

## TOOLING IS EVERYTHING

### Xperience the difference



Product Catalog

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V3.0

# ABOUT X-EDGE

How we started

With more than 50 combined years in the CNC machine tool industry we have learned a few things along the way and one of the most important things was that if you want to achieve the unachievable then you have to break the rules. Ignoring the standard feed rate calculators, we pushed tooling to its limits to achieve higher feed rates and superior edge finish. We wanted more. We decided to design a tool that could push it even further. The X-Edge Razor was born!

Soon after, we wanted to see if our "formula" could work on producing a tool that could achieve similar results in aluminum so we got to work combining aspects of existing tooling with our own tried and true approach. It worked, so we created the Viper line. After adding several other router bits, tool holders, collets, and even oscillating/drag knife blades, we rounded out with a few cleaning and maintenance tools that are absolutely necessary to provide the longest lasting, best performance possible on a CNC router. X-Edge Products is dedicated to helping you do what you do only better and faster!



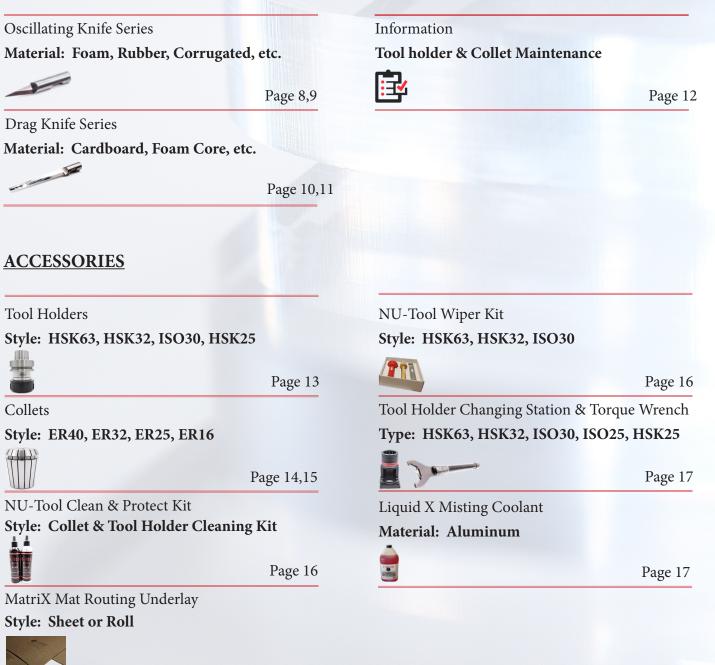
## CONTENT

### **ROUTER BITS**



## CONTENT

### KNIFE BLADES



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### **END MILLS**

#### **RAZOR SERIES**



Part Number	Dia.	Cut	OAL	Shank	Flutes
XR2060-CB	1/8"	1/2"	2"	1/4"	2
XR2061-CB	3/16"	5/8"	2"	1/4"	3
XR2062-CB	1/4"	3/4"	2"	1/4"	3
XR2063-CB	3/8"	1"	2.5"	3/8"	3
XR2061M-CB	3mm	13mm	51mm	6mm	2
XR2060M-CB	4mm	13mm	51mm	6mm	2
XR2062M-CB	6mm	25mm	51mm	6mm	3

The X-Edge Razor series line of bits are made for machining a wide range of materials including **PVC**, **UHMW**, **HDPE**, **ACM** and **Solid Surface** at ultra high rates of speed while maintaining superior edge quality regardless of what CNC router you own.

#### **VIPER SERIES**



Part Number	Dia.	Cut	OAL	Shank	Flutes
XV2030-S	1/8"	.2"	2"	1/4"	2
XV2030	1/8"	3/8"	2"	1/4"	2
XV2031	3/16"	5/8"	2"	1/4"	2
XV2032-S	1/4"	5/8"	2"	1/4"	2
XV2032	1/4"	1"	2"	1/4"	2
XV2033	3/8"	1"	2.5"	3/8"	2
XV2034	1/2"	1"	3"	1/2"	2
XV2034-EL	1/2"	1"	4"	1/2"	2
XV2030M	3mm	10mm	51mm	6mm	2
XV2031M	4mm	6mm	51mm	6mm	2
XV2032M	6mm	22mm	51mm	6mm	2

The X-Edge Viper series coupled with our specially formulated misting fluid Liquid X <sup>™</sup> you can expect to achieve the greatest **aluminum** edge quality possible on a CNC router at unbelievable speeds.

