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Catalog of Solid Carbide Cutting Tools

Provide You With One-stop Tool Solutions

SDF

Innovation / Integrity / Development / Win-Win

2025 GLOBAL PRODUCT CATALOG

Shengdefu Company Profile

INNOVATION / INTEGRITY / DEVELOPMENT / WIN-WIN

Since 2006, Shengdefu has been dedicated to the design and manufacturing of high-performance milling cutters. We are committed to making customer satisfaction the core measure of our success, striving to meet and even exceed customer expectations through high-quality products and services.

At Shengdefu, quality is not just a standard but an attitude, a firm commitment to every product and every service we provide. Our Quality Management System adheres to the ISO 9001:2000 standard, ensuring that each product undergoes rigorous quality control to meet and exceed customer expectations.

Our management and all employees are fully committed to this quality policy, ensuring that our products and services consistently maintain the highest standards.

Creating Value for Customers through Professionalism

PROVIDE YOU WITH ONE-STOP TOOL SOLUTIONS

Unique Advantages/

Customer Satisfaction Guaranteed, or We'll Resharpen Our Act.

Shengdefu's unique position in the tool manufacturing industry is not only due to our unwavering commitment to product quality but also reflected in our dedication to customer service. Shengdefu also offers a variety of value-added features:

Friendly and courteous sales assistants help you find the right tools for your needs.

Comprehensive cutting solutions provider: Our complete range of solid carbide end mills includes many high-performance carbide tools.

Certified quality system (ISO 9001:2000): To ensure that our tools meet or exceed your tolerances.

Precision manufacturing: All tools are manufactured using CNC precision grinding technology to ensure accuracy and durability.

Rapid response: We maintain ample inventory to enable quick shipping and minimize customer wait times.

Professional service: Our customer service team consists of experienced professionals who can provide timely technical support and customized solutions.

Cost-effective: We are committed to offering competitive prices while maintaining product performance, ensuring that customers receive the best value.

Service Standards/

Our Service is So Sharp, It's Cutting Edge.

At Shengdefu, our commitment to service is as stringent as our commitment to products. The following are key aspects of our service standards:

Customized Solutions: We work closely with our customers to provide tailored solutions that meet their specific needs.

Technical Guidance and Training: We offer comprehensive technical support and training services to ensure that customers can fully utilize our products and services.

Rapid Response and Delivery: We maintain ample inventory and achieve quick shipping to minimize customer wait times and enhance operational efficiency.

Comprehensive After-Sales Support: We provide thorough after-sales support to ensure that customers receive timely assistance and solutions throughout the use of our products.

Ongoing Customer Relationship Management: We are committed to building and maintaining long-term relationships with our customers through regular communication and feedback, continuously improving our products and services.

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Shengdefu Milling Cutter Naming Convention

- Naming Example for G-Series 65° Four-Flute Flat-Bottom Milling Cutter:

MG11465ASH-0104N0450

① ② ③④⑤ ⑥ ⑦ ⑧ ⑨ ⑩

1
Tool Type
M - Milling Cutter

2
Series
G - General Purpose
M - High Performance General Purpose
H - High Speed and High Hardness
S - Micro Diameter
D - Deep Groove Mill
O - Aluminum Mill
N - Difficult-to-Cut Materials
K - Graphite Mill
P - Thread Mill
C - Chamfer Mill
T - T-Slot Mill
W-Tapered End Mill

3
Coating
0 -- UN COAT
1 -- ALCRONA
2 -- HELICK
3 -- ALDURA
4 -- DLC
5 -- ALTIN
6 -- ALNOVA
7 -- AlTiSiN
8 -- TISAFLEX
9 -- PT
10 -- DIA
11 -- DP
12 -- ATNZ

4
Cutting Edge
1 -- Flat Bottom
2 -- Ball End
3 -- Round Nose
4 -- Wave Cutter
5 -- Tapered
6 -- Unequal Pitch
7 -- Other

5
Number of Flutes
1
2
3
4
5
6
7
8

6
Material Hardness
45 -- Within 45°
50 -- Within 50°
55 -- Within 55°
60 -- Within 60°
65 -- Within 65°
70 -- Within 70°
00 -- Superhard Materials

7
Metric/Imperial
A -- Metric
B -- Imperial

8
Length Standard
S -- Standard
L -- Extended

9
Shank Type
H -- Straight Shank
W -- Side Lock Shank
Y -- Special Shank

10	
Product Specifications	
Cutting Diameter	
Cutting Length	
Clearance	Y/N
Shank Diameter	
Overall Length	

Icon Explanation

Tool Material

- **WC** — Solid Carbide
- **HSS** — High Speed Steel (HSS)
- **PCD** — Polycrystalline Diamond

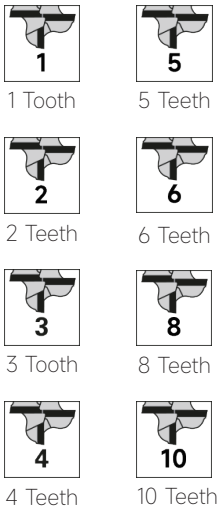
Coating

ALCRONA Coat | HELICK Coat | ALDURA Coat | DLC Coat | ATNZ Coat | ALTIN Coat

ALNOVA Coat | ALTiSiN Coat | TISAFLE Coat | PT Coat | DIA Coat | DP Coat

Flute Geometry Design

Number Teeth

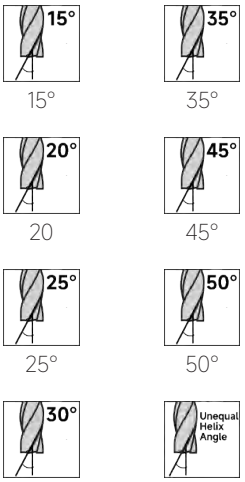


1 Tooth | 5 Teeth
2 Teeth | 6 Teeth
3 Tooth | 8 Teeth
4 Teeth | 10 Teeth

Flute Type

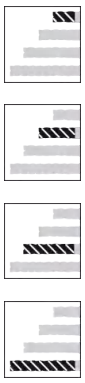
Flat End Mill
Ball End Mill
Radius End Mill
Wave Cutter
Tapered End Mill

Helix Angle



15° | 35°
20 | 45°
25° | 50°
30° | Unequal Helix Angle

flute Length



Short Flute
Standard
Long Flute
Extended Flute

Material Marking Guidelines

Marking Letter	Material to be Machined	
P	Alloy Steel, Carbon Steel	Various Steels and Cast Irons, Excluding Austenitic Steels
M	Stainless Steel	Austenitic Stainless Steels, Austenitic and Ferritic Duplex Stainless Steels, Cast Stainless Steels
K	Cast Iron	Gray Cast Iron, Ductile Cast Iron, Malleable Cast Iron, Compacted Graphite Iron
N	Aluminum Alloy / Non-Ferrous Metals	Aluminum Alloys, Other Non-Ferrous Metals and Non-Iron Materials
S	High-Temperature Alloys / Titanium Alloys	Ferritic, Nickel-Based, and Cobalt-Based Heat-Resistant Alloys, Titanium and Titanium Alloys
H	Hard Materials, Quenched Steel	Hardened Steels, Hardened Cast Irons, Cold-Hardened Cast Iron

Diamond-Coated Materials										
Graphite	Carbon Fiber	Glass Fiber	AlSi Alloy	CuAl Alloy	Pure / Purple / Red Copper	Pure Titanium	Pure Tungsten	Zinc Alloy	Magnesium Alloy	Zirconia
●	●	●	●	●	●	●	●	●	●	●

Versatile Machining

General-purpose alloy tools are suitable for materials with hardness up to 50 HRC, including steel, cast iron, aluminum alloys, and copper alloys. They excel in roughing, semi-finishing, and finishing operations, offering superior cutting performance and long tool life.

Durable

Using fine-grain carbide and advanced coating technology, our tools offer excellent hardness and wear resistance, extending tool life and enhancing cutting performance. This helps reduce production costs and improve processing efficiency and product quality.

Precision Machining

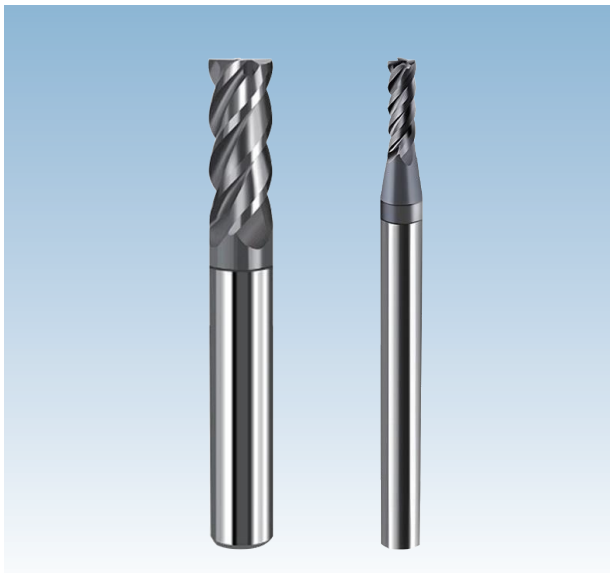
Through advanced design concepts and strict quality management, we ensure that every product has unparalleled geometric precision and surface quality. Our tools excel in planar milling, contour forming, and complex 3D surface machining, meeting the most demanding application requirements.

2025 New Product

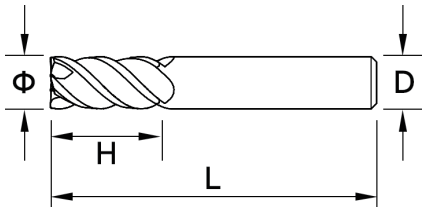
General Purpose G

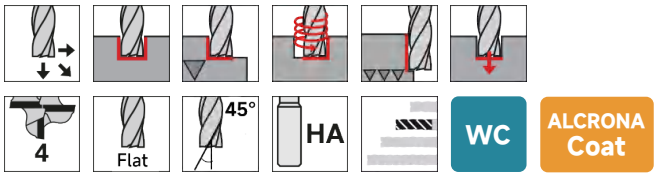
G Series

General-purpose 4-flute square end mill



▶ For pre-heat treatment of steel and machining non-ferrous materials like aluminum. Wide range of sizes and models.





● = Best ○ =Good

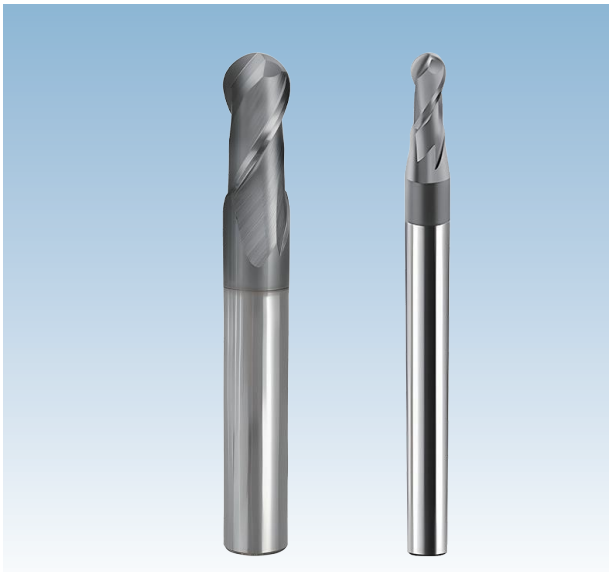
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	○	●	●				○	○	○	○	○	○		

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MG11445ASH-0103N0450	Φ1*3*50*D4	4	1	3	4	50	
MG11445ASH-01504N0450	Φ1.5*4*50*D4	4	1.5	4	4	50	
MG11445ASH-0206N0450	Φ2*6*50*D4	4	2	6	4	50	
MG11445ASH-02508N0450	Φ2.5*8*50*D4	4	2.5	8	4	50	
MG11445ASH-0308N0450	Φ3*8*50*D4	4	3	8	4	50	
MG11445ASH-03510N0450	Φ3.5x10x50xD4	4	3.5	10	4	50	
MG11445ASH-0410N0450	Φ4*10*50*D4	4	4	10	4	50	
MG11445ASH-0103N0650	Φ1*3*50*D6	4	1	3	6	50	
MG11445ASH-01504N0650	Φ1.5*4*50*D6	4	1.5	4	6	50	
MG11445ASH-0206N0650	Φ2*6*50*D6	4	2	6	6	50	
MG11445ASH-02508N0650	Φ2.5*8*50*D6	4	2.5	8	6	50	
MG11445ASH-0308N0650	Φ3*8*50*D6	4	3	8	6	50	
MG11445ASH-03510N0650	Φ3.5x10x50xD6	4	3.5	10	6	50	
MG11445ASH-0410N0650	Φ4*10*50*D6	4	4	10	6	50	
MG11445ASH-0513N0650	Φ5*13*50*D6	4	5	13	6	50	
MG11445ASH-0616N0650	Φ6*16*50*D6	4	6	16	6	50	
MG11445ASH-0820N0860	Φ8*20*60*D8	4	8	20	8	60	
MG11445ASH-1025N1075	Φ10*25*75*D10	4	10	25	10	75	
MG11445ASH-1230N1275	Φ12*30*75*D12	4	12	30	12	75	
MG11445ASH-1645N16100	Φ16*45*100*D16	4	16	45	16	100	
MG11445ASH-1845N18100	Φ18*45*100*D18	4	18	45	18	100	
MG11445ASH-2045N20100	Φ20*45*100*D20	4	20	45	20	100	

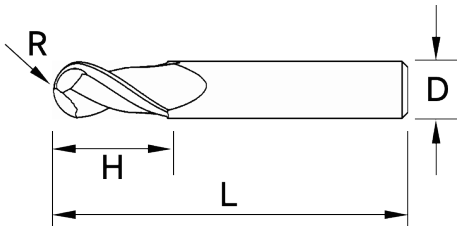
Supports Non-Standard Customization

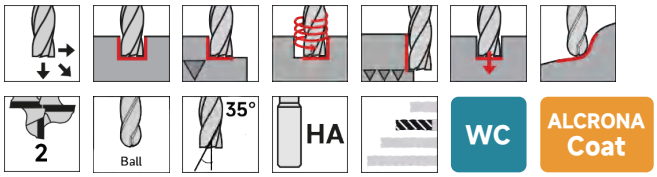
G Series

General-purpose 2-flute ball nose end mill



▶ For pre-heat treatment of steel and machining non-ferrous materials like aluminum. Wide range of sizes and models.





● = Best ○ =Good

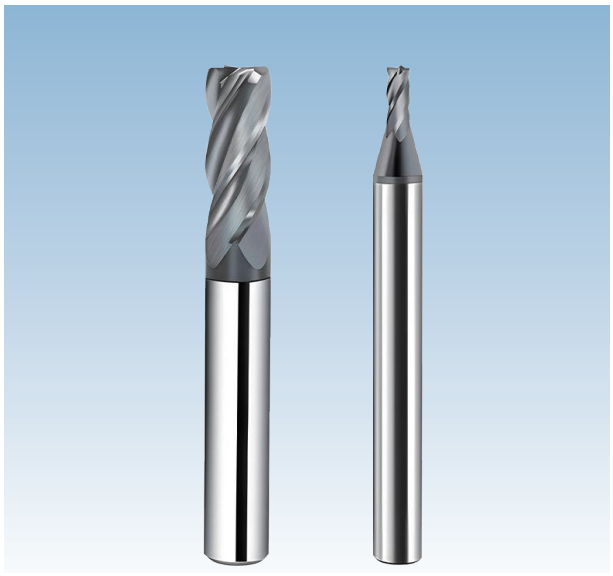
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	○	●	●				○	○	○	○	○	○		

Order Number	Specification	Number of Flutes T	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MG12245ASH-05002N0450	R0.5*2*50*D4	2	0.5	2	4	50	
MG12245ASH-07503N0450	R0.75*3*50*D4	2	0.75	3	4	50	
MG12245ASH-10004N0450	R1*4*50*D4	2	1	4	4	50	
MG12245ASH-12505N0450	R1.25*5*50*D4	2	1.25	5	4	50	
MG12245ASH-15006N0450	R1.5*6*50*D4	2	1.5	6	4	50	
MG12245ASH-20008N0450	R2*8*50*D4	2	2	8	4	50	
MG12245ASH-05002N0650	R0.5*2*50*D6	2	0.5	2	6	50	
MG12245ASH-07503N0650	R0.75*3*50*D6	2	0.75	3	6	50	
MG12245ASH-10004N0650	R1*4*50*D6	2	1	4	6	50	
MG12245ASH-12505N0650	R1.25*5*50*D6	2	1.25	5	6	50	
MG12245ASH-15006N0650	R1.5*6*50*D6	2	1.5	6	6	50	
MG12245ASH-20008N0650	R2*8*50*D6	2	2	8	6	50	
MG12245ASH-25010N0650	R2.5*10*50*D6	2	2.5	10	6	50	
MG12245ASH-30012N0650	R3*12*50*D6	2	3	12	6	50	
MG12245ASH-35012N0860	R3.5*12*60*D8	2	3.5	12	8	60	
MG12245ASH-40016N0860	R4*16*60*D8	2	4	16	8	60	
MG12245ASH-50020N1075	R5*20*75*D10	2	5	20	10	75	
MG12245ASH-60024N1275	R6*24*75*D12	2	6	24	12	75	
MG12245ASH-70028N14100	R7*28*100*14D	2	7	28	14	100	
MG12245ASH-80032N16100	R8*32*100*16D	2	8	32	16	100	
MG12245ASH-10040N20100	R10*40*100*20D	2	10	40	20	100	

Supports Non-Standard Customization

G Series

General-purpose 4-flute radius end mill (1)



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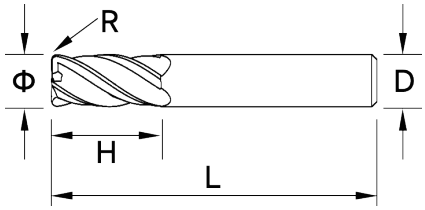
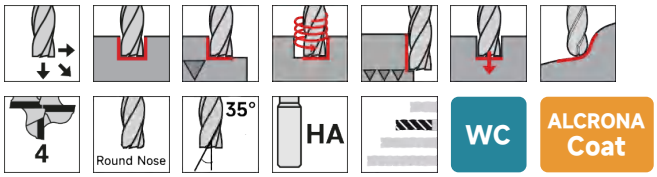




● = Best ○ =Good

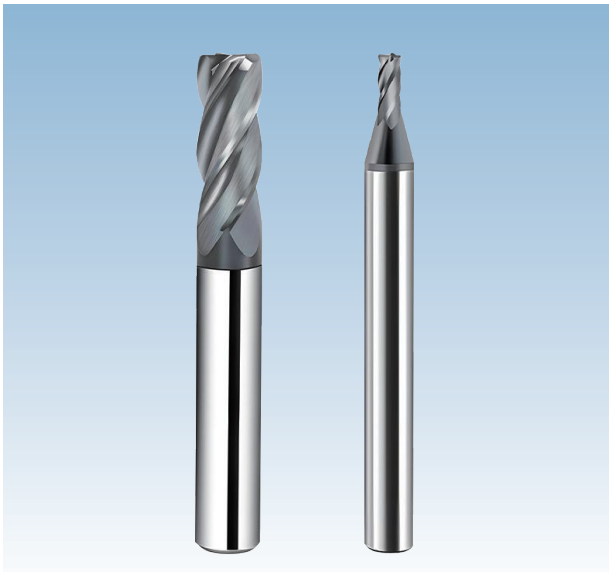
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	○	●	●				○	○	○	○	○	○		

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MG13445ASH-010203N0450	Φ1*R0.2*3*50*D4	4	1	0.2	3	4	50	
MG13445ASH-0150203N0450	Φ1.5*R0.2*4*50*D4	4	1.5	0.2	4	4	50	
MG13445ASH-020204N0450	Φ2*R0.2*6*50*D4	4	2	0.2	6	4	50	
MG13445ASH-0250206N0450	Φ2.5*R0.2*8*50*D4	4	2.5	0.2	8	4	50	
MG13445ASH-0250508N0450	Φ2.5*R0.5*8*50*D4	4	2.5	0.5	8	4	50	
MG13445ASH-030208N0450	Φ3*R0.2*8*50*D4	4	3	0.2	8	4	50	
MG13445ASH-030508N0450	Φ3*R0.5*8*50*D4	4	3	0.5	8	4	50	
MG13445ASH-040210N0450	Φ4*R0.2*10*50*D4	4	4	0.2	10	4	50	
MG13445ASH-040510N0450	Φ4*R0.5*10*50*D4	4	4	0.5	10	4	50	
MG13445ASH-050213N0650	Φ5*R0.2*13*50*D6	4	5	0.2	13	6	50	
MG13445ASH-050513N0650	Φ5*R0.5*13*50*D6	4	5	0.5	13	6	50	
MG13445ASH-051013N0650	Φ5*R1*13*50*D6	4	5	1	13	6	50	
MG13445ASH-060215N0650	Φ6*R0.2*15*50*D6	4	6	0.2	15	6	50	
MG13445ASH-060515N0650	Φ6*R0.5*15*50*D6	4	6	0.5	15	6	50	
MG13445ASH-061015N0650	Φ6*R1*15*50*D6	4	6	1	15	6	60	
MG13445ASH-080220N0860	Φ8*R0.2*20*60*D8	4	8	0.2	20	8	60	
MG13445ASH-080520N0860	Φ8*R0.5*20*60*D8	4	8	0.5	20	8	60	
MG13445ASH-081020N0860	Φ8*R1*20*60*D8	4	8	1	20	8	60	
MG13445ASH-100225N1075	Φ10*R0.2*25*75*D10	4	10	0.2	25	10	75	
MG13445ASH-100525N1075	Φ10*R0.5*25*75*D10	4	10	0.5	25	10	75	
MG13445ASH-101025N1075	Φ10*R1*25*75*D10	4	10	1	25	10	75	
MG13445ASH-102025N1075	Φ10*R2*25*75*D10	4	10	2	25	10	75	

Supports Non-Standard Customization

G Series

General-purpose 4-flute radius end mill (2)



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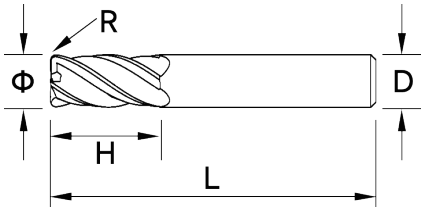

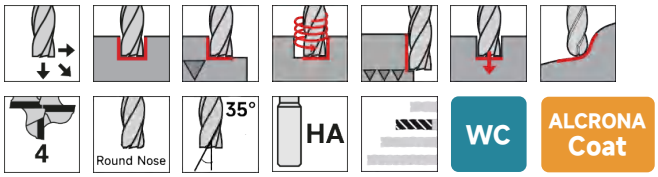

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Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	○	●	●				○	○	○	○	○	○		

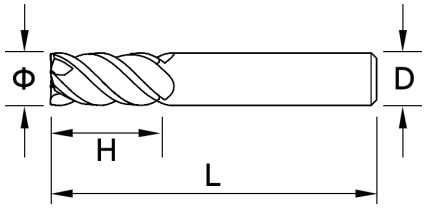
定货号	规格	刃数 T	刃径 Φ	圆弧 R	刃长 H	柄径 D	总长 L	库存
MG13445ASH-120230N1275	Φ12*R0.2*30*75*D12	4	12	0.2	30	12	75	
MG13445ASH-120530N1275	Φ12*R0.5*30*75*D12	4	12	0.5	30	12	75	
MG13445ASH-121030N1275	Φ12*R1*30*75*D12	4	12	1	30	12	75	
MG13445ASH-122030N1275	Φ12*R2*30*75*D12	4	12	2	30	12	75	
MG13445ASH-160245N16100	Φ16*R0.2*45*100*D16	4	16	0.2	45	16	100	
MG13445ASH-160545N16100	Φ16*R0.5*45*100*D16	4	16	0.5	45	16	100	
MG13445ASH-161045N16100	Φ16*R1.0*45*100*D16	4	16	1	45	16	100	
MG13445ASH-162045N16100	Φ16*R2.0*45*100*D16	4	16	2	45	16	100	
MG13445ASH-180245N16100	Φ18*R0.2*45*100*D18	4	18	0.2	45	18	100	
MG13445ASH-180545N18100	Φ18*R0.5*45*100*D18	4	18	0.5	45	18	100	
MG13445ASH-181045N18100	Φ18*R1.0*45*100*D18	4	18	1	45	18	100	
MG13445ASH-182045N18100	Φ18*R2.0*45*100*D18	4	18	2	45	18	100	
MG13445ASH-200245N20100	Φ20*R0.2*45*100*D20	4	20	0.2	45	20	100	
MG13445ASH-200545N20100	Φ20*R0.5*45*100*D20	4	20	0.5	45	20	100	
MG13445ASH-201045N20100	Φ20*R1.0*45*100*D20	4	20	1	45	20	100	
MG13445ASH-202045N20100	Φ20*R2.0*45*100*D20	4	20	2	45	20	100	

Supports Non-Standard Customization

G-SUS Series

General-purpose 4-flute square end mill for stainless steel

▶ For pre-heat treatment of steel and machining non-ferrous materials like aluminum. Wide range of sizes and models.



● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○				○	●	○	○	○	○		

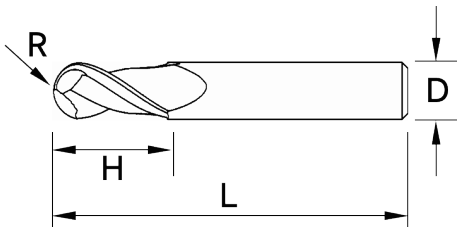
Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MG-SUS51445ASH-0103N0450	Φ1*3*50*D4	4	1	3	4	50	
MG-SUS51445ASH-01504N0450	Φ1.5*4*50*D4	4	1.5	4	4	50	
MG-SUS51445ASH-0206N0450	Φ2*6*50*D4	4	2	6	4	50	
MG-SUS51445ASH-02508N0450	Φ2.5*8*50*D4	4	2.5	8	4	50	
MG-SUS51445ASH-0308N0450	Φ3*8*50*D4	4	3	8	4	50	
MG-SUS51445ASH-03510N0450	Φ3.5x10x50xD4	4	3.5	10	4	50	
MG-SUS51445ASH-0410N0450	Φ4*10*50*D4	4	4	10	4	50	
MG-SUS51445ASH-0103N0650	Φ1*3*50*D6	4	1	3	6	50	
MG-SUS51445ASH-01504N0650	Φ1.5*4*50*D6	4	1.5	4	6	50	
MG-SUS51445ASH-0206N0650	Φ2*6*50*D6	4	2	6	6	50	
MG-SUS51445ASH-02508N0650	Φ2.5*8*50*D6	4	2.5	8	6	50	
MG-SUS51445ASH-0308N0650	Φ3*8*50*D6	4	3	8	6	50	
MG-SUS51445ASH-03510N0650	Φ3.5x10x50xD6	4	3.5	10	6	50	
MG-SUS51445ASH-0410N0650	Φ4*10*50*D6	4	4	10	6	50	
MG-SUS51445ASH-0513N0650	Φ5*13*50*D6	4	5	13	6	50	
MG-SUS51445ASH-0616N0650	Φ6*16*50*D6	4	6	16	6	50	
MG-SUS51445ASH-0820N0860	Φ8*20*60*D8	4	8	20	8	60	
MG-SUS51445ASH-1025N1075	Φ10*25*75*D10	4	10	25	10	75	
MG-SUS51445ASH-1230N1275	Φ12*30*75*D12	4	12	30	12	75	
MG-SUS51445ASH-1645N16100	Φ16*45*100*D16	4	16	45	16	100	
MG-SUS51445ASH-1845N18100	Φ18*45*100*D18	4	18	45	18	100	
MG-SUS51445ASH-2045N20100	Φ20*45*100*D20	4	20	45	20	100	

Supports Non-Standard Customization

G--SUS Series

General-purpose 2-flute ball nose end mill for stainless steel

▶ For pre-heat treatment of steel and machining non-ferrous materials like aluminum. Wide range of sizes and models.



● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○				○	●	○	○	○	○		

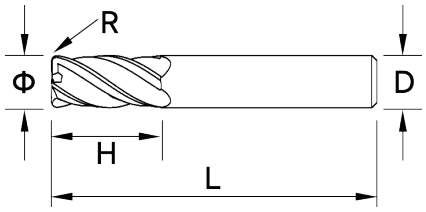
Order Number	Specification	Number of Flutes T	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MG-SUS52245ASH-05002N0450	R0.5*2*50*D4	2	0.5	2	4	50	
MG-SUS52245ASH-07503N0450	R0.75*3*50*D4	2	0.75	3	4	50	
MG-SUS52245ASH-10004N0450	R1*4*50*D4	2	1	4	4	50	
MG-SUS52245ASH-12505N0450	R1.25*5*50*D4	2	1.25	5	4	50	
MG-SUS52245ASH-15006N0450	R1.5*6*50*D4	2	1.5	6	4	50	
MG-SUS52245ASH-20008N0450	R2*8*50*D4	2	2	8	4	50	
MG-SUS52245ASH-05002N0650	R0.5*2*50*D6	2	0.5	2	6	50	
MG-SUS52245ASH-07503N0650	R0.75*3*50*D6	2	0.75	3	6	50	
MG-SUS52245ASH-10004N0650	R1*4*50*D6	2	1	4	6	50	
MG-SUS52245ASH-12505N0650	R1.25*5*50*D6	2	1.25	5	6	50	
MG-SUS52245ASH-15006N0650	R1.5*6*50*D6	2	1.5	6	6	50	
MG-SUS52245ASH-20008N0650	R2*8*50*D6	2	2	8	6	50	
MG-SUS52245ASH-25010N0650	R2.5*10*50*D6	2	2.5	10	6	50	
MG-SUS52245ASH-30012N0650	R3*12*50*D6	2	3	12	6	50	
MG-SUS52245ASH-35012N0860	R3.5*12*60*D8	2	3.5	12	8	60	
MG-SUS52245ASH-40016N0860	R4*16*60*D8	2	4	16	8	60	
MG-SUS52245ASH-50020N1075	R5*20*75*D10	2	5	20	10	75	
MG-SUS52245ASH-60024N1275	R6*24*75*D12	2	6	24	12	75	
MG-SUS52245ASH-70028N14100	R7*28*100*14D	2	7	28	14	100	
MG-SUS52245ASH-80032N16100	R8*32*100*16D	2	8	32	16	100	
MG-SUS52245ASH-10040N20100	R10*40*100*20D	2	10	40	20	100	

Supports Non-Standard Customization

G--SUS Series

General-purpose 4-flute radius end mill for stainless steel (1)

▶ For pre-heat treatment of steel and machining non-ferrous materials like aluminum. Wide range of sizes and models.



● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○				○	●	○	○	○	○		

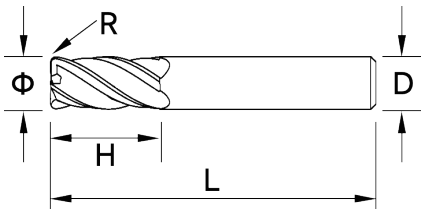
Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MG-SUS53445ASH-010203N0450	Φ1*R0.2*3*50*D4	4	1	0.2	3	4	50	
MG-SUS53445ASH-0150203N0450	Φ1.5*R0.2*4*50*D4	4	1.5	0.2	4	4	50	
MG-SUS53445ASH-020204N0450	Φ2*R0.2*6*50*D4	4	2	0.2	6	4	50	
MG-SUS53445ASH-0250206N0450	Φ2.5*R0.2*8*50*D4	4	2.5	0.2	8	4	50	
MG-SUS53445ASH-0250508N0450	Φ2.5*R0.5*8*50*D4	4	2.5	0.5	8	4	50	
MG-SUS53445ASH-030208N0450	Φ3*R0.2*8*50*D4	4	3	0.2	8	4	50	
MG-SUS53445ASH-030508N0450	Φ3*R0.5*8*50*D4	4	3	0.5	8	4	50	
MG-SUS53445ASH-040210N0450	Φ4*R0.2*10*50*D4	4	4	0.2	10	4	50	
MG-SUS53445ASH-040510N0450	Φ4*R0.5*10*50*D4	4	4	0.5	10	4	50	
MG-SUS53445ASH-050213N0650	Φ5*R0.2*13*50*D6	4	5	0.2	13	6	50	
MG-SUS53445ASH-050513N0650	Φ5*R0.5*13*50*D6	4	5	0.5	13	6	50	
MG-SUS53445ASH-051013N0650	Φ5*R1*13*50*D6	4	5	1	13	6	50	
MG-SUS53445ASH-060315N0650	Φ6*R0.3*15*50*D6	4	6	0.3	15	6	50	
MG-SUS53445ASH-060515N0650	Φ6*R0.5*15*50*D6	4	6	0.5	15	6	50	
MG-SUS53445ASH-061015N0650	Φ6*R1*15*50*D6	4	6	1	15	6	60	
MG-SUS53445ASH-080320N0860	Φ8*R0.3*20*60*D8	4	8	0.3	20	8	60	
MG-SUS53445ASH-080520N0860	Φ8*R0.5*20*60*D8	4	8	0.5	20	8	60	
MG-SUS53445ASH-081020N0860	Φ8*R1*20*60*D8	4	8	1	20	8	60	
MG-SUS53445ASH-100325N1075	Φ10*R0.3*25*75*D10	4	10	0.3	25	10	75	
MG-SUS53445ASH-100525N1075	Φ10*R0.5*25*75*D10	4	10	0.5	25	10	75	
MG-SUS53445ASH-101025N1075	Φ10*R1*25*75*D10	4	10	1	25	10	75	
MG-SUS53445ASH-102025N1075	Φ10*R2*25*75*D10	4	10	2	25	10	75	

Supports Non-Standard Customization

G--SUS Series

General-purpose 4-flute radius end mill for stainless steel (2)

▶ For pre-heat treatment of steel and machining non-ferrous materials like aluminum. Wide range of sizes and models.



● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○				○	●	○	○	○	○		

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MG-SUS53445ASH-120330N1275	Φ12*R0.3*30*75*D12	4	12	0.3	30	12	75	
MG-SUS53445ASH-120530N1275	Φ12*R0.5*30*75*D12	4	12	0.5	30	12	75	
MG-SUS53445ASH-121030N1275	Φ12*R1*30*75*D12	4	12	1	30	12	75	
MG-SUS53445ASH-122030N1275	Φ12*R2*30*75*D12	4	12	2	30	12	75	
MG-SUS53445ASH-160345N16100	Φ16*R0.3*45*100*D16	4	16	0.3	45	16	100	
MG-SUS53445ASH-160545N16100	Φ16*R0.5*45*100*D16	4	16	0.5	45	16	100	
MG-SUS53445ASH-161045N16100	Φ16*R1.0*45*100*D16	4	16	1	45	16	100	
MG-SUS53445ASH-162045N16100	Φ16*R2.0*45*100*D16	4	16	2	45	16	100	
MG-SUS53445ASH-180345N16100	Φ18*R0.3*45*100*D18	4	18	0.3	45	18	100	
MG-SUS53445ASH-180545N18100	Φ18*R0.5*45*100*D18	4	18	0.5	45	18	100	
MG-SUS53445ASH-181045N18100	Φ18*R1.0*45*100*D18	4	18	1	45	18	100	
MG-SUS53445ASH-182045N18100	Φ18*R2.0*45*100*D18	4	18	2	45	18	100	
MG-SUS53445ASH-200345N20100	Φ20*R0.3*45*100*D20	4	20	0.3	45	20	100	
MG-SUS53445ASH-200545N20100	Φ20*R0.5*45*100*D20	4	20	0.5	45	20	100	
MG-SUS53445ASH-201045N20100	Φ20*R1.0*45*100*D20	4	20	1	45	20	100	
MG-SUS53445ASH-202045N20100	Φ20*R2.0*45*100*D20	4	20	2	45	20	100	

Supports Non-Standard Customization

▶ Excellent slot geometry

The slot geometry is strictly controlled to improve chip flow and curl, and reduce cutting forces.

▶ High Rigidity cutting

High-stability edge treatment and high-rigidity design enable higher feed per tooth, significantly improving metal removal rate and machining efficiency.

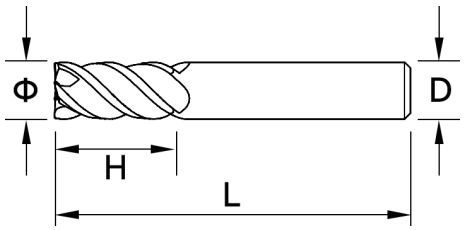
▶ wear-resistant and tough

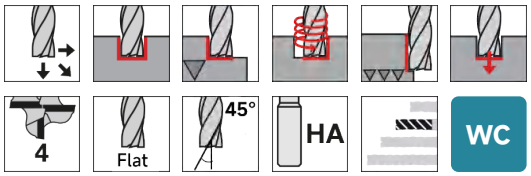
Excellent wear resistance and toughness ensure good tool wear and chipping resistance even under high-efficiency machining conditions.

M Series

High-performance 4-flute square end mill

▶ Uses high-hardness materials, advanced grinding, and edge treatment to extend tool life. Designed for machining hardened steels (HRC45-60).





● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	●	○		○	○						

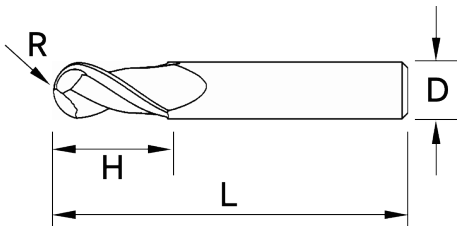
Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MM11455ASH-0103N0450	Φ1*3*50*D4	4	1	3	4	50	
MM11455ASH-01504N0450	Φ1.5*4*50*D4	4	1.5	4	4	50	
MM11455ASH-0206N0450	Φ2*6*50*D4	4	2	6	4	50	
MM11455ASH-02508N0450	Φ2.5*8*50*D4	4	2.5	8	4	50	
MM11455ASH-0308N0450	Φ3*8*50*D4	4	3	8	4	50	
MM11455ASH-03510N0450	Φ3.5x10x50xD4	4	3.5	10	4	50	
MM11455ASH-0410N0450	Φ4*10*50*D4	4	4	10	4	50	
MM11455ASH-0103N0650	Φ1*3*50*D6	4	1	3	6	50	
MM11455ASH-01504N0650	Φ1.5*4*50*D6	4	1.5	4	6	50	
MM11455ASH-0206N0650	Φ2*6*50*D6	4	2	6	6	50	
MM11455ASH-02508N0650	Φ2.5*8*50*D6	4	2.5	8	6	50	
MM11455ASH-0308N0650	Φ3*8*50*D6	4	3	8	6	50	
MM11455ASH-03510N0650	Φ3.5x10x50xD6	4	3.5	10	6	50	
MM11455ASH-0410N0650	Φ4*10*50*D6	4	4	10	6	50	
MM11455ASH-0513N0650	Φ5*13*50*D6	4	5	13	6	50	
MM11455ASH-0616N0650	Φ6*16*50*D6	4	6	16	6	50	
MM11455ASH-0820N0860	Φ8*20*60*D8	4	8	20	8	60	
MM11455ASH-1025N1075	Φ10*25*75*D10	4	10	25	10	75	
MM11455ASH-1230N1275	Φ12*30*75*D12	4	12	30	12	75	
MM11455ASH-1645N16100	Φ16*45*100*D16	4	16	45	16	100	
MM11455ASH-1845N18100	Φ18*45*100*D18	4	18	45	18	100	
MM11455ASH-2045N20100	Φ20*45*100*D20	4	20	45	20	100	

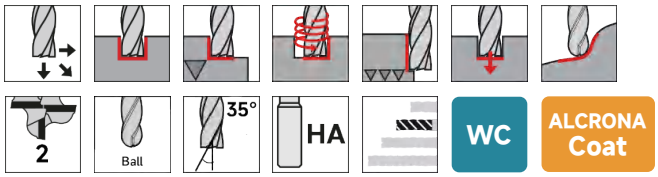
Supports Non-Standard Customization

M Series

High-performance 2-flute ball nose end mill

▶ Uses high-hardness materials, advanced grinding, and edge treatment to extend tool life. Designed for machining hardened steels (HRC45-60).





● = Best ○ =Good

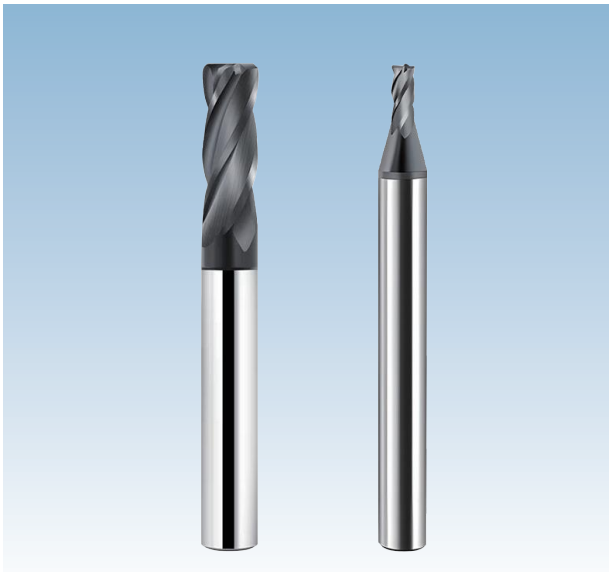
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	●	○		○	○						

Order Number	Specification	Number of Flutes T	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MM12255ASH-05002N0450	R0.5*2*50*D4	2	0.5	2	4	50	
MM12255ASH-07503N0450	R0.75*3*50*D4	2	0.75	3	4	50	
MM12255ASH-10004N0450	R1*4*50*D4	2	1	4	4	50	
MM12255ASH-12505N0450	R1.25*5*50*D4	2	1.25	5	4	50	
MM12255ASH-15006N0450	R1.5*6*50*D4	2	1.5	6	4	50	
MM12255ASH-20008N0450	R2*8*50*D4	2	2	8	4	50	
MM12255ASH-05002N0650	R0.5*2*50*D6	2	0.5	2	6	50	
MM12255ASH-07503N0650	R0.75*3*50*D6	2	0.75	3	6	50	
MM12255ASH-10004N0650	R1*4*50*D6	2	1	4	6	50	
MM12255ASH-12505N0650	R1.25*5*50*D6	2	1.25	5	6	50	
MM12255ASH-15006N0650	R1.5*6*50*D6	2	1.5	6	6	50	
MM12255ASH-20008N0650	R2*8*50*D6	2	2	8	6	50	
MM12255ASH-25010N0650	R2.5*10*50*D6	2	2.5	10	6	50	
MM12255ASH-30012N0650	R3*12*50*D6	2	3	12	6	50	
MM12255ASH-35012N0860	R3.5*12*60*D8	2	3.5	12	8	60	
MM12255ASH-40016N0860	R4*16*60*D8	2	4	16	8	60	
MM12255ASH-50020N1075	R5*20*75*D10	2	5	20	10	75	
MM12255ASH-60024N1275	R6*24*75*D12	2	6	24	12	75	
MM12255ASH-70028N14100	R7*28*100*14D	2	7	28	14	100	
MM12255ASH-80032N16100	R8*32*100*16D	2	8	32	16	100	
MM12255ASH-10040N20100	R10*40*100*20D	2	10	40	20	100	

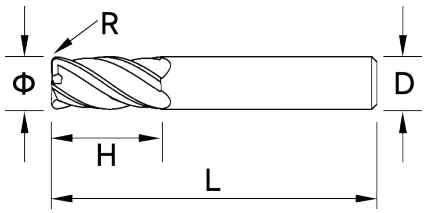
Supports Non-Standard Customization

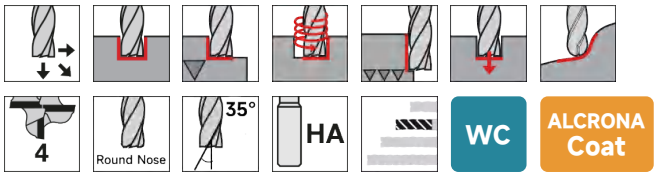
M Series

High-performance 4-flute radius end mill (1)



▶ Uses high-hardness materials, advanced grinding, and edge treatment to extend tool life. Designed for machining hardened steels (HRC45-60).





● = Best ○ =Good

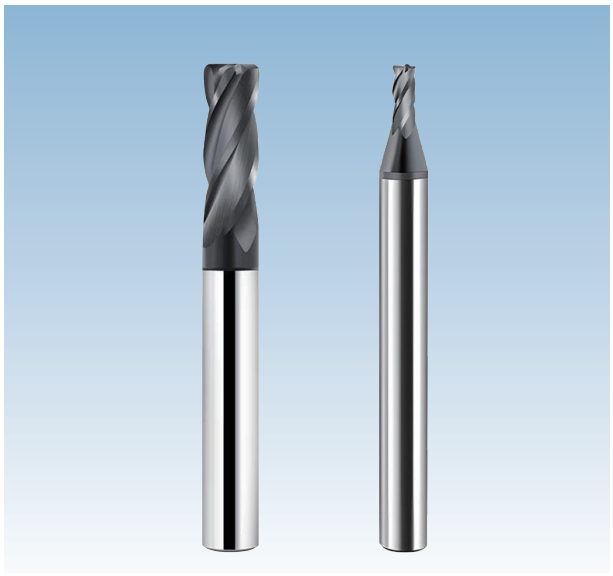
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	●	○		○	○						

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MM13455ASH-010203N0450	Φ1*R0.2*3*50*D4	4	1	0.2	3	4	50	
MM13455ASH-0150203N0450	Φ1.5*R0.2*4*50*D4	4	1.5	0.2	4	4	50	
MM13455ASH-020204N0450	Φ2*R0.2*6*50*D4	4	2	0.2	6	4	50	
MM13455ASH-0250206N0450	Φ2.5*R0.2*8*50*D4	4	2.5	0.2	8	4	50	
MM13455ASH-0250508N0450	Φ2.5*R0.5*8*50*D4	4	2.5	0.5	8	4	50	
MM13455ASH-030208N0450	Φ3*R0.2*8*50*D4	4	3	0.2	8	4	50	
MM13455ASH-030508N0450	Φ3*R0.5*8*50*D4	4	3	0.5	8	4	50	
MM13455ASH-040210N0450	Φ4*R0.2*10*50*D4	4	4	0.2	10	4	50	
MM13455ASH-040510N0450	Φ4*R0.5*10*50*D4	4	4	0.5	10	4	50	
MM13455ASH-050213N0650	Φ5*R0.2*13*50*D6	4	5	0.2	13	6	50	
MM13455ASH-050513N0650	Φ5*R0.5*13*50*D6	4	5	0.5	13	6	50	
MM13455ASH-051013N0650	Φ5*R1*13*50*D6	4	5	1	13	6	50	
MM13455ASH-060315N0650	Φ6*R0.3*15*50*D6	4	6	0.3	15	6	50	
MM13455ASH-060515N0650	Φ6*R0.5*15*50*D6	4	6	0.5	15	6	50	
MM13455ASH-061015N0650	Φ6*R1*15*50*D6	4	6	1	15	6	60	
MM13455ASH-080320N0860	Φ8*R0.3*20*60*D8	4	8	0.3	20	8	60	
MM13455ASH-080520N0860	Φ8*R0.5*20*60*D8	4	8	0.5	20	8	60	
MM13455ASH-081020N0860	Φ8*R1*20*60*D8	4	8	1	20	8	60	
MM13455ASH-100325N1075	Φ10*R0.3*25*75*D10	4	10	0.3	25	10	75	
MM13455ASH-100525N1075	Φ10*R0.5*25*75*D10	4	10	0.5	25	10	75	
MM13455ASH-101025N1075	Φ10*R1*25*75*D10	4	10	1	25	10	75	
MM13455ASH-102025N1075	Φ10*R2*25*75*D10	4	10	2	25	10	75	

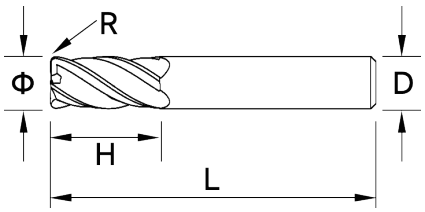
Supports Non-Standard Customization

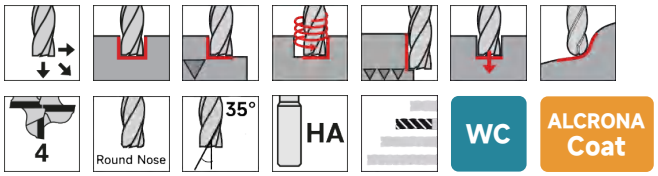
M Series

High-performance 4-flute radius end mill (2)



▶ Uses high-hardness materials, advanced grinding, and edge treatment to extend tool life. Designed for machining hardened steels (HRC45-60).





● = Best ○ =Good

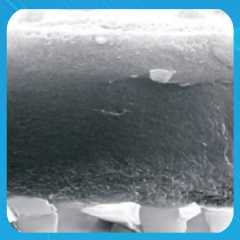
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	●	○		○	○						

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MM13455ASH-120330N1275	Φ12*R0.3*30*75*D12	4	12	0.3	30	12	75	
MM13455ASH-120530N1275	Φ12*R0.5*30*75*D12	4	12	0.5	30	12	75	
MM13455ASH-121030N1275	Φ12*R1*30*75*D12	4	12	1	30	12	75	
MM13455ASH-122030N1275	Φ12*R2*30*75*D12	4	12	2	30	12	75	
MM13455ASH-160345N16100	Φ16*R0.3*45*100*D16	4	16	0.3	45	16	100	
MM13455ASH-160545N16100	Φ16*R0.5*45*100*D16	4	16	0.5	45	16	100	
MM13455ASH-161045N16100	Φ16*R1.0*45*100*D16	4	16	1	45	16	100	
MM13455ASH-162045N16100	Φ16*R2.0*45*100*D16	4	16	2	45	16	100	
MM13455ASH-180345N16100	Φ18*R0.3*45*100*D18	4	18	0.3	45	18	100	
MM13455ASH-180545N18100	Φ18*R0.5*45*100*D18	4	18	0.5	45	18	100	
MM13455ASH-181045N18100	Φ18*R1.0*45*100*D18	4	18	1	45	18	100	
MM13455ASH-182045N18100	Φ18*R2.0*45*100*D18	4	18	2	45	18	100	
MM13455ASH-200345N20100	Φ20*R0.3*45*100*D20	4	20	0.3	45	20	100	
MM13455ASH-200545N20100	Φ20*R0.5*45*100*D20	4	20	0.5	45	20	100	
MM13455ASH-201045N20100	Φ20*R1.0*45*100*D20	4	20	1	45	20	100	
MM13455ASH-202045N20100	Φ20*R2.0*45*100*D20	4	20	2	45	20	100	

Supports Non-Standard Customization

High-rigidity design, high-speed machining

- Special element-doped coating with high hardness and excellent oxidation resistance, ideal for high-hardness materials and high-speed machining.
- Superior coating technology ensures better adhesion.



Lattice-Mismatch Coating

Upgraded with new technology

- Unique tool structure and optimized slot design for excellent cutting performance.
- Bronze coating for better wear identification.
- Special surface finishing to reduce friction, improve chip evacuation, and enhance surface quality.

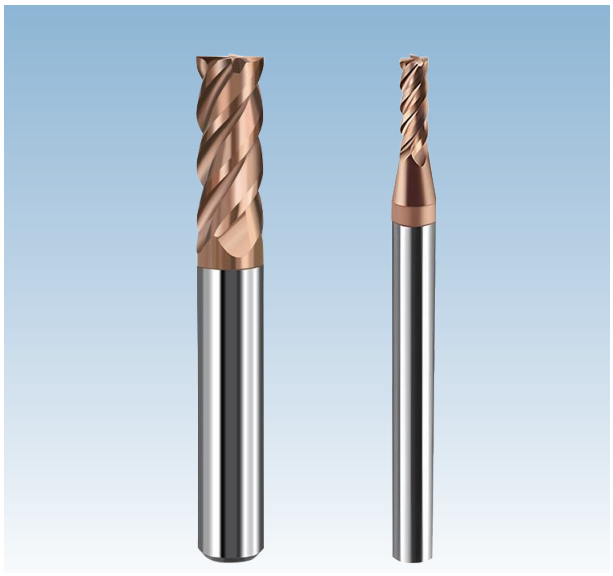
Excellent high-temperature oxidation resistance

- After oxidation at 1100° C, H-series coatings show a thin oxide layer, while others are fully oxidized.

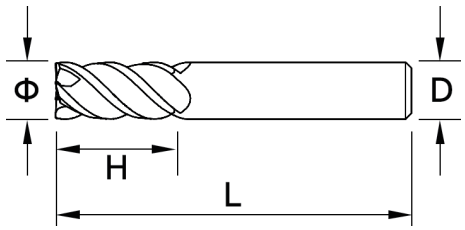
H Series Products

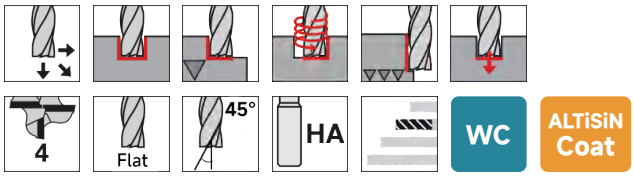
H Series

4-flute high-speed high-hardness square end mill



▶ Suitable for machining alloy steel, tool steel, and hardened steel (HRC60). Compatible with oil mist, water, and air cooling.





● = Best ○ =Good

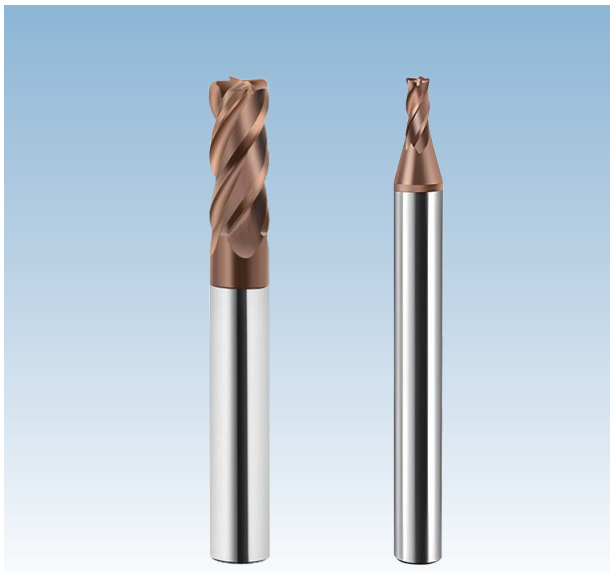
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	●		○	○					○	○

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MH71460ASH-0103N0450	Φ1*3*50*D4	4	1	3	4	50	
MH71460ASH-01504N0450	Φ1.5*4*50*D4	4	1.5	4	4	50	
MH71460ASH-0206N0450	Φ2*6*50*D4	4	2	6	4	50	
MH71460ASH-02508N0450	Φ2.5*8*50*D4	4	2.5	8	4	50	
MH71460ASH-0308N0450	Φ3*8*50*D4	4	3	8	4	50	
MH71460ASH-03510N0450	Φ3.5x10x50xD4	4	3.5	10	4	50	
MH71460ASH-0410N0450	Φ4*10*50*D4	4	4	10	4	50	
MH71460ASH-0103N0650	Φ1*3*50*D6	4	1	3	6	50	
MH71460ASH-01504N0650	Φ1.5*4*50*D6	4	1.5	4	6	50	
MH71460ASH-0206N0650	Φ2*6*50*D6	4	2	6	6	50	
MH71460ASH-02508N0650	Φ2.5*8*50*D6	4	2.5	8	6	50	
MH71460ASH-0308N0650	Φ3*8*50*D6	4	3	8	6	50	
MH71460ASH-03510N0650	Φ3.5x10x50xD6	4	3.5	10	6	50	
MH71460ASH-0410N0650	Φ4*10*50*D6	4	4	10	6	50	
MH71460ASH-0513N0650	Φ5*13*50*D6	4	5	13	6	50	
MH71460ASH-0616N0650	Φ6*16*50*D6	4	6	16	6	50	
MH71460ASH-0820N0860	Φ8*20*60*D8	4	8	20	8	60	
MH71460ASH-1025N1075	Φ10*25*75*D10	4	10	25	10	75	
MH71460ASH-1230N1275	Φ12*30*75*D12	4	12	30	12	75	
MH71460ASH-1645N16100	Φ16*45*100*D16	4	16	45	16	100	
MH71460ASH-1845N18100	Φ18*45*100*D18	4	18	45	18	100	
MH71460ASH-2045N20100	Φ20*45*100*D20	4	20	45	20	100	

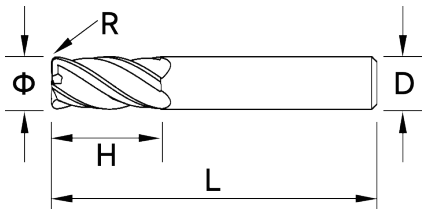
Supports Non-Standard Customization

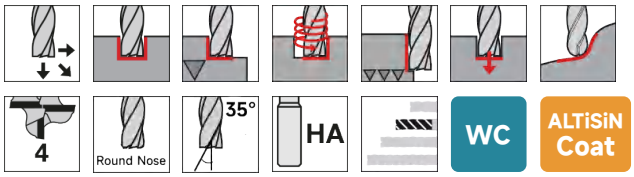
H Series

4-flute high-speed high-hardness radius end mill (1)



▶ Suitable for machining alloy steel, tool steel, and hardened steel (HRC60). Compatible with oil mist, water, and air cooling.





● = Best ○ =Good

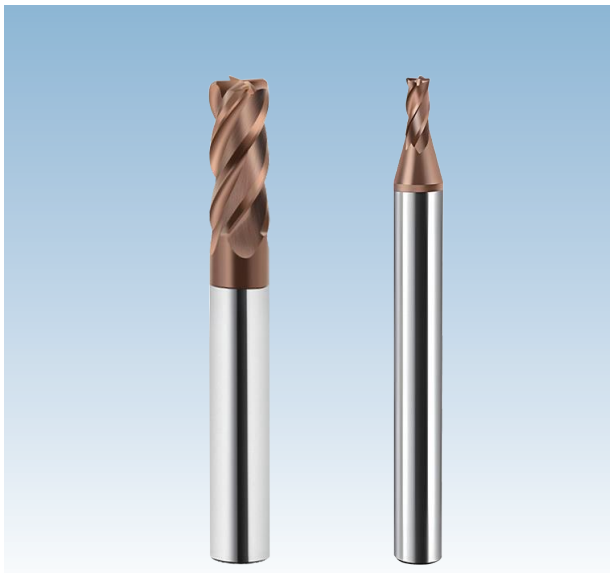
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	●		○	○					○	○

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MH73460ASH-010203N0450	Φ1*R0.2*3*50*D4	4	1	0.2	3	4	50	
MH73460ASH-0150203N0450	Φ1.5*R0.2*4*50*D4	4	1.5	0.2	4	4	50	
MH73460ASH-020204N0450	Φ2*R0.2*6*50*D4	4	2	0.2	6	4	50	
MH73460ASH-0250206N0450	Φ2.5*R0.2*8*50*D4	4	2.5	0.2	8	4	50	
MH73460ASH-0250508N0450	Φ2.5*R0.5*8*50*D4	4	2.5	0.5	8	4	50	
MH73460ASH-030208N0450	Φ3*R0.2*8*50*D4	4	3	0.2	8	4	50	
MH73460ASH-030508N0450	Φ3*R0.5*8*50*D4	4	3	0.5	8	4	50	
MH73460ASH-040210N0450	Φ4*R0.2*10*50*D4	4	4	0.2	10	4	50	
MH73460ASH-040510N0450	Φ4*R0.5*10*50*D4	4	4	0.5	10	4	50	
MH73460ASH-050213N0650	Φ5*R0.2*13*50*D6	4	5	0.2	13	6	50	
MH73460ASH-050513N0650	Φ5*R0.5*13*50*D6	4	5	0.5	13	6	50	
MH73460ASH-051013N0650	Φ5*R1*13*50*D6	4	5	1	13	6	50	
MH73460ASH-060315N0650	Φ6*R0.3*15*50*D6	4	6	0.3	15	6	50	
MH73460ASH-060515N0650	Φ6*R0.5*15*50*D6	4	6	0.5	15	6	50	
MH73460ASH-061015N0650	Φ6*R1*15*50*D6	4	6	1	15	6	60	
MH73460ASH-080320N0860	Φ8*R0.3*20*60*D8	4	8	0.3	20	8	60	
MH73460ASH-080520N0860	Φ8*R0.5*20*60*D8	4	8	0.5	20	8	60	
MH73460ASH-081020N0860	Φ8*R1*20*60*D8	4	8	1	20	8	60	
MH73460ASH-100325N1075	Φ10*R0.3*25*75*D10	4	10	0.3	25	10	75	
MH73460ASH-100525N1075	Φ10*R0.5*25*75*D10	4	10	0.5	25	10	75	
MH73460ASH-101025N1075	Φ10*R1*25*75*D10	4	10	1	25	10	75	
MH73460ASH-102025N1075	Φ10*R2*25*75*D10	4	10	2	25	10	75	

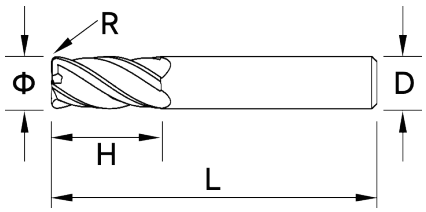
Supports Non-Standard Customization

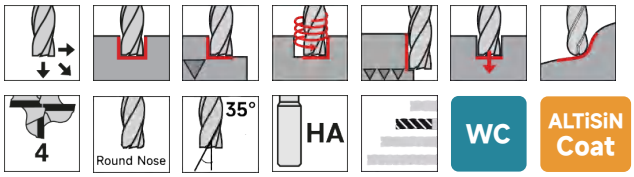
H Series

4-flute high-speed high-hardness radius end mill (2)



▶ Suitable for machining alloy steel, tool steel, and hardened steel (HRC60). Compatible with oil mist, water, and air cooling.





● = Best ○ =Good

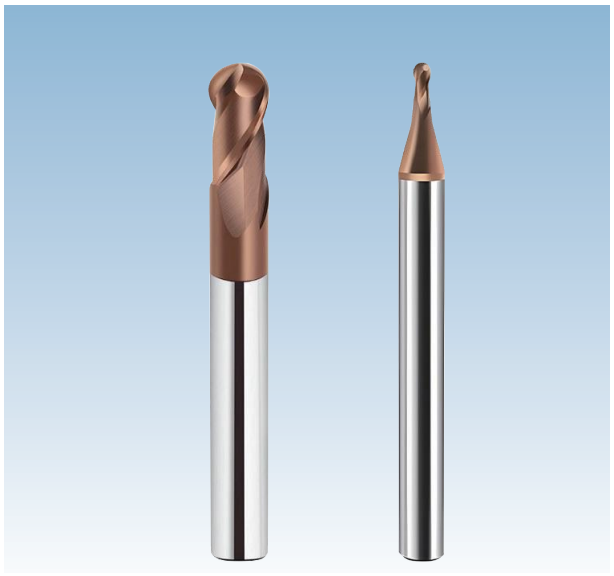
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	●		○	○					○	○

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MH73460ASH-120330N1275	Φ12*R0.3*30*75*D12	4	12	0.3	30	12	75	
MH73460ASH-120530N1275	Φ12*R0.5*30*75*D12	4	12	0.5	30	12	75	
MH73460ASH-121030N1275	Φ12*R1*30*75*D12	4	12	1	30	12	75	
MH73460ASH-122030N1275	Φ12*R2*30*75*D12	4	12	2	30	12	75	
MH73460ASH-160345N16100	Φ16*R0.3*45*100*D16	4	16	0.3	45	16	100	
MH73460ASH-160545N16100	Φ16*R0.5*45*100*D16	4	16	0.5	45	16	100	
MH73460ASH-161045N16100	Φ16*R1.0*45*100*D16	4	16	1	45	16	100	
MH73460ASH-162045N16100	Φ16*R2.0*45*100*D16	4	16	2	45	16	100	
MH73460ASH-180345N16100	Φ18*R0.3*45*100*D18	4	18	0.3	45	18	100	
MH73460ASH-180545N18100	Φ18*R0.5*45*100*D18	4	18	0.5	45	18	100	
MH73460ASH-181045N18100	Φ18*R1.0*45*100*D18	4	18	1	45	18	100	
MH73460ASH-182045N18100	Φ18*R2.0*45*100*D18	4	18	2	45	18	100	
MH73460ASH-200345N20100	Φ20*R0.3*45*100*D20	4	20	0.3	45	20	100	
MH73460ASH-200545N20100	Φ20*R0.5*45*100*D20	4	20	0.5	45	20	100	
MH73460ASH-201045N20100	Φ20*R1.0*45*100*D20	4	20	1	45	20	100	
MH73460ASH-202045N20100	Φ20*R2.0*45*100*D20	4	20	2	45	20	100	

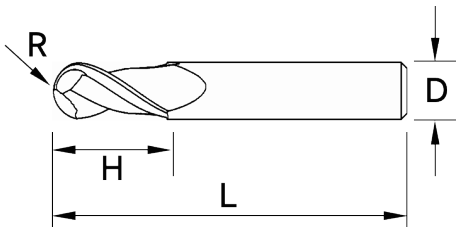
Supports Non-Standard Customization

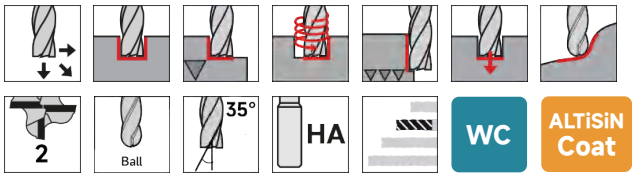
H Series

2-flute high-speed high-hardness ball nose end mill



▶ Suitable for machining alloy steel, tool steel, and hardened steel (HRC60). Compatible with oil mist, water, and air cooling.





● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	●		○	○					○	○

Order Number	Specification	Number of Flutes T	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MH72260ASH-05002N0450	R0.5*2*50*D4	2	0.5	2	4	50	
MH72260ASH-07503N0450	R0.75*3*50*D4	2	0.75	3	4	50	
MH72260ASH-10004N0450	R1*4*50*D4	2	1	4	4	50	
MH72260ASH-12505N0450	R1.25*5*50*D4	2	1.25	5	4	50	
MH72260ASH-15006N0450	R1.5*6*50*D4	2	1.5	6	4	50	
MH72260ASH-20008N0450	R2*8*50*D4	2	2	8	4	50	
MH72260ASH-05002N0650	R0.5*2*50*D6	2	0.5	2	6	50	
MH72260ASH-07503N0650	R0.75*3*50*D6	2	0.75	3	6	50	
MH72260ASH-10004N0650	R1*4*50*D6	2	1	4	6	50	
MH72260ASH-12505N0650	R1.25*5*50*D6	2	1.25	5	6	50	
MH72260ASH-15006N0650	R1.5*6*50*D6	2	1.5	6	6	50	
MH72260ASH-20008N0650	R2*8*50*D6	2	2	8	6	50	
MH72260ASH-25010N0650	R2.5*10*50*D6	2	2.5	10	6	50	
MH72260ASH-30012N0650	R3*12*50*D6	2	3	12	6	50	
MH72260ASH-35012N0860	R3.5*12*60*D8	2	3.5	12	8	60	
MH72260ASH-40016N0860	R4*16*60*D8	2	4	16	8	60	
MH72260ASH-50020N1075	R5*20*75*D10	2	5	20	10	75	
MH72260ASH-60024N1275	R6*24*75*D12	2	6	24	12	75	
MH72260ASH-70028N14100	R7*28*100*14D	2	7	28	14	100	
MH72260ASH-80032N16100	R8*32*100*16D	2	8	32	16	100	
MH72260ASH-10040N20100	R10*40*100*20D	2	10	40	20	100	

Supports Non-Standard Customization

Efficient Chip Evacuation

Unique U-shaped flute pockets with 20% more chip space, reducing chip blockage. Faster and smoother chip evacuation reduces surface friction, extending tool life by over 30%.

Improved Efficiency

Optimized flute geometry and helix angle improve force distribution, reduce vibration, and enhance stability. Solid carbide and nano-coating allow higher cutting speeds and feeds. The U-shaped slot end mill maintains high feed rates and achieves 2.3 times the efficiency of standard slot mills.

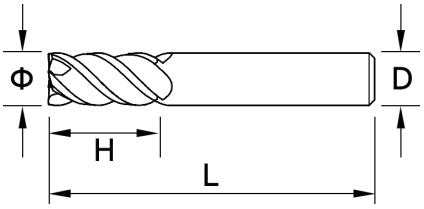
Multifunctional Adaptability

Suitable for both finish and rough machining, and can handle difficult-to-machine materials. The multifunctionality and wide adaptability of the U-shaped flute end mill make it suitable for various industries and materials, greatly expanding its application range.

N Series

Difficult-to-Machine Materials 4-flute square end mill

▶ Variable helix and unequal pitch design provide excellent anti-vibration performance, ideal for difficult-to-machine materials.



● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○					○	○					●	●

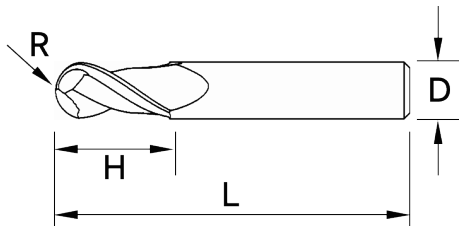
Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MN91465ASH-0103N0450	Φ1.0*3*50*D4	4	1	3	4	50	
MN91465ASH-01505N0450	Φ1.5*5*50*D4	4	1.5	5	4	50	
MN91465ASH-0206N0450	Φ2.0*6*50*D4	4	2	6	4	50	
MN91465ASH-02508N0450	Φ2.5*8*50*D4	4	2.5	8	4	50	
MN91465ASH-0309N0450	Φ3.0*9*50*D4	4	3	9	4	50	
MN91465ASH-0412N0450	Φ4.0*12*50*D4	4	4	12	4	50	
MN91465ASH-0513N0650	Φ5.0*13*50*D6	4	5	13	6	50	
MN91465ASH-0615N0650	Φ6.0*15*50*D6	4	6	15	6	50	
MN91465ASH-0820N0860	Φ8.0*20*60*D8	4	8	20	8	60	
MN91465ASH-1025N1075	Φ10.0*25*75*D10	4	10	25	10	75	
MN91465ASH-1230N1275	Φ12.0*30*75*D12	4	12	30	12	75	
MN91465ASH-1435N14100	Φ14.0*35*100*D14	4	14	35	14	100	
MN91465ASH-1640N16100	Φ16.0*40*100*D16	4	16	40	16	100	
MN91465ASH-1845N18100	Φ18.0*45*100*D18	4	18	45	18	100	
MN91465ASH-2045N20100	Φ20.0*45*100*D20	4	20	45	20	100	

Supports Non-Standard Customization

N Series

Difficult-to-Machine Materials 4-flute ball nose end mill (1)

▶ Variable helix and unequal pitch design provide excellent anti-vibration performance, ideal for difficult-to-machine materials.



● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○					○	○					●	●

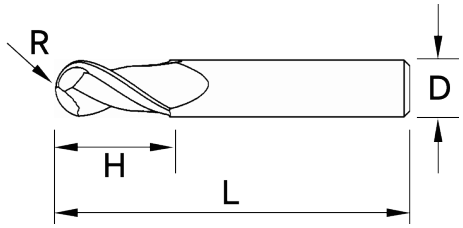
Order Number	Specification	Number of Flutes T	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MN92265ASH-0102N450	R0.1*0.2*50*D4	2	0.1	0.2	4	50	
MN92265ASH-01503N450	R0.15*0.3*50*D4	2	0.15	0.3	4	50	
MN92265ASH-0204N450	R0.2*0.4*50*D4	2	0.2	0.4	4	50	
MN92265ASH-02506N450	R0.25*0.6*50*D4	2	0.25	0.6	4	50	
MN92265ASH-0309N450	R0.3*0.9*50*D4	2	0.3	0.9	4	50	
MN92265ASH-0412N450	R0.4*1.2*50*D4	2	0.4	1.2	4	50	
MN92265ASH-0515N450	R0.5*1.5*50*D4	2	0.5	1.5	4	50	
MN92265ASH-07523N450	R0.75*2.3*50*D4	2	0.75	2.3	4	50	
MN92265ASH-103N450	R1.0*3*50*D4	2	1.0	3	4	50	
MN92265ASH-1545N450	R1.5*4.5*50*D4	2	1.5	4.5	4	50	
MN92265ASH-206N450	R2.0*6*50*4D	2	2.0	6	4	50	
MN92265ASH-206N475	R2.0*6*75*4D	2	2.0	6	4	75	
MN92265ASH-206N4100	R2.0*6*100*4D	2	2.0	6	4	100	
MN92265ASH-103N650	R1.0*3*50*D6	2	1.0	3	6	50	
MN92265ASH-1545N650	R1.5*4.5*50*D6	2	1.5	4.5	6	50	
MN92265ASH-208N650	R2.0*8*50*D6	2	2.0	8	6	50	
MN92265ASH-2575N650	R2.5*7.5*50*D6	2	2.5	7.5	6	50	
MN92265ASH-309N650	R3.0*9*50*D6	2	3.0	9	6	50	
MN92265ASH-309N660	R3.0*9*60*D6	2	3.0	9	6	60	
MN92265ASH-309N675	R3.0*9*75*D6	2	3.0	9	6	75	
MN92265ASH-309N6100	R3.0*9*100*D6	2	3.0	9	6	100	
MN92265ASH-4012N860	R4.0*12*60*D8	2	4.0	12	8	60	

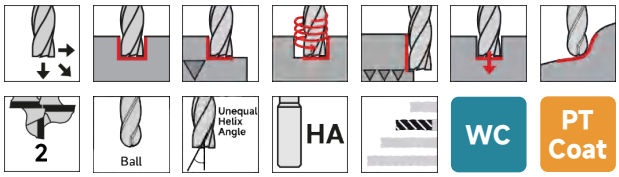
Supports Non-Standard Customization

N Series

Difficult-to-Machine Materials 4-flute ball nose end mill (2)

▶ Variable helix and unequal pitch design provide excellent anti-vibration performance, ideal for difficult-to-machine materials.





● = Best ○ =Good

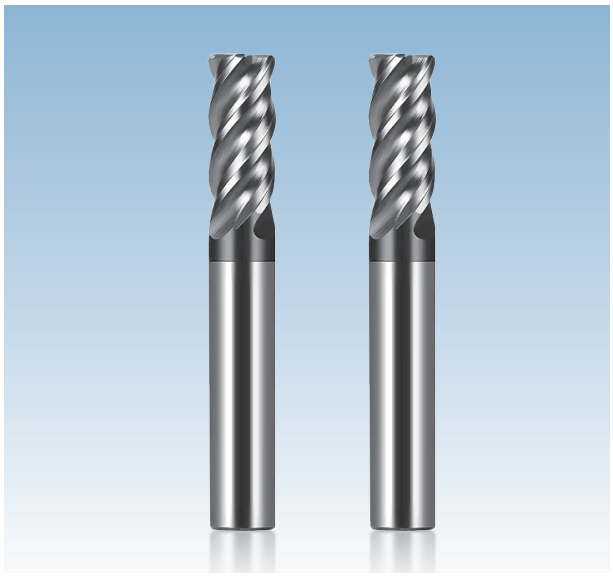
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○					○	○					●	●

Order Number	Specification	Number of Flutes T	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MN92265ASH-4012N875	R4.0*12*75*D8	2	4.0	12	8	75	
MN92265ASH-4012N8100	R4.0*12*100*D8	2	4.0	12	8	100	
MN92265ASH-4012N8150	R4.0*12*150*D8	2	4.0	12	8	150	
MN92265ASH-5015N1075	R5.0*15*75*D10	2	5.0	15	10	75	
MN92265ASH-5015N10100	R5.0*15*100*D10	2	5.0	15	10	100	
MN92265ASH-5015N10150	R5.0*15*150*D10	2	5.0	15	10	150	
MN92265ASH-6018N1275	R6.0*18*75*D12	2	6.0	18	12	75	
MN92265ASH-6018N12100	R6.0*18*100*D12	2	6.0	18	12	100	
MN92265ASH-6018N12150	R6.0*18*150*D12	2	6.0	18	12	150	
MN92265ASH-728N14100	R7*28*100*D14	2	7	28	14	100	
MN92265ASH-728N14150	R7*28*150*D14	2	7	28	14	150	
MN92265ASH-832N16100	R8*32*100*D16	2	8	32	16	100	
MN92265ASH-832N16150	R8*32*150*D16	2	8	32	16	150	
MN92265ASH-1040N20100	R10*40*100*D20	2	10	40	20	100	
MN92265ASH-1040N20150	R10*40*150*D20	2	10	40	20	150	

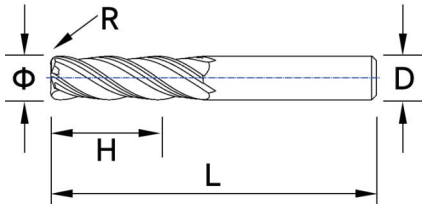
Supports Non-Standard Customization

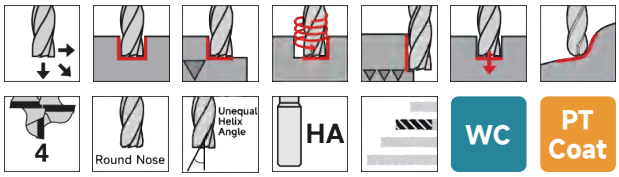
N Series

Difficult-to-Machine Materials 4-flute radius end mill (1)



▶ Variable helix and unequal pitch design provide excellent anti-vibration performance, ideal for difficult-to-machine materials.





