-30R01	3.000	9	1.750	1.000	0.375	.6
TG2G-30R01	3.000	7	1.750	1.000	0.375	.6
TG1G080R00	80mm	10	50mm	27mm	12.4mm	.75
TG2G080R00	80mm	9	50mm	27mm	12.4mm	.75
TG3G080R00	80mm	8	50mm	27mm	12.4mm	.75
TG4G080R00	80mm	7	50mm	27mm	12.4mm	.75

Refer to the new product announcement for detailed programming information. Note, AP Max. = .060 inch

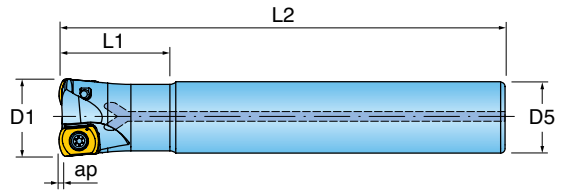


Part Number	Application	Grades	IN2035	IN2504	IN2505	IN2530	IN7035
			UNLU0904MOTR	Multi-Purpose - 0.094" R			
UNLU0904MOTR-ML	Precision - 0.094" R						
UNLU0904MOTR-MM	Positive Geometry - 0.094" R						

HARDWARE					
	Screw	Retention Bolt	Driver Handle	Screw Driver Blade	Coolant Bolt
TG1G050R00	SM35-088-10	SD-06-48	DS-A00T	DS-T106B	-
TG2G050R00	SM35-088-10	SD-06-48	DS-A00T	DS-T106B	-
TG3G050R00	SM35-088-10	SD-06-48	DS-A00T	DS-T106B	-
TG1G-20R01	SM35-088-10	SD-06-48	DS-A00T	DS-T106B	SD-06-A6
TG2G-20R01	SM35-088-10	SD-06-48	DS-A00T	DS-T106B	SD-06-A6
TG1G052R00	SM35-088-10	SD-06-48	DS-A00T	DS-T106B	-
TG2G052R00	SM35-088-10	SD-06-48	DS-A00T	DS-T106B	-
TG1G063R00	SM35-088-10	SD-06-48	DS-A00T	DS-T106B	-
TG2G063R00	SM35-088-10	SD-06-48	DS-A00T	DS-T106B	-
TG3G063R00	SM35-088-10	SD-06-48	DS-A00T	DS-T106B	-
TG1G-25R01	SM35-088-10	SD-06-48	DS-A00T	DS-T106B	-
TG1G-30R01	SM35-088-10	SD-08-46	DS-A00T	DS-T106B	-
TG2G-30R01	SM35-088-10	SD-08-46	DS-A00T	DS-T106B	-
TG1G080R00	-	-	-	-	-
TG2G080R00	-	-	-	-	-
TG3G080R00	SM35-088-10	SD-06-48	DS-A00T	DS-T106B	-
TG4G080R00	SM35-088-10	SD-06-48	DS-A00T	DS-T106B	-

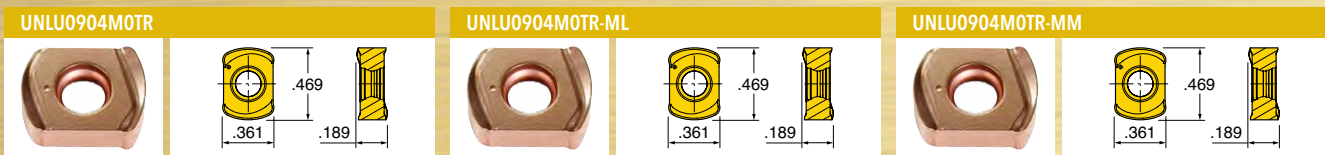
● = P ● = M ● = K ● = N ● = S ● = H

HIGH FEED END MILL, 4 INDEXES



Cutter Number	D1 Nominal Diameter	L2 Extension Length	L3 Overall Length	L4 Projection Length	D2 Shank Size/Style	Number of Inserts	Ramp Angle
1TG1G025070T5R00	25.000	70.00	150.00	-	25mm Cylind.	2	2
1TG1G025070T5R01	25.000	70.00	150.00	-	25mm Cylind.	3	2
1TG1G025110T5R01	25.000	110.00	200.00	-	25mm Cylind.	3	2
1TG1G-10019S1R03	1.000	1.97	7.00	1.80	1.000" Cylind.	3	3
1TG1G-10020S1R03	1.000	2.00	10.00	1.83	1.000" Cylind.	3	3
1TG1G-12027E2R03	1.250	2.75	5.75	2.57	1.250" Weldon	3	2
1TG1G-12027E2R04	1.250	2.75	5.75	2.57	1.250" Weldon	4	2
1TG1G-12047E2R03	1.250	4.75	7.75	4.57	1.250" Weldon	3	2
1TG1G032070U7R00	32.000	100.06	160.00	70.00	32mm Cylind.	3	2
1TG1G032070U7R02	32.000	100.06	160.00	70.00	32mm Cylind.	4	2
1TG1G032120U7R00	32.000	120.00	220.00	-	32mm Cylind.	3	2
1TG1G032120U7R02	32.000	160.00	220.00	120.00	32mm Cylind.	4	2
1TG1G-15016E2R04	1.500	1.69	6.00	1.45	1.250" Weldon	4	1.5
1TG1G-15016E2R05	1.500	1.69	6.00	1.45	1.250" Weldon	5	1.5

Refer to the new product announcement for detailed programming information. Note, AP Max. = .060 inch



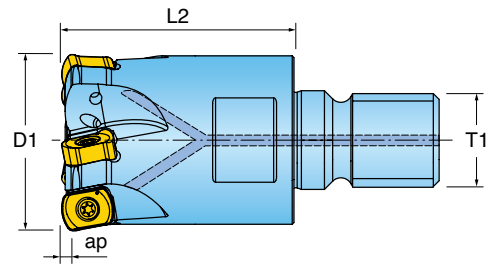
Part Number	Application	Grades				
		IN2035	IN2504	IN2505	IN2530	IN7035
UNLU0904MOTR	Multi-Purpose - 0.094" R	●	●	●	●	●
UNLU0904MOTR-ML	Precision - 0.094" R	●		●	●	●
UNLU0904MOTR-MM	Positive Geometry - 0.094" R	●	●	●	●	●

HARDWARE			
	Screw	Driver Handle	Screw Driver Blade
	SM35-088-10	DS-A00T	DS-T106B

● = P ○ = M ● = K ● = N ● = S ○ = H

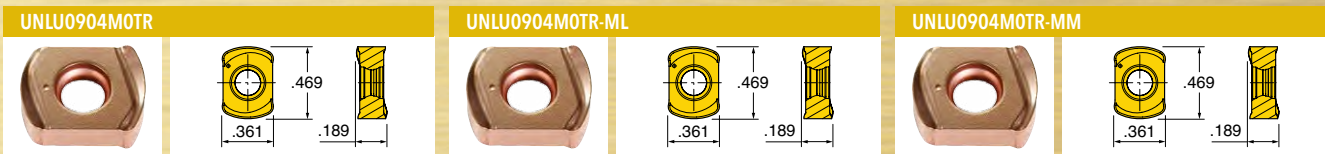
HI-FEED MIDI™ SERIES 1TG1G (TOP-ON STYLE)

HIGH FEED MODULAR END MILL, 4 INDEXES



Cutter Number	D1 Nom. Dia.	T1 Adaption	L2 Extension Length	Number of Inserts	Wrench Size	Ramp Angle
1TG1G025035X7R00	25mm	M12	35mm	2	17mm	2
1TG1G025035X7R01	25mm	M12	35mm	3	17mm	2
1TG1G032043X8R00	32mm	M16	43mm	3	22mm	2
1TG1G032043X8R01	32mm	M16	43mm	4	22mm	2
1TG1G035043X8R00	35mm	M16	43mm	4	22mm	2
1TG1G-10015X7R03	1.000	M12	1.57	3	17mm	3
1TG1G-12015X8R04	1.250	M16	1.57	4	22mm	2

Refer to the new product announcement for detailed programming information. Note, AP Max. = .060 inch



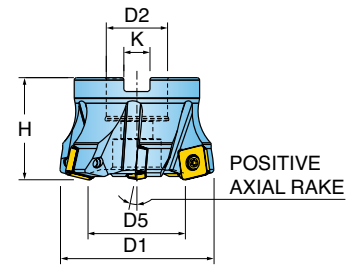
Part Number	Application	Grades				
		IN2035	IN2504	IN2505	IN2530	IN7035
UNLU0904M0TR	Multi-Purpose - 0.094" R	●	●	●	●	●
UNLU0904M0TR-ML	Precision - 0.094" R	●	●	●	●	●
UNLU0904M0TR-MM	Positive Geometry - 0.094" R	●	●	●	●	●

HARDWARE			
	SM35-088-10	DS-T106B	DS-A00T

● = P ● = M ● = K ● = N ● = S ○ = H

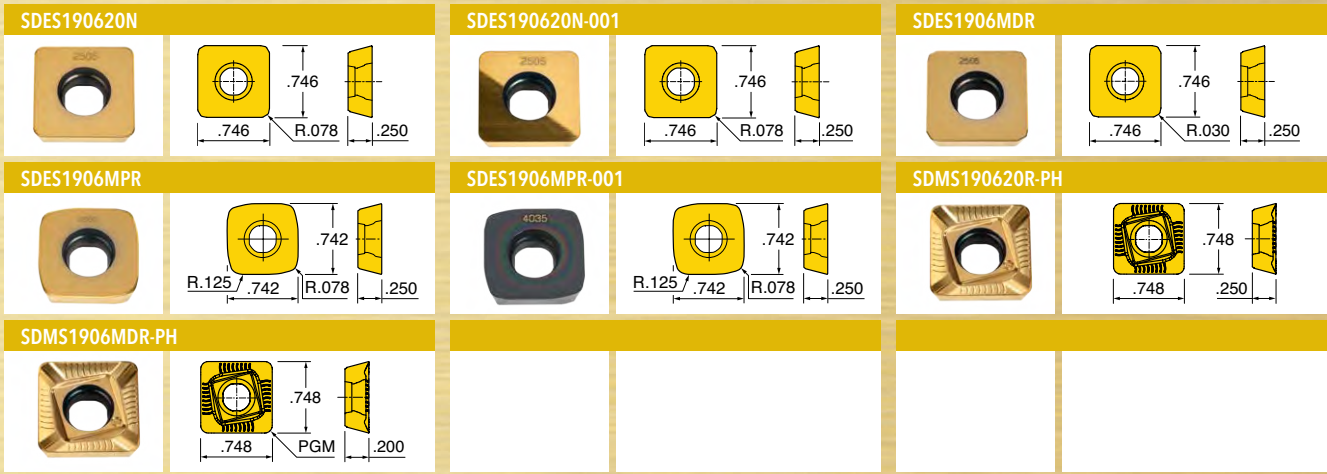
GOLD[®]QUAD SERIES 5G5M 5G6M (19MM INSERT)

HIGH FEED FACE MILL WITH 4 INDEXES, INCH & METRIC CUTTER DIAMETERS



Cutter Number	D1 Nominal Diameter	Number of Inserts	H Height	D2 Bore Dia.	K Keyway	Ramp Angle	Coolant
5G5M-30R01	3.000	6	2.000	1.000	0.375	1.2	Yes
5G6M-30R01	3.000	5	2.000	1.000	0.375	1.2	No
5G6M080R00	80mm	5	55mm	27mm	12mm		Yes
5G6M100R00	100mm	6	55mm	32mm	14mm		Yes
5G5M-40R01	4.000	8	2.500	1.500	0.625	.8	Yes
5G6M-40R01	4.000	6	2.500	1.500	0.625	.8	No
5G6M125R00	125mm	7	63mm	40mm	16mm		Yes
5G5M-50R01	5.000	9	2.500	1.500	0.625	.6	Yes
5G6M-50R01	5.000	7	2.500	1.500	0.625	.6	No
5G5M-60R01	6.000	10	2.500	1.500	0.625	.4	No
5G6M-60R01	6.000	8	2.500	1.500	0.625	.4	No
5G5M160R00	160mm	10	63mm	40mm	16mm		Yes
5G6M160R00	160mm	8	63mm	40mm	16mm		Yes

Refer to the new product announcement for detailed programming information.



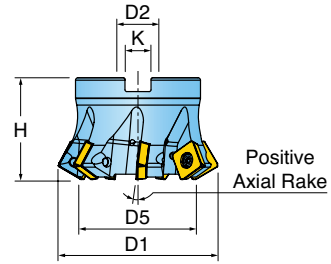
Part Number	Application	Grades				
		IN2505	IN2530	IN4005	IN4030	IN4035
SDES190620N	High-Feed - 0.178" R	●	●			
SDES190620N-001	High-Feed - 0.148" R	●				
SDES1906MDR	High-Feed - 0.178" R	●	●			
SDES1906MPR	High Feed, Heavy-Duty - 0.210" R	●	●	●		●
SDES1906MPR-001	High Feed, Heavy-Duty Keen Edge - 0.210" R	●	●	●	●	●
SDMS190620R-PH	High-Feed - 0.178" R	●	●	●	●	●
SDMS1906MDR-PH	High-Feed - 0.178" R	●	●	●	●	●

HARDWARE					
	Insert Screw	Retention Bolt	Coolant Bolt	Driver Handle	Screw Driver Blade
5G5M-30R01	SM60-135-R0	SD-08-47	SD08-C9	DS-A00T	DS-T256B
5G6M-30R01	SM60-135-R0	SD-08-47	-	DS-A00T	DS-T256B
5G6M080R00	SM60-135-R0	-	-	DS-A00T	DS-T256B
5G6M100R00	SM60-135-R0	-	-	-	-
5G5M-40R01	SM60-135-R0	SD-12-82	SD-12-99	DS-A00T	DS-T256B
5G6M-40R01	SM60-135-R0	SD-12-82	SD-12-99	DS-A00T	DS-T256B
5G6M125R00	SM60-135-R0	-	-	-	-
5G5M-50R01	SM60-135-R0	SD-12-82	SD-08-92	DS-A00T	DS-T256B
5G6M-50R01	SM60-135-R0	SD-12-82	-	DS-A00T	DS-T256B
5G5M-60R01	SM60-135-R0	SD-12-82	-	DS-A00T	DS-T256B
5G6M-60R01	SM60-135-R0	SD-12-82	-	DS-A00T	DS-T256B
5G5M160R00	SM60-135-R0	-	-	-	-
5G6M160R00	SM60-135-R0	-	-	-	-

● = P ● = M ● = K ● = N ● = S ○ = H

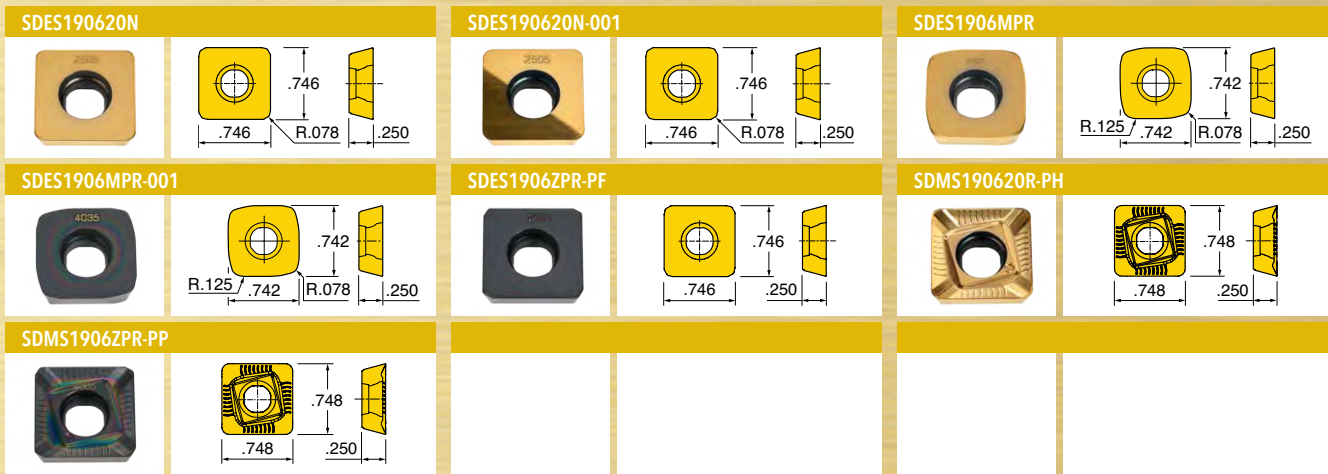
GOLD[®]QUAD SERIES 5M5M, 5M6M (19MM INSERT)

HIGH FEED FACE MILL, 30° BEVEL ANGLE




Cutter Number	D1 Nominal Diameter	Number of Inserts	H Height	D2 Bore Dia.	K Keyway	Ramp Angle	Coolant
5M5M-40R30	4.000	7	2.500	1.500	0.625	n/a	Yes
5M6M-40R30	4.000	6	2.500	1.500	0.625	n/a	Yes
5M5M-50R30	5.000	8	2.500	1.500	0.625	n/a	No
5M6M-50R30	5.000	7	2.500	1.500	0.625	n/a	No
5M5M-60R30	6.000	9	2.500	1.500	0.625	n/a	No
5M6M-60R30	6.000	8	2.500	1.500	0.625	n/a	No

Refer to the new product announcement for detailed programming information.



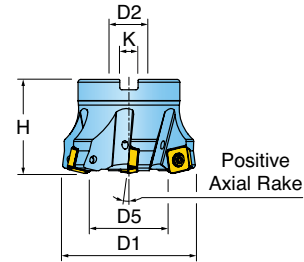
Part Number	Application	Grades				
		IN2505	IN2530	IN4005	IN4030	IN4035
SDES190620N	High-Feed - 0.178" R	●	●			
SDES190620N-001	High-Feed - 0.148" R	●				
SDES1906MPR	High Feed, Heavy-Duty - 0.210" R	●	●	●		●
SDES1906MPR-001	High Feed, Heavy-Duty Keen Edge - 0.210" R	●	●	●	●	●
SDES1906ZPR-PF	High-Feed - Wiper			●	●	●
SDMS190620R-PH	High-Feed - 0.178" R	●	●	●	●	●
SDMS1906ZPR-PP	High-Feed - Wiper			●	●	●

HARDWARE				
	SM60-135-R0	SD-12-82	DS-A00T	DS-T256B

● = P ● = M ● = K ● = N ● = S ○ = H

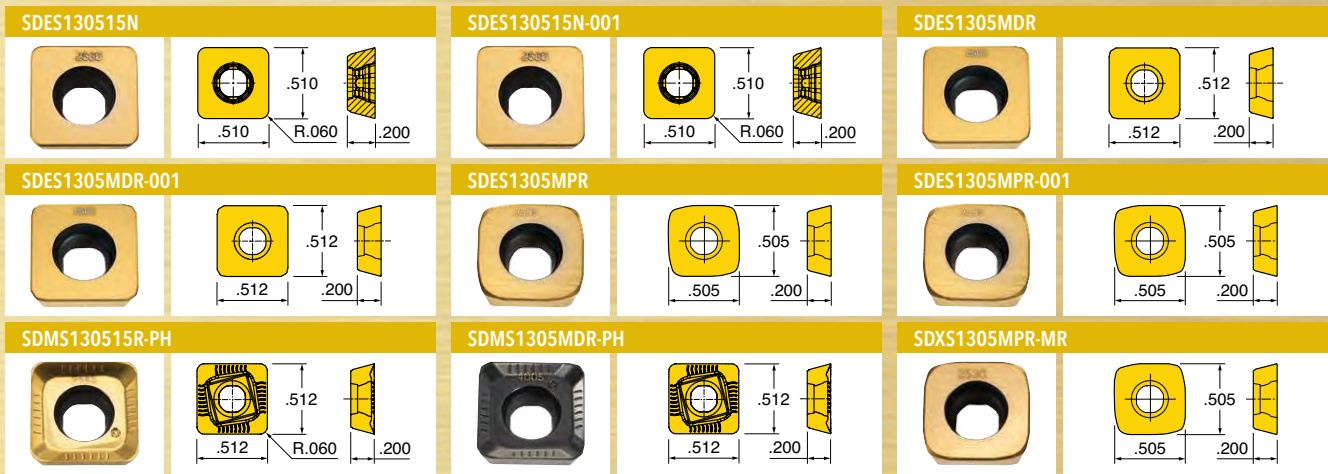
GOLD[®]QUAD SERIES 5M5P 5M6P (13MM INSERT)

HIGH FEED FACE MILL, 4 INDEXES, INCH & METRIC CUTTER DIAMETERS



Cutter Number	D1 Nominal Diameter	Number of Inserts	H Height	D2 Bore Dia.	K Keyway	Ramp Angle	Coolant
5M5P050R00	50mm	5	50mm	22mm	10mm	1.5	Yes
5M5P-20R01	2.000	5	2.000	0.750	0.312	1.5	Yes
5M6P-20R01	2.000	4	2.000	0.750	0.312	1.5	Yes
5M5P052R00	52mm	5	50mm	22mm	10mm	1.5	Yes
5M6P052R00	52mm	4	2.000	22mm	10mm	1.5	Yes
5M5P063R00	63mm	6	50mm	22mm	10mm	1.0	Yes
5M6P063R00	63mm	5	50mm	22mm	10mm	1.0	Yes
5M5P-25R01	2.500	6	2.000	0.750	0.312	1.5	Yes
5M6P-25R01	2.500	5	2.000	0.750	0.312	1.1	Yes
5M5P066R00	66mm	6	50mm	27mm	12mm	1.0	Yes
5M6P050R00	66mm	4	50mm	22mm	10mm	1.0	Yes
5M6P066R00	66mm	5	50mm	27mm	12mm	1.0	Yes
5M5P-30R01	3.000	8	2.000	1.000	0.375	.8	Yes
5M5P-30R02	3.000	8	2.000	1.250	0.500	.8	Yes
5M6P-30R01	3.000	6	2.000	1.000	0.375	.8	Yes
5M6P-30R02	3.000	6	2.000	1.250	0.500	.8	Yes
5M5P080R00	80mm	8	50mm	27mm	12mm	1.0	Yes
5M6P080R00	80mm	6	50mm	27mm	12mm	1.0	Yes
5M5P100R00	100mm	9	60mm	32mm	14mm	.5	Yes
5M6P100R00	100mm	7	60mm	32mm	14mm	.5	Yes
5M5P-40R01	4.000	10	2.500	1.500	0.625	.6	Yes
5M6P-40R01	4.000	8	2.500	1.500	0.625	.6	Yes
5M5P-50R01	5.000	11	2.500	1.500	0.625	.4	Yes
5M6P-50R01	5.000	9	2.500	1.500	0.625	.6	Yes

Refer to the new product announcement for detailed programming information. Note, when using inserts SDES1305MPR, SDES1305MPR-001 or SDES1305MPR-MR the nominal diameter is reduced .030 inch.



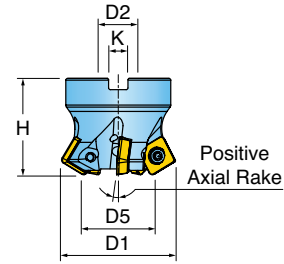
Part Number	Application	Grades	IN2505	IN2530	IN4005	IN4015	IN4030	IN4035
SDES130515N	Flat Top - Landed Edge - 0.060" R		●	●	●	●	●	●
SDES130515N-001	Flat Top - Keen Edge - 0.060" R		●	●			●	●
SDES1305MDR	Flat Top - Landed Edge - 0.033" Wiper		●	●				
SDES1305MDR-001	Flat Top - Keen Edge - 0.033" Wiper		●					
SDES1305MPR	High Feed, Heavy-Duty - n/a		●	●	●			●
SDES1305MPR-001	High Feed, Heavy-Duty Keen Edge - n/a		●	●	●		●	●
SDMS130515R-PH	Positive Geometry - 0.060" R		●	●	●		●	●
SDMS1305MDR-PH	Positive Geometry - 0.033" Wiper		●	●	●		●	●
SDXS1305MPR-MR	Utility Insert - Heavy Duty - n/a				●			

Hardware					
	Screw	Retention Bolt	Driver Handle	Screw Driver Blade	Coolant Bolt
5M5P050R00	SM40-100-R0	-	DS-A00T	DS-T156B	-
5M5P-20R01	SM40-100-R0	SD-06-48	DS-A00T	DS-T156B	SD-06-A6
5M6P-20R01	SM40-100-R0	SD-06-48	DS-A00T	DS-T156B	SD-06-A6
5M5P052R00	SM40-100-R0	-	DS-A00T	DS-T156B	-
5M6P052R00	SM40-100-R0	-	DS-A00T	DS-T156B	-
5M5P063R00	SM40-100-R0	-	DS-A00T	DS-T156B	-
5M6P063R00	SM40-100-R0	-	DS-A00T	DS-T156B	-
5M5P-25R01	SM40-100-R0	SD-06-48	DS-A00T	DS-T156B	SD-06-A6
5M6P-25R01	SM40-100-R0	SD-06-48	DS-A00T	DS-T156B	SD-06-A6
5M5P066R00	SM40-100-R0	-	DS-A00T	DS-T156B	-
5M6P050R00	-	-	-	-	-
5M6P066R00	-	-	-	-	-
5M5P-30R01	SM40-100-R0	SD-08-47	DS-A00T	DS-T156B	SD08-C9
5M5P-30R02	SM40-100-R0	SD-10-47	DS-A00T	DS-T156B	SD-10-99
5M6P-30R01	SM40-100-R0	SD-08-47	DS-A00T	DS-T156B	SD08-C9
5M6P-30R02	SM40-100-R0	SD-10-47	DS-A00T	DS-T156B	SD-10-99
5M5P080R00	-	-	-	-	-
5M6P080R00	SM40-100-R0	-	DS-A00T	DS-T156B	-
5M5P100R00	SM40-100-R0	SD-10-89	DS-A00T	DS-T156B	-
5M6P100R00	SM40-100-R0	SD-10-89	DS-A00T	DS-T156B	-
5M5P-40R01	SM40-100-R0	SD-12-82	DS-A00T	DS-T156B	SD-10-99
5M6P-40R01	SM40-100-R0	SD-12-82	DS-A00T	DS-T156B	SD-10-99
5M5P-50R01	SM40-100-R0	SD-12-82	DS-A00T	DS-T156B	SD-10-99
5M6P-50R01	SM40-100-R0	SD-12-82	DS-A00T	DS-T156B	SD-10-99

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD[®]QUAD SERIES 5M5P, 5M6P (13MM INSERT)

HIGH FEED FACE MILL, 30° BEVEL ANGLE



Cutter Number	D1 Nominal Diameter	Number of Inserts	H Height	D2 Bore Dia.	K Keyway	Ramp Angle	Coolant
5M5P-20R30	2.000	5	2.000	0.750	0.312	n/a	Yes
5M6P-20R30	2.000	4	2.000	0.750	0.312	n/a	Yes
5M5P-25R30	2.500	6	2.000	0.750	0.312	n/a	Yes
5M6P-25R30	2.500	5	2.000	0.750	0.312	n/a	Yes
5M5P-30R30	3.000	7	2.000	1.000	0.375	n/a	Yes
5M6P-30R30	3.000	6	2.000	1.000	0.375	n/a	Yes

Refer to the new product announcement for detailed programming information.

Part Number	Application	Grades	IN2505	IN2530	IN2535	IN4005	IN4015	IN4030	IN4035
SDES130516N-PF	Flat Top - Landed Edge - 0.062" R								
SDES130516N-PF1	Flat Top - Keen Edge - 0.062" R								
SDES1305MPR	High Feed, Heavy-Duty - n/a								
SDES1305MPR-001	High Feed, Heavy-Duty Keen Edge - n/a								
SDMS130516R-PP	Positive Geometry - 0.062" R								

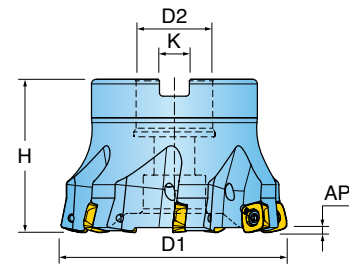
Part Number	Application	Grades	IN2505	IN2530	IN2535	IN4005	IN4015	IN4030	IN4035
SDES130516N-PF	Flat Top - Landed Edge - 0.062" R								
SDES130516N-PF1	Flat Top - Keen Edge - 0.062" R								
SDES1305MPR	High Feed, Heavy-Duty - n/a								
SDES1305MPR-001	High Feed, Heavy-Duty Keen Edge - n/a								
SDMS130516R-PP	Positive Geometry - 0.062" R								

HARDWARE	Screw	Retention Bolt	Driver Handle	Screw Driver Blade
5M5P-20R30	SM40-100-R0	-	DS-A00T	DS-T156B
5M6P-20R30	SM40-100-R0	-	DS-A00T	DS-T156B
5M5P-25R30	SM40-100-R0	SD-06-48	DS-A00T	DS-T156B
5M6P-25R30	SM40-100-R0	SD-06-48	DS-A00T	DS-T156B
5M5P-30R30	SM40-100-R0	SD-08-47	DS-A00T	DS-T156B
5M6P-30R30	SM40-100-R0	SD-08-47	DS-A00T	DS-T156B

● = P ● = M ● = K ● = N ● = S ○ = H

GOLDQUAD SERIES 5G5F 5G6F (9MM INSERT)

HIGH FEED FACE MILL, 4 INDEXES



Cutter Number	D1 Nominal Diameter	Number of Inserts	H Height	D2 Bore Dia.	K Keyway	Ramp Angle	Coolant
5G5F-20R01	2.000	7	1.970	0.750	0.312	n/a	Yes
5G6F-20R01	2.000	6	1.970	0.750	0.312	n/a	Yes
5G5F-25R01	2.500	8	1.970	0.750	0.312	n/a	Yes
5G5F-30R01	3.000	9	2.000	1.000	0.375	n/a	Yes
5G6F-30R01	3.000	7	2.000	1.000	0.375	n/a	Yes

Refer to the new product announcement for detailed programming information.

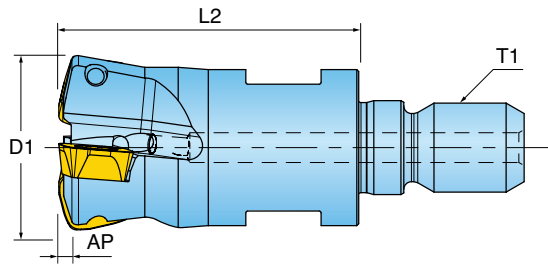
SDXS0904MPR-MM		SDXS0904MPR-MR							
Part Number	Application			Grades	IN2504	IN4005	IN4030	IN4035	IN4040
SDXS0904MPR-MM	Positive Geometry - R								
SDXS0904MPR-MR	Flat Top - Landed Edge - R								

HARDWARE				
	Screw	Driver	Retention Bolt	Coolant Bolt
5G5F-20R01	SM30-075-R0	DS-T09W	SD-06-48	SD-06-A6
5G6F-20R01	SM30-075-R0	DS-T09W	SD-06-48	SD-06-A6
5G5F-25R01	SM30-075-R0	DS-T09W	SD-06-48	SD-06-A6
5G5F-30R01	SM30-075-R0	DS-T09W	SD-08-47	SD08-C9
5G6F-30R01	SM30-075-R0	DS-T09W	SD-08-47	SD08-C9

● = P ○ = M ● = K ● = N ● = S ○ = H

GOLD^oQUAD SERIES 15G1F (9MM INSERT)

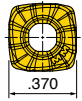
HIGH FEED MODULAR END MILL, 4 INDEXES, INCH CUTTER DIAMETERS (TOPON STYLE)



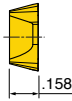
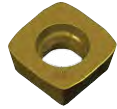
Cutter Number	D1 Nom. Dia.	Number of Inserts	L1 Extension Length	T1 Adaption	Max. Ramp Angle	Wrench Size
15G1F-10015X7R01	1.000	3	1.57	M12	5.5	NA
15G1F-12015X8R02	1.250	4	1.57	M16	3.3	NA

Refer to the new product announcement for detailed programming information.

SDXS0904MPR-MM



SDXS0904MPR-MR

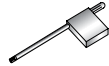


Part Number	Application	Grades					
			IN2504	IN4005	IN4030	IN4035	IN4040
SDXS0904MPR-MM	Positive Geometry - R			●	●	●	
SDXS0904MPR-MR	Flat Top - Landed Edge - R		●	●	●	●	●

HARDWARE



Screw



Driver

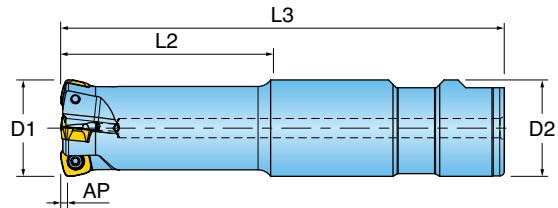
SM30-075-R0

DS-T09W

● = P ● = M ● = K ● = N ● = S ○ = H

GOLDQUAD SERIES 15G1F (9MM INSERT)

HIGH FEED END MILL WITH 4 INDEXES



Cutter Number	D1 Nom. Dia.	L1 Extension Length	L2 Overall Length	D2 Shank Size/Style	Number of Inserts	Coolant Thru	Max. Ramp Angle
15G1F-10019S1R01	1.000	1.970	7.00	1.000" Cyland.	3	Yes	5.5
15G1F-10020S1R01	1.000	2.000	10.00	1.000" Cyland.	3	Yes	5.5
15G1F-12027E2R01	1.250	2.750	5.75	1.250" Weldon	3	Yes	3.3
15G1F-12027E2R02	1.250	2.750	5.75	1.250" Weldon	4	Yes	3.3
15G1F-12047E2R01	1.250	4.750	7.75	1.250" Weldon	3	Yes	3.3
15G1F-15016E2R01	1.500	1.690	6.00	1.250" Weldon	4	Yes	2.3
15G1F-15016E2R02	1.500	1.690	6.00	1.250" Weldon	5	Yes	2.3

Refer to the new product announcement for detailed programming information.

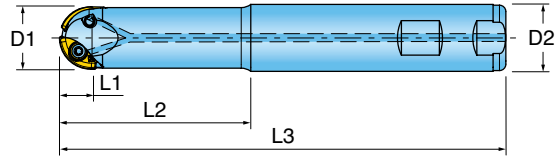
SDXS0904MPR-MM		SDXS0904MPR-MR						
Part Number	Application	Grades	IN2504	IN4005	IN4030	IN4035	IN4040	
SDXS0904MPR-MM	Positive Geometry - R							
SDXS0904MPR-MR	Flat Top - Landed Edge - R							

HARDWARE			
	Screw	Driver	
	SM30-075-R0	DS-T09W	

● = P ○ = M ● = K ● = N ● = S ○ = H

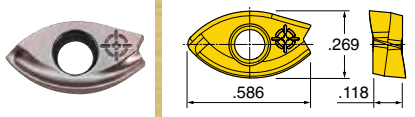
PRO•DUO™ SERIES 1TW7, 1TW8

HEAVY DUTY ROUGHING

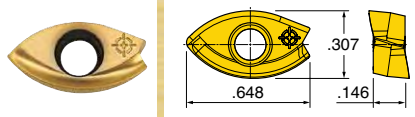


Cutter Number	D1 Nom. Dia.	L1 Max. Depth of Cut	L2 Extension Length	L3 Overall Length	D2 Shank Size/Style	No. of Effective Flutes	Insert Series
1TW7Q-0601379R01	0.625	0.47	1.38	4.75	.625" Weldon	2	NBEU16
1TW8Q-0601357R01	0.625	0.47	1.38	5.00	.750" Cylind.	2	NBEU16
1TW8Q-0601357R02	0.625	0.47	1.38	6.00	.750" Cylind.	2	NBEU16
1TW7J-0702084R01	0.750	0.51	2.00	4.00	.750" Weldon	2	NBEU19
1TW7J-0702084R02	0.750	0.51	2.00	6.00	.750" Weldon	2	NBEU19
1TW8J-0701580R01	0.750	0.51	2.00	6.00	1.000" Weldon	2	NBEU19
1TW8J-0701580R02	0.750	0.51	2.00	7.00	1.000" Weldon	2	NBEU19
1TW7K-1002780R01	1.000	0.69	2.64	5.00	1.000" Weldon	2	NBEU25
1TW7K-1002780R02	1.000	0.69	2.64	6.00	1.000" Weldon	2	NBEU25
1TW8K-1001981R01	1.000	0.69	2.75	6.00	1.250" Weldon	2	NBEU25
1TW8K-1001981R02	1.000	0.69	2.75	7.00	1.250" Weldon	2	NBEU25

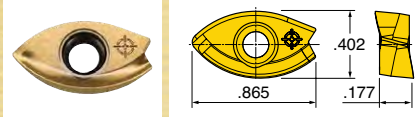
NBEU1603R



NBEU1904R



NBEU25T4R



Part Number	Application	Grades	Material Grades					
			IN2035	IN2504	IN2505	IN2530	IN4005	IN4030
NBEU1603R	Center Cutting - n/a		●	●	●	●	●	●
NBEU1904R	Center Cutting - n/a		●	●	●	●	●	●
NBEU25T4R	Center Cutting - n/a		●	●	●	●	●	●

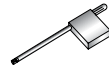
HARDWARE



Screw



Driver



Driver



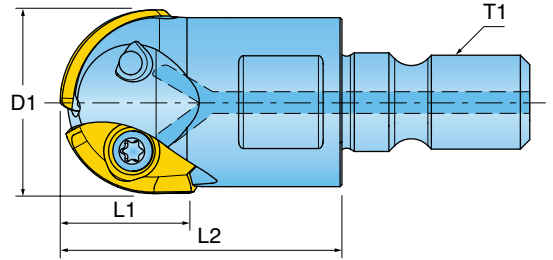
Torx Driver

1TW7Q-0601379R01	SM25-064-00	DS-T08S	-	-
1TW8Q-0601357R01	SM25-064-00	DS-T08S	-	-
1TW8Q-0601357R02	SM25-064-00	DS-T08S	-	-
1TW7J-0702084R01	SM30-072-00	-	DS-T09W	-
1TW7J-0702084R02	SM30-072-00	-	DS-T09W	-
1TW8J-0701580R01	SM30-072-00	-	DS-T09W	-
1TW8J-0701580R02	SM30-072-00	-	DS-T09W	-
1TW7K-1002780R01	SM35-087-70	-	-	DS-T15T
1TW7K-1002780R02	SM35-087-70	-	-	DS-T15T
1TW8K-1001981R01	SM35-087-70	-	-	DS-T15T
1TW8K-1001981R02	SM35-087-70	-	-	DS-T15T

● = P ○ = M ● = K ● = N ● = S ○ = H

PRO•DUO™ SERIES 1TW7 (TOP-ON STYLE)

HEAVY DUTY ROUGHING



Cutter Number	T1 Adaption	D1 Nom. Dia.	L1 Extension Length	L2 Max. Depth of Cut	# Effective	Accepts Inserts
1TW7Q-06012X5R01	M8	0.625	1.00	0.48	2	NBEU16
1TW7J-07014X6R01	M10	0.750	1.18	0.52	2	NBEU19
1TW7K-10017X7R01	M12	1.000	1.38	0.68	2	NBEU25

NBEU1603R		NBEU1904R		NBEU25T4R				
Part Number	Application	Grades	IN2035	IN2504	IN2505	IN2530	IN4005	IN4030
NBEU1603R	Center Cutting - n/a							
NBEU1904R	Center Cutting - n/a							
NBEU25T4R	Center Cutting - n/a							

Cutter Number	Hardware			
	Screw	Driver	Driver	Driver
1TW7Q-06012X5R01	SM25-064-00	DS-T08S	-	-
1TW7J-07014X6R01	SM30-072-00	-	DS-T09W	-
1TW7K-10017X7R01	-	-	-	DS-T15T

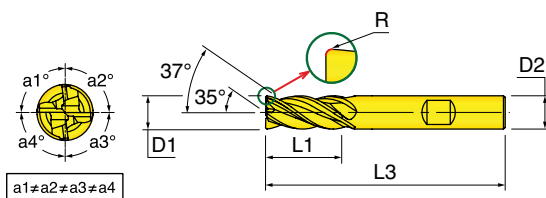
● = P ● = M ● = K ● = N ● = S ● = H

Features & Benefits:

- Unique geometry
- Best chatter free tools for high removal rates when machining titanium (up to 2xD full slotting)
- 4 flute endmills with differential helix and variable pitch
- Large variety of corner radii

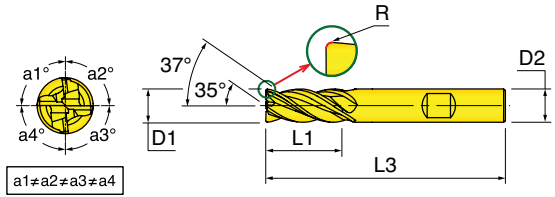
TEKROUNDS™ SERIES 47DRX

4-FLUTE ENDMILLS FOR MACHINING TITANIUM WITH DIFFERENT HELIX, CHAMFERED CUTTING EDGES & VARIABLE PITCH FOR CHATTER DAMPENING.



Cutter Number	Helix (deg)	D1 Diameter	Z Flutes	R Radius	L3 Overall Length	L1 Cut Length	D2 Shank Size/Style	
47D00408T7RX570	IN2005	35-37	4mm	4	0.200	57mm	8mm	6mm Cylind.
47D00510T7RX570	IN2005	35-37	5mm	4	0.200	57mm	10mm	6mm Cylind.
47D00612T7RX570	IN2005	35-37	6mm	4	0.200	57mm	12mm	6mm Cylind.
47D00612WERX570	IN2005	35-37	6mm	4	0.200	57mm	12mm	6mm Weldon
47D00816WSRX630	IN2005	35-37	8mm	4	0.400	63mm	16mm	8mm Cylind.
47D00816ZSRX630	IN2005	35-37	8mm	4	0.400	63mm	16mm	8mm Weldon
47D01020T1RX720	IN2005	35-37	10mm	4	0.500	72mm	20mm	10mm Cylind.
47D01020W1RX720	IN2005	35-37	10mm	4	0.500	72mm	20mm	10mm Weldon
47D01224T2RX830	IN2005	35-37	12mm	4	0.600	73mm	24mm	12mm Cylind.
47D01224W2RX830	IN2005	35-37	12mm	4	0.600	73mm	24mm	12mm Weldon
47D01632T3RX920	IN2005	35-37	16mm	4	0.800	92mm	32mm	16mm Cylind.
47D01632W3RX920	IN2005	35-37	16mm	4	0.800	92mm	32mm	16mm Weldon
47D02040T4RX104	IN2005	35-37	20mm	4	1.000	104mm	40mm	20mm Cylind.
47D02040W4RX104	IN2005	35-37	20mm	4	1.000	104mm	40mm	20mm Weldon

4-FLUTE ENDMILLS FOR MACHINING TITANIUM WITH DIFFERENT HELIX, CHAMFERED CUTTING EDGES & VARIABLE PITCH FOR CHATTER DAMPENING.



Cutter Number		Helix (deg)	D1 Diameter	Z Flutes	R Radius	L3 Overall Length	L1 Cut Length	D2 Shank Size/Style
47D-3775R8RX02	IN2005	35-37	0.375	4	0.020	3.00	0.75	.375" Cylind.
47D-377577RX02	IN2005	35-37	0.375	4	0.020	3.00	0.75	.375" Weldon
47D-3775R8RX09	IN1005	35-37	0.375	4	0.090	3.00	0.75	.375" Cylind.
47D-5010S4RX02	IN2005	35-37	0.500	4	0.023	3.00	1.00	.500" Cylind.
47D-501078RX02	IN2005	35-37	0.500	4	0.023	3.00	1.00	.500" Weldon
47D-5010S4RX12	IN1005	35-37	0.500	4	0.120	3.00	1.00	.500" Cylind.
47D-6212S6RX02	IN2005	35-37	0.625	4	0.030	3.50	1.25	.625" Cylind.
47D-621279RX02	IN2005	35-37	0.625	4	0.030	3.50	1.25	.625" Weldon
47D-6212S6RX12	IN1005	35-37	0.625	4	0.120	3.00	1.25	.625" Cylind.
47D-6212S6RX25	IN1005	35-37	0.625	4	0.250	3.00	1.25	.625" Cylind.
47D-7515S7RX04	IN2005	35-37	0.750	4	0.040	4.00	1.50	.750" Cylind.
47D-751584RX04	IN2005	35-37	0.750	4	0.040	4.00	1.50	.750" Weldon
47D-7515S7RX06	IN1005	35-37	0.750	4	0.060	4.00	1.50	.750" Cylind.
47D-7515S7RX12	IN1005	35-37	0.750	4	0.120	4.00	1.50	.750" Cylind.
47D-7515S7RX25	IN1005	35-37	0.750	4	0.250	4.00	1.50	.750" Cylind.

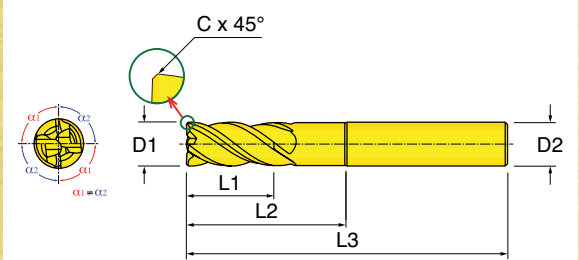
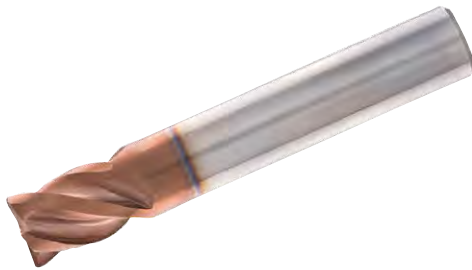
HYPERROUNDS™

Features & Benefits:

- Designed for very high material removal rates and roughing and finishing operations
- Capable of machining full slots of up to 1xD
- Tough submicron substrate with a hard PVD coating that provides substantially improved tool life and reliability
- Recommended for hardened steel and milling alloy steel at moderate to high cutting speeds

HYPERROUNDS™ SERIES 47C_RQ

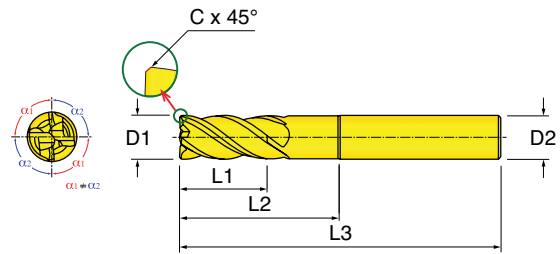
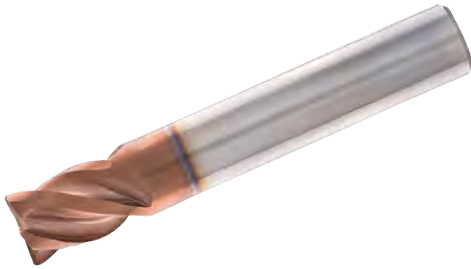
ECO SHORT, 4 FLUTE ENDMILLS WITH DIFFERENT HELIX (35° & 37°) AND VARIABLE PITCH FOR CHATTER DAMPENING. USED FOR VERY HIGH MATERIAL REMOVAL RATES.



Cutter Number	Helix (deg)	D1 Diameter	Z Flutes	C Chamfer	L3 Overall Length	L1 Cut Length	D2 Shank Size/Style	
47C-1212R4RQ00	IN2505	35-37	0.125	4	.006x45deg	1.50	0.125	.125" Cylind.
47C-1818R5RQ00	IN2505	35-37	0.187	4	.008x45deg	2.00	0.188	.188" Cylind.
47C-2525R6RQ01	IN2505	35-37	0.250	4	.010x45deg	2.00	0.250	.250" Cylind.
47C-3131R7RQ01	IN2505	35-37	0.312	4	.012x45deg	2.00	0.312	.312" Cylind.
47C-3737R8RQ01	IN2505	35-37	0.375	4	.016x45deg	2.00	0.375	.375" Cylind.
47C-373777RQ01	IN2505	35-37	0.375	4	.016x45deg	2.00	0.375	.375" Weldon
47C-5050S4RQ02	IN2505	35-37	0.500	4	.020x45deg	3.00	0.500	.500" Cylind.
47C-505078RQ02	IN2505	35-37	0.500	4	.020x45deg	3.00	0.500	.500" Weldon
47C-6262S6RQ02	IN2505	35-37	0.625	4	.023x45deg	3.00	0.625	.625" Cylind.
47C-626279RQ02	IN2505	35-37	0.625	4	.023x45deg	3.00	0.625	.625" Weldon
47C-7575S7RQ02	IN2505	35-37	0.750	4	.023x45deg	4.00	0.750	.750" Cylind.
47C-757584RQ02	IN2505	35-37	0.750	4	.023x45deg	4.00	0.750	.750" Weldon
47C-1010S1RQ02	IN2505	35-37	1.000	4	.023x45deg	4.00	1.000	1.000" Cylind.
47C-101080RQ02	IN2505	35-37	1.000	4	.023x45deg	4.00	1.000	1.000" Weldon

HYPERROUNDS™ SERIES 47CRQ

ECO SHORT, 4 METRIC FLUTE ENDMILLS WITH DIFFERENT HELIX (35° & 37°) AND VARIABLE PITCH. USED FOR VERY HIGH MATERIAL REMOVAL RATES.



Cutter Number		Helix (deg)	D1 Diameter	Z Flutes	C Chamfer	L3 Overall Length	L1 Cut Length	D2 Shank Size/Style
47C00606T7RQ25	IN2505	35-37	6mm	4	.25x45deg	50.00	6.000	6mm Cylind.
47C00606WERQ25	IN2505	35-37	6mm	4	.25x45deg	50.00	6.000	6mm Weldon
47C00808T0RQ30	IN2505	35-37	8mm	4	.3x45deg	63.00	8.000	8mm Cylind.
47C00808W0RQ30	IN2505	35-37	8mm	4	.3x45deg	63.00	8.000	8mm Weldon
47C01010T1RQ40	IN2505	35-37	10mm	4	.4x45deg	66.00	10.000	10mm Cylind.
47C01010W1RQ40	IN2505	35-37	10mm	4	.4x45deg	66.00	10.000	10mm Weldon
47C01212T2RQ50	IN2505	35-37	12mm	4	.5x45deg	73.00	12.000	12mm Cylind.
47C01212W2RQ50	IN2505	35-37	12mm	4	.5x45deg	73.00	12.000	12mm Weldon
47C01616T3RQ60	IN2505	35-37	16mm	4	.6x45deg	82.00	16.000	16mm Cylind.
47C01616W3RQ60	IN2505	35-37	16mm	4	.6x45deg	82.00	16.000	16mm Weldon
47C02020T4RQ60	IN2505	35-37	20mm	4	.6x45deg	92.00	20.000	20mm Cylind.
47C02020W4RQ60	IN2505	35-37	20mm	4	.6x45deg	92.00	20.000	20mm Weldon

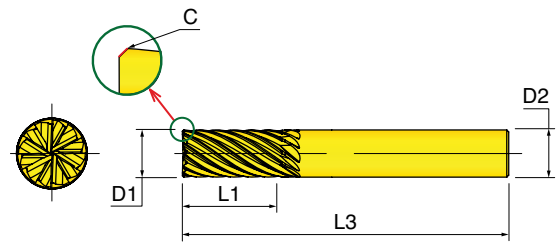
HYPERROUNDS™

Features & Benefits:

- Different helix and variable pitch, for a chatter free effect
- Special geometry - most recommended for high speed / trochoidal machining on most material types
- Low cutting forces
- Excellent for finishing operations
- Unique flute geometry provides good surface finish

HYPERROUNDS™ SERIES 48/49C_RQ

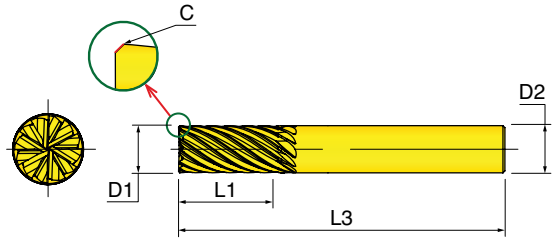
6- 20 FLUTE SOLID CARBIDE ENDMILLS WITH DIFFERENT HELIX AND VARIABLE PITCH, FOR CHATTERFREE HIGH SPEED FINISH MILLING



Cutter Number	Helix (deg)	D1 Diameter	Z Flutes	C Corner	L3 Overall Length	L1 Cut Length	D2 Shank Size/Style
48C-2550R6RQ00 IN2003	45	0.250	6	.007x45deg	2.10	0.50	.250" Cylind.
49C-3163R7RQ00 IN2003	45	0.312	8	.007x45deg	2.50	0.63	.312" Cylind.
49C-3775R8RQ00 IN2003	35	0.375	10	.007x45deg	3.00	0.75	.375" Cylind.
49C-5010S4RQ00 IN2003	35	0.500	12	.011x45deg	3.50	1.00	.500" Cylind.
49C-6212S6RQ00 IN2003	35	0.625	16	.011x45deg	4.00	1.25	.625" Cylind.
49C-7515S7RQ00 IN2003	35	0.750	20	.015x45deg	5.00	1.50	.750" Cylind.

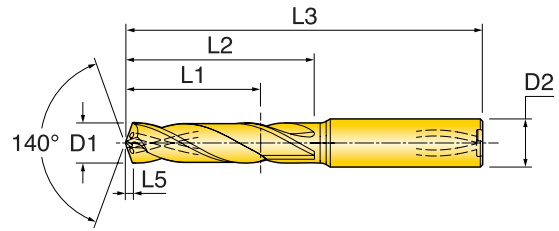
HYPERROUNDS™ SERIES 48C/49CRQ

6- 20 FLUTE SOLID CARBIDE ENDMILLS WITH DIFFERENT HELIX AND VARIABLE PITCH, FOR CHATTERFREE HIGH SPEED FINISH MILLING



Cutter Number	Material	Helix (deg)	D1 Diameter	Z Flutes	C Corner	L3 Overall Length	L1 Cut Length	D2 Shank Size/Style
48C00612T7RQ00	IN2003	45	6mm	6	.25x45deg	57.00	12.00	6mm Cylind.
49C00816T0RQ00	IN2003	45	8mm	8	.25x45deg	63.00	16.00	8mm Cylind.
49C01020T1RQ00	IN2003	45	10mm	10	.3x45deg	72.00	20.00	10mm Cylind.
49C01224T2RQ00	IN2003	45	12mm	12	.3x45deg	83.00	24.00	12mm Cylind.
49C01632T3RQ00	IN2003	45	16mm	16	.3x45deg	92.00	32.00	16mm Cylind.
49C02040T4RQ00	IN2003	45	20mm	20	.4x45deg	104.00	40.00	20mm Cylind.

SOLID CARBIDE DRILLS 3:1 GEOMETRY WITH INTERNAL COOLANT

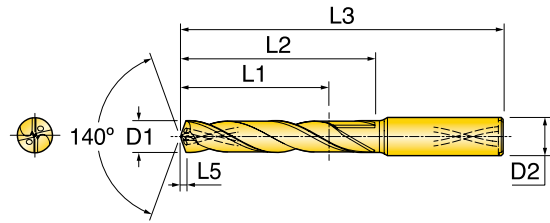


Part Number		D1 Max. Diam. Of Spot (inch)	D1 Max. Diam. Of Spot (mm)	D2 Shank Size/Style	L1 Maximum Depth of Cut	L2 Flute Length	L3 Overall Length	L5
DH0300014T7R01	IN2005	0.118	3.00mm	6mm Cylind.	14.00mm	20.00mm	62.00mm	0.50mm
DH0310014T7R01	IN2005	0.122	3.10mm	6mm Cylind.	14.00mm	20.00mm	62.00mm	0.50mm
DH0320014T7R01	IN2005	0.126	3.20mm	6mm Cylind.	14.00mm	20.00mm	62.00mm	0.50mm
DH0330014T7R01	IN2005	0.130	3.30mm	6mm Cylind.	14.00mm	20.00mm	62.00mm	0.50mm
DH0340014T7R01	IN2005	0.134	3.40mm	6mm Cylind.	14.00mm	20.00mm	62.00mm	0.50mm
DH0350014T7R01	IN2005	0.138	3.50mm	6mm Cylind.	14.00mm	20.00mm	62.00mm	0.60mm
DH0360014T7R01	IN2005	0.142	3.60mm	6mm Cylind.	14.00mm	20.00mm	62.00mm	0.60mm
DH0370017T7R01	IN2005	0.146	3.70mm	6mm Cylind.	14.00mm	20.00mm	62.00mm	0.60mm
DH0380017T7R01	IN2005	0.150	3.80mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.60mm
DH0390017T7R01	IN2005	0.154	3.90mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.60mm
DH0400017T7R01	IN2005	0.157	4.00mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.60mm
DH0410017T7R01	IN2005	0.161	4.10mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.70mm
DH0420017T7R01	IN2005	0.165	4.20mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.70mm
DH0430017T7R01	IN2005	0.169	4.30mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.70mm
DH0440017T7R01	IN2005	0.173	4.40mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.70mm
DH0450017T7R01	IN2005	0.177	4.50mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.70mm
DH0460017T7R01	IN2005	0.181	4.60mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.70mm
DH0470017T7R01	IN2005	0.185	4.70mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.80mm
DH0480020T7R01	IN2005	0.189	4.80mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.80mm
DH0490020T7R01	IN2005	0.193	4.90mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.80mm
DH0500020T7R01	IN2005	0.197	5.00mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.80mm
DH0510020T7R01	IN2005	0.201	5.10mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.80mm
DH0520020T7R01	IN2005	0.205	5.20mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.80mm
DH0530020T7R01	IN2005	0.209	5.30mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.80mm
DH0540020T7R01	IN2005	0.213	5.40mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.80mm
DH0550020T7R01	IN2005	0.217	5.50mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.90mm
DH0560020T7R01	IN2005	0.220	5.60mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.90mm
DH0570020T7R01	IN2005	0.224	5.70mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.90mm
DH0580020T7R01	IN2005	0.228	5.80mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.90mm
DH0590020T7R01	IN2005	0.232	5.90mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.90mm
DH0600020T7R01	IN2005	0.236	6.00mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.90mm
DH0610024T0R01	IN2005	0.240	6.10mm	8mm Cylind.	24.00mm	24.00mm	79.00mm	1.00mm
DH0620024T0R01	IN2005	0.244	6.20mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.00mm
DH0630024T0R01	IN2005	0.248	6.30mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.00mm
DH0640024T0R01	IN2005	0.252	6.40mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.00mm
DH0650024T0R01	IN2005	0.256	6.50mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.00mm
DH0660024T0R01	IN2005	0.260	6.60mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.00mm
DH0670024T0R01	IN2005	0.264	6.70mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.10mm
DH0680024T0R01	IN2005	0.268	6.80mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.10mm
DH0690024T0R01	IN2005	0.272	6.90mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.10mm

Part Number		D1 Max. Diam. Of Spot (inch)	D1 Max. Diam. Of Spot (mm)	D2 Shank Size/Style	L1 Maximum Depth of Cut	L2 Flute Length	L3 Overall Length	L5
DH0700024T0R01	IN2005	0.276	7.00mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.10mm
DH0710029T0R01	IN2005	0.280	7.10mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.10mm
DH0720029T0R01	IN2005	0.283	7.20mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.10mm
DH0730029T0R01	IN2005	0.287	7.30mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.10mm
DH0740029T0R01	IN2005	0.291	7.40mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.20mm
DH0750029T0R01	IN2005	0.295	7.50mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.20mm
DH0760029T0R01	IN2005	0.299	7.60mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.20mm
DH0770029T0R01	IN2005	0.303	7.70mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.20mm
DH0780029T0R01	IN2005	0.307	7.80mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.20mm
DH0790029T0R01	IN2005	0.311	7.90mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.30mm
DH0800029T0R01	IN2005	0.315	8.00mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.30mm
DH0810035T1R01	IN2005	0.319	8.10mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.30mm
DH0820035T1R01	IN2005	0.323	8.20mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.30mm
DH0830035T1R01	IN2005	0.327	8.30mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.30mm
DH0840035T1R01	IN2005	0.331	8.40mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.30mm
DH0850035T1R01	IN2005	0.335	8.50mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.30mm
DH0860035T1R01	IN2005	0.339	8.60mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.40mm
DH0870035T1R01	IN2005	0.343	8.70mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.40mm
DH0880035T1R01	IN2005	0.346	8.80mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.40mm
DH0890035T1R01	IN2005	0.350	8.90mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.40mm
DH0900035T1R01	IN2005	0.354	9.00mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.40mm
DH0910035T1R01	IN2005	0.358	9.10mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.40mm
DH0920035T1R01	IN2005	0.362	9.20mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.40mm
DH0930035T1R01	IN2005	0.366	9.30mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.50mm
DH0940035T1R01	IN2005	0.370	9.40mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.50mm
DH0950035T1R01	IN2005	0.374	9.50mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.50mm
DH0960035T1R01	IN2005	0.378	9.60mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.50mm
DH0970035T1R01	IN2005	0.382	9.70mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.50mm
DH0980035T1R01	IN2005	0.386	9.80mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.60mm
DH0990035T1R01	IN2005	0.390	9.90mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.60mm
DH1000035T1R01	IN2005	0.394	10.00mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.60mm
DH1010040T2R01	IN2005	0.398	10.10mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.60mm
DH1020040T2R01	IN2005	0.402	10.20mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.60mm
DH1030040T2R01	IN2005	0.406	10.30mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.60mm
DH1040040T2R01	IN2005	0.409	10.40mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.60mm
DH1050040T2R01	IN2005	0.413	10.50mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.60mm
DH1060040T2R01	IN2005	0.417	10.60mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.70mm
DH1070040T2R01	IN2005	0.421	10.70mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.70mm
DH1080040T2R01	IN2005	0.425	10.80mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.70mm
DH1090040T2R01	IN2005	0.429	10.90mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.70mm
DH1100040T2R01	IN2005	0.433	11.00mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.70mm
DH1110040T2R01	IN2005	0.437	11.10mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.70mm
DH1120040T2R01	IN2005	0.441	11.20mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.80mm
DH1130040T2R01	IN2005	0.445	11.30mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.80mm
DH1140040T2R01	IN2005	0.449	11.40mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.80mm
DH1150040T2R01	IN2005	0.453	11.50mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.80mm
DH1160040T2R01	IN2005	0.457	11.60mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.80mm
DH1170040T2R01	IN2005	0.461	11.70mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.90mm
DH1180040T2R01	IN2005	0.465	11.80mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.90mm
DH1190040T2R01	IN2005	0.469	11.90mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.90mm
DH1200040T2R01	IN2005	0.472	12.00mm	12mm Cylind.	40.00mm	55.00mm	102.00mm	1.90mm

Metric Standard - (dimensions in mm unless noted)

SOLID CARBIDE DRILLS 5:1 GEOMETRY WITH INTERNAL COOLANT

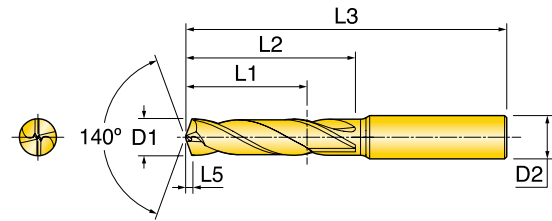


Part Number		D1 Max. Diam. Of Spot (inch)	D1 Max. Diam. Of Spot (mm)	D2 Shank Size/Style	L1 Maximum Depth of Cut	L2 Flute Length	L3 Overall Length	L5
DH0300023T7R01	IN2005	0.118	3.00mm	6mm Cylind.	23.00mm	28.00mm	66.00mm	0.50mm
DH0310023T7R01	IN2005	0.122	3.10mm	6mm Cylind.	23.00mm	28.00mm	66.00mm	0.50mm
DH0320023T7R01	IN2005	0.126	3.20mm	6mm Cylind.	23.00mm	28.00mm	66.00mm	0.50mm
DH0330023T7R01	IN2005	0.130	3.30mm	6mm Cylind.	23.00mm	28.00mm	66.00mm	0.50mm
DH0340023T7R01	IN2005	0.134	3.40mm	6mm Cylind.	23.00mm	28.00mm	66.00mm	0.50mm
DH0350023T7R01	IN2005	0.138	3.50mm	6mm Cylind.	23.00mm	28.00mm	66.00mm	0.60mm
DH0360023T7R01	IN2005	0.142	3.60mm	6mm Cylind.	23.00mm	28.00mm	66.00mm	0.60mm
DH0370023T7R01	IN2005	0.146	3.70mm	6mm Cylind.	23.00mm	28.00mm	66.00mm	0.60mm
DH0380029T7R01	IN2005	0.150	3.80mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.60mm
DH0390029T7R01	IN2005	0.154	3.90mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.60mm
DH0400029T7R01	IN2005	0.157	4.00mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.60mm
DH0410029T7R01	IN2005	0.161	4.10mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.70mm
DH0420029T7R01	IN2005	0.165	4.20mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.70mm
DH0430029T7R01	IN2005	0.169	4.30mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.70mm
DH0440029T7R01	IN2005	0.173	4.40mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.70mm
DH0450029T7R01	IN2005	0.177	4.50mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.70mm
DH0460029T7R01	IN2005	0.181	4.60mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.70mm
DH0470029T7R01	IN2005	0.185	4.70mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.80mm
DH0480035T7R01	IN2005	0.189	4.80mm	6mm Cylind.	35.00mm	44.00mm	74.00mm	0.80mm
DH0490035T7R01	IN2005	0.193	4.90mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.80mm
DH0500035T7R01	IN2005	0.197	5.00mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.80mm
DH0510035T7R01	IN2005	0.201	5.10mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.80mm
DH0520035T7R01	IN2005	0.209	5.20mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.80mm
DH0535035T7R01	IN2005	0.205	5.30mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.80mm
DH0540035T7R01	IN2005	0.213	5.40mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.80mm
DH0550035T7R01	IN2005	0.217	5.50mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.90mm
DH0560035T7R01	IN2005	0.220	5.60mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.90mm
DH0570035T7R01	IN2005	0.224	5.70mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.90mm
DH0580035T7R01	IN2005	0.228	5.80mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.90mm
DH0590035T7R01	IN2005	0.232	5.90mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.90mm
DH0600035T7R01	IN2005	0.236	6.00mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.90mm
DH0610043TOR01	IN2005	0.240	6.10mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.00mm
DH0620043TOR01	IN2005	0.244	6.20mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.00mm
DH0630043TOR01	IN2005	0.248	6.30mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.00mm
DH0640043TOR01	IN2005	0.252	6.40mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.00mm
DH0650043TOR01	IN2005	0.256	6.50mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.00mm
DH0660043TOR01	IN2005	0.260	6.60mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.00mm
DH0670043TOR01	IN2005	0.264	6.70mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.10mm
DH0680043TOR01	IN2005	0.268	6.80mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.10mm
DH0690043TOR01	IN2005	0.272	6.90mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.10mm

