GREWIN TOOLS

2026

SOLID CARBIDE TOOLS

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GREWIN TOOLS

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COMPANY PROFILE

Zhuzhou Grewin Tungsten Carbide Tools Co., Ltd is a rapid grow company expertise and professional in carbide materials and carbide cutting tools over 50 years of experience, integrated with new technology, high-end machinery and collaborate with cutting tool maker to make good quality tools for customers. Over the decade, we have actively collaborated with researcher and university to enhance the cutting tool design and tool life, we have successfully helped our customer to reduce their cost and gain more market share with us.

The company has a wide range of inspection equipment' s to fulfil products quality inspection, using ERP system for ordering processing, tracking and delivery.

The company mission and vision are to help customer solve the business needs by providing One-Stop Procurement peace of mind solution with various tungsten carbide material and carbide cutting tools for metalworking and woodworking to all customers all over the world.

our main products:

Metal cutting tools: carbide cutting insert, carbide end mill carbide drill carbide taps carbide reamers carbide saw blade

Wood working tool: wood cutting insert carbide drill bit saw blade and planer reversible cutting insert carbide saw tips

Solid carbide rod for metal & wood

Advertising working tools

Tungsten carbide preform tools like strips plate block

The company has ISO 9001:2008 quality system, possesses advanced production equipment' s, complete testing instruments, strong R&D center, and QC team. Grewin branding products are trusted brand sold to more than 80 countries in the world end to end, business to business such as USA, South America, Europe, Middle East, South East Asia, etc.

Grewin is dedicated – WE GROW TOGETHER WE WIN. Grewin is growing up with the worlds carbide technology to meet the demand of our customer from all over the world. The company even aggressively work with WWO and other organization on contributing back by carrying more socially responsible, reducing air pollution from our industry, blood donation and donation to the orphanage. To make social direct benefit.

GREWIN

HIGH QUALITY ASSURANCE

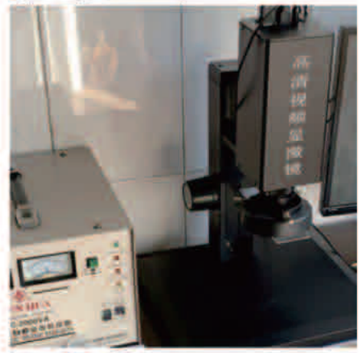
Grewin Owns a complete CNC insert production line, it including raw materials spraying treatment, mold making, deep processing, coating, etc. we are committed to research and development on Solutions of high-performance CNC cutting tools.

We are Equipped with some worlds top brand of precision high-end equipment, such as OSTERWALDER multi-axis electric press, CNC peripheral grinder, Balzer coating furnace.

Grewin adopts automatic numerical control equipment for raw material preparation, pressing, sintering, coating and products inspection.

We also have the advanced equipment' s like Mikron machining center and leading coating processing and world-class quality control system to ensure the good quality of our carbide insert.

We are aiming to provide the high-quality CNC cutting tools and improve the production efficiency to users and fully meet the strict requirements on insert quality.



GREWIN TOOLS

Contents

GREWIN TOOLS

FM General Purpose End Mills

Special cutting edge design, taking into account the strength and sharpness of the edge, low cutting force, nano bronze coating, providing better wear recognition, advanced coating post-treatment technology, closer bonding with the substrate, low friction, and better processing surface quality.

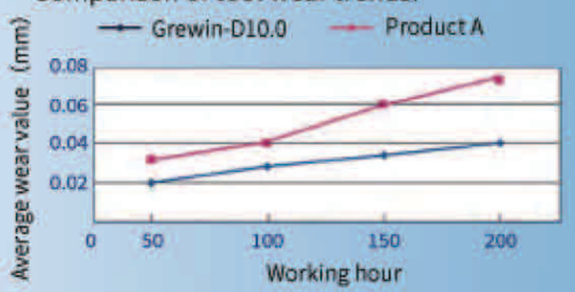
Scope of Application:

It is suitable for efficient machining of cast iron, carbon steel, alloy steel, pre-hardened steel, tempered steel, hardened steel with hardness less than HRC55, etc. It also shows excellent machining stability under weak rigidity conditions such as thin-walled parts, part corners and large overhangs.

Processing cases:

Workpiece material: 42CrMO(HRC35)
Machining part: Side milling
Tool used: Grewin-D10.0
Cutting parameters:n=6000r/min,
fz=0.16mm/z ap=10mm,ae=1mm

Comparison of tool wear trends:



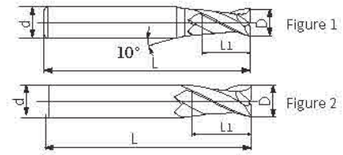
Non-standard size can be customized

GREWIN TOOLS

FM General Purpose End Mills — Two-flute straight shank flat end mills

FM-2E

Tip-protected type



35° | D: D≤12 0~-0.020, 12<D 0~-0.030

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C2020100003	2	6	4	50	Figure 1
C2020100004	2.5	7.5	4	50	Figure 1
C2020100005	3	9	4	50	Figure 1
C2020100006	3.5	10.5	4	50	Figure 1
C2020100007	4	12	4	50	Figure 2
C2020100008	4	12	4	75	Figure 2
C2020100009	4	16	4	100	Figure 2
C2020100010	5	15	6	50	Figure 1
C2020100011	5	15	6	75	Figure 1
C2020100012	5	20	6	100	Figure 1
C2020100013	6	18	6	50	Figure 2
C2020100014	6	18	6	75	Figure 2
C2020100015	6	24	6	100	Figure 2
C2020100016	7	21	8	60	Figure 1
C2020100017	7	21	8	75	Figure 1
C2020100018	7	28	8	100	Figure 1
C2020100019	8	24	8	60	Figure 2
C2020100020	8	24	8	75	Figure 2
C2020100021	8	32	8	100	Figure 2
C2020100022	8	40	8	150	Figure 2
C2020100023	10	30	10	75	Figure 2
C2020100024	10	40	10	100	Figure 2
C2020100025	10	50	10	150	Figure 2
C2020100026	10	80	10	200	Figure 2
C2020100027	12	36	12	75	Figure 2
C2020100028	12	45	12	100	Figure 2
C2020100029	12	60	12	150	Figure 2
C2020100030	12	80	12	200	Figure 2
C2020100031	14	45	14	100	Figure 2
C2020100032	14	70	14	150	Figure 2
C2020100033	14	100	14	200	Figure 2
C2020100034	16	45	16	100	Figure 2
C2020100035	16	75	16	150	Figure 2
C2020100036	16	100	16	200	Figure 2
C2020100037	18	45	18	100	Figure 2
C2020100038	18	75	18	150	Figure 2
C2020100039	18	100	18	200	Figure 2
C2020100040	20	45	20	100	Figure 2
C2020100041	20	75	20	150	Figure 2
C2020100042	20	100	20	200	Figure 2

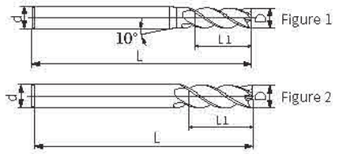
Applicable Table for Processed Materials ● Very Suitable ○ Suitable

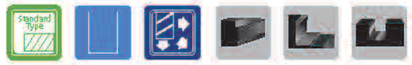
Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
●	●	●	○			○	●			○	○

GREWIN TOOLS

FM General Purpose End Mills — 4 Flutes Flate End Mill

FM-4E





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C2020100047	3	9	4	50	Figure 1
C2020100048	3.5	10.5	4	50	Figure 1
C2020100049	4	12	4	50	Figure 2
C2020100050	4	12	4	75	Figure 2
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C2020100052	5	15	6	50	Figure 1
C2020100053	5	15	6	75	Figure 1
C2020100054	5	20	6	100	Figure 1
C2020100055	6	18	6	50	Figure 2
C2020100056	6	18	6	75	Figure 2
C2020100057	6	24	6	100	Figure 2
C2020100058	7	21	8	60	Figure 1
C2020100059	7	21	8	75	Figure 1
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C2020100061	8	24	8	60	Figure 2
C2020100062	8	24	8	75	Figure 2
C2020100063	8	32	8	100	Figure 2
C2020100064	8	40	8	150	Figure 2
C2020100065	10	30	10	75	Figure 2
C2020100066	10	40	10	100	Figure 2
C2020100067	10	50	10	150	Figure 2
C2020100068	10	80	10	200	Figure 2
C2020100069	12	36	12	75	Figure 2
C2020100070	12	45	12	100	Figure 2
C2020100071	12	60	12	150	Figure 2
C2020100072	12	80	12	200	Figure 2
C2020100073	14	45	14	100	Figure 2
C2020100074	14	70	14	150	Figure 2
C2020100075	14	100	14	200	Figure 2
C2020100076	16	45	16	100	Figure 2
C2020100077	16	75	16	150	Figure 2
C2020100078	16	100	16	200	Figure 2
C2020100079	18	45	18	100	Figure 2
C2020100080	18	75	18	150	Figure 2
C2020100081	18	100	18	200	Figure 2
C2020100082	20	45	20	100	Figure 2
C2020100083	20	75	20	150	Figure 2
C2020100084	20	100	20	200	Figure 2

Applicable Table for Processed Materials

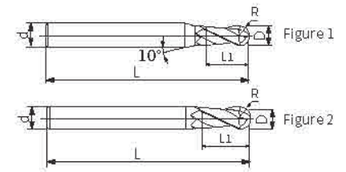
● Very Suitable ○ Suitable

Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
●	●	●	○			○	●			○	○

GREWIN TOOLS

FM General Purpose End Mills — 2 Flutes Ballnose End Mill

FM-2B



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C2020100086	R0.75	3	4	50	Figure 1
C2020100087	R1	4	4	50	Figure 1
C2020100088	R1.25	5	4	50	Figure 1
C2020100089	R1.5	6	4	50	Figure 1
C2020100090	R1.75	7	4	50	Figure 1
C2020100091	R2	8	4	50	Figure 2
C2020100092	R2	8	4	75	Figure 2
C2020100093	R2	8	4	100	Figure 2
C2020100094	R2.5	10	6	50	Figure 1
C2020100095	R2.5	10	6	75	Figure 1
C2020100096	R2.5	10	6	100	Figure 1
C2020100097	R3	12	6	50	Figure 2
C2020100098	R3	12	6	75	Figure 2
C2020100099	R3	12	6	100	Figure 2
C2020100100	R3	12	6	150	Figure 2
C2020100101	R4	16	8	60	Figure 2
C2020100102	R4	16	8	75	Figure 2
C2020100103	R4	16	8	100	Figure 2
C2020100104	R4	16	8	150	Figure 2
C2020100105	R5	20	10	75	Figure 2
C2020100106	R5	20	10	100	Figure 2
C2020100107	R5	20	10	150	Figure 2
C2020100108	R6	24	12	75	Figure 2
C2020100109	R6	24	12	100	Figure 2
C2020100110	R6	24	12	150	Figure 2
C2020100111	R7	28	14	100	Figure 2
C2020100112	R7	28	14	150	Figure 2
C2020100113	R8	32	16	100	Figure 2
C2020100114	R8	32	16	150	Figure 2
C2020100115	R9	36	18	100	Figure 2
C2020100116	R9	36	18	150	Figure 2
C2020100117	R10	40	20	100	Figure 2
C2020100118	R10	40	20	150	Figure 2

Applicable Table for Processed Materials

● Very Suitable ○ Suitable

Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
●	●	●	○			○	●			○	○

GREWIN TOOLS

FM General Purpose End Mills — 4 Flutes Corner Radius End Mill

FM-4R

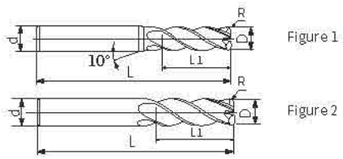
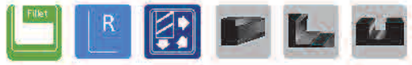


Figure 1

Figure 2



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C2020100121	2	R0.2	5	4	50	Figure 1
C2020100122	2	R0.5	5	4	50	Figure 1
C2020100123	2.5	R0.2	6	4	50	Figure 1
C2020100124	2.5	R0.5	6	4	50	Figure 1
C2020100125	3	R0.2	8	4	50	Figure 1
C2020100126	3	R0.5	8	4	50	Figure 1
C2020100127	3	R1	8	4	50	Figure 1
C2020100128	4	R0.2	10	4	50	Figure 2
C2020100129	4	R0.2	10	4	75	Figure 2
C2020100130	4	R0.2	12	4	100	Figure 2
C2020100131	4	R0.5	10	4	50	Figure 2
C2020100132	4	R0.5	10	4	75	Figure 2
C2020100133	4	R0.5	12	4	100	Figure 2
C2020100134	4	R1	10	4	50	Figure 2
C2020100135	4	R1	10	4	75	Figure 2
C2020100136	4	R1	12	4	100	Figure 2
C2020100137	5	R0.5	13	6	50	Figure 1
C2020100138	5	R0.5	13	6	75	Figure 1
C2020100139	5	R0.5	15	6	100	Figure 1
C2020100140	5	R1	13	6	50	Figure 1
C2020100141	5	R1	13	6	75	Figure 1
C2020100142	5	R1	15	6	100	Figure 1
C2020100143	6	R0.5	15	6	50	Figure 2
C2020100144	6	R0.5	15	6	75	Figure 2
C2020100145	6	R0.5	18	6	100	Figure 2
C2020100146	6	R1	15	6	50	Figure 2
C2020100147	6	R1	15	6	75	Figure 2
C2020100148	6	R1	18	6	100	Figure 2
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C2020100150	8	R0.5	20	8	75	Figure 2
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C2020100157	10	R1	25	10	75	Figure 2
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C2020100159	10	R2	25	10	75	Figure 2
C2020100160	10	R2	30	10	100	Figure 2
C2020100161	12	R0.5	30	12	75	Figure 2
C2020100162	12	R0.5	36	12	100	Figure 2
C2020100163	12	R1	30	12	75	Figure 2
C2020100164	12	R1	36	12	100	Figure 2
C2020100165	12	R2	30	12	75	Figure 2
C2020100166	12	R2	36	12	100	Figure 2

Applicable Table for Processed Materials

● Very Suitable ○ Suitable

Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
●	●	●	○			○	●			○	○

GREWIN TOOLS

FM General Purpose End Mills — 4 Flutes Roughing End mill

FM-4W

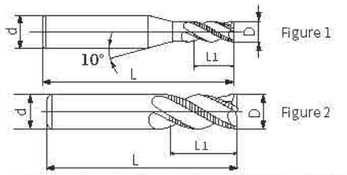
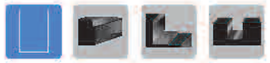


Figure 1

Figure 2



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C2020100169	6	15	6	50	Figure 2
C2020100170	8	20	8	60	Figure 2
C2020100171	10	25	10	756	Figure 2
C2020100172	12	30	12	75	Figure 2
C2020100173	14	42	14	100	Figure 2
C2020100174	16	45	16	100	Figure 2
C2020100175	18	45	18	100	Figure 2
C2020100176	20	45	20	100	Figure 2
C2020100177	4	12	4	75	Figure 2
C2020100178	6	18	6	75	Figure 2
C2020100179	8	24	8	75	Figure 2
C2020100180	10	30	10	100	Figure 2
C2020100181	12	36	12	100	Figure 2

Applicable Table for Processed Materials

● Very Suitable ○ Suitable

Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
●	●	●	○			○	●			○	○

GREWIN TOOLS

EM High Performance General Purpose End Mills

Groove profiles are tightly controlled to better improve chip flow and curl, as well as reduce cutting forces.

Special design of molding groove, under the same rigidity, the tool has more space for chip holding, which ensures that the tool can realize large depth of cut groove milling and adapt to various efficient machining conditions.

Scope of Application:

High vibration resistance structure, suitable for mold cavity milling, large cutting parameters processing corners without the need for speed reduction processing; high toughness base material and high rigidity structure, to achieve a large depth of cut ap = d slot milling; application of a new generation of coating technology to meet the dry cutting and water cooling under different cooling conditions, a variety of steel high efficiency and universal processing needs.

Preferred base materials with better versatility and wear resistance, high flexural strength, and meet the needs of efficient processing.

Substrate Coatings:

Preferred coating grades with lower coefficients of friction are especially suitable for processing viscous materials such as carbon steel, soft steel, and rusty steel.

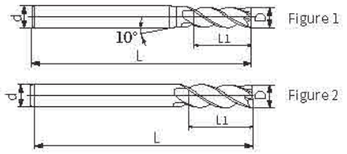
Non-standard size can be customized

GREWIN TOOLS

EM High Performance General Purpose End Mills — 4F Carbide Flat End Mill

EM-4E

Tip-protected type



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C2020100185	2.5	6	4	50	Figure 1
C2020100186	3	8	4	50	Figure 1
C2020100187	3.5	9	4	50	Figure 1
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C2020100189	4	10	4	75	Figure 2
C2020100190	4	12	4	100	Figure 2
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C2020100204	10	25	10	75	Figure 2
C2020100205	10	30	10	100	Figure 2
C2020100206	10	40	10	150	Figure 2
C2020100207	12	30	12	75	Figure 2
C2020100208	12	36	12	100	Figure 2
C2020100209	12	48	12	150	Figure 2
C2020100210	14	35	14	100	Figure 2
C2020100211	14	56	14	150	Figure 2
C2020100212	16	40	16	100	Figure 2
C2020100213	16	65	16	150	Figure 2
C2020100214	18	45	18	100	Figure 2
C2020100215	18	70	18	150	Figure 2
C2020100216	20	45	20	100	Figure 2
C2020100217	20	75	20	150	Figure 2

Applicable Table for Processed Materials

● Very Suitable ○ Suitable

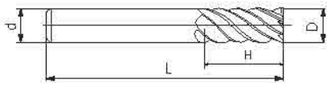
Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
●	●	●	●	○		○	●			○	○

GREWIN TOOLS

EM High Performance General Purpose End Mills — 4F Carbide Flat End Mill

EM-6E

Tip-protected type



Item Code	(D)	(L1)	(d h6)	(L)	(Z)
C2020100218	6	18	6	60	6
C2020100219	8	20	8	60	6
C2020100220	10	30	10	75	6
C2020100221	12	32	12	75	6
C2020100222	16	40	16	100	6
C2020100223	20	45	20	100	6
C2020100224	6	24	6	75	6
C2020100225	8	32	8	75	6
C2020100226	10	40	10	100	6
C2020100227	12	45	12	100	6
C2020100228	16	64	16	150	6
C2020100229	20	75	20	150	6

Applicable Table for Processed Materials

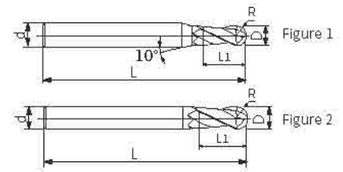
Very Suitable ○ Suitable

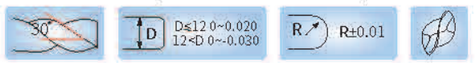
Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
●	●	●	●	○		○	●			○	○

GREWIN TOOLS

EM High Performance General Purpose End Mills — 2F Carbide Ballnose End Mill

EM-2B





Item Code	(R)	(L1)	(d h6)	(L)	Form
C2020100230	R0.5	2	4	50	Figure 1
C2020100231	R0.75	3	4	50	Figure 1
C2020100232	R1	4	4	50	Figure 1
C2020100233	R1.25	5	4	50	Figure 1
C2020100234	R1.5	6	4	50	Figure 1
C2020100235	R1.75	7	4	50	Figure 1
C2020100236	R2	8	4	50	Figure 2
C2020100237	R2	8	4	75	Figure 2
C2020100238	R2	8	4	100	Figure 2
C2020100239	R2.5	10	6	50	Figure 1
C2020100240	R2.5	10	6	75	Figure 1
C2020100241	R2.5	10	6	100	Figure 1
C2020100242	R3	12	6	50	Figure 2
C2020100243	R3	12	6	75	Figure 2
C2020100244	R3	12	6	100	Figure 2
C2020100245	R3	12	6	150	Figure 2
C2020100246	R4	16	8	60	Figure 2
C2020100247	R4	16	8	75	Figure 2
C2020100248	R4	16	8	100	Figure 2
C2020100249	R4	16	8	150	Figure 2
C2020100250	R5	20	10	75	Figure 2
C2020100251	R5	20	10	100	Figure 2
C2020100252	R5	20	10	150	Figure 2
C2020100253	R6	24	12	75	Figure 2
C2020100254	R6	24	12	100	Figure 2
C2020100255	R6	24	12	150	Figure 2
C2020100256	R7	28	14	100	Figure 2
C2020100257	R7	28	14	150	Figure 2
C2020100258	R8	32	16	100	Figure 2
C2020100259	R8	32	16	150	Figure 2
C2020100260	R9	36	18	100	Figure 2
C2020100261	R9	36	18	150	Figure 2
C2020100262	R10	40	20	100	Figure 2
C2020100263	R10	40	20	150	Figure 2

Applicable Table for Processed Materials

Very Suitable ○ Suitable

Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
●	●	●	●	○		○	●			○	○

GREWIN TOOLS

EM High Performance General Purpose End Mills

4F Carbide Ballnose End Mill

EM-4B

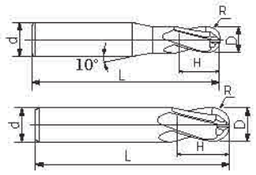


Figure 1

Figure 2

Item Code	(R)	(L1)	(d h6)	(L)	Form
C2020100264	R1	4	4	50	Figure 1
C2020100265	R1.25	5	4	50	Figure 1
C2020100266	R1.5	6	4	50	Figure 1
C2020100267	R1.75	7	4	50	Figure 1
C2020100268	R2	8	4	50	Figure 2
C2020100269	R2	8	4	75	Figure 2
C2020100270	R2	8	4	100	Figure 2
C2020100271	R2.5	10	6	50	Figure 1
C2020100272	R2.5	10	6	75	Figure 1
C2020100273	R2.5	10	6	100	Figure 1
C2020100274	R3	12	6	50	Figure 2
C2020100275	R3	12	6	75	Figure 2
C2020100276	R3	12	6	100	Figure 2
C2020100277	R3	12	6	150	Figure 2
C2020100278	R4	16	8	60	Figure 2
C2020100279	R4	16	8	75	Figure 2
C2020100280	R4	16	8	100	Figure 2
C2020100281	R4	16	8	150	Figure 2
C2020100282	R5	20	10	75	Figure 2
C2020100283	R5	20	10	100	Figure 2
C2020100284	R5	20	10	150	Figure 2
C2020100285	R6	24	12	75	Figure 2
C2020100286	R6	24	12	100	Figure 2
C2020100287	R6	24	12	150	Figure 2
C2020100288	R7	28	14	100	Figure 2
C2020100289	R7	28	14	150	Figure 2
C2020100290	R8	32	16	100	Figure 2
C2020100291	R8	32	16	150	Figure 2
C2020100292	R9	36	18	100	Figure 2
C2020100293	R9	36	18	150	Figure 2
C2020100294	R10	40	20	100	Figure 2
C2020100295	R10	40	20	150	Figure 2

Applicable Table for Processed Materials

Very Suitable ○ Suitable

Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
●	●	●	●	○		○	●			○	○

GREWIN TOOLS

EM High Performance General Purpose End Mills

4F Carbide Corner Radius End Mill

EM-4R

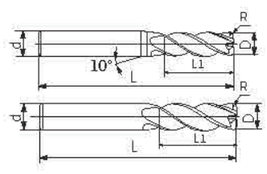
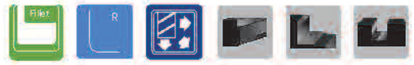


Figure 1

Figure 2



Item Code	(D)	(R)	(L1)	(d h6)	(L)	Form
C2020100296	1	R0.2	2.5	4	50	Figure 1
C2020100297	1.5	R0.2	4	4	50	Figure 1
C2020100298	2	R0.2	5	4	50	Figure 1
C2020100299	2	R0.5	5	4	50	Figure 1
C2020100300	2.5	R0.2	6	4	50	Figure 1
C2020100301	2.5	R0.5	6	4	50	Figure 1
C2020100302	3	R0.2	8	4	50	Figure 1
C2020100303	3	R0.5	8	4	50	Figure 1
C2020100304	3	R1	8	4	50	Figure 1
C2020100305	4	R0.2	10	4	50	Figure 2
C2020100306	4	R0.2	10	4	75	Figure 2
C2020100307	4	R0.2	12	4	100	Figure 2
C2020100308	4	R0.5	10	4	50	Figure 2
C2020100309	4	R0.5	10	4	75	Figure 2
C2020100310	4	R0.5	12	4	100	Figure 2
C2020100311	4	R1	10	4	50	Figure 2
C2020100312	4	R1	10	4	75	Figure 2
C2020100313	4	R1	12	4	100	Figure 2
C2020100314	5	R0.5	13	6	50	Figure 1
C2020100315	5	R0.5	13	6	75	Figure 1
C2020100316	5	R0.5	15	6	100	Figure 1
C2020100317	5	R1	13	6	50	Figure 1
C2020100318	5	R1	13	6	75	Figure 1
C2020100319	5	R1	15	6	100	Figure 1
C2020100320	6	R0.5	15	6	50	Figure 2
C2020100321	6	R0.5	15	6	75	Figure 2
C2020100322	6	R0.5	18	6	100	Figure 2
C2020100323	6	R1	15	6	50	Figure 2
C2020100324	6	R1	15	6	75	Figure 2
C2020100325	6	R1	18	6	100	Figure 2
C2020100326	8	R0.5	20	8	60	Figure 2
C2020100327	8	R0.5	20	8	75	Figure 2
C2020100328	8	R0.5	24	8	100	Figure 2
C2020100329	8	R1	20	8	60	Figure 2
C2020100330	8	R1	20	8	75	Figure 2
C2020100331	8	R1	24	8	100	Figure 2
C2020100332	10	R0.5	25	10	75	Figure 2
C2020100333	10	R0.5	30	10	100	Figure 2
C2020100334	10	R1	25	10	75	Figure 2
C2020100335	10	R1	30	10	100	Figure 2
C2020100336	10	R2	25	10	75	Figure 2
C2020100337	10	R2	30	10	100	Figure 2
C2020100338	12	R0.5	30	12	75	Figure 2
C2020100339	12	R0.5	36	12	100	Figure 2
C2020100340	12	R1	30	12	75	Figure 2
C2020100341	12	R1	36	12	100	Figure 2
C2020100342	12	R2	30	12	75	Figure 2
C2020100343	12	R2	36	12	100	Figure 2

Applicable Table for Processed Materials

Very Suitable ○ Suitable

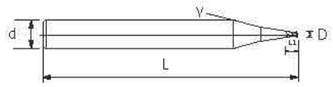
Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
●	●	●	●	○		○	●			○	○

GREWIN TOOLS

EM High Performance General Purpose End Mills

2F Carbide Microsize Flat End Mill

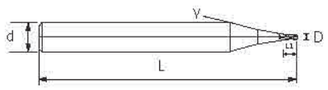
EM-2ES

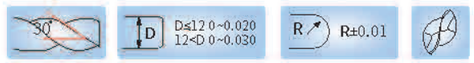


Item Code	(D)	(L1)	γ (Take as a Reference Value)	(d h6)	(L)
C2020100344	0.1	0.2	15°	4	50
C2020100345	0.15	0.3	15°	4	50
C2020100346	0.2	0.4	15°	4	50
C2020100347	0.25	0.5	15°	4	50
C2020100348	0.3	0.6	15°	4	50
C2020100349	0.35	0.7	15°	4	50
C2020100350	0.4	0.8	15°	4	50
C2020100351	0.45	0.9	15°	4	50
C2020100352	0.5	1.0	15°	4	50
C2020100353	0.55	1.1	15°	4	50
C2020100354	0.6	1.2	15°	4	50
C2020100355	0.65	1.3	15°	4	50
C2020100356	0.7	1.4	15°	4	50
C2020100357	0.75	1.5	15°	4	50
C2020100358	0.8	1.6	15°	4	50
C2020100359	0.85	1.7	15°	4	50
C2020100360	0.9	1.8	15°	4	50

2-flute straight shank micro-diameter ball nose end mill

EM-2BS





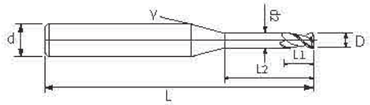
Item Code	(D)	(L1)	γ (Take as a Reference Value)	(d h6)	(L)
C2020100361	R0.05	0.15	15°	4	50
C2020100362	R0.075	0.2	15°	4	50
C2020100363	R0.1	0.3	15°	4	50
C2020100364	R0.15	0.45	15°	4	50
C2020100365	R0.2	0.6	15°	4	50
C2020100366	R0.25	0.8	15°	4	50
C2020100367	R0.3	0.9	15°	4	50
C2020100368	R0.35	1.1	15°	4	50
C2020100369	R0.4	1.2	15°	4	50
C2020100370	R0.45	1.4	15°	4	50

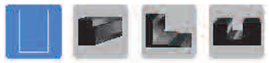
GREWIN TOOLS

EM High Performance General Purpose End Mills

2F Carbide Microsize deepth groove Flat End Mill

EM-2EP





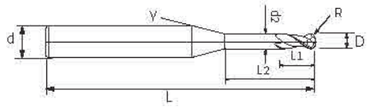
Item Code	(D)	(L2)	(L1)	(D2)	γ (Take as a Reference Value)	(d h6)	(L)
C2020100371	0.1	0.3	0.1	0.085	15°	4	50
C2020100372	0.1	0.5	0.1	0.085	15°	4	50
C2020100373	0.1	0.8	0.1	0.085	15°	4	50
C2020100374	0.1	1	0.1	0.085	15°	4	50
C2020100375	0.15	0.5	0.15	0.13	15°	4	50
C2020100376	0.15	1	0.15	0.13	15°	4	50
C2020100377	0.2	1	0.2	0.18	15°	4	50
C2020100378	0.2	1.5	0.2	0.18	12°	4	50
C2020100379	0.2	2	0.2	0.18	12°	4	50
C2020100380	0.2	3	0.2	0.18	12°	4	50
C2020100381	0.2	4	0.2	0.18	12°	4	50
C2020100382	0.3	1	0.3	0.27	12°	4	50
C2020100383	0.3	1.5	0.3	0.27	12°	4	50
C2020100384	0.3	2	0.3	0.27	12°	4	50
C2020100385	0.3	3	0.3	0.27	12°	4	50
C2020100386	0.3	4	0.3	0.27	12°	4	50
C2020100387	0.3	5	0.3	0.27	12°	4	50
C2020100388	0.4	1.5	0.4	0.37	12°	4	50
C2020100389	0.4	2	0.4	0.37	12°	4	50
C2020100390	0.4	3	0.4	0.37	12°	4	50
C2020100391	0.4	4	0.4	0.37	12°	4	50
C2020100392	0.4	5	0.4	0.37	12°	4	50
C2020100393	0.4	6	0.4	0.37	12°	4	50
C2020100394	0.5	2	0.5	0.46	12°	4	50
C2020100395	0.5	3	0.5	0.46	12°	4	50
C2020100396	0.5	4	0.5	0.46	12°	4	50
C2020100397	0.5	5	0.5	0.46	12°	4	50
C2020100398	0.5	6	0.5	0.46	12°	4	50
C2020100399	0.5	8	0.5	0.46	12°	4	50
C2020100400	0.5	10	0.5	0.46	12°	4	50
C2020100401	0.6	2	0.6	0.56	12°	4	50
C2020100402	0.6	3	0.6	0.56	12°	4	50
C2020100403	0.6	4	0.6	0.56	12°	4	50
C2020100404	0.6	5	0.6	0.56	12°	4	50
C2020100405	0.6	6	0.6	0.56	12°	4	50
C2020100406	0.6	8	0.6	0.56	12°	4	50
C2020100407	0.6	10	0.6	0.56	12°	4	50
C2020100408	0.7	2	0.7	0.66	12°	4	50
C2020100409	0.7	3	0.7	0.66	12°	4	50
C2020100410	0.7	4	0.7	0.66	12°	4	50
C2020100411	0.7	5	0.7	0.66	12°	4	50
C2020100412	0.7	6	0.7	0.66	12°	4	50
C2020100413	0.7	8	0.7	0.66	12°	4	50
C2020100414	0.7	10	0.7	0.66	12°	4	50
C2020100415	0.8	2	0.8	0.76	12°	4	50
C2020100416	0.8	3	0.8	0.76	12°	4	50
C2020100417	0.8	4	0.8	0.76	12°	4	50
C2020100418	0.8	5	0.8	0.76	12°	4	50
C2020100419	0.8	6	0.8	0.76	12°	4	50
C2020100420	0.8	8	0.8	0.76	12°	4	50
C2020100421	0.8	10	0.8	0.76	12°	4	50

GREWIN TOOLS

EM High Performance General Purpose End Mills

2F Carbide Microsize deepth groove Ballnose End Mill

EM-2BP



Item Code	(R)	(L2)	(L1)	(D h9)	γ (Take as a Reference Value)	(d h6)	(L)
C2020100422	R0.05	0.3	0.1	0.085	15°	4	50
C2020100423	R0.05	0.5	0.1	0.085	15°	4	50
C2020100424	R0.05	0.8	0.1	0.085	15°	4	50
C2020100425	R0.05	1	0.1	0.085	15°	4	50
C2020100426	R0.075	0.5	0.15	0.13	15°	4	50
C2020100427	R0.075	1	0.15	0.13	15°	4	50
C2020100428	R0.1	1	0.2	0.18	15°	4	50
C2020100429	R0.1	1.5	0.2	0.18	12°	4	50
C2020100430	R0.1	2	0.2	0.18	12°	4	50
C2020100431	R0.1	3	0.2	0.18	12°	4	50
C2020100432	R0.15	1	0.3	0.27	12°	4	50
C2020100433	R0.15	1.5	0.3	0.27	12°	4	50
C2020100434	R0.15	2	0.3	0.27	12°	4	50
C2020100435	R0.15	3	0.3	0.27	12°	4	50
C2020100436	R0.15	4	0.3	0.27	12°	4	50
C2020100437	R0.15	5	0.3	0.27	12°	4	50
C2020100438	R0.2	1.5	0.4	0.37	12°	4	50
C2020100439	R0.2	2	0.4	0.37	12°	4	50
C2020100440	R0.2	3	0.4	0.37	12°	4	50
C2020100441	R0.2	4	0.4	0.37	12°	4	50
C2020100442	R0.2	5	0.4	0.37	12°	4	50
C2020100443	R0.2	6	0.4	0.37	12°	4	50
C2020100444	R0.25	2	0.5	0.46	12°	4	50
C2020100445	R0.25	3	0.5	0.46	12°	4	50
C2020100446	R0.25	4	0.5	0.46	12°	4	50
C2020100447	R0.25	5	0.5	0.46	12°	4	50
C2020100448	R0.25	6	0.5	0.46	12°	4	50
C2020100449	R0.25	8	0.5	0.46	12°	4	50
C2020100450	R0.3	2	0.6	0.56	12°	4	50
C2020100451	R0.3	3	0.6	0.56	12°	4	50
C2020100452	R0.3	4	0.6	0.56	12°	4	50
C2020100453	R0.3	5	0.6	0.56	12°	4	50
C2020100454	R0.3	6	0.6	0.56	12°	4	50
C2020100455	R0.3	8	0.6	0.56	12°	4	50
C2020100456	R0.3	10	0.6	0.56	12°	4	50
C2020100457	R0.4	2	0.8	0.76	12°	4	50
C2020100458	R0.4	3	0.8	0.76	12°	4	50
C2020100459	R0.4	4	0.8	0.76	12°	4	50
C2020100460	R0.4	5	0.8	0.76	12°	4	50
C2020100461	R0.4	6	0.8	0.76	12°	4	50
C2020100462	R0.4	8	0.8	0.76	12°	4	50
C2020100463	R0.4	10	0.8	0.76	12°	4	50

GREWIN TOOLS

DM High Efficiency End Mills

Efficient and heavy cuts

Suitable for large cutting and high feed side milling and slotting of general-purpose steel parts, stainless steel, titanium high-temperature alloys, and fusible alloys.

Violent roughing

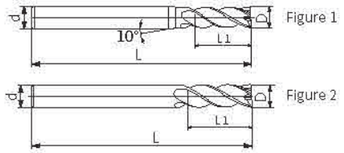
Enables rough machining with high metal removal capacity to finish machining with high precision and surface quality.

Non-standard size can be customized

GREWIN TOOLS

DM High Efficiency End Mills — 4F Carbide Flat End Mill

DM-4E



Item Code	(D)	(L1)	(d h6)	(L)	Form
C2020100464	1	3	4	50	Figure 1
C2020100465	1.5	4.5	4	50	Figure 1
C2020100466	2	6	4	50	Figure 1
C2020100467	2.5	7.5	4	50	Figure 1
C2020100468	3	9	4	50	Figure 1
C2020100469	3.5	10.5	4	50	Figure 1
C2020100470	4	12	4	50	Figure 2
C2020100471	4	12	4	75	Figure 2
C2020100472	4	16	4	100	Figure 2
C2020100473	5	15	6	50	Figure 1
C2020100474	5	15	6	75	Figure 1
C2020100475	5	20	6	100	Figure 1
C2020100476	6	18	6	50	Figure 2
C2020100477	6	18	6	75	Figure 2
C2020100478	6	24	6	100	Figure 2
C2020100479	7	21	8	60	Figure 1
C2020100480	7	21	8	75	Figure 1
C2020100481	7	28	8	100	Figure 1
C2020100482	8	24	8	60	Figure 2
C2020100483	8	24	8	75	Figure 2
C2020100484	8	32	8	100	Figure 2
C2020100485	8	40	8	150	Figure 2
C2020100486	10	30	10	75	Figure 2
C2020100487	10	40	10	100	Figure 2
C2020100488	10	50	10	150	Figure 2
C2020100489	10	80	10	200	Figure 2
C2020100490	12	36	12	75	Figure 2
C2020100491	12	45	12	100	Figure 2
C2020100492	12	60	12	150	Figure 2
C2020100493	12	80	12	200	Figure 2
C2020100494	14	45	14	100	Figure 2
C2020100495	14	70	14	150	Figure 2
C2020100496	14	100	14	200	Figure 2
C2020100497	16	45	16	100	Figure 2
C2020100498	16	75	16	150	Figure 2
C2020100499	16	100	16	200	Figure 2
C2020100500	18	45	18	100	Figure 2
C2020100501	18	75	18	150	Figure 2
C2020100502	18	100	18	200	Figure 2
C2020100503	20	45	20	100	Figure 2
C2020100504	20	75	20	150	Figure 2
C2020100505	20	100	20	200	Figure 2

Applicable Table for Processed Materials

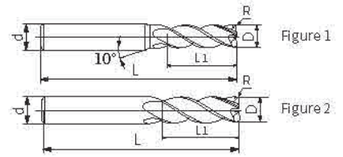
● Very Suitable ○ Suitable

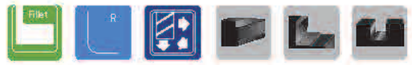
Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
●	●	●	○			○	●			○	○

GREWIN TOOLS

DM High Efficiency End Mills — 4F Carbide Corner Radius End Mill

DM-4R





Item Code	(D)	(R)	(L1)	(d h6)	(L)	Form
C2020100506	1	R0.2	2.5	4	50	Figure 1
C2020100507	1.5	R0.2	4	4	50	Figure 1
C2020100508	2	R0.2	5	4	50	Figure 1
C2020100509	2	R0.5	5	4	50	Figure 1
C2020100510	2.5	R0.2	6	4	50	Figure 1
C2020100511	2.5	R0.5	6	4	50	Figure 1
C2020100512	3	R0.2	8	4	50	Figure 1
C2020100513	3	R0.5	8	4	50	Figure 1
C2020100514	3	R1.0	8	4	50	Figure 1
C2020100515	4	R0.2	10	4	50	Figure 2
C2020100516	4	R0.2	10	4	75	Figure 2
C2020100517	4	R0.2	12	4	100	Figure 2
C2020100518	4	R0.5	10	4	50	Figure 2
C2020100519	4	R0.5	10	4	75	Figure 2
C2020100520	4	R0.5	12	4	100	Figure 2
C2020100521	4	R1.0	10	4	50	Figure 2
C2020100522	4	R1.0	10	4	75	Figure 2
C2020100523	4	R1.0	12	4	100	Figure 2
C2020100524	5	R0.5	13	6	50	Figure 1
C2020100525	5	R0.5	13	6	75	Figure 1
C2020100526	5	R0.5	15	6	100	Figure 1
C2020100527	5	R1.0	13	6	50	Figure 1
C2020100528	5	R1.0	13	6	75	Figure 1
C2020100529	5	R1.0	15	6	100	Figure 1
C2020100530	6	R0.5	15	6	50	Figure 2
C2020100531	6	R0.5	15	6	75	Figure 2
C2020100532	6	R0.5	18	6	100	Figure 2
C2020100533	6	R1.0	15	6	50	Figure 2
C2020100534	6	R1.0	15	6	75	Figure 2
C2020100535	6	R1.0	18	6	100	Figure 2
C2020100536	8	R0.5	20	8	60	Figure 2
C2020100537	8	R0.5	20	8	75	Figure 2
C2020100538	8	R0.5	24	8	100	Figure 2
C2020100539	8	R1.0	20	8	60	Figure 2
C2020100540	8	R1.0	20	8	75	Figure 2
C2020100541	8	R1.0	24	8	100	Figure 2
C2020100542	10	R0.5	25	10	75	Figure 2
C2020100543	10	R0.5	30	10	100	Figure 2
C2020100544	10	R1.0	25	10	75	Figure 2
C2020100545	10	R1.0	30	10	100	Figure 2
C2020100546	10	R2.0	25	10	75	Figure 2
C2020100547	10	R2.0	30	10	100	Figure 2
C2020100548	12	R0.5	30	12	75	Figure 2
C2020100549	12	R0.5	36	12	100	Figure 2
C2020100550	12	R1.0	30	12	75	Figure 2
C2020100551	12	R1.0	36	12	100	Figure 2
C2020100552	12	R2.0	30	12	75	Figure 2
C2020100553	12	R2.0	36	12	100	Figure 2

Applicable Table for Processed Materials

● Very Suitable ○ Suitable

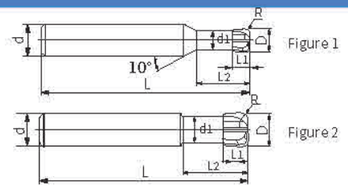
Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
●	●	●	○			○	●			○	○

GREWIN TOOLS

DM High Efficiency End Mills

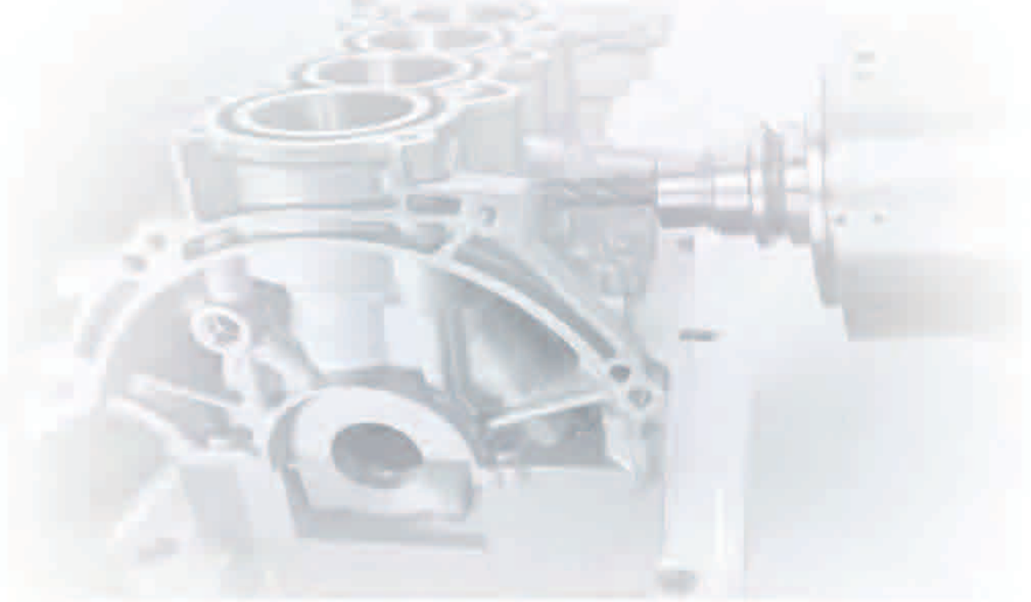
4F large feed End Mill

DM-4H



D 0~-0.030

Item Code	(D)	(R)	(d)	(d1)	(L1)	(L2)	(L)	(Z)
C2020100554	3.0	0.8	6	2.7	1.2	8.0	50	4
C2020100555	4.0	1.0	6	3.6	1.6	10.0	50	4
C2020100556	5.0	1.2	6	4.5	2	12.5	50	4
C2020100557	6.0	1.0	6	5.4	2.5	12.0	50	4
C2020100558	6.0	1.5	6	5.4	2.5	12.0	50	4
C2020100559	8.0	1.0	8	7.0	3.5	16.0	60	4
C2020100560	8.0	2.0	8	7.0	3.5	16.0	60	4
C2020100561	10.0	1.0	10	9.0	4.0	20.0	75	4
C2020100562	10.0	2.0	10	9.0	4.0	20.0	75	4
C2020100563	12.0	2.0	12	11.0	5.0	24.0	75	4
C2020100564	12.0	3.0	12	11.0	5.0	24.0	75	4



Applicable Table for Processed Materials ●Very Suitable ○Suitable

Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
●	●	●	○			○	●			○	○

GREWIN TOOLS

DLC Machining End Mills for Aluminum

Sharp cutting edges and large helix angle design effectively prevent the generation of chip tumors.

Unique chipformer shape provides excellent performance even in groove and cavity machining.

The anti-vibration design of the full cutting edge can inhibit chattering during machining and improve the surface quality of machining.

Tool model: GW-D6.0

Size: 6.0MM

Material to be processed: LC4

Speed: 13000R/MIN (250M/MIN)

Axial depth of cut: 1950MM/MIN(0.15MM/R)

Axial depth of cut: AP=9.0MM

Radial depth of cut: AE=1.0MM

Cutting method: complex cavity machining

Cooling method: air-cooled

Machining center: MIKRONUCP1000

Machining of even complex thin-walled cavity parts can be easily accomplished.

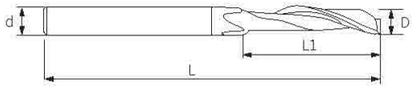
Non-standard size can be customized

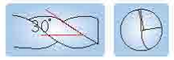
GREWIN TOOLS

DLC Machining End Mills for Aluminum

Single Edge Milling Cutter for Aluminum Profile Processing

DLC-1E





Item Code	(D)	(L1)	(d)	(L)
C2020100565	3.175	12	3.175	38
C2020100566	3.175	15	3.175	38
C2020100567	3.175	17	3.175	38
C2020100568	3.175	22	3.175	45
C2020100569	4	12	4	50
C2020100570	4	17	4	50
C2020100571	4	22	4	50
C2020100572	4	25	4	50
C2020100573	6	17	6	50
C2020100574	6	22	6	50
C2020100575	6	25	6	50
C2020100576	8	25	8	60
C2020100577	8	32	8	60
C2020100578	10	32	10	75
C2020100579	12	32	12	75

Applicable Table for Processed Materials ● Very Suitable ○ Suitable

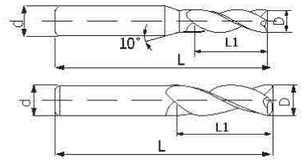
Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
								●	●		

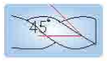
GREWIN TOOLS

DLC Machining End Mills for Aluminum

Colorful three-flute U-flute aluminum end mills

DLC-3E





Item Code	(D9)	(L1)	(d h6)	(L)	(z)	Form
C2020100580	1	3	4	50	3	Figure 1
C2020100581	1.5	4.5	4	50	3	Figure 1
C2020100582	2	6	4	50	3	Figure 1
C2020100583	2.5	7.5	4	50	3	Figure 1
C2020100584	3	9	4	50	3	Figure 1
C2020100585	3.5	10.5	4	50	3	Figure 1
C2020100586	4	12	4	50	3	Figure 2
C2020100587	5	15	6	50	3	Figure 1
C2020100588	6	18	6	50	3	Figure 2
C2020100589	7	21	8	60	3	Figure 1
C2020100590	8	24	8	60	3	Figure 2
C2020100591	9	27	10	75	3	Figure 2
C2020100592	10	30	10	75	3	Figure 2
C2020100593	11	33	12	75	3	Figure 1
C2020100594	12	36	12	75	3	Figure 2
C2020100595	14	45	14	100	3	Figure 2
C2020100596	16	45	16	100	3	Figure 2
C2020100597	18	45	18	100	3	Figure 2
C2020100598	20	45	20	100	3	Figure 2
C2020100599	4	12	4	75	3	Figure 2
C2020100600	6	18	6	75	3	Figure 2
C2020100601	8	24	8	75	3	Figure 2
C2020100602	4	16	4	100	3	Figure 2
C2020100603	6	24	6	100	3	Figure 2
C2020100604	8	32	8	100	3	Figure 2
C2020100605	10	40	10	100	3	Figure 2
C2020100606	12	45	12	100	3	Figure 2
C2020100607	8	40	8	150	3	Figure 2
C2020100608	10	50	10	150	3	Figure 2
C2020100609	12	60	12	150	3	Figure 2
C2020100610	14	70	14	150	3	Figure 2
C2020100611	16	75	16	150	3	Figure 2
C2020100612	18	75	18	150	3	Figure 2
C2020100613	20	75	20	150	3	Figure 2

Applicable Table for Processed Materials ● Very Suitable ○ Suitable

Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
								●	●		

GREWIN TOOLS

DLC Machining End Mills for Aluminum

Colorful 2-Edge Aluminum Ball Cutter

DLC-2B

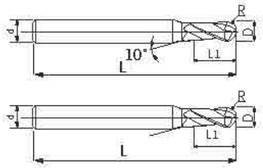


Figure 1

Figure 2

Item Code	(R)	(L1)	(d h6)	(L)	Form
C2020100716	R0.5	2	4	50	Figure 1
C2020100717	R0.75	3	4	50	Figure 1
C2020100718	R1	4	4	50	Figure 1
C2020100719	R1.25	5	4	50	Figure 1
C2020100720	R1.5	6	4	50	Figure 1
C2020100721	R1.75	7	4	50	Figure 1
C2020100722	R2	8	4	50	Figure 2
C2020100723	R2	8	4	75	Figure 2
C2020100724	R2	8	4	100	Figure 2
C2020100725	R2.5	10	6	50	Figure 1
C2020100726	R2.5	10	6	75	Figure 1
C2020100727	R2.5	10	6	100	Figure 1
C2020100728	R3	12	6	50	Figure 2
C2020100729	R3	12	6	75	Figure 2
C2020100730	R3	12	6	100	Figure 2
C2020100731	R3	12	6	150	Figure 2
C2020100732	R4	16	8	60	Figure 2
C2020100733	R4	16	8	75	Figure 2
C2020100734	R4	16	8	100	Figure 2
C2020100735	R4	16	8	150	Figure 2
C2020100736	R5	20	10	75	Figure 2
C2020100737	R5	20	10	100	Figure 2
C2020100738	R5	20	10	150	Figure 2
C2020100739	R6	24	12	75	Figure 2
C2020100740	R6	24	12	100	Figure 2
C2020100741	R6	24	12	150	Figure 2
C2020100742	R7	28	14	100	Figure 2
C2020100743	R7	28	14	150	Figure 2
C2020100744	R8	32	16	100	Figure 2
C2020100745	R8	32	16	150	Figure 2
C2020100746	R9	36	18	100	Figure 2
C2020100747	R9	36	18	150	Figure 2
C2020100748	R10	40	20	100	Figure 2
C2020100749	R10	40	20	150	Figure 2

Applicable Table for Processed Materials

Very Suitable ○ Suitable

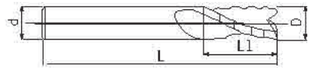
Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
								○	○		

GREWIN TOOLS

DLC Machining End Mills for Aluminum

Wave Flute End Mills for Aluminum

DLC-3W



Item Code	(D)	(L1)	(d h6)	(L)	(Z)
C2020100750	4	10	4	50	3
C2020100751	5	13	6	50	3
C2020100752	6	15	6	50	3
C2020100753	8	20	8	60	3
C2020100754	10	25	10	75	3
C2020100755	12	30	12	75	3
C2020100756	14	42	14	100	3
C2020100757	16	45	16	100	3
C2020100758	18	45	18	100	3
C2020100759	20	45	20	100	3
C2020100760	4	12	4	75	3
C2020100761	6	18	6	75	3
C2020100762	8	24	8	75	3
C2020100763	10	30	10	100	3
C2020100764	12	36	12	100	3

Applicable Table for Processed Materials

Very Suitable ○ Suitable

Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
								○	○		

GREWIN TOOLS

Machining End Mills for Titanium Stainless Steel

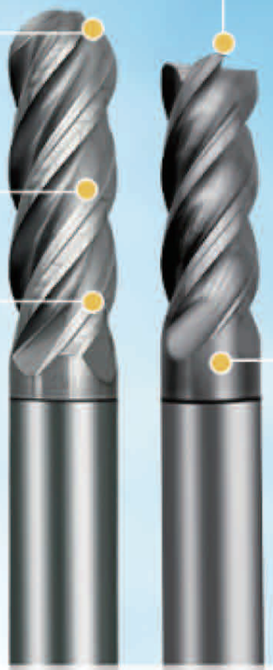
Polished front and rear cutting surfaces, better tool surface finish, reduced friction, lower cutting force and temperature, reduced bond wear;

The special edge treatment process can effectively reduce cutting adhesion, delay tool wear, and significantly increase service life.

