

Solutions that are innovative, accurate, and simple.

Techniks Toolholders

- Minimize T.I.R.
- Maximize rigidity
- Increase tool life



Accurate

Lamina High-Performance

- Eliminate insert guesswork
- Minimize set up time
- Maximize machine time



Simplify

PowerLOC

- Eliminate milling chucks
- Minimize set up time
- Maximize machine time



ShrinkMILL

- Perfect ShrinkFIT connection
- 30% less runout
- Longer insert life



Innovative

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

Nexus ShrinkMILL and Face Mills

Attacking Heat & Vibration is in Our DNA.



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



**Make more parts per day
and increase your profit margin!**

Problem

- ❶ Poor I.D./O.D. tolerance between face mill and face mill arbor
- ❷ This causes high T.I.R. (runout) and high vibration while cutting due to uneven cutting from each insert
- ❸ High T.I.R. also causes premature wear on the arbor, causing even more vibration

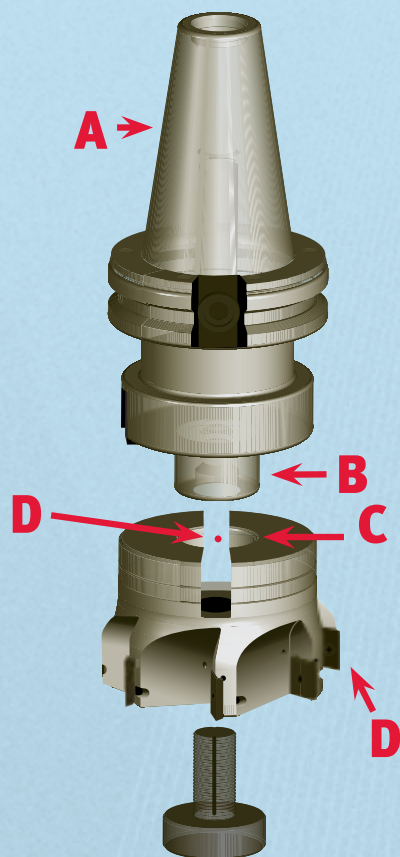
Solution

- ❶ ShrinkMILL perfects the connection between face mill and arbor with ShrinkFIT technology
- ❷ We reduce the diameter of the face mill I.D. so it can be ShrinkFIT onto the arbor for the most rigid, powerful, and accurate connection in the industry
- ❸ Our face mills and arbors are made out of the same H13 tool steel as our regular ShrinkFIT holders so you get the same outstanding performance and insert life

Benefits

- ❶ Better surface finish
- ❷ Less scrap due to less premature failure of inserts
- ❸ Increased productivity

Nexus ShrinkMILL – Perfect ShrinkFIT Connection



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

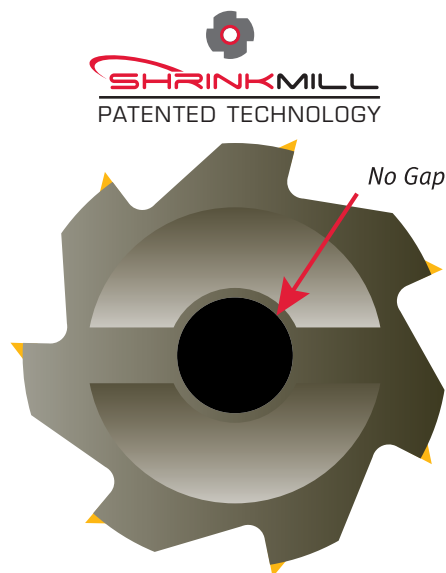
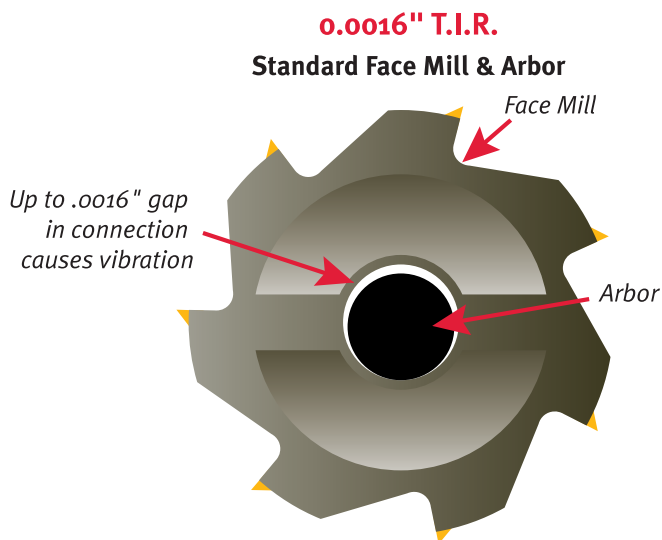
Typical 1" ID Face Mill Assembly

