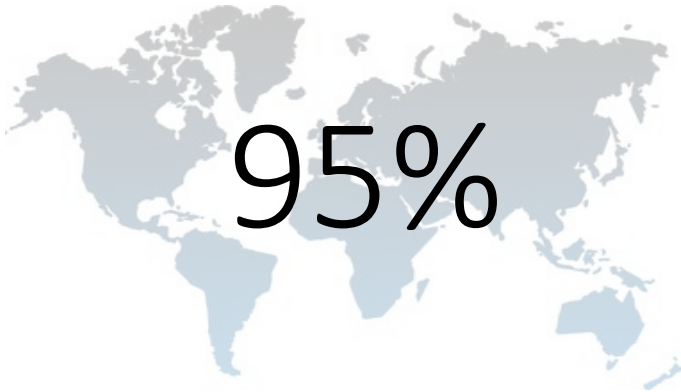


Smart  
solutions  
on the  
cutting  
edge

**2022**  
*International*

# The story of WhizCut



... of WhizCut products are exported to countries all over the world. Swiss lathes produce precision parts for most industries around the globe.

## Hej och välkommen!

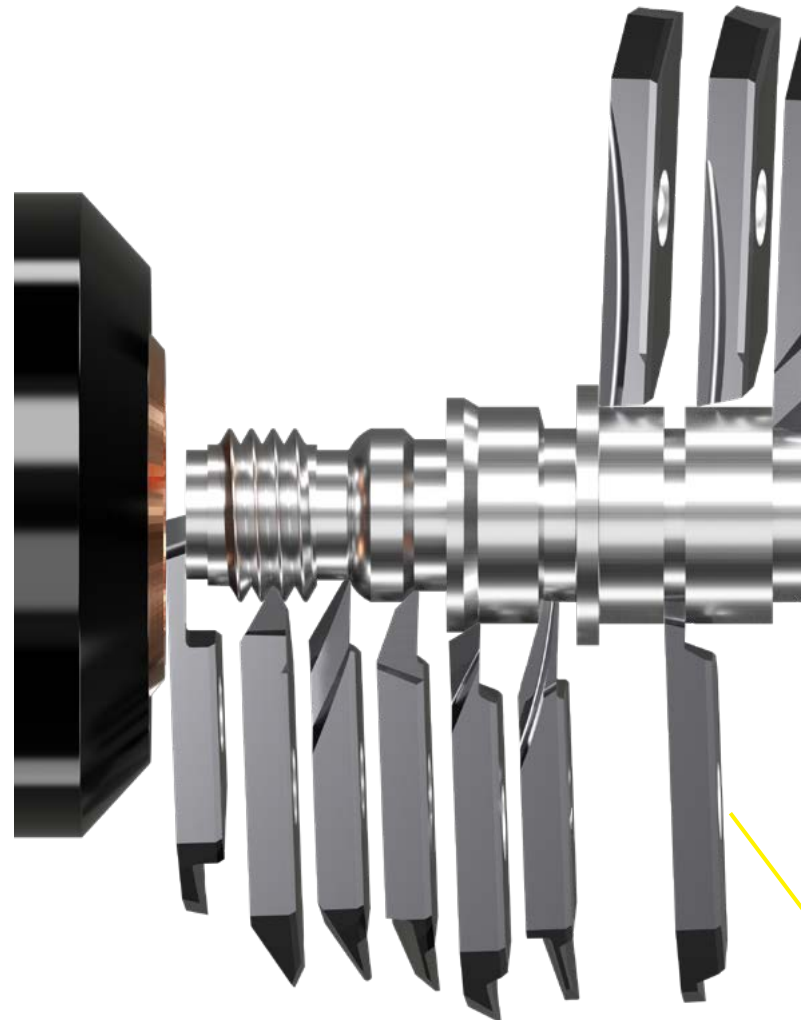
At WhizCut we say “hello and welcome”. Our head office is based in Helsingborg in the south of Sweden and we also operate our business from subsidiaries in Port Washington, Wisconsin, USA – Saraburi, Thailand and Hong Kong.

WhizCut manufactures precision cutting tools specially developed for CNC swiss automatic lathes – and deliver to all corners of the world.

The end users of our premium products are leading, often global companies mostly within these areas:

- Medical devices
- Watchmaking
- Electronics and telecommunication
- Automotive and aerospace

We aim for close, long-term and productive collaborations with our customers. We are often chosen when there is need for complex solutions and cutting-edge technical innovations.



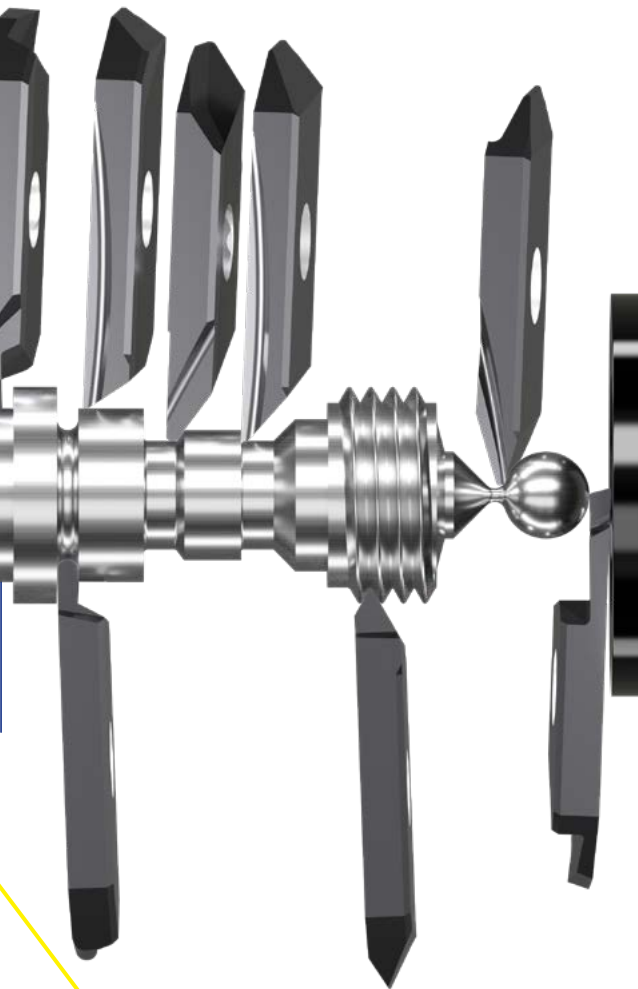
## Committed to quality – committed to customers

WhizCut has always taken pride in manufacturing and delivering top quality tooling, around the world. All WhizCut inserts and toolholders are thoroughly examined in top of the range measuring microscopes.

Every single cutting edge is checked at 60 to 150 times enlargement before being packed in transport safe packaging.

Fast shipment and reliable deliveries are also a major factor in the quality of our products. For this reason we always make sure that our products arrive to their destination on time.

We believe that the extensive quality work, through the entire production process, makes WhizCut-tools among the highest quality products on the market.



*Erik Schmidt  
Founder of WhizCut*



## Like a kid in a machine shop

The year is 1946. In a suburb of the Danish capital of Copenhagen Erik Schmidt, 3 years old, is listening to the well known sound of the lathes while helping his father producing lighters. This is where the story of WhizCut actually begins. Where the rhythm of the lathes became as natural as the rhythm of Erik's heart beats.

Several school years later, ten thousands of geometry calculations later Erik Schmidt invented the WhizFix toolholder system. WhizCut was founded in 1996, in Sweden. To this day Erik still develops new products and inventions for WhizCut, he is the designer behind the original patents and he is a well known name within the metal cutting industry: Inventing smart tooling solutions on the cutting edge.

*Chris Schmidt  
MD of WhizCut*



## The tomorrow of the industry

The rhythm of the band driven lathes is still heard within the Schmidt family – even if the well known sound is long gone in today's modern machines. WhizCut is a leading brand of tooling for CNC automatic lathes. Erik's youngest son Chris Schmidt is Managing director, and he is committed to brighten the future of the metal cutting industry, locally, nationally and worldwide.

As chairman of SKTC – Skärteknikcentrum Sverige, Chris Schmidt is engaged in issues regarding competence, education, validation, competitiveness and growth of the industry. He is dedicated to making the metal cutting industry, *our industry*, stronger and smarter.

*All applications made in a  
Swiss machine – with only  
two types of holders.*

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# News



## WhizTwin Y-axis holder **47.**

Do it the Y-axis way and say bye bye to long and tough chips. WhizCut has developed a brand new toolholder to WhizTwin — our latest range of parting off tools. The WhizTwin parting off insert is short and has two front cutting edges — perfect for Y-axis turning.



## **34.** WhizHip 8x8

Think small and reach bigger production goals. Small parts in small machines deserve the same opportunities as big parts in big machines. The line of WhizHip coolant holders are now available in 8x8 mm shanks. Also on pages: 17, 40, 47.

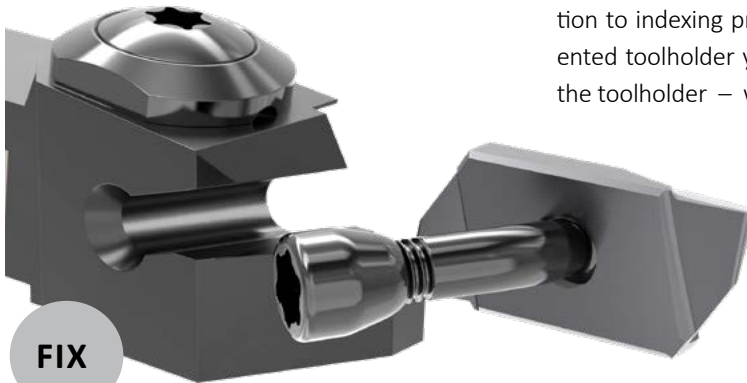
## **52.** WhizAdapt



Collabs that transform into brilliant tooling. That is what our new product line WhizAdapt is all about. First out is the ingenious PZ®turn from Mas Tools: quick change heads that fit the entire range of WhizCut inserts!

# Signature toolholders

## WhizFix



In 15 seconds. From the opposite side. Still in the machine. That is the solution to indexing problems in Swiss type automatics. With the WhizFix patented toolholder you can easily index the insert from the opposite side of the toolholder – with the holder still in the machine.

- Easy access with a stable torx fitting.
- Indexing or changing an insert will not change the setting, resulting in a much faster return to full production.
- There is no risk of damaging the new cutting edge.

Page: 16, 24, 26, 34, 40

## WhizHip

Cool it with high pressure, exactly where you want it. The high pressure coolant is led through the WhizHip toolholders and exits very close, at an optimal angle between the cutting edge and chip. The insert cools down, the chips are broken off and tool life is improved.

- Use the WhizHip toolholder and there is no need to invest in a special gang-plate.
- Combine WhizHip with WhizFix to minimize setup time and index in the machine.
- The WhizHip toolholder gives a positive effect on performance from 10 bar. Normal use is around 100 bar, however WhizHip can handle up to 300 bar.
- High pressure coolant drastically improves performance when working in titanium and other difficult-to-machine-materials.

Page: 17, 26, 34, 40, 47,61



## WhizAdjust

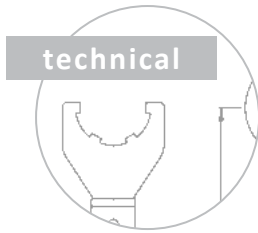


Working against the sub-spindle? With need of precision adjustment of centre height in lathes with no Y-axis? It is actually doable. With the patented adjustable toolholder system WhizAdjust – with an adjustment precision of 0,005 mm and steps of 0,02 mm.

- Easy & fast adjusting of the centre height, one-screw-release to loosen the insert head for adjustments.
- Most stable adjustable system around. Maximum clamp area and high cutting force absorption, as the head and body are clamped together in a 60 degree angle.
- Fits all WhizCut inserts, the adjustable toolholder comes in several different versions.

Page: 16, 25, 35, 41, 51

# Grades of carbide



## Carbide

Great strength, great hardness and great wear resistance – key features of WhizCut precision inserts which are made of carbide. WhizCut inserts and tooling are specially developed to suit the cutting conditions inside CNC Swiss automatic lathes. All cutting edges are fully ground and exceptionally sharp. This, together with the latest types of coating and suitable cutting geometries, gives WhizCut inserts an excellent tool life.

**WhizCut inserts** are made of an extra fine and sub-micron grain carbide with extreme hardness over 1850 Hv, a high fracture strength and even grain size.

**WhizCut round tools** are made of a sub-micron grain carbide with a hardness over 1610 Hv and a medium cobalt content. The grain size is remarkably even, resulting in a supreme fracture strength.

## Stock standard carbide grades for external inserts – including external threading

<b>7M, 8, 9, 10</b>	Uncoated grade covering ISO groups K10-K30 and M10-M20.
<b>C8, 9, 10</b>	The classic TiN coated grade covering ISO groups K05-K20, M05-M20 and P05-P10. Not a stock standard. Will be replaced by F8 and B8.
<b>F7, 8, 9, 10</b>	New improved AlTiN coated grade with high heat and thermal shock resistance. <b>Great for machining stainless steel.</b>
<b>B7, 8, 9, 10</b>	AlCrN coating with extra edge sharpness. A versatile grade which can be used for most materials. <b>Extra benefits in titanium and exotic materials.</b>
<b>NF8, 9, 10</b>	New improved slightly honed AlTiN coated grade with high heat and thermal shock resistance. <b>Great for machining steel and large stainless steel parts.</b>
<b>ND7, 8, 9, 10</b>	AlCrN coated grade with a slightly honed cutting edge. <b>Perfect for all steels, tough exotics and larger parts.</b>
<b>A9</b>	TiAlCN overall strong grade with low friction. <b>Suitable for thread milling.</b>
<b>P9, 10</b>	An extra smooth AlTiN coating suitable for all drill applications as well as boring in sticky materials.
<b>T7</b>	A diamond coating (ta-C) with a superb surface finish and hardness. <b>Excellent for aluminium.</b>

## Stock status

A	ER Stock standard, EL Stock standard.
B	ER Stock standard, EL Against inquiry.
C	EL Stock standard, ER Against inquiry.
R	ER Stock standard only.
L	EL Stock standard only.
K	Standard price, not a stock standard.
E	Stock standard neutral insert.
F	Stock standard neutral insert, right hand geometry.
-	Not available.

## Insert sizes

Insert type	L	T
J11, K11	11	2,5
H13, T13, U2	13	2,2
J15, K15	15	2,1
J20ER, K20ER	20	3,5

## EXTERNAL INSERTS &amp; TOOLHOLDERS

# WhizCut

Innovative indexing and high performing inserts. This is how you improve CNC swiss type automatic lathes. WhizCut has tangentially mounted inserts which are ingeniously set at an angle in the toolholder. This gives you the best possible tool life, tight tolerances and smooth surface finish.







K15ER Batch 1548

Batch 1815

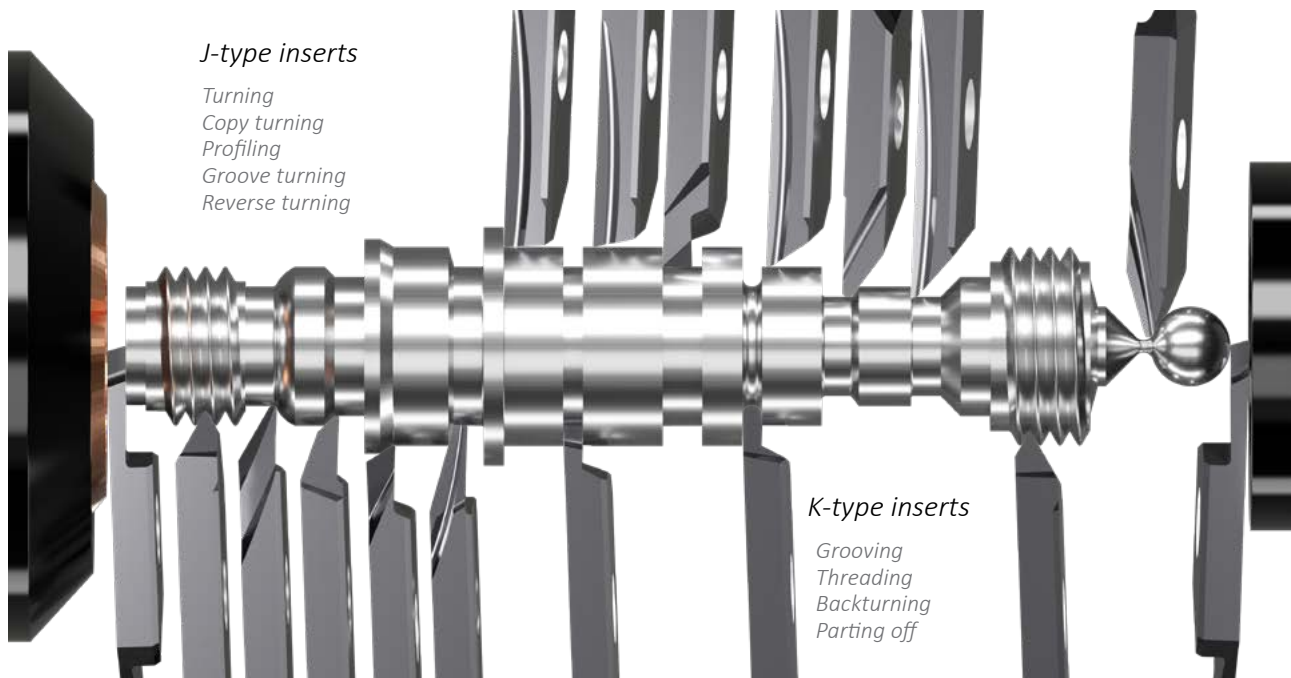
Batch 181  
J15ER

**WhizCut** DSJ15ER 0750M-8C


 technical

## WhizCut - fully ground cutting edges

WhizCut standard inserts all have sharp, fully ground cutting edges. Standard inserts are available between 2° and 20° positive cutting rake – to perform outstanding in every operation. Thanks to this inventive combination WhizCut inserts are up for any material or application challenge.



### Range benefits

- **Perfect chip control and minimal cutting forces:** all WhizCut inserts have complex cutting geometries and sharp, fully ground cutting edges. The entire range of inserts is designed to generate ultimate stability.
- **Flexible:** WhizCut has a great assortment of inserts specially designed to fit all Swiss type applications.
- **Save time:** with the toolholder system WhizFix, you can index the insert with the toolholder still in the machine. Change or turn the insert around in only 15 seconds. Read more on page 6.
- **High pressure coolant:** through the toolholders - is available for the full line of WhizCut inserts. Excellent to combine with WhizHip couplings and hoses.

2 holders  
- all applications

You only need two types of toolholders to perform any operation with a WhizCut insert: J-type toolholders and K-type toolholders. The inserts are divided into two different application styles; “radial turning” and “front turning”. The toolholders for radial turning and front turning are optimized for their targeted application.

Perfect fit with WhizCut signature toolholders:


 HIP


 FIX

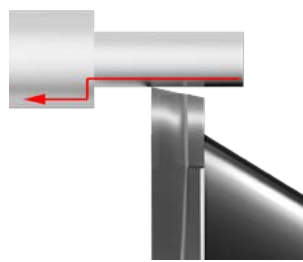

 ADJ

## J-type inserts and toolholders

### Front turning

A perfect combination of cutting rakes, shapes, corner executions, chip control and grades. WhizCut has designed a diverse range of J-type inserts so you can find the ideal insert right here.

The J-type insert is tilted in the toolholder to give the best clearance and superb stability in the tooling.



Turning direction



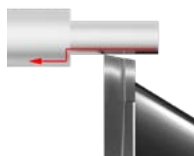
Resulting cutting force

For recommended cutting data J-type insert please see page 86.

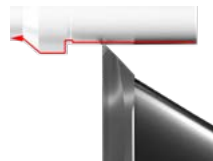
## WhizGuide select the ideal insert

### 1. Axial relief vs. component possibilities

- 3° Gives a stronger tool and smoother finish.
- 12° Gives a strong tool and good finish.
- 33° Medium strong tool, wiper good for smooth finish.
- 48-53° Less strong tool, for smooth finish.



Small axial relief  
- stronger tool



Large axial relief  
- weaker tool

### 3. Cutting rake vs. material

- 0-2° for short-chipping materials.
- 6-8° for harder long-chipping materials.
- 12° for long-chipping materials.
- 16-20° for sticky long-chipping materials.
- P-line, when low cutting pressure is needed, aggressive cutting rakes gives less edge build up. Stainless, exotics and steel.



0-2°



6-8°



12°



16-20°

### 2. Chip control

- Style H = Long chips and/or high feed rate.
- Style J = Long chips and/or highest feed rate.
- Style D, N & V = Short chips &/or low to mod. feed rate.
- Style M = Short chips and/or low to moderate feed rate.
- P-line = Long chips and/or low to moderate feed rate.

### 4. Corner alternatives

- Sharp corner = Min. cutting force - component is weak.
- Wiper = For higher feed rates - better surface finish.
- Radius = Stronger tool, also on request of component.
- Wiper and radius = For higher feed-rate - better surface.



Sharp corner



Wiper



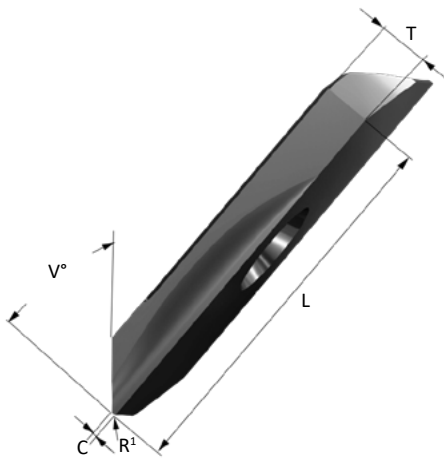
Full radius



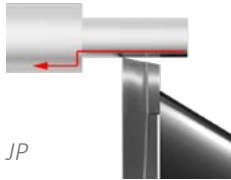
Radius + wiper

# J-type

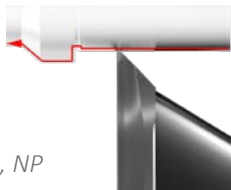
## Style H, J, D, N, V | Inserts for turning, copy turning



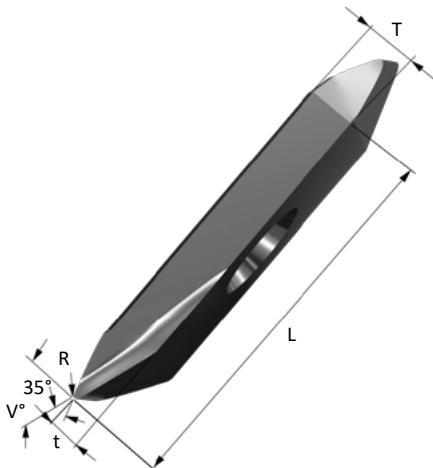
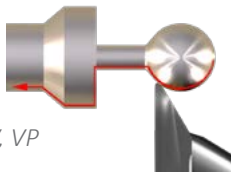
Turning  
Style H, HP, J, JP



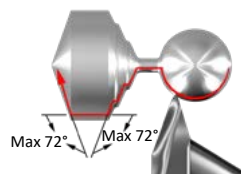
Copy turning  
Style D, DP, N, NP



Profiling  
Style N, NP, V, VP



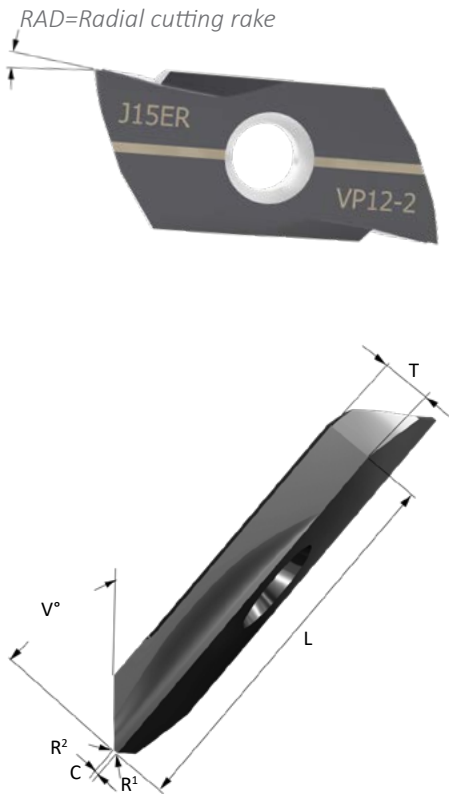
## Style M | Inserts for profile, copy turning



INSERTS	L	V°	R	C	C. RAKE°	STOCK						PRICE	
						8M	C8	F8	B8	NF8	ND8		
<b>H = 3°</b>	J15ER H6-0	15	3	0	0	6	R	K	R	R	-	-	A3
	J15ER H6-05	15	3	0,05	0	6	R	K	R	R	-	-	A4
	J15ER H6-2	15	3	0,2	0	6	R	K	R	R	R	R	A4
	J15ER H16-0	15	3	0	0	16	R	K	R	R	-	-	A3
	J15ER H16-1	15	3	0,1	0	16	R	K	R	R	R	R	A4
	J15ER H16-2	15	3	0,2	0	16	R	K	R	R	K	K	A4
J15ER H16-4	15	3	0,4	0	16	K	K	K	K	K	K	A4	
<b>J = 12°</b>	J11ER/L J8-0	11	12	0	0	8	A	K	A	A	-	-	A3
	J11ER/L J8-2	11	12	0,2	0	8	A	K	A	A	R	R	A4
	J11ER/L J20-0	11	12	0	0	20	A	K	A	A	-	-	A3
	J11ER/L J20-05	11	12	0,05	0	20	A	K	A	A	-	-	A4
	J11ER/L J20-2	11	12	0,2	0	20	A	K	A	A	K	K	A4
	J15ER/L J8-0	15	12	0	0	8	A	K	B	B	R	R	A3
	J15ER/L J8-1	15	12	0,1	0	8	A	K	B	B	R	R	A4
	J15ER/L J8-2	15	12	0,2	0	8	A	K	B	B	R	R	A4
	J15ER/L J20-0	15	12	0	0	20	A	K	B	B	-	-	A3
	J15ER/L J20-1	15	12	0,1	0	20	A	K	B	B	-	-	A4
	J15ER/L J20-2	15	12	0,2	0	20	A	K	B	B	K	K	A4
	J20ER J8-2	20	12	0,2	0	8	R	K	R	R	R	R	A21
J20ER J8-4	20	12	0,4	0	8	R	K	R	R	R	R	A21	
J20ER J20-2	20	12	0,2	0	20	R	K	R	R	R	R	A23	
J20ER J20-4	20	12	0,4	0	20	R	K	R	R	R	R	A23	
<b>D = 33°</b>	J11ER/L D2-0	11	33	0,02	0	2	A	K	A	A	-	-	A5
	J11ER/L D2-0-1	11	33	0	0,12	2	A	K	A	A	-	-	A5
	J11ER/L D12-0	11	33	0,02	0	12	A	K	A	A	-	-	A5
	J11ER/L D12-05	11	33	0,05	0	12	A	K	A	A	-	-	A5
	J11ER/L D12-0-1	11	33	0	0,12	12	A	K	A	A	-	-	A5
	J15ER/L D2-0	15	33	0,02	0	2	B	K	B	B	-	-	A5
	J15ER/L D2-0-2	15	33	0	0,2	2	B	K	B	B	-	-	A5
	J15ER/L D12-0	15	33	0,02	0	12	B	K	B	B	-	-	A5
	J15ER D12-4	15	33	0,4	0	12	K	K	K	K	K	K	A5
	J15ER D16-1	15	33	0,1	0	16	R	K	R	R	K	K	A5
	J15ER/L D12-0-2	15	33	0	0,2	12	B	K	B	B	-	-	A5
	J15ER/L D12-1-3	15	33	0,15	0,3	12	B	K	B	B	R	R	A6
J20ER D2-2-5	20	33	0,2	0,5	2	R	K	R	R	R	R	A23	
J20ER D12-2-5	20	33	0,2	0,5	12	R	K	R	R	R	R	A24	
<b>N = 48°</b>	J15ER/L N2-0-2	15	48	0	0,2	2	B	K	B	B	-	-	A6
	J15ER N2-1-3	15	48	0,1	0,3	2	R	K	R	R	-	-	A7
	J15ER/L N12-0-2	15	48	0	0,2	12	B	K	B	B	-	-	A6
	J15ER N12-1-3	15	48	0,1	0,3	12	R	K	R	R	R	R	A7
	J20ER N2-2-5	20	48	0,2	0,5	2	R	K	R	R	R	R	A24
J20ER N12-2-5	20	48	0,2	0,5	12	R	K	R	R	K	K	A25	
<b>V = 53°</b>	J11ER/L V2-1	11	53	0,1	0	2	A	K	B	B	-	-	A6
	J11ER/L V12-05	11	53	0,05	0	12	A	K	B	B	-	-	A7
	J11ER/L V12-2	11	53	0,2	0	12	A	K	B	B	K	K	A7
	J15ER/L V2-1	15	53	0,1	0	2	A	K	B	B	-	-	A6
	J15ER/L V2-0-2	15	53	0	0,2	2	B	K	B	B	-	-	A6
	J15ER/L V2-05-2	15	53	0,05	0,2	2	B	K	B	K	K	K	A6
	J15ER/L V12-2	15	53	0,2	0	12	B	K	B	B	R	R	A7
	J15ER V12-4	15	53	0,4	0	12	R	K	R	R	R	R	A7
	J15ER V12-4-28	15	62	0,4	0	12	R	K	R	R	K	K	A7
J20ER V12-4	20	53	0,4	0	12	-	-	-	-	R	R	A25	

INSERTS	L	t	V°	R	C. RAKE°	STOCK						PRICE	
						8M	C8	F8	B8	NF8	ND8		
<b>72,5°</b>	J15ER M12-08	15	1,3	72,5	0,08	12	R	K	R	R	-	-	A7
	J15ER M12-2	15	1,3	72,5	0,2	12	R	K	R	R	R	R	A7

### P-line | Inserts for turning sticky and exotic materials (extra radial cutting rake)



Pic. of profiling insert MP see page 12.

INSERTS	L	V°	R <sup>1</sup>	R <sup>2</sup>	C	C. RAKE°		STOCK					PRICE	
						Ax	RAD	8M	F8	B8	NF8	ND8		
HP	J11ER HP6-0	11	3	0	-	0	6	6	R	R	R	R	R	A5
	J11ER HP6-05	11	3	0,05	-	0	6	6	R	R	R	R	R	A6
	J15ER HP8-1	15	3	0,1	-	0	8	12	-	-	-	R	R	A5
	J15ER HP8-2	15	3	0,2	-	0	8	12	-	-	-	R	R	A5
	J15ER HP16-0	15	3	0	-	0	16	12	R	R	R	-	-	A4
	J15ER HP16-03	15	3	0,03	-	0	16	12	R	R	R	-	-	A5
	J15ER HP16-05	15	3	0,05	-	0	16	12	R	R	R	-	-	A5
	J15ER HP16-2	15	3	0,2	-	0	16	12	R	R	R	R	R	A5
	J15ER HP16-4	15	3	0,4	-	0	16	12	K	K	K	K	K	A5
JP	J15ER JP12-0	15	12	0	-	0	12	12	R	R	R	K	K	A4
	J15ER JP20-1	15	12	0,1	-	0	20	12	R	R	R	-	-	A5
DP	J20ER JP20-4	20	12	0,4	-	0	20	12	R	R	R	R	R	A24
	J15ER DP8-4	15	33	0,4	-	0	8	12	-	-	-	R	R	A6
	J15ER DP12-0	15	33	0,02	-	0	12	12	R	R	R	-	-	A6
	J15ER DP12-05	15	33	0,05	-	0	12	12	R	R	R	-	-	A7
	J15ER DP12-1	15	33	0,1	-	0	12	12	R	R	R	K	K	A6
	J15ER DP12-15	15	33	0,15	-	0	12	12	R	R	R	K	K	A6
NP	J15ER DP12-2	15	33	0,2	-	0	12	12	R	R	R	R	R	A6
	J15ER NP12-0-2	15	48	0	-	0,2	12	12	R	R	R	-	-	A7
	J15ER NP12-03-1	15	48	0,03	-	0,15	12	12	R	R	R	-	-	A8
	J15ER NP12-05-1	15	48	0,05	-	0,15	12	12	R	R	R	-	-	A8
	J15ER NP12-052	15	48	0,05	0,2	0	12	12	R	R	R	-	-	A8
VP	J15ER NP12-08	15	48	0,08	-	0	12	12	R	R	R	R	R	A8
	J15ER NP12-2	15	48	0,2	-	0	12	12	R	R	R	R	R	A8
	J15ER NP12-1-3	15	48	0,1	-	0,3	12	12	R	R	R	R	R	A8
	J15ER VP12-05	15	53	0,05	-	0	12	12	R	R	R	-	-	A8
MP	J15ER VP12-08	15	53	0,08	-	0	12	12	R	R	R	R	R	A8
	J15ER VP12-2	15	53	0,2	-	0	12	12	R	R	R	R	R	A8
	J15ER VP12-4	15	53	0,4	-	0	12	12	R	R	R	R	R	A8
MP	J15ER MP12-2	15	72,5	0,2	-	0	12	12	R	R	R	-	-	A8
	J15ER MP12-4	15	72,5	0,4	-	0	12	12	R	R	R	R	R	A8



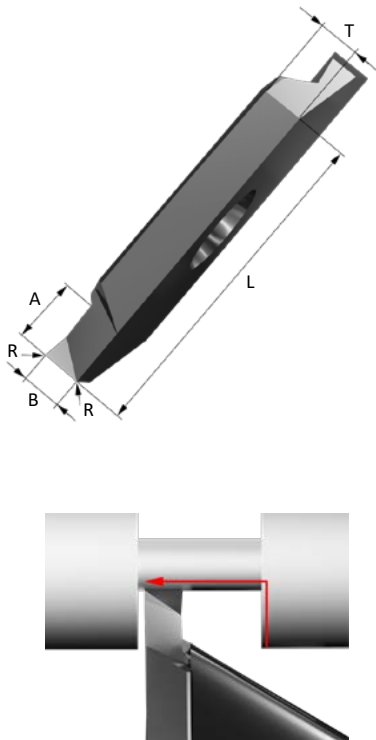
### Benefits of P-line

- The P-line inserts have the same basic geometry as the equivalent Style: H=HP, J=JP, D=DP, N=NP, V=VP, M=MP.
- The difference is the radial cutting rake, which varies from 6-12°.
- The P-line inserts offer greater chip control/breaking in materials that easily gives a built up edge.
- Reduced risk of a built up edge.
- Less cutting pressure = better surface finish.
- Outstanding performance in titanium, stainless and carbon steels.
- Improved surface finish when copy turning in all materials.



# J-type

## Style A | Inserts for groove turning



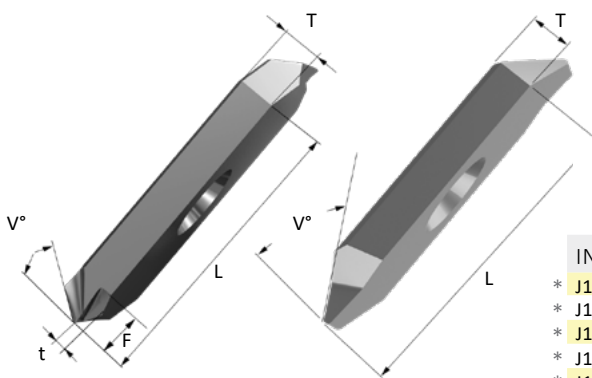
INSERTS	STOCK											PRICE
	L	B	A	RX2	C. RAKE°	8M	C8	F8	B8	NF8	ND8	
J11ER/L A0-03-0	11	0,2	0,3	0	0	A	K	B	B	-	-	A6
J11ER A0-08-0	11	0,5	0,8	0	0	R	K	R	R	-	-	A5
J11ER A0-08-03	11	0,5	0,8	0,03	0	R	K	R	R	-	-	A5
* J11ER/L A0-20-0	11	1,3	2	0	0	A	K	B	B	-	-	A5
* J11ER/L A12-20-0	11	1,3	2	0	12	A	K	B	B	-	-	A6
* J11ER A12-20-2	11	1,3	2	0,2	12	R	-	R	R	K	K	A7
J15ER A0-03-0	15	0,2	0,3	0	0	R	-	R	R	-	-	A5
J15ER A0-05-0	15	0,3	0,5	0	0	R	-	R	R	-	-	A6
J15ER A0-08-0	15	0,5	0,8	0	0	R	K	R	R	-	-	A5
J15ER A0-08-03	15	0,5	0,8	0,03	0	R	K	R	R	-	-	A6
J15ER A0-08-05	15	0,5	0,8	0,05	0	R	K	R	R	-	-	A6
J15ER A0-12-0	15	0,75	1,2	0	0	R	K	R	R	K	K	A5
J15ER A12-12-0	15	0,75	1,2	0	12	R	K	R	R	-	-	A6
J15ER A0-12-05	15	0,75	1,2	0,05	0	R	K	R	R	K	K	A7
J15ER A12-12-05	15	0,75	1,2	0,05	12	R	K	R	R	-	-	A7
J15ER A0-16-0	15	1	1,6	0	0	R	K	R	R	K	K	A5
J15ER A12-16-0	15	1	1,6	0	12	R	K	R	R	-	-	A6
J15ER A12-16-05	15	1	1,6	0,05	12	R	K	R	R	-	-	A7
* J15ER A0-24-0	15	1,5	2,4	0	0	R	K	R	R	R	R	A5
* J15ER/L A12-24-0	15	1,5	2,4	0	12	B	K	B	R	R	R	A6
* J15ER A12-24-08	15	1,5	2,4	0,08	12	R	K	R	R	K	K	A7
* J15ER/L A12-24-1	15	1,5	2,4	0,1	12	A	K	B	B	R	R	A7
** J15ER A12-40-0	15	2	4	0	12	R	K	R	R	R	R	A7
** J15ER A12-40-1	15	2	4	0,1	12	R	K	R	R	R	R	A7
** J15ER A12-40-2	15	2	4	0,2	12	R	K	R	R	R	R	A7
J20ER A0-3-0	20	2	3	0	0	R	K	R	R	-	-	A22
** J20ER A0-5-0	20	3	5	0	0	R	K	R	R	-	-	A22
J20ER A12-3-0	20	2	3	0	12	R	K	R	R	-	-	A24
J20ER A12-3-1	20	2	3	0,1	12	R	K	R	R	R	R	A25
** J20ER A12-5-0	20	3	5	0	12	R	K	R	R	-	-	A24
** J20ER A12-5-2	20	3	5	0,2	12	R	K	R	R	R	R	A25

\* New name.

\*\* DOC alteration of holder needed to reach full cutting depth.

## Benefits of groove turning

- One insert for numerous operations.
- Plunge and turn insert. With WhizCut inserts for groove turning there is no need for multiple plunging, resulting in much faster cycle times.
- Excellent for tight tolerance grooving, or grooving when several different sizes are needed.



## Style F | Inserts for reverse turning

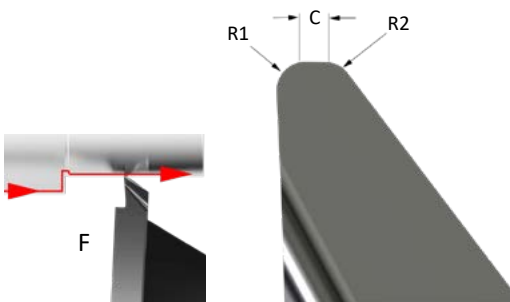
INSERTS	STOCK											PRICE
	R1	R2	C	t	F	V°	C. RAKE°	8M	C8	F8	B8	
* J15ER FD16-0320	0,03	0,2	0	0,6	3	33	16	R	K	R	K	A8
* J15ER FD16-0520	0,05	0,2	0	0,6	3	33	16	R	K	R	K	A8
* J15ER FN8-0520C	0,05	0,2	0,05	0	-	48	8	K	-	K	K	A8
* J15ER FN8-1020C	0,1	0,2	0,03	0	-	48	8	K	-	K	K	A8
* J15ER FN20-1818C	0,18	0,18	0,03	0	-	48	20	R	-	R	R	A8

\* New name.

At t=0 Max plunge F is 15 mm.

## Benefits of reverse turning

- Higher feed with an improved surface finish.
- Clears burrs on sharp corners.
- Corner radius protected when turning.
- Increased tool life.
- Angled cutting edge gives smoother cutting.