Part Number		D1 Max. Diam. Of Spot (inch)	D1 Max. Diam. Of Spot (mm)	D2 Shank Size/Style	L1 Maximum Depth of Cut	L2 Flute Length	L3 Overall Length	L5
DH0700043TOR01	IN2005	0.276	7.00mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.10mm
DH0710043TOR01	IN2005	0.280	7.10mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.10mm
DH0720043TOR01	IN2005	0.283	7.20mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.10mm
DH0730043TOR01	IN2005	0.287	7.30mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.10mm
DH0740043TOR01	IN2005	0.291	7.40mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.20mm
DH0750043TOR01	IN2005	0.295	7.50mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.20mm
DH0760043TOR01	IN2005	0.299	7.60mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.20mm
DH0770043TOR01	IN2005	0.303	7.70mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.20mm
DH0780043TOR01	IN2005	0.307	7.80mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.20mm
DH0790043TOR01	IN2005	0.311	7.90mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.30mm
DH0800043TOR01	IN2005	0.315	8.00mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.30mm
DH0810049T1R01	IN2005	0.319	8.10mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.30mm
DH0820049T1R01	IN2005	0.323	8.20mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.30mm
DH0830049T1R01	IN2005	0.327	8.30mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.30mm
DH0840049T1R01	IN2005	0.331	8.40mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.30mm
DH0850049T1R01	IN2005	0.335	8.50mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.30mm
DH0860049T1R01	IN2005	0.339	8.60mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.40mm
DH0870049T1R01	IN2005	0.343	8.70mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.40mm
DH0880049T1R01	IN2005	0.346	8.80mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.40mm
DH0890049T1R01	IN2005	0.350	8.90mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.40mm
DH0900049T1R01	IN2005	0.354	9.00mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.40mm
DH0910049T1R01	IN2005	0.358	9.10mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.40mm
DH0920049T1R01	IN2005	0.362	9.20mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.40mm
DH0930049T1R01	IN2005	0.366	9.30mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.50mm
DH0940049T1R01	IN2005	0.370	9.40mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.50mm
DH0950049T1R01	IN2005	0.374	9.50mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.50mm
DH0960049T1R01	IN2005	0.378	9.60mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.50mm
DH0970049T1R01	IN2005	0.382	9.70mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.50mm
DH0980049T1R01	IN2005	0.386	9.80mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.60mm
DH0990049T1R01	IN2005	0.390	9.90mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.60mm
DH1000049T1R01	IN2005	0.394	10.00mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.60mm
DH1010056T2R01	IN2005	0.398	10.10mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.60mm
DH1020056T2R01	IN2005	0.402	10.20mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.60mm
DH1030056T2R01	IN2005	0.406	10.30mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.60mm
DH1050056T2R01	IN2005	0.413	10.50mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.60mm
DH1056056T2R01	IN2005	0.409	10.40mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.60mm
DH1060056T2R01	IN2005	0.417	10.60mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.70mm
DH1070056T2R01	IN2005	0.421	10.70mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.70mm
DH1080056T2R01	IN2005	0.425	10.80mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.70mm
DH1090056T2R01	IN2005	0.429	10.90mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.70mm
DH1100056T2R01	IN2005	0.433	11.00mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.70mm
DH1110056T2R01	IN2005	0.437	11.10mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.70mm
DH1120056T2R01	IN2005	0.441	11.20mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.80mm
DH1130056T2R01	IN2005	0.445	11.30mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.80mm
DH1140056T2R01	IN2005	0.453	11.40mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.80mm
DH1156056T2R01	IN2005	0.449	11.50mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.80mm
DH1160056T2R01	IN2005	0.457	11.60mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.80mm
DH1170056T2R01	IN2005	0.461	11.70mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.90mm
DH1180056T2R01	IN2005	0.465	11.80mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.90mm
DH1190056T2R01	IN2005	0.469	11.90mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.90mm
DH1200056T2R01	IN2005	0.472	12.00mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.90mm

Metric Standard - (dimensions in mm unless noted)

SOLID CARBIDE DRILLS 3:1 GEOMETRY WITH EXTERNAL COOLANT

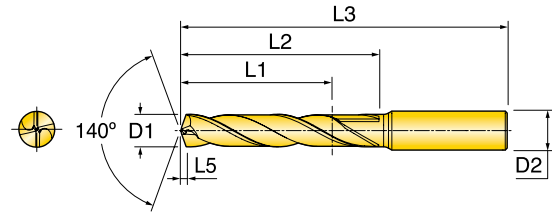


Part Number		D1 Max. Diam. Of Spot (inch)	D1 Max. Diam. Of Spot (mm)	D2 Shank Size/Style	L1 Maximum Depth of Cut	L2 Flute Length	L3 Overall Length	L5
DJ0300014T7R01	IN2005	0.118	3.00mm	6mm Cylind.	14.00mm	20.00mm	62.00mm	0.50mm
DJ0310014T7R01	IN2005	0.122	3.10mm	6mm Cylind.	14.00mm	20.00mm	62.00mm	0.50mm
DJ0320014T7R01	IN2005	0.126	3.20mm	6mm Cylind.	14.00mm	20.00mm	62.00mm	0.50mm
DJ0330014T7R01	IN2005	0.130	3.30mm	6mm Cylind.	14.00mm	20.00mm	62.00mm	0.50mm
DJ0340014T7R01	IN2005	0.134	3.40mm	6mm Cylind.	14.00mm	20.00mm	62.00mm	0.50mm
DJ0350014T7R01	IN2005	0.138	3.50mm	6mm Cylind.	14.00mm	20.00mm	62.00mm	0.60mm
DJ0360014T7R01	IN2005	0.142	3.60mm	6mm Cylind.	14.00mm	20.00mm	62.00mm	0.60mm
DJ0370017T7R01	IN2005	0.146	3.70mm	6mm Cylind.	14.00mm	20.00mm	62.00mm	0.60mm
DJ0380017T7R01	IN2005	0.150	3.80mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.60mm
DJ0390017T7R01	IN2005	0.154	3.90mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.60mm
DJ0400017T7R01	IN2005	0.157	4.00mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.60mm
DJ0410017T7R01	IN2005	0.161	4.10mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.70mm
DJ0420017T7R01	IN2005	0.165	4.20mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.70mm
DJ0430017T7R01	IN2005	0.169	4.30mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.70mm
DJ0440017T7R01	IN2005	0.173	4.40mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.70mm
DJ0450017T7R01	IN2005	0.177	4.50mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.70mm
DJ0460017T7R01	IN2005	0.181	4.60mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.80mm
DJ0470017T7R01	IN2005	0.185	4.70mm	6mm Cylind.	17.00mm	24.00mm	66.00mm	0.80mm
DJ0480020T7R01	IN2005	0.189	4.80mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.80mm
DJ0490020T7R01	IN2005	0.193	4.90mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.80mm
DJ0500020T7R01	IN2005	0.197	5.00mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.80mm
DJ0510020T7R01	IN2005	0.201	5.10mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.80mm
DJ0520020T7R01	IN2005	0.205	5.20mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.80mm
DJ0530020T7R01	IN2005	0.209	5.30mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.80mm
DJ0540020T7R01	IN2005	0.213	5.40mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.80mm
DJ0550020T7R01	IN2005	0.217	5.50mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.90mm
DJ0560020T7R01	IN2005	0.220	5.60mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.90mm
DJ0570020T7R01	IN2005	0.224	5.70mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.90mm
DJ0580020T7R01	IN2005	0.228	5.80mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.90mm
DJ0590020T7R01	IN2005	0.232	5.90mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.90mm
DJ0610020T7R01	IN2005	0.236	6.00mm	6mm Cylind.	20.00mm	28.00mm	66.00mm	0.90mm
DJ0610024T0R01	IN2005	0.240	6.10mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.00mm
DJ0620024T0R01	IN2005	0.244	6.20mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.00mm
DJ0630024T0R01	IN2005	0.248	6.30mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.00mm
DJ0640024T0R01	IN2005	0.252	6.40mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.00mm
DJ0650024T0R01	IN2005	0.256	6.50mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.00mm
DJ0660024T0R01	IN2005	0.260	6.60mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.00mm
DJ0670024T0R01	IN2005	0.264	6.70mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.10mm
DJ0680024T0R01	IN2005	0.268	6.80mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.10mm
DJ0690024T0R01	IN2005	0.272	6.90mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.10mm

Part Number		D1 Max. Diam. Of Spot (inch)	D1 Max. Diam. Of Spot (mm)	D2 Shank Size/Style	L1 Maximum Depth of Cut	L2 Flute Length	L3 Overall Length	L5
DJ0700024T0R01	IN2005	0.276	7.00mm	8mm Cylind.	24.00mm	34.00mm	79.00mm	1.10mm
DJ0710029T0R01	IN2005	0.280	7.10mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.10mm
DJ0720029T0R01	IN2005	0.283	7.20mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.10mm
DJ0730029T0R01	IN2005	0.287	7.30mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.10mm
DJ0740029T0R01	IN2005	0.291	7.40mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.20mm
DJ0750029T0R01	IN2005	0.295	7.50mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.20mm
DJ0760029T0R01	IN2005	0.299	7.60mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.20mm
DJ0770029T0R01	IN2005	0.303	7.70mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.20mm
DJ0780029T0R01	IN2005	0.307	7.80mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.20mm
DJ0790029T0R01	IN2005	0.311	7.90mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.30mm
DJ0800029T0R01	IN2005	0.315	8.00mm	8mm Cylind.	29.00mm	41.00mm	79.00mm	1.30mm
DJ0810035T1R01	IN2005	0.319	8.10mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.30mm
DJ0820035T1R01	IN2005	0.323	8.20mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.30mm
DJ0830035T1R01	IN2005	0.327	8.30mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.30mm
DJ0840035T1R01	IN2005	0.331	8.40mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.30mm
DJ0850035T1R01	IN2005	0.335	8.50mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.30mm
DJ0860035T1R01	IN2005	0.339	8.60mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.40mm
DJ0870035T1R01	IN2005	0.343	8.70mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.40mm
DJ0880035T1R01	IN2005	0.346	8.80mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.40mm
DJ0890035T1R01	IN2005	0.350	8.90mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.40mm
DJ0900035T1R01	IN2005	0.354	9.00mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.40mm
DJ0910035T1R01	IN2005	0.358	9.10mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.40mm
DJ0920035T1R01	IN2005	0.362	9.20mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.40mm
DJ0930035T1R01	IN2005	0.366	9.30mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.50mm
DJ0940035T1R01	IN2005	0.370	9.40mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.50mm
DJ0950035T1R01	IN2005	0.374	9.50mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.50mm
DJ0960035T1R01	IN2005	0.378	9.60mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.50mm
DJ0970035T1R01	IN2005	0.382	9.70mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.50mm
DJ0980035T1R01	IN2005	0.386	9.80mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.60mm
DJ0990035T1R01	IN2005	0.390	9.90mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.60mm
DJ1000035T1R01	IN2005	0.394	10.00mm	10mm Cylind.	35.00mm	47.00mm	89.00mm	1.60mm
DJ1010040T2R01	IN2005	0.398	10.10mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.60mm
DJ1020040T2R01	IN2005	0.402	10.20mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.60mm
DJ1030040T2R01	IN2005	0.406	10.30mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.60mm
DJ1040040T2R01	IN2005	0.409	10.40mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.60mm
DJ1050040T2R01	IN2005	0.413	10.50mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.60mm
DJ1060040T2R01	IN2005	0.417	10.60mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.70mm
DJ1070040T2R01	IN2005	0.421	10.70mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.70mm
DJ1080040T2R01	IN2005	0.425	10.80mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.70mm
DJ1090040T2R01	IN2005	0.429	10.90mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.70mm
DJ1100040T2R01	IN2005	0.433	11.00mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.70mm
DJ1110040T2R01	IN2005	0.437	11.10mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.70mm
DJ1120040T2R01	IN2005	0.441	11.20mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.80mm
DJ1130040T2R01	IN2005	0.445	11.30mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.80mm
DJ1140040T2R01	IN2005	0.449	11.40mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.80mm
DJ1150040T2R01	IN2005	0.453	11.50mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.80mm
DJ1160040T2R01	IN2005	0.457	11.60mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.80mm
DJ1170040T2R01	IN2005	0.461	11.70mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.90mm
DJ1180040T2R01	IN2005	0.465	11.80mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.90mm
DJ1190040T2R01	IN2005	0.469	11.90mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.90mm
DJ1200040T2R01	IN2005	0.472	12.00mm	12mm Cylind.	40.00mm	55.00mm	101.00mm	1.90mm

Metric Standard - (dimensions in mm unless noted)

SOLID CARBIDE DRILLS 5:1 GEOMETRY WITH EXTERNAL COOLANT



Part Number		D1 Max. Diam. Of Spot (inch)	D1 Max. Diam. Of Spot (mm)	D2 Shank Size/Style	L1 Maximum Depth of Cut	L2 Flute Length	L3 Overall Length	L5
DJ0300023T7R01	IN2005	0.118	3.00mm	6mm Cylind.	23.00mm	28.00mm	66.00mm	0.50mm
DJ0310023T7R01	IN2005	0.122	3.10mm	6mm Cylind.	23.00mm	28.00mm	66.00mm	0.50mm
DJ0320023T7R01	IN2005	0.126	3.20mm	6mm Cylind.	23.00mm	28.00mm	66.00mm	0.50mm
DJ0330023T7R01	IN2005	0.130	3.30mm	6mm Cylind.	23.00mm	28.00mm	66.00mm	0.50mm
DJ0340023T7R01	IN2005	0.134	3.40mm	6mm Cylind.	23.00mm	28.00mm	66.00mm	0.50mm
DJ0350023T7R01	IN2005	0.138	3.50mm	6mm Cylind.	23.00mm	28.00mm	66.00mm	0.60mm
DJ0360023T7R01	IN2005	0.142	3.60mm	6mm Cylind.	23.00mm	28.00mm	66.00mm	0.60mm
DJ0370023T7R01	IN2005	0.146	3.70mm	6mm Cylind.	23.00mm	28.00mm	66.00mm	0.60mm
DJ0380029T7R01	IN2005	0.150	3.80mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.60mm
DJ0390029T7R01	IN2005	0.154	3.90mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.60mm
DJ0400029T7R01	IN2005	0.157	4.00mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.60mm
DJ0410029T7R01	IN2005	0.161	4.10mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.70mm
DJ0420029T7R01	IN2005	0.165	4.20mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.70mm
DJ0430029T7R01	IN2005	0.169	4.30mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.70mm
DJ0440029T7R01	IN2005	0.173	4.40mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.70mm
DJ0450029T7R01	IN2005	0.177	4.50mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.70mm
DJ0460029T7R01	IN2005	0.181	4.60mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.70mm
DJ0470029T7R01	IN2005	0.185	4.70mm	6mm Cylind.	29.00mm	36.00mm	74.00mm	0.80mm
DJ0480035T7R01	IN2005	0.189	4.80mm	6mm Cylind.	35.00mm	44.00mm	74.00mm	0.80mm
DJ0490035T7R01	IN2005	0.193	4.90mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.80mm
DJ0500035T7R01	IN2005	0.197	5.00mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.80mm
DJ0510035T7R01	IN2005	0.201	5.10mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.80mm
DJ0520035T7R01	IN2005	0.209	5.20mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.80mm
DJ0535035T7R01	IN2005	0.205	5.30mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.80mm
DJ0540035T7R01	IN2005	0.213	5.40mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.80mm
DJ0550035T7R01	IN2005	0.217	5.50mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.90mm
DJ0560035T7R01	IN2005	0.220	5.60mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.90mm
DJ0570035T7R01	IN2005	0.224	5.70mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.90mm
DJ0580035T7R01	IN2005	0.228	5.80mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.90mm
DJ0590035T7R01	IN2005	0.232	5.90mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.90mm
DJ0610035T7R01	IN2005	0.236	6.00mm	6mm Cylind.	35.00mm	44.00mm	82.00mm	0.90mm
DJ0610043T0R01	IN2005	0.240	6.10mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.00mm
DJ0620043T0R01	IN2005	0.244	6.20mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.00mm
DJ0630043T0R01	IN2005	0.248	6.30mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.00mm
DJ0640043T0R01	IN2005	0.252	6.40mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.00mm
DJ0650043T0R01	IN2000	0.256	6.50mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.00mm
DJ0660043T0R01	IN2005	0.260	6.60mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.00mm
DJ0670043T0R01	IN2005	0.264	6.70mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.10mm
DJ0680043T0R01	IN2005	0.268	6.80mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.10mm
DJ0690043T0R01	IN2005	0.272	6.90mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.10mm

Part Number		D1 Max. Diam. Of Spot (inch)	D1 Max. Diam. Of Spot (mm)	D2 Shank Size/Style	L1 Maximum Depth of Cut	L2 Flute Length	L3 Overall Length	L5
DJ0700043T0R01	IN2005	0.276	7.00mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.10mm
DJ0710043T0R01	IN2005	0.280	7.10mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.10mm
DJ0720043T0R01	IN2005	0.283	7.20mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.10mm
DJ0730043T0R01	IN2005	0.287	7.30mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.10mm
DJ0740043T0R01	IN2005	0.291	7.40mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.20mm
DJ0750043T0R01	IN2005	0.295	7.50mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.20mm
DJ0760043T0R01	IN2005	0.299	7.60mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.20mm
DJ0770043T0R01	IN2005	0.303	7.70mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.20mm
DJ0780043T0R01	IN2005	0.307	7.80mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.20mm
DJ0790043T0R01	IN2005	0.311	7.90mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.30mm
DJ0800043T0R01	IN2005	0.315	8.00mm	8mm Cylind.	43.00mm	53.00mm	91.00mm	1.30mm
DJ0810049T1R01	IN2005	0.319	8.10mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.30mm
DJ0820049T1R01	IN2005	0.323	8.20mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.30mm
DJ0830049T1R01	IN2005	0.327	8.30mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.30mm
DJ0840049T1R01	IN2005	0.331	8.40mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.30mm
DJ0850049T1R01	IN2005	0.335	8.50mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.30mm
DJ0860049T1R01	IN2005	0.339	8.60mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.40mm
DJ0870049T1R01	IN2005	0.343	8.70mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.40mm
DJ0880049T1R01	IN2005	0.346	8.80mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.40mm
DJ0890049T1R01	IN2005	0.350	8.90mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.40mm
DJ0900049T1R01	IN2005	0.354	9.00mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.40mm
DJ0910049T1R01	IN2005	0.358	9.10mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.40mm
DJ0920049T1R01	IN2005	0.362	9.20mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.40mm
DJ0930049T1R01	IN2005	0.366	9.30mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.50mm
DJ0940049T1R01	IN2005	0.370	9.40mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.50mm
DJ0950049T1R01	IN2005	0.374	9.50mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.50mm
DJ0960049T1R01	IN2005	0.378	9.60mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.50mm
DJ0970049T1R01	IN2005	0.382	9.70mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.50mm
DJ0980049T1R01	IN2005	0.386	9.80mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.60mm
DJ0990049T1R01	IN2005	0.390	9.90mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.60mm
DJ1000049T1R01	IN2005	0.394	10.00mm	10mm Cylind.	49.00mm	61.00mm	103.00mm	1.60mm
DJ1010056T2R01	IN2005	0.398	10.10mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.60mm
DJ1020056T2R01	IN2005	0.402	10.20mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.60mm
DJ1030056T2R01	IN2005	0.406	10.30mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.60mm
DJ1040056T2R01	IN2005	0.413	10.40mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.60mm
DJ1056056T2R01	IN2005	0.409	10.50mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.60mm
DJ1060056T2R01	IN2005	0.417	10.60mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.70mm
DJ1070056T2R01	IN2005	0.421	10.70mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.70mm
DJ1080056T2R01	IN2005	0.425	10.80mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.70mm
DJ1090056T2R01	IN2005	0.429	10.90mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.70mm
DJ1100056T2R01	IN2005	0.433	11.00mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.70mm
DJ1110056T2R01	IN2005	0.437	11.10mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.70mm
DJ1120056T2R01	IN2005	0.441	11.20mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.80mm
DJ1130056T2R01	IN2005	0.445	11.30mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.80mm
DJ1150056T2R01	IN2005	0.453	11.50mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.80mm
DJ1156056T2R01	IN2005	0.449	11.40mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.80mm
DJ1160056T2R01	IN2005	0.457	11.60mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.80mm
DJ1170056T2R01	IN2005	0.461	11.70mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.90mm
DJ1180056T2R01	IN2005	0.465	11.80mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.90mm
DJ1190056T2R01	IN2005	0.469	11.90mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.90mm
DJ1200056T2R01	IN2005	0.472	12.00mm	12mm Cylind.	56.00mm	71.00mm	118.00mm	1.90mm

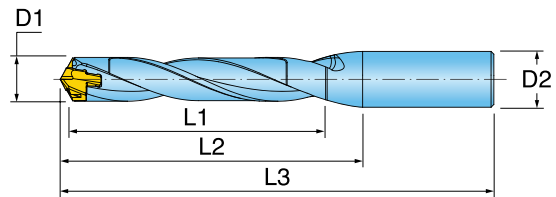
Metric Standard - (dimensions in mm unless noted)

Features & Benefits:

- Twisted coolant hole with optimum flute design
- Polished flute for smooth chip evacuation
- PVD coated body for prolonged body life
- Innovative quick change system
- IN2505 and IN05S grades - Long tool life
- One drill body can cover 5-10 different tip diameters

GOLD TWIST SERIES TD 1.5:1 CYLINDRICAL SHANK (INCH)

REPLACEABLE TIPPED DRILL BODIES



D1 Nom. Dia. inch	D1 Nom. Dia. mm	Body Number	L1 DOC	L2 Ext.	L3 Overall	D2 Shank Size/Style	Pocket Size	Coolant Thru Point
.2362-.2520	6.0-6.4	TD0600009S4R01	0.35	0.91	2.67	.500" Cylind.	6	Yes
.2560-.2717	6.5-6.9	TD0650010S4R01	0.39	0.95	2.72	.500" Cylind.	6.5	Yes
.2756-.2913	7.0-7.4	TD0700010S4R01	0.43	0.99	2.76	.500" Cylind.	7.0	Yes
.2953-.3110	7.5-7.9	TD0750011S4R01	0.44	1.02	2.79	.500" Cylind.	7.5	Yes
.3150-.3504	8.0-8.9	TD0800012S4R01	0.47	1.10	2.87	.500" Cylind.	8	Yes
.3543-.3898	9.0-9.9	TD0900013S4R01	0.55	1.15	2.92	.500" Cylind.	9	Yes
.3937-.4291	10.0-10.9	TD1000015S6R01	0.59	1.23	3.12	.625" Cylind.	10	Yes
.4331-.4685	11.0-11.9	TD1100016S6R01	0.67	1.30	3.19	.625" Cylind.	11	Yes
.4724-.5079	12.0-12.9	TD1200018S6R01	0.71	1.38	3.27	.625" Cylind.	12	Yes
.5118-.5472	13.0-13.9	TD1300019S6R01	0.79	1.46	3.35	.625" Cylind.	13	Yes
.5512-.5866	14.0-14.9	TD1400021S6R01	0.83	1.62	3.51	.625" Cylind.	14	Yes
.5906-.6260	15.0-15.9	TD1500022S7R01	0.91	1.82	3.79	.750" Cylind.	15	Yes
.6299-.6654	16.0-16.9	TD1600024S7R01	0.94	1.94	3.91	.750" Cylind.	16	Yes
.6693-.7047	17.0-17.9	TD1700025S7R01	1.02	2.06	4.03	.750" Cylind.	17	Yes
.7087-.7441	18.0-18.9	TD1800027S1R01	1.06	2.19	4.39	1.000" Cylind.	18	Yes
.7480-.7835	19.0-19.9	TD1900028S1R01	1.14	2.30	4.50	1.000" Cylind.	19	Yes
.7874-.8228	20.0-20.9	TD2000030S1R01	1.18	2.43	4.63	1.000" Cylind.	20	Yes
.8268-.8622	21.0-21.9	TD2100031S1R01	1.26	2.55	4.75	1.000" Cylind.	21	Yes
.8661-.9016	22.0-22.9	TD2200033S1R01	1.30	2.67	4.87	1.000" Cylind.	22	Yes
.9055-.9409	23.0-23.9	TD2300034S9R01	1.38	2.79	5.15	1.250" Cylind.	23	Yes
.9449-.9803	24.0-24.9	TD2400036S9R01	1.42	2.91	5.27	1.250" Cylind.	24	Yes
.9843-1.0197	25.0-25.9	TD2500037S9R01	1.50	3.03	5.39	1.250" Cylind.	25	Yes

*Do not mount a smaller drill point than the one listed with the tool.

HARDWARE



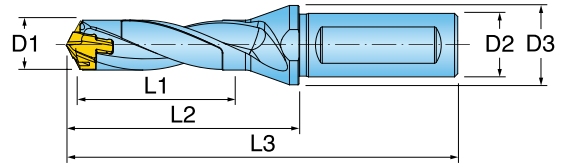
Clamping Key

Coolant Plug

	Clamping Key	Coolant Plug
TD0600009S4R01	KTD6.0-D9.9	DL-12
TD0650010S4R01	KTD6.0-D9.9	DL-12
TD0700010S4R01	KTD6.0-D9.9	DL-12
TD0750011S4R01	KTD6.0-D9.9	DL-12
TD0800012S4R01	KTD6.0-D9.9	DL-12
TD0900013S4R01	KTD6.0-D9.9	DL-12
TD1000015S6R01	KTD10.0-19.9	DL-16
TD1100016S6R01	KTD10.0-19.9	DL-16
TD1200018S6R01	KTD10.0-19.9	DL-16
TD1300019S6R01	KTD10.0-19.9	DL-16
TD1400021S6R01	KTD10.0-19.9	DL-16
TD1500022S7R01	KTD10.0-19.9	DL-20
TD1600024S7R01	KTD10.0-19.9	DL-20
TD1700025S7R01	KTD10.0-19.9	DL-20
TD1800027S1R01	KTD10.0-19.9	DL-25
TD1900028S1R01	KTD10.0-19.9	DL-25
TD2000030S1R01	KTD20.0-D26.9	DL-25
TD2100031S1R01	KTD20.0-D26.9	DL-25
TD2200033S1R01	KTD20.0-D26.9	DL-25
TD2300034S9R01	KTD20.0-D26.9	DL-32
TD2400036S9R01	KTD20.0-D26.9	DL-32
TD2500037S9R01	KTD20.0-D26.9	DL-32

GOLD TWIST SERIES TD 1.5:1 UNIVERSAL SHANK (INCH)

REPLACEABLE TIPPED DRILL BODIES



D1 Nom. Dia. inch	D1 Nom. Dia. mm	Body Number	L1 DOC	L2 Ext.	L3 Overall	D2 Shank Size/Style	D3 Flange Dia.	Pocket Size	Coolant Thru Point
.2362-.2520	6.0-6.4	TD0600009B9R01	0.35	0.91	2.67	.500" Univ.	0.63	6	Yes
.2540-.2717	6.5-6.9	TD0650010B9R01	0.39	0.95	2.72	.500" Univ.	0.63	6.5	Yes
.2756-.2913	7.0-7.4	TD0700010B9R01	0.43	0.99	2.76	.500" Univ.	0.63	7.0	Yes
.2953-.3110	7.5-7.9	TD0750011B9R01	0.44	1.02	2.79	.500" Univ.	0.63	7.5	Yes
.3150-.3504	8.0-8.9	TD0800012B9R01	0.47	1.10	2.87	.500" Univ.	0.63	8	Yes
.3543-.3898	9.0-9.9	TD0900013B9R01	0.55	1.15	2.92	.500" Univ.	0.63	9	Yes
.3937-.4291	10.0-10.9	TD1000015COR01	0.59	1.23	3.12	.625" Univ.	0.79	10	Yes
.4331-.4685	11.0-11.9	TD1100016COR01	0.67	1.30	3.19	.625" Univ.	0.79	11	Yes
.4724-.5079	12.0-12.9	TD1200018COR01	0.71	1.38	3.27	.625" Univ.	0.79	12	Yes
.5118-.5472	13.0-13.9	TD1300019COR01	0.79	1.46	3.35	.625" Univ.	0.79	13	Yes
.5512-.5866	14.0-14.9	TD1400021COR01	0.83	1.62	3.51	.625" Univ.	0.79	14	Yes
.5906-.6260	15.0-15.9	TD150002218R01	0.91	1.82	3.79	.750" Univ.	0.98	15	Yes
.6299-.6654	16.0-16.9	TD160002418R01	0.94	1.94	3.91	.750" Univ.	0.98	16	Yes
.6693-.7047	17.0-17.9	TD170002518R01	1.02	2.06	4.03	.750" Univ.	0.98	17	Yes
.7087-.7441	18.0-18.9	TD1800027C8R01	1.06	2.19	4.39	1.000" Univ.	1.26	18	Yes
.7480-.7835	19.0-19.9	TD1900028C8R01	1.14	2.30	4.50	1.000" Univ.	1.26	19	Yes
.7874-.8228	20.0-20.9	TD2000030C8R01	1.18	2.43	4.63	1.000" Univ.	1.26	20	Yes
.8268-.8622	21.0-21.9	TD2100031C8R01	1.26	2.55	4.75	1.000" Univ.	1.26	21	Yes
.8661-.9016	22.0-22.9	TD2200033C8R01	1.30	2.67	4.87	1.000" Univ.	1.26	22	Yes
.9055-.9409	23.0-23.9	TD2300034B7R01	1.38	2.79	5.15	1.250" Univ.	1.65	23	Yes
.9449-.9803	24.0-24.9	TD2400036B7R01	1.42	2.91	5.27	1.250" Univ.	1.65	24	Yes
.9843-1.0197	25.0-25.9	TD2500037B7R01	1.50	3.03	5.39	1.250" Univ.	1.65	25	Yes

*Do not mount a smaller drill point than the one listed with the tool.
Metric shanks available as non-stock standard.

HARDWARE



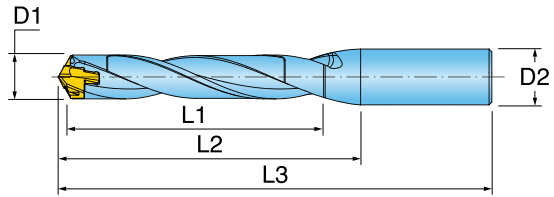
Clamping Key

Coolant Plug

	Clamping Key	Coolant Plug
TD0600009B9R01	KTD6.0-D9.9	DL-12
TD0650010B9R01	KTD6.0-D9.9	DL-12
TD0700010B9R01	KTD6.0-D9.9	DL-12
TD0750011B9R01	KTD6.0-D9.9	DL-12
TD0800012B9R01	KTD6.0-D9.9	DL-12
TD0900013B9R01	KTD6.0-D9.9	DL-12
TD1000015C0R01	KTD10.0-19.9	DL-16
TD1100016C0R01	KTD10.0-19.9	DL-16
TD1200018C0R01	KTD10.0-19.9	DL-16
TD1300019C0R01	KTD10.0-19.9	DL-16
TD1400021C0R01	KTD10.0-19.9	DL-16
TD150002218R01	KTD10.0-19.9	DL-20
TD160002418R01	KTD10.0-19.9	DL-20
TD170002518R01	KTD10.0-19.9	DL-20
TD1800027C8R01	KTD10.0-19.9	DL-25
TD1900028C8R01	KTD10.0-19.9	DL-25
TD2000030C8R01	KTD20.0-D26.9	DL-25
TD2100031C8R01	KTD20.0-D26.9	DL-25
TD2200033C8R01	KTD20.0-D26.9	DL-25
TD2300034B7R01	KTD20.0-D26.9	DL-32
TD2400036B7R01	KTD20.0-D26.9	DL-32
TD2500037B7R01	KTD20.0-D26.9	DL-32



GOLD TWIST SERIES TD 3:1 CYLINDRICAL SHANK (INCH)

REPLACEABLE TIPPED DRILL BODIES



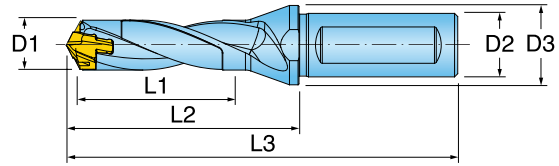
D1 Nom. Dia. inch	D1 Nom. Dia. mm	Body Number	L1 DOC	L2 Ext.	L3 Overall	D2 Shank Size/Style	Pocket Size	Chamfer Ring	Coolant Thru Point
.2362-.2520	6.0-6.4	TD0600018S4R01	0.71	1.26	3.03	.500" Cylind.	6	NA	Yes
.2540-.2717	6.5-6.9	TD0650020S4R01	0.79	1.33	3.10	.500" Cylind.	6.5	NA	Yes
.2756-.2913	7.0-7.4	TD0700021S4R01	0.83	1.40	3.17	.500" Cylind.	7.0	NA	Yes
.2953-.3110	7.5-7.9	TD0750022S4R01	0.89	1.46	3.23	.500" Cylind.	7.5	NA	Yes
.3150-.3307	8.0-8.4	TD0800024S4R01	0.94	1.55	3.32	.500" Cylind.	8	NA	Yes
.3346-.3504	8.5-8.9	TD0850025S4R01	1.00	1.61	3.38	.500" Cylind.	8.5	NA	Yes
.3543-.3701	9.0-9.4	TD0900027S4R01	1.06	1.69	3.46	.500" Cylind.	9	NA	Yes
.3740-.3898	9.5-9.9	TD0950028S4R01	1.12	1.74	3.51	.500" Cylind.	9.5	NA	Yes
.3937-.4094	10.0-10.4	TD1000030S6R01	1.18	1.82	3.71	.625" Cylind.	10	NA	Yes
.4134-.4291	10.5-10.9	TD1050031S6R01	1.26	1.88	3.77	.625" Cylind.	10.5	NA	Yes
.4331-.4488	11.0-11.4	TD1100033S6R01	1.30	1.95	3.84	.625" Cylind.	11	NA	Yes
.4528-.4685	11.5-11.9	TD1150034S6R01	1.38	2.01	3.90	.625" Cylind.	11.5	NA	Yes
.4724-.4882	12.0-12.4	TD1200036S6R01	1.42	2.09	3.98	.625" Cylind.	12	NA	Yes
.4912-.5079	12.5-12.9	TD1250037S6R01	1.46	2.15	4.04	.625" Cylind.	12.5	NA	Yes
.5118-.5276	13.0-13.4	TD1300039S6R01	1.54	2.23	4.12	.625" Cylind.	13	CB130R02	Yes
.5315-.5472	13.5-13.9	TD1350040S6R01	1.61	2.29	4.18	.625" Cylind.	13.5	CB135R02	Yes
.5512-.5669	14.0-14.4	TD1400042S6R01	1.65	2.44	4.33	.625" Cylind.	14	CB140R02	Yes
.5709-.5866	14.5-14.9	TD1450043S6R01	1.73	2.50	4.39	.625" Cylind.	14.5	CB145R02	Yes
.5906-.6260	15.0-15.9	TD1500045S7R01	1.77	2.70	4.67	.750" Cylind.	15	CB150R02	Yes
.6299-.6654	16.0-16.9	TD1600048S7R01	1.89	2.89	4.86	.750" Cylind.	16	CB160R02	Yes
.6693-.7047	17.0-17.9	TD1700051S7R01	2.01	3.07	5.04	.750" Cylind.	17	CB170R02	Yes
.7087-.7441	18.0-18.9	TD1800054S1R01	2.13	3.25	5.45	1.000" Cylind.	18	CB180R02	Yes
.7480-.7835	19.0-19.9	TD1900057S1R01	2.24	3.43	5.63	1.000" Cylind.	19	CB190R02	Yes
.7874-.8228	20.0-20.9	TD2000060S1R01	2.36	3.61	5.81	1.000" Cylind.	20	CB200R02	Yes
.8268-.8622	21.0-21.9	TD2100063S1R01	2.48	3.79	5.99	1.000" Cylind.	21	CB210R02	Yes
.8661-.9016	22.0-22.9	TD2200066S1R01	2.60	3.97	6.17	1.000" Cylind.	22	CB220R02	Yes
.9055-.9409	23.0-23.9	TD2300069S9R01	2.72	4.15	6.51	1.250" Cylind.	23	CB230R02	Yes
.9449-.9803	24.0-24.9	TD2400072S9R01	2.83	4.33	6.69	1.250" Cylind.	24	CB240R02	Yes
.9843-1.0197	25.0-25.9	TD2500075S9R01	2.95	4.51	6.87	1.250" Cylind.	25	CB250R02	Yes

*Do not mount a smaller drill point than the one listed with the tool.

HARDWARE		
	Clamping Key	Coolant Plug
TD0600018S4R01	KTD6.0-D9.9	DL-12
TD0650020S4R01	KTD6.0-D9.9	DL-12
TD0700021S4R01	KTD6.0-D9.9	DL-12
TD0750022S4R01	KTD6.0-D9.9	DL-12
TD0800024S4R01	KTD6.0-D9.9	DL-12
TD0850025S4R01	KTD6.0-D9.9	DL-12
TD0900027S4R01	KTD6.0-D9.9	DL-12
TD0950028S4R01	KTD6.0-D9.9	DL-12
TD1000030S6R01	KTD10.0-19.9	DL-16
TD1050031S6R01	KTD10.0-19.9	DL-16
TD1100033S6R01	KTD10.0-19.9	DL-16
TD1150034S6R01	KTD10.0-19.9	DL-16
TD1200036S6R01	KTD10.0-19.9	DL-16
TD1250037S6R01	KTD10.0-19.9	DL-16
TD1300039S6R01	KTD10.0-19.9	DL-16
TD1350040S6R01	KTD10.0-19.9	DL-16
TD1400042S6R01	KTD10.0-19.9	DL-16
TD1450043S6R01	KTD10.0-19.9	DL-16
TD1500045S7R01	KTD10.0-19.9	DL-20
TD1600048S7R01	KTD10.0-19.9	DL-20
TD1700051S7R01	KTD10.0-19.9	DL-20
TD1800054S1R01	KTD10.0-19.9	DL-25
TD1900057S1R01	KTD10.0-19.9	DL-25
TD2000060S1R01	KTD20.0-D26.9	DL-25
TD2100063S1R01	KTD20.0-D26.9	DL-25
TD2200066S1R01	KTD20.0-D26.9	DL-25
TD2300069S9R01	KTD20.0-D26.9	DL-32
TD2400072S9R01	KTD20.0-D26.9	DL-32
TD2500075S9R01	KTD20.0-D26.9	DL-32



GOLD TWIST SERIES TD 3:1 UNIVERSAL SHANK (INCH)

REPLACEABLE TIPPED DRILL BODIES



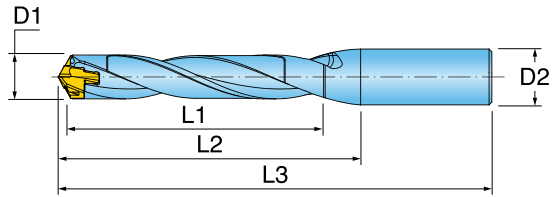
D1 Nom. Dia. inch	D1 Nom. Dia. mm	Body Number	L1 DOC	L2 Ext.	L3 Overall	D2 Shank Size/Style	D3 Flange Dia.	Pocket Size	Chamfer Ring	Coolant Thru Point
.2362-.2520	6.0-6.4	TD0600018B9R01	0.71	1.26	3.03	.500" Univ.	0.63	6	NA	Yes
.2560-.2717	6.5-6.9	TD0650020B9R01	0.79	1.33	3.10	.500" Univ.	0.63	6.5	NA	Yes
.2756-.2913	7.0-7.4	TD0700021B9R01	0.83	1.40	3.17	.500" Univ.	0.63	7.0	NA	Yes
.2953-.3110	7.5-7.9	TD0750022B9R01	0.89	1.46	3.23	.500" Univ.	0.63	7.5	NA	Yes
.3150-.3307	8.0-8.4	TD0800024B9R01	0.94	1.55	3.32	.500" Univ.	0.63	8	NA	Yes
.3346-.3504	8.5-8.9	TD0850025B9R01	1.00	1.61	3.38	.500" Univ.	0.63	8.5	NA	Yes
.3543-.3701	9.0-9.4	TD0900027B9R01	1.06	1.69	3.46	.500" Univ.	0.63	9	NA	Yes
.3740-.3898	9.5-9.9	TD0950028B9R01	1.12	1.74	3.51	.500" Univ.	0.63	9.5	NA	Yes
.3937-.4094	10.0-10.4	TD1000030COR01	1.18	1.82	3.71	.625" Univ.	0.79	10	NA	Yes
.4134-.4291	10.5-10.9	TD1050031COR01	1.26	1.90	3.79	.625" Univ.	0.79	10.5	NA	Yes
.4331-.4488	11.0-11.4	TD1100033COR01	1.30	1.95	3.84	.625" Univ.	0.79	11	NA	Yes
.4528-.4685	11.5-11.9	TD1150034COR01	1.38	2.01	3.90	.625" Univ.	0.79	11.5	NA	Yes
.4724-.4882	12.0-12.4	TD1200036COR01	1.42	2.09	3.98	.625" Univ.	0.79	12	NA	Yes
.4912-.5079	12.5-12.9	TD1250037COR01	1.46	2.15	4.04	.625" Univ.	0.79	12.5	NA	Yes
.5118-.5276	13.0-13.4	TD1300039COR01	1.54	2.23	4.12	.625" Univ.	0.79	13	CB130R02	Yes
.5315-.5472	13.5-13.9	TD1350040COR01	1.61	2.30	4.19	.625" Univ.	0.79	13.5	CB135R02	Yes
.5512-.5669	14.0-14.4	TD1400042COR01	1.65	2.44	4.33	.625" Univ.	0.79	14	CB140R02	Yes
.5709-.5866	14.5-14.9	TD1450043COR01	1.73	2.50	4.39	.625" Univ.	0.79	14.5	CB145R02	Yes
.5906-.6260	15.0-15.9	TD150004518R01	1.77	2.70	4.67	.750" Univ.	0.98	15	CB150R02	Yes
.6299-.6654	16.0-16.9	TD160004818R01	1.89	2.89	4.86	.750" Univ.	0.98	16	CB160R02	Yes
.6693-.7047	17.0-17.9	TD170005118R01	2.01	3.07	5.04	.750" Univ.	0.98	17	CB170R02	Yes
.7087-.7441	18.0-18.9	TD1800054C8R01	2.13	3.25	5.45	1.000" Univ.	1.26	18	CB180R02	Yes
.7480-.7835	19.0-19.9	TD1900057C8R01	2.24	3.43	5.63	1.000" Univ.	1.26	19	CB190R02	Yes
.7874-.8228	20.0-20.9	TD2000060C8R01	2.36	3.61	5.81	1.000" Univ.	1.26	20	CB200R02	Yes
.8268-.8622	21.0-21.9	TD2100063C8R01	2.48	3.79	5.99	1.000" Univ.	1.26	21	CB210R02	Yes
.8661-.9016	22.0-22.9	TD2200066C8R01	2.60	3.97	6.17	1.000" Univ.	1.26	22	CB220R02	Yes
.9055-.9409	23.0-23.9	TD2300069B7R01	2.72	4.15	6.51	1.250" Univ.	1.65	23	CB230R02	Yes
.9449-.9803	24.0-24.9	TD2400072B7R01	2.83	4.33	6.69	1.250" Univ.	1.65	24	CB240R02	Yes
.9843-1.0197	25.0-25.9	TD2500075B7R01	2.95	4.51	6.87	1.250" Univ.	1.65	25	CB250R02	Yes

*Do not mount a smaller drill point than the one listed with the tool.
Metric shanks available as non-stock standard.

HARDWARE		
	Clamping Key	Coolant Plug
TD0600018B9R01	KTD6.0-D9.9	DL-12
TD0650020B9R01	KTD6.0-D9.9	DL-12
TD0700021B9R01	KTD6.0-D9.9	DL-12
TD0750022B9R01	KTD6.0-D9.9	DL-12
TD0800024B9R01	KTD6.0-D9.9	DL-12
TD0850025B9R01	KTD6.0-D9.9	DL-12
TD0900027B9R01	KTD6.0-D9.9	DL-12
TD0950028B9R01	KTD6.0-D9.9	DL-12
TD1000030C0R01	KTD10.0-19.9	DL-16
TD1050031C0R01	KTD10.0-19.9	DL-16
TD1100033C0R01	KTD10.0-19.9	DL-16
TD1150034C0R01	KTD10.0-19.9	DL-16
TD1200036C0R01	KTD10.0-19.9	DL-16
TD1250037C0R01	KTD10.0-19.9	DL-16
TD1300039C0R01	KTD10.0-19.9	DL-16
TD1350040C0R01	KTD10.0-19.9	DL-16
TD1400042C0R01	KTD10.0-19.9	DL-16
TD1450043C0R01	KTD10.0-19.9	DL-16
TD150004518R01	KTD10.0-19.9	DL-20
TD160004818R01	KTD10.0-19.9	DL-20
TD170005118R01	KTD10.0-19.9	DL-20
TD1800054C8R01	KTD10.0-19.9	DL-25
TD1900057C8R01	KTD10.0-19.9	DL-25
TD2000060C8R01	KTD20.0-D26.9	DL-25
TD2100063C8R01	KTD20.0-D26.9	DL-25
TD2200066C8R01	KTD20.0-D26.9	DL-25
TD2300069B7R01	KTD20.0-D26.9	DL-32
TD2400072B7R01	KTD20.0-D26.9	DL-32
TD2500075B7R01	KTD20.0-D26.9	DL-32



GOLD TWIST SERIES TD 5:1 CYLINDRICAL SHANK (INCH)

REPLACEABLE TIPPED DRILL BODIES



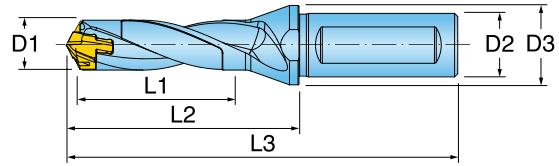
D1 Nom. Dia. inch	D1 Nom. Dia. mm	Body Number	L1 DOC	L2 Ext.	L3 Overall	D2 Shank Size/Style	Pocket Size	Chamfer Ring	Coolant Thru Point
.2362-.2520	6.0-6.4	TD0600030S4R01	1.18	1.73	3.50	.500" Cylind.	6	NA	Yes
.2540-.2717	6.5-6.9	TD0650033S4R01	1.30	1.84	3.61	.500" Cylind.	6.5	NA	Yes
.2756-.2913	7.0-7.4	TD0700035S4R01	1.38	1.95	3.72	.500" Cylind.	7.0	NA	Yes
.2953-.3110	7.5-7.9	TD0750037S4R01	1.48	2.05	3.82	.500" Cylind.	7.5	NA	Yes
.3150-.3307	8.0-8.4	TD0800040S4R01	1.57	2.18	3.95	.500" Cylind.	8	NA	Yes
.3346-.3504	8.5-8.9	TD0850042S4R01	1.67	2.28	4.05	.500" Cylind.	8.5	NA	Yes
.3543-.3701	9.0-9.4	TD0900045S4R01	1.77	2.39	4.16	.500" Cylind.	9	NA	Yes
.3740-.3898	9.5-9.9	TD0950047S4R01	1.87	2.49	4.26	.500" Cylind.	9.5	NA	Yes
.3937-.4094	10.0-10.4	TD1000050S6R01	1.97	2.61	4.50	.625" Cylind.	10	CB100R02	Yes
.4134-.4291	10.5-10.9	TD1050052S6R01	2.09	2.70	4.59	.625" Cylind.	10.5	CB105R02	Yes
.4331-.4488	11.0-11.4	TD1100055S6R01	2.17	2.82	4.71	.625" Cylind.	11	CB110R02	Yes
.4528-.4685	11.5-11.9	TD1150057S6R01	2.28	2.92	4.81	.625" Cylind.	11.5	CB115R02	Yes
.4724-.4882	12.0-12.4	TD1200060S6R01	2.36	3.03	4.92	.625" Cylind.	12	CB120R02	Yes
.4912-.5079	12.5-12.9	TD1250062S6R01	2.44	3.13	5.02	.625" Cylind.	12.5	CB125R02	Yes
.5118-.5276	13.0-13.4	TD1300065S6R01	2.56	3.25	5.14	.625" Cylind.	13	CB130R02	Yes
.5315-.5472	13.5-13.9	TD1350067S6R01	2.68	3.35	5.24	.625" Cylind.	13.5	CB135R02	Yes
.5512-.5669	14.0-14.4	TD1400070S6R01	2.76	3.55	5.44	.625" Cylind.	14	CB140R02	Yes
.5709-.5866	14.5-14.9	TD1450072S6R01	2.87	3.65	5.54	.625" Cylind.	14.5	CB145R02	Yes
.5906-.6260	15.0-15.9	TD1500075S7R01	2.95	3.89	5.86	.750" Cylind.	15	CB150R02	Yes
.6299-.6654	16.0-16.9	TD1600080S7R01	3.15	4.15	6.12	.750" Cylind.	16	CB160R02	Yes
.6693-.7047	17.0-17.9	TD1700085S7R01	3.35	4.41	6.38	.750" Cylind.	17	CB170R02	Yes
.7087-.7441	18.0-18.9	TD1800090S1R01	3.54	4.67	6.87	1.000" Cylind.	18	CB180R02	Yes
.7480-.7835	19.0-19.9	TD1900095S1R01	3.74	4.92	7.12	1.000" Cylind.	19	CB190R02	Yes
.7874-.8228	20.0-20.9	TD2000100S1R01	3.94	5.18	7.38	1.000" Cylind.	20	CB200R02	Yes
.8268-.8622	21.0-21.9	TD2100105S1R01	4.13	5.44	7.64	1.000" Cylind.	21	CB210R02	Yes
.8661-.9016	22.0-22.9	TD2200110S1R01	4.33	5.70	7.90	1.000" Cylind.	22	CB220R02	Yes
.9055-.9409	23.0-23.9	TD2300115S9R01	4.53	5.96	8.32	1.250" Cylind.	23	CB230R02	Yes
.9449-.9803	24.0-24.9	TD2400120S9R01	4.72	6.22	8.58	1.250" Cylind.	24	CB240R02	Yes
.9843-1.0197	25.0-25.9	TD2500125S9R01	4.92	6.48	8.84	1.250" Cylind.	25	CB250R02	Yes

*Do not mount a smaller drill point than the one listed with the tool.

HARDWARE		
	Clamping Key	Coolant Plug
TD0600030S4R01	KTD6.0-D9.9	DL-12
TD0650033S4R01	KTD6.0-D9.9	DL-12
TD0700035S4R01	KTD6.0-D9.9	DL-12
TD0750037S4R01	KTD6.0-D9.9	DL-12
TD0800040S4R01	KTD6.0-D9.9	DL-12
TD0850042S4R01	KTD6.0-D9.9	DL-12
TD0900045S4R01	KTD6.0-D9.9	DL-12
TD0950047S4R01	KTD6.0-D9.9	DL-12
TD1000050S6R01	KTD10.0-19.9	DL-16
TD1050052S6R01	KTD10.0-19.9	DL-16
TD1100055S6R01	KTD10.0-19.9	DL-16
TD1150057S6R01	KTD10.0-19.9	DL-16
TD1200060S6R01	KTD10.0-19.9	DL-16
TD1250062S6R01	KTD10.0-19.9	DL-16
TD1300065S6R01	KTD10.0-19.9	DL-16
TD1350067S6R01	KTD10.0-19.9	DL-16
TD1400070S6R01	KTD10.0-19.9	DL-16
TD1450072S6R01	KTD10.0-19.9	DL-16
TD1500075S7R01	KTD10.0-19.9	DL-20
TD1600080S7R01	KTD10.0-19.9	DL-20
TD1700085S7R01	KTD10.0-19.9	DL-20
TD1800090S1R01	KTD10.0-19.9	DL-25
TD1900095S1R01	KTD10.0-19.9	DL-25
TD2000100S1R01	KTD20.0-D26.9	DL-25
TD2100105S1R01	KTD20.0-D26.9	DL-25
TD2200110S1R01	KTD20.0-D26.9	DL-25
TD2300115S9R01	KTD20.0-D26.9	DL-32
TD2400120S9R01	KTD20.0-D26.9	DL-32
TD2500125S9R01	KTD20.0-D26.9	DL-32



GOLD TWIST SERIES TD 5:1 UNIVERSAL SHANK (INCH)

REPLACEABLE TIPPED DRILL BODIES



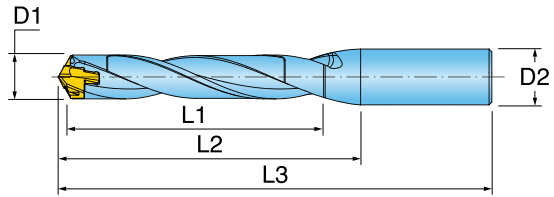
D1 Nom. Dia. inch	D1 Nom. Dia. mm	Body Number	L1 DOC	L2 Ext.	L3 Overall	D2 Shank Size/Style	D3 Flange Dia.	Pocket Size	Chamfer Ring	Coolant Thru Point
.2362-.2520	6.0-6.4	TD0600030B9R01	1.18	1.73	3.50	.500" Univ.	0.63	6	NA	Yes
.2560-.2717	6.5-6.9	TD0650033B9R01	1.30	1.84	3.61	.500" Univ.	0.63	6.5	NA	Yes
.2756-.2913	7.0-7.4	TD0700035B9R01	1.38	1.95	3.72	.500" Univ.	0.63	7.0	NA	Yes
.2953-.3110	7.5-7.9	TD0750037B9R01	1.48	2.05	3.82	.500" Univ.	0.63	7.5	NA	Yes
.3150-.3307	8.0-8.4	TD0800040B9R01	1.57	2.18	3.95	.500" Univ.	0.63	8	NA	Yes
.3346-.3504	8.5-8.9	TD0850042B9R01	1.67	2.28	4.05	.500" Univ.	0.63	8.5	NA	Yes
.3543-.3701	9.0-9.4	TD0900045B9R01	1.77	2.39	4.16	.500" Univ.	0.63	9	NA	Yes
.3740-.3898	9.5-9.9	TD0950047B9R01	1.87	2.49	4.26	.500" Univ.	0.63	9.5	NA	Yes
.3937-.4094	10.0-10.4	TD1000050COR01	1.97	2.61	4.50	.625" Univ.	0.79	10	CB100R02	Yes
.4134-.4291	10.5-10.9	TD1050052COR01	2.09	2.70	4.59	.625" Univ.	0.79	10.5	CB105R02	Yes
.4331-.4488	11.0-11.4	TD1100055COR01	2.17	2.82	4.71	.625" Univ.	0.79	11	CB110R02	Yes
.4528-.4685	11.5-11.9	TD1150057COR01	2.28	2.92	4.81	.625" Univ.	0.79	11.5	CB115R02	Yes
.4724-.4882	12.0-12.4	TD1200060COR01	2.36	3.03	4.92	.625" Univ.	0.79	12	CB120R02	Yes
.4912-.5079	12.5-12.9	TD1250062COR01	2.44	3.13	5.02	.625" Univ.	0.79	12.5	CB125R02	Yes
.5118-.5276	13.0-13.4	TD1300065COR01	2.56	3.25	5.14	.625" Univ.	0.79	13	CB130R02	Yes
.5315-.5472	13.5-13.9	TD1350067COR01	2.68	3.35	5.24	.625" Univ.	0.79	13.5	CB135R02	Yes
.5512-.5669	14.0-14.4	TD1400070COR01	2.76	3.55	5.44	.625" Univ.	0.79	14	CB140R02	Yes
.5709-.5866	14.5-14.9	TD1450072COR01	2.87	3.65	5.54	.625" Univ.	0.79	14.5	CB145R02	Yes
.5906-.6260	15.0-15.9	TD150007518R01	2.95	3.89	5.86	.750" Univ.	0.98	15	CB150R02	Yes
.6299-.6654	16.0-16.9	TD160008018R01	3.15	4.15	6.12	.750" Univ.	0.98	16	CB160R02	Yes
.6693-.7047	17.0-17.9	TD170008518R01	3.35	4.41	6.38	.750" Univ.	0.98	17	CB170R02	Yes
.7087-.7441	18.0-18.9	TD1800090C8R01	3.54	4.67	6.87	1.000" Univ.	1.26	18	CB180R02	Yes
.7480-.7835	19.0-19.9	TD1900095C8R01	3.74	4.92	7.12	1.000" Univ.	1.26	19	CB190R02	Yes
.7874-.8228	20.0-20.9	TD2000100C8R01	3.94	5.18	7.38	1.000" Univ.	1.26	20	CB200R02	Yes
.8268-.8622	21.0-21.9	TD2100105C8R01	4.13	5.44	7.64	1.000" Univ.	1.26	21	CB210R02	Yes
.8661-.9016	22.0-22.9	TD2200110C8R01	4.33	5.70	7.90	1.000" Univ.	1.26	22	CB220R02	Yes
.9055-.9409	23.0-23.9	TD2300115B7R01	4.53	5.96	8.32	1.250" Univ.	1.65	23	CB230R02	Yes
.9449-.9803	24.0-24.9	TD2400120B7R01	4.72	6.22	8.58	1.250" Univ.	1.65	24	CB240R02	Yes
.9843-1.0197	25.0-25.9	TD2500125B7R01	4.92	6.48	8.84	1.250" Univ.	1.65	25	CB250R02	Yes

*Do not mount a smaller drill point than the one listed with the tool.
Metric shanks available as non-stock standard.

HARDWARE		
	Clamping Key	Coolant Plug
TD0600030B9R01	KTD6.0-D9.9	DL-12
TD0650033B9R01	KTD6.0-D9.9	DL-12
TD0700035B9R01	KTD6.0-D9.9	DL-12
TD0750037B9R01	KTD6.0-D9.9	DL-12
TD0800040B9R01	KTD6.0-D9.9	DL-12
TD0850042B9R01	KTD6.0-D9.9	DL-12
TD0900045B9R01	KTD6.0-D9.9	DL-12
TD0950047B9R01	KTD6.0-D9.9	DL-12
TD1000050C0R01	KTD10.0-19.9	DL-16
TD1050052C0R01	KTD10.0-19.9	DL-16
TD1100055C0R01	KTD10.0-19.9	DL-16
TD1150057C0R01	KTD10.0-19.9	DL-16
TD1200060C0R01	KTD10.0-19.9	DL-16
TD1250062C0R01	KTD10.0-19.9	DL-16
TD1300065C0R01	KTD10.0-19.9	DL-16
TD1350067C0R01	KTD10.0-19.9	DL-16
TD1400070C0R01	KTD10.0-19.9	DL-16
TD1450072C0R01	KTD10.0-19.9	DL-16
TD150007518R01	KTD10.0-19.9	DL-20
TD160008018R01	KTD10.0-19.9	DL-20
TD170008518R01	KTD10.0-19.9	DL-20
TD1800090C8R01	KTD10.0-19.9	DL-25
TD1900095C8R01	KTD10.0-19.9	DL-25
TD2000100C8R01	KTD20.0-D26.9	DL-25
TD2100105C8R01	KTD20.0-D26.9	DL-25
TD2200110C8R01	KTD20.0-D26.9	DL-25
TD2300115B7R01	KTD20.0-D26.9	DL-32
TD2400120B7R01	KTD20.0-D26.9	DL-32
TD2500125B7R01	KTD20.0-D26.9	DL-32



GOLD TWIST SERIES TD 8:1 CYLINDRICAL SHANK (INCH)

REPLACEABLE TIPPED DRILL BODIES



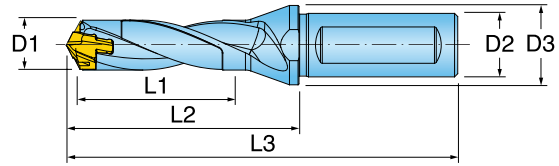
D1 Nom. Dia. inch	D1 Nom. Dia. mm	Body Number	L1 DOC	L2 Ext.	L3 Overall	D2 Shank Size/Style	Pocket Size	Chamfer Ring	Coolant Thru Point
.2756-.2913	7.0-7.4	TD0700056S4R01	2.20	2.78	4.55	.500" Cylind.	7.0	NA	Yes
.2953-.3110	7.5-7.9	TD0750060S4R01	2.28	2.94	4.71	.500" Cylind.	7.5	NA	Yes
.3150-.3307	8.0-8.4	TD0800064S4R01	2.52	3.13	4.90	.500" Cylind.	8	NA	Yes
.3346-.3504	8.5-8.9	TD0850068S4R01	2.68	3.32	5.09	.500" Cylind.	8.5	NA	Yes
.3543-.3701	9.0-9.4	TD0900072S4R01	2.83	3.46	5.23	.500" Cylind.	9	NA	Yes
.3740-.3898	9.5-9.9	TD0950076S4R01	2.99	3.65	5.42	.500" Cylind.	9.5	NA	Yes
.3937-.4094	10.0-10.4	TD1000080S6R01	3.15	3.79	5.68	.625" Cylind.	10	CB100R02	Yes
.4134-.4291	10.5-10.9	TD1050084S6R01	3.31	3.94	5.83	.625" Cylind.	10.5	CB105R02	Yes
.4331-.4488	11.0-11.4	TD1100088S6R01	3.46	4.12	6.01	.625" Cylind.	11	CB110R02	Yes
.4528-.4685	11.5-11.9	TD1150092S6R01	3.62	4.28	6.17	.625" Cylind.	11.5	CB115R02	Yes
.4724-.4882	12.0-12.4	TD1200096S6R01	3.78	4.45	6.34	.625" Cylind.	12	CB120R02	Yes
.4912-.5079	12.5-12.9	TD1250100S6R01	3.94	4.61	6.50	.625" Cylind.	12.5	CB125R02	Yes
.5118-.5276	13.0-13.4	TD1300104S6R01	4.09	4.79	6.68	.625" Cylind.	13	CB130R02	Yes
.5315-.5472	13.5-13.9	TD1350108S6R01	4.25	4.94	6.83	.625" Cylind.	13.5	CB135R02	Yes
.5512-.5669	14.0-14.4	TD1400112S6R01	4.41	5.20	7.09	.625" Cylind.	14	CB140R02	Yes
.5709-.5866	14.5-14.9	TD1450116S6R01	4.57	5.36	7.25	.625" Cylind.	14.5	CB145R02	Yes
.5906-.6260	15.0-15.9	TD1500120S7R01	4.72	5.66	7.63	.750" Cylind.	15	CB150R02	Yes
.6299-.6654	16.0-16.9	TD1600128S7R01	5.04	6.04	8.01	.750" Cylind.	16	CB160R02	Yes
.6693-.7047	17.0-17.9	TD1700136S7R01	5.35	6.41	8.38	.750" Cylind.	17	CB170R02	Yes
.7087-.7441	18.0-18.9	TD1800144S1R01	5.67	6.79	8.99	1.000" Cylind.	18	CB180R02	Yes
.7480-.7835	19.0-19.9	TD1900152S1R01	5.98	7.17	9.37	1.000" Cylind.	19	CB190R02	Yes
.7874-.8228	20.0-20.9	TD2000160S1R01	6.30	7.54	9.74	1.000" Cylind.	20	CB200R02	Yes
.8268-.8622	21.0-21.9	TD2100168S1R01	6.61	7.92	10.12	1.000" Cylind.	21	CB210R02	Yes
.8661-.9016	22.0-22.9	TD2200176S1R01	6.93	8.30	10.50	1.000" Cylind.	22	CB220R02	Yes
.9055-.9409	23.0-23.9	TD2300184S9R01	7.24	8.68	11.04	1.250" Cylind.	23	CB230R02	Yes
.9449-.9803	24.0-24.9	TD2400192S9R01	7.56	9.06	11.42	1.250" Cylind.	24	CB240R02	Yes
.9843-1.0197	25.0-25.9	TD2500200S9R01	7.87	9.43	11.79	1.250" Cylind.	25	CB250R02	Yes

*Do not mount a smaller drill point than the one listed with the tool.
Metric shanks available as non-stock standards.