Measurement	Tolerance	
A Taper to arbor T.I.R.	Toolholder	= 0.0002"
B OD tolerance	Arbor	= -0.0008"
C ID tolerance	Face Mill ID	= +0.0008"
D ID to insert OD (including insert tolerance)	Face Mill ID/OD	= ±0.003"
Total Tolerance		= 0.0048" T.I.R.

Reduced vibration allows faster feeds & speeds, increasing parts per day, and reduces premature failure of inserts.

Use ShrinkMILL to reduce scrap—which is money!

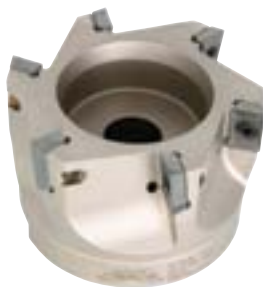
ID/OD Tolerance in Face Mills



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



Takes AP__1604 Inserts

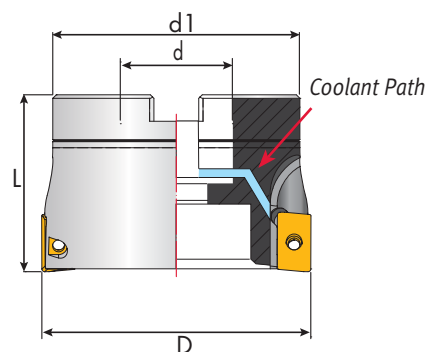
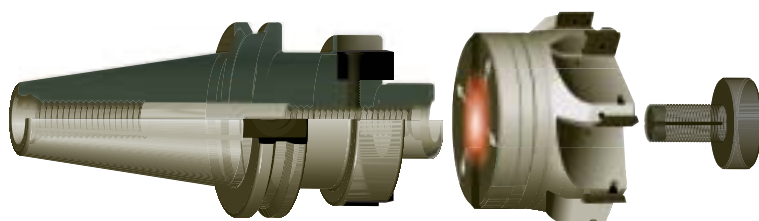


Features

- The holding power and rigidity of ShrinkFIT applied to a face mill
- Coolant-thru tool

Benefits

- Longer tool life or increased feed rates
- Better surface finish due to increased rigidity
- Longer insert life



Insert	Insert Screw	Wrench
AP__1604	9319345	9355555

90° ShrinkMILL (SFM) Coolant Thru

Part No.	Description	Inserts	D	d	Z	d1	L
2321234	SFM90-2.00C-.750-4-16	AP__1604	2.00	0.75	4	1.69	1.57
2331235	SFM90-3.00C-1.25-6-16	AP__1604	3.00	1.25	6	2.76	1.97
2341236	SFM90-4.00C-1.25-7-16	AP__1604	4.00	1.25	7	2.76	1.97
2351237	SFM90-5.00C-1.50-8-16	AP__1604	5.00	1.50	8	3.82	2.48

Ramp Angle (α°) N/A. Toolholders found starting on page 114.



Takes SE_12T3 and SE_13T3 Inserts

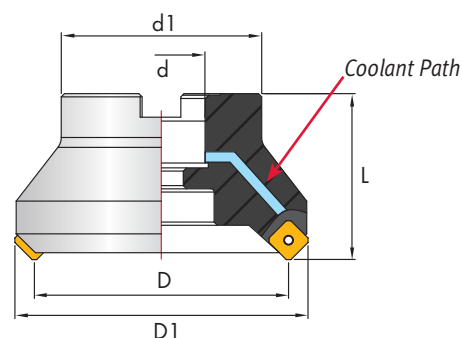


Features

- Accuracy and rigidity of ShrinkFIT applied to a face mill
- Coolant-thru tool

Benefits

- Faster metal removal rates
- Better surface finish due to increased rigidity
- Longer insert life



Insert	Insert Screw	Wrench
SE_12T3	9318345	9355555

45° ShrinkMILL (SFM) Coolant Thru

Part No.	Description	Inserts	D	d	D1	Z	d1	L
2421234	SFM45-2.00C-.750-4-13	SE_12T3	2.00	0.75	2.48	4	1.69	1.57
2431235	SFM45-3.00C-1.25-6-13	SE_12T3	3.00	1.25	3.66	6	2.76	1.97
2441236	SFM45-4.00C-1.25-7-13	SE_12T3	4.00	1.25	4.49	7	2.76	1.97
2451237	SFM45-5.00C-1.50-8-13	SE_12T3	5.00	1.50	5.43	8	3.82	2.48

Ramp Angle (α°) N/A. Toolholders found starting on page 114.



