

Milling

Nexus High-Performance Face Mills



NEW TECHNOLOGY

Nexus ShrinkMILLs

Accuracy and rigidity of ShrinkFIT applied to a face mill



Cast Iron Mill

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



High Feed Mills

Higher feed rates than standard face mills

Attacking Heat & Vibration is in Our DNA.

ShrinkMILL For Best Performance



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.
- 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 to a Techniks arbor for the most rigid, powerful, and accurate connection in the industry
- ❸ Our face mills and arbors are made of the same H13 tool steel as our regular ShrinkFIT holders so you get the same outstanding performance and insert life

Benefits

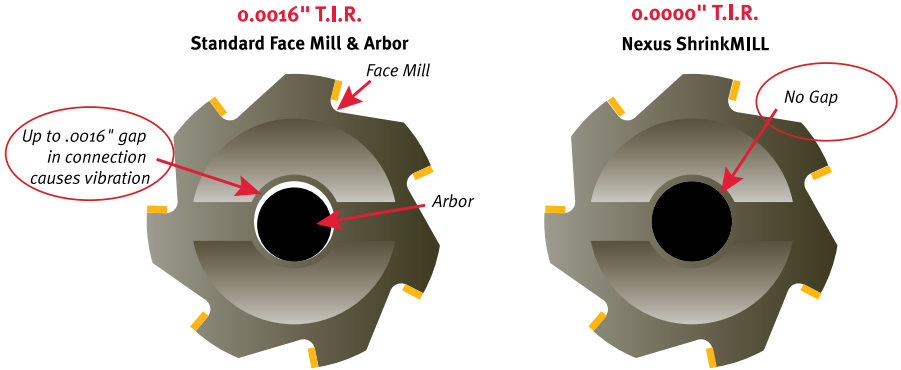
- ❶ Better surface finish
- ❷ Less scrap due to less premature failure of inserts
- ❸ Increased productivity

Nexus ShrinkMILL

A Perfect Connection



ID/OD Tolerance in Face Mills

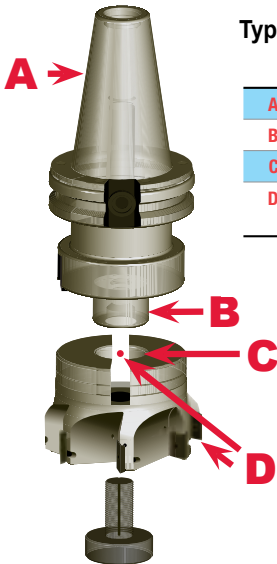


ShrinkMILL Makes a Perfect Connection Between the Face Mill and Arbor

ShrinkMILL Eliminates 1/3 of all T.I.R.

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

Stacking of Tolerances – Face Mill Arbor Assembly



Typical 1" ID Face Mill Assembly

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.

ShrinkMILL eliminates T.I.R. which reduces vibration and allows faster feeds & speeds, increasing parts per day, and reduces premature failure of inserts.

Use ShrinkMILL to reduce scrap—which is money!

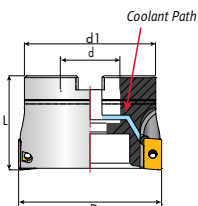
Nexus 90° Face Mill (FM) & ShrinkMILL (SFM)



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

Part No.	Description	Inserts	D	d	Z	d1	L
2621234	FM90-2.00C-.750-4-16	AP__1604	2.00	0.75	4	1.69	1.57
2621244	FM90-2.00C-.750-5-16	AP__1604	2.00	0.75	5	1.69	1.57
2631235	FM90-3.00C-1.25-6-16	AP__1604	3.00	1.25	6	2.76	1.97
2641236	FM90-4.00C-1.25-7-16	AP__1604	4.00	1.25	7	2.76	1.97
2651237	FM90-5.00C-1.50-8-16	AP__1604	5.00	1.50	8	3.82	2.48

Toolholders on page 36.



Takes AP__1604 Inserts

Features

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

Benefits

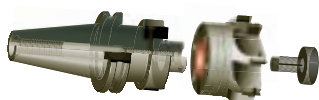
- Longer tool life or increased feed rates
- Better surface finish due to increased rigidity
- Longer insert life



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

Use ShrinkMILLS with Toolholders on page 36.



Product Information

- Comes in 2", 3", 4", 5" Diameters
- Takes Insert APKT1604 for most materials and APGT1604 and APEX1604PDFRFO1-5005-HP for aluminum (2 corners)
- Made of H13
- * Coolant Thru Capability
- Can be Used in All Materials

* To run coolant thru, face mills require Coolant Arbor Screws sold separately. See page 40.

Insert Screw	Wrench
9319345	9355555

Product Information

- Comes in 2", 3", 4", 5" Diameters
- ShrinkMILLS Lower T.I.R. for Longer Insert Life and Better Finish
- Takes Insert APKT1604 for Most Materials and APGT1604 and APEX1604PDFRFO1-5005-HP for Aluminum (2 corners)
- Made of H13
- * Coolant Thru Capability
- All ShrinkMILLS are Used with Standard Face Mill Arbors
- Can be used in all materials.

* To run coolant thru, face mills require Coolant Arbor Screws sold separately. See page 40.

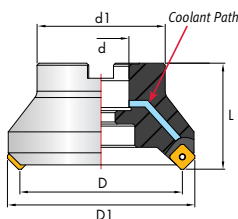
Nexus 45° Face Mill FM & ShrinkMILL (SFM)



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

Part No.	Description	Inserts	D	d	D1	Z	d1	L
2521234	FM45-2.00C-.750-4-13	SE_12T3	2.00	0.75	2.48	4	1.69	1.57
2531235	FM45-3.00C-1.25-6-13	SE_12T3	3.00	1.25	3.66	6	2.75	1.97
2541236	FM45-4.00C-1.25-7-13	SE_12T3	4.00	1.25	4.49	7	2.75	1.97
2551237	FM45-5.00C-1.50-8-13	SE_12T3	5.00	1.50	5.43	8	3.82	2.48

Toolholders on page 36.