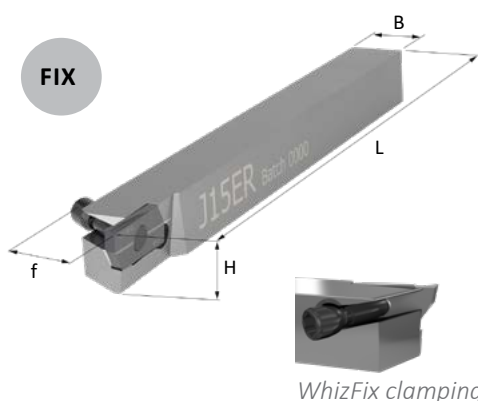


*Turning high depth of cut, 8 mm, with the signature product range WhizCut. Resulting in great chip control and excellent surface finish.*

YOUR NOTES

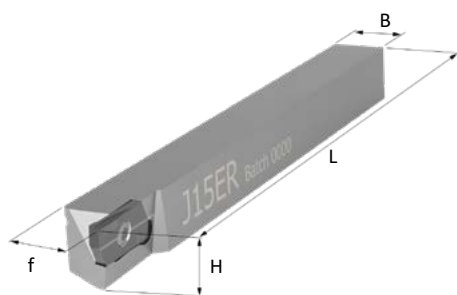
# J-type

## WPJ | Toolholders with WhizFix pin type clamping

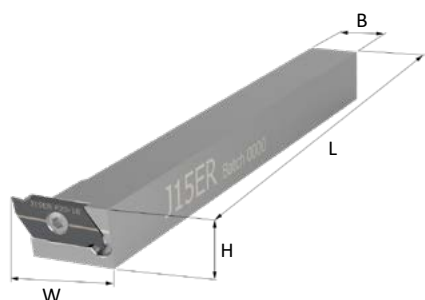


TOOLHOLDER	H	B	L	f	INSERT	PIN	BIT	STOCK	PRICE
WPJ11ER/L 88K-8T	8	8	125	8	J11ER/L	PIN 8	T15	A	A62
WPJ11ER/L 1010K-8T	10	10	125	10	J11ER/L	PIN 8	T15	A	A62
WPJ15ER/L 1010K-8T	10	10	125	10	J15ER/L	PIN 12	T20	A	A62
WPJ15ER/L 1212F-8T	12	12	85	12	J15ER	PIN 12	T20	R	A61
WPJ15ER/L 1212K-8T	12	12	125	12	J15ER/L	PIN 12	T20	A	A62
WPJ15ER 0500K-8T	1/2"	1/2"	125	1/2"	J15ER	PIN 12	T20	R	A62
WPJ15ER/L 1616K-8T	16	16	125	16	J15ER/L	PIN 12	T20	A	A63
WPJ20ER 1212K-8T	12	12	125	12	J20ER	PIN 16	T25	R	A62
WPJ20ER 0500K-8T	1/2"	1/2"	125	1/2"	J20ER	PIN 16	T25	R	A62
WPJ20ER 1616K-8T	16	16	125	16	J20ER	PIN 16	T25	R	A63
WPJ20ER 2020K-8T	20	20	125	20	J20ER	PIN 16	T25	R	A64

## WSJ | Toolholders with conventional clamping

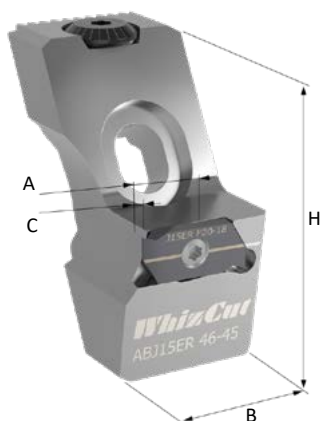


TOOLHOLDER	H	B	L	f	INSERT	SCREW	KEY	STOCK	PRICE
WSJ11ER/L 88K-8T	8	8	125	8	J11ER/L	M2,5X6	T7IP	A	A52
WSJ15ER 0810K-8T	8	10	125	10	J15ER	M3X7	T9IP	R	A52
WSJ15ER/L 1010K-8T	10	10	125	10	J15ER/L	M3X7	T9IP	A	A52
WSJ15ER/L 1212K-8T	12	12	125	12	J15ER/L	M3X7	T9IP	A	A52
WSJ15ER 0500K-8T	1/2"	1/2"	125	1/2"	J15ER	M3X7	T9IP	R	A52
WSJ15ER/L 1616K-8T	16	16	125	16	J15ER/L	M3X7	T9IP	A	A53
WSJ15ER 2020K-8T	20	20	125	20	J15ER	M3X7	T9IP	R	A54
WSJ20ER 1212K-8T	12	12	125	12	J20ER	M4X9	T15	R	A52
WSJ20ER 0500K-8T	1/2"	1/2"	125	1/2"	J20ER	M4X9	T15	R	A52
WSJ20ER 1616K-8T	16	16	125	16	J20ER	M4X9	T15	R	A53
WSJ20ER 2020K-8T	20	20	125	20	J20ER	M4X9	T15	R	A54
WSJ20ER 2525M-8T	25	25	150	25	J20ER	M4X9	T15	R	A55
WSJ20ER 1000M-8T	1"	1"	150	1"	J20ER	M4X9	T15	R	A55



## ZSJ | Square shank toolholders

TOOLHOLDER	H	B	L	W	INSERT	SCREW	KEY	STOCK	PRICE
ZSJ15ER 1212K-8T	12	12	125	20	J15ER	M3X7	T9IP	R	A72
ZSJ15ER 1616K-8T	16	16	125	24	J15ER	M3X7	T9IP	R	A73



## ABJ | WhizAdjust toolholder head

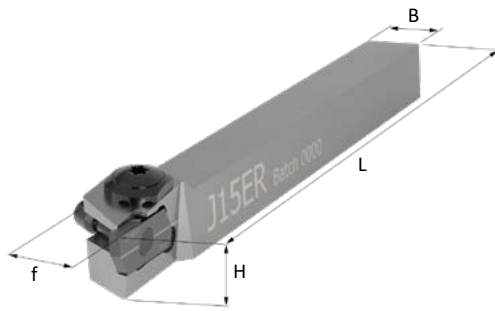
TOOLHOLDER HEAD	H	B	A	C	MAX DOC	MAX FEED LENGTH	INSERT TYPE	SCREW	KEY	STOCK	PRICE
ABJ15ER-46-45	46	24	10	2	45		J15ER	M3X7	T9IP	R	D55

For more information and shanks see WhizAdjust page 50.  
A is measurement from cutting edge to centre of shank.

ADJ

# J-type

## WPJ | Pin-type WhizHip toolholders



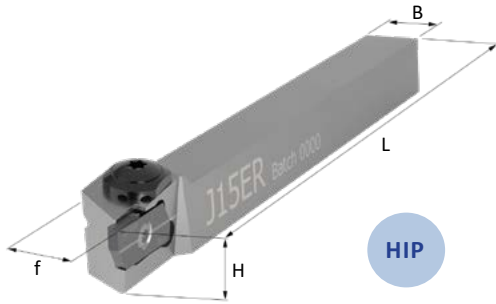
WhizFix clamping



TOOLHOLDER	H	B	L	f	INSERT	PLUG	PIN	BIT	STOCK	PRICE
WPJ15ER 1010K-8C	10	10	125	10	J15ER	M8X1	PIN 12	T20	R	A82
WPJ15ER 1010H-8C	10	10	100	10	J15ER	M8X1	PIN 12	T20	R	A82
WPJ15ER 1212K-8C	12	12	125	12	J15ER	1/8" NPT	PIN 12	T20	R	A82
WPJ15ER 0500K-8C	1/2"	1/2"	125	1/2"	J15ER	1/8" NPT	PIN 12	T20	R	A82
WPJ15ER 1616K-8C	16	16	125	16	J15ER	1/8" NPT	PIN 12	T20	R	A83
WPJ20ER 1216K-8C	12	16	125	16	J20ER	1/8" NPT	PIN 16	T25	R	A82
WPJ20ER 0516K-8C	1/2"	16	125	16	J20ER	1/8" NPT	PIN 16	T25	R	A82
WPJ20ER 1616K-8C	16	16	125	16	J20ER	1/8" NPT	PIN 16	T25	R	A83
WPJ20ER 2020K-8C	20	20	125	20	J20ER	1/8" NPT	PIN 16	T25	R	A83

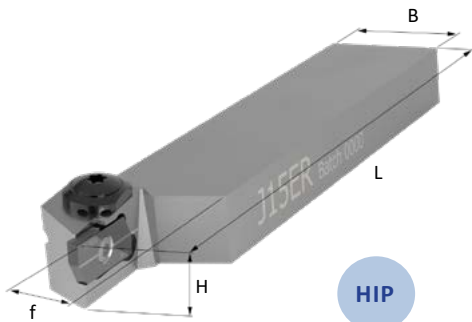
For more info on WhizHip see page 80.

## WSJ | WhizHip toolholders for high pressure coolant



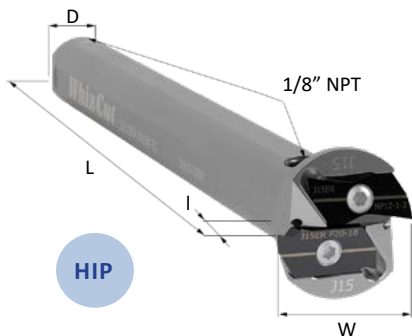
TOOLHOLDER	H	B	L	f	INSERT	PLUG	SCREW	KEY	STOCK	PRICE
WSJ11ER 88H-8C	8	8	100	10	J11ER	M5X0,8	M2,5X6	T7IP	R	A73
WSJ11ER 88K-8C	8	8	125	10	J11ER	M5X0,8	M2,5X6	T7IP	R	A73
WSJ15ER 1010H-8C	10	10	100	10	J15ER	M8X1	M3X7	T9IP	R	A72
WSJ15ER 1010K-8C	10	10	125	10	J15ER	M8X1	M3X7	T9IP	R	A72
WSJ15ER 1212K-8C	12	12	125	12	J15ER	1/8" NPT	M3X7	T9IP	R	A72
WSJ15ER 0500H-8C	1/2"	1/2"	100	1/2"	J15ER	1/8" NPT	M3X7	T9IP	R	A72
WSJ15ER 0500K-8C	1/2"	1/2"	125	1/2"	J15ER	1/8" NPT	M3X7	T9IP	R	A72
WSJ15ER 1616K-8C	16	16	125	16	J15ER	1/8" NPT	M3X7	T9IP	R	A73
WSJ15ER 0750K-8C	3/4"	3/4"	125	3/4"	J15ER	1/8" NPT	M3X7	T9IP	R	A73
WSJ15ER 2020K-8C	20	20	125	20	J15ER	1/8" NPT	M3X7	T9IP	R	A74
WSJ20ER 1216K-8C	12	16	125	16	J20ER	1/8" NPT	M4X9	T15	R	A72
WSJ20ER 0516K-8C	1/2"	16	125	16	J20ER	1/8" NPT	M4X9	T15	R	A72
WSJ20ER 1616K-8C	16	16	125	16	J20ER	1/8" NPT	M4X9	T15	R	A73
WSJ20ER 2020K-8C	20	20	125	20	J20ER	1/8" NPT	M4X9	T15	R	A74
WSJ20ER 2525M-8C	25	25	150	25	J20ER	1/8" NPT	M4X9	T15	R	A74
WSJ20ER 1000M-8C	1"	1"	150	1"	J20ER	1/8" NPT	M4X9	T15	R	A74

## WSJ | Shifted edge WhizHip toolholders



TOOLHOLDER	H	B	L	f	INSERT	PLUG	SCREW	KEY	STOCK	PRICE
WSJ15ER 1020H-8C	10	20	100	10	J15ER	M8X1	M3X7	T9IP	R	A72
WSJ15ER 1224K-8C	12	24	125	12	J15ER	1/8" NPT	M3X7	T9IP	R	A72
WSJ15ER 0510K-8C	1/2"	1"	125	1/2"	J15ER	1/8" NPT	M3X7	T9IP	R	A72
WSJ15ER 1632K-8C	16	32	125	16	J15ER	1/8" NPT	M3X7	T9IP	R	A73

## DSJ | WhizHip double inserts toolholder round shank



TOOLHOLDER	D	W	L	I	INSERT	SCREW	KEY	STOCK	PRICE
DSJ15ER 0625M-8C	5/8"	24	150	40	J15ER	M3X7	T9IP	R	A87
DSJ15ER 0016M-8C	16	24	150	40	J15ER	M3X7	T9IP	R	A87
DSJ15ER 0750M-8C	3/4"	24	150	40	J15ER	M3X7	T9IP	R	A87
DSJ15ER 0020M-8C	20	24	150	40	J15ER	M3X7	T9IP	R	A87
DSJ15ER 0022M-8C	22	24	150	40	J15ER	M3X7	T9IP	R	A87
DSJ15ER 0025M-8C	25	24	150	40	J15ER	M3X7	T9IP	R	A87
DSJ15ER 1000M-8C	1"	24	150	40	J15ER	M3X7	T9IP	R	A87

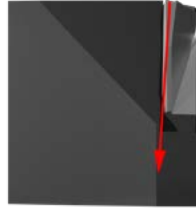
All holders are available as DSKJ15ER, with one J15ER and one K15ER pocket.

All holders have four location flats.

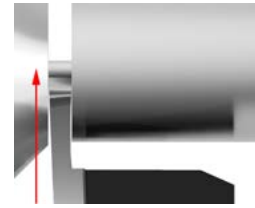
## K-type inserts and toolholders

### Radial turning

K-type inserts are designed for back turning, threading, grooving and parting off. WhizCut offers a wide range of inserts for these applications. The K-type insert is slightly tilted in the toolholder, to give enough clearance, while maintaining maximum stability.

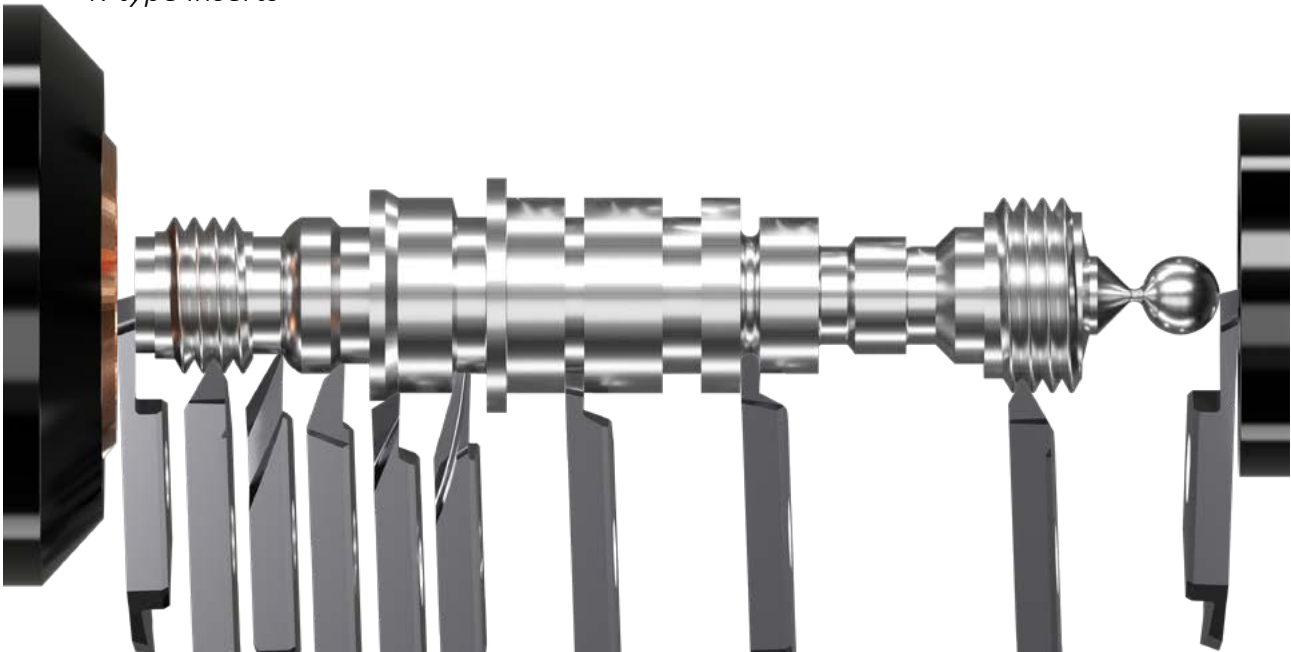


Resulting cutting force



Turning direction

### K-type inserts



### K-type toolholders

Find the right toolholder for your application. WhizCut offers a wide selection of toolholders:

- Regular holders.
- Narrow holders for short parts. Suitable for small diameter bars.
- Left hand holder with insert in centre, to part off against the sub spindle.
- Shifted edge holders. Can be used with an extended nose guide bushing collet.

WSK15ER 1616K-2CA



WSK15ER 1212K-2B



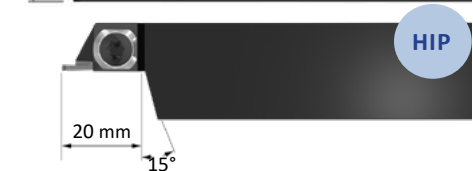
WSK15ER 1212K-2P



WSK15EL 12Q6K-2P

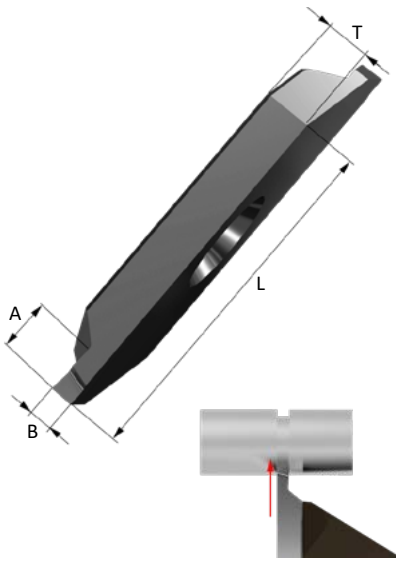


WSK15ER 1224K-2C





# K-type

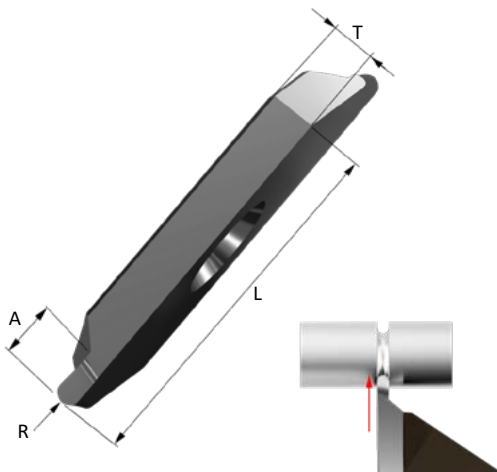


## Style G | Inserts for grooving

INSERTS	B	MAX A	*CIRCLIP	STOCK				PRICE
				8M	C8	F8	B8	
K11ER G0,5	0,5	1	0,4	R	K	R	R	A4
K11ER G0,8	0,8	1,6	0,7	R	K	R	R	A4
K11ER G1,0	1	2	0,9	R	K	R	R	A4
K15ER G0,1	0,1	0,2	-	R	K	R	R	A6
K15ER/L G0,2	0,2	0,4	-	B	K	B	B	A5
K15ER/L G0,25	0,25	0,5	-	B	K	B	B	A5
K15ER G0,3	0,3	0,6	-	R	K	R	R	A4
K15ER G0,4	0,4	0,8	-	R	K	R	R	A4
K15ER/L G0,5	0,5	1	0,4	B	K	B	B	A4
K15ER/L G0,6	0,6	1,2	0,5	B	K	B	B	A4
K15ER/L G0,7	0,7	1,4	0,6	B	K	B	B	A4
K15ER G0,75	0,75	1,5	0,6	R	K	R	R	A4
K15ER/L G0,8	0,8	1,6	0,7	B	K	B	B	A4
K15ER G0,9	0,9	1,8	0,8	R	K	R	R	A4
K15ER G0,95	0,95	1,9	0,8	R	K	R	R	A4
K15ER/L G1,0	1	2	0,9	B	K	B	B	A4
K15ER/L G1,15	1,15	2,3	1,0	B	K	B	B	A4
K15ER G1,2	1,2	2,4	1,0	R	K	R	R	A4
K15ER/L G1,35	1,35	2,7	1,2	B	K	B	B	A4
K15ER/L G1,5	1,5	3	-	B	K	B	B	A4
K15ER/L G1,65	1,65	3,3	1,5	B	K	B	B	A4
K15ER/L G1,90	1,9	3,8	1,75	B	K	B	B	A4
K15ER/L G2,05	2,05	4,1	-	B	K	B	B	A4
K20ER G2,0	2	4	-	R	K	R	R	A24
K20ER G2,5	2,5	5	-	R	K	R	R	A24
K20ER G3,0	3	6	-	R	K	R	R	A24

\*According to DIN471

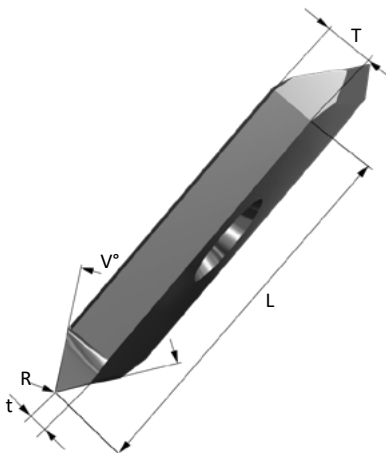
See page 38 for the WhizGroove full line of grooving inserts.



## Style GR | Inserts for radius grooving

INSERTS	R	A	L	T	STOCK				PRICE
					8M	C8	F8	B8	
K15ER GR0,25	0,25	1	15	2,1	R	K	R	R	A7
K15ER GR0,5	0,5	2	15	2,1	R	K	R	R	A7
K15ER GR0,75	0,75	3	15	2,1	R	K	R	R	A7
K15ER GR1,0	1	4	15	2,1	R	K	R	R	A7
K20ER GR1,25	1,25	5	20	3,5	R	K	R	R	A27
K20ER GR1,5	1,5	6	20	3,5	R	K	R	R	A27
K20ER GR1,75	1,75	7	20	3,5	R	K	R	R	A27

See page 38 for the WhizGroove full line of grooving inserts.



## Style T | Inserts for partial profile threading

INSERTS	L	V°	t	R	STOCK				PRICE
					8M	C8	F8	B8	
K11ER/L T60-5	11	60	0,5	0,03	A	K	B	B	A4
K15ER/L T55-5	15	55	0,5	0,03	B	K	B	B	A5
K15ER/L T60-5	15	60	0,5	0,03	A	K	B	B	A4
K15ER/L T60-8	15	60	0,8	0,05	A	K	B	B	A4
K15ER/L TS60-16	15	60	1,6	0,03	B	K	B	B	A5
K20ER T60-10	20	60	1	0,1	R	K	R	R	A25
K20ER T60-15	20	60	1,5	0,2	R	K	R	R	A25
K20ER TS60-25	20	60	2,5	0,1	R	K	R	R	A25

See page 30 for the WhizThread full line of threading inserts.

Right hand insert shown.  
All angles are shown when mounted in toolholder.



## Backturning



Get more done – every time. WhizCut back turning inserts are unlike any inserts you have experienced before. Don't accept the hassle that comes with back turning. Eliminate problems, cut cycle times and improve quality with the help of WhizCut.

### Succeed with WhizCut B style back turning insert

- **100% part roundness** - WhizCut back turning inserts give minimum radial cutting pressure.
- **Flawless finish** - Exceptional chip control when the chip is curled along the chip control groove, away from the part.
- **Improved tool life** - The radius is only worn during the plunging process.
- **Time saving** - Keeps the size longer without adjustment.
- **Flexible** - Available in a wide range of unique geometries and highly suitable for all diameters.

## WhizGuide

*select the ideal back turning insert*

### Style C

Style C is used when there is an undercut required.

### Style B

Style B is for general use in all materials. Perfect for back turning applications in stainless steel and other hard and long-chipping materials where good chip control is needed.

### Style BP

Style BP is used for sticky materials when there is a risk of an edge build up that can spoil the surface finish or reduce tool-life.

### Style BT

Style BT inserts have a chamfer on the leading corner that improves tool-life in harder materials. This insert is suitable when the wear on the style B insert is found in an early stage.

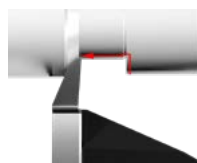
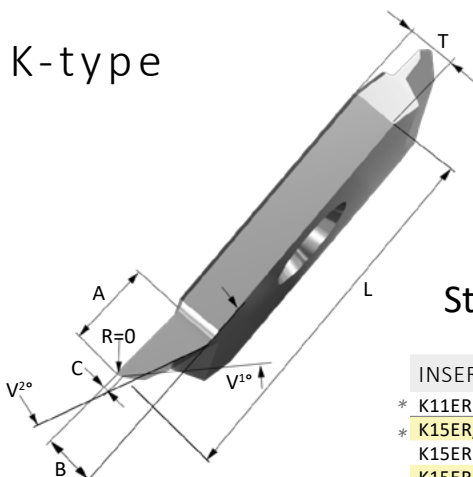
### Style VLR

Style VLR is used for back turning when a smooth surface is needed, when profiling. For example it is excellent to go in behind the head of a bone screw with it.

### Style E

Style E is used for fine turning, using high cutting speed and low feed rate. This insert will give the best possible surface finish. By protecting the small radius with the larger radius the tool life is extended, compared with conventional full radius inserts.

## K-type

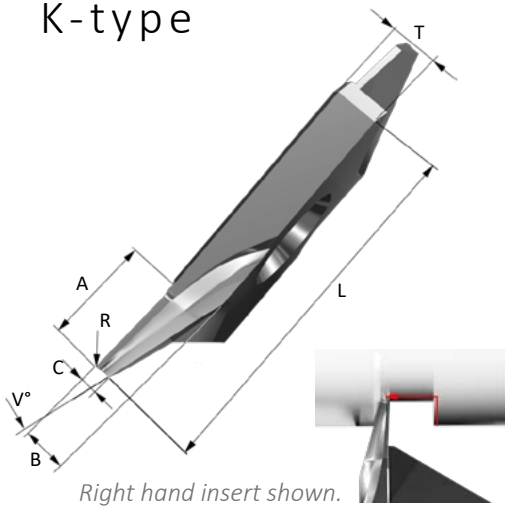


### Style C | Inserts for back turning when an undercut required

INSERTS	A	B	C	V <sup>1°</sup>	V <sup>2°</sup>	C. RAKE°	STOCK						PRICE
							8M	C8	F8	B8	NF8	ND8	
* K11ER C0-1-0	1,3	1	0,2	45	30	0	R	K	R	R	-	-	A6
* K15ER/L C0-3-0	3	1,9	0,2	45	20	0	B	K	B	B	R	R	A7
K15ER C0-1,27-0	3	1,5	0,127	28	-	0	B	K	K	B	K	K	A7
K15ER C0-2,5-0	3	1,5	0,25	28	-	0	B	K	K	B	K	K	A7

\* Please note A=Depth of cut in one pass

## K-type



### Style B | Inserts for back turning in steel and other hard and long-chipping materials

INSERTS	A*	B	C	R	V°	C. RAKE°	STOCK						PRICE
							8M	C8	F8	B8	NF8	ND8	
K11ER/L B12-2-0	2	1	0,4	0	15	12	A	K	B	B	-	-	A8
K11ER B12-2-05	2	1	0,4	0,05	15	12	R	K	R	R	-	-	A9
K11ER/L B12-3-0	3,5	1,5	0,6	0	15	12	A	K	B	B	-	-	A8
K15ER/L B12-2-0	2,5	1,3	0,5	0	15	12	A	K	B	B	-	-	A8
K15ER/L B12-4-0	4	1,9	0,7	0	15	12	A	K	B	B	R	R	A8
K15ER/L B12-4-05	4	1,9	0,7	0,05	15	12	A	K	B	B	K	K	A9
K15ER/L B12-4-1	4	1,9	0,7	0,1	15	12	A	K	B	B	R	R	A9
K15ER/L B12-4-2	4	1,9	0,7	0,2	15	12	A	K	B	B	R	R	A9
K20ER B12-7-0	7	3,2	1,3	0	15	12	R	K	R	R	-	-	A28
K20ER B12-7-2	7	3,2	1,3	0,2	15	12	R	K	R	R	R	R	A29

\* Please note A=Depth of cut in one pass

### Style BP | Inserts for back turning in sticky materials

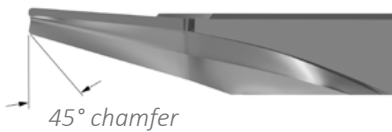


All other geometries are same as style B.

INSERTS	A	B	C	R	V°	Ax	RAD	CUTTING RAKE						PRICE
								8M	F8	B8	NF8	ND8		
K15ER BP12-2-0	2,5	1,3	0,5	0	20	12	14	R	R	R	-	-	A8	
K15ER BP12-2-03	2,5	1,3	0,5	0,03	20	12	14	R	R	R	-	-	A9	
K15ER BP12-2-05	2,5	1,3	0,5	0,05	20	12	14	R	R	R	-	-	A9	
K15ER BP12-4-0	4	1,9	0,7	0	20	12	14	R	R	R	-	-	A8	
K15ER BP12-4-1	4	1,9	0,7	0,1	20	12	14	R	R	R	R	R	A9	
K15ER BP12-4-2	4	1,9	0,7	0,2	20	12	14	R	R	R	R	R	A9	

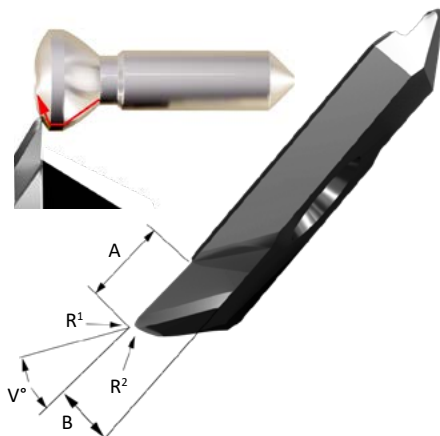
Please note: K15ER BP has a small chamfer on the left corner

### Style BT | Inserts for back turning, tough materials, longer tool life



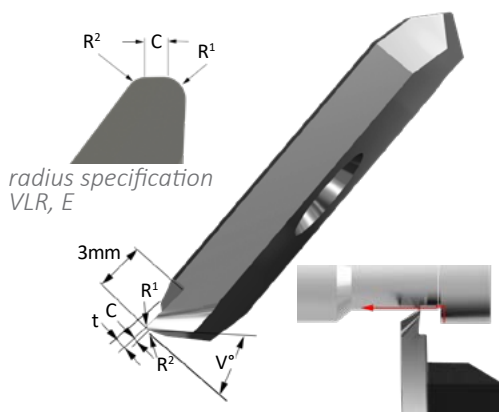
INSERTS	A	B	C	R	V°	C. RAKE°	STOCK						PRICE
							8M	C8	F8	B8	NF8	ND8	
K15ER BT12-4-2	4	1,9	0,7	0,2	15	12	R	K	R	R	R	R	A9
K20ER BT12-7-2	7	3,2	1,3	0,2	15	12	R	K	R	R	R	R	A29

### Style VLR | Inserts for back turning profiles



INSERTS	A	B	R <sup>1</sup>	R <sup>2</sup>	V°	C. RAKE°	STOCK						PRICE
							8M	C8	F8	B8	NF8	ND8	
K15ER VLR12-04	3	1,0	0,04	0,04	35	20	R	K	R	R	-	-	A7
K15ER VLR12-05	3	1,9	0,05	0,05	35	20	R	K	R	R	-	-	A7
K15ER VLR12-08	3	1,9	0,08	0,08	35	20	R	K	R	R	K	K	A7
K15ER VLR12-12	3	1,9	0,1	0,2	35	20	R	K	R	R	K	K	A7
K15ER VLR12-15	3	1,9	0,15	0,15	35	20	R	K	R	R	K	K	A7
K15ER VLR12-2-28	3	1,9	0,2	0,2	28	20	R	K	R	R	K	K	A7
K15ER VLR12-2	3	1,9	0,2	0,2	35	20	R	K	R	R	R	R	A7
K15ER VLR8-2	3	2,0	0,2	0,2	42	8	K	K	K	K	R	R	A7
K15ER VLR8-2L	6	2,0	0,2	0,2	42	8	K	K	K	K	K	R	A7
K20ER VLR12-2	9	3,4	0,2	0,2	35	20	R	R	R	R	R	R	A27

### Style E | Inserts for super finish back turning



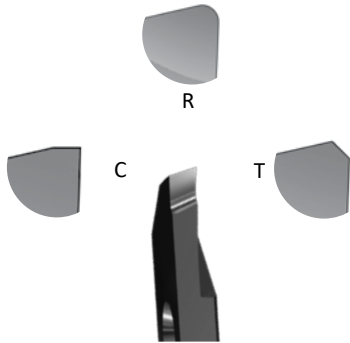
INSERTS	MAX CUT	C	t	R <sup>1</sup>	R <sup>2</sup>	V°	C. RAKE°	STOCK			PRICE
								8M	F8	B8	
K15ER ED16-05-15	0,8	0	0,6	0,05	0,15	30	16	R	R	R	A8
K15ER ED16-1-2	0,8	0	0,5	0,1	0,2	30	16	R	R	R	A8
K15ER ED16-18	0,8	0	0,6	0,18	0,18	30	16	R	R	R	A8
K15ER EN16-01-0	1,3	0,12	0,6	0,01	0	45	16	R	R	R	A8

\* Please note total depth of cut is 3 mm, depth of cut in one pass equals MAX CUT

## Parting off

# WhizGuide

select an ideal parting off insert



### 1. Axial relief vs. component possibilities

- Style P: 0° gives the strongest tool. Suitable with use of sub spindle. Style PS can be used for extra stability.
- Style Y: 6° gives a strong tool, can leave a small nib if a sub spindle is not used.
- Style Z: 15° is an all-round parting off insert. It can be used without a sub spindle.
- Style S, U: 20-30° is a less strong tool suitable for small parts where a fine surface finish is needed.

### 2. Cutting rake vs. material

- 0° for short-chipping materials.
- 12° for long-chipping materials.
- 20° for sticky long-chipping materials.

More parting off: WhizTwin on page: 44.

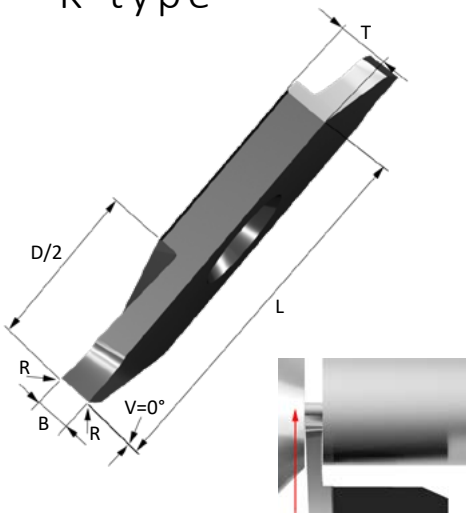
### 3. Machining against the sub spindle

- Recommended inserts are YR, ZR and SR.
- For maximum stability of the part use special toolholder: WSK15EL 12Q6K-2P.

### 4. Corner alternatives for parting off insert

Parting off applications can demand a different kind of corner execution on the parting off insert. WhizCut will arrange any type of corner execution. Contact your local distributor for assistance to find a type that best suits your needs.

## K-type

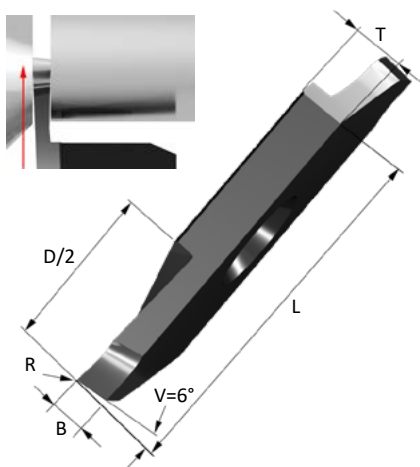


### Style P, PS | Inserts for parting off

INSERTS	MAX			C. RAKE°	STOCK						PRICE
	B	D	R		8M	C8	F8	B8	NF8	ND8	
K11ER/L P0,5-12	0,5	4	0	12	B	K	B	B	-	-	A5
K11ER/L P0,8-12	0,8	7	0	12	B	K	B	B	-	-	A5
K11ER/L P1,0-12	1	9	0	12	B	K	B	B	-	-	A5
K11ER/L P1,5-12	1,5	11	0	12	B	K	B	B	-	-	A5
K15ER/L PS0,5-12	0,5	3	0	12	B	K	B	B	-	-	A4
K15ER/L P0,7-12	0,7	5	0	12	B	K	B	B	-	-	A5
K15ER/L P1,0-12	1	10	0	12	A	K	B	B	R	R	A5
K15ER/L P1,0-12-R05	1	10	0,05	12	A	K	A	A	A	A	A6
K15ER PS1,0-12	1	6	0	12	R	K	R	R	-	-	A5
K15ER P1,0-20	1	10	0	20	R	K	R	R	R	R	A5
K15ER/L P1,2-12	1,2	12	0	12	A	K	B	B	-	-	A5
K15ER/L P1,5-12	1,5	12,7	0	12	A	K	B	B	R	R	A4
K15ER/L P1,5-12-R05	1,5	12,7	0,05	12	A	K	A	A	A	A	A6
K15ER PS1,5-12	1,5	9	0	12	R	K	A	R	-	-	A4
K15ER/L P1,5-20	1,5	12	0	20	B	K	B	B	R	R	A4
K15ER/L P2,0-12	2	12,7	0	12	A	K	B	B	-	-	A4
K20ER P1,5-12	1,5	16	0	12	R	K	R	R	R	R	A25
K20ER P2,0-12	2	20	0	12	R	K	R	R	R	R	A25
K20ER P2,5-12	2,5	20	0	12	R	K	R	R	R	R	A25
K20ER P3,0-12	3	20	0	12	R	K	R	R	R	R	A25

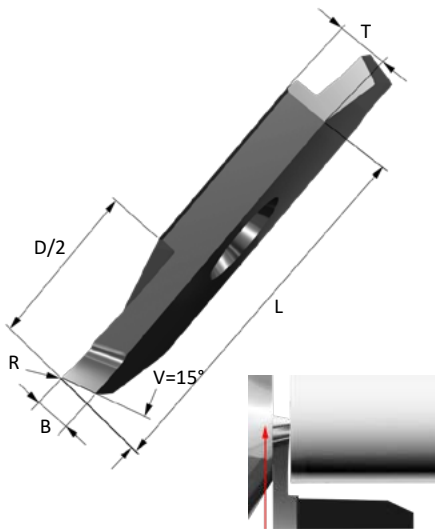
### Style Y | Inserts for parting off

INSERTS	MAX			C. RAKE°	STOCK						PRICE
	B	D	R		8M	C8	F8	B8	NF8	ND8	
K11ER/L Y1,0-12	1	9	0	12	B	K	B	B	-	-	A6
K11ER/L Y1,5-12	1,5	11	0	12	B	K	B	B	-	-	A5
K15ER/L Y1,0-12	1	10	0	12	A	K	B	B	R	R	A6
K15ER Y1,0-12-R05	1	10	0,05	12	K	K	K	K	R	R	A7
K15ER/L Y1,2-12	1,2	12	0	12	B	K	B	B	-	-	A5
K15ER/L Y1,5-12	1,5	12,7	0	12	A	K	B	B	-	-	A5
K15ER Y1,5-12-R05	1,5	12,7	0,05	12	K	K	K	K	R	R	A6
K15ER/L Y2,0-12	2	12,7	0	12	A	K	B	B	-	-	A5
K20ER Y2,0-12	2	20	0	12	R	K	R	R	K	K	A26
K20ER Y2,5-12	2,5	20	0	12	R	K	R	R	K	K	A26



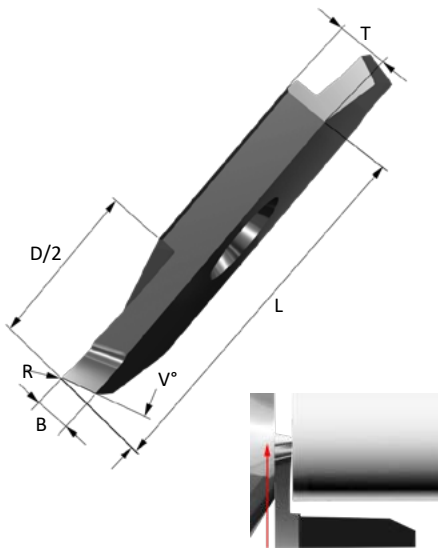
# K-type

## Style Z | Inserts for parting off



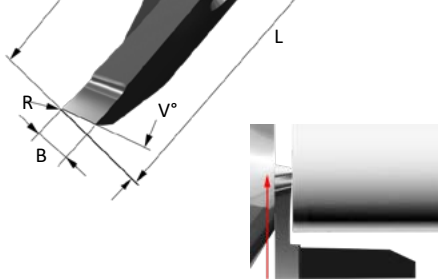
INSERTS	MAX			STOCK								PRICE
	B	D	R	C. RAKE°	8M	C8	F8	B8	NF8	ND8		
K11ER/L Z0,5-12	0,5	4	0	12	A	K	B	B	-	-	A6	
K11ER/L Z1,0-0	1	9	0	0	A	K	B	B	R	R	A6	
K11ER/L Z1,0-12	1	9	0	12	A	K	B	B	-	-	A6	
K11ER/L Z1,5-0	1,5	11	0	0	A	K	B	B	-	-	A5	
K11ER/L Z1,5-12	1,5	11	0	12	A	K	B	B	R	R	A5	
K15ER Z0,5-12	0,5	5	0	12	R	K	R	R	-	-	A6	
K15ER Z0,7-0	0,7	5	0	0	R	K	R	R	R	R	A6	
K15ER/L Z0,7-12	0,7	5	0	12	B	K	B	B	-	-	A6	
K15ER/L Z1,0-0	1	10	0	0	A	K	B	B	R	R	A6	
K15ER Z1,0-0-T10	1	10	C=0,1	0	R	K	R	R	-	-	A6	
K15ER Z1,0-0-R05	1	10	0,05	1	R	K	R	R	R	R	A7	
K15ER/L Z1,0-12	1	10	0	12	A	K	B	B	R	R	A6	
K15ER/L Z1,5-0	1,5	12,7	0	0	A	K	B	B	-	-	A5	
K15ER/L Z1,5-12	1,5	12,7	0	12	A	K	B	B	R	R	A5	
K15ER Z1,5-12-R1	1,5	12,7	0,1	12	R	K	R	R	R	R	A5	
K15ER/L Z2,0-0	2	12,7	0	0	A	K	B	B	-	-	A5	
K15ER/L Z2,0-12	2	12,7	0	12	A	K	B	B	-	-	A5	
K20ER Z2,0-0	2	20	0	0	R	R	R	R	R	R	A26	
K20ER Z2,0-12	2	20	0	12	R	R	R	R	-	-	A26	
K20ER Z2,5-0	2,5	20	0	0	R	R	R	R	R	R	A26	
K20ER Z2,5-12	2,5	20	0	12	R	R	R	R	-	-	A26	

## Style S | Inserts for parting off, short



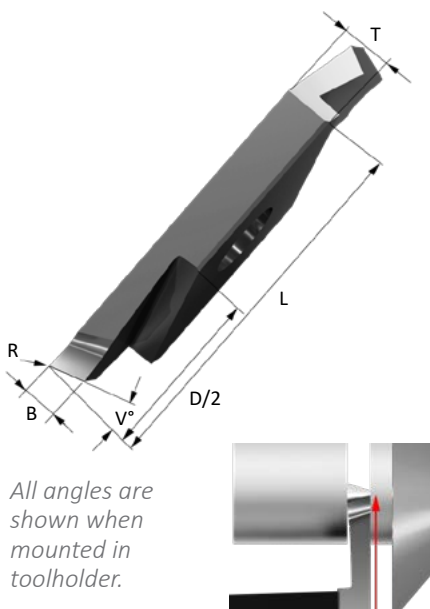
INSERTS	MAX			STOCK								PRICE
	B	D	R	C. RAKE	8M	C8	F8	B8				
K15ER S1,0-0	1	6	0	0	R	K	R	R	R	A5		
K15ER S1,0-12	1	6	0	12	R	K	R	R	R	A6		
K15ER S1,5-0	1,5	9	0	0	R	K	R	R	R	A5		
K15ER S1,5-12	1,5	9	0	12	R	K	R	R	R	A6		

## Style U | Inserts for parting off



INSERTS	MAX			STOCK								PRICE
	B	D	R	C. RAKE	8M	C8	F8	B8				
K11ER/L U1,0-0	1	8	0	0	B	K	B	B		A6		
K15ER U0,5-0	0,5	5	0	0	K	K	K	K		A6		
K15ER/L U1,0-0	1	8	0	0	B	K	B	B		A6		
K15ER/L U1,0-0-R05	1	8	0,05	0	B	K	B	B		A7		
K15ER/L U1,5-0	1,5	12	0	0	B	K	B	B		A6		
K20ER U2,0-0	2	16	0	0	R	K	R	R		A26		
K20ER U2,5-0	2,5	20	0	0	R	K	R	R		A26		

## Style YR, ZR, SR | Inserts for parting off against sub spindle etc

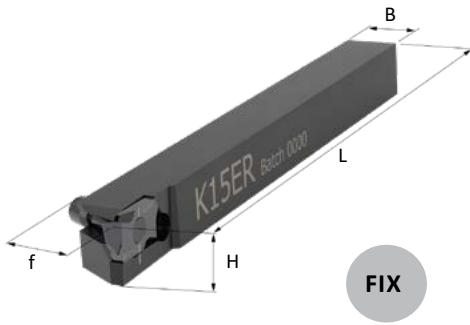


All angles are shown when mounted in toolholder.

