

 **DATA FLUTE**™



Introduction

Data Flute, Our Approach...

For over four decades, the Data Flute brand has been synonymous with high performance, application specific cutting tools. “Application specific” and “high performance” go hand-in-hand. From our perspective, it is very difficult to optimize cutting tool performance and therefore machine productivity without application specific tooling. If you want the highest metal removal rates with the best finish, most consistent tool life and the lowest levels of unwanted harmonics, it is essential to match the round tool to the job at hand.

This is the approach we have been taking at Data Flute since 1976. We believe our current catalog represents our best offering to date in application specific, high performance, solid, round, carbide end mills. Our tools cover the entire range of applications and work materials. Whether you need to maximize your metal removal rate in the roughest of roughing applications or need a mirror smooth finish, we have you covered. Similarly, our tools feature material specific geometries to maximize your productivity in the entire range of ferrous & non-ferrous metals. These tools have been developed at our in-house machining and testing center and have been refined through rigorous, follow-on field testing.

Here at Data Flute, we have the tools, factory and field support, and the desire to work with you to maximize your machining productivity. Call us today and let us help you with your cutting tool needs. We are passionate about high performance tooling and would love to share that passion with you.





How the Catalog Is Organized

By Work Material

Aluminum and Non-Ferrous
Titanium and Ferrous

Table of Contents

This section allows you to quickly reference the substrate or type of tool you are looking for. We have divided the catalog into three sections; Aluminum-Non Ferrous, Titanium-Ferrous and Miniatures, Chamfer Mills and Corner Rounds.









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Material Application Guide



We have tried to organize the tools in this catalog consistent with the manner in which our customers use them. The end mills have been categorized into one of two material machining areas: 1) Aluminum and Non-Ferrous Alloys; and 2) Titanium and Ferrous Alloys. Within each of the aforementioned listings, the tools are organized by operations beginning with Roughing and following a continuum through Finishing. While some are clearly intended as pure roughers or finishers, there are tools that cover the ground between serving as rougher-finishers or finisher-roughers. Use this guide to begin searching for a tool. First select the machined material group, next select the tool series that best fits your application. The first page of each material/substrate group provides a brief description and page number for each tool series. As always, if you have any questions regarding tool selection or application, call the appropriate technical support line listed at the bottom of each page.

Coatings

All of our tools are available in a variety of application specific surface treatments and coatings. Please see individual tool listings for stocked treatments and coatings. Other treatments and coatings are available upon request. These surface treatments and coatings are designed to enhance performance as well as the life of the tool. The chart below is a handy reference outlining the surface treatment and coating composition as well as the suggested application. If the material you are preparing to machine is not listed, please give us a call and we can help.

	LISTING	APPLICATIONS
	C5 Zr base coating	A thin hard coating with improved lubricity and increase oxidation resistance. Go to coating for machining non-ferrous alloys.
	C10 AlCr base coating	High wear resistant, excellent hot hardness and high oxidation properties. Suitable for machining of steels up to 45HRC, cast irons (wet or dry).
	C11 AlTi base coating	High aluminum content, offers optimized thermal shock resistance with outstanding chemical stability. Offers a broad application range. Suitable for Steels, Stainless Steels, High Temp Alloys (nickel base and titanium base alloys).
	C14 AlCr base coating	Dual layer structure with improved hot hardness, high oxidation and very smooth surface. Suitable for alloy Steels, Stainless Steels, Titanium and titanium alloys.
	C19 Si base coating	Multilayer, extremely hard, smooth temperature resistant. Suitable for hardened metals and Stainless Steels.
	C22 TiAl base coating	High hardness and impact resistance with reduced friction and superior wear resistance. Suitable for hardened metals and Stainless Steels.
	C35 Si base coating	Silicon base hard coating with outstanding wear resistance even at high temperatures. Outstanding adhesion with extremely smooth surface. Suitable for hardened steels up to 70 HRC, stainless steels and high temp alloys.
	C36 AlTi base coating	High wear resistant with high lubricity and no tendency to stick. Provides outstanding adhesion. Suitable for application up to 56 HRC, which includes steels, cast irons, stainless steels and nickel base alloys. Suitable for hardened steels up to 70 HRC, stainless steels and high temp alloys.

Legacy Coatings

	LISTING	APPLICATIONS
	C4 TiC base coating	Mono layer hard coating and good wear resistance. Suitable for most ferrous material groups.
	C7 TiAl base coating	Mono layer coating with low coefficient of friction with increase wear resistance. Suitable for high temp alloys and stainless steels.

INTERNATIONAL STANDARD FOR CUTTING TOOLS ISO-13399

What is ISO-13399

ISO-13399 (Cutting tool data representation and exchange) is an international technical standard established by the International Organization for Standardization (ISO). The goal is to establish standard terminology for product data regarding cutting tools and to implement a standard that is computer readable.

Manufacturers and customers can use ISO-13399 to exchange data between computer-aided design (CAD), computer-aided manufacturing (CAM), computer-aided engineering (CAE), tool management software, product data management (PDM/EDM), manufacturing resource planning (MRP) or enterprise resource planning (ERP), and other computer-aided technologies (CAx) and systems.

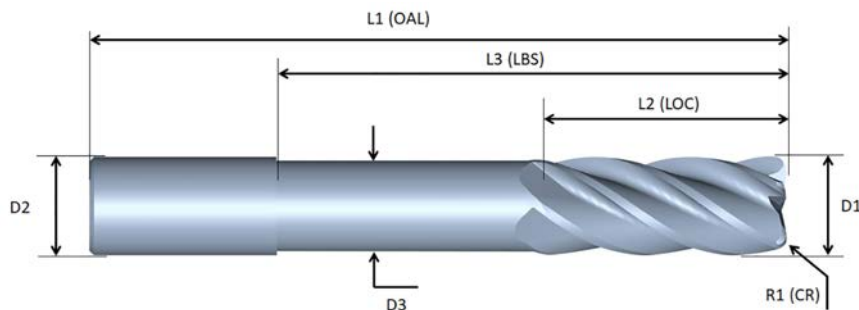
The ISO-13399 standard will simplify the exchange of data for cutting tools, make the process more efficient and lower the cost of managing information.

To comply with ISO-13399, Data Flute will transition all annotations and nomenclature for cutting tools to the new ISO standard.

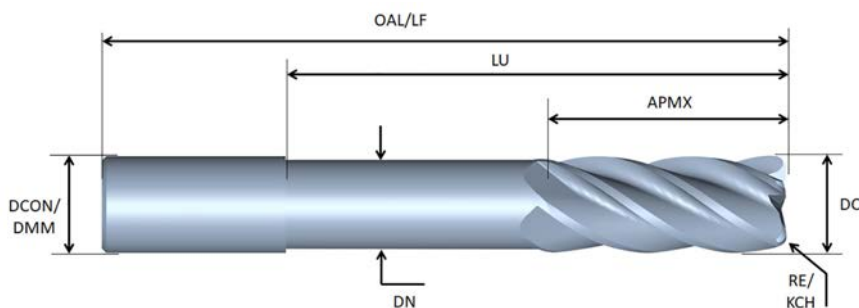
To promote a smooth transition to ISO-13399, this edition of the Data Flute catalog will use both the new nomenclature as well as our former terminology.

WHAT TO EXPECT

Previous annotations:



New annotations (ISO-13399):

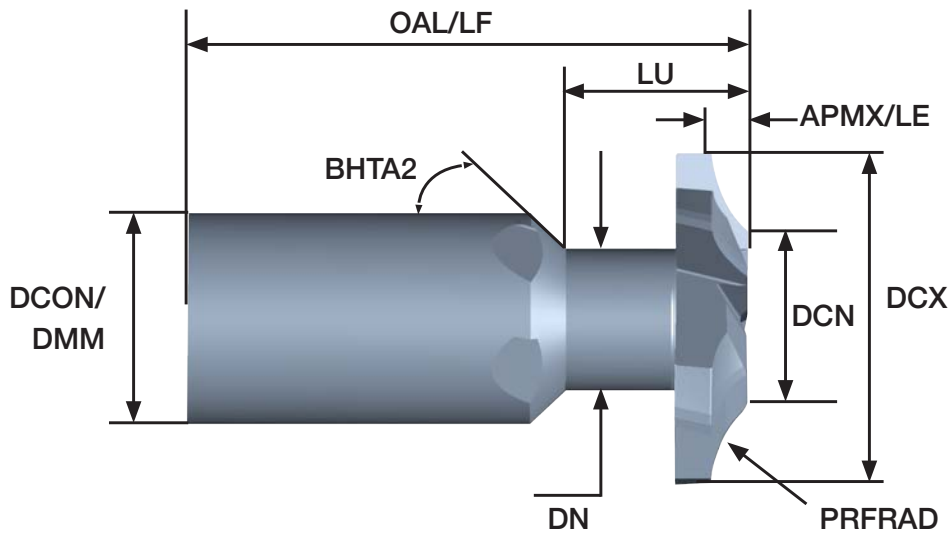


GLOSSARY OF TERMS/NOMENCLATURE ISO-13399:

Below, in alphabetical order, is the list of ISO 13399 terminology for solid, round cutting tools offered by Data Flute.

APMX	Depth of cut maximum	Lz	Cutting edge length
BBD	Balanced by design	LE	Cutting edge effective length
BCH	Corner chamfer length	LF	Functional length
BHTA	Body half taper angle	LH	Head length
CBP	Chip breaker property	LS	Shank Length
CHW	Corner chamfer width	LU	Usable length
CND	Coolant entry diameter	LUX	Usable length maximum
CTP	Coating property	NOF	Flute count
CXD	Coolant exit diameter	OAL	Overall length
DC	Cutting diameter	PNA	Profile included angle
DCN	Cutting diameter minimum	PRFRAD	Profile radius
DCON	Connection diameter	PSIR	Tool lead angle
DCX	Cutting diameter maximum	RCP	Rounded corner property
DMM	Shank diameter	RE	Corner radius
DN	Neck diameter	RMPX	Ramping angle maximum
FHA	Flute helix angle	RPMX	Rotational speed maximum
FMT	Form type	SIG	Point angle
GAMF	Rake angle radial	UST	Unit system
GAMP	Rake angle axial	WEP	Wiper edge property
KCH	Chamfer corner angle	ZEFP	Peripheral effective cutting edge count

Source: <https://www.iso.org>



OAL/LF: Overall length / Functional length

DCON/DMM: Connection diameter / Shank diameter

DN: Neck diameter

BHTA2: Body half taper angle

LU: Usable length

PRFRAD: Profile radius

APMX/LE: Depth of cut maximum / Cutting edge effective length

DCN: Cutting diameter minimum

DCX: Cutting diameter maximum

THIS TOOL CAN BE FOUND ON www.dataflute.com UNDER THE TECHNICAL TAB.

By entering tool diameter, the application filters Part Number Field and displays the available part numbers of specified diameter.

Mid range is the default value.
Min Speed = Max Tool Life
Max Speed = Max Productivity

1. Select Unit System

2. Select Material Group, Select Material Type

3. Input material hardness in Brinell or Rockwell C

4. Select Tool Series

5. Input Tool Diameter

6. Select Part Number

7. Select Operation

8. Input Cutting Condition

Once operation is selected (7), the application outputs the Operation definition & conditions consistent with Application Matrix.

Cutting Conditions input format should respect the Operation Definition.
RDOC input in percentage of diameter and within Ae definition from Operation.
ADOC input as multiplication factor of diameter and within Ap definition from Operation.
Unit value is then calculated and returned for both Ae and Ap.

9. Select Speed

10. Outputs Speed function of above selection

11. Calculates Spindle Speed

12. Outputs Chip Load

13. Calculates Feed

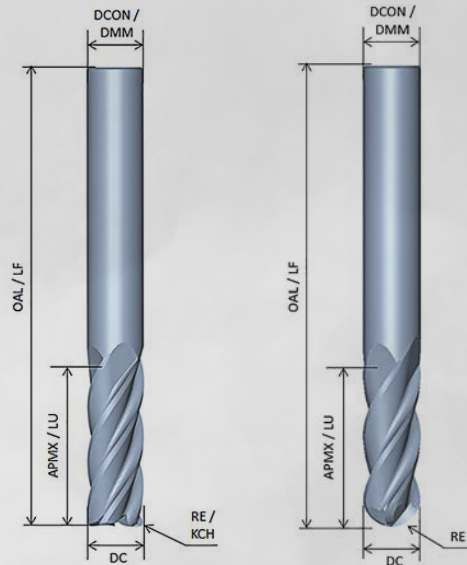
14. Calculates Metal Removal Rate Engagement Angle Average Chip Thickness

16. Resets Calculator

15. Converts outputs to metric/imperial unit system depending on selection from #1. On conversion, the Speed Adjustment is frozen and no input is allowed.

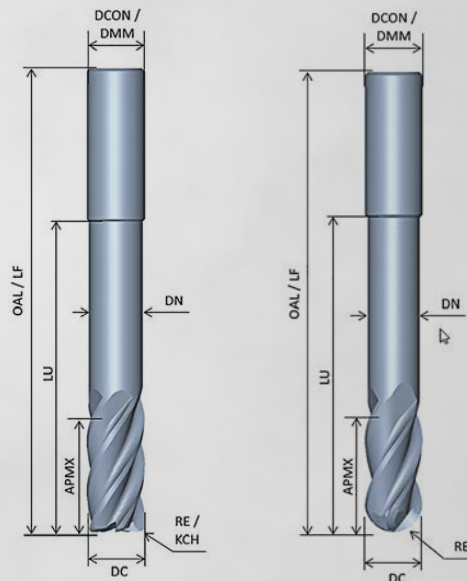
STYLE A

Style A is a standard, straight shank tool.



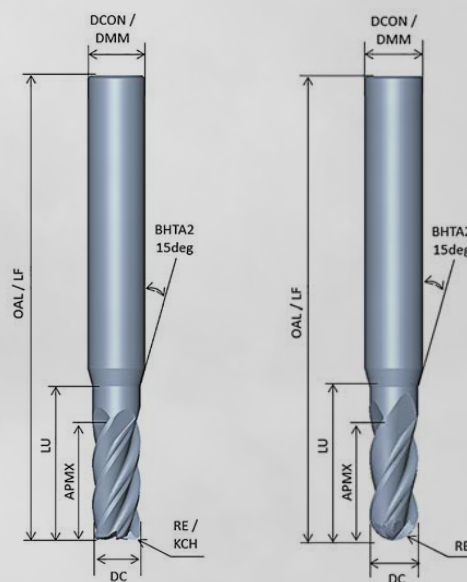
STYLE B

Style B is necked down. It offers a neck diameter, that is smaller than the shank diameter. This provides for clearance, particularly in finishing operations, so that the shank will not come in contact with the workpiece.



STYLE C

Style C provides a tapered transition from the shank diameter to a smaller cutting diameter. This style provides for greater tool rigidity in situations that combine long reach with a relatively small cutting diameter and/or length of cut.



A

B

C



Application Matrix

Material	ISO Code	Workpiece Material	OPERATION				
			Slotting	Heavy Peripheral	Peripheral	Light Peripheral	Finishing
			80% to 100% x DC	40% to 80% x DC	25% to 40% x DC	5% to 25% x DC	Up to 5% x DC
			0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2 x DC	Up to APMX
Carbon Steels	P	10XX 11XX 13XX 15XX	FeR _x SSI-4 SSDH SS	FeR _x SSI-4 SSDH SS	SSI-4 SSI-5 FeR _x	SSI-7 SSI-5 MH	SSI-7 SSI-5 MH
		Alloy Steels					
Tool & Mold Steels	P	H-13 0-1 A-2 D-2 B7, P20	SSI-4 SSDH SS	SSI-4 SSDH SS	SSI-4 SSI-5	SSI-7 MED _x SSI-5	SSI-7 MED _x SSI-5
		H					
Stainless Steel	M	Series 3XX	FeR _x SSI-4 SS	FeR _x SSI-4 SSI-5	SSI-5 FeR _x SSI-7	SSI-7 SSI-5 SSI-4	SSI-7 SSI-5 SVI MH
		Series 4XX					
		15-5PH, 16-6PH 17-4PH, AM-XX					
High Temp Alloys	S	Inconel 625 Inconel 718 A286	FeR _x SSI-4	FeR _x SSI-5 HiTe _x -C	HiTe _x -C FeR _x SSI-5	HiTe _x -C HiTe _x SSI-7 SSI-5	HiTe _x SSI-7 SSI-5
		Titanium Pure 6Al4V, ASTM 1, 2, 3 Alpha Beta 5553					
Cast Irons	K	Gray Ductile	FeR _x SSI-4 SSDH	FeR _x SSI-4 HiTe _x -C	HiTe _x -C SSI-5 FeR _x	HiTe _x SSI-5	HiTe _x SSI-5
Non-ferrous Alloys	N	Aluminum High Speed Machining	HVMag HVM	HVMag HVM	HVMag HVM	HVMag HVM	HVMag HVM
		Aluminum Copper Brass, Bronze	T.T. ALDH ARF	T.T. ALDH ARF	ARF HSM HVM	AFI HVM HSM	AFI AMF

Highly Recommended
Recommended
Applicable



DEFINITION OF MACHINING OPERATIONS

Slotting / Heavy Roughing

Defined as tool radial engagement (Ae) of at least 80% of its diameter

$$80\% \times DC < Ae \leq 100\% \times DC$$

Defined as tool axial engagement (Ap) being up to tool diameter
up to 1.0xDC

Heavy Peripheral

Defined as tool radial engagement (Ae) between 40% and 80% of its diameter

$$40\% \times DC < Ae \leq 80\% \times DC$$

Defined as tool axial engagement (Ap) being up to tool diameter
up to 1.0xDC

Peripheral

Defined as tool radial engagement (Ae) between 25% and 40% of its diameter

$$25\% \times DC < Ae \leq 40\% \times DC$$

Defined as tool axial engagement (Ap) being up to 1.5 times tool diameter
up to 1.5xDC

Light Peripheral

Defined as tool radial engagement (Ae) between 5% and 25% of its diameter

$$5\% \times DC < Ae \leq 25\% \times DC$$

Defined as tool axial engagement (Ap) being up to 2.0 times tool diameter
up to 2.0xDC

Finishing

Defined as tool radial engagement (Ae) up to 5%xDC

$$Ae \leq 5\% \times DC$$

Defined as tool axial engagement (Ap) being up to APMX
up to APMX

SUMMARY OF MACHINING OPERATIONS:

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	80%DC < __ ≤ 100%DC	40%DC < __ ≤ 80%DC	25%DC < __ ≤ 40%DC	5%DC < __ ≤ 25%DC	≤ 5%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC	APMX

Aluminum

and Non-Ferrous Alloys



Aluminum and Non-Ferrous Alloys Index

ROUGHING

SERIES	ITEM	DESCRIPTION	PAGE
Triple Threat (M)	Aluminum Rougher/Finisher	3 Flute 45° Helix Standard and Reduced Neck Rougher/Finisher	14
Triple Threat-C (M)	Aluminum Rougher/Finisher Chip Breakers	3 Flute 45° Helix Standard and Reduced Neck Rougher/Finisher Chip Breakers	20
ALDH	Aluminum Double Helix	3 Flute Double Helix Rougher/Finisher	26
ALDH-C	Aluminum Double Helix Chip Breaker	3 Flute Double Helix Rougher/Finisher Chip Breaker	29
ARF	Aluminum Rougher/Finisher	2 Flute 48° Helix Rougher/Finisher	32
ARF-BN	2 Flute Ball End Mill	2 Flute 48° Helix Rougher/Finisher	35
HSM	High Speed Machining	2 Flute 48° Helix Reduced Neck Rougher/Finisher	38
HSM-BN	High Speed Machining Ball Nose	2 Flute 48° Helix Reduced Neck Finisher/Rougher Ball Nose	41
HVM-2	High Velocity Machining	2 Flute 35° Helix Reduced Neck Finisher/Rougher	44
HVM-BN	High Velocity Machining Ball Nose	2 Flute 35° Helix Reduced Neck Finisher/Rougher Ball Nose	47
HVM-3	High Velocity Machining	3 Flute 35° Helix Reduced Neck Finisher/Rougher	50
HVMag-2 (M)	Hyper Velocity Machining	2 Flute 35° Helix Reduced Neck Finisher/Rougher	54
HVMag-3 (M)	Hyper Velocity Machining	3 Flute 35° Helix Reduced Neck Finisher/Rougher	58
AFI	Aluminum Finishing	3 Flute 35° Helix Aluminum Finisher	60
AMF	Aluminum Finishing	Multi-Flute 35° Helix Aluminum Finisher	66

FINISHING

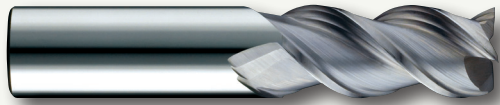
(M) This Series of Tools Also Offered in Metric Sizes



TRIPLE THREAT
Three-Flute

Triple Threat™, Three Flute Rougher/Finisher, Inch

High Performance Carbide



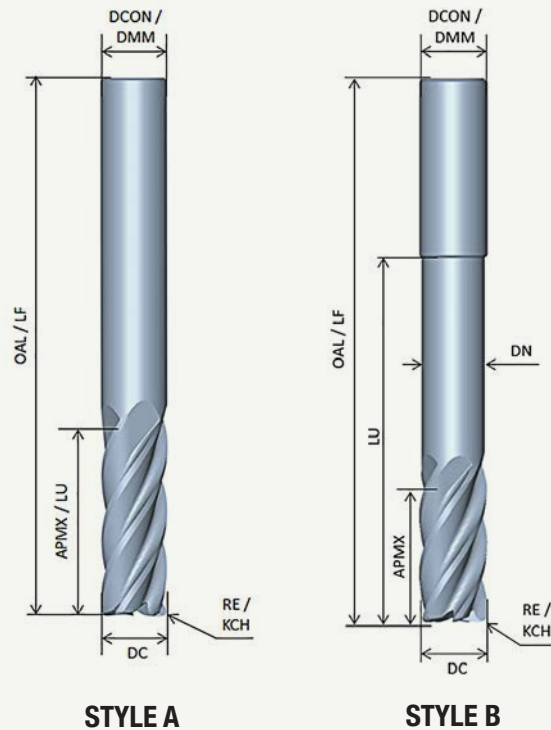
The Triple Threat™ tool is a multi-patented three flute high performance carbide end mill designed to finish and rough in aluminum and non-ferrous metals. The high shear, 45 degree helix and improved inner-flute geometries enhanced chip evacuation and permit increased chip loads as well as aggressive feed rates.

MAIN CHARACTERISTICS

- Flute Count (NOF): 3
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): $-0.0001''/-0.0004''$
- Corner Radius (RE): $+0.001''/-0.001''$



WORK MATERIAL

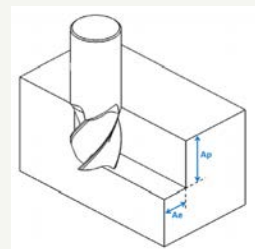
N

COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	80%DC <= 100%DC	40%DC <= 80%DC	25%DC <= 40%DC	5%DC <= 25%DC	<= 5%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC	APMX



Triple Threat

For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



Triple Threat™, Three Flute Rougher/Finisher, Inch

High Performance Carbide

Triple Threat

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Radius RE	Neck Dia DN	Style	EDP	C5 EDP
TT-ST-30250-000	1/4	1/4	3/8	2				A	36764-00-D	36764-86-D
TT-ST-30250-020	1/4	1/4	3/8	2		.020		A	36950-00-D	36950-86-D
TT-30250-000	1/4	1/4	3/4	2-1/2				A	36766-00-D	36766-86-D
TT-30250-020	1/4	1/4	3/4	2-1/2		.020		A	36951-00-D	36951-86-D
TT-RN-30250-000	1/4	1/4	3/8	2-1/2	1-1/8		.235	B	36768-00-D	36768-86-D
TT-RN-30250-020	1/4	1/4	3/8	2-1/2	1-1/8	.020	.235	B	36952-00-D	36952-86-D
TT-RN-M-30250-000	1/4	1/4	3/8	4	2-1/8		.235	B	36770-00-D	36770-86-D
TT-RN-M-30250-020	1/4	1/4	3/8	4	2-1/8	.020	.235	B	36953-00-D	36953-86-D
TT-ST-30312-000	5/16	5/16	7/16	2-1/2				A	36772-00-D	36772-86-D
TT-ST-30312-020	5/16	5/16	7/16	2-1/2		.020		A	36954-00-D	36954-86-D
TT-30312-000	5/16	5/16	13/16	2-1/2				A	36774-00-D	36774-86-D
TT-30312-020	5/16	5/16	13/16	2-1/2		.020		A	36955-00-D	36955-86-D
TT-RN-30312-000	5/16	5/16	7/16	2-1/2	1-1/8		.297	B	36776-00-D	36776-86-D
TT-RN-30312-020	5/16	5/16	7/16	2-1/2	1-1/8	.020	.297	B	36956-00-D	36956-86-D
TT-RN-M-30312-000	5/16	5/16	7/16	4	2-1/8		.297	B	36778-00-D	36778-86-D
TT-RN-M-30312-020	5/16	5/16	7/16	4	2-1/8	.020	.297	B	36957-00-D	36957-86-D
TT-ST-30375-000	3/8	3/8	1/2	2-1/2				A	36780-00-D	36780-86-D
TT-ST-30375-020	3/8	3/8	1/2	2-1/2		.020		A	36958-00-D	36958-86-D
TT-30375-000	3/8	3/8	1	2-1/2				A	36786-00-D	36786-86-D
TT-30375-020	3/8	3/8	1	2-1/2		.020		A	36959-00-D	36959-86-D
TT-RN-30375-000	3/8	3/8	1/2	2-1/2	1-1/8		.355	B	36789-00-D	36789-86-D
TT-RN-30375-020	3/8	3/8	1/2	2-1/2	1-1/8	.020	.355	B	36960-00-D	36960-86-D
TT-RN-M-30375-000	3/8	3/8	1/2	4	2-1/8		.355	B	36792-00-D	36792-86-D
TT-RN-M-30375-020	3/8	3/8	1/2	4	2-1/8	.020	.355	B	36961-00-D	36961-86-D
TT-ST-30500-000	1/2	1/2	5/8	3				A	36795-00-D	36795-86-D
TT-ST-30500-030	1/2	1/2	5/8	3		.030		A	36796-00-D	36796-86-D
TT-ST-30500-060	1/2	1/2	5/8	3		.060		A	36797-00-D	36797-86-D
TT-30500-000	1/2	1/2	1-1/4	3				A	36798-00-D	36798-86-D
TT-30500-030	1/2	1/2	1-1/4	3		.030		A	36799-00-D	36799-86-D
TT-30500-060	1/2	1/2	1-1/4	3		.060		A	36800-00-D	36800-86-D
TT-RN-30500-000	1/2	1/2	5/8	3	1-3/8		.475	B	36801-00-D	36801-86-D
TT-RN-30500-030	1/2	1/2	5/8	3	1-3/8	.030	.475	B	36803-00-D	36803-86-D
TT-RN-30500-060	1/2	1/2	5/8	3	1-3/8	.060	.475	B	36805-00-D	36805-86-D
TT-RN-M-30500-000	1/2	1/2	5/8	4	2-1/8		.475	B	36807-00-D	36807-86-D
TT-RN-M-30500-030	1/2	1/2	5/8	4	2-1/8	.030	.475	B	36809-00-D	36809-86-D
TT-RN-M-30500-060	1/2	1/2	5/8	4	2-1/8	.060	.475	B	36811-00-D	36811-86-D
TT-ST-30625-000	5/8	5/8	3/4	3				A	36813-00-D	36813-86-D
TT-ST-30625-030	5/8	5/8	3/4	3		.030		A	36814-00-D	36814-86-D
TT-ST-30625-060	5/8	5/8	3/4	3		.060		A	36815-00-D	36815-86-D
TT-30625-000	5/8	5/8	1-5/8	3-1/2				A	36816-00-D	36816-86-D
TT-30625-030	5/8	5/8	1-5/8	3-1/2		.030		A	36817-00-D	36817-86-D
TT-30625-060	5/8	5/8	1-5/8	3-1/2		.060		A	36818-00-D	36818-86-D
TT-RN-30625-000	5/8	5/8	3/4	4	1-5/8		.590	B	36819-00-D	36819-86-D
TT-RN-30625-030	5/8	5/8	3/4	4	1-5/8	.030	.590	B	36820-00-D	36820-86-D
TT-RN-30625-060	5/8	5/8	3/4	4	1-5/8	.060	.590	B	36821-00-D	36821-86-D
TT-RN-M-30625-000	5/8	5/8	3/4	6	2-3/8		.590	B	36822-00-D	36822-86-D
TT-RN-M-30625-030	5/8	5/8	3/4	6	2-3/8	.030	.590	B	36823-00-D	36823-86-D
TT-RN-M-30625-060	5/8	5/8	3/4	6	2-3/8	.060	.590	B	36824-00-D	36824-86-D

*LBS/LU Length Below Shank

PATENTED GEOMETRIES

Triple Threat™, Three Flute Rougher/Finisher, Inch Continued

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Radius RE	Neck Dia DN	Style	EDP	C5 EDP
TT-ST-30750-000	3/4	3/4	1	3				A	36825-00-D	36825-86-D
TT-ST-30750-030	3/4	3/4	1	3		.030		A	36826-00-D	36826-86-D
TT-ST-30750-060	3/4	3/4	1	3		.060		A	36827-00-D	36827-86-D
TT-30750-000	3/4	3/4	1-5/8	4				A	36828-00-D	36828-86-D
TT-30750-030	3/4	3/4	1-5/8	4		.030		A	36829-00-D	36829-86-D
TT-30750-060	3/4	3/4	1-5/8	4		.060		A	36830-00-D	36830-86-D
TT-RN-30750-000	3/4	3/4	1	4	2		.715	B	36831-00-D	36831-86-D
TT-RN-30750-030	3/4	3/4	1	4	2	.030	.715	B	36832-00-D	36832-86-D
TT-RN-30750-060	3/4	3/4	1	4	2	.060	.715	B	36833-00-D	36833-86-D
TT-RN-M-30750-000	3/4	3/4	1	6	2-5/8		.715	B	36834-00-D	36834-86-D
TT-RN-M-30750-030	3/4	3/4	1	6	2-5/8	.030	.715	B	36835-00-D	36835-86-D
TT-RN-M-30750-060	3/4	3/4	1	6	2-5/8	.060	.715	B	36836-00-D	36836-86-D
TT-ST-31000-000	1	1	1-1/4	4				A	36837-00-D	36837-86-D
TT-ST-31000-030	1	1	1-1/4	4		.030		A	36838-00-D	36838-86-D
TT-ST-31000-060	1	1	1-1/4	4		.060		A	36839-00-D	36839-86-D
TT-31000-000	1	1	2	5				A	36840-00-D	36840-86-D
TT-31000-030	1	1	2	5		.030		A	36841-00-D	36841-86-D
TT-31000-060	1	1	2	5		.060		A	36842-00-D	36842-86-D
TT-RN-31000-000	1	1	1-1/4	5	2-5/8		.960	B	36843-00-D	36843-86-D
TT-RN-31000-030	1	1	1-1/4	5	2-5/8	.030	.960	B	36844-00-D	36844-86-D
TT-RN-31000-060	1	1	1-1/4	5	2-5/8	.060	.960	B	36845-00-D	36845-86-D
TT-RN-M-31000-000	1	1	1-1/4	7	3-5/8		.960	B	36846-00-D	36846-86-D
TT-RN-M-31000-030	1	1	1-1/4	7	3-5/8	.030	.960	B	36847-00-D	36847-86-D
TT-RN-M-31000-060	1	1	1-1/4	7	3-5/8	.060	.960	B	36848-00-D	36848-86-D

*LBS/LU Length Below Shank

PATENTED GEOMETRIES

Triple Threat

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Triple Threat™, Three Flute Rougher/Finisher, Metric

High Performance Carbide

Triple Threat

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Radius RE	Neck Dia DN	Style	EDP	C5 EDP
TT-ST-306M-,3	6	6	10	55		,3		A	36962-00-D	36962-86-D
TT-306M-,3	6	6	20	58		,3		A	36963-00-D	36963-86-D
TT-RN-306M-,3	6	6	10	58	21	,3	5.48	B	36964-00-D	36964-86-D
TT-RN-M-306M-,3	6	6	10	80	44	,3	5.48	B	36965-00-D	36965-86-D
TT-ST-308M-,3	8	8	12	59		,3		A	36966-00-D	36966-86-D
TT-ST-308M-1	8	8	12	59		1		A	36967-00-D	36967-86-D
TT-308M-,3	8	8	22	64		,3		A	36968-00-D	36968-86-D
TT-308M-1	8	8	22	64		1		A	36969-00-D	36969-86-D
TT-RN-308M-,3	8	8	12	64	27	,3	7.59	B	36970-00-D	36970-86-D
TT-RN-308M-1	8	8	12	64	27	1	7.59	B	36971-00-D	36971-86-D
TT-RN-M-308M-,3	8	8	12	100	54	,3	7.59	B	36972-00-D	36972-86-D
TT-RN-M-308M-1	8	8	12	100	54	1	7.59	B	36973-00-D	36973-86-D
TT-ST-310M-,3	10	10	14	67		,3		A	36974-00-D	36974-86-D
TT-ST-310M-1	10	10	14	67		1		A	36975-00-D	36975-86-D
TT-310M-,3	10	10	25	73		,3		A	36976-00-D	36976-86-D
TT-310M-1	10	10	25	73		1		A	36977-00-D	36977-86-D
TT-RN-310M-,3	10	10	14	73	32	,3	9.47	B	36978-00-D	36978-86-D
TT-RN-310M-1	10	10	14	73	32	1	9.47	B	36979-00-D	36979-86-D
TT-RN-M-310M-,3	10	10	14	100	60	,3	9.47	B	36980-00-D	36980-86-D
TT-RN-M-310M-1	10	10	14	100	60	1	9.47	B	36981-00-D	36981-86-D
TT-ST-312M-,3	12	12	16	74		,3		A	36982-00-D	36982-86-D
TT-ST-312M-1	12	12	16	74		1		A	36983-00-D	36983-86-D
TT-312M-,3	12	12	26	84		,3		A	36984-00-D	36984-86-D
TT-312M-1	12	12	26	84		1		A	36985-00-D	36985-86-D
TT-RN-312M-,3	12	12	16	84	38	,3	11.22	B	36986-00-D	36986-86-D
TT-RN-312M-1	12	12	16	84	38	1	11.22	B	36987-00-D	36987-86-D
TT-RN-M-312M-,3	12	12	16	100	60	,3	11.22	B	36988-00-D	36988-86-D
TT-RN-M-312M-1	12	12	16	100	60	1	11.22	B	36989-00-D	36989-86-D
TT-ST-314M-,3	14	14	18	76		,3		A	36990-00-D	36990-86-D
TT-ST-314M-1	14	14	18	76		1		A	36991-00-D	36991-86-D
TT-314M-,3	14	14	26	84		,3		A	36992-00-D	36992-86-D
TT-314M-1	14	14	26	84		1		A	36993-00-D	36993-86-D
TT-RN-314M-,3	14	14	18	84	38	,3	13.13	B	36994-00-D	36994-86-D
TT-RN-314M-1	14	14	18	84	38	1	13.13	B	36995-00-D	36995-86-D
TT-RN-M-314M-,3	14	14	18	100	60	,3	13.13	B	36996-00-D	36996-86-D
TT-RN-M-314M-1	14	14	18	100	60	1	13.13	B	36997-00-D	36997-86-D
TT-ST-316M-1	16	16	22	83		1		A	36999-00-D	36999-86-D
TT-ST-316M-2	16	16	22	83		2		A	37000-00-D	37000-86-D
TT-316M-1	16	16	32	93		1		A	37001-00-D	37001-86-D
TT-316M-2	16	16	32	93		2		A	37003-00-D	37003-86-D
TT-RN-316M-1	16	16	22	93	44	1	15.03	B	37005-00-D	37005-86-D
TT-RN-316M-2	16	16	22	93	44	2	15.03	B	37007-00-D	37007-86-D
TT-RN-M-316M-1	16	16	22	130	75	1	15.03	B	37008-00-D	37008-86-D
TT-RN-M-316M-2	16	16	22	130	75	2	15.03	B	37009-00-D	37009-86-D
TT-ST-318M-1	18	18	24	85		1		A	37010-00-D	37010-86-D
TT-ST-318M-2	18	18	24	85		2		A	37011-00-D	37011-86-D
TT-318M-1	18	18	32	93		1		A	37012-00-D	37012-86-D
TT-318M-2	18	18	32	93		2		A	37013-00-D	37013-86-D
TT-RN-318M-1	18	18	24	93	44	1	16.88	B	37014-00-D	37014-86-D
TT-RN-318M-2	18	18	24	93	44	2	16.88	B	37015-00-D	37015-86-D
TT-RN-M-318M-1	18	18	24	130	75	1	16.88	B	37016-00-D	37016-86-D
TT-RN-M-318M-2	18	18	24	130	75	2	16.88	B	37017-00-D	37017-86-D

*LBS/LU Length Below Shank

Continued next page

PATENTED GEOMETRIES

Triple Threat™, Three Flute Rougher/Finisher, Metric

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Radius RE	Neck Dia DN	Style	EDP	C5 EDP
TT-ST-320M-1	20	20	26	93		1		A	37018-00-D	37018-86-D
TT-ST-320M-2	20	20	26	93		2		A	37019-00-D	37019-86-D
TT-320M-1	20	20	38	105		1		A	37020-00-D	37020-86-D
TT-320M-2	20	20	38	105		2		A	37021-00-D	37021-86-D
TT-RN-320M-1	20	20	26	105	54	1	18.76	B	37022-00-D	37022-86-D
TT-RN-320M-2	20	20	26	105	54	2	18.76	B	37023-00-D	37023-86-D
TT-RN-M-320M-1	20	20	26	150	96	1	18.76	B	37024-00-D	37024-86-D
TT-RN-M-320M-2	20	20	26	150	96	2	18.76	B	37025-00-D	37025-86-D
TT-ST-325M-1	25	25	38	104		1		A	37026-00-D	37026-86-D
TT-ST-325M-2	25	25	38	104		2		A	37027-00-D	37027-86-D
TT-325M-1	25	25	45	120		1		A	37028-00-D	37028-86-D
TT-325M-2	25	25	45	120		2		A	37029-00-D	37029-86-D
TT-RN-325M-1	25	25	38	120	64	1	24.00	B	37030-00-D	37030-86-D
TT-RN-325M-2	25	25	38	120	64	2	24.00	B	37031-00-D	37031-86-D
TT-RN-M-325M-1	25	25	38	150	96	1	24.00	B	37032-00-D	37032-86-D
TT-RN-M-325M-2	25	25	38	150	96	2	24.00	B	37033-00-D	37033-86-D

*LBS/LU Length Below Shank

PATENTED GEOMETRIES

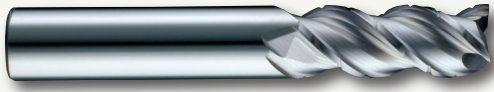
For speeds and feeds please visit www.dataflute.com and use the Recommended Cutting Parameters calculator

Triple Threat

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Triple Threat™, Three Flute Rougher/Finisher, With Chip Breakers, Inch High Performance Carbide



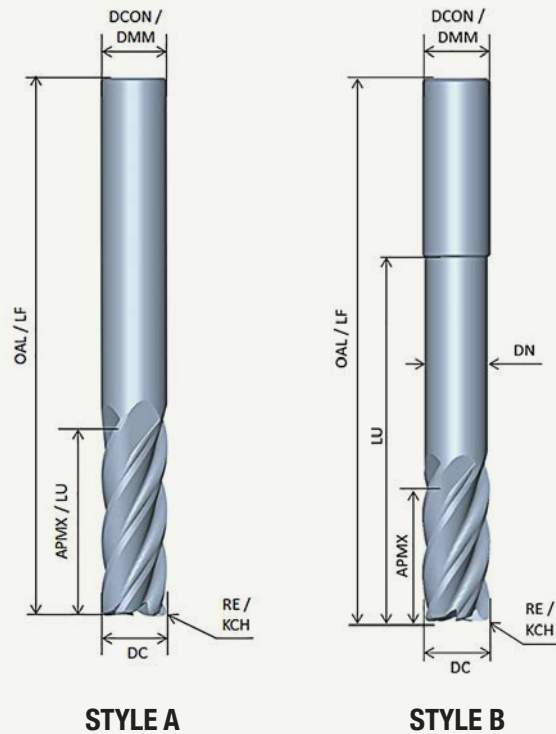
The Triple Threat™ tool is a multi-patented three flute high performance carbide end mill designed to finish and rough in aluminum and non-ferrous metals. The high shear, 45 degree helix and improved inter-flute geometries enhanced chip evacuation and permit increased chip loads as well as aggressive feed rates.

MAIN CHARACTERISTICS

- Flute Count (NOF): 3
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Chip Breakers

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): -0.0001"/-0.0004"
- Corner Radius (RE): +0.001"/-0.001"



WORK MATERIAL

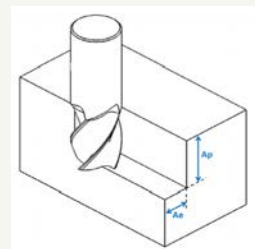
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COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	80%DC < ≤ 100%DC	40%DC < ≤ 80%DC	25%DC < ≤ 40%DC	5%DC < ≤ 25%DC	≤ 5%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC	APMX



Triple Threat™, Three Flute Rougher/Finisher, With Chip Breakers, Inch High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Radius RE	Neck Dia DN	Style	EDP	C5 EDP
TT-C-ST-30250-000	1/4	1/4	3/8	2				A	37034-00-D	37034-86-D
TT-C-ST-30250-020	1/4	1/4	3/8	2		.020		A	37035-00-D	37035-86-D
TT-C-30250-000	1/4	1/4	3/4	2-1/2				A	37036-00-D	37036-86-D
TT-C-30250-020	1/4	1/4	3/4	2-1/2		.020		A	37037-00-D	37037-86-D
TT-C-RN-30250-000	1/4	1/4	3/8	2-1/2	1-1/8		.235	B	37038-00-D	37038-86-D
TT-C-RN-30250-020	1/4	1/4	3/8	2-1/2	1-1/8	.020	.235	B	37039-00-D	37039-86-D
TT-C-RN-M-30250-000	1/4	1/4	3/8	4	2-1/8		.235	B	37040-00-D	37040-86-D
TT-C-RN-M-30250-020	1/4	1/4	3/8	4	2-1/8	.020	.235	B	37041-00-D	37041-86-D
TT-C-ST-30312-000	5/16	5/16	7/16	2-1/2				A	37042-00-D	37042-86-D
TT-C-ST-30312-020	5/16	5/16	7/16	2-1/2		.020		A	37043-00-D	37043-86-D
TT-C-30312-000	5/16	5/16	13/16	2-1/2				A	37044-00-D	37044-86-D
TT-C-30312-020	5/16	5/16	13/16	2-1/2		.020		A	37045-00-D	37045-86-D
TT-C-RN-30312-000	5/16	5/16	7/16	2-1/2	1-1/8		.297	B	37046-00-D	37046-86-D
TT-C-RN-30312-020	5/16	5/16	7/16	2-1/2	1-1/8	.020	.297	B	37047-00-D	37047-86-D
TT-C-RN-M-30312-000	5/16	5/16	7/16	4	2-1/8		.297	B	37048-00-D	37048-86-D
TT-C-RN-M-30312-020	5/16	5/16	7/16	4	2-1/8	.020	.297	B	37049-00-D	37049-86-D
TT-C-ST-30375-000	3/8	3/8	1/2	2-1/2				A	37050-00-D	37050-86-D
TT-C-ST-30375-020	3/8	3/8	1/2	2-1/2		.020		A	37051-00-D	37051-86-D
TT-C-30375-000	3/8	3/8	1	2-1/2				A	37052-00-D	37052-86-D
TT-C-30375-020	3/8	3/8	1	2-1/2		.020		A	37053-00-D	37053-86-D
TT-C-RN-30375-000	3/8	3/8	1/2	2-1/2	1-1/8		.355	B	37054-00-D	37054-86-D
TT-C-RN-30375-020	3/8	3/8	1/2	2-1/2	1-1/8	.020	.355	B	37055-00-D	37055-86-D
TT-C-RN-M-30375-000	3/8	3/8	1/2	4	2-1/8		.355	B	37056-00-D	37056-86-D
TT-C-RN-M-30375-020	3/8	3/8	1/2	4	2-1/8	.020	.355	B	37057-00-D	37057-86-D
TT-C-ST-30500-000	1/2	1/2	5/8	3				A	37058-00-D	37058-86-D
TT-C-ST-30500-030	1/2	1/2	5/8	3		.030		A	37059-00-D	37059-86-D
TT-C-30500-000	1/2	1/2	1-1/4	3				A	37060-00-D	37060-86-D
TT-C-30500-030	1/2	1/2	1-1/4	3		.030		A	37061-00-D	37061-86-D
TT-C-RN-30500-000	1/2	1/2	5/8	3	1-3/8		.475	B	37062-00-D	37062-86-D
TT-C-RN-30500-030	1/2	1/2	5/8	3	1-3/8	.030	.475	B	37063-00-D	37063-86-D
TT-C-RN-M-30500-000	1/2	1/2	5/8	4	2-1/8		.475	B	37064-00-D	37064-86-D
TT-C-RN-M-30500-030	1/2	1/2	5/8	4	2-1/8	.030	.475	B	37065-00-D	37065-86-D

*LBS/LU Length Below Shank

Continued next page

PATENTED GEOMETRIES

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Triple Threat™, Three Flute Rougher/Finisher, With Chip Breakers, Inch High Performance Carbide

Triple Threat-C

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Radius RE	Neck Dia DN	Style	EDP	C5 EDP
TT-C-ST-30625-000	5/8	5/8	3/4	3				A	37066-00-D	37066-86-D
TT-C-ST-30625-030	5/8	5/8	3/4	3		.030		A	37067-00-D	37067-86-D
TT-C-30625-000	5/8	5/8	1-5/8	3-1/2				A	37068-00-D	37068-86-D
TT-C-30625-030	5/8	5/8	1-5/8	3-1/2		.030		A	37069-00-D	37069-86-D
TT-C-RN-30625-000	5/8	5/8	3/4	4	1-5/8		.590	B	37070-00-D	37070-86-D
TT-C-RN-30625-030	5/8	5/8	3/4	4	1-5/8	.030	.590	B	37071-00-D	37071-86-D
TT-C-RN-M-30625-000	5/8	5/8	3/4	6	2-3/8		.590	B	37072-00-D	37072-86-D
TT-C-RN-M-30625-030	5/8	5/8	3/4	6	2-3/8	.030	.590	B	37073-00-D	37073-86-D
TT-C-ST-30750-000	3/4	3/4	1	3				A	37074-00-D	37074-86-D
TT-C-ST-30750-030	3/4	3/4	1	3		.030		A	37075-00-D	37075-86-D
TT-C-30750-000	3/4	3/4	1-5/8	4				A	37076-00-D	37076-86-D
TT-C-30750-030	3/4	3/4	1-5/8	4		.030		A	37077-00-D	37077-86-D
TT-C-RN-30750-000	3/4	3/4	1	4	2		.715	B	37078-00-D	37078-86-D
TT-C-RN-30750-030	3/4	3/4	1	4	2	.030	.715	B	37079-00-D	37079-86-D
TT-C-RN-M-30750-000	3/4	3/4	1	6	2-5/8		.715	B	37080-00-D	37080-86-D
TT-C-RN-M-30750-030	3/4	3/4	1	6	2-5/8	.030	.715	B	37081-00-D	37081-86-D
TT-C-ST-31000-000	1	1	1-1/4	4				A	37082-00-D	37082-86-D
TT-C-ST-31000-030	1	1	1-1/4	4		.030		A	37083-00-D	37083-86-D
TT-C-31000-000	1	1	2	5				A	37084-00-D	37084-86-D
TT-C-31000-030	1	1	2	5		.030		A	37085-00-D	37085-86-D
TT-C-RN-31000-000	1	1	1-1/4	5	2-5/8		.960	B	37086-00-D	37086-86-D
TT-C-RN-31000-030	1	1	1-1/4	5	2-5/8	.030	.960	B	37087-00-D	37087-86-D
TT-C-RN-M-31000-000	1	1	1-1/4	7	3-5/8		.960	B	37088-00-D	37088-86-D
TT-C-RN-M-31000-030	1	1	1-1/4	7	3-5/8	.030	.960	B	37089-00-D	37089-86-D

*LBS/LU Length Below Shank

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Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Radius RE	Neck Dia DN	Style	EDP	C5 EDP
TT-C-ST-306M-,3	6	6	10	55		,3		A	37090-00-D	37090-86-D
TT-C-306M-3	6	6	20	58		,3		A	37091-00-D	37091-86-D
TT-C-RN-306M-,3	6	6	10	58	21	,3	5.48	B	37092-00-D	37092-86-D
TT-C-RN-M-306M-,3	6	6	10	80	44	,3	5.48	B	37093-00-D	37093-86-D
TT-C-ST-308M-,3	8	8	12	59		,3		A	37094-00-D	37094-86-D
TT-C-ST-308M-1	8	8	12	59		1		A	37095-00-D	37095-86-D
TT-C-308M-,3	8	8	22	64		,3		A	37096-00-D	37096-86-D
TT-C-308M-1	8	8	22	64		1		A	37097-00-D	37097-86-D
TT-C-RN-308M-,3	8	8	12	64	27	,3	7.59	B	37098-00-D	37098-86-D
TT-C-RN-308M-1	8	8	12	64	27	1	7.59	B	37099-00-D	37099-86-D
TT-C-RN-M-308M-,3	8	8	12	100	54	,3	7.59	B	37100-00-D	37100-86-D
TT-C-RN-M-308M-1	8	8	12	100	54	1	7.59	B	37101-00-D	37101-86-D
TT-C-ST-310M-,3	10	10	14	67		,3		A	37103-00-D	37103-86-D
TT-C-ST-310M-1	10	10	14	67		1		A	37105-00-D	37105-86-D
TT-C-310M-,3	10	10	25	73		,3		A	37107-00-D	37107-86-D
TT-C-310M-1	10	10	25	73		1		A	37108-00-D	37108-86-D
TT-C-RN-310M-,3	10	10	14	73	32	,3	9.47	B	37109-00-D	37109-86-D
TT-C-RN-310M-1	10	10	14	73	32	1	9.47	B	37110-00-D	37110-86-D
TT-C-RN-M-310M-,3	10	10	14	100	60	,3	9.47	B	37111-00-D	37111-86-D
TT-C-RN-M-310M-1	10	10	14	100	60	1	9.47	B	37112-00-D	37112-86-D
TT-C-ST-312M-,3	12	12	16	74		,3		A	37113-00-D	37113-86-D
TT-C-ST-312M-1	12	12	16	74		1		A	37114-00-D	37114-86-D
TT-C-312M-,3	12	12	26	84		,3		A	37115-00-D	37115-86-D
TT-C-312M-1	12	12	26	84		1		A	37116-00-D	37116-86-D
TT-C-RN-312M-,3	12	12	16	84	38	,3	11.22	B	37117-00-D	37117-86-D
TT-C-RN-312M-1	12	12	16	84	38	1	11.22	B	37118-00-D	37118-86-D
TT-C-RN-M-312M-,3	12	12	16	100	60	,3	11.22	B	37119-00-D	37119-86-D
TT-C-RN-M-312M-1	12	12	16	100	60	1	11.22	B	37120-00-D	37120-86-D
TT-C-ST-314M-,3	14	14	18	76		,3		A	37121-00-D	37121-86-D
TT-C-ST-314M-1	14	14	18	76		1		A	37122-00-D	37122-86-D
TT-C-314M-,3	14	14	26	84		,3		A	37123-00-D	37123-86-D
TT-C-314M-1	14	14	26	84		1		A	37124-00-D	37124-86-D
TT-C-RN-314M-,3	14	14	18	84	36	,3	13.13	B	37125-00-D	37125-86-D
TT-C-RN-314M-1	14	14	18	84	36	1	13.13	B	37126-00-D	37126-86-D
TT-C-RN-M-314M-,3	14	14	18	100	44	,3	13.13	B	37127-00-D	37127-86-D
TT-C-RN-M-314M-1	14	14	18	100	44	1	13.13	B	37128-00-D	37128-86-D
TT-C-ST-316M-1	16	16	22	83		1		A	37129-00-D	37129-86-D
TT-C-ST-316M-2	16	16	22	83		2		A	37130-00-D	37130-86-D
TT-C-316M-1	16	16	32	93		1		A	37131-00-D	37131-86-D
TT-C-316M-2	16	16	32	93		2		A	37132-00-D	37132-86-D
TT-C-RN-316M-1	16	16	22	93	44	1	15.03	B	37133-00-D	37133-86-D
TT-C-RN-316M-2	16	16	22	93	44	2	15.03	B	37134-00-D	37134-86-D
TT-C-RN-M-316M-1	16	16	22	130	75	1	15.03	B	37135-00-D	37135-86-D
TT-C-RN-M-316M-2	16	16	22	130	75	2	15.03	B	37136-00-D	37136-86-D
TT-C-ST-318M-1	18	18	24	85		1		A	37137-00-D	37137-86-D
TT-C-ST-318M-2	18	18	24	85		2		A	37138-00-D	37138-86-D
TT-C-318M-1	18	18	32	93		1		A	37139-00-D	37139-86-D
TT-C-318M-2	18	18	32	93		2		A	37140-00-D	37140-86-D
TT-C-RN-318M-1	18	18	24	93	44	1	16.88	B	37141-00-D	37141-86-D
TT-C-RN-318M-2	18	18	24	93	44	2	16.88	B	37142-00-D	37142-86-D
TT-C-RN-M-318M-1	18	18	24	130	75	1	16.88	B	37143-00-D	37143-86-D
TT-C-RN-M-318M-2	18	18	24	130	75	2	16.88	B	37144-00-D	37144-86-D
TT-C-ST-320M-1	20	20	26	93		1		A	37145-00-D	37145-86-D
TT-C-ST-320M-2	20	20	26	93		2		A	37146-00-D	37146-86-D
TT-C-320M-1	20	20	38	105		1		A	37147-00-D	37147-86-D
TT-C-320M-2	20	20	38	105		2		A	37148-00-D	37148-86-D
TT-C-RN-320M-1	20	20	26	105	54	1	18.76	B	37149-00-D	37149-86-D
TT-C-RN-320M-2	20	20	26	105	54	2	18.76	B	37150-00-D	37150-86-D
TT-C-RN-M-320M-1	20	20	26	150	96	1	18.76	B	37151-00-D	37151-86-D
TT-C-RN-M-320M-2	20	20	26	150	96	2	18.76	B	37152-00-D	37152-86-D
TT-C-ST-325M-1	25	25	38	104		1		A	37153-00-D	37153-86-D
TT-C-ST-325M-2	25	25	38	104		2		A	37154-00-D	37154-86-D
TT-C-325M-1	25	25	45	120		1		A	37155-00-D	37155-86-D
TT-C-325M-2	25	25	45	120		2		A	37156-00-D	37156-86-D
TT-C-RN-325M-1	25	25	38	120	64	1	24.00	B	37157-00-D	37157-86-D
TT-C-RN-325M-2	25	25	38	120	64	2	24.00	B	37158-00-D	37158-86-D
TT-C-RN-M-325M-1	25	25	38	150	96	1	24.00	B	37159-00-D	37159-86-D
TT-C-RN-M-325M-2	25	25	38	150	96	2	24.00	B	37160-00-D	37160-86-D

*LBS/LU Length Below Shank

For speeds and feeds please visit www.dataflute.com and use the Recommended Cutting Parameters calculator

Triple Threat-C

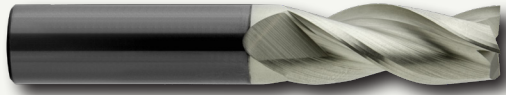
TT & TT-C Speeds & Chip Loads

TT & TT-C

			Speeds	1600	1600	600	900	1100	1500
			v [sfm]	MAX	MAX	1000	1300	1500	MAX
			AL Alloys	AL Cast	AL High Si	Brass	Copper	Magnesium	
					> 12% Si				
1/4	Slotting	[S]	0.0030	0.0030	0.0016	0.0023	0.0023	0.0030	
	Heavy Peripheral	[HP]	0.0038	0.0038	0.0020	0.0028	0.0028	0.0038	
	Peripheral	[P]	0.0042	0.0042	0.0021	0.0031	0.0031	0.0042	
	Light Peripheral	[LP]	0.0053	0.0053	0.0028	0.0040	0.0040	0.0053	
	Finishing	[F]	0.0087	0.0087	0.0045	0.0065	0.0065	0.0087	
5/16	Slotting	[S]	0.0038	0.0038	0.0020	0.0028	0.0028	0.0038	
	Heavy Peripheral	[HP]	0.0048	0.0048	0.0025	0.0035	0.0035	0.0048	
	Peripheral	[P]	0.0052	0.0052	0.0027	0.0039	0.0039	0.0052	
	Light Peripheral	[LP]	0.0067	0.0067	0.0034	0.0050	0.0050	0.0067	
	Finishing	[F]	0.0109	0.0109	0.0056	0.0081	0.0081	0.0109	
3/8	Slotting	[S]	0.0046	0.0046	0.0024	0.0034	0.0034	0.0046	
	Heavy Peripheral	[HP]	0.0057	0.0057	0.0030	0.0043	0.0043	0.0057	
	Peripheral	[P]	0.0062	0.0062	0.0032	0.0046	0.0046	0.0062	
	Light Peripheral	[LP]	0.0080	0.0080	0.0041	0.0060	0.0060	0.0080	
	Finishing	[F]	0.0131	0.0131	0.0068	0.0098	0.0098	0.0131	
1/2	Slotting	[S]	0.0061	0.0061	0.0032	0.0045	0.0045	0.0061	
	Heavy Peripheral	[HP]	0.0076	0.0076	0.0039	0.0057	0.0057	0.0076	
	Peripheral	[P]	0.0083	0.0083	0.0043	0.0062	0.0062	0.0083	
	Light Peripheral	[LP]	0.0107	0.0107	0.0055	0.0079	0.0079	0.0107	
	Finishing	[F]	0.0175	0.0175	0.0090	0.0130	0.0130	0.0175	
5/8	Slotting	[S]	0.0076	0.0076	0.0039	0.0057	0.0057	0.0076	
	Heavy Peripheral	[HP]	0.0095	0.0095	0.0049	0.0071	0.0071	0.0095	
	Peripheral	[P]	0.0104	0.0104	0.0054	0.0077	0.0077	0.0104	
	Light Peripheral	[LP]	0.0133	0.0133	0.0069	0.0099	0.0099	0.0133	
	Finishing	[F]	0.0218	0.0218	0.0113	0.0163	0.0163	0.0218	
3/4	Slotting	[S]	0.0091	0.0091	0.0047	0.0068	0.0068	0.0091	
	Heavy Peripheral	[HP]	0.0114	0.0114	0.0059	0.0085	0.0085	0.0114	
	Peripheral	[P]	0.0125	0.0125	0.0064	0.0093	0.0093	0.0125	
	Light Peripheral	[LP]	0.0160	0.0160	0.0083	0.0119	0.0119	0.0160	
	Finishing	[F]	0.0262	0.0262	0.0135	0.0195	0.0195	0.0262	
1	Slotting	[S]	0.0122	0.0122	0.0063	0.0091	0.0091	0.0122	
	Heavy Peripheral	[HP]	0.0152	0.0152	0.0079	0.0113	0.0113	0.0152	
	Peripheral	[P]	0.0166	0.0166	0.0086	0.0124	0.0124	0.0166	
	Light Peripheral	[LP]	0.0213	0.0213	0.0110	0.0159	0.0159	0.0213	
	Finishing	[F]	0.0349	0.0349	0.0181	0.0260	0.0260	0.0349	

ALDH
Three-Flute





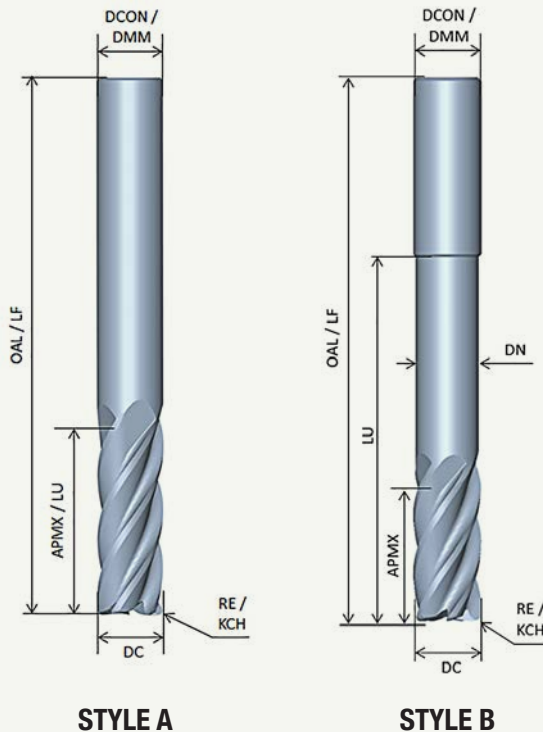
The ALDH is the rougher of choice when optimum material removal rates are the objective. The combination of progressive geometries result in a cutting tool intended for full engagement cuts at increased feed rates. Slotting cuts of 1x the diameter or more are normally recommended. 50% greater IPM versus competitors 2 flute design is a conservative starting point.

MAIN CHARACTERISTICS

- Flute Count (NOF): 3
- Equal Index
- Double Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): $-0.0001''/-0.0004''$
- Corner Radius (RE): $+0.001''/-0.001''$



WORK MATERIAL

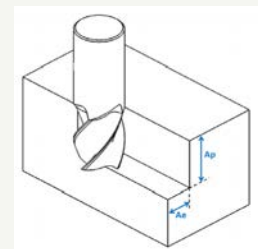


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)
AE	80%DC < \leq 100%DC	40%DC < \leq 80%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC



For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



ALDH, Three Flute

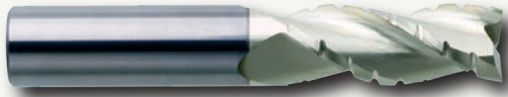
High Performance Carbide

ALDH

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Radius RE	Style	EDP	C4 EDP	C5 EDP
ALDH-ST-30250	1/4	1/4	3/8	2			A	54280-00-D	54280-89-D	54280-86-D
ALDH-30250	1/4	1/4	1/2	2-1/2			A	54281-00-D	54281-89-D	54281-86-D
ALDH-M-30250	1/4	1/4	3/4	3			A	54282-00-D	54282-89-D	54282-86-D
ALDH-RN-ST-30250	1/4	1/4	3/8	2-1/2	3/4		B	54283-00-D	54283-89-D	54283-86-D
ALDH-RN-M-30250	1/4	1/4	3/8	3	1-1/8		B	54284-00-D	54284-89-D	54284-86-D
ALDH-ST-30375	3/8	3/8	1/2	2			A	50501-00-D	50501-89-D	50501-86-D
ALDH-30375	3/8	3/8	3/4	2-1/2			A	50529-00-D	50529-89-D	50529-86-D
ALDH-M-30375	3/8	3/8	1	3			A	54285-00-D	54285-89-D	54285-86-D
ALDH-RN-30375	3/8	3/8	1/2	2-1/2	1-1/8		B	50575-00-D	50575-89-D	50575-86-D
ALDH-RN-30375-020	3/8	3/8	1/2	2-1/2	1-1/8	.020	B	50603-00-D	50603-89-D	50603-86-D
ALDH-RN-M-30375	3/8	3/8	1/2	3-1/2	2-1/8		B	54286-00-D	54286-89-D	54286-86-D
ALDH-ST-30500	1/2	1/2	5/8	2-1/2			A	50506-00-D	50506-89-D	50506-86-D
ALDH-ST-L-30500	1/2	1/2	1	3			A	54287-00-D	54287-89-D	54287-86-D
ALDH-30500	1/2	1/2	1-1/4	3			A	50536-00-D	50536-89-D	50536-86-D
ALDH-RN-30500	1/2	1/2	5/8	3	1-3/8		B	50582-00-D	50582-89-D	50582-86-D
ALDH-RN-30500-030	1/2	1/2	5/8	3	1-3/8	.030	B	50608-00-D	50608-89-D	50608-86-D
ALDH-RN-M-30500	1/2	1/2	5/8	4	2-1/8		B	54288-00-D	54288-89-D	54288-86-D
ALDH-RN-L-30500	1/2	1/2	5/8	6	3-3/8		B	54289-00-D	54289-89-D	54289-86-D
ALDH-ST-30625	5/8	5/8	3/4	3			A	50511-00-D	50511-89-D	50511-86-D
ALDH-ST-L-30625	5/8	5/8	1-1/4	4			A	54290-00-D	54290-89-D	54290-86-D
ALDH-30625	5/8	5/8	1-5/8	4			A	50544-00-D	50544-89-D	50544-86-D
ALDH-RN-30625	5/8	5/8	3/4	4	1-5/8		B	50587-00-D	50587-89-D	50587-86-D
ALDH-RN-30625-030	5/8	5/8	3/4	4	1-5/8	.030	B	50613-00-D	50613-89-D	50613-86-D
ALDH-RN-M-30625	5/8	5/8	3/4	5	2-3/8		B	54291-00-D	54291-89-D	54291-86-D
ALDH-RN-L-30625	5/8	5/8	3/4	6	3-3/8		B	54292-00-D	54292-89-D	54292-86-D
ALDH-ST-30750	3/4	3/4	1	3			A	50516-00-D	50516-89-D	50516-86-D
ALDH-30750	3/4	3/4	1-5/8	4			A	50552-00-D	50552-89-D	50552-86-D
ALDH-M-30750	3/4	3/4	2-1/4	5			A	54293-00-D	54293-89-D	54293-86-D
ALDH-RN-30750	3/4	3/4	1	4	2		B	50592-00-D	50592-89-D	50592-86-D
ALDH-RN-30750-030	3/4	3/4	1	4	2	.030	B	50618-00-D	50618-89-D	50618-86-D
ALDH-RN-M-30750	3/4	3/4	1	5	2-1/2		B	54294-00-D	54294-89-D	54294-86-D
ALDH-RN-L-30750	3/4	3/4	1	6	3-3/8		B	54295-00-D	54295-89-D	54295-86-D
ALDH-ST-31000	1	1	1-1/4	4			A	50523-00-D	50523-89-D	50523-86-D
ALDH-31000	1	1	1-3/4	4			A	50562-00-D	50562-89-D	50562-86-D
ALDH-M-31000	1	1	2-1/4	6			A	54297-00-D	54297-89-D	54297-86-D
ALDH-RN-31000	1	1	1-1/4	5	2		B	50597-00-D	50597-89-D	50597-86-D
ALDH-RN-31000-030	1	1	1-1/4	5	2	.030	B	50624-00-D	50624-89-D	50624-86-D
ALDH-RN-M-31000	1	1	1-1/4	5	2-5/8		B	54298-00-D	54298-89-D	54298-86-D
ALDH-RN-L-31000	1	1	1-1/4	6	3-3/8		B	54299-00-D	54299-89-D	54299-86-D
ALDH-RN-X-31000	1	1	1-1/4	7	4-3/8		B	54300-00-D	54300-89-D	54300-86-D

*LBS/LU Length Below Shank

PATENTED GEOMETRIES



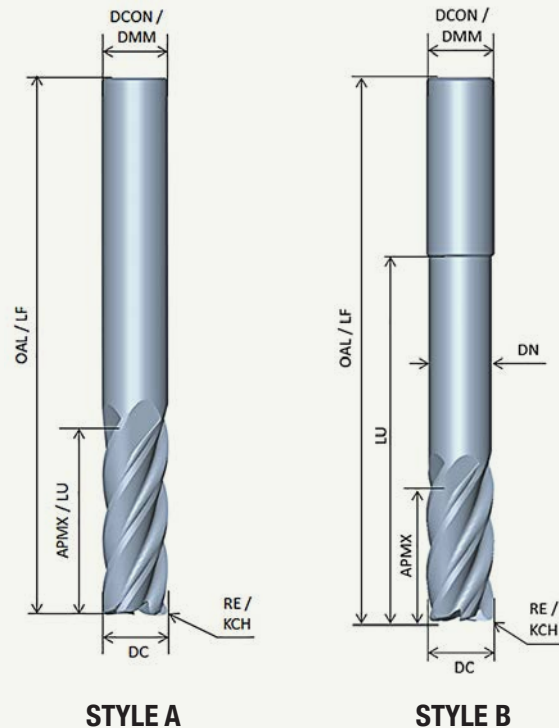
ALDH-C series combines the performance of the ALDH series with a truncated knuckle form to manage chips and Horse Power. It is designed for freer cutting without sacrificing work piece surface finishes. This unique O.D. form also aids in chip control and management in gummy, non-ferrous materials. The tools are available from stock in stub and standard lengths with coatings to match your particular applications.

MAIN CHARACTERISTICS

- Flute Count (NOF): 3
- Equal Index
- Double Helix
- Center Cutting
- RH-C / RH-H
- Chip Breakers

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): $-0.0001''/-0.0004''$
- Corner Radius (RE): $+0.001''/-0.001''$



WORK MATERIAL

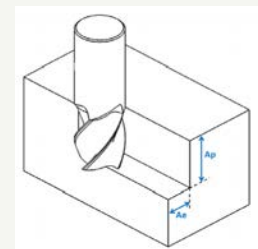


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)
AE	80%DC < \leq 100%DC	40%DC < \leq 80%DC	25%DC < \leq 40%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC



For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



ALDH-C, Three Flute

High Performance Carbide

ALDH-C

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Radius RE	Style	EDP	C4 EDP	C5 EDP
ALDH-ST-C-30250	1/4	1/4	3/8	2			A	54301-00-D	54301-89-D	54301-86-D
ALDH-C-30250	1/4	1/4	1/2	2-1/2			A	54302-00-D	54302-89-D	54302-86-D
ALDH-M-C-30250	1/4	1/4	3/4	3			A	54303-00-D	54303-89-D	54303-86-D
ALDH-RN-ST-C-30250	1/4	1/4	3/8	2-1/2	3/4		B	54304-00-D	54304-89-D	54304-86-D
ALDH-RN-M-C-30250	1/4	1/4	3/8	3	1-1/8		B	54306-00-D	54306-89-D	54306-86-D
ALDH-ST-C-30375	3/8	3/8	1/2	2			A	50631-00-D	50631-89-D	50631-86-D
ALDH-C-30375	3/8	3/8	3/4	2-1/2			A	50647-00-D	50647-89-D	50647-86-D
ALDH-M-C-30375	3/8	3/8	1	3			A	54307-00-D	54307-89-D	54307-86-D
ALDH-RN-C-30375	3/8	3/8	1/2	2-1/2	1-1/8		B	50663-00-D	50663-89-D	50663-86-D
ALDH-RN-C-30375-020	3/8	3/8	1/2	2-1/2	1-1/8	.020	B	50678-00-D	50678-89-D	50678-86-D
ALDH-RN-M-C-30375	3/8	3/8	1/2	3-1/2	2-1/8		B	54308-00-D	54308-89-D	54308-86-D
ALDH-ST-C-30500	1/2	1/2	5/8	2-1/2			A	50634-00-D	50634-89-D	50634-86-D
ALDH-STL-C-30500	1/2	1/2	1	3			A	54309-00-D	54309-89-D	54309-86-D
ALDH-C-30500	1/2	1/2	1-1/4	3			A	50651-00-D	50651-89-D	50651-86-D
ALDH-RN-C-30500	1/2	1/2	5/8	3	1-3/8		B	50666-00-D	50666-89-D	50666-86-D
ALDH-RN-C-30500-030	1/2	1/2	5/8	3	1-3/8	.030	B	50681-00-D	50681-89-D	50681-86-D
ALDH-RN-M-C-30500	1/2	1/2	5/8	4	2-1/8		B	54310-00-D	54310-89-D	54310-86-D
ALDH-RN-L-C-30500	1/2	1/2	5/8	6	3-3/8		B	54311-00-D	54311-89-D	54311-86-D
ALDH-ST-C-30625	5/8	5/8	3/4	3			A	50637-00-D	50637-89-D	50637-86-D
ALDH-STL-C-30625	5/8	5/8	1-1/4	4			A	54312-00-D	54312-89-D	54312-86-D
ALDH-C-30625	5/8	5/8	1-5/8	4			A	50654-00-D	50654-89-D	50654-86-D
ALDH-RN-C-30625	5/8	5/8	3/4	4	1-5/8		B	50669-00-D	50669-89-D	50669-86-D
ALDH-RN-C-30625-030	5/8	5/8	3/4	4	1-5/8	.030	B	50684-00-D	50684-89-D	50684-86-D
ALDH-RN-M-C-30625	5/8	5/8	3/4	5	2-3/8		B	54313-00-D	54313-89-D	54313-86-D
ALDH-RN-L-C-30625	5/8	5/8	3/4	6	3-3/8		B	54314-00-D	54314-89-D	54314-86-D
ALDH-ST-C-30750	3/4	3/4	1	3			A	50641-00-D	50641-89-D	50641-86-D
ALDH-C-30750	3/4	3/4	1-5/8	4			A	50657-00-D	50657-89-D	50657-86-D
ALDH-M-C-30750	3/4	3/4	2-1/4	5			A	54315-00-D	54315-89-D	54315-86-D
ALDH-RN-C-30750	3/4	3/4	1	4	2		B	50672-00-D	50672-89-D	50672-86-D
ALDH-RN-C-30750-030	3/4	3/4	1	4	2	.030	B	50688-00-D	50688-89-D	50688-86-D
ALDH-RN-M-C-30750	3/4	3/4	1	5	2-1/2		B	54317-00-D	54317-89-D	54317-86-D
ALDH-RN-L-C-30750	3/4	3/4	1	6	3-3/8		B	54318-00-D	54318-89-D	54318-86-D
ALDH-ST-C-31000	1	1	1-1/4	4			A	50644-00-D	50644-89-D	50644-86-D
ALDH-C-31000	1	1	1-3/4	4			A	50660-00-D	50660-89-D	50660-86-D
ALDH-M-C-31000	1	1	2-1/4	6			A	54319-00-D	54319-89-D	54319-86-D
ALDH-RN-C-31000	1	1	1-1/4	5	2		B	50675-00-D	50675-89-D	50675-86-D
ALDH-RN-C-31000-030	1	1	1-1/4	5	2	.030	B	50691-00-D	50691-89-D	50691-86-D
ALDH-RN-M-C-31000	1	1	1-1/4	5	2-5/8		B	54320-00-D	54320-89-D	54320-86-D
ALDH-RN-L-C-31000	1	1	1-1/4	6	3-3/8		B	54321-00-D	54321-89-D	54321-86-D
ALDH-RN-X-C-31000	1	1	1-1/4	7	4-3/8		B	54322-00-D	54322-89-D	54322-86-D

*LBS/LU Length Below Shank

PATENTED GEOMETRIES

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ALDH & ALDH-C Speeds & Chip Loads

Speeds v [sfm]			1600 MAX	1600 MAX	600 1000	900 1300	1100 1500	1500 MAX
			AL Alloys	AL Cast	AL High Si > 12% Si	Brass	Copper	Magnesium
1/4	Slotting	[S]	0.0032	0.0032	0.0017	0.0024	0.0024	0.0032
	Heavy Peripheral	[HP]	0.0040	0.0040	0.0021	0.0030	0.0030	0.0040
	Peripheral	[P]	0.0044	0.0044	0.0023	0.0032	0.0032	0.0044
3/8	Slotting	[S]	0.0048	0.0048	0.0025	0.0036	0.0036	0.0048
	Heavy Peripheral	[HP]	0.0060	0.0060	0.0031	0.0045	0.0045	0.0060
	Peripheral	[P]	0.0065	0.0065	0.0034	0.0049	0.0049	0.0065
1/2	Slotting	[S]	0.0064	0.0064	0.0033	0.0048	0.0048	0.0064
	Heavy Peripheral	[HP]	0.0080	0.0080	0.0041	0.0059	0.0059	0.0080
	Peripheral	[P]	0.0087	0.0087	0.0045	0.0065	0.0065	0.0087
5/8	Slotting	[S]	0.0080	0.0080	0.0041	0.0059	0.0059	0.0080
	Heavy Peripheral	[HP]	0.0100	0.0100	0.0052	0.0074	0.0074	0.0100
	Peripheral	[P]	0.0109	0.0109	0.0056	0.0081	0.0081	0.0109
3/4	Slotting	[S]	0.0096	0.0096	0.0050	0.0071	0.0071	0.0096
	Heavy Peripheral	[HP]	0.0120	0.0120	0.0062	0.0089	0.0089	0.0120
	Peripheral	[P]	0.0131	0.0131	0.0068	0.0097	0.0097	0.0131
1	Slotting	[S]	0.0128	0.0128	0.0066	0.0095	0.0095	0.0128
	Heavy Peripheral	[HP]	0.0160	0.0160	0.0083	0.0119	0.0119	0.0160
	Peripheral	[P]	0.0174	0.0174	0.0090	0.0130	0.0130	0.0174

ARF

Two Flute/Ball Nose





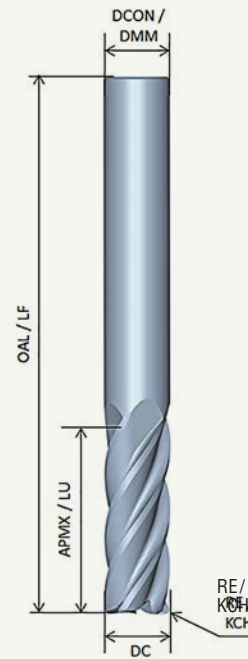
The ARF Series is a time-honored workhorse in our aluminum cutting tool family. Designed as a 2 flute, rougher/finisher, this tool can pull “double duty” in your aluminum and non-ferrous applications. The high helix angle provides exceptional shearing action and chip removal. Available in lengths ranging from stub for aggressive roughing, to extended lengths for tall side milling cuts.