HARDWARE			
	Clamping Key	Coolant Plug	
TD0700056S4R01	KTD6.0-D9.9	DL-12	
TD0750060S4R01	KTD6.0-D9.9	DL-12	
TD0800064S4R01	KTD6.0-D9.9	DL-12	
TD0850068S4R01	KTD6.0-D9.9	DL-12	
TD0900072S4R01	KTD6.0-D9.9	DL-12	
TD0950076S4R01	KTD6.0-D9.9	DL-12	
TD1000080S6R01	KTD10.0-19.9	DL-16	
TD1050084S6R01	KTD10.0-19.9	DL-16	
TD1100088S6R01	KTD10.0-19.9	DL-16	
TD1150092S6R01	KTD10.0-19.9	DL-16	
TD1200096S6R01	KTD10.0-19.9	DL-16	
TD1250100S6R01	KTD10.0-19.9	DL-16	
TD1300104S6R01	KTD10.0-19.9	DL-16	
TD1350108S6R01	KTD10.0-19.9	DL-16	
TD1400112S6R01	KTD10.0-19.9	DL-16	
TD1450116S6R01	KTD10.0-19.9	DL-16	
TD1500120S7R01	KTD10.0-19.9	DL-20	
TD1600128S7R01	KTD10.0-19.9	DL-20	
TD1700136S7R01	KTD10.0-19.9	DL-20	
TD1800144S1R01	KTD10.0-19.9	DL-25	
TD1900152S1R01	KTD10.0-19.9	DL-25	
TD2000160S1R01	KTD20.0-D26.9	DL-25	
TD2100168S1R01	KTD20.0-D26.9	DL-25	
TD2200176S1R01	KTD20.0-D26.9	DL-25	
TD2300184S9R01	KTD20.0-D26.9	DL-32	
TD2400192S9R01	KTD20.0-D26.9	DL-32	
TD2500200S9R01	KTD20.0-D26.9	DL-32	



GOLD TWIST SERIES TD 8:1 UNIVERSAL SHANK (INCH)

REPLACEABLE TIPPED DRILL BODIES



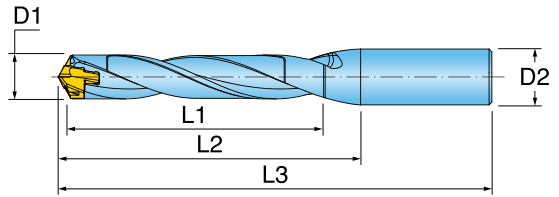
D1 Nom. Dia. inch	D1 Nom. Dia. mm	Body Number	L1 DOC	L2 Ext.	L3 Overall	D2 Shank Size/Style	D3 Flange Dia.	Pocket Size	Chamfer Ring	Coolant Thru Point
.2756-.2913	7.0-7.4	TD0700056B9R01	2.20	2.78	4.55	.500" Univ.	0.63	7.0	NA	Yes
.2958-.3110	7.5-7.9	TD0750060B9R01	2.28	2.94	4.71	.500" Univ.	0.63	7.5	NA	Yes
.3150-.3307	8.0-8.4	TD0800064B9R01	2.52	3.13	4.90	.500" Univ.	0.63	8	NA	Yes
.3346-.3504	8.5-8.9	TD0850068B9R01	2.68	3.32	5.09	.500" Univ.	0.63	8.5	NA	Yes
.3543-.3701	9.0-9.4	TD0900072B9R01	2.83	3.46	5.23	.500" Univ.	0.63	9	NA	Yes
.3740-.3898	9.5-9.9	TD0950076B9R01	2.99	3.65	5.42	.500" Univ.	0.63	9.5	NA	Yes
.3937-.4094	10.0-10.4	TD1000080COR01	3.15	3.79	5.68	.625" Univ.	0.79	10	CB100R02	Yes
.4134-.4291	10.5-10.9	TD1050084COR01	3.31	3.94	5.83	.625" Univ.	0.79	10.5	CB105R02	Yes
.4331-.4488	11.0-11.4	TD1100088COR01	3.46	4.12	6.01	.625" Univ.	0.79	11	CB110R02	Yes
.4528-.4685	11.5-11.9	TD1150092COR01	3.62	4.28	6.17	.625" Univ.	0.79	11.5	CB115R02	Yes
.4724-.4882	12.0-12.4	TD1200096COR01	3.78	4.45	6.34	.625" Univ.	0.79	12	CB120R02	Yes
.4912-.5079	12.5-12.9	TD1250100COR01	3.94	4.61	6.50	.625" Univ.	0.79	12.5	CB125R02	Yes
.5118-.5276	13.0-13.4	TD1300104COR01	4.09	4.79	6.68	.625" Univ.	0.79	13	CB130R02	Yes
.5315-.5472	13.5-13.9	TD1350108COR01	4.25	4.94	6.83	.625" Univ.	0.79	13.5	CB135R02	Yes
.5512-.5669	14.0-14.4	TD1400112COR01	4.41	5.20	7.09	.625" Univ.	0.79	14	CB140R02	Yes
.5709-.5866	14.5-14.9	TD1450116COR01	4.57	5.36	7.25	.625" Univ.	0.79	14.5	CB145R02	Yes
.5906-.6260	15.0-15.9	TD150012018R01	4.72	5.66	7.63	.750" Univ.	0.98	15	CB150R02	Yes
.6299-.6654	16.0-16.9	TD160012818R01	5.04	6.04	8.01	.750" Univ.	0.98	16	CB160R02	Yes
.6693-.7047	17.0-17.9	TD170013618R01	5.35	6.41	8.38	.750" Univ.	0.98	17	CB170R02	Yes
.7087-.7441	18.0-18.9	TD1800144C8R01	5.67	6.79	8.99	1.000" Univ.	1.26	18	CB180R02	Yes
.7480-.7835	19.0-19.9	TD1900152C8R01	5.98	7.17	9.37	1.000" Univ.	1.26	19	CB190R02	Yes
.7874-.8228	20.0-20.9	TD2000160C8R01	6.30	7.54	9.74	1.000" Univ.	1.26	20	CB200R02	Yes
.8268-.8622	21.0-21.9	TD2100168C8R01	6.61	7.92	10.12	1.000" Univ.	1.26	21	CB210R02	Yes
.8661-.9016	22.0-22.9	TD2200176C8R01	6.93	8.30	10.50	1.000" Univ.	1.26	22	CB220R02	Yes
.9055-.9409	23.0-23.9	TD2300184B7R01	7.24	8.68	11.04	1.250" Univ.	1.65	23	CB230R02	Yes
.9449-.9803	24.0-24.9	TD2400192B7R01	7.56	9.06	11.42	1.250" Univ.	1.65	24	CB240R02	Yes
.9843-1.0197	25.0-25.9	TD2500200B7R01	7.87	9.43	11.79	1.250" Univ.	1.65	25	CB250R02	Yes

*Do not mount a smaller drill point than the one listed with the tool.
Metric shanks available as non-stock standards.

HARDWARE		
	Clamping Key	Coolant Plug
TD0700056B9R01	KTD6.0-D9.9	DL-12
TD0750060B9R01	KTD6.0-D9.9	DL-12
TD0800064B9R01	KTD6.0-D9.9	DL-12
TD0850068B9R01	KTD6.0-D9.9	DL-12
TD0900072B9R01	KTD6.0-D9.9	DL-12
TD0950076B9R01	KTD6.0-D9.9	DL-12
TD1000080C0R01	KTD10.0-19.9	DL-16
TD1050084C0R01	KTD10.0-19.9	DL-16
TD1100088C0R01	KTD10.0-19.9	DL-16
TD1150092C0R01	KTD10.0-19.9	DL-16
TD1200096C0R01	KTD10.0-19.9	DL-16
TD1250100C0R01	KTD10.0-19.9	DL-16
TD1300104C0R01	KTD10.0-19.9	DL-16
TD1350108C0R01	KTD10.0-19.9	DL-16
TD1400112C0R01	KTD10.0-19.9	DL-16
TD1450116C0R01	KTD10.0-19.9	DL-16
TD150012018R01	KTD10.0-19.9	DL-20
TD160012818R01	KTD10.0-19.9	DL-20
TD170013618R01	KTD10.0-19.9	DL-20
TD1800144C8R01	KTD10.0-19.9	DL-25
TD1900152C8R01	KTD10.0-19.9	DL-25
TD2000160C8R01	KTD20.0-D26.9	DL-25
TD2100168C8R01	KTD20.0-D26.9	DL-25
TD2200176C8R01	KTD20.0-D26.9	DL-25
TD2300184B7R01	KTD20.0-D26.9	DL-32
TD2400192B7R01	KTD20.0-D26.9	DL-32
TD2500200B7R01	KTD20.0-D26.9	DL-32



GOLD TWIST SERIES TD 12:1 CYLINDRICAL SHANK (INCH)

REPLACEABLE TIPPED DRILL BODIES

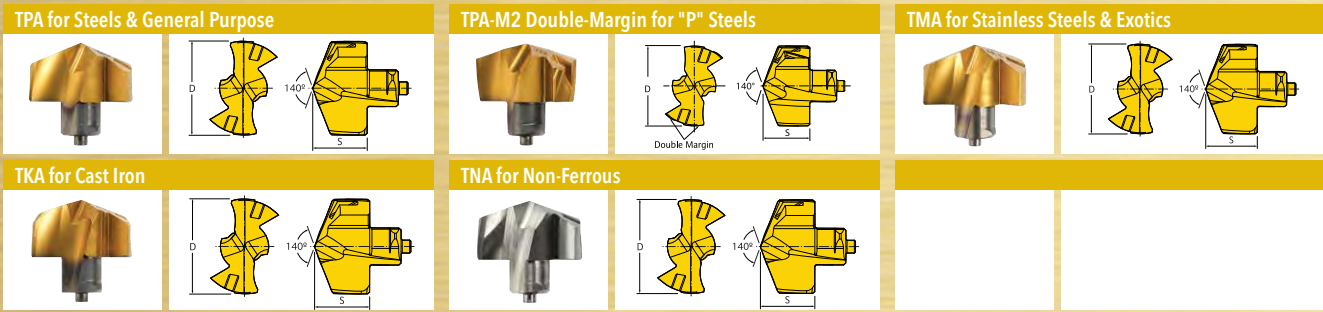


D1 Nom. Dia. inch	D1 Nom. Dia. mm	Body Number	L1 DOC	L2 Ext.	L3 Overall	D2 Shank Size/Style	Pocket Size	Chamfer Ring	Coolant Thru Point
.4724-.4882	12.0-12.4	TD1200144S6R01	5.67	6.34	8.23	.625" Cyliind.	12	CB120R02	Yes
.4912-.5079	12.5-12.9	TD1250150S6R01	5.91	6.57	8.46	.625" Cyliind.	12.5	CB125R02	Yes
.5118-.5276	13.0-13.4	TD1300156S6R01	6.14	6.81	8.70	.625" Cyliind.	13	CB130R02	Yes
.5315-.5472	13.5-13.9	TD1350162S6R01	6.38	7.05	8.94	.625" Cyliind.	13.5	CB135R02	Yes
.5512-.5669	14.0-14.4	TD1400168S6R01	6.61	7.40	9.29	.625" Cyliind.	14	CB140R02	Yes
.5709-.5866	14.5-14.9	TD1450174S6R01	6.85	7.64	9.53	.625" Cyliind.	14.5	CB145R02	Yes
.5906-.6260	15.0-15.9	TD1500180S7R01	7.09	8.27	10.24	.750" Cyliind.	15	CB150R02	Yes
.6299-.6654	16.0-16.9	TD1600192S7R01	7.56	8.82	10.79	.750" Cyliind.	16	CB160R02	Yes
.6693-.7047	17.0-17.9	TD1700204S7R01	8.03	9.37	11.34	.750" Cyliind.	17	CB170R02	Yes
.7087-.7441	18.0-18.9	TD1800216S1R01	8.50	9.92	12.13	1.000" Cyliind.	18	CB180R02	Yes
.7480-.7835	19.0-19.9	TD1900228S1R01	8.98	10.47	12.68	1.000" Cyliind.	19	CB190R02	Yes
.7874-.8228	20.0-20.9	TD2000240S1R01	9.45	11.02	13.23	1.000" Cyliind.	20	CB200R02	Yes
.8268-.8622	21.0-21.9	TD2100252S1R01	9.92	11.57	13.78	1.000" Cyliind.	21	CB210R02	Yes
.8661-.9016	22.0-22.9	TD2200264S1R01	10.39	12.13	14.33	1.000" Cyliind.	22	CB220R02	Yes
.9055-.9409	23.0-23.9	TD2300276S9R01	10.87	12.68	15.04	1.250" Cyliind.	23	CB230R02	Yes
.9449-.9803	24.0-24.9	TD2400288S9R01	11.34	13.23	15.59	1.250" Cyliind.	24	CB240R02	Yes
.9843-1.0197	25.0-25.9	TD2500300S9R01	11.81	13.78	16.14	1.250" Cyliind.	25	CB250R02	Yes

*Do not mount a smaller drill point than the one listed with the tool.
Metric shanks available as non-stock standard.

HARDWARE			
	Clamping Key	Coolant Plug	
TD1200144S6R01	KTD10.0-19.9	DL-16	
TD1250150S6R01	KTD10.0-19.9	DL-16	
TD1300156S6R01	KTD10.0-19.9	DL-16	
TD1350162S6R01	KTD10.0-19.9	DL-16	
TD1400168S6R01	KTD10.0-19.9	DL-16	
TD1450174S6R01	KTD10.0-19.9	DL-16	
TD1500180S7R01	KTD10.0-19.9	DL-20	
TD1600192S7R01	KTD10.0-19.9	DL-20	
TD1700204S7R01	KTD10.0-19.9	DL-20	
TD1800216S1R01	KTD10.0-19.9	DL-25	
TD1900228S1R01	KTD10.0-19.9	DL-25	
TD2000240S1R01	KTD20.0-D26.9	DL-25	
TD2100252S1R01	KTD20.0-D26.9	DL-25	
TD2200264S1R01	KTD20.0-D26.9	DL-25	
TD2300276S9R01	KTD20.0-D26.9	DL-25	
TD2400288S9R01	KTD20.0-D26.9	DL-25	
TD2500300S9R01	KTD20.0-D26.9	DL-25	

GOLD TWIST REPLACEABLE TIPS: 6MM-13.8MM DIA.



TPA Steels & GP	TPA-M2 "P" Steels	TMA Stainless & Exotics	TKA Cast Iron	TNA Non-Ferrous	D Diameter		S	Pocket Size
					in	mm		
TPA0600R01		TMA0600R01	TKA0600R01		6.00	0.2362	0.157	6.0
TPA0610R01		TMA0610R01	TKA0610R01		6.10	0.2402	0.157	6.0
TPA0620R01		TMA0620R01	TKA0620R01		6.20	0.2441	0.157	6.0
TPA0630R01		TMA0630R01	TKA0630R01		6.30	0.2480	0.157	6.0
				TNA0635R01	6.35	0.2500	0.157	6.0
TPA0640R01		TMA0640R01	TKA0640R01		6.40	0.2520	0.157	6.0
TPA0650R01		TMA0650R01	TKA0650R01		6.50	0.2559	0.169	6.5
TPA0660R01		TMA0660R01	TKA0660R01		6.60	0.2598	0.169	6.5
TPA0670R01		TMA0670R01	TKA0670R01		6.70	0.2638	0.169	6.5
TPA0680R01		TMA0680R01	TKA0680R01		6.80	0.2677	0.169	6.5
TPA0690R01		TMA0690R01	TKA0690R01		6.90	0.2717	0.169	6.5
TPA0700R01		TMA0700R01	TKA0700R01		7.00	0.2756	0.181	7.0
TPA0710R01		TMA0710R01	TKA0710R01		7.10	0.2795	0.181	7.0
				TNA0714R01	7.14	0.2812	0.181	7.0
TPA0720R01		TMA0720R01	TKA0720R01		7.20	0.2835	0.181	7.0
TPA0730R01		TMA0730R01	TKA0730R01		7.30	0.2874	0.181	7.0
TPA0740R01		TMA0740R01	TKA0740R01		7.40	0.2913	0.181	7.0
TPA0750R01		TMA0750R01	TKA0750R01		7.50	0.2953	0.181	7.5
TPA0760R01		TMA0760R01	TKA0760R01		7.60	0.2992	0.181	7.5
TPA0770R01		TMA0770R01	TKA0770R01		7.70	0.3031	0.181	7.5
TPA0780R01		TMA0780R01	TKA0780R01		7.80	0.3071	0.181	7.5
TPA0790R01		TMA0790R01	TKA0790R01		7.90	0.3110	0.181	7.5
				TNA0794R01	7.94	0.3125	0.181	7.5
TPA0800R01	TPA0800R01-M2	TMA0800R01	TKA0800R01	TNA0800R01	8.00	0.3150	0.213	8.0
TPA0810R01		TMA0810R01	TKA0810R01		8.10	0.3189	0.213	8.0
TPA0820R01		TMA0820R01	TKA0820R01		8.20	0.3228	0.213	8.0
TPA0830R01		TMA0830R01	TKA0830R01		8.30	0.3268	0.213	8.0
TPA0840R01		TMA0840R01	TKA0840R01		8.40	0.3307	0.213	8.0
TPA0850R01	TPA0850R01-M2	TMA0850R01	TKA0850R01	TNA0850R01	8.50	0.3346	0.213	8.5
TPA0860R01		TMA0860R01	TKA0860R01		8.60	0.3386	0.213	8.5
TPA0870R01		TMA0870R01	TKA0870R01	TNA0870R01	8.70	0.3425	0.213	8.5
	TPA0873R01-M2			TNA0873R01	8.73	0.3437	0.213	8.5
TPA0880R01		TMA0880R01	TKA0880R01		8.80	0.3465	0.213	8.5
TPA0890R01		TMA0890R01	TKA0890R01		8.90	0.3504	0.213	8.5
TPA0900R01	TPA0900R01-M2	TMA0900R01	TKA0900R01	TNA0900R01	9.00	0.3543	0.228	9.0
TPA0910R01		TMA0910R01	TKA0910R01		9.10	0.3583	0.228	9.0
TPA0920R01		TMA0920R01	TKA0920R01		9.20	0.3622	0.228	9.0
TPA0930R01		TMA0930R01	TKA0930R01		9.30	0.3661	0.228	9.0
TPA0940R01		TMA0940R01	TKA0940R01	TNA0940R01	9.40	0.3701	0.228	9.0

*** Grade IN2505 for ISO P, P-M2, M and K Geometries/Materials

*** Grade IN05S for ISO N Geometry/Materials

● = P ● = M ● = K ● = N ● = S ○ = H

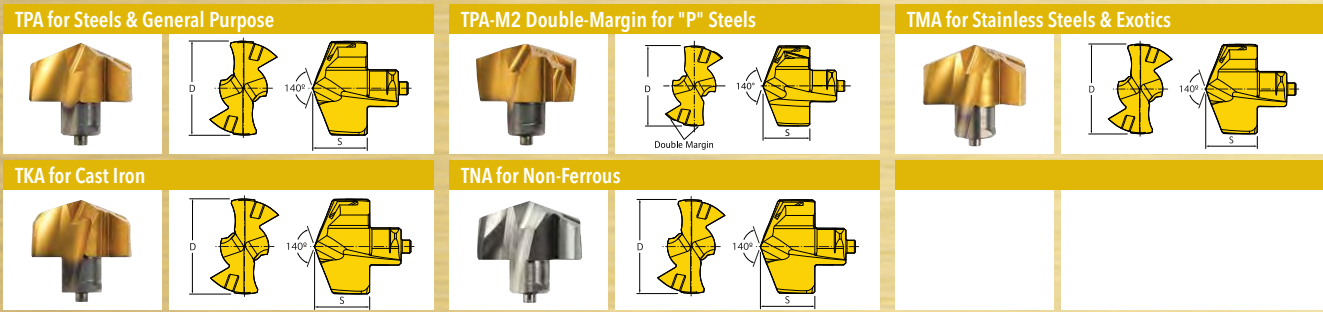
TPA Steels & GP	TPA-M2 "P" Steels	TMA Stainless & Exotics	TKA Cast Iron	TNA Non-Ferrous	D Diameter		S	Pocket Size
					in	mm		
TPA0950R01	TPA0950R01-M2	TMA0950R01	TKA0950R01	TNA0950R01	9.50	0.3740	0.228	9.5
				TNA0953R01	9.53	0.3750	0.228	9.5
TPA0960R01		TMA0960R01	TKA0960R01		9.60	0.3780	0.228	9.5
TPA0970R01		TMA0970R01	TKA0970R01		9.70	0.3819	0.228	9.5
TPA0980R01		TMA0980R01	TKA0980R01		9.80	0.3858	0.228	9.5
TPA0990R01		TMA0990R01	TKA0990R01	TNA0990R01	9.90	0.3898	0.228	9.5
TPA1000R01	TPA1000R01-M2	TMA1000R01	TKA1000R01	TNA1000R01	10.00	0.3937	0.244	10.0
TPA1010R01		TMA1010R01	TKA1010R01		10.10	0.3976	0.244	10.0
TPA1020R01		TMA1020R01	TKA1020R01	TNA1020R01	10.20	0.4016	0.244	10.0
TPA1030R01		TMA1030R01	TKA1030R01		10.30	0.4055	0.244	10.0
	TPA1032R01-M2			TNA1032R01	10.32	0.4062	0.244	10.0
TPA1040R01		TMA1040R01	TKA1040R01		10.40	0.4094	0.244	10.0
TPA1050R01	TPA1050R01-M2	TMA1050R01	TKA1050R01	TNA1050R01	10.50	0.4134	0.244	10.5
TPA1060R01		TMA1060R01	TKA1060R01		10.60	0.4173	0.244	10.5
TPA1070R01		TMA1070R01	TKA1070R01		10.70	0.4213	0.244	10.5
TPA1080R01		TMA1080R01	TKA1080R01	TNA1080R01	10.80	0.4252	0.244	10.5
TPA1090R01		TMA1090R01	TKA1090R01		10.90	0.4291	0.244	10.5
TPA1100R01	TPA1100R01-M2	TMA1100R01	TKA1100R01	TNA1100R01	11.00	0.4331	0.260	11.0
TPA1110R01		TMA1110R01	TKA1110R01		11.10	0.4370	0.260	11.0
	TPA1111R01-M2			TNA1111R01	11.11	0.4375	0.260	11.0
TPA1120R01		TMA1120R01	TKA1120R01		11.20	0.4409	0.260	11.0
TPA1130R01		TMA1130R01	TKA1130R01		11.30	0.4449	0.260	11.0
TPA1140R01		TMA1140R01	TKA1140R01		11.40	0.4488	0.260	11.0
TPA1150R01	TPA1150R01-M2	TMA1150R01	TKA1150R01	TNA1150R01	11.50	0.4528	0.260	11.5
TPA1160R01		TMA1160R01	TKA1160R01		11.60	0.4567	0.260	11.5
TPA1170R01		TMA1170R01	TKA1170R01		11.70	0.4606	0.260	11.5
TPA1180R01		TMA1180R01	TKA1180R01		11.80	0.4646	0.260	11.5
TPA1190R01		TMA1190R01	TKA1190R01	TNA1190R01	11.90	0.4685	0.260	11.5
	TPA1191R01-M2				11.91	0.4689	0.260	11.5
TPA1200R01	TPA1200R01-M2	TMA1200R01	TKA1200R01	TNA1200R01	12.00	0.4724	0.275	12.0
TPA1210R01		TMA1210R01	TKA1210R01		12.10	0.4764	0.275	12.0
TPA1220R01		TMA1220R01	TKA1220R01		12.20	0.4803	0.275	12.0
TPA1230R01		TMA1230R01	TKA1230R01	TNA1230R01	12.30	0.4843	0.275	12.0
TPA1240R01		TMA1240R01	TKA1240R01		12.40	0.4882	0.275	12.0
TPA1250R01	TPA1250R01-M2	TMA1250R01	TKA1250R01	TNA1250R01	12.50	0.4921	0.275	12.5
TPA1260R01		TMA1260R01	TKA1260R01		12.60	0.4961	0.275	12.5
TPA1270R01	TPA1270R01-M2	TMA1270R01	TKA1270R01	TNA1270R01	12.70	0.5000	0.275	12.5
TPA1280R01		TMA1280R01	TKA1280R01		12.80	0.5039	0.275	12.5
TPA1290R01	TPA1290R01-M2	TMA1290R01	TKA1290R01		12.90	0.5079	0.275	12.5
TPA1300R01	TPA1300R01-M2	TMA1300R01	TKA1300R01	TNA1300R01	13.00	0.5118	0.299	13.0
TPA1310R01		TMA1310R01	TKA1310R01		13.10	0.5157	0.299	13.0
TPA1320R01		TMA1320R01	TKA1320R01		13.20	0.5197	0.299	13.0
TPA1330R01		TMA1330R01	TKA1330R01		13.30	0.5236	0.299	13.0
TPA1340R01		TMA1340R01	TKA1340R01		13.40	0.5276	0.299	13.0
TPA1350R01	TPA1350R01-M2	TMA1350R01	TKA1350R01	TNA1350R01	13.50	0.5315	0.299	13.5
TPA1360R01		TMA1360R01	TKA1360R01		13.60	0.5354	0.299	13.5
TPA1370R01		TMA1370R01	TKA1370R01	TNA1370R01	13.70	0.5394	0.299	13.5
TPA1380R01		TMA1380R01	TKA1380R01		13.80	0.5433	0.299	13.5

*** Grade IN2505 for ISO P, P-M2, M and K Geometries/Materials

*** Grade IN05S for ISO N Geometry/Materials

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD TWIST REPLACEABLE TIPS (CONT.): 13.9MM-21.43MM DIA.



TPA Steels & GP	TPA-M2 "P" Steels	TMA Stainless & Exotics	TKA Cast Iron	TNA Non-Ferrous	D Diameter		S	Pocket Size
					in	mm		
TPA1390R01		TMA1390R01	TKA1390R01		13.90	0.5472	0.299	13.5
TPA1400R01	TPA1400R01-M2	TMA1400R01	TKA1400R01	TNA1400R01	14.00	0.5512	0.321	14.0
TPA1410R01		TMA1410R01	TKA1410R01		14.10	0.5551	0.321	14.0
TPA1420R01		TMA1420R01	TKA1420R01		14.20	0.5591	0.321	14.0
	TPA1429R01-M2			TNA1429R01	14.29	0.5625	0.321	14.0
TPA1430R01		TMA1430R01	TKA1430R01		14.30	0.5630	0.321	14.0
TPA1440R01		TMA1440R01	TKA1440R01		14.40	0.5669	0.321	14.0
TPA1450R01	TPA1450R01-M2	TMA1450R01	TKA1450R01	TNA1450R01	14.50	0.5709	0.321	14.5
TPA1460R01		TMA1460R01	TKA1460R01		14.60	0.5748	0.321	14.5
TPA1470R01		TMA1470R01	TKA1470R01		14.70	0.5787	0.321	14.5
TPA1480R01		TMA1480R01	TKA1480R01		14.80	0.5827	0.321	14.5
TPA1490R01		TMA1490R01	TKA1490R01		14.90	0.5866	0.321	14.5
TPA1500R01	TPA1500R01-M2	TMA1500R01	TKA1500R01	TNA1500R01	15.00	0.5906	0.344	15.0
				TNA1508R01	15.08	0.5937	0.344	15.0
TPA1510R01		TMA1510R01	TKA1510R01		15.10	0.5945	0.344	15.0
TPA1520R01		TMA1520R01	TKA1520R01		15.20	0.5984	0.344	15.0
TPA1530R01		TMA1530R01	TKA1530R01		15.30	0.6024	0.344	15.0
TPA1540R01		TMA1540R01	TKA1540R01		15.40	0.6063	0.344	15.0
TPA1550R01	TPA1550R01-M2	TMA1550R01	TKA1550R01		15.50	0.6102	0.344	15.0
TPA1560R01		TMA1560R01	TKA1560R01		15.60	0.6142	0.344	15.0
TPA1570R01		TMA1570R01	TKA1570R01		15.70	0.6181	0.344	15.0
TPA1580R01		TMA1580R01	TKA1580R01		15.80	0.6220	0.344	15.0
	TPA1588R01-M2			TNA1588R01	15.88	0.6250	0.344	15.0
TPA1590R01	TPA1590R01-M2	TMA1590R01	TKA1590R01		15.90	0.6260	0.344	15.0
TPA1600R01	TPA1600R01-M2	TMA1600R01	TKA1600R01	TNA1600R01	16.00	0.6299	0.366	16.0
TPA1610R01		TMA1610R01	TKA1610R01		16.10	0.6339	0.366	16.0
TPA1620R01		TMA1620R01	TKA1620R01		16.20	0.6378	0.366	16.0
TPA1630R01		TMA1630R01	TKA1630R01		16.30	0.6417	0.366	16.0
TPA1640R01		TMA1640R01	TKA1640R01		16.40	0.6457	0.366	16.0
TPA1650R01	TPA1650R01-M2	TMA1650R01	TKA1650R01	TNA1650R01	16.50	0.6496	0.366	16.0
TPA1660R01		TMA1660R01	TKA1660R01		16.60	0.6535	0.366	16.0
				TNA1667R01	16.67	0.6562	0.366	16.0
TPA1670R01	TPA1670R01-M2	TMA1670R01	TKA1670R01	TNA1670R01	16.70	0.6575	0.366	16.0
TPA1680R01		TMA1680R01	TKA1680R01		16.80	0.6614	0.366	16.0
TPA1690R01		TMA1690R01	TKA1690R01		16.90	0.6654	0.366	16.0
TPA1700R01	TPA1700R01-M2	TMA1700R01	TKA1700R01	TNA1700R01	17.00	0.6693	0.390	17.0
TPA1710R01		TMA1710R01	TKA1710R01		17.10	0.6732	0.390	17.0
TPA1720R01		TMA1720R01	TKA1720R01		17.20	0.6772	0.390	17.0
TPA1730R01		TMA1730R01	TKA1730R01		17.30	0.6811	0.390	17.0

*** Grade IN2505 for ISO P, P-M2, M and K Geometries/Materials

*** Grade IN055 for ISO N Geometry/Materials

● = P ● = M ● = K ● = N ● = S ○ = H

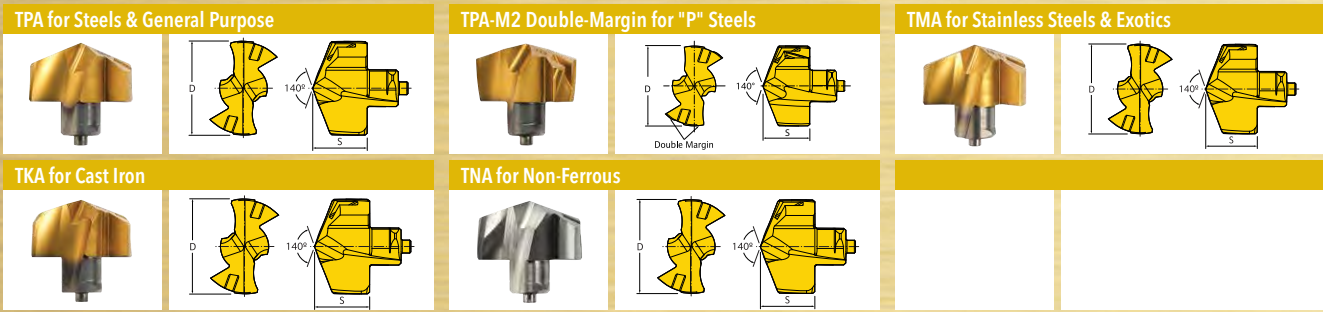
TPA Steels & GP	TPA-M2 "P" Steels	TMA Stainless & Exotics	TKA Cast Iron	TNA Non-Ferrous	D Diameter		S	Pocket Size
					in	mm		
TPA1740R01		TMA1740R01	TKA1740R01		17.40	0.6850	0.390	17.0
				TNA1746R01	17.46	0.6875	0.390	17.0
TPA1750R01	TPA1750R01-M2	TMA1750R01	TKA1750R01	TNA1750R01	17.50	0.6890	0.390	17.0
TPA1760R01		TMA1760R01	TKA1760R01		17.60	0.6929	0.390	17.0
TPA1770R01		TMA1770R01	TKA1770R01		17.70	0.6968	0.390	17.0
TPA1780R01		TMA1780R01	TKA1780R01		17.80	0.7008	0.390	17.0
TPA1790R01		TMA1790R01	TKA1790R01		17.90	0.7047	0.390	17.0
TPA1800R01	TPA1800R01-M2	TMA1800R01	TKA1800R01	TKA1800R01	18.00	0.7087	0.413	18.0
TPA1810R01		TMA1810R01	TKA1810R01		18.10	0.7126	0.413	18.0
TPA1820R01		TMA1820R01	TKA1820R01		18.20	0.7165	0.413	18.0
				TNA1826R01	18.26	0.7188	0.413	18.0
TPA1830R01		TMA1830R01	TKA1830R01		18.30	0.7205	0.413	18.0
TPA1840R01		TMA1840R01	TKA1840R01		18.40	0.7244	0.413	18.0
TPA1850R01	TPA1850R01-M2	TMA1850R01	TKA1850R01	TNA1850R01	18.50	0.7283	0.413	18.0
TPA1860R01		TMA1860R01	TKA1860R01		18.60	0.7323	0.413	18.0
TPA1870R01		TMA1870R01	TKA1870R01		18.70	0.7362	0.413	18.0
TPA1880R01		TMA1880R01	TKA1880R01		18.80	0.7402	0.413	18.0
TPA1890R01		TMA1890R01	TKA1890R01		18.90	0.7441	0.413	18.0
TPA1900R01	TPA1900R01-M2	TMA1900R01	TKA1900R01	TNA1900R01	19.00	0.7480	0.433	19.0
TPA1905R01	TNA1905R01-M2	TMA1905R01	TKA1905R01	TNA1905R01	19.05	0.7500	0.433	19.0
TPA1910R01		TMA1910R01	TKA1910R01		19.10	0.7520	0.433	19.0
TPA1920R01		TMA1920R01	TKA1920R01		19.20	0.7559	0.433	19.0
	TPA1926R01-M2				19.26	0.7559	0.433	19.0
TPA1930R01	TPA1930R01-M2	TMA1930R01	TKA1930R01		19.30	0.7598	0.433	19.0
TPA1940R01		TMA1940R01	TKA1940R01		19.40	0.7638	0.433	19.0
TPA1950R01	TPA1950R01-M2	TMA1950R01	TKA1950R01	TNA1950R01	19.50	0.7677	0.433	19.0
TPA1960R01		TMA1960R01	TKA1960R01		19.60	0.7717	0.433	19.0
TPA1970R01		TMA1970R01	TKA1970R01		19.70	0.7756	0.433	19.0
TPA1980R01		TMA1980R01	TKA1980R01		19.80	0.7795	0.433	19.0
				TNA1984R01	19.84	0.7795	0.433	19.0
TPA1990R01		TMA1990R01	TKA1990R01		19.90	0.7835	0.433	19.0
TPA2000R01		TMA2000R01	TKA2000R01	TNA2000R01	20.00	0.7874	0.344	20.0
TPA2010R01		TMA2010R01	TKA2010R01		20.10	0.7913	0.344	20.0
TPA2020R01		TMA2020R01	TKA2020R01		20.20	0.7953	0.344	20.0
TPA2030R01		TMA2030R01	TKA2030R01		20.30	0.7992	0.344	20.0
TPA2040R01		TMA2040R01	TKA2040R01		20.40	0.8031	0.344	20.0
TPA2050R01		TMA2050R01	TKA2050R01	TNA2050R01	20.50	0.8071	0.344	20.0
TPA2060R01		TMA2060R01	TKA2060R01		20.60	0.8110	0.344	20.0
				TNA2064R01	20.64	0.8125	0.344	20.0
TPA2070R01		TMA2070R01	TKA2070R01		20.70	0.8150	0.344	20.0
TPA2080R01		TMA2080R01	TKA2080R01		20.80	0.8189	0.344	20.0
TPA2090R01		TMA2090R01	TKA2090R01		20.90	0.8228	0.344	20.0
TPA2100R01		TMA2100R01	TKA2100R01	TNA2100R01	21.00	0.8268	0.366	21.0
TPA2110R01		TMA2110R01	TKA2110R01		21.10	0.8307	0.366	21.0
TPA2120R01		TMA2120R01	TKA2120R01		21.20	0.8346	0.366	21.0
TPA2130R01		TMA2130R01	TKA2130R01		21.30	0.8386	0.366	21.0
TPA2140R01		TMA2140R01	TKA2140R01		21.40	0.8425	0.366	21.0
				TNA2143R01	21.43	0.8437	0.366	21.0

*** Grade IN2505 for ISO P, P-M2, M and K Geometries/Materials

*** Grade IN05S for ISO N Geometry/Materials

● = P ● = M ● = K ● = N ● = S ○ = H

GOLDOTWIST REPLACEABLE TIPS (CONT.): 21.5MM-25.9MM DIA.



TPA Steels & GP	TPA-M2 "P" Steels	TMA Stainless & Exotics	TKA Cast Iron	TNA Non-Ferrous	D Diameter		S	Pocket Size
					in	mm		
TPA2150R01		TMA2150R01	TKA2150R01		21.50	0.8465	0.366	21.0
TPA2160R01		TMA2160R01	TKA2160R01		21.60	0.8504	0.366	21.0
TPA2170R01		TMA2170R01	TKA2170R01		21.70	0.8543	0.366	21.0
TPA2180R01		TMA2180R01	TKA2180R01		21.80	0.8583	0.366	21.0
TPA2190R01		TMA2190R01	TKA2190R01		21.90	0.8622	0.366	21.0
TPA2200R01		TMA2200R01	TKA2200R01	TNA2200R01	22.00	0.8661	0.390	22.0
TPA2210R01		TMA2210R01	TKA2210R01		22.10	0.8701	0.390	22.0
TPA2220R01		TMA2220R01	TKA2220R01		22.20	0.8740	0.390	22.0
TPA2222R01		TMA2222R01	TKA2222R01	TNA2222R01	22.22	0.8750	0.390	22.0
TPA2230R01		TMA2230R01	TKA2230R01		22.30	0.8780	0.390	22.0
TPA2240R01		TMA2240R01	TKA2240R01		22.40	0.8819	0.390	22.0
TPA2250R01		TMA2250R01	TKA2250R01		22.50	0.8858	0.390	22.0
TPA2260R01		TMA2260R01	TKA2260R01		22.60	0.8898	0.390	22.0
TPA2270R01		TMA2270R01	TKA2270R01		22.70	0.8937	0.390	22.0
TPA2280R01		TMA2280R01	TKA2280R01		22.80	0.8976	0.390	22.0
TPA2290R01		TMA2290R01	TKA2290R01		22.90	0.9016	0.390	22.0
TPA2300R01		TMA2300R01	TKA2300R01	TNA2300R01	23.00	0.9055	0.413	23.0
TPA2310R01		TMA2310R01	TKA2310R01		23.10	0.9094	0.413	23.0
TPA2320R01		TMA2320R01	TKA2320R01		23.20	0.9134	0.413	23.0
TPA2330R01		TMA2330R01	TKA2330R01		23.30	0.9173	0.413	23.0
TPA2340R01		TMA2340R01	TKA2340R01		23.40	0.9213	0.413	23.0
TPA2350R01		TMA2350R01	TKA2350R01		23.50	0.9252	0.413	23.0
TPA2360R01		TMA2360R01	TKA2360R01		23.60	0.9291	0.413	23.0
TPA2370R01		TMA2370R01	TKA2370R01		23.70	0.9331	0.413	23.0
TPA2380R01		TMA2380R01	TKA2380R01	TNA2380R01	23.80	0.9370	0.413	23.0
TPA2390R01		TMA2390R01	TKA2390R01		23.90	0.9409	0.413	23.0
TPA2400R01		TMA2400R01	TKA2400R01	TNA2400R01	24.00	0.9449	0.433	24.0
TPA2410R01		TMA2410R01	TKA2410R01		24.10	0.9488	0.433	24.0
TPA2420R01		TMA2420R01	TKA2420R01		24.20	0.9528	0.433	24.0
TPA2430R01		TMA2430R01	TKA2430R01		24.30	0.9567	0.433	24.0
TPA2440R01		TMA2440R01	TKA2440R01		24.40	0.9606	0.433	24.0
TPA2450R01		TMA2450R01	TKA2450R01	TNA2450R01	24.50	0.9646	0.433	24.0
TPA2460R01		TMA2460R01	TKA2460R01	TNA2460R01	24.60	0.9685	0.433	24.0
TPA2470R01		TMA2470R01	TKA2470R01		24.70	0.9724	0.433	24.0
TPA2480R01		TMA2480R01	TKA2480R01		24.80	0.9764	0.433	24.0
TPA2490R01		TMA2490R01	TKA2490R01		24.90	0.9803	0.433	24.0
TPA2500R01		TMA2500R01	TKA2500R01	TNA2500R01	25.00	0.9843	0.433	25.0
TPA2510R01		TMA2510R01	TKA2510R01		25.10	0.9882	0.433	25.0
TPA2520R01		TMA2520R01	TKA2520R01		25.20	0.9921	0.433	25.0

*** Grade IN2505 for ISO P, P-M2, M and K Geometries/Materials

*** Grade IN05S for ISO N Geometry/Materials

● = P ● = M ● = K ● = N ● = S ○ = H

TPA Steels & GP	TPA-M2 "P" Steels	TMA Stainless & Exotics	TKA Cast Iron	TNA Non-Ferrous	D Diameter		S	Pocket Size
					in	mm		
TPA2530R01		TMA2530R01	TKA2530R01		25.30	0.9961	0.433	25.0
TPA2540R01		TMA2540R01	TKA2540R01	IN2540R01	25.40	1.0000	0.433	25.0
TPA2550R01		TMA2550R01	TKA2550R01		25.50	1.0039	0.433	25.0
TPA2560R01		TMA2560R01	TKA2560R01		25.60	1.0079	0.433	25.0
TPA2570R01		TMA2570R01	TKA2570R01		25.70	1.0118	0.433	25.0
TPA2580R01		TMA2580R01	TKA2580R01		25.80	1.0157	0.433	25.0
TPA2590R01		TMA2590R01	TKA2590R01		25.90	1.0197	0.433	25.0

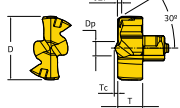
*** Grade IN2505 for ISO P, P-M2, M and K Geometries/Materials

*** Grade IN05S for ISO N Geometry/Materials

● = P ● = M ● = K ● = N ● = S ● = H

GOLDOTWIST REPLACEABLE TIPS: FLAT BOTTOM

TPF Flat Bottom for Steel & General Purpose



TPF Steel & GP	D Diameter		T	Tc	Dp Point Dia.	Pocket Size
	in	mm				
TPF0794R01	7.94	0.3125	0.157	0.015	0.091	7.5
TPF0800R01	8.00	0.3150	0.157	0.015	0.091	8.0
TPF0850R01	8.50	0.3346	0.157	0.015	0.091	8.5
TPF0900R01	9.00	0.3543	0.165	0.016	0.090	9.0
TPF0930R01	9.30	0.3661	0.165	0.016	0.090	9.0
TPF0950R01	9.50	0.3740	0.165	0.016	0.090	9.5
TPF1000R01	10.00	0.3937	0.173	0.018	0.096	10.0
TPF1020R01	10.20	0.4016	0.173	0.018	0.096	10.0
TPF1050R01	10.50	0.4134	0.173	0.018	0.096	10.5
TPF1070R01	10.70	0.4213	0.173	0.018	0.096	10.5
TPF1100R01	11.00	0.4331	0.177	0.021	0.122	11.0
TPF1110R01	11.10	0.4370	0.177	0.021	0.122	11.0
TPF1150R01	11.50	0.4528	0.177	0.021	0.122	11.5
TPF1200R01	12.00	0.4724	0.189	0.022	0.116	12.0
TPF1230R01	12.30	0.4843	0.189	0.022	0.116	12.0
TPF1250R01	12.50	0.4921	0.189	0.022	0.116	12.5
TPF1270R01	12.70	0.5000	0.189	0.022	0.116	12.5
TPF1300R01	13.00	0.5118	0.201	0.023	0.120	13.0
TPF1350R01	13.50	0.5315	0.201	0.023	0.120	13.5
TPF1400R01	14.00	0.5512	0.217	0.024	0.130	14.0
TPF1429R01	14.29	0.5620	0.217	0.024	0.130	14.0
TPF1450R01	14.50	0.5709	0.217	0.024	0.130	14.5
TPF1500R01	15.00	0.5906	0.233	0.026	0.139	15.0
TPF1550R01	15.50	0.6102	0.233	0.026	0.139	15.0
TPF1588R01	15.88	0.6250	0.233	0.026	0.139	15.0
TPF1600R01	16.00	0.6299	0.248	0.027	0.147	16.0
TPF1650R01	16.50	0.6496	0.248	0.027	0.147	16.0
TPF1670R01	16.70	0.6575	0.248	0.027	0.147	16.0
TPF1700R01	17.00	0.6693	0.260	0.028	0.148	17.0
TPF1750R01	17.50	0.6890	0.260	0.028	0.148	17.0
TPF1800R01	18.00	0.7087	0.271	0.028	0.151	18.0
TPF1830R01	18.30	0.7205	0.271	0.028	0.151	18.0
TPF1850R01	18.50	0.7283	0.271	0.028	0.151	18.0
TPF1900R01	19.00	0.7480	0.283	0.029	0.152	19.0
TPF1905R01	19.05	0.7500	0.283	0.029	0.152	19.0
TPF1930R01	19.30	0.7598	0.283	0.029	0.152	19.0
TPF1950R01	19.50	0.7677	0.283	0.029	0.152	19.0
TPF2000R01	20.00	0.7874	0.323	0.042	0.266	20.0
TPF2050R01	20.50	0.8071	0.323	0.042	0.266	20.0
TPF2060R01	20.60	0.8110	0.323	0.042	0.266	20.0
TPF2100R01	21.00	0.8268	0.339	0.043	0.276	21.0
TPF2150R01	21.50	0.8465	0.339	0.043	0.276	21.0
TPF2200R01	22.00	0.8661	0.350	0.044	0.292	22.0
TPF2222R01	22.22	0.8750	0.350	0.044	0.292	22.0

*** All FlatBottom Tips Available in Grade IN2505

● = P ○ = M ● = K ● = N ● = S ○ = H

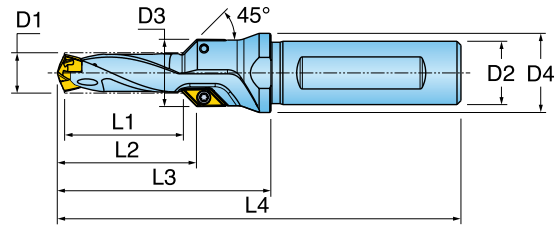
TPA Steels & GP	TPA-M2 "P" Steels	TMA Stainless & Exotics	TKA Cast Iron	TNA Non-Ferrous	D Diameter		S	Pocket Size
					in	mm		
TPF2250R01	22.50	0.8858	0.350	0.044	0.292		22.0	
TPF2300R01	23.00	0.9055	0.366	0.045	0.299		23.0	
TPF2350R01	23.50	0.9252	0.366	0.045	0.299		23.0	
TPF2381R01	23.81	0.9375	0.366	0.045	0.299		23.0	
TFP2400R01	24.00	0.9449	0.382	0.046	0.320		24.0	
TPF2450R01	24.50	0.9646	0.382	0.046	0.320		24.0	
TPF2500R01	25.00	0.9843	0.398	0.047	0.321		25.0	
TPF2540R01	25.40	1.0000	0.398	0.047	0.321		25.0	
TPF2550R01	25.50	1.0039	0.398	0.047	0.321		25.0	
TPF2570R01	25.70	1.0118	0.398	0.047	0.321		25.0	

*** All FlatBottom Tips Available in Grade IN2505




● = P ● = M ● = K ● = N ● = S ● = H

GOLD TWIST SERIES TC TAP DRILL/CHAMFER BODIES INCH SHANK

TAP DRILL/CHAMFER REPLACEABLE TIPPED BODIES

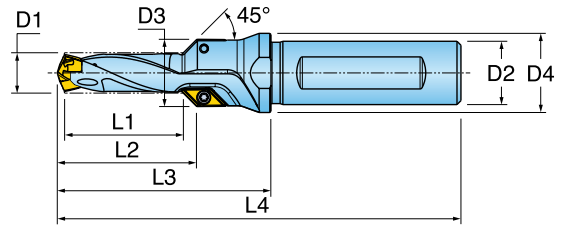


Body Number	Thread Size	D1 Nominal Point Size (inch, mm)	D1 Point Range	L1 Full Dia. to Chamfer	L2 Full Dia. to Top of Chamfer	L3 Ext.	L4 OAL	D2 Shank Dia. (mm, inch)	D3 Chamfer Dia.	D4 Flange Dia.	Pocket Size
TC0790025B9R01	3/8 UNC	0.311", 7.90mm	.2953-.3110	1.000	1.180	1.970	3.74	12.00mm, 0.472"	0.590	0.63	7.5
TC0850025B9R01	3/8 UNF	0.335", 8.50mm	.3346-.3504	1.000	1.180	2.010	3.78	12.70mm, 0.500"	0.610	0.63	8.5
TC0940026B9R01	7/16 UNC	0.370", 9.40mm	.3543-.3701	1.059	1.240	2.130	3.90	12.70mm, 0.500"	0.650	0.63	9
TC0990026B9R01	7/16 UNF	0.390", 9.90mm	.3740-.3898	1.059	1.240	2.130	3.90	12.70mm, 0.500"	0.669	0.63	9.5
TC1080026C0R01	1/2 UNC	0.425", 10.80mm	.4134-.4291	1.059	1.240	2.170	4.06	15.88mm, 0.625"	0.709	0.79	10.5
TC1150026C0R01	1/2 UNF	0.453", 11.50mm	.4528-.4685	1.059	1.240	2.200	4.09	15.88mm, 0.625"	0.728	0.79	11.5
TC1230026C0R01	9/16 UNC	0.484", 12.30mm	.4724-.4882	1.059	1.240	2.240	4.13	15.88mm, 0.625"	0.768	0.79	12
TC1300026C0R01	9/16 UNF	0.512", 13.00mm	.5118-.5276	1.059	1.240	2.280	4.17	15.88mm, 0.625"	0.787	0.79	13
TC137003018R01	5/8 UNC	0.539", 13.70mm	.5315-.5472	1.201	1.380	2.400	4.37	19.05mm, 0.750"	0.807	0.98	13.5
TC146003018R01	5/8 UNF	0.575", 14.60mm	.5709-.5866	1.201	1.380	2.440	4.41	19.05mm, 0.750"	0.827	0.98	14.5
TC167003518R01	3/4 UNC	0.658", 16.70mm	.6299-.6654	1.402	1.580	2.760	4.73	19.05mm, 0.750"	0.925	0.98	16
TC175003518R01	3/4 UNF	0.689", 17.50mm	.6693-.7047	1.402	1.580	2.830	4.80	19.05mm, 0.750"	0.965	0.98	17
TC1950041C8R01	7/8 UNC	0.768", 19.50mm	.7480-.7835	1.650	1.830	3.150	5.35	25.40mm, 1.000"	1.043	1.26	19
TC2050041C8R01	7/8 UNF	0.807", 20.50mm	.7874-.8228	1.650	1.830	3.230	5.43	25.40mm, 1.000"	1.083	1.26	20




HARDWARE	 Screw	 Torx Key	 Clamping Key	
TC0790025B9R01	SM22-046-00	T7	KTD6.0-D9.9	
TC0850025B9R01	SM22-046-00	T7	KTD6.0-D9.9	
TC0940026B9R01	SM22-046-00	T7	KTD6.0-D9.9	
TC0990026B9R01	SM22-046-00	T7	KTD6.0-D9.9	
TC1080026C0R01	SM22-046-00	T7	KTD10.0-19.9	
TC1150026C0R01	SM22-046-00	T7	KTD10.0-19.9	
TC1230026C0R01	SM22-046-00	T7	KTD10.0-19.9	
TC1300026C0R01	SM22-046-00	T7	KTD10.0-19.9	
TC137003018R01	SM22-046-00	T7	KTD10.0-19.9	
TC146003018R01	SM22-046-00	T7	KTD10.0-19.9	
TC167003518R01	SM22-046-00	T7	KTD10.0-19.9	
TC175003518R01	SM22-046-00	T7	KTD10.0-19.9	
TC1950041C8R01	SM22-046-00	T7	KTD10.0-19.9	
TC2050041C8R01	SM22-046-00	T7	KTD20.0-D26.9	

GOLD TWIST SERIES TC TAP DRILL/CHAMFER BODIES METRIC SHANK

TAP DRILL/CHAMFER REPLACEABLE TIPPED BODIES



Body Number	Thread Size	D1 Nominal Point Size (inch, mm)	D1 Point Range	L1 Full Dia. to Chamfer	L2 Full Dia. to Top of Chamfer	L3 Ext.	L4 OAL	D2 Shank Dia. (mm, inch)	D3 Chamfer Dia.	D4 Flange Dia.	Pocket Size
TC0680021JCR01	M08	0.268", 6.80mm	.2560-.2717	0.827	1.050	1.772	3.75	12.00mm, 0.472"	0.532	0.63	6.5
TC0850026JCR01	M10	0.335", 8.50mm	.3346-.3504	1.024	1.200	1.960	3.73	12.00mm, 0.472"	0.610	0.63	8.5
TC1020030JDR01	M12	0.402", 10.20mm	.3937-.4094	1.181	1.360	2.130	4.02	16.00mm, 0.630"	0.669	0.787	10
TC1200035JDR01	M14	0.472", 12.00mm	.4724-.4882	1.378	1.560	2.400	4.29	16.00mm, 0.630"	0.748	0.787	12
TC1400039JER01	M16	0.551", 14.00mm	.5512-.5669	1.535	1.710	2.720	4.69	20.00mm, 0.787"	0.827	0.984	14
TC1750042JER01	M20	0.689", 17.50mm	.6693-.7047	1.653	1.830	2.830	4.80	20.00mm, 0.787"	0.965	0.984	17
TC2100048JFR01	M24	0.827", 21.00mm	.8268-.8622	1.890	2.070	3.150	5.35	25.00mm, 0.984"	1.102	1.259	21

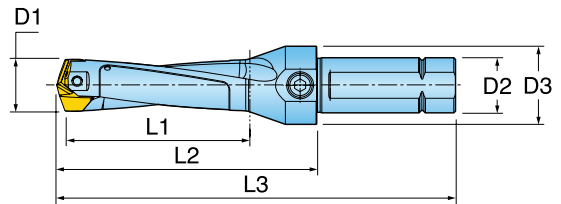
HARDWARE	 Screw	 Torx Key	 Clamping Key	
TC0680021JCR01	SM22-046-00	T7	KTD6.0-D9.9	
TC0850026JCR01	SM22-046-00	T7	KTD6.0-D9.9	
TC1020030JDR01	SM22-046-00	T7	KTD6.0-D9.9	
TC1200035JDR01	SM22-046-00	T7	KTD10.0-19.9	
TC1400039JER01	SM22-046-00	T7	KTD10.0-19.9	
TC1750042JER01	SM22-046-00	T7	KTD10.0-19.9	
TC2100048JFR01	SM22-046-00	T7	KTD20.0-D26.9	

Features & Benefits:

- Unique quick-change clamping system
- 2-effective cutting edges for higher productivity
- Self-centering design means no need for a pilot hole
- Easier replacement of the drill head in the machine
- Asymmetrical pocket design for error proof mounting, close tolerance and excellent surface finish
- Stronger rigidity of the unique screw clamp design means improved productivity
- Through coolant hole
- Drill Body(L/D) : 3xD, 5xD



SPADE TWIST™ SERIES LD UNIV EXT LGTH INCH SHK 3:1

REPLACEABLE TIPPED DRILL BODIES



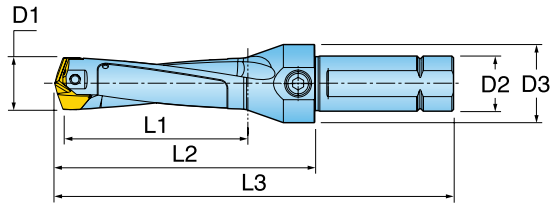
D1 Nom. Dia. inch	D1 Nom. Dia. mm	Body Number	L1 DOC	L2 Ext.	L3 Overall	D2 Shank Size/Style	D3 Flange Dia.	Pocket Size	Coolant Thru Point
1.0236-1.0590	26-26.9	LD2600078N6R01	3.07	5.32	8.47	1.250 Univ	1.77	26	Yes
1.0630-1.0984	27-27.9	LD2700081N6R01	3.19	5.45	8.60	1.250 Univ	1.77	27	Yes
1.1024-1.1378	28-28.9	LD2800084N6R01	3.31	5.61	8.76	1.250 Univ	1.77	28	Yes
1.1417-1.1772	29-29.9	LD2900087N6R01	3.43	5.74	8.90	1.250 Univ	1.77	29	Yes
1.1811-1.2165	30-30.9	LD3000090N6R01	3.54	5.89	9.04	1.250 Univ	1.77	30	Yes
1.2205-1.2559	31-31.9	LD3100093N6R01	3.66	6.03	9.18	1.250 Univ	1.77	31	Yes
1.2598-1.2953	32-32.9	LD3200096N6R01	3.78	6.38	9.53	1.250 Univ	2.17	32	Yes
1.2992-1.3346	33-33.9	LD3300099N6R01	3.90	6.52	9.67	1.250 Univ	2.17	33	Yes
1.3386-1.3740	34-34.9	LD3400102N6R01	4.02	6.65	9.80	1.250 Univ	2.17	34	Yes
1.3780-1.4134	35-35.9	LD3500105N6R01	4.13	6.81	9.96	1.250 Univ	2.17	35	Yes
1.4173-1.4528	36-36.9	LD3600108N6R01	4.25	6.94	10.10	1.250 Univ	2.17	36	Yes
1.4567-1.4921	37-37.9	LD3700111N6R01	4.30	7.08	10.23	1.250 Univ	2.17	37	Yes
1.4961-1.5315	38-38.9	LD3800114N6R01	4.49	7.24	10.39	1.250 Univ	2.17	38	Yes
1.5354-1.5709	39-39.9	LD3900117N6R01	4.61	7.38	10.53	1.250 Univ	2.17	39	Yes
1.5748-1.6496	40-41.9	LD4000120N6R01	4.72	7.52	10.67	1.250 Univ	2.17	40-41	Yes

*Do not mount a smaller drill point than the one listed with the tool.

HARDWARE					
	Coolant Fitting	Lock Screw	Driver Handle	Screw Driver Blade	
LD2600078N6R01	PF-0013	TS50230D3	SW6-T	DS-T206B	
LD2700081N6R01	PF-0013	TS50230D3	SW6-T	DS-T206B	
LD2800084N6R01	PF-0013	TS50250D35	SW6-T	DS-T256B	
LD2900087N6R01	PF-0013	TS50250D35	SW6-T	DS-T256B	
LD3000090N6R01	PF-0013	TS60265D4	SW6-T	DS-T256B	
LD3100093N6R01	PF-0013	TS60265D4	SW6-T	DS-T256B	
LD3200096N6R01	PF-0013	TS60285D42	SW6-T	DS-T256B	
LD3300099N6R01	PF-0013	TS60285D42	SW6-T	DS-T256B	
LD3400102N6R01	PF-0013	TS60285D42	SW6-T	DS-T256B	
LD3500105N6R01	PF-0013	TS60320D5	SW6-T	DS-T256B	
LD3600108N6R01	PF-0013	TS60320D5	SW6-T	DS-T256B	
LD3700111N6R01	PF-0013	TS60320D5	SW6-T	DS-T256B	
LD3800114N6R01	PF-0013	TS80340D6	SW6-T	DS-T256B	
LD3900117N6R01	PF-0013	TS80340D6	SW6-T	DS-T256B	
LD4000120N6R01	PF-0013	TS80340D6	SW6-T	DS-T256B	



SPADE TWIST™ SERIES LD UNIV EXT LGTH INCH SHK 5:1

REPLACEABLE TIPPED DRILL BODIES

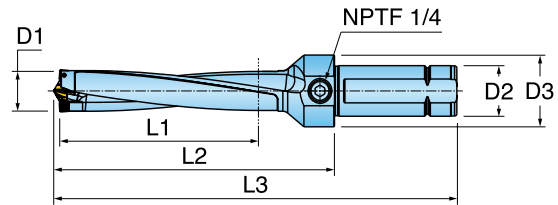


D1 Nom. Dia. inch	D1 Nom. Dia. mm	Body Number	L1 DOC	L2 Ext.	L3 Overall	D2 Shank Size/Style	D3 Flange Dia.	Pocket Size	Coolant Thru Point
1.0236-1.0590	26-26.9	LD2600130N6R01	5.12	7.36	10.51	1.250 Univ	1.77	26	Yes
1.0430-1.0984	27-27.9	LD2700135N6R01	5.32	7.58	10.73	1.250 Univ	1.77	27	Yes
1.1024-1.1378	28-28.9	LD2800140N6R01	5.51	7.81	10.96	1.250 Univ	1.77	28	Yes
1.1417-1.1772	29-29.9	LD2900145N6R01	5.71	8.03	11.18	1.250 Univ	1.77	29	Yes
1.1811-1.2165	30-30.9	LD3000150N6R01	5.91	8.26	11.41	1.250 Univ	1.77	30	Yes
1.2205-1.2559	31-31.9	LD3100155N6R01	6.10	8.47	11.62	1.250 Univ	1.77	31	Yes
1.2598-1.2953	32-32.9	LD3200160N6R01	6.20	8.90	12.05	1.250 Univ	2.17	32	Yes
1.2992-1.3346	33-33.9	LD3300165N6R01	6.50	9.11	12.26	1.250 Univ	2.17	33	Yes
1.3386-1.3740	34-34.9	LD3400170N6R01	6.70	9.33	12.48	1.250 Univ	2.17	34	Yes
1.3780-1.4134	35-35.9	LD3500175N6R01	6.89	9.56	12.71	1.250 Univ	2.17	35	Yes
1.4173-1.4528	36-36.9	LD3600180N6R01	7.09	9.78	12.93	1.250 Univ	2.17	36	Yes
1.4567-1.4921	37-37.9	LD3700185N6R01	7.28	10.00	13.15	1.250 Univ	2.17	37	Yes
1.4961-1.5315	38-38.9	LD3800190N6R01	7.48	10.23	13.38	1.250 Univ	2.17	38	Yes
1.5354-1.5709	39-39.9	LD3900195N6R01	7.68	10.45	13.60	1.250 Univ	2.17	39	Yes
1.5748-1.6496	40-41.9	LD4000200N6R01	7.88	10.67	13.82	1.250 Univ	2.17	40-41	Yes

*Do not mount a smaller drill point than the one listed with the tool.





HARDWARE	 Coolant Fitting	 Lock Screw	 Driver Handle	 Screw Driver Blade
LD2600130N6R01	PF-0013	TS50230D3	SW6-T	DS-T206B
LD2700135N6R01	PF-0013	TS50230D3	SW6-T	DS-T206B
LD2800140N6R01	PF-0013	TS50250D35	SW6-T	DS-T256B
LD2900145N6R01	PF-0013	TS50250D35	SW6-T	DS-T256B
LD3000150N6R01	PF-0013	TS60265D4	SW6-T	DS-T256B
LD3100155N6R01	PF-0013	TS60265D4	SW6-T	DS-T256B
LD3200160N6R01	PF-0013	TS60285D42	SW6-T	DS-T256B
LD3300165N6R01	PF-0013	TS60285D42	SW6-T	DS-T256B
LD3400170N6R01	PF-0013	TS60285D42	SW6-T	DS-T256B
LD3500175N6R01	PF-0013	TS60320D5	SW6-T	DS-T256B
LD3600180N6R01	PF-0013	TS60320D5	SW6-T	DS-T256B
LD3700185N6R01	PF-0013	TS60320D5	SW6-T	DS-T256B
LD3800190N6R01	PF-0013	TS80340D6	SW6-T	DS-T256B
LD3900195N6R01	PF-0013	TS80340D6	SW6-T	DS-T256B
LD4000200N6R01	PF-0013	TS80340D6	SW6-T	DS-T256B

COMBINATION REPLACEABLE TIP & INDEXABLE INSERT DRILL



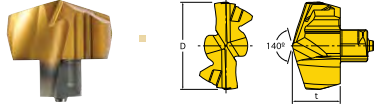
Part Number	D1 Nom. Dia. inch	D1 Nom. Dia. mm	L1 Drilling Length	L2 Ext. frm Holder	L3 Overall Length	D2 Shank Style/Size	D3 Flange Diameter	L4 Shank Length	Insert Series	Tip Series
CD2600130N6R01	1.024	26.0mm	5.12	7.23	10.38	1.250 Univ	1.772	3.16	SPGX06_	TPA15_-C
CD2620131N6R01	1.032	26.2mm	5.16	7.23	10.38	1.250 Univ	1.772	3.16	SPGX06_	TPA15_-C
CD2700135N6R01	1.063	27.0mm	5.32	7.47	10.62	1.250 Univ	1.772	3.16	SPGX06_	TPA16_-C
CD2780139N6R01	1.095	27.8mm	5.47	7.47	10.62	1.250 Univ	1.772	3.16	SPGX06_	TPA16_-C
CD2800140N6R01	1.102	28.0mm	5.51	7.71	10.86	1.250 Univ	1.772	3.16	SPGX06_	TPA17_-C
CD2860143N6R01	1.126	28.6mm	5.63	7.71	10.86	1.250 Univ	1.772	3.16	SPGX06_	TPA17_-C
CD2900145N6R01	1.142	29.0mm	5.71	7.88	11.03	1.250 Univ	2.165	3.16	SPGX07_	TPA15_-C
CD2940147N6R01	1.158	29.4mm	5.79	7.88	11.03	1.250 Univ	2.165	3.16	SPGX07_	TPA15_-C
CD3000150N6R01	1.181	30.0mm	5.91	8.12	11.27	1.250 Univ	2.165	3.16	SPGX07_	TPA16_-C
CD3020151N6R01	1.189	30.2mm	5.95	8.12	11.27	1.250 Univ	2.165	3.16	SPGX07_	TPA16_-C
CD3100155N6R01	1.221	31.0mm	6.10	8.36	11.51	1.250 Univ	2.165	3.16	SPGX07_	TPA17_-C
CD3180159N6R01	1.252	31.8mm	6.26	8.36	11.51	1.250 Univ	2.165	3.16	SPGX07_	TPA17_-C
CD3200160N6R01	1.260	32.0mm	6.30	8.60	11.75	1.250 Univ	2.165	3.16	SPGX07_	TPA18_-C
CD3250163N6R01	1.280	32.5mm	6.42	8.60	11.75	1.250 Univ	2.165	3.16	SPGX07_	TPA18_-C
CD3300165N6R01	1.299	33.0mm	6.50	7.93	10.61	1.250 Univ	2.165	3.16	SPGX09_	TPA15_-C
CD3330167N6R01	1.311	33.3mm	6.58	8.87	12.02	1.250 Univ	2.165	3.16	SPGX09_	TPA15_-C
CD3400170N6R01	1.339	34.0mm	6.69	9.11	12.26	1.250 Univ	2.165	3.16	SPGX09_	TPA16_-C
CD3410171N6R01	1.343	34.1mm	6.73	9.11	12.26	1.250 Univ	2.165	3.16	SPGX09_	TPA16_-C
CD3490175N6R01	1.374	34.9mm	6.89	9.11	12.26	1.250 Univ	2.165	3.16	SPGX09_	TPA16_-C
CD3500175N6R01	1.378	35.0mm	6.89	9.35	12.50	1.250 Univ	2.165	3.16	SPGX09_	TPA17_-C
CD3570179N6R01	1.406	35.7mm	7.05	9.35	12.50	1.250 Univ	2.165	3.16	SPGX09_	TPA17_-C
CD3600180N6R01	1.417	36.0mm	7.09	9.59	12.74	1.250 Univ	2.165	3.16	SPGX09_	TPA18_-C
CD3650182N6R01	1.437	36.5mm	7.17	9.59	12.74	1.250 Univ	2.165	3.16	SPGX09_	TPA18_-C
CD3700185N6R01	1.457	37.0mm	7.28	9.76	12.91	1.250 Univ	2.165	3.16	SPGX11_	TPA16_-C
CD3730186N6R01	1.469	37.3mm	7.32	9.76	12.91	1.250 Univ	2.165	3.16	SPGX11_	TPA16_-C
CD3800190N6R01	1.496	38.0mm	7.48	10.00	13.15	1.250 Univ	2.165	3.16	SPGX11_	TPA17_-C
CD3810191N6R01	1.500	38.1mm	7.52	10.00	13.15	1.250 Univ	2.165	3.16	SPGX11_	TPA17_-C
CD3890194N6R01	1.532	38.9mm	7.64	10.00	13.15	1.250 Univ	2.165	3.16	SPGX11_	TPA17_-C
CD3900195N6R01	1.535	39.0mm	7.68	10.24	13.39	1.250 Univ	2.165	3.16	SPGX11_	TPA18_-C
CD3970198N6R01	1.563	39.7mm	7.80	10.24	13.39	1.250 Univ	2.165	3.16	SPGX11_	TPA18_-C
CD4000200N6R01	1.575	40.0mm	7.87	10.47	13.62	1.250 Univ	2.165	3.16	SPGX11_	TPA19_-C
CD4050202N6R01	1.595	40.5mm	7.95	10.47	13.62	1.250 Univ	2.165	3.16	SPGX11_	TPA19_-C
CD4100205N6R01	1.614	41.0mm	8.07	10.71	13.86	1.250 Univ	2.165	3.16	SPGX11_	TPA20_-C
CD4130206N6R01	1.626	41.3mm	8.11	10.71	13.86	1.250 Univ	2.165	3.16	SPGX11_	TPA20_-C
CD4200210N6R01	1.654	42.0mm	8.27	10.95	14.10	1.250 Univ	2.165	3.16	SPGX11_	TPA21_-C
CD4280214N6R01	1.685	42.8mm	8.43	10.95	14.10	1.250 Univ	2.165	3.16	SPGX11_	TPA21_-C
CD4300215N7R01	1.693	43.0mm	8.47	11.19	14.34	1.500 Univ	2.362	3.16	SPGX11_	TPA22_-C
CD4370218N7R01	1.720	43.7mm	8.58	11.19	14.34	1.500 Univ	2.362	3.16	SPGX11_	TPA22_-C
CD4400220N7R01	1.732	44.0mm	8.66	11.43	14.58	1.500 Univ	2.362	3.16	SPGX11_	TPA23_-C
CD4450222N7R01	1.752	44.5mm	8.74	11.43	14.58	1.500 Univ	2.362	3.16	SPGX11_	TPA23_-C
CD4500225N7R01	1.772	45.0mm	8.86	11.67	14.82	1.500 Univ	2.362	3.16	SPGX11_	TPA24_-C
CD4520226N7R01	1.780	45.2mm	8.90	11.67	14.82	1.500 Univ	2.362	3.16	SPGX11_	TPA24_-C

Do not mount a smaller drill point than the one listed with the tool. Standard Gold-Twist tips do not fit in the Gold Twin. Gold-Twin use a modified standard Gold-Twist tip, designation R01-C.