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### **END MILLS**

#### **VIPER SERIES-cont.**



UPCUT					
Part Number	Dia.	Cut	OAL	Shank	Flutes
XV2230	1/8"	3/8"	2"	1/4"	1
XV2232	1/4"	5/8"	2"	1/4"	1

DOWNCUT

Part Number	Dia.	Cut	OAL	Shank	Flutes	
XV2220	1/8"	3/8"	2"	1/4"	1	
XV2222	1/4"	5/8"	2"	1/4"	Inter	

This single flute version of the X-Edge Viper series is best used on soft aluminum and other non-ferrous metals or when higher feedrates are not possible. Other materials such as wood, plastics, and composites may also be machined with this tool. Best when used with Liquid X<sup>™</sup> misting fluid.



### **END MILLS**

#### **"O" SERIES**



Dia.	Cut	OAL	Shank	Flutes
1/8"	.3"	2"	1/4"	1
1/8"	1/2"	2"	1/4"	1
3/16"	5/8"	2"	1/4"	1
1/4"	1/2"	2"	1/4"	1
1/4"	3/4"	2"	1/4"	1
1/4"	1-1/8"	2.5"	1/4"	1
3mm	13mm	51mm	6mm	1
4mm	13mm	51mm	6mm	1
6mm	13mm	51mm	6mm	1
	1/8" 1/8" 3/16" 1/4" 1/4" 1/4" 3mm 4mm	1/8" .3"   1/8" 1/2"   3/16" 5/8"   1/4" 1/2"   1/4" 3/4"   1/4" 1-1/8"   3mm 13mm   4mm 13mm	1/8" .3" 2"   1/8" 1/2" 2"   3/16" 5/8" 2"   1/4" 1/2" 2"   1/4" 3/4" 2"   1/4" 1-1/8" 2.5"   3mm 13mm 51mm   4mm 13mm 51mm	1/8" .3" 2" 1/4"   1/8" 1/2" 2" 1/4"   3/16" 5/8" 2" 1/4"   1/4" 1/2" 2" 1/4"   1/4" 3/4" 2" 1/4"   1/4" 3/4" 2" 1/4"   1/4" 3/4" 2.5" 1/4"   1/4" 1-1/8" 2.5" 1/4"   3mm 13mm 51mm 6mm   4mm 13mm 51mm 6mm

The "O" series is a highly polished single fluted tool with upcut geometry specifically designed for premium edge quality in **acrylic** but may be used to cut **ACM**, **woods**, **soft aluminum**, **and other plastics**. \*\*For best results in acrylic utilize an edge finish pass of .03-.06\*\*

#### **COMPRESSION SERIES**



#### DOUBLE FLUTE

Part #	Dia.	Cut	OAL	Shank	Upcut
XC2022-M	1/4"	1"	2.5"	1/4"	3/16"
XC2023	3/8"	1-1/4"	3"	3/8"	3/8"
XC2023-LL	3/8"	1-1/4"	3"	3/8"	3/8"
XC2023-M	3/8"	1-1/4"	3"	3/8"	3/16"
XC2024	1/2"	1-1/4"	3"	1/2"	5/16"
XC2024-M	1/2"	1-1/4"	3"	1/2"	3/16"
TRIPLE FLUTE	1	(M)			
Part #	Dia.	Cut	OAL	Shank	Upcut
XC2123-M	3/8"	1-1/4"	3"	3/8"	3/16"

-M Indicates mortising -LL Indicates Longer Life

Compression tool design with up and down cutting edges to prevent chipping on **laminated materials** while maintaining high cut rates. Use on **MDF**, **Melamine board**, **and various woods**. Consider mortising if better part hold down is desired. (dust pick up will be reduced using mortising type)



### **V CUTTERS**

### **ACM SERIES**



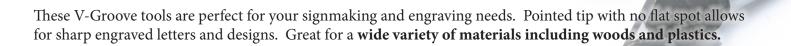
Part Number	Angle	VDepth	OAL	Shank	Flutes
XACM90-V	90°	5/16"	2-3/8"	3/8"	2
XACM135-V	135°	5/16"	2-3/8"	3/8"	2