INSERTS	MAX			STOCK								PRICE
	B	D	R	C. RAKE	8M	C8	F8	B8				
YR V = 6°												
K15EL YR1,5-12	1,5	12	0	12	L	K	L	L		A6		
K15EL YR2,0-12	2	12	0	12	L	K	L	L		A6		
ZR												
K11EL ZR0,5-12	0,5	4	0	12	L	K	L	L		A6		
K11EL ZR1,0-0	1	9	0	0	L	K	L	L		A6		
K11EL ZR1,0-12	1	9	0	12	L	K	L	L		A6		
K11EL ZR1,5-0	1,5	11	0	0	L	K	L	L		A6		
K11EL ZR1,5-12	1,5	11	0	12	L	K	L	L		A6		
V = 15°												
K15EL ZR1,0-0	1	10	0	0	L	K	L	L		A6		
K15EL ZR1,0-12	1	10	0	12	L	K	L	L		A6		
K15EL ZR1,0-12-R05	1	10	0,05	12	L	K	L	L		A7		
K15EL ZR1,5-0	1,5	12	0	0	L	K	L	L		A6		
K15EL ZR1,5-12	1,5	12	0	12	L	K	L	L		A6		
K15EL ZR1,5-12-R05	1,5	12	0,05	12	L	K	L	L		A7		
K15EL ZR2,0-0	2	12	0	0	L	K	L	L		A6		
K15EL ZR2,0-12	2	12	0	12	L	K	L	L		A6		
SR Short												
V = 20°												
K15EL SR1,0-0	1	5,5	0	0	L	K	L	L		A6		
K15EL SR1,0-12	1	5,5	0	12	L	K	L	L		A6		
K15EL SR1,5-0	1,5	8	0	0	L	K	L	L		A6		
K15EL SR1,5-12	1,5	8	0	12	L	K	L	L		A6		

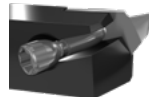


# K-type



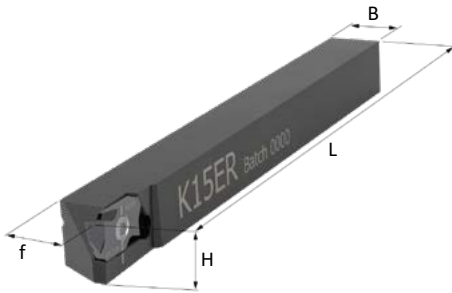
## WPK | Toolholders with WhizFix pin type clamping

TOOLHOLDER	H	B	L	f	INSERT	PIN	BIT	STOCK	PRICE
WPK11ER/L 88K-2P	8	8	125	8	K11ER/L	PIN 8	T15	A	A62
WPK11ER/L 1010K-2P	10	10	125	10	K11ER/L	PIN 8	T15	A	A62
WPK15ER/L 1010K-2P	10	10	125	10	K15ER/L	PIN 12	T20	A	A62
WPK15ER 1212F-2P	12	12	85	12	K15ER	PIN 12	T20	R	A61
WPK15ER/L 1212K-2P	12	12	125	12	K15ER/L	PIN 12	T20	A	A62
WPK15ER 0500K-2P	1/2"	1/2"	125	1/2"	K15ER	PIN 12	T20	R	A62
WPK15ER/L 1616K-2P	16	16	125	16	K15ER/L	PIN 12	T20	A	A63
WPK20ER 1212K-2P	12	12	125	12	K20ER	PIN 16	T25	R	A62
WPK20ER 0500K-2P	1/2"	1/2"	125	1/2"	K20ER	PIN 16	T25	R	A62
WPK20ER 1616K-2P	16	16	125	16	K20ER	PIN 16	T25	R	A63
WPK20ER 2020K-2P	20	20	125	20	K20ER	PIN 16	T25	R	A64

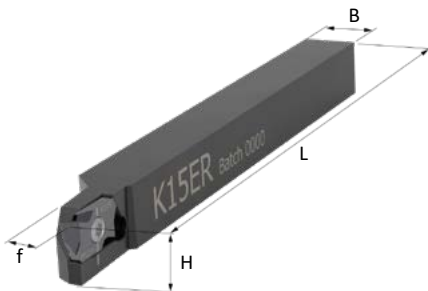


WhizFix Clamping

## WSK | Toolholders with conventional clamping



TOOLHOLDER	H	B	L	f	INSERT	SCREW	KEY	STOCK	PRICE
WSK11ER/L 88K-2P	8	8	125	8	K11ER/L	M2,5X6	T7IP	A	A52
WSK15ER 0810H-2P	8	10	100	10	K15ER	M3X7	T9IP	R	A52
WSK15ER/L 1010K-2P	10	10	125	10	K15ER/L	M3X7	T9IP	A	A52
WSK15ER/L 1212K-2P	12	12	125	12	K15ER/L	M3X7	T9IP	A	A52
WSK15ER/L 0500K-2P	1/2"	1/2"	125	1/2"	K15ER/L	M3X7	T9IP	A	A52
WSK15ER/L 1616K-2P	16	16	125	16	K15ER/L	M3X7	T9IP	A	A53
WSK15ER 2020K-2P	20	20	125	20	K15ER	M3X7	T9IP	R	A54
WSK15ER 2525M-2P	25	25	150	25	K15ER	M3X7	T9IP	R	A55
WSK15ER 1000M-2P	1"	1"	150	1"	K15ER	M3X7	T9IP	R	A55
WSK20ER 1212K-2P	12	12	125	12	K20ER	M4X9	T15	R	A52
WSK20ER 0500K-2P	1/2"	1/2"	125	1/2"	K20ER	M4X9	T15	R	A52
WSK20ER 1616K-2P	16	16	125	16	K20ER	M4X9	T15	R	A53
WSK20ER 2020K-2P	20	20	125	20	K20ER	M4X9	T15	R	A54
WSK20ER 2525M-2P	25	25	150	25	K20ER	M4X9	T15	R	A55
WSK20ER 1000M-2P	1"	1"	150	1"	K20ER	M4X9	T15	R	A55



## WSK | Toolholders for small parts

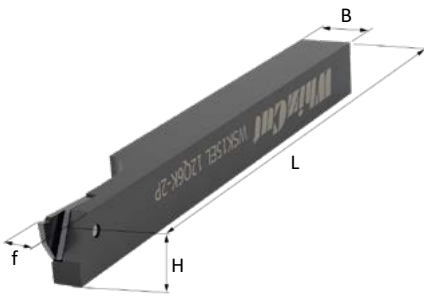
TOOLHOLDER	H	B	L	f	INSERT	SCREW	KEY	STOCK	PRICE
WSK15ER 1010K-2B	10	10	125	5	K15ER	M3X5	T9IP	R	A52
WSK15ER 1212K-2B	12	12	125	6	K15ER	M3X5	T9IP	R	A52



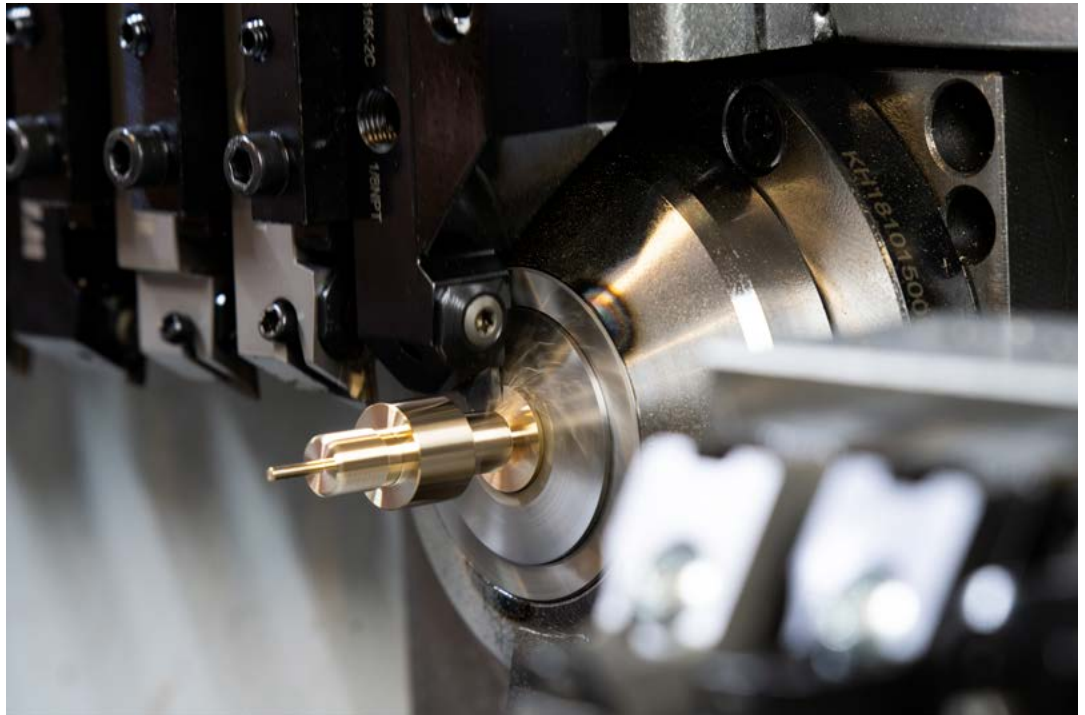
More parting off:  
WhizTwin  
on page: 44.

# K-type

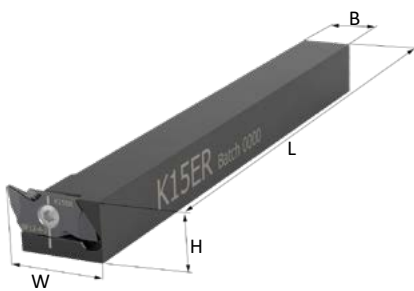
## WSK | Left hand toolholders with insert in centre



TOOLHOLDER	H	B	L	f	INSERT	SCREW	KEY	STOCK	PRICE
WSK15EL 12Q6K-2P	12	12	125	6	K15EL	M3X5	T9IP	L	A52



Parting off up to 20 mm with WhizCut K20ER inserts.



## ZSK | Square shank toolholders

TOOLHOLDER	H	B	L	W	INSERT	SCREW	KEY	STOCK	PRICE
ZSK15ER 1212K-2P	12	12	125	20	K15ER	M3X7	T9IP	R	A72
ZSK15ER 1616K-2P	16	16	125	24	K15ER	M3X7	T9IP	R	A73



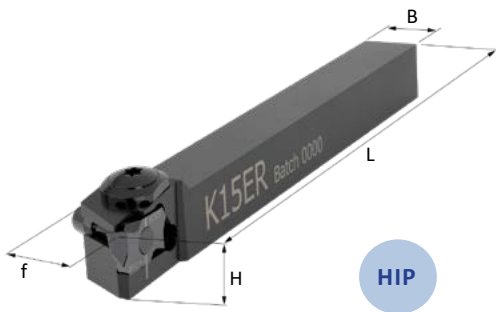
## ABK | WhizAdjust toolholder

T.HOLDER HEAD	H	B	A	C	MAX DOC	MAX FEED LENGTH	INSERT TYPE	CLAMPING SCREW	KEY	STOCK	PRICE
ABK15ER-46-45	46	24	12	4	4	45	K15ER	M3X7	T9IP	R	D55

For more information and shanks see WhizAdjust page 50.  
A is measurement from cutting edge to centre of shank.

ADJ

# K-type



- HIP**
- FIX**

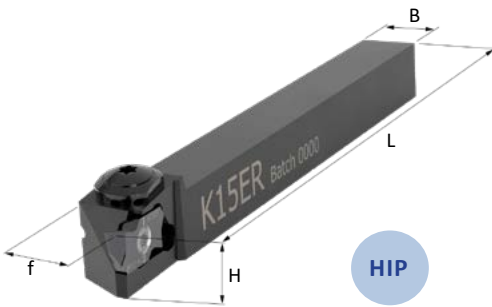


WhizFix Clamping

## WPK | Pin type WhizHip toolholders for high pressure coolant

TOOLHOLDER	H	B	L	f	INSERT	PLUG	PIN	BIT	STOCK	PRICE
WPK15ER 1010H-2C	10	10	100	10	K15ER	M8X1	PIN 12	T20	R	A82
WPK15ER 1010K-2C	10	10	125	10	K15ER	M8X1	PIN 12	T20	R	A82
WPK15ER 1212K-2C	12	12	125	12	K15ER	1/8" NPT	PIN 12	T20	R	A82
WPK15ER 0500K-2C	1/2"	1/2"	125	1/2"	K15ER	1/8" NPT	PIN 12	T20	R	A82
WPK15ER 1616K-2C	16	16	125	16	K15ER	1/8" NPT	PIN 12	T20	R	A83

## WSK | WhizHip toolholders for high pressure coolant

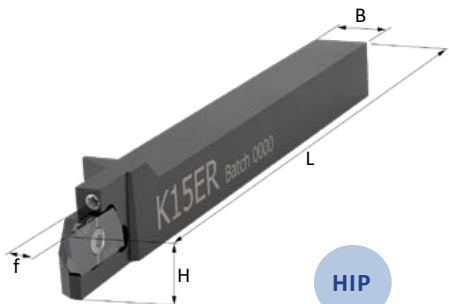


- HIP**

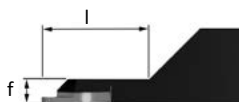
TOOLHOLDER	H	B	L	f	INSERT	PLUG	SCREW	KEY	STOCK	PRICE
WSK11ER 88H-2C	8	8	100	10	K11ER	M5X0,8	M2,5X6	T7IP	R	A73
WSK11ER 88K-2C	8	8	125	10	K11ER	M5X0,8	M2,5X6	T7IP	R	A73
WSK15ER 1010H-2C	10	10	100	10	K15ER	M8X1	M3X7	T9IP	B	A72
WSK15ER 1010K-2C	10	10	125	10	K15ER	M8X1	M3X7	T9IP	B	A72
WSK15ER/L 1212K-2C	12	12	125	12	K15ER/L	1/8" NPT	M3X7	T9IP	B	A72
WSK15ER 0500H-2C	1/2"	1/2"	100	1/2"	K15ER/L	1/8" NPT	M3X7	T9IP	B	A72
WSK15ER/L 0500K-2C	1/2"	1/2"	125	1/2"	K15ER/L	1/8" NPT	M3X7	T9IP	B	A72
WSK15ER/L 1616K-2C	16	16	125	16	K15ER/L	1/8" NPT	M3X7	T9IP	B	A73
WSK15ER 0750K-2C	3/4"	3/4"	125	3/4"	K15ER	1/8" NPT	M3X7	T9IP	R	A73
WSK20ER 1216K-2C	12	16	125	16	K20ER	1/8" NPT	M4X9	T15	R	A72
WSK20ER 0516K-2C	1/2"	16	125	16	K20ER	1/8" NPT	M4X9	T15	R	A72
WSK20ER 1616K-2C	16	16	125	16	K20ER	1/8" NPT	M4X9	T15	R	A73
WSK20ER 2020K-2C	20	20	125	20	K20ER	1/8" NPT	M4X9	T15	R	A74
WSK20ER 2525M-2C	25	25	150	25	K20ER	1/8" NPT	M4X9	T15	R	A74
WSK20ER 1000M-2C	1"	1"	150	1"	K20ER	1/8" NPT	M4X9	T15	R	A74

More parting off: WhizTwin on page: 44.

## WSK | Narrow WhizHip toolholders for sub spindle gripping

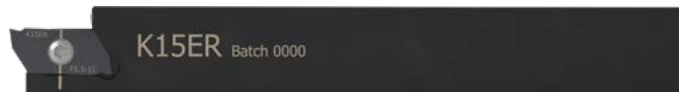


- HIP**



TOOLHOLDER	H	B	L	I	f	INSERT	PLUG	SCREW	KEY	STOCK	PRICE
WSK11ER 88K-2CA	8	8	125	20,5	5	K11ER	M5X0,8	M2,5X6	T7IP	R	A73
WSK15ER 1010H-2CA	10	10	100	18	5	K15ER	M8X1	M3X5	T9IP	R	A72
WSK15ER 1010K-2CA	10	10	125	18	5	K15ER	M8X1	M3X5	T9IP	R	A72
WSK15ER 1212K-2CA	12	12	125	18	5	K15ER	1/8" NPT	M3X5	T9IP	R	A72
WSK15ER 0500K-2CA	1/2"	1/2"	125	18	5	K15ER	1/8" NPT	M3X5	T9IP	R	A72
* WSK15ER 1616K-2CA	16(12)	16	125	25,4	5	K15ER	1/8" NPT	M3X5	T9IP	R	A73

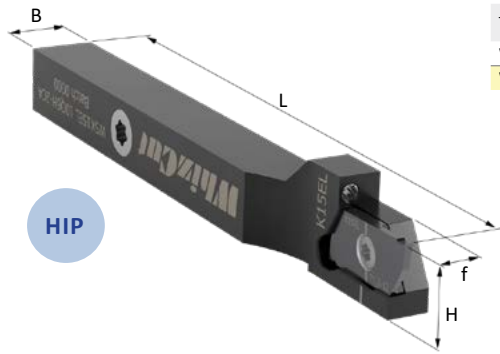
\* Shank 16x16 mm. Cutting edge lowered to 12 mm for optimal coolant.



WSK15ER 1616K-2CA

# K-type

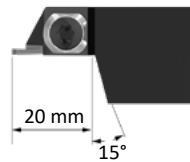
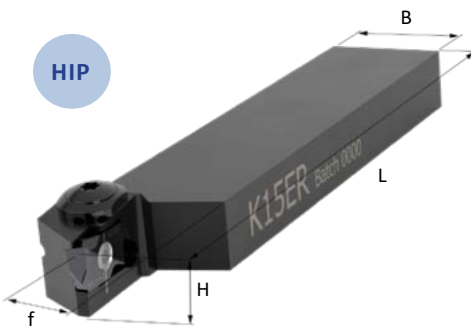
## WSK | Left hand WhizHip toolholders for parting off



TOOLHOLDER	H	B	L	I	f	INSERT	PLUG	SCREW	KEY	STOCK	PRICE
WSK11EL 8Q6H-2CA	8	8	100	20,5	6	K11EL	M5X0,8	M2,5X6	T9IP	L	A73
WSK15EL 10Q6H-2CA	10	10	100	20,5	6	K15EL	M8X1	M3X5	T9IP	L	A73

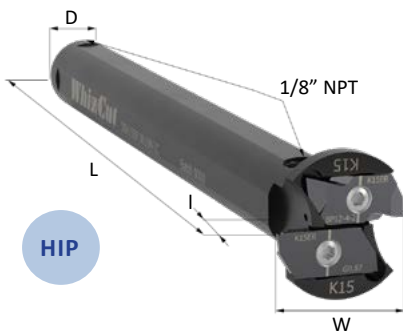
More parting off:  
WhizTwin  
on page: 44.

## WSK | Shifted edge WhizHip toolholders



TOOLHOLDER	H	B	L	f	INSERT	PLUG	SCREW	KEY	STOCK	PRICE
WSK15ER 1020H-2C	10	20	100	10	K15ER	M8X1	M3X7	T9IP	R	A72
WSK15ER 1224K-2C	12	24	125	12	K15ER	1/8" NPT	M3X7	T9IP	R	A72
WSK15ER 0510K-2C	1/2"	1"	125	1/2"	K15ER	1/8" NPT	M3X7	T9IP	R	A72
WSK15ER 1632K-2C	16	32	125	16	K15ER	1/8" NPT	M3X7	T9IP	R	A72

## DSK | WhizHip double inserts toolholder round shank



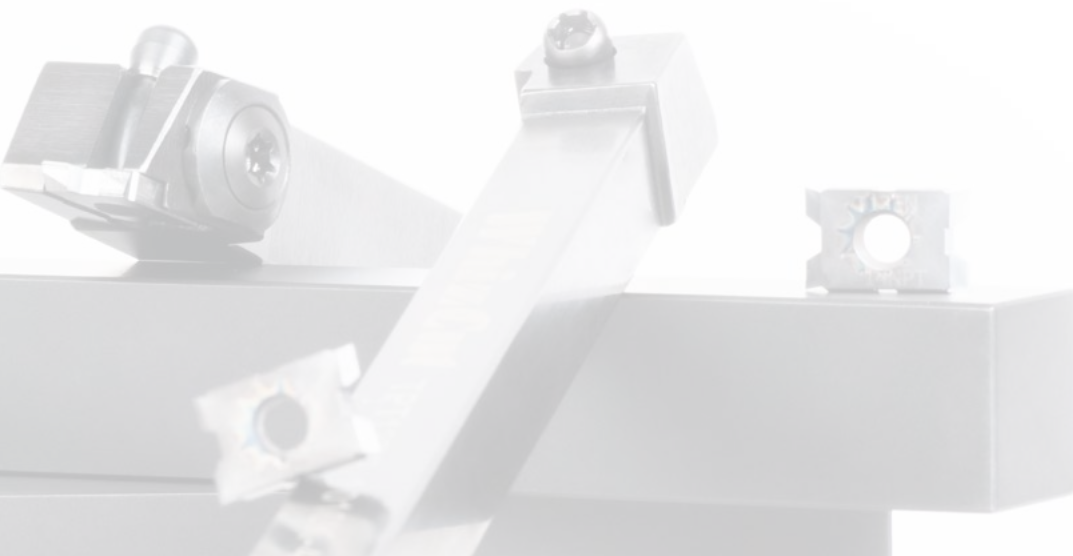
TOOLHOLDER	D	W	L	I	INSERT	SCREW	KEY	STOCK	PRICE
DSK15ER 0625M-2C	5/8"	24	150	40	K15ER	M3X7	T9IP	R	A87
DSK15ER 0016M-2C	16	24	150	40	K15ER	M3X7	T9IP	R	A87
DSK15ER 0750M-2C	3/4"	24	150	40	K15ER	M3X7	T9IP	R	A87
DSK15ER 0020M-2C	20	24	150	40	K15ER	M3X7	T9IP	R	A87
DSK15ER 0022M-2C	22	24	150	40	K15ER	M3X7	T9IP	R	A87
DSK15ER 0025M-2C	25	24	150	40	K15ER	M3X7	T9IP	R	A87
DSK15ER 1000M-2C	1"	24	150	40	K15ER	M3X7	T9IP	R	A87

All holders are available as DSKJ15ER, with one J15ER and one K15ER pocket.  
All holders have four location flats.

## PRECISION THREADING

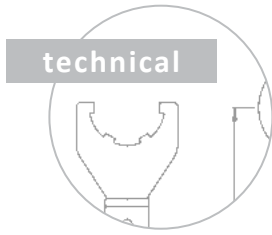
# WhizThread

Increase productivity together with the winning concept of WhizThread. The four very sharp cutting edges are precision ground on all four sides and tangentially mounted. This results in longer lasting inserts and great performance.









## Four cutting edges - maximum stability

Stable and long lasting – the focal point of the WhizThread design. It is a performance based tool system where the insert is fixed in the most solid position. The resulting clamping force goes diagonally through the insert and toolholder, as the insert is forced back into the toolholder pocket to boost stability.

### Range benefits

- **Better cutting conditions:** by a standing-up-insert in the toolholder. Cutting forces are drawn through the insert into the holder for stability.
- **Work close to the shoulder:** with minimal distance between the side of the insert and the thread.
- **Improved thread quality:** with precision ground cutting edges on all sides and a stable insert.
- **Less time with tool change:** combine WhizThread with WhizFix tool holder system and index the inserts with the toolholder still in the machine.
- **Quick-change coolant through:** all WhizThread inserts can be used with the WhizHip coolant through holders.

Perfect fit with WhizCut signature toolholders:



## WhizGuide

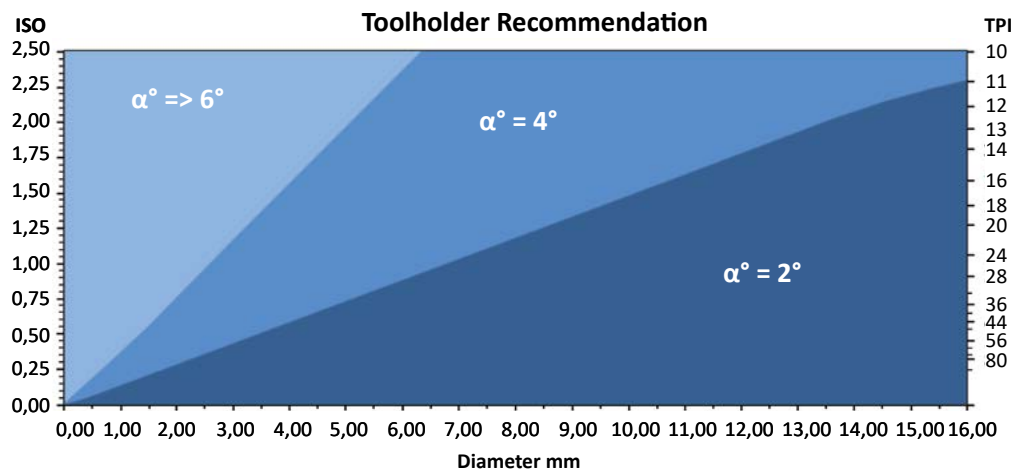
*select holder with the ideal cutting angle*

### 1. Cutting angle: 2°, 4°, +6°

- The secret of threading really small parts is to select a correct cutting angle of the toolholder.
- WhizThread toolholders are available with a 2°, 4° and +6° or bigger cutting angle.

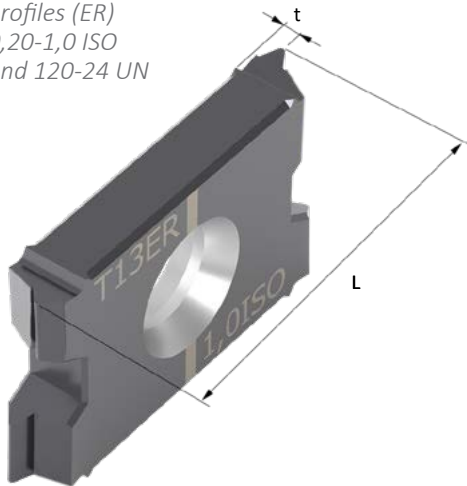
### 2. Pitch and diameter

- The WhizGuide-table recommends an appropriate toolholder, depending on part thread and diameter.
- If you have a very high pitch-to-diameter-ratio we advice special toolholders.



## T-ISO | Inserts for full profile threading

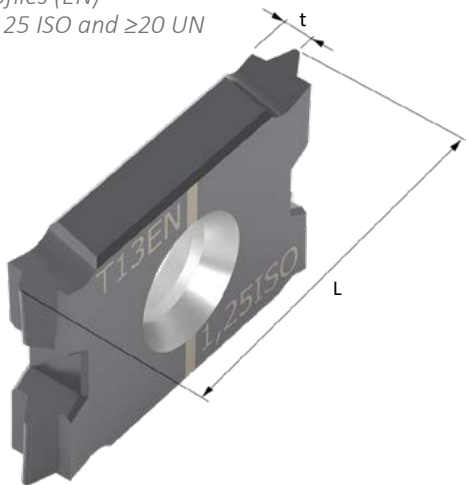
Small thread profiles (ER)  
0,20-1,0 ISO  
and 120-24 UN



PITCH MM	INSERTS	L	t	STOCK						PRICE
				8M	C8	F8	B8	NF8	ND8	
0,2	T13ER 0,2ISO	13	0,15	R	-	-	R	-	-	E5
0,25	T13ER 0,25ISO	13	0,2	R	-	R	R	-	-	E5
0,3	T13ER 0,3ISO	13	0,2	R	-	R	R	-	-	E5
0,35	T13ER 0,35ISO	13	0,25	R	-	R	R	-	-	E5
0,4	T13ER 0,4ISO	13	0,25	R	K	R	R	-	-	E4
0,45	T13ER 0,45ISO	13	0,3	R	K	R	R	-	-	E4
0,5	T13ER 0,5ISO	13	0,3	R	K	R	R	-	-	E3
0,6	T13ER 0,6ISO	13	0,35	R	K	R	R	-	-	E3
0,7	T13ER 0,7ISO	13	0,4	R	K	R	R	-	-	E3
0,75	T13ER 0,75ISO	13	0,4	R	K	R	R	-	-	E3
0,8	T13ER 0,8ISO	13	0,45	R	K	R	R	-	-	E3
1	T13ER 1,0ISO	13	0,55	R	K	R	R	-	-	E3
1,25	T13EN 1,25ISO	13	1,1	E	K	E	E	K	K	E2
1,5	T13EN 1,5ISO	13	1,1	E	K	E	E	K	K	E2
1,75	T13EN 1,75ISO	13	1,1	E	K	E	E	K	K	E2
2	T13EN 2,0ISO	13	1,1	E	K	E	E	K	K	E2

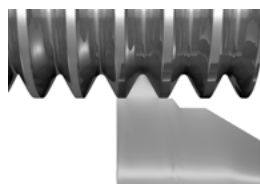
## T-UN | Inserts for full profile threading UNC, UNF, UNEF, UNS

Large thread profiles (EN)  
≥1,25 ISO and ≥20 UN



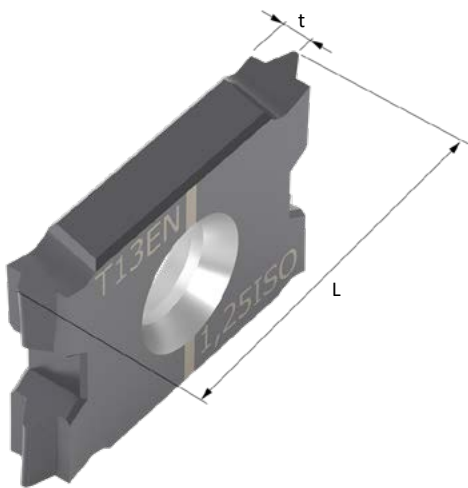
TPI	INSERTS	L	t	STOCK						PRICE
				8M	C8	F8	B8	NF8	ND8	
120	T13ER 120UN	13	0,15	R	-	R	R	-	-	E5
90	T13ER 90UN	13	0,2	R	-	R	R	-	-	E5
80	T13ER 80UN	13	0,2	R	K	R	R	-	-	E5
72	T13ER 72UN	13	0,25	R	K	R	R	-	-	E5
64	T13ER 64UN	13	0,25	R	K	R	R	-	-	E4
56	T13ER 56UN	13	0,3	R	K	R	R	-	-	E4
48	T13ER 48UN	13	0,35	R	K	R	R	-	-	E3
44	T13ER 44UN	13	0,35	R	K	R	R	-	-	E3
40	T13ER 40UN	13	0,4	R	K	R	R	-	-	E3
36	T13ER 36UN	13	0,4	R	K	R	R	-	-	E3
32	T13ER 32UN	13	0,45	R	K	R	R	-	-	E3
28	T13ER 28UN	13	0,5	R	K	R	R	-	-	E3
24	T13ER 24UN	13	0,55	R	K	R	R	-	-	E3
20	T13EN 20UN	13	1,1	E	K	E	E	K	K	E2
18	T13EN 18UN	13	1,1	E	K	E	E	K	K	E2
16	T13EN 16UN	13	1,1	E	K	E	E	K	K	E2
14	T13EN 14UN	13	1,1	E	K	E	E	K	K	E2
13	T13EN 13UN	13	1,1	E	K	E	E	K	K	E2
12	T13EN 12UN	13	1,1	E	K	E	E	K	K	E2

## T-UNJ | Inserts for full profile threading UNJC, UNJF, UNJEF, UNJS



Full profile threading

TPI	INSERTS	L	t	STOCK						PRICE
				8M	C8	F8	B8	NF8	ND8	
48	T13ER 48UNJ	13	0,35	R	K	R	R	-	-	E3
40	T13ER 40UNJ	13	0,4	R	K	R	R	-	-	E3
36	T13ER 36UNJ	13	0,4	R	K	R	R	-	-	E3
32	T13ER 32UNJ	13	0,45	R	K	R	R	-	-	E3
28	T13ER 28UNJ	13	0,5	R	K	R	R	-	-	E3
24	T13ER 24UNJ	13	0,55	R	K	R	R	-	-	E3
20	T13EN 20UNJ	13	1,1	E	K	E	E	K	K	E2
18	T13EN 18UNJ	13	1,1	E	K	E	E	K	K	E2
16	T13EN 16UNJ	13	1,1	E	K	E	E	K	K	E2
14	T13EN 14UNJ	13	1,1	E	K	E	E	K	K	E2
13	T13EN 13UNJ	13	1,1	E	K	E	E	K	K	E2
12	T13EN 12UNJ	13	1,1	E	K	E	E	K	K	E2

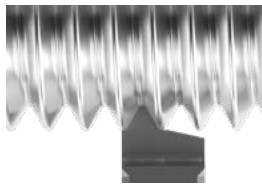


### T-NPT | Inserts for full profile threading - NPT

STOCK										
TPI	INSERTS	L	t	8M	C8	F8	B8	NF8	ND8	PRICE
27	T13ER 27NPT	13	0,55	R	K	R	R	-	-	E5
18	T13EN 18NPT	13	1,1	E	K	E	E	K	K	E4
14	T13EN 14NPT	13	1,1	E	K	E	E	K	K	E4

### T-NPTF | Inserts for full profile threading - NPTF

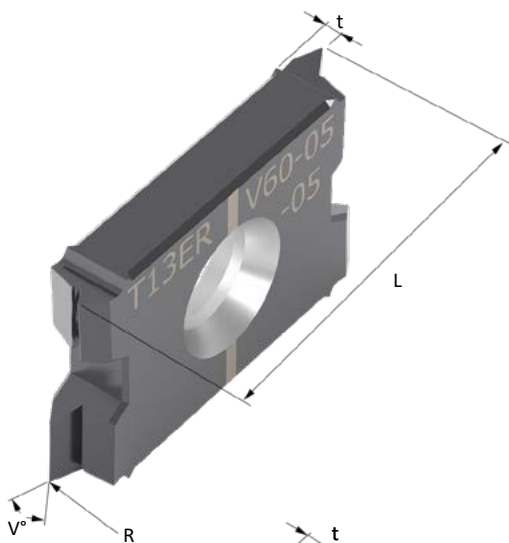
STOCK										
TPI	INSERTS	L	t	8M	C8	F8	B8	NF8	ND8	PRICE
27	T13ER 27NPTF	13	0,55	R	K	R	R	-	-	E5
18	T13EN 18NPTF	13	1,1	E	K	E	E	K	K	E4
14	T13EN 14NPTF	13	1,1	E	K	E	E	K	K	E4



Full profile threading

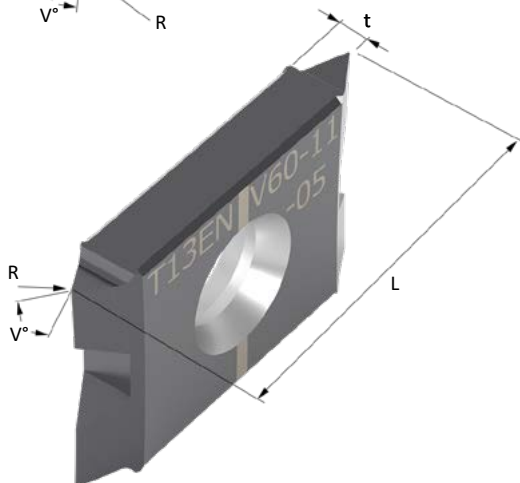
### T-W | Inserts for full profile threading whitworth BSW, BSP, BSF, BSB

STOCK										
TPI	INSERTS	L	t	8M	C8	F8	B8	NF8	ND8	PRICE
28	T13ER 28W	13	0,55	R	K	R	R	-	-	E5
19	T13EN 19W	13	1,1	E	K	E	E	K	K	E4
14	T13EN 14W	13	1,1	E	K	E	E	K	K	E4



### Style V | Inserts for partial profile micro threading

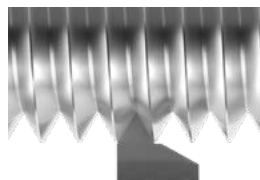
STOCK										
PITCH	INSERTS	L	V°	t	R	8M	C8	F8	B8	PRICE
0,2-0,4	T13ER V55-02-02	13	55	0,2	0,02	R	K	R	R	E3
0,2-1,0	T13ER V55-05-02	13	55	0,5	0,02	R	K	R	R	E2
0,1-0,2	T13ER V60-01-01	13	60	0,1	0,01	R	K	R	R	E3
0,2-0,4	T13ER V60-02-02	13	60	0,2	0,02	R	K	R	R	E3
0,2-1,0	T13ER V60-05-02	13	60	0,5	0,02	R	K	R	R	E2
0,4-1,0	T13ER V60-05-05	13	60	0,5	0,05	R	K	R	R	E2



### Style V | Inserts for partial profile threading

STOCK												
PITCH	INSERTS	L	V°	t	R	8M	C8	F8	B8	NF8	ND8	PRICE
0,7-2,0	T13EN V55-11-10	13	55	1,1	0,1	E	K	E	E	K	K	E3
0,4-2,0	T13EN V60-11-05	13	60	1,1	0,05	E	K	E	E	K	K	E2
0,7-2,0	T13EN V60-11-10	13	60	1,1	0,1	E	K	E	E	K	K	E2
-	T13EN V80-11-14	13	80	1,1	0,14	E	K	E	E	K	K	E3
-	T13EN V90-11	13	90	1,1	C0,10	E	K	E	E	K	K	E2

T13EN V90-11 has a 0,1 mm flat instead of a radius.



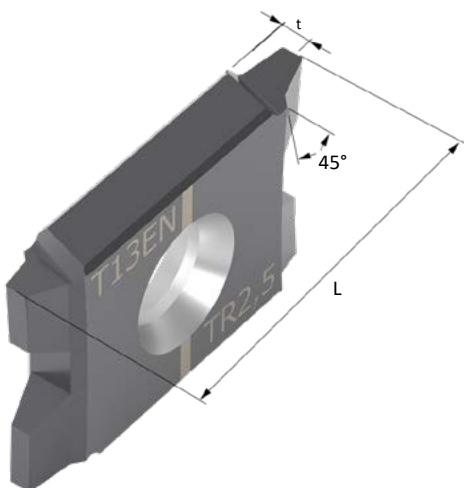
Partial profile threading

## TR, ACME and stub ACME

TR, ACME and Stub ACME threading inserts are now designed with extra side clearance along the profile with a maintained stability.