Takes SE_12T3 and SE_13T3 Inserts



Features

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

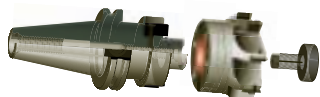
Benefits

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

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

Use ShrinkMILLS with Toolholders on page 36.



Product Information

- Comes in 2", 3", 4", 5" Diameters
 - Takes Insert SEKT12T3AGTN-LT30 for Most Materials and SEET13T3LH for Aluminum (4 corners)
 - Made of H13
 - * Coolant Thru Capability
 - Can be Used in All Materials
- * To run coolant thru, face mills require Coolant Arbor Screws sold separately. See page 40.

Insert Screw	Wrench
9318345	9355555

Product Information

- Comes in 2", 3", 4", 5" Diameters
 - ShrinkMILLS Lower T.I.R. for Longer Insert Life and Better Finish
 - Takes Insert SEKT12T3AGTN-LT30 for Most Materials and SEET13T3LH for Aluminum (4 corners)
 - Made of H13
 - * Coolant Thru Capability
 - All ShrinkMILLS are Used with Standard Face Mill Arbors
 - Can be used in all materials.
- * To run coolant thru, face mills require Coolant Arbor Screws sold separately. See page 40.

All Nexus products are backed by our 100% satisfaction guarantee.

Nexus Negative Cast Iron Milling Cutter



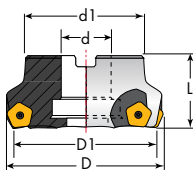
Takes PNEG1105 Inserts

Features & Benefits

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

Product Information

- Comes in 3", 4", 5", 6" Diameters
- Takes Negative Insert PNEG110512R (10 corners)
- Primarily used in Cast Iron, but can be used in other materials.



Decagon Cutter

Part	Description	Inserts	D	d	D1	Z	d1	L	Insert Screw	Wrench
2139910	PN11-3.00-1.00-08	PNEG1105	3.00	1.00	2.87	8	2.36	2.00	9319345	9355555
2149920	PN11-4.00-1.25-10	PNEG1105	4.00	1.25	3.93	10	3.16	2.00	9319345	9355555
2159930	PN11-5.00-1.50-12	PNEG1105	5.00	1.50	4.90	12	3.94	2.50	9319345	9355555
2169940	PN11-6.00-1.50-14	PNEG1105	6.00	1.50	5.80	14	4.53	2.50	9319345	9355555

Toolholders starting on page 36.



PNEG inserts on page 86.

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

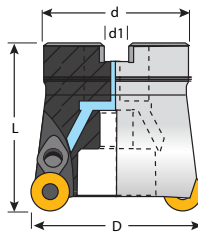
Nexus Positive Round Button Cutter Face Mill



Takes RDM_1204 inserts

Features

- Excels in profile and copy milling
- Great for roughing operations
- Great for pockets and 3D surfaces
- Number of indexes depend on D.O.C.



Product Information

- Comes in 2" and 3"
- Shrink and standard versions
- Coolant-thru
- Made of H13
- 3 geometries to choose from (RDMT, RDMW, RDMX)
- Runs in all materials

Round Button Cutter Coolant-Thru

Part No.	Description	Insert	D	d	d1	ap	Z	α°	L
2825635	RD12-2.00-.750C-4	RD__1204	2.00	0.75	1.69	0.250	4	5°	1.97
2835640	RD12-3.00-1.00C-5	RD__1204	2.50	0.75	2.19	0.250	5	3°	1.97

α° = Ramp Angle. Toolholders on page 36.

Shrink Fit Round Button Cutter Coolant-Thru

Part No.	Description	Insert	D	d	d1	ap	Z	α°	L
2825650	SFRD12-2.00-.750C-4	RD__1204	2.00	0.75	1.69	0.250	4	5°	1.97
2835645	SFRD12-3.00-1.00C-5	RD__1204	3.00	1.00	2.19	0.250	5	3°	1.97

α° = Ramp Angle. Toolholders on page 36.



Takes RDMT1204 insert



Takes RDMW1204 insert



Takes RDMX1204 insert

RDM_1204 inserts start on page 87.

RDM_1204 Inserts

Part No.	Description	Grade	Radius	Operation	Screw	Clamp	Wrench	Clamp Screw	Clamp Screw Wrench	Material
3355541	RDMT 1204	LT30	-	*	9311311	9344999	9355555	6811299	9355666	P-M-K-S-H
3355548	RDMW 1204	LT30	-	*	9311311	9344999	9355555	6811299	9355666	P-M-K-S-H
3355549	RDMX 1204	LT30	-	*	9311311	9344999	9355555	6811299	9355666	P-M-K-S-H

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

* Pocket Milling, Copying, Facing

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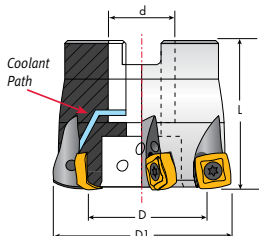
Nexus Negative High Feed Face Mills & ShrinkMILLS



Use with SNKX Inserts

Features

- Great for profile and copy milling
- Excels in plunge milling
- Great for roughing operations on pockets and 3D surfaces
- SFM—high productivity (more cutting edges per insert)



Product Information

- Comes in 2", 2-1/2", 3", 4" Diameters
- Takes Insert SNKX09T3HF-LT30 (8 corners)
- Made of H13
- * Coolant Thru Capability
- Only Run in Steel, Cast Iron,
- All ShrinkMILLS are Used with Standard Face Mill Arbors (see page 36) and Hardened Materials

* To run coolant thru, face mills require Coolant Arbor Screws sold separately. See page 40.

