

Asia High Performance Catalogue
亚洲版高性能系列产品目录
2015



澳大利亚 • 神盾工具

suttontools
world class cutting tools

suttontools
world class cutting tools







suttontools

Made in Australia, exported to the world.

“ We have been manufacturing quality cutting tools in Australia since 1917 and the fact that we are manufacturing in Australia is becoming an important part of our message.

Director and third-generation family member Jim Sutton

”

Proud supporter of the Australian Made Campaign

Sutton Tools have invested in the Australia Made Green and Gold Jumping Kangaroo Logo as a symbol of quality.

The Jumping Kangaroo is one of the nation's strongest brands in the world, the trademark is widely recognised as the symbol for Australian products internationally, and is now used successfully by Australian exporters all around the world. The Logo is Australia's most widely used and best-known symbol, with 98% recognition domestically and rapid growth into international markets.

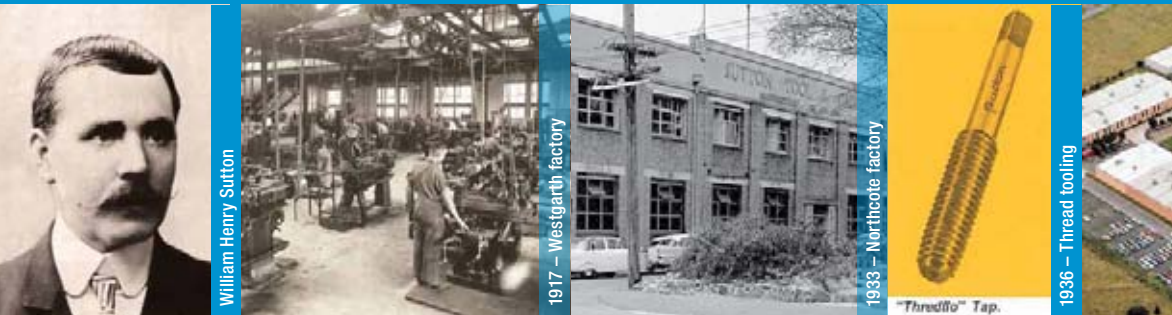
For a product to qualify to use the Jumping Kangaroo logo it must meet strict criteria in the production and manufacturing processes. To purchase Australian Made from Sutton Tools, you can be confident in:

- quality products
- affordable prices
- a globally competitive product

Sutton Tools Pty Ltd is registered with the Australian Made, Australian Campaign and is licensed to use the Australian Made Australian Jumping Kangaroo Logo.



1917 – the start to an iconic Australian family brand, manufacturing cutting tools for distribution throughout Australia...



William Henry Sutton arrived in Australia

William Henry Sutton, a British Immigrant, opened a tool room at Thompson's Foundry at Castlemaine. He was recognised as one of the leading tool engineers in England before his departure to Australia.

Business quadrupled

It soon became evident to local manufacturers' they could now buy domestically produced tools of equal or better quality than those from overseas! With the original factory 'bursting at the seams', Sutton Tool & Gauge moved to a 13,000 square foot factory in Northcote, Melbourne.

A broader market goal

Sutton Tool & Gauge first export was to New Zealand, a consignment of reamers.

1912

1917

1933

1936

1939

1940

Start to an iconic Australian family tradition

Nearing the end of World War 1 in 1917, after been seconded back to the UK to help with the war effort, W. Henry Sutton at the age of 54, established the Sutton Tool & Gauge Manufacturing Co. at Plant Street Westgarth, Victoria.

Thread production

Sutton Tool & Gauge commenced the manufacture of Thread Tooling, expanding its product portfolio.

The next generation

Both sons of W. Henry, Henry George Sutton and Leslie Sutton became managing directors of the business whilst William Henry at age 77 continued to take an active interest.

Our History. Our Tradition.



From left to right:

Bill Sutton, picture of William Henry Sutton,
Henry George Sutton, Jim Sutton, Leslie Sutton

Industry Legend

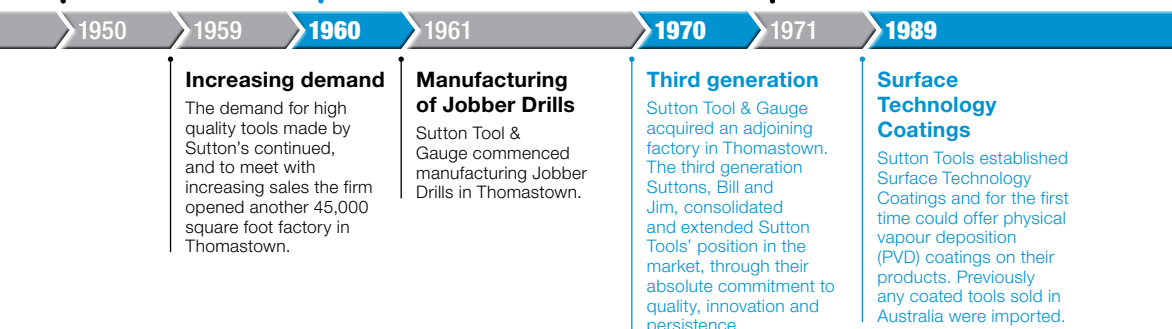
William Henry Sutton, born 1863 – died 1950, a highly regarded tool and gauge engineer prior to the founding business owner of Sutton Tool & Gauge. William was a pioneer of the Australian Engineering Industry.

Ground-from-Solid

A team of engineers were sent across the globe to investigate the best method of producing the finest drill in the world. They came back with the "Ground-from-Solid" process. All endmills, slot drills and taps up to ½" diameter were produced by this method. Sutton Tools purchased and installed specialised equipment and was considered to have one of the most modern facilities in the world.

Company name changed to Sutton Tools

With the expansion into a greater range of products the company officially changed its name from 'Sutton Tool & Gauge' to 'Sutton Tools'.



...of course, after a proud history spanning over 95 years it's always tempting to keep looking to the past. However, it is just as important, if not more so, to look to the future.



Achievement of ISO 9001 Accreditation

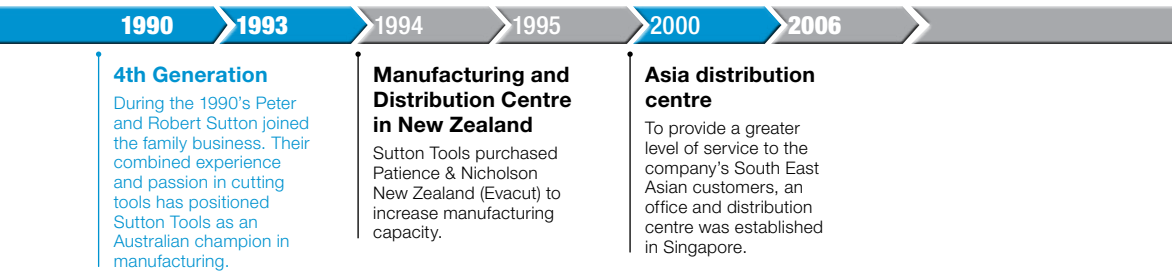
Sutton Tools achieved quality accreditation ISO 9001. The structure of controls and checks throughout the manufacturing process ensures that we continually manufacture products that will exceed customer expectations.

A global vision

Robert Sutton was appointed Sutton Tools first Export Manager. His vision leads to rapid expansion into the 'high performance' product category to compete in the global market.

Export Milestone

Sutton Tools sold the 5 millionth drill bit to Germany.





2008 – The Tech Centre

2009 – Australian Made License

2009 – Partnership with DMTC

2010 – Hall of Fame induction

Australian Made License

Sutton Tools becomes licensee of the Australian Made campaign, reaffirming our commitment to Australian Manufacturing.

Sutton Tools Europe

Sutton Tools Europe was established with an office and warehouse based in the Netherlands.

Victorian Manufacturing Hall of Fame

The Victorian Government, in partnership with the Victorian Industry Manufacturing Council, inducted Bill and Jim Sutton into the Victorian Manufacturing Hall of Fame Honour Roll for their outstanding contributions to manufacturing excellence.

2008

2008

2009

2009

2010

2012

2013

The Tech Centre

Facilities for specials and regrinding services were established to support the market in high performance cutting tools, with a specific focus on carbide.

Partnership with DMTC

Sutton Tools becomes a member of Defence Materials Technology Centre (DMTC) a collaborative venture between industry, universities and government research agencies. Sutton Tools invests in state-of-the-art equipment, bolstering its R&D capability to produce new advancements in cutting tools at the highest level.

USA Warehouse and Distribution Centre

Sutton Tools USA was established. With a Warehouse and Distribution Centre in North America, Sutton Tools can now be recognised as a global company providing world-class cutting tools.





Quality
ISO 9001



suttontools

Manufacturing without compromise.

“ Sutton Tools endeavours to minimise impacting factors that will reduce its carbon footprint and environmental impact. ”

Commitment to Quality

A well-managed structured system embracing all manufacturing processes from the floor up, driven with a continuous improvement policy ensures that our customers can be completely satisfied with the quality of our products. This includes all aspects of the purchasing process, with full traceability from the moment customers place the order to delivery.

Sutton Tools is a leader in the field of the conventional grinding and advanced super abrasive grinding. This Grinding Technology ensures that our cutting tools are of the highest accuracy and performance. Modern CNC machines give pick-and-place robot handling functions, that not only give repeatable quality operations but a safer work place environment.

The structure of controls and checks throughout the manufacturing process, backed by documented procedures and support personnel ensures that we continually manufacture products that will exceed customer expectations.



Research & Development.

“ Through formal cooperation with industry, leading Universities, research organisations and government, we continually seek technological advancements to better serve industry. ”

Today's metal working industry faces the relentless challenges of producing product faster, better and cheaper than before. Such challenges require innovative technology to world standards. Sutton Tools meets this challenge, through its commitment to research and development.

Sutton Tools R&D includes all aspects of manufacturing and development. We simulate actual production conditions to optimise tool design, and benchmark tool performance to exceed market standards.

Sutton Tools Engineering Department has state of the art technology in measuring and design equipment which has been critical in our continual development of machine tools.



Reliable Customer Service.

“ Sutton Tools has been successfully delivering quality cutting tools to customers since 1917. ”

We are here to help you

Stock requirements and needs can vary from customer to customer and Sutton Tools has implemented varied ordering systems to receive orders and seamlessly process them.

We combine the latest logistic technology (freight management systems) with personalised customer service to ensure that you get the products you order, when you need them on time, every time.

Our comprehensive customer service comprises:

- EDI and internet ordering
- Fully integrated ERP system
- Automatic delivery and order confirmation
- Quick backorder response

Sutton Tools Online Tool Shop

Sutton Tools e-Sales helps to increase service levels through real-time availability of information. Tool Shop will extend our customer service by offering online access to our products 24 hours a day, 7 days a week. Tool shop gives you the ability to:

- Check stock availability
- Place orders online
- Track the progress of your order
- Check your order History

To apply for a Tool Shop account please contact toolshop@sutton.com.au



Distribution and Logistics.

“ We have over 20,000 SKUs and our stock availability consistently averages in the high 90%. ”

Global Distribution Network

Our International Distribution Centre uses modern radio frequency scanning technology coupled with the latest carousel and stock replenishment systems which allows accurate stock control and efficient warehouse operation. We have over 20,000 SKUs and our stock availability consistently averages in the high 90%*s*. From a customer perspective, this provides confidence in breadth and depth of stock cover and reliable delivery service.

Our Distribution Centre comprises:

- Modern radio frequency scanning technology and latest carousel and stock replenishment systems
- Computerised dispatch system
- Warehousing over 20,000 SKUs
- Picking over 10,000 items daily
- Dispatch of over 1,000 consignments daily
- Order and dispatch within one hour turnaround
- Global Storage Area in excess of 5,000m²



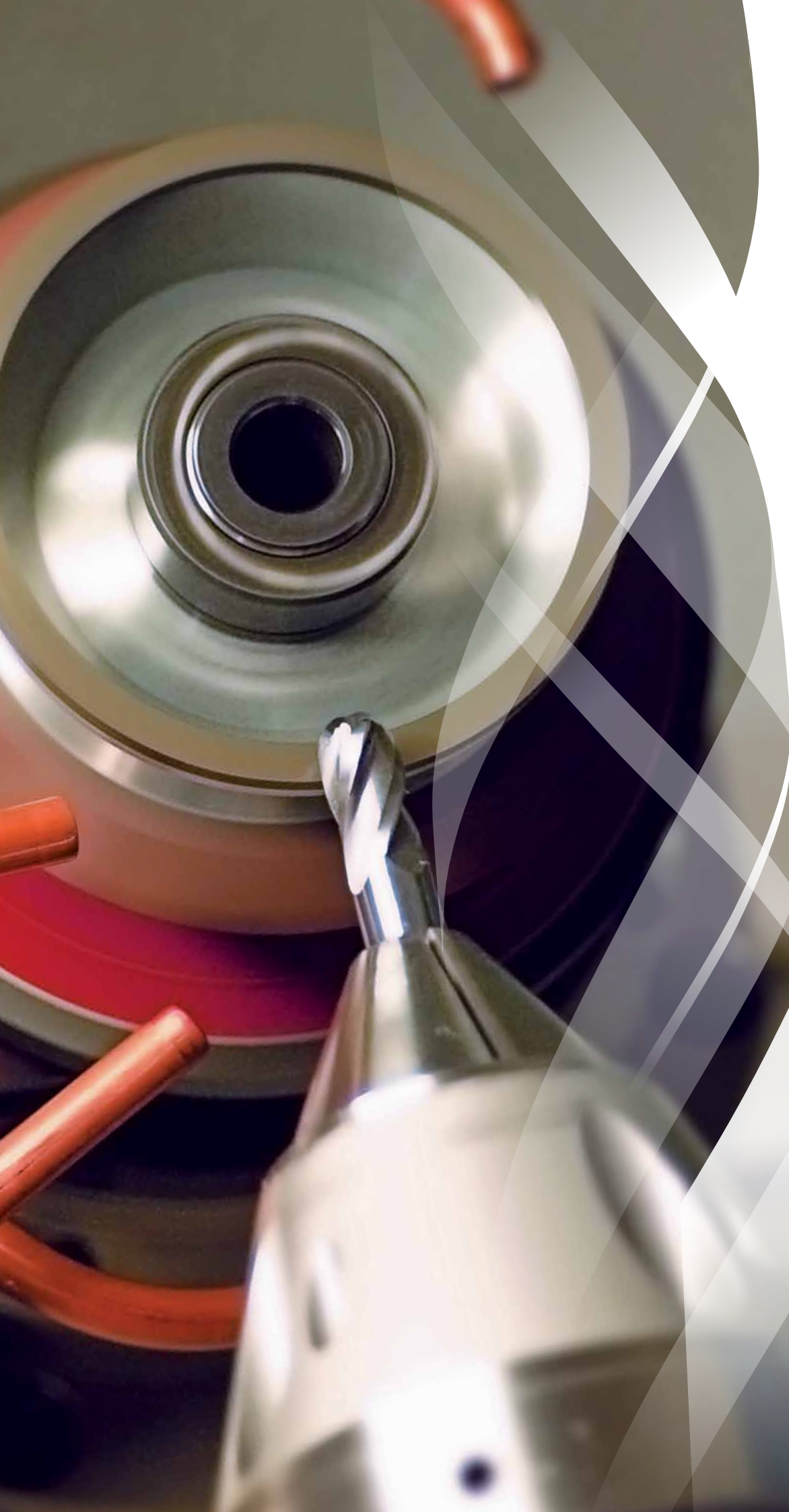
Meeting Your Exact Requirements.

Special Tools

Sutton Tools use state-of-art CNC tool grinding equipment, and manufacturing processes to produce specialised cutting tools, distribute to industries such as plumbing, electrical, automotive, aerospace, marine, transport, construction, surgical, manufacturing and agriculture.

We use only the very best European grades of materials including powder metallurgy, HSS cobalt and ultra-fine grain carbide. Materials are complimented by the latest generation of thin film PVD coatings, providing many advantages in tool life, component surface finishes and the ability for the tools to operate in low or minimum coolant environments, making them more environmentally friendly.

All tools are subject to stringent quality and performance checking and testing to ensure best results. Our customers can benefit from the advantages of our reliable cost effective world's-best practice manufacture, supply and support capabilities, now and well into the foreseeable future. Our Special Tools division offers express service on non-standard taps and other cutting tools.



One-Stop-Shop Regrinding and Coating.

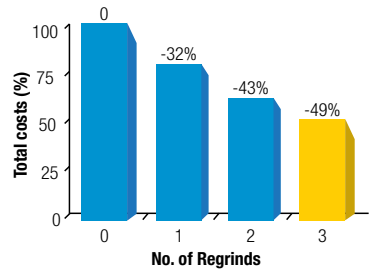
“ Australia's only company to provide regrinding, coating and heat treatment on the one site. ”

Regrinding Service

The regrinding service significantly reduces tooling costs over buying new tools. Our customers benefit from Sutton Tools advanced super abrasive grinding expertise providing high accuracy and quality. All tools are subject to stringent quality and performance checking and testing to ensure best results.

Cost benefits of regrinding your tools

Cost Reduction – New vs Reconditioning



Example: D332 10mm 5xD IK R30N Carbide Drill, AlCrN coated.

Surface Technology Coatings Service

Complementing our regrind facility, Surface Technology Coating (STC) provides a physical vapour deposition (PVD) coating service, and is at the forefront of heat treatment and surface engineering technology.

In addition to providing PVD coating, STC provides plasma nitriding and vacuum heat treatment for various tools and components. Our unique position enables us to provide tailored solutions to a wide range of friction and wear problems.



Sutton Tools Expert Tool Selector.

www.sutton.com.au/ETS/ExpertToolSelector

Advice at your fingertips

Sutton Tools web based Expert Tool Selector, enables easy tool selection for your machining task. The Expert Tool Selector will recommend the right tool for your application, with advice on everything from suitable coolant choices through to cutting parameters.

Our Expert Tool Selector provides easy step-by-step detailed information that includes:

- Workpiece material classification
- Workpiece material groups
- Tool recommendations
- Tool specifications
- Recommended cutting conditions
- Stock availability

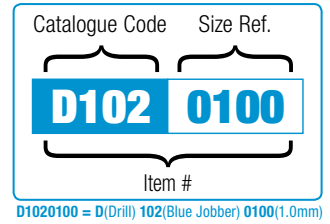


Sutton Tools Code System – explained

Sutton Tools item # system makes it easier to identify a product. The codes are based on a universal prefix & suffix system.

Prefix (Catalogue Code) – is alpha numeric, and is unique to a specific product range. The letter is relevant to the type of tool, and the number refers to a product range.

- C – Countersinks
- D – Drills
- E – Endmills
- L – Literature
- R – Reamers
- T – Taps
- Z – Tool Holders / Chucks



Suffix (Size Ref.) – in most cases is relevant to the diameter or size reference of an item, and is based on a metric value.

For example 5mm = 0500, & 1/4" = 0635 (inch converted to decimal).

Suffix can also refer to set code or number of pieces in a set.

Benefits of the coding system

- Range identification simplified.
- Search online 'Expert Tool Selector' by range.

Understanding your Sutton Tools Catalogue

Once you have selected the correct page from the index (page 3) further information will be given regarding the product you have selected on each page. What does it all mean?

Discount Group (A0202 – Z1108)

All Product groups have been given a discount group number. These codes enable our distributor partners to identify their discounts on any particular product.

Material

This highlights what the product is made of. (VHM = Carbide, HSS = High Speed Steel)

Surface Finish

Many of our products have various surface coatings to improve the performance. Surface coatings improve productivity by increasing speeds and feeds and reducing friction related problems.

Colour Ring & Application

Certain products in our range have a coloured ring on the shank. These colour rings help to select the correct product for a specific material application. Full information on Colour Band Selection is available on pages 20 – 21.

Symbols

For all of our product pages you will find symbols which depict what specifications these products were made to. Symbols have been used to simplify product identification. A full list of symbols can be found before the contents page of this catalogue.

Some common examples are:



Standard



Regular length



5 x D max. working depth



60° Metric thread form



Colour band

we've made it easier to find the right tool fast...

For easy tool reference, you will find an extensive application based index at the start of each section.

These icons below can be found on the product pages throughout the catalogue, and at a glance the characteristic features of the tool can be identified.

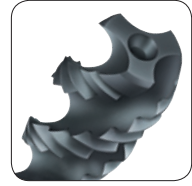
Standard	 Sutton Standard	 German Standard	 International Standard	 American Standard	 British Standard	 Japanese Standard												
Length	 Stub	 Regular	 Long	 Extra Long														
Shank	 Plain	 Form B	 Form HB	 Form HE	 Threaded	 Stepped	 Reduced	 Tanged	 Morse Taper	 Square Drive								
Colour Band	 UNI	 VA	 H	 AI	 W	 Cu	 GG											
Depth	 3 x diameter	 4 x diameter	 5 x diameter	 6 x diameter	 8 x diameter	 10 x diameter	 12 x diameter	 14 x diameter										
Drill Application	Standard Facet Radius Lips	Normal	(DIN 1412)				Carbide											
			Form A	Form B	Form C	Special	Normal	IK										
																		
Tap Application	 Blind Hole Straight Flute					 Through Hole Straight Flute	 Through Hole Gun	 Blind Hole Spiral Flute	 Thread Forming	Countersink Geometry	 Crosshole	 Single Flute	 3 Flutes					
	 High Speed Cutting					 Z-Axis Control	 Deep Hole	 Single Coolant Groove	 Multi Coolant Groove		Internal Coolant	 Internal Coolant (Helical)	 Internal Coolant (Axial)	 Internal Coolant (Radial)				
Thread Forms	 Metric Coarse		 Metric Fine		 Unified Coarse		 Unified Fine		 Unified Series		 Unified Extra Fine		 (BSPF)		 Whitworth Coarse		 Whitworth Fine	
	 British Association		 British Standard Brass		 Steel Conduit		 Sealing Pipe		 (BSPT)		 Dryseal Straight		 National Pipe Taper		 Dryseal Taper			
Endmill Application	Cutting Directions	 Slotting	 Profiling	 Finishing	 Universal	 Roughing	Geometry	 Unequal	 Radius	 Chamfer	 Reduced Neck							
		 HR	 HRS	 NF	 NR	 STF		 Ti	 VA	 WR	 Micro Geometry	 Rake Correction						

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Carbide Drills
3xD, 5xD, 8xD, 12xD



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高速钢钻头
短刃,标准刃,长刃

HSS Drills
Stub, Jobber, Long



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钻头
定位钻及倒角刀

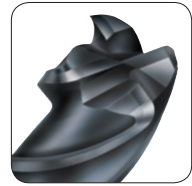
Countersinks
& Spotting Drills



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硬质合金铣刀
和谐系列

Carbide Endmills
Harmony & Ecoline



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Catalogue Code 产品目录号	Page No. 页数	Discount Group 折扣组	Sutton Designation Sutton代号	Description 产品名称	Point Type 钻尖别类	Tool Material 刀具材质	Surface Finish 表面处理	Standard 生产标准
Countersinks 倒角刀								
C108	35	A1108	○	Countersink, Three Flute, UNI	90°	HSS Co	TiAIN	DIN335
Drills 钻头								
D151	26	A1006	NH	Drill, Stub, CNC	130° Form B	HSS Co	TiAIN	DIN1897
D153	26	A1502	○	Drill, Stub, R40 VA, <i>Black Magic</i>	4 Facet	HSS Co	TiAIN	DIN1897
D155	26	A1502	○	Drill, Stub, R40 UNI	130° 4 Facet Form B	SPM	TiAIN	DIN1897
D163	29	A0418	NH	Drill, Jobber, DHJ	130° Form B	HSS Co	TiAIN	DIN338
D165	29	A0418	WN	Drill, Jobber, DXJ	130° Form A	HSS Co	TiAIN	DIN338
D168	29	A1502	○	Drill, Jobber, R40 UNI	130° 4 Facet Form B	SPM	TiAIN	DIN338
D169	29	A1502	○	Drill, Jobber, R40 VA, <i>Black Magic</i>	4 Facet Form C	HSS Co	TiAIN	DIN338
D170	32	A0504	NH	Drill, Long Series, DHL	130° Form B	HSS Co	BrT	DIN340
D171	32	A0508	NH	Drill, Long Series, DHL	130° Form B	HSS Co	TiAIN	DIN340
D175	35	A1124		Drill, NC Spotting	90°	HSS Co	TiN	DIN1897
D176	35	A1124		Drill, NC Spotting	120°	HSS Co	TiN	DIN1897
D177	26	A1006	WN	Drill, Stub, DXS	130° Form A	HSS Co	TiAIN	DIN1897
D191	33	A0502	NH	Drill, Extra Long, DHXL-1	130° Form B	HSS	Ni + Blu	DIN1869-1
D192	33	A0502	NH	Drill, Extra Long, DHXL-2	130° Form B	HSS	Ni + Blu	DIN1869-2
D193	33	A0502	NH	Drill, Extra Long, DHXL-3	130° Form B	HSS	Ni + Blu	DIN1869-3
D194	34	A0508	NH	Drill, Extra Long, DHXL-1	130° Form B	HSS Co	TiAIN	DIN1869-1
D195	34	A0508	NH	Drill, Extra Long, DHXL-2	130° Form B	HSS Co	TiAIN	DIN1869-2
D196	34	A0508	NH	Drill, Extra Long, DHXL-3	130° Form B	HSS Co	TiAIN	DIN1869-3
D323	18	A0210		Drill, 3xD, Shank Form HA	140° Form C	VHM	AlCrN	DIN6537
D326	21	A0210		Drill, 5xD, Shank Form HA	140° Form C	VHM	AlCrN	DIN6537
D329	18	A0210		Drill, 3xD, Shank Form HA, IK	140° Form C	VHM	AlCrN	DIN6537
D332	21	A0210		Drill, 5xD, Shank Form HA, IK	140° Form C	VHM	AlCrN	DIN6537
D335	24	A0210		Drill, 8xD, Shank Form HA, IK	140° Form C	VHM	AlCrN	DIN6537
D356	18	A0210	○	Drill, 3xD, HA Shank, VA <i>Black Magic</i>	140° 4 Facet Form C	VHM	HELICA	DIN6537
D358	21	A0210	○	Drill, 5xD, HA Shank, VA <i>Black Magic</i>	140° 4 Facet Form C	VHM	HELICA	DIN6537
D364	35	A0210		Drill, NC Spotting	90°	VHM	AlCrN	~DIN1897
D366	35	A0210		Drill, NC Spotting	142°	VHM	AlCrN	~DIN1897
D371	25	A0210		Drill, 12xD, Shank Form HA, IK	135° Form C	VHM	AlCrN Tip	-

Catalogue Code 产品目录号	Page No. 页数	Discount Group 折扣组	Sutton Designation Sutton代号	Description 产品名称	Shank 柄类型	Tool Material 刀具材质	Surface Finish 表面处理	Standard 生产标准
Endmills 铣刀								
E310	41	B0208	○	Slot Drill, Long, 2 Flute, R40, AlCarb	DIN 6535-HA	VHM	BrT	DIN6527L
E400	41	B0210	○	Endmill, Long, 3 Flute, R45/46/44-Al, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	CrN	DIN6527L
E402	41	B0210	○	Endmill, Long Reach, 3 Flute, R45/46/44-Al, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	CrN	-
E404	41	B0210	○	Rougher, Long, 3 Flute, R35/36/36-Al HR, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	CrN	DIN6527L
E408	41	B0210	○	Endmill, Long Reach, Ballnose, 3 Flute, R45/46/44-Al, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	CrN	-
E410	40	B0210	○	Endmill, Long, 3 Flute, R55/54/56-VA, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	Helica	DIN6527L
E412	40	B0210	○	Endmill, Long, 4 Flute, R55-VA, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	Helica	DIN6527L
E414	40	B0210	○	Endmill, Long Reach, 4 Flute, R55-VA, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	Helica	-
E416	40	B0210	○	Rougher, Long, 3 Flute, R35/36/36-Al HR, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	Helica	DIN6527L
E418	38	B0210	○	Slot Drill, Long Reach, 2 Flute, R30, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	AlCrN	-
E420	38	B0210	○	Slot Drill, Long Reach, 2 Flute, R30, Corner Rad, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	AlCrN	-
E422	36	B0210	○	Endmill, Short, 3 Flute, R38/37/39, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	AlCrN	DIN6527K
E424	36	B0210	○	Endmill, Long, 3 Flute, R38/37/39, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	AlCrN	DIN6527L
E426	36	B0210	○	Endmill, Long, 4 Flute, R45/44, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	AlCrN	DIN6527L
E428	43	B0210	○	Endmill, Long, 4 Flute, R55-NH, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	AlCrN	DIN6527L
E430	39	B0210	○	Endmill, Long Reach, 4 Flute, R45/44, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	AlCrN	-
E432	43	B0210	○	Endmill, Long, 6-8 Flute, R50/35-NH, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	AlCrN	DIN6527L
E434	43	B0210	○	Endmill, Extra Long, 6-8 Flute, R50/35-NH, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	AlCrN	-
E436	43	B0210	○	Endmill, Long Reach, 6-8 Flute, R50/35-NH, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	AlCrN	-
E456	45	B0210		Endmill Chamfer, 4 Flute, 90°	DIN 6535-HA	VHM	TiAIN	-

Catalogue Code 产品目录号	Page No. 页数	Discount Group 折扣组	Sutton Designation Sutton代号	Description 产品名称	Shank 柄类型	Tool Material 刀具材质	Surface Finish 表面处理	Standard 生产标准
E457	45	B0210		Endmill Chamfer, 4 Flute, 60°	DIN 6535-HA	VHM	TiAIN	-
E458	45	B0210		Endmill Chamfer, 4 Flute, Corner Rad	DIN 6535-HA	VHM	TiAIN	-
E459	40	B0210	○	Endmill, Long, 4 Flute, R40/42-VA, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	Helica	DIN6527L
E462	37	B0210	○	Endmill, Long, 4 Flute, R40/42-VA Corner Rad, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	Helica	DIN6527L
E533	36	B0210	○	Endmill, Short, 4 Flute, R35/38, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	AlCrN	DIN6527K
E535	36	B0210	○	Endmill, Long, 4 Flute, R35/38, <i>Harmony</i>	DIN 1835-HA	VHM-ULTRA	AlCrN	DIN6527L
E543	43	B0210	○	Endmill, Long, 6-8 Flute, R45, VH <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	AlCrN	DIN6527L
E545	36	B0210	○	Endmill, Long, 4 Flute, R45-STF, <i>Harmony</i>	DIN 1835-HA	VHM-ULTRA	AlCrN	DIN6527L
E549	36	B0210	○	Rougher, Long, 3-6 Flute, R45-HRS, <i>Harmony</i>	DIN 1835-HA	VHM-ULTRA	AlCrN	DIN6527L
E559	37	B0210	○	Endmill, Long, 4 Flute, R35/38 Corner Rad, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	AlCrN	DIN6527L
E562	42	B0210	○	Endmill, Long, 4 Flute, R50-NH DUO, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	AlCrN	DIN6527L
E564	42	B0210	○	Endmill, Long, 4 Flute, R50-NH DUO Corner Rad, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	AlCrN	DIN6527L
E566	42	B0210	○	Endmill, Long, 4 Flute, R50-VH DUO, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	Aldura	DIN6527L
E568	42	B0210	○	Endmill, Long, 4 Flute, R50-VH DUO Corner Rad, <i>Harmony</i>	DIN 6535-HA	VHM-ULTRA	Aldura	DIN6527L
E603	44	B0210		Slot Drill, Stub, 2 Flute, R30	DIN 6535-HA	VHM	TiAIN	-
E604	44	B0210		Endmill, Regular, 4 Flute, R30	DIN 6535-HA	VHM	TiAIN	-
E605	44	B0210		Slot Drill, Regular, Ballnose, 2 Flute, R30	DIN 6535-HA	VHM	TiAIN	-
E607	44	B0210		Endmill, Regular, Ballnose, 4 Flute, R30	DIN 6535-HA	VHM	TiAIN	-

Catalogue Code 产品目录号	Page No. 页数	Discount Group 折扣组	Sutton Designation Sutton代号	Description 产品名称	Thread 螺纹	Geometry Type 几何结构	Tool Material 刀具材质	Surface Finish 表面处理	Standard 生产标准
Taps 丝锥									
T102	12	D0402		Tap, Gun, N	M	N	HSSE V3	Blu	DIN371
T103	12	D0402		Tap, Gun, N	M	N	HSSE V3	Blu	DIN376
T104	12	D0406		Tap, Gun, N	M	N	HSSE V3	TiN	DIN371
T105	12	D0406		Tap, Gun, N	M	N	HSSE V3	TiN	DIN376
T110	13	D0402	○	Tap, Gun, VA	M	VA	HSSE V3	Blu	DIN371
T111	13	D0402	○	Tap, Gun, VA	M	VA	HSSE V3	Blu	DIN376
T116	13	D0408	○	Tap, Gun, VA PM	M	VA PM	PM-HSSE V3	TiCN	DIN371
T117	13	D0408	○	Tap, Gun, VA PM	M	VA PM	PM-HSSE V3	TiCN	DIN376
T120	13	D0408	○	Tap, Gun, VADH	M	VADH	PM-HSSE V3	TiCN	DIN371
T121	13	D0408	○	Tap, Gun, VADH	M	VADH	PM-HSSE V3	TiCN	DIN376
T122	12	D0402	○	Tap, Gun, W	M	W	HSSE V3	Ni	DIN371
T123	12	D0402	○	Tap, Gun, W	M	W	HSSE V3	Ni	DIN376
T124	13	D0402	○	Tap, Gun, W	M	W	HSSE V3	Blu	DIN371
T125	13	D0402	○	Tap, Gun, W	M	W	HSSE V3	Blu	DIN376
T128	13	D0402	○	Tap, Gun, W-AZ	M	W - AZ	HSSE V3	BrT	DIN371
T129	13	D0402	○	Tap, Gun, W-AZ	M	W - AZ	HSSE V3	BrT	DIN376
T140	13	D0410	NH	Tap, Gun, NH	M	NH	PM-HSSE V3	TiAIN	DIN371
T141	13	D0410	NH	Tap, Gun, NH	M	NH	PM-HSSE V3	TiAIN	DIN376
T144	13	D0402	○	Tap, Gun, H	M	H	PM-HSS Co	Blu	DIN371
T145	13	D0402	○	Tap, Gun, H	M	H	PM-HSS Co	Blu	DIN376
T146	13	D0408	○	Tap, Gun, H	M	H	PM-HSS Co	TiCN	DIN371
T147	13	D0408	○	Tap, Gun, H	M	H	PM-HSS Co	TiCN	DIN376
T156	12	D0402		Tap, Gun, N	MF	N	HSSE V3	Blu	DIN374
T157	12	D0406		Tap, Gun, N	MF	N	HSSE V3	TiN	DIN374
T158	13	D0402	○	Tap, Gun, VA	MF	VA	HSSE V3	Blu	DIN374
T160	13	D0408	○	Tap, Gun, VA PM	MF	VA PM	PM-HSSE V3	TiCN	DIN374
T163	13	D0410	NH	Tap, Gun, NH	MF	NH	PM-HSSE V3	TiAIN	DIN374
T189	10	D0402		Tap, Spiral Flute, R40 N	M	N	HSSE V3	Blu	DIN371
T190	10	D0402		Tap, Spiral Flute, R40 N	M	N	HSSE V3	Blu	DIN376
T197	11	D0402	○	Tap, Spiral Flute, R45 VADH	M	VADH	HSSE V3	Blu	DIN371
T199	11	D0402	○	Tap, Spiral Flute, R45 VADH	M	VADH	HSSE V3	Blu	DIN376
T201	11	D0408	○	Tap, Spiral Flute, R45 VADH	M	VADH	HSSE V3	TiCN	DIN371
T202	11	D0408	○	Tap, Spiral Flute, R45 VADH	M	VADH	HSSE V3	TiCN	DIN376
T205	11	D0408	○	Tap, Spiral Flute, R50 VA PM	M	VA PM	PM-HSSE V3	TiCN	DIN371
T206	11	D0408	○	Tap, Spiral Flute, R50 VA PM	M	VA PM	PM-HSSE V3	TiCN	DIN376