### Succeed with WhizThread TR, ACME and Stub ACME

- **Perfect for all tolerance classes** - all inserts and corners are precision ground.
- **Great clearance** - even when helix angle varies at major and minor diameters.
- **Good surface finish** - thanks to sufficient clearance.
- **Identical** - profiles and reliefs are the same on all four corners and cutting edges.
- **Outstanding stability** - compared to traditional design threading inserts.
- **Productivity increases** - use higher speeds and feeds thanks to the combination of high stability and reliefs.
- **Special inserts** - can also be made with similar benefits, for module and other thread types.



### T-Tr | Inserts for threading trapezoidal DIN 103

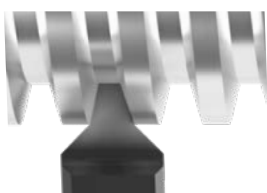
PITCH MM	INSERTS	L	t	STOCK					PRICE
				8M	F8	B8	NF8	ND8	
1,5	T13EN 1,5TR	13	1,1	K	K	K	E	E	E5
2	T13EN 2,0TR	13	1,1	K	K	K	E	E	E4
2,5	T13EN 2,5TR	13	1,1	K	K	K	E	E	E4

### T-ACME | Inserts for threading - ACME

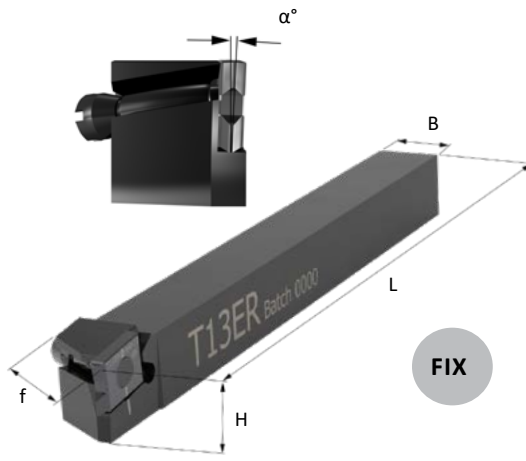
TPI	INSERTS	L	t	STOCK					PRICE
				8M	F8	B8	NF8	ND8	
16	T13EN 16ACME	13	1,1	K	K	K	E	E	E5
14	T13EN 14ACME	13	1,1	K	K	K	E	E	E4
12	T13EN 12ACME	13	1,1	K	K	K	E	E	E4
10	T13EN 10ACME	13	1,1	K	K	K	E	E	E4

### T-STACME | Inserts for threading - STUB ACME

TPI	INSERTS	L	t	STOCK					PRICE
				8M	F8	B8	NF8	ND8	
16	T13EN 16STACME	13	1,1	K	K	K	E	E	E5
14	T13EN 14STACME	13	1,1	K	K	K	E	E	E4
12	T13EN 12STACME	13	1,1	K	K	K	E	E	E4
10	T13EN 10STACME	13	1,1	K	K	K	E	E	E4



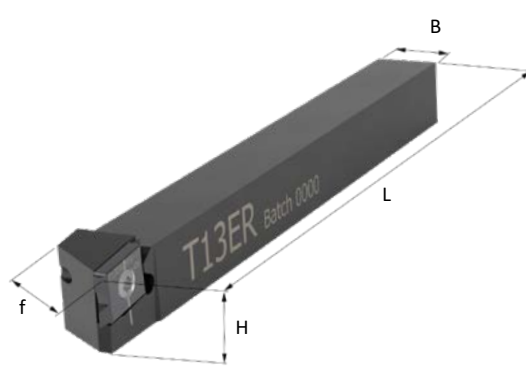
Partial profile threading



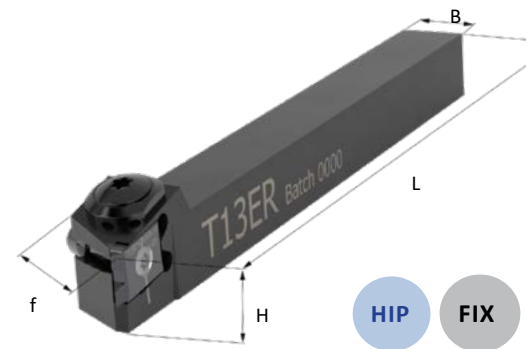
### TPT | Toolholders with WhizFix pin type clamping

TOOLHOLDER	H	B	L	f	α°	INSERT	PIN	BIT	STOCK	PRICE
TPT13ER 1010K-2	10	10	125	10	2°	T13ER/EN	PIN 12	T20	R	A62
TPT13ER 1010K-4	10	10	125	10	4°	T13ER/EN	PIN 12	T20	R	A62
TPT13ER 0375K-2	3/8"	3/8"	125	3/8"	2°	T13ER/EN	PIN 12	T20	R	A62
TPT13ER 0375K-4	3/8"	3/8"	125	3/8"	4°	T13ER/EN	PIN 12	T20	R	A62
TPT13ER 1212K-2	12	12	125	12	2°	T13ER/EN	PIN 12	T20	R	A62
TPT13ER 1212K-4	12	12	125	12	4°	T13ER/EN	PIN 12	T20	R	A62
TPT13ER 0500K-2	1/2"	1/2"	125	1/2"	2°	T13ER/EN	PIN 12	T20	R	A62
TPT13ER 0500K-4	1/2"	1/2"	125	1/2"	4°	T13ER/EN	PIN 12	T20	R	A62
TPT13ER 1616K-2	16	16	125	16	2°	T13ER/EN	PIN 12	T20	R	A63
TPT13ER 1616K-4	16	16	125	16	4°	T13ER/EN	PIN 12	T20	R	A63

### TST | Toolholders with conventional clamping



TOOLHOLDER	H	B	L	f	α°	INSERT	SCREW	KEY	STOCK	PRICE
TST13ER 88K-2	8	8	125	8	2°	T13ER/EN	M3X7	T9IP	R	A52
TST13ER 88K-4	8	8	125	8	4°	T13ER/EN	M3X7	T9IP	R	A52
TST13ER 1010K-2	10	10	125	10	2°	T13ER/EN	M3X7	T9IP	R	A52
TST13ER 1010K-4	10	10	125	10	4°	T13ER/EN	M3X7	T9IP	R	A52
TST13ER 1010K-6	10	10	125	10	6°	T13ER/EN	M3X7	T9IP	R	A52
TST13ER 0375K-2	3/8"	3/8"	125	3/8"	2°	T13ER/EN	M3X7	T9IP	R	A52
TST13ER 0375K-4	3/8"	3/8"	125	3/8"	4°	T13ER/EN	M3X7	T9IP	R	A52
TST13ER 1212K-2	12	12	125	12	2°	T13ER/EN	M3X7	T9IP	R	A52
TST13ER 1212K-4	12	12	125	12	4°	T13ER/EN	M3X7	T9IP	R	A52
TST13ER 1212K-6	12	12	125	12	6°	T13ER/EN	M3X7	T9IP	R	A52
TST13ER 1212K-8	12	12	125	12	8°	T13ER/EN	M3X7	T9IP	R	A52
TST13ER 0500K-2	1/2"	1/2"	125	1/2"	2°	T13ER/EN	M3X7	T9IP	R	A52
TST13ER 0500K-4	1/2"	1/2"	125	1/2"	4°	T13ER/EN	M3X7	T9IP	R	A52
TST13ER 1616K-2	16	16	125	16	2°	T13ER/EN	M3X7	T9IP	R	A53
TST13ER 1616K-4	16	16	125	16	4°	T13ER/EN	M3X7	T9IP	R	A53
TST13ER 0750K-2	3/4"	3/4"	125	3/4"	2°	T13ER/EN	M3X7	T9IP	R	A54
TST13ER 0750K-4	3/4"	3/4"	125	3/4"	4°	T13ER/EN	M3X7	T9IP	R	A54
TST13ER 2020K-2	20	20	125	20	2°	T13ER/EN	M3X7	T9IP	R	A54
TST13ER 2525M-2	25	25	150	25	2°	T13ER/EN	M3X7	T9IP	R	A55
TST13ER 1000M-2	1"	1"	150	1"	2°	T13ER/EN	M3X7	T9IP	R	A55



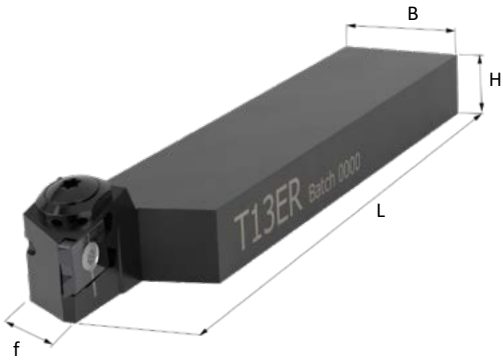
### TPT | WhizHip pin type toolholders for high pressure coolant

TOOLHOLDER	H	B	L	f	α°	INSERT	PIN	PLUG	BIT	STOCK	PRICE
TPT13ER 0375K-2C	3/8"	3/8"	125	3/8"	2°	T13ER/EN	PIN 12	M8X1	T20	R	A82
TPT13ER 0375K-4C	3/8"	3/8"	125	3/8"	4°	T13ER/EN	PIN 12	M8X1	T20	R	A82
TPT13ER 1010H-2C	10	10	100	10	2°	T13ER/EN	PIN 12	M8X1	T20	R	A82
TPT13ER 1010K-2C	10	10	125	10	2°	T13ER/EN	PIN 12	M8X1	T20	R	A82
TPT13ER 1010H-4C	10	10	100	10	4°	T13ER/EN	PIN 12	M8X1	T20	R	A82
TPT13ER 1010K-4C	10	10	125	10	4°	T13ER/EN	PIN 12	M8X1	T20	R	A82
TPT13ER 1212K-2C	12	12	125	12	2°	T13ER/EN	PIN 12	1/8" NPT	T20	R	A82
TPT13ER 1212K-4C	12	12	125	12	4°	T13ER/EN	PIN 12	1/8" NPT	T20	R	A82
TPT13ER 0500K-2C	1/2"	1/2"	125	1/2"	2°	T13ER/EN	PIN 12	1/8" NPT	T20	R	A82
TPT13ER 0500K-4C	1/2"	1/2"	125	1/2"	4°	T13ER/EN	PIN 12	1/8" NPT	T20	R	A82
TPT13ER 1616K-2C	16	16	125	16	2°	T13ER/EN	PIN 12	1/8" NPT	T20	R	A83



### TST | WhizHip toolholders for high pressure coolant

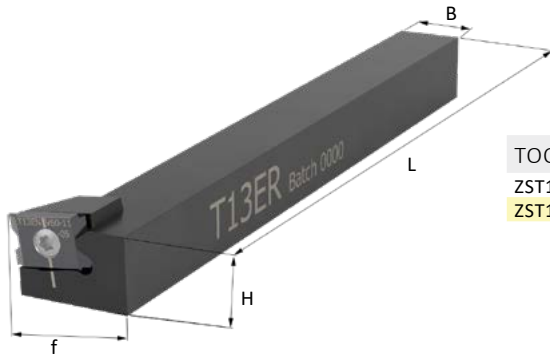
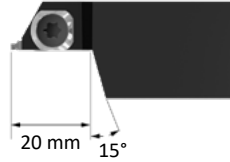
TOOLHOLDER	H	B	L	f	α°	INSERT	SCREW	PLUG	KEY	STOCK	PRICE
TST13ER 88H-2C	8	8	100	10	2°	T13ER/EN	M3X7	M5X0,8	T9IP	R	A73
TST13ER 88K-2C	8	8	125	10	2°	T13ER/EN	M3X7	M5X0,8	T9IP	R	A73
TST13ER 88H-4C	8	8	100	10	4°	T13ER/EN	M3X7	M5X0,8	T9IP	R	A73
TST13ER 88K-4C	8	8	125	10	4°	T13ER/EN	M3X7	M5X0,8	T9IP	R	A73
TST13ER 1010H-2C	10	10	100	10	2°	T13ER/EN	M3X7	M8X1	T9IP	R	A72
TST13ER 1010K-2C	10	10	125	10	2°	T13ER/EN	M3X7	M8X1	T9IP	R	A72
TST13ER 1010H-4C	10	10	100	10	4°	T13ER/EN	M3X7	M8X1	T9IP	R	A72
TST13ER 1010K-4C	10	10	125	10	4°	T13ER/EN	M3X7	M8X1	T9IP	R	A72
TST13ER 0375K-2C	3/8"	3/8"	125	3/8"	2°	T13ER/EN	M3X7	M8X1	T9IP	R	A72
TST13ER 0375K-4C	3/8"	3/8"	125	3/8"	4°	T13ER/EN	M3X7	M8X1	T9IP	R	A72
TST13ER 1212K-2C	12	12	125	12	2°	T13ER/EN	M3X7	1/8" NPT	T9IP	R	A72
TST13ER 1212K-4C	12	12	125	12	4°	T13ER/EN	M3X7	1/8" NPT	T9IP	R	A72
TST13ER 0500K-2C	1/2"	1/2"	125	1/2"	2°	T13ER/EN	M3X7	1/8" NPT	T9IP	R	A72
TST13ER 0500K-4C	1/2"	1/2"	125	1/2"	4°	T13ER/EN	M3X7	1/8" NPT	T9IP	R	A72
TST13ER 1616K-2C	16	16	125	16	2°	T13ER/EN	M3X7	1/8" NPT	T9IP	R	A73



HIP

### TST | Shifted WhizHip toolholders

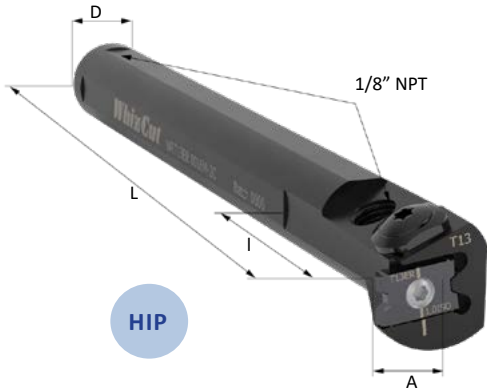
TOOLHOLDER	H	B	L	f	$\alpha^\circ$	INSERT	SCREW	PLUG	KEY	STOCK	PRICE
TST13ER 1020K-2C	10	20	125	10	2°	T13ER/EN	M3X7	M8X1	T9IP	R	A72
TST13ER 1020K-4C	10	20	125	10	4°	T13ER/EN	M3X7	M8X1	T9IP	R	A72
TST13ER 1224K-2C	12	24	125	12	2°	T13ER/EN	M3X7	1/8" NPT	T9IP	R	A72
TST13ER 1224K-4C	12	24	125	12	4°	T13ER/EN	M3X7	1/8" NPT	T9IP	R	A72
TST13ER 0510K-2C	1/2"	1"	125	1/2"	2°	T13ER/EN	M3X7	1/8" NPT	T9IP	R	A72
TST13ER 0510K-4C	1/2"	1"	125	1/2"	4°	T13ER/EN	M3X7	1/8" NPT	T9IP	R	A72
TST13ER 1632K-2C	16	32	125	16	2°	T13ER/EN	M3X7	1/8" NPT	T9IP	R	A73



### ZST | Square shank toolholders

TOOLHOLDER	H	B	L	f	$\alpha^\circ$	INSERT	SCREW	KEY	STOCK	PRICE
ZST13ER 1212K-2	12	12	125	20	2°	T13ER/EN	M3X7	T9IP	R	A72
ZST13ER 1616K-2	16	16	125	24	2°	T13ER/EN	M3X7	T9IP	R	A73

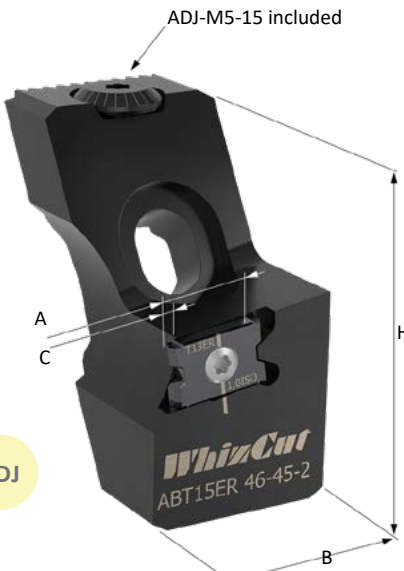
### WRT | Round shank WhizHip holders



HIP

TOOLHOLDER	D	A	L	I	$\alpha^\circ$	INSERT	PLUG	SCREW	KEY	STOCK	PRICE
WRT13ER 0625M-2C	5/8"	10	150	40	2°	T13ER/EN	1/8" NPT	M3X7	T9IP	R	A72
WRT13ER 0625M-4C	5/8"	10	150	40	4°	T13ER/EN	1/8" NPT	M3X7	T9IP	R	A72
WRT13ER 0016M-2C	16	10	150	40	2°	T13ER/EN	1/8" NPT	M3X7	T9IP	R	A72
WRT13ER 0016M-4C	16	10	150	40	4°	T13ER/EN	1/8" NPT	M3X7	T9IP	R	A72
WRT13ER 0750M-2C	3/4"	10	150	40	2°	T13ER/EN	1/8" NPT	M3X7	T9IP	R	A72
WRT13ER 0750M-4C	3/4"	10	150	40	4°	T13ER/EN	1/8" NPT	M3X7	T9IP	R	A72
WRT13ER 0020M-2C	20	10	150	40	2°	T13ER/EN	1/8" NPT	M3X7	T9IP	R	A72
WRT13ER 0020M-4C	20	10	150	40	4°	T13ER/EN	1/8" NPT	M3X7	T9IP	R	A72
WRT13ER 0022M-2C	22	10	150	40	2°	T13ER/EN	1/8" NPT	M3X7	T9IP	R	A73
WRT13ER 0022M-4C	22	10	150	40	4°	T13ER/EN	1/8" NPT	M3X7	T9IP	R	A73
WRT13ER 0025M-2C	25	10	150	40	2°	T13ER/EN	1/8" NPT	M3X7	T9IP	R	A73
WRT13ER 0025M-4C	25	10	150	40	4°	T13ER/EN	1/8" NPT	M3X7	T9IP	R	A73
WRT13ER 1000M-2C	1"	10	150	40	2°	T13ER/EN	1/8" NPT	M3X7	T9IP	R	A73
WRT13ER 1000M-4C	1"	10	150	40	4°	T13ER/EN	1/8" NPT	M3X7	T9IP	R	A73

A is measurement from cutting edge to the centre of shank.



### ABT | WhizAdjust toolholder

TOOLHOLDER-HEAD	H	B	A	$\alpha^\circ$	C MAX DOC	MAX FEED LENGTH	INSERT	CLAMP SCREW	KEY	STOCK	PRICE
ABT13ER-46-45-2	46	24	10	2°	2	45	T13ER/EN	M3X7	T9IP	R	D55
ABT13ER-46-45-4	46	24	10	4°	2	45	T13ER/EN	M3X7	T9IP	R	D55

For more information and shanks see WhizAdjust page: 50.

"A" is measurement from cutting edge to the centre of shank.

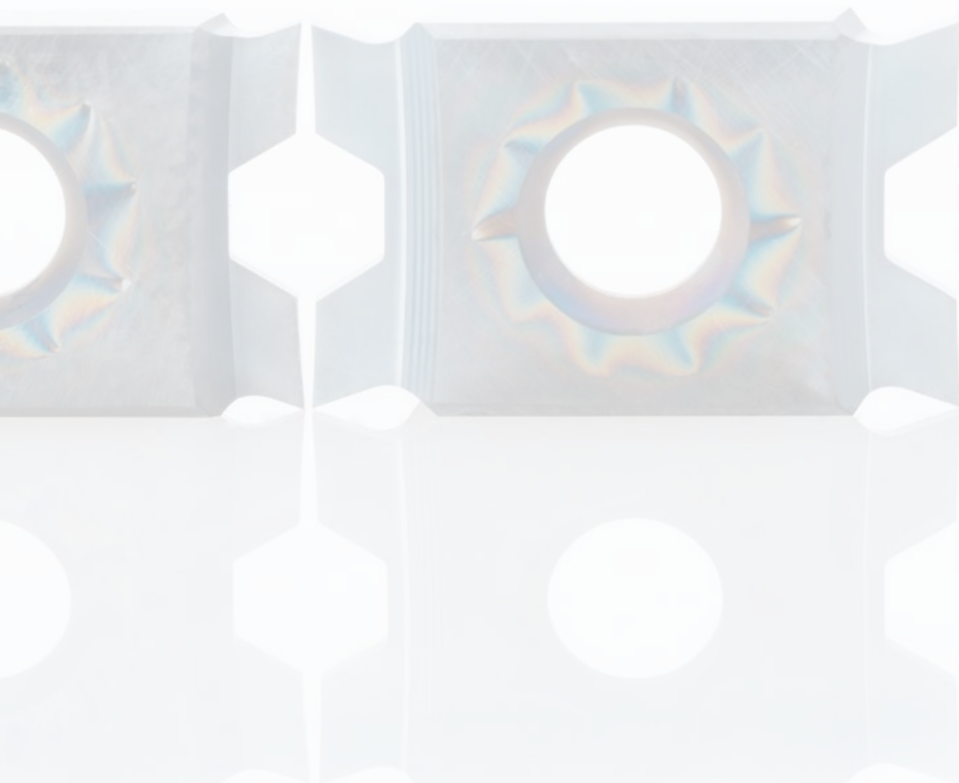
ADJ

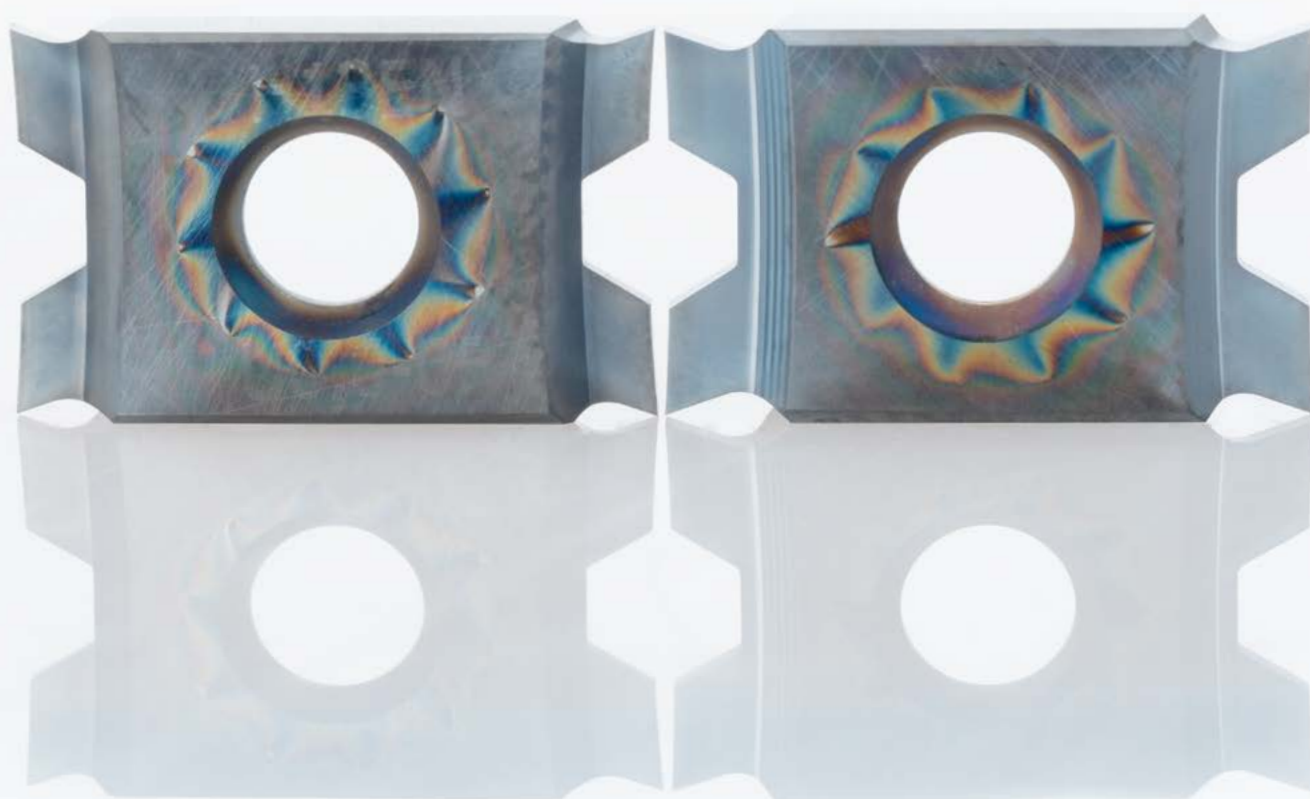


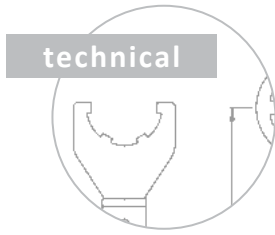
## PRECISION GROOVING

# WhizGroove

Have the cutting edge your way. WhizGroove inserts have four precision ground cutting edges and they come in four different shapes: sharp corners, corner radius, full radius and slightly honed cutting edges. It is a great combination of precision, stability and low cost per cutting edge.







## WhizGroove - for tight tolerances

Perform excellently and eliminate variation in machined parts. Increase your productivity with WhizGroove: precision ground inserts with four cutting edges. WhizGroove was explicitly designed to manage tight tolerance production - down to the decimal and achieve consistent quality with +/- 0,01mm tolerance. WhizCut offers a standard cutting rake of 12 degrees.

### Range benefits

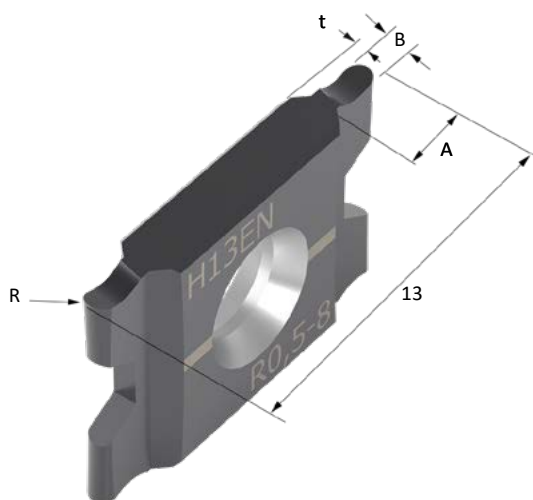
- **Winning combo:** of precise geometries and four sharp cutting edges.
- **Precision ground:** all inserts are precision ground on all four edges.
- **Your choice:** WhizGroove comes with sharp corners, radius, and full radius.
- **Mix it and fix it:** operate WhizGroove together with WhizFix toolholder system and index the inserts in 15 seconds.
- **Improve productivity:** with enhanced chip control. We recommend using WhizHip holders, feeding the coolant through the holder.

Perfect fit with WhizCut signature toolholders:

HIP

FIX

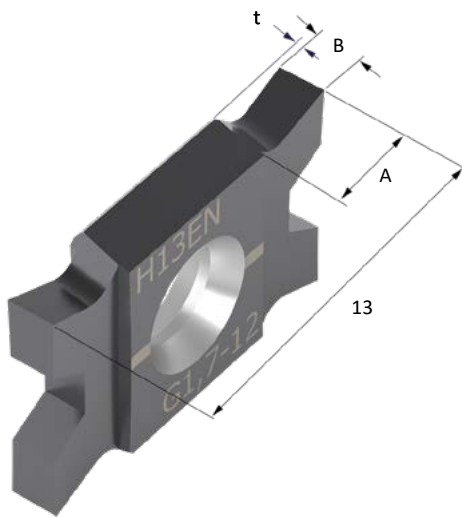
ADJ



### Style R | Inserts for radius grooving

INSERTS	R	B	MAX A	t	STOCK					PRICE
					8M	F8	B8	NF8	ND8	
H13EN R0,15	0,15	0,3	0,6	1,05	E	E	E	-	-	H5
H13EN R0,2	0,2	0,4	0,8	1	E	E	E	-	-	H4
H13EN R0,25	0,25	0,5	1	0,95	E	E	E	-	-	H4
H13EN R0,3	0,3	0,6	1,2	0,9	E	E	E	-	-	H4
H13EN R0,33	0,33	0,66	1,3	0,87	E	B	E	-	-	H4
H13EN R0,35	0,35	0,7	1,4	0,85	E	E	E	-	-	H4
H13EN R0,4	0,4	0,8	1,6	0,8	E	E	E	-	-	H4
H13EN R0,5	0,5	1	2	0,7	E	E	E	K	K	H4
H13EN R0,5L	0,5	1	3	0,7	E	E	E	K	K	H4
H13EN R0,53	0,53	1,06	2,1	0,67	E	E	E	K	K	H4
H13EN R0,55	0,55	1,1	2,2	0,65	E	E	E	K	K	H4
H13EN R0,6	0,6	1,2	2,4	0,6	E	E	E	K	K	H4
H13EN R0,75	0,75	1,5	3	0,45	E	E	E	K	K	H4
H13EN R1,0	1	2	3	0,2	E	E	E	K	K	H4

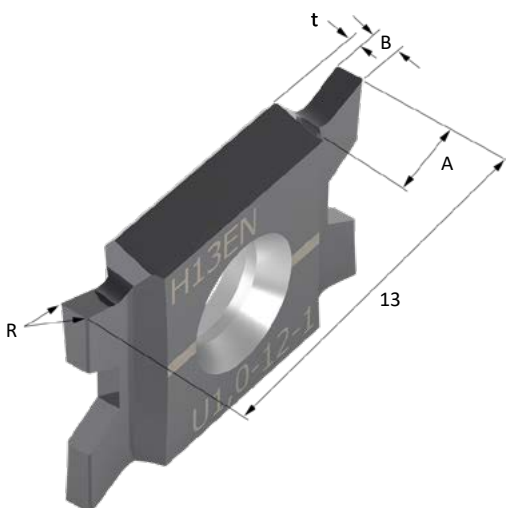
## Style G | Inserts for grooving, sharp corners



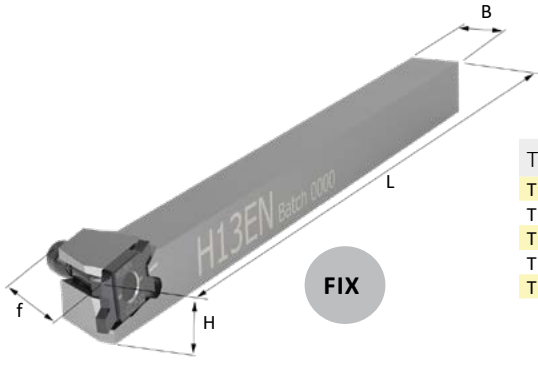
t= from side of holder  
to cutting edge.

INSERTS	B	MAX A	t	STOCK			PRICE
				8M	F8	B8	
H13EN G0,1-12	0,1	0,2	1,15	E	-	E	H4
H13EN G0,2-12	0,2	0,4	1,1	E	-	E	H4
H13EN G0,25-12	0,25	0,5	1,075	E	-	E	H4
H13EN G0,3-12	0,3	0,6	1,05	E	-	E	H4
H13EN G0,35-12	0,35	0,7	1,025	E	-	E	H4
H13EN G0,4-12	0,4	0,8	1	E	E	E	H4
H13EN G0,45-12	0,45	0,9	0,975	E	E	E	H4
H13EN G0,5-12	0,5	1	0,95	E	E	E	H3
H13EN G0,5-12L	0,5	3	0,95	E	E	E	H3
H13EN G0,6-12	0,6	1,2	0,9	E	E	E	H3
H13EN G0,7-12	0,7	1,4	0,85	E	E	E	H3
H13EN G0,8-12	0,8	1,6	0,8	E	E	E	H3
H13EN G0,9-12	0,9	1,8	0,75	E	E	E	H3
H13EN G0,95-12	0,95	1,9	0,725	E	E	E	H3
H13EN G1,0-12	1	2	0,7	E	E	E	H3
H13EN G1,0-12L	1	3	0,7	E	E	E	H3
H13EN G1,05-12	1,05	2,1	0,675	E	E	E	H3
H13EN G1,10-12	1,1	2,2	0,65	E	E	E	H3
H13EN G1,15-12	1,15	2,3	0,625	E	E	E	H3
H13EN G1,25-12	1,25	2,5	0,575	E	E	E	H3
H13EN G1,3-12	1,3	2,6	0,55	E	E	E	H3
H13EN G1,35-12	1,35	2,7	0,525	E	E	E	H3
H13EN G1,45-12	1,45	2,9	0,475	E	E	E	H3
H13EN G1,5-12	1,5	3	0,45	E	E	E	H3
H13EN G1,65-12	1,65	3	0,375	E	E	E	H3
H13EN G1,75-12	1,75	3	0,325	E	E	E	H3
H13EN G1,9-12	1,9	3	0,25	E	E	E	H3
H13EN G2,0-12	2	3	0,2	E	E	E	H3
H13EN G2,05-12	2,05	3	0,175	E	E	E	H3
H13EN G2,15-12	2,15	3	0,125	E	E	E	H3

## Style U | Inserts for grooving, radius corners

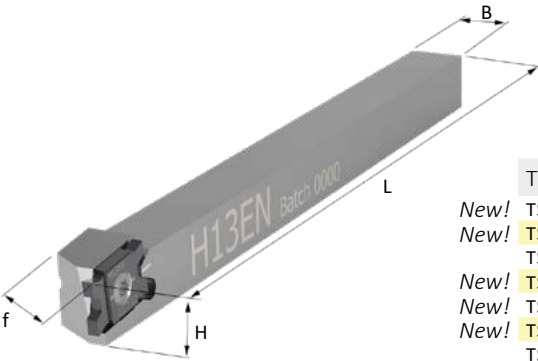


INSERTS	B	MAX A	R	t	STOCK					PRICE
					8M	F8	B8	NF8	ND8	
H13EN U0,4-12-05	0,4	0,8	0,05	1	E	E	E	-	-	H4
H13EN U0,45-12-05	0,45	0,9	0,05	0,975	E	E	E	-	-	H4
H13EN U0,5-12-05	0,5	1	0,05	0,95	E	E	E	-	-	H4
H13EN U0,6-12-05	0,6	1,2	0,05	0,9	E	E	E	-	-	H4
H13EN U0,7-12-05	0,7	1,4	0,05	0,85	E	E	E	-	-	H4
H13EN U0,8-12-05	0,8	1,6	0,05	0,8	E	E	E	K	K	H4
H13EN U0,9-12-05	0,9	1,8	0,05	0,75	E	E	E	K	K	H4
H13EN U0,95-12-05	0,95	1,9	0,05	0,725	E	E	E	K	K	H4
H13EN U1,0-12-05	1	2	0,05	0,7	E	E	E	K	K	H4
H13EN U1,0-12-1	1	2	0,1	0,7	E	E	E	E	E	H4
H13EN U1,05-12-1	1,05	2,1	0,1	0,675	E	E	E	K	K	H4
H13EN U1,10-12-1	1,1	2,2	0,1	0,65	E	E	E	K	K	H4
H13EN U1,15-12-1	1,15	2,3	0,1	0,625	E	E	E	E	E	H4
H13EN U1,25-12-1	1,25	2,5	0,1	0,575	E	E	E	K	K	H4
H13EN U1,3-12-1	1,3	2,6	0,1	0,55	E	E	E	E	E	H4
H13EN U1,35-12-1	1,35	2,7	0,1	0,525	E	E	E	K	K	H4
H13EN U1,45-12-1	1,45	2,9	0,1	0,475	E	E	E	K	K	H4
H13EN U1,5-12-1	1,5	3	0,1	0,45	E	E	E	E	E	H4
H13EN U1,65-12-1	1,65	3	0,1	0,375	E	E	E	E	E	H4
H13EN U1,75-12-1	1,75	3	0,1	0,325	E	E	E	E	E	H4
H13EN U1,9-12-1	1,9	3	0,1	0,25	E	E	E	E	E	H4
H13EN U2,0-12-1	2	3	0,1	0,2	E	E	E	K	K	H4
H13EN U2,05-12-1	2,05	3	0,1	0,175	E	E	E	E	E	H4
H13EN U2,15-12-1	2,15	3	0,1	0,125	E	E	E	E	E	H4



### TPH | Toolholders with WhizFix pin type clamping

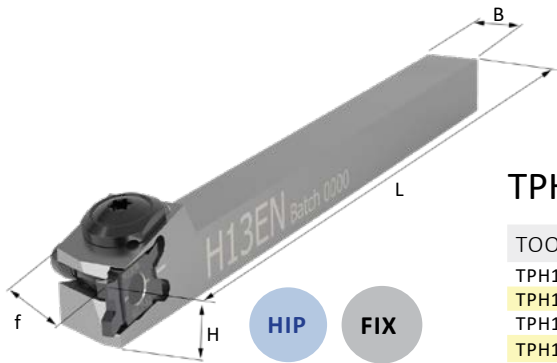
TOOLHOLDER	H	B	L	f	INSERT	PIN	BIT	STOCK	PRICE
TPH13ER 1010K-0	10	10	125	10	H13	PIN 12	T20	R	A62
TPH13ER 0375K-0	3/8"	3/8"	125	3/8"	H13	PIN 12	T20	R	A62
TPH13ER 1212K-0	12	12	125	12	H13	PIN 12	T20	R	A62
TPH13ER 0500K-0	1/2"	1/2"	125	1/2"	H13	PIN 12	T20	R	A62
TPH13ER 1616K-0	16	16	125	16	H13	PIN 12	T20	R	A63



### TSH | Toolholders with conventional clamping

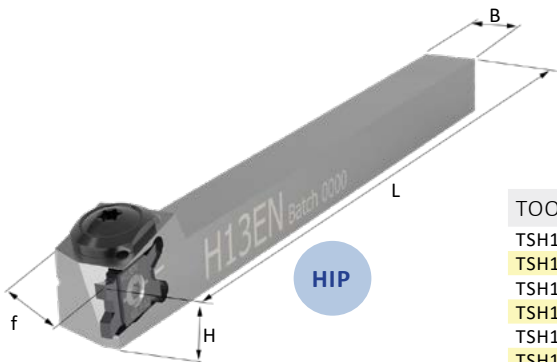
TOOLHOLDER	H	B	L	f	INSERT	SCREW	KEY	STOCK	PRICE
<i>New!</i> TSH13ER/L 88K-0	8	8	125	8	H13	M3X7	T9IP	B	A52
<i>New!</i> TSH13ER/L 1010K-0	10	10	125	10	H13	M3X7	T9IP	B	A52
TSH13ER 0375K-0	3/8"	3/8"	125	3/8"	H13	M3X7	T9IP	R	A52
<i>New!</i> TSH13ER/L 1212K-0	12	12	125	12	H13	M3X7	T9IP	B	A52
<i>New!</i> TSH13ER/L 0500K-0	1/2"	1/2"	125	1/2"	H13	M3X7	T9IP	B	A52
<i>New!</i> TSH13ER/L 1616K-0	16	16	125	16	H13	M3X7	T9IP	B	A53
TSH13ER 0750K-0	3/4"	3/4"	125	3/4"	H13	M3X7	T9IP	R	A54
TSH13ER 2020K-0	20	20	125	20	H13	M3X7	T9IP	R	A54
TSH13ER 2525M-0	25	25	150	25	H13	M3X7	T9IP	R	A55
TSH13ER 1000M-0	1"	1"	150	1"	H13	M3X7	T9IP	R	A55

*New left hand holders.*



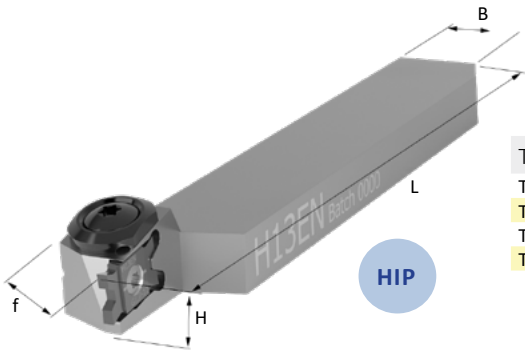
### TPH | WhizHip pin type toolholders for high pressure coolant

TOOLHOLDER	H	B	L	f	INSERT	PIN	PLUG	BIT	STOCK	PRICE
TPH13ER 1010H-OC	10	10	100	10	H13	PIN 12	M8X1	T20	R	A82
TPH13ER 1010K-OC	10	10	125	10	H13	PIN 12	M8X1	T20	R	A82
TPH13ER 0375K-OC	3/8"	3/8"	125	3/8"	H13	PIN 12	M8X1	T20	R	A82
TPH13ER 1212K-OC	12	12	125	12	H13	PIN 12	1/8" NPT	T20	R	A82
TPH13ER 0500K-OC	1/2"	1/2"	125	1/2"	H13	PIN 12	1/8" NPT	T20	R	A82
TPH13ER 1616K-OC	16	16	125	16	H13	PIN 12	1/8" NPT	T20	R	A83



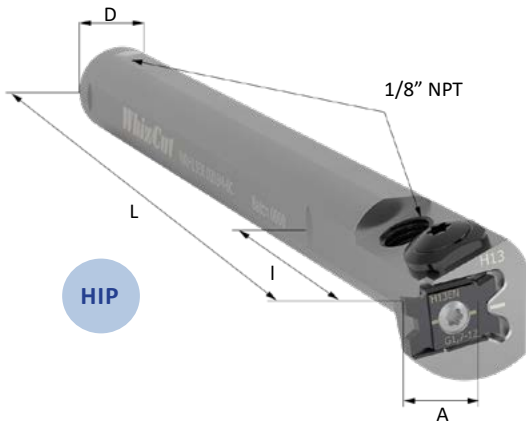
### TSH | WhizHip toolholders for high pressure coolant

TOOLHOLDER	H	B	L	f	INSERT	SCREW	PLUG	KEY	STOCK	PRICE
TSH13ER/L 88H-OC	8	8	100	10	H13	M3X7	M5X0,8	T9IP	B	A73
TSH13ER 88K-OC	8	8	125	10	H13	M3X7	M5X0,8	T9IP	R	A73
TSH13ER 1010H-OC	10	10	100	10	H13	M3X7	M8X1	T9IP	R	A72
TSH13ER 1010K-OC	10	10	125	10	H13	M3X7	M8X1	T9IP	R	A72
TSH13ER 0375H-OC	3/8"	3/8"	100	3/8"	H13	M3X7	M8X1	T9IP	R	A72
TSH13ER 1212K-OC	12	12	125	12	H13	M3X7	1/8" NPT	T9IP	R	A72
TSH13ER 0500K-OC	1/2"	1/2"	125	1/2"	H13	M3X7	1/8" NPT	T9IP	R	A72
TSH13ER 1616K-OC	16	16	125	16	H13	M3X7	1/8" NPT	T9IP	R	A73



### TSH | Shifted WhizHip toolholders

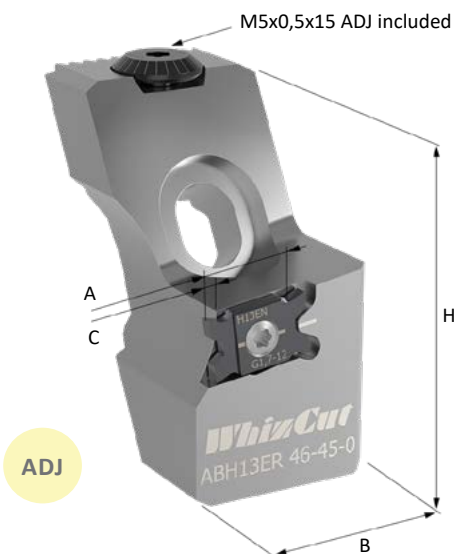
TOOLHOLDER	H	B	L	f	INSERT	SCREW	PLUG	KEY	STOCK	PRICE
TSH13ER 1020H-OC	10	20	100	10	H13	M3X7	M8X1	T9IP	R	A72
TSH13ER 1224K-OC	12	24	125	12	H13	M3X7	1/8" NPT	T9IP	R	A72
TSH13ER 0510K-OC	1/2"	1"	125	1/2"	H13	M3X7	1/8" NPT	T9IP	R	A72
TSH13ER 1632K-OC	16	32	125	16	H13	M3X7	1/8" NPT	T9IP	R	A73



### WRH | Round shank WhizHip holders

TOOLHOLDER	D	A	L	I	INSERT	PLUG	SCREW	KEY	STOCK	PRICE
WRH13ER 0625M-OC	5/8"	10	150	40	H13	1/8" NPT	M3X7	T9IP	R	A72
WRH13ER 0016M-OC	16	10	150	40	H13	1/8" NPT	M3X7	T9IP	R	A72
WRH13ER 0750M-OC	3/4"	10	150	40	H13	1/8" NPT	M3X7	T9IP	R	A72
WRH13ER 0020M-OC	20	10	150	40	H13	1/8" NPT	M3X7	T9IP	R	A72
WRH13ER 0022M-OC	22	10	150	40	H13	1/8" NPT	M3X7	T9IP	R	A73
WRH13ER 0025M-OC	25	10	150	40	H13	1/8" NPT	M3X7	T9IP	R	A73
WRH13ER 1000M-OC	1"	10	150	40	H13	1/8" NPT	M3X7	T9IP	R	A73

A is measurement from cutting edge to the centre of shank.