HARDWARE				
	Insert Screw	Coolant Fitting	Locking Key	Torx Driver
CD2600130N6R01	TS22052I/HG	PF-0013	KTD15.0-15.9-C	DS-T07S
CD2620131N6R01	TS22052I/HG	PF-0013	KTD15.0-15.9-C	DS-T07S
CD2700135N6R01	TS22052I/HG	PF-0013	KTD16.0-16.9-C	DS-T07S
CD2780139N6R01	TS22052I/HG	PF-0013	KTD16.0-16.9-C	DS-T07S
CD2800140N6R01	TS22052I/HG	PF-0013	KTD17.0-17.9-C	DS-T07S
CD2860143N6R01	TS22052I/HG	PF-0013	KTD17.0-17.9-C	DS-T07S
CD2900145N6R01	TS25064I	PF-0013	KTD15.0-15.9-C	TD8
CD2940147N6R01	TS25064I	PF-0013	KTD15.0-15.9-C	TD8
CD3000150N6R01	TS25064I	PF-0013	KTD16.0-16.9-C	TD8
CD3020151N6R01	TS25064I	PF-0013	KTD16.0-16.9-C	TD8
CD3100155N6R01	TS25064I	PF-0013	KTD17.0-17.9-C	TD8
CD3180159N6R01	TS25064I	PF-0013	KTD17.0-17.9-C	TD8
CD3200160N6R01	TS25064I	PF-0013	KTD18.0-18.9-C	TD8
CD3250163N6R01	TS25064I	PF-0013	KTD18.0-18.9-C	TD8
CD3300165N6R01	SM35-088-60	PF-0013	KTD15.0-15.9-C	TD10
CD3330167N6R01	SM35-088-60	PF-0013	KTD15.0-15.9-C	TD10
CD3400170N6R01	SM35-088-60	PF-0013	KTD16.0-16.9-C	TD10
CD3410171N6R01	SM35-088-60	PF-0013	KTD16.0-16.9-C	TD10
CD3490175N6R01	SM35-088-60	PF-0013	KTD16.0-16.9-C	TD10
CD3500175N6R01	SM35-088-60	PF-0013	KTD17.0-17.9-C	TD10
CD3570179N6R01	SM35-088-60	PF-0013	KTD17.0-17.9-C	TD10
CD3600180N6R01	SM35-088-60	PF-0013	KTD18.0-18.9-C	TD10
CD3650182N6R01	SM35-088-60	PF-0013	KTD18.0-18.9-C	TD10
CD3700185N6R01	SM40-093-20	PF-0013	KTD16.0-16.9-C	TD15
CD3730186N6R01	SM40-093-20	PF-0013	KTD16.0-16.9-C	TD15
CD3800190N6R01	SM40-093-20	PF-0013	KTD17.0-17.9-C	TD15
CD3810191N6R01	SM40-093-20	PF-0013	KTD17.0-17.9-C	TD15
CD3890194N6R01	SM40-093-20	PF-0013	KTD17.0-17.9-C	TD15
CD3900195N6R01	SM40-093-20	PF-0013	KTD18.0-18.9-C	TD15
CD3970198N6R01	SM40-093-20	PF-0013	KTD18.0-18.9-C	TD15
CD4000200N6R01	SM40-093-20	PF-0013	KTD19.0-19.9-C	TD15
CD4050202N6R01	SM40-093-20	PF-0013	KTD19.0-19.9-C	TD15
CD4100205N6R01	SM40-093-20	PF-0013	KTD20.0-20.9-C	TD15
CD4130206N6R01	SM40-093-20	PF-0013	KTD20.0-20.9-C	TD15
CD4200210N6R01	SM40-093-20	PF-0013	KTD21.0-21.9-C	TD15
CD4280214N6R01	SM40-093-20	PF-0013	KTD21.0-21.9-C	TD15
CD4300215N7R01	SM40-093-20	PF-0015	KTD22.0-22.9-C	TD15
CD4370218N7R01	SM40-093-20	PF-0015	KTD22.0-22.9-C	TD15
CD4400220N7R01	SM40-093-20	PF-0015	KTD23.0-23.9-C	TD15
CD4450222N7R01	SM40-093-20	PF-0015	KTD23.0-23.9-C	TD15
CD4500225N7R01	SM40-093-20	PF-0015	KTD24.0-24.9-C	TD15
CD4520226N7R01	SM40-093-20	PF-0015	KTD24.0-24.9-C	TD15

GOLD-TWIN SERIES TPA -C TIPS

TPA-C Replaceable Tip for Gold-Twin

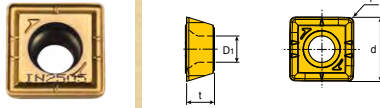


Part Number	D Diameter (mm)	D Diameter (in)	t Length	Pocket Size	Grades	IN2505
TPA1590R01-C	15.9mm	0.626	0.344	15		
TPA1690R01-C	16.9mm	0.665	0.366	16		
TPA1790R01-C	17.9mm	0.705	0.390	17		
TPA1890R01-C	18.9mm	0.744	0.413	18		
TPA1990R01-C	19.9mm	0.784	0.433	19		
TPA2090R01-C	20.9mm	0.823	0.344	20		
TPA2190R01-C	21.9mm	0.862	0.366	21		
TPA2290R01-C	22.9mm	0.902	0.390	22		
TPA2390R01-C	23.9mm	0.941	0.413	23		
TPA2490R01-C	24.9mm	0.980	0.433	24		

Modified -C Tip is NOT interchangeable with the Standard Gold-Twist Tip.



GOLD-TWIN SERIES SPGX...WG

SPGX...WG Peripheral Inserts for Gold-Twin



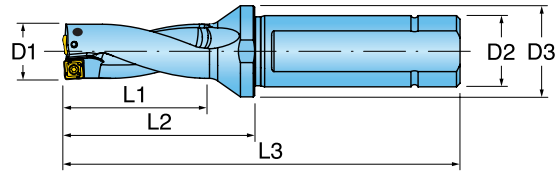
Part Number	D Diameter (mm)	D Diameter (in)	T Thickness	R Radius	Pocket Size	Grades	IN2505
SPGX060204WG	6.0mm	.239"	.094"	.016"	6		
SPGX07T308WG	8.0mm	.316"	.156"	.031"	7		
SPGX090408WG	10.0mm	.390"	.169"	.031"	9		
SPGX110408WG	11.6mm	.457"	.190"	.031"	11		

● = P ● = M ● = K ● = N ● = S ○ = H

HARDWARE	 Screw	 Torx Key	Torque Spec (in.lbs.)
SPGX060204WG	TS22052I/HG (M2.2X5.2MM)	HZ5.0004	7-11
SPGX07T308WG	TS25064I (M2.5X6.4MM)	TD 8	10-15
SPGX090408WG	SM35-088-60 (M3.5X8.75MM)	TD 10	25-30
SPGX110408WG	SE02-82 (M4X9.3MM)	TD 15	30-35

QUADOTWIST™ SERIES QR INDEXABLE DRILL INCH 2:1




SQUARE INSERT INDEXABLE DRILLS - UNIVERSAL EXT. LENGTH SHANK - INCH



Part Number	D1 Nom. Dia. inch	D1 Nom. Dia. mm	L1 Drilling Length	L2 Ext. frm Holder	L3 Overall Length	D2 Shank Style/Size	Num of Inserts	D3 Flange Diameter	L4 Shank Length	Insert Series
QR0143029N5R02	0.563	14.3mm	1.10	2.13	4.33	1.000 Univ	2	1.26	3.16	SOMT05_
QR0150030N5R02	0.591	15.0mm	1.19	2.24	5.39	1.000 Univ	2	1.26	3.16	SOMT05_
QR0159032N5R02	0.626	15.9mm	1.25	2.36	5.51	1.000 Univ	2	1.26	3.16	SOMT05_
QR0167033N5R02	0.658	16.7mm	1.31	2.44	5.59	1.000 Univ	2	1.26	3.16	SOMT06_
QR0175035N5R02	0.689	17.5mm	1.38	2.56	5.71	1.000 Univ	2	1.26	3.16	SOMT06_
QR0183037N5R02	0.721	18.3mm	1.44	2.56	5.71	1.000 Univ	2	1.26	3.16	SOMT06_
QR0191038N5R02	0.750	19.1mm	1.50	2.64	5.79	1.000 Univ	2	1.26	3.16	SOMT06_
QR0198040N5R02	0.780	19.8mm	1.56	2.80	5.94	1.000 Univ	2	1.26	3.16	SOMT07_
QR0206041N5R02	0.811	20.6mm	1.63	2.87	6.02	1.000 Univ	2	1.26	3.16	SOMT07_
QR0214042N5R02	0.843	21.4mm	1.69	2.95	6.10	1.000 Univ	2	1.26	3.16	SOMT07_
QR0222044N5R02	0.874	22.2mm	1.75	2.95	6.10	1.000 Univ	2	1.26	3.16	SOMT07_
QR0230046N6R02	0.906	23.0mm	1.81	3.19	6.34	1.250 Univ	2	1.77	3.16	SOMT08_
QR0238048N6R02	0.937	23.8mm	1.88	3.31	6.46	1.250 Univ	2	1.77	3.16	SOMT08_
QR0246049N6R02	0.969	24.6mm	1.94	3.43	6.57	1.250 Univ	2	1.77	3.16	SOMT08_
QR0250050N6R02	0.984	25.0mm	1.97	3.43	6.58	1.250 Univ	2	1.77	3.16	SOMT08_
QR0254051N6R02	1.000	25.4mm	2.00	3.50	6.65	1.250 Univ	2	1.77	3.16	SOMT08_
QR0262052N6R02	1.031	26.2mm	2.06	3.50	6.65	1.250 Univ	2	1.77	3.16	SOMT08_
QR0270054N6R02	1.063	27.0mm	2.13	3.58	6.73	1.250 Univ	2	1.77	3.16	SOMT09_
QR0278056N6R02	1.094	27.8mm	2.19	3.70	6.85	1.250 Univ	2	1.77	3.16	SOMT09_
QR0286057N6R02	1.125	28.6mm	2.25	3.78	6.93	1.250 Univ	2	1.77	3.16	SOMT09_
QR0294059N6R02	1.156	29.4mm	2.31	3.98	7.13	1.250 Univ	2	2.17	3.16	SOMT09_
QR0302060N6R02	1.187	30.2mm	2.37	3.98	7.13	1.250 Univ	2	2.17	3.16	SOMT09_
QR0310062N6R02	1.219	31.0mm	2.44	4.09	7.24	1.250 Univ	2	2.17	3.16	SOMT09_
QR0318063N6R02	1.250	31.8mm	2.50	4.17	7.32	1.250 Univ	2	2.17	3.16	SOMT11_
QR0325065N6R02	1.281	32.5mm	2.56	4.29	7.44	1.250 Univ	2	2.17	3.16	SOMT11_
QR0333067N6R02	1.312	33.3mm	2.62	4.29	7.44	1.250 Univ	2	2.17	3.16	SOMT11_
QR0341068N6R02	1.343	34.1mm	2.69	4.37	7.52	1.250 Univ	2	2.17	3.16	SOMT11_
QR0349070N6R02	1.375	34.9mm	2.75	4.49	7.64	1.250 Univ	2	2.17	3.16	SOMT11_
QR0357071N6R02	1.406	35.7mm	2.81	4.61	7.76	1.250 Univ	2	2.17	3.16	SOMT11_
QR0365073N6R02	1.437	36.5mm	2.87	4.72	7.87	1.250 Univ	2	2.17	3.16	SOMT13_
QR0373075N6R02	1.468	37.3mm	2.94	4.72	7.87	1.250 Univ	2	2.17	3.16	SOMT13_
QR0381076N6R02	1.500	38.1mm	3.00	4.84	7.99	1.250 Univ	2	2.17	3.16	SOMT13_
QR0389078N6R02	1.531	38.9mm	3.06	4.92	8.07	1.250 Univ	2	2.17	3.16	SOMT13_
QR0397079N6R02	1.562	39.7mm	3.12	5.04	8.19	1.250 Univ	2	2.36	3.16	SOMT13_
QR0405081N6R02	1.594	40.5mm	3.12	5.16	8.31	1.250 Univ	2	2.36	3.16	SOMT13_
QR0413083N6R02	1.625	41.3mm	3.25	5.16	8.31	1.250 Univ	2	2.36	3.16	SOMT13_
QR0428086N6R02	1.687	42.8mm	3.37	5.35	8.50	1.250 Univ	2	2.36	3.16	SOMT13_
QR0437087N7R02	1.719	43.7mm	3.44	5.43	8.58	1.500 Univ	2	2.36	3.16	SOMT15_
QR0445089N7R02	1.750	44.5mm	3.50	5.59	8.74	1.500 Univ	2	2.36	3.16	SOMT15_
QR0452090N7R02	1.781	45.2mm	3.56	5.59	8.74	1.500 Univ	2	2.36	3.16	SOMT15_
QR0460092N7R02	1.813	46.0mm	3.63	5.71	8.86	1.500 Univ	2	2.36	3.16	SOMT15_
QR0476095N7R02	1.875	47.6mm	3.75	5.91	9.06	1.500 Univ	2	2.36	3.16	SOMT15_
QR0492098N7R02	1.937	49.2mm	3.87	5.98	9.13	1.500 Univ	2	2.36	3.16	SOMT15_
QR0500100N7R02	1.969	50.0mm	3.94	6.10	9.25	1.500 Univ	2	2.36	3.16	SOMT15_
QR0508102N7R02	2.000	50.8mm	4.00	6.22	9.37	1.500 Univ	2	2.36	3.16	SOMT15_

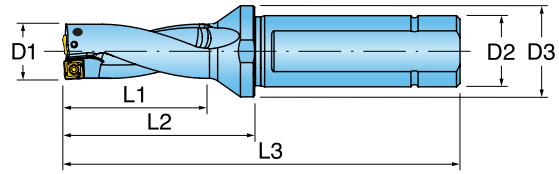
For Lathe Use: Order Coolant Plug Separately - For 1.00" Shank, use PF-0012, For 1.25" Shank, use PF-0013, and For 1.50" Shank, use PF-0015.

FINE GOLD

HARDWARE			
	Insert Screw	Driver	Coolant Fitting
QR0143029N5R02	SM20-043-00	DS-TP06S-NEU	PF-0012
QR0150030N5R02	SM20-043-00	DS-TP06S-NEU	PF-0012
QR0159032N5R02	SM20-043-00	DS-TP06S-NEU	PF-0012
QR0167033N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0175035N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0183037N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0191038N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0198040N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0206041N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0214042N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0222044N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0230046N6R02	SM25-065-70	DS-T07S	PF-0013
QR0238048N6R02	SM25-065-70	DS-T07S	PF-0013
QR0246049N6R02	SM25-065-70	DS-T07S	PF-0013
QR0250050N6R02	SM25-065-70	DS-T07S	PF-0013
QR0254051N6R02	SM25-065-70	DS-T07S	PF-0013
QR0262052N6R02	SM25-065-70	DS-T07S	PF-0013
QR0270054N6R02	SM35-088-60	TD10	PF-0013
QR0278056N6R02	SM35-088-60	TD10	PF-0013
QR0286057N6R02	SM35-088-60	TD10	PF-0013
QR0294059N6R02	SM35-088-60	TD10	PF-0013
QR0302060N6R02	SM35-088-60	TD10	PF-0013
QR0310062N6R02	SM35-088-60	TD10	PF-0013
QR0318063N6R02	SM35-088-60	TD10	PF-0013
QR0325065N6R02	SM35-088-60	TD10	PF-0013
QR0333067N6R02	SM35-088-60	TD10	PF-0013
QR0341068N6R02	SM35-088-60	TD10	PF-0013
QR0349070N6R02	SM35-088-60	TD10	PF-0013
QR0357071N6R02	SM35-088-60	TD10	PF-0013
QR0365073N6R02	SM40-093-20	TD15	PF-0013
QR0373075N6R02	SM40-093-20	TD15	PF-0013
QR0381076N6R02	SM40-093-20	TD15	PF-0013
QR0389078N6R02	SM40-093-20	TD15	PF-0013
QR0397079N6R02	SM40-093-20	TD15	PF-0013
QR0405081N6R02	SM40-093-20	TD15	PF-0013
QR0413083N6R02	SM40-093-20	TD15	PF-0013
QR0428086N6R02	SM40-093-20	TD15	PF-0013
QR0437087N7R02	SM50-113-20	DS-T20T	PF-0015
QR0445089N7R02	SM50-113-20	DS-T20T	PF-0015
QR0452090N7R02	SM50-113-20	DS-T20T	PF-0015
QR0460092N7R02	SM50-113-20	DS-T20T	PF-0015
QR0476095N7R02	SM50-113-20	DS-T20T	PF-0015
QR0492098N7R02	SM50-113-20	DS-T20T	PF-0015
QR0500100N7R02	SM50-113-20	DS-T20T	PF-0015
QR0508102N7R02	SM50-113-20	DS-T20T	PF-0015

QUADOTWIST™ SERIES QR INDEXABLE DRILL INCH 3:1




SQUARE INSERT INDEXABLE DRILLS - UNIVERSAL EXT. LENGTH SHANK - INCH



Part Number	D1 Nom. Dia. inch	D1 Nom. Dia. mm	L1 Drilling Length	L2 Ext. frm Holder	L3 Overall Length	D2 Shank Style/Size	Num of Inserts	D3 Flange Dia.	L4 Shank Length	Insert Series	Chamfer Ring
QR0143043N5R02	0.563	14.3mm	1.69	2.68	5.83	1.000 Univ	2	1.26	3.16	SOMT05_	CB140R02
QR0150045N5R02	0.591	15.0mm	1.78	2.83	5.98	1.000 Univ	2	1.26	3.16	SOMT05_	CB150R02
QR0159048N5R02	0.626	15.9mm	1.87	2.99	6.14	1.000 Univ	2	1.26	3.16	SOMT05_	CB160R02
QR0167050N5R02	0.658	16.7mm	1.97	3.11	6.26	1.000 Univ	2	1.26	3.16	SOMT06_	CB170R02
QR0175053N5R02	0.689	17.5mm	2.06	3.27	6.42	1.000 Univ	2	1.26	3.16	SOMT06_	CB180R02
QR0183055N5R02	0.721	18.3mm	2.16	3.27	6.42	1.000 Univ	2	1.26	3.16	SOMT06_	CB180R02
QR0191057N5R02	0.750	19.1mm	2.25	3.39	6.54	1.000 Univ	2	1.26	3.16	SOMT06_	CB190R02
QR0198059N5R02	0.780	19.8mm	2.34	3.58	6.73	1.000 Univ	2	1.26	3.16	SOMT07_	CB200R02
QR0206062N5R02	0.811	20.6mm	2.44	3.70	6.85	1.000 Univ	2	1.26	3.16	SOMT07_	CB210R02
QR0214064N5R02	0.843	21.4mm	2.53	3.82	6.97	1.000 Univ	2	1.26	3.16	SOMT07_	CB210R02
QR0222067N5R02	0.874	22.2mm	2.63	3.82	6.97	1.000 Univ	2	1.26	3.16	SOMT07_	CB220R02
QR0230069N6R02	0.906	23.0mm	2.72	4.09	7.24	1.250 Univ	2	1.77	3.16	SOMT08_	CB230R02
QR0238071N6R02	0.937	23.8mm	2.81	4.25	7.40	1.250 Univ	2	1.77	3.16	SOMT08_	CB240R02
QR0246074N6R02	0.969	24.6mm	2.91	4.41	7.56	1.250 Univ	2	1.77	3.16	SOMT08_	CB250R02
QR0250075N6R02	0.984	25.0mm	2.95	4.41	7.56	1.250 Univ	2	1.77	3.16	SOMT08_	CB250R02
QR0254076N6R02	1.000	25.4mm	3.00	4.53	7.68	1.250 Univ	2	1.77	3.16	SOMT08_	CB250R02
QR0262079N6R02	1.031	26.2mm	3.09	4.53	7.68	1.250 Univ	2	1.77	3.16	SOMT08_	NA
QR0270081N6R02	1.063	27.0mm	3.19	4.65	7.80	1.250 Univ	2	1.77	3.16	SOMT09_	NA
QR0278083N6R02	1.094	27.8mm	3.28	4.80	7.95	1.250 Univ	2	1.77	3.16	SOMT09_	NA
QR0286086N6R02	1.125	28.6mm	3.38	4.92	8.07	1.250 Univ	2	1.77	3.16	SOMT09_	NA
QR0294088N6R02	1.156	29.4mm	3.47	5.16	8.30	1.250 Univ	2	2.17	3.16	SOMT09_	NA
QR0302090N6R02	1.187	30.2mm	3.56	5.16	8.30	1.250 Univ	2	2.17	3.16	SOMT09_	NA
QR0310093N6R02	1.219	31.0mm	3.66	5.31	8.46	1.250 Univ	2	2.17	3.16	SOMT09_	NA
QR0318095N6R02	1.250	31.8mm	3.75	5.43	8.58	1.250 Univ	2	2.17	3.16	SOMT11_	NA
QR0325098N6R02	1.281	32.5mm	3.84	5.59	8.74	1.250 Univ	2	2.17	3.16	SOMT11_	NA
QR0333100N6R02	1.312	33.3mm	3.94	5.59	8.74	1.250 Univ	2	2.17	3.16	SOMT11_	NA
QR0341102N6R02	1.343	34.1mm	4.03	5.71	8.86	1.250 Univ	2	2.17	3.16	SOMT11_	NA
QR0349105N6R02	1.375	34.9mm	4.13	5.87	9.02	1.250 Univ	2	2.17	3.16	SOMT11_	NA
QR0357107N6R02	1.406	35.7mm	4.22	6.02	9.17	1.250 Univ	2	2.17	3.16	SOMT11_	NA
QR0365110N6R02	1.437	36.5mm	4.31	6.18	9.33	1.250 Univ	2	2.17	3.16	SOMT13_	NA
QR0373112N6R02	1.468	37.3mm	4.41	6.18	9.33	1.250 Univ	2	2.17	3.16	SOMT13_	NA
QR0381114N6R02	1.500	38.1mm	4.50	6.34	9.49	1.250 Univ	2	2.17	3.16	SOMT13_	NA
QR0389117N6R02	1.531	38.9mm	4.59	6.46	9.61	1.250 Univ	2	2.17	3.16	SOMT13_	NA
QR0397119N6R02	1.562	39.7mm	4.69	6.61	9.76	1.250 Univ	2	2.36	3.16	SOMT13_	NA
QR0405122N6R02	1.594	40.5mm	4.69	6.77	9.92	1.250 Univ	2	2.36	3.16	SOMT13_	NA
QR0413124N6R02	1.625	41.3mm	4.87	6.77	9.92	1.250 Univ	2	2.36	3.16	SOMT13_	NA
QR0428128N6R02	1.687	42.8mm	5.06	7.05	10.20	1.250 Univ	2	2.36	3.16	SOMT13_	NA
QR0437131N7R02	1.719	43.7mm	5.16	7.17	10.31	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0445134N7R02	1.750	44.5mm	5.25	7.36	10.51	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0452136N7R02	1.781	45.2mm	5.34	7.36	10.51	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0460138N7R02	1.813	46.0mm	5.44	7.52	10.67	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0476143N7R02	1.875	47.6mm	5.63	7.80	10.94	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0492148N7R02	1.937	49.2mm	5.81	7.91	11.06	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0500150N7R02	1.969	50.0mm	5.91	8.07	11.22	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0508152N7R02	2.000	50.8mm	6.00	8.23	11.38	1.500 Univ	2	2.36	3.16	SOMT15_	NA

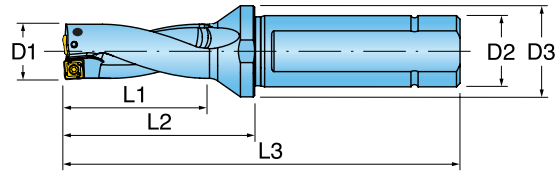
For Lathe Use: Order Coolant Plug Separately - For 1.00" Shank, use PF-0012, For 1.25" Shank, use PF-0013, and For 1.50" Shank, use PF-0015.

FINE GOLD

HARDWARE			
	Insert Screw	Driver	Coolant Fitting
QR0143043N5R02	SM20-043-00	DS-TP06S-NEU	PF-0012
QR0150045N5R02	SM20-043-00	DS-TP06S-NEU	PF-0012
QR0159048N5R02	SM20-043-00	DS-TP06S-NEU	PF-0012
QR0167050N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0175053N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0183055N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0191057N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0198059N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0206062N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0214064N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0222067N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0230069N6R02	SM25-065-70	DS-T07S	PF-0013
QR0238071N6R02	SM25-065-70	DS-T07S	PF-0013
QR0246074N6R02	SM25-065-70	DS-T07S	PF-0013
QR0250075N6R02	SM25-065-70	DS-T07S	PF-0013
QR0254076N6R02	SM25-065-70	DS-T07S	PF-0013
QR0262079N6R02	SM25-065-70	DS-T07S	PF-0013
QR0270081N6R02	SM35-088-60	TD10	PF-0013
QR0278083N6R02	SM35-088-60	TD10	PF-0013
QR0286086N6R02	SM35-088-60	TD10	PF-0013
QR0294088N6R02	SM35-088-60	TD10	PF-0013
QR0302090N6R02	SM35-088-60	TD10	PF-0013
QR0310093N6R02	SM35-088-60	TD10	PF-0013
QR0318095N6R02	SM35-088-60	TD10	PF-0013
QR0325098N6R02	SM35-088-60	TD10	PF-0013
QR0333100N6R02	SM35-088-60	TD10	PF-0013
QR0341102N6R02	SM35-088-60	TD10	PF-0013
QR0349105N6R02	SM35-088-60	TD10	PF-0013
QR0357107N6R02	SM35-088-60	TD10	PF-0013
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QR0389117N6R02	SM40-093-20	TD15	PF-0013
QR0397119N6R02	SM40-093-20	TD15	PF-0013
QR0405122N6R02	SM40-093-20	TD15	PF-0013
QR0413124N6R02	SM40-093-20	TD15	PF-0013
QR0428128N6R02	SM40-093-20	TD15	PF-0013
QR0437131N7R02	SM50-113-20	DS-T20T	PF-0015
QR0445134N7R02	SM50-113-20	DS-T20T	PF-0015
QR0452136N7R02	SM50-113-20	DS-T20T	PF-0015
QR0460138N7R02	SM50-113-20	DS-T20T	PF-0015
QR0476143N7R02	SM50-113-20	DS-T20T	PF-0015
QR0492148N7R02	SM50-113-20	DS-T20T	PF-0015
QR0500150N7R02	SM50-113-20	DS-T20T	PF-0015
QR0508152N7R02	SM50-113-20	DS-T20T	PF-0015




QUADOTWIST™ SERIES QR INDEXABLE DRILL INCH 4:1

SQUARE INSERT INDEXABLE DRILLS - UNIVERSAL EXT. LENGTH SHANK - INCH



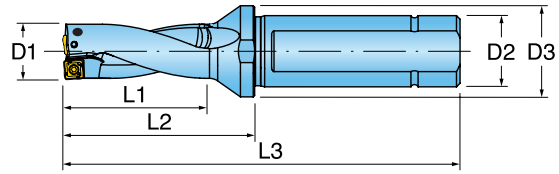
Part Number	D1 Nom. Dia. inch	D1 Nom. Dia. mm	L1 Drilling Length	L2 Ext. frm Holder	L3 Overall Length	D2 Shank Style/Size	Num of Inserts	D3 Flange Dia.	L4 Shank Length	Insert Series	Chamfer Ring
QR0143057N5R02	0.563	14.3mm	2.25	3.23	6.38	1.000 Univ	2	1.26	3.16	SOMT05_	CB140R02
QR0150060N5R02	0.591	15.0mm	2.37	3.43	6.57	1.000 Univ	2	1.26	3.16	SOMT05_	CB150R02
QR0159064N5R02	0.626	15.9mm	2.50	3.62	6.77	1.000 Univ	2	1.26	3.16	SOMT05_	CB160R02
QR0167067N5R02	0.658	16.7mm	2.63	3.78	6.93	1.000 Univ	2	1.26	3.16	SOMT06_	CB170R02
QR0175070N5R02	0.689	17.5mm	2.75	3.98	7.13	1.000 Univ	2	1.26	3.16	SOMT06_	CB180R02
QR0183073N5R02	0.721	18.3mm	2.87	3.98	7.13	1.000 Univ	2	1.26	3.16	SOMT06_	CB180R02
QR0191076N5R02	0.750	19.1mm	3.00	4.13	7.28	1.000 Univ	2	1.26	3.16	SOMT06_	CB190R02
QR0198079N5R02	0.780	19.8mm	3.13	4.37	7.52	1.000 Univ	2	1.26	3.16	SOMT07_	CB200R02
QR0206082N5R02	0.811	20.6mm	3.25	4.53	7.68	1.000 Univ	2	1.26	3.16	SOMT07_	CB210R02
QR0214086N5R02	0.843	21.4mm	3.37	4.69	7.83	1.000 Univ	2	1.26	3.16	SOMT07_	CB210R02
QR0222089N5R02	0.874	22.2mm	3.50	4.69	7.83	1.000 Univ	2	1.26	3.16	SOMT07_	CB220R02
QR0230092N6R02	0.906	23.0mm	3.62	5.00	8.15	1.250 Univ	2	1.77	3.16	SOMT08_	CB230R02
QR0238095N6R02	0.937	23.8mm	3.75	5.20	8.35	1.250 Univ	2	1.77	3.16	SOMT08_	CB240R02
QR0246098N6R02	0.969	24.6mm	3.87	5.39	8.54	1.250 Univ	2	1.77	3.16	SOMT08_	CB250R02
QR0250100N6R02	0.984	25.0mm	3.94	5.39	8.54	1.250 Univ	2	1.77	3.16	SOMT08_	CB250R02
QR0254102N6R02	1.000	25.4mm	4.00	5.55	8.70	1.250 Univ	2	1.77	3.16	SOMT08_	CB250R02
QR0262105N6R02	1.031	26.2mm	4.13	5.55	8.70	1.250 Univ	2	1.77	3.16	SOMT08_	NA
QR0270108N6R02	1.063	27.0mm	4.25	5.71	8.86	1.250 Univ	2	1.77	3.16	SOMT09_	NA
QR0278111N6R02	1.094	27.8mm	4.38	5.91	9.06	1.250 Univ	2	1.77	3.16	SOMT09_	NA
QR0286114N6R02	1.125	28.6mm	4.50	6.06	9.21	1.250 Univ	2	1.77	3.16	SOMT09_	NA
QR0294118N6R02	1.156	29.4mm	4.62	6.34	9.49	1.250 Univ	2	2.17	3.16	SOMT09_	NA
QR0302120N6R02	1.187	30.2mm	4.75	6.34	9.49	1.250 Univ	2	2.17	3.16	SOMT09_	NA
QR0310124N6R02	1.219	31.0mm	4.87	6.54	9.69	1.250 Univ	2	2.17	3.16	SOMT09_	NA
QR0318127N6R02	1.250	31.8mm	5.00	6.69	9.84	1.250 Univ	2	2.17	3.16	SOMT11_	NA
QR0325130N6R02	1.281	32.5mm	5.13	6.89	10.04	1.250 Univ	2	2.17	3.16	SOMT11_	NA
QR0333133N6R02	1.312	33.3mm	5.25	6.89	10.04	1.250 Univ	2	2.17	3.16	SOMT11_	NA
QR0341136N6R02	1.343	34.1mm	5.37	7.05	10.20	1.250 Univ	2	2.17	3.16	SOMT11_	NA
QR0349140N6R02	1.375	34.9mm	5.50	7.24	10.39	1.250 Univ	2	2.17	3.16	SOMT11_	NA
QR0357143N6R02	1.406	35.7mm	5.62	7.44	10.59	1.250 Univ	2	2.17	3.16	SOMT11_	NA
QR0365146N6R02	1.437	36.5mm	5.75	7.64	10.79	1.250 Univ	2	2.17	3.16	SOMT13_	NA
QR0373149N6R02	1.468	37.3mm	5.87	7.64	10.79	1.250 Univ	2	2.17	3.16	SOMT13_	NA
QR0381152N6R02	1.500	38.1mm	6.00	7.83	10.98	1.250 Univ	2	2.17	3.16	SOMT13_	NA
QR0389156N6R02	1.531	38.9mm	6.13	7.99	11.14	1.250 Univ	2	2.17	3.16	SOMT13_	NA
QR0397159N6R02	1.562	39.7mm	6.25	8.19	11.34	1.250 Univ	2	2.36	3.16	SOMT13_	NA
QR0405162N6R02	1.594	40.5mm	6.25	8.39	11.54	1.250 Univ	2	2.36	3.16	SOMT13_	NA
QR0413165N6R02	1.625	41.3mm	6.50	8.39	11.54	1.250 Univ	2	2.36	3.16	SOMT13_	NA
QR0428171N6R02	1.687	42.8mm	6.75	8.74	11.89	1.250 Univ	2	2.36	3.16	SOMT13_	NA
QR0437175N7R02	1.719	43.7mm	6.87	8.90	12.05	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0445178N7R02	1.750	44.5mm	7.00	9.13	12.28	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0452181N7R02	1.781	45.2mm	7.13	9.13	12.28	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0460184N7R02	1.813	46.0mm	7.25	9.33	12.48	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0476190N7R02	1.875	47.6mm	7.50	9.69	12.83	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0492197N7R02	1.937	49.2mm	7.75	9.84	12.99	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0500200N7R02	1.969	50.0mm	7.87	10.04	13.19	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0508203N7R02	2.000	50.8mm	8.00	10.24	13.39	1.500 Univ	2	2.36	3.16	SOMT15_	NA

For Lathe Use: Order Coolant Plug Separately - For 1.00" Shank, use PF-0012, For 1.25" Shank, use PF-0013, and For 1.50" Shank, use PF-0015.

HARDWARE			
	Insert Screw	Driver	Coolant Fitting
QR0143057N5R02	SM20-043-00	DS-TP06S-NEU	PF-0012
QR0150060N5R02	SM20-043-00	DS-TP06S-NEU	PF-0012
QR0159064N5R02	SM20-043-00	DS-TP06S-NEU	PF-0012
QR0167067N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0175070N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0183073N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0191076N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0198079N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0206082N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0214086N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0222089N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0230092N6R02	SM25-065-70	DS-T07S	PF-0013
QR0238095N6R02	SM25-065-70	DS-T07S	PF-0013
QR0246098N6R02	SM25-065-70	DS-T07S	PF-0013
QR0250100N6R02	SM25-065-70	DS-T07S	PF-0013
QR0254102N6R02	SM25-065-70	DS-T07S	PF-0013
QR0262105N6R02	SM25-065-70	DS-T07S	PF-0013
QR0270108N6R02	SM35-088-60	TD10	PF-0013
QR0278111N6R02	SM35-088-60	TD10	PF-0013
QR0286114N6R02	SM35-088-60	TD10	PF-0013
QR0294118N6R02	SM35-088-60	TD10	PF-0013
QR0302120N6R02	SM35-088-60	TD10	PF-0013
QR0310124N6R02	SM35-088-60	TD10	PF-0013
QR0318127N6R02	SM35-088-60	TD10	PF-0013
QR0325130N6R02	SM35-088-60	TD10	PF-0013
QR0333133N6R02	SM35-088-60	TD10	PF-0013
QR0341136N6R02	SM35-088-60	TD10	PF-0013
QR0349140N6R02	SM35-088-60	TD10	PF-0013
QR0357143N6R02	SM35-088-60	TD10	PF-0013
QR0365146N6R02	SM40-093-20	TD15	PF-0013
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QR0397159N6R02	SM40-093-20	TD15	PF-0013
QR0405162N6R02	SM40-093-20	TD15	PF-0013
QR0413165N6R02	SM40-093-20	TD15	PF-0013
QR0428171N6R02	SM40-093-20	TD15	PF-0013
QR0437175N7R02	SM50-113-20	DS-T20T	PF-0015
QR0445178N7R02	SM50-113-20	DS-T20T	PF-0015
QR0452181N7R02	SM50-113-20	DS-T20T	PF-0015
QR0460184N7R02	SM50-113-20	DS-T20T	PF-0015
QR0476190N7R02	SM50-113-20	DS-T20T	PF-0015
QR0492197N7R02	SM50-113-20	DS-T20T	PF-0015
QR0500200N7R02	SM50-113-20	DS-T20T	PF-0015
QR0508203N7R02	SM50-113-20	DS-T20T	PF-0015




QUADOTWIST™ SERIES QR INDEXABLE DRILL INCH 5:1

SQUARE INSERT INDEXABLE DRILLS - UNIVERSAL EXT. LENGTH SHANK - INCH



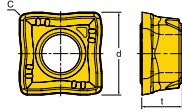
Part Number	D1 Nom. Dia. inch	D1 Nom. Dia. mm	L1 Drilling Length	L2 Ext. frm Holder	L3 Overall Length	D2 Shank Style/Size	Num of Inserts	D3 Flange Dia.	L4 Shank Length	Insert Series	Chamfer Ring
QR0143072N5R02	0.563	14.3mm	2.81	3.78	6.94	1.000 Univ	2	1.26	3.16	SOMT05_	CB140R02
QR0150075N5R02	0.591	15.0mm	2.96	4.02	7.17	1.000 Univ	2	1.26	3.16	SOMT05_	CB150R02
QR0159080N5R02	0.626	15.9mm	3.13	4.25	7.40	1.000 Univ	2	1.26	3.16	SOMT05_	CB160R02
QR0167084N5R02	0.658	16.7mm	3.29	4.45	7.60	1.000 Univ	2	1.26	3.16	SOMT06_	CB170R02
QR0175088N5R02	0.689	17.5mm	3.44	4.69	7.84	1.000 Univ	2	1.26	3.16	SOMT06_	CB180R02
QR0183092N5R02	0.721	18.3mm	3.59	4.69	7.84	1.000 Univ	2	1.26	3.16	SOMT06_	CB180R02
QR0191095N5R02	0.750	19.1mm	3.75	4.88	8.03	1.000 Univ	2	1.26	3.16	SOMT06_	CB190R02
QR0198099N5R02	0.780	19.8mm	3.91	5.16	8.31	1.000 Univ	2	1.26	3.16	SOMT07_	CB200R02
QR0206103N5R02	0.811	20.6mm	4.07	5.35	8.50	1.000 Univ	2	1.26	3.16	SOMT07_	CB210R02
QR0214107N5R02	0.843	21.4mm	4.22	5.55	8.70	1.000 Univ	2	1.26	3.16	SOMT07_	CB210R02
QR0222111N5R02	0.874	22.2mm	4.38	5.55	8.70	1.000 Univ	2	1.26	3.16	SOMT07_	CB220R02
QR0230115N6R02	0.906	23.0mm	4.53	5.91	9.06	1.250 Univ	2	1.77	3.16	SOMT08_	CB230R02
QR0238119N6R02	0.937	23.8mm	4.69	6.14	9.29	1.250 Univ	2	1.77	3.16	SOMT08_	CB240R02
QR0246123N6R02	0.969	24.6mm	4.85	6.38	9.53	1.250 Univ	2	1.77	3.16	SOMT08_	CB250R02
QR0250125N6R02	0.984	25.0mm	4.85	6.38	9.53	1.250 Univ	2	1.77	3.16	SOMT08_	CB250R02
QR0254127N6R02	1.000	25.4mm	5.00	6.57	9.72	1.250 Univ	2	1.77	3.16	SOMT08_	CB250R02
QR0262131N6R02	1.031	26.2mm	5.16	6.57	9.72	1.250 Univ	2	1.77	3.16	SOMT08_	NA
QR0270135N6R02	1.063	27.0mm	5.31	6.77	9.92	1.250 Univ	2	1.77	3.16	SOMT09_	NA
QR0278139N6R02	1.094	27.8mm	5.47	7.01	10.15	1.250 Univ	2	1.77	3.16	SOMT09_	NA
QR0286143N6R02	1.125	28.6mm	5.63	7.20	10.34	1.250 Univ	2	1.77	3.16	SOMT09_	NA
QR0294147N6R02	1.156	29.4mm	5.78	7.52	10.64	1.250 Univ	2	2.17	3.16	SOMT09_	NA
QR0302151N6R02	1.187	30.2mm	5.94	7.52	10.68	1.250 Univ	2	2.17	3.16	SOMT09_	NA
QR0310155N6R02	1.219	31.0mm	6.09	7.76	10.90	1.250 Univ	2	2.17	3.16	SOMT09_	NA
QR0318159N6R02	1.250	31.8mm	6.25	7.95	11.09	1.250 Univ	2	2.17	3.16	SOMT11_	NA
QR0325163N6R02	1.281	32.5mm	6.41	8.19	11.32	1.250 Univ	2	2.17	3.16	SOMT11_	NA
QR0333167N6R02	1.312	33.3mm	6.56	8.19	11.35	1.250 Univ	2	2.17	3.16	SOMT11_	NA
QR0341171N6R02	1.343	34.1mm	6.72	8.39	11.54	1.250 Univ	2	2.17	3.16	SOMT11_	NA
QR0349175N6R02	1.375	34.9mm	6.88	8.62	11.77	1.250 Univ	2	2.17	3.16	SOMT11_	NA
QR0357179N6R02	1.406	35.7mm	7.03	8.86	12.00	1.250 Univ	2	2.17	3.16	SOMT11_	NA
QR0365182N6R02	1.437	36.5mm	7.19	9.09	12.24	1.250 Univ	2	2.17	3.16	SOMT13_	NA
QR0373186N6R02	1.468	37.3mm	7.34	9.09	12.24	1.250 Univ	2	2.17	3.16	SOMT13_	NA
QR0381191N6R02	1.500	38.1mm	7.50	9.33	12.26	1.250 Univ	2	2.17	3.16	SOMT13_	NA
QR0389194N6R02	1.531	38.9mm	7.66	9.53	12.67	1.250 Univ	2	2.17	3.16	SOMT13_	NA
QR0397198N6R02	1.562	39.7mm	7.81	9.76	12.91	1.250 Univ	2	2.36	3.16	SOMT13_	NA
QR0405202N6R02	1.594	40.5mm	7.81	10.00	13.15	1.250 Univ	2	2.36	3.16	SOMT13_	NA
QR0413206N6R02	1.625	41.3mm	8.13	10.00	13.15	1.250 Univ	2	2.36	3.16	SOMT13_	NA
QR0428214N6R02	1.687	42.8mm	8.59	10.24	13.07	1.250 Univ	2	2.36	3.16	SOMT13_	NA
QR0437218N7R02	1.719	43.7mm	8.59	10.24	13.07	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0445222N7R02	1.750	44.5mm	8.75	10.24	13.39	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0452226N7R02	1.781	45.2mm	8.91	10.43	13.58	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0460230N7R02	1.813	46.0mm	9.06	10.63	13.78	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0476238N7R02	1.875	47.6mm	7.50	11.02	14.17	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0492246N7R02	1.937	49.2mm	9.69	11.22	14.37	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0500250N7R02	1.969	50.0mm	9.84	11.42	14.57	1.500 Univ	2	2.36	3.16	SOMT15_	NA
QR0508254N7R02	2.000	50.8mm	10.00	11.61	14.76	1.500 Univ	2	2.36	3.16	SOMT15_	NA

For Lathe Use: Order Coolant Plug Separately - For 1.00" Shank, use PF-0012, For 1.25" Shank, use PF-0013, and For 1.50" Shank, use PF-0015.

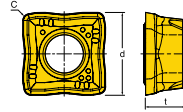
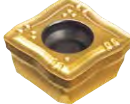
HARDWARE			
	Insert Screw	Driver	Coolant Fitting
QR0143072N5R02	SM20-043-00	DS-TP06S-NEU	PF-0012
QR0150075N5R02	SM20-043-00	DS-TP06S-NEU	PF-0012
QR0159080N5R02	SM20-043-00	DS-TP06S-NEU	PF-0012
QR0167084N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0175088N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0183092N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0191095N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0198099N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0206103N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0214107N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0222111N5R02	TS22052I/HG-P	DS-TP07S	PF-0012
QR0230115N6R02	SM25-065-70	DS-T07S	PF-0013
QR0238119N6R02	SM25-065-70	DS-T07S	PF-0013
QR0246123N6R02	SM25-065-70	DS-T07S	PF-0013
QR0250125N6R02	SM25-065-70	DS-T07S	PF-0013
QR0254127N6R02	SM25-065-70	DS-T07S	PF-0013
QR0262131N6R02	SM25-065-70	DS-T07S	PF-0013
QR0270135N6R02	SM35-088-60	TD10	PF-0013
QR0278139N6R02	SM35-088-60	TD10	PF-0013
QR0286143N6R02	SM35-088-60	TD10	PF-0013
QR0294147N6R02	SM35-088-60	TD10	PF-0013
QR0302151N6R02	SM35-088-60	TD10	PF-0013
QR0310155N6R02	SM35-088-60	TD10	PF-0013
QR0318159N6R02	SM35-088-60	TD10	PF-0013
QR0325163N6R02	SM35-088-60	TD10	PF-0013
QR0333167N6R02	SM35-088-60	TD10	PF-0013
QR0341171N6R02	SM35-088-60	TD10	PF-0013
QR0349175N6R02	SM35-088-60	TD10	PF-0013
QR0357179N6R02	SM35-088-60	TD10	PF-0013
QR0365182N6R02	SM40-093-20	TD15	PF-0013
QR0373186N6R02	SM40-093-20	TD15	PF-0013
QR0381191N6R02	SM40-093-20	TD15	PF-0013
QR0389194N6R02	SM40-093-20	TD15	PF-0013
QR0397198N6R02	SM40-093-20	TD15	PF-0013
QR0405202N6R02	SM40-093-20	TD15	PF-0013
QR0413206N6R02	SM40-093-20	TD15	PF-0013
QR0428214N6R02	SM40-093-20	TD15	PF-0013
QR0437218N7R02	SM50-113-20	DS-T20T	PF-0015
QR0445222N7R02	SM50-113-20	DS-T20T	PF-0015
QR0452226N7R02	SM50-113-20	DS-T20T	PF-0015
QR0460230N7R02	SM50-113-20	DS-T20T	PF-0015
QR0476238N7R02	SM50-113-20	DS-T20T	PF-0015
QR0492246N7R02	SM50-113-20	DS-T20T	PF-0015
QR0500250N7R02	SM50-113-20	DS-T20T	PF-0015
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QUADOTWIST™ SERIES SOMT-NG

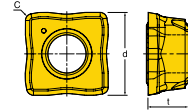
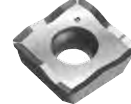
Series SOMT-NG



Series SOMT-SK



Series SOMT-HP



Part Number	d	t	C Corner	Grades				
				IN10K	IN1030	IN2505	IN2510	IN6505*
SOMT050204NG	0.193	0.094	0.016 Full Radius					●
SOMT060204NG	0.224	0.094	0.016 Full Radius					●
SOMT070306NG	0.268	0.110	0.024 Full Radius					●
SOMT08T306NG	0.311	0.156	0.024 Full Radius					●
SOMT09T308NG	0.362	0.156	0.031 Full Radius					●
SOMT11T308NG	0.433	0.156	0.031 Full Radius					●
SOMT130408NG	0.504	0.173	0.031 Full Radius					●
SOMT150510NG	0.590	0.189	0.039 Full Radius					●
SOMT050204SK	0.193	0.094	0.016 Full Radius		●	●		●
SOMT060204SK	0.224	0.094	0.016 Full Radius		●	●		●
SOMT070306SK	0.268	0.110	0.024 Full Radius		●	●		●
SOMT08T306SK	0.311	0.156	0.024 Full Radius		●	●		●
SOMT09T308SK	0.362	0.156	0.031 Full Radius		●	●		●
SOMT11T308SK	0.433	0.156	0.031 Full Radius		●	●		●
SOMT130408SK	0.504	0.173	0.031 Full Radius		●	●		●
SOMT150510SK	0.590	0.189	0.039 Full Radius		●	●		●
SOMT050204HP	0.193	0.094	0.016 Full Radius	●				
SOMT060204HP	0.224	0.094	0.016 Full Radius	●				
SOMT070306HP	0.268	0.110	0.024 Full Radius	●				
SOMT08T306HP	0.311	0.156	0.024 Full Radius	●				
SOMT09T308HP	0.362	0.156	0.031 Full Radius	●				
SOMT11T308HP	0.433	0.156	0.031 Full Radius	●				
SOMT130408HP	0.504	0.173	0.031 Full Radius	●				
SOMT150510HP	0.590	0.189	0.039 Full Radius	●				

* Grade IN6505 is only for use in the outer (peripheral) insert station.

asdf

Placeholder

● = P ○ = M ● = K ● = N ● = S ○ = H

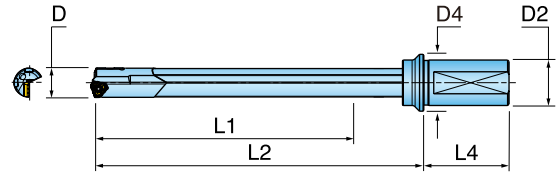
Features & Benefits:

- Indexable, 3-Edge Insert for Deep Hole Drilling
- Excellent Hole Accuracy (IT10) and Surface Finish
- Very High Feed
- Wide range of applications
- Extremely long life (3 corner insert)
- No Diameter setting necessary
- No Regrinding

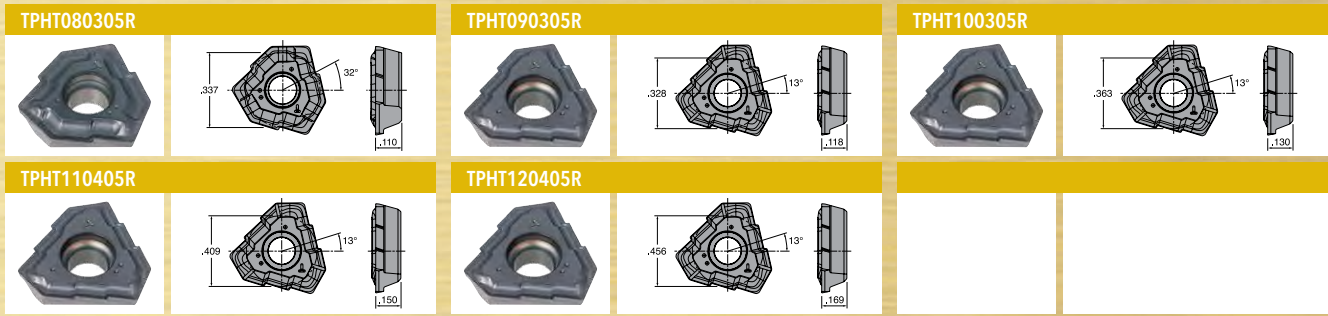
DEEPTRIO^{MC}

SERIES DEEP TRIO MC

DEEP TRIO MC INDEXABLE DEEP DRILL



Part Number	D Diameter (inch)	D Diameter (mm)	L1 DOC	L2 Ext Length	L4 Shank Length	D2 Shank Style/Size	D4 Flange Dia
GT17450175N5R01	0.687	17.5mm	7.09	9.25	2.21	1.000 Univ	1.26
GT17450262N5R01	0.687	17.5mm	10.63	12.80	2.21	1.000 Univ	1.26
GT17450436N5R01	0.687	17.5mm	17.72	19.88	2.21	1.000 Univ	1.26
GT18240182N5R01	0.718	18.2mm	7.48	9.65	2.21	1.000 Univ	1.26
GT18240274N5R01	0.718	18.2mm	11.22	13.39	2.21	1.000 Univ	1.26
GT18240456N5R01	0.718	18.2mm	18.70	20.87	2.21	1.000 Univ	1.26
GT18640186N5R01	0.734	18.6mm	7.48	9.65	2.21	1.000 Univ	1.26
GT18640280N5R01	0.734	18.6mm	11.22	13.39	2.21	1.000 Univ	1.26
GT18640466N5R01	0.734	18.6mm	18.70	20.87	2.21	1.000 Univ	1.26
GT19050191N5R01	0.750	19.1mm	7.87	10.04	2.21	1.000 Univ	1.26
GT19050286N5R01	0.750	19.1mm	11.81	13.98	2.21	1.000 Univ	1.26
GT19050476N5R01	0.750	19.1mm	19.69	21.85	2.21	1.000 Univ	1.26
GT20620206N6R01	0.812	20.6mm	8.27	10.43	2.36	1.250 Univ	1.77
GT20620309N6R01	0.812	20.6mm	12.40	14.57	2.36	1.250 Univ	1.77
GT20620516N6R01	0.812	20.6mm	20.67	22.84	2.36	1.250 Univ	1.77
GT22230222N6R01	0.875	22.2mm	8.66	10.83	2.36	1.250 Univ	1.77
GT22230333N6R01	0.875	22.2mm	13.58	16.54	2.36	1.250 Univ	1.77
GT22230556N6R01	0.875	22.2mm	22.64	25.59	2.36	1.250 Univ	1.77
GT23800238N6R01	0.937	23.8mm	9.84	12.80	2.36	1.250 Univ	1.77
GT23800357N6R01	0.937	23.8mm	14.76	17.72	2.36	1.250 Univ	1.77
GT23800595N6R01	0.937	23.8mm	24.61	27.56	2.36	1.250 Univ	1.77
GT25400254N6R01	1.000	25.4mm	11.35	13.73	2.36	1.250 Univ	1.77
GT25400381N6R01	1.000	25.4mm	15.35	18.31	2.36	1.250 Univ	1.77
GT25400635N6R01	1.000	25.4mm	27.56	28.54	2.36	1.250 Univ	1.77

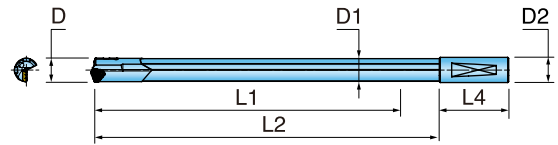


Part Number	Application	Grades	IN2005
TPHT080305R	Multi-Purpose - 0.020" R		
TPHT090305R	Multi-Purpose - 0.020" R		
TPHT100305R	Multi-Purpose - 0.020" R		
TPHT110405R	Multi-Purpose - 0.020" R		
TPHT120405R	Multi-Purpose - 0.020" R		

HARDWARE			
	Insert Screw	Guide Pad Screw	Guide Pad
GT17450175N5R01	SR14-560/S	SR34-508	PAD-G006-075CD-SB
GT17450262N5R01	SR14-560/S	SR34-508	PAD-G006-075CD-SB
GT17450436N5R01	SR14-560/S	SR34-508	PAD-G006-075CD-SB
GT18240182N5R01	SR14-560/S	SR34-508	PAD-G006-085CD-SB
GT18240274N5R01	SR14-560/S	SR34-508	PAD-G006-085CD-SB
GT18240456N5R01	SR14-560/S	SR34-508	PAD-G006-085CD-SB
GT18640186N5R01	SR14-560/S	SR34-508	PAD-G006-085CD-SB
GT18640280N5R01	SR14-560/S	SR34-508	PAD-G006-085CD-SB
GT18640466N5R01	SR14-560/S	SR34-508	PAD-G006-085CD-SB
GT19050191N5R01	SR14-560/S	SR34-508	PAD-G006-085CD-SB
GT19050286N5R01	SR14-560/S	SR34-508	PAD-G006-085CD-SB
GT19050476N5R01	SR14-560/S	SR34-508	PAD-G006-085CD-SB
GT20620206N6R01	SR34-506	SR34-508	PAD-G006-085CD-SB
GT20620309N6R01	SR34-506	SR34-508	PAD-G006-085CD-SB
GT20620516N6R01	SR34-506	SR34-508	PAD-G006-085CD-SB
GT22230222N6R01	SR14-571/S	SR34-508	PAD-G006-100CD-SB
GT22230333N6R01	SR14-571/S	SR34-508	PAD-G006-100CD-SB
GT22230556N6R01	SR14-571/S	SR34-508	PAD-G006-100CD-SB
GT23800238N6R01	SR14-571/S	SR34-508	PAD-G006-100CD-SB
GT23800357N6R01	SR14-571/S	SR34-508	PAD-G006-100CD-SB
GT23800595N6R01	SR14-571/S	SR34-508	PAD-G006-100CD-SB
GT25400254N6R01	SR14-506	SR34-508	PAD-G006CD-SB
GT25400381N6R01	SR14-506	SR34-508	PAD-G006CD-SB
GT25400635N6R01	SR14-506	SR34-508	PAD-G006CD-SB

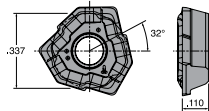
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DEEP TRIO GD INDEXABLE GUN DRILL

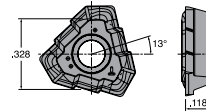


Part Number	D Diameter (inch)	D Diameter (mm)	L1 DOC (mm)	L2 Ext Length	D2 Shank Style/Size	L4 Shank Length
GT-1600-0800-58-R01	0.630	16.0mm	28.34	29.29	1.000 Universal	2.21
GT-1745-1500-58-R01	0.687	17.5mm	55.81	56.79	1.000 Universal	2.21
GT-1824-1500-58-R01	0.718	18.2mm	55.81	56.73	1.000 Universal	2.21
GT-1864-1500-58-R01	0.734	18.6mm	55.81	55.73	1.000 Universal	2.21
GT-1905-1500-58-R01	0.750	19.1mm	55.69	55.73	1.000 Universal	2.21
GT-2062-1500-59-R01	0.812	20.6mm	55.46	55.73	1.250 Universal	2.36
GT-2223-1500-59-R01	0.875	22.2mm	55.34	55.73	1.250 Universal	2.36
GT-2380-1500-59-R01	0.937	23.8mm	55.30	55.73	1.250 Universal	2.36
GT-2540-1500-59-R01	1.000	25.4mm	55.18	55.73	1.250 Universal	2.36

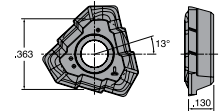
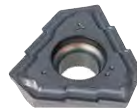
TPHT080305R



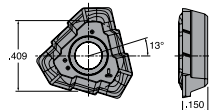
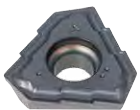
TPHT090305R



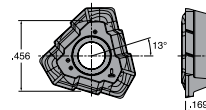
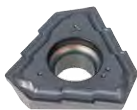
TPHT100305R



TPHT110405R



TPHT120405R



Part Number	Application	Grades	IN2005
TPHT080305R	Multi-Purpose - 0.020" R		
TPHT090305R	Multi-Purpose - 0.020" R		
TPHT100305R	Multi-Purpose - 0.020" R		
TPHT110405R	Multi-Purpose - 0.020" R		
TPHT120405R	Multi-Purpose - 0.020" R		

HARDWARE



Insert Screw



Guide Pad Screw



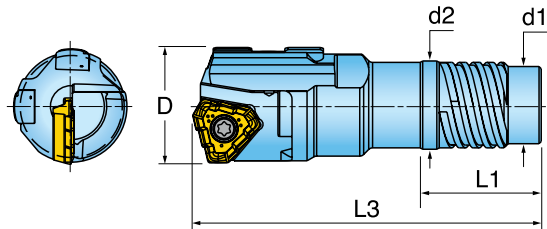
Guide Pad

GT-1600-0800-58-R01	SR14-560/S	SR34-508	PAD-G006-075CD-SB
GT-1745-1500-58-R01	SR14-560/S	SR34-508	PAD-G006-075CD-SB
GT-1824-1500-58-R01	SR14-560/S	SR34-508	PAD-G006-085CD-SB
GT-1864-1500-58-R01	SR14-560/S	SR34-508	PAD-G006-085CD-SB
GT-1905-1500-58-R01	SR14-560/S	SR34-508	PAD-G006-085CD-SB
GT-2062-1500-59-R01	SR34-506	SR34-508	PAD-G006-085CD-SB
GT-2223-1500-59-R01	SR14-571/S	SR34-508	PAD-G006-100CD-SB
GT-2380-1500-59-R01	SR14-571/S	SR34-508	PAD-G006-100CD-SB
GT-2540-1500-59-R01	SR14-506	SR34-508	PAD-G006CD-SB

● = P ● = M ● = K ● = N ● = S ○ = H

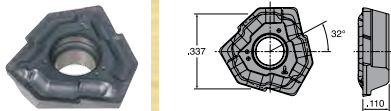
DEEP TRIO BTA™ SERIES DEEP TRIO BTA - SE4

DEEP TRIO BTA INDEXABLE DRILL HEAD

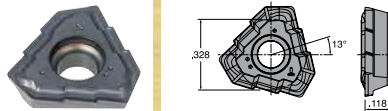


Part Number	D Diameter (inch)	D Diameter (mm)	L3 Overall Length	L1 Thread Length	d1 Pilot Dia	d2 Pilot Dia 2	Tube	Tube Dia
TBTA-DT.630SE4-14	0.630	16.0mm	2.17	0.79	0.43	0.50	BTSI014	0.55
TBTA-DT.687SE4-15	0.687	17.5mm	2.17	0.79	0.47	0.54	BTSI015	0.59
TBTA-DT.718SE4-16	0.718	18.2mm	2.21	0.85	0.49	0.57	BTSI016	0.63
TBTA-DT.734SE4-16	0.734	18.6mm	2.21	0.85	0.49	0.57	BTSI016	0.63
TBTA-DT.750SE4-17	0.750	19.1mm	2.32	0.85	0.53	0.61	BTSI017	0.67
TBTA-DT.812SE4-18	0.812	20.6mm	2.36	0.85	0.55	0.63	BTSI018	0.71
TBTA-DT.813SE4-18	0.813	20.7mm	2.36	0.85	0.55	0.63	BTSI018	0.71
TBTA-DT.875SE4-20	0.875	22.2mm	2.58	0.85	0.63	0.71	BTSI020	0.79
TBTA-DT.937SE4-20	0.937	23.8mm	2.58	0.85	0.63	0.71	BTSI020	0.79
TBTA-DT1.000SE4-22	1.000	25.4mm	2.58	0.85	0.59	0.77	BTSI022	0.87

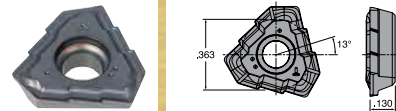
TPHT080305R



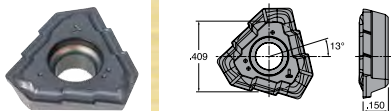
TPHT090305R



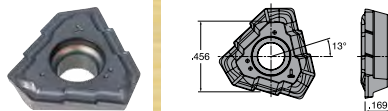
TPHT100305R



TPHT110405R



TPHT120405R



Part Number	Application	Grades	IN2005
TPHT080305R	Multi-Purpose - 0.020" R		
TPHT090305R	Multi-Purpose - 0.020" R		
TPHT100305R	Multi-Purpose - 0.020" R		
TPHT110405R	Multi-Purpose - 0.020" R		
TPHT120405R	Multi-Purpose - 0.020" R		

HARDWARE



Insert Screw



Guide Pad Screw

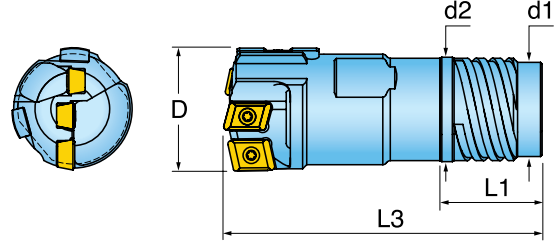


Guide Pad

TBTA-DT.630SE4-14	SR14-560/S	SR34-508	PAD-G006-075CD-SB
TBTA-DT.687SE4-15	SR14-560/S	SR34-508	PAD-G006-075CD-SB
TBTA-DT.718SE4-16	SR14-560/S	SR34-508	PAD-G006-085CD-SB
TBTA-DT.734SE4-16	SR14-560/S	SR34-508	PAD-G006-085CD-SB
TBTA-DT.750SE4-17	SR14-560/S	SR34-508	PAD-G006-085CD-SB
TBTA-DT.812SE4-18	SR34-506	SR34-508	PAD-G006-085CD-SB
TBTA-DT.813SE4-18	SR34-506	SR34-508	PAD-G006-085CD-SB
TBTA-DT.875SE4-20	SR14-571/S	SR34-508	PAD-G006-100CD-SB
TBTA-DT.937SE4-20	SR14-571/S	SR34-508	PAD-G006-100CD-SB
TBTA-DT1.000SE4-22	SR14-506	SR34-508	PAD-G006CD-SB