Catalogue Code 产品目录号	Page No. 页数	Discount Group 折扣组	Sutton Designation Sutton代号	Description 产品名称	Thread 螺纹	Geometry Type 几何结构	Tool Material 刀具材质	Surface Finish 表面处理	Standard 生产标准
T209	11	D0402	○	Tap, Spiral Flute, R15 H	M	H	PM-HSS Co	Blu	DIN371
T210	11	D0402	○	Tap, Spiral Flute, R15 H	M	H	PM-HSS Co	Blu	DIN376
T211	11	D0408	○	Tap, Spiral Flute, R15 H	M	H	PM-HSS Co	TiCN	DIN371
T212	11	D0408	○	Tap, Spiral Flute, R15 H	M	H	PM-HSS Co	TiCN	DIN376
T227	11	D0410	NH	Tap, Spiral Flute, R40 NH	M	NH	PM-HSSE V3	TiAlN	DIN371
T228	11	D0410	NH	Tap, Spiral Flute, R40 NH	M	NH	PM-HSSE V3	TiAlN	DIN376
T231	11	D0402	○	Tap, Spiral Flute, R45 Al	M	Al	HSSE V3	Brt	DIN371
T232	11	D0402	○	Tap, Spiral Flute, R45 Al	M	Al	HSSE V3	Brt	DIN376
T235	10	D0402	○	Tap, Spiral Flute, R45 W	M	W	HSSE V3	Ni	DIN371
T236	10	D0402	○	Tap, Spiral Flute, R45 W	M	W	HSSE V3	Ni	DIN376
T239	11	D0404	○	Tap, Spiral Flute, R45 Cu	M	Cu	HSSE V3	CrN	DIN371
T240	11	D0404	○	Tap, Spiral Flute, R45 Cu	M	Cu	HSSE V3	CrN	DIN376
T241	10	D0406	○	Tap, Spiral Flute, R45 W	M	W	HSSE V3	TiN	DIN371
T242	10	D0406	○	Tap, Spiral Flute, R45 W	M	W	HSSE V3	TiN	DIN376
T247	10	D0402		Tap, Spiral Flute, R40 N	MF	N	HSSE V3	Blu	DIN374
T249	11	D0402	○	Tap, Spiral Flute, R45 VADH	MF	VADH	HSSE V3	Blu	DIN374
T251	11	D0408	○	Tap, Spiral Flute, R45 VADH	MF	VADH	HSSE V3	TiCN	DIN374
T252	11	D0408	○	Tap, Spiral Flute, R50 VA PM	MF	VA PM	PM-HSSE V3	TiCN	DIN374
T254	11	D0410	NH	Tap, Spiral Flute, R40 NH	MF	NH	PM-HSSE V3	TiAlN	DIN374
T292	14	D0408	◎	Tap, Straight Flute, GG	M	GG	HSSE V3	TiCN	DIN371
T293	14	D0408	◎	Tap, Straight Flute, GG	M	GG	HSSE V3	TiCN	DIN376
T294	15	D0408	○	Tap, Straight Flute, XH, Form C	M	XH	SPM	TiCN	-
T295	15	D0408	○	Tap, Straight Flute, XH, Form D	M	XH	SPM	TiCN	-
T296	15	D0414	○	Tap, Straight Flute, VH, Form C	M	VH	VHM	TiCN	-
T297	15	D0414	○	Tap, Straight Flute, VH, Form D	M	VH	VHM	TiCN	-
T301	14	D0408	◎	Tap, Straight Flute, GG	MF	GG	HSSE V3	TiCN	DIN374
T325	17	D0410	○	Tap, Forming, with multi coolant groove, UNI	M	UNI	SPM	TiAlN	DIN2174
T326	17	D0410	○	Tap, Forming, with multi coolant groove, UNI	M	UNI	SPM	TiAlN	DIN2174
T327	17	D0410	○	Tap, Forming, with multi coolant groove, UNI, IK	M	UNI - IK	SPM	TiAlN	DIN2174
T328	17	D0410	○	Tap, Forming, with multi coolant groove, UNI, IK	M	UNI - IK	SPM	TiAlN	DIN2174
T335	14	D0408	DC	Tap, Straight Flute, DC	M	DC	PM-HSS Co	TiCN	DIN371
T336	14	D0408	DC	Tap, Straight Flute, DC	M	DC	PM-HSS Co	TiCN	DIN376
T343	15	D0408	○	Tap, Straight Flute, XH, Form C	MF	XH	SPM	TiCN	-
T344	15	D0408	○	Tap, Straight Flute, XH, Form D	MF	XH	SPM	TiCN	-
T345	15	D0414	○	Tap, Straight Flute, VH, Form C	MF	VH	VHM	TiCN	-
T346	15	D0414	○	Tap, Straight Flute, VH, Form D	MF	VH	VHM	TiCN	-
T357	14	D0408	DC	Tap, Straight Flute, DC, IK	M	DC - IK	PM-HSS Co	TiCN	DIN371
T358	14	D0408	DC	Tap, Straight Flute, DC, IK	M	DC - IK	PM-HSS Co	TiCN	DIN376
T365	9	D0412	Synchro	Tap, Spiral Flute, Synchro, L20	M	~DIN1835-B /HSC	PM-HSSE V3	TiCN	-
T367	9	D0412	Synchro	Tap, Spiral Flute, Synchro, L20, IK	M	~DIN1835-B /HSC	PM-HSSE V3	TiCN	-
T369	9	D0412	Synchro	Tap, Spiral Flute, Synchro, R45 Al	M	~DIN1835-B /HSC	PM-HSSE V3	CrN	-
T371	9	D0412	Synchro	Tap, Spiral Flute, Synchro, R45 Al, IK	M	~DIN1835-B /HSC	PM-HSSE V3	CrN	-
T373	8	D0412	Synchro	Tap, Spiral Flute, Synchro, R50	M	~DIN1835-B /HSC	PM-HSSE V3	TiCN	-
T375	8	D0412	Synchro	Tap, Spiral Flute, Synchro, R50, IK	M	~DIN1835-B /HSC	PM-HSSE V3	TiCN	-
T377	8	D0412	Synchro	Tap, Gun, Synchro	M	~DIN1835-B /HSC	PM-HSSE V3	TiCN	-
T379	8	D0412	Synchro	Tap, Gun, Synchro, IK	M	~DIN1835-B /HSC	PM-HSSE V3	TiCN	-
T381	9	D0412	Synchro	Tap, Forming, Synchro	M	~DIN1835-B /HSC	PM-HSSE V3	TiN	-
T383	9	D0412	Synchro	Tap, Forming, Synchro, IK	M	~DIN1835-B /HSC	PM-HSSE V3	TiN	-
T499	7	D0602		Tap, Gun, N	M	N	HSSE V3	Brt	JIS
T500	7	D0602		Tap, Gun, N	M	N	HSSE V3	Blu	JIS
T503	6	D0602		Tap, Spiral Flute, R40 N	M	N	HSSE V3	Brt	JIS
T504	6	D0602		Tap, Spiral Flute, R40 N	M	N	HSSE V3	Blu	JIS
T510	16	D0606		Tap, Forming, single coolant groove, P lead	M	N	HSS Co.8	Ni	JIS
T511	16	D0606		Tap, Forming, single coolant groove, B lead	M	N	HSS Co.8	Ni	JIS
T512	16	D0606		Tap, Forming, single coolant groove, P lead	M	N	HSS Co.8	Blu	JIS
T513	16	D0606		Tap, Forming, single coolant groove, B lead	M	N	HSS Co.8	Blu	JIS

Catalogue Code 产品目录号	Page No. 页数	Discount Group 折扣组	Sutton Designation Sutton代号	Description 产品名称	Thread 螺纹	Geometry Type 几何结构	Tool Material 刀具材质	Surface Finish 表面处理	Standard 生产标准
T514	16	D0614		Tap, Forming, single coolant groove, P lead	M	N	HSS Co.8	TiN	JIS
T515	16	D0614		Tap, Forming, single coolant groove, B lead	M	N	HSS Co.8	TiN	JIS
T606	6	D0602		Tap, Spiral Flute, R40 N (Point Removed)	M	N	HSSE V3	BrT	JIS
T607	6	D0602		Tap, Spiral Flute, R40 N (Point Removed)	M	N	HSSE V3	Blu	JIS
T629	16	D0614		Tap, Forming, single coolant groove, P lead	Metric	N	PM-HSSE V3	TiCN	JIS
T630	16	D0614		Tap, Forming, single coolant groove, B lead	Metric	N	PM-HSSE V3	TiCN	JIS
T668	14	D0408	DC	Tap, Straight Flute, DC	MF	DC	PM-HSS Co	TiCN	DIN374
T669	14	D0408	DC	Tap, Straight Flute, DC, IK	MF	DC	PM-HSS Co	TiCN	DIN374
T670	14	D0414	◎	Tap, Straight Flute, GG	M	GG	VHM	TiCN	DIN371
T671	14	D0414	◎	Tap, Straight Flute, GG	M	GG	VHM	TiCN	DIN376
T682	17	D0414		Tap, Forming, VH, with multi coolant groove	M	VH	VHM	TiAIN	DIN2174
T683	17	D0414		Tap, Forming, VH, with multi coolant groove	M	VH	VHM	TiAIN	DIN2174
T684	10	D0410	●	Tap, Spiral Flute, R50 <i>Black Magic</i>	M	UNI	PM-HSSE V3	Hardlube	DIN371
T685	10	D0410	●	Tap, Spiral Flute, R50 <i>Black Magic</i>	M	UNI	PM-HSSE V3	Hardlube	DIN376
T686	10	D0410	●	Tap, Spiral Flute, R50 <i>Black Magic</i>	MF	UNI	PM-HSSE V3	Hardlube	DIN374
T687	12	D0410	●	Tap, Gun, <i>Black Magic</i>	M	UNI	PM-HSSE V3	Hardlube	DIN371
T688	12	D0410	●	Tap, Gun, <i>Black Magic</i>	M	UNI	PM-HSSE V3	Hardlube	DIN376
T689	12	D0410	●	Tap, Gun, <i>Black Magic</i>	MF	UNI	PM-HSSE V3	Hardlube	DIN374
T743	14	D0414	◎	Tap, Straight Flute, GG	MF	GG	VHM	TiCN	DIN374
T747	17	D0414	●	Tap, Forming, VH-IK, with multi coolant groove	M	VH	VHM	TiAIN	DIN2174
T748	17	D0414	●	Tap, Forming, VH-IK, with multi coolant groove	M	VH	VHM	TiAIN	DIN2174
T754	9	D0412	Synchro	Tap, Spiral Flute, Synchro, L20	MF	~DIN1835-B /HSC	PM-HSSE V3	TiCN	-
T756	9	D0412	Synchro	Tap, Spiral Flute, Synchro, L20, IK	MF	~DIN1835-B /HSC	PM-HSSE V3	TiCN	-
T758	9	D0412	Synchro	Tap, Spiral Flute, Synchro, R45 Al	MF	~DIN1835-B /HSC	PM-HSSE V3	CrN	-
T760	9	D0412	Synchro	Tap, Spiral Flute, Synchro, R45 Al, IK	MF	~DIN1835-B /HSC	PM-HSSE V3	CrN	-
T762	8	D0412	Synchro	Tap, Spiral Flute, Synchro, R50	MF	~DIN1835-B /HSC	PM-HSSE V3	TiCN	-
T764	8	D0412	Synchro	Tap, Spiral Flute, Synchro, R50, IK	MF	~DIN1835-B /HSC	PM-HSSE V3	TiCN	-
T766	8	D0412	Synchro	Tap, Gun, Synchro	MF	~DIN1835-B /HSC	PM-HSSE V3	TiCN	-
T768	8	D0412	Synchro	Tap, Gun, Synchro, IK	MF	~DIN1835-B /HSC	PM-HSSE V3	TiCN	-
T770	9	D0412	Synchro	Tap, Forming, Synchro	MF	~DIN1835-B /HSC	PM-HSSE V3	TiN	-
T772	9	D0412	Synchro	Tap, Forming, Synchro, IK	MF	~DIN1835-B /HSC	PM-HSSE V3	TiN	-

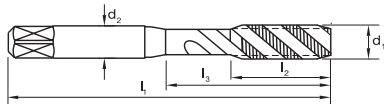
Taps Metric, Spiral Flute

suttontools

- General purpose use, materials up to approx. 1000 N/mm²
- Blind holes
- Suitable for machine operations
- Depths up to approx. 2.5 x d₁

- 一般用途、适合≤1000N/mm²的材料
- 盲孔用
- 适合机用
- 加工深度 ≤2.5 x d₁

JIS



尺寸参考 螺距 精度

Size Ref.	d ₁	Pitch	Limit	Style	l ₁	l ₂	l ₃	d ₂	sq	z	drill Ø	Item # (货号)	Item # (货号)
WITH POINT 尖头													
0100	M 1	x 0.25	P1	1	30	7	-	3.0	2.5	2	0.75	T503 0100	
0110	M 1.1	x 0.25	P1	1	32	8	-	3.0	2.5	2	0.85	T503 0110	
0120	M 1.2	x 0.25	P1	1	32	8	-	3.0	2.5	2	0.95	T503 0120	
0140	M 1.4	x 0.3	P1	1	34	9	-	3.0	2.5	2	1.1	T503 0140	
0160	M 1.6	x 0.35	P1	1	36	10	-	3.0	2.5	2	1.25	T503 0160	
1170	M 1.7	x 0.35	P1	1	36	11	-	3.0	2.5	2	1.35	T503 0170	
0180	M 1.8	x 0.35	P1	1	36	11	-	3.0	2.5	2	1.45	T503 0180	
0200	M 2	x 0.4	P2	1	40	12	15	3.0	2.5	2	1.60	T503 0200	T504 0200
0220	M 2.2	x 0.45	P2	1	42	13	15	3.0	2.5	2	1.75	T503 0220	T504 0220
0230	M 2.3	x 0.4	P2	1	42	13	15	3.0	2.5	2	1.9	T503 0230	T504 0230
0250	M 2.5	x 0.45	P2	1	44	14	16	3.0	2.5	2	2.05	T503 0250	T504 0250
0260	M 2.6	x 0.45	P2	1	44	14	16	3.0	2.5	2	2.15	T503 0260	T504 0260
0300	M 3	x 0.5	P2	2	46	11	18	4.0	3.2	3	2.5	T503 0300	T504 0300
0350	M 3.5	x 0.6	P1	2	48	13	20	4.0	3.2	3	2.9	T503 0350	T504 0350
0400	M 4	x 0.7	P2	2	52	13	20	5.0	4.0	3	3.3	T503 0400	T504 0400
0500	M 5	x 0.8	P2	2	60	16	25	5.5	4.5	3	4.2	T503 0500	T504 0500
0600	M 6	x 1.0	P2	2	62	19	28	6.0	4.5	3	5.0	T503 0600	T504 0600
WITHOUT POINT 削平头													
0200	M 2	x 0.4	P2	4	40	12	16	3.0	2.5	2	1.60	T606 0200	T607 0200
0250	M 2.5	x 0.45	P2	4	44	14	16	3.0	2.5	2	2.05	T606 0250	T607 0250
0300	M 3	x 0.5	P2	5	46	11	18	4.0	3.2	3	2.5	T606 0300	T607 0300
0350	M 3.5	x 0.6	P1	5	48	13	20	4.0	3.2	3	2.9	T606 0350	T607 0350
0400	M 4	x 0.7	P2	5	52	13	20	5.0	4.0	3	3.3	T606 0400	T607 0400
0500	M 5	x 0.8	P2	5	60	16	25	5.5	4.5	3	4.2	T606 0500	T607 0500
0600	M 6	x 1.0	P2	5	62	19	28	6.0	4.5	3	5.0	T606 0600	T607 0600
0700	M 7	x 1.0	P2	3	65	22	-	6.2	5.0	3	6.0	T606 0700	T607 0700
0800	M 8	x 1.25	P2	3	70	22	-	6.2	5.0	3	6.8	T606 0800	T607 0800
1006	MF 10	x 1.25	P2	3	75	24	-	7.0	5.5	3	8.5	T606 1006	T607 1006
1000	M 10	x 1.5	P2	3	75	24	-	7.0	5.5	3	8.8	T606 1000	T607 1000
1200	M 12	x 1.75	P2	3	82	29	-	8.5	6.5	3	10.2	T606 1200	T607 1200



Product Name 产品名称

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Geometry 几何结构

Lead 切削锥

R40 N

R40 N

D0602

D0602

HSSE V3

HSSE V3

Brt 无处理

Blu 氧化处理

N

N

R40

R40

2.5 x P

2.5 x P

Item # (货号)

Item # (货号)

T503

T504

T503 0100

T503 0110

T503 0120

T503 0140

T503 0160

T503 0170

T503 0180

T503 0200

T503 0220

T503 0230

T503 0250

T503 0260

T503 0300

T503 0350

T503 0400

T503 0500

T503 0600

T606

T607

T606 0200

T606 0250

T606 0300

T606 0350

T606 0400

T606 0500

T606 0600

T606 0700

T606 0800

T606 1006

T606 1000

T606 1200

T607 0200

T607 0250

T607 0300

T607 0350

T607 0400

T607 0500

T607 0600

T607 0700

T607 0800

T607 1006

T607 1000

T607 1200

Recommended Tapping Drill

推荐的底孔钻头

D151

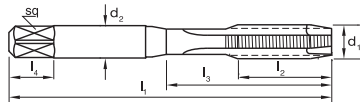
D151



Taps Metric, Gun, (Spiral Point)

suttontools

- General purpose use, materials up to approx. 1000 N/mm²
- Through holes
- Ideally suited for machine applications.
- Depths up to approx. 3 x d₁
- 一般用途、适合≤1000N/mm²的材料
- 通孔用
- 适合机用
- 加工深度 ≤3 x d₁



尺寸参考 螺距 精度

Size Ref.	d ₁	Pitch	Limit	Style	l ₁	l ₂	l ₃	d ₂	sq	z	drill Ø	Item # (货号)	Item # (货号)
0100	M 1	x 0.25	P1	1	30	7	-	3.0	2.5	2	0.75	T499 0100	
0110	M 1.1	x 0.25	P1	1	32	8	-	3.0	2.5	2	0.85	T499 0110	
0120	M 1.2	x 0.25	P1	1	32	8	-	3.0	2.5	2	0.95	T499 0120	
0140	M 1.4	x 0.3	P1	1	34	9	-	3.0	2.5	2	1.1	T499 0140	
0160	M 1.6	x 0.35	P1	1	36	10	-	3.0	2.5	2	1.25	T499 0160	
0170	M 1.7	x 0.35	P1	1	36	11	-	3.0	2.5	2	1.35	T499 0170	
0180	M 1.8	x 0.35	P1	1	36	11	-	3.0	2.5	2	1.45	T499 0180	
0200	M 2	x 0.4	P2	1	40	12	-	3.0	2.5	2	1.60	T499 0200	T500 0200
0220	M 2.2	x 0.45	P2	1	42	13	-	3.0	2.5	2	1.75	T499 0220	T500 0220
0230	M 2.3	x 0.4	P2	1	42	13	-	3.0	2.5	2	1.9	T499 0230	T500 0230
0250	M 2.5	x 0.45	P2	1	44	14	-	3.0	2.5	2	2.05	T499 0250	T500 0250
0260	M 2.6	x 0.45	P2	1	44	14	-	3.0	2.5	2	2.15	T499 0260	T500 0260
0300	M 3	x 0.5	P2	2	46	11	18	4.0	3.2	3	2.5	T499 0300	T500 0300
0350	M 3.5	x 0.6	P2	2	48	13	20	4.0	3.2	3	2.9	T499 0350	T500 0350
0400	M 4	x 0.7	P2	2	52	13	20	5.0	4.0	3	3.3	T499 0400	T500 0400
0500	M 5	x 0.8	P2	2	60	16	25	5.5	4.5	3	4.2	T499 0500	T500 0500
0600	M 6	x 1.0	P2	2	62	19	28	6.0	4.5	3	5.0	T499 0600	T500 0600
0700	M 7	x 1.0	P2	3	65	22	-	6.2	5.0	3	6.0	T499 0700	T500 0700
0800	M 8	x 1.25	P3	3	70	22	-	6.2	5.0	3	6.8	T499 0800	T500 0800
1006	MF 10	x 1.25	P3	3	75	24	-	7.0	5.5	3	8.8	T499 1006	T500 1006
1000	M 10	x 1.5	P3	3	75	24	-	7.0	5.5	3	8.5	T499 1000	T500 1000
1200	M 12	x 1.75	P4	3	82	29	-	8.5	6.5	3	10.2	T499 1200	T500 1200
1400	M 14	x 2.0	P4	3	88	30	-	10.5	8.0	3	12.0	T499 1400	T500 1400
1600	M 16	x 2.0	P4	3	95	32	-	12.5	10.0	4	14.0	T499 1600	T500 1600
1800	M 18	x 2.5	P4	3	100	37	-	14.0	11.0	4	15.5	T499 1800	T500 1800
2000	M 20	x 2.5	P4	3	105	37	-	15.0	12.0	4	17.5	T499 2000	T500 2000
2200	M 22	x 2.5	P4	3	115	38	-	17.0	13.0	4	19.5	T499 2200	T500 2200
2400	M 24	x 3.0	P4	3	120	45	-	19.0	15.0	4	21.0	T499 2400	T500 2400



Catalogue Code 目录代码

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Geometry 几何结构

Lead 切削锥

T499

D0602

HSSE V3**Br** 无处理**N**

5 x P

Item # (货号)

T500

D0602

HSSE V3**Blu** 氧化处理**N**

5 x P

Item # (货号)

Recommended Tapping Drill

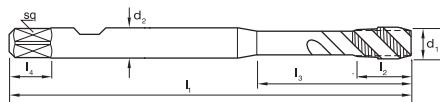
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D151**D151**

DIN Taps Metric, Synchro Series

suttontools

- For high speed and precision tapping
- For rigid tapping in CNC machines with synchronised feed
- With and without internal coolant
- h6 endmill shank
- 适合高速及高精度螺纹加工
- 专供带同步进给的CNC进行刚性攻牙
- 有外冷和内冷油孔
- 高精度h6铣刀柄



尺寸参考

螺距

Limit & Nut Tolerance

精度及螺母容许公差

Size Ref.	d ₁	Pitch	l ₁	l ₂	l ₃	d ₂	sq	z	Drill Ø
SUTTON STD SUTTON 标准									
0200	M 2	x 0.4	70	4	13	6.0	4.9	3	1.6
0250	M 2.5	x 0.45	70	4.5	14	6.0	4.9	3	2.1
0300	M 3	x 0.5	70	5	18	6.0	4.9	3	2.5
0400	M 4	x 0.7	70	7	21	6.0	4.9	3	3.3
0500	M 5	x 0.8	70	8	25	6.0	4.9	3	4.2
0600	M 6	x 1	80	10	30	6.0	4.9	3	5.0
0800	M 8	x 1.25	90	13	35	8.0	6.2	3	6.8
1000	M 10	x 1.5	100	15	39	10.0	8.0	3	8.5
1200	M 12	x 1.75	110	18	42	12.0	9.0	3	10.3
1400	M 14	x 2	110	20	49	14.0	11.0	3	12.0
1600	M 16	x 2	110	20	55	16.0	12.0	4	14.0
1800	M 18	x 2.5	125	25	-	16.0	12.0	4	15.5
2000	M 20	x 2.5	140	25	-	16.0	12.0	4	17.5
SUTTON STD - FINE PITCH SUTTON 标准-公制细牙									
0805	MF 8	x 1	90	13	30	8.0	6.2	3	7.8
1005	MF 10	x 1	100	15	39	10.0	8.0	3	9.0
1006	MF 10	x 1.25	100	15	39	10.0	8.0	3	8.8
1205	MF 12	x 1	110	18	42	12.0	9.0	3	11.0
1206	MF 12	x 1.25	110	18	42	12.0	9.0	3	10.8
1207	MF 12	x 1.5	110	18	42	12.0	9.0	3	10.5

Product Name 产品名称

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Geometry 几何结构

Chamfer 倒角



Synchro	Synchro	Synchro	Synchro
D0412	D0412	D0412	D0412
PM-HSSE V3	PM-HSSE V3	PM-HSSE V3	PM-HSSE V3
TiCN 氮化钛	TiCN 氮化钛	TiCN 氮化钛	TiCN 氮化钛
HSC	HSC	HSC	HSC
Gun	Gun - IK 内冷	R50	R50 IK 内冷
Form B / 4.5 x P	Form B / 4.5 x P	Form C / 2.5 x P	Form C / 2.5 x P
6HX	6HX	6HX	6HX
Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
T377	T379	T373	T375
T377 0200		T373 0200	
T377 0250		T373 0250	
T377 0300		T373 0300	
T377 0400		T373 0400	
T377 0500	T379 0500	T373 0500	T375 0500
T377 0600	T379 0600	T373 0600	T375 0600
T377 0800	T379 0800	T373 0800	T375 0800
T377 1000	T379 1000	T373 1000	T375 1000
T377 1200	T379 1200	T373 1200	T375 1200
T377 1400	T379 1400	T373 1400	T375 1400
T377 1600	T379 1600	T373 1600	T375 1600
T377 1800	T379 1800	T373 1800	T375 1800
T377 2000	T379 2000	T373 2000	T375 2000
T766	T768	T762	T764
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•

Recommended Tapping Drill

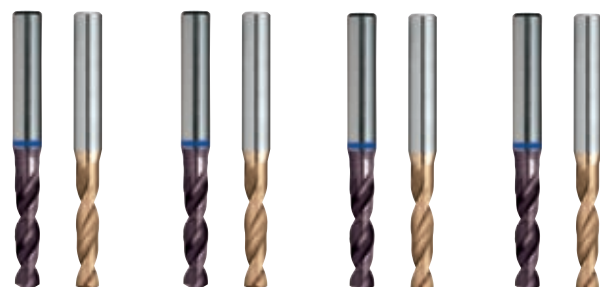
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D153 / D356

D153 / D356

D153 / D356

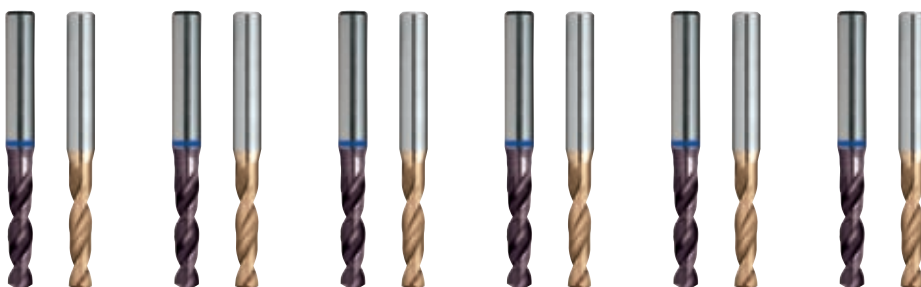
D153 / D356





Synchro	Synchro	Synchro	Synchro	Synchro	Synchro
D0412	D0412	D0412	D0412	D0412	D0412
PM-HSSE V3	PM-HSSE V3	PM-HSSE V3	PM-HSSE V3	PM-HSSE V3	PM-HSSE V3
TiCN 氮化钛	TiCN 氮化钛	CrN 氮化铬	CrN 氮化铬	TiN 氮化钛	TiN 氮化钛
HSC	HSC	HSC	HSC	HSC	HSC
L20	L20-1K 内冷	R45 Al	R45 Al - 1K 内冷	Forming	Forming - 1K 内冷
Form D / 4 x P	Form D / 4 x P	Form C / 2.5 x P	Form C / 2.5 x P	Form C / 2.5 x P	Form C / 2.5 x P
6HX	6HX	6HX	6HX	6HX	6HX
Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
T365	T367	T369	T371	T381	T383
T365 0200		T369 0200		T381 0200	
T365 0250		T369 0250		T381 0250	
T365 0300		T369 0300		T381 0300	
T365 0400		T369 0400		T381 0400	
T365 0500	T367 0500	T369 0500	T371 0500	T381 0500	T383 0500
T365 0600	T367 0600	T369 0600	T371 0600	T381 0600	T383 0600
T365 0800	T367 0800	T369 0800	T371 0800	T381 0800	T383 0800
T365 1000	T367 1000	T369 1000	T371 1000	T381 1000	T383 1000
T365 1200	T367 1200	T369 1200	T371 1200	T381 1200	T383 1200
T365 1400	T367 1400	T369 1400	T371 1400	T381 1400	T383 1400
T365 1600	T367 1600	T369 1600	T371 1600	T381 1600	T383 1600
T365 1800	T367 1800	T369 1800	T371 1800	T381 1800	T383 1800
T365 2000	T367 2000	T369 2000	T371 2000	T381 2000	T383 2000
T754	T756	T758	T760	T770	T772
•	•	•	•	•	•
•	•	•	•	•	•
•	•	•	•	•	•
•	•	•	•	•	•
•	•	•	•	•	•
•	•	•	•	•	•

D153 / D356 D153 / D356 D153 / D356 D153 / D356 D153 / D356 D153 / D356



•Available on request as special manufacture. Subject to lead time. •可定制.

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请参阅我们在线全系列完整产品目录 Refer to our complete Industrial Catalogue online for entire range

Taps Metric - For Tapping Blind Holes

suttontools

Speed & Feeds - refer page 48

切削速度及进给—请参阅第48页



Product Name 产品名称

Discount Group 折扣组

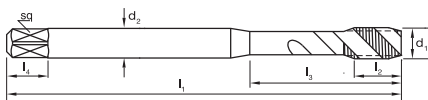
Material 材料

Surface Finish 表面处理

Application 色环及应用

Geometry 几何结构

Chamfer 倒角



尺寸参考

螺距

Limit & Nut Tolerance 精度及螺母容许公差

Size Ref.	d ₁	Pitch	l ₁	l ₂	l ₃	d ₂	sq	z	Drill Ø
DIN 371 REINFORCED SHANK									
0300	M 3	x 0.5	56	5	18	3.5	2.7	3	2.5
0400	M 4	x 0.7	63	7	21	4.5	3.4	3	3.3
0500	M 5	x 0.8	70	8	25	6.0	4.9	3	4.2
0600	M 6	x 1	80	10	30	6.0	4.9	3	5.0
0800	M 8	x 1.25	90	12.5	35	8.0	6.2	3	6.8
1000	M 10	x 1.5	100	15	39	10.0	8.0	3	8.5
DIN 376 REDUCED SHANK									
0600	M 6	x 1	80	10	-	4.5	3.4	3	5.0
0800	M 8	x 1.25	90	12.5	-	6.0	4.9	3	6.8
1000	M 10	x 1.5	100	15	-	7.0	5.5	3	8.5
1200	M 12	x 1.75	110	17.5	-	9.0	7.0	3	10.2
1400	M 14	x 2	110	20	-	11.0	9.0	3	12.0
1600	M 16	x 2	110	20	-	12.0	9.0	3	14.0
1800	M 18	x 2.5	125	25	-	14.0	11.0	4	15.5
2000	M 20	x 2.5	140	25	-	16.0	12.0	4	17.5
DIN 374 FINE PITCH - REDUCED SHANK									
0604	MF 6	x 0.75	80	8	-	4.5	3.4	3	5.3
0805	MF 8	x 1	90	8	-	6.0	4.9	3	7.0
1005	MF 10	x 1	90	10	-	7.0	5.5	3	9.0
1006	MF 10	x 1.25	100	13	-	7.0	5.5	3	8.8
1205	MF 12	x 1	100	14	-	9.0	7.0	3	11.0
1206	MF 12	x 1.25	100	14	-	9.0	7.0	3	10.8
1207	MF 12	x 1.5	100	14	-	9.0	7.0	3	10.5
1406	MF 14	x 1.25	100	16	-	11.0	9.0	3	12.8
1407	MF 14	x 1.5	100	16	-	11.0	9.0	3	12.5
1607	MF 16	x 1.5	100	16	-	12.0	9.0	3	16.5

Other Available Thread Forms 可供应右列的其他螺纹



R40 N	Black Magic	R45 W	R45 W
D0402	D0410	D0406	D0402
HSSE V3	PM-HSSE V3	HSSE V3	HSSE V3
Blu 氮化处理	Hardlube HL涂层	TiN 氮化钛	Ni 氮化处理
N	UNI	W	W
R40	R50	R45	R45
Form C / 2.5 x P	Form C / 2.5 x P	Form C / 2.5 x P	Form C / 2.5 x P
ISO 2 / 6H	6HX	ISO 2 / 6H	ISO 2 / 6H
Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
T189	T684	T241	T235
T189 0300	T684 0300	T241 0300	T235 0300
T189 0400	T684 0400	T241 0400	T235 0400
T189 0500	T684 0500	T241 0500	T235 0500
T189 0600	T684 0600	T241 0600	T235 0600
T189 0800	T684 0800	T241 0800	T235 0800
T189 1000	T684 1000	T241 1000	T235 1000
T190	T685	T242	T236
T190 0600	•	T242 0600	T236 0600
T190 0800	•	T242 0800	T236 0800
T190 1000	•	T242 1000	T236 1000
T190 1200	T685 1200	T242 1200	T236 1200
T190 1400	T685 1400	T242 1400	T236 1400
T190 1600	T685 1600	T242 1600	T236 1600
T190 1800	T685 1800	T242 1800	T236 1800
T190 2000	T685 2000	T242 2000	T236 2000
T247	T686		
T247 0604	T686 0604		
T247 0805	T686 0805		
T247 1005	T686 1005		
T247 1006	T686 1006		
•	T686 1205		
T247 1206	T686 1206		
T247 1207	T686 1207		
•	T686 1406		
T247 1407	•		
T247 1607	•		
UNC, G(BSPF)	UNC, UNF, G(BSPF)		

Recommended Tapping Drill

推荐的底孔钻头

D151

D155 / D323

D177

D177





R45 AI	R45 Cu	R45 VADH	R45 VADH	R50 VA	R40 NH	R15 H	R15 H
D0402	D0404	D0402	D0408	D0408	D0410	D0402	D0408
HSSE V3	HSSE V3	HSSE V3	HSSE V3	PM-HSSE V3	PM-HSSE V3	PM-HSS Co	PM-HSS Co
BrT 无处理	CrN 氮化铬	Blu 氧化处理	TiCN 碳氮化钛	TiCN 碳氮化钛	TiAlN 氮化铝钛	Blu 氧化处理	TiCN 碳氮化钛
AI	Cu	VADH	VADH	VA PM	NH	H	H
R45 2 Flute	R45	R45 Back Chamf.	R45° Back Chamf.	R50	R40	R15	R15
Form C / 2.5 x P	Form C / 2.5 x P	Form C / 2.5 x P	Form C / 2.5 x P	Form C / 2.5 x P	Form C / 2.5 x P	Form C / 3 x P	Form C / 3 x P
ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	6HX	ISO 2 / 6H	ISO 2 / 6HX	ISO 2 / 6HX
Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
T231	T239	T197	T201	T205	T227	T209	T211
T231 0300	T239 0300	T197 0300	T201 0300	T205 0300	T227 0300	T209 0300	T211 0300
T231 0400	T239 0400	T197 0400	T201 0400	T205 0400	T227 0400	T209 0400	T211 0400
T231 0500	T239 0500	T197 0500	T201 0500	T205 0500	T227 0500	T209 0500	T211 0500
T231 0600	T239 0600	T197 0600	T201 0600	T205 0600	T227 0600	T209 0600	T211 0600
T231 0800	T239 0800	T197 0800	T201 0800	T205 0800	T227 0800	T209 0800	T211 0800
T231 1000	T239 1000	T197 1000	T201 1000	T205 1000	T227 1000	T209 1000	T211 1000
T232	T240	T199	T202	T206	T228	T210	T212
•	T240 0600	T199 0600	T202 0600	•	•	•	•
•	•	T199 0800	T202 0800	•	•	•	•
•	•	T199 1000	T202 1000	•	•	•	•
T232 1200	T240 1200	T199 1200	T202 1200	T206 1200	T228 1200	T210 1200	T212 1200
	T240 1400	T199 1400	T202 1400	T206 1400	T228 1400	T210 1400	T212 1400
	T240 1600	T199 1600	T202 1600	T206 1600	T228 1600	T210 1600	T212 1600
	T240 1800	T199 1800	T202 1800	T206 1800	T228 1800	T210 1800	T212 1800
	T240 2000	T199 2000	T202 2000	T206 2000	T228 2000	T210 2000	T212 2000
		T249	T251	T252	T254		
		T249 0604	T251 0604	T252 0604	T254 0604		
		T249 0805	T251 0805	•	T254 0805		
		T249 1005	T251 1005	T252 1005	T254 1005		
		T249 1006	T251 1006	•	T254 1006		
		T249 1205	T251 1205	T252 1205	T254 1205		
		T249 1206	T251 1206	T252 1206	T254 1206		
		•	•	T252 1207	T254 1207		
		•	•	T252 1406	T254 1406		
		T249 1407	T251 1407	T252 1407	T254 1407		
		•	•		T254 1607		
		UNC, UNF, G(BSPF)	UNC, UNF, G(BSPF)	UNC, UNF, G(BSPF)	UNC	UNC	UNC