High Feed Face Mills Coolant-Thru

Part No.	Description	D	d	L	Z	Insert	Ap	α°	Screw	Wrench
9202123	HF-2.00-.750C-4SN9	2.00	0.75	1.57	4	SNKX09T3	0.040	1°	6811264	9355444
9212124	HF-2.50-.750C-5SN9	2.50	0.75	1.57	4	SNKX09T3	0.040	.75°	6811264	9355444
9353123	HF-3.00-1.00C-6SN9	3.00	1.00	1.57	6	SNKX09T3	0.040	.5°	6811264	9355444
9474123	HF-4.00-1.25C-7SN9	4.00	1.25	2.00	7	SNKX09T3	0.040	.25°	6811264	9355444

Ramp Angle (α°) N/A.



Use with SNKX Inserts

ShrinkMILL High Feed Face Mills Coolant Thru

Part No.	Description	D	d	L	Z	Insert	Ap	α°	Screw	Wrench
9223123	SHF-2.00-.750C-4SN9	2.00	0.75	1.570	4	SNKX09T3	0.040	1°	6811264	9355444
9233124	SHF-2.50-.750C-5SN9	2.50	0.75	1.570	4	SNKX09T3	0.040	.75°	6811264	9355444
9363123	SHF-3.00-1.00C-6SN9	3.00	1.00	1.57	6	SNKX09T3	0.040	.5°	6811264	9355444
9484123	SHF-4.00-1.25C-7SN9	4.00	1.25	2.00	7	SNKX09T3	0.040	.25°	6811264	9355444

Use ShrinkMILLS with Tool-holders on page 36.



SNKX High-Feed Insert with Positive Geometry

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

P = steel, K = cast iron H = hardened material SNKX on page 118.

Nexus Positive High Feed Face Mills



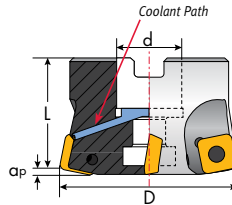
Takes SDMT Inserts

Features & Benefits

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

Product Information

- Comes in 2", 2-1/2", and 3" diameters
- 2" and 2-1/2" Take Insert SDMT09T312 (4 corners)
- 3" Takes Insert SDMT120412 (4 corners)



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

α° = Ramp Angle **Toolholders on page 36.**

Hardware (page 333)

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



SDMT on page 107.

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

CAT40 Precision Face Mill Arbors



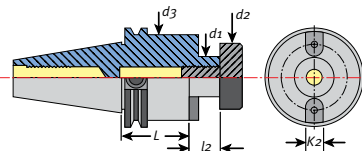
CoolBLAST arbor screw provides coolant path. page 40.

Features

- Compatible with all coolant-thru face mills
- H6 arbor tolerance for less chatter and better tool life
- Each arbor lab certified for accuracy
- Taper ground to AT₃ tolerance or better

Benefits

- Better rigidity and reduced vibration
- Improved performance at high metal removal rates and when machining at extended lengths



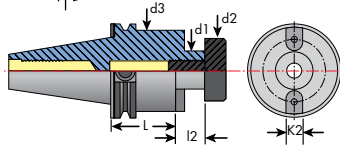
CAT40 Face Mill Arbors

Part No.	Description	L	l2	d1	d2	d3	K2
22711	CAT40 x FMA 3/4" - 1.37"	1.37"	.69"	3/4"	.88"	1.69"	.31"
22711-4	CAT40 x FMA 3/4" - 4.0"	4"	.69"	3/4"	.88"	1.69"	.31"
22711-6	CAT40 x FMA 3/4" - 6.0"	6"	.69"	3/4"	.88"	1.69"	.31"
22715	CAT40 x FMA 1-1/4" - 2.21"	2.21"	.69"	1-1/4"	1.5"	2.75"	.5"
22715-4	CAT40 x FMA 1-1/4" - 4.0"	4"	.69"	1-1/4"	1.5"	2.75"	.5"
22715-6	CAT40 x FMA 1-1/4" - 6.0"	6"	.69"	1-1/4"	1.5"	3."	.5"
22717	CAT40 x FMA 1-1/2" - 2.21"	2.21"	.94"	1-1/2"	1.88"	3.8"	.63"
22717-4	CAT40 x FMA 1-1/2" - 4"	4"	.94"	1-1/2"	1.88"	3.8"	.63"

CAT40 DualDRIVE Face Mill Arbors

Part No.	Description	L	l2	d1	d2	d3	K2
72711	CAT40 x FMA 3/4" - 1.37" DualDRIVE	1.37"	.69"	3/4"	.88"	1.69"	.31"
72711-4	CAT40 x FMA 3/4" - 4" DualDRIVE	4"	.69"	3/4"	.88"	1.69"	.31"
72711-6	CAT40 x FMA 3/4" - 6" DualDRIVE	6"	.69"	3/4"	.88"	1.69"	.31"
72715	CAT40 x FMA 1-1/4" - 2.21" DualDRIVE	2.21"	.69"	1-1/4"	1.5"	2.75"	.5"
72715-4	CAT40 x FMA 1-1/4" - 4" DualDRIVE	4"	.69"	1-1/4"	1.5"	2.75"	.5"
72715-6	CAT40 x FMA 1-1/4" - 6" DualDRIVE	6"	.69"	1-1/4"	1.5"	3"	.5"
72717	CAT40 x FMA 1-1/2" - 2.21" DualDRIVE	2.21"	.94"	1-1/2"	1.88"	3.8"	.63"
72717-4	CAT40 x FMA 1-1/2" - 4" DualDRIVE	4"	.94"	1-1/2"	1.88"	3.8"	.63"