Our ACM Series tools make folding aluminum composite materials easy. Choose from 90 degree tools to create 90 degree folds or our 135 degree tools for 45 degree folds. \*\* For straight cutting of ACM see Razor or "O" series.\*\*

### **"V-GROOVE" SERIES**



Part Number	Angle	Cut	OAL	Shank	Flutes
XV2005	90°	7/16"	1-3/4"	1/4"	2
XV2006	60°	5/8"	1-3/4"	1/4"	2
XV2006M	90°	11mm	44mm	6mm	2



### SPECIALTY CUTTERS

#### **CHAMFER SERIES**



Part Number	Angle	Cut	OAL	Shank	Flutes
XCH2042-S	90°	.12"	2.36"	1/4"	3
XCH2043-S	90°	.157"	3"	3/8"	3
XCH2044-S	90°	.196"	3"	1/2"	3

Our Chamfer Series line of tooling offers a unique design of 3 upfluted spiral cut edges fit to an over all 90° to achieve phenomenal cut quality on **aluminum**, **plastic**, **and wood materials**.

**BALL MILL SERIES** 



Part Number	Dia.	Cut	OAL	Shank	Flutes
XB2072	1/4"	3/4"	2-1/2"	1/4"	2
XB2073	3/8"	1"	2-1/2"	3/8"	2
XB2073-M	8mm	16mm	60mm	8mm	2
XB2074	1/2"	1"	3"	1/2"	2

The Ball Mill Series takes the standard ball nose platform to the next level with an extra finishing step and a special flute design optimized for **aluminum** machining. Also works well on **plastics, and multiple wood materials.** 

eXcellent speed, eXcellent quality, eXcellent tools



### SPECIALTY CUTTERS

#### **CARBIDE DRILL SERIES**



Part Number	Dia.	Cut	OAL
XCD2079-S	1/16"	1"	2.5"
XCD2080-S	1/8"	1"	2.5"
XCD2081-S	3/16"	1"	2.5"
XCD2082-S	1/4"	1"	2.5"
XCD2083-S	3/8"	1"	2.5"
XCD2084-S	1/2"	1"	2.5"

Our carbide drill series was created for those that need perfect drill holes on a CNC router. End mills are not ideal for plunging straight down and standard drills do not last long. Solid carbide drill bits work great in **aluminum**, wood, and plastics.

#### **TAPERED CARVING SERIES**



Part Number	Tip Dia.	Cut	OAL	Shank	Flutes
XCT0132	1/32"	1"	3"	1/4"	3
XCT016	1/16"	1"	3"	1/4"	3
XCT018	1/8"	1"	3"	1/4"	3
XCT518	1/8"	2-1/2"	4"	1/2"	3

These tapered ball nose tools were designed to offer smooth 3D carving while maintaining high strength and deflection resistance due to the inherent design of the tapered geometry.

eXcellent speed, eXcellent quality, eXcellent tools

### SURFACING

### TABLE MILL SERIES



Part Number	Dia.	Cut	OAL	Shank	Flutes
XSC9001S	1-1/2"	N/A	2-3/4"	3/8"	2
XSC9001	2-1/2"	N/A	2-3/4"	1/2"	2

Out table mill tool is designed to be used on **MDF** to provide a flat, smooth surface which will allow the greatest air flow from vacuum pump possible. Can also be used on any type of **wood or plastic**.

**REPLACEMENT INSERTS** 



Part Number	Length	Width	Thickness	Grade
XSC9001-CI	14mm	14mm	2mm	HCO5



Carbide replacement inserts blades for Table Mill Series **XSC-9001** and **XSC-9001S** spoil board cutter. Qty 10 per box.



### **OSCILLATING KNIFE BLADES**

### ROUND SHANK ROUND POINT



Part Number	Type	Length	OAL	Shank	Edges
XK3006-ORP	Osc	6mm	36mm	6mm	1
XK3010-ORP	Osc	10mm	36mm	6mm	1
XK3015-ORP	Osc	15mm	36mm	6mm	1
XK3020-ORP	Osc	20mm	36mm	6mm	1
XK3025-ORP	Osc	25mm	46mm	6mm	1
XK3030-ORP	Osc	30mm	51mm	6mm	1
XK3050-ORP	Osc	50mm	76mm	6mm	1
XK3070-ORP	Osc	70mm	86mm	6mm	1
XK3090-ORP	Osc	90mm	115mm	6mm	1
XK3110-ORP	Osc	110mm	135mm	6mm	1

Oscillating knife blades with a round point. These knife blades fit the **MultiCam, AXYZ, Kongsberg, and Aris-**to knife systems. These are general purpose blades.

