

Solutions that are innovative, accurate, and simple.

PowerLOC Indexable End Mills

- Much better accuracy
- Better balance
- Positively grips the tool shank



**We're Making
a Better Connection
Between the Cutting Tool
and Spindle.**



Simplify



POWERLOC Square Shank Adapter

- Use with Techniks ER Chucks to turn them into PowerLOC Milling Holders



Innovative

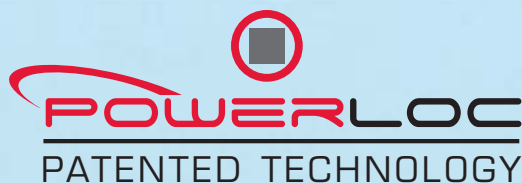
Indexable End Mills



- Positive High-Feed

- High-Feed

Attacking Heat & Vibration is in Our DNA.



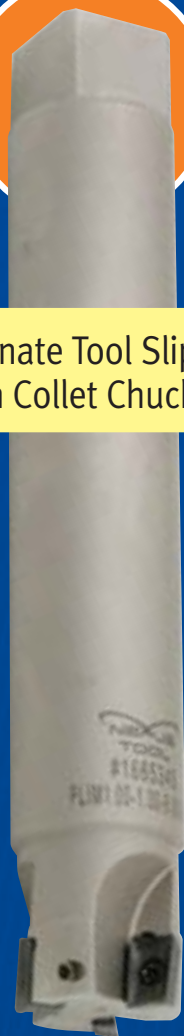
We're Making a Better Connection
Between the Cutting Tool and Spindle.



PowerLOC Square Shank End Mill



Eliminate Tool Slippage
in Collet Chucks!



Problem

- ❶ Inaccuracy of indexable end mill shanks
- ❷ Slippage (axial tool movement)
- ❸ Inability to remove the steel tool shanks from high technology ShrinkFIT chucks

Solution

- ❶ Develop a shank that works with collet chucks and ShrinkFIT holders
- ❷ Reduced diameter for ShrinkFIT Technology
- ❸ Develop a square on the back of the shank to eliminate any tool pressure slippage

Advantages & Benefits

- Extend tool life or increase feed rates
- Use indexable end mills in the two most accurate toolholders—Collet Chucks and ShrinkFIT

PowerLOC & ShrinkLOC For Best Insert Life

T.I.R. Causes Vibration. Vibration Causes Poor Cutting and Premature Failure in Inserts.



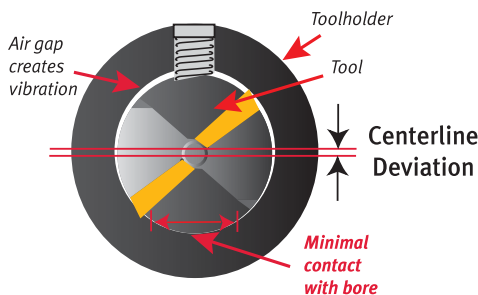
Typical Tolerance of a 3/4" Indexable End Mill

Shank Diameter	=	3/4"
Shank Tolerance	=	-0.0009"
	+	0.0000"
ID Tolerance of End Mill Holder	=	+0.0009"
	=	-0.0000"
Total Out of Tolerance	=	0.0018"

For Every 0.0001" T.I.R., Cutting Tools Lose 10% Tool Life.

.0018" T.I.R.

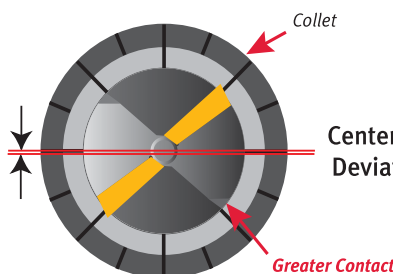
**Typical Use
End Mill Holder**



Average Tool Life

.0004" T.I.R.

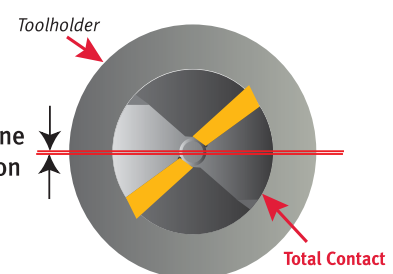
**Better Option
PowerLOC Collet Chuck**



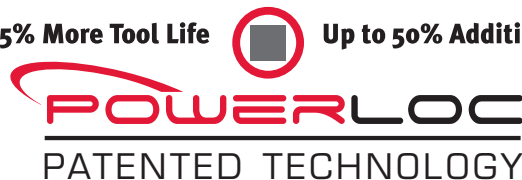
Up to 25% More Tool Life

.0002" T.I.R.

**Best Option
ShrinkLOC Holder**



Up to 50% Additional Tool Life



We're Making a Better Connection Between the Cutting Tool and Spindle.