CAT50 Precision Face Mill Arbors

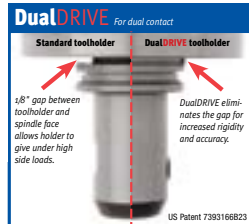


Features

- Compatible with all coolant-thru face mills
- H6 arbor tolerance for less chatter and better tool life
- Each arbor lab certified for accuracy
- Taper ground to AT₃ tolerance or better



See an on-machine DualDRIVE demonstration vs. standard toolholders: www.technikksusa.com/videos2008/DD



CAT50 Face Mill Arbors

Part No.	Description	L	l2	d1	d2	d3	K2
22721	CAT50 x FMA 3/4" - 1.5"	1.5"	.69"	3/4"	.88"	2.75"	.31"
22721-3.5	CAT50 x FMA 3/4" - 3.5"	3.5"	.69"	3/4"	.88"	1.69"	.31"
22721-5.5	CAT50 x FMA 3/4" - 5.5"	5.5"	.69"	3/4"	.88"	1.69"	.31"
22721-8	CAT50 x FMA 3/4" - 8"	8"	.69"	3/4"	.88"	1.69"	.31"
22721-10	CAT50 x FMA 3/4" - 10"	10"	.69"	3/4"	.88"	1.69"	.31"
22725	CAT50 x FMA 1-1/4" - 1.50"	1.5"	.69"	1-1/4"	1.5"	2.75"	.5"
22725-3.5	CAT50 x FMA 1-1/4" - 3.5"	3.5"	.69"	1-1/4"	1.5"	2.75"	.5"
22725-6	CAT50 x FMA 1-1/4" - 6.0"	6"	.69"	1-1/4"	1.5"	2.75"	.5"
22725-8	CAT50 x FMA 1-1/4" - 8.0"	8"	.69"	1-1/4"	1.5"	2.75"	.5"
22727	CAT50 x FMA 1-1/2" - 2.4"	2.4"	.94"	1-1/2"	1.88"	3.8"	.63"
22727-4	CAT50 x FMA 1-1/2" - 4.0"	4"	.94"	1-1/2"	1.88"	3.8"	.63"
22727-6	CAT50 x FMA 1-1/2" - 6.0"	6"	.94"	1-1/2"	1.88"	3.8"	.63"
22727-8	CAT50 x FMA 1-1/2" - 8.0"	8"	.94"	1-1/2"	1.88"	3.8"	.63"

CAT50 DualDRIVE Face Mill Arbors

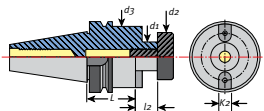
Part No.	Description	L	l2	d1	d2	d3	K2
72721	CAT50 x FMA 3/4" - 1.5" DualDRIVE	1.5"	.69"	3/4"	.88"	2.75"	.31"
72721-3.5	CAT50 x FMA 3/4" - 3.5" DualDRIVE	3.5"	.69"	3/4"	.88"	1.69"	.31"
72721-5.5	CAT50 x FMA 3/4" - 5.5" DualDRIVE	5.5"	.69"	3/4"	.88"	1.69"	.31"
72725	CAT50 x FMA 1-1/4" - 1.5" DualDRIVE	1.5"	.69"	1-1/4"	1.5"	2.75"	.5"
72725-3.5	CAT50 x FMA 1-1/4" - 3.5" DualDRIVE	3.5"	.69"	1-1/4"	1.5"	2.75"	.5"
72725-6	CAT50 x FMA 1-1/4" - 6" DualDRIVE	6"	.69"	1-1/4"	1.5"	2.75"	.5"
72727	CAT50 x FMA 1-1/2" - 2.4" DualDRIVE	2.4"	.94"	1-1/2"	1.88"	3.8"	.63"
72727-4	CAT50 x FMA 1-1/2" - 4" DualDRIVE	4"	.94"	1-1/2"	1.88"	3.8"	.63"
72727-6	CAT50 x FMA 1-1/2" - 6" DualDRIVE	6"	.94"	1-1/2"	1.88"	3.8"	.63"
72727-8	CAT50 x FMA 1-1/2" - 8" DualDRIVE	8"	.94"	1-1/2"	1.88"	3.8"	.63"

BT30, BT40 & BT50 Precision Face Mill Arbors



Features

- H6 arbor tolerance for less chatter and better tool life
- Each arbor lab certified for accuracy
- Taper ground to AT₃ tolerance for maximum spindle contact



BT40, BT50 Face Mill Arbors

Part No.	Description	L	l2	d1	d2	d3	K2
16615-3/4	BT40 x 3/4" FMA - 1"	1.0"	.69"	3/4"	.88"	1.69"	.313"
16615-4	BT40 x 3/4" FMA - 4.0"	4"	.69"	3/4"	.88"	1.69"	.313"
16615-6	BT40 x 3/4" FMA - 6.0"	6"	.69"	3/4"	.88"	1.69"	.313"
16620	BT40 x 1-1/4" FMA - 1.77"	1.77"	.69"	1-1/4"	1.5"	2.75"	.5"
16620-4	BT40 x 1-1/4" FMA - 4"	4"	.69"	1-1/4"	1.5"	2.75"	.5"
16626	BT40 x 1-1/2" FMA - 2.36"	2.36"	.94"	1-1/2"	1.88"	3.8"	.625"
16639	BT50, 1.0" FMA - 1.77"	1.77"	.79"	1.0"	1.19"	1.97"	.375"
16639-3	BT50, 1.0" FMA - 3"	3"	.79"	1.0"	1.19"	1.97"	.375"
16642	BT50, 1-1/4" FMA - 1.77"	1.77"	.87"	1-1/4"	1.5"	2.34"	.5"
16645	BT50, 1-1/2" FMA - 1.77"	1.77"	.94"	1-1/2"	1.88"	3.8"	.625"
16646	BT50, 1-1/2" FMA - 75mm	75mm	.94"	1-1/2"	1.88"	3.8"	.625"
16646105	BT50, 1-1/2" FMA - 105mm	105mm	.94"	1-1/2"	1.88"	3.8"	.625"
16646150	BT50, 1-1/2" FMA - 150mm	150mm	.94"	1-1/2"	1.88"	3.8"	.625"