MAIN CHARACTERISTICS

- Flute Count (NOF): 2
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h6
- Cutting Diameter (DC): $-0.0001''/-0.0004''$
- Corner Radius (RE): $+0.001''/-0.001''$



STYLE A

WORK MATERIAL

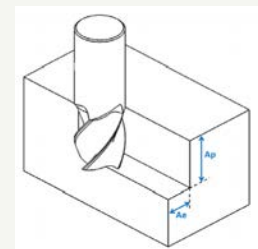


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)
AE	80%DC < \leq 100%DC	40%DC < \leq 80%DC	25%DC < \leq 40%DC	5%DC < \leq 25%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC



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ARF, Two Flute Series

High Performance Carbide

ARF

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	Style	EDP	C4 EDP	C5 EDP
ARF-ST-20125	1/8	1/8	1/4	1-1/2	A	32821-00-D	32821-89-D	32821-86-D
ARF-20125	1/8	1/8	3/8	1-1/2	A	32588-00-D	32588-89-D	32588-86-D
ARF-ST-20156	5/32	3/16	5/16	2	A	32829-00-D	32829-89-D	32829-86-D
ARF-20156	5/32	3/16	9/16	2	A	32596-00-D	32596-89-D	32596-86-D
ARF-ST-20187	3/16	3/16	5/16	2	A	32837-00-D	32837-89-D	32837-86-D
ARF-20187	3/16	3/16	9/16	2	A	32604-00-D	32604-89-D	32604-86-D
ARF-ST-20218	7/32	1/4	3/8	2-1/2	A	32845-00-D	32845-89-D	32845-86-D
ARF-20218	7/32	1/4	3/4	2-1/2	A	32612-00-D	32612-89-D	32612-86-D
ARF-ST-20250	1/4	1/4	3/8	2-1/2	A	32853-00-D	32853-89-D	32853-86-D
ARF-20250	1/4	1/4	3/4	2-1/2	A	32620-00-D	32620-89-D	32620-86-D
ARF-L-20250	1/4	1/4	1-1/4	3-1/4	A	32741-00-D	32741-89-D	32741-86-D
ARF-ST-20281	9/32	5/16	7/16	2-1/2	A	32861-00-D	32861-89-D	32861-86-D
ARF-20281	9/32	5/16	13/16	2-1/2	A	32628-00-D	32628-89-D	32628-86-D
ARF-ST-20312	5/16	5/16	7/16	2-1/2	A	32869-00-D	32869-89-D	32869-86-D
ARF-20312	5/16	5/16	13/16	2-1/2	A	32636-00-D	32636-89-D	32636-86-D
ARF-L-20312	5/16	5/16	1-1/4	3-1/2	A	32749-00-D	32749-89-D	32749-86-D
ARF-X-20312	5/16	5/16	2-1/8	4	A	32949-00-D	32949-89-D	32949-86-D
ARF-ST-20343	11/32	3/8	1/2	2-1/2	A	32877-00-D	32877-89-D	32877-86-D
ARF-20343	11/32	3/8	1	2-1/2	A	32644-00-D	32644-89-D	32644-86-D
ARF-ST-20375	3/8	3/8	1/2	2-1/2	A	32885-00-D	32885-89-D	32885-86-D
ARF-20375	3/8	3/8	1	2-1/2	A	32652-00-D	32652-89-D	32652-86-D
ARF-M-20375	3/8	3/8	1-1/4	3	A	51622-00-D	51622-89-D	51622-86-D
ARF-L-20375	3/8	3/8	1-1/2	4	A	32757-00-D	32757-89-D	32757-86-D
ARF-X-20375	3/8	3/8	2-1/2	6	A	32957-00-D	32957-89-D	32957-86-D
ARF-ST-20406	13/32	7/16	9/16	2-3/4	A	32893-00-D	32893-89-D	32893-86-D
ARF-20406	13/32	7/16	1	2-3/4	A	32660-00-D	32660-89-D	32660-86-D
ARF-ST-20437	7/16	7/16	9/16	2-3/4	A	32901-00-D	32901-89-D	32901-86-D
ARF-20437	7/16	7/16	1	2-3/4	A	32668-00-D	32668-89-D	32668-86-D
ARF-L-20437	7/16	7/16	2	4	A	32765-00-D	32765-89-D	32765-86-D
ARF-ST-20468	15/32	1/2	5/8	3	A	32909-00-D	32909-89-D	32909-86-D
ARF-20468	15/32	1/2	1-1/4	3	A	32676-00-D	32676-89-D	32676-86-D
ARF-ST-20500	1/2	1/2	5/8	3	A	32917-00-D	32917-89-D	32917-86-D
ARF-20500	1/2	1/2	1-1/4	3	A	32684-00-D	32684-89-D	32684-86-D
ARF-M-20500	1/2	1/2	1-5/8	4	A	51629-00-D	51629-89-D	51629-86-D
ARF-L-20500	1/2	1/2	2	4	A	32773-00-D	32773-89-D	32773-86-D
ARF-X-20500	1/2	1/2	3-1/8	6	A	32965-00-D	32965-89-D	32965-86-D
ARF-ST-20625	5/8	5/8	3/4	3-1/2	A	32925-00-D	32925-89-D	32925-86-D
ARF-20625	5/8	5/8	1-5/8	3-1/2	A	32692-00-D	32692-89-D	32692-86-D
ARF-M-20625	5/8	5/8	2-1/8	4	A	51636-00-D	51636-89-D	51636-86-D
ARF-L-20625	5/8	5/8	2-1/2	5	A	32781-00-D	32781-89-D	32781-86-D
ARF-X-20625	5/8	5/8	3-3/4	6	A	32973-00-D	32973-89-D	32973-86-D
ARF-ST-20750	3/4	3/4	1	4	A	32933-00-D	32933-89-D	32933-86-D
ARF-20750	3/4	3/4	1-5/8	4	A	32700-00-D	32700-89-D	32700-86-D
ARF-M-20750	3/4	3/4	2-1/4	5	A	32805-00-D	32805-89-D	32805-86-D
ARF-L-20750	3/4	3/4	3-1/4	6	A	32789-00-D	32789-89-D	32789-86-D
ARF-X-20750	3/4	3/4	4	6-1/2	A	32981-00-D	32981-89-D	32981-86-D
ARF-ST-21000	1	1	1-1/4	5	A	32941-00-D	32941-89-D	32941-86-D
ARF-21000	1	1	2	5	A	32708-00-D	32708-89-D	32708-86-D
ARF-M-21000	1	1	2-5/8	6	A	32813-00-D	32813-89-D	32813-86-D
ARF-L-21000	1	1	3-1/4	6	A	32797-00-D	32797-89-D	32797-86-D
ARF-X-21000	1	1	4-1/8	7	A	32989-00-D	32989-89-D	32989-86-D



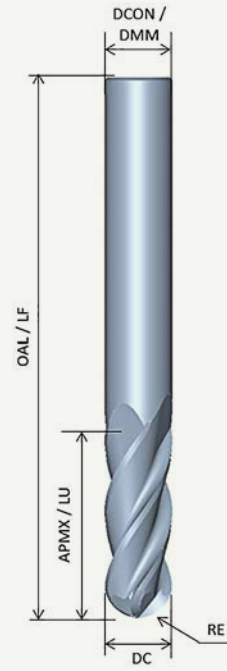
The ARF-BN combines the proven geometry of our ARF two flute series with a precision ground, full, ball-nose radius. The high helix and high clearance angles provide a freer cutting ball with superior shearing properties. The ball nose is also ground with a vibration protection margin. When your non-ferrous applications require contour or 3-D work, the ARF-BN should be your tool of choice.

MAIN CHARACTERISTICS

- Flute Count (NOF): 2
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h6
- Cutting Diameter (DC): $-0.001''/-0.002''$
- Corner Radius (RE): $+0.000''/-0.001''$



STYLE A

WORK MATERIAL

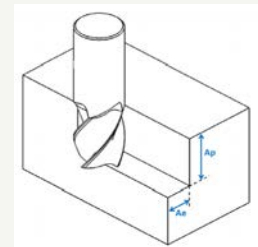


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)
AE	80%DC <= 100%DC	40%DC <= 80%DC	25%DC <= 40%DC	5%DC <= 25%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC



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Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	Style	EDP	C4 EDP	C5 EDP
ARF-BN-ST-20250	1/4	1/4	3/8	2-1/2	A	33424-86-D	33424-00-D	33424-89-D
ARF-BN-20250	1/4	1/4	3/4	2-1/2	A	33360-86-D	33360-00-D	33360-89-D
ARF-BN-ST-20312	5/16	5/16	7/16	2-1/2	A	33432-86-D	33432-00-D	33432-89-D
ARF-BN-20312	5/16	5/16	13/16	2-1/2	A	33368-86-D	33368-00-D	33368-89-D
ARF-BN-ST-20375	3/8	3/8	1/2	2-1/2	A	33440-86-D	33440-00-D	33440-89-D
ARF-BN-20375	3/8	3/8	1	2-1/2	A	33376-86-D	33376-00-D	33376-89-D
ARF-BN-ST-20437	7/16	7/16	9/16	2-3/4	A	33448-86-D	33448-00-D	33448-89-D
ARF-BN-20437	7/16	7/16	1	2-3/4	A	33384-86-D	33384-00-D	33384-89-D
ARF-BN-ST-20500	1/2	1/2	5/8	3	A	33456-86-D	33456-00-D	33456-89-D
ARF-BN-20500	1/2	1/2	1-1/4	3	A	33392-86-D	33392-00-D	33392-89-D
ARF-BN-ST-20625	5/8	5/8	3/4	3-1/2	A	33464-86-D	33464-00-D	33464-89-D
ARF-BN-20625	5/8	5/8	1-5/8	3-1/2	A	33400-86-D	33400-00-D	33400-89-D
ARF-BN-ST-20750	3/4	3/4	1	4	A	33472-86-D	33472-00-D	33472-89-D
ARF-BN-20750	3/4	3/4	1-5/8	4	A	33408-86-D	33408-00-D	33408-89-D
ARF-BN- ST-21000	1	1	1-1/4	5	A	33480-86-D	33480-00-D	33480-89-D
ARF-BN-21000	1	1	2	5	A	33416-86-D	33416-00-D	33416-89-D

ARF & ARF-BN Speeds & Chip Loads

		Speeds v [sfm]	1600 MAX	1600 MAX	600 1000	900 1300	1100 1500	1500 MAX
			AL Alloys	AL Cast	AL High Si > 12% Si	Brass	Copper	Magnesium
1/8	Slotting	[S]	0.0018	0.0018	0.0009	0.0013	0.0013	0.0018
	Heavy Peripheral	[HP]	0.0023	0.0023	0.0011	0.0016	0.0016	0.0023
	Peripheral	[P]	0.0025	0.0025	0.0012	0.0017	0.0017	0.0025
	Light Peripheral	[LP]	0.0032	0.0032	0.0016	0.0022	0.0022	0.0032
3/16	Slotting	[S]	0.0027	0.0027	0.0014	0.0019	0.0019	0.0027
	Heavy Peripheral	[HP]	0.0034	0.0034	0.0017	0.0024	0.0024	0.0034
	Peripheral	[P]	0.0037	0.0037	0.0018	0.0026	0.0026	0.0037
	Light Peripheral	[LP]	0.0047	0.0047	0.0024	0.0034	0.0034	0.0047
1/4	Slotting	[S]	0.0036	0.0036	0.0018	0.0026	0.0026	0.0036
	Heavy Peripheral	[HP]	0.0045	0.0045	0.0023	0.0032	0.0032	0.0045
	Peripheral	[P]	0.0049	0.0049	0.0025	0.0035	0.0035	0.0049
	Light Peripheral	[LP]	0.0063	0.0063	0.0032	0.0045	0.0045	0.0063
5/16	Slotting	[S]	0.0045	0.0045	0.0023	0.0032	0.0032	0.0045
	Heavy Peripheral	[HP]	0.0056	0.0056	0.0028	0.0040	0.0040	0.0056
	Peripheral	[P]	0.0061	0.0061	0.0031	0.0044	0.0044	0.0061
	Light Peripheral	[LP]	0.0079	0.0079	0.0039	0.0056	0.0056	0.0079
3/8	Slotting	[S]	0.0054	0.0054	0.0027	0.0038	0.0038	0.0054
	Heavy Peripheral	[HP]	0.0068	0.0068	0.0034	0.0048	0.0048	0.0068
	Peripheral	[P]	0.0074	0.0074	0.0037	0.0052	0.0052	0.0074
	Light Peripheral	[LP]	0.0095	0.0095	0.0047	0.0067	0.0067	0.0095
7/16	Slotting	[S]	0.0063	0.0063	0.0032	0.0045	0.0045	0.0063
	Heavy Peripheral	[HP]	0.0079	0.0079	0.0039	0.0056	0.0056	0.0079
	Peripheral	[P]	0.0086	0.0086	0.0043	0.0061	0.0061	0.0086
	Light Peripheral	[LP]	0.0110	0.0110	0.0055	0.0078	0.0078	0.0110
1/2	Slotting	[S]	0.0072	0.0072	0.0036	0.0051	0.0051	0.0072
	Heavy Peripheral	[HP]	0.0090	0.0090	0.0045	0.0064	0.0064	0.0090
	Peripheral	[P]	0.0098	0.0098	0.0049	0.0070	0.0070	0.0098
	Light Peripheral	[LP]	0.0126	0.0126	0.0063	0.0090	0.0090	0.0126
5/8	Slotting	[S]	0.0090	0.0090	0.0045	0.0064	0.0064	0.0090
	Heavy Peripheral	[HP]	0.0113	0.0113	0.0056	0.0080	0.0080	0.0113
	Peripheral	[P]	0.0123	0.0123	0.0061	0.0087	0.0087	0.0123
	Light Peripheral	[LP]	0.0158	0.0158	0.0079	0.0112	0.0112	0.0158
3/4	Slotting	[S]	0.0108	0.0108	0.0054	0.0077	0.0077	0.0108
	Heavy Peripheral	[HP]	0.0135	0.0135	0.0068	0.0096	0.0096	0.0135
	Peripheral	[P]	0.0147	0.0147	0.0074	0.0105	0.0105	0.0147
	Light Peripheral	[LP]	0.0189	0.0189	0.0095	0.0134	0.0134	0.0189
1	Slotting	[S]	0.0144	0.0144	0.0072	0.0102	0.0102	0.0144
	Heavy Peripheral	[HP]	0.0180	0.0180	0.0090	0.0128	0.0128	0.0180
	Peripheral	[P]	0.0196	0.0196	0.0098	0.0140	0.0140	0.0196
	Light Peripheral	[LP]	0.0252	0.0252	0.0126	0.0179	0.0179	0.0252

HSM
Two Flute/Ball Nose





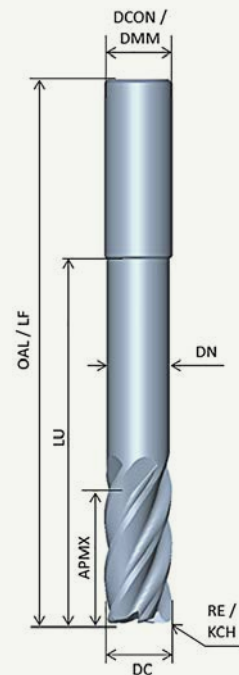
The HSM is a 2 flute rougher/finisher that uses the geometries of the ARF series and couples them with an extended reach design. The stub flute length, in conjunction with a wide range of reach lengths, makes the HSM series a great choice for roughing in aluminum and other non-ferrous materials in hard to reach depths of cuts.

MAIN CHARACTERISTICS

- Flute Count (NOF): 2
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h6
- Cutting Diameter (DC): $-0.0001''/-0.0004''$
- Corner Radius (RE): $+0.001''/-0.001''$



STYLE B

WORK MATERIAL

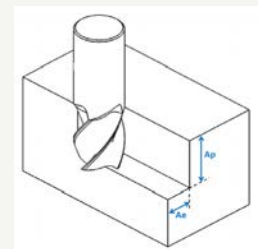


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)
AE	80%DC < \leq 100%DC	40%DC < \leq 80%DC	25%DC < \leq 40%DC	5%DC < \leq 25%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC



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HSM Two Flute, Reduced Neck

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Neck Dia DN	Style	EDP	C4 EDP	C5 EDP
HSM-20250	1/4	1/4	3/8	2-1/2	1-1/8	0.235	B	39544-00-D	39544-89-D	39544-86-D
HSM-M-20250	1/4	1/4	3/8	4	2-1/8	0.235	B	39640-00-D	39640-89-D	39640-86-D
HSM-20312	5/16	5/16	7/16	2-1/2	1-1/8	0.297	B	39552-00-D	39552-89-D	39552-86-D
HSM-M-20312	5/16	5/16	7/16	4	2-1/8	0.297	B	39648-00-D	39648-89-D	39648-86-D
HSM-20375	3/8	3/8	1/2	2-1/2	1-1/8	0.355	B	39560-00-D	39560-89-D	39560-86-D
HSM-M-20375	3/8	3/8	1/2	4	2-1/8	0.355	B	39656-00-D	39656-89-D	39656-86-D
HSM-20437	7/16	7/16	9/16	2-3/4	1-1/4	0.412	B	39568-00-D	39568-89-D	39568-89-D
HSM-20500	1/2	1/2	5/8	3	1-3/8	0.475	B	39576-00-D	39576-89-D	39576-86-D
HSM-M-20500	1/2	1/2	5/8	4	2-1/8	0.475	B	39664-00-D	39664-89-D	39664-86-D
HSM-L-20500	1/2	1/2	5/8	6	3-3/8	0.475	B	39608-00-D	39608-89-D	39608-86-D
HSM-20625	5/8	5/8	3/4	3-1/2	1-5/8	0.590	B	39584-00-D	39584-89-D	39584-86-D
HSM-M-20625	5/8	5/8	3/4	6	2-3/8	0.590	B	39672-00-D	39672-89-D	39672-86-D
HSM-L-20625	5/8	5/8	3/4	6	3-3/8	0.590	B	39616-00-D	39616-89-D	39616-86-D
HSM-20750	3/4	3/4	1	4	2	0.715	B	39592-00-D	39592-89-D	39592-86-D
HSM-M-20750	3/4	3/4	1	6	2-1/2	0.715	B	39680-00-D	39680-89-D	39680-86-D
HSM-L-20750	3/4	3/4	1	6	3-3/8	0.715	B	39624-00-D	39624-89-D	39624-86-D
HSM-21000	1	1	1-1/4	5	2	0.960	B	39600-00-D	39600-89-D	39600-86-D
HSM-M-21000	1	1	1-1/4	7	3-3/8	0.960	B	39688-00-D	39688-89-D	39688-86-D
HSM-L-21000	1	1	1-1/4	7	4-3/8	0.960	B	39632-00-D	39632-89-D	39632-86-D

*LBS/LU Length Below Shank

HSM



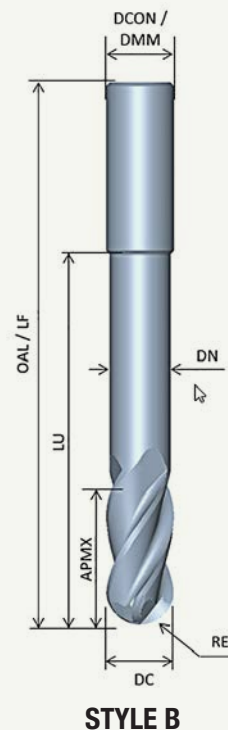
The HSM-BN is a two flute rougher/finisher that couples ARF geometries with an extended reach design. The tool provides all the advantages of the ARF's high helix, high clearance and anti-vibration margin, in a necked tool with a stub length of cut. This is your "go to" tool for extended reach, aluminum applications that call for a ball nose.

MAIN CHARACTERISTICS

- Flute Count (NOF): 2
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h6
- Cutting Diameter (DC): -0.001"/-0.002"
- Corner Radius (RE): +0.000"/-0.001"



WORK MATERIAL

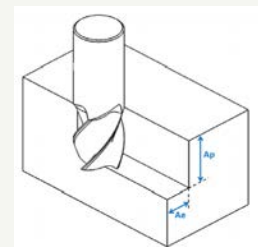


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)
AE	80%DC <= 100%DC	40%DC <= 80%DC	25%DC <= 40%DC	5%DC <= 25%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC



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HSM-BN, Two Flute Ball Mill

High Performance Carbide

HSM-BN

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Neck Dia. DN	Style	EDP	C4 EDP	C5 EDP
HSM-BN-20250	1/4	1/4	3/8	2-1/2	1-1/8	0.235	B	33499-00-D	33499-89-D	33499-86-D
HSM-BN-M-20250	1/4	1/4	3/8	4	2-1/8	0.235	B	33595-00-D	33595-89-D	33595-86-D
HSM-BN-20312	5/16	5/16	7/16	2-1/2	1-1/8	0.297	B	33507-00-D	33507-89-D	33507-86-D
HSM-BN-M-20312	5/16	5/16	7/16	4	2-1/8	0.297	B	33603-00-D	33603-89-D	33603-86-D
HSM-BN-20375	3/8	3/8	1/2	2-1/2	1-1/8	0.355	B	33515-00-D	33515-89-D	33515-86-D
HSM-BN-M-20375	3/8	3/8	1/2	4	2-1/8	0.355	B	33611-00-D	33611-89-D	33611-86-D
HSM-BN-20437	7/16	7/16	9/16	2-3/4	1-1/4	0.412	B	33523-00-D	33523-89-D	33523-86-D
HSM-BN-20500	1/2	1/2	5/8	3	1-3/8	0.475	B	33531-00-D	33531-89-D	33531-86-D
HSM-BN-M-20500	1/2	1/2	5/8	4	2-1/8	0.475	B	33619-00-D	33619-89-D	33619-86-D
HSM-BN-L-20500	1/2	1/2	5/8	6	3-3/8	0.475	B	33563-00-D	33563-89-D	33563-86-D
HSM-BN-20625	5/8	5/8	3/4	3-1/2	1-5/8	0.590	B	33539-00-D	33539-89-D	33539-86-D
HSM-BN-M-20625	5/8	5/8	3/4	6	2-3/8	0.590	B	33627-00-D	33627-89-D	33627-86-D
HSM-BN-L-20625	5/8	5/8	3/4	6	3-3/8	0.590	B	33571-00-D	33571-89-D	33571-86-D
HSM-BN-20750	3/4	3/4	1	4	1-5/8	0.715	B	33547-00-D	33547-89-D	33547-86-D
HSM-BN-M-20750	3/4	3/4	1	6	2-1/2	0.715	B	33635-00-D	33635-89-D	33635-86-D
HSM-BN-L-20750	3/4	3/4	1	6	3-3/8	0.715	B	33579-00-D	33579-89-D	33579-86-D
HSM-BN-21000	1	1	1-1/4	5	2	0.960	B	33555-00-D	33555-89-D	33555-86-D
HSM-BN-M-21000	1	1	1-1/4	7	3-3/8	0.960	B	33643-00-D	33643-89-D	33643-86-D
HSM-BN-L-21000	1	1	1-1/4	7	4-3/8	0.960	B	33587-00-D	33587-89-D	33587-86-D

*LBS/LU Length Below Shank

HSM & HSM-BN Speeds & Chip Loads

HSM & HSM-BN

Speeds v [sfm]			1600 MAX	1600 MAX	600 1000	900 1300	1100 1500	1500 MAX
			AL Alloys	AL Cast	AL High Si > 12% Si	Brass	Copper	Magnesium
1/4	Slotting	[S]	0.0034	0.0034	0.0017	0.0024	0.0024	0.0034
	Heavy Peripheral	[HP]	0.0043	0.0043	0.0021	0.0030	0.0030	0.0043
	Peripheral	[P]	0.0047	0.0047	0.0023	0.0033	0.0033	0.0047
	Light Peripheral	[LP]	0.0060	0.0060	0.0030	0.0043	0.0043	0.0060
5/16	Slotting	[S]	0.0043	0.0043	0.0021	0.0030	0.0030	0.0043
	Heavy Peripheral	[HP]	0.0053	0.0053	0.0027	0.0038	0.0038	0.0053
	Peripheral	[P]	0.0058	0.0058	0.0029	0.0041	0.0041	0.0058
	Light Peripheral	[LP]	0.0075	0.0075	0.0037	0.0053	0.0053	0.0075
3/8	Slotting	[S]	0.0051	0.0051	0.0026	0.0036	0.0036	0.0051
	Heavy Peripheral	[HP]	0.0064	0.0064	0.0032	0.0046	0.0046	0.0064
	Peripheral	[P]	0.0070	0.0070	0.0035	0.0050	0.0050	0.0070
	Light Peripheral	[LP]	0.0090	0.0090	0.0045	0.0064	0.0064	0.0090
7/16	Slotting	[S]	0.0060	0.0060	0.0030	0.0043	0.0043	0.0060
	Heavy Peripheral	[HP]	0.0075	0.0075	0.0037	0.0053	0.0053	0.0075
	Peripheral	[P]	0.0082	0.0082	0.0041	0.0058	0.0058	0.0082
	Light Peripheral	[LP]	0.0105	0.0105	0.0052	0.0074	0.0074	0.0105
1/2	Slotting	[S]	0.0068	0.0068	0.0034	0.0049	0.0049	0.0068
	Heavy Peripheral	[HP]	0.0086	0.0086	0.0043	0.0061	0.0061	0.0086
	Peripheral	[P]	0.0093	0.0093	0.0047	0.0066	0.0066	0.0093
	Light Peripheral	[LP]	0.0120	0.0120	0.0060	0.0085	0.0085	0.0120
5/8	Slotting	[S]	0.0086	0.0086	0.0043	0.0061	0.0061	0.0086
	Heavy Peripheral	[HP]	0.0107	0.0107	0.0053	0.0076	0.0076	0.0107
	Peripheral	[P]	0.0117	0.0117	0.0058	0.0083	0.0083	0.0117
	Light Peripheral	[LP]	0.0150	0.0150	0.0075	0.0106	0.0106	0.0150
3/4	Slotting	[S]	0.0103	0.0103	0.0051	0.0073	0.0073	0.0103
	Heavy Peripheral	[HP]	0.0128	0.0128	0.0064	0.0091	0.0091	0.0128
	Peripheral	[P]	0.0140	0.0140	0.0070	0.0100	0.0100	0.0140
	Light Peripheral	[LP]	0.0180	0.0180	0.0090	0.0128	0.0128	0.0180
1	Slotting	[S]	0.0137	0.0137	0.0068	0.0097	0.0097	0.0137
	Heavy Peripheral	[HP]	0.0171	0.0171	0.0086	0.0122	0.0122	0.0171
	Peripheral	[P]	0.0187	0.0187	0.0093	0.0133	0.0133	0.0187
	Light Peripheral	[LP]	0.0239	0.0239	0.0120	0.0170	0.0170	0.0239

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HVM
2 & 3 Flute/Ball Nose





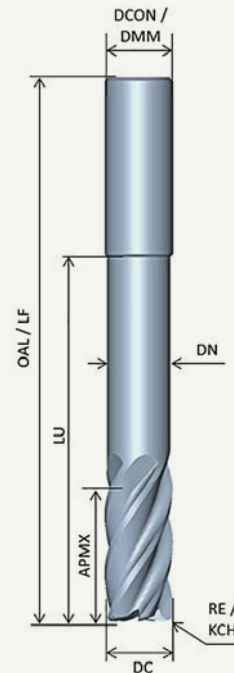
The High Velocity Machining Series (HVM) is designed to perform at the level that its name suggests. By using shallow depths of cut, at very high speeds, this extended reach design will rough in non-ferrous applications from peripheral cuts to deep pockets. This tool is ideal for the machine tool that has ample RPM and feed rate capabilities, but may have some horsepower or torque restrictions.

MAIN CHARACTERISTICS

- Flute Count (NOF): 2
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): -0.0001"/-0.0004"
- Corner Radius (RE): +0.001"/-0.001"



STYLE B

WORK MATERIAL

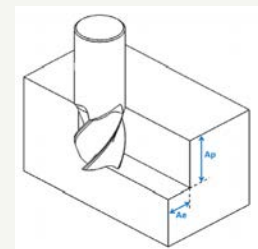


COATING



RECOMMENDED OPERATION

	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	40%DC < \leq 80%DC	25%DC < \leq 40%DC	5%DC < \leq 25%DC	\leq 5%DC
AP	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC	APMX



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HVM-2, Two Flute

High Performance Carbide

HVM-2

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Neck Dia DN	Style	EDP	C4 EDP	C5 EDP
HVM-20250	1/4	1/4	3/8	2-1/2	1-1/8	0.235	B	51800-00-D	51800-89-D	51800-86-D
HVM-M-20250	1/4	1/4	3/8	4	2-1/8	0.235	B	51830-00-D	51830-89-D	51830-86-D
HVM-20375	3/8	3/8	1/2	2-1/2	1-1/8	0.355	B	51805-00-D	51805-89-D	51805-86-D
HVM-M-20375	3/8	3/8	1/2	4	2-1/8	0.355	B	51835-00-D	51835-89-D	51835-86-D
HVM-20500	1/2	1/2	5/8	3	1-3/8	0.475	B	51810-00-D	51810-89-D	51810-86-D
HVM-M-20500	1/2	1/2	5/8	4	2-1/8	0.475	B	51841-00-D	51841-89-D	51841-86-D
HVM-L-20500	1/2	1/2	5/8	6	3-3/8	0.475	B	51866-00-D	51866-89-D	51866-86-D
HVM-20625	5/8	5/8	3/4	4	1-5/8	0.590	B	51815-00-D	51815-89-D	51815-86-D
HVM-M-20625	5/8	5/8	3/4	6	2-3/8	0.590	B	51846-00-D	51846-89-D	51846-86-D
HVM-L-20625	5/8	5/8	3/4	6	3-3/8	0.590	B	51871-00-D	51871-89-D	51871-86-D
HVM-20750	3/4	3/4	1	4	2	0.715	B	51820-00-D	51820-89-D	51820-86-D
HVM-M-20750	3/4	3/4	1	6	2-1/2	0.715	B	51851-00-D	51851-89-D	51851-86-D
HVM-L-20750	3/4	3/4	1	6	3-3/8	0.715	B	51876-00-D	51876-89-D	51876-86-D
HVM-21000	1	1	1-1/4	5	2-5/8	0.960	B	51825-00-D	51825-89-D	51825-86-D
HVM-M-21000	1	1	1-1/4	7	3-3/8	0.960	B	51856-00-D	51856-89-D	51856-86-D
HVM-L-21000	1	1	1-1/4	7	4-3/8	0.960	B	51881-00-D	51881-89-D	51881-86-D

*LBS/LU Length Below Shank

HVM-BN, Two Flute Ball Mill with Reduced Neck

High Performance Carbide



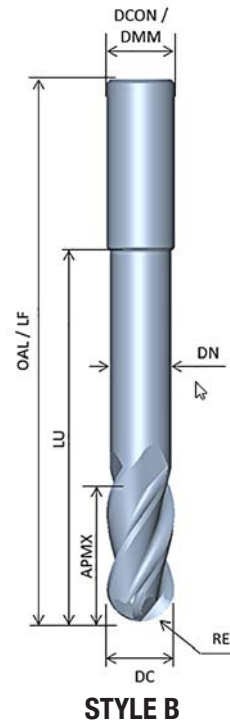
This is a new series that provides HVM geometry in a 2 flute, precision ground, ball nose configuration. The HVM has a slower helix than our HSM. This helix angle can be more appropriate in applications where operators are seeking to limit or control vertical cutting forces in the Z direction.

MAIN CHARACTERISTICS

- Flute Count (NOF): 2
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): $-0.001''/-0.002''$
- Corner Radius (RE): $+0.000''/-0.001''$



WORK MATERIAL

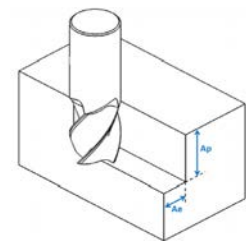
N

COATING



RECOMMENDED OPERATION

	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	40%DC < \leq 80%DC	25%DC < \leq 40%DC	5%DC < \leq 25%DC	\leq 5%DC
AP	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC	APMX



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HVM-BN, Two Flute Ball Mill with Reduced Neck

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Neck Dia DN	Style	EDP	C4 EDP	C5 EDP
HVM-BN-RN-20250	1/4	1/4	3/8	2-1/2	1-1/8	0.235	B	54323-00-D	54323-89-D	54323-86-D
HVM-BN-RN-M-20250	1/4	1/4	3/8	4	2-1/8	0.235	B	54324-00-D	54324-89-D	54324-86-D
HVM-BN-RN-20375	3/8	3/8	1/2	2-1/2	1-1/8	0.355	B	54326-00-D	54326-89-D	54326-86-D
HVM-BN-RN-M-20375	3/8	3/8	1/2	4	2-1/8	0.355	B	54327-00-D	54327-89-D	54327-86-D
HVM-BN-RN-20500	1/2	1/2	5/8	3	1-3/8	0.475	B	54328-00-D	54328-89-D	54328-86-D
HVM-BN-RN-M-20500	1/2	1/2	5/8	4	2-1/8	0.475	B	54329-00-D	54329-89-D	54329-86-D
HVM-BN-RN-L-20500	1/2	1/2	5/8	6	3-3/8	0.475	B	54330-00-D	54330-89-D	54330-86-D
HVM-BN-RN-20625	5/8	5/8	3/4	4	1-5/8	0.590	B	54331-00-D	54331-89-D	54331-86-D
HVM-BN-RN-M-20625	5/8	5/8	3/4	6	2-1/8	0.590	B	54332-00-D	54332-89-D	54332-86-D
HVM-BN-RN-L-20625	5/8	5/8	3/4	6	3-3/8	0.590	B	54333-00-D	54333-89-D	54333-86-D
HVM-BN-RN-20750	3/4	3/4	1	4	2	0.715	B	54334-00-D	54334-89-D	54334-86-D
HVM-BN-RN-M-20750	3/4	3/4	1	6	2-1/2	0.715	B	54335-00-D	54335-89-D	54335-86-D
HVM-BN-RN-L-20750	3/4	3/4	1	6	3-3/8	0.715	B	54336-00-D	54336-89-D	54336-86-D
HVM-BN-RN-21000	1	1	1-1/4	5	2-5/8	0.960	B	54338-00-D	54338-89-D	54338-86-D
HVM-BN-RN-M-21000	1	1	1-1/4	7	3-3/8	0.960	B	54339-00-D	54339-89-D	54339-86-D
HVM-BN-RN-L-21000	1	1	1-1/4	7	4-3/8	0.960	B	54340-00-D	54340-89-D	54340-86-D

*LBS/LU Length Below Shank

HVM-BN

HVM-2 & HVM-BN-2 Speeds & Chip Loads

		Speeds v [sfm]	1600 MAX	1600 MAX	600 1000	900 1300	1100 1500	1500 MAX
			AL Alloys	AL Cast	AL High Si > 12% Si	Brass	Copper	Magnesium
1/4	Heavy Peripheral	[HP]	0.0045	0.0045	0.0023	0.0032	0.0032	0.0045
	Peripheral	[P]	0.0049	0.0049	0.0025	0.0035	0.0035	0.0049
	Light Peripheral	[LP]	0.0063	0.0063	0.0032	0.0045	0.0045	0.0063
	Finishing	[F]	0.0103	0.0103	0.0052	0.0073	0.0073	0.0103
3/8	Heavy Peripheral	[HP]	0.0068	0.0068	0.0034	0.0048	0.0048	0.0068
	Peripheral	[P]	0.0074	0.0074	0.0037	0.0052	0.0052	0.0074
	Light Peripheral	[LP]	0.0095	0.0095	0.0047	0.0067	0.0067	0.0095
	Finishing	[F]	0.0155	0.0155	0.0077	0.0110	0.0110	0.0155
1/2	Heavy Peripheral	[HP]	0.0090	0.0090	0.0045	0.0064	0.0064	0.0090
	Peripheral	[P]	0.0098	0.0098	0.0049	0.0070	0.0070	0.0098
	Light Peripheral	[LP]	0.0126	0.0126	0.0063	0.0090	0.0090	0.0126
	Finishing	[F]	0.0206	0.0206	0.0103	0.0147	0.0147	0.0206
5/8	Heavy Peripheral	[HP]	0.0113	0.0113	0.0056	0.0080	0.0080	0.0113
	Peripheral	[P]	0.0123	0.0123	0.0061	0.0087	0.0087	0.0123
	Light Peripheral	[LP]	0.0158	0.0158	0.0079	0.0112	0.0112	0.0158
	Finishing	[F]	0.0258	0.0258	0.0129	0.0184	0.0184	0.0258
3/4	Heavy Peripheral	[HP]	0.0135	0.0135	0.0068	0.0096	0.0096	0.0135
	Peripheral	[P]	0.0147	0.0147	0.0074	0.0105	0.0105	0.0147
	Light Peripheral	[LP]	0.0189	0.0189	0.0095	0.0134	0.0134	0.0189
	Finishing	[F]	0.0310	0.0310	0.0155	0.0220	0.0220	0.0310
1	Heavy Peripheral	[HP]	0.0180	0.0180	0.0090	0.0128	0.0128	0.0180
	Peripheral	[P]	0.0196	0.0196	0.0098	0.0140	0.0140	0.0196
	Light Peripheral	[LP]	0.0252	0.0252	0.0126	0.0179	0.0179	0.0252
	Finishing	[F]	0.0413	0.0413	0.0206	0.0294	0.0294	0.0413

HVM-3, Three Flute with Reduced Neck and Radius



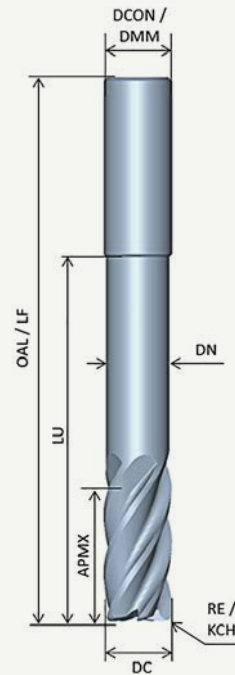
Our High Velocity Machining 3 Series (HVM-3), builds on the success of our HVM-2 tools. In situations where machining centers may lack the high RPMs for which the HVM-2 was designed, but have plenty of horsepower and torque, the solution is the HVM-3. Our HVM-3 has a 50% increase in tooth passage per revolution (3:2) that is perfect for machining centers that operate a higher rate of power. The HVM-3 is available in up-sharp versions as well as a selection of stocked radii.

MAIN CHARACTERISTICS

- Flute Count (NOF): 3
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): -0.0001"/-0.0004"
- Corner Radius (RE): +0.001"/-0.001"



STYLE B

WORK MATERIAL

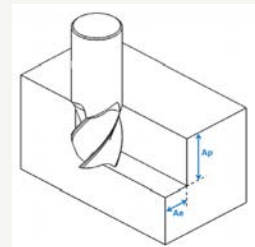


COATING



RECOMMENDED OPERATION

	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	40%DC < ≤ 80%DC	25%DC < ≤ 40%DC	5%DC < ≤ 25%DC	≤ 5%DC
AP	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC	APMX



For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



HVM-3, Three Flute with Reduced Neck and Radius

High Performance Carbide

HVM-3

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Neck Dia DN	Radius RE	Style	EDP	C4 EDP	C5 EDP
HVM-30250	1/4	1/4	3/8	2-1/2	1-1/8	0.235		B	51886-00-D	51886-89-D	51886-86-D
HVM-M-30250	1/4	1/4	3/8	4	2-1/8	0.235		B	51916-00-D	51916-89-D	51916-86-D
HVM-30250-015	1/4	1/4	3/8	2-1/2	1-1/8	0.235	.015	B	37578-00-D	37578-89-D	37578-86-D
HVM-M-30250-015	1/4	1/4	3/8	4	2-1/8	0.235	.015	B	37579-00-D	37579-89-D	37579-86-D
HVM-30250-030	1/4	1/4	3/8	2-1/2	1-1/8	0.235	.030	B	37580-00-D	37580-89-D	37580-86-D
HVM-M-30250-030	1/4	1/4	3/8	4	2-1/8	0.235	.030	B	37581-00-D	37581-89-D	37581-86-D
HVM-30375	3/8	3/8	1/2	2-1/2	1-1/8	0.355		B	51891-00-D	51891-89-D	51891-86-D
HVM-M-30375	3/8	3/8	1/2	4	2-1/8	0.355		B	51921-00-D	51921-89-D	51921-86-D
HVM-30375-015	3/8	3/8	1/2	2-1/2	1-1/8	0.355	.015	B	37582-00-D	37582-89-D	37582-86-D
HVM-M-30375-015	3/8	3/8	1/2	4	2-1/8	0.355	.015	B	37583-00-D	37583-89-D	37583-86-D
HVM-30375-030	3/8	3/8	1/2	2-1/2	1-1/8	0.355	.030	B	37584-00-D	37584-89-D	37584-86-D
HVM-M-30375-030	3/8	3/8	1/2	4	2-1/8	0.355	.030	B	37585-00-D	37585-89-D	37585-86-D
HVM-30500	1/2	1/2	5/8	3	1-3/8	0.475		B	51896-00-D	51896-89-D	51896-86-D
HVM-M-30500	1/2	1/2	5/8	4	2-1/8	0.475		B	51926-00-D	51926-89-D	51926-86-D
HVM-L-30500	1/2	1/2	5/8	6	3-3/8	0.475		B	51946-00-D	51946-89-D	51946-86-D
HVM-30500-030	1/2	1/2	5/8	3	1-3/8	0.475	.030	B	37586-00-D	37586-89-D	37586-86-D
HVM-M-30500-030	1/2	1/2	5/8	4	2-1/8	0.475	.030	B	37587-00-D	37587-89-D	37587-86-D
HVM-L-30500-030	1/2	1/2	5/8	6	3-3/8	0.475	.030	B	37588-00-D	37588-89-D	37588-86-D
HVM-30500-060	1/2	1/2	5/8	3	1-3/8	0.475	.060	B	37589-00-D	37589-89-D	37589-86-D
HVM-M-30500-060	1/2	1/2	5/8	4	2-1/8	0.475	.060	B	37590-00-D	37590-89-D	37590-86-D
HVM-L-30500-060	1/2	1/2	5/8	6	3-3/8	0.475	.060	B	37591-00-D	37591-89-D	37591-86-D
HVM-30625	5/8	5/8	3/4	4	1-5/8	0.590		B	51901-00-D	51901-89-D	51901-86-D
HVM-M-30625	5/8	5/8	3/4	6	2-3/8	0.590		B	51931-00-D	51931-89-D	51931-86-D
HVM-L-30625	5/8	5/8	3/4	6	3-3/8	0.590		B	51951-00-D	51951-89-D	51951-86-D
HVM-30625-030	5/8	5/8	3/4	4	1-5/8	0.590	.030	B	37592-00-D	37592-89-D	37592-86-D
HVM-M-30625-030	5/8	5/8	3/4	6	2-3/8	0.590	.030	B	37593-00-D	37593-89-D	37593-86-D
HVM-L-30625-030	5/8	5/8	3/4	6	3-3/8	0.590	.030	B	37594-00-D	37594-89-D	37594-86-D
HVM-30625-060	5/8	5/8	3/4	4	1-5/8	0.590	.060	B	37595-00-D	37595-89-D	37595-86-D
HVM-M-30625-060	5/8	5/8	3/4	6	2-3/8	0.590	.060	B	37596-00-D	37596-89-D	37596-86-D
HVM-L-30625-060	5/8	5/8	3/4	6	3-3/8	0.590	.060	B	37597-00-D	37597-89-D	37597-86-D
HVM-30750	3/4	3/4	1	4	2	0.715		B	51906-00-D	51906-89-D	51906-86-D
HVM-M-30750	3/4	3/4	1	6	2-1/2	0.715		B	51936-00-D	51936-89-D	51936-86-D
HVM-L-30750	3/4	3/4	1	6	3-3/8	0.715		B	51956-00-D	51956-89-D	51956-86-D
HVM-30750-030	3/4	3/4	1	4	2	0.715	.030	B	37598-00-D	37598-89-D	37598-86-D
HVM-M-30750-030	3/4	3/4	1	6	2-1/2	0.715	.030	B	37599-00-D	37599-89-D	37599-86-D
HVM-L-30750-030	3/4	3/4	1	6	3-3/8	0.715	.030	B	37600-00-D	37600-89-D	37600-86-D
HVM-30750-060	3/4	3/4	1	4	2	0.715	.060	B	37601-00-D	37601-89-D	37601-86-D
HVM-M-30750-060	3/4	3/4	1	6	2-1/2	0.715	.060	B	37602-00-D	37602-89-D	37602-86-D
HVM-L-30750-060	3/4	3/4	1	6	3-3/8	0.715	.060	B	37603-00-D	37603-89-D	37603-86-D
HVM-30750-090	3/4	3/4	1	4	2	0.715	.090	B	37604-00-D	37604-89-D	37604-86-D
HVM-M-30750-090	3/4	3/4	1	6	2-1/2	0.715	.090	B	37605-00-D	37605-89-D	37605-86-D
HVM-L-30750-090	3/4	3/4	1	6	3-3/8	0.715	.090	B	37606-00-D	37606-89-D	37606-86-D
HVM-30750-120	3/4	3/4	1	4	2	0.715	.120	B	37607-00-D	37607-89-D	37607-86-D
HVM-M-30750-120	3/4	3/4	1	6	2-1/2	0.715	.120	B	37608-00-D	37608-89-D	37608-86-D
HVM-L-30750-120	3/4	3/4	1	6	3-3/8	0.715	.120	B	37609-00-D	37609-89-D	37609-86-D

*LBS/LU Length Below Shank

Continued next page

HVM-3, Three Flute with Reduced Neck and Radius

High Performance Carbide

HVM-3

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Neck Dia DN	Radius RE	Style	EDP	C4 EDP	C5 EDP
HVM-30750	3/4	3/4	1	4	2	0.715		B	51906-00-D	51906-89-D	51906-86-D
HVM-M-30750	3/4	3/4	1	6	2-1/2	0.715		B	51936-00-D	51936-89-D	51936-86-D
HVM-L-30750	3/4	3/4	1	6	3-3/8	0.715		B	51956-00-D	51956-89-D	51956-86-D
HVM-30750-030	3/4	3/4	1	4	2	0.715	.030	B	37598-00-D	37598-89-D	37598-86-D
HVM-M-30750-030	3/4	3/4	1	6	2-1/2	0.715	.030	B	37599-00-D	37599-89-D	37599-86-D
HVM-L-30750-030	3/4	3/4	1	6	3-3/8	0.715	.030	B	37600-00-D	37600-89-D	37600-86-D
HVM-30750-060	3/4	3/4	1	4	2	0.715	.060	B	37601-00-D	37601-89-D	37601-86-D
HVM-M-30750-060	3/4	3/4	1	6	2-1/2	0.715	.060	B	37602-00-D	37602-89-D	37602-86-D
HVM-L-30750-060	3/4	3/4	1	6	3-3/8	0.715	.060	B	37603-00-D	37603-89-D	37603-86-D
HVM-30750-090	3/4	3/4	1	4	2	0.715	.090	B	37604-00-D	37604-89-D	37604-86-D
HVM-M-30750-090	3/4	3/4	1	6	2-1/2	0.715	.090	B	37605-00-D	37605-89-D	37605-86-D
HVM-L-30750-090	3/4	3/4	1	6	3-3/8	0.715	.090	B	37606-00-D	37606-89-D	37606-86-D
HVM-30750-120	3/4	3/4	1	4	2	0.715	.120	B	37607-00-D	37607-89-D	37607-86-D
HVM-M-30750-120	3/4	3/4	1	6	2-1/2	0.715	.120	B	37608-00-D	37608-89-D	37608-86-D
HVM-L-30750-120	3/4	3/4	1	6	3-3/8	0.715	.120	B	37609-00-D	37609-89-D	37609-86-D
HVM-31000	1	1	1-1/4	5	2-5/8	0.960		B	51911-00-D	51911-89-D	51911-86-D
HVM-M-31000	1	1	1-1/4	7	3-3/8	0.960		B	51941-00-D	51941-89-D	51941-86-D
HVM-L-31000	1	1	1-1/4	7	4-3/8	0.960		B	51961-00-D	51961-89-D	51961-86-D
HVM-31000-030	1	1	1-1/4	5	2-5/8	0.960	.030	B	37610-00-D	37610-89-D	37610-86-D
HVM-M-31000-030	1	1	1-1/4	7	3-3/8	0.960	.030	B	37611-00-D	37611-89-D	37611-86-D
HVM-L-31000-030	1	1	1-1/4	7	4-3/8	0.960	.030	B	37612-00-D	37612-89-D	37612-86-D
HVM-31000-060	1	1	1-1/4	5	2-5/8	0.960	.060	B	37613-00-D	37613-89-D	37613-86-D
HVM-M-31000-060	1	1	1-1/4	7	3-3/8	0.960	.060	B	37614-00-D	37614-89-D	37614-86-D
HVM-L-31000-060	1	1	1-1/4	7	4-3/8	0.960	.060	B	37615-00-D	37615-89-D	37615-86-D
HVM-31000-090	1	1	1-1/4	5	2-5/8	0.960	.090	B	37616-00-D	37616-89-D	37616-86-D
HVM-M-31000-090	1	1	1-1/4	7	3-3/8	0.960	.090	B	37617-00-D	37617-89-D	37617-86-D
HVM-L-31000-090	1	1	1-1/4	7	4-3/8	0.960	.090	B	37618-00-D	37618-89-D	37618-86-D
HVM-31000-120	1	1	1-1/4	5	2-5/8	0.960	.120	B	37619-00-D	37619-89-D	37619-86-D
HVM-M-31000-120	1	1	1-1/4	7	3-3/8	0.960	.120	B	37620-00-D	37620-89-D	37620-86-D
HVM-L-31000-120	1	1	1-1/4	7	4-3/8	0.960	.120	B	37621-00-D	37621-89-D	37621-86-D

*LBS/LU Length Below Shank

HVM-3 Speeds & Chip Loads

HVM-3

		Speeds v [sfm]	1600 MAX	1600 MAX	600 1000	900 1300	1100 1500	1500 MAX
			AL Alloys	AL Cast	AL High Si > 12% Si	Brass	Copper	Magnesium
1/4	Heavy Peripheral [HP]		0.0036	0.0036	0.0019	0.0027	0.0027	0.0036
	Peripheral [P]		0.0040	0.0040	0.0020	0.0029	0.0029	0.0040
	Light Peripheral [LP]		0.0051	0.0051	0.0026	0.0038	0.0038	0.0051
	Finishing [F]		0.0083	0.0083	0.0043	0.0062	0.0062	0.0083
3/8	Heavy Peripheral [HP]		0.0054	0.0054	0.0028	0.0041	0.0041	0.0054
	Peripheral [P]		0.0059	0.0059	0.0031	0.0044	0.0044	0.0059
	Light Peripheral [LP]		0.0076	0.0076	0.0039	0.0057	0.0057	0.0076
	Finishing [F]		0.0125	0.0125	0.0065	0.0093	0.0093	0.0125
1/2	Heavy Peripheral [HP]		0.0073	0.0073	0.0038	0.0054	0.0054	0.0073
	Peripheral [P]		0.0079	0.0079	0.0041	0.0059	0.0059	0.0079
	Light Peripheral [LP]		0.0102	0.0102	0.0053	0.0076	0.0076	0.0102
	Finishing [F]		0.0166	0.0166	0.0086	0.0124	0.0124	0.0166
5/8	Heavy Peripheral [HP]		0.0091	0.0091	0.0047	0.0068	0.0068	0.0091
	Peripheral [P]		0.0099	0.0099	0.0051	0.0074	0.0074	0.0099
	Light Peripheral [LP]		0.0127	0.0127	0.0066	0.0095	0.0095	0.0127
	Finishing [F]		0.0208	0.0208	0.0108	0.0155	0.0155	0.0208
3/4	Heavy Peripheral [HP]		0.0109	0.0109	0.0056	0.0081	0.0081	0.0109
	Peripheral [P]		0.0119	0.0119	0.0061	0.0088	0.0088	0.0119
	Light Peripheral [LP]		0.0152	0.0152	0.0079	0.0113	0.0113	0.0152
	Finishing [F]		0.0249	0.0249	0.0129	0.0186	0.0186	0.0249
1	Heavy Peripheral [HP]		0.0145	0.0145	0.0075	0.0108	0.0108	0.0145
	Peripheral [P]		0.0158	0.0158	0.0082	0.0118	0.0118	0.0158
	Light Peripheral [LP]		0.0203	0.0203	0.0105	0.0151	0.0151	0.0203
	Finishing [F]		0.0333	0.0333	0.0172	0.0248	0.0248	0.0333

For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



HVMag Two & Three Flute





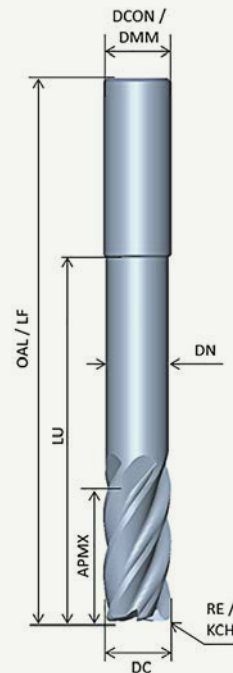
Our HVMag is a 2 flute tool, with field tested, patented geometries designed specifically for the newest generation of hyper-velocity machining centers. We have produced an exceptionally well-balanced tool with superior chip flow. This tool achieves outstanding results in applications ranging from 15,000 rpm to 30,000+ rpm and feed rates of up to 1,000 inches per minute.

MAIN CHARACTERISTICS

- Flute Count (NOF): 2
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): -0.001"/-0.002"
- Corner Radius (RE): +0.001"/-0.001"



STYLE B

WORK MATERIAL

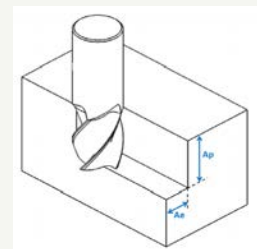


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	80%DC < \leq 100%DC	40%DC < \leq 80%DC	25%DC < \leq 40%DC	5%DC < \leq 25%DC	\leq 5%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC	APMX



For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.





The intense competition in the marketplace and the need for ever higher rates of machining productivity has spawned a new generation of high powered, hyper-velocity machining centers. These new mega machines demand a tool that can deliver performance to match.

Data Flute has re-engineered our HVM (High Velocity Machining) series of tools to match the capabilities of the most productive machines on the market. We have done this based upon the proper combination of field testing, customer feedback and the most up-to-date analytic software available. Countless rounds of design, analysis, customer discussion, testing and re-testing have gone into this series of tools. The level of effort is consistent with the level of commitment that our valued customers have shown by investing in these next generation machining centers.

This catalog contains our standard offering in the HVMag series. We realize that there are frequently times when a more customized solution will provide better tool life, better productivity and better “fit” with a particular machining task. As always we welcome the opportunity to work with our customers to meet their machining and productivity needs with special or non-standard tooling. We also offer these tools with coolant through holes and other MQL modifications.

Data Flute believes that we have the finest hyper-velocity end mill on the market. We hope that you agree.



HVMag, Two Flute Inch and Metric

High Performance Carbide

HVMag

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Style	EDP .000 Radius	EDP .030 Radius	EDP .060 Radius	EDP .090 Radius	EDP .120 Radius
HVMag-20375	3/8	3/8	1/2	3	1-1/4	B	52747-00-D	52748-00-D	52750-00-D	52751-00-D	
HVMag-L-20375	3/8	3/8	1/2	4	2-1/8	B	52752-00-D	52754-00-D	52756-00-D	52758-00-D	
HVMag-20500	1/2	1/2	5/8	3	1-1/2	B	52760-00-D	52762-00-D	52766-00-D	52768-00-D	52774-00-D
HVMag-M-20500	1/2	1/2	5/8	4	2-1/8	B	52775-00-D	52776-00-D	52777-00-D	52778-00-D	52779-00-D
HVMag-L-20500	1/2	1/2	5/8	6	3-1/4	B	52780-00-D	52781-00-D	52782-00-D	52783-00-D	52784-00-D
HVMag-20625	5/8	5/8	3/4	4	1-5/8	B	52785-00-D	52786-00-D	52787-00-D	52788-00-D	52789-00-D
HVMag-M-20625	5/8	5/8	3/4	5	2-1/4	B	52790-00-D	52791-00-D	52792-00-D	52793-00-D	52794-00-D
HVMag-L-20625	5/8	5/8	3/4	6	3-1/4	B	52795-00-D	52796-00-D	52797-00-D	52798-00-D	52799-00-D
HVMag-20750	3/4	3/4	1	4	2-1/8	B	52800-00-D	52801-00-D	52802-00-D	52803-00-D	52804-00-D
HVMag-M-20750	3/4	3/4	1	5	3	B	52805-00-D	52806-00-D	52807-00-D	52808-00-D	52809-00-D
HVMag-L-20750	3/4	3/4	1	6	3-3/4	B	52810-00-D	52811-00-D	52812-00-D	52813-00-D	52814-00-D
HVMag-21000	1	1	1-1/4	5	2-3/4	B	52815-00-D	52816-00-D	52817-00-D	52818-00-D	52819-00-D
HVMag-M-21000	1	1	1-1/4	6	3-1/2	B	52820-00-D	52821-00-D	52822-00-D	52823-00-D	52824-00-D
HVMag-L-21000	1	1	1-1/4	7	4-1/4	B	52825-00-D	52826-00-D	52827-00-D	52828-00-D	52829-00-D

*LBS/LU Length Below Shank

HVMag Metric Offering

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Style	EDP .000 Radius	EDP .25mm Radius	EDP 1mm Radius	EDP 2mm Radius	EDP 4mm Radius	EDP 5mm Radius
HVMag-10MM-	10	10	13	73	38	B	53578-00-D	53579-00-D	53580-00-D	53581-00-D		
HVMag-L-10MM-	10	10	13	100	52	B	53582-00-D	53583-00-D	53584-00-D	53585-00-D		
HVMag-12MM-	12	12	16	74	38	B	53586-00-D	54240-00-D	53587-00-D	53588-00-D	53589-00-D	53590-00-D
HVMag-M-12MM-	12	12	16	100	52	B	53591-00-D	54241-00-D	53592-00-D	53593-00-D	53594-00-D	53595-00-D
HVMag-L-12MM-	12	12	16	147	80	B	53596-00-D	54242-00-D	53597-00-D	53598-00-D	53599-00-D	53600-00-D
HVMag-16MM-	16	16	19	100	42	B	53601-00-D	54243-00-D	53602-00-D	53603-00-D	53604-00-D	53605-00-D
HVMag-M-16MM-	16	16	19	122	55	B	53606-00-D	54244-00-D	53607-00-D	53608-00-D	53609-00-D	53610-00-D
HVMag-L-16MM-	16	16	19	147	80	B	53611-00-D	54245-00-D	53612-00-D	53613-00-D	53614-00-D	53615-00-D
HVMag-20MM-	20	20	25	100	52	B	53616-00-D	54246-00-D	53617-00-D	53618-00-D	53619-00-D	53620-00-D
HVMag-M-20MM-	20	20	25	122	74	B	53621-00-D	54247-00-D	53622-00-D	53623-00-D	53624-00-D	53625-00-D
HVMag-L-20MM-	20	20	25	147	92	B	53626-00-D	54248-00-D	53627-00-D	53628-00-D	53629-00-D	53630-00-D
HVMag-25MM-	25	25	30	122	67	B	53631-00-D	54249-00-D	53632-00-D	53633-00-D	53634-00-D	53635-00-D
HVMag-M-25MM-	25	25	30	147	86	B	53636-00-D	54250-00-D	53637-00-D	53638-00-D	53639-00-D	53640-00-D
HVMag-L-25MM-	25	25	30	172	105	B	53641-00-D	54251-00-D	53642-00-D	53643-00-D	53644-00-D	53645-00-D

*LBS/LU Length Below Shank

PATENTED GEOMETRIES

For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.





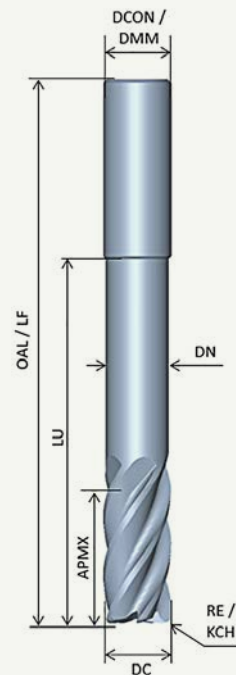
Our HVMag-3 is a 3 flute tool, with field tested, patented geometries designed specifically for the newer generation of high speed machining centers. We have produced an exceptionally well-balanced tool, with superior chip flow. This tool is best used for speeds up to 20,000 rpm and feed rates of up to 1,000 inches per minute. Best performance is achieved in spindles designed for high speed, three flute tools and machining.

MAIN CHARACTERISTICS

- Flute Count (NOF): 3
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): -0.001"/-0.002"
- Corner Radius (RE): +0.001"/-0.001"



STYLE B

WORK MATERIAL

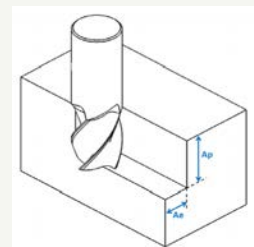
N

COATING

UC

RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	80%DC < ≤ 100%DC	40%DC < ≤ 80%DC	25%DC < ≤ 40%DC	5%DC < ≤ 25%DC	≤ 5%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC	APMX



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HVMag-3, Three Flute Inch and Metric

High Performance Carbide

HVMag-3

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Style	EDP .000 Radius	EDP .030 Radius	EDP .060 Radius	EDP .090 Radius	EDP .120 Radius
HVMag3-30375	3/8	3/8	1/2	3	1-1/4	B	37424-00-D	37425-00-D	37426-00-D	37427-00-D	
HVMag3-L-30375	3/8	3/8	1/2	4	2-1/8	B	37429-00-D	37431-00-D	37432-00-D	37433-00-D	
HVMag3-30500	1/2	1/2	5/8	3	1-1/2	B	37435-00-D	37436-00-D	37437-00-D	37438-00-D	37439-00-D
HVMag3-M-30500	1/2	1/2	5/8	4	2-1/8	B	37441-00-D	37442-00-D	37443-00-D	37444-00-D	37445-00-D
HVMag3-L-30500	1/2	1/2	5/8	6	3-1/4	B	37446-00-D	37447-00-D	37448-00-D	37449-00-D	37451-00-D
HVMag3-30625	5/8	5/8	3/4	4	1-5/8	B	37452-00-D	37453-00-D	37454-00-D	37455-00-D	37456-00-D
HVMag3-M-30625	5/8	5/8	3/4	5	2-1/4	B	37457-00-D	37458-00-D	37459-00-D	37461-00-D	37462-00-D
HVMag3-L-30625	5/8	5/8	3/4	6	3-1/4	B	37463-00-D	37464-00-D	37465-00-D	37466-00-D	37467-00-D
HVMag3-30750	3/4	3/4	1	4	2-1/8	B	37468-00-D	37469-00-D	37470-00-D	37471-00-D	37472-00-D
HVMag3-M-30750	3/4	3/4	1	5	3	B	37473-00-D	37474-00-D	37475-00-D	37476-00-D	37477-00-D
HVMag3-L-30750	3/4	3/4	1	6	3-3/4	B	37478-00-D	37479-00-D	37480-00-D	37481-00-D	37482-00-D
HVMag3-31000	1	1	1-1/4	5	2-3/4	B	37483-00-D	37484-00-D	37485-00-D	37486-00-D	37487-00-D
HVMag3-M-31000	1	1	1-1/4	6	3-1/2	B	37488-00-D	37489-00-D	37490-00-D	37491-00-D	37492-00-D
HVMag3-L-31000	1	1	1-1/4	7	4-1/4	B	39055-00-D	40100-00-D	40101-00-D	40102-00-D	40103-00-D

*LBS/LU Length Below Shank

HVMag Metric Offering

Part Number	Dia. DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Style	EDP .000 Radius	EDP .25mm Radius	EDP 1mm Radius	EDP 2mm Radius	EDP 4mm Radius	EDP 5mm Radius
HVMag3-10MM-	10	10	13	73	38	B	37493-00-D	37494-00-D	37495-00-D	37496-00-D		
HVMag3-L-10MM-	10	10	13	100	52	B	37500-00-D	37501-00-D	37502-00-D	37503-00-D		
HVMag3-12MM-	12	12	16	74	38	B	37506-00-D	37507-00-D	37508-00-D	37509-00-D	37510-00-D	
HVMag3-M-12MM-	12	12	16	100	52	B	37512-00-D	37513-00-D	37514-00-D	37515-00-D	37516-00-D	
HVMag3-L-12MM-	12	12	16	147	80	B	37518-00-D	37519-00-D	37520-00-D	37521-00-D	37522-00-D	
HVMag3-16MM-	16	16	19	100	42	B	37524-00-D	37525-00-D	37526-00-D	37527-00-D	37528-00-D	37529-00-D
HVMag3-M-16MM-	16	16	19	122	55	B	37530-00-D	37531-00-D	37532-00-D	37533-00-D	37534-00-D	37535-00-D
HVMag3-L-16MM-	16	16	19	147	80	B	37536-00-D	37537-00-D	37538-00-D	37539-00-D	37540-00-D	37541-00-D
HVMag3-20MM-	20	20	25	100	52	B	37542-00-D	37543-00-D	37544-00-D	37545-00-D	37546-00-D	37547-00-D
HVMag3-M-20MM-	20	20	25	122	74	B	37548-00-D	37549-00-D	37550-00-D	37551-00-D	37552-00-D	37553-00-D
HVMag3-L-20MM-	20	20	25	147	92	B	37554-00-D	37555-00-D	37556-00-D	37557-00-D	37558-00-D	37559-00-D
HVMag3-25MM-	25	25	30	122	67	B	37560-00-D	37561-00-D	37562-00-D	37563-00-D	37564-00-D	37565-00-D
HVMag3-M-25MM-	25	25	30	147	86	B	37566-00-D	37567-00-D	37568-00-D	37569-00-D	37570-00-D	37571-00-D
HVMag3-L-25MM-	25	25	30	172	105	B	37572-00-D	37573-00-D	37574-00-D	37575-00-D	37576-00-D	37577-00-D

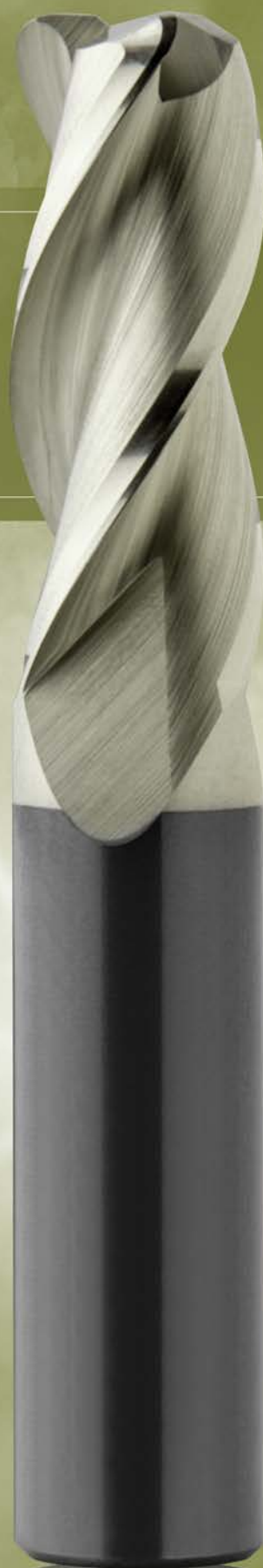
*LBS/LU Length Below Shank

PATENTED GEOMETRIES

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AFI
Three Flute





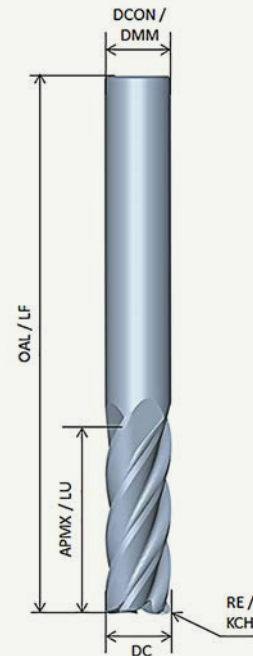
The AFI 3 flute Aluminum mill is the perfect choice for your finishing applications. The polished O.D. cylindrical margin along with material specific geometries generates an excellent surface finish. The addition of a Wiper Flat brings this series of tool to the perfect choice. The AFI series is available in stub, standard, medium, long and extra long length of cut.