● = P ● = M ● = K ● = N ● = S ○ = H

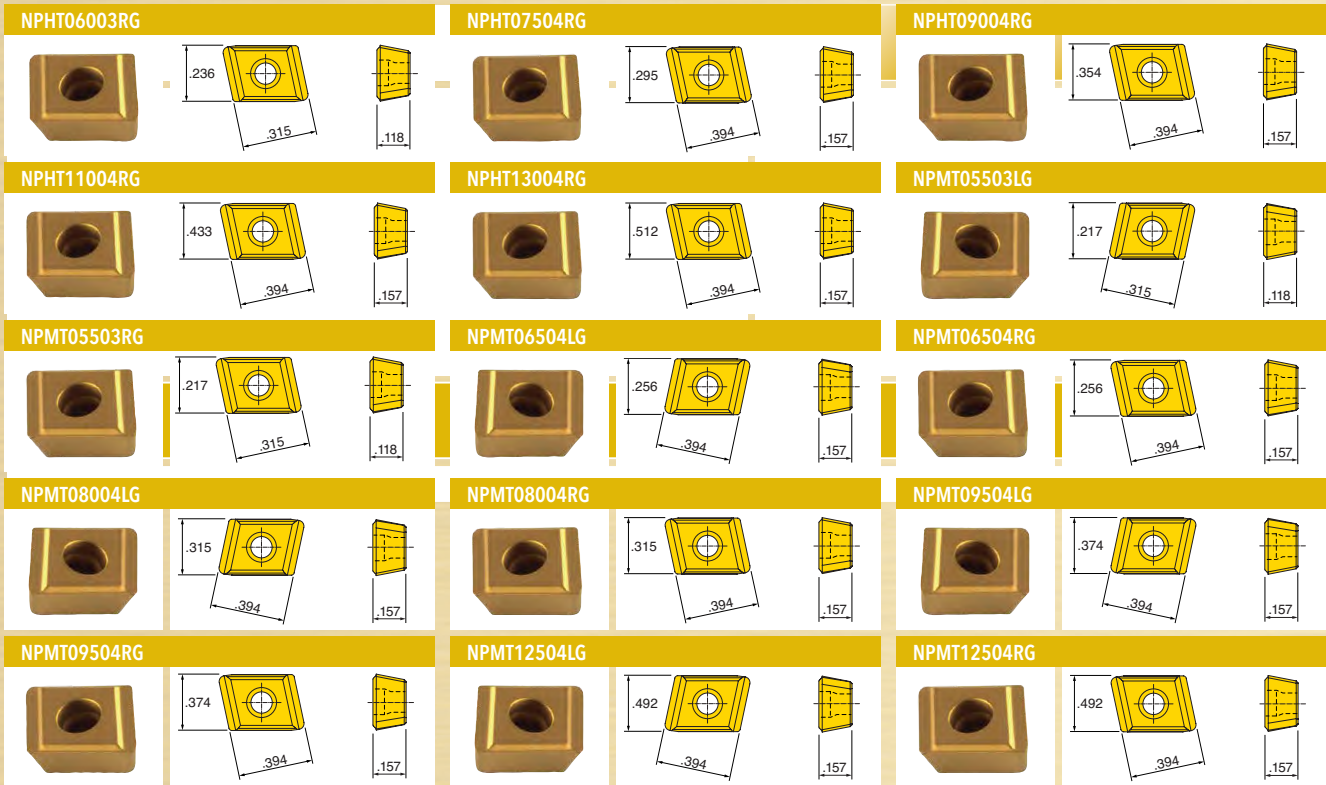
BTA INDEXABLE






Part Number	D Diameter (inch)	D Diameter (mm)	L3 Overall Length	L1 Thread Length	d1 Pilot Dia	d2 Pilot Dia 2	Tube	Tube Dia
TBTA-H.984SE4-22	0.984	25.0mm	2.76	0.85	0.69	0.77	BTSI022	0.87
TBTA-H1.000SE4-22	1.000	25.4mm	2.76	0.85	0.69	0.77	BTSI022	0.87
TBTA-H1.024SE4-22	1.024	26.0mm	2.76	0.85	0.69	0.77	BTSI022	0.87
TBTA-H1.062SE4-24	1.062	27.0mm	2.76	0.85	0.75	0.83	BTSI024	0.95
TBTA-H1.102SE4-24	1.102	28.0mm	2.76	0.85	0.75	0.83	BTSI024	0.95
TBTA-H1.114SE4-24	1.114	28.3mm	2.76	0.85	0.75	0.83	BTSI024	0.95
TBTA-H1.125SE4-24	1.125	28.6mm	2.76	0.85	0.75	0.83	BTSI024	0.95
TBTA-H1.156SE4-26	1.156	29.4mm	2.95	0.96	0.83	0.93	BTSI026	1.02
TBTA-H1.187SE4-26	1.187	30.2mm	2.95	0.96	0.83	0.93	BTSI026	1.02
TBTA-H1.193SE4-26	1.193	30.3mm	2.95	0.96	0.83	0.93	BTSI026	1.02
TBTA-H1.218SE4-26	1.218	30.9mm	2.95	0.96	0.83	0.93	BTSI026	1.02
TBTA-H1.235SE4-28	1.235	31.4mm	2.95	0.96	0.91	1.00	BTSI028	1.10
TBTA-H1.245SE4-28	1.245	31.6mm	2.95	0.96	0.91	1.00	BTSI028	1.10
TBTA-H1.250SE4-28	1.250	31.8mm	2.95	0.96	0.91	1.00	BTSI028	1.10
TBTA-H1.260SE4-28	1.260	32.0mm	2.95	0.96	0.91	1.00	BTSI028	1.10
TBTA-H1.299SE4-28	1.299	33.0mm	2.95	0.96	0.91	1.00	BTSI028	1.10
TBTA-H1.312SE4-30	1.312	33.3mm	3.15	0.96	1.00	1.10	BTSI030	1.18
TBTA-H1.375SE4-30	1.375	34.9mm	3.15	0.96	1.00	1.10	BTSI030	1.18
TBTA-H1.378SE4-30	1.378	35.0mm	3.15	0.96	1.00	1.10	BTSI030	1.18
TBTA-H1.417SE4-30	1.417	36.0mm	3.15	0.96	1.00	1.10	BTSI030	1.18
TBTA-H1.437SE4-33	1.437	36.5mm	3.54	1.20	1.06	1.18	BTSI033	1.30
TBTA-H1.496SE4-33	1.496	38.0mm	3.54	1.20	1.06	1.18	BTSI033	1.30
TBTA-H1.500SE4-33	1.500	38.1mm	3.54	1.20	1.06	1.18	BTSI033	1.30
TBTA-H1.562SE4-36	1.562	39.7mm	3.74	1.20	1.18	1.30	BTSI036	1.42
TBTA-H1.575SE4-36	1.575	40.0mm	3.74	1.20	1.18	1.30	BTSI036	1.42
TBTA-H1.594SE4-36	1.594	40.5mm	3.74	1.20	1.18	1.30	BTSI036	1.42
TBTA-H1.625SE4-36	1.625	41.3mm	3.74	1.20	1.18	1.30	BTSI036	1.42
TBTA-H1.687SE4-36	1.687	42.9mm	3.74	1.20	1.18	1.30	BTSI036	1.42
TBTA-H1.725SE4-39	1.725	43.8mm	3.94	1.20	1.30	1.42	BTSI039	1.54
TBTA-H1.732SE4-39	1.732	44.0mm	3.94	1.20	1.30	1.42	BTSI039	1.54
TBTA-H1.750SE4-39	1.750	44.5mm	3.94	1.20	1.30	1.42	BTSI039	1.54
TBTA-H1.812SE4-39	1.812	46.0mm	3.94	1.20	1.30	1.42	BTSI039	1.54
TBTA-H1.875SE4-43	1.875	47.6mm	3.94	1.20	1.42	1.54	BTSI043	1.69
TBTA-H1.890SE4-43	1.890	48.0mm	3.94	1.20	1.42	1.54	BTSI043	1.69
TBTA-H1.905SE4-43	1.905	48.4mm	3.94	1.20	1.42	1.54	BTSI043	1.69
TBTA-H1.929SE4-43	1.929	49.0mm	3.94	1.20	1.42	1.54	BTSI043	1.69
TBTA-H1.937SE4-43	1.937	49.2mm	3.94	1.20	1.42	1.54	BTSI043	1.69
TBTA-H1.940SE4-43	1.940	49.3mm	3.94	1.20	1.42	1.54	BTSI043	1.69

Part Number	D Diameter (inch)	D Diameter (mm)	L Overall Length	L1 Thread Length	d1 Pilot Dia	d2 Pilot Dia 2	Tube	Tube Dia
TBTA-H1.945SE4-43	1.945	49.4mm	3.94	1.20	1.42	1.54	BTSI043	1.69
TBTA-H1.949SE4-43	1.949	49.5mm	3.94	1.20	1.42	1.54	BTSI043	1.69
TBTA-H1.965SE4-43	1.965	49.9mm	3.94	1.20	1.42	1.54	BTSI043	1.69
TBTA-H1.969SE4-43	1.969	50.0mm	3.94	1.20	1.42	1.54	BTSI043	1.69
TBTA-H1.985SE4-43	1.985	50.4mm	3.94	1.20	1.42	1.54	BTSI043	1.69
TBTA-H2.000SE4-43	2.000	50.8mm	3.94	1.20	1.42	1.54	BTSI043	1.69
TBTA-H2.062SE4-47	2.062	52.4mm	4.33	1.36	1.56	1.69	BTSI047	1.85
TBTA-H2.125SE4-47	2.125	54.0mm	4.33	1.36	1.56	1.69	BTSI047	1.85
TBTA-H2.126SE4-47	2.126	54.0mm	4.33	1.36	1.56	1.69	BTSI047	1.85
TBTA-H2.187SE4-47	2.187	55.6mm	4.33	1.36	1.56	1.69	BTSI047	1.85
TBTA-H2.250SE4-51	2.250	57.2mm	4.53	1.36	1.71	1.85	BTSI051	2.01
TBTA-H2.283SE4-51	2.283	58.0mm	4.53	1.36	1.71	1.85	BTSI051	2.01
TBTA-H2.312SE4-51	2.312	58.7mm	4.53	1.36	1.71	1.85	BTSI051	2.01
TBTA-H2.335SE4-51	2.335	59.3mm	4.53	1.36	1.71	1.85	BTSI051	2.01
TBTA-H2.350SE4-51	2.350	59.7mm	4.53	1.36	1.71	1.85	BTSI051	2.01
TBTA-H2.362SE4-51	2.362	60.0mm	4.53	1.36	1.71	1.85	BTSI051	2.01
TBTA-H2.375SE4-51	2.375	60.3mm	4.53	1.36	1.71	1.85	BTSI051	2.01
TBTA-H2.380SE4-51	2.380	60.5mm	4.53	1.36	1.71	1.85	BTSI051	2.01
TBTA-H2.405SE4-56A	2.405	61.1mm	4.53	1.36	1.87	2.01	BTSI056A	2.21
TBTA-H2.437SE4-56A	2.437	61.9mm	4.53	1.36	1.87	2.01	BTSI056A	2.21
TBTA-H2.441SE4-56A	2.441	62.0mm	4.53	1.36	1.87	2.01	BTSI056A	2.21
TBTA-H2.500SE4-56A	2.500	63.5mm	4.53	1.36	1.87	2.01	BTSI056A	2.21
TBTA-H2.559SE4-56A	2.559	65.0mm	4.53	1.36	1.87	2.01	BTSI056A	2.21




BTA DRILL SERIES NPHT, NPMT INSERTS



Part Number	Application	Station	Grades		
			IN1510	IN2005	IN6542
NPHT06003RG	Multi-Purpose	Outer	●	●	
NPMT05503LG	Multi-Purpose	Center	●	●	
NPMT05503RG	Multi-Purpose	Inner	●	●	
NPMT06504LG	Multi-Purpose	Center	●	●	●
NPHT07504RG	Multi-Purpose	Outer	●	●	
NPMT06504RG	Multi-Purpose	Inner	●	●	●
NPMT08004LG	Multi-Purpose	Center	●	●	●
NPHT09004RG	Multi-Purpose	Outer	●	●	
NPMT08004RG	Multi-Purpose	Inner	●	●	●
NPMT09504LG	Multi-Purpose	Center	●	●	●
NPHT11004RG	Multi-Purpose	Outer	●	●	
NPMT09504RG	Multi-Purpose	Inner	●	●	●
NPMT12504LG	Multi-Purpose	Center	●	●	●
NPHT13004RG	Multi-Purpose	Outer	●	●	
NPMT12504RG	Multi-Purpose	Inner	●	●	●

HARDWARE			
	Insert Screw	Guide Pad Screw	Guide Pad
TBTA-H.984SE4-22	CSTB2.2	CSTB2.2S	PAD-G006CD-SB
TBTA-H1.000SE4-22	CSTB2.2	CSTB2.2S	PAD-G006CD-SB
TBTA-H1.024SE4-22	CSTB2.2	CSTB2.2S	PAD-G006CD-SB
TBTA-H1.062SE4-24	CSTB2.2	CSTB2.2S	PAD-G006CD-SB
TBTA-H1.102SE4-24	CSTB2.2	CSTB2.2S	PAD-G006CD-SB
TBTA-H1.114SE4-24	CSTB2.2	CSTB2.2S	PAD-G006CD-SB
TBTA-H1.125SE4-24	CSTB2.2	CSTB2.2S	PAD-G006CD-SB

● = P ○ = M ● = K ● = N ● = S ○ = H

HARDWARE			
	Insert Screw	Guide Pad Screw	Guide Pad
TBTA-H1.156SE4-26	CSTB2.2	CSTB2.2S	PAD-GO06CD-SB
TBTA-H1.187SE4-26	CSTB2.5	CSTB3S	PAD-GO07CD-SB
TBTA-H1.193SE4-26	CSTB2.5	CSTB3S	PAD-GO07CD-SB
TBTA-H1.218SE4-26	CSTB2.5	CSTB3S	PAD-GO07CD-SB
TBTA-H1.235SE4-28	CSTB2.5	CSTB3S	PAD-GO07CD-SB
TBTA-H1.245SE4-28	CSTB2.5	CSTB3S	PAD-GO07CD-SB
TBTA-H1.250SE4-28	CSTB2.5	CSTB3S	PAD-GO07CD-SB
TBTA-H1.260SE4-28	CSTB2.5	CSTB3S	PAD-GO07CD-SB
TBTA-H1.299SE4-28	CSTB2.5	CSTB3S	PAD-GO07CD-SB
TBTA-H1.312SE4-30	CSTB2.5	CSTB3S	PAD-GO07CD-SB
TBTA-H1.375SE4-30	CSTB2.5	CSTB3S	PAD-GO07CD-SB
TBTA-H1.378SE4-30	CSTB2.5	CSTB3S	PAD-GO07CD-SB
TBTA-H1.417SE4-30	CSTB2.5	CSTB3S	PAD-GO07CD-SB
TBTA-H1.437SE4-33	CSTB2.5	CSTB3S	PAD-GO07CD-SB
TBTA-H1.496SE4-33	CSTB2.5	CSTB3S	PAD-GO07CD-SB
TBTA-H1.500SE4-33	CSTB2.5	CSTB3S	PAD-GO07CD-SB
TBTA-H1.562SE4-36	CSTB2.5	CSTB3S	PAD-GO08CD-SB-FB
TBTA-H1.575SE4-36	CSTB2.5	CSTB3S	PAD-GO08CD-SB-FB
TBTA-H1.594SE4-36	CSTB2.5	CSTB3S	PAD-GO08CD-SB-FB
TBTA-H1.625SE4-36	CSTB2.5	CSTB3S	PAD-GO08CD-SB-FB
TBTA-H1.687SE4-36	CSTB2.5	CSTB3S	PAD-GO08CD-SB-FB
TBTA-H1.725SE4-39	CSTB2.5	CSTB3S	PAD-GO08CD-SB-FB
TBTA-H1.732SE4-39	CSTB2.5	CSTB3S	PAD-GO08CD-SB-FB
TBTA-H1.750SE4-39	CSTB2.5	CSTB3S	PAD-GO08CD-SB-FB
TBTA-H1.812SE4-39	CSTB2.5	CSTB3.5	PAD-GO10CD-SB
TBTA-H1.875SE4-43	CSTB2.5	CSTB3.5	PAD-GO10CD-SB
TBTA-H1.890SE4-43	CSTB2.5	CSTB3.5	PAD-GO10CD-SB
TBTA-H1.905SE4-43	CSTB2.5	CSTB3.5	PAD-GO10CD-SB
TBTA-H1.929SE4-43	CSTB2.5	CSTB3.5	PAD-GO10CD-SB
TBTA-H1.937SE4-43	CSTB2.5	CSTB3.5	PAD-GO10CD-SB
TBTA-H1.940SE4-43	CSTB2.5	CSTB3.5	PAD-GO10CD-SB
TBTA-H1.945SE4-43	CSTB2.5	CSTB3.5	PAD-GO10CD-SB
TBTA-H1.949SE4-43	CSTB2.5	CSTB3.5	PAD-GO10CD-SB
TBTA-H1.965SE4-43	CSTB2.5	CSTB3.5	PAD-GO10CD-SB
TBTA-H1.969SE4-43	CSTB2.5	CSTB3.5	PAD-GO10CD-SB
TBTA-H1.985SE4-43	CSTB2.5	CSTB3.5	PAD-GO10CD-SB
TBTA-H2.000SE4-43	CSTB2.5	CSTB3.5	PAD-GO10CD-SB
TBTA-H2.062SE4-47	CSTB2.5	CSTB3.5	PAD-GO10CD-SB
TBTA-H2.125SE4-47	CSTB2.5	CSTB3.5	PAD-GO10CD-SB
TBTA-H2.126SE4-47	CSTB2.5	CSTB3.5	PAD-GO10CD-SB
TBTA-H2.187SE4-47	CSTB2.5	CSTB3.5	PAD-GO10CD-SB
TBTA-H2.250SE4-51	CSTB2.5	CSTB3.5	PAD-GO12CD-SB
TBTA-H2.283SE4-51	CSTB2.5	CSTB3.5	PAD-GO12CD-SB
TBTA-H2.312SE4-51	CSTB2.5	CSTB3.5	PAD-GO12CD-SB
TBTA-H2.335SE4-51	CSTB2.5	CSTB3.5	PAD-GO12CD-SB
TBTA-H2.350SE4-51	CSTB2.5	CSTB3.5	PAD-GO12CD-SB
TBTA-H2.362SE4-51	CSTB2.5	CSTB3.5	PAD-GO12CD-SB
TBTA-H2.375SE4-51	CSTB2.5	CSTB3.5	PAD-GO12CD-SB
TBTA-H2.380SE4-51	CSTB2.5	CSTB3.5	PAD-GO12CD-SB
TBTA-H2.405SE4-56A	CSTB2.5	CSTB3.5	PAD-GO12CD-SB
TBTA-H2.437SE4-56A	CSTB2.5	CSTB3.5	PAD-GO12CD-SB
TBTA-H2.441SE4-56A	CSTB2.5	CSTB3.5	PAD-GO12CD-SB
TBTA-H2.500SE4-56A	CSTB2.5	CSTB3.5	PAD-GO12CD-SB
TBTA-H2.559SE4-56A	CSTB2.5	CSTB3.5	PAD-GO12CD-SB

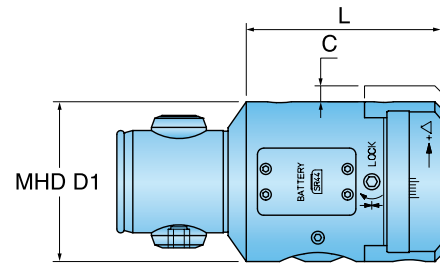
D'ANDREA Digital Fine Boring Heads

Features & Benefits:

- Zero backlash compensation
- Single button operation for functions 'On', 'Reset', and to change between inch and metric
- Display resolution .0001" (.002mm)
- Energy saving function. Display switches off automatically after 30 seconds and stores last display value
- Internal coolant thru
- High level of resistance to dust and water rated at IP67

D'ANDREA SERIES TRE

DIGITAL DISPLAY FINE BORING HEAD



Item Description 1	Item Description 2	Bore Dia Range	MHD D1	L	C	Cartridge Type	Accepts SFTP Cart	Accepts SFCC Cart	Weight (lb)
TRE50	455200500500	.098" - 4.330"	50	2.401	0.197	SF.. 50	Yes	Yes	2.425
TRE63	455200630630	.236" - 4.921"	63	2.736	0.197	SF.. 50	Yes	Yes	4.850
TRE80	455200800800	.236" - 7.874"	80	3.327	0.197	SF.. 50	Yes	Yes	8.600



GOLD RHINO Same Performance at a Lower Price!

SMALL inserts with superior durability and the **SAME THICKNESS** as ISO inserts



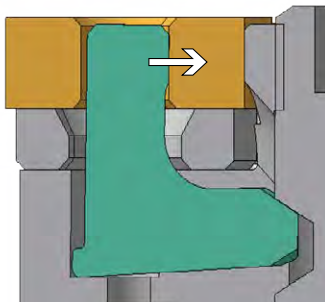
Current trends in manufacturing feature work piece components with reduced stock conditions due to improved casting and forging technology. In these cases, depths of cut in rough turning are predominantly in the range of .040"~.080" per side, rendering conventional ISO turning inserts with .500" long cutting edges inefficient due to their disproportionate size. With an eye toward cost reduction, Ingersoll is pleased to launch Gold-Rhino, a series of smaller, but robust, ISO turning inserts to meet the manufacturing industry's needs of reduced machining costs and increased competitiveness.

Clamp Features

- Exceptionally stable machining due to multi-directional clamping forces over the existing conventional ISO lever holder's single direction clamping force
- Excellent productivity and longer, stable tool life in high feed turning applications
- Optimal performance in interrupted cutting on weak/old machine set-ups

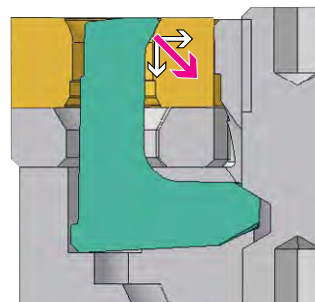
Conventional ISO clamping structure

Single directional clamping force



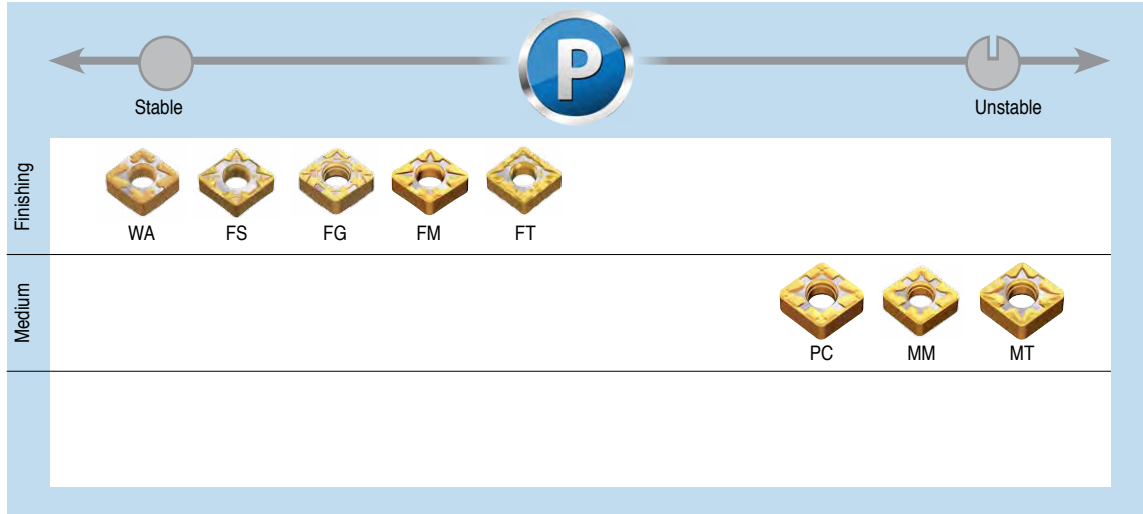
GOLD RHINO clamping structure

Multi-directional clamping forces

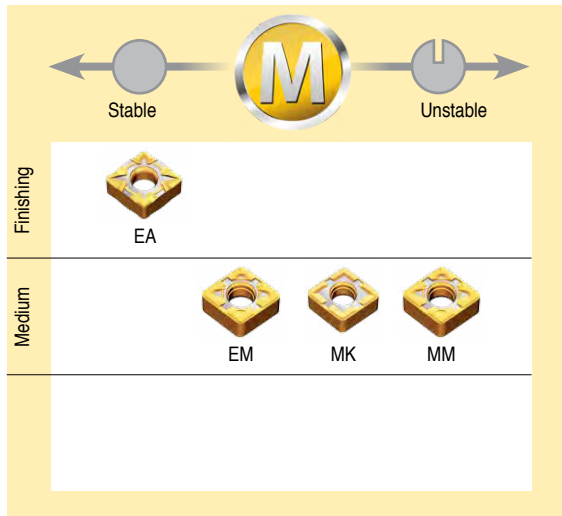


Geometry recommendations for GOLD RHINO (Negative)

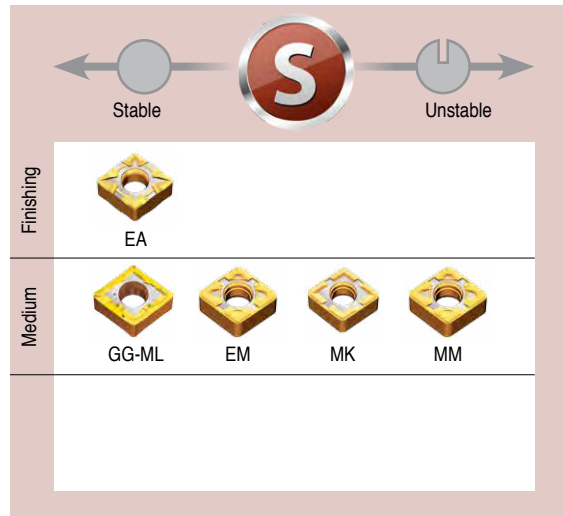
Steel



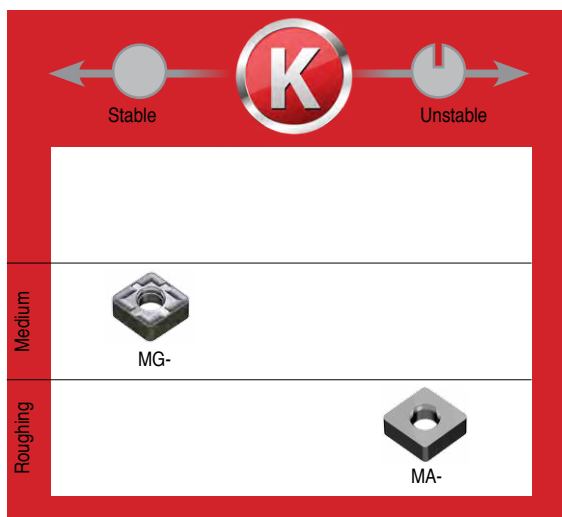
Stainless Steel



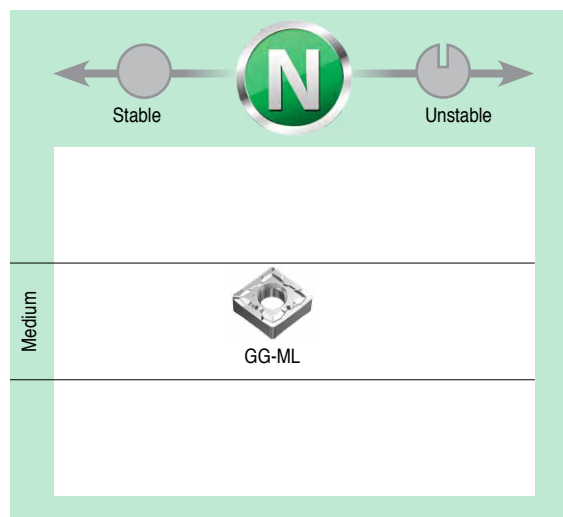
High Temp. Alloys



Cast Iron

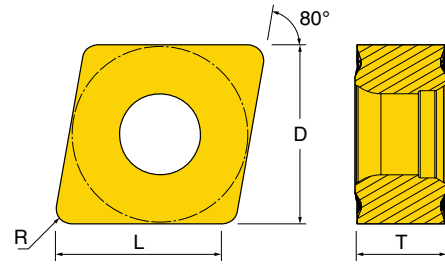
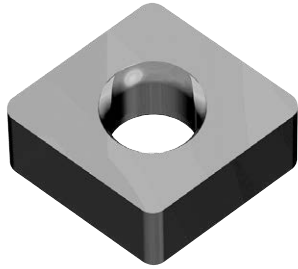


Non-ferrous



GOLD RHINO SERIES CNMA FLAT TOP

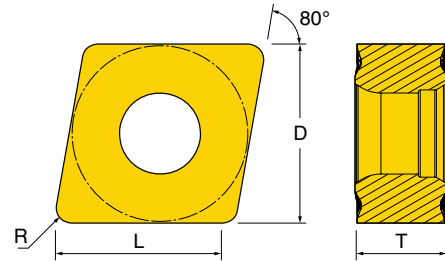
NEGATIVE 80° RHOMBIC FLAT TOP INSERTS FOR ROUGHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT7005	TT7015
CNMA332	CNMA090408	.006	.024	.039	.157	.346	.375	.187	.031		●	●
CNMA333	CNMA090412	.006	.028	.039	.157	.332	.375	.187	.047		●	●

GOLD RHINO SERIES CNMG EA CHIPBREAKER

NEGATIVE 80° RHOMBIC INSERTS FOR SUPER FINISHING

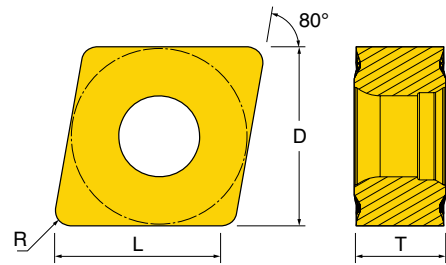
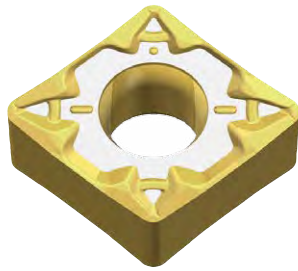


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5080	TT9080	TT9215	TT9225	TT9235
CNMG331EA	CNMG090404EA	.002	.012	.012	.060	.362	.375	.187	.016		●	●	●	●	●
CNMG332EA	CNMG090408EA	.003	.020	.012	.060	.346	.375	.187	.031		●	●	●	●	●

● = P ○ = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES CNMG FS CHIPBREAKER

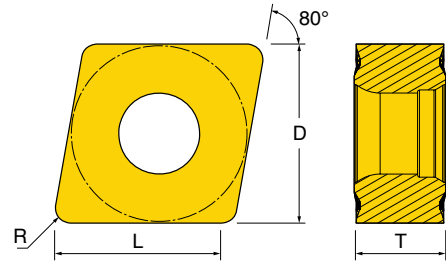
NEGATIVE 80° RHOMBIC INSERTS FOR SUPER FINISHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	PV3010	TT8115	TT8125
CNMG330.5FS	CNMG090402FS	.002	.010	.008	.060	.374	.375	.187	.008		●	●	●	●
CNMG331FS	CNMG090404FS	.003	.012	.012	.060	.362	.375	.187	.016		●	●	●	●
CNMG332FS	CNMG090408FS	.004	.012	.020	.060	.346	.375	.187	.031		●	●	●	●

GOLD RHINO SERIES CNMG FG CHIPBREAKER

NEGATIVE 80° RHOMBIC INSERTS FOR FINISHING

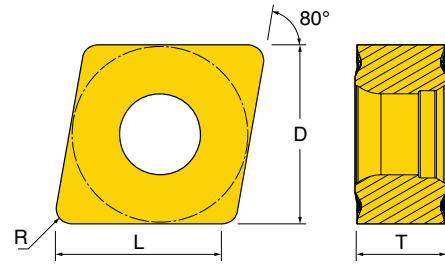


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5100	TT8115	TT8125
CNMG331FG	CNMG090404FG	.003	.012	.008	.080	.362	.375	.187	.016		●	●	●
CNMG332FG	CNMG090408FG	.004	.014	.020	.080	.346	.375	.187	.031		●	●	●
CNMG333FG	CNMG090412FG	.006	.016	.020	.080	.332	.375	.187	.047		●	●	●

● = P ○ = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES CNMG FM CHIPBREAKER

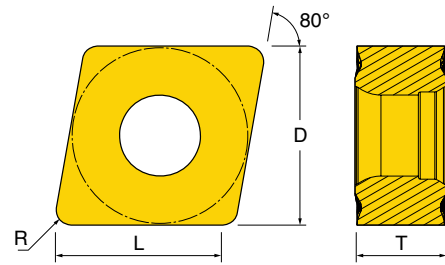
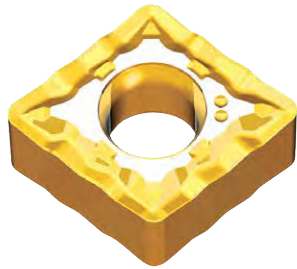
NEGATIVE 80° RHOMBIC INSERTS FOR FINISHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	TT5100	TT8105	TT8115	TT8125	TT8135
CNMG331FM	CNMG090404FM	.003	.012	.010	.080	.362	.375	.187	.016	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●
CNMG332FM	CNMG090408FM	.004	.014	.012	.080	.346	.375	.187	.031	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●
CNMG333FM	CNMG090412FM	.006	.016	.014	.080	.332	.375	.187	.047	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●

GOLD RHINO SERIES CNMG FT CHIPBREAKER

NEGATIVE 80° RHOMBIC INSERTS FOR MEDIUM

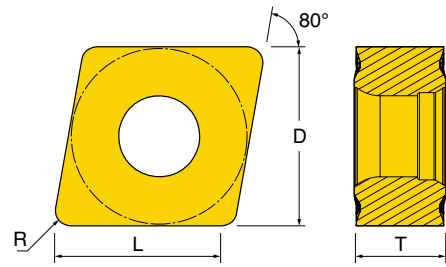
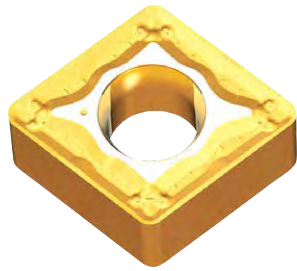


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5100	TT8105	TT8115	TT8125	TT8135
CNMG331FT	CNMG090404FT	.003	.012	.016	.125	.362	.375	.187	.016	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●
CNMG332FT	CNMG090408FT	.004	.016	.020	.125	.346	.375	.187	.031	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●
CNMG333FT	CNMG090412FT	.006	.020	.024	.125	.332	.375	.187	.047	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●

● = P ○ = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES CNMG PC CHIPBREAKER

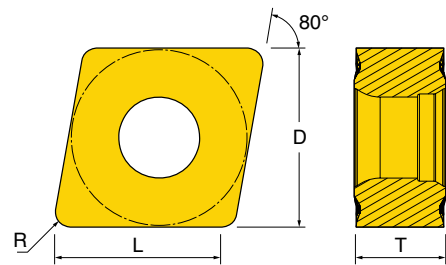
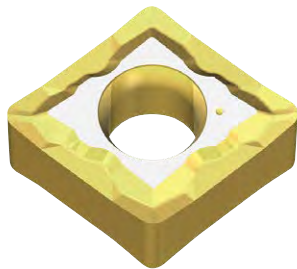
NEGATIVE 80° RHOMBIC INSERTS FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5100	TT8105	TT8115	TT8125	TT8135
CNMG331PC	CNMG090404PC	.004	.012	.016	.125	.362	.375	.187	.016						
CNMG332PC	CNMG090408PC	.006	.016	.020	.125	.346	.375	.187	.031						
CNMG333PC	CNMG090412PC	.007	.020	.024	.125	.332	.375	.187	.047						

GOLD RHINO SERIES CNGG ML CHIPBREAKER

NEGATIVE 80° RHOMBIC GROUND INSERTS FOR MEDIUM

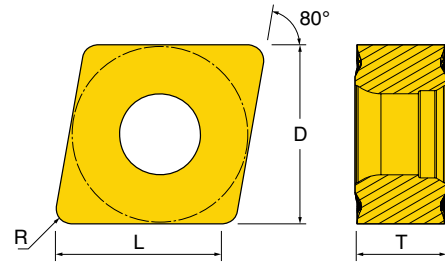
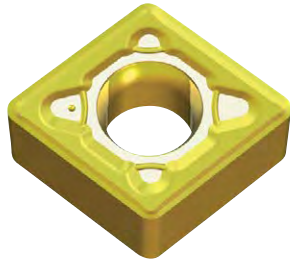


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	K10	TT5080
CNGG330ML	CNGG090401ML	.001	.004	.004	.040	.378	.375	.187	.004			
CNGG330.5ML	CNGG090402ML	.002	.006	.008	.047	.374	.375	.187	.008			
CNGG331ML	CNGG090404ML	.004	.012	.031	.118	.362	.375	.187	.016			
CNGG332ML	CNGG090408ML	.005	.014	.039	.118	.346	.375	.187	.031			

● = P ○ = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES CNMG EM CHIPBREAKER

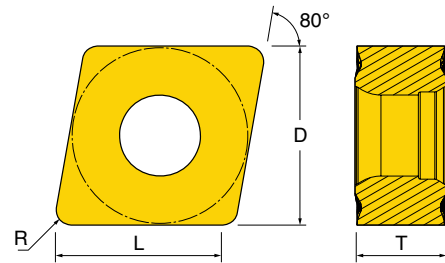
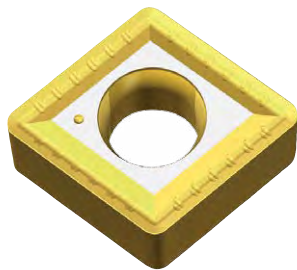
NEGATIVE 80° RHOMBIC INSERTS FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TI5080	TI9080	TI9215	TI9225	TI9235
CNMG332EM	CNMG090408EM	.005	.020	.020	.125	.346	.375	.187	.031						
CNMG333EM	CNMG090412EM	.006	.020	.028	.125	.332	.375	.187	.047						

GOLD RHINO SERIES CNMG MK CHIPBREAKER

NEGATIVE 80° RHOMBIC INSERTS FOR MEDIUM

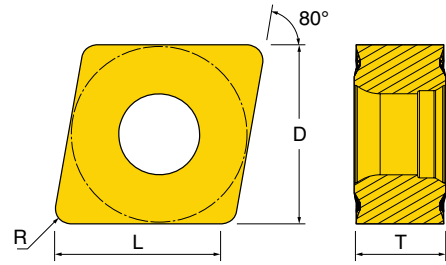


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TI5080	TI8020	TI9080	TI9225	TI9235
CNMG331MK	CNMG090404MK	.006	.016	.028	.125	.362	.375	.187	.016						
CNMG332MK	CNMG090408MK	.008	.018	.040	.125	.346	.375	.187	.031						
CNMG333MK	CNMG090412MK	.009	.020	.060	.125	.332	.375	.187	.047						

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES CNMG MM CHIPBREAKER

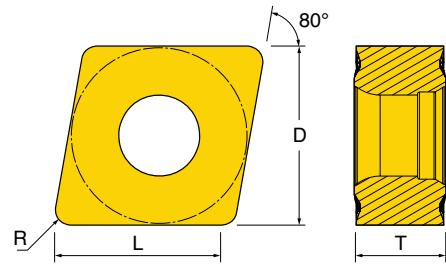
NEGATIVE 80° RHOMBIC INSERTS FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5100	TT8115	TT8125	TT8135	TT9215	TT9225	TT9235
CNMG331MM	CNMG090404MM	.006	.018	.016	.125	.362	.375	.187	.016	TT5100	TT8115	TT8125	TT8135	TT9215	TT9225	TT9235	
CNMG332MM	CNMG090408MM	.008	.020	.020	.125	.346	.375	.187	.031	TT5100	TT8115	TT8125	TT8135	TT9215	TT9225	TT9235	
CNMG333MM	CNMG090412MM	.009	.020	.028	.125	.332	.375	.187	.047	TT5100	TT8115	TT8125	TT8135	TT9215	TT9225	TT9235	

GOLD RHINO SERIES CNMG MT CHIPBREAKER

NEGATIVE 80° RHOMBIC INSERTS FOR MEDIUM

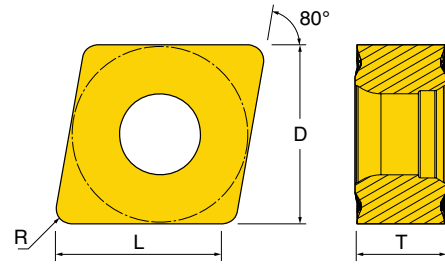
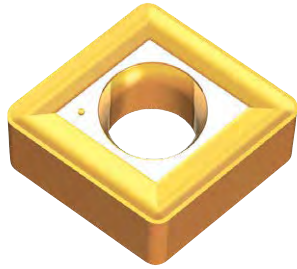


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5100	TT8105	TT8115	TT8125	TT8135
CNMG331MT	CNMG090404MT	.004	.014	.031	.125	.362	.375	.187	.016	TT5100	TT8105	TT8115	TT8125	TT8135	
CNMG332MT	CNMG090408MT	.006	.018	.039	.125	.346	.375	.187	.031	TT5100	TT8105	TT8115	TT8125	TT8135	
CNMG333MT	CNMG090412MT	.008	.022	.047	.125	.332	.375	.187	.047	TT5100	TT8105	TT8115	TT8125	TT8135	

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES CNMG COMMON CHIPBREAKER

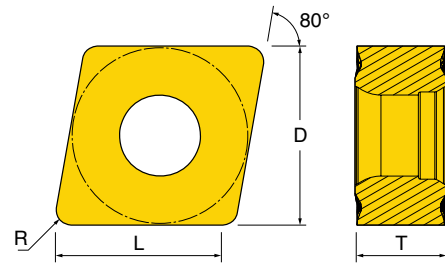
NEGATIVE 80° RHOMBIC COMMON TYPE INSERTS WITH CHIPBREAKER FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT7005	TT7015
CNMG331	CNMG090404	.004	.018	.020	.125	.362	.375	.187	.016		●	●
CNMG332	CNMG090408	.004	.020	.020	.125	.346	.375	.187	.031		●	●
CNMG333	CNMG090412	.004	.022	.020	.125	.332	.375	.187	.047		●	●

GOLD RHINO SERIES CNMG WA CHIPBREAKER

NEGATIVE 80° RHOMBIC INSERTS FOR FINISHING TO MEDIUM WIPER

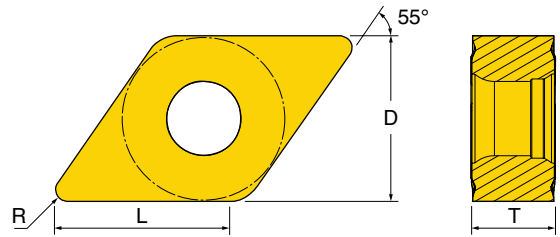


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	PV3010	TT5100	TT7005	TT7015	TT8105	TT8115	TT8125
CNMG331WA	CNMG090404WA	.003	.010	.010	.098	.362	.375	.187	.016		●	●	●	●	●	●	●	●
CNMG332WA	CNMG090408WA	.004	.016	.010	.118	.346	.375	.187	.031		●	●	●	●	●	●	●	●
CNMG333WA	CNMG090412WA	.008	.020	.016	.118	.332	.375	.187	.047		●	●	●	●	●	●	●	●

● = P ○ = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES DNMG EA CHIPBREAKER

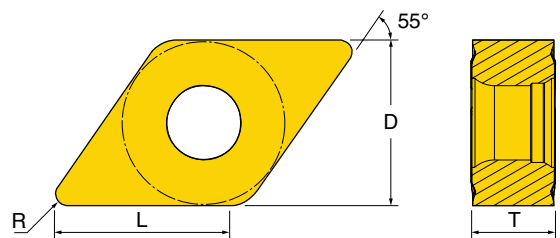
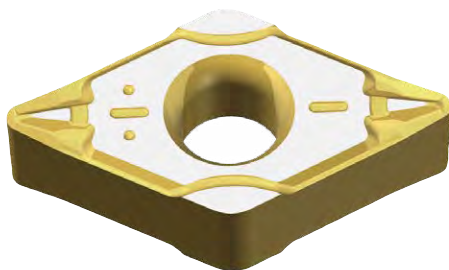
NEGATIVE 55° RHOMBIC INSERTS FOR SUPER FINISHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5080	TT9080	TT9215	TT9225	TT9235
DNMG3.53.51EA	DNMG130504EA	.002	.012	.005	.059	.511	.438	.219	.016						
DNMG3.53.52EA	DNMG130508EA	.003	.016	.006	.059	.489	.438	.219	.031						

GOLD RHINO SERIES DNMG FS CHIPBREAKER

NEGATIVE 55° RHOMBIC INSERTS FOR SUPER FINISHING

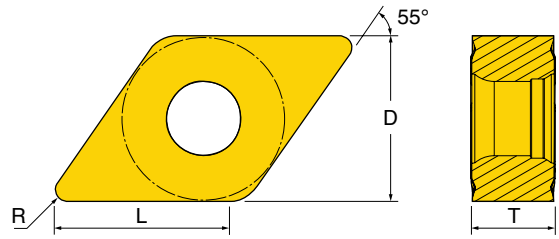
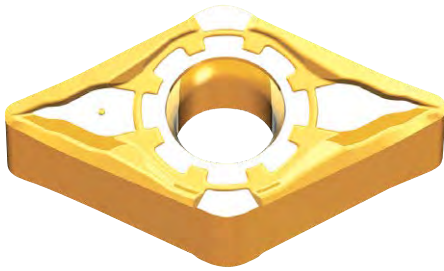


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	PV3010	TT8115	TT8125
DNMG3.53.50.5FS	DNMG130502FS	.002	.010	.008	.080	.523	.438	.219	.008					
DNMG3.53.51FS	DNMG130504FS	.003	.012	.012	.080	.511	.438	.219	.016					
DNMG3.53.52FS	DNMG130508FS	.004	.012	.020	.080	.489	.438	.219	.031					

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES DNMG FG CHIPBREAKER

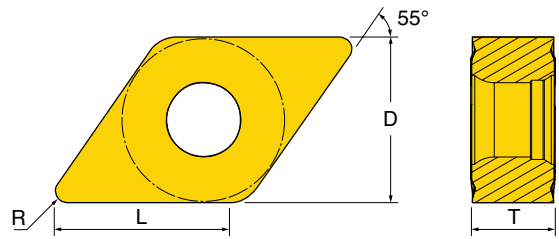
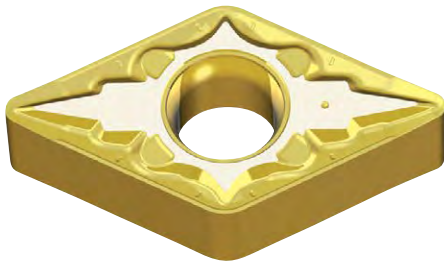
NEGATIVE 55° RHOMBIC INSERTS FOR FINISHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5100	TT8115	TT8125
DNMG3.53.51FG	DNMG130504FG	.003	.012	.008	.079	.511	.438	.219	.016				
DNMG3.53.52FG	DNMG130508FG	.004	.014	.020	.079	.489	.438	.219	.031				
DNMG3.53.53FG	DNMG130512FG	.006	.016	.020	.079	.466	.438	.219	.047				

GOLD RHINO SERIES DNMG FM CHIPBREAKER

NEGATIVE 55° RHOMBIC INSERTS FOR FINISHING

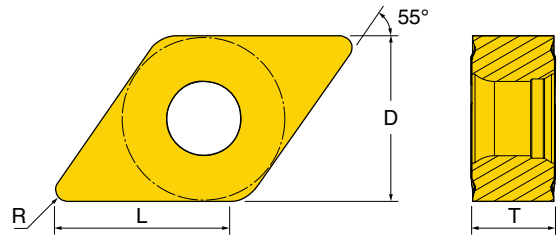


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	TT5100	TT8115	TT8125	TT8135
DNMG3.53.51FM	DNMG130504FM	.003	.012	.010	.079	.511	.438	.219	.016						
DNMG3.53.52FM	DNMG130508FM	.004	.014	.012	.079	.489	.438	.219	.031						
DNMG3.53.53FM	DNMG130512FM	.006	.016	.014	.079	.466	.438	.219	.047						

● = P ○ = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES DNMG FT CHIPBREAKER

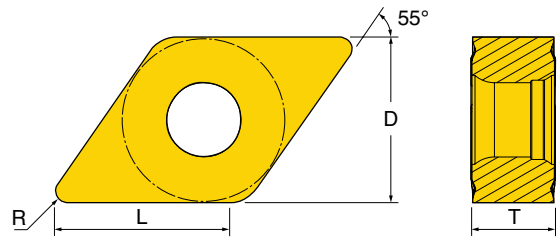
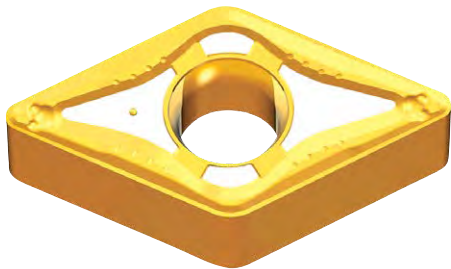
NEGATIVE 55° RHOMBIC INSERTS FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5100	TT8115	TT8125	TT8135
DNMG3.53.51FT	DNMG130504FT	.003	.012	.010	.138	.511	.438	.219	.016					
DNMG3.53.52FT	DNMG130508FT	.004	.016	.012	.138	.489	.438	.219	.031					
DNMG3.53.53FT	DNMG130512FT	.006	.020	.014	.138	.466	.438	.219	.047					

GOLD RHINO SERIES DNMG PC CHIPBREAKER

NEGATIVE 55° RHOMBIC INSERTS FOR MEDIUM

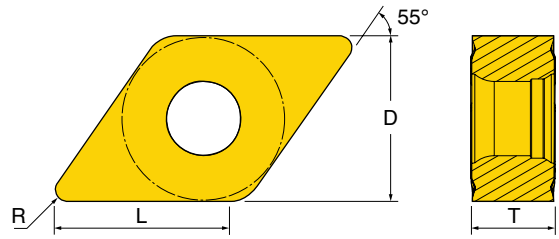
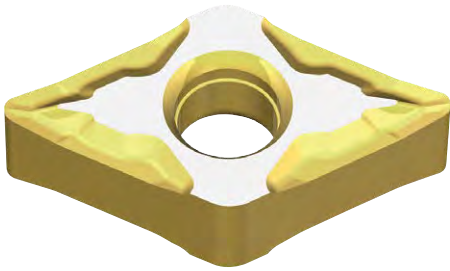


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5100	TT8115	TT8125	TT8135
DNMG3.53.51PC	DNMG130504PC	.004	.012	.016	.157	.511	.438	.219	.016					
DNMG3.53.52PC	DNMG130508PC	.006	.016	.020	.157	.489	.438	.219	.031					
DNMG3.53.53PC	DNMG130512PC	.007	.020	.024	.157	.466	.438	.219	.047					

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES DNGG ML CHIPBREAKER

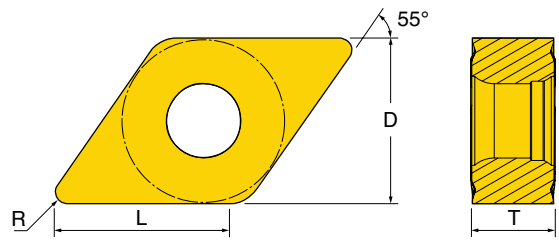
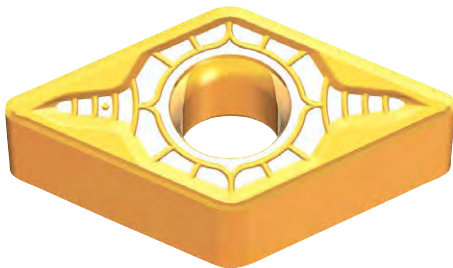
NEGATIVE 55° RHOMBIC GROUND INSERT FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	K10	TT5080
DNGG3.53.50ML	DNGG130501ML	.001	.004	.004	.040	.528	.437	.219	.004			
DNGG3.53.50.5ML	DNGG130502ML	.002	.006	.008	.047	.523	.437	.219	.008			
DNGG3.53.51ML	DNGG130504ML	.004	.012	.031	.138	.511	.437	.219	.016			
DNGG3.53.52ML	DNGG130508ML	.005	.014	.039	.138	.489	.437	.219	.031			

GOLD RHINO SERIES DNMG EM CHIPBREAKER

NEGATIVE 55° RHOMBIC INSERTS FOR MEDIUM

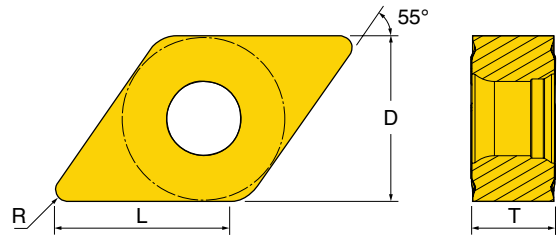
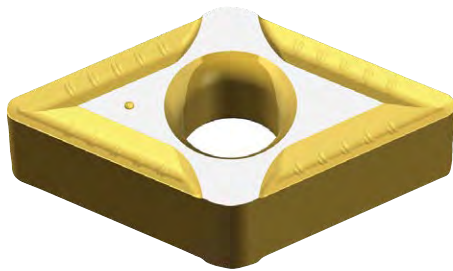


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5080	TT9080	TT9215	TT9225	TT9235
DNMG3.53.52EM	DNMG130508EM	.005	.016	.020	.157	.489	.438	.219	.031						
DNMG3.53.53EM	DNMG130512EM	.006	.016	.028	.157	.466	.438	.219	.047						

● = P ○ = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES DNMG MK CHIPBREAKER

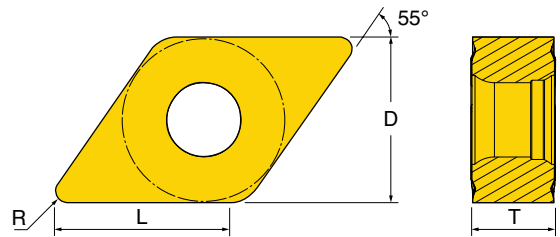
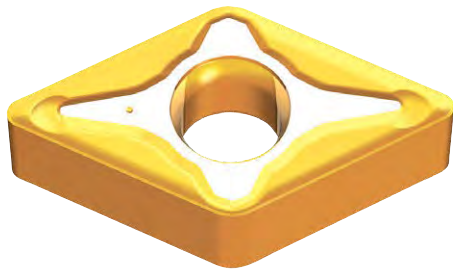
NEGATIVE 55° RHOMBIC INSERTS FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5080	TT9080	TT9225	TT9235
DNMG3.53.51MK	DNMG130504MK	.006	.016	.028	.157	.511	.438	.219	.016	●	●	●	●	
DNMG3.53.52MK	DNMG130508MK	.008	.018	.040	.157	.489	.438	.219	.031	●	●	●	●	
DNMG3.53.53MK	DNMG130512MK	.009	.020	.060	.157	.466	.438	.219	.047	●	●	●	●	

GOLD RHINO SERIES DNMG MM CHIPBREAKER

NEGATIVE 55° RHOMBIC INSERTS FOR MEDIUM

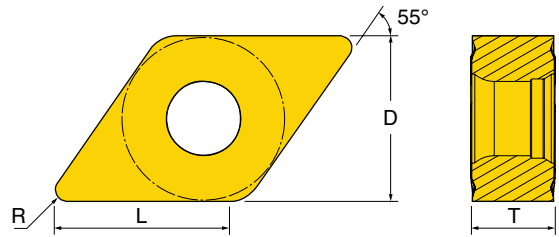
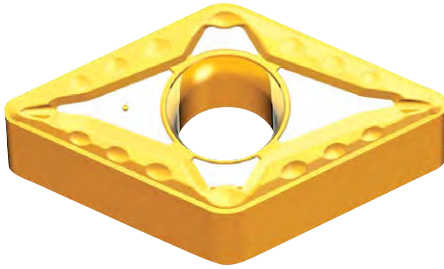


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5080	TT5100	TT8115	TT8125	TT8135	TT9080	TT9215	TT9225	TT9235
DNMG3.53.51MM	DNMG130504MM	.006	.016	.016	.177	.511	.438	.219	.016	●	●	●	●	●	●	●	●	●	●
DNMG3.53.52MM	DNMG130508MM	.008	.020	.020	.177	.489	.438	.219	.031	●	●	●	●	●	●	●	●	●	●
DNMG3.53.53MM	DNMG130512MM	.009	.020	.028	.177	.466	.438	.219	.047	●	●	●	●	●	●	●	●	●	●

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES DNMG MT CHIPBREAKER

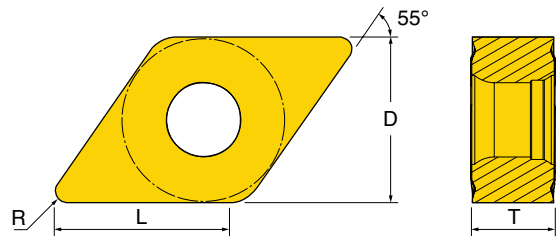
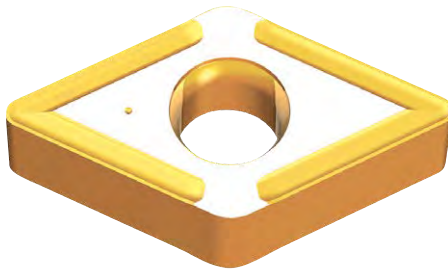
NEGATIVE 55° RHOMBIC INSERTS FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5100	TT8115	TT8125	TT8135
DNMG3.53.51MT	DNMG130504MT	.004	.014	.031	.177	.511	.438	.219	.016	●●●●	●●●●	●●●●	●●●●	●●●●
DNMG3.53.52MT	DNMG130508MT	.006	.018	.039	.177	.489	.438	.219	.031	●●●●	●●●●	●●●●	●●●●	●●●●
DNMG3.53.53MT	DNMG130512MT	.008	.022	.047	.177	.466	.438	.219	.047	●●●●	●●●●	●●●●	●●●●	●●●●

GOLD RHINO SERIES DNMG COMMON CHIPBREAKER

NEGATIVE 55° RHOMBIC COMMON TYPE WITH CHIPBREAKER FOR MEDIUM

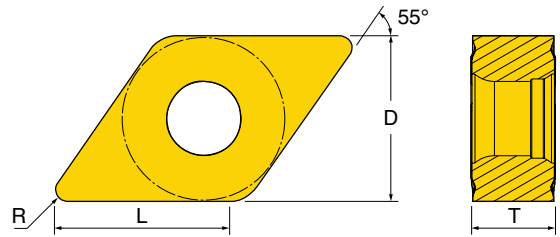
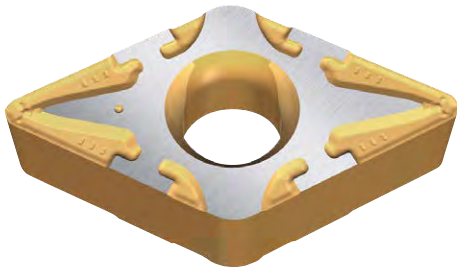


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT7005	TT7015
DNMG3.53.51	DNMG130504	.004	.018	.020	.157	.511	.438	.219	.016	●●●●	●●	●●
DNMG3.53.52	DNMG130508	.004	.020	.020	.157	.489	.438	.219	.031	●●●●	●●	●●
DNMG3.53.53	DNMG130512	.004	.022	.020	.157	.466	.438	.219	.047	●●●●	●●	●●

● = P ○ = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES DNMG WA CHIPBREAKER

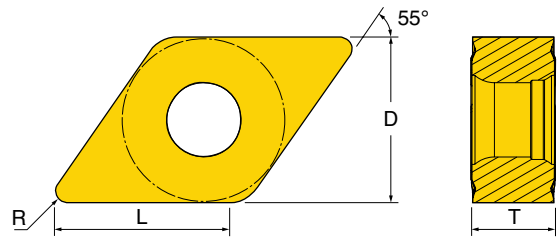
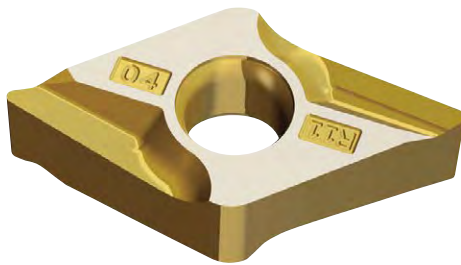
NEGATIVE 55° RHOMBIC INSERTS FOR FINISHING TO MEDIUM WIPER



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	PV3010	TT5100	TT7005	TT7015	TT8105	TT8115	TT8125
DNMG3.53.51WA	DNMG130504WA	.003	.010	.010	.098	.511	.438	.219	.016		●	●	●	●	●	●	●	●
DNMG3.53.52WA	DNMG130508WA	.004	.014	.010	.118	.489	.438	.219	.031		●	●	●	●	●	●	●	●
DNMG3.53.53WA	DNMG130512WA	.006	.018	.016	.138	.466	.438	.219	.047		●	●	●	●	●	●	●	●

GOLD RHINO SERIES DNUX R/L 11 CHIPBREAKER

NEGATIVE 55° RHOMBIC INSERTS FOR MEDIUM

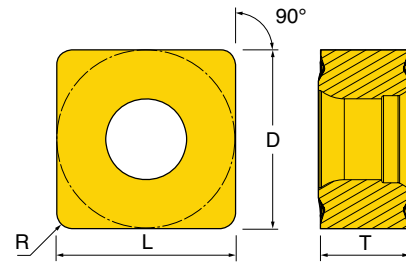


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5100	TT8115	TT8125	TT9080	TT9225
DNUX3.53.51L11	DNUX130504L11	.006	.014	.060	.200	-	.438	.219	.016		●	●	●	●	●
DNUX3.53.51R11	DNUX130504R11	.006	.014	.060	.200	-	.438	.219	.016		●	●	●	●	●
DNUX3.53.52L11	DNUX130508L11	.008	.018	.080	.200	-	.438	.219	.031		●	●	●	●	●
DNUX3.53.52R11	DNUX130508R11	.008	.018	.080	.200	-	.438	.219	.031		●	●	●	●	●

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES SNMG EA CHIPBREAKER

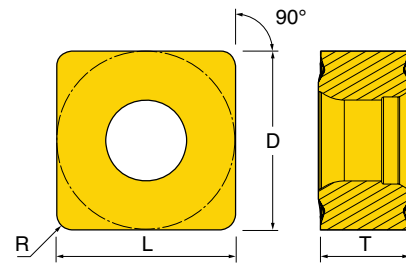
NEGATIVE SQUARE INSERTS FOR FINISHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TI5080	TI9080	TI9215	TI9225	TI9235
SNMG331EA	SNMG090404EA	.002	.012	.005	.059	.358	.375	.187	.016						
SNMG332EA	SNMG090408EA	.003	.016	.006	.059	.343	.375	.187	.031						

GOLD RHINO SERIES SNMG FG CHIPBREAKER

NEGATIVE SQUARE INSERTS FOR FINISHING

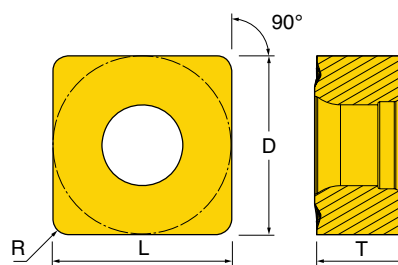


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	TI5100	TI8115	TI8125
SNMG331FG	SNMG090404FG	.003	.012	.008	.079	.358	.375	.187	.016					
SNMG332FG	SNMG090408FG	.004	.014	.020	.079	.343	.375	.187	.031					
SNMG333FG	SNMG090412FG	.006	.016	.020	.079	.328	.375	.187	.047					

● = P ○ = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES SNMG FM CHIPBREAKER

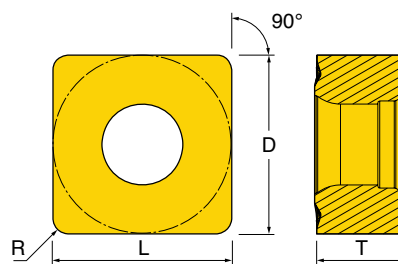
NEGATIVE SQUARE INSERTS FOR FINISHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	TT5100	TT8115	TT8125	TT8135
SNMG331FM	SNMG090404FM	.003	.012	.010	.079	.358	.375	.187	.016						
SNMG332FM	SNMG090408FM	.004	.014	.012	.079	.343	.375	.187	.031						
SNMG333FM	SNMG090412FM	.006	.016	.014	.079	.328	.375	.187	.047						

GOLD RHINO SERIES SNMG PC CHIPBREAKER

NEGATIVE SQUARE INSERTS FOR MEDIUM

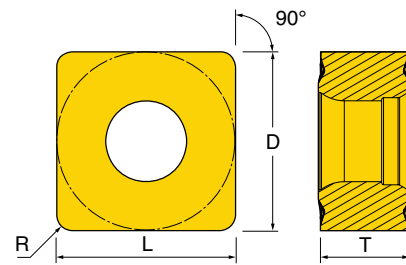


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5100	TT8115	TT8125	TT8135
SNMG331PC	SNMG090404PC	.004	.012	.016	.125	.358	.375	.187	.016					
SNMG332PC	SNMG090408PC	.006	.016	.020	.125	.343	.375	.187	.031					
SNMG333PC	SNMG090412PC	.007	.020	.024	.125	.328	.375	.187	.047					

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES SNMG EM CHIPBREAKER

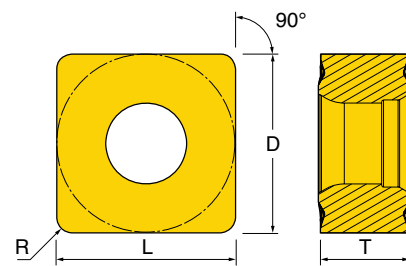
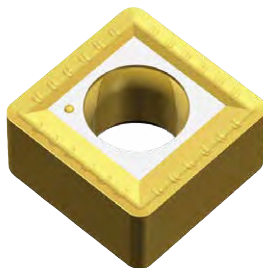
NEGATIVE SQUARE INSERTS FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TI5080	TI9080	TI9215	TI9225	TI9235
SNMG332EM	SNMG090408EM	.005	.016	.020	.125	.343	.375	.187	.031						
SNMG333EM	SNMG090412EM	.006	.016	.028	.125	.328	.375	.187	.047						