BT30 Precision Face Mill Arbors

Part No.	Description	L	l2	d1	d2	d3	K2
16611	BT30 x 3/4" FMA - 1.18"	1.18"	.69"	3/4"	.88"	1.66"	.313"
16614	BT30 x 1-1/4" FMA - 1.77"	1.77"	.87"	1-1/4"	1.5"	2.37"	.5"



Features

- Compatible with all coolant-thru face mills
- H6 arbor tolerance for less chatter and better tool life
- Use with your existing dual contact spindles

Benefits

- Better rigidity and reduced vibration (chatter)
- Improved performance at high metal removal rates and when machining at extended lengths
- Provides the benefits of dual-contact machining on standard spindles too!

BT30 DualDRIVE Face Mill Arbors

Part No.	Description d1 - l1	L	l2	d1	d2	d3	K2
66610	BT30 x DualDRIVE FMA 3/4" - 2"	2"	.69"	3/4"	.88"	1.66"	.313"

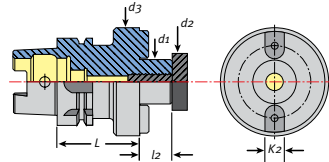
HSK63A, 100A Precision Face Mill Arbors



Order standard and CoolBLAST arbor screws. See page 40.

Features

- Compatible with all coolant-thru face mills
- H6 arbor tolerance for less chatter and better tool life
- Each arbor lab certified for accuracy



HSK63A Face Mill Arbors

Part No.	Description	L	l2	d1	d2	d3	K2
93500	HSK63A 3/4" FMA - 2"	2"	.687"	3/4"	.875"	1.69"	.313"
93502	HSK63A 1-1/4" FMA - 2.75"	2.75"	.687"	1-1/4"	1.5"	2.75"	.5"

HSK63A Extended Length Face Mill Arbors

Part No.	Description	L	l2	d1	d2	d3	K2
93510	HSK63A 3/4" FMA - 4"	4"	.687"	3/4"	.875"	1.69"	.313"
93530	HSK63A 1-1/4" FMA - 4"	4"	.687"	1-1/4"	1.5"	2.75"	.5"

HSK100A Face Mill Arbors

Part No.	Description	L	l2	d1	d2	d3	K2
95901	HSK100 A 3/4" FMA - 2"	2"	.69"	3/4"	.88"	1.69"	.31"
95905	HSK100 A 1-1/4" FMA - 2-1/2"	2-1/2"	.69"	1-1/4"	1.5"	2.75"	.5"
95907	HSK100 A 1-1/2" FMA - 2-1/2"	2-1/2"	.94"	1-1/2"	1.88"	3.8"	.63"

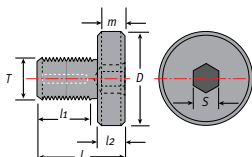
CoolBLAST & Standard Face Mill Arbor Screws



CoolBLAST arbor screw provides coolant path.

Features

- Compatible with all coolant thru face mills
- Works with all Techniks face mill arbors
- For coolant up to 1,500 PSI



CAT, BT, and HSK CoolBLAST Coolant Arbor Screws

Part No.	Description	Style	Size	D	L	I1	I2	T	S	m
WFC1-0.5-1.5	CoolBLAST arbor screw 1/2"	B	1/2"	5/8"	1.875"	1.5"	.34"	1/4"-28UNF	3/16"	.157"
WFC1-0.75-1.5	CoolBLAST arbor screw 3/4"	B	3/4"	7/8"	1.875"	1.5"	.37"	3/8"-24UNF	1/4"	.197"
9851125	CAS-A-0.75 smaller "D"	A	3/4"	5/8"	1.375"	1.0"	.36"	3/8-24 UNF	1/4"	.37"
WFC1-1-1.75	CoolBLAST arbor screw 1.0"	B	1.0"	1-3/16"	2.125"	1.75"	.37"	1/2"-20UNF	5/16"	.197"
9851135	CAS-A-1.00 smaller "D"	A	1.0"	1.180"	1.375"	1.0"	.38"	1/2-20UNF	5/16"	.37"
WFC1-1.25-1.75	CoolBLAST arbor screw 1-1/4"	B	1-1/4"	1-1/2"	2.25"	1.75"	.5"	5/8"-18UNF	5/16"	.236"
WFC1-1.5-1.75	CoolBLAST arbor screw 1-1/2"	B	1-1/2"	1-7/8"	2.25"	1.75"	.5"	3/4"-16UNF	3/8"	.276"
WFC1-2-2	CoolBLAST arbor screw 2.0"	B	2"	2-1/2"	2.5"	2.00"	.5"	1.0"-14UNF	1/2"	.354"
WFC1-2.5-2.25	CoolBLAST arbor screw 2-1/2"	B	2-1/2"	3-1/8"	2.5"	2.25"	.5"	1.0"-14UNF	1/2"	.354"

