



Gear Milling insert

3 T Gear Milling series



SINCE 1977



Special Gear Cutter Design

About Gears

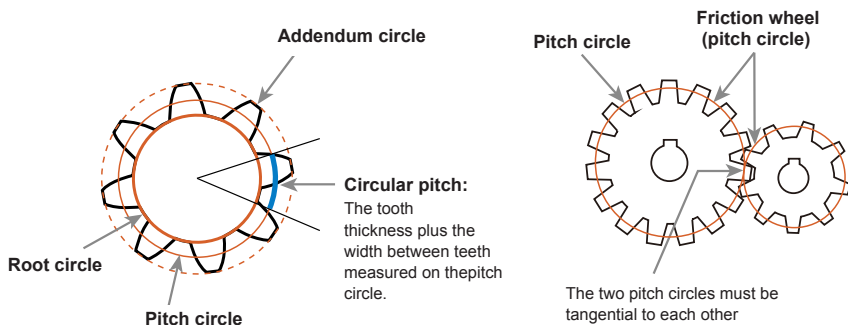
Gears rely on the engagement of teeth to transmit torque. The transmission of movement, and method of such between gears to other toothed components is called meshing transmission. Gears are comprised of gear teeth, tooth slots, end faces, normal planes, addendum circles, dedendum circles, base circles and reference circles.

Dividing the circumference by the number of teeth gives a length commonly known as the “Circular pitch,” which is the tooth thickness plus the width between teeth measured on the pitch circle. (Fig. 1)

The pitch circle refers to the tangent outer edges of the two friction wheels (imaginary circles) (Fig. 2). For two gears to mesh with each other, their pitch circles must be tangential at one point.

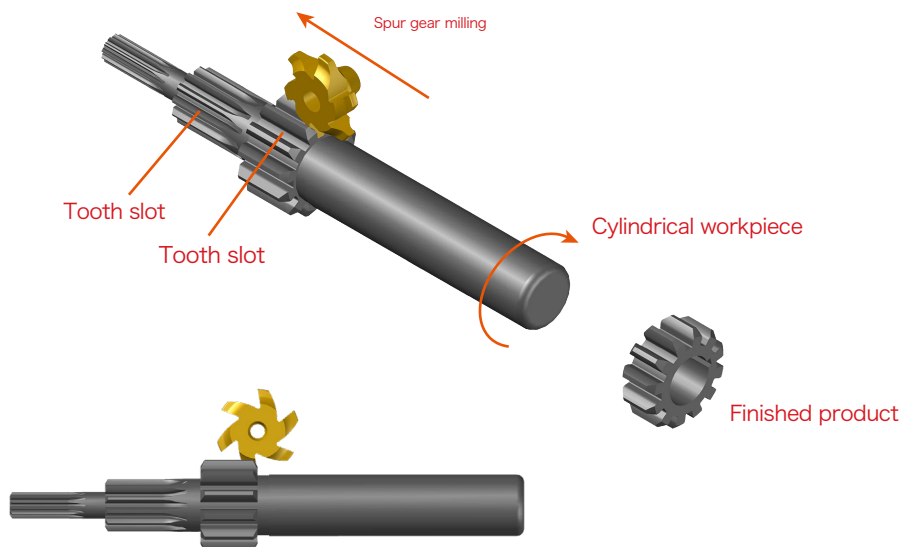
The pitch circle and the number of teeth will inevitably affect the number of teeth cut and the pressure angle. The relative number of teeth will affect the module cut on the workpiece.

Interlocked gears drive another part (such as a gear, gear rack, or worm gear) to rotate to transmit power and thus change the speed, torque, as well as motion direction and form of movement of a product. Thanks to high transmission efficiency, accurate transmission ratio, and a wide range of applications of gears, their machining has been widely used in products across different industries.



How the Y.T. Gear Milling Insert Works

The Y.T gear milling insert works through a **side-clamped spur gear cutting method** where the same module is used for linear machining. Thanks to the interaction between the motion of the tool and the rotation of the workpiece, metal is removed from the slot and a cylindrical gear is formed gradually. There is no friction problem between the workpiece and the tooth surface when the tool is retracted.