MAIN CHARACTERISTICS

- Flute Count (NOF): 3
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h6
- Cutting Diameter (DC): $-0.0001''/-0.0004''$
- Corner Radius (RE): $+0.001''/-0.001''$



STYLE A

WORK MATERIAL

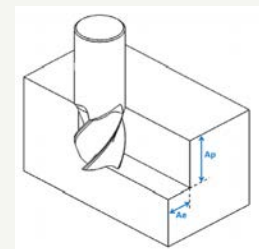


COATING



RECOMMENDED OPERATION

	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	25%DC < \leq 40%DC	5%DC < \leq 25%DC	\leq 5%DC
AP	1.0 to 1.5 x DC	2.0 x DC	APMX



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AFI, Three Flute

High Performance Carbide

AFI

Item	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	Coatings	Style	Square			Radius Offering		
							0.000	0.015	0.030	0.060	0.090	0.125
AFIST30125-	1/8	1/8	1/4	1-1/2		A	32460-00-D	41000-00-D	41001-00-D			
AFIST30125C5-	1/8	1/8	1/4	1-1/2	C5	A	32460-86-D	41000-86-D	41001-86-D			
AFI30125-	1/8	1/8	3/8	1-1/2		A	32300-00-D	41002-00-D	41003-00-D			
AFI30125C5-	1/8	1/8	3/8	1-1/2	C5	A	32300-86-D	41002-86-D	41003-86-D			
AFIST30187-	3/16	3/16	5/16	2		A	32468-00-D	41004-00-D	41005-00-D			
AFIST30187C5-	3/16	3/16	5/16	2	C5	A	32468-86-D	41004-86-D	41005-86-D			
AFI30187-	3/16	3/16	9/16	2		A	32308-00-D	41006-00-D	41007-00-D			
AFI30187C5-	3/16	3/16	9/16	2	C5	A	32308-86-D	41006-86-D	41007-86-D			
AFIST30250-	1/4	1/4	3/8	2		A	32476-00-D	41008-00-D	41009-00-D	41021-00-D		
AFIST30250C5-	1/4	1/4	3/8	2	C5	A	32476-86-D	41008-86-D	41009-86-D	41021-86-D		
AFI30250-	1/4	1/4	5/8	2-1/2		A	32316-00-D	41023-00-D	41025-00-D	41027-00-D		
AFI30250C5-	1/4	1/4	5/8	2-1/2	C5	A	32316-86-D	41023-86-D	41025-86-D	41027-86-D		
AFIL30250-	1/4	1/4	1-1/4	3-1/4		A	32380-00-D	41029-00-D	41030-00-D	41031-00-D		
AFIL30250C5-	1/4	1/4	1-1/4	3-1/4	C5	A	32380-86-D	41029-86-D	41030-86-D	41031-86-D		
AFIST30312-	5/16	5/16	7/16	2		A	32484-00-D	41032-00-D	41033-00-D	41034-00-D		
AFIST30312C5-	5/16	5/16	7/16	2	C5	A	32484-86-D	41032-86-D	41033-86-D	41034-86-D		
AFI30312-	5/16	5/16	5/8	2-1/2		A	32324-00-D	41035-00-D	41036-00-D	41037-00-D		
AFI30312C5-	5/16	5/16	5/8	2-1/2	C5	A	32324-86-D	41035-86-D	41036-86-D	41037-86-D		
AFIL30312-	5/16	5/16	1-1/4	3-1/2		A	32388-00-D	41038-00-D	41039-00-D	41040-00-D		
AFIL30312C5-	5/16	5/16	1-1/4	3-1/2	C5	A	32388-86-D	41038-86-D	41039-86-D	41040-86-D		
AFIX30312-	5/16	5/16	2-1/8	4		A	32540-00-D	41041-00-D	41042-00-D	41043-00-D		
AFIX30312C5-	5/16	5/16	2-1/8	4	C5	A	32540-86-D	41041-86-D	41042-86-D	41043-86-D		
AFIST30375-	3/8	3/8	1/2	2		A	32492-00-D	41044-00-D	41045-00-D	41046-00-D	41047-00-D	
AFIST30375C5-	3/8	3/8	1/2	2	C5	A	32492-86-D	41044-86-D	41045-86-D	41046-86-D	41047-86-D	
AFI30375-	3/8	3/8	1	2-1/2		A	32332-00-D	41048-00-D	41049-00-D	41050-00-D	41051-00-D	
AFI30375C5-	3/8	3/8	1	2-1/2	C5	A	32332-86-D	41048-86-D	41049-86-D	41050-86-D	41051-86-D	
AFIM30375-	3/8	3/8	1-1/4	3		A	51600-00-D	41052-00-D	41053-00-D	41054-00-D	41055-00-D	
AFIM30375C5-	3/8	3/8	1-1/4	3	C5	A	51600-86-D	41052-86-D	41053-86-D	41054-86-D	41055-86-D	
AFIL30375-	3/8	3/8	1-1/2	3-1/2		A	32396-00-D	41056-00-D	41057-00-D	41058-00-D	41059-00-D	
AFIL30375C5-	3/8	3/8	1-1/2	3-1/2	C5	A	32396-86-D	41056-86-D	41057-86-D	41058-86-D	41059-86-D	
AFIX30375-	3/8	3/8	2-1/2	6		A	32548-00-D	41060-00-D	41061-00-D	41062-00-D	41063-00-D	
AFIX30375C5-	3/8	3/8	2-1/2	6	C5	A	32548-86-D	41060-86-D	41061-86-D	41062-86-D	41063-86-D	
AFIST30437-	7/16	7/16	9/16	2-1/2		A	32500-00-D	41064-00-D	41065-00-D	41066-00-D	41067-00-D	
AFIST30437C5-	7/16	7/16	9/16	2-1/2	C5	A	32500-86-D	41064-86-D	41065-86-D	41066-86-D	41067-86-D	
AFI30437-	7/16	7/16	1-1/4	2-3/4		A	32340-00-D	41068-00-D	41069-00-D	41070-00-D	41071-00-D	
AFI30437C5-	7/16	7/16	1-1/4	2-3/4	C5	A	32340-86-D	41068-86-D	41069-86-D	41070-86-D	41071-86-D	
AFIL30437-	7/16	7/16	2	4		A	32404-00-D	41072-00-D	41073-00-D	41074-00-D	41075-00-D	
AFIL30437C5-	7/16	7/16	2	4	C5	A	32404-86-D	41072-86-D	41073-86-D	41074-86-D	41075-86-D	
AFIST30500-	1/2	1/2	5/8	2-1/2		A	32508-00-D	41076-00-D	41077-00-D	41078-00-D	41079-00-D	41080-00-D
AFIST30500C5-	1/2	1/2	5/8	2-1/2	C5	A	32508-86-D	41076-86-D	41077-86-D	41078-86-D	41079-86-D	41080-86-D
AFI30500-	1/2	1/2	1-1/4	3		A	32348-00-D	41081-00-D	41082-00-D	41083-00-D	41084-00-D	41085-00-D
AFI30500C5-	1/2	1/2	1-1/4	3	C5	A	32348-86-D	41081-86-D	41082-86-D	41083-86-D	41084-86-D	41085-86-D
AFIM30500-	1/2	1/2	1-5/8	4		A	51607-00-D	41086-00-D	41087-00-D	41088-00-D	41089-00-D	41090-00-D
AFIM30500C5-	1/2	1/2	1-5/8	4	C5	A	51607-86-D	41086-86-D	41087-86-D	41088-86-D	41089-86-D	41090-86-D
AFIL30500-	1/2	1/2	2	4		A	32412-00-D	41091-00-D	41092-00-D	41093-00-D	41094-00-D	41095-00-D
AFIL30500C5-	1/2	1/2	2	4	C5	A	32412-86-D	41091-86-D	41092-86-D	41093-86-D	41094-86-D	41095-86-D
AFIX30500-	1/2	1/2	3-1/8	6		A	32556-00-D	41096-00-D	41097-00-D	41098-00-D	41099-00-D	44761-00-D
AFIX30500C5-	1/2	1/2	3-1/8	6	C5	A	32556-86-D	41096-86-D	41097-86-D	41098-86-D	41099-86-D	44761-86-D

Item	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	Coatings	Style	Square Radius Offering							
							0.000	0.015	0.030	0.060	0.090	0.125	0.190	
AFIST30625-	5/8	5/8	3/4	3		A	32516-00-D			44763-00-D	44765-00-D	44766-00-D	44767-00-D	
AFIST30625C5-	5/8	5/8	3/4	3	C5	A	32516-86-D			44763-86-D	44765-86-D	44766-86-D	44767-86-D	
AFI30625-	5/8	5/8	1-5/8	3-1/2		A	32356-00-D			44768-00-D	44769-00-D	44770-00-D	44771-00-D	
AFI30625C5-	5/8	5/8	1-5/8	3-1/2	C5	A	32356-86-D			44768-86-D	44769-86-D	44770-86-D	44771-86-D	
AFIM30625-	5/8	5/8	2-1/8	4		A	51614-00-D			44772-00-D	44773-00-D	44774-00-D	44775-00-D	
AFIM30625C5-	5/8	5/8	2-1/8	4	C5	A	51614-86-D			44772-86-D	44773-86-D	44774-86-D	44775-86-D	
AFIL30625-	5/8	5/8	2-1/2	5		A	32420-00-D			44776-00-D	44777-00-D	44778-00-D	44779-00-D	
AFIL30625C5-	5/8	5/8	2-1/2	5	C5	A	32420-86-D			44776-86-D	44777-86-D	44778-86-D	44779-86-D	
AFIX30625-	5/8	5/8	3-3/4	6		A	32564-00-D			44780-00-D	44781-00-D	44782-00-D	44783-00-D	
AFIX30625C5-	5/8	5/8	3-3/4	6	C5	A	32564-86-D			44780-86-D	44781-86-D	44782-86-D	44783-86-D	
AFIST30750-	3/4	3/4	1	3		A	32524-00-D			44784-00-D	44785-00-D	44786-00-D	44787-00-D	44788-00-D
AFIST30750C5-	3/4	3/4	1	3	C5	A	32524-86-D			44784-86-D	44785-86-D	44786-86-D	44787-86-D	44788-86-D
AFI30750-	3/4	3/4	1-5/8	4		A	32364-00-D			44789-00-D	44790-00-D	44791-00-D	44792-00-D	44793-00-D
AFI30750C5-	3/4	3/4	1-5/8	4	C5	A	32364-86-D			44789-86-D	44790-86-D	44791-86-D	44792-86-D	44793-86-D
AFIM30750-	3/4	3/4	2-1/4	5		A	32444-00-D			44794-00-D	44795-00-D	44796-00-D	44797-00-D	44798-00-D
AFIM30750C5-	3/4	3/4	2-1/4	5	C5	A	32444-86-D			44794-86-D	44795-86-D	44796-86-D	44797-86-D	44798-86-D
AFIL30750-	3/4	3/4	3-1/4	6		A	32428-00-D			44799-00-D	44800-00-D	44801-00-D	44802-00-D	44803-00-D
AFIL30750C5-	3/4	3/4	3-1/4	6	C5	A	32428-86-D			44799-86-D	44800-86-D	44801-86-D	44802-86-D	44803-86-D
AFIX30750-	3/4	3/4	4	6-1/2		A	32572-00-D			44804-00-D	44805-00-D	44806-00-D	44807-00-D	44808-00-D
AFIX30750C5-	3/4	3/4	4	6-1/2	C5	A	32572-86-D			44804-86-D	44805-86-D	44806-86-D	44807-86-D	44808-86-D
AFIST31000-	1	1	1-1/4	4		A	32532-00-D			44809-00-D	44810-00-D	44811-00-D	44812-00-D	44813-00-D
AFIST31000C5-	1	1	1-1/4	4	C5	A	32532-86-D			44809-86-D	44810-86-D	44811-86-D	44812-86-D	44813-86-D
AFI31000-	1	1	2	5		A	32372-00-D			44814-00-D	44815-00-D	44816-00-D	44817-00-D	44818-00-D
AFI31000C5-	1	1	2	5	C5	A	32372-86-D			44814-86-D	44815-86-D	44816-86-D	44817-86-D	44818-86-D
AFIM31000-	1	1	2-5/8	6		A	32452-00-D			44819-00-D	44820-00-D	44821-00-D	44822-00-D	44823-00-D
AFIM31000C5-	1	1	2-5/8	6	C5	A	32452-86-D			44819-86-D	44820-86-D	44821-86-D	44822-86-D	44823-86-D
AFIL31000-	1	1	3-1/4	6		A	32436-00-D			44824-00-D	44825-00-D	44826-00-D	44827-00-D	44828-00-D
AFIL31000C5-	1	1	3-1/4	6	C5	A	32436-86-D			44824-86-D	44825-86-D	44826-86-D	44827-86-D	44828-86-D
AFIX31000-	1	1	4-1/8	7		A	32580-00-D			44829-00-D	44830-00-D	44831-00-D	44832-00-D	44833-00-D
AFIX31000C5-	1	1	4-1/8	7	C5	A	32580-86-D			44829-86-D	44830-86-D	44831-86-D	44832-86-D	44833-86-D

AFI Speeds & Chip Loads

AFI

Speeds v [sfm]			1600 MAX	1600 MAX	600 1000	900 1300	1100 1500	1500 MAX
			AL Alloys	AL Cast	AL High Si > 12% Si	Brass	Copper	Magnesium
1/4	Peripheral	[P]	0.0020	0.0020	0.0010	0.0015	0.0015	0.0020
	Light Peripheral	[LP]	0.0025	0.0025	0.0013	0.0019	0.0019	0.0025
	Finishing	[F]	0.0042	0.0042	0.0022	0.0031	0.0031	0.0042
3/16	Peripheral	[P]	0.0030	0.0030	0.0015	0.0022	0.0022	0.0030
	Light Peripheral	[LP]	0.0038	0.0038	0.0020	0.0028	0.0028	0.0038
	Finishing	[F]	0.0062	0.0062	0.0032	0.0046	0.0046	0.0062
1/4	Peripheral	[P]	0.0040	0.0040	0.0020	0.0029	0.0029	0.0040
	Light Peripheral	[LP]	0.0051	0.0051	0.0026	0.0038	0.0038	0.0051
	Finishing	[F]	0.0083	0.0083	0.0043	0.0062	0.0062	0.0083
5/16	Peripheral	[P]	0.0049	0.0049	0.0026	0.0037	0.0037	0.0049
	Light Peripheral	[LP]	0.0063	0.0063	0.0033	0.0047	0.0047	0.0063
	Finishing	[F]	0.0104	0.0104	0.0054	0.0077	0.0077	0.0104
3/8	Peripheral	[P]	0.0059	0.0059	0.0031	0.0044	0.0044	0.0059
	Light Peripheral	[LP]	0.0076	0.0076	0.0039	0.0057	0.0057	0.0076
	Finishing	[F]	0.0125	0.0125	0.0065	0.0093	0.0093	0.0125
7/16	Peripheral	[P]	0.0069	0.0069	0.0036	0.0052	0.0052	0.0069
	Light Peripheral	[LP]	0.0089	0.0089	0.0046	0.0066	0.0066	0.0089
	Finishing	[F]	0.0146	0.0146	0.0075	0.0108	0.0108	0.0146
1/2	Peripheral	[P]	0.0079	0.0079	0.0041	0.0059	0.0059	0.0079
	Light Peripheral	[LP]	0.0102	0.0102	0.0053	0.0076	0.0076	0.0102
	Finishing	[F]	0.0166	0.0166	0.0086	0.0124	0.0124	0.0166
5/8	Peripheral	[P]	0.0099	0.0099	0.0051	0.0074	0.0074	0.0099
	Light Peripheral	[LP]	0.0127	0.0127	0.0066	0.0095	0.0095	0.0127
	Finishing	[F]	0.0208	0.0208	0.0108	0.0155	0.0155	0.0208
3/4	Peripheral	[P]	0.0119	0.0119	0.0061	0.0088	0.0088	0.0119
	Light Peripheral	[LP]	0.0152	0.0152	0.0079	0.0113	0.0113	0.0152
	Finishing	[F]	0.0249	0.0249	0.0129	0.0186	0.0186	0.0249
1	Peripheral	[P]	0.0158	0.0158	0.0082	0.0118	0.0118	0.0158
	Light Peripheral	[LP]	0.0203	0.0203	0.0105	0.0151	0.0151	0.0203
	Finishing	[F]	0.0333	0.0333	0.0172	0.0248	0.0248	0.0333

For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.





DATA FLUTE™

EXPANDED AFI SERIES

High Performance Carbide for Non-Ferrous Applications

Data Flute has expanded its AFI series to include:

- Over 300 new SKUs with radii
- Radius sizes from 0.015 through 0.190





AMF
Multi-Flute



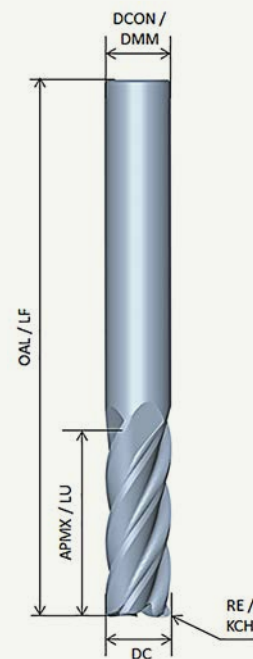
The Aluminum Multi-Flute Series (AMF) features patented geometries with a flute form that reduces unwanted harmonics. The AMF provides unparalleled surface finishes at superior feed rates in aluminum and other non-ferrous materials. This tool can also profile in some peripheral roughing applications. With its special geometry for process dampening, the AMF is a perfect choice for straight wall finishing.

MAIN CHARACTERISTICS

- Flute Count (NOF): 5-7
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): $-0.001''/-0.002''$
- Corner Radius (RE): $+0.001''/-0.001''$



STYLE A

WORK MATERIAL

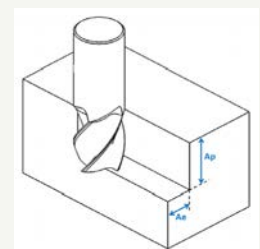


COATING



RECOMMENDED OPERATION

	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	$5\%DC < _ \leq 25\%DC$	$\leq 5\%DC$
AP	$2.0 \times DC$	APMX



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Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	No. of Flutes	Style	EDP	C4 EDP	C5 EDP
AMF-ST-50250	1/4	1/4	3/8	2	5	A	37243-00-D	37243-89-D	37243-86-D
AMF-50250	1/4	1/4	3/4	2-1/2	5	A	37244-00-D	37244-89-D	37244-86-D
AMF-L-50250	1/4	1/4	1-1/4	3-1/4	5	A	37245-00-D	37245-89-D	37245-86-D
AMF-ST-50312	5/16	5/16	7/16	2	5	A	37246-00-D	37246-89-D	37246-86-D
AMF-50312	5/16	5/16	13/16	2-1/2	5	A	37247-00-D	37247-89-D	37247-86-D
AMF-L-50312	5/16	5/16	1-1/4	3-1/2	5	A	37248-00-D	37248-89-D	37248-86-D
AMF-ST-50375	3/8	3/8	1/2	2	5	A	37249-00-D	37249-89-D	37249-86-D
AMF-50375	3/8	3/8	1	2-1/2	5	A	37250-00-D	37250-89-D	37250-86-D
AMF-L-50375	3/8	3/8	1-1/2	3-1/2	5	A	37251-00-D	37251-89-D	37251-86-D
AMF-ST-50437	7/16	7/16	9/16	2-1/2	5	A	37252-00-D	37252-89-D	37252-86-D
AMF-50437	7/16	7/16	1	2-3/4	5	A	37253-00-D	37253-89-D	37253-86-D
AMF-L-50437	7/16	7/16	2	4	5	A	37254-00-D	37254-89-D	37254-86-D
AMF-ST-50500	1/2	1/2	5/8	2-1/2	5	A	37255-00-D	37255-89-D	37255-86-D
AMF-50500	1/2	1/2	1-1/4	3	5	A	37256-00-D	37256-89-D	37256-86-D
AMF-L-50500	1/2	1/2	2	4	5	A	37257-00-D	37257-89-D	37257-86-D
AMF-ST-50625	5/8	5/8	3/4	3	5	A	37258-00-D	37258-89-D	37258-86-D
AMF-50625	5/8	5/8	1-5/8	3-1/2	5	A	37259-00-D	37259-89-D	37259-86-D
AMF-L-50625	5/8	5/8	2-1/2	5	5	A	37260-00-D	37260-89-D	37260-86-D
AMF-ST-70750	3/4	3/4	1	3	7	A	37261-00-D	37261-89-D	37261-86-D
AMF-70750	3/4	3/4	1-5/8	4	7	A	37262-00-D	37262-89-D	37262-86-D
AMF-L-70750	3/4	3/4	3-1/4	6	7	A	37263-00-D	37263-89-D	37263-86-D
AMF-ST-71000	1	1	1-1/4	3	7	A	37264-00-D	37264-89-D	37264-86-D
AMF-71000	1	1	2	5	7	A	37265-00-D	37265-89-D	37265-86-D
AMF-L-71000	1	1	3-1/4	6	7	A	37266-00-D	37266-89-D	37266-86-D

PATENTED GEOMETRIES

AMF, Multi-Flute Speeds & Chip Loads

			Speeds v [sfm]	1600 MAX	1600 MAX	600 1000	900 1300	1100 1500	1500 MAX
			AL Alloys	AL Cast	AL High Si > 12% Si	Brass	Copper	Magnesium	
1/4	Light Peripheral	[LP]	0.0033	0.0033	0.0018	0.0027	0.0027	0.0033	
	Finishing	[F]	0.0054	0.0054	0.0030	0.0044	0.0044	0.0054	
5/16	Light Peripheral	[LP]	0.0041	0.0041	0.0023	0.0034	0.0034	0.0041	
	Finishing	[F]	0.0067	0.0067	0.0037	0.0055	0.0055	0.0067	
3/8	Light Peripheral	[LP]	0.0049	0.0049	0.0027	0.0040	0.0040	0.0049	
	Finishing	[F]	0.0081	0.0081	0.0045	0.0066	0.0066	0.0081	
7/16	Light Peripheral	[LP]	0.0058	0.0058	0.0032	0.0047	0.0047	0.0058	
	Finishing	[F]	0.0094	0.0094	0.0052	0.0077	0.0077	0.0094	
1/2	Light Peripheral	[LP]	0.0066	0.0066	0.0036	0.0054	0.0054	0.0066	
	Finishing	[F]	0.0108	0.0108	0.0060	0.0088	0.0088	0.0108	
5/8	Light Peripheral	[LP]	0.0053	0.0053	0.0032	0.0048	0.0048	0.0053	
	Finishing	[F]	0.0088	0.0088	0.0052	0.0078	0.0078	0.0088	
3/4	Light Peripheral	[LP]	0.0064	0.0064	0.0038	0.0057	0.0057	0.0064	
	Finishing	[F]	0.0105	0.0105	0.0062	0.0094	0.0094	0.0105	
1	Light Peripheral	[LP]	0.0085	0.0085	0.0051	0.0077	0.0077	0.0085	
	Finishing	[F]	0.0140	0.0140	0.0083	0.0126	0.0126	0.0140	

AMF

Ferrous



Recommended Speeds

High Performance Carbide

Workpiece Material	ISO Code	Material Hardness	Slotting/Roughing S/R	Heavy Peripheral HP	Peripheral P	Light Peripheral LP	Finishing F
			100%>_≥ 80%DC	80%DC>_≥40%DC	40%DC>_≥25%DC	25%DC>_≥5%DC	_<5%DC
Carbon Steels 10XX, 11xx, 12xx, 13xx	P	Rc≤42 [HRC] 35<Rc≤42 [HRC]	230 -	305 -	360 -	475 -	550 -
Alloy Steels 40xx, 41xx, 42xx, 43xx, 86xx	P	Rc≤35 [HRC] 35<Rc≤42 [HRC]	200 150	265 185	310 220	405 275	465 315
Tool Steels (Annealed) A2, D2, H13, P20, B7	P	Rc<35 [HRC] 35<Rc<42 [HRC]	160 120	210 150	245 180	320 225	370 260
Hardened Steels	H	35<Rc<42 [HRC] 42<Rc<59 [HRC]	90 40	135 75	160 90	225 145	260 165
Cobalt Chrome	H	Rc≤35 [HRC] 35<Rc≤42 [HRC]	140 90	180 125	215 145	275 195	315 225
Austenitic (300) Stainless Steels	M	Rc≤35 [HRC] 35<Rc≤42 [HRC]	200 130	260 170	305 200	395 260	455 295
Ferritic/Martensitic (400 Series) Stainless Steels	M	Rc≤35 [HRC] 35<Rc≤42 [HRC]	220 130	280 170	330 200	420 255	480 295
Precipitation Hardened Stainless Steels	M	Rc≤35 [HRC] 35<Rc≤42 [HRC]	180 -	235 -	280 -	365 -	420 -
Austenitic/Ferritic (Duplex) Stainless Steels	M	Rc≤35 [HRC] 35<Rc≤42 [HRC]	180 -	235 -	280 -	365 -	420 -
Iron Base Alloys	S	Rc≤35 [HRC] 35<Rc≤42 [HRC]	70 -	90 -	105 -	135 -	160 -
Cobalt Base Alloys	S	Rc≤35 [HRC] 35<Rc≤42 [HRC]	50 -	70 -	80 -	115 -	130 -
Nickel Base Alloys	S	Rc≤35 [HRC] 35<Rc≤42 [HRC]	70 40	90 55	105 65	135 90	160 105
Titanium Cast/Wrought	S	Rm≤950 [MPa] Rm>950 [MPa]	160 100	215 140	250 165	335 225	390 260
Gray Cast Irons	K	Rc≤35 [HRC] 35<Rc≤42 [HRC]	200 -	250 -	295 -	370 -	425 -
Malleable Cast Irons	K	Rc<35 [HRC] 35<Rc<42 [HRC]	220 -	275 -	320 -	405 -	465 -
Nodular Cast Irons	K	Rc≤35 [HRC] 35<Rc≤42 [HRC]	180 -	230 -	270 -	340 -	390 -



List of Ferrous Material Groups

CARBON STEELS (Unalloyed Steels)

10xx	11xx	13xx	15xx
A570.36	A572-60	A573-81	
W1	W210	12L14	

Alloy Steels (Low Alloy Steels)

40xx	41xx	42xx	43xx
44xx	46xx	51xx	86xx
L1	L6	S1	
A204Gr.A	A350LF5	A182 F.22	

TOOL & MOLD STEELS (High Alloy Steels)

H13	0-1	A2	D2	B7	P20
H21	M2	M7	M35	L3	

COBALT CHROME ALLOYS

ASTM F1537	ASTM F75	5537C	5772
ASTM F799	ISO 5832-xx	BS 7252	BioDur

HARDENED STEELS

440A	0-2	610
Steels > 45 HRC		

STAINLESS STEELS

Austenitic Stainless Steels						
Series 300						
301	303	304	308	309		
	316	317	318	321		
	304L	304LN	316L	316LN	317L	
EV8	CA6-NM	S31254				
Ferritic/Martensitic Stainless Steels						
Series 400						
	403	405	410	420		
	430	431	434	446		
	430F					
S44400	HW3	HNV6				
Austenitic/Ferritic (Duplex) Stainless Steels						
2101	2304	2205	2507			
LDX2101						
Precipitation Hardening Stainless Steels						
15-5PH	17-4PH	16-6PH	18-3PH	AM-xx		

HIGH TEMP ALLOYS

Titanium Alloys					
Ti6Al4V	ASTM 1, 2,	Titanium Pure Alpha-Beta	5553		
Nickel Base Alloys					
Inconel 625	Inconel 718	Rene 95	Haynes 600	Incoloy 825	
Monet 400	Waspaloy	Hastelloy C			
Cobalt Base Alloys					
Air Resist 213	Jettalloy 20	Stellite			
Iron Base Alloys					
Incolloy 800	A286	A297			

CAST IRONS

Malleable Cast Iron
 Gray Cast Iron
 Nodular Cast Iron



Ferrous

and Exotic Alloys

ROUGHING

SERIES	ITEM	DESCRIPTION	PAGE
FeR _x	Variably Indexed Rougher	Multi Fluted Rougher	76
SSDH	Stainless Steel Double Helix	4 Flute Double Helix	82
SSDH-C	Stainless Steel Double Helix Chip Breaker	4 Flute Double Helix Truncated Chip Breaker	88
SS-3	Titanium and Stainless Steel Rougher/Finisher, With and Without Reduced Neck	3 Flute 35° Helix Rougher/Finisher	92
SS-3-C	Stainless Steel Chip Breaker	3 Flute 35° Helix Rougher/Finisher Chip Breaker	100
SS-4-C	Stainless Steel Chip Breaker	4 Flute 35° Helix Rougher/Finisher Chip Breaker	102
SS-BN-3	Stainless Steel Ball Nose	3 Flute 35° Helix Rougher/Finisher Ball Nose Regular and Reduced Neck	108
SS-BN-4	Stainless Steel Ball Nose	4 Flute 35° Helix Rougher/Finisher Ball Nose Regular and Reduced Neck	116
SS-BN-4-C	Stainless Steel Ball Nose Chip Breaker	4 Flute 35° Helix Rougher/Finisher Ball Nose Chip Breaker	114
SSI-4 (M)	Titanium and Stainless Steel Rougher/Finisher, With and Without Reduced Neck	4 Flute 35° Variably Indexed Square and Radius Ends	124
SSI-4 BN	Titanium and Stainless Steel Ball Nose	4 Flute Variably Indexed Ball Nose	131

FINISHING

Ferrous and Exotic Alloys Index

ROUGHING

SERIES	ITEM	DESCRIPTION	PAGE
SSI-5 (M)	Titanium and Stainless Steel Rougher/Finisher, With and Without Reduced Neck	5 Flute Variably Indexed Square and Radius Ends	138
SSI-7	Titanium and Stainless Steel Simi Finisher/Finisher, With And Without Reduced Neck	7 Flute Variably Indexed Square and Radius Ends	150
SVI	Titanium and Stainless Steel Rougher/Finisher	5 Flute Variable Pitch and Variable Helix Flute to Flute	156
HiTe _χ	Titanium and Stainless Steel Rougher/Finisher, With and Without Reduced Neck	4 Flute 35° Variably Indexed Square and Radius Ends	162
HiTe _χ -C	Titanium and Stainless Steel Rougher/Finisher, With and Without Reduced Neck	4 Flute 35° Variably Indexed Square and Radius Ends	168
DM-BN (M)	Die Mold Ball Nose	2 Flute Ball Mill for Hard Milling Mold Applications	172
MH	Titanium and Stainless Steel Rougher/Finisher	Multi-Flute, 45° Helix Rougher/Finisher Multi-Flute Square End	176
MH-CR	Titanium and Stainless Steel Rougher/Finisher	Multi-Flute, 45° Helix Rougher/Finisher Multi-Flute Radius End	184
MED _χ	Titanium and Stainless Steel Rougher/Finisher, With and Without Reduced Neck	Multi-Flute 6 & 8 Flutes Radius & Ball Ends	190
TiW	Multi-Flute Finisher	Multi-Flute Variable Pitch and	196

FINISHING



FeR_x
Variably Indexed



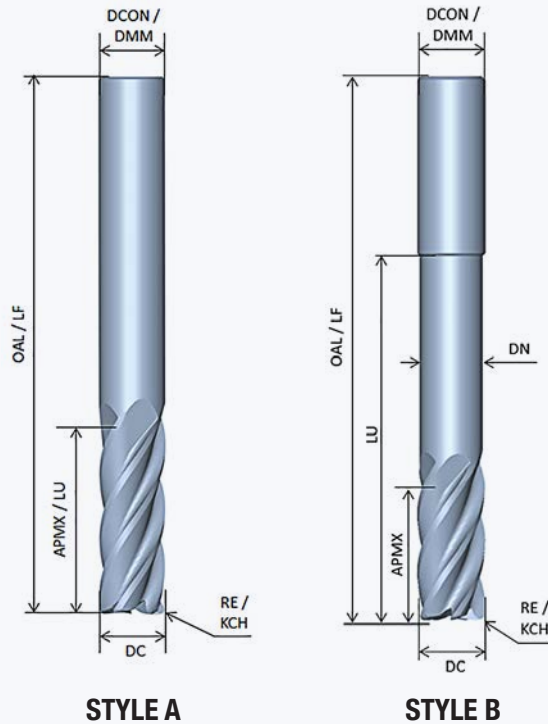
The FeR_x is a variably-indexed, serrated tool for roughing in ferrous alloys. We offer a four flute version in cutting diameters up to 1/2". For tools with a cutting diameter larger than 1/2", the FeR_x is a five flute tool. The FeR_x is available in both straight shank and reduced neck configurations for all of your ferrous roughing needs.

MAIN CHARACTERISTICS

- Flute Count (NOF): 4-5
- UnEqual Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Serrations

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): -0.001"/-0.002"
- Corner Radius (RE): +0.001"/-0.001"



WORK MATERIAL

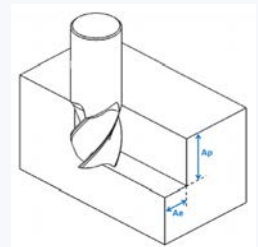


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)
AE	80%DC <= 100%DC	40%DC <= 80%DC	25%DC <= 40%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC



For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



FeR_x Variably Indexed Rougher

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	RAD RE	Neck Dia DN	No. of Flutes	Style	C14 EDP	C19 EDP
FeR _x ST40250-020	1/4	1/4	3/8	2		0.020		4	A	44925-14-D	44925-19-D
FeR _x 40250-020	1/4	1/4	3/4	2-1/2		0.020		4	A	44926-14-D	44926-19-D
FeR _x RN 40250-020	1/4	1/4	3/8	4	3/4	0.020	.235	4	B	44928-14-D	44928-19-D
FeR _x ST40375-020	3/8	3/8	1/2	2-1/2		0.020		4	A	44930-14-D	44930-19-D
FeR _x 40375-020	3/8	3/8	1	2-1/2		0.020		4	A	44931-14-D	44931-19-D
FeR _x RN 40375-020	3/8	3/8	1/2	4	1-1/8	0.020	.355	4	B	44932-14-D	44932-19-D
FeR _x ST40500-030	1/2	1/2	5/8	3		0.030		4	A	44933-14-D	44933-19-D
FeR _x 40500-030	1/2	1/2	1-1/4	3		0.030		4	A	44934-14-D	44934-19-D
FeR _x RN 40500-030	1/2	1/2	5/8	6	1-1/2	0.030	.475	4	B	44935-14-D	44935-19-D
FeR _x ST50625-030	5/8	5/8	3/4	3		0.030		5	A	44936-14-D	44936-19-D
FeR _x 50625-030	5/8	5/8	1-5/8	3-1/2		0.030		5	A	44937-14-D	44937-19-D
FeR _x RN 50625-030	5/8	5/8	3/4	6	1-5/8	0.030	0.590	5	B	44938-14-D	44938-19-D
FeR _x ST50750-030	3/4	3/4	1	3		0.030		5	A	44939-14-D	44939-19-D
FeR _x 50750-030	3/4	3/4	1-5/8	4		0.030		5	A	44940-14-D	44940-19-D
FeR _x RN 50750-030	3/4	3/4	1	6	2	0.030	.715	5	B	44941-14-D	44941-19-D
FeR _x ST51000-030	1	1	1-1/4	4		0.030		5	A	44942-14-D	44942-19-D
FeR _x 51000-030	1	1	2	5		0.030		5	A	44943-14-D	44943-19-D
FeR _x RN 51000-030	1	1	1-1/4	7	2-5/8	0.030	0.960	5	B	44944-14-D	44944-19-D

*LBS/LU Length Below Shank

FeR_x

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DATA FLUTE™

FeR_x

- Tool of Choice in Ferrous Roughing Applications
- Freer Cutting, Better Chip Form and Control
- Additional Radii and Coatings upon Request
- Modified LBS Lengths upon Request



FeR_x Recommended Chip Loads

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
1/4	Slotting	[S]	0.00131	0.00125	0.00108	0.00081	0.00092	0.00119
	Heavy Peripheral	[HP]	0.00164	0.00156	0.00135	0.00101	0.00114	0.00149
	Peripheral	[P]	0.00179	0.00171	0.00147	0.00110	0.00125	0.00162
3/8	Slotting	[S]	0.00196	0.00188	0.00162	0.00121	0.00137	0.00179
	Heavy Peripheral	[HP]	0.00246	0.00234	0.00202	0.00151	0.00172	0.00223
	Peripheral	[P]	0.00268	0.00256	0.00220	0.00165	0.00187	0.00244
1/2	Slotting	[S]	0.00262	0.00250	0.00215	0.00162	0.00183	0.00238
	Heavy Peripheral	[HP]	0.00327	0.00313	0.00269	0.00202	0.00229	0.00298
	Peripheral	[P]	0.00357	0.00341	0.00294	0.00220	0.00250	0.00325
5/8	Slotting	[S]	0.00303	0.00289	0.00249	0.00187	0.00212	0.00276
	Heavy Peripheral	[HP]	0.00379	0.00362	0.00312	0.00234	0.00265	0.00345
	Peripheral	[P]	0.00414	0.00395	0.00340	0.00255	0.00289	0.00376
3/4	Slotting	[S]	0.00364	0.00347	0.00299	0.00224	0.00254	0.00331
	Heavy Peripheral	[HP]	0.00455	0.00434	0.00374	0.00281	0.00318	0.00413
	Peripheral	[P]	0.00496	0.00474	0.00408	0.00306	0.00347	0.00451
1	Slotting	[S]	0.00485	0.00463	0.00399	0.00299	0.00339	0.00441
	Heavy Peripheral	[HP]	0.00606	0.00579	0.00499	0.00374	0.00424	0.00551
	Peripheral	[P]	0.00662	0.00632	0.00544	0.00408	0.00463	0.00601

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00102	0.00113	0.00113	0.00119	0.00097	0.00097	0.00092	0.00113	0.00113	0.00097
0.00128	0.00142	0.00142	0.00149	0.00121	0.00121	0.00114	0.00142	0.00142	0.00121
0.00139	0.00155	0.00155	0.00162	0.00132	0.00132	0.00125	0.00155	0.00155	0.00132
0.00153	0.00170	0.00170	0.00179	0.00145	0.00145	0.00137	0.00170	0.00170	0.00145
0.00191	0.00213	0.00213	0.00223	0.00182	0.00182	0.00172	0.00213	0.00213	0.00182
0.00209	0.00232	0.00232	0.00244	0.00198	0.00198	0.00187	0.00232	0.00232	0.00198
0.00204	0.00227	0.00227	0.00238	0.00194	0.00194	0.00183	0.00227	0.00227	0.00194
0.00255	0.00284	0.00284	0.00298	0.00242	0.00242	0.00229	0.00284	0.00284	0.00242
0.00278	0.00309	0.00309	0.00325	0.00264	0.00264	0.00250	0.00309	0.00309	0.00264
0.00236	0.00263	0.00263	0.00276	0.00224	0.00224	0.00212	0.00263	0.00263	0.00224
0.00295	0.00328	0.00328	0.00345	0.00281	0.00281	0.00265	0.00328	0.00328	0.00281
0.00322	0.00358	0.00358	0.00376	0.00306	0.00306	0.00289	0.00358	0.00358	0.00306
0.00284	0.00315	0.00315	0.00331	0.00269	0.00269	0.00254	0.00315	0.00315	0.00269
0.00354	0.00394	0.00394	0.00413	0.00337	0.00337	0.00318	0.00394	0.00394	0.00337
0.00387	0.00430	0.00430	0.00451	0.00367	0.00367	0.00347	0.00430	0.00430	0.00367
0.00378	0.00420	0.00420	0.00441	0.00359	0.00359	0.00339	0.00420	0.00420	0.00359
0.00473	0.00525	0.00525	0.00551	0.00449	0.00449	0.00424	0.00525	0.00525	0.00449
0.00516	0.00573	0.00573	0.00601	0.00490	0.00490	0.00463	0.00573	0.00573	0.00490

SSDH
Four Flute





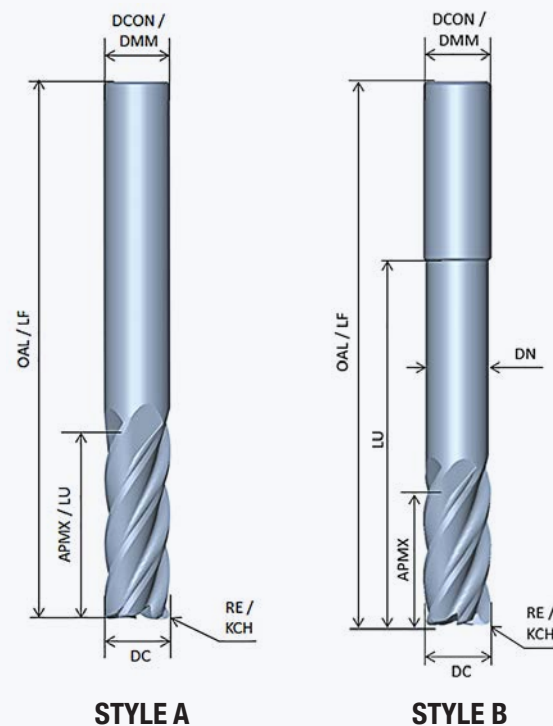
The SSDH series achieves superior chip flow and evacuation through the introduction of chip-release flute form technology, and a unique inter-flute helical transition all within a patent pending design. A premium, rupture resistant substrate is the foundation to which these progressive geometries are applied. The end result is a brute of an end mill, capable of ultra aggressive metal removal rates in ferrous material ranging from low carbon steel to high nickel alloys. This all adds up to cycle time reductions and improved machine tool productivity.

MAIN CHARACTERISTICS

- Flute Count (NOF): 4
- Equal Index
- Double Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): $-0.001"/-0.002"$
- Corner Radius (RE): $+0.001"/-0.001"$



WORK MATERIAL

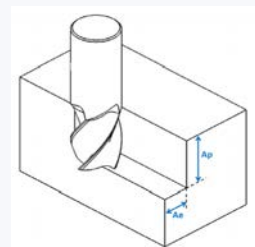


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)
AE	80%DC <= 100%DC	40%DC <= 80%DC	25%DC <= 40%DC	5%DC <= 25%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC



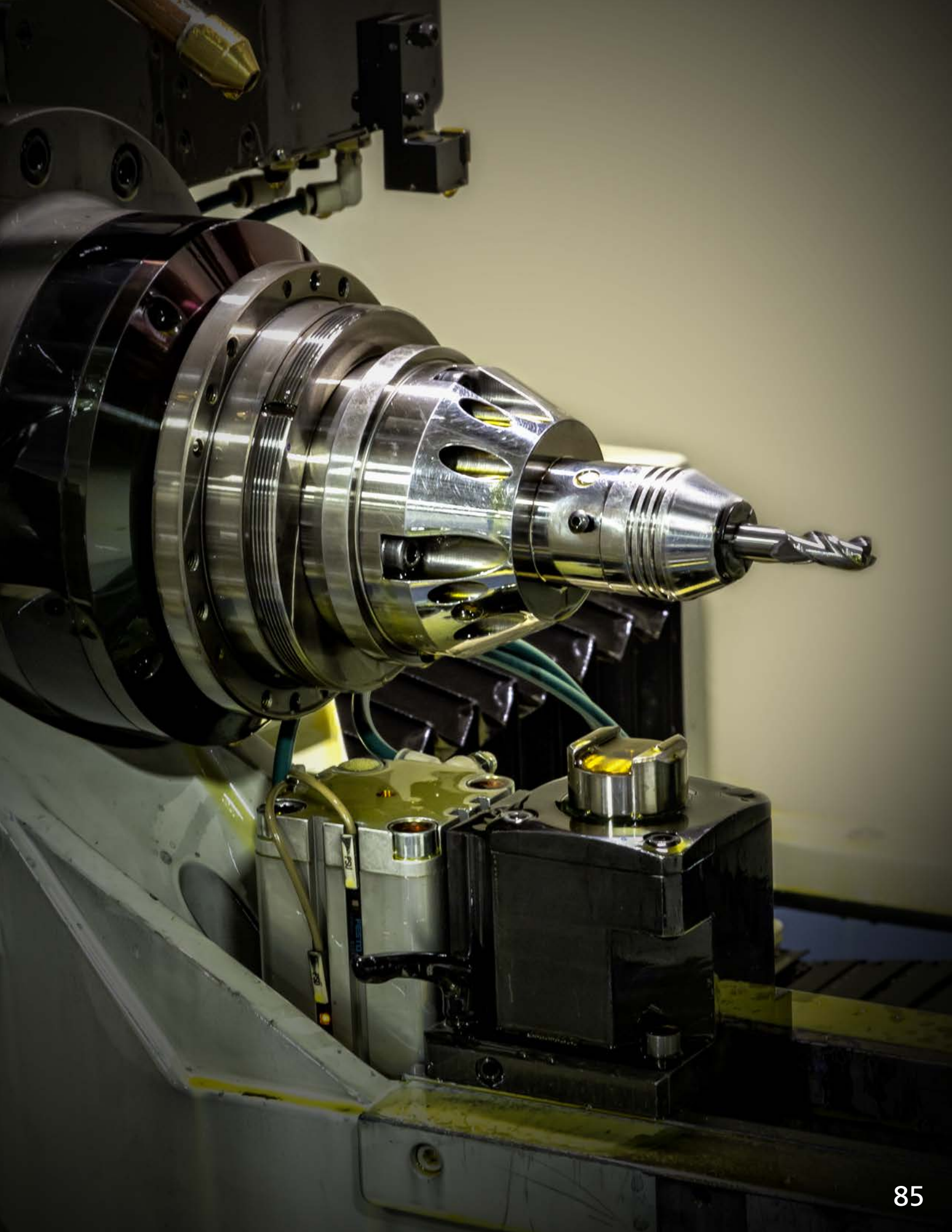
SSDH

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Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Radius RE	Neck Dia DN	Style	EDP	C7 EDP	C11 EDP	C10 EDP
SSDH-ST-40250	1/4	1/4	3/8	2		.020		A	51000-00-D	51000-83-D	51000-85-D	51000-70-D
SSDH-40250	1/4	1/4	3/4	2-1/2		.020		A	51032-00-D	51032-83-D	51032-85-D	51032-70-D
SSDH-LS-M-40250	1/4	1/4	3/8	4	2-1/8	.020	.235	B	51064-00-D	51064-83-D	51064-85-D	51064-70-D
SSDH-ST-40312	5/16	5/16	7/16	2		.020		A	51004-00-D	51004-83-D	51004-85-D	51004-70-D
SSDH-40312	5/16	5/16	13/16	2-1/2		.020		A	51036-00-D	51036-83-D	51036-85-D	51036-70-D
SSDH-LS-M-40312	5/16	5/16	7/16	4	2-1/8	.020	.297	B	51068-00-D	51068-83-D	51068-85-D	51068-70-D
SSDH-ST-40375	3/8	3/8	1/2	2		.020		A	51008-00-D	51008-83-D	51008-85-D	51008-70-D
SSDH-40375	3/8	3/8	1	2-1/2		.020		A	51040-00-D	51040-83-D	51040-85-D	51040-70-D
SSDH-LS-M-40375	3/8	3/8	1/2	6	2-3/8	.020	.355	B	51072-00-D	51072-83-D	51072-85-D	51072-70-D
SSDH-ST-40437	7/16	7/16	9/16	2-1/2		.020		A	51012-00-D	51012-83-D	51012-85-D	51012-70-D
SSDH-40437	7/16	7/16	1	2-3/4		.020		A	51044-00-D	51044-83-D	51044-85-D	51044-70-D
SSDH-LS-M-40437	7/16	7/16	9/16	6	2-3/8	.020	.412	B	51076-00-D	51076-83-D	51076-85-D	51076-70-D
SSDH-ST-40500	1/2	1/2	5/8	2-1/2		.030		A	51016-00-D	51016-83-D	51016-85-D	51016-70-D
SSDH-40500	1/2	1/2	1-1/4	3		.030		A	51048-00-D	51048-83-D	51048-85-D	51048-70-D
SSDH-LS-M-40500	1/2	1/2	5/8	6	2-3/8	.030	.475	B	51080-00-D	51080-83-D	51080-85-D	51080-70-D
SSDH-ST-40625	5/8	5/8	3/4	3		.030		A	51020-00-D	51020-83-D	51020-85-D	51020-70-D
SSDH-40625	5/8	5/8	1-5/8	3-1/2		.030		A	51052-00-D	51052-83-D	51052-85-D	51052-70-D
SSDH-LS-M-40625	5/8	5/8	3/4	6	2-3/8	.030	.590	B	51084-00-D	51084-83-D	51084-85-D	51084-70-D
SSDH-ST-40750	3/4	3/4	1	3		.030		A	51024-00-D	51024-83-D	51024-85-D	51024-70-D
SSDH-40750	3/4	3/4	1-5/8	4		.030		A	51056-00-D	51056-83-D	51056-85-D	51056-70-D
SSDH-LS-M-40750	3/4	3/4	1	6	2-1/2	.030	.715	B	51088-00-D	51088-83-D	51088-85-D	51088-70-D
SSDH-ST-41000	1	1	1-1/4	4		.030		A	51028-00-D	51028-83-D	51028-85-D	51028-70-D
SSDH-41000	1	1	2	5		.030		A	51060-00-D	51060-83-D	51060-85-D	51060-70-D
SSDH-LS-M-401000	1	1	1-1/4	6	2-1/2	.030	.960	B	51092-00-D	51092-83-D	51092-85-D	51092-70-D

*LBS/LU Length Below Shank



SSDH Recommended Chip Loads

SSDH

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
1/4	Slotting	[S]	0.00131	0.00125	0.00108	0.00081	0.00092	0.00119
	Heavy Peripheral	[HP]	0.00164	0.00156	0.00135	0.00101	0.00114	0.00149
	Peripheral	[P]	0.00179	0.00171	0.00147	0.00110	0.00125	0.00162
	Light Peripheral	[LP]	0.00213	0.00203	0.00175	0.00131	0.00149	0.00194
5/16	Slotting	[S]	0.00164	0.00156	0.00135	0.00101	0.00114	0.00149
	Heavy Peripheral	[HP]	0.00205	0.00195	0.00168	0.00126	0.00143	0.00186
	Peripheral	[P]	0.00223	0.00213	0.00184	0.00138	0.00156	0.00203
	Light Peripheral	[LP]	0.00266	0.00254	0.00219	0.00164	0.00186	0.00242
3/8	Slotting	[S]	0.00196	0.00188	0.00162	0.00121	0.00137	0.00179
	Heavy Peripheral	[HP]	0.00246	0.00234	0.00202	0.00151	0.00172	0.00223
	Peripheral	[P]	0.00268	0.00256	0.00220	0.00165	0.00187	0.00244
	Light Peripheral	[LP]	0.00320	0.00305	0.00263	0.00197	0.00223	0.00291
7/16	Slotting	[S]	0.00229	0.00219	0.00189	0.00141	0.00160	0.00208
	Heavy Peripheral	[HP]	0.00287	0.00273	0.00236	0.00177	0.00200	0.00260
	Peripheral	[P]	0.00313	0.00298	0.00257	0.00193	0.00219	0.00284
	Light Peripheral	[LP]	0.00373	0.00356	0.00307	0.00230	0.00261	0.00339
1/2	Slotting	[S]	0.00262	0.00250	0.00215	0.00162	0.00183	0.00238
	Heavy Peripheral	[HP]	0.00327	0.00313	0.00269	0.00202	0.00229	0.00298
	Peripheral	[P]	0.00357	0.00341	0.00294	0.00220	0.00250	0.00325
	Light Peripheral	[LP]	0.00426	0.00407	0.00351	0.00263	0.00298	0.00387
5/8	Slotting	[S]	0.00327	0.00313	0.00269	0.00202	0.00229	0.00298
	Heavy Peripheral	[HP]	0.00409	0.00391	0.00337	0.00252	0.00286	0.00372
	Peripheral	[P]	0.00447	0.00426	0.00367	0.00275	0.00312	0.00406
	Light Peripheral	[LP]	0.00533	0.00508	0.00438	0.00329	0.00372	0.00484
3/4	Slotting	[S]	0.00393	0.00375	0.00323	0.00242	0.00275	0.00357
	Heavy Peripheral	[HP]	0.00491	0.00469	0.00404	0.00303	0.00343	0.00447
	Peripheral	[P]	0.00536	0.00512	0.00441	0.00331	0.00375	0.00487
	Light Peripheral	[LP]	0.00639	0.00610	0.00526	0.00394	0.00447	0.00581
1	Slotting	[S]	0.00524	0.00500	0.00431	0.00323	0.00366	0.00476
	Heavy Peripheral	[HP]	0.00655	0.00625	0.00539	0.00404	0.00458	0.00595
	Peripheral	[P]	0.00715	0.00682	0.00588	0.00441	0.00500	0.00650
	Light Peripheral	[LP]	0.00852	0.00814	0.00701	0.00526	0.00596	0.00775

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00102	0.00113	0.00113	0.00119	0.00097	0.00097	0.00092	0.00113	0.00113	0.00097
0.00128	0.00142	0.00142	0.00149	0.00121	0.00121	0.00114	0.00142	0.00142	0.00121
0.00139	0.00155	0.00155	0.00162	0.00132	0.00132	0.00125	0.00155	0.00155	0.00132
0.00166	0.00184	0.00184	0.00194	0.00158	0.00158	0.00149	0.00184	0.00184	0.00158
0.00128	0.00142	0.00142	0.00149	0.00121	0.00121	0.00114	0.00142	0.00142	0.00121
0.00159	0.00177	0.00177	0.00186	0.00151	0.00151	0.00143	0.00177	0.00177	0.00151
0.00174	0.00193	0.00193	0.00203	0.00165	0.00165	0.00156	0.00193	0.00193	0.00165
0.00208	0.00231	0.00231	0.00242	0.00197	0.00197	0.00186	0.00231	0.00231	0.00197
0.00153	0.00170	0.00170	0.00179	0.00145	0.00145	0.00137	0.00170	0.00170	0.00145
0.00191	0.00213	0.00213	0.00223	0.00182	0.00182	0.00172	0.00213	0.00213	0.00182
0.00209	0.00232	0.00232	0.00244	0.00198	0.00198	0.00187	0.00232	0.00232	0.00198
0.00249	0.00277	0.00277	0.00291	0.00237	0.00237	0.00223	0.00277	0.00277	0.00237
0.00179	0.00198	0.00198	0.00208	0.00170	0.00170	0.00160	0.00198	0.00198	0.00170
0.00223	0.00248	0.00248	0.00260	0.00212	0.00212	0.00200	0.00248	0.00248	0.00212
0.00244	0.00271	0.00271	0.00284	0.00231	0.00231	0.00219	0.00271	0.00271	0.00231
0.00291	0.00323	0.00323	0.00339	0.00276	0.00276	0.00261	0.00323	0.00323	0.00276
0.00204	0.00227	0.00227	0.00238	0.00194	0.00194	0.00183	0.00227	0.00227	0.00194
0.00255	0.00284	0.00284	0.00298	0.00242	0.00242	0.00229	0.00284	0.00284	0.00242
0.00278	0.00309	0.00309	0.00325	0.00264	0.00264	0.00250	0.00309	0.00309	0.00264
0.00332	0.00369	0.00369	0.00387	0.00315	0.00315	0.00298	0.00369	0.00369	0.00315
0.00255	0.00284	0.00284	0.00298	0.00242	0.00242	0.00229	0.00284	0.00284	0.00242
0.00319	0.00354	0.00354	0.00372	0.00303	0.00303	0.00286	0.00354	0.00354	0.00303
0.00348	0.00387	0.00387	0.00406	0.00331	0.00331	0.00312	0.00387	0.00387	0.00331
0.00415	0.00461	0.00461	0.00484	0.00394	0.00394	0.00372	0.00461	0.00461	0.00394
0.00306	0.00340	0.00340	0.00357	0.00291	0.00291	0.00275	0.00340	0.00340	0.00291
0.00383	0.00425	0.00425	0.00447	0.00364	0.00364	0.00343	0.00425	0.00425	0.00364
0.00418	0.00464	0.00464	0.00487	0.00397	0.00397	0.00375	0.00464	0.00464	0.00397
0.00498	0.00553	0.00553	0.00581	0.00473	0.00473	0.00447	0.00553	0.00553	0.00473
0.00408	0.00454	0.00454	0.00476	0.00388	0.00388	0.00366	0.00454	0.00454	0.00388
0.00510	0.00567	0.00567	0.00595	0.00485	0.00485	0.00458	0.00567	0.00567	0.00485
0.00557	0.00619	0.00619	0.00650	0.00529	0.00529	0.00500	0.00619	0.00619	0.00529
0.00664	0.00738	0.00738	0.00775	0.00631	0.00631	0.00596	0.00738	0.00738	0.00631



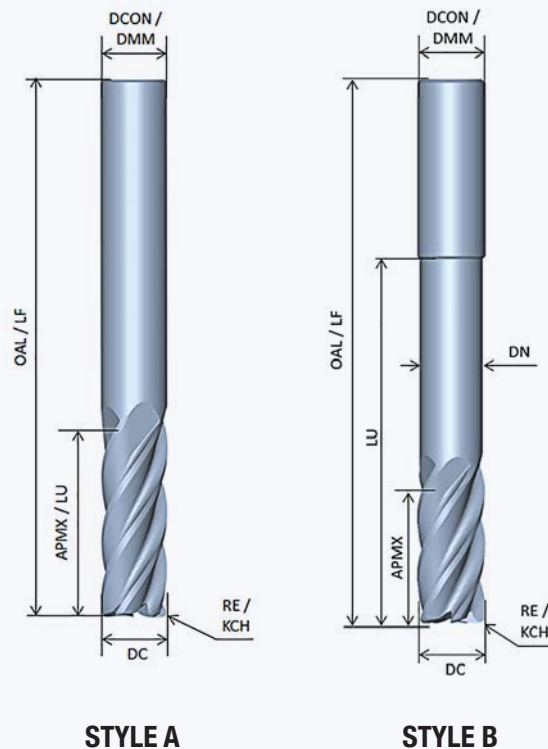
SSDH-C series combines the aggressive roughing geometries of the SSDH series with a truncated knuckle O.D. form. This unique design allows for freer cutting and better chip control while maintaining the work piece surface finishes. These tools are stocked in stub and regular lengths and coated to match your particular application.

MAIN CHARACTERISTICS

- Flute Count (NOF): 4
- Equal Index
- Double Helix
- Center Cutting
- RH-C / RH-H
- Chip Breakers

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): -0.001"/-0.002"
- Corner Radius (RE): +0.001"/-0.001"



WORK MATERIAL

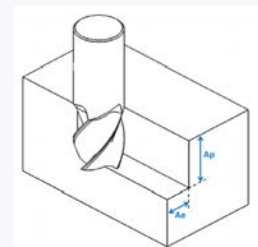


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)
AE	80%DC < \leq 100%DC	40%DC < \leq 80%DC	25%DC < \leq 40%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC



For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Radius RE	Neck Dia DN	Style	EDP	C11 EDP	C10 EDP
SSDH-ST-C-40250	1/4	1/4	3/8	2		.020		A	51202-00-D	51202-85-D	51202-70-D
SSDH-C-40250	1/4	1/4	3/4	2-1/2		.020		A	51234-00-D	51234-85-D	51234-70-D
SSDH-LS-M-C-40250	1/4	1/4	3/8	4	2-1/8	.020	.235	B	51267-00-D	51267-85-D	51267-70-D
SSDH-ST-C-40312	5/16	5/16	7/16	2		.020		A	51206-00-D	51206-85-D	51206-70-D
SSDH-C-40312	5/16	5/16	13/16	2-1/2		.020		A	51238-00-D	51238-85-D	51238-70-D
SSDH-LS-M-C-40312	5/16	5/16	7/16	4	2-1/8	.020	.297	B	51271-00-D	51271-85-D	51271-70-D
SSDH-ST-C-40375	3/8	3/8	1/2	2		.020		A	51210-00-D	51210-85-D	51210-70-D
SSDH-C-40375	3/8	3/8	1	2-1/2		.020		A	51242-00-D	51242-85-D	51242-70-D
SSDH-LS-M-C-40375	3/8	3/8	1/2	6	2-3/8	.020	.355	B	51275-00-D	51275-85-D	51275-70-D
SSDH-ST-C-40437	7/16	7/16	9/16	2-1/2		.020		A	51214-00-D	51214-85-D	51214-70-D
SSDH-C-40437	7/16	7/16	1	2-3/4		.020		A	51246-00-D	51246-85-D	51246-70-D
SSDH-LS-M-C-40437	7/16	7/16	9/16	6	2-3/8	.020	.412	B	51279-00-D	51279-85-D	51279-70-D
SSDH-ST-C-40500	1/2	1/2	5/8	2-1/2		.030		A	51218-00-D	51218-85-D	51218-70-D
SSDH-C-40500	1/2	1/2	1-1/4	3		.030		A	51251-00-D	51251-85-D	51251-70-D
SSDH-LS-M-C-40500	1/2	1/2	5/8	6	2-3/8	.030	.475	B	51283-00-D	51283-85-D	51283-70-D
SSDH-ST-C-40625	5/8	5/8	3/4	3		.030		A	51222-00-D	51222-85-D	51222-70-D
SSDH-C-40625	5/8	5/8	1-5/8	3-1/2		.030		A	51255-00-D	51255-85-D	51255-70-D
SSDH-LS-M-C-40625	5/8	5/8	3/4	6	2-3/8	.030	.590	B	51287-00-D	51287-85-D	51287-70-D
SSDH-ST-C-40750	3/4	3/4	1	3		.030		A	51226-00-D	51226-85-D	51226-70-D
SSDH-C-40750	3/4	3/4	1-5/8	4		.030		A	51259-00-D	51259-85-D	51259-70-D
SSDH-LS-M-C-40750	3/4	3/4	1	6	2-1/2	.030	.715	B	51291-00-D	51291-85-D	51291-70-D
SSDH-ST-C-41000	1	1	1-1/4	4		.030		A	51230-00-D	51230-85-D	51230-70-D
SSDH-C-41000	1	1	2	5		.030		A	51263-00-D	51263-85-D	51263-70-D
SSDH-LS-M-C-41000	1	1	1-1/4	6	2-1/2	.030	.960	B	51295-00-D	51295-85-D	51295-70-D

*LBS/LU Length Below Shank

SSDH -C Recommended Chip Loads

SSDH-C

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
1/4	Slotting	[S]	0.00137	0.00131	0.00113	0.00085	0.00096	0.00125
	Heavy Peripheral	[HP]	0.00172	0.00164	0.00141	0.00106	0.00120	0.00156
	Peripheral	[P]	0.00187	0.00179	0.00154	0.00115	0.00131	0.00170
5/16	Slotting	[S]	0.00172	0.00164	0.00141	0.00106	0.00120	0.00156
	Heavy Peripheral	[HP]	0.00214	0.00205	0.00176	0.00132	0.00150	0.00195
	Peripheral	[P]	0.00234	0.00223	0.00192	0.00144	0.00164	0.00213
3/8	Slotting	[S]	0.00206	0.00196	0.00169	0.00127	0.00144	0.00187
	Heavy Peripheral	[HP]	0.00257	0.00246	0.00212	0.00159	0.00180	0.00234
	Peripheral	[P]	0.00281	0.00268	0.00231	0.00173	0.00196	0.00255
7/16	Slotting	[S]	0.00240	0.00229	0.00198	0.00148	0.00168	0.00218
	Heavy Peripheral	[HP]	0.00300	0.00287	0.00247	0.00185	0.00210	0.00273
	Peripheral	[P]	0.00327	0.00313	0.00269	0.00202	0.00229	0.00298
1/2	Slotting	[S]	0.00274	0.00262	0.00226	0.00169	0.00192	0.00249
	Heavy Peripheral	[HP]	0.00343	0.00327	0.00282	0.00212	0.00240	0.00312
	Peripheral	[P]	0.00374	0.00357	0.00308	0.00231	0.00262	0.00340
5/8	Slotting	[S]	0.00343	0.00327	0.00282	0.00212	0.00240	0.00312
	Heavy Peripheral	[HP]	0.00429	0.00409	0.00353	0.00265	0.00300	0.00390
	Peripheral	[P]	0.00468	0.00447	0.00385	0.00289	0.00327	0.00425
3/4	Slotting	[S]	0.00412	0.00393	0.00339	0.00254	0.00288	0.00374
	Heavy Peripheral	[HP]	0.00515	0.00491	0.00423	0.00317	0.00360	0.00468
	Peripheral	[P]	0.00561	0.00536	0.00462	0.00346	0.00393	0.00510
1	Slotting	[S]	0.00549	0.00524	0.00451	0.00339	0.00384	0.00499
	Heavy Peripheral	[HP]	0.00686	0.00655	0.00564	0.00423	0.00480	0.00624
	Peripheral	[P]	0.00749	0.00715	0.00616	0.00462	0.00523	0.00681

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00107	0.00119	0.00119	0.00125	0.00102	0.00102	0.00096	0.00119	0.00119	0.00102
0.00134	0.00149	0.00149	0.00156	0.00127	0.00127	0.00120	0.00149	0.00149	0.00127
0.00146	0.00162	0.00162	0.00170	0.00139	0.00139	0.00131	0.00162	0.00162	0.00139
0.00134	0.00149	0.00149	0.00156	0.00127	0.00127	0.00120	0.00149	0.00149	0.00127
0.00167	0.00186	0.00186	0.00195	0.00159	0.00159	0.00150	0.00186	0.00186	0.00159
0.00182	0.00203	0.00203	0.00213	0.00173	0.00173	0.00164	0.00203	0.00203	0.00173
0.00160	0.00178	0.00178	0.00187	0.00152	0.00152	0.00144	0.00178	0.00178	0.00152
0.00200	0.00223	0.00223	0.00234	0.00190	0.00190	0.00180	0.00223	0.00223	0.00190
0.00219	0.00243	0.00243	0.00255	0.00208	0.00208	0.00196	0.00243	0.00243	0.00208
0.00187	0.00208	0.00208	0.00218	0.00178	0.00178	0.00168	0.00208	0.00208	0.00178
0.00234	0.00260	0.00260	0.00273	0.00222	0.00222	0.00210	0.00260	0.00260	0.00222
0.00255	0.00284	0.00284	0.00298	0.00242	0.00242	0.00229	0.00284	0.00284	0.00242
0.00214	0.00238	0.00238	0.00249	0.00203	0.00203	0.00192	0.00238	0.00238	0.00203
0.00267	0.00297	0.00297	0.00312	0.00254	0.00254	0.00240	0.00297	0.00297	0.00254
0.00292	0.00324	0.00324	0.00340	0.00277	0.00277	0.00262	0.00324	0.00324	0.0027
0.00267	0.00297	0.00297	0.00312	0.00254	0.00254	0.00240	0.00297	0.00297	0.00254
0.00334	0.00371	0.00371	0.00390	0.00317	0.00317	0.00300	0.00371	0.00371	0.00317
0.00365	0.00405	0.00405	0.00425	0.00346	0.00346	0.00327	0.00405	0.00405	0.00346
0.00321	0.00356	0.00356	0.00374	0.00305	0.00305	0.00288	0.00356	0.00356	0.00305
0.00401	0.00446	0.00446	0.00468	0.00381	0.00381	0.00360	0.00446	0.00446	0.00381
0.00437	0.00486	0.00486	0.00510	0.00416	0.00416	0.00393	0.00486	0.00486	0.00416
0.00428	0.00475	0.00475	0.00499	0.00406	0.00406	0.00384	0.00475	0.00475	0.00406
0.00535	0.00594	0.00594	0.00624	0.00508	0.00508	0.00480	0.00594	0.00594	0.00508
0.00583	0.00648	0.00648	0.00681	0.00554	0.00554	0.00523	0.00648	0.00648	0.00554



SS-3 • SS-C-3 • SS-C-4
Three Flute



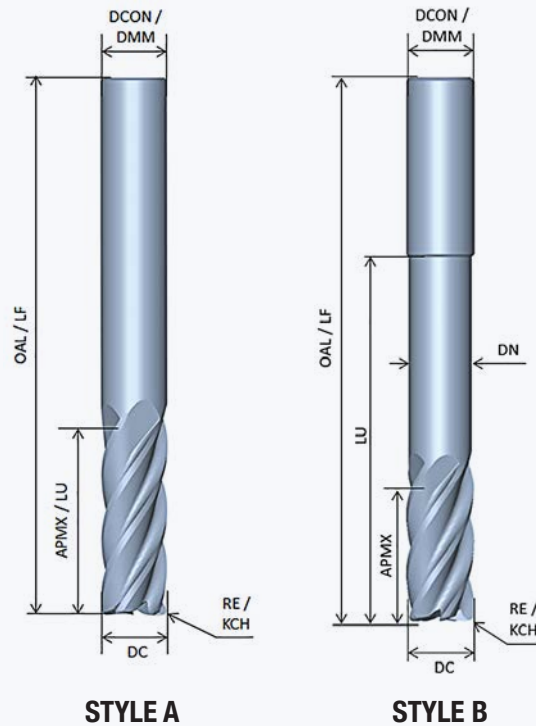
The SS series 3 flute end mill remains the workhorse when roughing in ferrous alloy applications. A standard corner radius protects the tool corner and enhances tool life in aggressive roughing applications. The SS series is offered in stub, standard, medium length and reduced neck.

MAIN CHARACTERISTICS

- Flute Count (NOF): 3
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): $-0.001''/-0.002''$
- Corner Radius (RE): $+0.001''/-0.001''$



WORK MATERIAL

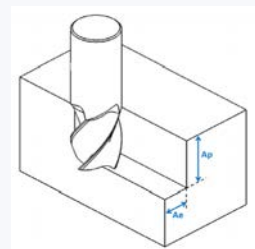


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)
AE	80%DC < \leq 100%DC	40%DC < \leq 80%DC	25%DC < \leq 40%DC	5%DC < \leq 25%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC



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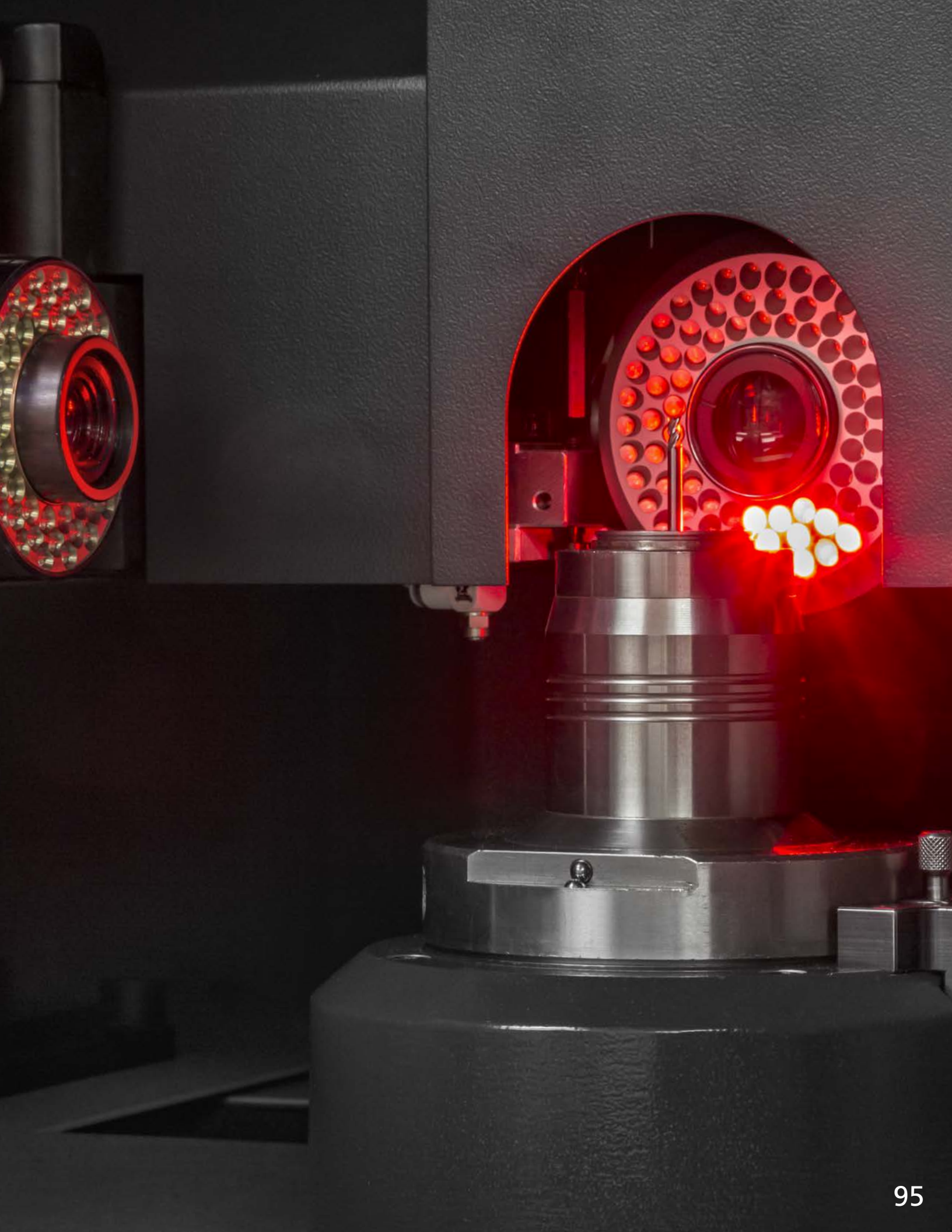


SS-3, Three Flute

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Radius RE	Neck Dia DN	Style	EDP	C4 EDP	C7 EDP	C11 EDP
SS-ST-30125-375	1/8	3/8	1/4	2-1/2		.010		A	52136-00-D	52136-89-D	52136-83-D	52136-85-D
SS-ST-30125	1/8	1/8	1/4	1-1/2		.010		A	46281-00-D	46281-89-D	46281-83-D	46281-85-D
SS-30125-375	1/8	3/8	1/2	2-1/2		.010		A	52156-00-D	52156-89-D	52156-83-D	52156-85-D
SS-30125	1/8	1/8	1/2	1-1/2		.010		A	43805-00-D	43805-89-D	43805-83-D	43805-85-D
SS-ST-30156	5/32	3/16	5/16	2		.010		A	46289-00-D	46289-89-D	46289-83-D	46289-85-D
SS-30156	5/32	3/16	9/16	2		.010		A	43813-00-D	43813-89-D	43813-83-D	43813-85-D
SS-ST-30187-375	3/16	3/8	5/16	2-1/2		.010		A	52142-00-D	52142-89-D	52142-83-D	52142-85-D
SS-ST-30187	3/16	3/16	5/16	2		.010		A	46297-00-D	46297-89-D	46297-83-D	46297-85-D
SS-30187	3/16	3/16	9/16	2		.010		A	43821-00-D	43821-89-D	43821-83-D	43821-85-D
SS-30187-375	3/16	3/8	5/8	2-1/2		.010		A	52164-00-D	52164-89-D	52164-83-D	52164-85-D
SS-ST-30218	7/32	1/4	3/8	2		.020		A	46305-00-D	46305-89-D	46305-83-D	46305-85-D
SS-30218	7/32	1/4	3/4	2-1/2		.020		A	43829-00-D	43829-89-D	43829-83-D	43829-85-D
SS-ST-30250-375	1/4	3/8	3/8	2-1/2		.020		A	52148-00-D	52148-89-D	52148-83-D	52148-85-D
SS-ST-30250	1/4	1/4	3/8	2		.020		A	46313-00-D	46313-89-D	46313-83-D	46313-85-D
SS-30250-375	1/4	3/8	3/4	2-1/2		.020		A	52189-00-D	52189-89-D	52189-83-D	52189-85-D
SS-30250	1/4	1/4	3/4	2-1/2		.020		A	43837-00-D	43837-89-D	43837-83-D	43837-85-D
SS-LS-M-30250	1/4	1/4	3/8	4	2-1/8	.020	.235	B	46177-00-D	46177-89-D	46177-83-D	46177-85-D
SS-ST-30281	9/32	5/16	7/16	2		.020		A	46321-00-D	46321-89-D	46321-83-D	46321-85-D
SS-30281	9/32	5/16	13/16	2-1/2		.020		A	43845-00-D	43845-89-D	43845-83-D	43845-85-D
SS-ST-30312	5/16	5/16	7/16	2		.020		A	46329-00-D	46329-89-D	46329-83-D	46329-85-D
SS-30312	5/16	5/16	13/16	2-1/2		.020		A	43853-00-D	43853-89-D	43853-83-D	43853-85-D
SS-LS-M-30312	5/16	5/16	7/16	4	2-1/8	.020	.297	B	46185-00-D	46185-89-D	46185-83-D	46185-85-D
SS-ST-30343	11/32	3/8	1/2	2		.020		A	46337-00-D	46337-89-D	46337-83-D	46337-85-D
SS-30343	11/32	3/8	1	2-1/2		.020		A	43861-00-D	43861-89-D	43861-83-D	43861-85-D
SS-ST-30375	3/8	3/8	1/2	2		.020		A	46345-00-D	46345-89-D	46345-83-D	46345-85-D
SS-30375	3/8	3/8	1	2-1/2		.020		A	43869-00-D	43869-89-D	43869-83-D	43869-85-D
SS-M-30375	3/8	3/8	1-1/4	3		.020		A	51664-00-D	51664-89-D	51664-83-D	51664-85-D
SS-LS-M-30375	3/8	3/8	1/2	6	2-3/8	.020	.355	B	46193-00-D	46193-89-D	46193-83-D	46193-85-D
SS-LS-L-30375	3/8	3/8	1/2	6	3-3/8	.020	.355	B	46129-00-D	46129-89-D	46129-83-D	46129-85-D
SS-ST-30437	7/16	7/16	9/16	2-1/2		.020		A	46353-00-D	46353-89-D	46353-83-D	46353-85-D
SS-30437	7/16	7/16	1	2-3/4		.020		A	43877-00-D	43877-89-D	43877-83-D	43877-85-D
SS-LS-M-30437	7/16	7/16	9/16	6	2-3/8	.020	.412	B	46201-00-D	46201-89-D	46201-83-D	46201-85-D
SS-LS-L-30437	7/16	7/16	9/16	6	3-3/8	.020	.412	B	46137-00-D	46137-89-D	46137-83-D	46137-85-D
SS-ST-30500	1/2	1/2	5/8	2-1/2		.030		A	46361-00-D	46361-89-D	46361-83-D	46361-85-D
SS-30500	1/2	1/2	1-1/4	3		.030		A	43885-00-D	43885-89-D	43885-83-D	43885-85-D
SS-M-30500	1/2	1/2	1-5/8	4		.030		A	51671-00-D	51671-89-D	51671-83-D	51671-85-D
SS-LS-M-30500	1/2	1/2	5/8	6	2-3/8	.030	.475	B	46209-00-D	46209-89-D	46209-83-D	46209-85-D
SS-LS-L-30500	1/2	1/2	5/8	6	3-3/8	.030	.475	B	46145-00-D	46145-89-D	46145-83-D	46145-85-D
SS-LS-X-30500	1/2	1/2	5/8	6	4-1/8	.030	.475	B	46249-00-D	46249-89-D	46249-83-D	46249-85-D
SS-ST-30625	5/8	5/8	3/4	3		.030		A	46369-00-D	46369-89-D	46369-83-D	46369-85-D
SS-30625	5/8	5/8	1-5/8	3-1/2		.030		A	43893-00-D	43893-89-D	43893-83-D	43893-85-D
SS-M-30625	5/8	5/8	2-1/8	4		.030		A	51678-00-D	51678-89-D	51678-83-D	51678-85-D
SS-LS-M-30625	5/8	5/8	3/4	6	2-3/8	.030	.390	B	46217-00-D	46217-89-D	46217-83-D	46217-85-D
SS-LS-L-30625	5/8	5/8	3/4	6	3-3/8	.030	.590	B	46153-00-D	46153-89-D	46153-83-D	46153-85-D
SS-LS-X-30625	5/8	5/8	3/4	6	4-1/8	.030	.590	B	46257-00-D	46257-89-D	46257-83-D	46257-85-D
SS-ST-30750	3/4	3/4	1	4		.030		A	46377-00-D	46377-89-D	46377-83-D	46377-85-D
SS-30750	3/4	3/4	1-5/8	4		.030		A	43901-00-D	43901-89-D	43901-83-D	43901-85-D
SS-M-30750	3/4	3/4	2-1/4	5		.030		A	51685-00-D	51685-89-D	51685-83-D	51685-85-D
SS-LS-M-30750	3/4	3/4	1	6	2-1/2	.030	.715	B	46225-00-D	46225-89-D	46225-83-D	46225-85-D
SS-LS-L-30750	3/4	3/4	1	6	3-3/8	.030	.715	B	46161-00-D	46161-89-D	46161-83-D	46161-85-D
SS-LS-X-30750	3/4	3/4	1	6	4-1/8	.030	.715	B	46265-00-D	46265-89-D	46265-83-D	46265-85-D
SS-ST-31000	1	1	1-1/4	4		.030		A	46385-00-D	46385-89-D	46385-83-D	46385-85-D
SS-31000	1	1	2	4		.030		A	43909-00-D	43909-89-D	43909-83-D	43909-85-D
SS-M-31000	1	1	2-5/8	6		.030		A	51692-00-D	51692-89-D	51692-83-D	51692-85-D
SS-LS-M-31000	1	1	1-1/4	6	2-1/2	.030	.960	B	46233-00-D	46233-89-D	46233-83-D	46233-85-D
SS-LS-L-31000	1	1	1-1/4	6	3-3/8	.030	.960	B	46169-00-D	46169-89-D	46169-83-D	46169-85-D
SS-LS-X-31000	1	1	1-1/4	6	4-1/8	.030	.960	B	46273-00-D	46273-89-D	46273-83-D	46273-85-D