**ROUND SHANK FLAT POINT** 



Part Number	Туре	Length	OAL	Shank	Edges
XK3020-OFP	Osc	20mm	39mm	6mm	1
XK3035-OFP	Osc	35mm	51mm	6mm	1
XK3040-OFP	Osc	40mm	56mm	6mm	1
XK3110-OFP	Osc	110mm	127mm	6mm	1

Oscillating knife blades with a flat point and single edge. These knife blades fit the **MultiCam, AXYZ, Kongs-berg, and Aristo knife systems.** This type of knife is best for cutting fabric, leather, and like materials.

### **OSCILLATING KNIFE BLADES**

#### ROUND SHANK DOUBLE EDGE



Part Number	Туре	Length	OAL	Shank	Edges
XK3025D-O	Osc	25mm	41mm	6mm	2
XK3040D-O	Osc	40mm	56mm	6mm	2
XK3055D-O	Osc	55mm	71mm	6mm	2
XK3060D-O	Osc	60mm	76mm	6mm	2

Oscillating knife blades with a flat point and double edge. **These knife blades fit the MultiCam, AXYZ, Kongs-berg, and Aristo knife systems.** This type of knife is best for cutting foam materials.

#### FLAT KNIFE SINGLE EDGE



			-		
Part Number	Туре	Cut	OAL	Thick	Edges
XZ0016	Osc	7.4mm	25mm	.63mm	1
XZ0017	Osc	12mm	25mm	.63mm	1
XZ0020	Osc	14.3mm	25mm	.63mm	1
XZ0021	Osc	17.2mm	28mm	.63mm	1
XZ0022	Osc	14mm	25mm	.63mm	1
XZ0023	Osc	22mm	33mm	.63mm	- 1
XZ0026	Osc	8.7mm	25mm	.63mm	1

Flat oscillating knife blades for soft materials etc. Fits the following machine types: **Kongsberg, Zund, Multi-Cam, Gerber MCT (VersaTech)** 

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### DRAG KNIFE BLADES

### FLAT KNIFE



Part Number	Туре	Cut	Angle	Thick	Edges
XK4055-D	Drag	8mm	55°	.63mm	1
XZ0030	Drag	3.7mm	50°	.63mm	1

Solid carbide drag knife blades with single edge for slitting and folding. Fits the following machine types: Kongsberg, Zund, MultiCam, Gerber MCT (VersaTech)

FLAT KNIFE SINGLE EDGE



Part Number	Туре	Cut	OAL	Angle	Thick
XZ0046	Drag	20mm	50mm	45°	1.5mm

Oscillating knife blades with a flat point and single edge. Fits the following machine types: **Zund, MultiCam, and Aristo knife systems.** This type of knife is best for cutting corrugated plastic, foams, carpet, etc.

### DRAG KNIFE BLADES

### WIDIA DRAG KNIFE



Part Number	Туре	Cut	OAL	Angle	Thick
XK4050-D	Drag	5mm	30mm	50°	1.5mm
XZ0010	Drag	4.8mm	50mm	50°	1.5mm
XK4060-D	Drag	5mm	30mm	60°	1.5mm
XZ0011	Drag	6.9mm	50mm	60°	1.5mm

Flat double edge drag blade for universal use on materials such as banner, magnetic foil, polycarb, hard foam, canvas, etc. Fits the following machine types: **Zund, MultiCam & Aristo knife systems.** 

V-NOTCH BLADE



Part Number	Туре	Cut	OAL	Thick	Edges
XEK571	Drag	16mm	44mm	.6mm	2

Double edged V-notch tool deisgned for cutting foamed core board, triple wall corrugated and other fluted core boards. Fits the following machine types: **Kongsberg.** 



### TOOL HOLDER/COLLET MAINTENANCE

#### Collets

There is a limited life to any colleting system and all collets should be replaced on a regular basis. Collets should be inspected and cleaned during each tool change and checked for any metal damage such as bellmouthing or inside burrs. If damage is visible, the collet should be discarded and replaced. Clean collets using collet brushes and a cleaning solution like NU-TOOL<sup>™</sup>. Keep in mind that for every .0001 over TIR (total indicator runout meaning how much out of balance) you lose 10% of your tool life. Not to mention suffered cut quality, and shorter spindle life.