### ABH | WhizAdjust toolholder

TOOLHOLDER HEAD	H	B	A	C MAX DOC	MAX FEED LENGTH	INSERT TYPE	CLAMPING SCREW	KEY	STOCK	PRICE
ABH13ER-46-45-0	46	24	11	3	45	H13	M3X7	T9IP	R	D55

For more information and shanks see WhizAdjust page 50.  
A is measurement from cutting edge to the centre of shank.






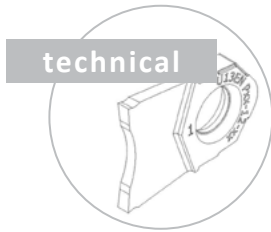
TWIN-EDGED PARTING OFF

# WhizTwin

The power and strength is where it needs to be – times two. WhizCut has re-invented the parting off insert for the future: WhizTwin is a bold new insert that helps reduce waste material and has a stability that is:  
truly cutting edge.







## WhizTwin, double it, and it's a win win

The patent pending design of WhizTwin generates a cutting edge stronger than any other and a stability not seen before. The strength and increased stability of the cutting edge is maximized with two cutting edges at the front. This lets the toolholder be clamped in a more stable position with a shorter overhang from the toolholder plate- reducing instability and vibrations which are the main challenges when parting off. Less material waste – less costs. The narrow insert allows you to lower your production cost as you save material using it. Removing less bar material is great for you and also for the environment. It's a win win – with WhizTwin.

### Range benefits

- **More stability, less vibrations:** with two cutting edges at the front. The holder can be clamped closer to the tool plate.
- **Longer tool life:** thanks to the stability of the insert and cutting edge.
- **Control those chips:** with a choice of four different chip control and cutting rakes to optimize performance for most materials.
- **Save material and barstock:** as the WhizTwin insert is more stable than ordinary parting off inserts, it is possible to use a more narrow part off.
- **Full range and same inserts for right and left:** The same insert can be used in a right hand and left hand holder. WhizTwin offers parting off/grooving tools with choices from width of 0,3 mm.
- **New carbide grade 7:** is an outstanding carbide grade that is extremely hard and tough. Available in all five grades: 7M, F7, B7, T7, ND7.

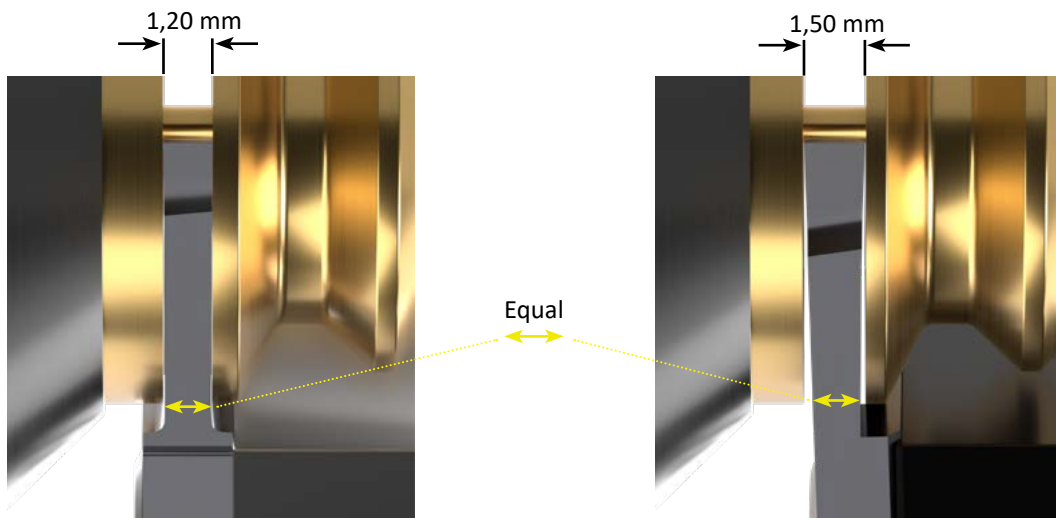
More  
parting off:  
WhizCut  
on page: 22.

Perfect fit with WhizCut signature toolholders:

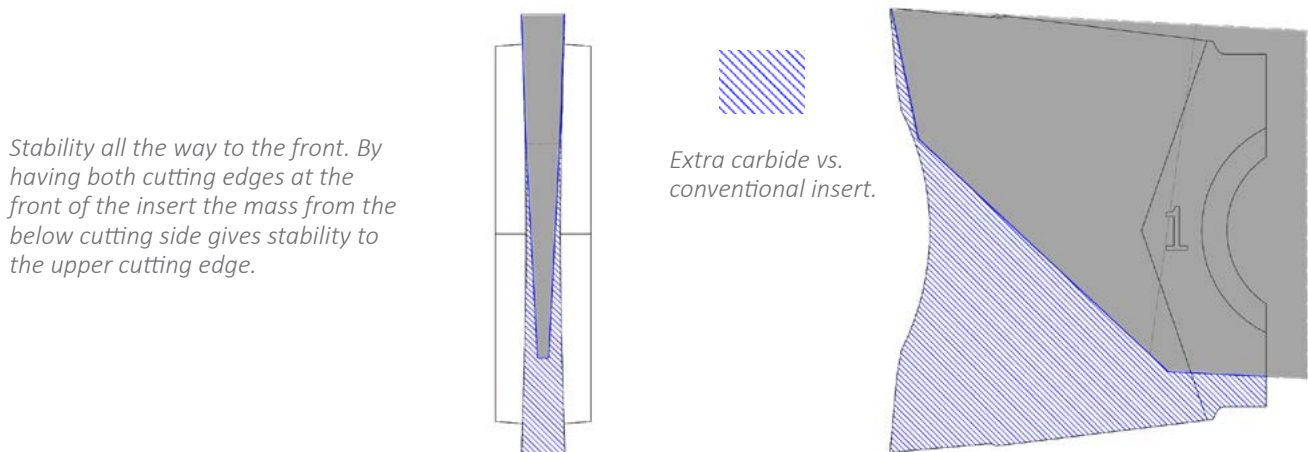
HIP



Index from both sides of the holder, as the WhizTwin screw has a double torx.



*WhizTwin insert: optimizes cutting geometry and relief around and under the cutting edge which boosts mass and stability. The stability of a WhizTwin 1,2 mm part off insert achieves the same width as a 1,5 mm from the top and the strength is considerably stronger below the cutting edge.*



*Stability all the way to the front. By having both cutting edges at the front of the insert the mass from the below cutting side gives stability to the upper cutting edge.*

*Extra carbide vs. conventional insert.*

Strong, fast and tough

The WhizTwin design utilizes the two cutting edges to build up extra strength under and around the cutting edge. Get longer tool life and more stable parting off – the patent pending design gives the WhizTwin insert a bigger carbide mass under the cutting edge. A 1,2 mm insert is considerably stronger than a 1,5 mm conventional insert. The strength of a 1 mm part off is the same as a 1,5 mm conventional. WhizTwin represents a new range of grades developed for more powerful machines and tougher materials, grade 7.



*Setup tip: use toolholder as probing/bar stop surface. Cut off position = t+cut off width*

# WhizGuide

get the most out of WhizTwin

## 1. Straight or angled part off

- Style P: 0° gives the strongest tool. Suitable with use of sub spindle.
- Style Z: 15° Suitable to be used without a sub spindle or when parting off with the centre hole.

## 2. Cutting rake options



- 2° for short-chipping materials, and very small parts.
- 7° for steel and other tough materials when an aggressive chip breaker is needed.
- 12° The best overall choice. For long-chipping materials, and strong enough for tough materials.
- 18° for sticky long-chipping materials and materials where there is a risk of a built up edge.

## 3. Make it stable

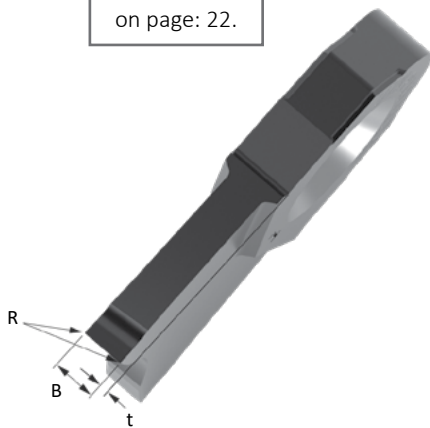
- Clamp the toolholder so the cutting edge is as close to the tool plate as your setup can allow.
- Choose as small MAX Ø on your insert as possible.
- Use the toolholder as probing/bar stop instead of the insert.

## 4. WhizTwin nomenclature

- U2NR Z1,0J-12R
- U2 = insert size
- N = Neutral, NR = Neutral insert right hand geometry
- P/Z front angle
- 1,0 = Cutting width
- Max part off B = 4, C = 6,4, E = 8, G = 1 0, J = 13
- -12 Cutting rake
- R = Radius

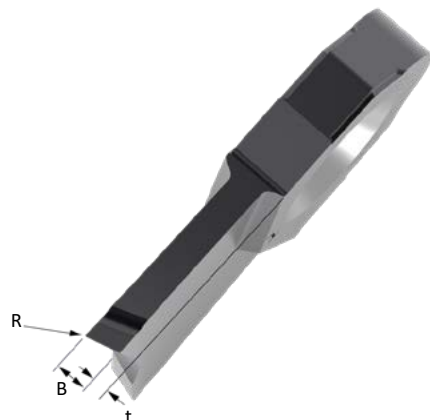
## Style P | Straight grooving and parting off

More parting off: WhizCut on page: 22.

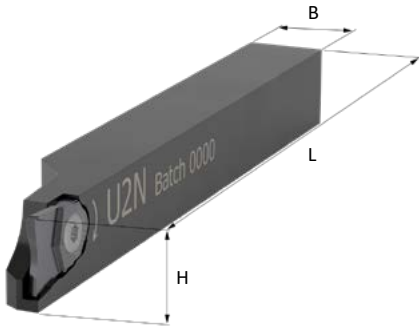


INSERT	B	C.RAKE	R	MAX Ø	t	STOCK					PG
						7M	F7	B7	T7	ND7	
U2N P0,3B-12	0,3	12°	0	4	0,95	E	-	E	-	-	A6
U2N P0,5C-2	0,5	2°	0	6,4	0,85	E	E	E	-	-	A5
U2N P0,5C-12	0,5	12°	0	6,4	0,85	E	E	E	-	-	A5
U2N P0,5C-18	0,5	18°	0	6,4	0,85	E	E	E	K	-	A5
U2N P0,5E-12	0,5	12°	0	8	0,85	E	E	E	-	-	A5
U2N P0,6C-12	0,6	12°	0	6,4	0,80	K	K	K	-	K	A5
U2N P0,7C-12	0,7	12°	0	6,4	0,75	K	K	K	-	K	A5
U2N P0,7E-12	0,7	12°	0	8	0,75	K	K	K	K	K	A5
U2N P1,0G-7R	1	7°	0,05	10	0,6	E	K	K	-	E	A6
U2N P1,0G-12R	1	12°	0,05	10	0,6	E	E	E	K	E	A6
U2N P1,0J-2	1	2°	0	13	0,6	E	E	E	-	K	A5
U2N P1,0J-7R	1	7°	0,05	13	0,6	E	K	K	-	E	A6
U2N P1,0J-12	1	12°	0	13	0,6	E	E	E	-	E	A5
U2N P1,0J-12R	1	12°	0,05	13	0,6	E	E	E	K	E	A6
U2N P1,0J-18	1	18°	0	13	0,6	E	E	E	K	-	A5
U2N P1,5J-7R	1,5	7°	0,05	13	0,35	E	K	K	-	E	A5
U2N P1,5J-12	1,5	12°	0	13	0,35	E	E	E	-	-	A4
U2N P1,5J-12R	1,5	12°	0,05	13	0,35	E	E	E	K	E	A5
U2N P1,5J-18	1,5	18°	0	13	0,35	E	E	E	K	-	A4
U2N P2,0J-7R	2	7°	0,05	13	0,1	E	K	K	-	E	A5
U2N P2,0J-12	2	12°	0	13	0,1	E	E	E	K	-	A4
U2N P2,0J-12R	2	12°	0,05	13	0,1	E	K	K	K	E	A5
U2N P2,0J-18	2	18°	0	13	0,1	E	E	E	K	-	A4

## Style Z | 15° parting off



INSERT	B	C.RAKE	R	MAX Ø	t	STOCK					PG
						7M	F7	B7	T7	ND7	
U2NR Z0,5C-12	0,5	12°	0	6,4	0,85	F	F	F	-	-	A6
U2NR Z0,5C-2	0,5	2°	0	6,4	0,85	F	F	F	-	-	A6
U2NR Z0,5E-12	0,5	12°	0	8	0,85	F	F	F	-	-	A6
U2NR Z0,5E-18	0,5	18°	0	8	0,85	F	F	F	K	-	A6
U2NR Z1,0J-12	1	12°	0	12,7	0,6	F	F	F	-	F	A6
U2NR Z1,0J-12R	1	12°	0,05	12,7	0,6	F	F	F	K	F	A6
U2NR Z1,0J-18	1	18°	0	12,7	0,6	F	F	F	K	-	A6
U2NR Z1,0J-2	1	2°	0	12,7	0,6	F	F	F	-	-	A6
U2NR Z1,0J-7	1	7°	0	12,7	0,6	-	-	-	-	F	A6
U2NR Z1,5J-12	1,5	12°	0	12,7	0,35	F	F	F	K	F	A5
U2NR Z1,5J-12R	1,5	12°	0,05	12,7	0,35	F	F	F	K	F	A5
U2NR Z1,5J-7	1,5	7°	0	12,7	0,35	-	-	-	-	F	A5
U2NR Z2,0J-12	2	12°	0	12,7	0,1	F	F	F	K	F	A5
U2NR Z2,0J-7	2	7°	0	12,7	0,1	F	K	K	-	F	A5

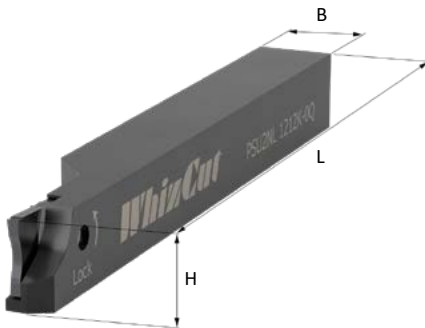


### Style B | Right hand - narrow front

TOOLHOLDER	H	B	L	f	INSERT	SCREW	KEY	STOCK	PRICE
PSU2NR 88K-0B	8	8	125	5	U2N	M4X5-RU	T9IP	R	A63
PSU2NR 1010K-0B	10	10	125	5	U2N	M4X5-RU	T9IP	R	A63
PSU2NR 1212K-0B	12	12	125	5	U2N	M4X5-RU	T9IP	R	A63
PSU2NR 0500K-0B	1/2"	1/2"	125	5	U2N	M4X5-RU	T9IP	R	A63
PSU2NR 1616K-0B	16	16	125	5	U2N	M4X5-RU	T9IP	R	A64
PSU2NR 2020K-0B	20	20	125	10	U2N	M4X5-RU	T9IP	R	A64



More parting off: WhizCut on page: 22.

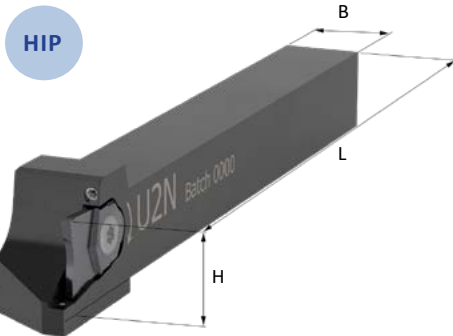


### Style Q | Left hand - shifted insert

TOOLHOLDER	H	B	L	f	INSERT	SCREW	KEY	STOCK	PRICE
PSU2NL 88K-0Q	8	8	125	5	U2N	M4X5-RU	T9IP	L	A63
PSU2NL 1010K-0Q	10	10	125	5	U2N	M4X5-RU	T9IP	L	A63
PSU2NL 1212K-0Q	12	12	125	6	U2N	M4X5-RU	T9IP	L	A63
PSU2NL 0500K-0Q	1/2"	1/2"	125	1/4"	U2N	M4X5-RU	T9IP	L	A63
PSU2NL 1616K-0Q	16	16	125	8	U2N	M4X5-RU	T9IP	L	A64



t specified in insert table



### Style C | Right and left hand - coolant through

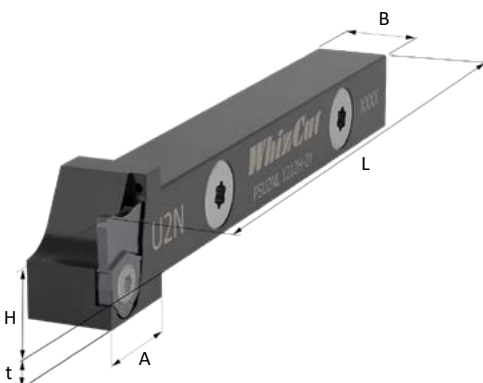
TOOLHOLDER	H	B	L	INSERT	PLUG	SCREW	KEY	STOCK	PRICE
* PSU2NR/L 88H-0C	8	8	100	U2N	M5X0,8	M4X5-RU	T9IP	A	A82
PSU2NR/L 1010H-0C	10	10	100	U2N	M8X1	M4X5-RU	T9IP	A	A82
PSU2NR/L 1212H-0C	12	12	100	U2N	1/8" NPT	M4X5-RU	T9IP	A	A82
PSU2NR/L 0500H-0C	1/2"	1/2"	100	U2N	1/8" NPT	M4X5-RU	T9IP	A	A82
PSU2NR/L 1616K-0C	16	16	125	U2N	1/8" NPT	M4X5-RU	T9IP	A	A83

\*Only 1 coolant exit from above.

Right hand holders has coolant inlet on opposite side of the insert.

Left hand holders has coolant inlet on insert side.

### Style Y | Y-axis toolholder - coolant through



TOOLHOLDER	H	B	L	t	A	INSERT	PLUG	SCREW	KEY	STOCK	PRICE
PSU2NR/L 88H-0Y	8	8	100	7	15	U2N	M5X0,8	M4X5-RU	T9IP	A	A83
PSU2NR/L 1010H-0Y	10	10	100	5	15	U2N	M8X1	M4X5-RU	T9IP	A	A83
PSU2NR/L 1212H-0Y	12	12	100	3	15	U2N	1/8" NPT	M4X5-RU	T9IP	A	A83
PSU2NR/L 0500H-0Y	1/2"	1/2"	100	2,3	15	U2N	1/8" NPT	M4X5-RU	T9IP	A	A83
PSU2NR/L 1616K-0Y	16	16	125	0	15	U2N	1/8" NPT	M4X5-RU	T9IP	A	A83



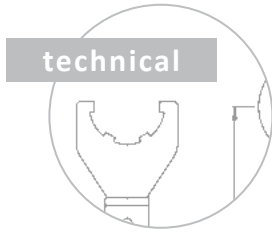
## HEIGHT ADJUSTABLE TOOLHOLDERS

The image features a 3D CAD rendering of a WhizAdjust toolholder system. The main focus is a large, semi-transparent grey toolholder with a central bore and a top adjustment knob. In the foreground, a smaller, more detailed version of the toolholder is shown, highlighting its internal components and the 'WhizCut' branding on its base. The background is a clean, light grey gradient.

# WhizAdjust

Take back working to a new level with WhizAdjust and enjoy the flexibility. An innovative and patented toolholder system that is perfect for turning against the sub spindle. The height adjustment is quick and easy – without loss of stability.





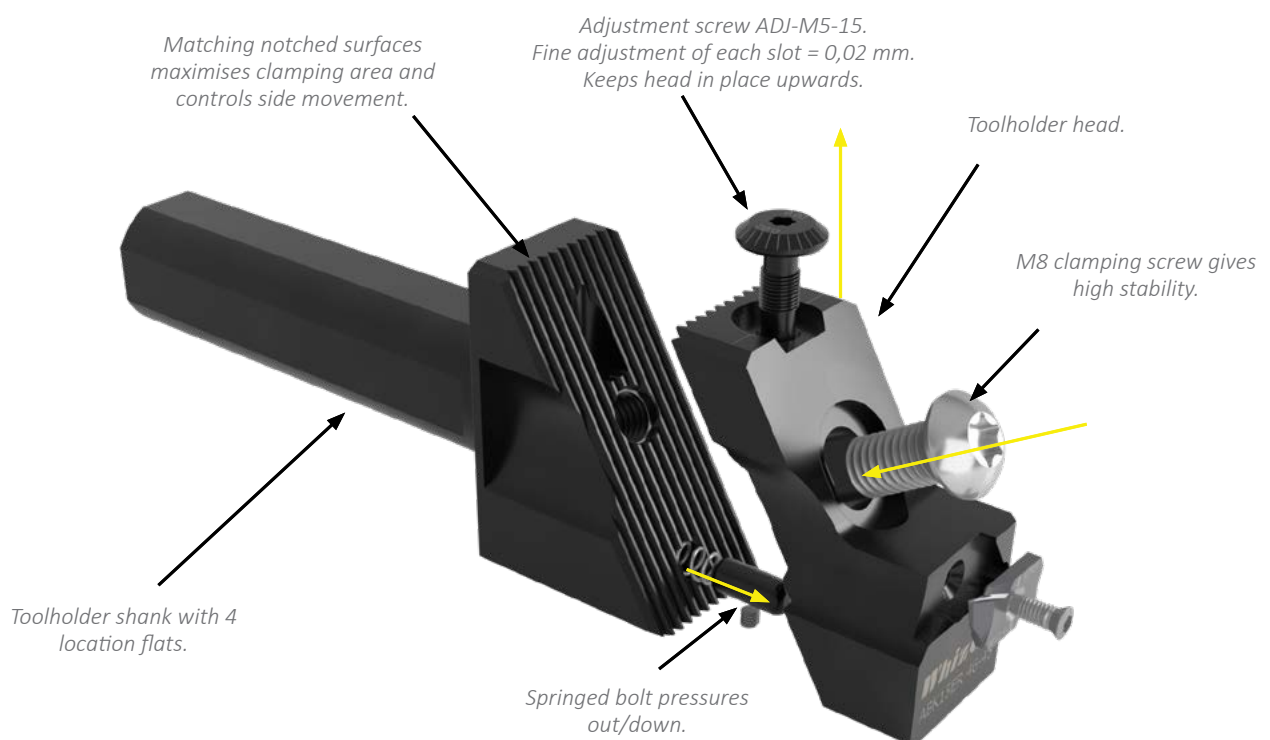
## WhizAdjust - for perfecting centre height

Fine-tune your way into the future of backworking, with the patented toolholder system WhizAdjust. An adjustable toolholder system from WhizCut, with quick height adjustment and no loss of stability. The quick: The fine-tune adjustment screw together with stable clamping makes it possible to modify centre height. Loosen one clamping screw from the WhizAdjust head and shank – and the adjustment can be done. It is as easy as that. The stable: The shank and adjustable head are positioned together with serrated surfaces in X- axis and the adjustment screw plus a spring in Y. The repeatability, by releasing the toolholder and fastening it again, is under 0,005 mm.

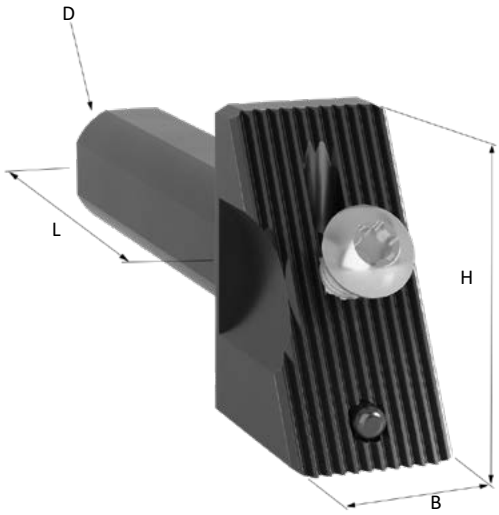
### Range benefits

- **Quick release and easy to adjust:** Only one adjustment screw and clamping screw is needed to change centre height.
- **Rigid toolholder:** with slanted and serrated connection surfaces.
- **Combine adjustable heads:** use the same shank for multiple adjustable heads: WhizCut, WhizThread and WhizGroove.
- **Precise adjustment:** +/- 0,02 mm per line. Fine tuning and repeatability down to 0,005 mm.

## WhizGuide functions of the WhizAdjust holder



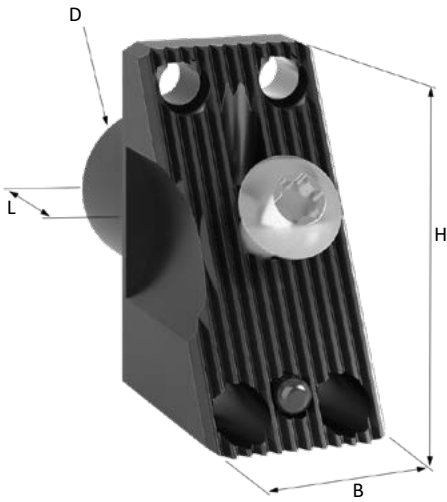
Please note. Due to the slant in the holder if a movement in Y is 0,01 mm then movement in Z will be 0,006 mm.



### Toolholder shank

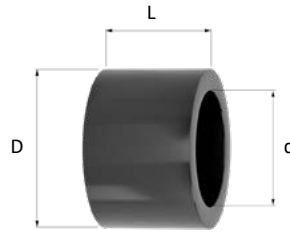
TOOLHOLDER SHANK	D	L	H	B	FLATS	SCREW	BIT	STOCK	PRICE
AB4624 D0625J	5/8"	80	46	24	4	M8X16	T40	R	D75
AB4624 D0750J	3/4"	80	46	24	4	M8X16	T40	R	D75
AB4624 D1000J	1"	80	46	24	4	M8X16	T40	R	D75
AB4624 D16J	16	80	46	24	4	M8X16	T40	R	D75
AB4624 D20J	20	80	46	24	4	M8X16	T40	R	D75
AB4624 D22J	22	80	46	24	4	M8X16	T40	R	D75
AB4624 D25J	25	80	46	24	4	M8X16	T40	R	D75

### Toolholder shank - front clamping

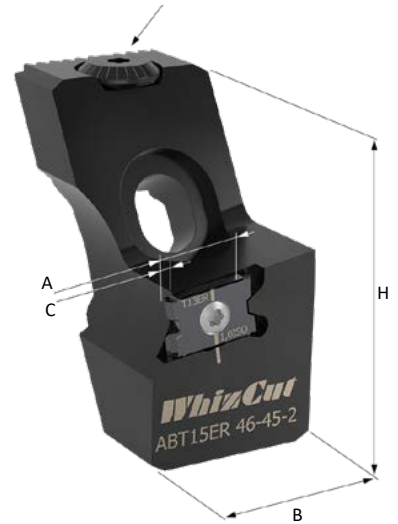
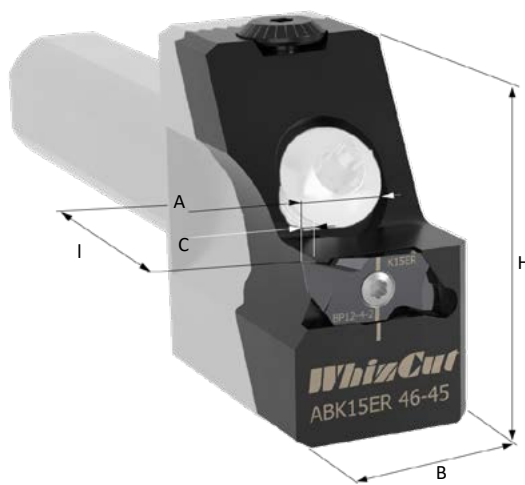
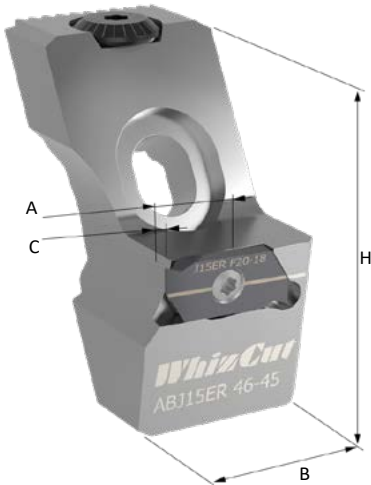


TOOLHOLDER SHANK	D	L	H	B	HOLE POSITION	SCREW	BIT	STOCK	PRICE
AB4624-S38D16	16+22	15	46	24	38/14	M8X16	T40	R	D75

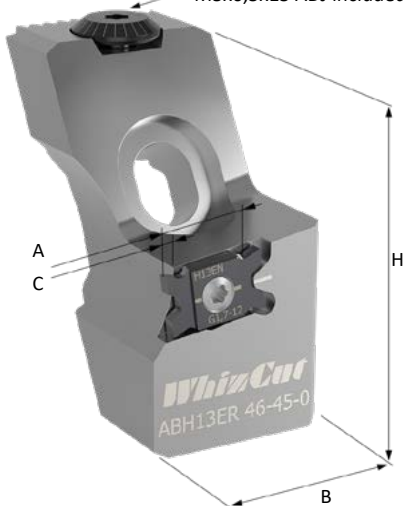
Note: All front clamping holders come with 16 mm shank plus 22 mm sleeve.



SHANK SLEEVES	D	d	L	PRICE
AT0750-16-15	3/4"	16	15	D3
AT1000-16-15	1"	16	15	D3
AT20-16-15	20	16	15	D3
AT22-16-15	22	16	15	D3
AT25-16-15	25	16	15	D3



M5x0,5x15 ADJ included in all heads

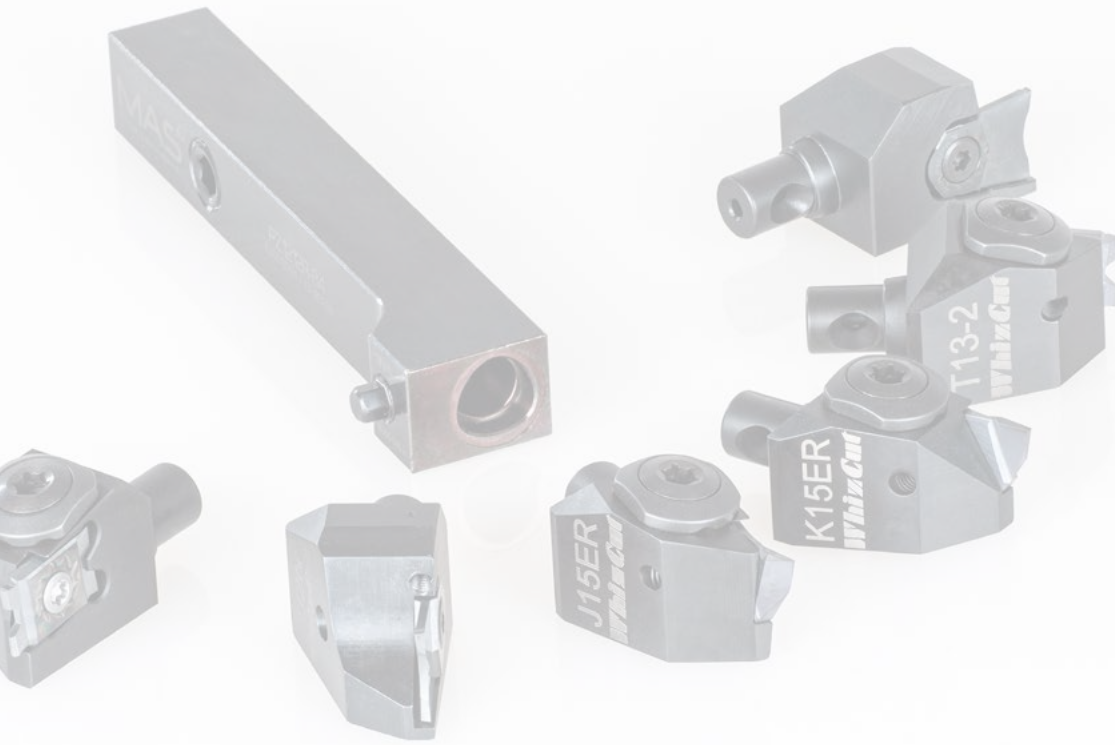


### Toolholder adjustable head

TOOLHOLDER HEAD	H	B	A	C MAX DOC	I WITH SHANK	INSERT TYPE	SCREW	KEY	STOCK	PRICE
ABH13ER-46-45-0	46	24	11	3	45	H13	M3X7	T9IP	R	D55
ABT13ER-46-45-2	46	24	10	2	45	T13ER/EN	M3X7	T9IP	R	D55
ABT13ER-46-45-4	46	24	10	2	45	T13ER/EN	M3X7	T9IP	R	D55
ABJ15ER-46-45	46	24	10	2	45	J15ER	M3X7	T9IP	R	D55
ABK15ER-46-45	46	24	12	4	45	K15ER	M3X7	T9IP	R	D55

Note: 1. A is distance from cutting edge to the centre of toolholder.  
 2. Difference between -2 and -4 WhizThread is the  $\alpha^\circ$  of the insert pocket.

## TOOLHOLDER SYSTEMS

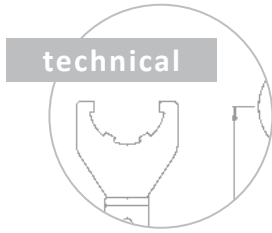


# WhizAdapt

The WhizAdapt product portfolio is all about collaborations. WhizCut is teaming up with the brightest inventions on the market to create the best and most modern cutting tools for you.







## WhizAdapt PZ<sup>®</sup>turn - Quick change holders

MAS Tools GmbH, inventors of the PZ<sup>®</sup>turn Quick change holders for Swiss type lathes have outdone themselves with this extremely stable and durable quick change system. The tapered polygon gives very good support and repeatability. The heads are always clamped back into the center of the taper, by an angled M5x0,5 screw pushing the head into the center of the holder. The heads are available with most WhizCut insert pockets, all come with coolant through preparation. The Shanks are now available in 12 mm and 1/2". Other pockets and shanks sizes (10 mm, 5/8", 16 mm) are available upon request.



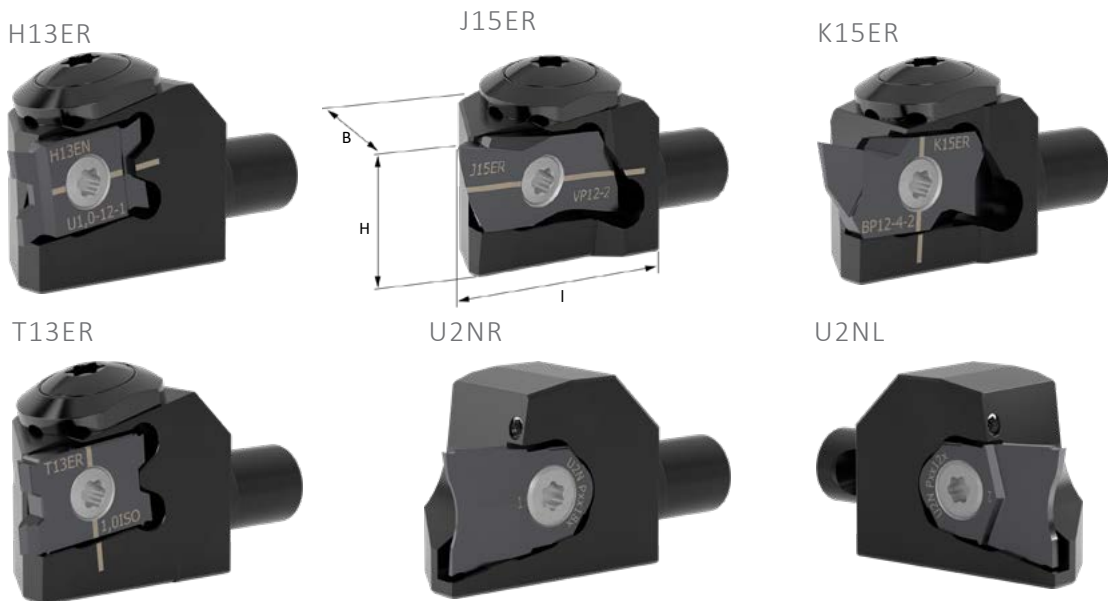
*WhizAdapt PZ<sup>®</sup>turn polygon taper gives maximum rigidity and excellent repeatability*

### Range benefits

Lifting productivity  
with WhizAdapt

- **More stability, less vibrations:** The PZ<sup>®</sup>turn has a very precise positioning due to a tapered polygon and the clamp screw only pushes the head into the holder and not down.
- **Quicker setups:** The same shank can be used for many different heads and applications making your setups not only faster but a lot more flexible.
- **Multiple coolant ports:** 3 coolant ports makes it possible to connect the shank to any machine set up.
- **Maximum coolant efficiency:** The WhizAdapt is combined with our WhizHip coolant nozzles giving the best possible coolant to the cutting edge.
- **Extended range upon request:** A full range of ISO pockets and other heads are available upon request.
- **Quick change:** Insert indexing within 30 seconds.