Unequal helix, unequal tooth pitch structure, greatly improve the vibration resistance of the tool, can effectively inhibit cutting vibration, enhance the machining surface finish;

Substrates and coatings for better versatility and wear resistance

Unique groove design, taking into account the rigidity of the tool and chip space, can realize pendulum milling, large feed machining conditions.



LONGER TOOL LIFE

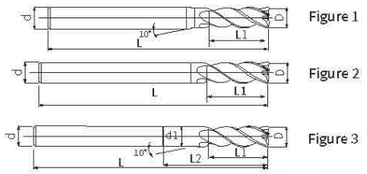
Processed parts: Bracket parts
Processing material: TC4
Cutter: GW - D16.0R0.5
Cutting parameters:
S=720r/min,
F=128~160mm/min
ap=13~15.3mm
ae=8~16mm
Machining center: Gantry milling machine
Machining method: slot milling, side milling
Cooling method: emulsion

Comparison results: our milling cutter processing 6 pieces of A company products only 5 pieces.

GREWIN TOOLS

TM Machining End Mills for Titanium, Stainless Steel — Four-flute unequal helix angle end mills

TM-4E



Item Code	(D)	(L1)	(d h6)	(L)	(d1)	(L2)	Form
C2020100765	3	7.5	4	50	/	/	Figure 1
C2020100766	4	10	4	50	/	/	Figure 2
C2020100767	5	13	5	50	/	/	Figure 2
C2020100768	5	13	6	50	/	/	Figure 1
C2020100769	6	15	6	50	/	/	Figure 2
C2020100770	8	20	8	60	/	/	Figure 2
C2020100771	10	25	10	75	/	/	Figure 2
C2020100772	12	30	12	75	/	/	Figure 2
C2020100773	14	35	14	100	/	/	Figure 2
C2020100774	16	40	16	100	/	/	Figure 2
C2020100775	18	40	18	100	/	/	Figure 2
C2020100776	20	45	20	100	/	/	Figure 2
C2020100777	4	10	4	75	/	/	Figure 2
C2020100778	6	15	6	75	/	/	Figure 2
C2020100779	8	20	8	75	/	/	Figure 2
C2020100780	4	12	4	100	/	/	Figure 2
C2020100781	6	18	6	100	/	/	Figure 2
C2020100782	8	24	8	100	/	/	Figure 2
C2020100783	10	30	10	100	/	/	Figure 2
C2020100784	12	36	12	100	/	/	Figure 2
C2020100785	6	18	6	150	5.8	30	Figure 3
C2020100786	8	24	8	150	7.8	40	Figure 3
C2020100787	10	30	10	150	9.8	50	Figure 3
C2020100788	12	36	12	150	11.8	60	Figure 3
C2020100789	14	42	14	150	13.8	70	Figure 3
C2020100790	16	48	16	150	15.8	80	Figure 3
C2020100791	18	54	18	150	17.8	90	Figure 3
C2020100792	20	60	20	150	19.8	100	Figure 3

Applicable Table for Processed Materials

● Very Suitable ○ Suitable

Processed Material										
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
						●				●	

GREWIN TOOLS

TM Machining End Mills for Titanium, Stainless Steel

4-Flute Unequal Helix Angle Round Nose End Mills

TM-4R

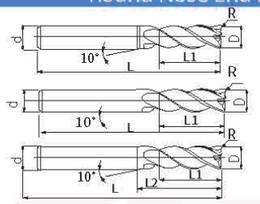
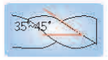
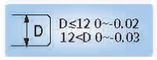


Figure 1

Figure 2

Figure 3





Item Code	(D)	(L1)	(d h6)	(L)	(R)	(d1)	(L2)	Form
C2020100793	3	7.5	4	50	R0.5	/	/	Figure 1
C2020100794	4	10	4	50	R0.5	/	/	Figure 2
C2020100795	4	10	4	50	R1	/	/	Figure 2
C2020100796	5	13	5	50	R0.5	/	/	Figure 2
C2020100797	5	13	5	50	R1	/	/	Figure 2
C2020100798	5	13	5	50	R0.5	/	/	Figure 1
C2020100799	5	13	5	50	R1	/	/	Figure 1
C2020100800	6	15	6	50	R0.5	/	/	Figure 2
C2020100801	6	15	6	50	R1	/	/	Figure 2
C2020100802	8	20	8	60	R0.5	/	/	Figure 2
C2020100803	8	20	8	60	R1	/	/	Figure 2
C2020100804	8	20	8	60	R2	/	/	Figure 2
C2020100805	10	25	10	75	R0.5	/	/	Figure 2
C2020100806	10	25	10	75	R1	/	/	Figure 2
C2020100807	10	25	10	75	R2	/	/	Figure 2
C2020100808	12	30	12	75	R0.5	/	/	Figure 2
C2020100809	12	30	12	75	R1	/	/	Figure 2
C2020100810	12	30	12	75	R2	/	/	Figure 2
C2020100811	14	35	14	100	R0.5	/	/	Figure 2
C2020100812	14	35	14	100	R1	/	/	Figure 2
C2020100813	14	35	14	100	R2	/	/	Figure 2
C2020100814	16	40	16	100	R0.5	/	/	Figure 2
C2020100815	16	40	16	100	R1	/	/	Figure 2
C2020100816	16	40	16	100	R2	/	/	Figure 2
C2020100817	18	40	18	100	R0.5	/	/	Figure 2
C2020100818	18	40	18	100	R1	/	/	Figure 2
C2020100819	18	40	18	100	R2	/	/	Figure 2
C2020100820	20	45	20	100	R0.5	/	/	Figure 2
C2020100821	20	45	20	100	R1	/	/	Figure 2
C2020100822	20	45	20	100	R2	/	/	Figure 2
C2020100823	4	10	4	75	R0.5	/	/	Figure 2
C2020100824	4	10	4	75	R1	/	/	Figure 2
C2020100825	6	15	6	75	R0.5	/	/	Figure 2
C2020100826	6	15	6	75	R1	/	/	Figure 2
C2020100827	8	20	8	75	R0.5	/	/	Figure 2
C2020100828	8	20	8	75	R1	/	/	Figure 2
C2020100829	8	20	8	75	R2	/	/	Figure 2
C2020100830	4	12	4	100	R0.5	/	/	Figure 2
C2020100831	4	12	4	100	R1	/	/	Figure 2
C2020100832	6	18	6	100	R0.5	/	/	Figure 2
C2020100833	6	18	6	100	R1	/	/	Figure 2
C2020100834	8	24	8	100	R0.5	/	/	Figure 2
C2020100835	8	24	8	100	R1	/	/	Figure 2
C2020100836	8	24	8	100	R2	/	/	Figure 2
C2020100837	10	30	10	100	R0.5	/	/	Figure 2
C2020100838	10	30	10	100	R1	/	/	Figure 2
C2020100839	10	30	10	100	R2	/	/	Figure 2
C2020100840	12	36	12	100	R0.5	/	/	Figure 2
C2020100841	12	36	12	100	R1	/	/	Figure 2
C2020100842	12	36	12	100	R2	/	/	Figure 2
C2020100843	6	18	6	150	R0.5	5.8	90	Figure 3
C2020100844	6	18	6	150	R1	5.8	90	Figure 3
C2020100845	8	24	8	150	R2	7.8	40	Figure 3
C2020100846	8	24	8	150	R0.5	7.8	40	Figure 3
C2020100847	8	24	8	150	R1	7.8	40	Figure 3
C2020100848	10	30	10	150	R0.5	9.8	50	Figure 3
C2020100849	10	30	10	150	R1	9.8	50	Figure 3
C2020100850	10	30	10	150	R2	9.8	50	Figure 3
C2020100851	12	36	12	150	R0.5	11.8	60	Figure 3
C2020100852	12	36	12	150	R1	11.8	60	Figure 3
C2020100853	12	36	12	150	R2	11.8	60	Figure 3
C2020100854	14	42	14	150	R0.5	13.8	70	Figure 3
C2020100855	14	42	14	150	R1	13.8	70	Figure 3
C2020100856	14	42	14	150	R2	13.8	70	Figure 3
C2020100857	16	48	16	150	R0.5	15.8	80	Figure 3
C2020100858	16	48	16	150	R1	15.8	80	Figure 3
C2020100859	16	48	16	150	R2	15.8	80	Figure 3
C2020100860	18	54	18	150	R0.5	17.8	90	Figure 3
C2020100861	18	54	18	150	R1	17.8	90	Figure 3
C2020100862	18	54	18	150	R2	17.8	90	Figure 3
C2020100863	20	60	20	150	R0.5	19.8	100	Figure 3
C2020100864	20	60	20	150	R1	19.8	100	Figure 3
C2020100865	20	60	20	150	R2	19.8	100	Figure 3

Applicable Table for Processed Materials

Very Suitable ○ Suitable

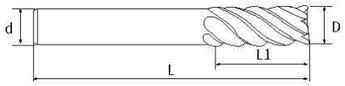
Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
						○				○	

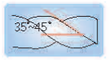
GREWIN TOOLS

TM Machining End Mills for Titanium, Stainless Steel

Five flute straight shank round nose end mills

TM-5R





Item Code	(D)	(R)	(L1)	(d h6)	(L)
C2020100866	6	0.2	15	6	50
C2020100867	6	0.5	15	6	50
C2020100868	6	1	15	6	50
C2020100869	8	0.2	20	8	60
C2020100870	8	0.5	20	8	60
C2020100871	8	1	20	8	60
C2020100872	10	0.5	25	10	75
C2020100873	10	1	25	10	75
C2020100874	10	2	25	10	75
C2020100875	12	0.5	30	12	75
C2020100876	12	1	30	12	75
C2020100877	12	2	30	12	75
C2020100878	14	0.5	35	14	100
C2020100879	14	1	35	14	100
C2020100880	14	2	35	14	100
C2020100881	14	3	35	14	100
C2020100882	16	1	40	16	100
C2020100883	16	2	40	16	100
C2020100884	16	3	40	16	100
C2020100885	16	4	40	16	100
C2020100886	20	1	45	20	100
C2020100887	20	2	45	20	100
C2020100888	20	3	45	20	100
C2020100889	20	4	45	20	100
C2020100890	25	1	50	25	110
C2020100891	25	2	50	25	110
C2020100892	25	3	50	25	110
C2020100893	25	4	50	25	110
C2020100894	25	5	50	25	110

Applicable Table for Processed Materials

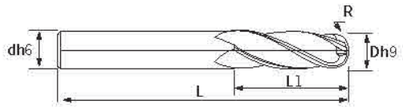
Very Suitable ○ Suitable

Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
						○				○	

TM Machining End Mills for Titanium, Stainless Steel

Four-flute unequal helix angle ball end mills

TM-4B



Item Code	(D)	(R)	(L1)	(d h6)	(L)	(d1)	(L2)
C2020100895	3	R1.5	6	4	50	/	/
C2020100896	4	R2	8	4	50	/	/
C2020100897	5	R2.5	10	5	50	/	/
C2020100898	5	R2.5	10	6	50	/	/
C2020100899	6	R3	12	6	50	/	/
C2020100900	8	R4	16	8	60	/	/
C2020100901	10	R5	20	10	75	/	/
C2020100902	12	R6	24	12	75	/	/
C2020100903	14	R7	28	14	100	/	/
C2020100904	16	R8	32	16	100	/	/
C2020100905	18	R9	36	18	100	/	/
C2020100906	20	R10	40	20	100	/	/
C2020100907	4	R2	8	4	75	/	/
C2020100908	6	R3	12	6	75	/	/
C2020100909	8	R4	16	8	75	/	/
C2020100910	4	R2	8	4	100	/	/
C2020100911	6	R3	12	6	100	/	/
C2020100912	8	R4	16	8	100	/	/
C2020100913	10	R5	20	10	100	/	/
C2020100914	12	R6	24	12	100	/	/
C2020100915	6	R3	12	6	150	5.8	30
C2020100916	8	R4	16	8	150	7.8	40
C2020100917	10	R5	20	10	150	9.8	50
C2020100918	12	R6	24	12	150	11.8	60
C2020100919	14	R7	28	14	150	13.8	70
C2020100920	16	R8	32	16	150	15.8	80
C2020100921	18	R9	36	18	150	17.8	90
C2020100922	20	R10	40	20	150	19.8	100

Applicable Table for Processed Materials

Very Suitable ○ Suitable

Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
						●				●	

TM Machining End Mills for Titanium, Stainless Steel

Four-flute unequal helix angle ball end mills

TM-4BTAP

Figure 1

Figure 2

Item Code	(R)	(α°)	(L1)	(d)	(L)	Form
C2020100923	1.5	4	23	6	75	Figure 1
C2020100924	1.5	4	8	8	80	Figure 2
C2020100925	2	3	10	8	80	Figure 2
C2020100926	2	4	15	10	100	Figure 2
C2020100927	3	3	15	10	100	Figure 2
C2020100928	3	4	15	12	100	Figure 2
C2020100929	4	3	15	12	100	Figure 2
C2020100930	4	4	20	16	120	Figure 2

Applicable Table for Processed Materials

Very Suitable ○ Suitable

Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
						●				●	

GREWIN TOOLS

SM machining end mills for high temperature alloy

- The large helix angle and rake angle design, sharp cutting edge, and unique shape of cutting edge can suppress the influence of cutting heat on the tip, significantly improving wear resistance and anti-abrasion performance.
- The coating with good heat resistance enables stable processing even at high temperatures.
- It is the most suitable for processing difficult-to-machine materials such as high-temperature alloys.

Non-standard size can be customized

GREWIN TOOLS

SM machining end mills for high temperature alloy

4 flutes straight shank corner radius end mills

SM-4R

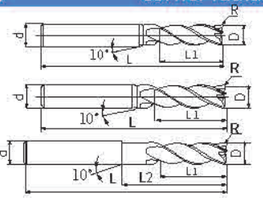
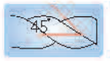
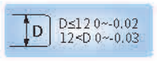


Figure 1

Figure 2

Figure 3





Item Code	(D)	(L1)	(d h6)	(L)	(R)	(d1)	(L2)	Form
C2020100931	3	7.5	4	50	R0.5	/	/	Figure 1
C2020100932	4	10	4	50	R0.5	/	/	Figure 2
C2020100933	4	10	4	50	R1	/	/	Figure 2
C2020100934	5	13	5	50	R0.5	/	/	Figure 2
C2020100935	5	13	5	50	R1	/	/	Figure 2
C2020100936	5	13	6	50	R0.5	/	/	Figure 1
C2020100937	5	13	6	50	R1	/	/	Figure 1
C2020100938	6	15	6	50	R0.5	/	/	Figure 2
C2020100939	6	15	6	50	R1	/	/	Figure 2
C2020100940	8	20	8	60	R0.5	/	/	Figure 2
C2020100941	8	20	8	60	R1	/	/	Figure 2
C2020100942	8	20	8	60	R2	/	/	Figure 2
C2020100943	10	25	10	75	R0.5	/	/	Figure 2
C2020100944	10	25	10	75	R1	/	/	Figure 2
C2020100945	10	25	10	75	R2	/	/	Figure 2
C2020100946	12	30	12	75	R0.5	/	/	Figure 2
C2020100947	12	30	12	75	R1	/	/	Figure 2
C2020100948	12	30	12	75	R2	/	/	Figure 2
C2020100949	14	35	14	100	R0.5	/	/	Figure 2
C2020100950	14	35	14	100	R1	/	/	Figure 2
C2020100951	14	35	14	100	R2	/	/	Figure 2
C2020100952	16	40	16	100	R0.5	/	/	Figure 2
C2020100953	16	40	16	100	R1	/	/	Figure 2
C2020100954	16	40	16	100	R2	/	/	Figure 2
C2020100955	18	40	18	100	R0.5	/	/	Figure 2
C2020100956	18	40	18	100	R1	/	/	Figure 2
C2020100957	18	40	18	100	R2	/	/	Figure 2
C2020100958	20	45	20	100	R0.5	/	/	Figure 2
C2020100959	20	45	20	100	R1	/	/	Figure 2
C2020100960	20	45	20	100	R2	/	/	Figure 2
C2020100961	4	10	4	75	R0.5	/	/	Figure 2
C2020100962	4	10	4	75	R1	/	/	Figure 2
C2020100963	6	15	6	75	R0.5	/	/	Figure 2
C2020100964	6	15	6	75	R1	/	/	Figure 2
C2020100965	8	20	8	75	R0.5	/	/	Figure 2
C2020100966	8	20	8	75	R1	/	/	Figure 2
C2020100967	8	20	8	75	R2	/	/	Figure 2
C2020100968	4	12	4	100	R0.5	/	/	Figure 2
C2020100969	4	12	4	100	R1	/	/	Figure 2
C2020100970	6	18	6	100	R0.5	/	/	Figure 2
C2020100971	6	18	6	100	R1	/	/	Figure 2
C2020100972	8	24	8	100	R0.5	/	/	Figure 2
C2020100973	8	24	8	100	R1	/	/	Figure 2
C2020100974	8	24	8	100	R2	/	/	Figure 2
C2020100975	10	30	10	100	R0.5	/	/	Figure 2
C2020100976	10	30	10	100	R1	/	/	Figure 2
C2020100977	10	30	10	100	R2	/	/	Figure 2
C2020100978	12	36	12	100	R0.5	/	/	Figure 2
C2020100979	12	36	12	100	R1	/	/	Figure 2
C2020100980	12	36	12	100	R2	/	/	Figure 2
C2020100981	6	18	6	150	R0.5	5.8	30	Figure 3
C2020100982	6	18	6	150	R1	5.8	30	Figure 3
C2020100983	8	24	8	150	R0.5	7.8	40	Figure 3
C2020100984	8	24	8	150	R1	7.8	40	Figure 3
C2020100985	8	24	8	150	R2	7.8	40	Figure 3
C2020100986	10	30	10	150	R0.5	9.8	50	Figure 3
C2020100987	10	30	10	150	R1	9.8	50	Figure 3
C2020100988	10	30	10	150	R2	9.8	50	Figure 3
C2020100989	12	36	12	150	R0.5	11.8	60	Figure 3
C2020100990	12	36	12	150	R1	11.8	60	Figure 3
C2020100991	12	36	12	150	R2	11.8	60	Figure 3
C2020100992	14	42	14	150	R0.5	13.8	70	Figure 3
C2020100993	14	42	14	150	R1	13.8	70	Figure 3
C2020100994	14	42	14	150	R2	13.8	70	Figure 3
C2020100995	16	48	16	150	R0.5	15.8	80	Figure 3
C2020100996	16	48	16	150	R1	15.8	80	Figure 3
C2020100997	16	48	16	150	R2	15.8	80	Figure 3
C2020100998	18	54	18	150	R0.5	17.8	90	Figure 3
C2020100999	18	54	18	150	R1	17.8	90	Figure 3
C2020101000	18	54	18	150	R2	17.8	90	Figure 3
C2020101001	20	60	20	150	R0.5	19.8	100	Figure 3
C2020101002	20	60	20	150	R1	19.8	100	Figure 3
C2020101003	20	60	20	150	R2	19.8	100	Figure 3

Applicable Table for Processed Materials

● Very Suitable ○ Suitable

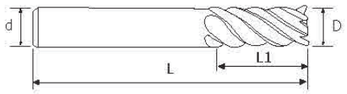
Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
											●

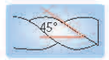
GREWIN TOOLS

SM machining end mills for high temperature alloy

5 flutes straight shank corner radius end mills

SM-5R





Item Code	(D)	(R)	(L1)	(d h6)	(L)
C2020101004	6	0.2	15	6	50
C2020101005	6	0.5	15	6	50
C2020101006	6	1	15	6	50
C2020101007	8	0.2	20	8	60
C2020101008	8	0.5	20	8	60
C2020101009	8	1	20	8	60
C2020101010	10	0.5	25	10	75
C2020101011	10	1	25	10	75
C2020101012	10	2	25	10	75
C2020101013	12	0.5	30	12	75
C2020101014	12	1	30	12	75
C2020101015	12	2	30	12	75
C2020101016	14	0.5	35	14	100
C2020101017	14	1	35	14	100
C2020101018	14	2	35	14	100
C2020101019	14	3	35	14	100
C2020101020	16	1	40	16	100
C2020101021	16	2	40	16	100
C2020101022	16	3	40	16	100
C2020101023	16	4	40	16	100
C2020101024	20	1	45	20	100
C2020101025	20	2	45	20	100
C2020101026	20	3	45	20	100
C2020101027	20	4	45	20	100
C2020101028	25	1	50	25	110
C2020101029	25	2	50	25	110
C2020101030	25	3	50	25	110
C2020101031	25	4	50	25	110
C2020101032	25	5	50	25	110

Applicable Table for Processed Materials ● Very Suitable ○ Suitable

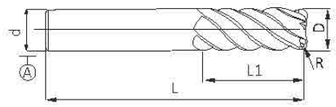
Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
											●

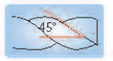
GREWIN TOOLS

SM machining end mills for high temperature alloy

6 flutes straight shank corner radius end mills

SM-6R





Item Code	(D)	(R)	(L1)	(d h6)	(L)	(Z)
C2020101033	10	1	25	10	75	6
C2020101034	10	2	25	10	75	6
C2020101035	12	1	30	12	75	6
C2020101036	12	2	30	12	75	6
C2020101037	12	3	30	12	75	6
C2020101038	14	1	35	14	90	6
C2020101039	14	2	35	14	90	6
C2020101040	14	3	35	14	90	6
C2020101041	16	1	35	16	90	6
C2020101042	16	2.5	35	16	90	6
C2020101043	16	4	35	16	90	6
C2020101044	20	1	45	20	100	6
C2020101045	20	2.5	45	20	100	6
C2020101046	20	4	45	20	100	6
C2020101047	25	1	50	25	110	6
C2020101048	25	2.5	50	25	110	6
C2020101049	25	4	50	25	110	6

Applicable Table for Processed Materials ● Very Suitable ○ Suitable

Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
											●

GREWIN TOOLS

SHM End mill for machining high-hardness steel

Thickness of center section

- Thickening of the center section suppresses deformation or chipping of the ball nose tip.

Excellent shank accuracy

- Corresponding h4 tolerance (0/-0.004)

The most suitable heat shrinkable tool holders

- The high-precision shank diameter is suitable for use with heat shrink tool holders.

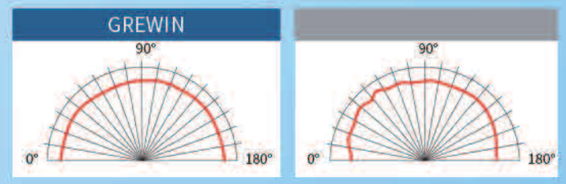
Variable negative anterior angle spiral crescent groove design

- A large negative rake angle at the the cutting edge effectively suppresses chipping
- While progressively reducing the nagative angle toward the periphery to maintain sharpness. This design , combined with a low helix angle , enhances both cutting performance and chipping resistance

Excellent accuracy of the ball head R

R ±0.005

- Ensure stable R accuracy within a 180° range



Smooth surface finish

- The surface of the coating is treated for smoothness, thereby improving the accuracy and smoothness of the processing surface.

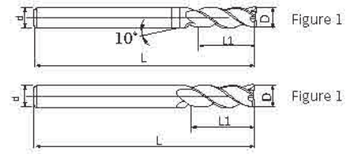
Non-standard size can be customized

GREWIN TOOLS

SHM machining end mills for high hardness steel — 4 flutes stright shank flat end mill

SHM-4E

Tip-protected type



Item Code	(D)	(L1)	(d h6)	(L)	Form
C2020101050	1.0	3	4	50	Figure 1
C2020101051	1.5	4.5	4	50	Figure 1
C2020101052	2.0	6	4	50	Figure 1
C2020101053	2.5	7.5	4	50	Figure 1
C2020101054	3.0	9	4	50	Figure 1
C2020101055	3.5	10.5	4	50	Figure 1
C2020101056	4.0	12	4	50	Figure 2
C2020101057	4.0	12	4	75	Figure 2
C2020101058	4.0	16	4	100	Figure 2
C2020101059	5.0	15	6	50	Figure 1
C2020101060	5.0	15	6	75	Figure 1
C2020101061	5.0	20	6	100	Figure 1
C2020101062	6.0	18	6	50	Figure 2
C2020101063	6.0	18	6	75	Figure 2
C2020101064	6.0	24	6	100	Figure 2
C2020101065	7.0	21	8	60	Figure 1
C2020101066	7.0	21	8	75	Figure 1
C2020101067	7.0	28	8	100	Figure 1
C2020101068	8.0	24	8	60	Figure 2
C2020101069	8.0	24	8	75	Figure 2
C2020101070	8.0	32	8	100	Figure 2
C2020101071	8.0	40	8	150	Figure 2
C2020101072	10.0	30	10	75	Figure 2
C2020101073	10.0	40	10	100	Figure 2
C2020101074	10.0	50	10	150	Figure 2
C2020101075	10.0	80	10	200	Figure 2
C2020101076	12.0	36	12	75	Figure 2
C2020101077	12.0	45	12	100	Figure 2
C2020101078	12.0	60	12	150	Figure 2
C2020101079	12.0	80	12	200	Figure 2
C2020101080	14.0	45	14	100	Figure 2
C2020101081	14.0	70	14	150	Figure 2
C2020101082	14.0	100	14	200	Figure 2
C2020101083	16.0	45	16	100	Figure 2
C2020101084	16.0	75	16	150	Figure 2
C2020101085	16.0	100	16	200	Figure 2
C2020101086	18.0	45	18	100	Figure 2
C2020101087	18.0	75	18	150	Figure 2
C2020101088	18.0	100	18	200	Figure 2
C2020101089	20.0	45	20	100	Figure 2
C2020101090	20.0	75	20	150	Figure 2
C2020101091	20.0	100	20	200	Figure 2

Applicable Table for Processed Materials — ● Very Suitable ○ Suitable

Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
○	○	○	○	●	●		○				○

GREWIN TOOLS

SHM machining end mills for high hardness steel

4 flutes stright shank corner radius end mill

SHM-4R

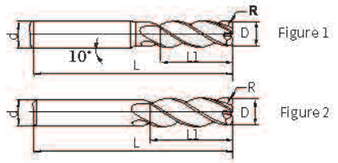
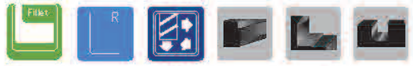
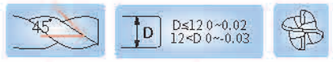


Figure 1

Figure 2





Item Code	(D)	(R)	(L1)	(d h6)	(L)	Form
C2020101092	1.0	R0.2	2.5	4	50	Figure 1
C2020101093	1.5	R0.2	4	4	50	Figure 1
C2020101094	2.0	R0.2	5	4	50	Figure 1
C2020101095	2.0	R0.5	5	4	50	Figure 1
C2020101096	2.5	R0.2	6	4	50	Figure 1
C2020101097	2.5	R0.5	6	4	50	Figure 1
C2020101098	3.0	R0.2	8	4	50	Figure 1
C2020101099	3.0	R0.5	8	4	50	Figure 1
C2020101100	3.0	R1.0	8	4	50	Figure 1
C2020101101	4.0	R0.2	10	4	50	Figure 2
C2020101102	4.0	R0.2	10	4	75	Figure 2
C2020101103	4.0	R0.2	12	4	100	Figure 2
C2020101104	4.0	R0.5	10	4	50	Figure 2
C2020101105	4.0	R0.5	10	4	75	Figure 2
C2020101106	4.0	R0.5	12	4	100	Figure 2
C2020101107	4.0	R1.0	10	4	50	Figure 2
C2020101108	4.0	R1.0	10	4	75	Figure 2
C2020101109	4.0	R1.0	12	4	100	Figure 2
C2020101110	5.0	R0.5	13	6	50	Figure 1
C2020101111	5.0	R0.5	13	6	75	Figure 1
C2020101112	5.0	R0.5	15	6	100	Figure 1
C2020101113	5.0	R1.0	13	6	50	Figure 1
C2020101114	5.0	R1.0	13	6	75	Figure 1
C2020101115	5.0	R1.0	15	6	100	Figure 1
C2020101116	6.0	R0.5	15	6	50	Figure 2
C2020101117	6.0	R0.5	15	6	75	Figure 2
C2020101118	6.0	R0.5	18	6	100	Figure 2
C2020101119	6.0	R1.0	15	6	50	Figure 2
C2020101120	6.0	R1.0	15	6	75	Figure 2
C2020101121	6.0	R1.0	18	6	100	Figure 2
C2020101122	8.0	R0.5	20	8	60	Figure 2
C2020101123	8.0	R0.5	20	8	75	Figure 2
C2020101124	8.0	R0.5	24	8	100	Figure 2
C2020101125	8.0	R1.0	20	8	60	Figure 2
C2020101126	8.0	R1.0	20	8	75	Figure 2
C2020101127	8.0	R1.0	24	8	100	Figure 2
C2020101128	10.0	R0.5	25	10	75	Figure 2
C2020101129	10.0	R0.5	30	10	100	Figure 2
C2020101130	10.0	R1.0	25	10	75	Figure 2
C2020101131	10.0	R1.0	30	10	100	Figure 2
C2020101132	10.0	R2.0	25	10	75	Figure 2
C2020101133	10.0	R2.0	30	10	100	Figure 2
C2020101134	12.0	R0.5	30	12	75	Figure 2
C2020101135	12.0	R0.5	36	12	100	Figure 2
C2020101136	12.0	R1.0	30	12	75	Figure 2
C2020101137	12.0	R1.0	36	12	100	Figure 2
C2020101138	12.0	R2.0	30	12	75	Figure 2
C2020101139	12.0	R2.0	36	12	100	Figure 2

Applicable Table for Processed Materials

● Very Suitable ○ Suitable

Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
○	○	○	○	●	●		○				○

GREWIN TOOLS

SHM machining end mills for high hardness steel

2 flutes stright shank flat end mill

SHM-2B

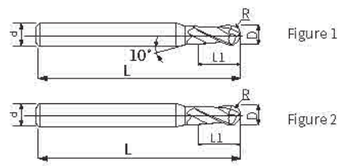


Figure 1

Figure 2

Item Code	(R)	(L1)	(d h6)	(L)	Form
C2020101140	R0.5	2	4	50	Figure 1
C2020101141	R0.75	3	4	50	Figure 1
C2020101142	R1	4	4	50	Figure 1
C2020101143	R1.25	5	4	50	Figure 1
C2020101144	R1.5	6	4	50	Figure 1
C2020101145	R1.75	7	4	50	Figure 1
C2020101146	R2	8	4	50	Figure 2
C2020101147	R2	8	4	75	Figure 2
C2020101148	R2	8	4	100	Figure 2
C2020101149	R2.5	10	6	50	Figure 1
C2020101150	R2.5	10	6	75	Figure 1
C2020101151	R2.5	10	6	100	Figure 1
C2020101152	R3	12	6	50	Figure 2
C2020101153	R3	12	6	75	Figure 2
C2020101154	R3	12	6	100	Figure 2
C2020101155	R3	12	6	150	Figure 2
C2020101156	R4	16	8	60	Figure 2
C2020101157	R4	16	8	75	Figure 2
C2020101158	R4	16	8	100	Figure 2
C2020101159	R4	16	8	150	Figure 2
C2020101160	R5	20	10	75	Figure 2
C2020101161	R5	20	10	100	Figure 2
C2020101162	R5	20	10	150	Figure 2
C2020101163	R6	24	12	75	Figure 2
C2020101164	R6	24	12	100	Figure 2
C2020101165	R6	24	12	150	Figure 2
C2020101166	R7	28	14	100	Figure 2
C2020101167	R7	28	14	150	Figure 2
C2020101168	R8	32	16	100	Figure 2
C2020101169	R8	32	16	150	Figure 2
C2020101170	R9	36	18	100	Figure 2
C2020101171	R9	36	18	150	Figure 2
C2020101172	R10	40	20	100	Figure 2
C2020101173	R10	40	20	150	Figure 2

Applicable Table for Processed Materials

● Very Suitable ○ Suitable

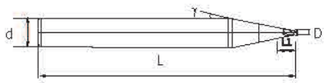
Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys
		~40HRC	~50HRC	~55HRC	~68HRC						
○	○	○	○	●	●		○				○

GREWIN TOOLS

SHM machining end mills for high hardness steel

2 flutes straight shank Micro diameter flat end mill

SHM-2ES

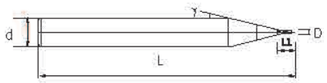


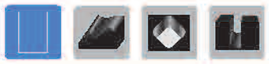
Item Code	(D)	(L1)	γ (Take as a Reference Value)	(d h6)	(L)
C2020101174	0.1	0.2	15°	4	50
C2020101175	0.15	0.3	15°	4	50
C2020101176	0.2	0.4	15°	4	50
C2020101177	0.25	0.5	15°	4	50
C2020101178	0.3	0.6	15°	4	50
C2020101179	0.35	0.7	15°	4	50
C2020101180	0.4	0.8	15°	4	50
C2020101181	0.45	0.9	15°	4	50
C2020101182	0.5	1	15°	4	50
C2020101183	0.55	1.1	15°	4	50
C2020101184	0.6	1.2	15°	4	50
C2020101185	0.64	1.3	15°	4	50
C2020101186	0.7	1.4	15°	4	50
C2020101187	0.75	1.5	15°	4	50
C2020101188	0.8	1.6	15°	4	50
C2020101189	0.85	1.7	15°	4	50
C2020101190	0.9	1.8	15°	4	50

SHM machining end mills for high hardness steel

2-Flute Straight Shaft Micro Diameter Ball Nose End Mill

SHM-2BS





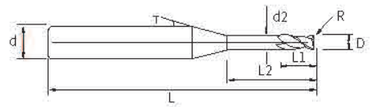
Item Code	(D)	(L1)	γ (Take as a Reference Value)	(d h6)	(L)
C2020101191	0.05	0.15	15°	4	50
C2020101192	0.075	0.2	15°	4	50
C2020101193	0.1	0.3	15°	4	50
C2020101194	0.15	0.45	15°	4	50
C2020101195	0.2	0.6	15°	4	50
C2020101196	0.25	0.8	15°	4	50
C2020101197	0.3	0.9	15°	4	50
C2020101198	0.35	1.1	15°	4	50
C2020101199	0.4	1.2	15°	4	50
C2020101200	0.45	1.4	15°	4	50

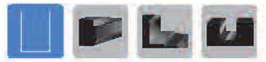
GREWIN TOOLS

SHM machining end mills for high hardness steel

2-flutes straight shank micro small diameter deep groove flat end mill

SHM-2EP





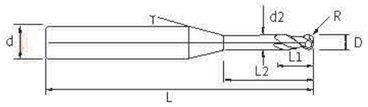
Item Code	(D)	(L2)	(L1)	(d2)	γ (Take as a Reference Value)	(d h6)	(L)
C2020101201	0.1	0.3	0.1	0.085	15°	4	50
C2020101202	0.1	0.5	0.1	0.085	15°	4	50
C2020101203	0.1	0.8	0.1	0.085	15°	4	50
C2020101204	0.1	1	0.1	0.085	15°	4	50
C2020101205	0.15	0.5	0.15	0.13	15°	4	50
C2020101206	0.15	1	0.15	0.13	15°	4	50
C2020101207	0.2	1	0.2	0.18	15°	4	50
C2020101208	0.2	1.5	0.2	0.18	12°	4	50
C2020101209	0.2	2	0.2	0.18	12°	4	50
C2020101210	0.2	3	0.2	0.18	12°	4	50
C2020101211	0.2	4	0.2	0.18	12°	4	50
C2020101212	0.3	1	0.3	0.27	12°	4	50
C2020101213	0.3	1.5	0.3	0.27	12°	4	50
C2020101214	0.3	2	0.3	0.27	12°	4	50
C2020101215	0.3	3	0.3	0.27	12°	4	50
C2020101216	0.3	4	0.3	0.27	12°	4	50
C2020101217	0.3	5	0.3	0.27	12°	4	50
C2020101218	0.4	1.5	0.4	0.37	12°	4	50
C2020101219	0.4	2	0.4	0.37	12°	4	50
C2020101220	0.4	3	0.4	0.37	12°	4	50
C2020101221	0.4	4	0.4	0.37	12°	4	50
C2020101222	0.4	5	0.4	0.37	12°	4	50
C2020101223	0.4	6	0.4	0.37	12°	4	50
C2020101224	0.5	2	0.5	0.46	12°	4	50
C2020101225	0.5	3	0.5	0.46	12°	4	50
C2020101226	0.5	4	0.5	0.46	12°	4	50
C2020101227	0.5	5	0.5	0.46	12°	4	50
C2020101228	0.5	6	0.5	0.46	12°	4	50
C2020101229	0.5	8	0.5	0.46	12°	4	50
C2020101230	0.5	10	0.5	0.46	12°	4	50
C2020101231	0.6	2	0.6	0.56	12°	4	50
C2020101232	0.6	3	0.6	0.56	12°	4	50
C2020101233	0.6	4	0.6	0.56	12°	4	50
C2020101234	0.6	5	0.6	0.56	12°	4	50
C2020101235	0.6	6	0.6	0.56	12°	4	50
C2020101236	0.6	8	0.6	0.56	12°	4	50
C2020101237	0.6	10	0.6	0.56	12°	4	50
C2020101238	0.7	2	0.7	0.66	12°	4	50
C2020101239	0.7	3	0.7	0.66	12°	4	50
C2020101240	0.7	4	0.7	0.66	12°	4	50
C2020101241	0.7	5	0.7	0.66	12°	4	50
C2020101242	0.7	6	0.7	0.66	12°	4	50
C2020101243	0.7	8	0.7	0.66	12°	4	50
C2020101244	0.7	10	0.7	0.66	12°	4	50
C2020101245	0.8	2	0.8	0.76	12°	4	50
C2020101246	0.8	3	0.8	0.76	12°	4	50
C2020101247	0.8	4	0.8	0.76	12°	4	50
C2020101248	0.8	5	0.8	0.76	12°	4	50
C2020101249	0.8	6	0.8	0.76	12°	4	50
C2020101250	0.8	8	0.8	0.76	12°	4	50
C2020101251	0.8	10	0.8	0.76	12°	4	50

GREWIN TOOLS

SHM machining end mills for high hardness steel

2-flutes straight shank micro small diameter deep groove ballnose end mill

SHM-2BP



Item Code	(R)	(L2)	(L1)	(D)	(d2)	∨ (Take as a Reference Value)	(d h6)	(L)
C2020101252	R0.05	0.3	0.1	0.1	0.085	15°	4	50
C2020101253	R0.05	0.5	0.1	0.1	0.085	15°	4	50
C2020101254	R0.05	0.8	0.1	0.1	0.085	15°	4	50
C2020101255	R0.05	1	0.1	0.1	0.085	15°	4	50
C2020101256	R0.075	0.5	0.15	0.15	0.13	15°	4	50
C2020101257	R0.075	1	0.15	0.15	0.13	15°	4	50
C2020101258	R0.1	1	0.2	0.2	0.18	15°	4	50
C2020101259	R0.1	1.5	0.2	0.2	0.18	12°	4	50
C2020101260	R0.1	2	0.2	0.2	0.18	12°	4	50
C2020101261	R0.1	3	0.2	0.2	0.18	12°	4	50
C2020101262	R0.15	1	0.3	0.3	0.27	15°	4	50
C2020101263	R0.15	1.5	0.3	0.3	0.27	15°	4	50
C2020101264	R0.15	2	0.3	0.3	0.27	12°	4	50
C2020101265	R0.15	3	0.3	0.3	0.27	12°	4	50
C2020101266	R0.15	4	0.3	0.3	0.27	12°	4	50
C2020101267	R0.15	5	0.3	0.3	0.27	12°	4	50
C2020101268	R0.2	1.5	0.4	0.4	0.37	12°	4	50
C2020101269	R0.2	2	0.4	0.4	0.37	12°	4	50
C2020101270	R0.2	3	0.4	0.4	0.37	12°	4	50
C2020101271	R0.2	4	0.4	0.4	0.37	12°	4	50
C2020101272	R0.2	5	0.4	0.4	0.37	12°	4	50
C2020101273	R0.2	6	0.4	0.4	0.37	12°	4	50
C2020101274	R0.25	2	0.5	0.5	0.46	12°	4	50
C2020101275	R0.25	3	0.5	0.5	0.46	12°	4	50
C2020101276	R0.25	4	0.5	0.5	0.46	12°	4	50
C2020101277	R0.25	5	0.5	0.5	0.46	12°	4	50
C2020101278	R0.25	6	0.5	0.5	0.46	12°	4	50
C2020101279	R0.25	8	0.5	0.5	0.46	12°	4	50
C2020101280	R0.3	2	0.6	0.6	0.56	12°	4	50
C2020101281	R0.3	3	0.6	0.6	0.56	12°	4	50
C2020101282	R0.3	4	0.6	0.6	0.56	12°	4	50
C2020101283	R0.3	5	0.6	0.6	0.56	12°	4	50
C2020101284	R0.3	6	0.6	0.6	0.56	12°	4	50
C2020101285	R0.3	8	0.6	0.6	0.56	12°	4	50
C2020101286	R0.3	10	0.6	0.6	0.56	12°	4	50
C2020101287	R0.4	2	0.8	0.8	0.76	12°	4	50
C2020101288	R0.4	3	0.8	0.8	0.76	12°	4	50
C2020101289	R0.4	4	0.8	0.8	0.76	12°	4	50
C2020101290	R0.4	5	0.8	0.8	0.76	12°	4	50
C2020101291	R0.4	6	0.8	0.8	0.76	12°	4	50
C2020101292	R0.4	8	0.8	0.8	0.76	12°	4	50
C2020101293	R0.4	10	0.8	0.8	0.76	12°	4	50

GREWIN TOOLS

Graphite Cutter Series

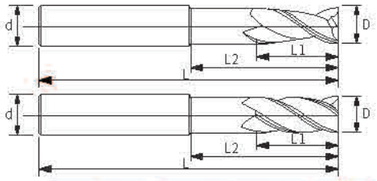
Due to the various characteristics of graphite, it is very easy to appear edge jagged, slag drop and corner chipping during pro-cessing which directly leads to the unqualified quality of graphiteproducts. Therefore, based on years of experience and combined with the current situation of my country's graphite processing in dustry, the characteristics of graphite materials are analyzed, and then graphite tools are reasonably selected, and the cutting pa-rameters and cutting methods are selected in the processing Quality problems in processing, cost reduction and efficiency improvement.

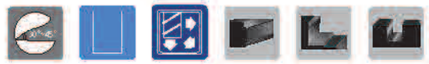
Non-standard size can be customized

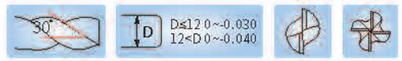
GREWIN TOOLS

GM Graphite Cutters — Diamond Coated Graphite Flat End Mills

GM-2E/4E







Item Code	(D)	(L1)	(L2)	(L)	(d h6)	(Z)
GM-2E-00505050	0.5	1	5	50	4	2
GM-2E-00606050	0.6	1.2	6	50	4	2
GM-2E-00608050	0.6	1.2	8	50	4	2
GM-2E-00808050	0.8	1.6	10	50	4	2
GM-4E-01003060	1	3	3	60	4	4
GM-4E-01006060	1	3	6	60	4	4
GM-4E-01010060	1	3	10	60	4	4
GM-4E-01015060	1	3	15	60	4	4
GM-4E-01020060	1	3	20	60	4	4
GM-4E-01504060	1.5	4	4	60	4	4
GM-4E-01510060	1.5	4	10	60	4	4
GM-4E-01510060	1.5	4	15	60	4	4
GM-4E-01520080	1.5	4	20	80	4	4
GM-4E-01525080	1.5	4	25	80	4	4
GM-4E-02006060	2	6		60	4	4
GM-4E-02010060	2	6	10	60	4	4
GM-4E-02015060	2	6	15	60	4	4
GM-4E-02020060	2	6	20	60	4	4
GM-4E-02025060	2	6	25	60	4	4
GM-4E-02020080	2	6	20	80	4	4
GM-4E-02025080	2	6	25	80	4	4
GM-4E-02030080	2	6	30	80	4	4
GM-4E-03009050	3	9		50	4	4
GM-4E-03020080	3	9	20	80	4	4
GM-4E-03025080	3	9	25	80	4	4
GM-4E-03030080	3	9	30	80	4	4
GM-4E-04012050	4	12		50	4	4
GM-4E-04020060	4	10	20	60	4	4
GM-4E-04025060	4	10	25	60	4	4
GM-4E-04020080	4	10	20	80	4	4
GM-4E-04025080	4	10	25	80	4	4
GM-4E-06030080	6	108	30	80	6	4
GM-4E-06040110	6	18	40	10	6	4
GM-4E-06050150	6	18	50	150	6	4
GM-4E-08040110	8	20	40	110	8	4
GM-4E-08050150	8	20	50	150	8	4
GM-4E-10040110	10	30	40	110	10	4
GM-4E-10050150	10	30	50	150	10	4
GM-4E-12050110	12	30	50	110	12	4
GM-4E-12050150	12	30	60	150	12	4

Applicable Table for Processed Materials

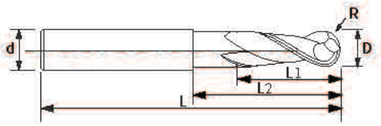
● Very Suitable ○ Suitable

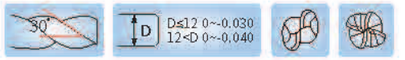
Processed Material												
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys	Graphite
		~40HRC	~50HRC	~55HRC	~68HRC							
												●

GREWIN TOOLS

GM Graphite Cutters — Diamond Coated Graphite B allnose Endmills

GM-2B/4B





Item Code	(R)	(L1)	(L2)	(L)	(d h6)	(Z)
GM-2B-00505050	R0.25X0.5	1	5	50	4	2
GM-2B-00510050	R0.25X0.5	1	10	50	4	2
GM-2B-00606050	R0.3X0.6	1.2	6	50	4	2
GM-2B-00608050	R0.3X0.6	1.2	8	50	4	2
GM-2B-00610050	R0.3X0.6	1.2	10	50	4	2
GM-2B-00615050	R0.3X0.6	1.2	15	50	4	2
GM-2B-01003060	R0.5X1	2		60	4	2
GM-2B-01006060	R0.5X1	2	6	60	4	2
GM-2B-01008060	R0.5X1	2	8	60	4	2
GM-2B-01010060	R0.5X1	2	10	60	4	2
GM-2B-01015060	R0.5X1	2	15	60	4	2
GM-2B-01020060	R0.5X1	2	20	60	4	2
GM-2B-01015080	R0.5X1	2	15	80	4	2
GM-2B-01020080	R0.5X1	2	20	80	4	2
GM-2B-01512060	R0.75X1.5	3	10	60	4	2
GM-2B-01515060	R0.75X1.5	3	15	60	4	2
GM-2B-01520080	R0.75X1.5	3	20	80	4	2
GM-2B-01525080	R0.75X1.5	3	25	80	4	2
GM-2B-01530080	R0.75X1.5	3	30	80	4	2
GM-2B-02005060	R1X2	4		60	4	2
GM-2B-02008060	R1X2	4	8	60	4	2
GM-2B-02010060	R1X2	4	10	60	4	2
GM-2B-02015060	R1X2	4	15	60	4	2
GM-2B-02020060	R1X2	4	20	60	4	2
GM-2B-02016080	R1X2	4	16	80	4	2
GM-2B-02020080	R1X2	4	20	80	4	2
GM-2B-02025080	R1X2	4	25	80	4	2
GM-2B-02030080	R1X2	4	30	80	4	2
GM-2B-03009080	R1.5X3	6		60	4	2
GM-2B-03020080	R1.5X3	6	20	80	4	2
GM-2B-03020080	R1.5X3	6	25	80	4	2
GM-2B-03030080	R1.5X3	6	30	80	4	2
GM-2B-04010050	R2X4	8		50	4	2
GM-2B-04020080	R2X4	8	20	80	4	2
GM-2B-04030080	R2X4	8	30	80	4	2
GM-2B-04030100	R2X4	8	30	100	4	2
GM-2B-06030080	R3X6	12	30	80	6	2
GM-4B-06040110	R3X6	12	40	110	6	4
GM-4B-06050150	R3X6	12	50	150	6	4
GM-4B-08040110	R4X8	16	40	110	8	4
GM-4B-08040150	R4X8	16	50	150	8	4
GM-4B-10040110	R5X10	20	40	110	10	4
GM-4B-10050150	R5X10	20	50	150	10	4
GM-4B-12050110	R6X12	24	50	110	12	4
GM-4B-12060150	R6X12	24	60	150	12	4

Applicable Table for Processed Materials

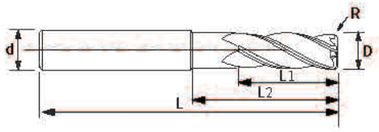
● Very Suitable ○ Suitable

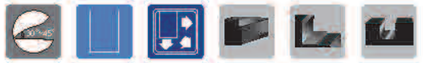
Processed Material												
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys	Graphite
		~40HRC	~50HRC	~55HRC	~68HRC							
												●

GREWIN TOOLS

GM Graphite Cutters — Diamond Coated Graphite Corner Radius Endmills

GM-2R/4R





Item Code	(R)	(L1)	(L2)	(L)	(d h6)	(Z)
GM-2R-000500507050	0.5xR0.05	1	7	50	4	2
GM-2R-000500510050	0.5xR0.05	1	10	50	4	2
GM-2R-000800506050	0.8xR0.05	2	6	50	4	2
GM-2R-000800508050	0.8xR0.05	2	8	50	4	2
GM-2R-0100112050	1xR0.1	2.5	12	50	4	2
GM-2R-0100210050	1xR0.2	2.5	10	50	4	2
GM-4R-0150210050	1.5xR0.2	3	10	50	4	4
GM-4R-0200115050	2xR0.1	5	15	50	4	4
GM-4R-0200210060	2xR0.2	5	10	60	4	4
GM-4R-0200215060	2xR0.2	5	15	60	4	4
GM-4R-0200220080	2xR0.2	5	20	80	4	4
GM-4R-0200225080	2xR0.2	5	25	80	4	4
GM-4R-0300118050	3xR0.1	8	18	50	4	4
GM-4R-0300220080	3xR0.2	8	20	80	4	4
GM-4R-0300225080	3xR0.2	8	25	80	4	4
GM-4R-0300230080	3xR0.2	8	30	80	4	4
GM-4R-0400212050	4xR0.2	12		50	4	4
GM-4R-0400216060	4xR0.2	10	16	60	4	4
GM-4R-0400312050	4xR0.3	12		60	4	4
GM-4R-0400220080	4xR0.2	10	20	80	4	4
GM-4R-0400225080	4xR0.2	10	25	80	4	4
GM-4R-0400230080	4xR0.2	10	30	80	4	4
GM-4R-0400520080	4xR0.5	10	20	80	4	4
GM-4R-0400530080	4xR0.5	10	30	80	4	4
GM-4R-0400530080	4xR0.5	10	30	100	4	4
GM-4R-0600230080	6xR0.2	15	30	80	6	4
GM-4R-0600330080	6xR0.3	15	30	80	6	4
GM-4R-0600530080	6xR0.5	15	30	80	6	4
GM-4R-0600540110	6xR0.5	15	40	110	6	4
GM-4R-0600550150	6xR0.5	15	50	150	6	4
GM-4R-0800540110	8xR0.5	20	40	110	8	4
GM-4R-0800550150	8xR0.5	20	50	150	8	4
GM-4R-1000540110	10xR0.5	25	40	110	10	4
GM-4R-1000540150	10xR0.5	25	60	150	10	4
GM-4R-1200540110	12xR0.5	30	50	110	12	4
GM-4R-1200560150	12xR0.5	30	60	150	12	4

Applicable Table for Processed Materials

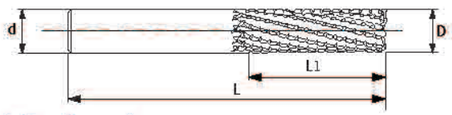
● Very Suitable ○ Suitable

Processed Material												
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	Heat Resistant Alloys	Graphite
		~40HRC	~50HRC	~55HRC	~68HRC							
												●

GREWIN TOOLS

Aviation & Space Grade

Solid Carbide skeletonizing Cutters for CFRP,Helical Flute With Chipbreaker



High-performance CRFP skeletonizing cutter for roughing and finishing Processing
Unique CVD coating ensures high wear resistance and tools life.