SS-3



SS-3 Recommended Chip Loads

SS-3

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
1/8	Slotting	[S/R]	0.00065	0.00062	0.00053	0.00040	0.00045	0.00059
	Heavy Peripheral	[HP]	0.00081	0.00077	0.00067	0.00050	0.00057	0.00074
	Peripheral	[P]	0.00088	0.00084	0.00073	0.00054	0.00062	0.00080
	Light Peripheral	[LP]	0.00105	0.00100	0.00087	0.00065	0.00074	0.00096
5/32	Slotting	[S/R]	0.00081	0.00077	0.00067	0.00050	0.00057	0.00074
	Heavy Peripheral	[HP]	0.00101	0.00096	0.00083	0.00062	0.00071	0.00092
	Peripheral	[P]	0.00110	0.00105	0.00091	0.00068	0.00077	0.00100
	Light Peripheral	[LP]	0.00132	0.00126	0.00108	0.00081	0.00092	0.00120
3/16	Slotting	[S]	0.00097	0.00093	0.00080	0.00060	0.00068	0.00088
	Heavy Peripheral	[HP]	0.00121	0.00116	0.00100	0.00075	0.00085	0.00110
	Peripheral	[P]	0.00132	0.00126	0.00109	0.00082	0.00093	0.00120
	Light Peripheral	[LP]	0.00158	0.00151	0.00130	0.00097	0.00110	0.00143
7/32	Slotting	[S]	0.00113	0.00108	0.00093	0.00070	0.00079	0.00103
	Heavy Peripheral	[HP]	0.00141	0.00135	0.00116	0.00087	0.00099	0.00129
	Peripheral	[P]	0.00154	0.00147	0.00127	0.00095	0.00108	0.00140
	Light Peripheral	[LP]	0.00184	0.00176	0.00151	0.00114	0.00129	0.00167
1/4	Slotting	[S]	0.00129	0.00123	0.00106	0.00080	0.00090	0.00118
	Heavy Peripheral	[HP]	0.00162	0.00154	0.00133	0.00100	0.00113	0.00147
	Peripheral	[P]	0.00176	0.00168	0.00145	0.00109	0.00123	0.00160
	Light Peripheral	[LP]	0.00210	0.00201	0.00173	0.00130	0.00147	0.00191
9/32	Slotting	[S]	0.00146	0.00139	0.00120	0.00090	0.00102	0.00132
	Heavy Peripheral	[HP]	0.00182	0.00174	0.00150	0.00112	0.00127	0.00165
	Peripheral	[P]	0.00198	0.00189	0.00163	0.00122	0.00139	0.00180
	Light Peripheral	[LP]	0.00237	0.00226	0.00195	0.00146	0.00166	0.00215
5/16	Slotting	[S]	0.00162	0.00154	0.00133	0.00100	0.00113	0.00147
	Heavy Peripheral	[HP]	0.00202	0.00193	0.00166	0.00125	0.00141	0.00184
	Peripheral	[P]	0.00221	0.00211	0.00181	0.00136	0.00154	0.00200
	Light Peripheral	[LP]	0.00263	0.00251	0.00216	0.00162	0.00184	0.00239
11/32	Slotting	[S]	0.00178	0.00170	0.00146	0.00110	0.00124	0.00162
	Heavy Peripheral	[HP]	0.00222	0.00212	0.00183	0.00137	0.00155	0.00202
	Peripheral	[P]	0.00243	0.00232	0.00200	0.00150	0.00170	0.00221
	Light Peripheral	[LP]	0.00289	0.00276	0.00238	0.00179	0.00202	0.00263

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00050	0.00056	0.00056	0.00059	0.00048	0.00048	0.00045	0.00056	0.00056	0.00048
0.00063	0.00070	0.00070	0.00074	0.00060	0.00060	0.00057	0.00070	0.00070	0.00060
0.00069	0.00076	0.00076	0.00080	0.00065	0.00065	0.00062	0.00076	0.00076	0.00065
0.00082	0.00091	0.00091	0.00096	0.00078	0.00078	0.00074	0.00091	0.00091	0.00078
0.00063	0.00070	0.00070	0.00074	0.00060	0.00060	0.00057	0.00070	0.00070	0.00060
0.00079	0.00088	0.00088	0.00092	0.00075	0.00075	0.00071	0.00088	0.00088	0.00075
0.00086	0.00095	0.00095	0.00100	0.00082	0.00082	0.00077	0.00095	0.00095	0.00082
0.00102	0.00114	0.00114	0.00120	0.00097	0.00097	0.00092	0.00114	0.00114	0.00097
0.00076	0.00084	0.00084	0.00088	0.00072	0.00072	0.00068	0.00084	0.00084	0.00072
0.00095	0.00105	0.00105	0.00110	0.00090	0.00090	0.00085	0.00105	0.00105	0.00090
0.00103	0.00115	0.00115	0.00120	0.00098	0.00098	0.00093	0.00115	0.00115	0.00098
0.00123	0.00137	0.00137	0.00143	0.00117	0.00117	0.00110	0.00137	0.00137	0.00117
0.00088	0.00098	0.00098	0.00103	0.00084	0.00084	0.00079	0.00098	0.00098	0.00084
0.00110	0.00123	0.00123	0.00129	0.00105	0.00105	0.00099	0.00123	0.00123	0.00105
0.00120	0.00134	0.00134	0.00140	0.00114	0.00114	0.00108	0.00134	0.00134	0.00114
0.00143	0.00159	0.00159	0.00167	0.00136	0.00136	0.00129	0.00159	0.00159	0.00136
0.00101	0.00112	0.00112	0.00118	0.00096	0.00096	0.00090	0.00112	0.00112	0.00096
0.00126	0.00140	0.00140	0.00147	0.00120	0.00120	0.00113	0.00140	0.00140	0.00120
0.00137	0.00153	0.00153	0.00160	0.00131	0.00131	0.00123	0.00153	0.00153	0.00131
0.00164	0.00182	0.00182	0.00191	0.00156	0.00156	0.00147	0.00182	0.00182	0.00156
0.00113	0.00126	0.00126	0.00132	0.00108	0.00108	0.00102	0.00126	0.00126	0.00108
0.00142	0.00158	0.00158	0.00165	0.00135	0.00135	0.00127	0.00158	0.00158	0.00135
0.00155	0.00172	0.00172	0.00180	0.00147	0.00147	0.00139	0.00172	0.00172	0.00147
0.00184	0.00205	0.00205	0.00215	0.00175	0.00175	0.00166	0.00205	0.00205	0.00175
0.00126	0.00140	0.00140	0.00147	0.00120	0.00120	0.00113	0.00140	0.00140	0.00120
0.00158	0.00175	0.00175	0.00184	0.00150	0.00150	0.00141	0.00175	0.00175	0.00150
0.00172	0.00191	0.00191	0.00200	0.00163	0.00163	0.00154	0.00191	0.00191	0.00163
0.00205	0.00228	0.00228	0.00239	0.00195	0.00195	0.00184	0.00228	0.00228	0.00195
0.00139	0.00154	0.00154	0.00162	0.00132	0.00132	0.00124	0.00154	0.00154	0.00132
0.00173	0.00193	0.00193	0.00202	0.00165	0.00165	0.00155	0.00193	0.00193	0.00165
0.00189	0.00210	0.00210	0.00221	0.00180	0.00180	0.00170	0.00210	0.00210	0.00180
0.00225	0.00251	0.00251	0.00263	0.00214	0.00214	0.00202	0.00251	0.00251	0.00214

SS-3 Recommended Chip Loads

SS-3

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
3/8	Slotting	[S]	0.00194	0.00185	0.00160	0.00120	0.00136	0.00176
	Heavy Peripheral	[HP]	0.00243	0.00232	0.00200	0.00150	0.00170	0.00221
	Peripheral	[P]	0.00265	0.00253	0.00218	0.00163	0.00185	0.00241
	Light Peripheral	[LP]	0.00316	0.00301	0.00260	0.00195	0.00221	0.00287
13/32	Slotting	[S]	0.00210	0.00201	0.00173	0.00130	0.00147	0.00191
	Heavy Peripheral	[HP]	0.00263	0.00251	0.00216	0.00162	0.00184	0.00239
	Peripheral	[P]	0.00287	0.00274	0.00236	0.00177	0.00200	0.00261
	Light Peripheral	[LP]	0.00342	0.00326	0.00281	0.00211	0.00239	0.00311
7/16	Slotting	[S]	0.00226	0.00216	0.00186	0.00140	0.00158	0.00206
	Heavy Peripheral	[HP]	0.00283	0.00270	0.00233	0.00175	0.00198	0.00257
	Peripheral	[P]	0.00309	0.00295	0.00254	0.00190	0.00216	0.00281
	Light Peripheral	[LP]	0.00368	0.00352	0.00303	0.00227	0.00257	0.00335
15/32	Slotting	[S]	0.00243	0.00232	0.00200	0.00150	0.00170	0.00221
	Heavy Peripheral	[HP]	0.00303	0.00289	0.00249	0.00187	0.00212	0.00276
	Peripheral	[P]	0.00331	0.00316	0.00272	0.00204	0.00231	0.00301
	Light Peripheral	[LP]	0.00395	0.00377	0.00325	0.00243	0.00276	0.00359
1/2	Slotting	[S]	0.00259	0.00247	0.00213	0.00160	0.00181	0.00235
	Heavy Peripheral	[HP]	0.00323	0.00309	0.00266	0.00200	0.00226	0.00294
	Peripheral	[P]	0.00353	0.00337	0.00290	0.00218	0.00247	0.00321
	Light Peripheral	[LP]	0.00421	0.00402	0.00346	0.00260	0.00294	0.00383
5/8	Slotting	[S]	0.00323	0.00309	0.00266	0.00200	0.00226	0.00294
	Heavy Peripheral	[HP]	0.00404	0.00386	0.00333	0.00249	0.00283	0.00368
	Peripheral	[P]	0.00441	0.00421	0.00363	0.00272	0.00308	0.00401
	Light Peripheral	[LP]	0.00526	0.00502	0.00433	0.00325	0.00368	0.00478
3/4	Slotting	[S]	0.00388	0.00370	0.00319	0.00239	0.00271	0.00353
	Heavy Peripheral	[HP]	0.00485	0.00463	0.00399	0.00299	0.00339	0.00441
	Peripheral	[P]	0.00529	0.00505	0.00435	0.00327	0.00370	0.00481
	Light Peripheral	[LP]	0.00631	0.00603	0.00519	0.00389	0.00441	0.00574
1	Slotting	[S]	0.00517	0.00494	0.00426	0.00319	0.00362	0.00470
	Heavy Peripheral	[HP]	0.00647	0.00617	0.00532	0.00399	0.00452	0.00588
	Peripheral	[P]	0.00706	0.00674	0.00580	0.00435	0.00493	0.00642
	Light Peripheral	[LP]	0.00842	0.00804	0.00692	0.00519	0.00589	0.00765

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00151	0.00168	0.00168	0.00176	0.00144	0.00144	0.00136	0.00168	0.00168	0.00144
0.00189	0.00210	0.00210	0.00221	0.00180	0.00180	0.00170	0.00210	0.00210	0.00180
0.00206	0.00229	0.00229	0.00241	0.00196	0.00196	0.00185	0.00229	0.00229	0.00196
0.00246	0.00273	0.00273	0.00287	0.00234	0.00234	0.00221	0.00273	0.00273	0.00234
0.00164	0.00182	0.00182	0.00191	0.00156	0.00156	0.00147	0.00182	0.00182	0.00156
0.00205	0.00228	0.00228	0.00239	0.00195	0.00195	0.00184	0.00228	0.00228	0.00195
0.00223	0.00248	0.00248	0.00261	0.00212	0.00212	0.00200	0.00248	0.00248	0.00212
0.00266	0.00296	0.00296	0.00311	0.00253	0.00253	0.00239	0.00296	0.00296	0.00253
0.00176	0.00196	0.00196	0.00206	0.00168	0.00168	0.00158	0.00196	0.00196	0.00168
0.00221	0.00245	0.00245	0.00257	0.00209	0.00209	0.00198	0.00245	0.00245	0.00209
0.00241	0.00267	0.00267	0.00281	0.00229	0.00229	0.00216	0.00267	0.00267	0.00229
0.00287	0.00319	0.00319	0.00335	0.00273	0.00273	0.00257	0.00319	0.00319	0.00273
0.00189	0.00210	0.00210	0.00221	0.00180	0.00180	0.00170	0.00210	0.00210	0.00180
0.00236	0.00263	0.00263	0.00276	0.00224	0.00224	0.00212	0.00263	0.00263	0.00224
0.00258	0.00286	0.00286	0.00301	0.00245	0.00245	0.00231	0.00286	0.00286	0.00245
0.00307	0.00342	0.00342	0.00359	0.00292	0.00292	0.00276	0.00342	0.00342	0.00292
0.00202	0.00224	0.00224	0.00235	0.00192	0.00192	0.00181	0.00224	0.00224	0.00192
0.00252	0.00280	0.00280	0.00294	0.00239	0.00239	0.00226	0.00280	0.00280	0.00239
0.00275	0.00306	0.00306	0.00321	0.00261	0.00261	0.00247	0.00306	0.00306	0.00261
0.00328	0.00364	0.00364	0.00383	0.00312	0.00312	0.00294	0.00364	0.00364	0.00312
0.00252	0.00280	0.00280	0.00294	0.00239	0.00239	0.00226	0.00280	0.00280	0.00239
0.00315	0.00350	0.00350	0.00368	0.00299	0.00299	0.00283	0.00350	0.00350	0.00299
0.00344	0.00382	0.00382	0.00401	0.00327	0.00327	0.00308	0.00382	0.00382	0.00327
0.00410	0.00456	0.00456	0.00478	0.00389	0.00389	0.00368	0.00456	0.00456	0.00389
0.00302	0.00336	0.00336	0.00353	0.00287	0.00287	0.00271	0.00336	0.00336	0.00287
0.00378	0.00420	0.00420	0.00441	0.00359	0.00359	0.00339	0.00420	0.00420	0.00359
0.00412	0.00458	0.00458	0.00481	0.00392	0.00392	0.00370	0.00458	0.00458	0.00392
0.00492	0.00547	0.00547	0.00574	0.00467	0.00467	0.00441	0.00547	0.00547	0.00467
0.00403	0.00448	0.00448	0.00470	0.00383	0.00383	0.00362	0.00448	0.00448	0.00383
0.00504	0.00560	0.00560	0.00588	0.00479	0.00479	0.00452	0.00560	0.00560	0.00479
0.00550	0.00611	0.00611	0.00642	0.00522	0.00522	0.00493	0.00611	0.00611	0.00522
0.00656	0.00729	0.00729	0.00765	0.00623	0.00623	0.00589	0.00729	0.00729	0.00623



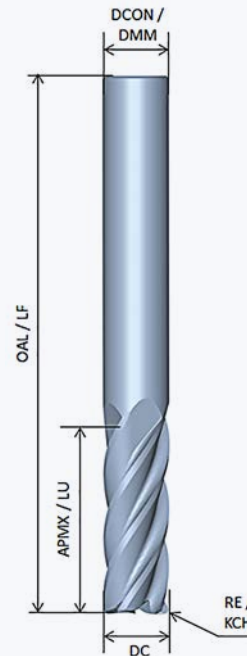
When machining a material that is gummy in nature, the 3 flute SS-C is the tool of choice. SS-C combines the proven SS family geometries with a truncated knuckle form that aids in chip size and form. Stub and standard lengths are available from stock.

MAIN CHARACTERISTICS

- Flute Count (NOF): 3
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Chip Breakers

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): -0.001"/-0.002"
- Corner Radius (RE): +0.001"/-0.001"



STYLE A

WORK MATERIAL

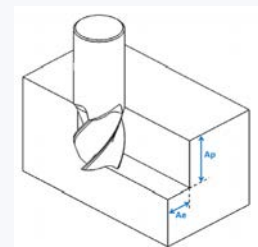


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)
AE	80%DC < ≤ 100%DC	40%DC < ≤ 80%DC	25%DC < ≤ 40%DC	5%DC < ≤ 25%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC



For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.

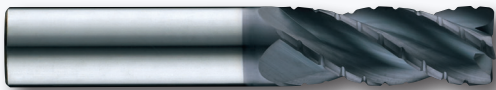


SS-C-3, Three Flute

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	Radius RE	Style	EDP	C4 EDP	C7 EDP	C11 EDP
SS-ST-C-30125	1/8	1/8	1/4	1-1/2	.010	A	46393-00-D	46393-89-D	46393-83-D	46393-85-D
SS-C-30125	1/8	1/8	1/2	1-1/2	.010	A	43917-00-D	43917-89-D	43917-83-D	43917-85-D
SS-ST-C-30156	5/32	3/16	5/16	2	.010	A	46401-00-D	46401-89-D	46401-83-D	46401-85-D
SS-C-30156	5/32	3/16	9/16	2	.010	A	43925-00-D	43925-89-D	43925-83-D	43925-85-D
SS-ST-C-30187	3/16	3/16	5/16	2	.010	A	46409-00-D	46409-89-D	46409-83-D	46409-85-D
SS-C-30187	3/16	3/16	9/16	2	.010	A	43933-00-D	43933-89-D	43933-83-D	43933-85-D
SS-ST-C-30218	7/32	1/4	3/8	2	.020	A	46417-00-D	46417-89-D	46417-83-D	46417-85-D
SS-C-30218	7/32	1/4	3/4	2-1/2	.020	A	43941-00-D	43941-89-D	43941-83-D	43941-85-D
SS-ST-C-30250	1/4	1/4	3/8	2	.020	A	46425-00-D	46425-89-D	46425-83-D	46425-85-D
SS-C-30250	1/4	1/4	3/4	2-1/2	.020	A	43949-00-D	43949-89-D	43949-83-D	43949-85-D
SS-ST-C-30281	9/32	5/16	7/16	2	.020	A	46433-00-D	46433-89-D	46433-83-D	46433-85-D
SS-C-30281	9/32	5/16	13/16	2-1/2	.020	A	43957-00-D	43957-89-D	43957-83-D	43957-85-D
SS-ST-C-30312	5/16	5/16	7/16	2	.020	A	46441-00-D	46441-89-D	46441-83-D	46441-85-D
SS-C-30312	5/16	5/16	13/16	2-1/2	.020	A	43965-00-D	43965-89-D	43965-83-D	43965-85-D
SS-ST-C-30343	11/32	3/8	1/2	2	.020	A	46449-00-D	46449-89-D	46449-83-D	46449-85-D
SS-C-30343	11/32	3/8	1	2-1/2	.020	A	43973-00-D	43973-89-D	43973-83-D	43973-85-D
SS-ST-C-30375	3/8	3/8	1/2	2	.020	A	46457-00-D	46457-89-D	46457-83-D	46457-85-D
SS-C-30375	3/8	3/8	1	2-1/2	.020	A	43981-00-D	43981-89-D	43981-83-D	43981-85-D
SS-ST-C-30437	7/16	7/16	9/16	2-1/2	.020	A	46465-00-D	46465-89-D	46465-83-D	46465-85-D
SS-C-30437	7/16	7/16	1	2-3/4	.020	A	43989-00-D	43989-89-D	43989-83-D	43989-85-D
SS-ST-C-30500	1/2	1/2	5/8	2-1/2	.030	A	46473-00-D	46473-89-D	46473-83-D	46473-85-D
SS-C-30500	1/2	1/2	1-1/4	3	.030	A	43997-00-D	43997-89-D	43997-83-D	43997-85-D
SS-ST-C-30625	5/8	5/8	3/4	3	.030	A	46481-00-D	46481-89-D	46481-83-D	46481-85-D
SS-C-30625	5/8	5/8	1-5/8	3-1/2	.030	A	46105-00-D	46105-89-D	46105-83-D	46105-85-D
SS-ST-C-30750	3/4	3/4	1	4	.030	A	46489-00-D	46489-89-D	46489-83-D	46489-85-D
SS-C-30750	3/4	3/4	1-5/8	4	.030	A	46113-00-D	46113-89-D	46113-83-D	46113-85-D
SS-ST-C-31000	1	1	1-1/4	4	.030	A	46497-00-D	46497-89-D	46497-83-D	46497-85-D
SS-C-31000	1	1	2	4	.030	A	46121-00-D	46121-89-D	46121-83-D	46121-85-D

SS-C-3



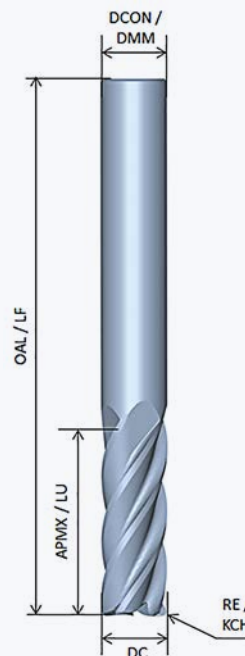
The SS-C four flute enable a 25% increase in feed rates. SS-C four flute is the tool of choice when periphery machining tuff gummy material. The geometries of the SS style tool along with the truncated knuckle form helps control the chip form and is freer cutting than traditional roughers.

MAIN CHARACTERISTICS

- Flute Count (NOF): 4
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Chip Breakers

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): -0.001"/-0.002"
- Corner Radius (RE): +0.001"/-0.001"



STYLE A

WORK MATERIAL

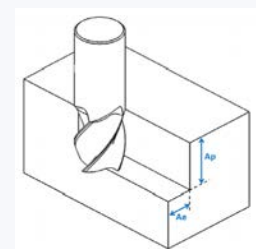


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)
AE	80%DC <= 100%DC	40%DC <= 80%DC	25%DC <= 40%DC	5%DC <= 25%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 15 x DC	2.0 x DC



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SS-C-4, Four Flute

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	Radius RE	Style	EDP	C4 EDP	C7 EDP	C11 EDP
SS-ST-C-40125	1/8	1/8	1/4	1-1/2	.010	A	49200-00-D	49200-89-D	49200-83-D	49200-85-D
SS-C-40125	1/8	1/8	1/2	1-1/2	.010	A	49305-00-D	49305-89-D	49305-83-D	49305-85-D
SS-ST-C-40156	5/32	3/16	5/16	2	.010	A	49212-00-D	49212-89-D	49212-83-D	49212-85-D
SS-C-40156	5/32	3/16	9/16	2	.010	A	49314-00-D	49314-89-D	49314-83-D	49314-85-D
SS-ST-C-40187	3/16	3/16	5/16	2	.010	A	49219-00-D	49219-89-D	49219-83-D	49219-85-D
SS-C-40187	3/16	3/16	9/16	2	.010	A	49321-00-D	49321-89-D	49321-83-D	49321-85-D
SS-ST-C-40218	7/32	1/4	3/8	2	.020	A	49226-00-D	49226-89-D	49226-83-D	49226-85-D
SS-C-40218	7/32	1/4	3/4	2-1/2	.020	A	49328-00-D	49328-89-D	49328-83-D	49328-85-D
SS-ST-C-40250	1/4	1/4	3/8	2	.020	A	49233-00-D	49233-89-D	49233-83-D	49233-85-D
SS-C-40250	1/4	1/4	3/4	2-1/2	.020	A	49335-00-D	49335-89-D	49335-83-D	49335-85-D
SS-ST-C-40281	9/32	5/16	7/16	2	.020	A	49240-00-D	49240-89-D	49240-83-D	49240-85-D
SS-C-40281	9/32	5/16	13/16	2-1/2	.020	A	49342-00-D	49342-89-D	49342-83-D	49342-85-D
SS-ST-C-40312	5/16	5/16	7/16	2	.020	A	49247-00-D	49247-89-D	49247-83-D	49247-85-D
SS-C-40312	5/16	5/16	13/16	2-1/2	.020	A	49891-00-D	49891-89-D	49891-83-D	49891-85-D
SS-ST-C-40343	11/32	3/8	1/2	2	.020	A	49254-00-D	49254-89-D	49254-83-D	49254-85-D
SS-C-40343	11/32	3/8	1	2-1/2	.020	A	49349-00-D	49349-89-D	49349-83-D	49349-85-D
SS-ST-C-40375	3/8	3/8	1/2	2	.020	A	49261-00-D	49261-89-D	49261-83-D	49261-85-D
SS-C-40375	3/8	3/8	1	2-1/2	.020	A	49356-00-D	49356-89-D	49356-83-D	49356-85-D
SS-ST-C-40437	7/16	7/16	9/16	2-1/2	.020	A	49268-00-D	49268-89-D	49268-83-D	49268-85-D
SS-C-40437	7/16	7/16	1	2-3/4	.020	A	49363-00-D	49363-89-D	49363-83-D	49363-85-D
SS-ST-C-40500	1/2	1/2	5/8	2-1/2	.030	A	49275-00-D	49275-89-D	49275-83-D	49275-85-D
SS-C-40500	1/2	1/2	1-1/4	3	.030	A	49370-00-D	49370-89-D	49370-83-D	49370-85-D
SS-ST-C-40625	5/8	5/8	3/4	3	.030	A	49282-00-D	49282-89-D	49282-83-D	49282-85-D
SS-C-40625	5/8	5/8	1-5/8	3-1/2	.030	A	49377-00-D	49377-89-D	49377-83-D	49377-85-D
SS-ST-C-40750	3/4	3/4	1	3	.030	A	49289-00-D	49289-89-D	49289-83-D	49289-85-D
SS-C-40750	3/4	3/4	1-5/8	4	.030	A	49384-00-D	49384-89-D	49384-83-D	49384-85-D
SS-ST-C-41000	1	1	1-1/4	3	.030	A	49296-00-D	49296-89-D	49296-83-D	49296-85-D
SS-C-41000	1	1	2	4	.030	A	49391-00-D	49391-89-D	49391-83-D	49391-85-D

SS-C-4

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SS-C-4 Recommended Chip Loads

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
1/8	Slotting	[S/R]	0.00065	0.00063	0.00054	0.00040	0.00046	0.00060
	Heavy Peripheral	[HP]	0.00082	0.00078	0.00067	0.00050	0.00057	0.00074
	Peripheral	[P]	0.00089	0.00085	0.00073	0.00055	0.00062	0.00081
	Light Peripheral	[LP]	0.00107	0.00102	0.00088	0.00066	0.00074	0.00097
5/32	Slotting	[S/R]	0.00082	0.00078	0.00067	0.00050	0.00057	0.00074
	Heavy Peripheral	[HP]	0.00102	0.00098	0.00084	0.00063	0.00072	0.00093
	Peripheral	[P]	0.00112	0.00107	0.00092	0.00069	0.00078	0.00101
	Light Peripheral	[LP]	0.00133	0.00127	0.00110	0.00082	0.00093	0.00121
3/16	Slotting	[S]	0.00098	0.00094	0.00081	0.00061	0.00069	0.00089
	Heavy Peripheral	[HP]	0.00123	0.00117	0.00101	0.00076	0.00086	0.00112
	Peripheral	[P]	0.00134	0.00128	0.00110	0.00083	0.00094	0.00122
	Light Peripheral	[LP]	0.00160	0.00153	0.00131	0.00099	0.00112	0.00145
7/32	Slotting	[S]	0.00115	0.00109	0.00094	0.00071	0.00080	0.00104
	Heavy Peripheral	[HP]	0.00143	0.00137	0.00118	0.00088	0.00100	0.00130
	Peripheral	[P]	0.00156	0.00149	0.00129	0.00096	0.00109	0.00142
	Light Peripheral	[LP]	0.00186	0.00178	0.00153	0.00115	0.00130	0.00169
1/4	Slotting	[S]	0.00131	0.00125	0.00108	0.00081	0.00092	0.00119
	Heavy Peripheral	[HP]	0.00164	0.00156	0.00135	0.00101	0.00114	0.00149
	Peripheral	[P]	0.00179	0.00171	0.00147	0.00110	0.00125	0.00162
	Light Peripheral	[LP]	0.00213	0.00203	0.00175	0.00131	0.00149	0.00194
9/32	Slotting	[S]	0.00147	0.00141	0.00121	0.00091	0.00103	0.00134
	Heavy Peripheral	[HP]	0.00184	0.00176	0.00151	0.00114	0.00129	0.00167
	Peripheral	[P]	0.00201	0.00192	0.00165	0.00124	0.00141	0.00183
	Light Peripheral	[LP]	0.00240	0.00229	0.00197	0.00148	0.00168	0.00218
5/16	Slotting	[S]	0.00164	0.00156	0.00135	0.00101	0.00114	0.00149
	Heavy Peripheral	[HP]	0.00205	0.00195	0.00168	0.00126	0.00143	0.00186
	Peripheral	[P]	0.00223	0.00213	0.00184	0.00138	0.00156	0.00203
	Light Peripheral	[LP]	0.00266	0.00254	0.00219	0.00164	0.00186	0.00242
11/32	Slotting	[S]	0.00180	0.00172	0.00148	0.00111	0.00126	0.00164
	Heavy Peripheral	[HP]	0.00225	0.00215	0.00185	0.00139	0.00157	0.00205
	Peripheral	[P]	0.00246	0.00234	0.00202	0.00152	0.00172	0.00223
	Light Peripheral	[LP]	0.00293	0.00280	0.00241	0.00181	0.00205	0.00266
3/8	Slotting	[S]	0.00196	0.00188	0.00162	0.00121	0.00137	0.00179
	Heavy Peripheral	[HP]	0.00246	0.00234	0.00202	0.00151	0.00172	0.00223
	Peripheral	[P]	0.00268	0.00256	0.00220	0.00165	0.00187	0.00244
	Light Peripheral	[LP]	0.00320	0.00305	0.00263	0.00197	0.00223	0.00291
13/32	Slotting	[S]	0.00213	0.00203	0.00175	0.00131	0.00149	0.00193
	Heavy Peripheral	[HP]	0.00266	0.00254	0.00219	0.00164	0.00186	0.00242
	Peripheral	[P]	0.00290	0.00277	0.00239	0.00179	0.00203	0.00264
	Light Peripheral	[LP]	0.00346	0.00331	0.00285	0.00214	0.00242	0.00315

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00051	0.00057	0.00057	0.00060	0.00048	0.00048	0.00046	0.00057	0.00057	0.00048
0.00064	0.00071	0.00071	0.00074	0.00061	0.00061	0.00057	0.00071	0.00071	0.00061
0.00070	0.00077	0.00077	0.00081	0.00066	0.00066	0.00062	0.00077	0.00077	0.00066
0.00083	0.00092	0.00092	0.00097	0.00079	0.00079	0.00074	0.00092	0.00092	0.00079
0.00064	0.00071	0.00071	0.00074	0.00061	0.00061	0.00057	0.00071	0.00071	0.00061
0.00080	0.00089	0.00089	0.00093	0.00076	0.00076	0.00072	0.00089	0.00089	0.00076
0.00087	0.00097	0.00097	0.00101	0.00083	0.00083	0.00078	0.00097	0.00097	0.00083
0.00104	0.00115	0.00115	0.00121	0.00099	0.00099	0.00093	0.00115	0.00115	0.00099
0.00077	0.00085	0.00085	0.00089	0.00073	0.00073	0.00069	0.00085	0.00085	0.00073
0.00096	0.00106	0.00106	0.00112	0.00091	0.00091	0.00086	0.00106	0.00106	0.00091
0.00104	0.00116	0.00116	0.00122	0.00099	0.00099	0.00094	0.00116	0.00116	0.00099
0.00125	0.00138	0.00138	0.00145	0.00118	0.00118	0.00112	0.00138	0.00138	0.00118
0.00089	0.00099	0.00099	0.00104	0.00085	0.00085	0.00080	0.00099	0.00099	0.00085
0.00112	0.00124	0.00124	0.00130	0.00106	0.00106	0.00100	0.00124	0.00124	0.00106
0.00122	0.00135	0.00135	0.00142	0.00116	0.00116	0.00109	0.00135	0.00135	0.00116
0.00145	0.00161	0.00161	0.00169	0.00138	0.00138	0.00130	0.00161	0.00161	0.00138
0.00102	0.00113	0.00113	0.00119	0.00097	0.00097	0.00092	0.00113	0.00113	0.00097
0.00128	0.00142	0.00142	0.00149	0.00121	0.00121	0.00114	0.00142	0.00142	0.00121
0.00139	0.00155	0.00155	0.00162	0.00132	0.00132	0.00125	0.00155	0.00155	0.00132
0.00166	0.00184	0.00184	0.00194	0.00158	0.00158	0.00149	0.00184	0.00184	0.00158
0.00115	0.00128	0.00128	0.00134	0.00109	0.00109	0.00103	0.00128	0.00128	0.00109
0.00144	0.00159	0.00159	0.00167	0.00136	0.00136	0.00129	0.00159	0.00159	0.00136
0.00157	0.00174	0.00174	0.00183	0.00149	0.00149	0.00141	0.00174	0.00174	0.00149
0.00187	0.00208	0.00208	0.00218	0.00177	0.00177	0.00168	0.00208	0.00208	0.00177
0.00128	0.00142	0.00142	0.00149	0.00121	0.00121	0.00114	0.00142	0.00142	0.00121
0.00159	0.00177	0.00177	0.00186	0.00151	0.00151	0.00143	0.00177	0.00177	0.00151
0.00174	0.00193	0.00193	0.00203	0.00165	0.00165	0.00156	0.00193	0.00193	0.00165
0.00208	0.00231	0.00231	0.00242	0.00197	0.00197	0.00186	0.00231	0.00231	0.00197
0.00140	0.00156	0.00156	0.00164	0.00133	0.00133	0.00126	0.00156	0.00156	0.00133
0.00175	0.00195	0.00195	0.00205	0.00167	0.00167	0.00157	0.00195	0.00195	0.00167
0.00191	0.00213	0.00213	0.00223	0.00182	0.00182	0.00172	0.00213	0.00213	0.00182
0.00228	0.00254	0.00254	0.00266	0.00217	0.00217	0.00205	0.00254	0.00254	0.00217
0.00153	0.00170	0.00170	0.00179	0.00145	0.00145	0.00137	0.00170	0.00170	0.00145
0.00191	0.00213	0.00213	0.00223	0.00182	0.00182	0.00172	0.00213	0.00213	0.00182
0.00209	0.00232	0.00232	0.00244	0.00198	0.00198	0.00187	0.00232	0.00232	0.00198
0.00249	0.00277	0.00277	0.00291	0.00237	0.00237	0.00223	0.00277	0.00277	0.00237
0.00166	0.00184	0.00184	0.00193	0.00158	0.00158	0.00149	0.00184	0.00184	0.00158
0.00207	0.00230	0.00230	0.00242	0.00197	0.00197	0.00186	0.00230	0.00230	0.00197
0.00226	0.00251	0.00251	0.00264	0.00215	0.00215	0.00203	0.00251	0.00251	0.00215
0.00270	0.00300	0.00300	0.00315	0.00256	0.00256	0.00242	0.00300	0.00300	0.00256

SS-C-4

SS-C-4 Recommended Chip Loads

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
7/16	Slotting	[S]	0.00229	0.00219	0.00189	0.00141	0.00160	0.00208
	Heavy Peripheral	[HP]	0.00287	0.00273	0.00236	0.00177	0.00200	0.00260
	Peripheral	[P]	0.00313	0.00298	0.00257	0.00193	0.00219	0.00284
	Light Peripheral	[LP]	0.00373	0.00356	0.00307	0.00230	0.00261	0.00339
15/32	Slotting	[S]	0.00246	0.00234	0.00202	0.00151	0.00172	0.00223
	Heavy Peripheral	[HP]	0.00307	0.00293	0.00252	0.00189	0.00215	0.00279
	Peripheral	[P]	0.00335	0.00320	0.00275	0.00207	0.00234	0.00304
	Light Peripheral	[LP]	0.00400	0.00381	0.00329	0.00246	0.00279	0.00363
1/2	Slotting	[S]	0.00262	0.00250	0.00215	0.00162	0.00183	0.00238
	Heavy Peripheral	[HP]	0.00327	0.00313	0.00269	0.00202	0.00229	0.00298
	Peripheral	[P]	0.00357	0.00341	0.00294	0.00220	0.00250	0.00325
	Light Peripheral	[LP]	0.00426	0.00407	0.00351	0.00263	0.00298	0.00387
5/8	Slotting	[S]	0.00327	0.00313	0.00269	0.00202	0.00229	0.00298
	Heavy Peripheral	[HP]	0.00409	0.00391	0.00337	0.00252	0.00286	0.00372
	Peripheral	[P]	0.00447	0.00426	0.00367	0.00275	0.00312	0.00406
	Light Peripheral	[LP]	0.00533	0.00508	0.00438	0.00329	0.00372	0.00484
3/4	Slotting	[S]	0.00393	0.00375	0.00323	0.00242	0.00275	0.00357
	Heavy Peripheral	[HP]	0.00491	0.00469	0.00404	0.00303	0.00343	0.00447
	Peripheral	[P]	0.00536	0.00512	0.00441	0.00331	0.00375	0.00487
	Light Peripheral	[LP]	0.00639	0.00610	0.00526	0.00394	0.00447	0.00581
1	Slotting	[S]	0.00524	0.00500	0.00431	0.00323	0.00366	0.00476
	Heavy Peripheral	[HP]	0.00655	0.00625	0.00539	0.00404	0.00458	0.00595
	Peripheral	[P]	0.00715	0.00682	0.00588	0.00441	0.00500	0.00650
	Light Peripheral	[LP]	0.00852	0.00814	0.00701	0.00526	0.00596	0.00775

Stainless Steels

High Temp Alloys

Cast Irons

Stainless Steels			High Temp Alloys				Cast Irons		
M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00179	0.00198	0.00198	0.00208	0.00170	0.00170	0.00160	0.00198	0.00198	0.00170
0.00223	0.00248	0.00248	0.00260	0.00212	0.00212	0.00200	0.00248	0.00248	0.00212
0.00244	0.00271	0.00271	0.00284	0.00231	0.00231	0.00219	0.00271	0.00271	0.00231
0.00291	0.00323	0.00323	0.00339	0.00276	0.00276	0.00261	0.00323	0.00323	0.00276
0.00191	0.00213	0.00213	0.00223	0.00182	0.00182	0.00172	0.00213	0.00213	0.00182
0.00239	0.00266	0.00266	0.00279	0.00227	0.00227	0.00215	0.00266	0.00266	0.00227
0.00261	0.00290	0.00290	0.00304	0.00248	0.00248	0.00234	0.00290	0.00290	0.00248
0.00311	0.00346	0.00346	0.00363	0.00296	0.00296	0.00279	0.00346	0.00346	0.00296
0.00204	0.00227	0.00227	0.00238	0.00194	0.00194	0.00183	0.00227	0.00227	0.00194
0.00255	0.00284	0.00284	0.00298	0.00242	0.00242	0.00229	0.00284	0.00284	0.00242
0.00278	0.00309	0.00309	0.00325	0.00264	0.00264	0.00250	0.00309	0.00309	0.00264
0.00332	0.00369	0.00369	0.00387	0.00315	0.00315	0.00298	0.00369	0.00369	0.00315
0.00255	0.00284	0.00284	0.00298	0.00242	0.00242	0.00229	0.00284	0.00284	0.00242
0.00319	0.00354	0.00354	0.00372	0.00303	0.00303	0.00286	0.00354	0.00354	0.00303
0.00348	0.00387	0.00387	0.00406	0.00331	0.00331	0.00312	0.00387	0.00387	0.00331
0.00415	0.00461	0.00461	0.00484	0.00394	0.00394	0.00372	0.00461	0.00461	0.00394
0.00306	0.00340	0.00340	0.00357	0.00291	0.00291	0.00275	0.00340	0.00340	0.00291
0.00383	0.00425	0.00425	0.00447	0.00364	0.00364	0.00343	0.00425	0.00425	0.00364
0.00418	0.00464	0.00464	0.00487	0.00397	0.00397	0.00375	0.00464	0.00464	0.00397
0.00498	0.00553	0.00553	0.00581	0.00473	0.00473	0.00447	0.00553	0.00553	0.00473
0.00408	0.00454	0.00454	0.00476	0.00388	0.00388	0.00366	0.00454	0.00454	0.00388
0.00510	0.00567	0.00567	0.00595	0.00485	0.00485	0.00458	0.00567	0.00567	0.00485
0.00557	0.00619	0.00619	0.00650	0.00529	0.00529	0.00500	0.00619	0.00619	0.00529
0.00664	0.00738	0.00738	0.00775	0.00631	0.00631	0.00596	0.00738	0.00738	0.00631

SS-C-4

SS-BN-3 • SS-BN-4
Three & Four Flute





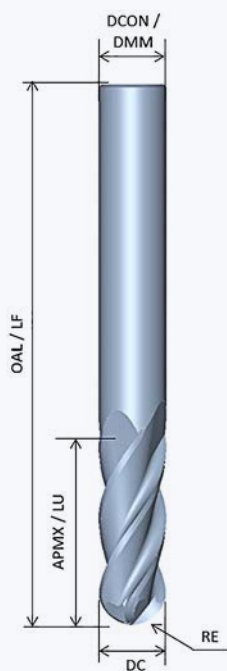
The SS-BN series is a great choice if your application requires 3-D, radius or contour work but with the added challenge of deep reaching cuts. The tools have a precision ground full radius and are stock with stub, regular and reduced neck.

MAIN CHARACTERISTICS

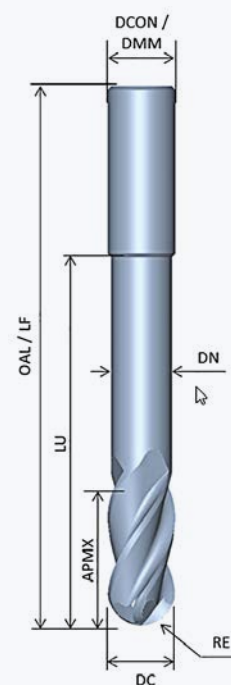
- Flute Count (NOF): 3
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): $-0.001''/-0.002''$
- Corner Radius (RE): $+0.000''/-0.001''$



STYLE A



STYLE B

WORK MATERIAL

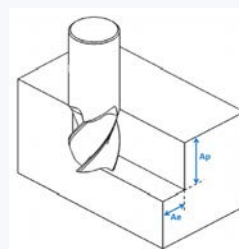


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)
AE	80%DC <= 100%DC	40%DC <= 80%DC	25%DC <= 40%DC	5%DC <= 25%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC



For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.

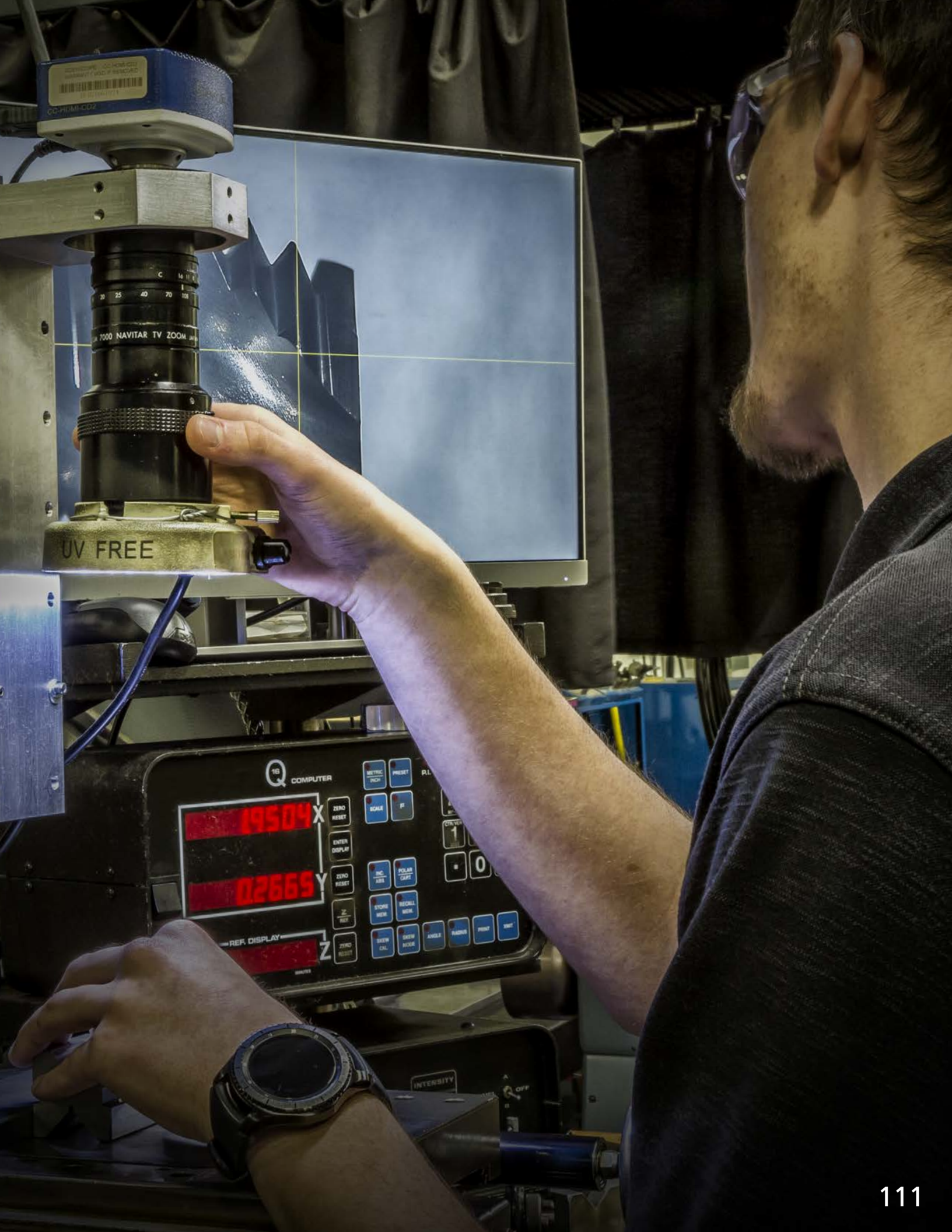


SS-BN-3, Three Flute Ball Nose

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Neck Dia DN	Style	EDP	C4 EDP	C7 EDP	C11 EDP
SS-BN-ST-30125	1/8	1/8	1/4	1-1/2			A	34292-00-D	34292-89-D	34292-83-D	34292-85-D
SS-BN-30125	1/8	1/8	1/2	1-1/2			A	33723-00-D	33723-89-D	33723-83-D	33723-85-D
SS-BN-ST-30156	5/32	3/16	5/16	2			A	34300-00-D	34300-89-D	34300-83-D	34300-85-D
SS-BN-30156	5/32	3/16	9/16	2			A	33731-00-D	33731-89-D	33731-83-D	33731-85-D
SS-BN-ST-30187	3/16	3/16	5/16	2			A	34308-00-D	34308-89-D	34308-83-D	34308-85-D
SS-BN-30187	3/16	3/16	9/16	2			A	33739-00-D	33739-89-D	33739-83-D	33739-85-D
SS-BN-ST-30218	7/32	1/4	3/8	2			A	34316-00-D	34316-89-D	34316-83-D	34316-85-D
SS-BN-30218	7/32	1/4	3/4	2-1/2			A	33747-00-D	33747-89-D	33747-83-D	33747-85-D
SS-BN-ST-30250	1/4	1/4	3/8	2			A	34324-00-D	34324-89-D	34324-83-D	34324-85-D
SS-BN-30250	1/4	1/4	3/4	2-1/2			A	33755-00-D	33755-89-D	33755-83-D	33755-85-D
SS-BN-LS-M-30250	1/4	1/4	3/8	4	2-1/8	.235	B	33996-00-D	33996-89-D	33996-83-D	33996-85-D
SS-BN-ST-30281	9/32	5/16	7/16	2			A	34332-00-D	34332-89-D	34332-83-D	34332-85-D
SS-BN-30281	9/32	5/16	13/16	2-1/2			A	33763-00-D	33763-89-D	33763-83-D	33763-85-D
SS-BN-ST-30312	5/16	5/16	7/16	2			A	34340-00-D	34340-89-D	34340-83-D	34340-85-D
SS-BN-30312	5/16	5/16	13/16	2-1/2			A	33771-00-D	33771-89-D	33771-83-D	33771-85-D
SS-BN-LS-M-30312	5/16	5/16	7/16	4	2-1/8	.297	B	34204-00-D	34204-89-D	34204-83-D	34204-85-D
SS-BN-ST-30343	11/32	3/8	1/2	2			A	34348-00-D	34348-89-D	34348-83-D	34348-85-D
SS-BN-30343	11/32	3/8	1	2-1/2			A	33779-00-D	33779-89-D	33779-83-D	33779-85-D
SS-BN-ST-30375	3/8	3/8	1/2	2			A	34356-00-D	34356-89-D	34356-83-D	34356-85-D
SS-BN-30375	3/8	3/8	1	2-1/2			A	33787-00-D	33787-89-D	33787-83-D	33787-85-D
SS-BN-LS-M-30375	3/8	3/8	1/2	6	2-3/8	.355	B	34212-00-D	34212-89-D	34212-83-D	34212-85-D
SS-BN-LS-L-30375	3/8	3/8	1/2	6	3-3/8	.355	B	33948-00-D	33948-89-D	33948-83-D	33948-85-D
SS-BN-ST-30437	7/16	7/16	9/16	2-1/2			A	34364-00-D	34364-89-D	34364-83-D	34364-85-D
SS-BN-30437	7/16	7/16	1	2-3/4			A	33795-00-D	33795-89-D	33795-83-D	33795-85-D
SS-BN-LS-M-30437	7/16	7/16	9/16	6	2-3/8	.412	B	34220-00-D	34220-89-D	34220-83-D	34220-85-D
SS-BN-LS-L-30437	7/16	7/16	9/16	6	3-3/8	.412	B	33956-00-D	33956-89-D	33956-83-D	33956-85-D
SS-BN-ST-30500	1/2	1/2	5/8	2-1/2			A	34372-00-D	34372-89-D	34372-83-D	34372-85-D
SS-BN-30500	1/2	1/2	1-1/4	3			A	33803-00-D	33803-89-D	33803-83-D	33803-85-D
SS-BN-LS-M-30500	1/2	1/2	5/8	6	2-3/8	.475	B	34228-00-D	34228-89-D	34228-83-D	34228-85-D
SS-BN-LS-L-30500	1/2	1/2	5/8	6	3-3/8	.475	B	33964-00-D	33964-89-D	33964-83-D	33964-85-D
SS-BN-LS-X-30500	1/2	1/2	5/8	6	4-1/8	.475	B	34260-00-D	34260-89-D	34260-83-D	34260-85-D
SS-BN-ST-30625	5/8	5/8	3/4	3			A	34380-00-D	34380-89-D	34380-83-D	34380-85-D
SS-BN-30625	5/8	5/8	1-5/8	3-1/2			A	33811-00-D	33811-89-D	33811-83-D	33811-85-D
SS-BN-LS-M-30625	5/8	5/8	3/4	6	2-3/8	.590	B	34236-00-D	34236-89-D	34236-83-D	34236-85-D
SS-BN-LS-L-30625	5/8	5/8	3/4	6	3-3/8	.590	B	33972-00-D	33972-89-D	33972-83-D	33972-85-D
SS-BN-LS-X-30625	5/8	5/8	3/4	6	4-1/8	.590	B	34268-00-D	34268-89-D	34268-83-D	34268-85-D
SS-BN-ST-30750	3/4	3/4	1	3			A	34388-00-D	34388-89-D	34388-83-D	34388-85-D
SS-BN-30750	3/4	3/4	1-5/8	4			A	33819-00-D	33819-89-D	33819-83-D	33819-85-D
SS-BN-LS-M-30750	3/4	3/4	1	6	2-1/2	.715	B	34244-00-D	34244-89-D	34244-83-D	34244-85-D
SS-BN-LS-L-30750	3/4	3/4	1	6	3-3/8	.715	B	33980-00-D	33980-89-D	33980-83-D	33980-85-D
SS-BN-LS-X-30750	3/4	3/4	1	6	4-1/8	.715	B	34276-00-D	34276-89-D	34276-83-D	34276-85-D
SS-BN-ST-31000	1	1	1-1/4	4			A	34396-00-D	34396-89-D	34396-83-D	34396-85-D
SS-BN-31000	1	1	2	4			A	33827-00-D	33827-89-D	33827-83-D	33827-85-D
SS-BN-LS-M-31000	1	1	1-1/4	6	2-1/2	.960	B	34252-00-D	34252-89-D	34252-83-D	34252-85-D
SS-BN-LS-L-31000	1	1	1-1/4	6	3-3/8	.960	B	33988-00-D	33988-89-D	33988-83-D	33988-85-D
SS-BN-LS-X-31000	1	1	1-1/4	6	4-1/8	.960	B	34284-00-D	34284-89-D	34284-83-D	34284-85-D

SS-BN-3



CC-PI-M-CD2

7000 NAVITAR TV ZOOM

UV FREE

COMPUTER
19504 X
02665 Y

METRIC INCH PRESET R.L.
SCALE FT.
CIR. W/ 1
0
INC. ABLE POLAR CART.
DEC. ABLE ROTATE
STOR. MEM. RECALL MEM.
VIEW CAL. VIEW SCALE ANG. RADIUS PRINT EXIT
ZERO RESET
ENTER DISPLAY
ZERO RESET
Z REF.
ZERO RESET
REF. DISPLAY
MINUTE

INTERBITY

SS-BN-3 Recommended Chip Loads

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
1/8	Slotting	[S/R]	0.00065	0.00062	0.00053	0.00040	0.00045	0.00059
	Heavy Peripheral	[HP]	0.00081	0.00077	0.00067	0.00050	0.00057	0.00074
	Peripheral	[P]	0.00088	0.00084	0.00073	0.00054	0.00062	0.00080
	Light Peripheral	[LP]	0.00105	0.00100	0.00087	0.00065	0.00074	0.00096
5/32	Slotting	[S/R]	0.00081	0.00077	0.00067	0.00050	0.00057	0.00074
	Heavy Peripheral	[HP]	0.00101	0.00096	0.00083	0.00062	0.00071	0.00092
	Peripheral	[P]	0.00110	0.00105	0.00091	0.00068	0.00077	0.00100
	Light Peripheral	[LP]	0.00132	0.00126	0.00108	0.00081	0.00092	0.00120
3/16	Slotting	[S]	0.00097	0.00093	0.00080	0.00060	0.00068	0.00088
	Heavy Peripheral	[HP]	0.00121	0.00116	0.00100	0.00075	0.00085	0.00110
	Peripheral	[P]	0.00132	0.00126	0.00109	0.00082	0.00093	0.00120
	Light Peripheral	[LP]	0.00158	0.00151	0.00130	0.00097	0.00110	0.00143
7/32	Slotting	[S]	0.00113	0.00108	0.00093	0.00070	0.00079	0.00103
	Heavy Peripheral	[HP]	0.00141	0.00135	0.00116	0.00087	0.00099	0.00129
	Peripheral	[P]	0.00154	0.00147	0.00127	0.00095	0.00108	0.00140
	Light Peripheral	[LP]	0.00184	0.00176	0.00151	0.00114	0.00129	0.00167
1/4	Slotting	[S]	0.00129	0.00123	0.00106	0.00080	0.00090	0.00118
	Heavy Peripheral	[HP]	0.00162	0.00154	0.00133	0.00100	0.00113	0.00147
	Peripheral	[P]	0.00176	0.00168	0.00145	0.00109	0.00123	0.00160
	Light Peripheral	[LP]	0.00210	0.00201	0.00173	0.00130	0.00147	0.00191
9/32	Slotting	[S]	0.00146	0.00139	0.00120	0.00090	0.00102	0.00132
	Heavy Peripheral	[HP]	0.00182	0.00174	0.00150	0.00112	0.00127	0.00165
	Peripheral	[P]	0.00198	0.00189	0.00163	0.00122	0.00139	0.00180
	Light Peripheral	[LP]	0.00237	0.00226	0.00195	0.00146	0.00166	0.00215
5/16	Slotting	[S]	0.00162	0.00154	0.00133	0.00100	0.00113	0.00147
	Heavy Peripheral	[HP]	0.00202	0.00193	0.00166	0.00125	0.00141	0.00184
	Peripheral	[P]	0.00221	0.00211	0.00181	0.00136	0.00154	0.00200
	Light Peripheral	[LP]	0.00263	0.00251	0.00216	0.00162	0.00184	0.00239
11/32	Slotting	[S]	0.00178	0.00170	0.00146	0.00110	0.00124	0.00162
	Heavy Peripheral	[HP]	0.00222	0.00212	0.00183	0.00137	0.00155	0.00202
	Peripheral	[P]	0.00243	0.00232	0.00200	0.00150	0.00170	0.00221
	Light Peripheral	[LP]	0.00289	0.00276	0.00238	0.00179	0.00202	0.00263
3/8	Slotting	[S]	0.00194	0.00185	0.00160	0.00120	0.00136	0.00176
	Heavy Peripheral	[HP]	0.00243	0.00232	0.00200	0.00150	0.00170	0.00221
	Peripheral	[P]	0.00265	0.00253	0.00218	0.00163	0.00185	0.00241
	Light Peripheral	[LP]	0.00316	0.00301	0.00260	0.00195	0.00221	0.00287
13/32	Slotting	[S]	0.00210	0.00201	0.00173	0.00130	0.00147	0.00191
	Heavy Peripheral	[HP]	0.00263	0.00251	0.00216	0.00162	0.00184	0.00239
	Peripheral	[P]	0.00287	0.00274	0.00236	0.00177	0.00200	0.00261
	Light Peripheral	[LP]	0.00342	0.00326	0.00281	0.00211	0.00239	0.00311

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/ Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00050	0.00056	0.00056	0.00059	0.00048	0.00048	0.00045	0.00056	0.00056	0.00048
0.00063	0.00070	0.00070	0.00074	0.00060	0.00060	0.00057	0.00070	0.00070	0.00060
0.00069	0.00076	0.00076	0.00080	0.00065	0.00065	0.00062	0.00076	0.00076	0.00065
0.00082	0.00091	0.00091	0.00096	0.00078	0.00078	0.00074	0.00091	0.00091	0.00078
0.00063	0.00070	0.00070	0.00074	0.00060	0.00060	0.00057	0.00070	0.00070	0.00060
0.00079	0.00088	0.00088	0.00092	0.00075	0.00075	0.00071	0.00088	0.00088	0.00075
0.00086	0.00095	0.00095	0.00100	0.00082	0.00082	0.00077	0.00095	0.00095	0.00082
0.00102	0.00114	0.00114	0.00120	0.00097	0.00097	0.00092	0.00114	0.00114	0.00097
0.00076	0.00084	0.00084	0.00088	0.00072	0.00072	0.00068	0.00084	0.00084	0.00072
0.00095	0.00105	0.00105	0.00110	0.00090	0.00090	0.00085	0.00105	0.00105	0.00090
0.00103	0.00115	0.00115	0.00120	0.00098	0.00098	0.00093	0.00115	0.00115	0.00098
0.00123	0.00137	0.00137	0.00143	0.00117	0.00117	0.00110	0.00137	0.00137	0.00117
0.00088	0.00098	0.00098	0.00103	0.00084	0.00084	0.00079	0.00098	0.00098	0.00084
0.00110	0.00123	0.00123	0.00129	0.00105	0.00105	0.00099	0.00123	0.00123	0.00105
0.00120	0.00134	0.00134	0.00140	0.00114	0.00114	0.00108	0.00134	0.00134	0.00114
0.00143	0.00159	0.00159	0.00167	0.00136	0.00136	0.00129	0.00159	0.00159	0.00136
0.00101	0.00112	0.00112	0.00118	0.00096	0.00096	0.00090	0.00112	0.00112	0.00096
0.00126	0.00140	0.00140	0.00147	0.00120	0.00120	0.00113	0.00140	0.00140	0.00120
0.00137	0.00153	0.00153	0.00160	0.00131	0.00131	0.00123	0.00153	0.00153	0.00131
0.00164	0.00182	0.00182	0.00191	0.00156	0.00156	0.00147	0.00182	0.00182	0.00156
0.00113	0.00126	0.00126	0.00132	0.00108	0.00108	0.00102	0.00126	0.00126	0.00108
0.00142	0.00158	0.00158	0.00165	0.00135	0.00135	0.00127	0.00158	0.00158	0.00135
0.00155	0.00172	0.00172	0.00180	0.00147	0.00147	0.00139	0.00172	0.00172	0.00147
0.00184	0.00205	0.00205	0.00215	0.00175	0.00175	0.00166	0.00205	0.00205	0.00175
0.00126	0.00140	0.00140	0.00147	0.00120	0.00120	0.00113	0.00140	0.00140	0.00120
0.00158	0.00175	0.00175	0.00184	0.00150	0.00150	0.00141	0.00175	0.00175	0.00150
0.00172	0.00191	0.00191	0.00200	0.00163	0.00163	0.00154	0.00191	0.00191	0.00163
0.00205	0.00228	0.00228	0.00239	0.00195	0.00195	0.00184	0.00228	0.00228	0.00195
0.00139	0.00154	0.00154	0.00162	0.00132	0.00132	0.00124	0.00154	0.00154	0.00132
0.00173	0.00193	0.00193	0.00202	0.00165	0.00165	0.00155	0.00193	0.00193	0.00165
0.00189	0.00210	0.00210	0.00221	0.00180	0.00180	0.00170	0.00210	0.00210	0.00180
0.00225	0.00251	0.00251	0.00263	0.00214	0.00214	0.00202	0.00251	0.00251	0.00214
0.00151	0.00168	0.00168	0.00176	0.00144	0.00144	0.00136	0.00168	0.00168	0.00144
0.00189	0.00210	0.00210	0.00221	0.00180	0.00180	0.00170	0.00210	0.00210	0.00180
0.00206	0.00229	0.00229	0.00241	0.00196	0.00196	0.00185	0.00229	0.00229	0.00196
0.00246	0.00273	0.00273	0.00287	0.00234	0.00234	0.00221	0.00273	0.00273	0.00234
0.00164	0.00182	0.00182	0.00191	0.00156	0.00156	0.00147	0.00182	0.00182	0.00156
0.00205	0.00228	0.00228	0.00239	0.00195	0.00195	0.00184	0.00228	0.00228	0.00195
0.00223	0.00248	0.00248	0.00261	0.00212	0.00212	0.00200	0.00248	0.00248	0.00212
0.00266	0.00296	0.00296	0.00311	0.00253	0.00253	0.00239	0.00296	0.00296	0.00253

SS-BN-3

SS-BN-3 Recommended Chip Loads

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
7/16	Slotting	[S]	0.00226	0.00216	0.00186	0.00140	0.00158	0.00206
	Heavy Peripheral	[HP]	0.00283	0.00270	0.00233	0.00175	0.00198	0.00257
	Peripheral	[P]	0.00309	0.00295	0.00254	0.00190	0.00216	0.00281
	Light Peripheral	[LP]	0.00368	0.00352	0.00303	0.00227	0.00257	0.00335
15/32	Slotting	[S]	0.00243	0.00232	0.00200	0.00150	0.00170	0.00221
	Heavy Peripheral	[HP]	0.00303	0.00289	0.00249	0.00187	0.00212	0.00276
	Peripheral	[P]	0.00331	0.00316	0.00272	0.00204	0.00231	0.00301
	Light Peripheral	[LP]	0.00395	0.00377	0.00325	0.00243	0.00276	0.00359
1/2	Slotting	[S]	0.00259	0.00247	0.00213	0.00160	0.00181	0.00235
	Heavy Peripheral	[HP]	0.00323	0.00309	0.00266	0.00200	0.00226	0.00294
	Peripheral	[P]	0.00353	0.00337	0.00290	0.00218	0.00247	0.00321
	Light Peripheral	[LP]	0.00421	0.00402	0.00346	0.00260	0.00294	0.00383
5/8	Slotting	[S]	0.00323	0.00309	0.00266	0.00200	0.00226	0.00294
	Heavy Peripheral	[HP]	0.00404	0.00386	0.00333	0.00249	0.00283	0.00368
	Peripheral	[P]	0.00441	0.00421	0.00363	0.00272	0.00308	0.00401
	Light Peripheral	[LP]	0.00526	0.00502	0.00433	0.00325	0.00368	0.00478
3/4	Slotting	[S]	0.00388	0.00370	0.00319	0.00239	0.00271	0.00353
	Heavy Peripheral	[HP]	0.00485	0.00463	0.00399	0.00299	0.00339	0.00441
	Peripheral	[P]	0.00529	0.00505	0.00435	0.00327	0.00370	0.00481
	Light Peripheral	[LP]	0.00631	0.00603	0.00519	0.00389	0.00441	0.00574
1	Slotting	[S]	0.00517	0.00494	0.00426	0.00319	0.00362	0.00470
	Heavy Peripheral	[HP]	0.00647	0.00617	0.00532	0.00399	0.00452	0.00588
	Peripheral	[P]	0.00706	0.00674	0.00580	0.00435	0.00493	0.00642
	Light Peripheral	[LP]	0.00842	0.00804	0.00692	0.00519	0.00589	0.00765

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00176	0.00196	0.00196	0.00206	0.00168	0.00168	0.00158	0.00196	0.00196	0.00168
0.00221	0.00245	0.00245	0.00257	0.00209	0.00209	0.00198	0.00245	0.00245	0.00209
0.00241	0.00267	0.00267	0.00281	0.00229	0.00229	0.00216	0.00267	0.00267	0.00229
0.00287	0.00319	0.00319	0.00335	0.00273	0.00273	0.00257	0.00319	0.00319	0.00273
0.00189	0.00210	0.00210	0.00221	0.00180	0.00180	0.00170	0.00210	0.00210	0.00180
0.00236	0.00263	0.00263	0.00276	0.00224	0.00224	0.00212	0.00263	0.00263	0.00224
0.00258	0.00286	0.00286	0.00301	0.00245	0.00245	0.00231	0.00286	0.00286	0.00245
0.00307	0.00342	0.00342	0.00359	0.00292	0.00292	0.00276	0.00342	0.00342	0.00292
0.00202	0.00224	0.00224	0.00235	0.00192	0.00192	0.00181	0.00224	0.00224	0.00192
0.00252	0.00280	0.00280	0.00294	0.00239	0.00239	0.00226	0.00280	0.00280	0.00239
0.00275	0.00306	0.00306	0.00321	0.00261	0.00261	0.00247	0.00306	0.00306	0.00261
0.00328	0.00364	0.00364	0.00383	0.00312	0.00312	0.00294	0.00364	0.00364	0.00312
0.00252	0.00280	0.00280	0.00294	0.00239	0.00239	0.00226	0.00280	0.00280	0.00239
0.00315	0.00350	0.00350	0.00368	0.00299	0.00299	0.00283	0.00350	0.00350	0.00299
0.00344	0.00382	0.00382	0.00401	0.00327	0.00327	0.00308	0.00382	0.00382	0.00327
0.00410	0.00456	0.00456	0.00478	0.00389	0.00389	0.00368	0.00456	0.00456	0.00389
0.00302	0.00336	0.00336	0.00353	0.00287	0.00287	0.00271	0.00336	0.00336	0.00287
0.00378	0.00420	0.00420	0.00441	0.00359	0.00359	0.00339	0.00420	0.00420	0.00359
0.00412	0.00458	0.00458	0.00481	0.00392	0.00392	0.00370	0.00458	0.00458	0.00392
0.00492	0.00547	0.00547	0.00574	0.00467	0.00467	0.00441	0.00547	0.00547	0.00467
0.00403	0.00448	0.00448	0.00470	0.00383	0.00383	0.00362	0.00448	0.00448	0.00383
0.00504	0.00560	0.00560	0.00588	0.00479	0.00479	0.00452	0.00560	0.00560	0.00479
0.00550	0.00611	0.00611	0.00642	0.00522	0.00522	0.00493	0.00611	0.00611	0.00522
0.00656	0.00729	0.00729	0.00765	0.00623	0.00623	0.00589	0.00729	0.00729	0.00623

SS-BN-3



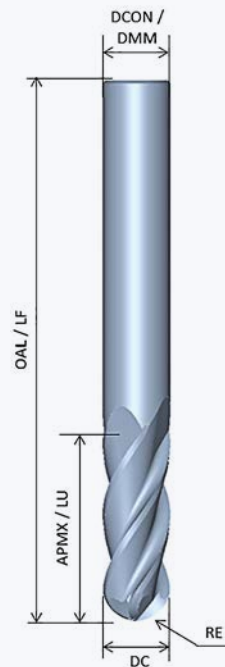
Contour, radius and 3-D modeling in an extended reach application are a breeze with 4 flute SS-BN-RN series. Due to aggressive gash angles which allow for heavier chip loads as well as better chip evacuation when milling with the ball. This series is offered with stub, regular and extended neck.

MAIN CHARACTERISTICS

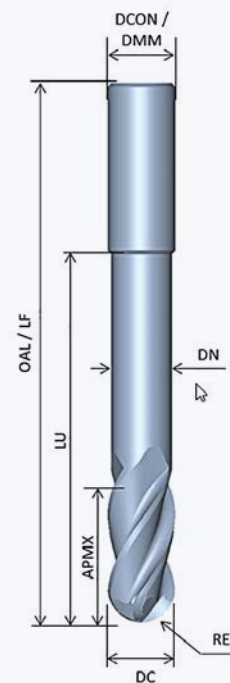
- Flute Count (NOF): 4
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): -0.001"/-0.002"
- Corner Radius (RE): +0.000"/-0.001"



STYLE A



STYLE B

WORK MATERIAL

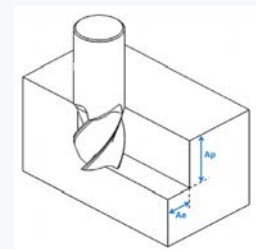


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)
AE	80%DC<_≤100%DC	40%DC<_≤80%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC



For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.

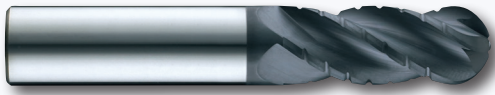


SS-BN-4, Four Flute Ball Mill

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Neck Dia DN	Style	EDP	C4 EDP	C7 EDP	C11 EDP
SS-BN-ST-40125	1/8	1/8	1/4	1-1/2			A	49000-00-D	49000-89-D	49000-83-D	49000-85-D
SS-BN-40125	1/8	1/8	1/2	1-1/2			A	49100-00-D	49100-89-D	49100-83-D	49100-85-D
SS-BN-ST-40156	5/32	3/16	5/16	2			A	49007-00-D	49007-89-D	49007-83-D	49007-85-D
SS-BN-40156	5/32	3/16	9/16	2			A	49107-00-D	49107-89-D	49107-83-D	49107-85-D
SS-BN-ST-40187	3/16	3/16	5/16	2			A	49014-00-D	49014-89-D	49014-83-D	49014-85-D
SS-BN-40187	3/16	3/16	9/16	2			A	49114-00-D	49114-89-D	49114-83-D	49114-85-D
SS-BN-ST-40218	7/32	1/4	3/8	2			A	49021-00-D	49021-89-D	49021-83-D	49021-85-D
SS-BN-40218	7/32	1/4	3/4	2-1/2			A	49121-00-D	49121-89-D	49121-83-D	49121-85-D
SS-BN-ST-40250	1/4	1/4	3/8	2			A	49028-00-D	49028-89-D	49028-83-D	49028-85-D
SS-BN-40250	1/4	1/4	3/4	2-1/2			A	49128-00-D	49128-89-D	49128-83-D	49128-85-D
SS-BN-LS-M-40250	1/4	1/4	3/8	4	2-1/8	.235	B	49745-00-D	49745-89-D	49745-83-D	49745-85-D
SS-BN-ST-40281	9/32	5/16	7/16	2			A	49035-00-D	49035-89-D	49035-83-D	49035-85-D
SS-BN-40281	9/32	5/16	13/16	2-1/2			A	49135-00-D	49135-89-D	49135-83-D	49135-85-D
SS-BN-ST-40312	5/16	5/16	7/16	2			A	49042-00-D	49042-89-D	49042-83-D	49042-85-D
SS-BN-40312	5/16	5/16	13/16	2-1/2			A	49142-00-D	49142-89-D	49142-83-D	49142-85-D
SS-BN-LS-M-40312	5/16	5/16	7/16	4	2-1/8	.297	B	49752-00-D	49752-89-D	49752-83-D	49752-85-D
SS-BN-ST-40343	11/32	3/8	1/2	2			A	49049-00-D	49049-89-D	49049-83-D	49049-85-D
SS-BN-40343	11/32	3/8	1	2-1/2			A	49149-00-D	49149-89-D	49149-83-D	49149-85-D
SS-BN-ST-40375	3/8	3/8	1/2	2			A	49056-00-D	49056-89-D	49056-83-D	49056-85-D
SS-BN-40375	3/8	3/8	1	2-1/2			A	49156-00-D	49156-89-D	49156-83-D	49156-85-D
SS-BN-LS-M-40375	3/8	3/8	1/2	6	2-3/8	.355	B	49759-00-D	49759-89-D	49759-83-D	49759-85-D
SS-BN-LS-L-40375	3/8	3/8	1/2	6	3-3/8	.355	B	49801-00-D	49801-89-D	49801-83-D	49801-85-D
SS-BN-ST-40437	7/16	7/16	9/16	2-1/2			A	49063-00-D	49063-89-D	49063-83-D	49063-85-D
SS-BN-40437	7/16	7/16	1	2-3/4			A	49163-00-D	49163-89-D	49163-83-D	49163-85-D
SS-BN-LS-M-40437	7/16	7/16	9/16	6	2-3/8	.412	B	49766-00-D	49766-89-D	49766-83-D	49766-85-D
SS-BN-LS-L-40437	7/16	7/16	9/16	6	3-3/8	.412	B	49813-00-D	49813-89-D	49813-83-D	49813-85-D
SS-BN-ST-40500	1/2	1/2	5/8	2-1/2			A	49070-00-D	49070-89-D	49070-83-D	49070-85-D
SS-BN-40500	1/2	1/2	1-1/4	3			A	49170-00-D	49170-89-D	49170-83-D	49170-85-D
SS-BN-LS-M-40500	1/2	1/2	5/8	6	2-3/8	.475	B	49773-00-D	49773-89-D	49773-83-D	49773-85-D
SS-BN-LS-L-40500	1/2	1/2	5/8	6	3-3/8	.475	B	49820-00-D	49820-89-D	49820-83-D	49820-85-D
SS-BN-LS-X-40500	1/2	1/2	5/8	6	4-1/8	.475	B	49848-00-D	49848-89-D	49848-83-D	49848-85-D
SS-BN-ST-40625	5/8	5/8	3/4	3			A	49077-00-D	49077-89-D	49077-83-D	49077-85-D
SS-BN-40625	5/8	5/8	1-5/8	3-1/2			A	49177-00-D	49177-89-D	49177-83-D	49177-85-D
SS-BN-LS-M-40625	5/8	5/8	3/4	6	2-3/8	.590	B	49780-00-D	49780-89-D	49780-83-D	49780-85-D
SS-BN-LS-L-40625	5/8	5/8	3/4	6	3-3/8	.590	B	49827-00-D	49827-89-D	49827-83-D	49827-85-D
SS-BN-LS-X-40625	5/8	5/8	3/4	6	4-1/8	.590	B	49855-00-D	49855-89-D	49855-83-D	49855-85-D
SS-BN-ST-40750	3/4	3/4	1	3			A	49084-00-D	49084-89-D	49084-83-D	49084-85-D
SS-BN-40750	3/4	3/4	1-5/8	4			A	49184-00-D	49184-89-D	49184-83-D	49184-85-D
SS-BN-LS-M-40750	3/4	3/4	1	6	2-1/2	.715	B	49787-00-D	49787-89-D	49787-83-D	49787-85-D
SS-BN-LS-L-40750	3/4	3/4	1	6	3-3/8	.715	B	49834-00-D	49834-89-D	49834-83-D	49834-85-D
SS-BN-LS-X-40750	3/4	3/4	1	6	4-1/8	.715	B	49862-00-D	49862-89-D	49862-83-D	49862-85-D
SS-BN-ST-41000	1	1	1-1/4	3			A	49091-00-D	49091-89-D	49091-83-D	49091-85-D
SS-BN-41000	1	1	2	4			A	49191-00-D	49191-89-D	49191-83-D	49191-85-D
SS-BN-LS-M-41000	1	1	1-1/4	6	2-1/2	.960	B	49794-00-D	49794-89-D	49794-83-D	49794-85-D
SS-BN-LS-L-41000	1	1	1-1/4	6	3-3/8	.960	B	49841-00-D	49841-89-D	49841-83-D	49841-85-D
SS-BN-LS-X-41000	1	1	1-1/4	6	4-1/8	.960	B	49869-00-D	49869-89-D	49869-83-D	49869-85-D

SS-BN-4



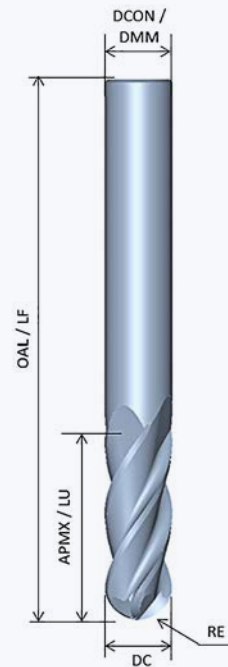
The 4 flute SS-BN-C series combines the ultra-effective design of the SS geometry with a truncated knuckle form. This design is best utilized in gummy material applications as it helps manage chip size and flow.