● = Best ○ =Good

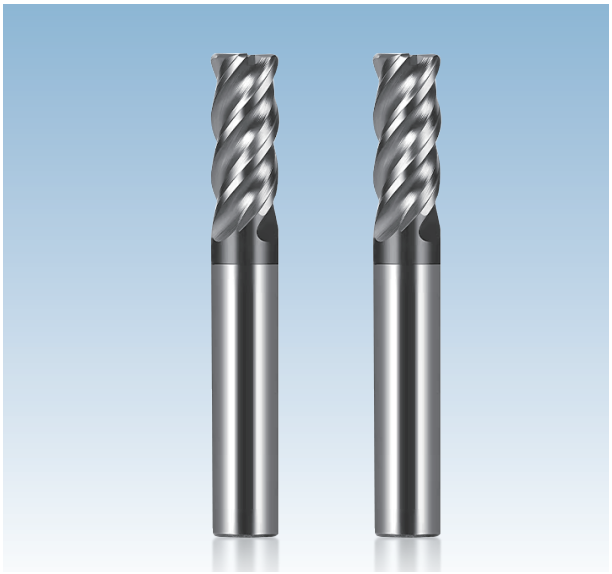
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○					○	○					●	●

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MN93465ASH-1023N450	Φ1*R0.2*3*50*D4	4	1	0.2	3	4	50	
MN93465ASH-15024N450	Φ1.5*R0.2*4*50*D4	4	1.5	0.2	4	4	50	
MN93465ASH-2026N450	Φ2*R0.2*6*50*D4	4	2	0.2	6	4	50	
MN93465ASH-25028N450	Φ2.5*R0.2*8*50*D4	4	2.5	0.2	8	4	50	
MN93465ASH-25058N450	Φ2.5*R0.5*8*50*D4	4	2.5	0.5	8	4	50	
MN93465ASH-3028N450	Φ3*R0.2*8*50*D4	4	3	0.2	8	4	50	
MN93465ASH-3058N450	Φ3*R0.5*8*50*D4	4	3	0.5	8	4	50	
MN93465ASH-40210N450	Φ4*R0.2*10*50*D4	4	4	0.2	10	4	50	
MN93465ASH-40510N450	Φ4*R0.5*10*50*D4	4	4	0.5	10	4	50	
MN93465ASH-50213N650	Φ5*R0.2*13*50*D6	4	5	0.2	13	6	50	
MN93465ASH-50513N650	Φ5*R0.5*13*50*D6	4	5	0.5	13	6	50	
MN93465ASH-5113N650	Φ5*R1*13*50*D6	4	5	1	13	6	50	
MN93465ASH-60315N650	Φ6*R0.3*15*50*D6	4	6	0.3	15	6	50	
MN93465ASH-60515N650	Φ6*R0.5*15*50*D6	4	6	0.5	15	6	50	
MN93465ASH-6115N660	Φ6*R1*15*50*D6	4	6	1	15	6	60	
MN93465ASH-80320N860	Φ8*R0.3*20*60*D8	4	8	0.3	20	8	60	
MN93465ASH-80520N860	Φ8*R0.5*20*60*D8	4	8	0.5	20	8	60	
MN93465ASH-8120N860	Φ8*R1*20*60*D8	4	8	1	20	8	60	
MN93465ASH-100325N1075	Φ10*R0.3*25*75*D10	4	10	0.3	25	10	75	
MN93465ASH-100525N1075	Φ10*R0.5*25*75*D10	4	10	0.5	25	10	75	
MN93465ASH-10125N1075	Φ10*R1*25*75*D10	4	10	1	25	10	75	
MN93465ASH-10225N1075	Φ10*R2*25*75*D10	4	10	2	25	10	75	

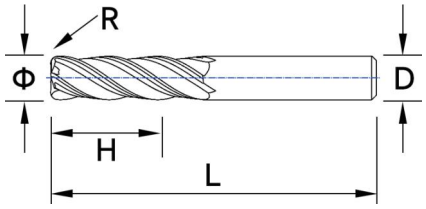
Supports Non-Standard Customization

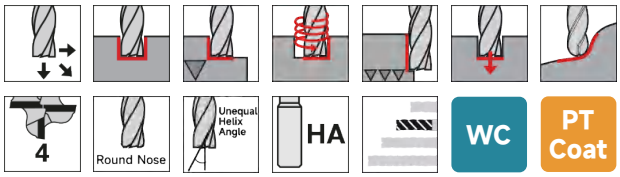
N Series

Difficult-to-Machine Materials 4-flute radius end mill (2)



▶ Variable helix and unequal pitch design provide excellent anti-vibration performance, ideal for difficult-to-machine materials.





● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○					○	○					●	●

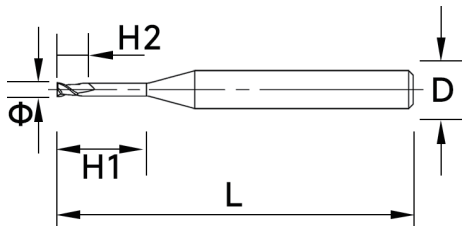
Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MN93465ASH-120330N1275	Φ12*R0.3*30*75*D12	4	12	0.3	30	12	75	
MN93465ASH-120530N1275	Φ12*R0.5*30*75*D12	4	12	0.5	30	12	75	
MN93465ASH-12130N1275	Φ12*R1*30*75*D12	4	12	1	30	12	75	
MN93465ASH-12230N1275	Φ12*R2*30*75*D12	4	12	2	30	12	75	
MN93465ASH-160345N16100	Φ16*R0.3*45*100*D16	4	16	0.3	45	16	100	
MN93465ASH-160545N16100	Φ16*R0.5*45*100*D16	4	16	0.5	45	16	100	
MN93465ASH-16145N16100	Φ16*R1.0*45*100*D16	4	16	1	45	16	100	
MN93465ASH-16245N16100	Φ16*R2.0*45*100*D16	4	16	2	45	16	100	
MN93465ASH-180345N18100	Φ18*R0.3*45*100*D18	4	18	0.3	45	18	100	
MN93465ASH-180545N18100	Φ18*R0.5*45*100*D18	4	18	0.5	45	18	100	
MN93465ASH-18145N18100	Φ18*R1.0*45*100*D18	4	18	1	45	18	100	
MN93465ASH-18245N18100	Φ18*R2.0*45*100*D18	4	18	2	45	18	100	
MN93465ASH-200345N20100	Φ20*R0.3*45*100*D20	4	20	0.3	45	20	100	
MN93465ASH-200545N20100	Φ20*R0.5*45*100*D20	4	20	0.5	45	20	100	
MN93465ASH-20145N20100	Φ20*R1.0*45*100*D20	4	20	1	45	20	100	
MN93465ASH-20245N20100	Φ20*R2.0*45*100*D20	4	20	2	45	20	100	

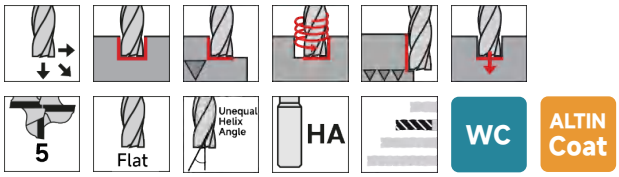
Supports Non-Standard Customization

NS Series

High-temperature alloys 5-flute square end mill

▶ Optimized cutting angles and edge shapes ensure good performance and long life in high-temperature and high-stress conditions.





● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○					○	○					●	●

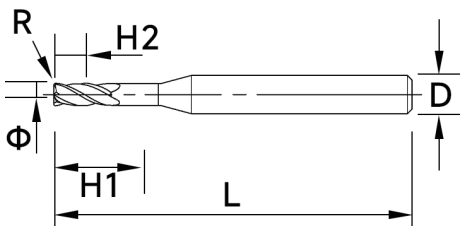
Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Cutting Length H2	Clearance Length H1	Shank Diameter D	Overall Length L	Stock
MNS51565ASH-41220Y650	Φ4*12*50*D6	5	4	12	20	6	50	
MNS51565ASH-51523Y650	Φ5*15*50*D6	5	5	15	23	6	50	
MNS51565ASH-61826Y650	Φ6*18*50*D6	5	6	18	26	6	50	
MNS51565ASH-82432Y860	Φ8*24*60*D8	5	8	24	32	8	60	
MNS51565ASH-103038Y1075	Φ10*30*75*D10	5	10	30	38	10	75	
MNS51565ASH-123644Y1275	Φ12*36*75*D12	5	12	36	44	12	75	
MNS51565ASH-164856Y16100	Φ16*48*100*D16	5	16	48	56	16	100	
MNS51565ASH-185462Y18100	Φ18*54*100*D18	5	18	54	62	18	100	
MNS51565ASH-205462Y20100	Φ20*54*100*D20	5	20	54	62	20	100	

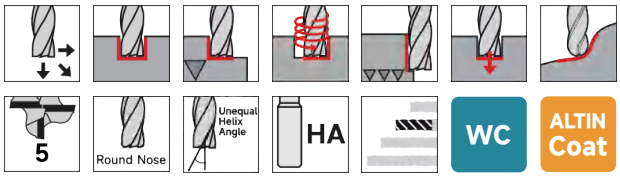
Supports Non-Standard Customization

NS Series

High-temperature alloys 5-flute radius end mill

▶ Optimized cutting angles and edge shapes ensure good performance and long life in high-temperature and high-stress conditions.





● = Best ○ =Good

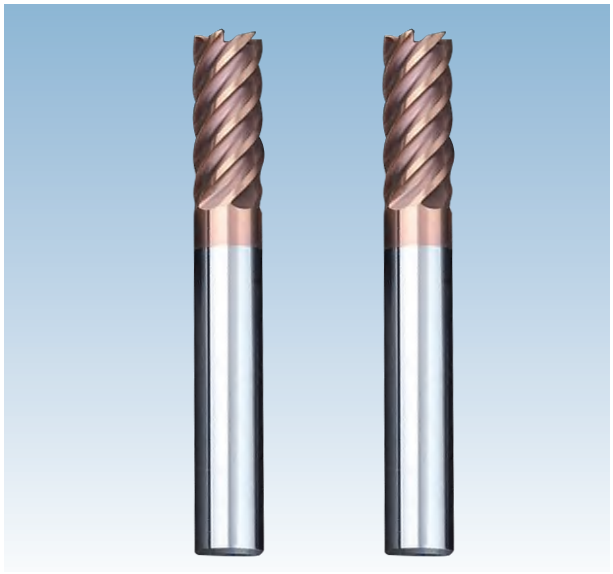
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○					○	○					●	●

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Arc Radius R	Cutting Length H2	Clearance Length H1	Shank Diameter D	Overall Length L	Stock
MNS53565ASH-4021220Y650	Φ4*12*50*D6	5	4	0.2	12	20	6	50	
MNS53565ASH-4051220Y650	Φ4*12*50*D6	5	4	0.5	12	20	6	50	
MNS53565ASH-411220Y650	Φ4*12*50*D6	5	4	1	12	20	6	50	
MNS53565ASH-5021523Y650	Φ5*15*50*D6	5	5	0.2	15	23	6	50	
MNS53565ASH-5051523Y650	Φ5*15*50*D6	5	5	0.5	15	23	6	50	
MNS53565ASH-511523Y650	Φ5*15*50*D6	5	5	1	15	23	6	50	
MNS53565ASH-6021826Y650	Φ6*18*50*D6	5	6	0.2	18	26	6	50	
MNS53565ASH-6051826Y650	Φ6*18*50*D6	5	6	0.5	18	26	6	50	
MNS53565ASH-611826Y650	Φ6*18*50*D6	5	6	1	18	26	6	50	
MNS53565ASH-8022432Y860	Φ8*24*60*D8	5	8	0.2	24	32	8	60	
MNS53565ASH-8052432Y860	Φ8*24*60*D8	5	8	0.5	24	32	8	60	
MNS53565ASH-812432Y860	Φ8*24*60*D8	5	8	1	24	32	8	60	
MNS53565ASH-10023038Y1075	Φ10*30*75*D10	5	10	0.2	30	38	10	75	
MNS53565ASH-10053038Y1075	Φ10*30*75*D10	5	10	0.5	30	38	10	75	
MNS53565ASH-1013038Y1075	Φ10*30*75*D10	5	10	1	30	38	10	75	
MNS53565ASH-12023644Y1275	Φ12*36*75*D12	5	12	0.2	36	44	12	75	
MNS53565ASH-12053644Y1275	Φ12*36*75*D12	5	12	0.5	36	44	12	75	
MNS53565ASH-1213644Y1275	Φ12*36*75*D12	5	12	1	36	44	12	75	
MNS53565ASH-16024856Y16100	Φ16*48*100*D16	5	16	0.2	48	56	16	100	
MNS53565ASH-16054856Y16100	Φ16*48*100*D16	5	16	0.5	48	56	16	100	
MNS53565ASH-1614856Y16100	Φ16*48*100*D16	5	16	1	48	56	16	100	
MNS53565ASH-18025462Y18100	Φ18*54*100*D18	5	18	0.2	54	62	18	100	
MNS53565ASH-18055462Y18100	Φ18*54*100*D18	5	18	0.5	54	62	18	100	
MNS53565ASH-1815462Y18100	Φ18*54*100*D18	5	18	1	54	62	18	100	
MNS53565ASH-20025462Y20100	Φ20*54*100*D20	5	20	0.2	54	62	20	100	
MNS53565ASH-20055462Y20100	Φ20*54*100*D20	5	20	0.5	54	62	20	100	
MNS53565ASH-2015462Y20100	Φ20*54*100*D20	5	20	1	54	62	20	100	

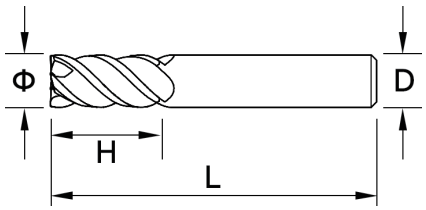
Supports Non-Standard Customization

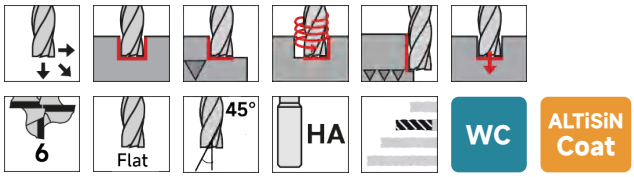
NE Series

Finishing 6-flute square end mill



▶ Multi-flute design for high feed rates, low cutting forces, and excellent surface finish, ideal for efficient and high-precision machining.





● = Best ○ =Good

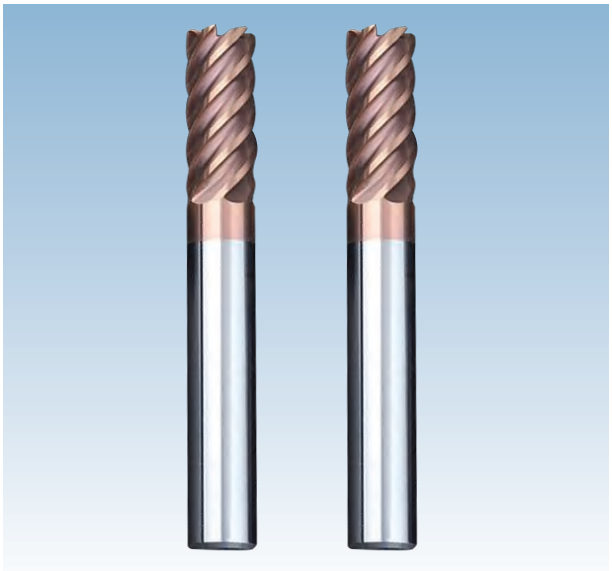
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○					○	○					●	●

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MNE71665ASH-615660	Φ6*15*6*D60	6	6	15	6	60	
MNE71665ASH-820860	Φ8*20*8*D60	6	8	20	8	60	
MNE71665ASH-10251075	Φ10*25*10*D75	6	10	25	10	75	
MNE71665ASH-12301275	Φ12*30*12*D75	6	12	30	12	75	
MNE71665ASH-143514100	Φ14*35*14*D100	6	14	35	14	100	
MNE71665ASH-164016100	Φ16*40*16*D100	6	16	40	16	100	
MNE71665ASH-204520100	Φ20*45*20*D100	6	20	45	20	100	

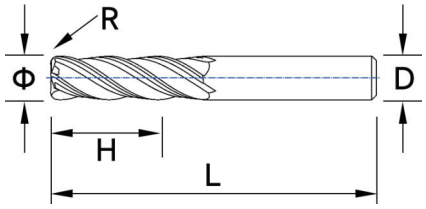
Supports Non-Standard Customization

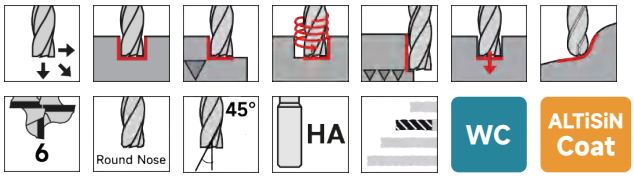
NE Series

Finishing 6-flute radius end mill



▶ Multi-flute design for high feed rates, low cutting forces, and excellent surface finish, ideal for efficient and high-precision machining.





● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○					○	○					●	●

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MNE73665ASH-60.515660	Φ6*R0.5*15*60*D6	6	6	0.5	15	6	60	
MNE73665ASH-6115660	Φ6*R1*15*60*D6	6	6	1	15	6	60	
MNE73665ASH-80.520860	Φ8*R0.5*20*60*D8	6	8	0.5	20	8	60	
MNE73665ASH-8120860	Φ8*R1*20*60*D8	6	8	1	20	8	60	
MNE73665ASH-100.5251075	Φ10*R0.5*25*75*D10	6	10	0.5	25	10	75	
MNE73665ASH-101251075	Φ10*R1*25*75*D10	6	10	1	25	10	75	
MNE73665ASH-102251075	Φ10*R2*25*75*D10	6	10	2	25	10	75	
MNE73665ASH-120.5301275	Φ12*R0.5*30*75*D12	6	12	0.5	30	12	75	
MNE73665ASH-121301275	Φ12*R1*30*75*D12	6	12	1	30	12	75	
MNE73665ASH-122301275	Φ12*R2*30*75*D12	6	12	2	30	12	75	
MNE73665ASH-1614016100	Φ16*R1*40*100*D16	6	16	1	40	16	100	
MNE73665ASH-1624016100	Φ16*R2*40*100*D16	6	16	2	40	16	100	
MNE73665ASH-1634016100	Φ16*R3*40*100*D16	6	16	3	40	16	100	
MNE73665ASH-2014520100	Φ20*R1*45*100*D20	6	20	1	45	20	100	
MNE73665ASH-2024520100	Φ20*R2*45*100*D20	6	20	2	45	20	100	
MNE73665ASH-2034520100	Φ20*R3*45*100*D20	6	20	3	45	20	100	

Supports Non-Standard Customization

Excellent Surface Finish and Tool Sticking Control

Optimized large rake angle design and small edge band width effectively reduce cutting forces and cutting temperatures, reducing tool sticking by over 50%. Additionally, you can choose our DLC diamond-like carbon coated U-shaped Flutes aluminum end mills, which have a low coefficient of friction and significantly improve surface finish.

Efficient Chip Evacuation and Extended Tool Life

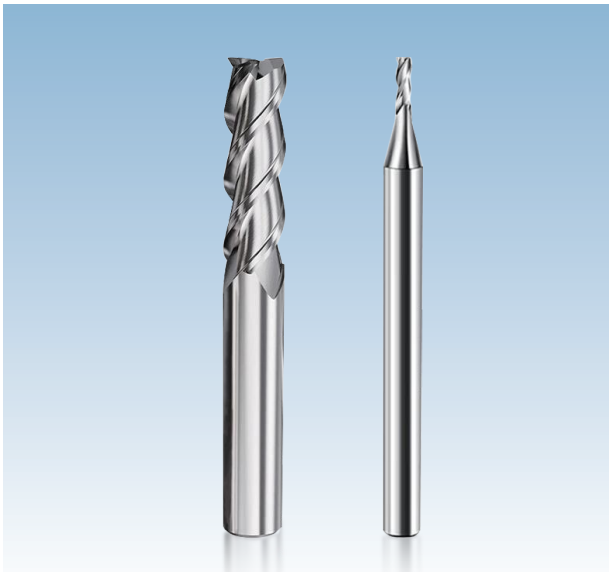
Aluminum materials produce large amounts of soft, easily tangled chips during cutting. If not effectively removed, this can affect machining efficiency and tool life. Our aluminum end mills feature wide chip evacuation grooves, ensuring chips are quickly and smoothly removed, improving chip evacuation efficiency by over 30%.

High-Speed Stable Cutting and Vibration Damping Design

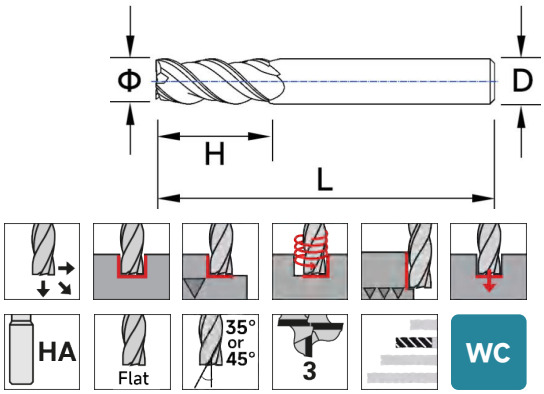
Through optimized geometric parameter adjustments, our aluminum end mills provide efficient cutting performance at high feed rates, significantly boosting production efficiency. Test data shows that our aluminum end mills improve stability by 25% under high-speed cutting conditions, significantly enhancing processing efficiency and product quality.

O Series

3-flute square end mill for aluminum



▶ Special edge design and advanced polishing prevent vibration and chip adhesion. High-performance aluminum tool with high metal removal rates and excellent surface finish.



● = Best ○ =Good

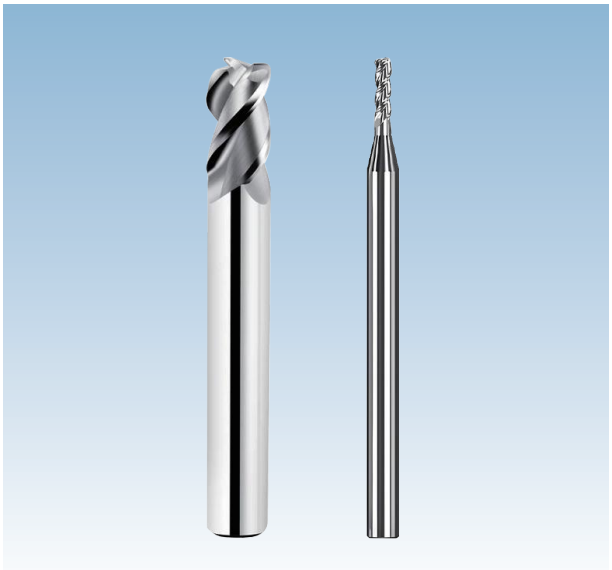
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
									●	●	○	○		

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MO01345ASH-13N450	Φ1*3*D4*50	3	1	3	4	50	
MO01345ASH-1545N450	Φ1.5*4.5*D4*50	3	1.5	4.5	4	50	
MO01345ASH-26N450	Φ2*6*D4*50	3	2	6	4	50	
MO01345ASH-2575N450	Φ2.5*7.5*D4*50	3	2.5	7.5	4	50	
MO01345ASH-39N450	Φ3*9*D4*50	3	3	9	4	50	
MO01345ASH-412N450	Φ4*12*D4*50	3	4	12	4	50	
MO01345ASH-515N650	Φ5*15*D6*50	3	5	15	6	50	
MO01345ASH-618N650	Φ6*18*D6*50	3	6	18	6	50	
MO01345ASH-824N860	Φ8*24*D8*60	3	8	24	8	60	
MO01345ASH-1030N1075	Φ10*30*D10*75	3	10	30	10	75	
MO01345ASH-1236N1275	Φ12*36*D12*75	3	12	36	12	75	
MO01345ASH-1440N14100	Φ14*40*D14*100	3	14	40	14	100	
MO01345ASH-1645N16100	Φ16*45*D16*100	3	16	45	16	100	
MO01345ASH-1845N18100	Φ18*45*D18*100	3	18	45	18	100	
MO01345ASH-2045N20100	Φ20*45*D20*100	3	20	45	20	100	

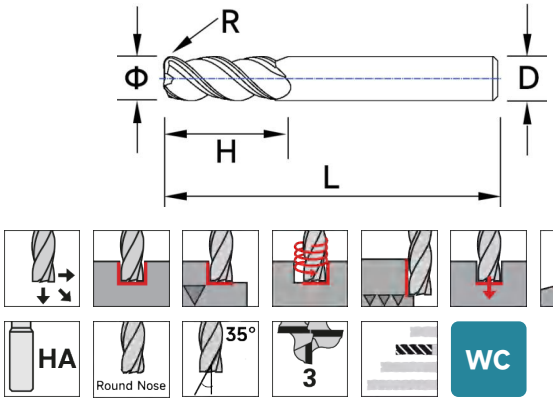
Supports Non-Standard Customization

O Series

3-flute radius end mill for aluminum (1)



▶ Special edge design and advanced polishing prevent vibration and chip adhesion. High-performance aluminum tool with high metal removal rates and excellent surface finish.



● = Best ○ =Good

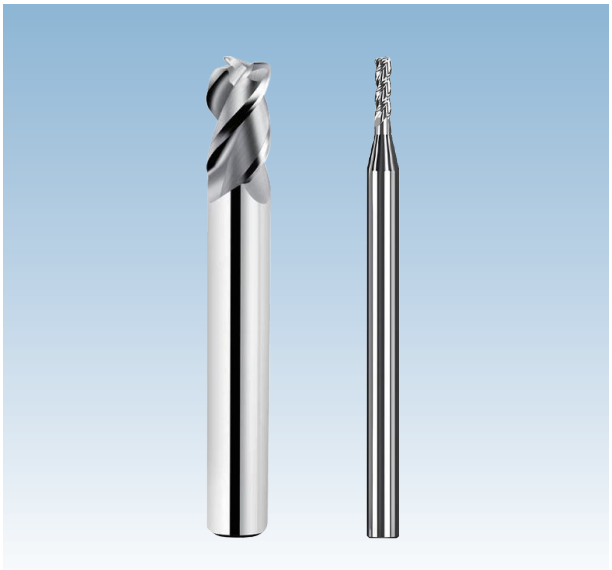
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
									●	●	○	○		

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MO03345ASH-023N450	Φ1*0.2*3*D4*50	3	Φ1	0.2	3	D4	50	
MO03345ASH-024N450	Φ1.5*0.2*4*D4*50	3	Φ1.5	0.2	4	D4	50	
MO03345ASH-026N450	Φ2*0.2*6*D4*50	3	Φ2	0.2	6	D4	50	
MO03345ASH-028N450	Φ3*0.2*8*D4*50	3	Φ3	0.2	8	D4	50	
MO03345ASH-058N450	Φ3*0.5*8*D4*50	3	Φ3	0.5	8	D4	50	
MO03345ASH-0210N450	Φ4*0.2*10*D4*50	3	Φ4	0.2	10	D4	50	
MO03345ASH-0510N450	Φ4*0.5*10*D4*50	3	Φ4	0.5	10	D4	50	
MO03345ASH-0513N650	Φ5*0.5*13*D6*50	3	Φ5	0.5	13	D6	50	
MO03345ASH-113N650	Φ5*1*13*D6*50	3	Φ5	1	13	D6	50	
MO03345ASH-0515N650	Φ6*0.5*15*D6*50	3	Φ6	0.5	15	D6	50	
MO03345ASH-115N650	Φ6*1*15*D6*50	3	Φ6	1	15	D6	50	
MO03345ASH-1515N650	Φ6*1.5*15*D6*50	3	Φ6	1.5	15	D6	50	
MO03345ASH-0520N860	Φ8*0.5*20*D8*60	3	Φ8	0.5	20	D8	60	
MO03345ASH-120N860	Φ8*1*20*D8*60	3	Φ8	1	20	D8	60	
MO03345ASH-1520N860	Φ8*1.5*20*D8*60	3	Φ8	1.5	20	D8	60	
MO03345ASH-0525N1075	Φ10*0.5*25*D10*75	3	Φ10	0.5	25	D10	75	
MO03345ASH-125N1075	Φ10*1*25*D10*75	3	Φ10	1	25	D10	75	
MO03345ASH-1525N1075	Φ10*1.5*25*D10*75	3	Φ10	1.5	25	D10	75	
MO03345ASH-225N1075	Φ10*2*25*D10*75	3	Φ10	2	25	D10	75	
MO03345ASH-0530N1275	Φ12*0.5*30*D12*75	3	Φ12	0.5	30	D12	75	
MO03345ASH-130N1275	Φ12*1*30*D12*75	3	Φ12	1	30	D12	75	
MO03345ASH-1530N1275	Φ12*1.5*30*D12*75	3	Φ12	1.5	30	D12	75	

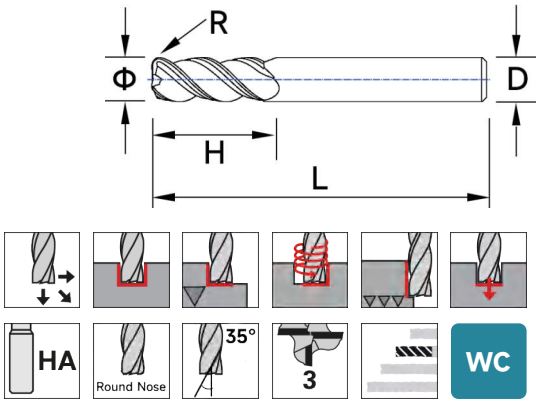
Supports Non-Standard Customization

O Series

3-flute corner radius end mill for aluminum (2)



▶ Special edge design and advanced polishing prevent vibration and chip adhesion. High-performance aluminum tool with high metal removal rates and excellent surface finish.



● = Best ○ =Good

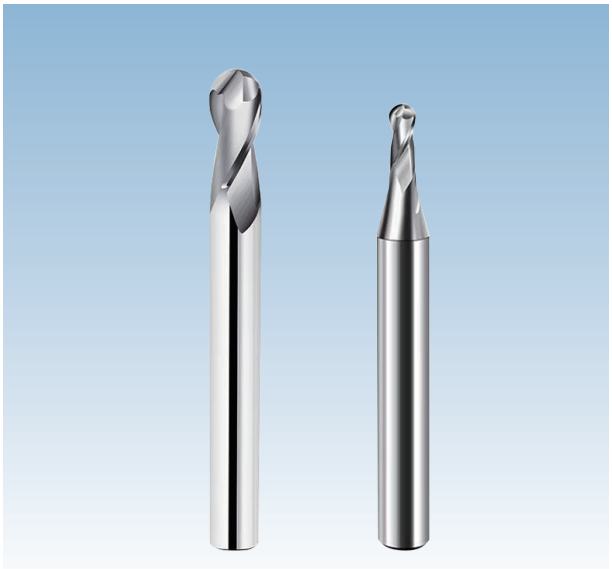
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
									●	●	○	○		

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MO03345ASH-230N1275	Φ12*2*30*D12*75	3	Φ12	2	30	D12	75	
MO03345ASH-0540N14100	Φ14*0.5*40*D14*100	3	Φ14	0.5	40	D14	100	
MO03345ASH-140N14100	Φ14*1*40*D14*100	3	Φ14	1	40	D14	100	
MO03345ASH-1540N14100	Φ14*1.5*40*D14*100	3	Φ14	1.5	40	D14	100	
MO03345ASH-240N14100	Φ14*2*40*D14*100	3	Φ14	2	40	D14	100	
MO03345ASH-0545N16100	Φ16*0.5*45*D16*100	3	Φ16	0.5	45	D16	100	
MO03345ASH-145N16100	Φ16*1*45*D16*100	3	Φ16	1	45	D16	100	
MO03345ASH-1545N16100	Φ16*1.5*45*D16*100	3	Φ16	1.5	45	D16	100	
MO03345ASH-245N16100	Φ16*2*45*D16*100	3	Φ16	2	45	D16	100	
MO03345ASH-0545N18100	Φ18*0.5*45*D18*100	3	Φ18	0.5	45	D18	100	
MO03345ASH-145N18100	Φ18*1*45*D18*100	3	Φ18	1	45	D18	100	
MO03345ASH-1545N18100	Φ18*1.5*45*D18*100	3	Φ18	1.5	45	D18	100	
MO03345ASH-245N18100	Φ18*2*45*D18*100	3	Φ18	2	45	D18	100	
MO03345ASH-0545N20100	Φ20*0.5*45*D20*100	3	Φ20	0.5	45	D20	100	
MO03345ASH-145N20100	Φ20*1*45*D20*100	3	Φ20	1	45	D20	100	
MO03345ASH-1545N20100	Φ20*1.5*45*D20*100	3	Φ20	1.5	45	D20	100	
MO03345ASH-245N20100	Φ20*2*45*D20*100	3	Φ20	2	45	D20	100	

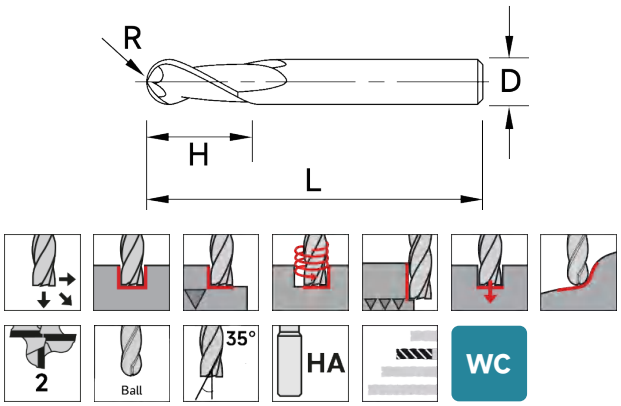
Supports Non-Standard Customization

O Series

2-flute ball nose end mill for aluminum



▶ Special edge design and advanced polishing prevent vibration and chip adhesion. High-performance aluminum tool with high metal removal rates and excellent surface finish.



● = Best ○ =Good

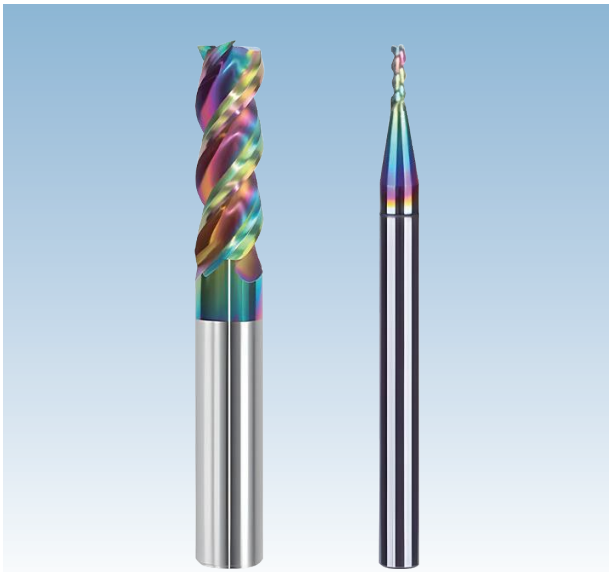
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
									●	●	○	○		

Order Number	Specification	Number of Flutes T	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MO02245ASH-052N450	Φ0.5*2*D4*50	2	0.5	2	4	50	
MO02245ASH-0753N450	Φ0.75*3*D4*50	2	0.75	3	4	50	
MO02245ASH-14N450	Φ1*4*D4*50	2	1	4	4	50	
MO02245ASH-1255N450	Φ1.25*5*D4*50	2	1.25	5	4	50	
MO02245ASH-156N450	Φ1.5*6*D4*50	2	1.5	6	4	50	
MO02245ASH-28N450	Φ2*8*D4*50	2	2	8	4	50	
MO02245ASH-2510N650	Φ2.5*10*D6*50	2	2.5	10	6	50	
MO02245ASH-312N650	Φ3*12*D6*50	2	3	12	6	50	
MO02245ASH-416N860	Φ4*16*D8*60	2	4	16	8	60	
MO02245ASH-520N1075	Φ5*20*D10*75	2	5	20	10	75	
MO02245ASH-624N1275	Φ6*24*D12*75	2	6	24	12	75	
MO02245ASH-728N14100	Φ7*28*D14*100	2	7	28	14	100	
MO02245ASH-832N16100	Φ8*32*D16*100	2	8	32	16	100	
MO02245ASH-936N18100	Φ9*36*D18*100	2	9	36	18	100	
MO02245ASH-1040N20100	Φ10*40*D20*100	2	10	40	20	100	

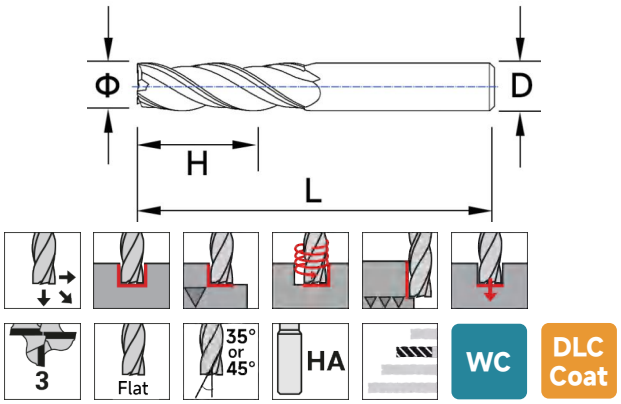
Supports Non-Standard Customization

O Series

U-shaped Flutes 3-flute square end mill for aluminum (DLC coating)



▶ Special edge design and advanced polishing prevent vibration and chip adhesion. High-performance aluminum tool with high metal removal rates and excellent surface finish.



● = Best ○ =Good

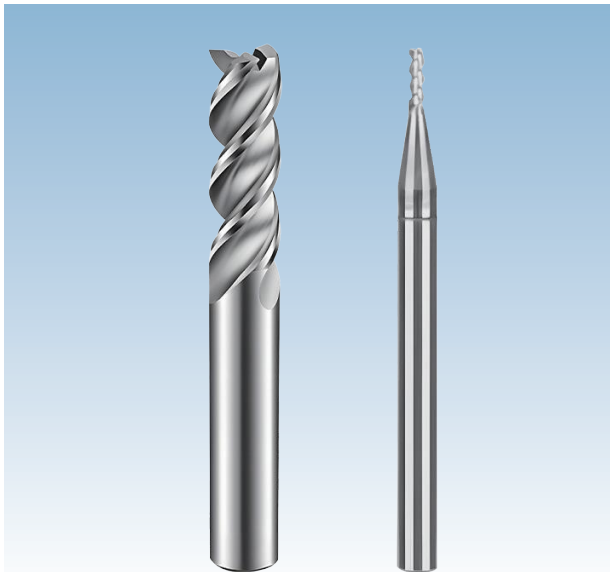
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
									●	●	○	○		

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MO41345ASH-13N450	Φ1*3*D4*50	3	1	3	4	50	
MO41345ASH-1545N450	Φ1.5*4.5*D4*50	3	1.5	4.5	4	50	
MO41345ASH-26N450	Φ2*6*D4*50	3	2	6	4	50	
MO41345ASH-2575N450	Φ2.5*7.5*D4*50	3	2.5	7.5	4	50	
MO41345ASH-39N450	Φ3*9*D4*50	3	3	9	4	50	
MO41345ASH-412N450	Φ4*12*D4*50	3	4	12	4	50	
MO41345ASH-515N650	Φ5*15*D6*50	3	5	15	6	50	
MO41345ASH-618N650	Φ6*18*D6*50	3	6	18	6	50	
MO41345ASH-824N860	Φ8*24*D8*60	3	8	24	8	60	
MO41345ASH-1030N1075	Φ10*30*D10*75	3	10	30	10	75	
MO41345ASH-1236N1275	Φ12*36*D12*75	3	12	36	12	75	
MO41345ASH-1440N14100	Φ14*40*D14*100	3	14	40	14	100	
MO41345ASH-1645N16100	Φ16*45*D16*100	3	16	45	16	100	
MO41345ASH-1845N18100	Φ18*45*D18*100	3	18	45	18	100	
MO41345ASH-2045N20100	Φ20*45*D20*100	3	20	45	20	100	

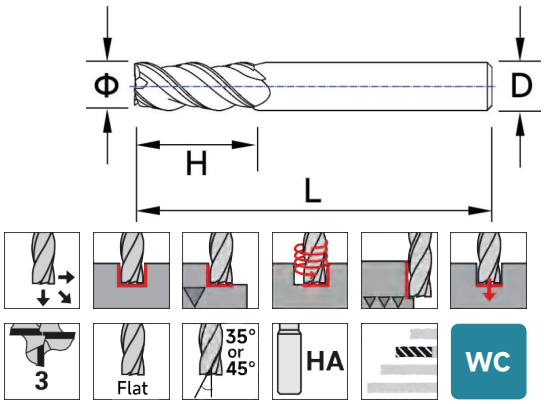
Supports Non-Standard Customization

O Series

U-shaped Flutes 3-flute square end mill for aluminum (Uncoated)



▶ Special edge design and advanced polishing prevent vibration and chip adhesion. High-performance aluminum tool with high metal removal rates and excellent surface finish.



● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
									●	●	○	○		

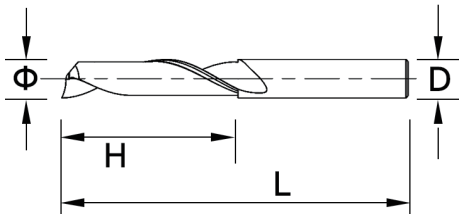
Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MO01345ASH-13N450	Φ1*3*D4*50	3	1	3	4	50	
MO01345ASH-1545N450	Φ1.5*4.5*D4*50	3	1.5	4.5	4	50	
MO01345ASH-26N450	Φ2*6*D4*50	3	2	6	4	50	
MO01345ASH-2575N450	Φ2.5*7.5*D4*50	3	2.5	7.5	4	50	
MO01345ASH-39N450	Φ3*9*D4*50	3	3	9	4	50	
MO01345ASH-412N450	Φ4*12*D4*50	3	4	12	4	50	
MO01345ASH-515N650	Φ5*15*D6*50	3	5	15	6	50	
MO01345ASH-618N650	Φ6*18*D6*50	3	6	18	6	50	
MO01345ASH-824N860	Φ8*24*D8*60	3	8	24	8	60	
MO01345ASH-1030N1075	Φ10*30*D10*75	3	10	30	10	75	
MO01345ASH-1236N1275	Φ12*36*D12*75	3	12	36	12	75	
MO01345ASH-1440N14100	Φ14*40*D14*100	3	14	40	14	100	
MO01345ASH-1645N16100	Φ16*45*D16*100	3	16	45	16	100	
MO01345ASH-1845N18100	Φ18*45*D18*100	3	18	45	18	100	
MO01345ASH-2045N20100	Φ20*45*D20*100	3	20	45	20	100	

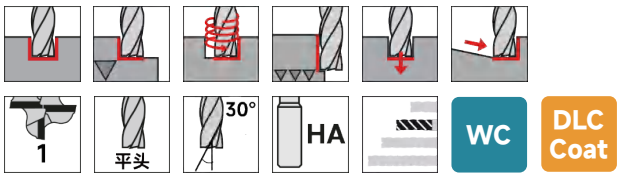
Supports Non-Standard Customization

O Series

Single Flute End Mill for Aluminum-- DLC coating

▶ Single-flute design reduces impact and vibration, ideal for thin-walled or deformable parts





● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
									●	●	○	○		

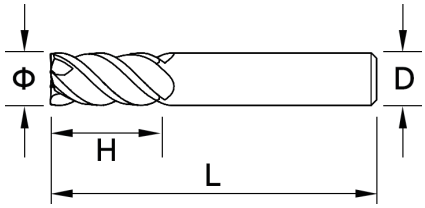
Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MO41145ASH-14N317538	Φ1*4*D3.175*38	1	1	4	3.175	38	
MO41145ASH-156N317538	Φ1.5*6*D3.175*38	1	1.5	6	3.175	38	
MO41145ASH-26N317538	Φ2*6*D3.175*38	1	2	6	3.175	38	
MO41145ASH-258N317538	Φ2.5*8*D3.175*38	1	2.5	8	3.175	38	
MO41145ASH-31758N317538	Φ3.175*8*D3.175*38	1	3.175	8	3.175	38	
MO41145ASH-317512N317538	Φ3.175*12*D3.175*38	1	3.175	12	3.175	38	
MO41145ASH-312N450	Φ3*12*D4*50	1	3.0	12	4	50	
MO41145ASH-3212N450	Φ3.2*12*D4*50	1	3.2	12	4	50	
MO41145ASH-3512N450	Φ3.5*12*D4*50	1	3.5	12	4	50	
MO41145ASH-412N450	Φ4*12*D4*50	1	4	12	4	50	
MO41145ASH-417N450	Φ4*17*D4*50	1	4	17	4	50	
MO41145ASH-422N450	Φ4*22*D4*50	1	4	22	4	50	
MO41145ASH-4214N650	Φ4.2*14*D6*50	1	4.2	14	6	50	
MO41145ASH-514N650	Φ5*14*D6*50	1	5	14	6	50	
MO41145ASH-5214N650	Φ5.2*14*D6*50	1	5.2	14	6	50	
MO41145ASH-617N650	Φ6*17*D6*50	1	6	17	6	50	
MO41145ASH-622N650	Φ6*22*D6*50	1	6	22	6	50	
MO41145ASH-625N655	Φ6*25*D6*55	1	6	25	6	55	
MO41145ASH-630N660	Φ6*30*D6*60	1	6	30	6	60	
MO41145ASH-722N860	Φ7*22*D8*60	1	7	22	8	60	
MO41145ASH-817N860	Φ8*17*D8*60	1	8	17	8	60	
MO41145ASH-822N860	Φ8*22*D8*60	1	8	22	8	60	
MO41145ASH-825N860	Φ8*25*D8*60	1	8	25	8	60	
MO41145ASH-830N860	Φ8*30*D8*60	1	8	30	8	60	
MO41145ASH-1032N1075	Φ10*32*D10*75	1	10	32	10	75	
MO41145ASH-1232N1275	Φ12*32*D12*75	1	12	32	12	75	

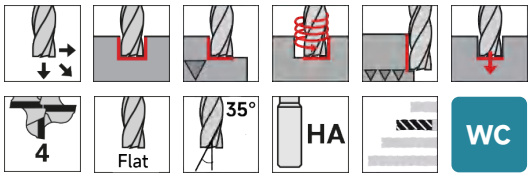
Supports Non-Standard Customization

A Series

Imperial 4-flute square end mill

▶ Suitable for pre-heat treatment of steel and machining non-ferrous materials like aluminum; available in multiple sizes for broad application.





● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	○	●						●	○	○	○	○		

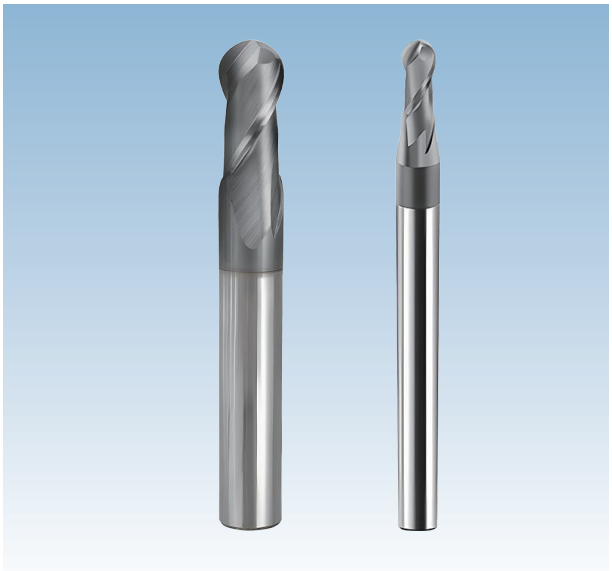
Order Number (Unit: inch)	Cutting Diameter Φ	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MA1145BSH-125188N250225	0.125	0.188	0.250	2.250	
MA1145BSH-188281N250225	0.188	0.281	0.250	2.250	
MA1145BSH-250375N250225	0.250	0.375	0.250	2.250	
MA1145BSH-313469N313225	0.313	0.469	0.313	2.500	
MA1145BSH-375563N375300	0.375	0.563	0.375	3.000	
MA1145BSH-500750N500350	0.500	0.750	0.500	3.500	
MA1145BSH-625938N625350	0.625	0.938	0.625	3.500	
MA1145BSH-7501125N750400	0.750	1.125	0.750	4.000	

(Unit: inch)

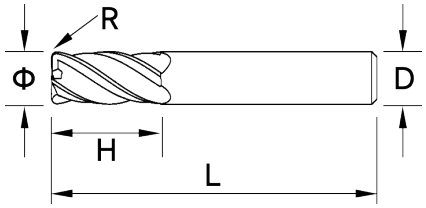
Supports Non-Standard Customization

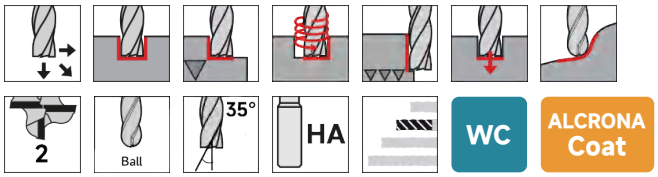
A Series

Imperial 2-flute ball nose end mill



▶ Suitable for pre-heat treatment of steel and machining non-ferrous materials like aluminum; available in multiple sizes for broad application.





● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	○	●						●	○	○	○	○		

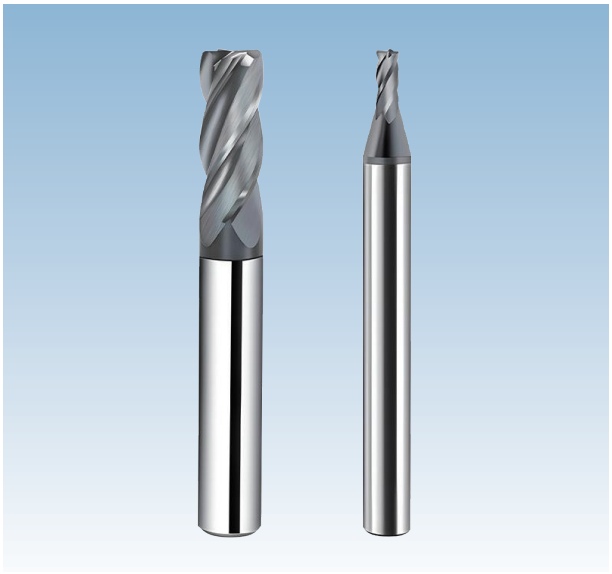
Order Number (Unit: inch)	Cutting Diameter Φ	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MA12245BSH-063188N25050	0.125	0.063	0.188	0.250	2.250	
MA12245BSH-094281N25050	0.188	0.094	0.281	0.250	2.250	
MA12245BSH-125375N25050	0.250	0.125	0.375	0.250	2.250	
MA12245BSH-156469N31300	0.313	0.156	0.469	0.313	2.500	
MA12245BSH-188563N37500	0.375	0.188	0.563	0.375	3.000	
MA12245BSH-250750N50000	0.500	0.250	0.750	0.500	3.500	
MA12245BSH-313938N62500	0.625	0.313	0.938	0.625	3.500	
MA12245BSH-275125N07500	0.750	0.375	1.125	0.750	4000	

(Unit: inch)

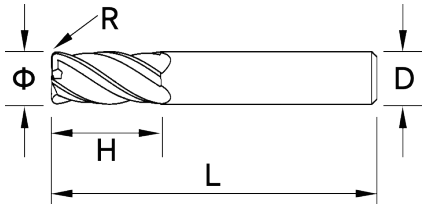
Supports Non-Standard Customization

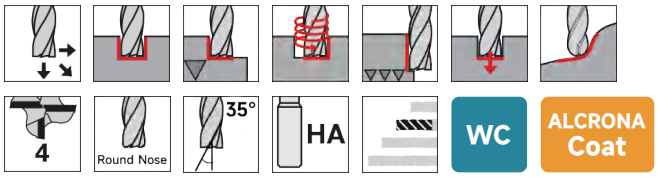
A Series

Imperial 4-flute radius end mill



▶ Suitable for pre-heat treatment of steel and machining non-ferrous materials like aluminum; available in multiple sizes for broad application.





● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	○	●						●	○	○	○	○		

Order Number (Unit: inch)	Cutting Diameter Φ	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MA13445BSH-251526N5025	0.250	0.015	0.626	0.250	2.500	
MA13445BSH-253026N5025	0.250	0.030	0.626	0.250	2.500	
MA13445BSH-311550N1325	0.313	0.015	0.750	0.313	2.500	
MA13445BSH-313050N1325	0.313	0.030	0.750	0.313	2.500	
MA13445BSH-371578N7530	0.375	0.015	0.878	0.375	3.000	
MA13445BSH-373078N7530	0.375	0.030	0.878	0.375	3.000	
MA13445BSH-431500N3835	0.438	0.015	1.000	0.438	3.500	
MA13445BSH-433000N3835	0.438	0.030	1.000	0.438	3.500	
MA13445BSH-501526N0035	0.500	0.015	1.126	0.500	3.500	
MA13445BSH-503026N0035	0.500	0.030	1.126	0.500	3.500	
MA13445BSH-506026N0035	0.500	0.060	1.126	0.500	3.500	
MA13445BSH-623015N2537	0.625	0.030	1.315	0.625	3.780	
MA13445BSH-626015N2537	0.625	0.060	1.315	0.625	3.780	
MA13445BSH-753026N5040	0.750	0.030	1.626	0.750	4.000	
MA13445BSH-756026N5040	0.750	0.060	1.626	0.750	4.000	

(Unit: inch)

Supports Non-Standard Customization

Designed for Precision Machining

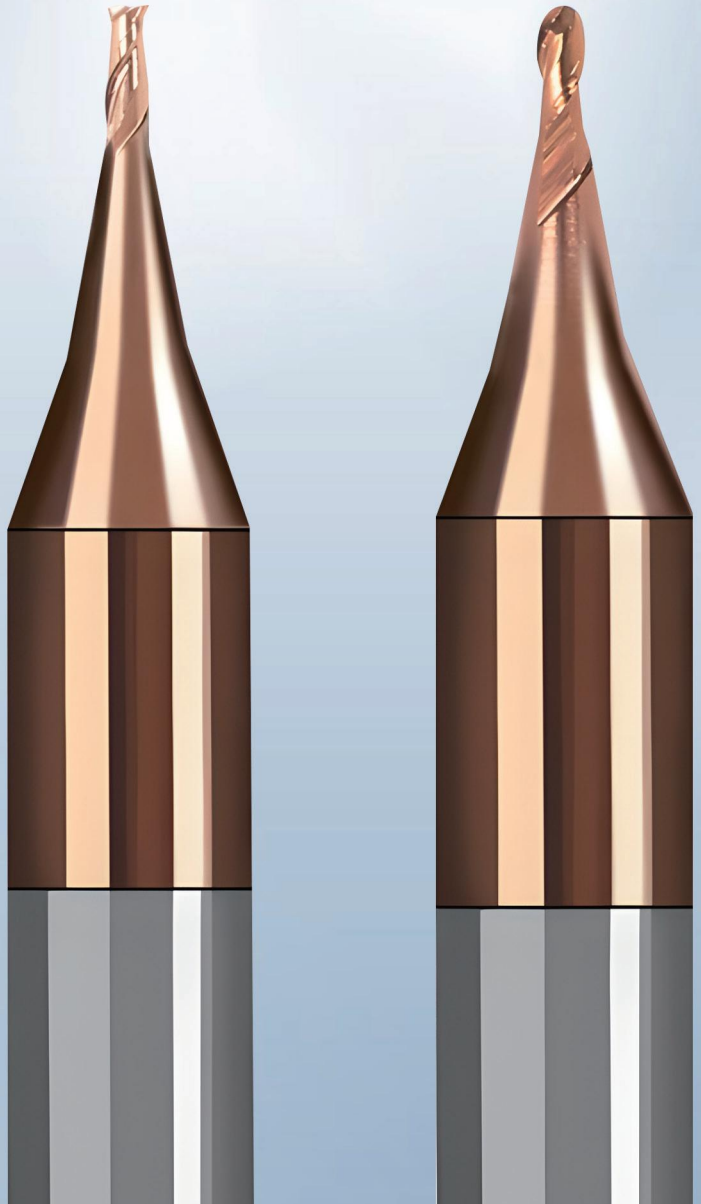
Utilizing advanced manufacturing processes, the diameter tolerance is strictly controlled within ±0.005mm, and the flute length tolerance does not exceed ±0.1mm. This extremely high precision makes micro-diameter end mills ideal for fine part machining in electronics, medical devices, and aerospace applications.

High-Performance Materials and Surface Treatment

Uses high-performance hard alloy and HELICK, AITISIN nanocomposite coatings to enhance wear and heat resistance. Extends tool life by 30% to 50% and reduces friction by about 20%, significantly improving efficiency.

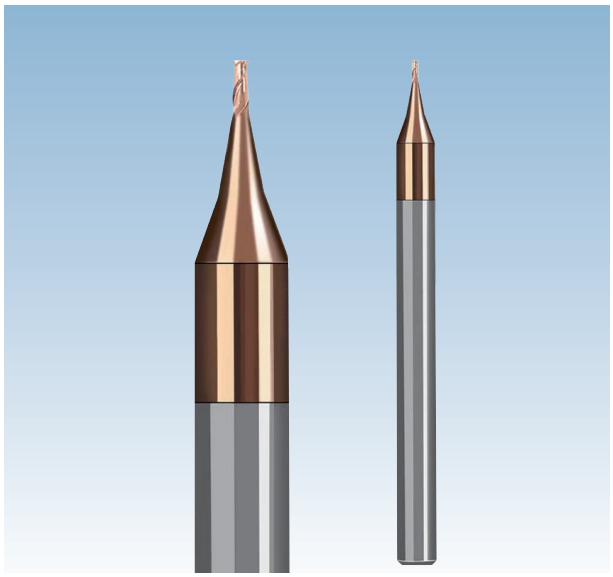
Optimized Geometry

Through precise adjustment of key parameters such as helix angle, rake angle, and clearance angle, cutting forces are reduced, energy consumption is minimized, and machining speed is increased. Strict dynamic balance correction effectively suppresses vibration, ensuring excellent cutting performance on various materials.

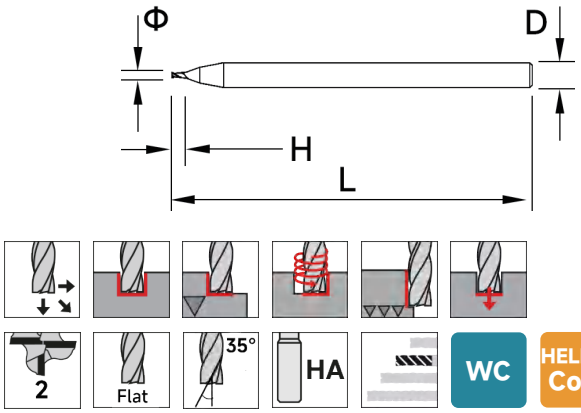


S Series

General-purpose micro-diameter 2-flute square end mill



▶ High-wear-resistant coating and smooth transition structure provide high breakage resistance, enabling long-term cutting of hardened steel.



● = Best ○ =Good

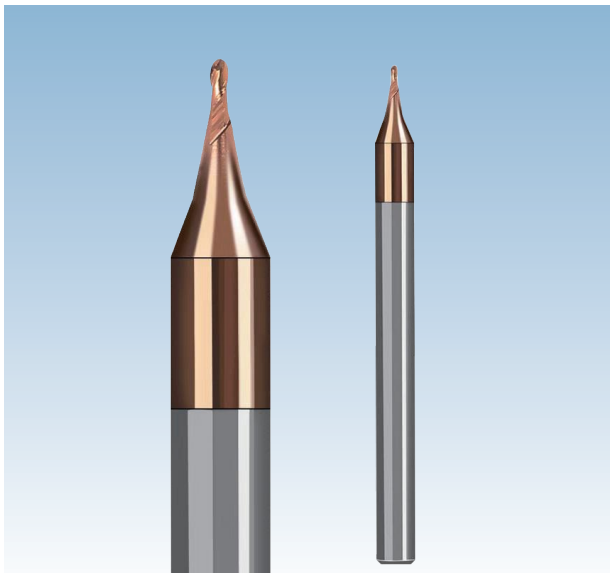
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○		●			○	○						

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MS21255ASH-0102N442	Φ0.1*0.2*42*D4	2	0.1	0.2	4	42	
MS21255ASH-01503N445	Φ0.15*0.3*45*D4	2	0.15	0.3	4	45	
MS21255ASH-0204N445	Φ0.2*0.4*45*D4	2	0.2	0.4	4	45	
MS21255ASH-02505N445	Φ0.25*0.5*45*D4	2	0.25	0.5	4	45	
MS21255ASH-0306N445	Φ0.3*0.6*45*D4	2	0.3	0.6	4	45	
MS21255ASH-03507N445	Φ0.35*0.7*45*D4	2	0.35	0.7	4	45	
MS21255ASH-0408N445	Φ0.4*0.8*45*D4	2	0.4	0.8	4	45	
MS21255ASH-04509N445	Φ0.45*0.9*45*D4	2	0.45	0.9	4	45	
MS21255ASH-051N445	Φ0.5*1*45*D4	2	0.5	1	4	45	
MS21255ASH-05511N445	Φ0.55*1.1*45*D4	2	0.55	1.1	4	45	
MS21255ASH-0612N445	Φ0.6*1.2*45*D4	2	0.6	1.2	4	45	
MS21255ASH-06513N445	Φ0.65*1.3*45*D4	2	0.65	1.3	4	45	
MS21255ASH-0714N445	Φ0.7*1.4*45*D4	2	0.7	1.4	4	45	
MS21255ASH-07515N445	Φ0.75*1.5*45*D4	2	0.75	1.5	4	45	
MS21255ASH-0816N445	Φ0.8*1.6*45*D4	2	0.8	1.6	4	45	
MS21255ASH-08517N445	Φ0.85*1.7*45*D4	2	0.85	1.7	4	45	
MS21255ASH-0918N445	Φ0.9*1.8*45*D4	2	0.9	1.8	4	45	

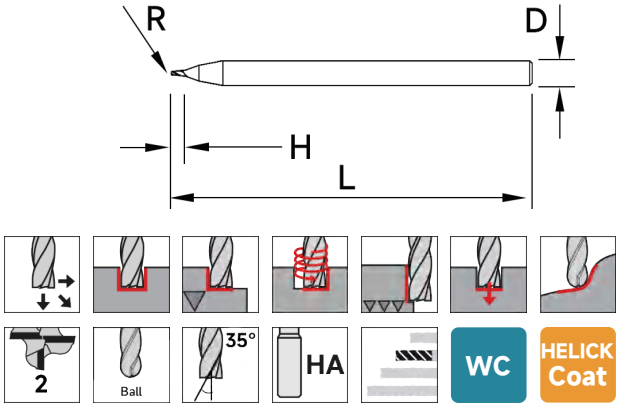
Supports Non-Standard Customization

S Series

General-purpose micro-diameter 2-flute ball nose end mill



▶ High-wear-resistant coating and smooth transition structure provide high breakage resistance, enabling long-term cutting of hardened steel.



● = Best ○ =Good

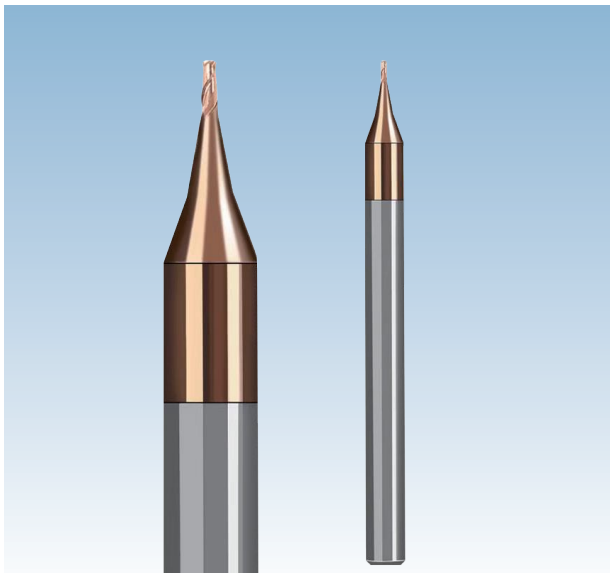
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○		●			○	○						

Order Number	Specification	Number of Flutes T	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MS22255ASH-005015N442	R0.05*0.15*42*D4	2	R0.05	0.15	4	42	
MS22255ASH-007502N445	R0.075*0.2*45*D4	2	R0.075	0.2	4	45	
MS22255ASH-0103N445	R0.1*0.3*45*D4	2	R0.1	0.3	4	45	
MS22255ASH-015045N445	R0.15*0.45*45*D4	2	R0.15	0.45	4	45	
MS22255ASH-0206N445	R0.2*0.6*45*D4	2	R0.2	0.6	4	45	
MS22255ASH-02508N445	R0.25*0.8*45*D4	2	R0.25	0.8	4	45	
MS22255ASH-0309N445	R0.3*0.9*45*D4	2	R0.3	0.9	4	45	
MS22255ASH-03511N445	R0.35*1.1*45*D4	2	R0.35	1.1	4	45	
MS22255ASH-0412N445	R0.4*1.2*45*D4	2	R0.4	1.2	4	45	
MS22255ASH-04514N445	R0.45*1.4*45*D4	2	R0.45	1.4	4	45	

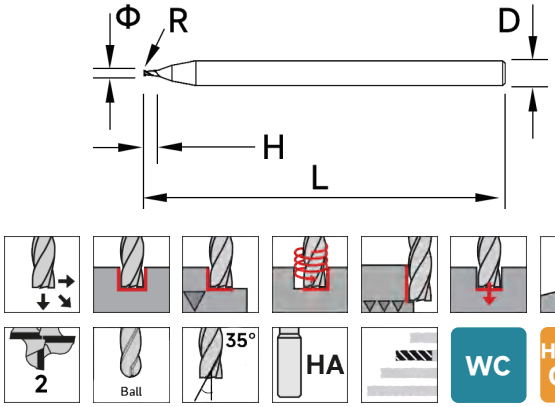
Supports Non-Standard Customization

S Series

General-purpose micro-diameter 2-flute radius end mill



▶ High-wear-resistant coating and smooth transition structure provide high breakage resistance, enabling long-term cutting of hardened steel.



● = Best ○ =Good

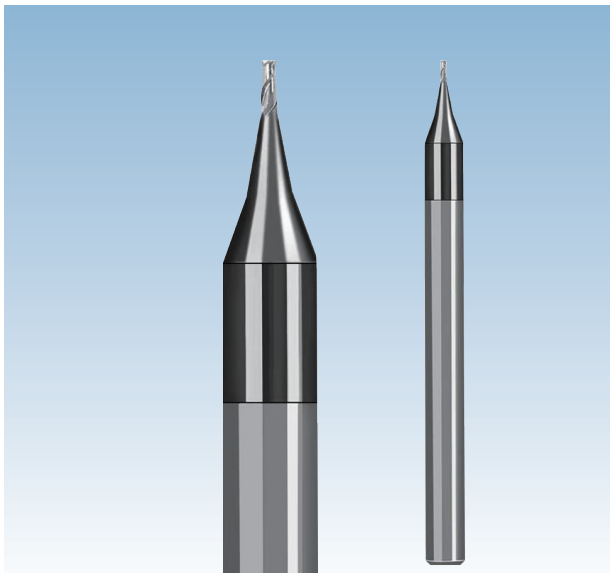
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○		●			○	○						

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MS23255ASH-0200204N445	Φ0.2*0.02*0.4*45*D4	2	0.2	0.02	0.4	4	45	
MS23255ASH-0200504N445	Φ0.2*0.05*0.4*45*D4	2	0.2	0.05	0.4	4	45	
MS23255ASH-0300206N445	Φ0.3*0.02*0.6*45*D4	2	0.3	0.02	0.6	4	45	
MS23255ASH-0300506N445	Φ0.3*0.05*0.6*45*D4	2	0.3	0.05	0.6	4	45	
MS23255ASH-0400208N445	Φ0.4*0.02*0.8*45*D4	2	0.4	0.02	0.8	4	45	
MS23255ASH-0400508N445	Φ0.4*0.05*0.8*45*D4	2	0.4	0.05	0.8	4	45	
MS23255ASH-040108N445	Φ0.4*0.1*0.8*45*D4	2	0.4	0.1	0.8	4	45	
MS23255ASH-050021N445	Φ0.5*0.02*1*45*D4	2	0.5	0.02	1	4	45	
MS23255ASH-050051N445	Φ0.5*0.05*1*45*D4	2	0.5	0.05	1	4	45	
MS23255ASH-05011N445	Φ0.5*0.1*1*45*D4	2	0.5	0.1	1	4	45	
MS23255ASH-0600212N445	Φ0.6*0.02*1.2*45*D4	2	0.6	0.02	1.2	4	45	
MS23255ASH-0600512N445	Φ0.6*0.05*1.2*45*D4	2	0.6	0.05	1.2	4	45	
MS23255ASH-060112N445	Φ0.6*0.1*1.2*45*D4	2	0.6	0.1	1.2	4	45	
MS23255ASH-060212N445	Φ0.6*0.2*1.2*45*D4	2	0.6	0.2	1.2	4	45	
MS23255ASH-0800216N445	Φ0.8*0.02*1.6*45*D4	2	0.8	0.02	1.6	4	45	
MS23255ASH-0800516N445	Φ0.8*0.05*1.6*45*D4	2	0.8	0.05	1.6	4	45	
MS23255ASH-080116N445	Φ0.8*0.1*1.6*45*D4	2	0.8	0.1	1.6	4	45	
MS23255ASH-080216N445	Φ0.8*0.2*1.6*45*D4	2	0.8	0.2	1.6	4	45	

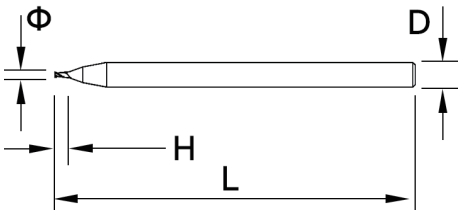
Supports Non-Standard Customization

S Series

Super-hard micro-diameter 2-flute square end mill



▶ High-wear-resistant coating and smooth transition structure provide high breakage resistance, enabling long-term cutting of hardened steel.



● = Best ○ =Good

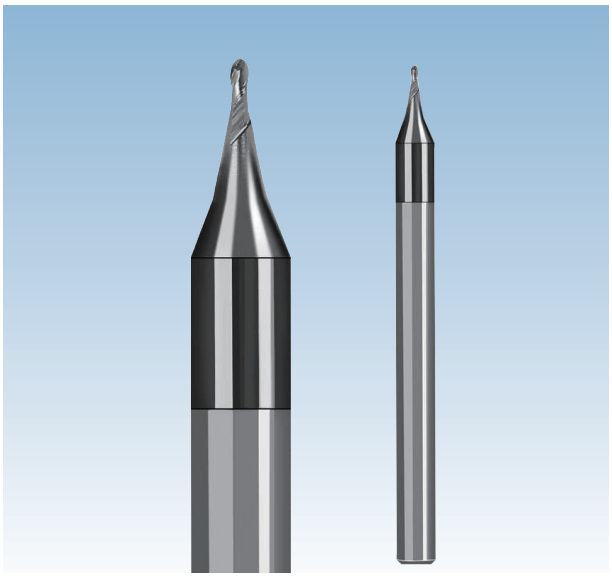
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○			●		○	○						

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MS111260ASH-00501N442	Φ0.05*0.1*42*D4	2	0.05	0.1	4	42	
MS111260ASH-006012N442	Φ0.06*0.12*42*D4	2	0.06	0.12	4	42	
MS111260ASH-N007014442	Φ0.07*0.14*42*D4	2	0.07	0.14	4	42	
MS111260ASH-008016N442	Φ0.08*0.16*42*D4	2	0.08	0.16	4	42	
MS111260ASH-009018N442	Φ0.09*0.18*42*D4	2	0.09	0.18	4	42	
MS111260ASH-0102N442	Φ0.1*0.2*42*D4	2	0.1	0.2	4	42	
MS111260ASH-01503N445	Φ0.15*0.3*45*D4	2	0.15	0.3	4	42	
MS111260ASH-0204N445	Φ0.2*0.4*45*D4	2	0.2	0.4	4	42	
MS111260ASH-02505N445	Φ0.25*0.5*45*D4	2	0.25	0.5	4	45	
MS111260ASH-0306N445	Φ0.3*0.6*45*D4	2	0.3	0.6	4	45	
MS111260ASH-03507N445	Φ0.35*0.7*45*D4	2	0.35	0.7	4	45	
MS111260ASH-0408N445	Φ0.4*0.8*45*D4	2	0.4	0.8	4	45	
MS111260ASH-04509N445	Φ0.45*0.9*45*D4	2	0.45	0.9	4	45	
MS111260ASH-051N445	Φ0.5*1*45*D4	2	0.5	1	4	45	
MS111260ASH-05511N445	Φ0.55*1.1*45*D4	2	0.55	1.1	4	45	
MS111260ASH-0612N445	Φ0.6*1.2*45*D4	2	0.6	1.2	4	45	
MS111260ASH-06513N445	Φ0.65*1.3*45*D4	2	0.65	1.3	4	45	
MS111260ASH-0714N445	Φ0.7*1.4*45*D4	2	0.7	1.4	4	45	
MS111260ASH-07515N445	Φ0.75*1.5*45*D4	2	0.75	1.5	4	45	
MS111260ASH-0816N445	Φ0.8*1.6*45*D4	2	0.8	1.6	4	45	
MS111260ASH-08517N445	Φ0.85*1.7*45*D4	2	0.85	1.7	4	45	
MS111260ASH-0918N445	Φ0.9*1.8*45*D4	2	0.9	1.8	4	45	

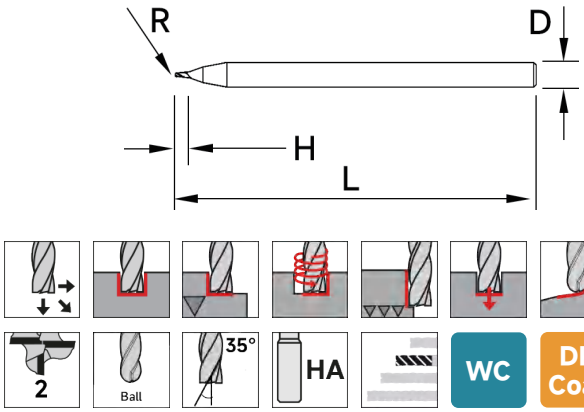
Supports Non-Standard Customization

S Series

Super-hard micro-diameter 2-flute ball nose end mill



▶ High-wear-resistant coating and smooth transition structure provide high breakage resistance, enabling long-term cutting of hardened steel.