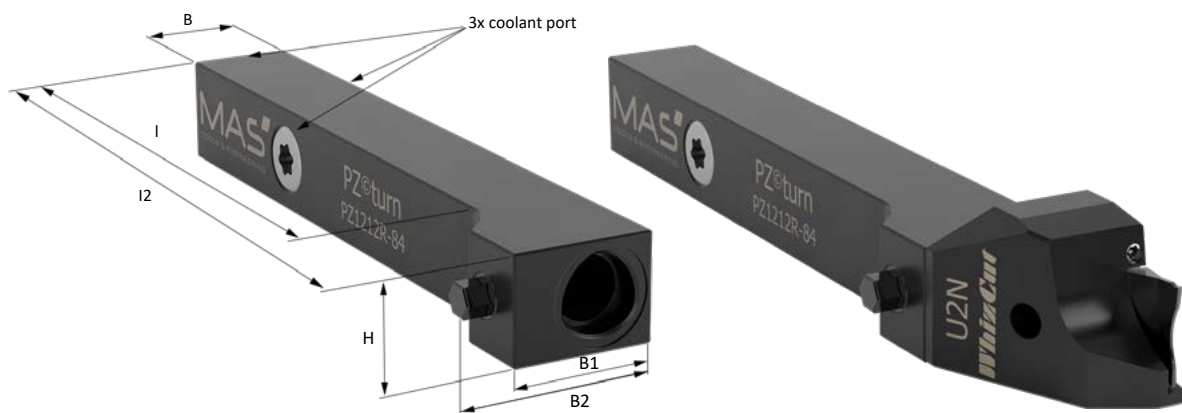




### WhizAdapt PZ@turn | heads

TOOLHOLDER	H	B	I	L	INSERT	SCREW	KEY	STOCK	PRICE
WAH13ER PZ1022-0	10	13,5	22	106	H13	M3X7	T9IP	K	AD71
WAJ15ER PZ1022-8	10	13,5	22	106	J15ER	M3X7	T9IP	R	AD71
WAK15ER/L PZ1022-2	10	13,5	22	106	K15ER	M3X7	T9IP	B	AD71
WAT13ER PZ1022-2	10	13,5	22	106	T13	M3X7	T9IP	K	AD71
WAT13ER PZ1022-4	10	13,5	22	106	T13	M3X7	T9IP	K	AD71
WAU2NR PZ1022-0	10	13,5	22	106	U2N	M4X5-RU	T9IP	K	AD71
WAU2NL PZ1022-0	10	13,5	22	106	U2N	M4X5-RU	T9IP	K	AD71
WAH13ER PZ1222-0	12	16	22	106	H13	M3X7	T9IP	R	AD71
WAJ15ER PZ1222-8	12	16	22	106	J15ER	M3X7	T9IP	R	AD71
WAK15ER/L PZ1222-2	12	16	22	106	K15ER	M3X7	T9IP	B	AD71
WAT13ER PZ1222-2	12	16	22	106	T13	M3X7	T9IP	R	AD71
WAT13ER PZ1222-4	12	16	22	106	T13	M3X7	T9IP	R	AD71
WAU2NR PZ1222-0	12	16	22	106	U2N	M4X5-RU	T9IP	R	AD71
WAU2NL PZ1222-0	12	16	22	106	U2N	M4X5-RU	T9IP	L	AD71
WAH13ER PZ1622-0	16	20	22	106	H13	M3X7	T9IP	K	AD72
WAJ15ER PZ1622-8	16	20	22	106	J15ER	M3X7	T9IP	R	AD72
WAK15ER PZ1622-2	16	20	22	106	K15ER	M3X7	T9IP	R	AD72
WAT13ER PZ1622-2	16	20	22	106	T13	M3X7	T9IP	K	AD72
WAT13ER PZ1622-4	16	20	22	106	T13	M3X7	T9IP	K	AD72
WAU2NR PZ1622-0	16	20	22	106	U2N	M4X5-RU	T9IP	K	AD72
WAU2NL PZ1622-0	16	20	22	106	U2N	M4X5-RU	T9IP	K	AD72

\* L=Length of Head+shank



### WhizAdapt PZ@turn | shanks

TOOLHOLDER	H	B	B1	B2	I	I2	SCREW	KEY	3X PORT	STOCK	PRICE
PZ1010R-84	10	10	13,5	17,6	71	84	M5X0.5X7X60	SW3,5	M8X1	R	AD92
PZ1212R-84	12	12	16	20,2	71	84	M5X0.5X9.5X60	SW3,5	M8X1	R	AD92
PZ12.7-12.7R-84	1/2"	1/2"	16	20,2	71	84	M5X0.5X9.5X60	SW3,5	5/16"-24 UNF	R	AD92
PZ15.8-15.8R-84	5/8"	5/8"	20	25,5	71	84	M6X0.75X10.5X60	SW4,5	5/16"-24 UNF	R	AD93
PZ1616R-84	16	16	20	25,5	71	84	M6X0.75X10.5X60	SW4,5	G1/8"	R	AD93

\* Screw available with internal torx.

## SOLID CARBIDE BORING BARS

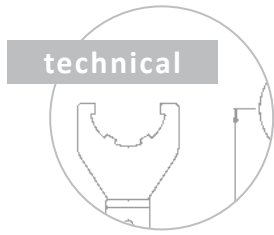


# WhizIn

We clamp it inclined and you get a tool unlike anything ever experienced before. WhizIn toolholders have the carbide bar mounted at an angle to create more stability. WhizIn improves productivity, by better surface finish and increased tool life.

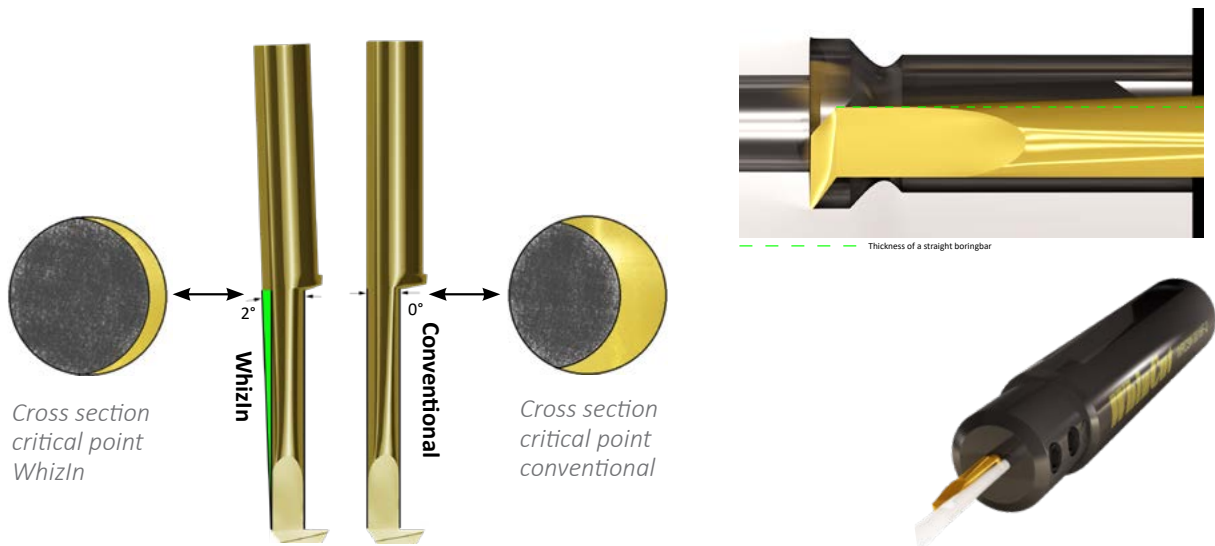






## WhizIn - angled for better productivity

Consistent, strong and stable. A WhizIn boring bar has up to 50 percent more material at the critical point compared to a conventional boring bar. The boring bar is clamped into the toolholder at an angle and the boring bar grows thicker with the length of the bar. Minimal grinding is required which results in less grinding stress and a more consistent tool for you.



### Range benefits

- **Unique chip control geometries:** control down to the smallest dimensions.
- **Increased tool life:** the added material at the crucial points gives a greatly improved tool life.
- **Improved surface finish:** thanks to the additional material and stability.
- **Wide range:** a wide selection of toolholders, some with coolant through.

Perfect conditions for high pressure coolant. The boring bar is mounted in a 2° angle in the toolholder, and a natural incline angle is achieved.

- **Coolant through:** ideal for high pressure coolant. Read more on page 80.
- **Secure and stable:** with double screws.
- **Special toolholder designs:** for Swiss type automatic lathes.
- **Self locating system:** when clamping within 30° the boring bar rotates itself into a correct position in the toolholder

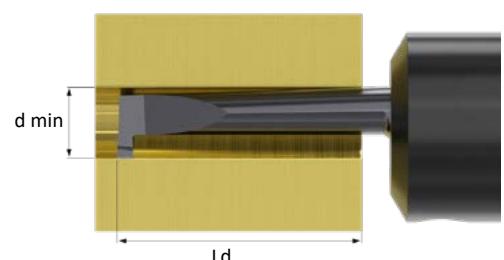
### The WhizIn toolholder

## WhizGuide

*select minimum bore size*

### Minimum bore size

The minimum bore size is determined by what depth the tool goes into the smaller hole. This is a result of the inventive angular mounting of the WhizIn boring. Get it right with a simple calculation, as shown in the picture.

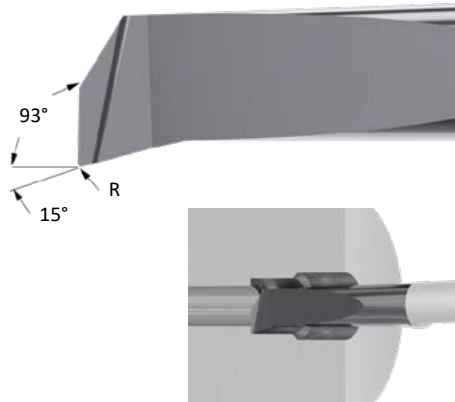


$$d \text{ min} = \text{tool } d + Ld \times 0,035$$

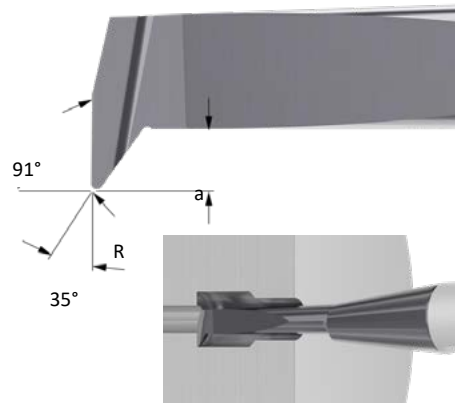
For recommended cutting data WhizIn, please see page 87.

### Style J | Boring bars for turning

Please note: WhizIn boring bars are only compatible with WhizIn toolholders.



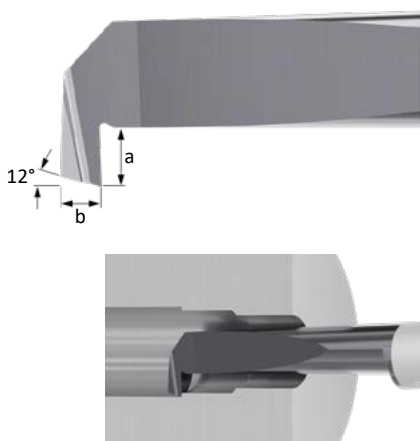
BORING BAR	D	d	C. RAKE	R	f	L	l	STOCK				PRICE
								10M	C10	F10	B10	
C31NR J8-0	3	0,8	8°	0	0,4	24	4	B	K	B	B	B4
C314NR J8-0	3	1,4	8°	0	0,7	24	4	B	K	B	B	B4
C32NR J8-0	3	1,6	8°	0	0,8	24	7	B	K	B	B	B3
C32NR J16-0	3	1,6	16°	0	0,8	24	7	B	K	B	B	B3
C33NR J8-0	3	2,2	8°	0	1,1	24	10	B	K	B	B	B3
C33NR J16-0	3	2,2	16°	0,0	1,1	24	10	B	K	B	B	B3
C33NR J8-1	3	2,2	8°	0,1	1,1	24	10	B	K	B	B	B4
C33NR J16-1	3	2,2	16°	0,1	1,1	24	10	B	K	B	B	B4
C34NR J8-0	3	3	8°	0	1,5	24	12	B	K	B	B	B2
C34NR J16-0	3	3	16°	0	1,5	24	12	B	K	B	B	B2
C34NR J8-1	3	3	8°	0,1	1,5	24	12	B	K	B	B	B3
C34NR J16-1	3	3	16°	0,1	1,5	24	12	B	K	B	B	B3
C4NR J8-0	4	4	8°	0	2	32	16,5	B	K	B	B	B3
C4NR J16-0	4	4	16°	0	2	32	16,5	B	K	B	B	B3
C4NR J8-1	4	4	8°	0,1	2	32	16,5	B	K	B	B	B4
C4NR J16-1	4	4	16°	0,1	2	32	16,5	B	K	B	B	B4
C5NR J8-0	5	5	8°	0	2,5	40	21	B	K	B	B	B4
C5NR J16-0	5	5	16°	0	2,5	40	21	B	K	B	B	B4
C5NR J8-1	5	5	8°	0,1	2,5	40	21	B	K	B	B	B5
C5NR J8-2	5	5	8°	0,2	2,5	40	21	B	K	B	B	B5
C5NR J16-1	5	5	16°	0,1	2,5	40	21	B	K	B	B	B5
C6NR J8-0	6	6	8°	0	3	48	26	B	K	B	B	B6
C6NR J16-0	6	6	16°	0	3	48	26	B	K	B	B	B6
C6NR J8-1	6	6	8°	0,1	3	48	26	B	K	B	B	B7
C6NR J16-1	6	6	16°	0,1	3	48	26	B	K	B	B	B7
C8NR J8-0	8	8	8°	0	4	72	45	B	K	B	B	B10
C8NR J16-0	8	8	16°	0	4	72	45	B	K	B	B	B10
C8NR J8-1	8	8	8°	0,1	4	72	45	B	K	B	B	B11
C8NR J16-1	8	8	16°	0,1	4	72	45	B	K	B	B	B11



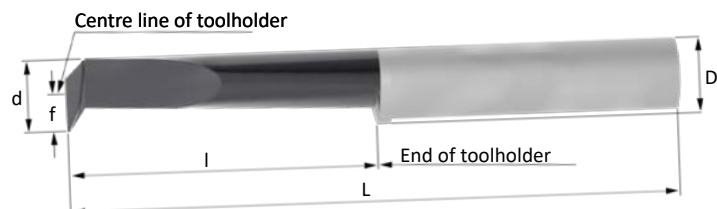
### Style V | Boring bars for copy turning

BORING BAR	D	d	C. RAKE	a	R	f	L	l	STOCK				PRICE
									10M	C10	F10	B10	
C32NR V8	3	1,6	8°	0,5	0,05	0,8	24	7	B	K	B	B	B3
C33NR V8	3	2,2	8°	0,7	0,07	1,1	24	10	B	K	B	B	B3
C3NR V8	3	3	8°	1	0,1	1,5	24	12	B	K	B	B	B3
C4NR V8	4	4	8°	1,4	0,15	2	32	16,5	B	K	B	B	B4
C5NR V8	5	5	8°	1,7	0,2	2,5	40	21	B	K	B	B	B5
C6NR V8	6	6	8°	2	0,25	3	48	26	B	K	B	B	B7
C8NR V8	8	8	8°	2,7	0,3	4	72	45	B	K	B	B	B11

### Style B | Boring bars for back turning

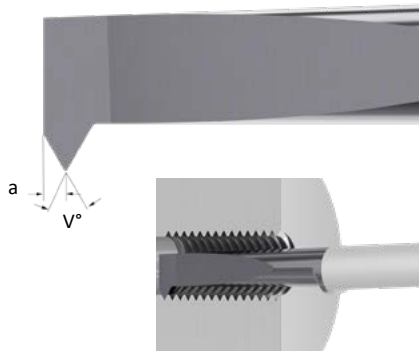


BORING BAR	D	d	a	b	f	L	l	STOCK				PRICE
								10M	C10	F10	B10	
C3NR B12-1-0	3	3	1	0,75	1,5	24	11	B	K	B	B	B4
C4NR B12-1,4-0	4	4	1,4	1	2	32	16,5	B	K	B	B	B5
C5NR B12-1,7-0	5	5	1,7	1,25	2,5	40	21	B	K	B	B	B6
C6NR B12-2-0	6	6	2	1,5	3	48	27	B	K	B	B	B8
C8NR B12-2,7-0	8	8	2,7	1,8	4	72	45	B	K	B	B	B12



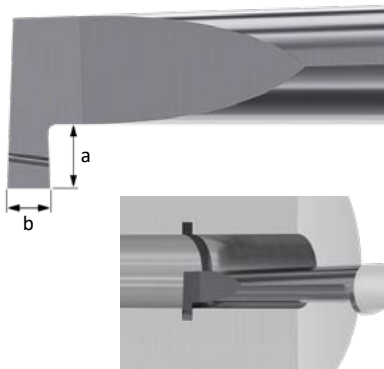


## Style T | Boring bars for threading

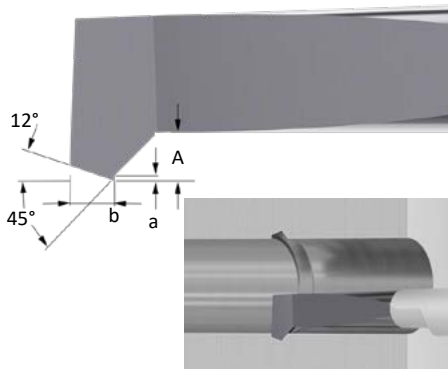


BORING BAR	D	d	PITCH	V°	a	f	L	l	STOCK				PRICE
									10M	C10	F10	B10	
C31NR T60	3	0,8	0,2-0,4	60	0,2	0,5	24	4	B	K	B	B	B4
C32NR T60	3	1,6	0,2-0,6	60	0,3	0,75	24	7	B	K	B	B	B3
C33NR T60	3	2,2	0,2-0,8	60	0,4	1,25	24	10	B	K	B	B	B3
C34NR T60	3	3	0,2-1,0	60	0,5	1,5	24	12	B	K	B	B	B2
C4NR T60	4	4	0,25-1,25	60	0,6	2	32	16,5	B	K	B	B	B3
C4NR T55	4	4	0,25-1,25	55	0,6	2	32	16,5	B	K	B	B	B3
C5NR T60	5	5	0,25-1,5	60	0,7	2,5	40	21	B	K	B	B	B4
C6NR T60	6	6	0,25-1,75	60	0,8	3	48	27	B	K	B	B	B5
C6NR T55	6	6	0,25-1,75	55	0,8	3	48	27	B	K	B	B	B5
C8NR T60	8	8	0,35-2,5	60	1,2	4	72	45	B	K	B	B	B10

## Style G | Boring bars for straight grooves

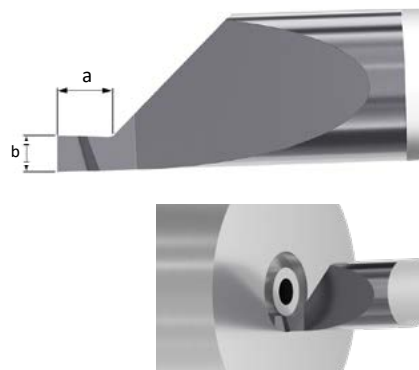


BORING BAR	D	d	b	a	f	L	l	STOCK				PRICE
								10M	C10	F10	B10	
C31NR G0,2	3	0,8	0,2	0,3	0,4	24	4	B	K	B	B	B4
C32NR G0,3	3	1,6	0,3	0,5	0,8	24	7	B	K	B	B	B4
C33NR G0,5	3	2,2	0,5	0,7	1,1	24	10	B	K	B	B	B4
C34NR G0,2	3	3	0,2	0,3	1,5	24	12	B	K	B	B	B3
C34NR G0,5	3	3	0,5	0,8	1,5	24	12	B	K	B	B	B3
C34NR G0,8	3	3	0,8	1,0	1,5	24	12	B	K	B	B	B3
C34NR G1,0	3	3	1,0	1,0	1,5	24	12	B	K	B	B	B3
C4NR G0,5	4	4	0,5	0,8	2	32	16,5	B	K	B	B	B4
C4NR G1,0	4	4	1,0	1,3	2	32	16,5	B	K	B	B	B4
C5NR G0,5	5	5	0,5	0,8	2,5	40	21	B	K	B	B	B5
C5NR G1,0	5	5	1,0	1,5	2,5	40	21	B	K	B	B	B5
C5NR G1,5	5	5	1,5	1,5	2,5	40	21	B	K	B	B	B5
C6NR G0,7	6	6	0,7	1,3	3	48	26	B	K	B	B	B7
C6NR G1,0	6	6	1,0	1,3	3	48	26	B	K	B	B	B7
C6NR G1,5	6	6	1,5	2	3	48	26	B	K	B	B	B7
C6NR G2,0	6	6	2,0	2	3	48	26	B	K	B	B	B7
C8NR G1,0	8	8	1,0	1,7	4	72	45	B	K	B	B	B11
C8NR G1,5	8	8	1,5	2,2	4	72	45	B	K	B	B	B11
C8NR G2,0	8	8	2	2,7	4	72	45	B	K	B	B	B11
C8NR G2,5	8	8	2,5	2,7	4	72	45	B	K	B	B	B11

Style P | Boring bars for grooving and chamfering  
- before parting off

BORING BAR	D	d	b	A	a	f	L	l	STOCK				PRICE
									10M	C10	F10	B10	
C3NR P0,8	3	3	0,8	0,8	0,1	1,5	24	12	B	K	B	B	B4
C4NR P1,0	4	4	1	1	0,1	2	32	16,5	B	K	B	B	B5
C5NR P1,0	5	5	1	1,3	0,2	2,5	40	21	B	K	B	B	B6
C6NR P1,0	6	6	1	1,5	0,2	3	48	26	B	K	B	B	B8
C8NR P1,5	8	8	1,5	2	0,3	4	72	45	B	K	B	B	B12

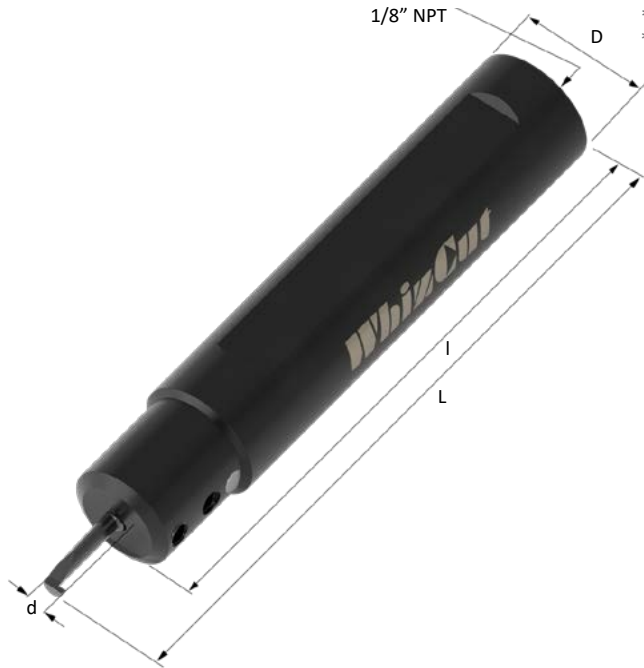
## Style A | Boring bars for face grooving



BORING BAR	D	b	a	L	l	STOCK				PRICE
						10M	C10	F10	B10	
C3NR A8-3-07	3	0,7	0,8	18	6	B	K	B	B	B2
C4NR A8-4-10	4	1	1,25	23,5	8	B	K	B	B	B3
C5NR A8-5-12	5	1,2	1,5	29	10	B	K	B	B	B4
C6NR A8-6-15	6	1,5	2	34	12	B	K	B	B	B6
C8NR A8-8-20	8	2	2,5	43	16	B	K	B	B	B10

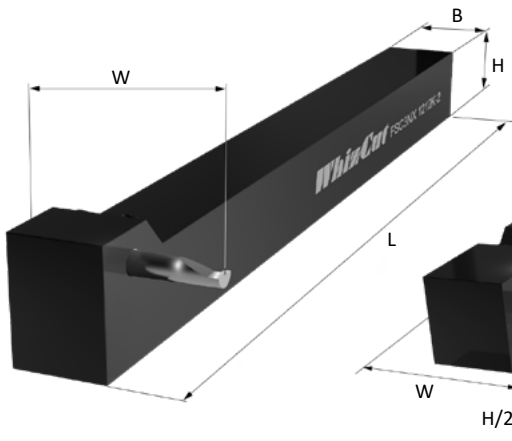
Special widths and depths can be produced. Contact your local distributor for a quote.

### WRC | Round toolholder with internal coolant

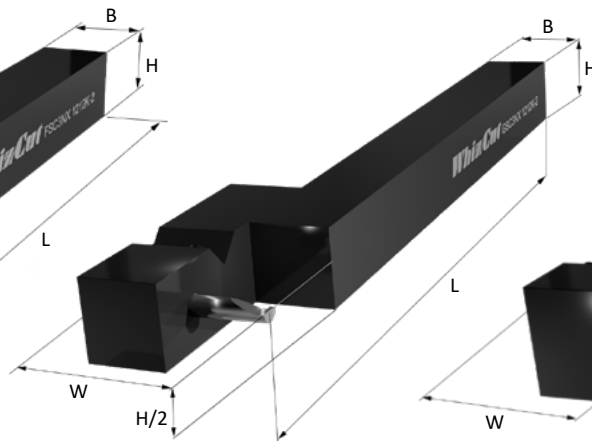


TOOLHOLDER	D	d INSERT SIZE	I	L WITH STANDARD INSERT	BORING BAR	STOCK	PRICE
* WRC3N 0812E-2	8	3	60,5	72,5	C3N---	R	B20
* WRC4N 0812E-2	8	4	60,5	77	C4N---	R	B20
WRC3N 0012E-2	12	3	70	82	C3N---	R	B20
WRC4N 0012E-2	12	4	75	91,5	C4N---	R	B20
WRC3N 0016F-2	16	3	80	92	C3N---	R	B21
WRC4N 0016F-2	16	4	85	101,5	C4N---	R	B21
WRC5N 0016G-2	16	5	90	111	C5N---	R	B21
WRC6N 0016G-2	16	6	95	121	C6N---	R	B21
WRC3N 0750H-2	3/4"	3	100	112	C3N---	R	B22
WRC4N 0750H-2	3/4"	4	105	121,5	C4N---	R	B22
WRC5N 0750J-2	3/4"	5	110	131	C5N---	R	B22
WRC6N 0750J-2	3/4"	6	115	141	C6N---	R	B22
WRC8N 0750J-2	3/4"	8	120	165	C8N---	R	B22
WRC3N 0020H-2	20	3	100	112	C3N---	R	B22
WRC4N 0020H-2	20	4	105	121,5	C4N---	R	B22
WRC5N 0020J-2	20	5	110	131	C5N---	R	B22
WRC6N 0020J-2	20	6	115	141	C6N---	R	B22
WRC8N 0020J-2	20	8	120	165	C8N---	R	B22
WRC3N 0022J-2	22	3	110	122	C3N---	R	B23
WRC4N 0022J-2	22	4	115	131,5	C4N---	R	B23
WRC5N 0022J-2	22	5	120	141	C5N---	R	B23
WRC6N 0022K-2	22	6	125	151	C6N---	R	B23
WRC8N 0022K-2	22	8	130	175	C8N---	R	B23
WRC3N 0025J-2	25	3	110	122	C3N---	R	B24
WRC4N 0025J-2	25	4	115	131,5	C4N---	R	B24
WRC5N 0025J-2	25	5	120	141	C5N---	R	B24
WRC6N 0025K-2	25	6	125	151	C6N---	R	B24
WRC8N 0025K-2	25	8	130	175	C8N---	R	B24
WRC3N 1000J-2	1"	3	110	122	C3N---	R	B24
WRC4N 1000J-2	1"	4	115	131,5	C4N---	R	B24
WRC5N 1000J-2	1"	5	120	141	C5N---	R	B24
WRC6N 1000K-2	1"	6	125	151	C6N---	R	B24
WRC8N 1000K-2	1"	8	130	175	C8N---	R	B24

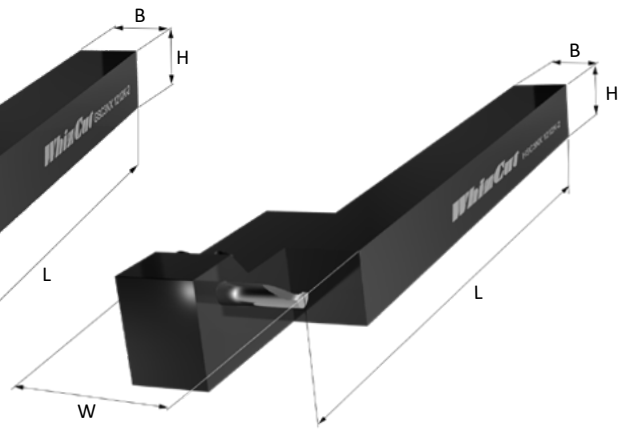
\* No coolant channel.



**FSC | Square shanks with centreline at top**



**GSC | Square shanks with centreline at centre**



**HSC | Square shanks with centreline at top**

FSC, GSC and HSC are machine specific toolholders, available upon request. Please contact your local distributor for a quote.



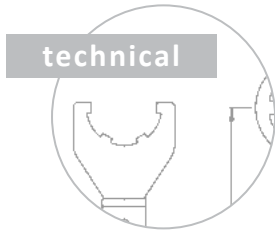
## SOLID CARBIDE THREAD MILLS

# WhizThrill

Thread mill without battling burrs! WhizCut has revitalized the world of thread milling: the innovation of WhizThrill creates a deburred thread in one single move – with a perfect result.





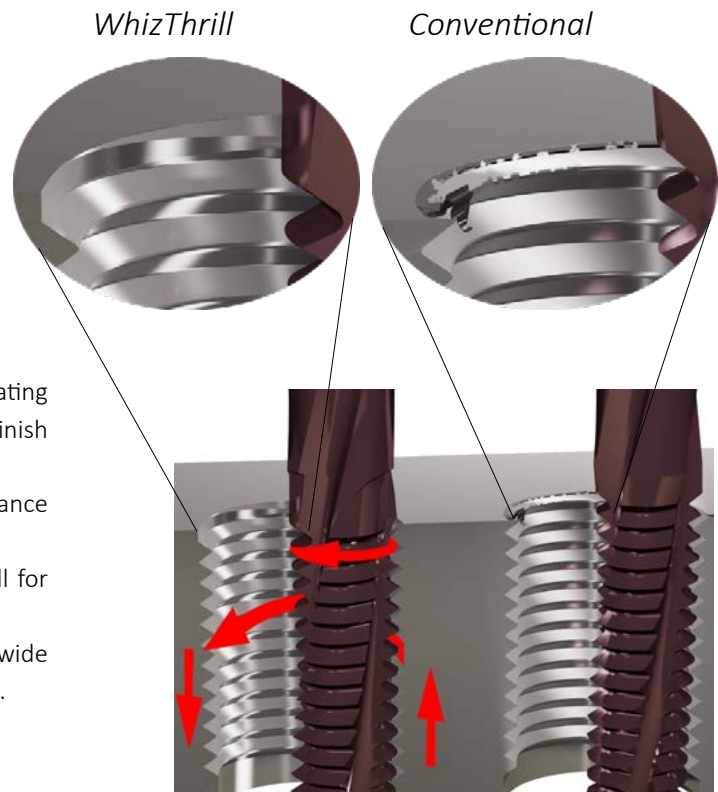


## WhizThrill - deburring thread mills

WhizThrill is an unmatched WhizCut-concept of solid carbide thread mills. The range is designed with various unique geometries, to meet your specific needs and machining challenges.

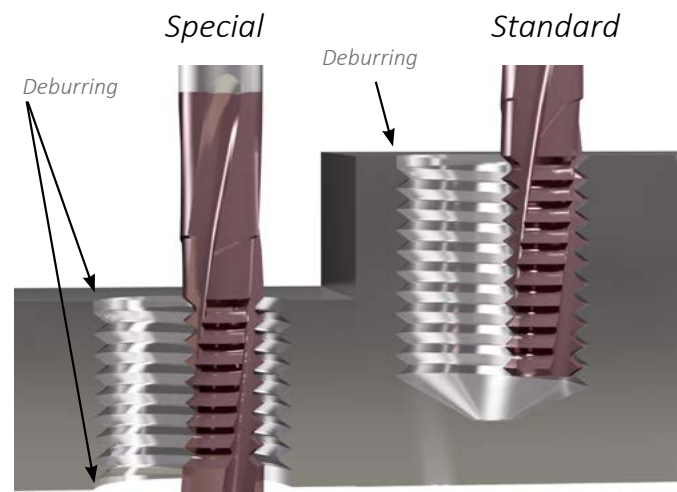
### Range benefits

- **Upgraded output:** the great carbide and coating combinations of WhizThrill gives better surface finish and longer tool life.
- **Time saving:** WhizThrill deburrs the thread entrance without having to make a chamfer.
- **Unique geometries:** find the perfect thread mill for your specific job.
- **Wide range:** from M1-M42, 0,4-4 mm pitch and wide range of thread types: NPT, NPTF and Whitworth.
- **Coolant through:** both straight and radial.



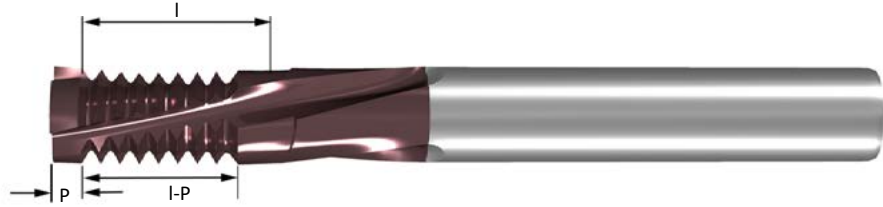
### Double deburr WhizThrill

Are burrs on both sides causing you a headache - when thread milling a through hole? WhizCut has designed double deburring thread mills, where both sides are deburred in the standard thread milling process. We only need to know one thing from you: the exact length of the thread and it will be produced as a special.



# WhizGuide

*select the ideal thread mill*



## Double deburr specs

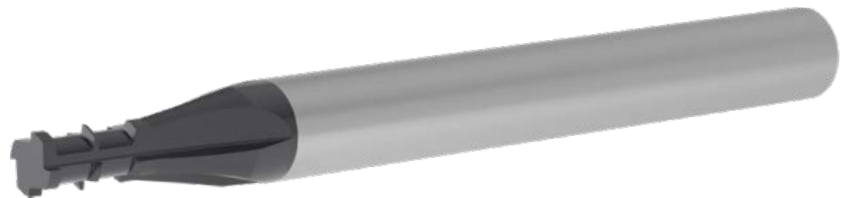
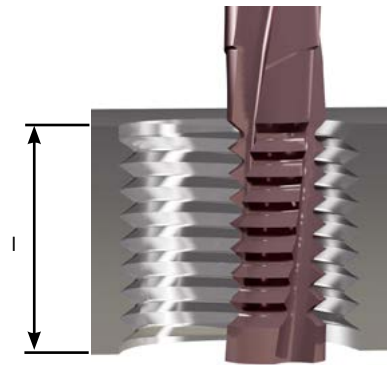
Information we need: diameter, pitch, thickness of the plate that will be thread milled.

## Specials

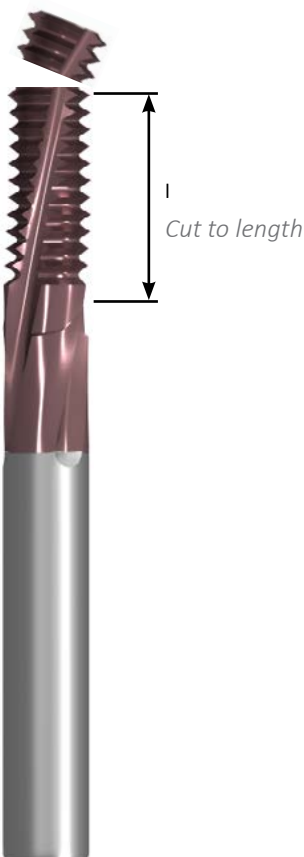
If you require a length/dimension apart the WhizCut standards - no problem! For a minor fee, we cut a standard thread mill to your desired length or grind a unique form, like a tapered thread mill for bone plates.

## Smooth operations with WhizThrill software

Program your machine together with us and thread milling will be easy. Our software aid is great when programming the machine and it also calculates the deburring automatically. (It is important to use the correct thread mill.) The WhizThrill aid is a user friendly excel based program that recommends the programming for your CNC-machine. Order it free of charge from the WhizCut website: whizcut.com.



*Special double deburring thread mill for bone plates.*



### WhizThrill

Internal Thread Milling in Machining Center

Fanuc

M-Metric

Steel, Low Carbon, < 0,25% C, < 400N/mm<sup>2</sup>

**D = thread diameter (mm)**  1

**P = pitch (mm)**  2

**L = thread length (mm)**  3

**S = safety distance (mm)**  4

MB1616C40 3 050 A9

**d = cutter diameter (mm)**  5

**l = length of cutting edge (mm)**  6

**z = number of flutes**  7

**V = cutting speed (m/min)**  8

**Fz = feed/tooth (mm/tooth)**  9

**Number of passes, radial (max 3)**  10

**Number of passes, axial**

**N = spindle speed (rpm)**

**FD = feed at thread diameter (mm/min)**

**Fd = feed in center of mill (mm/min)**

**T = time to mill the thread (seconds)**

Please read before use!

**CNC program for Fanuc**

```

S3143 M3
G00 G91 Z-38
G01 G41 X2 Y-2 F156
G03 X2 Y2 Z0.375 I0 J2
G03 X0 Y0 Z3 I-4 J0
G03 X-2 Y2 Z0.375 I-2 J0
G01 G40 X-2 Y-2
G00 Z34.25
                    
```

**WhizCut**

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2011-05-09

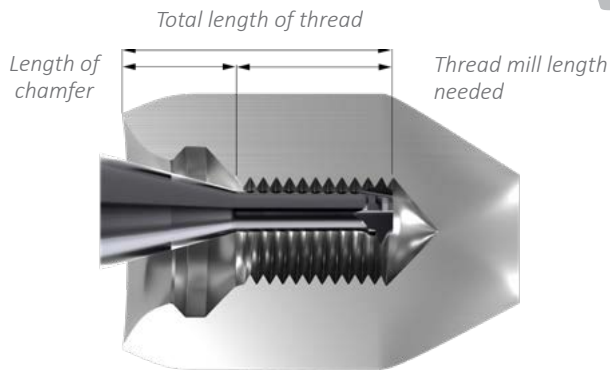
English



Micro thread mills  
WhizThrill

# WhizGuide

select the ideal micro thread



## Range benefits

- **Unique shank design:** with increased stability.
- **Coated carbide grade:** (B9), extra edge sharpness.
- **Down to M1:** full profile, with minimal cutting forces gives great surface finish and longer tool life.
- **15° exit angle to full diameter:** use short thread mill.
- Specials, single or double deburring micro thread mills, and more flutes available upon request.

### 1. Partial profile vs. full profile

- Partial profile is better for long threads, tougher materials, and unstable machining conditions.
- Full profile when tight tolerances of major and minor are required. The quality of the thread form is improved vs. partial profile.

### 2. Grades vs. material

- WhizThrill uncoated grade 9M, a sub-micron carbide ISO K20-K30. Performs well in soft materials.
- B9 is an AlCrN coating which gives an extra edge sharpness. Tool life will be 4-5 times longer than an uncoated thread mill cutting in titanium.

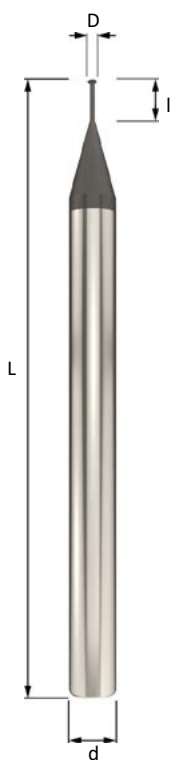
### 3. Determine length

- Always choose the shortest possible tool. Micro thread mills lose a lot of rigidity with increased length.
- WhizThrill has a 15° exit angle from the minor dimension (D) to shank (d). When possible, make the chamfer before thread milling so that you can calculate the length of the thread from the end of the chamfer.