Nexus PowerLOC Indexable End Mills

PowerLOC Indexable End Mills



Takes AP_1003 Inserts

Features

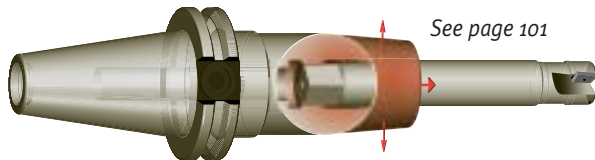
- Much better accuracy
- Better balance
- Positively grips the tool shank

Benefits

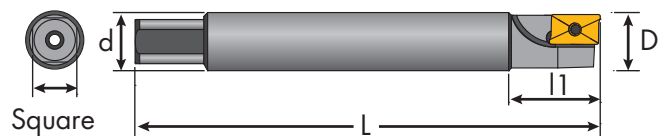
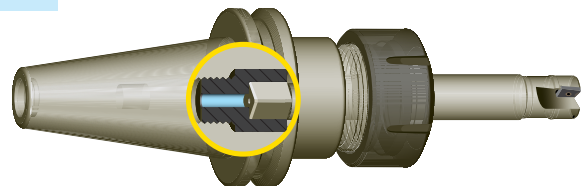
- Extend cutting tool life or increase feed rates
- Lower tooling cost
- Eliminates the need for milling chucks and end mill holders

How PowerLOC End Mills Reduce Scrap to Save Money

- PowerLOC Square Drive eliminates tool slippage issues for more accurate cutting, especially under heavy loads.
- Overall better balance, greater rigidity, and accuracy (.0002" T.I.R.) of the toolholder and end mill reduces wear on cutting inserts, extending life.
- Longer insert life = less down time for tool changes, and make more parts per insert.



Used with either a ShrinkLOC holder or a PowerLOC collet chuck, you get all the performance benefits – PLUS – you don't have to invest in a milling chuck!



Insert	Insert Screw	Wrench
AP_1003	9316446	9355333

α° = Ramp Angle

End Mills (PLIM) Coolant Thru and Non-Coolant

Part No.	Description	No. of Inserts	Coolant Thru	Collet Size	D	d	L	l1	Square	α°
1633345	PLIM.500-.500C-4.00-1-10	1	*	ER32 or ER40	.500	.500	4.00	0.79	0.380	32°
1655345	PLIM.750-.750C-5.00-2-10	2	*	ER32 or ER40	.750	.750	5.00	0.98	0.563	7.5°
1666345	PLIM1.00-1.00C-6.00-3-10	3	*	ER40	1.00	1.00	6.00	0.98	0.750	5°
1632345	PLIM.500-.500-4.00-1-10	1		ER32 or ER40	.500	.500	4.00	0.79	0.380	32°
1654345	PLIM.750-.750-5.00-2-10	2		ER32 or ER40	.750	.750	5.00	0.98	0.563	7.5°
1665345	PLIM1.00-1.00-6.00-3-10	3		ER40	1.00	1.00	6.00	0.98	0.750	5°

PowerLOC Square Shank High-Feed End Mills



Use with ShrinkLOC holder (pg 101)
or PowerLOC Collet Chuck (pg 234)

Takes SNKX09T Inserts



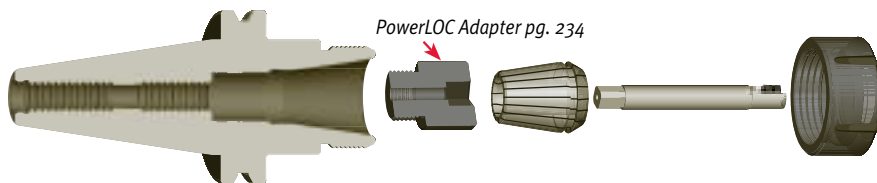
Features

- PowerLOC Square Shank
- Takes 8 cornered inserts
- Cost per corner cut in half
- Runs in steel, cast iron & hardened materials

Benefits

- Eliminate costly milling chucks
- Reduce Scrap
- No tool slippage
- Eliminate inaccurate end mill holders that cause chatter and short tool life
- Faster feed rates
- Extend insert life up to 2X

**We're Making a Better Connection
Between the Cutting Tool and Spindle.**



PowerLOC Adapter pg. 234



PowerLOC Coolant Thru High-Feed End Mills

Part No.	Description	D	d	L	Z	Insert	l1	Ap	α°
6612118	PLHF-1.00-1.00C-5.00-3SN9	1.00	1.00	5.00	3	SNKX09T3	2.36	.039	3.5°
6612117	PLHF-1.00-1.00C-8.00-3SN9	1.00	1.00	8.00	3	SNKX09T3	3.94	.039	3.5°
6712119	PLHF-1.25-1.25C-5.00-4SN9	1.25	1.25	5.00	4	SNKX09T3	1.20	.039	2°
6712120	PLHF-1.25-1.25C-8.00-3SN9	1.25	1.25	8.00	3	SNKX09T3	1.20	.039	2°

Adapters & Toolholders for PowerLOC End Mills

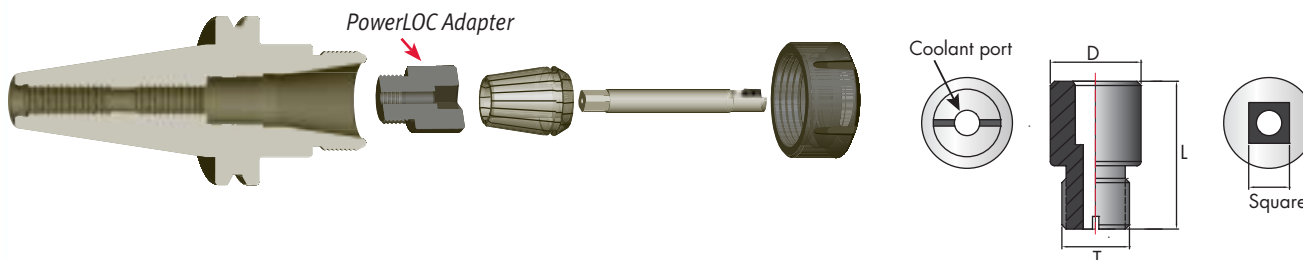


Adapts ER Chucks into PowerLOC Milling Holders

PowerLOC Square Shank Adapters turn our standard collet chucks into milling holders capable of performing heavier milling jobs than you ever thought possible.