● = Best ○ =Good

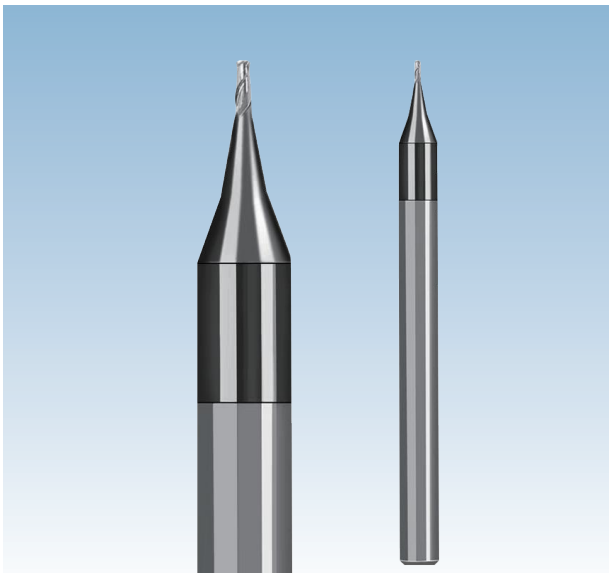
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○			●		○	○						

Order Number	Specification	Number of Flutes T	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MS112260ASH-005015N442	R0.05*0.15*42*D4	2	R0.05	0.15	4	42	
MS112260ASH-007502N445	R0.075*0.2*45*D4	2	R0.075	0.2	4	45	
MS112260ASH-0103N445	R0.1*0.3*45*D4	2	R0.1	0.3	4	45	
MS112260ASH-015045N445	R0.15*0.45*45*D4	2	R0.15	0.45	4	45	
MS112260ASH-0206N445	R0.2*0.6*45*D4	2	R0.2	0.6	4	45	
MS112260ASH-02508N445	R0.25*0.8*45*D4	2	R0.25	0.8	4	45	
MS112260ASH-0309N445	R0.3*0.9*45*D4	2	R0.3	0.9	4	45	
MS112260ASH-03511N445	R0.35*1.1*45*D4	2	R0.35	1.1	4	45	
MS112260ASH-0412N445	R0.4*1.2*45*D4	2	R0.4	1.2	4	45	
MS112260ASH-04514N445	R0.45*1.4*45*D4	2	R0.45	1.4	4	45	

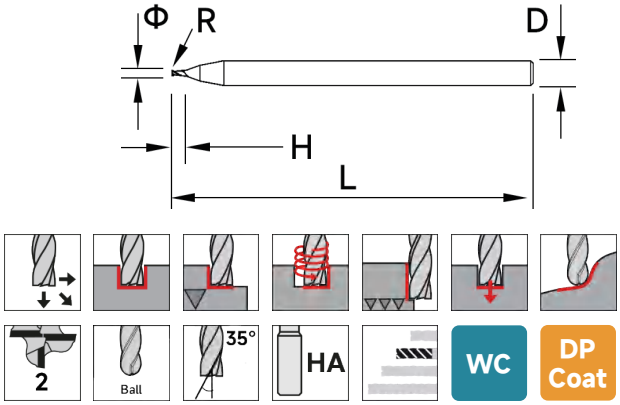
Supports Non-Standard Customization

S Series

Super-hard micro-diameter 2-flute radius end mill



▶ High-wear-resistant coating and smooth transition structure provide high breakage resistance, enabling long-term cutting of hardened steel.



● = Best ○ =Good

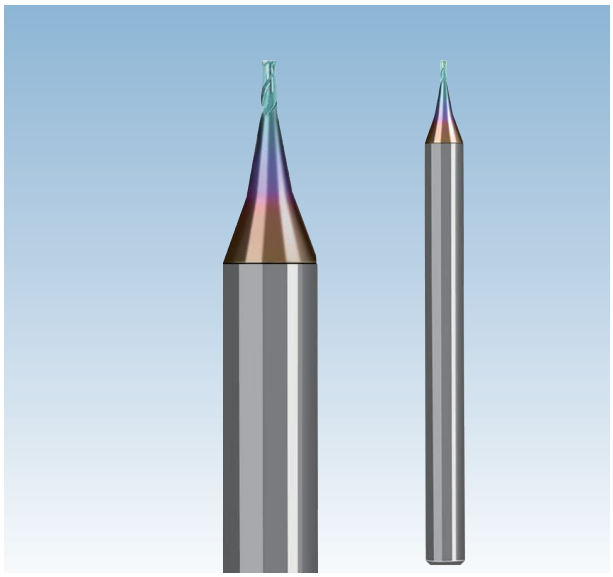
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○			●		○	○						

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MS113260ASH-0200204N445	Φ0.2*0.02*0.4*45*D4	2	0.2	0.02	0.4	4	45	
MS113260ASH-0200504N445	Φ0.2*0.05*0.4*45*D4	2	0.2	0.05	0.4	4	45	
MS113260ASH-0300206N445	Φ0.3*0.02*0.6*45*D4	2	0.3	0.02	0.6	4	45	
MS113260ASH-0300506N445	Φ0.3*0.05*0.6*45*D4	2	0.3	0.05	0.6	4	45	
MS113260ASH-0400208N445	Φ0.4*0.02*0.8*45*D4	2	0.4	0.02	0.8	4	45	
MS113260ASH-0400508N445	Φ0.4*0.05*0.8*45*D4	2	0.4	0.05	0.8	4	45	
MS113260ASH-040108N445	Φ0.4*0.1*0.8*45*D4	2	0.4	0.1	0.8	4	45	
MS113260ASH-050021N445	Φ0.5*0.02*1*45*D4	2	0.5	0.02	1	4	45	
MS113260ASH-050051N445	Φ0.5*0.05*1*45*D4	2	0.5	0.05	1	4	45	
MS113260ASH-05011N445	Φ0.5*0.1*1*45*D4	2	0.5	0.1	1	4	45	
MS113260ASH-0600212N445	Φ0.6*0.02*1.2*45*D4	2	0.6	0.02	1.2	4	45	
MS113260ASH-0600512N445	Φ0.6*0.05*1.2*45*D4	2	0.6	0.05	1.2	4	45	
MS113260ASH-060112N445	Φ0.6*0.1*1.2*45*D4	2	0.6	0.1	1.2	4	45	
MS113260ASH-060212N445	Φ0.6*0.2*1.2*45*D4	2	0.6	0.2	1.2	4	45	
MS113260ASH-0800216N445	Φ0.8*0.02*1.6*45*D4	2	0.8	0.02	1.6	4	45	
MS113260ASH-0800516N445	Φ0.8*0.05*1.6*45*D4	2	0.8	0.05	1.6	4	45	
MS113260ASH-080116N445	Φ0.8*0.1*1.6*45*D4	2	0.8	0.1	1.6	4	45	
MS113260ASH-080216N445	Φ0.8*0.2*1.6*45*D4	2	0.8	0.2	1.6	4	45	

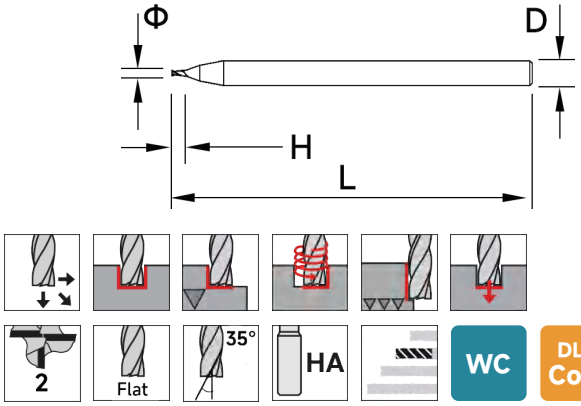
Supports Non-Standard Customization

S Series

Micro-Diameter 2-flute square end mill for Aluminum



▶ Designed for copper and aluminum alloys, with a small diameter and optimized geometry. Ensures high precision, good surface quality, and efficient cutting.



● = Best ○ =Good

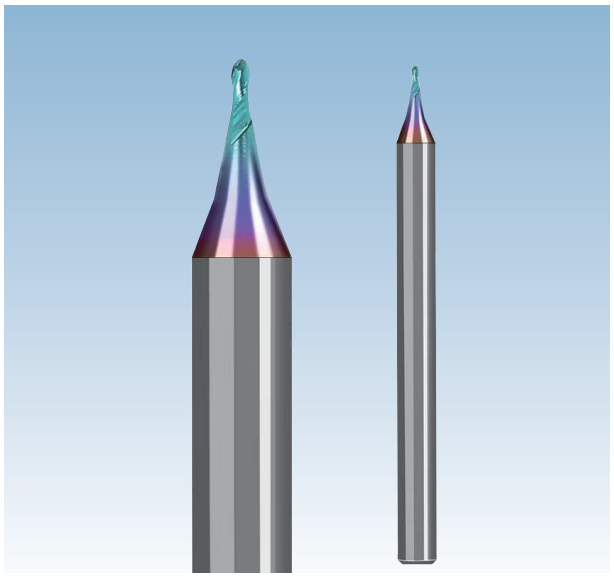
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
									●	●	○	○		

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MS41245ASH-0102N442	Φ0.1*0.2*42*D4	2	0.1	0.2	4	42	
MS41245ASH-01503N445	Φ0.15*0.3*45*D4	2	0.15	0.3	4	45	
MS41245ASH-0204N445	Φ0.2*0.4*45*D4	2	0.2	0.4	4	45	
MS41245ASH-02505N445	Φ0.25*0.5*45*D4	2	0.25	0.5	4	45	
MS41245ASH-0306N445	Φ0.3*0.6*45*D4	2	0.3	0.6	4	45	
MS41245ASH-03507N445	Φ0.35*0.7*45*D4	2	0.35	0.7	4	45	
MS41245ASH-0408N445	Φ0.4*0.8*45*D4	2	0.4	0.8	4	45	
MS41245ASH-04509N445	Φ0.45*0.9*45*D4	2	0.45	0.9	4	45	
MS41245ASH-051N445	Φ0.5*1*45*D4	2	0.5	1	4	45	
MS41245ASH-05511N445	Φ0.55*1.1*45*D4	2	0.55	1.1	4	45	
MS41245ASH-0612N445	Φ0.6*1.2*45*D4	2	0.6	1.2	4	45	
MS41245ASH-06513N445	Φ0.65*1.3*45*D4	2	0.65	1.3	4	45	
MS41245ASH-0714N445	Φ0.7*1.4*45*D4	2	0.7	1.4	4	45	
MS41245ASH-07515N445	Φ0.75*1.5*45*D4	2	0.75	1.5	4	45	
MS41245ASH-0816N445	Φ0.8*1.6*45*D4	2	0.8	1.6	4	45	
MS41245ASH-08517N445	Φ0.85*1.7*45*D4	2	0.85	1.7	4	45	
MS41245ASH-0918N445	Φ0.9*1.8*45*D4	2	0.9	1.8	4	45	

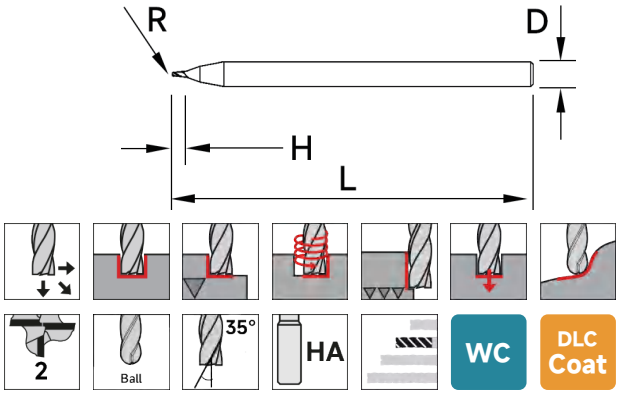
Supports Non-Standard Customization

S Series

Micro-Diameter 2-flute ball nose end mill for Aluminum



▶ Designed for copper and aluminum alloys, with a small diameter and optimized geometry. Ensures high precision, good surface quality, and efficient cutting.



● = Best ○ =Good

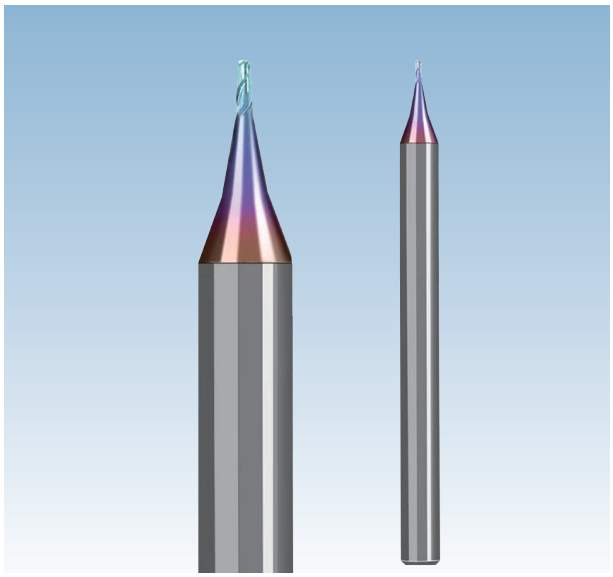
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
									●	●	○	○		

Order Number	Specification	Number of Flutes T	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MS42245ASH-005015N442	R0.05*0.15*42*D4	2	R0.05	0.15	4	42	
MS42245ASH-007502N445	R0.075*0.2*45*D4	2	R0.075	0.2	4	45	
MS42245ASH-0103N445	R0.1*0.3*45*D4	2	R0.1	0.3	4	45	
MS42245ASH-015045N445	R0.15*0.45*45*D4	2	R0.15	0.45	4	45	
MS42245ASH-0206N445	R0.2*0.6*45*D4	2	R0.2	0.6	4	45	
MS42245ASH-02508N445	R0.25*0.8*45*D4	2	R0.25	0.8	4	45	
MS42245ASH-0309N445	R0.3*0.9*45*D4	2	R0.3	0.9	4	45	
MS42245ASH-03511N445	R0.35*1.1*45*D4	2	R0.35	1.1	4	45	
MS42245ASH-0412N445	R0.4*1.2*45*D4	2	R0.4	1.2	4	45	
MS42245ASH-04514N445	R0.45*1.4*45*D4	2	R0.45	1.4	4	45	

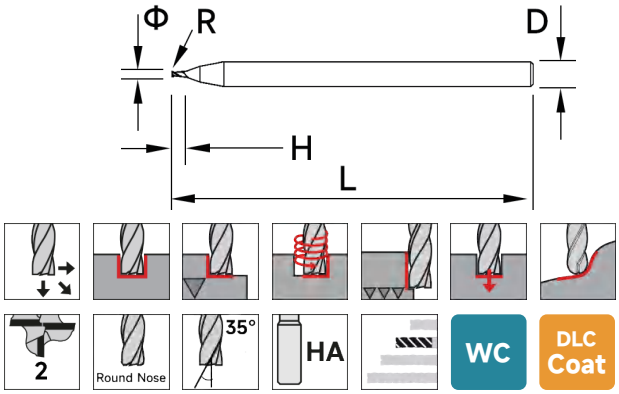
Supports Non-Standard Customization

S Series

Micro-Diameter 2-flute radius end mill for Aluminum



▶ Designed for copper and aluminum alloys, with a small diameter and optimized geometry. Ensures high precision, good surface quality, and efficient cutting.



● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
									●	●	○	○		

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Arc Radius R	Cutting Length H	Shank Diameter D	Overall Length L	Stock
MS43245ASH-0200204N445	Φ0.2*0.02*0.4*45*D4	2	0.2	0.02	0.4	4	45	
MS43245ASH-0200504N445	Φ0.2*0.05*0.4*45*D4	2	0.2	0.05	0.4	4	45	
MS43245ASH-0300206N445	Φ0.3*0.02*0.6*45*D4	2	0.3	0.02	0.6	4	45	
MS43245ASH-0300506N445	Φ0.3*0.05*0.6*45*D4	2	0.3	0.05	0.6	4	45	
MS43245ASH-0400208N445	Φ0.4*0.02*0.8*45*D4	2	0.4	0.02	0.8	4	45	
MS43245ASH-0400508N445	Φ0.4*0.05*0.8*45*D4	2	0.4	0.05	0.8	4	45	
MS43245ASH-040108N445	Φ0.4*0.1*0.8*45*D4	2	0.4	0.1	0.8	4	45	
MS43245ASH-050021N445	Φ0.5*0.02*1*45*D4	2	0.5	0.02	1	4	45	
MS43245ASH-050051N445	Φ0.5*0.05*1*45*D4	2	0.5	0.05	1	4	45	
MS43245ASH-05011N445	Φ0.5*0.1*1*45*D4	2	0.5	0.1	1	4	45	
MS43245ASH-0600212N445	Φ0.6*0.02*1.2*45*D4	2	0.6	0.02	1.2	4	45	
MS43245ASH-0600512N445	Φ0.6*0.05*1.2*45*D4	2	0.6	0.05	1.2	4	45	
MS43245ASH-060112N445	Φ0.6*0.1*1.2*45*D4	2	0.6	0.1	1.2	4	45	
MS43245ASH-060212N445	Φ0.6*0.2*1.2*45*D4	2	0.6	0.2	1.2	4	45	
MS43245ASH-0800216N445	Φ0.8*0.02*1.6*45*D4	2	0.8	0.02	1.6	4	45	
MS43245ASH-0800516N445	Φ0.8*0.05*1.6*45*D4	2	0.8	0.05	1.6	4	45	
MS43245ASH-080116N445	Φ0.8*0.1*1.6*45*D4	2	0.8	0.1	1.6	4	45	
MS43245ASH-080216N445	Φ0.8*0.2*1.6*45*D4	2	0.8	0.2	1.6	4	45	

Supports Non-Standard Customization

Enhanced Cutting Stability and Precision

The deep groove end mill features a high-rigidity short flute design, significantly improving cutting stability during deep slot machining. By keeping the tool overhang within 2 to 3 times the diameter, vibration and bending deformation are effectively reduced, maintaining good straightness and dimensional accuracy.

Optimized Helix Angle - Promotes Smooth Chip Evacuation

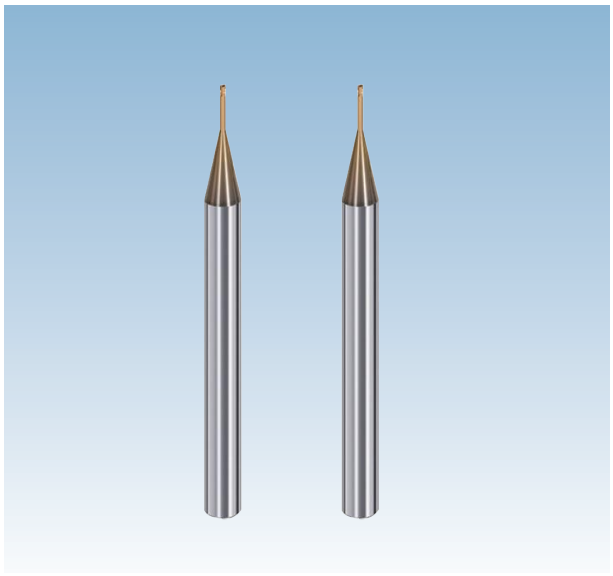
Carefully designed and optimized helix angles lower cutting temperatures by 15% to 20% and increase chip evacuation efficiency by over 30%. This not only reduces tool wear but also prevents surface quality issues caused by chip accumulation, especially when machining difficult-to-cut materials.

High-Performance Coating Technology

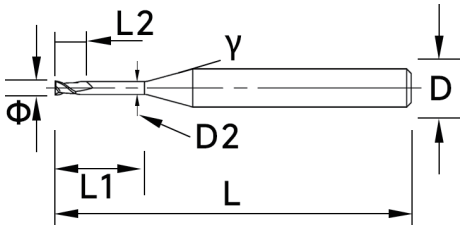
Coated deep groove end mills used for machining hard materials like stainless steel have a tool life 30% to 50% longer than uncoated tools. Additionally, the coatings effectively prevent chip adhesion, further enhancing machining efficiency and surface finish.

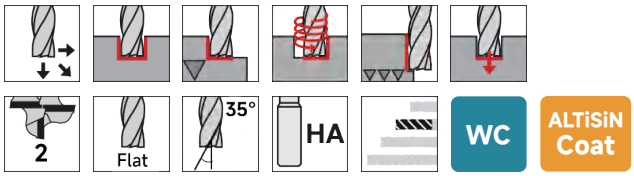
D Series

Long neck 2-flute square end mill (01)



▶ Ultra-high precision in edge and shank diameter, high-wear-resistant coating, enables long-duration cutting of hardened steels.





● = Best ○ =Good

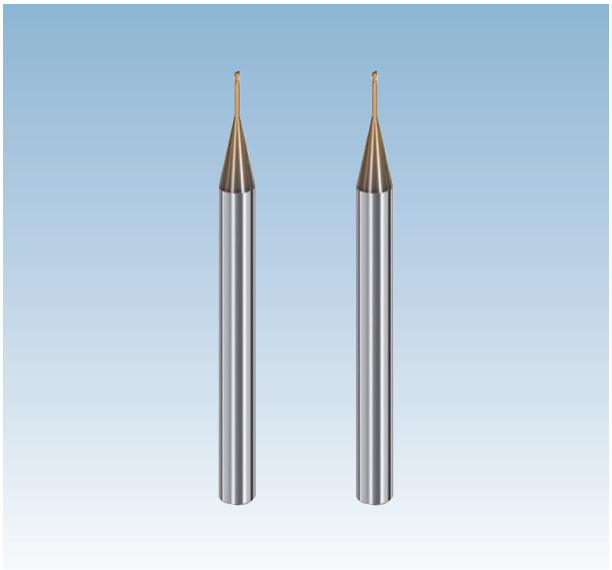
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	○		○	○	○	○	○	○	○	○

Order Number	Specification	Cutting Diameter	Neck Length	Cutting Length	Neck Diameter	Neck Angle	Shank Diameter	Overall Length	Stock
		Φ	L1	L2	D2	γ	D	L	
MD71255ASH-010301Y445	Φ0.1*0.3*0.1*D4*45	0.1	0.3	0.1	0.085	15°	4	45	
MD71255ASH-010501Y445	Φ0.1*0.5*0.1*D4*45	0.1	0.5	0.1	0.085	15°	4	45	
MD71255ASH-010801Y445	Φ0.1*0.8*0.1*D4*45	0.1	0.8	0.1	0.085	15°	4	45	
MD71255ASH-01101Y445	Φ0.1*1*0.1*D4*45	0.1	1	0.1	0.085	15°	4	45	
MD71255ASH-01505015Y445	Φ0.15*0.5*0.15*D4*45	0.15	0.5	0.15	0.13	15°	4	45	
MD71255ASH-0151015Y445	Φ0.15*1*0.15*D4*45	0.15	1	0.15	0.13	15°	4	45	
MD71255ASH-02102Y445	Φ0.2*1*0.2*D4*45	0.2	1	0.2	0.18	12°	4	45	
MD71255ASH-021502Y445	Φ0.2*1.5*0.2*D4*45	0.2	1.5	0.2	0.18	12°	4	45	
MD71255ASH-02202Y445	Φ0.2*2*0.2*D4*45	0.2	2	0.2	0.18	12°	4	45	
MD71255ASH-02302Y445	Φ0.2*3*0.2*D4*45	0.2	3	0.2	0.18	12°	4	45	
MD71255ASH-02402Y445	Φ0.2*4*0.2*D4*45	0.2	4	0.2	0.18	12°	4	45	
MD71255ASH-03103Y445	Φ0.3*1*0.3*D4*45	0.3	1	0.3	0.27	12°	4	45	
MD71255ASH-031503Y445	Φ0.3*1.5*0.3*D4*45	0.3	1.5	0.3	0.27	12°	4	45	
MD71255ASH-03203Y445	Φ0.3*2*0.3*D4*45	0.3	2	0.3	0.27	12°	4	45	
MD71255ASH-03303Y445	Φ0.3*3*0.3*D4*45	0.3	3	0.3	0.27	12°	4	45	
MD71255ASH-03403Y445	Φ0.3*4*0.3*D4*45	0.3	4	0.3	0.27	12°	4	45	
MD71255ASH-03503Y445	Φ0.3*5*0.3*D4*45	0.3	5	0.3	0.27	12°	4	45	
MD71255ASH-041504Y445	Φ0.4*1.5*0.4*D4*45	0.4	1.5	0.4	0.37	12°	4	45	
MD71255ASH-04204Y445	Φ0.4*2*0.4*D4*45	0.4	2	0.4	0.37	12°	4	45	
MD71255ASH-04304Y445	Φ0.4*3*0.4*D4*45	0.4	3	0.4	0.37	12°	4	45	
MD71255ASH-04404Y445	Φ0.4*4*0.4*D4*45	0.4	4	0.4	0.37	12°	4	45	
MD71255ASH-04504Y445	Φ0.4*5*0.4*D4*45	0.4	5	0.4	0.37	12°	4	45	
MD71255ASH-04604Y445	Φ0.4*6*0.4*D4*45	0.4	6	0.4	0.37	12°	4	45	
MD71255ASH-05205Y445	Φ0.5*2*0.5*D4*45	0.5	2	0.5	0.46	12°	4	45	
MD71255ASH-05305Y445	Φ0.5*3*0.5*D4*45	0.5	3	0.5	0.46	12°	4	45	
MD71255ASH-05405Y445	Φ0.5*4*0.5*D4*45	0.5	4	0.5	0.46	12°	4	45	
MD71255ASH-05505Y445	Φ0.5*5*0.5*D4*45	0.5	5	0.5	0.46	12°	4	45	
MD71255ASH-05605Y445	Φ0.5*6*0.5*D4*45	0.5	6	0.5	0.46	12°	4	45	

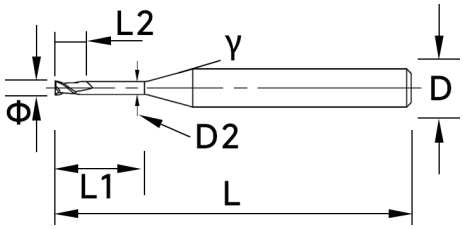
Supports Non-Standard Customization

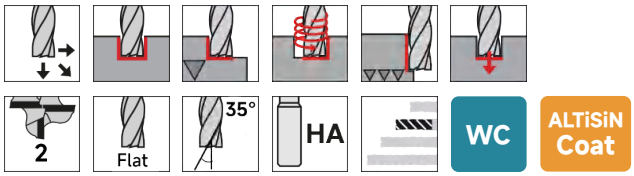
D Series

Long neck 2-flute square end mill (02)



▶ Ultra-high precision in edge and shank diameter, high-wear-resistant coating, enables long-duration cutting of hardened steels.





● = Best ○ =Good

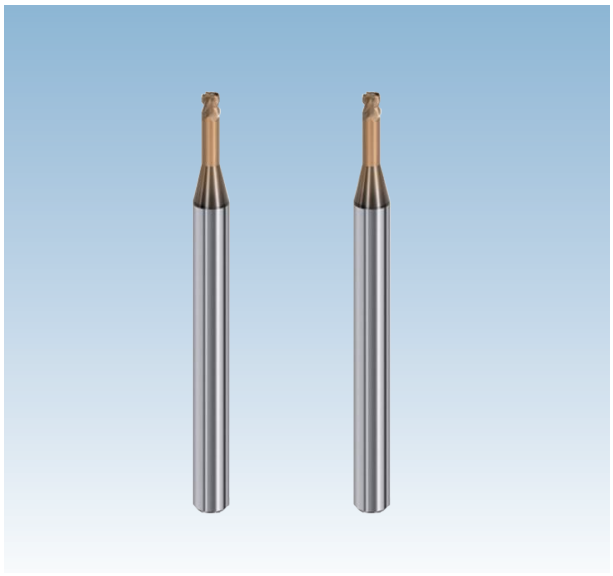
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	○		○	○	○	○	○	○	○	○

Order Number	Specification	Cutting Diameter	Neck Length	Cutting Length	Neck Diameter	Neck Angle	Shank Diameter	Overall Length	Stock
		Φ	L1	L2	D2	γ	D	L	
MD71255ASH-05805Y445	Φ0.5*8*0.5*D4*45	0.5	8	0.5	0.46	12°	4	45	
MD71255ASH-051005Y445	Φ0.5*10*0.5*D4*45	0.5	10	0.5	0.46	12°	4	45	
MD71255ASH-06206Y445	Φ0.6*2*0.6*D4*45	0.6	2	0.6	0.56	12°	4	45	
MD71255ASH-06306Y445	Φ0.6*3*0.6*D4*45	0.6	3	0.6	0.56	12°	4	45	
MD71255ASH-06406Y445	Φ0.6*4*0.6*D4*45	0.6	4	0.6	0.56	12°	4	45	
MD71255ASH-06506Y445	Φ0.6*5*0.6*D4*45	0.6	5	0.6	0.56	12°	4	45	
MD71255ASH-06606Y445	Φ0.6*6*0.6*D4*45	0.6	6	0.6	0.56	12°	4	45	
MD71255ASH-06806Y445	Φ0.6*8*0.6*D4*45	0.6	8	0.6	0.56	12°	4	45	
MD71255ASH-061006Y445	Φ0.6*10*0.6*D4*45	0.6	10	0.6	0.56	12°	4	45	
MD71255ASH-07207Y445	Φ0.7*2*0.7*D4*45	0.7	2	0.7	0.66	12°	4	45	
MD71255ASH-07307Y445	Φ0.7*3*0.7*D4*45	0.7	3	0.7	0.66	12°	4	45	
MD71255ASH-07407Y445	Φ0.7*4*0.7*D4*45	0.7	4	0.7	0.66	12°	4	45	
MD71255ASH-07507Y445	Φ0.7*5*0.7*D4*45	0.7	5	0.7	0.66	12°	4	45	
MD71255ASH-07607Y445	Φ0.7*6*0.7*D4*45	0.7	6	0.7	0.66	12°	4	45	
MD71255ASH-07807Y445	Φ0.7*8*0.7*D4*45	0.7	8	0.7	0.66	12°	4	45	
MD71255ASH-071007Y445	Φ0.7*10*0.7*D4*45	0.7	10	0.7	0.66	12°	4	45	
MD71255ASH-08208Y445	Φ0.8*2*0.8*D4*45	0.8	2	0.8	0.76	12°	4	45	
MD71255ASH-08308Y445	Φ0.8*3*0.8*D4*45	0.8	3	0.8	0.76	12°	4	45	
MD71255ASH-08408Y445	Φ0.8*4*0.8*D4*45	0.8	4	0.8	0.76	12°	4	45	
MD71255ASH-08508Y445	Φ0.8*5*0.8*D4*45	0.8	5	0.8	0.76	12°	4	45	
MD71255ASH-08608Y445	Φ0.8*6*0.8*D4*45	0.8	6	0.8	0.76	12°	4	45	
MD71255ASH-08808Y445	Φ0.8*8*0.8*D4*45	0.8	8	0.8	0.76	12°	4	45	
MD71255ASH-081008Y445	Φ0.8*10*0.8*D4*45	0.8	10	0.8	0.76	12°	4	45	

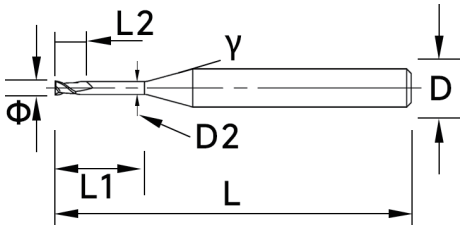
Supports Non-Standard Customization

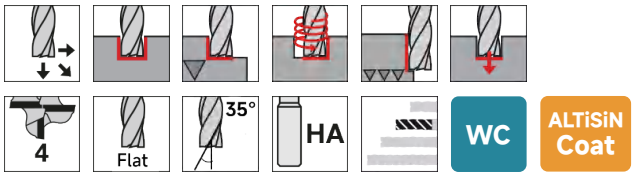
D Series

Long neck 4-flute square end mill (01)



▶ Ultra-high precision in edge and shank diameter, high-wear-resistant coating, enables long-duration cutting of hardened steels.





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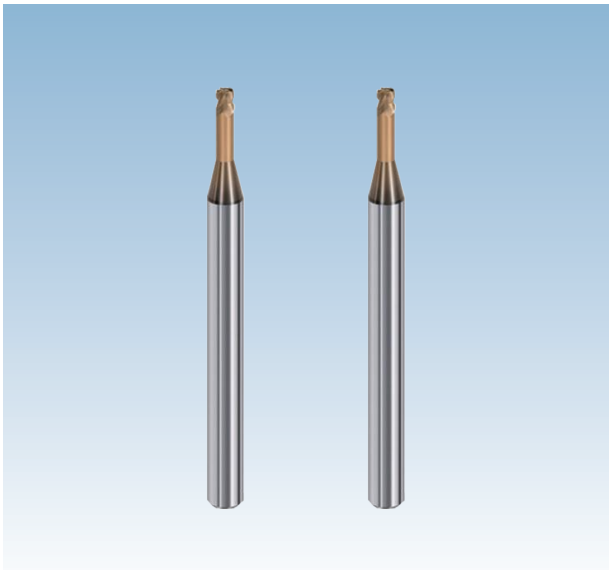
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	○		○	○	○	○	○	○	○	○

Order Number	Specification	Cutting Diameter	Neck Length	Cutting Length	Neck Diameter	Neck Angle	Shank Diameter	Overall Length	Stock
		Φ	L1	L2	D2	γ	D	L	
MD71455ASH-141Y450	Φ1*4*1*D4*50	1	4	1	0.95	12°	4	50	
MD71455ASH-151Y450	Φ1*5*1*D4*50	1	5	1	0.95	12°	4	50	
MD71455ASH-161Y450	Φ1*6*1*D4*50	1	6	1	0.95	12°	4	50	
MD71455ASH-181Y450	Φ1*8*1*D4*50	1	8	1	0.95	12°	4	50	
MD71455ASH-1101Y450	Φ1*10*1*D4*50	1	10	1	0.95	12°	4	50	
MD71455ASH-1121Y450	Φ1*12*1*D4*50	1	12	1	0.95	12°	4	50	
MD71455ASH-1141Y450	Φ1*14*1*D4*50	1	14	1	0.95	12°	4	50	
MD71455ASH-1161Y450	Φ1*16*1*D4*50	1	16	1	0.95	12°	4	50	
MD71455ASH-1181Y450	Φ1*18*1*D4*50	1	18	1	0.95	12°	4	50	
MD71455ASH-1201Y450	Φ1*20*1*D4*50	1	20	1	0.95	12°	4	50	
MD71455ASH-15615Y450	Φ1.5*6*1.5*D4*50	1.5	6	1.5	1.44	12°	4	50	
MD71455ASH-15815Y450	Φ1.5*8*1.5*D4*50	1.5	8	1.5	1.44	12°	4	50	
MD71455ASH-151015Y450	Φ1.5*10*1.5*D4*50	1.5	10	1.5	1.44	12°	4	50	
MD71455ASH-151215Y450	Φ1.5*12*1.5*D4*50	1.5	12	1.5	1.44	12°	4	50	
MD71455ASH-151415Y450	Φ1.5*14*1.5*D4*50	1.5	14	1.5	1.44	12°	4	50	
MD71455ASH-151615Y450	Φ1.5*16*1.5*D4*50	1.5	16	1.5	1.44	12°	4	50	
MD71455ASH-151815Y450	Φ1.5*18*1.5*D4*50	1.5	18	1.5	1.44	12°	4	50	
MD71455ASH-152015Y450	Φ1.5*20*1.5*D4*50	1.5	20	1.5	1.44	12°	4	50	
MD71455ASH-262Y450	Φ2*6*2*D4*50	2	6	2	1.94	12°	4	50	
MD71455ASH-282Y450	Φ2*8*2*D4*50	2	8	2	1.94	12°	4	50	
MD71455ASH-2102Y450	Φ2*10*2*D4*50	2	10	2	1.94	12°	4	50	
MD71455ASH-2122Y450	Φ2*12*2*D4*50	2	12	2	1.94	12°	4	50	
MD71455ASH-2142Y450	Φ2*14*2*D4*50	2	14	2	1.94	12°	4	50	
MD71455ASH-2162Y450	Φ2*16*2*D4*50	2	16	2	1.94	12°	4	50	
MD71455ASH-2182Y450	Φ2*18*2*D4*50	2	18	2	1.94	12°	4	50	
MD71455ASH-2202Y450	Φ2*20*2*D4*50	2	20	2	1.94	12°	4	50	
MD71455ASH-3103Y450	Φ3*10*3*D4*50	3	10	3	2.92	12°	4	50	
MD71455ASH-3123Y450	Φ3*12*3*D4*50	3	12	3	2.92	12°	4	50	

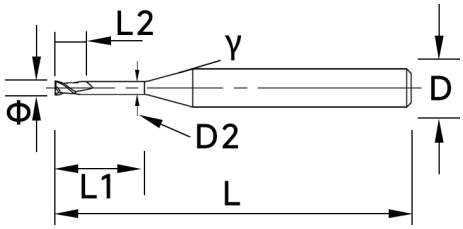
Supports Non-Standard Customization

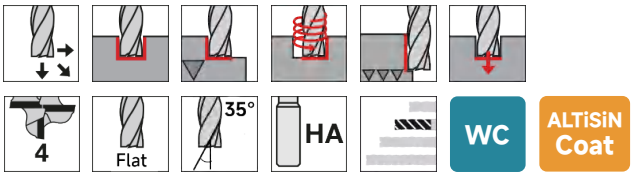
D Series

Long neck 4-flute square end mill (02)



▶ Ultra-high precision in edge and shank diameter, high-wear-resistant coating, enables long-duration cutting of hardened steels.





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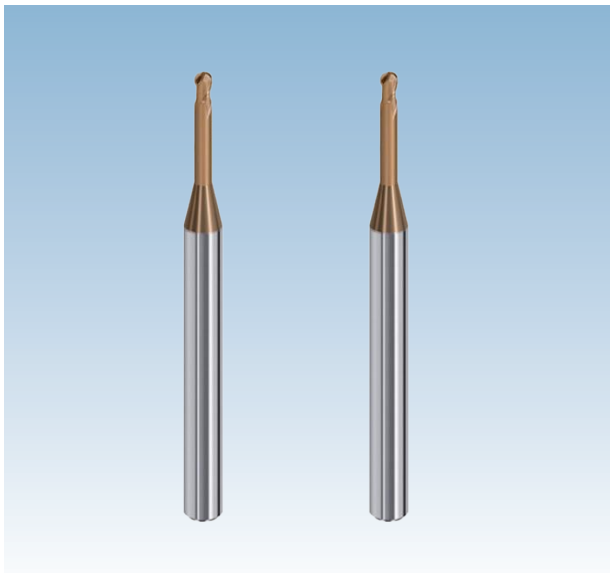
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	○		○	○	○	○	○	○	○	○

Order Number	Specification	Cutting Diameter	Neck Length	Cutting Length	Neck Diameter	Neck Angle	Shank Diameter	Overall Length	Stock
		Φ	L1	L2	D2	γ	D	L	
MD71455ASH-3143Y450	Φ3*14*3*D4*50	3	14	3	2.92	12°	4	50	
MD71455ASH-3163Y450	Φ3*16*3*D4*50	3	16	3	2.92	12°	4	50	
MD71455ASH-3183Y450	Φ3*18*3*D4*50	3	18	3	2.92	12°	4	50	
MD71455ASH-3203Y450	Φ3*20*3*D4*50	3	20	3	2.92	12°	4	50	
MD71455ASH-3163Y660	Φ3*16*3*D6*60	3	16	3	2.92	12°	6	60	
MD71455ASH-3183Y660	Φ3*18*3*D6*60	3	18	3	2.92	12°	6	60	
MD71455ASH-3203Y660	Φ3*20*3*D6*60	3	20	3	2.92	12°	6	60	
MD71455ASH-3253Y660	Φ3*25*3*D6*60	3	25	3	2.92	12°	6	60	
MD71455ASH-3163Y675	Φ3*16*3*D6*75	3	16	3	2.92	12°	6	75	
MD71455ASH-3183Y675	Φ3*18*3*D6*75	3	18	3	2.92	12°	6	75	
MD71455ASH-3203Y675	Φ3*20*3*D6*75	3	20	3	2.92	12°	6	75	
MD71455ASH-3253Y675	Φ3*25*3*D6*75	3	25	3	2.92	12°	6	75	
MD71455ASH-3303Y675	Φ3*30*3*D6*75	3	30	3	2.92	12°	6	75	
MD71455ASH-3353Y675	Φ3*35*3*D6*75	3	35	3	2.92	12°	6	75	
MD71455ASH-4164Y660	Φ4*16*4*D6*60	4	16	4	3.9	12°	6	60	
MD71455ASH-4184Y660	Φ4*18*4*D6*60	4	18	4	3.9	12°	6	60	
MD71455ASH-4204Y660	Φ4*20*4*D6*60	4	20	4	3.9	12°	6	60	
MD71455ASH-4254Y660	Φ4*25*4*D6*60	4	25	4	3.9	12°	6	60	
MD71455ASH-4164Y675	Φ4*16*4*D6*75	4	16	4	3.9	12°	6	75	
MD71455ASH-4184Y675	Φ4*18*4*D6*75	4	18	4	3.9	12°	6	75	
MD71455ASH-4204Y675	Φ4*20*4*D6*75	4	20	4	3.9	12°	6	75	
MD71455ASH-4254Y675	Φ4*25*4*D6*75	4	25	4	3.9	12°	6	75	
MD71455ASH-4304Y675	Φ4*30*4*D6*75	4	30	4	3.9	12°	6	75	
MD71455ASH-4354Y675	Φ4*35*4*D6*75	4	35	4	3.9	12°	6	75	

Supports Non-Standard Customization

D Series

Long neck 2-flute ball nose end mill (01)



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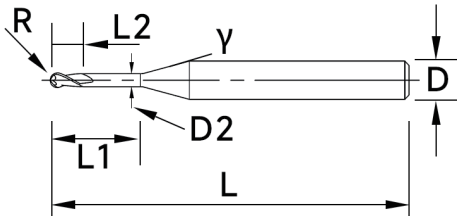
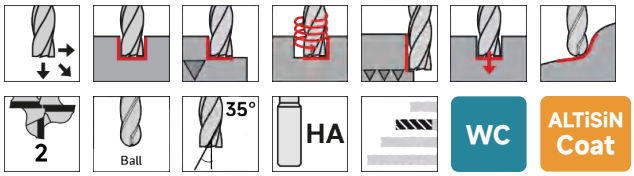




● = Best ○ =Good

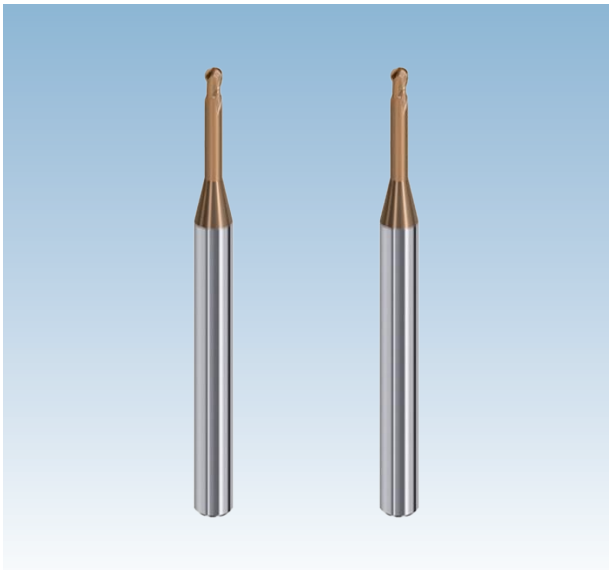
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	○		○	○	○	○	○	○	○	○

Order Number	Specification	Arc Radius	Neck Length	Cutting Length	Neck Diameter	Neck Angle	Shank Diameter	Overall Length	Stock
		R	L1	L2	D2	γ	D	L	
MD72255ASH-0050301Y445	R0.05*0.3*0.1*4*45	0.05	0.3	0.1	0.085	15°	4	45	
MD72255ASH-0050501Y445	R0.05*0.5*0.1*4*45	0.05	0.5	0.1	0.085	15°	4	45	
MD72255ASH-0050801Y445	R0.05*0.8*0.1*4*45	0.05	0.8	0.1	0.085	15°	4	45	
MD72255ASH-005101Y445	R0.05*1*0.1*4*45	0.05	1	0.1	0.085	15°	4	45	
MD72255ASH-007505015Y445	R0.075*0.5*0.15*4*45	0.075	0.5	0.15	0.13	15°	4	45	
MD72255ASH-00751015Y445	R0.075*1*0.15*4*45	0.075	1	0.15	0.13	15°	4	45	
MD72255ASH-01102Y445	R0.1*1*0.2*4*45	0.1	1	0.2	0.18	12°	4	45	
MD72255ASH-011502Y445	R0.1*1.5*0.2*4*45	0.1	1.5	0.2	0.18	12°	4	45	
MD72255ASH-01202Y445	R0.1*2*0.2*4*45	0.1	2	0.2	0.18	12°	4	45	
MD72255ASH-01302Y445	R0.1*3*0.2*4*45	0.1	3	0.2	0.18	12°	4	45	
MD72255ASH-015103Y445	R0.15*1*0.3*4*45	0.15	1	0.3	0.27	12°	4	45	
MD72255ASH-0151503Y445	R0.15*1.5*0.3*4*45	0.15	1.5	0.3	0.27	12°	4	45	
MD72255ASH-015203Y445	R0.15*2*0.3*4*45	0.15	2	0.3	0.27	12°	4	45	
MD72255ASH-015303Y445	R0.15*3*0.3*4*45	0.15	3	0.3	0.27	12°	4	45	
MD72255ASH-015403Y445	R0.15*4*0.3*4*45	0.15	4	0.3	0.27	12°	4	45	
MD72255ASH-015503Y445	R0.15*5*0.3*4*45	0.15	5	0.3	0.27	12°	4	45	
MD72255ASH-021504Y445	R0.2*1.5*0.4*4*45	0.2	1.5	0.4	0.37	12°	4	45	
MD72255ASH-02204Y445	R0.2*2*0.4*4*45	0.2	2	0.4	0.37	12°	4	45	
MD72255ASH-02304Y445	R0.2*3*0.4*4*45	0.2	3	0.4	0.37	12°	4	45	
MD72255ASH-02404Y445	R0.2*4*0.4*4*45	0.2	4	0.4	0.37	12°	4	45	
MD72255ASH-02504Y445	R0.2*5*0.4*4*45	0.2	5	0.4	0.37	12°	4	45	
MD72255ASH-02604Y445	R0.2*6*0.4*4*45	0.2	6	0.4	0.37	12°	4	45	
MD72255ASH-025205Y445	R0.25*2*0.5*4*45	0.25	2	0.5	0.46	12°	4	45	
MD72255ASH-025305Y445	R0.25*3*0.5*4*45	0.25	3	0.5	0.46	12°	4	45	
MD72255ASH-025405Y445	R0.25*4*0.5*4*45	0.25	4	0.5	0.46	12°	4	45	
MD72255ASH-025505Y445	R0.25*5*0.5*4*45	0.25	5	0.5	0.46	12°	4	45	
MD72255ASH-025605Y445	R0.25*6*0.5*4*45	0.25	6	0.5	0.46	12°	4	45	
MD72255ASH-025805Y445	R0.25*8*0.5*4*45	0.25	8	0.5	0.46	12°	4	45	

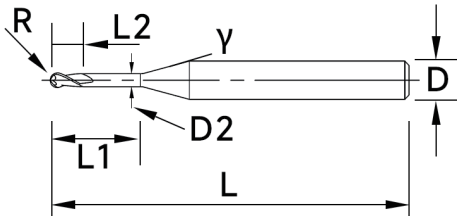
Supports Non-Standard Customization

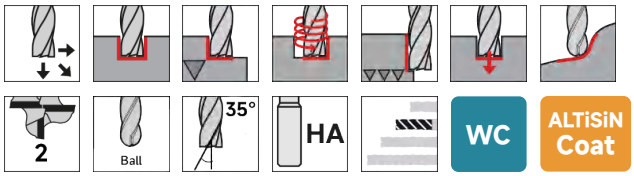
D Series

Long neck 2-flute ball nose end mill (02)



▶ Ultra-high precision in edge and shank diameter, high-wear-resistant coating, enables long-duration cutting of hardened steels.





● = Best ○ =Good

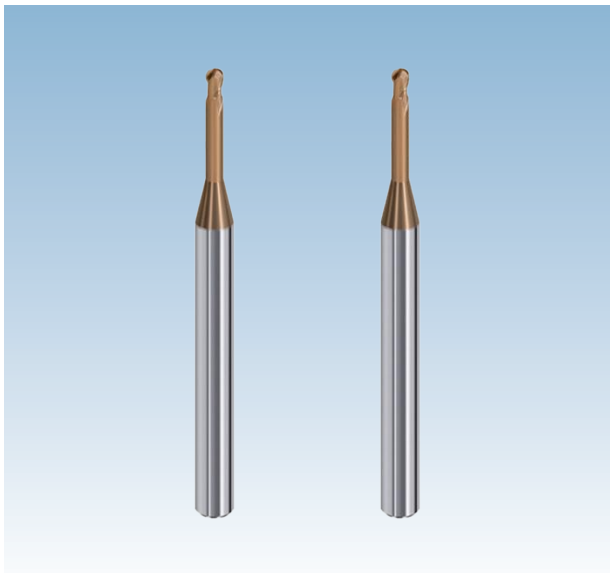
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	○		○	○	○	○	○	○	○	○

Order Number	Specification	Arc Radius	Neck Length	Cutting Length	Neck Diameter	Neck Angle	Shank Diameter	Overall Length	Stock
		R	L1	L2	D2	γ	D	L	
MD72255ASH-03206Y445	R0.3*2*0.6*4*45	0.3	2	0.6	0.56	12°	4	45	
MD72255ASH-03306Y445	R0.3*3*0.6*4*45	0.3	3	0.6	0.56	12°	4	45	
MD72255ASH-03406Y445	R0.3*4*0.6*4*45	0.3	4	0.6	0.56	12°	4	45	
MD72255ASH-03506Y445	R0.3*5*0.6*4*45	0.3	5	0.6	0.56	12°	4	45	
MD72255ASH-03606Y445	R0.3*6*0.6*4*45	0.3	6	0.6	0.56	12°	4	45	
MD72255ASH-03806Y445	R0.3*8*0.6*4*45	0.3	8	0.6	0.56	12°	4	45	
MD72255ASH-031006Y445	R0.3*10*0.6*4*45	0.3	10	0.6	0.56	12°	4	45	
MD72255ASH-04208Y445	R0.4*2*0.8*4*45	0.4	2	0.8	0.76	12°	4	45	
MD72255ASH-04308Y445	R0.4*3*0.8*4*45	0.4	3	0.8	0.76	12°	4	45	
MD72255ASH-04408Y445	R0.4*4*0.8*4*45	0.4	4	0.8	0.76	12°	4	45	
MD72255ASH-04508Y445	R0.4*5*0.8*4*45	0.4	5	0.8	0.76	12°	4	45	
MD72255ASH-04608Y445	R0.4*6*0.8*4*45	0.4	6	0.8	0.76	12°	4	45	
MD72255ASH-04808Y445	R0.4*8*0.8*4*45	0.4	8	0.8	0.76	12°	4	45	
MD72255ASH-041008Y445	R0.4*10*0.8*4*45	0.4	10	0.8	0.76	12°	4	45	
MD72255ASH-531Y450	R0.5*3*1*4*50	0.5	3	1	0.95	12°	4	50	
MD72255ASH-541Y450	R0.5*4*1*4*50	0.5	4	1	0.95	12°	4	50	
MD72255ASH-551Y450	R0.5*5*1*4*50	0.5	5	1	0.95	12°	4	50	
MD72255ASH-561Y450	R0.5*6*1*4*50	0.5	6	1	0.95	12°	4	50	
MD72255ASH-581Y450	R0.5*8*1*4*50	0.5	8	1	0.95	12°	4	50	
MD72255ASH-5101Y450	R0.5*10*1*4*50	0.5	10	1	0.95	12°	4	50	
MD72255ASH-5121Y450	R0.5*12*1*4*50	0.5	12	1	0.95	12°	4	50	
MD72255ASH-5141Y450	R0.5*14*1*4*50	0.5	14	1	0.95	12°	4	50	
MD72255ASH-5161Y450	R0.5*16*1*4*50	0.5	16	1	0.95	12°	4	50	
MD72255ASH-5181Y450	R0.5*18*1*4*50	0.5	18	1	0.95	12°	4	50	
MD72255ASH-5201Y450	R0.5*20*1*4*50	0.5	20	1	0.95	12°	4	50	
MD72255ASH-75415Y450	R0.75*4*1.5*4*50	0.75	4	1.5	1.44	12°	4	50	
MD72255ASH-75515Y450	R0.75*5*1.5*4*50	0.75	5	1.5	1.44	12°	4	50	
MD72255ASH-75615Y450	R0.75*6*1.5*4*50	0.75	6	1.5	1.44	12°	4	50	

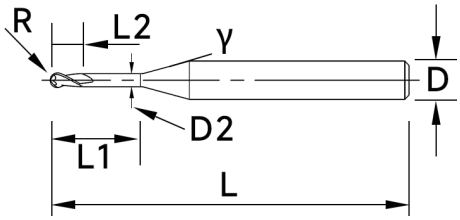
Supports Non-Standard Customization

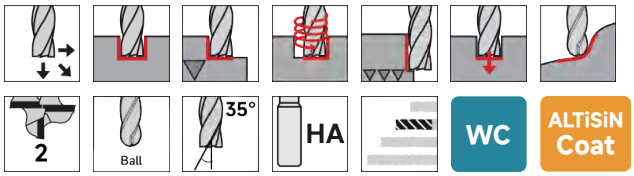
D Series

Long neck 2-flute ball nose end mill (03)



▶ Ultra-high precision in edge and shank diameter, high-wear-resistant coating, enables long-duration cutting of hardened steels.





● = Best ○ =Good

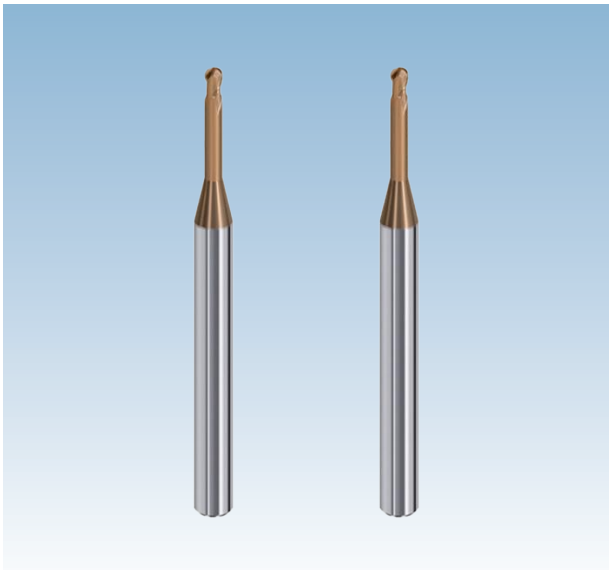
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	○		○	○	○	○	○	○	○	○

Order Number	Specification	Arc Radius	Neck Length	Cutting Length	Neck Diameter	Neck Angle	Shank Diameter	Overall Length	Stock
		R	L1	L2	D2	γ	D	L	
MD72255ASH-75815Y450	R0.75*8*1.5*4*50	0.75	8	1.5	1.44	12°	4	50	
MD72255ASH-751015Y450	R0.75*10*1.5*4*50	0.75	10	1.5	1.44	12°	4	50	
MD72255ASH-751215Y450	R0.75*12*1.5*4*50	0.75	12	1.5	1.44	12°	4	50	
MD72255ASH-751615Y450	R0.75*16*1.5*4*50	0.75	16	1.5	1.44	12°	4	50	
MD72255ASH-751815Y450	R0.75*18*1.5*4*50	0.75	18	1.5	1.44	12°	4	50	
MD72255ASH-752015Y450	R0.75*20*1.5*4*50	0.75	20	1.5	1.44	12°	4	50	
MD72255ASH-162Y450	R1*6*2*4*50	1	6	2	1.94	12°	4	50	
MD72255ASH-182Y450	R1*8*2*4*50	1	8	2	1.94	12°	4	50	
MD72255ASH-1102Y450	R1*10*2*4*50	1	10	2	1.94	12°	4	50	
MD72255ASH-1122Y450	R1*12*2*4*50	1	12	2	1.94	12°	4	50	
MD72255ASH-1142Y450	R1*14*2*4*50	1	14	2	1.94	12°	4	50	
MD72255ASH-1162Y450	R1*16*2*4*50	1	16	2	1.94	12°	4	50	
MD72255ASH-1182Y450	R1*18*2*4*50	1	18	2	1.94	12°	4	50	
MD72255ASH-1202Y450	R1*20*2*4*50	1	20	2	1.94	12°	4	50	
MD72255ASH-1162Y660	R1*16*2*6*60	1	16	2	1.94	12°	6	60	
MD72255ASH-1182Y660	R1*18*2*6*60	1	18	2	1.94	12°	6	60	
MD72255ASH-1202Y660	R1*20*2*6*60	1	20	2	1.94	12°	6	60	
MD72255ASH-1252Y660	R1*25*2*6*60	1	25	2	1.94	12°	6	60	
MD72255ASH-1583Y450	R1.5*8*3*4*50	1.5	8	3	2.92	12°	4	50	
MD72255ASH-15103Y450	R1.5*10*3*4*50	1.5	10	3	2.92	12°	4	50	
MD72255ASH-15123Y450	R1.5*12*3*4*50	1.5	12	3	2.92	12°	4	50	
MD72255ASH-15163Y450	R1.5*16*3*4*50	1.5	16	3	2.92	12°	4	50	
MD72255ASH-15203Y450	R1.5*20*3*4*50	1.5	20	3	2.92	12°	4	50	
MD72255ASH-15163Y660	R1.5*16*3*6*60	1.5	16	3	2.92	12°	6	60	
MD72255ASH-15183Y660	R1.5*18*3*6*60	1.5	18	3	2.92	12°	6	60	
MD72255ASH-15203Y660	R1.5*20*3*6*60	1.5	20	3	2.92	12°	6	60	
MD72255ASH-15253Y660	R1.5*25*3*6*60	1.5	25	3	2.92	12°	6	60	
MD72255ASH-15163Y675	**R1.5*16*3*6*75**	1.5	16	3	2.92	12°	6	75	

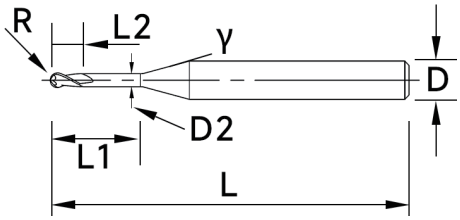
Supports Non-Standard Customization

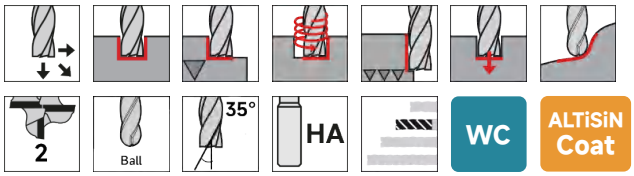
D Series

Long neck 2-flute ball nose end mill (04)



▶ Ultra-high precision in edge and shank diameter, high-wear-resistant coating, enables long-duration cutting of hardened steels.





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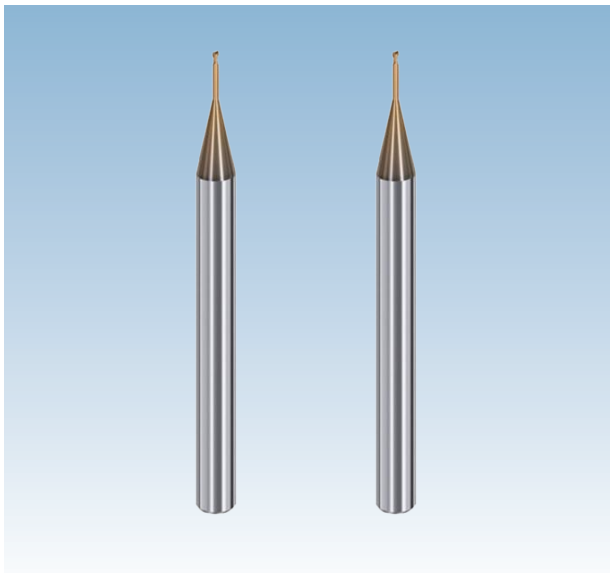
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	○		○	○	○	○	○	○	○	○

Order Number	Specification	Arc Radius	Neck Length	Cutting Length	Neck Diameter	Neck Angle	Shank Diameter	Overall Length	Stock
		R	L1	L2	D2	γ	D	L	
MD72255ASH-15183Y675	R1.5*18*3*6*75	1.5	18	3	2.92	12°	6	75	
MD72255ASH-15203Y675	R1.5*20*3*6*75	1.5	20	3	2.92	12°	6	75	
MD72255ASH-15253Y675	R1.5*25*3*6*75	1.5	25	3	2.92	12°	6	75	
MD72255ASH-15303Y675	R1.5*30*3*6*75	1.5	30	3	2.92	12°	6	75	
MD72255ASH-2164Y660	R2*16*4*6*60	2	16	4	3.9	12°	6	60	
MD72255ASH-2184Y660	R2*18*4*6*60	2	18	4	3.9	12°	6	60	
MD72255ASH-2204Y660	R2*20*4*6*60	2	20	4	3.9	12°	6	60	
MD72255ASH-2254Y660	R2*25*4*6*60	2	25	4	3.9	12°	6	60	
MD72255ASH-2164Y675	R2*16*4*6*75	2	16	4	3.9	12°	6	75	
MD72255ASH-2184Y675	R2*18*4*6*75	2	18	4	3.9	12°	6	75	
MD72255ASH-2204Y675	R2*20*4*6*75	2	20	4	3.9	12°	6	75	
MD72255ASH-2254Y675	R2*25*4*6*75	2	25	4	3.9	12°	6	75	
MD72255ASH-2304Y675	R2*30*4*6*75	2	30	4	3.9	12°	6	75	
MD72255ASH-2354Y675	R2*35*4*6*75	2	35	4	3.9	12°	6	75	

Supports Non-Standard Customization

D Series

Long neck 2-flute radius end mill (01)



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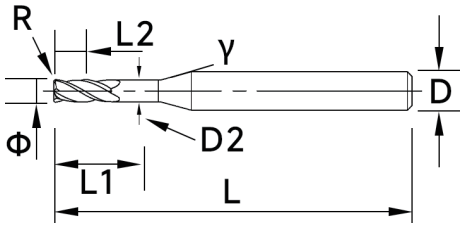

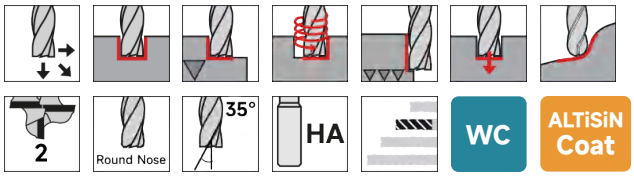

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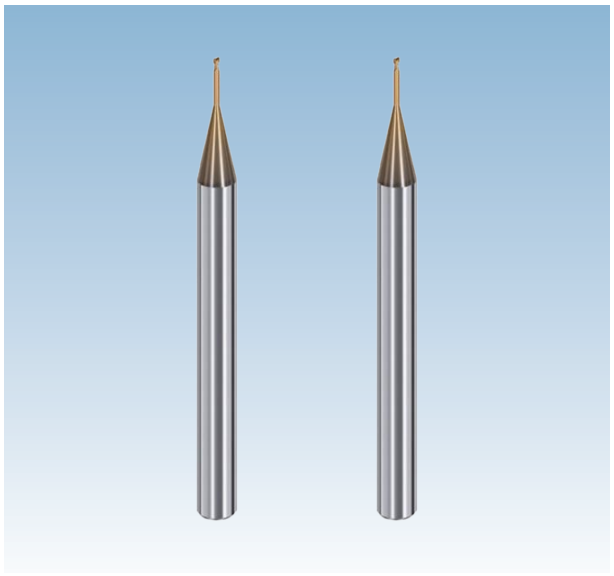
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	○		○	○	○	○	○	○	○	○

Order Number	Specification	Φ	R	L1	L2	D2	γ	D	L	Stock
MD73255ASH-202102Y445	0.2*0.02*1*0.2*4*45	0.2	0.02	1	0.2	0.18	12°	4	45	
MD73255ASH-2021502Y445	0.2*0.02*1.5*0.2*4*45	0.2	0.02	1.5	0.2	0.18	12°	4	45	
MD73255ASH-202202Y445	0.2*0.02*2*0.2*4*45	0.2	0.02	2	0.2	0.18	12°	4	45	
MD73255ASH-202302Y445	0.2*0.02*3*0.2*4*45	0.2	0.02	3	0.2	0.18	12°	4	45	
MD73255ASH-205102Y445	0.2*0.05*1*0.2*4*45	0.2	0.05	1	0.2	0.18	12°	4	45	
MD73255ASH-2051502Y445	0.2*0.05*1.5*0.2*4*45	0.2	0.05	1.5	0.2	0.18	12°	4	45	
MD73255ASH-205202Y445	0.2*0.05*2*0.2*4*45	0.2	0.05	2	0.2	0.18	12°	4	45	
MD73255ASH-205302Y445	0.2*0.05*3*0.2*4*45	0.2	0.05	3	0.2	0.18	12°	4	45	
MD73255ASH-302103Y445	0.3*0.02*1*0.3*4*45	0.3	0.02	1	0.3	0.27	12°	4	45	
MD73255ASH-3021503Y445	0.3*0.02*1.5*0.3*4*45	0.3	0.02	1.5	0.3	0.27	12°	4	45	
MD73255ASH-302203Y445	0.3*0.02*2*0.3*4*45	0.3	0.02	2	0.3	0.27	12°	4	45	
MD73255ASH-302303Y445	0.3*0.02*3*0.3*4*45	0.3	0.02	3	0.3	0.27	12°	4	45	
MD73255ASH-302403Y445	0.3*0.02*4*0.3*4*45	0.3	0.02	4	0.3	0.27	12°	4	45	
MD73255ASH-305103Y445	0.3*0.05*1*0.3*4*45	0.3	0.05	1	0.3	0.27	12°	4	45	
MD73255ASH-3051503Y445	0.3*0.05*1.5*0.3*4*45	0.3	0.05	1.5	0.3	0.27	12°	4	45	
MD73255ASH-305203Y445	0.3*0.05*2*0.3*4*45	0.3	0.05	2	0.3	0.27	12°	4	45	
MD73255ASH-305303Y445	0.3*0.05*3*0.3*4*45	0.3	0.05	3	0.3	0.27	12°	4	45	
MD73255ASH-305403Y445	0.3*0.05*4*0.3*4*45	0.3	0.05	4	0.3	0.27	12°	4	45	
MD73255ASH-402104Y445	0.4*0.02*1*0.4*4*45	0.4	0.02	1	0.4	0.37	12°	4	45	
MD73255ASH-4021504Y445	0.4*0.02*1.5*0.4*4*45	0.4	0.02	1.5	0.4	0.37	12°	4	45	
MD73255ASH-402204Y445	0.4*0.02*2*0.4*4*45	0.4	0.02	2	0.4	0.37	12°	4	45	
MD73255ASH-402304Y445	0.4*0.02*3*0.4*4*45	0.4	0.02	3	0.4	0.37	12°	4	45	
MD73255ASH-402404Y445	0.4*0.02*4*0.4*4*45	0.4	0.02	4	0.4	0.37	12°	4	45	
MD73255ASH-402504Y445	0.4*0.02*5*0.4*4*45	0.4	0.02	5	0.4	0.37	12°	4	45	
MD73255ASH-402604Y445	0.4*0.02*6*0.4*4*45	0.4	0.02	6	0.4	0.37	12°	4	45	
MD73255ASH-405104Y445	0.4*0.05*1*0.4*4*45	0.4	0.05	1	0.4	0.37	12°	4	45	
MD73255ASH-4051504Y445	0.4*0.05*1.5*0.4*4*45	0.4	0.05	1.5	0.4	0.37	12°	4	45	
MD73255ASH-405204Y445	0.4*0.05*2*0.4*4*45	0.4	0.05	2	0.4	0.37	12°	4	45	
MD73255ASH-405304Y445	0.4*0.05*3*0.4*4*45	0.4	0.05	3	0.4	0.37	12°	4	45	

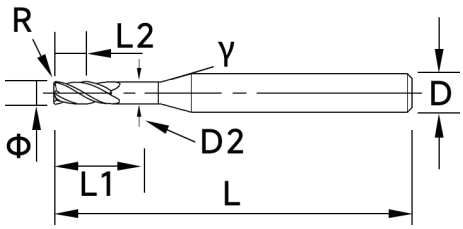
Supports Non-Standard Customization

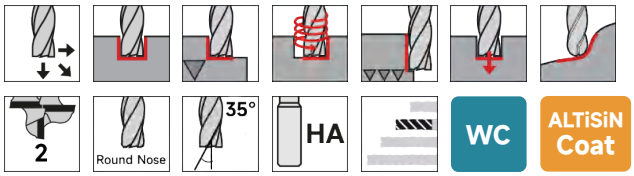
D Series

Long neck 2-flute radius end mill (02)



▶ Ultra-high precision in edge and shank diameter, high-wear-resistant coating, enables long-duration cutting of hardened steels.





● = Best ○ =Good

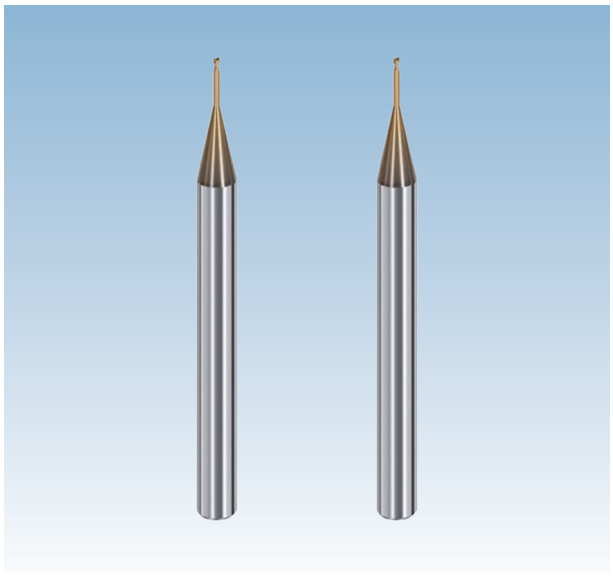
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	○		○	○	○	○	○	○	○	○

Order Number	Specification	Φ	R	L1	L2	D2	γ	D	L	Stock
MD73255ASH-405404Y445	0.4*0.05*4*0.4*4*45	0.4	0.05	4	0.4	0.37	12°	4	45	
MD73255ASH-405504Y445	0.4*0.05*5*0.4*4*45	0.4	0.05	5	0.4	0.37	12°	4	45	
MD73255ASH-405604Y445	0.4*0.05*6*0.4*4*45	0.4	0.05	6	0.4	0.37	12°	4	45	
MD73255ASH-41104Y445	0.4*0.1*1*0.4*4*45	0.4	0.1	1	0.4	0.37	12°	4	45	
MD73255ASH-411504Y445	0.4*0.1*1.5*0.4*4*45	0.4	0.1	1.5	0.4	0.37	12°	4	45	
MD73255ASH-41104Y445	0.4*0.1*1*0.4*4*45	0.4	0.1	1	0.4	0.37	12°	4	45	
MD73255ASH-41304Y445	0.4*0.1*3*0.4*4*45	0.4	0.1	3	0.4	0.37	12°	4	45	
MD73255ASH-41404Y445	0.4*0.1*4*0.4*4*45	0.4	0.1	4	0.4	0.37	12°	4	45	
MD73255ASH-41504Y445	0.4*0.1*5*0.4*4*45	0.4	0.1	5	0.4	0.37	12°	4	45	
MD73255ASH-41604Y445	0.4*0.1*6*0.4*4*45	0.4	0.1	6	0.4	0.37	12°	4	45	
MD73255ASH-502205Y445	0.5*0.02*2*0.5*4*45	0.5	0.02	2	0.5	0.46	12°	4	45	
MD73255ASH-502305Y445	0.5*0.02*3*0.5*4*45	0.5	0.02	3	0.5	0.46	12°	4	45	
MD73255ASH-502405Y445	0.5*0.02*4*0.5*4*45	0.5	0.02	4	0.5	0.46	12°	4	45	
MD73255ASH-502505Y445	0.5*0.02*5*0.5*4*45	0.5	0.02	5	0.5	0.46	12°	4	45	
MD73255ASH-502605Y445	0.5*0.02*6*0.5*4*45	0.5	0.02	6	0.5	0.46	12°	4	45	
MD73255ASH-502805Y445	0.5*0.02*8*0.5*4*45	0.5	0.02	8	0.5	0.46	12°	4	45	
MD73255ASH-5021005Y445	0.5*0.02*10*0.5*4*45	0.5	0.02	10	0.5	0.46	12°	4	45	
MD73255ASH-505205Y445	0.5*0.05*2*0.5*4*45	0.5	0.05	2	0.5	0.46	12°	4	45	
MD73255ASH-505305Y445	0.5*0.05*3*0.5*4*45	0.5	0.05	3	0.5	0.46	12°	4	45	
MD73255ASH-505405Y445	0.5*0.05*4*0.5*4*45	0.5	0.05	4	0.5	0.46	12°	4	45	
MD73255ASH-505505Y445	0.5*0.05*5*0.5*4*45	0.5	0.05	5	0.5	0.46	12°	4	45	
MD73255ASH-505605Y445	0.5*0.05*6*0.5*4*45	0.5	0.05	6	0.5	0.46	12°	4	45	
MD73255ASH-505805Y445	0.5*0.05*8*0.5*4*45	0.5	0.05	8	0.5	0.46	12°	4	45	
MD73255ASH-5051005Y445	0.5*0.05*10*0.5*4*45	0.5	0.05	10	0.5	0.46	12°	4	45	
MD73255ASH-51205Y445	0.5*0.1*2*0.5*4*45	0.5	0.1	2	0.5	0.46	12°	4	45	
MD73255ASH-51305Y445	0.5*0.1*3*0.5*4*45	0.5	0.1	3	0.5	0.46	12°	4	45	
MD73255ASH-51405Y445	0.5*0.1*4*0.5*4*45	0.5	0.1	4	0.5	0.46	12°	4	45	
MD73255ASH-51505Y445	0.5*0.1*5*0.5*4*45	0.5	0.1	5	0.5	0.46	12°	4	45	
MD73255ASH-51605Y445	0.5*0.1*6*0.5*4*45	0.5	0.1	6	0.5	0.46	12°	4	45	

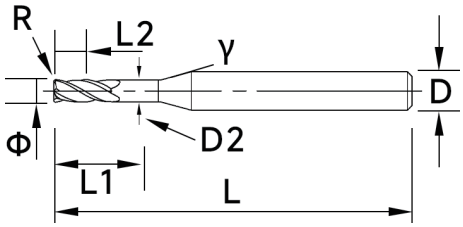
Supports Non-Standard Customization

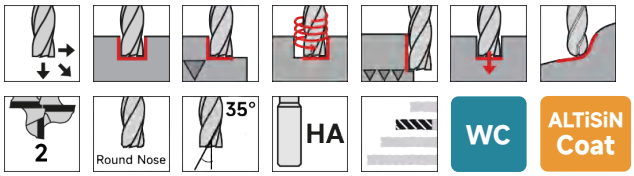
D Series

Long neck 2-flute radius end mill (03)



▶ Ultra-high precision in edge and shank diameter, high-wear-resistant coating, enables long-duration cutting of hardened steels.