MAIN CHARACTERISTICS

- Flute Count (NOF): 4
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Chip Breakers

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): -0.001"/-0.002"
- Corner Radius (RE): +0.000"/-0.001"



STYLE A

WORK MATERIAL

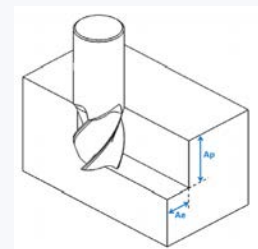


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)
AE	80%DC < \leq 100%DC	40%DC < \leq 80%DC	25%DC < \leq 40%DC	5%DC < \leq 25%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC



For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



SS-BN-C-4, Four Flute Ball Nose

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	Style	EDP	C4 EDP	C7 EDP	C11 EDP
SS-BN-ST-C-40125	1/8	1/8	1/4	1-1/2	A	49398-00-D	49398-89-D	49398-83-D	49398-85-D
SS-BN-C-40125	1/8	1/8	1/2	1-1/2	A	49525-00-D	49525-89-D	49525-83-D	49525-85-D
SS-BN-ST-C-40156	5/32	3/16	5/16	2	A	49409-00-D	49409-89-D	49409-83-D	49409-85-D
SS-BN-C-40156	5/32	3/16	9/16	2	A	49532-00-D	49532-89-D	49532-83-D	49532-85-D
SS-BN-ST-C-40187	3/16	3/16	5/16	2	A	49421-00-D	49421-89-D	49421-83-D	49421-85-D
SS-BN-C-40187	3/16	3/16	9/16	2	A	49539-00-D	49539-89-D	49539-83-D	49539-85-D
SS-BN-ST-C-40218	7/32	1/4	3/8	2	A	49431-00-D	49431-89-D	49431-83-D	49431-85-D
SS-BN-C-40218	7/32	1/4	3/4	2-1/2	A	49546-00-D	49546-89-D	49546-83-D	49546-85-D
SS-BN-ST-C-40250	1/4	1/4	3/8	2	A	49447-00-D	49447-89-D	49447-83-D	49447-85-D
SS-BN-C-40250	1/4	1/4	3/4	2-1/2	A	49553-00-D	49553-89-D	49553-83-D	49553-85-D
SS-BN-ST-C-40281	9/32	5/16	7/16	2	A	49457-00-D	49457-89-D	49457-83-D	49457-85-D
SS-BN-C-40281	9/32	5/16	13/16	2-1/2	A	49560-00-D	49560-89-D	49560-83-D	49560-85-D
SS-BN-ST-C-40312	5/16	5/16	7/16	2	A	49465-00-D	49465-89-D	49465-83-D	49465-85-D
SS-BN-C-40312	5/16	5/16	13/16	2-1/2	A	49567-00-D	49567-89-D	49567-83-D	49567-85-D
SS-BN-ST-C-40343	11/32	3/8	1/2	2	A	49472-00-D	49472-89-D	49472-83-D	49472-85-D
SS-BN-C-40343	11/32	3/8	1	2-1/2	A	49574-00-D	49574-89-D	49574-83-D	49574-85-D
SS-BN-ST-C-40375	3/8	3/8	1/2	2	A	49479-00-D	49479-89-D	49479-83-D	49479-85-D
SS-BN-C-40375	3/8	3/8	1	2-1/2	A	49581-00-D	49581-89-D	49581-83-D	49581-85-D
SS-BN-ST-C-40437	7/16	7/16	9/16	2-1/2	A	49486-00-D	49486-89-D	49486-83-D	49486-85-D
SS-BN-C-40437	7/16	7/16	1	2-3/4	A	49588-00-D	49588-89-D	49588-83-D	49588-85-D
SS-BN-ST-C-40500	1/2	1/2	5/8	2-1/2	A	49493-00-D	49493-89-D	49493-83-D	49493-85-D
SS-BN-C-40500	1/2	1/2	1-1/4	3	A	49595-00-D	49595-89-D	49595-83-D	49595-85-D
SS-BN-ST-C-40625	5/8	5/8	3/4	3	A	49500-00-D	49500-89-D	49500-83-D	49500-85-D
SS-BN-C-40625	5/8	5/8	1-5/8	3-1/2	A	49603-00-D	49603-89-D	49603-83-D	49603-85-D
SS-BN-ST-C-40750	3/4	3/4	1	3	A	49511-00-D	49511-89-D	49511-83-D	49511-85-D
SS-BN-C-40750	3/4	3/4	1-5/8	4	A	49898-00-D	49898-89-D	49898-83-D	49898-85-D
SS-BN-ST-C-41000	1	1	1-1/4	3	A	49518-00-D	49518-89-D	49518-83-D	49518-85-D
SS-BN-C-41000	1	1	2	4	A	50220-00-D	50220-89-D	50220-83-D	50220-85-D

SS-BN-C-4

SS-BN-4 & SS-BN-C-4 Recommended Chip Loads

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
1/8	Slotting	[S/R]	0.00065	0.00063	0.00054	0.00040	0.00046	0.00060
	Heavy Peripheral	[HP]	0.00082	0.00078	0.00067	0.00050	0.00057	0.00074
	Peripheral	[P]	0.00089	0.00085	0.00073	0.00055	0.00062	0.00081
	Light Peripheral	[LP]	0.00107	0.00102	0.00088	0.00066	0.00074	0.00097
5/32	Slotting	[S/R]	0.00082	0.00078	0.00067	0.00050	0.00057	0.00074
	Heavy Peripheral	[HP]	0.00102	0.00098	0.00084	0.00063	0.00072	0.00093
	Peripheral	[P]	0.00112	0.00107	0.00092	0.00069	0.00078	0.00101
	Light Peripheral	[LP]	0.00133	0.00127	0.00110	0.00082	0.00093	0.00121
3/16	Slotting	[S]	0.00098	0.00094	0.00081	0.00061	0.00069	0.00089
	Heavy Peripheral	[HP]	0.00123	0.00117	0.00101	0.00076	0.00086	0.00112
	Peripheral	[P]	0.00134	0.00128	0.00110	0.00083	0.00094	0.00122
	Light Peripheral	[LP]	0.00160	0.00153	0.00131	0.00099	0.00112	0.00145
7/32	Slotting	[S]	0.00115	0.00109	0.00094	0.00071	0.00080	0.00104
	Heavy Peripheral	[HP]	0.00143	0.00137	0.00118	0.00088	0.00100	0.00130
	Peripheral	[P]	0.00156	0.00149	0.00129	0.00096	0.00109	0.00142
	Light Peripheral	[LP]	0.00186	0.00178	0.00153	0.00115	0.00130	0.00169
1/4	Slotting	[S]	0.00131	0.00125	0.00108	0.00081	0.00092	0.00119
	Heavy Peripheral	[HP]	0.00164	0.00156	0.00135	0.00101	0.00114	0.00149
	Peripheral	[P]	0.00179	0.00171	0.00147	0.00110	0.00125	0.00162
	Light Peripheral	[LP]	0.00213	0.00203	0.00175	0.00131	0.00149	0.00194
9/32	Slotting	[S]	0.00147	0.00141	0.00121	0.00091	0.00103	0.00134
	Heavy Peripheral	[HP]	0.00184	0.00176	0.00151	0.00114	0.00129	0.00167
	Peripheral	[P]	0.00201	0.00192	0.00165	0.00124	0.00141	0.00183
	Light Peripheral	[LP]	0.00240	0.00229	0.00197	0.00148	0.00168	0.00218
5/16	Slotting	[S]	0.00164	0.00156	0.00135	0.00101	0.00114	0.00149
	Heavy Peripheral	[HP]	0.00205	0.00195	0.00168	0.00126	0.00143	0.00186
	Peripheral	[P]	0.00223	0.00213	0.00184	0.00138	0.00156	0.00203
	Light Peripheral	[LP]	0.00266	0.00254	0.00219	0.00164	0.00186	0.00242
11/32	Slotting	[S]	0.00180	0.00172	0.00148	0.00111	0.00126	0.00164
	Heavy Peripheral	[HP]	0.00225	0.00215	0.00185	0.00139	0.00157	0.00205
	Peripheral	[P]	0.00246	0.00234	0.00202	0.00152	0.00172	0.00223
	Light Peripheral	[LP]	0.00293	0.00280	0.00241	0.00181	0.00205	0.00266
3/8	Slotting	[S]	0.00196	0.00188	0.00162	0.00121	0.00137	0.00179
	Heavy Peripheral	[HP]	0.00246	0.00234	0.00202	0.00151	0.00172	0.00223
	Peripheral	[P]	0.00268	0.00256	0.00220	0.00165	0.00187	0.00244
	Light Peripheral	[LP]	0.00320	0.00305	0.00263	0.00197	0.00223	0.00291
13/32	Slotting	[S]	0.00213	0.00203	0.00175	0.00131	0.00149	0.00193
	Heavy Peripheral	[HP]	0.00266	0.00254	0.00219	0.00164	0.00186	0.00242
	Peripheral	[P]	0.00290	0.00277	0.00239	0.00179	0.00203	0.00264
	Light Peripheral	[LP]	0.00346	0.00331	0.00285	0.00214	0.00242	0.00315

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00051	0.00057	0.00057	0.00060	0.00048	0.00048	0.00046	0.00057	0.00057	0.00048
0.00064	0.00071	0.00071	0.00074	0.00061	0.00061	0.00057	0.00071	0.00071	0.00061
0.00070	0.00077	0.00077	0.00081	0.00066	0.00066	0.00062	0.00077	0.00077	0.00066
0.00083	0.00092	0.00092	0.00097	0.00079	0.00079	0.00074	0.00092	0.00092	0.00079
0.00064	0.00071	0.00071	0.00074	0.00061	0.00061	0.00057	0.00071	0.00071	0.00061
0.00080	0.00089	0.00089	0.00093	0.00076	0.00076	0.00072	0.00089	0.00089	0.00076
0.00087	0.00097	0.00097	0.00101	0.00083	0.00083	0.00078	0.00097	0.00097	0.00083
0.00104	0.00115	0.00115	0.00121	0.00099	0.00099	0.00093	0.00115	0.00115	0.00099
0.00077	0.00085	0.00085	0.00089	0.00073	0.00073	0.00069	0.00085	0.00085	0.00073
0.00096	0.00106	0.00106	0.00112	0.00091	0.00091	0.00086	0.00106	0.00106	0.00091
0.00104	0.00116	0.00116	0.00122	0.00099	0.00099	0.00094	0.00116	0.00116	0.00099
0.00125	0.00138	0.00138	0.00145	0.00118	0.00118	0.00112	0.00138	0.00138	0.00118
0.00089	0.00099	0.00099	0.00104	0.00085	0.00085	0.00080	0.00099	0.00099	0.00085
0.00112	0.00124	0.00124	0.00130	0.00106	0.00106	0.00100	0.00124	0.00124	0.00106
0.00122	0.00135	0.00135	0.00142	0.00116	0.00116	0.00109	0.00135	0.00135	0.00116
0.00145	0.00161	0.00161	0.00169	0.00138	0.00138	0.00130	0.00161	0.00161	0.00138
0.00102	0.00113	0.00113	0.00119	0.00097	0.00097	0.00092	0.00113	0.00113	0.00097
0.00128	0.00142	0.00142	0.00149	0.00121	0.00121	0.00114	0.00142	0.00142	0.00121
0.00139	0.00155	0.00155	0.00162	0.00132	0.00132	0.00125	0.00155	0.00155	0.00132
0.00166	0.00184	0.00184	0.00194	0.00158	0.00158	0.00149	0.00184	0.00184	0.00158
0.00115	0.00128	0.00128	0.00134	0.00109	0.00109	0.00103	0.00128	0.00128	0.00109
0.00144	0.00159	0.00159	0.00167	0.00136	0.00136	0.00129	0.00159	0.00159	0.00136
0.00157	0.00174	0.00174	0.00183	0.00149	0.00149	0.00141	0.00174	0.00174	0.00149
0.00187	0.00208	0.00208	0.00218	0.00177	0.00177	0.00168	0.00208	0.00208	0.00177
0.00128	0.00142	0.00142	0.00149	0.00121	0.00121	0.00114	0.00142	0.00142	0.00121
0.00159	0.00177	0.00177	0.00186	0.00151	0.00151	0.00143	0.00177	0.00177	0.00151
0.00174	0.00193	0.00193	0.00203	0.00165	0.00165	0.00156	0.00193	0.00193	0.00165
0.00208	0.00231	0.00231	0.00242	0.00197	0.00197	0.00186	0.00231	0.00231	0.00197
0.00140	0.00156	0.00156	0.00164	0.00133	0.00133	0.00126	0.00156	0.00156	0.00133
0.00175	0.00195	0.00195	0.00205	0.00167	0.00167	0.00157	0.00195	0.00195	0.00167
0.00191	0.00213	0.00213	0.00223	0.00182	0.00182	0.00172	0.00213	0.00213	0.00182
0.00228	0.00254	0.00254	0.00266	0.00217	0.00217	0.00205	0.00254	0.00254	0.00217
0.00153	0.00170	0.00170	0.00179	0.00145	0.00145	0.00137	0.00170	0.00170	0.00145
0.00191	0.00213	0.00213	0.00223	0.00182	0.00182	0.00172	0.00213	0.00213	0.00182
0.00209	0.00232	0.00232	0.00244	0.00198	0.00198	0.00187	0.00232	0.00232	0.00198
0.00249	0.00277	0.00277	0.00291	0.00237	0.00237	0.00223	0.00277	0.00277	0.00237
0.00166	0.00184	0.00184	0.00193	0.00158	0.00158	0.00149	0.00184	0.00184	0.00158
0.00207	0.00230	0.00230	0.00242	0.00197	0.00197	0.00186	0.00230	0.00230	0.00197
0.00226	0.00251	0.00251	0.00264	0.00215	0.00215	0.00203	0.00251	0.00251	0.00215
0.00270	0.00300	0.00300	0.00315	0.00256	0.00256	0.00242	0.00300	0.00300	0.00256

SS-BN-4

SS-BN-4 & SS-BN-C-4 Recommended Chip Loads

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
7/16	Slotting	[S]	0.00229	0.00219	0.00189	0.00141	0.00160	0.00208
	Heavy Peripheral	[HP]	0.00287	0.00273	0.00236	0.00177	0.00200	0.00260
	Peripheral	[P]	0.00313	0.00298	0.00257	0.00193	0.00219	0.00284
	Light Peripheral	[LP]	0.00373	0.00356	0.00307	0.00230	0.00261	0.00339
15/32	Slotting	[S]	0.00246	0.00234	0.00202	0.00151	0.00172	0.00223
	Heavy Peripheral	[HP]	0.00307	0.00293	0.00252	0.00189	0.00215	0.00279
	Peripheral	[P]	0.00335	0.00320	0.00275	0.00207	0.00234	0.00304
	Light Peripheral	[LP]	0.00400	0.00381	0.00329	0.00246	0.00279	0.00363
1/2	Slotting	[S]	0.00262	0.00250	0.00215	0.00162	0.00183	0.00238
	Heavy Peripheral	[HP]	0.00327	0.00313	0.00269	0.00202	0.00229	0.00298
	Peripheral	[P]	0.00357	0.00341	0.00294	0.00220	0.00250	0.00325
	Light Peripheral	[LP]	0.00426	0.00407	0.00351	0.00263	0.00298	0.00387
5/8	Slotting	[S]	0.00327	0.00313	0.00269	0.00202	0.00229	0.00298
	Heavy Peripheral	[HP]	0.00409	0.00391	0.00337	0.00252	0.00286	0.00372
	Peripheral	[P]	0.00447	0.00426	0.00367	0.00275	0.00312	0.00406
	Light Peripheral	[LP]	0.00533	0.00508	0.00438	0.00329	0.00372	0.00484
3/4	Slotting	[S]	0.00393	0.00375	0.00323	0.00242	0.00275	0.00357
	Heavy Peripheral	[HP]	0.00491	0.00469	0.00404	0.00303	0.00343	0.00447
	Peripheral	[P]	0.00536	0.00512	0.00441	0.00331	0.00375	0.00487
	Light Peripheral	[LP]	0.00639	0.00610	0.00526	0.00394	0.00447	0.00581
1	Slotting	[S]	0.00524	0.00500	0.00431	0.00323	0.00366	0.00476
	Heavy Peripheral	[HP]	0.00655	0.00625	0.00539	0.00404	0.00458	0.00595
	Peripheral	[P]	0.00715	0.00682	0.00588	0.00441	0.00500	0.00650
	Light Peripheral	[LP]	0.00852	0.00814	0.00701	0.00526	0.00596	0.00775

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00179	0.00198	0.00198	0.00208	0.00170	0.00170	0.00160	0.00198	0.00198	0.00170
0.00223	0.00248	0.00248	0.00260	0.00212	0.00212	0.00200	0.00248	0.00248	0.00212
0.00244	0.00271	0.00271	0.00284	0.00231	0.00231	0.00219	0.00271	0.00271	0.00231
0.00291	0.00323	0.00323	0.00339	0.00276	0.00276	0.00261	0.00323	0.00323	0.00276
0.00191	0.00213	0.00213	0.00223	0.00182	0.00182	0.00172	0.00213	0.00213	0.00182
0.00239	0.00266	0.00266	0.00279	0.00227	0.00227	0.00215	0.00266	0.00266	0.00227
0.00261	0.00290	0.00290	0.00304	0.00248	0.00248	0.00234	0.00290	0.00290	0.00248
0.00311	0.00346	0.00346	0.00363	0.00296	0.00296	0.00279	0.00346	0.00346	0.00296
0.00204	0.00227	0.00227	0.00238	0.00194	0.00194	0.00183	0.00227	0.00227	0.00194
0.00255	0.00284	0.00284	0.00298	0.00242	0.00242	0.00229	0.00284	0.00284	0.00242
0.00278	0.00309	0.00309	0.00325	0.00264	0.00264	0.00250	0.00309	0.00309	0.00264
0.00332	0.00369	0.00369	0.00387	0.00315	0.00315	0.00298	0.00369	0.00369	0.00315
0.00255	0.00284	0.00284	0.00298	0.00242	0.00242	0.00229	0.00284	0.00284	0.00242
0.00319	0.00354	0.00354	0.00372	0.00303	0.00303	0.00286	0.00354	0.00354	0.00303
0.00348	0.00387	0.00387	0.00406	0.00331	0.00331	0.00312	0.00387	0.00387	0.00331
0.00415	0.00461	0.00461	0.00484	0.00394	0.00394	0.00372	0.00461	0.00461	0.00394
0.00306	0.00340	0.00340	0.00357	0.00291	0.00291	0.00275	0.00340	0.00340	0.00291
0.00383	0.00425	0.00425	0.00447	0.00364	0.00364	0.00343	0.00425	0.00425	0.00364
0.00418	0.00464	0.00464	0.00487	0.00397	0.00397	0.00375	0.00464	0.00464	0.00397
0.00498	0.00553	0.00553	0.00581	0.00473	0.00473	0.00447	0.00553	0.00553	0.00473
0.00408	0.00454	0.00454	0.00476	0.00388	0.00388	0.00366	0.00454	0.00454	0.00388
0.00510	0.00567	0.00567	0.00595	0.00485	0.00485	0.00458	0.00567	0.00567	0.00485
0.00557	0.00619	0.00619	0.00650	0.00529	0.00529	0.00500	0.00619	0.00619	0.00529
0.00664	0.00738	0.00738	0.00775	0.00631	0.00631	0.00596	0.00738	0.00738	0.00631

SS-BN-4



SSI-4
Four Flute/Ball Nose

SSI-4, Four Flute, Inch

High Performance Carbide



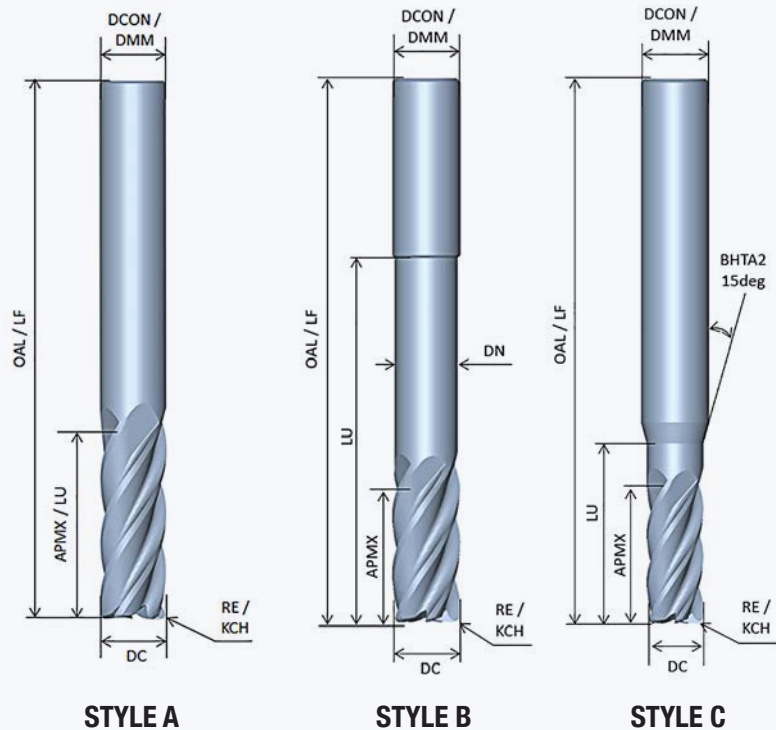
The SSI-4 is the foundation on which our variably indexed family of ferrous rougher/finishers was built. The SSI-4 is a proven, performance driven, ferrous rougher that has the geometry to successfully venture into finishing territory as well. Now updated and expanded to over 70 stocked sizes, we hope that the SSI-4 will be the “go-to” tool for most of your ferrous alloy applications.

MAIN CHARACTERISTICS

- Flute Count (NOF): 4
- UnEqual Index
- Variable Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): $-0.001''/-0.002''$
- Corner Radius (RE): $+0.001''/-0.001''$



WORK MATERIAL

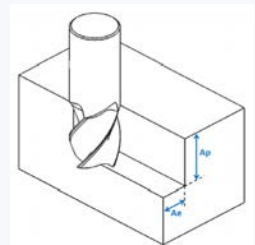


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	80%DC <= 100%DC	40%DC <= 80%DC	25%DC <= 40%DC	5%DC <= 25%DC	<= 5%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC	APMX



SSI-4

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SSI-4, Four Flute, Inch

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	LBS LU	Neck Dia DN	OAL OAL/FL	Style	Coating	Square			Radius Offering		
									0.000	0.010	0.020	0.030	0.060	
SSI-ST-40125-	1/8	1/8	1/4			2	A	C11	52523-85-D	51430-85-D		52390-85-D		
								C10	52523-70-D	51430-70-D		52390-70-D		
SSI-40125-	1/8	1/8	1/2			2-1/2	A	C11	52525-85-D	51434-85-D		52526-85-D		
								C10	52525-70-D	51434-70-D		52526-70-D		
SSI-RN-40125-	1/8	1/8	1/4	0.375	0.115	2-1/2	B	C11		53344-85-D		53345-85-D		
SSI-RN-M-40125-	1/8	1/8	1/4	0.500	0.115	2-1/2	B	C11		53346-85-D		53347-85-D		
SSI-RN-L-40125-	1/8	1/8	1/4	0.625	0.115	2-1/2	B	C11		53348-85-D		53350-85-D		
SSI-ST-40156-	5/32	3/16	3/16			2	C	C11	52527-85-D	51438-85-D				
								C10	52527-70-D	51438-70-D				
SSI-ST-40156-	5/32	3/16	5/16			2	C	C11	52529-85-D	51442-85-D				
								C10	52529-70-D	51442-70-D				
SSI-40156-	5/32	3/16	9/16			2-1/2	C	C11	52531-85-D	52451-85-D				
								C10	52531-70-D	52451-70-D				
SSI-ST-40187-	3/16	3/16	3/16			2	A	C11	52533-85-D	51446-85-D		52534-85-D		
								C10	52533-70-D	51446-70-D		52534-70-D		
SSI-ST-40187-	3/16	3/16	5/16			2	A	C11	52535-85-D	51450-85-D		52536-85-D		
								C10	52535-70-D	51450-70-D		52536-70-D		
SSI-40187-	3/16	3/16	9/16			2-1/2	A	C11	52537-85-D	51454-85-D		52538-85-D		
								C10	52537-70-D	51454-70-D		52538-70-D		
SSI-RN-40187-	3/16	3/16	5/16	0.500	0.175	3	B	C11		53351-85-D		53352-85-D		
SSI-RN-M-40187-	3/16	3/16	5/16	0.750	0.175	3	B	C11		53354-85-D		53356-85-D		
SSI-RN-L-40187-	3/16	3/16	5/16	1.000	0.175	3	B	C11		53358-85-D		53360-85-D		
SSI-ST-40218-	7/32	1/4	3/8			2	C	C11	52539-85-D		51458-85-D			
								C10	52539-70-D		51458-70-D			
SSI-STL-40218-	7/32	1/4	1/2			2-1/2	C	C11	52541-85-D		51462-85-D			
								C10	52541-70-D		51462-70-D			
SSI-40218-	7/32	1/4	3/4			2-1/2	C	C11	52544-85-D		51466-85-D			
								C10	52544-70-D		51466-70-D			
SSI-ST-40250-	1/4	1/4	3/8			2	A	C11	52546-85-D		51303-85-D	52547-85-D		
								C10	52546-70-D		51303-70-D	52547-70-D		
SSI-STL-40250-	1/4	1/4	1/2			2-1/2	A	C11	52548-85-D		51474-85-D	52549-85-D		
								C10	52548-70-D		51474-70-D	52549-70-D		
SSI-40250-	1/4	1/4	3/4			2-1/2	A	C11	52550-85-D		51336-85-D	52551-85-D		
								C10	52550-70-D		51336-70-D	52551-70-D		
SSI-M-40250-	1/4	1/4	1-1/4			3	A	C11	52552-85-D		52455-85-D	52554-85-D		
								C10	52552-70-D		52455-70-D	52554-70-D		
SSI-RN-40250-	1/4	1/4	3/8	0.750	0.235	3	B	C11		53362-85-D	53363-85-D	52872-85-D		
SSI-RN-M-40250-	1/4	1/4	3/8	1.125	0.235	4	B	C11		53364-85-D	53367-85-D	53368-85-D		
SSI-RN-L-40250-	1/4	1/4	3/8	2.125	0.235	4	B	C11		51398-85-D	53369-85-D	53370-85-D		
SSI-ST-40281-	9/32	5/16	7/16			2-1/2	C	C11	52555-85-D	51479-85-D				
								C10	52555-70-D	51479-70-D				
SSI-40281-	9/32	5/16	3/4			2-1/2	C	C11	52558-85-D	51483-85-D				
								C10	52558-70-D	51483-70-D				
SSI-ST-40312-	5/16	5/16	7/16			2-1/2	A	C11	52560-85-D	51307-85-D	52562-85-D			
								C10	52560-70-D	51307-70-D	52562-70-D			
SSI-STL-40312-	5/16	5/16	5/8			2-1/2	A	C11	52563-85-D	51491-85-D	52564-85-D			
								C10	52563-70-D	51491-70-D	52564-70-D			
SSI-40312-	5/16	5/16	13/16			2-1/2	A	C11	52566-85-D	51341-85-D	52567-85-D			
								C10	52566-70-D	51341-70-D	52567-70-D			
SSI-M-40312-	5/16	5/16	1-1/4			3	A	C11	52568-85-D	52460-85-D	52570-85-D			
								C10	52568-70-D	52460-70-D	52570-70-D			
SSI-ST-40343-	11/32	3/8	1/2			2-1/2	C	C11	52572-85-D	51496-85-D				
								C10	52572-70-D	51496-70-D				
SSI-40343-	11/32	3/8	1			2-1/2	C	C11	52576-85-D	51500-85-D				
								C10	52576-70-D	51500-70-D				
SSI-M-40343-	11/32	3/8	1-1/4			3	C	C11	52579-85-D	52465-85-D				
								C10	52579-70-D	52465-70-D				

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SSI-4, Four Flute, Inch Continued

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	LBS LU	Neck Dia DN	OAL OAL/FL	Style	Coating	Square		Radius Offering			
									0.000	0.020	0.030	0.060	0.090	
SSI-ST-40375-	3/8	3/8	1/2			2-1/2	A	C11	52582-85-D	51311-85-D	52583-85-D	52584-85-D		
								C10	52582-70-D	51311-70-D	52583-70-D	52584-70-D		
SSI-STL-40375-	3/8	3/8	3/4			2-1/2	A	C11	52585-85-D	51508-85-D	52586-85-D	52587-85-D		
								C10	52585-70-D	51508-70-D	52586-70-D	52587-70-D		
SSI-40375-	3/8	3/8	1			2-1/2	A	C11	52588-85-D	51346-85-D	52589-85-D	52590-85-D		
								C10	52588-70-D	51346-70-D	52589-70-D	52590-70-D		
SSI-M-40375-	3/8	3/8	1-1/4			3	A	C11	52591-85-D	51513-85-D	52592-85-D	52593-85-D		
								C10	52591-70-D	51513-70-D	52592-70-D	52593-70-D		
SSI-L-40375-	3/8	3/8	1-1/2			4	A	C11	52594-85-D	51517-85-D	52595-85-D	52596-85-D		
								C10	52594-70-D	51517-70-D	52595-70-D	52596-70-D		
SSI-X-40375-	3/8	3/8	2			4	A	C11	52597-85-D	51522-85-D	52598-85-D	52599-85-D		
								C10	52597-70-D	51522-70-D	52598-70-D	52599-70-D		
SSI-RN-40375-	3/8	3/8	1/2	1.125	0.355	4	B	C11		53371-85-D	53372-85-D	53373-85-D	53374-85-D	
SSI-RN-M-40375-	3/8	3/8	1/2	2.125	0.355	4	B	C11		53375-85-D	53376-85-D	53377-85-D	53378-85-D	
SSI-RN-L-40375-	3/8	3/8	1/2	3.125	0.355	6	B	C11		53379-85-D	53380-85-D	53381-85-D	53382-85-D	
SSI-RN-X-40375-	3/8	3/8	1/2	4.125	0.355	6	B	C11		53383-85-D	53384-85-D	53385-85-D	53386-85-D	
SSI-ST-40406-	13/32	7/16	9/16			2-1/2	C	C11	52600-85-D	52470-85-D				
								C10	52600-70-D	52470-70-D				
SSI-40406-	13/32	7/16	1			2-3/4	C	C11	52603-85-D	52475-85-D				
								C10	52603-70-D	52475-70-D				
SSI-ST-40437-	7/16	7/16	9/16			2-1/2	A	C11	52606-85-D	51315-85-D	52607-85-D	52608-85-D		
								C10	52606-70-D	51315-70-D	52607-70-D	52608-70-D		
SSI-40437-	7/16	7/16	1			3	A	C11	52609-85-D	51351-85-D	52610-85-D	52611-85-D		
								C10	52609-70-D	51351-70-D	52610-70-D	52611-70-D		
SSI-M-40437-	7/16	7/16	1-1/4			3-1/2	A	C11	52612-85-D	51533-85-D	52613-85-D	52614-85-D		
								C10	52612-70-D	51533-70-D	52613-70-D	52614-70-D		
SSI-ST-40469-	15/32	1/2	5/8			3	C	C11	52615-85-D	51538-85-D				
								C10	52615-70-D	51538-70-D				
SSI-40469-	15/32	1/2	1			3	C	C11	52619-85-D	51542-85-D				
								C10	52619-70-D	51542-70-D				
SSI-M-40469-	15/32	1/2	1-1/4			3-1/2	C	C11	52524-85-D	51547-85-D				
								C10	52524-70-D	51547-70-D				
SSI-ST-40500-	1/2	1/2	5/8			3	A	C11	52628-85-D		51319-85-D	52630-85-D	52631-85-D	52632-85-D
								C10	52628-70-D		51319-70-D	52630-70-D	52631-70-D	52632-70-D
SSI-STL-40500-	1/2	1/2	1			3	A	C11	52633-85-D		52480-85-D	52635-85-D	52636-85-D	52637-85-D
								C10	52633-70-D		52480-70-D	52635-70-D	52636-70-D	52637-70-D
SSI-40500-	1/2	1/2	1-1/4			3	A	C11	52638-85-D		51379-85-D	52640-85-D	52641-85-D	52642-85-D
								C10	52638-70-D		51379-70-D	52640-70-D	52641-70-D	52642-70-D
SSI-M-40500-	1/2	1/2	1-3/4			4	A	C11	52643-85-D		51581-85-D	52645-85-D	52646-85-D	52647-85-D
								C10	52643-70-D		51581-70-D	52645-70-D	52646-70-D	52647-70-D
SSI-L-40500-	1/2	1/2	2			4	A	C11	52648-85-D		51585-85-D	52650-85-D	52651-85-D	52652-85-D
								C10	52648-70-D		51585-70-D	52650-70-D	52651-70-D	52652-70-D
SSI-X-40500-	1/2	1/2	3			5	A	C11	52653-85-D		51589-85-D	52655-85-D	52656-85-D	52657-85-D
								C10	52653-70-D		51589-70-D	52655-70-D	52656-70-D	52657-70-D
SSI-RN-40500-	1/2	1/2	5/8	1.500	0.475	4	B	C11			53387-85-D	53388-85-D	53389-85-D	52874-85-D
SSI-RN-M-40500-	1/2	1/2	5/8	2.250	0.475	4	B	C11			53390-85-D	53391-85-D	53392-85-D	53393-85-D
SSI-RN-L-40500-	1/2	1/2	5/8	3.375	0.475	6	B	C11			53394-85-D	53395-85-D	53396-85-D	53397-85-D
SSI-RN-X-40500-	1/2	1/2	5/8	4.125	0.475	6	B	C11			53398-85-D	53399-85-D	53500-85-D	53501-85-D

SSI-4

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Part Number	Dia DC	Shank DCON	LOC APMX	LBS LU	Neck Dia DN	OAL OAL/FL	Style	Coating	Square			Radius Offering			
									0.000	0.030	0.060	0.090	0.120	0.156	0.190
SSI-ST-40625-	5/8	5/8	3/4			3	A	C11	52658-85-D	51324-85-D	52660-85-D	52661-85-D	52662-85-D		
								C10	52658-70-D	51324-70-D	52660-70-D	52661-70-D	52662-70-D		
SSI-STL-40625-	5/8	5/8	1-1/4			3-1/2	A	C11	52663-85-D	51593-85-D	52665-85-D	52666-85-D	52667-85-D		
								C10	52663-70-D	51593-70-D	52665-70-D	52666-70-D	52667-70-D		
SSI-40625-	5/8	5/8	1-5/8			3-1/2	A	C11	52668-85-D	51383-85-D	52670-85-D	52671-85-D	52672-85-D		
								C10	52668-70-D	51383-70-D	52670-70-D	52671-70-D	52672-70-D		
SSI-M-40625-	5/8	5/8	2			4	A	C11	52673-85-D	51598-85-D	52675-85-D	52676-85-D	52677-85-D		
								C10	52673-70-D	51598-70-D	52675-70-D	52676-70-D	52677-70-D		
SSI-L-40625-	5/8	5/8	2-1/2			5	A	C11	52678-85-D	52396-85-D	52680-85-D	52681-85-D	52682-85-D		
								C10	52678-70-D	52396-70-D	52680-70-D	52681-70-D	52682-70-D		
SSI-X-40625-	5/8	5/8	3			6	A	C11	52683-85-D	52400-85-D	52685-85-D	52686-85-D	52687-85-D		
								C10	52683-70-D	52400-70-D	52685-70-D	52686-70-D	52687-70-D		
SSI-RN-40625-	5/8	5/8	3/4	1.625	0.590	4	B	C11		53502-85-D	53503-85-D	53504-85-D	53505-85-D		
SSI-RN-M-40625-	5/8	5/8	3/4	2.375	0.590	6	B	C11		53506-85-D	53507-85-D	53508-85-D	53509-85-D		
SSI-RN-L-40625-	5/8	5/8	3/4	3.375	0.590	6	B	C11		53510-85-D	53511-85-D	53512-85-D	53513-85-D		
SSI-RN-X-40625-	5/8	5/8	3/4	4.125	0.590	6	B	C11		53514-85-D	53515-85-D	53516-85-D	53517-85-D		
SSI-ST-40750-	3/4	3/4	1			3	A	C11	52688-85-D	51330-85-D	52690-85-D	52691-85-D	52692-85-D	53176-85-D	53177-85-D
								C10	52688-70-D	51330-70-D	52690-70-D	52691-70-D	52692-70-D	53176-70-D	53177-70-D
SSI-40750-	3/4	3/4	1-5/8			4	A	C11	52693-85-D	51387-85-D	52696-85-D	52697-85-D	52845-85-D	52847-85-D	52849-85-D
								C10	52693-70-D	51387-70-D	52696-70-D	52697-70-D	52845-70-D	52847-70-D	52849-70-D
SSI-M-40750-	3/4	3/4	2-1/4			5	A	C11	52698-85-D	52406-85-D	52700-85-D	52701-85-D	52702-85-D	52860-85-D	52862-85-D
								C10	52698-70-D	52406-70-D	52700-70-D	52701-70-D	52702-70-D	52860-70-D	52862-70-D
SSI-L-40750-	3/4	3/4	3			6	A	C11	52703-85-D	52410-85-D	52705-85-D	52706-85-D	52707-85-D	53196-85-D	53197-85-D
								C10	52703-70-D	52410-70-D	52705-70-D	52706-70-D	52707-70-D	53196-70-D	53197-70-D
SSI-X-40750-	3/4	3/4	4			7	A	C11	52708-85-D	52414-85-D	52710-85-D	52711-85-D	52712-85-D	53304-85-D	53305-85-D
								C10	52708-70-D	52414-70-D	52710-70-D	52711-70-D	52712-70-D	53304-70-D	53305-70-D
SSI-RN-40750-	3/4	3/4	1	2.000	0.715	4	B	C11		53518-85-D	53519-85-D	53520-85-D	53521-85-D		
SSI-RN-M-40750-	3/4	3/4	1	2.500	0.715	6	B	C11		51422-85-D	53522-85-D	53523-85-D	53524-85-D		
SSI-RN-L-40750-	3/4	3/4	1	3.375	0.715	6	B	C11		53525-85-D	53526-85-D	53527-85-D	53528-85-D		
SSI-RN-X-40750-	3/4	3/4	1	4.125	0.715	6	B	C11		53529-85-D	53530-85-D	53531-85-D	53532-85-D		
SSI-ST-41000-	1	1	1-1/4			4	A	C11	52713-85-D	51335-85-D	52715-85-D	52716-85-D	52717-85-D	53312-85-D	53313-85-D
								C10	52713-70-D	51335-70-D	52715-70-D	52716-70-D	52717-70-D	53312-70-D	53313-70-D
SSI-41000-	1	1	2			5	A	C11	52718-85-D	51391-85-D	52721-85-D	52722-85-D	52723-85-D	53320-85-D	53321-85-D
								C10	52718-70-D	51391-70-D	52721-70-D	52722-70-D	52723-70-D	53320-70-D	53321-70-D
SSI-M-41000-	1	1	2-5/8			6	A	C11	52724-85-D	52422-85-D	52726-85-D	52727-85-D	52728-85-D	53328-85-D	53329-85-D
								C10	52724-70-D	52422-70-D	52726-70-D	52727-70-D	52728-70-D	53328-70-D	53329-70-D
SSI-L-41000-*	1	1	3-1/4			6	A	C11	40104-85-D	44999-85-D					
								C10	40104-70-D	44999-70-D					
SSI-X-41000-*	1	1	4-1/8			7	A	C11	40105-85-D	45000-85-D					
								C10	40105-70-D	45000-70-D					
SSI-RN-41000-	1	1	1-1/4	2.250	0.960	4	B	C11		53533-85-D	53534-85-D	53535-85-D	53536-85-D		
SSI-RN-M-41000-	1	1	1-1/4	2.625	0.960	6	B	C11		53537-85-D	53538-85-D	53539-85-D	53540-85-D		
SSI-RN-L-41000-	1	1	1-1/4	3.375	0.960	6	B	C11		53541-85-D	53542-85-D	53543-85-D	53544-85-D		
SSI-RN-X-41000-	1	1	1-1/4	4.125	0.960	6	B	C11		53545-85-D	53546-85-D	53547-85-D	53548-85-D		

* non-stock standards

SSI-4, Four Flute, Metric

High Performance Carbide

Part Number	Dia DC	Shank DCONN	LOC APMX	LBS LU	Neck Dia DN	OAL OAL/FL	Style	Coating	Radius Offering			
									,3	,5	1	2
SSI-ST-403M-	3	6	5			55	C	C11	37347-85-D			
SSI-ST-403M-	3	6	5			55	C	C10	37347-70-D			
SSI-403M-	3	6	8			57	C	C11	37622-85-D			
SSI-403M-	3	6	8			57	C	C10	37622-70-D			
SSI-ST-404M-	4	6	8			55	C	C11	37348-85-D			
SSI-ST-404M-	4	6	8			55	C	C10	37348-70-D			
SSI-404M-	4	6	11			57	C	C11	37623-85-D			
SSI-404M-	4	6	11			57	C	C10	37623-70-D			
SSI-RN-404M-	4	6	5	21	3.61	58	B	C11		37395-85-D		
SSI-RN-404M-	4	6	5	21	3.61	58	B	C10		37395-70-D		
SSI-ST-405M-	5	6	9			55	C	C11	37349-85-D			
SSI-ST-405M-	5	6	9			55	C	C10	37349-70-D			
SSI-405M-	5	6	13			57	C	C11	37624-85-D			
SSI-405M-	5	6	13			57	C	C10	37624-70-D			
SSI-RN-405M-	5	6	6	21	4.61	58	B	C11		37396-85-D		
SSI-RN-405M-	5	6	6	21	4.61	58	B	C10		37396-70-D		
SSI-ST-406M-	6	6	10			55	A	C11	37350-85-D			
SSI-ST-406M-	6	6	10			55	A	C10	37350-70-D			
SSI-406M-	6	6	20			57	A	C11	37625-85-D			
SSI-406M-	6	6	20			57	A	C10	37625-70-D			
SSI-RN-406M-	6	6	10	21	5.48	58	B	C11		37397-85-D		
SSI-RN-406M-	6	6	10	21	5.48	58	B	C10		37397-70-D		
SSI-ST-408M-	8	8	12			59	A	C11	37351-85-D		37352-85-D	
SSI-ST-408M-	8	8	12			59	A	C10	37351-70-D		37352-70-D	
SSI-408M-	8	8	22			64	A	C11	37626-85-D		37627-85-D	
SSI-408M-	8	8	22			64	A	C10	37626-70-D		37627-70-D	
SSI-RN-408M-	8	8	12	27	7.59	64	B	C11		37398-85-D	37399-85-D	
SSI-RN-408M-	8	8	12	27	7.59	64	B	C10		37398-70-D	37399-70-D	
SSI-ST-410M-	10	10	14			67	A	C11	37353-85-D	37354-85-D	37355-85-D	
SSI-ST-410M-	10	10	14			67	A	C10	37353-70-D	37354-70-D	37355-70-D	
SSI-410M-	10	10	25			73	A	C11	37628-85-D	37629-85-D	37630-85-D	
SSI-410M-	10	10	25			73	A	C10	37628-70-D	37629-70-D	37630-70-D	
SSI-RN-410M-	10	10	14	32	9.47	73	B	C11		37400-85-D	37401-85-D	
SSI-RN-410M-	10	10	14	32	9.47	73	B	C10		37400-70-D	37401-70-D	
SSI-ST-412M-	12	12	16			74	A	C11	37356-85-D	37357-85-D	37358-85-D	
SSI-ST-412M-	12	12	16			74	A	C10	37356-70-D	37357-70-D	37358-70-D	
SSI-412M-	12	12	26			84	A	C11	37631-85-D	37632-85-D	37633-85-D	
SSI-412M-	12	12	26			84	A	C10	37631-70-D	37632-70-D	37633-70-D	
SSI-RN-412M-	12	12	16	38	11.22	84	B	C11		37402-85-D	37403-85-D	
SSI-RN-412M-	12	12	16	38	11.22	84	B	C10		37402-70-D	37403-70-D	
SSI-ST-414M-	14	14	18			76	A	C11	37359-85-D	37360-85-D	37361-85-D	37362-85-D
SSI-ST-414M-	14	14	18			76	A	C10	37359-70-D	37360-70-D	37361-70-D	37362-70-D
SSI-414M-	14	14	26			84	A	C11	37634-85-D	37635-85-D	37637-85-D	37639-85-D
SSI-414M-	14	14	26			84	A	C10	37634-70-D	37635-70-D	37637-70-D	37639-70-D
SSI-RN-414M-	14	14	18	38	13.13	84	B	C11		37636-85-D	37638-85-D	37640-85-D
SSI-RN-414M-	14	14	18	38	13.13	84	B	C10		37636-70-D	37638-70-D	37640-70-D

SSI-4-M

For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



SSI-4, Four Flute, Metric

High Performance Carbide

Part Number	Dia DC	Shank DCONN	LOC APMX	LBS LU	Neck Dia DN	OAL OAL/FL	Style	Coating	Radius Offering			
									,3	,5	1	2
SSI-ST-416M-	16	16	22			83	A	C11	37363-85-D	37364-85-D	37365-85-D	37366-85-D
SSI-ST-416M-	16	16	22			83	A	C10	37363-70-D	37364-70-D	37365-70-D	37366-70-D
SSI-416M-	16	16	32			93	A	C11	37379-85-D	37380-85-D	37381-85-D	37382-85-D
SSI-416M-	16	16	32			93	A	C10	37379-70-D	37380-70-D	37381-70-D	37382-70-D
SSI-RN-416M-	16	16	22	44	15.03	93	B	C11		37404-85-D	37405-85-D	37406-85-D
SSI-RN-416M-	16	16	22	44	15.03	93	B	C10		37404-70-D	37405-70-D	37406-70-D
SSI-RN-M-416M-	16	16	22	75	15.03	130	B	C11		37414-85-D	37415-85-D	37416-85-D
SSI-RN-M-416M-	16	16	22	75	15.03	130	B	C10		37414-70-D	37415-70-D	37416-70-D
SSI-ST-418M-	18	18	24			85	A	C11	37367-85-D	37368-85-D	37369-85-D	37370-85-D
SSI-ST-418M-	18	18	24			85	A	C10	37367-70-D	37368-70-D	37369-70-D	37370-70-D
SSI-418M-	18	18	32			93	A	C11	37383-85-D	37384-85-D	37385-85-D	37386-85-D
SSI-418M-	18	18	32			93	A	C10	37383-70-D	37384-70-D	37385-70-D	37386-70-D
SSI-RN-418M-	18	18	24	44	16.88	93	B	C11		37641-85-D	37643-85-D	37645-85-D
SSI-RN-418M-	18	18	24	44	16.88	93	B	C10		37641-70-D	37643-70-D	37645-70-D
SSI-RN-M-418M-	18	18	24	75	16.88	130	B	C11		37642-85-D	37644-85-D	37646-85-D
SSI-RN-M-418M-	18	18	24	75	16.88	130	B	C10		37642-70-D	37644-70-D	37646-70-D
SSI-ST-420M-	20	20	26			93	A	C11	37371-85-D	37372-85-D	37373-85-D	37374-85-D
SSI-ST-420M-	20	20	26			93	A	C10	37371-70-D	37372-70-D	37373-70-D	37374-70-D
SSI-420M-	20	20	38			105	A	C11	37387-85-D	37388-85-D	37389-85-D	37390-85-D
SSI-420M-	20	20	38			105	A	C10	37387-70-D	37388-70-D	37389-70-D	37390-70-D
SSI-RN-420M-	20	20	26	54	18.76	105	B	C11		37407-85-D	37408-85-D	37409-85-D
SSI-RN-420M-	20	20	26	54	18.76	105	B	C10		37407-70-D	37408-70-D	37409-70-D
SSI-RN-M-420M-	20	20	26	96	18.76	150	B	C11		37417-85-D	37418-85-D	37419-85-D
SSI-RN-M-420M-	20	20	26	96	18.76	150	B	C10		37417-70-D	37418-70-D	37419-70-D
SSI-ST-425M-	25	25	32			104	A	C11	37375-85-D	37376-85-D	37377-85-D	37378-85-D
SSI-ST-425M-	25	25	32			104	A	C10	37375-70-D	37376-70-D	37377-70-D	37378-70-D
SSI-425M-	25	25	45			120	A	C11	37391-85-D	37392-85-D	37393-85-D	37394-85-D
SSI-425M-	25	25	45			120	A	C10	37391-70-D	37392-70-D	37393-70-D	37394-70-D
SSI-RN-425M-	25	25	32	64	24.00	120	B	C11		37411-85-D	37412-85-D	37413-85-D
SSI-RN-425M-	25	25	32	64	24.00	120	B	C10		37411-70-D	37412-70-D	37413-70-D
SSI-RN-M-425M-	25	25	32	96	24.00	150	B	C11		37421-85-D	37422-85-D	37423-85-D
SSI-RN-M-425M-	25	25	32	96	24.00	150	B	C10		37421-70-D	37422-70-D	37423-70-D

SSI-4-M



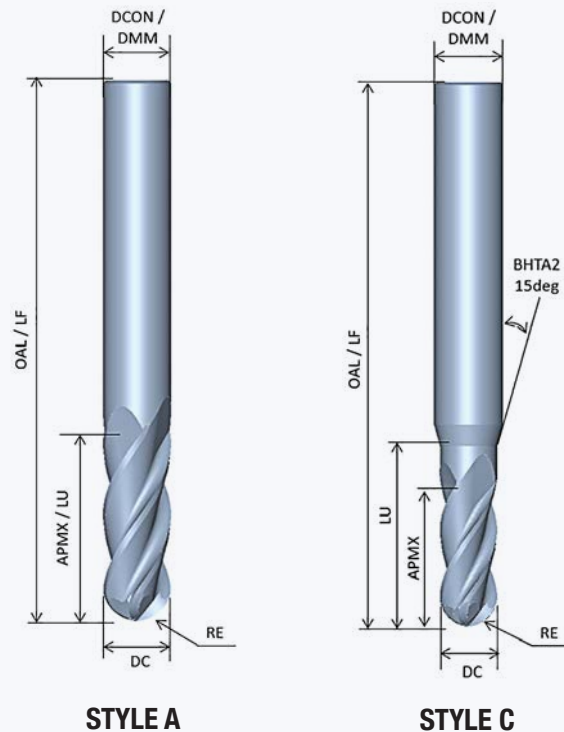
When the need arises for a tool to handle your profiling, modeling, or shaping operations in hard metals, look no farther than our SSI-4 Ball Nose Series. We have taken our SSI-4 geometry and added a precision, CNC ground, full ball radius. Our unique end design allows for heavier chip loads and faster metal removal rates than conventional ball nose end mills.

MAIN CHARACTERISTICS

- Flute Count (NOF): 4
- UnEqual Index
- Variable Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): $-0.001''/-0.002''$
- Corner Radius (RE): $+0.000''/-0.001''$



WORK MATERIAL

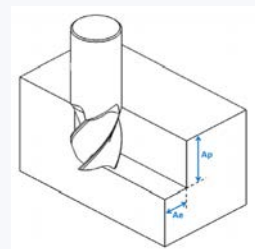


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	80%DC < \leq 100%DC	40%DC < \leq 80%DC	25%DC < \leq 40%DC	5%DC < \leq 25%DC	\leq 5%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC	APMX



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SSI-4-BN, Four Flute, Ball Nose

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	Style	EDP
SSI-BN-ST-40125	1/8	1/8	1/4	2	A	53549-85-D
SSI-BN-40125	1/8	1/8	1/2	2-1/2	A	53550-85-D
SSI-BN-ST-40156	5/32	3/16	5/16	2	C	53551-85-D
SSI-BN-40156	5/32	3/16	9/16	2-1/2	C	53552-85-D
SSI-BN-ST-40187	3/16	3/16	5/16	2	A	53553-85-D
SSI-BN-40187	3/16	3/16	9/16	2-1/2	A	53554-85-D
SSI-BN-ST-40218	7/32	1/4	3/8	2	C	53555-85-D
SSI-BN-40218	7/32	1/4	3/4	2-1/2	C	53556-85-D
SSI-BN-ST-40250	1/4	1/4	3/8	2	A	53557-85-D
SSI-BN-40250	1/4	1/4	3/4	2-1/2	A	53558-85-D
SSI-BN-ST-40281	9/32	5/16	7/16	2-1/2	C	53559-85-D
SSI-BN-40281	9/32	5/16	3/4	2-1/2	C	53560-85-D
SSI-BN-ST-40312	5/16	5/16	7/16	2-1/2	A	53561-85-D
SSI-BN-40312	5/16	5/16	13/16	2-1/2	A	53562-85-D
SSI-BN-ST-40343	11/32	3/8	1/2	2-1/2	C	53563-85-D
SSI-BN-40343	11/32	3/8	1	2-1/2	C	53564-85-D
SSI-BN-ST-40375	3/8	3/8	1/2	2-1/2	A	53565-85-D
SSI-BN-40375	3/8	3/8	1	2-1/2	A	53566-85-D
SSI-BN-ST-40437	7/16	7/16	9/16	2-1/2	A	53567-85-D
SSI-BN-40437	7/16	7/16	1	3	A	53569-85-D
SSI-BN-ST-40500	1/2	1/2	5/8	3	A	53570-85-D
SSI-BN-40500	1/2	1/2	1-1/4	3	A	53571-85-D
SSI-BN-ST-40625	5/8	5/8	3/4	3	A	53572-85-D
SSI-BN-40625	5/8	5/8	1-5/8	3-1/2	A	53573-85-D
SSI-BN-ST-40750	3/4	3/4	1	3	A	53574-85-D
SSI-BN-40750	3/4	3/4	1-5/8	4	A	53575-85-D
SSI-BN-ST-41000	1	1	1-1/4	4	A	53576-85-D
SSI-BN-41000	1	1	2	5	A	53577-85-D

SSI-4-BN

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DATA FLUTE™



SSI-4

SSI-5

High Performance Carbide End Mills

Titanium and Ferrous Alloys

Variably Indexed • Patented Geometries

SSI-4 & SSI-4-BN Recommended Chip Loads

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
1/8	Slotting	[S/R]	0.00062	0.00060	0.00051	0.00038	0.00044	0.00057
	Heavy Peripheral	[HP]	0.00078	0.00074	0.00064	0.00048	0.00055	0.00071
	Peripheral	[P]	0.00085	0.00081	0.00070	0.00052	0.00059	0.00077
	Light Peripheral	[LP]	0.00101	0.00097	0.00083	0.00063	0.00071	0.00092
	Finishing	[F]	0.00179	0.00171	0.00147	0.00110	0.00125	0.00163
5/32	Slotting	[S/R]	0.00078	0.00074	0.00064	0.00048	0.00055	0.00071
	Heavy Peripheral	[HP]	0.00097	0.00093	0.00080	0.00060	0.00068	0.00089
	Peripheral	[P]	0.00106	0.00101	0.00087	0.00066	0.00074	0.00097
	Light Peripheral	[LP]	0.00127	0.00121	0.00104	0.00078	0.00089	0.00115
	Finishing	[F]	0.00224	0.00213	0.00184	0.00138	0.00156	0.00203
3/16	Slotting	[S]	0.00094	0.00089	0.00077	0.00058	0.00065	0.00085
	Heavy Peripheral	[HP]	0.00117	0.00112	0.00096	0.00072	0.00082	0.00106
	Peripheral	[P]	0.00128	0.00122	0.00105	0.00079	0.00089	0.00116
	Light Peripheral	[LP]	0.00152	0.00145	0.00125	0.00094	0.00106	0.00138
	Finishing	[F]	0.00268	0.00256	0.00221	0.00166	0.00188	0.00244
7/32	Slotting	[S]	0.00109	0.00104	0.00090	0.00067	0.00076	0.00099
	Heavy Peripheral	[HP]	0.00136	0.00130	0.00112	0.00084	0.00095	0.00124
	Peripheral	[P]	0.00149	0.00142	0.00122	0.00092	0.00104	0.00135
	Light Peripheral	[LP]	0.00178	0.00169	0.00146	0.00110	0.00124	0.00161
	Finishing	[F]	0.00313	0.00299	0.00257	0.00193	0.00219	0.00285
1/4	Slotting	[S]	0.00125	0.00119	0.00103	0.00077	0.00087	0.00113
	Heavy Peripheral	[HP]	0.00156	0.00149	0.00128	0.00096	0.00109	0.00142
	Peripheral	[P]	0.00170	0.00162	0.00140	0.00105	0.00119	0.00155
	Light Peripheral	[LP]	0.00203	0.00194	0.00167	0.00125	0.00142	0.00184
	Finishing	[F]	0.00358	0.00341	0.00294	0.00221	0.00250	0.00325
9/32	Slotting	[S]	0.00140	0.00134	0.00115	0.00087	0.00098	0.00128
	Heavy Peripheral	[HP]	0.00175	0.00167	0.00144	0.00108	0.00123	0.00159
	Peripheral	[P]	0.00191	0.00183	0.00157	0.00118	0.00134	0.00174
	Light Peripheral	[LP]	0.00228	0.00218	0.00188	0.00141	0.00160	0.00208
	Finishing	[F]	0.00402	0.00384	0.00331	0.00248	0.00281	0.00366
5/16	Slotting	[S]	0.00156	0.00149	0.00128	0.00096	0.00109	0.00142
	Heavy Peripheral	[HP]	0.00195	0.00186	0.00160	0.00120	0.00136	0.00177
	Peripheral	[P]	0.00213	0.00203	0.00175	0.00131	0.00149	0.00193
	Light Peripheral	[LP]	0.00254	0.00242	0.00209	0.00156	0.00177	0.00231
	Finishing	[F]	0.00447	0.00427	0.00368	0.00276	0.00313	0.00406
11/32	Slotting	[S]	0.00172	0.00164	0.00141	0.00106	0.00120	0.00156
	Heavy Peripheral	[HP]	0.00214	0.00205	0.00176	0.00132	0.00150	0.00195
	Peripheral	[P]	0.00234	0.00223	0.00192	0.00144	0.00164	0.00213
	Light Peripheral	[LP]	0.00279	0.00266	0.00230	0.00172	0.00195	0.00254
	Finishing	[F]	0.00492	0.00470	0.00405	0.00303	0.00344	0.00447

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00049	0.00054	0.00054	0.00057	0.00046	0.00046	0.00044	0.00054	0.00054	0.00046
0.00061	0.00068	0.00068	0.00071	0.00058	0.00058	0.00055	0.00068	0.00068	0.00058
0.00066	0.00074	0.00074	0.00077	0.00063	0.00063	0.00059	0.00074	0.00074	0.00063
0.00079	0.00088	0.00088	0.00092	0.00075	0.00075	0.00071	0.00088	0.00088	0.00075
0.00139	0.00155	0.00155	0.00163	0.00132	0.00132	0.00125	0.00155	0.00155	0.00132
0.00061	0.00068	0.00068	0.00071	0.00058	0.00058	0.00055	0.00068	0.00068	0.00058
0.00076	0.00084	0.00084	0.00089	0.00072	0.00072	0.00068	0.00084	0.00084	0.00072
0.00083	0.00092	0.00092	0.00097	0.00079	0.00079	0.00074	0.00092	0.00092	0.00079
0.00099	0.00110	0.00110	0.00115	0.00094	0.00094	0.00089	0.00110	0.00110	0.00094
0.00174	0.00194	0.00194	0.00203	0.00166	0.00166	0.00156	0.00194	0.00194	0.00166
0.00073	0.00081	0.00081	0.00085	0.00069	0.00069	0.00065	0.00081	0.00081	0.00069
0.00091	0.00101	0.00101	0.00106	0.00087	0.00087	0.00082	0.00101	0.00101	0.00087
0.00099	0.00110	0.00110	0.00116	0.00094	0.00094	0.00089	0.00110	0.00110	0.00094
0.00119	0.00132	0.00132	0.00138	0.00113	0.00113	0.00106	0.00132	0.00132	0.00113
0.00209	0.00232	0.00232	0.00244	0.00199	0.00199	0.00188	0.00232	0.00232	0.00199
0.00085	0.00095	0.00095	0.00099	0.00081	0.00081	0.00076	0.00095	0.00095	0.00081
0.00106	0.00118	0.00118	0.00124	0.00101	0.00101	0.00095	0.00118	0.00118	0.00101
0.00116	0.00129	0.00129	0.00135	0.00110	0.00110	0.00104	0.00129	0.00129	0.00110
0.00138	0.00154	0.00154	0.00161	0.00131	0.00131	0.00124	0.00154	0.00154	0.00131
0.00244	0.00271	0.00271	0.00285	0.00232	0.00232	0.00219	0.00271	0.00271	0.00232
0.00097	0.00108	0.00108	0.00113	0.00092	0.00092	0.00087	0.00108	0.00108	0.00092
0.00122	0.00135	0.00135	0.00142	0.00115	0.00115	0.00109	0.00135	0.00135	0.00115
0.00133	0.00147	0.00147	0.00155	0.00126	0.00126	0.00119	0.00147	0.00147	0.00126
0.00158	0.00176	0.00176	0.00184	0.00150	0.00150	0.00142	0.00176	0.00176	0.00150
0.00279	0.00310	0.00310	0.00325	0.00265	0.00265	0.00250	0.00310	0.00310	0.00265
0.00109	0.00122	0.00122	0.00128	0.00104	0.00104	0.00098	0.00122	0.00122	0.00104
0.00137	0.00152	0.00152	0.00159	0.00130	0.00130	0.00123	0.00152	0.00152	0.00130
0.00149	0.00166	0.00166	0.00174	0.00142	0.00142	0.00134	0.00166	0.00166	0.00142
0.00178	0.00198	0.00198	0.00208	0.00169	0.00169	0.00160	0.00198	0.00198	0.00169
0.00314	0.00348	0.00348	0.00366	0.00298	0.00298	0.00281	0.00348	0.00348	0.00298
0.00122	0.00135	0.00135	0.00142	0.00115	0.00115	0.00109	0.00135	0.00135	0.00115
0.00152	0.00169	0.00169	0.00177	0.00144	0.00144	0.00136	0.00169	0.00169	0.00144
0.00166	0.00184	0.00184	0.00193	0.00157	0.00157	0.00149	0.00184	0.00184	0.00157
0.00198	0.00220	0.00220	0.00231	0.00188	0.00188	0.00177	0.00220	0.00220	0.00188
0.00348	0.00387	0.00387	0.00406	0.00331	0.00331	0.00313	0.00387	0.00387	0.00331
0.00134	0.00149	0.00149	0.00156	0.00127	0.00127	0.00120	0.00149	0.00149	0.00127
0.00167	0.00186	0.00186	0.00195	0.00159	0.00159	0.00150	0.00186	0.00186	0.00159
0.00182	0.00203	0.00203	0.00213	0.00173	0.00173	0.00164	0.00203	0.00203	0.00173
0.00217	0.00242	0.00242	0.00254	0.00207	0.00207	0.00195	0.00242	0.00242	0.00207
0.00383	0.00426	0.00426	0.00447	0.00364	0.00364	0.00344	0.00426	0.00426	0.00364

SSI-4 & SSI-4-BN Recommended Chip Loads

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
3/8	Slotting	[S]	0.00187	0.00179	0.00154	0.00115	0.00131	0.00170
	Heavy Peripheral	[HP]	0.00234	0.00223	0.00192	0.00144	0.00164	0.00213
	Peripheral	[P]	0.00255	0.00244	0.00210	0.00157	0.00178	0.00232
	Light Peripheral	[LP]	0.00304	0.00291	0.00250	0.00188	0.00213	0.00277
	Finishing	[F]	0.00537	0.00512	0.00441	0.00331	0.00375	0.00488
13/32	Slotting	[S]	0.00203	0.00193	0.00167	0.00125	0.00142	0.00184
	Heavy Peripheral	[HP]	0.00253	0.00242	0.00208	0.00156	0.00177	0.00230
	Peripheral	[P]	0.00276	0.00264	0.00227	0.00171	0.00193	0.00251
	Light Peripheral	[LP]	0.00330	0.00315	0.00271	0.00203	0.00231	0.00300
	Finishing	[F]	0.00581	0.00555	0.00478	0.00359	0.00406	0.00528
7/16	Slotting	[S]	0.00218	0.00208	0.00180	0.00135	0.00153	0.00198
	Heavy Peripheral	[HP]	0.00273	0.00260	0.00224	0.00168	0.00191	0.00248
	Peripheral	[P]	0.00298	0.00284	0.00245	0.00184	0.00208	0.00271
	Light Peripheral	[LP]	0.00355	0.00339	0.00292	0.00219	0.00248	0.00323
	Finishing	[F]	0.00626	0.00598	0.00515	0.00386	0.00438	0.00569
15/32	Slotting	[S]	0.00234	0.00223	0.00192	0.00144	0.00164	0.00213
	Heavy Peripheral	[HP]	0.00292	0.00279	0.00240	0.00180	0.00204	0.00266
	Peripheral	[P]	0.00319	0.00304	0.00262	0.00197	0.00223	0.00290
	Light Peripheral	[LP]	0.00380	0.00363	0.00313	0.00235	0.00266	0.00346
	Finishing	[F]	0.00671	0.00640	0.00552	0.00414	0.00469	0.00610
1/2	Slotting	[S]	0.00249	0.00238	0.00205	0.00154	0.00174	0.00227
	Heavy Peripheral	[HP]	0.00312	0.00298	0.00257	0.00192	0.00218	0.00284
	Peripheral	[P]	0.00340	0.00325	0.00280	0.00210	0.00238	0.00309
	Light Peripheral	[LP]	0.00406	0.00387	0.00334	0.00250	0.00284	0.00369
	Finishing	[F]	0.00715	0.00683	0.00588	0.00441	0.00500	0.00650
5/8	Slotting	[S]	0.00312	0.00298	0.00257	0.00192	0.00218	0.00284
	Heavy Peripheral	[HP]	0.00390	0.00372	0.00321	0.00240	0.00273	0.00354
	Peripheral	[P]	0.00425	0.00406	0.00350	0.00262	0.00297	0.00387
	Light Peripheral	[LP]	0.00507	0.00484	0.00417	0.00313	0.00355	0.00461
	Finishing	[F]	0.00894	0.00854	0.00736	0.00552	0.00625	0.00813
3/4	Slotting	[S]	0.00374	0.00357	0.00308	0.00231	0.00262	0.00340
	Heavy Peripheral	[HP]	0.00468	0.00447	0.00385	0.00289	0.00327	0.00425
	Peripheral	[P]	0.00510	0.00487	0.00420	0.00315	0.00357	0.00464
	Light Peripheral	[LP]	0.00609	0.00581	0.00501	0.00376	0.00426	0.00553
	Finishing	[F]	0.01073	0.01024	0.00883	0.00662	0.00750	0.00976
1	Slotting	[S]	0.00499	0.00476	0.00410	0.00308	0.00349	0.00454
	Heavy Peripheral	[HP]	0.00624	0.00595	0.00513	0.00385	0.00436	0.00567
	Peripheral	[P]	0.00681	0.00650	0.00560	0.00420	0.00476	0.00619
	Light Peripheral	[LP]	0.00812	0.00775	0.00668	0.00501	0.00567	0.00738
	Finishing	[F]	0.01431	0.01366	0.01177	0.00883	0.01000	0.01301

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00146	0.00162	0.00162	0.00170	0.00139	0.00139	0.00131	0.00162	0.00162	0.00139
0.00182	0.00203	0.00203	0.00213	0.00173	0.00173	0.00164	0.00203	0.00203	0.00173
0.00199	0.00221	0.00221	0.00232	0.00189	0.00189	0.00178	0.00221	0.00221	0.00189
0.00237	0.00264	0.00264	0.00277	0.00225	0.00225	0.00213	0.00264	0.00264	0.00225
0.00418	0.00465	0.00465	0.00488	0.00397	0.00397	0.00375	0.00465	0.00465	0.00397
0.00158	0.00176	0.00176	0.00184	0.00150	0.00150	0.00142	0.00176	0.00176	0.00150
0.00197	0.00219	0.00219	0.00230	0.00188	0.00188	0.00177	0.00219	0.00219	0.00188
0.00215	0.00239	0.00239	0.00251	0.00205	0.00205	0.00193	0.00239	0.00239	0.00205
0.00257	0.00286	0.00286	0.00300	0.00244	0.00244	0.00231	0.00286	0.00286	0.00244
0.00453	0.00503	0.00503	0.00528	0.00430	0.00430	0.00406	0.00503	0.00503	0.00430
0.00170	0.00189	0.00189	0.00198	0.00162	0.00162	0.00153	0.00189	0.00189	0.00162
0.00213	0.00236	0.00236	0.00248	0.00202	0.00202	0.00191	0.00236	0.00236	0.00202
0.00232	0.00258	0.00258	0.00271	0.00220	0.00220	0.00208	0.00258	0.00258	0.00220
0.00277	0.00307	0.00307	0.00323	0.00263	0.00263	0.00248	0.00307	0.00307	0.00263
0.00488	0.00542	0.00542	0.00569	0.00463	0.00463	0.00438	0.00542	0.00542	0.00463
0.00182	0.00203	0.00203	0.00213	0.00173	0.00173	0.00164	0.00203	0.00203	0.00173
0.00228	0.00253	0.00253	0.00266	0.00216	0.00216	0.00204	0.00253	0.00253	0.00216
0.00249	0.00276	0.00276	0.00290	0.00236	0.00236	0.00223	0.00276	0.00276	0.00236
0.00296	0.00329	0.00329	0.00346	0.00282	0.00282	0.00266	0.00329	0.00329	0.00282
0.00523	0.00581	0.00581	0.00610	0.00497	0.00497	0.00469	0.00581	0.00581	0.00497
0.00194	0.00216	0.00216	0.00227	0.00185	0.00185	0.00174	0.00216	0.00216	0.00185
0.00243	0.00270	0.00270	0.00284	0.00231	0.00231	0.00218	0.00270	0.00270	0.00231
0.00265	0.00295	0.00295	0.00309	0.00252	0.00252	0.00238	0.00295	0.00295	0.00252
0.00316	0.00351	0.00351	0.00369	0.00300	0.00300	0.00284	0.00351	0.00351	0.00300
0.00557	0.00619	0.00619	0.00650	0.00530	0.00530	0.00500	0.00619	0.00619	0.00530
0.00243	0.00270	0.00270	0.00284	0.00231	0.00231	0.00218	0.00270	0.00270	0.00231
0.00304	0.00338	0.00338	0.00354	0.00289	0.00289	0.00273	0.00338	0.00338	0.00289
0.00331	0.00368	0.00368	0.00387	0.00315	0.00315	0.00297	0.00368	0.00368	0.00315
0.00395	0.00439	0.00439	0.00461	0.00376	0.00376	0.00355	0.00439	0.00439	0.00376
0.00697	0.00774	0.00774	0.00813	0.00662	0.00662	0.00625	0.00774	0.00774	0.00662
0.00292	0.00324	0.00324	0.00340	0.00277	0.00277	0.00262	0.00324	0.00324	0.00277
0.00365	0.00405	0.00405	0.00425	0.00346	0.00346	0.00327	0.00405	0.00405	0.00346
0.00398	0.00442	0.00442	0.00464	0.00378	0.00378	0.00357	0.00442	0.00442	0.00378
0.00474	0.00527	0.00527	0.00553	0.00451	0.00451	0.00426	0.00527	0.00527	0.00451
0.00836	0.00929	0.00929	0.00976	0.00794	0.00794	0.00750	0.00929	0.00929	0.00794
0.00389	0.00432	0.00432	0.00454	0.00369	0.00369	0.00349	0.00432	0.00432	0.00369
0.00486	0.00540	0.00540	0.00567	0.00462	0.00462	0.00436	0.00540	0.00540	0.00462
0.00530	0.00589	0.00589	0.00619	0.00504	0.00504	0.00476	0.00589	0.00589	0.00504
0.00633	0.00703	0.00703	0.00738	0.00601	0.00601	0.00567	0.00703	0.00703	0.00601
0.01115	0.01239	0.01239	0.01301	0.01059	0.01059	0.01000	0.01239	0.01239	0.01059

SSI-4

SSI-5
Five Flute



SSI-5, Five Flute, Inch



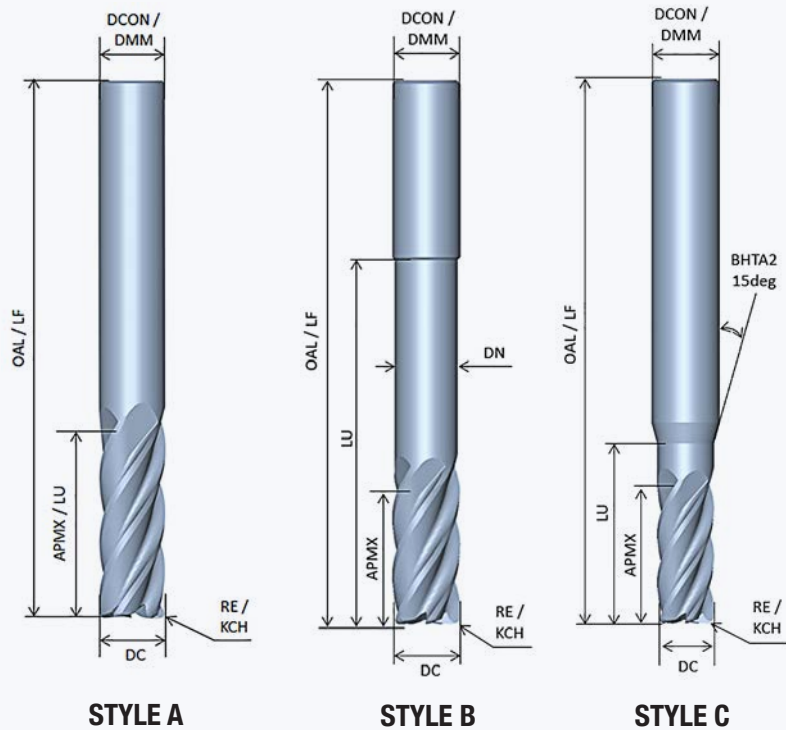
The SSI-5 is the all terrain vehicle of our ferrous alloy series tools. It can “chew up the road” in most roughing applications and at the same time provide smooth, high speed cruising well into finishing range. The SSI-5 will appeal to those who demand high performance and seek to minimize tool changes in a wide range of operations. This series has the addition of a Radius Program from stock.