MG HM | DIA | MULTI | 15° | PLAIN | C | GF | structural platform | robotic device | P.60

Imperial dimensions

EDP				D		(d)	(L1)	(L)	Flute count
Type1	Type2	Type3	Type4	Fraction	point				
URT5P1AF0125	URT5P1AG0125	URT5P1AH0125	URT5P1AI0125	1/8	.1250	1/8	1/2	3	Multi-helix
URT5P1AF0250	URT5P1AG0250	URT5P1AH0250	URT5P1AI0250	1/4	.1250	1/4	1	3	Multi-helix
URT5P1AF0375	URT5P1AG0375	URT5P1AH0375	URT5P1AI0375	3/8	.1250	3/8	1	3	Multi-helix
URT5P1AF0500	URT5P1AG0500	URT5P1AH0500	URT5P1AI0500	1/2	.1250	1/2	1-1/2	4	Multi-helix

Metric dimensions

EDP				D	(d)	(L1)	(L)	Flute count
Type1	Type2	Type3	Type4					
RUT5P2AF0300	RUT5P2AG0300	RUT5P2AH0300	RUT5P2AI0300	3	3	9	50	Multi-helix
URT5P2AF0600	URT5P2AG0600	URT5P2AH0600	URT5P2AI0600	6	6	18	65	Multi-helix
URT5P2AF0800	URT5P2AG0800	URT5P2AH0800	URT5P2AI0800	8	8	24	70	Multi-helix
URT5P2AF1000	URT5P2AG1000	URT5P2AH1000	URT5P2AI1000	10	10	30	80	Multi-helix
URT5P2AF1200	URT5P2AG1200	URT5P2AH1200	URT5P2AI1200	12	12	36	100	Multi-helix

Non-standard size can be customized

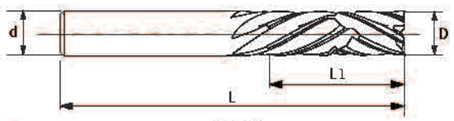
Applicable Table for Processed Materials ● Very Suitable ○ Suitable

Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	CFRP
		~40HRC	~50HRC	~55HRC	~68HRC						
											●

GREWIN TOOLS

Aviation & Space Grade

Solid Carbide Bidirectional Helical Endmills for CFRP with/without chipbreakers



Type 1
(without chip breaker groove)
Type 2
(with chip breaker groove)

High-performance CRFP skeletonizing cutter for roughing and finishing Processing
Unique CVD coating ensures high wear resistance and tools life.

MG HM | DIA | 6 | 30°/40° | PLAIN | C | GF | structural platform | robotic device | P.60

Imperial dimensions

EDP		D		D1	LOC	OAL	Flute count
Type1 (Without chip breaker)	Type2 (With chip breaker)	Fraction	Point				
URT5P1AN0250	URT5P1A00250	1/4	.2500	1/4	1	3	6
URT5P1AN0375	URT5P1A00375	3/8	.3750	3/8	1	3	6
URT5P1AN0500	URT5P1A00500	1/2	.5000	1/2	1-1/2	4	6

Metric dimensions

EDP		D	D1	LOC	OAL	Flute count
Type1 (Without chip breaker)	Type2 (With chip breaker)					
URT5P2AN0600	URT5P2A00600	6	6	18	65	6
URT5P2AN0800	URT5P2A00800	8	8	24	70	6
URT5P2AN1000	URT5P2A01000	10	10	30	80	6
URT5P2AN1200	URT5P2A01200	12	12	36	100	6

Non-standard size can be customized

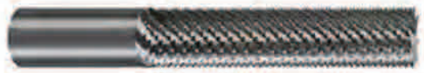
Applicable Table for Processed Materials ● Very Suitable ○ Suitable

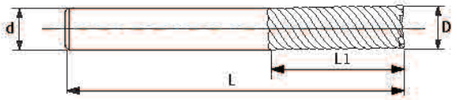
Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	CFRP
		~40HRC	~50HRC	~55HRC	~68HRC						
											●

GREWIN TOOLS

Aviation & Space Grade

Solid Carbide Bidirectional Helical Endmills for CFRP with/without chipbreakers





Solid Carbide Engraving Router for Honeycomb Material Processing & Trimming
Unique CVD Coating Ensures High Wear Resistance & Extended Tool Life

MG HM | MULTI | PLAIN | HC | P.60

Imperial dimensions

EDP	D		(d)	(L1)	(L)	Flute count
	Fraction	Point				
URT5A1AR0250	1/4	.2500	1/4	1	3	Multi-helix
URT5A1AR0375	3/8	.3750	3/8	1	3	Multi-helix
URT5A1AR0500	1/2	.5000	1/2	1-1/2	4	Multi-helix

Metric dimensions

EDP	D	(d)	(L1)	(L)	Flute count
URT5A2AR0600	6	6	18	65	Multi-helix
URT5A2AR0800	8	8	24	70	Multi-helix
URT5A2AR1000	10	10	30	80	Multi-helix
URT5A2AR1200	12	12	36	100	Multi-helix

Non-standard size can be customized

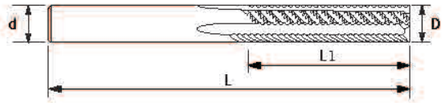
Applicable Table for Processed Materials ●Very Suitable ○Suitable

Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	CFRP
		~40HRC	~50HRC	~55HRC	~68HRC						
											●

GREWIN TOOLS

Aviation & Space Grade

Solid Carbide Special Flutes Endmills With Straight Shank



HM | h6

EDP	D		L1		L		d	
	inch	mm	inch	mm	inch	mm	inch	mm
URT0400650	0.1575	4	0.6299	16	1.9685	50	0.2362	6
URT0600660	0.2362	6	0.748	19	2.4803	60	0.2362	6
URT0600675	0.2362	6	0.9843	25	2.9528	75	0.2362	6
URT0800875	0.315	8	0.9843	25	2.4803	75	0.315	8
URT1001075	0.3937	10	0.9843	25	2.9528	75	0.3937	10
URT1201275	0.4724	12	0.9843	25	2.9528	75	0.4724	12

Non-standard size can be customized

Applicable Table for Processed Materials ●Very Suitable ○Suitable

Processed Material											
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	CFRP
		~40HRC	~50HRC	~55HRC	~68HRC						
											●

GREWIN TOOLS

Woodworking Tools

Suitable for drilling wooden doors, cutting particleboard, plywood, hardwood, etc. Features a unique chip flute design that balances cutting edge sharpness and blade strength, ensuring high surface finish and smooth chip evacuation.

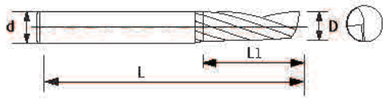
- ▲ High hardness/Wear resistance
- ▲ Sharp
- ▲ High surface finish

Non-standard size can be customized

GREWIN TOOLS

WM Woodworking Tools — Single Edge Helical Flute Endmills

WM-1E



D≤12 0~-0.030
12<D 0~-0.040

Item Code	(D)	(L1)	(d)	(L)
WM-1E-010033175385	1	3	3.175	38.5
WM-1E-010063175385	1	6	3.175	38.5
WM-1E-010063175385	1.2	6	3.175	38.5
WM-1E-012103175385	1.2	10	3.175	38.5
WM-1E-015083175385	1.5	8	3.175	38.5
WM-1E-015123175385	1.5	12	3.175	38.5
WM-1E-020083175385	2	8	3.175	38.5
WM-1E-020123175385	2	12	3.175	38.5
WM-1E-020153175385	2	15	3.175	38.5
WM-1E-020223175450	2	17	3.175	45
WM-1E-020223175450	2	22	3.175	45
WM-1E-025123175385	2.5	12	3.175	38.5
WM-1E-025153175385	2.5	15	3.175	38.5
WM-1E-025223175450	2.5	22	3.175	45
WM-1E-03175063175385	3.175	6	3.175	38.5
WM-1E-03175083175385	3.175	8	3.175	38.5
WM-1E-03175123175385	3.175	12	3.175	38.5
WM-1E-03175153175385	3.175	15	3.175	38.5
WM-1E-03175173175385	3.175	17	3.175	38.5
WM-1E-03175223175451	3.175	22	3.175	45
WM-1E-03175253175500	3.175	25	3.175	50
WM-1E-03175283175500	3.175	28	3.175	50
WM-1E-03175323175600	3.175	32	3.175	60
WM-1E-03175423175700	3.175	42	3.175	70
WM-1E-0301204500	3	12	4	50
WM-1E-0301504500	3	15	4	50
WM-1E-0301705500	3	17	4	50
WM-1E-0302204500	3	22	4	50
WM-1E-0401204400	4	12	4	40

Item Code	(D)	(L1)	(d)	(L)
WM-1E-0401504400	4	15	4	40
WM-1E-0401704400	4	17	4	40
WM-1E-0402204450	4	22	4	45
WM-1E-0402504500	4	25	4	50
WM-1E-0402804500	4	28	4	50
WM-1E-0403204600	4	32	4	60
WM-1E-04034204700	4	42	4	70
WM-1E-0404204800	4	52	4	80
WM-1E-0501705500	5	17	5	50
WM-1E-0502205500	5	22	5	50
WM-1E-0503205600	5	32	5	60
WM-1E-0301203500	3	12	3	50
WM-1E-0301703500	3	17	3	50
WM-1E-0401704500	4	17	4	50
WM-1E-0402204500	4	22	4	50
WM-1E-0502205500	5	22	5	50
WM-1E-0502505550	5	25	5	55
WM-1E-0601706500	6	17	6	50
WM-1E-0602206500	6	22	6	50
WM-1E-0602506500	6	25	6	50
WM-1E-0603205600	6	32	6	60
WM-1E-0604206700	6	42	6	70
WM-1E-0605206800	6	52	6	80
WM-1E-0803208800	8	32	8	80
WM-1E-1003210800	10	32	10	80
WM-1E-1203212800	12	32	12	80
WM-1E-14032141000	14	32	14	100
WM-1E-14042141000	14	42	14	100

Applicable Table for Processed Materials

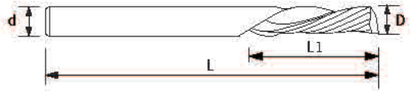
● Very Suitable ○ Suitable

Processed Material													
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	CFRP	Timber	Nonmetal
		~40HRC	~50HRC	~55HRC	~68HRC								
												●	●

GREWIN TOOLS

WM Woodworking Tools — Single Edge Left Helical Flute Endmills

WM-1EL



Item Code	(D)	(L1)	(d)	(L)
WM-1EL-03175063175385	3.175	6	3.175	38.5
WM-1EL-03175083175385	3.175	8	3.175	38.5
WM-1EL-03175123175385	3.175	12	3.175	38.5
WM-1EL-03175153175385	3.175	15	3.175	38.5
WM-1EL-03175173175385	3.175	17	3.175	38.5
WM-1EL-03175223175450	3.175	22	3.175	45
WM-1EL-03175253175500	3.175	25	3.175	50
WM-1EL-03175283175550	3.175	28	3.175	55
WM-1EL-03175323175600	3.175	32	3.175	60
WM-1EL-03175423175700	3.175	42	3.175	70
WM-1EL-0401204400	4	12	4	40
WM-1EL-0401504450	4	15	4	45
WM-1EL-0401704450	4	17	4	45
WM-1EL-0402204500	4	22	4	50
WM-1EL-0402504500	4	25	4	50
WM-1EL-0402804550	4	28	4	55
WM-1EL-0403204600	4	32	4	60
WM-1EL-0404204700	4	42	4	70
WM-1EL-0405204800	4	52	4	80
WM-1EL-0501705600	5	17	5	60
WM-1EL-0502205600	5	22	5	60
WM-1EL-0503205700	5	32	5	70
WM-1EL-0601706500	6	17	6	50
WM-1EL-0602206500	6	22	6	50
WM-1EL-0602506500	6	25	6	50
WM-1EL-0603206600	6	32	6	60
WM-1EL-0604206700	6	42	6	70
WM-1EL-0605206800	6	52	6	80
WM-1EL-0803208100	8	32	8	100
WM-1EL-1003210100	10	32	10	100
WM-1EL-1203212100	12	32	12	100
WM-1EL-1403214100	14	32	14	100

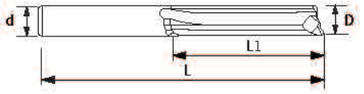
Applicable Table for Processed Materials ● Very Suitable ○ Suitable

Processed Material													
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	CFRP	Timber	Nonmetal
		~40HRC	~50HRC	~55HRC	~68HRC								
												●	●

GREWIN TOOLS

WM Woodworking Tools — Double Edge Straight Flute Endmills

WM-2E



Item Code	(D)	(L1)	(d)	(L)
WM-2E-015063175385	1.5	6	3.175	38.5
WM-2E-015083175385	1.5	8	3.175	38.5
WM-2E-015123175385	1.5	12	3.175	38.5
WM-2E-020063175385	2	6	3.175	38.5
WM-2E-020083175385	2	8	3.175	38.5
WM-2E-020123175385	2	12	3.175	38.5
WM-2E-020153175385	2	15	3.175	38.5
WM-2E-020173175400	2	17	3.175	40
WM-2E-025083175385	2.5	8	3.175	38.5
WM-2E-025123175385	2.5	12	3.175	38.5
WM-2E-025153175385	2.5	15	3.175	38.5
WM-2E-025173175400	2.5	17	3.175	40
WM-2E-025223175450	2.5	22	3.175	45
WM-2E-03175103175385	3.175	10	3.175	38.5
WM-2E-03175123175385	3.175	12	3.175	38.5
WM-2E-03175153175385	3.175	15	3.175	38.5
WM-2E-03175173175385	3.175	17	3.175	38.5
WM-2E-03175223175450	3.175	22	3.175	45
WM-2E-03175253175500	3.175	25	3.175	505
WM-2E-03175283175550	3.175	28	3.175	55
WM-2E-03175323175600	3.175	32	3.175	60
WM-2E-03175423175700	3.175	42	3.175	70
WM-2E-0301204400	3	12	4	40
WM-2E-0301504400	3	15	4	40
WM-2E-0301704400	3	17	4	40
WM-2E-0302204450	3	22	4	45
WM-2E-0401204450	4	12	4	45
WM-2E-0401504450	4	15	4	45
WM-2E-0401704450	4	17	4	45
WM-2E-0402204500	4	22	4	50
WM-2E-0402504550	4	25	4	55
WM-2E-0402804550	4	28	4	55
WM-2E-0403204600	4	32	4	60

Item Code	(D)	(L1)	(d)	(L)
WM-2E-0404204700	4	42	4	70
WM-2E-0301206500	3	12	6	50
WM-2E-0301706500	3	17	6	50
WM-2E-0401706500	4	17	6	50
WM-2E-0402206500	4	22	6	50
WM-2E-0502206500	5	22	6	50
WM-2E-0502506500	5	25	6	50
WM-2E-0503260600	5	32	6	60
WM-2E-0601206500	6	12	6	50
WM-2E-0601706500	6	17	6	50
WM-2E-0602206500	6	22	6	50
WM-2E-0602506500	6	25	6	50
WM-2E-0602806550	6	28	6	55
WM-2E-0603206600	6	32	6	60
WM-2E-0604206700	6	42	6	70
WM-2E-0605206800	6	52	6	80
WM-2E-0802202500	8	22	8	50
WM-2E-0802502500	8	25	8	50
WM-2E-0803208600	8	32	8	60
WM-2E-0804208700	8	42	8	70
WM-2E-0805208800	8	52	8	80
WM-2E-1002210500	10	22	10	50
WM-2E-1003210700	10	32	10	70
WM-2E-1004210900	10	42	10	90
WM-2E-10052101000	10	52	10	100
WM-2E-12045121000	12	45	12	100
WM-2E-12052121000	12	52	12	100
WM-2E-12062121200	12	62	12	120
WM-2E-1403514800	14	35	14	80
WM-2E-14045141000	14	45	14	100
WM-2E-14055141100	14	55	14	110
WM-2E-14065141100	14	65	14	120
WM-2E-14072141300	14	72	14	130

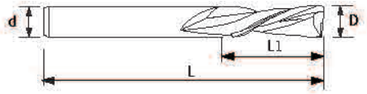
Applicable Table for Processed Materials ● Very Suitable ○ Suitable

Processed Material													
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	CFRP	Timber	Nonmetal
		~40HRC	~50HRC	~55HRC	~68HRC								
												●	●

GREWIN TOOLS

WM Woodworking Tools — Double Edge left Helical right-handed Endmills

WM-2EL



D≤12 0~-0.030
12<D 0~-0.040

Item Code	(D)	(L1)	(d)	(L)
WM-2EL-010033175385	1	3	3.175	38.5
WM-2EL-010063175385	1	6	3.175	38.5
WM-2EL-012063175385	1.2	6	3.175	38.5
WM-2EL-012103175385	1.2	10	3.175	38.5
WM-2EL-015083175385	1.5	8	3.175	38.5
WM-2EL-015123175385	1.5	12	3.175	38.5
WM-2EL-020083175385	2	8	3.175	38.5
WM-2EL-020123175400	2	12	3.175	38.5
WM-2EL-020153175385	2	15	3.175	38.5
WM-2EL-020173175400	2	17	3.175	40
WM-2EL-020223175500	2	22	3.175	50
WM-2EL-025123175385	2.5	12	3.175	38.5
WM-2EL-025153175385	2.5	15	3.175	38.5
WM-2EL-025223175500	2.5	22	3.175	50
WM-2EL-030123175400	3	12	3.175	40
WM-2EL-030173175400	3	17	3.175	40
WM-2EL-03175123175385	3.175	12	3.175	38.5
WM-2EL-03175153175385	3.175	15	3.175	38.5
WM-2EL-03175173175385	3.175	17	3.175	38.5
WM-2EL-03175223175450	3.175	22	3.175	45
WM-2EL-03175253175500	3.175	25	3.175	50
WM-2EL-03175283175550	3.175	28	3.175	50
WM-2EL-03175323175600	3.175	32	3.175	60
WM-2EL-03175423175700	3.175	42	3.175	70
WM-2EL-03175523175800	3.175	52	3.175	80
WM-2EL-0251204400	2.5	12	4	40
WM-2EL-0251704400	2.5	17	4	40
WM-2EL-0252204400	2.5	22	4	40
WM-2EL-0301504400	3	15	4	40
WM-2EL-0301704400	3	17	4	40
WM-2EL-0302204450	3	22	4	45
WM-2EL-0401204400	4	12	4	40
WM-2EL-0401504400	4	15	4	40
WM-2EL-0401704400	4	17	4	40
WM-2EL-0402204450	4	22	4	45
WM-2EL-0402504500	4	25	4	50

Item Code	(D)	(L1)	(d)	(L)
WM-2EL-0402805550	4	28	4	55
WM-2EL-0403204600	4	32	4	60
WM-2EL-0404204700	4	42	4	70
WM-2EL-0405204800	4	52	4	80
WM-2EL-0501705500	5	17	5	50
WM-2EL-0502205500	5	22	5	50
WM-2EL-0502505550	5	25	5	55
WM-2EL-0502805550	5	28	5	55
WM-2EL-0503205600	5	32	5	60
WM-2EL-0301206500	3	12	6	50
WM-2EL-0301706500	3	17	6	50
WM-2EL-0401706500	4	17	6	50
WM-2EL-0402206500	4	22	6	50
WM-2EL-0502206500	5	22	6	50
WM-2EL-0502506500	5	25	6	50
WM-2EL-0503206600	5	32	6	60
WM-2EL-0601206500	6	12	6	50
WM-2EL-0601706500	6	17	6	50
WM-2EL-0602206500	6	22	6	50
WM-2EL-0602506550	6	25	6	55
WM-2EL-0602806550	6	28	6	55
WM-2EL-0603206600	6	32	6	60
WM-2EL-0604206700	6	42	6	70
WM-2EL-0605206800	6	52	6	80
WM-2EL-0802208500	8	22	8	50
WM-2EL-0803208600	8	32	8	60
WM-2EL-0804208700	8	42	8	70
WM-2EL-1002510500	10	25	10	50
WM-2EL-1003510700	10	35	10	70
WM-2EL-1004510900	10	45	10	90
WM-2EL-1203512700	12	35	12	70
WM-2EL-1204512900	12	45	12	90
WM-2EL-12055121000	12	55	12	100
WM-2EL-1403514700	14	35	14	70
WM-2EL-1404514900	14	45	14	90
WM-2EL-14055141000	14	55	14	100

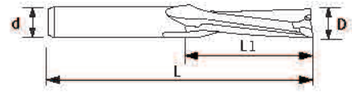
Applicable Table for Processed Materials — Very Suitable ○ Suitable

Processed Material													
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	CFRP	Timber	Nonmetal
		~40HRC	~50HRC	~55HRC	~68HRC								
												○	○

GREWIN TOOLS

WM Woodworking Tools — Two-flute low-thread woodworking Endmills

WM-2LT



D≤12 0~-0.030
12<D 0~-0.040

Item Code	(D)	(L1)	(d)	(L)
WM-2LT-015063175650	1.5	6	3.175	65
WM-2LT-015083175700	1.5	8	3.175	70
WM-2LT-015123175500	1.5	12	3.175	50
WM-2LT-020063175500	2	6	3.175	50
WM-2LT-020083175500	2	8	3.175	50
WM-2LT-020123175500	2	12	3.175	50
WM-2LT-020153175500	2	15	3.175	50
WM-2LT-020173175500	2	17	3.175	50
WM-2LT-025083175600	2.5	8	3.175	60
WM-2LT-025123175500	2.5	12	3.175	50
WM-2LT-025153175500	2.5	15	3.175	50
WM-2LT-025173175500	2.5	17	3.175	50
WM-2LT-025223175500	2.5	22	3.175	50
WM-2LT-03175103175385	3.175	10	3.175	38.5
WM-2LT-03175123175385	3.175	121	3.175	38.5
WM-2LT-03175153175385	3.175	15	3.175	38.5
WM-2LT-03175173175385	3.175	17	3.175	38.5
WM-2LT-03175223175450	3.175	22	3.175	45
WM-2LT-03175253175500	3.175	25	3.175	50
WM-2LT-03175283175500	3.175	28	3.175	50
WM-2LT-03175323175600	3.175	32	3.175	60
WM-2LT-03175423175700	3.175	42	3.175	70
WM-2LT-0301204500	3	12	4	50
WM-2LT-0301504500	3	15	4	50
WM-2LT-0301704500	3	17	4	50
WM-2LT-0302204500	3	22	4	50
WM-2LT-0401204400	4	12	4	40
WM-2LT-0401504400	4	15	4	40
WM-2LT-0401704400	4	17	4	40
WM-2LT-0402204450	4	22	4	45
WM-2LT-0402504500	4	25	4	50
WM-2LT-0402804500	4	28	4	50
WM-2LT-0403204600	4	32	4	60

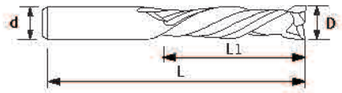
Item Code	(D)	(L1)	(d)	(L)
WM-2LT-0404204700	4	42	4	70
WM-2LT-0301206500	3	12	6	50
WM-2LT-0301706500	3	17	6	50
WM-2LT-0401706500	4	17	6	50
WM-2LT-0402206500	4	22	6	50
WM-2LT-0502206500	5	22	6	50
WM-2LT-0502506500	5	25	6	50
WM-2LT-0503206600	5	32	6	60
WM-2LT-0601206500	6	12	6	50
WM-2LT-0601706500	6	17	6	50
WM-2LT-0602206500	6	22	6	50
WM-2LT-0602506500	6	25	6	50
WM-2LT-0602806550	6	28	6	55
WM-2LT-0603206600	6	32	6	60
WM-2LT-0604206700	6	42	6	70
WM-2LT-0605206800	6	52	6	80
WM-2LT-0802208500	8	22	8	50
WM-2LT-0802508500	8	25	8	50
WM-2LT-0803208600	8	32	8	60
WM-2LT-0804208700	8	42	8	70
WM-2LT-0805208800	8	52	8	80
WM-2LT-1005210500	10	52	10	50
WM-2LT-1003210700	10	32	10	70
WM-2LT-1004210900	10	42	10	90
WM-2LT-10052101000	10	52	10	100
WM-2LT-120458121000	12	45	12	100
WM-2LT-12052121000	12	52	12	100
WM-2LT-12062121200	12	62	12	120
WM-2LT-1403514800	14	35	14	80
WM-2LT-14045141000	14	45	14	100
WM-2LT-14055141100	14	55	14	110
WM-2LT-14062141300	14	62	14	130
WM-2LT-14072141300	14	72	14	130

Applicable Table for Processed Materials — Very Suitable ○ Suitable

Processed Material													
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	CFRP	Timber	Nonmetal
		~40HRC	~50HRC	~55HRC	~68HRC								
												○	○

WM Woodworking Tools — Double Edge Compound Endmills

WM-2F



D≤12 0~-0.030
12<D 0~-0.040

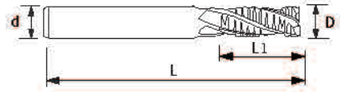
Item Code	(D)	(L1)	(d)	(L)
WM-2F-03175123175385	3.175	12	3.175	38.5
WM-2F-03175153175385	3.175	15	3.175	38.5
WM-2F-03175173175385	3.175	17	3.175	38.5
WM-2F-0401204500	4	12	4	50
WM-2F-0401704500	4	17	4	50
WM-2F-0402204500	4	22	4	50
WM-2F-0601206500	6	12	6	50
WM-2F-0601706500	6	17	6	50
WM-2F-0602206500	6	22	6	50
WM-2F-0603506600	6	35	6	60
WM-2F-0802508800	8	25	8	60
WM-2F-0803508800	8	35	8	80
WM-2F-1002510600	10	25	10	60
WM-2F-1003510800	10	35	10	80
WM-2F-10045101000	10	45	10	100
WM-2F-10055101000	10	55	10	100
WM-2F-1203512750	12	35	12	75
WM-2F-12045121000	12	45	12	100
WM-2F-12055121000	12	55	12	100
WM-2F-1403514750	14	35	14	75
WM-2F-14045140100	14	45	14	100
WM-2F-14055141000	14	55	14	100

Applicable Table for Processed Materials ● Very Suitable ○ Suitable

Processed Material													
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	CFRP	Timber	Nonmetal
		~40HRC	~50HRC	~55HRC	~68HRC								
												●	●

WM Woodworking Tools — Three-edge woodworking corrugated Endmills

WM-3W



D≤12 0~-0.030
12<D 0~-0.040

Item Code	(D)	(L1)	(d)	(L)
WM-3W-060170650	6	17	6	50
WM-3W-060220650	6	22	6	50
WM-3W-060320665	6	32	6	65
WM-3W-080250860	8	25	8	60
WM-3W-080350880	8	35	8	80
WM-3W-100251060	10	25	10	60
WM-3W-100351080	10	35	10	80
WM-3W-1004510100	10	45	10	100
WM-3W-120351275	12	35	12	75
WM-3W-1204512100	12	45	12	100
WM-3W-1205512100	12	55	12	100
WM-3W-140351475	14	35	14	75
WM-3W-1403514100	14	45	14	100
WM-3W-1405514100	14	55	14	100

Applicable Table for Processed Materials ● Very Suitable ○ Suitable

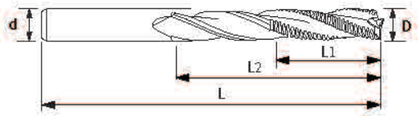
Processed Material													
Carbon Steel	Alloy Steel	Pre-hardened, Hardened Steel				Stainless Steel	Ductile Cast Iron	Corper	Aluminum	Titanium Alloy	CFRP	Timber	Nonmetal
		~40HRC	~50HRC	~55HRC	~68HRC								
												●	●

GREWIN TOOLS

WM Woodworking Tools

Three-flute woodworking corrugated avoidance Endmills (special for locking holes)

WM-3WE



D≤12 0~-0.030
12<D 0~-0.040

Item Code	(D)	(L1)	(L2)	(d)	(L)
WM-3WE-0800875	8	35	-	8	75
WM-3WE-08008100	8	50	-	8	100
WM-3WE-10010100	10	50	-	10	100
WM-3WE-10010120	10	70	-	10	120
WM-3WE-12012100	12	50	-	12	100
WM-3WE-12012120	12	70	-	12	120
WM-3WE-127127120	12.7	80	-	12.7	120
WM-3WE-16016100	16	50	-	16	100
WM-3WE-16016130	16	80	-	16	130
WM-3WE-16016165	16	55	110	16	165
WM-3WE-18016165	18	55	110	16	165
WM-3WE-20016165	20	55	110	16	165

GREWIN TOOLS

TYF New generation general processing twist drill bit

- Linear cutting edge, high strength
- Optimized drill tip structure for better cutting performance
- The combination of cutting simulation and experiment has better comprehensive performance
- Seismic margin design improves processing stability
- Professional coating post-treatment technology ensures low resistance and efficient processing

Non-standard size can be customized

Application scope

Strong universality, capable of efficient processing of various materials such as P (steel), M (stainless steel), K (cast iron), etc.

Excellent machining accuracy

Hole wall quality:

- Tool model TYF03C-0820
- Processing material: C70S 6 (HRC 30)
- V=120m/min; f=0.23mm r;H=30mm ;
- Cooling method: water-soluble coolant (internal coolant)

TYF series drill bits

A company's products

TYF series drill bits

A company's products

Good chip breaker performance

Chip breaker performance:

- Tool model: TYF05C-0600
- Processing material: 1Cr18Ni9Ti (HR1g0)
- V=75m/min;f=0.2mm/r;H=30mm;
- Cooling method: water-soluble cooling (internal coolant)

GREWIN TOOLS

TYF Drill Bit Series

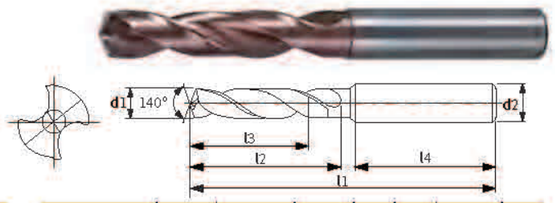
3D external coolant hole straight shank Twist drill bit

HELICA coating
Curved cutting edge, grinding back angle
Application materials : steel, cast iron, etc

HELICA 3D

P	M	K	N
Steel	Stainless steel	Cast iron	Non-ferrous metals
●	○	●	○

● Very Suitable ○ Suitable



Item Code	d1(m7)	M	d2(h6)	l1	l2	l3	l4
TYF-3D-D 0300	3		6	62	20	14	36
TYF-3D-D 0325	3.25		6	62	20	14	36
TYF-3D-D 0330	3.3	M4	6	62	20	14	36
TYF-3D-D 0340	3.4		6	62	20	14	36
TYF-3D-D 0350	3.5		6	62	20	14	36
TYF-3D-D 0370	3.7		6	62	20	14	36
TYF-3D-D 0400	4		6	66	24	17	36
TYF-3D-D 0420	4.2	M5	6	66	24	17	36
TYF-3D-D 0430	4.3		6	66	24	17	36
TYF-3D-D 0450	4.5		6	66	24	17	36
TYF-3D-D 0465	4.65		6	66	24	17	36
TYF-3D-D 0480	4.8		6	66	28	20	36
TYF-3D-D 0500	5	M6	6	66	28	20	36
TYF-3D-D 0510	5.1		6	66	28	20	36
TYF-3D-D 0520	5.2		6	66	28	20	36
TYF-3D-D 0550	5.5		6	66	28	20	36
TYF-3D-D 0555	5.55		6	66	28	20	36
TYF-3D-D 0580	5.8		6	66	28	20	36
TYF-3D-D 0600	6		6	66	28	20	36
TYF-3D-D0610	6.1		8	79	34	24	36
TYF-3D-D 0620	6.2		8	79	34	24	36
TYF-3D-D 0630	6.3		8	79	34	24	36
TYF-3D-D 0650	6.5		8	79	34	24	36
TYF-3D-D 0660	6.6		8	79	34	24	36
TYF-3D-D 0680	6.8	M8	8	79	34	24	36
TYF-3D-D 0690	6.9		8	79	34	24	36
TYF-3D-D 0700	7	M8X1	8	79	34	24	36
TYF-3D-D 0710	7.1		8	79	41	29	36
TYF-3D-D 0740	7.4		8	79	41	29	36
TYF-3D-D 0750	7.5		8	79	41	29	36
TYF-3D-D 0780	7.8		8	79	41	29	36
TYF-3D-D 0810	8		8	79	41	29	36
TYF-3D-D 0840	8.1		10	89	47	35	40
TYF-3D-D 0870	8.4		10	89	47	35	40
TYF-3D-D 0900	8.5	M10	10	89	47	35	40
TYF-3D-D 0930	8.6		10	89	47	35	40
TYF-3D-D 0960	8.7		10	89	47	35	40
TYF-3D-D 0990	8.8		10	89	47	35	40
TYF-3D-D 1020	9	M10X1	10	89	47	35	40
TYF-3D-D 1050	9.3		10	89	47	35	40
TYF-3D-D 1080	9.5		10	89	47	35	40
TYF-3D-D 1110	9.6		10	89	47	35	40
TYF-3D-D 1140	9.8		10	89	41	35	40

Item Code	d1(m7)	M	d2(h6)	l1	l2	l3	l4
TYF-3D-D 1000	10.00		10.00	89	47	35	40
TYF-3D-D 1025	10.25	M12	12.00	102	55	40	45
TYF-3D-D 1040	10.40		12.00	102	55	40	45
TYF-3D-D 1050	10.50	M12X1.5	12.00	102	55	40	45
TYF-3D-D 1060	10.60		12.00	102	55	40	45
TYF-3D-D 1080	10.80		12.00	102	55	40	45
TYF-3D-D 1100	11.00		12.00	102	55	40	45
TYF-3D-D 1120	11.20		12.00	102	55	40	45
TYF-3D-D 1150	11.50		12.00	102	55	40	45
TYF-3D-D 1180	11.80		12.00	102	55	40	45
TYF-3D-D 1200	12.00	M14	12.00	102	55	40	45
TYF-3D-D 1225	12.25		14.00	107	60	43	45
TYF-3D-D 1250	12.50	M14X1.5	14.00	107	60	43	45
TYF-3D-D 1270	12.70		14.00	107	60	43	45
TYF-3D-D 1275	12.75		14.00	107	60	43	45
TYF-3D-D 1280	12.80		14.00	107	60	43	45
TYF-3D-D 1300	13.00		14.00	107	60	43	45
TYF-3D-D 1310	13.10		14.00	107	60	43	45
TYF-3D-D 1350	13.50		14.00	107	60	43	45
TYF-3D-D 1380	13.80		14.00	107	60	43	45
TYF-3D-D 1400	14.00	M16	14.00	107	60	43	45
TYF-3D-D 1425	14.25		16.00	115	65	45	48
TYF-3D-D 1450	14.50	M16X1.5	16.00	115	65	45	48
TYF-3D-D 1475	14.75		16.00	115	65	45	48
TYF-3D-D 1480	14.80		16.00	115	65	45	48
TYF-3D-D 1500	15.00		16.00	115	65	45	48
TYF-3D-D 1510	15.10		16.00	115	65	45	48
TYF-3D-D 1550	15.50		16.00	115	65	45	48
TYF-3D-D 1580	15.80		16.00	115	65	45	48
TYF-3D-D 1600	16.00		16.00	115	65	45	48
TYF-3D-D 1650	16.50		18.00	123	73	51	48
TYF-3D-D 1675	16.75		18.00	123	73	51	48
TYF-3D-D 1680	16.80		18.00	123	73	51	48
TYF-3D-D 1700	17.00		18.00	123	73	51	48
TYF-3D-D 1750	17.50		18.00	123	73	51	48
TYF-3D-D 1780	17.80		18.00	123	73	51	48
TYF-3D-D 1800	18.00		18.00	123	73	51	48
TYF-3D-D 1850	18.50		20.00	131	79	55	50
TYF-3D-D 1880	18.80		20.00	131	79	55	50
TYF-3D-D 1900	19.00		20.00	131	79	55	50
TYF-3D-D 1950	19.50		20.00	131	79	55	50
TYF-3D-D 1980	19.80		20.00	131	79	55	50
TYF-3D-D 2000	20.00		20.00	131	79	55	50

Size range	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.006/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013
		Unit (mm)

GREWIN TOOLS

TYF Drill Bit Series

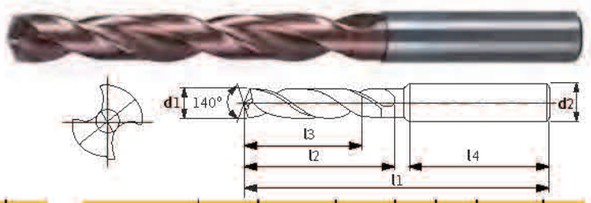
5D external coolant hole straight shank Twist drill bit

HELICA coating
Curved cutting edge, grinding back angle
Application materials : steel, cast iron, etc

HELICA 5D

P	M	K	N
Steel	Stainless steel	Cast iron	Non-ferrous metals
●	○	●	○

● Very Suitable ○ Suitable



Item Code	d1(m7)	M	d2(h6)	l1	l2	l3	l4
TYF-5D-D 0300	3		6	66	28	23	36
TYF-5D-D 0325	3.25		6	66	28	23	36
TYF-5D-D 0330	3.3	M4	6	66	28	23	36
TYF-5D-D 0340	3.4		6	66	28	23	36
TYF-5D-D 0350	3.5		6	66	28	23	36
TYF-5D-D 0370	3.7		6	66	28	23	36
TYF-5D-D 0400	4		6	74	36	29	36
TYF-5D-D 0420	4.2	M5	6	74	36	29	36
TYF-5D-D 0430	4.3		6	74	36	29	36
TYF-5D-D 0450	4.5		6	74	36	29	36
TYF-5D-D 0465	4.65		6	74	36	29	36
TYF-5D-D 0480	4.8		6	82	44	35	36
TYF-5D-D 0500	5	M6	6	82	44	35	36
TYF-5D-D 0510	5.1		6	82	44	35	36
TYF-5D-D 0520	5.2		6	82	44	35	36
TYF-5D-D 0550	5.5		6	82	44	35	36
TYF-5D-D 0555	5.55		6	82	44	35	36
TYF-5D-D 0580	5.8		6	82	44	35	36
TYF-5D-D 0600	6		6	82	44	35	36
TYF-5D-D0610	6.1		8	91	53	43	36
TYF-5D-D 0620	6.2		8	91	53	43	36
TYF-5D-D 0630	6.3		8	91	53	43	36
TYF-5D-D 0650	6.5		8	91	53	43	36
TYF-5D-D 0660	6.6		8	91	53	43	36
TYF-5D-D 0680	6.8	M8	8	91	53	43	36
TYF-5D-D 0690	6.9		8	91	53	43	36
TYF-5D-D 0700	7	M8X1	8	91	53	43	36
TYF-5D-D 0710	7.1		8	91	53	43	36
TYF-5D-D 0740	7.4		8	91	53	43	36
TYF-5D-D 0750	7.5		8	91	53	43	36
TYF-5D-D 0780	7.8		8	91	53	43	36
TYF-5D-D 0800	8		8	91	53	43	36
TYF-5D-D 0810	8.1		10	103	61	49	40
TYF-5D-D 0840	8.4		10	103	61	49	40
TYF-5D-D 0850	8.5	M10	10	103	61	49	40
TYF-5D-D 0860	8.6		10	103	61	49	40
TYF-5D-D 0870	8.7		10	103	61	49	40
TYF-5D-D 0880	8.8		10	103	61	49	40
TYF-5D-D 0900	9	M10X1	10	103	61	49	40
TYF-5D-D 0930	9.3		10	103	61	49	40
TYF-5D-D 0950	9.5		10	103	61	49	40
TYF-5D-D 0960	9.6		10	103	61	49	40
TYF-5D-D 0980	9.8		10	103	61	49	40

Item Code	d1(m7)	M	d2(h6)	l1	l2	l3	l4
TYF-5D-D 1000	10.00		10.00	103	61	49	40
TYF-5D-D 1025	10.25	M12	12.00	118	71	56	45
TYF-5D-D 1040	10.40		12.00	118	71	56	45
TYF-5D-D 1050	10.50	M12X1.5	12.00	118	71	56	45
TYF-5D-D 1060	10.60		12.00	118	71	56	45
TYF-5D-D 1080	10.80		12.00	118	71	56	45
TYF-5D-D 1100	11.00		12.00	118	71	56	45
TYF-5D-D 1120	11.20		12.00	118	71	56	45
TYF-5D-D 1150	11.50		12.00	118	71	56	45
TYF-5D-D 1180	11.80		12.00	118	71	56	45
TYF-5D-D 1200	12.00	M14	12.00	118	71	56	45
TYF-5D-D 1220	12.20		14.00	124	77	60	45
TYF-5D-D 1225	12.25		14.00	124	77	60	45
TYF-5D-D 1250	12.50	M14X1.5	14.00	124	77	60	45
TYF-5D-D 1270	12.70		14.00	124	77	60	45
TYF-5D-D 1275	12.75		14.00	124	77	60	45
TYF-5D-D 1280	12.80		14.00	124	77	60	45
TYF-5D-D 1310	13.00		14.00	124	77	60	45
TYF-5D-D 1350	13.50		14.00	124	77	60	45
TYF-5D-D 1380	13.80		14.00	124	77	60	45
TYF-5D-D 1400	14.00	M16	14.00	124	77	60	45
TYF-5D-D 1425	14.25		16.00	133	83	63	48
TYF-5D-D 1450	14.50	M16X1.5	16.00	133	83	63	48
TYF-5D-D 1475	14.75		16.00	133	83	63	48
TYF-5D-D 1480	14.80		16.00	133	83	63	48
TYF-5D-D 1500	15.00		16.00	133	83	63	48
TYF-5D-D 1510	15.10		16.00	133	83	63	48
TYF-5D-D 1550	15.50		16.00	133	83	63	48
TYF-5D-D 1580	15.80		16.00	133	83	63	48
TYF-5D-D 1600	16.00		16.00	133	83	63	48
TYF-5D-D 1650	16.50		18.00	143	93	71	48
TYF-5D-D 1675	16.75		18.00	143	93	71	48
TYF-5D-D 1680	16.80		18.00	143	93	71	48
TYF-5D-D 1700	17.00		18.00	143	93	71	48
TYF-5D-D 1750	17.50		18.00	143	93	71	48
TYF-5D-D 1780	17.80		18.00	143	93	71	48
TYF-5D-D 1800	18.00		18.00	143	93	71	48
TYF-5D-D 1850	18.50		20.00	153	101	77	50
TYF-5D-D 1900	19.00		20.00	153	101	77	50
TYF-5D-D 1950	19.50		20.00	153	101	77	50
TYF-5D-D 1980	19.80		20.00	153	101	77	50
TYF-5D-D 2000	20.00		20.00	153	101	77	50

Size range	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.006/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013
		Unit (mm)

GREWIN TOOLS

TYF Drill Bit Series

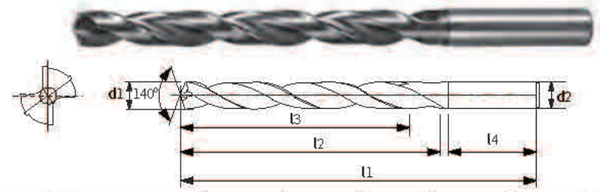
8D external coolant hole straight shank Twist drill bit

HELICA coating
Curved cutting edge, grinding back angle
Application materials : steel, cast iron, etc

HELICA 8D

P	M	K	N
Steel	Stainless steel	Cast iron	Non-ferrous metals
●	○	●	○

● Very Suitable ○ Suitable



Item Code	d1(m7)	d2(h6)	l1	l2	l4
TYF-8D-D03000	3.00	6.00	72	34	36
TYF-8D-D03100	3.10	6.00	72	34	36
TYF-8D-D03200	3.20	6.00	72	34	36
TYF-8D-D03300	3.30	6.00	72	34	36
TYF-8D-D03400	3.40	6.00	72	34	36
TYF-8D-D03500	3.50	6.00	72	34	36
TYF-8D-D 03600	3.60	6.00	72	34	36
TYF-8D-D03700	3.70	6.00	72	34	36
TYF-8D-D0380C	3.80	6.00	81	43	36
TYF-8D-D03900	3.90	6.00	81	43	36
TYF-8D-D04000	4.00	6.00	81	43	36
TYF-8D-004100	4.10	6.00	81	43	36
TYF-8D-D04200	4.20	6.00	81	43	36
TYF-8D-D04300	4.30	6.00	81	43	36
TYF-8D-D04400	4.40	6.00	81	43	36
TYF-8D-D04500	4.50	6.00	81	43	36
TYF-8D-D04600	4.60	6.00	81	43	36
TYF-8D-D04700	4.70	6.00	81	43	36
TYF-8D-D04800	4.80	6.00	95	57	36
TYF-8D-D04900	4.90	6.00	95	57	36
TYF-8D-D05000	5.00	6.00	95	57	36
TYF-8D-D.05100	5.10	6.00	95	57	36
TYF-8D-D05200	5.20	6.00	95	57	36
TYF-8D-D 05300	5.30	6.00	95	57	36
TYF-8D-D.05400	5.40	6.00	95	57	36
TYF-8D-D.05500	5.50	6.00	95	57	36
TYF-8D-D.05600	5.60	6.00	95	57	36
TYF-8D-D 0570C	5.70	6.00	95	57	36
TYF-8D-D05800	5.80	6.00	95	57	36
TYF-8D-D05900	5.90	6.00	95	57	36
TYF-8D-D06000	6.00	6.00	95	57	36
TYF-8D-D06100	6.10	8.00	114	76	36
TYF-8D-D 06200	6.20	8.00	114	76	36
TYF-8D-D 06300	6.20	8.00	114	76	36
TYF-8D-D 06400	6.40	8.00	114	76	36
TYF-8D-D06500	6.50	8.00	114	76	36
TYF-8D-D 0660C	6.60	8.00	114	76	36
TYF-8D-D06700	6.70	8.00	114	76	36
TYF-8D-D 06800	6.80	8.00	114	76	36
TYF-8D-D 06900	6.90	8.00	114	76	36
TYF-8D-D07000	7.00	8.00	114	76	36
TYF-8D-D07100	7.10	8.00	114	76	36
TYF-8D-D07200	7.20	8.00	114	76	36
TYF-8D-D07300	7.30	8.00	114	76	36
TYF-8D-D07400	7.40	8.00	114	76	36
TYF-8D-D07500	7.50	8.00	114	76	36
TYF-8D-D07600	7.60	8.00	114	76	36
TYF-8D-D07700	7.70	8.00	114	76	36
TYF-8D-D07800	7.80	8.00	114	76	36

Item Code	d1(m7)	d2(h6)	l1	l2	l4
TYF-8D-D07900	7.90	8.00	114	76	36
TYF-8D-D08000	8.00	8.00	114	76	36
TYF-8D-D08100	8.10	10.00	142	95	40
TYF-8D-D08200	8.20	10.00	142	95	40
TYF-8D-D08300	8.30	10.00	142	95	40
TYF-8D-D08400	8.40	10.00	142	95	40
TYF-8D-D08500	8.50	10.00	142	95	40
TYF-8D-D08600	8.60	10.00	142	95	40
TYF-8D-D08700	8.70	10.00	142	95	40
TYF-8D-D08800	8.80	10.00	142	95	40
TYF-8D-D08900	8.90	10.00	142	95	40
TYF-8D-D09000	9.00	10.00	142	95	40
TYF-8D-D09100	9.10	10.00	142	95	40
TYF-8D-D09200	9.20	10.00	142	95	40
TYF-8D-D09300	9.30	10.00	142	95	40
TYF-8D-D09400	9.40	10.00	142	95	40
TYF-8D-D09500	9.50	10.00	142	95	40
TYF-8D-D09600	9.60	10.00	142	95	40
TYF-8D-D09700	9.70	10.00	142	95	40
TYF-8D-D09800	9.80	10.00	142	95	40
TYF-8D-D09900	9.90	10.00	142	95	40
TYF-8D-D10000	10.00	10.00	142	95	40
TYF-8D-D10200	10.20	12.00	162	114	45
TYF-8D-D 10300	10.30	12.00	162	114	45
TYF-8D-D 10500	10.50	12.00	162	114	45
TYF-8D-D 10800	10.80	12.00	162	114	45
TYF-8D-D 11000	11.00	12.00	162	114	45
TYF-8D-D11200	11.20	12.00	162	114	45
TYF-8D-D 11500	11.50	12.00	162	114	45
TYF-8D-D 11600	11.60	12.00	162	114	45
TYF-8D-D11800	11.80	12.00	162	114	45
TYF-8D-D12000	12.00	12.00	162	114	45
TYF-8D-D12100	12.10	14.00	182	133	45
TYF-8D-D1220C	12.20	14.00	182	133	45
TYF-8D-D12500	12.50	14.00	182	133	45
TYF-8D-D1280C	12.80	14.00	182	133	45
TYF-8D-D1300C	13.00	14.00	182	133	45
TYF-8D-D13500	13.50	14.00	182	133	45
TYF-8D-D13800	13.80	14.00	182	133	45
TYF-8D-D14000	14.00	14.00	182	133	45
TYF-8D-D14200	14.20	16.00	203	152	48
TYF-8D-D14500	14.50	16.00	203	152	48
TYF-8D-D14800	14.80	16.00	203	152	48
TYF-8D-D15000	15.00	16.00	203	152	48
TYF-8D-D15500	15.50	16.00	203	152	48
TYF-8D-D15800	15.80	16.00	203	152	48
TYF-8D-D15900	15.90	16.00	203	152	48
TYF-8D-D16000	16.00	16.00	203	152	48

Size range	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.005/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位 (mm)

GREWIN TOOLS

TYF Drill Bit Series

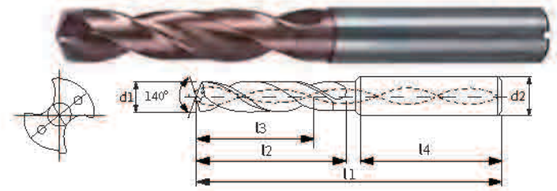
3D internal coolant hole straight shank Twist drill bit

HELICA coating
Curved cutting edge, grinding back angle
Application materials : steel, cast iron, etc