● = Best ○ =Good

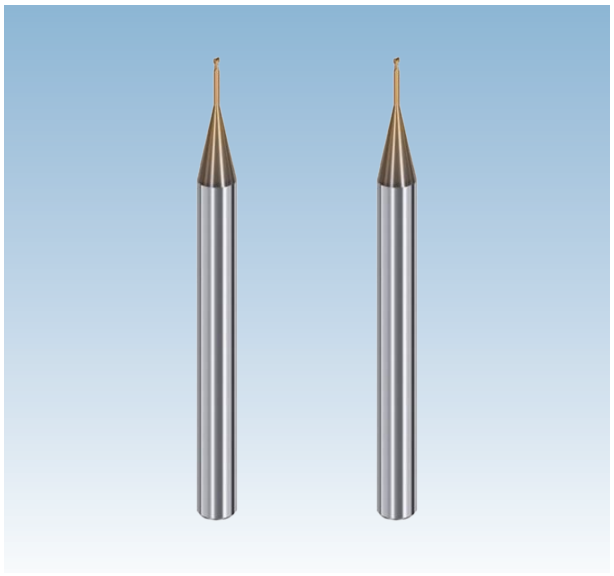
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	○		○	○	○	○	○	○	○	○

Order Number	Specification	Φ	R	L1	L2	D2	γ	D	L	Stock
MD73255ASH-51805Y445	0.5*0.1*8*0.5*4*45	0.5	0.1	8	0.5	0.46	12°	4	45	
MD73255ASH-511005Y445	0.5*0.1*10*0.5*4*45	0.5	0.1	10	0.5	0.46	12°	4	45	
MD73255ASH-602206Y445	0.6*0.02*2*0.6*4*45	0.6	0.02	2	0.6	0.56	12°	4	45	
MD73255ASH-602306Y445	0.6*0.02*3*0.6*4*45	0.6	0.02	3	0.6	0.56	12°	4	45	
MD73255ASH-602406Y445	0.6*0.02*4*0.6*4*45	0.6	0.02	4	0.6	0.56	12°	4	45	
MD73255ASH-602506Y445	0.6*0.02*5*0.6*4*45	0.6	0.02	5	0.6	0.56	12°	4	45	
MD73255ASH-602606Y445	0.6*0.02*6*0.6*4*45	0.6	0.02	6	0.6	0.56	12°	4	45	
MD73255ASH-602806Y445	0.6*0.02*8*0.6*4*45	0.6	0.02	8	0.6	0.56	12°	4	45	
MD73255ASH-6021006Y445	0.6*0.02*10*0.6*4*45	0.6	0.02	10	0.6	0.56	12°	4	45	
MD73255ASH-605206Y445	0.6*0.05*2*0.6*4*45	0.6	0.05	2	0.6	0.56	12°	4	45	
MD73255ASH-605306Y445	0.6*0.05*3*0.6*4*45	0.6	0.05	3	0.6	0.56	12°	4	45	
MD73255ASH-605406Y445	0.6*0.05*4*0.6*4*45	0.6	0.05	4	0.6	0.56	12°	4	45	
MD73255ASH-605506Y445	0.6*0.05*5*0.6*4*45	0.6	0.05	5	0.6	0.56	12°	4	45	
MD73255ASH-605606Y445	0.6*0.05*6*0.6*4*45	0.6	0.05	6	0.6	0.56	12°	4	45	
MD73255ASH-605806Y445	0.6*0.05*8*0.6*4*45	0.6	0.05	8	0.6	0.56	12°	4	45	
MD73255ASH-6051006Y445	0.6*0.05*10*0.6*4*45	0.6	0.05	10	0.6	0.56	12°	4	45	
MD73255ASH-61206Y445	0.6*0.1*2*0.6*4*45	0.6	0.1	2	0.6	0.56	12°	4	45	
MD73255ASH-61306Y445	0.6*0.1*3*0.6*4*45	0.6	0.1	3	0.6	0.56	12°	4	45	
MD73255ASH-61406Y445	0.6*0.1*4*0.6*4*45	0.6	0.1	4	0.6	0.56	12°	4	45	
MD73255ASH-61506Y445	0.6*0.1*5*0.6*4*45	0.6	0.1	5	0.6	0.56	12°	4	45	
MD73255ASH-61606Y445	0.6*0.1*6*0.6*4*45	0.6	0.1	6	0.6	0.56	12°	4	45	
MD73255ASH-61806Y445	0.6*0.1*8*0.6*4*45	0.6	0.1	8	0.6	0.56	12°	4	45	
MD73255ASH-611006Y445	0.6*0.1*10*0.6*4*45	0.6	0.1	10	0.6	0.56	12°	4	45	
MD73255ASH-62206Y445	0.6*0.2*2*0.6*4*45	0.6	0.2	2	0.6	0.56	12°	4	45	
MD73255ASH-62306Y445	0.6*0.2*3*0.6*4*45	0.6	0.2	3	0.6	0.56	12°	4	45	
MD73255ASH-62406Y445	0.6*0.2*4*0.6*4*45	0.6	0.2	4	0.6	0.56	12°	4	45	
MD73255ASH-62506Y445	0.6*0.2*5*0.6*4*45	0.6	0.2	5	0.6	0.56	12°	4	45	
MD73255ASH-62606Y445	0.6*0.2*6*0.6*4*45	0.6	0.2	6	0.6	0.56	12°	4	45	
MD73255ASH-62806Y445	0.6*0.2*8*0.6*4*45	0.6	0.2	8	0.6	0.56	12°	4	45	

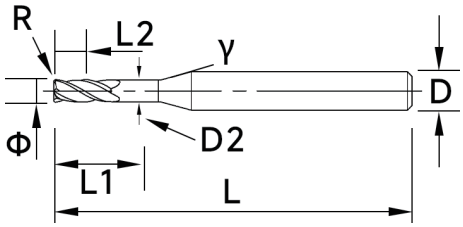
Supports Non-Standard Customization

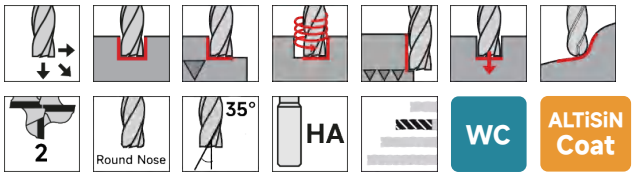
D Series

Long neck 2-flute radius end mill (04)



▶ Ultra-high precision in edge and shank diameter, high-wear-resistant coating, enables long-duration cutting of hardened steels.





● = Best ○ =Good

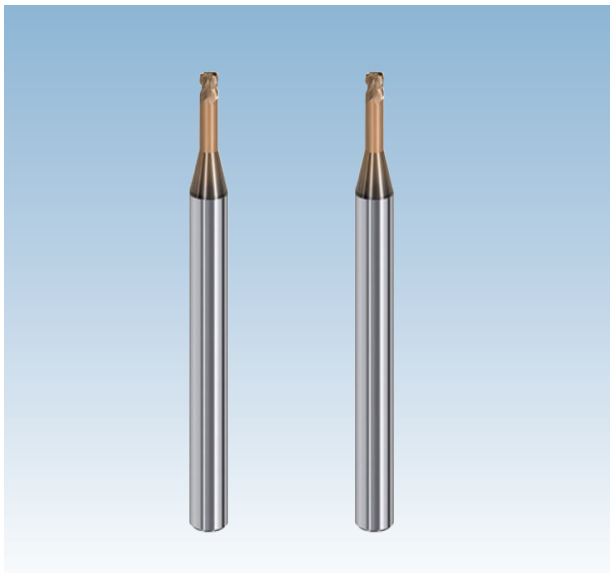
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	○		○	○	○	○	○	○	○	○

Order Number	Specification	Φ	R	L1	L2	D2	γ	D	L	Stock
MD73255ASH-621006Y445	0.6*0.2*10*0.6*4*45	0.6	0.2	10	0.6	0.56	12°	4	45	
MD73255ASH-802208Y445	0.8*0.02*2*0.8*45	0.8	0.02	2	0.8	0.76	12°	4	45	
MD73255ASH-802308Y445	0.8*0.02*3*0.8*45	0.8	0.02	3	0.8	0.76	12°	4	45	
MD73255ASH-802408Y445	0.8*0.02*4*0.8*45	0.8	0.02	4	0.8	0.76	12°	4	45	
MD73255ASH-802508Y445	0.8*0.02*5*0.8*45	0.8	0.02	5	0.8	0.76	12°	4	45	
MD73255ASH-802608Y445	0.8*0.02*6*0.8*45	0.8	0.02	6	0.8	0.76	12°	4	45	
MD73255ASH-802808Y445	0.8*0.02*8*0.8*45	0.8	0.02	8	0.8	0.76	12°	4	45	
MD73255ASH-8021008Y445	0.8*0.02*10*0.8*45	0.8	0.02	10	0.8	0.76	12°	4	45	
MD73255ASH-805208Y445	0.8*0.05*2*0.8*45	0.8	0.05	2	0.8	0.76	12°	4	45	
MD73255ASH-805308Y445	0.8*0.05*3*0.8*45	0.8	0.05	3	0.8	0.76	12°	4	45	
MD73255ASH-805408Y445	0.8*0.05*4*0.8*45	0.8	0.05	4	0.8	0.76	12°	4	45	
MD73255ASH-805508Y445	0.8*0.05*5*0.8*45	0.8	0.05	5	0.8	0.76	12°	4	45	
MD73255ASH-805608Y445	0.8*0.05*6*0.8*45	0.8	0.05	6	0.8	0.76	12°	4	45	
MD73255ASH-805808Y445	0.8*0.05*8*0.8*45	0.8	0.05	8	0.8	0.76	12°	4	45	
MD73255ASH-8051008Y445	0.8*0.05*10*0.8*45	0.8	0.05	10	0.8	0.76	12°	4	45	
MD73255ASH-81208Y445	0.8*0.1*2*0.8*45	0.8	0.1	2	0.8	0.76	12°	4	45	
MD73255ASH-81308Y445	0.8*0.1*3*0.8*45	0.8	0.1	3	0.8	0.76	12°	4	45	
MD73255ASH-81408Y445	0.8*0.1*4*0.8*45	0.8	0.1	4	0.8	0.76	12°	4	45	
MD73255ASH-81508Y445	0.8*0.1*5*0.8*45	0.8	0.1	5	0.8	0.76	12°	4	45	
MD73255ASH-81608Y445	0.8*0.1*6*0.8*45	0.8	0.1	6	0.8	0.76	12°	4	45	
MD73255ASH-81808Y445	0.8*0.1*8*0.8*45	0.8	0.1	8	0.8	0.76	12°	4	45	
MD73255ASH-811008Y445	0.8*0.1*10*0.8*45	0.8	0.1	10	0.8	0.76	12°	4	45	
MD73255ASH-82208Y445	0.8*0.2*2*0.8*45	0.8	0.2	2	0.8	0.76	12°	4	45	
MD73255ASH-82308Y445	0.8*0.2*3*0.8*45	0.8	0.2	3	0.8	0.76	12°	4	45	
MD73255ASH-82408Y445	0.8*0.2*4*0.8*45	0.8	0.2	4	0.8	0.76	12°	4	45	
MD73255ASH-82508Y445	0.8*0.2*5*0.8*45	0.8	0.2	5	0.8	0.76	12°	4	45	
MD73255ASH-82608Y445	0.8*0.2*6*0.8*45	0.8	0.2	6	0.8	0.76	12°	4	45	
MD73255ASH-82808Y445	0.8*0.2*8*0.8*45	0.8	0.2	8	0.8	0.76	12°	4	45	
MD73255ASH-821008Y445	0.8*0.2*10*0.8*45	0.8	0.2	10	0.8	0.76	12°	4	45	

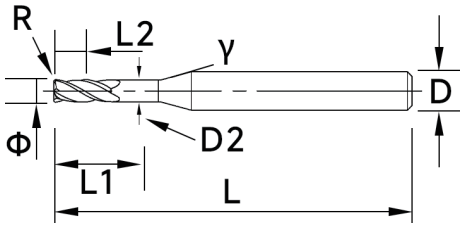
Supports Non-Standard Customization

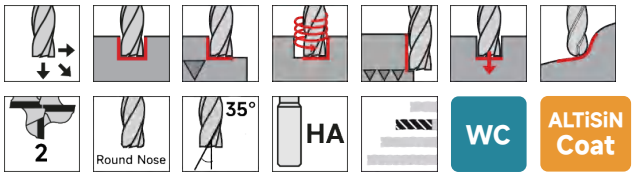
D Series

Long neck 4-flute radius end mill (01)



▶ Ultra-high precision in edge and shank diameter, high-wear-resistant coating, enables long-duration cutting of hardened steels.





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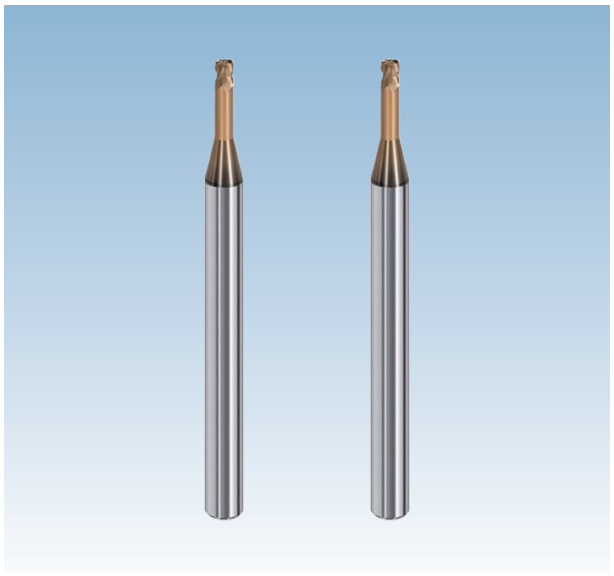
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	○		○	○	○	○	○	○	○	○

Order Number	Specification	Φ	R	L1	L2	D2	γ	D	L	Stock
MD73455ASH-10141Y450	1*0.1*4*1*4*50	1	0.1	4	1	0.95	12°	4	50	
MD73456ASH-10161Y450	1*0.1*6*1*4*50	1	0.1	6	1	0.95	12°	4	50	
MD73457ASH-10181Y450	1*0.1*8*1*4*50	1	0.1	8	1	0.95	12°	4	50	
MD73458ASH-101101Y450	1*0.1*10*1*4*50	1	0.1	10	1	0.95	12°	4	50	
MD73459ASH-101121Y450	1*0.1*12*1*4*50	1	0.1	12	1	0.95	12°	4	50	
MD73460ASH-101141Y450	1*0.1*14*1*4*50	1	0.1	14	1	0.95	12°	4	50	
MD73461ASH-101161Y450	1*0.1*16*1*4*50	1	0.1	16	1	0.95	12°	4	50	
MD73462ASH-101181Y450	1*0.1*18*1*4*50	1	0.1	18	1	0.95	12°	4	50	
MD73463ASH-101201Y450	1*0.1*20*1*4*50	1	0.1	20	1	0.95	12°	4	50	
MD73464ASH-10241Y450	1*0.2*4*1*4*50	1	0.2	4	1	0.95	12°	4	50	
MD73465ASH-10261Y450	1*0.2*6*1*4*50	1	0.2	6	1	0.95	12°	4	50	
MD73466ASH-10281Y450	1*0.2*8*1*4*50	1	0.2	8	1	0.95	12°	4	50	
MD73467ASH-102101Y450	1*0.2*10*1*4*50	1	0.2	10	1	0.95	12°	4	50	
MD73468ASH-102121Y450	1*0.2*12*1*4*50	1	0.2	12	1	0.95	12°	4	50	
MD73469ASH-102141Y450	1*0.2*14*1*4*50	1	0.2	14	1	0.95	12°	4	50	
MD73470ASH-102161Y450	1*0.2*16*1*4*50	1	0.2	16	1	0.95	12°	4	50	
MD73471ASH-102181Y450	1*0.2*18*1*4*50	1	0.2	18	1	0.95	12°	4	50	
MD73472ASH-102201Y450	1*0.2*20*1*4*50	1	0.2	20	1	0.95	12°	4	50	
MD73473ASH-1501615Y450	1.5*0.1*6*1.5*4*50	1.5	0.1	6	1.5	1.44	12°	4	50	
MD73474ASH-1501815Y450	1.5*0.1*8*1.5*4*50	1.5	0.1	8	1.5	1.44	12°	4	50	
MD73475ASH-15011015Y450	1.5*0.1*10*1.5*4*50	1.5	0.1	10	1.5	1.44	12°	4	50	
MD73476ASH-15011215Y450	1.5*0.1*12*1.5*4*50	1.5	0.1	12	1.5	1.44	12°	4	50	
MD73477ASH-15011415Y450	1.5*0.1*14*1.5*4*50	1.5	0.1	14	1.5	1.44	12°	4	50	
MD73478ASH-15011615Y450	1.5*0.1*16*1.5*4*50	1.5	0.1	16	1.5	1.44	12°	4	50	
MD73479ASH-15011815Y450	1.5*0.1*18*1.5*4*50	1.5	0.1	18	1.5	1.44	12°	4	50	
MD73480ASH-15012015Y450	1.5*0.1*20*1.5*4*50	1.5	0.1	20	1.5	1.44	12°	4	50	
MD73481ASH-1502615Y450	1.5*0.2*6*1.5*4*50	1.5	0.2	6	1.5	1.44	12°	4	50	
MD73482ASH-1502815Y450	1.5*0.2*8*1.5*4*50	1.5	0.2	8	1.5	1.44	12°	4	50	
MD73483ASH-15021015Y450	1.5*0.2*10*1.5*4*50	1.5	0.2	10	1.5	1.44	12°	4	50	

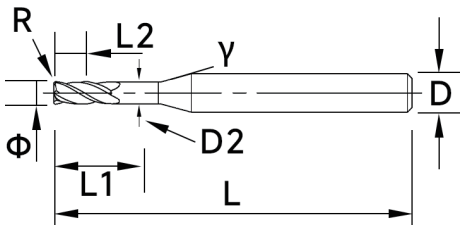
Supports Non-Standard Customization

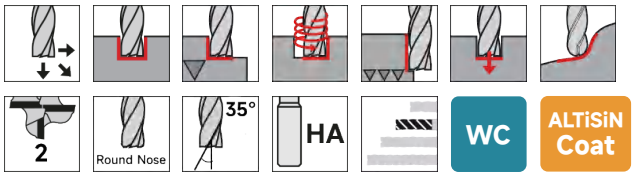
D Series

Long neck 4-flute radius end mill（02）



▶ Ultra-high precision in edge and shank diameter, high-wear-resistant coating, enables long-duration cutting of hardened steels.





● = Best ○ =Good

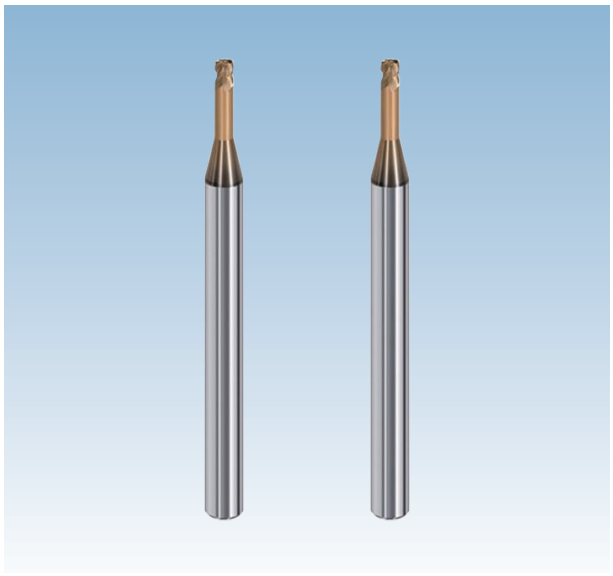
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	○		○	○	○	○	○	○	○	○

Order Number	Specification	Φ	R	L1	L2	D2	γ	D	L	Stock
MD73484ASH-15021215Y450	1.5*0.2*12*1.5*4*50	1.5	0.2	12	1.5	1.44	12°	4	50	
MD73485ASH-15021415Y450	1.5*0.2*14*1.5*4*50	1.5	0.2	14	1.5	1.44	12°	4	50	
MD73486ASH-15021615Y450	1.5*0.2*16*1.5*4*50	1.5	0.2	16	1.5	1.44	12°	4	50	
MD73487ASH-15021815Y450	1.5*0.2*18*1.5*4*50	1.5	0.2	18	1.5	1.44	12°	4	50	
MD73488ASH-15022015Y450	1.5*0.2*20*1.5*4*50	1.5	0.2	20	1.5	1.44	12°	4	50	
MD73489ASH-20162Y450	2*0.1*6*2*4*50	2	0.1	6	2	1.94	12°	4	50	
MD73490ASH-20182Y450	2*0.1*8*2*4*50	2	0.1	8	2	1.94	12°	4	50	
MD73491ASH-201102Y450	2*0.1*10*2*4*50	2	0.1	10	2	1.94	12°	4	50	
MD73492ASH-201122Y450	2*0.1*12*2*4*50	2	0.1	12	2	1.94	12°	4	50	
MD73493ASH-201142Y450	2*0.1*14*2*4*50	2	0.1	14	2	1.94	12°	4	50	
MD73494ASH-201162Y450	2*0.1*16*2*4*50	2	0.1	16	2	1.94	12°	4	50	
MD73495ASH-201182Y450	2*0.1*18*2*4*50	2	0.1	18	2	1.94	12°	4	50	
MD73496ASH-201202Y450	2*0.1*20*2*4*50	2	0.1	20	2	1.94	12°	4	50	
MD73497ASH-20262Y450	2*0.2*6*2*4*50	2	0.2	6	2	1.94	12°	4	50	
MD73498ASH-20282Y450	2*0.2*8*2*4*50	2	0.2	8	2	1.94	12°	4	50	
MD73499ASH-202102Y450	2*0.2*10*2*4*50	2	0.2	10	2	1.94	12°	4	50	
MD73500ASH-202122Y450	2*0.2*12*2*4*50	2	0.2	12	2	1.94	12°	4	50	
MD73501ASH-202142Y450	2*0.2*14*2*4*50	2	0.2	14	2	1.94	12°	4	50	
MD73502ASH-202162Y450	2*0.2*16*2*4*50	2	0.2	16	2	1.94	12°	4	50	
MD73503ASH-202182Y450	2*0.2*18*2*4*50	2	0.2	18	2	1.94	12°	4	50	
MD73504ASH-202202Y450	2*0.2*20*2*4*50	2	0.2	20	2	1.94	12°	4	50	
MD73505ASH-20562Y450	2*0.5*6*2*4*50	2	0.5	6	2	1.94	12°	4	50	
MD73506ASH-20582Y450	2*0.5*8*2*4*50	2	0.5	8	2	1.94	12°	4	50	
MD73507ASH-205102Y450	2*0.5*10*2*4*50	2	0.5	10	2	1.94	12°	4	50	
MD73508ASH-205122Y450	2*0.5*12*2*4*50	2	0.5	12	2	1.94	12°	4	50	
MD73509ASH-205142Y450	2*0.5*14*2*4*50	2	0.5	14	2	1.94	12°	4	50	
MD73510ASH-205162Y450	2*0.5*16*2*4*50	2	0.5	16	2	1.94	12°	4	50	
MD73511ASH-205182Y450	2*0.5*18*2*4*50	2	0.5	18	2	1.94	12°	4	50	
MD73512ASH-205202Y450	2*0.5*20*2*4*50	2	0.5	20	2	1.94	12°	4	50	

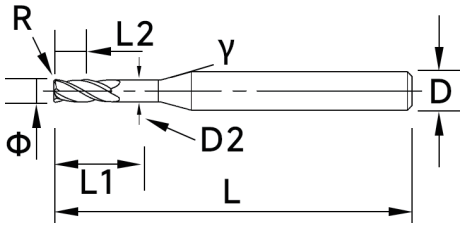
Supports Non-Standard Customization

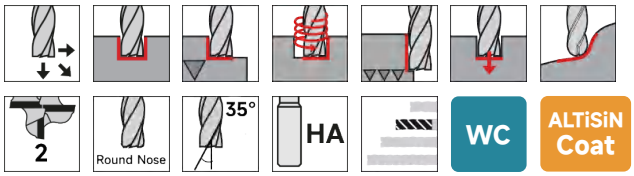
D Series

Long neck 4-flute radius end mill (03)



▶ Ultra-high precision in edge and shank diameter, high-wear-resistant coating, enables long-duration cutting of hardened steels.





● = Best ○ =Good

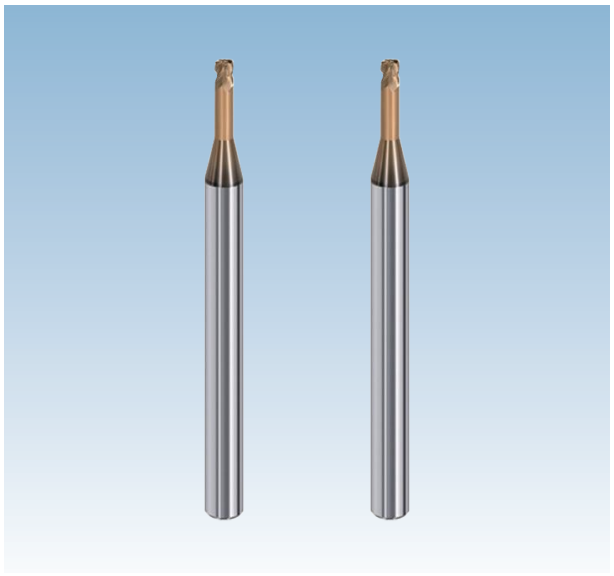
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	○		○	○	○	○	○	○	○	○

Order Number	Specification	Φ	R	L1	L2	D2	γ	D	L	Stock
MD73513ASH-301103Y450	3*0.1*10*3*4*50	3	0.1	10	3	2.92	12°	4	50	
MD73514ASH-301123Y450	3*0.1*12*3*4*50	3	0.1	12	3	2.92	12°	4	50	
MD73515ASH-301143Y450	3*0.1*14*3*4*50	3	0.1	14	3	2.92	12°	4	50	
MD73516ASH-301163Y450	3*0.1*16*3*4*50	3	0.1	16	3	2.92	12°	4	50	
MD73517ASH-301183Y450	3*0.1*18*3*4*50	3	0.1	18	3	2.92	12°	4	50	
MD73518ASH-301203Y450	3*0.1*20*3*4*50	3	0.1	20	3	2.92	12°	4	50	
MD73519ASH-302103Y450	3*0.2*10*3*4*50	3	0.2	10	3	2.92	12°	4	50	
MD73520ASH-302123Y450	3*0.2*12*3*4*50	3	0.2	12	3	2.92	12°	4	50	
MD73521ASH-302143Y450	3*0.2*14*3*4*50	3	0.2	14	3	2.92	12°	4	50	
MD73522ASH-302163Y450	3*0.2*16*3*4*50	3	0.2	16	3	2.92	12°	4	50	
MD73523ASH-302183Y450	3*0.2*18*3*4*50	3	0.2	18	3	2.92	12°	4	50	
MD73524ASH-302203Y450	3*0.2*20*3*4*50	3	0.2	20	3	2.92	12°	4	50	
MD73525ASH-305103Y450	3*0.5*10*3*4*50	3	0.5	10	3	2.92	12°	4	50	
MD73526ASH-305123Y450	3*0.5*12*3*4*50	3	0.5	12	3	2.92	12°	4	50	
MD73527ASH-305143Y450	3*0.5*14*3*4*50	3	0.5	14	3	2.92	12°	4	50	
MD73528ASH-305163Y450	3*0.5*16*3*4*50	3	0.5	16	3	2.92	12°	4	50	
MD73529ASH-305183Y450	3*0.5*18*3*4*50	3	0.5	18	3	2.92	12°	4	50	
MD73530ASH-305203Y450	3*0.5*20*3*4*50	3	0.5	20	3	2.92	12°	4	50	
MD73531ASH-302123Y660	3*0.2*12*3*6*60	3	0.2	12	3	2.92	12°	6	60	
MD73532ASH-302163Y660	3*0.2*16*3*6*60	3	0.2	16	3	2.92	12°	6	60	
MD73533ASH-302203Y660	3*0.2*20*3*6*60	3	0.2	20	3	2.92	12°	6	60	
MD73534ASH-302253Y660	3*0.2*25*3*6*60	3	0.2	25	3	2.92	12°	6	60	
MD73535ASH-305123Y660	3*0.5*12*3*6*60	3	0.5	12	3	2.92	12°	6	60	
MD73536ASH-305163Y660	3*0.5*16*3*6*60	3	0.5	16	3	2.92	12°	6	60	
MD73537ASH-305203Y660	3*0.5*20*3*6*60	3	0.5	20	3	2.92	12°	6	60	
MD73538ASH-305253Y660	3*0.5*25*3*6*60	3	0.5	25	3	2.92	12°	6	60	
MD73539ASH-302123Y675	3*0.2*12*3*6*75	3	0.2	12	3	2.92	12°	6	75	
MD73540ASH-302163Y675	3*0.2*16*3*6*75	3	0.2	16	3	2.92	12°	6	75	
MD73541ASH-302203Y675	3*0.2*20*3*6*75	3	0.2	20	3	2.92	12°	6	75	

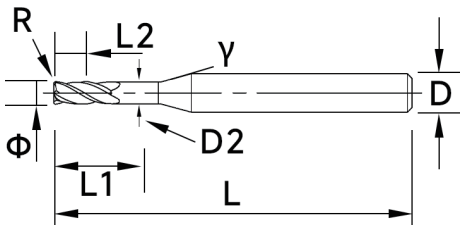
Supports Non-Standard Customization

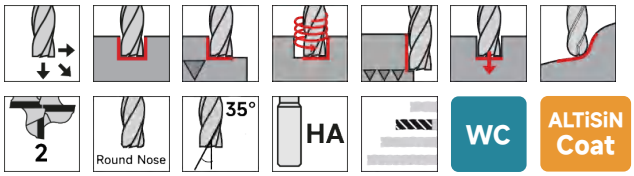
D Series

Long neck 4-flute radius end mill (04)



▶ Ultra-high precision in edge and shank diameter, high-wear-resistant coating, enables long-duration cutting of hardened steels.





● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	○		○	○	○	○	○	○	○	○

Order Number	Specification	Φ	R	L1	L2	D2	γ	D	L	Stock
MD73542ASH-302253Y675	3*0.2*25*3*6*75	3	0.2	25	3	2.92	12°	6	75	
MD73543ASH-302303Y675	3*0.2*30*3*75	3	0.2	30	3	2.92	12°	6	75	
MD73544ASH-305123Y675	3*0.5*12*3*75	3	0.5	12	3	2.92	12°	6	75	
MD73545ASH-305163Y675	3*0.5*16*3*75	3	0.5	16	3	2.92	12°	6	75	
MD73546ASH-305203Y675	3*0.5*20*3*75	3	0.5	20	3	2.92	12°	6	75	
MD73547ASH-305253Y675	3*0.5*25*3*75	3	0.5	25	3	2.92	12°	6	75	
MD73548ASH-305303Y675	3*0.5*30*3*75	3	0.5	30	3	2.92	12°	6	75	
MD73549ASH-402164Y660	4*0.2*16*4*60	4	0.2	16	4	3.9	12°	6	60	
MD73550ASH-402204Y660	4*0.2*20*4*60	4	0.2	20	4	3.9	12°	6	60	
MD73551ASH-402254Y660	4*0.2*25*4*60	4	0.2	25	4	3.9	12°	6	60	
MD73552ASH-405164Y660	4*0.5*16*4*60	4	0.5	16	4	3.9	12°	6	60	
MD73553ASH-405204Y660	4*0.5*20*4*60	4	0.5	20	4	3.9	12°	6	60	
MD73554ASH-405254Y660	4*0.5*25*4*60	4	0.5	25	4	3.9	12°	6	60	
MD73555ASH-402164Y675	4*0.2*16*4*75	4	0.2	16	4	3.9	12°	6	75	
MD73556ASH-402204Y675	4*0.2*20*4*75	4	0.2	20	4	3.9	12°	6	75	
MD73557ASH-402254Y675	4*0.2*25*4*75	4	0.2	25	4	3.9	12°	6	75	
MD73558ASH-402304Y675	4*0.2*30*4*75	4	0.2	30	4	3.9	12°	6	75	
MD73559ASH-402354Y675	4*0.2*35*4*75	4	0.2	35	4	3.9	12°	6	75	
MD73560ASH-405164Y675	4*0.5*16*4*75	4	0.5	16	4	3.9	12°	6	75	
MD73561ASH-405204Y675	4*0.5*20*4*75	4	0.5	20	4	3.9	12°	6	75	
MD73562ASH-405254Y675	4*0.5*25*4*75	4	0.5	25	4	3.9	12°	6	75	
MD73563ASH-405304Y675	4*0.5*30*4*75	4	0.5	30	4	3.9	12°	6	75	
MD73564ASH-405354Y675	4*0.5*35*4*75	4	0.5	35	4	3.9	12°	6	75	

Supports Non-Standard Customization

▶ High Precision and Stability

High precision and stability. Utilizes high-precision manufacturing processes to ensure geometric and dimensional accuracy of chamfering end mills and center drills. Maintains stability during high-speed rotation and cutting, reducing vibration and runout, ensuring consistent and accurate chamfering and drilling.

▶ Diverse Design and Applications

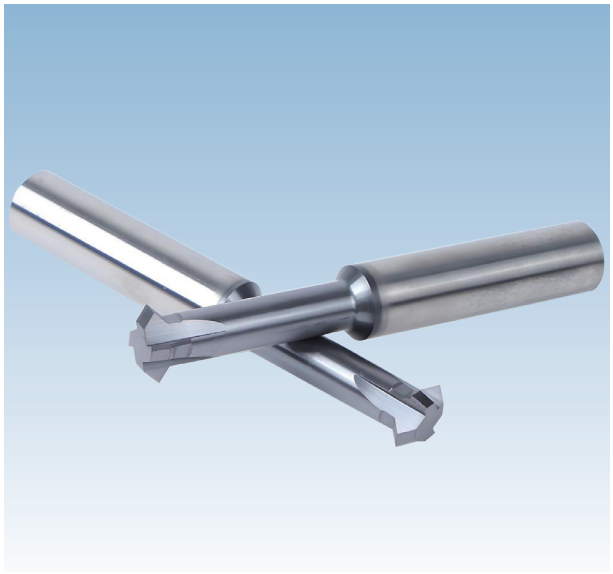
Chamfering End Mills: Offers multiple chamfer angles, such as 45° , 60° , 90° , to meet various machining needs.
Center Drills: Provides different diameters for center hole drilling, ensuring wide applicability.

▶ High-Quality Materials and Coatings

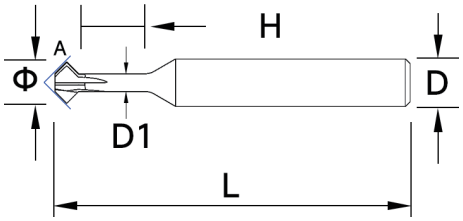
Made from high-performance materials like hard alloy, ensuring high hardness and wear resistance. Offers multiple coating options to enhance hardness, wear resistance, and anti-adhesion, extending tool life.

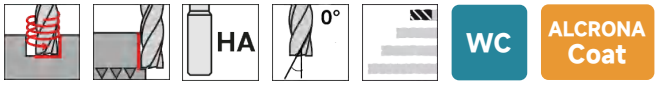
C Series

4-flute chamfering end mill



▶ Achieves efficient and stable bi-directional chamfering, featuring low cutting forces, high precision, and long life.





● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○		●		○	○	○	○	○	○		

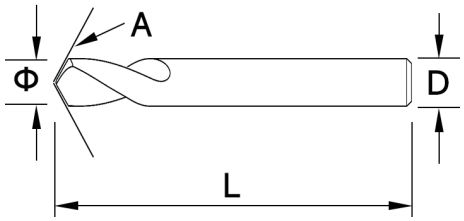
Order Number	Specification	Cutting Diameter Φ	Chamfer angle A	Clearance diameter D1	Clearance length H	Shank Diameter D	Overall Length L	Stock
MC17460ASH-019690Y10100450	1.96*90° *1.0*10*D4*50	1.96	90°	1	10	4	50	
MC17460ASH-02490Y14080450	2.4*90° *1.4*8*D4*50	2.4	90°	1.4	8	4	50	
MC17460ASH-0390Y18150450	3*90° *1.8*15*D4*50	3	90°	1.8	15	4	50	
MC17460ASH-0490Y24160450	4*90° *2.4*16*D4*50	4	90°	2.4	16	4	50	
MC17460ASH-04590Y206200550	4.5*90° *2.06*20*D5*50	4.5	90°	2.06	20	5	50	
MC17460ASH-0590Y28200650	5*90° *2.8*20*D6*50	5	90°	2.8	20	6	50	
MC17460ASH-0690Y30250650	6*90° *3.0*25*D6*50	6	90°	3	25	6	50	
MC17460ASH-0890Y48280860	8*90° *4.8*28*D8*60	8	90°	4.8	28	8	60	
MC17460ASH-1090Y63351075	10*90° *6.3*35*D10*75	10	90°	6.3	35	10	75	
MC17460ASH-1290Y705012100	12*90° *7.0*50*D12*100	12	90°	7	50	12	100	

Supports Non-Standard Customization

C Series

NC Spot drill

▶ Precise positioning, efficient machining. Double-flute design ensures stability and long life, providing reliable support for your precision machining.



● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○		●		○	○	○	○	○	○		

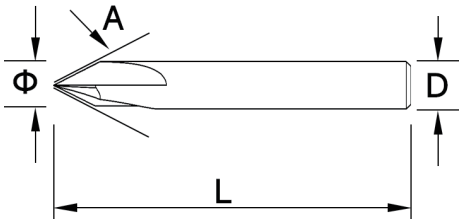
Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Angle A	Shank Diameter D	Overall Length L	Stock
MC77260ASH-10.5N450	Φ1*0.5*D4*50L*2F	2	1	60° /90°	4	50	
MC77260ASH-26N450	Φ2*6*D4*50L*2F	2	2	60° /90°	4	50	
MC77260ASH-36N450	Φ3*6*D4*50L*2F	2	3	60° /90°	4	50	
MC77260ASH-46N450	Φ4*6*D4*50L*2F	2	4	60° /90°	4	50	
MC77260ASH-610N650	Φ6*10*D6*50L*2F	2	6	60° /90°	6	50	
MC77260ASH-812N860	Φ8*12*D8*60L*2F	2	8	60° /90°	8	60	
MC77260ASH-1015N1075	Φ10*15*D10*75L*2F	2	10	60° /90°	10	75	
MC77260ASH-1215N1275	Φ12*15*D12*75L*2F	2	12	60° /90°	12	75	

Supports Non-Standard Customization

C Series

Chamfering end mill

▶ Universal multi-angle chamfering end mill. Ensures efficient and precise chamfering, suitable for various materials, with high surface quality and long life.



● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○		●		○	○	○	○	○	○		

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Angle A	Shank Diameter D	Overall Length L	Stock
MC77260ASH-10.5N450	Φ1*0.5*D4*50L*2F	2	1	30° /60° /90° /120°	4	50	
MC77260ASH-26N450	Φ2*6*D4*50L*2F	2	2	30° /60° /90° /120°	4	50	
MC77260ASH-36N450	Φ3*6*D4*50L*2F	2	3	30° /60° /90° /120°	4	50	
MC77260ASH-46N450	Φ4*6*D4*50L*2F	2	4	30° /60° /90° /120°	4	50	
MC77260ASH-610N650	Φ6*10*D6*50L*2F	2	6	30° /60° /90° /120°	6	50	
MC77260ASH-812N860	Φ8*12*D8*60L*2F	2	8	30° /60° /90° /120°	8	60	
MC77260ASH-1015N1075	Φ10*15*D10*75L*2F	2	10	30° /60° /90° /120°	10	75	
MC77260ASH-1215N1275	Φ12*15*D12*75L*2F	2	12	30° /60° /90° /120°	12	75	

Supports Non-Standard Customization

Precise Milling, Efficient Processing

The T-slot end mill features cutting edges specifically designed for T-slots, ensuring precise contour matching and depth control during milling. This precision reduces machining errors and improves efficiency.

Durable Materials, Long-lasting Sharpness

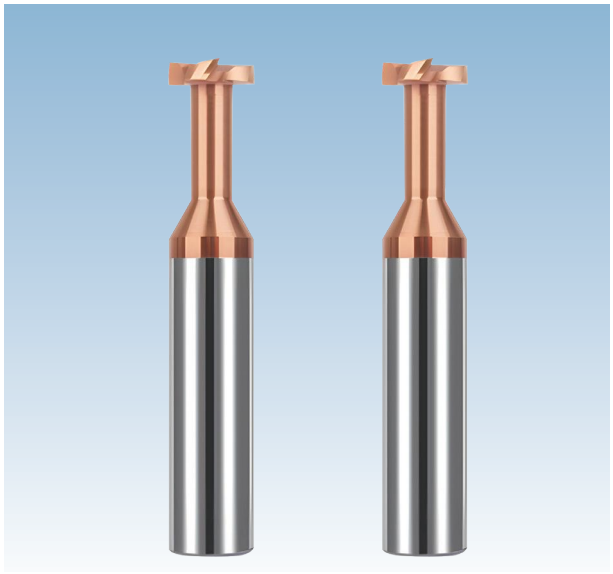
Made from hard alloy and coated with high-performance materials, our T-slot end mills offer excellent wear resistance and impact resistance. They remain sharp during long and intensive operations, reducing replacement frequency and lowering production costs while improving efficiency.

Versatility, Wide Application

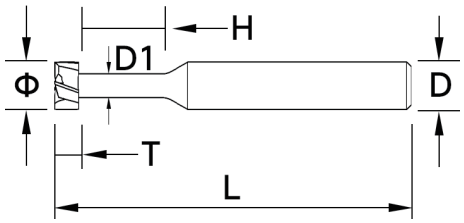
Our T-slot end mills are available in various sizes and depths, providing high flexibility. They are widely used in industries such as mechanical manufacturing and mold processing, offering a one-stop solution for users.

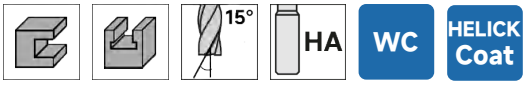
T Series

T-slot square end mill (HELICK Coating)



▶ High-strength hard alloy with high rigidity, stability, and long life.
Suitable for various materials, achieving efficient and precise milling.





● = Best ○ =Good

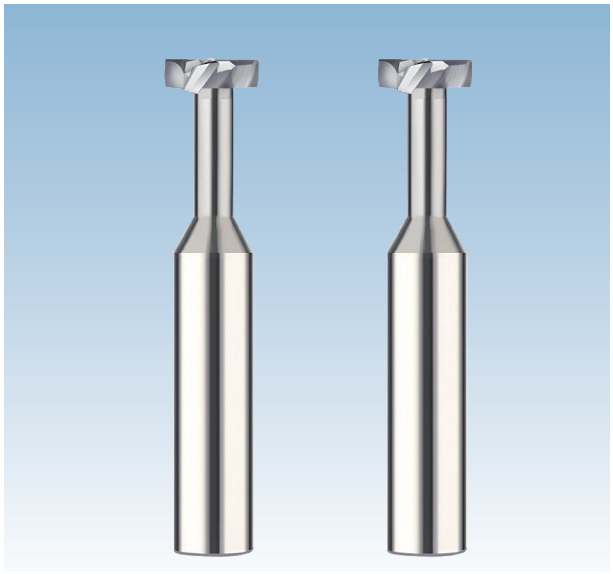
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○		●		○	○	○	○	○	○		

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Thickness T	Clearance diameter D1	Clearance length H	Shank Diameter D	Overall Length L	Stock
MT71460ASH-030530Y15050450	D3*0.5H*D4*50L*4F	4	3	0.5-3.0	1.5	5	4	50	
MT71460ASH-040550Y2060450	D4*0.5H*D4*50L*4F	4	4	0.5-5.0	2	6	4	50	
MT71461ASH-060560Y3090650	D6*0.5H*D6*50L*4F	4	6	0.5-6.0	3	9	6	50	
MT71462ASH-080580Y4120850	D8*0.5H*D8*50L*4F	4	8	0.5-8.0	4	12	8	50	
MT71463ASH-100510Y5151060	D10*0.5H*D10*60L*4F	4	10	0.5-10.0	5	15	10	60	
MT71464ASH-120512Y6181260	D12*0.5H*D12*60L*4F	4	12	0.5-12.0	6	18	12	60	
MT71465ASH-142080Y7251475	D14*2.0H*D14*75L*4F	4	14	2.0-8.0	7	25	14	75	
MT71466ASH-162080Y8251675	D16*2.0H*D16*75L*4F	4	16	2.0-8.0	8	25	16	75	
MT71466ASH-202012Y10252075	D20*2.0H*D16*75L*4F	4	20	2.0-12.0	10	25	20	75	

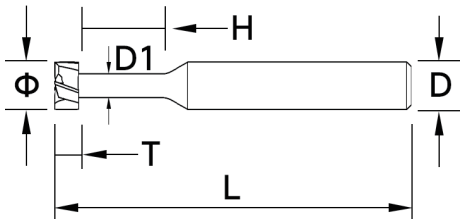
Supports Non-Standard Customization

T Series

T-slot square end mill (Uncoated)



▶ High-strength hard alloy with high rigidity, stability, and long life.
Suitable for various materials, achieving efficient and precise milling.



● = Best ○ =Good

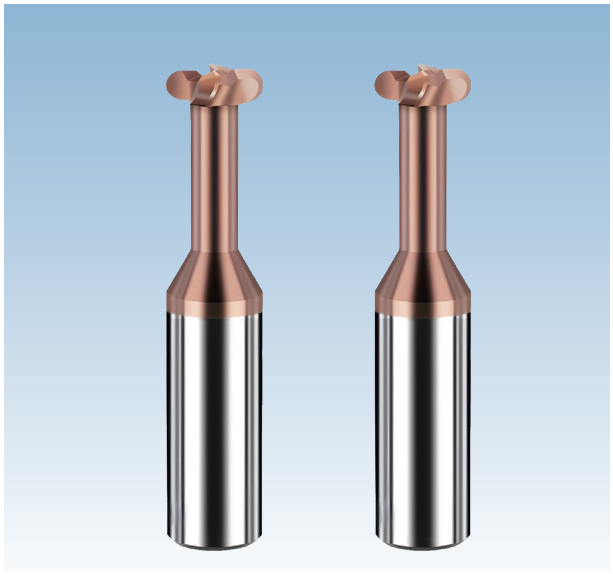
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
									●	●	○	○		

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Thickness T	Clearance diameter D1	Clearance length H	Shank Diameter D	Overall Length L	Stock
MT01445ASH-030530Y15050450	D3*0.5H*D4*50L*4F	4	3	0.5-3.0	1.5	5	4	50	
MT01445ASH-040550Y2060450	D4*0.5H*D4*50L*4F	4	4	0.5-5.0	2	6	4	50	
MT01445ASH-060560Y3090650	D6*0.5H*D6*50L*4F	4	6	0.5-6.0	3	9	6	50	
MT01445ASH-080580Y4120850	D8*0.5H*D8*50L*4F	4	8	0.5-8.0	4	12	8	50	
MT01445ASH-100510Y5151060	D10*0.5H*D10*60L*4F	4	10	0.5-10.0	5	15	10	60	
MT01445ASH-120512Y6181260	D12*0.5H*D12*60L*4F	4	12	0.5-12.0	6	18	12	60	
MT01445ASH-142080Y7251475	D14*2.0H*D14*75L*4F	4	14	2.0-8.0	7	25	14	75	
MT01445ASH-162080Y8251675	D16*2.0H*D16*75L*4F	4	16	2.0-8.0	8	25	16	75	
MT01445ASH-202012Y10252075	D20*2.0H*D16*75L*4F	4	20	2.0-12.0	10	25	20	75	

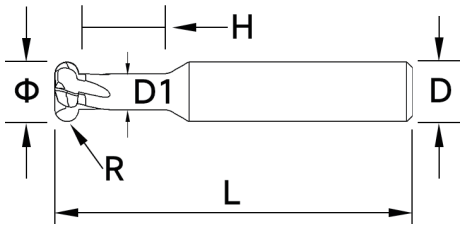
Supports Non-Standard Customization

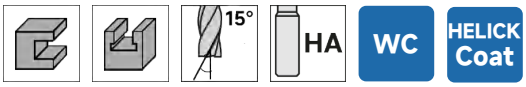
T Series

T-slot Full radius end mill (HELICK Coating)



▶ High-strength hard alloy with high rigidity, stability, and long life.
Suitable for various materials, achieving efficient and precise milling.





● = Best ○ =Good

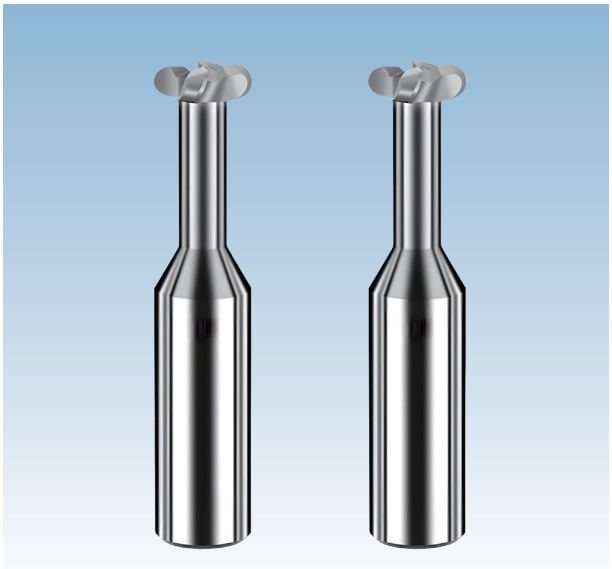
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○		●		○	○	○	○	○	○		

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Thickness T	Clearance diameter D1	Clearance length H	Shank Diameter D	Overall Length L	Stock
MT72460ASH-0302515Y015050450	D3*0.5H*D4*50L*4F	4	3	R0.25-R1.5	1.5	5	4	50	
MT72460ASH-0402525Y02060450	D4*0.5H*D4*50L*4F	4	4	R0.25-R2.5	2	6	4	50	
MT72460ASH-0602530Y03090650	D6*0.5H*D6*50L*4F	4	6	R0.25-R3.0	3	9	6	50	
MT72460ASH-0802530Y04120850	D8*0.5H*D8*50L*4F	4	8	R0.25-R3.0	4	12	8	50	
MT72460ASH-1002550Y05151060	D10*0.5H*D10*60L*4F	4	10	R0.25-R5.0	5	15	10	60	
MT72460ASH-1202560Y06181260	D12*0.5H*D12*60L*4F	4	12	R0.25-R6.0	6	18	12	60	
MT72460ASH-1402560Y07251475	D14*2.0H*D14*75L*4F	4	14	R0.25-R6.0	7	25	14	75	
MT72460ASH-1602560Y08251675	D16*2.0H*D16*75L*4F	4	16	R0.25-R6.0	8	25	16	75	

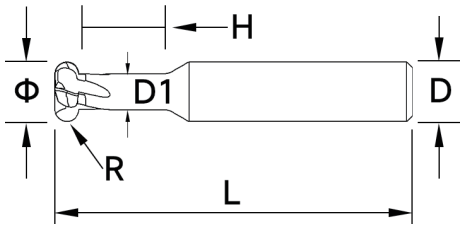
Supports Non-Standard Customization

T Series

T-slot Full radius end mill（Uncoated）



▶ High-strength hard alloy with high rigidity, stability, and long life.
Suitable for various materials, achieving efficient and precise milling.



● = Best ○ =Good

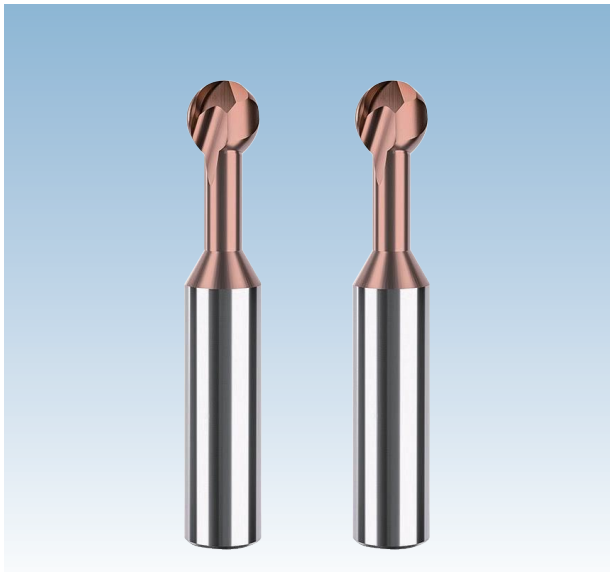
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
									●	●	○	○		

Order Number	Specification	Number of Flutes T	Cutting Diameter Φ	Thickness T	Clearance diameter D1	Clearance length H	Shank Diameter D	Overall Length L	Stock
MT02445ASH-0302515Y015050450	D3*0.5H*D4*50L*4F	4	3	R0.25-R1.5	1.5	5	4	50	
MT02445ASH-0402525Y02060450	D4*0.5H*D4*50L*4F	4	4	R0.25-R2.5	2	6	4	50	
MT02445ASH-0602530Y03090650	D6*0.5H*D6*50L*4F	4	6	R0.25-R3.0	3	9	6	50	
MT02445ASH-0802530Y04120850	D8*0.5H*D8*50L*4F	4	8	R0.25-R3.0	4	12	8	50	
MT02445ASH-1002550Y05151060	D10*0.5H*D10*60L*4F	4	10	R0.25-R5.0	5	15	10	60	
MT02445ASH-1202560Y06181260	D12*0.5H*D12*60L*4F	4	12	R0.25-R6.0	6	18	12	60	
MT02445ASH-1402560Y07251475	D14*2.0H*D14*75L*4F	4	14	R0.25-R6.0	7	25	14	75	
MT02445ASH-1602560Y08251675	D16*2.0H*D16*75L*4F	4	16	R0.25-R6.0	8	25	16	75	

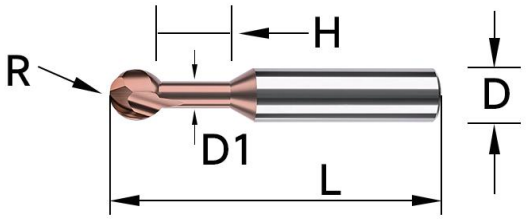
Supports Non-Standard Customization

T Series

Lollipop End Mill



▶ Lollipop End Mill made from high-strength tungsten carbide, ensuring high rigidity, stability, and long life. Suitable for various materials, it delivers efficient and precise milling.



● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●						●					○	○

定货号 Order Number	Specification	R	D1	H	D	L	库存 Stock
MT02455ASH-5Y52450	R0.5*2*D4*50L	0.5	0.5	2	4	50	
MT02455ASH-75Y753450	R0.75*3*D4*50L	0.75	0.75	3	4	50	
MT02455ASH-1Y14450	R1*4*D4*50L	1	1	4	4	50	
MT02455ASH-125Y1254450	R1.25*4*D4*50	1.25	1.25	4	4	50	
MT02455ASH-15Y156450	R1.5*6*D4*50L	1.5	1.5	6	4	50	
MT02455ASH-175Y1756450	R1.75*6*D4*50L	1.75	1.75	6	4	50	
MT02455ASH-2Y26450	R2*6*D4*50L	2	2	6	4	50	
MT02455ASH-25Y2510650	R2.5*10*D6*50L	2.5	2.5	10	6	50	
MT02455ASH-3Y310660	R3*10*D6*60L	3	3	10	6	60	
MT02455ASH-35Y3511660	R3.5*11*D6*60L	3.5	3.5	11	6	60	
MT02455ASH-4Y412860	R4*12*D8*60L	4	4	12	8	60	
MT02455ASH-5Y5151060	R5*15*D10*60L	5	5	15	10	60	
MT02455ASH-6Y6151060	R6*15*D10*60L	6	6	15	10	60	
MT02455ASH-7Y7251475	R7*25*D14*75L	7	7	25	14	75	
MT02455ASH-8Y8251675	R8*25*D16*75L	8	8	25	16	75	
MT02455ASH-9Y9251875	R9**25*D18*75L	9	9	25	18	75	
MT02455ASH-10Y10252075	R10*25*D20*75L	10	10	25	20	75	
MT02455ASH-1Y110475	R1*10*D4*75	1	1	10	4	75	
MT02455ASH-2Y216475	R2*16*D4*75	2	2	16	4	75	
MT02455ASH-25Y2520675	R2.5*20*D6*75	2.5	2.5	20	6	75	
MT02455ASH-3Y325675	R3*25*D6*75L	3	3	25	6	75	
MT02455ASH-3Y3406100	R3*40*D6*100	3	3	40	6	100	
MT02455ASH-4Y4408100	R4*40*D8*100L	4	4	40	8	100	
MT02455ASH-5Y54010100	R5*40*D10*100L	5	5	40	10	100	
MT02455ASH-6Y64012100	R6*40*D12*100	6	6	40	12	100	

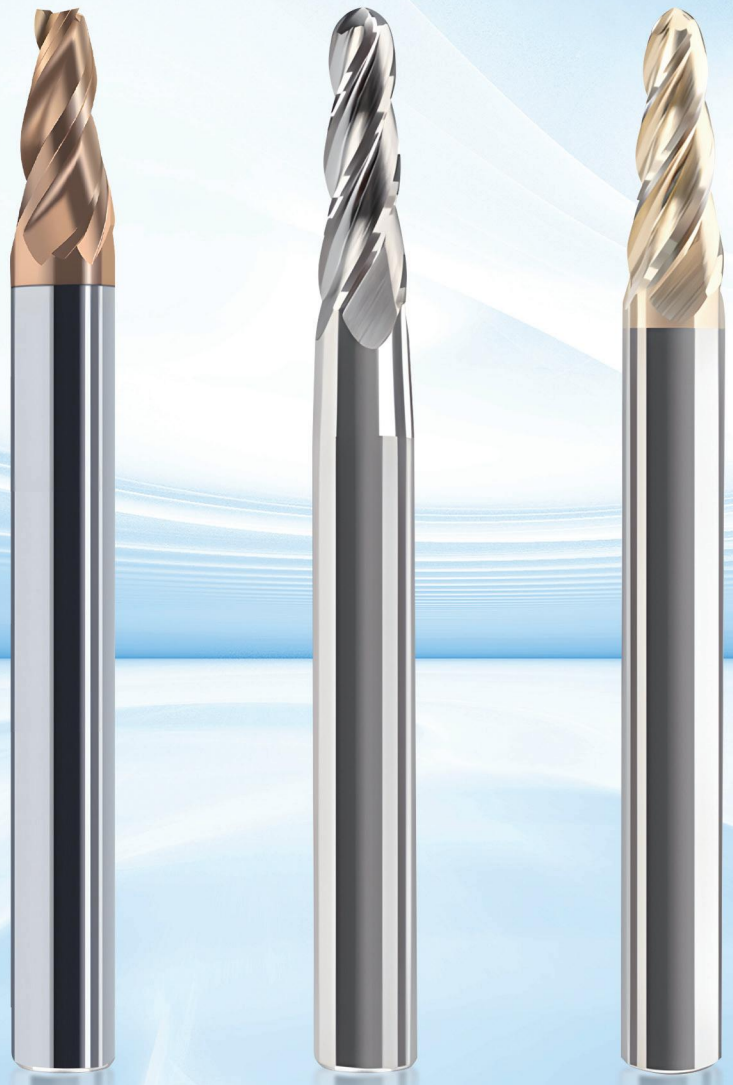
Supports Non-Standard Customization

▶ High Precision and Complex Machining Capabilities

The S series tapered end mills are renowned for their high precision and ability to handle complex machining tasks. They are particularly suitable for machining tapered holes and special-angle molds. These tools ensure processing accuracy in high-precision industries such as aerospace and automotive manufacturing, meeting stringent industry standards.

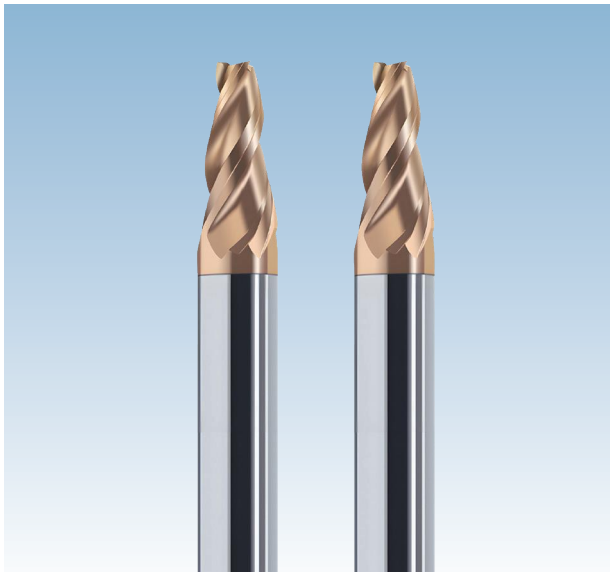
▶ Durability and Long Life

Made from hard alloy and coated with high-performance materials, these end mills offer excellent wear resistance and impact resistance. They maintain sharpness during long and intensive operations, reducing replacement frequency and lowering production costs.

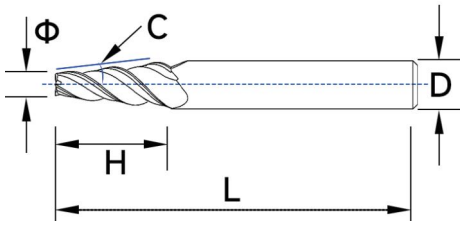


W Series

Tapered square end mill



▶ Precise taper design ensures high precision and stability, suitable for efficient conical surface machining of various materials.



● = Best ○ =Good

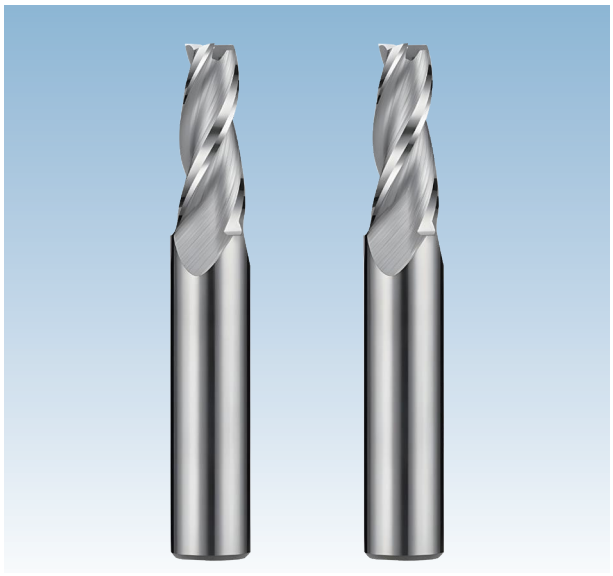
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○		●		○	○	○	○	○	○		

Order Number	Specification	Cutting Diameter Φ	Taper C	Cutting Length H	Overall Length L	Shank Diameter D	Number of Flutes T	Stock
MW25360ASH-40515N650	4*0.5° *15*6D	4	0.5°	15	50	6	3	
MW25360ASH-4115N650	4*1° *15*6D	4	1°	15	50	6	3	
MW25360ASH-41515N650	4*1.5° *15*6D	4	1.5°	15	50	6	3	
MW25360ASH-4215N650	4*2° *15*6D	4	2°	15	50	6	3	
MW25360ASH-4315N650	4*3° *15*6D	4	3°	15	50	6	3	
MW25360ASH-4415N650	4*4° *15*6D	4	4°	15	50	6	3	
MW25360ASH-3515N650	3*5° *15*6D	3	5°	15	50	6	3	
MW25360ASH-60520N850	6*0.5° *20*8D	6	0.5°	20	50	8	3	
MW25360ASH-6120N850	6*1° *20*8D	6	1°	20	50	8	3	
MW25360ASH-61520N850	6*1.5° *20*8D	6	1.5°	20	50	8	3	
MW25360ASH-6220N850	6*2° *20*8D	6	2°	20	50	8	3	
MW25360ASH-6318N850	6*3° *19*8D	6	3°	18	50	8	3	
MW25360ASH-6415N850	6*4° *15*8D	6	4°	15	50	8	3	
MW25360ASH-4515N850	4*5° *15*8D	4	5°	15	50	8	3	
MW25360ASH-4814N850	4*8° *14*8D	4	8°	14	50	8	3	
MW25360ASH-31015N850	3*10° *15*8D	3	10°	15	50	8	3	
MW25360ASH-80525N1060	8*0.5° *25*10D	8	0.5°	25	60	10	3	
MW25360ASH-8125N1060	8*1° *25*10D	8	1°	25	60	10	3	
MW25360ASH-8520N1060	6*5° *20*10D	8	5°	20	60	10	3	
MW25360ASH-41015N1060	4*10° *15*10D	4	10°	15	60	10	3	
MW25360ASH-31513N1060	3*15° *13*10D	3	15°	13	60	10	3	
MW25360ASH-6820N1260	6*8° *20*12D	6	8°	20	60	12	3	
MW25360ASH-61017N1260	6*10° *17*12D	6	10°	17	60	12	3	
MW25360ASH-41515N1260	4*15° *15*12D	4	15°	15	60	12	3	
MW25360ASH-61519N1670	6*15° *19*16D	6	15°	19	70	16	3	

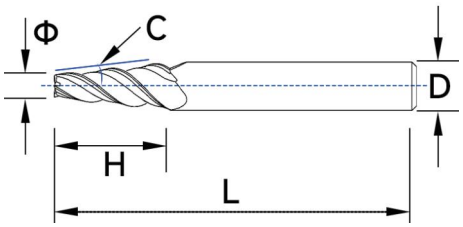
Supports Non-Standard Customization

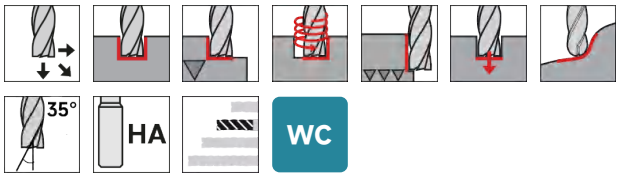
W Series

Tapered square end mill - Uncoated



▶ Precise taper design ensures high precision and stability, suitable for efficient conical surface machining of various materials.





● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
									●	●	○	○		

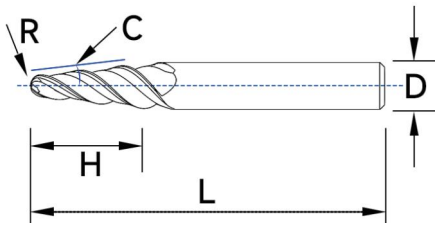
Order Number	Specification	Cutting Diameter Φ	Taper C	Cutting Length H	Overall Length L	Shank Diameter D	Number of Flutes T	Stock
MW05360ASH-40515N650	4*0.5° *15*6D	4	0.5°	15	50	6	3	
MW05360ASH-4115N650	4*1° *15*6D	4	1°	15	50	6	3	
MW05360ASH-41515N650	4*1.5° *15*6D	4	1.5°	15	50	6	3	
MW05360ASH-4215N650	4*2° *15*6D	4	2°	15	50	6	3	
MW05360ASH-4315N650	4*3° *15*6D	4	3°	15	50	6	3	
MW05360ASH-4415N650	4*4° *15*6D	4	4°	15	50	6	3	
MW05360ASH-3515N650	3*5° *15*6D	3	5°	15	50	6	3	
MW05360ASH-60520N850	6*0.5° *20*8D	6	0.5°	20	50	8	3	
MW05360ASH-6120N850	6*1° *20*8D	6	1°	20	50	8	3	
MW05360ASH-61520N850	6*1.5° *20*8D	6	1.5°	20	50	8	3	
MW05360ASH-6220N850	6*2° *20*8D	6	2°	20	50	8	3	
MW05360ASH-6318N850	6*3° *19*8D	6	3°	18	50	8	3	
MW05360ASH-6415N850	6*4° *15*8D	6	4°	15	50	8	3	
MW05360ASH-4515N850	4*5° *15*8D	4	5°	15	50	8	3	
MW05360ASH-4814N850	4*8° *14*8D	4	8°	14	50	8	3	
MW05360ASH-31015N850	3*10° *15*8D	3	10°	15	50	8	3	
MW05360ASH-80525N1060	8*0.5° *25*10D	8	0.5°	25	60	10	3	
MW05360ASH-8125N1060	8*1° *25*10D	8	1°	25	60	10	3	
MW05360ASH-8520N1060	6*5° *20*10D	8	5°	20	60	10	3	
MW05360ASH-41015N1060	4*10° *15*10D	4	10°	15	60	10	3	
MW05360ASH-31513N1060	3*15° *13*10D	3	15°	13	60	10	3	
MW05360ASH-6820N1260	6*8° *20*12D	6	8°	20	60	12	3	
MW05360ASH-61017N1260	6*10° *17*12D	6	10°	17	60	12	3	
MW05360ASH-41515N1260	4*15° *15*12D	4	15°	15	60	12	3	
MW05360ASH-61519N1670	6*15° *19*16D	6	15°	19	70	16	3	

Supports Non-Standard Customization

W Series

Tapered ball nose end mill

▶ Precise taper design ensures high precision and stability, suitable for efficient conical surface machining of various materials.



● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○		●		○	○	○	○	○	○		

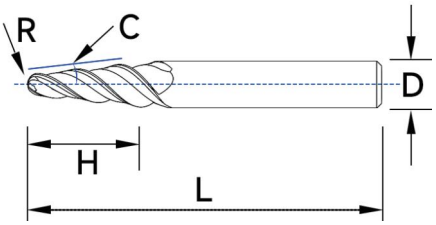
Order Number	Specification	Cutting Diameter Φ	Taper C	Cutting Length H	Overall Length L	Shank Diameter D	Number of Flutes T	Stock
MW22260ASH-1038N460	R1.0*3° *8H*60L*D4*2F	1.0	3°	8	60	4	2	
MW22260ASH-1058N675	R1.0*5° *8H*75L*D6*2F	1.0	5°	8	75	6	2	
MW22260ASH-15312N675	R1.5*3° *12H*75L*D6*2F	1.5	3°	12	75	6	2	
MW22260ASH-15512N675	R1.5*5° *12H*75L*D6*2F	1.5	5°	12	75	6	2	
MW22260ASH-20316N8100	R2.0*3° *16H*100L*D8*2F	2.0	3°	16	100	8	2	
MW22260ASH-20516N8100	R2.0*5° *16H*100L*D8*2F	2.0	5°	16	100	8	2	
MW22460ASH-30324N10100	R3.0*3° *24H*100L*D10*4F	3.0	3°	24	100	10	4	
MW22460ASH-30524N10100	R3.0*5° *24H*100L*D10*4F	3.0	5°	24	100	10	4	

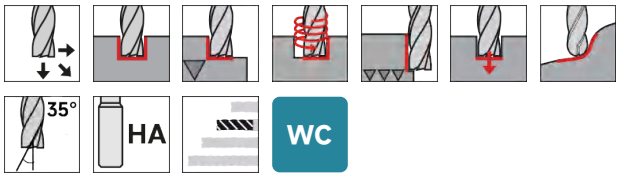
Supports Non-Standard Customization

W Series

Tapered ball nose end mill- Uncoated

▶ Precise taper design ensures high precision and stability, suitable for efficient conical surface machining of various materials.





● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
									●	●	○	○		

Order Number	Specification	Cutting Diameter Φ	Taper C	Cutting Length H	Overall Length L	Shank Diameter D	Number of Flutes T	Stock
MW02260ASH-1038N460	R1.0*3° *8H*60L*D4*2F	1.0	3°	8	60	4	2	
MW02260ASH-1058N675	R1.0*5° *8H*75L*D6*2F	1.0	5°	8	75	6	2	
MW02260ASH-15312N675	R1.5*3° *12H*75L*D6*2F	1.5	3°	12	75	6	2	
MW02260ASH-15512N675	R1.5*5° *12H*75L*D6*2F	1.5	5°	12	75	6	2	
MW02260ASH-20316N8100	R2.0*3° *16H*100L*D8*2F	2.0	3°	16	100	8	2	
MW02260ASH-20516N8100	R2.0*5° *16H*100L*D8*2F	2.0	5°	16	100	8	2	
MW02460ASH-30324N10100	R3.0*3° *24H*100L*D10*4F	3.0	3°	24	100	10	4	
MW02460ASH-30524N10100	R3.0*5° *24H*100L*D10*4F	3.0	5°	24	100	10	4	

Supports Non-Standard Customization

High precision versatile size design

High precision: Advanced processes control thread size errors to minimal values (e.g., M8 - 1.25 thread, error within ±0.005mm)

Versatility: Different sizes of threads with the same pitch can be machined using a single end mill by adjusting parameters. Reduces tool changes, increases efficiency by 30%, and lowers tool costs by 20%.

High-quality coating and unique cutting edge design

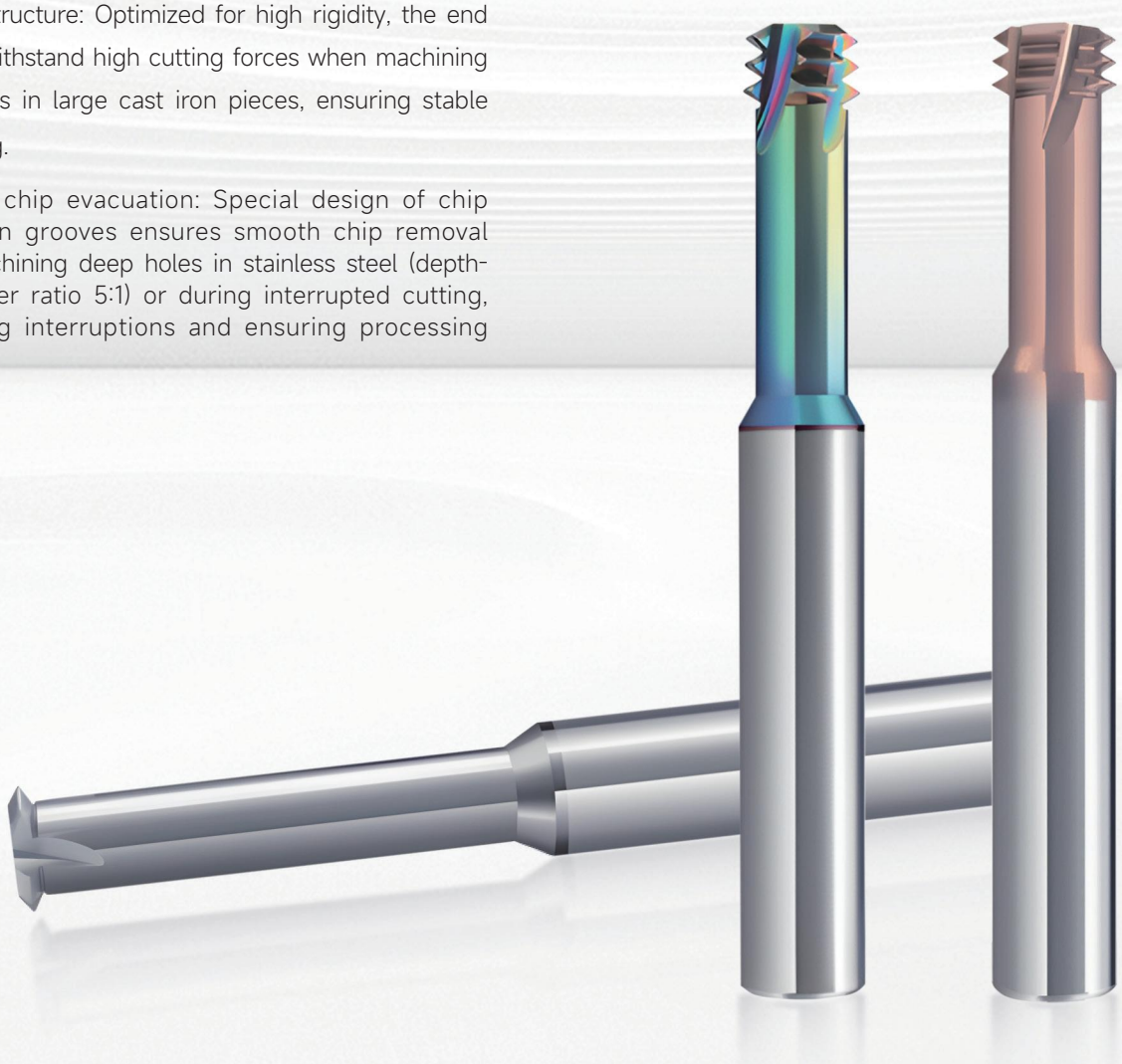
Excellent coating technology: Offers multiple high-performance coatings for different materials, such as AITISIN, HELICK, and diamond coatings for graphite.

Versatility: Multiple flutes with precise cutting edges (grinding angle ±0.1 °) ensure smooth and efficient cutting. In aerospace part machining, tool life is extended by 60%, addressing wear and quality issues in hard materials.