MAIN CHARACTERISTICS

- Flute Count (NOF): 5
- UnEqual Index
- Variable Helix
- Non-Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): $-0.001''/-0.002''$
- Corner Radius (RE): $+0.001''/-0.001''$



WORK MATERIAL

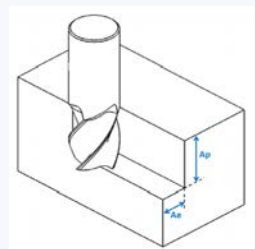


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	80%DC < \leq 100%DC	40%DC < \leq 80%DC	25%DC < \leq 40%DC	5%DC < \leq 25%DC	\leq 5%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC	APMX



SSI-5

For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



SSI-5, Five Flute, Inch

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	LBS LU	Neck Dia DN	OAL OAL/FL	Style	Coating	Square				
									0.000	0.010	Radius Offering		
									0.020	0.030	0.060		
SSI-ST-50125-	1/8	1/8	1/4			2	A	C11	53646-85-D	53647-85-D	53648-85-D		
								C10	53646-70-D	53647-70-D	53648-70-D		
SSI-50125-	1/8	1/8	1/2			2-1/2	A	C11	53652-85-D	53653-85-D	53654-85-D		
								C10	53652-70-D	53653-70-D	53654-70-D		
SSI-RN-50125-	1/8	1/8	1/4	0.375	0.115	2-1/2	B	C11		54134-85-D	54136-85-D		
SSI-RN-M-50125-	1/8	1/8	1/4	0.500	0.115	2-1/2	B	C11		54137-85-D	54138-85-D		
SSI-RN-L-50125-	1/8	1/8	1/4	0.625	0.115	2-1/2	B	C11		54139-85-D	54141-85-D		
SSI-ST-50156-	5/32	3/16	3/16			2	C	C11	53658-85-D	53659-85-D			
								C10	53658-70-D	53659-70-D			
SSI-ST-50156-	5/32	3/16	5/16			2	C	C11	53662-85-D	53663-85-D			
								C10	53662-70-D	53663-70-D			
SSI-50156-	5/32	3/16	9/16			2-1/2	C	C11	53666-85-D	53667-85-D			
								C10	53666-70-D	53667-70-D			
SSI-ST-50187-	3/16	3/16	3/16			2	A	C11	53670-85-D	53671-85-D	53672-85-D		
								C10	53670-70-D	53671-70-D	53672-70-D		
SSI-ST-50187-	3/16	3/16	5/16			2	A	C11	53676-85-D	53677-85-D	53678-85-D		
								C10	53676-70-D	53677-70-D	53678-70-D		
SSI-50187-	3/16	3/16	9/16			2-1/2	A	C11	53682-85-D	53683-85-D	53684-85-D		
								C10	53682-70-D	53683-70-D	53684-70-D		
SSI-RN-50187-	3/16	3/16	5/16	0.500	0.175	3	B	C11		54142-85-D	54144-85-D		
SSI-RN-M-50187-	3/16	3/16	5/16	0.750	0.175	3	B	C11		54145-85-D	54146-85-D		
SSI-RN-L-50187-	3/16	3/16	5/16	1.000	0.175	3	B	C11		54147-85-D	54148-85-D		
SSI-ST-50218-	7/32	1/4	3/8			2	C	C11	53688-85-D		53689-85-D		
								C10	53688-70-D		53689-70-D		
SSI-STL-50218-	7/32	1/4	1/2			2-1/2	C	C11	53692-85-D		53693-85-D		
								C10	53692-70-D		53693-70-D		
SSI-50218-	7/32	1/4	3/4			2-1/2	C	C11	53696-85-D		53697-85-D		
								C10	53696-70-D		53697-70-D		
SSI-ST-50250-	1/4	1/4	3/8			2	A	C11	53700-85-D	53704-85-D	53706-85-D		
								C10	53700-70-D	53704-70-D	53706-70-D		
SSI-STL-50250-	1/4	1/4	1/2			2-1/2	A	C11	53713-85-D	53714-85-D	53715-85-D		
								C10	53713-70-D	53714-70-D	53715-70-D		
SSI-50250-	1/4	1/4	3/4			2-1/2	A	C11	53721-85-D	53722-85-D	53724-85-D		
								C10	53721-70-D	53722-70-D	53724-70-D		
SSI-M-50250-	1/4	1/4	1-1/4			3	A	C11	53729-85-D	53730-85-D	53732-85-D		
								C10	53729-70-D	53730-70-D	53732-70-D		
SSI-RN-50250-	1/4	1/4	3/8	0.750	0.235	3	B	C11		54149-85-D	54150-85-D	54151-85-D	
SSI-RN-M-50250-	1/4	1/4	3/8	1.125	0.235	4	B	C11		54152-85-D	54154-85-D	54156-85-D	
SSI-RN-L-50250-	1/4	1/4	3/8	2.125	0.235	4	B	C11		54157-85-D	54158-85-D	54159-85-D	
SSI-ST-50281-	9/32	5/16	7/16			2-1/2	C	C11	53737-85-D		53738-85-D		
								C10	53737-70-D		53738-70-D		
SSI-50281-	9/32	5/16	3/4			2-1/2	C	C11	53742-85-D		53744-85-D		
								C10	53742-70-D		53744-70-D		

SSI-5

SSI-5, Five Flute, Inch

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	LBS LU	Neck Dia DN	OAL OAL/FL	Style	Coating	Radius Offering				
									Square 0.000	0.020	0.030	0.060	0.090
SSI-ST-50312-	5/16	5/16	7/16			2-1/2	A	C11	53747-85-D	53748-85-D	53749-85-D		
									C10	53747-70-D	53748-70-D	53749-70-D	
SSI-STL-50312-	5/16	5/16	5/8			2-1/2	A	C11	53754-85-D	53756-85-D	53757-85-D		
									C10	53754-70-D	53756-70-D	53757-70-D	
SSI-50312-	5/16	5/16	13/16			2-1/2	A	C11	53761-85-D	54252-85-D	54253-85-D		
									C10	53761-70-D	54252-70-D	54253-70-D	
SSI-M-50312-	5/16	5/16	1-1/4			3	A	C11	53763-85-D	53764-85-D	53765-85-D		
									C10	53763-70-D	53764-70-D	53765-70-D	
SSI-ST-50343-	11/32	3/8	1/2			2-1/2	C	C11	53769-85-D	53770-85-D			
									C10	53769-70-D	53770-70-D		
SSI-50343-	11/32	3/8	1			2-1/2	C	C11	53773-85-D	53774-85-D			
									C10	53773-70-D	53774-70-D		
SSI-M-50343-	11/32	3/8	1-1/4			3	C	C11	53777-85-D	53778-85-D			
									C10	53777-70-D	53778-70-D		
SSI-ST-50375-	3/8	3/8	1/2			2-1/2	A	C11	53781-85-D	53782-85-D	53783-85-D	53784-85-D	
									C10	53781-70-D	53782-70-D	53783-70-D	53784-70-D
SSI-STL-50375-	3/8	3/8	3/4			2-1/2	A	C11	53789-85-D	53790-85-D	53791-85-D	53792-85-D	
									C10	53789-70-D	53790-70-D	53791-70-D	53792-70-D
SSI-50375-	3/8	3/8	1			2-1/2	A	C11	53797-85-D	53798-85-D	53799-85-D	53800-85-D	
									C10	53797-70-D	53798-70-D	53799-70-D	53800-70-D
SSI-M-50375-	3/8	3/8	1-1/4			3	A	C11	53805-85-D	53806-85-D	53807-85-D	53808-85-D	
									C10	53805-70-D	53806-70-D	53807-70-D	53808-70-D
SSI-L-50375-	3/8	3/8	1-1/2			4	A	C11	53813-85-D	53814-85-D	53815-85-D	53816-85-D	
									C10	53813-70-D	53814-70-D	53815-70-D	53816-70-D
SSI-X-50375-	3/8	3/8	2			4	A	C11	53821-85-D	53822-85-D	53823-85-D	53824-85-D	
									C10	53821-70-D	53822-70-D	53823-70-D	53824-70-D
SSI-RN-50375-	3/8	3/8	1/2	1.125	0.355	4	B	C11		54160-85-D	54161-85-D	54162-85-D	54163-85-D
										54164-85-D	54165-85-D	54166-85-D	54167-85-D
SSI-RN-M-50375-	3/8	3/8	1/2	2.125	0.355	4	B	C11		54164-85-D	54165-85-D	54166-85-D	54167-85-D
										54168-85-D	54169-85-D	54170-85-D	54171-85-D
SSI-RN-L-50375-	3/8	3/8	1/2	3.125	0.355	6	B	C11		54168-85-D	54169-85-D	54170-85-D	54171-85-D
										54172-85-D	54173-85-D	54174-85-D	54175-85-D
SSI-RN-X-50375-	3/8	3/8	1/2	4.125	0.355	6	B	C11		54172-85-D	54173-85-D	54174-85-D	54175-85-D
SSI-ST-50406-	13/32	7/16	9/16			2-1/2	C	C11	53829-85-D		53830-85-D		
									C10	53829-70-D	53830-70-D		
SSI-50406-	13/32	7/16	1			2-3/4	C	C11	53833-85-D		53834-85-D		
									C10	53833-70-D	53834-70-D		
SSI-ST-50437-	7/16	7/16	9/16			2-1/2	A	C11	53837-85-D		53838-85-D	53839-85-D	53840-85-D
									C10	53837-70-D	53838-70-D	53839-70-D	53840-70-D
SSI-50437-	7/16	7/16	1			3	A	C11	53845-85-D		53846-85-D	53847-85-D	53848-85-D
									C10	53845-70-D	53846-70-D	53847-70-D	53848-70-D
SSI-M-50437-	7/16	7/16	1-1/4			3-1/2	A	C11	53853-85-D		53854-85-D	53855-85-D	53856-85-D
									C10	53853-70-D	53854-70-D	53855-70-D	53856-70-D
SSI-ST-50469-	15/32	1/2	5/8			3	C	C11	53861-85-D		53862-85-D		
									C10	53861-70-D	53862-70-D		
SSI-50469-	15/32	1/2	1			3	C	C11	53865-85-D		53866-85-D		
									C10	53865-70-D	53866-70-D		
SSI-M-50469-	15/32	1/2	1-1/4			3-1/2	C	C11	53869-85-D		53870-85-D		
									C10	53869-70-D	53870-70-D		

SSI-5

For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



SSI-5, Five Flute, Inch Continued

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	LBS LU	Neck		OAL OAL/FL	Style	Coating	Square				Radius Offering				
					Dia DN	OAL				0.000	0.030	0.060	0.090	0.120	0.156	0.190		
SSI-ST-50500-	1/2	1/2	5/8				3	A	C11	53873-85-D	53874-85-D	53875-85-D	53876-85-D	53877-85-D				
										C10	53873-70-D	53874-70-D	53875-70-D	53876-70-D	53877-70-D			
SSI-STL-50500-	1/2	1/2	1				3	A	C11	53883-85-D	53884-85-D	53885-85-D	53886-85-D	53887-85-D				
										C10	53883-70-D	53884-70-D	53885-70-D	53886-70-D	53887-70-D			
SSI-50500-	1/2	1/2	1-1/4				3	A	C11	53893-85-D	53894-85-D	53895-85-D	53896-85-D	53897-85-D				
										C10	53893-70-D	53894-70-D	53895-70-D	53896-70-D	53897-70-D			
SSI-M-50500-	1/2	1/2	1-3/4				4	A	C11	53907-85-D	53909-85-D	53911-85-D	53913-85-D	53914-85-D				
										C10	53907-70-D	53909-70-D	53911-70-D	53913-70-D	53914-70-D			
SSI-L-50500-	1/2	1/2	2				4	A	C11	53922-85-D	53924-85-D	53925-85-D	53926-85-D	53928-85-D				
										C10	53922-70-D	53924-70-D	53925-70-D	53926-70-D	53928-70-D			
SSI-X-50500-	1/2	1/2	3				5	A	C11	53936-85-D	53937-85-D	53938-85-D	53939-85-D	53941-85-D				
										C10	53936-70-D	53937-70-D	53938-70-D	53939-70-D	53941-70-D			
SSI-RN-50500-	1/2	1/2	5/8	1.500	0.475	4	B	C11		54176-85-D	54177-85-D	54178-85-D	54179-85-D					
SSI-RN-M-50500-	1/2	1/2	5/8	2.250	0.475	4	B	C11		54180-85-D	54181-85-D	54182-85-D	54183-85-D					
SSI-RN-L-50500-	1/2	1/2	5/8	3.375	0.475	6	B	C11		54184-85-D	54185-85-D	54186-85-D	54187-85-D					
SSI-RN-X-50500-	1/2	1/2	5/8	4.125	0.475	6	B	C11		54188-85-D	54189-85-D	54190-85-D	54191-85-D					
SSI-ST-50625-	5/8	5/8	3/4				3	A	C11	53948-85-D	53949-85-D	53950-85-D	53951-85-D	53952-85-D				
										C10	53948-70-D	53949-70-D	53950-70-D	53951-70-D	53952-70-D			
SSI-STL-50625-	5/8	5/8	1-1/4				3-1/2	A	C11	53960-85-D	53961-85-D	53962-85-D	53963-85-D	53964-85-D				
										C10	53960-70-D	53961-70-D	53962-70-D	53963-70-D	53964-70-D			
SSI-50625-	5/8	5/8	1-5/8				3-1/2	A	C11	53970-85-D	53971-85-D	53972-85-D	53973-85-D	53974-85-D				
										C10	53970-70-D	53971-70-D	53972-70-D	53973-70-D	53974-70-D			
SSI-M-50625-	5/8	5/8	2				4	A	C11	53985-85-D	53981-85-D	53982-85-D	53983-85-D	53984-85-D				
										C10	53985-70-D	53981-70-D	53982-70-D	53983-70-D	53984-70-D			
SSI-L-50625-	5/8	5/8	2-1/2				5	A	C11	53990-85-D	53991-85-D	53992-85-D	53993-85-D	53994-85-D				
										C10	53990-70-D	53991-70-D	53992-70-D	53993-70-D	53994-70-D			
SSI-X-50625-	5/8	5/8	3				6	A	C11	54000-85-D	54001-85-D	54002-85-D	54003-85-D	54004-85-D				
										C10	54000-70-D	54001-70-D	54002-70-D	54003-70-D	54004-70-D			
SSI-RN-50625-	5/8	5/8	3/4	1.625	0.590	4	B	C11		54192-85-D	54193-85-D	54194-85-D	54195-85-D					
SSI-RN-M-50625-	5/8	5/8	3/4	2.375	0.590	6	B	C11		54196-85-D	54197-85-D	54198-85-D	54199-85-D					
SSI-RN-L-50625-	5/8	5/8	3/4	3.375	0.590	6	B	C11		54200-85-D	54201-85-D	54202-85-D	54203-85-D					
SSI-RN-X-50625-	5/8	5/8	3/4	4.125	0.590	6	B	C11		54204-85-D	54205-85-D	54206-85-D	54207-85-D					
SSI-ST-50750-	3/4	3/4	1				3	A	C11	54010-85-D	54011-85-D	54012-85-D	54013-85-D	54014-85-D	54015-85-D	54016-85-D		
										C10	54010-70-D	54011-70-D	54012-70-D	54013-70-D	54014-70-D	54015-70-D	54016-70-D	
SSI-50750-	3/4	3/4	1-5/8				4	A	C11	54024-85-D	54025-85-D	54026-85-D	54027-85-D	54028-85-D	54029-85-D	54030-85-D		
										C10	54024-70-D	54025-70-D	54026-70-D	54027-70-D	54028-70-D	54029-70-D	54030-70-D	
SSI-M-50750-	3/4	3/4	2 1/4				5	A	C11	54038-85-D	54039-85-D	54040-85-D	54041-85-D	54042-85-D	54043-85-D	54044-85-D		
										C10	54038-70-D	54039-70-D	54040-70-D	54041-70-D	54042-70-D	54043-70-D	54044-70-D	
SSI-L-50750-	3/4	3/4	3				6	A	C11	54052-85-D	54053-85-D	54054-85-D	54055-85-D	54056-85-D	54057-85-D	54058-85-D		
										C10	54052-70-D	54053-70-D	54054-70-D	54055-70-D	54056-70-D	54057-70-D	54058-70-D	
SSI-X-50750-	3/4	3/4	4				7	A	C11	54066-85-D	54067-85-D	54068-85-D	54069-85-D	54070-85-D	54071-85-D	54072-85-D		
										C10	54066-70-D	54067-70-D	54068-70-D	54069-70-D	54070-70-D	54071-70-D	54072-70-D	
SSI-RN-50750-	3/4	3/4	1	2.000	0.715	4	B	C11		54208-85-D	54209-85-D	54210-85-D	54211-85-D					
SSI-RN-M-50750-	3/4	3/4	1	2.500	0.715	6	B	C11		54212-85-D	54213-85-D	54214-85-D	54215-85-D					
SSI-RN-L-50750-	3/4	3/4	1	3.375	0.715	6	B	C11		54216-85-D	54217-85-D	54218-85-D	54219-85-D					
SSI-RN-X-50750-	3/4	3/4	1	4.125	0.715	6	B	C11		54220-85-D	54221-85-D	54222-85-D	54223-85-D					
SSI-ST-51000-	1	1	1-1/4				4	A	C11	54080-85-D	54081-85-D	54082-85-D	54083-85-D	54084-85-D	54085-85-D	54086-85-D		
										C10	54080-70-D	54081-70-D	54082-70-D	54083-70-D	54084-70-D	54085-70-D	54086-70-D	
SSI-51000-	1	1	2				5	A	C11	54094-85-D	54095-85-D	54096-85-D	54097-85-D	54098-85-D	54099-85-D	54100-85-D		
										C10	54094-70-D	54095-70-D	54096-70-D	54097-70-D	54098-70-D	54099-70-D	54100-70-D	
SSI-M-51000-	1	1	2-5/8				6	A	C11	54115-85-D	54117-85-D	54119-85-D	54120-85-D	54121-85-D	54122-85-D	54123-85-D		
										C10	54115-70-D	54117-70-D	54119-70-D	54120-70-D	54121-70-D	54122-70-D	54123-70-D	
SSI-L-51000-*	1	1	3-1/4				6	A	C11	40106-85-D	45001-85-D							
										C10	40106-70-D	45001-70-D						
SSI-X-51000-*	1	1	4-1/8				7	A	C11	40107-85-D	45002-85-D							
										C10	40107-70-D	45002-70-D						
SSI-RN-51000-	1	1	1-1/4	2.250	0.960	4	B	C11		54224-85-D	54225-85-D	54226-85-D	54227-85-D					
SSI-RN-M-51000-	1	1	1-1/4	2.625	0.960	6	B	C11		54228-85-D	54229-85-D	54230-85-D	54231-85-D					
SSI-RN-L-51000-	1	1	1-1/4	3.375	0.960	6	B	C11		54232-85-D	54233-85-D	54234-85-D	54235-85-D					
SSI-RN-X-51000-	1	1	1-1/4	4.125	0.960	6	B	C11		54236-85-D	54237-85-D	54238-85-D	54239-85-D					

SSI-5

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	LBS LU	Neck Dia. DN	OAL OAL/FL	Style	Coating	Radius Offering				
									,3	,5	1	2	
SSI-ST-503M-	3	6	5			55	C	C11	37267-85-D				
SSI-ST-503M-	3	6	5			55	C	C10	37267-70-D				
SSI-503M-	3	6	8			57	C	C11	37647-85-D				
SSI-503M-	3	6	8			57	C	C10	37647-70-D				
SSI-ST-504M-	4	6	8			55	C	C11	37268-85-D				
SSI-ST-504M-	4	6	8			55	C	C10	37268-70-D				
SSI-504M-	4	6	11			57	C	C11	37648-85-D				
SSI-504M-	4	6	11			57	C	C10	37648-70-D				
SSI-RN-504M-	4	6	5	21	3.61	58	B	C11			37320-85-D		
SSI-RN-504M-	4	6	5	21	3.61	58	B	C10			37320-70-D		
SSI-ST-505M-	5	6	9			55	C	C11	37269-85-D				
SSI-ST-505M-	5	6	9			55	C	C10	37269-70-D				
SSI-505M-	5	6	13			57	C	C11	37649-85-D				
SSI-505M-	5	6	13			57	C	C10	37649-70-D				
SSI-RN-505M-	5	6	6	21	4.61	58	B	C11			37321-85-D		
SSI-RN-505M-	5	6	6	21	4.61	58	B	C10			37321-70-D		
SSI-ST-506M-	6	6	10			55	A	C11	37270-85-D				
SSI-ST-506M-	6	6	10			55	A	C10	37270-70-D				
SSI-506M-	6	6	20			58	A	C11	37650-85-D				
SSI-506M-	6	6	20			58	A	C10	37650-70-D				
SSI-RN-506M-	6	6	10	21	5.48	58	B	C11			37322-85-D		
SSI-RN-506M-	6	6	10	21	5.48	58	B	C10			37322-70-D		
SSI-ST-508M-	8	8	12			59	A	C11	37271-85-D			37272-85-D	
SSI-ST-508M-	8	8	12			59	A	C10	37271-70-D			37272-70-D	
SSI-508M-	8	8	22			64	A	C11	37651-85-D			37652-85-D	
SSI-508M-	8	8	22			64	A	C10	37651-70-D			37652-70-D	
SSI-RN-508M-	8	8	12	27	7.59	64	B	C11			37323-85-D	37324-85-D	
SSI-RN-508M-	8	8	12	27	7.59	64	B	C10			37323-70-D	37324-70-D	
SSI-ST-510M-	10	10	14			67	A	C11	37273-85-D	37274-85-D	37275-85-D		
SSI-ST-510M-	10	10	14			67	A	C10	37273-70-D	37274-70-D	37275-70-D		
SSI-510M-	10	10	25			73	A	C11	37653-85-D	37654-85-D	37655-85-D		
SSI-510M-	10	10	25			73	A	C10	37653-70-D	37654-70-D	37655-70-D		
SSI-RN-510M-	10	10	14	32	9.47	73	B	C11			37325-85-D	37326-85-D	
SSI-RN-510M-	10	10	14	32	9.47	73	B	C10			37325-70-D	37326-70-D	
SSI-ST-512M-	12	12	16			74	A	C11	37276-85-D	37277-85-D	37278-85-D		
SSI-ST-512M-	12	12	16			74	A	C10	37276-70-D	37277-70-D	37278-70-D		
SSI-512M-	12	12	26			84	A	C11	37656-85-D	37657-85-D	37799-85-D		
SSI-512M-	12	12	26			84	A	C10	37656-70-D	37657-70-D	37799-70-D		
SSI-RN-512M-	12	12	16	38	11.22	84	B	C11			37327-85-D	37328-85-D	
SSI-RN-512M-	12	12	16	38	11.22	84	B	C10			37327-70-D	37328-70-D	
SSI-ST-514M-	14	14	18			76	A	C11	37279-85-D	37280-85-D	37281-85-D	37282-85-D	
SSI-ST-514M-	14	14	18			76	A	C10	37279-70-D	37280-70-D	37281-70-D	37282-70-D	
SSI-514M-	14	14	26			84	A	C11	37847-85-D	37849-85-D	38702-85-D	38789-85-D	
SSI-514M-	14	14	26			84	A	C10	37847-70-D	37849-70-D	38702-70-D	38789-70-D	
SSI-RN-514M-	14	14	18	38	13.13	84	B	C11			37942-85-D	38703-85-D	38968-85-D
SSI-RN-514M-	14	14	18	38	13.13	84	B	C10			37942-70-D	38703-70-D	38968-70-D
SSI-ST-516M-	16	16	22			83	A	C11	37283-85-D	37284-85-D	37285-85-D	37286-85-D	
SSI-ST-516M-	16	16	22			83	A	C10	37283-70-D	37284-70-D	37285-70-D	37286-70-D	
SSI-516M-	16	16	32			93	A	C11	37299-85-D	37300-85-D	37301-85-D	37303-85-D	
SSI-516M-	16	16	32			93	A	C10	37299-70-D	37300-70-D	37301-70-D	37303-70-D	
SSI-RN-516M-	16	16	22	44	15.03	93	B	C11			37329-85-D	37330-85-D	37331-85-D
SSI-RN-516M-	16	16	22	44	15.03	93	B	C10			37329-70-D	37330-70-D	37331-70-D
SSI-RN-M-516M-	16	16	22	75	15.03	130	B	C11			37338-85-D	37339-85-D	37340-85-D
SSI-RN-M-516M-	16	16	22	75	15.03	130	B	C10			37338-70-D	37339-70-D	37340-70-D

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SSI-5-M

SSI-5, Five Flute, Metric

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	LBS LU	Neck Dia DN	OAL OAL/FL	Style	Coating	Radius Offering			
									,3	,5	1	2
SSI-ST-518M-	18	18	24			85	A	C11	37287-85-D	37288-85-D	37289-85-D	37290-85-D
SSI-ST-518M-	18	18	24			85	A	C10	37287-70-D	37288-70-D	37289-70-D	37290-70-D
SSI-518M-	18	18	32			93	A	C11	37305-85-D	37307-85-D	37309-85-D	37311-85-D
SSI-518M-	18	18	32			93	A	C10	37305-70-D	37307-70-D	37309-70-D	37311-70-D
SSI-RN-518M-	18	18	24	44	16.88	93	B	C11		38969-85-D	39047-85-D	39051-85-D
SSI-RN-518M-	18	18	24	44	16.88	93	B	C10		38969-70-D	39047-70-D	39051-70-D
SSI-RN-M-518M-	18	18	24	75	16.88	130	B	C11		39045-85-D	39049-85-D	39053-85-D
SSI-RN-M-518M-	18	18	24	75	16.88	130	B	C10		39045-70-D	39049-70-D	39053-70-D
SI-ST-520M-	20	20	26			93	A	C11	37291-85-D	37292-85-D	37293-85-D	37294-85-D
SSI-ST-520M-	20	20	26			93	A	C10	37291-70-D	37292-70-D	37293-70-D	37294-70-D
SSI-520M-	20	20	38			105	A	C11	37312-85-D	37313-85-D	37314-85-D	37315-85-D
SSI-520M-	20	20	38			105	A	C10	37312-70-D	37313-70-D	37314-70-D	37315-70-D
SSI-RN-520M-	20	20	26	54	18.76	105	B	C11		37332-85-D	37333-85-D	37334-85-D
SSI-RN-520M-	20	20	26	54	18.76	105	B	C10		37332-70-D	37333-70-D	37334-70-D
SSI-RN-M-520M-	20	20	26	96	18.76	150	B	C11		37341-85-D	37342-85-D	37343-85-D
SSI-RN-M-520M-	20	20	26	96	18.76	150	B	C10		37341-70-D	37342-70-D	37343-70-D
SSI-ST-525M-	25	25	32			104	A	C11	37295-85-D	37296-85-D	37297-85-D	37298-85-D
SSI-ST-525M-	25	25	32			104	A	C10	37295-70-D	37296-70-D	37297-70-D	37298-70-D
SSI-525M-	25	25	45			120	A	C11	37316-85-D	37317-85-D	37318-85-D	37319-85-D
SSI-525M-	25	25	45			120	A	C10	37316-70-D	37317-70-D	37318-70-D	37319-70-D
SSI-RN-525M-	25	25	32	64	24.00	120	B	C11		37335-85-D	37336-85-D	37337-85-D
SSI-RN-525M-	25	25	32	64	24.00	120	B	C10		37335-70-D	37336-70-D	37337-70-D
SSI-RN-M-525M-	25	25	32	96	24.00	150	B	C11		37344-85-D	37345-85-D	37346-85-D
SSI-RN-M-525M-	25	25	32	96	24.00	150	B	C10		37344-70-D	37345-70-D	37346-70-D

SSI-5-M



DATA FLUTE™



SSI-5 Recommended Chip Loads

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
1/8	Slotting	[S/R]	0.00058	0.00055	0.00048	0.00036	0.00040	0.00053
	Heavy Peripheral	[HP]	0.00072	0.00069	0.00059	0.00045	0.00050	0.00066
	Peripheral	[P]	0.00079	0.00075	0.00065	0.00049	0.00055	0.00072
	Light Peripheral	[LP]	0.00094	0.00090	0.00077	0.00058	0.00066	0.00085
	Finishing	[F]	0.00166	0.00158	0.00136	0.00102	0.00116	0.00151
5/32	Slotting	[S/R]	0.00072	0.00069	0.00059	0.00045	0.00050	0.00066
	Heavy Peripheral	[HP]	0.00090	0.00086	0.00074	0.00056	0.00063	0.00082
	Peripheral	[P]	0.00098	0.00094	0.00081	0.00061	0.00069	0.00090
	Light Peripheral	[LP]	0.00117	0.00112	0.00097	0.00072	0.00082	0.00107
	Finishing	[F]	0.00207	0.00198	0.00170	0.00128	0.00145	0.00188
3/16	Slotting	[S]	0.00087	0.00083	0.00071	0.00053	0.00061	0.00079
	Heavy Peripheral	[HP]	0.00108	0.00103	0.00089	0.00067	0.00076	0.00098
	Peripheral	[P]	0.00118	0.00113	0.00097	0.00073	0.00083	0.00107
	Light Peripheral	[LP]	0.00141	0.00135	0.00116	0.00087	0.00099	0.00128
	Finishing	[F]	0.00248	0.00237	0.00204	0.00153	0.00174	0.00226
7/32	Slotting	[S]	0.00101	0.00096	0.00083	0.00062	0.00071	0.00092
	Heavy Peripheral	[HP]	0.00126	0.00121	0.00104	0.00078	0.00088	0.00115
	Peripheral	[P]	0.00138	0.00132	0.00113	0.00085	0.00096	0.00125
	Light Peripheral	[LP]	0.00164	0.00157	0.00135	0.00101	0.00115	0.00149
	Finishing	[F]	0.00290	0.00277	0.00238	0.00179	0.00203	0.00263
1/4	Slotting	[S]	0.00116	0.00110	0.00095	0.00071	0.00081	0.00105
	Heavy Peripheral	[HP]	0.00144	0.00138	0.00119	0.00089	0.00101	0.00131
	Peripheral	[P]	0.00158	0.00150	0.00130	0.00097	0.00110	0.00143
	Light Peripheral	[LP]	0.00188	0.00179	0.00155	0.00116	0.00131	0.00171
	Finishing	[F]	0.00331	0.00316	0.00272	0.00204	0.00232	0.00301
9/32	Slotting	[S]	0.00130	0.00124	0.00107	0.00080	0.00091	0.00118
	Heavy Peripheral	[HP]	0.00162	0.00155	0.00134	0.00100	0.00114	0.00148
	Peripheral	[P]	0.00177	0.00169	0.00146	0.00109	0.00124	0.00161
	Light Peripheral	[LP]	0.00211	0.00202	0.00174	0.00130	0.00148	0.00192
	Finishing	[F]	0.00373	0.00356	0.00306	0.00230	0.00261	0.00339
5/16	Slotting	[S]	0.00144	0.00138	0.00119	0.00089	0.00101	0.00131
	Heavy Peripheral	[HP]	0.00180	0.00172	0.00148	0.00111	0.00126	0.00164
	Peripheral	[P]	0.00197	0.00188	0.00162	0.00121	0.00138	0.00179
	Light Peripheral	[LP]	0.00235	0.00224	0.00193	0.00145	0.00164	0.00214
	Finishing	[F]	0.00414	0.00395	0.00341	0.00255	0.00289	0.00376
11/32	Slotting	[S]	0.00159	0.00152	0.00131	0.00098	0.00111	0.00144
	Heavy Peripheral	[HP]	0.00199	0.00189	0.00163	0.00122	0.00139	0.00180
	Peripheral	[P]	0.00217	0.00207	0.00178	0.00134	0.00151	0.00197
	Light Peripheral	[LP]	0.00258	0.00247	0.00213	0.00159	0.00181	0.00235
	Finishing	[F]	0.00455	0.00435	0.00375	0.00281	0.00318	0.00414

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/ Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00045	0.00050	0.00050	0.00053	0.00043	0.00043	0.00040	0.00050	0.00050	0.00043
0.00056	0.00063	0.00063	0.00066	0.00053	0.00053	0.00050	0.00063	0.00063	0.00053
0.00061	0.00068	0.00068	0.00072	0.00058	0.00058	0.00055	0.00068	0.00068	0.00058
0.00073	0.00081	0.00081	0.00085	0.00070	0.00070	0.00066	0.00081	0.00081	0.00070
0.00129	0.00143	0.00143	0.00151	0.00123	0.00123	0.00116	0.00143	0.00143	0.00123
0.00056	0.00063	0.00063	0.00066	0.00053	0.00053	0.00050	0.00063	0.00063	0.00053
0.00070	0.00078	0.00078	0.00082	0.00067	0.00067	0.00063	0.00078	0.00078	0.00067
0.00077	0.00085	0.00085	0.00090	0.00073	0.00073	0.00069	0.00085	0.00085	0.00073
0.00092	0.00102	0.00102	0.00107	0.00087	0.00087	0.00082	0.00102	0.00102	0.00087
0.00161	0.00179	0.00179	0.00188	0.00153	0.00153	0.00145	0.00179	0.00179	0.00153
0.00068	0.00075	0.00075	0.00079	0.00064	0.00064	0.00061	0.00075	0.00075	0.00064
0.00084	0.00094	0.00094	0.00098	0.00080	0.00080	0.00076	0.00094	0.00094	0.00080
0.00092	0.00102	0.00102	0.00107	0.00087	0.00087	0.00083	0.00102	0.00102	0.00087
0.00110	0.00122	0.00122	0.00128	0.00104	0.00104	0.00099	0.00122	0.00122	0.00104
0.00194	0.00215	0.00215	0.00226	0.00184	0.00184	0.00174	0.00215	0.00215	0.00184
0.00079	0.00088	0.00088	0.00092	0.00075	0.00075	0.00071	0.00088	0.00088	0.00075
0.00098	0.00109	0.00109	0.00115	0.00094	0.00094	0.00088	0.00109	0.00109	0.00094
0.00107	0.00119	0.00119	0.00125	0.00102	0.00102	0.00096	0.00119	0.00119	0.00102
0.00128	0.00142	0.00142	0.00149	0.00122	0.00122	0.00115	0.00142	0.00142	0.00122
0.00226	0.00251	0.00251	0.00263	0.00215	0.00215	0.00203	0.00251	0.00251	0.00215
0.00090	0.00100	0.00100	0.00105	0.00086	0.00086	0.00081	0.00100	0.00100	0.00086
0.00113	0.00125	0.00125	0.00131	0.00107	0.00107	0.00101	0.00125	0.00125	0.00107
0.00123	0.00136	0.00136	0.00143	0.00117	0.00117	0.00110	0.00136	0.00136	0.00117
0.00146	0.00163	0.00163	0.00171	0.00139	0.00139	0.00131	0.00163	0.00163	0.00139
0.00258	0.00287	0.00287	0.00301	0.00245	0.00245	0.00232	0.00287	0.00287	0.00245
0.00101	0.00113	0.00113	0.00118	0.00096	0.00096	0.00091	0.00113	0.00113	0.00096
0.00127	0.00141	0.00141	0.00148	0.00120	0.00120	0.00114	0.00141	0.00141	0.00120
0.00138	0.00153	0.00153	0.00161	0.00131	0.00131	0.00124	0.00153	0.00153	0.00131
0.00165	0.00183	0.00183	0.00192	0.00156	0.00156	0.00148	0.00183	0.00183	0.00156
0.00290	0.00323	0.00323	0.00339	0.00276	0.00276	0.00261	0.00323	0.00323	0.00276
0.00113	0.00125	0.00125	0.00131	0.00107	0.00107	0.00101	0.00125	0.00125	0.00107
0.00141	0.00156	0.00156	0.00164	0.00134	0.00134	0.00126	0.00156	0.00156	0.00134
0.00153	0.00170	0.00170	0.00179	0.00146	0.00146	0.00138	0.00170	0.00170	0.00146
0.00183	0.00203	0.00203	0.00214	0.00174	0.00174	0.00164	0.00203	0.00203	0.00174
0.00323	0.00358	0.00358	0.00376	0.00306	0.00306	0.00289	0.00358	0.00358	0.00306
0.00124	0.00138	0.00138	0.00144	0.00118	0.00118	0.00111	0.00138	0.00138	0.00118
0.00155	0.00172	0.00172	0.00180	0.00147	0.00147	0.00139	0.00172	0.00172	0.00147
0.00169	0.00188	0.00188	0.00197	0.00160	0.00160	0.00151	0.00188	0.00188	0.00160
0.00201	0.00224	0.00224	0.00235	0.00191	0.00191	0.00181	0.00224	0.00224	0.00191
0.00355	0.00394	0.00394	0.00414	0.00337	0.00337	0.00318	0.00394	0.00394	0.00337

SSI-5 Recommended Chip Loads

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
3/8	Slotting	[S]	0.00173	0.00165	0.00143	0.00107	0.00121	0.00158
	Heavy Peripheral	[HP]	0.00217	0.00207	0.00178	0.00134	0.00151	0.00197
	Peripheral	[P]	0.00236	0.00226	0.00194	0.00146	0.00165	0.00215
	Light Peripheral	[LP]	0.00282	0.00269	0.00232	0.00174	0.00197	0.00256
	Finishing	[F]	0.00497	0.00474	0.00409	0.00306	0.00347	0.00452
13/32	Slotting	[S]	0.00188	0.00179	0.00154	0.00116	0.00131	0.00171
	Heavy Peripheral	[HP]	0.00235	0.00224	0.00193	0.00145	0.00164	0.00213
	Peripheral	[P]	0.00256	0.00244	0.00211	0.00158	0.00179	0.00233
	Light Peripheral	[LP]	0.00305	0.00291	0.00251	0.00188	0.00213	0.00278
	Finishing	[F]	0.00538	0.00514	0.00443	0.00332	0.00376	0.00489
7/16	Slotting	[S]	0.00202	0.00193	0.00166	0.00125	0.00141	0.00184
	Heavy Peripheral	[HP]	0.00253	0.00241	0.00208	0.00156	0.00177	0.00230
	Peripheral	[P]	0.00276	0.00263	0.00227	0.00170	0.00193	0.00251
	Light Peripheral	[LP]	0.00329	0.00314	0.00270	0.00203	0.00230	0.00299
	Finishing	[F]	0.00580	0.00553	0.00477	0.00358	0.00405	0.00527
15/32	Slotting	[S]	0.00217	0.00207	0.00178	0.00134	0.00151	0.00197
	Heavy Peripheral	[HP]	0.00271	0.00258	0.00223	0.00167	0.00189	0.00246
	Peripheral	[P]	0.00295	0.00282	0.00243	0.00182	0.00206	0.00269
	Light Peripheral	[LP]	0.00352	0.00336	0.00290	0.00217	0.00246	0.00320
	Finishing	[F]	0.00621	0.00593	0.00511	0.00383	0.00434	0.00565
1/2	Slotting	[S]	0.00231	0.00221	0.00190	0.00143	0.00162	0.00210
	Heavy Peripheral	[HP]	0.00289	0.00276	0.00238	0.00178	0.00202	0.00263
	Peripheral	[P]	0.00315	0.00301	0.00259	0.00194	0.00220	0.00286
	Light Peripheral	[LP]	0.00376	0.00359	0.00309	0.00232	0.00263	0.00342
	Finishing	[F]	0.00662	0.00632	0.00545	0.00409	0.00463	0.00602
5/8	Slotting	[S]	0.00289	0.00276	0.00238	0.00178	0.00202	0.00263
	Heavy Peripheral	[HP]	0.00361	0.00345	0.00297	0.00223	0.00252	0.00328
	Peripheral	[P]	0.00394	0.00376	0.00324	0.00243	0.00275	0.00358
	Light Peripheral	[LP]	0.00470	0.00448	0.00386	0.00290	0.00328	0.00427
	Finishing	[F]	0.00828	0.00790	0.00681	0.00511	0.00579	0.00753
3/4	Slotting	[S]	0.00347	0.00331	0.00285	0.00214	0.00242	0.00315
	Heavy Peripheral	[HP]	0.00433	0.00413	0.00356	0.00267	0.00303	0.00394
	Peripheral	[P]	0.00473	0.00451	0.00389	0.00292	0.00330	0.00430
	Light Peripheral	[LP]	0.00564	0.00538	0.00464	0.00348	0.00394	0.00512
	Finishing	[F]	0.00994	0.00948	0.00817	0.00613	0.00695	0.00903
1	Slotting	[S]	0.00462	0.00441	0.00380	0.00285	0.00323	0.00420
	Heavy Peripheral	[HP]	0.00578	0.00551	0.00475	0.00356	0.00404	0.00525
	Peripheral	[P]	0.00630	0.00601	0.00518	0.00389	0.00441	0.00573
	Light Peripheral	[LP]	0.00752	0.00717	0.00618	0.00464	0.00525	0.00683
	Finishing	[F]	0.01325	0.01265	0.01090	0.00817	0.00926	0.01204

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/ Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00135	0.00150	0.00150	0.00158	0.00128	0.00128	0.00121	0.00150	0.00150	0.00128
0.00169	0.00188	0.00188	0.00197	0.00160	0.00160	0.00151	0.00188	0.00188	0.00160
0.00184	0.00205	0.00205	0.00215	0.00175	0.00175	0.00165	0.00205	0.00205	0.00175
0.00220	0.00244	0.00244	0.00256	0.00209	0.00209	0.00197	0.00244	0.00244	0.00209
0.00387	0.00430	0.00430	0.00452	0.00368	0.00368	0.00347	0.00430	0.00430	0.00368
0.00146	0.00163	0.00163	0.00171	0.00139	0.00139	0.00131	0.00163	0.00163	0.00139
0.00183	0.00203	0.00203	0.00213	0.00174	0.00174	0.00164	0.00203	0.00203	0.00174
0.00199	0.00222	0.00222	0.00233	0.00189	0.00189	0.00179	0.00222	0.00222	0.00189
0.00238	0.00264	0.00264	0.00278	0.00226	0.00226	0.00213	0.00264	0.00264	0.00226
0.00419	0.00466	0.00466	0.00489	0.00398	0.00398	0.00376	0.00466	0.00466	0.00398
0.00158	0.00175	0.00175	0.00184	0.00150	0.00150	0.00141	0.00175	0.00175	0.00150
0.00197	0.00219	0.00219	0.00230	0.00187	0.00187	0.00177	0.00219	0.00219	0.00187
0.00215	0.00239	0.00239	0.00251	0.00204	0.00204	0.00193	0.00239	0.00239	0.00204
0.00256	0.00285	0.00285	0.00299	0.00243	0.00243	0.00230	0.00285	0.00285	0.00243
0.00452	0.00502	0.00502	0.00527	0.00429	0.00429	0.00405	0.00502	0.00502	0.00429
0.00169	0.00188	0.00188	0.00197	0.00160	0.00160	0.00151	0.00188	0.00188	0.00160
0.00211	0.00234	0.00234	0.00246	0.00200	0.00200	0.00189	0.00234	0.00234	0.00200
0.00230	0.00256	0.00256	0.00269	0.00219	0.00219	0.00206	0.00256	0.00256	0.00219
0.00275	0.00305	0.00305	0.00320	0.00261	0.00261	0.00246	0.00305	0.00305	0.00261
0.00484	0.00538	0.00538	0.00565	0.00460	0.00460	0.00434	0.00538	0.00538	0.00460
0.00180	0.00200	0.00200	0.00210	0.00171	0.00171	0.00162	0.00200	0.00200	0.00171
0.00225	0.00250	0.00250	0.00263	0.00214	0.00214	0.00202	0.00250	0.00250	0.00214
0.00245	0.00273	0.00273	0.00286	0.00233	0.00233	0.00220	0.00273	0.00273	0.00233
0.00293	0.00325	0.00325	0.00342	0.00278	0.00278	0.00263	0.00325	0.00325	0.00278
0.00516	0.00574	0.00574	0.00602	0.00490	0.00490	0.00463	0.00574	0.00574	0.00490
0.00225	0.00250	0.00250	0.00263	0.00214	0.00214	0.00202	0.00250	0.00250	0.00214
0.00281	0.00313	0.00313	0.00328	0.00267	0.00267	0.00252	0.00313	0.00313	0.00267
0.00307	0.00341	0.00341	0.00358	0.00292	0.00292	0.00275	0.00341	0.00341	0.00292
0.00366	0.00407	0.00407	0.00427	0.00348	0.00348	0.00328	0.00407	0.00407	0.00348
0.00645	0.00717	0.00717	0.00753	0.00613	0.00613	0.00579	0.00717	0.00717	0.00613
0.00270	0.00300	0.00300	0.00315	0.00257	0.00257	0.00242	0.00300	0.00300	0.00257
0.00338	0.00375	0.00375	0.00394	0.00321	0.00321	0.00303	0.00375	0.00375	0.00321
0.00368	0.00409	0.00409	0.00430	0.00350	0.00350	0.00330	0.00409	0.00409	0.00350
0.00439	0.00488	0.00488	0.00512	0.00417	0.00417	0.00394	0.00488	0.00488	0.00417
0.00774	0.00860	0.00860	0.00903	0.00736	0.00736	0.00695	0.00860	0.00860	0.00736
0.00360	0.00400	0.00400	0.00420	0.00342	0.00342	0.00323	0.00400	0.00400	0.00342
0.00450	0.00500	0.00500	0.00525	0.00428	0.00428	0.00404	0.00500	0.00500	0.00428
0.00491	0.00546	0.00546	0.00573	0.00466	0.00466	0.00441	0.00546	0.00546	0.00466
0.00586	0.00651	0.00651	0.00683	0.00556	0.00556	0.00525	0.00651	0.00651	0.00556
0.01032	0.01147	0.01147	0.01204	0.00981	0.00981	0.00926	0.01147	0.01147	0.00981

SS-5



SSI-7
Seven Flute



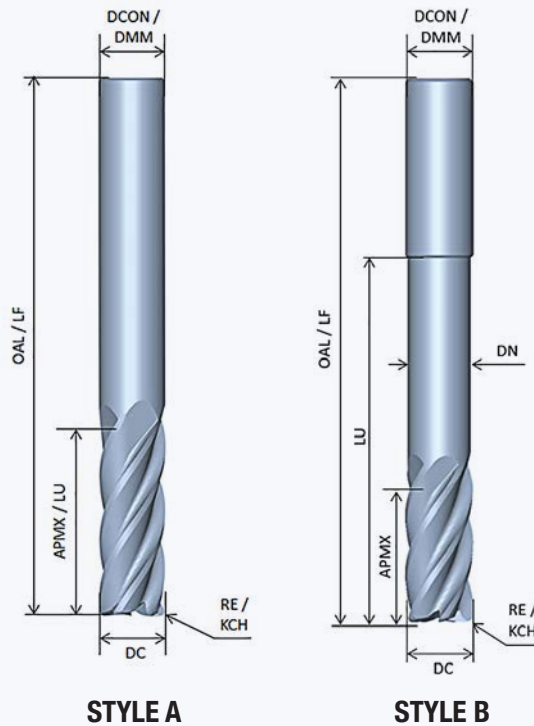
The latest addition to our popular SSI series is the SSI-7. This is a seven flute, variably-indexed tool designed specifically for high efficiency machining in ferrous alloys. In addition to seven flutes, we have also built this series on a new, premium substrate. We guarantee that you will be pleased with the tremendous productivity, superior surface finish and unequalled tool life that the SSI-7 provides.

MAIN CHARACTERISTICS

- Flute Count (NOF): 7
- UnEqual Index
- Constant Helix
- Non-Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): -0.001"/-0.002"
- Corner Radius (RE): +0.001"/-0.001"



WORK MATERIAL

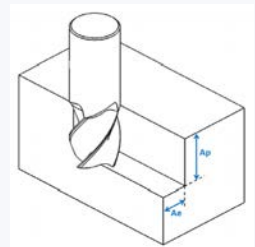


COATING



RECOMMENDED OPERATION

	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	25%DC <= 40%DC	5%DC <= 25%DC	<= 5%DC
AP	1.0 to 1.5 x DC	2.0 x DC	APMX



SSI-7

For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



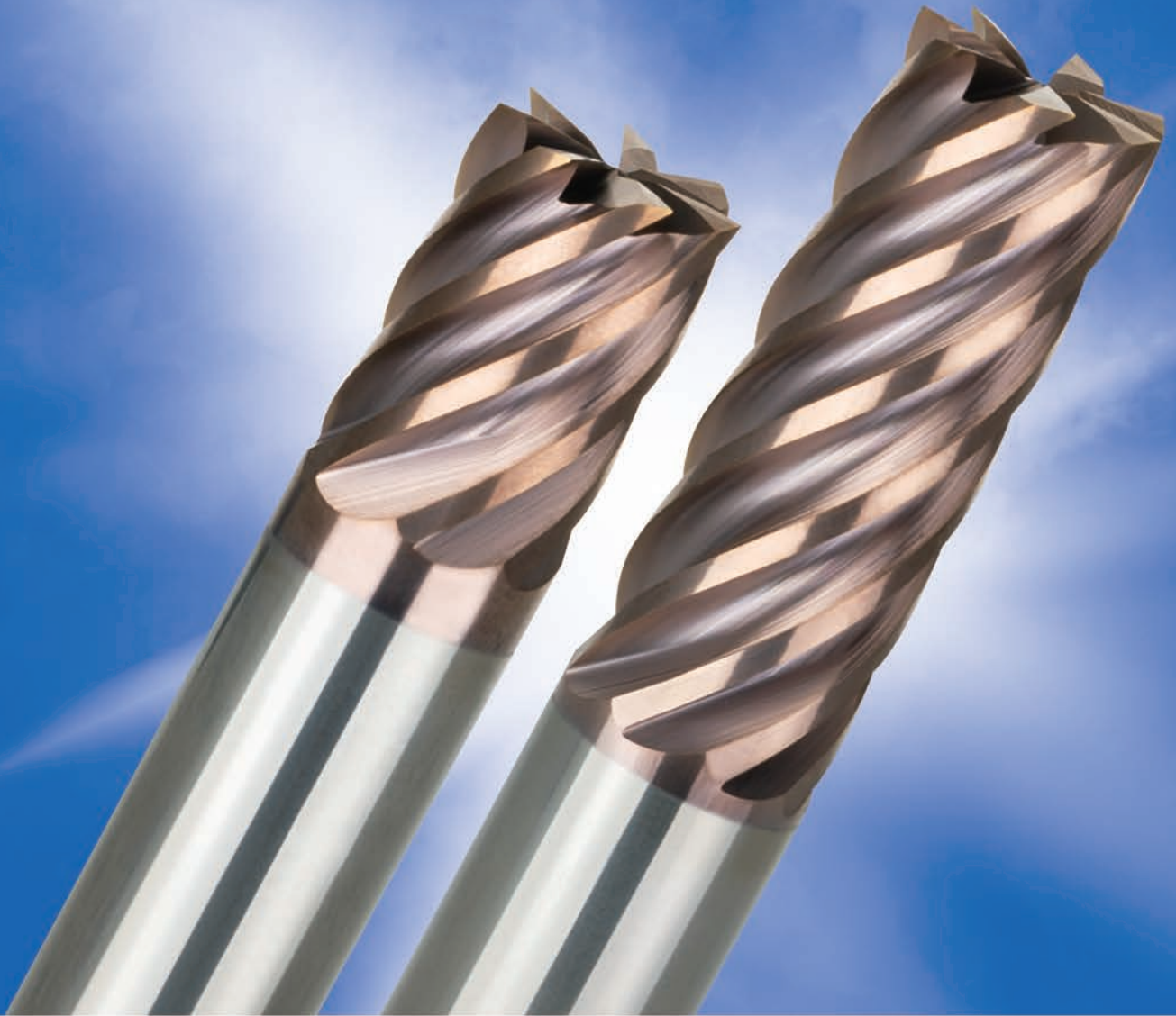
SSI-7, Seven Flute, Inch

Part Number	Dia DC	Shank DCON	LOC APMX	LBS LU	Neck Dia		OAL/FL	Style	COATING	SQUARE			RADIUS OFFERING				
					DN	DN				0.000	0.010	0.020	0.030	0.060	0.090	0.120	
SSI-ST-70187-	3/16	3/16	5/16				2	C	C35	45057-35-D	45058-35-D						
SSI-70187-	3/16	3/16	9/16				2-1/2	C	C35	45060-35-D	45061-35-D						
SSI-ST-70250-	1/4	1/4	3/8				2	C	C35	45063-35-D		45064-35-D	45065-35-D				
SSI-STL-70250-	1/4	1/4	1/2				2-1/2	C	C35	45066-35-D		45067-35-D	45068-35-D				
SSI-70250-	1/4	1/4	3/4				2-1/2	C	C35	45069-35-D		45070-35-D	45071-35-D				
SSI-M-70250-	1/4	1/4	1 1/4				3	C	C35	45072-35-D		45073-35-D	45074-35-D				
SSI-ST-70312-	5/16	5/16	7/16				2-1/2	C	C35	45075-35-D		45076-35-D	45077-35-D				
SSI-STL-70312-	5/16	5/16	5/8				2-1/2	C	C35	45078-35-D		45079-35-D	45080-35-D				
SSI-70312-	5/16	5/16	13/16				2-1/2	C	C35	45081-35-D		45082-35-D	45083-35-D				
SSI-M-70312-	5/16	5/16	1 1/4				3	C	C35	45082-35-D		45083-35-D	45084-35-D				
SSI-ST-70375-	3/8	3/8	1/2				2-1/2	C	C35	45085-35-D		45086-35-D	45087-35-D	45088-35-D			
SSI-STL-70375-	3/8	3/8	3/4				2-1/2	C	C35	45089-35-D		45090-35-D	45091-35-D	45092-35-D			
SSI-70375-	3/8	3/8	1				2-1/2	C	C35	45093-35-D		45094-35-D	45095-35-D	45096-35-D			
SSI-M-70375-	3/8	3/8	1 1/4				3	C	C35	45097-35-D		45098-35-D	45099-35-D	45100-35-D			
SSI-L-70375-	3/8	3/8	1 1/2				4	C	C35	45101-35-D		45102-35-D	45103-35-D	45104-35-D			
SSI-X-70375-	3/8	3/8	2				4	C	C35	45105-35-D		45106-35-D	45107-35-D	45108-35-D			
SSI-RN-70375-	3/8	3/8	1/2	1.125	0.355	4	B	C35	45187-35-D*		45188-35-D*	45189-35-D*	45190-35-D*	45191-35-D*			
SSI-RN-M-70375-	3/8	3/8	1/2	2.125	0.355	4	B	C35	45192-35-D*		45193-35-D*	45194-35-D*	45195-35-D*	45196-35-D*			
SSI-RN-L-70375-	3/8	3/8	1/2	3.125	0.355	6	B	C35	45197-35-D*		45198-35-D*	45199-35-D*	45200-35-D*	45201-35-D*			
SSI-RN-X-70375-	3/8	3/8	1/2	4.125	0.355	6	B	C35	45202-35-D*		45203-35-D*	45204-35-D*	45205-35-D*	45206-35-D*			
SSI-ST-70500-	1/2	1/2	5/8				3	C	C35	45109-35-D		45110-35-D	45111-35-D	45207-35-D*	45208-35-D*		
SSI-STL-70500-	1/2	1/2	1				3	C	C35	45112-35-D		45113-35-D	45114-35-D	45209-35-D*	45210-35-D*		
SSI-70500-	1/2	1/2	1 1/4				3	C	C35	45115-35-D		45116-35-D	45117-35-D	45211-35-D*	45212-35-D*		
SSI-M-70500-	1/2	1/2	1 3/4				4	C	C35	45118-35-D		45119-35-D	45120-35-D	45213-35-D*	45214-35-D*		
SSI-L-70500-	1/2	1/2	2				4	C	C35	45121-35-D		45122-35-D	45123-35-D	45215-35-D*	45216-35-D*		
SSI-X-70500-	1/2	1/2	3				5	C	C35	45124-35-D		45125-35-D	45126-35-D	45217-35-D*	45218-35-D*		
SSI-RN-70500-	1/2	1/2	5/8	1.500	0.475	4	B	C35	45219-35-D*		45220-35-D*	45221-35-D*	45222-35-D*	45223-35-D*			
SSI-RN-M-70500-	1/2	1/2	5/8	2.250	0.475	4	B	C35	45224-35-D*		45225-35-D*	45226-35-D*	45227-35-D*	45228-35-D*			
SSI-RN-L-70500-	1/2	1/2	5/8	3.375	0.475	6	B	C35	45229-35-D*		45230-35-D*	45231-35-D*	45232-35-D*	45233-35-D*			
SSI-RN-X-70500-	1/2	1/2	5/8	4.125	0.475	6	B	C35	45234-35-D*		45235-35-D*	45236-35-D*	45237-35-D*	45238-35-D*	45239-35-D*		
SSI-ST-70625-	5/8	5/8	3/4				3	C	C35	45127-35-D		45128-35-D	45129-35-D	45252-35-D*	45253-35-D*		
SSI-STL-70625-	5/8	5/8	1 1/4				3-1/2	C	C35	45130-35-D		45131-35-D	45132-35-D	45254-35-D*	45255-35-D*		
SSI-70625-	5/8	5/8	1 5/8				3-1/2	C	C35	45133-35-D		45134-35-D	45135-35-D	45256-35-D*	45257-35-D*		
SSI-M-70625-	5/8	5/8	2				4	C	C35	45136-35-D		45137-35-D	45138-35-D	45258-35-D*	45259-35-D*		
SSI-L-70625-	5/8	5/8	2 1/2				5	C	C35	45139-35-D		45140-35-D	45141-35-D	45260-35-D*	45261-35-D*		
SSI-X-70625-	5/8	5/8	3				6	C	C35	45153-35-D		45154-35-D	45155-35-D	45262-35-D*	45263-35-D*		
SSI-RN-70625-	5/8	5/8	3/4	1.625	0.590	4	B	C35	45264-35-D*		45265-35-D*	45266-35-D*	45267-35-D*	45268-35-D*			
SSI-RN-M-70625-	5/8	5/8	3/4	2.375	0.590	6	B	C35	45269-35-D*		45270-35-D*	45271-35-D*	45272-35-D*	45273-35-D*			
SSI-RN-L-70625-	5/8	5/8	3/4	3.375	0.590	6	B	C35	45274-35-D*		45275-35-D*	45276-35-D*	45277-35-D*	45278-35-D*			
SSI-RN-X-70625-	5/8	5/8	3/4	4.125	0.590	6	B	C35	45279-35-D*		45280-35-D*	45281-35-D*	45282-35-D*	45283-35-D*			
SSI-ST-70750-	3/4	3/4	1				3	C	C35	45156-35-D		45157-35-D	45158-35-D	45284-35-D*	45285-35-D*		
SSI-70750-	3/4	3/4	1 5/8				4	C	C35	45159-35-D		45160-35-D	45161-35-D	45286-35-D*	45287-35-D*		
SSI-M-70750-	3/4	3/4	2 1/4				5	C	C35	45162-35-D		45163-35-D	45164-35-D	45288-35-D*	45289-35-D*		
SSI-L-70750-	3/4	3/4	3				6	C	C35	45165-35-D		45166-35-D	45167-35-D	45290-35-D*	45291-35-D*		
SSI-X-70750-	3/4	3/4	4				7	C	C35	45168-35-D		45169-35-D	45170-35-D	45292-35-D*	45293-35-D*		
SSI-RN-70750-	3/4	3/4	1	2.000	0.715	4	B	C35	45294-35-D*		45295-35-D*	45296-35-D*	45297-35-D*	45298-35-D*			
SSI-RN-M-70750-	3/4	3/4	1	2.500	0.715	6	B	C35	45299-35-D*		45300-35-D*	45301-35-D*	45302-35-D*	45303-35-D*			
SSI-RN-L-70750-	3/4	3/4	1	3.375	0.715	6	B	C35	45304-35-D*		45305-35-D*	45306-35-D*	45307-35-D*	45308-35-D*			
SSI-RN-X-70750-	3/4	3/4	1	4.125	0.715	6	B	C35	45309-35-D*		45310-35-D*	45311-35-D*	45312-35-D*	45313-35-D*			
SSI-ST-71000-	1	1	1 1/4				4	C	C35	45171-35-D		45172-35-D	45173-35-D	45314-35-D*	45315-35-D*		
SSI-71000-	1	1	2				5	C	C35	45174-35-D		45175-35-D	45176-35-D	45316-35-D*	45317-35-D*		
SSI-M-71000-	1	1	2 5/8				6	C	C35	45177-35-D		45178-35-D	45179-35-D	45318-35-D*	45319-35-D*		
SSI-L-71000	1	1	3-1/4				6	C	C35	45180-35-D		45181-35-D	45182-35-D	45320-35-D*	45321-35-D*		
SSI-X-71000	1	1	4-1/8				7	C	C35	45183-35-D		45184-35-D	45185-35-D	45322-35-D*	45323-35-D*		
SSI-RN-71000-	1	1	1 1/4	2.250	0.960	4	B	C35	45324-35-D*		45325-35-D*	45326-35-D*	45327-35-D*	45328-35-D*			
SSI-RN-M-71000-	1	1	1 1/4	2.625	0.960	6	B	C35	45329-35-D*		45330-35-D*	45331-35-D*	45332-35-D*	45333-35-D*			
SSI-RN-L-71000-	1	1	1 1/4	3.375	0.960	6	B	C35	45334-35-D*		45335-35-D*	45336-35-D*	45337-35-D*	45338-35-D*			
SSI-RN-X-71000-	1	1	1 1/4	4.125	0.960	6	B	C35	45339-35-D*		45340-35-D*	45341-35-D*	45342-35-D*	45343-35-D*			

*Indicates Non Stock Standards

Introducing

SSI7



- **Ferrous Alloys Finisher**
- **Adapted Geometry for High Temp Alloys and Stainless Steels**
- **Designed for High Efficiency Machining**
- **Superior Surface finish**
- **Outstanding Tool Life**

SSI-7 Recommended Chip Loads

SSI-7

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 O-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
3/16	Peripheral	[P]	0.00097	0.00092	0.00080	0.00060	0.00068	0.00088
	Light Peripheral	[LP]	0.00116	0.00110	0.00095	0.00071	0.00081	0.00105
	Finishing	[F]	0.00204	0.00194	0.00168	0.00126	0.00142	0.00185
1/4	Peripheral	[P]	0.00129	0.00123	0.00106	0.00080	0.00090	0.00117
	Light Peripheral	[LP]	0.00154	0.00147	0.00127	0.00095	0.00108	0.00140
	Finishing	[F]	0.00272	0.00259	0.00223	0.00168	0.00190	0.00247
5/16	Peripheral	[P]	0.00161	0.00154	0.00133	0.00100	0.00113	0.00147
	Light Peripheral	[LP]	0.00193	0.00184	0.00158	0.00119	0.00135	0.00175
	Finishing	[F]	0.00339	0.00324	0.00279	0.00209	0.00237	0.00309
3/8	Peripheral	[P]	0.00194	0.00185	0.00159	0.00120	0.00135	0.00176
	Light Peripheral	[LP]	0.00231	0.00221	0.00190	0.00143	0.00162	0.00210
	Finishing	[F]	0.00407	0.00389	0.00335	0.00251	0.00285	0.00370
7/16	Peripheral	[P]	0.00226	0.00216	0.00186	0.00139	0.00158	0.00205
	Light Peripheral	[LP]	0.00270	0.00257	0.00222	0.00166	0.00189	0.00245
	Finishing	[F]	0.00475	0.00454	0.00391	0.00293	0.00332	0.00432
1/2	Peripheral	[P]	0.00258	0.00247	0.00212	0.00159	0.00181	0.00235
	Light Peripheral	[LP]	0.00308	0.00294	0.00253	0.00190	0.00215	0.00280
	Finishing	[F]	0.00543	0.00519	0.00447	0.00335	0.00380	0.00494
5/8	Peripheral	[P]	0.00323	0.00308	0.00266	0.00199	0.00226	0.00294
	Light Peripheral	[LP]	0.00385	0.00368	0.00317	0.00238	0.00269	0.00350
	Finishing	[F]	0.00679	0.00648	0.00558	0.00419	0.00475	0.00617
3/4	Peripheral	[P]	0.00388	0.00370	0.00319	0.00239	0.00271	0.00352
	Light Peripheral	[LP]	0.00462	0.00441	0.00380	0.00285	0.00323	0.00420
	Finishing	[F]	0.00815	0.00778	0.00670	0.00503	0.00570	0.00741
1	Peripheral	[P]	0.00517	0.00493	0.00425	0.00319	0.00361	0.00470
	Light Peripheral	[LP]	0.00616	0.00588	0.00507	0.00380	0.00431	0.00560
	Finishing	[F]	0.01086	0.01037	0.00894	0.00670	0.00760	0.00988

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00075	0.00084	0.00084	0.00088	0.00072	0.00072	0.00068	0.00084	0.00084	0.00072
0.00090	0.00100	0.00100	0.00105	0.00086	0.00086	0.00081	0.00100	0.00100	0.00086
0.00159	0.00176	0.00176	0.00185	0.00151	0.00151	0.00142	0.00176	0.00176	0.00151
0.00101	0.00112	0.00112	0.00117	0.00096	0.00096	0.00090	0.00112	0.00112	0.00096
0.00120	0.00133	0.00133	0.00140	0.00114	0.00114	0.00108	0.00133	0.00133	0.00114
0.00212	0.00235	0.00235	0.00247	0.00201	0.00201	0.00190	0.00235	0.00235	0.00201
0.00126	0.00140	0.00140	0.00147	0.00120	0.00120	0.00113	0.00140	0.00140	0.00120
0.00150	0.00167	0.00167	0.00175	0.00143	0.00143	0.00135	0.00167	0.00167	0.00143
0.00265	0.00294	0.00294	0.00309	0.00251	0.00251	0.00237	0.00294	0.00294	0.00251
0.00151	0.00168	0.00168	0.00176	0.00143	0.00143	0.00135	0.00168	0.00168	0.00143
0.00180	0.00200	0.00200	0.00210	0.00171	0.00171	0.00162	0.00200	0.00200	0.00171
0.00317	0.00353	0.00353	0.00370	0.00302	0.00302	0.00285	0.00353	0.00353	0.00302
0.00176	0.00196	0.00196	0.00205	0.00167	0.00167	0.00158	0.00196	0.00196	0.00167
0.00210	0.00233	0.00233	0.00245	0.00200	0.00200	0.00189	0.00233	0.00233	0.00200
0.00370	0.00412	0.00412	0.00432	0.00352	0.00352	0.00332	0.00412	0.00412	0.00352
0.00201	0.00224	0.00224	0.00235	0.00191	0.00191	0.00181	0.00224	0.00224	0.00191
0.00240	0.00267	0.00267	0.00280	0.00228	0.00228	0.00215	0.00267	0.00267	0.00228
0.00423	0.00470	0.00470	0.00494	0.00402	0.00402	0.00380	0.00470	0.00470	0.00402
0.00252	0.00280	0.00280	0.00294	0.00239	0.00239	0.00226	0.00280	0.00280	0.00239
0.00300	0.00333	0.00333	0.00350	0.00285	0.00285	0.00269	0.00333	0.00333	0.00285
0.00529	0.00588	0.00588	0.00617	0.00503	0.00503	0.00475	0.00588	0.00588	0.00503
0.00302	0.00336	0.00336	0.00352	0.00287	0.00287	0.00271	0.00336	0.00336	0.00287
0.00360	0.00400	0.00400	0.00420	0.00342	0.00342	0.00323	0.00400	0.00400	0.00342
0.00635	0.00705	0.00705	0.00741	0.00603	0.00603	0.00570	0.00705	0.00705	0.00603
0.00403	0.00447	0.00447	0.00470	0.00382	0.00382	0.00361	0.00447	0.00447	0.00382
0.00480	0.00534	0.00534	0.00560	0.00456	0.00456	0.00431	0.00534	0.00534	0.00456
0.00847	0.00941	0.00941	0.00988	0.00804	0.00804	0.00760	0.00941	0.00941	0.00804

SSI-7



SVI
Five Flute



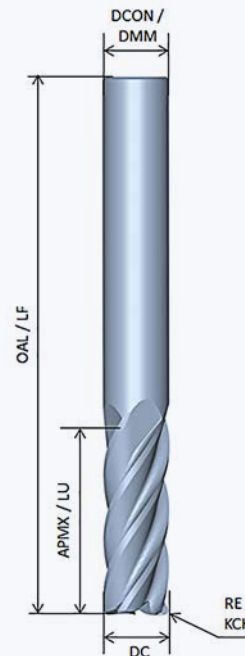
The SVI is a patented, five flute tool with both variable indexing and variable helixes. These features combine to provide the highest levels of protection against unwanted chatter and harmonics. The SVI-5 is the perfect tool for ramping at up to 3 degrees and helical interpolation of up to 3 degrees.

MAIN CHARACTERISTICS

- Flute Count (NOF): 5
- UnEqual Index
- Variable Helix
- Non-Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): -0.001"/-0.002"
- Corner Radius (RE): +0.001"/-0.001"



STYLE A

WORK MATERIAL

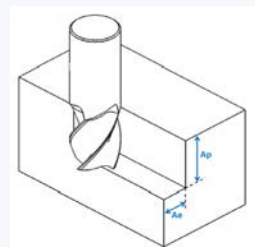


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	80%DC <= 100%DC	40%DC <= 80%DC	25%DC <= 40%DC	5%DC <= 25%DC	<= 5%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC	APMX



For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	Radius RE	Style	C10 EDP	C11 EDP
SVI-ST-50250-020	1/4	1/4	3/8	2	0.020	A	37219-70-D	37219-85-D
SVI-50250-020	1/4	1/4	3/4	2-1/2	0.020	A	37220-70-D	37220-85-D
SVI-L-50250-020	1/4	1/4	1-1/4	3-1/4	0.020	A	37221-70-D	37221-85-D
SVI-ST-50312-020	5/16	5/16	7/16	2-1/2	0.020	A	37222-70-D	37222-85-D
SVI-50312-020	5/16	5/16	13/16	2-1/2	0.020	A	37223-70-D	37223-85-D
SVI-L-50312-020	5/16	5/16	1-1/4	3-1/2	0.020	A	37224-70-D	37224-85-D
SVI-ST-50375-020	3/8	3/8	1/2	2-1/2	0.020	A	37225-70-D	37225-85-D
SVI-50375-020	3/8	3/8	1	2-1/2	0.020	A	37226-70-D	37226-85-D
SVI-L-50375-020	3/8	3/8	1-1/2	4	0.020	A	37227-70-D	37227-85-D
SVI-ST-50437-020	7/16	7/16	9/16	2-1/2	0.020	A	37228-70-D	37228-85-D
SVI-50437-020	7/16	7/16	1	3	0.020	A	37229-70-D	37229-85-D
SVI-L-50437-020	7/16	7/16	2	4	0.020	A	37230-70-D	37230-85-D
SVI-ST-50500-030	1/2	1/2	5/8	3	0.030	A	37231-70-D	37231-85-D
SVI-50500-030	1/2	1/2	1-1/4	3	0.030	A	37232-70-D	37232-85-D
SVI-L-50500-030	1/2	1/2	2	4	0.030	A	37233-70-D	37233-85-D
SVI-ST-50625-030	5/8	5/8	3/4	3	0.030	A	37234-70-D	37234-85-D
SVI-50625-030	5/8	5/8	1-5/8	3-1/2	0.030	A	37235-70-D	37235-85-D
SVI-L-50625-030	5/8	5/8	2-1/2	5	0.030	A	37236-70-D	37236-85-D
SVI-ST-50750-030	3/4	3/4	1	3	0.030	A	37237-70-D	37237-85-D
SVI-50750-030	3/4	3/4	1-5/8	4	0.030	A	37238-70-D	37238-85-D
SVI-L-50750-030	3/4	3/4	3-1/4	6	0.030	A	37239-70-D	37239-85-D
SVI-ST-51000-030	1	1	1-1/4	4	0.030	A	37240-70-D	37240-85-D
SVI-51000-030	1	1	2	5	0.030	A	37241-70-D	37241-85-D
SVI-L-51000-030	1	1	3-1/4	6	0.030	A	37242-70-D	37242-85-D



SVI Recommended Chip Loads

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
1/4	Slotting	[S]	0.00116	0.00110	0.00095	0.00071	0.00081	0.00105
	Heavy Peripheral	[HP]	0.00144	0.00138	0.00119	0.00089	0.00101	0.00131
	Peripheral	[P]	0.00158	0.00150	0.00130	0.00097	0.00110	0.00143
	Light Peripheral	[LP]	0.00188	0.00179	0.00155	0.00116	0.00131	0.00171
	Finishing	[F]	0.00331	0.00316	0.00272	0.00204	0.00232	0.00301
5/16	Slotting	[S]	0.00144	0.00138	0.00119	0.00089	0.00101	0.00131
	Heavy Peripheral	[HP]	0.00180	0.00172	0.00148	0.00111	0.00126	0.00164
	Peripheral	[P]	0.00197	0.00188	0.00162	0.00121	0.00138	0.00179
	Light Peripheral	[LP]	0.00235	0.00224	0.00193	0.00145	0.00164	0.00214
	Finishing	[F]	0.00414	0.00395	0.00341	0.00255	0.00289	0.00376
3/8	Slotting	[S]	0.00173	0.00165	0.00143	0.00107	0.00121	0.00158
	Heavy Peripheral	[HP]	0.00217	0.00207	0.00178	0.00134	0.00151	0.00197
	Peripheral	[P]	0.00236	0.00226	0.00194	0.00146	0.00165	0.00215
	Light Peripheral	[LP]	0.00282	0.00269	0.00232	0.00174	0.00197	0.00256
	Finishing	[F]	0.00497	0.00474	0.00409	0.00306	0.00347	0.00452
7/16	Slotting	[S]	0.00202	0.00193	0.00166	0.00125	0.00141	0.00184
	Heavy Peripheral	[HP]	0.00253	0.00241	0.00208	0.00156	0.00177	0.00230
	Peripheral	[P]	0.00276	0.00263	0.00227	0.00170	0.00193	0.00251
	Light Peripheral	[LP]	0.00329	0.00314	0.00270	0.00203	0.00230	0.00299
	Finishing	[F]	0.00580	0.00553	0.00477	0.00358	0.00405	0.00527
1/2	Slotting	[S]	0.00231	0.00221	0.00190	0.00143	0.00162	0.00210
	Heavy Peripheral	[HP]	0.00289	0.00276	0.00238	0.00178	0.00202	0.00263
	Peripheral	[P]	0.00315	0.00301	0.00259	0.00194	0.00220	0.00286
	Light Peripheral	[LP]	0.00376	0.00359	0.00309	0.00232	0.00263	0.00342
	Finishing	[F]	0.00662	0.00632	0.00545	0.00409	0.00463	0.00602
5/8	Slotting	[S]	0.00289	0.00276	0.00238	0.00178	0.00202	0.00263
	Heavy Peripheral	[HP]	0.00361	0.00345	0.00297	0.00223	0.00252	0.00328
	Peripheral	[P]	0.00394	0.00376	0.00324	0.00243	0.00275	0.00358
	Light Peripheral	[LP]	0.00470	0.00448	0.00386	0.00290	0.00328	0.00427
	Finishing	[F]	0.00828	0.00790	0.00681	0.00511	0.00579	0.00753
3/4	Slotting	[S]	0.00347	0.00331	0.00285	0.00214	0.00242	0.00315
	Heavy Peripheral	[HP]	0.00433	0.00413	0.00356	0.00267	0.00303	0.00394
	Peripheral	[P]	0.00473	0.00451	0.00389	0.00292	0.00330	0.00430
	Light Peripheral	[LP]	0.00564	0.00538	0.00464	0.00348	0.00394	0.00512
	Finishing	[F]	0.00994	0.00948	0.00817	0.00613	0.00695	0.00903
1	Slotting	[S]	0.00462	0.00441	0.00380	0.00285	0.00323	0.00420
	Heavy Peripheral	[HP]	0.00578	0.00551	0.00475	0.00356	0.00404	0.00525
	Peripheral	[P]	0.00630	0.00601	0.00518	0.00389	0.00441	0.00573
	Light Peripheral	[LP]	0.00752	0.00717	0.00618	0.00464	0.00525	0.00683
	Finishing	[F]	0.01325	0.01265	0.01090	0.00817	0.00926	0.01204

Stainless Steels

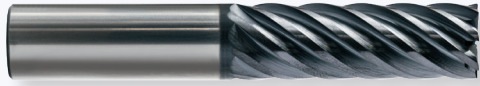
High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00090	0.00100	0.00100	0.00105	0.00086	0.00086	0.00081	0.00100	0.00100	0.00086
0.00113	0.00125	0.00125	0.00131	0.00107	0.00107	0.00101	0.00125	0.00125	0.00107
0.00123	0.00136	0.00136	0.00143	0.00117	0.00117	0.00110	0.00136	0.00136	0.00117
0.00146	0.00163	0.00163	0.00171	0.00139	0.00139	0.00131	0.00163	0.00163	0.00139
0.00258	0.00287	0.00287	0.00301	0.00245	0.00245	0.00232	0.00287	0.00287	0.00245
0.00113	0.00125	0.00125	0.00131	0.00107	0.00107	0.00101	0.00125	0.00125	0.00107
0.00141	0.00156	0.00156	0.00164	0.00134	0.00134	0.00126	0.00156	0.00156	0.00134
0.00153	0.00170	0.00170	0.00179	0.00146	0.00146	0.00138	0.00170	0.00170	0.00146
0.00183	0.00203	0.00203	0.00214	0.00174	0.00174	0.00164	0.00203	0.00203	0.00174
0.00323	0.00358	0.00358	0.00376	0.00306	0.00306	0.00289	0.00358	0.00358	0.00306
0.00135	0.00150	0.00150	0.00158	0.00128	0.00128	0.00121	0.00150	0.00150	0.00128
0.00169	0.00188	0.00188	0.00197	0.00160	0.00160	0.00151	0.00188	0.00188	0.00160
0.00184	0.00205	0.00205	0.00215	0.00175	0.00175	0.00165	0.00205	0.00205	0.00175
0.00220	0.00244	0.00244	0.00256	0.00209	0.00209	0.00197	0.00244	0.00244	0.00209
0.00387	0.00430	0.00430	0.00452	0.00368	0.00368	0.00347	0.00430	0.00430	0.00368
0.00158	0.00175	0.00175	0.00184	0.00150	0.00150	0.00141	0.00175	0.00175	0.00150
0.00197	0.00219	0.00219	0.00230	0.00187	0.00187	0.00177	0.00219	0.00219	0.00187
0.00215	0.00239	0.00239	0.00251	0.00204	0.00204	0.00193	0.00239	0.00239	0.00204
0.00256	0.00285	0.00285	0.00299	0.00243	0.00243	0.00230	0.00285	0.00285	0.00243
0.00452	0.00502	0.00502	0.00527	0.00429	0.00429	0.00405	0.00502	0.00502	0.00429
0.00180	0.00200	0.00200	0.00210	0.00171	0.00171	0.00162	0.00200	0.00200	0.00171
0.00225	0.00250	0.00250	0.00263	0.00214	0.00214	0.00202	0.00250	0.00250	0.00214
0.00245	0.00273	0.00273	0.00286	0.00233	0.00233	0.00220	0.00273	0.00273	0.00233
0.00293	0.00325	0.00325	0.00342	0.00278	0.00278	0.00263	0.00325	0.00325	0.00278
0.00516	0.00574	0.00574	0.00602	0.00490	0.00490	0.00463	0.00574	0.00574	0.00490
0.00225	0.00250	0.00250	0.00263	0.00214	0.00214	0.00202	0.00250	0.00250	0.00214
0.00281	0.00313	0.00313	0.00328	0.00267	0.00267	0.00252	0.00313	0.00313	0.00267
0.00307	0.00341	0.00341	0.00358	0.00292	0.00292	0.00275	0.00341	0.00341	0.00292
0.00366	0.00407	0.00407	0.00427	0.00348	0.00348	0.00328	0.00407	0.00407	0.00348
0.00645	0.00717	0.00717	0.00753	0.00613	0.00613	0.00579	0.00717	0.00717	0.00613
0.00270	0.00300	0.00300	0.00315	0.00257	0.00257	0.00242	0.00300	0.00300	0.00257
0.00338	0.00375	0.00375	0.00394	0.00321	0.00321	0.00303	0.00375	0.00375	0.00321
0.00368	0.00409	0.00409	0.00430	0.00350	0.00350	0.00330	0.00409	0.00409	0.00350
0.00439	0.00488	0.00488	0.00512	0.00417	0.00417	0.00394	0.00488	0.00488	0.00417
0.00774	0.00860	0.00860	0.00903	0.00736	0.00736	0.00695	0.00860	0.00860	0.00736
0.00360	0.00400	0.00400	0.00420	0.00342	0.00342	0.00323	0.00400	0.00400	0.00342
0.00450	0.00500	0.00500	0.00525	0.00428	0.00428	0.00404	0.00500	0.00500	0.00428
0.00491	0.00546	0.00546	0.00573	0.00466	0.00466	0.00441	0.00546	0.00546	0.00466
0.00586	0.00651	0.00651	0.00683	0.00556	0.00556	0.00525	0.00651	0.00651	0.00556
0.01032	0.01147	0.01147	0.01204	0.00981	0.00981	0.00926	0.01147	0.01147	0.00981

HiTe_x
Multi Flute





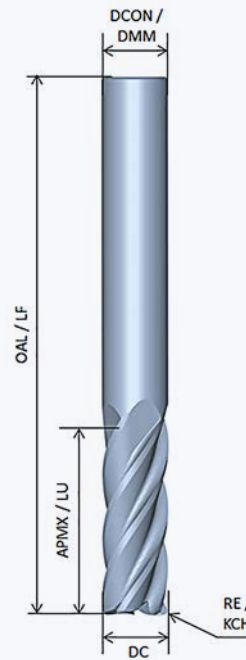
The HiTe_x, HiTe_x-C series is designed for outstanding performance in nickel and cobalt based high temperature alloys, as well as other difficult to machine materials. The corrosion and heat resistance of the nickel and cobalt based metals give rise to corresponding machining challenges. Examples of frequently encountered nickel based alloys include Waspalloy, Hastelloy, Inconel 718, and Inconel 625. Cobalt based alloys include, but are not limited to, Stellite, Haynes 188 and Haynes 230.