Thickness and Module of Gear Milling Insert

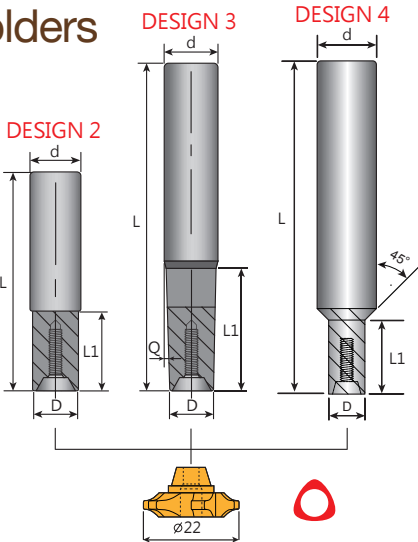


- $\varnothing 22$
- Thickness 2.5, 2.8, 3.5, 3.7, 4, 4.8, 5.5, 5.8 mm
- Module 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.25, 1.5, 1.75 mm



PRODUCT SPECIFICATIONS

UFO Family Common Toolholders



CB3

• HSS Shanks

Order code	Dimensions (mm)					Design	 KG	Inserts	Screw	Key
	D	d	L	L1	Q					
CB3-1010-80-20	9.8	10	80	12	-	2	0.12	Ø 22	C03513	T10P
CB3-1010-100-20			100				0.13			
CB3-1210-90-20		12	90	25	3.2°	3	0.14			
CB3-1210-130-20			130	40	1.7°		0.18			
CB3-1610-90-20	11.8	16	90	20	-	4	0.20			
CB3-1612-95-20			95	25	-	4	0.23			
CB3-1612-150-20				55	2.4°	3	0.29			
CB3-1616-150-20	15.8		150	20	-	2	0.31			

CB3W

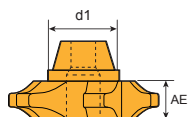
• Carbide Shanks

Order code	Dimensions (mm)					Design	 KG	Inserts	Screw	Key
	D	d	L	L1	Q					
CB3W-1010-100-20	9.8	10	100	12	-	2	0.18	Ø 22	C03513	T10P
CB3W-1212-150-20	11.8	12	150	20	-	2	0.32			

• To check the max. AR, please refer to the page of relative inserts or cutters.

UFO Gear Cutter Inserts (DIN3972)

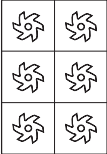
• Toolholders P.4



Tolerances (mm)
D : ± 0.02 AE : ± 0.015



Code	Dimensions (mm)					
	D	d1	AE	Module	Z _{min}	Z _{max}
3T1022-050-1	22	9.9	2.5	0.5	12	13
3T1022-050-2					14	16
3T1022-050-3					17	20
3T1022-050-4					21	25
3T1022-050-5					26	34
3T1022-050-6					35	55
3T1022-050-7					55	134
3T1022-050-8					135	250

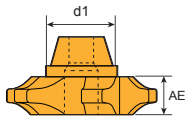
Inserts	Order Code	Grades								
		Carbide					Cermet		Uncoated	
		B100	C200	C250	F20	F30	CE100	CE60	K10	CE
 6 flutes	3T1022-050-1-ME									
	3T1022-050-2-ME									
	3T1022-050-3-ME									
	3T1022-050-4-ME									
	3T1022-050-5-ME									
	3T1022-050-6-ME									
	3T1022-050-7-ME									
	3T1022-050-8-ME									
										 Inserts 6 PCS / Box

-  Steel/Cast Iron
- Pressure angle 20°
- Prices and stocks are based on present conditions
- Please specify model numbers and the grade of inserts, ie.: 3T1022-050-1-ME, B100



UFO Gear Cutter Inserts (DIN3972)

• Toolholders P.4



Tolerances (mm)
D : ± 0.02 AE : ± 0.015



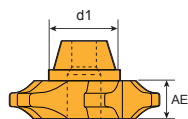
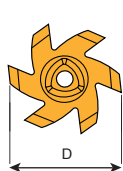
Code	Dimensions (mm)					
	D	d1	AE	Module	Z _{min}	Z _{max}
3T1022-060-1	22	9.9	2.8	0.6	12	13
3T1022-060-2					14	16
3T1022-060-3					17	20
3T1022-060-4					21	25
3T1022-060-5					26	34
3T1022-060-6					35	55
3T1022-060-7					55	134
3T1022-060-8					135	250