Rational structure, excellent chip evacuation

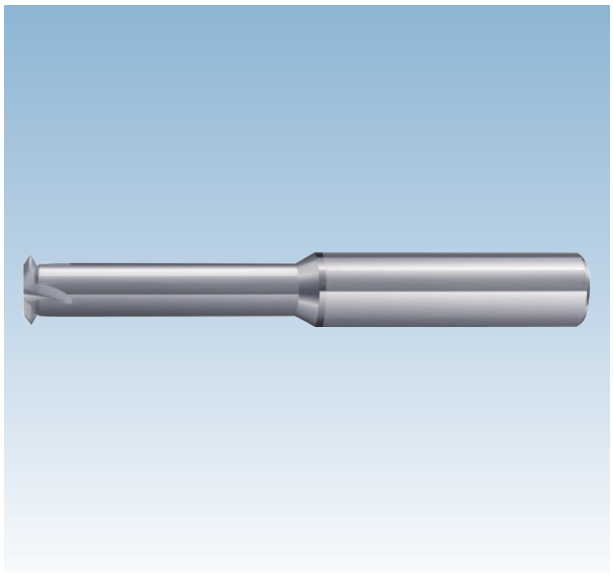
Rational structure: Optimized for high rigidity, the end mill can withstand high cutting forces when machining deep holes in large cast iron pieces, ensuring stable processing.

Excellent chip evacuation: Special design of chip evacuation grooves ensures smooth chip removal when machining deep holes in stainless steel (depth-to-diameter ratio 5:1) or during interrupted cutting, preventing interruptions and ensuring processing quality.

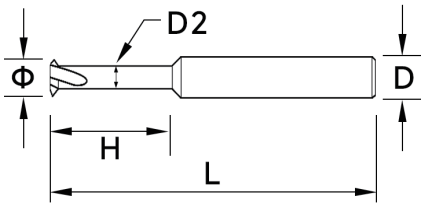


P Series

Single-Tooth Thread Milling Cutter for Steel



▶ Single-thread milling cutter: Low cutting resistance, high versatility, easy to use. Extended clearance design suitable for deep holes and complex threads.



● = Best ○ =Good

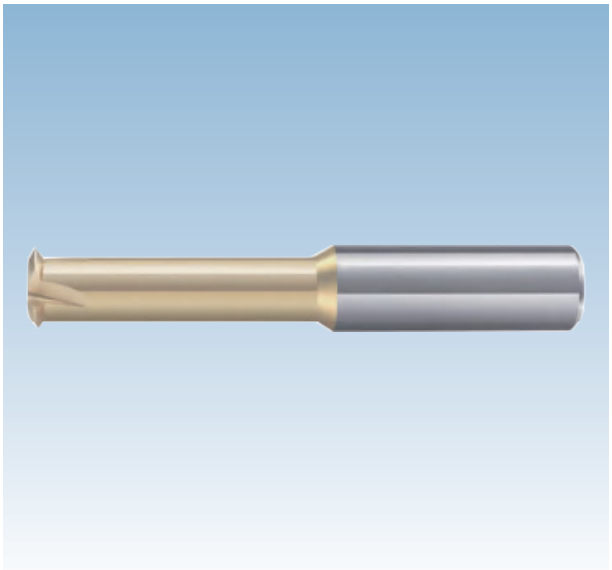
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	○				●	●						

Order Number	Specification	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP17245ASH-05503215Y4501	M0.8*0.2	0.55	0.32	1.5	4	50	2	
MP17245ASH-062503518Y4501	M0.9*0.225	0.625	0.35	1.8	4	50	2	
MP17245ASH-070433Y4501	M1.0*0.25	0.7	0.43	3	4	50	2	
MP17245ASH-0906336Y4501	M1.2*0.25	0.9	0.63	3.6	4	50	2	
MP17345ASH-105074Y4501	M1.4*0.3	1.05	0.7	4	4	50	3	
MP17345ASH-120845Y4501	M1.6*0.35	1.2	0.8	4.5	4	50	3	
MP17345ASH-155096Y4501	M2.0*0.4	1.55	0.9	6	4	50	3	
MP17445ASH-1961365Y4501	M2.5*0.45	1.96	1.3	6.5	4	50	4	
MP17445ASH-235168Y4501	M3.0*0.5	2.35	1.6	8	4	50	4	
MP17445ASH-3152110Y4501	M4.0*0.7	3.15	2.1	10	4	50	4	
MP17445ASH-392812Y4501	M5.0*0.8	3.9	2.8	12	4	50	4	
MP17445ASH-483415Y6501	M6.0*1.0	4.8	3.4	15	6	50	4	
MP17445ASH-604220Y6601	M8.0*1.25	6.0	4.2	20	6	60	4	
MP17445ASH-775625Y8601	M10*1.5	7.7	5.6	25	8	60	4	
MP17445ASH-967330Y10751	M12*1.75	9.6	7.3	30	10	75	4	
MP17445ASH-107336Y10751	M14*2.0	10	7.3	36	10	75	4	
MP17445ASH-128838Y12751	M18*2.5	12	8.8	38	12	75	4	
MP17645ASH-1410248Y141001	M24*3.0	14	10.2	48	14	100	6	
MP17645ASH-1611550Y161001	M30*3.5	16	11.5	50	16	100	6	

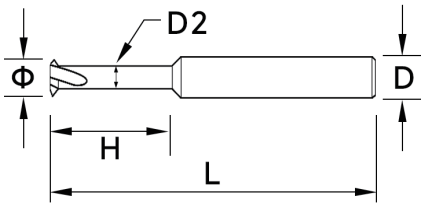
Supports Non-Standard Customization

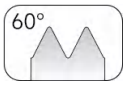
P Series

Single-Tooth Thread Milling Cutter for Titanium alloys / High-temperature alloys



▶ Single-thread milling cutter: Low cutting resistance, high versatility, easy to use. Extended clearance design suitable for deep holes and complex threads.





● = Best ○ =Good

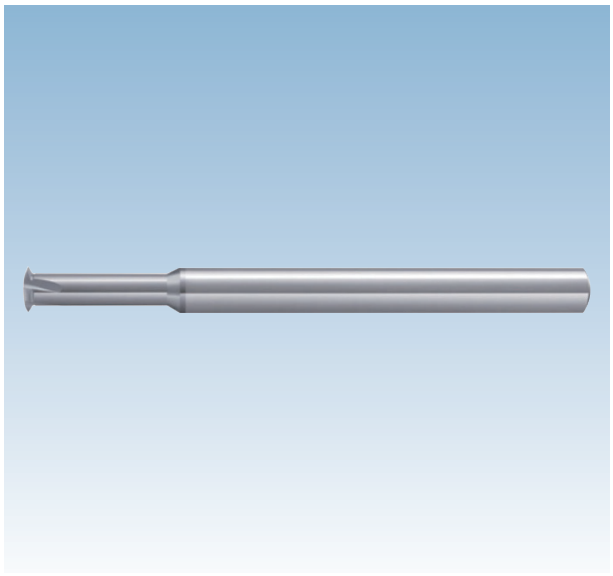
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	●	○	○				○	●					●	●

Order Number	Specification	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP127455ASH-0906332Y4502	M1.2*0.25	0.9	0.63	3.2	4.0	50	4	
MP127455ASH-1050735Y4502	M1.4*0.3	1.05	0.7	3.5	4.0	50	4	
MP127355ASH-120840Y4502	M1.6*0.35	1.2	0.8	4.0	4.0	50	3	
MP127355ASH-1550960Y4502	M2.0*0.4	1.55	0.9	6.0	4.0	50	3	
MP127455ASH-1961365Y4502	M2.5*0.45	1.96	1.3	6.5	4.0	50	4	
MP127455ASH-2351680Y4502	M3.0*0.5	2.35	1.6	8.0	4.0	50	4	
MP127455ASH-3152110Y4502	M4.0*0.7	3.15	2.1	10	4.0	50	4	
MP127455ASH-392812Y4502	M5.0*0.8	3.9	2.8	12	4.0	50	4	
MP127455ASH-483415Y6502	M6.0*1.0	4.8	3.4	15	6.0	50	4	
MP127455ASH-604220Y6602	M8.0*1.25	6.0	4.2	20	6.0	60	4	
MP127455ASH-775625Y8602	M10*1.5	7.7	5.6	25	8.0	60	4	
MP127455ASH-967330Y10752	M12*1.75	9.6	7.3	30	10	75	4	
MP127455ASH-107336Y10752	M14*2.0	10	7.3	36	10	75	4	
MP127455ASH-128838Y12752	M18*2.5	12	8.8	38	12	75	4	
MP127655ASH-1410248Y141002	M24*3.0	14	10.2	48	14	100	6	
MP127655ASH-1611550Y161002	M30*3.5	16	11.5	50	16	100	6	

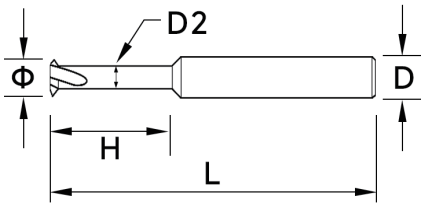
Supports Non-Standard Customization

P Series

Extended Single-Tooth Thread Milling Cutter



▶ Single-thread milling cutter: Low cutting resistance, suitable for deep thread holes.



● = Best ○ =Good

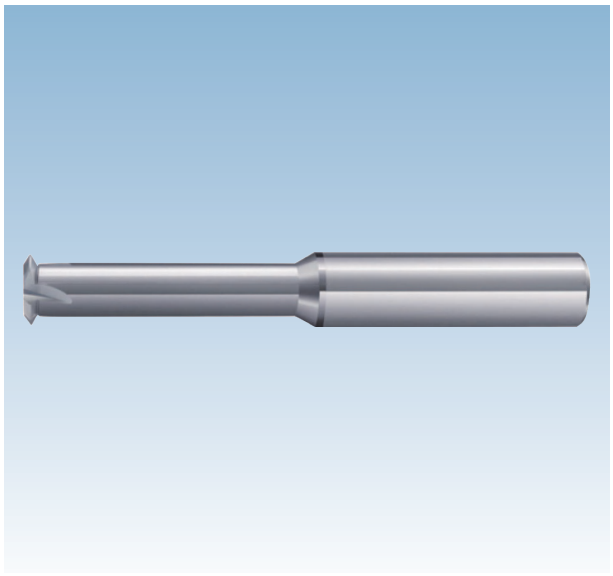
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	○				●	●						

Order Number	Specification	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP17345ASH-1050735Y401003	M1.4*0.3	1.05	0.7	3.5	4.0	100	3	
MP17345ASH-120840Y401003	M1.6*0.35	1.2	0.8	4.0	4.0	100	3	
MP17345ASH-1550960Y401003	M2.0*0.4	1.55	0.9	6.0	4.0	100	3	
MP17445ASH-1961365Y401003	M2.5*0.45	1.96	1.3	6.5	4.0	100	4	
MP17445ASH-2351680Y401003	M3.0*0.5	2.35	1.6	8.0	4.0	100	4	
MP17445ASH-3152110Y401003	M4.0*0.7	3.15	2.1	10	4.0	100	4	
MP17445ASH-392812Y401003	M5.0*0.8	3.9	2.8	12	4.0	100	4	
MP17445ASH-483415Y601003	M6.0*1.0	4.8	3.4	15	6.0	100	4	
MP17445ASH-604220Y601003	M8.0*1.25	6.0	4.2	20	6.0	100	4	
MP17445ASH-775625Y801003	M10*1.5	7.7	5.6	25	8.0	100	4	
MP17445ASH-967330Y101003	M12*1.75	9.6	7.3	30	10	100	4	
MP17445ASH-107336Y101003	M14*2.0	10	7.3	36	10	100	4	
MP17445ASH-128838Y121003	M18*2.5	12	8.8	38	12	100	4	
MP17645ASH-1410248Y141003	M24*3.0	14	10.2	48	14	100	6	
MP17645ASH-1611550Y161003	M30*3.5	16	11.5	50	16	100	6	

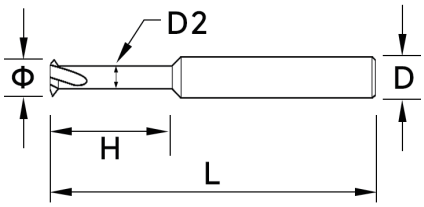
Supports Non-Standard Customization

P Series

Single-Tooth Wide Range Thread Milling Cutter for Steel



▶ Single-thread milling cutter: Low cutting resistance, suitable for deep thread holes.



● = Best ○ =Good

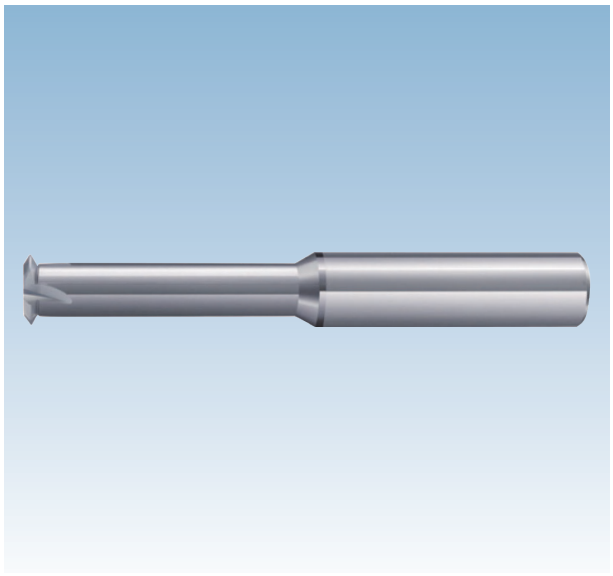
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	○				●	●						

Order Number	Specification	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Stock
MP17345ASH-1050635Y40504	0.25-0.35	1.05	0.6	3.5	4.0	50	
MP17345ASH-1207540Y40504	0.25-0.35	1.2	0.75	4.0	4.0	50	
MP17345ASH-1550960Y40504	0.3-0.5	1.55	0.9	6.0	4.0	50	
MP17445ASH-1961165Y40504	0.3-0.7	1.96	1.1	6.5	4.0	50	
MP17445ASH-2351480Y40504	0.3-0.8	2.35	1.4	8.0	4.0	50	
MP17445ASH-3152010Y40504	0.3-0.8	3.15	2.0	10	4.0	50	
MP17445ASH-392512Y40504	0.3-1.0	3.9	2.5	12	4.0	50	
MP17445ASH-482915Y60504	0.5-1.5	4.8	2.9	15	6.0	50	
MP17445ASH-604020Y60504	0.5-1.75	6.0	4.0	20	6.0	50	
MP17445ASH-774825Y80604	0.5-2.5	7.7	4.8	25	8.0	60	
MP17445ASH-966030Y10754	1.0-3.0	9.6	6.0	30	10	75	
MP17445ASH-106036Y10754	1.0-3.5	10	6.0	36	10	75	
MP17445ASH-127338Y12754	1.0-4.0	12	7.3	38	12	75	
MP17645ASH-149048Y141004	1.5-4.0	14	9.0	48	14	100	
MP17645ASH-161050Y161004	2.0-5.0	16	10	50	16	100	

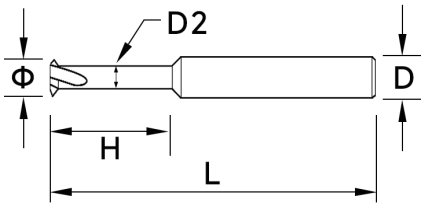
Supports Non-Standard Customization

P Series

Single-Tooth Range Thread Milling Cutter for Steel



▶ Single-thread milling cutter: Low resistance, versatile, easy to use. Extended clearance for deep holes and complex threads.



● = Best ○ =Good

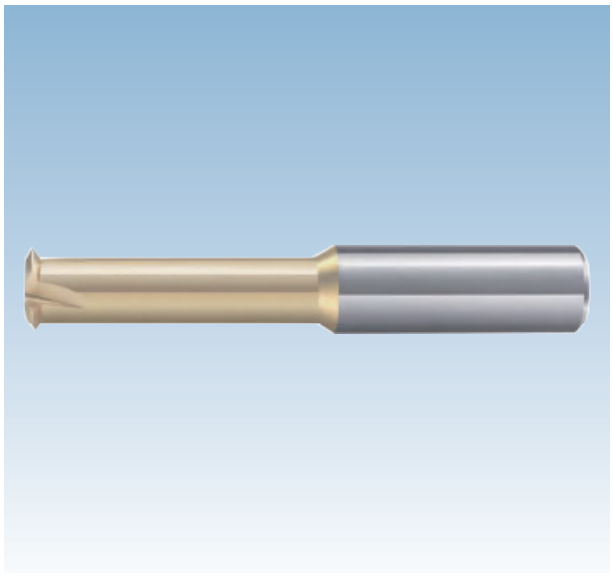
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	○				●	●						

Order Number	Specification			Pitch		Size specifications						Stock
	Coarse	Fine	UN, UNS, UNF, UNEF	mm	TPI	Φ	D2	H	D	L	F	
MP17445ASH-392816Y4505	M5x0.8	M5x0.5 M5X0.75	No.10-56UNS, No.10-48UNS, No.40UNS,	0.5-0.8	32-56	3.9	2.8	16	4	50	4	
MP17545ASH-4853520Y6605	M6x1.0	M6x0.5 M6X0.75	No.12-56UNS, No.12-48UNS, 1/4-40UNS,1/4-36UNS, 1/4-32UNEF, 1/4-28UNF, 1/4-27UNS, 1/4-24UNS	0.5-1.0	24-56	4.85	3.5	20	6	60	5	
MP17545ASH-594225Y6605	M8x1.25	M7x0.5 M7X0.75 M7.5X1.0	5/16-48UNS, 5/16-40UNS, 5/16-36UNS,5/16-36UNEF, 5/16-28UN, 5/16-27UNS, 5/16-24UNS, 5/16-20UNS	0.5-1.25	20-48	5.9	4.2	25	6	60	5	
MP17645ASH-988535Y10755		M7x0.5 M7X0.75 M7.5X1.0	7/16-32UNS, 7/16-28UNEF, 7/16-27UNS,7/16-24UNS	0.5-1.0	24-56	9.8	8.5	35	10	75	6	
MP17645ASH-795832Y8755	M10x1.5	M10x1.0 M10X1.25	3/8-24UNF, 3/8-20NS, 7/16-18UNS,7/16-16UNS	1.0-1.50	13-24	7.9	5.8	32	8	75	6	
MP17645ASH-997638Y10755	M12x1.75	M12x1.0 M12X1.25 M12X1.5	1/2-24UNS, 1/2-20UNS, 1/2-18UNS,1/2-16UNS, 1/2-14UNS	1.0-1.75	14-24	9.9	7.6	38	10	75	6	
MP17645ASH-1199640Y12755	M16x2.0	M13.5X1.0 M14X1.25 M14X1.5	9/16-24UNEF,9/16-18UNF, 5/8-18UNF,3/4-16UNF, 7/8-14UNF	1.0-2.0	14-24	11.9	9.6	40	12	75	6	
MP17645ASH-1410248Y141005	M18x2.5 M20x2.5 M22x2.5 M24x3.0 M27x3.0		9/16-12UNC, 5/8-11UNC 3/4-10UNC, 7/8-9UNC	2.0-3.0	9-12	14	10.2	48	14	100	6	
MP17645ASH-1611550Y161005	M20x2.5 M22x2.5 M24x2.5 M27x3.0 M30x3.0 M33x3.5		9/16-12UNC, 5/8-11UNC 3/4-10UNC, 1-8UNC	2.0-3.5	8-12	16	11.5	50	16	100	6	

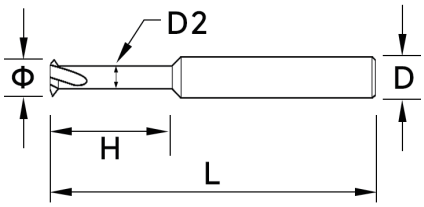
Supports Non-Standard Customization

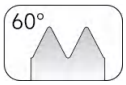
P Series

Single-Tooth Range Thread Milling Cutter for Titanium alloys / High-temperature alloy



▶ Single-thread milling cutter: Low resistance, versatile, easy to use. Extended clearance for deep holes and complex threads.





● = Best ○ =Good

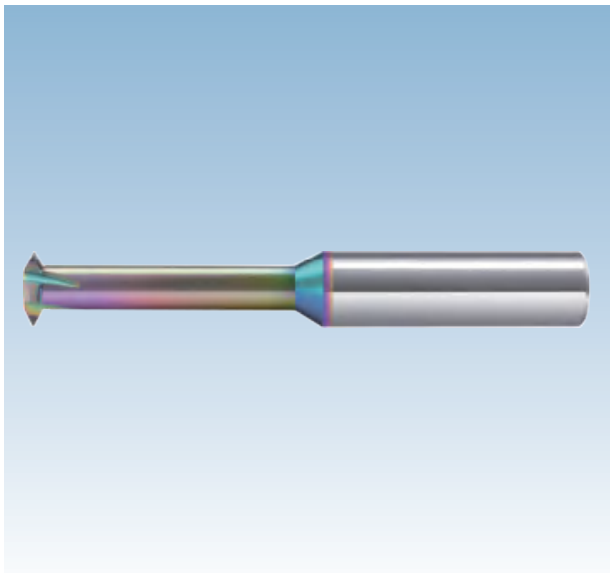
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~~45HRC	~55HRC	~60HRC	~65HRC								
○	●	○	○				○	●					●	●

Order Number	Specification			Pitch		Size specifications						Stock
	Coarse	Fine	UN, UNS, UNF, UNEF	mm	TPI	Φ	D2	H	D	L	F	
MP127455ASH-392816Y4506	M5x0.8	M5x0.5 M5X0.75	No.10-56UNS, No.10-48UNS, No.40UNS,	0.5-0.8	32-56	3.9	2.8	16	4	50	4	
MP127555ASH-4853520Y6606	M6x1.0	M6x0.5 M6X0.75	No.12-56UNS, No.12-48UNS, 1/4-40UNS,1/4-36UNS, 1/4-32UNEF, 1/4-28UNF, 1/4-27UNS, 1/4-24UNS	0.5-1.0	24-56	4.85	3.5	20	6	60	5	
MP127555ASH-594225Y6606	M8x1.25	M7x0.5 M7X0.75 M7.5X1.0	5/16-48UNS, 5/16-40UNS, 5/16-36UNS,5/16-36UNEF, 5/16-28UN, 5/16-27UNS, 5/16-24UNS, 5/16-20UNS	0.5-1.25	20-48	5.9	4.2	25	6	60	5	
MP127655ASH-988535Y10756		M7x0.5 M7X0.75 M7.5X1.0	7/16-32UNS, 7/16-28UNEF, 7/16-27UNS,7/16-24UNS	0.5-1.0	24-56	9.8	8.5	35	10	75	6	
MP127655ASH-795832Y8756	M10x1.5	M10x1.0 M10X1.25	3/8-24UNF, 3/8-20NS, 7/16-18UNS,7/16-16UNS	1.0-1.50	13-24	7.9	5.8	32	8	75	6	
MP127655ASH-997638Y10756	M12x1.75	M12x1.0 M12X1.25 M12X1.5	1/2-24UNS, 1/2-20UNS, 1/2-18UNS,1/2-16UNS, 1/2-14UNS	1.0-1.75	14-24	9.9	7.6	38	10	75	6	
MP127655ASH-1199640Y12756	M16x2.0	M13.5X1.0 M14X1.25 M14X1.5	9/16-24UNEF,9/16-18UNF, 5/8-18UNF,3/4-16UNF, 7/8-14UNF	1.0-2.0	14-24	11.9	9.6	40	12	75	6	
MP127655ASH-1410248Y141006	M18x2.5 M20x2.5 M22x2.5 M24x3.0 M27x3.0		9/16-12UNC, 5/8-11UNC 3/4-10UNC, 7/8-9UNC	2.0-3.0	9-12	14	10.2	48	14	100	6	
MP127655ASH-1611550Y161006	M20x2.5 M22x2.5 M24x2.5 M27x3.0 M30x3.0 M33x3.5		9/16-12UNC, 5/8-11UNC 3/4-10UNC, 1-8UNC	2.0-3.5	8-12	16	11.5	50	16	100	6	

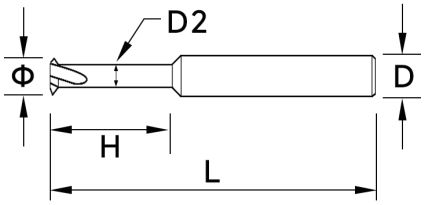
Supports Non-Standard Customization

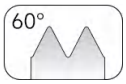
P Series

Single-Tooth Thread Milling Cutter (DLC Coated)



▶ DLC coating has the lowest friction coefficient, high anti-welding properties for non-ferrous metals, and corrosion resistance. Suitable for machining copper alloys, aluminum alloys, non-ferrous metals, acrylic, etc.





● = Best ○ =Good

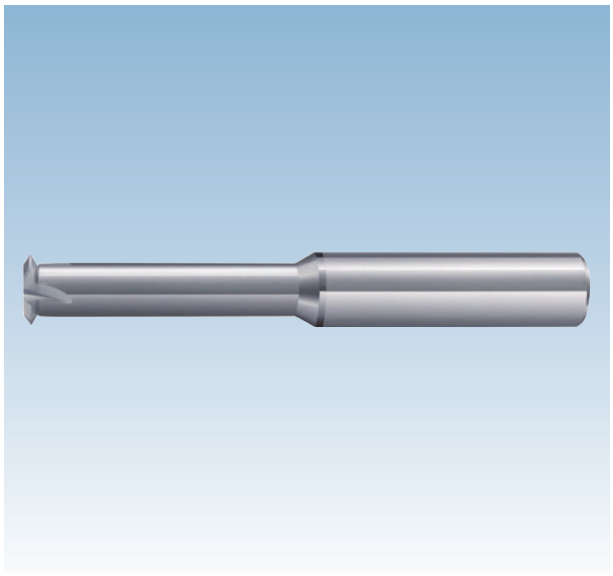
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
									●	●	●	●		

Order Number	Specification	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP47245ASH-07204325Y40507	1.0*0.25	0.72	0.43	2.5	4.0	50	2	
MP47245ASH-0906332Y40507	1.2*0.25	0.9	0.63	3.2	4.0	50	2	
MP47345ASH-1050635Y40507	0.25-0.35	1.05	0.6	3.5	4.0	50	3	
MP47345ASH-1207540Y40507	0.25-0.35	1.2	0.75	4.0	4.0	50	3	
MP47345ASH-1550960Y40507	0.3-0.5	1.55	0.9	6.0	4.0	50	3	
MP47445ASH-1961165Y40507	0.3-0.7	1.96	1.1	6.5	4.0	50	4	
MP47445ASH-2351480Y40507	0.3-0.8	2.35	1.4	8.0	4.0	50	4	
MP47445ASH-3152010Y40507	0.3-0.8	3.15	2.0	10	4.0	50	4	
MP47445ASH-392512Y40507	0.3-1.0	3.9	2.5	12	4.0	50	4	
MP47445ASH-482915Y60507	0.5-1.5	4.8	2.9	15	6.0	50	4	
MP47445ASH-604020Y60507	0.5-1.75	6.0	4.0	20	6.0	50	4	
MP47445ASH-774825Y80607	0.5-2.5	7.7	4.8	25	8.0	60	4	
MP47445ASH-966030Y10757	1.0-3.0	9.6	6.0	30	10	75	4	
MP47445ASH-106036Y10757	1.0-3.5	10	6.0	36	10	75	4	
MP47445ASH-127338Y12757	1.0-4.0	12	7.3	38	12	75	4	
MP47445ASH-149048Y141007	1.5-4.0	14	9.0	48	14	100	4	
MP47445ASH-161050Y161007	2.0-5.0	16	10	50	16	100	4	

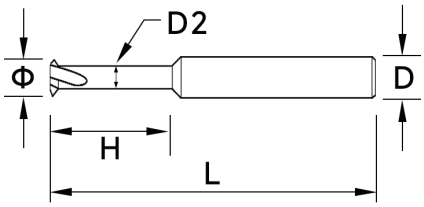
Supports Non-Standard Customization

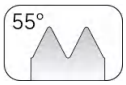
P Series

Single-Tooth 55° Imperial Range Thread Milling Cutter



▶ Capable of machining British pipe threads, British tapered pipe threads, Whitworth threads. Low cutting resistance, versatile, and easy to use.





● = Best ○ =Good

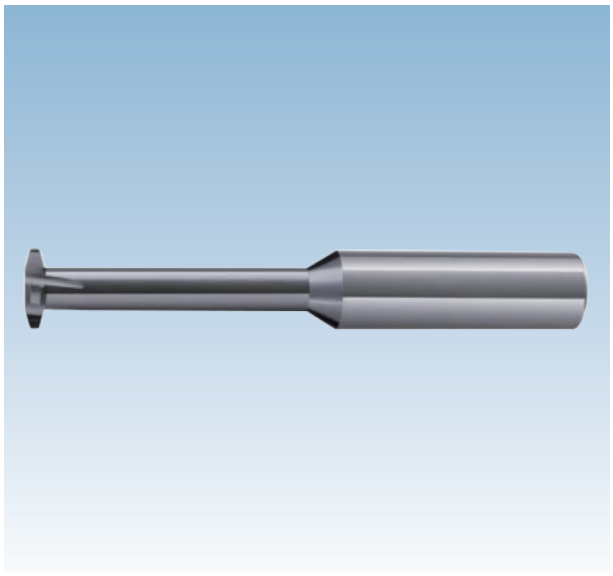
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	○				●	●						○

Order Number	Specification	Pitch	Angle	Size specifications						Stock
				Φ	D2	H	D	L	F	
MP17445ASH-31198Y4508	W5/32-32	P0.793	55°	3.1	1.9	8	4	50	4	
MP17445ASH-352010Y4508	W3/16-24	P1.058	55°	3.5	2.0	10	4	50	4	
MP17445ASH-402212Y4508	W1/4-20	P1.27	55°	4.0	2.2	12	4	50	4	
MP17445ASH-604514Y6508	W5/16-18 G1/8-28 G1/16-28	P0.907-P1.411	55°	6.0	4.5	14	6	50	4	
MP17445ASH-805522Y8608	W7/16-14 G1/4-19 G3/8-19	P1.336-P1.814	55°	8.0	5.5	22	8	60	4	
MP17445ASH-107330Y10758	G1/2-14 G3/4-14 G1/4-19 G3/8-19	P1.336-P1.814	55°	10	7.3	30	10	75	4	
MP17445ASH-128238Y12758	W5/8-11 W3/4-10 G1/2-14 G3/4-14 G1-11	P1.336-P2.54	55°	12	8.2	38	12	75	4	

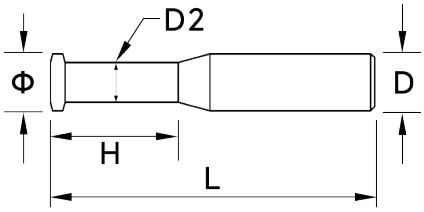
Supports Non-Standard Customization

P Series

Single-tooth trapezoidal thread milling cutter - TR 30°



▶ Trapezoidal threads: Primary form of spiral transmission, used in machine tool lead screws and tool holder lead screws.



● = Best ○ =Good

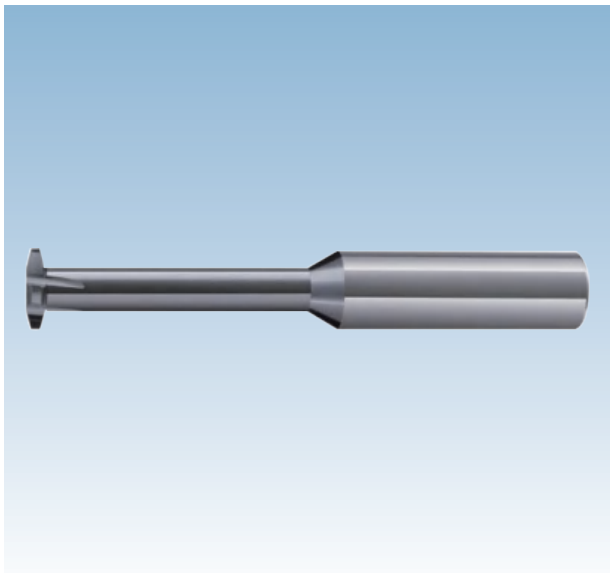
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	○				●	●						○

Order Number	Specification	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP17445ASH-554120Y6509	TR 7x1.0	5.5	4.1	20	6	50	4	
MP17445ASH-6420Y6509	TR 8x1.5 TR 9x1.5	6	4	20	6	50	4	
MP17445ASH-643720Y8609	TR 9x2 TR 10x2 TR 11x2	6.4	3.7	20	8	60	4	
MP17445ASH-946535Y10759	TR 12x2 TR 14x2 TR 16x2 TR 18x2 TR 20x2	9.4	6.5	35	10	75	4	
MP17445ASH-743825Y8609	TR 11x3 TR 12x3 TR 14x3	7.4	3.8	25	8	60	4	
MP17445ASH-10635Y10759	TR 14x3 TR 22x3 TR 24x3 TR 26x3 TR 28x3 TR 30x3	10	6	35	10	75	4	
MP17445ASH-11638Y12759	TR 16x4 TR 18x4 TR 20x4	11	6	38	12	75	4	
MP17445ASH-147850Y141009	TR 22x5 TR 24x5 TR 26x5 TR 28x5	14	7.8	50	14	100	4	
MP17445ASH-16950Y161009	TR 30*6 TR 32*6 TR 34*6 TR 36*6 TR 38*6 TR 40*6 TR 42*6	16	9	50	16	100	4	

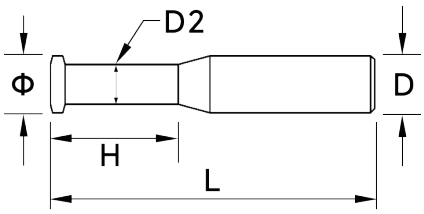
Supports Non-Standard Customization

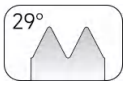
P Series

Single-tooth Acme thread milling cutter - ACME 29°



▶ Trapezoidal threads: Primary form of spiral transmission, used in machine tool lead screws and tool holder lead screws.





● = Best ○ =Good

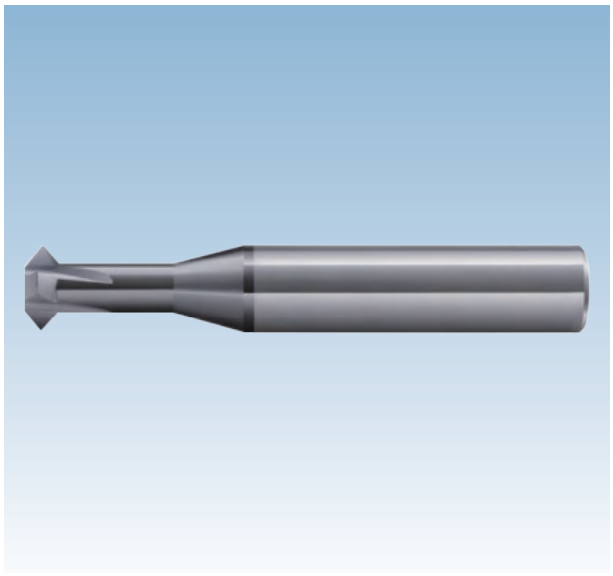
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	○				●	●						○

Order Number	Specification	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP17445ASH-472615Y60500	1/4-16	4.7	2.6	15	6.0	50	4	
MP17445ASH-603620Y60500	5/16-14	6.0	3.6	20	6.0	50	4	
MP17445ASH-724525Y80600	3/8-12 7/16-12	7.2	4.5	25	8.0	60	4	
MP17445ASH-106635Y10750	1/2-10	10	6.6	35	10	75	4	
MP17445ASH-127535Y12750	5/8-8	12	7.5	35	12	75	4	
MP17445ASH-126535Y12750	3/4-6 7/8-6	12	6.5	35	12	75	4	

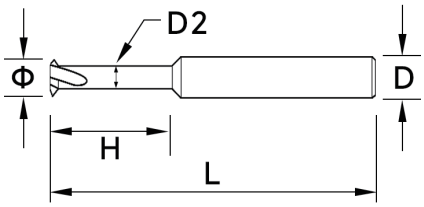
Supports Non-Standard Customization

P Series

Single-tooth A80 DIN standard thread milling cutter



▶ Multiple thread specifications, easy to use. Single-thread design with low cutting resistance, suitable for deep thread holes.



● = Best ○ =Good

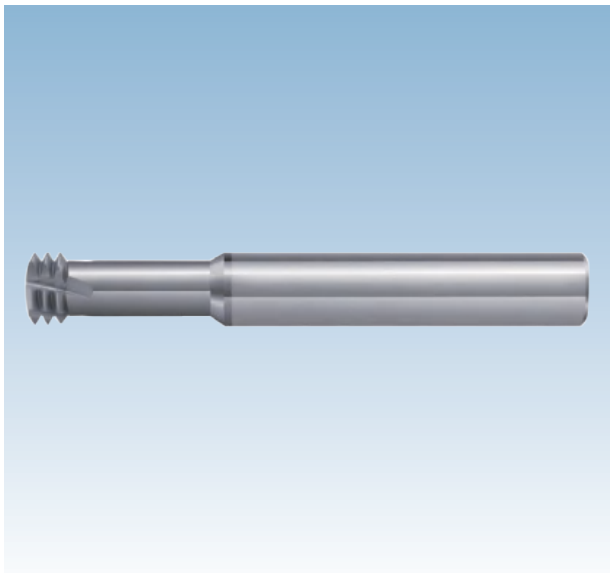
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	○				●	●						○

Order Number	Specification	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP17445ASH-8615Y8601	PG7 PG9 PG11 PG13.5 PG16	8	6	15	8	60	4	
MP17445ASH-10720Y10751	PG9 PG11 PG13.5 PG16	10	7	20	10	75	4	
MP17445ASH-12720Y12751	PG21 PG29 PG36 PG42 PG48	12	7	20	12	75	4	

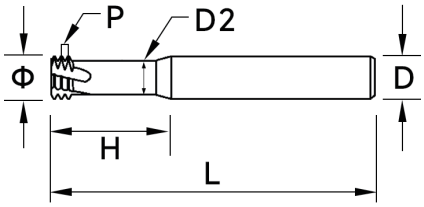
Supports Non-Standard Customization

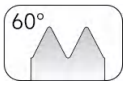
P Series

Three-tooth, 2D metric thread milling cutter for steel (01)



▶ Suitable for machining small-diameter threads and hard workpieces. High rigidity and strength, resistant to breakage.





● = Best ○ =Good

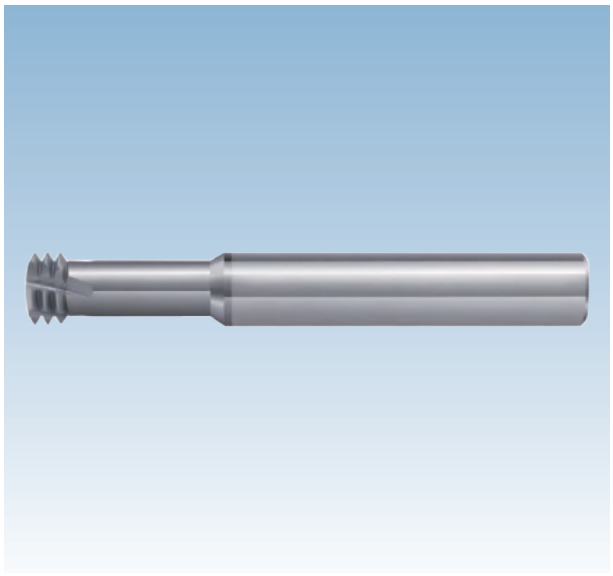
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	●	○			●	●					○	●

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP17345ASH-07304320Y4502	M1.0	0.25	0.73	0.43	2.0	4.0	50	3	
MP17345ASH-09206224Y4502	M1.2	0.25	0.92	0.62	2.4	4.0	50	3	
MP17345ASH-10506528Y4502	M1.4	0.3	1.05	0.65	2.8	4.0	50	3	
MP17345ASH-1207832Y4502	M1.6	0.35	1.2	0.78	3.2	4.0	50	3	
MP17345ASH-1207832Y6502	M1.6	0.35	1.2	0.78	3.2	6.0	50	3	
MP17345ASH-1409836Y4502	M1.8	0.35	1.4	0.98	3.6	4.0	50	3	
MP17345ASH-15510540Y4502	M2.0	0.4	1.55	1.05	4.0	4.0	50	3	
MP17345ASH-15510540Y6502	M2.0	0.4	1.55	1.05	4.0	6.0	50	3	
MP17345ASH-171150Y4502	M2.2	0.45	1.7	1.1	5.0	4.0	50	3	
MP17345ASH-2014550Y4502	M2.5	0.45	2.0	1.45	5.0	4.0	50	3	
MP17345ASH-2014550Y6502	M2.5	0.45	2.0	1.45	5.0	6.0	50	3	
MP17345ASH-241860Y4502	M3.0	0.5	2.4	1.8	6.0	4.0	50	3	
MP17345ASH-241860Y6502	M3.0	0.5	2.4	1.8	6.0	6.0	50	3	
MP17345ASH-2752080Y4502	M3.5	0.6	2.75	2.0	8.0	4.0	50	3	
MP17345ASH-3152380Y4502	M4.0	0.7	3.15	2.3	8.0	4.0	50	3	
MP17345ASH-3152380Y6502	M4.0	0.7	3.15	2.3	8.0	6.0	50	3	
MP17345ASH-3525590Y4502	M4.5	0.75	3.5	2.55	9.0	4.0	50	3	
MP17345ASH-403010Y4502	M5.0	0.8	4.0	3.0	10	4.0	50	3	
MP17345ASH-403010Y6502	M5.0	0.8	4.0	3.0	10	6.0	50	3	

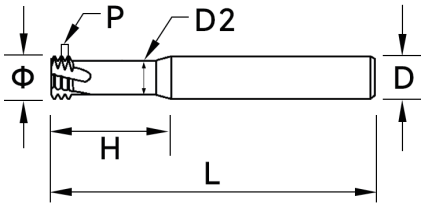
Supports Non-Standard Customization

P Series

Three-tooth, 2D metric thread milling cutter for steel (02)



▶ Suitable for machining small-diameter threads and hard workpieces. High rigidity and strength, resistant to breakage.



● = Best ○ =Good

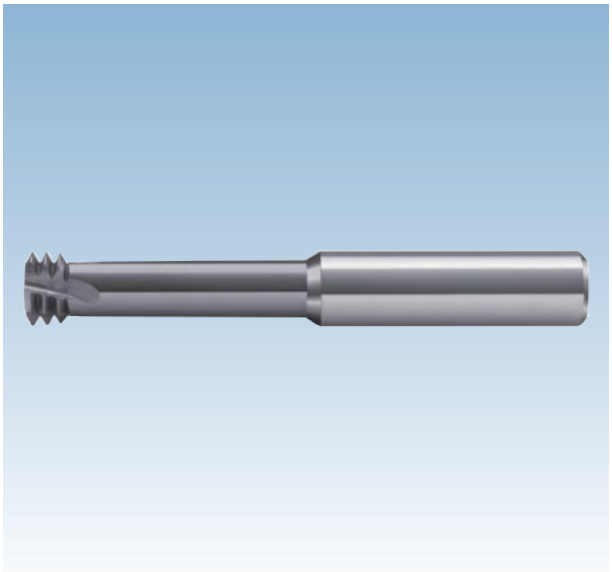
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	●	○			●	●					○	●

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP17345ASH-483812Y6502	M6.0	0.75	4.8	3.8	12	6	50	3	
MP17345ASH-483612Y6502	M6.0	1	4.8	3.6	12	6	50	3	
MP17445ASH-64816Y6502	M8.0	1	6	4.8	16	6	50	4	
MP17445ASH-64516Y6502	M8.0	1.25	6	4.5	16	6	50	4	
MP17445ASH-86820Y8602	M10	1	8	6.8	20	8	60	4	
MP17445ASH-86220Y8602	M10	1.5	8	6.2	20	8	60	4	
MP17445ASH-108724Y10752	M12	1	10	8.7	24	10	75	4	
MP17445ASH-108524Y10752	M12	1.25	10	8.5	24	10	75	4	
MP17445ASH-108124Y10752	M12	1.5	10	8.1	24	10	75	4	
MP17445ASH-107824Y10752	M12	1.75	10	7.8	24	10	75	4	
MP17445ASH-1210128Y12752	M14	1.5	12	10.1	28	12	75	4	
MP17445ASH-107528Y10752	M14	2	10	7.5	28	10	75	4	
MP17445ASH-129532Y12752	M16	2	12	9.5	32	12	75	4	
MP17445ASH-1412132Y141002	M16	1.5	14	12.1	32	14	100	4	
MP17445ASH-1351132Y141002	M16	2	13.5	11	32	14	100	4	
MP17445ASH-14811438Y161002	M18	2.5	14.8	11.4	38	16	100	4	
MP17445ASH-1614140Y161002	M20	1.5	16	14.1	40	16	100	4	
MP17645ASH-1612640Y161002	M20	2.5	16	12.6	40	16	100	6	
MP17645ASH-161248Y161002	M24	3	16	12	48	16	100	6	

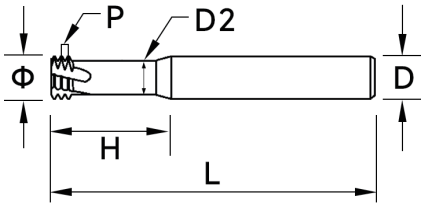
Supports Non-Standard Customization

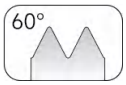
P Series

Three-tooth, 3D metric thread milling cutter for steel



▶ Uses ALCRONA base coating for excellent lubrication, particularly suitable for machining stainless steel and general steel parts.





● = Best ○ =Good

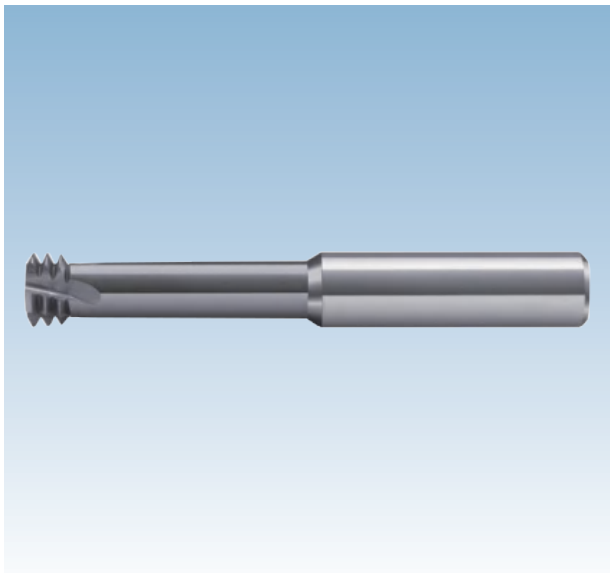
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	●	○			●	●					○	●

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP17345ASH-07304330Y40503	M1.0	0.25	0.73	0.43	3.0	4.0	50	3	
MP17345ASH-09206236Y40503	M1.2	0.25	0.92	0.62	3.6	4.0	50	3	
MP17345ASH-10506542Y40503	M1.4	0.3	1.05	0.65	4.2	4.0	50	3	
MP17345ASH-1207848Y40503	M1.6	0.35	1.2	0.78	4.8	4.0	50	3	
MP17345ASH-1207848Y60503	M1.6	0.35	1.2	0.78	4.8	6.0	50	3	
MP17345ASH-15510560Y40503	M2.0	0.4	1.55	1.05	6.0	4.0	50	3	
MP17345ASH-15510560Y60503	M2.0	0.4	1.55	1.05	6.0	6.0	50	3	
MP17345ASH-2014575Y40503	M2.5	0.45	2.0	1.45	7.5	4.0	50	3	
MP17345ASH-2014575Y60503	M2.5	0.45	2.0	1.45	7.5	6.0	50	3	
MP17345ASH-241890Y40503	M3.0	0.5	2.4	1.8	9.0	4.0	50	3	
MP17345ASH-241890Y60503	M3.0	0.5	2.4	1.8	9.0	6.0	50	3	
MP17345ASH-3152312Y40503	M4.0	0.7	3.15	2.3	12	4.0	50	3	
MP17345ASH-3152312Y60503	M4.0	0.7	3.15	2.3	12	6.0	50	3	
MP17345ASH-403015Y40503	M5.0	0.8	4.0	3.0	15	4.0	50	3	
MP17345ASH-403015Y60503	M5.0	0.8	4.0	3.0	15	6.0	50	3	
MP17345ASH-483618Y60503	M6.0	1.0	4.8	3.6	18	6.0	50	3	
MP17445ASH-604524Y60503	M8.0	1.25	6.0	4.5	24	6.0	50	4	
MP17445ASH-806230Y80603	M10	1.5	8.0	6.2	30	8.0	60	4	
MP17445ASH-107836Y10753	M12	1.75	10	7.8	36	10	75	4	

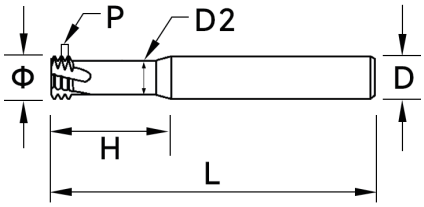
Supports Non-Standard Customization

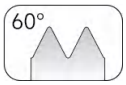
P Series

Three-tooth, 4D metric thread milling cutter for steel



▶ Suitable for machining small-diameter threads and harder workpieces. Three-thread design provides high rigidity and wear resistance, ensuring stable thread dimensions.





● = Best ○ =Good

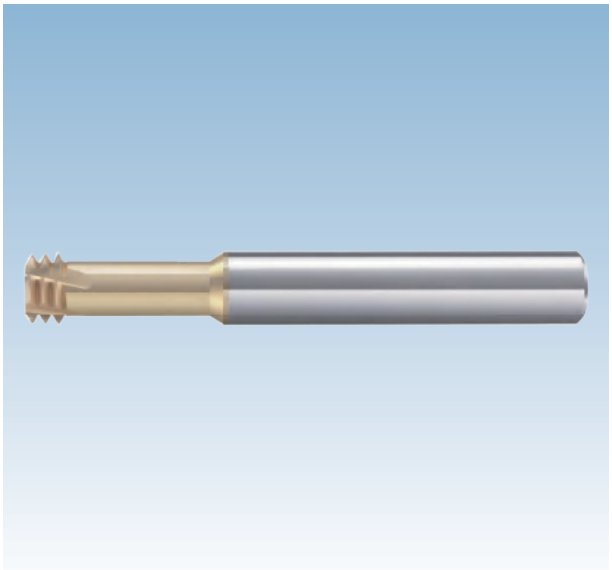
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	●	○			●	●					○	●

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP17345ASH-15510580Y40504	M2.0	0.4	1.55	1.05	8.0	4.0	50	3	
MP17345ASH-2014510Y40504	M2.5	0.45	2.0	1.45	10	4.0	50	3	
MP17345ASH-241812Y40504	M3.0	0.5	2.4	1.8	12	4.0	50	3	
MP17345ASH-3152316Y40504	M4.0	0.7	3.15	2.3	16	4.0	50	3	
MP17345ASH-403020Y40504	M5.0	0.8	4.0	3.0	20	4.0	50	3	

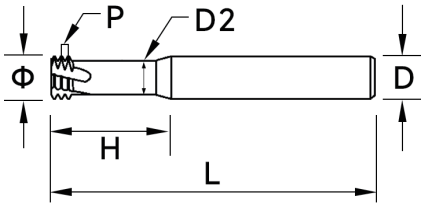
Supports Non-Standard Customization

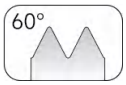
P Series

Three-tooth, 2D metric thread milling cutter for Titanium/High-temperature alloys (01)



▶ Uses specialized coatings for high-temperature alloys and titanium alloys, improving resistance to chip adhesion and high-temperature welding, thus extending tool life.





● = Best ○ =Good

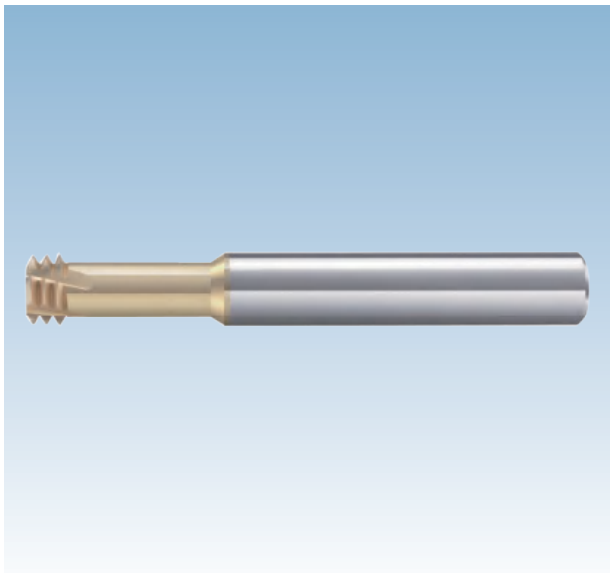
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	●	○	○				○	●					●	●

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP127355ASH-07304320Y4505	M1.0	0.25	0.73	0.43	2.0	4.0	50	3	
MP127355ASH-09206224Y4505	M1.2	0.25	0.92	0.62	2.4	4.0	50	3	
MP127355ASH-10506528Y4505	M1.4	0.3	1.05	0.65	2.8	4.0	50	3	
MP127355ASH-1207832Y4505	M1.6	0.35	1.2	0.78	3.2	4.0	50	3	
MP127355ASH-1207832Y6505	M1.6	0.35	1.2	0.78	3.2	6.0	50	3	
MP127355ASH-1409836Y4505	M1.8	0.35	1.4	0.98	3.6	4.0	50	3	
MP127355ASH-15510540Y4505	M2.0	0.4	1.55	1.05	4.0	4.0	50	3	
MP127355ASH-15510540Y6505	M2.0	0.4	1.55	1.05	4.0	6.0	50	3	
MP127355ASH-171150Y4505	M2.2	0.45	1.7	1.1	5.0	4.0	50	3	
MP127355ASH-2014550Y4505	M2.5	0.45	2.0	1.45	5.0	4.0	50	3	
MP127355ASH-2014550Y6505	M2.5	0.45	2.0	1.45	5.0	6.0	50	3	
MP127355ASH-241860Y4505	M3.0	0.5	2.4	1.8	6.0	4.0	50	3	
MP127355ASH-241860Y6505	M3.0	0.5	2.4	1.8	6.0	6.0	50	3	
MP127355ASH-2752080Y4505	M3.5	0.6	2.75	2.0	8.0	4.0	50	3	
MP127355ASH-3152380Y4505	M4.0	0.7	3.15	2.3	8.0	4.0	50	3	
MP127355ASH-3152380Y6505	M4.0	0.7	3.15	2.3	8.0	6.0	50	3	
MP127355ASH-3525590Y4505	M4.5	0.75	3.5	2.55	9.0	4.0	50	3	
MP127355ASH-403010Y4505	M5.0	0.8	4.0	3.0	10	4.0	50	3	
MP127355ASH-403010Y6505	M5.0	0.8	4.0	3.0	10	6.0	50	3	
MP127355ASH-483612Y6505	M6.0	1	4.8	3.6	12	6	50	3	

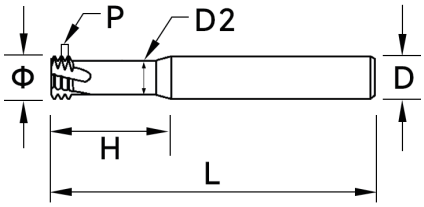
Supports Non-Standard Customization

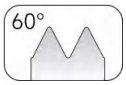
P Series

Three-tooth, 2D metric thread milling cutter for Titanium/High-temperature alloys (02)



▶ Uses specialized coatings for high-temperature alloys and titanium alloys, improving resistance to chip adhesion and high-temperature welding, thus extending tool life.





● = Best ○ =Good

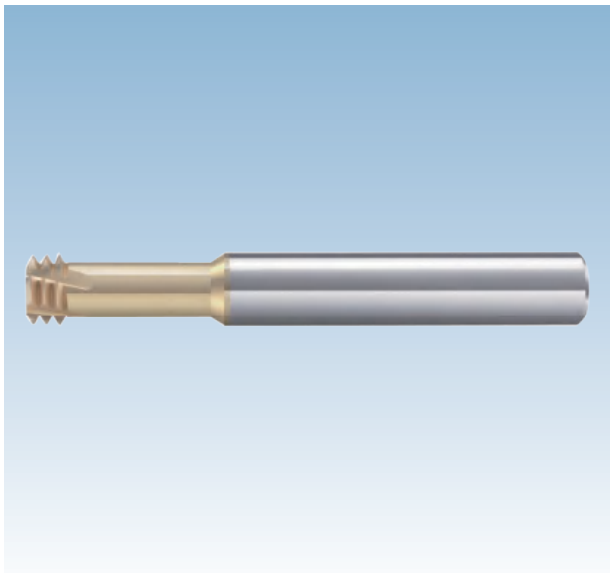
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	●	○	○				○	●					●	●

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP127455ASH-64816Y6505	M8.0	1	6	4.8	16	6	50	4	
MP127455ASH-64516Y6505	M8.0	1.25	6	4.5	16	6	50	4	
MP127455ASH-86820Y8605	M10	1	8	6.8	20	8	60	4	
MP127455ASH-86220Y8605	M10	1.5	8	6.2	20	8	60	4	
MP127455ASH-108724Y10755	M12	1	10	8.7	24	10	75	4	
MP127455ASH-1024Y10755	M12	1.25	10		24	10	75	4	
MP127455ASH-108124Y10755	M12	1.5	10	8.1	24	10	75	4	
MP127455ASH-107824Y10755	M12	1.75	10	7.8	24	10	75	4	
MP127455ASH-1210128Y12755	M14	1.5	12	10.1	28	12	75	4	
MP127455ASH-107528Y10755	M14	2	10	7.5	28	10	75	4	
MP127455ASH-129532Y12755	M16	2	12	9.5	32	12	75	4	
MP127455ASH-1412132Y141005	M16	1.5	14	12.1	32	14	100	4	
MP127455ASH-1351132Y141005	M16	2	13.5	11	32	14	100	4	
MP127455ASH-14838Y161005	M18	2.5	14.8		38	16	100	4	
MP127455ASH-1614140Y161005	M20	1.5	16	14.1	40	16	100	4	
MP127655ASH-1612640Y161005	M20	2.5	16	12.6	40	16	100	6	
MP127655ASH-161248Y161005	M24	3	16	12	48	16	100	6	

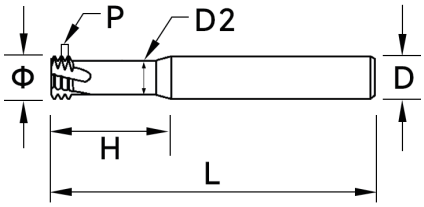
Supports Non-Standard Customization

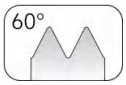
P Series

Three-tooth, 3D metric thread milling cutter for Titanium/High-temperature alloys



▶ Uses specialized coatings for high-temperature alloys and titanium alloys, improving resistance to chip adhesion and high-temperature welding, thus extending tool life.





● = Best ○ =Good

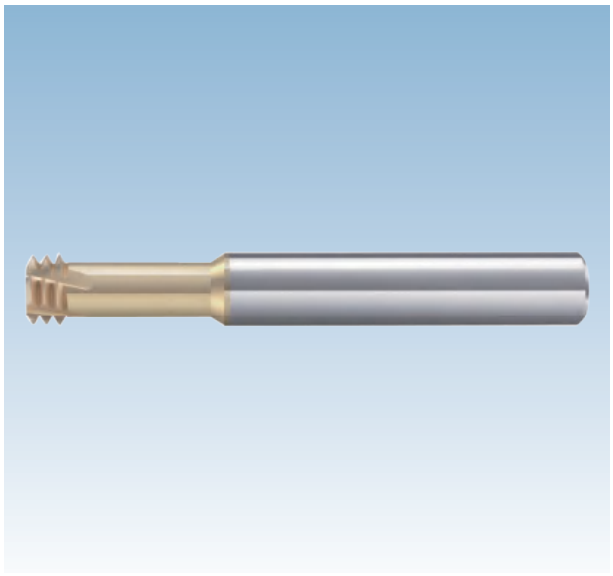
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	●	○	○				○	●					●	●

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP127355ASH-07304330Y4507	M1.0	0.25	0.73	0.43	3.0	4.0	50	3	
MP127355ASH-09206236Y4507	M1.2	0.25	0.92	0.62	3.6	4.0	50	3	
MP127355ASH-10506542Y4507	M1.4	0.3	1.05	0.65	4.2	4.0	50	3	
MP127355ASH-1207848Y4507	M1.6	0.35	1.2	0.78	4.8	4.0	50	3	
MP127355ASH-1207848Y6507	M1.6	0.35	1.2	0.78	4.8	6.0	50	3	
MP127355ASH-15510560Y4507	M2.0	0.4	1.55	1.05	6.0	4.0	50	3	
MP127355ASH-15510506Y6507	M2.0	0.4	1.55	1.05	0.6	6.0	50	3	
MP127355ASH-2014575Y4507	M2.5	0.45	2.0	1.45	7.5	4.0	50	3	
MP127355ASH-2014575Y6507	M2.5	0.45	2.0	1.45	7.5	6.0	50	3	
MP127355ASH-241890Y4507	M3.0	0.5	2.4	1.8	9.0	4.0	50	3	
MP127355ASH-241890Y6507	M3.0	0.5	2.4	1.8	9.0	6.0	50	3	
MP127355ASH-3152312Y4507	M4.0	0.7	3.15	2.3	12	4.0	50	3	
MP127355ASH-3152312Y6507	M4.0	0.7	3.15	2.3	12	6.0	50	3	
MP127355ASH-403015Y4507	M5.0	0.8	4.0	3.0	15	4.0	50	3	
MP127355ASH-403015Y6507	M5.0	0.8	4.0	3.0	15	6.0	50	3	
MP127355ASH-483618Y6507	M6.0	1.0	4.8	3.6	18	6.0	50	3	
MP127455ASH-604524Y6507	M8.0	1.25	6.0	4.5	24	6.0	50	4	
MP127455ASH-806230Y8607	M10	1.5	8.0	6.2	30	8.0	60	4	
MP127455ASH-107836Y1757	M12	1.75	10	7.8	36	10	75	4	

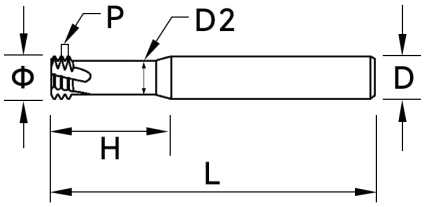
Supports Non-Standard Customization

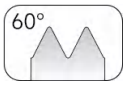
P Series

Three-tooth aviation thread milling cutter for Titanium/High-temperature alloys



▶ Uses specialized coatings for high-temperature alloys and titanium alloys, improving resistance to chip adhesion and high-temperature welding, thus extending tool life.





● = Best ○ =Good

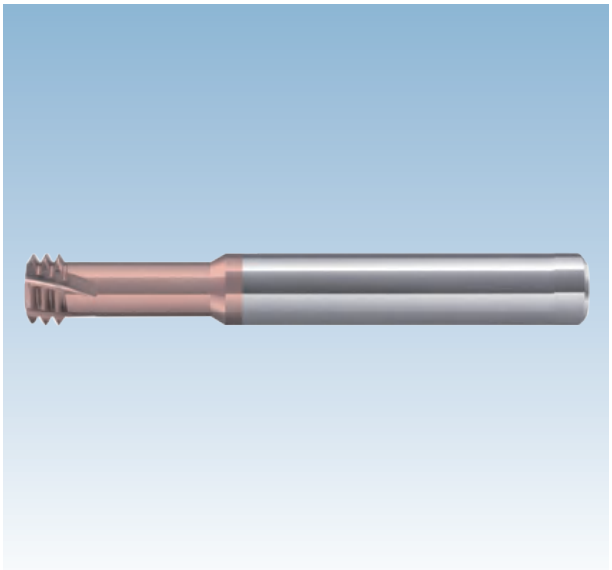
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	●	○	○				○	●					●	●

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Stock
MP127355ASH-15510560Y40508	MJ2.0	0.4	1.55	1.05	6.0	4.0	50	
MP127355ASH-2014575Y40508	MJ2.5	0.45	2.0	1.45	7.5	4.0	50	
MP127355ASH-241890Y40508	MJ3.0	0.5	2.4	1.8	9.0	4.0	50	
MP127355ASH-3152312Y40508	MJ4.0	0.7	3.15	2.3	12	4.0	50	
MP127355ASH-403015Y40508	MJ5.0	0.8	4.0	3.0	15	4.0	50	
MP127355ASH-483618Y60508	MJ6.0	1.0	4.8	3.6	18	6.0	50	
MP127355ASH-604524Y60508	MJ8.0	1.25	6.0	4.5	24	6.0	50	
MP127355ASH-806230Y80608	MJ10	1.5	8.0	6.2	30	8.0	60	
MP127355ASH-107836Y10758	MJ12	1.75	10	7.8	36	10	75	

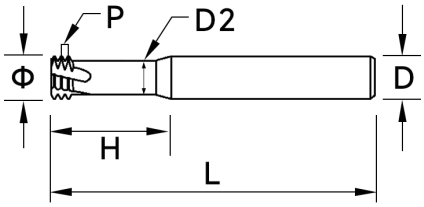
Supports Non-Standard Customization

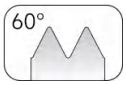
P Series

Three-tooth, 2D metric thread milling cutter with antique bronze coating



▶ Suitable for machining small-diameter threads and harder workpieces. Three-thread design provides high rigidity and strength, making it less prone to breaking.





● = Best ○ =Good

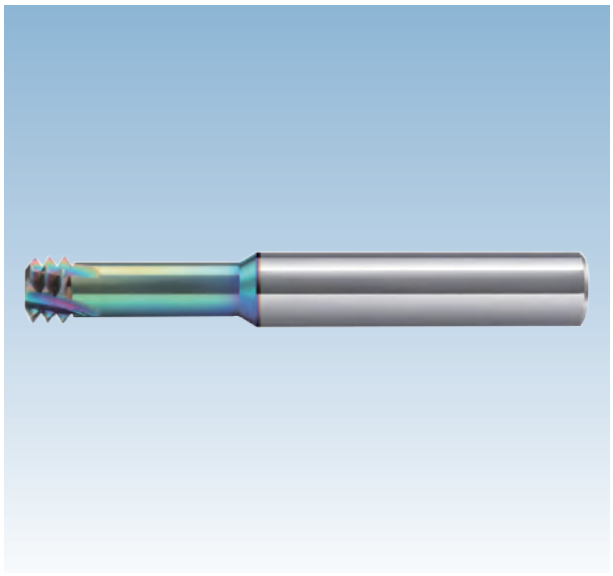
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	○	●	●				●	○						

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP77360ASH-0732030Y40509	M1.0	0.25	0.73	2.0	3.0	4.0	50	3	
MP77360ASH-0922436Y40509	M1.2	0.25	0.92	2.4	3.6	4.0	50	3	
MP77360ASH-1052842Y40509	M1.4	0.3	1.05	2.8	4.2	4.0	50	3	
MP77360ASH-123248Y40509	M1.6	0.35	1.2	3.2	4.8	4.0	50	3	
MP77360ASH-1554060Y40509	M2.0	0.4	1.55	4.0	6.0	4.0	50	3	
MP77360ASH-205075Y40509	M2.5	0.45	2.0	5.0	7.5	4.0	50	3	
MP77360ASH-246090Y40509	M3.0	0.5	2.4	6.0	9.0	4.0	50	3	
MP77360ASH-3158012Y40509	M4.0	0.7	3.15	8.0	12	4.0	50	3	
MP77360ASH-401015Y40509	M5.0	0.8	4.0	10	15	4.0	50	3	
MP77360ASH-481218Y60509	M6.0	1.0	4.8	12	18	6.0	50	3	
MP77460ASH-601624Y60509	M8.0	1.25	6.0	16	24	6.0	50	4	
MP77460ASH-802030Y80609	M10	1.5	8.0	20	30	8.0	60	4	
MP77460ASH-102436Y10759	M12	1.75	10	24	36	10	75	4	
MP77460ASH-1010128Y10759	M14	2.0	10	10.1	28	10	75	4	

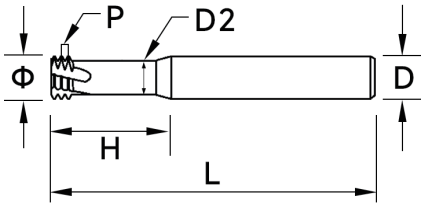
Supports Non-Standard Customization

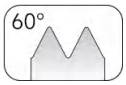
P Series

Three-tooth metric thread milling cutter (DLC coating for aluminum)



▶ DLC coating has the lowest friction coefficient, high anti-welding properties for non-ferrous metals, and corrosion resistance.





● = Best ○ =Good

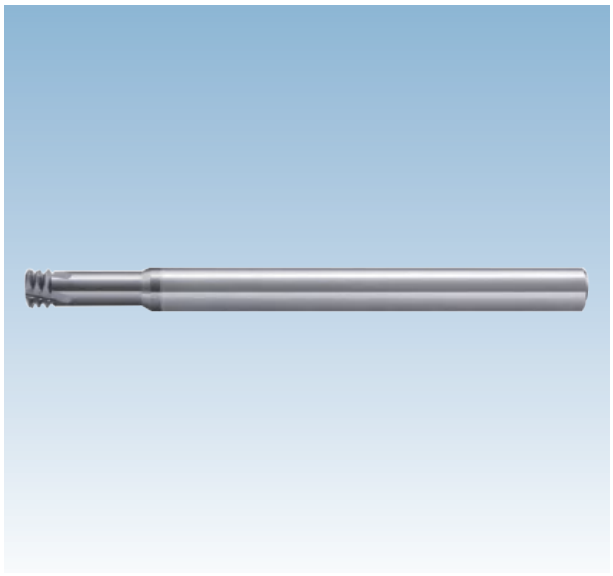
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
									●	●	●	●		

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP47345ASH-07304330Y4500	M1.0	0.25	0.73	0.43	3.0	4.0	50	3	
MP47345ASH-09206236Y4500	M1.2	0.25	0.92	0.62	3.6	4.0	50	3	
MP47345ASH-10506542Y4500	M1.4	0.3	1.05	0.65	4.2	4.0	50	3	
MP47345ASH-1207848Y4500	M1.6	0.35	1.2	0.78	4.8	4.0	50	3	
MP47345ASH-15510560Y4500	M2.0	0.4	1.55	1.05	6.0	4.0	50	3	
MP47345ASH-2014575Y4500	M2.5	0.45	2.0	1.45	7.5	4.0	50	3	
MP47345ASH-241890Y4500	M3.0	0.5	2.4	1.8	9.0	4.0	50	3	
MP47345ASH-3152312Y4500	M4.0	0.7	3.15	2.3	12	4.0	50	3	
MP47345ASH-403015Y4500	M5.0	0.8	4.0	3.0	15	4.0	50	3	
MP47345ASH-483612Y6500	M6.0	1.0	4.8	3.6	12	6.0	50	3	
MP47345ASH-483618Y6500	M6.0	1.0	4.8	3.6	18	6.0	50	3	
MP47445ASH-604516Y6500	M8.0	1.25	6.0	4.5	16	6.0	50	4	
MP47445ASH-604524Y6500	M8.0	1.25	6.0	4.5	24	6.0	50	4	
MP47445ASH-806220Y8600	M10	1.5	8.0	6.2	20	8.0	60	4	
MP47445ASH-806230Y8600	M10	1.5	8.0	6.2	30	8.0	60	4	
MP47445ASH-107836Y10750	M12	1.75	10	7.8	36	10	75	4	
MP47445ASH-107528Y10750	M14	2.0	10	7.5	28	10	75	4	

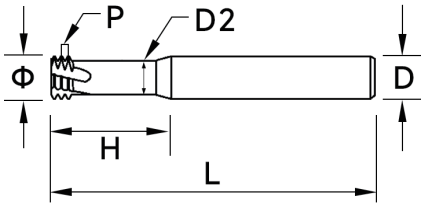
Supports Non-Standard Customization

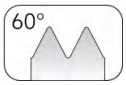
P Series

Three-tooth extended length metric thread milling cutter for steel



▶ Suitable for machining small-diameter threads and harder workpieces. Three-thread design provides high rigidity and strength, making it less prone to breaking.





● = Best ○ =Good

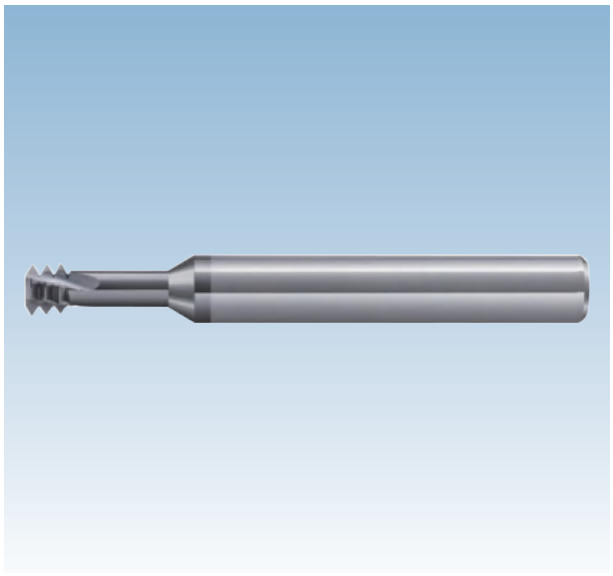
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	●				●	●	○	○			○	●

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP17345ASH-1207832Y61001	M1.6	0.35	1.2	0.78	3.2	6.0	100	3	
MP17345ASH-15510560Y6751	M2.0	0.4	1.55	1.05	6.0	6.0	75	3	
MP17345ASH-15510540Y61001	M2.0	0.4	1.55	1.05	4.0	6.0	100	3	
MP17345ASH-2014575Y6751	M2.5	0.45	2.0	1.45	7.5	6.0	75	3	
MP17345ASH-2014550Y61001	M2.5	0.45	2.0	1.45	5.0	6.0	100	3	
MP17345ASH-241890Y6751	M3.0	0.5	2.4	1.8	9.0	6.0	75	3	
MP17345ASH-241860Y61001	M3.0	0.5	2.4	1.8	6.0	6.0	100	3	
MP17345ASH-3152312Y6751	M4.0	0.7	3.15	2.3	12	6.0	75	3	
MP17345ASH-3152380Y61001	M4.0	0.7	3.15	2.3	8.0	6.0	100	3	
MP17345ASH-403015Y6751	M5.0	0.8	4.0	3.0	15	6.0	75	3	
MP17345ASH-403010Y61001	M5.0	0.8	4.0	3.0	10	6.0	100	3	
MP17345ASH-483618Y6751	M6.0	1.0	4.8	3.6	18	6.0	75	3	
MP17345ASH-483612Y61001	M6.0	1.0	4.8	3.6	12	6.0	100	3	
MP17445ASH-604524Y6751	M8.0	1.25	6.0	4.5	24	6.0	75	4	
MP17345ASH-604516Y61001	M8.0	1.25	6.0	4.5	16	6.0	100	3	
MP17445ASH-806230Y8751	M10	1.5	8.0	6.2	30	8.0	75	4	
MP17345ASH-806220Y81001	M10	1.5	8.0	6.2	20	8.0	100	3	
MP17445ASH-107824Y101001	M12	1.75	10	7.8	24	10	100	4	
MP17445ASH-107528Y101001	M14	2.0	10	7.5	28	10	100	4	

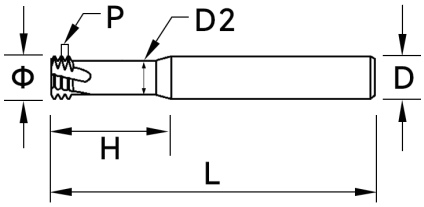
Supports Non-Standard Customization

P Series

Three-tooth American standard thread milling cutter for steel



▶ Suitable for machining small-diameter threads and harder workpieces. Three-thread design provides high rigidity and strength, making it less prone to breaking.