HELICA 3D

P	M	K	N
Steel	Stainless steel	Cast iron	Non-ferrous metals
●	○	●	○

● Very Suitable ○ Suitable



Item Code	d1(m7)	M	d2(h6)	l1	l2	l3	l4
TYF-3DN-D 0300	3		6	62	20	14	36
TYF-3DN-D 0325	3.25		6	62	20	14	36
TYF-3DN-D 0330	3.3	M4	6	62	20	14	36
TYF-3DN-D 0340	3.4		6	62	20	14	36
TYF-3DN-D 0350	3.5		6	62	20	14	36
TYF-3DN-D 0370	3.7		6	62	20	14	36
TYF-3DN-D 0400	4		6	66	24	17	36
TYF-3DN-D 0420	4.2	M5	6	66	24	17	36
TYF-3DN-D 0430	4.3		6	66	24	17	36
TYF-3DN-D 0450	4.5		6	66	24	17	36
TYF-3DN-D 0465	4.65		6	66	24	17	36
TYF-3DN-D 0480	4.8		6	66	28	20	36
TYF-3DN-D 0500	5	M6	6	66	28	20	36
TYF-3DN-D 0510	5.1		6	66	28	20	36
TYF-3DN-D 0520	5.2		6	66	28	20	36
TYF-3DN-D 0550	5.5		6	66	28	20	36
TYF-3DN-D 0555	5.55		6	66	28	20	36
TYF-3DN-D 0580	5.8		6	66	28	20	36
TYF-3DN-D 0600	6		6	66	28	20	36
TYF-3DN-D0610	6.1		8	79	34	24	36
TYF-3DN-D 0620	6.2		8	79	34	24	36
TYF-3DN-D 0630	6.3		8	79	34	24	36
TYF-3DN-D 0650	6.5		8	79	34	24	36
TYF-3DN-D 0660	6.6		8	79	34	24	36
TYF-3DN-D 0680	6.8	M8	8	79	34	24	36
TYF-3DN-D 0690	6.9		8	79	34	24	36
TYF-3DN-D 0700	7	M8X1	8	79	34	24	36
TYF-3DN-D 0710	7.1		8	79	41	29	36
TYF-3DN-D 0740	7.4		8	79	41	29	36
TYF-3DN-D 0750	7.5		8	79	41	29	36
TYF-3DN-D 0780	7.8		8	79	41	29	36
TYF-3DN-D 0800	8		8	79	41	29	36
TYF-3DN-D 0810	8.1		10	89	47	35	40
TYF-3DN-D 0840	8.4		10	89	47	35	40
TYF-3DN-D 0850	8.5	M10	10	89	47	35	40
TYF-3DN-D 0860	8.6		10	89	47	35	40
TYF-3DN-D 0870	8.7		10	89	47	35	40
TYF-3DN-D 0880	8.8		10	89	47	35	40
TYF-3DN-D 0900	9	M10X1	10	89	47	35	40
TYF-3DN-D 0930	9.3		10	89	47	35	40
TYF-3DN-D 0950	9.5		10	89	47	35	40
TYF-3DN-D 0960	9.6		10	89	47	35	40
TYF-3DN-D 0980	9.8		10	89	47	35	40

Item Code	d1(m7)	M	d2(h6)	l1	l2	l3	l4
TYF-3DN-D 1000	10		10	89	47	35	40
TYF-3DN-D 1025	10.25	M12	12	102	55	40	45
TYF-3DN-D 1040	10.4		12	102	55	40	45
TYF-3DN-D 1050	10.5	M12X1.5	12	102	55	40	45
TYF-3DN-D 1060	10.6		12	102	55	40	45
TYF-3DN-D 1080	10.8		12	102	55	40	45
TYF-3DN-D 1100	11		12	102	55	40	45
TYF-3DN-D 1120	11.2		12	102	55	40	45
TYF-3DN-D 1150	11.5		12	102	55	40	45
TYF-3DN-D 1180	11.8		12	102	55	40	45
TYF-3DN-D 1200	12	M14	12	102	55	40	45
TYF-3DN-D 1225	12.25		14	107	60	43	45
TYF-3DN-D 1250	12.5	M14X1.5	14	107	60	43	45
TYF-3DN-D 1270	12.7		14	107	60	43	45
TYF-3DN-D 1275	12.75		14	107	60	43	45
TYF-3DN-D 1280	12.8		14	107	60	43	45
TYF-3DN-D 1300	13		14	107	60	43	45
TYF-3DN-D 1310	13.1		14	107	60	43	45
TYF-3DN-D 1350	13.5		14	107	60	43	45
TYF-3DN-D 1380	13.8		14	107	60	43	45
TYF-3DN-D 1400	14	M16	14	107	60	43	45
TYF-3DN-D 1425	14.25		16	115	65	45	48
TYF-3DN-D 1450	14.5	M16X1.5	16	115	65	45	48
TYF-3DN-D 1475	14.75		16	115	65	45	48
TYF-3DN-D 1480	14.8		16	115	65	45	48
TYF-3DN-D 1500	15		16	115	65	45	48
TYF-3DN-D 1510	15.1		16	115	65	45	48
TYF-3DN-D 1550	15.5		16	115	65	45	48
TYF-3DN-D 1580	15.8		16	115	65	45	48
TYF-3DN-D 1600	16		16	115	65	45	48
TYF-3DN-D 1650	16.5		18	123	73	51	48
TYF-3DN-D 1675	16.75		18	123	73	51	48
TYF-3DN-D 1680	16.8		18	123	73	51	48
TYF-3DN-D 1700	17		18	123	73	51	48
TYF-3DN-D 1750	17.5		18	123	73	51	48
TYF-3DN-D 1780	17.8		18	123	73	51	48
TYF-3DN-D 1800	18		18	123	73	51	48
TYF-3DN-D 1850	18.5		20	131	79	55	50
TYF-3DN-D 1880	18.8		20	131	79	55	50
TYF-3DN-D 1900	19		20	131	79	55	50
TYF-3DN-D 1950	19.5		20	131	79	55	50
TYF-3DN-D 1980	19.8		20	131	79	55	50
TYF-3DN-D 2000	20		20	131	79	55	50

Size range	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.005/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位 (mm)

GREWIN TOOLS

TYF Drill Bit Series

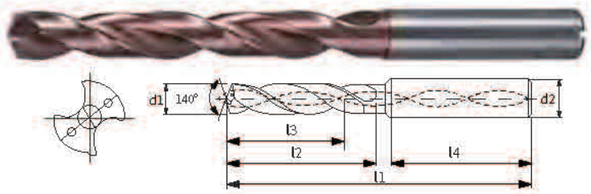
5D internal coolant hole straight shank Twist drill bit

HELICA coating
Curved cutting edge, grinding back angle
Application materials : steel, cast iron, etc

HELICA 5D

P	M	K	N
Steel	Stainless steel	Cast iron	Non-ferrous metals
●	○	●	○

● Very Suitable ○ Suitable



Item Code	d1(m7)	M	d2(h6)	l1	l2	l3	l4
TYF-5DN-D 0300	3		6	62	20	14	36
TYF-5DN-D 0325	3.25		6	62	20	14	36
TYF-5DN-D 0330	3.3	M4	6	62	20	14	36
TYF-5DN-D 0340	3.4		6	62	20	14	36
TYF-5DN-D 0350	3.5		6	62	20	14	36
TYF-5DN-D 0370	3.7		6	62	20	14	36
TYF-5DN-D 0400	4		6	66	24	17	36
TYF-5DN-D 0420	4.2	M5	6	66	24	17	36
TYF-5DN-D 0430	4.3		6	66	24	17	36
TYF-5DN-D 0450	4.5		6	66	24	17	36
TYF-5DN-D 0465	4.65		6	66	24	17	36
TYF-5DN-D 0480	4.8		6	66	28	20	36
TYF-5DN-D 0500	5	M6	6	66	28	20	36
TYF-5DN-D 0510	5.1		6	66	28	20	36
TYF-5DN-D 0520	5.2		6	66	28	20	36
TYF-5DN-D 0550	5.5		6	66	28	20	36
TYF-5DN-D 0555	5.55		6	66	28	20	36
TYF-5DN-D 0580	5.8		6	66	28	20	36
TYF-5DN-D 0600	6		6	66	28	20	36
TYF-5DN-D0610	6.1		8	79	34	24	36
TYF-5DN-D 0620	6.2		8	79	34	24	36
TYF-5DN-D 0630	6.3		8	79	34	24	36
TYF-5DN-D 0650	6.5		8	79	34	24	36
TYF-5DN-D 0660	6.6		8	79	34	24	36
TYF-5DN-D 0680	6.8	M8	8	79	34	24	36
TYF-5DN-D 0690	6.9		8	79	34	24	36
TYF-5DN-D 0700	7	M8X1	8	79	34	24	36
TYF-5DN-D 0710	7.1		8	79	41	29	36
TYF-5DN-D 0740	7.4		8	79	41	29	36
TYF-5DN-D 0750	7.5		8	79	41	29	36
TYF-5DN-D 0780	7.8		8	79	41	29	36
TYF-5DN-D 0800	8		8	79	41	29	36
TYF-5DN-D 0810	8.1		10	89	47	35	40
TYF-5DN-D 0840	8.4		10	89	47	35	40
TYF-5DN-D 0850	8.5	M10	10	89	47	35	40
TYF-5DN-D 0860	8.6		10	89	47	35	40
TYF-5DN-D 0870	8.7		10	89	47	35	40
TYF-5DN-D 0880	8.8		10	89	47	35	40
TYF-5DN-D 0900	9	M10X1	10	89	47	35	40
TYF-5DN-D 0930	9.3		10	89	47	35	40
TYF-5DN-D 0950	9.5		10	89	47	35	40
TYF-5DN-D 0960	9.6		10	89	47	35	40
TYF-5DN-D 0980	9.8		10	89	47	35	40

Item Code	d1(m7)	M	d2(h6)	l1	l2	l3	l4
TYF-5DN-D 1000	10.00		10.00	103	61	49	40
TYF-5DN-D 1025	10.25	M12	12.00	118	71	56	45
TYF-5DN-D 1040	10.40		12.00	118	71	56	45
TYF-5DN-D 1050	10.50	M12X1.5	12.00	118	71	56	45
TYF-5DN-D 1060	10.60		12.00	118	71	56	45
TYF-5DN-D 1080	10.80		12.00	118	71	56	45
TYF-5DN-D 1100	11.00		12.00	118	71	56	45
TYF-5DN-D 1120	11.20		12.00	118	71	56	45
TYF-5DN-D 1150	11.50		12.00	118	71	56	45
TYF-5DN-D 1180	11.80		12.00	118	71	56	45
TYF-5DN-D 1200	12.00	M14	12.00	118	71	56	45
TYF-5DN-D 1220	12.20		14.00	124	77	60	45
TYF-5DN-D 1225	12.25		14.00	124	77	60	45
TYF-5DN-D 1250	12.50	M14X1.5	14.00	124	77	60	45
TYF-5DN-D 1270	12.70		14.00	124	77	60	45
TYF-5DN-D 1275	12.75		14.00	124	77	60	45
TYF-5DN-D 1280	12.80		14.00	124	77	60	45
TYF-5DN-D 1310	13.00		14.00	124	77	60	45
TYF-5DN-D 1350	13.50		14.00	124	77	60	45
TYF-5DN-D 1380	13.80		14.00	124	77	60	45
TYF-5DN-D 1400	14.00	M16	14.00	124	77	60	45
TYF-5DN-D 1425	14.25		16.00	133	83	63	48
TYF-5DN-D 1450	14.50	M16X1.5	16.00	133	83	63	48
TYF-5DN-D 1475	14.75		16.00	133	83	63	48
TYF-5DN-D 1480	14.80		16.00	133	83	63	48
TYF-5DN-D 1500	15.00		16.00	133	83	63	48
TYF-5DN-D 1510	15.10		16.00	133	83	63	48
TYF-5DN-D 1550	15.50		16.00	133	83	63	48
TYF-5DN-D 1580	15.80		16.00	133	83	63	48
TYF-5DN-D 1600	16.00		16.00	133	83	63	48
TYF-5DN-D 1650	16.50		18.00	143	93	71	48
TYF-5DN-D 1675	16.75		18.00	143	93	71	48
TYF-5DN-D 1680	16.80		18.00	143	93	71	48
TYF-5DN-D 1700	17.00		18.00	143	93	71	48
TYF-5DN-D 1750	17.50		18.00	143	93	71	48
TYF-5DN-D 1780	17.80		18.00	143	93	71	48
TYF-5DN-D 1800	18.00		18.00	143	93	71	48
TYF-5DN-D 1850	18.50		20.00	153	101	77	50
TYF-5DN-D 1900	19.00		20.00	153	101	77	50
TYF-5DN-D 1950	19.50		20.00	153	101	77	50
TYF-5DN-D 1980	19.80		20.00	153	101	77	50
TYF-5DN-D 2000	20.00		20.00	153	101	77	50

Size range	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.005/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013
		Unit (mm)

GREWIN TOOLS

TYF Drill Bit Series

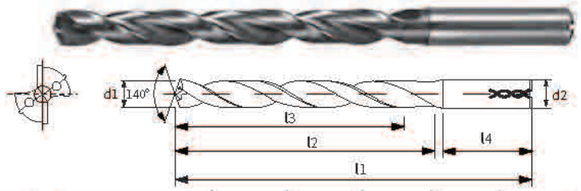
8D internal coolant hole straight shank Twist drill bit

HELICA coating
Curved cutting edge, grinding back angle
Application materials : steel, cast iron, etc

HELICA 8D

P	M	K	N
Steel	Stainless steel	Cast iron	Non-ferrous metals
●	○	●	○

● Very Suitable ○ Suitable



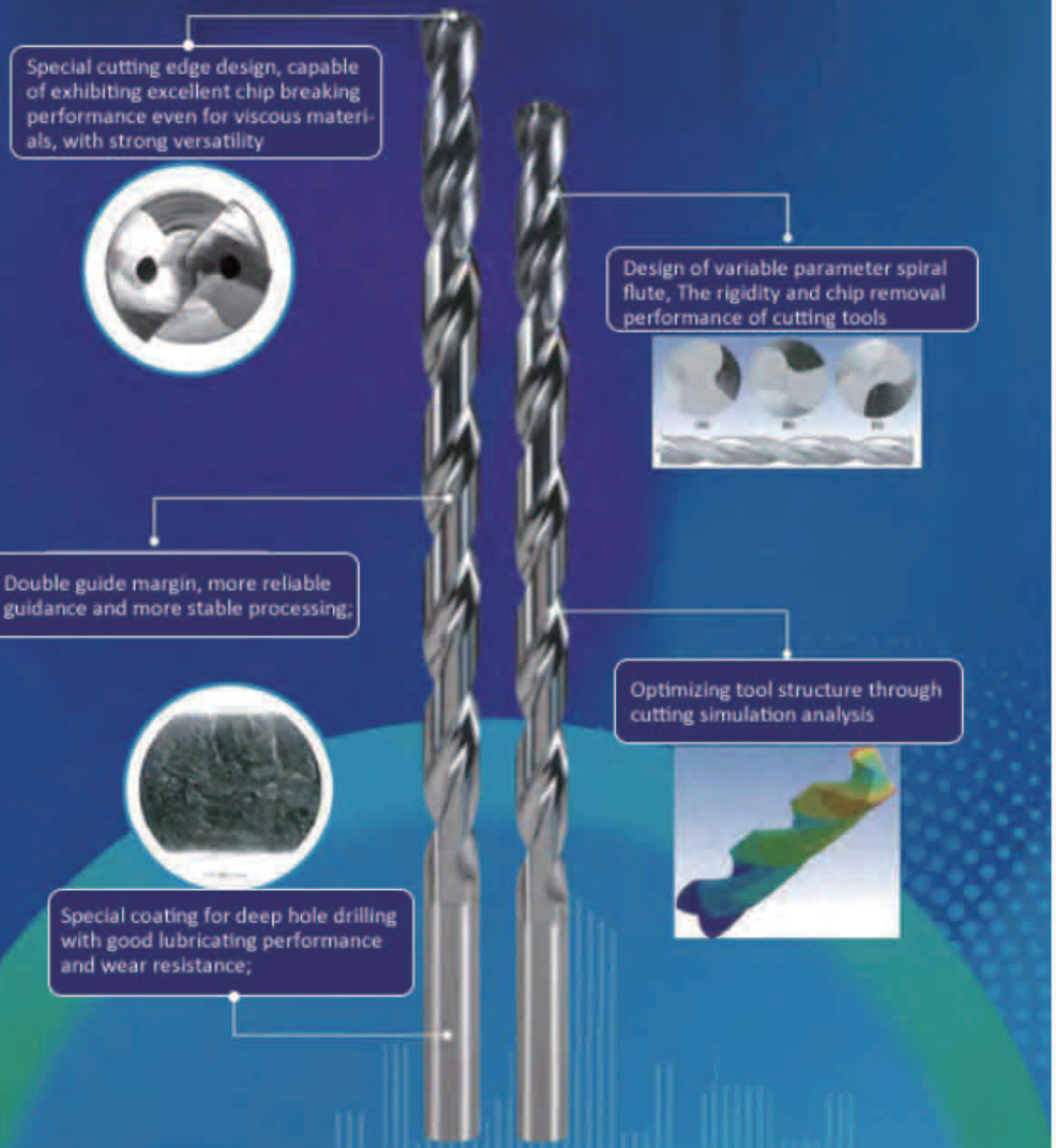
Item Code	d1(m7)	d2(h6)	l1	l2	l4
TYF-8DN-D 03000	3.00	6.00	72	34	36
TYF-8DN-D 03100	3.10	6.00	72	34	36
TYF-8DN-D 03200	3.20	6.00	72	34	36
TYF-8DN-D 03300	3.30	6.00	72	34	36
TYF-8DN-D 03400	3.40	6.00	72	34	36
TYF-8DN-D 03500	3.50	6.00	72	34	36
TYF-8DN-D 03600	3.60	6.00	72	34	36
TYF-8DN-D 03700	3.70	6.00	72	34	36
TYF-8DN-D 0380C	3.80	6.00	81	43	36
TYF-8DN-D 03900	3.90	6.00	81	43	36
TYF-8DN-D 04000	4.00	6.00	81	43	36
TYF-8DN-D 04100	4.10	6.00	81	43	36
TYF-8DN-D 04200	4.20	6.00	81	43	36
TYF-8DN-D 04300	4.30	6.00	81	43	36
TYF-8DN-D 04400	4.40	6.00	81	43	36
TYF-8DN-D 04500	4.50	6.00	81	43	36
TYF-8DN-D 04600	4.60	6.00	81	43	36
TYF-8DN-D 04700	4.70	6.00	81	43	36
TYF-8DN-D 04800	4.80	6.00	95	57	36
TYF-8DN-D 04900	4.90	6.00	95	57	36
TYF-8DN-D 05000	5.00	6.00	95	57	36
TYF-8DN-D 05100	5.10	6.00	95	57	36
TYF-8DN-D 05200	5.20	6.00	95	57	36
TYF-8DN-D 05300	5.30	6.00	95	57	36
TYF-8DN-D 05400	5.40	6.00	95	57	36
TYF-8DN-D 05500	5.50	6.00	95	57	36
TYF-8DN-D 05600	5.60	6.00	95	57	36
TYF-8DN-D 05700	5.70	6.00	95	57	36
TYF-8DN-D 05800	5.80	6.00	95	57	36
TYF-8DN-D 05900	5.90	6.00	95	57	36
TYF-8DN-D 06000	6.00	6.00	95	57	36
TYF-8DN-D 06100	6.10	8.00	114	76	36
TYF-8DN-D 06200	6.20	8.00	114	76	36
TYF-8DN-D 06300	6.20	8.00	114	76	36
TYF-8DN-D 06400	6.40	8.00	114	76	36
TYF-8DN-D 06500	6.50	8.00	114	76	36
TYF-8DN-D 0660C	6.60	8.00	114	76	36
TYF-8DN-D 06700	6.70	8.00	114	76	36
TYF-8DN-D 06800	6.80	8.00	114	76	36
TYF-8DN-D 06900	6.90	8.00	114	76	36
TYF-8DN-D 07000	7.00	8.00	114	76	36
TYF-8DN-D 07100	7.10	8.00	114	76	36
TYF-8DN-D 07200	7.20	8.00	114	76	36
TYF-8DN-D 07300	7.30	8.00	114	76	36
TYF-8DN-D 07400	7.40	8.00	114	76	36
TYF-8DN-D 07500	7.50	8.00	114	76	36
TYF-8DN-D 07600	7.60	8.00	114	76	36
TYF-8DN-D 07700	7.70	8.00	114	76	36
TYF-8DN-D 07800	7.80	8.00	114	76	36

Item Code	d1(m7)	d2(h6)	l1	l2	l4
TYF-8DN-D 07900	7.90	8.00	114	76	36
TYF-8DN-D 08000	8.00	8.00	114	76	36
TYF-8DN-D 08100	8.10	10.00	142	95	40
TYF-8DN-D 08200	8.20	10.00	142	95	40
TYF-8DN-D 08300	8.30	10.00	142	95	40
TYF-8DN-D 08400	8.40	10.00	142	95	40
TYF-8DN-D 08500	8.50	10.00	142	95	40
TYF-8DN-D 08600	8.60	10.00	142	95	40
TYF-8DN-D 08700	8.70	10.00	142	95	40
TYF-8DN-D 08800	8.80	10.00	142	95	40
TYF-8DN-D 08900	8.90	10.00	142	95	40
TYF-8DN-D 09000	9.00	10.00	142	95	40
TYF-8DN-D 09100	9.10	10.00	142	95	40
TYF-8DN-D 09200	9.20	10.00	142	95	40
TYF-8DN-D 09300	9.30	10.00	142	95	40
TYF-8DN-D 09400	9.40	10.00	142	95	40
TYF-8DN-D 09500	9.50	10.00	142	95	40
TYF-8DN-D 09600	9.60	10.00	142	95	40
TYF-8DN-D 09700	9.70	10.00	142	95	40
TYF-8DN-D 09800	9.80	10.00	142	95	40
TYF-8DN-D 09900	9.90	10.00	142	95	40
TYF-8DN-D 10000	10.00	10.00	142	95	40
TYF-8DN-D 10200	10.20	12.00	162	114	45
TYF-8DN-D 10300	10.30	12.00	162	114	45
TYF-8DN-D 10500	10.50	12.00	162	114	45
TYF-8DN-D 10800	10.80	12.00	162	114	45
TYF-8DN-D 11000	11.00	12.00	162	114	45
TYF-8DN-D 11200	11.20	12.00	162	114	45
TYF-8DN-D 11500	11.50	12.00	162	114	45
TYF-8DN-D 11600	11.60	12.00	162	114	45
TYF-8DN-D 11800	11.80	12.00	162	114	45
TYF-8DN-D 12000	12.00	12.00	162	114	45
TYF-8DN-D 12100	12.10	14.00	182	133	45
TYF-8DN-D 1220C	12.20	14.00	182	133	45
TYF-8DN-D 12500	12.50	14.00	182	133	45
TYF-8DN-D 1280C	12.80	14.00	182	133	45
TYF-8DN-D 1300C	13.00	14.00	182	133	45
TYF-8DN-D 13500	13.50	14.00	182	133	45
TYF-8DN-D 13800	13.80	14.00	182	133	45
TYF-8DN-D 14000	14.00	14.00	182	133	45
TYF-8DN-D 14200	14.20	16.00	203	152	48
TYF-8DN-D 14500	14.50	16.00	203	152	48
TYF-8DN-D 14800	14.80	16.00	203	152	48
TYF-8DN-D 15000	15.00	16.00	203	152	48
TYF-8DN-D 15500	15.50	16.00	203	152	48
TYF-8DN-D 15800	15.80	16.00	203	152	48
TYF-8DN-D 15900	15.90	16.00	203	152	48
TYF-8DN-D 16000	16.00	16.00	203	152	48

Size range	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.005/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013
		Unit (mm)

GREWIN TOOLS

Deep hole making series

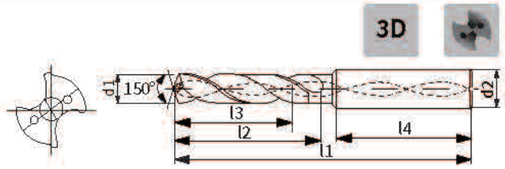


Non-standard size can be customized

GREWIN TOOLS

Deep hole making series — Guide hole making drill bit

3D



Item Code	(d1)	(d2)	(l1)	(l2)	(l3)	(l4)
SP03C-0303	3.03	6	62	20	14	36
SP03C-0313	3.13	6	62	20	14	36
SP03C-0323	323.00	6	62	20	14	36
SP03C-0333	3.33	6	62	20	14	36
SP03C-0343	3.43	6	62	20	14	36
SP03C-0353	3.53	6	62	20	14	36
SP03C-0363	3.63	6	62	20	14	36
SP03C-0373	3.73	6	62	20	14	36
SP03C-0383	3.83	6	66	24	17	36
SP03C-0393	3.93	6	66	24	17	36
SP03C-0403	4.03	6	66	24	17	36
SP03C-0413	4.13	6	66	24	17	36
SP03C-0423	4.23	6	66	24	17	36
SP03C-0433	4.33	6	66	24	17	36
SP03C-0443	4.43	6	66	24	17	36
SP03C-0453	4.53	6	66	24	17	36
SP03C-0463	4.63	6	66	24	17	36
SP03C-0473	4.73	6	66	24	17	36
SP03C-0483	4.83	6	66	28	20	36
SP03C-0493	4.93	6	66	28	20	36
SP03C-0503	5.03	6	66	28	20	36
SP03C-0513	5.13	6	66	28	20	36
SP03C-0523	5.23	6	66	28	20	36
SP03C-0533	5.33	6	66	28	20	36
SP03C-0543	5.43	6	66	28	20	36
SP03C-0553	5.53	6	66	28	20	36
SP03C-0563	5.63	6	66	28	20	36
SP03C-0573	5.73	6	66	28	20	36
SP03C-0583	5.83	6	66	28	20	36
SP03C-0593	5.93	6	66	28	20	36
SP03C-0603	6.03	6	66	28	20	36
SP03C-0613	6.13	8	79	34	24	36
SP03C-0623	6.23	8	79	34	24	36
SP03C-0633	6.33	8	79	34	24	36
SP03C-0643	6.43	8	79	34	24	36
SP03C-0653	6.53	8	79	34	24	36
SP03C-0663	6.63	8	79	34	24	36
SP03C-0673	6.73	8	79	34	24	36
SP03C-0683	6.83	8	79	34	24	36
SP03C-0693	6.93	8	79	34	24	36
SP03C-0703	7.03	8	79	34	24	36
SP03C-0713	7.13	8	79	41	29	36
SP03C-0723	7.23	8	79	41	29	36
SP03C-0733	7.33	8	79	41	29	36
SP03C-0743	7.43	8	79	41	29	36
SP03C-0753	7.53	8	79	41	29	36
SP03C-0763	7.63	8	79	41	29	36
SP03C-0773	7.73	8	79	41	29	36
SP03C-0783	7.83	8	79	41	29	36

Item Code	(d1)	(d2)	(l1)	(l2)	(l3)	(l4)
SP03C-0793	7.93	8	79	41	29	36
SP03C-0803	8.03	8	79	41	29	36
SP03C-0813	8.13	10	89	47	35	40
SP03C-0823	8.23	10	89	47	35	40
SP03C-0833	8.33	10	89	47	35	40
SP03C-0843	8.43	10	89	47	35	40
SP03C-0853	8.53	10	89	47	35	40
SP03C-0863	8.63	10	89	47	35	40
SP03C-0873	8.73	10	89	47	35	40
SP03C-0883	8.83	10	89	47	35	40
SP03C-0893	8.93	10	89	47	35	40
SP03C-0903	9.03	10	89	47	35	40
SP03C-0913	9.13	10	89	47	35	40
SP03C-0923	9.23	10	89	47	35	40
SP03C-0933	9.33	10	89	47	35	40
SP03C-0943	9.43	10	89	47	35	40
SP03C-0953	9.53	10	89	47	35	40
SP03C-0963	9.63	10	89	47	35	40
SP03C-0973	9.73	10	89	47	35	40
SP03C-0983	9.83	10	89	47	35	40
SP03C-0993	9.93	10	89	47	35	40
SP03C-1003	10.03	10	89	47	35	40
SP03C-1013	10.13	12	102	55	40	45
SP03C-1023	10.23	12	102	55	40	45
SP03C-1033	10.33	12	102	55	40	45
SP03C-1043	10.43	12	102	55	40	45
SP03C-1053	10.53	12	102	55	40	45
SP03C-1063	10.63	12	102	55	40	45
SP03C-1073	10.73	12	102	55	40	45
SP03C-1083	10.83	12	102	55	40	45
SP03C-1093	10.93	12	102	55	40	45
SP03C-1103	11.03	12	102	55	40	45
SP03C-1113	11.13	12	102	55	40	45
SP03C-1123	11.23	12	102	55	40	45
SP03C-1133	11.33	12	102	55	40	45
SP03C-1143	11.43	12	102	55	40	45
SP03C-1153	11.53	12	102	55	40	45
SP03C-1163	11.63	12	102	55	40	45
SP03C-1173	11.73	12	102	55	40	45
SP03C-1183	11.83	12	102	55	40	45
SP03C-1193	11.93	12	102	55	40	45
SP03C-1203	12.03	12	102	55	40	45
SP03C-1253	12.53	14	107	60	43	45
SP03C-1273	12.73	14	107	60	43	45
SP03C-1283	12.83	14	107	60	43	45
SP03C-1303	13.03	14	107	60	43	45
SP03C-1353	13.53	14	107	60	43	45
SP03C-1403	14.03	14	107	60	43	45

GREWIN TOOLS

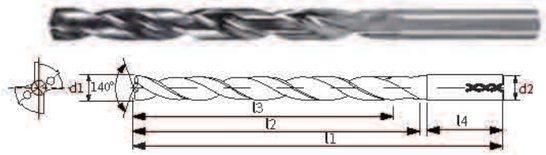
Deep hole making series — 12D Internal coolant deep hole Twist drill bit

AlTiN-nano coating
Straight edge, flat relief angle, 4-side margin
Application materials: steel, cast iron, non-ferrous metals, etc

AlTiN nano | 12D

P		H	K
Steel (HRC<35)	Stainless steel	Hardened steel	Cast iron
●	●	●	○

● Very Suitable ○ Suitable



Item Code	d1(h7)	d2(h6)	l1	l2	l4
SP012C-03000	3.0	6	90	50	36
SP012C-03100	3.1	6	90	50	36
SP012C-03200	3.2	6	90	50	36
SP012C-03300	3.3	6	90	50	36
SP012C-03400	3.4	6	90	50	36
SP012C-03500	3.5	6	90	50	36
SP012C-03600	3.6	6	90	50	36
SP012C-03700	3.7	6	90	50	36
SP012C-03800	3.8	6	102	64	36
SP012C-03900	3.9	6	102	64	36
SP012C-04000	4.0	6	102	64	36
SP012C-04100	4.1	6	102	64	36
SP012C-04200	4.2	6	102	64	36
SP012C-04300	4.3	6	102	64	36
SP012C-04400	4.4	6	102	64	36
SP012C-04500	4.5	6	102	64	36
SP012C-04600	4.6	6	102	64	36
SP012C-04700	4.7	6	102	64	36
SP012C-04800	4.8	6	116	78	36
SP012C-04900	4.9	6	116	78	36
SP012C-05000	5.0	6	116	78	36
SP012C-05100	5.1	6	116	78	36
SP012C-05200	5.2	6	116	78	36
SP012C-05300	5.3	6	116	78	36
SP012C-05400	5.4	6	116	78	36
SP012C-05500	5.5	6	116	78	36
SP012C-05600	5.6	6	116	78	36
SP012C-05700	5.7	6	116	78	36
SP012C-05800	5.8	6	116	78	36
SP012C-05900	5.9	6	116	78	36
SP012C-06000	6.0	6	116	78	36
SP012C-06100	6.1	8	146	108	36
SP012C-06200	6.2	8	146	108	36
SP012C-06300	6.3	8	146	108	36
SP012C-06400	6.4	8	146	108	36
SP012C-06500	6.5	8	146	108	36
SP012C-06600	6.6	8	146	108	36
SP012C-06700	6.7	8	146	108	36
SP012C-06800	6.8	8	146	108	36
SP012C-06900	6.9	8	146	108	36
SP012C-07000	7.0	8	146	108	36
SP012C-07100	7.1	8	146	108	36
SP012C-07200	7.2	8	146	108	36
SP012C-07300	7.3	8	146	108	36
SP012C-07400	7.4	8	146	108	36
SP012C-07500	7.5	8	146	108	36
SP012C-07600	7.6	8	146	108	36

Item Code	d1(h7)	d2(h6)	l1	l2	l4
SP012C-07700	7.7	8	146	108	36
SP012C-07800	7.8	8	146	108	36
SP012C-07900	7.9	8	146	108	36
SP012C-08000	8.0	8	146	108	36
SP012C-08100	8.1	10	162	120	40
SP012C-08200	8.2	10	162	120	40
SP012C-08300	8.3	10	162	120	40
SP012C-08400	8.4	10	162	120	40
SP012C-08500	8.5	10	162	120	40
SP012C-08600	8.6	10	162	120	40
SP012C-08700	8.7	10	162	120	40
SP012C-08800	8.8	10	162	120	40
SP012C-08900	8.9	10	162	120	40
SP012C-09000	9.0	10	162	120	40
SP012C-09100	9.1	10	162	120	40
SP012C-09200	9.2	10	162	120	40
SP012C-09300	9.3	10	162	120	40
SP012C-09400	9.4	10	162	120	40
SP012C-09500	9.5	10	162	120	40
SP012C-09600	9.6	10	162	120	40
SP012C-09700	9.7	10	162	120	40
SP012C-09800	9.8	10	162	120	40
SP012C-09900	9.9	10	162	120	40
SP012C-10000	10.0	10	162	120	40
SP012C-10200	10.2	12	204	156	45
SP012C-10500	10.5	12	204	156	45
SP012C-11000	11.0	12	204	156	45
SP012C-11500	11.5	12	204	156	45
SP012C-12000	12.0	12	204	156	45
SP012C-12500	12.5	14	230	182	45
SP012C-12700	12.7	14	230	182	45
SP012C-13000	13.0	14	230	182	45
SP012C-13500	13.5	14	230	182	45
SP012C-14000	14.0	14	230	182	45
SP012C-14500	14.5	16	260	208	48
SP012C-15000	15.0	16	260	208	48
SP012C-15500	15.5	16	260	208	45
SP012C-16000	16.0	16	260	208	42
SP012C-16500	16.5	18	285	234	39
SP012C-17000	17.0	18	285	234	36
SP012C-17500	17.5	18	285	234	33
SP012C-18000	18.0	18	285	234	30
SP012C-18500	18.5	20	310	258	50
SP012C-19000	19.0	20	310	258	50
SP012C-19500	19.5	20	310	258	50
SP012C-20000	20.0	20	310	258	50

GREWIN TOOLS

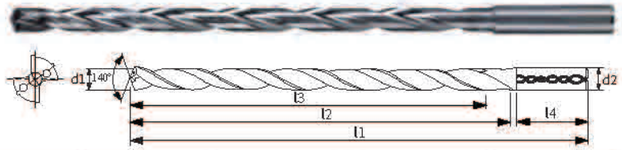
Deep hole making series — 15D Internal coolant deep hole Twist drill bit

AlTiN-nano coating
Straight edge, flat relief angle, 4-side margin
Application materials: steel, cast iron, non-ferrous metals, etc

AlTiN nano | 15D

P		K	N
Steel	Stainless steel	Cast iron	Non-ferrous metals
●	○	●	○

● Very Suitable ○ Suitable



Item Code	inch	d1(h7)	d2(h6)	l1	l2	l4
SP015C-03000		3	6	95	55	36
SP015C-03170	1/8	3.17	6	106	67	36
SP015C-03500		3.5	6	116	76	36
SP015C-03570	9/64	3.57	6	116	76	36
SP015C-03970	5/32	3.97	6	116	76	36
SP015C-04000		4	6	116	76	36
SP015C-04370	11/64	4.37	6	133	93	36
SP015C-04500		4.5	6	133	93	36
SP015C-04760	3/16	4.76	6	133	93	36
SP015C-05000		5	6	133	93	36
SP015C-05100		5.1	6	150	110	36
SP015C-05160	13/64	5.16	6	150	110	36
SP015C-05410		5.41	6	150	110	36
SP015C-05500		5.5	6	150	110	36
SP015C-05560	7/32	5.56	6	150	110	36
SP015C-05950	15/64	5.95	6	150	110	36
SP015C-06000		6	6	150	110	36
SP015C-06350	1/4	6.35	8	167	127	36
SP015C-06500		6.5	8	167	127	36
SP015C-06750	17/64	6.75	8	167	127	36
SP015C-07000		7	8	167	127	36
SP015C-07140	9/32	7.14	8	183	143	36
SP015C-07500		7.5	8	183	143	36
SP015C-07510	19/64	7.54	8	183	143	36
SP015C-07940	5/16	7.94	8	183	143	36
SP015C-08000		8	8	183	143	36
SP015C-08330	21/64	8.33	10	204	160	40
SP015C-08500		8.5	10	204	160	40
SP015C-08730	11/32	8.73	10	204	160	40
SP015C-09000		9	10	204	160	40
SP015C-09130	23/64	9.13	10	221	177	40
SP015C-09520	3/8	9.52	10	221	177	40
SP015C-09920	25/64	9.92	10	221	177	40
SP015C-10000		10	10	221	177	40
SP015C-10320	13/32	10.32	12	247	198	45
SP015C-10720	27/64	10.72	12	247	198	45
SP015C-11000		11	12	247	198	45
SP015C-11110	7/16	11.11	12	263	214	45
SP015C-11510	29/64	11.51	12	263	214	45
SP015C-11910	15/32	11.91	12	263	214	45
SP015C-12000		12	12	263	214	45
SP015C-12300	31/64	12.3	14	297	248	45
SP015C-12700	1/2	12.7	14	297	248	45
SP015C-13100	33/64	13.1	14	297	248	45
SP015C-13490	17/32	13.49	14	297	248	45
SP015C-13890	35/64	13.89	14	297	248	45
SP015C-14000		14	14	297	248	45

GREWIN TOOLS

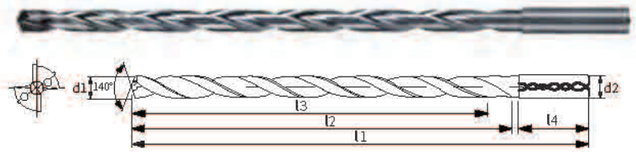
Deep hole making series — 20D Internal coolant deep hole Twist drill bit

AlTiN-nano coating
Straight edge, flat relief angle, 4-side margin
Application materials: steel, cast iron, non-ferrous metals, etc

AlTiN nano | 20D

P		K	N
Steel	Stainless steel	Cast iron	Non-ferrous metals
●	○	●	○

● Very Suitable ○ Suitable



Item Code	d1(h7)	inch	d2(h6)	l1	l2	l3	l4
SP020C-03000	3		6	107	65	60	36
SP020C-03175	3.175	1/8	6	134	92	86	36
SP020C-03500	3.5		6	134	92	86	36
SP020C-03572	3.572	9/64	6	134	92	86	36
SP020C-03969	3.969	5/32	6	134	92	86	36
SP020C-04000	4		6	134	92	86	36
SP020C-04500	4.5		6	158	118	110	36
SP020C-04763	4.763	3/16	6	158	118	110	36
SP020C-04800	4.8		6	158	118	110	36
SP020C-05000	5		6	158	118	110	36
SP020C-05500	5.5		6	170	132	123	36
SP020C-05556	5.556	7/32	6	182	144	135	36
SP020C-05800	5.8		6	182	144	135	36
SP020C-06000	6		6	182	144	135	36
SP020C-06100	6.1		8	200	162	151	36
SP020C-06350	6.350	1/4	8	200	162	151	36
SP020C-06500	6.5		8	200	162	151	36
SP020C-06800	6.8		8	200	162	151	36
SP020C-07000	7		8	200	162	151	36
SP020C-07144	7.144	9/32	8	222	184	172	36
SP020C-07400	7.4		8	222	184	172	36
SP020C-07500	7.5		8	222	184	172	36
SP020C-07938	7.938	5/16	8	222	184	172	36
SP020C-08000	8		8	222	184	172	36
SP020C-08300	8.3		10	240	198	184	40
SP020C-08500	8.5		10	240	198	184	40
SP020C-08731	8.731	11/32	10	240	198	184	40
SP020C-09000	9		10	240	198	184	40
SP020C-09525	9.525	3/8	10	262	220	205	40
SP020C-09800	9.8		10	262	220	205	40
SP020C-10000	10		10	262	220	205	40
SP020C-10200	10.2		12	289	242	225	45
SP020C-10319	10.319	13/32	12	289	242	225	45
SP020C-11000	11		12	289	242	225	45
SP020C-11113	11.113	7/16	12	311	264	246	45
SP020C-11500	11.5		12	311	264	246	45
SP020C-11800	11.8		12	311	264	246	45
SP020C-11906	11.906	15/32	12	311	264	246	45
SP020C-12000	12		12	311	264	246	45

GREWIN TOOLS

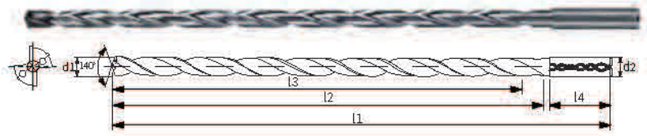
Deep hole making series — 25D Internal coolant deep hole Twist drill bit

AlTiN-nano coating
Straight edge, flat relief angle, 4-side margin
Application materials: steel, cast iron, non-ferrous metals, etc

AlTiN nano | 25D

P		K	N
Steel	Stainless steel	Cast iron	Non-ferrous metals
●	○	●	○

● Very Suitable ○ Suitable



Item Code	d1(h7)	inch	d2(h6)	l1	l2	l4
SP025C-03000	3.00		6	125	85	36
SPO25C-03100	3.10		6	141	101	36
SP025C-03500	3.50		6	156	116	36
SP025C-03800	3.80		6	156	116	36
SP025C-03970	3.97	5/32	6	156	116	36
SP025C-04000	4.00		6	156	116	36
SP025C-04200	4.20		6	183	143	36
SP025C-04500	4.50		6	183	143	36
SP025C-04760	4.76	3/15	6	183	143	36
SP025C-05000	5.00		6	183	143	36
SP025C-05100	5.10		6	210	170	36
SP025C-05500	5.50		6	210	170	36
SP025C-05560	5.56	7/32	6	210	170	36
SP025C-06000	6.00		6	210	170	36
SP025C-06300	6.30		8	237	197	36
SP025C-06350	6.35	1/4	8	237	197	36
SP025C-06500	6.50		8	237	197	36
SP025C-07000	7.00		8	237	197	36
SP025C-07140	7.14	9/32	8	263	223	36
SP025C-07500	7.50		8	263	223	36
SP025C-08000	8.00		8	263	223	36
SP025C-08500	8.50		10	294	250	40
SP025C-08800	8.80		10	294	250	40
SP025C-09000	9.00		10	294	250	40
SP025C-10000	10.00		10	321	277	40
SP025C-11000	11.00		12	359	310	40
SP025C-12000	12.00		12	386	337	40

GREWIN TOOLS

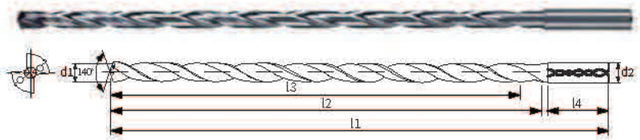
Deep hole making series — 30D Internal coolant deep hole Twist drill bit

AlTiN-nano coating
Straight edge, flat relief angle, 4-side margin
Application materials: steel, cast iron, non-ferrous metals, etc

AlTiN nano | 30D

P		K	N
Steel	Stainless steel	Cast iron	Non-ferrous metals
●	○	●	○

● Very Suitable ○ Suitable



Item Code	d1(h7)	inch	d2(h6)	l1	l2	l4
SP030C-03000	3		6	140	100	36
SP030C-03100	3.1		6	158	118	36
SP030C-03500	3.5		6	176	136	36
SP030C-03800	3.8		6	176	136	36
SP030C-03970	3.97	5/32	6	176	136	36
SP030C-04000	4		6	176	136	36
SP030C-04200	4.2		6	208	168	36
SP030C-04500	4.5		6	208	168	36
SP030C-04760	4.76	3/16	6	208	168	36
SP030C-05000	5		6	208	168	36
SP030C-05100	5.1		6	240	200	36
SP030C-05500	5.5		6	240	200	36
SP030C-05560	5.56	7/32	6	240	200	36
SP030C-06000	6		6	240	200	36
SP030C-06300	6.3		8	272	232	36
SP030C-06350	6.35	1/4	8	272	232	36
SP030C-06500	6.5		8	272	232	36
SP030C-07000	7		8	272	232	36
SP030C-07140	7.14	9/32	8	303	263	36
SP030C-07500	7.5		8	303	263	36
SP030C-08000	8		8	303	263	36
SP030C-08500	8.5		10	339	295	40
SP030C-08800	8.8		10	339	295	40
SP030C-09000	9		10	339	295	40
SP030C-10000	10		10	371	327	40

GREWIN TOOLS

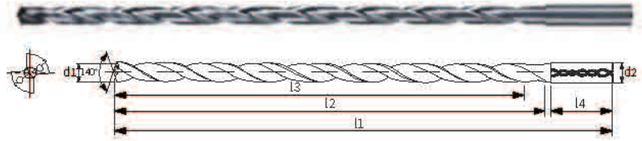
Deep hole making series — 40D Internal coolant deep hole Twist drill bit

AlTiN-nano coating
Straight edge, flat relief angle, 4-side margin
Application materials: steel, cast iron, non-ferrous metals, etc

AlTiN nano | 40D

P		K	N
Steel	Stainless steel	Cast iron	Non-ferrous metals
●	○	●	○

● Very Suitable ○ Suitable



Item Code	d1(h7)	inch	d2(h6)	l1	l2	l4
SP040C-03000	3		6	170	130	36
SP040C-03100	3.1		6	193	153	36
SP040C-03170	3.17	1/8	6	193	153	36
SP040C-03500	3.5		6	193	153	36
SP040C-03800	3.8		6	216	176	36
SP040C-03970	3.97	5/32	6	216	176	36
SP040C-04000	4		6	216	176	36
SP040C-04200	4.2		6	238	198	36
SP040C-04500	4.5		6	238	198	36
SP040C-04760	4.76	3/16	6	258	218	36
SP040C-05000	5		6	258	218	36
SP040C-05100	5.1		6	280	240	36
SP040C-05500	5.5		6	280	240	36
SP040C-05560	5.56	7/32	6	300	260	36
SP040C-06000	6		6	300	260	36
SP040C-06300	6.3		8	322	282	36
SP040C-06350	6.35	1/4	8	322	282	36
SP040C-06500	6.5		8	322	282	36
SP040C-07000	7		8	342	302	36
SP040C-07140	7.14	9/32	8	363	323	36
SP040C-07500	7.5		8	363	323	36
SP040C-08000	8		8	383	343	36

GREWIN TOOLS

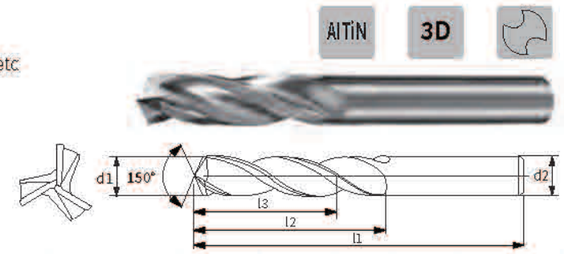
Deep hole making series — Solid carbide three flutes reaming drill bit

AlTiN-nano coating
Straight edge, flat relief angle, 4-side margin
Application materials: steel, cast iron, non-ferrous metals, etc

AlTiN 3D

P	M	K	N	S
Steel	Stainless steel	Cast iron	Non-ferrous metals	Superalloy
		●	●	

● Very Suitable ○ Suitable



Item Code	d1(h7)	d2(h6)	l1	l2	l3
RD03-D0300	3.00	3.00	46	16	12
RD03-D0310	3.10	3.10	49	18	14
RD03-D0320	3.20	3.20	49	18	14
RD03-D0330	3.30	3.30	49	18	14
RD03-D0340	3.40	3.40	52	20	15
RD03-D0350	3.50	3.50	52	20	15
RD03-D0360	3.60	3.60	52	20	15
RD03-D0370	3.70	3.70	52	20	15
RD03-D0380	3.80	3.80	55	22	17
RD03-D0400	4.00	4.00	55	22	17
RD03-D0410	4.10	4.10	55	22	17
RD03-D0420	4.20	4.20	55	22	17
RD03-D0450	4.50	4.50	58	24	18
RD03-D0480	4.80	4.80	62	26	20
RD03-D0500	5.00	5.00	62	26	20

Item Code	d1(h7)	d2(h6)	l1	l2	l3
RD03-D0510	5.10	5.10	62	26	20
RD03-D0520	5.20	5.20	62	26	20
RD03-D0530	5.30	5.30	62	26	20
RD03-D0550	5.50	5.50	66	28	21
RD03-D0580	5.80	5.80	66	28	21
RD03-D0600	6.00	6.00	66	28	21
RD03-D0610	6.10	6.10	70	31	23
RD03-D0620	6.20	6.20	70	31	23
RD03-D0640	6.40	6.40	70	31	23
RD03-D0650	6.50	6.50	70	31	23
RD03-D0670	6.70	6.70	70	31	23
RD03-D0680	6.80	6.80	74	34	25
RD03-D0700	7.00	7.00	74	34	25
RD03-D0710	7.10	7.10	74	34	25
RD03-D0740	7.40	7.40	74	34	25

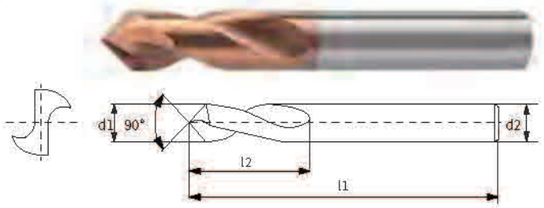
Deep hole making series — Solid carbide center drill (90 °/120 °)

AlTiN-nano coating
Straight edge, flat relief angle, 4-side margin
Application materials: steel, cast iron, non-ferrous metals, etc

AlTiN

P	M	K	N	S
Steel	Stainless steel	Cast iron	Non-ferrous metals	Superalloy
●		●	●	

● Very Suitable ○ Suitable



Item Code	d1	l2	d2	l1
RX090-D0100450	1	2	4	50
RX090-D0200450	2	4	4	50
RX090-D0300450	3	6	4	50
RX090-D0400450	4	8	4	50
RX090-D0500650	5	10	6	50
RX090-D0600650	6	12	6	50
RX090-D0800860	8	16	8	60

Item Code	d1	l2	d2	l1
RX090-D1001075	10	20	10	75
RX090-D1201275	12	24	12	75
RX090-D14014100	14	28	14	100
RX090-D16016100	16	32	16	100
RX090-D18018100	18	36	18	100
RX090-D20020100	20	40	20	100

GREWIN TOOLS

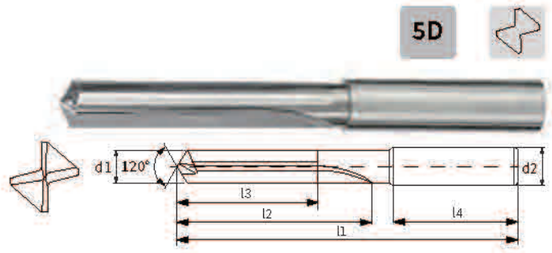
Deep hole making series — Solid carbide straight flute drill bit

Without coating
Applicable Workpiece Materials: Steel, cast iron, cast aluminum alloys, etc.