**We're Making a Better Connection
Between the Cutting Tool and Spindle.**



PowerLOC Straight Shank Adapters (PLSS) Coolant-Thru

Part No.	Description	Collet Size	L	D	Square	Tool Shank	T=Thread
9398765	PLSS.500xM16	ER32	1.380	.850	0.380	.500	M16x2.0
9397764	PLSS.750xM16	ER32	1.380	.850	0.563	.750	M16x2.0
9396764	PLSS.500xM20	ER40	1.97	1.280	0.380	.500	M20x2.0
9396763	PLSS.750xM20	ER40	1.97	1.280	0.563	.750	M20x2.0
9396762	PLSS1.00xM20	ER40	1.97	1.280	0.750	1.00	M20x2.0
9396766	PLSS1.25xM24	ER50	1.59	1.35	.763	1.25	M24X2.0



purchase collet separately

PowerLOC CAT40 ER Toolholders

Part No.	Collet	L	D	Max. Shank	Wrench	Thread
CAT40-ER-32-2.76	ER32	2.76	1.97	.788	9904616	M16X2.0
CAT40-ER-32-4	ER32	4	1.97	.788	9904616	M16X2.0
CAT40-ER-40-3.15	ER40	3.15	2.48	1.023	9904617	M120X2.0

PowerLOC CAT50 ER Toolholders

Part No.	Collet	L	D	Max. Shank	Wrench	Thread
CAT50-ER-32-4	ER32	4	1.97	.788	9904616	M16X2.0
CAT50-ER-32-6	ER32	6	1.97	.788	9904616	M16X2.0
CAT50-ER-40-4	ER40	4	2.48	1.023	9904617	M20X2.0

HIGH-PERFORMANCE
3x the Thickness of Conventional PVD!



The Power of 8!

Milling with 8 Cutting Edges

Excellent for
near-to-shape workpieces

High stability reduces vibration

SNKX 09T3-HF-LT30

Designed to achieve the same feed per
tooth as bigger inserts



More cutting edges per corner
creates higher productivity

Nexus Tool introduces the SNKX High-Feed Insert

Nexus Tool is pleased to announce the release of its revolutionary High-Feed SNKX 09T3 insert.

For the first time in the market you can have an 8 cutting edges square insert for High-Feed milling, with 09 size.

Features

- Perfect for copying
- Excels in plunge milling
- Great for roughing operations on pockets and 3D surfaces
- High productivity (more cutting edges per corner)



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Benefits

- 8 cutting edges
- Long tool life
- Top quality with proprietary Sub-micron and ultra thick PVD technologies
- Positive geometry for low cutting forces
- Excellent for dry machining of moulds and dies
- Superior toughness & wear resistances for consistent performance and tool life

SNKX for P-K-H

Part No.	Description	Grade	Programming Radius	Operation	Material
2502115	SNK09T3-HF	LT 30	.165	Roughing	P-K-H

P = steel, K = cast iron, H = hardened material

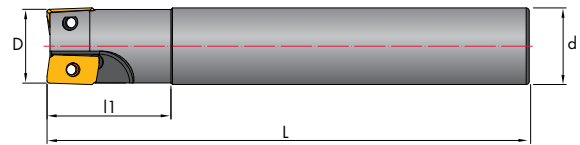
Nexus Indexable End Mills (IEM90)



Takes AP__ Inserts

Benefits

- H13 tool steel provides a more rigid tool for less deflection in the cut, and extended tool life
- H6 shank tolerance provides 38% better T.I.R. to improve accuracy and extend insert life



Indexable End Mills (IEM90) Coolant Thru

Part No.	Description	Insert	D	d	L	Z	l1	α°
1632234	IEM90-.500-.500C-4.00-1-10	AP__1003	.500	.500	4.00	1	0.787	32°
1642235	IEM90-.625-.625C-5.00-2-1	AP__1003	.625	.625	5.00	2	0.984	5°
1652236	IEM90-.750-.750C-5.00-2-10	AP__1003	.750	.750	5.00	2	0.984	7.5°
1662237	IEM90-1.00-1.00C-6.00-3-10	AP__1003	1.00	1.00	6.00	3	0.984	5°
1672238	IEM90-1.25-1.25C-6.00-3-16	AP__1604	1.25	1.25	6.00	3	1.772	3°
1682239	IEM90-1.50-1.25C-6.00-4-16	AP__1604	1.50	1.25	6.00	4	1.772	2.7°

Indexable End Mills (IEM90)