● = Best ○ =Good

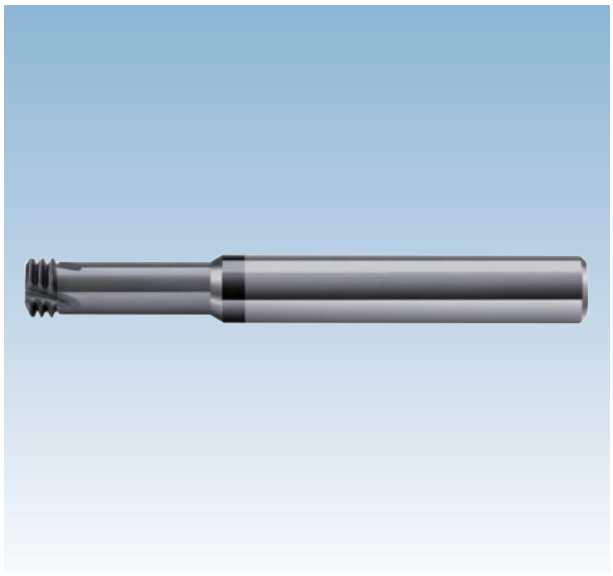
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	●				●	●	○	○			○	●

Order Number	Specification	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
UNF 细螺纹								
MP17345ASH-1451039Y4502	NO.1-72	1.45	1.0	3.9	4.0	50	3	
MP17345ASH-1951453Y4502	NO.3-56	1.95	1.4	5.3	4.0	50	3	
MP17345ASH-2251660Y4502	NO.4-48	2.25	1.6	6.0	4.0	50	3	
MP17345ASH-2751972Y4502	NO.6-40	2.75	1.9	7.2	4.0	50	3	
MP17345ASH-332487Y4502	NO.8-36	3.3	2.4	8.7	4.0	50	3	
MP17345ASH-392910Y4502	NO.10-32	3.9	2.9	10	4.0	50	3	
MP17345ASH-534212Y6502	1/4-28	5.3	4.2	12	6.0	50	3	
MP17345ASH-806920Y8602	3/8-24	8.0	6.9	20	8.0	60	4	
MP17445ASH-957924Y1752	7/16-20	9.5	7.9	24	10	75	4	
UNC 粗螺纹								
MP17345ASH-140940Y4502	NO.1-64	1.4	0.9	4.0	4.0	50	3	
MP17345ASH-1651150Y4502	NO.2-56	1.65	1.1	5.0	4.0	50	3	
MP17345ASH-1951350Y4502	NO.3-48	1.95	1.3	5.0	4.0	50	3	
MP17345ASH-2151360Y4502	NO.4-40	2.15	1.3	6.0	4.0	50	3	
MP17345ASH-2451672Y4502	NO.5-40	2.45	1.6	7.2	4.0	50	3	
MP17345ASH-2651675Y4502	NO.6-32	2.65	1.6	7.5	4.0	50	3	
MP17345ASH-322290Y4502	NO.8-32	3.2	2.2	9.0	4.0	50	3	
MP17345ASH-372410Y4502	NO.10-24	3.7	2.4	10	4.0	50	3	
MP17345ASH-493312Y6502	1/4-20	4.9	3.3	12	6.0	50	3	
MP17445ASH-644718Y8602	5/16-18	6.4	4.7	18	8.0	60	4	
MP17445ASH-7858520Y8602	3/8-16	7.8	5.85	20	8.0	60	4	
MP17445ASH-927024Y10752	7/16-14	9.2	7.0	24	10	75	4	
MP17445ASH-107524Y10752	1/2-13	10	7.5	24	10	75	4	
MP17445ASH-129428Y12752	9/16-12	12	9.4	28	12	75	4	

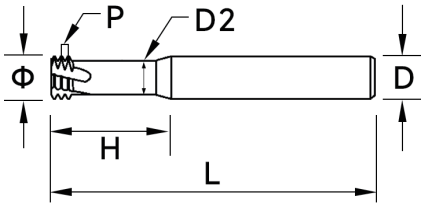
Supports Non-Standard Customization

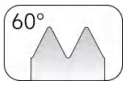
P Series

Three-tooth British standard parallel pipe thread milling cutter - BSP (G)



▶ Suitable for machining small-diameter threads and harder workpieces. Three-thread design provides high rigidity and strength, making it less prone to breaking.





● = Best ○ =Good

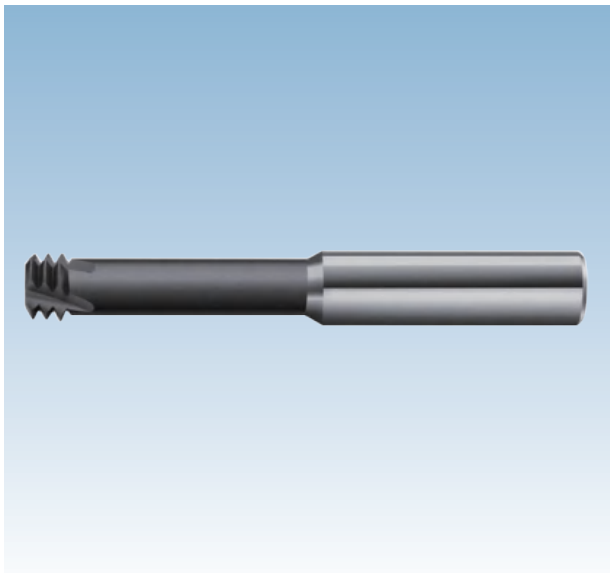
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	●				●	●	○	○			○	●

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP17445ASH-6047516Y6503	1/16	28	6.0	4.75	16	6.0	50	4	
MP17445ASH-8067520Y8603	1/8	28	8.0	6.75	20	8.0	60	4	
MP17445ASH-8062520Y8603	1/4	19	8.0	6.25	20	8.0	60	4	
MP17445ASH-1082524Y10753	1/4	19	10	8.25	24	10	75	4	
MP17445ASH-12102528Y12753	3/8	19	12	10.25	28	12	75	4	
MP17445ASH-129528Y12753	1/2	14	12	9.5	28	12	75	4	
MP17645ASH-1613540Y161003	3/4	14	16	13.5	40	16	100	6	
MP17645ASH-1612740Y161003	1"	11	16	12.7	40	16	100	6	

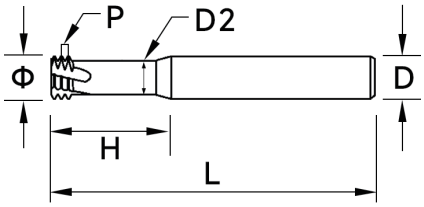
Supports Non-Standard Customization

P Series

Three-tooth, 3D metric thread milling cutter with diamond coating



▶ Uses diamond coating to form a hard, wear-resistant, and corrosion-resistant nano-scale amorphous diamond film on the hard alloy substrate.



● = Best ○ =Good

Graphite	Carbon Fiber	Glass Fiber	AlSi Alloy	CuAl Alloy	Pure / Purple / Red Copper	Pure Titanium	Pure Tungsten	Zinc Alloy	Magnesium Alloy	Zirconia
●	●	●	○			○	○	○	○	○

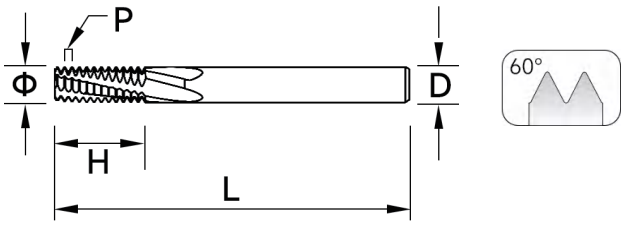
Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP107370ASH-1207848Y450	M1.6	0.35	1.2	0.78	4.8	4.0	50	3	
MP107370ASH-15510560Y450	M2.0	0.4	1.55	1.05	6.0	4.0	50	3	
MP107370ASH-2014575Y450	M2.5	0.45	2.0	1.45	7.5	4.0	50	3	
MP107370ASH-241890Y450	M3.0	0.5	2.4	1.8	9.0	4.0	50	3	
MP107370ASH-3152312Y450	M4.0	0.7	3.15	2.3	12	4.0	50	3	
MP107370ASH-403015Y450	M5.0	0.8	4.0	3.0	15	4.0	50	3	
MP107370ASH-483618Y650	M6.0	1.0	4.8	3.6	18	6.0	50	3	
MP107470ASH-604524Y650	M8.0	1.25	6.0	4.5	24	6.0	50	4	
MP107470ASH-806230Y860	M10	1.5	8.0	6.2	30	8.0	60	4	

Supports Non-Standard Customization

P Series

Full-thread metric internal thread milling cutter for steel (01)

▶ Suitable for large-scale production of the same specification. Multiple thread specifications, easy to use. High processing efficiency for workpieces with depths up to 2 diameters.



● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	●				●	●	○	○			○	●

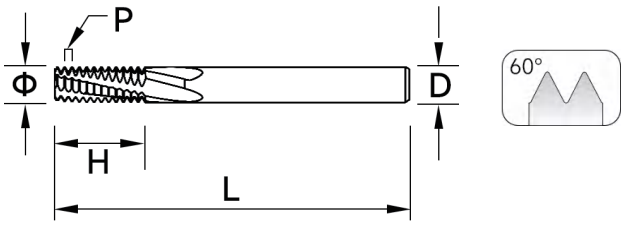
Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP17345ASH-0415540N4501	M2	0.4	1.55	4.0	4.0	50	3	
MP17345ASH-0452050N4501	M2.5	0.45	2.0	5.0	4.0	50	3	
MP17445ASH-052460N4501	M3	0.5	2.4	6.0	4.0	50	4	
MP17445ASH-0731580N4501	M4	0.7	3.15	8.0	4.0	50	4	
MP17345ASH-054010N4501	M5	0.5	4.0	10	4.0	50	3	
MP17345ASH-0754010N4501	M5	0.75	4.0	10	4.0	50	3	
MP17445ASH-084010N4501	M5	0.8	4.0	10	4.0	50	4	
MP17345ASH-0754812N6601	M6	0.75	4.8	12	6.0	60	3	
MP17445ASH-104812N6601	M6	1.0	4.8	12	6.0	60	4	
MP17345ASH-056016N6601	M8	0.5	6.0	16	6.0	60	3	
MP17345ASH-0756016N6601	M8	0.75	6.0	16	6.0	60	3	
MP17345ASH-106016N6601	M8	1.0	6.0	16	6.0	60	3	
MP17445ASH-1256016N6601	M8	1.25	6.0	16	6.0	60	4	
MP17445ASH-108020N8601	M10	1.0	8.0	20	8.0	60	4	
MP17445ASH-1258020N8601	M10	1.25	8.0	20	8.0	60	4	
MP17445ASH-158020N8601	M10	1.5	8.0	20	8.0	60	4	

Supports Non-Standard Customization

P Series

Full-thread metric internal thread milling cutter for steel (02)

▶ Suitable for large-scale production of the same specification. Multiple thread specifications, easy to use. High processing efficiency for workpieces with depths up to 2 diameters.



● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	●				●	●	○	○			○	●

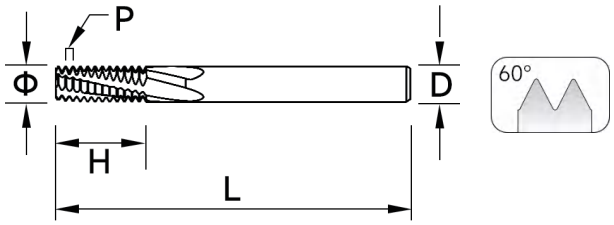
Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP17445ASH-051024N10751	M12	0.5	10	24	10	75	4	
MP17445ASH-0751024N10751	M12	0.75	10	24	10	75	4	
MP17445ASH-101024N10751	M12	1.0	10	24	10	75	4	
MP17445ASH-1251024N10751	M12	1.25	10	24	10	75	4	
MP17445ASH-151024N10751	M12	1.5	10	24	10	75	4	
MP17445ASH-1751024N10751	M12	1.75	10	24	10	75	4	
MP17445ASH-11228N12751	M14	1	12	28	12	75	4	
MP17445ASH-151228N12751	M14	1.5	12	28	12	75	4	
MP17445ASH-211628N12751	M14	2	11.6	28	12	75	4	
MP17445ASH-151432N141001	M16	1.5	14	32	14	100	4	
MP17445ASH-21332N141001	M16	2	13	32	14	100	4	
MP17445ASH-2514838N161001	M18	2.5	14.8	38	16	100	4	
MP17445ASH-11638N161001	M20	1	16	38	16	100	4	
MP17445ASH-151638N161001	M20	1.5	16	38	16	100	4	
MP17445ASH-251642N161001	M20	2.5	16	42	16	100	4	
MP17445ASH-31642N161001	M24	3	16	42	16	100	4	

Supports Non-Standard Customization

P Series

Full-thread metric external thread milling cutter for steel (01)

▶ Suitable for large-scale production of the same specification. Multiple thread specifications, easy to use. High processing efficiency for workpieces with depths up to 2 diameters.



● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	●				●	●	○	○			○	●

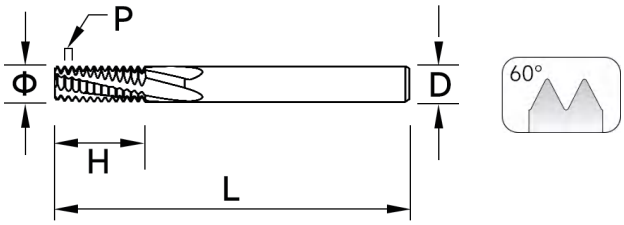
Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP17345ASH-0415540N40502	M2	0.4	1.55	4.0	4.0	50	3	
MP17345ASH-0452050N40502	M2.5	0.45	2.0	5.0	4.0	50	3	
MP17445ASH-052460N40502	M3	0.5	2.4	6.0	4.0	50	4	
MP17445ASH-0731580N40502	M4	0.7	3.15	8.0	4.0	50	4	
MP17345ASH-054010N40502	M5	0.5	4.0	10	4.0	50	3	
MP17345ASH-0754010N40502	M5	0.75	4.0	10	4.0	50	3	
MP17445ASH-084010N40502	M5	0.8	4.0	10	4.0	50	4	
MP17345ASH-0754812N60602	M6	0.75	4.8	12	6.0	60	3	
MP17445ASH-104812N60602	M6	1.0	4.8	12	6.0	60	4	
MP17345ASH-056016N60602	M8	0.5	6.0	16	6.0	60	3	
MP17345ASH-0756016N60602	M8	0.75	6.0	16	6.0	60	3	
MP17345ASH-106016N60602	M8	1.0	6.0	16	6.0	60	3	
MP17445ASH-1256016N60602	M8	1.25	6.0	16	6.0	60	4	
MP17445ASH-108020N80602	M10	1.0	8.0	20	8.0	60	4	
MP17445ASH-1258020N80602	M10	1.25	8.0	20	8.0	60	4	
MP17445ASH-158020N80602	M10	1.5	8.0	20	8.0	60	4	

Supports Non-Standard Customization

P Series

Full-thread metric external thread milling cutter for steel (02)

▶ Suitable for large-scale production of the same specification. Multiple thread specifications, easy to use. High processing efficiency for workpieces with depths up to 2 diameters.



● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	●				●	●	○	○			○	●

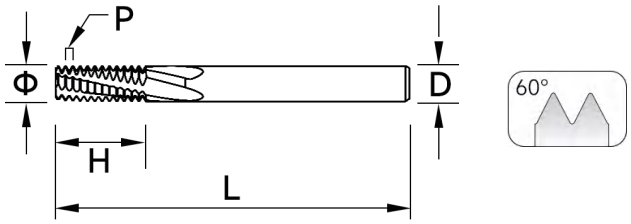
Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP17445ASH-051024N10752	M12	0.5	10	24	10	75	4	
MP17445ASH-0751024N10752	M12	0.75	10	24	10	75	4	
MP17445ASH-101024N10752	M12	1.0	10	24	10	75	4	
MP17445ASH-1251024N10752	M12	1.25	10	24	10	75	4	
MP17445ASH-151024N10752	M12	1.5	10	24	10	75	4	
MP17445ASH-1751024N10752	M12	1.75	10	24	10	75	4	
MP17445ASH-11228N12752	M14	1	12	28	12	75	4	
MP17445ASH-151228N12752	M14	1.5	12	28	12	75	4	
MP17445ASH-211628N12752	M14	2	11.6	28	12	75	4	
MP17445ASH-151432N141002	M16	1.5	14	32	14	100	4	
MP17445ASH-21332N141002	M16	2	13	32	14	100	4	
MP17445ASH-2514838N161002	M18	2.5	14.8	38	16	100	4	
MP17445ASH-11638N161002	M20	1	16	38	16	100	4	
MP17445ASH-151638N161002	M20	1.5	16	38	16	100	4	
MP17445ASH-251642N161002	M20	2.5	16	42	16	100	4	
MP17445ASH-31642N161002	M24	3	16	42	16	100	4	

Supports Non-Standard Customization

P Series

Full-thread American standard thread milling cutter for steel

▶ Suitable for large-scale production of the same specification. Multiple thread specifications, easy to use. High processing efficiency for workpieces with depths up to 2 diameters.



● = Best ○ =Good

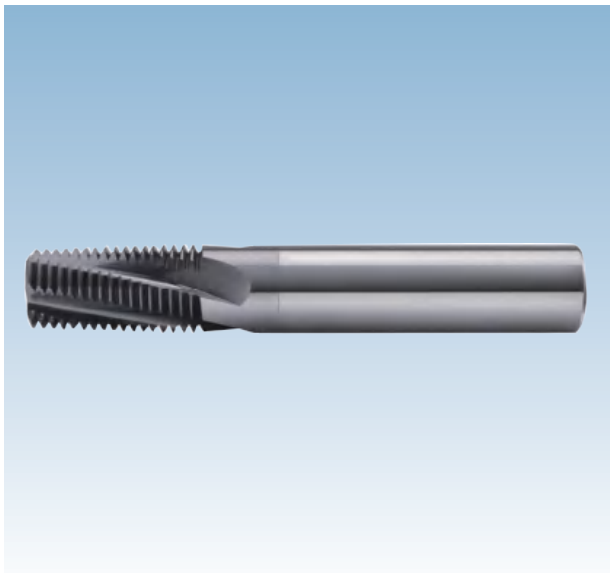
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	●				●	●	○	○			○	●

Order Number	Coarse	Fine	Extra-fine	Pitch	Size					Stock
	UNC	UNF	UNEF	TPI	Φ	H	D	L	F	
MP17445ASH-323910N450		10-32		32	3.9	10	4	50	4	
MP17445ASH-326818N860			5/16-32	32	6.8	18	8	60	4	
MP17445ASH-285312N660		1/4-28		28	5.3	12	6	60	4	
MP17445ASH-246518N860		5/16-24		24	6.5	18	8	60	4	
MP17445ASH-241024N1075			9/16-24	24	10	24	10	75	4	
MP17445ASH-2048512N660	1/4-20			20	4.85	12	6	60	4	
MP17445ASH-209524N1075		7/16-20		20	9.5	24	10	75	4	
MP17445ASH-186418N860	5/16-18			18	6.4	18	8	60	4	
MP17445ASH-181024N1075		9/16-18		18	10	24	10	75	4	
MP17445ASH-167821N860	3/8-16			16	7.8	21	8	60	4	
MP17445ASH-161228N1275		3/4-16		16	12	28	12	75	4	
MP17445ASH-148824N1075	7/16-14			14	8.8	24	10	75	4	
MP17445ASH-131024N1075	1/2-13			13	10	24	10	75	4	
MP17445ASH-121228N1275	9/16-12			12	12	28	12	75	4	
MP17445ASH-111228N1275	5/8-11			11	12	28	12	75	4	
MP17445ASH-101638N16100	3/4-10			10	16	38	16	100	4	
MP17445ASH-91638N16100	7/8-9			9	16	38	16	100	4	
MP17445ASH-81642N16100	1"-8			8	16	42	16	100	4	

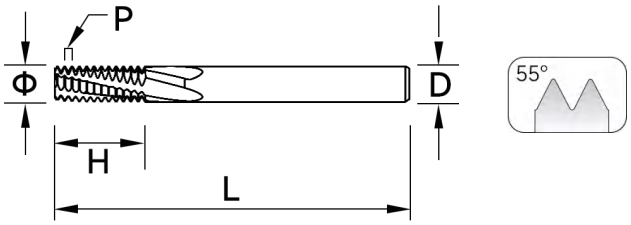
Supports Non-Standard Customization

P Series

Full-thread British standard pipe thread milling cutter - BSP (G)



▶ BSP (G) straight pipe threads, suitable for machining aluminum alloy, stainless steel, and titanium alloy. Provides excellent results and high efficiency.



● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	●				●	●	○	○			○	●

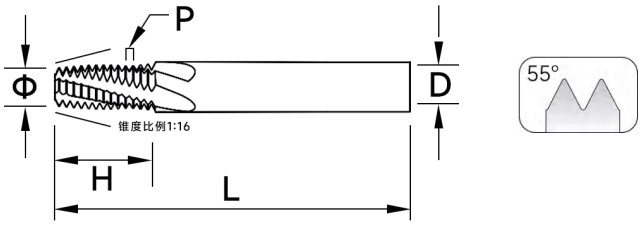
Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP17445ASH-28614N660	1/16	28	6.0	14	6.0	60	4	
MP17445ASH-28814N860	1/8	28	8.0	14	8.0	60	4	
MP17445ASH-19818N860	1/4	19	8.0	18	8.0	60	4	
MP17445ASH-191020N1075	1/4	19	10	20	10	75	4	
MP17445ASH-191024N1075	1/4	19	10	24	10	75	4	
MP17445ASH-191225N1275	3/8	19	12	25	12	75	4	
MP17445ASH-191228N1275	3/8	19	12	28	12	75	4	
MP17445ASH-141220N1275	1/2	14	12	20	12	75	4	
MP17445ASH-141228N1275	1/2	14	12	28	12	75	4	
MP17445ASH-141630N16100	3/4	14	16	30	16	100	4	
MP17445ASH-111632N16100	1″	11	16	32	16	100	4	
MP17445ASH-111638N16100	1″	11	16	38	16	100	4	
MP17545ASH-112042N20100	1″	11	20	42	20	100	5	

Supports Non-Standard Customization

P Series

Full-thread British Standard Pipe Taper thread milling cutter - BSPT (Rc)

▶ BSPT (RC) tapered pipe threads, suitable for machining aluminum alloy, stainless steel, and titanium alloy. Provides excellent results and high efficiency.



● = Best ○ =Good

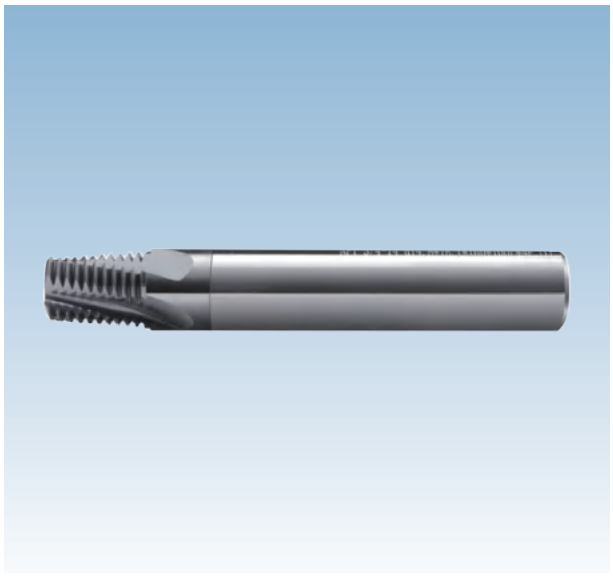
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	●				●	●	○	○			○	●

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP15445ASH-285399N6060	1/16	28	5.3	9.9	6.0	60	4	
MP15445ASH-287399N8060	1/8	28	7.3	9.9	8.0	60	4	
MP15445ASH-2867520N8060	1/8	28	6.75	20	8.0	60	4	
MP15445ASH-197014N8060	1/4	19	7.0	14	8.0	60	4	
MP15445ASH-199015N1075	1/4	19	9.0	15	10	75	4	
MP15445ASH-198524N1075	1/4	19	8.5	24	10	75	4	
MP15445ASH-191114N1275	3/8	19	11	14	12	75	4	
MP15445ASH-19102528N1275	3/8	19	10.25	28	12	75	4	
MP15445ASH-1410819N1275	1/2	14	10.8	19	12	75	4	
MP15445ASH-1410228N1275	1/2	14	10.2	28	12	75	4	
MP15445ASH-1414621N16100	3/4	14	14.6	21	16	100	4	
MP15445ASH-1114327N16100	1″	11	14.3	27	16	100	4	
MP15545ASH-11173842N20100	1″	11	17.38	42	20	100	5	

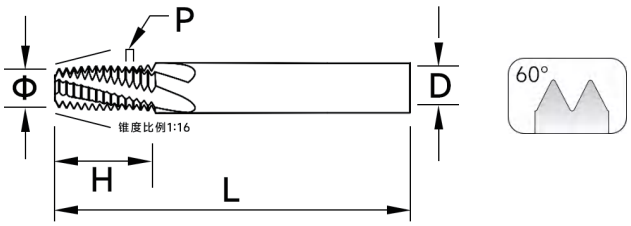
Supports Non-Standard Customization

P Series

Full-thread American Standard Pipe Taper thread milling cutter (NPT)



▶ NPT general purpose sealing threads, NPTF dry sealing threads, suitable for machining stainless steel and titanium alloy. Provides excellent results and high efficiency.



HA | WC | ALCRONA Coat

● = Best ○ =Good

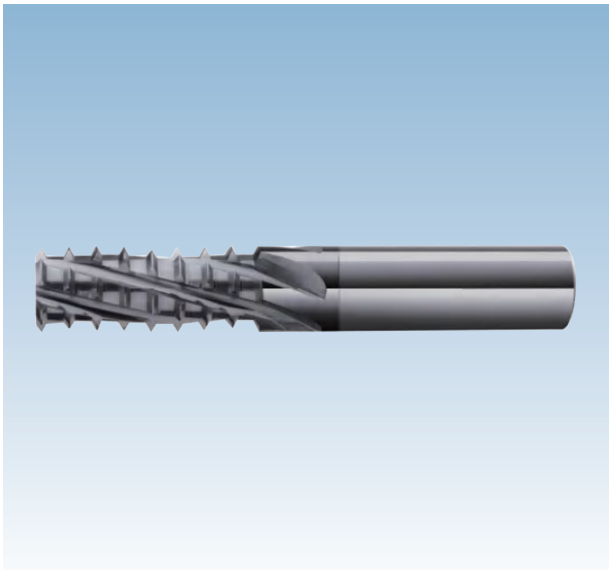
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	●				●	●	○	○			○	●

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
NPT-60° American taper pipe thread								
MP15445ASH-275494N6060	1/16	27	5.4	9.4	6.0	60	4	
MP15445ASH-277494N8060	1/8	27	7.4	9.4	8.0	60	4	
MP15445ASH-1871141N8060	1/4	18	7.1	14.1	8.0	60	4	
MP15445ASH-1891141N1075	1/4	18	9.1	14.1	10	75	4	
MP15445ASH-18111141N1275	3/8	18	11.1	14.1	12	75	4	
MP15445ASH-14108181N1275	1/2	14	10.8	18.1	12	75	4	
MP15445ASH-14148181N16100	3/4	14	14.8	18.1	16	100	4	
MP15445ASH-11514622N16100	1"	11.5	14.6	22	16	100	4	
MP15545ASH-115173842N20100	1"	11.5	17.38	42	20	100	5	
NPTF-60° American taper pipe thread for dry sealing								
MP15445ASH-275494N6060	1/16	27	5.4	9.4	6.0	60	4	
MP15445ASH-277494N8060	1/8	27	7.4	9.4	8.0	60	4	
MP15445ASH-1871141N8060	1/4	18	7.1	14.1	8.0	60	4	
MP15445ASH-1891141N1075	1/4	18	9.1	14.1	10	75	4	
MP15445ASH-18111141N1275	3/8	18	11.1	14.1	12	75	4	
MP15445ASH-14108181N1275	1/2	14	10.8	18.1	12	75	4	
MP15445ASH-14148181N16100	3/4	14	14.8	18.1	16	100	4	
MP15445ASH-11514622N16100	1"	11.5	14.6	22	16	100	4	
MP15545ASH-115173842N20100	1"	11.5	17.38	42	20	100	5	

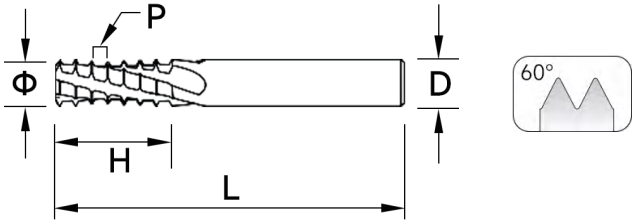
Supports Non-Standard Customization

P Series

Staggered-tooth full-thread milling cutter for steel



▶ Offset tooth design significantly reduces the cutting resistance experienced by the full row of teeth during machining, allowing for higher feed rates and larger cutting volumes, thus greatly improving machining efficiency.



● = Best ○ =Good

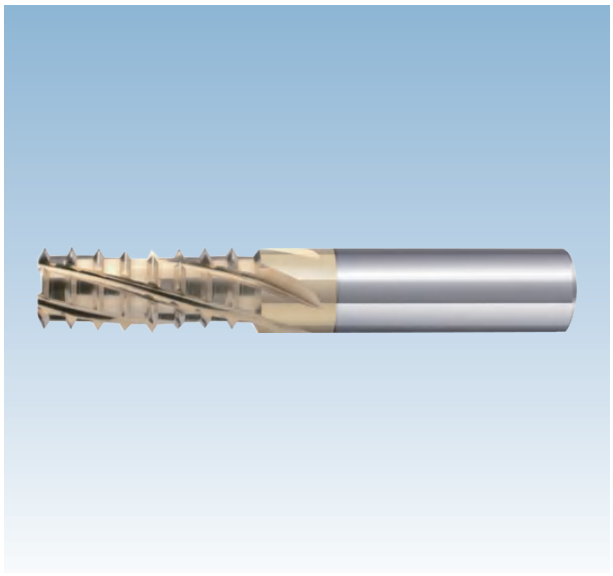
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●	●				●	●	○	○			○	●

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP15445ASH-0731584N06508	M4.0	0.7	3.15	8.4	6	50	4	
MP15445ASH-084084N06508	M5.0	0.8	4.0	10.4	6	50	4	
MP15445ASH-1048104N06608	M6.0	1.0	4.8	12	6	60	4	
MP15445ASH-1256012N8608	M8.0	1.25	6.0	16.3	8	60	4	
MP15445ASH-1580163N8608	M10	1.5	8.0	21	8	60	4	
MP15445ASH-1751021N10758	M12	1.75	10	24.5	10	75	4	
MP15445ASH-2011628N12758	M14	2.0	11.6	28	12	75	4	
MP15445ASH-201332N141008	M16	2.0	13	32	14	100	5	
MP15445ASH-251640N161008	M20	2.5	16	40	16	100	5	

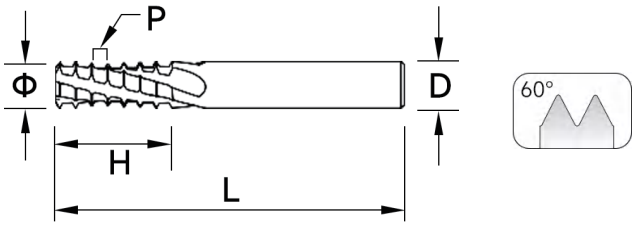
Supports Non-Standard Customization

P Series

Staggered-tooth full-thread milling cutter for Titanium/High-temperature alloys



▶ Offset tooth design significantly reduces the cutting resistance experienced by the full row of teeth during machining, allowing for higher feed rates and larger cutting volumes, thus greatly improving machining efficiency.



● = Best ○ =Good

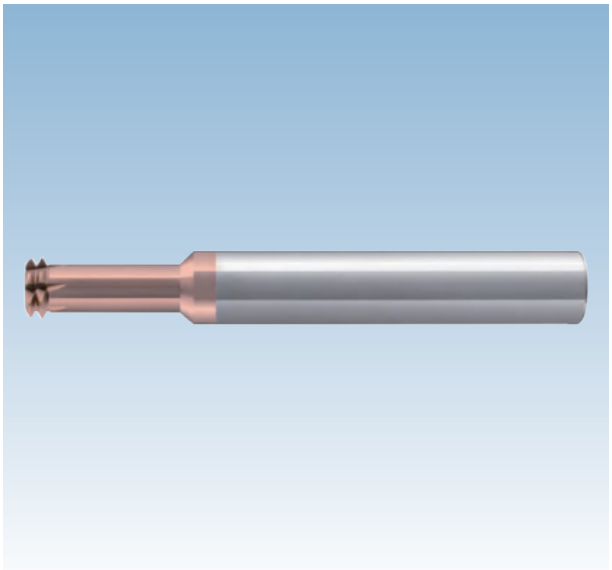
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
								●					●	●

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP15445ASH-0731584N06509	M4.0	0.7	3.15	8.4	6	50	4	
MP15445ASH-084084N06509	M5.0	0.8	4.0	10.4	6	50	4	
MP15445ASH-1048104N06609	M6.0	1.0	4.8	12	6	60	4	
MP15445ASH-1256012N8609	M8.0	1.25	6.0	16.3	8	60	4	
MP15445ASH-1580163N8609	M10	1.5	8.0	21	8	60	4	
MP15445ASH-1751021N10759	M12	1.75	10	24.5	10	75	4	
MP15445ASH-2011628N12759	M14	2.0	11.6	28	12	75	4	
MP15445ASH-201332N141009	M16	2.0	13	32	14	100	5	
MP15445ASH-251640N161009	M20	2.5	16	40	16	100	5	

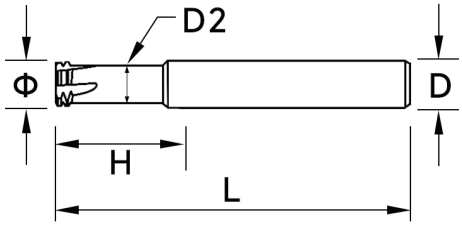
Supports Non-Standard Customization

P Series

Two-tooth ultra-hard left-hand thread milling cutter with Balzers coating



▶ Left-hand helix design, spindle rotates in reverse. Left-hand cutting reduces deflection and increases cutting force. Suitable for materials over 48HRC, such as hardened mold steel.



● = Best ○ =Good

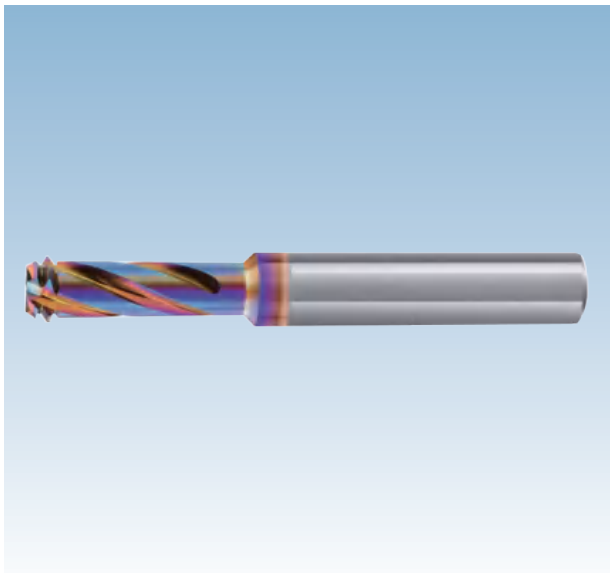
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
			●	●	●									

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance diameter D2	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP77360ASH-1207832Y650	M1.6	0.35	1.2	0.78	3.2	6.0	50	3	
MP77460ASH-15510540Y650	M2.0	0.4	1.55	1.05	4.0	6.0	50	4	
MP77460ASH-2014550Y650	M2.5	0.45	2.0	1.45	5.0	6.0	50	4	
MP77460ASH-241860Y650	M3.0	0.5	2.4	1.8	6.0	6.0	50	4	
MP77460ASH-3152380Y650	M4.0	0.7	3.15	2.3	8.0	6.0	50	4	
MP77460ASH-40530510Y650	M5.0	0.8	4.05	3.05	10	6.0	50	4	
MP77560ASH-483612Y650	M6.0	1.0	4.8	3.6	12	6.0	50	5	
MP77660ASH-655016Y860	M8.0	1.25	6.5	5.0	16	8.0	60	6	
MP77660ASH-826420Y1075	M10	1.5	8.2	6.4	20	10	75	6	
MP77660ASH-967524Y1075	M12	1.75	9.6	7.5	24	10	75	6	

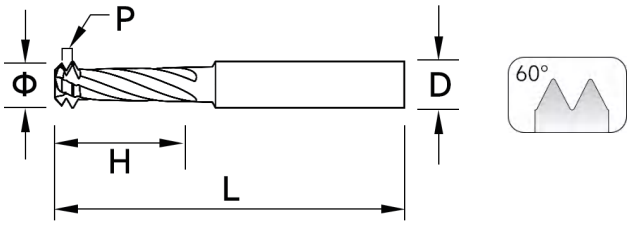
Supports Non-Standard Customization

P Series

Thread milling cutter without Pre-hole (DLC coating for aluminum)



▶ No pre-drilling required. Bottom hole and thread milling are completed in one operation with the self-tapping thread milling cutter.



● = Best ○ =Good

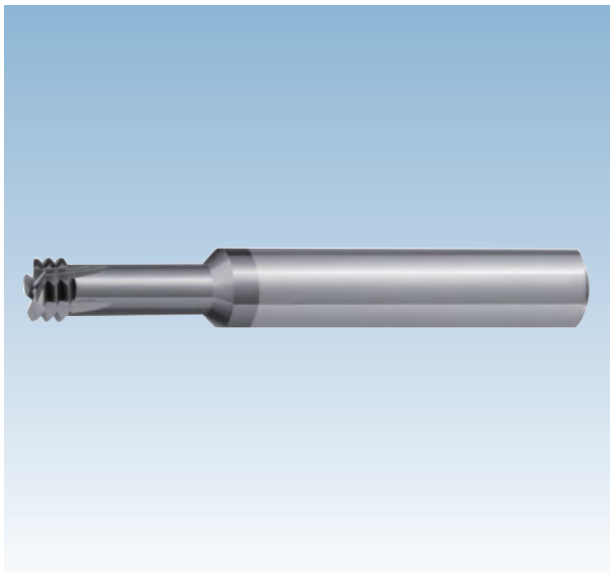
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
									●	●	●	●		

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Stock
MP47245ASH-03511550Y450	M1.6	0.35	1.15	5.0	4.0	50	2	
MP47245ASH-041565Y450	M2.0	0.4	1.5	6.5	4.0	50	2	
MP47245ASH-0451970Y450	M2.5	0.45	1.9	7.0	4.0	50	2	
MP47345ASH-052490Y650	M3.0	0.5	2.4	9.0	6.0	50	3	
MP47345ASH-073211Y650	M4.0	0.7	3.2	11	6.0	50	3	
MP47345ASH-083912Y650	M5.0	0.8	3.9	12	6.0	50	3	
MP47345ASH-104714Y650	M6.0	1.0	4.7	14	6.0	50	3	
MP47445ASH-1256518Y860	M8.0	1.25	6.5	18	8.0	60	4	
MP47445ASH-157823Y860	M10	1.5	7.8	23	8.0	60	4	
MP47445ASH-1759626Y1075	M12	1.75	9.6	26	10	75	4	

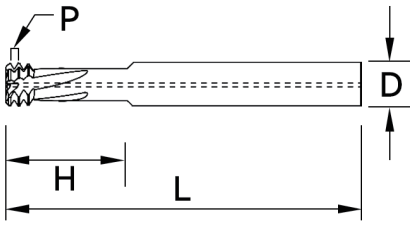
Supports Non-Standard Customization

P Series

Thread milling cutter without Pre-hole (coating for steel)



▶ No pre-drilling required. Bottom hole and thread milling are completed in one operation with the self-tapping thread milling cutter.



● = Best ○ =Good

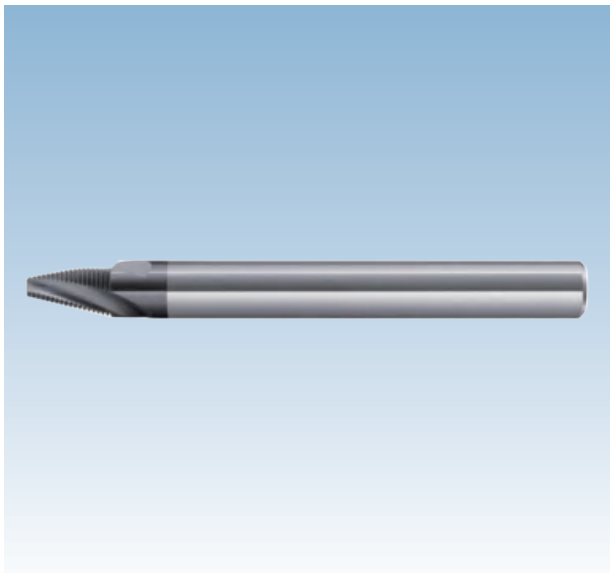
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●						○						

Order Number	Specification	Pitch P	Cutting Diameter Φ	Clearance length H	Shank Diameter D	Overall Length L	Number of Flutes T	Internal/ External	Stock
MP17445ASH-05247Y650	M3.0	0.5	2.4	7	6	50	4	External cooling	
MP17445ASH-07329Y650	M4.0	0.7	3.2	9	6	50	4	External cooling	
MP17445ASH-083912Y650	M5.0	0.8	3.9	12	6	50	4	External cooling	
MP17445ASH-14714Y650	M6.0	1	4.7	14	6	50	4	External cooling	
MP17445ASH-1256218Y860	M8.0	1.25	6.2	18	8	60	4	Internal cooling	
MP17445ASH-157523Y860	M10	1.5	7.5	23	8	60	4	Internal cooling	
MP17445ASH-175926Y1075	M12	1.75	9	26	10	75	4	Internal cooling	

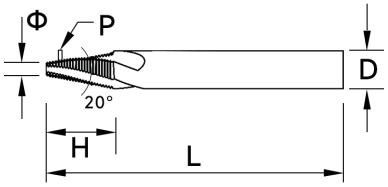
Supports Non-Standard Customization

P Series

Tapered medical bone plate thread milling cutter



▶ Specialized thread milling cutter for titanium alloy bone plates. High surface finish, smooth chip evacuation, stable dimensions, and long-lasting wear resistance.



● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
														●

Order Number	Specification	Pitch P	Thread angle C1	Cutting Diameter Φ	Angle C2	Flute length H	Shank Diameter D	Stock
Metric 60-degree taper thread milling cutter								
MP17345ASH-036019N66	NO.1	0.3	60°	1.9	20°	6	6	
MP17345ASH-046023N106	NO.2	0.4	60°	2.3	20°	10	6	
MP17345ASH-056029N96	NO.3	0.5	60°	2.9	20°	9	6	
MP17345ASH-06603N148	NO.4	0.6	60°	3	20°	14	8	
Imperial 55-degree taper thread milling cutter								
MP17345ASH-035519N66	NO.5	0.3	55°	1.9	20°	6	6	
MP17345ASH-045523N106	NO.6	0.4	55°	2.3	20°	10	6	
MP17345ASH-055529N96	NO.7	0.5	55°	2.9	20°	9	6	
MP17345ASH-06553N148	NO.8	0.6	55°	3	20°	14	8	

Supports Non-Standard Customization

Excellent Stability and Adaptability

● Wide Range of Operating Conditions: Provides consistent high performance in both stable and unstable operating conditions.

● Internal and External Cooling Options: Offers both internal and external cooling designs to effectively reduce cutting temperatures, extend tool life, and improve machining efficiency.

Advanced Cutting Geometry

● Crescent Cutting Edge: Features a crescent-shaped cutting edge that significantly reduces cutting resistance and force, enhancing drilling speed and surface quality.

● Optimized Drill Point: Special drill point design reduces axial forces, improving hole accuracy and centering ability.

● Special Cross-Cutting Edge: The cross-cutting edge design provides excellent centering, ensuring stability and precision during drilling.

Efficient Chip Evacuation and Long Life

● Optimized Chip Pocket Design: An optimized chip pocket design improves chip evacuation, prevents chip blockage, and enhances machining efficiency.

● Ultra-Fine Grain Substrate with Nano-Composite Multi-Layer PVD Coating: Significantly increases wear resistance and corrosion resistance, extending tool life.

● Broad Application Range: Suitable for general machinery, molds, automotive, and energy industries. Offers a full range of drills for ISO material groups, with hole tolerances reaching IT8-9, diameter range D3 to D20mm, and drilling depths from standard 3D to up to 40D deep holes, meeting various machining needs.

Milling Drill Naming Convention:

- Naming Example for the G-Series Universal External Coolant Twist Drill -3xD

Z G 1 1 2 5 5 A S H - 0 5 0 9 6 3 8 0 3 N 3

① ② ③④⑤ ⑥ ⑦ ⑧ ⑨ ⑩

1
Tool Type
Z - Drill Bit

2
Series
G-General Purpose Drill
P- High-Performance Drill
M-Stainless Steel Drill
K- Cast Iron Drill
R- Professional High-Performance Drill
A- Deep Hole Drill

3
Coating
0 -- UN COAT
1 -- ALCRONA
2 -- HELICK
3 -- ALDURA
4 -- DLC
5 -- ALTIN
6 -- ALNOVA
7 -- ALTiSiN
8 -- KX
9 -- PT
10 -- DIA
11 -- DP
12 -- DH

4
edge type
1 --X
2 --S
3 --C

5
Flute
1
2
3
4

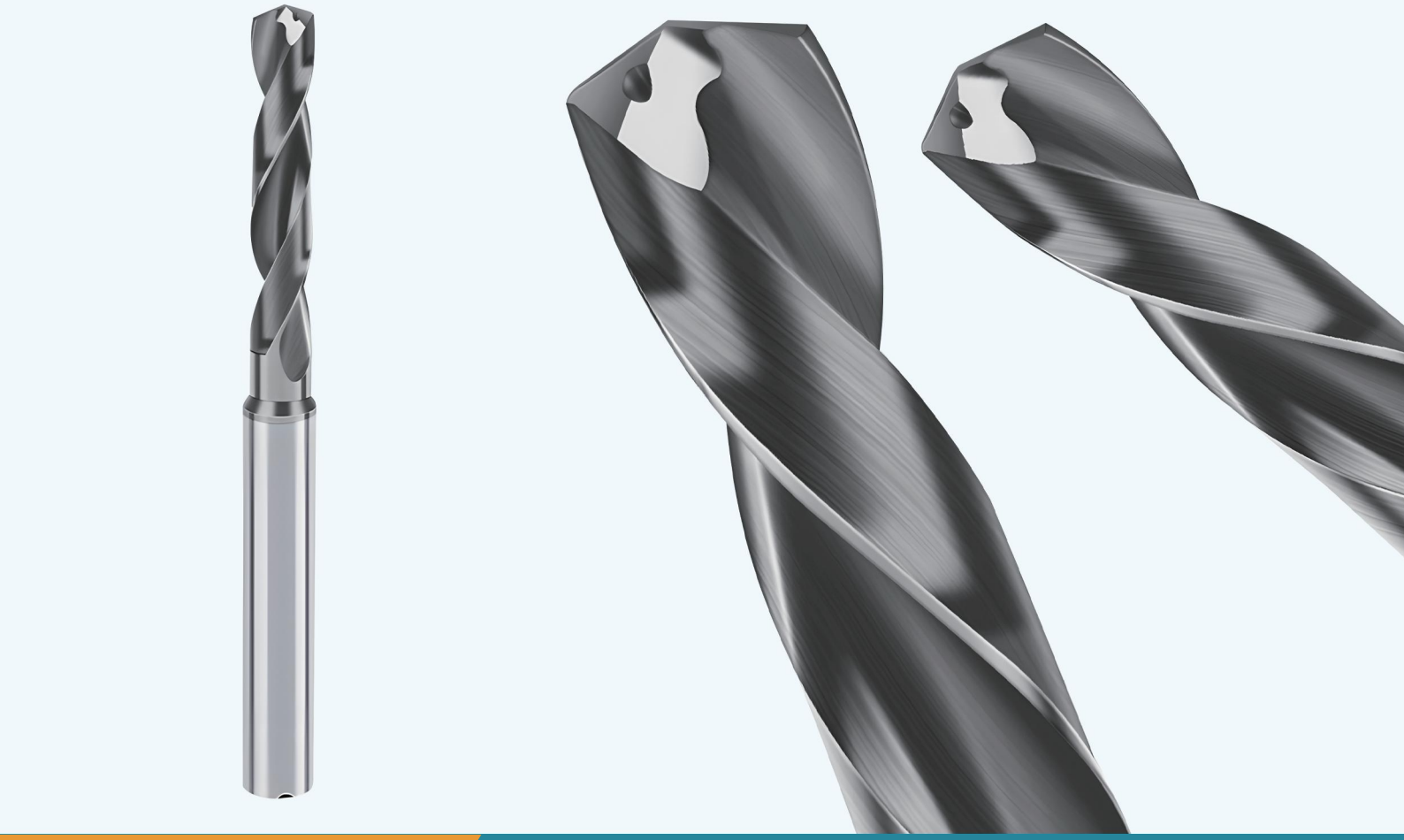
6
Material Hardness
45 -- Up to 45°
50 -- Up to 50°
55 -- Up to 55°
60 -- Up to 60°
65 -- Up to 65°
70 -- Up to 70°
00 -- Superhard Materials

7
Metric/Imperial
A -- Metric
B -- Imperial

8
Length Standard
S -- Standard
L -- Extended

9
Shank Type
H -- Straight Shank
W -- Side Lock Shank
Y -- Special Shan

10	
Specifications	
Cutting Diameter	
Cutting Length	
Overall Length	
Shank Diameter	
Internal External Coolant	N/C
L/D Ratio	



2025
New Product

General Purpose Tungsten Carbide Drill G

Overview and Applications

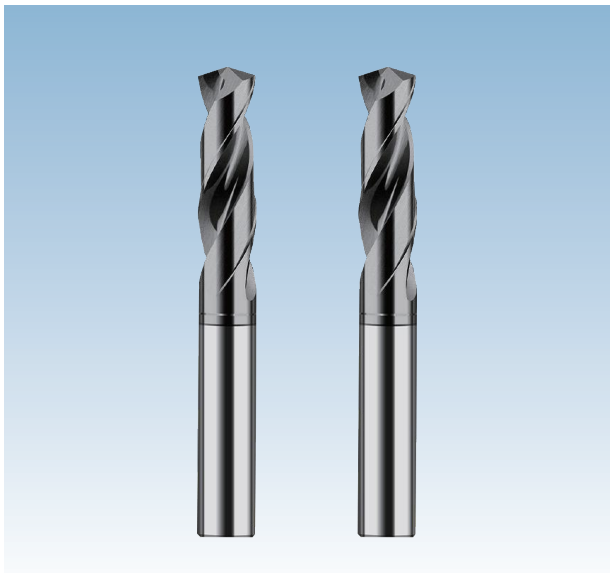
- Solutions for industry segments such as general machining, D&M, auto and power generation
- Covers ISO-P/K/M/H material groups
- Hole tolerance IT8-9
- Diameter range: 0.5–20.0 mm
- Drill length above 3D and 8D

Features and Technical Advantages

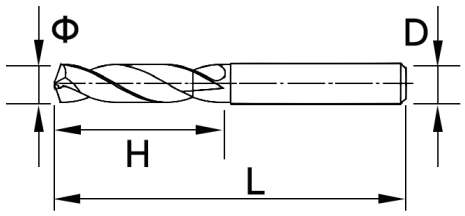
- Cover both stable and unstable cutting conditions
- Provide both internal & external coolant solutions
- Curve cutting edge generates low cutting forces
- Good centering performance thanks to unique design on central cutting edge
- Good chips evacuation thanks to chips flute optimization design
- Extra fine grain size substrate together with multi layers PVD coating generates long tool life

G Series

General Purpose External Coolant Carbide Drill - 3xD



▶ Features smooth chip evacuation, high wear resistance, and precise drilling. Coated with ALCRONA for enhanced heat and wear resistance, it is ideal for efficient machining of various materials.



● = Best ○ =Good

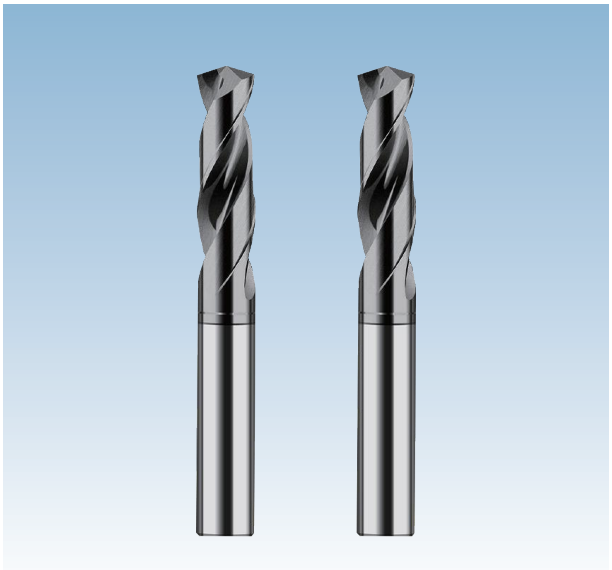
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	●			○	○	○	○	○	○		

Order Number	Cutting Diameter Φ	Diameter Multiple	Cutting Length H	Overall Length L	Shank Diameter D	Stock
ZG11255ASH-05096383N30	0.5-0.9	3D	6	38	3	
ZG11255ASH-10008383N30	1	3D	8	38	3	
ZG11255ASH-111310423N30	1.1-1.3	3D	10	42	3	
ZG11255ASH-141511423N30	1.4-1.5	3D	11	42	3	
ZG11255ASH-161712423N30	1.6-1.7	3D	12	42	3	
ZG11255ASH-181913423N30	1.8-1.9	3D	13	42	3	
ZG11255ASH-202914503N30	2.0-2.9	3D	14	50	3	
ZG11255ASH-300018603N30	3	3D	18	60	3	
ZG11255ASH-303720624N30	3.0-3.7	3D	20	62	4	
ZG11255ASH-384024664N30	3.8-4.0	3D	24	66	4	
ZG11255ASH-410024625N30	4.1	3D	24	62	5	
ZG11255ASH-425026625N30	4.2-5.0	3D	26	62	5	
ZG11255ASH-414724666N30	4.1-4.7	3D	24	66	6	
ZG11255ASH-486028666N30	4.8-6.0	3D	28	66	6	
ZG11255ASH-616634747N30	6.1-6.6	3D	34	74	7	
ZG11255ASH-677037747N30	6.7-7.0	3D	37	74	7	
ZG11255ASH-617034798N30	6.1-7.0	3D	34	79	8	
ZG11255ASH-718041798N30	7.1-8.0	3D	41	79	8	
ZG11255ASH-819043849N30	8.1-9.0	3D	43	84	9	
ZG11255ASH-81100478910N30	8.1-10.0	3D	47	89	10	
ZG11255ASH-101110519511N30	10.1-11.0	3D	51	95	11	
ZG11255ASH-1011205510212N30	10.1-12.0	3D	55	102	12	
ZG11255ASH-1211305710213N30	12.1-13.0	3D	57	102	13	
ZG11255ASH-1211406010714N30	12.1-14.0	3D	60	107	14	
ZG11255ASH-1411506211115N30	14.1-15.0	3D	62	111	15	
ZG11255ASH-1411606511516N30	14.1-16.0	3D	65	115	16	
ZG11255ASH-1611706611917N30	16.1-17.0	3D	66	119	17	
ZG11255ASH-1611807312318N30	16.1-18.0	3D	73	123	18	
ZG11255ASH-1811907012719N30	18.1-19.0	3D	70	127	19	
ZG11255ASH-1812007913120N30	18.1-20.0	3D	79	131	20	

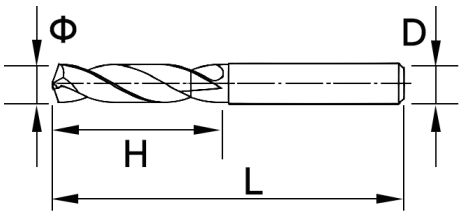
Supports Non-Standard Customization

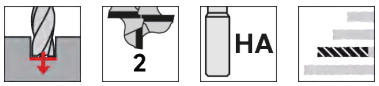
G Series

General Purpose External Coolant Carbide Drill - 5xD



▶ Features smooth chip evacuation, high wear resistance, and precise drilling. Coated with ALCRONA for enhanced heat and wear resistance, it is ideal for efficient machining of various materials.





WC

ALCRONA Coat

● = Best ○ =Good

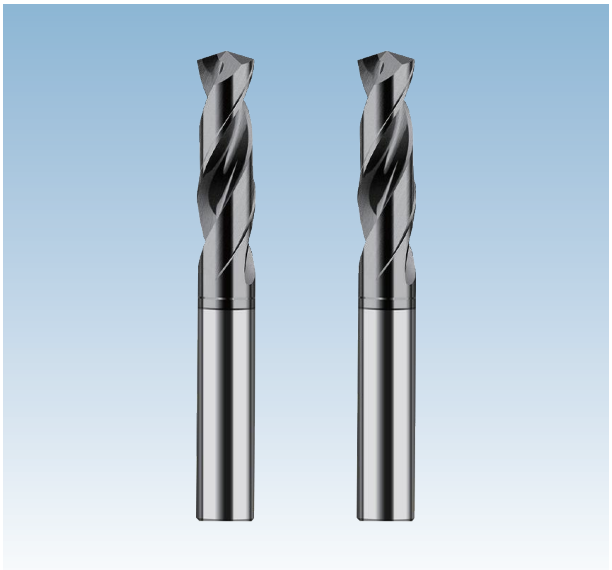
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	●			○	○	○	○	○	○		

Order Number	Cutting Diameter Φ	Diameter Multiple	Cutting Length H	Overall Length L	Shank Diameter D	Stock
ZG11255ASH-100010503N50	1	5D	10	50	3	
ZG11256ASH-111312503N50	1.1-1.3	5D	12	50	3	
ZG11257ASH-141513503N50	1.4-1.5	5D	13	50	3	
ZG11258ASH-161714503N50	1.6-1.7	5D	14	50	3	
ZG11259ASH-181915503N50	1.8-1.9	5D	15	50	3	
ZG11260ASH-200016503N50	2	5D	16	50	3	
ZG11261ASH-212922503N50	2.1-2.9	5D	22	50	3	
ZG11262ASH-300025603N50	3	5D	25	60	3	
ZG11263ASH-303728664N50	3.0-3.7	5D	28	66	4	
ZG11264ASH-384038744N50	3.8-4.0	5D	38	74	4	
ZG11265ASH-414333715N50	4.1-4.3	5D	33	71	5	
ZG11266ASH-444736715N50	4.4-4.7	5D	36	71	5	
ZG11267ASH-485039715N50	4.8-5.0	5D	39	71	5	
ZG11268ASH-414738746N50	4.1-4.7	5D	38	74	6	
ZG11269ASH-486044826N50	4.8-6.0	5D	44	82	6	
ZG11270ASH-617047877N50	6.1-7.0	5D	47	87	7	
ZG11271ASH-618053918N50	6.1-8.0	5D	53	91	8	
ZG11272ASH-819056969N50	8.1-9.0	5D	56	96	9	
ZG11273ASH-811006110310N50	8.1-10.0	5D	61	103	10	
ZG11274ASH-1011106811511N50	10.1-11.0	5D	68	115	11	
ZG11275ASH-1011207111812N50	10.1-12.0	5D	71	118	12	
ZG11276ASH-1211307512513N50	12.1-13.0	5D	75	125	13	
ZG11277ASH-1211407712414N50	12.1-14.0	5D	77	124	14	
ZG11278ASH-1411508314315N50	14.1-15.0	5D	83	143	15	
ZG11279ASH-1411608313316N50	14.1-16.0	5D	83	133	16	
ZG11280ASH-1611709515517N50	16.1-17.0	5D	95	155	17	
ZG11281ASH-1611809314318N50	16.1-18.0	5D	93	143	18	
ZG11282ASH-18119010516019N50	18.1-19.0	5D	105	160	19	
ZG11283ASH-18120010115320N50	18.1-20.0	5D	101	153	20	

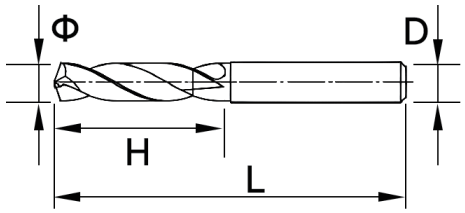
Supports Non-Standard Customization

G Series

Reinforced External Coolant Carbide Drill - 3xD



▶ Features smooth chip evacuation, high wear resistance, and precise drilling. Coated with ALCRONA for enhanced heat and wear resistance, it is ideal for efficient machining of various materials.



● = Best ○ =Good

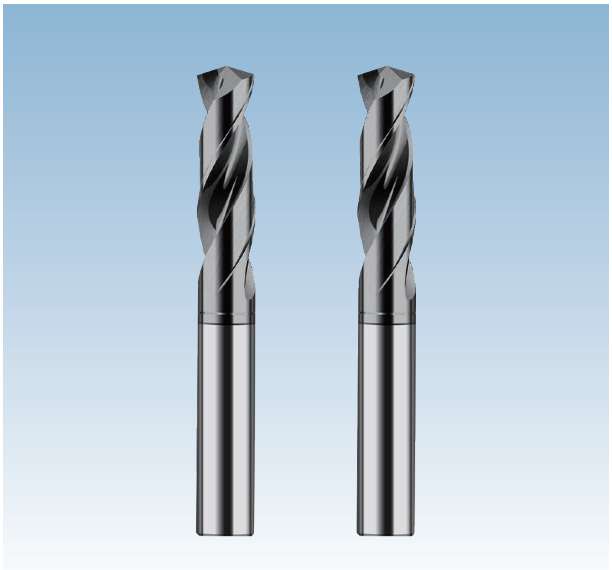
P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	●			○	○	○	○	○	○		

Order Number	Cutting Diameter Φ	Diameter Multiple	Cutting Length H	Overall Length L	Shank Diameter D	Stock
ZG11255ASH-303720624N3	3.0-3.7	3D	20	62	4	
ZG11255ASH-384024664N3	3.8-4.0	3D	24	66	4	
ZG11255ASH-414724666N3	4.1-4.7	3D	24	66	6	
ZG11255ASH-486028666N3	4.8-6.0	3D	28	66	6	
ZG11255ASH-617034798N3	6.1-7.0	3D	34	79	8	
ZG11255ASH-718041798N3	7.1-8.0	3D	41	79	8	
ZG11255ASH-81100478910N3	8.1-10.0	3D	47	89	10	
ZG11255ASH-1011205510212N3	10.1-12.0	3D	55	102	12	
ZG11255ASH-1211406010714N3	12.1-14.0	3D	60	107	14	
ZG11255ASH-1411606511516N3	14.1-16.0	3D	65	115	16	
ZG11255ASH-1611807312318N3	16.1-18.0	3D	73	123	18	
ZG11255ASH-1812007913120N3	18.1-20.0	3D	79	131	20	

Supports Non-Standard Customization

G Series

Reinforced External Coolant Carbide Drill - 5xD



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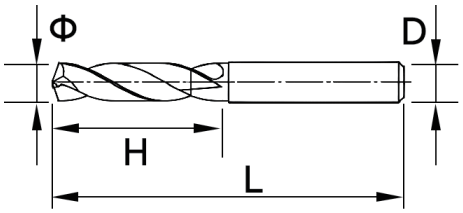


● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	●			○	○	○	○	○	○		

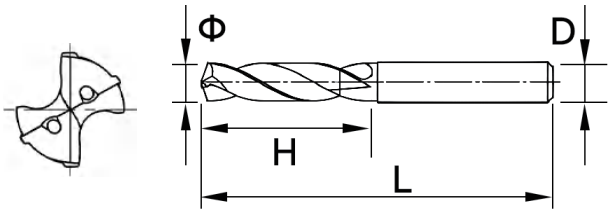
Order Number	Cutting Diameter Φ	Diameter Multiple	Cutting Length H	Overall Length L	Shank Diameter D	Stock
ZG11255ASH-303728664N5	3.0-3.7	5D	28	66	4	
ZG11255ASH-384036744N5	3.8-4.0	5D	36	74	4	
ZG11255ASH-414736746N5	4.1-4.7	5D	36	74	6	
ZG11255ASH-486044826N5	4.8-6.0	5D	44	82	6	
ZG11255ASH-618053918N5	6.1-8.0	5D	53	91	8	
ZG11255ASH-811006110310N5	8.1-10.0	5D	61	103	10	
ZG11255ASH-1011207111812N5	10.1-12.0	5D	71	118	12	
ZG11255ASH-1211407712414N5	12.1-14.0	5D	77	124	14	
ZG11255ASH-1411608313316N5	14.1-16.0	5D	83	133	16	
ZG11255ASH-1611809314318N5	16.1-18.0	5D	93	143	18	
ZG11255ASH-18120010115320N5	18.1-20.0	5D	101	153	20	

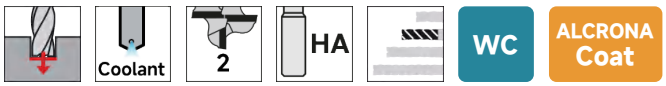
Supports Non-Standard Customization

G Series

Reinforced Internal Coolant Carbide Drill - 3xD

▶ Features smooth chip evacuation, high wear resistance, and precise drilling. Coated with ALCRONA for enhanced heat and wear resistance, it is ideal for efficient machining of various materials.





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P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	●			○	○	○	○	○	○		

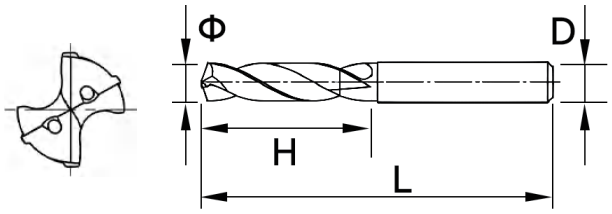
Order Number	Cutting Diameter Φ	Diameter Multiple	Cutting Length H	Overall Length L	Shank Diameter D	Stock
ZG11255ASH-303720624C3	3.0-3.7	3D	20	62	4	
ZG11255ASH-384024664C3	3.8-4.0	3D	24	66	4	
ZG11255ASH-414724666C3	4.1-4.7	3D	24	66	6	
ZG11255ASH-486028666C3	4.8-6.0	3D	28	66	6	
ZG11255ASH-617034798C3	6.1-7.0	3D	34	79	8	
ZG11255ASH-718041798C3	7.1-8.0	3D	41	79	8	
ZG11255ASH-81100478910C3	8.1-10.0	3D	47	89	10	
ZG11255ASH-1011205510212C3	10.1-12.0	3D	55	102	12	
ZG11255ASH-1211406010714C3	12.1-14.0	3D	60	107	14	
ZG11255ASH-1411606511516C3	14.1-16.0	3D	65	115	16	
ZG11255ASH-1611807312318C3	16.1-18.0	3D	73	123	18	
ZG11255ASH-1812007913120C3	18.1-20.0	3D	79	131	20	

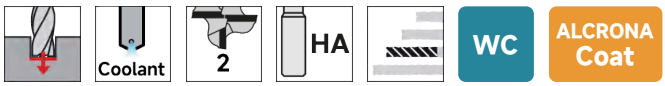
Supports Non-Standard Customization

G Series

Reinforced Internal Coolant Carbide Drill - 5xD

▶ Features smooth chip evacuation, high wear resistance, and precise drilling. Coated with ALCRONA for enhanced heat and wear resistance, it is ideal for efficient machining of various materials.





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P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	●			○	○	○	○	○	○		

Order Number	Cutting Diameter Φ	Diameter Multiple	Cutting Length H	Overall Length L	Shank Diameter D	Stock
ZG11255ASH-303728664C5	3.0-3.7	5D	28	66	4	
ZG11255ASH-384036744C5	3.8-4.0	5D	36	74	4	
ZG11255ASH-414736746C5	4.1-4.7	5D	36	74	6	
ZG11255ASH-486044826C5	4.8-6.0	5D	44	82	6	
ZG11255ASH-618053918C5	6.1-8.0	5D	53	91	8	
ZG11255ASH-811006110310C5	8.1-10.0	5D	61	103	10	
ZG11255ASH-1011207111812C5	10.1-12.0	5D	71	118	12	
ZG11255ASH-1211407712414C5	12.1-14.0	5D	77	124	14	
ZG11255ASH-1411608313316C5	14.1-16.0	5D	83	133	16	
ZG11255ASH-1611809314318C5	16.1-18.0	5D	93	143	18	
ZG11255ASH-18120010115320C5	18.1-20.0	5D	101	153	20	

Supports Non-Standard Customization

2025
New Product

High-Performance Solid Carbide Drill P

Overview and Applications

- Solutions for industry segments such as general machining, D&M, auto and power generation
- Covers ISO-P/K/M/H material groups
- Hole tolerance IT8-9
- Diameter range: 3.0–20.0 mm
- Drill length above 8xD

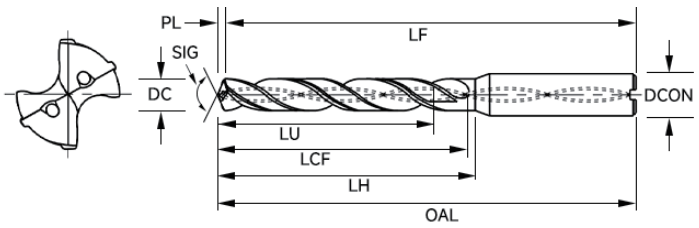
Features and Technical Advantages

- Cover both stable and unstable cutting conditions
- Provide both internal & external coolant solutions
- Curve cutting edge generates low cutting forces
- Good centering performance thanks to unique design on central cutting edge
- Good chips evacuation thanks to chips flute optimization design
- Extra fine grain size substrate together with multi layers PVD coating generates long tool life

P Series

General Purpose High-Performance Solid Tungsten Carbide Drill – Internal Coolant

▶ Highly Versatile for ISO Groups P, K, M, H. Excellent Centering, IT8-9 Tolerances. Full Range of Sizes, D3-D20mm.