Inserts	Crder Code	Grades								
		Carbide					Cermet		Uncoated	
		B100	C200	C250	F20	F30	CE100	CE60	K10	CE
 6 flutes	3T1022-060-1-ME									
	3T1022-060-2-ME									
	3T1022-060-3-ME									
	3T1022-060-4-ME									
	3T1022-060-5-ME									
	3T1022-060-6-ME									
	3T1022-060-7-ME									
	3T1022-060-8-ME									
										     
										Inserts 6 PCS / Box

-  Steel/Cast Iron
- Pressure angle 20°
- Prices and stocks are based on present conditions
- Please specify model numbers and the grade of inserts, ie.: 3T1022-060-1-ME, B100

UFO Gear Cutter Inserts (DIN3972)

• Toolholders P.4



Tolerances (mm)
D : ± 0.02 AE : ± 0.015



Code	Dimensions (mm)					
	D	d1	AE	Module	Z _{min}	Z _{max}
3T1022-070-1	22	9.9	3.2	0.7	12	13
3T1022-070-2					14	16
3T1022-070-3					17	20
3T1022-070-4					21	25
3T1022-070-5					26	34
3T1022-070-6					35	55
3T1022-070-7					55	134
3T1022-070-8					135	250

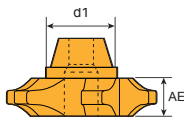
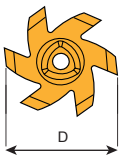
Inserts	Order Code	Grades								
		Carbide					Cermet		Uncoated	
		B100	C200	C250	F20	F30	CE100	CE60	K10	CE
 6 flutes	3T1022-070-1-ME									
	3T1022-070-2-ME									
	3T1022-070-3-ME									
	3T1022-070-4-ME									
	3T1022-070-5-ME									
	3T1022-070-6-ME									
	3T1022-070-7-ME									
	3T1022-070-8-ME									
										     
										Inserts 6 PCS / Box

-  Steel/Cast Iron
- Pressure angle 20°
- Prices and stocks are based on present conditions
- Please specify model numbers and the grade of inserts, ie.:3T1022-070-1-ME, B100



UFO Gear Cutter Inserts (DIN3972)

• Toolholders P.4



Tolerances (mm)
D : ± 0.02 AE : ± 0.015



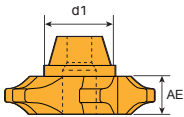
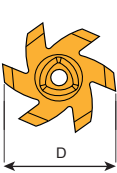
Code	Dimensions (mm)					
	D	d1	AE	Module	Z _{min}	Z _{max}
3T1022-080-1	22	9.9	3.5	0.8	12	13
3T1022-080-2					14	16
3T1022-080-3					17	20
3T1022-080-4					21	25
3T1022-080-5					26	34
3T1022-080-6					35	55
3T1022-080-7					55	134
3T1022-080-8					135	250

Inserts	Order Code	Grades								
		Carbide					Cermet		Uncoated	
		B100	C200	C250	F20	F30	CE100	CE60	K10	CE
 6 flutes	3T1022-080-1-ME									
	3T1022-080-2-ME									
	3T1022-080-3-ME									
	3T1022-080-4-ME									
	3T1022-080-5-ME									
	3T1022-080-6-ME									
	3T1022-080-7-ME									
	3T1022-080-8-ME									
										     
										刀片一盒 6 片裝

-  Steel/Cast Iron
- Pressure angle 20°
- Prices and stocks are based on present conditions
- Please specify model numbers and the grade of inserts, ie.:3T1022-080-1-ME, B100

UFO Gear Cutter Inserts (DIN3972)

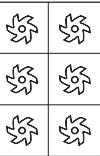
• Toolholders P.4



Tolerances (mm)
D : ± 0.02 AE : ± 0.015



Code	Dimensions (mm)					
	D	d1	AE	Module	Z _{min}	Z _{max}
3T1022-090-1	22	9.9	3.7	0.9	12	13
3T1022-090-2					14	16
3T1022-090-3					17	20
3T1022-090-4					21	25
3T1022-090-5					26	34
3T1022-090-6					35	55
3T1022-090-7					55	134
3T1022-090-8					135	250