D153

D177

D153 / D356

D153 / D356

D153

D155 / D323

D155 / D323

D155 / D323



•Available on request as special manufacture. Subject to lead time. •可定制。

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Taps Metric - For Tapping Through Holes

suttontools

Speed & Feeds - refer page 49

切削速度及进给、请参阅第49页



DIN 371

DIN 376

DIN 374

60°
M60°
MF

Product Name 产品名称

Discount Group 折扣组

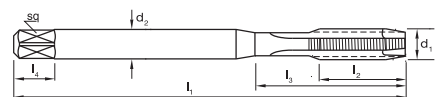
Material 材料

Surface Finish 表面处理

Application 色环及应用

Geometry 几何结构

Chamfer 倒角



尺寸参考

螺距

Limit & Nut Tolerance 精度及螺母容许公差

Size Ref.	d ₁	Pitch	l ₁	l ₂	l ₃	d ₂	sq	z	Drill Ø
DIN 371 REINFORCED SHANK									
0300	M 3	x 0.5	56	11	18	3.5	2.7	3	2.5
0400	M 4	x 0.7	63	13	21	4.5	3.4	3	3.3
0500	M 5	x 0.8	70	16	25	6.0	4.9	3	4.2
0600	M 6	x 1	80	19	30	6.0	4.9	3	5.0
0800	M 8	x 1.25	90	22	35	8.0	6.2	3	6.8
1000	M 10	x 1.5	100	24	39	10.0	8.0	3	8.5
DIN 376 REDUCED SHANK									
0600	M 6	x 1	80	19	-	4.5	3.4	3	5.0
0800	M 8	x 1.25	90	22	-	6.0	4.9	3	6.8
1000	M 10	x 1.5	100	24	-	7.0	5.5	3	8.5
1200	M 12	x 1.75	110	28	-	9.0	7.0	3	10.2
1400	M 14	x 2	110	30	-	11.0	9.0	3	12.0
1600	M 16	x 2	110	32	-	12.0	9.0	4	14.0
1800	M 18	x 2.5	125	34	-	14.0	11.0	4	15.5
2000	M 20	x 2.5	140	34	-	16.0	12.0	4	17.5
DIN 374 FINE PITCH - REDUCED SHANK									
0604	MF 6	x 0.75	80	14	-	4.5	3.4	3	5.3
0805	MF 8	x 1	90	22	-	6.0	4.9	3	7.0
1005	MF 10	x 1	90	20	-	7.0	5.5	3	9.0
1006	MF 10	x 1.25	100	24	-	7.0	5.5	3	8.8
1205	MF 12	x 1	100	22	-	9.0	7.0	3	11.0
1206	MF 12	x 1.25	100	22	-	9.0	7.0	3	10.8
1207	MF 12	x 1.5	100	22	-	9.0	7.0	3	10.5
1406	MF 14	x 1.25	100	22	-	11.0	9.0	3	12.8
1407	MF 14	x 1.5	100	22	-	11.0	9.0	3	12.5
1607	MF 16	x 1.5	100	22	-	12.0	9.0	3	14.5

Other Available Thread Forms 可供应右列的其他螺纹

Gun N / 先端 N	Gun N / 先端 N	Black Magic	Gun W / 先端 W
D0402	D0406	D0410	D0402
HSSE V3	HSSE V3	PM-HSSE V3	HSSE V3
Blu 氮化处理	TiN 氮化钛	Hardlube HL涂层	Ni 氮化处理
N	N	UNI	W
Normal	Normal	Special Relief	
Form B / 4.5 x P	Form B / 4.5 x P	Form B / 4.5 x P	Form B / 4.5 x P
ISO 2 / 6H	ISO 2 / 6H	6HX	ISO 2 / 6H
Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
T102	T104	T687	T122
T102 0300	T104 0300	T687 0300	T122 0300
T102 0400	T104 0400	T687 0400	T122 0400
T102 0500	T104 0500	T687 0500	T122 0500
T102 0600	T104 0600	T687 0600	T122 0600
T102 0800	T104 0800	T687 0800	T122 0800
T102 1000	T104 1000	T687 1000	T122 1000
T103	T105	T688	T123
T103 0600	T105 0600		
T103 0800	T105 0800		
T103 1000	T105 1000		
T103 1200	T105 1200	T688 1200	T123 1200
T103 1400	T105 1400	T688 1400	
T103 1600	T105 1600	T688 1600	T123 1600
T103 1800	T105 1800	T688 1800	
T103 2000	T105 2000	T688 2000	T123 2000
T156	T157	T689	
T156 0604	T157 0604	T689 0604	
T156 0805	T157 0805	T689 0805	
T156 1005	T157 1005	T689 1005	
T156 1006	T157 1006	T689 1006	
T156 1205	T157 1205	T689 1205	
T156 1206	T157 1206	T689 1206	
T156 1207	T157 1207	T689 1207	
T156 1406	T157 1406	T689 1406	
T156 1407	T157 1407		
T156 1607	T157 1607		
UNC, G(BSPF)	UNC, UNF, G(BSPF)	UNC, UNF, G(BSPF)	

Recommended Tapping Drill

推荐的底孔钻头

D151

D151

D155 / D323

D177





Gun W / 先端 W	Gun W AZ / 先端 W AZ	Gun VA / 先端 VA	Gun VADH / 先端 VADH	Gun VA PM / 先端 VA PM	Gun NH / 先端 NH	Gun H / 先端 H	Gun H / 先端 H
D0402	D0402	D0402	D0408	D0408	D0410	D0402	D0408
HSSE V3	HSSE V3	HSSE V3	PM-HSSE V3	PM-HSSE V3	PM-HSSE V3	PM-HSS Co	PM-HSS Co
Blu 氧化处理	BrT 无处理	Blu 氧化处理	TiCN 碳氮化钛	TiCN 碳氮化钛	TiAlN 氮化铝钛	Blu 氧化处理	TiCN 碳氮化钛
W	Sticky Material	VA	VADH	VA PM	NH	H	H
	Interrupted Threads	Special Relief	Thread Length =10 x P	Special Relief		Low Relief	Low Relief
Form B / 4.5 x P	Form B / 4.5 x P	Form B / 4.5 x P	Form B / 4.5 x P	Form B / 4.5 x P	Form B / 4.5 x P	Form B / 4.5 x P	Form B / 4.5 x P
ISO 2 / 6H	ISO 2 / 6H	ISO 2 / 6H	6HX	6HX	ISO 2 / 6H	6HX	6HX
Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
T124	T128	T110	T120	T116	T140	T144	T146
T124 0300	T128 0300	T110 0300	T120 0300	T116 0300	T140 0300	T144 0300	T146 0300
T124 0400	T128 0400	T110 0400	T120 0400	T116 0400	T140 0400	T144 0400	T146 0400
T124 0500	T128 0500	T110 0500	T120 0500	T116 0500	T140 0500	T144 0500	T146 0500
T124 0600	T128 0600	T110 0600	T120 0600	T116 0600	T140 0600	T144 0600	T146 0600
T124 0800	T128 0800	T110 0800	T120 0800	T116 0800	T140 0800	T144 0800	T146 0800
T124 1000	T128 1000	T110 1000	T120 1000	T116 1000	T140 1000	T144 1000	T146 1000
T125	T129	T111	T121	T117	T141	T145	T147
•	•	T111 0600	•	•	•	•	•
•	•	T111 0800	•	•	•	•	•
•	•	T111 1000	•	•	•	•	•
T125 1200	T129 1200	T111 1200	T121 1200	T117 1200	T141 1200	T145 1200	T147 1200
•	T129 1400	T111 1400	T121 1400	T117 1400	T141 1400	T145 1400	T147 1400
T125 1600	T129 1600	T111 1600	T121 1600	T117 1600	T141 1600	T145 1600	T147 1600
•		T111 1800	T121 1800	T117 1800	T141 1800	T145 1800	T147 1800
T125 2000		T111 2000	T121 2000	T117 2000	T141 2000	T145 2000	T147 2000
		T158		T160	T163		
		T158 0604		T160 0604	T163 0604		
		T158 0805		•	T163 0805		
		T158 1005		T160 1005	T163 1005		
		T158 1006		•	T163 1006		
		T158 1205		T160 1205	T163 1205		
		T158 1206		T160 1206	T163 1206		
		T158 1207		T160 1207	T163 1207		
		T158 1406		T160 1406	T163 1406		
		T158 1407		•	T163 1407		
		•		•	T163 1607		
		UNC, UNF, G(BSPF)		UNC, UNF, G(BSPF)	UNC	UNC	UNC

D177

D177

D153 / D356

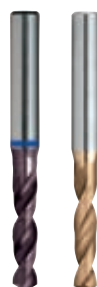
D153 / D356

D153 / D356

D155 / D323

D155 / D323

D155 / D323



•Available on request as special manufacture. Subject to lead time. •可定制.

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Taps Metric, For Tapping Blind/Through Holes

suttontools

- For through & blind holes

T292 - For use in grey cast iron (GG)

T670 - For use in Al >10% Si & cast iron (GGG)

T335/T357 - For production tapping in die cast materials

- 通孔及盲孔用

T292 - 灰铸铁(GG)用

T670 - 球墨铸铁(GGG)及压铸铝 >10% Si用

T335/T357 - 压铸件用



Product Name 产品名称

Discount Group 折扣组

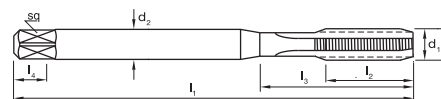
Material 材料

Surface Finish 表面处理

Application 色环及应用

Geometry 几何结构

Chamfer 倒角



尺寸参考

螺距

Limit & Nut Tolerance 精度及螺母容许公差

Size Ref.	d ₁	Pitch	l ₁	l ₂	l ₃	d ₂	sq	z	Drill Ø
DIN 371 REINFORCED SHANK									
0300	M 3	x 0.5	56	11	18	3.5	2.7	4	2.5
0400	M 4	x 0.7	63	13	21	4.5	3.4	4	3.3
0500	M 5	x 0.8	70	16	25	6.0	4.9	4	4.2
0600	M 6	x 1	80	19	30	6.0	4.9	4	5.0
0800	M 8	x 1.25	90	22	35	8.0	6.2	4	6.8
1000	M 10	x 1.5	100	24	39	10.0	8.0	4	8.5
DIN 376 REDUCED SHANK									
0600	M 6	x 1	80	19	-	4.5	3.4	4	5.0
0800	M 8	x 1.25	90	22	-	6.0	4.9	4	6.8
1000	M 10	x 1.5	100	24	-	7.0	5.5	4	8.5
1200	M 12	x 1.75	110	28	-	9.0	7.0	4	10.2
1400	M 14	x 2	110	30	-	11.0	9.0	4	12.0
1600	M 16	x 2	110	32	-	12.0	9.0	4	14.0
2000	M 20	x 2.5	140	34	-	16.0	12.0	4	17.5
DIN 374 FINE PITCH - REDUCED SHANK									
0403	MF 4	x 0.5	63	10	-	2.8	2.1	4	3.5
0503	MF 5	x 0.5	70	12	-	3.5	2.7	4	4.5
0604	MF 6	x 0.75	80	14	-	4.5	3.4	4	5.3
0805	MF 8	x 1	90	22	-	6.0	4.9	4	7.0
1005	MF 10	x 1	90	20	-	7.0	5.5	4	9.0
1006	MF 10	x 1.25	100	24	-	7.0	5.5	4	8.8
1206	MF 12	x 1.25	100	22	-	9.0	7.0	4	10.8
1207	MF 12	x 1.5	100	22	-	9.0	7.0	4	10.5
1406	MF 14	x 1.25	100	22	-	11.0	9.0	4	12.8
1407	MF 14	x 1.5	100	22	-	11.0	9.0	4	12.5
1607	MF 16	x 1.5	100	22	-	12.0	9.0	4	14.5
1807	MF 18	x 1.5	110	25	-	14.0	11.0	4	16.5
2007	MF 20	x 1.5	125	25	-	16.0	12.0	4	18.5



Straight GG	Straight GG	Straight DC	Straight DC
D0408	D0414	D0408	D0408
HSSE V3	VHM 硬质合金	PM-HSS Co	PM-HSS Co
TICN 氮化钛	TICN 氮化钛	TICN 氮化钛	TICN 氮化钛
GG	GG	Die Cast	Die Cast
Low Relief	Low Relief		IK 内冷
Form C / 2.5 x P	Form C / 2.5 x P	Form E / 1.5 x P	Form E / 1.5 x P
6HX	6H	6HX	6HX
Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
T292	T670	T335	T357
T292 0300	•		
T292 0400	•		
T292 0500	•		
T292 0600	T670 0600	T335 0600	T357 0600
T292 0800	T670 0800	T335 0800	T357 0800
T292 1000	T670 1000	T335 1000	T357 1000
T293	T671	T336	T358
T293 0600	•		
T293 0800	•		
T293 1000	•		
T293 1200	T671 1200	T336 1200	T358 1200
T293 1400	•	T336 1400	T358 1400
T293 1600	T671 1600	T336 1600	T358 1600
T293 2000	•	T336 2000	T358 2000
T301	T743	T668	T669
T301 0403	•		
T301 0503	•		
T301 0604	•		
T301 0805	•		
T301 1005	•		
T301 1006	•	T668 1006	T669 1006
T301 1206	•		
T301 1207	•	T668 1207	T669 1207
T301 1406	•		
T301 1407	•	T668 1407	T669 1407
T301 1607	•	T668 1607	T669 1607
T301 1807	•		
T301 2007	•		

Recommended Tapping Drill

推荐的底孔钻头

D155 / D323

D155 / D323

D356

D356



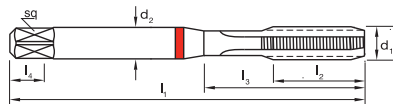
Taps Metric, For Tapping Blind/Through Holes

suttontools

- Suitable for machine operations
- Depths up to approx. $1.5 \times d_1$

T294/T295 - Use in hardened steels 42-52 HRc
T296/T297 - Use in hardened steels 50-60 HRc

- 适合机用
 - 攻牙深度 $1.5 \times d_1$
- T294/T295 - 加工硬度 42-52 HRc
T296/T297 - 加工硬度 50-60 HRc



尺寸参考 螺距 Limit & Nut Tolerance 精度及螺母容许公差

Size Ref.	d ₁	Pitch	l ₁	l ₂	l ₃	d ₂	sq	z	Drill Ø	Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
SUTTON STD REINFORCED SHANK										T294	T295	T296	T297
0300	M 3	x 0.50	46	11	18	3.5	2.7	4	2.55	T294 0300	T295 0300	T296 0300	•
0400	M 4	x 0.70	52	13	21	4.5	3.4	4	3.4	T294 0400	T295 0400	T296 0400	•
0500	M 5	x 0.80	60	16	25	6.0	4.9	4	4.3	T294 0500	T295 0500	T296 0500	•
0600	M 6	x 1.00	62	19	30	6.0	4.9	4	5.1	T294 0600	T295 0600	T296 0600*	•*
SUTTON STD REDUCED SHANK													
0800	M 8	x 1.25	70	22	-	6.0	4.9	5	6.9	T294 0800	T295 0800	T296 0800	•
1000	M 10	x 1.50	75	24	-	7.0	5.5	5	8.6	T294 1000	T295 1000	T296 1000	•
1200	M 12	x 1.75	82	29	-	9.0	7.0	5	10.3	T294 1200	T295 1200	T296 1200	•
1600	M 16	x 2.00	95	32	-	12.0	9.0	5	14.1	T294 1600	T295 1600	T296 1600†	•†
2000	M 20	x 2.50	105	37	-	16.0	12.0	5	17.7	T294 2000	T295 2000	T296 2000†	•†
SUTTON STD FINE PITCH - REDUCED SHANK										T343	T344	T345	T346
0805	8	x 1.00	70	22	-	6.0	4.9	5	7.1	•	•	T345 0805	T346 0805
1005	10	x 1.00	75	24	-	7.0	5.5	5	9.1	•	•	T345 1005	T346 1005
1006	10	x 1.25	75	24	-	7.0	5.5	5	8.9	•	•	T345 1006	T346 1006
1205	12	x 1.00	82	29	-	9.0	7.0	5	11.1	•	•	•	•
1206	12	x 1.25	82	29	-	9.0	7.0	5	10.9	•	•	T345 1206	T346 1206
1207	12	x 1.50	82	29	-	9.0	7.0	5	10.6	•	•	T345 1207	T346 1207
1407	14	x 1.50	88	30	-	11.0	9.0	6	12.6	•	•	•	•
1607	16	x 1.50	95	32	-	12.0	9.0	6	14.6	•	•	•	•
2007	20	x 1.50	105	37	-	16.0	12.0	6	18.6	•	•	•	•



Recommended Tapping Drill

推荐的底孔钻头

D323

D323

D323

D323



*5 Flute 16 Flute *5 刃 16 刃

*Available on request as special manufacture. Subject to lead time. *可定制。

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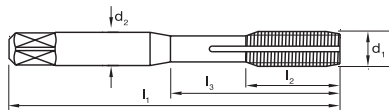
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Taps Metric, Forming, Single Coolant Groove

suttontools

- Depths up to approx. 3 x d₁
- For cold forming of threads in materials with good flow characteristics
- Ni - For non-ferrous materials
- Blue - For ferrous materials
- TiN - For materials up to 1000 N/mm²
- TiCN - For difficult materials

- 加工深度可达 3 x d₁
- 用于延展性良好的材料
- Ni (氮化处理) - 非铁金属用
- Blu (氧化处理) - 钢用
- TiN (氮化钛) - 高性能泛用
- TiCN (碳氮化钛) - 难加工材料用



尺寸参考 螺距 精度

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

色环及应用

Geometry 几何结构

Size Ref.	d ₁	Pitch	Limit Style*	l ₁	l ₂	l ₃	d ₂	sq	z	Tap hole min/max	
	P LEAD P 型-4牙(通孔用)										
0100	M 1	x 0.25	GH4	1	30	7	- 3.0	2.5	4	0.90 - 0.92	
0110	M 1.1	x 0.25	GH4	1	32	8	- 3	3	4	1.00 - 1.02	
0120	M 1.2	x 0.25	GH4	1	32	8	- 3.0	2.5	4	1.10 - 1.12	
0140	M 1.4	x 0.30	GH4	1	34	9	- 3.0	2.5	4	1.27 - 1.29	
0145	M 1.4	x 0.30	GH5	1	34	9	- 3.0	2.5	4	1.28 - 1.31	
0160	M 1.6	x 0.35	GH4	1	36	10	- 3.0	2.5	4	1.44 - 1.47	
0170	M 1.7	x 0.35	GH4	1	36	11	- 3.0	2.5	4	1.54 - 1.57	
0175	M 1.7	x 0.35	GH5	1	36	11	- 3.0	2.5	4	1.55 - 1.58	
0180	M 1.8	x 0.35	GH4	1	36	11	- 3.0	2.5	4	1.64 - 1.67	
0200	M 2	x 0.40	GH4	1	40	12	- 3.0	2.5	4	1.81 - 1.84	
0205	M 2	x 0.40	GH5	1	40	12	- 3.0	2.5	4	1.82 - 1.86	
0220	M 2.2	x 0.45	GH4	1	42	13	- 3.0	2.5	4	1.98 - 2.02	
0230	M 2.3	x 0.40	GH4	1	42	13	- 3.0	2.5	4	2.11 - 2.14	
0250	M 2.5	x 0.45	GH4	1	44	14	- 3.0	2.5	4	2.28 - 2.32	
0255	M 2.5	x 0.45	GH5	1	44	14	- 3.0	2.5	4	2.29 - 2.33	
0260	M 2.6	x 0.45	GH4	1	44	14	- 3.0	2.5	4	2.38 - 2.42	
0300	M 3	x 0.50	GH5	2	46	9	18	4.0	3.2	4	2.76 - 2.80
0306	M 3	x 0.50	GH6	2	46	9	18	4.0	3.2	4	2.78 - 2.82
0307	M 3	x 0.50	GH7	2	46	9	18	4.0	3.2	4	2.79 - 2.83
0350	M 3.5	x 0.60	GH5	2	48	9	18	4.0	3.2	4	3.20 - 3.25
0400	M 4	x 0.70	GH6	2	52	10	20	5.0	4.0	4	3.65 - 3.71
0500	M 5	x 0.80	GH6	2	60	11	22	5.5	4.5	4	4.59 - 4.66
0600	M 6	x 1.00	GH7	2	62	12	24	6.0	4.5	4	5.49 - 5.57
0700	M 7	x 1.00	GH7	3	65	18	- 6.2	5.0	4	6.49 - 6.57	
0800	M 8	x 1.25	GH7	3	70	18	- 6.2	5.0	6	7.34 - 7.44	
1000	M 10	x 1.50	GH7	3	75	19	- 7.0	5.5	6	9.18 - 9.31	
	B LEAD B 型-2牙(盲孔用)										
0100	M 1	x 0.25	GH4	1	30	7	- 3.0	2.5	4	0.90 - 0.92	
0110	M 1.1	x 0.25	GH4	1	32	8	- 3	3	4	1.00 - 1.02	
0120	M 1.2	x 0.25	GH4	1	32	8	- 3.0	2.5	4	1.10 - 1.12	
0140	M 1.4	x 0.30	GH5	1	34	9	- 3.0	2.5	4	1.27 - 1.29	
0160	M 1.6	x 0.35	GH4	1	36	10	- 3.0	2.5	4	1.44 - 1.47	
0170	M 1.7	x 0.35	GH5	1	36	11	- 3.0	2.5	4	1.54 - 1.57	
0180	M 1.8	x 0.35	GH4	1	36	11	- 3.0	2.5	4	1.64 - 1.67	
0200	M 2	x 0.40	GH4	1	40	12	- 3.0	2.5	4	1.81 - 1.84	
0220	M 2.2	x 0.45	GH4	1	42	13	- 3.0	2.5	4	1.98 - 2.02	
0230	M 2.3	x 0.40	GH4	1	42	13	- 3.0	2.5	4	2.11 - 2.14	
0250	M 2.5	x 0.45	GH4	1	44	14	- 3.0	2.5	4	2.28 - 2.32	
0260	M 2.6	x 0.45	GH4	1	44	14	- 3.0	2.5	4	2.38 - 2.42	
0300	M 3	x 0.50	GH5	2	46	9	19	4.0	3.2	4	2.76 - 2.80
0350	M 3.5	x 0.60	GH5	2	48	9	23	4.0	3.2	4	3.20 - 3.25
0400	M 4	x 0.70	GH6	2	52	10	21	5.0	4.0	4	3.65 - 3.71
0500	M 5	x 0.80	GH6	2	60	11	24	5.5	4.5	4	4.59 - 4.66
0600	M 6	x 1.00	GH7	2	62	12	31	6.0	4.5	4	5.49 - 5.57
0700	M 7	x 1.00	GH7	3	65	18	- 6.2	5.0	4	6.49 - 6.57	
0800	M 8	x 1.25	GH7	3	70	18	- 6.2	5.0	6	7.34 - 7.44	
1000	M 10	x 1.50	GH7	3	75	19	- 7.0	5.5	6	9.18 - 9.31	



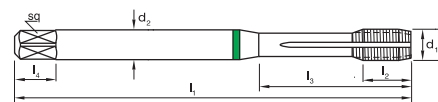
D0606	D0606	D0614	D0614
HSS Co.8	HSS Co.8	HSS Co.8	PM-HSSE V3
Ni 氮化处理	Blu 氧化处理	TiN 氮化钛	TiCN 碳氮化钛
General Production	General Production	Medium Production	High Production
一般产量	一般产量	中/高产量	高产量
1 Coolant Groove M3+	1 Coolant Groove M3+	1 Coolant Groove M3+	1 Coolant Groove M3+
Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
T510	T512	T514	T629
T510 0100	T512 0100	T514 0100	T629 0100
T510 0110	T512 0110	T514 0110	
T510 0120	T512 0120	T514 0120	T629 0120
T510 0140	T512 0140	T514 0140	T629 0140
		T514 0145	
T510 0160	T512 0160	T514 0160	T629 0160
T510 0170	T512 0170	T514 0170	T629 0170
		T514 0175	
T510 0180	T512 0180	T514 0180	T629 0180
T510 0200	T512 0200	T514 0200	T629 0200
		T514 0205	
T510 0220	T512 0220	T514 0220	T629 0220
T510 0230	T512 0230	T514 0230	T629 0230
T510 0250	T512 0250	T514 0250	T629 0250
T510 0255	T512 0255	T514 0255	
T510 0260	T512 0260	T514 0260	T629 0260
T510 0300	T512 0300	T514 0300	T629 0300
T510 0306	T512 0306	T514 0306	
		T514 0307	
T510 0350	T512 0350	T514 0350	T629 0350
T510 0400	T512 0400	T514 0400	T629 0400
T510 0500	T512 0500	T514 0500	T629 0500
T510 0600	T512 0600	T514 0600	T629 0600
T510 0700	T512 0700	T514 0700	
T510 0800	T512 0800	T514 0800	T629 0800
T510 1000	T512 1000	T514 1000	T629 1000
T511	T513	T515	T630
T511 0100	T513 0100	T515 0100	T630 0100
T511 0110	T513 0110	T515 0110	
T511 0120	T513 0120	T515 0120	T630 0120
T511 0140	T513 0140	T515 0140	T630 0140
T511 0160	T513 0160	T515 0160	T630 0160
T511 0170	T513 0170	T515 0170	T630 0170
T511 0180	T513 0180	T515 0180	T630 0180
T511 0200	T513 0200	T515 0200	T630 0200
T511 0220	T513 0220	T515 0220	T630 0220
T511 0230	T513 0230	T515 0230	T630 0230
T511 0250	T513 0250	T515 0250	T630 0250
T511 0260	T513 0260	T515 0260	T630 0260
T511 0300	T513 0300	T515 0300	T630 0300
T511 0350	T513 0350	T515 0350	T630 0350
T511 0400	T513 0400	T515 0400	T630 0400
T511 0500	T513 0500	T515 0500	T630 0500
T511 0600	T513 0600	T515 0600	T630 0600
T511 0700	T513 0700	T515 0700	
T511 0800	T513 0800	T515 0800	T630 0800
T511 1000	T513 1000	T515 1000	T630 1000

Taps - Thread Forming

suttontools

- SPM for superior performance
- Suitable for materials with >10% elongation
- Through or blind holes
- Depths up to $3 \times d_1$

- 高钴粉末钢及硬质合金可大大提升效能
- 适用于延展率>10%的材料
- 通孔及盲孔合用
- 加工深度可达 $3 \times d_1$



尺寸参考 螺距 Limit & Nut Tolerance 精度及螺母容许公差

Size Ref.	d ₁	Pitch	l ₁	l ₂	l ₃	d ₂	sq	z	drill Ø
DIN 2174 REINFORCED SHANK									
0200	M 2	x 0.4	45	6	-	2.8	2.1	1.8	
0220	M 2.2	x 0.45	45	7	-	2.8	2.1	2.0	
0230	M 2.3	x 0.4	45	7	-	2.8	2.1	2.1	
0250	M 2.5	x 0.45	50	8	-	2.8	2.1	2.3	
0260	M 2.6	x 0.45	50	8	-	2.8	2.1	2.4	
0300	M 3	x 0.5	56	9	18	3.5	2.7	2.8	
0350	M 3.5	x 0.6	56	11	20	4.0	3.0	3.2	
0400	M 4	x 0.7	63	12	21	4.5	3.4	3.7	
0500	M 5	x 0.8	70	13	25	6.0	4.9	4.6	
0600	M 6	x 1	80	15	30	6.0	4.9	5.5	
0700	M 7	x 1	80	15	30	7.0	5.5	6.5	
0800	M 8	x 1.25	90	18	35	8.0	6.2	7.4	
1000	M 10	x 1.5	100	20	39	10.0	8.0	9.3	
DIN 2174 REDUCED SHANK									
1200	M 12	x 1.75	110	23	-	9.0	7.0	11.2	
1400	M 14	x 2	110	25	-	11.0	9.0	13.1	
1600	M 16	x 2	110	25	-	12.0	9.0	15.1	
1800	M 18	x 2.5	125	30	-	14.0	11.0	16.9	
2000	M 20	x 2.5	140	30	-	16.0	12.0	18.9	



Product Name 产品名称

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Geometry 几何结构

Chamfer 倒角

RLC	RLC	RLC	RLC
D0410	D0410	D0414	D0414
SPM 高钴粉末钢	SPM 高钴粉末钢	VHM 硬质合金	VHM 硬质合金
TiAIN 氮化铝钛	TiAIN 氮化铝钛	TiAIN 氮化铝钛	TiAIN 氮化铝钛
UNI	UNI	N	N
Multi Coolant Groove	IK 内冷	Multi Coolant Groove	Multi Coolant Groove IK 内冷
Form C / 2.5 x P	Form C / 2.5 x P	Form C / 2.5 x P	Form C / 2.5 x P
6HX	6HX	6HX	6HX
Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
T325	T327	T682	T747
T325 0200			
•			
•			
T325 0250			
•			
T325 0300		•	
•			
T325 0400		•	
T325 0500	T327 0500	•	
T325 0600	T327 0600	•	•
•	•		
T325 0800	T327 0800	•	•
T325 1000	T327 1000	•	•
T326	T328	T683	T748
T326 1200	T328 1200	•	•
T326 1400	•	•	•
T326 1600	•	•	•
•	•		
•	•		

Recommended Tapping Drill

推荐的底孔钻头

D155

D155

D323

D323



•Available on request as special manufacture. Subject to lead time. •可定制.

www.sutton.com.au

请参阅我们在线全系列完整产品目录 Refer to our complete Industrial Catalogue online for entire range

Drills Carbide 3 x D

suttontools

D323/D329

- Suitable for materials up to 1400N/mm²
- Micro geometry & surface conditioning for optimal chip control
- AlCrN for maximum tool life

D356

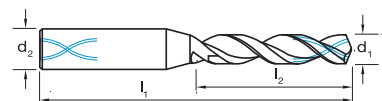
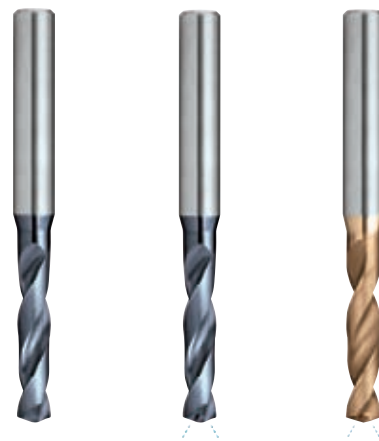
- Excellent solution for stainless steels & difficult super alloy type materials
- Optimised geometry ensures no work hardening and high productivity
- HELICA for outstanding oxidation resistance and hot hardness

D323/D329

- 钢件用、可达1400N/mm²
- 微型几何设计及表面微处理、具有最佳切屑控制效果
- 采用氮化铝铬涂层、最大程度延长刀具的使用寿命

D356

- 针对不锈钢及耐热合金等难削材
- 优化的几何设计、确保无加工硬化及最高生产率
- 专用HELICA涂层、超卓的耐高温氧化及红硬性



尺寸参考

Size Ref.	d ₁ (m7)	l ₁	l ₂	d ₂ (h6)
0300	3.0	62	20	6
0310	3.1	62	20	6
0318	3.18 1/8	62	20	6
0320	3.2	62	20	6
0330	3.3	62	20	6
0340	3.4	62	20	6
0350	3.5	62	20	6
0357	3.57 9/64	62	20	6
0360	3.6	62	20	6
0370	3.7	62	20	6
0380	3.8	66	24	6
0390	3.9	66	24	6
0397	3.97 5/32	66	24	6
0400	4.0	66	24	6
0410	4.1	66	24	6
0420	4.2	66	24	6
0430	4.3	66	24	6
0437	4.37 11/64	66	24	6
0440	4.4	66	24	6
0450	4.5	66	24	6
0460	4.6	66	24	6
0470	4.7	66	24	6
0476	4.76 3/16	66	24	6
0480	4.8	66	28	6
0490	4.9	66	28	6
0500	5.0	66	28	6
0510	5.1	66	28	6
0516	5.16 13/64	66	28	6
0520	5.2	66	28	6
0530	5.3	66	28	6
0540	5.4	66	28	6
0550	5.5	66	28	6
0556	5.56 7/32	66	28	6
0560	5.6	66	28	6
0570	5.7	66	28	6
0580	5.8	66	28	6
0590	5.9	66	28	6
0595	5.95 15/64	66	28	6
0600	6.0	66	28	6
0610	6.1	79	34	8
0620	6.2	79	34	8
0630	6.3	79	34	8
0635	6.35 1/4	79	34	8
0640	6.4	79	34	8
0650	6.5	79	34	8
0660	6.6	79	34	8
0670	6.7	79	34	8
0676	6.76 17/64	79	34	8
0680	6.8	79	34	8
0690	6.9	79	34	8

Catalogue Code 目录代码

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Geometry 几何结构

Point Type 钻尖类别

Shank Form (DIN 6535) 柄径型

D323	D329	D356
A0210	A0210	A0210
VHM 硬质合金	VHM 硬质合金	VHM 硬质合金
AlCrN 氮化铝铬	AlCrN 氮化铝铬	HELICA
N	N	VA
R30	R30 - IK 内冷	R30 - IK 内冷
140° Form C	140° Form C	140° 4 Facet Form C
HA	HA	HA
Item # (货号)	Item # (货号)	Item # (货号)
D323 0300	D329 0300	D356 0300
D323 0310	D329 0310	D356 0310
D323 0318	D329 0318	D356 0318
D323 0320	D329 0320	D356 0320
D323 0330	D329 0330	D356 0330
D323 0340	D329 0340	D356 0340
D323 0350	D329 0350	D356 0350
D323 0357	D329 0357	D356 0357
D323 0360	D329 0360	D356 0360
D323 0370	D329 0370	D356 0370
D323 0380	D329 0380	D356 0380
D323 0390	D329 0390	D356 0390
D323 0397	D329 0397	D356 0397
D323 0400	D329 0400	D356 0400
D323 0410	D329 0410	D356 0410
D323 0420	D329 0420	D356 0420
D323 0430	D329 0430	D356 0430
D323 0437	D329 0437	D356 0437
D323 0440	D329 0440	D356 0440
D323 0450	D329 0450	D356 0450
D323 0460	D329 0460	D356 0460
D323 0470	D329 0470	D356 0470
D323 0476	D329 0476	D356 0476
D323 0480	D329 0480	D356 0480
D323 0490	D329 0490	D356 0490
D323 0500	D329 0500	D356 0500
D323 0510	D329 0510	D356 0510
D323 0516	D329 0516	D356 0516
D323 0520	D329 0520	D356 0520
D323 0530	D329 0530	D356 0530
D323 0540	D329 0540	D356 0540
D323 0550	D329 0550	D356 0550
D323 0556	D329 0556	D356 0556
D323 0560	D329 0560	D356 0560
D323 0570	D329 0570	D356 0570
D323 0580	D329 0580	D356 0580
D323 0590	D329 0590	D356 0590
D323 0595	D329 0595	D356 0595
D323 0600	D329 0600	D356 0600
D323 0610	D329 0610	D356 0610
D323 0620	D329 0620	D356 0620
D323 0630	D329 0630	D356 0630
D323 0635	D329 0635	D356 0635
D323 0640	D329 0640	D356 0640
D323 0650	D329 0650	D356 0650
D323 0660	D329 0660	D356 0660
D323 0670	D329 0670	D356 0670
D323 0676	D329 0676	D356 0676
D323 0680	D329 0680	D356 0680
D323 0690	D329 0690	D356 0690