Takes SNKX Inserts

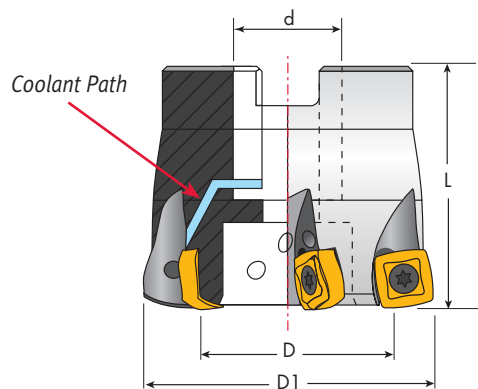
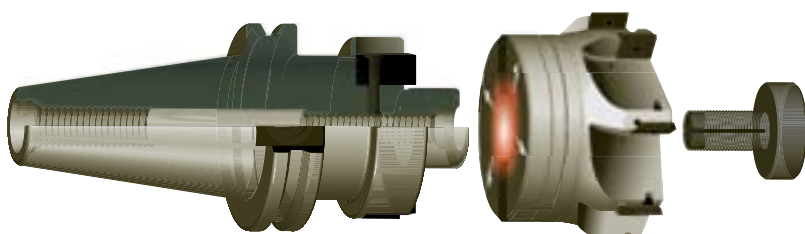


Features

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

Benefits

- Lamina Technology
- 8 cutting edges
- Long tool life
- Excellent for dry machining of moulds and dies



ShrinkMILL High Feed Face Mills Coolant Thru

Part No.	Description	D	d	H	Z	Insert	Ap	α°	Screw	Wrench
9223123	SHF-2.00-.750C-4SN9	2.00	0.75	1.570	4	SNKX09T3	0.040	1°	6811264	T8Flag
9233124	SHF-2.50-.075C-5SN9	2.50	0.75	1.570	4	SNKX09T3	0.040	.75°	6811264	T8Flag
9363123	SHF-3.00-1.00C-6SN9	3.00	1.00	1.57	6	SNKX09T3	0.040	.5°	6811264	T8Flag
9484123	SHF-4.00-1.25C-7SN9	4.00	1.25	2.00	7	SNKX09T3	0.040	.25°	6811264	T8Flag

α° = Ramp Angle. Toolholders found starting on page 114.



High-Performance Insert - 8 Cutting Edges

Part No.	Description	Grade	Programming Radius	Operation	Material
2502115	SNKX09T3-HF	LT 30	.165"	Roughing	P-K-H

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

Nexus High-Performance Face Mills



High Feed Mills

*Higher feed rates
than standard
face mills*



Cast Iron Mill

*Cast iron cutter
with 10 cutting
edges producing
lower cost per
corner*

Attacking Heat & Vibration is in Our DNA.

NEXUS
CUTTING
TOOLS
by Techniks

Nexus ShrinkMILL and Face Mills

Nexus 90° Face Mill (FM)

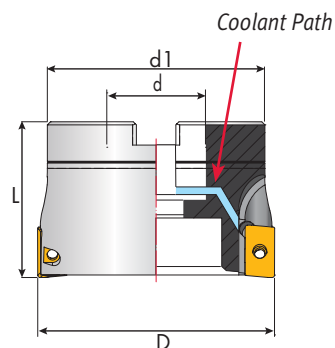


Takes AP__1604 Inserts



Features & Benefits

- *H6 bore tolerance — 38% more accurate than standard face mills*
- *Less vibration*
- *Longer insert life*



90° 16mm Face Mill (FM) Coolant Thru

Insert	Insert Screw	Wrench
AP__1604	9319345	9355555

Part No.	Description	D	d	Z	d1	L
2621234	FM90-2.00C-.750-4-16	2.00	0.75	4	1.69	1.57
2631235	FM90-3.00C-1.25-6-16	3.00	1.25	6	2.76	1.97
2641236	FM90-4.00C-1.25-7-16	4.00	1.25	7	2.76	1.97
2651237	FM90-5.00C-1.50-8-16	5.00	1.50	8	3.82	2.48

Ramp Angle (α°) N/A. Toolholders Pg. 114.