GOLD RHINO SERIES SNMG MK CHIPBREAKER

NEGATIVE SQUARE INSERTS FOR MEDIUM

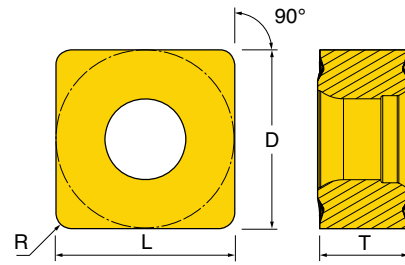


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TI5080	TI9080	TI9225	TI9235
SNMG331MK	SNMG090404MK	.006	.016	.028	.125	.358	.375	.187	.016					
SNMG332MK	SNMG090408MIK	.008	.018	.040	.125	.343	.375	.187	.031					
SNMG333MK	SNMG090412MK	.009	.020	.060	.125	.328	.375	.187	.047					

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES SNMG MM CHIPBREAKER

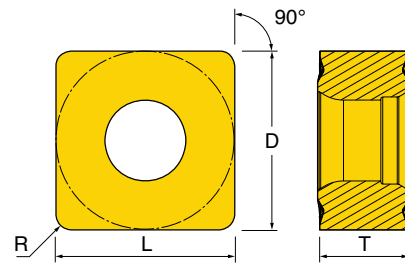
NEGATIVE SQUARE INSERTS FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5100	TT8115	TT8125	TT8135	TT9215	TT9225	TT9235
SNMG331MM	SNMG090404MM	.006	.018	.016	.125	.358	.375	.187	.016								
SNMG332MM	SNMG090408MM	.008	.020	.020	.125	.343	.375	.187	.031								
SNMG333MM	SNMG109412MM	.009	.020	.028	.125	.328	.375	.187	.047								

GOLD RHINO SERIES SNMG MT CHIPBREAKER

NEGATIVE SQUARE INSERTS FOR MEDIUM

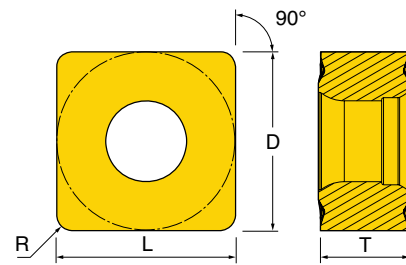


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5100	TT8115	TT8125	TT8135
SNMG331MT	SNMG090404MT	.004	.014	.031	.125	.358	.375	.187	.016					
SNMG332MT	SNMG090408MT	.006	.018	.039	.125	.343	.375	.187	.031					
SNMG333MT	SNMG0904012MT	.008	.022	.047	.125	.328	.375	.187	.047					

= P = M = K = N = S = H

GOLD RHINO SERIES SNMG COMMON CHIPBREAKER

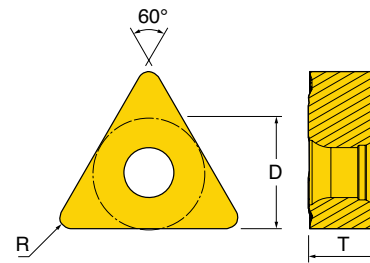
NEGATIVE SQUARE COMMON-TYPE INSERTS WITH CHIPBREAKER FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	TT7005	TT7015
SNMG331	SNMG090404	.004	.018	.020	.125	.358	.375	.187	.016			●	●
SNMG332	SNMG090408	.004	.020	.020	.125	.343	.375	.187	.031	●	●	●	
SNMG333	SNMG090412	.004	.022	.020	.125	.328	.375	.187	.047		●	●	

GOLD RHINO SERIES TNGG R/L HOOK CHIPBREAKER

NEGATIVE TRIANGULAR GROUND INSERTS FOR MEDIUM

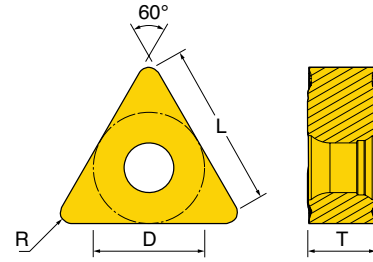


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000
TNGG2.531L	TNGG130404L	.005	.012	.039	.125	.518	.313	.187	.016		●
TNGG2.531R	TNGG130404R	.005	.012	.039	.125	.518	.313	.187	.016		●
TNGG2.532L	TNGG130408L	.006	.014	.051	.125	.495	.313	.187	.031		●
TNGG2.532R	TNGG130408R	.006	.014	.051	.125	.495	.313	.187	.031		●

● = P ○ = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES TNMG COMMON CHIPBREAKER

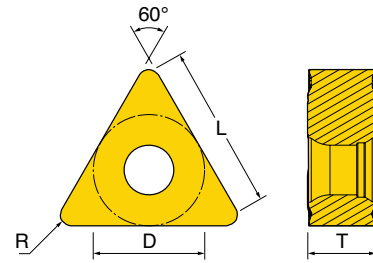
NEGATIVE TRIANGULAR COMMON-TYPE INSERTS WITH CHIPBREAKER FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT7005	TT7015
TNMG2.531	TNMG130404	.004	.018	.020	.138	.518	.313	.187	.016		●	●
TNMG2.532	TNMG130408	.004	.020	.020	.138	.495	.313	.187	.031		●	●
TNMG2.533	TNMG130412	.004	.022	.020	.138	.473	.313	.187	.047		●	●

GOLD RHINO SERIES TNMG EA CHIPBREAKER

NEGATIVE TRIANGULAR INSERTS FOR SUPER FINISHING

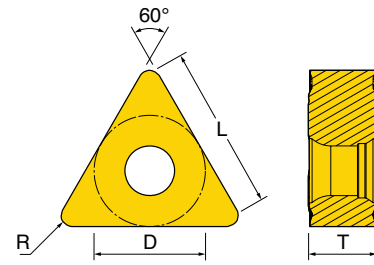


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5080	TT9080	TT9215	TT9225	TT9235
TNMG2.531EA	TNMG130404EA	.002	.012	.008	.059	.518	.313	.187	.016		●	●	●	●	●
TNMG2.532EA	TNMG130408EA	.003	.016	.012	.059	.495	.313	.187	.031		●	●	●	●	●

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES TNMG-FS CHIPBREAKER

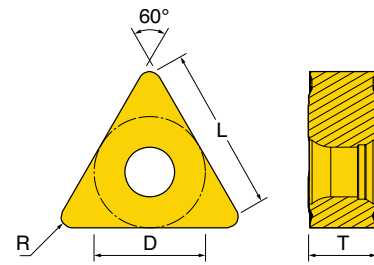
NEGATIVE TRIANGULAR INSERTS FOR FINE-FINISHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	PV3010	TT8115	TT8125
TNMG2.530.5FS	TNMG130402FS	.002	.010	.008	.040	.530	.313	.187	.008		●●●●	●●●●	●●●●	●●●●
TNMG2.531FS	TNMG130404FS	.003	.012	.012	.040	.518	.313	.187	.016		●●●●	●●●●	●●●●	●●●●
TNMG2.532FS	TNMG130408FS	.004	.012	.020	.040	.495	.313	.187	.031		●●●●	●●●●	●●●●	●●●●

GOLD RHINO SERIES TNMG FG CHIPBREAKER

NEGATIVE TRIANGULAR INSERTS FOR FINISHING

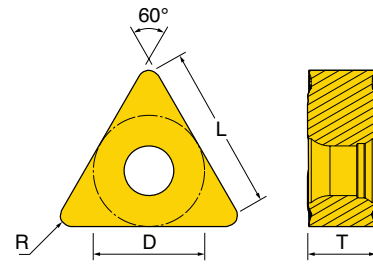


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5100	TT8115	TT8125
TNMG2.531FG	TNMG130404FG	.003	.012	.010	.059	.518	.313	.187	.016		●●●●	●●●●	●●●●
TNMG2.532FG	TNMG130408FG	.004	.014	.012	.059	.495	.313	.187	.031		●●●●	●●●●	●●●●
TNMG2.533FG	TNMG130412FG	.006	.016	.014	.059	.473	.313	.187	.047		●●●●	●●●●	●●●●

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES TNMG FM CHIPBREAKER

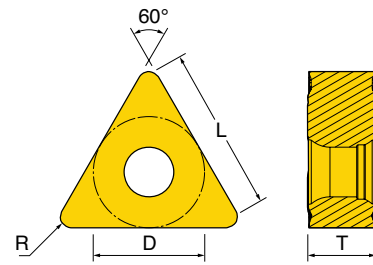
NEGATIVE TRIANGULAR INSERTS FOR FINISHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	TT5100	TT8115	TT8125	TT8135
TNMG2.531FM	TNMG130404FM	.003	.012	.010	.059	.518	.313	.187	.016						
TNMG2.532FM	TNMG130408FM	.004	.014	.012	.059	.495	.313	.187	.031						
TNMG2.533FM	TNMG130412FM	.006	.016	.014	.059	.473	.313	.187	.047						

GOLD RHINO SERIES TNMG FT CHIPBREAKER

NEGATIVE TRIANGULAR INSERTS FOR MEDIUM

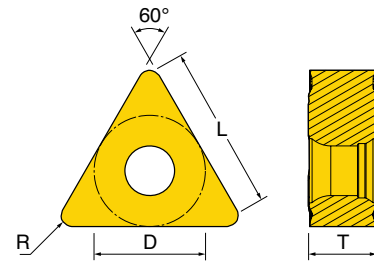


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5100	TT8115	TT8125	TT8135
TNMG2.531FT	TNMG130404FT	.003	.012	.010	.098	.518	.313	.187	.016					
TNMG2.532FT	TNMG130408FT	.004	.016	.012	.098	.495	.313	.187	.031					
TNMG2.533FT	TNMG130412FT	.006	.020	.014	.098	.473	.313	.187	.047					

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES TNMG PC CHIPBREAKER

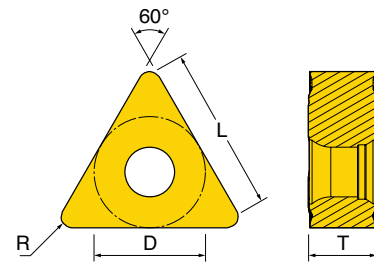
NEGATIVE TRIANGULAR INSERTS FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5100	TT8115	TT8125	TT8135
TNMG2.531PC	TNMG130404PC	.004	.012	.016	.118	.518	.313	.187	.016	TT5100	TT8115	TT8125	TT8135	TT8135
TNMG2.532PC	TNMG130408PC	.006	.016	.020	.118	.495	.313	.187	.031	TT5100	TT8115	TT8125	TT8135	TT8135
TNMG2.533PC	TNMG130412PC	.007	.020	.024	.118	.473	.313	.187	.047	TT5100	TT8115	TT8125	TT8135	TT8135

GOLD RHINO SERIES TNMG EM CHIPBREAKER

NEGATIVE TRIANGULAR INSERTS FOR MEDIUM

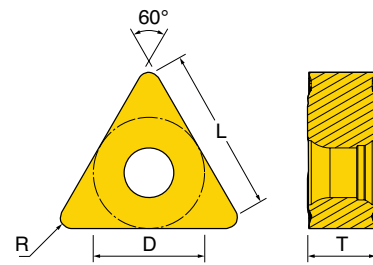


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5080	TT9080	TT9215	TT9225	TT9235
TNMG2.532EM	TNMG130408EM	.005	.016	.020	.125	.495	.313	.187	.031	TT5080	TT9080	TT9215	TT9225	TT9235	
TNMG2.533EM	TNMG130412EM	.006	.016	.028	.125	.473	.313	.187	.047	TT5080	TT9080	TT9215	TT9225	TT9235	

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES TNMG MK CHIPBREAKER

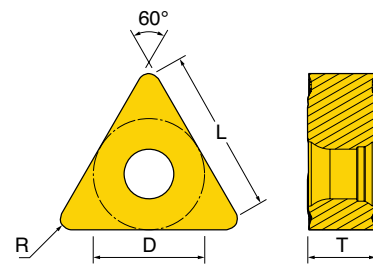
NEGATIVE TRIANGULAR INSERTS FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5080	TT9080	TT9225	TT9235
TNMG2.531MK	TNMG130404MK	.006	.016	.028	.118	.518	.313	.187	.016		●	●	●	●
TNMG2.532MK	TNMG130408MK	.008	.018	.040	.118	.495	.313	.187	.031		●	●	●	●
TNMG2.533MK	TNMG130412MK	.009	.020	.060	.118	.473	.313	.187	.047		●	●	●	●

GOLD RHINO SERIES TNMG MM CHIPBREAKER

NEGATIVE TRIANGULAR INSERTS FOR MEDIUM

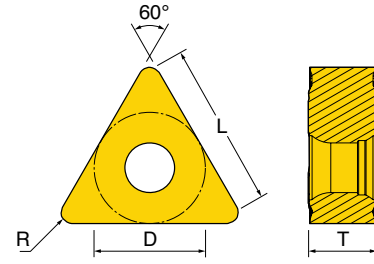


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5100	TT8115	TT8125	TT8135	TT9215	TT9225	TT9235
TNMG2.531MM	TNMG130404MM	.006	.018	.016	.125	.518	.313	.187	.016		●	●	●	●	●	●	●
TNMG2.532MM	TNMG130408MM	.008	.020	.020	.125	.495	.313	.187	.031		●	●	●	●	●	●	●
TNMG2.533MM	TNMG130412MM	.009	.020	.028	.125	.473	.313	.187	.047		●	●	●	●	●	●	●

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES TNMG MT CHIPBREAKER

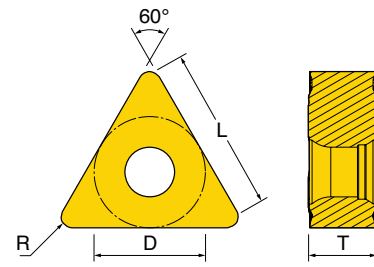
NEGATIVE TRIANGULAR INSERTS FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5100	TT8115	TT8125	TT8135
TNMG2.531MT	TNMG130404MT	.004	.014	.031	.125	.518	.313	.187	.016					
TNMG2.532MT	TNMG130408MT	.006	.018	.040	.125	.495	.313	.187	.031					
TNMG2.533MT	TNMG130412MT	.008	.022	.047	.125	.473	.313	.187	.047					

GOLD RHINO SERIES TNMG WA CHIPBREAKER

NEGATIVE TRIANGULAR INSERTS FOR FINISHING TO MEDIUM WIPER

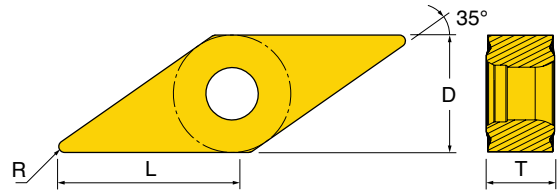
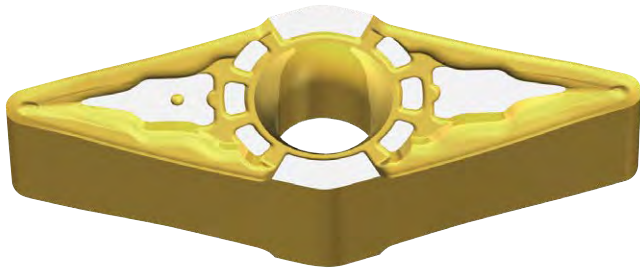


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	PV3010	TT5100	TT7005	TT7015	TT8105	TT8115	TT8125
TNMG2.531WA	TNMG130404WA	.003	.010	.010	.098	.518	.313	.187	.016									
TNMG2.532WA	TNMG130408WA	.004	.014	.010	.118	.495	.313	.187	.031									
TNMG2.533WA	TNMG130412WA	.006	.018	.016	.138	.473	.313	.187	.047									

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES VNMX FG CHIPBREAKER

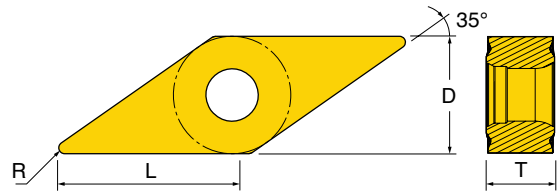
NEGATIVE 35° RHOMBIC INSERTS FOR FINISHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	TT5080	TT5100	TT8115	TT8125	TT9080
VNMX2.531FG	VNMX130404FG	.003	.008	.002	.079	.465	.313	.187	.016							
VNMX2.532FG	VNMX130408FG	.004	.009	.002	.079	.425	.313	.187	.031							

GOLD RHINO SERIES VNMX FS CHIPBREAKER

NEGATIVE 35° RHOMBIC INSERTS FOR SUPER-FINISHING

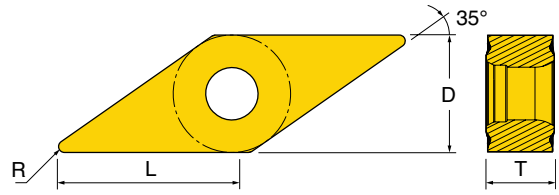
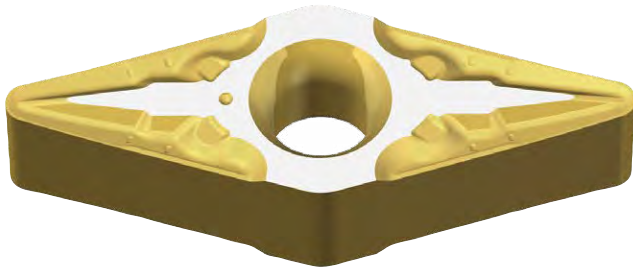


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	PV3010	TT5080	TT8105	TT8115	TT8125
VNMX2.530.5FS	VNMX130402FS	.002	.010	.008	.039	.505	.313	.187	.008							
VNMX2.531FS	VNMX130404FS	.003	.012	.012	.039	.465	.313	.187	.016							
VNMX2.532FS	VNMX130408FS	.004	.012	.020	.039	.425	.313	.187	.031							

● = P ○ = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES VNMX FM CHIPBREAKER

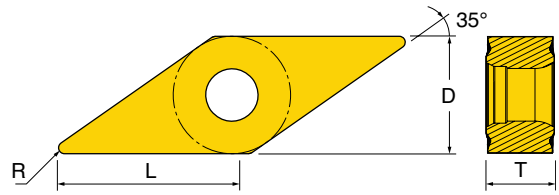
NEGATIVE 35° RHOMBIC INSERTS FOR FINISHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	TF5080	TF5100	TT8105	TT8115	TT8125	TT8135	TT9080
VNMX2.531FM	VNMX130404FM	.003	.012	.010	.059	.465	.313	.187	.016									
VNMX2.532FM	VNMX130408FM	.004	.014	.012	.059	.425	.313	.187	.031									

GOLD RHINO SERIES VNMX PC CHIPBREAKER

NEGATIVE 35° RHOMBIC INSERTS FOR MEDIUM

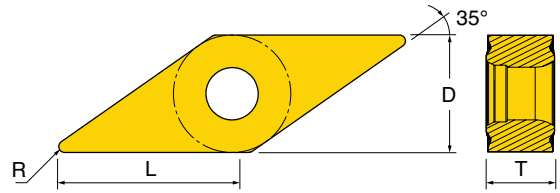
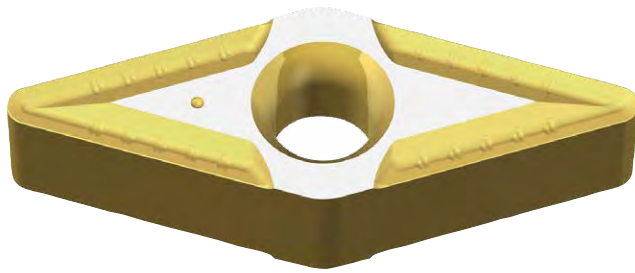


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TF5080	TF5100	TT8105	TT8115	TT8125	TT8135	TT9080
VNMX2.531PC	VNMX130404PC	.006	.014	.016	.118	.465	.313	.187	.016								
VNMX2.532PC	VNMX130408PC	.007	.014	.020	.118	.425	.313	.187	.031								
VNMX2.533PC	VNMX130412PC	.008	.016	.039	.118	.385	.313	.187	.047								

● = P ○ = M ● = K ● = N ● = S ○ = H

SERIES VNMX MK CHIPBREAKER

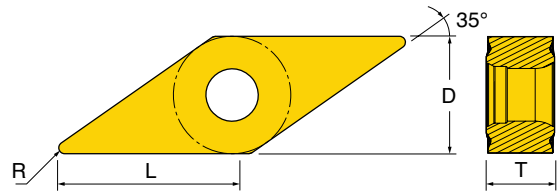
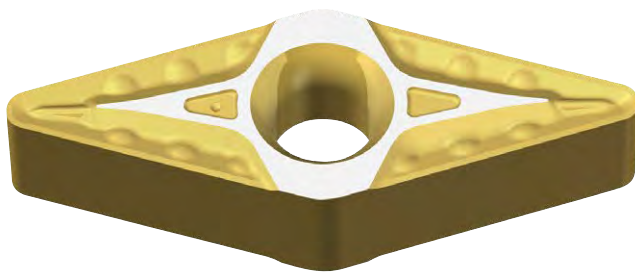
NEGATIVE 35° RHOMBIC INSERTS FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5080	TT9080	TT9225	TT9235
VNMX2.531MK	VNMX130404MK	.007	.014	.028	.118	.465	.313	.187	.016					
VNMX2.532MK	VNMX130408MK	.008	.016	.039	.118	.425	.313	.187	.031					

SERIES VNMX MT CHIPBREAKER

NEGATIVE 35° RHOMBIC INSERTS FOR MEDIUM

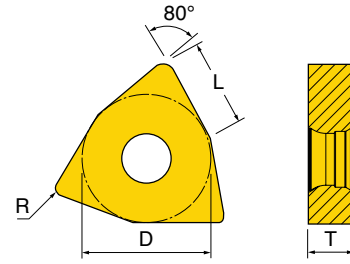


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	TT5080	TT5100	TT7005	TT7015	TT8105	TT8115	TT8125	TT8135	TT9080	
VNMX2.531MT	VNMX130404MT	.006	.014	.031	.118	.465	.313	.187	.016												
VNMX2.532MT	VNMX130408MT	.007	.014	.040	.118	.425	.313	.187	.031												
VNMX2.533MT	VNMX130412MT	.008	.016	.059	.118	.385	.313	.187	.047												

= P = M = K = N = S = H

GOLD RHINO SERIES WNMX FS CHIPBREAKER

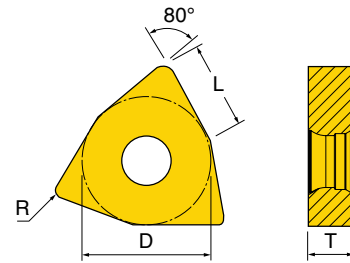
NEGATIVE 80° TRIGON INSERTS FOR SUPER FINISHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	PV3010	TT8115	TT8125
WNMX331FS	WNMX060404FS	.003	.012	.012	.060	.244	.375	.187	.016					
WNMX332FS	WNMX060408FS	.004	.012	.020	.060	.240	.375	.187	.031					

GOLD RHINO SERIES WNMX FG CHIPBREAKER

NEGATIVE 80° TRIGON INSERTS FOR FINISHING

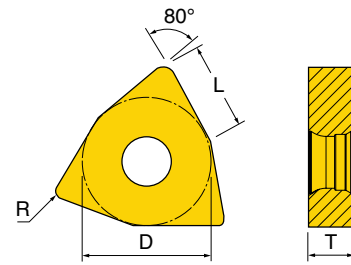
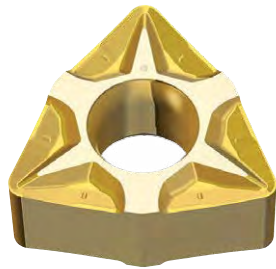


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	PV3010	TT5080	TT5100	TT8115	TT8125
WNMX331FG	WNMX060404FG	.003	.012	.008	.079	.244	.375	.187	.016							
WNMX332FG	WNMX060408FG	.004	.014	.020	.079	.240	.375	.187	.031							

● = P ○ = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES WNMX FM CHIPBREAKER

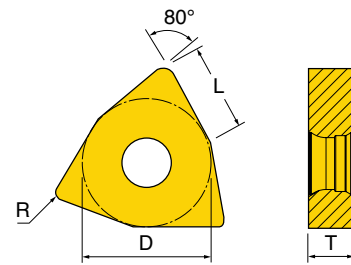
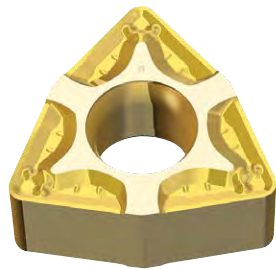
NEGATIVE 80° TRIGON INSERTS FOR FINISHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	TT5100	TT8105	TT8115	TT8125
WNMX331FM	WNMX060404FM	.003	.012	.010	.079	.244	.375	.187	.016	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
WNMX332FM	WNMX060408FM	.004	.014	.012	.079	.240	.375	.187	.031	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
WNMX333FM	WNMX060412FM	.006	.016	.014	.079	.236	.375	.187	.047	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●

GOLD RHINO SERIES WNMX PC CHIPBREAKER

NEGATIVE 80° TRIGON INSERTS FOR MEDIUM

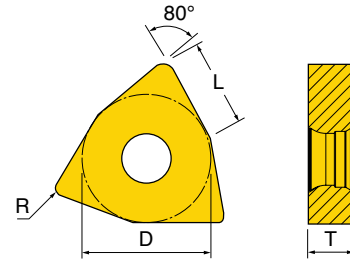
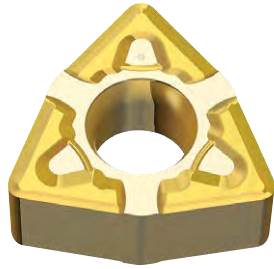


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT8105	TT8115	TT8125	TT9080
WNMX331PC	WNMX060404PC	.004	.012	.016	.125	.240	.375	.187	.016	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
WNMX332PC	WNMX060408PC	.006	.016	.020	.125	.240	.375	.187	.031	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
WNMX333PC	WNMX060412PC	.007	.020	.024	.125	.236	.375	.187	.047	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●

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GOLD RHINO SERIES WNMX EM CHIPBREAKER

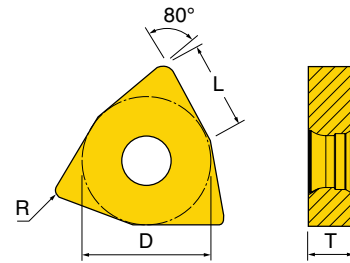
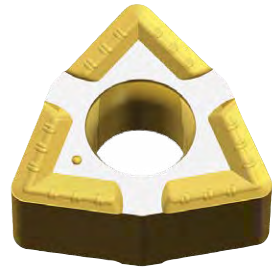
NEGATIVE 80° RHOMBIC INSERTS FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TI5080	TI9080	TI9215	TI9225	TI9235
WNMX331EM	WNMX060404EM	.004	.014	.016	.125	.244	.375	.187	.016	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
WNMX332EM	WNMX060408EM	.005	.016	.020	.125	.240	.375	.187	.031	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
WNMX333EM	WNMG060412EM	.006	.016	.028	.125	.236	.375	.187	.047	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●

GOLD RHINO SERIES WNMX MK CHIPBREAKER

NEGATIVE 80° TRIGON INSERTS FOR MEDIUM

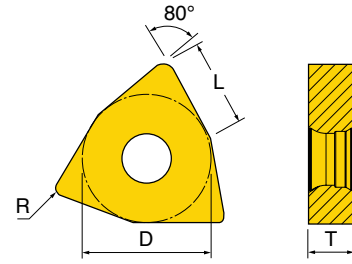
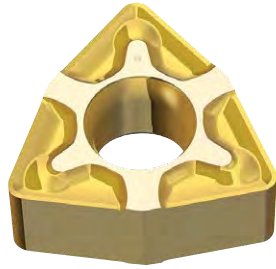


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TI5080	TI9080	TI9225	TI9235
WNMX331MK	WNMX060404MK	.006	.016	.028	.118	.244	.375	.187	.016	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
WNMX332MK	WNMX060408MK	.008	.018	.040	.118	.240	.375	.187	.031	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
WNMX333MK	WNMX060412MK	.009	.020	.060	.118	.236	.375	.187	.047	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES WNMX MM CHIPBREAKER

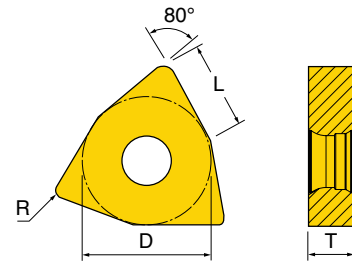
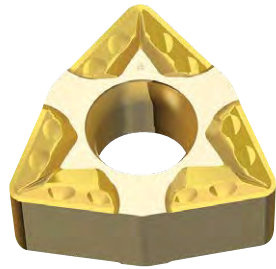
NEGATIVE 80° TRIGON INSERTS FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5080	TT5100	TT8020	TT8125	TT9080	TT9215	TT9225	TT9235
WNMX331MM	WNMX060404MM	.006	.018	.016	.125	.244	.375	.187	.016	●					●	●	●	●
WNMX332MM	WNMX060408MM	.008	.020	.020	.125	.240	.375	.187	.031	●	●	●	●	●	●	●	●	●
WNMX333MM	WNMX060412MM	.009	.020	.028	.125	.236	.375	.187	.047	●					●	●	●	●

GOLD RHINO SERIES WNMX MT CHIPBREAKER

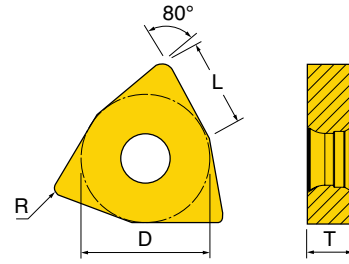
NEGATIVE 80° TRIGON INSERTS FOR MEDIUM



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5080	TT5100	TT7005	TT7015	TT8105	TT8115	TT8125	TT9215	TT9225	TT9235
WNMX331MT	WNMX060404MT	.004	.014	.031	.125	.244	.375	.187	.016	●	●				●	●	●	●	●	●
WNMX332MT	WNMX060408MT	.006	.018	.039	.125	.240	.375	.187	.031	●	●	●	●	●	●	●	●	●	●	●
WNMX333MT	WNMX060412MT	.008	.022	.047	.125	.236	.375	.187	.047	●	●	●	●	●	●	●	●			

● = P ● = M ● = K ● = N ● = S ○ = H

NEGATIVE 80° TRIGON INSERTS FOR FINISHING TO MEDIUM WIPER

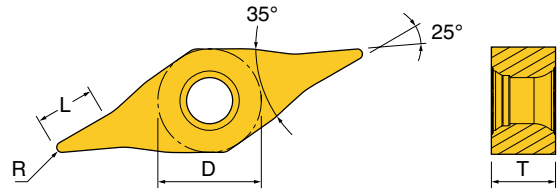
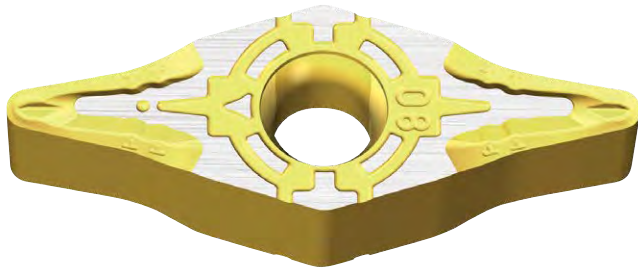


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	PV3010	TT5100	TT7005	TT7015	TT8105	TT8115	TT8125
WNMX331WA	WNMX060404WA	.003	.010	.010	.098	.244	.375	.187	.016									
WNMX332WA	WNMX060408WA	.004	.016	.010	.118	.240	.375	.187	.031									
WNMX333WA	WNMX060412WA	.008	.020	.016	.118	.236	.375	.187	.047									

● = P ○ = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES YNMG FS CHIPBREAKER

NEGATIVE 25° RHOMBIC INSERTS FOR SUPER-FINISHING

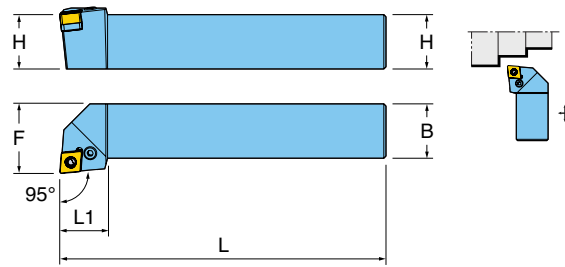
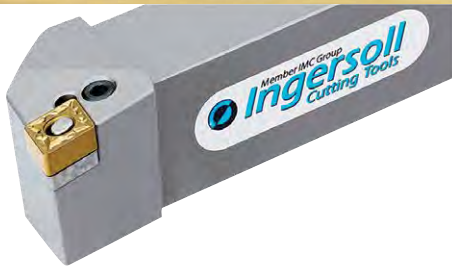


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	PV3010	TT5080	TT8105	TT8115	TT9080
YNMG2.531FS	YNMG130404FS	.003	.008	.012	.039	.185	.313	.187	.016							
YNMG2.532FS	YNMG130408FS	.003	.010	.020	.059	.165	.313	.187	.031							








● = P ● = M ● = K ● = N ● = S ○ = H

GOLD RHINO SERIES HCLNR/L

HOOK-LEVER HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE 80° RHOMBIC INSERTS

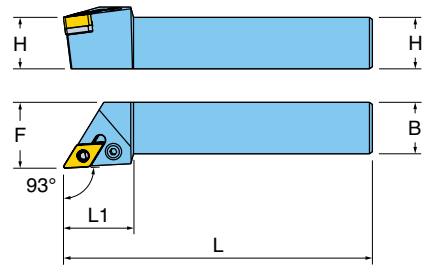


Designation	H	B	L	L1	F
HCLNL08-33C-SH	0.500	0.500	6.000	0.708	0.500
HCLNR08-33C-SH	0.500	0.500	6.000	0.708	0.500
HCLNL10-33C-SH	0.625	0.625	6.000	0.787	0.625
HCLNR10-33C-SH	0.625	0.625	6.000	0.787	0.625
HCLNL10-33A	0.625	0.625	4.000	0.870	0.750
HCLNR10-33A	0.625	0.625	4.000	0.870	0.750
HCLNL12-33B	0.750	0.750	4.500	0.870	1.000
HCLNR12-33B	0.750	0.750	4.500	0.870	1.000
HCLNL16-33D	1.000	1.000	6.000	0.870	1.250
HCLNR16-33D	1.000	1.000	6.000	0.870	1.250
HCLNL20-33D	1.250	1.250	6.000	0.870	1.375
HCLNR20-33D	1.250	1.250	6.000	0.870	1.375

HARDWARE							
	Insert Reference	Lever	Lever Screw	Seat	Seat Pin	Lever Screw Wrench	Seat Pin Punch
HCLNR/L08	CN_33_	LCL09B-NX	LCS3B	-	-	L-W2	-
HCLNR/L10	CN_33_	LCL09-NX	LCS3	LSC32A	LSP3A	L-W2.5	SPP3-4
HCLNR/L12	CN_33_	LCL09-NX	LCS3	LSC32A	LSP3A	L-W2.5	SPP3-4
HCLNR/L16	CN_33_	LCL09-NX	LCS3	LSC32A	LSP3A	L-W2.5	SPP3-4
HCLNR/L20	CN_33_	LCL09-NX	LCS3	LSC32A	LSP3A	L-W2.5	SPP3-4

GOLD RHINO SERIES HDJNR/L

HOOK-LEVER-HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE 55° RHOMBIC INSERTS

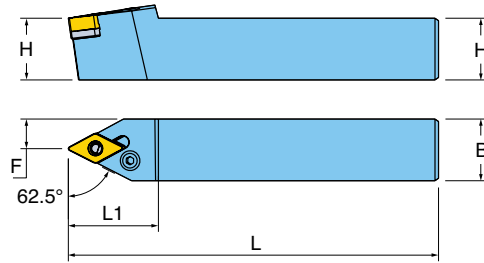


Designation	H	B	L	L1	F
HDJNL12-3.53.5B	0.750	0.750	4.500	1.340	1.000
HDJNR12-3.53.5B	0.750	0.750	4.500	1.340	1.000
HDJNL16-3.53.5D	1.000	1.000	6.000	1.340	1.250
HDJNR16-3.53.5D	1.000	1.000	6.000	1.340	1.250
HDJNL20-3.53.5D	1.250	1.250	6.000	1.340	1.500
HDJNR20-3.53.5D	1.250	1.250	6.000	1.340	1.500

HARDWARE							
	Insert Reference	Lever	Lever Screw	Seat Pin	Lever Screw Wrench	Seat	Seat Pin Punch
	DN_3.53.5_	LCL11-NX	LCS4	LSP4	L-W3	LSD3.52	SPP3-4

GOLD RHINO SERIES HDNNR/L

HOOK-LEVER HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE 55° RHOMBIC INSERTS



Designation	H	B	L	L1	F
HDNNL12-3.53.5B	0.750	0.750	4.500	1.440	0.375
HDNNR12-3.53.5B	0.750	0.750	4.500	1.440	0.375
HDNNL16-3.53.5D	1.000	1.000	6.000	1.440	0.500
HDNNR16-3.53.5D	1.000	1.000	6.000	1.440	0.500

HARDWARE



Insert Reference

DN_3.53.5_



Lever

LCL11-NX



Lever Screw

LCS4



Seat Pin

LSP4



Lever Screw Wrench

L-W3



Seat

LSD3.52

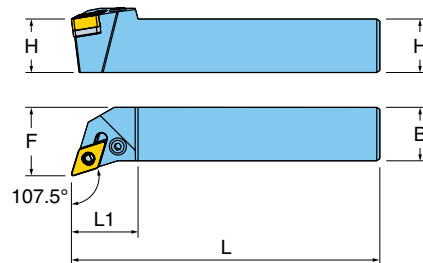


Seat Pin Punch

SPP3-4

GOLD RHINO SERIES HDQNR/L

HOOK-LEVER HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE 55° RHOMBIC INSERTS



Designation	H	B	L	L1	F
HDQNL12-3.53.5B	0.750	0.750	4.500	1.220	1.000
HDQNR12-3.53.5B	0.750	0.750	4.500	1.220	1.000
HDQNL16-3.53.5D	1.000	1.000	6.000	1.220	1.250
HDQNR16-3.53.5D	1.000	1.000	6.000	1.220	1.250

HARDWARE



Insert Reference

DN_3.53.5_



Lever

LCL11-NX



Lever Screw

LCS4



Seat Pin

LSP4



Lever Screw Wrench

L-W3



Seat

LSD3.52

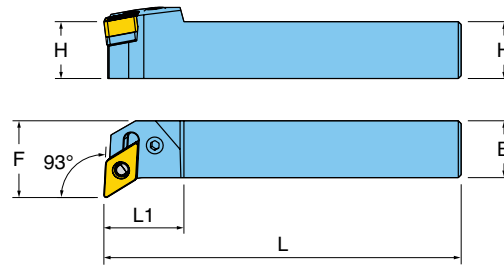


Seat Pin Punch

SPP3-4

GOLD RHINO SERIES HDUNR/L

HOOK-LEVER-HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE 55° RHOMBIC INSERTS

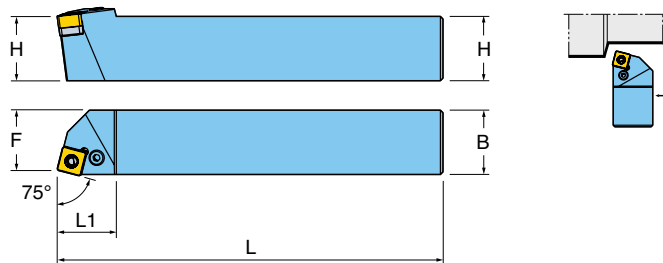


Designation	H	B	L	L1	F
HDUNL16-3.53.5D	1.000	1.000	6.000	1.100	1.365
HDUNR16-3.53.5D	1.000	1.000	6.000	1.100	1.365

HARDWARE							
	Insert Reference	Lever	Lever Screw	Seat Pin	Lever Screw Wrench	Seat	Seat Pin Punch
	DN_3.53.5_	LCL11-NX	LCS4	LSP4	L-W3	LSD3.52	SPP3-4

GOLD RHINO SERIES HSBNR/L

HOOK-LEVER HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE SQUARE INSERTS

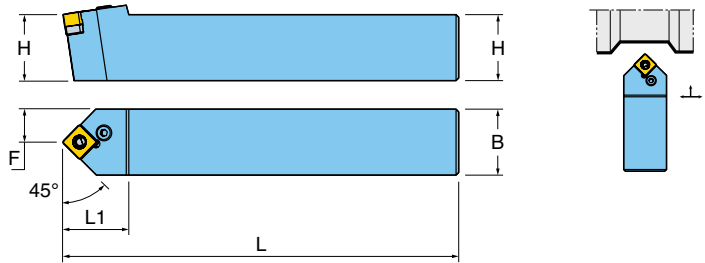


Designation	H	B	L	L1	F
HSBNL12-33B	0.750	0.750	4.500	0.910	0.691
HSBNR12-33B	0.750	0.750	4.500	0.910	0.691
HSBNL16-33D	1.000	1.000	6.000	0.910	0.941
HSBNR16-33D	1.000	1.000	6.000	0.910	0.941

HARDWARE							
	Insert Reference	Lever	Lever Screw	Seat Pin	Seat	Lever Screw Wrench	Seat Pin Punch
	SN_33_	LCL09-NX	LCS3	LSP3A	LSS32A	L-W2.5	SPP3-3L

GOLD RHINO SERIES HSDNN

HOOK-LEVER HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE SQUARE INSERTS

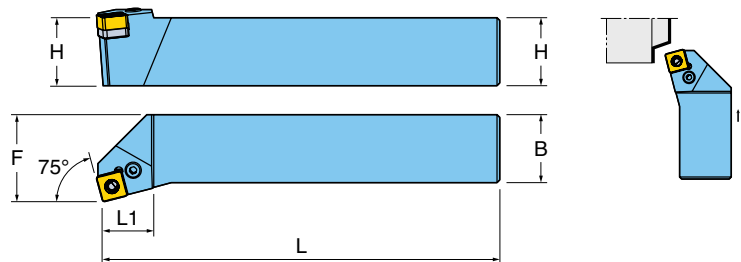


Designation	H	B	L	L1	F
HSDNN12-33B	0.750	0.750	4.500	0.980	0.375
HSDNN16-33D	1.000	1.000	6.000	0.980	0.500

HARDWARE							
	SN_33_	LCL09-NX	LCS3	LSP3A	LSS32A	L-W2.5	SPP3-3L

GOLD RHINO SERIES HSKNR/L

HOOK-LEVER HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE SQUARE INSERTS

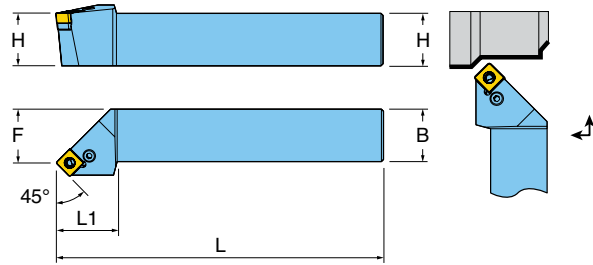


Designation	H	B	L	L1	F
HSKNL12-33B	0.750	0.750	4.500	0.750	1.000
HSKNR12-33B	0.750	0.750	4.500	0.750	1.000
HSKNL16-33D	1.000	1.000	6.000	0.750	1.250
HSKNR16-33D	1.000	1.000	6.000	0.750	1.250

HARDWARE							
	SN_33_	LCL09-NX	LCS3	LSP3A	LSS32A	L-W2.5	SPP3-3L

GOLD RHINO SERIES HSSNR/L

HOOK-LEVER HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE SQUARE INSERTS

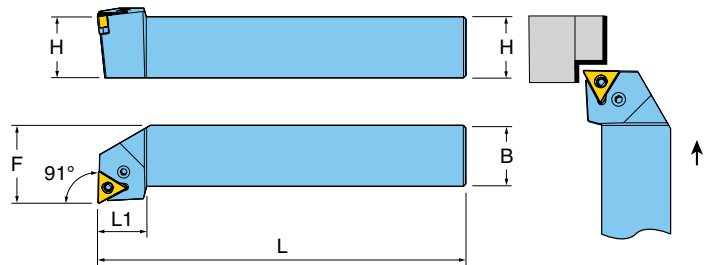
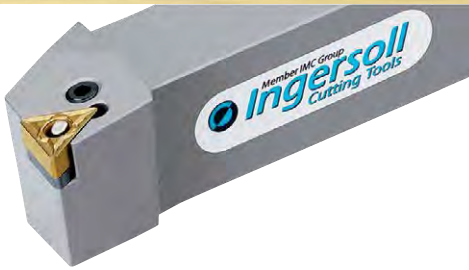


Designation	H	B	L	L1	F
HSSNL12-33B	0.750	0.750	4.500	0.850	1.000
HSSNR12-33B	0.750	0.750	4.500	0.850	1.000
HSSNL16-33D	1.000	1.000	6.000	1.140	1.250
HSSNR16-33D	1.000	1.000	6.000	1.140	1.250

HARDWARE							
	SN__33__	LCL09-NX	LCS3	LSP3A	LSS32A	L-W2.5	SPP3-3L

GOLD RHINO SERIES HTFNR/L

HOOK-LEVER HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE TRIANGULAR INSERTS

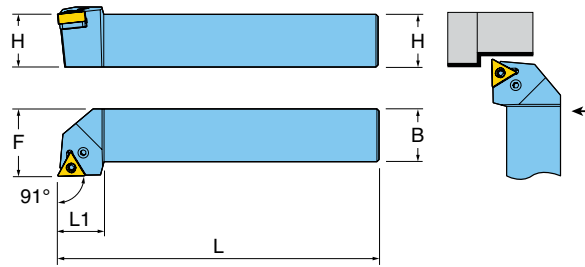


Designation	H	B	L	L1	F
HTFNL12-2.53B	0.750	0.750	4.500	0.790	1.000
HTFNR12-2.53B	0.750	0.750	4.500	0.790	1.000
HTFNL16-2.53D	1.000	1.000	6.000	0.790	1.250
HTFNR16-2.53D	1.000	1.000	6.000	0.790	1.250

HARDWARE							
	TN__2.53__	LCL08-NX	LCS3-NX	LSP3B	L-W2.5	SPP3-3L	LST2.51.8

GOLD RHINO SERIES HTGNR/L

HOOK-LEVER HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE TRIANGULAR INSERTS

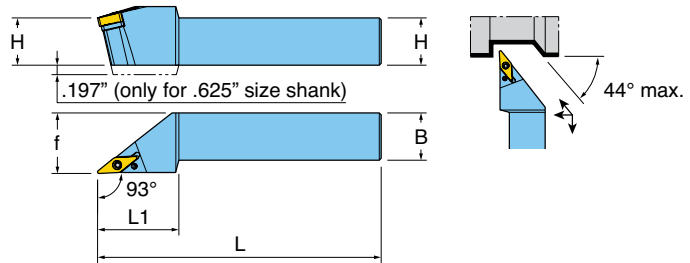


Designation	H	B	L	L1	F
HTGNL10-2.53A	0.625	0.625	4.000	0.870	0.750
HTGNR10-2.53A	0.625	0.625	4.000	0.870	0.750
HTGNL12-2.53B	0.750	0.750	4.500	0.870	1.000
HTGNR12-2.53B	0.750	0.750	4.500	0.870	1.000
HTGNL16-2.53D	1.000	1.000	6.000	0.870	1.250
HTGNR16-2.53D	1.000	1.000	6.000	0.870	1.250

HARDWARE							
	TN_2.53_	LCL08-NX	LCS3-NX	LSP3B	L-W2.5	SPP3-3L	LST2.51.8

GOLD RHINO SERIES HVJNR/L

HOOK-LEVER HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE 25° & 35° RHOMBIC INSERTS

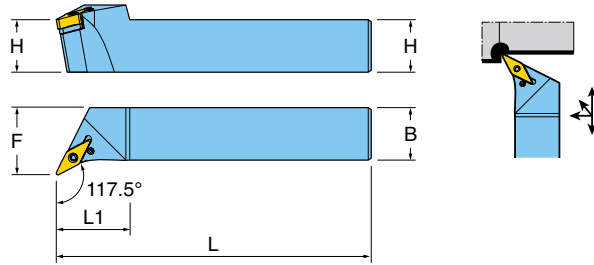


Designation	H	B	L	L1	F
HVJNL10-2.53A	0.625	0.625	4.000	1.180	0.750
HVJNR10-2.53A	0.625	0.625	4.000	1.180	0.750
HVJNL12-2.53B	0.750	0.750	4.500	1.380	1.000
HVJNR12-2.53B	0.750	0.750	4.500	1.380	1.000
HVJNL16-2.53D	1.000	1.000	6.000	1.690	1.250
HVJNR16-2.53D	1.000	1.000	6.000	1.690	1.250
HVJNL20-2.53D	1.250	1.250	6.000	1.970	1.500
HVJNR20-2.53D	1.250	1.250	6.000	1.970	1.500

HARDWARE							
	VN_X2.53_	LCL08-NX	LCS4-DH	LSP3B	L-W2.5	SPP3-3L	LSV2.51.8H

GOLD RHINO SERIES HVQNR/L

HOOK LEVER HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE 25° & 35° RHOMBIC INSERTS

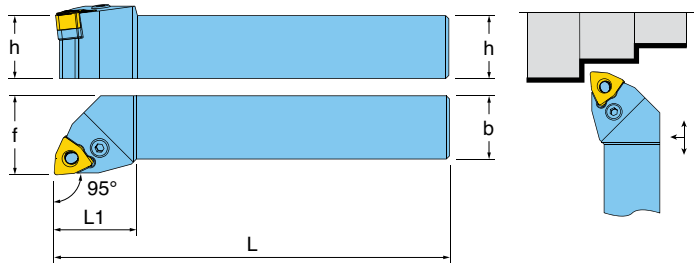
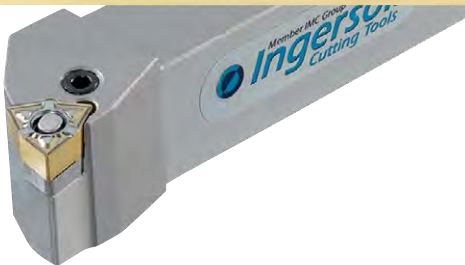


Designation	H	B	L	L1	F
HVQNL12-2.53B	0.750	0.750	4.500	1.380	1.000
HVQNR12-2.53B	0.750	0.750	4.500	1.380	1.000
HVQNL16-2.53D	1.000	1.000	6.000	1.380	1.250
HVQNR16-2.53D	1.000	1.000	6.000	1.380	1.250

HARDWARE							
	Insert Reference	Lever	Lever Screw	Seat Pin	Lever Screw Wrench	Seat Pin Punch	Seat
	VN_X2.53_	LCL08-NX	LCS4-DH	LSP3B	L-W2.5	SPP3-3L	LSV2.51.8H

GOLD RHINO SERIES HWLNR/L

HOOK-LEVER HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE 80° TRIGON INSERTS

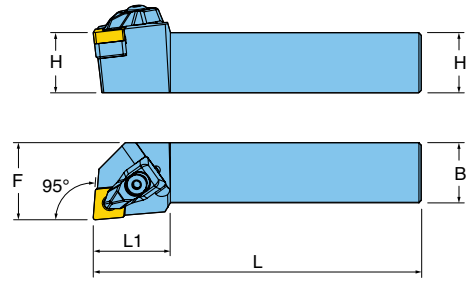


Designation	H	B	L	L1	F
HWLNL10-33A	0.625	0.625	4.000	1.023	0.750
HWLNR10-33A	0.625	0.625	4.000	1.023	0.750
HWLNL12-33B	0.750	0.750	4.500	1.023	1.000
HWLNR12-33B	0.750	0.750	4.500	1.023	1.000
HWLNL16-33D	1.000	1.000	6.000	1.023	1.250
HWLNR16-33D	1.000	1.000	6.000	1.023	1.250

HARDWARE							
	Insert Reference	Lever	Lever Screw	Seat Pin	Seat	Lever Screw Wrench	Seat Pin Punch
	WN_X33_	LCL09-NX	LCS3	LSP3A	LSW32A	L-W2.5	SPP3-4

GOLD RHINO SERIES TCLNR/L

T-TYPE HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE 80° RHOMBIC INSERTS

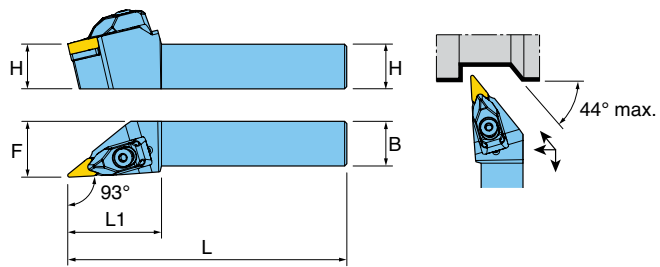


Designation	H	B	L	L1	F
TCLNL12-33B	0.750	0.750	4.500	0.980	1.000
TCLNR12-33B	0.750	0.750	4.500	0.980	1.000
TCLNL16-33D	1.000	1.000	6.000	0.980	1.250
TCLNR16-33D	1.000	1.000	6.000	0.980	1.250
TCLNL20-33D	1.250	1.250	6.000	0.980	1.375
TCLNR20-33D	1.250	1.250	6.000	0.980	1.375

HARDWARE							
	Insert Reference	Clamp	Clamp Spring	Seat Screw	Seat Wrench	Clamp Screw	Seat
	CN_33_	DLM3-NX	DSP3	S040085I	T15	DLS3	LSC32A

GOLD RHINO SERIES TVJNR/L

T-TYPE HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE 35° RHOMBIC INSERTS

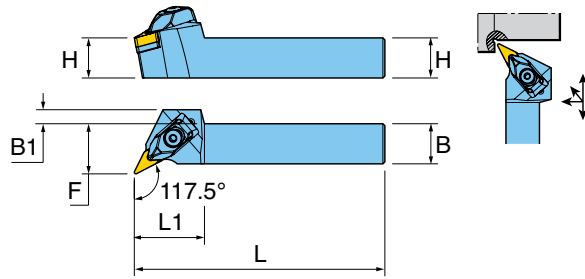


Designation	H	B	L	L1	F
TVJNL12-2.53B	0.750	0.750	4.500	1.380	1.000
TVJNR12-2.53B	0.750	0.750	4.500	1.380	1.000
TVJNL16-2.53D	1.000	1.000	6.000	1.690	1.250
TVJNR16-2.53D	1.000	1.000	6.000	1.690	1.250
TVJNL20-2.53D	1.250	1.250	6.000	1.970	1.500
TVJNR20-2.53D	1.250	1.250	6.000	1.970	1.500

HDWR								
	Insert Reference	Clamp	Clamp Spring	Seat Screw	Seat Wrench	Clamp Screw	Clamp Screw Wrench	Seat
	VN_X2.53_	DLM2.5V-NX	DSP4	S040085I	T15	DLS4	L-W3	MSV12.522

GOLD RHINO SERIES TVQNR/L

T-TYPE HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE 35° RHOMBIC INSERTS

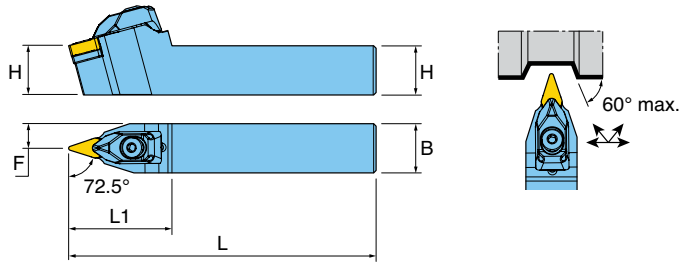


Designation	H	B	L	L1	F	B1
TVQNL12-2.53B	0.750	0.750	4.500	1.380	1.000	-
TVQNR12-2.53B	0.750	0.750	4.500	1.380	1.000	-
TVQNL16-2.53D	1.000	1.000	6.000	1.380	1.250	-
TVQNR16-2.53D	1.000	1.000	6.000	1.380	1.250	-

HDWR	Insert Reference	Clamp	Clamp Spring	Seat Screw	Seat Wrench	Clamp Screw	Clamp Screw Wrench	Seat
VN_X2.53_	DLM2.5V-NX	DSP4	S0400851	T15	DLS4	L-W3	MSV12.522	

GOLD RHINO SERIES TVVNN

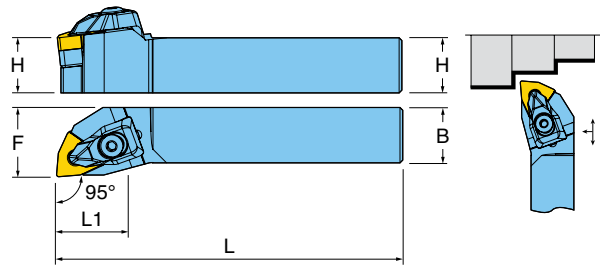
T-TYPE HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE 35° RHOMBIC INSERTS










Designation	H	B	L	L1	F
TVVNN12-2.53B	0.750	0.750	4.500	1.654	0.375
TVVNN16-2.53D	1.000	1.000	6.000	1.654	0.500

HDWR	Insert Reference	Clamp	Clamp Spring	Seat Screw	Seat Wrench	Clamp Screw	Clamp Screw Wrench	Seat
VN_X2.53_	DLM2.5V-NX	DSP4	S0400851	T15	DLS4	L-W3	MSV12.522	

T-TYPE HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE 80° TRIGON INSERTS

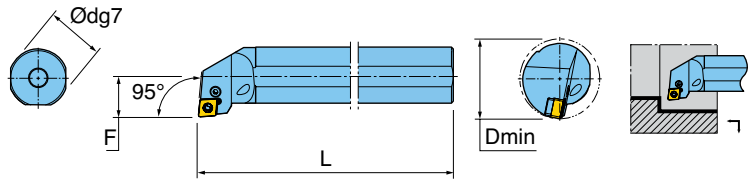


Designation	H	B	L	L1	F
TWLN12-33B	0.750	0.750	4.500	1.020	1.000
TWLN12-33D	0.750	0.750	4.500	1.020	1.000
TWLN16-33D	1.000	1.000	6.000	1.020	1.250
TWLN16-33B	1.000	1.000	6.000	1.020	1.250
TWLN20-33D	1.250	1.250	6.000	1.020	1.375
TWLN20-33B	1.250	1.250	6.000	1.020	1.375

HDWR							
	Insert Reference	Clamp	Clamp Spring	Seat Screw	Seat Wrench	Clamp Screw	Seat
	WN_X33_	DLM3-NX	DSP3	S040085I	T15	DLS3	LSW32A

GOLD RHINO SERIES A-HCLNR/L

HOOK-LEVER BORING BAR FOR INTERNAL TURNING ACCEPTS NEGATIVE 80° RHOMBIC INSERTS, COOLANT THRU

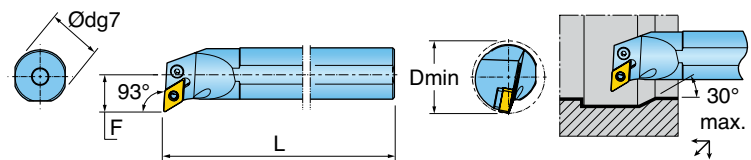


Designation	D	Dmin	L	F
A10R-HCLNL-33	0.625	0.750	8.00	0.406
A10R-HCLNR-33	0.625	0.750	8.00	0.406
A12S-HCLNL-33	0.750	1.000	10.00	0.500
A12S-HCLNR-33	0.750	1.000	10.00	0.500
A16T-HCLNL-33	1.000	1.250	12.00	0.640
A16T-HCLNR-33	1.000	1.250	12.00	0.640
A20U-HCLNL-33	1.250	1.500	14.00	0.765
A20U-HCLNR-33	1.250	1.500	14.00	0.765

HDWR								
	Insert Reference	Lever	Lever Screw	Lever Screw Wrench	Lever Clip	Seat	Seat Pin Punch	Seat Pin
A10R	CN_33_	LCL09B-NX	LCS3B	L-W2	LSR3B	-	-	-
A12S	CN_33_	LCL09B-NX	LCS3B	L-W2	LSR3B	-	-	-
A16T	CN_33_	LCL09B-NX	LCS3B	L-W2	LSR3B	-	-	-
A20U	CN_33_	LCL09-NX	LCS3	L-W2.5	-	LSC32	SPP3-4	LSP3A

GOLD RHINO SERIES A-HDUNR/L

HOOK-LEVER BORING BAR FOR INTERNAL TURNING ACCEPTS NEGATIVE 55° RHOMBIC INSERTS, COOLANT THRU

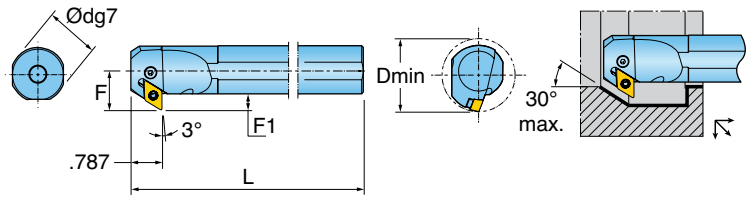
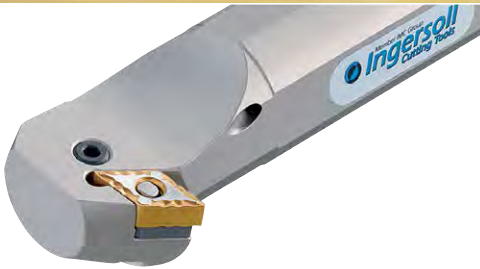


Designation	D	Dmin	L	F
A20U-HDUNL-3.53.5	1.250	1.750	14.00	1.000
A20U-HDUNR-3.53.5	1.250	1.750	14.00	1.000

HARDWARE							
	Insert Reference	Lever	Lever Screw	Seat Pin	Lever Screw Wrench	Seat Pin Punch	Seat
	DN_3.53.5_	LCL11-NX	LCS4S	LSP4	L-W3	SPP3-4	LSD3.52B

GOLD RHINO SERIES A-HDZNR/L

HOOK-LEVER-BORING BAR FOR INTERNAL TURNING ACCEPTS NEGATIVE 55° RHOMBIC INSERTS, COOLANT THRU

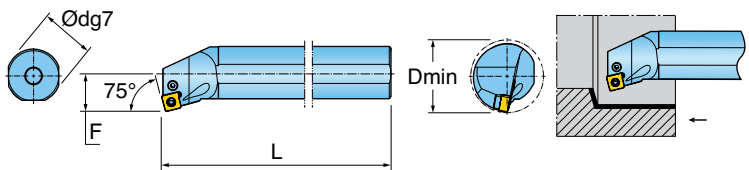


Designation	D	Dmin	L	F	F1
A20U-HDZNL-3.53.5	1.250	1.750	14.00	1.000	.413
A20U-HDZNR-3.53.5	1.250	1.750	14.00	1.000	.413

HARDWARE							
	Insert Reference	Lever	Lever Screw	Seat Pin	Lever Screw Wrench	Seat Pin Punch	Seat
	DN_3.53.5_	LCL11-NX	LCS4S	LSP4	L-W3	SPP3-4	LSD3.52B

GOLD RHINO SERIES A-HSKNR/L

HOOK-LEVER BORING BAR FOR INTERNAL TURNING ACCEPTS NEGATIVE SQUARE INSERTS, COOLANT THRU

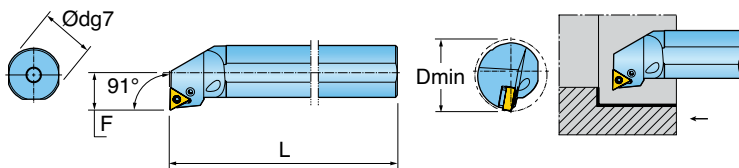


Designation	D	Dmin	L	F
A16T-HSKNL-33	1.000	1.250	12.00	0.640
A16T-HSKNR-33	1.000	1.250	12.00	0.640
A20U-HSKNL-33	1.250	1.500	14.00	0.765
A20U-HSKNR-33	1.250	1.500	14.00	0.765


HDWR								
	Insert Reference	Lever	Lever Screw	Lever Screw Wrench	Lever Clip	Seat Pin	Seat	Seat Pin Punch
A16T	SN_33_	LCL09B-NX	LCS3B	L-W2	LSR3B	-	-	-
A20U	SN_33_	LCL09-NX	LCS3	L-W2.5	-	LSP3A	LSS32	SPP3-4

GOLD RHINO SERIES A-HTFNR/L

HOOK-LEVER-BORING BAR FOR INTERNAL TURNING ACCEPTS NEGATIVE TRIANGULAR INSERTS, COOLANT THRU

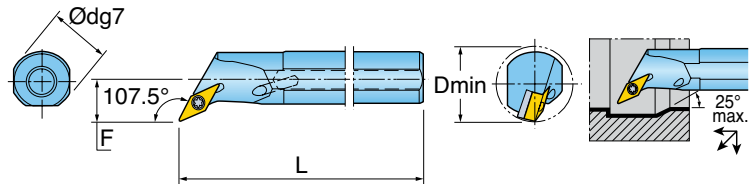


Designation	D	Dmin	L	F
A10R-HTFNL-2.53	0.625	0.750	8.00	0.406
A10R-HTFNR-2.53	0.625	0.750	8.00	0.406
A12S-HTFNL-2.53	0.750	1.000	10.00	0.500
A12S-HTFNR-2.53	0.750	1.000	10.00	0.500
A16T-HTFNL-2.53	1.000	1.250	12.00	0.640
A16T-HTFNR-2.53	1.000	1.250	12.00	0.640
A20U-HTFNL-2.53	1.250	1.500	14.00	0.765
A20U-HTFNR-2.53	1.250	1.500	14.00	0.765







HDWR								
	Insert Reference	Lever	Lever Screw	Lever Screw Wrench	Lever Clip	Seat Pin	Seat	Seat Pin Punch
A10R	TN_2.53_	LCL08B-NX	LCS3B	L-W2	LSR3B	-	-	-
A12S	TN_2.53_	LCL08B-NX	LCS3B	L-W2	LSR3B	-	-	-
A16T	TN_2.53_	LCL08B-NX	LCS3B	L-W2	LSR3B	-	-	-
A20U	TN_2.53_	LCL08-NX	LCS3-NX	L-W2.5	-	LS3PB	LST2.51.8B	SPP3-3L