Drills Carbide 3 x D

suttontools

D323/D329

- Suitable for materials up to 1400N/mm²
- Micro geometry & surface conditioning for optimal chip control
- AlCrN for maximum tool life

D356

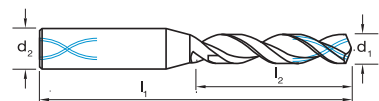
- Excellent solution for stainless steels & difficult super alloy type materials
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D323/D329

- 钢件用、可达1400N/mm²
- 微型几何设计及表面微处理、具有最佳切屑控制效果
- 采用氮化铝铬涂层、最大程度延长刀具的使用寿命

D356

- 针对不锈钢及耐热合金等难削材
- 优化的几何设计、确保无加工硬化及最高生产率
- 专用HELICA涂层、超卓的耐高温氧化及红硬性



尺寸参考

Size Ref.	d ₁ (m7)	l ₁	l ₂	d ₂ (h6)
0700	7.0	79	34	8
0710	7.1	79	41	8
0714	7.14 9/32	79	41	8
0720	7.2	79	41	8
0730	7.3	79	41	8
0740	7.4	79	41	8
0750	7.5	79	41	8
0754	7.54 19/64	79	41	8
0760	7.6	79	41	8
0770	7.7	79	41	8
0780	7.8	79	41	8
0790	7.9	79	41	8
0794	7.94 5/16	79	41	8
0800	8.0	79	41	8
0810	8.1	89	47	10
0820	8.2	89	47	10
0830	8.3	89	47	10
0833	8.33 21/64	89	47	10
0840	8.4	89	47	10
0850	8.5	89	47	10
0860	8.6	89	47	10
0870	8.7	89	47	10
0873	8.73 11/32	89	47	10
0880	8.8	89	47	10
0890	8.9	89	47	10
0900	9.0	89	47	10
0910	9.1	89	47	10
0913	9.13 23/64	89	47	10
0920	9.2	89	47	10
0930	9.3	89	47	10
0940	9.4	89	47	10
0950	9.5	89	47	10
0953	9.53 3/8	89	47	10
0960	9.6	89	47	10
0970	9.7	89	47	10
0980	9.8	89	47	10
0990	9.9	89	47	10
0992	9.92 25/64	89	47	10
1000	10.0	89	47	10
1010	10.1	102	55	12
1020	10.2	102	55	12
1030	10.3	102	55	12
1032	10.32 13/32	102	55	12
1040	10.4	102	55	12
1050	10.5	102	55	12
1060	10.6	102	55	12
1070	10.7	102	55	12
1072	10.72 27/64	102	55	12
1080	10.8	102	55	12
1090	10.9	102	55	12

Catalogue Code 目录代码

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Geometry 几何结构

Point Type 钻尖类别

Shank Form (DIN 6535) 柄径型

D323	D329	D356
A0210	A0210	A0210
VHM 硬质合金	VHM 硬质合金	VHM 硬质合金
AlCrN 氮化铝铬	AlCrN 氮化铝铬	HELICA
N	N	VA
R30	R30 - IK 内冷	R30 - IK 内冷
140° Form C	140° Form C	140° 4 Facet Form C
HA	HA	HA
Item # (货号)	Item # (货号)	Item # (货号)
D323 0700	D329 0700	D356 0700
D323 0710	D329 0710	D356 0710
D323 0714	D329 0714	D356 0714
D323 0720	D329 0720	D356 0720
D323 0730	D329 0730	D356 0730
D323 0740	D329 0740	D356 0740
D323 0750	D329 0750	D356 0750
D323 0754	D329 0754	D356 0754
D323 0760	D329 0760	D356 0760
D323 0770	D329 0770	D356 0770
D323 0780	D329 0780	D356 0780
D323 0790	D329 0790	D356 0790
D323 0794	D329 0794	D356 0794
D323 0800	D329 0800	D356 0800
D323 0810	D329 0810	D356 0810
D323 0820	D329 0820	D356 0820
D323 0830	D329 0830	D356 0830
D323 0833	D329 0833	D356 0833
D323 0840	D329 0840	D356 0840
D323 0850	D329 0850	D356 0850
D323 0860	D329 0860	D356 0860
D323 0870	D329 0870	D356 0870
D323 0873	D329 0873	D356 0873
D323 0880	D329 0880	D356 0880
D323 0890	D329 0890	D356 0890
D323 0900	D329 0900	D356 0900
D323 0910	D329 0910	D356 0910
D323 0913	D329 0913	D356 0913
D323 0920	D329 0920	D356 0920
D323 0930	D329 0930	D356 0930
D323 0940	D329 0940	D356 0940
D323 0950	D329 0950	D356 0950
D323 0953	D329 0953	D356 0953
D323 0960	D329 0960	D356 0960
D323 0970	D329 0970	D356 0970
D323 0980	D329 0980	D356 0980
D323 0990	D329 0990	D356 0990
D323 0992	D329 0992	D356 0992
D323 1000	D329 1000	D356 1000
D323 1010	D329 1010	D356 1010
D323 1020	D329 1020	D356 1020
D323 1030	D329 1030	D356 1030
D323 1032	D329 1032	D356 1032
D323 1040	D329 1040	D356 1040
D323 1050	D329 1050	D356 1050
D323 1060	D329 1060	D356 1060
D323 1070	D329 1070	D356 1070
		D356 1072
D323 1080	D329 1080	D356 1080
D323 1090	D329 1090	D356 1090

* HB & HE Shank styles available

* HB 和 HE 柄径样式可供选购

Drills Carbide 3 x D

suttontools

D323/D329

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D356

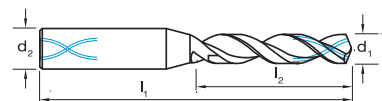
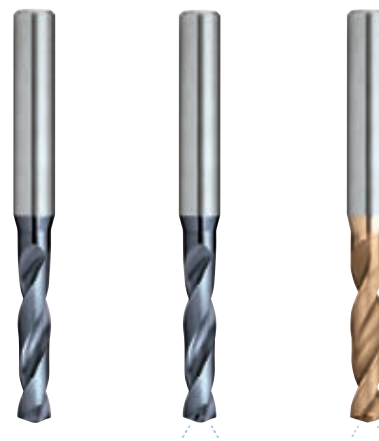
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尺寸参考

Size Ref.	d ₁ (m7)	l ₁	l ₂	d ₂ (h6)
1100	11.0	102	55	12
1110	11.1	102	55	12
1111	11.11 7/16	102	55	12
1120	11.2	102	55	12
1130	11.3	102	55	12
1140	11.4	102	55	12
1150	11.5	102	55	12
1151	11.51 29/64	102	55	12
1160	11.6	102	55	12
1170	11.7	102	55	12
1180	11.8	102	55	12
1190	11.9	102	55	12
1191	11.91 15/32	102	55	12
1200	12.0	102	55	12
1231	12.30 31/64	107	60	14
1250	12.5	107	60	14
1269	12.69 1/2	107	60	14
1280	12.8	107	60	14
1300	13.0	107	60	14
1310	13.10 33/64	107	60	14
1349	13.49 17/32	107	60	14
1350	13.5	107	60	14
1380	13.8	107	60	14
1389	13.89 35/64	107	60	14
1400	14.0	107	60	14
1429	14.29 9/16	115	65	16
1450	14.5	115	65	16
1468	14.68 37/64	115	65	16
1480	14.8	115	65	16
1500	15.0	115	65	16
1508	15.08 19/32	115	65	16
1548	15.48 39/64	115	65	16
1550	15.5	115	65	16
1580	15.8	115	65	16
1588	15.88 5/8	115	65	16
1600	16.0	115	65	16
1650	16.5	123	73	18
1667	16.67 21/32	123	73	18
1680	16.8	123	73	18
1700	17.0	123	73	18
1746	17.46 11/16	123	73	18
1750	17.5	123	73	18
1780	17.8	123	73	18
1800	18.0	123	73	18
1826	18.26 23/32	131	79	20
1850	18.5	131	79	20
1900	19.0	131	79	20
1905	19.05 3/4	131	79	20
1950	19.5	131	79	20
2000	20.0	131	79	20

Catalogue Code 目录代码

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Geometry 几何结构

Point Type 钻尖类别

Shank Form (DIN 6535) 柄径型

D323	D329	D356
A0210	A0210	A0210
VHM 硬质合金	VHM 硬质合金	VHM 硬质合金
AlCrN 氮化铝铬	AlCrN 氮化铝铬	HELICA
N	N	VA
R30	R30 - IK 内冷	R30 - IK 内冷
140° Form C	140° Form C	140° 4 Facet Form C
HA	HA	HA
Item # (货号)	Item # (货号)	Item # (货号)
D323 1100	D329 1100	D356 1100
D323 1110	D329 1110	D356 1110
D323 1111	D329 1111	D356 1111
D323 1120	D329 1120	D356 1120
D323 1130	D329 1130	D356 1130
D323 1140	D329 1140	D356 1140
D323 1150	D329 1150	D356 1150
		D356 1151
D323 1160	D329 1160	D356 1160
D323 1170	D329 1170	D356 1170
D323 1180	D329 1180	D356 1180
D323 1190	D329 1190	D356 1190
D323 1191	D329 1191	D356 1191
D323 1200	D329 1200	D356 1200
		D356 1231
D323 1250	D329 1250	D356 1250
D323 1269	D329 1269	D356 1269
D323 1280	D329 1280	D356 1280
D323 1300	D329 1300	D356 1300
		D356 1310
D323 1349	D329 1349	D356 1349
D323 1350	D329 1350	D356 1350
D323 1380	•	
		D356 1389
D323 1400	D329 1400	D356 1400
D323 1429	D329 1429	D356 1429
D323 1450	D329 1450	D356 1450
		D356 1468
D323 1480	•	
D323 1500	D329 1500	D356 1500
		D356 1508
		D356 1548
D323 1550	D329 1550	D356 1550
D323 1580	•	
D323 1588	D329 1588	D356 1588
D323 1600	D329 1600	D356 1600
D323 1650	D329 1650	D356 1650
		D356 1667
D323 1680		
D323 1700	D329 1700	D356 1700
D323 1746	D329 1746	D356 1746
D323 1750	D329 1750	D356 1750
D323 1780		
D323 1800	D329 1800	D356 1800
		D356 1826
D323 1850	D329 1850	D356 1850
D323 1900	D329 1900	D356 1900
D323 1905	D329 1905	D356 1905
D323 1950	D329 1950	D356 1950
D323 2000	D329 2000	D356 2000

*Available on request as special manufacture. Subject to lead time. •可定制。

* HB & HE Shank styles available * HB 和 HE 柄径样式可供选购

Refer to our complete Industrial Catalogue online for entire range 请参阅我们在线系列完整产品目录

www.sutton.com.au

Drills Carbide 5 x D

suttontools

D326/D332

- Suitable for materials up to 1400N/mm²
- Micro geometry & surface conditioning for optimal chip control
- AlCrN for maximum tool life

D358

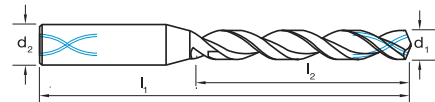
- Excellent solution for stainless steels & difficult super alloy type materials
- Optimised geometry ensures no work hardening and high productivity
- HELICA for outstanding oxidation resistance and hot hardness

D326/D332

- 钢件用、可达1400N/mm²
- 微型几何设计及表面微处理、具有最佳切屑控制效果
- 采用氮化铝铬涂层、最大程度延长刀具的使用寿命

D358

- 针对不锈钢及耐热合金等难削材
- 优化的几何设计、确保无加工硬化及最高生产率
- 专用HELICA涂层、超卓的耐高温氧化及红硬性



尺寸参考

Size Ref.	d ₁ (m7)	l ₁	l ₂	d ₂ (h6)
0300	3.0	66	28	6
0310	3.1	66	28	6
0318	3.18 1/8	66	28	6
0320	3.2	66	28	6
0330	3.3	66	28	6
0340	3.4	66	28	6
0350	3.5	66	28	6
0357	3.57 9/64	66	28	6
0360	3.6	66	28	6
0370	3.7	66	28	6
0380	3.8	74	36	6
0390	3.9	74	36	6
0397	3.97 5/32	74	36	6
0400	4.0	74	36	6
0410	4.1	74	36	6
0420	4.2	74	36	6
0430	4.3	74	36	6
0437	4.37 11/64	74	36	6
0440	4.4	74	36	6
0450	4.5	74	36	6
0460	4.6	74	36	6
0470	4.7	74	36	6
0476	4.76 3/16	74	36	6
0480	4.8	82	44	6
0490	4.9	82	44	6
0500	5.0	82	44	6
0510	5.1	82	44	6
0516	5.16 13/64	82	44	6
0520	5.2	82	44	6
0530	5.3	82	44	6
0540	5.4	82	44	6
0550	5.5	82	44	6
0556	5.56 7/32	82	44	6
0560	5.6	82	44	6
0570	5.7	82	44	6
0580	5.8	82	44	6
0590	5.9	82	44	6
0595	5.95 15/64	82	44	6
0600	6.0	82	44	6
0610	6.1	91	53	8
0620	6.2	91	53	8
0630	6.3	91	53	8
0635	6.35 1/4	91	53	8
0640	6.4	91	53	8
0650	6.5	91	53	8
0660	6.6	91	53	8
0670	6.7	91	53	8
0676	6.76 17/64	91	53	8
0680	6.8	91	53	8
0690	6.9	91	53	8

Catalogue Code 目录代码

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Geometry 几何结构

Point Type 钻尖类别

Shank Form (DIN 6535) 柄径型



D326	D332	D358
A0210	A0210	A0210
VHM 硬质合金	VHM 硬质合金	VHM 硬质合金
AlCrN 氮化铝铬	AlCrN 氮化铝铬	HELICA
N	N	VA
R30	R30 - IK 内冷	R30 - IK 内冷
140° Form C	140° Form C	140° 4 Facet Form C
HA	HA	HA
Item # (货号)	Item # (货号)	Item # (货号)
D326 0300	D332 0300	D358 0300
D326 0310	D332 0310	D358 0310
D326 0318	D332 0318	D358 0318
D326 0320	D332 0320	D358 0320
D326 0330	D332 0330	D358 0330
D326 0340	D332 0340	D358 0340
D326 0350	D332 0350	D358 0350
D326 0357	D332 0357	D358 0357
D326 0360	D332 0360	D358 0360
D326 0370	D332 0370	D358 0370
D326 0380	D332 0380	D358 0380
D326 0390	D332 0390	D358 0390
D326 0397	D332 0397	D358 0397
D326 0400	D332 0400	D358 0400
D326 0410	D332 0410	D358 0410
D326 0420	D332 0420	D358 0420
D326 0430	D332 0430	D358 0430
D326 0437	D332 0437	D358 0437
D326 0440	D332 0440	D358 0440
D326 0450	D332 0450	D358 0450
D326 0460	D332 0460	D358 0460
D326 0470	D332 0470	D358 0470
D326 0476	D332 0476	D358 0476
D326 0480	D332 0480	D358 0480
D326 0490	D332 0490	D358 0490
D326 0500	D332 0500	D358 0500
D326 0510	D332 0510	D358 0510
D326 0516	D332 0516	D358 0516
D326 0520	D332 0520	D358 0520
D326 0530	D332 0530	D358 0530
D326 0540	D332 0540	D358 0540
D326 0550	D332 0550	D358 0550
D326 0556	D332 0556	D358 0556
D326 0560	D332 0560	D358 0560
D326 0570	D332 0570	D358 0570
D326 0580	D332 0580	D358 0580
D326 0590	D332 0590	D358 0590
D326 0595	D332 0595	D358 0595
D326 0600	D332 0600	D358 0600
D326 0610	D332 0610	D358 0610
D326 0620	D332 0620	D358 0620
D326 0630	D332 0630	D358 0630
D326 0635	D332 0635	D358 0635
D326 0640	D332 0640	D358 0640
D326 0650	D332 0650	D358 0650
D326 0660	D332 0660	D358 0660
D326 0670	D332 0670	D358 0670
D326 0676	D332 0676	D358 0676
D326 0680	D332 0680	D358 0680
D326 0690	D332 0690	D358 0690

* HB & HE Shank styles available

* HB 和 HE 柄径样式可供选购

Drills Carbide 5 x D

suttontools

D326/D332

- Suitable for materials up to 1400N/mm²
- Micro geometry & surface conditioning for optimal chip control
- AlCrN for maximum tool life

D358

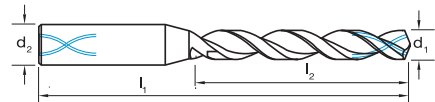
- Excellent solution for stainless steels & difficult super alloy type materials
- Optimised geometry ensures no work hardening and high productivity
- HELICA for outstanding oxidation resistance and hot hardness

D326/D332

- 钢件用、可达1400N/mm²
- 微型几何设计及表面微处理、具有最佳切屑控制效果
- 采用氮化铝铬涂层、最大程度延长刀具的使用寿命

D358

- 针对不锈钢及耐热合金等难削材
- 优化的几何设计、确保无加工硬化及最高生产率
- 专用HELICA涂层、超卓的耐高温氧化及红硬性



尺寸参考

Size Ref.	d ₁ (m7)	l ₁	l ₂	d ₂ (h6)
0700	7.0	91	53	8
0710	7.1	91	53	8
0714	7.14 9/32	91	53	8
0720	7.2	91	53	8
0730	7.3	91	53	8
0740	7.4	91	53	8
0750	7.5	91	53	8
0754	7.54 19/64	91	53	8
0760	7.6	91	53	8
0770	7.7	91	53	8
0780	7.8	91	53	8
0790	7.9	91	53	8
0794	7.94 5/16	91	53	8
0800	8.0	91	53	8
0810	8.1	103	61	10
0820	8.2	103	61	10
0830	8.3	103	61	10
0833	8.33 21/64	103	61	10
0840	8.4	103	61	10
0850	8.5	103	61	10
0860	8.6	103	61	10
0870	8.7	103	61	10
0873	8.73 11/32	103	61	10
0880	8.8	103	61	10
0890	8.9	103	61	10
0900	9.0	103	61	10
0910	9.1	103	61	10
0913	9.13 23/64	103	61	10
0920	9.2	103	61	10
0930	9.3	103	61	10
0940	9.4	103	61	10
0950	9.5	103	61	10
0953	9.53 3/8	103	61	10
0960	9.6	103	61	10
0970	9.7	103	61	10
0980	9.8	103	61	10
0990	9.9	103	61	10
0992	9.92 25/64	103	61	10
1000	10.0	103	61	10
1010	10.1	118	71	12
1020	10.2	118	71	12
1030	10.3	118	71	12
1032	10.32 13/32	118	71	12
1040	10.4	118	71	12
1050	10.5	118	71	12
1060	10.6	118	71	12
1070	10.7	118	71	12
1072	10.72 27/64	118	71	12
1080	10.8	118	71	12
1090	10.9	118	71	12

Catalogue Code 目录代码

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Geometry 几何结构

Point Type 钻尖类别

Shank Form (DIN 6535) 柄径型

D326	D332	D358
A0210	A0210	A0210
VHM 硬质合金	VHM 硬质合金	VHM 硬质合金
AlCrN 氮化铝铬	AlCrN 氮化铝铬	HELICA
N	N	VA
R30	R30 - IK 内冷	R30 - IK 内冷
140° Form C	140° Form C	140° 4 Facet Form C
HA	HA	HA
Item # (货号)	Item # (货号)	Item # (货号)
D326 0700	D332 0700	D358 0700
D326 0710	D332 0710	D358 0710
D326 0714	D332 0714	D358 0714
D326 0720	D332 0720	D358 0720
D326 0730	D332 0730	D358 0730
D326 0740	D332 0740	D358 0740
D326 0750	D332 0750	D358 0750
D326 0754	D332 0754	D358 0754
D326 0760	D332 0760	D358 0760
D326 0770	D332 0770	D358 0770
D326 0780	D332 0780	D358 0780
D326 0790	D332 0790	D358 0790
D326 0794	D332 0794	D358 0794
D326 0800	D332 0800	D358 0800
D326 0810	D332 0810	D358 0810
D326 0820	D332 0820	D358 0820
D326 0830	D332 0830	D358 0830
D326 0833	D332 0833	D358 0833
D326 0840	D332 0840	D358 0840
D326 0850	D332 0850	D358 0850
D326 0860	D332 0860	D358 0860
D326 0870	D332 0870	D358 0870
D326 0873	D332 0873	D358 0873
D326 0880	D332 0880	D358 0880
D326 0890	D332 0890	D358 0890
D326 0900	D332 0900	D358 0900
D326 0910	D332 0910	D358 0910
D326 0913	D332 0913	D358 0913
D326 0920	D332 0920	D358 0920
D326 0930	D332 0930	D358 0930
D326 0940	D332 0940	D358 0940
D326 0950	D332 0950	D358 0950
D326 0953	D332 0953	D358 0953
D326 0960	D332 0960	D358 0960
D326 0970	D332 0970	D358 0970
D326 0980	D332 0980	D358 0980
D326 0990	D332 0990	D358 0990
D326 0992	D332 0992	D358 0992
D326 1000	D332 1000	D358 1000
D326 1010	D332 1010	D358 1010
D326 1020	D332 1020	D358 1020
D326 1030	D332 1030	D358 1030
D326 1032	D332 1032	D358 1032
D326 1040	D332 1040	D358 1040
D326 1050	D332 1050	D358 1050
D326 1060	D332 1060	D358 1060
D326 1070	D332 1070	D358 1070
		D358 1072
D326 1080	D332 1080	D358 1080
D326 1090	D332 1090	D358 1090

Drills Carbide 5 x D

suttontools

D326/D332

- Suitable for materials up to 1400N/mm²
- Micro geometry & surface conditioning for optimal chip control
- AlCrN for maximum tool life

D358

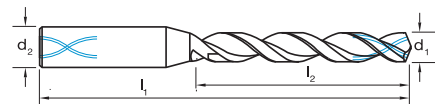
- Excellent solution for stainless steels & difficult super alloy type materials
- Optimised geometry ensures no work hardening and high productivity
- HELICA for outstanding oxidation resistance and hot hardness

D326/D332

- 钢件用、可达1400N/mm²
- 微型几何设计及表面微处理、具有最佳切屑控制效果
- 采用氮化铝铬涂层、最大程度延长刀具的使用寿命

D358

- 针对不锈钢及耐热合金等难削材
- 优化的几何设计、确保无加工硬化及最高生产率
- 专用HELICA涂层、超卓的耐高温氧化及红硬性



尺寸参考

Size Ref.	d ₁ (m7)	l ₁	l ₂	d ₂ (h6)
1100	11.0	118	71	12
1110	11.1	118	71	12
1111	11.11 7/16	118	71	12
1120	11.2	118	71	12
1130	11.3	118	71	12
1140	11.4	118	71	12
1150	11.5	118	71	12
1151	11.51 29/64	118	71	12
1160	11.6	118	71	12
1170	11.7	118	71	12
1180	11.8	118	71	12
1190	11.9	118	71	12
1191	11.91 15/32	118	71	12
1200	12.0	118	71	12
1231	12.31 31/64	124	77	14
1250	12.5	124	77	14
1269	12.69 1/2	124	77	14
1280	12.8	124	77	14
1300	13.0	124	77	14
1310	13.10 33/64	124	77	14
1349	13.49 17/32	124	77	14
1350	13.5	124	77	14
1380	13.8	124	77	14
1389	13.89 35/64	124	77	14
1400	14.0	124	77	14
1429	14.29 9/16	133	83	16
1450	14.5	133	83	16
1468	14.68 37/64	133	83	16
1480	14.8	133	83	16
1500	15.0	133	83	16
1508	15.08 19/32	133	83	16
1548	15.48 39/64	133	83	16
1550	15.5	133	83	16
1580	15.8	133	83	16
1588	15.88 5/8	133	83	16
1600	16.0	133	83	16
1650	16.5	143	93	18
1667	16.67 21/32	143	93	18
1680	16.8	143	93	18
1700	17.0	143	93	18
1746	17.46 11/16	143	93	18
1750	17.5	143	93	18
1780	17.8	143	93	18
1800	18.0	143	93	18
1826	18.26 23/32	153	101	20
1850	18.5	153	101	20
1900	19.0	153	101	20
1905	19.05 3/4	153	101	20
1950	19.5	153	101	20
1980	19.8	153	101	20
2000	20.0	153	101	20

Catalogue Code 目录代码

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Geometry 几何结构

Point Type 钻尖类别

Shank Form (DIN 6535) 柄径型

D326	D332	D358
A0210	A0210	A0210
VHM 硬质合金	VHM 硬质合金	VHM 硬质合金
AlCrN 氮化铝铬	AlCrN 氮化铝铬	HELICA
N	N	VA
R30	R30 - IK 内冷	R30 - IK 内冷
140° Form C	140° Form C	140° 4 Facet Form C
HA	HA	HA
Item # (货号)	Item # (货号)	Item # (货号)
D326 1100	D332 1100	D358 1100
D326 1110	D332 1110	D358 1110
D326 1111	D332 1111	D358 1111
D326 1120	D332 1120	D358 1120
D326 1130	D332 1130	D358 1130
D326 1140	D332 1140	D358 1140
D326 1150	D332 1150	D358 1150
		D358 1151
D326 1160	D332 1160	D358 1160
D326 1170	D332 1170	D358 1170
D326 1180	D332 1180	D358 1180
D326 1190	D332 1190	D358 1190
D326 1191	D332 1191	D358 1191
D326 1200	D332 1200	D358 1200
		D358 1231
D326 1250	D332 1250	D358 1250
D326 1269	D332 1269	D358 1269
D326 1280	D332 1280	D358 1280
D326 1300	D332 1300	D358 1300
		D358 1310
D326 1349	D332 1349	D358 1349
D326 1350	D332 1350	D358 1350
D326 1380	•	
		D358 1389
D326 1400	D332 1400	D358 1400
D326 1429	D332 1429	D358 1429
D326 1450	D332 1450	D358 1450
		D358 1468
D326 1480	•	
D326 1500	D332 1500	D358 1500
		D358 1508
		D358 1548
D326 1550	D332 1550	D358 1550
D326 1580	•	
D326 1588	D332 1588	D358 1588
D326 1600	D332 1600	D358 1600
D326 1650	D332 1650	D358 1650
		D358 1667
D326 1680	•	
D326 1700	D332 1700	D358 1700
D326 1746	D332 1746	D358 1746
D326 1750	D332 1750	D358 1750
D326 1780	•	
D326 1800	D332 1800	D358 1800
		D358 1826
D326 1850	D332 1850	D358 1850
D326 1900	D332 1900	D358 1900
D326 1905	D332 1905	D358 1905
D326 1950	D332 1950	D358 1950
	•	
D326 2000	D332 2000	D358 2000

*Available on request as special manufacture. Subject to lead time. *可定制.

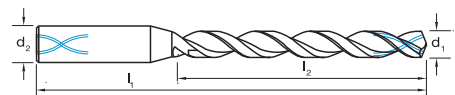
* HB & HE Shank styles available

* HB 和 HE 柄径样式可供选购

Drills Carbide 8 x D

suttontools

- Suitable for materials up to 1400N/mm²
- Strong core with internal coolant supply
- Micro geometry & surface conditioning for optimal chip control
- AlCrN for maximum tool life
- 钢件用、可达1400N/mm²
- 高刚性芯径及内冷却孔设计
- 微型几何设计及表面微处理、具有最佳切屑控制效果
- 采用氮化铝铬涂层、最大程度延长刀具的使用寿命



尺寸参考

Size Ref.	d ₁	l ₁	l ₂	d ₂	Item # (货号)
0500	5.0	95	57	6	D335 0500
0510	5.1	95	57	6	D335 0510
0516	5.16	13/64	95	57	D335 0516
0520	5.2	95	57	6	D335 0520
0530	5.3	95	57	6	D335 0530
0540	5.4	95	57	6	D335 0540
0550	5.5	95	57	6	D335 0550
0556	5.56	7/32	95	57	D335 0556
0560	5.6	95	57	6	D335 0560
0570	5.7	95	57	6	D335 0570
0580	5.8	95	57	6	D335 0580
0590	5.9	95	57	6	D335 0590
0595	5.95	15/64	95	57	D335 0595
0600	6.0	95	57	6	D335 0600
0610	6.1	114	76	8	D335 0610
0620	6.2	114	76	8	D335 0620
0630	6.3	114	76	8	D335 0630
0635	6.35	1/4	114	76	D335 0635
0640	6.4	114	76	8	D335 0640
0650	6.5	114	76	8	D335 0650
0660	6.6	114	76	8	D335 0660
0670	6.7	114	76	8	D335 0670
0676	6.76	17/64	114	76	D335 0676
0680	6.8	114	76	8	D335 0680
0690	6.9	114	76	8	D335 0690
0700	7.0	114	76	8	D335 0700
0710	7.1	114	76	8	D335 0710
0714	7.14	9/32	114	76	D335 0714
0720	7.2	114	76	8	D335 0720
0730	7.3	114	76	8	D335 0730
0740	7.4	114	76	8	D335 0740
0750	7.5	114	76	8	D335 0750
0754	7.54	19/64	114	76	D335 0754
0760	7.6	114	76	8	D335 0760
0770	7.7	114	76	8	D335 0770
0780	7.8	114	76	8	D335 0780
0790	7.9	114	76	8	D335 0790
0794	7.94	5/16	114	76	D335 0794
0800	8.0	114	76	8	D335 0800
0810	8.1	142	95	10	D335 0810
0820	8.2	142	95	10	D335 0820
0830	8.3	142	95	10	D335 0830
0833	8.33	21/64	142	95	D335 0833
0840	8.4	142	95	10	D335 0840

尺寸参考

Size Ref.	d ₁	l ₁	l ₂	d ₂	Item # (货号)
0850	8.5	142	95	10	D335 0850
0860	8.6	142	95	10	D335 0860
0870	8.7	142	95	10	D335 0870
0873	8.73	11/32	142	95	D335 0873
0880	8.8	142	95	10	D335 0880
0890	8.9	142	95	10	D335 0890
0900	9.0	142	95	10	D335 0900
0910	9.1	142	95	10	D335 0910
0913	9.13	23/64	142	95	D335 0913
0920	9.2	142	95	10	D335 0920
0930	9.3	142	95	10	D335 0930
0940	9.4	142	95	10	D335 0940
0950	9.5	142	95	10	D335 0950
0953	9.53	3/8	142	95	D335 0953
0960	9.6	142	95	10	D335 0960
0970	9.7	142	95	10	D335 0970
0980	9.8	142	95	10	D335 0980
0990	9.9	142	95	10	D335 0990
0992	9.92	25/64	142	95	D335 0992
1000	10.0	142	95	10	D335 1000
1010	10.1	162	114	12	D335 1010
1020	10.2	162	114	12	D335 1020
1030	10.3	162	114	12	D335 1030
1032	10.32	13/32	162	114	D335 1032
1040	10.4	162	114	12	D335 1040
1050	10.5	162	114	12	D335 1050
1060	10.6	162	114	12	D335 1060
1070	10.7	162	114	12	D335 1070
1080	10.8	162	114	12	D335 1080
1090	10.9	162	114	12	D335 1090
1100	11.0	162	114	12	D335 1100
1110	11.1	162	114	12	D335 1110
1111	11.11	7/16	162	114	D335 1111
1120	11.2	162	114	12	D335 1120
1130	11.3	162	114	12	D335 1130
1140	11.4	162	114	12	D335 1140
1150	11.5	162	114	12	D335 1150
1160	11.6	162	114	12	D335 1160
1170	11.7	162	114	12	D335 1170
1180	11.8	162	114	12	D335 1180
1190	11.9	162	114	12	D335 1190
1191	11.91	15/32	162	114	D335 1191
1200	12.0	162	114	12	D335 1200



Catalogue Code 目录代码
Discount Group 折扣组
Material 材料
Surface Finish 表面处理
Application 色环及应用
Geometry 几何结构
Point Type 钻尖类别
Shank Form 柄径型

D335
A0210
VHM 硬质合金
AlCrN 氮化铝铬
Up to 1400N/mm²
R30 - IK 内冷
140° Form C
HA (h6)

Drills Carbide 12 x D

suttontools

- Suitable for materials up to 1200N/mm²
- Strong core with internal coolant supply
- Micro geometry & surface conditioning for optimal chip control
- AlCrN for maximum tool life
- 钢件用、可达1200N/mm²
- 高刚性芯径及内冷油孔设计
- 微型几何设计及表面微处理、具有最佳切屑控制效果
- 采用氮化铝涂层、最大程度延长刀具的使用寿命



尺寸参考

Size Ref.	d ₁ (h7)	l ₁	l ₂	d ₂ (h6)	Item # (货号)	
0300	3.0	90	50	6	D371 0300	
0310	3.1	90	50	6	D371 0310	
0318	3.18	1/8	90	50	6	D371 0318
0320	3.2	90	50	6	D371 0320	
0330	3.3	90	50	6	D371 0330	
0340	3.4	90	50	6	D371 0340	
0350	3.5	90	50	6	D371 0350	
0357	3.57	9/64	90	50	6	D371 0357
0360	3.6	90	50	6	D371 0360	
0370	3.7	90	50	6	D371 0370	
0380	3.8	102	64	6	D371 0380	
0390	3.9	102	64	6	D371 0390	
0397	3.97	5/32	102	64	6	D371 0397
0400	4.0	102	64	6	D371 0400	
0410	4.1	102	64	6	D371 0410	
0420	4.2	102	64	6	D371 0420	
0430	4.3	102	64	6	D371 0430	
0437	4.37	9/64	102	64	6	D371 0437
0440	4.4	102	64	6	D371 0440	
0450	4.5	102	64	6	D371 0450	
0460	4.6	102	64	6	D371 0460	
0470	4.7	102	64	6	D371 0470	
0476	4.76	3/16	102	64	6	D371 0476
0480	4.8	116	78	6	D371 0480	
0490	4.9	116	78	6	D371 0490	
0500	5.0	116	78	6	D371 0500	
0510	5.1	116	78	6	D371 0510	
0516	5.16	13/64	116	78	6	D371 0516
0520	5.2	116	78	6	D371 0520	
0530	5.3	116	78	6	D371 0530	
0540	5.4	116	78	6	D371 0540	
0550	5.5	116	78	6	D371 0550	
0556	5.56	7/32	116	78	6	D371 0556
0560	5.6	116	78	6	D371 0560	
0570	5.7	116	78	6	D371 0570	
0580	5.8	116	78	6	D371 0580	
0590	5.9	116	78	6	D371 0590	
0595	5.95	15/64	116	78	6	D371 0595
0600	6.0	116	78	6	D371 0600	
0610	6.1	146	108	8	D371 0610	
0620	6.2	146	108	8	D371 0620	
0630	6.3	146	108	8	D371 0630	
0635	6.35	1/4	146	108	8	D371 0635
0640	6.4	146	108	8	D371 0640	
0650	6.5	146	108	8	D371 0650	
0660	6.6	146	108	8	D371 0660	
0670	6.7	146	108	8	D371 0670	
0676	6.76	17/64	146	108	8	D371 0676
0680	6.8	146	108	8	D371 0680	
0690	6.9	146	108	8	D371 0690	
0700	7.0	146	108	8	D371 0700	
0710	7.1	146	108	8	D371 0710	
0714	7.14	9/32	146	108	8	D371 0714
0720	7.2	146	108	8	D371 0720	
0730	7.3	146	108	8	D371 0730	
0740	7.4	146	108	8	D371 0740	