## NS | Micro partial profile 60°

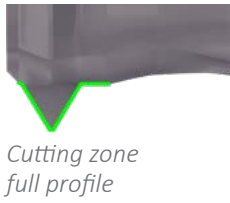


Cutting zone partial profile



STOCK													
M COARSE	M FINE	S&UNM	UNC	UNF	PART NUMBER	d	D	FLUTES	I	L	9M	B9	PRICE
M0,5	M0,5	0,5	#000-160		NS03003C1.3 P60	3	0,36	3	1,3	39	B	B	T2A
M0,6	M0,6	0,6			NS03004C1.5 P60	3	0,43	3	1,5	39	B	B	T2A
M0,8	M0,8	0,8	#000-120		NS03005C1.4 P60	3	0,57	3	1,4	39	B	B	T2
M0,8	M0,8	0,8	#000-120		NS03005C2.0 P60	3	0,57	3	2,0	39	B	B	T2
M0,8	M0,8	0,8	#000-120		NS03005C2.7 P60	3	0,57	3	2,7	39	B	B	T2
M1,0	M1,0	1,0			NS03007C1.1 P60	3	0,71	3	1,1	39	B	B	T2
M1,0	M1,0	1,0			NS03007C1.7 P60	3	0,71	3	1,7	39	B	B	T2
M1,0	M1,0	1,0			NS03007C2.1 P60	3	0,71	3	2,1	39	B	B	T2
M1,0	M1,0	1,0			NS03007C2.5 P60	3	0,71	3	2,5	39	B	B	T2
M1,0	M1,0	1,0			NS03007C3.2 P60	3	0,71	3	3,2	39	B	B	T2
M1,2	M1,2	1,2	#00-95<		NS03009C2.0 P60	3	0,91	3	2	39	B	B	T2
M1,2	M1,2	1,2	#00-95<		NS03009C2.9 P60	3	0,91	3	2,9	39	B	B	T2
M1,2	M1,2	1,2	#00-95<		NS03009C3.9 P60	3	0,91	3	3,9	39	B	B	T2
M1,4	M1,4	1,4			NS03010C2.2 P60	3	1,05	3	2,2	39	B	B	T2
M1,4	M1,4	1,4			NS03010C3.3 P60	3	1,05	3	3,3	39	B	B	T2
M1,4	M1,4	1,4			NS03010C4.4 P60	3	1,05	3	4,4	39	B	B	T2
M1,6	M1,4X0,2		#0-80		NS03011D2.5 P60	3	1,18	4	2,5	39	B	B	T2
M1,6	M1,4X0,2		#0-80		NS03011D3.6 P60	3	1,18	4	3,6	39	B	B	T2
M1,6	M1,4X0,2		#0-80		NS03011D5.1 P60	3	1,18	4	5,1	39	B	B	T2
M1,8	M1,6X0,2		#1		NS03013D4.8 P60	3	1,39	4	2,8	39	B	B	T2
M1,8	M1,6X0,2		#1		NS03013D4.2 P60	3	1,39	4	4,2	39	B	B	T2
M1,8	M1,6X0,2		#1		NS03013D5.6 P60	3	1,39	4	5,6	39	B	B	T2
M2,0	M1,8		#2		NS03015D3.2 P60	3	1,54	4	3,2	39	B	B	T1
M2,0	M1,8		#2		NS03015D3.8 P60	3	1,54	4	3,8	39	B	B	T1
M2,0	M1,8		#2		NS03015D4.6 P60	3	1,54	4	4,6	39	B	B	T1
M2,0	M1,8		#2		NS03015D5.4 P60	3	1,54	4	5,4	39	B	B	T1
M2,0	M1,8		#2		NS03015D6.2 P60	3	1,54	4	6,2	39	B	B	T1
M2,5	M2,2X0,25		#3		NS03019D4.3 P60	3	1,93	4	4,3	39	B	B	T1
M2,5	M2,2X0,25		#3		NS03019D6.2 P60	3	1,93	4	6,2	39	B	B	T1
	M2,5		#4		NS03021D4.9 P60	3	2,12	4	4,9	39	B	B	T1
	M2,5		#4		NS03021D7.1 P60	3	2,12	4	7,1	39	B	B	T1
M3	M3		#5		NS03023D5.4 P60	3	2,38	4	5,4	39	B	B	T1
M3	M3		#5		NS03023D7.8 P60	3	2,38	4	7,8	39	B	B	T1
M3,5	M3		#6		NS03026D6.1 P60	3	2,62	4	6,1	39	B	B	T1
M3,5	M3		#6		NS03026D8.7 P60	3	2,62	4	8,7	39	B	B	T1
M4	M3,5-M4		#8		NS0303D7.1 P60	3	3	4	7,1	39	B	B	T1
M4	M3,5-M4		#8		NS0303D10.2 P60	3	3	4	10,2	39	B	B	T1
M4,5	M4,5		#10		NS04036D8.3 P60	4	3,65	4	8,3	51	B	B	T2
M4,5	M4,5		#10		NS04036D12.0 P60	4	3,65	4	12	51	B	B	T2
M5-M6	M5-M6		#12		NS0404D10.0 P60	4	4	4	10	51	B	B	T2
M5-M6	M5-M6		#12		NS0404D14.5 P60	4	4	4	14,5	51	B	B	T2

### NT-ISO M | Micro full form



M COARSE	PITCH ISO	PART NUMBER	d	D	FLUTES	l	L	STOCK		PRICE
								9M	B9	
M1,0	0,25	NT03007C1,7-0.25ISO	3	0,72	3	1,7	39	B	B	T2B
M1,0	0,25	NT03007C2,5-0.25ISO	3	0,72	3	2,5	39	B	B	T2B
M1,0	0,25	NT03007C3,5-0.25ISO	3	0,72	3	3,5	39	B	B	T2B
M1,2	0,25	NT03009C2,0-0.25ISO	3	0,92	3	2	39	B	B	T2B
M1,2	0,25	NT03009C2,9-0.25ISO	3	0,92	3	2,9	39	B	B	T2B
M1,2	0,25	NT03009C3,9-0.25ISO	3	0,92	3	3,9	39	B	B	T2B
M1,4	0,3	NT03010C2,3-0.3ISO	3	1,06	3	2,3	39	B	B	T2A
M1,4	0,3	NT03010C3,3-0.3ISO	3	1,06	3	3,3	39	B	B	T2A
M1,4	0,3	NT03010C4,4-0.3ISO	3	1,06	3	4,4	39	B	B	T2A
M1,6	0,35	NT03011D2,5-0.35ISO	3	1,2	4	2,5	39	B	B	T2A
M1,6	0,35	NT03011D3,6-0.35ISO	3	1,2	4	3,6	39	B	B	T2A
M1,6	0,35	NT03011D5,1-0.35ISO	3	1,2	4	5,1	39	B	B	T2A
M1,8	0,35	NT03013D2,8-0.35ISO	3	1,4	4	2,8	39	B	B	T2A
M1,8	0,35	NT03013D4,2-0.35ISO	3	1,4	4	4,2	39	B	B	T2A
M1,8	0,35	NT03013D5,6-0.35ISO	3	1,4	4	5,6	39	B	B	T2A
M2,0	0,4	NT03015D3,2-0.4ISO	3	1,55	4	3,2	39	B	B	T2
M2,0	0,4	NT03015D4,7-0.4ISO	3	1,55	4	4,7	39	B	B	T2
M2,0	0,4	NT03015D6,2-0.4ISO	3	1,55	4	6,2	39	B	B	T2

### NT-ISO S, UNM | Micro full form

ISO S-1501	UNM	PITCH	PART NUMBER	d	D	FLUTES	l	L	STOCK		PRICE
									9M	B9	
S1,0	1,00 UNM	0,25	NT03007C2,5-S1.0UNM	3	0,73	3	2,5	39	B	B	T2B
S1,2	1,20 UNM	0,25	NT03009C2,9-S1.2UNM	3	0,93	3	2,9	39	B	B	T2B
S1,4	1,40 UNM	0,3	NT03010C3,3-S1.4UNM	3	1,08	3	3,3	39	B	B	T2A

### NT-UN | Micro full form

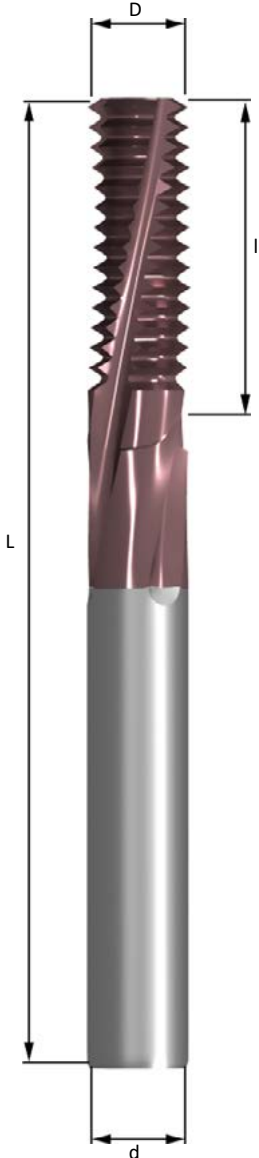
UNC UNF	#	TPI	PART NUMBER	d	D	FLUTES	l	L	STOCK		PRICE
									9M	B9	
UNF	NO. 0	80	NT03011C3,3-80UN	3	1,16	3	3,3	39	B	B	T2A
UNF	NO. 1	72	NT03014C4,4-72UN	3	1,45	3	4,4	39	B	B	T2A
UNC	NO. 1	64	NT03014C4,4-64UN	3	1,41	3	4,4	39	B	B	T2A
UNF	NO. 2	64	NT03017C5,2-64UN	3	1,74	3	5,2	39	B	B	T2
UNC	NO. 2	56	NT03016C5,2-56UN	3	1,68	3	5,2	39	B	B	T2

### NM | Two tooth metrical

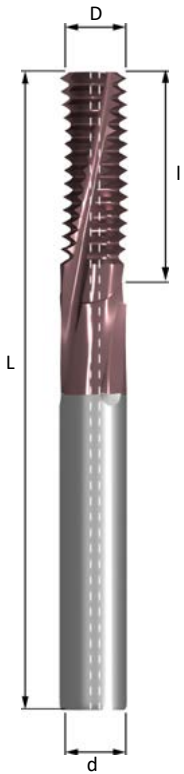
PITCH MM	M COARSE	PART NUMBER	d	D	FLUTES	l	L	PRICE
0,4	M2 (2XD)	NM04015D4 0.4ISO A9	4	1,5	4	4,4	50	TB4
0,4	M2 (3XD)	NM04015D6 0.4ISO A9	4	1,5	4	6,4	50	TB4
0,45	M2,2 (2XD)	NM04016D5 0.45ISO A9	4	1,65	4	5,0	50	TB4
0,45	M2,2 (3XD)	NM04016D7 0.45ISO A9	4	1,65	4	7,1	50	TB4
0,45	M2,5 (2XD)	NM04019D5 0.45ISO A9	4	1,9	4	5,5	50	TB4
0,45	M2,5 (3XD)	NM04019D8 0.45ISO A9	4	1,9	4	8	50	TB4
0,5	M3 (2XD)	NM04023E6 0.5ISO A9	4	2,3	5	6,5	50	TB4
0,5	M3 (3XD)	NM04023E9 0.5ISO A9	4	2,3	5	9,5	50	TB4
0,6	M3,5 (2XD)	NM04026E7 0.6ISO A9	4	2,6	5	7,6	50	TB4
0,6	M3,5 (3XD)	NM04026E11 0.6ISO A9	4	2,6	5	11,1	50	TB4
0,7	M4 (2XD)	NM0403E9 0.7ISO A9	4	3	5	9	50	TB4
0,7	M4 (3XD)	NM0403E13 0.7ISO A9	4	3	5	13	50	TB4
0,75	M4,5 (2XD)	NM04034E10 0.75ISO A9	4	3,4	5	10	50	TB4
0,75	M4,5 (3XD)	NM04034E14 0.75ISO A9	4	3,4	5	14,3	50	TB4
0,8	M5 (2XD)	NM04038E11 0.8ISO A9	4	3,8	5	11	50	TB4
0,8	M5 (3XD)	NM04038E16 0.8ISO A9	4	3,8	5	16	50	TB4
1,0	M6 (2XD)	NM06045E13 1.0ISO A9	6	4,5	5	13	63	TB5
1,0	M6 (3XD)	NM06045E19 1.0ISO A9	6	4,5	5	19	76	TB6
1,25	M8 (2XD)	NM0606E17 1.25ISO A9	6	6	5	17,3	63	TB5
1,25	M8 (3XD)	NM0606E25 1.25ISO A9	6	6	5	25,3	76	TB6
1,5	M10 (2XD)	NM08075E22 1.5ISO A9	8	7,5	5	22	63	TB8
1,5	M10 (3XD)	NM08075E32 1.5ISO A9	8	7,5	5	32	76	TB9
1,75	M12 (2XD)	NM1009E26 1.75ISO A9	10	9	5	26	76	TB12
1,75	M12 (3XD)	NM1009E38 1.75ISO A9	10	9	5	38	100	TB13
2,0	M14 (2XD)	NM1010E30 2.0ISO A9	10	10	5	30	76	TB12
2,0	M14 (3XD)	NM1010E44 2.0ISO A9	10	10	5	44	100	TB13
2,0	M16 (2XD)	NM1212F34 2.0ISO A9	12	12	6	34	83	TB14
2,0	M16 (3XD)	NM1212F50 2.0ISO A9	12	12	6	50	100	TB16

## NB-ISO | Metric deburring thread mills

PITCH MM	M COARSE	M FINE	PART NUMBER	d	D	FLUTES	l	L	PRICE
0,4	M2 (1,5XD)		NB04015C3 0.4ISO A9	4	1,5	3	3,4	50	T5
0,4	M2 (2XD)		NB04015C4 0.4ISO A9	4	1,5	3	4,6	50	T6
0,45	M2,2 (1,5XD)		NB04016C3 0.45ISO A9	4	1,6	3	3,82	50	T5
0,45	M2,2 (2XD)		NB04016C5 0.45ISO A9	4	1,6	3	5,17	50	T6
0,45	M2,5 (1,5XD)		NB04019C4 0.45ISO A9	4	1,9	3	4,27	50	T5
0,45	M2,5 (2XD)		NB04019C5 0.45ISO A9	4	1,9	3	5,62	50	T6
0,5	M3 (1,5XD)	≥ M4	NB04023C5 0.5ISO A9	4	2,3	3	5,25	50	T5
0,5	M3 (2XD)	≥ M4	NB04023C6 0.5ISO A9	4	2,3	3	6,75	50	T6
0,5	M3 (2,5XD)	≥ M4	NB04023C8 0.5ISO A9	4	2,3	3	8,25	50	T8
0,5	M3 (1,5XD)	≥ M4	NB06023C5 0.5ISO A9	6	2,3	3	5,25	63	T7
0,5	M3 (2XD)	≥ M4	NB06023C6 0.5ISO A9	6	2,3	3	6,75	63	T9
0,5	M3 (2,5XD)	≥ M4	NB06023C8 0.5ISO A9	6	2,3	3	8,25	63	T10
0,5		≥ M5	NB04038C10 0.5ISO A9	4	3,8	3	10,75	50	T6
0,5		≥ M5	NB06038C10 0.5ISO A9	6	3,8	3	10,75	63	T9
0,6	M3,5 (1,5XD)		NB04026C6 0.6ISO A9	4	2,6	3	6,3	50	T5
0,6	M3,5 (2XD)		NB04026C8 0.6ISO A9	4	2,6	3	8,1	50	T6
0,7	M4 (1,5XD)		NB0403C7 0.7ISO A9	4	3	3	7,35	50	T5
0,7	M4 (2XD)		NB0403C8 0.7ISO A9	4	3	3	8,75	50	T6
0,7	M4 (2,5XD)		NB0403C10 0.7ISO A9	4	3	3	10,85	50	T8
0,7	M4 (1,5XD)		NB0603C7 0.7ISO A9	6	3	3	7,35	63	T7
0,7	M4 (2XD)		NB0603C8 0.7ISO A9	6	3	3	8,75	63	T9
0,7	M4 (2,5XD)		NB0603C10 0.7ISO A9	6	3	3	10,85	63	T10
0,75	M4,5 (1,5XD)		NB04034C7 0.75ISO A9	4	3,4	3	7,87	50	T5
0,75	M4,5 (2XD)		NB04034C10 0.75ISO A9	4	3,4	3	10,12	50	T6
0,75		≥ M6	NB06045C10 0.75ISO A9	6	4,5	3	10,87	63	T7
0,75		≥ M6	NB06045C16 0.75ISO A9	6	4,5	3	16,87	63	T9
0,8	M5 (1,5XD)		NB04038C8 0.8ISO A9	4	3,8	3	8,4	50	T5
0,8	M5 (2XD)		NB04038C10 0.8ISO A9	4	3,8	3	10,8	50	T6
0,8	M5 (2,5XD)		NB04038C13 0.8ISO A9	4	3,8	3	13,2	50	T8
0,8	M5 (1,5XD)		NB06038C8 0.8ISO A9	6	3,8	3	8,4	63	T7
0,8	M5 (2XD)		NB06038C10 0.8ISO A9	6	3,8	3	10,8	63	T9
0,8	M5 (2,5XD)		NB06038C13 0.8ISO A9	6	3,8	3	13,2	63	T10
1	M6 (1,5XD)	≥ M8	NB06045C10 1.0ISO A9	6	4,5	3	10,5	63	T7
1	M6 (2XD)	≥ M8	NB06045C13 1.0ISO A9	6	4,5	3	13,5	63	T9
1	M6 (2,5XD)	≥ M8	NB06045C16 1.0ISO A9	6	4,5	3	16,5	63	T10
1	M6 (3XD)	≥ M8	NB06045C19 1.0ISO A9	6	4,5	3	19,5	63	T12
1		≥ M8	NB0606C10 1.0ISO A9	6	6	3	10,5	63	T7
1		≥ M8	NB0606C13 1.0ISO A9	6	6	3	13,5	63	T8
1		≥ M10	NB0808D10 1.0ISO A9	8	8	4	10,5	63	T10
1		≥ M10	NB0808D13 1.0ISO A9	8	8	4	13,5	63	T11
1		≥ M10	NB0808D17 1.0ISO A9	8	8	4	17,5	63	T12
1		≥ M14	NB1010E14 1.0ISO A9	10	10	5	14,5	76	T16
1		≥ M14	NB1010E19 1.0ISO A9	10	10	5	19,5	76	T17
1		≥ M14	NB1212F15 1.0ISO A9	12	12	6	15,5	83	T18
1		≥ M14	NB1212F21 1.0ISO A9	12	12	6	21,5	83	T19
1,25	M8 (1,5XD)	≥ M10	NB0606C14 1.25ISO A9	6	6	3	14,37	63	T7
1,25	M8 (2XD)	≥ M10	NB0606C18 1.25ISO A9	6	6	3	18,12	63	T9
1,25	M8 (2,5XD)	≥ M10	NB0606C21 1.25ISO A9	6	6	3	21,87	63	T10
1,25	M8 (3XD)	≥ M10	NB0606C25 1.25ISO A9	6	6	3	25,62	63	T12
1,5	M10 (1,5XD)	≥ M12	NB08075C17 1.5ISO A9	8	7,5	3	17,25	63	T11
1,5	M10 (2XD)	≥ M12	NB08075C21 1.5ISO A9	8	7,5	3	21,75	63	T13
1,5	M10 (2,5XD)	≥ M12	NB08075C27 1.5ISO A9	8	7,5	3	27,75	63	T14
1,5	M10 (3XD)	≥ M12	NB08075C32 1.5ISO A9	8	7,5	3	32,25	63	T16
1,5		≥ M14	NB1010D17 1.5ISO A9	10	10	4	17,25	76	T15
1,5		≥ M14	NB1010D23 1.5ISO A9	10	10	4	23,25	76	T15
1,5		≥ M16	NB1212D15 1.5ISO A9	12	12	4	15,75	83	T17
1,5		≥ M16	NB1212D21 1.5ISO A9	12	12	4	21,75	83	T18
1,5		≥ M16	NB1212D29 1.5ISO A9	12	12	4	29,25	83	T19
1,5		≥ M20	NB1616F18 1.5ISO A9	16	16	6	18,75	100	T21
1,5		≥ M20	NB1616F26 1.5ISO A9	16	16	6	26,25	100	T22
1,5		≥ M20	NB1616F35 1.5ISO A9	16	16	6	35,25	100	T23
1,75	M12 (1,5XD)		NB0808C20 1.75ISO A9	8	8	3	20,12	76	T11
1,75	M12 (2XD)		NB0808C27 1.75ISO A9	8	8	3	27,12	76	T13
1,75	M12 (1,5XD)		NB1009C20 1.75ISO A9	10	9	3	20,12	76	T15
1,75	M12 (2XD)		NB1009C27 1.75ISO A9	10	9	3	27,12	76	T17
1,75	M12 (2,5XD)		NB1009C32 1.75ISO A9	10	9	3	32,37	100	T18
1,75	M12 (3XD)		NB1009C37 1.75ISO A9	10	9	3	37,62	100	T19
2	M14 (1,5XD)	≥ M18	NB1010C23 2.0ISO A9	10	10	3	23	76	T15
2	M14 (2XD)	≥ M18	NB1010C31 2.0ISO A9	10	10	3	31	100	T17
2	M14 (2,5XD)	≥ M18	NB1010C37 2.0ISO A9	10	10	3	37	100	T18
2	M16 (1,5XD)	≥ M18	NB1212D27 2.0ISO A9	12	12	4	27	83	T18
2	M16 (2XD)	≥ M18	NB1212D35 2.0ISO A9	12	12	4	35	100	T19
2	M16 (2,5XD)	≥ M18	NB1212D43 2.0ISO A9	12	12	4	43	100	T20
2		≥ M18	NB1212C51 2.0ISO A9	12	12	3	51	100	T21
2		≥ M20	NB1616E29 2.0ISO A9	16	16	5	29	100	T22
2		≥ M20	NB1616E39 2.0ISO A9	16	16	5	39	100	T23
2		≥ M24	NB2020F43 2.0ISO A9	20	20	6	43	100	T26
2		≥ M30	NB2525F57 2.0ISO A9	25	25	6	57	130	T29
2,5	M18 (1,5XD)		NB1212C31 2.5ISO A9	12	12	3	31,25	100	T19
2,5	M18 (2XD)		NB1212C38 2.5ISO A9	12	12	3	38,75	100	T20
2,5	M18 (2,5XD)		NB1212C48 2.5ISO A9	12	12	3	48,75	100	T21
2,5	M20 (1,5XD)		NB1414D33 2.5ISO A9	14	14	4	33,75	89	T20
2,5	M20 (2XD)		NB1414D43 2.5ISO A9	14	14	4	43,75	100	T21
2,5	M20 (2,5XD)		NB1615D53 2.5ISO A9	16	15	4	53,75	120	T23
2,5	M20 (3XD)		NB1615C63 2.5ISO A9	16	15	3	63,75	120	T24
3	M24 (1,5XD)	≥ M30	NB1616C40 3.0ISO A9	16	16	3	40,5	100	T22
3	M24 (2XD)	≥ M30	NB1616C52 3.0ISO A9	16	16	3	52,5	120	T23
3	M24 (2,5XD)	≥ M30	NB1818C64 3.0ISO A9	18	18	3	64,5	130	T25
3		≥ M30	NB2020D46 3.0ISO A9	20	20	4	46,5	120	T25
3		≥ M33	NB2525D61 3.0ISO A9	25	25	4	61,5	130	T29
3,5	M30 (1,5XD)		NB2020C50 3.5ISO A9	20	20	3	50,75	120	T26
3,5	M30 (2XD)		NB2020C64 3.5ISO A9	20	20	3	64,75	150	T27
3,5	M30 (2,5XD)		NB2020C78 3.5ISO A9	20	20	3	78,75	150	T28
4	M36 (1,5XD)	≥ M42	NB2525C58 4.0ISO A9	25	25	3	58	130	T29
4	M36 (2XD)	≥ M42	NB2525C78 4.0ISO A9	25	25	3	78	150	T30

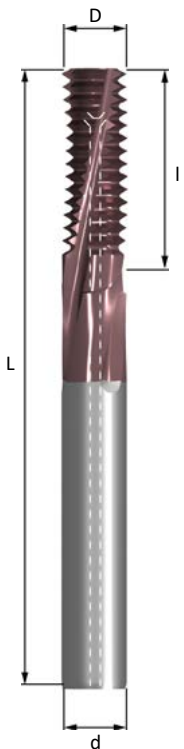


### NBK-ISO | Metric deburring thread mills, axial coolant



PITCH MM	M COARSE	M FINE	PART NUMBER	d	D	FLUTES	I	L	PRICE
0,8	M5 (1,5XD)		NBK04038C8 0.8ISO A9	4	3,8	3	8,4	50	T6
0,8	M5 (2XD)		NBK04038C10 0.8ISO A9	4	3,8	3	10,8	50	T8
0,8	M5 (2,5XD)		NBK04038C13 0.8ISO A9	4	3,8	3	13,2	50	T9
1	M6 (1,5XD)		NBK06045C10 1.0ISO A9	6	4,5	3	10,5	63	T9
1	M6 (2XD)		NBK06045C13 1.0ISO A9	6	4,5	3	13,5	63	T10
1	M6 (2,5XD)		NBK06045C16 1.0ISO A9	6	4,5	3	16,5	63	T12
1		≥ M10	NBK0808D17 1.0ISO A9	8	8	4	17,5	76	T13
1,25	M8 (1,5XD)	≥ M10	NBK0606C14 1.25ISO A9	6	6	3	14,37	63	T9
1,25	M8 (2XD)	≥ M10	NBK0606C18 1.25ISO A9	6	6	3	18,12	63	T10
1,25	M8 (2,5XD)	≥ M10	NBK0606C21 1.25ISO A9	6	6	3	21,87	63	T12
1,5	M10 (1,5XD)	≥ M12	NBK08075C17 1.5ISO A9	8	7,5	3	17,25	76	T13
1,5	M10 (2XD)	≥ M12	NBK08075C21 1.5ISO A9	8	7,5	3	21,75	76	T14
1,5	M10 (2,5XD)	≥ M12	NBK08075C27 1.5ISO A9	8	7,5	3	27,75	76	T16
1,5	M10 (3XD)	≥ M12	NBK08075C32 1.5ISO A9	8	7,5	3	32,25	76	T17
1,5		≥ M16	NBK1212E29 1.5ISO A9	12	12	5	29,25	100	T18
1,5		≥ M20	NBK1616F35 1.5ISO A9	16	16	6	35,25	120	T22
1,75	M12 (1,5XD)		NBK0808C20 1.75ISO A9	8	8	3	20,12	76	T13
1,75	M12 (2XD)		NBK0808C27 1.75ISO A9	8	8	3	27,12	76	T14
1,75	M12 (1,5XD)		NBK1009C20 1.75ISO A9	10	9	3	20,12	100	T17
1,75	M12 (2XD)		NBK1009C27 1.75ISO A9	10	9	3	27,12	100	T18
1,75	M12 (2,5XD)		NBK1009C32 1.75ISO A9	10	9	3	32,37	100	T19
1,75	M12 (3XD)		NBK1009C37 1.75ISO A9	10	9	3	37,62	100	T20
2	M14 (1,5XD)	≥ M18	NBK1010C23 2.0ISO A9	10	10	3	23	100	T17
2	M14 (2XD)	≥ M18	NBK1010C31 2.0ISO A9	10	10	3	31	100	T18
2	M16 (1,5XD)	≥ M18	NBK1212D27 2.0ISO A9	12	12	4	27	100	T19
2	M16 (2XD)	≥ M18	NBK1212D35 2.0ISO A9	12	12	4	35	100	T20
2	M16 (2,5XD)	≥ M18	NBK1212D43 2.0ISO A9	12	12	4	43	100	T21
2	M16 (3XD)	≥ M18	NBK1212C51 2.0ISO A9	12	12	3	51	100	T22
2		≥ M20	NBK1616E39 2.0ISO A9	16	16	5	39	120	T23
2,5	M20 (1,5XD)		NBK1414D33 2.5ISO A9	14	14	4	33,75	100	T21
2,5	M20 (2XD)		NBK1414D43 2.5ISO A9	14	14	4	43,75	100	T23
2,5	M20 (2,5XD)		NBK1615D53 2.5ISO A9	16	15	4	53,75	120	T24
3	M24 (1,5XD)	≥ M30	NBK1616C40 3.0ISO A9	16	16	3	40,5	120	T23
3	M24 (2XD)	≥ M30	NBK1616C52 3.0ISO A9	16	16	3	52,5	120	T24
3,5	M30 (1,5XD)		NBK2020C50 3.5ISO A9	20	20	3	50,75	150	T27
3,5	M30 (2XD)		NBK2020C64 3.5ISO A9	20	20	3	64,75	150	T28

### NBT-ISO | Metric deburring thread mills, radial coolant



PITCH MM	M COARSE	M FINE	PART NUMBER	d	D	FLUTES	I	L	PRICE
1		≥ M10	NBT0808D17 1.0ISO A9	8	8	4	17,5	76	T14
1,25	M8 (2XD)	≥ M10	NBT0606C18 1.25ISO A9	6	6	3	18,12	76	T12
1,5	M10 (2XD)	≥ M12	NBT08075C21 1.5ISO A9	8	7,5	3	21,75	76	T16
1,5		≥ M16	NBT1212D29 1.5ISO A9	12	12	4	29,25	100	T20
1,75	M12 (2XD)		NBT0808C27 1.75ISO A9	8	8	3	27,12	76	T16
1,75	M12 (2XD)		NBT1009C27 1.75ISO A9	10	9	3	27,12	100	T19
2	M14 (2XD)	≥ M18	NBT1010C31 2.0ISO A9	10	10	3	31	100	T19
2	M16 (2XD)	≥ M18	NBT1212D35 2.0ISO A9	12	12	4	35	100	T21
2		≥ M20	NBT1616E39 2.0ISO A9	16	16	5	39	100	T24

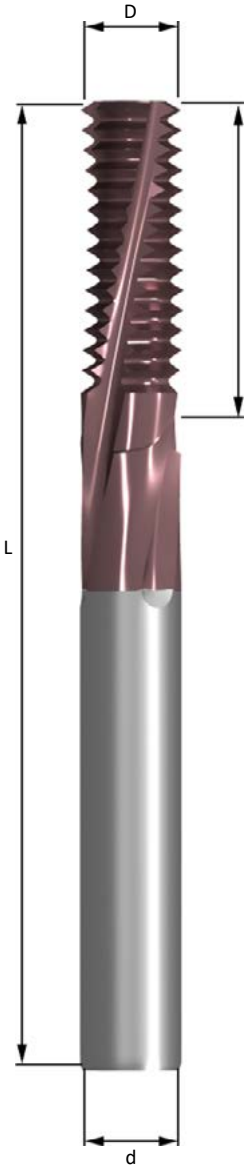
### XBT | Whitworth pipe thread, radial coolant, for internal and external thread

TPI	NORM	PART NUMBER	d	D	FLUTES	I	L	PRICE
28	G 1/8	XBT0606C10 28W A9	6	6	3	10,43	76	T10
19	G 1/4 - 3/8	XBT1010D22 19W A9	10	10	4	22,06	100	T18
14	G 1/2 - 7/8	XBT1212D28 14W A9	12	12	4	28,12	100	T21
11	G 1 - 3	XBT1616D40 11W A9	16	16	4	40,41	100	T24

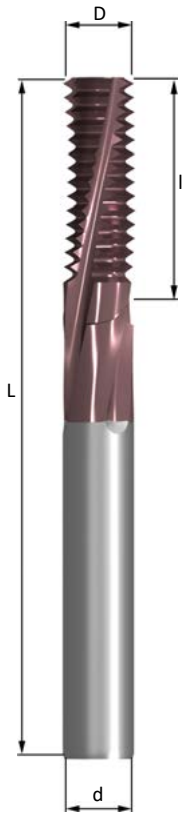
More Whitworth thread mills on page 71.

### UN | Deburring thread mills unified

TPI	UNC	UNF	PART NUMBER		d	D	FLUTES	I	L	PRICE
64		NO.2 (1,5XD)	NB04017C3	64UN A9	4	1,7	3	3,77	50	T6
64		NO.2 (2XD)	NB04017C5	64UN A9	4	1,7	3	4,96	50	T6
56	NO.2 (1,5XD)		NB04016C3	56UN A9	4	1,6	3	3,86	50	T5
56	NO.2 (2XD)		NB04016C5	56UN A9	4	1,6	3	5,22	50	T6
56		NO.3 (1,5XD)	NB04019C4	56UN A9	4	1,9	3	4,31	50	T6
56		NO.3 (2XD)	NB04019C5	56UN A9	4	1,9	3	5,67	50	T6
48	NO.3 (1,5XD)		NB04019C4	48UN A9	4	1,9	3	4,5	50	T5
48	NO.3 (2XD)		NB04019C5	48UN A9	4	1,9	3	5,56	50	T6
48		NO.4 (1,5XD)	NB04021C5	48UN A9	4	2,1	3	5,03	50	T6
48		NO.4 (2XD)	NB04021C6	48UN A9	4	2,1	3	6,61	50	T6
44		NO.5 (1,5XD)	NB04024C5	44UN A9	4	2,4	3	5,48	50	T6
44		NO.5 (2XD)	NB04024C7	44UN A9	4	2,4	3	7,22	50	T6
40	NO.4 (1,5XD)		NB04021C5	40UN A9	4	2,1	3	5,4	50	T5
40	NO.4 (2XD)		NB04021C6	40UN A9	4	2,1	3	6,67	50	T6
40	NO.5 (2XD)		NB04023C5	40UN A9	4	2,3	3	5,4	50	T5
40	NO.5 (2,5XD)		NB04023C7	40UN A9	4	2,3	3	7,3	50	T6
40			NB04023C8	40UN A9	4	2,3	3	8,57	50	T6
40		NO.6 (1,5XD)	NB04026C6	40UN A9	4	2,6	3	6,03	50	T6
40		NO.6 (2XD)	NB04026C8	40UN A9	4	2,6	3	7,94	50	T6
36		NO.8 (1,5XD)	NB04031C7	36UN A9	4	3,1	3	7,41	50	T6
36	NO.6 (1,5XD)	NO.8 (2XD)	NB04031C9	36UN A9	4	3,1	3	9,53	50	T6
32	NO.6 (2XD)		NB04025C6	32UN A9	4	2,5	3	6,75	50	T5
32	NO.6 (2,5XD)		NB04025C8	32UN A9	4	2,5	3	8,33	50	T6
32	NO.8 (1,5XD)		NB04025C10	32UN A9	4	2,5	3	9,92	50	T6
32	NO.8 (2XD)		NB0403C7	32UN A9	4	3	3	7,54	50	T5
32	NO.8 (2,5XD)		NB0403C9	32UN A9	4	3	3	9,13	50	T6
32			NB0403C11	32UN A9	4	3	3	11,51	50	T6
32		NO.10 (1,5XD)	NB04036C8	32UN A9	4	3,6	3	8,33	50	T6
32		NO.10 (2XD)	NB04036C10	32UN A9	4	3,6	3	10,72	50	T6
32			NB0606D13	32UN A9	6	6	4	13,1	63	T6
28		NO.12 (1,5XD)	NB0404C9	28UN A9	4	4	3	9,52	50	T6
28		NO.12 (2XD)	NB0404C12	28UN A9	4	4	3	12,25	50	T6
28		1/4 (1,5XD)	NB0605C10	28UN A9	6	5	3	10,43	63	T9
28		1/4 (2XD)	NB0605C14	28UN A9	6	5	3	14,06	63	T10
28			NB0808D17	28UN A9	8	8	4	17,69	63	T11
24	NO.10 (1,5XD)		NB04036C9	24UN A9	4	3,6	3	9	50	T5
24	NO.10 (2XD)		NB04036C11	24UN A9	4	3,6	3	11,11	50	T6
24	NO.10 (2,5XD)		NB04036C13	24UN A9	4	3,6	3	13,23	50	T6
24	NO.12 (1,5XD)		NB0404C10	24UN A9	4	4	3	10,05	50	T5
24	NO.12 (2XD)		NB0404C12	24UN A9	4	4	3	12,17	50	T6
24	NO.12 (2,5XD)		NB0404C15	24UN A9	4	4	3	15,35	50	T6
24		5/16 (1,5XD)	NB0606C13	24UN A9	6	6	3	13,23	63	T9
24		5/16 (2XD)	NB0606C17	24UN A9	6	6	3	17,46	63	T10
24		3/8 (1,5XD)	NB08076C15	24UN A9	8	7,6	3	15,35	63	T13
24		3/8 (2XD)	NB08076C20	24UN A9	8	7,6	3	20,64	76	T14
20	1/4 (1,5XD)		NB06045C10	20UN A9	6	4,5	3	10,8	63	T7
20	1/4 (2XD)		NB06045C14	20UN A9	6	4,5	3	14,6	63	T9
20	1/4 (2,5XD)		NB06045C17	20UN A9	6	4,5	3	17,15	63	T10
20		7/16 (1,5XD)	NB0808C18	20UN A9	8	8	3	18,41	63	T13
20		7/16 (2XD)	NB0808C23	20UN A9	8	8	3	23,5	76	T14
20		1/2 (1,5XD)	NB1010D21	20UN A9	10	10	4	20,96	76	T17
20		1/2 (2XD)	NB1010D27	20UN A9	10	10	4	27,31	76	T18
20			NB1212E28	20UN A9	12	12	5	28,57	83	T19
18	5/16 (1,5XD)		NB06058C13	18UN A9	6	5,8	3	13,41	63	T7
18	5/16 (2XD)		NB06058C17	18UN A9	6	5,8	3	17,64	63	T9
18	5/16 (2,5XD)		NB06058C21	18UN A9	6	5,8	3	21,87	63	T10
18		9/16 (1,5XD)	NB1010D23	18UN A9	10	10	4	23,28	76	T17
18		9/16 (2XD)	NB1010D30	18UN A9	10	10	4	30,34	100	T18
18		5/8 (1,5XD)	NB1212D26	18UN A9	12	12	4	26,11	83	T19
18		5/8 (2XD)	NB1212D33	18UN A9	12	12	4	33,16	100	T20
16	3/8 (1,5XD)		NB0606C16	16UN A9	6	6	3	16,67	63	T7
16	3/8 (2XD)		NB0606C21	16UN A9	6	6	3	21,43	63	T9
16	3/8 (2,5XD)		NB0807C26	16UN A9	8	7	3	26,19	76	T14
16		3/4 (1,5XD)	NB1212D31	16UN A9	12	12	4	30,96	100	T19
16		3/4 (2XD)	NB1212D40	16UN A9	12	12	4	40,48	100	T19
16			NB1616E35	16UN A9	16	16	5	35,72	100	T23
14	7/16 (1,5XD)		NB0808C19	14UN A9	8	8	3	19,05	63	T11
14	7/16 (2XD)		NB0808C24	14UN A9	8	8	3	24,49	76	T13
14	7/16 (2,5XD)		NB0808C30	14UN A9	8	8	3	29,94	76	T14
14		7/8 (1,5XD)	NB1616E35	14UN A9	16	16	5	35,38	100	T23
14		7/8 (2XD)	NB1616E46	14UN A9	16	16	5	46,26	120	T24
13	1/2 (1,5XD)		NB0808C22	13UN A9	8	8	3	22,47	76	T11
13	1/2 (2XD)		NB0808C28	13UN A9	8	8	3	28,33	76	T13
13	1/2 (2,5XD)		NB1009C34	13UN A9	10	9,3	3	34,19	100	T18
12	9/16 (1,5XD)		NB1010C24	12UN A9	10	10	3	24,34	76	T15
12	9/16 (2XD)		NB1010C30	12UN A9	10	10	3	30,69	100	T17
12			NB1616E43	12UN A9	16	16	5	43,39	100	T23
11	5/8 (1,5XD)		NB1010C26	11UN A9	10	10	3	26,55	76	T15
11	5/8 (2XD)		NB1010C35	11UN A9	10	10	3	35,79	100	T17
11	5/8 (2,5XD)		NB12117C42	11UN A9	12	11,7	3	42,72	100	T19
10	3/4 (1,5XD)		NB1212C31	10UN A9	12	12	3	31,75	100	T18
10	3/4 (2XD)		NB1212C41	10UN A9	12	12	3	41,91	100	T19
9	7/8 (1,5XD)		NB1616C38	9UN A9	16	16	3	38,1	100	T22
9	7/8 (2XD)		NB1616C49	9UN A9	16	16	3	49,39	120	T23
8	1 (1,5XD)		NB1616C42	8UN A9	16	16	3	42,86	100	T22
8	1 (2XD)		NB1616C55	8UN A9	16	16	3	55,56	120	T23
8			NB2020D49	8UN A9	20	20	4	49,21	120	T26
7	11/8 - 11/4 (1,5XD)		NB2020C52	7UN A9	20	20	3	52,61	120	T26
6	13/8 - 11/2 (1,5XD)		NB2525C61	6UN A9	25	25	3	61,38	130	T29







### XB | Whitworth pipe thread, for internal and external thread

TPI	NORM	PART NUMBER	d	D	FLUTES	I	L	PRICE
28	G 1/8	XB0606C10 28W A9	6	6	3	10,43	63	T7
28	G 1/8	XB0808D14 28W A9	8	8	4	14,06	63	T11
19	G 1/4 - 3/8	XB0808C15 19W A9	8	8	3	15,37	63	T11
19	G 1/4 - 3/8	XB1010D22 19W A9	10	10	4	22,06	76	T15
14	G 1/2 - 7/8	XB1212D20 14W A9	12	12	4	20,86	83	T18
14	G 1/2 - 7/8	XB1212D28 14W A9	12	12	4	28,12	83	T19
14	G 1/2 - 7/8	XB1616E28 14W A9	16	16	5	28,12	89	T22
11	G 1 - 1 1/2	XB1212C26 11W A9	12	12	3	26,55	83	T18
11	G 1 - 3	XB1616D40 11W A9	16	16	4	40,41	100	T22
11	G ≥ 1	XB2020E49 11W A9	20	20	5	49,65	120	T25

Available with internal coolant, see page: 69.