CAT, BT, and HSK Standard Arbor Screws

Part No.	Description	Arbor Size	D	L	I1	I2	T	S	m
WF0.5-1.5	FMA screw 1/2"	1/2"	5/8"	1.875"	1.5"	.34"	1/4"-28UNF	3/16"	.157"
WF0.75-1.5	FMA screw 3/4"	3/4"	7/8"	1.875"	1.5"	.37"	3/8"-24UNF	1/4"	.197"
WF1-1.75	FMA screw 1.0"	1.0"	1-3/16"	2.125"	1.75"	.37"	1/2"-20UNF	5/16"	.197"
WF1.25-1.75	FMA screw 1-1/4"	1-1/4"	1-1/2"	2.25"	1.75"	.5"	5/8"-18UNF	5/16"	.236"
WF1.5-1.75	FMA screw 1-1/2"	1-1/2"	1-7/8"	2.25"	1.75"	.5"	3/4"-16UNF	3/8"	.276"
WF2-2-2	FMA screw 2.0"	2"	2-1/2"	2.5"	2.00"	.5"	1.0"-14UNF	1/2"	.354"
WF2.5-2.25	FMA screw 2-1/2"	2-1/2"	3-1/8"	2.5"	2.25"	.5"	1.0"-14UNF	1/2"	.354"

Milling

PowerLOC Indexable End Mills

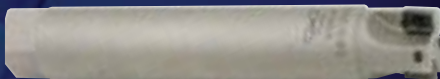
We're Making a Better Connection Between the Cutting Tool and Spindle.

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



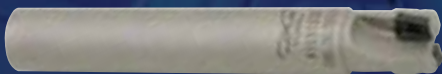
Square Shank Adapter

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



Innovative

Indexable End Mills



Positive High-Feed



90° Square Shoulder
Positive High-Feed



Negative High-Feed

Attacking Heat & Vibration is in Our DNA.

PowerLOC End Mills



Problem

- 1 Inaccuracy of indexable end mill shanks
- 2 Slippage (axial tool movement)
- 3 Inability to remove the steel tool shanks from high technology ShrinkFIT chucks

Solution

- 1 Develop a shank that works with collet chucks and ShrinkFIT holders
- 2 Reduced diameter for ShrinkFIT Technology
- 3 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

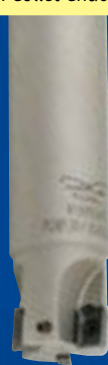


We're Making a Better Connection
Between the Cutting Tool and Spindle.

PowerLOC Square Shank End Mill



Eliminate Tool Slippage
in Collet Chucks!



PowerLOC Eliminates Slippage



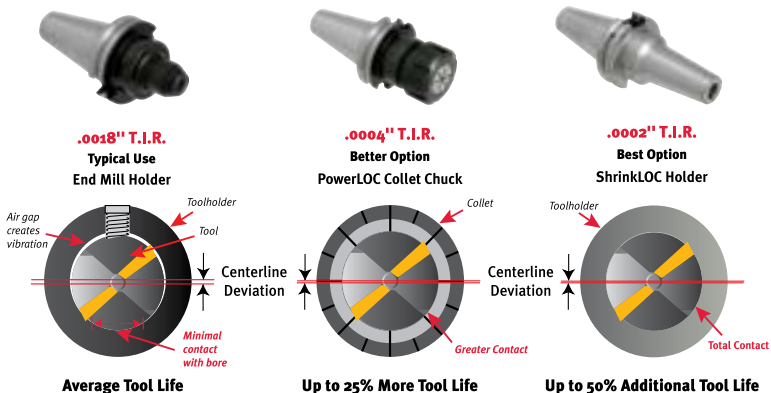
PowerLOC end mills eliminates tool slippage. Use PowerLOC technology to increase productivity and reduce costs.



Eliminate Tool Slippage in Collet Chucks!

Features

- PowerLOC connection works with ShrinkMILL holders or Techniks ER collet chucks
- Eliminate the need for expensive milling chucks



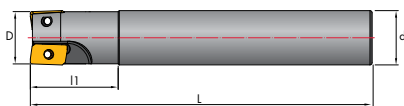
All Nexus products are backed by our 100% satisfaction guarantee.



Nexus Indexable End Mills (IEM90)



Takes AP_1003 & AP_1604 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

Product Information

- Available in 1/2", 5/8", 3/4", 1" Diameters
- Take Insert APKT1003 and APLX1003 for Most Materials-APGT1003 for Aluminum (2 corners)
- Made of H13 Tool Steel
- Coolant and Non-coolant Versions
- Also Comes in 1", 1-1/4", 1-1/2"
- Takes Insert APKT1604 for Most Materials and APGT1604 for Aluminum (2 corners)
- Made of H13 Tool Steel
- Coolant and Non-coolant Versions
- 1" Version has Weldon Shank
- Can be Used in all materials.

Indexable End Mills (IEM90) – Coolant Thru

Part No.	Description	Insert	D	d	L	Z	I1	α°	Screw	Wrench
1632234	IEM90-.500-.500C-4.00-1-10	AP_1003	.500	.500	4.00	1	0.787	32°	9316446	9355333
1642235	IEM90-.625-.625C-5.00-2-1	AP_1003	.625	.625	5.00	2	0.984	5°	9316446	9355333
1652236	IEM90-.750-.750C-5.00-2-10	AP_1003	.750	.750	5.00	2	0.984	7.5°	9316446	9355333
1652336	IEM90-.750-.750CW-3.50-3-10	AP_1003	.750	.750	3.50	3	1.00	5°	9316446	9355333
1662237	IEM90-1.00-1.00C-6.00-3-10	AP_1003	1.00	1.00	6.00	3	0.984	5°	9316446	9355333
1662250	IEM90-1.00-1.00CW-3.50-2-16	AP_1604	1.00	1.00	3.50	2	1.250	90°	9319345	9355555
1672238	IEM90-1.25-1.25C-6.00-3-16	AP_1604	1.25	1.25	6.00	3	1.772	3°	9319345	9355555
1682239	IEM90-1.50-1.25C-6.00-4-16	AP_1604	1.50	1.25	6.00	4	1.772	2.7°	9319345	9355555

Indexable End Mills (IEM90)