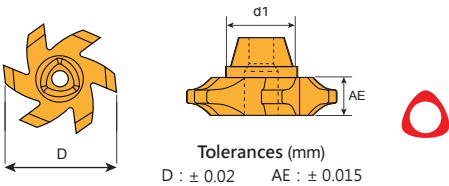
Inserts	Crder Code	Grades										
		Carbide					Cermet		Uncoated			
		B100	C200	C250	F20	F30	CE100	CE60	K10	CE		
 6 flutes	3T1022-090-1-ME											 Inserts 6 PCS / Box
	3T1022-090-2-ME											
	3T1022-090-3-ME											
	3T1022-090-4-ME											
	3T1022-090-5-ME											
	3T1022-090-6-ME											
	3T1022-090-7-ME											
	3T1022-090-8-ME											

-  Steel/Cast Iron
- Pressure angle 20°
- Prices and stocks are based on present conditions
- Please specify model numbers and the grade of inserts, ie.:3T1022-090-1-ME, B100

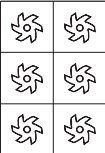


UFO Gear Cutter Inserts (DIN3972)

• Toolholders P.4



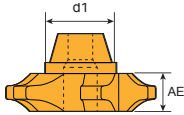
Code	Dimensions (mm)					
	D	d1	AE	Module	Z _{min}	Z _{max}
3T1022-100-1	22	9.9	4.0	1.0	12	13
3T1022-100-2					14	16
3T1022-100-3					17	20
3T1022-100-4					21	25
3T1022-100-5					26	34
3T1022-100-6					35	55
3T1022-100-7					55	134
3T1022-100-8					135	250

Inserts	Crder Code	Grades										
		Carbide					Cermet	Uncoated				
		B100	C200	C250	F20	F30	CE100	CE60	K10	CE		
 6 flutes	3T1022-100-1-ME											 Inserts 6 PCS / Box
	3T1022-100-2-ME											
	3T1022-100-3-ME											
	3T1022-100-4-ME											
	3T1022-100-5-ME											
	3T1022-100-6-ME											
	3T1022-100-7-ME											
	3T1022-100-8-ME											

-  Steel/Cast Iron
- Pressure angle 20°
- Prices and stocks are based on present conditions
- Please specify model numbers and the grade of inserts, ie.: 3T1022-100-1-ME, B100

UFO Gear Cutter Inserts (DIN3972)

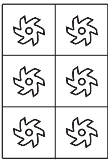
- Toolholders P.4



Tolerances (mm)
D : ± 0.02 AE : ± 0.015



Code	Dimensions (mm)					
	D	d1	AE	Module	Z _{min}	Z _{max}
3T1022-125-1	22	9.9	4.8	1.25	12	13
3T1022-125-2					14	16
3T1022-125-3					17	20
3T1022-125-4					21	25
3T1022-125-5					26	34
3T1022-125-6					35	55
3T1022-125-7					55	134
3T1022-125-8					135	250

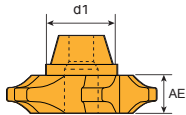
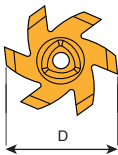
Inserts	Crder Code	Grades										
		Carbide					Cermet		Uncoated			
		B100	C200	C250	F20	F30	CE100	CE60	K10	CE		
 6 flutes	3T1022-125-1-ME											 Inserts 6 PCS / Box
	3T1022-125-2-ME											
	3T1022-125-3-ME											
	3T1022-125-4-ME											
	3T1022-125-5-ME											
	3T1022-125-6-ME											
	3T1022-125-7-ME											
	3T1022-125-8-ME											

-  Steel/Cast Iron
- Pressure angle 20°
- Prices and stocks are based on present conditions
- Please specify model numbers and the grade of inserts, ie.: 3T1022-125-1-ME, B100



UFO Gear Cutter Inserts (DIN3972)

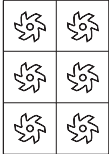
• Toolholders P.4



Tolerances (mm)
D : ± 0.02 AE : ± 0.015



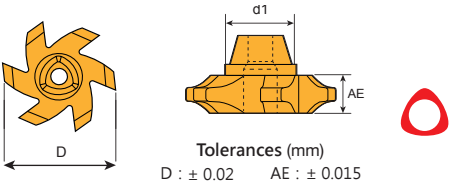
Code	Dimensions (mm)					
	D	d1	AE	Module	Z _{min}	Z _{max}
3T1022-150-1	22	9.9	5.5	1.5	12	13
3T1022-150-2					14	16
3T1022-150-3					17	20
3T1022-150-4					21	25
3T1022-150-5					26	34
3T1022-150-6					35	55
3T1022-150-7					55	134
3T1022-150-8					135	250