### XB | BSPT pipe thread, for internal and external thread

TPI	NORM	PART NUMBER	d	D	FLUTES	I	L	PRICE
28	RC 1/8	XB0606C10 28BSPT A9	6	6	3	10,43	63	T9
28	RC 1/8	XB0808D14 28BSPT A9	8	8	4	14,06	63	T11
19	RC 1/4 - 3/8	XB0808C15 19BSPT A9	8	8	3	15,37	63	T13
19	RC 1/4 - 3/8	XB1010D22 19BSPT A9	10	10	4	22,06	76	T15
14	RC 1/2 - 7/8	XB1212D20 14BSPT A9	12	12	4	20,86	83	T19
11	RC 1 - 2	XB1616D31 11BSPT A9	16	16	4	31,17	89	T23

### XB | Steel conduit thread, for internal and external thread

TPI	NORM	PART NUMBER	d	D	FLUTES	I	L	PRICE
20	PG 7	XB0808C21 20PG A9	8	8	3	20,96	63	T13
18	PG 9 - 16	XB1010C27 18PG A9	10	10	3	27,52	76	T17
16	PG 21 - 48	XB1212D31 16PG A9	12	12	4	30,96	83	T19

### XB | NPT, for internal and external thread

TPI	NORM	PART NUMBER	d	D	FLUTES	I	L	PRICE
27	1/16 - 1/8	XB0606C10 27NPT A9	6	6	3	10,82	63	T9
18	1/4 - 3/8	XB0808C16 18NPT A9	8	8	3	16,23	63	T13
18	1/4 - 3/8	XB1010D16 18NPT A9	10	10	4	16,23	63	T15
14	1/2 - 3/4	XB1212D22 14NPT A9	12	12	4	22,68	83	T19
14	3/4	XB1616E22 14NPT A9	16	16	5	22,86	89	T23
11,5	1-2	XB1616D29 11.5NPT A9	16	16	4	29,82	89	T23
8	≥ 2 1/2	XB2020D42 8NPT A9	20	20	4	42,86	100	T26

### XB | NPTF, for internal and external thread

TPI	NORM	PART NUMBER	d	D	FLUTES	I	L	PRICE
27	1/16 - 1/8	XB0606C10 27NPTF A9	6	6	3	10,82	63	T9
18	1/4 - 3/8	XB0808C16 18NPTF A9	8	8	3	16,23	63	T13
14	1/2 - 3/4	XB1212D22 14NPTF A9	12	12	4	22,68	83	T19
11,5	1-2	XB1616D29 11.5NPTF A9	16	16	4	29,82	89	T23
8	≥ 2 1/2	XB2020D42 8NPTF A9	20	20	4	42,86	100	T26

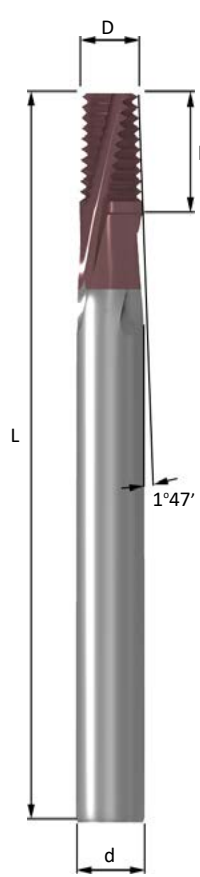
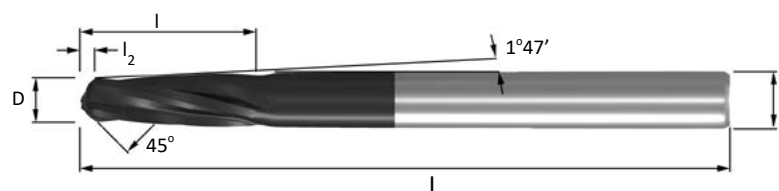
### XB | NPSF, for internal and external thread

TPI	NORM	PART NUMBER	d	D	FLUTES	I	L	PRICE
27	1/16 - 1/8	XB0606C12 27NPSF A9	6	6	3	12,7	63	T9
18	1/4 - 3/8	XB0808C16 18NPSF A9	8	8	3	16,23	63	T13
14	1/2 - 3/4	XB1212D22 14NPSF A9	12	12	4	22,68	83	T19
11,5	1	XB1616D29 11.5NPSF A9	16	16	4	29,82	89	T23

### NPT | Tapered end mills for NPT/NPTF - reduces wear of the thread mill

D	d	PART NUMBER	FLUTES	I	I <sub>2</sub>	L	PRICE
5	6	NPT0605D16 F9	4	16	1	64	T1
8,5	10	NPT10085D24 F9	4	24	1,5	76	T4
14	16	NPT1614D32 F9	4	32	2	89	T14
17	20	NPT2017D48 F9	4	48	3	120	T22

Use with cylindrical interpolation. This will save the thread mill from excessive wear.








MADE-TO-ORDER MICRO DRILLS

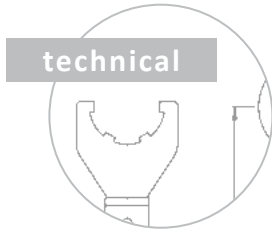


# WhizDrill



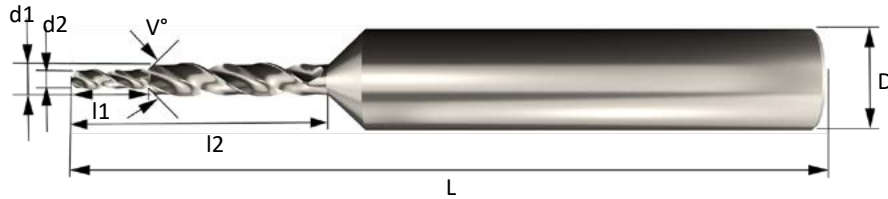
You name it. We make it WhizDrill. Together. All WhizDrills are made to your specific needs and request. WhizCut design micro drills starting at 0,05 mm in any drill form or geometries. Why settle for less when you can have the ideal drill for the job, every time.





## WhizDrill: made-to-order micro drill bits

All WhizDrill micro drills are custom-made, designed and produced to your specific requirements. Thanks to our improved machining facilities WhizCut delivers perfect drills to a moderate price, starting at 20 pieces. At WhizCut we know geometries and our focus is to help you create a supreme tool.



### Range benefits

- **Really small:** micro drills starting at 0,05 mm.
- **Flexible:** we produce any drill form and geometry.
- **Ready to order:** blank size in stock: 1,0 mm, 1,5 mm, 2,0 mm, 2,5 mm, 3,0 mm, 1/8" and 4,0 mm.
- **Perfect design:** optimizing drill design generates increased tool life and improved cycle times.
- **Smoother coating:** all drills have an improved smoothness of the coating which improves chip flow and surface finish.



# WhizGuide

*select the perfect micro drill*

## 1. Order the correct drill bit

All WhizDrills can be ordered for every 0,001 mm in diameter, with a range of different specifications.

## 2. Conversion chart

Have a look at the two examples and use the conversion chart below to order the correct drill for you.

## 3. Specify details

Details to specify when you order: drill diameter, cutting length, shank diameter and length, right or left hand, helix angle, point angle. The drills have h6 tolerance, unless otherwise specified.

## 4. Contact us

Please contact your WhizCut representative if you need assistance to choose the correct drill bit.

DRILL	TYPE	RIGHT/LEFT HAND	DRILL D	HELIX ANGLE	POINT ANGLE	SHANK D MM	CUTTING LENGTH MM	O.V.A LENGTH MM	GRADE
D	*	*	*,**	*	*	*,*	*	**	**
D	C	R	0,58	E	D	3,0	7	38	B9
D	B	R	0,10	F	F	1,5	1	30	B9

NAME	DRILL TYPE
A	1-FLUTE TWIST DRILL WITH REINFORCED SHANK
B	2-FLUTE TWIST DRILL WITH REINFORCED SHANK
BA	2-FLUTE SELF CENTERING TWIST DRILL WITH REINFORCED SHANK
BC	2-FLUTE COOLANT THROUGH TWIST DRILL, REINFORCED SHANK
C	3-FLUTE TWIST DRILL WITH REINFORCED SHANK
D	2-FLUTE TWIST DRILL
E	2-FLUTE STEP TWIST DRILL
F	SPADE DRILL
G	CENTRE DRILL
H	CENTRE DRILL LONG
I	HALF ROUND DRILL
J	1,2,3 STEP HALF ROUND DRILL
K	DOUBLE COUNTERSINK DRILL

NAME	HELIX ANGLE°
A	0
B	15
C	20
D	24
E	30
F	35
G	38

NAME	POINT ANGLE°
A	90
B	100
C	110
D	118
E	120
F	130
G	140

GRADE
B9
F9
P9
T9





### Style A | Carbide 1-flute twist drill with reinforced shank

The large flute gives plenty of room for chip evacuation. Suitable for titanium, and other hard materials.



### Style B | Carbide 2-flute twist drills with reinforced shank

#### Style BA | Carbide 2-flute *self centering* twist drill with reinforced shank

#### Style BC | Carbide 2-flute *coolant through* twist drill with reinforced shank

Good overall drill. Type that depends more on the application than the actual material. Style BA to be used when high heat is generated or better chip evacuation is needed. Style BA reamer can be eliminated and hole positioning is increased. Suitable for most materials



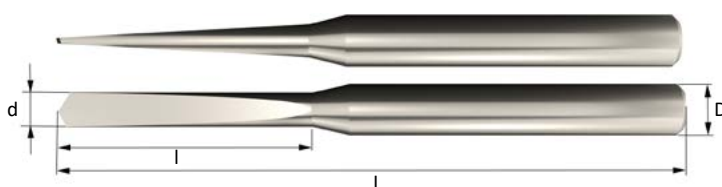
### Style C | Carbide 3-flute twist drill with reinforced shank

Drills to tight tolerances so reamer can be taken away. Most often no centre drill needed. To be used in tough stainless steel, medical steels like 316 and MP35.



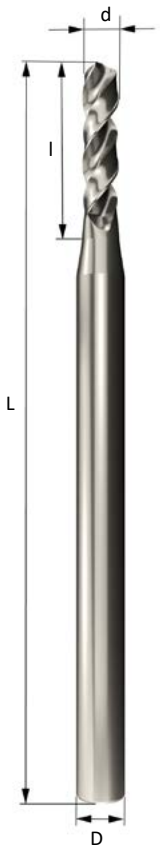
### Style E | Carbide 2-flute multiple step twist drill with reinforced shank

Special applications where the cycle time, hole quality and concentricity is a priority. For most materials.



### Style F | Carbide spade drill

Often used in watchmaking. For softer materials, short holes.



**Style G | Carbide centre drills**

**Style H | Carbide centre drills long**

A big benefit of choosing helix and point angle per application.  
Centre drills suitable for all materials.



**Style I | Half round drills**

Half round drills that drill to perfection. Long tradition of usage in watchmaking and medical applications.  
Exotics, copper, powdered materials



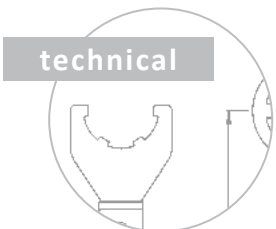
**Style J | Carbide 1, 2, 3 Step half round**

Use when high concentricity is needed,  
sames as style I.



**Style K | Carbide double countersink drills**

All round countersink drill, use when small and precise profiles need to be made.



Technical information WhizDrill	Minimum drill size
<ul style="list-style-type: none"> <li>All drills are available for any type of geometry and size up to 3,17 mm.</li> <li>Diameter tolerance is h6 as standard other tolerances upon request.</li> </ul>	<ul style="list-style-type: none"> <li>0,05 mm = style B.</li> <li>0,10 mm = style E, G, H, I, J, K.</li> <li>0,50 mm = style A, BA, BC, C, F.</li> </ul>



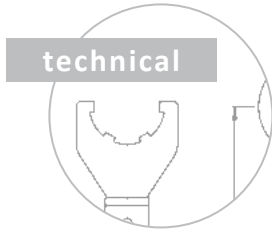
## HIGH PRESSURE COOLANT CONNECTION

# WhizHip

WhizHip is a high pressure coolant connection system that is quick, adjustable and easy to use. The system is developed to give a maximised coolant flow from machine to holder where connecting is made quickly and with a great ease.







## WhizHip - high pressure connections

WhizHip, a distribution system for high pressure coolant, capable of handling pressures up to 250 bar, and at the same time flexible for setup and tool changes. WhizHip performs great, leading to shorter machining times, less machine stops and a more consistent process. Choose between WhizHip Octo line or WhizHip Mini line, there is always a size that fits your tools.

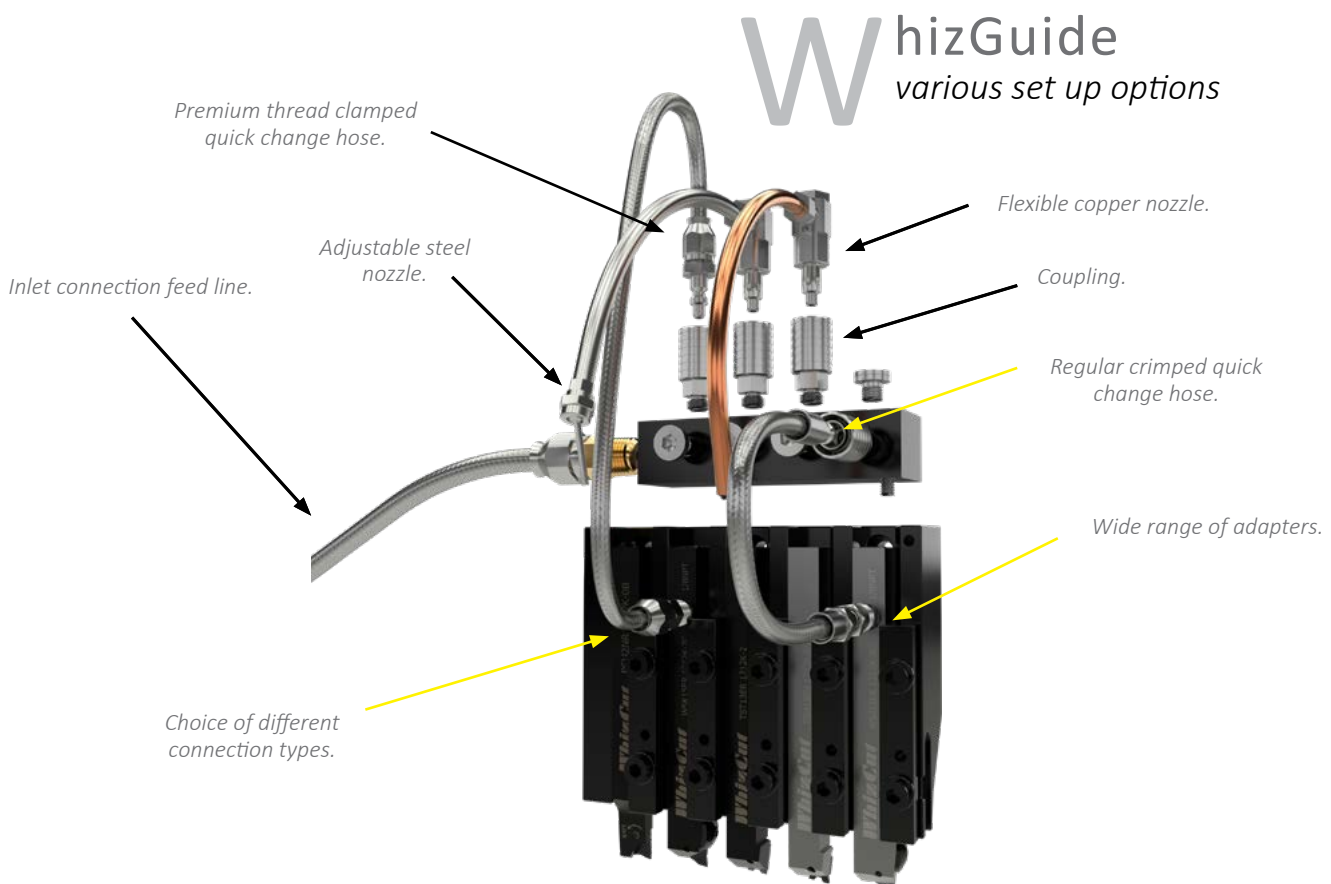
### Range benefits

- **Flexible:** WhizHip is designed with flexible, hard wearing stainless steel braided hoses- bendable with quick change couplings and adjustable nozzles.
- **Heat resistant:** the hoses are designed to withstand heat from hot chips shooting from the workpiece.
- **Time saving:** connect the hoses to the quick change coupling without using any other tools.
- **Precise:** the high pressure coolant is led through the toolholder and exits with directed jets.
- **Great chip control:** high pressure controls and breaks the chip thanks to its concentration at the cutting edge.
- **Ready:** Many WhizHip and WhizIn toolholders are prepared for internal high pressure coolant

Perfect fit with WhizCut signature toolholders:

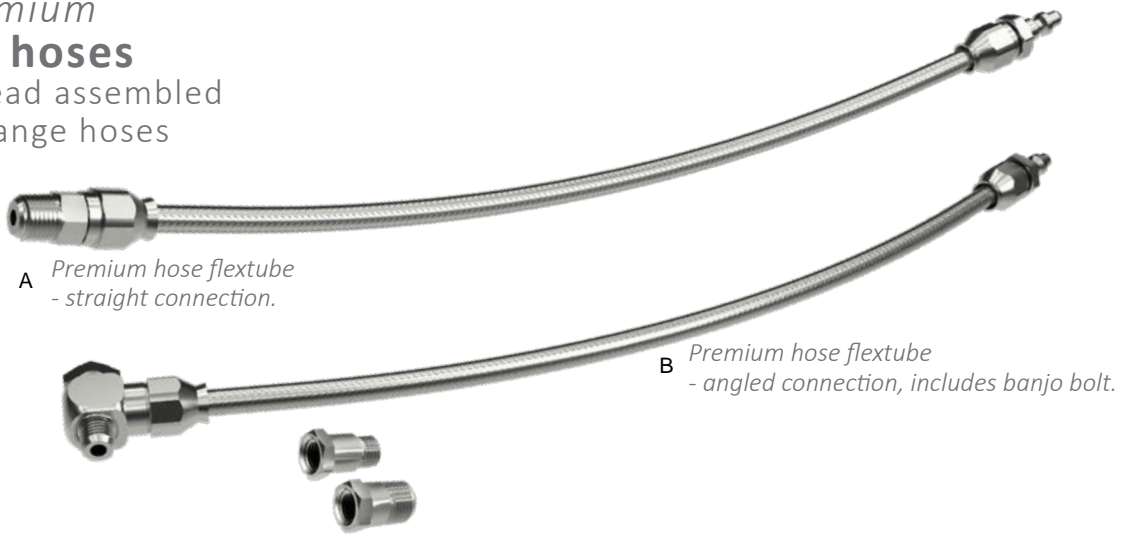
HIP

FIX



## Premium Octo hoses

Flexible thread assembled quick-change hoses



A Premium hose flextube - straight connection.

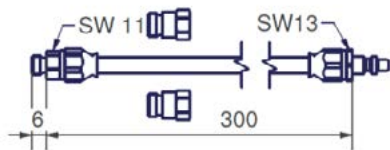
B Premium hose flextube - angled connection, includes banjo bolt.

WO- WhizHip Octo  
WM- WhizHip Mini  
ET- External  
IT- Internal

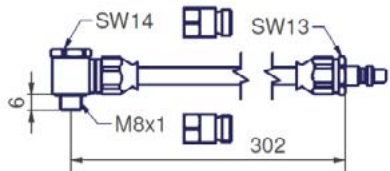
### Octo premium hose

PART NB.	CONNECTOR 1	CONNECTOR 2	LENGTH*	WRENCH	PIC.
103376	1/8" NPT	WO NIPPLE	100	SW 11+13	A
102938	1/8" NPT	WO NIPPLE	200	SW 11+13	A
102186	1/8" NPT	WO NIPPLE	300	SW 11+13	A

### Octo premium hose set - including adapters



Premium hose set - straight.



Premium hose set - angled.

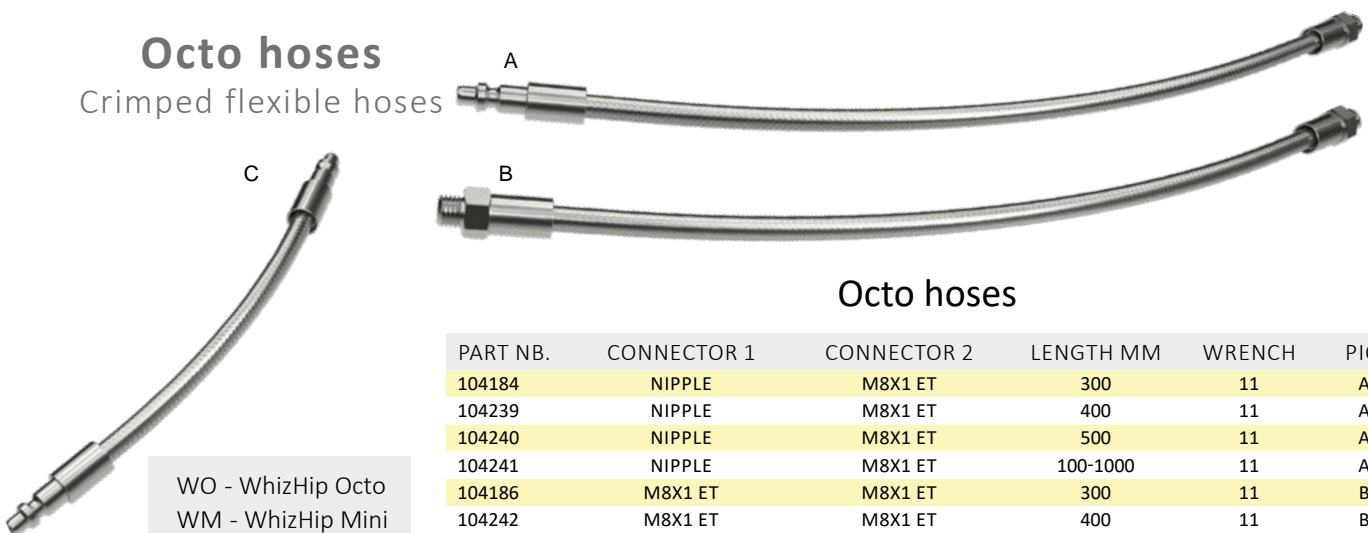
PART NB.	CONNECTOR 1	CONNECTOR 2	LENGTH*	THREAD ADAPT.	WRENCH	PIC.
103375	M8X1	WO NIPPLE	100	M10X1, G1/8	SW 11+13	A
102686	M8X1	WO NIPPLE	200	M10X1, G1/8	SW 11+13	A
101991	M8X1	WO NIPPLE	300	M10X1, G1/8	SW 11+13	A
103375U	M8X1	WO NIPPLE	100	M10X1, 1/8" NPT	SW 11+13	A
102686U	M8X1	WO NIPPLE	200	M10X1, 1/8" NPT	SW 11+13	A
101991U	M8X1	WO NIPPLE	300	M10X1, 1/8" NPT	SW 11+13	A
103449	ANGLED M8X1	WO NIPPLE	100	M8X1, M10X1, G1/8	SW 13+14	B
103448	ANGLED M8X1	WO NIPPLE	200	M8X1, M10X1, G1/8	SW 13+14	B
101992	ANGLED M8X1	WO NIPPLE	300	M8X1, M10X1, G1/8	SW 13+14	B
103451	ANGLED M8X1	WO NIPPLE	100	M8X1, 1/8" NPT	SW 13+14	B
103450	ANGLED M8X1	WO NIPPLE	200	M8X1, 1/8" NPT	SW 13+14	B
102182	ANGLED M8X1	WO NIPPLE	300	M8X1, 1/8" NPT	SW 13+14	B
102586	WO NIPPLE	WO NIPPLE	150			

\* Length in mm.

The angled hose set includes banjo bolt.

## Octo hoses

Crimped flexible hoses



WO - WhizHip Octo  
WM - WhizHip Mini  
ET - External  
IT - Internal

### Octo hoses

PART NB.	CONNECTOR 1	CONNECTOR 2	LENGTH MM	WRENCH	PIC.
104184	NIPPLE	M8X1 ET	300	11	A
104239	NIPPLE	M8X1 ET	400	11	A
104240	NIPPLE	M8X1 ET	500	11	A
104241	NIPPLE	M8X1 ET	100-1000	11	A
104186	M8X1 ET	M8X1 ET	300	11	B
104242	M8X1 ET	M8X1 ET	400	11	B
104243	M8X1 ET	M8X1 ET	500	11	B
104244	M8X1 ET	M8X1 ET	100-1000	11	B
104421	NIPPLE	NIPPLE	100-1000	11	C

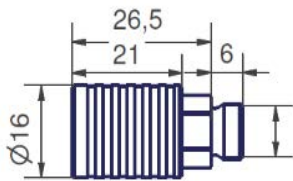
## Octo nozzles external coolant



### Nozzles | Copper, stainless steel, locks with coupling

PART NB.	DESCRIPTION	LENGTH	ADDITIONAL INFO
101993	ANGLED PLUG, FLEXIBLE NOZZLE	150	COPPER NOZZLE
102529	ANGLED PLUG, FLEXIBLE AND ADJUSTABLE NOZZLE	200	ADJUSTABLE TIP, STAINLESS
102625	STRAIGHT PLUG, FLEXIBLE AND ADJUSTABLE NOZZLE	200	ADJUSTABLE TIP, STAINLESS

## Octo coupling set quick release



### Coupling | Stainless steel, thread connection

INC. SEAL PLUG	COUPLING ONLY	DESCRIPTION	PIC.
	104234	COUPLING - M8X1	A
101994	104183	COUPLING - G1/8	A
101995	104235	COUPLING - M10X1	A
102184	104236	COUPLING - 1/8"NPT	A
103428	104237	COUPLING - AN/JIC4	E
102498	104234 + SEE ADAPTERS/BANJO BOLTS	ANGLED COUPLING - M8X1	B
102654	104234 + SEE ADAPTERS/BANJO BOLTS	ANGLED COUPLING - G1/8	B
103560	104234 + SEE ADAPTERS/BANJO BOLTS	ANGLED COUPLING - 1/8"NPT	B
102038	104234 + SEE NIPPLES	COUPLING - M8X1 + 102042	D
103729	104238	COUPLING - M8X1 IT	C

## Octo adapters & connectors



Adapters - example



WhizHip Octo Nipples - example



A

Angled fitting



B

Banjo bolt

### Adapters

PART NB.	CONNECTOR 1	CONNECTOR 2	WRENCH
101979	M10X1 ET	M8X1 IT	SW 11
101980	G1/8 ET	M8X1 IT	SW 11
102188	1/8"NPT ET	M8X1 IT	SW 11
102292	G1/4 ET	G1/8 IT	SW 17
102434	M6 ET	M8X1 IT	SW 11
102435	M5 ET	M8X1 IT	SW 11
102585	M8X1 ET	M8X1 IT Ø9,5	SW 11
102864	M8 ET	M8X1 IT	SW 11
102914	UNF7/16-20 ET	G1/8 IT	SW 11
102915	M12 ET	M8X1 IT	SW 14
102931	G1/2 ET	G1/4 IT BRASS	SW 24
102932	G1/2 IT	M16X1,5 IT BRASS	SW 27
103500	M12 ET	M8X1 IT	SW 14
102928	COLLET ER16	G1/8 IT	-

### Nipples

PART NB.	CONNECTOR 1	CONNECTOR 2
102042	WO-NIPPLE ET	M8X1 IT
102601	WO-NIPPLE ET	M5 IT
102602	WO-NIPPLE ET	NPT1/4" IT
102683	WO-NIPPLE ET	M8X1 ET
102685	WO-NIPPLE ET	NPT1/8" IT
102913	WO-NIPPLE ET	UNF 7/16 IT

### Banjo bolts & angled fittings

PART NB.	DESCRIPTION	PIC.
102475	ANGL. FITTING F. BANJO B. M8X1 IT/10,5Ø	A
101978	BANJO BOLT Ø10,5 M8X1 ET	B
103767	BANJO BOLT Ø10,5 UNJF 5/16"24 ET	B

WO- WhizHip Octo  
WM- WhizHip Mini  
ET- External  
IT- Internal

Seal plug



Compression ring



### Seal plug

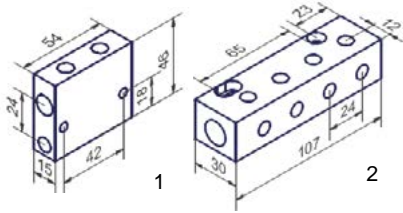
PART NB.	DESCRIPTION
101919	PLUG, WO NIPPLE

### Extras

PART NB.	DESCRIPTION
102751	COMPRESSION RING Ø4 FOR 102529 & 102625



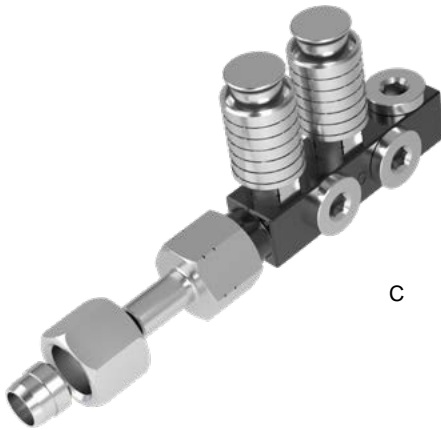
## Octo manifolds and inlets



A



B



C



D



E

## Manifolds | Block & cylindrical

PART NO	TYPE	OUTLET	INLET TO COOLANT SYSTEM	CONNECTION/FASTENING	PIC
101990	BLOCK	5X G1/8 IT	G1/4	2XSCREWS M5	A
102221	BLOCK	5X 1/8" NPT IT	1/4" NPT	2XSCREWS M5	A
102533	BLOCK	4X G1/8 IT	G1/8	1XSREW M5	B
103529	BLOCK	5X G1/8 IT	∅8	INCOMING HOSE	C
103530	BLOCK	5X 1/8" NPT IT	∅8	INCOMING HOSE	C
101997	BLOCK	8X G1/8 IT	G3/8	2XSCREWS M5	D
102220	BLOCK	8X 1/8" NPT IT	3/8" NPT	2XSCREWS M5	D
102440	CYLINDRICAL	3X COUPLINGS	∅8	INCOMING HOSE	E

WO - WhizHip Octo  
 WM - WhizHip Mini  
 ET - External  
 IT - Internal



## Inlet connection feed line

PART NO	PRODUCT NAME	ADDITIONAL INFO
101961	CONNECTION FEED LINE, FLEX-TUBE, 300 MM	ND 5, TUBE STAINLESS STEEL, OUTSIDE END G1/4", PIPE END
102166	CONNECTION FEED LINE, FLEX-TUBE, UP TP 1000 MM	ND 5, TUBE STAINLESS STEEL, OUTSIDE THREAD G1/4", PIPE END
102190	NPT CONNECTION FEED LINE, FLEX-TUBE, 300 MM	ND 5, TUBE STAINLESS STEEL, OUTSIDE THREAD 1/4"NPT, PIPE END
102609	NPT CONNECTION FEED LINE, FLEX-TUBE, UP TO 1000 MM	ND 5, TUBE STAINLESS STEEL, OUTSIDE THREAD 1/4"NPT, PIPE END

# Mini hoses, couplings, adapters & connectors

pick-and-mix



Mini hoses



Mini coupling



Mini adapters



Mini banjo bolt

Angled fitting

## Mini hoses

PART NBR	CONNECTOR 1	CONNECTOR 2	LENGTH MM
104204	M5 ET	WM NIPPLE	300
104215	M5 ET	WM NIPPLE	400
104216	M5 ET	WM NIPPLE	500
104217	M5 ET	WM NIPPLE	100-1000
104205	M5 ET	M5 ET	300
104218	M5 ET	M5 ET	400
104219	M5 ET	M5 ET	500
104213	M5 ET	M5 ET	100-1000
104214	WM NIPPLE	WM NIPPLE	100-1000

## Mini adapters

PART NBR	CONNECTOR 1	CONNECTOR 2	WRENCH
102453	M6 ET	M5 IT	SW 8
102454	M8X1 ET	M5 IT	SW 8
102848	G1/8 ET	M5 IT	SW 8
102940	1/16" NPT ET	M5 IT	SW 8

## Mini banjo bolts & angled fittings

PART NBR	CONNECTOR 1	CONNECTOR 2	DESCRIPTION
102855	M5 IT	Ø6	ANGLED FITTING
102856	M5 ET		BANJO BOLT

## Mini coupling | Stainless steel outside thread

INC. SEAL PLUG	COUPLING ONLY	DESCRIPTION	PIC
103947	104203	COUPLING-M5 ET	A
104067		ANGLED COUPLING-M5 ET	A+B

WO - WhizHip Octo  
WM - WhizHip Mini  
ET - External  
IT - Internal



WhizHip Mini nipple



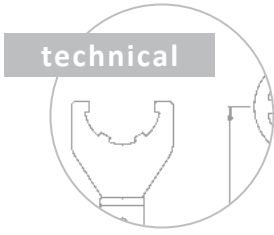
WhizHip Mini seal plug

## Mini nipples

PART NBR	CONNECTOR 1	CONNECTOR 2
102851	PREVIOUS MICRO NIPPLE	M5 IT
104189	WM NIPPLE	M5 IT
102601	WO NIPPLE	M5 IT

## Mini seal plug

PART NBR	DESCRIPTION
103952	SEAL PLUG, WM NIPPLE



## Recommended cutting data

### Recommended cutting data J-type Inserts

MATERIAL	HARDNESS	FEED RATE	UNCOATED	COATED
	HB		M/MIN	M/MIN
HIGH TEMP. ALLOYS	200	0,05-0,12	40-110	50-130
	300	0,05-0,12	25-90	30-110
	400	0,05-0,12	20-65	25-80
BRASS	<110	0,10-0,35	300-700	400-1000
	>110	0,08-0,28	250-500	300-700
COPPER	<100	0,10-0,35	250-500	300-700
	>100	0,08-0,28	175-350	250-500
ALUMINIUM	<100	0,10-0,20	300-700	400-1000
	>100	0,08-0,20	250-500	300-700

MATERIAL	HARDNESS	FEED RATE	UNCOATED	COATED
	HB		M/MIN	M/MIN
CARBON STEEL	150	0,10-0,22	160-270	200-350
	250	0,08-0,17	120-220	150-275
	350	0,07-0,14	70-140	100-200
ALLOY STEEL	200	0,08-0,20	110-190	150-275
	300	0,07-0,16	70-140	100-200
	400	0,06-0,15	50-100	70-140
STAINLESS STEEL	150	0,08-0,20	110-190	150-275
	250	0,07-0,16	70-140	100-200
	350	0,06-0,15	50-100	70-140

### Recommended cutting data K- and H-type inserts

MATERIAL	HARDNESS	FEED RATE	UNCOATED	COATED
	HB		M/MIN	M/MIN
CARBON STEEL	150	0,07-0,15	130-230	160-270
	250	0,05-0,12	100-190	120-220
	350	0,04-0,10	60-120	70-140
ALLOY STEEL	200	0,05-0,12	90-160	110-190
	300	0,04-0,10	60-120	70-140
	400	0,03-0,08	40-80	50-100
STAINLESS STEEL	150	0,05-0,12	90-160	110-190
	250	0,04-0,10	60-120	70-140
	350	0,03-0,08	40-80	50-100

MATERIAL	HARDNESS	FEED RATE	UNCOATED	COATED
	HB		M/MIN	M/MIN
HIGH TEMP. ALLOYS	200	0,03-0,09	30-90	40-110
	300	0,03-0,09	20-75	25-90
	400	0,03-0,09	15-50	20-65
BRASS	<110	0,07-0,25	250-500	300-700
	>110	0,05-0,20	175-350	250-500
COPPER	<100	0,07-0,25	200-400	250-500
	>100	0,05-0,20	140-280	175-350
ALUMINIUM	<100	0,07-0,15	250-600	300-700
	>100	0,06-0,15	175-400	250-500

### Recommended cutting data T-type inserts

MATERIAL	HARDNESS	FEED RATE	UNCOATED	COATED
	HB		M/MIN	M/MIN
CARBON STEEL	150	0,07-0,15	130-230	160-270
	250	0,05-0,12	100-190	120-220
	350	0,04-0,10	60-120	70-140
ALLOY STEEL	200	0,05-0,12	90-160	110-190
	300	0,04-0,10	60-120	70-140
	400	0,03-0,08	40-80	50-100
STAINLESS STEEL	150	0,05-0,12	90-160	110-190
	250	0,04-0,10	60-120	70-140
	350	0,03-0,08	40-80	50-100

MATERIAL	HARDNESS	FEED RATE	UNCOATED	COATED
	HB		M/MIN	M/MIN
HIGH TEMP. ALLOYS	200	0,03-0,09	30-90	40-110
	300	0,03-0,09	20-75	25-90
	400	0,03-0,09	15-50	20-65
BRASS	<110	0,07-0,25	250-500	300-700
	>110	0,05-0,20	175-350	250-500
COPPER	<100	0,07-0,25	200-400	250-500
	>100	0,05-0,20	140-280	175-350
ALUMINIUM	<100	0,07-0,15	250-600	300-700
	>100	0,06-0,15	175-400	250-500

## Recommended cutting data WhizIn

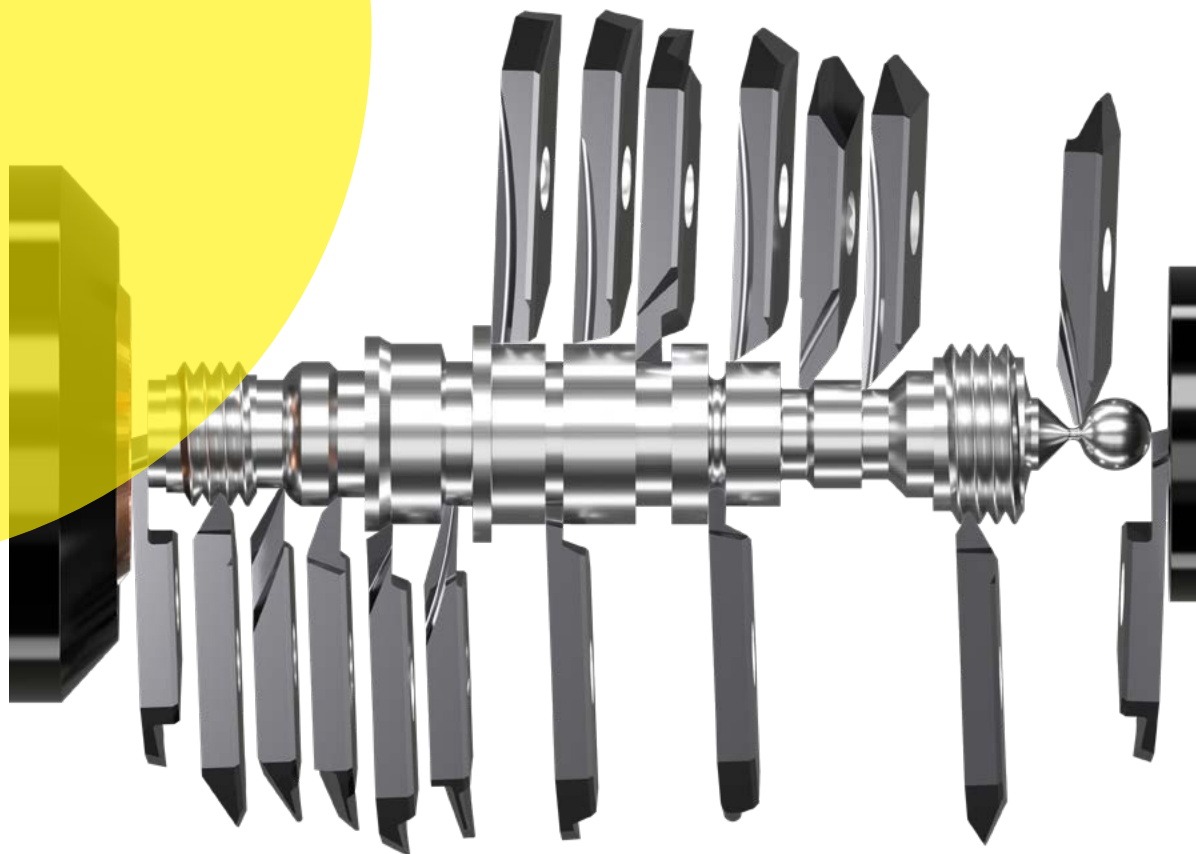
## Turning, copyturning etc.

	HARDNESS		FEED RATE		UNCOATED	COATED
	HB	MM/REV	M/MIN	M/MIN		
CARBON STEEL	150	0,10-0,22	160-270	200-350		
	250	0,08-0,17	120-220	150-275		
	350	0,07-0,14	70-140	100-200		
ALLOY STEEL	200	0,08-0,20	110-190	150-275		
	300	0,07-0,16	70-140	100-200		
	400	0,06-0,15	50-100	70-140		
STAINLESS STEEL	150	0,08-0,20	110-190	150-275		
	250	0,07-0,16	70-140	100-200		
	350	0,06-0,15	50-100	70-140		
HIGH TEMP.	200	0,05-0,12	40-110	50-130		
ALLOYS	300	0,05-0,12	25-90	30-110		
	400	0,05-0,12	20-65	25-80		
BRASS	<110	0,10-0,35	300-700	400-1000		
	>110	0,08-0,28	250-500	300-700		
COPPER	<100	0,10-0,35	250-500	300-700		
	>100	0,08-0,28	175-350	250-500		
ALUMINIUM	<100	0,10-0,20	300-700	400-1000		
	>100	0,08-0,20	250-500	300-700		

## Grooving, threading etc.

	HARDNESS		FEEDRATE		UNCOATED	COATED
	HB	MM/REV	M/MIN	M/MIN		
CARBON STEEL	150	0,07-0,15	130-230	160-270		
	250	0,05-0,12	100-190	120-220		
	350	0,04-0,10	60-120	70-140		
ALLOY STEEL	200	0,05-0,12	90-160	110-190		
	300	0,04-0,10	60-120	70-140		
	400	0,03-0,08	40-80	50-100		
STAINLESS STEEL	150	0,05-0,12	90-160	110-190		
	250	0,04-0,10	60-120	70-140		
	350	0,03-0,08	40-80	50-100		
HIGH TEMP.	200	0,03-0,09	30-90	40-110		
ALLOYS	300	0,03-0,09	20-75	25-90		
	400	0,03-0,09	15-50	20-65		
BRASS	<110	0,07-0,25	250-500	300-700		
	>110	0,05-0,20	175-350	250-500		
COPPER	<100	0,07-0,25	200-400	250-500		
	>100	0,05-0,20	140-280	75-350		
ALUMINIUM	<100	0,07-0,15	250-600	300-700		
	>100	0,06-0,15	175-400	250-500		

YOUR NOTES



**WhizCut<sup>®</sup>**

*Smart solutions on the cutting edge*

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