GOLD RHINO SERIES A-SVQNR/L

SCREW-CLAMP BORING BAR FOR INTERNAL TURNING ACCEPTS NEGATIVE 35° RHOMBIC INSERTS, COOLANT THRU

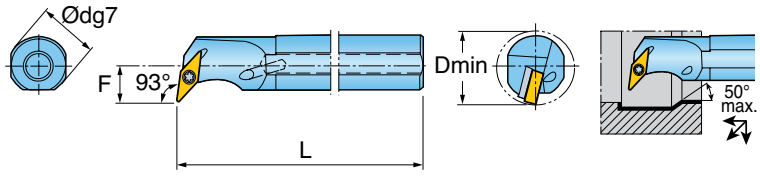


Designation	D	Dmin	L	F
A16T-SVQNL-2.53	1.000	1.300	12.00	0.750
A16T-SVQNR-2.53	1.000	1.300	12.00	0.750
A20U-SVQNL-2.53	1.250	1.650	14.00	0.875
A20U-SVQNR-2.53	1.250	1.650	14.00	0.875

HARDWARE						
	Insert Reference	Insert Screw	Seat Screw	Insert Screw Wrench	Seat Screw Wrench	Seat
	VN_X2.53_	TS30120I/HG	TS5030062S	T9	L-W3.5	SSVN2.523

GOLD RHINO SERIES A-SVUNR/L

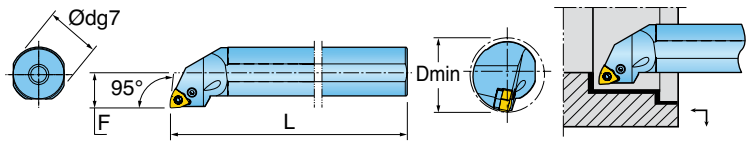
SCREW-CLAMP-BORING BAR FOR INTERNAL TURNING ACCEPTS NEGATIVE 35° RHOMBIC INSERTS, COOLANT THRU











Designation	D	Dmin	L	F
A16T-SVUNL-2.53	1.000	1.250	12.00	0.625
A16T-SVUNR-2.53	1.000	1.250	12.00	0.625
A20U-SVUNL-2.53	1.250	1.500	14.00	0.750
A20U-SVUNR-2.53	1.250	1.500	14.00	0.750

HARDWARE						
	Insert Reference	Insert Screw	Seat Screw	Insert Screw Wrench	Seat Screw Wrench	Seat
	VN_X2.53_	TS30120I/HG	TS5030062S	T9	L-W3.5	SSVN2.523

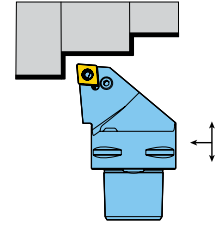
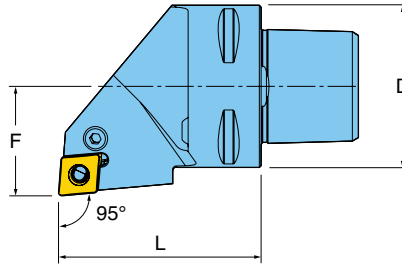
HOOK-LEVER BORING BAR FOR INTERNAL TURNING ACCEPTS NEGATIVE 80° TRIGON INSERTS, COOLANT THRU



Designation	D	Dmin	L	F
A10R-HWLN-33	0.625	0.750	8.00	0.406
A10R-HWLN-33	0.625	0.750	8.00	0.406
A12S-HWLN-33	0.750	1.000	10.00	0.500
A12S-HWLN-33	0.750	1.000	10.00	0.500
A16T-HWLN-33	1.000	1.250	12.00	0.640
A16T-HWLN-33	1.000	1.250	12.00	0.640
A20U-HWLN-33	1.250	1.500	14.00	0.765
A20U-HWLN-33	1.250	1.500	14.00	0.765

HDWR	 Insert Reference	 Lever	 Lever Screw	 Lever Clip	 Lever Screw Wrench	 Seat	 Seat Pin Punch	 Seat Pin
A10R	WN_X33_	LCL09B-NX	LCS3B	LSR3B	L-W2	-	-	-
A12S	WN_X33_	LCL09B-NX	LCS3B	LSR3B	L-W2	-	-	-
A16T	WN_X33_	LCL09B-NX	LCS3B	LSR3B	L-W2	-	-	-
A20U	WN_X33_	LCL09-NX	LCS3	-	L-W2.5	LSW32	SPP3-4	LSP3A

QUICK CHANGE (ISO 26623) H-TYPE HOLDER FOR ISO TURNING ACCEPTS 80° RHOMBIC INSERTS

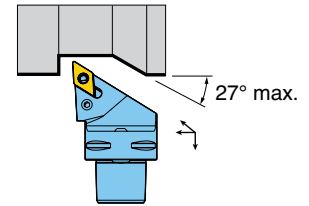
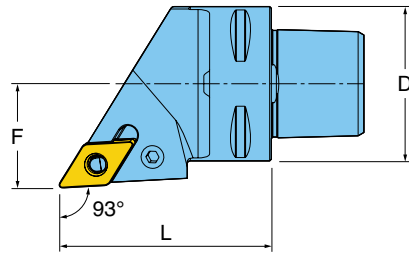


Designation	D	L	F
C4-HCLNL27050-0904	40mm	50mm	27mm
C4-HCLNR27050-0904	40mm	50mm	27mm

HDWR								
	Insert Reference	Lever	Lever Screw	Coolant Nozzle	Seat	Seat Pin	Lever Screw Wrench	Seat Pin Punch
	CN_33_	LCL09-NX	LCS3	NZ83	LSC32	LSP3A	L-W2.5	SPP3-4

GOLD RHINO SERIES C_-HDJNR/L COADAPTER™

QUICK CHANGE (ISO 26623) H-TYPE HOLDER FOR ISO TURNING ACCEPTS 55° RHOMBIC INSERTS

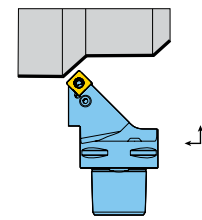
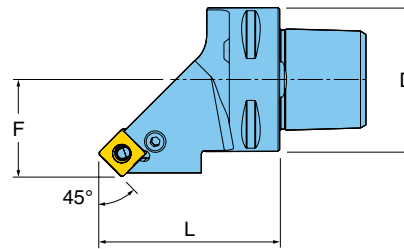


Designation	D	L	F
C4-HDJNL27055-1305	40mm	55mm	27mm
C4-HDJNL27055-1305	40mm	55mm	27mm

HDWR	Insert Reference	Lever	Lever Screw	Coolant Nozzle	Seat Pin	Lever Screw Wrench	Seat Pin Punch	Seat
	DN_3.53.5_	LCL11-NX	LCS4	NZ83	LSP4	L-W3	SPP3-4	LSD3.52

GOLD RHINO SERIES C_-HSSNR/L COADAPTER™

QUICK CHANGE (ISO 26623) H-TYPE HOLDER FOR ISO TURNING ACCEPTS SQUARE INSERTS

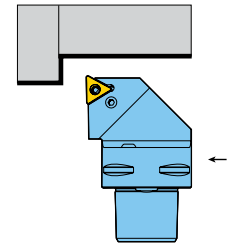
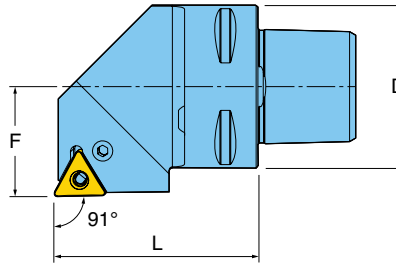


Designation	D	L	F
C4-HSSNL27042-0904	40mm	44mm	27mm
C4-HSSNR27042-0904	40mm	44mm	27mm

HDWR	Insert Reference	Lever	Lever Screw	Coolant Nozzle	Seat Pin	Seat	Lever Screw Wrench	Seat Pin Punch
	SN_33_	LCL09-NX	LCS3	NZ83	LSP3A	LSS32A	L-W2.5	SPP3-4

GOLD RHINO SERIES C_-HTGNR/L COADAPTER™

QUICK CHANGE (ISO 26623) H-TYPE HOLDER FOR ISO TURNING ACCEPTS TRIANGULAR INSERTS

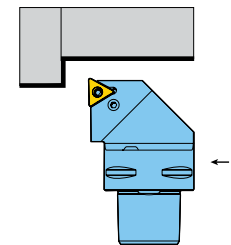
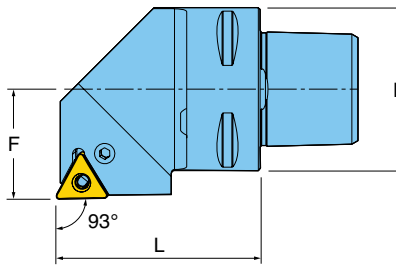


Designation	D	L	F
C4-HTGNL27050-1304	40mm	50mm	27mm
C4-HTGNR27050-1304	40mm	50mm	27mm

HDWR								
	TN_2.53_	LCL08-NX	LCS3-NX	NZ83	LSP3B	L-W2.5	SPP3-3L	LST2.51.8

GOLD RHINO SERIES C_-HTJNR/L COADAPTER™

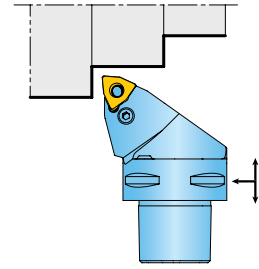
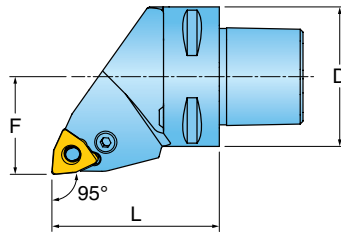
QUICK CHANGE (ISO 26623) H-TYPE HOLDER FOR ISO TURNING ACCEPTS TRIANGULAR INSERTS



Designation	D	L	F
C4-HTJNL27050-1304	40mm	50mm	27mm
C4-HTJNR27050-1304	40mm	50mm	27mm

HDWR								
	TN_2.53_	LCL08-NX	LCS3-NX	NZ83	LSP3B	L-W2.5	SPP3-3L	LST2.51.8

QUICK CHANGE (ISO 26623) H-TYPE HOLDER FOR ISO TURNING ACCEPTS 80° TRIGON INSERTS

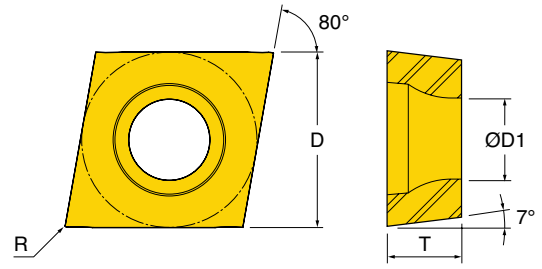
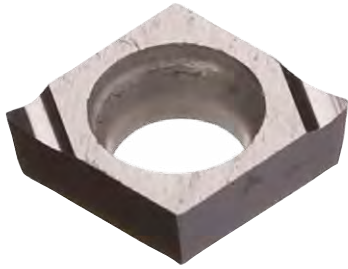


Designation	D	L	F
C4-HWLNL27050-0604	40mm	50mm	27mm
C4-HWLNR27050-0604	40mm	50mm	27mm

HDWR								
	Insert Reference	Lever	Lever Screw	Coolant Nozzle	Seat Pin	Seat	Lever Screw Wrench	Seat Pin Punch
	WN_X33_	LCL09-NX	LCS3	NZ83	LSP3A	LSW32A	L-W2.5	SPP3-4

TOMINI™ SERIES CCGT R/L FF CHIPBREAKER

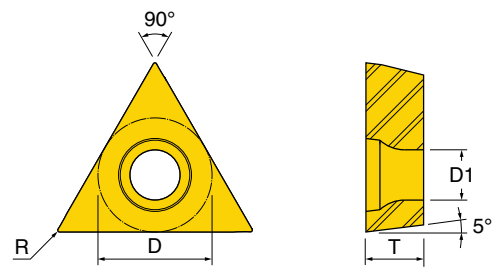
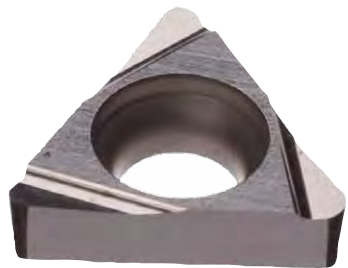
POSITIVE 7° CLEARANCE 80° RHOMBIC GROUND INSERTS FOR SMALL BORING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	D	T	R	D1	Grades	CT3000	TT9020
CCGT1.10.9X0L-FF	CCGT0301003L-FF	0.001	0.004	0.002	0.012	0.138	0.055	0.001	0.079			
CCGT1.10.9X0R-FF	CCGT0301003R-FF	0.001	0.004	0.002	0.012	0.138	0.055	0.001	0.079			
CCGT1.10.90L-FF	CCGT030101L-FF	0.001	0.005	0.003	0.016	0.138	0.055	0.004	0.079			
CCGT1.10.90R-FF	CCGT030101R-FF	0.001	0.005	0.003	0.016	0.138	0.055	0.004	0.079			
CCGT1.10.90.5L-FF	CCGT030102L-FF	0.001	0.006	0.004	0.016	0.138	0.055	0.008	0.079			
CCGT1.10.90.5R-FF	CCGT030102R-FF	0.001	0.006	0.004	0.016	0.138	0.055	0.008	0.079			
CCGT1.10.91L-FF	CCGT030104L-FF	0.002	0.008	0.004	0.016	0.138	0.055	0.016	0.079			
CCGT1.10.91R-FF	CCGT030104R-FF	0.002	0.008	0.004	0.016	0.138	0.055	0.016	0.079			
CCGT1.41.1X0L-FF	CCGT0401003L-FF	0.001	0.004	0.002	0.016	0.169	0.071	0.001	0.090			
CCGT1.41.1X0R-FF	CCGT0401003R-FF	0.001	0.004	0.002	0.016	0.169	0.071	0.001	0.090			
CCGT1.41.10L-FF	CCGT040101L-FF	0.001	0.005	0.004	0.020	0.169	0.071	0.004	0.090			
CCGT1.41.10R-FF	CCGT040101R-FF	0.001	0.005	0.004	0.020	0.169	0.071	0.004	0.090			
CCGT1.41.10.5L-FF	CCGT040102L-FF	0.001	0.005	0.004	0.020	0.169	0.071	0.008	0.090			
CCGT1.41.10.5R-FF	CCGT040102R-FF	0.001	0.005	0.004	0.020	0.169	0.071	0.008	0.090			
CCGT1.41.11L-FF	CCGT040104L-FF	0.002	0.008	0.004	0.020	0.169	0.071	0.016	0.090			
CCGT1.41.11R-FF	CCGT040104R-FF	0.002	0.008	0.004	0.020	0.169	0.071	0.016	0.090			

TOMINI™ SERIES TBGT R/L FF CHIPBREAKER

POSITIVE 5° CLEARANCE TRIANGULAR GROUND INSERTS FOR SMALL BORING

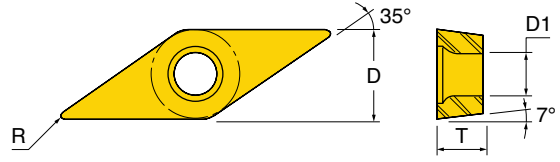


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	D	T	R	D1	Grades	CT3000	TT9020
TBGT1.21X0L-FF	TBGT0601003L-FF	0.001	0.004	0.002	0.012	0.156	0.094	0.001	0.090			
TBGT1.21X0R-FF	TBGT0601003R-FF	0.001	0.004	0.002	0.012	0.156	0.094	0.001	0.090			
TBGT1.210L-FF	TBGT060101L-FF	0.001	0.005	0.003	0.016	0.156	0.094	0.004	0.090			
TBGT1.210R-FF	TBGT060101R-FF	0.001	0.005	0.003	0.016	0.156	0.094	0.004	0.090			
TBGT1.210.5L-FF	TBGT060102L-FF	0.001	0.006	0.004	0.016	0.156	0.094	0.008	0.090			
TBGT1.210.5R-FF	TBGT060102R-FF	0.001	0.006	0.004	0.016	0.156	0.094	0.008	0.090			
TBGT1.211L-FF	TBGT060104L-FF	0.002	0.008	0.004	0.016	0.156	0.094	0.016	0.090			
TBGT1.211R-FF	TBGT060104R-FF	0.002	0.008	0.004	0.016	0.156	0.094	0.016	0.090			

● = P ○ = M ● = K ● = N ● = S ○ = H

TOMINI™ SERIES VCGT SA CHIPBREAKER

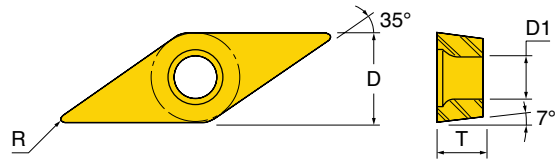
POSITIVE 7° CLEARANCE 35° RHOMBIC GROUND INSERTS FOR PRECISION FINISHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	D	T	R	D1	Grades	TT5080	TT9020
VCGT220SA	VCGT110301SA	0.001	0.003	0.004	0.060	0.250	0.125	0.004	0.094			
VCGT220.5SA	VCGT110302SA	0.001	0.003	0.008	0.060	0.250	0.125	0.008	0.094			
VCGT221SA	VCGT110304SA	0.001	0.004	0.008	0.060	0.250	0.125	0.016	0.094			

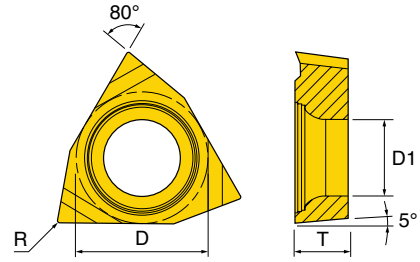
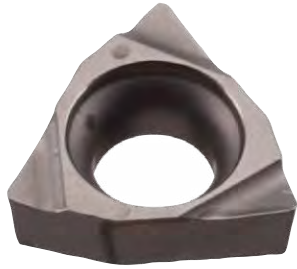
TOMINI™ SERIES VCMT PC CHIPBREAKER

POSITIVE 7° CLEARANCE 35° RHOMBIC INSERTS FOR SEMI-FINISH AND MEDIUM MACHINING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	D	T	R	D1	Grades	CT3000	PV3010	TT8105	TT8115	TT8125	TT9080	TT9215	TT9225	
VCMT1.51.50.5PC	VCMT080202PC	0.001	0.006	0.008	0.059	0.188	0.094	0.008	-										
VCMT1.51.51PC	VCMT080204PC	0.002	0.008	0.008	0.059	0.188	0.094	0.016	-										
VCMT221PC	VCMT110304PC	0.002	0.008	0.004	0.067	0.250	0.125	0.016	0.094										
VCMT331PC	VCMT160404PC	0.002	0.008	0.012	0.079	0.375	0.187	0.016	0.094										
VCMT332PC	VCMT160408PC	0.003	0.008	0.012	0.079	0.375	0.187	0.031	0.094										

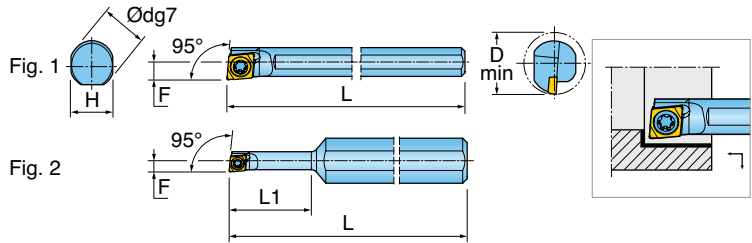
● = P ○ = M ● = K ● = N ● = S ○ = H

**POSITIVE 5° CLEARANCE 80° TRIGON GROUND INSERTS FOR SMALL BORING**

ANSI Number	ISO Number	feed min	feed max	ap min	ap max	D	T	R	D1	Grades	CT3000	TT9020
WBGT1.21X0L-FF	WBGT0601003L-FF	0.001	0.004	0.002	0.012	0.156	0.063	0.001	0.090			
WBGT1.21X0R-FF	WBGT0601003R-FF	0.001	0.004	0.002	0.012	0.156	0.063	0.001	0.090			
WBGT1.210L-FF	WBGT060101L-FF	0.001	0.005	0.003	0.016	0.156	0.063	0.004	0.090			
WBGT1.210R-FF	WBGT060101R-FF	0.001	0.005	0.003	0.016	0.156	0.063	0.004	0.090			
WBGT1.210.5L-FF	WBGT060102L-FF	0.001	0.006	0.004	0.016	0.156	0.063	0.008	0.090			
WBGT1.210.5R-FF	WBGT060102R-FF	0.001	0.006	0.004	0.016	0.156	0.063	0.008	0.090			
WBGT1.211L-FF	WBGT060104L-FF	0.002	0.008	0.004	0.016	0.156	0.063	0.016	0.090			
WBGT1.211R-FF	WBGT060104R-FF	0.002	0.008	0.004	0.016	0.156	0.063	0.016	0.090			

● = P ● = M ● = K ● = N ● = S ○ = H

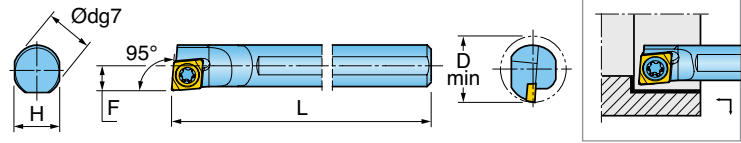
SCREW-CLAMP BORING BAR ACCEPTS POSITIVE 7° CLEARANCE 80° RHOMBIC INSERTS






Designation	D	Dmin	L	L1	F	Shape
S04F-SCLCL03-D05	0.157	0.197	3.15	-	0.098	Fig. 1
S04F-SCLCR03-D05	0.157	0.197	3.15	-	0.098	Fig. 1
S05G-SCLCL03-D06	0.197	0.236	3.54	-	0.118	Fig. 1
S05G-SCLCR03-D06	0.197	0.236	3.54	-	0.118	Fig. 1
S06H-SCLCL04-D07	0.236	0.276	3.94	-	0.138	Fig. 1
S06H-SCLCR04-D07	0.236	0.276	3.94	-	0.138	Fig. 1
S07J-SCLCL04-D08	0.276	0.315	4.33	-	0.157	Fig. 1
S07J-SCLCR04-D08	0.276	0.315	4.33	-	0.157	Fig. 1
S10H-SCLCL03-D05	0.394	0.197	3.94	0.591	0.098	Fig. 2
S10H-SCLCR03-D05	0.394	0.197	3.94	0.591	0.098	Fig. 2

HARDWARE			
	Insert Reference	Insert Screw	Insert Screw Wrench
S04F-SCLCL03-D05	CC_T 1.10.9_	TS160311	T6
S04F-SCLCR03-D05	CC_T 1.10.9_	TS160311	T6
S05G-SCLCL03-D06	CC_T 1.10.9_	TS160311	T6
S05G-SCLCR03-D06	CC_T 1.10.9_	TS160311	T6
S06H-SCLCL04-D07	CC_T 1.41.1_	TS20038I/HG-P	T6P
S06H-SCLCR04-D07	CC_T 1.41.1_	TS20038I/HG-P	T6P
S07J-SCLCL04-D08	CC_T 1.41.1_	TS20038I/HG-P	T6P
S07J-SCLCR04-D08	CC_T 1.41.1_	TS20038I/HG-P	T6P
S10H-SCLCL03-D05	CC_T 1.10.9_	TS160311	T6
S10H-SCLCR03-D05	CC_T 1.10.9_	TS160311	T6

SCREW-CLAMP BORING BAR ACCEPTS POSITIVE 7° CLEARANCE 80° RHOMBIC INSERTS

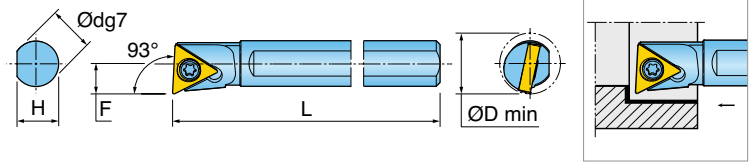


Designation	D	Dmin	L	F
C04G-SCLCL03-D05	0.157	0.197	3.54	0.098
C04G-SCLCR03-D05	0.157	0.197	3.54	0.098
C05H-SCLCL03-D06	0.197	0.236	3.94	0.118
C05H-SCLCR03-D06	0.197	0.236	3.94	0.118
C06J-SCLCL04-D07	0.236	0.276	4.33	0.133
C06J-SCLCR04-D07	0.236	0.276	4.33	0.133
C07K-SCLCL04-D08	0.276	0.315	4.92	0.157
C07K-SCLCR04-D08	0.276	0.315	4.92	0.157

HARDWARE			
	Insert Reference	Insert Screw	Insert Screw Wrench
C04G-SCLCL03-D05	CC_T 1.10.9_	TS16031I	T6
C04G-SCLCR03-D05	CC_T 1.10.9_	TS16031I	T6
C05H-SCLCL03-D06	CC_T 1.10.9_	TS16031I	T6
C05H-SCLCR03-D06	CC_T 1.10.9_	TS16031I	T6
C06J-SCLCL04-D07	CC_T 1.41.1_	TS20038I/HG-P	T6P
C06J-SCLCR04-D07	CC_T 1.41.1_	TS20038I/HG-P	T6P
C07K-SCLCL04-D08	CC_T 1.41.1_	TS20038I/HG-P	T6P
C07K-SCLCR04-D08	CC_T 1.41.1_	TS20038I/HG-P	T6P

TOMINI™ SERIES S-STUBR/L

SCREW-CLAMP BORING BAR ACCEPTS POSITIVE 5° CLEARANCE TRIANGULAR INSERTS

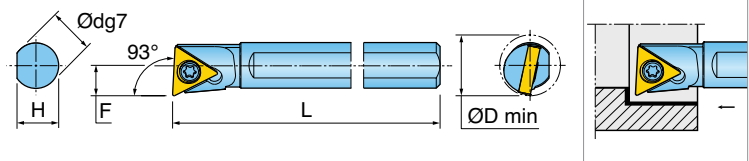


Designation	D	Dmin	L	F
S06H-STUBL06-D08	0.236	0.315	3.94	0.157
S06H-STUBR06-D08	0.236	0.315	3.94	0.157

HARDWARE			
	Insert Reference	Insert Screw	Insert Screw Wrench
	TB_T1.21_	SM20-043-00	T6P

TOMINI™ SERIES C-STUBR/L (CARBIDE)

SCREW-CLAMP BORING BAR ACCEPTS POSITIVE 5° CLEARANCE TRIANGULAR INSERTS

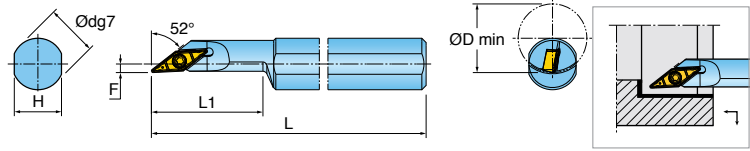


Designation	D	Dmin	L	F
C06J-STUBL06-D08	0.236	0.315	4.33	0.157
C06J-STUBR06-D08	0.236	0.315	4.33	0.157

HARDWARE			
	Insert Reference	Insert Screw	Insert Screw Wrench
	TB_T1.21_	SM20-043-00	T6P

TOMINI™ SERIES S-SVJCR/L

SCREW-HELD BORING BAR ACCEPTS POSITIVE 7° CLEARANCE 35° RHOMBIC INSERTS



Designation	D	Dmin	L	L1	F
S12M-SVJCL08-D16	0.472	0.630	5.91	1.020	0.079
S12M-SVJCR08-D16	0.472	0.630	5.91	1.020	0.079
S16Q-SVJCL08-D20	0.630	0.787	7.09	1.420	0.079
S16Q-SVJCR08-D20	0.630	0.787	7.09	1.420	0.079

HARDWARE



Insert Reference



Insert Screw



Insert Screw Wrench

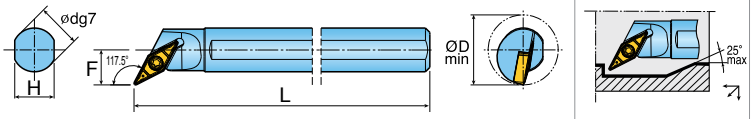
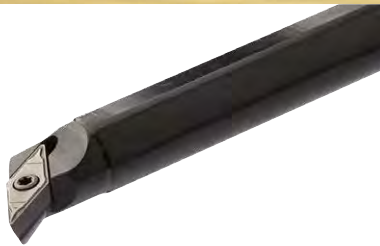
VC_T1.51.5_

TS20038I/HG-P

T6P

TOMINI™ SERIES S-SVPCR/L

SCREW-HELD BORING BAR ACCEPTS POSITIVE 7° CLEARANCE 35° RHOMBIC INSERTS



Designation	D	Dmin	L	F
S10K-SVPCLO8-D16	0.394	0.630	4.92	0.236
S10K-SVPCR08-D16	0.394	0.630	4.92	0.236
S12M-SVPC11-D20	0.472	0.787	5.91	0.394
S12M-SVPCR11-D20	0.472	0.787	5.91	0.394

HARDWARE



Insert Reference



Insert Screw



Insert Screw Wrench

S10K-SVPCLO8-D16

VC_T1.51.5_

TS20038I/HG-P

T6P

S10K-SVPCR08-D16

VC_T1.51.5_

TS20038I/HG-P

T6P

S12M-SVPC11-D20

VC_T22_

SM25-065-70

T7

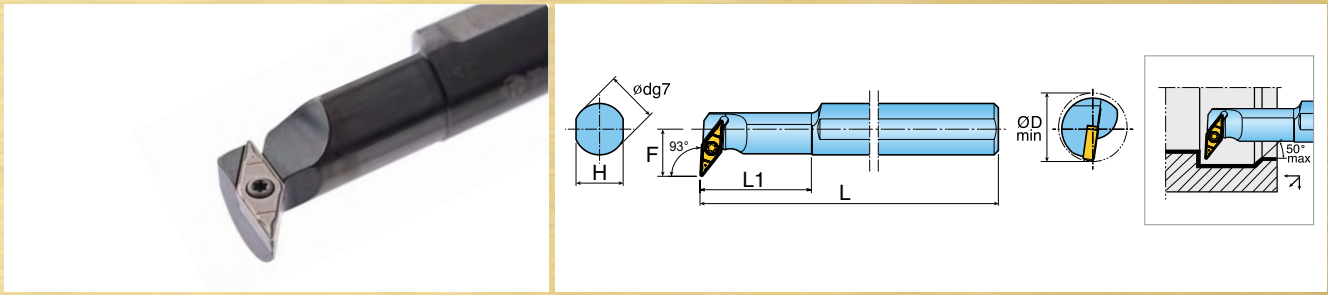
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VC_T22_



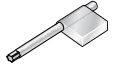
SM25-065-70

T7

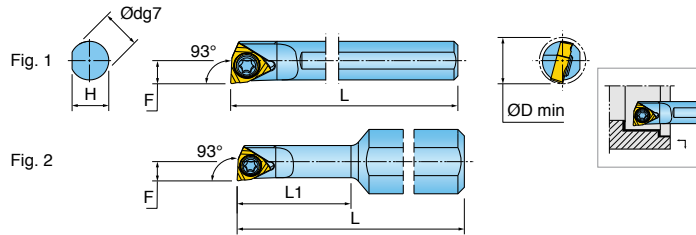
SCREW-HELD BORING BAR ACCEPTS POSITIVE 7° CLEARANCE 35° RHOMBIC INSERTS



Designation	D	Dmin	L	L1	F
S12M-SVUCR08-D16	0.472	0.630	5.91	1.020	0.433
S12M-SVUCL08-D16	0.472	0.630	5.91	1.020	0.433
S16Q-SVUCR11-D20	0.630	0.787	7.09	1.260	0.610
S16Q-SVUCL11-D20	0.630	0.787	7.09	1.260	0.610
S20R-SVUCR11-D25	0.787	0.984	7.87	1.570	0.689
S20R-SVUCL11-D25	0.787	0.984	7.87	1.570	0.689

HARDWARE			
	Insert Reference	Insert Screw	Insert Screw Wrench
S12M-SVUCR/L	VC_T1.51.5_	TS20038I/HG-P	T6P
S16Q-SVUCR/L	VC_T22_	SO 25065I	T7
S20R-SVUCR/L	VC_T22_	SO 25065I	T7

SCREW-CLAMP BORING BAR ACCEPTS POSITIVE 5° CLEARANCE 80° TRIGON INSERTS



Designation	D	Dmin	L	L1	F	Shape
S05G-SWUBL06-D06	0.197	0.236	3.94	-	0.118	Fig. 1
S05G-SWUBR06-D06	0.197	0.236	3.94	-	0.118	Fig. 1
S06H-SWUBL06-D07	0.236	0.276	4.33	-	0.138	Fig. 1
S06H-SWUBR06-D07	0.236	0.276	4.33	-	0.138	Fig. 1
S07J-SWUBL06-D08	0.276	0.315	4.92	-	0.157	Fig. 1
S07J-SWUBR06-D08	0.276	0.315	4.92	-	0.157	Fig. 1
S10H-SWUBL06-D06	0.394	0.236	3.94	0.709	0.118	Fig. 2
S10H-SWUBR06-D06	0.394	0.236	3.94	0.709	0.118	Fig. 2

HARDWARE



Insert Reference



Insert Screw



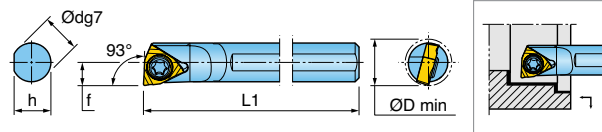
Insert Screw Wrench

WB_T1.21_

TS20038I/HG-P

T6P

SCREW-CLAMP BORING BAR ACCEPTS POSITIVE 5° CLEARANCE 80° TRIGON INSERTS



Designation	D	Dmin	L	F
C05H-SWUBL06-D06	0.197	0.236	3.94	0.118
C05H-SWUBR06-D06	0.197	0.236	3.94	0.118
C06J-SWUBL06-D07	0.236	0.276	4.33	0.133
C06J-SWUBR06-D07	0.236	0.276	4.33	0.133
C07K-SWUBL06-D08	0.276	0.315	4.92	0.157
C07K-SWUBR06-D08	0.276	0.315	4.92	0.157

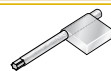
HARDWARE



Insert Reference



Insert Screw



Insert Screw Wrench

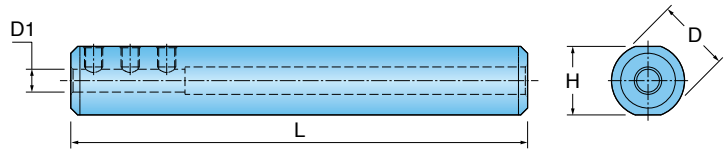
WB_T1.21_

TS20038I/HG-P

T6P

ToMINI™ SERIES TSL T-MINI-M

SLEEVES FOR T-MINI BORING BARS METRIC TO METRIC



Designation	D (mm)	D1 (mm)	L (mm)
TSL16-04	16mm	4mm	100mm
TSL16-05	16mm	5mm	100mm
TSL16-06	16mm	6mm	100mm
TSL16-07	16mm	7mm	100mm

HARDWARE



Set Screw Wrench



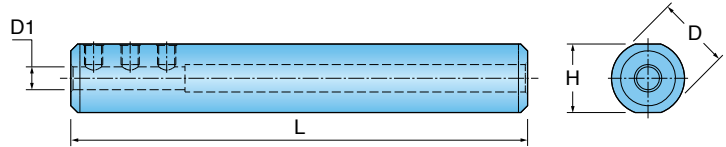
Set Screw

L-W2

SS-M4X0.7X4

ToMINI™ SERIES TSL T-MINI-I

SLEEVES FOR T-MINI BORING BARS INCH TO METRIC



Designation	D (inch)	D1 (mm)	L (inch)
TSL15.88-04-MINI	0.625	4mm	3.940
TSL15.88-05-MINI	0.625	5mm	3.940
TSL15.88-06-MINI	0.625	6mm	3.940
TSL15.88-07-MINI	0.625	7mm	3.940
TSL19.05-04-MINI	0.750	4mm	3.940
TSL19.05-05-MINI	0.750	5mm	3.940
TSL19.05-06-MINI	0.750	6mm	3.940
TSL19.05-07-MINI	0.750	7mm	3.940
TSL19.05-10-MINI	0.750	10mm	3.940
TSL19.05-12-MINI	0.750	12mm	3.940

HARDWARE



Set Screw Wrench



Set Screw

L-W2

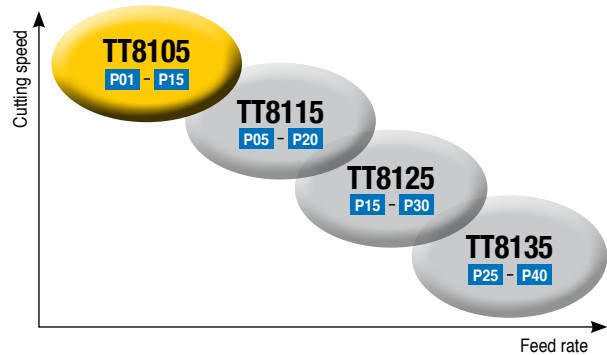
SS-M4X0.7X4

TT8105: A New Grade for Turning Steel at High Speeds

Features & Benefits:

- Gold-Life+ structured coating technology
- High-speed turning of steel in continuous cutting applications
- Maximum wear-resistant carbide grade
- Gold-Rush treatment provides smooth & stable cutting edge
- Expands our existing TT81xx series grades to a broader range of applications

CVD Coating Application Range



Designation ANSI	Designation ISO	Grades	TT8105
CCMT21.51MT	CCMT060204MT		●
CCMT21.51PC	CCMT060204PC		●
CCMT32.51MT	CCMT09T304MT		●
CCMT32.52MT	CCMT09T308MT		●
CCMT32.52PC	CCMT09T308PC		●
CCMT432MT	CCMT120408MT		●
CNMG431FC	CNMG120404FC		●
CNMG431FG	CNMG120404FG		●
CNMG431MC	CNMG120404MC		●
CNMG431MT	CNMG120404MT		●
CNMG431PC	CNMG120404PC		●
CNMG432FC	CNMG120408FC		●
CNMG432FG	CNMG120408FG		●
CNMG432MC	CNMG120408MC		●
CNMG432MT	CNMG120408MT		●
CNMG432PC	CNMG120408PC		●
CNMG432RT	CNMG120408RT		●
CNMG433FC	CNMG120412FC		●
CNMG433MC	CNMG120412MC		●
CNMG433MT	CNMG120412MT		●
CNMG433PC	CNMG120412PC		●
CNMG433RT	CNMG120412RT		●
CNMG434RT	CNMG120416RT		●
CNMG542MT	CNMG160608MT		●
CNMG543MT	CNMG160612MT		●
CNMG543PC	CNMG160612PC		●

Designation ANSI	Designation ISO	Grades	TT8105
CNMG543RT	CNMG160612RT		●
CNMG544MT	CNMG160616MT		●
CNMG544RT	CNMG160616RT		●
CNMG642MT	CNMG190608MT		●
CNMG642RT	CNMG190608RT		●
CNMG643MT	CNMG190612MT		●
CNMG643RT	CNMG190612RT		●
CNMG644MT	CNMG190616MT		●
CNMG644RT	CNMG190616RT		●
CNMG866RT	CNMG250924RT		●
CNMX43.52HB	CNMX120508HB		●
CNMX43.53HB	CNMX120512HB		●
CNMX553HB	CNMX160712HB		●
CNMX554HB	CNMX160716HB		●
DCMT21.51FG	DCMT070204FG		●
DCMT32.51FG	DCMT11T304FG		●
DCMT32.51MT	DCMT11T304MT		●
DCMT32.52FG	DCMT11T308FG		●
DNMG431FC	DNMG150404FC		●
DNMG431FG	DNMG150404FG		●
DNMG431MT	DNMG150404MT		●
DNMG431PC	DNMG150404PC		●
DNMG432FC	DNMG150408FC		●
DNMG432FG	DNMG150408FG		●
DNMG432MC	DNMG150408MC		●
DNMG432MT	DNMG150408MT		●

● = P ○ = M ● = K ● = N ● = S ○ = H

Designation ANSI	Designation ISO	Grades	TT8105
DNMG432PC	DNMG150408PC		●
DNMG432RT	DNMG150408RT		●
DNMG433FC	DNMG150412FC		●
DNMG433FG	DNMG150412FG		●
DNMG433MC	DNMG150412MC		●
DNMG433MT	DNMG150412MT		●
DNMG433PC	DNMG150412PC		●
DNMG433RT	DNMG150412RT		●
DNMG442FC	DNMG150608FC		●
DNMG442PC	DNMG150608PC		●
DNMG443PC	DNMG150612PC		●
SCMT32.51MT	SCMT09T304MT		●
SCMT433MT	SCMT120412MT		●
SNMG431MT	SNMG120404MT		●
SNMG432FG	SNMG120408FG		●
SNMG432MC	SNMG120408MC		●
SNMG432MT	SNMG120408MT		●
SNMG432PC	SNMG120408PC		●
SNMG432RT	SNMG120408RT		●
SNMG433MC	SNMG120412MC		●
SNMG433PC	SNMG120412PC		●
SNMG433RT	SNMG120412RT		●
SNMG434RT	SNMG120416RT		●
SNMG543MT	SNMG150612MT		●
SNMG543RT	SNMG150612RT		●
SNMG643RT	SNMG190612RT		●
SNMG644RT	SNMG190616RT		●
TCMT32.52MT	TCMT16T308MT		●
TNMG331FC	TNMG160404FC		●
TNMG331FG	TNMG160404FG		●
TNMG331MT	TNMG160404MT		●
TNMG332FC	TNMG160408FC		●
TNMG332FG	TNMG160408FG		●
TNMG332MC	TNMG160408MC		●
TNMG332MT	TNMG160408MT		●
TNMG332PC	TNMG160408PC		●
TNMG331PC	TNMG16040PC		●
TNMG333FC	TNMG160412FC		●
TNMG333FG	TNMG160412FG		●
TNMG333MT	TNMG160412MT		●
TNMG333PC	TNMG160412PC		●
TNMG431MT	TNMG220404MT		●

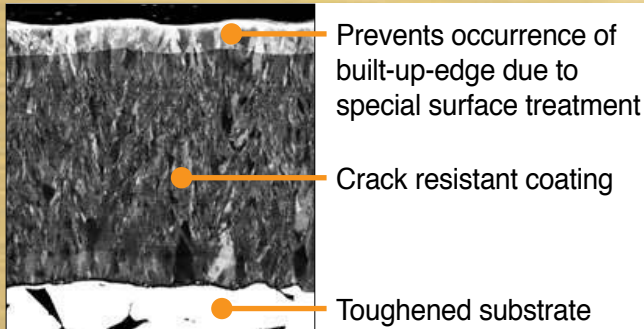
Designation ANSI	Designation ISO	Grades	TT8105
TNMG432FG	TNMG220408FG		●
TNMG432MT	TNMG220408MT		●
TNMG432PC	TNMG220408PC		●
TNMG432RT	TNMG220408RT		●
TNMG433MT	TNMG220412MT		●
TNMG433PC	TNMG220412PC		●
TNMG433RT	TNMG220412RT		●
VBMT331FG	VBMT160404FG		●
VBMT331MT	VBMT160404MT		●
VBMT331PC	VBMT160404PC		●
VBMT332FG	VBMT160408FG		●
VBMT332FX	VBMT160408FX		●
VBMT332MT	VBMT160408MT		●
VBMT332PC	VBMT160408PC		●
VBMT333FC	VBMT160412FC		●
VCMT332PC	VCMT160408PC		●
VNMG331FG	VNMG160404FG		●
VNMG331FX	VNMG160404FX		●
VNMG331MT	VNMG160404MT		●
VNMG332FG	VNMG160408FG		●
VNMG332FX	VNMG160408FX		●
VNMG332MT	VNMG160408MT		●
VNMG332PC	VNMG160408PC		●
WNMG431FC	WNMG080404FC		●
WNMG431FG	WNMG080404FG		●
WNMG431MT	WNMG080404MT		●
WNMG432FC	WNMG080408FC		●
WNMG432FG	WNMG080408FG		●
WNMG432MC	WNMG080408MC		●
WNMG432MT	WNMG080408MT		●
WNMG432PC	WNMG080408PC		●
WNMG432RT	WNMG080408RT		●
WNMG433MC	WNMG080412MC		●
WNMG433MT	WNMG080412MT		●
WNMG433PC	WNMG080412PC		●
WNMG433RT	WNMG080412RT		●
WNMG434MT	WNMG080416MT		●
WNMG434RT	WNMG080416RT		●

● = P ○ = M ● = K ● = N ● = S ○ = H

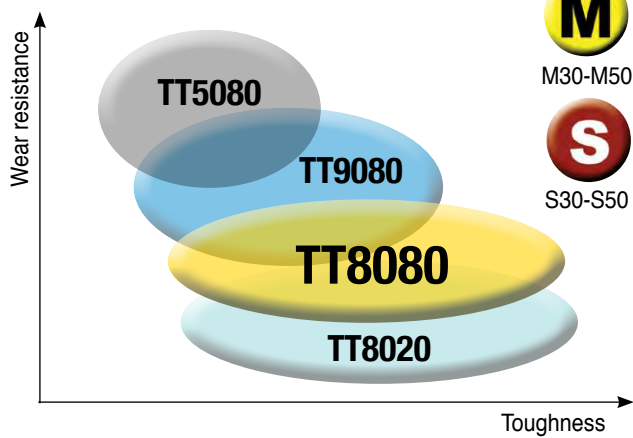
TT8080: Superior Performance in Stainless and High Temperature Alloys

Features & Benefits:

- Excellent performance in stainless steel under low cutting speed and interrupted cutting conditions.
- Improved coating technology with enhanced wear resistance for long tool life.
- Very strong coating adhesion eliminates coating layer delamination.
- Features post-coat Gold-Rush treatment for reduced build-up and more stable cutting edge.



PVD Coating Application Range

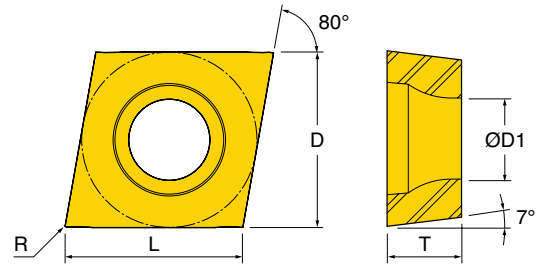


Designation ANSI	Designation ISO	Grades	TT8080
CNMG431EA	CNMG120404EA	●	●
CNMG431EM	CNMG120404EM	●	●
CNMG431ML	CNMG120404ML	●	●
CNMG431MP	CNMG120404MP	●	●
CNMG432EM	CNMG120408EM	●	●
CNMG432ML	CNMG120408ML	●	●
CNMG432MP	CNMG120408MP	●	●
CNMG433ML	CNMG120412ML	●	●
DNMG431EA	DNMG150404EA	●	●
DNMG431ML	DNMG150404ML	●	●
DNMG432EM	DNMG150408EM	●	●
DNMG432ML	DNMG150408ML	●	●
TNMG331EA	TNMG160404EA	●	●
TNMG332EM	TNMG160408EM	●	●
TNMG331ML	TNMG160404ML	●	●
TNMG332ML	TNMG160408ML	●	●
WNMG332EM	WNMG060408EM	●	●
WNMG431EA	WNMG080404EA	●	●
WNMG431EM	WNMG080404EM	●	●
WNMG432EM	WNMG080408EM	●	●
WNMG432ML	WNMG080408ML	●	●

● = P ○ = M ● = K ● = N ● = S ○ = H

TOTURN™ SERIES CCMT FA CHIPBREAKER

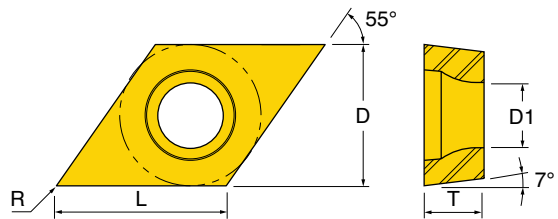
POSITIVE 7° CLEARANCE 80° RHOMBIC INSERTS FOR SUPER FINISHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	D1	Grades					
											CT3000	PV3010	TT5080	TT5100	TT8020	TT8125
CCMT21.50.5FA	CCMT060202FA	0.002	0.006	0.004	0.059	0.244	0.250	0.094	0.008	0.110	●	●	●	●	●	●
CCMT21.51FA	CCMT060204FA	0.002	0.006	0.004	0.059	0.236	0.250	0.094	0.016	0.110	●	●	●	●	●	●
CCMT32.50.5FA	CCMT09T302FA	0.002	0.006	0.004	0.079	0.370	0.375	0.156	0.008	0.173	●	●	●	●	●	●
CCMT32.51FA	CCMT09T304FA	0.002	0.008	0.004	0.079	0.362	0.375	0.156	0.016	0.173	●	●	●	●	●	●
CCMT32.52FA	CCMT09T308FA	0.004	0.010	0.008	0.079	0.346	0.375	0.156	0.031	0.173	●	●	●	●	●	●

TOTURN™ SERIES DCMT FA CHIPBREAKER

POSITIVE 7° CLEARANCE 55° RHOMBIC INSERTS FOR SUPER FINISHING

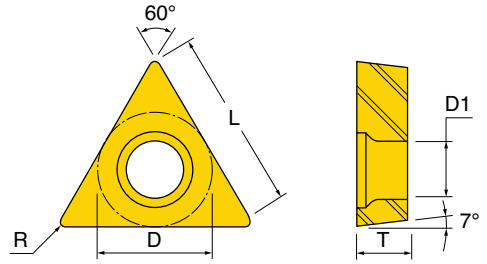
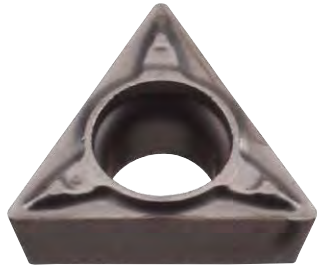


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	D1	Grades							
											CT3000	PV3010	TT5080	TT5100	TT8115	TT8125	TT9080	TT9215
DCMT21.50.5FA	DCMT070202FA	0.002	0.006	0.006	0.060	0.295	0.250	0.094	0.008	0.110	●	●	●	●	●	●	●	●
DCMT21.51FA	DCMT070204FA	0.002	0.008	0.008	0.060	0.287	0.250	0.094	0.016	0.110	●	●	●	●	●	●	●	●
DCMT32.50.5FA	DCMT11T302FA	0.002	0.006	0.006	0.060	0.445	0.375	0.156	0.008	0.173	●	●	●	●	●	●	●	●
DCMT32.51FA	DCMT11T304FA	0.002	0.008	0.008	0.080	0.441	0.375	0.156	0.016	0.173	●	●	●	●	●	●	●	●
DCMT32.52FA	DCMT11T308FA	0.003	0.010	0.012	0.080	0.425	0.375	0.156	0.031	0.173	●	●	●	●	●	●	●	●

● = P ● = M ● = K ● = N ● = S ○ = H

TOTURN™ SERIES TCMT FA CHIPBREAKER

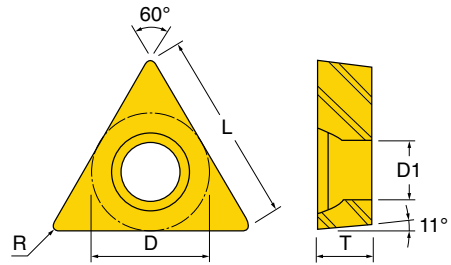
POSITIVE 7° CLEARANCE TRIANGULAR INSERTS FOR SUPER FINISHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	D1	Grades	CT3000	PV3010	TT5080	TT5100	TT8125	TT9080
TCMT21.50.5FA	TCMT110202FA	0.001	0.006	0.004	0.059	0.433	0.250	0.094	0.008	0.110	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
TCMT21.51FA	TCMT110204FA	0.002	0.006	0.004	0.059	0.394	0.250	0.094	0.016	0.110	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●

TOTURN™ SERIES TPMT FA CHIPBREAKER

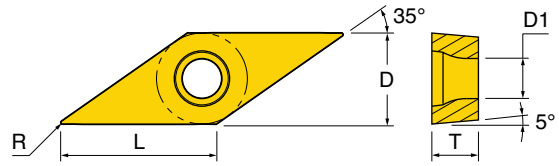
POSITIVE 11° CLEARANCE TRIANGULAR INSERTS FOR SUPER FINISHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	D1	Grades	CT3000	PV3010	TT5080	TT5100	TT8020	TT8115	TT8125
TPMT730.5FA	TPMT090202FA	0.001	0.006	0.004	0.047	0.376	0.219	0.094	0.008	0.098	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
TPMT731FA	TPMT090204FA	0.002	0.008	0.008	0.047	0.339	0.219	0.094	0.016	0.098	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
TPMT32.51FA	TPMT16T304FA	0.002	0.008	0.008	0.079	0.610	0.375	0.156	0.016	0.173	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
TPMT32.52FA	TPMT16T308FA	0.003	0.010	0.012	0.079	0.571	0.375	0.156	0.031	0.173	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●

● = P ● = M ● = K ● = N ● = S ○ = H

POSITIVE 5° CLEARANCE 35° RHOMBIC INSERTS FOR SUPER FINISHING

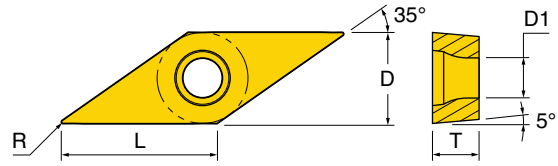


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	D1	Grades	CT3000	PV3010	TT5080	TT5100	TT8115	TT8125
VBMT221FA	VBMT110304FA	0.002	0.008	0.008	0.060	0.390	0.250	0.125	0.016	0.110	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
VBMT331FA	VBMT160404FA	0.002	0.008	0.008	0.080	0.614	0.375	0.187	0.016	0.173	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
VBMT332FA	VBMT160408FA	0.003	0.010	0.012	0.080	0.575	0.375	0.187	0.031	0.173	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●

● = P ● = M ● = K ● = N ● = S ○ = H

TOTURN™ SERIES VBMT FX CHIPBREAKER

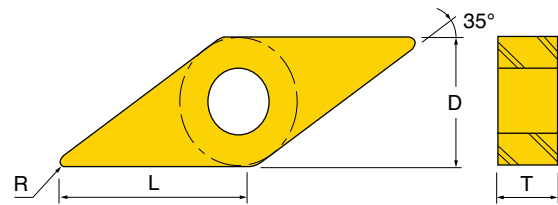
POSITIVE 5° CLEARANCE 35° RHOMBIC INSERTS FOR BALL STUD AND PULLEY MACHINING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	D1	Grades	CT3000	PV3010	TT8115	TT8125
VBMT331FX	VBMT160404FX	0.002	0.008	0.008	0.080	0.614	0.375	0.187	0.016	0.173					
VBMT332FX	VBMT160408FX	0.003	0.008	0.008	0.080	0.575	0.375	0.187	0.031	0.173					

TOTURN™ SERIES VNMG FX CHIPBREAKER

NEGATIVE 35° RHOMBIC INSERTS FOR BALL STUD AND PULLEY MACHINING

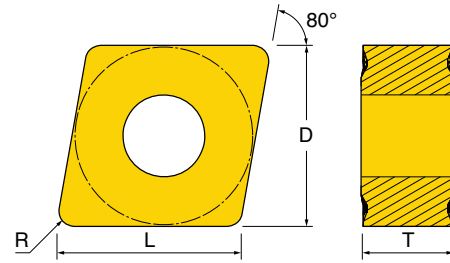
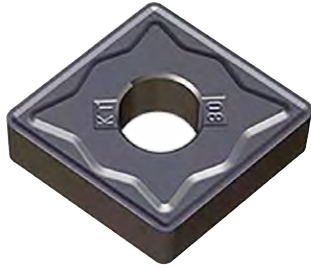


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	CT3000	PV3010	TT8105	TT8115	TT8125
VNMG331FX	VNMG160404FX	.002	.008	.008	.080	.614	.375	.187	.016						
VNMG332FX	VNMG160408FX	.003	.008	.008	.080	.575	.375	.187	.031						

● = P ○ = M ● = K ● = N ● = S ○ = H

TOTURN™ SERIES CNMG KT CHIPBREAKER

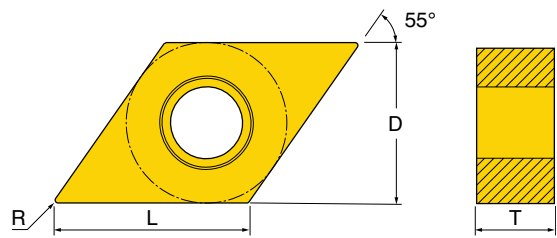
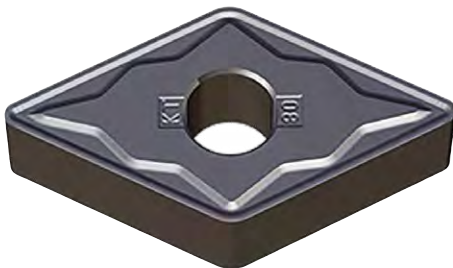
NEGATIVE 80° RHOMBIC INSERTS FOR ROUGHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT7005	TT7015
CNMG432KT	CNMG120408KT	.007	.021	.015	.276	.472	.500	.187	.031		●	●
CNMG433KT	CNMG120412KT	.010	.028	.020	.276	.457	.500	.187	.047		●	●
CNMG434KT	CNMG120416KT	.011	.033	.030	.276	.441	.500	.187	.063		●	●
CNMG543KT	CNMG160612KT	.010	.028	.030	.354	.583	.625	.250	.047		●	●
CNMG544KT	CNMG160616KT	.012	.033	.040	.354	.567	.625	.250	.063		●	●
CNMG643KT	CNMG190612KT	.010	.028	.040	.551	.713	.750	.375	.047		●	●
CNMG644KT	CNMG190616KT	.012	.033	.060	.551	.697	.750	.375	.063		●	●

TOTURN™ SERIES DNMG KT CHIPBREAKER

NEGATIVE 55° RHOMBIC INSERTS FOR ROUGHING

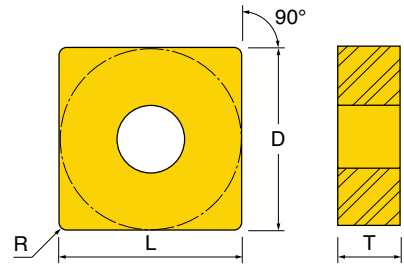
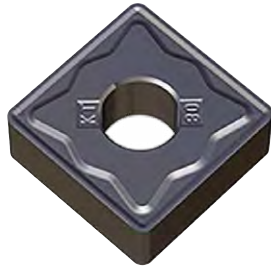


ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT7005	TT7015
DNMG432KT	DNMG150408KT	.007	.019	.015	.276	.579	.500	.187	.031		●	●
DNMG433KT	DNMG150412KT	.009	.025	.020	.276	.567	.500	.187	.047		●	●
DNMG442KT	DNMG150608KT	.007	.019	.015	.276	.579	.500	.250	.031		●	●
DNMG443KT	DNMG150612KT	.009	.025	.020	.276	.567	.500	.250	.047		●	●

● = P ○ = M ● = K ● = N ● = S ○ = H

TOTURN™ SERIES SNMG KT CHIPBREAKER

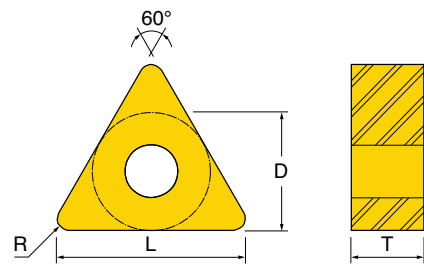
NEGATIVE SQUARE INSERTS FOR ROUGHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT7005	TT7015
SNMG432KT	SNMG120408KT	.007	.021	.015	.276	.469	.500	.187	.031		●	●
SNMG433KT	SNMG120412KT	.011	.028	.020	.276	.453	.500	.187	.047		●	●
SNMG434KT	SNMG120416KT	.012	.030	.030	.276	.437	.500	.187	.063		●	●
SNMG543KT	SNMG150612KT	.012	.030	.024	.335	.575	.625	.250	.047		●	●
SNMG544KT	SNMG150616KT	.012	.033	.035	.355	.559	.625	.250	.063		●	●
SNMG644KT	SNMG190616KT	.012	.033	.051	.472	.685	.750	.313	.063		●	●

TOTURN™ SERIES TNMG KT CHIPBREAKER

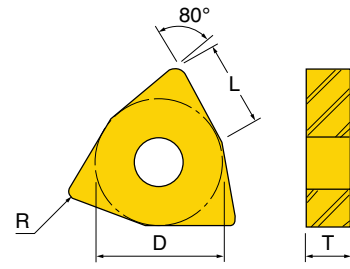
NEGATIVE TRIANGULAR INSERTS FOR ROUGHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT7005	TT7015
TNMG332KT	TNMG160408KT	.007	.017	.013	.244	.571	.375	.187	.031		●	●
TNMG333KT	TNMG160412KT	.008	.022	.018	.248	.531	.375	.187	.047		●	●
TNMG432KT	TNMG220408KT	.007	.021	.015	.276	.787	.500	.187	.031		●	●
TNMG433KT	TNMG220412KT	.010	.028	.020	.276	.748	.500	.187	.047		●	●

● = P ● = M ● = K ● = N ● = S ○ = H

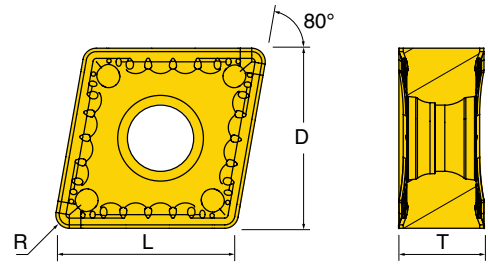
NEGATIVE 80° TRIGON INSERTS FOR ROUGHING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT7005	TT7015
WNMG432KT	WNMG080408KT	.007	.019	.011	.217	.327	.500	.187	.031		●	●
WNMG433KT	WNMG080412KT	.009	.025	.015	.217	.323	.500	.187	.047		●	●
WNMG434KT	WNMG080416KT	.010	.024	.020	.217	.319	.500	.187	.063		●	●

● = P ● = M ● = K ● = N ● = S ○ = H

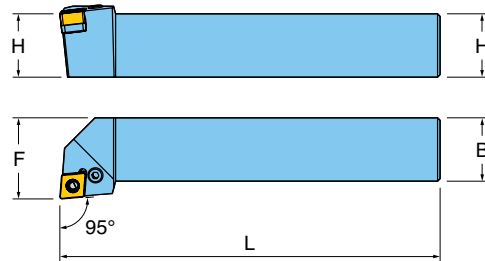
NEGATIVE 80° RHOMBIC INSERTS WITH HB CHIPBREAKER FOR SEMI HEAVY TURNING



ANSI Number	ISO Number	feed min	feed max	ap min	ap max	L	D	T	R	Grades	TT5080	TT8105	TT8115	TT8125	TT8135	TT9080
CNMX43.52HB	CNMX120508HB	.010	.031	.060	.236	.472	.500	.219	.031		●	●	●	●	●	●
CNMX43.53HB	CNMX120512HB	.010	.031	.060	.236	.457	.500	.219	.047		●	●	●	●	●	●
CNMX553HB	CNMX160712HB	.012	.031	.060	.315	.583	.625	.272	.047	●	●	●	●	●	●	●
CNMX554HB	CNMX160716HB	.012	.031	.060	.315	.567	.625	.272	.063		●	●	●	●	●	●

● = P ○ = M ● = K ● = N ● = S ○ = H

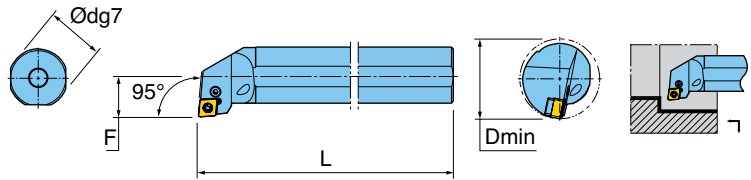
HOOK-LEVER-HOLDER FOR EXTERNAL TURNING ACCEPTS NEGATIVE 80° RHOMBIC CNMX HB INSERTS









Designation	H	B	L	F
HCLNL12-43.5B	0.750	0.750	4.500	1.000
HCLNR12-43.5B	0.750	0.750	4.500	1.000
HCLNL16-43.5D	1.000	1.000	6.000	1.250
HCLNL16-55D	1.000	1.000	6.000	1.250
HCLNR16-43.5D	1.000	1.000	6.000	1.250
HCLNR16-55D	1.000	1.000	6.000	1.250
HCLNL20-43.5E	1.250	1.250	7.000	1.500
HCLNL20-55E	1.250	1.250	7.000	1.500
HCLNR20-43.5E	1.250	1.250	7.000	1.500
HCLNR20-55E	1.250	1.250	7.000	1.500
HCLNL24-55E	1.500	1.500	7.000	1.750
HCLNR24-55E	1.500	1.500	7.000	1.750

HARDWARE							
	Turning Holder Insert Reference	Lever	Lever Screw	Seat	Seat Pin	Seat Pin Punch	Lever Screw Wrench
HCLNL12-43.5B	CN_X 43.5_	LCL12-NX	LCS5-L21	LSC43-NX	LSP4	SPP3-4	L-W3
HCLNR12-43.5B	CN_X 43.5_	LCL12-NX	LCS5-L21	LSC43-NX	LSP4	SPP3-4	L-W3
HCLNL16-43.5D	CN_X 43.5_	LCL12-NX	LCS5	LSC43-NX	LSP4	SPP3-4	L-W3
HCLNL16-55D	CN_X 55_	LCL16-NX	LCS5-L25.5	LSC54-NX	LSP5	SPP5-6	L-W3
HCLNR16-43.5D	CN_X 43.5_	LCL12-NX	LCS5	LSC43-NX	LSP4	SPP3-4	L-W3
HCLNR16-55D	CN_X 55_	LCL16-NX	LCS5-L25.5	LSC54-NX	LSP5	SPP5-6	L-W3
HCLNL20-43.5E	CN_X 43.5_	LCL12-NX	LCS5	LSC43-NX	LSP4	SPP3-4	L-W3
HCLNL20-55E	CN_X 55_	LCL16-NX	LCS5-L25.5	LSC54-NX	LSP5	SPP5-6	L-W3
HCLNR20-43.5E	CN_X 43.5_	LCL12-NX	LCS5	LSC43-NX	LSP4	SPP3-4	L-W3
HCLNR20-55E	CN_X 55_	LCL16-NX	LCS5-L25.5	LSC54-NX	LSP5	SPP5-6	L-W3
HCLNL24-55E	CN_X 55_	LCL16-NX	LCS5-L25.5	LSC54-NX	LSP5	SPP5-6	L-W3
HCLNR24-55E	CN_X 55_	LCL16-NX	LCS5-L25.5	LSC54-NX	LSP5	SPP5-6	L-W3