Inserts	Crder Code	Grades								
		Carbide					Cermet		Uncoated	
		B100	C200	C250	F20	F30	CE100	CE60	K10	CE
 6 flutes	3T1022-150-1-ME									
	3T1022-150-2-ME									
	3T1022-150-3-ME									
	3T1022-150-4-ME									
	3T1022-150-5-ME									
	3T1022-150-6-ME									
	3T1022-150-7-ME									
	3T1022-150-8-ME									
										
										Inserts 6 PCS / Box

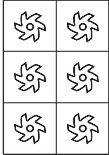
-  Steel/Cast Iron
- Pressure angle 20°
- Prices and stocks are based on present conditions
- Please specify model numbers and the grade of inserts, ie.: 3T1022-150-1-ME, B100

UFO Gear Cutter Inserts (DIN3972)

- Toolholders P.4



Code	Dimensions (mm)					
	D	d1	AE	Module	Z _{min}	Z _{max}
3T1022-175-1	22	9.9	5.8	1.75	12	13
3T1022-175-2					14	16
3T1022-175-3					17	20
3T1022-175-4					21	25
3T1022-175-5					26	34
3T1022-175-6					35	55
3T1022-175-7					55	134
3T1022-175-8					135	250

Inserts	Crder Code	Grades								
		Carbide					Cermet		Uncoated	
		B100	C200	C250	F20	F30	CE100	CE60	K10	CE
 6 flutes	3T1022-175-1-ME									
	3T1022-175-2-ME									
	3T1022-175-3-ME									
	3T1022-175-4-ME									
	3T1022-175-5-ME									
	3T1022-175-6-ME									
	3T1022-175-7-ME									
	3T1022-175-8-ME									
										
										Inserts 6 PCS / Box

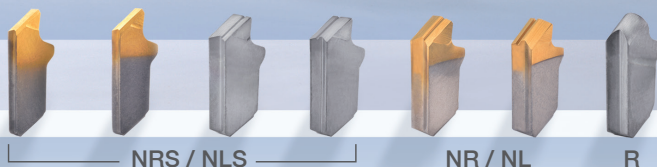
-  Steel/Cast Iron
- Pressure angle 20°
- Prices and stocks are based on present conditions
- Please specify model numbers and the grade of inserts, ie.: 3T1022-175-1-ME, B100



Multifunctional Saw Blade



Whole range from dia 32mm~300mm,
thickness 1.4~8mm. Available in all
materials and different clamping systems.



Insert series

Custom Tool For a Total Solution

48 years specialist experience

With over 48 years professional experience R&D team and 30 patents approval, we provide you a total tool solution by customizing to your needs

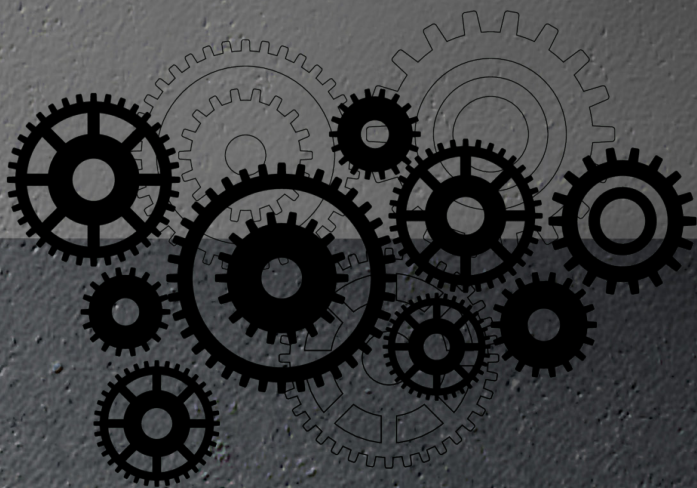
Short lead time

About 3-4 weeks lead time to enhance customer competitiveness

Cost down

Indexable design tool brings customer an effective cost-saving solution





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台灣益壯

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