Nexus 45° Face Mill (FM)

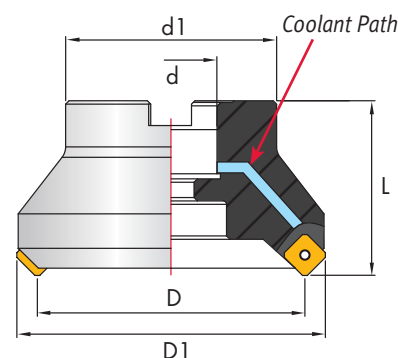


Takes SE__12T3 and SE__13T3 Inserts



Features & Benefits

- H6 bore tolerance — 38% more accurate than standard face mills
- Less vibration
- Longer insert life



45° Face Mill (FM) Coolant Thru

Insert	Insert Screw	Wrench
SE__12T3	9318345	9355555

Part No.	Description	D	d	D1	Z	d1	L
2521234	FM45-2.00C-.750-4-13	2.00	0.75	2.48	4	1.69	1.57
2531235	FM45-3.00C-1.25-6-13	3.00	1.25	3.66	6	2.75	1.97
2541236	FM45-4.00C-1.25-7-13	4.00	1.25	4.49	7	2.75	1.97
2551237	FM45-5.00C-1.50-8-13	5.00	1.50	5.43	8	3.82	2.48

Ramp Angle (α°) N/A. Toolholders found starting on page 114.

Nexus High Feed Face Mills



Takes SNKX Inserts



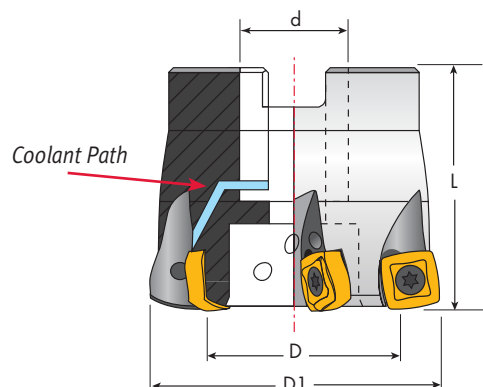
8!
Simplify

Features

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

Benefits

- Lamina Technology
- 8 cutting edges
- Long tool life
- Excellent for dry machining of moulds and dies



High Feed Face Mills Coolant-Thru

Part No.	Description	D	d	H	Z	Insert	Ap	α°	Screw	Wrench
9202123	HF-2.00-.750C-4SN9	2.00	0.75	1.57	4	SNKX09T3	0.040	1°	6811264	T8Flag
9212124	HF-2.50-.075C-5SN9	2.50	0.75	1.57	4	SNKX09T3	0.040	.75°	6811264	T8Flag
9353123	HF-3.00-1.00C-6SN9	3.00	1.00	1.57	6	SNKX09T3	0.040	.5°	6811264	T8Flag
9474123	HF-4.00-1.25C-7SN9	4.00	1.25	2.00	7	SNKX09T3	0.040	.25°	6811264	T8Flag

Ramp Angle (α°) N/A. Toolholders found starting on page 114.



High-Performance Insert - 8 Cutting Edges

Part No.	Description	Grade	Programming Radius	Operation	Material
2502115	SNKX09T3-HF	LT 30	.165"	Roughing	P-K-H

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

8! 
Simplify

The Power of 8!