MAIN CHARACTERISTICS

- Flute Count (NOF): 6-7
- UnEqual Index
- Variable Helix
- Non-Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): -0.001"/-0.002"
- Corner Radius (RE): +0.001"/-0.001"



STYLE A

WORK MATERIAL

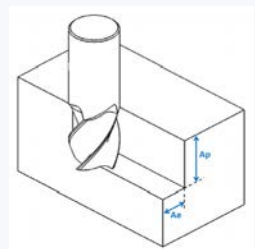
S

COATING



RECOMMENDED OPERATION

	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	25%DC < ≤ 40%DC	5%DC < ≤ 25%DC	≤ 5%DC
AP	1.0 to 1.5 x DC	2.0 x DC	APMX



For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	Style	Coating	No. of Flutes	SQ	Radius Offering			
									0.020	0.030	0.060	0.120
HiTe _x ST60250-	1/4	1/4	3/8	2	A	C11	6	45022-85-D	45023-85-D	54767-85-D		
HiTe _x 60250-	1/4	1/4	3/4	2-1/2	A	C11	6	44945-85-D	44834-85-D	54768-85-D		
HiTe _x M60250-	1/4	1/4	1-1/4	3	A	C11	6	44946-85-D	44835-85-D	54769-85-D		
HiTe _x ST60312-	5/16	5/16	7/16	2-1/2	A	C11	6	44947-85-D	45025-85-D	54770-85-D		
HiTe _x 60312-	5/16	5/16	13/16	2-1/2	A	C11	6	44947-85-D	44836-85-D	54771-85-D		
HiTe _x M60312-	5/16	5/16	1-1/4	3	A	C11	6	44948-85-D	44837-85-D	54772-85-D		
HiTe _x ST60375-	3/8	3/8	1/2	2-1/2	A	C11	6	45026-85-D	45027-85-D	54773-85-D		
HiTe _x 60375-	3/8	3/8	1	2-1/2	A	C11	6	44949-85-D	44838-85-D	54775-85-D		
HiTe _x M60375-	3/8	3/8	1-1/4	3	A	C11	6	44950-85-D	44839-85-D	54776-85-D		
HiTe _x ST60437-	7/16	7/16	9/16	2-1/2	A	C11	6	45028-85-D	45029-85-D	54778-85-D		
HiTe _x 60437-	7/16	7/16	1	3	A	C11	6	44951-85-D	44851-85-D	54779-85-D		
HiTe _x M60437-	7/16	7/16	1-1/4	3-1/2	A	C11	6	44952-85-D	44853-85-D	54780-85-D		
HiTe _x ST70500-	1/2	1/2	5/8	3	A	C11	7	45030-85-D		45021-85-D	45031-85-D	45056-85-D
HiTe _x 70500-	1/2	1/2	1-1/4	3	A	C11	7	44953-85-D		44861-85-D	44873-85-D	44881-85-D
HiTe _x M70500-	1/2	1/2	1-3/4	4	A	C11	7	44954-85-D		44862-85-D	44874-85-D	44882-85-D
HiTe _x ST70625-	5/8	5/8	3/4	3	A	C11	7	45032-85-D		45033-85-D	45034-85-D	45035-85-D
HiTe _x 70625-	5/8	5/8	1-5/8	3-1/2	A	C11	7	44955-85-D		44863-85-D	44875-85-D	44883-85-D
HiTe _x M70625-	5/8	5/8	2	4	A	C11	7	44956-85-D		44864-85-D	44876-85-D	44884-85-D
HiTe _x ST70750-	3/4	3/4	1	3	A	C11	7	45036-85-D		45037-85-D	45038-85-D	45039-85-D
HiTe _x 70750-	3/4	3/4	1-5/8	4	A	C11	7	44957-85-D		44865-85-D	44877-85-D	44885-85-D
HiTe _x M70750-	3/4	3/4	2-1/4	5	A	C11	7	44958-85-D		44866-85-D	44878-85-D	44886-85-D
HiTe _x ST71000-	1	1	1-1/4	4	A	C11	7	45052-85-D		45053-85-D	45054-85-D	45055-85-D
HiTe _x 71000-	1	1	2	5	A	C11	7	44959-85-D		44867-85-D	44879-85-D	44887-85-D
HiTe _x M71000-	1	1	2-5/8	6	A	C11	7	44960-85-D		44868-85-D	44880-85-D	44888-85-D



DATA FLUTE™

New HiTe_x/HiTe_x-C Series

Designed to Optimize Performance
in High Temp Alloys and
Other Hard to Machine Materials



HiTex Recommended Chip Loads

HiTex

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 O-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
1/4	Peripheral	[P]	0.00145	0.00138	0.00119	0.00089	0.00101	0.00132
	Light Peripheral	[LP]	0.00173	0.00165	0.00142	0.00107	0.00121	0.00157
	Finishing	[F]	0.00305	0.00291	0.00251	0.00188	0.00213	0.00277
5/16	Peripheral	[P]	0.00181	0.00173	0.00149	0.00112	0.00127	0.00165
	Light Peripheral	[LP]	0.00216	0.00206	0.00178	0.00133	0.00151	0.00196
	Finishing	[F]	0.00381	0.00364	0.00313	0.00235	0.00266	0.00346
3/8	Peripheral	[P]	0.00217	0.00208	0.00179	0.00134	0.00152	0.00198
	Light Peripheral	[LP]	0.00259	0.00248	0.00213	0.00160	0.00181	0.00236
	Finishing	[F]	0.00457	0.00436	0.00376	0.00282	0.00320	0.00416
7/16	Peripheral	[P]	0.00254	0.00242	0.00209	0.00156	0.00177	0.00231
	Light Peripheral	[LP]	0.00303	0.00289	0.00249	0.00187	0.00211	0.00275
	Finishing	[F]	0.00533	0.00509	0.00439	0.00329	0.00373	0.00485
1/2	Peripheral	[P]	0.00258	0.00247	0.00212	0.00159	0.00181	0.00235
	Light Peripheral	[LP]	0.00308	0.00294	0.00253	0.00190	0.00215	0.00280
	Finishing	[F]	0.00543	0.00519	0.00447	0.00335	0.00380	0.00494
5/8	Peripheral	[P]	0.00323	0.00308	0.00266	0.00199	0.00226	0.00294
	Light Peripheral	[LP]	0.00385	0.00368	0.00317	0.00238	0.00269	0.00350
	Finishing	[F]	0.00679	0.00648	0.00558	0.00419	0.00475	0.00617
3/4	Peripheral	[P]	0.00388	0.00370	0.00319	0.00239	0.00271	0.00352
	Light Peripheral	[LP]	0.00462	0.00441	0.00380	0.00285	0.00323	0.00420
	Finishing	[F]	0.00815	0.00778	0.00670	0.00503	0.00570	0.00741
1	Peripheral	[P]	0.00517	0.00493	0.00425	0.00319	0.00361	0.00470
	Light Peripheral	[LP]	0.00616	0.00588	0.00507	0.00380	0.00431	0.00560
	Finishing	[F]	0.01086	0.01037	0.00894	0.00670	0.00760	0.00988

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00113	0.00125	0.00125	0.00132	0.00107	0.00107	0.00101	0.00125	0.00125	0.00107
0.00135	0.00150	0.00150	0.00157	0.00128	0.00128	0.00121	0.00150	0.00150	0.00128
0.00237	0.00264	0.00264	0.00277	0.00226	0.00226	0.00213	0.00264	0.00264	0.00226
0.00141	0.00157	0.00157	0.00165	0.00134	0.00134	0.00127	0.00157	0.00157	0.00134
0.00168	0.00187	0.00187	0.00196	0.00160	0.00160	0.00151	0.00187	0.00187	0.00160
0.00297	0.00330	0.00330	0.00346	0.00282	0.00282	0.00266	0.00330	0.00330	0.00282
0.00169	0.00188	0.00188	0.00198	0.00161	0.00161	0.00152	0.00188	0.00188	0.00161
0.00202	0.00224	0.00224	0.00236	0.00192	0.00192	0.00181	0.00224	0.00224	0.00192
0.00356	0.00396	0.00396	0.00416	0.00338	0.00338	0.00320	0.00396	0.00396	0.00338
0.00198	0.00220	0.00220	0.00231	0.00188	0.00188	0.00177	0.00220	0.00220	0.00188
0.00236	0.00262	0.00262	0.00275	0.00224	0.00224	0.00211	0.00262	0.00262	0.00224
0.00416	0.00462	0.00462	0.00485	0.00395	0.00395	0.00373	0.00462	0.00462	0.00395
0.00201	0.00224	0.00224	0.00235	0.00191	0.00191	0.00181	0.00224	0.00224	0.00191
0.00240	0.00267	0.00267	0.00280	0.00228	0.00228	0.00215	0.00267	0.00267	0.00228
0.00423	0.00470	0.00470	0.00494	0.00402	0.00402	0.00380	0.00470	0.00470	0.00402
0.00252	0.00280	0.00280	0.00294	0.00239	0.00239	0.00226	0.00280	0.00280	0.00239
0.00300	0.00333	0.00333	0.00350	0.00285	0.00285	0.00269	0.00333	0.00333	0.00285
0.00529	0.00588	0.00588	0.00617	0.00503	0.00503	0.00475	0.00588	0.00588	0.00503
0.00302	0.00336	0.00336	0.00352	0.00287	0.00287	0.00271	0.00336	0.00336	0.00287
0.00360	0.00400	0.00400	0.00420	0.00342	0.00342	0.00323	0.00400	0.00400	0.00342
0.00635	0.00705	0.00705	0.00741	0.00603	0.00603	0.00570	0.00705	0.00705	0.00603
0.00403	0.00447	0.00447	0.00470	0.00382	0.00382	0.00361	0.00447	0.00447	0.00382
0.00480	0.00534	0.00534	0.00560	0.00456	0.00456	0.00431	0.00534	0.00534	0.00456
0.00847	0.00941	0.00941	0.00988	0.00804	0.00804	0.00760	0.00941	0.00941	0.00804

HITeX



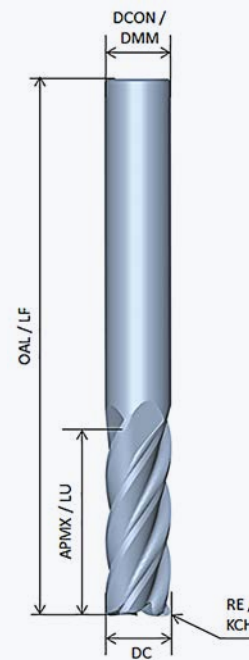
The HiTe_x, HiTe_x-C series is designed for outstanding performance in nickel and cobalt based high temperature alloys, as well as other difficult to machine materials. The corrosion and heat resistance of the nickel and cobalt based metals give rise to corresponding machining challenges. Examples of frequently encountered nickel based alloys include Waspalloy, Hastelloy, Inconel 718, and Inconel 625. Cobalt based alloys include, but are not limited to, Stellite, Haynes 188 and Haynes 230.

MAIN CHARACTERISTICS

- Flute Count (NOF): 6
- UnEqual Index
- Variable Helix
- Non-Center Cutting
- RH-C / RH-H
- Serrations

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): -0.001"/-0.002"
- Corner Radius (RE): +0.001"/-0.001"



STYLE A

WORK MATERIAL

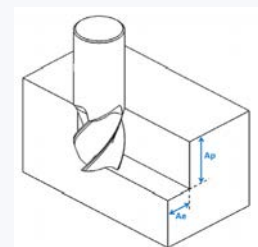
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COATING

C11

RECOMMENDED OPERATION

	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)
AE	40%DC <= 80%DC	25%DC <= 40%DC	25%DC <= 40%DC
AP	0.5 to 1.0 x DC	1.0 to 1.5 x DC	1.0 to 1.5 x DC



For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	Style	Coating	No. of Flutes	Radius Offering	
								0.020	0.030
HiTe _x STC60250-020C11	1/4	1/4	3/8	2	A	C11	6	44889-85-D	
HiTe _x C60250-020C11	1/4	1/4	3/4	2-1/2	A	C11	6	44890-85-D	
HiTe _x MC60250-020C11	1/4	1/4	1-1/4	3	A	C11	6	44891-85-D	
HiTe _x STC60312-020C11	5/16	5/16	7/16	2-1/2	A	C11	6	44892-85-D	
HiTe _x C60312-020C11	5/16	5/16	13/16	2-1/2	A	C11	6	44893-85-D	
HiTe _x MC60312-020C11	5/16	5/16	1-1/4	3	A	C11	6	44894-85-D	
HiTe _x STC60375-020C11	3/8	3/8	1/2	2-1/2	A	C11	6	44895-85-D	
HiTe _x C60375-020C11	3/8	3/8	1	2-1/2	A	C11	6	44896-85-D	
HiTe _x MC60375-020C11	3/8	3/8	1-1/4	3	A	C11	6	44897-85-D	
HiTe _x STC60437-020C11	7/16	7/16	9/16	2-1/2	A	C11	6	44898-85-D	
HiTe _x C60437-020C11	7/16	7/16	1	3	A	C11	6	44899-85-D	
HiTe _x MC60437-020C11	7/16	7/16	1-1/4	3-1/2	A	C11	6	44900-85-D	
HiTe _x STC60500-030C11	1/2	1/2	5/8	3	A	C11	6		44901-85-D
HiTe _x C60500-030C11	1/2	1/2	1-1/4	3	A	C11	6		44902-85-D
HiTe _x MC60500-030C11	1/2	1/2	1-3/4	4	A	C11	6		44903-85-D
HiTe _x STC60625-030C11	5/8	5/8	3/4	3	A	C11	6		44904-85-D
HiTe _x C60625-030C11	5/8	5/8	1-5/8	3-1/2	A	C11	6		44905-85-D
HiTe _x MC60625-030C11	5/8	5/8	2	4	A	C11	6		44906-85-D
HiTe _x STC60750-030C11	3/4	3/4	1	3	A	C11	6		44907-85-D
HiTe _x C60750-030C11	3/4	3/4	1-5/8	4	A	C11	6		44908-85-D
HiTe _x MC60750-030C11	3/4	3/4	2-1/4	5	A	C11	6		44909-85-D
HiTe _x STC61000-030C11	1	1	1-1/4	4	A	C11	6		44919-85-D
HiTe _x C61000-030C11	1	1	2	5	A	C11	6		44921-85-D
HiTe _x MC61000-030C11	1	1	2-5/8	6	A	C11	6		44923-85-D

HiTex-C Recommended Chip Loads

HiTex-C

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
1/4	Heavy Peripheral	[HP]	0.00139	0.00133	0.00115	0.00086	0.00098	0.00127
	Peripheral	[P]	0.00152	0.00145	0.00125	0.00094	0.00106	0.00138
	Light Peripheral	[LP]	0.00182	0.00173	0.00149	0.00112	0.00127	0.00165
5/16	Heavy Peripheral	[HP]	0.00174	0.00166	0.00143	0.00108	0.00122	0.00158
	Peripheral	[P]	0.00190	0.00182	0.00156	0.00117	0.00133	0.00173
	Light Peripheral	[LP]	0.00227	0.00217	0.00187	0.00140	0.00159	0.00206
3/8	Heavy Peripheral	[HP]	0.00209	0.00200	0.00172	0.00129	0.00146	0.00190
	Peripheral	[P]	0.00228	0.00218	0.00188	0.00141	0.00160	0.00208
	Light Peripheral	[LP]	0.00272	0.00260	0.00224	0.00168	0.00190	0.00248
7/16	Heavy Peripheral	[HP]	0.00244	0.00233	0.00201	0.00151	0.00171	0.00222
	Peripheral	[P]	0.00266	0.00254	0.00219	0.00164	0.00186	0.00242
	Light Peripheral	[LP]	0.00318	0.00303	0.00261	0.00196	0.00222	0.00289
1/2	Heavy Peripheral	[HP]	0.00279	0.00266	0.00229	0.00172	0.00195	0.00254
	Peripheral	[P]	0.00304	0.00291	0.00250	0.00188	0.00213	0.00277
	Light Peripheral	[LP]	0.00363	0.00347	0.00299	0.00224	0.00254	0.00330
5/8	Heavy Peripheral	[HP]	0.00349	0.00333	0.00287	0.00215	0.00244	0.00317
	Peripheral	[P]	0.00380	0.00363	0.00313	0.00235	0.00266	0.00346
	Light Peripheral	[LP]	0.00454	0.00433	0.00373	0.00280	0.00317	0.00413
3/4	Heavy Peripheral	[HP]	0.00418	0.00399	0.00344	0.00258	0.00293	0.00380
	Peripheral	[P]	0.00457	0.00436	0.00375	0.00282	0.00319	0.00415
	Light Peripheral	[LP]	0.00545	0.00520	0.00448	0.00336	0.00381	0.00495
1	Heavy Peripheral	[HP]	0.00558	0.00533	0.00459	0.00344	0.00390	0.00507
	Peripheral	[P]	0.00609	0.00581	0.00501	0.00375	0.00426	0.00553
	Light Peripheral	[LP]	0.00726	0.00693	0.00597	0.00448	0.00508	0.00660

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00109	0.00121	0.00121	0.00127	0.00103	0.00103	0.00098	0.00121	0.00121	0.00103
0.00119	0.00132	0.00132	0.00138	0.00113	0.00113	0.00106	0.00132	0.00132	0.00113
0.00141	0.00157	0.00157	0.00165	0.00134	0.00134	0.00127	0.00157	0.00157	0.00134
0.00136	0.00151	0.00151	0.00158	0.00129	0.00129	0.00122	0.00151	0.00151	0.00129
0.00148	0.00165	0.00165	0.00173	0.00141	0.00141	0.00133	0.00165	0.00165	0.00141
0.00177	0.00196	0.00196	0.00206	0.00168	0.00168	0.00159	0.00196	0.00196	0.00168
0.00163	0.00181	0.00181	0.00190	0.00155	0.00155	0.00146	0.00181	0.00181	0.00155
0.00178	0.00198	0.00198	0.00208	0.00169	0.00169	0.00160	0.00198	0.00198	0.00169
0.00212	0.00236	0.00236	0.00248	0.00202	0.00202	0.00190	0.00236	0.00236	0.00202
0.00190	0.00211	0.00211	0.00222	0.00181	0.00181	0.00171	0.00211	0.00211	0.00181
0.00208	0.00231	0.00231	0.00242	0.00197	0.00197	0.00186	0.00231	0.00231	0.00197
0.00248	0.00275	0.00275	0.00289	0.00235	0.00235	0.00222	0.00275	0.00275	0.00235
0.00217	0.00242	0.00242	0.00254	0.00206	0.00206	0.00195	0.00242	0.00242	0.00206
0.00237	0.00263	0.00263	0.00277	0.00225	0.00225	0.00213	0.00263	0.00263	0.00225
0.00283	0.00314	0.00314	0.00330	0.00269	0.00269	0.00254	0.00314	0.00314	0.00269
0.00272	0.00302	0.00302	0.00317	0.00258	0.00258	0.00244	0.00302	0.00302	0.00258
0.00296	0.00329	0.00329	0.00346	0.00282	0.00282	0.00266	0.00329	0.00329	0.00282
0.00354	0.00393	0.00393	0.00413	0.00336	0.00336	0.00317	0.00393	0.00393	0.00336
0.00326	0.00362	0.00362	0.00380	0.00310	0.00310	0.00293	0.00362	0.00362	0.00310
0.00356	0.00395	0.00395	0.00415	0.00338	0.00338	0.00319	0.00395	0.00395	0.00338
0.00424	0.00471	0.00471	0.00495	0.00403	0.00403	0.00381	0.00471	0.00471	0.00403
0.00435	0.00483	0.00483	0.00507	0.00413	0.00413	0.00390	0.00483	0.00483	0.00413
0.00474	0.00527	0.00527	0.00553	0.00451	0.00451	0.00426	0.00527	0.00527	0.00451
0.00566	0.00629	0.00629	0.00660	0.00537	0.00537	0.00508	0.00629	0.00629	0.00537



DM-BN
Two Flute



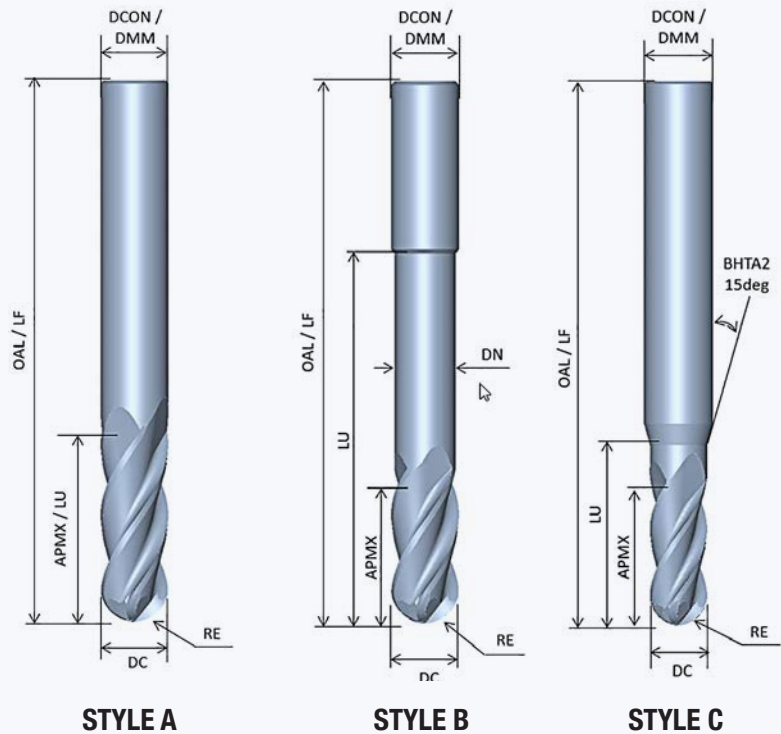
Data Flute has re-engineered the Die Mold series solid carbide, ball-nose end-mills for hard milling, mold applications. These material and application specific tools permit machinists to use the newest, most productive high-speed machining techniques to achieve superior finish, requiring little or no handwork, while also extending tool life.

MAIN CHARACTERISTICS

- Flute Count (NOF): 2
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h6
- Cutting Diameter (DC): +0.000"/-0.001"
- Corner Radius (RE): +0.0000"/-0.0005"



WORK MATERIAL

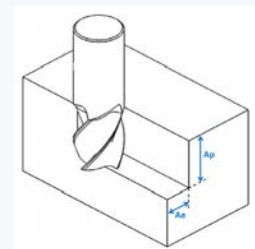
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COATING



RECOMMENDED OPERATION

	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	5%DC < \leq 25%DC	\leq 5%DC
AP	2.0 x DC	APMX



For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



Tapered Shank Two Flute

METRIC											
Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Neck Dia DN	LF	Angle	Style	C11 EDP	C19 EDP
DM-BN-2001	1	3	1	40	2	0.7	8.4	10	C	54341-85-D	54341-19-D
DM-BN-2002	2	4	2	50	4	1.7	10.5	10	C	54342-85-D	54342-19-D
DM-BN-2003	3	6	3	57	6	2.7	15.4	10	C	54343-85-D	54343-19-D
DM-BN-2004	4	6	4	57	8	3.7	12.3	15	C	54344-85-D	54344-19-D
DM-BN-L-2004	4	6	4	75	8	3.7	12.3	15	C	54363-85-D	54363-19-D
DM-BN-2005	5	6	5	57	10	4.6	12.7	15	C	54345-85-D	54345-19-D
DM-BN-L-2005	5	6	5	100	10	4.6	12.7	15	C	54365-85-D	54365-19-D
IMPERIAL											
Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Neck Dia DN	LF	Angle	Style	C11 EDP	C19 EDP
DM-BN-20062	1/16	1/4	1/16	2-1/2	1/8	0.05	0.5	15	C	52235-85-D	52235-19-D
DM-BN-20093	3/32	1/4	3/32	2-1/2	3/16	0.082	0.5	15	C	52237-85-D	52237-19-D
DM-BN-20125	1/8	1/4	1/8	3	1/4	0.113	0.51	15	C	52239-85-D	52239-19-D
DM-BN-20187	3/16	1/4	3/16	3	3/8	0.174	0.515	15	C	52241-85-D	52241-19-D

Necked Shank Two Flute

METRIC									
Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Neck Dia DN	Style	C11 EDP	C19 EDP
DM-BN-RN-2006	6	6	6	57	20	5.5	B	54346-85-D	54346-19-D
DM-BN-RN-L-2006	6	6	6	100	20	5.5	B	54347-85-D	54347-19-D
DM-BN-RN-2008	8	8	8	63	26	7.4	B	54348-85-D	54348-19-D
DM-BN-RN-L-2008	8	8	8	100	26	7.4	B	54350-85-D	54350-19-D
DM-BN-RN-2010	10	10	10	72	31	9.2	B	54351-85-D	54351-19-D
DM-BN-RN-L-2010	10	10	10	100	31	9.2	B	54352-85-D	54352-19-D
DM-BN-RN-2012	12	12	12	83	37	11	B	54353-85-D	54353-19-D
DM-BN-RN-L-2012	12	12	12	110	37	11	B	54354-85-D	54354-19-D
DM-BN-RN-2016	16	16	16	83	43	15	B	54355-85-D	54355-19-D
DM-BN-RN-L-2016	16	16	16	140	43	15	B	54356-85-D	54356-19-D
DM-BN-RN-2020	20	20	20	104	53	19	B	54357-85-D	54357-19-D
DM-BN-RN-L-2020	20	20	20	160	53	19	B	54358-85-D	54358-19-D

Straight Shank Two Flute

METRIC							
Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	Style	C11 EDP	C19 EDP
DM-BN-2006	6	6	6	57	A	54366-85-D	54366-19-D
DM-BN-L-2006	6	6	6	100	A	54368-85-D	54368-19-D
DM-BN-2008	8	8	8	63	A	54369-85-D	54369-19-D
DM-BN-L-2008	8	8	8	100	A	54370-85-D	54370-19-D
DM-BN-2010	10	10	10	72	A	54371-85-D	54371-19-D
DM-BN-L-2010	10	10	10	100	A	54373-85-D	54373-19-D
DM-BN-2012	12	12	12	83	A	54374-85-D	54374-19-D
DM-BN-L-2012	12	12	12	110	A	54375-85-D	54375-19-D
DM-BN-2016	16	16	16	83	A	54377-85-D	54377-19-D
DM-BN-L-2016	16	16	16	140	A	54378-85-D	54378-19-D
DM-BN-2020	20	20	20	104	A	54379-85-D	54379-19-D
DM-BN-L-2020	20	20	20	160	A	54380-85-D	54380-19-D

IMPERIAL							
Part Number	Dia. DC	Shank DCON	LOC APMX	OAL OAL/FL	Style	C11 EDP	C19 EDP
DM-BN-20250	1/4	1/4	1/4	3	A	52243-85-D	52243-19-D
DM-BN-20312	5/16	5/16	5/16	4	A	52245-85-D	52245-19-D
DM-BN-20375	3/8	3/8	3/8	4	A	52247-85-D	52247-19-D
DM-BN-20437	7/16	7/16	7/16	4	A	52249-85-D	52249-19-D
DM-BN-20500	1/2	1/2	1/2	4	A	52253-85-D	52253-19-D



MH • MH-CR
Multi Flute



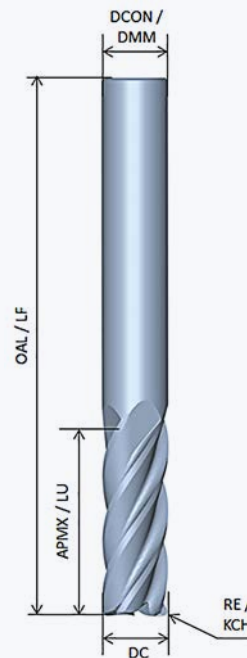
Our MH series is the tool of choice for finishing and light profile roughing in ferrous materials. The odd number of flutes disrupts unwanted harmonics. Our medium helix provides an optimum shear angle to aid chip evacuation. We have a full offering of stub, standard, medium, long and extra long lengths of cut.

MAIN CHARACTERISTICS

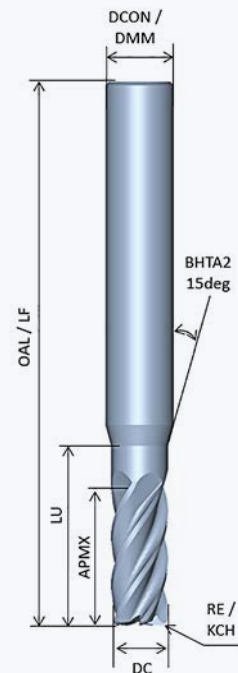
- Flute Count (NOF): 5
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): $-0.001''/-0.002''$
- Corner Radius (RE): $+0.001''/-0.001''$



STYLE A



STYLE C

WORK MATERIAL

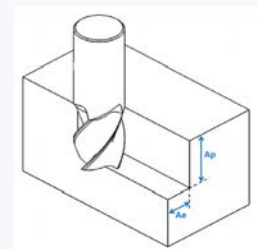


COATING



RECOMMENDED OPERATION

	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	25%DC <= 40%DC	5%DC <= 25%DC	<= 5%DC
AP	1.0 to 1.5 x DC	2.0 x DC	APMX



MH

For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	No. of Flutes	Style	EDP	C4 EDP	C11 EDP	C10 EDP
MH-ST-50125-375	1/8	3/8	1/4	2-1/2	5	A	52100-00-D	52100-89-D	52100-85-D	52100-70-D
MH-ST-50125	1/8	1/8	1/4	1-1/2	5	A	40251-00-D	40251-89-D	40251-85-D	40251-70-D
MH-50125-375	1/8	3/8	1/2	2-1/2	5	A	52118-00-D	52118-89-D	52118-85-D	52118-70-D
MH-50125	1/8	1/8	1/2	1-1/2	5	A	39696-00-D	39696-89-D	39696-85-D	39696-70-D
MH-ST-50156	5/32	3/16	5/16	2	5	C	40259-00-D	40259-89-D	40259-85-D	40259-70-D
MH-50156	5/32	3/16	9/16	2	5	C	39704-00-D	39704-89-D	39704-85-D	39704-70-D
MH-ST-50187-375	3/16	3/8	5/16	2-1/2	5	A	52106-00-D	52106-89-D	52106-85-D	52106-70-D
MH-ST-50187	3/16	3/16	5/16	2	5	A	40267-00-D	40267-89-D	40267-85-D	40267-70-D
MH-50187-375	3/16	3/8	5/8	2-1/2	5	A	52124-00-D	52124-89-D	52124-85-D	52124-70-D
MH-50187	3/16	3/16	9/16	2	5	A	39712-00-D	39712-89-D	39712-85-D	39712-70-D
MH-ST-50218	7/32	1/4	3/8	2	5	C	40275-00-D	40275-89-D	40275-85-D	40275-70-D
MH-50218	7/32	1/4	3/4	2-1/2	5	C	39720-00-D	39720-89-D	39720-85-D	39720-70-D
MH-ST-50250-375	1/4	3/8	3/8	2-1/2	5	A	52112-00-D	52112-89-D	52112-85-D	52112-70-D
MH-ST-50250	1/4	1/4	3/8	2	5	A	40283-00-D	40283-89-D	40283-85-D	40283-70-D
MH-50250-375	1/4	3/8	3/4	2-1/2	5	A	52130-00-D	52130-89-D	52130-85-D	52130-70-D
MH-50250	1/4	1/4	3/4	2-1/2	5	A	39728-00-D	39728-89-D	39728-85-D	39728-70-D
MH-L-50250	1/4	1/4	1-1/4	4	5	A	39912-00-D	39912-89-D	39912-85-D	39912-70-D
MH-ST-50281	9/32	5/16	7/16	2	5	C	40291-00-D	40291-89-D	40291-85-D	40291-70-D
MH-50281	9/32	5/16	13/16	2-1/2	5	C	39736-00-D	39736-89-D	39736-85-D	39736-70-D
MH-ST-50312	5/16	5/16	7/16	2	5	A	40299-00-D	40299-89-D	40299-85-D	40299-70-D
MH-50312	5/16	5/16	13/16	2-1/2	5	A	39744-00-D	39744-89-D	39744-85-D	39744-70-D
MH-L-50312	5/16	5/16	1-1/4	4	5	A	39920-00-D	39920-89-D	39920-85-D	39920-70-D
MH-X-50312	5/16	5/16	2-1/8	4	5	A	40379-00-D	40379-89-D	40379-85-D	40379-70-D
MH-ST-50343	11/32	3/8	1/2	2	5	C	40307-00-D	40307-89-D	40307-85-D	40307-70-D
MH-50343	11/32	3/8	1	2-1/2	5	C	39752-00-D	39752-89-D	39752-85-D	39752-70-D
MH-ST-50375	3/8	3/8	1/2	2	5	A	40315-00-D	40315-89-D	40315-85-D	40315-70-D
MH-50375	3/8	3/8	1	2-1/2	5	A	39760-00-D	39760-89-D	39760-85-D	39760-70-D
MH-M-50375	3/8	3/8	1-1/4	3	5	A	51643-00-D	51643-89-D	51643-85-D	51643-70-D
MH-L-50375	3/8	3/8	1-1/2	4	5	A	39928-00-D	39928-89-D	39928-85-D	39928-70-D
MH-X-50375	3/8	3/8	2-1/2	6	5	A	40387-00-D	40387-89-D	40387-85-D	40387-70-D
MH-ST-50406	13/32	7/16	9/16	2-1/2	5	C	40323-00-D	40323-89-D	40323-85-D	40323-70-D
MH-50406	13/32	7/16	1	2-3/4	5	C	39768-00-D	39768-89-D	39768-85-D	39768-70-D
MH-ST-50437	7/16	7/16	9/16	2-1/2	5	A	40331-00-D	40331-89-D	40331-85-D	40331-70-D
MH-50437	7/16	7/16	1	2-3/4	5	A	39776-00-D	39776-89-D	39776-85-D	39776-70-D
MH-L-50437	7/16	7/16	2	4	5	A	39936-00-D	39936-89-D	39936-85-D	39936-70-D
MH-ST-50468	15/32	1/2	5/8	2-1/2	5	C	40339-00-D	40339-89-D	40339-85-D	40339-70-D
MH-50468	15/32	1/2	1-1/4	3	5	C	39784-00-D	39784-89-D	39784-85-D	39784-70-D
MH-ST-50500	1/2	1/2	5/8	2-1/2	5	A	40347-00-D	40347-89-D	40347-85-D	40347-70-D
MH-50500	1/2	1/2	1-1/4	3	5	A	39792-00-D	39792-89-D	39792-85-D	39792-70-D
MH-M-50500	1/2	1/2	1-5/8	4	5	A	51650-00-D	51650-89-D	51650-85-D	51650-70-D
MH-L-50500	1/2	1/2	2	4	5	A	39944-00-D	39944-89-D	39944-85-D	39944-70-D
MH-X-50500	1/2	1/2	3-1/8	6	5	A	40395-00-D	40395-89-D	40395-85-D	40395-70-D
MH-50562	9/16	9/16	1-1/2	3-1/2	5	A	39800-00-D	39800-89-D	39800-85-D	39800-70-D
MH-ST-50625	5/8	5/8	3/4	3	5	A	40355-00-D	40355-89-D	40355-85-D	40355-70-D
MH-50625	5/8	5/8	1-5/8	3-1/2	5	A	39808-00-D	39808-89-D	39808-85-D	39808-70-D
MH-M-50625	5/8	5/8	2-1/8	4	5	A	51657-00-D	51657-89-D	51657-85-D	51657-70-D
MH-L-50625	5/8	5/8	2-1/2	5	5	A	39952-00-D	39952-89-D	39952-85-D	39952-70-D
MH-X-50625	5/8	5/8	4	6	5	A	40403-00-D	40403-89-D	40403-85-D	40403-70-D
MH-ST-50750	3/4	3/4	1	3	5	A	40363-00-D	40363-89-D	40363-85-D	40363-70-D
MH-50750	3/4	3/4	1-5/8	4	5	A	39816-00-D	39816-89-D	39816-85-D	39816-70-D
MH-M-50750	3/4	3/4	2-1/4	5	5	A	39991-00-D	39991-89-D	39991-85-D	39991-70-D
MH-L-50750	3/4	3/4	3-1/4	6	5	A	39960-00-D	39960-89-D	39960-85-D	39960-70-D
MH-X-50750	3/4	3/4	4	6	5	A	40411-00-D	40411-89-D	40411-85-D	40411-70-D
MH-50875	7/8	7/8	2	4	5	A	39824-00-D	39824-89-D	39824-85-D	39824-70-D
MH-ST-51000	1	1	1-1/4	3	5	A	40371-00-D	40371-89-D	40371-85-D	40371-70-D
MH-51000	1	1	2	4	5	A	39832-00-D	39832-89-D	39832-85-D	39832-70-D
MH-M-51000	1	1	2-5/8	6	5	A	39999-00-D	39999-89-D	39999-85-D	39999-70-D
MH-L-51000	1	1	3-1/4	6	5	A	39968-00-D	39968-89-D	39968-85-D	39968-70-D
MH-X-51000	1	1	4-1/8	7	5	A	40419-00-D	40419-89-D	40419-85-D	40419-70-D
MH-71250	1-1/4	1-1/4	2	4-1/2	7	A	39848-00-D	39848-89-D	39848-85-D	39848-70-D
MH-L-71250	1-1/4	1-1/4	3-1/4	6	7	A	39984-00-D	39984-89-D	39984-85-D	39984-70-D
MH-X-71250	1-1/4	1-1/4	5	7-1/2	7	A	40427-00-D	40427-89-D	40427-85-D	40427-70-D

MH

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WALTER
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MH Recommended Chip Loads

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			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 O-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
1/8	Peripheral	[P]	0.00079	0.00075	0.00065	0.00049	0.00055	0.00072
	Light Peripheral	[LP]	0.00094	0.00090	0.00077	0.00058	0.00066	0.00085
	Finishing	[F]	0.00166	0.00158	0.00136	0.00102	0.00116	0.00151
5/32	Peripheral	[P]	0.00098	0.00094	0.00081	0.00061	0.00069	0.00090
	Light Peripheral	[LP]	0.00117	0.00112	0.00097	0.00072	0.00082	0.00107
	Finishing	[F]	0.00207	0.00198	0.00170	0.00128	0.00145	0.00188
3/16	Peripheral	[P]	0.00118	0.00113	0.00097	0.00073	0.00083	0.00107
	Light Peripheral	[LP]	0.00141	0.00135	0.00116	0.00087	0.00099	0.00128
	Finishing	[F]	0.00248	0.00237	0.00204	0.00153	0.00174	0.00226
7/32	Peripheral	[P]	0.00138	0.00132	0.00113	0.00085	0.00096	0.00125
	Light Peripheral	[LP]	0.00164	0.00157	0.00135	0.00101	0.00115	0.00149
	Finishing	[F]	0.00290	0.00277	0.00238	0.00179	0.00203	0.00263
1/4	Peripheral	[P]	0.00158	0.00150	0.00130	0.00097	0.00110	0.00143
	Light Peripheral	[LP]	0.00188	0.00179	0.00155	0.00116	0.00131	0.00171
	Finishing	[F]	0.00331	0.00316	0.00272	0.00204	0.00232	0.00301
9/32	Peripheral	[P]	0.00177	0.00169	0.00146	0.00109	0.00124	0.00161
	Light Peripheral	[LP]	0.00211	0.00202	0.00174	0.00130	0.00148	0.00192
	Finishing	[F]	0.00373	0.00356	0.00306	0.00230	0.00261	0.00339
5/16	Peripheral	[P]	0.00197	0.00188	0.00162	0.00121	0.00138	0.00179
	Light Peripheral	[LP]	0.00235	0.00224	0.00193	0.00145	0.00164	0.00214
	Finishing	[F]	0.00414	0.00395	0.00341	0.00255	0.00289	0.00376
11/32	Peripheral	[P]	0.00217	0.00207	0.00178	0.00134	0.00151	0.00197
	Light Peripheral	[LP]	0.00258	0.00247	0.00213	0.00159	0.00181	0.00235
	Finishing	[F]	0.00455	0.00435	0.00375	0.00281	0.00318	0.00414
3/8	Peripheral	[P]	0.00236	0.00226	0.00194	0.00146	0.00165	0.00215
	Light Peripheral	[LP]	0.00282	0.00269	0.00232	0.00174	0.00197	0.00256
	Finishing	[F]	0.00497	0.00474	0.00409	0.00306	0.00347	0.00452
13/32	Peripheral	[P]	0.00256	0.00244	0.00211	0.00158	0.00179	0.00233
	Light Peripheral	[LP]	0.00305	0.00291	0.00251	0.00188	0.00213	0.00278
	Finishing	[F]	0.00538	0.00514	0.00443	0.00332	0.00376	0.00489
7/16	Peripheral	[P]	0.00276	0.00263	0.00227	0.00170	0.00193	0.00251
	Light Peripheral	[LP]	0.00329	0.00314	0.00270	0.00203	0.00230	0.00299
	Finishing	[F]	0.00580	0.00553	0.00477	0.00358	0.00405	0.00527

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00061	0.00068	0.00068	0.00072	0.00058	0.00058	0.00055	0.00068	0.00068	0.00058
0.00073	0.00081	0.00081	0.00085	0.00070	0.00070	0.00066	0.00081	0.00081	0.00070
0.00129	0.00143	0.00143	0.00151	0.00123	0.00123	0.00116	0.00143	0.00143	0.00123
0.00077	0.00085	0.00085	0.00090	0.00073	0.00073	0.00069	0.00085	0.00085	0.00073
0.00092	0.00102	0.00102	0.00107	0.00087	0.00087	0.00082	0.00102	0.00102	0.00087
0.00161	0.00179	0.00179	0.00188	0.00153	0.00153	0.00145	0.00179	0.00179	0.00153
0.00092	0.00102	0.00102	0.00107	0.00087	0.00087	0.00083	0.00102	0.00102	0.00087
0.00110	0.00122	0.00122	0.00128	0.00104	0.00104	0.00099	0.00122	0.00122	0.00104
0.00194	0.00215	0.00215	0.00226	0.00184	0.00184	0.00174	0.00215	0.00215	0.00184
0.00107	0.00119	0.00119	0.00125	0.00102	0.00102	0.00096	0.00119	0.00119	0.00102
0.00128	0.00142	0.00142	0.00149	0.00122	0.00122	0.00115	0.00142	0.00142	0.00122
0.00226	0.00251	0.00251	0.00263	0.00215	0.00215	0.00203	0.00251	0.00251	0.00215
0.00123	0.00136	0.00136	0.00143	0.00117	0.00117	0.00110	0.00136	0.00136	0.00117
0.00146	0.00163	0.00163	0.00171	0.00139	0.00139	0.00131	0.00163	0.00163	0.00139
0.00258	0.00287	0.00287	0.00301	0.00245	0.00245	0.00232	0.00287	0.00287	0.00245
0.00138	0.00153	0.00153	0.00161	0.00131	0.00131	0.00124	0.00153	0.00153	0.00131
0.00165	0.00183	0.00183	0.00192	0.00156	0.00156	0.00148	0.00183	0.00183	0.00156
0.00290	0.00323	0.00323	0.00339	0.00276	0.00276	0.00261	0.00323	0.00323	0.00276
0.00153	0.00170	0.00170	0.00179	0.00146	0.00146	0.00138	0.00170	0.00170	0.00146
0.00183	0.00203	0.00203	0.00214	0.00174	0.00174	0.00164	0.00203	0.00203	0.00174
0.00323	0.00358	0.00358	0.00376	0.00306	0.00306	0.00289	0.00358	0.00358	0.00306
0.00169	0.00188	0.00188	0.00197	0.00160	0.00160	0.00151	0.00188	0.00188	0.00160
0.00201	0.00224	0.00224	0.00235	0.00191	0.00191	0.00181	0.00224	0.00224	0.00191
0.00355	0.00394	0.00394	0.00414	0.00337	0.00337	0.00318	0.00394	0.00394	0.00337
0.00184	0.00205	0.00205	0.00215	0.00175	0.00175	0.00165	0.00205	0.00205	0.00175
0.00220	0.00244	0.00244	0.00256	0.00209	0.00209	0.00197	0.00244	0.00244	0.00209
0.00387	0.00430	0.00430	0.00452	0.00368	0.00368	0.00347	0.00430	0.00430	0.00368
0.00199	0.00222	0.00222	0.00233	0.00189	0.00189	0.00179	0.00222	0.00222	0.00189
0.00238	0.00264	0.00264	0.00278	0.00226	0.00226	0.00213	0.00264	0.00264	0.00226
0.00419	0.00466	0.00466	0.00489	0.00398	0.00398	0.00376	0.00466	0.00466	0.00398
0.00215	0.00239	0.00239	0.00251	0.00204	0.00204	0.00193	0.00239	0.00239	0.00204
0.00256	0.00285	0.00285	0.00299	0.00243	0.00243	0.00230	0.00285	0.00285	0.00243
0.00452	0.00502	0.00502	0.00527	0.00429	0.00429	0.00405	0.00502	0.00502	0.00429

MH Recommended Chip Loads

MH

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
15/32	Peripheral	[P]	0.00295	0.00282	0.00243	0.00182	0.00206	0.00269
	Light Peripheral	[LP]	0.00352	0.00336	0.00290	0.00217	0.00246	0.00320
	Finishing	[F]	0.00621	0.00593	0.00511	0.00383	0.00434	0.00565
1/2	Peripheral	[P]	0.00315	0.00301	0.00259	0.00194	0.00220	0.00286
	Light Peripheral	[LP]	0.00376	0.00359	0.00309	0.00232	0.00263	0.00342
	Finishing	[F]	0.00662	0.00632	0.00545	0.00409	0.00463	0.00602
5/8	Peripheral	[P]	0.00394	0.00376	0.00324	0.00243	0.00275	0.00358
	Light Peripheral	[LP]	0.00470	0.00448	0.00386	0.00290	0.00328	0.00427
	Finishing	[F]	0.00828	0.00790	0.00681	0.00511	0.00579	0.00753
3/4	Peripheral	[P]	0.00473	0.00451	0.00389	0.00292	0.00330	0.00430
	Light Peripheral	[LP]	0.00564	0.00538	0.00464	0.00348	0.00394	0.00512
	Finishing	[F]	0.00994	0.00948	0.00817	0.00613	0.00695	0.00903
1	Peripheral	[P]	0.00630	0.00601	0.00518	0.00389	0.00441	0.00573
	Light Peripheral	[LP]	0.00752	0.00717	0.00618	0.00464	0.00525	0.00683
	Finishing	[F]	0.01325	0.01265	0.01090	0.00817	0.00926	0.01204
1 1/4	Peripheral	[P]	0.00646	0.00616	0.00531	0.00398	0.00452	0.00587
	Light Peripheral	[LP]	0.00770	0.00735	0.00634	0.00475	0.00539	0.00700
	Finishing	[F]	0.01358	0.01296	0.01117	0.00838	0.00949	0.01235

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00230	0.00256	0.00256	0.00269	0.00219	0.00219	0.00206	0.00256	0.00256	0.00219
0.00275	0.00305	0.00305	0.00320	0.00261	0.00261	0.00246	0.00305	0.00305	0.00261
0.00484	0.00538	0.00538	0.00565	0.00460	0.00460	0.00434	0.00538	0.00538	0.00460
0.00245	0.00273	0.00273	0.00286	0.00233	0.00233	0.00220	0.00273	0.00273	0.00233
0.00293	0.00325	0.00325	0.00342	0.00278	0.00278	0.00263	0.00325	0.00325	0.00278
0.00516	0.00574	0.00574	0.00602	0.00490	0.00490	0.00463	0.00574	0.00574	0.00490
0.00307	0.00341	0.00341	0.00358	0.00292	0.00292	0.00275	0.00341	0.00341	0.00292
0.00366	0.00407	0.00407	0.00427	0.00348	0.00348	0.00328	0.00407	0.00407	0.00348
0.00645	0.00717	0.00717	0.00753	0.00613	0.00613	0.00579	0.00717	0.00717	0.00613
0.00368	0.00409	0.00409	0.00430	0.00350	0.00350	0.00330	0.00409	0.00409	0.00350
0.00439	0.00488	0.00488	0.00512	0.00417	0.00417	0.00394	0.00488	0.00488	0.00417
0.00774	0.00860	0.00860	0.00903	0.00736	0.00736	0.00695	0.00860	0.00860	0.00736
0.00491	0.00546	0.00546	0.00573	0.00466	0.00466	0.00441	0.00546	0.00546	0.00466
0.00586	0.00651	0.00651	0.00683	0.00556	0.00556	0.00525	0.00651	0.00651	0.00556
0.01032	0.01147	0.01147	0.01204	0.00981	0.00981	0.00926	0.01147	0.01147	0.00981
0.00503	0.00559	0.00559	0.00587	0.00478	0.00478	0.00452	0.00559	0.00559	0.00478
0.00600	0.00667	0.00667	0.00700	0.00570	0.00570	0.00539	0.00667	0.00667	0.00570
0.01058	0.01176	0.01176	0.01235	0.01005	0.01005	0.00949	0.01176	0.01176	0.01005

HW



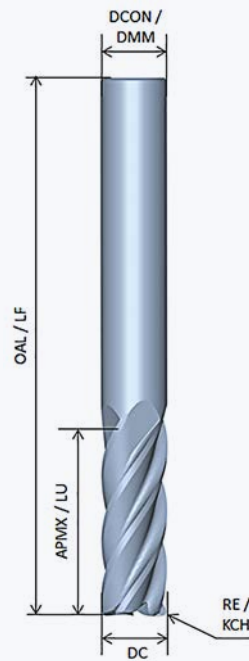
Our MH series is the tool of choice for finishing and light profile roughing in ferrous materials. The odd number of flutes disrupts unwanted harmonics. Our medium helix provides an optimum shear angle to aid chip evacuation. We have a full offering of stub, standard, medium, long and extra long lengths of cut.

MAIN CHARACTERISTICS

- Flute Count (NOF): 5
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): -0.001"/-0.002"
- Corner Radius (RE): +0.001"/-0.001"



STYLE A

WORK MATERIAL

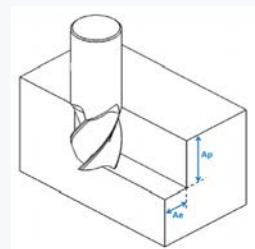


COATING



RECOMMENDED OPERATION

	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	25%DC < \leq 40%DC	5%DC < \leq 25%DC	\leq 5%DC
AP	1.0 to 15 x DC	2.0 x DC	APMX



For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



Radius Offering

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	No. of Flutes	Coating	Style	030	Radius Offering				
									.060"	.090"	.125"	.156"	.187"
MHCR-ST-50250	1/4	1/4	3/8	2	5	Uncoated	A	48736-00-D					
						C4	A	48736-89-D					
						C11	C	48736-85-D					
						C10	A	48736-70-D					
MHCR-50250	1/4	1/4	3/4	2-1/2	5	Uncoated	A	48767-00-D					
						C4	A	48767-89-D					
						C11	A	48767-85-D					
						C10	A	48767-70-D					
MHCR-M-50250	1/4	1/4	1	3	5	Uncoated	A	50292-00-D					
						C4	A	50292-89-D					
						C11	A	50292-85-D					
						C10	A	50292-70-D					
MHCR-L-50250	1/4	1/4	1-1/4	4	5	Uncoated	A	50329-00-D					
						C4	A	50329-89-D					
						C11	A	50329-85-D					
						C10	A	50329-70-D					
MHCR-X-50250	1/4	1/4	2	6	5	Uncoated	A	48700-00-D					
						C4	A	48700-89-D					
						C11	A	48700-85-D					
						C10	A	48700-70-D					
MHCR-ST-50375	3/8	3/8	1/2	2	5	Uncoated	A	48740-00-D	48748-00-D				
						C4	A	48740-89-D	48748-89-D				
						C11	A	48740-85-D	48748-85-D				
						C10	A	48740-70-D	48748-70-D				
MHCR-50375	3/8	3/8	1	2-1/2	5	Uncoated	A	48771-00-D	48780-00-D				
						C4	A	48771-89-D	48780-89-D				
						C11	A	48771-85-D	48780-85-D				
						C10	A	48771-70-D	48780-70-D				
MHCR-M-50375	3/8	3/8	1-1/4	3	5	Uncoated	A	50296-00-D	50306-00-D				
						C4	A	50296-89-D	50306-89-D				
						C11	A	50296-85-D	50306-85-D				
						C10	A	50296-70-D	50306-70-D				
MHCR-L-50375	3/8	3/8	1-1/2	4	5	Uncoated	A	50335-00-D	50346-00-D				
						C4	A	50335-89-D	50346-89-D				
						C11	A	50335-85-D	50346-85-D				
						C10	A	50335-70-D	50346-70-D				
MHCR-X-50375	3/8	3/8	2-1/2	6	5	Uncoated	A	48704-00-D	48713-00-D				
						C4	A	48704-89-D	48713-89-D				
						C11	A	48704-85-D	48713-85-D				
						C10	A	48704-70-D	48713-70-D				
MHCR-ST-50500	1/2	1/2	5/8	2-1/2	5	Uncoated	A	49909-00-D	49966-00-D	49993-00-D			
						C4	A	49909-89-D	49966-89-D	49993-89-D			
						C11	A	49909-85-D	49966-85-D	49993-85-D			
						C10	A	49909-70-D	49966-70-D	49993-70-D			
MHCR-50500	1/2	1/2	1-1/4	3	5	Uncoated	A	49921-00-D	49978-00-D	50005-00-D			
						C4	A	49921-89-D	49978-89-D	50005-89-D			
						C11	A	49921-85-D	49978-85-D	50005-85-D			
						C10	A	49921-70-D	49978-70-D	50005-70-D			
MHCR-M-50500	1/2	1/2	1-5/8	4	5	Uncoated	A	50228-00-D	50240-00-D	50254-00-D			
						C4	A	50228-89-D	50240-89-D	50254-89-D			
						C11	A	50228-85-D	50240-85-D	50254-85-D			
						C10	A	50228-70-D	50240-70-D	50254-70-D			

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	No. of Flutes	Coating	Style	Radius Offering						
								.030"	.060"	.090"	.125"	.156"	.187"	
MHCR-L-50500	1/2	1/2	2	4	5	Uncoated	A	49936-00-D	50203-00-D	50020-00-D				
							C4	A	49936-89-D	50203-89-D	50020-89-D			
							C11	A	49936-85-D	50203-85-D	50020-85-D			
							C10	A	49936-70-D	50203-70-D	50020-70-D			
MHCR-X-50500	1/2	1/2	3-1/8	6	5	Uncoated	A	49951-00-D	49876-00-D	50035-00-D				
							C4	A	49951-89-D	49876-89-D	50035-89-D			
							C11	A	49951-85-D	49876-85-D	50035-85-D			
							C10	A	49951-70-D	49876-70-D	50035-70-D			
MHCR-ST-50625	5/8	5/8	3/4	3	5	Uncoated	A	49912-00-D	49969-00-D	49996-00-D	50050-00-D			
							C4	A	49912-89-D	49969-89-D	49996-89-D	50050-89-D		
							C11	A	49912-85-D	49969-85-D	49996-85-D	50050-85-D		
							C10	A	49912-70-D	49969-70-D	49996-70-D	50050-70-D		
MHCR-50625	5/8	5/8	1-5/8	3-1/2	5	Uncoated	A	49924-00-D	49981-00-D	50008-00-D	50059-00-D			
							C4	A	49924-89-D	49981-89-D	50008-89-D	50059-89-D		
							C11	A	49924-85-D	49981-85-D	50008-85-D	50059-85-D		
							C10	A	49924-70-D	49981-70-D	50008-70-D	50059-70-D		
MHCR-M-50625	5/8	5/8	2-1/8	4	5	Uncoated	A	50231-00-D	50244-00-D	50257-00-D	50271-00-D			
							C4	A	50231-89-D	50244-89-D	50257-89-D	50271-89-D		
							C11	A	50231-85-D	50244-85-D	50257-85-D	50271-85-D		
							C10	A	50231-70-D	50244-70-D	50257-70-D	50271-70-D		
MHCR-L-50625	5/8	5/8	2-1/2	5	5	Uncoated	A	49939-00-D	50206-00-D	50023-00-D	50071-00-D			
							C4	A	49939-89-D	50206-89-D	50023-89-D	50071-89-D		
							C11	A	49939-85-D	50206-85-D	50023-85-D	50071-85-D		
							C10	A	49939-70-D	50206-70-D	50023-70-D	50071-70-D		
MHCR-X-50625	5/8	5/8	4	6	5	Uncoated	A	49954-00-D	49879-00-D	50038-00-D	50083-00-D			
							C4	A	49954-89-D	49879-89-D	50038-89-D	50083-89-D		
							C11	A	49954-85-D	49879-85-D	50038-85-D	50083-85-D		
							C10	A	49954-70-D	49879-70-D	50038-70-D	50083-70-D		
MHCR-ST-50750	3/4	3/4	1	3	5	Uncoated	A	49915-00-D	49972-00-D	49999-00-D	50053-00-D	50095-00-D	50160-00-D	
							C4	A	49915-89-D	49972-89-D	49999-89-D	50053-89-D	50095-89-D	50160-89-D
							C11	A	49915-85-D	49972-85-D	49999-85-D	50053-85-D	50095-85-D	50160-85-D
							C10	A	49915-70-D	49972-70-D	49999-70-D	50053-70-D	50095-70-D	50160-70-D
MHCR-50750	3/4	3/4	1-5/8	4	5	Uncoated	A	49927-00-D	49984-00-D	50011-00-D	50062-00-D	50111-00-D	50168-00-D	
							C4	A	49927-89-D	49984-89-D	50011-89-D	50062-89-D	50111-89-D	50168-89-D
							C11	A	49927-85-D	49984-85-D	50011-85-D	50062-85-D	50111-85-D	50168-85-D
							C10	A	49927-70-D	49984-70-D	50011-70-D	50062-70-D	50111-70-D	50168-70-D
MHCR-M-50750	3/4	3/4	2-1/4	5	5	Uncoated	A	50234-00-D	50247-00-D	50262-00-D	50274-00-D	50280-00-D	50286-00-D	
							C4	A	50234-89-D	50247-89-D	50262-89-D	50274-89-D	50280-89-D	50286-89-D
							C11	A	50234-85-D	50247-85-D	50262-85-D	50274-85-D	50280-85-D	50286-85-D
							C10	A	50234-70-D	50247-70-D	50262-70-D	50274-70-D	50280-70-D	50286-70-D
MHCR-L-50750	3/4	3/4	3-1/4	6	5	Uncoated	A	49942-00-D	50209-00-D	50026-00-D	50074-00-D	50122-00-D	50182-00-D	
							C4	A	49942-89-D	50209-89-D	50026-89-D	50074-89-D	50122-89-D	50182-89-D
							C11	A	49942-85-D	50209-85-D	50026-85-D	50074-85-D	50122-85-D	50182-85-D
							C10	A	49942-70-D	50209-70-D	50026-70-D	50074-70-D	50122-70-D	50182-70-D
MHCR-X-50750	3/4	3/4	4	6	5	Uncoated	A	49957-00-D	49882-00-D	50041-00-D	50086-00-D	50136-00-D	50191-00-D	
							C4	A	49957-89-D	49882-89-D	50041-89-D	50086-89-D	50136-89-D	50191-89-D
							C11	A	49957-85-D	49882-85-D	50041-85-D	50086-85-D	50136-85-D	50191-85-D
							C10	A	49957-70-D	49882-70-D	50041-70-D	50086-70-D	50136-70-D	50191-70-D

Continued next page

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	No. of Flutes	Coating	Style	Radius Offering					
								.030"	.060"	.090"	.125"	.156"	.187"
MHCR-ST-51000	1	1	1-1/4	3	5	Uncoated	A	49918-00-D	49975-00-D	50002-00-D	50056-00-D	50098-00-D	50164-00-D
						C4	A	49918-89-D	49975-89-D	50002-89-D	50056-89-D	50098-89-D	50164-89-D
						C11	A	49918-85-D	49975-85-D	50002-85-D	50056-85-D	50098-85-D	50164-85-D
						C10	A	49918-70-D	49975-70-D	50002-70-D	50056-70-D	50098-70-D	50164-70-D
MHCR-51000	1	1	2	4	5	Uncoated	A	49930-00-D	49987-00-D	50014-00-D	50065-00-D	50114-00-D	50173-00-D
						C4	A	49930-89-D	49987-89-D	50014-89-D	50065-89-D	50114-89-D	50173-89-D
						C11	A	49930-85-D	49987-85-D	50014-85-D	50065-85-D	50114-85-D	50173-85-D
						C10	A	49930-70-D	49987-70-D	50014-70-D	50065-70-D	50114-70-D	50173-70-D
MHCR-M-51000	1	1	2-5/8	6	5	Uncoated	A	50237-00-D	50251-00-D	50265-00-D	50277-00-D	50283-00-D	50289-00-D
						C4	A	50237-89-D	50251-89-D	50265-89-D	50277-89-D	50283-89-D	50289-89-D
						C11	A	50237-85-D	50251-85-D	50265-85-D	50277-85-D	50283-85-D	50289-85-D
						C10	A	50237-70-D	50251-70-D	50265-70-D	50277-70-D	50283-70-D	50289-70-D
MHCR-L-51000	1	1	3-1/4	6	5	Uncoated	A	49945-00-D	50214-00-D	50029-00-D	50077-00-D	50127-00-D	50185-00-D
						C4	A	49945-89-D	50214-89-D	50029-89-D	50077-89-D	50127-89-D	50185-89-D
						C11	A	49945-85-D	50214-85-D	50029-85-D	50077-85-D	50127-85-D	50185-85-D
						C10	A	49945-70-D	50214-70-D	50029-70-D	50077-70-D	50127-70-D	50185-70-D
MHCR-X-51000	1	1	4-1/8	7	5	Uncoated	A	49960-00-D	49885-00-D	50044-00-D	50089-00-D	50141-00-D	50194-00-D
						C4	A	49960-89-D	49885-89-D	50044-89-D	50089-89-D	50141-89-D	50194-89-D
						C11	A	49960-85-D	49885-85-D	50044-85-D	50089-85-D	50141-85-D	50194-85-D
						C10	A	49960-70-D	49885-70-D	50044-70-D	50089-70-D	50141-70-D	50194-70-D
MHCR-71250	1-1/4	1-1/4	2	4-1/2	7	Uncoated	A	49933-00-D	49990-00-D	50017-00-D	50068-00-D	50118-00-D	50179-00-D
						C4	A	49933-89-D	49990-89-D	50017-89-D	50068-89-D	50118-89-D	50179-89-D
						C11	A	49933-85-D	49990-85-D	50017-85-D	50068-85-D	50118-85-D	50179-85-D
						C10	A	49933-70-D	49990-70-D	50017-70-D	50068-70-D	50118-70-D	50179-70-D
MHCR-L-71250	1-1/4	1-1/4	3-1/4	6	7	Uncoated	A	49948-00-D	50217-00-D	50032-00-D	50080-00-D	50132-00-D	50188-00-D
						C4	A	49948-89-D	50217-89-D	50032-89-D	50080-89-D	50132-89-D	50188-89-D
						C11	A	49948-85-D	50217-85-D	50032-85-D	50080-85-D	50132-85-D	50188-85-D
						C10	A	49948-70-D	50217-70-D	50032-70-D	50080-70-D	50132-70-D	50188-70-D
MHCR-X-71250	1-1/4	1-1/4	5	7-1/2	7	Uncoated	A	49963-00-D	49888-00-D	50047-00-D	50092-00-D	50145-00-D	50197-00-D
						C4	A	49963-89-D	49888-89-D	50047-89-D	50092-89-D	50145-89-D	50197-89-D
						C11	A	49963-85-D	49888-85-D	50047-85-D	50092-85-D	50145-85-D	50197-85-D
						C10	A	49963-70-D	49888-70-D	50047-70-D	50092-70-D	50145-70-D	50197-70-D

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MH-CR Recommended Chip Loads

MH-CR

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
1/4	Peripheral	[P]	0.00158	0.00150	0.00130	0.00097	0.00110	0.00143
	Light Peripheral	[LP]	0.00188	0.00179	0.00155	0.00116	0.00131	0.00171
	Finishing	[F]	0.00331	0.00316	0.00272	0.00204	0.00232	0.00301
3/8	Peripheral	[P]	0.00236	0.00226	0.00194	0.00146	0.00165	0.00215
	Light Peripheral	[LP]	0.00282	0.00269	0.00232	0.00174	0.00197	0.00256
	Finishing	[F]	0.00497	0.00474	0.00409	0.00306	0.00347	0.00452
1/2	Peripheral	[P]	0.00315	0.00301	0.00259	0.00194	0.00220	0.00286
	Light Peripheral	[LP]	0.00376	0.00359	0.00309	0.00232	0.00263	0.00342
	Finishing	[F]	0.00662	0.00632	0.00545	0.00409	0.00463	0.00602
5/8	Peripheral	[P]	0.00394	0.00376	0.00324	0.00243	0.00275	0.00358
	Light Peripheral	[LP]	0.00470	0.00448	0.00386	0.00290	0.00328	0.00427
	Finishing	[F]	0.00828	0.00790	0.00681	0.00511	0.00579	0.00753
3/4	Peripheral	[P]	0.00473	0.00451	0.00389	0.00292	0.00330	0.00430
	Light Peripheral	[LP]	0.00564	0.00538	0.00464	0.00348	0.00394	0.00512
	Finishing	[F]	0.00994	0.00948	0.00817	0.00613	0.00695	0.00903
1	Peripheral	[P]	0.00630	0.00601	0.00518	0.00389	0.00441	0.00573
	Light Peripheral	[LP]	0.00752	0.00717	0.00618	0.00464	0.00525	0.00683
	Finishing	[F]	0.01325	0.01265	0.01090	0.00817	0.00926	0.01204
1 1/4	Peripheral	[P]	0.00646	0.00616	0.00531	0.00398	0.00452	0.00587
	Light Peripheral	[LP]	0.00770	0.00735	0.00634	0.00475	0.00539	0.00700
	Finishing	[F]	0.01358	0.01296	0.01117	0.00838	0.00949	0.01235

Stainless Steels

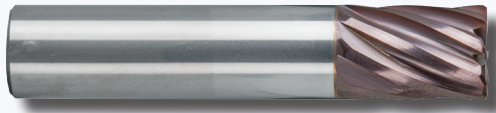
High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/ Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00123	0.00136	0.00136	0.00143	0.00117	0.00117	0.00110	0.00136	0.00136	0.00117
0.00146	0.00163	0.00163	0.00171	0.00139	0.00139	0.00131	0.00163	0.00163	0.00139
0.00258	0.00287	0.00287	0.00301	0.00245	0.00245	0.00232	0.00287	0.00287	0.00245
0.00184	0.00205	0.00205	0.00215	0.00175	0.00175	0.00165	0.00205	0.00205	0.00175
0.00220	0.00244	0.00244	0.00256	0.00209	0.00209	0.00197	0.00244	0.00244	0.00209
0.00387	0.00430	0.00430	0.00452	0.00368	0.00368	0.00347	0.00430	0.00430	0.00368
0.00245	0.00273	0.00273	0.00286	0.00233	0.00233	0.00220	0.00273	0.00273	0.00233
0.00293	0.00325	0.00325	0.00342	0.00278	0.00278	0.00263	0.00325	0.00325	0.00278
0.00516	0.00574	0.00574	0.00602	0.00490	0.00490	0.00463	0.00574	0.00574	0.00490
0.00307	0.00341	0.00341	0.00358	0.00292	0.00292	0.00275	0.00341	0.00341	0.00292
0.00366	0.00407	0.00407	0.00427	0.00348	0.00348	0.00328	0.00407	0.00407	0.00348
0.00645	0.00717	0.00717	0.00753	0.00613	0.00613	0.00579	0.00717	0.00717	0.00613
0.00368	0.00409	0.00409	0.00430	0.00350	0.00350	0.00330	0.00409	0.00409	0.00350
0.00439	0.00488	0.00488	0.00512	0.00417	0.00417	0.00394	0.00488	0.00488	0.00417
0.00774	0.00860	0.00860	0.00903	0.00736	0.00736	0.00695	0.00860	0.00860	0.00736
0.00491	0.00546	0.00546	0.00573	0.00466	0.00466	0.00441	0.00546	0.00546	0.00466
0.00586	0.00651	0.00651	0.00683	0.00556	0.00556	0.00525	0.00651	0.00651	0.00556
0.01032	0.01147	0.01147	0.01204	0.00981	0.00981	0.00926	0.01147	0.01147	0.00981
0.00503	0.00559	0.00559	0.00587	0.00478	0.00478	0.00452	0.00559	0.00559	0.00478
0.00600	0.00667	0.00667	0.00700	0.00570	0.00570	0.00539	0.00667	0.00667	0.00570
0.01058	0.01176	0.01176	0.01235	0.01005	0.01005	0.00949	0.01176	0.01176	0.01005

MED_x
Six & Eight Flutes





Data Flute is pleased to introduce its all new Med_x Series. This is a multi-flute tool designed primarily for cobalt chrome and other similar materials used in medical implants. Best results are achieved with high speed machining techniques using high rpm, high feed rates with light depths of cuts. Please call Data Flute for additional information.