Part No.	Description	Insert	D	d	L	Z	I1	α°	Screw	Wrench
1631234	IEM90-.500-.500-4.00-1-10	AP_1003	.500	.500	4.00	1	0.787	32°	9316446	9355333
1641235	IEM90-.625-.625-5.00-2-10	AP_1003	.625	.625	5.00	2	0.984	5°	9316446	9355333
1651236	IEM90-.750-.750-5.00-2-10	AP_1003	.750	.750	5.00	2	0.984	7.5°	9316446	9355333
1652336	IEM90-.750-.750-3.50-3-10	AP_1003	.750	.750	3.50	3	1.250	90°	9316446	9355333
1661237	IEM90-1.00-1.00-6.00-3-10	AP_1003	1.00	1.00	6.00	3	0.984	5°	9316446	9355333
1676238	IEM90-1.25-1.25-6.00-3-16	AP_1604	1.25	1.25	6.00	3	1.772	3°	9319345	9355555
1686239	IEM90-1.50-1.25-6.00-4-16	AP_1604	1.50	1.25	6.00	4	1.772	2.7°	9319345	9355555

W=Weldon Flat α° = Ramp Angle

PowerLOC Indexable End Mills



Takes AP__1003 &
AP__1604 Inserts

Features

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

Benefits

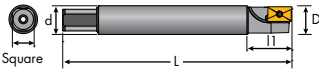
- Extend cutting tool life and increase feed rates
- Lower tooling cost
- Eliminates the need for milling chucks and end mill holders

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.

Product Information

- Comes in 1/2", 3/4", 1" Diameters
- Square on Shank for Positive Lock and Zero Slipping
- Takes Insert APKT1003 and APLX1003 for most Materials APTG1003 for Aluminum (2 corners)
- Made of H13 Tool Steel
- Coolant and non-coolant Versions
- **Must be used with (PLSS) Power-Loc Square Shank Adapters. See page 49.**
- Can be Used in All Materials



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!

End Mills (PLIM) Coolant Thru and Non-Coolant

Part No.	Description	No. of Inserts	Coolant Thru	Collet Size	D	Insert				
						d	L	I1	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°
1666350	PLIM1.00-1.00C-3.50-2-16	2	*	ER40	1.00	1.00	3.50	1.25	.750	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°

α° = Ramp Angle

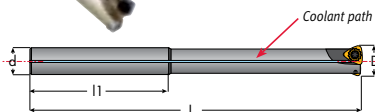
Nexus Positive High Feed Indexable End Mills



Takes WPGT Inserts

Features & Benefits

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



Positive High Feed Indexable End Mills - Coolant Thru

Part No.	Description	D	d	L	Z	I1	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°

Product Information

- Comes in 3/4", 1", 1-1/4", 1-1/2"
- 3/4" Takes Insert WPGT050335 (3 corners)
- 1" and 1-1/4" Take Insert SDMT09T312 (4 corners)
- 1-1/4" and 1-1/2" Take Insert SDMT120412 (4 corners)
- All Versions are Coolant Thru
- Can Be Used in all Materials



Takes SDMT Inserts

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

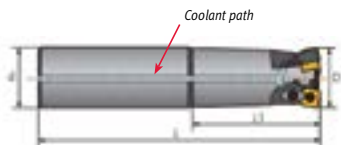
ShrinkFIT holders can be found on page 50.

End mill holders can be found on page 49.

Insert	Insert Screw	Wrench
SDMT09T	9317446	9355444
SDMT12T	9318547	9355555

Insert Insert Screw Wrench

WPGT0503	9317446	9355444
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Positive High Feed Indexable End Mills - Coolant Thru

Part No.	Description	D	d	L	Z	I1	Ap	α°	Screw	Wrench
1668820	HFEM-1.00-1.00-5.50-SD09-02	1.00	1.00	5.50	2	3.25	0.06	7.5°	6811264	9355444
1668822	HFEM-1.00-1.00-7.00-SD09-02	1.00	1.00	7.00	2	3.25	0.06	7.5°	6811264	9355444
1678830	HFEM-1.25-1.25-8.00-SD09-03	1.25	1.25	8.00	3	3.25	0.06	4.5°	6811264	9355444
1678840	HFEM-1.25-1.25-8.00-SD12-02	1.25	1.25	8.00	2	3.25	0.07	9°	6811264	9355444
1688850	HFEM-1.50-1.50-8.00-SD12-03	1.50	1.50	8.00	3	3.25	0.07	6°	6811264	9355444

α° = ramp angle

Nexus Negative High Feed Indexable End Mills



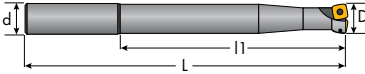
Takes SNKX09T Inserts

Features

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

Benefits

- Less inventory = lower cost
- Higher productivity and lower cost per corner



Product Information

- Comes in 1" and 1-1/4"
- Each Size has 5" Length of Cut
- Each Size has 8" Length of Cut
- Takes Insert SNKX09T3HF-LT30 (8 corners)
- Made of H13 Tool Steel
- Coolant Thru
- Weldon Shanks
- Only Run in Steel, Cast Iron, and Hardened Materials

Indexable High-Feed End Mills – Coolant Thru

Part No.	Description	D	d	L	Z	Insert	l1	Ap	α°	Screw	Wrench
6602118	HFEM-1.00-1.00CW-5.00-3SN9	1.00	1.00	5.00	3	SNKX09T3	2.36	.039	3.5°	6811264	9355444
6602117	HFEM-1.00-1.00CW-8.00-3SN9	1.00	1.00	8.00	3	SNKX09T3	3.94	.039	3.5°	6811264	9355444
6702119	HFEM-1.25-1.25CW-5.00-4SN9	1.25	1.25	5.00	4	SNKX09T3	2.36	.039	2°	6811264	9355444
6702120	HFEM-1.25-1.25CW-8.00-3SN9	1.25	1.25	8.00	3	SNKX09T3	3.94	.039	2°	6811264	9355444

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



Benefits

- 8 cutting edges per insert!
- Axial cutting forces reduce spindle wear
- Achieves same feed rates as larger inserts
- Excellent for dry machining of moulds and dies

SNKX High-Feed Insert with Positive Geometry

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

PowerLOC Negative High Feed End Mills



Takes SNKX09T Inserts

Features

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

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! See page 50.