5D

P	M	K	N	S
Steel	Stainless steel	Cast iron	Non-ferrous metals	Superalloy
		●	●	

● Very Suitable ○ Suitable



Item Code	d1(k6)	M	d2(h6)	l1	l2	l3	l4
ZC05-D0400	4.00		6.00	74	36.00	29	36
ZC05-D0420	4.20	M5	6.00	74	36.00	29	36
ZC05-D0500	5.00	M6	6.00	82	44.00	35	36
ZC05-D0600	6.00		6.00	82	44.00	35	36
ZC05-D0680	6.80	M8	8.00	91	53.00	43	36
ZC05-D0700	7.00	M8X1	8.00	91	53.00	43	36
ZC05-D0800	8.00		8.00	91	53.00	43	36
ZC05-D0850	8.50	M10	10.00	103	61.00	49	40
ZC05-D0900	9.00	M10X1	10.00	103	61.00	49	40
ZC05-D1000	10.00		10.00	103	61.00	49	40
ZC05-D1025	10.25	M12	12.00	118	71.00	56	45
ZC05-D1100	11.00		12.00	118	71.00	56	45

Item Code	d1(k6)	M	d2(h6)	l1	l2	l3	l4
ZC05-D1200	12.00	M14	12	118	71	56	45
ZC05-D1300	13.00		14	124	77	60	45
ZC05-D1400	14.00	M16	14	124	77	60	45
ZC05-D1500	15.00		16	133	83	63	48
ZC05-D1550	15.50		16	133	83	63	48
ZC05-D1600	16.00		16	133	83	63	48
ZC05-D1700	17.00		18	143	93	71	48
ZC05-D1750	17.50		18	143	93	71	48
ZC05-D1800	18.00		18	143	93	71	48
ZC05-D1950	19.50		20	153	101	77	50
ZC05-D2000	20.00		20	153	101	77	50

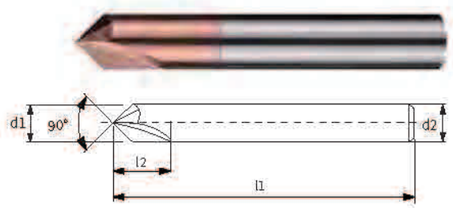
Deep hole making series — Solid carbide chamfer cutter(90 °/120 °)

AlTiN-nano coating
Straight edge, flat relief angle, 4-side margin
Application materials: steel, cast iron, non-ferrous metals, etc

AlTiN

P	M	K	N	S
Steel	Stainless steel	Cast iron	Non-ferrous metals	Superalloy
●		●	●	

● Very Suitable ○ Suitable



Item Code	d1	l2	d2	l1
RJ090-D0100450	1	2	4	50
RJ090-D0200450	2	4	4	50
RJ090-D0300450	3	6	4	50
RJ090-D0400450	4	8	4	50
RJ090-D0500650	5	10	6	50
RJ090-D0600650	6	12	6	50
RJ090-D0800860	8	16	8	60

Item Code	d1	l2	d2	l1
RJ090-D1001075	10	20	10	75
RJ090-D1201275	12	24	12	75
RJ090-D14014100	14	28	14	100
RJ090-D16016100	16	32	16	100
RJ090-D18018100	18	36	18	100
RJ090-D20020100	20	40	20	100

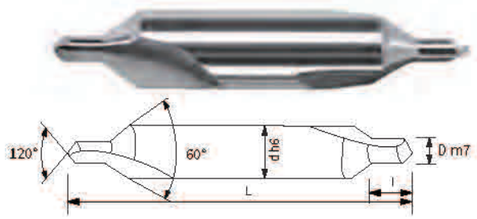
GREWIN TOOLS

Deep hole making series — Solid Carbide Center Drill

PVD coating
Application materials: steel, stainless steel, cast iron, non-ferrous metals, high-temperature alloys

P	M	K	N	S
Steel	Stainless steel	Cast iron	Non-ferrous metals	Superalloy
○	○	○	○	○

● Very Suitable ○ Suitable



Item Code	(D H7)	(l)	(d h6)	L
ZX-050D0200	2.0	2.5	5.0	50
ZX-063D0250	2.5	3.1	6.0	60
ZX-080D0315	3.15	3.9	8.0	70

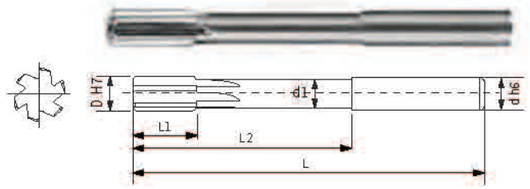
Item Code	(D H7)	(l)	(d h6)	L
ZX-100D0400	4.0	5.0	10.0	80
ZX-120D0500	5.0	6.3	12.0	80
ZX-160D0630	6.3	8.0	16.0	80

Deep hole making series — Solid Carbide Straight Flute Reamer

PVD coating
Application materials: steel, stainless steel, cast iron, non-ferrous metals, high-temperature alloys

P	M	K	N	S
Steel	Stainless steel	Cast iron	Non-ferrous metals	Superalloy
○	○	○		○

● Very Suitable ○ Suitable



Item Code	(D H7)	l2	(d1)	(L2)	(d)	(L)	(Z)
	0.6-0.9 (Gap0.01)	4		8	3	50	2
	0.91-1.3 (Gap0.01)	5		10	3	50	4
	1.31-1.9 (Gap0.01)	8		15	3	50	4
	1.91-2.4 (Gap0.01)	10		20	3	50	4
	2.41-2.9 (Gap0.01)	12		20	3	50	4
RML-03004100	3	20	2.7	70	4	100	4
RML-04004100	4	25	3.7	70	4	100	4
RML-05006100	5	30	4.7	70	6	100	4
RML-06006100	6	30	5.7	70	6	100	6
RML-08008100	8	35	7.7	70	8	100	6
RML-09010100	9	40	8.7	70	10	100	6
RML-10010100	10	40	9.7	70	10	100	6
RML-11012100	11	40	10.7	70	12	100	6
RML-12012100	12	40	11.7	70	12	100	6
RML-06006150	6	40	5.7	100	6	150	6
RML-08008150	8	50	7.5	100	8	150	6
RML-10010150	10	55	9.5	100	10	150	6
RML-12012150	12	55	11.5	100	12	150	6
RML-14014150	14	55	13.5	100	14	150	6
RML-16016150	16	55	15.5	100	16	150	6
RML-20020150	20	55	19.5	100	20	150	6

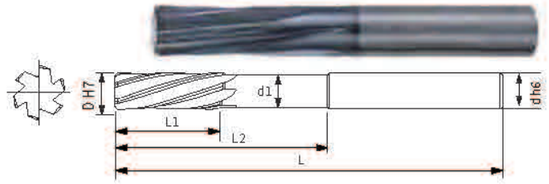
GREWIN TOOLS

Deep hole making series — Solid Carbide Left-Hand Reamer

PVD coating
Application materials: steel, stainless steel, cast iron, non-ferrous metals, high-temperature alloys

P	M	K	N	S
Steel	Stainless steel	Cast iron	Non-ferrous metals	Superalloy
○	○	○		○

● Very Suitable ○ Suitable



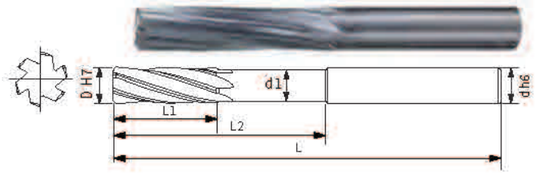
Item Code	(D H7)	l2	(d1)	(L2)	(d)	(L)	(Z)
	0.6-0.9 (Gap0.01)	4		8	3	50	2
	0.91-1.3 (Gap0.01)	8		10	3	50	4
	1.31-1.9 (Gap0.01)	8		15	3	50	4
	1.91-2.4 (Gap0.01)	10		20	3	50	4
	2.41-2.9 (Gap0.01)	12		20	3	50	4
RML-03004100	3	20	2.7	70	4	100	4
RML-04004100	4	25	3.7	70	4	100	4
RML-05006100	5	30	4.7	70	6	100	4
RML-06006100	6	30	5.7	70	6	100	6
RML-08008100	8	35	7.7	70	8	100	6
RML-09010100	9	40	8.7	70	10	100	6
RML-10010100	10	40	9.7	70	10	100	6
RML-11012100	11	40	10.7	70	12	100	6
RML-12012100	12	40	11.7	70	12	100	6
RML-06006150	6	40	5.7	100	6	150	6
RML-08008150	8	50	7.5	100	8	150	6
RML-10010150	10	55	9.5	100	10	150	6
RML-12012150	12	55	11.5	100	12	150	6
RML-14014150	14	55	13.5	100	14	150	6
RML-16016150	16	55	15.5	100	16	150	6
RML-20020150	20	55	19.5	100	20	150	6

Deep hole making series — Solid Carbide Right-Hand Reamer

PVD coating
Application materials: steel, stainless steel, cast iron, non-ferrous metals, high-temperature alloys

P	M	K	N	S
Steel	Stainless steel	Cast iron	Non-ferrous metals	Superalloy
○	○	○		○

● Very Suitable ○ Suitable



Item Code	(D H7)	l2	(d1)	(L2)	(d)	(L)	(Z)
	0.6-0.9 (Gap0.01)	4		8	3	50	2
	0.91-1.3 (Gap0.01)	5		10	3	50	4
	1.31-1.9 (Gap0.01)	8		15	3	50	4
	1.91-2.4 (Gap0.01)	10		20	3	50	4
	2.41-2.9 (Gap0.01)	12		20	3	50	4
RML-03004100	3	20	2.7	70	4	100	4
RML-04004100	4	25	3.7	70	4	100	4
RML-05006100	5	30	4.7	70	6	100	4
RML-06006100	6	30	5.7	70	6	100	6
RML-08008100	8	35	7.7	70	8	100	6
RML-09010100	9	40	8.7	70	10	100	6
RML-10010100	10	40	9.7	70	10	100	6
RML-11012100	11	40	10.7	70	12	100	6
RML-12012100	12	40	11.7	70	12	100	6
RML-06006150	6	40	5.7	100	6	150	6
RML-08008150	8	50	7.5	100	8	150	6
RML-10010150	10	55	9.5	100	10	150	6
RML-12012150	12	55	11.5	100	12	150	6
RML-14014150	14	55	13.5	100	14	150	6
RML-16016150	16	55	15.5	100	16	150	6
RML-20020150	20	55	19.5	100	20	150	6

GREWIN TOOLS

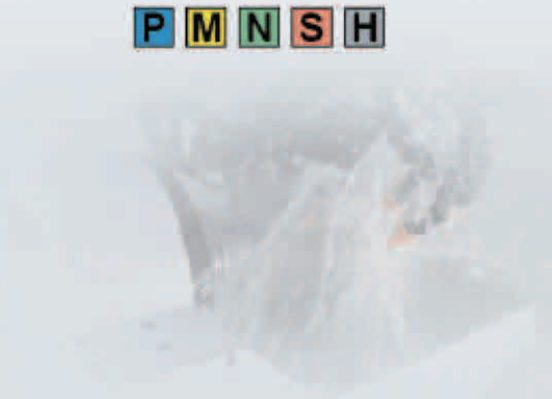
Special tool for small parts processing

Application

Inner hole turning
Forming processing
Back boring
Profile machining
grooving
end-face grooving
Pre cut off
Thread cutting

ISO Scope of Application

P M N S H



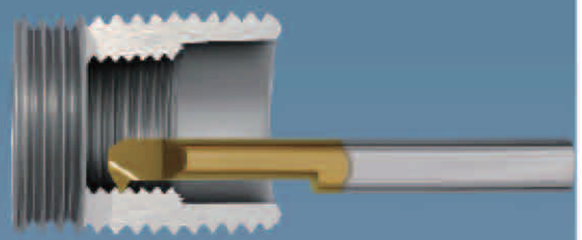
Features and Benefits

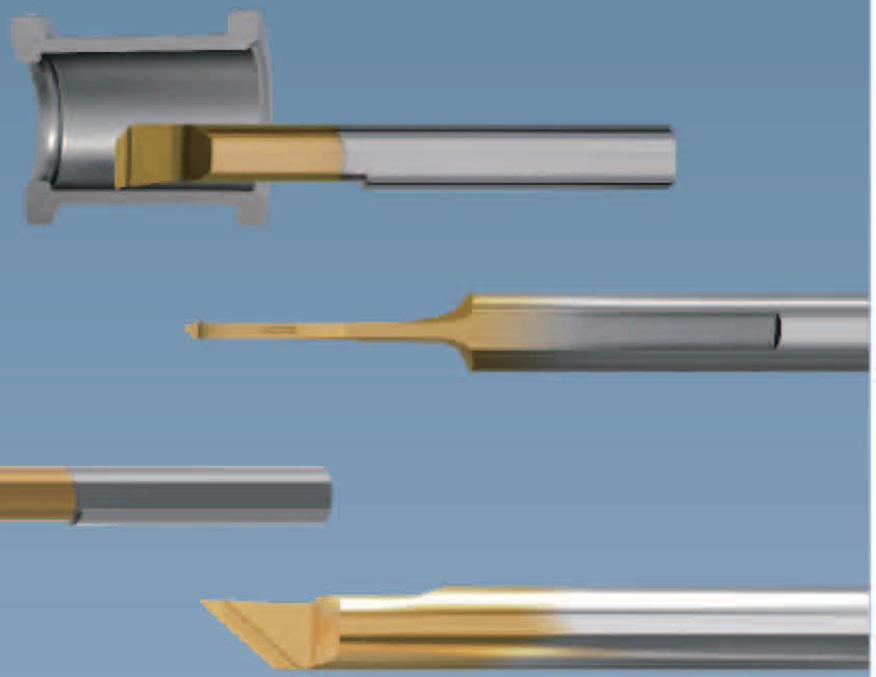
- ▲ *Optimized for high-quality machining of small parts*
- ▲ *High precision and repeatability*
- ▲ *Durable and easy-to-use clamping system*
- ▲ *Ensure high repeatability and high precision tools*
- ▲ *Carbide cylindrical shank adaptors reduce vibration and*
- ▲ *achieve long tool life*
- ▲ *Clamping nut ensures easy replacement*

Micro boring tool

Solid carbide cutting tools for small-hole machining

Widely used for Electronics, medical, and small parts processing industries All tools can be equipped with internal coolant holes, and the coolant is sprayed directly on the cutting edge, which ensures smooth chip removal, light cutting and longer tool life.





Product Code

Micro boring tool

M	T	R	3	R0.2	L10	BXC

M = Micro boring tool

R = Right Thread
L = Left thread

3 — Tool Shank Diameter
3=3.0mm
4=4.0mm
5=5.0mm
6=6.0mm
8=8.0mm
10=10.0mm

L10 — Length
L5=5mm
L10=10mm
L15=15mm
L22=22mm
L35=35mm

T — T=Turning
P=Profile turning
Q=Profile turning
I=Thread machining
C=Chamfering & Boring
G=Grooving
k=Circular groove cutting
F=Axial groove cutting
Z=Circular groove cutting
X=Reverse boring/turning inner Hole
u=profiling
W=Chamfering and contouring
V=End Face Grooving
D=Groove/Chamfer

R0.2 — Radius =0.2mm

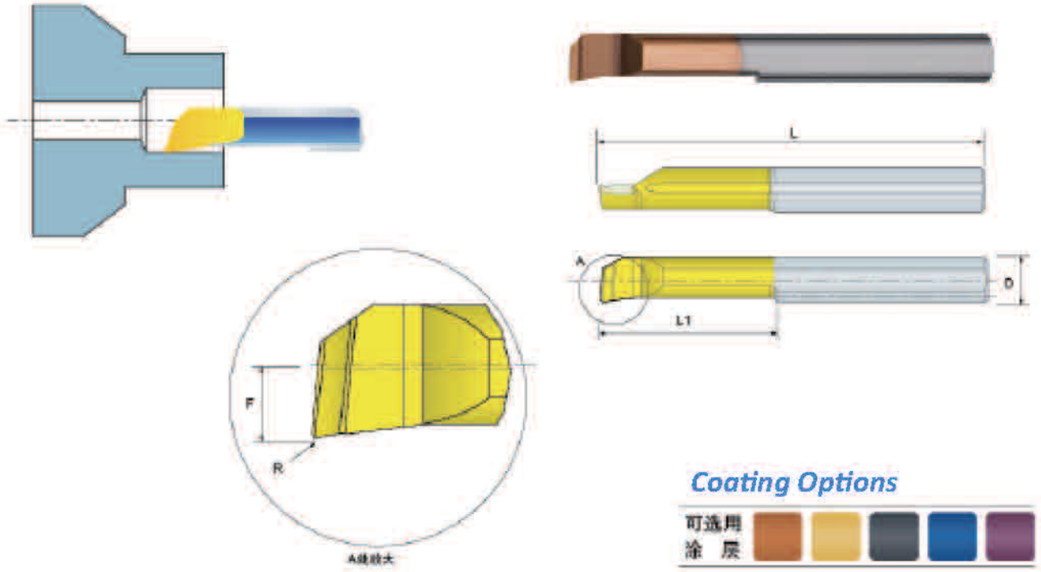
A55/A60 General-Purpose Thread Precision Diagram - ISO 60° or UN 60° General-Purpose Thread

Width
B1.0=1.0mm=.040
B1.5=1.5mm=.060
B2.0=2.0mm=.080

BXC — Coating
BXC
BMK
K20

GREWIN TOOLS

MTR Micro boring tool — Boring/turning inner circle



Coating Options

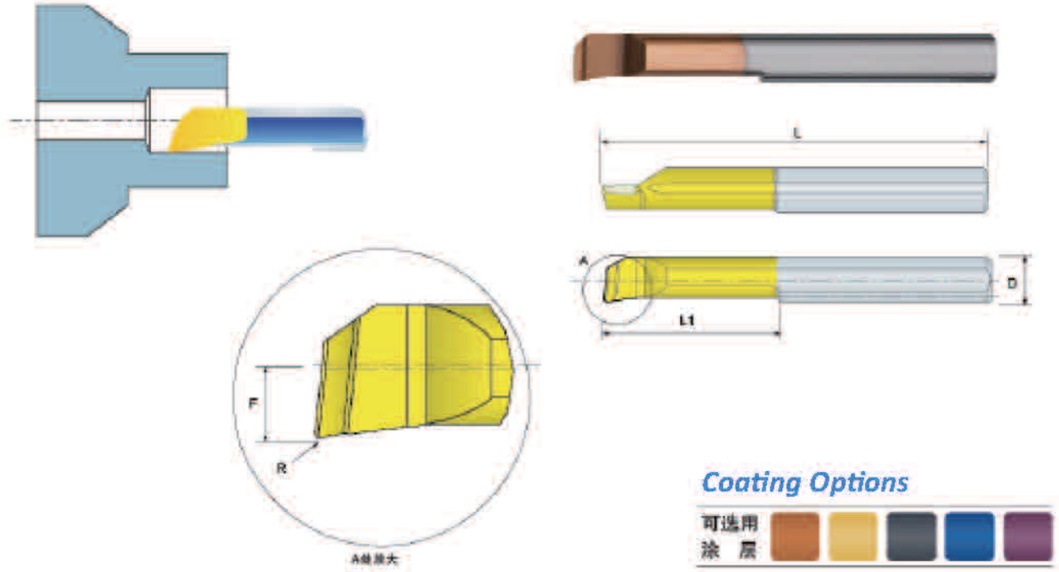
可选用涂层

D	Order Number	L	L1	R	F	Minimum Hole Diameter
3.0	* MTR 1 R0.05 L4	50	4	0.05	0.5	1.0
3.0	* MTR 1.5 R0.1 L6	50	6	0.10	0.7	1.5
3.0	* MTR 2 R0.05 L10	50	10	0.05	0.8	2.1
	* MTR 2 R0.15 L5	50	5	0.15	0.8	2.1
	* MTR 2 R0.15 L10	50	10	0.15	0.8	2.1
3.0	MTR 3 R0.05 L10	50	10	0.05	1.3	3.1
	MTR 3 R0.05 L15	50	15	0.05	1.3	3.1
	MTR 3 R0.1 L15	50	15	0.10	1.3	3.1
	MTR 3 R0.2 L10	50	10	0.20	1.3	3.1
	MTR 3 R0.2 L15	50	15	0.20	1.3	3.1
4.0	MTR 4 R0.05 L15	50	15	0.05	1.7	4.1
	MTR 4 R0.1 L10	50	10	0.10	1.7	4.1
	MTR 4 R0.1 L15	50	15	0.10	1.7	4.1
	MTR 4 R0.1 L22	50	22	0.10	1.7	4.1
	MTR 4 R0.2 L10	50	10	0.20	1.7	4.1
	MTR 4 R0.2 L15	50	15	0.20	1.7	4.1
	MTR 4 R0.2 L22	50	22	0.20	1.7	4.1

.Without Internal Coolant Hole

GREWIN TOOLS

MTR Micro boring tool — Boring/turning inner circle



Coating Options

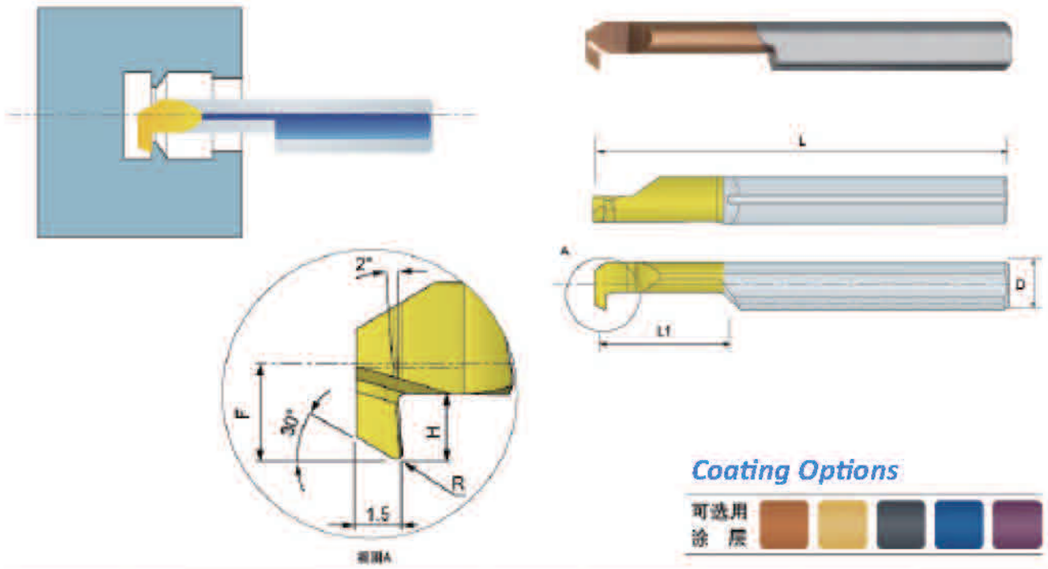
可选用涂层

D	Order Number	L	L1	R	F	Minimum Hole Diameter
5.0	MTR 5 R0.05 L15	50	15	0.05	2.1	5.1
	MTR 5 R0.1 L15	50	15	0.10	2.1	5.1
	MTR 5 R0.1 L22	50	22	0.10	2.1	5.1
	MTR 5 R0.1 L30	75	30	0.10	2.1	5.1
	MTR 5 R0.2 L15	50	15	0.20	2.1	5.1
	MTR 5 R0.2 L22	50	22	0.20	2.1	5.1
	MTR 5 R0.2 L30	75	30	0.20	2.1	5.1
6.0	MTR 6 R0.05 L15	50	15	0.05	2.8	6.1
	MTR 6 R0.1 L15	50	15	0.10	2.8	6.1
	MTR 6 R0.2 L15	50	15	0.20	2.8	6.1
	MTR 6 R0.2 L22	50	22	0.20	2.8	6.1
	MTR 6 R0.2 L30	75	30	0.20	2.8	6.1
	MTR 6 R0.2 L35	75	35	0.20	2.8	6.1
7.0	MTR 7 R0.2 L22	60	22	0.20	3.3	7.1
	MTR 7 R0.2 L30	60	30	0.20	3.3	7.1
8.0	MTR 8 R0.2 L15	60	15	0.20	3.8	8.1
	MTR 8 R0.2 L22	60	22	0.20	3.8	8.1
	MTR 8 R0.2 L35	75	35	0.20	3.8	8.1
10.0	MTR 10 R0.2 L35	75	35	0.20	4.8	10.1

.Custom Non-Standard Sizes Available

GREWIN TOOLS

MXR Micro boring tool — Reverse boring/turning inner circle



Coating Options

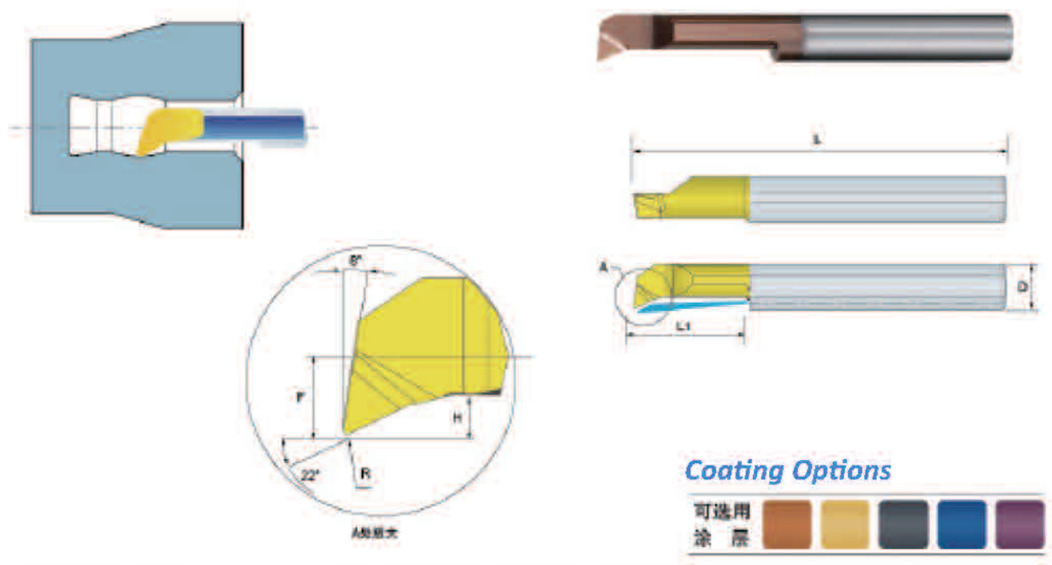
可选用涂层

D	Order Number	L	L1	R	H	F	Minimum Hole Diameter
4.0	MXR 4 R0.1 L10	50	10	0.10	0.5	1.3	3.1
4.0	MXR 4 R0.15 L10	50	10	0.15	0.8	1.6	4.1
4.0	MXR 4 R0.15 L15	50	15	0.15	0.8	1.6	4.1
5.0	MXR 5 R0.2 L 15	50	15	0.20	1.0	2.2	5.1
5.0	MXR 5 R0.2 L22	50	22	0.20	1.0	2.2	5.1
6.0	MXR 6 R0.2 L15	50	15	0.20	1.8	2.8	6.1
6.0	MXR 6 R0.2 L22	50	22	0.20	1.8	2.8	6.1

.Custom Non-Standard Sizes Available

GREWIN TOOLS

MPR Micro boring tool — Profile turning



Coating Options

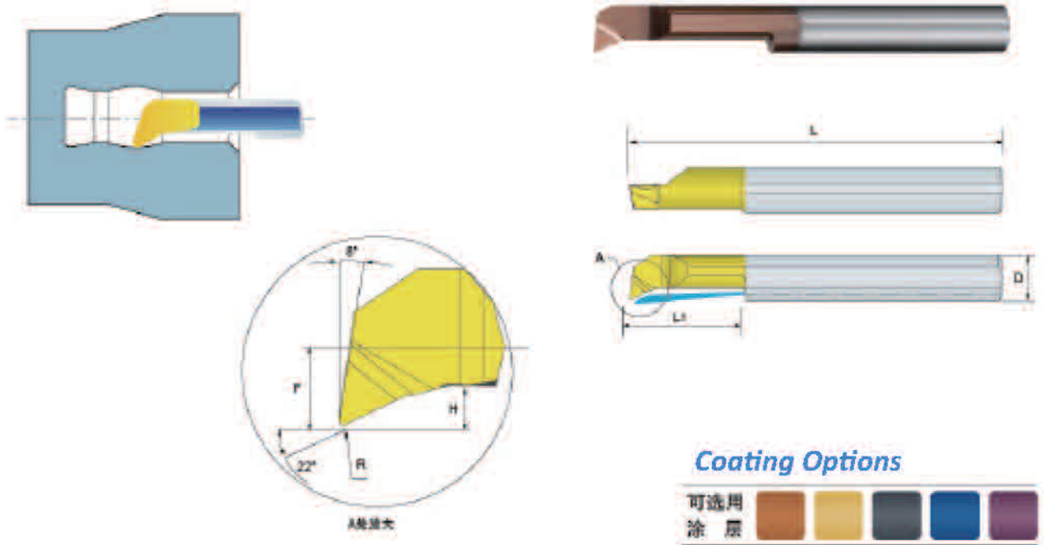
可选用涂层

D	Order Number	L	L1	R	H	F	Minimum Hole Diameter
3.0	* MPR 1 R0.05 L4	50	4	0.05	0.2	0.5	1.0
3.0	* MPR 1.5 R0.1 L6	50	6	0.10	0.3	0.7	1.5
4.0	* MPR 1.5 R0.1 L10	50	10	0.10	0.3	0.7	1.5
4.0	* MPR 2 R0.05 L10	50	10	0.05	0.5	0.8	2.1
4.0	* MPR 2 R0.1 L10	50	10	0.10	0.5	0.8	2.1
5.0	* MPR 2 R0.15 L5	50	5	0.15	0.5	0.8	2.1
5.0	* MPR 2 R0.15 L10	50	10	0.15	0.5	0.8	2.1
5.0	* MPR 2 R0.15 L15	50	15	0.15	0.5	0.8	2.1
5.0	MPR 3 R0.05 L10	50	10	0.05	0.7	1.3	3.1
5.0	MPR 3 R0.05 L15	50	15	0.05	0.7	1.3	3.1
6.0	MPR 3 R0.1 L15	50	15	0.10	0.7	1.3	3.1
6.0	MPR 3 R0.1 L22	50	22	0.10	0.7	1.3	3.1
6.0	MPR 3 R0.2 L10	50	10	0.20	0.7	1.3	3.1
7.0	MPR 3 R0.2 L15	50	15	0.20	0.7	1.3	3.1
7.0	MPR 3 R0.2 L22	50	22	0.20	0.7	1.3	3.1
7.0	MPR 4 R0.1 L15	50	15	0.10	0.8	1.7	4.1
8.0	MPR 4 R0.1 L22	50	22	0.10	0.8	1.7	4.1
8.0	MPR 4 R0.2 L10	50	10	0.20	0.8	1.7	4.1
8.0	MPR 4 R0.2 L15	50	15	0.20	0.8	1.7	4.1
10.0	MPR 4 R0.2 L22	50	22	0.20	0.8	1.7	4.1

.Without Internal Coolant Hole

GREWIN TOOLS

MPR Micro boring tool — Profile turning



Coating Options

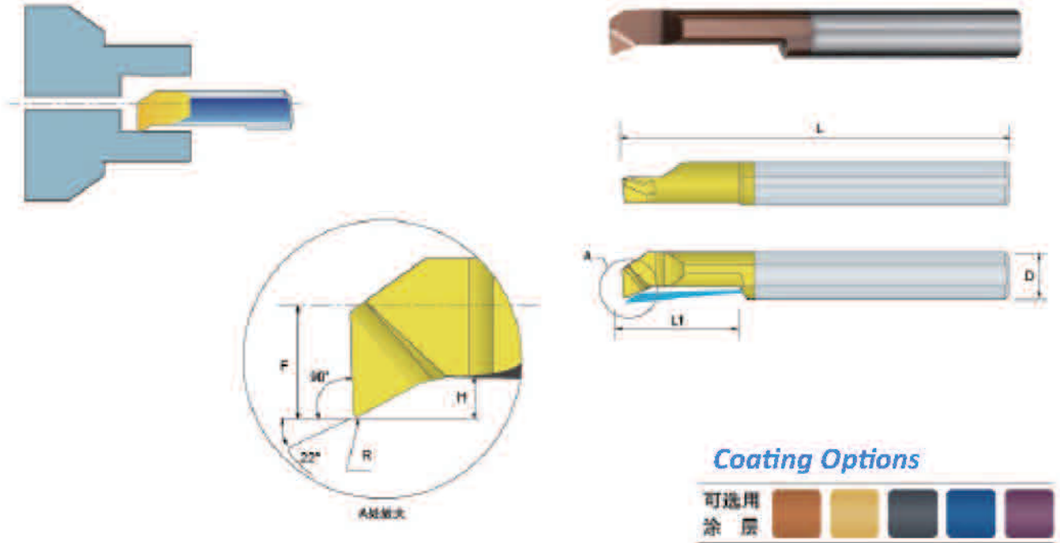
可选用涂层

D	Order Number	L	L1	R	H	F	Minimum Hole Diameter
5.0	MPR 5 R0.1 L22	50	22	0.10	1.2	2.1	5.1
5.0	MPR 5 R0.1 L30	75	30	0.10	1.2	2.1	5.1
5.0	MPR 5 R0.2 L15	50	15	0.20	1.2	2.1	5.1
5.0	MPR 5 R0.2 L22	50	22	0.20	1.2	2.1	5.1
5.0	MPR 5 R0.2 L30	75	30	0.20	1.2	2.1	5.1
6.0	MPR 6 R0.2 L15	50	15	0.20	1.4	2.8	6.1
6.0	MPR 6 R0.2 L22	50	22	0.20	1.4	2.8	6.1
6.0	MPR 6 R0.2 L30	75	30	0.20	1.4	2.8	6.1
7.0	MPR 7 R0.2 L22	60	22	0.20	1.5	3.3	7.1
7.0	MPR 7 R0.2 L30	60	30	0.20	1.5	3.3	7.1
7.0	MPR 7 R0.2 L35	60	35	0.20	1.5	3.3	7.1
8.0	MPR 8 R0.2 L15	60	15	0.20	1.6	3.8	8.1
8.0	MPR 8 R0.2 L22	60	22	0.20	1.6	3.8	8.1
8.0	MPR 8 R0.2 L35	75	35	0.20	1.6	3.8	8.1
10.0	MPR 10 R0.2 L35	75	35	0.20	2.0	4.8	10.1

.Custom Non-Standard Sizes Available

GREWIN TOOLS

MUR Micro boring tool — Profile turning



Coating Options

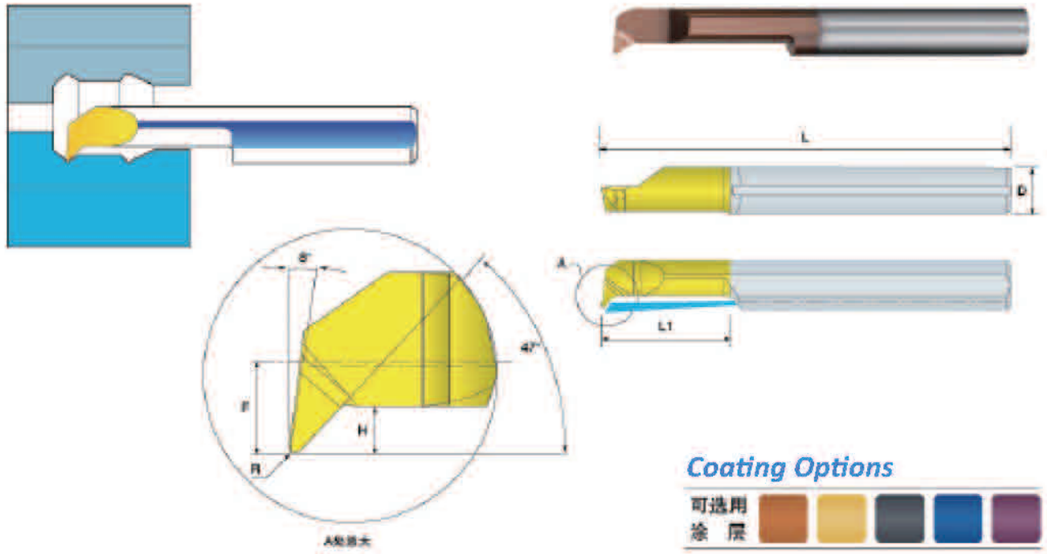
可选用涂层

D	Order Number	L	L1	R	H	F	Minimum Hole Diameter
3.0	MUR 3 R0.005 L10	50	10	0.05	0.4	1.3	3.1
3.0	MUR 3 R0.005 L15	50	15	0.05	0.4	1.3	3.1
4.0	MUR 4 R0.1 L10	50	10	0.10	0.5	1.7	4.1
4.0	MUR 4 R0.1 L15	50	15	0.10	0.5	1.7	4.1
5.0	MUR 5 R0.15 L22	50	15	0.15	0.7	2.1	5.1
5.0	MUR 5 R0.15 L22	50	22	0.15	0.7	2.1	5.1
6.0	MUR 6 R0.15 L15	50	15	0.15	0.9	2.8	6.1
6.0	MUR 6 R0.15 L22	50	22	0.15	0.9	2.8	6.1
8.0	MUR 8 R0.2 L22	60	22	0.20	1.1	3.8	8.1

.Custom Non-Standard Sizes Available

GREWIN TOOLS

MQR Micro boring tool — Profile turning



Coating Options

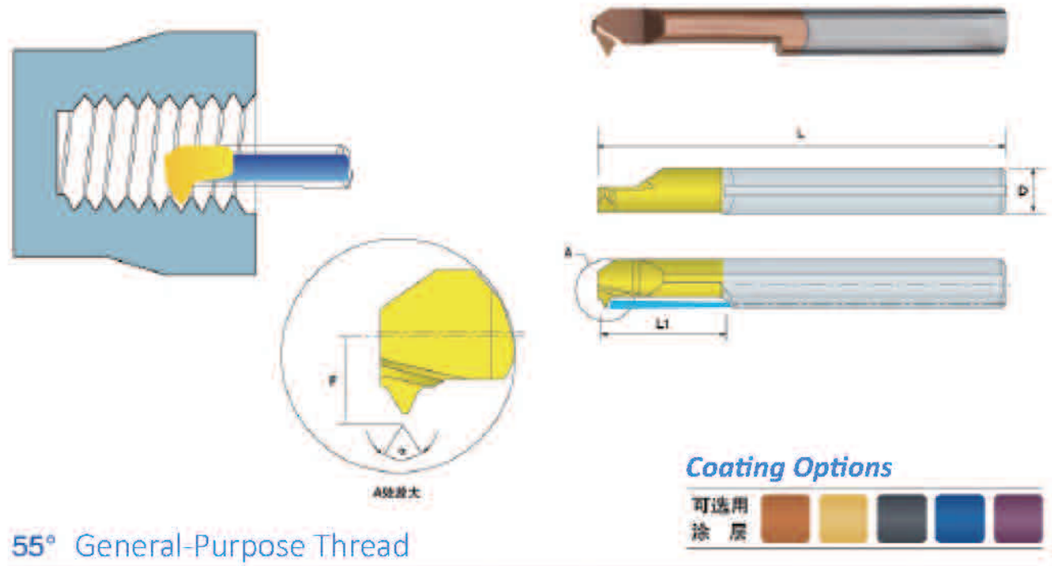
可选用涂层

D	Order Number	L	L1	R	H	F	Minimum Hole Diameter
4.0	MQR 4 R0.2 L10	50	10	0.20	0.8	1.8	4.1
4.0	MQR 4 R0.2 L15	50	15	0.20	0.8	1.8	4.1
4.0	MQR 4 R0.2 L22	50	22	0.20	0.8	1.8	4.1
5.0	MQR 5 R0.2 L15	50	15	0.20	1.0	2.3	5.1
5.0	MQR 5 R0.2 L22	50	22	0.20	1.0	2.3	5.1
6.0	MQR 6 R0.2 L15	50	15	0.20	1.4	2.8	6.1
6.0	MQR 6 R0.2 L22	50	22	0.20	1.4	2.8	6.1
6.0	MQR 6 R0.2 L30	75	30	0.20	1.4	2.8	6.1
8.0	MQR 8 R0.2 L22	60	22	0.20	1.6	3.8	8.1
8.0	MQR 8 R0.2 L27	60	27	0.20	2.0	3.8	8.1

.Custom Non-Standard Sizes Available

GREWIN TOOLS

MIR Micro boring tool — Thread machining



Coating Options

可选用涂层

55° General-Purpose Thread

D	Order Number	L	L1	α	Pitch mm	Pitch TPI/inch	F	Minimum Hole Diameter
3.0	MIR 3 L15 A55	50	15	55	0.5–1.0	48–24	1.4	3.2
4.0	MIR 4 L15 A55	50	15	55	0.5–1.0	48–24	1.8	4.1
5.0	MIR 5 L15 A55	50	15	55	0.5–1.25	48–20	2.3	5.1
5.0	MIR 5 L22 A55	50	22	55	0.5–1.25	48–20	2.3	5.1
6.0	MIR 6 L15 A55	50	15	55	0.5–1.5	48–16	2.6	6.0
6.0	MIR 6 L22 A55	50	22	55	0.5–1.5	48–16	2.6	6.0

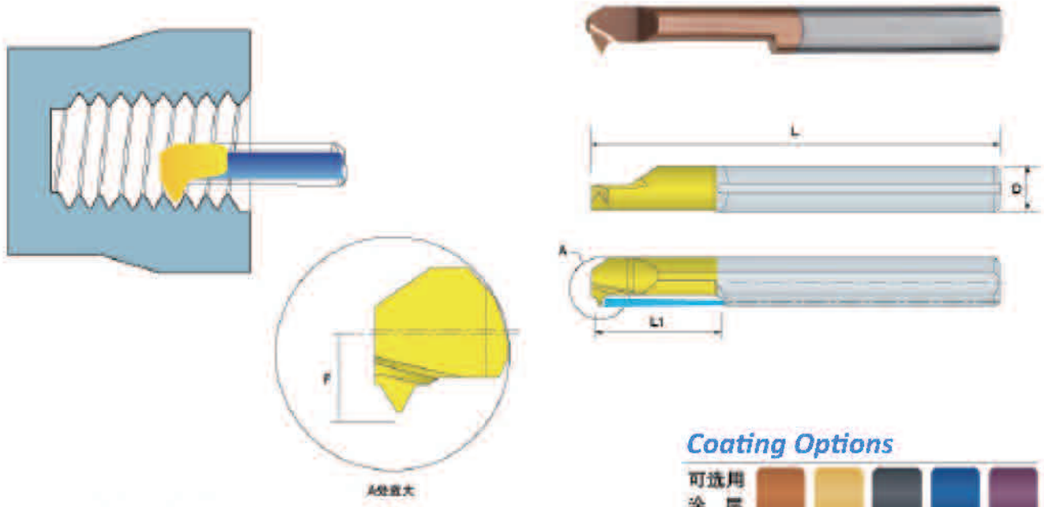
.Custom Non-Standard Sizes Available

60° General-Purpose Thread

D	Order Number	L	L1	α	Pitch mm	Pitch 牙数/英寸	F	Minimum Hole Diameter
3.0	MIR 1 L5 A60	50	4.8	60	0.25–0.35	100–72	0.55	1.2
3.0	MIR 1 L6 A60	50	6.3	60	0.35–0.45	72–56	0.65	1.4
3.0	MIR 2 L8 A60	50	8	60	0.45–0.7	56–32	1.0	2.1
3.0	MIR 3 L15 A60	50	15	60	0.8–1.0	32–24	1.4	3.2
4.0	MIR 4 L15 A60	50	15	60	0.8–1.0	32–24	1.8	4.1
5.0	MIR 5 L15 A60	50	15	60	1.0–1.25	24–20	2.3	5.1
5.0	MIR 5 L22 A60	50	22	60	1.0–1.25	24–20	2.3	5.1
6.0	MIR 6 L15 A60	50	15	60	1.0–1.5	24–16	2.6	6.0
6.0	MIR 6 L22 A60	50	22	60	1.0–1.5	24–16	2.6	6.0
8.0	MIR 8 L22 A60	60	22	60	1.0–2.0	24–13	3.6	8.0

.Custom Non-Standard Sizes Available

MIR Micro boring tool — Thread machining



Coating Options

可选用涂层

60° Fixed Pitch Thread-ISO

D	Order Number	Pitch mm	L	L1	F	Minimum Hole Diameter
3.0	MIR 3 L15 0.5 ISO	M4 × 0.5	50	15	1.4	3.2
3.0	MIR 3 L15 0.7 ISO	M4 × 0.7	50	15	1.4	3.2
3.0	MIR 3 L15 0.75ISO	M4.5 × 0.75	50	15	1.4	3.2
4.0	MIR 4 L15 0.5 ISO	M5 × 0.5	50	15	1.8	4.1
4.0	MIR 4 L15 0.75ISO	M5 × 0.75	50	15	1.8	4.1
4.0	MIR 4 L15 0.8 ISO	M5 × 0.8	50	15	1.8	4.1
5.0	MIR 5 L15 1.0 ISO	M6 × 1.0	50	15	2.2	4.9
6.0	MIR 6 L22 1.25ISO	M8 × 1.25	50	22	2.8	6.1

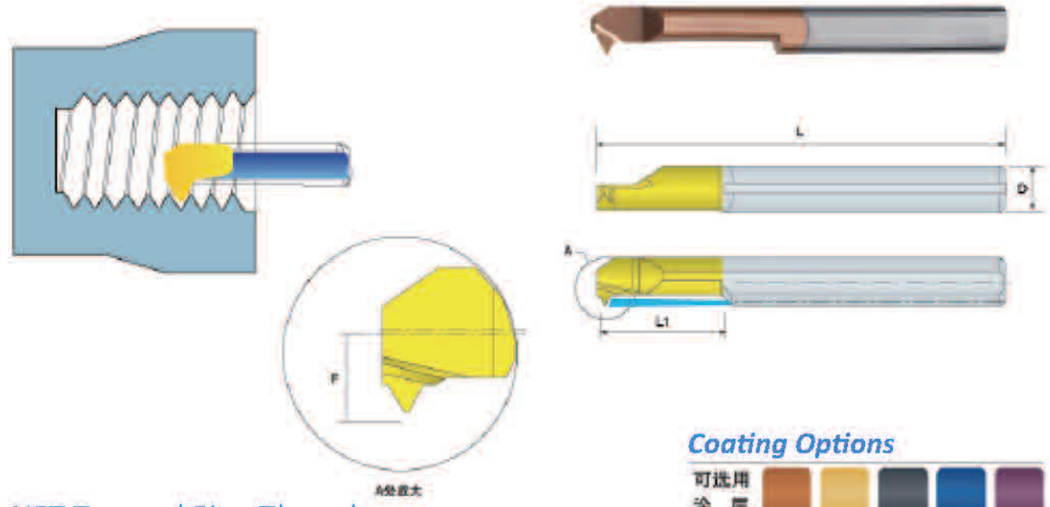
.Custom Non-Standard Sizes Available

60° Fixed Pitch Thread-UN

D	Order Number	Pitch mm	L	L1	F	Minimum Hole Diameter
3.0	MIR 3 L15 36 UN	8–36UNF	50	15	1.4	3.2
3.0	MIR 3 L15 32 UN	8–32UNC	50	15	1.4	3.2
4.0	MIR 4 L15 36 UN	12–36UNS	50	15	1.8	4.1
4.0	MIR 4 L15 32 UN	12–32UNEF	50	15	1.8	4.1
5.0	MIR 5 L15 28 UN	1/4–28UNF	50	15	2.2	4.9
5.0	MIR 5 L18 20 UN	1/4–20UNC	50	18	2.3	5.0
6.0	MIR 6 L18 24 UN	5/16–24UNF	50	18	2.8	6.5
6.0	MIR 6 L18 18 UN	5/16–18UNC	50	18	2.8	6.2

.Custom Non-Standard Sizes Available

MIR 微型镗刀 — Thread machining



Coating Options

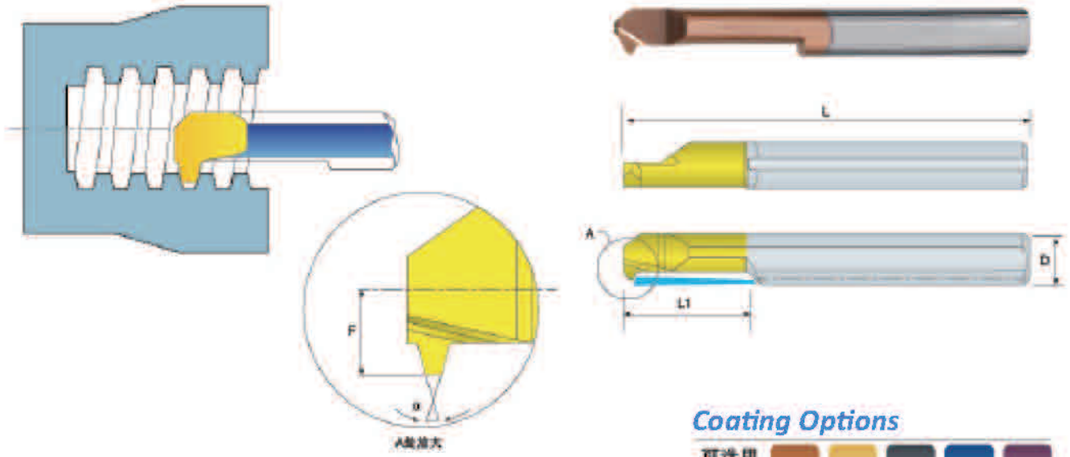
可选用涂层

NPT Tapered Pipe Thread

D	Order Number	Pitch TPI/Inch	L	L1	F	Minimum Hole Diameter	Thread
6.0	MIR 6 L15 27 NPT	27	50	15	2.6	5.9	1/16×27NPT 1/8×27NPT

.Custom Non-Standard Sizes Available

MIR Micro boring tool — Thread machining



Coating Options

可选用涂层

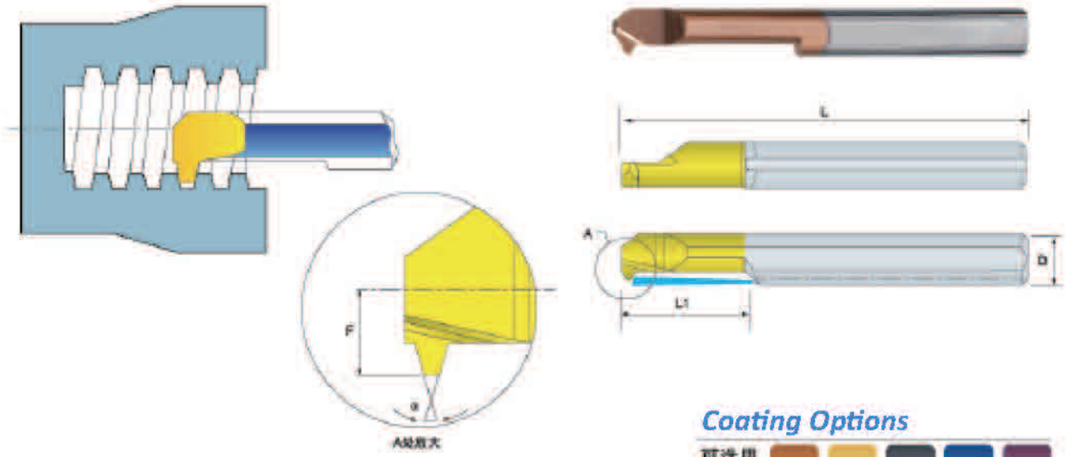
AcmeTrapezoidal Thread

D	订货号	螺距 牙数/英寸	L	L1	F	α	最小孔径	螺纹
4.0	MIR 4 L15 16 ACME	16	50	15	1.8	29	4.6	1/4×16
6.0	MIR 6 L20 14 ACME	14	50	20	2.6	29	6.0	5/16×14
7.0	MIR 7 L22 12 ACME	12	60	22	3.3	29	7.2	3/8×12
8.0	MIR 8 L30 10 ACME	10	75	30	3.8	29	10.0	1/2×10
10.0	MIR 10 L35 8 ACME	8	75	35	4.8	29	12.5	5/8×8
10.0	MIR 10 L45 6 ACME	6	100	45	4.8	29	14.6	3/4×6 7/8×6