Collets can also be damaged without visible signs. The most common problem is metal fatigue. An easy way to see if metal fatigue has occured is to insert the tool shank into the back of the collet and then try it in the front side. If the tightness is not the same both ways then the collet is fatigued and should be discarded. One major cause of collet metal fatigue is from overtightening. A tool holder tightening stand and torque wrench should always be used.

The loss of gripping pressure is a natural occurence over time simply from use, but it also happens from heat generated by the cutting tool and also the spindle. The constant heating and cooling of the collet causes the fatigue which in turn causes the collet to lose its gripping power.

Collets should be replaced every 2 to 3 months based on an 8 hour work day. Replacing collets at the recommended time line will result in longer lasting tools, better cuts, and longer spindle service intervals.

Correct installation of the tool in the collet is of absolute importance. The tool must only be gripped on the shank part of the tool. Never should any part of the flute be inside the collet. The collet should be snapped into the nut before tightening or damage to the collet will occur.

#### **Tool Holders**

All tool holders should be replaced every 1-2 years. Tool Holders such as ISO30, HSK63F, HSK32E, and HSK25 have additional mating tolerances higher then those of the older style tapers. Because of this, these style tool holders can be more prone to runout caused by resin buildup. "Fretting" or "Bronzing" will cause inconsistent gripping in the taper and/or the flat mating surface and reduce consistency of tool life. If ignored, this will eventually cause premature spindle failure. The mating surfaces should be cleaned with NU-Tool Part 1<sup>™</sup> and hand dried immediately afterwards. Apply NU-Tool part 2 to protect tool holders and collets from rusting.

A contamination-free toolholder and machine tool spindle interface ensures toolholders properly seat at full taper contact and are pulled into the spindle taper at maximum force. With holders held and positioned accurately, a machine's full power and tolerance capabilities can then effectively and safely transfer to cutting tools, while runout and vibration are reduced for superior part surface finish quality. Shops should clean and inspect toolholders and spindles after every job. Toolholders should be completely disassembled and cleaned.

### **TOOL HOLDERS**

### **TOOL HOLDERS**



Part Number	Style	Nut	OAL	Balance
XTHHSK-63	HSK63F	ER40	71mm	24,000
XTHHSK-32	HSK32E	ER25	60mm	40,000
XTHHSK-25	HSK25	ER16	40mm	40,000
XTHISO30-HSD	ISO30	ER32	50mm	24,000
XTHISO30-COL	ISO30	ER32	50mm	24,000

Note. -COL have pull studs designed for PDS Columbo spindles Note. -HSD have pull studs designed for HSD spindles.

Our high quality tool holders come with coated nut and balanced at G2.5. Stainless steel versions of all above tool holders are available upon request.

DRILL CHUCK TOOL HOLDERS



Part Number	Style	Nut	OAL					
XDCHSK-63	HSK63F	Chuck	170mm					
Part Number	Style	Works With						
XDCW-63	Wrench	XDCHSK-63						

Flat oscillating knife blades for soft materials etc. Fits the following machine types: **Kongsberg, Zund, Multi-Cam, Gerber MCT (VersaTech)** 

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### **COLLETS**

### **ER40 COLLETS**



Part Number	Туре	Diameter
XER100-40	ER40	1"
XER078-40	ER40	7/8"
XER075-40	ER40	3/4"
XER058-40	ER40	5/8"
XER012-40	ER40	1/2"
XER038-40	ER40	3/8"
XER014-40	ER40	1/4"
XER018-40	ER40	1/8"
XER010-40M	ER40	10mm
XER006-40M	ER40	6mm
		111

High quality high precision collets for tool holders with ER40 style nuts.

### **ER32 COLLETS**



Part Number	Туре	Diameter
XER058-32	ER32	5/8"
XER012-32	ER32	1/2"
XER038-32	ER32	3/8"
XER014-32	ER32	1/4"
XER316-32	ER32	3/16"
XER018-32	ER32	1/8"
XER010-32M	ER32	10mm
XER060-32M	ER32	6mm

High quality high precision collets for tool holders with ER32 style nuts.