WC DH Coat

Shank Tolerance	H6
SIG Angle	140°
Max Reconditioning	5

● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	○	○	○	○	○	○	○	○		

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZP121260ASH-395624C3	3	9.5	20	62	61.5	0.5	4	3	
ZP121260ASH-3155664C5	3	15.5	26	66	65.5	0.5	4	5	
ZP121260ASH-3245784C8	3	24.5	40	78	77.5	0.5	4	8	
ZP121260ASH-3198624C3	3.1	9.8	20	62	61.5	0.5	4	3	
ZP121260ASH-3116664C5	3.1	16	26	66	65.5	0.5	4	5	
ZP121260ASH-31253784C8	3.1	25.3	40	78	77.5	0.5	4	8	
ZP121260ASH-31710624C3	3.17	10	20	62	61.5	0.5	4	3	
ZP121260ASH-317164664C5	3.17	16.4	28	66	65.5	0.5	4	5	
ZP121260ASH-317259744C8	3.17	25.9	34	74	73.5	0.5	4	8	
ZP121260ASH-32101624C3	3.2	10.1	20	62	61.5	0.5	4	3	
ZP121260ASH-32165664C5	3.2	16.5	26	66	65.5	0.5	4	5	
ZP121260ASH-32261784C8	3.2	26.1	40	78	77.5	0.5	4	8	
ZP121260ASH-33105624C3	3.3	10.5	20	62	61.4	0.6	4	3	
ZP121260ASH-33171664C5	3.3	17.1	26	66	65.4	0.6	4	5	
ZP121260ASH-3327784C8	3.3	27	40	78	77.5	0.6	4	8	
ZP121260ASH-34108624C3	3.4	10.8	20	62	61.4	0.6	4	3	
ZP121260ASH-34176664C5	3.4	17.6	26	66	65.4	0.6	4	5	
ZP121260ASH-34275784C8	3.4	27.5	40	78	77.4	0.6	4	8	
ZP121260ASH-345274784C8	3.45	27.4	40	78	73.4	0.6	4	8	
ZP121260ASH-35111624C3	3.5	11.1	20	62	61.4	0.6	4	3	
ZP121260ASH-35181664C5	3.5	18.1	26	66	65.4	0.6	4	5	
ZP121260ASH-35273784C8	3.5	27.3	40	78	77.4	0.6	4	8	
ZP121260ASH-355112624C3	3.55	11.2	20	62	61.4	0.6	4	3	
ZP121260ASH-357271784C8	3.57	27.1	40	78	73.4	0.6	4	8	
ZP121260ASH-36114624C3	3.6	11.4	20	62	61.4	0.6	4	3	
ZP121260ASH-36185664C5	3.6	18.5	26	66	65.4	0.6	4	5	
ZP121260ASH-36271784C8	3.6	27.1	40	78	73.4	0.6	4	8	
ZP121260ASH-37117624C3	3.7	11.7	20	62	61.4	0.6	4	3	
ZP121260ASH-37191664C5	3.7	19.1	26	66	65.4	0.6	4	5	
ZP121260ASH-37279784C8	3.7	27.9	40	78	77.4	0.6	4	8	

Supports Non-Standard Customization

General Purpose High-Performance Solid Tungsten Carbide Drill – Internal Coolant (02)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZP121260ASH-38121664C3	3.8	12.1	24	66	65.4	0.6	4	3	
ZP121260ASH-38311744C5	3.8	31.1	34	74	73.4	0.6	4	5	
ZP121260ASH-38311874C8	3.8	31.1	49	87	86.4	0.6	4	8	
ZP121260ASH-39125664C3	3.9	12.5	24	66	65.4	0.6	4	3	
ZP121260ASH-39202744C5	3.9	20.2	34	74	73.4	0.6	4	5	
ZP121260ASH-39319874C8	3.9	31.9	49	87	86.4	0.6	4	8	
ZP121260ASH-397324874C8	3.97	32.4	49	87	84.3	0.7	4	8	
ZP121260ASH-4127664C3	4	12.7	24	66	65.3	0.7	4	3	
ZP121260ASH-4207744C5	4	20.7	34	74	73.3	0.7	4	5	
ZP121260ASH-4327874C8	4	32.7	49	87	86.3	0.7	4	8	
ZP121260ASH-4113666C3	4.1	13	24	66	65.3	0.7	6	3	
ZP121260ASH-41212746C5	4.1	21.2	34	74	73.3	0.7	6	5	
ZP121260ASH-41335876C8	4.1	33.5	49	87	86.3	0.7	6	8	
ZP121260ASH-42133666C3	4.2	13.3	24	66	65.3	0.7	6	3	
ZP121260ASH-42217746C5	4.2	21.7	34	74	73.3	0.7	6	5	
ZP121260ASH-42343876C8	4.2	34.3	49	87	86.3	0.7	6	8	
ZP121260ASH-43137666C3	4.3	13.7	24	66	65.2	0.7	6	3	
ZP121260ASH-43223746C5	4.3	22.3	34	74	73.2	0.7	6	5	
ZP121260ASH-43352876C8	4.3	35.2	49	87	86.3	0.7	6	8	
ZP121260ASH-44141666C3	4.4	14.1	24	66	65.3	0.7	6	3	
ZP121260ASH-44228746C5	4.4	22.8	34	74	73.3	0.7	6	5	
ZP121260ASH-4436876C8	4.4	36	49	87	86.3	0.7	6	8	
ZP121260ASH-45143666C3	4.5	14.3	24	66	65.3	0.7	6	3	
ZP121260ASH-45233746C5	4.5	23.3	34	74	73.3	0.7	6	5	
ZP121260ASH-45368876C8	4.5	36.8	49	87	86.3	0.7	6	8	
ZP121260ASH-455235746C5	4.55	23.5	36	74	73.2	0.8	6	5	
ZP121260ASH-46146666C3	4.6	14.6	24	66	65.2	0.8	6	3	
ZP121260ASH-46238746C5	4.6	23.8	34	74	73.2	0.8	6	5	
ZP121260ASH-46368876C8	4.6	36.8	49	87	86.2	0.8	6	8	
ZP121260ASH-47149666C3	4.7	14.9	24	66	65.2	0.8	6	3	
ZP121260ASH-47242746C5	4.7	24.2	34	74	73.2	0.8	6	5	
ZP121260ASH-47366876C8	4.7	36.6	49	87	84.2	0.8	6	8	
ZP121260ASH-47615666C3	4.76	15	28	66	65.2	0.8	6	3	
ZP121260ASH-476368946C8	4.76	36.8	56	94	96.2	0.8	6	8	
ZP121260ASH-48152666C3	4.8	15.2	28	66	65.2	0.8	6	3	
ZP121260ASH-48248826C5	4.8	24.8	44	82	81.2	0.8	6	5	
ZP121260ASH-48392946C8	4.8	39.2	56	94	93.2	0.8	6	8	
ZP121260ASH-49155666C3	4.9	15.5	28	66	65.2	0.8	6	3	
ZP121260ASH-49253826C5	4.9	25.3	44	82	81.2	0.8	6	5	
ZP121260ASH-4940946C8	4.9	40	56	94	93.2	0.8	6	8	
ZP121260ASH-5158666C3	5	15.8	28	66	65.2	0.8	6	3	
ZP121260ASH-5258826C5	5	25.8	44	82	81.2	0.8	6	5	
ZP121260ASH-5408946C8	5	40.8	56	94	93.2	0.8	6	8	
ZP121260ASH-51161666C3	5.1	16.1	28	66	65.2	0.8	6	3	
ZP121260ASH-51263826C5	5.1	26.3	44	82	81.2	0.8	6	5	
ZP121260ASH-51416946C8	5.1	41.6	56	94	93.2	0.8	6	8	
ZP121260ASH-516266876C5	5.16	26.6	44	87	81.2	0.8	6	5	
ZP121260ASH-516421976C8	5.16	42.1	57	97	96.1	0.9	6	8	
ZP121260ASH-52164666C3	5.2	16.4	28	66	65.1	0.9	6	3	
ZP121260ASH-52268826C5	5.2	26.8	44	82	81.1	0.9	6	5	
ZP121260ASH-52424946C8	5.2	42.4	56	94	93.1	0.9	6	8	

Supports Non-Standard Customization

General Purpose High-Performance Solid Tungsten Carbide Drill – Internal Coolant (03)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZP121260ASH-53167666C3	5.3	16.7	28	66	65.1	0.9	6	3	
ZP121260ASH-53273826C5	5.3	27.3	44	82	81.1	0.9	6	5	
ZP121260ASH-5417666C3	5.4	17	28	66	65.1	0.9	6	3	
ZP121260ASH-54278826C5	5.4	27.8	44	82	81.1	0.9	6	5	
ZP121260ASH-5444946C8	5.4	44	56	94	93.1	0.9	6	8	
ZP121260ASH-55174666C3	5.5	17.4	28	66	65.1	0.9	6	3	
ZP121260ASH-55284826C5	5.5	28.4	44	82	81.1	0.9	6	5	
ZP121260ASH-55449946C8	5.5	44.9	56	94	93.1	0.9	6	8	
ZP121260ASH-555287876C5	5.55	28.7	44	87	81.1	0.9	6	5	
ZP121260ASH-556175726C3	5.56	17.5	28	72	65.1	0.9	6	3	
ZP121260ASH-556287876C5	5.56	28.7	44	87	81.1	0.9	6	5	
ZP121260ASH-556453976C8	5.56	45.3	58	97	96.1	0.9	6	8	
ZP121260ASH-56177666C3	5.6	17.7	28	66	65.1	0.9	6	3	
ZP121260ASH-56289826C5	5.6	28.9	44	82	81.1	0.9	6	5	
ZP121260ASH-56457946C8	5.6	45.7	56	94	93.1	0.9	6	8	
ZP121260ASH-57179666C3	5.7	17.9	28	66	65.1	0.9	6	3	
ZP121260ASH-57294826C5	5.7	29.4	44	82	81	1	6	5	
ZP121260ASH-57465946C8	5.7	46.5	56	94	93	1	6	8	
ZP121260ASH-5818666C3	5.8	18	28	66	65	1	6	3	
ZP121260ASH-58299826C5	5.8	29.9	44	82	81	1	6	5	
ZP121260ASH-58473946C8	5.8	47.3	56	94	93	1	6	8	
ZP121260ASH-59182666C3	5.9	18.2	28	66	65	1	6	3	
ZP121260ASH-59304826C5	5.9	30.4	44	82	81	1	6	5	
ZP121260ASH-59474946C8	5.9	47.4	56	94	93	1	6	8	
ZP121260ASH-595182666C3	5.95	18.2	28	66	65	1	6	3	
ZP121260ASH-595307826C5	5.95	30.7	44	82	81	1	6	5	
ZP121260ASH-6189666C3	6	18.9	28	66	65	1	6	3	
ZP121260ASH-6309826C5	6	30.9	44	82	81	1	6	5	
ZP121260ASH-648946C8	6	48	56	94	93	1	6	8	
ZP121260ASH-61193668C3	6.1	19.3	28	66	65	1	8	3	
ZP121260ASH-61315828C5	6.1	31.5	44	82	81	1	8	5	
ZP121260ASH-614981068C8	6.1	49.8	67	106	105	1	8	8	
ZP121260ASH-62196798C3	6.2	19.6	34	79	77.9	1.1	8	3	
ZP121260ASH-6232918C5	6.2	32	53	91	89.9	1.1	8	5	
ZP121260ASH-625061068C8	6.2	50.6	67	106	105	1.1	8	8	
ZP121260ASH-63199798C3	6.3	19.9	34	79	77.9	1.1	8	3	
ZP121260ASH-63325918C5	6.3	32.5	53	91	89.9	1.1	8	5	
ZP121260ASH-635141068C8	6.3	51.4	67	106	105	1.1	8	8	
ZP121260ASH-635201798C3	6.35	20.1	34	79	78	1.1	8	3	
ZP121260ASH-635328918C5	6.35	32.8	53	91	90	1.1	8	5	
ZP121260ASH-6355181068C8	6.35	51.8	67	106	105	1.1	8	8	
ZP121260ASH-64202798C3	6.4	20.2	34	79	77.9	1.1	8	3	
ZP121260ASH-6433918C5	6.4	33	53	91	89.9	1.1	8	5	
ZP121260ASH-645221058C8	6.4	52.2	67	105	104	1.1	8	8	
ZP121260ASH-65206798C3	6.5	20.6	34	79	77.9	1.1	8	3	
ZP121260ASH-65336918C5	6.5	33.6	53	91	89.9	1.1	8	5	
ZP121260ASH-655311058C8	6.5	53.1	67	105	104	1.1	8	8	
ZP121260ASH-66209798C3	6.6	20.9	34	79	77.9	1.1	8	3	
ZP121260ASH-66341918C5	6.6	34.1	53	91	89.9	1.1	8	5	
ZP121260ASH-665391058C8	6.6	53.9	67	105	104	1.1	8	8	
ZP121260ASH-67212798C3	6.7	21.2	34	79	77.9	1.1	8	3	

Supports Non-Standard Customization

General Purpose High-Performance Solid Tungsten Carbide Drill – Internal Coolant (04)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZP121260ASH-67346918C5	6.7	34.6	53	91	89.9	1.1	8	5	
ZP121260ASH-675471058C8	6.7	54.7	67	105	104	1.1	8	8	
ZP121260ASH-675213798C3	6.75	21.3	34	79	77.9	1.1	8	3	
ZP121260ASH-675348918C5	6.75	34.8	53	91	89.9	1.1	8	5	
ZP121260ASH-6755511068C8	6.75	55.1	67	106	105	1.1	8	8	
ZP121260ASH-68215798C3	6.8	21.5	34	79	77.9	1.1	8	3	
ZP121260ASH-68351918C5	6.8	35.1	53	91	89.9	1.1	8	5	
ZP121260ASH-685551068C8	6.8	55.5	67	106	105	1.1	8	8	
ZP121260ASH-69218798C3	6.9	21.8	34	79	77.8	1.2	8	3	
ZP121260ASH-69356918C5	6.9	35.6	53	91	89.8	1.2	8	5	
ZP121260ASH-695631068C8	6.9	56.3	67	106	105	1.2	8	8	
ZP121260ASH-7221798C3	7	22.1	34	79	77.8	1.2	8	3	
ZP121260ASH-7361918C5	7	36.1	53	91	89.8	1.2	8	5	
ZP121260ASH-75711068C8	7	57.1	67	106	105	1.2	8	8	
ZP121260ASH-71224798C3	7.1	22.4	41	79	77.8	1.2	8	3	
ZP121260ASH-71366918C5	7.1	36.6	53	91	89.8	1.2	8	5	
ZP121260ASH-714226798C3	7.14	22.6	41	79	77.8	1.2	8	3	
ZP121260ASH-714369918C5	7.14	36.9	53	91	89.8	1.2	8	5	
ZP121260ASH-7145831108C8	7.14	58.3	72	110	109	1.2	8	8	
ZP121260ASH-72228798C3	7.2	22.8	41	79	77.8	1.2	8	3	
ZP121260ASH-72372918C5	7.2	37.2	53	91	89.8	1.2	8	5	
ZP121260ASH-73231798C3	7.3	23.1	41	79	77.8	1.2	8	3	
ZP121260ASH-73377918C5	7.3	37.7	53	91	89.8	1.2	8	5	
ZP121260ASH-735961108C8	7.3	59.6	72	110	109	1.2	8	8	
ZP121260ASH-74234798C3	7.4	23.4	41	79	77.7	1.3	8	3	
ZP121260ASH-74382918C5	7.4	38.2	53	91	89.7	1.3	8	5	
ZP121260ASH-746041108C8	7.4	60.4	72	110	109	1.3	8	8	
ZP121260ASH-75237798C3	7.5	23.7	41	79	77.7	1.3	8	3	
ZP121260ASH-75387918C5	7.5	38.7	53	91	89.7	1.3	8	5	
ZP121260ASH-756121108C8	7.5	61.2	72	110	109	1.3	8	8	
ZP121260ASH-754389918C5	7.54	38.9	53	91	89.7	1.3	8	5	
ZP121260ASH-7624798C3	7.6	24	41	79	77.7	1.3	8	3	
ZP121260ASH-76621108C8	7.6	62	72	110	109	1.3	8	8	
ZP121260ASH-77243798C3	7.7	24.3	41	79	77.7	1.3	8	3	
ZP121260ASH-77397918C5	7.7	39.7	53	91	89.7	1.3	8	5	
ZP121260ASH-776281108C8	7.7	62.8	72	110	109	1.3	8	8	
ZP121260ASH-78247798C3	7.8	24.7	41	79	77.7	1.3	8	3	
ZP121260ASH-78403918C5	7.8	40.3	53	91	89.7	1.3	8	5	
ZP121260ASH-786371108C8	7.8	63.7	72	110	109	1.3	8	8	
ZP121260ASH-7925798C3	7.9	25	41	79	77.7	1.3	8	3	
ZP121260ASH-79408918C5	7.9	40.8	53	91	89.7	1.3	8	5	
ZP121260ASH-794251798C3	7.94	25.1	41	79	77.6	1.4	8	3	
ZP121260ASH-79441918C5	7.94	41	53	91	89.6	1.4	8	5	
ZP121260ASH-7946481108C8	7.94	64.8	72	110	109	1.4	8	8	
ZP121260ASH-8253798C3	8	25.3	41	79	77.6	1.4	8	3	
ZP121260ASH-8413918C5	8	41.3	53	91	89.6	1.4	8	5	
ZP121260ASH-8561108C7	8	56	72	110	109	1.4	8	7	
ZP121260ASH-812567910C3	8.1	25.6	41	79	77.6	1.4	10	3	
ZP121260ASH-814189110C5	8.1	41.8	53	91	89.6	1.4	10	5	
ZP121260ASH-8166112210C8	8.1	66.1	80	122	121	1.4	10	8	
ZP121260ASH-8154219110C5	8.15	42.1	53	91	89.6	1.4	10	5	

Supports Non-Standard Customization

General Purpose High-Performance Solid Tungsten Carbide Drill – Internal Coolant (05)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZP121260ASH-822598910C3	8.2	25.9	47	89	87.6	1.4	10	3	
ZP121260ASH-8242310310C5	8.2	42.3	61	103	102	1.4	10	5	
ZP121260ASH-8266912210C8	8.2	66.9	80	122	121	1.4	10	8	
ZP121260ASH-832638910C3	8.3	26.3	47	89	87.6	1.4	10	3	
ZP121260ASH-8342910310C5	8.3	42.9	61	103	102	1.4	10	5	
ZP121260ASH-8367812210C8	8.3	67.8	80	122	121	1.4	10	8	
ZP121260ASH-8334310310C5	8.33	43	61	103	102	1.4	10	5	
ZP121260ASH-842668910C3	8.4	26.6	47	89	87.6	1.4	10	3	
ZP121260ASH-8443410310C5	8.4	43.4	61	103	102	1.4	10	5	
ZP121260ASH-8468612210C8	8.4	68.6	80	122	121	1.4	10	8	
ZP121260ASH-852698910C3	8.5	26.9	47	89	87.6	1.4	10	3	
ZP121260ASH-8543910310C5	8.5	43.9	61	103	102	1.4	10	5	
ZP121260ASH-8569412210C8	8.5	69.4	80	122	121	1.4	10	8	
ZP121260ASH-862728910C3	8.6	27.2	47	89	87.5	1.5	10	3	
ZP121260ASH-8644410310C5	8.6	44.4	61	103	102	1.5	10	5	
ZP121260ASH-8670212210C8	8.6	70.2	80	122	121	1.5	10	8	
ZP121260ASH-872758910C3	8.7	27.5	47	89	87.5	1.5	10	3	
ZP121260ASH-8744910310C5	8.7	44.9	61	103	102	1.5	10	5	
ZP121260ASH-877112210C8	8.7	71	80	122	121	1.5	10	8	
ZP121260ASH-8732768910C3	8.73	27.6	47	89	87.5	1.5	10	3	
ZP121260ASH-87345110310C5	8.73	45.1	61	103	102	1.5	10	5	
ZP121260ASH-87371312210C8	8.73	71.3	80	122	121	1.5	10	8	
ZP121260ASH-882788910C3	8.8	27.8	47	89	87.5	1.5	10	3	
ZP121260ASH-8845410310C5	8.8	45.4	61	103	102	1.5	10	5	
ZP121260ASH-8871812210C8	8.8	71.8	80	122	121	1.5	10	8	
ZP121260ASH-89288910C3	8.9	28	47	89	87.5	1.5	10	3	
ZP121260ASH-8945910310C5	8.9	45.9	61	103	102	1.5	10	5	
ZP121260ASH-92858910C3	9	28.5	47	89	87.5	1.5	10	3	
ZP121260ASH-946510310C5	9	46.5	61	103	102	1.5	10	5	
ZP121260ASH-97212210C8	9	72	80	122	121	1.5	10	8	
ZP121260ASH-912888910C3	9.1	28.8	47	89	87.5	1.5	10	3	
ZP121260ASH-914710310C5	9.1	47	61	103	102	1.5	10	5	
ZP121260ASH-9163712210C7	9.1	63.7	80	122	121	1.5	10	7	
ZP121260ASH-922918910C3	9.2	29.1	47	89	87.4	1.6	10	3	
ZP121260ASH-9247510310C5	9.2	47.5	61	103	101	1.6	10	5	
ZP121260ASH-9264412210C7	9.2	64.4	80	122	120	1.6	10	7	
ZP121260ASH-932948910C3	9.3	29.4	47	89	87.4	1.6	10	3	
ZP121260ASH-934810310C5	9.3	48	61	103	101	1.6	10	5	
ZP121260ASH-9365112210C7	9.3	65.1	80	122	120	1.6	10	7	
ZP121260ASH-942978910C3	9.4	29.7	47	89	87.4	1.6	10	3	
ZP121260ASH-9448510310C5	9.4	48.5	61	103	101	1.6	10	5	
ZP121260ASH-9465812210C7	9.4	65.8	80	122	120	1.6	10	7	
ZP121260ASH-95308910C3	9.5	30	47	89	87.4	1.6	10	3	
ZP121260ASH-9548710310C5	9.5	48.7	61	103	101	1.6	10	5	
ZP121260ASH-9566512210C7	9.5	66.5	80	122	120	1.6	10	7	
ZP121260ASH-9523018910C3	9.52	30.1	47	89	87.4	1.6	10	3	
ZP121260ASH-95248610310C5	9.52	48.6	61	103	101	1.6	10	5	
ZP121260ASH-95266612210C7	9.52	66.6	80	122	120	1.6	10	7	
ZP121260ASH-95548610310C5	9.55	48.6	61	103	101	1.6	10	5	
ZP121260ASH-963038910C3	9.6	30.3	47	89	87.4	1.6	10	3	
ZP121260ASH-9648510310C5	9.6	48.5	61	103	101	1.6	10	5	

Supports Non-Standard Customization

General Purpose High-Performance Solid Tungsten Carbide Drill – Internal Coolant (06)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZP121260ASH-9667212210C7	9.6	67.2	80	122	120	1.6	10	7	
ZP121260ASH-973078910C3	9.7	30.7	47	89	87.3	1.7	10	3	
ZP121260ASH-9767912210C7	9.7	67.9	80	122	120	1.7	10	7	
ZP121260ASH-98318910C3	9.8	31	47	89	87.3	1.7	10	3	
ZP121260ASH-9848310310C5	9.8	48.3	61	103	101	1.7	10	5	
ZP121260ASH-9868612210C7	9.8	68.6	80	122	120	1.7	10	7	
ZP121260ASH-993138910C3	9.9	31.3	47	89	87.3	1.7	10	3	
ZP121260ASH-9948110310C5	9.9	48.1	61	103	101	1.7	10	5	
ZP121260ASH-9969312210C7	9.9	69.3	80	122	120	1.7	10	7	
ZP121260ASH-99269412210C7	9.92	69.4	80	122	120	1.7	10	7	
ZP121260ASH-103168910C3	10	31.6	47	89	87.3	1.7	10	3	
ZP121260ASH-105010310C5	10	50	61	103	101	1.7	10	5	
ZP121260ASH-107012210C7	10	70	80	122	120	1.7	10	7	
ZP121260ASH-1013198912C3	10.1	31.9	47	89	87.3	1.7	12	3	
ZP121260ASH-10152110312C5	10.1	52.1	61	103	101	1.7	12	5	
ZP121260ASH-10182414112C8	10.1	82.4	96	141	139	1.7	12	8	
ZP121260ASH-10232310212C3	10.2	32.3	55	102	100	1.7	12	3	
ZP121260ASH-10252711812C5	10.2	52.7	71	118	116	1.7	12	5	
ZP121260ASH-10283314112C8	10.2	83.3	96	141	139	1.7	12	8	
ZP121260ASH-10332610212C3	10.3	32.6	55	102	100	1.8	12	3	
ZP121260ASH-10353211812C5	10.3	53.2	71	118	116	1.8	12	5	
ZP121260ASH-10384114112C8	10.3	84.1	96	141	139	1.8	12	8	
ZP121260ASH-103232610212C3	10.32	32.6	55	102	100	1.8	12	3	
ZP121260ASH-103253311812C5	10.32	53.3	71	118	116	1.8	12	5	
ZP121260ASH-10432910212C3	10.4	32.9	55	102	100	1.8	12	3	
ZP121260ASH-10453711812C5	10.4	53.7	71	118	116	1.8	12	5	
ZP121260ASH-10484914112C8	10.4	84.9	96	141	139	1.8	12	8	
ZP121260ASH-10533210212C3	10.5	33.2	55	102	100	1.8	12	3	
ZP121260ASH-10554211812C5	10.5	54.2	71	118	116	1.8	12	5	
ZP121260ASH-1058414112C8	10.5	84	96	141	139	1.8	12	8	
ZP121260ASH-10633510212C3	10.6	33.5	55	102	100	1.8	12	3	
ZP121260ASH-10654711812C5	10.6	54.7	71	118	116	1.8	12	5	
ZP121260ASH-10733810212C3	10.7	33.8	55	102	100	1.8	12	3	
ZP121260ASH-10755211812C5	10.7	55.2	71	118	116	1.8	12	5	
ZP121260ASH-107155311812C5	10.71	55.3	71	118	116	1.8	12	5	
ZP121260ASH-10834210212C3	10.8	34.2	55	102	100	1.8	12	3	
ZP121260ASH-10855811812C5	10.8	55.8	71	118	116	1.8	12	5	
ZP121260ASH-10886414112C8	10.8	86.4	96	141	139	1.8	12	8	
ZP121260ASH-10934610212C3	10.9	34.6	55	102	100	1.8	12	3	
ZP121260ASH-10956311812C5	10.9	56.3	71	118	116	1.9	12	5	
ZP121260ASH-1134810212C3	11	34.8	55	102	100	1.9	12	3	
ZP121260ASH-1156811812C5	11	56.8	71	118	116	1.9	12	5	
ZP121260ASH-117714112C7	11	77	96	141	139	1.9	12	7	
ZP121260ASH-11135110212C3	11.1	35.1	55	102	100	1.9	12	3	
ZP121260ASH-11157311812C5	11.1	57.3	71	118	116	1.9	12	5	
ZP121260ASH-1117814112C7	11.1	78	96	141	139	1.9	12	7	
ZP121260ASH-111135110212C3	11.11	35.1	55	102	100	1.9	12	3	
ZP121260ASH-111177814112C7	11.11	77.8	96	141	139	1.9	12	7	
ZP121260ASH-11335710212C3	11.3	35.7	55	102	100	1.9	12	3	
ZP121260ASH-11357411812C5	11.3	57.4	71	118	116	1.9	12	5	
ZP121260ASH-11379114112C7	11.3	79.1	96	141	139	1.9	12	7	

Supports Non-Standard Customization

General Purpose High-Performance Solid Tungsten Carbide Drill – Internal Coolant (07)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZP121260ASH-11436110212C3	11.4	36.1	55	102	100	2	12	3	
ZP121260ASH-11457311812C5	11.4	57.3	71	118	116	1.9	12	5	
ZP121260ASH-11536410212C3	11.5	36.4	55	102	100	2	12	3	
ZP121260ASH-11557211812C5	11.5	57.2	71	118	116	2	12	5	
ZP121260ASH-11580514112C7	11.5	80.5	96	141	139	2	12	7	
ZP121260ASH-11636710212C3	11.6	36.7	55	102	100	2	12	3	
ZP121260ASH-11657111812C5	11.6	57.1	71	118	116	2	12	5	
ZP121260ASH-1173710212C3	11.7	37	55	102	100	2	12	3	
ZP121260ASH-1175711812C5	11.7	57	71	118	116	2	12	5	
ZP121260ASH-11837310212C3	11.8	37.3	55	102	100	2	12	3	
ZP121260ASH-11856811812C5	11.8	56.8	71	118	116	2	12	5	
ZP121260ASH-11882614112C7	11.8	82.6	96	141	139	2	12	7	
ZP121260ASH-11937610212C3	11.9	37.6	55	102	100	2	12	3	
ZP121260ASH-11958211812C5	11.9	58.2	71	118	116	2	12	5	
ZP121260ASH-11983314112C7	11.9	83.3	96	141	139	2	12	7	
ZP121260ASH-123810212C3	12	38	55	102	99.9	2.1	12	3	
ZP121260ASH-126011812C5	12	60	71	118	116	2.1	12	5	
ZP121260ASH-128414112C7	12	84	96	141	139	2.1	12	7	
ZP121260ASH-12138310214C3	12.1	38.3	55	102	99.9	2.1	14	3	
ZP121260ASH-12162511814C5	12.1	62.5	71	118	116	2.1	14	5	
ZP121260ASH-12196815514C8	12.1	96.8	108	155	153	2.1	14	8	
ZP121260ASH-12238610714C3	12.2	38.6	60	107	105	2.1	14	3	
ZP121260ASH-12262412414C5	12.2	62.4	77	124	122	2.1	14	5	
ZP121260ASH-12297615514C8	12.2	97.6	108	155	153	2.1	14	8	
ZP121260ASH-12338910714C3	12.3	38.9	60	107	105	2.1	14	3	
ZP121260ASH-12362212414C5	12.3	62.2	77	124	122	2.1	14	5	
ZP121260ASH-12398415514C8	12.3	98.4	108	155	153	2.1	14	8	
ZP121260ASH-12539510714C3	12.5	39.5	60	107	105	2.1	14	3	
ZP121260ASH-1256312414C5	12.5	63	77	124	122	2.1	14	5	
ZP121260ASH-1258815514C7	12.5	88	108	155	153	2.1	14	7	
ZP121260ASH-12639910714C3	12.6	39.9	60	107	105	2.2	14	3	
ZP121260ASH-12663512414C5	12.6	63.5	77	124	122	2.1	14	5	
ZP121260ASH-12740210714C3	12.7	40.2	60	107	105	2.2	14	3	
ZP121260ASH-1276412414C5	12.7	64	77	124	122	2.2	14	5	
ZP121260ASH-12788915514C7	12.7	88.9	108	155	153	2.2	14	7	
ZP121260ASH-12840510714C3	12.8	40.5	60	107	105	2.2	14	3	
ZP121260ASH-12864612414C5	12.8	64.6	77	124	122	2.2	14	5	
ZP121260ASH-12889615514C7	12.8	89.6	108	155	153	2.2	14	7	
ZP121260ASH-1341110714C3	13	41.1	60	107	105	2.22	14	3	
ZP121260ASH-1361412414C5	13	61.4	77	124	122	2.22	14	5	
ZP121260ASH-139115514C7	13	91	108	155	153	2.22	14	7	
ZP121260ASH-13141410714C3	13.1	41.4	60	107	105	2.3	14	3	
ZP121260ASH-13161312414C5	13.1	61.3	77	124	122	2.3	14	5	
ZP121260ASH-13191715514C7	13.1	91.7	108	155	153	2.3	14	7	
ZP121260ASH-132561112414C5	13.25	61.1	77	124	122	2.3	14	5	
ZP121260ASH-13542710714C3	13.5	42.7	60	107	105	2.3	14	3	
ZP121260ASH-13560812414C5	13.5	60.8	77	124	122	2.3	14	5	
ZP121260ASH-13594515514C7	13.5	94.5	108	155	153	2.3	14	7	
ZP121260ASH-137560512414C5	13.75	60.5	77	124	122	2.4	14	5	
ZP121260ASH-13843410714C3	13.8	43.4	60	107	105	2.4	14	3	
ZP121260ASH-13860412414C5	13.8	60.4	77	124	122	2.4	14	5	

Supports Non-Standard Customization

General Purpose High-Performance Solid Tungsten Carbide Drill – Internal Coolant (08)

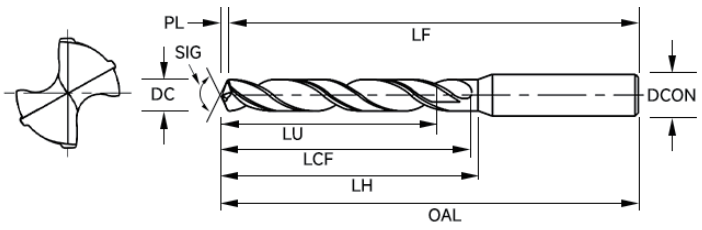
Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZP121260ASH-13896615514C7	13.8	96.6	108	155	153	2.4	14	7	
ZP121260ASH-138960312414C5	13.89	60.3	77	124	122	2.4	14	5	
ZP121260ASH-1444310714C3	14	44.3	60	107	105	2.4	14	3	
ZP121260ASH-146312414C5	14	63	77	124	122	2.4	14	5	
ZP121260ASH-149815514C7	14	98	108	155	153	2.4	14	7	
ZP121260ASH-14254511516C3	14.25	45	65	115	113	2.5	16	3	
ZP121260ASH-142568813316C5	14.25	68.8	83	133	131	2.5	16	5	
ZP121260ASH-142945211516C3	14.29	45.2	65	115	113	2.5	16	3	
ZP121260ASH-142968713316C5	14.29	68.7	83	133	131	2.5	16	5	
ZP121260ASH-14545811516C3	14.5	45.8	65	115	113	2.5	16	3	
ZP121260ASH-14568513316C5	14.5	68.5	83	133	131	2.5	16	5	
ZP121260ASH-146946411516C3	14.69	46.4	65	115	113	2.5	16	3	
ZP121260ASH-14846611516C3	14.8	46.6	65	115	113	2.5	16	3	
ZP121260ASH-14868213316C5	14.8	68.2	83	133	131	2.6	16	5	
ZP121260ASH-1547411516C3	15	47.4	65	115	112	2.6	16	3	
ZP121260ASH-156813316C5	15	68	83	133	130	2.6	16	5	
ZP121260ASH-1554911516C3	15.5	49	65	115	112	2.7	16	3	
ZP121260ASH-15567513316C5	15.5	67.5	83	133	130	2.7	16	5	
ZP121260ASH-15849211516C3	15.8	49.2	65	115	112	2.8	16	3	
ZP121260ASH-15867213316C5	15.8	67.2	83	133	130	2.8	16	5	
ZP121260ASH-158749111516C3	15.87	49.1	65	115	112	2.8	16	3	
ZP121260ASH-164911516C3	16	49	65	115	112	2.8	16	3	
ZP121260ASH-166713316C5	16	67	83	133	130	2.8	16	5	
ZP121260ASH-1611117116C7	16	111	121	171	168	2.8	16	7	
ZP121260ASH-16552112318C3	16.5	52.1	73	123	120	2.8	18	3	
ZP121260ASH-16576514318C5	16.5	76.5	93	143	140	2.8	18	5	
ZP121260ASH-1685312318C3	16.8	53	73	123	120	2.8	18	3	
ZP121260ASH-16876214318C5	16.8	76.2	93	143	140	2.8	18	5	
ZP121260ASH-1754112318C3	17	54.1	73	123	120	2.8	18	3	
ZP121260ASH-177614318C5	17	76	93	143	140	2.8	18	5	
ZP121260ASH-17555212318C3	17.5	55.2	73	123	120	2.8	18	3	
ZP121260ASH-17575514318C5	17.5	75.5	93	143	140	2.8	18	5	
ZP121260ASH-17856212318C3	17.8	56.2	73	123	120	2.8	18	3	
ZP121260ASH-17875214318C5	17.8	75.2	93	143	140	2.9	18	5	
ZP121260ASH-1856812318C3	18	56.8	73	123	120	2.9	18	3	
ZP121260ASH-1878614318C5	18	78.6	93	143	140	2.9	18	5	
ZP121260ASH-18558413120C3	18.5	58.4	79	131	128	2.9	20	3	
ZP121260ASH-1858415320C5	18.5	84	101	153	150	2.9	20	5	
ZP121260ASH-18859313120C3	18.8	59.3	79	131	128	2.9	20	3	
ZP121260ASH-1888615320C5	18.8	86	101	153	150	2.9	20	5	
ZP121260ASH-1959913120C3	19	59.9	79	131	128	2.9	20	3	
ZP121260ASH-206313120C3	20	63	79	131	128	3.1	20	3	

Supports Non-Standard Customization

P Series

General Purpose High-Performance Solid Tungsten Carbide Drill – External Coolant

▶ Highly Versatile for ISO Groups P, K, M, H. Excellent Centering, IT8-9 Tolerances. Full Range of Sizes, D3-D20mm.



WC DH Coat

Shank Tolerance	H6
SIG Angle	140°
Max Reconditioning	5

● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
○	○	○	○	○	○	○	○	○	○	○	○	○		

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZP121260ASH-395624N3	3	9.5	20	62	61.5	0.5	4	3	
ZP121260ASH-3155664N5	3	15.5	26	66	65.5	0.5	4	5	
ZP121260ASH-3198624N3	3.1	9.8	20	62	61.5	0.5	4	3	
ZP121260ASH-3116664N5	3.1	16	26	66	65.5	0.5	4	5	
ZP121260ASH-31710624N3	3.17	10	20	62	61.5	0.5	4	3	
ZP121260ASH-317164664N5	3.17	16.4	28	66	65.5	0.5	4	5	
ZP121260ASH-32101624N3	3.2	10.1	20	62	61.5	0.5	4	3	
ZP121260ASH-32165664N5	3.2	16.5	26	66	65.5	0.5	4	5	
ZP121260ASH-33105624N3	3.3	10.5	20	62	61.4	0.6	4	3	
ZP121260ASH-33171664N5	3.3	17.1	26	66	65.4	0.6	4	5	
ZP121260ASH-34108624N3	3.4	10.8	20	62	61.4	0.6	4	3	
ZP121260ASH-34176664N5	3.4	17.6	26	66	65.4	0.6	4	5	
ZP121260ASH-35111624N3	3.5	11.1	20	62	61.4	0.6	4	3	
ZP121260ASH-35181664N5	3.5	18.1	26	66	65.4	0.6	4	5	
ZP121260ASH-355112624N3	3.55	11.2	20	62	61.4	0.6	4	3	
ZP121260ASH-36114624N3	3.6	11.4	20	62	61.4	0.6	4	3	
ZP121260ASH-36185664N5	3.6	18.5	26	66	65.4	0.6	4	5	
ZP121260ASH-37117624N3	3.7	11.7	20	62	61.4	0.6	4	3	
ZP121260ASH-37191664N5	3.7	19.1	26	66	65.4	0.6	4	5	
ZP121260ASH-38121664N3	3.8	12.1	24	66	65.4	0.6	4	3	
ZP121260ASH-38195744N5	3.8	19.5	34	74	73.4	0.6	4	5	
ZP121260ASH-39125664N3	3.9	12.5	24	66	65.4	0.6	4	3	
ZP121260ASH-39202744N5	3.9	20.2	34	74	73.4	0.6	4	5	
ZP121260ASH-4127664N3	4	12.7	24	66	65.3	0.7	4	3	
ZP121260ASH-4207744N5	4	20.7	34	74	73.3	0.7	4	5	
ZP121260ASH-4113666N3	4.1	13	24	66	65.3	0.7	6	3	
ZP121260ASH-41212746N5	4.1	21.2	34	74	73.3	0.7	6	5	
ZP121260ASH-42133666N3	4.2	13.3	24	66	65.3	0.7	6	3	
ZP121260ASH-42217746N5	4.2	21.7	34	74	73.3	0.7	6	5	
ZP121260ASH-43137666N3	4.3	13.7	24	66	65.2	0.7	6	3	

Supports Non-Standard Customization

General Purpose High-Performance Solid Tungsten Carbide Drill – External Coolant (02)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZP121260ASH-43223746N5	4.3	22.3	34	74	73.2	0.7	6	5	
ZP121260ASH-44141666N3	4.4	14.1	24	66	65.3	0.7	6	3	
ZP121260ASH-44228746N5	4.4	22.8	34	74	73.3	0.7	6	5	
ZP121260ASH-45143666N3	4.5	14.3	24	66	65.3	0.7	6	3	
ZP121260ASH-45233746N5	4.5	23.3	34	74	73.3	0.7	6	5	
ZP121260ASH-455235746N5	4.55	23.5	36	74	73.2	0.8	6	5	
ZP121260ASH-46146666N3	4.6	14.6	24	66	65.2	0.8	6	3	
ZP121260ASH-46238746N5	4.6	23.8	34	74	73.2	0.8	6	5	
ZP121260ASH-47615666N3	4.76	15	28	66	65.2	0.8	6	3	
ZP121260ASH-48152666N3	4.8	15.2	28	66	65.2	0.8	6	3	
ZP121260ASH-48248826N5	4.8	24.8	44	82	81.2	0.8	6	5	
ZP121260ASH-49155666N3	4.9	15.5	28	66	65.2	0.8	6	3	
ZP121260ASH-49253826N5	4.9	25.3	44	82	81.2	0.8	6	5	
ZP121260ASH-5158666N3	5	15.8	28	66	65.2	0.8	6	3	
ZP121260ASH-5258826N5	5	25.8	44	82	81.2	0.8	6	5	
ZP121260ASH-51161666N3	5.1	16.1	28	66	65.2	0.8	6	3	
ZP121260ASH-51263826N5	5.1	26.3	44	82	81.2	0.8	6	5	
ZP121260ASH-516266876N5	5.16	26.6	44	87	81.2	0.8	6	5	
ZP121260ASH-52164666N3	5.2	16.4	28	66	65.1	0.9	6	3	
ZP121260ASH-52268826N5	5.2	26.8	44	82	81.1	0.9	6	5	
ZP121260ASH-53167666N3	5.3	16.7	28	66	65.1	0.9	6	3	
ZP121260ASH-53273826N5	5.3	27.3	44	82	81.1	0.9	6	5	
ZP121260ASH-5417666N3	5.4	17	28	66	65.1	0.9	6	3	
ZP121260ASH-54278826N5	5.4	27.8	44	82	81.1	0.9	6	5	
ZP121260ASH-55174666N3	5.5	17.4	28	66	65.1	0.9	6	3	
ZP121260ASH-55284826N5	5.5	28.4	44	82	81.1	0.9	6	5	
ZP121260ASH-555287876N5	5.55	28.7	44	87	81.1	0.9	6	5	
ZP121260ASH-556175726N3	5.56	17.5	28	72	65.1	0.9	6	3	
ZP121260ASH-556287876N5	5.56	28.7	44	87	81.1	0.9	6	5	
ZP121260ASH-56177666N3	5.6	17.7	28	66	65.1	0.9	6	3	
ZP121260ASH-56289826N5	5.6	28.9	44	82	81.1	0.9	6	5	
ZP121260ASH-57176666N3	5.7	17.6	28	66	65.1	0.9	6	3	
ZP121260ASH-57294826N5	5.7	29.4	44	82	81	1	6	5	
ZP121260ASH-58176666N3	5.8	17.6	28	66	65	1	6	3	
ZP121260ASH-58299826N5	5.8	29.9	44	82	81	1	6	5	
ZP121260ASH-59182666N3	5.9	18.2	28	66	65	1	6	3	
ZP121260ASH-59304826N5	5.9	30.4	44	82	81	1	6	5	
ZP121260ASH-595182666N3	5.95	18.2	28	66	65	1	6	3	
ZP121260ASH-595307826N5	5.95	30.7	44	82	81	1	6	5	
ZP121260ASH-6189666N3	6	18.9	28	66	65	1	6	3	
ZP121260ASH-6309826N5	6	30.9	44	82	81	1	6	5	
ZP121260ASH-61193668N3	6.1	19.3	28	66	65	1	8	3	
ZP121260ASH-61315828N5	6.1	31.5	44	82	81	1	8	5	
ZP121260ASH-62196798N3	6.2	19.6	34	79	77.9	1.1	8	3	
ZP121260ASH-6232918N5	6.2	32	53	91	89.9	1.1	8	5	
ZP121260ASH-63199798N3	6.3	19.9	34	79	77.9	1.1	8	3	
ZP121260ASH-63325918N5	6.3	32.5	53	91	89.9	1.1	8	5	
ZP121260ASH-635201798N3	6.35	20.1	34	79	78	1.1	8	3	
ZP121260ASH-635328918N5	6.35	32.8	53	91	90	1.1	8	5	
ZP121260ASH-64202798N3	6.4	20.2	34	79	77.9	1.1	8	3	
ZP121260ASH-6433918N5	6.4	33	53	91	89.9	1.1	8	5	

Supports Non-Standard Customization

General Purpose High-Performance Solid Tungsten Carbide Drill – External Coolant (03)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZP121260ASH-65206798N3	6.5	20.6	34	79	77.9	1.1	8	3	
ZP121260ASH-65336918N5	6.5	33.6	53	91	89.9	1.1	8	5	
ZP121260ASH-66209798N3	6.6	20.9	34	79	77.9	1.1	8	3	
ZP121260ASH-66341918N5	6.6	34.1	53	91	89.9	1.1	8	5	
ZP121260ASH-67212798N3	6.7	21.2	34	79	77.9	1.1	8	3	
ZP121260ASH-67346918N5	6.7	34.6	53	91	89.9	1.1	8	5	
ZP121260ASH-675213798N3	6.75	21.3	34	79	77.9	1.1	8	3	
ZP121260ASH-675348918N5	6.75	34.8	53	91	89.9	1.1	8	5	
ZP121260ASH-68215798N3	6.8	21.5	34	79	77.9	1.1	8	3	
ZP121260ASH-68351918N5	6.8	35.1	53	91	89.9	1.1	8	5	
ZP121260ASH-69218798N3	6.9	21.8	34	79	77.8	1.2	8	3	
ZP121260ASH-69356918N5	6.9	35.6	53	91	89.8	1.2	8	5	
ZP121260ASH-7221798N3	7	22.1	34	79	77.8	1.2	8	3	
ZP121260ASH-7361918N5	7	36.1	53	91	89.8	1.2	8	5	
ZP121260ASH-71224798N3	7.1	22.4	41	79	77.8	1.2	8	3	
ZP121260ASH-71366918N5	7.1	36.6	53	91	89.8	1.2	8	5	
ZP121260ASH-714226798N3	7.14	22.6	41	79	77.8	1.2	8	3	
ZP121260ASH-714369918N5	7.14	36.9	53	91	89.8	1.2	8	5	
ZP121260ASH-72228798N3	7.2	22.8	41	79	77.8	1.2	8	3	
ZP121260ASH-72372918N5	7.2	37.2	53	91	89.8	1.2	8	5	
ZP121260ASH-73231798N3	7.3	23.1	41	79	77.8	1.2	8	3	
ZP121260ASH-73377918N5	7.3	37.7	53	91	89.8	1.2	8	5	
ZP121260ASH-74234798N3	7.4	23.4	41	79	77.7	1.3	8	3	
ZP121260ASH-74382918N5	7.4	38.2	53	91	89.7	1.3	8	5	
ZP121260ASH-75237798N3	7.5	23.7	41	79	77.7	1.3	8	3	
ZP121260ASH-75387918N5	7.5	38.7	53	91	89.7	1.3	8	5	
ZP121260ASH-754389918N5	7.54	38.9	53	91	89.7	1.3	8	5	
ZP121260ASH-7624798N3	7.6	24	41	79	77.7	1.3	8	3	
ZP121260ASH-76382918N5	7.6	38.2	53	91	89.7	1.3	8	5	
ZP121260ASH-77243798N3	7.7	24.3	41	79	77.7	1.3	8	3	
ZP121260ASH-77397918N5	7.7	39.7	53	91	89.7	1.3	8	5	
ZP121260ASH-78247798N3	7.8	24.7	41	79	77.7	1.3	8	3	
ZP121260ASH-78403918N5	7.8	40.3	53	91	89.7	1.3	8	5	
ZP121260ASH-7925798N3	7.9	25	41	79	77.7	1.3	8	3	
ZP121260ASH-79408918N5	7.9	40.8	53	91	89.7	1.3	8	5	
ZP121260ASH-794251798N3	7.94	25.1	41	79	77.6	1.4	8	3	
ZP121260ASH-79441918N5	7.94	41	53	91	89.6	1.4	8	5	
ZP121260ASH-8253798N3	8	25.3	41	79	77.6	1.4	8	3	
ZP121260ASH-8413918N5	8	41.3	53	91	89.6	1.4	8	5	
ZP121260ASH-812567910N3	8.1	25.6	41	79	77.6	1.4	10	3	
ZP121260ASH-814189110N5	8.1	41.8	53	91	89.6	1.4	10	5	
ZP121260ASH-8154219110N5	8.15	42.1	53	91	89.6	1.4	10	5	
ZP121260ASH-822598910N3	8.2	25.9	47	89	87.6	1.4	10	3	
ZP121260ASH-8242310310N5	8.2	42.3	61	103	102	1.4	10	5	
ZP121260ASH-832638910N3	8.3	26.3	47	89	87.6	1.4	10	3	
ZP121260ASH-8342910310N5	8.3	42.9	61	103	102	1.4	10	5	
ZP121260ASH-8334310310N5	8.33	43	61	103	102	1.4	10	5	
ZP121260ASH-842668910N3	8.4	26.6	47	89	87.6	1.4	10	3	
ZP121260ASH-8443410310N5	8.4	43.4	61	103	102	1.4	10	5	
ZP121260ASH-852698910N3	8.5	26.9	47	89	87.6	1.4	10	3	
ZP121260ASH-8543910310N5	8.5	43.9	61	103	102	1.4	10	5	

Supports Non-Standard Customization

General Purpose High-Performance Solid Tungsten Carbide Drill – External Coolant (04)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZP121260ASH-862728910N3	8.6	27.2	47	89	87.5	1.5	10	3	
ZP121260ASH-8644410310N5	8.6	44.4	61	103	102	1.5	10	5	
ZP121260ASH-872758910N3	8.7	27.5	47	89	87.5	1.5	10	3	
ZP121260ASH-8744910310N5	8.7	44.9	61	103	102	1.5	10	5	
ZP121260ASH-8732768910N3	8.73	27.6	47	89	87.5	1.5	10	3	
ZP121260ASH-87345110310N5	8.73	45.1	61	103	102	1.5	10	5	
ZP121260ASH-882788910N3	8.8	27.8	47	89	87.5	1.5	10	3	
ZP121260ASH-8845410310N5	8.8	45.4	61	103	102	1.5	10	5	
ZP121260ASH-892818910N3	8.9	28.1	47	89	87.5	1.5	10	3	
ZP121260ASH-8945910310N5	8.9	45.9	61	103	102	1.5	10	5	
ZP121260ASH-92858910N3	9	28.5	47	89	87.5	1.5	10	3	
ZP121260ASH-946510310N5	9	46.5	61	103	102	1.5	10	5	
ZP121260ASH-912888910N3	9.1	28.8	47	89	87.5	1.5	10	3	
ZP121260ASH-914710310N5	9.1	47	61	103	102	1.5	10	5	
ZP121260ASH-922918910N3	9.2	29.1	47	89	87.4	1.6	10	3	
ZP121260ASH-9247510310N5	9.2	47.5	61	103	101	1.6	10	5	
ZP121260ASH-932948910N3	9.3	29.4	47	89	87.4	1.6	10	3	
ZP121260ASH-934810310N5	9.3	48	61	103	101	1.6	10	5	
ZP121260ASH-942978910N3	9.4	29.7	47	89	87.4	1.6	10	3	
ZP121260ASH-9448510310N5	9.4	48.5	61	103	101	1.6	10	5	
ZP121260ASH-95308910N3	9.5	30	47	89	87.4	1.6	10	3	
ZP121260ASH-9548710310N5	9.5	48.7	61	103	101	1.6	10	5	
ZP121260ASH-9523018910N3	9.52	30.1	47	89	87.4	1.6	10	3	
ZP121260ASH-95248610310N5	9.52	48.6	61	103	101	1.6	10	5	
ZP121260ASH-95548610310N5	9.55	48.6	61	103	101	1.6	10	5	
ZP121260ASH-963038910N3	9.6	30.3	47	89	87.4	1.6	10	3	
ZP121260ASH-9648510310N5	9.6	48.5	61	103	101	1.6	10	5	
ZP121260ASH-973078910N3	9.7	30.7	47	89	87.3	1.7	10	3	
ZP121260ASH-9748410310N5	9.7	48.4	61	103	101	1.6	10	5	
ZP121260ASH-98318910N3	9.8	31	47	89	87.3	1.7	10	3	
ZP121260ASH-9848310310N5	9.8	48.3	61	103	101	1.7	10	5	
ZP121260ASH-993138910N3	9.9	31.3	47	89	87.3	1.7	10	3	
ZP121260ASH-9948110310N5	9.9	48.1	61	103	101	1.7	10	5	
ZP121260ASH-103168910N3	10	31.6	47	89	87.3	1.7	10	3	
ZP121260ASH-105010310N5	10	50	61	103	101	1.7	10	5	
ZP121260ASH-1013198912N3	10.1	31.9	47	89	87.3	1.7	12	3	
ZP121260ASH-10152110312N5	10.1	52.1	61	103	101	1.7	12	5	
ZP121260ASH-10232310212N3	10.2	32.3	55	102	100	1.7	12	3	
ZP121260ASH-10252711812N5	10.2	52.7	71	118	116	1.7	12	5	
ZP121260ASH-10332610212N3	10.3	32.6	55	102	100	1.8	12	3	
ZP121260ASH-10353211812N5	10.3	53.2	71	118	116	1.8	12	5	
ZP121260ASH-10332610212N3	10.3	32.6	55	102	100	1.8	12	3	
ZP121260ASH-10353311812N5	10.3	53.3	71	118	116	1.8	12	5	
ZP121260ASH-10432910212N3	10.4	32.9	55	102	100	1.8	12	3	
ZP121260ASH-10453711812N5	10.4	53.7	71	118	116	1.8	12	5	
ZP121260ASH-10533210212N3	10.5	33.2	55	102	100	1.8	12	3	
ZP121260ASH-10554211812N5	10.5	54.2	71	118	116	1.8	12	5	
ZP121260ASH-10633510212N3	10.6	33.5	55	102	100	1.8	12	3	
ZP121260ASH-10654711812N5	10.6	54.7	71	118	116	1.8	12	5	
ZP121260ASH-10733810212N3	10.7	33.8	55	102	100	1.8	12	3	
ZP121260ASH-10755211812N5	10.7	55.2	71	118	116	1.8	12	5	

Supports Non-Standard Customization

P Series

General Purpose High-Performance Solid Tungsten Carbide Drill – External Coolant (05)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZP121260ASH-107155311812N5	10.71	55.3	71	118	116	1.8	12	5	
ZP121260ASH-10834210212N3	10.8	34.2	55	102	100	1.8	12	3	
ZP121260ASH-10855811812N5	10.8	55.8	71	118	116	1.8	12	5	
ZP121260ASH-10934510212N3	10.9	34.5	55	102	100	1.8	12	3	
ZP121260ASH-10956311812N5	10.9	56.3	71	118	116	1.9	12	5	
ZP121260ASH-1134810212N3	11	34.8	55	102	100	1.9	12	3	
ZP121260ASH-1156811812N5	11	56.8	71	118	116	1.9	12	5	
ZP121260ASH-11135110212N3	11.1	35.1	55	102	100	1.9	12	3	
ZP121260ASH-11157311812N5	11.1	57.3	71	118	116	1.9	12	5	
ZP121260ASH-111135110212N3	11.11	35.1	55	102	100	1.9	12	3	
ZP121260ASH-11235410212N3	11.2	35.4	55	102	100	1.9	12	3	
ZP121260ASH-11257611812N5	11.2	57.6	71	118	116	1.9	12	5	
ZP121260ASH-11335710212N3	11.3	35.7	55	102	100	1.9	12	3	
ZP121260ASH-11357411812N5	11.3	57.4	71	118	116	1.9	12	5	
ZP121260ASH-11436110212N3	11.4	36.1	55	102	100	2	12	3	
ZP121260ASH-11436211812N5	11.4	36.2	71	118	116	1.9	12	5	
ZP121260ASH-11536410212N3	11.5	36.4	55	102	100	2	12	3	
ZP121260ASH-11557211812N5	11.5	57.2	71	118	116	2	12	5	
ZP121260ASH-11636710212N3	11.6	36.7	55	102	100	2	12	3	
ZP121260ASH-11657111812N5	11.6	57.1	71	118	116	2	12	5	
ZP121260ASH-1173710212N3	11.7	37	55	102	100	2	12	3	
ZP121260ASH-1175711812N5	11.7	57	71	118	116	2	12	5	
ZP121260ASH-11837310212N3	11.8	37.3	55	102	100	2	12	3	
ZP121260ASH-11856811812N5	11.8	56.8	71	118	116	2	12	5	
ZP121260ASH-11937610212N3	11.9	37.6	55	102	100	2	12	3	
ZP121260ASH-11958211812N5	11.9	58.2	71	118	116	2	12	5	
ZP121260ASH-123810212N3	12	38	55	102	99.9	2.1	12	3	
ZP121260ASH-126011812N5	12	60	71	118	116	2.1	12	5	
ZP121260ASH-12138310214N3	12.1	38.3	55	102	99.9	2.1	14	3	
ZP121260ASH-12162511814N5	12.1	62.5	71	118	116	2.1	14	5	
ZP121260ASH-12238610714N3	12.2	38.6	60	107	105	2.1	14	3	
ZP121260ASH-12262412414N5	12.2	62.4	77	124	122	2.1	14	5	
ZP121260ASH-12338910714N3	12.3	38.9	60	107	105	2.1	14	3	
ZP121260ASH-12362212414N5	12.3	62.2	77	124	122	2.1	14	5	
ZP121260ASH-12539510714N3	12.5	39.5	60	107	105	2.1	14	3	
ZP121260ASH-1256312414N5	12.5	63	77	124	122	2.1	14	5	
ZP121260ASH-12639910714N3	12.6	39.9	60	107	105	2.2	14	3	
ZP121260ASH-12663512414N5	12.6	63.5	77	124	122	2.1	14	5	
ZP121260ASH-12740210714N3	12.7	40.2	60	107	105	2.2	14	3	
ZP121260ASH-1276412414N5	12.7	64	77	124	122	2.2	14	5	
ZP121260ASH-12840510714N3	12.8	40.5	60	107	105	2.2	14	3	
ZP121260ASH-12864612414N5	12.8	64.6	77	124	122	2.2	14	5	
ZP121260ASH-1341110714N3	13	41.1	60	107	105	2.2	14	3	
ZP121260ASH-1361412414N5	13	61.4	77	124	122	2.2	14	5	
ZP121260ASH-13141410714N3	13.1	41.4	60	107	105	2.3	14	3	
ZP121260ASH-13161312414N5	13.1	61.3	77	124	122	2.3	14	5	
ZP121260ASH-132561112414N5	13.25	61.1	77	124	122	2.3	14	5	
ZP121260ASH-13542710714N3	13.5	42.7	60	107	105	2.3	14	3	
ZP121260ASH-13560812414N5	13.5	60.8	77	124	122	2.3	14	5	
ZP121260ASH-137560512414N5	13.75	60.5	77	124	122	2.4	14	5	
ZP121260ASH-13843410714N3	13.8	43.4	60	107	105	2.4	14	3	

Supports Non-Standard Customization

General Purpose High-Performance Solid Tungsten Carbide Drill – External Coolant (06)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZP121260ASH-13860412414N5	13.8	60.4	77	124	122	2.4	14	5	
ZP121260ASH-138960312414N5	13.89	60.3	77	124	122	2.4	14	5	
ZP121260ASH-1444310714N3	14	44.3	60	107	105	2.4	14	3	
ZP121260ASH-146312414N5	14	63	77	124	122	2.4	14	5	
ZP121260ASH-14254511516N3	14.25	45	65	115	113	2.5	16	3	
ZP121260ASH-142568813316N5	14.25	68.8	83	133	131	2.5	16	5	
ZP121260ASH-142945211516N3	14.29	45.2	65	115	113	2.5	16	3	
ZP121260ASH-142968713316N5	14.29	68.7	83	133	131	2.5	16	5	
ZP121260ASH-14545811516N3	14.5	45.8	65	115	113	2.5	16	3	
ZP121260ASH-14568513316N5	14.5	68.5	83	133	131	2.5	16	5	
ZP121260ASH-14746411516N3	14.7	46.4	65	115	113	2.5	16	3	
ZP121260ASH-14846911516N3	14.8	46.9	65	115	112	2.6	16	3	
ZP121260ASH-14868213316N5	14.8	68.2	83	133	130	2.6	16	5	
ZP121260ASH-1547411516N3	15	47.4	65	115	112	2.6	16	3	
ZP121260ASH-156813316N5	15	68	83	133	130	2.6	16	5	
ZP121260ASH-1554911516N3	15.5	49	65	115	112	2.7	16	3	
ZP121260ASH-15567513316N5	15.5	67.5	83	133	130	2.7	16	5	
ZP121260ASH-15849211516N3	15.8	49.2	65	115	112	2.8	16	3	
ZP121260ASH-15867213316N5	15.8	67.2	83	133	130	2.8	16	5	
ZP121260ASH-158749111516N3	15.87	49.1	65	115	112	2.8	16	3	
ZP121260ASH-164911516N3	16	49	65	115	112	2.8	16	3	
ZP121260ASH-166713316N5	16	67	83	133	130	2.8	16	5	
ZP121260ASH-16552112318N3	16.5	52.1	73	123	120	2.8	18	3	
ZP121260ASH-16576514318N5	16.5	76.5	93	143	140	2.8	18	5	
ZP121260ASH-1685312318N3	16.8	53	73	123	120	2.8	18	3	
ZP121260ASH-16876214318N5	16.8	76.2	93	143	140	2.8	18	5	
ZP121260ASH-1754112318N3	17	54.1	73	123	120	2.8	18	3	
ZP121260ASH-177614318N5	17	76	93	143	140	2.8	18	5	
ZP121260ASH-17555212318N3	17.5	55.2	73	123	120	2.8	18	3	
ZP121260ASH-17575514318N5	17.5	75.5	93	143	140	2.8	18	5	
ZP121260ASH-17856212318N3	17.8	56.2	73	123	120	2.8	18	3	
ZP121260ASH-17875214318N5	17.8	75.2	93	143	140	2.9	18	5	
ZP121260ASH-1856812318N3	18	56.8	73	123	120	2.9	18	3	
ZP121260ASH-1878614318N5	18	78.6	93	143	140	2.9	18	5	
ZP121260ASH-18558413120N3	18.5	58.4	79	131	128	2.9	20	3	
ZP121260ASH-1858415320N5	18.5	84	101	153	150	2.9	20	5	
ZP121260ASH-18859313120N3	18.8	59.3	79	131	128	2.9	20	3	
ZP121260ASH-1888615320N5	18.8	86	101	153	150	2.9	20	5	
ZP121260ASH-1959913120N3	19	59.9	79	131	128	2.9	20	3	
ZP121260ASH-206313120N3	20	63	79	131	128	3.1	20	3	

Supports Non-Standard Customization

Internal Coolant Design

ISO	Material Code	Workpiece Material	Brinell Hardness	Cutting Speed (VC) m/min		
				Minimum	Initial Value	Maximum
P	Non-Alloy Steel					
	P1.1.Z.AN	C=0.05-0.1%	125	90	130	170
	P1.1.Z.AN	C=0.1-0.25%	125	90	130	170
	P1.2.Z.AN	C=0.25-0.55%	150	90	120	170
	P1.3.Z.AN	C=0.55-0.80%	170	90	120	170
	High-Carbon Steel					
	P1.3.Z.AN	Carbon Tool Steel	210	100	110	150
	Low-Alloy Steel					
	P2.1.Z.AN	Non-Hardened	175	80	110	160
	P2.5.Z.HT	Tempered	275	50	70	90
	P2.5.Z.HT	Tempered	350	40	50	70
	High-Alloy Steel					
	P3.0.Z.AN	Annealed	200	40	80	90
	P3.0.Z.HT	Hardened Tool Steel	300	40	50	70
	Cast Steel					
	P1.5.C.UT	Non-Alloy	150	80	110	140
	P2.6.C.UT	Low-Alloy (≤ 5% Alloy Elements)	200	80	110	120

Drill Diameter (mm)	Feed per Revolution (mm/r) *		
	Minimum	Initial Value	Maximum
3	0.06	0.1	0.13
4	0.07	0.11	0.14
6	0.11	0.18	0.24
8	0.16	0.21	0.25
10	0.19	0.23	0.27
12	0.22	0.25	0.29
16	0.23	0.28	0.33
20	0.26	0.3	0.34

- Cutting parameters are valid only for internal cooling.
- Recommended minimum internal cooling pressure: 20 bar.
- For harder materials, reduce speed and feed proportionally.
- If using external cooling, adjust the speed to ensure good chip formation and smooth chip evacuation.
- If using external cooling, reduce feed per revolution as needed to ensure smooth chip evacuation.

Supports Non-Standard Customization

Application Guidelines for Material Processing (02)

Internal Coolant Design

ISO	Material Code	Workpiece Material	Brinell Hardness	Cutting Speed (VC) m/min		
				Minimum	Initial Value	Maximum
M	Austenitic Stainless Steel					
	M1.0.C.UT	Cast + Unprocessed	165	48	60	72
	M1.0.Z.AQ	Annealed / Quenched	200	48	60	72
	M1.0.Z.PH	Precipitation Hardened	350	44	55	66
	M1.1.Z.AQ	Improved Machinability	165	48	60	72
	M1.2.Z.AQ	Free-Cutting Steel	200	48	60	72
	M1.3.C.AQ	Titanium-Stabilized + Cast	200	48	60	72
	M1.3.Z.AQ	Titanium-Stabilized	200	48	60	72
	M1.4.Z.AQ	High Strength	250	64	80	96
	Premium Austenitic Stainless Steel (Ni > 20%)					
	M2.0.C.AQ	Cast + Annealed/Quenched	165	30	40	50
	M2.0.Z.AQ	Annealed / Quenched	200	30	40	50
	Duplex (Austenitic/Ferritic) Stainless Steel					
	M3.1. Z. AQ >60%	Ferritic (N < 0.10%)	250	40	50	70
	M3.2. Z. AQ <60%	Ferritic (N < 0.10%)	250	40	50	70

Drill Diameter (mm)	Feed per Revolution (mm/r) *		
	Minimum	Initial Value	Maximum
3	0.05	0.07	0.1
4	0.08	0.1	0.12
6	0.09	0.11	0.13
8	0.1	0.12	0.14
10	0.13	0.14	0.17
12	0.13	0.16	0.19
16	0.14	0.2	0.23
20	0.17	0.22	0.25

- Cutting parameters are valid only for internal cooling.
- Recommended minimum internal cooling pressure: 20 bar.
- For harder stainless steels (e.g., precipitation hardened), reduce parameters by 30%.
- If using external cooling, adjust speed to ensure good chip formation and smooth chip evacuation.
- If using external cooling, reduce feed per revolution as needed to ensure smooth chip evacuation.

Supports Non-Standard Customization

Internal Coolant Design

ISO	Material Code	Workpiece Material	Brinell Hardness	Cutting Speed (VC) m/min		
				Minimum	Initial Value	Maximum
K	Ferritic Pearlitic					
	K1.1.C.NS	Ferritic Pearlitic	200	80	100	120
	Gray Cast Iron (GCI)					
	K2.1.C.UT	Low Tensile Strength	180	100	120	140
	K2.2.C.UT	High Tensile Strength	245	80	100	120
	K2.3.C.UT	High Tensile Strength	175	100	120	140
	Nodular/Ductile Cast Iron (NDI)					
	K3.1.C.UT	Ferritic Pearlitic	155	100	120	140
	K3.2.C.UT	Pearlitic	215	80	100	120
	K3.3.C.UT	Pearlitic	265	100	120	140
	K3.5.C.UT	Pearlitic	190	100	120	140
	K5.1.C.UT	ADI (Ausempered Ductile Iron)	300	60	80	100

Drill Diameter (mm)	Feed per Revolution (mm/r) *		
	Minimum	Initial Value	Maximum
3	0.06	0.1	0.13
4	0.07	0.11	0.14
6	0.11	0.18	0.24
8	0.16	0.21	0.25
10	0.19	0.23	0.27
12	0.22	0.25	0.29
16	0.23	0.28	0.33
20	0.26	0.3	0.34

- Cutting parameters are valid only for internal cooling.
- Recommended minimum internal cooling pressure: 20 bar.
- For harder materials, reduce speed and feed proportionally.
- When using external cooling, adjust speed to ensure good chip formation and smooth chip evacuation.
- When using external cooling, reduce feed per revolution as needed to ensure smooth chip evacuation.

Supports Non-Standard Customization

Application Guidelines for Material Processing (04)

Internal Coolant Design

ISO	Material Code	Workpiece Material	Brinell Hardness HB	Cutting Speed (VC) m/min	Drill Diameter DC (mm)			
					3-6	6.01-10	10.01-14	14.01-20
					Feed per Revolution (mm/r)			
S	S1.0.U.AN	Hardened High-Temperature Alloys	200	15-25	0.06-0.12	0.08-0.14	0.10-0.14	0.12-0.16
	S1.0.U.AG		280	15-25	0.06-0.12	0.08-0.14	0.10-0.14	0.12-0.16
	S2.0.Z.AN	Nickel-Based Alloys	250	15-25	0.06-0.12	0.08-0.14	0.10-0.14	0.12-0.16
	S2.0.Z.AG		350	15-25	0.06-0.12	0.08-0.14	0.10-0.14	0.12-0.16
	S2.0.Z.UT		275	15-25	0.06-0.12	0.08-0.14	0.10-0.14	0.12-0.16
	S2.0.Z.NS		320	15-25	0.06-0.12	0.08-0.14	0.10-0.14	0.12-0.16
	S3.0.Z.AN	Cobalt-Based Alloys	200	15-25	0.06-0.12	0.08-0.14	0.10-0.14	0.12-0.16
	S3.0.Z.AG		300	15-25	0.06-0.12	0.08-0.14	0.10-0.14	0.12-0.16
	S3.0.C.NS		320	15-25	0.06-0.12	0.08-0.14	0.10-0.14	0.12-0.16
	S4.1.Z.UT	Titanium Alloys	200	40-60	0.06-0.12	0.08-0.20	0.14-0.28	0.10-0.16
	S4.2.Z.AN		320	40-60	0.06-0.12	0.08-0.20	0.14-0.28	0.16-0.30
	S4.3.Z.AN		330	40-60	0.06-0.12	0.08-0.20	0.14-0.28	0.16-0.30
	S4.3.Z.AG		375	40-60	0.06-0.12	0.08-0.20	0.14-0.28	0.16-0.30
	S4.4.Z.AN		330	40-60	0.06-0.12	0.08-0.20	0.14-0.28	0.16-0.30
	S4.4.Z.AG		410	40-60	0.06-0.12	0.08-0.20	0.14-0.28	0.16-0.30

ISO	Material Code	Workpiece Material	Brinell Hardness HB	Cutting Speed (VC) m/min	Drill Diameter DC (mm)			
					3-6	6.01-10	10.01-14	14.01-20
					Feed per Revolution (mm/r)			
H	H1.1.Z.HA	Ultra-Hard Steel Tempered	50	16-24	0.05-0.12	0.08-0.14	0.10-0.16	0.12-0.2
	H2.0.C.UT.4	Cold-Hardened Cast Iron	64	14-20	0.05-0.12	0.08-0.14	0.10-0.16	0.12-0.2

- Cutting parameters are valid only for internal cooling.
- Recommended minimum internal cooling pressure: 20 bar.
- For harder materials, reduce speed and feed proportionally.
- When using external cooling, adjust speed to ensure good chip formation and smooth chip evacuation.
- When using external cooling, reduce feed per revolution as needed to ensure smooth chip evacuation.

Supports Non-Standard Customization

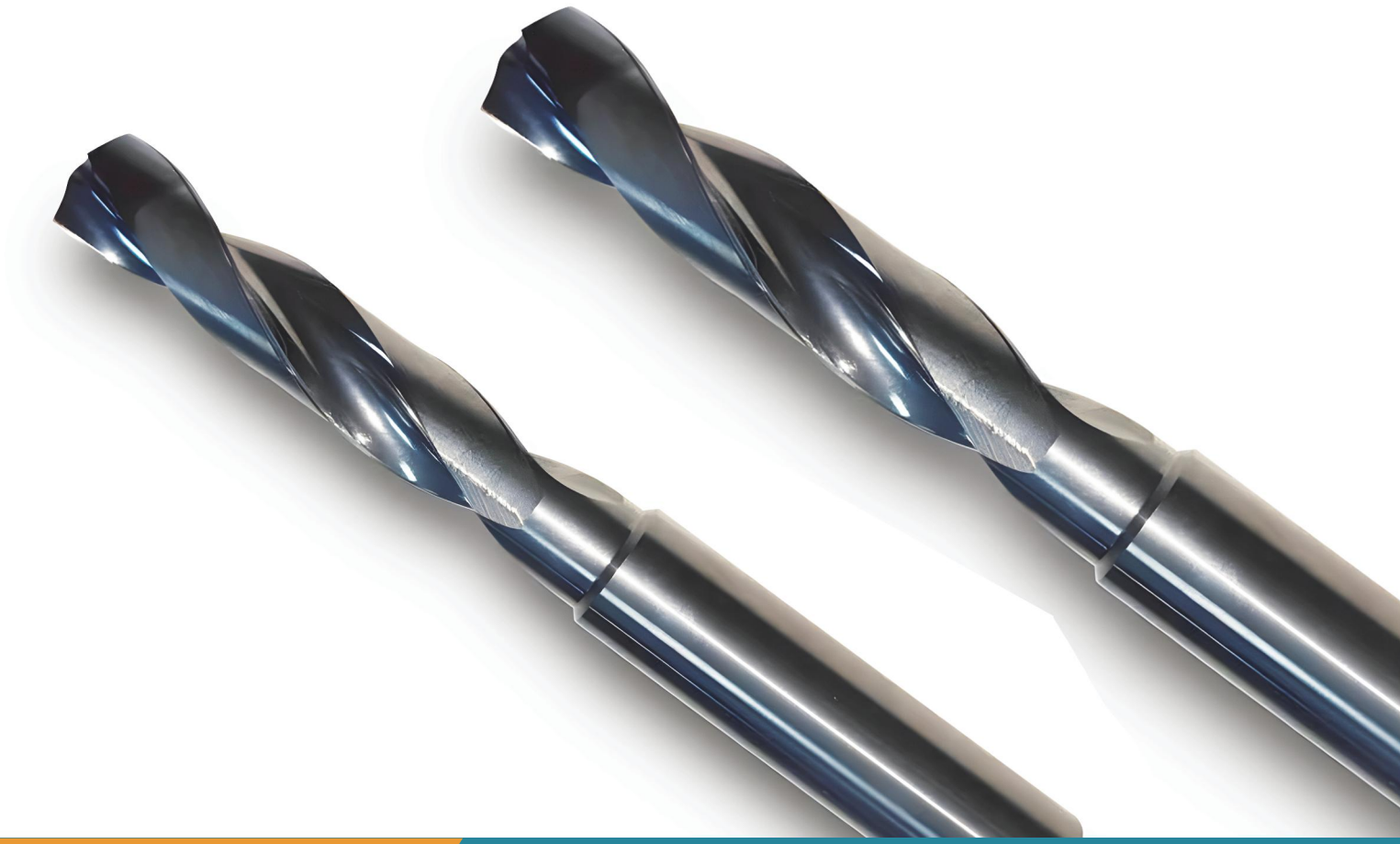
Internal Coolant Design

ISO	Material Code	Workpiece Material	Brinell Hardness HB	Cutting Speed (VC) m/min		
				Minimum	Initial Value	Maximum
N	Aluminum					
	N1.2.Z.UT	Industrial Pure Aluminum	60	110	150	180
	N1.2.Z.AG	Silicon-Aluminum Alloy (Si ≤ 1%)	100	110	150	180
	N1.3.C.UT	Cast Aluminum, Non-Aged	75	110	150	180
	N1.3.C.UT	Cast Aluminum with Aging Treatment	90	110	130	160
	N1.4.C.NS	Silicon-Containing Cast Aluminum (Si ≥ 13%)	130	80	100	120
	Copper Alloys					
	N3.3.U.UT	Free-Cutting Copper Alloys (Pb > 1%)	110	70	90	110
	N3.1.U.UT	Lead-Free Copper Alloys (including Electrolytic Copper)	100	70	80	100

Drill Diameter (mm)	Feed per Revolution (mm/r) *		
	Minimum	Initial Value	Maximum
3	0.08	0.18	0.28
4	0.1	0.19	0.28
6	0.16	0.28	0.35
8	0.16	0.2	0.24
10	0.2	0.4	0.8
12	0.22	0.5	0.8
16	0.3	0.6	1
20	0.3	0.6	1

- Cutting parameters are valid only for internal cooling.
- Recommended minimum internal cooling pressure: 20 bar.
- For harder materials, reduce speed and feed proportionally.
- When using external cooling, adjust speed to ensure good chip formation and smooth chip evacuation.
- When using external cooling, reduce feed per revolution as needed to ensure smooth chip evacuation.