尺寸参考

Size Ref.	d ₁ (h7)		l ₁	l ₂	d ₂ (h6)	Item # (货号)
0750	7.5		146	108	8	D371 0750
0754	7.54	19/64	146	108	8	D371 0754
0760	7.6		146	108	8	D371 0760
0770	7.7		146	108	8	D371 0770
0780	7.8		146	108	8	D371 0780
0790	7.9		146	108	8	D371 0790
0794	7.94	5/16	146	108	8	D371 0794
0800	8.0		146	108	8	D371 0800
0810	8.1		162	120	10	D371 0810
0820	8.2		162	120	10	D371 0820
0830	8.3		162	120	10	D371 0830
0833	8.33	21/64	162	120	10	D371 0833
0840	8.4		162	120	10	D371 0840
0850	8.5		162	120	10	D371 0850
0860	8.6		162	120	10	D371 0860
0870	8.7		162	120	10	D371 0870
0873	8.73	11/32	162	120	10	D371 0873
0880	8.8		162	120	10	D371 0880
0890	8.9		162	120	10	D371 0890
0900	9.0		162	120	10	D371 0900
0910	9.1		162	120	10	D371 0910
0913	9.13	23/64	162	120	10	D371 0913
0920	9.2		162	120	10	D371 0920
0930	9.3		162	120	10	D371 0930
0940	9.4		162	120	10	D371 0940
0950	9.5		162	120	10	D371 0950
0952	9.52	3/8	162	120	10	D371 0952
0960	9.6		162	120	10	D371 0960
0970	9.7		162	120	10	D371 0970
0980	9.8		162	120	10	D371 0980
0990	9.9		162	120	10	D371 0990
0992	9.92	25/64	162	120	10	D371 0992
1000	10.0		162	120	10	D371 1000
1010	10.1		204	156	12	D371 1010
1020	10.2		204	156	12	D371 1020
1030	10.3		204	156	12	D371 1030
1032	10.32	13/32	204	156	12	D371 1032
1040	10.4		204	156	12	D371 1040
1050	10.5		204	156	12	D371 1050
1060	10.6		204	156	12	D371 1060
1070	10.7		204	156	12	D371 1070
1080	10.8		204	156	12	D371 1080
1090	10.9		204	156	12	D371 1090
1100	11.0		204	156	12	D371 1100
1110	11.1		204	156	12	D371 1110
1111	11.11	7/16	204	156	12	D371 1111
1120	11.2		204	156	12	D371 1120
1130	11.3		204	156	12	D371 1130
1140	11.4		204	156	12	D371 1140
1150	11.5		204	156	12	D371 1150
1160	11.6		204	156	12	D371 1160
1170	11.7		204	156	12	D371 1170
1180	11.8		204	156	12	D371 1180
1190	11.9		204	156	12	D371 1190
1191	11.91	15/32	204	156	12	D371 1191
1200	12.0		204	156	12	D371 1200



Catalogue Code 目录代码

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Geometry 几何结构

Point Type 钻尖类别

Shank Form 柄径型

D371

A0210

VHM 硬质合金

AlCrN Tip 前端涂层

Up to 1200N/mm²

R30 - IK 内冷

135° Form C

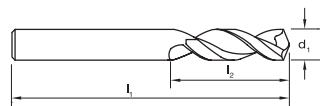
HA

Drills Stub 3 x D

suttontools

D177 - For soft materials up to 850N/mm²
 D151 - For materials up to 1200N/mm²
 D155 - Production drilling in materials up to 1500N/mm²
 D153 - For austenitic stainless steels and most long chipping materials

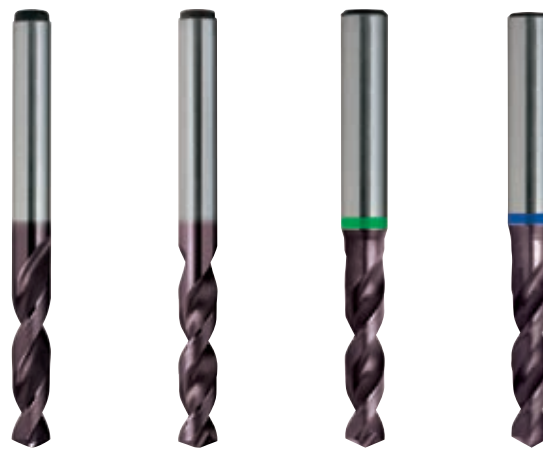
D177 - 软材用、≤850N/mm²
 D151 - 中硬材用、≤1200N/mm²
 D155 - 量产作业用、≤1500N/mm²
 D153 - 不锈钢及长屑材料用



尺寸参考

Shank Tolerance 柄径容许公差

Size Ref.	d ₁	l ₁	l ₂	d ₂	
0100	1.0	26	6	3	
0110	1.1	28	7	3	
0120	1.2	30	8	3	
0130	1.3	30	8	3	
0140	1.4	32	9	3	
0150	1.5	32	9	3	
0160	1.6	34	10	3	
0170	1.7	34	10	3	
0180	1.8	36	11	3	
0190	1.9	36	11	3	
0200	2.0	38	12	3	
0210	2.1	40	13	3	
0220	2.2	40	13	3	
0230	2.3	40	13	3	
0240	2.4	43	14	3	
0250	2.5	43	14	3	
0260	2.6	43	14	3	
0270	2.7	46	16	3	
0280	2.8	46	16	3	
0290	2.9	46	16	3	
0300	3.0	46	16	3	
0310	3.1	49	18	4	
0318	3.18	1/8	49	18	4
0320	3.2	49	18	4	
0330	3.3	49	18	4	
0340	3.4	52	20	4	
0350	3.5	52	20	4	
0357	3.57	9/64	52	20	4
0360	3.6	52	20	4	
0370	3.7	52	20	4	
0380	3.8	55	22	4	
0390	3.9	55	22	4	
0397	3.97	5/32	55	22	4
0400	4.0	55	22	4	
0410	4.1	55	22	6	
0420	4.2	55	22	6	
0430	4.3	58	24	6	
0437	4.37	11/64	58	24	6
0440	4.4	58	24	6	
0450	4.5	58	24	6	
0460	4.6	58	24	6	
0470	4.7	58	24	6	
0476	4.76	3/16	62	26	6
0480	4.8	62	26	6	
0490	4.9	62	26	6	
0500	5.0	62	26	6	
0510	5.1	62	26	6	
0516	5.16	13/64	62	26	6
0520	5.2	62	26	6	
0530	5.3	62	26	6	
0540	5.4	66	28	6	
0550	5.5	66	28	6	
0556	5.56	7/32	66	28	6
0560	5.6	66	28	6	



Catalogue Code 目录代码

Product Name 产品名称

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Point Type 钻尖类别

D177	D151	D155	D153
DXS	CNC	UNI	Black Magic
A1006	A1006	A1502	A1502
HSS Co 含钴高速钢	HSS Co 含钴高速钢	SPM 高钴粉末钢	HSS Co 含钴高速钢
TiAIN 氮化铝钛	TiAIN 氮化铝钛	TiAIN 氮化铝钛	TiAIN 氮化铝钛
R35 WN	R40 NH	R40 UNI	R40 VA
130° Form A	130° Form B	130° 4 Facet Form B	4 Facet
h9	h9	h7	h7
Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
D177 0100	D151 0100	D155 0100	D153 0100
D177 0110	D151 0110	D155 0110	D153 0110
D177 0120	D151 0120	D155 0120	D153 0120
D177 0130	D151 0130	D155 0130	D153 0130
D177 0140	D151 0140	D155 0140	D153 0140
D177 0150	D151 0150	D155 0150	D153 0150
D177 0160	D151 0160	D155 0160	D153 0160
D177 0170	D151 0170	D155 0170	D153 0170
D177 0180	D151 0180	D155 0180	D153 0180
D177 0190	D151 0190	D155 0190	D153 0190
D177 0200	D151 0200	D155 0200	D153 0200
D177 0210	D151 0210	D155 0210	D153 0210
D177 0220	D151 0220	D155 0220	D153 0220
D177 0230	D151 0230	D155 0230	D153 0230
D177 0240	D151 0240	D155 0240	D153 0240
D177 0250	D151 0250	D155 0250	D153 0250
D177 0260	D151 0260	D155 0260	D153 0260
D177 0270	D151 0270	D155 0270	D153 0270
D177 0280	D151 0280	D155 0280	D153 0280
D177 0290	D151 0290	D155 0290	D153 0290
D177 0300	D151 0300	D155 0300	D153 0300
D177 0310	D151 0310	D155 0310	D153 0310
D177 0318	D151 0318		D153 0318
D177 0320	D151 0320	D155 0320	D153 0320
D177 0330	D151 0330	D155 0330	D153 0330
D177 0340	D151 0340	D155 0340	D153 0340
D177 0350	D151 0350	D155 0350	D153 0350
D177 0357	D151 0357		D153 0357
D177 0360	D151 0360	D155 0360	D153 0360
D177 0370	D151 0370	D155 0370	D153 0370
D177 0380	D151 0380	D155 0380	D153 0380
D177 0390	D151 0390	D155 0390	D153 0390
D177 0397	D151 0397		D153 0397
D177 0400	D151 0400	D155 0400	D153 0400
D177 0410	D151 0410	D155 0410	D153 0410
D177 0420	D151 0420	D155 0420	D153 0420
D177 0430	D151 0430	D155 0430	D153 0430
D177 0437	D151 0437		D153 0437
D177 0440	D151 0440	D155 0440	D153 0440
D177 0450	D151 0450	D155 0450	D153 0450
D177 0460	D151 0460	D155 0460	D153 0460
D177 0470	D151 0470	D155 0470	D153 0470
D177 0476	D151 0476		D153 0476
D177 0480	D151 0480	D155 0480	D153 0480
D177 0490	D151 0490	D155 0490	D153 0490
D177 0500	D151 0500	D155 0500	D153 0500
D177 0510	D151 0510	D155 0510	D153 0510
D177 0516	D151 0516		D153 0516
D177 0520	D151 0520	D155 0520	D153 0520
D177 0530	D151 0530	D155 0530	D153 0530
D177 0540	D151 0540	D155 0540	D153 0540
D177 0550	D151 0550	D155 0550	D153 0550
D177 0556	D151 0556		D153 0556
D177 0560	D151 0560	D155 0560	D153 0560

d₂ ref - D155 & D153 d₂ 钻头柄尺寸 - D155及D153

Refer to our complete Industrial Catalogue online for entire range 请参阅我们在线全系列完整产品目录

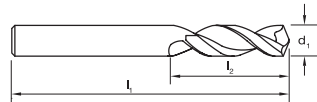
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Drills Stub 3 x D

suttontools

D177 - For soft materials up to 850N/mm²
 D151 - For materials up to 1200N/mm²
 D155 - Production drilling in materials up to 1500N/mm²
 D153 - For austenitic stainless steels and most long chipping materials

D177 - 软材用、≤850N/mm²
 D151 - 中硬材用、≤1200N/mm²
 D155 - 量产作业用、≤1500N/mm²
 D153 - 不锈钢及长屑材料用



尺寸参考

Size Ref.	d ₁	l ₁	l ₂	d ₂
0570	5.7	66	28	6
0580	5.8	66	28	6
0590	5.9	66	28	6
0595	5.95	15/64	66	28
0600	6.0	66	28	6
0610	6.1	70	31	8
0620	6.2	70	31	8
0630	6.3	70	31	8
0635	6.35	1/4	70	31
0640	6.4	70	31	8
0650	6.5	70	31	8
0660	6.6	70	31	8
0670	6.7	70	31	8
0676	6.76	17/64	74	34
0680	6.8	74	34	8
0690	6.9	74	34	8
0700	7.0	74	34	8
0710	7.1	74	34	8
0714	7.14	9/32	74	34
0720	7.2	74	34	8
0730	7.3	74	34	8
0740	7.4	74	34	8
0750	7.5	74	34	8
0754	7.54	19/64	79	37
0760	7.6	79	37	8
0770	7.7	79	37	8
0780	7.8	79	37	8
0790	7.9	79	37	8
0794	7.94	5/16	79	37
0800	8.0	79	37	8
0810	8.1	79	37	10
0820	8.2	79	37	10
0830	8.3	79	37	10
0833	8.33	21/64	79	37
0840	8.4	79	37	10
0850	8.5	79	37	10
0860	8.6	84	40	10
0870	8.7	84	40	10
0873	8.73	11/32	84	40
0880	8.8	84	40	10
0890	8.9	84	40	10
0900	9.0	84	40	10
0910	9.1	84	40	10
0913	9.13	23/64	84	40
0920	9.2	84	40	10
0930	9.3	84	40	10
0940	9.4	84	40	10
0950	9.5	84	40	10
0953	9.53	3/8	89	43
0960	9.6	89	43	10
0970	9.7	89	43	10
0980	9.8	89	43	10
0990	9.9	89	43	10
0992	9.92	25/64	89	43

Catalogue Code 目录代码
 Product Name 产品名称
 Discount Group 折扣组
 Material 材料
 Surface Finish 表面处理
 Application 色环及应用
 Point Type 钻尖类别
 Shank Tolerance 柄径容许公差

D177	D151	D155	D153
DXS	CNC	UNI	Black Magic
A1006	A1006	A1502	A1502
HSS Co 含钴高速钢	HSS Co 含钴高速钢	SPM 高钴粉末钢	HSS Co 含钴高速钢
TiAlN 氮化铝钛	TiAlN 氮化铝钛	TiAlN 氮化铝钛	TiAlN 氮化铝钛
R35 WN	R40 NH	R40 UNI	R40 VA
130° Form A	130° Form B	130° 4 Facet Form B	4 Facet
h9	h9	h7	h7
Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
D177 0570	D151 0570	D155 0570	D153 0570
D177 0580	D151 0580	D155 0580	D153 0580
D177 0590	D151 0590	D155 0590	D153 0590
D177 0595	D151 0595		D153 0595
D177 0600	D151 0600	D155 0600	D153 0600
D177 0610	D151 0610	•	D153 0610
D177 0620	D151 0620	D155 0620	D153 0620
D177 0630	D151 0630	D155 0630	D153 0630
D177 0635	D151 0635		D153 0635
D177 0640	D151 0640	D155 0640	D153 0640
D177 0650	D151 0650	D155 0650	D153 0650
D177 0660	D151 0660	D155 0660	D153 0660
D177 0670	D151 0670	D155 0670	D153 0670
D177 0676	D151 0676		D153 0676
D177 0680	D151 0680	D155 0680	D153 0680
D177 0690	D151 0690	D155 0690	D153 0690
D177 0700	D151 0700	D155 0700	D153 0700
D177 0710	D151 0710	D155 0710	D153 0710
D177 0714	D151 0714		D153 0714
D177 0720	D151 0720	D155 0720	D153 0720
D177 0730	D151 0730	D155 0730	D153 0730
D177 0740	D151 0740	D155 0740	D153 0740
D177 0750	D151 0750	D155 0750	D153 0750
D177 0754	D151 0754		D153 0754
D177 0760	D151 0760	D155 0760	D153 0760
D177 0770	D151 0770	D155 0770	D153 0770
D177 0780	D151 0780	D155 0780	D153 0780
D177 0790	D151 0790	D155 0790	D153 0790
D177 0794	D151 0794		D153 0794
D177 0800	D151 0800	D155 0800	D153 0800
D177 0810	D151 0810	D155 0810	D153 0810
D177 0820	D151 0820	D155 0820	D153 0820
D177 0830	D151 0830	D155 0830	D153 0830
D177 0833	D151 0833		D153 0833
D177 0840	D151 0840	D155 0840	D153 0840
D177 0850	D151 0850	D155 0850	D153 0850
D177 0860	D151 0860	D155 0860	D153 0860
D177 0870	D151 0870	D155 0870	D153 0870
D177 0873	D151 0873		D153 0873
D177 0880	D151 0880	D155 0880	D153 0880
D177 0890	D151 0890	D155 0890	D153 0890
D177 0900	D151 0900	D155 0900	D153 0900
D177 0910	D151 0910	D155 0910	D153 0910
D177 0913	D151 0913		D153 0913
D177 0920	D151 0920	D155 0920	D153 0920
D177 0930	D151 0930	D155 0930	D153 0930
D177 0940	D151 0940	D155 0940	D153 0940
D177 0950	D151 0950	D155 0950	D153 0950
D177 0953	D151 0953		D153 0953
D177 0960	D151 0960	D155 0960	D153 0960
D177 0970	D151 0970	D155 0970	D153 0970
D177 0980	D151 0980	D155 0980	D153 0980
D177 0990	D151 0990	D155 0990	D153 0990
D177 0992	D151 0992		D153 0992

• Available on request as special manufacture. Subject to lead time. •可定制。

d₂ ref - D155 & D153 d₂ 钻头柄尺寸 - D155及D153

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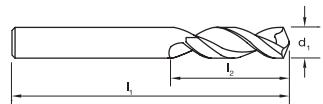
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Drills Stub 3 x D

suttontools

D177 - For soft materials up to 850N/mm²
 D151 - For materials up to 1200N/mm²
 D155 - Production drilling in materials up to 1500N/mm²
 D153 - For austenitic stainless steels and most long chipping materials

D177 - 软材用、≤850N/mm²
 D151 - 中硬材用、≤1200N/mm²
 D155 - 量产作业用、≤1500N/mm²
 D153 - 不锈钢及长屑材料用



尺寸参考

Size Ref.	d ₁	l ₁	l ₂	d ₂	
1000	10.0	89	43	10	
1010	10.1	89	43	10	
1020	10.2	89	43	10	
1030	10.3	89	43	10	
1032	10.32	13/32	89	43	10
1040	10.4	89	43	10	
1050	10.5	89	43	10	
1060	10.6	89	43	12	
1070	10.7	95	47	12	
1072	10.72	27/64	95	47	12
1080	10.8	95	47	12	
1090	10.9	95	47	12	
1100	11.0	95	47	12	
1110	11.1	95	47	12	
1111	11.11	7/16	95	47	12
1120	11.2	95	47	12	
1130	11.3	95	47	12	
1140	11.4	95	47	12	
1150	11.5	95	47	12	
1151	11.51	29/64	95	47	12
1160	11.6	95	47	12	
1170	11.7	95	47	12	
1180	11.8	95	47	12	
1190	11.9	102	51	12	
1191	11.91	15/32	102	51	12
1200	12.0	102	51	12	
1210	12.1	102	51	12	
1220	12.2	102	51	12	
1230	12.3	102	51	12	
1231	12.31	31/64	102	51	12
1240	12.4	102	51	12	
1250	12.5	102	51	12	
1260	12.6	102	51	12	
1269	12.69	1/2	102	51	12
1270	12.7	102	51	12	
1280	12.8	102	51	12	
1290	12.9	102	51	12	
1300	13.0	102	51	12	
1350	13.5	107	54	16	
1400	14.0	107	54	16	
1450	14.5	111	56	16	
1500	15.0	111	56	16	
1550	15.5	115	58	16	
1600	16.0	115	58	16	
1650	16.5	119	60	20	
1700	17.0	119	60	20	
1750	17.5	123	62	20	
1800	18.0	123	62	20	
1850	18.5	127	64	20	
1900	19.0	127	64	20	
1950	19.5	131	66	20	
2000	20.0	131	66	20	

Catalogue Code 目录代码

Product Name 产品名称

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Point Type 钻尖类别

Shank Tolerance 柄径容许公差

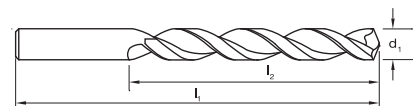


D177	D151	D155	D153
DXS	CNC	UNI	Black Magic
A1006	A1006	A1502	A1502
HSS Co 含钴高速钢	HSS Co 含钴高速钢	SPM 高钴粉末钢	HSS Co 含钴高速钢
TiAlN 氮化铝钛	TiAlN 氮化铝钛	TiAlN 氮化铝钛	TiAlN 氮化铝钛
R35 WN	R40 NH	R40 UNI	R40 VA
130° Form A	130° Form B	130° 4 Facet Form B	4 Facet
h9	h9	h7	h7
Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
D177 1000	D151 1000	D155 1000	D153 1000
D177 1010	D151 1010	D155 1010	D153 1010
D177 1020	D151 1020	D155 1020	D153 1020
	D151 1030	D155 1030	D153 1030
D177 1032	D151 1032		D153 1032
	D151 1040	D155 1040	D153 1040
D177 1050	D151 1050	D155 1050	D153 1050
	D151 1060	D155 1060	D153 1060
	D151 1070	D155 1070	D153 1070
D177 1072	D151 1072		D153 1072
D177 1080	D151 1080	D155 1080	D153 1080
	D151 1090	D155 1090	D153 1090
D177 1100	D151 1100	D155 1100	D153 1100
	D151 1110	D155 1110	D153 1110
D177 1111	D151 1111		D153 1111
D177 1120	D151 1120	D155 1120	D153 1120
	D151 1130	D155 1130	D153 1130
	D151 1140	D155 1140	D153 1140
D177 1150	D151 1150	D155 1150	D153 1150
D177 1151	D151 1151		D153 1151
	D151 1160	D155 1160	D153 1160
	D151 1170	D155 1170	D153 1170
D177 1180	D151 1180	D155 1180	D153 1180
	D151 1190	D155 1190	D153 1190
D177 1191	D151 1191		D153 1191
D177 1200	D151 1200	D155 1200	D153 1200
	D151 1210	D155 1210	D153 1210
D177 1220	D151 1220	D155 1220	D153 1220
	D151 1230	D155 1230	D153 1230
D177 1231	D151 1231		D153 1231
	D151 1240	D155 1240	D153 1240
D177 1250	D151 1250	D155 1250	D153 1250
	D151 1260	D155 1260	D153 1260
D177 1269	D151 1269		D153 1269
	D151 1270	D155 1270	
D177 1280	D151 1280	D155 1280	D153 1280
	D151 1290	D155 1290	D153 1290
D177 1300	D151 1300	D155 1300	D153 1300
D177 1350	D151 1350	D155 1350	D153 1350
D177 1400	D151 1400	D155 1400	D153 1400
D177 1450	D151 1450	D155 1450	D153 1450
D177 1500	D151 1500	D155 1500	D153 1500
D177 1550	D151 1550	D155 1550	D153 1550
D177 1600	D151 1600	D155 1600	D153 1600
D177 1650	D151 1650	D155 1650	D153 1650
D177 1700	D151 1700	D155 1700	D153 1700
D177 1750	D151 1750	D155 1750	D153 1750
D177 1800	D151 1800	D155 1800	D153 1800
D177 1850	D151 1850	D155 1850	D153 1850
D177 1900	D151 1900	D155 1900	D153 1900
D177 1950	D151 1950	D155 1950	D153 1950
D177 2000	D151 2000	D155 2000	D153 2000

Drills Jobber 5 x D

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- D165 - For soft materials up to 850N/mm² D165 - 软材用、≤850N/mm²
 D163 - For materials up to 1200N/mm² D163 - 中硬材用、≤1200N/mm²
 D168 - Production drilling in materials up to 1500N/mm² D168 - 量产作业加用、≤1500N/mm²
 D169 - For austenitic stainless steels and most long chipping materials D169 - 氏体不锈钢及长屑材料用



尺寸参考

Catalogue Code 目录代码
 Product Name 产品名称
 Discount Group 折扣组
 Material 材料
 Surface Finish 表面处理
 Application 色环及应用
 Point Type 钻尖类别
 Shank Tolerance 柄径容许公差

Size Ref.	d ₁	l ₁	l ₂	d ₂	D165	D163	D168	D169
0100	1.0	34	13	3	DXJ	DHJ	UNI	Black Magic
0110	1.1	36	15	3	A0418	A0418	A1502	A1502
0120	1.2	38	17	3	HSS Co 含钴高速钢	HSS Co 含钴高速钢	SPM 高钴粉末钢	HSS Co 含钴高速钢
0130	1.3	38	17	3	TAIIN 氮化铝钛	TAIIN 氮化铝钛	TAIIN 氮化铝钛	TAIIN 氮化铝钛
0140	1.4	40	19	3	R35 WN	R40 NH	R40 UNI	R40 VA
0150	1.5	40	19	3	130° Form A	130° Form B	130° 4 Facet Form B	4 Facet Form C
0159	1.59	1/16	43	21	h9	h9	h7	h7
0160	1.6	43	21	3	Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
0170	1.7	43	21	3	•	D163 0100	D168 0100	
0180	1.8	46	23	3		D163 0110	D168 0110	
0190	1.9	46	23	3		D163 0120	D168 0120	
0198	1.98	5/64	49	24		D163 0130	D168 0130	
0200	2.0	49	24	3	•	D163 0140	D168 0140	
0210	2.1	49	24	3		D163 0150	D168 0150	
0220	2.2	53	28	3		•		
0230	2.3	53	28	3		D163 0160	D168 0160	
0238	2.38	3/32	57	31		D163 0170	D168 0170	
0240	2.4	57	31	3		D163 0180	D168 0180	
0250	2.5	57	31	3		D163 0190	D168 0190	
0260	2.6	57	31	3	•			
0270	2.7	61	34	3		D163 0200	D168 0200	D169 0200
0278	2.78	7/64	61	34		D163 0210	D168 0210	D169 0210
0280	2.8	61	34	3		D163 0220	D168 0220	D169 0220
0290	2.9	61	34	3		D163 0230	D168 0230	D169 0230
0300	3.0	61	33	3	•			
0310	3.1	65	36	4		D163 0240	D168 0240	D169 0240
0318	3.18	1/8	65	36		D163 0250	D168 0250	D169 0250
0320	3.2	65	36	4		D163 0260	D168 0260	D169 0260
0330	3.3	65	36	4		D163 0270	D168 0270	D169 0270
0340	3.4	70	39	4		•		
0350	3.5	70	39	4		D163 0280	D168 0280	D169 0280
0357	3.57	9/64	70	39		D163 0290	D168 0290	D169 0290
0360	3.6	70	39	4		D163 0300	D168 0300	D169 0300
0370	3.7	70	39	4		D163 0310	D168 0310	D169 0310
0380	3.8	75	43	4		D163 0318		D169 0318
0390	3.9	75	43	4		D163 0320	D168 0320	D169 0320
0397	3.97	5/32	75	43		D163 0330	D168 0330	D169 0330
0400	4.0	75	43	4		D163 0340	D168 0340	D169 0340
0410	4.1	75	43	6		D163 0350	D168 0350	D169 0350
0420	4.2	75	43	6		D163 0357		D169 0357
0430	4.3	80	47	6		D163 0360	D168 0360	D169 0360
0437	4.37	11/64	80	47		D163 0370	D168 0370	D169 0370
0440	4.4	80	47	6		D163 0380	D168 0380	D169 0380
0450	4.5	80	47	6		D163 0390	D168 0390	D169 0390
0460	4.6	80	47	6		D163 0397		D169 0397
0470	4.7	80	47	6		D163 0400	D168 0400	D169 0400
0476	4.76	3/16	80	47		D163 0410	D168 0410	D169 0410
0480	4.8	86	52	6		D163 0420	D168 0420	D169 0420
0490	4.9	86	52	6		D163 0430	D168 0430	D169 0430
0500	5.0	86	52	6		D163 0437		D169 0437
0510	5.1	86	52	6		D163 0440	D168 0440	D169 0440
0516	5.16	13/64	86	52		D163 0450	D168 0450	D169 0450
0520	5.2	86	52	6		D163 0460	D168 0460	D169 0460
0530	5.3	86	52	6		D163 0470	D168 0470	D169 0470
0540	5.4	93	57	6		D163 0476		D169 0476
0550	5.5	93	57	6		D163 0480	D168 0480	D169 0480
						D163 0490	D168 0490	D169 0490
						D163 0500	D168 0500	D169 0500
						D163 0510	D168 0510	D169 0510
						D163 0516		D169 0516
						D163 0520	D168 0520	D169 0520
						D163 0530	D168 0530	D169 0530
						D163 0540	D168 0540	D169 0540
						D163 0550	D168 0550	D169 0550

• Available on request as special manufacture. Subject to lead time. •可定制。

d₂ ref - D168 & D169 d₂ 铣刀柄尺寸 - D168及D169

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Drills Jobber 5 x D

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D165 - For soft materials up to 850N/mm²

D163 - For materials up to 1200N/mm²

D168 - Production drilling in materials up to 1500N/mm²

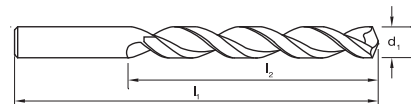
D169 - For austenitic stainless steels and most long chipping materials

D165 - 软材用、≤850N/mm²

D163 - 中硬材用、≤1200N/mm²

D168 - 量产作业加用、≤1500N/mm²

D169 - 氏体不锈钢及长屑材料用



尺寸参考

Shank Tolerance 柄径容许公差

Size Ref.	d ₁	l ₁	l ₂	d ₂
0556	5.56	7/32	93	57
0560	5.6		93	57
0570	5.7		93	57
0580	5.8		93	57
0590	5.9		93	57
0595	5.95	15/64	93	57
0600	6.0		93	57
0610	6.1		101	63
0620	6.2		101	63
0630	6.3		101	63
0635	6.35	1/4	101	63
0640	6.4		101	63
0650	6.5		101	63
0660	6.6		101	63
0670	6.7		101	63
0676	6.75	17/64	109	69
0680	6.8		109	69
0690	6.9		109	69
0700	7.0		109	69
0710	7.1		109	69
0714	7.14	9/32	109	69
0720	7.2		109	69
0730	7.3		109	69
0740	7.4		109	69
0750	7.5		109	69
0754	7.54	19/64	117	75
0760	7.6		117	75
0770	7.7		117	75
0780	7.8		117	75
0790	7.9		117	75
0794	7.94	5/16	117	75
0800	8.0		117	75
0810	8.1		117	75
0820	8.2		117	75
0830	8.3		117	75
0833	8.33	21/64	117	75
0840	8.4		117	75
0850	8.5		117	75
0860	8.6		125	81
0870	8.7		125	81
0873	8.73	11/32	125	81
0880	8.8		125	81
0890	8.9		125	81
0900	9.0		125	81
0910	9.1		125	81
0913	9.13	23/64	125	81
0920	9.2		125	81
0930	9.3		125	81
0940	9.4		125	81
0950	9.5		125	81
0953	9.52	3/8	133	87
0960	9.6		133	87
0970	9.7		133	87
0980	9.8		133	87
0990	9.9		133	87
0992	9.92	25/64	133	87

Catalogue Code 目录代码

Product Name 产品名称

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Point Type 钻尖类别

D165	D163	D168	D169
DXJ	DHJ	UNI	Black Magic
A0418	A0418	A1502	A1502
HSS Co 含钴高速钢	HSS Co 含钴高速钢	SPM 高钴粉末钢	HSS Co 含钴高速钢
TiAlN 氮化铝钛	TiAlN 氮化铝钛	TiAlN 氮化铝钛	TiAlN 氮化铝钛
R35 W → N	R40 N → H	R40 UNI	R40 VA
130° Form A	130° Form B	130° 4 Facet Form B	4 Facet Form C
h9	h9	h7	h7
Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
D165 0556	D163 0556		D169 0556
D165 0560	D163 0560	D168 0560	D169 0560
D165 0570	D163 0570	D168 0570	D169 0570
D165 0580	D163 0580	D168 0580	D169 0580
D165 0590	D163 0590	D168 0590	D169 0590
D165 0595	D163 0595		D169 0595
D165 0600	D163 0600	D168 0600	D169 0600
D165 0610	D163 0610	D168 0610	D169 0610
D165 0620	D163 0620	D168 0620	D169 0620
D165 0630	D163 0630	D168 0630	D169 0630
D165 0635	D163 0635		D169 0635
D165 0640	D163 0640	D168 0640	D169 0640
D165 0650	D163 0650	D168 0650	D169 0650
D165 0660	D163 0660	D168 0660	D169 0660
D165 0670	D163 0670	D168 0670	D169 0670
D165 0676	D163 0676		D169 0676
D165 0680	D163 0680	D168 0680	D169 0680
D165 0690	D163 0690	D168 0690	D169 0690
D165 0700	D163 0700	D168 0700	D169 0700
D165 0710	D163 0710	D168 0710	D169 0710
D165 0714	D163 0714		D169 0714
D165 0720	D163 0720	D168 0720	D169 0720
D165 0730	D163 0730	D168 0730	D169 0730
D165 0740	D163 0740	D168 0740	D169 0740
D165 0750	D163 0750	D168 0750	D169 0750
D165 0754	D163 0754		D169 0754
D165 0760	D163 0760	D168 0760	D169 0760
D165 0770	D163 0770	D168 0770	D169 0770
D165 0780	D163 0780	D168 0780	D169 0780
D165 0790	D163 0790	D168 0790	D169 0790
D165 0794	D163 0794		D169 0794
D165 0800	D163 0800	D168 0800	D169 0800
D165 0810	D163 0810	D168 0810	D169 0810
D165 0820	D163 0820	D168 0820	D169 0820
D165 0830	D163 0830	D168 0830	D169 0830
D165 0833	D163 0833		D169 0833
D165 0840	D163 0840	D168 0840	D169 0840
D165 0850	D163 0850	D168 0850	D169 0850
D165 0860	D163 0860	D168 0860	D169 0860
D165 0870	D163 0870	D168 0870	D169 0870
D165 0873	D163 0873		D169 0873
D165 0880	D163 0880	D168 0880	D169 0880
D165 0890	D163 0890	D168 0890	D169 0890
D165 0900	D163 0900	D168 0900	D169 0900
D165 0910	D163 0910	D168 0910	D169 0910
D165 0913	D163 0913		D169 0913
D165 0920	D163 0920	D168 0920	D169 0920
D165 0930	D163 0930	D168 0930	D169 0930
D165 0940	D163 0940	D168 0940	D169 0940
D165 0950	D163 0950	D168 0950	D169 0950
D165 0953	D163 0953		D169 0953
D165 0960	D163 0960	D168 0960	D169 0960
D165 0970	D163 0970	D168 0970	D169 0970
D165 0980	D163 0980	D168 0980	D169 0980
D165 0990	D163 0990	D168 0990	D169 0990
D165 0992	D163 0992		D169 0992

d₂ ref - D168 & D169 d₂ 铣刀柄尺寸 - D168及D169

Refer to our complete Industrial Catalogue online for entire range 请参阅我们在线全系列完整产品目录

www.sutton.com.au

Drills Jobber 5 x D

suttontools

D165 - For soft materials up to 850N/mm²

D163 - For materials up to 1200N/mm²

D168 - Production drilling in materials up to 1500N/mm²

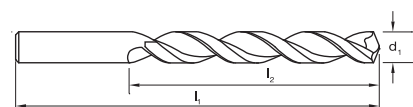
D169 - For austenitic stainless steels and most long chipping materials