Part No.	Description	Insert	D	d	L	Z	l1	α°
1631234	IEM90-.500-.500-4.00-1-10	AP__1003	.500	.500	4.00	1	0.787	32°
1641235	IEM90-.625-.625-5.00-2-10	AP__1003	.625	.625	5.00	2	0.984	5°
1651236	IEM90-.750-.750-5.00-2-10	AP__1003	.750	.750	5.00	2	0.984	7.5°
1661237	IEM90-1.00-1.00-6.00-3-10	AP__1003	1.00	1.00	6.00	3	0.984	5°
1676238	IEM90-1.25-1.25-6.00-3-16	AP__1604	1.25	1.25	6.00	3	1.772	3°
1686239	IEM90-1.50-1.25-6.00-4-16	AP__1604	1.50	1.25	6.00	4	1.772	2.7°



Takes SNKX09T Inserts

Features

- 8 corners
- Runs in steel, cast iron & hardened materials

Benefits

- Less inventory = lower cost
- Higher productivity and lower cost per corner
- Cost per corner cut in half

Indexable High-Feed End Mills

Coolant Thru

Part No.	Description	D	d	L	Z	Insert	l1	Ap	α°
6602118	HFEM-1.00-1.00CW-5.00-3SN9	1.00	1.00	5.00	3	SNKX09T3	2.36	.039	3.5°
6602117	HFEM-1.00-1.00CW-8.00-3SN9	1.00	1.00	8.00	3	SNKX09T3	3.94	.039	3.5°
6702119	HFEM-1.25-1.25CW-5.00-4SN9	1.25	1.25	5.00	4	SNKX09T3	2.36	.039	2°
6702120	HFEM-1.25-1.25CW-8.00-3SN9	1.25	1.25	8.00	3	SNKX09T3	3.94	.039	2°

W=Weldon. Z = number of inserts. α° = Ramp Angle

Nexus Positive High-Feed Indexable End Mills

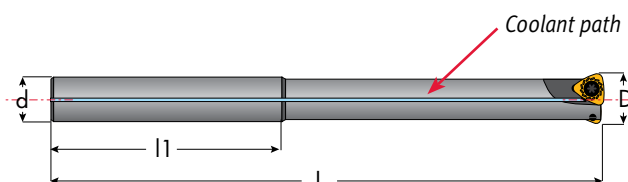


Takes WPGT Inserts

Features & Benefits

- Higher feed rates than standard end mills
- Less radial cutting forces
- Reduces spindle wear

Insert	Insert Screw	Wrench
WPGT0503	160M3.5X08TT	WT10P & WT15P



Positive High Feed Indexable End Mills - Coolant Thru

Part No.	Description	D	d	L	Z	l1	Ap	α°
1658810	HFEM-0.75-0.75-7.00-WP05-02	0.75	0.75	5.00	2	3.25	0.06	6.5°



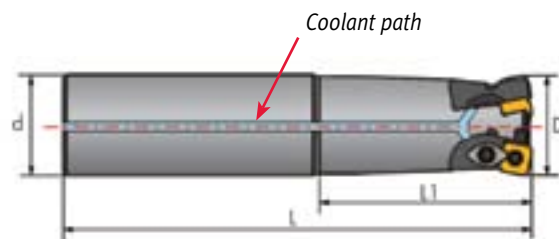
Takes SDMT Inserts

Use in a ShrinkFIT holder
to increase tool life up to 50%.

ShrinkFIT holders can be found starting on page 92

End mill holders can be found starting on page 74.

Insert	Insert Screw	Wrench
SDMT09T	160M3.5X08TT	WT101P
SDMT12T	160M4X8.4	WT151P



Positive High Feed Indexable End Mills - Coolant Thru

Part No.	Description	D	d	L	Z	l1	Ap	α°
1668820	HFEM-1.00-1.00-5.50-SD09-02	1.00	1.00	5.50	2	3.25	0.06	7.5°
1668822	HFEM-1.00-1.00-7.00-SD09-02	1.00	1.00	7.00	2	3.25	0.06	7.5°
1678830	HFEM-1.25-1.25-8.00-SD09-03	1.25	1.25	8.00	3	3.25	0.06	4.5°
1678840	HFEM-1.25-1.25-8.00-SD12-02	1.25	1.25	8.00	2	3.25	0.07	9°
1688850	HFEM-1.50-1.50-8.00-SD12-03	1.50	1.50	8.00	3	3.25	0.07	6°

High-Performance Milling Inserts



APEX



APGT

P = steel
M = stainless
K = cast iron
S = high temp alloys
H = hardened material
N = aluminum & alloys