.Custom Non-Standard Sizes Available

GREWIN TOOLS

MIR Micro boring tool — Thread machining



Coating Options

可选用涂层

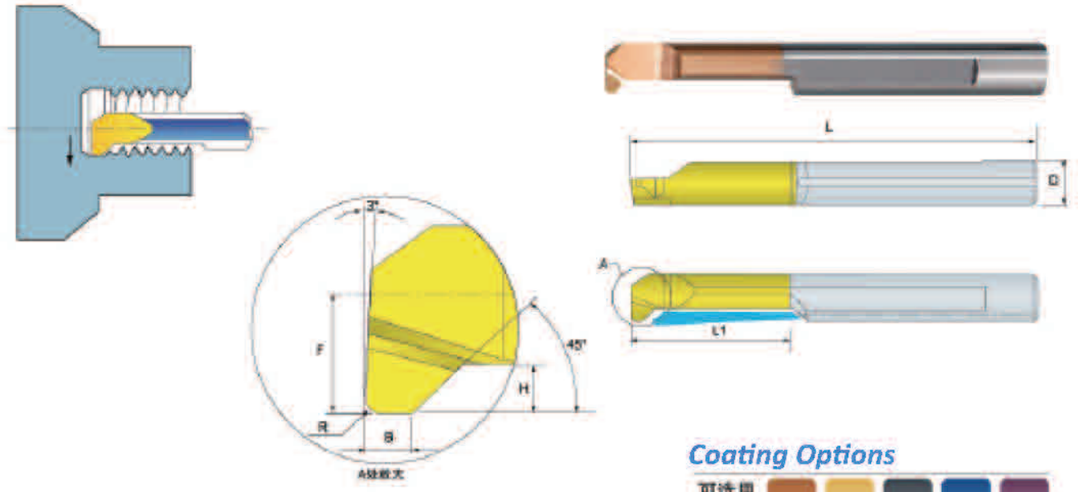
D	订货号	螺距 牙数/英寸	L	L1	F	α	最小孔径	螺纹
7.0	MIR 7 L25 2 TR	2	60	25	3.2	30	6.9	Tr 9×2 Tr 10×2 Tr 11×2 Tr 12×2
10.0	MIR 10 L35 2 TR	2	75	35	4.8	30	11.0	Tr 14×2 Tr 16×2 Tr 18×2 Tr 20×2
7.0	MIR 7 L35 3 TR	3	60	35	3.3	30	7.5	Tr 11×3 Tr 12×3
10.0	MIR 10 L35 3 TR	3	75	35	4.8	30	10.5	Tr 14×3 Tr 22×3 Tr 24×3 Tr 26×3 Tr 28×3
10.0	MIR 10 L45 4 TR	4	100	45	4.8	30	11.5	Tr 16×4 Tr 18×4 Tr 20×4
10.0	MIR 10 L55 5 TR	5	100	55	4.8	30	11.0	Tr 22×5 Tr 24×5 Tr 28×5

.Custom Non-Standard Sizes Available

GREWIN TOOLS

MDR Micro boring tool

Thread machining

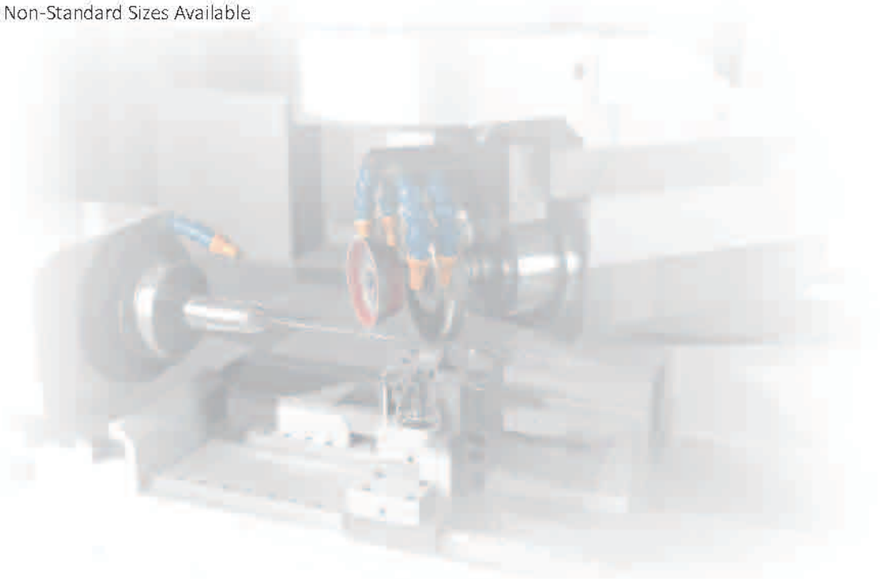


Coating Options

可选用涂层

D	Order Number	L	L1	B	R	H	F	Minimum Hole Diameter
4.0	**MDR 4 R0.5 L18**	50	18	1.5	0.5	0.8	1.8	4.1
5.0	**MDR 5 R0.5 L24**	50	24	1.5	0.5	1.2	2.3	5.1
6.0	**MDR 6 R0.5 L27**	75	27	1.5	0.5	1.4	2.8	6.1

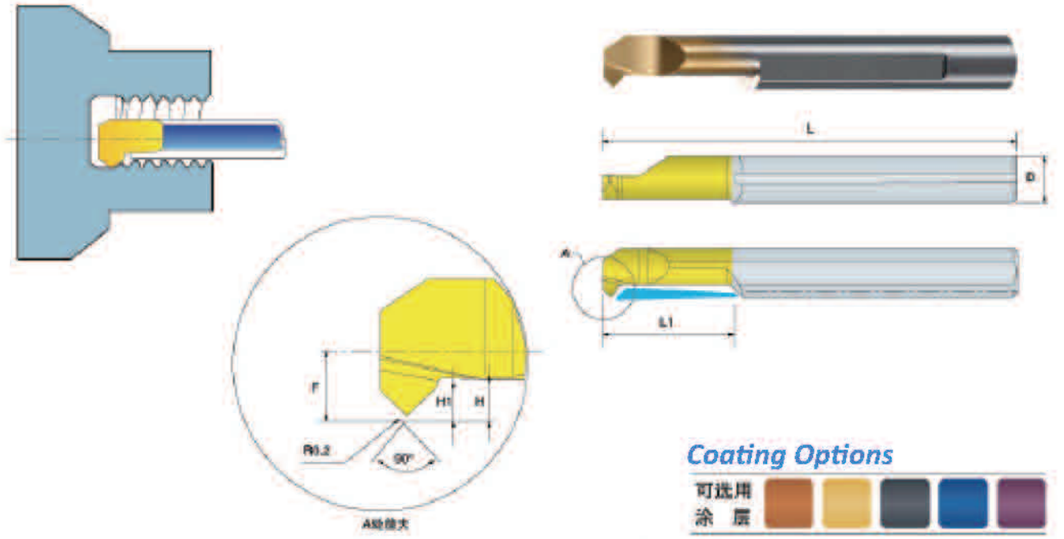
.Custom Non-Standard Sizes Available



GREWIN TOOLS

MCR Micro boring tool

Machining chamfer and boring holes

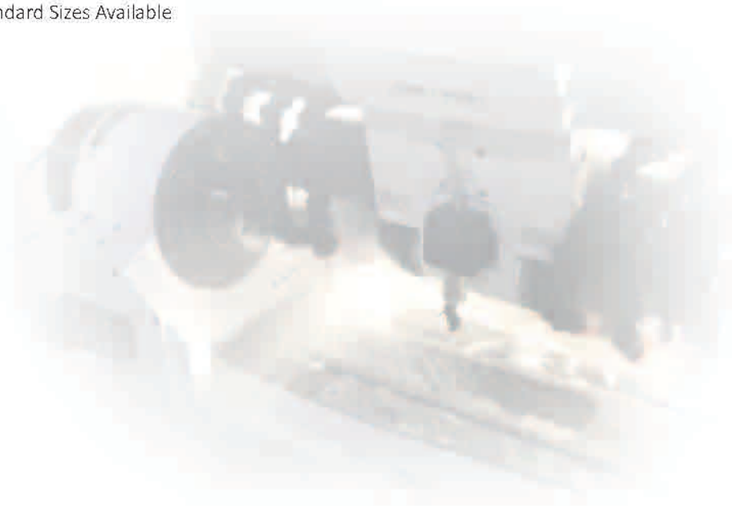


Coating Options

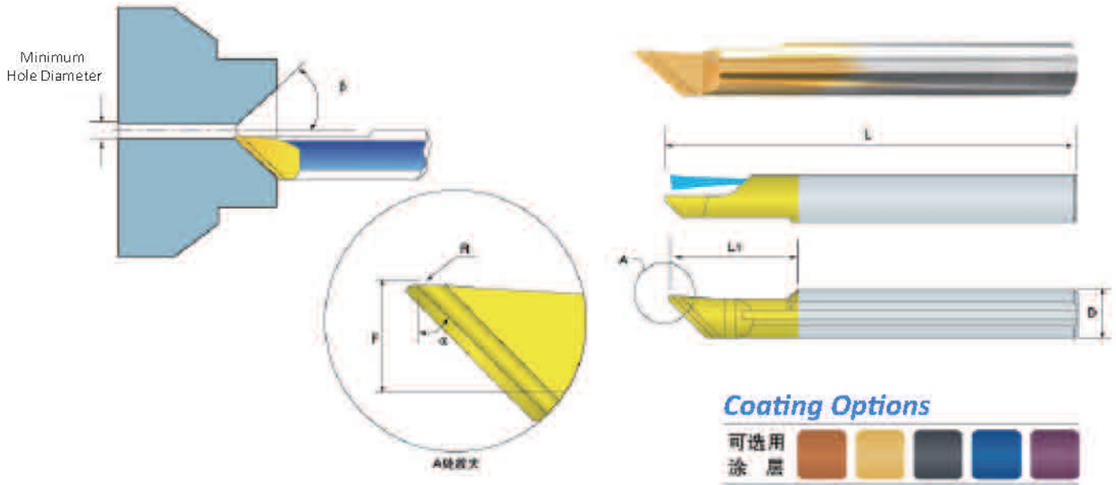
可选用涂层

D	Order Number	L	L1	R	H	H1	F	Minimum Hole Diameter
3.0	**MCR 3 R0.2 L10**	50	10	0.20	0.7	0.3	1.3	3.1
4.0	**MCR 4 R0.2 L15**	50	15	0.20	0.8	0.4	1.7	4.1
5.0	**MCR 5 R0.2 L15**	50	15	0.20	1.2	0.7	2.1	5.1
6.0	**MCR 6 R0.2 L15**	50	15	0.20	1.4	0.7	2.8	6.1
7.0	**MCR 7 R0.2 L20**	60	20	0.20	1.5	0.8	3.3	7.1

.Custom Non-Standard Sizes Available



MWR Micro boring tool — Machining chamfer/profiling



Coating Options

可选用涂层

D	Order Number	L	L1	R	α	β	F	Minimum Hole Diameter
6.0	MWR 6 R0.2 A90	50	15.0	0.20	45°	45°	2.3	1.0
6.0	MWR 6 R0.2 A60	50	15.0	0.20	60°	30°	2.3	1.0

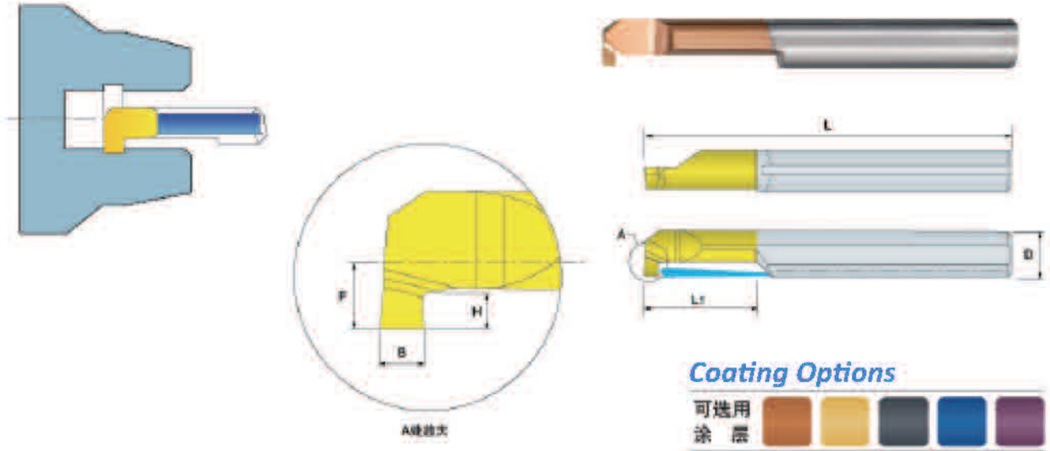
.Custom Non-Standard Sizes Available

MWL

D	Order Number	L	L1	R	α	β	F	Minimum Hole Diameter
6.0	MWL 6 R0.2 A90	50	15.0	0.20	45°	45°	2.3	1.0
6.0	MWL 6 R0.2 A60	50	15.0	0.20	60°	30°	2.3	1.0

.Custom Non-Standard Sizes Available

MGR Micro boring tool — Grooving



Coating Options

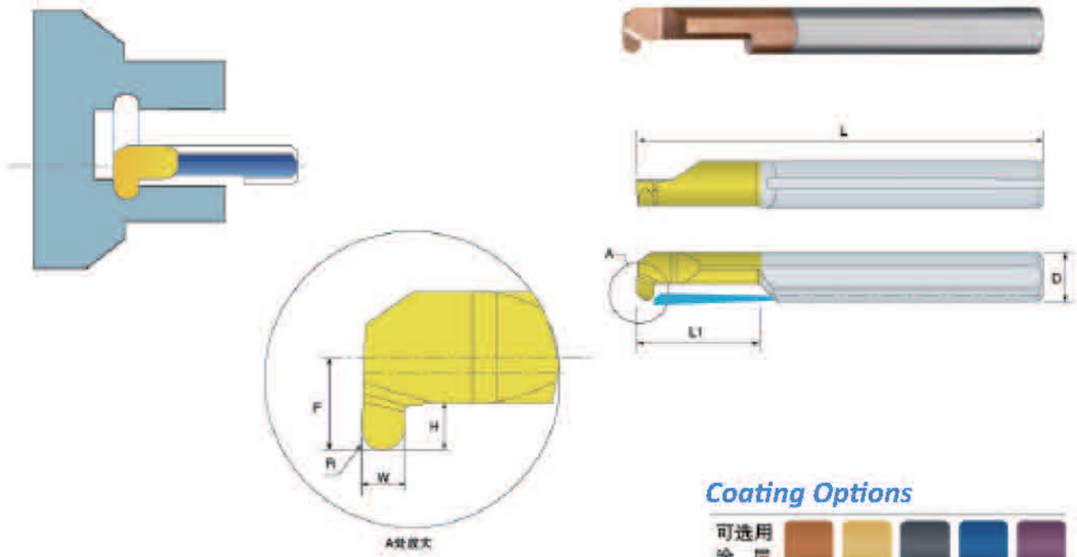
可选用涂层

D	Order Number	L	L1	B	H	F	Minimum Hole Diameter
3.0	MGR 3 B0.7 L10	50	10	0.7	0.6	1.3	3.1
4.0	MGR 4 B1.0 L10	50	10	1.0	1.0	1.7	4.1
4.0	MGR 4 B1.0 L15	50	15	1.0	1.0	1.7	4.1
4.0	MGR 4 B1.5 L10	50	10	1.5	1.0	1.7	4.1
5.0	MGR 5 B1.0 L15	50	15	1.0	1.2	2.3	5.1
5.0	MGR 5 B1.0 L22	50	22	1.0	1.2	2.3	5.1
5.0	MGR 5 B1.5 L15	50	15	1.5	1.2	2.3	5.1
5.0	MGR 5 B1.5 L22	50	22	1.5	1.2	2.3	5.1
5.0	MGR 5 B2.0 L15	50	15	2.0	1.2	2.3	5.1
5.0	MGR 5 B2.0 L22	50	22	2.0	1.2	2.3	5.1
6.0	MGR 6 B1.0 L15	50	15	1.0	1.4	2.8	6.1
6.0	MGR 6 B1.0 L22	50	22	1.0	1.4	2.8	6.1
6.0	MGR 6 B1.5 L15	50	15	1.5	1.4	2.8	6.1
6.0	MGR 6 B1.5 L22	50	22	1.5	1.4	2.8	6.1
6.0	MGR 6 B2.0 L15	50	15	2.0	1.4	2.8	6.1
6.0	MGR 6 B2.0 L22	50	22	2.0	1.4	2.8	6.1
7.0	MGR 7 B1.0 L15	60	15	1.0	2.5	3.3	7.1
7.0	MGR 7 B1.0 L22	60	22	1.0	2.5	3.3	7.1
7.0	MGR 7 B1.0 L30	60	30	1.0	2.5	3.3	7.1
7.0	MGR 7 B1.5 L15	60	15	1.5	2.5	3.3	7.1
7.0	MGR 7 B1.5 L22	60	22	1.5	2.5	3.3	7.1
7.0	MGR 7 B1.5 L30	60	30	1.5	2.5	3.3	7.1
7.0	MGR 7 B2.0 L15	60	15	2.0	2.5	3.3	7.1
7.0	MGR 7 B2.0 L22	60	22	2.0	2.5	3.3	7.1
7.0	MGR 7 B2.0 L30	60	30	2.0	2.5	3.3	7.1
8.0	MGR 8 B1.0 L22	60	22	1.0	1.7	3.8	8.1
8.0	MGR 8 B1.5 L22	60	22	1.5	1.7	3.8	8.1
8.0	MGR 8 B2.0 L22	60	22	2.0	2.6	3.8	8.1

.Custom Non-Standard Sizes Available

GREWIN TOOLS

MKR Micro boring tool — Circular Grooving



Coating Options

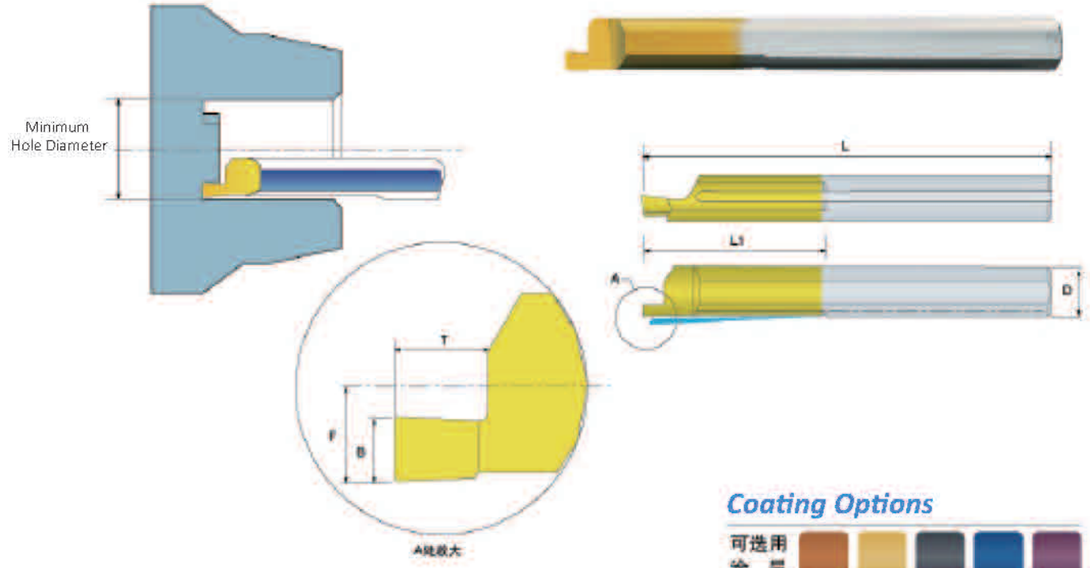
可选用涂层

D	Order Number	L	L1	R	W	H	F	Minimum Hole Diameter
4.0	MKR 4 R0.5 L10	50	10	0.50	1.0	1.0	1.7	4.1
4.0	MKR 4 R0.75 L10	50	10	0.75	1.5	1.0	1.7	4.1
5.0	MKR 5 R0.5 L15	50	15	0.50	1.0	1.2	2.3	5.1
5.0	MKR 5 R0.75 L15	50	15	0.75	1.5	1.2	2.3	5.1
5.0	MKR 5 R1.0 L15	50	15	1.00	2.0	1.2	2.3	5.1
6.0	MKR 6 R0.5 L15	50	15	0.50	1.0	1.6	2.8	6.1
6.0	MKR 6 R0.75 L15	50	15	0.75	1.5	1.6	2.8	6.1
6.0	MKR 6 R1.0 L15	50	15	1.00	2.0	1.6	2.8	6.1

.Custom Non-Standard Sizes Available

GREWIN TOOLS

MFR Micro boring tool — Axial grooving



Coating Options

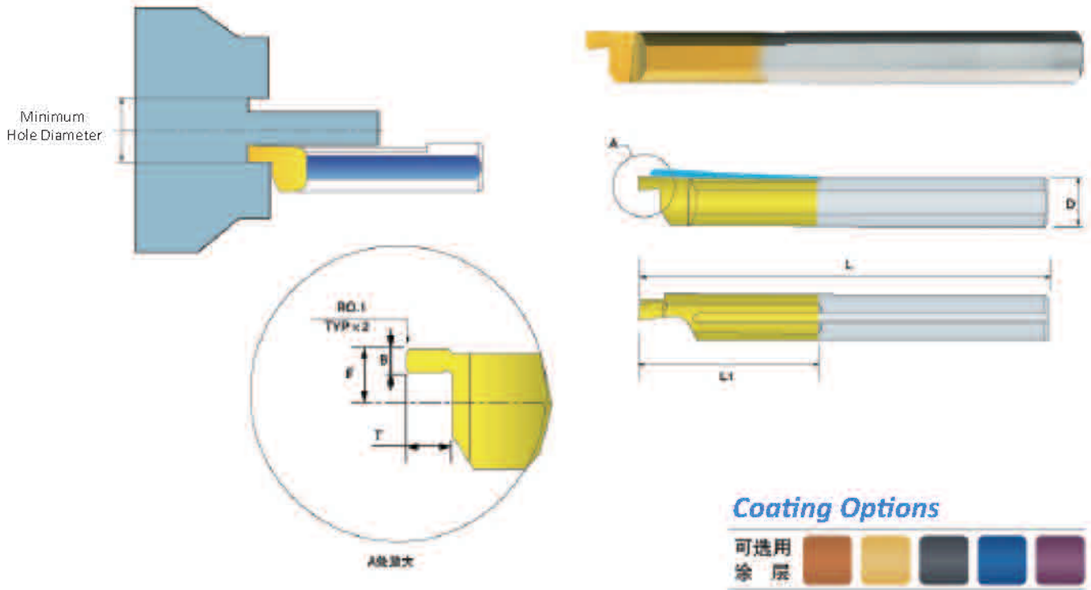
可选用涂层

D	Order Number	L	L1	B	T	F	Minimum Hole Diameter
4.0	MFR 4 B0.75 L15	50	15	0.75	1.2	1.95	5.0
4.0	MFR 4 B1.0 L15	50	15	1.0	1.5	1.95	5.0
4.0	MFR 4 B1.5 L15	50	15	1.5	2.8	1.95	5.0
5.0	MFR 5 B0.75 L22	50	22	0.75	1.2	2.45	6.0
5.0	MFR 5 B1.0 L22	50	22	1.0	1.5	2.45	6.0
5.0	MFR 5 B1.5 L22	50	22	1.5	2.5	2.45	6.0
5.0	MFR 5 B2.0 L22	50	22	2.0	3.8	2.45	6.0
6.0	MFR 6 B1.0 L22	50	22	1.0	1.5	2.95	8.0
6.0	MFR 6 B1.5 L22	50	22	1.5	2.5	2.95	8.0
6.0	MFR 6 B2.0 L22	50	22	2.0	3.0	2.95	8.0
6.0	MFR 6 B2.5 L22	50	22	2.5	4.8	2.95	8.0
6.0	MFR 6 B3.0 L30	75	30	3.0	6.0	2.95	8.0
8.0	MFR 8 B2.5 L22	60	22	2.5	3.5	3.95	10.0

.Custom Non-Standard Sizes Available

GREWIN TOOLS

MFL Micro boring tool — Axial grooving



Coating Options

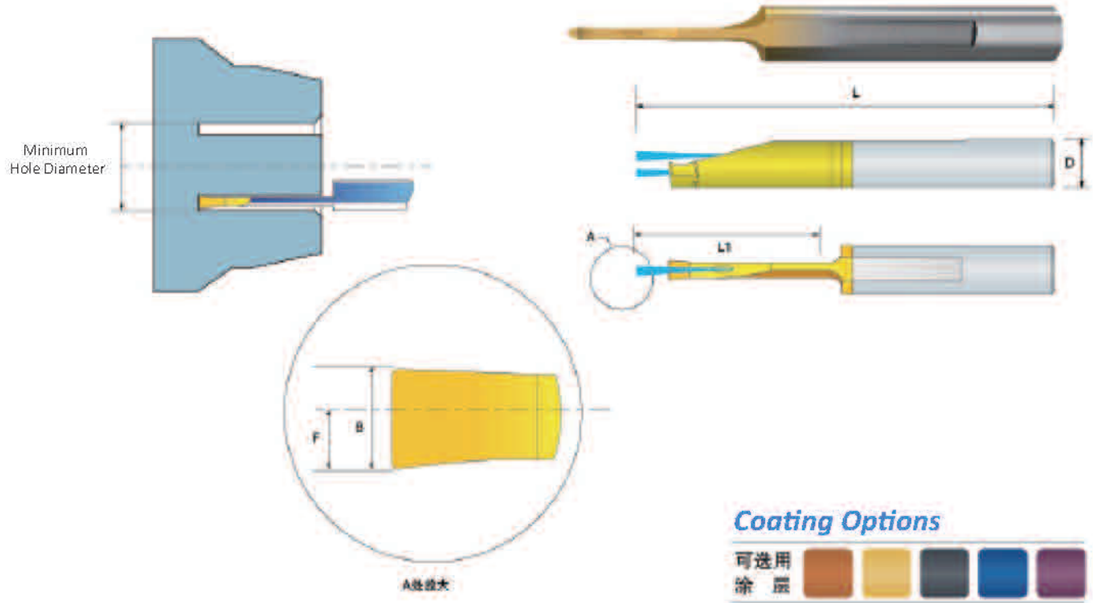
可选用
涂 层

D	Order Number	L	L1	B	T	F	Minimum Hole Diameter
4.0	MFL 4 B0.75 L15	50	15	0.75	1.2	1.75	5.0
4.0	MFL 4 B1.0 L15	50	15	1.0	1.5	1.75	5.0
4.0	MFL 4 B1.5 L15	50	15	1.5	2.8	1.75	5.0
5.0	MFL 5 B0.75 L22	50	22	0.75	1.2	2.25	6.0
5.0	MFL 5 B1.0 L22	50	22	1.0	1.5	2.25	6.0
5.0	MFL 5 B1.5 L22	50	22	1.5	2.5	2.25	6.0
5.0	MFL 5 B2.0 L22	50	22	2.0	3.8	2.25	6.0
6.0	MFL 6 B1.0 L22	50	22	1.0	1.5	2.75	8.0
6.0	MFL 6 B1.5 L22	50	22	1.5	2.5	2.75	8.0
6.0	MFL 6 B2.0 L22	50	22	2.0	3.0	2.75	8.0
6.0	MFL 6 B2.5 L22	50	22	2.5	4.8	2.75	8.0
6.0	MFL 6 B3.0 L30	75	30	3.0	6.0	2.75	8.0
8.0	MFL 8 B2.5 L22	60	22	2.5	3.5	3.75	10.0

.Custom Non-Standard Sizes Available

GREWIN TOOLS

MVR Micro boring tool — End Face Grooving



Coating Options

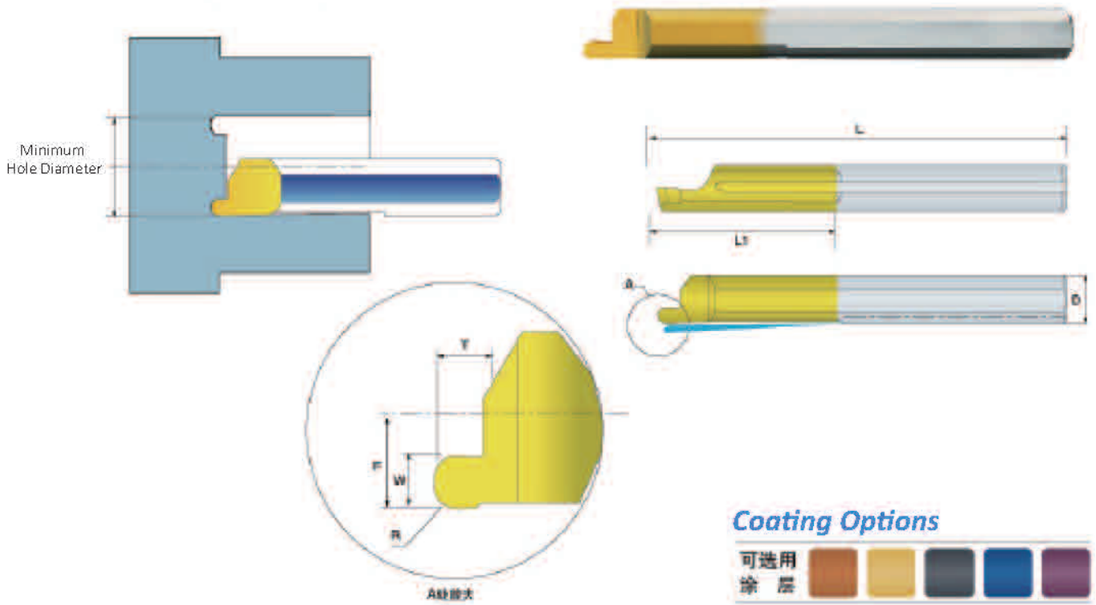
可选用
涂 层

D	Order Number	L	L1	B	F	Minimum Hole Diameter
6.0	MVR 6 B2.0 L15	64	15	2.0	1.1	12.0
6.0	MVR 6 B2.0 L22	64	22	2.0	1.1	12.0
6.0	MVR 6 B2.5 L22	64	22	2.5	1.4	12.0
8.0	MVR 8 B3.0 L27	64	27	3.0	1.6	15.0
8.0	MVR 8 B3.0 L43	80	43	3.0	1.6	15.0
8.0	MVR 8 B4.0 L43	80	43	4.0	2.1	20.0

.Custom Non-Standard Sizes Available

GREWIN TOOLS

MZR Micro boring tool — Circular Grooving



Coating Options

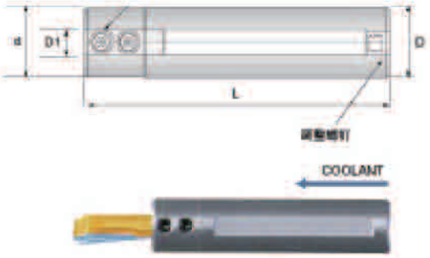
可选用涂层

D	Order Number	L	L1	R	W	T	F	Minimum Hole Diameter
4.0	MZR 4 R0.5 L15	50	15	0.50	1.0	1.2	1.95	5.0
4.0	MZR 4 R0.75 L15	50	15	0.75	1.5	1.5	1.95	5.0
5.0	MZR 5 R0.5 L22	50	22	0.50	1.0	1.2	2.45	6.0
5.0	MZR 5 R0.75 L22	50	22	0.75	1.5	1.5	2.45	6.0
5.0	MZR 5 R1.0 L22	50	22	1.00	2.0	2.5	2.45	6.0
6.0	MZR 6 R0.5 L22	50	22	0.50	1.0	1.2	2.95	8.0
6.0	MZR 6 R0.75 L22	50	22	0.75	1.5	1.5	2.95	8.0
6.0	MZR 6 R1.0 L22	50	22	1.00	2.0	2.5	2.95	8.0

.Custom Non-Standard Sizes Available

GREWIN TOOLS

Miniature Boring Tool Shank



D1	Order Number	L	D	d	Torx 扳手	Clamping Screw	Adjustment Screw
3.0	SIM0012 H3	88	12	12	K25	S25	S35
3.0	* SIM0016 H3S	75	16	20	K25	S25	S35S
3.0	SIM0016 H3	88	16	20	K25	S25	S35
3.0	SIM0020 H3	88	20	20	K25	S25	S35
3.0	* SIM0022 H3	88	22	22	K25	S25	S35
3.0	SIM0025 H3	62	25	10.8	K25	S25	S35
4.0	SIM0012 H4	88	12	12	K25	S25	S35
4.0	* SIM0016 H4S	75	16	20	K25	S25	S35
4.0	SIM0016 H4	88	16	20	K25	S25	S35
4.0	SIM0020 H4	88	20	20	K25	S25	S35
4.0	* SIM0022 H4	88	22	22	K25	S25	S35
4.0	SIM0025 H4	62	25	10.8	K25	S25	S35S
5.0	SIM0012 H5	88	12	12	K25	S25	S35
5.0	* SIM0016 H5S	75	16	20	K25	S25	S35
5.0	SIM0016 H5	88	16	20	K25	S25	S35
5.0	SIM0020 H5	88	20	20	K25	S25	S35S
5.0	* SIM0022 H5	75	22	22	K25	S25	S35
5.0	SIM0025 H5	62	25	10.8	K25	S25	S35
6.0	* SIM0016 H6S	75	16	20	K25	S25	S35
6.0	SIM0016 H6	88	16	20	K25	S25	S35
6.0	SIM0020 H6	88	20	20	K25	S25	S35
6.0	* SIM0022 H6	88	22	22	K25	S25	S35
6.0	SIM0025 H6	62	25	10.8	K25	S25	S35
7.0	SIM0016 H7	88	16	20	K25	S25	S35
7.0	SIM0020 H7	88	20	20	K25	S25	S35
8.0	SIM0016 H8	88	16	20	K25	S25	S35
8.0	SIM0020 H8	88	20	20	K25	S25	S35
10.0	SIM0020 H10	88	20	20	K25	S25	S35

.Custom Non-Standard Sizes Available

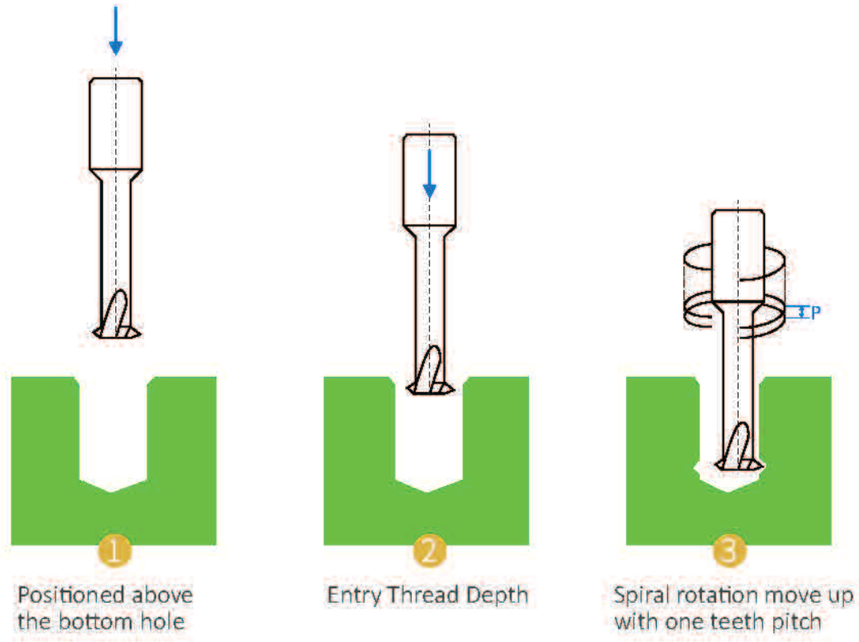
GREWIN TOOLS

FULL GRINDING EDGE SHARP CUTTING

- Compatible with blade strength and sharpness
- Enhance the rigidity of the cutting tool without burrs on the cutting edge
- Reduce the tool change times and extend the lifetime.

GREWIN TOOLS

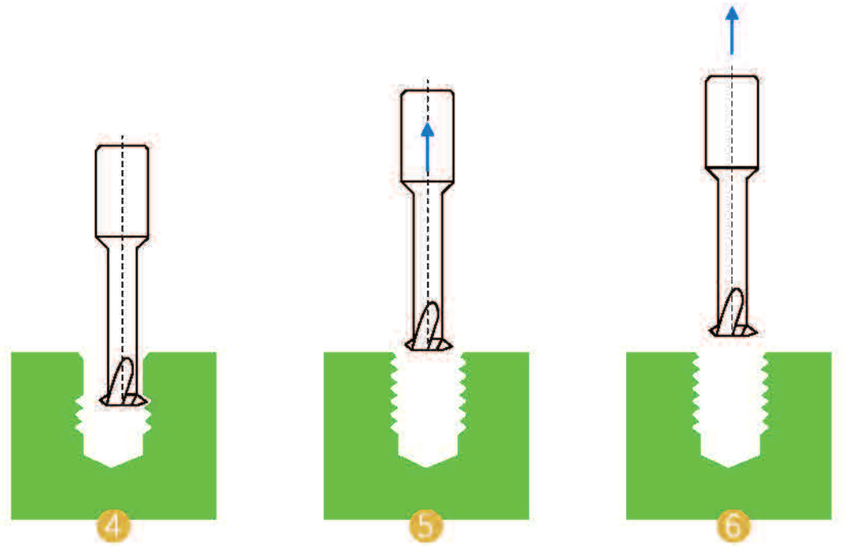
Processing process of single-thread milling cutter



1 Positioned above the bottom hole

2 Entry Thread Depth

3 Spiral rotation move up with one teeth pitch



4 Repeat the upward process according to the pitch P spiral

5 180° exit to center position

6 The cutter returns to the starting position

GREWIN TOOLS

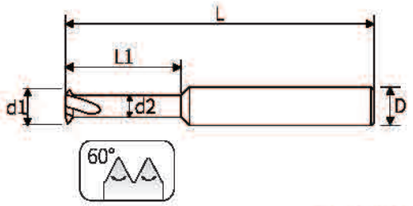
Tungsten carbide single-teeth thread endmill-For Steel

Features

- Suitable for processing sampling workpiece with less threads and varuous thread specifications,besides,it could processing American threads as well,The Single thread processing resistance is small, versatility is strong, and it is easy to use. the long-neck type thread mill is especially suitable for deep holes and complex thread working condition.

◎= Best ○=Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainlee Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
◎	◎	◎	○				◎	◎						



UNIT=MM

Product Code	Type	Size					
	mm	d1	d2	L1	D	L	F
ISO S0.2 0.550150450 D	M0.8*0.2	0.55	0.32	1.5	4.0	50	2
ISO S0.225 0.6250180450 D	M0.9*0.225	0.625	0.35	1.8			
ISO S0.25 0.720250450 D	M1.0*0.25	0.72	0.43	2.5			
ISO S0.25 0.90320450 D	M1.2*0.25	0.9	0.63	3.2			3
ISO S0.3 1.050350450 D	M1.4*0.3	1.05	0.7	3.5			
ISO S0.35 1.2040450 D	M1.6*0.35	1.2	0.8	4.0			
ISO S0.4 1.55060450 D	M2.0*0.4	1.55	0.9	6.0			
ISO S0.45 1.960650450 D	M2.5*0.45	1.96	1.3	6.5			4
ISO S0.5 2.35080450 D	M3.0*0.5	2.35	1.6	8.0			
ISO S0.7 3.15100450 D	M4.0*0.7	3.15	2.1	10			
ISO S0.8 3.9120450 D	M5.0*0.8	3.9	2.8	12			
ISO S1.0 4.8150650 D	M6.0*1.0	4.8	3.4	15	6.0	60	
ISO S1.25 6.0200660 D	M8.0*1.25	6.0	4.2	20			
ISO S1.5 7.7250860 D	M10*1.5	7.7	5.6	25	8.0		
ISO S1.75 9.6301075 D	M12*1.75	9.6	7.3	30	10	75	
ISO S2.0 10361075 D	M14*2.0	10	7.3	36			
ISO S2.5 12381275 D	M18*2.5	12	8.8	38	12		
ISO S3.0 144814100 D	M24*3.0	14	10.2	48	14	100	6
ISO S3.5 165016100 D	M30*3.5	16	11.5	50	16		

GREWIN TOOLS

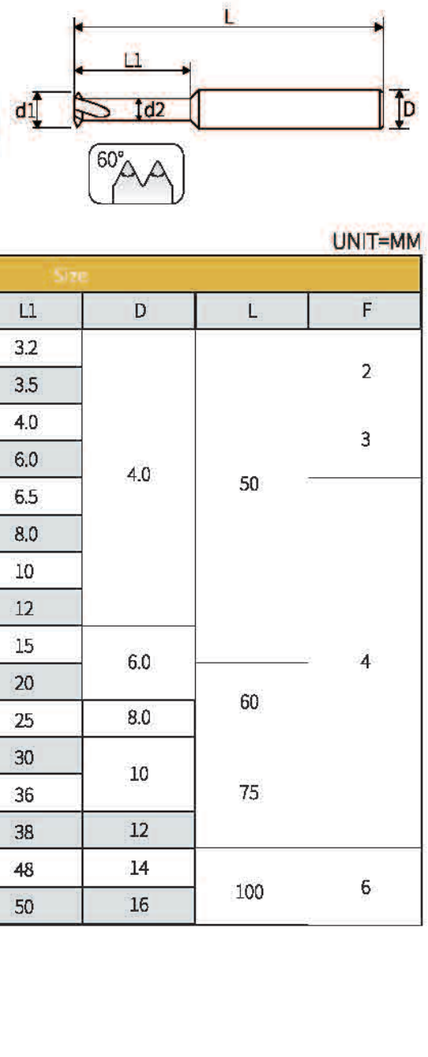
Tungsten carbide single-teeth thread endmill-For Titanium alloy/high temperature alloy

Features

- Suitable for processing sampling workpiece with less threads and varuous thread specifications, besides,it could processing American threads as well,The single thread processing resistance is small,versatility is trong and it is easy to use,choosing special coatings forc,which improves the tool's resistance to chip sticking and high-temperature melting, thereby extending its lifetime.

◎= 最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainlee Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
○	◎	○	○				○	◎					◎	◎



UNIT=MM

Product Code	Type	Size					
	mm	d1	d2	L1	D	L	F
ISO S0.25 0.90320450 X	M1.2*0.25	0.9	0.63	3.2	4.0	50	2
ISO S0.3 1.050350450 X	M1.4*0.3	1.05	0.7	3.5			
ISO S0.35 1.2040450 X	M1.6*0.35	1.2	0.8	4.0			3
ISO S0.4 1.55060450 X	M2.0*0.4	1.55	0.9	6.0			
ISO S0.45 1.960650450 X	M2.5*0.45	1.96	1.3	6.5			
ISO S0.5 2.35080450 X	M3.0*0.5	2.35	1.6	8.0			4
ISO S0.7 3.15100450 X	M4.0*0.7	3.15	2.1	10			
ISO S0.8 3.9120450 X	M5.0*0.8	3.9	2.8	12			
ISO S1.0 4.8150650 X	M6.0*1.0	4.8	3.4	15	6.0	60	
ISO S1.25 6.0200660 X	M8.0*1.25	6.0	4.2	20			
ISO S1.5 7.7250860 X	M10*1.5	7.7	5.6	25	8.0	75	
ISO S1.75 9.6301075 X	M12*1.75	9.6	7.3	30	10		
ISO S2.0 10361075 X	M14*2.0	10	7.3	36			
ISO S2.5 12381275 X	M18*2.5	12	8.8	38	12		
ISO S3.0 144814100 X	M24*3.0	14	10.2	48	14	100	6
ISO S3.5 165016100 X	M30*3.5	16	11.5	50	16		

GREWIN TOOLS

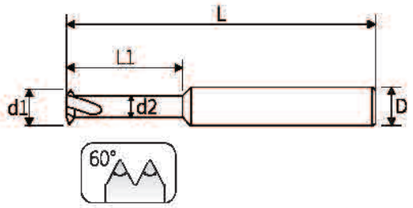
Tungsten carbide single-teeth extended length thread endmill

Features

▶Suitable for processing sampling workpiece with less threads and various thread specifications,Single thread processing resistance is small,it could processing deeper thread holes.

◎= Best ○=Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	~48HRC	~55HRC	~60HRC	~65HRC	Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Ti alloy
◎	◎	◎	○				◎	◎						



UNIT=MM

Product Code	Type	Size					
	mm	d1	d2	L1	D	L	F
ISO S0.3 1.0503504100 D	M1.4*0.3	1.05	0.7	3.5	4.0	100	3
ISO S0.35 1.20404100 D	M1.6*0.35	1.2	0.8	4.0			
ISO S0.4 1.550604100 D	M2.0*0.4	1.55	0.9	6.0			4
ISO S0.45 1.9606504100 D	M2.5*0.45	1.96	1.3	6.5			
ISO S0.5 2.350804100 D	M3.0*0.5	2.35	1.6	8.0			
ISO S0.7 3.151004100 D	M4.0*0.7	3.15	2.1	10			
ISO S0.8 3.91204100 D	M5.0*0.8	3.9	2.8	12			
ISO S1.0 4.81506100 D	M6.0*1.0	4.8	3.4	15	6.0		
ISO S1.25 6.02006100 D	M8.0*1.25	6.0	4.2	20			
ISO S1.5 7.72508100 D	M10*1.5	7.7	5.6	25	8.0		
ISO S1.75 9.63010100 D	M12*1.75	9.6	7.3	30	10		
ISO S2.0 103610100 D	M14*2.0	10	7.3	36			
ISO S2.5 123812100 D	M18*2.5	12	8.8	38	12		
ISO S3.0 144814100 D	M24*3.0	14	10.2	48	14		6
ISO S3.5 165016100 D	M30*3.5	16	11.5	50	16		

GREWIN TOOLS

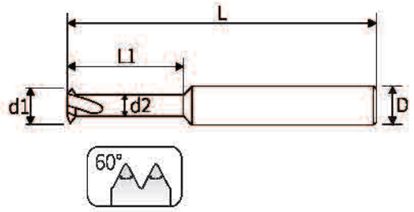
Tungsten carbide single-teeth thread endmill-for steel

Features

▶ Suitable for processing sampling workpiece with less threads and varuous thread specifications,besides,it could processing American threads as well,The Single thread processing resistance is small, versatility is strong, and it is easy to use

◎■最佳 Best ○■适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainlee Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
◎	◎	◎	○				◎	◎						



单位 UNIT=MM

Product Code	Type	Size				
	mm	刃径d1	避空直径d2	避空长L1	柄径D	总长L
ISO S0.25-0.35 1.050350450 D	0.25-0.35	1.05	0.6	3.5	4.0	50
ISO S0.25-0.35 1.20040450 D	0.25-0.35	1.2	0.75	4.0		
ISO S0.3-0.5 1.55060450 D	0.3-0.5	1.55	0.9	6.0		
ISO S0.3-0.7 1.960650450 D	0.3-0.7	1.96	1.1	6.5		
ISO S0.3-0.8 2.35080450 D	0.3-0.8	2.35	1.4	8.0		
ISO S0.3-0.8 3.15100450 D	0.3-0.8	3.15	2.0	10		
ISO S0.3-1.0 3.9120450 D	0.3-1.0	3.9	2.5	12		
ISO S0.5-1.5 4.8150650 D	0.5-1.5	4.8	2.9	15	6.0	
ISO S0.5-1.75 6.0200450 D	0.5-1.75	6.0	4.0	20		
ISO S0.5-2.5 7.7250860 D	0.5-2.5	7.7	4.8	25	8.0	60
ISO S1.0-3.0 9.6301075 D	1.0-3.0	9.6	6.0	30	10	75
ISO S1.0-3.5 10361075 D	1.0-3.5	10	6.0	36		
ISO S1.0-4.0 12381275 D	1.0-4.0	12	7.3	38	12	
ISO S1.5-4.0 144814100 D	1.5-4.0	14	9.0	48	14	100
ISO S2.0-5.0 165016100 D	2.0-5.0	16	10	50	16	

GREWIN TOOLS

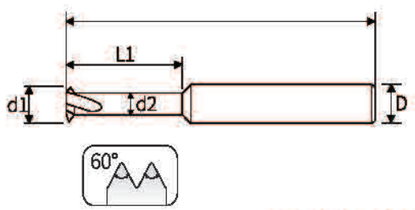
Tungsten carbide single-teeth thread endmill-for steel

特 征 Features

▶ Suitable for processing sampling workpiece with less threads and varuous thread specifications,besides,it could processing American threads as well,The Single thread processing resistance is small, versatility is strong, and it is easy to use. the long-neck type thread mill is especially suitable for deep holes and complex thread working condition.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainlee Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
◎	◎	◎	○				◎	◎						



单位 UNIT=MM

Product Code	Thread Types			Pitch		Size					
	M粗牙	细牙	UN, UNS, UNF, UNEF	mm	tpi	d1	d2	L1	D	L	F
ISO S0.5-0.8 3.90160450 D	M5x0.8	M5x0.5 M5X0.75	No.10-56UNS, No.10-48UNS, No.40UNS,	0.5-0.8	32-56	3.9	2.8	16	4.0	50	4
ISO S0.5-1.0 4.850200660 D	M6x1.0	M6x0.5 M6X0.75	No.12-56UNS, No.12-48UNS, 1/4-40UNS,1/4-36UNS, 1/4-32UNEF, 1/4-28UNF, 1/4-27UNS, 1/4-24UNS	0.5-1.0	24-56	4.85	3.5	20	6.0	60	5
ISO S0.5-1.25 5.9250660 D	M8x1.25	M7x0.5 M7X0.75 M7.5X1.0	5/16-48UNS, 5/16-40UNS, 5/16-36UNS,5/16-36UNEF, 5/16-28UN, 5/16-27UNS, 5/16-24UNS, 5/16-20UNS	0.5-1.25	20-48	5.9	4.2	25			
ISO S0.5-1.0 9.8351075 D		M11X0.75 M11X1.0	7/16-32UNS, 7/16-28UNEF, 7/16-27UNS,7/16-24UNS	0.5-1.0	24-56	9.8	8.5	35	10	75	6
ISO S1.0-1.5 7.9320875 D	M10x1.5	M10x1.0 M10X1.25	3/8-24UNF, 3/8-20NS, 7/16-18UNS,7/16-16UNS	1.0-1.50	13-24	7.9	5.8	32	8.0		
ISO S1.0-1.75 9.9381075 D	M12x1.75	M12x1.0 M12X1.25 M12X1.5	1/2-24UNS, 1/2-20UNS, 1/2-18UNS,1/2-16UNS, 1/2-14UNS	1.0-1.75	14-24	9.9	7.6	38	10		
ISO S1.0-2.0 11.9401275 D	M16x2.0	M13.5X1.0 M14X1.25 M14X1.5	9/16-24UNEF, 9/16-18UNF, 5/8-18UNF,3/4-16UNF, 7/8-14UNF	1.0-2.0	14-24	11.9	9.6	40	12		
ISO S2.0-3.0 144814100 D	M18x2.5 M20x2.5 M22x2.5 M24x3.0 M27x3.0		9/16-12UNC, 5/8-11UNC 3/4-10UNC, 7/8-9UNC	2.0-3.0	9-12	14	10.2	48	14	100	
ISO S2.0-3.5 165016100 D	M20x2.5 M22x2.5 M24x3.0 M27x3.0 M30x3.5 M33x3.5		9/16-12UNC, 5/8-11UNC 3/4-10UNC, 1-8UNC	2.0-3.5	8-12	16	11.5	50	16		

GREWIN TOOLS

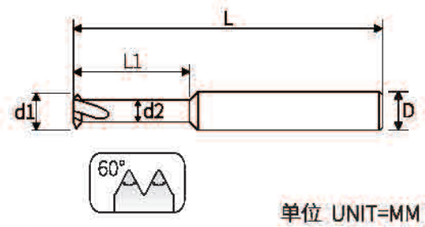
Tungsten carbide single-thread endmill-for high-temperature alloys and titanium alloys

特 征 Features

▶ Suitable for processing sampling workpiece with less threads and varuous thread specifications,besides,it could processing American threads as well,The single thread processing resistance is small,versatility is trong and it is easy to use,choosing special coatings forc,which improves the tool's resistance to chip sticking and high-temperature melting, thereby extending its lifetime.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainlee Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
○	◎	○	○				○	◎					◎	◎