D165 - 软材用、≤850N/mm²

D163 - 中硬材用、≤1200N/mm²

D168 - 量产作业加用、≤1500N/mm²

D169 - 氏体不锈钢及长屑材料用



尺寸参考

Catalogue Code 目录代码

Product Name 产品名称

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Point Type 钻尖类别

Shank Tolerance 柄径容许公差

Size Ref.	d ₁	l ₁	l ₂	d ₂	Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
1000	10.0	133	87	10	D165 1000	D163 1000	D168 1000	D169 1000
1010	10.1	133	87	10	D165 1010	•	D168 1010	D169 1010
1020	10.2	133	87	10	D165 1020	D163 1020	D168 1020	D169 1020
1030	10.3	133	87	10	•	•	D168 1030	D169 1030
1032	10.32 13/32	133	87	10	D165 1032	D163 1032	•	D169 1032
1040	10.4	133	87	10	•	•	D168 1040	D169 1040
1050	10.5	133	87	10	D165 1050	D163 1050	D168 1050	D169 1050
1060	10.6	133	87	12	•	•	D168 1060	D169 1060
1070	10.7	142	94	12	•	•	D168 1070	D169 1070
1072	10.72 27/64	142	94	12	D165 1072	D163 1072	•	D169 1072
1080	10.8	142	94	12	D165 1080	D163 1080	D168 1080	D169 1080
1090	10.9	142	94	12	•	•	D168 1090	D169 1090
1100	11.0	142	94	12	D165 1100	D163 1100	D168 1100	D169 1100
1110	11.1	142	94	12	D165 1110	D163 1110	D168 1110	D169 1110
1111	11.11 7/16	142	94	12	D165 1111	D163 1111	•	D169 1111
1120	11.2	142	94	12	D165 1120	•	D168 1120	D169 1120
1130	11.3	142	94	12	•	•	D168 1130	D169 1130
1140	11.4	142	94	12	•	•	D168 1140	D169 1140
1150	11.5	142	94	12	D165 1150	D163 1150	D168 1150	D169 1150
1151	11.51 29/64	142	94	12	D165 1151	D163 1151	•	D169 1151
1160	11.6	142	94	12	•	•	D168 1160	D169 1160
1170	11.7	142	94	12	•	•	D168 1170	D169 1170
1180	11.8	142	94	12	D165 1180	D163 1180	D168 1180	D169 1180
1190	11.9	151	94	12	•	•	D168 1190	D169 1190
1191	11.91 15/32	151	101	12	D165 1191	D163 1191	•	D169 1191
1200	12.0	151	101	12	D165 1200	D163 1200	D168 1200	D169 1200
1210	12.1	151	101	12	•	•	D168 1210	D169 1210
1220	12.2	151	101	12	D165 1220	D163 1220	D168 1220	D169 1220
1230	12.3	151	101	12	•	•	D168 1230	D169 1230
1231	12.3 31/64	151	101	12	D165 1231	D163 1231	•	D169 1231
1240	12.4	151	101	12	•	•	D168 1240	D169 1240
1250	12.5	151	101	12	D165 1250	D163 1250	D168 1250	D169 1250
1260	12.6	151	101	12	•	•	D168 1260	D169 1260
1269	12.7 1/2	151	101	12	D165 1269	D163 1269	•	D169 1269
1270	12.7	151	101	12	•	D163 1270	D168 1270	D169 1270
1280	12.8	151	101	12	D165 1280	•	D168 1280	D169 1280
1290	12.9	151	101	12	•	•	D168 1290	D169 1290
1300	13.0	151	101	12	D165 1300	D163 1300	D168 1300	D169 1300
1350	13.5	160	108	16	•	D163 1350	D168 1350	D169 1350
1400	14.0	160	108	16	•	D163 1400	D168 1400	D169 1400
1450	14.5	169	114	16	•	D163 1450	D168 1450	D169 1450
1500	15.0	169	114	16	•	D163 1500	D168 1500	D169 1500
1550	15.5	178	120	16	•	D163 1550	D168 1550	D169 1550
1600	16.0	178	120	16	•	D163 1600	D168 1600	D169 1600
1650	16.5	184	125	20	•	•	D168 1650	D169 1650
1700	17.0	184	125	20	•	•	D168 1700	D169 1700
1750	17.5	191	130	20	•	•	D168 1750	D169 1750
1800	18.0	191	130	20	•	•	D168 1800	D169 1800
1850	18.5	198	135	20	•	•	D168 1850	D169 1850
1900	19.0	198	135	20	•	•	D168 1900	D169 1900
1950	19.5	205	140	20	•	•	D168 1950	D169 1950
2000	20.0	205	140	20	•	•	D168 2000	D169 2000

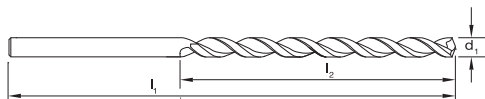
• Available on request as special manufacture. Subject to lead time. •可定制。

d₂ ref - D168 & D169 d₂ 钻头柄尺寸 - D168及D169

Drills Long 8 x D

suttontools

- High performance drill
- Suitable for materials up to 1200N/mm²
- Point geometry ensures high strength
- Parabolic flute design for optimal chip transportation
- Less pecking required over standard drills
- TiAlN for longer tool life
- 高效能钻头
- 加工硬度可达1200N/mm²
- 高强度钻尖
- 高效排屑的抛物线槽形设计
- 大幅降低啄钻或退刀次数
- TiAlN涂层延长刀具寿命



尺寸参考

Size Ref.	d ₁	l ₁	l ₂	Item # (货号)	Item # (货号)
0100	1.0	56	33	D170 0100	D171 0100
0110	1.1	60	37	D170 0110	D171 0110
0120	1.2	65	41	D170 0120	D171 0120
0130	1.3	65	41	D170 0130	D171 0130
0140	1.4	70	45	D170 0140	D171 0140
0150	1.5	70	45	D170 0150	D171 0150
0160	1.6	76	50	D170 0160	D171 0160
0170	1.7	76	50	D170 0170	D171 0170
0180	1.8	80	53	D170 0180	D171 0180
0190	1.9	80	53	D170 0190	D171 0190
0200	2.0	85	56	D170 0200	D171 0200
0210	2.1	85	56	D170 0210	D171 0210
0220	2.2	90	59	D170 0220	D171 0220
0230	2.3	90	59	D170 0230	D171 0230
0240	2.4	95	62	D170 0240	D171 0240
0250	2.5	95	62	D170 0250	D171 0250
0260	2.6	95	62	D170 0260	D171 0260
0270	2.7	100	66	D170 0270	D171 0270
0280	2.8	100	66	D170 0280	D171 0280
0290	2.9	100	66	D170 0290	D171 0290
0300	3.0	100	66	D170 0300	D171 0300
0310	3.1	106	69	D170 0310	D171 0310
0320	3.2	106	69	D170 0320	D171 0320
0330	3.3	106	69	D170 0330	D171 0330
0340	3.4	112	73	D170 0340	D171 0340
0350	3.5	112	73	D170 0350	D171 0350
0360	3.6	112	73	D170 0360	D171 0360
0370	3.7	112	73	D170 0370	D171 0370
0380	3.8	119	78	D170 0380	D171 0380
0390	3.9	119	78	D170 0390	D171 0390
0400	4.0	119	78	D170 0400	D171 0400
0410	4.1	119	78	D170 0410	D171 0410
0420	4.2	119	78	D170 0420	D171 0420
0430	4.3	126	82	D170 0430	D171 0430
0440	4.4	126	82	D170 0440	D171 0440
0450	4.5	126	82	D170 0450	D171 0450
0460	4.6	126	82	D170 0460	D171 0460
0470	4.7	126	82	D170 0470	D171 0470
0480	4.8	132	87	D170 0480	D171 0480
0490	4.9	132	87	D170 0490	D171 0490
0500	5.0	132	87	D170 0500	D171 0500
0510	5.1	132	87	D170 0510	D171 0510
0520	5.2	132	87	D170 0520	D171 0520
0530	5.3	132	87	D170 0530	D171 0530
0540	5.4	139	91	D170 0540	D171 0540
0550	5.5	139	91	D170 0550	D171 0550
0560	5.6	139	91	D170 0560	D171 0560
0570	5.7	139	91	D170 0570	D171 0570



Catalogue Code 目录代码

Product Name 产品名称

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Point Type 钻尖类别

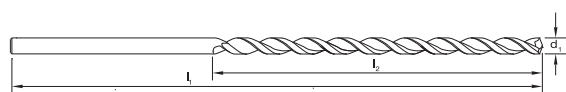
Shank Tolerance 柄径容许公差

				D170	D171
				DHL	DHL
				A0504	A0508
				HSS Co 含钴高速钢	HSS Co 含钴高速钢
				Brt 无处理	TiAlN 氮化铝钛
				R40 NH	R40 NH
				130° Form B	130° Form B
				h9	h9
Size Ref.	d ₁	l ₁	l ₂	Item # (货号)	Item # (货号)
0580	5.8	139	91	D170 0580	D171 0580
0590	5.9	139	91	D170 0590	D171 0590
0600	6.0	139	91	D170 0600	D171 0600
0610	6.1	148	97	D170 0610	D171 0610
0620	6.2	148	97	D170 0620	D171 0620
0630	6.3	148	97	D170 0630	D171 0630
0640	6.4	148	97	D170 0640	D171 0640
0650	6.5	148	97	D170 0650	D171 0650
0660	6.6	148	97	D170 0660	D171 0660
0670	6.7	148	97	D170 0670	D171 0670
0680	6.8	156	102	D170 0680	D171 0680
0690	6.9	156	102	D170 0690	D171 0690
0700	7.0	156	102	D170 0700	D171 0700
0710	7.1	156	102	D170 0710	D171 0710
0720	7.2	156	102	D170 0720	D171 0720
0730	7.3	156	102	D170 0730	D171 0730
0740	7.4	156	102	D170 0740	D171 0740
0750	7.5	156	102	D170 0750	D171 0750
0760	7.6	165	109	D170 0760	D171 0760
0770	7.7	165	109	D170 0770	D171 0770
0780	7.8	165	109	D170 0780	D171 0780
0790	7.9	165	109	D170 0790	D171 0790
0800	8.0	165	109	D170 0800	D171 0800
0810	8.1	165	109	D170 0810	D171 0810
0820	8.2	165	109	D170 0820	D171 0820
0830	8.3	165	109	D170 0830	D171 0830
0840	8.4	165	109	D170 0840	D171 0840
0850	8.5	165	109	D170 0850	D171 0850
0860	8.6	175	115	D170 0860	D171 0860
0870	8.7	175	115	D170 0870	D171 0870
0880	8.8	175	115	D170 0880	D171 0880
0890	8.9	175	115	D170 0890	D171 0890
0900	9.0	175	115	D170 0900	D171 0900
0910	9.1	175	115	D170 0910	D171 0910
0920	9.2	175	115	D170 0920	D171 0920
0930	9.3	175	115	D170 0930	D171 0930
0940	9.4	175	115	D170 0940	D171 0940
0950	9.5	175	115	D170 0950	D171 0950
0980	9.8	184	121	D170 0980	D171 0980
1000	10.0	184	121	D170 1000	D171 1000
1020	10.2	184	121	D170 1020	D171 1020
1050	10.5	184	121	D170 1050	D171 1050
1100	11.0	195	128	D170 1100	D171 1100
1150	11.5	195	128	D170 1150	D171 1150
1200	12.0	205	134	D170 1200	D171 1200
1250	12.5	205	134	D170 1250	D171 1250
1300	13.0	205	134	D170 1300	D171 1300

Drills Extra Long 10-14 x D

suttontools

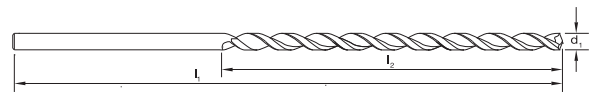
- | | |
|--|-------------------------------|
| - High performance drill | - 高效能钻头 |
| - Suitable for materials up to 1200N/mm ² | - 加工硬度可达1200N/mm ² |
| - Point geometry ensures high strength | - 高强度钻尖 |
| - Parabolic flute design for optimal chip transportation | - 高效排屑的抛物线槽形设计 |
| - Less pecking required over standard drills | - 大幅降低啄钻或退刀次数 |

[illegible]

Drills Extra Long 10-14 x D

suttontools

- High performance drill
- Suitable for materials up to 1200N/mm²
- Point geometry ensures high strength
- Parabolic flute design for optimal chip transportation
- Less pecking required over standard drills
- TiAlN for longer tool life
- 高效能钻头
- 加工硬度可达1200N/mm²
- 高强度钻尖
- 高效排屑的抛物线槽形设计
- 大幅降低啄钻或退刀次数
- TiAlN涂层延长刀具寿命



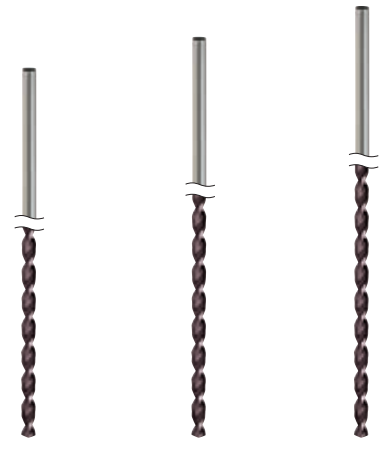
Catalogue Code 目录代码
Product Name 产品名称
Discount Group 折扣组
Material 材料
Surface Finish 表面处理
Application 色环及应用
Point Type 钻尖类别

Shank Tolerance

Size Ref.	d ₁	DIN1869-1 (D194)		DIN1869-2 (D195)		DIN1869-3 (D196)	
		l ₁	l ₂	l ₁	l ₂	l ₁	l ₂
0200	2.0	125	85				
0250	2.5	135	90				
0300	3.0	155	105	200	135	240	160
0350	3.5	165	115	210	145	265	180
0400	4.0	175	120	220	150	280	190
0450	4.5	185	125	235	160	295	200
0500	5.0	195	135	245	170	315	210
0550	5.5	205	140	260	180	330	225
0600	6.0	205	140	260	180	330	225
0650	6.5	215	150	275	190	350	235
0700	7.0	225	155	290	200	370	250
0750	7.5	225	155	290	200	370	250
0800	8.0	240	165	305	210	390	265
0850	8.5	240	165	305	210	390	265
0900	9.0	250	175	320	220	410	280
0950	9.5	250	175	320	220	410	280
1000	10.0	265	185	340	235	430	295

D194	D195	D196
DHXL-1	DHXL-2	DHXL-3
A0508	A0508	A0508
HSS Co 含钴高速钢	HSS Co 含钴高速钢	HSS Co 含钴高速钢
TiAlN 氮化铝钛	TiAlN 氮化铝钛	TiAlN 氮化铝钛
R40 NH	R40 NH	R40 NH
130° Form B	130° Form B	130° Form B
h9	h9	h9

Item # (货号)	Item # (货号)	Item # (货号)
D194 0200		
D194 0250		
D194 0300	D195 0300	
D194 0350	D195 0350	D196 0350
D194 0400	D195 0400	D196 0400
D194 0450	D195 0450	D196 0450
D194 0500	D195 0500	D196 0500
D194 0550	D195 0550	D196 0550
D194 0600	D195 0600	D196 0600
D194 0650	D195 0650	D196 0650
D194 0700	D195 0700	D196 0700
D194 0750	D195 0750	D196 0750
D194 0800	D195 0800	D196 0800
D194 0850	D195 0850	D196 0850
D194 0900	D195 0900	D196 0900
D194 0950	D195 0950	D196 0950
D194 1000	D195 1000	D196 1000



suttontools

- Precision drill for machine use
- Rigid design for "seat" position accuracy
- 90° offers hole chamfering and spotting with the one tool
- 120°/142° designed to match drill point
- 机用精密钻削
- 高刚性设计、倒角位更精确
- 90° 型号适合同时倒角及定位
- 120° 及142° 用于针对相应的钻尖角度



Catalogue Code 目录代码

Discount Group 折扣组

Material 材料

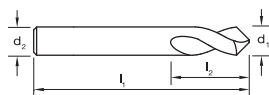
Surface Finish 表面处理

Application 色环及应用

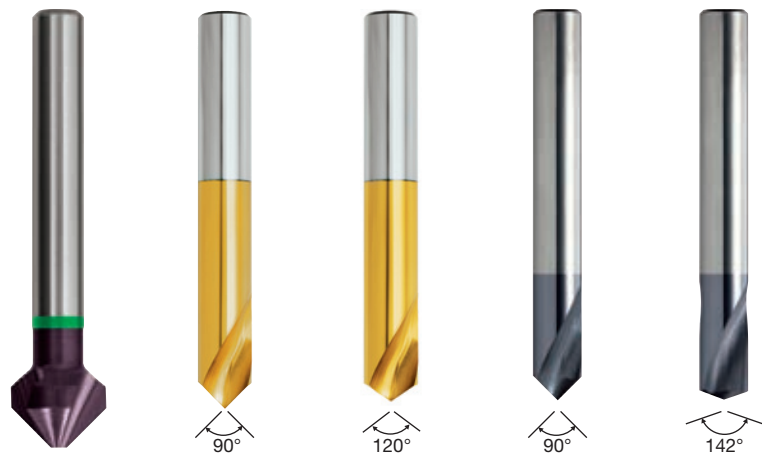
Geometry 几何结构

Point Type 钻尖类别

Shank Tolerance 柄径容许公差



尺寸参考

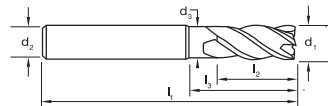
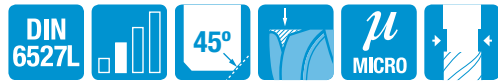


					C108	D175	D176	D364	D366
					A1108	A1124	A1124	A0210	A0210
					HSS Co 含钴高速钢	HSS Co 含钴高速钢	HSS Co 含钴高速钢	VHM 硬质合金	VHM 硬质合金
					TiAlN 氮化铝钛	TiN 氮化钛	TiN 氮化钛	AlCrN 氮化铝铬	AlCrN 氮化铝铬
					UNI	NC	NC	NC	NC
					90°	90°	120°	90° Form A	142° Form A
					-	h9	h9	h9	h9
Size Ref.	d ₁	l ₁	l ₂	d ₂	Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
DIN 335									
0430	4.3	40		4	C108 0430				
0530	5.3	40		4	C108 0530				
0630	6.3	45		5	C108 0630				
0730	7.3	50		6	C108 0730				
0800	8.0	50		6	C108 0800				
0840	8.4	50		6	C108 0840				
0940	9.4	50		6	C108 0940				
1000	10.0	50		6	C108 1000				
1040	10.4	50		6	C108 1040				
1150	11.5	56		8	C108 1150				
1240	12.4	56		8	C108 1240				
1340	13.4	56		8	C108 1340				
1500	15.0	60		10	C108 1500				
1650	16.5	60		10	C108 1650				
1900	19.0	63		10	C108 1900				
2050	20.5	63		10	C108 2050				
2300	23.0	67		10	C108 2300				
2500	25.0	67		10	C108 2500				
3000	30.0	71		12	C108 3000				
3100	31.0	71		12	C108 3100				
DIN 1897									
0300	3.0	49	16	3.0		D175 0300	D176 0300		
0400	4.0	55	22	4.0		D175 0400	D176 0400		
0500	5.0	62	25	5.0		D175 0500	D176 0500		
0600	6.0	66	25	6.0		D175 0600	D176 0600		
0800	8.0	79	29	8.0		D175 0800	D176 0800		
1000	10.0	89	32	10.0		D175 1000	D176 1000		
1200	12.0	102	32	12.0		D175 1200	D176 1200		
1600	16.0	115	35	16.0		D175 1600	D176 1600		
2000	20.0	131	37	20.0		D175 2000	D176 2000		
2500	25.0	151	37	25.0		D175 2500	D176 2500		
SUTTON STD									
0300	3.0	46	9	3.0				D364 0300	D366 0300
0400	4.0	55	12	4.0				D364 0400	D366 0400
0500	5.0	62	15	5.0				D364 0500	D366 0500
0600	6.0	66	18	6.0				D364 0600	D366 0600
0800	8.0	79	23	8.0				D364 0800	D366 0800
1000	10.0	89	24	10.0				D364 1000	D366 1000
1200	12.0	102	24	12.0				D364 1200	D366 1200
1600	16.0	115	26	16.0				D364 1600	D366 1600
2000	20.0	131	35	20.0				D364 2000	D366 2000

Endmills Harmony UNI Series

suttontools

- VHM-ULTRA grade of carbide for high performance
- For universal application in materials up to 1600N/mm²
- AlCrN for longer tool life
- 采用高效能用的VHM-Ultra超微晶粒硬质合金
- 高泛用性、加工硬度达1600N/mm²
- 氮化铝涂层延长刀具寿命



尺寸参考

Type 型
Discount Group 折扣组
Material 材料
Surface Finish 表面处理
Application 色环及应用
Geometry 螺旋角别
Shank Form (DIN 6535) 柄径形 (DIN 6535)
Shank Tolerance 柄径容许公差

Size Ref.	d ₁ (e8)	l ₁	l ₂	l ₃	d ₂	d ₃	z
DIN 6527K							
0300	3.0	50	5	*	6	*	3
0350	3.5	50	6	*	6	*	3
0400	4.0	54	8	*	6	*	3
0450	4.5	54	8	*	6	*	3
0500	5.0	54	9	*	6	*	3
0550	5.5	54	9	*	6	*	3
0600	6.0	54	10	*	6	*	3
0800	8.0	58	12	*	8	*	3
1000	10.0	66	14	*	10	*	3
1200	12.0	73	16	*	12	*	3
1400	14.0	73	16	*	14	*	3
1600	16.0	82	22	*	16	*	3
1800	18.0	82	22	*	18	*	3
2000	20.0	92	26	*	20	*	3
DIN 6527L							
0300	3.0	57	8	*	6	*	4
0350	3.5	57	11	*	6	*	4
0400	4.0	57	11	*	6	*	4
0450	4.5	57	13	*	6	*	4
0500	5.0	57	13	*	6	*	4
0550	5.5	57	13	*	6	*	4
0600	6.0	57	13	*	6	*	4
0800	8.0	63	19	*	8	*	4
1000	10.0	72	22	*	10	*	4
1200	12.0	83	26	*	12	*	4
1400	14.0	83	26	*	14	*	4
1600	16.0	92	32	*	16	*	4
1800	18.0	92	32	*	18	*	4
2000	20.0	104	38	*	20	*	4
2500	25.0	120	45	*	25	*	4
DIN 6527L							
0400	4.0	57	11	19	6	3.7	3
0500	5.0	57	13	20	6	4.6	4
0600	6.0	57	16	21	6	5.5	4
0800	8.0	63	19	27	8	7.5	4
1000	10.0	72	22	32	10	9.5	4
1200	12.0	83	26	38	12	11.2	4
1600	16.0	92	32	44	16	15.0	5
2000	20.0	104	38	54	20	19.0	6



3 Flute / 3 刃	4 Flute / 4 刃	4 Flute / 4 刃	Universal / 半精粗	Roughing / 粗铣
B0210	B0210	B0210	B0210	B0210
VHM-ULTRA	VHM-ULTRA	VHM-ULTRA	VHM-ULTRA	VHM-ULTRA
AlCrN 氮化铝铬	AlCrN 氮化铝铬	AlCrN 氮化铝铬	AlCrN 氮化铝铬	AlCrN 氮化铝铬
UNI	UNI	UNI	UNI	UNI
R38/37/39	R35 / 38	R45/44	R45 STF	R45 HRS
HA	HA	HA	HA	HA
h5	h6	h5	h6	h6
Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
E422	E533			
E422 0300				
E422 0350				
E422 0400				
E422 0450				
E422 0500				
E422 0550				
E422 0600	E533 0600			
E422 0800	E533 0800			
E422 1000	E533 1000			
E422 1200	E533 1200			
E422 1400				
E422 1600	E533 1600			
E422 1800				
E422 2000	E533 2000			
E424	E535	E426	E545	E549
E424 0300	E535 0300	E426 0300		
E424 0350		E426 0350		
E424 0400	E535 0400	E426 0400	E545 0400	
E424 0450		E426 0450		
E424 0500	E535 0500	E426 0500	E545 0500	
E424 0550		E426 0550		
E424 0600	E535 0600	E426 0600	E545 0600	
E424 0800	E535 0800	E426 0800	E545 0800	
E424 1000	E535 1000	E426 1000	E545 1000	
E424 1200	E535 1200	E426 1200	E545 1200	
E424 1400	E535 1400	E426 1400		
E424 1600	E535 1600	E426 1600	E545 1600	
E424 1800	E535 1800	E426 1800		
E424 2000	E535 2000	E426 2000	E545 2000	
	E535 2500	E426 2500		
				E549 0400
				E549 0500
				E549 0600
				E549 0800
				E549 1000
				E549 1200
				E549 1600
				E549 2000

Endmills Harmony, Corner Radius

suttontools

E559 - For precision finishing applications

- Ideally suited to materials up to 1300 N/mm²
- AlCrN for longer tool life

E462 - Optimised geometry for soft stainless steels

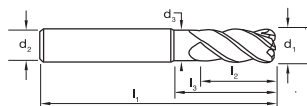
- Helica for superior wear resistance in stainless steel

E559 - 高精度精铣用

- 加工硬度可达1300N/mm²
- 氮化铝铬涂层延长刀具寿命

E462 - 特殊几何设计、针对软质不锈钢类

- 不锈钢专用Helica涂层可延长刀具寿命



尺寸参考

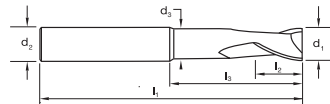
[illegible]

Endmills Harmony UNI Series

suttontools

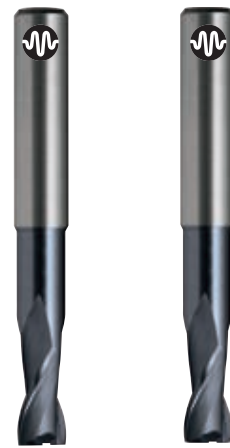
- VHM-ULTRA grade of carbide for high performance
- For precision milling of slots & cavities
- AlCrN for longer tool life
E418 - Suitable for materials up to 1600 N/mm²
E420 - Suitable for materials up to 1300 N/mm²

- 采用高效能用的VHM-Ultra超微晶粒硬质合金
- 适合高精度槽铣及型腔铣削
- 氮化铝铬涂层延长刀具寿命
E418 - 加工硬度可达1600N/mm²
E420 - 加工硬度可达1300N/mm²



尺寸参考

Size Ref.	d ₁	l ₁	l ₂	l ₃	d ₂	d ₃	z	rad*	Item # (货号)	Item # (货号)
									E418	E420
0200	2.0	54	3	9	6	1.8	2		E418 0200	
0250	2.5	54	3.5	9	6	2.2	2		E418 0250	
0300	3.0	54	4	11	6	2.7	2		E418 0300	
0350	3.5	57	4.5	11	6	3.1	2		E418 0350	
0400	4.0	57	5	15	6	3.6	2	0.3	E418 0400	E420 0403
0405		57	5	15	6	3.6	2	0.5		E420 0405
0450	4.5	57	5.5	15	6	4.1	2		E418 0450	
0500	5.0	62	6	23	6	4.5	2		E418 0500	
0550	5.5	62	6.5	23	6	5.0	2		E418 0550	
0600	6.0	62	7	24	6	5.4	2	0.3	E418 0600	E420 0603
0605		62	7	24	6	5.4	2	0.5		E420 0605
0610		62	7	24	6	5.4	2	1.0		E420 0610
0615		62	7	24	6	5.4	2	1.5		E420 0615
0700	7.0	68	8	28	8	6.3	2		E418 0700	
0800	8.0	68	9	30	8	7.2	2	0.3	E418 0800	E420 0803
0805		68	9	30	8	7.2	2	0.5		E420 0805
0810		68	9	30	8	7.2	2	1.0		E420 0810
0815		68	9	30	8	7.2	2	1.5		E420 0815
0900	9.0	80	10	36	10	8.2	2		E418 0900	
1000	10.0	80	11	38	10	9.0	2	0.5	E418 1000	E420 1005
1010		80	11	38	10	9.0	2	1.0		E420 1010
1015		80	11	38	10	9.0	2	1.5		E420 1015
1020		80	11	38	10	9.0	2	2.0		E420 1020
1100	11.0	93	12	44	12	10.0	2		E418 1100	
1200	12.0	93	13	46	12	11.0	2	0.5	E418 1200	E420 1205
1210		93	13	46	12	11.0	2	1.0		E420 1210
1215		93	13	46	12	11.0	2	1.5		E420 1215
1220		93	13	46	12	11.0	2	2.0		E420 1220
1300	13.0	93	14	44	14	12.0	2		E418 1300	
1400	14.0	93	15	46	14	13.0	2		E418 1400	
1500	15.0	108	16	56	16	14.0	2		E418 1500	
1600	16.0	108	17	58	16	15.0	2	1.0	E418 1600	E420 1610
1620		108	17	58	16	15.0	2	2.0		E420 1620
1630		108	17	58	16	15.0	2	3.0		E420 1630
1640		108	17	58	16	15.0	2	4.0		E420 1640
1800	18.0	108	19	58	18	17.0	2		E418 1800	
2000	20.0	126	21	74	20	19.0	2		E418 2000	



Type 型

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Geometry 螺旋角别

Shank Form (DIN 6535) 柄径形 (DIN 6535)

Shank Tolerance 柄径容许公差

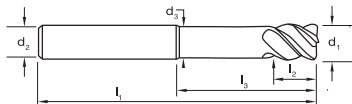
2 Flute / 2 刃	2 Flute - Rad / 2 刃圆角
B0210	B0210
VHM-ULTRA	VHM-ULTRA
AlCrN 氮化铝铬	AlCrN 氮化铝铬
UNI	UNI
R30	R30
HA	HA
h5	h5

Endmills Harmony UNI Series, Corner Radius



suttontools

- VHM-ULTRA grade of carbide for high performance
 - 45/44° variable flute helix for chatter free milling
 - Suitable for materials up to 1300 N/mm²
 - AlCrN for longer tool life
- 采用高效能用的VHM-Ultra超微晶粒硬质合金
 - 45/44° 不等螺旋角有效抑制共振
 - 加工硬度可达1300N/mm²
 - 氮化铝铬涂层延长刀具寿命



尺寸参考

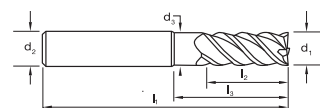
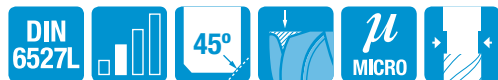
[illegible]

Type 型	4 Flute - Rad / 4 刃圓角
Discount Group 折扣組	B0210
Material 材料	VHM-ULTRA
Surface Finish 表面處理	AICrN 氮化鉻鋁
Application 色環及应用	UNI
Geometry 螺旋角別	R45 / 44
Shank Form (DIN 6535) 柄徑形 (DIN 6535)	HA
Shank Tolerance 柄徑容許公差	h5

Endmills Harmony VA Series

suttontools

- VHM-ULTRA grade of carbide for high performance
- Optimised geometry for soft stainless steels
- Helica for superior wear resistance in stainless steel
- 采用高效能用的VHM-Ultra 超微晶粒硬质合金
- 特殊几何设计、针对软质 不锈钢类
- 不锈钢专用Helica涂层可延 长刀具寿命



Type 型

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 应用代号

Geometry 螺旋角別

Shank Form (DIN 6535) 柄径形 (DIN 6535)

Shank Tolerance 柄径容许公差

尺寸参考

Size Ref.	d ₁ (e8)	l ₁	l ₂	l ₃	d ₂	d ₃	z
	DIN6527L						
0300	3.0	57	8	14	6	2.8	3
0400	4.0	57	11	16	6	3.8	3
0500	5.0	57	13	18	6	4.8	3
0600	6.0	57	13	19	6	5.7	3
0800	8.0	63	19	25	8	7.6	3
1000	10.0	72	22	30	10	9.5	3
1200	12.0	83	26	36	12	11.5	3
1400	14.0	83	26	36	14	13.5	3
1600	16.0	92	32	42	16	15.5	3
1800	18.0	92	32	42	18	17.5	3
2000	20.0	104	38	52	20	19.5	3

	DIN6527L						
0300	3.0	57	8	18	6	2.8	4
0400	4.0	57	11	19	6	3.8	4
0500	5.0	57	13	20	6	4.8	4
0600	6.0	57	13	21	6	5.7	4
0800	8.0	63	19	27	8	7.6	4
1000	10.0	72	22	32	10	9.5	4
1200	12.0	83	26	38	12	11.5	4
1400	14.0	83	26	38	14	13.5	4
1600	16.0	92	32	44	16	15.5	4
1800	18.0	92	32	44	18	17.5	4
2000	20.0	104	38	54	20	19.5	4

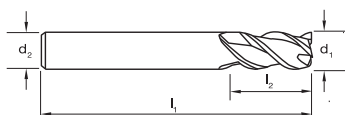
	SUTTON STD						
0600	6.0	62	7	24	6	5.0	4
0800	8.0	68	9	30	8	7.0	4
1000	10.0	80	24	38	10	9.0	4
1200	12.0	93	13	46	12	11.0	4
1400	14.0	93	13	46	14	13.0	4
1600	16.0	108	17	58	16	15.0	4

[illegible]

Endmills Harmony Al Series

suttontools

- VHM-ULTRA grade of carbide for high performance
- Optimised geometry for soft materials
- CrN for copper and non-ferrous materials
- 采用高效能用的VHM-Ultra超微晶粒硬质合金
- 特殊几何设计、针对软质材料
- 氮化铬涂层针对铜材及非铁金属



尺寸参考

Shank Form (DIN 6535) 柄径形 (DIN 6535)

Shank Tolerance 柄径容许公差

Size Ref.	d ₁ (e8)	l ₁	l ₂	l ₃	d ₂	d ₃	z	rad	Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
DIN 6527L									E310	E400	E404	E408
0200	2.0	57	7	10	6		2		E310 0200			
0300	3.0	57	8	10	6		2		E310 0300			
0400	4.0	57	11	10	6		2		E310 0400			
0500	5.0	57	13	8	6		2		E310 0500			
0600	6.0	57	13		6		2		E310 0600			
0800	8.0	63	19		8		2		E310 0800			
1000	10.0	72	22		10		2		E310 1000			
1200	12.0	83	26		12		2		E310 1200			
1600	16.0	92	32		16		2		E310 1600			
2000	20.0	104	38		20		2		E310 2000			
DIN 6527L										E400 0600		
0600	6.0	57	13		6		3	0.2		E400 0800		
0800	8.0	63	19		8		3	0.2		E400 1000		
1000	10.0	72	24		10		3	0.3		E400 1200		
1200	12.0	83	28		12		3	0.4		E400 1400		
1400	14.0	83	30		14		3	0.4		E400 1600		
1600	16.0	92	35		16		3	0.5		E400 1800		
1800	18.0	92	38		18		3	0.5		E400 2000		
2000	20.0	104	42		20		3	0.6		E400 2500		
2500	25.0	120	50		25		3	0.6				
SUTTON STD										E402		
0600	6.0	62	7	24	6	5.0	3	0.2		E402 0600		
0800	8.0	68	9	30	8	7.0	3	0.2		E402 0800		
1000	10.0	80	12	38	10	9.0	3	0.3		E402 1000		
1200	12.0	93	14	46	12	11.0	3	0.4		E402 1200		
1400	14.0	93	16	46	14	13.0	3	0.4		E402 1400		
1600	16.0	108	18	58	16	15.0	3	0.5		E402 1600		
1800	18.0	108	20	58	18	17.0	3	0.5		E402 1800		
2000	20.0	126	22	74	20	19.0	3	0.6		E402 2000		
2500	25.0	150	27	92	25	24.0	3	0.6		E402 2500		
DIN 6527L											E404 1000	
1000	10.0	72	23		10		3			E404 1200		
1200	12.0	83	28		12		3			E404 1400		
1400	14.0	83	28		14		3			E404 1600		
1600	16.0	92	34		16		3			E404 1800		
1800	18.0	92	34		18		3			E404 2000		
2000	20.0	104	42		20		3			E404 2500		
2500	25.0	120	52		25		3					
SUTTON STD												E408 0600
0600	6.0	62	9	24	6		3					E408 0800
0800	8.0	68	12	30	8		3					E408 1000
1000	10.0	80	15	38	10		3					E408 1200
1200	12.0	93	18	46	12		3					E408 1400
1400	14.0	93	21	46	14		3					E408 1600
1600	16.0	108	24	58	16		3					E408 1800
1800	18.0	108	27	58	18		3					E408 2000
2000	20.0	126	30	74	20		3					E408 2500
2500	25.0	150	38	92	25		3					



Type 型

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Geometry 钻尖类别

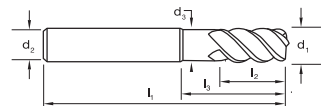
2 Flute / 2 刃	3 Flute / 3 刃	Roughing / 粗铣	Ballnose / 球头
B0208	B0210	B0210	B0210
VHM 硬质合金	VHM-ULTRA	VHM-ULTRA	VHM-ULTRA
Brf 无处理	CrN 氮化铬	CrN 氮化铬	CrN 氮化铬
Al	Al	Al	Al
R40	R45/46/44	R35/36/36 HR	R45/46/44
HA	HA	HA	HA
h5	h5	h5	h5
Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
E310	E400	E404	E408
E310 0200			
E310 0300			
E310 0400			
E310 0500			
E310 0600			
E310 0800			
E310 1000			
E310 1200			
E310 1600			
E310 2000			
	E400 0600		
	E400 0800		
	E400 1000		
	E400 1200		
	E400 1400		
	E400 1600		
	E400 1800		
	E400 2000		
	E400 2500		
	E402		
	E402 0600		
	E402 0800		
	E402 1000		
	E402 1200		
	E402 1400		
	E402 1600		
	E402 1800		
	E402 2000		
	E402 2500		
		E404 1000	
		E404 1200	
		E404 1400	
		E404 1600	
		E404 1800	
		E404 2000	
		E404 2500	
			E408 0600
			E408 0800
			E408 1000
			E408 1200
			E408 1400
			E408 1600
			E408 1800
			E408 2000
			E408 2500