SDMT



SEKT

Part No.	Description	Grade	Radius	Operation	Material
1506065	ADKT1505PDTR-LT30-Insert	LT30	Facet	General	P-M-K-S-H
3153311	AOMT123608PETR-LT30-Insert	LT30	0.031	General	P-M-K-S-H
3151236	APEX100304PDFR-F01-Insert-5005-HP	5005	0.016	Finishing	N
3151239	APEX1604PDFR-F01-Insert-GH05-HP	GH05	Sharp	Finishing	N
1506501	APGT1003PDER-ALU-LT05-Insert	LT05	Facet	General	N-S
1506505	APGT1604PDER-ALU-LT05-Insert	LT05	Facet	General	N-S
3154411	APKT1003PDTR-LT30-Insert	LT30	Facet	General	P-M-K-S-H
3154422	APKT100304PDTR-LT30-Insert	LT30	0.016	General	P-M-K-S-H
3154433	APKT100312PDTR-LT30-Insert	LT30	0.047	Roughing	P-M-K-S-H
3154444	APKT100332PDTR-LT30-Insert	LT30	0.125	Roughing	P-M-K-S-H
3154455	APKT100340PDTR-LT30-Insert	LT30	0.157	Roughing	P-M-K-S-H
1506073	APKT1604 PDTR-LT30-Insert	LT30	Facet	General	P-M-K-S-H
1500300	APKT160424ER-LT30-Insert	LT30	0.094	Roughing	P-M-K-S-H
1506077	APKT1705PETR-LT30-Insert	LT30	Facet	General	P-M-K-S-H
1506085	APLX100308PDTR-LT 30-Insert	LT30	0.031	General	P-M-K-S-H
1501567	APLX100340PDTR-LT30-Insert	LT30	0.157	Roughing	P-M-K-S-H
1506082	APLX1003PDTR-LT30-Insert	LT30	Facet	General	P-M-K-S-H
3153321	APMT1135PDTR-LT30-Insert	LT30	Facet	General	P-M-K-S-H
3153325	APMT160408PDTR-LT30-Insert	LT30	0.031	General	P-M-K-S-H
3954411	ODMT060508TN-LT30-Insert	LT30	0.031	General	P-M-K-S-H
3954415	ODMW060508TN-LT30-Insert	LT30	0.031	General	P-M-K-S-H
3954421	OFER070405TN-LT30-Insert	LT30	0.020	General	P-M-K-S-H
3954431	OFMT05T305TN-LT30-Insert	LT30	0.020	General	P-M-K-S-H
3954435	OFMT070405TN-LT30-Insert	LT30	0.020	General	P-M-K-S-H
3959999	PNEG110512R-CM-Insert-152	152	0.047	General	K
3355525	RCMT1204M0-LT10-Insert	LT30	NA	General	P-M-K-S-H
3355531	RDMT0803M0-LT30-Insert	LT30	NA	General	P-M-K-S-H
3355541	RDMT1204M0-LT30-Insert	LT30	NA	General	P-M-K-S-H
3254411	SDKT1204AETN-LT30-Insert	LT30	Chamfer	General	P-M-K-S-H
3253310	SDMT09T312-DM-Insert-202 (HF)	202	0.047	High-Feed	P-M-K-S-H
3253320	SDMT120412-DM-Insert-202 (HF)	202	0.047	High-Feed	P-M-K-S-H
3251239	SEET13T3-LH-Insert-WSK10-HP	WSK10	Chamfer	Finishing	N
2506509	SEGT1204AFEN-ALU-LT05-Insert	LT05	Chamfer	General	N-S
3254415	SEKN1203AFTN-LT30-Insert	LT30	Chamfer	General	P-M-K-S-H
3254431	SEKR1203AFTN-LT30-Insert	LT30	Chamfer	General	P-M-K-S-H
3254435	SEKT1204AFTN-LT30-Insert	LT30	Chamfer	General	P-M-K-S-H
2506169	SEKT12T3AGTN-LT30-Insert	LT30	Chamfer	General	P-M-K-S-H
2502115	SNKX09T3HF-LT30-Insert	LT30	0.031	High-Feed	P-K-H
3567741	TPKN32PDTR-LT30-Insert	LT30	Chamfer	General	P-M-K-S-H
3567745	TPKN43PDTR-LT30-Insert	LT30	Chamfer	General	P-M-K-S-H
3567751	TPKR323PDTR-LT30-Insert	LT30	Chamfer	General	P-M-K-S-H
3567755	TPKR43PDTR-LT30-Insert	LT30	Chamfer	General	P-M-K-S-H
3567761	TPUN322-LT30-Insert	LT30	0.031	General	P-M-K-S-H
3451112	WPGT050315ZSR-Insert-351 (HF)	351	0.059	High-Feed	P-M-K-S-H

LT 30 Machining Guide

APLX LT 30



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HIGH-PERFORMANCE
3x the Thickness of Conventional PVD!

Material Group	No.	Material example	Brinell hardness	d.o.c [inch]		feed [inch/tooth]		Cutting Speed [SFM]	
				min	max	min	max	min	max
Low Carbon Steel	1	Ck15	150	0.020	0.591	0.004	0.015	590	984
		Ck45	180				0.010		853
		1020	210				0.009		722
		1045							
Alloy steel	2	42 CrMo 4	180	0.020	0.591	0.003	0.009	426	656
		St 50-2	230						590
		Ck60	280	0.020		0.003	0.007	328	525
		1060	320						459
		4140							
High Alloy Steel	3	X40	220	0.020	0.591	0.003	0.007	295	426
		CrMoV 5	280						361
		1 40	320	0.020	0.276	0.003	0.006	197	328
		NiCrMo 6	350						295
		S 2-10-1-8	400	0.020	0.157	0.004	0.006	131	262
H13	480	0.079							230
D2	550	0.039							197
Hardened Steel		HSS M42							
Austenitic and Duplex Stainless Steel	4	X5 CrNi	210 to 250	0.020	0.354	0.004	0.009	623	820
		18 9							
		304							
Austenitic and Duplex Stainless Steel	5	X2 CrNiMo	230 to 270	0.020	0.354	0.004	0.008	525	689
		17 2 2							
		316							
Austenitic and Duplex Stainless Steel	6	X6 CrNiMoTi	—	0.020	0.354	0.003	0.007	230	394
		17 12 2							
		316 Ti							
		Duplex / Nitronic							
Ferritic Stainless Steel	7	X8 Cr 7	annealed	0.020	0.354	0.003	0.008	492	754
Martensitic Stainless Steel	8	X15 Cr 13	annealed	0.020	0.354	0.003	0.008	426	689
		410	treated					295	492
Grey Cast iron	9	GG 20	140 to 230	0.020	0.354	0.004	0.010	492	787
		GG 25							722
		GG 30							623
Nodular Cast Iron	10	GGG 40	210	0.020	0.354	0.004	0.009	328	656
		GGG 50	260						525
		GGG 70	310						426
White Cast Iron		G-X260Ni-Cr42	400	0.020	0.118	0.004	0.006	98	197
Ni based alloy	11	Inconel 625	—	0.020	0.197	0.003	0.006	82	115
		Inconel 718						92	125
		Hastelloy C						131	213
Ti based alloy	12	TiAl 6 V4	-----	0.020	0.197	0.003	0.007	115	197
		T40					0.006	92	131