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### COLLETS

### **ER25 COLLETS**



Part Number	Туре	Diameter
XER012-25	ER25	1/2"
XER038-25	ER25	3/8"
XER014-25	ER25	1/4"
XER316-25	ER25	3/16"
XER018-25	ER25	1/8"
XER016-25	ER25	1/16"
XER006-25M	ER25	6mm
XER004-25M	ER25	4mm
XER003-25M	ER25	3mm

High quality high precision collets for tool holders with ER25 style nuts.

### ER16 COLLETS



Part Number	Туре	Diameter
XER038-16	ER16	3/8"
XER014-16	ER16	1/4"
XER018-16	ER16	1/8"
XER016-16	ER16	1/16"
XER006-16M	ER16	6mm
XER004-16M	ER16	4mm
XER003-16M	ER16	3mm

High quality high precision collets for tool holders with ER32 style nuts.

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### **CLEANING/MAINTENANCE**

### TOOL HOLDER/COLLET CLEANER



Part Number	Description	Bottle Size
XNU100	Part 1&2 Kit	8oz Each
XNU100P1	Part 1	8oz
XNU100P2	Part2	8oz

Revolutionary NU-TOOL<sup>™</sup> 2-part CNC tool holder and collet cleaning kit mist nozzles. Part 1 is a powerful cleaning solution for removing rust and debris from tool holders and collets. Part 2 is a specially formulated protectant that will deter rust and repel dust from your tool holders and collets.

#### SPINDLE/HOLDER/COLLET MAINTENANCE



Part Number	Туре	Description
XWK1110-63	HSK63	Kit
XWK1110-32	HSK32	Kit
XWK1120-30	ISO30	Kit

Wiper kit contains 1 spindle taper wiper, 1 tool holder taper wiper, and 1 set of collet brushes to fit all standard size inch and metric collets. Choose appropriate type for your spindle. Use NU-TOOL Part 1 for more effective cleaning.

### ACCESSORIES

### TOOL HOLDER TIGHTENING STATION



Part Number	Туре	Description
XSWH-H63	HSK63F	KIT
XSWH-H32	HSK32E	KIT
XSWH-H25	HSK25	KIT
XSWH-I30	ISO30	KIT
XSWH-I25	ISO25	KIT

Using our CNC tool holder tightening station and wrench will allow you to tighten your tool holders to the correct torque spec for the collet used. Over tightening can cause collets to distort or even break resulting in run-out and premature failure. Under tightening can cause tools to slip and possibly even injure someone.

### LIQUID X MISTING COOLANT



Part Number	Size	Base
XL001	1 Gallon	Alcohol
XL005	5 Gallon	Alcohol

Our revolutionary Liquid X cutting fluid is for use in all misting systems to enable smooth cutting of non-ferrous metals like aluminum, copper, brass, etc. It is also commonly used when cutting certain plastics like Delrin. Alcohol based means less mess due to evaporation. Does not affect aluminum anodizing or welding processes.

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### ACCESSORIES

### MATRIX MAT ROUTING UNDERLAY



Part Number	Size	Unit	
XMM4063-2	40" x 63"	Sheet	
XMM4080-2	40"x 80"	Sheet	
XMMROLL-2	40" x 196.85'	Roll	

The MatriX Mat can be used on any CNC router equipped with a knife system and is designed to be laid directly over the sacrificial bed to protect knife blades from hitting the spoil board. The MatriX Mat can also be used on digital cutters with conveyor beds and used as a sacrificial routing mat.

The special MatriX Mat formulation and permeable design allows for vacuum to easily pull directly through, while also maintaining a high grip surface producing greater lateral holding power when cutting small parts!



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### NOTES

/N	Series	Diameter	Otv	Price
/1N	Series	Diameter	Qty.	Plice
otes:				
eds & Spee	eds:			
eds & Spec		RPM	Feedrate	 Misc.
	eds:	RPM	Feedrate	Misc.
		RPM	Feedrate	Misc.
			Feedrate	Misc.
eds & Spee		RPM	Feedrate	Misc.
		RPM	Feedrate	Misc.
		RPM	Feedrate	Misc.
		RPM	Feedrate	Misc.

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