Milling with 8 Cutting Edges

SNKX 09T3-HF-LT30

Designed to achieve the same feed per tooth as bigger inserts

Excellent for near-to-shape workpieces



More cutting edges per corner creates higher productivity

High stability reduces vibration

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)

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



LAMINA
TECHNOLOGIES

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 Cast Iron Milling Cutter

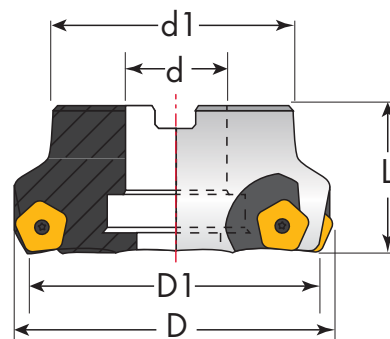


Takes PNEG1105 Inserts



Features & Benefits

- Negative pentagon insert designed for cast iron
- 10 cutting edges produce lower cost per corner



Decagon Cutter

Part	Description	Inserts	D	d	D1	Z	d1	L	Screw	Wrench
2139910	PN11-3.00-1.00-08	PNEG1105	3.00	1.00	2.87	8	2.36	2.00	I60M4 X 10	T15Flag
2149920	PN11-4.00-1.25-10	PNEG1105	4.00	1.25	3.93	10	3.16	2.00	I60M4 X 10	T15Flag
2159930	PN11-5.00-1.50-12	PNEG1105	5.00	1.50	4.90	12	3.94	2.50	I60M4 X 10	T15Flag
2169940	PN11-6.00-1.50-14	PNEG1105	6.00	1.50	5.80	14	4.53	2.50	I60M4 X 10	T15Flag

Toolholders found starting on page 114.



PNEG 11MM Inserts

Part No.	Description	Grade	Radius	Operation	Material
3959999	PNEG110512R-CM	152	0.047	General	K

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

Hardware

Insert Screw	Wrench
9319345	9355555

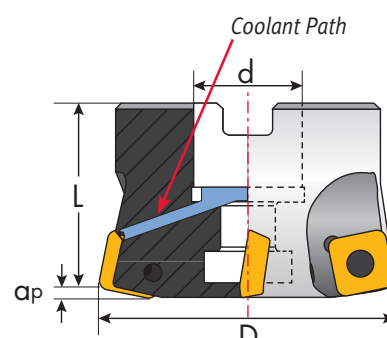
Nexus Positive High Feed Face Mills



Takes SDMT Inserts

Features & Benefits

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



Tetrad Coolant-Thru

Part No.	Description	D	d	D1	ap	Z	α°	d1	L
2928860	HFM-2.00-0.75-SD09-04	2.00	0.75	1.52	0.055	4	1.5	1.78	2.00
2928865	HFM-2.50-0.75-SD09-05	2.50	0.75	1.97	0.055	5	1.5	1.97	2.00
2938870	HFM-3.00-1.25-SD12-05	3.00	1.25	2.35	0.071	5	1.5	2.75	2.50

Toolholders found starting on page 114. α° = Ramp Angle



SDMT 09 & 12 Inserts

Part No.	Description	Grade	Programming Radius	Radius	Operation	Material
3253310	SDMT09T312-DM	202	.098	0.047	General	P-K-H
3253320	SDMT120412-DM	202	.157	0.047	General	P-K-H

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

Hardware

Insert Screw	Wedge Screw	Wedge	Insert Wrench	Wedge Wrench
9317446	9318347	9344454	9355444	9355555
9318547	9318347	9344454	9355555	9355555

Nexus High-Performance Milling Inserts

The Concept



HIGH-PERFORMANCE

- *High-performance in different materials – same as solid carbide tools do*
- *Eliminate insert guesswork*
- *Flexible – 1 grade across most materials*

- *Minimize changeover and set up time*
- *Much less inventory to buy and manage*
- *Always have the right insert available*

Innovative Technology

Let Us Prove it to You!



The old way

- *Breakthroughs in honing and coating technologies*
- *Thickest PVD coating in the industry*
- *Freedom from the cycle of "new grade" announcements*



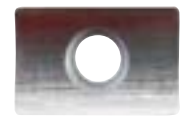
The LAMINA way



Simplify

Milling Inserts

EDP 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-LT30-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



APEX



APGT

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



SDMT



SEKT

LT 30 Machining Guide

APKT 1604 PDTR



LAMINA
TECHNOLOGIES

HIGH-PERFORMANCE
3x the Thickness of Conventional PVD!

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	720
			14		240 HB	0.020	0.590	0.005	0.009	520	680	0.157	0.008	620
	Duplex	5	14	X2CrNi23-4, 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.	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
			40	Ni-Hard 2	400 HB	0.020	0.169	0.004	0.007	130	260	0.059	0.006	160
			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

Aluminum LT 05 Machining Guide

APGT 1604 PDER ALU LT 05



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HIGH-PERFORMANCE
3x the Thickness of Conventional PVD!