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



Product Information

- Comes in 1" and 1-1/4"
- Each Size has 5" Length of Cut
- Each Size has 8" Length of Cut
- Square on Shank for Positive Lock and Zero Slipping
- Takes Insert SNKX09T3HF-LT30 (8 corners)
- Made of H13 Tool Steel
- Coolant Thru
- **Must be used with (PLSS) PowerLOC Square Shank Adapters. See page 49.**
- Only Run in Steel, Cast Iron, and Hardened Materials

PowerLOC Coolant Thru High-Feed End Mills

Part No.	Description	D	d	L	Z	Insert	l1	Ap	α°	Screw	Wrench
6612118	PLHF-1.00-1.00C-5.00-3SN9	1.00	1.00	5.00	3	SNKX09T3	2.36	.039	3.5°	6811264	9355444
6612117	PLHF-1.00-1.00C-8.00-3SN9	1.00	1.00	8.00	3	SNKX09T3	3.94	.039	3.5°	6811264	9355444
6712119	PLHF-1.25-1.25C-5.00-4SN9	1.25	1.25	5.00	4	SNKX09T3	1.20	.039	2°	6811264	9355444
6712120	PLHF-1.25-1.25C-8.00-3SN9	1.25	1.25	8.00	3	SNKX09T3	1.20	.039	2°	6811264	9355444



Benefits

- 8 cutting edges per insert!
- Axial cutting forces reduce spindle wear
- Achieves same feed rates as larger inserts
- Excellent for dry machining of moulds and dies

SNKX High-Feed Insert with Positive Geometry

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

ER Chuck Adapters for PowerLOC End Mills

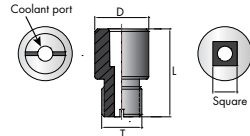
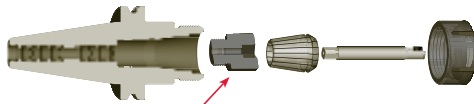


Turn ER Chucks into Milling Chucks

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

Features

- Eliminate costly milling chucks
- PowerLOC Eliminates Slippage
- Low T.I.R. extends tool life
- Available CAT₄₀, CAT₅₀



PowerLOC Adapter

PowerLOC Straight Shank Adapters (PLSS) Coolant-Thru

Part No.	Description	Collet	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



Use PLSS adapters with PowerLOC end mills and ER collet chucks (see tables below)
Additional toolholder lengths available
Purchase collet separately

PowerLOC CAT₄₀ ER Toolholders

Part No.	Descriptions	Collet Size	L	D	Max. Shank	Wrench	Thread
22253	CAT40-ER-32-2.76	ER32	2.76	1.97	.788	9904616	M16X2.0
22255	CAT40-ER-32-4	ER32	4	1.97	.788	9904616	M16X2.0
22261	CAT40-ER-40-3.15	ER40	3.15	2.48	1.023	9904617	M120X2.0

PowerLOC CAT₅₀ ER Toolholders

Part No.	Description	Collet	L	D	Max. Shank	Wrench	Thread
22311	CAT50-ER-32-4	ER32	4	1.97	.788	9904616	M16X2.0
22313	CAT50-ER-32-6	ER32	6	1.97	.788	9904616	M16X2.0
22321	CAT50-ER-40-4	ER40	4	2.48	1.023	9904617	M20X2.0

All Nexus products are backed by our 100% satisfaction guarantee.



ShrinkLOC Holders for PowerLOC End Mills



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

How ShrinkLOC Holders Prevent Tool Slippage

PROBLEM



Spinning the shank under heavy load conditions causes tool slippage (red)

SOLUTION



ShrinkLOC square drive (yellow) locks the tool shank and the toolholder making it impossible for the tool to spin, even under the heaviest loads.

See page 49 for more information.

Features

- PowerLOC indexable endmill ready
- Works with standard shank cutters too!
- Balanced to 25,000 RPMs
- Max. T.I.R. .0001"

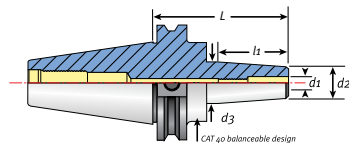
Benefits

- Eliminates costly milling chucks
- Prevents tool slippage
- Reduces Scrap
- Extends indexable insert life up to 50%



See page 45 for PowerLOC (PLIM) end mills.

Use ShrinkLOC holders with PowerLOC endmills to get all the benefits of PowerLOC, PLUS the accuracy and rigidity of ShrinkFIT for maximum performance out of the PowerLOC (PLIM) endmill.



CAT40 ShrinkLOC Holders

Part No.	Description	Use with PLIM	d1	L	d2	l1	I.D. Square
7189027	CAT40-SL.500-3.75	1632345	0.500	3.75	1.10	2.37	.380
7189036	CAT40-SL.750-4.00	1654345	0.750	4.00	1.42	2.62	.563
7189042	CAT40-SL1.00-4.00	1665345	1.00	4.00	1.81	2.62	.750

CAT50 ShrinkLOC Holders

Part No.	Description	Use with PLIM	d1	L	d2	l1	I.D. Square
7189060	CAT50-SL.500-3.94	1632345	0.500	3.94	1.10	2.56	.380
7189064	CAT50-SL.750-4.13	1654345	0.750	4.13	1.42	2.76	.563
7189068	CAT50-SL.00-4.13	1665345	1.00	4.13	1.81	2.76	.750