单位 UNIT=MM

Product Code	Thread Types			Pitch		Size					
	M粗牙	细牙	UN, UNS, UNF, UNEF	mm	tpi	d1	d2	L1	D	L	F
ISO S0.5-0.8 3.90160450 X	M5x0.8	M5x0.5 M5X0.75	No.10-56UNS, No.10-48UNS, No.40UNS,	0.5-0.8	32-56	3.9	2.8	16	4.0	50	4
ISO S0.5-1.0 4.850200660 X	M6x1.0	M6x0.5 M6X0.75	No.12-56UNS, No.12-48UNS, 1/4-40UNS,1/4-36UNS, 1/4-32UNEF, 1/4-28UNF, 1/4-27UNS, 1/4-24UNS	0.5-1.0	24-56	4.85	3.5	20	6.0	60	5
ISO S0.5-1.25 5.9250660 X	M8x1.25	M7x0.5 M7X0.75 M7.5X1.0	5/16-48UNS, 5/16-40UNS, 5/16-36UNS,5/16-36UNEF, 5/16-28UN, 5/16-27UNS, 5/16-24UNS, 5/16-20UNS	0.5-1.25	20-48	5.9	4.2	25			
ISO S0.5-1.0 9.8351075 X		M11X0.75 M11X1.0	7/16-32UNS, 7/16-28UNEF, 7/16-27UNS,7/16-24UNS	0.5-1.0	24-56	9.8	8.5	35	10	75	6
ISO S1.0-1.5 7.9320875 X	M10x1.5	M10x1.0 M10X1.25	3/8-24UNF, 3/8-20NS, 7/16-18UNS,7/16-16UNS	1.0-1.50	13-24	7.9	5.8	32	8.0		
ISO S1.0-1.75 9.9381075 X	M12x1.75	M12x1.0 M12X1.25 M12X1.5	1/2-24UNS, 1/2-20UNS, 1/2-18UNS,1/2-16UNS, 1/2-14UNS	1.0-1.75	14-24	9.9	7.6	38	10		
ISO S1.0-2.0 11.9401275 X	M16x2.0	M13.5X1.0 M14X1.25 M14X1.5	9/16-24UNEF, 9/16-18UNF, 5/8-18UNF,3/4-16UNF, 7/8-14UNF	1.0-2.0	14-24	11.9	9.6	40	12		
ISO S2.0-3.0 144814100 X	M18x2.5 M20x2.5 M22x2.5 M24x3.0 M27x3.0		9/16-12UNC, 5/8-11UNC 3/4-10UNC, 7/8-9UNC	2.0-3.0	9-12	14	10.2	48	14	100	
ISO S2.0-3.5 165016100 X	M20x2.5 M22x2.5 M24x3.0 M27x3.0 M30x3.5 M33x3.5		9/16-12UNC, 5/8-11UNC 3/4-10UNC, 1-8UNC	2.0-3.5	8-12	16	11.5	50	16		

GREWIN TOOLS

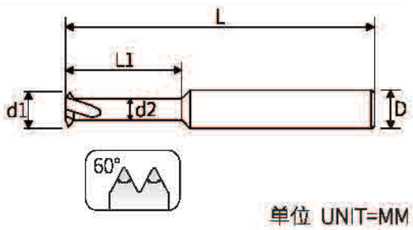
Tungsten carbide single-teeth thread endmill-DLC coating for Alu

特 征 Features

▶ Suitable for processing sampling workpiece with less threads and various thread specifications,Single thread processing resistance is small,it could processing deeper thread holes,Colorful DLC coating has the lowest friction coefficient and has high resistance to sintering and corrosion on non-ferrous metals. Suitable for processing copper alloys, aluminum alloys, non-ferrous metals, acrylic, etc.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
									◎	◎	◎	◎		



单位 UNIT=MM

Product Code	Pitch	Size					
	P	刃径d1	避空直径d2	避空长L1	柄径D	总长L	刃数F
ISO S0.25 0.720250450 DLC	M1.0*0.25	0.72	0.43	2.5	4.0	50	2
ISO S0.25 0.900320450 DLC	M1.2*0.25	0.9	0.63	3.2			
ISO S0.25-0.35 1.050400450 DLC	0.25-0.35	1.05	0.6	3.5			3
ISO S0.25-0.35 1.20040450 DLC	0.25-0.35	1.2	0.75	4.0			
ISO S0.3-0.5 1.55060450 DLC	0.3-0.5	1.55	0.9	6.0			
ISO S0.3-0.7 1.960650450 DLC	0.3-0.7	1.96	1.1	6.5			4
ISO S0.3-0.8 2.35080450 DLC	0.3-0.8	2.35	1.4	8.0			
ISO S0.3-0.8 3.15100450 DLC	0.3-0.8	3.15	2.0	10			
ISO S0.3-1.0 3.9120450 DLC	0.3-1.0	3.9	2.5	12			
ISO S0.5-1.5 4.8150650 DLC	0.5-1.5	4.8	2.9	15	6.0		
ISO S0.5-1.75 6.0200450 DLC	0.5-1.75	6.0	4.0	20			
ISO S0.5-2.5 7.7250860 DLC	0.5-2.5	7.7	4.8	25	8.0	60	
ISO S1.0-3.0 9.6301075 DLC	1.0-3.0	9.6	6.0	30	10	75	
ISO S1.0-3.5 10361075 DLC	1.0-3.5	10	6.0	36			
ISO S1.0-4.0 12381275 DLC	1.0-4.0	12	7.3	38	12		
ISO S1.5-4.0 144814100 DLC	1.5-4.0	14	9.0	48	14	100	6
ISO S2.0-5.0 165016100 DLC	2.0-5.0	16	10	50	16		

GREWIN TOOLS

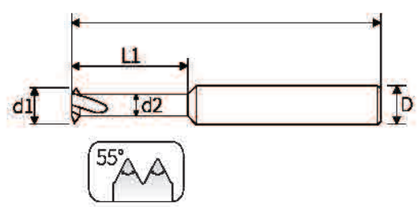
Tungsten carbide single-teeth 55° imperial thread endmill

特 征 Features

▶ Suitable for processing sampling workpiece with less threads and various thread specifications,it could also processing British pipe thread, British taper pipe thread, Whitworth thread,The Single thread processing resistance is small, versatility is strong, and it is easy to use

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
◎	◎	◎	○				◎	◎						○



单位 UNIT=MM

Product Code	Thread Size	Pitch	刃径d1	角度	避空直径d2	避空长L1	柄径D	总长L	刃数F
W S32 3.10800450 D	W5/32-32	P0.793	3.1	55°	1.9	8	4.0	50	4
W S24 3.5100450 D	W3/16-24	P1.058	3.5	55°	2.0	10			
W S20 4.0120450 D	W1/4-20	P1.27	4.0	55°	2.2	12			
W S28-18 6.0140650 D	W5/16-18 G1/16-28 G1/8-28	P0.907-P1.411	6.0	55°	4.5	14	6.0		
W S19-14 8.0220860 D	W7/16-14 G1/4-19 G3/8-19	P1.336-P1.814	8.0	55°	5.5	22	8.0	60	
W S19-14 10301075 D	G1/2-14 G1/4-19 G3/4-14 G3/8-19	P1.336-P1.814	10	55°	7.3	30	10	75	
W S14-10 12381275 D	W5/8-11 W3/4-10 G1/2-14 G3/4-14 G1-11	P1.336-P2.54	12	55°	8.2	38	12		

GREWIN TOOLS

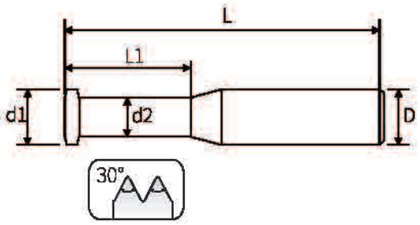
Tungsten carbide single thread trapezoidal thread endmill-TR30°

特 征 Features

▶ Trapezoidal thread is the main transmission form of spiral transmission, and is mostly used in the main screw transmission of machine tools and the screw transmission of tool holders.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainlee Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
◎	◎	◎	○				◎	◎						○



单位 UNIT=MM

Product Code	Type	刃径d1	避空直径d2	避空长L1	柄径D	总长L	刃数F
TR S1.0 5.5200650 D	TR 7x1.0	5.5	4.1	20	6.0	50	4
TR S1.5 6.0200650 D	TR 8x1.5 TR 9x1.5	6.0	4.0	20			
TR S2.0 6.4200660 D	TR 9x2 TR 10x2 TR 11x2	6.4	3.7	20	8.0	60	
TR S2.0 9.4351075 D	TR 12x2 TR 14x2 TR 16x2 TR 18x2 TR 20x2	9.4	6.5	35	10	75	
TR S3.0 7.4250860 D	TR 11x3 TR 12x3 TR 14x3	7.4	3.8	25	8.0	60	
TR S3.0 10351075 D	TR 14x3 TR 22x3 TR 24x3 TR 26x3 TR 28x3 TR 30x3	10	6.0	35	10	75	
TR S4.0 11381275 D	TR 16x4 TR 18x4 TR 20x4	11	6.0	38	12		
TR S5.0 145014100 D	TR 22x5 TR 24x5 TR 26x5 TR 28x5	14	7.8	50	14	100	
TR S6.0 165016100 D	TR 30*6 TR 32*6 TR 34*6 TR 36*6 TR 38*6 TR 40*6 TR 42*6	16	9.0	50	16		

GREWIN TOOLS

Tungsten carbide single thread trapezoidal thread endmill-ACME29°

特 征 Features

▶ Trapezoidal thread is the main transmission form of spiral transmission, and is mostly used in the main screw transmission of machine tools and the screw transmission of tool holders.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainlee Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
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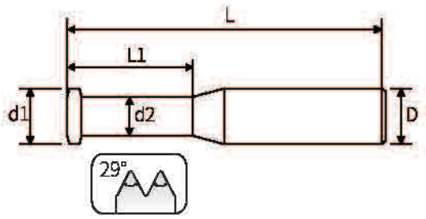

单位 UNIT=MM

Product Code	Type	刃径d1	避空直径d2	避空长L1	柄径D	总长L	刃数F
ACME S16 4.7150650 D	1/4-16	4.7	2.6	15	6.0	50	4
ACME S14 6.0200650 D	5/16-14	6.0	3.6	20			
ACME S12 7.2250860 D	3/8-12 7/16-12	7.2	4.5	25	8.0	60	
ACME S10 10351075 D	1/2-10	10	6.6	35	10		
ACME S8 12351275 D	5/8-8	12	7.5	35	12	75	
ACME S6 12351275 D	3/4-6 7/8-6	12	6.5	35			

Tungsten carbide A80 DIN standard single-teeth thread end mills

特 征 Features

▶ Suitable for processing sampling workpiece with less threads and various thread specifications,Single thread processing resistance is small,it could processing deeper thread holes

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
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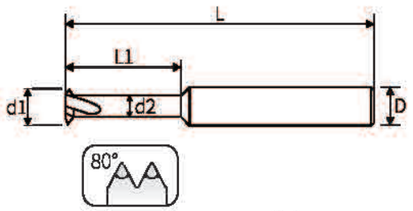
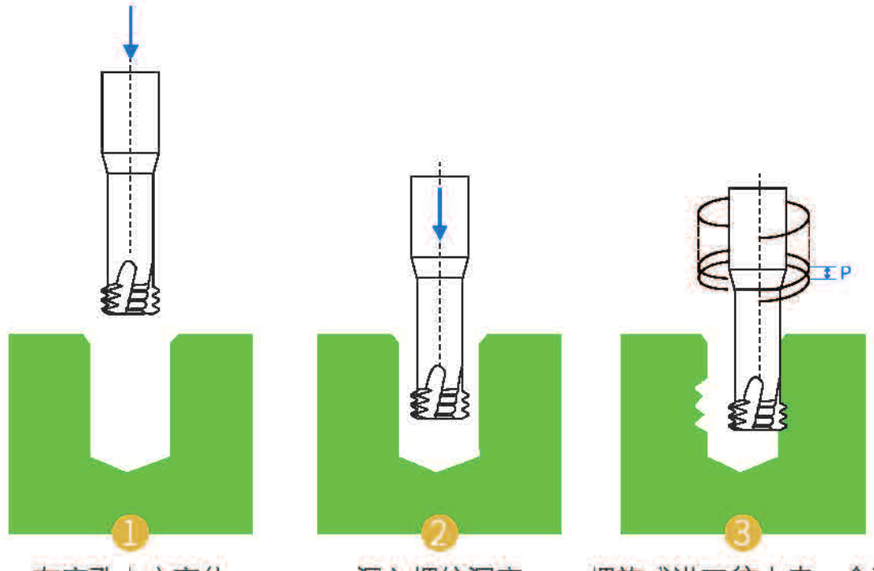


单位 UNIT=MM

Product Code	Type	刃径d1	避空直径d2	避空长L1	柄径D	总长L	刃数F
PG S 8.0150860 D	PG7 PG9 PG11 PG13.5 PG16	8	6	15	8.0	60	4
PG S 10201075 D	PG9 PG11 PG13.5 PG16	10	7	20	10	75	
PG S 12201275 D	PG21 PG29 PG36 PG42 PG48	12	7	20	12		

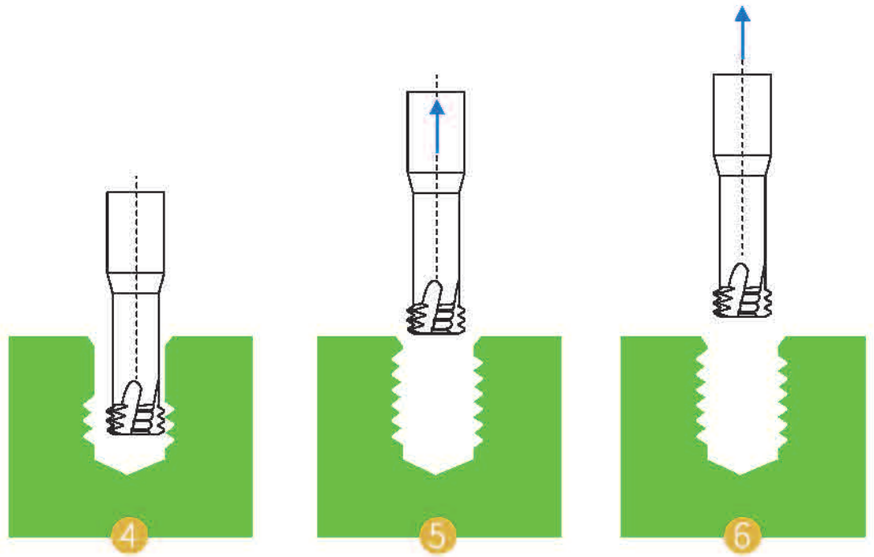
Three Tooth Thread Milling Cutter Machining Process



在底孔上方定位
Positioned above the bottom hole

深入螺纹深度
Entry Thread Depth

螺旋式进刀往上走一个牙距
Spiral rotation move up with one teeth pitch



按照一个牙距P
螺旋重复向上加工
Repeat the upward process according to the pitch P spiral

180°退出到中间位置
180° exit to center position

刀具退回到起始位置
The cutter returns to the starting position

GREWIN TOOLS

Tungsten Carbide Three Teeth 2XD Metric Thread End Mill-Coated for Steel-1

特 征 Features

▶ Suitable for processing small aperture threads and high hardness of the workpiece, three buckle teeth steel, high strength, not easy to break the gray-black coating in the middle of the nano-stacked structure with high toughness and high compressive stress is particularly suitable for the processing of carbon steel, 45 steel, 20Cr, S136, 40Cr, 42Cr, die steel, hardened steel and so on.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
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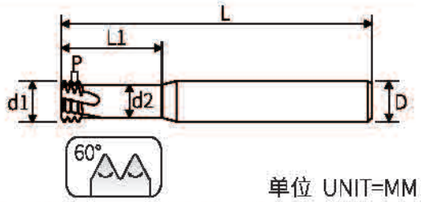

单位 UNIT=MM

Product Code	Type	螺距P	刃径d1	避空直径d2	避空长 L1	柄径D	总长L	刃数F
ISO T0.25 0.730200450 D	M1.0	0.25	0.73	0.43	2.0	4.0	50	3
ISO T0.25 0.920240450 D	M1.2	0.25	0.92	0.62	2.4			
ISO T0.3 1.050280450 D	M1.4	0.3	1.05	0.65	2.8			
ISO T0.35 1.20320450 D	M1.6	0.35	1.2	0.78	3.2			
ISO T0.35 1.20320650 D	M1.6	0.35	1.2	0.78	3.2	6.0		
ISO T0.35 1.40360450 D	M1.8	0.35	1.4	0.98	3.6	4.0		
ISO T0.4 1.550400450 D	M2.0	0.4	1.55	1.05	4.0			
ISO T0.4 1.550400650 D	M2.0	0.4	1.55	1.05	4.0	6.0		
ISO T0.45 1.70500450 D	M2.2	0.45	1.7	1.1	5.0	4.0		
ISO T0.45 2.00500450 D	M2.5	0.45	2.0	1.45	5.0			
ISO T0.45 2.00500650 D	M2.5	0.45	2.0	1.45	5.0	6.0		
ISO T0.25 2.40600450 D	M3.0	0.25	2.4	2.05	6.0	4.0		
ISO T0.35 2.40600450 D	M3.0	0.35	2.4	1.95	6.0			
ISO T0.5 2.40600450 D	M3.0	0.5	2.4	1.8	6.0			
ISO T0.5 2.40600650 D	M3.0	0.5	2.4	1.8	6.0	6.0		
ISO T0.6 2.750800450 D	M3.5	0.6	2.75	2.0	8.0	4.0		
ISO T0.7 3.150800450 D	M4.0	0.7	3.15	2.3	8.0			
ISO T0.7 3.150800650 D	M4.0	0.7	3.15	2.3	8.0	6.0		
ISO T0.75 3.50900450 D	M4.5	0.75	3.5	2.55	9.0	4.0		
ISO T0.8 4.0100450 D	M5.0	0.8	4.0	3.0	10			
ISO T0.8 4.0100650 D	M5.0	0.8	4.0	3.0	10	6.0		
ISO T0.75 4.8120650 D	M6.0	0.75	4.8	3.8	12			
ISO T1.0 4.8120650 D	M6.0	1.0	4.8	3.6	12			

GREWIN TOOLS

Tungsten Carbide Three Teeth 2XD Metric Thread End Mill-Coated for Steel-2

特 征 Features

▶ Suitable for processing small aperture threads and high hardness of the workpiece, three buckle teeth steel, high strength, not easy to break the gray-black coating in the middle of the nano-stacked structure with high toughness and high compressive stress is particularly suitable for the processing of carbon steel, 45 steel, 20Cr, S136, 40Cr, 42Cr, die steel, hardened steel and so on.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
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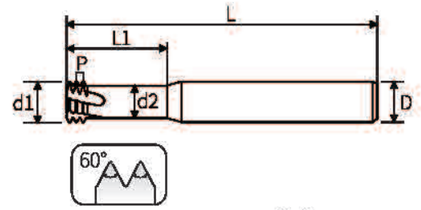

单位 UNIT=MM

Product Code	Type	螺距P	刃径d1	避空直径d2	避空长 L1	柄径D	总长L	刃数F
ISO T1.0 6.0160650 D	M8.0	1.0	6.0	4.8	16	6.0	50	4
ISO T1.25 6.0160650 D	M8.0	1.25	6.0	4.5	16			
ISO T1.0 8.0200860 D	M10	1.0	8.0	6.8	20	8.0	60	
ISO T1.5 8.0200860 D	M10	1.5	8.0	6.2	20			
ISO T1.0 10241075 D	M12	1.0	10	8.7	24	10	75	
ISO T1.25 10241075 D	M12	1.25	10	8.5	24			
ISO T1.5 10241075 D	M12	1.5	10	8.1	24			
ISO T1.75 10241075 D	M12	1.75	10	7.8	24			
ISO T1.5 12281275 D	M14	1.5	12	10.1	28	12		
ISO T2.0 10281075 D	M14	2.0	10	7.5	28	10		
ISO T2.0 12321275 D	M16	2.0	12	9.5	32	12		
ISO T1.5 143214100 D	M16	1.5	14	12.1	32	14	100	6
ISO T2.0 13.53214100 D	M16	2.0	13.5	11	32			
ISO T2.5 14.83816100 D	M18	2.5	14.8	11.4	38	16		
ISO T1.5 164016100 D	M20	1.5	16	14.1	40			
ISO T2.5 164016100 D	M20	2.5	16	12.6	40			
ISO T3.0 164816100 D	M24	3.0	16	12	48			

GREWIN TOOLS

Tungsten Carbide Three Teeth 3XD Metric Thread End Mill-Coated for Steel

特 征 Features

- Suitable for the processing of small aperture threads and high hardness of the workpiece, three buckle tooth rigidity, high wear resistance, thread size is more stable, the use of AlTiSiN grass-roots coating, containing aluminum, titanium, silicon, nitrogen and other composite elements, which contains a high level of aluminum with high lubrication is particularly suited to the processing of stainless steel, and other general-purpose steel parts.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
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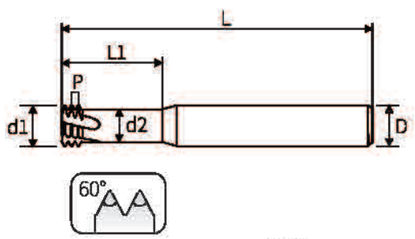


单位 UNIT=MM

Product Code	Type	螺距P	刃径d1	避空直径d2	避空长 L1	柄径D	总长L	刃数F
ISO T0.25 0.730300450 D	M1.0	0.25	0.73	0.43	3.0	4.0	50	3
ISO T0.25 0.920360450 D	M1.2	0.25	0.92	0.62	3.6			
ISO T0.3 1.050420450 D	M1.4	0.3	1.05	0.65	4.2			
ISO T0.35 1.20480450 D	M1.6	0.35	1.2	0.78	4.8			
ISO T0.35 1.20480650 D	M1.6	0.35	1.2	0.78	4.8	6.0		
ISO T0.4 1.550600450 D	M2.0	0.4	1.55	1.05	6.0	4.0		
ISO T0.4 1.550600650 D	M2.0	0.4	1.55	1.05	6.0	6.0		
ISO T0.45 2.00750450 D	M2.5	0.45	2.0	1.45	7.5	4.0		
ISO T0.45 2.00750650 D	M2.5	0.45	2.0	1.45	7.5	6.0		
ISO T0.5 2.40900450 D	M3.0	0.5	2.4	1.8	9.0	4.0		
ISO T0.5 2.40900650 D	M3.0	0.5	2.4	1.8	9.0	6.0		
ISO T0.7 3.15120450 D	M4.0	0.7	3.15	2.3	12	4.0		
ISO T0.7 3.15120650 D	M4.0	0.7	3.15	2.3	12	6.0		
ISO T0.8 4.0150450 D	M5.0	0.8	4.0	3.0	15	4.0		
ISO T0.8 4.0150650 D	M5.0	0.8	4.0	3.0	15	6.0		
ISO T1.0 4.8180650 D	M6.0	1.0	4.8	3.6	18			
ISO T1.25 6.0240650 D	M8.0	1.25	6.0	4.5	24			4
ISO T1.5 8.0300860 D	M10	1.5	8.0	6.2	30	8.0	60	
ISO T1.75 10361075 D	M12	1.75	10	7.8	36	10	75	

GREWIN TOOLS

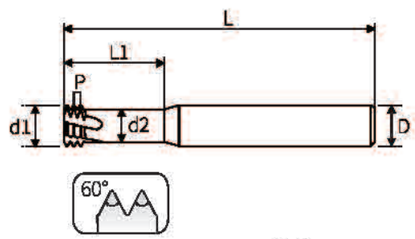
Tungsten Carbide Three Teeth 4XD Metric Thread End Mill-Coated for Steel

特 征 Features

- Suitable for the processing of small aperture threads and high hardness of the workpiece, three buckle tooth rigidity, high wear resistance, thread size is more stable, the use of AlTiSiN grass-roots coating, containing aluminum, titanium, silicon, nitrogen and other composite elements, which contains a high level of aluminum with high lubrication is particularly suited to the processing of stainless steel, and other general-purpose steel parts.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
◎	◎	◎	◎	○			◎	◎					○	◎



单位 UNIT=MM

Product Code	Type	螺距P	刃径d1	避空直径d2	避空长 L1	柄径D	总长L	刃数F
ISO T0.4 1.550800450 D	M2.0	0.4	1.55	1.05	8.0	4.0	50	3
ISO T0.45 2.00100450 D	M2.5	0.45	2.0	1.45	10			
ISO T0.5 2.4120450 D	M3.0	0.5	2.4	1.8	12			
ISO T0.7 3.15160450 D	M4.0	0.7	3.15	2.3	16			
ISO T0.8 4.0200450 D	M5.0	0.8	4.0	3.0	20			

GREWIN TOOLS

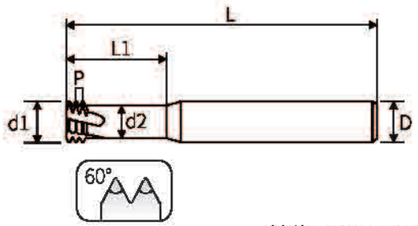
Tungsten Carbide Three Tooth 3D Metric Double Milling Cutter-Titanium Alloy/High-Temperature Alloy-1

特 征 Features

▶ Suitable for machining small-diameter threads and workpieces with high hardness, three tooth threads with good rigidity, high wear resistance, and more stable thread dimensions. Utilises high-temperature alloy and titanium alloy special coatings to improve the tool's resistance to chip adhesion and high-temperature melting, thereby extending its service life.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
○	◎	○	○				○	◎					◎	◎



单位 UNIT=MM

Product Code	Type	螺距P	刃径d1	避空直径d2	避空长 L1	柄径D	总长L	刃数F
ISO T0.25 0.730200450 X	M1.0	0.25	0.73	0.43	2.0	4.0	50	3
ISO T0.25 0.920240450 X	M1.2	0.25	0.92	0.62	2.4			
ISO T0.3 1.050280450 X	M1.4	0.3	1.05	0.65	2.8			
ISO T0.35 1.20320450 X	M1.6	0.35	1.2	0.78	3.2			
ISO T0.35 1.20320650 X	M1.6	0.35	1.2	0.78	3.2	6.0		
ISO T0.35 1.40360450 X	M1.8	0.35	1.4	0.98	3.6	4.0		
ISO T0.4 1.550400450 X	M2.0	0.4	1.55	1.05	4.0			
ISO T0.4 1.550400650 X	M2.0	0.4	1.55	1.05	4.0	6.0		
ISO T0.45 1.70500450 X	M2.2	0.45	1.7	1.1	5.0	4.0		
ISO T0.45 2.00500450 X	M2.5	0.45	2.0	1.45	5.0			
ISO T0.45 2.00500650 X	M2.5	0.45	2.0	1.45	5.0	6.0		
ISO T0.5 2.40600450 X	M3.0	0.5	2.4	1.8	6.0	4.0		
ISO T0.5 2.40600650 X	M3.0	0.5	2.4	1.8	6.0	6.0		
ISO T0.6 2.750800450 X	M3.5	0.6	2.75	2.0	8.0	4.0		
ISO T0.7 3.150800450 X	M4.0	0.7	3.15	2.3	8.0			
ISO T0.7 3.150800650 X	M4.0	0.7	3.15	2.3	8.0	6.0		
ISO T0.75 3.50900450 X	M4.5	0.75	3.5	2.55	9.0	4.0		
ISO T0.8 4.0100450 X	M5.0	0.8	4.0	3.0	10			
ISO T0.8 4.0100650 X	M5.0	0.8	4.0	3.0	10	6.0		
ISO T1.0 4.8120650 X	M6.0	1.0	4.8	3.6	12			
ISO T1.0 6.0160650 X	M8.0	1.0	6.0	4.8	16			4
ISO T1.25 6.0160650 X	M8.0	1.25	6.0	4.5	16			
ISO T1.0 8.0200860 X	M10	1.0	8.0	6.8	20	8.0	60	
ISO T1.5 8.0200860 X	M10	1.5	8.0	6.2	20			
ISO T1.0 10241075 X	M12	1.0	10	8.7	24	10	75	
ISO T1.25 10241075 X	M12	1.25	10		24			
ISO T1.5 10241075 X	M12	1.5	10	8.1	24			
ISO T1.75 10241075 X	M12	1.75	10	7.8	24			
ISO T1.5 12281275 X	M14	1.5	12	10.1	28	12		

GREWIN TOOLS

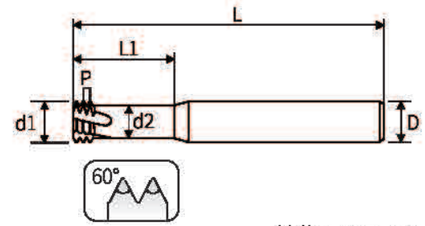
Tungsten Carbide Three Tooth 3D Metric Double Milling Cutter-Titanium Alloy/High-Temperature Alloy-2

特 征 Features

▶ Suitable for machining small-diameter threads and workpieces with high hardness, three tooth threads with good rigidity, high wear resistance, and more stable thread dimensions. Utilises high-temperature alloy and titanium alloy special coatings to improve the tool's resistance to chip adhesion and high-temperature melting, thereby extending its service life.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
○	◎	○	○				○	◎					◎	◎



单位 UNIT=MM

产品编码	型号	螺距P	刃径d1	避空直径d2	避空长 L1	柄径D	总长L	刃数F
ISO T2.0 10281075 X	M14	2.0	10	7.5	28	10	75	4
ISO T2.0 12321275 X	M16	2.0	12	9.5	32	12		
ISO T1.5 143214100 X	M16	1.5	14	12.1	32	14	100	
ISO T2.0 13.53214100 X	M16	2.0	13.5	11	32			
ISO T2.5 14.83816100 X	M18	2.5	14.8	11.4	38			
ISO T1.5 164016100 X	M20	1.5	16	14.1	40	16		
ISO T2.5 164016100 X	M20	2.5	16	12.6	40			6
ISO T3.0 164816100 X	M24	3.0	16	12	48			

GREWIN TOOLS

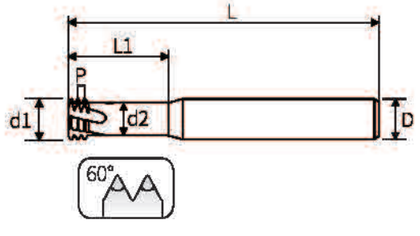
Tungsten Carbide Three Tooth 3D Metric Thread Milling Cutter-Titanium Alloy/High-Temperature Alloy

特 征 Features

- Suitable for machining small-diameter threads and workpieces with high hardness, three tooth threads with good rigidity, high wear resistance, and more stable thread dimensions. Utilises high-temperature alloy and titanium alloy special coatings to improve the tool's resistance to chip adhesion and high-temperature melting, thereby extending its service life.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
○	◎	○	○				○	◎					◎	◎



单位 UNIT=MM

Product Code	Type	螺距P	刃径d1	避空直径d2	避空长 L1	柄径D	总长L	刃数F
ISO T0.25 0.730300450 X	M1.0	0.25	0.73	0.43	3.0	4.0	50	3
ISO T0.25 0.920360450 X	M1.2	0.25	0.92	0.62	3.6			
ISO T0.3 1.050420450 X	M1.4	0.3	1.05	0.65	4.2			
ISO T0.35 1.20480450 X	M1.6	0.35	1.2	0.78	4.8			
ISO T0.35 1.20480650 X	M1.6	0.35	1.2	0.78	4.8	6.0		
ISO T0.4 1.550600450 X	M2.0	0.4	1.55	1.05	6.0	4.0		
ISO T0.4 1.550600650 X	M2.0	0.4	1.55	1.05	6.0	6.0		
ISO T0.45 2.00750450 X	M2.5	0.45	2.0	1.45	7.5	4.0		
ISO T0.45 2.00750650 X	M2.5	0.45	2.0	1.45	7.5	6.0		
ISO T0.5 2.40900450 X	M3.0	0.5	2.4	1.8	9.0	4.0		
ISO T0.5 2.40900650 X	M3.0	0.5	2.4	1.8	9.0	6.0		
ISO T0.7 3.15120450 X	M4.0	0.7	3.15	2.3	12	4.0		
ISO T0.7 3.15120650 X	M4.0	0.7	3.15	2.3	12	6.0		
ISO T0.8 4.0150450 X	M5.0	0.8	4.0	3.0	15	4.0		
ISO T0.8 4.0150650 X	M5.0	0.8	4.0	3.0	15	6.0		
ISO T1.0 4.8180650 X	M6.0	1.0	4.8	3.6	18			
ISO T1.25 6.0240650 X	M8.0	1.25	6.0	4.5	24			4
ISO T1.5 8.0300860 X	M10	1.5	8.0	6.2	30	8.0	60	
ISO T1.75 10361075 X	M12	1.75	10	7.8	36	10	75	

GREWIN TOOLS

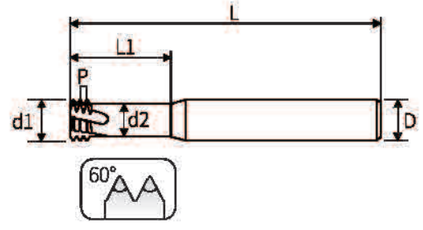
Tungsten Carbide Three Tooth Thread Milling Cutter for Aerospace Special-Titanium Alloy/High-Temperature Alloy

特 征 Features

- Suitable for machining small-diameter threads and workpieces with high hardness, three tooth threads with good rigidity, high wear resistance, and more stable thread dimensions. Utilises high-temperature alloy and titanium alloy special coatings to improve the tool's resistance to chip adhesion and high-temperature melting, thereby extending its service life.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
○	◎	○	○				○	◎					◎	◎



单位 UNIT=MM

Product Code	Type	螺距P	刃径d1	避空直径d2	避空长 L1	柄径D	总长L
MJ T0.4 1.550600450 X	MJ2.0	0.4	1.55	1.05	6.0	4.0	50
MJ T0.45 2.00750450 X	MJ2.5	0.45	2.0	1.45	7.5		
MJ T0.5 2.40900450 X	MJ3.0	0.5	2.4	1.8	9.0		
MJ T0.7 3.15120450 X	MJ4.0	0.7	3.15	2.3	12		
MJ T0.8 4.0150450 X	MJ5.0	0.8	4.0	3.0	15		
MJ T1.0 4.8180650 X	MJ6.0	1.0	4.8	3.6	18	6.0	
MJ T1.25 6.0240650 X	MJ8.0	1.25	6.0	4.5	24		
MJ T1.5 8.0300860 X	MJ10	1.5	8.0	6.2	30	8.0	60
MJ T1.75 10361075 X	MJ12	1.75	10	7.8	36	10	75

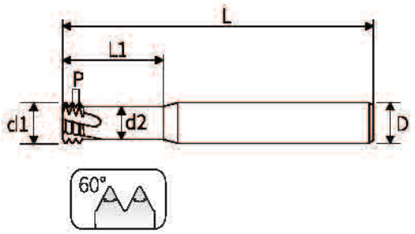
Tungsten Carbide Three Tooth 2D Metric Thread Milling Cutter-Bronze Coating

特 征 Features

▶ Suitable for machining small-diameter threads and workpieces with high hardness, three tooth thread steel has good rigidity, high strength, and is not prone to breakage.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
◎	○	◎	◎				◎	○						



单位 UNIT=MM

Product Code	Type	螺距P	刃径d1	避空直径d2	避空长 L1	柄径D	总长L	刃数F
ISO T0.25 0.730200450 H	M1.0	0.25	0.73	0.43	2.0	4.0	50	3
ISO T0.25 0.920240450 H	M1.2	0.25	0.92	0.62	2.4			
ISO T0.3 1.050280450 H	M1.4	0.3	1.05	0.65	2.8			
ISO T0.35 1.20320450 H	M1.6	0.35	1.2	0.78	3.2			
ISO T0.4 1.550400450 H	M2.0	0.4	1.55	1.05	4.0			
ISO T0.45 2.00500450 H	M2.5	0.45	2.0	1.45	5.0			
ISO T0.5 2.40600450 H	M3.0	0.5	2.4	1.8	6.0			
ISO T0.7 3.150800450 H	M4.0	0.7	3.15	2.3	8.0			
ISO T0.8 4.0100450 H	M5.0	0.8	4.0	3.0	10			
ISO T1.0 4.8120650 H	M6.0	1.0	4.8	3.6	12	6.0		4
ISO T1.25 6.0160650 H	M8.0	1.25	6.0	4.5	16			
ISO T1.5 8.0200860 H	M10	1.5	8.0	6.2	20	8.0	60	
ISO T1.75 10241075 H	M12	1.75	10	8.1	24	10	75	
ISO T2.0 10281075 H	M14	2.0	10	7.5	28			

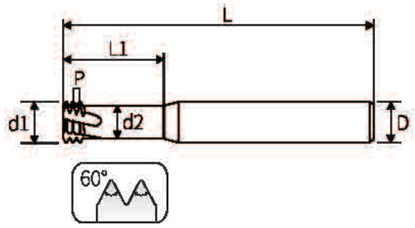
Tungsten Carbide Three Tooth Metric Thread Milling Cutter-DLC Coated for Aluminum

特 征 Features

▶ The DLC coating has the lowest coefficient of friction and high resistance to welding and corrosion on non-ferrous metals. It is suitable for processing copper alloys, aluminium alloys, non-ferrous metals, acrylic, etc.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
									◎	◎	◎	◎		



单位 UNIT=MM

Product Code	Type	螺距P	刃径d1	避空直径d2	避空长 L1	柄径D	总长L	刃数F
ISO T0.25 0.730300450 DLC	M1.0	0.25	0.73	0.43	3.0	4.0	50	3
ISO T0.25 0.920360450 DLC	M1.2	0.25	0.92	0.62	3.6			
ISO T0.3 1.050420450 DLC	M1.4	0.3	1.05	0.65	4.2			
ISO T0.35 1.20480450 DLC	M1.6	0.35	1.2	0.78	4.8			
ISO T0.4 1.550600450 DLC	M2.0	0.4	1.55	1.05	6.0			
ISO T0.45 2.00750450 DLC	M2.5	0.45	2.0	1.45	7.5			
ISO T0.5 2.40900450 DLC	M3.0	0.5	2.4	1.8	9.0			
ISO T0.7 3.15120450 DLC	M4.0	0.7	3.15	2.3	12			
ISO T0.8 4.0150450 DLC	M5.0	0.8	4.0	3.0	15			
ISO T1.0 4.8120650 DLC	M6.0	1.0	4.8	3.6	12	6.0		4
ISO T1.0 4.8180650 DLC	M6.0	1.0	4.8	3.6	18			
ISO T1.25 6.0160650 DLC	M8.0	1.25	6.0	4.5	16			
ISO T1.25 6.0240650 DLC	M8.0	1.25	6.0	4.5	24			
ISO T1.5 8.0200860 DLC	M10	1.5	8.0	6.2	20	8.0	60	
ISO T1.5 8.0300860 DLC	M10	1.5	8.0	6.2	30			
ISO T1.75 10361075 DLC	M12	1.75	10	7.8	36	10	75	
ISO T2.0 10371075 DLC	M14	2.0	10	7.5	28			

GREWIN TOOLS

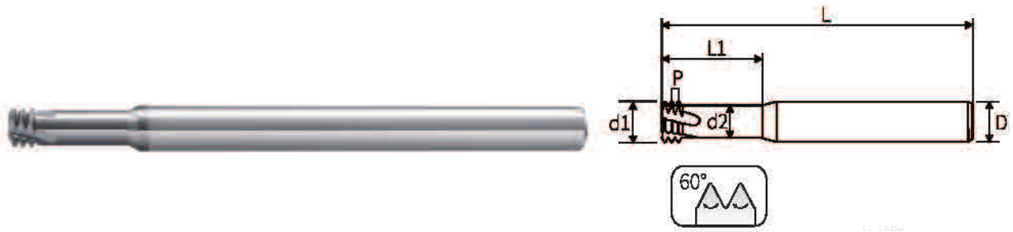
Tungsten Carbide Three Tooth Extended Metric Thread Milling Cutter-Coated for steel

特 征 Features

▶ Suitable for machining small-diameter threads and workpieces with high hardness, three tooth thread steel has good rigidity, high strength, and is not prone to breakage.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
◎	◎	◎	◎	○			◎	◎					○	◎



单位 UNIT=MM

Product Code	Type	螺距P	刃径d1	避空直径d2	避空长 L1	柄径D	总长L	刃数F
ISO T0.35 1.203206100 A	M1.6	0.35	1.2	0.78	3.2	6.0	100	3
ISO T0.4 1.550600675 A	M2.0	0.4	1.55	1.05	6.0		75	
ISO T0.4 1.5504006100 A	M2.0	0.4	1.55	1.05	4.0		100	
ISO T0.45 2.00750675 A	M2.5	0.45	2.0	1.45	7.5		75	
ISO T0.45 2.005006100 A	M2.5	0.45	2.0	1.45	5.0		100	
ISO T0.5 2.40090675 A	M3.0	0.5	2.4	1.8	9.0		75	
ISO T0.5 2.400606100 A	M3.0	0.5	2.4	1.8	6.0		100	
ISO T0.7 3.15120675 A	M4.0	0.7	3.15	2.3	12		75	
ISO T0.7 3.150806100 A	M4.0	0.7	3.15	2.3	8.0		100	
ISO T0.8 4.05150675 A	M5.0	0.8	4.0	3.0	15		75	
ISO T0.8 4.051006100 A	M5.0	0.8	4.0	3.0	10		100	
ISO T1.0 4.8180675 A	M6.0	1.0	4.8	3.6	18		75	
ISO T1.0 4.81206100 A	M6.0	1.0	4.8	3.6	12		100	
ISO T1.25 6.0240675 A	M8.0	1.25	6.0	4.5	24		75	4
ISO T1.25 6.01606100 A	M8.0	1.25	6.0	4.5	16		100	3
ISO T1.5 8.0300875 A	M10	1.5	8.0	6.2	30	8.0	75	4
ISO T1.5 8.02008100 A	M10	1.5	8.0	6.2	20			3
ISO T1.75 102410100 A	M12	1.75	10	7.8	24	10	100	4
ISO T2.0 102810100 A	M14	2.0	10	7.5	28			

GREWIN TOOLS

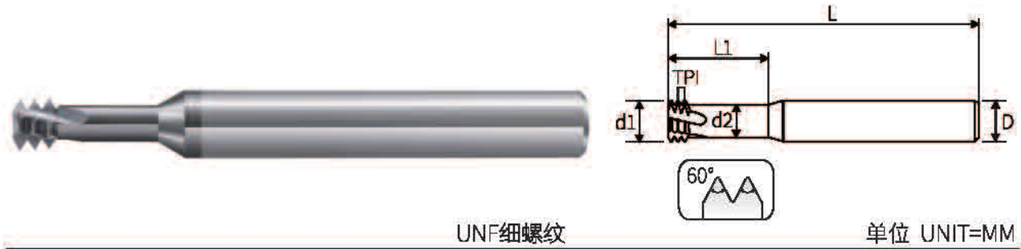
Tungsten Carbide Three Tooth American Standard Thread Milling Cutter-Coated for steel

特 征 Features

▶ Suitable for machining small-diameter threads and workpieces with high hardness, three tooth thread steel has good rigidity, high strength, and is not prone to breakage.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
◎	◎	◎	◎	○			◎	◎					○	◎



UNF细螺纹

单位 UNIT=MM

Product Code	Type	刃径d1	避空直径d2	避空长L1	柄径D	总长L	刃数F
UNF T72 1.450390450 A	NO.1-72	1.45	1.0	3.9			
UNF T56 1.950530450 A	NO.3-56	1.95	1.4	5.3	4.0	50	3
UNF T48 2.250600450 A	NO.4-48	2.25	1.6	6.0			
UNF T40 2.750720450 A	NO.6-40	2.75	1.9	7.2			
UNF T36 3.30870450 A	NO.8-36	3.3	2.4	8.7			
UNF T32 3.9100450 A	NO.10-32	3.9	2.9	10			
UNF T28 5.3120650 A	1/4-28	5.3	4.2	12	6.0		
UNF T24 6.5200860A	5/16-24	6.5	5.2	20	8.0	60	4
UNF T24 8.0200860 A	3/8-24	8.0	6.7	20			
UNF T20 9.5241075 A	7/16-20	9.5	7.9	24	10	75	

UNC粗螺纹

Product Code	Type	刃径d1	避空直径d2	避空长L1	柄径D	总长L	刃数F
UNC T64 1.40400450 A	NO.1-64	1.4	0.9	4.0	4.0	50	3
UNC T56 1.650500450 A	NO.2-56	1.65	1.1	5.0			
UNC T48 1.950500450 A	NO.3-48	1.95	1.3	5.0			
UNC T40 2.150600450 A	NO.4-40	2.15	1.3	6.0			
UNC T40 2.450720450 A	NO.5-40	2.45	1.6	7.2			
UNC T32 2.650750450 A	NO.6-32	2.65	1.6	7.5			
UNC T32 3.20900450 A	NO.8-32	3.2	2.2	9.0			
UNC T24 3.7100450 A	NO.10-24	3.7	2.4	10			
UNC T20 4.9120650 A	1/4-20	4.9	3.3	12	6.0		
UNC T16 7.8200860 A	5/16-18	6.4	4.7	18	8.0	60	4
UNC T18 6.4180860 A	3/8-16	7.8	5.85	20			
UNC T14 9.2241075 A	7/16-14	9.2	7.0	24	10	75	
UNC T13 10241075 A	1/2-13	10	7.5	24			
UNC T12 12281275 A	9/16-12	12	9.4	28	12		

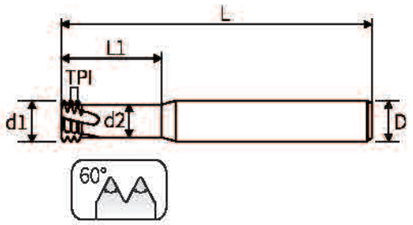
Tungsten Carbide Three Thread British Standard Straight Pipe Thread Milling Cutter-BSP(G)

特 征 Features

- Suitable for machining small-diameter threads and workpieces with high hardness, three tooth thread steel has good rigidity, high strength, and is not prone to breakage.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainlee Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
◎	◎	◎	◎	○			◎	◎					○	◎



单位 UNIT=MM

Product Code	Type	螺距P	刃径d1	避空直径d2	避空长 L1	柄径D	总长L	刃数F
BSP T28 6.0160650 D	1/16	28	6.0	4.75	16	6.0	50	4
BSP T28 8.0200860 D	1/8	28	8.0	6.75	20	8.0	60	
BSP T19 8.0200860 D	1/4	19	8.0	6.25	20			
BSP T19 10241075 D	1/4	19	10	8.25	24	10	75	
BSP T19 12281275 D	3/8	19	12	10.25	28	12		
BSP T14 12281275 D	1/2	14	12	9.5	28			
BSP T14 164016100 D	3/4	14	16	13.5	40	16	100	6
BSP T11 164016100 D	1"	11	16	12.7	40			

Tungsten Carbide Triple-Row Three-Flute Metric Thread Milling Cutter - Diamond Coated

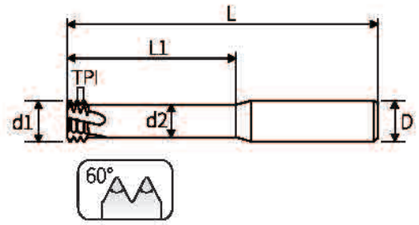
特 征 Features

- The nanodiamond coating uses chemical vapour deposition technology to form a hard, wear-resistant, corrosion-resistant nanoscale amorphous diamond film on a hard alloy substrate.

  Particularly suitable for: non-ferrous metals such as silicon-aluminium alloys and copper alloys, graphite, glass fibre, zirconium dioxide, and other engineering materials.