Aluminum Machining Guide

APGT 1003 PDER ALU LT 05



LAMINA
TECHNOLOGIES

HIGH-PERFORMANCE
3x the Thickness of Conventional PVD!

Material Group		Gr. N°	VDI Group	Material Ex-amples*	Hardness	D.O.C. [inch]		Feed [inch/tooth]		Vc [sfm]		Optimal cutting conditions		
						min	max	min	max	min	max	D.O.C.	Feed	Vc
NF	Al (<8%Si)	13	21, 22, 23, 24	Si < 4 %	60 HB	0.012	0.354	0.005	0.008	1320	3960	0.118	0.006	1650
				4% < Si < 8 %	100 HB			0.004	0.007	825	1980			1320
	Cooper Alloys	14	26, 27, 28	CuZn30	100 HB	0.012	0.354	0.004	0.007	330	2640	0.118	0.006	990
	Non-Metallic	15	29	Fiber Plastics	-		0.354		0.008	264	1650	0.118	0.005	660
			30	Hard Rubber	-	0.012	0.354	0.005	0.008	264	990			495
			-	Graphite	-		0.354		0.008	330	660			495
H.T.A.	Ti based Alloys	10	36	Ti 1	-	0.012	0.197	0.003	0.008	115.5	198	0.079	0.005	148.5
			36	TiAl 6 V4	-		0.197		0.006	92.4	148.5			115.5

LT 30 Machining Guide

APKT 1604 PDTR



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Material Group		Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [inch]		Feed [inch/tooth]		Vc [sfm]		Optimal cutting conditions		
						min	max	min	max	min	max	D.O.C.	Feed	Vc
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.020	0.590	0.007	0.013	620	1080	0.157	0.009	820
			2		190 HB	0.020	0.590	0.007	0.013	620	980	0.157	0.009	720
			3		250 HB	0.020	0.590	0.007	0.013	620	820	0.157	0.009	650
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.020	0.590	0.006	0.010	490	780	0.157	0.008	650
			4,6		230 HB	0.020	0.590	0.006	0.010	490	680	0.157	0.008	590
			5,7		280 HB	0.020	0.590	0.006	0.009	420	620	0.157	0.007	490
			8		350 HB	0.020	0.590	0.006	0.009	420	550	0.157	0.007	450
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.020	0.422	0.005	0.009	290	490	0.118	0.007	420
			10		280 HB	0.020	0.422	0.005	0.009	290	420	0.118	0.007	390
			11		320 HB	0.020	0.422	0.005	0.007	190	360	0.118	0.006	320
			11		350 HB	0.020	0.422	0.005	0.007	190	290	0.118	0.006	260
	Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.020	0.590	0.006	0.010	620	820	0.157	0.008
14				240 HB		0.020	0.590	0.005	0.009	520	680	0.157	0.008	620
Duplex		5	14	X2CrNiN23-4, S31500	290 HB	0.020	0.422	0.005	0.007	220	420	0.118	0.006	320
			14		310 HB	0.020	0.422	0.005	0.007	220	390	0.118	0.006	290
Ferritic & Martensitic		6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.020	0.590	0.006	0.010	490	680	0.157	0.008	620
13	42 HRc		0.020		0.422	0.006	0.008	290	490	0.118	0.006	420		
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.020	0.590	0.007	0.013	490	780	0.157	0.009	650
			15		200 HB	0.020	0.590	0.007	0.013	490	720	0.157	0.009	590
			16		250 HB	0.020	0.590	0.007	0.013	490	620	0.157	0.009	520
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.020	0.590	0.006	0.011	320	650	0.157	0.008	590
			17,19		200 HB	0.020	0.590	0.006	0.011	320	590	0.157	0.008	490
18,20			250 HB		0.020	0.590	0.006	0.011	320	490	0.157	0.008	420	
High Temp.Alloys	Fe, Ni & Co based	9	31,32	Incoloy 800	240 HB	0.020	0.422	0.005	0.007	80	140	0.118	0.006	100
			33	Inconel 700	250 HB	0.020	0.422	0.005	0.007	80	140	0.118	0.006	90
			34	Stellite 21	350 HB	0.020	0.422	0.005	0.007	80	140	0.118	0.006	90
	Ti based	10	36	TiAl6V4	-	0.020	0.422	0.005	0.008	130	210	0.118	0.007	180
			37	T40	-	0.020	0.422	0.005	0.007	90	180	0.118	0.006	130
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.020	0.211	0.004	0.007	130	260	0.079	0.006	190
			38		50 HRc	0.020	0.126	0.004	0.006	130	220	0.059	0.005	180
			38		55 HRc	0.020	0.063	0.004	0.006	130	190	0.039	0.005	160
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.020	0.169	0.004	0.007	130	260	0.059	0.006	160
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.020	0.063	0.004	0.006	90	190	0.039	0.005	130
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.020	0.590	0.007	0.013	650	1310	0.157	0.010	910