HOOK-LEVER-BORING BAR FOR INTERNAL TURNING ACCEPTS NEGATIVE 80° RHOMBIC CNMX HB INSERTS, COOLANT THRU



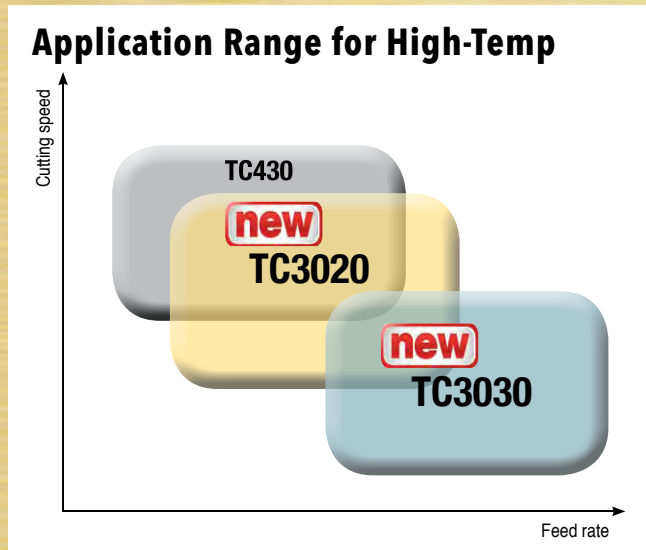
Designation	D	Dmin	L	F
A20U-HCLNL-43.5	1.250	1.500	14.00	0.765
A20U-HCLNR-43.5	1.250	1.500	14.00	0.765
A24U-HCLNL-43.5	1.500	1.750	14.00	0.890
A24U-HCLNR-43.5	1.500	1.750	14.00	0.890

HARDWARE						
	Lever	Lever Screw	Seat Pin	Lever Screw Wrench	Seat Pin Punch	Seat
A20U-HCLNL-43.5	LCL12-NX	LCS5-L21	LSP4	L-W3	SPP3-4	LSC42-NXS
A20U-HCLNR-43.5	LCL12-NX	LCS5-L21	LSP4	L-W3	SPP3-4	LSC42-NXS
A24U-HCLNL-43.5	LCL12-NX	LCS5	LSP4	L-W3	SPP3-4	LSC42-NXS
A24U-HCLNR-43.5	LCL12-NX	LCS5	LSP4	L-W3	SPP3-4	LSC42-NXS

TC3020 & TC3030: New Ceramic Grades for High Temperature Alloy Machining

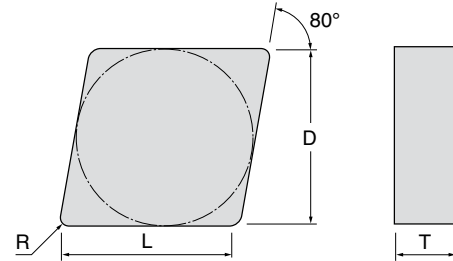
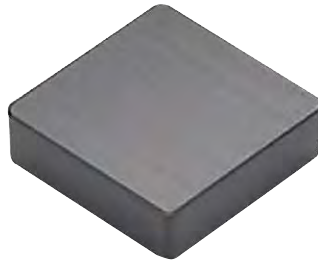
Features & Benefits:

- **TC430: Whisker** - Maximum wear resistance
- **TC3020: SiAlON** - Highly wear resistant
- **TC3030: SiAlON** - Extremely tough grade



TOTURN™ SERIES CNG

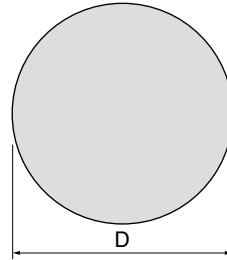
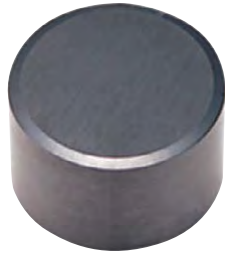
80° RHOMBIC CERAMIC INSERTS, NO HOLE



ANSI Number	ISO Number	L	D	T	R	Grades	TC3020	TC3030	TC430
CNG432E	CNGN120408E	0.472	0.500	0.187	0.031			●	
CNG432T6	CNGN120408T6	0.500	0.500	0.187	0.031				●
CNG433E	CNGN120412E	0.500	0.500	0.187	0.047			●	
CNG433T6	CNGN120412T6	0.500	0.500	0.187	0.047				●
CNG452E	CNGN120708E	0.472	0.500	0.313	0.031			●	
CNG452T6	CNGN120708T6	0.500	0.500	0.312	0.031	●			●
CNG453E	CNGN120712E	0.457	0.500	0.313	0.047			●	
CNG453T6	CNGN120712T6	0.500	0.500	0.312	0.047	●			●
CNG454T6	CNGN120716T6	0.500	0.500	0.312	0.047	●			

● = P ● = M ● = K ● = N ● = S ○ = H

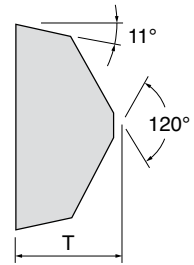
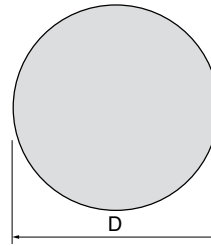
ROUND CERAMIC INSERTS



ANSI Number	ISO Number	D	T	Grades		
				TC3020	TC3030	TC430
RNG32T6	RNGN090300T6	0.375	0.125			●
RNG43T6	RNGN120400T6	0.500	0.187			●
RNG45E04	RNGN120700E04	0.500	0.313	●	●	
RNG45T6	RNGN120700T6	0.500	0.313	●	●	●
RNG65T6	RNGN190700T6	0.750	0.312			●

T6 = .004" @ 20°
E04 = .002" hone

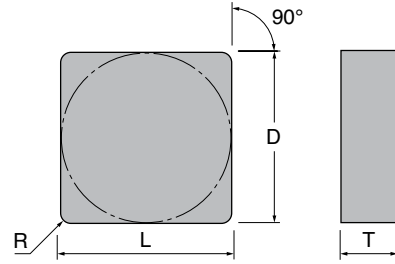
POSITIVE 11° CLEARANCE ROUND V-BOTTOM CERAMIC INSERTS



ANSI Number	ISO Number	D	T	Grades	TC3020	TC3030	TC430
RPGX35E04	RPGX090700E04	0.375	0.312		●	●	
RPGX35T6	RPGX090700T6	0.375	0.312		●	●	●
RPGX45E04	RPGX120700E04	0.500	0.312		●	●	
RPGX45T6	RPGX120700T6	0.500	0.312		●	●	●

T6 = .004" @ 20°
E04 = .002" hone

SQUARE CERAMIC INSERTS, NO HOLE



ANSI Number	ISO Number	L	D	T	R	Grades		
						TC3020	TC3030	TC430
SNG432T6	SNGN120408T6	0.500	0.500	0.187	0.031			●
SNG433T6	SNGN120412T6	0.500	0.500	0.187	0.047			●
SNG452T6	SNGN120708T6	0.500	0.500	0.312	0.031			●
SNG453T6	SNGN120712T6	0.500	0.500	0.312	0.047	●	●	●

T6 = .004" @ 20°

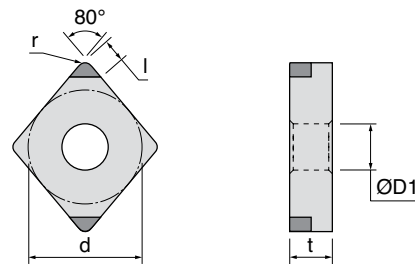
TB2030: Coated CBN Inserts with Chipbreakers for Turning Carburized and Hardened Steel

Chipbreakers:

- CM - Medium Applications
- CF - Finishing Applications

SERIES CNGM CF-LS2

80° RHOMBIC CBN-TIPPED INSERTS WITH CHIPBREAKER FOR FINISHING APPLICATIONS

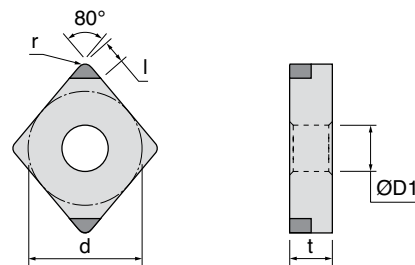
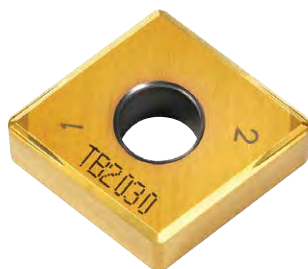


ANSI Number	ISO Number	l	d	t	R	D1	Grades	TB2030
CNGM432CF-LS2	CNGM120408CF-LS2	0.086	0.500	0.187	0.031	0.203		
CNGM433CF-LS2	CNGM120412CF-LS2	0.094	0.500	0.187	0.047	0.203		

LS2 - Double tip

SERIES CNGM CM-LS2

80° RHOMBIC CBN-TIPPED INSERTS WITH CHIPBREAKER FOR MEDIUM APPLICATIONS



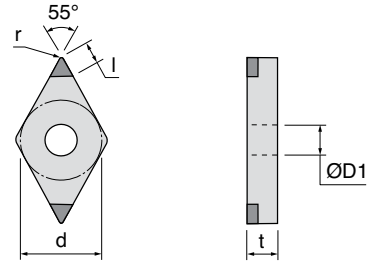
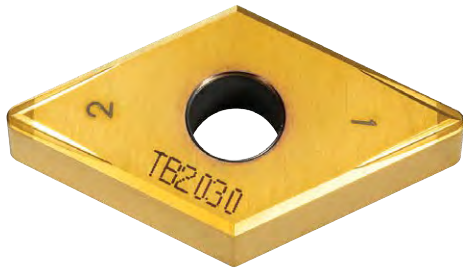
ANSI Number	ISO Number	l	d	t	R	D1	Grades	TB2030
CNGM432CM-LS2	CNGM120408CM-LS2	0.086	0.500	0.187	0.031	0.203		
CNGM433CM-LS2	CNGM120412CM-LS2	0.094	0.500	0.187	0.047	0.203		

LS2 - Double tip

= P = M = K = N = S = H

TOTURN™ SERIES DNGM-CF-LS2

55° RHOMBIC CBN-TIPPED INSERTS WITH CHIPBREAKER FOR FINISHING APPLICATIONS

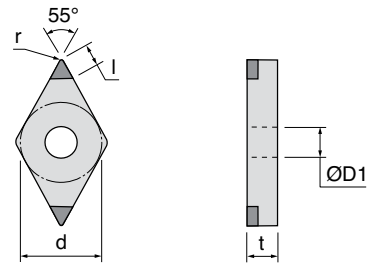


ANSI Number	ISO Number	l	d	t	R	D1	Grades	TB2030
DNGM432CF-LS2	DNGM150408CF-LS2	0.082	0.500	0.187	0.031	0.203		●
DNGM433CF-LS2	DNGM150412CF-LS2	0.078	0.500	0.187	0.047	0.203		●

LS2 - Double tip

TOTURN™ SERIES DNGM-CM-LS2

55° RHOMBIC CBN-TIPPED INSERTS WITH CHIPBREAKER FOR MEDIUM APPLICATIONS



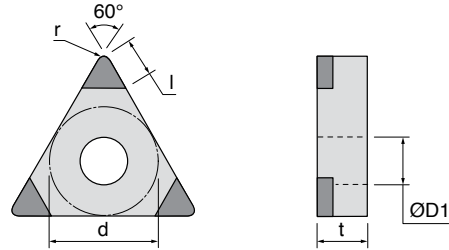
ANSI Number	ISO Number	l	d	t	R	D1	Grades	TB2030
DNGM432CM-LS2	DNGM150408CM-LS2	0.082	0.500	0.187	0.031	0.203		●
DNGM433CM-LS2	DNGM150412CM-LS2	0.078	0.500	0.187	0.047	0.203		●

LS2 - Double tip

● = P ● = M ● = K ● = N ● = S ○ = H

TOTURN™ SERIES TNGM CF-LS3

TRIANGULAR CBN-TIPPED INSERTS WITH CHIPBREAKER FOR FINISHING APPLICATIONS

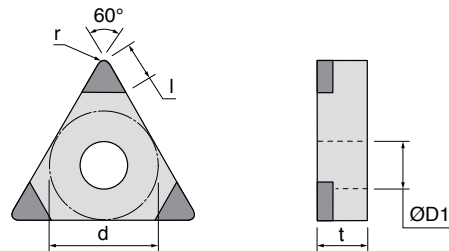


ANSI Number	ISO Number	l	d	t	R	D1	Grades	TB2030
TNGM332CF-LS3	TNGM160408CF-LS3	0.074	0.375	0.187	0.031	0.150	●	
TNGM333CF-LS3	TNGM160412CF-LS3	0.094	0.375	0.187	0.047	0.150	●	

LS3 - Triple tip

TOTURN™ SERIES TNGM CM-LS3

TRIANGULAR CBN-TIPPED INSERTS WITH CHIPBREAKER FOR MEDIUM APPLICATIONS



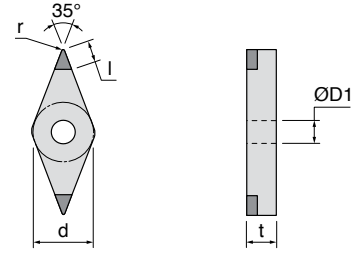
ANSI Number	ISO Number	l	d	t	R	D1	Grades	TB2030
TNGM332CM-LS3	TNGM160408CM-LS3	0.074	0.375	0.187	0.031	0.150	●	
TNGM333CM-LS3	TNGM160412CM-LS3	0.094	0.375	0.187	0.047	0.150	●	

LS3 - Triple tip

● = P ○ = M ● = K ● = N ● = S ○ = H

TOTURN™ SERIES VNGM CF-LS2

35° RHOMBIC CBN-TIPPED INSERTS WITH CHIPBREAKER FOR FINISHING APPLICATIONS

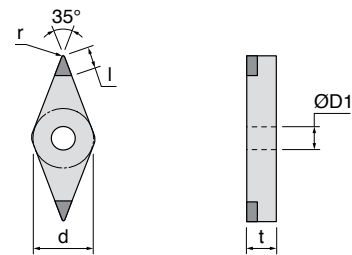


ANSI Number	ISO Number	l	d	t	R	D1	Grades	TB2030
VNGM332CF-LS2	VNGM160408CF-LS2	0.086	0.375	0.187	0.031	0.150		●

LS2 - Double tip

TOTURN™ SERIES VNGM CM-LS2

35° RHOMBIC CBN-TIPPED INSERTS WITH CHIPBREAKER FOR MEDIUM APPLICATIONS



ANSI Number	ISO Number	l	d	t	R	D1	Grades	TB2030
VNGM332CM-LS2	VNGM160408CM-LS2	0.086	0.375	0.187	0.031	0.150		●

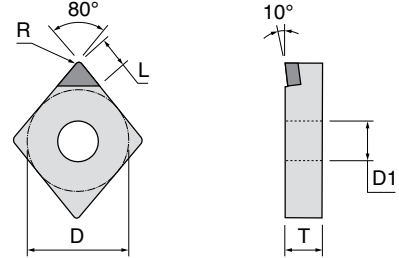
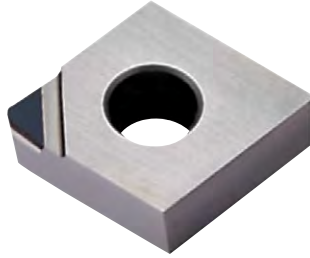
LS2 - Double tip

● = P ● = M ● = K ● = N ● = S ○ = H

TD810: New PCD Hybrid Grade for Aluminum and Non-Ferrous Materials

SERIES CNMA LN-10

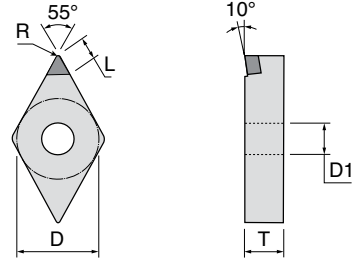
80° RHOMBIC PCD-TIPPED INSERTS



ANSI Number	ISO Number	L	D	T	R	D1	Grades	TD810
CNMA431LN-10	CNMA120404LN-10	0.157	0.500	0.187	0.016	0.203		●
CNMA432LN-10	CNMA120408LN-10	0.154	0.500	0.187	0.031	0.203		●

TOTURN™ SERIES DNMA LN-10

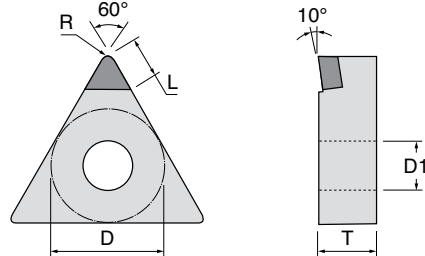
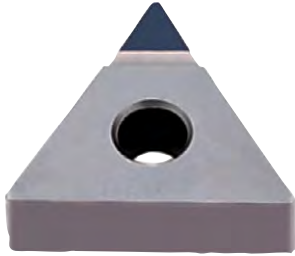
55° RHOMBIC PCD-TIPPED INSERTS



ANSI Number	ISO Number	L	D	T	R	D1	Grades	TD810
DNMA431LN-10	DNMA150404LN-10	0.157	0.500	0.187	0.016	0.203	●	
DNMA432LN-10	DNMA150408LN-10	0.146	0.500	0.187	0.031	0.203	●	
DNMA441LN-10	DNMA150604LN-10	0.157	0.500	0.250	0.016	0.203	●	
DNMA442LN-10	DNMA150608LN-10	0.146	0.500	0.250	0.031	0.203	●	

TOTURN™ SERIES TNMA LN-10

TRIANGULAR PCD-TIPPED INSERTS

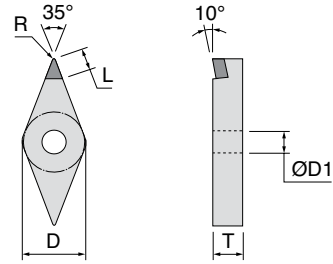


ANSI Number	ISO Number	L	D	T	R	D1	Grades	TD810
TNMA331LN-10	TNMA160404LN-10	0.169	0.375	0.187	0.016	0.150	●	

● = P ● = M ● = K ● = N ● = S ○ = H

TOTURN™ SERIES VNGA LN-10

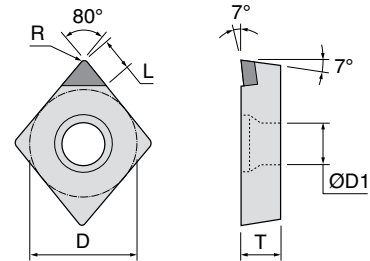
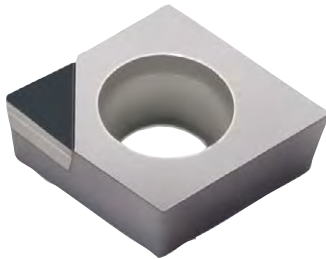
35° RHOMBIC PCD-TIPPED INSERTS



ANSI Number	ISO Number	L	D	T	R	D1	Grades	TD810
VNGA331LN-10	VNGA160404LN-10	0.197	0.375	0.187	0.016	0.150	●	
VNGA332LN-10	VNGA160408LN-10	0.161	0.375	0.187	0.031	0.150	●	

TOTURN™ SERIES CCGW LN7

POSITIVE 7° CLEARANCE 80° RHOMBIC PCD-TIPPED INSERTS

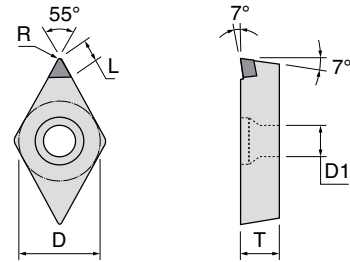
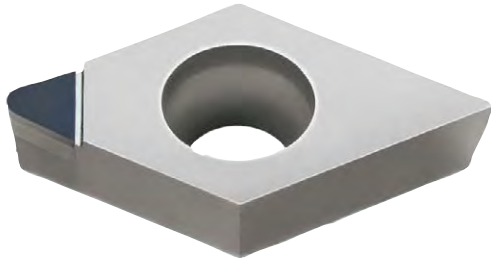


ANSI Number	ISO Number	L	D	T	R	Grades	TD810
CCGW21.50.5LN-7	CCGW060202LN-7	0.122	0.250	0.094	0.008	●	
CCGW21.51LN-7	CCGW060204LN-7	0.122	0.250	0.094	0.016	●	
CCGW32.51LN-7	CCGW09T304LN-7	0.157	0.375	0.156	0.016	●	
CCGW32.52LN-7	CCGW09RT308LN-7	0.154	0.375	0.156	0.031	●	
CCGW431LN-7	CCGW120404LN-7	0.157	0.500	0.187	0.016	●	
CCGW432LN-7	CCGW120408LN-7	0.154	0.500	0.187	0.031	●	

● = P ● = M ● = K ● = N ● = S ○ = H

TOTURN™ SERIES DCGW LN-7

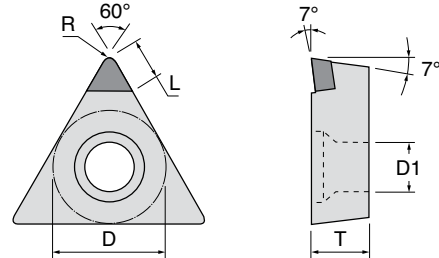
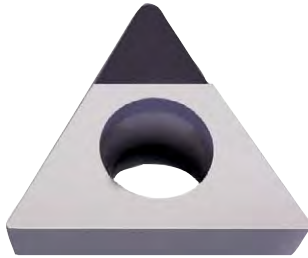
POSITIVE 7° CLEARANCE 55° RHOMBIC PCD-TIPPED INSERTS



ANSI Number	ISO Number	L	D	T	R	D1	Grades	TD810
DCGW21.50.5LN-7	DCGW070202LN-7	0.134	0.250	0.094	0.008	0.110	●	
DCGW21.51LN-7	DCGW070204LN-7	0.130	0.250	0.094	0.016	0.110	●	
DCGW32.50.5LN-7	DCGW11T302LN-7	0.154	0.375	0.156	0.008	0.173	●	
DCGW32.51LN-7	DCGW11T304LN-7	0.146	0.375	0.156	0.016	0.173	●	
DCGW32.52LN-7	DCGW11T308LN-7	0.130	0.375	0.156	0.031	0.173	●	

TOTURN™ SERIES TCGW LN-7

POSITIVE 7° CLEARANCE TRIANGULAR PCD-TIPPED INSERTS

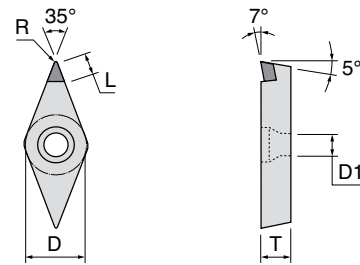
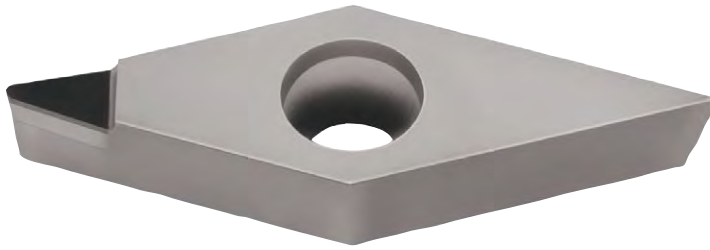


ANSI Number	ISO Number	L	D	T	R	D1	Grades	TD810
TCGW21.51LN-7	TCGW110204LN-7	0.150	0.250	0.094	0.016	0.110	●	
TCGW32.51LN-7	TCGW16T304LN-7	0.150	0.375	0.156	0.016	0.173	●	
TCGW32.52LN-7	TCGW16T308LN-7	0.138	0.375	0.156	0.031	0.173	●	
TCGW731LN-7	TCGW090204LN-7	0.130	0.219	0.094	0.016	0.098	●	
TCGW732LN-7	TCGW090208LN-7	0.118	0.219	0.094	0.031	0.098	●	

● = P ● = M ● = K ● = N ● = S ○ = H

TOTURN™ SERIES VBGW LN-7

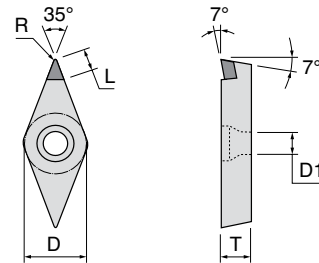
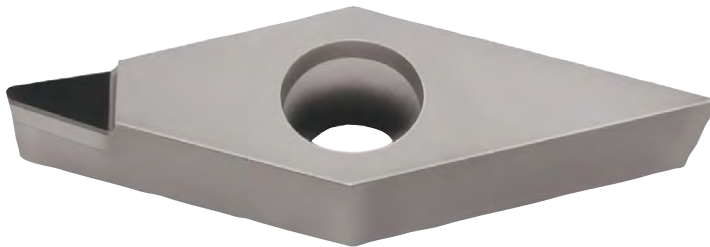
POSITIVE 5° CLEARANCE 35° RHOMBIC PCD-TIPPED INSERTS



ANSI Number	ISO Number	L	D	T	R	D1	Grades	TD810
VBGW330.5LN-7	VBGW160402LN-7	0.205	0.375	0.187	0.008	0.173	●	
VBGW331LN-7	VBGW160404LN-7	0.197	0.375	0.187	0.016	0.173	●	
VBGW332LN-7	VBGW160408LN-7	0.165	0.375	0.187	0.031	0.173	●	

TOTURN™ SERIES VCGW LN-7

POSITIVE 7° CLEARANCE 35° RHOMBIC PCD-TIPPED INSERTS

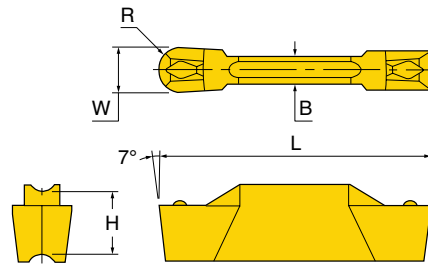


ANSI Number	ISO Number	L	D	T	R	D1	Grades	TD810
VCGW331LN-7	VCGW160404LN-7	0.197	0.375	0.187	0.016	0.173	●	
VCGW332LN-7	VCGW160408LN-7	0.165	0.375	0.187	0.031	0.173	●	

● = P ● = M ● = K ● = N ● = S ○ = H

TOCLAMP^{ULTRA+} SERIES TST-E

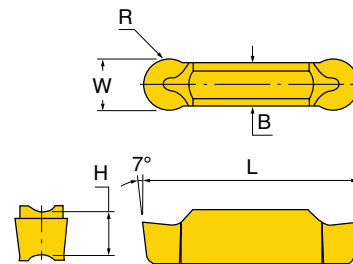
SINGLE-END FULL-RADIUS PRECISION INSERTS FOR EXTERNAL TURNING, GROOVING AND PROFILING



Designation	Insert Seat Size	W (inch)	R (inch)	L (inch)	H (inch)	Grades	TT9080
TST2.39E-1.19	2	0.094	0.047	0.79	0.185		
TST3.00E-1.50	3	0.118	0.059	0.79	0.185		
TST3.18E-1.59	3	0.125	0.062	0.79	0.185		
TST4.78E-2.39	5	0.188	0.094	0.98	0.205		

TOCLAMP^{ULTRA+} SERIES TDA

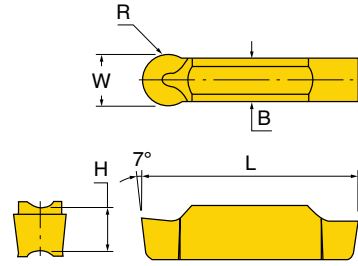
DOUBLE-END FULL-RADIUS PRECISION INSERTS FOR ALUMINUM MACHINING



Designation	Insert Seat Size	W (inch)	R (inch)	L (inch)	H (inch)	Grades	K10
TDA3.00-1.50	3	0.118	0.059	0.79	0.185		
TDA4.00-2.00	4	0.157	0.079	0.79	0.185		
TDA4.78-2.39	5	0.188	0.094	0.98	0.205		
TDA5.00-2.50	5	0.197	0.098	0.98	0.205		
TDA6.00-3.00	6	0.236	0.118	0.98	0.205		
TDA8.00-4.00	8	0.315	0.157	1.18	0.252		

● = P ● = M ● = K ● = N ● = S ○ = H

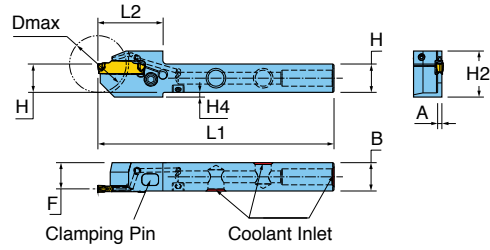
SINGLE END FULL-RADIUS PRECISION INSERTS FOR ALUMINUM MACHINING



Designation	Insert Seat Size	W ±.0008	R ±.002	L (inch)	H (inch)	Grades	K10
TSA4.78-2.39	6	0.188	0.094	0.98	0.205		
TSA6.35-3.18	6	0.250	0.125	0.98	0.205		

● = P ● = M ● = K ● = N ● = S ○ = H

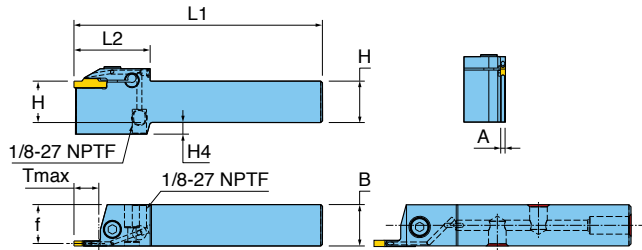
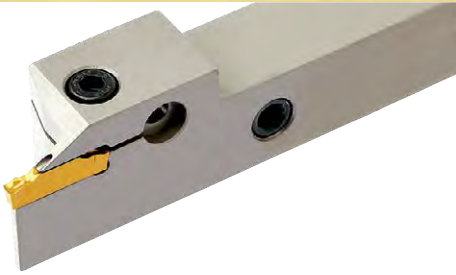
EXTERNAL TURNING AND GROOVING HOLDERS FOR SWISS AUTOMATICS, HIGH PRESSURE COOLANT



Designation	Ins. Seat Size	H (inch)	B (inch)	L (inch)	E (inch)	F (inch)	A (inch)	H1 (inch)	H2 (inch)	Dmax (inch)
TTEL12.7-24-3SH-TB	3	0.500	0.500	5.00	1.080	0.453	0.094	0.795	0.079	0.940
TTER12.7-24-3SH-TB	3	0.500	0.500	5.00	1.080	0.453	0.094	0.795	0.079	0.940
TTEL15.9-32-3SH-TB	3	0.625	0.625	5.00	1.240	0.579	0.094	0.843	-	1.260
TTER15.9-32-3SH-TB	3	0.625	0.625	5.00	1.240	0.579	0.094	0.843	-	1.260

HARDWARE						
	Inlet Plug Wrench	Clamp Screw & Pin Plug Wrench	Clamping Pin	Inlet Plug	Clamp Screw	Pin Plug
	L-W4	L-W2.5F	PIN-SH-TB	PT5/16UNF	SSM5-24145	SSM5X3.5ULTEM2300

MIDDLE TMAX HOLDERS FOR EXTERNAL TURNING AND GROOVING, HIGH PRESSURE COOLANT

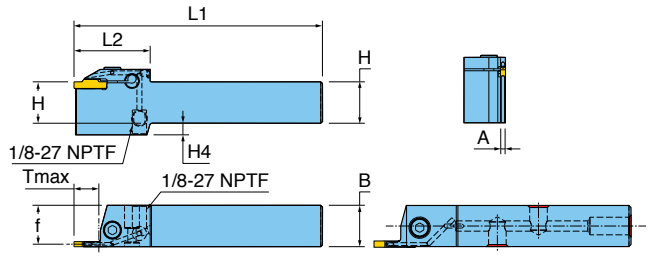
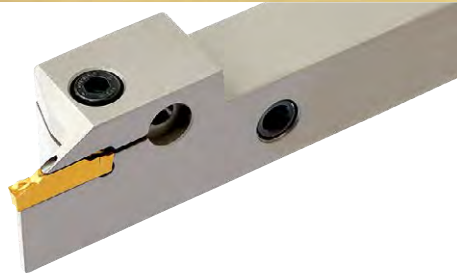


Note: .750" holder has 3 coolant inlets.






Designation	Insert Seat Size	F (inch)	L (inch)	H (inch)	H4 (inch)	B (inch)	L2 (inch)	Tmax (inch)	A (inch)
TTEL19-3-TB	3	0.703	5.00	0.750	0.157	0.750	1.690	0.472	0.094
TTER19-3-TB	3	0.703	5.00	0.750	0.157	0.750	1.690	0.472	0.094
TTEL25.4-3-TB	3	0.953	6.00	1.000	0.157	1.000	1.690	0.472	0.094
TTER25.4-3-TB	3	0.953	6.00	1.000	0.157	1.000	1.690	0.472	0.094
TTEL19-4-TB	4	0.690	5.00	0.750	0.157	0.750	1.810	0.590	0.118
TTER19-4-TB	4	0.690	5.00	0.750	0.157	0.750	1.810	0.590	0.118
TTEL25.4-4-TB	4	0.940	6.00	1.000	0.157	1.000	1.810	0.590	0.118
TTER25.4-4-TB	4	0.940	6.00	1.000	0.157	1.000	1.810	0.590	0.118
TTEL25.4-5-TB	5	0.925	6.00	1.000	-	1.000	1.930	0.787	0.157
TTER25.4-5-TB	5	0.925	6.00	1.000	-	1.000	1.930	0.787	0.157
TTEL25.4-6-TB	6	0.906	6.00	1.000	0.276	1.000	2.050	0.787	0.197
TTER25.4-6-TB	6	0.906	6.00	1.000	0.276	1.000	2.050	0.787	0.197
TTEL25.4-8-TB	8	0.886	6.00	1.000	0.276	1.000	2.280	0.787	0.236
TTER25.4-8-TB	8	0.886	6.00	1.000	0.276	1.000	2.280	0.787	0.236

HARDWARE					
	Insert Clamp Screw	Clamp Screw Wrench	Inlet Plug Wrench	Inlet Plug	Sealing Screw
TTEL19-3-TB	SHM5X0.8X20	L-W4	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTER19-3-TB	SHM5X0.8X20	L-W4	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTEL25.4-3-TB	SHM5X0.8X20	L-W4	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTER25.4-3-TB	SHM5X0.8X20	L-W4	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTEL19-4-TB	SHM6X1X20	L-W5	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTER19-4-TB	SHM6X1X20	L-W5	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTEL25.4-4-TB	SHM6X1X20	L-W5	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTER25.4-4-TB	SHM6X1X20	L-W5	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTEL25.4-5-TB	SHM6X1X20	L-W5	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTER25.4-5-TB	SHM6X1X20	L-W5	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTEL25.4-6-TB	SHM8X1.25X20	L-W6	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTER25.4-6-TB	SHM8X1.25X20	L-W6	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTEL25.4-8-TB	SHM8X1.25X20	L-W6	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTER25.4-8-TB	SHM8X1.25X20	L-W6	L-W3/16	NPTF1/8	SS-M4X0.7X4

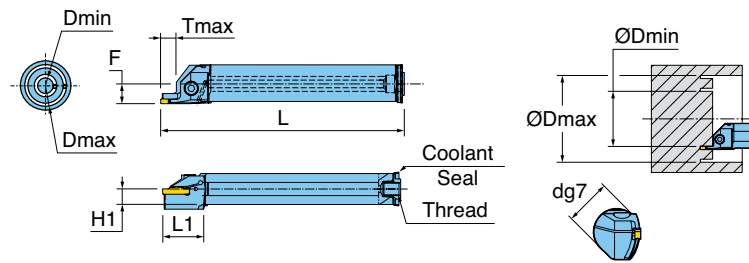
LONG TMAX HOLDERS FOR EXTERNAL TURNING AND GROOVING, HIGH PRESSURE COOLANT






Designation	Insert Seat Size	F (inch)	L (inch)	H (inch)	H4 (inch)	B (inch)	L2 (inch)	Tmax (inch)	A (inch)
TTEL25.4-3T25-TB	3	0.953	6.00	1.000	0.157	1.000	2.000	0.980	0.094
TTER25.4-3T25-TB	3	0.953	6.00	1.000	0.157	1.000	2.000	0.980	0.094
TTEL25.4-4T25-TB	4	0.940	6.00	1.000	0.157	1.000	2.165	0.980	0.118
TTER25.4-4T25-TB	4	0.940	6.00	1.000	0.157	1.000	2.165	0.980	0.118
TTEL25.4-5T32-TB	5	0.925	6.00	1.000	-	1.000	2.322	1.260	0.156
TTER25.4-5T32-TB	5	0.925	6.00	1.000	-	1.000	2.322	1.260	0.156
TTEL25.4-6T32-TB	6	0.906	6.00	1.000	0.276	1.000	2.441	1.260	0.197
TTER25.4-6T32-TB	6	0.906	6.00	1.000	0.276	1.000	2.441	1.260	0.197

HARDWARE					
	Insert Clamp Screw	Clamp Screw Wrench	Inlet Plug Wrench	Inlet Plug	Sealing Screw
TTEL25.4-3T25-TB	SHM5X0.8X20	L-W4	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTER25.4-3T25-TB	SHM5X0.8X20	L-W4	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTEL25.4-4T25-TB	SHM6X1X20	L-W5	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTER25.4-4T25-TB	SHM6X1X20	L-W5	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTEL25.4-5T32-TB	SHM6X1X20	L-W5	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTER25.4-5T32-TB	SHM6X1X20	L-W5	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTEL25.4-6T32-TB	SHM8X1.25X20	L-W6	L-W3/16	NPTF1/8	SS-M4X0.7X4
TTER25.4-6T32-TB	SHM8X1.25X20	L-W6	L-W3/16	NPTF1/8	SS-M4X0.7X4

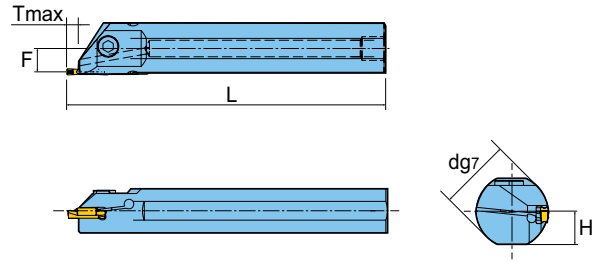
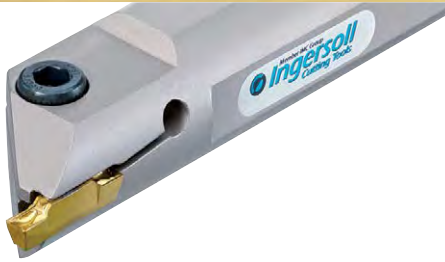
INTERNAL FACE GROOVING AND FACE TURNING HOLDERS






Designation	Insert Seat Size	d (inch)	H1 (inch)	F (inch)	L (inch)	L1 (inch)	Tmax (inch)	Dmin (inch)	Dmax (inch)
TTFIL25.4-3T12-20-33	3	1.000	0.453	0.516	8.000	1.220	0.472	0.787	1.300
TTFIL25.4-3T12-26-39	3	1.000	0.453	0.516	8.000	1.220	0.472	1.024	1.535
TTFIL25.4-3T12-33-48	3	1.000	0.453	0.516	8.000	1.220	0.472	1.300	1.889
TTFIL25.4-3T12-42-60	3	1.000	0.453	0.516	8.000	1.220	0.472	1.650	2.362
TTFIL25.4-3T12-54-85	3	1.000	0.453	0.516	8.000	1.220	0.472	2.126	3.346
TTFIL25.4-3T12-79-150	3	1.000	0.453	0.516	8.000	1.220	0.472	3.110	5.905
TTFIR25.4-3T12-20-33	3	1.000	0.453	0.516	8.000	1.220	0.472	0.787	1.300
TTFIR25.4-3T12-26-39	3	1.000	0.453	0.516	8.000	1.220	0.472	1.024	1.535
TTFIR25.4-3T12-33-48	3	1.000	0.453	0.516	8.000	1.220	0.472	1.300	1.889
TTFIR25.4-3T12-42-60	3	1.000	0.453	0.516	8.000	1.220	0.472	1.650	2.362
TTFIR25.4-3T12-54-85	3	1.000	0.453	0.516	8.000	1.220	0.472	2.126	3.346
TTFIR25.4-3T12-79-150	3	1.000	0.453	0.516	8.000	1.220	0.472	3.110	5.905
TTFIL25.4-4T12-18-34	4	1.000	0.453	0.508	8.000	1.220	0.472	0.709	1.338
TTFIL25.4-4T12-26-42	4	1.000	0.453	0.508	8.000	1.220	0.472	1.024	1.653
TTFIL25.4-4T12-34-55	4	1.000	0.453	0.508	8.000	1.220	0.472	1.339	2.165
TTFIR25.4-4T12-18-34	4	1.000	0.453	0.508	8.000	1.220	0.472	0.709	1.338
TTFIR25.4-4T12-26-42	4	1.000	0.453	0.508	8.000	1.220	0.472	1.024	1.653
TTFIR25.4-4T12-34-55	4	1.000	0.453	0.508	8.000	1.220	0.472	1.339	2.165
TTFIL31.7-4T12-47-70	4	1.250	0.571	0.646	10.000	1.220	0.472	1.850	2.756
TTFIL31.7-4T12-62-100	4	1.250	0.571	0.646	10.000	1.220	0.472	2.441	3.937
TTFIL31.7-4T12-92-180	4	1.250	0.571	0.646	10.000	1.220	0.472	3.622	7.087
TTFIR31.7-4T12-47-70	4	1.250	0.571	0.646	10.000	1.220	0.472	1.850	2.756
TTFIR31.7-4T12-62-100	4	1.250	0.571	0.646	10.000	1.220	0.472	2.441	3.937
TTFIR31.7-4T12-92-180	4	1.250	0.571	0.646	10.000	1.220	0.472	3.622	7.087

HARDWARE				
				
	Screw	Seal	Clamp Screw Wrench	
TFIL25.4-3T12-20-33	SHM5X0.8X16	PL100	L-W4	
TFIL25.4-3T12-26-39	SHM5X0.8X16	PL100	L-W4	
TFIL25.4-3T12-33-48	SHM5X0.8X16	PL100	L-W4	
TFIL25.4-3T12-42-60	SHM5X0.8X16	PL100	L-W4	
TFIL25.4-3T12-54-85	SHM5X0.8X16	PL100	L-W4	
TFIL25.4-3T12-79-150	SHM5X0.8X16	PL100	L-W4	
TFIR25.4-3T12-20-33	SHM5X0.8X16	PL100	L-W4	
TFIR25.4-3T12-26-39	SHM5X0.8X16	PL100	L-W4	
TFIR25.4-3T12-33-48	SHM5X0.8X16	PL100	L-W4	
TFIR25.4-3T12-42-60	SHM5X0.8X16	PL100	L-W4	
TFIR25.4-3T12-54-85	SHM5X0.8X16	PL100	L-W4	
TFIR25.4-3T12-79-150	SHM5X0.8X16	PL100	L-W4	
TFIL25.4-4T12-18-34	SHM5X0.8X16	PL100	L-W4	
TFIL25.4-4T12-26-42	SHM5X0.8X16	PL100	L-W4	
TFIL25.4-4T12-34-55	SHM5X0.8X16	PL100	L-W4	
TFIR25.4-4T12-18-34	SHM5X0.8X16	PL100	L-W4	
TFIR25.4-4T12-26-42	SHM5X0.8X16	PL100	L-W4	
TFIR25.4-4T12-34-55	SHM5X0.8X16	PL100	L-W4	
TFIL31.7-4T12-47-70	SHM5X0.8X16	PL125	L-W4	
TFIL31.7-4T12-62-100	SHM5X0.8X16	PL125	L-W4	
TFIL31.7-4T12-92-180	SHM5X0.8X16	PL125	L-W4	
TFIR31.7-4T12-47-70	SHM5X0.8X16	PL125	L-W4	
TFIR31.7-4T12-62-100	SHM5X0.8X16	PL125	L-W4	
TFIR31.7-4T12-92-180	SHM5X0.8X16	PL125	L-W4	

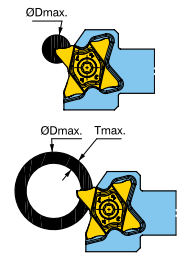
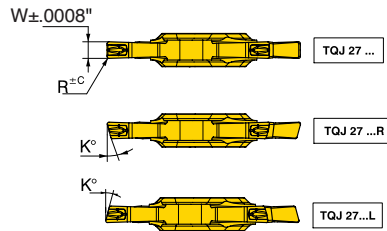
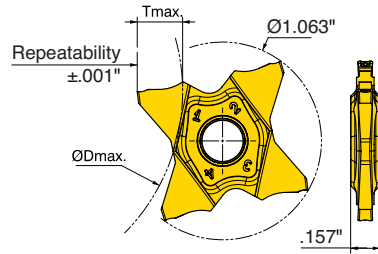
SHALLOW INTERNAL FACE GROOVING AND FACE TURNING HOLDERS



Designation	Insert Seat Size	D (inch)	H (inch)	F (inch)	L (inch)	Tmax (inch)
TGIFL25.4-4C-T5.5	3, 4	1.000	0.453	0.453	8.000	0.216
TGIFR25.4-4C-T5.5	3, 4	1.000	0.453	0.453	8.000	0.216
TGIFL31.7-4C-T5.5	3, 4	1.250	0.571	0.579	10.000	0.216
TGIFR31.7-4C-T5.5	3, 4	1.250	0.571	0.579	10.000	0.216
TGIFL25.4-6C-T5.5	5, 6	1.000	0.453	0.413	8.000	0.216
TGIFR25.4-6C-T5.5	5, 6	1.000	0.453	0.413	8.000	0.216
TGIFL31.7-6C-T5.5	5, 6	1.250	0.571	0.539	10.000	0.216
TGIFR31.7-6C-T5.5	5, 6	1.250	0.571	0.539	10.000	0.216

HARDWARE			
	Wrench	Seal	Insert Clamp Screw
TGIFL25.4-4C-T5.5	L-W5	PL100	SHM6X1X16
TGIFR25.4-4C-T5.5	L-W5	PL100	SHM6X1X16
TGIFL31.7-4C-T5.5	L-W5	PL125	SHM6X1X20
TGIFR31.7-4C-T5.5	L-W5	PL125	SHM6X1X20
TGIFL25.4-6C-T5.5	L-W5	PL100	SHM6X1X16
TGIFR25.4-6C-T5.5	L-W5	PL100	SHM6X1X16
TGIFL31.7-6C-T5.5	L-W5	PL125	SHM6X1X20
TGIFR31.7-6C-T5.5	L-W5	PL125	SHM6X1X20

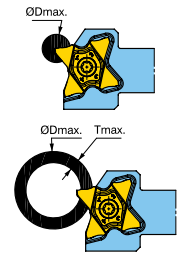
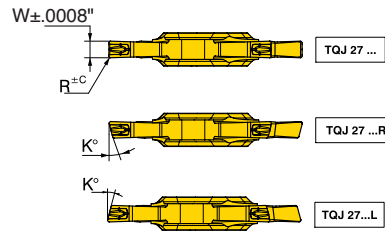
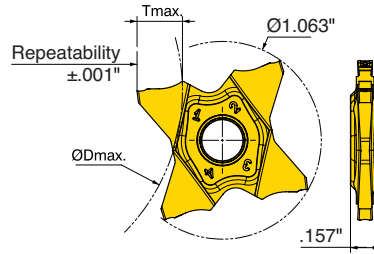
FOUR CORNER CARBIDE INSERT FOR PARTING & GROOVING @ HIGH FEED RATES



Designation	W	R (inch)	Tmax (inch)	K°	Dmax ≤.118	Dmax ≤.138	Dmax ≤.157	Dmax ≤.177	Dmax ≤.197	Dmax ≤.217	Dmax ≤.236	Dmax ≤.244	Dmax ≤.252	Grades	TT9080
TQC27-1.50-0.10	0.059	0.002	0.197	-	N.L.	23.62	11.02	7.09	5.12	-	-	-	-		
TQC27-1.50-0.20	0.059	0.008	0.197	-	N.L.	23.62	11.02	7.09	5.12	-	-	-	-		
TQC27-1.50-15L	0.059	0.004	0.197	15	N.L.	23.62	11.02	7.09	5.12	-	-	-	-		
TQC27-1.50-15R	0.059	0.004	0.197	15	N.L.	23.62	11.02	7.09	5.12	-	-	-	-		
TQC27-1.50-6L	0.059	0.004	0.197	6	N.L.	23.62	11.02	7.09	5.12	-	-	-	-		
TQC27-1.50-6L	0.059	0.004	0.197	6	N.L.	23.62	11.02	7.09	5.12	-	-	-	-		
TQC27-1.57-0.79	0.062	0.031	0.118	-	N.L.	-	-	-	-	-	-	-	-		
TQC27-1.57-0.79	0.062	0.031	0.118	-	N.L.	-	-	-	-	-	-	-	-		
TQC27-1.75-0.10	0.069	0.004	0.118	-	N.L.	-	-	-	-	-	-	-	-		
TQC27-1.75-0.20	0.069	0.008	0.118	-	N.L.	-	-	-	-	-	-	-	-		
TQC27-1.78-0.18	0.070	0.007	0.118	-	N.L.	-	-	-	-	-	-	-	-		
TQC27-1.85-0.20	0.073	0.008	0.118	-	N.L.	-	-	-	-	-	-	-	-		
TQC27-1.96-0.15	0.077	0.006	0.118	-	N.L.	-	-	-	-	-	-	-	-		
TQC27-2.00-0.10	0.079	0.004	0.252	-	N.L.	23.62	11.02	7.09	5.12	4.13	2.36	1.97	1.18		
TQC27-2.00-0.20	0.079	0.008	0.252	-	N.L.	23.62	11.02	7.09	5.12	4.13	2.36	1.97	1.18		
TQC27-2.00-1.00	0.079	0.039	0.118	-	N.L.	-	-	-	-	-	-	-	-		
TQC27-2.00-15L	0.079	0.004	0.252	15	N.L.	23.62	11.02	7.09	5.12	4.13	2.36	1.97	1.18		
TQC27-2.00-15R	0.079	0.004	0.252	15	N.L.	23.62	11.02	7.09	5.12	4.13	2.36	1.97	1.18		
TQC27-2.00-6L	0.079	0.004	0.252	6	N.L.	23.62	11.02	7.09	5.12	4.13	2.36	1.97	1.18		
TQC27-2.00-6R	0.079	0.004	0.252	6	N.L.	23.62	11.02	7.09	5.12	4.13	2.36	1.97	1.18		
TQC27-2.22-0.15	0.087	0.006	0.138	-	N.L.	23.62	-	-	-	-	-	-	-		
TQC27-2.30-0.20	0.091	0.008	0.138	-	N.L.	23.62	-	-	-	-	-	-	-		
TQC27-2.39-0.15	0.094	0.006	0.197	-	N.L.	23.62	11.02	7.09	5.12	-	-	-	-		
TQC27-2.39-1.20	0.094	0.047	0.197	-	N.L.	23.62	11.02	7.09	5.12	-	-	-	-		
TQC27-2.47-0.20	0.097	0.008	0.197	-	N.L.	23.62	11.02	7.09	5.12	-	-	-	-		
TQC27-2.50-0.10	0.098	0.004	0.197	-	N.L.	23.62	11.02	7.09	5.12	-	-	-	-		
TQC27-2.50-0.30	0.098	0.012	0.197	-	N.L.	23.62	11.02	7.09	5.12	-	-	-	-		
TQC27-2.70-0.10	0.106	0.004	0.224	-	N.L.	23.62	11.02	7.09	5.31	4.13	3.35	3.07	-		
TQC27-2.87-0.20	0.113	0.008	0.224	-	N.L.	23.62	11.02	7.09	5.31	4.13	3.35	3.07	-		
TQC27-3.00-0.00	0.118	-	0.252	-	N.L.	23.62	11.02	7.09	5.31	4.13	3.35	3.07	2.17		
TQC27-3.00-0.20	0.118	0.008	0.252	-	N.L.	23.62	11.02	7.09	5.31	4.13	3.35	3.07	2.17		
TQC27-3.00-0.30	0.118	0.012	0.252	-	N.L.	23.62	11.02	7.09	5.31	4.13	3.35	3.07	2.17		
TQC27-3.00-0.40	0.118	0.016	0.252	-	N.L.	23.62	11.02	7.09	5.31	4.13	3.35	3.07	2.17		
TQC27-3.00-1.50	0.118	0.059	0.252	-	N.L.	23.62	11.02	7.09	5.31	4.13	3.35	3.07	2.17		
TQC27-3.15-0.15	0.124	0.006	0.252	-	N.L.	23.62	11.02	7.09	5.31	4.13	3.35	3.07	2.68		
TQC27-3.18-0.20	0.125	0.008	0.252	-	N.L.	23.62	11.02	7.09	5.31	4.13	3.35	3.07	2.68		

● = P ○ = M ● = K ● = N ● = S ○ = H

FOUR CORNER CARBIDE OR CERMET INSERT WITH FLAT CUTTING EDGE FOR HIGH QUALITY SURFACE FINISH

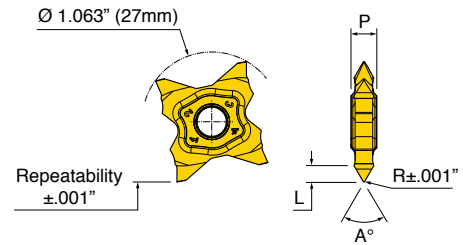


Designation	W	R (inch)	Tmax (inch)	K°	Dmax ≤.118	Dmax ≤.138	Dmax ≤.157	Dmax ≤.177	Dmax ≤.197	Dmax ≤.217	Dmax ≤.236	Dmax ≤.244	Dmax ≤.252	Grades	
														CT3000	TT9080
TQS27-1.50-0.20	0.059	0.008	0.197	-	N.L.	23.62	11.02	7.09	5.12	-	-	-	-		
TQS27-2.00-0.20	0.079	0.008	0.252	-	N.L.	23.62	11.02	7.09	5.12	4.13	2.36	1.97	1.18		
TQS27-2.39-0.15	0.094	0.006	0.197	-	N.L.	23.62	11.02	7.09	5.12	-	-	-	-		
TQS27-2.50-0.20	0.098	0.008	0.197	-	N.L.	23.62	11.02	7.09	5.12	-	-	-	-		
TQS27-3.00-0.20	0.118	0.008	0.252	-	N.L.	23.62	11.02	7.09	5.31	4.13	3.35	3.07	2.17		

● = P ● = M ● = K ● = N ● = S ○ = H

GOLDofFLEX™ SERIES TQS27 THREADING - 55°

FOUR CORNER INSERT FOR PRECISION THREADING - PARTIAL PROFILE

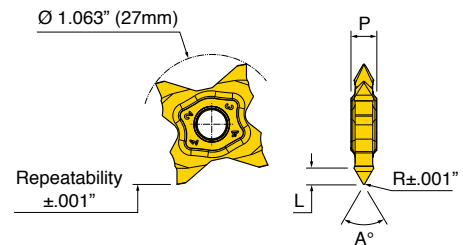


Designation	R	A (Deg)	P	L	TPI Min	TPI Max	Grades	TT9080
TQS27-4WT-0.05	0.002	55	0.157	0.114	6.4 / D	54		
TQS27-5WT-0.15	0.006	55	0.197	0.130	6.4 / D	19		
TQS27-6WT-0.25	0.010	55	0.236	0.154	6.4 / D	12		

D: Diameter
TPI: Threads / Inch

GOLDofFLEX™ SERIES TQS27 THREADING - 60°

FOUR CORNER INSERT FOR PRECISION THREADING - PARTIAL PROFILE



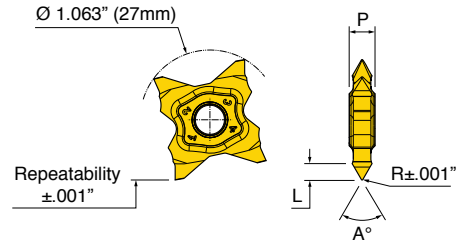
Designation	R	A (Deg)	P	L	Pitch Min	Pitch Max	TPI Min	TPI Max	Grades	TT9080
TQS27-4MT-0.05	0.002	60	0.157	0.110	0.45	.175xD	5.7 / D	56		
TQS27-4MT-0.14	0.005	60	0.157	0.106	1.11	.175xD	5.7 / D	23		
TQS27-5MT-0.15	0.006	60	0.197	0.122	1.25	.175xD	5.7 / D	20		
TQS27-5MT-0.20	0.008	60	0.197	0.122	1.63	.175xD	5.7 / D	16		
TQS27-6MT-0.25	0.010	60	0.236	0.142	1.94	.175xD	5.7 / D	13		

D: Diameter
TPI: Threads / Inch

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD OF FLEX™ SERIES TQS27 THREADING - ISO

FOUR CORNER INSERT FOR PRECISION THREADING - FULL PROFILE

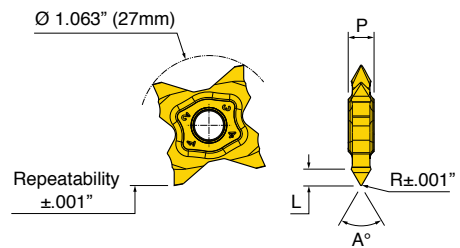


Designation	R	ISO Pitch	Grades	TT9080
TQS27-0.5-ISO	0.003	0.50		
TQS27-0.75-ISO	0.004	0.75		
TQS27-0.8-ISO	0.005	0.80		
TQS27-1.0-ISO	0.006	1.00		
TQS27-1.25-ISO	0.007	1.25		
TQS27-1.5-ISO	0.009	1.50		
TQS27-1.75-ISO	0.010	1.75		
TQS27-2.0-ISO	0.011	2.00		

ISO Pitch: mm

GOLD OF FLEX™ SERIES TQS27 THREADING - UN

FOUR CORNER INSERT FOR PRECISION THREADING - FULL PROFILE

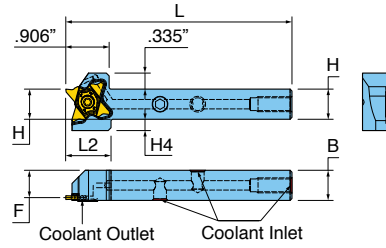


Designation	R	TPI	Grades	TT9080
TQS27-12-UN	0.010	12		
TQS27-14-UN	0.009	14		
TQS27-16-UN	0.008	16		
TQS27-18-UN	0.007	18		
TQS27-20-UN	0.006	20		
TQS27-24-UN	0.005	24		






TPI: Threads / Inch

● = P ● = M ● = K ● = N ● = S ○ = H

GOLD FLEX INTEGRAL TOOL HOLDERS FOR PARTING AND GROOVING (INCH), HIGH PRESSURE COOLANT

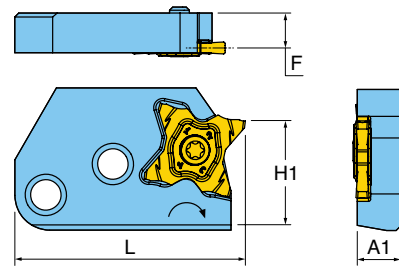


Designation	H	B (inch)	F (inch)	L (inch)	L2 (inch)	H4 (inch)
TQHL12.7-27-TB	0.500	0.500	0.441	5.00	0.944	0.287
TQHR12.7-27-TB	0.500	0.500	0.441	5.00	0.944	0.287
TQHL16-27-TB	0.630	0.630	0.571	4.72	0.944	0.236
TQHR16-27-TB	0.630	0.630	0.571	4.72	0.944	0.236
TQHL19-27-TB	0.750	0.750	0.691	5.00	0.944	0.118
TQHR19-27-TB	0.750	0.750	0.691	5.00	0.944	0.118
TQHL25.4-27-TB	1.000	1.000	0.941	5.50	-	-
TQHR25.4-27-TB	1.000	1.000	0.941	5.50	-	-

HARDWARE					
	Insert Screw	Inlet Plug	Inlet Plug Wrench	Insert Reference	Torx Driver
TQHL12.7-27-TB	TS50125I	PT5/16UNF	L-W4	TQ_27	T-2010/5
TQHR12.7-27-TB	TS50125IL	-	L-W4	TQ_27	T-2010/5
TQHL16-27-TB	TS50125I	PT5/16UNF	L-W4	TQ_27	T-2010/5
TQHR16-27-TB	TS50125IL	PT5/16UNF	L-W4	TQ_27	T-2010/5
TQHL19-27-TB	TS50125I	NPTF1/8-TQ19	L-W3/16	TQ_27	T-2010/5
TQHR19-27-TB	TS50125IL	NPTF1/8-TQ19	L-W3/16	TQ_27	T-2010/5
TQHL25.4-27-TB	TS50125I	NPTF1/8-TQ19	L-W3/16	TQ_27	T-2010/5
TQHR25.4-27-TB	TS50125IL	NPTF1/8-TQ19	L-W3/16	TQ_27	T-2010/5

TOCLAMP^{ULTRA+} SERIES TQCL

ADAPTER FOR GOLD FLEX (LEFT HAND)

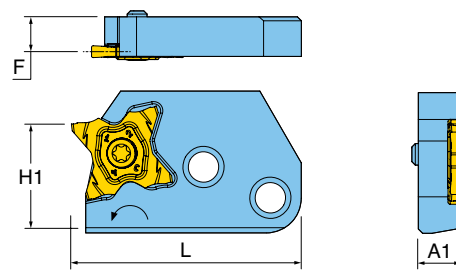


Designation	F (inch)	L (inch)	Width Min	Width Max
TQCL27	0.346	2.09	0.020	0.255

HARDWARE		
	TS50125I	T-2010/5

TOCLAMP^{ULTRA+} SERIES TQCR

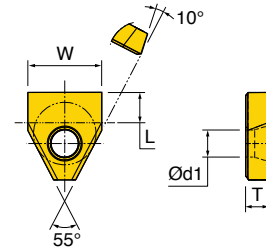
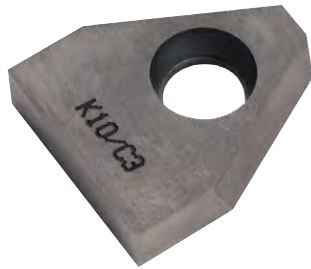
ADAPTER FOR GOLD FLEX (RIGHT HAND)



Designation	F (inch)	L (inch)	Width Min	Width Max
TQCR27	0.346	2.09	0.020	0.255

HARDWARE		
	TS50125IL	T-2010/5

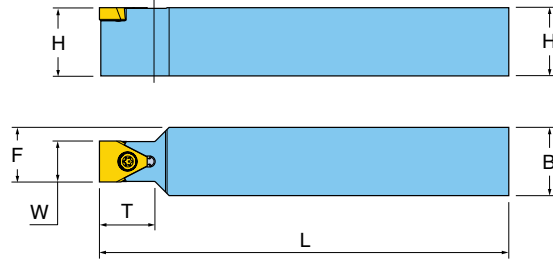
INSERTS FOR WIDE GROOVING APPLICATIONS



Designation	W	L	T	D1	Grades	K10	P40
TGUX1004	0.402	0.23	0.188	0.217			
TGUX1504	0.598	0.23	0.188	0.217			
TGUX2004	0.795	0.37	0.250	0.236			
TGUX2506	0.992	0.36	0.250	0.236			

● = P ● = M ● = K ● = N ● = S ○ = H

T-GROOVE HOLDERS FOR EXTERNAL GROOVING



Designation	H (inch)	B (inch)	F (inch)	Tmax (inch)	L (inch)	A (inch)
TTLEN12.7K10	0.500	0.500	0.450	0.790	5.00	0.394
TTLEN15.9K10	0.625	0.625	0.510	0.790	5.00	0.394
TTLEN15.9K15	0.625	0.625	0.610	0.790	5.00	0.591
TTLEN19M10	0.750	0.750	0.570	0.790	6.00	0.394
TTLEN19M15	0.750	0.750	0.670	0.790	6.00	0.591
TTLEN19K20	0.750	0.750	0.770	1.380	5.00	0.787
TTLEN19K25	0.750	0.750	0.870	1.380	5.00	0.984
TTLEN25.4M10	1.000	1.000	0.700	0.790	6.00	0.394
TTLEN25.4M15	1.000	1.000	0.800	0.790	6.00	0.591
TTLEN25.4M20	1.000	1.000	0.890	1.380	6.00	0.787
TTLEN25.4M25	1.000	1.000	0.990	1.380	6.00	0.984
TTLEN31.8P20	1.250	1.250	1.020	1.380	7.00	0.787
TTLEN31.8P25	1.250	1.250	1.120	1.380	7.00	0.984

Designation	HARDWARE			
	Turning Holder	Insert Reference	Insert Screw	Screw Driver Blade
TTLEN12.7K10	TGUX1004	SM40-100-R0	DS-T156B	DS-A00T
TTLEN15.9K10	TGUX1004	SM40-100-R0	DS-T156B	DS-A00T
TTLEN15.9K15	TGUX1504	SM40-100-R0	DS-T156B	DS-A00T
TTLEN19K20	TGUX2006	SM45-120-R0	DS-T206B	DS-A00T
TTLEN19K25	TGUX2506	SM45-120-R0	DS-T206B	DS-A00T
TTLEN19M10	TGUX1004	SM40-100-R0	DS-T156B	DS-A00T
TTLEN19M15	TGUX1504	SM40-100-R0	DS-T156B	DS-A00T
TTLEN25.4M10	TGUX1004	SM40-100-R0	DS-T156B	DS-A00T
TTLEN25.4M15	TGUX1504	SM40-100-R0	DS-T156B	DS-A00T
TTLEN25.4M20	TGUX2006	SM45-120-R0	DS-T206B	DS-A00T
TTLEN25.4M25	TGUX2506	SM45-120-R0	DS-T206B	DS-A00T
TTLEN31.8P20	TGUX2006	SM45-120-R0	DS-T206B	DS-A00T
TTLEN31.8P25	TGUX2506	SM45-120-R0	DS-T206B	DS-A00T

● = P ● = M ● = K ● = N ● = S ○ = H



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