Endmills Harmony DUO

suttontools

- VHM-ULTRA grade of carbide for high performance
- Dual stepped core for optimal strength
E562-E564 - Ideal design for pocket milling in materials up to 48HRC
E566-E568 - For hard machining in materials up to 63HRC

- 采用高效能用的VHM-Ultra超微晶粒硬质合金
- 双芯径设计、刚性特高
E562/E564 - 特别适合48HRC的型腔铣削
E566/E568 - 适合高硬铣削、硬度可达63HRC



尺寸参考

Size Ref.	d ₁ (e8)	l ₁	l ₂	l ₃	d ₂	d ₃	z	rad
DIN 6527L								
0600	6.0	57	13	21	6	5.5	4	
0800	8.0	63	19	27	8	7.5	4	
1000	10.0	72	22	32	10	9.5	4	
1200	12.0	83	26	38	12	11.2	4	
1400	14.0	83	26	38	14	13.0	4	
1600	16.0	92	32	44	16	15.0	4	
2000	20.0	104	38	54	20	19.0	4	
DIN 6527L								
0603	6.0	57	13	21	6	5.5	4	0.3
0605		57	13	21	6	5.5	4	0.5
0610		57	13	21	6	5.5	4	1.0
0803	8.0	63	19	27	8	7.5	4	0.3
0805		63	19	27	8	7.5	4	0.5
0810		63	19	27	8	7.5	4	1.0
0815		63	19	27	8	7.5	4	1.5
0820		63	19	27	8	7.5	4	2.0
1003	10.0	72	22	32	10	9.5	4	0.3
1005		72	22	32	10	9.5	4	0.5
1010		72	22	32	10	9.5	4	1.0
1015		72	22	32	10	9.5	4	1.5
1020		72	22	32	10	9.5	4	2.0
1203	12.0	83	26	38	12	11.2	4	0.3
1205		83	26	38	12	11.2	4	0.5
1210		83	26	38	12	11.2	4	1.0
1215		83	26	38	12	11.2	4	1.5
1220		83	26	38	12	11.2	4	2.0
1230		83	26	38	12	11.2	4	3.0
1430	14.0	83	26	38	14	13.0	4	0.3
1405		83	26	38	14	13.0	4	0.5
1410		83	26	38	14	13.0	4	1.0
1415		83	26	38	14	13.0	4	1.5
1420		83	26	38	14	13.0	4	2.0
1430		83	26	38	14	13.0	4	3.0
1605	16.0	92	32	44	16	15.0	4	0.5
1610		92	32	44	16	15.0	4	1.0
1615		92	32	44	16	15.0	4	1.5
1620		92	32	44	16	15.0	4	2.0
1630		92	32	44	16	15.0	4	3.0
1630		92	32	44	16	15.0	4	4.0
2005	20.0	104	38	54	20	19.0	4	0.5
2010		104	38	54	20	19.0	4	1.0
2015		104	38	54	20	19.0	4	1.5
2020		104	38	54	20	19.0	4	2.0
2030		104	38	54	20	19.0	4	3.0
2040		104	38	54	20	19.0	4	4.0

Type 型

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 应用代号

Geometry 螺旋角别

Shank Form (DIN 6535) 柄径形 (DIN 6535)

Shank Tolerance 柄径容许公差

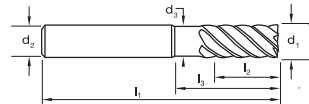
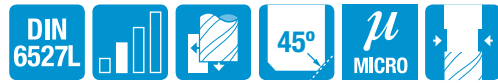
DUO	DUO	DUO	DUO
B0210	B0210	B0210	B0210
VHM-ULTRA	VHM-ULTRA	VHM-ULTRA	VHM-ULTRA
AlCrN 氮化铝铬	AlCrN 氮化铝铬	Aldura	Aldura
NH	NH	VH	VH
R50	R50	R50	R50
HA	HA	HA	HA
h6	h6	h6	h6
Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
E562	E564	E566	E568
E562 0600		E566 0600	
E562 0800		E566 0800	
E562 1000		E566 1000	
E562 1200		E566 1200	
E562 1400		E566 1400	
E562 1600		E566 1600	
E562 2000		E566 2000	
	E564 0603		
	E564 0605		
	E564 0610		E568 0610
	E564 0803		
	E564 0805		
	E564 0810		
	E564 0815		
	E564 0820		E568 0820
	E564 1003		
	E564 1005		
	E564 1010		
	E564 1015		
	E564 1020		E568 1020
	E564 1203		
	E564 1205		
	E564 1210		
	E564 1215		
	E564 1220		
	E564 1230		E568 1230
	E564 1403		
	E564 1405		
	E564 1410		
	E564 1415		
	E564 1420		
	E564 1430		E568 1430
	E564 1605		
	E564 1610		
	E564 1615		
	E564 1620		
	E564 1630		
	E564 1640		E568 1640
	E564 2005		
	E564 2010		
	E564 2015		
	E564 2020		
	E564 2030		
	E564 2040		E568 2040

Endmills Harmony H Series

suttontools

- For super fine finishing applications
- Suitable for hard, short chipping materials
NH - For materials up to 48HRc
VH - For materials up to 63HRc

- 高精铣用
- 适合高硬度、短屑材料
NH - 加工硬度可达48HRc
VH - 加工硬度可达63HRc



尺寸参考

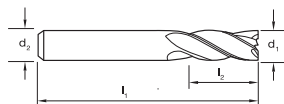
Type 型
Discount Group 折扣组
Material 材料
Surface Finish 表面处理
Application 应用代号
Geometry 螺旋角别
Shank Form (DIN 6535) 柄径形 (DIN 6535)
Shank Tolerance 柄径容许公差

Size Ref.	d ₁ (e8)	l ₁	l ₂	l ₃	d ₂	d ₃	z	rad	Item # (货号)	Item # (货号)	Item # (货号)	Item # (货号)
DIN 6527L									E428	E432	E436	E543
0400	4.0	57	11	19	6	3.7	4		E428 0400			
0500	5.0	57	13	20	6	4.7	4		E428 0500			
0600	6.0	57	13	21	6	5.7	6		E428 0600			E543 0600
0800	8.0	63	19	27	8	7.6	6		E428 0800			E543 0800
1000	10.0	72	22	32	10	9.5	6		E428 1000			E543 1000
1200	12.0	83	26	38	12	11.5	6		E428 1200			E543 1200
1600	16.0	92	32	44	16	15.5	8		E428 1600			E543 1600
2000	20.0	104	38	54	20	19.0	8					E543 2000
DIN 6527L												
0600	6.0	57	13		6		6			E432 0600		
0800	8.0	63	19		8		6			E432 0800		
1000	10.0	72	22		10		6			E432 1000		
1200	12.0	83	26		12		6			E432 1200		
1400	14.0	83	26		14		6			E432 1400		
1600	16.0	92	32		16		6			E432 1600		
1800	18.0	92	32		18		8			E432 1800		
2000	20.0	104	38		20		8			E432 2000		
2500	25.0	120	45		25		8			E432 2500		
SUTTON STD										E434		
0600	6.0	62	18		6		6			E434 0600		
0800	8.0	68	24		8		6			E434 0800		
1000	10.0	80	30		10		6			E434 1000		
1200	12.0	93	36		12		6			E434 1200		
1600	16.0	108	48		16		6			E434 1600		
2000	20.0	126	60		20		8			E434 2000		
2500	25.0	150	85		25		8			E434 2500		
0605	6.0	62	13		6		6	0.5			E436 0605	
0610	6.0	62	13		6		6	1.0			E436 0610	
0805	8.0	68	19		8		6	0.5			E436 0805	
0810	8.0	68	19		8		6	1.0			E436 0810	
1005	10.0	80	22		10		6	0.5			E436 1005	
1010	10.0	80	22		10		6	1.0			E436 1010	
1015	10.0	80	22		10		6	1.5			E436 1015	
1020	10.0	80	22		10		6	2.0			E436 1020	
1205	12.0	93	26		12		6	0.5			E436 1205	
1210	12.0	93	26		12		6	1.0			E436 1210	
1215	12.0	93	26		12		6	1.5			E436 1215	
1220	12.0	93	26		12		6	2.0			E436 1220	
1605	16.0	108	32		16		6	0.5			E436 1605	
1610	16.0	108	32		16		6	1.0			E436 1610	
1615	16.0	108	32		16		6	1.5			E436 1615	
1620	16.0	108	32		16		6	2.0			E436 1620	
2005	20.0	126	38		20		8	0.5			E436 2005	
2010	20.0	126	38		20		8	1.0			E436 2010	
2015	20.0	126	38		20		8	1.5			E436 2015	
2020	20.0	126	38		20		8	2.0			E436 2020	

Endmills Carbide

suttontools

- Economy range endmills
- Standard grade carbide
- For conventional milling applications



尺寸参考

Catalogue Code 目录代码

Discount Group 折扣组

Material 材料

Surface Finish 表面处理

Application 色环及应用

Geometry 螺旋角別

Shank Form (DIN 6535) 柄径形 (DIN 6535)

Shank Tolerance 柄径容许公差

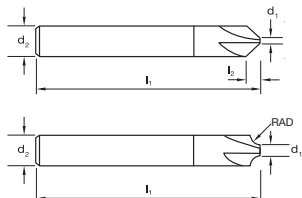
[illegible]

Endmills Carbide, Chamfer

suttontools

- For chamfering & deburring component edges
 - Straight flute for smooth cutting
 - TiAlN for longer tool life
- E456 - 90° form
E457 - 60° form
E458 - Radius for corner rounding

- 适合倒角及去毛边
 - 更顺畅的直刀设计
 - 铝氮化钛涂层大幅度层延长刀具寿命
- E456 - 90° 倒角
E457 - 60° 倒角
E458 - 内圆弧倒角



尺寸参考

[illegible]

Application Guide Colour Band Selection

suttontools

Sutton Tools have made the tool selection for cutting different materials easy by applying colour coded bands to the shanks of the tools which relates to the material it is best suited to.

Sutton Tools — 神盾工具通过在刀具柄径上标识的色环来显示其最适宜切割的材料。由此可轻松选择用于切削不同材料的刀具。

Why Colour Band? 为何要使用色环?

- Each colour gives clear assignment of materials, different choice of tools and applications
每种色彩清楚地表明刀具的材料、刀具及其应用的不同选择。
- Internationally recognised
国际公认
- All suitable standard tools are identified at a glance
可一目了然地识别所有合适的标准刀具
- A simplified tool selection lends itself to rationalisation
轻松地选择刀具有利于其合理使用
- Rejects are reduced due to correct tool choice.
选择正确的刀具可减少不良品。

Selection Made Easy! 选择使一切变得轻松!

ISO	VDI	Material Group	工件材料类别	Sutton	应用材料代号
P	A	Steel	钢件	N	 ^ VDI 333 also belongs to the new listing of our new ISO 5210:1982 ^ VDI 333 can be checked in the component materials
M	R	Stainless Steel	不锈钢	VA	
K	F	Cast Iron	铸铁	GG	
N	N	Non-Ferrous Metals, Aluminiums & Coppers	有色金属	Al W	
S	S	Titaniums & Super Alloys	钛合金及超级合金	Ti Ni	
H	H	Hard Materials (≥ 45 HRC)	淬火钢(≥ 45 HRC)	H	

ISO及VDI应用材料代号

^ VDI 3323 material groups can also be determined by referring to the material cross reference listing in the application guide of our main catalogue.

^ VDI 3323 工件材料类别明细
可查阅产品目录技术篇的工
件材料分类表。

	N	for general purpose 般用
	UNI	for universal materials 高效通用
	AI	for aluminums 铝用
	W	for soft materials 软质材料用
	Cu	for copper materials 红铜用
	VA	for tough materials 不锈钢用
	GG	for cast iron materials 铸铁用
	H	for hard materials 硬质材料用
	XH	for extra hard materials 高硬质材料用
	VH	for very hard materials 较高硬质材料用
	Ti	for titaniums 钛合金用
	Ni	for nickels 镍合金用

ISO	VDI^ 3323	Material 工件材料		Condition 材料状态	HB 硬度	N/mm²											
P	1	Steel - Non-alloy, cast & free cutting 钢件-非合金及 易切削	~ 0.15 %C	A	125	440	●	●		●	●						
	2		~ 0.45 %C	A	190	640	●	●		●	●						
	3			QT	250	840	○	●		○	○		○				
	4		~ 0.75 %C	A	270	910	○	●		○	○		○				
	5			QT	300	1010		●					●	○			
	6	Steel - Low alloy & cast < 5% of alloying elements 钢件-低合金钢			A	180	610	●	●		●	●					
	7				QT	275	930	○	●		○	○		○			
	8				QT	300	1010		●					●	○		
	9				QT	350	1180			○				●	●	○	
	10	Steel - High alloy, cast & tool 高合金钢及工具钢			A	200	680	○	●			○		○			
	11				HT	325	1100			○				●	●	○	
	12	Steel - Corrosion resistant & cast 钢件-耐酸钢	Ferritic / Martensitic	A	200	680		●			●		○				
	13		Martensitic	QT	240	810		○			○		○	●	○		
M	14.1	Stainless Steel 不锈钢	Austenitic	A	180	610		○			●						
	14.2		Duplex		250	840		○			●				○		
	14.3		Precipitation Hardening	PH	250	840		●			●		○			○	
K	15	Cast Iron - Grey (GG)	Ferritic / Pearlitic		180	610	○	●				●	○				
	16	灰铸铁	Pearlitic		260	880		●				●	●	●			
	17	Cast Iron - Nodular (GGG)	Ferritic		160	570	○	●				●	○				
	18	球墨铸铁	Pearlitic		250	840		●				●	●	●			
	19	Cast Iron - Malleable 可锻铸铁	Ferritic		130	460	○	●				○	○				
			Pearlitic		230	780	○	●				○	●				
N	21	Aluminum & Magnesium - wrought alloy 锻造铝合金	Non Heat Treatable		60	210	●	○	●	●	●	○					
	22		Heat Treatable	AH	100	360	●	○	●	●	●	○					
	23	Aluminum & Magnesium - cast alloy ≤12% Si 压铸铝 ≤12% Si	Non Heat Treatable		75	270	○	●	●	○	●	○					
	24		Heat Treatable	AH	90	320	○	●	●	○	●	○					
	25	Al & Mg-cast alloy 压铸铝 >12% Si	Non Heat Treatable		130	460			○	○	○	○	●	○			
	26	Copper & Cu alloys (Brass/Bronze) 铜及铜合金	Free cutting, Pb > 1%		110	390	○	○	○	○	○	○					
	27		Brass (CuZn, CuSnZn)		90	320	○	●		○	○		●	●	○	○	
	28		Bronze (CuSn)		100	360		○	○	○	○	●	○				
	29	Non-metallic - Thermosetting & fiber-reinforced plastics							○								
	30	Non-metallic - Hard rubber, wood etc.															
S	31	High temp. alloys 耐热合金	Fe based	A	200	680						●					●
	AH			280	950					○					●		
	33		Ni / Co based	A	250	840		○				○					●
	34			AH	350	1180										●	
	35			C	320	1080										●	
	36	Titanium & Ti alloys 钛合金	CP Titanium		400 MPa											●	
	37.1		Alpha alloys		860 MPa			○								●	
	37.2		Alpha / Beta alloys	A	960 MPa											●	
	37.3			AH	1170 MPa											●	
	37.4		Beta alloys	A	830 MPa											●	
37.5	AH	1400 MPa											●				
H	38.1	Hardened steel 淬火钢			HT	45 HRC			○					○	●	●	
	38.2				HT	55 HRC							●				
	39.1				HT	58 HRC							●				
	39.2				HT	62 HRC							●				
	40	Cast Iron 硬铸铁	Chilled	C	400	1350		●					●	●	●	○	
	41			HT	55 HRC								●				

Condition: A (Annealed) (正火), AH (Age Hardened) (时效硬化), C (Cast) (铸件), HT (Hardened & Tempered) (淬火及回火), QT (Quenched & Tempered) (调质及回火)

● Optimal 非常适合 | ○ Effective 适合

Application Guide Speeds & Feeds - Endmills

suttontools

ISO	VDI	Material Group	工件材料类别	Sutton	应用材料代号
P	A	Steel	钢件	N	UN
M	R	Stainless Steel	不锈钢	VA	
K	F	Cast Iron	铸铁	GG	
N	N	Non-Ferrous Metals, Aluminiums & Coppers	有色金属	Al W	
S	S	Titaniums & Super Alloys	钛合金及超级合金	Ti	Ni
H	H	Hard Materials (≥ 45 HRC)	淬火钢(≥ 45 HRC)	H	

ISO及VDI应用材料代号

^ VDI 3323 material groups can also be determined by referring to the material cross reference listing in the application guide of our main catalogue.

^ VDI 3323 工件材料类别明细可查阅产品目录技术篇的工件材料分类表。

Catalogue Code / 目录代码

Material / 材料

Surface Finish / 表面处理

Sutton Designation / 应用材料代号

Type of Cut: Slotting / 槽铣

Finishing / 精铣

Universal / 半精铣

Roughing / 粗铣

Profiling / 仿形铣

↑ ap × Ø / 轴向深度

↔ ae × Ø / 径向深度

								
E428	E432	E434	E436	E543	E562	E564	E566	E568
VHM-ULTRA							VHM-ULTRA	
AICrN							Aldura	
NH							VH	
•						•	•	
	•		•	•				
		•			•		•	•
1.0 1.0 1.0	2.0 2.0	2.0 2.0	2.0 2.0	1.75 1.75	0.5 1.0	0.5 1.0	1.0	1.0
1.0 0.25 0.5	0.05 0.025	0.06 0.05	0.06 0.05	0.05 0.025	1.0 0.4	1.0 0.4	0.05	0.05

ISO	VDI ³³²³	Material 工件材料	Condition 材料状态	HB 硬度	N/mm²	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #
P	1	Steel - Non-alloy, cast & free cutting	~ 0.15 %C	A	125	440	210	8	8	11	210	11	15	210	11	14	210	11	14	-	-	-	-
	2	Steel - Non-alloy, cast & free cutting	~ 0.45 %C	A	190	640	210	8	8	11	210	11	15	210	11	14	210	11	14	-	-	-	-
	3	Steel - Non-alloy, cast & free cutting	~ 0.75 %C	QT	250	840	175	8	8	11	175	11	15	175	11	14	175	11	14	-	-	-	-
	4	Steel - Low alloy & cast < 5% of alloying elements		A	270	910	175	8	8	11	175	11	15	175	11	14	175	11	14	-	-	-	-
	5	Steel - Low alloy & cast < 5% of alloying elements		QT	300	1010	175	8	8	11	175	11	15	175	11	14	175	11	14	100	11	14	175
	6	Steel - Low alloy & cast < 5% of alloying elements		A	180	610	210	8	8	11	210	11	15	210	11	14	210	11	14	-	-	-	-
	7	Steel - Low alloy & cast < 5% of alloying elements		QT	275	930	175	8	8	11	175	11	15	175	11	14	175	11	14	100	11	14	-
	8	Steel - Low alloy & cast < 5% of alloying elements		QT	300	1010	175	8	8	11	175	11	15	175	11	14	175	11	14	100	11	14	175
	9	Steel - Low alloy & cast < 5% of alloying elements		QT	350	1180	120	8	8	11	120	11	15	120	11	14	120	11	14	80	11	14	120
	10	Steel - High alloy, cast & tool		A	200	680	175	8	8	11	175	11	15	175	11	14	175	11	14	100	11	14	-
	11	Steel - High alloy, cast & tool		HT	325	1100	120	8	8	11	120	11	15	120	11	14	120	11	14	80	11	14	120
	12	Steel - Corrosion resistant & cast	Ferritic / Martensitic	A	200	680	-	-	-	-	120	11	15	120	11	14	120	11	14	90	11	14	-
	13	Steel - Corrosion resistant & cast	Martensitic	QT	240	810	-	-	-	-	100	11	15	100	11	14	100	11	14	80	11	14	100
M	14.1	Stainless Steel	Austenitic	A	180	610	-	-	-	-	-	-	-	-	-	90	11	14	-	-	-	-	
	14.2	Stainless Steel	Duplex		250	840	-	-	-	-	-	-	-	-	-	90	11	14	120	9	10	120	
	14.3	Stainless Steel	Precipitation Hardening	PH	250	840	-	-	-	-	-	-	-	-	-	80	11	14	100	9	10	100	
K	15	Cast Iron - Grey (GG)	Ferritic / Pearlitic		180	610	150	8	8	11	150	11	15	150	11	14	150	11	14	140	11	14	-
	16	Cast Iron - Grey (GG)	Pearlitic		260	880	150	8	8	11	150	11	15	150	11	14	150	11	14	140	11	14	150
	17	Cast Iron - Nodular (GGG)	Ferritic		160	570	150	8	8	11	150	11	15	150	11	14	150	11	14	140	11	14	-
	18	Cast Iron - Nodular (GGG)	Pearlitic		250	840	150	8	8	11	150	11	15	150	11	14	150	11	14	140	11	14	150
	19	Cast Iron - Malleable	Ferritic		130	460	110	8	8	11	110	11	15	110	11	14	110	11	14	100	11	14	-
N	20	Cast Iron - Malleable	Pearlitic		230	780	110	8	8	11	110	11	15	110	11	14	110	11	14	100	11	14	-
	21	Aluminum & Magnesium - wrought alloy	Non Heat Treatable		60	210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22	Aluminum & Magnesium - wrought alloy	Heat Treatable	AH	100	360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	23	Aluminum & Magnesium - cast alloy ≤12% Si	Non Heat Treatable		75	270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24	Aluminum & Magnesium - cast alloy ≤12% Si	Heat Treatable	AH	90	320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	25	Al & Mg-cast alloy 压铸铝 >12% Si	Non Heat Treatable		130	460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	26	Copper & Cu alloys (Brass/Bronze)	Free cutting, Pb > 1%		110	390	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	27	Copper & Cu alloys (Brass/Bronze)	Brass (CuZn, CuSnZn)		90	320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	28	Copper & Cu alloys (Brass/Bronze)	Bronze (CuSn)		100	360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	29	Non-metallic - Thermosetting & fiber-reinforced plastics					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S	30	Non-metallic - Hard rubber, wood etc.				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	31	High temp. alloys	Fe based	A	200	680	50	-	-	-	-	-	-	-	-	50	11	14	-	-	-	-	-
	32	High temp. alloys	Ni / Co based	AH	280	950	50	-	-	-	50	11	15	50	11	14	50	11	14	50	9	10	50
	33	High temp. alloys		A	250	840	50	-	-	-	-	-	-	-	-	50	11	14	-	-	-	-	-
	34	High temp. alloys		AH	350	1180	50	-	-	-	50	11	15	50	11	14	50	11	14	50	9	10	50
	35	High temp. alloys		C	320	1080	-	-	-	-	50	11	15	50	11	14	50	11	14	50	9	10	50
	36	Titanium & Ti alloys	CP Titanium		400 MPa		70	8	8	11	-	-	-	-	-	-	-	-	-	-	-	-	-
	37.1	Titanium & Ti alloys	Alpha alloys		860 MPa		70	8	8	11	-	-	-	-	-	-	70	11	14	-	9	10	-
	37.2	Titanium & Ti alloys	Alpha / Beta alloys	A	960 MPa		70	8	8	11	70	11	15	70	11	14	70	11	14	70	9	10	70
	37.3	Titanium & Ti alloys	Beta alloys	AH	1170 MPa		-	-	-	-	70	11	15	70	11	14	70	11	14	-	-	-	-
H	37.4	Titanium & Ti alloys	Beta alloys	A	830 MPa		70	8	8	11	70	11	15	70	11	14	70	11	14	70	9	10	70
	37.5	Titanium & Ti alloys	Beta alloys	AH	1400 MPa		-	-	-	-	70	11	15	70	11	14	70	11	14	-	-	-	-
	38.1	Hardened steel	HT	45 HRC		120	8	8	11	120	11	15	120	11	14	120	11	14	80	11	14	120	
	38.2	Hardened steel	HT	55 HRC		-	-	-	-	120	11	15	120	11	14	120	11	14	-	-	-	-	60
	39.1	Hardened steel	HT	58 HRC		-	-	-	-	100	11	15	100	11	14	100	11	14	-	-	-	-	50
	39.2	Hardened steel	HT	62 HRC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
	40	Cast Iron	Chilled	C	400	1350	120	8	8	11	120	11	15	120	11	14	120	11	14	80	11	14	120
41	Hardened steel	HT	55 HRC		-	-	-	-	100	11	15	100	11	14	100	11	14	-	-	-	-	-	140

Condition: A (Annealed) (正火), AH (Age Hardened) (时效硬化),
C (Cast) (铸件), HT (Hardened & Tempered) (淬火及回火),
QT (Quenched & Tempered) (调质及回火)

Bold = Optimal | Regular = Effective
粗体 = 非常适合 | 细体 = 适合

Notes on Milling

- Above values are guidelines for the size and type of cut nominated.
- For long series tools, reduce speed by 40% and feed by 20%.

Feed Table (f _t) (mm/tooth) / 进给表 (f _t)mm/齿																				
0	Feed # / 每齿进给码																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2	0.001	0.002	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.010	0.011	0.013	0.014	0.016	0.018	0.020	0.022	0.024	0.026	0.030
3	0.002	0.003	0.004	0.005	0.006	0.008	0.009	0.010	0.012	0.014	0.016	0.018	0.020	0.023	0.025	0.028	0.032	0.034	0.038	0.042
4	0.004	0.005	0.006	0.007	0.009	0.010	0.012	0.014	0.016	0.018	0.021	0.023	0.026	0.030	0.032	0.036	0.040	0.044	0.045	0.050
5	0.005	0.006	0.008	0.009	0.011	0.013	0.015	0.017	0.020	0.023	0.025	0.030	0.032	0.036	0.040	0.044	0.050	0.055	0.060	0.065
6	0.006	0.008	0.009	0.011	0.013	0.016	0.018	0.021	0.024	0.028	0.030	0.034	0.038	0.042	0.045	0.050	0.055	0.060	0.070	0.075
8	0.010	0.012	0.014	0.017	0.019	0.022	0.025	0.028	0.032	0.036	0.040	0.045	0.050	0.055	0.060	0.065	0.075	0.080	0.085	0.095
10	0.013	0.015	0.018	0.021	0.024	0.028	0.032	0.036	0.040	0.045	0.050	0.055	0.060	0.070	0.075	0.085	0.090	0.100	0.11	0.12
12	0.016	0.019	0.022	0.026	0.030	0.034	0.038	0.044	0.050	0.055	0.060	0.065	0.075	0.080	0.090	0.100	0.11	0.12	0.13	0.14
16	0.020	0.024	0.028	0.034	0.038	0.044	0.050	0.055	0.060	0.070	0.080	0.085	0.095	0.11	0.12	0.13	0.14	0.16	0.17	0.18
20	0.022	0.028	0.032	0.038	0.044	0.050	0.060	0.065	0.075	0.085	0.095	0.11	0.12	0.13	0.15	0.16	0.18	0.19	0.21	0.23
25	0.025	0.032	0.038	0.045	0.055	0.060	0.070	0.080	0.090	0.10	0.12	0.13	0.15	0.16	0.18	0.20	0.22	0.24	0.26	0.29

						
E424	E535	E559	E426	E430	E545	E549
VHM-ULTRA						
AlCrN						
UNI						
•				•		
	•		•			
		•				
			•			
				•		
					•	
						•
	0.25	1.0	1.0		1.5	1.5
	1.0	0.1	0.4		0.1	0.4

IMPERIAL ENDMILLS (inch size)

Ø	= nominal tool diameter (inch)	$n = \frac{v_c \times 12}{\phi \times \pi} \approx \frac{v_c}{\phi} \times 3.82$
n	= Spindel speed (RPM)	
v _c	= Cutting speed (SFM)	$v_c = \frac{n \times \phi \times \pi}{12} \approx \frac{n \times \phi}{3.82}$
f _z	= Feed rate per tooth (inch/tooth)	$f_z = \frac{V_f}{z \times n}$
v _f	= Feed rate (inch/min)	$v_f = f_z \times z \times n$
z	= No. cutting edges	
Q	= Metal removal rate (in³/min)	$Q = \frac{a_p \times a_e \times v_f}{1000}$
a _p	= Cutting depth (inch)	
a _e	= Cutting width (inch)	

METRIC ENDMILLS (mm size)

Ø	= nominal tool diameter (mm)	$n = \frac{v_c \times 1000}{\phi \times \pi} \approx \frac{v_c}{\phi} \times 318$
n	= Spindel speed (RPM)	
v _c	= Cutting speed (m/min)	$v_c = \frac{n \times \phi \times \pi}{1000} \approx \frac{n \times \phi}{318}$
f _z	= Feed rate per tooth (mm/tooth)	$f_z = \frac{V_f}{z \times n}$
v _f	= Feed rate (mm/min)	$v_f = f_z \times z \times n$
z	= No. cutting edges	
Q	= Metal removal rate (cm³/min)	$Q = \frac{a_p \times a_e \times v_f}{1000}$
a _p	= Cutting depth (mm)	
a _e	= Cutting width (mm)	

Application Guide Speeds & Feeds - Endmills

suttontools

ISO	VDI	Material Group 工件材料类别	Sutton	应用材料代号
P	A	Steel 钢件	N	UN
M	R	Stainless Steel 不锈钢	VA	
K	F	Cast Iron 铸铁	GG	
N	N	Non-Ferrous Metals, Aluminiums & Coppers 有色金属	Al	W
S	S	Titaniums & Super Alloys 钛合金及超级合金	Ti	Ni
H	H	Hard Materials (> 45 HRC) 淬火钢(> 45 HRC)	H	

ISO及VDI应用材料代号

^ VDI 3323 material groups can also be determined by referring to the material cross reference listing in the application guide of our main catalogue.

^ VDI 3323 工件材料类别明细可查阅
产品目录技术篇的工件材料分类表。

Catalogue Code / 目录代码

Material / 材料

Surface Finish / 表面处理

Sutton Designation / 应用材料代号

Type of Cut: *Slotting* / 槽铣

Finishing / 精铣

Universal / 半精铣

Roughing / 粗铣

Profiling / 仿形铣

↑ $ap \times \theta$ / 轴向深度

$\downarrow$ $a_p \times \theta$ / 轴向深度
 $\rightleftarrows$ $a_r \times \theta$ / 径向深度

Condition HB

ISO	VDI ¹ 3323	Material 工件材料		Condition 材料状态	HB 硬度	N/mm ²	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #			
P	1	Steel - Non-alloy, cast & free cutting 钢件-非合金及 易切削	~ 0.15 %C	A	125	440	180	16	180	15	180	16	-	-	-	-	-	-	-	-	-		
	2		~ 0.45 %C	A	190	640	180	16	180	15	180	16	-	-	-	-	-	-	-	-	-		
	3		~ 0.75 %C	QT	250	840	100	16	100	15	100	16	-	-	-	-	-	-	-	-	-		
	4			A	270	910	100	16	100	15	100	16	-	-	-	-	-	-	-	-	-		
	5			QT	300	1010	100	16	100	15	100	16	-	-	-	-	-	-	-	-	-		
	6	Steel - Low alloy & cast < 5% of alloying elements 钢件-低合金钢		A	180	610	180	16	180	15	180	16	-	-	-	-	-	-	-	-	-		
	7			QT	275	930	100	16	100	15	100	16	-	-	-	-	-	-	-	-	-		
	8			QT	300	1010	100	16	100	15	100	16	-	-	-	-	-	-	-	-	-		
	9			QT	350	1180	80	16	80	15	80	16	-	-	-	-	-	-	-	-	-		
	10	Steel - High alloy, cast & tool 高合金钢及工具钢		A	200	680	100	16	100	15	100	16	-	-	-	-	-	-	-	-	-		
	11			HT	325	1100	80	16	80	15	80	16	-	-	-	-	-	-	-	-	-		
	12	Steel - Corrosion resistant & cast 钢件-耐蚀钢	Ferritic / Martensitic	A	200	680	90	16	90	15	90	16	-	-	-	-	-	-	-	-	-		
	13		Martensitic	QT	240	810	80	16	80	15	80	16	-	-	-	-	-	-	-	-	-		
M	14.1	Stainless Steel 不锈钢	Austenitic	A	180	610	90	16	90	15	90	16	-	-	-	-	-	-	-	-	-		
	14.2		Duplex		250	840	90	16	90	15	90	16	-	-	-	-	-	-	-	-	-		
	14.3		Precipitation Hardening	PH	250	840	80	16	80	15	80	16	-	-	-	-	-	-	-	-	-		
K	15	Cast Iron - Grey (GG)	Ferritic / Pearlitic		180	610	140	16	140	15	140	16	-	-	-	-	-	-	-	-	-		
	16		Pearlitic		260	880	140	16	140	15	140	16	-	-	-	-	-	-	-	-	-		
	17	Cast Iron - Nodular (GGG)	Ferritic		160	570	140	16	140	15	140	16	-	-	-	-	-	-	-	-	-		
	18		Pearlitic		250	840	140	16	140	15	140	16	-	-	-	-	-	-	-	-	-		
	19	Cast Iron - Malleable 可锻铸铁	Ferritic		130	460	100	16	100	15	100	16	-	-	-	-	-	-	-	-	-		
	20		Pearlitic		230	780	100	16	100	15	100	16	-	-	-	-	-	-	-	-	-		
N	21	Aluminum & Magnesium - wrought alloy 锻造铝合金	Non Heat Treatable		60	210	-	-	-	-	-	220	8	14	18	200	8	13	17	200	9	13	18
	Heat Treatable		AH	100	360	-	-	-	-	-	220	8	14	18	200	8	13	17	200	9	13	18	
	22	Aluminum & Magnesium - cast alloy ≤12% Si 压铸铝 ≤12% Si	Non Heat Treatable		75	270	-	-	-	-	-	220	8	14	18	200	8	13	17	200	9	13	18
	Heat Treatable		AH	90	320	-	-	-	-	-	220	8	14	18	200	8	13	17	200	9	13	18	
	24	Al & Mg-cast alloy 压铸铝 >12% Si	Non Heat Treatable		130	460	-	-	-	-	-	220	8	14	18	200	8	13	17	200	9	13	18
	25	Copper & Cu alloys (Brass/Bronze) 铜及铜合金	Free cutting, Pb > 1% (Brass/CuZn, CuSnZn)		110	390	-	-	-	-	-	160	8	14	18	500	8	13	17	500	9	13	18
	27		Brass (CuZn, CuSnZn)		90	320	-	-	-	-	-	160	8	14	18	500	8	13	17	500	9	13	18
	28		Bronze (CuSn)		100	360	-	-	-	-	-	160	8	14	18	500	8	13	17	500	9	13	18
	29		Non-metallic - Thermosetting & fiber-reinforced plastics				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	30	Non-metallic - Hard rubber, wood etc.				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
S	31	High temp. alloys 耐热合金	Fe based	A	200	680	50	16	50	15	50	16	-	-	-	-	-	-	-	-	-		
	AH			280	950	50	16	50	15	50	16	-	-	-	-	-	-	-	-	-			
	33		Ni / Co based	A	250	840	50	16	50	15	50	16	-	-	-	-	-	-	-	-	-		
	34			AH	350	1180	50	16	50	15	50	16	-	-	-	-	-	-	-	-	-		
	35			C	320	1080	50	16	50	15	50	16	-	-	-	-	-	-	-	-	-		
	36	Titanium & Ti alloys 钛合金	CP Titanium		400 MPa		70	16	70	15	70	16	-	-	-	-	-	-	-	-	-		
	37.1		Alpha alloys		860 MPa		70	16	70	15	70	16	-	-	-	-	-	-	-	-	-		
	37.2		Alpha / Beta alloys	A	960 MPa		70	16	70	15	70	16	-	-	-	-	-	-	-	-	-		
	37.3			AH	1170 MPa		70	16	70	15	70	16	-	-	-	-	-	-	-	-	-		
	37.4		Beta alloys	A	830 MPa		70	16	70	15	70	16	-	-	-	-	-	-	-	-	-		
	37.5			AH	1400 MPa		70	16	70	15	70	16	-	-	-	-	-	-	-	-	-		
H	38.1		Hardened steel 淬火钢		HT	45 HRC		80	16	80	15	80	16	-	-	-	-	-	-	-	-	-	
	38.2	HT			55 HRC		60	16	60	15	60	16	-	-	-	-	-	-	-	-	-		
	39.1	HT			58 HRC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	39.2	HT			62 HRC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	40	Cast Iron 硬铸铁	Chilled	C	400	1350	60	16	60	15	60	16	-	-	-	-	-	-	-	-	-		
41	HT			55 HRC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

Condition: A (Annealed) (正火), AH (Age Hardened) (时效硬化),
C (Cast) (铸件), HT (Hardened & Tempered) (淬火及回火),
QT (Quenched & Tempered) (调质及回火)

Bold = Optimal | Regular = Effective

粗体 = 非常适合 | 细体 = 适合

Notes on Milling

1. Above values are guidelines for the size and type of cut nominated.

2. For long series tools, reduce speed by 40% and feed by 20%.

Feed Table (f _z) (mm/tooth) / 进给表 (f _z) mm/齿																				
0	Feed # / 每齿进给量																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2	0.001	0.002	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.010	0.011	0.013	0.014	0.016	0.018	0.020	0.022	0.024	0.026	0.030
3	0.002	0.003	0.004	0.005	0.006	0.008	0.009	0.010	0.012	0.014	0.016	0.018	0.020	0.023	0.025	0.028	0.032	0.034	0.038	0.042
4	0.004	0.005	0.006	0.007	0.009	0.010	0.012	0.014	0.016	0.018	0.021	0.023	0.026	0.030	0.032	0.036	0.040	0.044	0.045	0.050
5	0.005	0.006	0.008	0.009	0.011	0.013	0.015	0.017	0.020	0.023	0.025	0.030	0.032	0.036	0.040	0.044	0.050	0.055	0.060	0.065
6	0.006	0.008	0.009	0.011	0.013	0.016	0.018	0.021	0.024	0.028	0.030	0.034	0.038	0.042	0.045	0.050	0.055	0.060	0.070	0.075
8	0.010	0.012	0.014	0.017	0.019	0.022	0.025	0.028	0.032	0.036	0.040	0.045	0.050	0.055	0.060	0.065	0.075	0.080	0.085	0.095
10	0.013	0.015	0.018	0.021	0.024	0.028	0.032	0.036	0.040	0.045	0.050	0.055	0.060	0.070	0.075	0.085	0.090	0.100	0.11	0.12
12	0.016	0.019	0.022	0.026	0.030	0.034	0.038	0.044	0.050	0.055	0.060	0.065	0.075	0.080	0.090	0.100	0.11	0.12	0.13	0.14
16	0.020	0.024	0.028	0.034	0.038	0.044	0.050	0.055	0.060	0.070	0.080	0.085	0.095	0.11	0.12	0.13	0.14	0.16	0.17	0.18
20	0.022	0.028	0.032	0.038	0.044	0.050	0.060	0.065	0.075	0.085	0.095	0.11	0.12	0.13	0.15	0.16	0.18	0.19	0.21	0.23
25	0.025	0.032	0.038	0.045	0.055	0.060	0.070	0.080	0.090	0.10	0.12	0.13	0.15	0.16	0.18	0.20	0.22	0.24	0.26	0.29

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METRIC ENDMILLS (mm size)

Ø = nominal tool diameter (mm)	$n = \frac{v_c \times 1000}{\text{Ø} \times \pi} \approx \frac{v_c}{\text{Ø}} \times 318$
n = Spindle speed (RPM)	
v_c = Cutting speed (m/min)	
f_z = Feed rate per tooth (mm/tooth)	$v_c = \frac{n \times \text{Ø} \times \pi}{1000} \approx \frac{n \times \text{Ø}}{318}$
v_r = Feed rate (mm/min)	
z = No. cutting edges	$f_z = \frac{v_r}{z \times n} \quad v_r = f_z \times z \times n$
Q = Metal removal rate (cm ³ /min)	
a_p = Cutting depth (mm)	$Q = \frac{a_p \times \text{Ø} \times v_c \times v_r}{1000}$
a_e = Cutting width (mm)	

Application Guide Speeds & Feeds - Carbide

suttontools

ISO VDI Material Group 工件材料类别 Sutton 应用材料代号

P	A	Steel 钢件	N	ISO
M	R	Stainless Steel 不锈钢	VA	
K	F	Cast Iron 铸铁	GG	
N	N	Non-Ferrous Metals, Aluminiums & Coppers 有色金属	Al W	
S	S	Titaniums & Super Alloys 钛合金及超级合金	Ti Ni	VDI
H	H	Hard Materials (≥ 45 HRC) 淬火钢(≥ 45 HRC)	H	

ISO及VDI应用材料代号

^ VDI 3323 material groups can also be determined by referring to the material cross reference listing in the application guide of our main catalogue.