◎=最佳 Best ○=适合Good

石墨 Graphite	碳纤维 Fiber Carbon	玻璃纤维 Fiberglass	硅铝合金 Aluminum-Silicon Alloy	纯铝合金 Pure Aluminum Alloy	纯铜/紫铜/红铜 Pure Copper/ Purple Copper / Red Copper	纯钛 Pure Titanium	纯钨 tungsten	锌合金 zinc alloy	镁合金 Magnesium Alloy	二氧化锆 Zirconium Dioxide
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

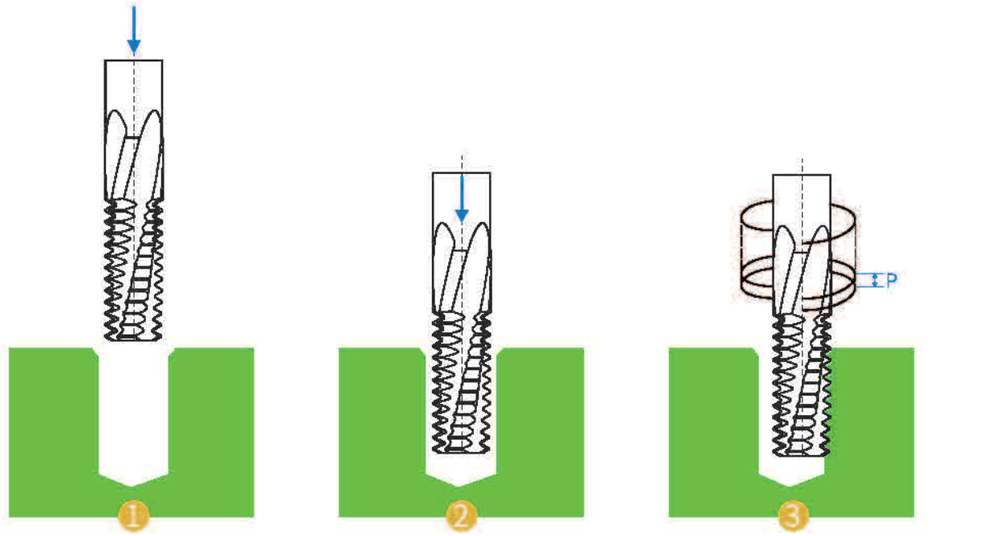


单位 UNIT=MM

Product Code	Type	螺距P	刃径d1	避空直径d2	避空长 L1	柄径D	总长L	刃数F
ISO T0.35 1.20480450 JG	M1.6	0.35	1.2	0.78	4.8	4.0	50	3
ISO T0.4 1.550600450 JG	M2.0	0.4	1.55	1.05	6.0			
ISO T0.45 2.00750450 JG	M2.5	0.45	2.0	1.45	7.5			
ISO T0.5 2.40900450 JG	M3.0	0.5	2.4	1.8	9.0			
ISO T0.7 3.15120450 JG	M4.0	0.7	3.15	2.3	12			
ISO T0.8 4.0150450 JG	M5.0	0.8	4.0	3.0	15			
ISO T1.0 4.8180650 JG	M6.0	1.0	4.8	3.6	18	6.0		4
ISO T1.25 6.0240650 JG	M8.0	1.25	6.0	4.5	24			
ISO T1.5 8.0300860 JG	M10	1.5	8.0	6.2	30	8.0	60	

GREWIN TOOLS

Full-tooth thread milling cutter machining process



在底孔上方定位
Positioning above the bottom hole

提升到螺纹深度
Raise to thread depth

螺旋式进刀往上走一个牙距
Spiral feed goes up one tooth pitch

利用360°螺旋运动加工螺纹
Machining of threads with 360° helical motion

180°退出到中间位置
180° exit to center position

刀具退回到起始位置
The cutter returns to the starting position

GREWIN TOOLS

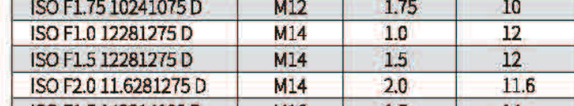
Tungsten Carbide Full Thread Metric Thread Milling Cutter-Coated Internal Threads for Steel

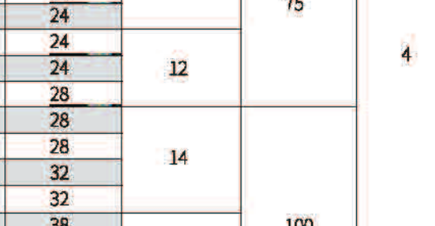
特 征 Features

▶ Suitable for high-volume production of the same specification, thread specifications, easy to use, 2 times the depth of the diameter of the workpiece, high processing efficiency.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
◎	◎	◎	◎				◎	◎	○	○			○	◎





单位 UNIT=MM

产品编码	型号	螺距P	刃径d1	刃长 L1	柄径D	总长L	刃数F
ISO F0.4 1.55040450 D	M2	0.4	1.55	4.0	4.0	50	3
ISO F0.45 2.0050450 D	M2.5	0.45	2.0	5.0			4
ISO F0.5 2.4060450 D	M3	0.5	2.4	6.0			3
ISO F0.7 3.15080450 D	M4	0.7	3.15	8.0			4
ISO F0.5 4.0100450 D	M5	0.5	4.0	10			3
ISO F0.75 4.0100450 D	M5	0.75	4.0	10			4
ISO F0.8 4.0100450 D	M5	0.8	4.0	10			4
ISO F0.75 4.8120660 D	M6	0.75	4.8	12	6.0	60	3
ISO F1.0 4.8120660 D	M6	1.0	4.8	12			4
ISO F0.5 6.0160660 D	M8	0.5	6.0	16			3
ISO F0.75 6.0160660 D	M8	0.75	6.0	16			4
ISO F1.0 6.0160660 D	M8	1.0	6.0	16			4
ISO F1.25 6.0160660 D	M8	1.25	6.0	16			4
ISO F0.5 8.0200860 D	M10	0.5	8.0	20	8.0	75	4
ISO F0.75 8.0200860 D	M10	0.75	8.0	20			4
ISO F1.0 8.0200860 D	M10	1.0	8.0	20			4
ISO F1.25 8.0200860 D	M10	1.25	8.0	20			4
ISO F1.5 8.0200860 D	M10	1.5	8.0	20			4
ISO F0.5 10241075 D	M12	0.5	10	24	10	75	4
ISO F0.75 10241075 D	M12	0.75	10	24			4
ISO F1.0 10241075 D	M12	1.0	10	24			4
ISO F1.25 10241075 D	M12	1.25	10	24			4
ISO F1.5 10241075 D	M12	1.5	10	24			4
ISO F1.75 10241075 D	M12	1.75	10	24			4
ISO F1.0 12281275 D	M14	1.0	12	28	12	75	4
ISO F1.5 12281275 D	M14	1.5	12	28			4
ISO F2.0 11.6281275 D	M14	2.0	11.6	28	14	100	4
ISO F1.5 143214100 D	M16	1.5	14	32			4
ISO F2.0 133214100 D	M16	2.0	13	32			4
ISO F2.5 14.83816100 D	M18	2.5	14.8	38	16	100	4
ISO F1.0 163816100 D	M20	1.0	16	38			4
ISO F1.5 163816100 D	M20	1.5	16	38			4
ISO F2.5 164216100 D	M20	2.5	16	42			4
ISO F3.0 164216100 D	M24	3.0	16	42			4

GREWIN TOOLS

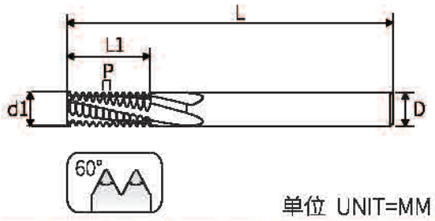
Tungsten Carbide Full Thread Metric Thread Milling Cutter-Coated Internal Threads for Steel

特 征 Features

- Suitable for high-volume production of the same specification, thread specifications, easy to use, 2 times the depth of the diameter of the workpiece, high processing efficiency.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainlee Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
◎	◎	◎	◎				◎	◎	○	○			○	◎



单位 UNIT=MM

Product Code	Type	螺距P	刃径d1	刃长 L1	柄径D	总长L	刃数F
ISO EF0.4 1.55040450 D	M2	0.4	1.55	4.0	4.0	50	3
ISO EF0.45 2.0050450 D	M2.5	0.45	2.0	5.0			
ISO EF0.5 2.4060450 D	M3	0.5	2.4	6.0			4
ISO EF0.7 3.15080450 D	M4	0.7	3.15	8.0			
ISO EF0.5 4.0100450 D	M5	0.5	4.0	10			3
ISO EF0.75 4.0100450 D	M5	0.75	4.0	10			
ISO EF0.8 4.0100450 D	M5	0.8	4.0	10			4
ISO EF0.75 4.8120660 D	M6	0.75	4.8	12	6.0	60	3
ISO EF1.0 4.8120660 D	M6	1.0	4.8	12			4
ISO EF0.5 6.0160660 D	M8	0.5	6.0	16			3
ISO EF0.75 6.0160660 D	M8	0.75	6.0	16			
ISO EF1.0 6.0160660 D	M8	1.0	6.0	16			4
ISO EF1.25 6.0160660 D	M8	1.25	6.0	16			
ISO EF0.5 8.0200860 D	M10	0.5	8.0	20	8.0	60	
ISO EF0.75 8.0200860 D	M10	0.7	8.0	20			
ISO EF1.0 8.0200860 D	M10	1.0	8.0	20			
ISO EF1.25 8.0200860 D	M10	1.25	8.0	20			
ISO EF1.5 8.0200860 D	M10	1.5	8.0	20			
ISO EF0.5 10241075 D	M12	0.5	10	24	10	75	
ISO EF0.75 10241075 D	M12	0.75	10	24			
ISO EF1.0 10241075 D	M12	1.0	10	24			
ISO EF1.25 10241075 D	M12	1.25	10	24			
ISO EF1.5 10241075 D	M12	1.5	10	24			
ISO EF1.75 10241075 D	M12	1.75	10	24	12		
ISO EF1.0 12281275 D	M14	1.0	12	28			
ISO EF1.5 12281275 D	M14	1.5	12	28			
ISO EF2.0 11.6281275 D	M14	2.0	11.6	28	14	100	
ISO EF1.5 143214100 D	M16	1.5	14	32			
ISO EF2.0 133214100 D	M16	2.0	13	32			
ISO EF2.5 14.83816100 D	M18	2.5	14.8	38			
ISO EF1.0 163816100 D	M20	1.0	16	38	16		
ISO EF1.5 163816100 D	M20	1.5	16	38			
ISO EF2.5 164216100 D	M20	2.5	16	42			
ISO EF3.0 164216100 D	M24	3.0	16	42			

GREWIN TOOLS

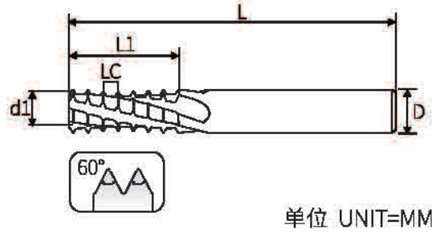
Tungsten Carbide Straggered tooth Full Thread End Mill-Coated for Steel

特 征 Features

- In order to pursue better processing efficiency, we give the tool to do a staggered tooth design, this design greatly reduces the full row of teeth, in the processing of resistance, it can do higher feed and greater cutting volume, thus greatly improving the efficiency of processing and shorten the processing time. Service Life expectancy in the increase in the force added at the same time reduce the frequency of adding mending tools.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainlee Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
◎	◎	◎	◎				◎	◎	○	○			○	◎



单位 UNIT=MM

Product Code	Type	螺距P	刃径d1	刃长 L1	柄径D	总长L	刃数F
ISO C0.7 3.150840650 D	M4.0	0.7	3.15	8.4	6.0	50	4
ISO C0.8 4.01040650 D	M5.0	0.8	4.0	10.4			
ISO C1.0 4.81200660 D	M6.0	1.0	4.8	12		60	
ISO C1.25 6.01630860 D	M8.0	1.25	6.0	16.3	8.0		
ISO C1.5 8.02100860 D	M10	1.5	8.0	21			
ISO C1.75 102451075 D	M12	1.75	10	24.5	10	75	
ISO C2.0 11.62801275 D	M14	2.0	11.6	28	12		
ISO C2.0 1332014100 D	M16	2.0	13	32	14	100	5
ISO C2.5 1640016100 D	M20	2.5	16	40	16		

GREWIN TOOLS

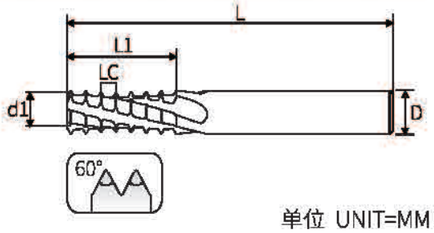
Tungsten Carbide Staggered Tooth Full Thread Milling Cutter-Titanium Alloy/High Temperature Alloy

特 征 Features

- In order to pursue better machining efficiency, we give the tool to do a staggered tooth design, this design greatly reduces the full row of teeth in the processing of resistance, it can do higher feed and greater cutting volume, thus it greatly improving the efficiency of processing and shorten the processing time. Service life in the increase at the same time reduces the frequency of adding tool mending.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
								◎					◎	◎



单位 UNIT=MM

Product Code	Type	螺距P	刃径d1	刃长L1	柄径D	总长L	刃数F
ISO C0.7 3.150840650 X	M4.0	0.7	3.15	8.4	6.0	50	4
ISO C0.8 4.01040650 X	M5.0	0.8	4.0	10.4			
ISO C1.0 4.81200660 X	M6.0	1.0	4.8	12		60	
ISO C1.25 6.01630860 X	M8.0	1.25	6.0	16.3	8.0		
ISO C1.5 8.02100860 X	M10	1.5	8.0	21			
ISO C1.75 102451075 X	M12	1.75	10	24.5	10	75	
ISO C2.0 11.62801275 X	M14	2.0	11.6	28	12		
ISO C2.0 1332014100 X	M16	2.0	13	32	14	100	5
ISO C2.5 1640016100 X	M20	2.5	16	40	16		

GREWIN TOOLS

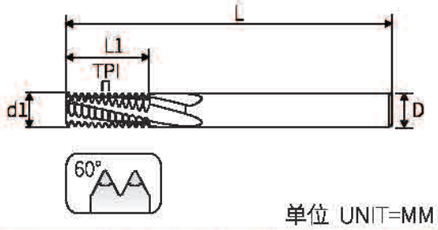
Tungsten Carbide Full Thread Milling Cutter-Coating for Steel

特 征 Features

- Suitable for high-volume production of the same specification, thread specifications, easy to use, 2 times the depth of the diameter of the workpiece, high processing efficiency.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
◎	◎	◎	◎				◎	◎	○	○			○	◎



单位 UNIT=MM

Product Code	粗牙 UNC	细牙 UNF	特细牙 UNEF	牙距 TPI	刃径 d1	刃长 L1	柄径 D	全长 L	刃数 F
UNF F32 3.9100450 D		10-32		32	3.9	10	4.0	50	4
UNEF F32 6.8180860 D			5/16-32 3/8-32	32	6.8	18	8.0	60	
UNF F28 5.3120660 D		1/4-28	7/16-28 1/2-28	28	5.3	12	6.0		
UNF F24 6.5180860 D		5/16-24	9/16-24 5/8-24	24	6.5	18	8.0		
UNEF F24 10241075 D			9/16-24 5/8-24	24	10	24	10	75	
UNC F20 4.85120660 D	1/4-20	7/16-20 1/2-20	3/4-20 7/8-20 1"-20	20	4.85	12	6.0	60	
UNF F20 9.5241075 D		7/16-20 1/2-20	3/4-20 7/8-20 1"-20	20	9.5	24	10	75	
UNC F18 6.4180860 D	5/16-18	9/16-18 5/8-18		18	6.4	18	8.0	60	
UNF F18 10241075 D		9/16-18 5/8-18		18	10	24	10	75	
UNC F16 7.8210860 D	3/8-16	3/4-16		16	7.8	20	8.0	60	
UNF F16 12281275 D		3/4-16		16	12	28	12	75	
UNC F14 8.8241075 D	7/16-14	7/8-14		14	8.8	24	10		
UNC F13 10241075 D	1/2-13			13	10	24	10		
UNC F12 12281275 D	9/16-12	1"-12 1"-1/8-12 1"-1/4-12 1"-1/2-12 1"-3/8-12		12	12	28	12		
UNC F11 12281275 D	5/8-11			11	12	28	12		
UNC F10 163816100 D	3/4-10			10	16	38	16	100	
UNC F9 163816100 D	7/8-9			9	16	38	16		
UNC F8 164216100 D	1"-8			8	16	42	16		

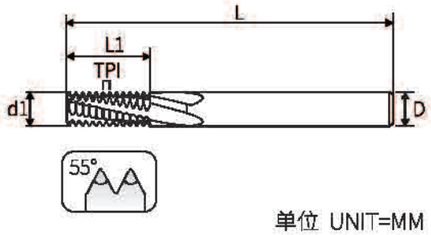
Tungsten Steel Full Thread Fractional Straight Pipe Thread Milling Cutter-BSP(G)

特 征 Features

▶ Tungsten Steel Full Thread Fractional Straight Pipe Thread Milling Cutter-BSP(G)

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢	合金钢	预硬钢	淬火钢 Hardened Steel				铸铁	不锈钢	铝合金	铜合金	塑胶	亚克力	高温合金	钛合金
Carbon Steel	Alloy Steel	Prehardened Steel	~48HRC	~55HRC	~60HRC	~65HRC	Cast Iron	Stainless Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Ti alloy
◎	◎	◎	◎				◎	◎	○	○			○	◎



单位 UNIT=MM

Product Code	Type	螺距TPI	刃径d1	刃长 L1	柄径D	总长L	刃数F
BSP F28 6.0140660 D	1/16	28	6.0	14	6.0	60	4
BSP F28 8.0140860 D	1/8	28	8.0	14	8.0		
BSP F28 8.0200860 D	1/8	28	8.0	20			
BSP F19 8.0180860 D	1/4	19	8.0	18			
BSP F19 10201075 D	1/4	19	10	20	10	75	
BSP F19 10241075 D	1/4	19	10	24			
BSP F19 12251275 D	3/8	19	12	25	12		
BSP F19 12281275 D	3/8	19	12	28			
BSP F14 12201275 D	1/2	14	12	20			
BSP F14 12281275 D	1/2	14	12	28			
BSP F14 163016100 D	3/4	14	16	30	16	100	
BSP F11 163216100 D	1"	11	16	32			
BSP F11 163816100 D	1"	11	16	38			
BSP F11 204220100 D	1"	11	20	42	20		5

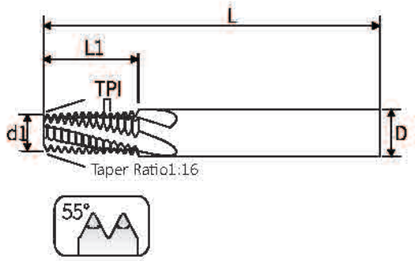
Tungsten Carbide Full Thread Fractional Taper Pipe Thread Milling Cutter-BSPT(Rc)

特 征 Features

▶ BSPT (RC) Taper Pipe Thread- Excellent Performance & High Efficiency for Aluminum Alloy, Stainless Steel, and Titanium Alloy Machining

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢	合金钢	预硬钢	淬火钢 Hardened Steel				铸铁	不锈钢	铝合金	铜合金	塑胶	亚克力	高温合金	钛合金
Carbon Steel	Alloy Steel	Prehardened Steel	~48HRC	~55HRC	~60HRC	~65HRC	Cast Iron	Stainless Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Ti alloy
◎	◎	◎	◎				◎	◎	○	○			○	◎



单位 UNIT=MM

Product Code	Type	螺距TPI	刃径d1	刃长 L1	柄径D	总长L	刃数F
BSPT F28 5.3990660 D	1/16	28	5.3	9.9	6.0	60	4
BSPT F28 7.3990860 D	1/8	28	7.3	9.9	8.0		
BSPT F28 6.75200860 D	1/8	28	6.75	20			
BSPT F19 7.0140860 D	1/4	19	7.0	14			
BSPT F19 9.0151075 D	1/4	19	9.0	15	10	75	
BSPT F19 8.5241075 D	1/4	19	8.5	24			
BSPT F19 11141275 D	3/8	19	11	14	12		
BSPT F19 10.25281275 D	3/8	19	10.25	28			
BSPT F14 10191275 D	1/2	14	10.8	19			
BSPT F14 10.2281275 D	1/2	14	10.2	28			
BSPT F14 14.62116100 D	3/4	14	14.6	21	16	100	
BSPT F11 14.32716100 D	1"	11	14.3	27			
BSPT F11 17.384220100 D	1"	11	17.38	42	20		5

GREWIN TOOLS

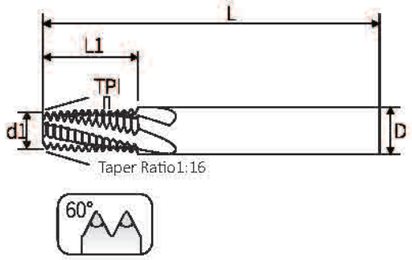
Tungsten Steel Full Thread American Taper Pipe Thread Milling Cutter

特 征 Features

▶ NPT general sealing thread, NPTF dry sealing thread, processing materials: stainless steel, titanium alloy is very effective and efficient.

◎=最佳 Best ○=适合 Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
◎	◎	◎	◎				◎	◎	○	○			○	◎



单位 UNIT=MM

NPT-60°美制锥度管螺纹 NPT-60° America Standard Taper Pipe Threads

Product Code	Type	螺距TPI	刃径d1	刃长 L1	柄径D	总长L	刃数F
NPT F27 5.4940660 D	1/16	27	5.4	9.4	6.0	60	4
NPT F27 7.4940860 D	1/8	27	7.4	9.4	8.0		
NPT F18 7.11410860 D	1/4	18	7.1	14.1			
NPT F18 9.11411075 D	1/4	18	9.1	14.1	10	75	
NPT F18 11.11411275 D	3/8	18	11.1	14.1	12		
NPT F14 10.81811275 D	1/2	14	10.8	18.1			
NPT F14 14.818116100 D	3/4	14	14.8	18.1	16	100	
NPT F11.5 14.62216100 D	1"	11.5	14.6	22			
NPT F11.5 17.384220100 D	1"	11.5	17.38	42	20		5

NPTF-60°美制锥度密封管螺纹 NPTF-60° American National Standard Taper Pipe Thread for Sealing

Product Code	Type	螺距TPI	刃径d1	刃长 L1	柄径D	总长L	刃数F
NPTF F27 5.4940660 D	1/16	27	5.4	9.4	6.0	60	4
NPTF F27 7.4940860 D	1/8	27	7.4	9.4	8.0		
NPTF F18 7.11410860 D	1/4	18	7.1	14.1			
NPTF F18 9.11411075 D	1/4	18	9.1	14.1	10	75	
NPTF F18 11.11411275 D	3/8	18	11.1	14.1	12		
NPTF F14 10.81811275 D	1/2	14	10.8	18.1			
NPTF F14 14.818116100 D	3/4	14	14.8	18.1	16	100	
NPTF F11.5 14.62216100 D	1"	11.5	14.6	22			
NPTF F11.5 17.384220100 D	1"	11.5	17.38	42	20		5

GREWIN TOOLS

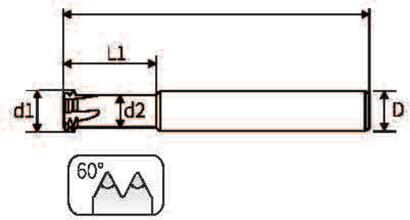
Tungsten steel two rows of teeth superhard left-hand thread milling cutter-Balzers coating

特 征 Features

▶ The first row of short teeth is used for initial machining, the second row of teeth finishing to complete the thread. Tool left design, the spindle needs to be reversed left left cut to reduce the let knife to increase the cutting strength. Suitable for machining hardened steel above 48HRC, mold steel and other high hard materials.

◎=最佳 Best ○=适合 Good

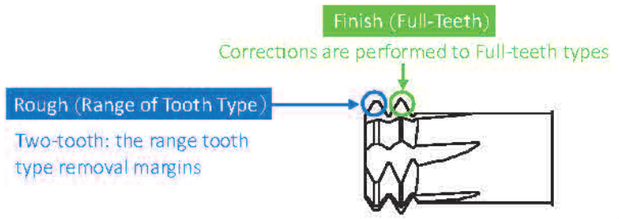
P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
			◎	◎	◎									



单位 UNIT=MM

Product Code	Type	螺距P	刃径d1	避空直径d2	避空长 L1	柄径D	总长L	刃数F
ISO H0.35 1.20320650 H	M1.6	0.35	1.2	0.78	3.2	6.0	50	3
ISO H0.4 1.550400650 H	M2.0	0.4	1.55	1.05	4.0			4
ISO H0.45 2.00500650 H	M2.5	0.45	2.0	1.45	5.0			
ISO H0.5 2.40600650 H	M3.0	0.5	2.4	1.8	6.0			
ISO H0.7 3.150800650 H	M4.0	0.7	3.15	2.3	8.0			
ISO H0.8 4.05100650 H	M5.0	0.8	4.05	3.05	10			
ISO H1.0 4.8120650 H	M6.0	1.0	4.8	3.6	12			5
ISO H1.25 6.5160860 H	M8.0	1.25	6.5	5.0	16	8.0	60	6
ISO H1.5 8.2201075 H	M10	1.5	8.2	6.4	20	10	75	
ISO H1.75 9.6241075 H	M12	1.75	9.6	7.5	24			

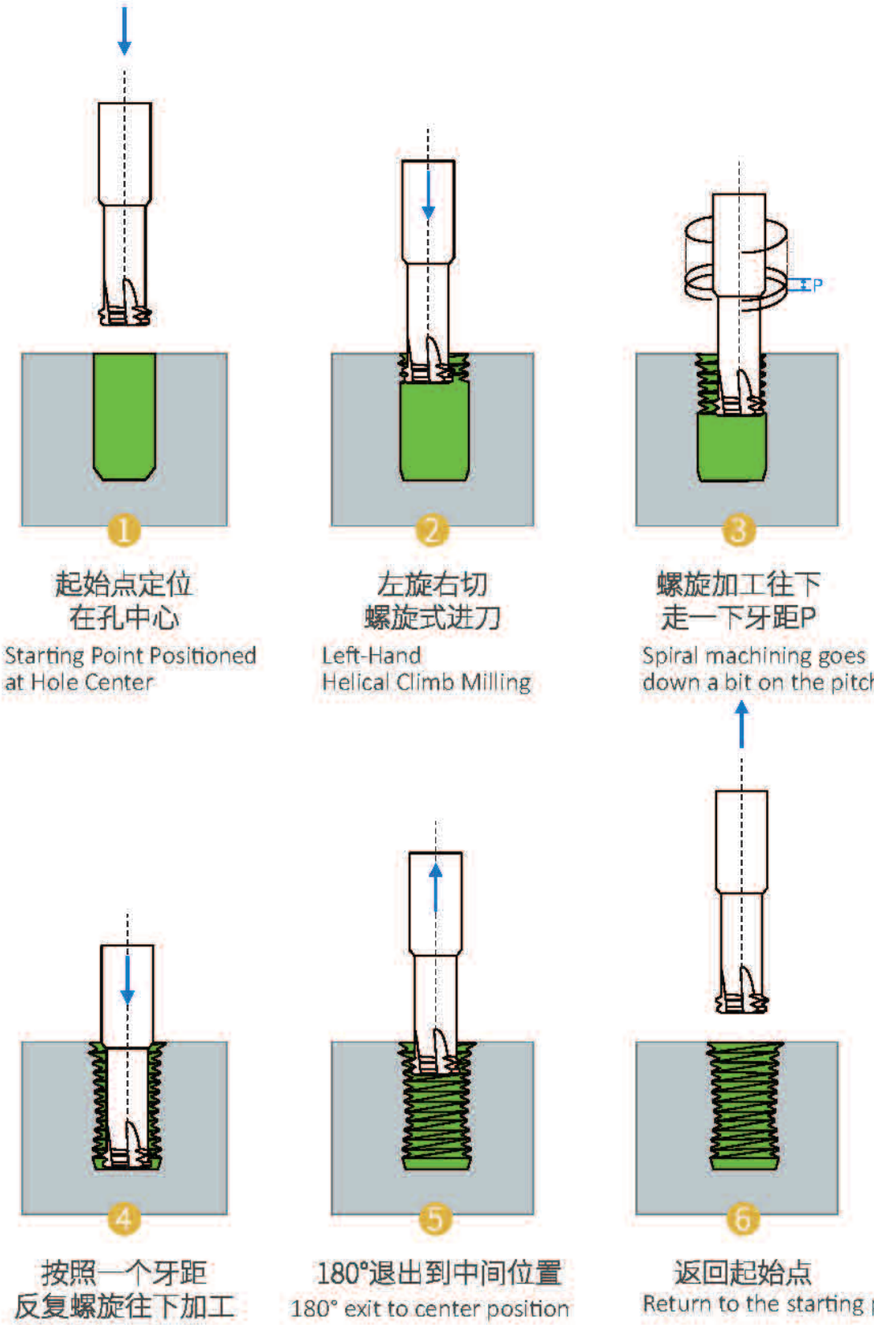
Working Principle of Metric Super-Hard Double-Row Thread Milling Cutter



Machining direction from the top to the bottom of the thread
(Spindle needs to be reversed) M04 code

GREWIN TOOLS

Tungsten carbide two rows of teeth superhard left-hand thread milling cutter machining process



起始点定位
在孔中心
Starting Point Positioned at Hole Center

左旋右切
螺旋式进刀
Left-Hand Helical Climb Milling

螺旋加工往下
走一下牙距P
Spiral machining goes down a bit on the pitch P

按照一个牙距
反复螺旋往下加工
Repeatedly spiraling down in one pitch

180°退出到中间位置
180° exit to center position

返回起始点
Return to the starting point

GREWIN TOOLS

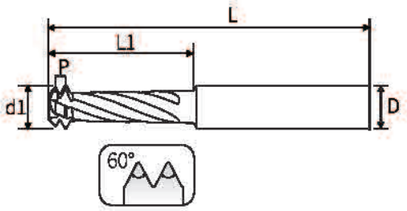
Tungsten carbide thread milling cutter with no-punched hole-DLC aluminum coating

特 征 Features

▶ No need to pre-drill, thread milling cutter with no-punched hole can complete the bottom hole, thread and chamfer milling processing in one go with the colorful DLC coating, in the processing of copper and aluminum alloys and other non-ferrous metals greatly improve efficiency, subvert the traditional processing.

◎=最佳 Best ○=适合Good

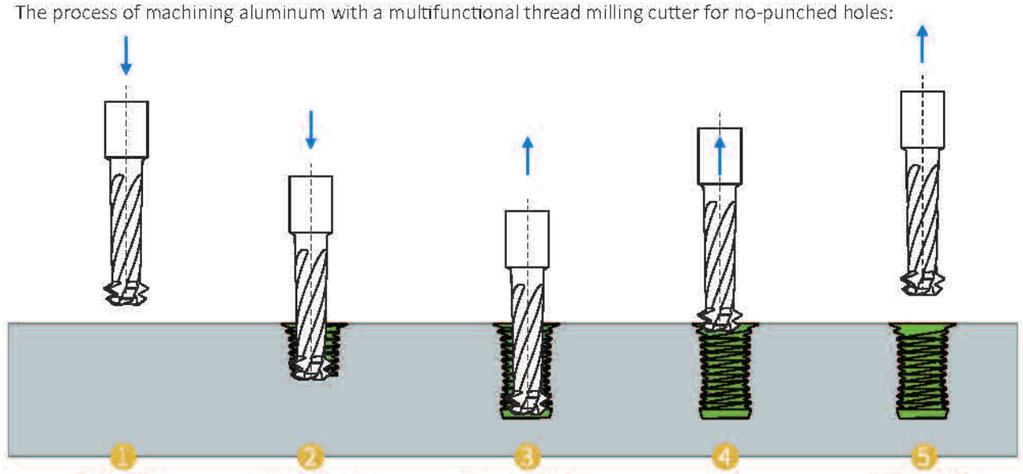
P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainlee Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
									◎	◎	◎	◎		



单位 UNIT=MM

Procuct Code	Type	螺距P	刃径d1	有效长 L1	柄径D	总长L	刃数F
ISO M0.35 1.150500450 DLC	M1.6	0.35	1.15	5.0	4.0	50	2
ISO M0.4 1.50650450 DLC	M2.0	0.4	1.5	6.5			
ISO M0.45 1.90700450 DLC	M2.5	0.45	1.9	7.0			
ISO M0.5 2.40900650 DLC	M3.0	0.5	2.4	9.0	6.0		3
ISO M0.7 3.2110650 DLC	M4.0	0.7	3.2	11			
ISO M0.8 3.9120650 DLC	M5.0	0.8	3.9	12			
ISO M1.0 4.7140650 DLC	M6.0	1.0	4.7	14			
ISO M1.25 6.5180860 DLC	M8.0	1.25	6.5	18	8.0	60	4
ISO M1.5 7.8230860 DLC	M10	1.5	7.8	23			
ISO M1.75 9.6261075 DLC	M12	1.75	9.6	26	10	75	

The process of machining aluminum with a multifunctional thread milling cutter for no-punched holes:



1 移动至螺旋起始点
Move to the starting point of the spiral

2 螺旋插补加工底孔及螺纹
Spiral interpolation for machining bottom holes and thread

3 螺纹加工完成后移至孔中心再退刀
After completing the thread machining, move it to the center of the hole and then retract the tool

4 倒角 Chamfer

5 返回起始点
Return to the starting point

GREWIN TOOLS

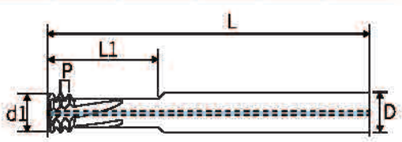
No-punch thread milling cutters for steel - Coated for steel

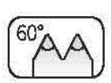
特 征 Features

▶ No need to pre-drill, thread milling cutter with no-punched hole can complete the bottom hole, thread and chamfer milling processing in one go with the colorful DLC coating, in the processing of copper and aluminum alloys and other non-ferrous metals greatly improve efficiency, subvert the traditional processing.

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
◎	◎	◎						○						

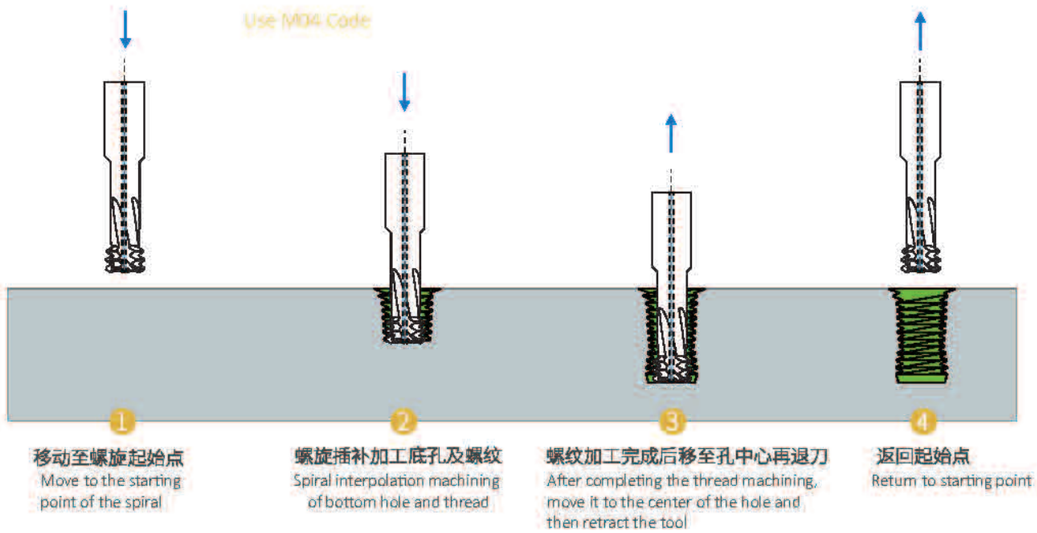




单位 UNIT=MM

Product Code	Type	螺距P	刃径d1	避空长L1	柄径D	总长L	刃数F	内冷/外冷
ISO M0.5 2.40700650 A	M3.0	0.5	2.4	9.0	6.0	50	4	外冷
ISO M0.7 3.20900650 A	M4.0	0.7	3.2	11				
ISO M0.8 3.9120650 A	M5.0	0.8	3.9	12				
ISO M1.0 4.7140650 A	M6.0	1.0	4.7	14				
ISO M1.25 6.2180860 A	M8.0	1.25	6.2	18	8.0	60		内冷
ISO M1.5 7.5230860 A	M10	1.5	7.5	23				
ISO M1.75 9.0261075 A	M12	1.75	9.0	26	10	75		

The process of machining aluminum with a multifunctional thread milling cutter for no-punched holes:



GREWIN TOOLS

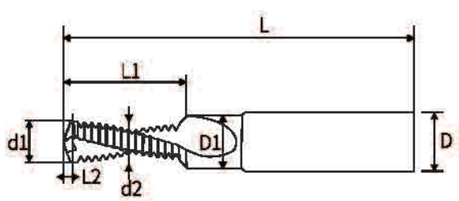
Tungsten steel three-in-one drilling and milling thread milling cutter-coated for steel

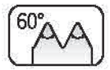
特 征 Features

▶ Suitable for high-volume production of the same specification, the three in one drilling and milling thread end mill can achieve bottom hole machining, chamfering and internal thread machining without changing the tool, reducing non machining time and improving production efficiency. Suitable for non-ferrous metals, copper alloy and aluminum alloy processing

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
							◎		○	○				

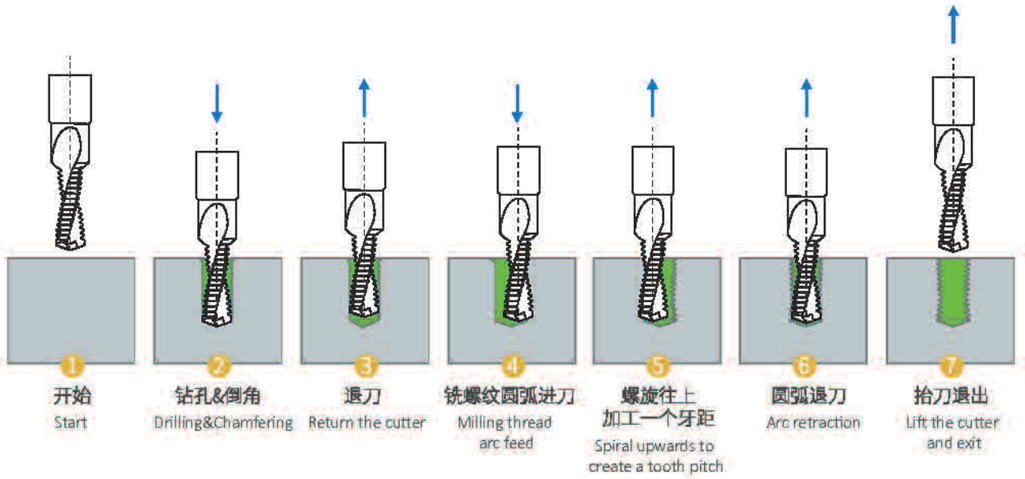




单位 UNIT=MM

Product Code	Type	螺纹外径d2	钻头径d1	刃长L1	钻头长L2	颈径D1	柄径D	总长L	刃数F
ISO DR1.0 5.0120860 A	M6*1.0	4.8	5.0	12	1.0	7.0	8.0	60	2
ISO DR1.25 6.0151075 A	M8*1.25	6.5	6.8	15	1.3	9.0	10	75	
ISO DR1.5 8.5201275 A	M10*1.5	8.2	8.5	20	1.5	11	12		
ISO DR1.75 10.32414100 A	M12*1.75	9.9	10.3	24	1.8	13.5	14		

Three in one drilling and milling thread end mill machining process:



GREWIN TOOLS

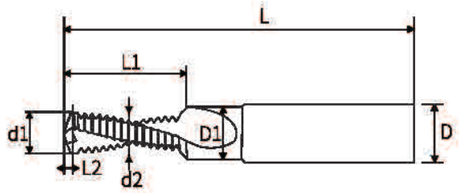
Tungsten carbide three in one drilling and milling thread end mill - DLC coating

特 征 Features

- Suitable for high-volume production of the same specification, the three in one drilling and milling thread end mill can achieve bottom hole machining, chamfering and internal thread machining without changing the tool, reducing non machining time and improving production efficiency. Suitable for non-ferrous metals, copper alloy and aluminum alloy processing

◎=最佳 Best ○=适合Good

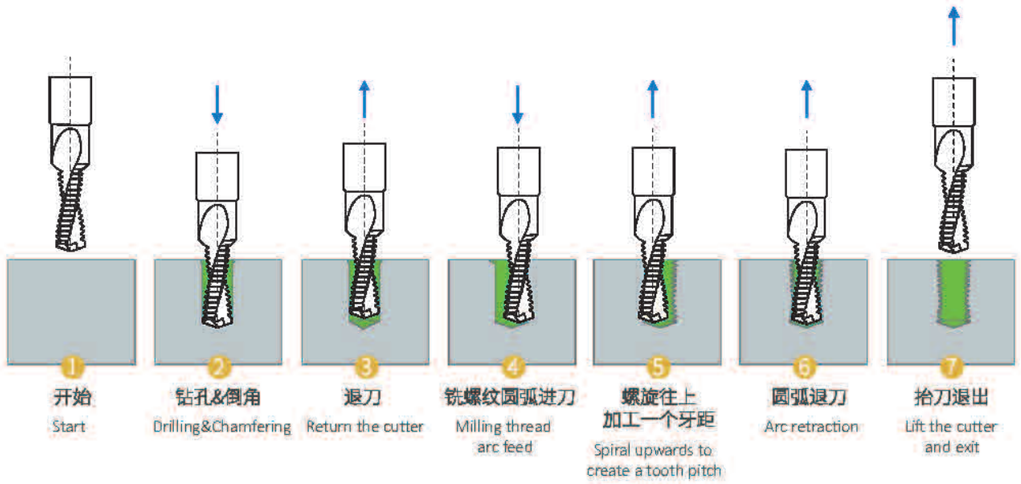
P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
							○		◎	◎				



单位 UNIT=MM

Product Code	Type	螺纹外径d2	钻头径d1	刃长L1	钻头长L2	颈径D1	柄径D	总长L	刃数F
ISO DR1.0 5.0120860 DLC	M6*1.0	4.8	5.0	12	1.0	7.0	8.0	60	2
ISO DR1.25 6.0151075 DLC	M8*1.25	6.5	6.8	15	1.3	9.0	10	75	
ISO DR1.5 8.5201275 DLC	M10*1.5	8.2	8.5	20	1.5	11	12		
ISO DR1.75 10.32414100 DLC	M12*1.75	9.9	10.3	24	1.8	13.5	14		

Three in one drilling and milling thread end mill machining process:



GREWIN TOOLS

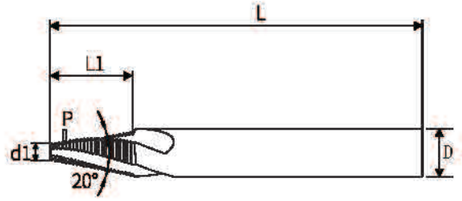
Tungsten carbide taper medical bone plate thread end mill

特 征 Features

- Specially designed thread end mill for titanium alloy bone plate material, with high polishing surface, smooth cutting, stable size, and durable wear resistance. The unique tapered spiral flute makes the tool more durable

◎=最佳 Best ○=适合Good

P			H				K	M	N				S	
碳素钢 Carbon Steel	合金钢 Alloy Steel	预硬钢 Prehardened Steel	淬火钢 Hardened Steel ~48HRC	~55HRC	~60HRC	~65HRC	铸铁 Cast Iron	不锈钢 Stainless Steels	铝合金 Aluminium Alloys	铜合金 Copper Alloys	塑胶 Plastic Cement	亚克力 Acrylic	高温合金 Superalloy	钛合金 Ti alloy
														◎



公制60度锥度螺纹铣刀 Metric 60° taper thread end mill

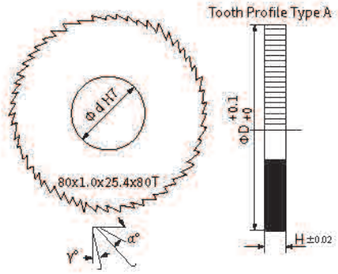
单位 UNIT=MM

Product Code	牙距P	牙型角	刃径d1	角度°	刃长L1	柄径D	总长L
ISO TA0.3 1.9060660 A	0.3	60°	1.9	20°	6.0	6.0	60
ISO TA0.4 2.3100660 A	0.4		2.3		10		
ISO TA0.5 2.9090660 A	0.5		2.9		9.0		
ISO TA0.6 3.0140860 A	0.6		3.0		14	8.0	

英制55度锥度螺纹铣刀 British 55° taper thread end mill

Product Code	牙距P	牙型角	刃径d1	角度°	刃长L1	柄径D	总长L
W TA0.3 1.9060660 A	0.3	55°	1.9	20°	6.0	6.0	60
W TA0.4 2.3100660 A	0.4		2.3		10		
W TA0.5 2.9090660 A	0.5		2.9		9.0		
W TA0.6 3.0140860 A	0.6		3.0		14	8.0	

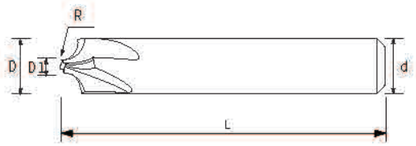
Tungsten Carbide Saw Blade End Mill



产品编号 Item Code	外径 (D)	厚度 (H)	内径 (d H7)	齿数 (Z)
	8	0.15~4.0	3/4	4~20
	10	0.15~4.0	4/5	6~24
	12	0.15~4.0	4/5/6	6~30
	16	0.15~4.0	5/6/8	6~40
	20	0.15~4.0	5/6/8	6~45
	25	0.2~5.0	6/8/10	10~56
	30	0.2~5.0	6/8/10	10~60
	35	0.2~6.0	8/10/12.7	10~60
	40	0.2~6.0	8/10/12.7	10~80
	45	0.2~8.0	10/12.7/16	10~80
	50	0.2~8.0	10/12.7/16	10~100
	55	0.2~8.0	12.7/16	24~120
	60	0.2~8.0	12.7/13/16	24~120
	63	0.2~8.0	12.7/13/16	24~120
	70	0.3~8.0	16/22/25.4	28~120
	75	0.5~8.0	16/22/25.4	30~120

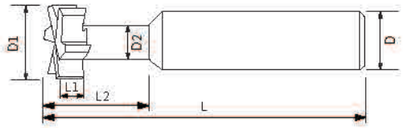
产品编号 Item Code	外径 (D)	厚度 (H)	内径 (d H7)	齿数 (Z)
	80	0.5~8.0	22/25.4	30~128
	85	0.5~8.0	22/25.4	30~128
	90	0.5~8.0	22/25.4	30~160
	95	0.5~8.0	22/25.4	30~160
	100	0.5~8.0	22/25.4/27	30~160
	105	0.8~0.8	22/25.4/27	30~160
	110	0.8~0.8	22/25.4/27/32	30~180
	115	0.8~0.8	22/25.4/27/32	30~180
	120	1.0~10.0	22/25.4/27/32	30~240
	125	1.0~10.0	22/25.4/27	30~240
	130	1.0~10.0	22/25.4/27/32	30~240
	150	1.0~10.0	22/25.4/27/32	40~240
	160	1.0~10.0	22/25.4/27/32	40~240
	180	1.5~12	25.4/27/32/40	60~280
	200	1.5~12	25.4/27/32/40	60~280

Internal R End Mill



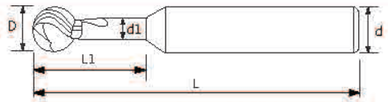
产品编号 Item Code	R 角 (R)	炳径 (d)	先端径 (D1)	外径 (D)	全长 (L)	刃数 (Z)
NR-R0500450	0.50	4	1.5	2.7	50	4
NR-R0750450	0.75	4	1.5	3.2	50	4
NR-R1000450	1.00	4	1.5	3.7	50	4
NR-R1250650	1.25	6	1.5	4.2	50	4
NR-R1500650	1.50	6	1.5	4.7	50	4
NR-R1750650	1.75	6	1.5	5.2	50	4
NR-R2000650	2.00	6	1.5	5.7	50	4
NR-R2500850	2.50	8	1.5	6.7	50	4
NR-R3000850	3.00	8	1.5	7.7	50	4
NR-R4001260	4.00	12	2.0	10.2	60	4
NR-R5001675	5.00	16	3.0	13.2	75	4
NR-R6001675	6.00	16	3.0	15.2	75	4

T-slot End Mill



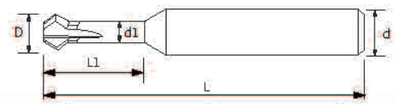
产品编号 Item Code	刃径 (D1)	刃厚 (L1)	颈径 (D2)	槽长 (L2)	炳径 (D)	全长 (L)
TX-0300450-0.5/1/1.5/2	3	0.5/1/1.5/2	1.5	4	4	50
TX-0400450-0.5/1/1.5/2	4	0.5/1/1.5/2	2	6	4	50
TX-0600650-0.5/1/1.5/2/3	6	0.5/1/1.5/2/3	3	10	6	50
TX-0800860-0.5/1/1.5/2/3	8	0.5/1/1.5/2/3	4	12	8	60
TX-1001060-1/1.5/2/3/4/5	10	1/1.5/2/3/4/5	5	15	10	60
TX-1201260-1/1.5/2/3/4/5	12	1/1.5/2/3/4/5	6	15	12	60
TX-1401475-1/1.5/2/3/4/5	14	1/1.5/2/3/4/5	7	20	14	75
TX-1601675-1/1.5/2/3/4/5	16	1/1.5/2/3/4/5	8	20	16	75
TX-2002075-2/3/4/5/6/7/8	20	2/3/4/5/6/7/8	10	25	20	75

Lollipop End Mill



产品编号 Item Code	R 角 (R)	有效长 (L1)	颈径 (D2)	炳径 (d)	全长 (L)	刃数 (Z)
BBT-R0050450	R0.5	2	0.5	4	50	2
BBT-R00750450	R0.75	3	0.8	4	50	2
BBT-R0100450	R1	4	1.0	4	50	2
BBT-R01250450	R1.25	4	1.3	4	50	2
BBT-R0150450	R1.5	6	1.5	4	50	2
BBT-R0200450	R2	8	2.0	4	50	2
BBT-R0250650	R2.5	10	2.5	6	50	2
BBT-R0300650	R3	10	3.0	6	50	2
BBT-R0400860	R4	12	4.0	8	60	2
BBT-R0501060	R5	15	5	10	60	2
BBT-R0601260	R6	15	6	12	60	2
BBT-R0701460	R7	25	7	14	75	3
BBT-R0801660	R8	25	8	16	75	3
BBT-R0901860	R9	25	9	18	75	3
BBT-R1002060	R10	25	10	20	75	3

Up and Down Chamfering End Mill



产品编号 Item Code	刃径 (D)	角度 (Angle)	有效长 (L1)	颈径 (d1)	炳径 (d)	全长 (L)
SXD-0400450-60°90°120°	4	60°90°120°	8	2	4	50
SXD-0600650-60°90°120°	6	60°90°120°	10	3	6	50
SXD-0800860-60°90°120°	8	60°90°120°	10	4	8	60
SXD-1001060-60°90°120°	10	60°90°120°	15	5	10	60
SXD-1201260-60°90°120°	12	60°90°120°	15	6	12	60
SXD-1401475-60°90°120°	14	60°90°120°	20	7	14	75
SXD-1601675-60°90°120°	16	60°90°120°	20	8	16	75

GREWIN TOOLS

航空、航天

领域专用刀具

Special tools for aviation and aerospace

可定制非标尺寸
Non-standard size can be customized

Professional Tool Manufacturer
专业刀具制造商

格威工具通过不断的产品研发，完善及发展航空刀具体系，产品涵盖车、铣、钻、整体刀具、工具系统及非标专用刀具等。

Through continuous product research and development, Grewin Tools has per-fected and developed the aviation tool system. Its products cover turning, mill.ing, driling, integral tools, tool systems and non-standard special tools.

可定制非标尺寸
Non-standard size can be customized

GREWIN TOOLS

Professional Tool Manufacturer
专业刀具制造商

复合材料

领域专用刀具

Special tools for Composite material

目前复合材料在许多工程应用中的使用有了迅速增长，如航空、汽车、发电、体育等领域。

格威工具开发了广泛而创新的复合材料切割工具系列。独特的大批量生产和应用，研发中心为我们的客户提供真正的优势产品。

At present, the use of composite materials in many engineer-ing applica-tions has grown rapidly, such as aviation, automo-biles, power genera-tion, sports and other fields. Grewin Tools has developed a broad and in-novative series ofcutting tools for composite materials. With unique mass pro-duction and application, the R&D center provides our cus-tom-ers with real superior products.

可定制非标尺寸
Non-standard size can be customized

可定制非标尺寸
Non-standard size can be cust

GREWIN TOOLS

Professional Tool Manufacturer
专业刀具制造商

格威工具致力于汽车零部件领域专用刀具的研发，为客户提供优质、高效、精密的刀具产品解决方案。在发动机缸体缸盖、离合器、变速箱、转向节壳体、ABS阀体、刹车卡钳支架、车内空调的缸体后盖和活塞等方面我们都能提供成熟可靠的加工方案。

Grewin Tools is committed to the research and development of special tools in the field of auto parts and providescustomers with high-quality, eficient and precise tool product solutions. We can provide mature and reliable process-ing solutions for engine cylinder heads, clutches, gearboxes, steering knuckle housings, ABS valve bodies, brake caliper brackets, cylinder back covers and pistons for in-vehicle air conditioners.

可定制非标尺寸
Non-standard size can be customized

汽车零部件

领域专用刀具

Special tools for car parts

可定制非标尺寸
Non-standard size can be customized

PCD

刀具系列
PCD tool series

可定制非标尺寸
Non-standard size can be customized

采用PCD超硬刀具加工铝合金时，由于金刚石硬度高，表面与金属亲和力小，且刀具前刀面都抛光成镜面，不易产生积屑瘤，加工尺寸稳定性以及表面质量都很好。采用PCD超硬刀具加工各种规格铝合金零件，刀具寿命可达几千到几万件，尤其适合汽车、摩托车零件的大规模生产。PCD超硬刀具还广泛用于其它有色金属和非金属材料的高速加工，被广泛应用于汽车、航空航天、电子和木材加工等领域。

可定制非标尺寸
Non-standard size can be customized

When using PCD superhard tools to process aluminum alloy, due to the high hardness of diamond, the surface has low affinity with metal, and the rake face of the tool is polished to a mirror surface, it is not easy to produce built-up edge, and the processing dimensional stability and surface quality are very good. Using PCD super-hard tools to process various specifications of aluminum alloy parts, the tool life can reach thousands to tens of thousands of pieces, especially suitable for mass production of automobile and motorcycle parts. PCD super-hard tools are also widely used in high-speed processing of other non-ferrous and non-metallic materials, and are widely used in automotive, aerospace, electronics and wood processing fields.

GREWIN TOOLS

机械制造

领域专用刀具

Special tools for Machine made

Professional Tool Manufacturer

专业刀具制造商

由于刀具材料、刀具结构以及涂层技术等领域的长足进步，数控刀具获得了突飞猛进的发展。高速切削、干式切削等一些高校环保的数控切削技术被越来越广泛地应用在机械制造领域。

本公司通过研发团队的不断努力创新，所生产的数控刀具由于其高效率、高精度、高稳定性，已广泛应用于机械制造企业。

Due to the great progress in the fields of tool materials, tool structure and coating technology, CNC tools have developed by leaps and bounds. High-speed cutting, dry cutting, and other environmentally-friendly CNC cutting technologies in some colleges and universities are being more and more widely used in the field of machinery manufacturing.

Through the continuous efforts and innovation of the R&D team, the CNC tools produced by the company have been widely used in machinery manufacturing enterprises due to their high efficiency, high precision and high stability.

可定制非标尺寸

Non-standard size can be customized

可定制非标尺寸

Non-standard size can be customized