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	TiAl 6 V4	-	0.020	0.591	0.004	0.013	115.5	198	0.157	0.005	148.5
			36	T40	-		0.591		0.009	92.4	148.5			115.5

Nexus ShrinkMILL and Face Mills

Insert Grade Descriptions

LAMINA
TECHNOLOGIES

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Simplify

LT 05

PVD Coated with Chromium Nitride. Great for aluminum $\leq 6\%$ silicon and titanium

LT 30 Milling

A sub-micro grain substrate with a very thick high-pulse PVD coating with better adhesion than normal coatings. It can be run in all materials including aluminum

101

Uncoated Ultra Micro-grain Carbide

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

Used 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

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

GH05

Uncoated ultra micro-grain carbide

A very sharp, high-polished geometry used in the general and finish machining of aluminum

WSK10

Uncoated ultra micro-grain carbide

A very sharp, high-polished geometry used in the general and finish machining of aluminum

LT 30 Machining Guide

SEKT 12T3 PLSN



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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	0.276	0.007	0.018	620	1080	0.118	0.013	820
			2		190 HB	0.020	0.276	0.007	0.018	620	980	0.118	0.013	720
			3		250 HB	0.020	0.276	0.007	0.018	620	820	0.118	0.013	650
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.020	0.276	0.006	0.014	490	780	0.118	0.012	650
			4,6		230 HB	0.020	0.276	0.006	0.014	490	680	0.118	0.012	590
			5,7		280 HB	0.020	0.276	0.006	0.013	420	620	0.118	0.010	490
			8		350 HB	0.020	0.276	0.006	0.013	420	550	0.118	0.010	450
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.020	0.197	0.005	0.013	290	490	0.089	0.010	420
			10		280 HB	0.020	0.197	0.005	0.013	290	420	0.089	0.010	390
			11		320 HB	0.020	0.197	0.005	0.010	190	360	0.089	0.009	320
			11		350 HB	0.020	0.197	0.005	0.010	190	290	0.089	0.009	260
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.020	0.276	0.006	0.013	620	820	0.118	0.010	720
			14		240 HB	0.020	0.276	0.005	0.011	520	680	0.118	0.010	620
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.020	0.197	0.005	0.010	220	420	0.089	0.009	320
			14		310 HB	0.020	0.197	0.005	0.010	220	390	0.089	0.009	290
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.020	0.276	0.006	0.013	490	680	0.118	0.010	620
			13		42 HRC	0.020	0.197	0.006	0.010	290	490	0.089	0.009	420
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.020	0.276	0.007	0.018	490	780	0.118	0.013	650
			15		200 HB	0.020	0.276	0.007	0.018	490	720	0.118	0.013	590
			16		250 HB	0.020	0.276	0.007	0.018	490	620	0.118	0.013	520
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.020	0.276	0.006	0.016	320	650	0.118	0.012	590
			17,19		200 HB	0.020	0.276	0.006	0.016	320	590	0.118	0.012	490
			18,20		250 HB	0.020	0.276	0.006	0.016	320	490	0.118	0.012	420
High Temp. Alloys	Fe, Ni & Co based	9	31,32	Incoloy 800	240 HB	0.020	0.197	0.005	0.010	80	140	0.089	0.009	100
			33	Inconel 700	250 HB	0.020	0.197	0.005	0.010	80	140	0.089	0.009	90
			34	Stellite 21	350 HB	0.020	0.197	0.005	0.010	80	140	0.089	0.009	90
	Ti based	10	36	TiAl6V4	-	0.020	0.197	0.005	0.011	130	210	0.089	0.010	180
			37	T40	-	0.020	0.197	0.005	0.010	90	180	0.089	0.009	130
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRC	0.020	0.098	0.004	0.010	130	260	0.059	0.008	190
			38		50 HRC	0.020	0.069	0.004	0.009	130	220	0.044	0.008	180
			38		55 HRC	0.020	0.059	0.004	0.008	130	190	0.030	0.007	160
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.020	0.079	0.004	0.010	130	260	0.044	0.008	160
	White Cast Iron		41	G-X300Cr-Mo15	55 HRC	0.020	0.059	0.004	0.008	90	190	0.030	0.007	130
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.020	0.276	0.007	0.018	650	1310	0.118	0.015	910

Nexus ShrinkMILL and Face Mills

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	X2CrNiN23-4,	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									