^ VDI 3323 工件材料类别明细可查阅产品目录技术篇的工件材料分类表。

Catalogue Code / 目录代码

Material / 材料

Surface Finish / 表面处理

Sutton Designation / 应用材料代号

Geometry / 螺旋角别

Drilling Depth / 钻孔深度

ISO	VDI 3323	Material 工件材料		Condition 材料状态	HB 硬度	N/mm ²	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #	Vc	Feed #		
P	1	Steel - Non-alloy, cast & free cutting 钢件-非合金及 易切削	~ 0.15 %C	A	125	440	90	8	130	8	130-180	7	90	8	130	8	130-180	7	100	8	80	8
	2		~ 0.45 %C	A	190	640	90	8	130	8	110-160	7	90	8	130	8	110-160	7	100	8	80	8
	3		~ 0.75 %C	QT	250	840	85	8	110	8	110-160	7	85	8	110	8	110-160	7	80	7	60	7
	4			A	270	910	85	8	110	8	110-160	7	85	8	110	8	110-160	7	80	7	60	7
	5			QT	300	1010	50	6	70	6	70-100	7	50	6	70	6	70-100	7	60	6	50	6
	6	Steel - Low alloy & cast < 5% of alloying elements 钢件-低合金钢		A	180	610	85	8	110	8	110-160	7	85	8	110	8	110-160	7	80	7	60	7
	7			QT	275	930	65	7	80	7	110-160	7	65	7	80	7	110-160	7	80	7	60	7
	8			QT	300	1010	50	6	70	6	70-100	7	50	6	70	6	110-160	7	60	6	50	6
	9			QT	350	1180	30	5	35	5	-	-	30	5	35	5	-	-	30	5	-	-
	10	Steel - High alloy, cast & tool 高合金钢及工具钢		A	200	680	50	6	70	6	90-120	7	50	6	70	6	90-120	7	60	6	50	6
	11			HT	325	1100	30	5	35	5	-	-	30	5	35	5	-	-	30	5	-	-
	12	Steel - Corrosion resistant & cast 钢件-耐酸钢	Ferritic / Martensitic	A	200	680	-	-	30	4	40-50	5	-	-	25	4	30-50	5	-	-	-	-
	13		Martensitic	QT	240	810	30	5	35	5	40-50	5	30	5	35	5	40-50	5	30	5	-	-
M	14.1	Stainless Steel 不锈钢	Austenitic	A	180	610	-	-	50	5	50-70	5	-	-	40	5	50-70	5	45	5	40	5
	14.2		Duplex		250	840	-	-	40	4	40-60	5	-	-	35	4	40-60	5	-	-	30	4
	14.3		Precipitation Hardening	PH	250	840	20	4	30	4	40-50	5	20	4	25	4	30-50	5	-	-	-	-
K	15	Cast Iron - Grey (GG) 灰铸铁	Ferritic / Pearlitic		180	610	75	6	150	9	-	-	75	6	150	9	-	-	90	8	80	8
	Pearlitic			260	880	65	6	120	8	-	-	65	6	120	8	-	-	80	8	70	8	
	17	Cast Iron - Nodular (GGG) 球墨铸铁	Ferritic		160	570	65	5	100	8	-	-	65	5	100	8	-	-	70	7	60	7
	Pearlitic			250	840	65	5	100	8	-	-	65	5	100	8	-	-	70	7	60	7	
	19	Cast Iron - Malleable 可锻铸铁	Ferritic		130	460	65	5	100	8	-	-	65	5	100	8	-	-	70	7	60	7
	Pearlitic			230	780	65	5	100	8	-	-	65	5	100	8	-	-	70	7	60	7	
N	21	Aluminum & Magnesium - wrought alloy 锻造铝合金	Non Heat Treatable		60	210	-	-	-	-	300-400	8	-	-	-	-	300-400	8	-	-	-	-
	Heat Treatable		AH	100	360	-	-	-	-	-	300-400	8	-	-	-	-	300-400	8	-	-	-	-
	23	Aluminum & Magnesium - cast alloy ≤12% Si 压铸铝 ≤12% Si	Non Heat Treatable		75	270	-	-	-	-	220-320	8	-	-	-	-	220-320	8	-	-	-	-
	Heat Treatable		AH	90	320	-	-	-	-	-	220-320	8	-	-	-	-	220-320	8	-	-	-	-
	25	Al & Mg-cast alloy 压铸铝 >12% Si	Non Heat Treatable		130	460	-	-	200	7	200-280	7	-	-	250	7	200-280	7	-	-	-	-
	26	Copper & Cu alloys (Brass/Bronze) 铜及铜合金	Free cutting, Pb > 1%		110	390	-	-	200	7	-	-	-	-	250	7	-	-	-	-	-	-
	Brass (CuZn, CuSnZn)			90	320	-	-	200	7	-	-	-	-	250	7	-	-	-	-	-	-	
	28		Bronze (CuSn)		100	360	-	-	200	7	-	-	-	-	250	7	-	-	-	-	-	-
	29	Non-metallic - Thermosetting & fiber-reinforced plastics						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	30	Non-metallic - Hard rubber, wood etc.						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S	31	High temp. alloys 耐热合金	Fe based	A	200	680	-	-	35	4	30-40	4	-	-	35	4	30-40	4	-	-	-	-
	AH			280	950	-	-	30	4	30-40	4	-	-	30	4	30-40	4	-	-	-	-	
	Ni / Co based		A	250	840	-	-	35	4	30-40	4	-	-	35	4	30-40	4	-	-	-	-	
			AH	350	1180	-	-	30	4	25	3	-	-	30	4	25-35	3	-	-	-	-	
			C	320	1080	-	-	30	4	30-40	4	-	-	30	4	30-40	4	-	-	-	-	
	36	Titanium & Ti alloys 钛合金	CP Titanium		400 MPa		40	4	45	5	50-70	4	40	4	45	5	50-70	4	-	-	-	-
	37.1		Alpha alloys		860 MPa		35	3	40	4	40-60	4	35	3	40	4	40-60	4	-	-	-	-
	37.2		Alpha / Beta alloys	A	960 MPa		35	3	40	4	40-60	4	35	3	40	4	40-60	4	-	-	-	-
	AH			1170 MPa		-	-	35	4	30-50	4	-	-	35	4	30-50	4	-	-	-	-	
	37.3		Beta alloys	A	830 MPa		35	3	40	4	40-60	4	35	3	40	4	40-60	4	-	-	-	-
37.4				AH	1400 MPa		-	-	35	4	30-50	4	-	-	35	4	30-50	4	-	-	-	-
37.5																						
H	38.1	Hardened steel 淬火钢		HT	45 HRC		20	4	25	4	-	-	20	4	25	4	-	-	-	-	48	3
	38.2			HT	55 HRC		-	-	-	-	-	-	-	-	-	-	-	-	-	36	3	
	39.1			HT	58 HRC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	3
	39.2			HT	62 HRC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	3
	40	Cast iron 硬铸铁	Chilled	C	400	1350	65	6	120	8	-	-	65	6	120	8	-	-	-	-	70	8
	41			HT	55 HRC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	3

Condition: A (Annealed) (正火), AH (Age Hardened) (时效硬化), C (Cast) (铸件).

HT (Hardened & Tempered) (淬火及回火), QT (Quenched & Tempered) (调质及回火)

Bold = Optimal | Regular = Effective 粗体 = 非常适合 | 细体 = 适合

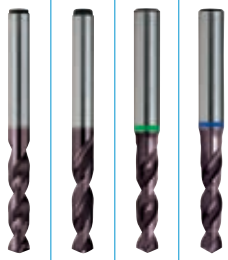
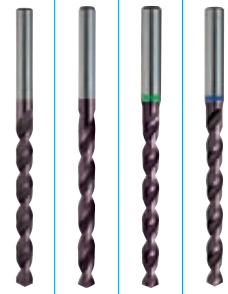
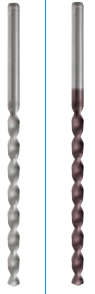
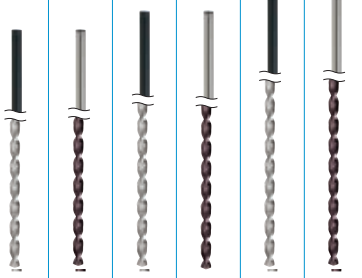
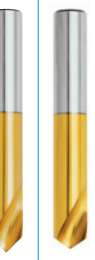
Notes on Drilling

- Step feeding or pecking is required for drilling greater than 3 x Ø.
- When drilling cast surface & black (ie. not machined surface), reduce drilling speed by 20%.
- For optimal positional accuracy and hole size, the use of spot drills is recommended prior to drilling desired hole, refer to our standard range (D175).
- For hole depths greater than 7 x Ø, pre-drill initially to pilot start for more accurate hole position and eliminate drill wandering. The pilot can be drilled with short rigid drill, approx. 3 x Ø in depth and reduced feed to ensure accurate pilot hole.

Feed Table (f) (mm/rev) / 进给表 (f) (mm/转)

Ø	Feed # / 每转进给码									
	1	2	3	4	5	6	7	8	9	10
2.0	0.020	0.025	0.030	0.040	0.050	0.060	0.075	0.095	0.120	0.15
3.0	0.030	0.035	0.045	0.055	0.070	0.090	0.110	0.135	0.17	0.21
4.0	0.040	0.045	0.060	0.075	0.090	0.115	0.140	0.18	0.22	0.27
5.0	0.045	0.055	0.070	0.090	0.110	0.135	0.17	0.21	0.26	0.32
6.0	0.055	0.065	0.080	0.100	0.125	0.16	0.19	0.24	0.30	0.37
8.0	0.070	0.085	0.105	0.130	0.16	0.20	0.25	0.31	0.38	0.47
10.0	0.085	0.105	0.125	0.16	0.19	0.24	0.30	0.37	0.46	0.56
12.0	0.095	0.120	0.15	0.18	0.23	0.28	0.34	0.42	0.52	0.64
16.0	0.125	0.15	0.19	0.23	0.29	0.36	0.44	0.54	0.66	0.82
20.0	0.15	0.18	0.23	0.28	0.34	0.42	0.52	0.64	0.80	0.98
25.0	0.18	0.22	0.27	0.33	0.41	0.50	0.60	0.74	0.90	1.10

Application Guide Speeds & Feeds - Drills

STUB / 短刃								JOBBER / 标准刃								LONG / 长刃				EXTRA LENGTH / 特长												NC SPOTTING 定位钻				CSINK 倒角刀																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
D151		D177		D155		D153		D163		D165		D168		D169		D170		D171		D191		D194		D192		D195		D193		D196		D175		D176		C108																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Feed Table (f) (mm/rev) / 进给表 (f) (mm/转)										
Ø	1	2	3	4	5	6	7	8	9	10
2.0	0.020	0.025	0.030	0.040	0.050	0.060	0.075	0.095	0.120	0.15
3.0	0.030	0.035	0.045	0.055	0.070	0.090	0.110	0.135	0.17	0.21
4.0	0.040	0.045	0.060	0.075	0.090	0.115	0.140	0.18	0.22	0.27
5.0	0.045	0.055	0.070	0.090	0.110	0.135	0.17	0.21	0.26	0.32
6.0	0.055	0.065	0.080	0.100	0.125	0.16	0.19	0.24	0.30	0.37
8.0	0.070	0.085	0.105	0.130	0.16	0.20	0.25	0.31	0.38	0.47
10.0	0.085	0.105	0.125	0.16	0.19	0.24	0.30	0.37	0.46	0.56
12.0	0.095	0.120	0.15	0.18	0.23	0.28	0.34	0.42	0.52	0.64
16.0	0.125	0.15	0.19	0.23	0.29	0.36	0.44	0.54	0.66	0.82
20.0	0.15	0.18	0.23	0.28	0.34	0.42	0.52	0.64	0.80	0.98
25.0	0.18	0.22	0.27	0.33	0.41	0.50	0.60	0.74	0.90	1.10
32.0	0.23	0.27	0.33	0.41	0.50	0.60	0.74	0.88	1.10	1.30
38.0	0.26	0.32	0.38	0.46	0.56	0.68	0.82	1.00	1.20	1.45
45.0	0.30	0.36	0.43	0.52	0.64	0.76	0.92	1.10	1.35	1.60
52.0	0.33	0.40	0.48	0.58	0.70	0.84	1.00	1.20	1.45	1.75
63.0	0.39	0.47	0.56	0.67	0.80	0.96	1.14	1.35	1.65	1.95

METRIC DRILLS (mm size)

$$\begin{aligned} \phi &= \text{nominal tap size (mm)} \\ n &= \text{spindle speed (RPM)} \\ v_c &= \text{cutting speed (m/min) (切削速度(m/分钟))} \\ f &= \text{feed (mm/rev) (每转进给(mm/转))} \\ vr &= \text{feed rate (mm/min) (进给速度(mm/分钟))} \end{aligned}$$

$$n = \frac{v_c \times 1000}{\phi \times \pi} \approx \frac{v_c}{\phi} \times 318$$

$$v_c = \frac{n \times \phi \times \pi}{1000} \approx \frac{n \times \phi}{318}$$

$$vr = f \times n$$

Application Guide Speeds & Feeds - Taps

suttontools

ISO VDI Material Group 工件材料类别 Sutton 应用材料代号

P	A	Steel 钢件	N	UNI
M	R	Stainless Steel 不锈钢	VA	
K	F	Cast Iron 铸铁	GG	
N	N	Non-Ferrous Metals, Aluminiums & Coppers 有色金属	Al W	
S	S	Titaniums & Super Alloys 钛合金及超级合金	Ti Ni	H
H	H	Hard Materials (≥ 45 HRC) 淬火钢(≥ 45 HRC)	H	

ISO及VDI应用材料代号

^ VDI 3323 material groups can also be determined by referring to the material cross reference listing in the application guide of our main catalogue.

^ VDI 3323 工件材料类别明细可查阅产品目录技术篇的工件材料分类表。

Catalogue Code / 目录代码 M

MF

UNC

UNF

G (BSPF)

Material / 材料

Surface Finish / 表面处理

Sutton Designation / 应用材料代号

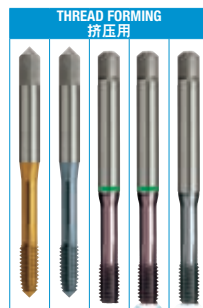
Geometry / 螺旋角别

Thread Depth / 有效攻牙深度

ISO	VDI 3323	Material 工件材料	Condition 材料状态	HB 硬度	N/mm²	Vc (m/min)					
P	1	Steel - Non-alloy, cast & free cutting 钢件-非合金及易切削	~ 0.15 %C	A	125	440	18	18	23	28	36
	2		~ 0.45 %C	A	190	640	18	18	23	28	36
	3		~ 0.75 %C	QT	250	840	15	15	20	23	30
	4			A	270	910	17	17	21	26	33
	5			QT	300	1010	-	-	-	-	27
	6	Steel - Low alloy & cast < 5% of alloying elements 钢件-低合金钢		A	180	610	18	18	23	28	36
	7			QT	275	930	-	-	16	19	24
	8			QT	300	1010	-	-	-	-	18
	9			QT	350	1180	-	-	-	-	-
	10	Steel - High alloy, cast & tool 高合金钢及工具钢		A	200	680	-	-	16	19	24
M	11	Steel - Corrosion resistant & cast 钢件-耐酸钢	Ferritic / Martensitic	HT	325	1100	-	-	-	-	-
	12		Martensitic	A	200	680	-	-	-	-	-
	13			QT	240	810	-	-	-	-	-
	14.1	Stainless Steel 不锈钢	Austenitic	A	180	610	9	9	12	14	18
K	14.2		Duplex		250	840	6	6	8	9	12
	14.3		Precipitation Hardening	PH	250	840	-	-	-	-	-
	15	Cast Iron - Grey (GG) 灰铸铁	Ferritic / Pearlitic		180	610	-	-	-	-	-
	16		Pearlitic		260	880	-	-	-	-	-
N	17	Cast Iron - Nodular (GGG) 球墨铸铁	Ferritic		160	570	-	-	-	-	-
	18		Pearlitic		250	840	-	-	-	-	-
	19	Cast Iron - Malleable 可锻铸铁	Ferritic		130	460	-	-	-	-	-
	20		Pearlitic		230	780	-	-	-	-	-
S	21	Aluminum & Magnesium - wrought alloy 锻造铝合金	Non Heat Treatable		60	210	18	18	23	28	36
	22		Heat Treatable	AH	100	360	23	23	29	35	45
	23	Aluminum & Magnesium - cast alloy ≤12% Si 压铸铝 ≤12% Si	Non Heat Treatable		75	270	23	23	29	35	45
	24		Heat Treatable	AH	90	320	23	23	29	35	45
	25	Al & Mg-cast alloy 压铸铝 >12% Si	Non Heat Treatable		130	460	-	-	-	-	-
	26	Copper & Cu alloys (Brass/Bronze) 铜及铜合金	Free cutting, Pb > 1% 自由切削, Pb > 1%		110	390	12	12	16	19	-
	27		Brass (CuZn, CuSnZn)		90	320	-	-	-	-	-
	28		Bronze (CuSn)		100	360	21	21	27	33	42
	29	Non-metallic - Thermosetting & fiber-reinforced plastics			-	-	-	-	-	-	-
	30	Non-metallic - Hard rubber, wood etc.			-	-	-	-	-	-	-
H	31	High temp. alloys 耐热合金	Fe based	A	200	680	-	-	-	-	-
	32			AH	280	950	-	-	-	-	-
	33		Ni / Co based	A	250	840	-	-	-	-	-
	34			AH	350	1180	-	-	-	-	-
	35			C	320	1080	-	-	-	-	-
	36	Titanium & Ti alloys 钛合金	CP Titanium		400 MPa	-	-	-	-	-	-
	37.1		Alpha alloys		860 MPa	-	-	-	-	-	-
	37.2		Alpha / Beta alloys	A	960 MPa	-	-	-	-	-	-
	37.3			AH	1170 MPa	-	-	-	-	-	-
	37.4		Beta alloys	A	830 MPa	-	-	-	-	-	-
H	37.5			AH	1400 MPa	-	-	-	-	-	-
	38.1	Hardened steel 淬火钢	HT	45 HRC	-	-	-	-	-	-	-
	38.2		HT	55 HRC	-	-	-	-	-	-	-
	39.1		HT	58 HRC	-	-	-	-	-	-	-
	39.2		HT	62 HRC	-	-	-	-	-	-	-
H	40	Cast Iron 硬铸铁	Chilled	C	400	1350	-	-	-	-	-
	41			HT	55 HRC	-	-	-	-	-	-

Condition: A (Annealed) (正火), AH (Age Hardened) (时效硬化), C (Cast) (铸件), HT (Hardened & Tempered) (淬火及回火), QT (Quenched & Tempered) (调质及回火)

Bold = Optimal | Regular = Effective 粗体 = 非常适合 | 细体 = 适合



T514 T629 T325 T327 T682

T526

T538

HSS Co.8 PMHSSE V3 SPM VHM

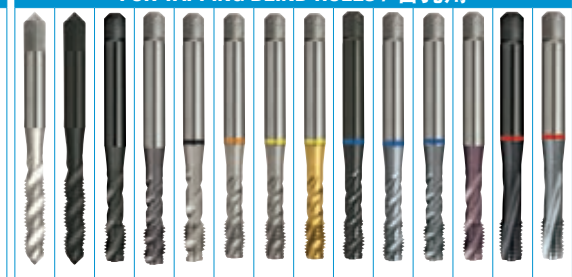
TIN TiCN TiAlN

N NH UNI N

Single-Coolant Groove Multi-Coolant Groove IK Multi-Coolant Groove

≤3x0

FOR TAPPING BLIND HOLES / 盲孔用



T503 T504 T189 T684 T231 T239 T235 T241 T197 T201 T205 T227 T209 T211

T247 T686

T618 T619 T260 T691 T249 T251 T252 T254 T707

T625 T626 T701 T692 T276 T277 T696

T282 T699 T284 T285 T352

HSSE V3 PMHSSE V3 HSSE V3 PM-HSSE V3 PM-HSS Co

BrT Blu Hard-Tube BrT CrN Ni TiN Blu TiCN TiAlN Blu TiCN

N UNI A Cu W VADH VA PM NH H

R40 R50 R40 R50 R45 2F R45 R50 R40 R15

≤2.5x0 ≤3x0 ≤2.5x0 ≤1.5x0

Vc (m/min)

10 11 11 17 - - 14 14 11 14 17 - - -

8 9 9 14 - - 12 12 9 12 14 14 - -

9 10 10 16 - - 13 13 - 13 16 16 - -

- - - - - - - - - 13 10 13

10 11 11 17 - - 14 14 11 14 17 - - -

6 7 7 12 - - 10 10 7 10 12 12 - -

- - - - - - - 7 9 9 6 9

- - 7 12 - - - - - 10 12 12 - -

- - - - - - - - - 9 6 9

- 4 4 7 - - - 4 6 7 7 5 7

- - - 4 - - - - - 4 - 4 - 4

- 5 5 9 - - - 5 7 9 9 - -

- 4 4 6 - - - 4 5 6 6 - -

- 3 3 - - - 3 4 4 4 3 4

10 11 11 17 - - - - - 17 13 17

- - - 14 - - - - - 14 11 14

10 11 11 17 - - - - - 17 13 17

- - - 14 - - - - - 14 11 14

12 13 13 22 - - - - - 22 16 22

10 11 11 17 - - - - - 17 13 17

10 - - 17 10 14 14 - 14 17 17 - -

12 - - 22 12 18 18 18 - 18 22 22 - -

12 - - 22 12 - - - 18 22 22 - -

12 - - 22 12 - - - 18 22 22 - -

- - - 14 - - - - 14 14 - 14

6 - - 12 6 10 10 10 - 10 12 12 - -

14 - - 26 - - - - - 26 19 26

- - - - 11 17 17 17 - 17 20 20 - -

- - - - - - - - - - - -

- - - - - - - - - - - -

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Notes on Tapping

1. The speeds listed above are a recommendation only, and are based on depth of thread listed, speeds can be adjusted on application.

As a general rule;

-If hole depth required is less than above mentioned = increase speed

-If hole depth required is more than above mentioned = reduce speed

2. Taps must be driven by the square to eliminate slippage, eg, ER-GB collets (square drive).

3. When using spiral flute taps with length compensation tapping attachment, it is recommended to short pitch the feed 95%,

to eliminate tap cutting oversize, eg, M6x1 @ 1000RPM, Feedrate= 950mm/min.

4. Forming taps are suitable for materials with >10% elongation

[illegible]

BLIND / THROUGH HOLES 通孔及盲孔用					
T292	T670	T335	T357	T294	T296
T301	T743	T668	T669	T343	T345
T303					
T307					
HSSE V3	VHM	HSSE V3		SPM	VHM
TiCN					
GG		DC		XH	VH
Low Relief		IK		Special Relief	
≤3xØ				≤1.5xØ	
Vc (m/min)					
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	11	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	7	-
-	-	-	-	4	5
-	-	-	-	-	-
-	-	-	-	7	11
-	-	-	-	-	-
-	-	-	-	4	5
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
11	22	11	13	-	-
9	18	9	11	12	-
11	22	11	13	-	-
9	18	9	11	12	-
14	27	14	16	-	-
11	22	11	13	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	14	16	-	-
-	-	14	16	-	-
9	18	9	11	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	32	16	19	21	32
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	4	5
-	-	-	-	-	4
-	-	-	-	-	4
-	-	-	-	-	4
-	14	7	9	9	14
-	-	-	-	-	4

[illegible]

IMPERIAL TAPS (inch size)	
$\varnothing$ = nominal tap size (inch)	
TPI = thread count per inch (TPI)	$n = \frac{V_c \times 1000}{\varnothing \times \pi \times 25.4} \approx \frac{V_c}{\varnothing} \times 12.5$
n = spindle speed (RPM)	
V_c = cutting speed (m/min)	$V_c = \frac{n \times \varnothing \times \pi \times 25.4}{1000} \approx \frac{n \times \varnothing}{12.5}$
v_f = feed rate (mm/min)	
v_r = feed rate per rev (mm/rev)	$v_r = \frac{n \times 25.4}{TPI}$

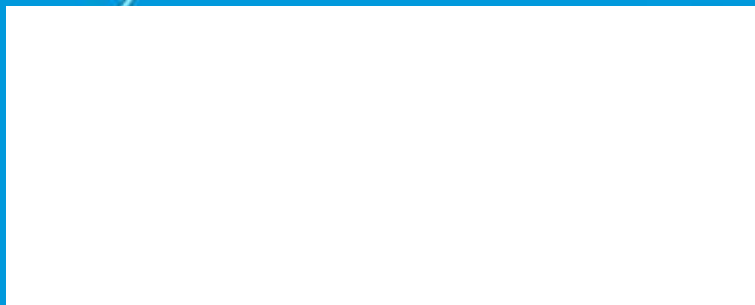
METRIC TAPS (mm size)	
Ø = nominal tap size (mm)	
P = thread pitch (mm)	
n = spindle speed (RPM)	$n = \frac{V_c \times 1000}{\varnothing \times \pi} \approx \frac{V_c}{\varnothing} \times 318$
V_c = cutting speed (m/min)	$V_c = \frac{n \times \varnothing \times \pi}{1000} \approx \frac{n \times \varnothing}{318}$
v_f = feed rate (mm/min)	
v_r = feed rate per rev (mm/rev)	$v_r = n \times P$

Trade Name	Coating	Coating Structure	Micro-hardness	Coeff. of Friction vs Steel	Thermal Stability	Colour	Application & Benefits
Br 光亮,无表面处理	-	-	-	0.8 - 1.0	-	-	For general purpose applications
Blu 表面氧化处理(黑色)	Steam Oxide	-	-	0.8 - 1.0	-	Blue - Black 蓝黑	- For ferrous metals - Prevents chip build-up on the cutting edges, especially in low carbon steels - Oxide layer protects surface - Good carrier of lubricants
Ni 表面氮化处理	Plasma Nitride	-	-	0.8 - 1.0	-	-	- Increases surface hardness - Better lubricant carrying properties - Abrasive materials - cast iron and Aluminium alloys
Futura Nano (TiAlN) 高铝钛涂层	Titanium Aluminium Nitride	Nano Layer	3300 HV	0.3 - 0.35	up to 900°C	Violet - Grey 灰紫	- Abrasive materials - cast iron and heat treated steel - Difficult to machine materials, such as stainless steel - Higher speeds and feeds - Reduces or eliminates use of coolants
Hardlube HL 涂层	TiAlN + WC/C	Nano Layer	3000 HV	0.15 - 0.20	up to 800°C	Dark Grey 灰黑	- Excellent friction and lubricating properties of the coating provide optimal chip flow - Tapping and drilling of hard to machine materials - Suitable for minimum quantity lubrication (MQL) and dry machining
Alcrona 氮化铝铬涂层	Aluminium Chromium Nitride	Mono Layer	3200 HV	0.35	up to 1100°C	Blue - Grey 灰蓝	- Low alloy steels and high tensile steels - Hardened steels up to 54 HRC - Ideal for carbide tools
Helica Helica涂层	Alcrona based	Multi Layer	3000 HV	0.25	up to 1100°C	Copper 紫铜	- Longer tool life - Higher cutting speeds and feeds - Superb chip evacuation - Greater number of regrinds - Improved drill hole quality - Excellent performance in abrasive material
TiCN 碳氮化钛涂层	Titanium Carbonitride	Gradient Coating	3000 HV	0.4	up to 400°C	Blue - Grey 灰蓝	- High performance applications - Difficult to machine materials - Abrasive materials - cast iron and Aluminium alloys - Adhesive materials - copper and copper based alloys
TiN 氮化钛涂层	Titanium Nitride	Mono Layer	2300 HV	0.4	up to 600°C	Gold - Yellow 金黄	- General purpose use - Wide range of materials 3 to 8 times longer tool life than uncoated tools - Higher tool speeds and feeds than uncoated tools
CrN 氮化铬涂层	Chromium Nitride	Gradient Coating	1750 HV	0.5	up to 700°C	Silver - Grey 银灰	- Cutting and forming of copper, nickel, & monel metal - Enhanced thermal stability and oxidation resistance - Excellent corrosion resistance - Low internal stress of coating results in excellent adhesion under high loads

Abbreviations	Type	Application	Description
HSS 高速钢	Conventional high speed steel	Standard tool material for most common applications	Used for the manufacturing of cutting tools such as twist drills, end mills and taps.
HSS Co 含钴高速钢	5% cobalt grade of high speed steel	High-heat resistance, especially suited for roughing or when coolant insufficient	Cobalt alloyed, tungsten-molybdenum high speed steel possessing high hardness, excellent cutting properties, high-red hardness and good toughness.
HSSE Co8% 含8%钴高速钢	8% cobalt grade of high speed steel	Increased heat resistance & hardness, suitable for difficult-to-machine materials	Available for applications that require a strong resistance to softening at elevated cutting temperatures. The ability of the steel to maintain its "red-hot hardness" is provided by the addition of cobalt. The high hot hardness is required for machining difficult materials such as nickel-base, titanium and highly alloyed steel.
HSSE V3 钒钨高速钢	Premium grade of high speed steel	Wide range of machine taps.	Vanadium grade gives high wear resistance and toughness for most tapping applications.
PM-HSS V3 粉末冶金高速钢	Powdered metallurgy - vanadium grade of high speed steel	Materials with hardness up to 40HRC Difficult to machine materials eg. stainless steels.	PM-HSS V3 for higher performance tools, incorporates very fine and uniform grain structure allowing a high hardness to be achieved, whilst maintaining good toughness.
PM-HSS Co 粉末冶金含钴高速钢	Powdered metallurgy - 8% Cobalt grade of high speed steel	Materials with hardness up to 45HRC	The addition of cobalt provides this material with the ability to maintain its strength and hardness level when exposed to extremely high cutting temperatures. This makes PM-HSS Co suitable for heavy duty tapping, in materials such as high alloyed steels to non-ferrous metals like Ni-base alloys & Ti-alloys.
SPM 粉末冶金含11%钴高速钢	Powdered metallurgy - 11% Cobalt grade of high speed steel	Special applications, requiring very high edge hardness. Cutting tools with the appropriate geometry can be applied to workpiece materials with hardness up to 55HRC	An excellent bridge material between high speed steel and carbide. SPM offers very high red hardness, wear resistance and the highest compressive strength of any high speed steel.
VHM 硬质合金 (0.8 μm)	Sub-micron grade of solid Carbide (ISO K15-K30)	Tapping hardened steel	Ultra fine grain type (0.8μm) with maximum toughness & high hardness, therefore especially recommended for rotating tools to machine hardened parts.
VHM 硬质合金 (0.6 μm)	Sub-micron grade of solid Carbide (ISO K40)	Sutton standard grade for endmills & drills	Ultra fine grain type (0.6μm) offers the ideal combination of hardness & toughness for high performance drilling & general milling applications
VHM-ULTRA 硬质合金 (0.5 μm)	Sub-micron grade of solid Carbide (ISO K40-K50)	High performance grade for endmills	Ultra fine grain type (0.5μm) offers the best wear resistance for high performance milling applications.

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