MAIN CHARACTERISTICS

- Flute Count (NOF): 6-8
- UnEqual Index
- Constant Helix
- Non-Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h6
- Cutting Diameter (DC): -0.001"/-0.002"
- Corner Radius (RE): +0.001"/-0.001"

TOLERANCES – BALLNOSE

- Shank Diameter (DMM): h6
- Cutting Diameter (DC): -0.001"/-0.002"
- Corner Radius (RE): +0.000"/-0.001"

WORK MATERIAL

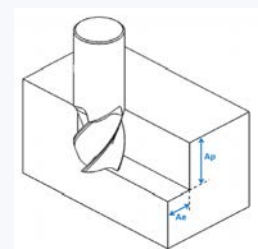
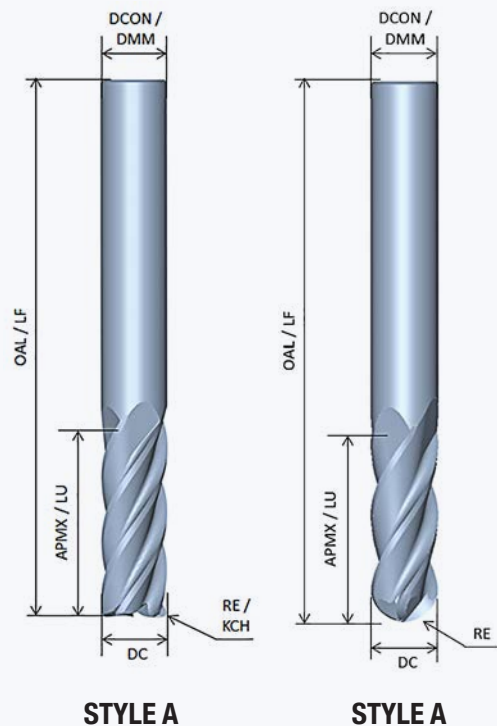
H

COATING



RECOMMENDED OPERATION

	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	25%DC < \leq 40%DC	5%DC < \leq 25%DC	\leq 5%DC
AP	1.0 to 1.5 x DC	2.0 x DC	APMX



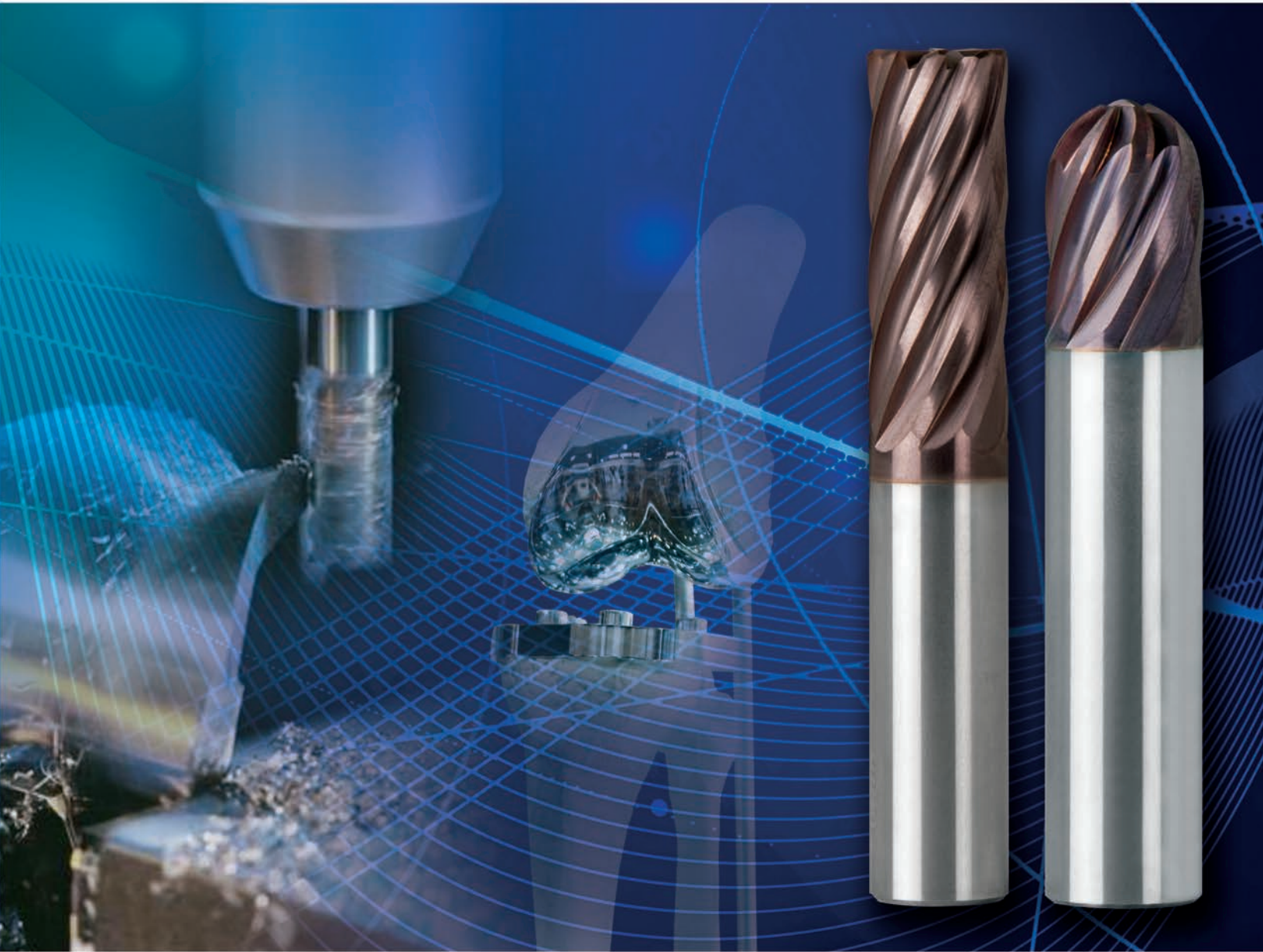
For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	Style	Coating	No. of Flutes	Radius EDP	Ball EDP
MED _χ ST60125-010C22	1/8	1/8	1/4	2	A	C22	6	44987-76-D	
MED _χ 60125-010C22	1/8	1/8	1/2	2-1/2	A	C22	6	44988-76-D	
MED _χ BNST60125C22	1/8	1/8	1/4	2	A	C22	6		44989-76-D
MED _χ ST60187-010C22	3/16	3/16	5/16	2	A	C22	6	44990-76-D	
MED _χ 60187-010C22	3/16	3/16	9/16	2-1/2	A	C22	6	44991-76-D	
MED _χ BNST60187C22	3/16	3/16	5/16	2	A	C22	6		44992-76-D
MED _χ ST80250-020C22	1/4	1/4	3/8	2	A	C22	8	44963-76-D	
MED _χ 80250-020C22	1/4	1/4	3/4	2-1/2	A	C22	8	44964-76-D	
MED _χ BNST80250C22	1/4	1/4	3/8	2	A	C22	8		44965-76-D
MED _χ ST80312-020C22	5/16	5/16	7/16	2-1/2	A	C22	8	44966-76-D	
MED _χ 80312-020C22	5/16	5/16	13/16	2-1/2	A	C22	8	44967-76-D	
MED _χ BNST80312C22	5/16	5/16	7/16	2-1/2	A	C22	8		44968-76-D
MED _χ ST80375-020C22	3/8	3/8	1/2	2-1/2	A	C22	8	44969-76-D	
MED _χ 80375-020C22	3/8	3/8	1	3	A	C22	8	44970-76-D	
MED _χ BNST80375C22	3/8	3/8	1/2	2-1/2	A	C22	8		44971-76-D
Metric									
MED _χ ST603M-.3C22	3	6	5	55	C	C22	6	44993-76-D	
MED _χ 603M-.3C22	3	6	8	57	C	C22	6	44994-76-D	
MED _χ BNST603MC22	3	6	5	55	C	C22	6		44995-76-D
MED _χ ST605M-.5C22	5	6	9	55	C	C22	6	44996-76-D	
MED _χ 605M-.5C22	5	6	13	57	C	C22	6	44997-76-D	
MED _χ BNST605MC22	5	6	9	55	C	C22	6		44998-76-D
MED _χ ST806M-.5C22	6	6	10	55	A	C22	8	44975-76-D	
MED _χ 806M-.5C22	6	6	20	57	A	C22	8	44976-76-D	
MED _χ BNST806MC22	6	6	10	55	A	C22	8		44977-76-D
MED _χ ST808M-.5C22	8	8	12	59	A	C22	8	44978-76-D	
MED _χ 808M-.5C22	8	8	22	64	A	C22	8	44979-76-D	
MED _χ BNST808MC22	8	8	12	59	A	C22	8		44980-76-D
MED _χ ST810M-.5C22	10	10	14	67	A	C22	8	44981-76-D	
MED _χ 810M-.5C22	10	10	25	73	A	C22	8	44982-76-D	
MED _χ BNST810MC22	10	10	14	67	A	C22	8		44983-76-D
MED _χ ST812M-.5C22	12	12	16	74	A	C22	8	44984-76-D	
MED _χ 812M-.5C22	12	12	26	84	A	C22	8	44985-76-D	
MED _χ BNST812C22	12	12	16	74	A	C22	8		44986-76-D

NON STOCK STANDARDS

MED_x Multi-Flute



- **Optimized cutting geometry for Co-Cr alloys**
- **Capable of higher speeds and feeds**
- **Enhanced density PVD coating**
- **Low friction coefficient on cutting surfaces**

MED_x Recommended Chip Loads

MED_x

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
1/8	Peripheral	[P]	0.00057	0.00054	0.00047	0.00035	0.00040	0.00052
	Light Peripheral	[LP]	0.00068	0.00065	0.00056	0.00042	0.00047	0.00061
	Finishing	[F]	0.00119	0.00114	0.00098	0.00074	0.00083	0.00108
3/16	Peripheral	[P]	0.00085	0.00081	0.00070	0.00052	0.00059	0.00077
	Light Peripheral	[LP]	0.00101	0.00097	0.00083	0.00063	0.00071	0.00092
	Finishing	[F]	0.00179	0.00171	0.00147	0.00110	0.00125	0.00163
1/4	Peripheral	[P]	0.00113	0.00108	0.00093	0.00070	0.00079	0.00103
	Light Peripheral	[LP]	0.00135	0.00129	0.00111	0.00083	0.00095	0.00123
	Finishing	[F]	0.00238	0.00228	0.00196	0.00147	0.00167	0.00217
5/16	Peripheral	[P]	0.00142	0.00135	0.00117	0.00087	0.00099	0.00129
	Light Peripheral	[LP]	0.00169	0.00161	0.00139	0.00104	0.00118	0.00154
	Finishing	[F]	0.00298	0.00285	0.00245	0.00184	0.00208	0.00271
3/8	Peripheral	[P]	0.00170	0.00162	0.00140	0.00105	0.00119	0.00155
	Light Peripheral	[LP]	0.00203	0.00194	0.00167	0.00125	0.00142	0.00184
	Finishing	[F]	0.00358	0.00341	0.00294	0.00221	0.00250	0.00325

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00044	0.00049	0.00049	0.00052	0.00042	0.00042	0.00040	0.00049	0.00049	0.00042
0.00053	0.00059	0.00059	0.00061	0.00050	0.00050	0.00047	0.00059	0.00059	0.00050
0.00093	0.00103	0.00103	0.00108	0.00088	0.00088	0.00083	0.00103	0.00103	0.00088
0.00066	0.00074	0.00074	0.00077	0.00063	0.00063	0.00059	0.00074	0.00074	0.00063
0.00079	0.00088	0.00088	0.00092	0.00075	0.00075	0.00071	0.00088	0.00088	0.00075
0.00139	0.00155	0.00155	0.00163	0.00132	0.00132	0.00125	0.00155	0.00155	0.00132
0.00088	0.00098	0.00098	0.00103	0.00084	0.00084	0.00079	0.00098	0.00098	0.00084
0.00105	0.00117	0.00117	0.00123	0.00100	0.00100	0.00095	0.00117	0.00117	0.00100
0.00186	0.00206	0.00206	0.00217	0.00177	0.00177	0.00167	0.00206	0.00206	0.00177
0.00110	0.00123	0.00123	0.00129	0.00105	0.00105	0.00099	0.00123	0.00123	0.00105
0.00132	0.00146	0.00146	0.00154	0.00125	0.00125	0.00118	0.00146	0.00146	0.00125
0.00232	0.00258	0.00258	0.00271	0.00221	0.00221	0.00208	0.00258	0.00258	0.00221
0.00133	0.00147	0.00147	0.00155	0.00126	0.00126	0.00119	0.00147	0.00147	0.00126
0.00158	0.00176	0.00176	0.00184	0.00150	0.00150	0.00142	0.00176	0.00176	0.00150
0.00279	0.00310	0.00310	0.00325	0.00265	0.00265	0.00250	0.00310	0.00310	0.00265



TIW
Five Flute



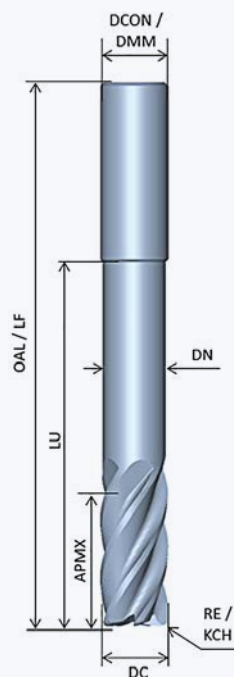
The introduction of the TiW series was designed for thin wall machining of Titanium Aerospace Structures with walls 3 times or more the diameter in depth of wall. The TiW series has patented geometries which improve Process Dampening in machining thin wall structures.

MAIN CHARACTERISTICS

- Flute Count (NOF): 5
- UnEqual Index
- Variable Helix
- Non-Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h5
- Cutting Diameter (DC): -0.001"/-0.002"
- Corner Radius (RE): +0.001"/-0.001"



STYLE B

WORK MATERIAL

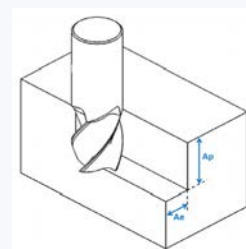


COATING



RECOMMENDED OPERATION

	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	25%DC <= 40%DC	5%DC <= 25%DC	<= 5%DC
AP	1.0 to 1.5 x DC	2.0 x DC	APMX



For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



TiW

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	LBS LU	Neck Dia DN	Coating	STYLE	Radius Offering			
									.030"	.060"	.090"	.120"
TiW-50500	1/2	1/2	5/8	4	1-1/2	0.475	Uncoated	B	37161-00-D	37162-00-D	37163-00-D	37164-00-D
							C11	B	37161-85-D	37162-85-D	37163-85-D	37164-85-D
							C10	B	37161-70-D	37162-70-D	37163-70-D	37164-70-D
TiW-M-50500	1/2	1/2	5/8	4	2-1/4	0.475	Uncoated	B	37165-00-D	37166-00-D	37167-00-D	37168-00-D
							C11	B	37165-85-D	37166-85-D	37167-85-D	37168-85-D
							C10	B	37165-70-D	37166-70-D	37167-70-D	37168-70-D
TiW-L-50500	1/2	1/2	5/8	6	3-3/8	0.475	Uncoated	B	37169-00-D	37170-00-D	37171-00-D	37173-00-D
							C11	B	37169-85-D	37170-85-D	37171-85-D	37173-85-D
							C10	B	37169-70-D	37170-70-D	37171-70-D	37173-70-D
TiW-50625	5/8	5/8	3/4	4	1-5/8	0.590	Uncoated	B	37174-00-D	37175-00-D	37176-00-D	37177-00-D
							C11	B	37174-85-D	37175-85-D	37176-85-D	37177-85-D
							C10	B	37174-70-D	37175-70-D	37176-70-D	37177-70-D
TiW-M-50625	5/8	5/8	3/4	6	2-3/8	0.590	Uncoated	B	37178-00-D	37179-00-D	37180-00-D	37181-00-D
							C11	B	37178-85-D	37179-85-D	37180-85-D	37181-85-D
							C10	B	37178-70-D	37179-70-D	37180-70-D	37181-70-D
TiW-L-50625	5/8	5/8	3/4	6	3-3/8	0.590	Uncoated	B	37182-00-D	37183-00-D	37184-00-D	37185-00-D
							C11	B	37182-85-D	37183-85-D	37184-85-D	37185-85-D
							C10	B	37182-70-D	37183-70-D	37184-70-D	37185-70-D
TiW-50750	3/4	3/4	1	4	2	0.715	Uncoated	B	37186-00-D	37187-00-D	37188-00-D	37189-00-D
							C11	B	37186-85-D	37187-85-D	37188-85-D	37189-85-D
							C10	B	37186-70-D	37187-70-D	37188-70-D	37189-70-D
TiW-M-50750	3/4	3/4	1	6	2-1/2	0.715	Uncoated	B	37190-00-D	37191-00-D	37192-00-D	37193-00-D
							C11	B	37190-85-D	37191-85-D	37192-85-D	37193-85-D
							C10	B	37190-70-D	37191-70-D	37192-70-D	37193-70-D
TiW-L-50750	3/4	3/4	1	6	3-3/8	0.715	Uncoated	B	37194-00-D	37195-00-D	37196-00-D	37197-00-D
							C11	B	37194-85-D	37195-85-D	37196-85-D	37197-85-D
							C10	B	37194-70-D	37195-70-D	37196-70-D	37197-70-D
TiW-51000	1	1	1-1/4	4	2-1/4	0.96	Uncoated	B	37199-00-D	37200-00-D	37201-00-D	37203-00-D
							C11	B	37199-85-D	37200-85-D	37201-85-D	37203-85-D
							C10	B	37199-70-D	37200-70-D	37201-70-D	37203-70-D
TiW-M-51000	1	1	1-1/4	6	2-5/8	0.96	Uncoated	B	37205-00-D	37207-00-D	37209-00-D	37211-00-D
							C11	B	37205-85-D	37207-85-D	37209-85-D	37211-85-D
							C10	B	37205-70-D	37207-70-D	37209-70-D	37211-70-D
TiW-L-51000	1	1	1-1/4	6	3-3/8	0.96	Uncoated	B	37213-00-D	37215-00-D	37217-00-D	37218-00-D
							C11	B	37213-85-D	37215-85-D	37217-85-D	37218-85-D
							C10	B	37213-70-D	37215-70-D	37217-70-D	37218-70-D

NON STOCK STANDARDS



DATA FLUTE™



TiW Recommended Chip Loads

			Carbon Steels	Alloy Steels	Tool Steels	Hardened Steels	Cobalt Chrome	
			P	P	P	H	H	M
			10xx, 11xx 13xx, 15xx	40xx, 41xx, 42xx 43xx 44xx 46xx	H-13 0-1 A-2 D-2 P20 B7	Rc > 45HRC	F1537 F799 BioDur	Ferritic/ Martensitic
1/2	Peripheral	[P]	0.00284	0.00271	0.00233	0.00175	0.00198	0.00258
	Light Peripheral	[LP]	0.00338	0.00323	0.00278	0.00209	0.00236	0.00307
	Finishing	[F]	0.00596	0.00569	0.00490	0.00368	0.00417	0.00542
5/8	Peripheral	[P]	0.00354	0.00338	0.00292	0.00219	0.00248	0.00322
	Light Peripheral	[LP]	0.00423	0.00404	0.00348	0.00261	0.00296	0.00384
	Finishing	[F]	0.00745	0.00711	0.00613	0.00460	0.00521	0.00677
3/4	Peripheral	[P]	0.00425	0.00406	0.00350	0.00262	0.00297	0.00387
	Light Peripheral	[LP]	0.00507	0.00484	0.00417	0.00313	0.00355	0.00461
	Finishing	[F]	0.00894	0.00854	0.00736	0.00552	0.00625	0.00813
1	Peripheral	[P]	0.00567	0.00541	0.00466	0.00350	0.00396	0.00516
	Light Peripheral	[LP]	0.00676	0.00646	0.00556	0.00417	0.00473	0.00615
	Finishing	[F]	0.01192	0.01138	0.00981	0.00736	0.00834	0.01084

Stainless Steels

High Temp Alloys

Cast Irons

M	M	M	S	S	S	S	K	K	K
Austenitic	Precipitation Hardened	Duplex Austenitic/ Ferritic	Titanium Cast/Wrought	Nickel Base Alloys	Iron Base Alloys	Cobalt Base Alloys	Gray Cast Irons	Malleable Cast Irons	Nodular Cast Irons
0.00221	0.00245	0.00245	0.00258	0.00210	0.00210	0.00198	0.00245	0.00245	0.00210
0.00264	0.00293	0.00293	0.00307	0.00250	0.00250	0.00236	0.00293	0.00293	0.00250
0.00465	0.00516	0.00516	0.00542	0.00441	0.00441	0.00417	0.00516	0.00516	0.00441
0.00276	0.00307	0.00307	0.00322	0.00262	0.00262	0.00248	0.00307	0.00307	0.00262
0.00329	0.00366	0.00366	0.00384	0.00313	0.00313	0.00296	0.00366	0.00366	0.00313
0.00581	0.00645	0.00645	0.00677	0.00552	0.00552	0.00521	0.00645	0.00645	0.00552
0.00331	0.00368	0.00368	0.00387	0.00315	0.00315	0.00297	0.00368	0.00368	0.00315
0.00395	0.00439	0.00439	0.00461	0.00376	0.00376	0.00355	0.00439	0.00439	0.00376
0.00697	0.00774	0.00774	0.00813	0.00662	0.00662	0.00625	0.00774	0.00774	0.00662
0.00442	0.00491	0.00491	0.00516	0.00420	0.00420	0.00396	0.00491	0.00491	0.00420
0.00527	0.00586	0.00586	0.00615	0.00501	0.00501	0.00473	0.00586	0.00586	0.00501
0.00929	0.01032	0.01032	0.01084	0.00883	0.00883	0.00834	0.01032	0.01032	0.00883

Miniatures, Chamfer Mills and Corner Rounding Cutters



Miniatures, Chamfer Mills and Corner Rounding Cutters Index

ROUGHING

SERIES	ITEM	DESCRIPTION	PAGE
SH-2	Miniature Series Standard Helix	2 Flute 30° Helix	204
SH-3	Miniature Series Standard Helix	3 Flute 30° Helix	207
SH-4	Miniature Series Standard Helix	4 Flute 30° Helix	209
BN-2	Miniature Series Ball Nose	2 Flute 30° Helix Ball Nose	212
BN-3	Miniature Series Ball Nose	3 Flute 30° Helix Ball Nose	215
BN-4	Miniature Series Ball Nose	4 Flute 30° Helix Ball Nose	217
CM	Chamfer Mill	2 and 4 Flute 60° and 90° Angles Chamfer/Deburring	220
CRC	Corner Rounding Cutter	3 and 4 Flute Single End	220

FINISHING



SH
Two, Three & Four Flute



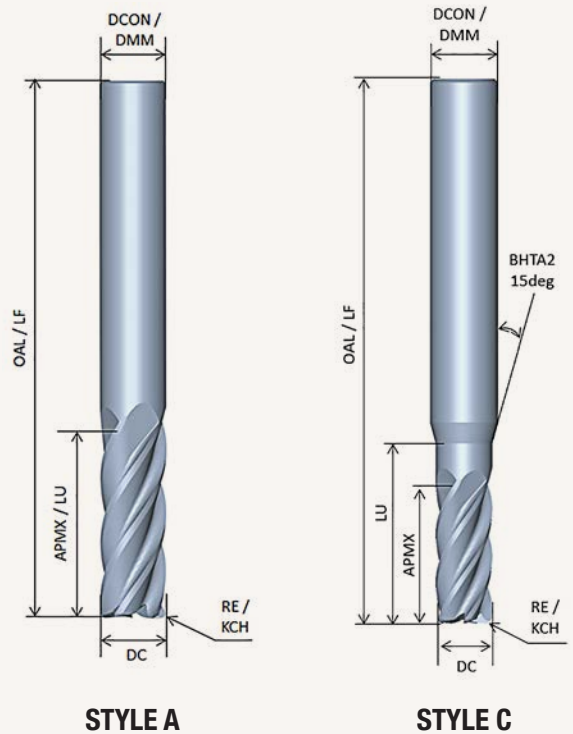
Stable and versatile describe our SH series. Able to machine a variety of materials and perform well in a variety of applications, the SH series is a good all-round choice for your machining needs.

MAIN CHARACTERISTICS

- Flute Count (NOF): 2
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h6
- Cutting Diameter .005"-.055" (DC): +0.000"/-0.001"
- Corner Radius (RE): +0.001"/-0.001"
- Cutting Diameter .062"-.125" (DC): +0.000"/-0.002"
- Corner Radius (RE): +0.001"/-0.001"



WORK MATERIAL

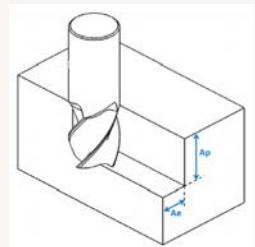


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	80%DC<_≤100%DC	40%DC<_≤80%DC	25%DC<_≤40%DC	5%DC<_≤25%DC	≤ 5%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC	APMX



For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



SH, Two Flute Miniature

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	Style	EDP	C4 EDP	C5 EDP	C7 EDP	C11 EDP
SH-ST-20005	0.005	1/8	0.0075	1-1/2	C	48600-00-D	48600-89-D	48600-86-D	48600-83-D	48600-85-D
SH-20005	0.005	1/8	0.0150	1-1/2	C	44000-00-D	44000-89-D	44000-86-D	44000-83-D	44000-85-D
SH-ST-20010	0.010	1/8	0.0150	1-1/2	C	48606-00-D	48606-89-D	48606-86-D	48606-83-D	48606-85-D
SH-20010	0.010	1/8	0.0300	1-1/2	C	44006-00-D	44006-89-D	44006-86-D	44006-83-D	44006-85-D
SH-ST-20015	0.015	1/8	0.0225	1-1/2	C	48612-00-D	48612-89-D	48612-86-D	48612-83-D	48612-85-D
SH-20015	0.015	1/8	0.0450	1-1/2	C	44021-00-D	44021-89-D	44021-86-D	44021-83-D	44021-85-D
SH-ST-20020	0.020	1/8	0.0300	1-1/2	C	48618-00-D	48618-89-D	48618-86-D	48618-83-D	48618-85-D
SH-20020	0.020	1/8	0.0600	1-1/2	C	44027-00-D	44027-89-D	44027-86-D	44027-83-D	44027-85-D
SH-ST-20025	0.025	1/8	0.0375	1-1/2	C	48624-00-D	48624-89-D	48624-86-D	48624-83-D	48624-85-D
SH-20025	0.025	1/8	0.0750	1-1/2	C	44033-00-D	44033-89-D	44033-86-D	44033-83-D	44033-85-D
SH-ST-20030	0.030	1/8	0.0450	1-1/2	C	48630-00-D	48630-89-D	48630-86-D	48630-83-D	48630-85-D
SH-20030	0.030	1/8	0.0900	1-1/2	C	44039-00-D	44039-89-D	44039-86-D	44039-83-D	44039-85-D
SH-ST-20032	0.032	1/8	0.0620	1-1/2	C	43397-00-D	43397-89-D	43397-86-D	43397-83-D	43397-85-D
SH-20032	0.032	1/8	0.0930	1-1/2	C	40499-00-D	40499-89-D	40499-86-D	40499-83-D	40499-85-D
SH-ST-20035	0.035	1/8	0.0525	1-1/2	C	48636-00-D	48636-89-D	48636-86-D	48636-83-D	48636-85-D
SH-20035	0.035	1/8	0.1050	1-1/2	C	44045-00-D	44045-89-D	44045-86-D	44045-83-D	44045-85-D
SH-ST-20040	0.040	1/8	0.0600	1-1/2	C	48642-00-D	48642-89-D	48642-86-D	48642-83-D	48642-85-D
SH-20040	0.040	1/8	0.1200	1-1/2	C	44051-00-D	44051-89-D	44051-86-D	44051-83-D	44051-85-D
SH-ST-20045	0.045	1/8	0.0675	1-1/2	C	48648-00-D	48648-89-D	48648-86-D	48648-83-D	48648-85-D
SH-20045	0.045	1/8	0.1350	1-1/2	C	44057-00-D	44057-89-D	44057-86-D	44057-83-D	44057-85-D
SH-ST-20046	0.046	1/8	0.0930	1-1/2	C	43405-00-D	43405-89-D	43405-86-D	43405-83-D	43405-85-D
SH-20046	0.046	1/8	0.1406	1-1/2	C	40507-00-D	40507-89-D	40507-86-D	40507-83-D	40507-85-D
SH-ST-20050	0.050	1/8	0.0750	1-1/2	C	48654-00-D	48654-89-D	48654-86-D	48654-83-D	48654-85-D
SH-20050	0.050	1/8	0.1500	1-1/2	C	44063-00-D	44063-89-D	44063-86-D	44063-83-D	44063-85-D
SH-ST-20055	0.055	1/8	0.0825	1-1/2	C	48660-00-D	48660-89-D	48660-86-D	48660-83-D	48660-85-D
SH-20055	0.055	1/8	0.1650	1-1/2	C	44069-00-D	44069-89-D	44069-86-D	44069-83-D	44069-85-D
SH-ST-20062	0.062	1/8	0.1250	1-1/2	C	43413-00-D	43413-89-D	43413-86-D	43413-83-D	43413-85-D
SH-20062	0.062	1/8	0.1875	1-1/2	C	40515-00-D	40515-89-D	40515-86-D	40515-83-D	40515-85-D
SH-ST-20078	0.078	1/8	0.1250	1-1/2	C	43421-00-D	43421-89-D	43421-86-D	43421-83-D	43421-85-D
SH-20078	0.078	1/8	0.2500	1-1/2	C	40523-00-D	40523-89-D	40523-86-D	40523-83-D	40523-85-D
SH-ST-20093	0.093	1/8	0.1875	1-1/2	C	43429-00-D	43429-89-D	43429-86-D	43429-83-D	43429-85-D
SH-20093	0.093	1/8	0.3750	1-1/2	C	40531-00-D	40531-89-D	40531-86-D	40531-83-D	40531-85-D
SH-ST-20109	0.109	1/8	0.1875	1-1/2	C	43437-00-D	43437-89-D	43437-86-D	43437-83-D	43437-85-D
SH-20109	0.109	1/8	0.3750	1-1/2	C	40539-00-D	40539-89-D	40539-86-D	40539-83-D	40539-85-D
SH-ST-20125	0.125	1/8	0.2500	1-1/2	A	43445-00-D	43445-89-D	43445-86-D	43445-83-D	43445-85-D
SH-20125	0.125	1/8	0.5000	1-1/2	A	40547-00-D	40547-89-D	40547-86-D	40547-83-D	40547-85-D

In addition to the miniature sizes listed, intermediate sizes are available upon request between .005 and .060 in .001 increments.

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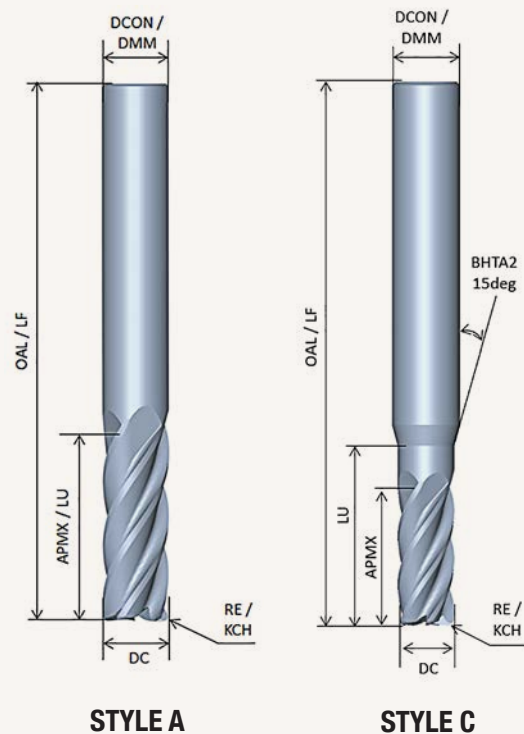
Stable and versatile describe our SH series. Able to machine a variety of materials and perform well in a variety of applications, the SH series is a good all-round choice for your machining needs.

MAIN CHARACTERISTICS

- Flute Count (NOF): 3
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h6
- Cutting Diameter .005"-.055" (DC): +0.000"/-0.001"
- Corner Radius (RE): +0.001"/-0.001"
- Cutting Diameter .062"-.125" (DC): +0.000"/-0.002"
- Corner Radius (RE): +0.001"/-0.001"



WORK MATERIAL

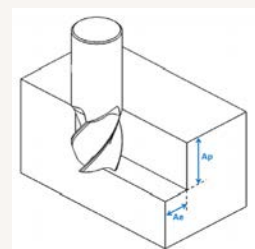


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	80%DC <= 100%DC	40%DC <= 80%DC	25%DC <= 40%DC	5%DC <= 25%DC	<= 5%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC	APMX



SH-3

For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



SH, Three Flute Miniature

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	Style	EDP	C4 EDP	C5 EDP	C7 EDP	C11 EDP
SH-ST-30032	1/32	1/8	1/16	1-1/2	C	43573-00-D	43573-89-D	43573-86-D	43573-83-D	43573-85-D
SH-30032	1/32	1/8	3/32	1-1/2	C	40675-00-D	40675-89-D	40675-86-D	40675-83-D	40675-85-D
SH-ST-30046	3/64	1/8	3/32	1-1/2	C	43581-00-D	43581-89-D	43581-86-D	43581-83-D	43581-85-D
SH-30046	3/64	1/8	9/64	1-1/2	C	40683-00-D	40683-89-D	40683-86-D	40683-83-D	40683-85-D
SH-ST-30062	1/16	1/8	1/8	1-1/2	C	43589-00-D	43589-89-D	43589-86-D	43589-83-D	43589-85-D
SH-30062	1/16	1/8	3/16	1-1/2	C	40691-00-D	40691-89-D	40691-86-D	40691-83-D	40691-85-D
SH-ST-30078	5/64	1/8	1/8	1-1/2	C	43597-00-D	43597-89-D	43597-86-D	43597-83-D	43597-85-D
SH-30078	5/64	1/8	1/4	1-1/2	C	40699-00-D	40699-89-D	40699-86-D	40699-83-D	40699-85-D
SH-ST-30093	3/32	1/8	3/16	1-1/2	C	43605-00-D	43605-89-D	43605-86-D	43605-83-D	43605-85-D
SH-30093	3/32	1/8	3/8	1-1/2	C	40707-00-D	40707-89-D	40707-86-D	40707-83-D	40707-85-D
SH-ST-30109	7/64	1/8	3/16	1-1/2	C	43613-00-D	43613-89-D	43613-86-D	43613-83-D	43613-85-D
SH-30109	7/64	1/8	3/8	1-1/2	C	40715-00-D	40715-89-D	40715-86-D	40715-83-D	40715-85-D
SH-ST-30125	1/8	1/8	1/4	1-1/2	A	43621-00-D	43621-89-D	43621-86-D	43621-83-D	43621-85-D
SH-30125	1/8	1/8	1/2	1-1/2	A	40723-00-D	40723-89-D	40723-86-D	40723-83-D	40723-85-D

In addition to the miniature sizes listed, intermediate sizes are available upon request between .005 and .060 in .001 increments.



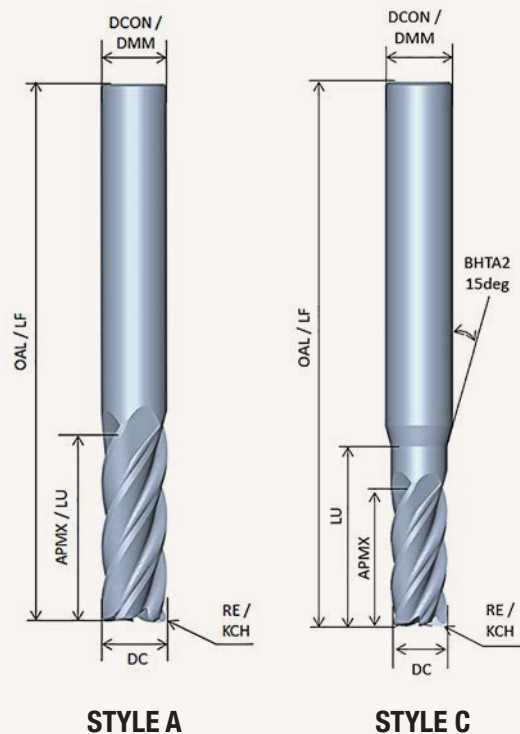
Stable and versatile describe our SH series. Able to machine a variety of materials and perform well in a variety of applications, the SH series is a good all-round choice for your machining needs.

MAIN CHARACTERISTICS

- Flute Count (NOF): 4
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h6
- Cutting Diameter .005"-.055" (DC): +0.000"/-0.001"
- Corner Radius (RE): +0.001"/-0.001"
- Cutting Diameter .062"-.125" (DC): +0.000"/-0.002"
- Corner Radius (RE): +0.001"/-0.001"



WORK MATERIAL

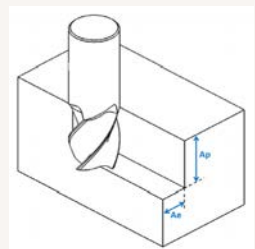


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	80%DC<_≤100%DC	40%DC<_≤80%DC	25%DC<_≤40%DC	5%DC<_≤25%DC	≤ 5%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC	APMX



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SH, Four Flute Miniature

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	Style	EDP	C4 EDP	C5 EDP	C7 EDP	C11 EDP
SH-ST-40005	0.005	1/8	0.0075	1-1/2	C	43000-00-D	43000-89-D	43000-86-D	43000-83-D	43000-85-D
SH-40005	0.005	1/8	0.0150	1-1/2	C	41100-00-D	41100-89-D	41100-86-D	41100-83-D	41100-85-D
SH-ST-40010	0.010	1/8	0.0150	1-1/2	C	43006-00-D	43006-89-D	43006-86-D	43006-83-D	43006-85-D
SH-40010	0.010	1/8	0.0300	1-1/2	C	41106-00-D	41106-89-D	41106-86-D	41106-83-D	41106-85-D
SH-ST-40015	0.015	1/8	0.0225	1-1/2	C	43012-00-D	43012-89-D	43012-86-D	43012-83-D	43012-85-D
SH-40015	0.015	1/8	0.0450	1-1/2	C	41125-00-D	41125-89-D	41125-86-D	41125-83-D	41125-85-D
SH-ST-40020	0.020	1/8	0.0300	1-1/2	C	43018-00-D	43018-89-D	43018-86-D	43018-83-D	43018-85-D
SH-40020	0.020	1/8	0.0600	1-1/2	C	41133-00-D	41133-89-D	41133-86-D	41133-83-D	41133-85-D
SH-ST-40025	0.025	1/8	0.0375	1-1/2	C	43024-00-D	43024-89-D	43024-86-D	43024-83-D	43024-85-D
SH-40025	0.025	1/8	0.0750	1-1/2	C	41139-00-D	41139-89-D	41139-86-D	41139-83-D	41139-85-D
SH-ST-40030	0.030	1/8	0.0450	1-1/2	C	43030-00-D	43030-89-D	43030-86-D	43030-83-D	43030-85-D
SH-40030	0.030	1/8	0.0900	1-1/2	C	41145-00-D	41145-89-D	41145-86-D	41145-83-D	41145-85-D
SH-ST-40032	0.032	1/8	0.0625	1-1/2	C	43629-00-D	43629-89-D	43629-86-D	43629-83-D	43629-85-D
SH-40032	0.032	1/8	0.0937	1-1/2	C	40731-00-D	40731-89-D	40731-86-D	40731-83-D	40731-85-D
SH-ST-40035	0.035	1/8	0.0525	1-1/2	C	43036-00-D	43036-89-D	43036-86-D	43036-83-D	43036-85-D
SH-40035	0.035	1/8	0.1050	1-1/2	C	41151-00-D	41151-89-D	41151-86-D	41151-83-D	41151-85-D
SH-ST-40040	0.040	1/8	0.0600	1-1/2	C	43045-00-D	43045-89-D	43045-86-D	43045-83-D	43045-85-D
SH-40040	0.040	1/8	0.1200	1-1/2	C	41157-00-D	41157-89-D	41157-86-D	41157-83-D	41157-85-D
SH-ST-40045	0.045	1/8	0.0675	1-1/2	C	43054-00-D	43054-89-D	43054-86-D	43054-83-D	43054-85-D
SH-40045	0.045	1/8	0.1350	1-1/2	C	41163-00-D	41163-89-D	41163-86-D	41163-83-D	41163-85-D
SH-ST-40046	0.046	1/8	0.0937	1-1/2	C	43637-00-D	43637-89-D	43637-86-D	43637-83-D	43637-85-D
SH-40046	0.046	1/8	0.1406	1-1/2	C	40739-00-D	40739-89-D	40739-86-D	40739-83-D	40739-85-D
SH-ST-40050	0.050	1/8	0.0750	1-1/2	C	43060-00-D	43060-89-D	43060-86-D	43060-83-D	43060-85-D
SH-40050	0.050	1/8	0.1500	1-1/2	C	41169-00-D	41169-89-D	41169-86-D	41169-83-D	41169-85-D
SH-ST-40055	0.055	1/8	0.0825	1-1/2	C	43066-00-D	43066-89-D	43066-86-D	43066-83-D	43066-85-D
SH-40055	0.055	1/8	0.1650	1-1/2	C	41175-00-D	41175-89-D	41175-86-D	41175-83-D	41175-85-D
SH-ST-40062	0.062	1/8	0.1250	1-1/2	C	43645-00-D	43645-89-D	43645-86-D	43645-83-D	43645-85-D
SH-40062	0.062	1/8	0.1875	1-1/2	C	40747-00-D	40747-89-D	40747-86-D	40747-83-D	40747-85-D
SH-ST-40078	0.078	1/8	0.1250	1-1/2	C	43653-00-D	43653-89-D	43653-86-D	43653-83-D	43653-85-D
SH-40078	0.078	1/8	0.2500	1-1/2	C	40755-00-D	40755-89-D	40755-86-D	40755-83-D	40755-85-D
SH-ST-40093	0.093	1/8	0.1875	1-1/2	C	43661-00-D	43661-89-D	43661-86-D	43661-83-D	43661-85-D
SH-40093	0.093	1/8	0.3750	1-1/2	C	40763-00-D	40763-89-D	40763-86-D	40763-83-D	40763-85-D
SH-ST-40109	0.109	1/8	0.1875	1-1/2	C	43669-00-D	43669-89-D	43669-86-D	43669-83-D	43669-85-D
SH-40109	0.109	1/8	0.3750	1-1/2	C	40771-00-D	40771-89-D	40771-86-D	40771-83-D	40771-85-D
SH-ST-40125	0.125	1/8	0.2500	1-1/2	A	43677-00-D	43677-89-D	43677-86-D	43677-83-D	43677-85-D
SH-40125	0.125	1/8	0.5000	1-1/2	A	40779-00-D	40779-89-D	40779-86-D	40779-83-D	40779-85-D

In addition to the miniature sizes listed, intermediate sizes are available upon request between .005 and .060 in .001 increments.

For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.





BN
Two, Three & Four Flute
Miniatures





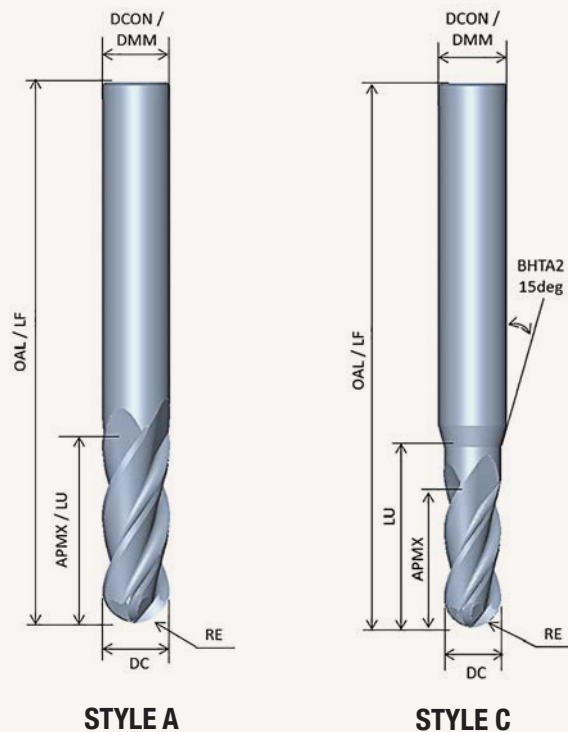
Stable and versatile describe our BN series. Able to machine a variety of materials and perform well in a variety of applications, the BN series is a good all-round choice for your machining needs.

MAIN CHARACTERISTICS

- Flute Count (NOF): 2
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h6
- Cutting Diameter .005"-.055" (DC): +0.000"/-0.001"
- Corner Radius (RE): +0.0000"/-0.0005"
- Cutting Diameter .062"-.125" (DC): +0.000"/-0.002"
- Corner Radius (RE): +0.000"/-0.001"



WORK MATERIAL

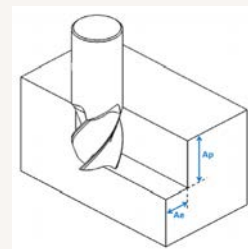


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	80%DC <= 100%DC	40%DC <= 80%DC	25%DC <= 40%DC	5%DC <= 25%DC	<= 5%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC	APMX



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BN, Two Flute Ball Miniature

High Performance Carbide

Part Number	Dia. DC	Shank DCON	LOC APMX	OAL OAL/FL	Style	EDP	C4 EDP	C5 EDP	C7 EDP	C11 EDP
BN-ST-20010	0.010	1/8	0.0150	1-1/2	C	35006-00-D	35006-89-D	35006-86-D	35006-83-D	35006-85-D
BN-20010	0.010	1/8	0.0300	1-1/2	C	35186-00-D	35186-89-D	35186-86-D	35186-83-D	35186-85-D
BN-ST-20015	0.015	1/8	0.0225	1-1/2	C	35015-00-D	35015-89-D	35015-86-D	35015-83-D	35015-85-D
BN-20015	0.015	1/8	0.0450	1-1/2	C	35192-00-D	35192-89-D	35192-86-D	35192-83-D	35192-85-D
BN-ST-20020	0.020	1/8	0.0300	1-1/2	C	35027-00-D	35027-89-D	35027-86-D	35027-83-D	35027-85-D
BN-20020	0.020	1/8	0.0600	1-1/2	C	35198-00-D	35198-89-D	35198-86-D	35198-83-D	35198-85-D
BN-ST-20025	0.025	1/8	0.0375	1-1/2	C	35039-00-D	35039-89-D	35039-86-D	35039-83-D	35039-85-D
BN-20025	0.025	1/8	0.0750	1-1/2	C	35204-00-D	35204-89-D	35204-86-D	35204-83-D	35204-85-D
BN-ST-20030	0.030	1/8	0.0450	1-1/2	C	35051-00-D	35051-89-D	35051-86-D	35051-83-D	35051-85-D
BN-20030	0.030	1/8	0.0900	1-1/2	C	35211-00-D	35211-89-D	35211-86-D	35211-83-D	35211-85-D
BN-ST-20032	0.032	1/8	0.0620	1-1/2	C	34516-00-D	34516-89-D	34516-86-D	34516-83-D	34516-85-D
BN-20032	0.032	1/8	0.0930	1-1/2	C	33125-00-D	33125-89-D	33125-86-D	33125-83-D	33125-85-D
BN-ST-20035	0.035	1/8	0.0525	1-1/2	C	35057-00-D	35057-89-D	35057-86-D	35057-83-D	35057-85-D
BN-20035	0.035	1/8	0.1050	1-1/2	C	35223-00-D	35223-89-D	35223-86-D	35223-83-D	35223-85-D
BN-ST-20040	0.040	1/8	0.0600	1-1/2	C	35063-00-D	35063-89-D	35063-86-D	35063-83-D	35063-85-D
BN-20040	0.040	1/8	0.1200	1-1/2	C	35231-00-D	35231-89-D	35231-86-D	35231-83-D	35231-85-D
BN-ST-20045	0.045	1/8	0.0675	1-1/2	C	35069-00-D	35069-89-D	35069-86-D	35069-83-D	35069-85-D
BN-20045	0.045	1/8	0.1350	1-1/2	C	35237-00-D	35237-89-D	35237-86-D	35237-83-D	35237-85-D
BN-ST-20046	0.046	1/8	0.0930	1-1/2	C	34524-00-D	34524-89-D	34524-86-D	34524-83-D	34524-85-D
BN-20046	0.046	1/8	0.1406	1-1/2	C	33133-00-D	33133-89-D	33133-86-D	33133-83-D	33133-85-D
BN-ST-20050	0.050	1/8	0.0750	1-1/2	C	35075-00-D	35075-89-D	35075-86-D	35075-83-D	35075-85-D
BN-20050	0.050	1/8	0.1500	1-1/2	C	35243-00-D	35243-89-D	35243-86-D	35243-83-D	35243-85-D
BN-ST-20055	0.055	1/8	0.0825	1-1/2	C	35081-00-D	35081-89-D	35081-86-D	35081-83-D	35081-85-D
BN-20055	0.055	1/8	0.1650	1-1/2	C	35249-00-D	35249-89-D	35249-86-D	35249-83-D	35249-85-D
BN-ST-20062	0.062	1/8	0.1250	1-1/2	C	34532-00-D	34532-89-D	34532-86-D	34532-83-D	34532-85-D
BN-20062	0.062	1/8	0.1875	1-1/2	C	33141-00-D	33141-89-D	33141-86-D	33141-83-D	33141-85-D
BN-ST-20078	0.078	1/8	0.1250	1-1/2	C	34540-00-D	34540-89-D	34540-86-D	34540-83-D	34540-85-D
BN-20078	0.078	1/8	0.2500	1-1/2	C	33149-00-D	33149-89-D	33149-86-D	33149-83-D	33149-85-D
BN-ST-20093	0.093	1/8	0.1875	1-1/2	C	34548-00-D	34548-89-D	34548-86-D	34548-83-D	34548-85-D
BN-20093	0.093	1/8	0.3750	1-1/2	C	33157-00-D	33157-89-D	33157-86-D	33157-83-D	33157-85-D
BN-ST-20109	0.109	1/8	0.1875	1-1/2	C	34556-00-D	34556-89-D	34556-86-D	34556-83-D	34556-85-D
BN-20109	0.109	1/8	0.3750	1-1/2	C	33165-00-D	33165-89-D	33165-86-D	33165-83-D	33165-85-D
BN-ST-20125	0.125	1/8	0.2500	1-1/2	A	34564-00-D	34564-89-D	34564-86-D	34564-83-D	34564-85-D
BN-20125	0.125	1/8	0.5000	1-1/2	A	33173-00-D	33173-89-D	33173-86-D	33173-83-D	33173-85-D

In addition to the miniature sizes listed, intermediate sizes are available upon request between .005 and .060 in .001 increments.



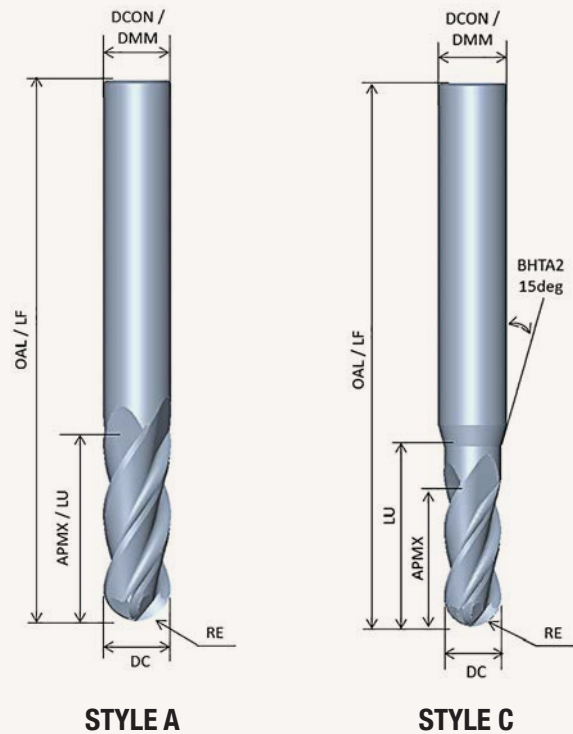
Stable and versatile describe our BN series. Able to machine a variety of materials and perform well in a variety of applications, the BN series is a good all-round choice for your machining needs.

MAIN CHARACTERISTICS

- Flute Count (NOF): 3
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h6
- Cutting Diameter .005"-.055" (DC): +0.000"/-0.001"
- Corner Radius (RE): +0.0000"/-0.0005"
- Cutting Diameter .062"-.125" (DC): +0.000"/-0.002"
- Corner Radius (RE): +0.000"/-0.001"



WORK MATERIAL

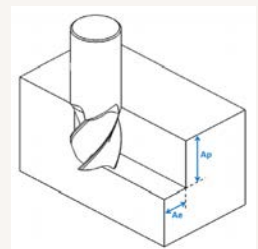


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	80%DC<_≤100%DC	40%DC<_≤80%DC	25%DC<_≤40%DC	5%DC<_≤25%DC	≤ 5%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC	APMX



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BN, Three Flute Ball Miniature

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	Style	EDP	C4 EDP	C5 EDP	C7 EDP	C11 EDP
BN-ST-30032	1/32	1/8	1/16	1-1/2	C	34572-00-D	34572-89-D	34572-86-D	34572-83-D	34572-85-D
BN-30032	1/32	1/8	3/32	1-1/2	C	33181-00-D	33181-89-D	33181-86-D	33181-83-D	33181-85-D
BN-ST-30046	3/64	1/8	3/32	1-1/2	C	34580-00-D	34580-89-D	34580-86-D	34580-83-D	34580-85-D
BN-30046	3/64	1/8	9/64	1-1/2	C	33189-00-D	33189-89-D	33189-86-D	33189-83-D	33189-85-D
BN-ST-30062	1/16	1/8	1/8	1-1/2	C	34588-00-D	34588-89-D	34588-86-D	34588-83-D	34588-85-D
BN-30062	1/16	1/8	3/16	1-1/2	C	33197-00-D	33197-89-D	33197-86-D	33197-83-D	33197-85-D
BN-ST-30078	5/64	1/8	1/8	1-1/2	C	34596-00-D	34596-89-D	34596-86-D	34596-83-D	34596-85-D
BN-30078	5/64	1/8	1/4	1-1/2	C	33205-00-D	33205-89-D	33205-86-D	33205-83-D	33205-85-D
BN-ST-30093	3/32	1/8	3/16	1-1/2	C	34604-00-D	34604-89-D	34604-86-D	34604-83-D	34604-85-D
BN-30093	3/32	1/8	3/8	1-1/2	C	33213-00-D	33213-89-D	33213-86-D	33213-83-D	33213-85-D
BN-ST-30109	7/64	1/8	3/16	1-1/2	C	34612-00-D	34612-89-D	34612-86-D	34612-83-D	34612-85-D
BN-30109	7/64	1/8	3/8	1-1/2	C	33221-00-D	33221-89-D	33221-86-D	33221-83-D	33221-85-D
BN-ST-30125	1/8	1/8	1/4	1-1/2	A	34620-00-D	34620-89-D	34620-86-D	34620-83-D	34620-85-D
BN-30125	1/8	1/8	1/2	1-1/2	A	33229-00-D	33229-89-D	33229-86-D	33229-83-D	33229-85-D

In addition to the miniature sizes listed, intermediate sizes are available upon request between .005 and .060 in .001 increments.



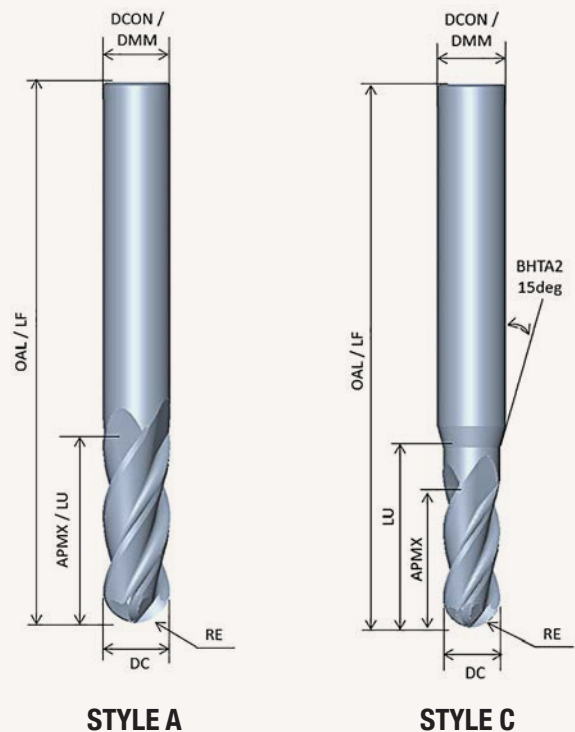
Stable and versatile describe our BN series. Able to machine a variety of materials and perform well in a variety of applications, the BN series is a good all-round choice for your machining needs.

MAIN CHARACTERISTICS

- Flute Count (NOF): 4
- Equal Index
- Constant Helix
- Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h6
- Cutting Diameter .005"-.055" (DC): +0.000"/-0.001"
- Corner Radius (RE): +0.0000"/-0.0005"
- Cutting Diameter .062"-.125" (DC): +0.000"/-0.002"
- Corner Radius (RE): +0.000"/-0.001"



WORK MATERIAL

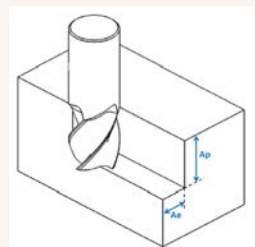


COATING



RECOMMENDED OPERATION

	SLOTING (S)	HEAVY PERIPHERAL (HP)	PERIPHERAL (P)	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	80%DC<_≤100%DC	40%DC<_≤80%DC	25%DC<_≤40%DC	5%DC<_≤25%DC	≤ 5%DC
AP	0.5 to 1.0 x DC	0.5 to 1.0 x DC	1.0 to 1.5 x DC	2.0 x DC	APMX



BN-4

For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.

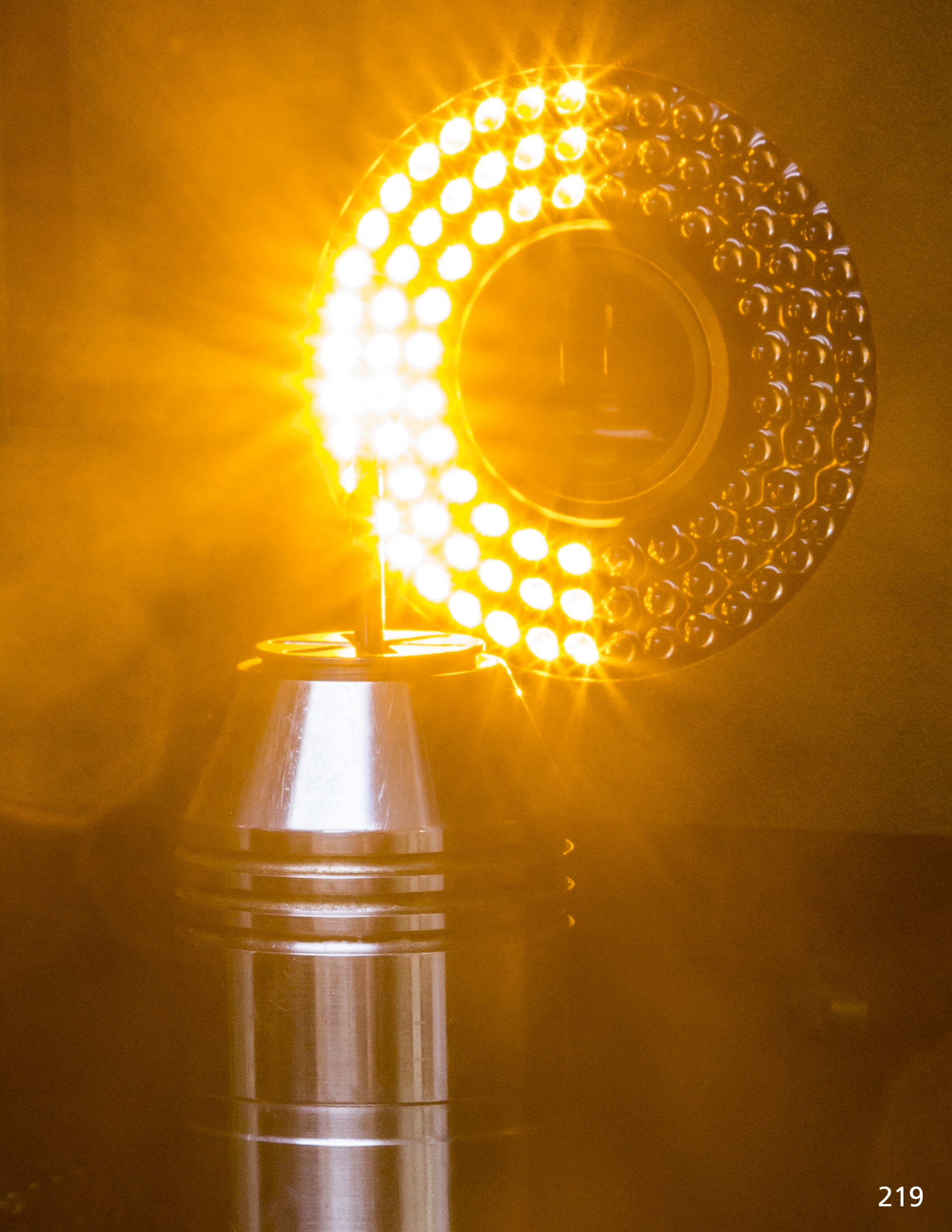


BN, Four Flute Ball Miniature

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	Style	EDP	C4 EDP	C5 EDP	C7 EDP	C11 EDP
BN-ST-40010	0.010	1/8	0.0150	1-1/2	C	35106-00-D	35106-89-D	35106-86-D	35106-83-D	35106-85-D
BN-40010	0.010	1/8	0.0300	1-1/2	C	34006-00-D	34006-89-D	34006-86-D	34006-83-D	34006-85-D
BN-ST-40015	0.015	1/8	0.0225	1-1/2	C	35115-00-D	35115-89-D	35115-86-D	35115-83-D	35115-85-D
BN-40015	0.015	1/8	0.0450	1-1/2	C	34014-00-D	34014-89-D	34014-86-D	34014-83-D	34014-85-D
BN-ST-40020	0.020	1/8	0.0300	1-1/2	C	35127-00-D	35127-89-D	35127-86-D	35127-83-D	35127-85-D
BN-40020	0.020	1/8	0.0600	1-1/2	C	34021-00-D	34021-89-D	34021-86-D	34021-83-D	34021-85-D
BN-ST-40025	0.025	1/8	0.0375	1-1/2	C	35138-00-D	35138-89-D	35138-86-D	35138-83-D	35138-85-D
BN-40025	0.025	1/8	0.0750	1-1/2	C	34027-00-D	34027-89-D	34027-86-D	34027-83-D	34027-85-D
BN-ST-40030	0.030	1/8	0.0450	1-1/2	C	35144-00-D	35144-89-D	35144-86-D	35144-83-D	35144-85-D
BN-40030	0.030	1/8	0.0900	1-1/2	C	34034-00-D	34034-89-D	34034-86-D	34034-83-D	34034-85-D
BN-ST-40032	0.031	1/8	0.0620	1-1/2	C	34628-00-D	34628-89-D	34628-86-D	34628-83-D	34628-85-D
BN-40032	0.031	1/8	0.0930	1-1/2	C	33237-00-D	33237-89-D	33237-86-D	33237-83-D	33237-85-D
BN-ST-40035	0.035	1/8	0.0525	1-1/2	C	35150-00-D	35150-89-D	35150-86-D	35150-83-D	35150-85-D
BN-40035	0.035	1/8	0.1050	1-1/2	C	34041-00-D	34041-89-D	34041-86-D	34041-83-D	34041-85-D
BN-ST-40040	0.040	1/8	0.0600	1-1/2	C	35156-00-D	35156-89-D	35156-86-D	35156-83-D	35156-85-D
BN-40040	0.040	1/8	0.1200	1-1/2	C	34047-00-D	34047-89-D	34047-86-D	34047-83-D	34047-85-D
BN-ST-40045	0.045	1/8	0.0675	1-1/2	C	35162-00-D	35162-89-D	35162-86-D	35162-83-D	35162-85-D
BN-40045	0.045	1/8	0.1350	1-1/2	C	34053-00-D	34053-89-D	34053-86-D	34053-83-D	34053-85-D
BN-ST-40046	0.046	1/8	0.0930	1-1/2	C	34636-00-D	34636-89-D	34636-86-D	34636-83-D	34636-85-D
BN-40046	0.046	1/8	0.1406	1-1/2	C	33245-00-D	33245-89-D	33245-86-D	33245-83-D	33245-85-D
BN-ST-40050	0.050	1/8	0.0750	1-1/2	C	35168-00-D	35168-89-D	35168-86-D	35168-83-D	35168-85-D
BN-40050	0.050	1/8	0.1500	1-1/2	C	34059-00-D	34059-89-D	34059-86-D	34059-83-D	34059-85-D
BN-ST-40055	0.055	1/8	0.0825	1-1/2	C	35174-00-D	35174-89-D	35174-86-D	35174-83-D	35174-85-D
BN-40055	0.055	1/8	0.1650	1-1/2	C	34065-00-D	34065-89-D	34065-86-D	34065-83-D	34065-85-D
BN-ST-40062	0.062	1/8	0.1250	1-1/2	C	34644-00-D	34644-89-D	34644-86-D	34644-83-D	34644-85-D
BN-40062	0.062	1/8	0.1875	1-1/2	C	33253-00-D	33253-89-D	33253-86-D	33253-83-D	33253-85-D
BN-ST-40078	0.078	1/8	0.1250	1-1/2	C	34652-00-D	34652-89-D	34652-86-D	34652-83-D	34652-85-D
BN-40078	0.078	1/8	0.2500	1-1/2	C	33261-00-D	33261-89-D	33261-86-D	33261-83-D	33261-85-D
BN-ST-40093	0.093	1/8	0.1875	1-1/2	C	34660-00-D	34660-89-D	34660-86-D	34660-83-D	34660-85-D
BN-40093	0.093	1/8	0.3750	1-1/2	C	33269-00-D	33269-89-D	33269-86-D	33269-83-D	33269-85-D
BN-ST-40109	0.109	1/8	0.1875	1-1/2	C	34668-00-D	34668-89-D	34668-86-D	34668-83-D	34668-85-D
BN-40109	0.109	1/8	0.3750	1-1/2	C	33277-00-D	33277-89-D	33277-86-D	33277-83-D	33277-85-D
BN-ST-40125	0.125	1/8	0.2500	1-1/2	A	34676-00-D	34676-89-D	34676-86-D	34676-83-D	34676-85-D
BN-40125	0.125	1/8	0.5000	1-1/2	A	33285-00-D	33285-89-D	33285-86-D	33285-83-D	33285-85-D

In addition to the miniature sizes listed, intermediate sizes are available upon request between .005 and .060 in .001 increments.





CHAMFER

Two & Four Flute



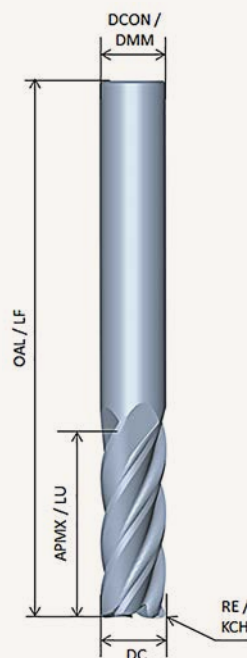
If your part requires a beveled edge or you are looking to improve aesthetics over hand de-burring, the CM series can handle the job. Available in 60 and 90 degree, 2 and 4 flute designs as well as a multitude of coatings. These tools work great in a variety of materials and applications.

MAIN CHARACTERISTICS

- Flute Count (NOF): 3-4
- Equal Index
- Constant Helix
- Center Cutting
- Straight
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h6
- Cutting Diameter (DC): $-0.0001''/-0.0004''$
- Corner Radius (RE): N/A / N/A



STYLE A

WORK MATERIAL

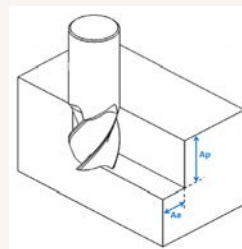


COATING



RECOMMENDED OPERATION

	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	5%DC < \leq 25%DC	\leq 5%DC
AP	2.0 x DC	APMX



For additional support and for maximum optimization of your Data Flute tools, call us toll free at 800.447.1476 and ask to speak to our Technical Support Department.



Chamfer Mills, Two and Four Flute

High Performance Carbide

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	No. of Flutes	Style	EDP	C4 EDP	C5 EDP	C7 EDP	C11 EDP
2 Flute 60 Degree											
CM-20187-60	3/16	3/16	5/32	2	2	A	51735-00-D	51735-89-D	51735-86-D	51735-83-D	51735-85-D
CM-20250-60	1/4	1/4	3/16	2-1/2	2	A	34748-00-D	34748-89-D	34748-86-D	34748-83-D	34748-85-D
CM-20375-60	3/8	3/8	5/16	2-1/2	2	A	34764-00-D	34764-89-D	34764-86-D	34764-83-D	34764-85-D
CM-20500-60	1/2	1/2	7/16	3	2	A	34780-00-D	34780-89-D	34780-86-D	34780-83-D	34780-85-D

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	No. of Flutes	Style	EDP	C4 EDP	C5 EDP	C7 EDP	C11 EDP
4 Flute 60 Degree											
CM-40187-60	3/16	3/16	5/32	2	4	A	51749-00-D	51749-89-D	51749-86-D	51749-83-D	51749-85-D
CM-40250-60	1/4	1/4	3/16	2-1/2	4	A	34796-00-D	34796-89-D	34796-86-D	34796-83-D	34796-85-D
CM-40375-60	3/8	3/8	5/16	2-1/2	4	A	34812-00-D	34812-89-D	34812-86-D	34812-83-D	34812-85-D
CM-40500-60	1/2	1/2	7/16	3	4	A	34828-00-D	34828-89-D	34828-86-D	34828-83-D	34828-85-D
CM-40750-60	3/4	3/4	5/8	3	4	A	34844-00-D	34844-89-D	34844-86-D	34844-83-D	34844-85-D

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	No. of Flutes	Style	EDP	C4 EDP	C5 EDP	C7 EDP	C11 EDP
2 Flute 90 Degree											
CM-20187-90	3/16	3/16	3/32	2	2	A	51742-00-D	51742-89-D	51742-86-D	51742-83-D	51742-85-D
CM-20250-90	1/4	1/4	1/8	2-1/2	2	A	34756-00-D	34756-89-D	34756-86-D	34756-83-D	34756-85-D
CM-20375-90	3/8	3/8	3/16	2-1/2	2	A	34772-00-D	34772-89-D	34772-86-D	34772-83-D	34772-85-D
CM-20500-90	1/2	1/2	1/4	3	2	A	34788-00-D	34788-89-D	34788-86-D	34788-83-D	34788-85-D

Part Number	Dia DC	Shank DCON	LOC APMX	OAL OAL/FL	No. of Flutes	Style	EDP	C4 EDP	C5 EDP	C7 EDP	C11 EDP
4 Flute 90 Degree											
CM-40187-90	3/16	3/16	3/32	2	4	A	51756-00-D	51756-89-D	51756-86-D	51756-83-D	51756-85-D
CM-40250-90	1/4	1/4	1/8	2-1/2	4	A	34804-00-D	34804-89-D	34804-86-D	34804-83-D	34804-85-D
CM-40375-90	3/8	3/8	3/16	2-1/2	4	A	34820-00-D	34820-89-D	34820-86-D	34820-83-D	34820-85-D
CM-40500-90	1/2	1/2	1/4	3	4	A	34836-00-D	34836-89-D	34836-86-D	34836-83-D	34836-85-D
CM-40750-90	3/4	3/4	3/8	3	4	A	34852-00-D	34852-89-D	34852-86-D	34852-83-D	34852-85-D

Chamfer Mill

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DATA FLUTE™

Chamfer Mills

If your part requires a beveled edge or you are looking to improve aesthetics over hand de-burring, the CM series can handle the job.

- **Able to Machine a Variety of Materials**
- **Available in 60 and 90 Degree Angles**
- **Multitude of Coatings Available**



CORNER Rounding





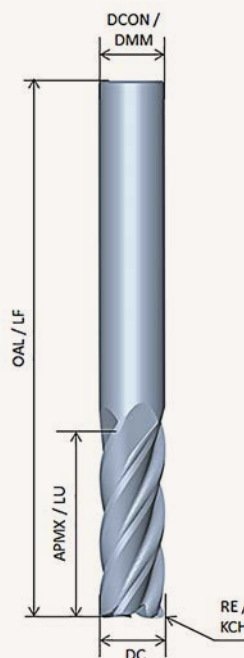
Whether the print calls for a radius, or a final operation deburring cycle, the CRC Series from Data Flute will add the finishing touch to your next machined part. Save time and produce a better part. The CRC Series tools are available in single and double end in three and four flute designs.

MAIN CHARACTERISTICS

- Flute Count (NOF): 3-4
- Equal Index
- Constant Helix
- Non-Center Cutting
- RH-C / RH-H
- Continuous Cutting Edge

TOLERANCES

- Shank Diameter (DMM): h6
- Cutting Diameter (DC): +0.000"/-0.002"
- Corner Radius (RE): +0.001"/-0.001"



STYLE A

WORK MATERIAL

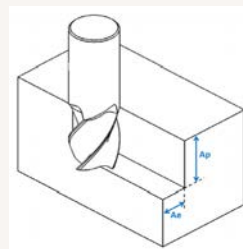


COATING



RECOMMENDED OPERATION

	LIGHT PERIPHERAL (LP)	FINISHING (F)
AE	5%DC < \leq 25%DC	\leq 5%DC
AP	2.0 x DC	APMX



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Corner Rounding End Mills

High Performance Carbide

Part Number	Radius RE	Pilot Dia.	Shank DCON	OAL OAL/FL	No. of Flutes	Style	EDP	C11 EDP
3 Flute Single End								
CRC-30125-010	0.010	0.105	1/8	1-1/2	3	A	54828-00-D	54828-85-D
CRC-30125-015	0.015	0.095	1/8	1-1/2	3	A	54829-00-D	54829-85-D
CRC-30125-020	0.020	0.085	1/8	1-1/2	3	A	54830-00-D	54830-85-D
CRC-30125-025	0.025	0.075	1/8	1-1/2	3	A	54832-00-D	54832-85-D
CRC-30125-032	0.032	0.061	1/8	1-1/2	3	A	54833-00-D	54833-85-D
CRC-30125-035	0.035	0.055	1/8	1-1/2	3	A	54834-00-D	54834-85-D
CRC-30125-039	0.039	0.047	1/8	1-1/2	3	A	54835-00-D	54835-85-D
CRC-30187-032	0.032	0.125	3/16	2	3	A	52000-00-D	52000-85-D
CRC-30187-047	0.047	0.094	3/16	2	3	A	54836-00-D	54836-85-D
CRC-30187-050	0.050	0.088	3/16	2	3	A	54837-00-D	54837-85-D
CRC-30187-055	0.055	0.078	3/16	2	3	A	54838-00-D	54838-85-D
CRC-30187-062	0.062	0.064	3/16	2	3	A	54839-00-D	54839-85-D
CRC-30250-062	0.062	0.125	1/4	2-1/2	3	A	52002-00-D	52002-85-D
CRC-30250-072	0.072	0.106	1/4	2-1/2	3	A	54840-00-D	54840-85-D
CRC-30250-078	0.078	0.094	1/4	2-1/2	3	A	54842-00-D	54842-85-D
CRC-30250-094	0.093	0.062	1/4	2-1/2	3	A	54843-00-D	54843-85-D
CRC-30250-100	0.100	0.050	1/4	2-1/2	3	A	54844-00-D	54844-85-D
CRC-30312-109	0.109	0.095	5/16	2-1/2	3	A	54845-00-D	54845-85-D
CRC-30312-118	0.118	0.077	5/16	2-1/2	3	A	54846-00-D	54846-85-D
CRC-30312-125	0.125	0.063	5/16	2-1/2	3	A	54847-00-D	54847-85-D
CRC-30375-094	0.093	0.187	3/8	2-1/2	3	A	52004-00-D	52004-85-D
CRC-30375-140	0.140	0.095	3/8	2-1/2	3	A	54848-00-D	54848-85-D
CRC-30375-156	0.156	0.063	3/8	2-1/2	3	A	54849-00-D	54849-85-D
CRC-30437-187	0.187	0.063	7/16	2-1/2	3	A	54850-00-D	54850-85-D
CRC-30500-125	0.125	0.250	1/2	3	3	A	52006-00-D	52006-85-D
CRC-30625-156	0.156	0.312	5/8	3	3	A	52008-00-D	52008-85-D
CRC-30625-250	0.250	0.125	5/8	3	3	A	54852-00-D	54852-85-D
CRC-30750-187	0.187	0.375	3/4	3	3	A	52010-00-D	52010-85-D
CRC-31000-250	0.250	0.500	1	3	3	A	52012-00-D	52012-85-D
CRC-31000-375	0.375	0.250	1	3	3	A	54853-00-D	54853-85-D

Part Number	Radius RE	Pilot Dia.	Shank DCON	OAL OAL/FL	No. of Flutes	Style	EDP	C11 EDP
4 Flute Single End								
CRC-40187-032	1/32	1/8	3/16	2	4	A	52014-00-D	52014-85-D
CRC-40250-062	1/16	1/8	1/4	2-1/2	4	A	52016-00-D	52016-85-D
CRC-40375-094	3/32	3/16	3/8	2-1/2	4	A	52018-00-D	52018-85-D
CRC-40500-125	1/8	1/4	1/2	3	4	A	52020-00-D	52020-85-D
CRC-40625-156	5/32	5/16	5/8	3	4	A	52022-00-D	52022-85-D
CRC-40750-187	3/16	3/8	3/4	3	4	A	52024-00-D	52024-85-D
CRC-41000-250	1/4	1/2	1	3	4	A	52026-00-D	52026-85-D



ORDERING is as simple as contacting your local authorized distributor. Alternatively, you can call us directly to get a list of authorized distributors in your area. For technical support, please use the numbers listed below and ask to speak with an applications engineer.

Thank you for your business and your support of American manufacturing.



9 Betnr Industrial Drive
Pittsfield, MA 01201
800-447-1476
www.dataflute.com



NOTES

Limited Warranty

Data Flute warrants, to original equipment manufacturers, distributors and industrial and commercial users of, its products that each new product that it manufactures or supplies is free from defects in material and workmanship. Its sole obligation under this warranty is limited to furnishing, without additional charge, a replacement for, or, at its option, repairing or issuing credit for any such product which shall, within one year from the date of sale by **Data Flute**, be returned freight prepaid to **Data Flute** and which, upon inspection, is determined by **Data Flute** to be defective in materials or workmanship. The provisions of this warranty shall not apply to any product which has been subjected to misuse, improper operating conditions, or which has been repaired or altered, if such would adversely affect performance of the product. Complete written information with respect to all such matters must be furnished to **Data Flute** as a prerequisite to its consideration of any claim or complaint under this warranty.

The repair, replacement or issuance of credit for parts provided for in this warranty constitutes the Buyer's exclusive remedy. The warranty is in lieu of all other warranties, express or implied, including any implied warranty of merchantability or fitness for a particular purpose. **Data Flute** has no liability or responsibility on any claim of any kind, whether in contract, tort or otherwise, for any loss or damage arising out of, connected with, or resulting from the manufacture, sale, delivery or use of any product sold hereunder, in excess of the cost of replacement or repair as provided herein. In no event shall **Data Flute** be liable for any special, incidental or consequential damages. **Data Flute** makes no other warranty, express or implied, except as set forth above; and neither assumes nor authorizes any other person or entity to assume for it any other obligation or liability in connection with any of its products.

WARNING

Any cutting tool may break or shatter under improper use. Government regulations require use of safety glasses and other appropriate safety equipment at all times in the vicinity of use. Wet or dry grinding of cutting tools produces potentially hazardous dusts or mists; to avoid adverse health effects, use adequate ventilation and read the material Safety Data Sheet for further applicable tool material or grade before grinding.



 **DATA FLUTE**™

Data Flute · 9 Betnr Industrial Drive · Pittsfield, MA 01201 · Phone: 800-447-1476

www.dataflute.com

 **HERITAGE
CUTTER**

 **BRUBAKER**™

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