Nexus PowerLOC Indexable End Mills

Aluminum LT 05 Machining Guide

APGT 1604 PDER ALU LT 05



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Material Group		Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [inch]		Feed [inch/tooth]		Vc [sfm]		Optimal cutting conditions		
						min	max	min	max	min	max	D.O.C.	Feed	Vc
NF	Al (<8%Si)	13	21, 22 23, 24	Si < 4 %	60 HB	0.020	0.591	0.006	0.013	1320	3960	0.157	0.006	1650
				4% < Si < 8 %	100 HB		0.591	0.005	0.011	825	1980			1320
	Cooper Alloys	14	26,27,28	CuZn30	100 HB	0.020	0.591	0.005	0.011	330	2640	0.157	0.006	990
	Non-Metallic	15	29	Fiber Plastics	-	0.020	0.591	0.006	0.013	264	1650	0.157	0.005	660
			30	Hard Rubber	-		0.591		0.013	264	990			495
			-	Graphite	-		0.591		0.013	330	660			495
H.T.A.	Ti based Alloys	10	36	Ti 1	-	0.020	0.591	0.004	0.013	115.5	198	0.157	0.005	148.5
		36	TiAl 6 V4	-	0.591		0.009		92.4	148.5	115.5			

LAMINA Insert Descriptions

LT05

PVD Coated with Chromium Nitride.
Great for aluminum <6% silicon and titanium

LT 30 Milling

A sub-micro grain substrate with a very thick high-pulse PVD coating

It has better adhesion than normal coatings.
It can be run in all materials including aluminum

101

Uncoated Fine-grade Carbide

A very sharp high polished grade

Used mostly for the general machining of aluminum

Can be used in all non-ferrous materials and high temperature alloys

202

PVD Coated Grade

Ultra-fine grain substrate provides excellent resistance to plastic deformation

NANO-TiAlN Coated

Good for wide range of general milling applications in a variety of materials

351

CVD Coated Grade

Very tough substrate with high wear-resistance

Multi-coating contains TiCN, Al₂O₃, and TiN

Good for rough milling of steel, stainless steel and cast iron

5005

Uncoated ultra micro-grain carbide

A very sharp high-polished geometry

Used in the general and finish machining of aluminum

GHO5

Uncoated ultra micro-grain carbide

A very sharp high-polished geometry

Used in the general and finish machining of aluminum

High-Feed Machining Guide

SNKX 09T3-HF

Corner radius for CNC programming: 0.165"



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Material Group		Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [inch]		Feed [inch/tooth]		Vc [sfm]		Optimal cutting conditions		
						min	max	min	max	min	max	D.O.C.	Feed	Vc
Steel	Non-alloyed	1	1	C35, Ck45,	125 HB	0.004	0.039	0.011	0.083	620	1080	0.022	0.043	820
			2	1020, 1045,	190 HB	0.004	0.039	0.011	0.077	620	980	0.022	0.043	720
			3	1060, 28Mn6	250 HB	0.004	0.039	0.011	0.059	620	820	0.022	0.043	650
	Low alloyed	2	6	42CrMo4,	180 HB	0.004	0.039	0.010	0.077	490	780	0.020	0.039	650
			4,6	St50, Ck60,	230 HB	0.004	0.039	0.010	0.067	490	680	0.020	0.039	590
			5,7	4140, 4340,	280 HB	0.004	0.039	0.009	0.063	420	620	0.020	0.035	490
			8	100Cr6	350 HB	0.004	0.039	0.009	0.059	420	550	0.020	0.035	450
	High alloyed	3	10	X40CrMoV5,	220 HB	0.004	0.039	0.008	0.067	290	490	0.020	0.035	420
			10	H13, M42,	280 HB	0.004	0.039	0.008	0.063	290	420	0.020	0.035	390
			11	D3, S6-5-2,	320 HB	0.004	0.031	0.008	0.059	190	360	0.016	0.031	320
			11	12Ni19	350 HB	0.004	0.031	0.008	0.055	190	290	0.016	0.031	260
Stainless Steel	Austenitic	4	14	304, 316,	180 HB									
			14	X5CrNi18-9	240 HB									
	Duplex	5	14	X2CrNi23-4,	290 HB									
			14	S31500	310 HB									
	Ferritic & Martensitic	6	12	410, X6Cr17,	200 HB									
			13	17-4 PH, 430	42 HRC									
Cast Iron	Grey	7	15	GG20, GG40,	150 HB	0.004	0.039	0.008	0.094	490	780	0.024	0.043	650
			15	EN-GJL-250,	200 HB	0.004	0.039	0.008	0.094	490	720	0.024	0.043	590
			16	No30B	250 HB	0.004	0.039	0.008	0.094	490	620	0.024	0.043	520
	Malleable & Nodular	8	17,19	GGG40,	150 HB	0.004	0.039	0.008	0.071	320	650	0.020	0.039	590
			17,19	GGG70,	200 HB	0.004	0.039	0.008	0.071	320	590	0.020	0.039	490
			18,20	50005	250 HB	0.004	0.039	0.008	0.071	320	490	0.020	0.039	420
High Temp. Alloys	Fe, Ni & Co based	9	31,32	Incoloy 800	240 HB									
			33	Inconel 700	250 HB									
			34	Stellite 21	350 HB									
	Ti based	10	36	TiAl6V4	-									
			37	T40	-									
Hardened Mat.	Steel	11	38	X100CrMo13,	45 HRC	0.004	0.024	0.006	0.043	130	260	0.016	0.028	190
			38	440C,	50 HRC	0.004	0.020	0.006	0.039	130	220	0.012	0.026	180
			38	G-X260NiCr42	55 HRC	0.004	0.016	0.006	0.035	130	190	0.012	0.024	160
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.004	0.024	0.006	0.043	130	260	0.016	0.028	160
	White Cast Iron		41	G-X300Cr-Mo15	55 HRC	0.004	0.016	0.006	0.035	90	190	0.012	0.024	130
NF	Al (>8%Si)	12	25	AlSi12	130 HB									

Nexus PowerLOC Indexable End Mills

Nexus Indexable Drills

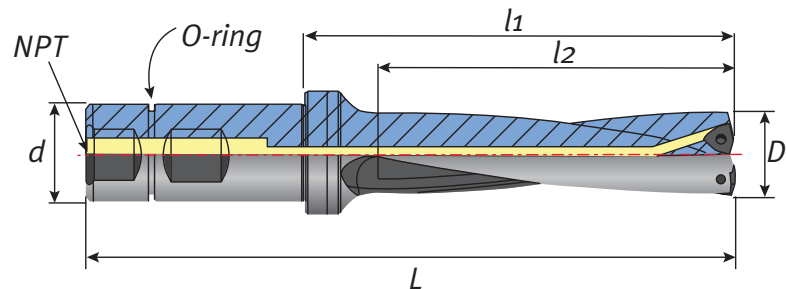


Simplify

HIGH-PERFORMANCE
3x the Thickness of Conventional PVD!

Features

- Coolant fed through center
- Special -ring design to help seal coolant
- H13 steel for rigidity and tool life
- 4x depth to diameter
- High-performance inserts reduce setup time and inventory of inserts



4WD Indexable Drills

Part No.	Description	D	d	Drill Depth I3	NTP Thread P	I2	I1	L	Insert	Wrench
1741234	4WD.625-.750C-2.50-3	0.625"	0.750"	2.50"	1/8"	2.69"	3.44"	5.48"	WC_0302	T8
1751244	4WD.750-.750C-3.00-3	0.750"	0.750"	3.00"	1/8"	3.20"	3.94"	6.00"	WC_0302	T8
1751254	4WD.875-1.00C-3.50-4	0.875"	1.00"	3.50"	1/8"	3.69"	4.43"	6.72"	WC_0402	T8
1761264	4WD1.00-1.00C-4.00-4	1.00"	1.00"	4.00"	1/8"	4.20"	4.94"	7.23"	WC_0402	T8
1771284	4WD1.25-1.25C-5.00-6	1.25"	1.25"	5.00"	1/4"	5.20"	6.14"	8.43"	WC_06T3	T15
1771294	4WD1.375-1.25C-5.50-6	1.375"	1.25"	5.50"	1/4"	5.69"	6.64"	8.92"	WC_06T3	T15
1781334	4WD1.50-1.25C-6.00-6	1.50"	1.25"	6.00"	1/4"	6.20"	7.26"	9.54"	WC_06T3	T15
1781354	4WD1.75-1.50C-7.00-6	1.75"	1.50"	7.00"	1/4"	7.20"	8.26"	10.95"	WC_06T3	T15
1781374	4WD2.00-1.50C-8.00-8	2.00"	1.50"	8.00"	1/4"	8.20"	9.34"	12.03"	WC_0804	T15
1791394	4WD2.25-1.50C-9.00-8	2.25"	1.50"	9.00"	1/4"	9.20"	10.34"	13.03"	WC_0804	T15

Drilling Inserts

Part No.	Description	Grade	Radius	Operation	Material
3441111	WCMX030208R53-201-Drill Insert	201	0.031	General	P-M-K-S-H
3441121	WCMX040208NN-LT30-Drill Insert	LT30	0.031	General	P-M-K-S-H
3441125	WCMX050308NN-LT30-Drill Insert	LT30	0.031	General	P-M-K-S-H
3441131	WCMX06T308NN-LT30-Drill Insert	LT30	0.031	General	P-M-K-S-H
3441135	WCMX080412NN-LT30-Drill Insert	LT30	0.047	General	P-M-K-S-H

P = steel, M = stainless, K = cast iron, S = high temp alloys, H = hardened material, N = aluminum & alloys