Supports Non-Standard Customization



2025
New Product

General Purpose Stainless Steel Drill M

Overview and Applications

- General purpose machining for stainless steel Including austenitic SS, super austenitic SS, ferritic SS, and duplex stainless steel
- Hole tolerance IT8-9
- Diameter range: 3.0–20.0 mm
- Drill length above 8xD

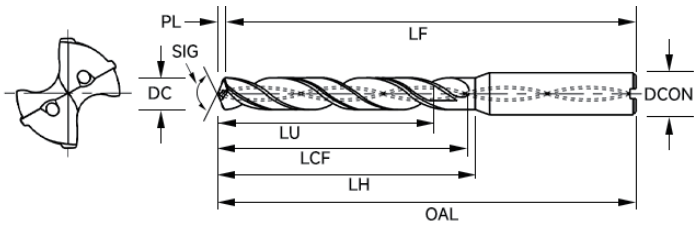
Features and Technical Advantages

- Cover both stable and unstable cutting conditions
- Provide internal coolant solutions
- Curve cutting edge generates low cutting force
- Variant clearance angle which provide cutting edge reliability
- Chips evacuation improvement thanks to chips flute new design
- Advanced ER treatment applied on cutting edge, which reduce risk of cutting edge breakage

M Series

General Purpose Stainless Steel Drill – Internal Coolant

▶ General Purpose Stainless Steel Machining, including Austenitic, Super Austenitic, Ferritic, and Duplex Stainless Steels, with drilling depth up to 8D



WC DP Coat

Shank Tolerance	H6
SIG Angle	140°
Max Reconditioning	5

● = Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
								●						

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZM111245ASH-320624C3	3	9.5	20	62	61.5	0.5	4	3	
ZM111245ASH-326664C5	3	15.5	26	66	65.5	0.5	4	5	
ZM111245ASH-340784C8	3	24.5	40	78	77.5	0.5	4	8	
ZM111245ASH-3120624C3	3.1	9.8	20	62	61.5	0.5	4	3	
ZM111245ASH-3140784C8	3.1	25.3	40	78	77.5	0.5	4	8	
ZM111245ASH-31828664C5	3.18	16.4	28	66	65.5	0.5	4	5	
ZM111245ASH-3226664C5	3.2	16.5	26	66	65.5	0.5	4	5	
ZM111245ASH-3320624C3	3.3	10.5	20	62	61.4	0.6	4	3	
ZM111245ASH-3326664C5	3.3	17.1	26	66	65.4	0.6	4	5	
ZM111245ASH-3340784C8	3.3	27	40	78	77.4	0.6	4	8	
ZM111245ASH-3440784C8	3.4	27	40	78	73.4	0.6	4	8	
ZM111245ASH-3520624C3	3.5	11.1	20	62	61.4	0.6	4	3	
ZM111245ASH-3526664C5	3.5	18.1	26	66	65.4	0.6	4	5	
ZM111245ASH-3540784C8	3.5	27.3	40	78	77.4	0.6	4	8	
ZM111245ASH-3620624C3	3.6	11.4	20	62	61.4	0.6	4	3	
ZM111245ASH-3726664C5	3.7	19.1	26	66	65.4	0.6	4	5	
ZM111245ASH-3740784C8	3.7	27.9	40	78	77.4	0.6	4	8	
ZM111245ASH-3824664C3	3.8	12.1	24	66	65.4	0.6	4	3	
ZM111245ASH-3834744C5	3.8	31.1	34	74	73.4	0.6	4	5	
ZM111245ASH-3849874C8	3.8	31.1	49	87	86.4	0.6	4	8	
ZM111245ASH-424664C3	4	12.7	24	66	65.3	0.7	4	3	
ZM111245ASH-434744C5	4	20.7	34	74	73.3	0.7	4	5	
ZM111245ASH-449874C8	4	32.7	49	87	86.3	0.7	4	8	
ZM111245ASH-4224666C3	4.2	13.3	24	66	65.3	0.7	6	3	
ZM111245ASH-4234746C5	4.2	21.7	34	74	73.3	0.7	6	5	
ZM111245ASH-4249876C8	4.2	34.3	49	87	86.3	0.7	6	8	
ZM111245ASH-4324666C3	4.3	13.7	24	66	65.2	0.7	6	3	
ZM111245ASH-4334746C5	4.3	22.3	34	74	73.2	0.7	6	5	
ZM111245ASH-4349876C8	4.3	35.2	49	87	86.3	0.7	6	8	
ZM111245ASH-43724666C3	4.37	13.8	24	66	65.3	0.7	6	3	

Supports Non-Standard Customization

General Purpose Stainless Steel Drill – Internal Coolant (02)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZM111245ASH-43734746C5	4.37	22.5	34	74	73.3	0.7	6	5	
ZM111245ASH-4424666C3	4.4	14.1	24	66	65.3	0.7	6	3	
ZM111245ASH-4434746C5	4.4	22.8	34	74	73.3	0.7	6	5	
ZM111245ASH-4449876C8	4.4	36	49	87	86.3	0.7	6	8	
ZM111245ASH-4524666C3	4.5	14.3	24	66	65.3	0.7	6	3	
ZM111245ASH-4534746C5	4.5	23.3	34	74	73.3	0.7	6	5	
ZM111245ASH-4549876C8	4.5	36.8	49	87	86.3	0.7	6	8	
ZM111245ASH-4634746C5	4.6	23.8	34	74	73.2	0.8	6	5	
ZM111245ASH-4649876C8	4.6	36.8	49	87	86.2	0.8	6	8	
ZM111245ASH-4734746C5	4.7	24.3	34	74	73.2	0.8	6	5	
ZM111245ASH-47628666C3	4.76	15	28	66	65.2	0.8	6	3	
ZM111245ASH-4828666C3	4.8	15.2	28	66	65.2	0.8	6	3	
ZM111245ASH-4856946C8	4.8	39.2	56	94	93.2	0.8	6	8	
ZM111245ASH-4944826C5	4.9	25.3	44	82	81.2	0.8	6	5	
ZM111245ASH-528666C3	5	15.8	28	66	65.2	0.8	6	3	
ZM111245ASH-544826C5	5	25.8	44	82	81.2	0.8	6	5	
ZM111245ASH-556946C8	5	40.8	56	94	93.2	0.8	6	8	
ZM111245ASH-5128666C3	5.1	16.1	28	66	65.2	0.8	6	3	
ZM111245ASH-5144826C5	5.1	26.3	44	82	81.2	0.8	6	5	
ZM111245ASH-51628666C3	5.16	16.3	28	66	65.2	0.8	6	3	
ZM111245ASH-5228666C3	5.2	16.4	28	66	65.1	0.9	6	3	
ZM111245ASH-5244826C5	5.2	26.8	44	82	81.1	0.9	6	5	
ZM111245ASH-5344826C5	5.3	27.3	44	82	81.1	0.9	6	5	
ZM111245ASH-5528666C3	5.5	17.4	28	66	65.1	0.9	6	3	
ZM111245ASH-5544826C5	5.5	28.4	44	82	81.1	0.9	6	5	
ZM111245ASH-5556946C8	5.5	44.9	56	94	93.1	0.9	6	8	
ZM111245ASH-55628666C3	5.56	17.6	28	66	65.1	0.9	6	3	
ZM111245ASH-5828666C3	5.8	17.6	28	66	65	1	6	3	
ZM111245ASH-5856946C8	5.8	47.3	56	94	93	1	6	8	
ZM111245ASH-5944826C5	5.9	30.4	44	82	81	1	6	5	
ZM111245ASH-628666C3	6	18.9	28	66	65	1	6	3	
ZM111245ASH-644826C5	6	30.9	44	82	81	1	6	5	
ZM111245ASH-656946C8	6	48.9	56	94	93	1	6	8	
ZM111245ASH-6153918C5	6.1	31.5	53	91	90	1	8	5	
ZM111245ASH-61671068C8	6.1	49.8	67	106	105	1	8	8	
ZM111245ASH-6253918C5	6.2	32	53	91	89.9	1.1	8	5	
ZM111245ASH-62671068C8	6.2	50.6	67	106	104.9	1.1	8	8	
ZM111245ASH-63534798C3	6.35	20.1	34	79	78	1.1	8	3	
ZM111245ASH-63553918C5	6.35	32.8	53	91	90	1.1	8	5	
ZM111245ASH-635671068C8	6.35	51.8	67	106	104.9	1.1	8	8	
ZM111245ASH-6534798C3	6.5	20.6	34	79	77.9	1.1	8	3	
ZM111245ASH-6553918C5	6.5	33.6	53	91	89.9	1.1	8	5	
ZM111245ASH-65671068C8	6.5	52	67	106	104.9	1.1	8	8	
ZM111245ASH-6634798C3	6.6	20.9	34	79	77.9	1.1	8	3	
ZM111245ASH-6653918C5	6.6	34.1	53	91	89.9	1.1	8	5	
ZM111245ASH-6734798C3	6.7	21.2	34	79	77.9	1.1	8	3	
ZM111245ASH-6753918C5	6.7	34.6	53	91	89.9	1.1	8	5	
ZM111245ASH-67534798C3	6.75	21.3	34	79	77.9	1.1	8	3	
ZM111245ASH-6834798C3	6.8	21.5	34	79	77.9	1.1	8	3	
ZM111245ASH-6853918C5	6.8	35.1	53	91	89.9	1.1	8	5	
ZM111245ASH-68671068C8	6.8	54	67	106	104.9	1.1	8	8	

Supports Non-Standard Customization

M Series

General Purpose Stainless Steel Drill – Internal Coolant (03)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZM111245ASH-6934798C3	6.9	21.8	34	79	77.8	1.2	8	3	
ZM111245ASH-6953918C5	6.9	35.6	53	91	89.8	1.2	8	5	
ZM111245ASH-69671068C8	6.9	55	67	106	104.8	1.2	8	8	
ZM111245ASH-734798C3	7	22.1	34	79	77.8	1.2	8	3	
ZM111245ASH-753918C5	7	36.1	53	91	89.8	1.2	8	5	
ZM111245ASH-7671068C8	7	55	67	106	104.8	1.2	8	8	
ZM111245ASH-71721108C8	7.1	57	72	110	108.8	1.2	8	8	
ZM111245ASH-71441798C3	7.14	22.6	41	79	77.8	1.2	8	3	
ZM111245ASH-714721108C8	7.14	58.3	72	110	108.8	1.2	8	8	
ZM111245ASH-7441798C3	7.4	23.4	41	79	77.7	1.3	8	3	
ZM111245ASH-7541798C3	7.5	23.7	41	79	77.7	1.3	8	3	
ZM111245ASH-7553918C5	7.5	38.7	53	91	89.7	1.3	8	5	
ZM111245ASH-7841798C3	7.8	24.7	41	79	77.7	1.3	8	3	
ZM111245ASH-7853918C5	7.8	40.3	53	91	89.7	1.3	8	5	
ZM111245ASH-78721108C8	7.8	63.7	72	110	108.7	1.3	8	8	
ZM111245ASH-794721108C8	7.94	64.8	72	110	108.6	1.4	8	8	
ZM111245ASH-841798C3	8	25.3	41	79	77.6	1.4	8	3	
ZM111245ASH-853918C5	8	41.3	53	91	89.6	1.4	8	5	
ZM111245ASH-8721108C7	8	56	72	110	108.6	1.4	8	7	
ZM111245ASH-81478910C3	8.1	25.6	47	89	87.6	1.4	10	3	
ZM111245ASH-818012210C8	8.1	66.1	80	122	120.6	1.4	10	8	
ZM111245ASH-82478910C3	8.2	25.9	47	89	87.6	1.4	10	3	
ZM111245ASH-826110310C5	8.2	42.3	61	103	101.6	1.4	10	5	
ZM111245ASH-846110310C5	8.4	43.4	61	103	101.6	1.4	10	5	
ZM111245ASH-85478910C3	8.5	26.9	47	89	87.6	1.4	10	3	
ZM111245ASH-856110310C5	8.5	43.9	61	103	101.6	1.4	10	5	
ZM111245ASH-858012210C8	8.5	69.4	80	122	120.6	1.4	10	8	
ZM111245ASH-86478910C3	8.6	27.2	47	89	87.5	1.5	10	3	
ZM111245ASH-866110310C5	8.6	44.4	61	103	101.5	1.5	10	5	
ZM111245ASH-868012210C8	8.6	70.2	80	122	120.5	1.5	10	8	
ZM111245ASH-87478910C3	8.7	27.5	47	89	87.5	1.5	10	3	
ZM111245ASH-876110310C5	8.7	44.9	61	103	101.5	1.5	10	5	
ZM111245ASH-878012210C8	8.7	71	80	122	120.5	1.5	10	8	
ZM111245ASH-88478910C3	8.8	27.8	47	89	87.5	1.5	10	3	
ZM111245ASH-888012210C8	8.8	71.8	80	122	120.5	1.5	10	8	
ZM111245ASH-9478910C3	9	28.5	47	89	87.5	1.5	10	3	
ZM111245ASH-96110310C5	9	46.5	61	103	101.5	1.5	10	5	
ZM111245ASH-98012210C8	9	72	80	122	120.5	1.5	10	8	
ZM111245ASH-918012210C7	9.1	63.7	80	122	120.5	1.5	10	7	
ZM111245ASH-93478910C3	9.3	29.4	47	89	87.4	1.6	10	3	
ZM111245ASH-936110310C5	9.3	48	61	103	101.4	1.6	10	5	
ZM111245ASH-948012210C7	9.4	65.8	80	122	120.4	1.6	10	7	
ZM111245ASH-95478910C3	9.5	30	47	89	87.4	1.6	10	3	
ZM111245ASH-956110310C5	9.5	48.7	61	103	101.4	1.6	10	5	
ZM111245ASH-958012210C7	9.5	66.5	80	122	120.4	1.6	10	7	
ZM111245ASH-9538012210C7	9.53	66.7	80	122	120.4	1.6	10	7	
ZM111245ASH-96478910C3	9.6	30.3	47	89	87.4	1.6	10	3	
ZM111245ASH-968012210C7	9.6	67.2	80	122	120.4	1.6	10	7	
ZM111245ASH-98478910C3	9.8	31	47	89	87.3	1.7	10	3	
ZM111245ASH-986110310C5	9.8	48.3	61	103	101.3	1.7	10	5	
ZM111245ASH-10478910C3	10	31.6	47	89	87.3	1.7	10	3	

Supports Non-Standard Customization

M Series

General Purpose Stainless Steel Drill – Internal Coolant (04)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZM111245ASH-106110310C5	10	50	61		101.3	1.7	10	5	
ZM111245ASH-108012210C7	10	70	80		120.3	1.7	10	7	
ZM111245ASH-1017111812C5	10.1	52.1	71		106.3	1.7	12	5	
ZM111245ASH-1025510212C3	10.2	32.3	55		100.3	1.7	12	3	
ZM111245ASH-1027111812C5	10.2	52.7	71		116.3	1.7	12	5	
ZM111245ASH-1035510212C3	10.3	32.6	55		100.2	1.8	12	3	
ZM111245ASH-1037111812C5	10.3	53.2	71		116.2	1.8	12	5	
ZM111245ASH-1039614112C8	10.3	82.4	96		139.2	1.8	12	8	
ZM111245ASH-1055510212C3	10.5	33.2	55		100.2	1.8	12	3	
ZM111245ASH-1057111812C5	10.5	54.2	71		116.2	1.8	12	5	
ZM111245ASH-1059614112C8	10.5	84	96		139.2	1.8	12	8	
ZM111245ASH-1085510212C3	10.8	34.2	55		100.2	1.8	12	3	
ZM111245ASH-115510212C3	11	34.8	55		100.1	1.9	12	3	
ZM111245ASH-117111812C5	11	56.8	71		116.1	1.9	12	5	
ZM111245ASH-119614112C7	11	77	96		139.1	1.9	12	7	
ZM111245ASH-1115510212C3	11.1	35.1	55		100.1	1.9	12	3	
ZM111245ASH-11119614112C7	11.11	77.8	96		139.1	1.9	12	7	
ZM111245ASH-1127111812C5	11.2	57.6	71		116.1	1.9	12	5	
ZM111245ASH-1155510212C3	11.5	36.4	55		100	2	12	3	
ZM111245ASH-1157111812C5	11.5	57.2	71		116	2	12	5	
ZM111245ASH-1175510212C3	11.7	37	55		100	2	12	3	
ZM111245ASH-1185510212C3	11.8	37.3	55		100	2	12	3	
ZM111245ASH-1187111812C5	11.8	56.8	71		116	2	12	5	
ZM111245ASH-1189614112C7	11.8	82.6	96		139	2	12	7	
ZM111245ASH-125510212C3	12	38	55		99.9	2.1	12	3	
ZM111245ASH-127111812C5	12	60	71		115.9	2.1	12	5	
ZM111245ASH-129614112C7	12	84	96		138.9	2.1	12	7	
ZM111245ASH-1226010714C3	12.2	38.6	60		104.9	2.1	14	3	
ZM111245ASH-1257712414C5	12.5	63	77		121.9	2.1	14	5	
ZM111245ASH-12510815514C7	12.5	88	108		152.9	2.1	14	7	
ZM111245ASH-1276010714C3	12.7	40.2	60		104.8	2.2	14	3	
ZM111245ASH-1277712414C5	12.7	64	77		121.8	2.2	14	5	
ZM111245ASH-1286010714C3	12.8	40.5	60		104.8	2.2	14	3	
ZM111245ASH-136010714C3	13	41.1	60		104.8	2.2	14	3	
ZM111245ASH-137712414C5	13	61.4	77		121.8	2.2	14	5	
ZM111245ASH-1310815514C7	13	91	108		152.8	2.2	14	7	
ZM111245ASH-1357712414C5	13.5	60.8	77		121.7	2.3	14	5	
ZM111245ASH-13510815514C7	13.5	95	108		152.7	2.3	14	7	
ZM111245ASH-146010714C3	14	44.3	60		104.6	2.4	14	3	
ZM111245ASH-147712414C5	14	63	77		121.6	2.4	14	5	
ZM111245ASH-1410815514C7	14	98	108		152.6	2.4	14	7	
ZM111245ASH-14258313316C5	14.25	68.7	83		130.5	2.5	16	5	
ZM111245ASH-142512117116C7	14.25	101	121		168.5	2.5	16	7	
ZM111245ASH-1458313316C5	14.5	68.5	83		130.5	2.5	16	5	
ZM111245ASH-14686511516C3	14.68	46.4	65		112.5	2.5	16	3	
ZM111245ASH-156511516C3	15	47.4	65		112.4	2.6	16	3	
ZM111245ASH-158313316C5	15	68	83		130.4	2.6	16	5	
ZM111245ASH-15812117116C7	15.8	111	121		168.2	2.8	16	7	
ZM111245ASH-166511516C3	16	49	65		112.2	2.8	16	3	
ZM111245ASH-1612117116C7	16	111	121		168.2	2.8	16	7	
ZM111245ASH-1657312318C3	16.5	52.1	73		120.2	2.8	18	3	

Supports Non-Standard Customization

M Series

General Purpose Stainless Steel Drill – Internal Coolant (05)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZM111245ASH-1659514318C5	16.5	82.5	95	143	140.2	2.8	18	5	
ZM111245ASH-1687312318C3	16.8	53	73	123	120.2	2.8	18	3	
ZM111245ASH-179514318C5	17	85	95	143	140.2	2.8	18	5	
ZM111245ASH-1757312318C3	17.5	55.2	73	123	120.2	2.8	18	3	
ZM111245ASH-1759514318C4	17.5	70	95	143	140.2	2.8	18	4	
ZM111245ASH-1789514318C4	17.8	71.2	95	143	140.1	2.9	18	4	
ZM111245ASH-187312318C3	18	56.8	73	123	120.1	2.9	18	3	
ZM111245ASH-189514318C4	18	72	95	143	140.1	2.9	18	4	
ZM111245ASH-1857913120C3	18.5	58.4	79	131	128.1	2.9	20	3	
ZM111245ASH-1887913120C3	18.8	59.3	79	131	128.1	2.9	20	3	
ZM111245ASH-18810315320C5	18.8	93	103	153	150.1	2.9	20	5	
ZM111245ASH-197913120C3	19	59.9	79	131	128.1	2.9	20	3	
ZM111245ASH-207913120C3	20	63	79	131	127.9	3.1	20	3	

Supports Non-Standard Customization

Application Guidelines for Material Processing

Internal Coolant Design

ISO	Material Code	Workpiece Material	Brinell Hardness	Cutting Speed (VC) m/min		
				Minimum	Initial Value	Maximum
M	Austenitic Stainless Steel					
	M1.0.C.UT	Cast + Unprocessed	165	48	60	72
	M1.0.Z.AQ	Annealed / Quenched	200	48	60	72
	M1.0.Z.PH	Precipitation Hardened	350	44	55	66
	M1.1.Z.AQ	Improved Machinability	165	48	60	72
	M1.2.Z.AQ	Free-Cutting Steel	200	48	60	72
	M1.3.C.AQ	Titanium-Stabilized + Cast	200	48	60	72
	M1.3.Z.AQ	Titanium-Stabilized	200	48	60	72
	M1.4.Z.AQ	High Strength	250	48	60	72
	Premium Austenitic Stainless Steel (Ni > 20%)					
	M2.0.C.AQ	Cast + Annealed/Quenched	165	44	50	68
	M2.0.Z.AQ	Annealed / Quenched	200	44	50	68
	Duplex (Austenitic/Ferritic) Stainless Steel					
	M3.1. Z. AQ >60%	Ferritic (N < 0.10%)	250	50	65	80
	M3.2. Z. AQ <60%	Ferritic (N < 0.10%)	250	50	65	80

Drill Diameter (mm)	Feed per Revolution (mm/r) *		
	Minimum	Initial Value	Maximum
3	0.05	0.07	0.1
4	0.08	0.1	0.12
6	0.09	0.11	0.13
8	0.1	0.12	0.14
10	0.13	0.14	0.17
12	0.13	0.16	0.19
16	0.14	0.2	0.23
20	0.17	0.22	0.25

- Cutting parameters are valid only for internal cooling.
- Recommended minimum internal cooling pressure: 20 bar.
- For harder stainless steels (e.g., precipitation hardened), reduce parameters by 30%.
- If using external cooling, adjust speed to ensure good chip formation and smooth chip evacuation.
- If using external cooling, reduce feed per revolution as needed to ensure smooth chip evacuation.

Supports Non-Standard Customization

2025
New Product

Cast Iron Specialized Drill K

Overview and Applications

- General Processing of Cast Iron Materials General machining for ISO-K material Including GCI, NCI, CGI and ADI
- Hole tolerance IT8-9
- Diameter range: 3.0–20.0 mm
- Drill length above 8xD

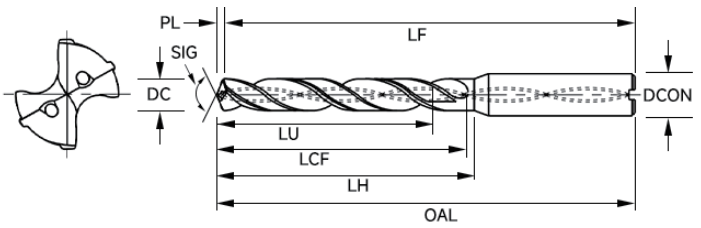
Features and Technical Advantages

- Cover both stable and unstable cutting conditions
- Provide internal coolant solutions
- Curve cutting edge generates good chips deformation
- Conical flank surface generates cutting edge high toughness
- Good chips evacuation thanks to chips flute optimization design
- Chamfer design on peripheral corner which reduce risk of breakage

K Series

General Purpose Cast Iron Drill – Internal Coolant

▶ General Processing of Cast Iron Materials General machining for ISO-K materialIncluding GCI, NCI, CGI and ADI



WC KX Coat

Shank Tolerance	H6
SIG Angle	140°
Max Reconditioning	5

● =Best ○ =Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
							●							

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZK81255ASH-320624C3	3	9.5	20	62	61.5	0.5	4	3	
ZK81255ASH-326664C5	3	15.5	26	66	65.5	0.5	4	5	
ZK81255ASH-340784C8	3	24.5	40	78	77.5	0.5	4	8	
ZK81255ASH-3120624C3	3.1	9.8	20	62	61.5	0.5	4	3	
ZK81255ASH-3126664C5	3.1	16	26	66	65.5	0.5	4	5	
ZK81255ASH-3140784C8	3.1	25.3	40	78	77.5	0.5	4	8	
ZK81255ASH-3220624C3	3.2	10.1	20	62	61.5	0.5	4	3	
ZK81255ASH-3226664C5	3.2	16.5	26	66	65.5	0.5	4	5	
ZK81255ASH-3240784C8	3.2	26.1	40	78	77.5	0.5	4	8	
ZK81255ASH-3320624C3	3.3	10.5	20	62	61.4	0.6	4	3	
ZK81255ASH-3326664C5	3.3	17.1	26	66	65.4	0.6	4	5	
ZK81255ASH-3340784C8	3.3	27	40	78	77.5	0.6	4	8	
ZK81255ASH-3420624C3	3.4	10.8	20	62	61.4	0.6	4	3	
ZK81255ASH-3426664C5	3.4	17.6	26	66	65.4	0.6	4	5	
ZK81255ASH-3440784C8	3.4	27.5	40	78	77.4	0.6	4	8	
ZK81255ASH-3520624C3	3.5	11.1	20	62	61.4	0.6	4	3	
ZK81255ASH-3526664C5	3.5	18.1	26	66	65.4	0.6	4	5	
ZK81255ASH-3540784C8	3.5	27.3	40	78	77.4	0.6	4	8	
ZK81255ASH-3620624C3	3.6	11.4	20	62	61.4	0.6	4	3	
ZK81255ASH-3626664C5	3.6	18.5	26	66	65.4	0.6	4	5	
ZK81255ASH-3640784C8	3.6	27.3	40	78	77.4	0.6	4	8	
ZK81255ASH-3720624C3	3.7	11.7	20	62	61.4	0.6	4	3	
ZK81255ASH-3726664C5	3.7	19.1	26	66	65.4	0.6	4	5	
ZK81255ASH-3740784C8	3.7	27.9	40	78	77.4	0.6	4	8	
ZK81255ASH-3824664C3	3.8	12.1	24	66	65.4	0.6	4	3	
ZK81255ASH-3834744C5	3.8	20.2	34	74	73.4	0.6	4	5	
ZK81255ASH-3849874C8	3.8	31.1	49	87	86.4	0.6	4	8	
ZK81255ASH-3924664C3	3.9	12.5	24	66	65.4	0.6	4	3	
ZK81255ASH-3934744C5	3.9	20.2	34	74	73.4	0.6	4	5	
ZK81255ASH-3949874C8	3.9	31.9	49	87	86.4	0.6	4	8	

Supports Non-Standard Customization

K Series

General Purpose Cast Iron Drill – Internal Coolant (02)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZK81255ASH-424664C3	4	12.7	24	66	65.3	0.7	4	3	
ZK81255ASH-434744C5	4	20.7	34	74	73.3	0.7	4	5	
ZK81255ASH-449874C8	4	32.7	49	87	86.3	0.7	4	8	
ZK81255ASH-4124666C3	4.1	13	24	66	65.3	0.7	6	3	
ZK81255ASH-4134746C5	4.1	21.2	34	74	73.3	0.7	6	5	
ZK81255ASH-4149876C8	4.1	33.5	49	87	86.3	0.7	6	8	
ZK81255ASH-4224666C3	4.2	13.3	24	66	65.3	0.7	6	3	
ZK81255ASH-4234746C5	4.2	21.7	34	74	73.3	0.7	6	5	
ZK81255ASH-4249876C8	4.2	34.3	49	87	86.3	0.7	6	8	
ZK81255ASH-4324666C3	4.3	13.7	24	66	65.2	0.7	6	3	
ZK81255ASH-4334746C5	4.3	22.3	34	74	73.2	0.7	6	5	
ZK81255ASH-4349876C8	4.3	35.2	49	87	86.3	0.7	6	8	
ZK81255ASH-4424666C3	4.4	14.1	24	66	65.3	0.7	6	3	
ZK81255ASH-4434746C5	4.4	22.8	34	74	73.3	0.7	6	5	
ZK81255ASH-4449876C8	4.4	36	49	87	86.3	0.7	6	8	
ZK81255ASH-4524666C3	4.5	14.3	24	66	65.3	0.7	6	3	
ZK81255ASH-4534746C5	4.5	23.3	34	74	73.3	0.7	6	5	
ZK81255ASH-4549876C8	4.5	36.8	49	87	86.3	0.7	6	8	
ZK81255ASH-4624666C3	4.6	14.6	24	66	65.2	0.8	6	3	
ZK81255ASH-4634746C5	4.6	23.8	34	74	73.2	0.8	6	5	
ZK81255ASH-4656946C8	4.6	39.2	56	94	93.2	0.8	6	8	
ZK81255ASH-4756946C8	4.7	39.2	56	94	93.2	0.8	6	8	
ZK81255ASH-4828666C3	4.8	15.2	28	66	65.2	0.8	6	3	
ZK81255ASH-4844826C5	4.8	24.8	44	82	81.2	0.8	6	5	
ZK81255ASH-4856946C8	4.8	39.2	56	94	93.2	0.8	6	8	
ZK81255ASH-4928666C3	4.9	15.5	28	66	65.2	0.8	6	3	
ZK81255ASH-4944826C5	4.9	25.3	44	82	81.2	0.8	6	5	
ZK81255ASH-4956946C8	4.9	40	56	94	93.2	0.8	6	8	
ZK81255ASH-528666C3	5	15.8	28	66	65.2	0.8	6	3	
ZK81255ASH-544826C5	5	25.8	44	82	81.2	0.8	6	5	
ZK81255ASH-556946C8	5	40.8	56	94	93.2	0.8	6	8	
ZK81255ASH-5128666C3	5.1	16.1	28	66	65.2	0.8	6	3	
ZK81255ASH-5144826C5	5.1	26.3	44	82	81.2	0.8	6	5	
ZK81255ASH-5156946C8	5.1	41.6	56	94	93.2	0.8	6	8	
ZK81255ASH-5228666C3	5.2	16.4	28	66	65.1	0.9	6	3	
ZK81255ASH-5244826C5	5.2	26.8	44	82	81.1	0.9	6	5	
ZK81255ASH-5256946C8	5.2	42.4	56	94	93.1	0.9	6	8	
ZK81255ASH-5328666C3	5.3	16.7	28	66	65.1	0.9	6	3	
ZK81255ASH-5344826C5	5.3	27.3	44	82	81.1	0.9	6	5	
ZK81255ASH-5428666C3	5.4	17	28	66	65.1	0.9	6	3	
ZK81255ASH-5444826C5	5.4	27.8	44	82	81.1	0.9	6	5	
ZK81255ASH-5456946C8	5.4	44	56	94	93.1	0.9	6	8	
ZK81255ASH-5528666C3	5.5	17.4	28	66	65.1	0.9	6	3	
ZK81255ASH-5544826C5	5.5	28.4	44	82	81.1	0.9	6	5	
ZK81255ASH-5556946C8	5.5	44.9	56	94	93.1	0.9	6	8	
ZK81255ASH-5628666C3	5.6	17.7	28	66	65.1	0.9	6	3	
ZK81255ASH-5644826C5	5.6	28.9	44	82	81.1	0.9	6	5	
ZK81255ASH-5656946C8	5.6	45.7	56	94	93.1	0.9	6	8	
ZK81255ASH-5744826C5	5.7	29.4	44	82	81	1	6	5	
ZK81255ASH-5756946C8	5.7	46.5	56	94	93	1	6	8	
ZK81255ASH-5828666C3	5.8	17.6	28	66	65	1	6	3	

Supports Non-Standard Customization

K Series

General Purpose Cast Iron Drill – Internal Coolant (03)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZK81255ASH-5844826C5	5.8	29.9	44	82	81	1	6	5	
ZK81255ASH-5856946C8	5.8	47.3	56	94	93	1	6	8	
ZK81255ASH-5928666C3	5.9	18.2	28	66	65	1	6	3	
ZK81255ASH-5944826C5	5.9	30.4	44	82	81	1	6	5	
ZK81255ASH-5956946C8	5.9	47.4	56	94	93	1	6	8	
ZK81255ASH-628666C3	6	18.9	28	66	65	1	6	3	
ZK81255ASH-644826C5	6	30.9	44	82	81	1	6	5	
ZK81255ASH-656946C8	6	48.9	56	94	93	1	6	8	
ZK81255ASH-6134798C3	6.1	19.6	34	79	77.9	1	8	3	
ZK81255ASH-6153918C5	6.1	32	53	91	89.9	1	8	5	
ZK81255ASH-61671068C8	6.1	50.6	67	106	104.9	1	8	8	
ZK81255ASH-6234798C3	6.2	19.6	34	79	77.9	1.1	8	3	
ZK81255ASH-6253918C5	6.2	32	53	91	89.9	1.1	8	5	
ZK81255ASH-62671068C8	6.2	50.6	67	106	104.9	1.1	8	8	
ZK81255ASH-6334798C3	6.3	19.9	34	79	77.9	1.1	8	3	
ZK81255ASH-6353918C5	6.3	32.5	53	91	89.9	1.1	8	5	
ZK81255ASH-63671068C8	6.3	51.4	67	106	104.9	1.1	8	8	
ZK81255ASH-6434798C3	6.4	20.2	34	79	77.9	1.1	8	3	
ZK81255ASH-6453918C5	6.4	33	53	91	89.9	1.1	8	5	
ZK81255ASH-64671068C8	6.4	52.2	67	106	104.9	1.1	8	8	
ZK81255ASH-6534798C3	6.5	20.6	34	79	77.9	1.1	8	3	
ZK81255ASH-6553918C5	6.5	33.6	53	91	89.9	1.1	8	5	
ZK81255ASH-65671068C8	6.5	53.1	67	106	104.9	1.1	8	8	
ZK81255ASH-6634798C3	6.6	20.9	34	79	77.9	1.1	8	3	
ZK81255ASH-6653918C5	6.6	34.1	53	91	89.9	1.1	8	5	
ZK81255ASH-66671068C8	6.6	53.9	67	106	104.9	1.1	8	8	
ZK81255ASH-6734798C3	6.7	21.2	34	79	77.9	1.1	8	3	
ZK81255ASH-6753918C5	6.7	34.6	53	91	89.9	1.1	8	5	
ZK81255ASH-67671068C8	6.7	54.7	67	106	104.9	1.1	8	8	
ZK81255ASH-6834798C3	6.8	21.5	34	79	77.9	1.1	8	3	
ZK81255ASH-6853918C5	6.8	35.1	53	91	89.9	1.1	8	5	
ZK81255ASH-68671068C8	6.8	55.5	67	106	104.9	1.1	8	8	
ZK81255ASH-6934798C3	6.9	21.8	34	79	77.8	1.2	8	3	
ZK81255ASH-6953918C5	6.9	35.6	53	91	89.8	1.2	8	5	
ZK81255ASH-69671068C8	6.9	56.3	67	106	104.8	1.2	8	8	
ZK81255ASH-734798C3	7	22.1	34	79	77.8	1.2	8	3	
ZK81255ASH-753918C5	7	36.1	53	91	89.8	1.2	8	5	
ZK81255ASH-7671068C8	7	57.1	67	106	104.8	1.2	8	8	
ZK81255ASH-7141798C3	7.1	22.4	41	79	77.8	1.2	8	3	
ZK81255ASH-7153918C5	7.1	36.6	53	91	89.8	1.2	8	5	
ZK81255ASH-7241798C3	7.2	22.8	41	79	77.8	1.2	8	3	
ZK81255ASH-7253918C5	7.2	37.2	53	91	89.8	1.2	8	5	
ZK81255ASH-7353918C5	7.3	37.7	53	91	89.8	1.2	8	5	
ZK81255ASH-73721108C8	7.3	59.6	72	110	109	1.2	8	8	
ZK81255ASH-7441798C3	7.4	23.4	41	79	77.7	1.3	8	3	
ZK81255ASH-7453918C5	7.4	38.2	53	91	89.7	1.3	8	5	
ZK81255ASH-74721108C8	7.4	60.4	72	110	109	1.3	8	8	
ZK81255ASH-7541798C3	7.5	23.7	41	79	77.7	1.3	8	3	
ZK81255ASH-7553918C5	7.5	38.7	53	91	89.7	1.3	8	5	
ZK81255ASH-75721108C8	7.5	61.2	72	110	109	1.3	8	8	
ZK81255ASH-7641798C3	7.6	24	41	79	77.7	1.3	8	3	

Supports Non-Standard Customization

K Series

General Purpose Cast Iron Drill – Internal Coolant (04)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZK81255ASH-76721108C8	7.6	62	72	110	109	1.3	8	8	
ZK81255ASH-7741798C3	7.7	24.3	41	79	77.7	1.3	8	3	
ZK81255ASH-7753918C5	7.7	39.7	53	91	89.7	1.3	8	5	
ZK81255ASH-77721108C8	7.7	62.8	72	110	109	1.3	8	8	
ZK81255ASH-7841798C3	7.8	24.7	41	79	77.7	1.3	8	3	
ZK81255ASH-7853918C5	7.8	40.3	53	91	89.7	1.3	8	5	
ZK81255ASH-78721108C8	7.8	63.7	72	110	109	1.3	8	8	
ZK81255ASH-7941798C3	7.9	25	41	79	77.7	1.3	8	3	
ZK81255ASH-7953918C5	7.9	40.8	53	91	89.7	1.3	8	5	
ZK81255ASH-841798C3	8	25.3	41	79	77.6	1.4	8	3	
ZK81255ASH-853918C5	8	41.3	53	91	89.6	1.4	8	5	
ZK81255ASH-8721108C7	8	56	72	110	109	1.4	8	7	
ZK81255ASH-81417910C3	8.1	25.6	41	79	77.6	1.4	10	3	
ZK81255ASH-81539110C5	8.1	41.8	53	91	89.6	1.4	10	5	
ZK81255ASH-818012210C8	8.1	66.1	80	122	121	1.4	10	8	
ZK81255ASH-82478910C3	8.2	25.9	47	89	87.6	1.4	10	3	
ZK81255ASH-826110310C5	8.2	42.3	61	103	102	1.4	10	5	
ZK81255ASH-828012210C8	8.2	66.9	80	122	121	1.4	10	8	
ZK81255ASH-83478910C3	8.3	26.3	47	89	87.6	1.4	10	3	
ZK81255ASH-836110310C5	8.3	42.9	61	103	102	1.4	10	5	
ZK81255ASH-838012210C8	8.3	67.8	80	122	121	1.4	10	8	
ZK81255ASH-84478910C3	8.4	26.6	47	89	87.6	1.4	10	3	
ZK81255ASH-846110310C5	8.4	43.4	61	103	102	1.4	10	5	
ZK81255ASH-848012210C8	8.4	68.6	80	122	121	1.4	10	8	
ZK81255ASH-85478910C3	8.5	26.9	47	89	87.6	1.4	10	3	
ZK81255ASH-856110310C5	8.5	43.9	61	103	102	1.4	10	5	
ZK81255ASH-858012210C8	8.5	69.4	80	122	121	1.4	10	8	
ZK81255ASH-86478910C3	8.6	27.2	47	89	87.5	1.5	10	3	
ZK81255ASH-866110310C5	8.6	44.4	61	103	102	1.5	10	5	
ZK81255ASH-868012210C8	8.6	70.2	80	122	121	1.5	10	8	
ZK81255ASH-87478910C3	8.7	27.5	47	89	87.5	1.5	10	3	
ZK81255ASH-876110310C5	8.7	44.9	61	103	102	1.5	10	5	
ZK81255ASH-878012210C8	8.7	71	80	122	120.5	1.5	10	8	
ZK81255ASH-88478910C3	8.8	27.8	47	89	87.5	1.5	10	3	
ZK81255ASH-886110310C5	8.8	45.4	61	103	101.5	1.5	10	5	
ZK81255ASH-888012210C8	8.8	71.8	80	122	120.5	1.5	10	8	
ZK81255ASH-896110310C5	8.9	45.9	61	103	101.5	1.5	10	5	
ZK81255ASH-9478910C3	9	28.5	47	89	87.5	1.5	10	3	
ZK81255ASH-96110310C5	9	46.5	61	103	101.5	1.5	10	5	
ZK81255ASH-98012210C8	9	72	80	122	120.5	1.5	10	8	
ZK81255ASH-91478910C3	9.1	28.8	47	89	87.5	1.5	10	3	
ZK81255ASH-916110310C5	9.1	47	61	103	101.5	1.5	10	5	
ZK81255ASH-918012210C7	9.1	63.7	80	122	120.5	1.5	10	7	
ZK81255ASH-92478910C3	9.2	29.1	47	89	87.4	1.6	10	3	
ZK81255ASH-926110310C5	9.2	47.5	61	103	101.4	1.6	10	5	
ZK81255ASH-928012210C7	9.2	64.4	80	122	120.4	1.6	10	7	
ZK81255ASH-93478910C3	9.3	29.4	47	89	87.4	1.6	10	3	
ZK81255ASH-936110310C5	9.3	48	61	103	101.4	1.6	10	5	
ZK81255ASH-938012210C7	9.3	65.1	80	122	120.4	1.6	10	7	
ZK81255ASH-94478910C3	9.4	29.7	47	89	87.4	1.6	10	3	
ZK81255ASH-946110310C5	9.4	48.5	61	103	101.4	1.6	10	5	

Supports Non-Standard Customization

K Series

General Purpose Cast Iron Drill – Internal Coolant (05)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZK81255ASH-948012210C7	9.4	65.8	80	122	120.4	1.6	10	7	
ZK81255ASH-95478910C3	9.5	30	47	89	87.4	1.6	10	3	
ZK81255ASH-956110310C5	9.5	48.7	61	103	101.4	1.6	10	5	
ZK81255ASH-958012210C7	9.5	66.5	80	122	120.4	1.6	10	7	
ZK81255ASH-96478910C3	9.6	30.3	47	89	87.4	1.6	10	3	
ZK81255ASH-966110310C5	9.6	48.5	61	103	101.4	1.6	10	5	
ZK81255ASH-968012210C7	9.6	67.2	80	122	120.4	1.6	10	7	
ZK81255ASH-97478910C3	9.7	30.7	47	89	87.3	1.7	10	3	
ZK81255ASH-978012210C7	9.7	67.9	80	122	120.3	1.7	10	7	
ZK81255ASH-98478910C3	9.8	31	47	89	87.3	1.7	10	3	
ZK81255ASH-986110310C5	9.8	48.3	61	103	101.3	1.7	10	5	
ZK81255ASH-988012210C7	9.8	68.6	80	122	120.3	1.7	10	7	
ZK81255ASH-99478910C3	9.9	31.3	47	89	87.3	1.7	10	3	
ZK81255ASH-996110310C5	9.9	48.1	61	103	101.3	1.7	10	5	
ZK81255ASH-998012210C7	9.9	69.3	80	122	120.3	1.7	10	7	
ZK81255ASH-10478910C3	10	31.6	47	89	87.3	1.7	10	3	
ZK81255ASH-106110310C5	10	50	61	103	101.3	1.7	10	5	
ZK81255ASH-108012210C7	10	70	80	122	120.3	1.7	10	7	
ZK81255ASH-101478912C3	10.1	31.9	47	89	87.3	1.7	12	3	
ZK81255ASH-1016110312C5	10.1	52.1	61	103	101.3	1.7	12	5	
ZK81255ASH-1019614112C8	10.1	82.4	96	141	139.3	1.7	12	8	
ZK81255ASH-1025510212C3	10.2	32.3	55	102	100.3	1.7	12	3	
ZK81255ASH-1027111812C5	10.2	52.7	71	118	116.3	1.7	12	5	
ZK81255ASH-1029614112C8	10.2	83.3	96	141	139.3	1.7	12	8	
ZK81255ASH-1035510212C3	10.3	32.6	55	102	100.2	1.8	12	3	
ZK81255ASH-1037111812C5	10.3	53.2	71	118	116.2	1.8	12	5	
ZK81255ASH-1039614112C8	10.3	84.1	96	141	139.2	1.8	12	8	
ZK81255ASH-1045510212C3	10.4	32.9	55	102	100.2	1.8	12	3	
ZK81255ASH-1047111812C5	10.4	53.7	71	118	116.2	1.8	12	5	
ZK81255ASH-1049614112C8	10.4	84.9	96	141	139.2	1.8	12	8	
ZK81255ASH-1055510212C3	10.5	33.2	55	102	100.2	1.8	12	3	
ZK81255ASH-1057111812C5	10.5	54.2	71	118	116.2	1.8	12	5	
ZK81255ASH-1059614112C8	10.5	85.7	96	141	139.2	1.8	12	8	
ZK81255ASH-1067111812C5	10.6	54.7	71	118	116.2	1.8	12	5	
ZK81255ASH-1075510212C3	10.7	33.8	55	102	100.2	1.8	12	3	
ZK81255ASH-1077111812C5	10.7	55.2	71	118	116.2	1.8	12	5	
ZK81255ASH-1085510212C3	10.8	34.2	55	102	100.2	1.8	12	3	
ZK81255ASH-1087111812C5	10.8	55.8	71	118	116.2	1.8	12	5	
ZK81255ASH-1089614112C8	10.8	86.4	96	141	139.2	1.8	12	8	
ZK81255ASH-1097111812C5	10.9	56.3	71	118	116.1	1.9	12	5	
ZK81255ASH-115510212C3	11	34.8	55	102	100.1	1.9	12	3	
ZK81255ASH-117111812C5	11	56.8	71	118	116.1	1.9	12	5	
ZK81255ASH-119614112C7	11	77	96	141	139.1	1.9	12	7	
ZK81255ASH-1115510212C3	11.1	35.1	55	102	100.1	1.9	12	3	
ZK81255ASH-1117111812C5	11.1	57.3	71	118	116.1	1.9	12	5	
ZK81255ASH-1119614112C7	11.1	77.8	96	141	139.1	1.9	12	7	
ZK81255ASH-1125510212C3	11.2	35.4	55	102	100.1	1.9	12	3	
ZK81255ASH-1127111812C5	11.2	57.6	71	118	116.1	1.9	12	5	
ZK81255ASH-1129614112C7	11.2	78.4	96	141	139.1	1.9	12	7	
ZK81255ASH-1135510212C3	11.3	35.7	55	102	100.1	1.9	12	3	
ZK81255ASH-1137111812C5	11.3	57.4	71	118	116.1	1.9	12	5	

Supports Non-Standard Customization

K Series

General Purpose Cast Iron Drill – Internal Coolant (06)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZK81255ASH-1139614112C7	11.3	79.1	96	141	139.1	1.9	12	7	
ZK81255ASH-1145510212C3	11.4	36.1	55	102	100	2	12	3	
ZK81255ASH-1155510212C3	11.5	36.4	55	102	100	2	12	3	
ZK81255ASH-1157111812C5	11.5	57.2	71	118	116	2	12	5	
ZK81255ASH-1159614112C7	11.5	80.5	96	141	139	2	12	7	
ZK81255ASH-1165510212C3	11.6	36.7	55	102	100	2	12	3	
ZK81255ASH-1175510212C3	11.7	37	55	102	100	2	12	3	
ZK81255ASH-1177111812C5	11.7	57	71	118	116	2	12	5	
ZK81255ASH-1185510212C3	11.8	37.3	55	102	100	2	12	3	
ZK81255ASH-1187111812C5	11.8	56.8	71	118	116	2	12	5	
ZK81255ASH-1189614112C7	11.8	82.6	96	141	139	2	12	7	
ZK81255ASH-1195510212C3	11.9	37.6	55	102	100	2	12	3	
ZK81255ASH-1199614112C7	11.9	97.1	96	141	139	2	12	7	
ZK81255ASH-125510212C3	12	38	55	102	99.9	2.1	12	3	
ZK81255ASH-127111812C5	12	60	71	118	115.9	2.1	12	5	
ZK81255ASH-129614112C7	12	84	96	141	138.9	2.1	12	7	
ZK81255ASH-1215510214C3	12.1	38.3	55	102	99.9	2.1	14	3	
ZK81255ASH-1217111814C5	12.1	62.5	71	118	115.9	2.1	14	5	
ZK81255ASH-12110815514C8	12.1	96.8	108	155	152.9	2.1	14	8	
ZK81255ASH-1226010714C3	12.2	38.6	60	107	104.9	2.1	14	3	
ZK81255ASH-1227712414C5	12.2	62.4	77	124	121.9	2.1	14	5	
ZK81255ASH-12210815514C8	12.2	97.6	108	155	152.9	2.1	14	8	
ZK81255ASH-1236010714C3	12.3	38.9	60	107	104.9	2.1	14	3	
ZK81255ASH-1237712414C5	12.3	62.2	77	124	121.9	2.1	14	5	
ZK81255ASH-12310815514C8	12.3	98.4	108	155	152.9	2.1	14	8	
ZK81255ASH-1256010714C3	12.5	39.5	60	107	104.9	2.1	14	3	
ZK81255ASH-1257712414C5	12.5	63	77	124	121.9	2.1	14	5	
ZK81255ASH-12510815514C7	12.5	88	108	155	152.9	2.1	14	7	
ZK81255ASH-1266010714C3	12.6	39.9	60	107	104.8	2.2	14	3	
ZK81255ASH-1276010714C3	12.7	40.2	60	107	104.8	2.2	14	3	
ZK81255ASH-1277712414C5	12.7	64	77	124	121.8	2.2	14	5	
ZK81255ASH-12710815514C7	12.7	88.9	108	155	152.8	2.2	14	7	
ZK81255ASH-1286010714C3	12.8	40.5	60	107	104.8	2.2	14	3	
ZK81255ASH-1287712414C5	12.8	64.6	77	124	121.8	2.2	14	5	
ZK81255ASH-12810815514C7	12.8	89.6	108	155	152.8	2.2	14	7	
ZK81255ASH-136010714C3	13	41.1	60	107	104.8	2.2	14	3	
ZK81255ASH-137712414C5	13	61.4	77	124	121.8	2.2	14	5	
ZK81255ASH-1310815514C7	13	91	108	155	152.8	2.2	14	7	
ZK81255ASH-1316010714C3	13.1	41.4	60	107	104.7	2.3	14	3	
ZK81255ASH-1317712414C5	13.1	61.3	77	124	121.7	2.3	14	5	
ZK81255ASH-13110815514C7	13.1	91.7	108	155	152.7	2.3	14	7	
ZK81255ASH-1356010714C3	13.5	42.7	60	107	104.7	2.3	14	3	
ZK81255ASH-1357712414C5	13.5	60.8	77	124	121.7	2.3	14	5	
ZK81255ASH-13510815514C7	13.5	94.5	108	155	152.7	2.3	14	7	
ZK81255ASH-1386010714C3	13.8	43.4	60	107	104.6	2.4	14	3	
ZK81255ASH-1387712414C5	13.8	60.4	77	124	121.6	2.4	14	5	
ZK81255ASH-13810815514C7	13.8	96.6	108	155	152.6	2.4	14	7	
ZK81255ASH-146010714C3	14	44.3	60	107	104.6	2.4	14	3	
ZK81255ASH-147712414C5	14	63	77	124	121.6	2.4	14	5	
ZK81255ASH-1410815514C7	14	98	108	155	152.6	2.4	14	7	
ZK81255ASH-1456511516C3	14.5	45.8	65	115	112.5	2.5	16	3	

Supports Non-Standard Customization

K Series

General Purpose Cast Iron Drill – Internal Coolant (07)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZK81255ASH-1458313316C5	14.5	68.5	83	133	130.5	2.5	16	5	
ZK81255ASH-1488313316C5	14.8	68.2	83	133	130.4	2.6	16	5	
ZK81255ASH-156511516C3	15	47.4	65	115	112.4	2.6	16	3	
ZK81255ASH-158313316C5	15	68	83	133	130.4	2.6	16	5	
ZK81255ASH-1556511516C3	15.5	49	65	115	112.3	2.7	16	3	
ZK81255ASH-1558313316C5	15.5	67.5	83	133	130.3	2.7	16	5	
ZK81255ASH-1586511516C3	15.8	49.2	65	115	112.2	2.8	16	3	
ZK81255ASH-1588313316C5	15.8	67.2	83	133	130.2	2.8	16	5	
ZK81255ASH-166511516C3	16	49	65	115	112.2	2.8	16	3	
ZK81255ASH-168313316C5	16	67	83	133	130.2	2.8	16	5	
ZK81255ASH-1612117116C7	16	111	121	171	168.2	2.8	16	7	
ZK81255ASH-1657312318C3	16.5	52.1	73	123	120.2	2.8	18	3	
ZK81255ASH-1659314318C5	16.5	76.5	93	143	140.2	2.8	18	5	
ZK81255ASH-1687312318C3	16.8	53	73	123	120.2	2.8	18	3	
ZK81255ASH-179314318C5	17	76	93	143	140.2	2.8	18	5	
ZK81255ASH-1757312318C3	17.5	55.2	73	123	120.2	2.8	18	3	
ZK81255ASH-1759514318C4	17.5	70	95	143	140.2	2.8	18	4	
ZK81255ASH-1789514318C4	17.8	71.2	95	143	140.1	2.9	18	4	
ZK81255ASH-187312318C3	18	56.8	73	123	120.1	2.9	18	3	
ZK81255ASH-189314318C4	18	72	93	143	140.1	2.9	18	4	
ZK81255ASH-1857913120C3	18.5	58.4	79	131	128.1	2.9	20	3	
ZK81255ASH-1887913120C3	18.8	59.3	79	131	128.1	2.9	20	3	
ZK81255ASH-18810115320C5	18.8	86	101	153	150.1	2.9	20	5	
ZK81255ASH-197913120C3	19	59.9	79	131	128.1	2.9	20	3	
ZK81255ASH-207913120C3	20	63	79	131	127.9	3.1	20	3	

Supports Non-Standard Customization

K Series

Application Guidelines for Material Processing

Internal Coolant Design

ISO	Material Code	Workpiece Material	Brinell Hardness	Cutting Speed (VC) m/min		
				Minimum	Initial Value	Maximum
K	Ferritic Pearlitic					
	K1.1.C.NS	Ferritic Pearlitic	200	80	100	120
	Gray Cast Iron (GCI)					
	K2.1.C.UT	Low Tensile Strength	180	100	120	140
	K2.2.C.UT	High Tensile Strength	245	80	100	120
	K2.3.C.UT	High Tensile Strength	175	100	120	140
	Nodular/Ductile Cast Iron (NDI)					
	K3.1.C.UT	Ferritic Pearlitic	155	100	120	140
	K3.2.C.UT	Pearlitic	215	80	100	120
	K3.3.C.UT	Pearlitic	265	100	120	140
	K3.5.C.UT	Pearlitic	190	100	120	140
	K5.1.C.UT	ADI (Ausempered Ductile Iron)	300	60	80	100

Drill Diameter (mm)	Feed per Revolution (mm/r) *		
	Minimum	Initial Value	Maximum
3	0.08	0.1	0.12
4	0.1	0.12	0.14
6	0.12	0.16	0.18
8	0.16	0.2	0.24
10	0.2	0.25	0.3
12	0.22	0.28	0.33
16	0.25	0.32	0.38
20	0.26	0.34	0.4

- Cutting parameters are valid only for internal cooling.
- Recommended minimum internal cooling pressure: 20 bar.
- For harder materials, reduce speed and feed proportionally.
- When using external cooling, adjust speed to ensure good chip formation and smooth chip evacuation.
- When using external cooling, reduce feed per revolution as needed to ensure smooth chip evacuation.

Supports Non-Standard Customization

2025
New Product

Specialized High-Performance Alloy Drill R

Overview and Applications

- Solutions for industry segments such as general machining, D&M, auto and power generation
- Covers ISO-P/M material groups
- Hole tolerance IT8-9
- Diameter range: 3.0–20.0 mm
- Drill length above 8xD

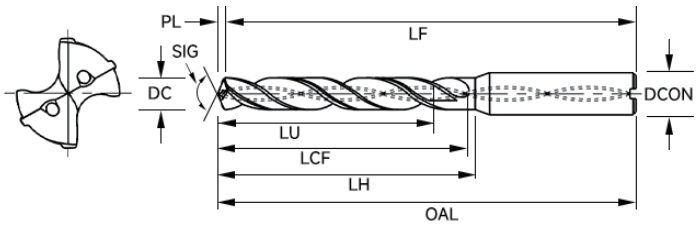
Features and Technical Advantages

- Cover both stable and unstable cutting conditions
- Provide both internal & external coolant solutions
- Curve cutting edge generates low cutting force
- Good centering performance thanks to unique design on central cutting edge
- Good chips evacuation thanks to chips flute optimization design
- Extra fine grain size substrate together with multi layers PVD coating generates long tool life

R Series

Specialized High-Performance Solid Carbide Drill – Internal Coolant

▶ For specialized machinery, molds, automotive, and energy industries. Suitable for ISO groups P, M. Tolerance IT8-9, D3-D20mm, depth up to 8D.



WC DP Coat

Shank Tolerance	H6
SIG Angle	140°
Max Reconditioning	5

● = Best ○ = Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●						●						

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZR111260ASH-320624C3	3	9.5	20	62	61.5	0.5	4	3	
ZR111260ASH-326664C5	3	15.5	26	66	65.5	0.5	4	5	
ZR111260ASH-340784C8	3	24.5	40	78	77.5	0.5	4	8	
ZR111260ASH-3120624C3	3.1	9.8	20	62	61.5	0.5	4	3	
ZR111260ASH-3126664C5	3.1	16	26	66	65.5	0.5	4	5	
ZR111260ASH-3140784C8	3.1	25.3	40	78	77.5	0.5	4	8	
ZR111260ASH-31720624C3	3.17	10	20	62	61.5	0.5	4	3	
ZR111260ASH-31726664C5	3.17	16.4	26	66	65.5	0.5	4	5	
ZR111260ASH-31740784C8	3.17	25.9	40	78	77.5	0.5	4	8	
ZR111260ASH-3220624C3	3.2	10.1	20	62	61.5	0.5	4	3	
ZR111260ASH-3226664C5	3.2	16.5	26	66	65.5	0.5	4	5	
ZR111260ASH-3240784C8	3.2	26.1	40	78	77.5	0.5	4	8	
ZR111260ASH-3320624C3	3.3	10.5	20	62	61.4	0.6	4	3	
ZR111260ASH-3326664C5	3.3	17.1	26	66	65.4	0.6	4	5	
ZR111260ASH-3340784C8	3.3	27	40	78	77.5	0.6	4	8	
ZR111260ASH-3420624C3	3.4	10.8	20	62	61.4	0.6	4	3	
ZR111260ASH-3426664C5	3.4	17.6	26	66	65.4	0.6	4	5	
ZR111260ASH-3440784C8	3.4	27.5	40	78	77.4	0.6	4	8	
ZR111260ASH-34540784C8	3.45	27.4	40	78	77.4	0.6	4	8	
ZR111260ASH-3520624C3	3.5	11.1	20	62	61.4	0.6	4	3	
ZR111260ASH-3526664C5	3.5	18.1	26	66	65.4	0.6	4	5	
ZR111260ASH-3540784C8	3.5	27.3	40	78	77.4	0.6	4	8	
ZR111260ASH-35520624C3	3.55	11.2	20	62	61.4	0.6	4	3	
ZR111260ASH-35740784C8	3.57	27.1	40	78	77.4	0.6	4	8	
ZR111260ASH-3620624C3	3.6	11.4	20	62	61.4	0.6	4	3	
ZR111260ASH-3626664C5	3.6	18.5	26	66	65.4	0.6	4	5	
ZR111260ASH-3640784C8	3.6	27.1	40	78	77.4	0.6	4	8	
ZR111260ASH-3720624C3	3.7	11.7	20	62	61.4	0.6	4	3	
ZR111260ASH-3726664C5	3.7	19.1	26	66	65.4	0.6	4	5	
ZR111260ASH-3740784C8	3.7	27.9	40	78	77.4	0.6	4	8	

Supports Non-Standard Customization

Specialized High-Performance Solid Carbide Drill – Internal Coolant (02)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZR111260ASH-3824664C3	3.8	12.1	24	66	65.4	0.6	4	3	
ZR111260ASH-3834744C5	3.8	31.1	34	74	73.4	0.6	4	5	
ZR111260ASH-3849874C8	3.8	31.1	49	87	86.4	0.6	4	8	
ZR111260ASH-3924664C3	3.9	12.5	24	66	65.4	0.6	4	3	
ZR111260ASH-3934744C5	3.9	20.2	34	74	73.4	0.6	4	5	
ZR111260ASH-3949874C8	3.9	31.9	49	87	86.4	0.6	4	8	
ZR111260ASH-39749874C8	3.97	32.4	49	87	86.3	0.7	4	8	
ZR111260ASH-424664C3	4	12.7	24	66	65.3	0.7	4	3	
ZR111260ASH-434744C5	4	20.7	34	74	73.3	0.7	4	5	
ZR111260ASH-449874C8	4	32.7	49	87	86.3	0.7	4	8	
ZR111260ASH-4124666C3	4.1	13	24	66	65.3	0.7	6	3	
ZR111260ASH-4134746C5	4.1	21.2	34	74	73.3	0.7	6	5	
ZR111260ASH-4149876C8	4.1	33.5	49	87	86.3	0.7	6	8	
ZR111260ASH-4224666C3	4.2	13.3	24	66	65.3	0.7	6	3	
ZR111260ASH-4234746C5	4.2	21.7	34	74	73.3	0.7	6	5	
ZR111260ASH-4249876C8	4.2	34.3	49	87	86.3	0.7	6	8	
ZR111260ASH-4324666C3	4.3	13.7	24	66	65.2	0.7	6	3	
ZR111260ASH-4334746C5	4.3	22.3	34	74	73.2	0.7	6	5	
ZR111260ASH-4349876C8	4.3	35.2	49	87	86.3	0.7	6	8	
ZR111260ASH-4424666C3	4.4	14.1	24	66	65.3	0.7	6	3	
ZR111260ASH-4434746C5	4.4	22.8	34	74	73.3	0.7	6	5	
ZR111260ASH-4449876C8	4.4	36	49	87	86.3	0.7	6	8	
ZR111260ASH-4524666C3	4.5	14.3	24	66	65.3	0.7	6	3	
ZR111260ASH-4534746C5	4.5	23.3	34	74	73.3	0.7	6	5	
ZR111260ASH-4549876C8	4.5	36.8	49	87	86.3	0.7	6	8	
ZR111260ASH-45534746C5	4.55	23.5	34	74	73.2	0.8	6	5	
ZR111260ASH-4624666C3	4.6	14.6	24	66	65.2	0.8	6	3	
ZR111260ASH-4634746C5	4.6	23.8	34	74	73.2	0.8	6	5	
ZR111260ASH-4649876C8	4.6	36.8	49	87	86.2	0.8	6	8	
ZR111260ASH-4749876C8	4.7	36.6	49	87	86.2	0.8	6	8	
ZR111260ASH-47628666C3	4.76	15	28	66	65.2	0.8	6	3	
ZR111260ASH-47656946C8	4.76	36.8	56	94	93.2	0.8	6	8	
ZR111260ASH-4828666C3	4.8	15.2	28	66	65.2	0.8	6	3	
ZR111260ASH-4844826C5	4.8	24.8	44	82	81.2	0.8	6	5	
ZR111260ASH-4856946C8	4.8	39.2	56	94	93.2	0.8	6	8	
ZR111260ASH-4928666C3	4.9	15.5	28	66	65.2	0.8	6	3	
ZR111260ASH-4944826C5	4.9	25.3	44	82	81.2	0.8	6	5	
ZR111260ASH-4956946C8	4.9	40	56	94	93.2	0.8	6	8	
ZR111260ASH-528666C3	5	15.8	28	66	65.2	0.8	6	3	
ZR111260ASH-544826C5	5	25.8	44	82	81.2	0.8	6	5	
ZR111260ASH-556946C8	5	40.8	56	94	93.2	0.8	6	8	
ZR111260ASH-5128666C3	5.1	16.1	28	66	65.2	0.8	6	3	
ZR111260ASH-5144826C5	5.1	26.3	44	82	81.2	0.8	6	5	
ZR111260ASH-5156946C8	5.1	41.6	56	94	93.2	0.8	6	8	
ZR111260ASH-51644826C5	5.16	26.6	44	82	81.2	0.8	6	5	
ZR111260ASH-51656946C8	5.16	42.1	56	94	93.1	0.9	6	8	
ZR111260ASH-5228666C3	5.2	16.4	28	66	65.1	0.9	6	3	
ZR111260ASH-5244826C5	5.2	26.8	44	82	81.1	0.9	6	5	
ZR111260ASH-5256946C8	5.2	42.4	56	94	93.1	0.9	6	8	
ZR111260ASH-5328666C3	5.3	16.7	28	66	65.1	0.9	6	3	
ZR111260ASH-5344826C5	5.3	27.3	44	82	81.1	0.9	6	5	

Supports Non-Standard Customization

Specialized High-Performance Solid Carbide Drill – Internal Coolant (03)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZR111260ASH-5428666C3	5.4	17	28	66	65.1	0.9	6	3	
ZR111260ASH-5444826C5	5.4	27.8	44	82	81.1	0.9	6	5	
ZR111260ASH-5456946C8	5.4	44	56	94	93.1	0.9	6	8	
ZR111260ASH-5528666C3	5.5	17.4	28	66	65.1	0.9	6	3	
ZR111260ASH-5544826C5	5.5	28.4	44	82	81.1	0.9	6	5	
ZR111260ASH-5556946C8	5.5	44.9	56	94	93.1	0.9	6	8	
ZR111260ASH-55544826C5	5.55	28.7	44	82	81.1	0.9	6	5	
ZR111260ASH-55628666C3	5.56	17.5	28	66	65.1	0.9	6	3	
ZR111260ASH-55644826C5	5.56	28.7	44	82	81.1	0.9	6	5	
ZR111260ASH-55656946C8	5.56	45.3	56	94	93.1	0.9	6	8	
ZR111260ASH-5628666C3	5.6	17.7	28	66	65.1	0.9	6	3	
ZR111260ASH-5644826C5	5.6	28.9	44	82	81.1	0.9	6	5	
ZR111260ASH-5656946C8	5.6	45.7	56	94	93.1	0.9	6	8	
ZR111260ASH-5744826C5	5.7	29.4	44	82	81	1	6	5	
ZR111260ASH-5756946C8	5.7	46.5	56	94	93	1	6	8	
ZR111260ASH-5828666C3	5.8	17.6	28	66	65	1	6	3	
ZR111260ASH-5844826C5	5.8	29.9	44	82	81	1	6	5	
ZR111260ASH-5856946C8	5.8	47.3	56	94	93	1	6	8	
ZR111260ASH-5928666C3	5.9	18.2	28	66	65	1	6	3	
ZR111260ASH-5944826C5	5.9	30.4	44	82	81	1	6	5	
ZR111260ASH-5956946C8	5.9	47.4	56	94	93	1	6	8	
ZR111260ASH-59528666C3	5.95	18.2	28	66	65	1	6	3	
ZR111260ASH-59544826C5	5.95	30.7	44	82	81	1	6	5	
ZR111260ASH-628666C3	6	18.9	28	66	65	1	6	3	
ZR111260ASH-644826C5	6	30.9	44	82	81	1	6	5	
ZR111260ASH-656946C8	6	48	56	94	93	1	6	8	
ZR111260ASH-6134798C3	6.1	19.3	34	79	78	1	8	3	
ZR111260ASH-6153918C5	6.1	31.5	53	91	90	1	8	5	
ZR111260ASH-61671058C8	6.1	49.8	67	105	104	1	8	8	
ZR111260ASH-6234798C3	6.2	19.6	34	79	77.9	1.1	8	3	
ZR111260ASH-6253918C5	6.2	32	53	91	89.9	1.1	8	5	
ZR111260ASH-62671068C8	6.2	50.6	67	106	105	1.1	8	8	
ZR111260ASH-6334798C3	6.3	19.9	34	79	77.9	1.1	8	3	
ZR111260ASH-6353918C5	6.3	32.5	53	91	89.9	1.1	8	5	
ZR111260ASH-63671068C8	6.3	51.4	67	106	105	1.1	8	8	
ZR111260ASH-63534798C3	6.35	20.1	34	79	78	1.1	8	3	
ZR111260ASH-63553918C5	6.35	32.8	53	91	90	1.1	8	5	
ZR111260ASH-635671068C8	6.35	51.8	67	106	105	1.1	8	8	
ZR111260ASH-6434798C3	6.4	20.2	34	79	77.9	1.1	8	3	
ZR111260ASH-6453918C5	6.4	33	53	91	89.9	1.1	8	5	
ZR111260ASH-64671068C8	6.4	52.2	67	106	105	1.1	8	8	
ZR111260ASH-6534798C3	6.5	20.6	34	79	77.9	1.1	8	3	
ZR111260ASH-6553918C5	6.5	33.6	53	91	89.9	1.1	8	5	
ZR111260ASH-65671068C8	6.5	53.1	67	106	105	1.1	8	8	
ZR111260ASH-6634798C3	6.6	20.9	34	79	77.9	1.1	8	3	
ZR111260ASH-6653918C5	6.6	34.1	53	91	89.9	1.1	8	5	
ZR111260ASH-66671068C8	6.6	53.9	67	106	105	1.1	8	8	
ZR111260ASH-6734798C3	6.7	21.2	34	79	77.9	1.1	8	3	
ZR111260ASH-6753918C5	6.7	34.6	53	91	89.9	1.1	8	5	
ZR111260ASH-67671068C8	6.7	54.7	67	106	105	1.1	8	8	
ZR111260ASH-67534798C3	6.75	21.3	34	79	77.9	1.1	8	3	

Supports Non-Standard Customization

Specialized High-Performance Solid Carbide Drill – Internal Coolant (04)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZR111260ASH-67553918C5	6.75	34.8	53	91	89.9	1.1	8	5	
ZR111260ASH-675671068C8	6.75	55.1	67	106	105	1.1	8	8	
ZR111260ASH-6834798C3	6.8	21.5	34	79	77.9	1.1	8	3	
ZR111260ASH-6853918C5	6.8	35.1	53	91	89.9	1.1	8	5	
ZR111260ASH-68671068C8	6.8	55.5	67	106	105	1.1	8	8	
ZR111260ASH-6934798C3	6.9	21.8	34	79	77.8	1.2	8	3	
ZR111260ASH-6953918C5	6.9	35.6	53	91	89.8	1.2	8	5	
ZR111260ASH-69671068C8	6.9	56.3	67	106	105	1.2	8	8	
ZR111260ASH-734798C3	7	22.1	34	79	77.8	1.2	8	3	
ZR111260ASH-753918C5	7	36.1	53	91	89.8	1.2	8	5	
ZR111260ASH-7671068C8	7	57.1	67	106	105	1.2	8	8	
ZR111260ASH-7141798C3	7.1	22.4	41	79	77.8	1.2	8	3	
ZR111260ASH-7153918C5	7.1	36.6	53	91	89.8	1.2	8	5	
ZR111260ASH-71441798C3	7.14	22.6	41	79	77.8	1.2	8	3	
ZR111260ASH-71453918C5	7.14	36.9	53	91	89.8	1.2	8	5	
ZR111260ASH-714721108C8	7.14	58.3	72	110	109	1.2	8	8	
ZR111260ASH-7241798C3	7.2	22.8	41	79	77.8	1.2	8	3	
ZR111260ASH-7253918C5	7.2	37.2	53	91	89.8	1.2	8	5	
ZR111260ASH-7353918C5	7.3	37.7	53	91	89.8	1.2	8	5	
ZR111260ASH-73721108C8	7.3	59.6	72	110	109	1.2	8	8	
ZR111260ASH-7441798C3	7.4	23.4	41	79	77.7	1.3	8	3	
ZR111260ASH-7453918C5	7.4	38.2	53	91	89.7	1.3	8	5	
ZR111260ASH-74721108C8	7.4	60.4	72	110	109	1.3	8	8	
ZR111260ASH-7541798C3	7.5	23.7	41	79	77.7	1.3	8	3	
ZR111260ASH-7553918C5	7.5	38.7	53	91	89.7	1.3	8	5	
ZR111260ASH-75721108C8	7.5	61.2	72	110	109	1.3	8	8	
ZR111260ASH-75453918C5	7.54	38.9	53	91	89.7	1.3	8	5	
ZR111260ASH-7641798C3	7.6	24	41	79	77.7	1.3	8	3	
ZR111260ASH-76721108C8	7.6	62	72	110	109	1.3	8	8	
ZR111260ASH-7741798C3	7.7	24.3	41	79	77.7	1.3	8	3	
ZR111260ASH-7753918C5	7.7	39.7	53	91	89.7	1.3	8	5	
ZR111260ASH-77721108C8	7.7	61.6	72	110	109	1.3	8	8	
ZR111260ASH-7841798C3	7.8	24.7	41	79	77.7	1.3	8	3	
ZR111260ASH-7853918C5	7.8	40.3	53	91	89.7	1.3	8	5	
ZR111260ASH-78721108C8	7.8	63.7	72	110	109	1.3	8	8	
ZR111260ASH-7941798C3	7.9	25	41	79	77.7	1.3	8	3	
ZR111260ASH-7953918C5	7.9	40.8	53	91	89.7	1.3	8	5	
ZR111260ASH-79441798C3	7.94	25.1	41	79	77.6	1.4	8	3	
ZR111260ASH-79453918C5	7.94	41	53	91	89.6	1.4	8	5	
ZR111260ASH-794721108C8	7.94	63.5	72	110	109	1.4	8	8	
ZR111260ASH-841798C3	8	25.3	41	79	77.6	1.4	8	3	
ZR111260ASH-853918C5	8	41.3	53	91	89.6	1.4	8	5	
ZR111260ASH-8721108C7	8	56	72	110	109	1.4	8	7	
ZR111260ASH-81478910C3	8.1	25.6	47	89	87.6	1.4	10	3	
ZR111260ASH-816110310C5	8.1	41.8	61	103	102	1.4	10	5	
ZR111260ASH-818012210C8	8.1	66.1	80	122	121	1.4	10	8	
ZR111260ASH-8156110310C5	8.15	42.1	61	103	102	1.4	10	5	
ZR111260ASH-82478910C3	8.2	25.9	47	89	87.6	1.4	10	3	
ZR111260ASH-826110310C5	8.2	42.3	61	103	102	1.4	10	5	
ZR111260ASH-828012210C8	8.2	66.9	80	122	121	1.4	10	8	
ZR111260ASH-83478910C3	8.3	26.3	47	89	87.6	1.4	10	3	

Supports Non-Standard Customization

R Series

Specialized High-Performance Solid Carbide Drill – Internal Coolant (05)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZR111260ASH-836110310C5	8.3	42.9	61	103	102	1.4	10	5	
ZR111260ASH-838012210C8	8.3	67.8	80	122	121	1.4	10	8	
ZR111260ASH-8336110310C5	8.33	43	61	103	102	1.4	10	5	
ZR111260ASH-84478910C3	8.4	26.6	47	89	87.6	1.4	10	3	
ZR111260ASH-846110310C5	8.4	43.4	61	103	102	1.4	10	5	
ZR111260ASH-848012210C8	8.4	68.6	80	122	121	1.4	10	8	
ZR111260ASH-85478910C3	8.5	26.9	47	89	87.6	1.4	10	3	
ZR111260ASH-856110310C5	8.5	43.9	61	103	102	1.4	10	5	
ZR111260ASH-858012210C8	8.5	69.4	80	122	121	1.4	10	8	
ZR111260ASH-86478910C3	8.6	27.2	47	89	87.5	1.5	10	3	
ZR111260ASH-866110310C5	8.6	44.4	61	103	102	1.5	10	5	
ZR111260ASH-868012210C8	8.6	70.2	80	122	121	1.5	10	8	
ZR111260ASH-87478910C3	8.7	27.5	47	89	87.5	1.5	10	3	
ZR111260ASH-876110310C5	8.7	44.9	61	103	102	1.5	10	5	
ZR111260ASH-878012210C8	8.7	71	80	122	121	1.5	10	8	
ZR111260ASH-873478910C3	8.73	27.6	47	89	87.5	1.5	10	3	
ZR111260ASH-8736110310C5	8.73	45.1	61	103	102	1.5	10	5	
ZR111260ASH-8738012210C8	8.73	71.3	80	122	121	1.5	10	8	
ZR111260ASH-88478910C3	8.8	27.8	47	89	87.5	1.5	10	3	
ZR111260ASH-886110310C5	8.8	45.4	61	103	102	1.5	10	5	
ZR111260ASH-888012210C8	8.8	71.8	80	122	121	1.5	10	8	
ZR111260ASH-896110310C5	8.9	45.9	61	103	102	1.5	10	5	
ZR111260ASH-9478910C3	9	28.5	47	89	87.5	1.5	10	3	
ZR111260ASH-96110310C5	9	46.5	61	103	102	1.5	10	5	
ZR111260ASH-98012210C8	9	72	80	122	121	1.5	10	8	
ZR111260ASH-91478910C3	9.1	28.8	47	89	87.5	1.5	10	3	
ZR111260ASH-916110310C5	9.1	47	61	103	102	1.5	10	5	
ZR111260ASH-918012210C7	9.1	63.7	80	122	121	1.5	10	7	
ZR111260ASH-92478910C3	9.2	29.1	47	89	87.4	1.6	10	3	
ZR111260ASH-926110310C5	9.2	47.5	61	103	101	1.6	10	5	
ZR111260ASH-928012210C7	9.2	64.4	80	122	120	1.6	10	7	
ZR111260ASH-93478910C3	9.3	29.4	47	89	87.4	1.6	10	3	
ZR111260ASH-936110310C5	9.3	48	61	103	101	1.6	10	5	
ZR111260ASH-938012210C7	9.3	65.1	80	122	120	1.6	10	7	
ZR111260ASH-94478910C3	9.4	29.7	47	89	87.4	1.6	10	3	
ZR111260ASH-946110310C5	9.4	48.5	61	103	101	1.6	10	5	
ZR111260ASH-948012210C7	9.4	65.8	80	122	120	1.6	10	7	
ZR111260ASH-95478910C3	9.5	30	47	89	87.4	1.6	10	3	
ZR111260ASH-956110310C5	9.5	48.7	61	103	101	1.6	10	5	
ZR111260ASH-958012210C7	9.5	66.5	80	122	120	1.6	10	7	
ZR111260ASH-952478910C3	9.52	30.1	47	89	87.4	1.6	10	3	
ZR111260ASH-9526110310C5	9.52	48.6	61	103	101	1.6	10	5	
ZR111260ASH-9528012210C7	9.52	66.6	80	122	120	1.6	10	7	
ZR111260ASH-9556110310C5	9.55	48.6	61	103	101	1.6	10	5	
ZR111260ASH-96478910C3	9.6	30.3	47	89	87.4	1.6	10	3	
ZR111260ASH-966110310C5	9.6	48.5	61	103	101	1.6	10	5	
ZR111260ASH-968012210C7	9.6	67.2	80	122	120	1.6	10	7	
ZR111260ASH-97478910C3	9.7	30.7	47	89	87.3	1.7	10	3	
ZR111260ASH-978012210C7	9.7	67.9	80	122	120	1.7	10	7	
ZR111260ASH-98478910C3	9.8	31	47	89	87.3	1.7	10	3	
ZR111260ASH-986110310C5	9.8	48.3	61	103	101	1.7	10	5	

Supports Non-Standard Customization

Specialized High-Performance Solid Carbide Drill – Internal Coolant (06)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZR111260ASH-988012210C7	9.8	68.6	80	122	120	1.7	10	7	
ZR111260ASH-99478910C3	9.9	31.3	47	89	87.3	1.7	10	3	
ZR111260ASH-996110310C5	9.9	48.1	61	103	101	1.7	10	5	
ZR111260ASH-998012210C7	9.9	69.3	80	122	120	1.7	10	7	
ZR111260ASH-9928012210C7	9.92	69.4	80	122	120	1.7	10	7	
ZR111260ASH-10478910C3	10	31.6	47	89	87.3	1.7	10	3	
ZR111260ASH-106110310C5	10	50	61	103	101	1.7	10	5	
ZR111260ASH-108012210C7	10	70	80	122	120	1.7	10	7	
ZR111260ASH-1015510212C3	10.1	31.9	55	102	100	1.7	12	3	
ZR111260ASH-1017111812C5	10.1	52.1	71	118	116	1.7	12	5	
ZR111260ASH-1019614112C8	10.1	82.4	96	141	139	1.7	12	8	
ZR111260ASH-1025510212C3	10.2	32.3	55	102	100	1.7	12	3	
ZR111260ASH-1027111812C5	10.2	52.7	71	118	116	1.7	12	5	
ZR111260ASH-1029614112C8	10.2	83.3	96	141	139	1.7	12	8	
ZR111260ASH-1035510212C3	10.3	32.6	55	102	100	1.8	12	3	
ZR111260ASH-1037111812C5	10.3	53.2	71	118	116	1.8	12	5	
ZR111260ASH-1039614112C8	10.3	82.4	96	141	139	1.8	12	8	
ZR111260ASH-10325510212C3	10.32	32.6	55	102	100	1.8	12	3	
ZR111260ASH-10327111812C5	10.32	53.3	71	118	116	1.8	12	5	
ZR111260ASH-1045510212C3	10.4	32.9	55	102	100	1.8	12	3	
ZR111260ASH-1047111812C5	10.4	53.7	71	118	116	1.8	12	5	
ZR111260ASH-1049614112C8	10.4	84.9	96	141	139	1.8	12	8	
ZR111260ASH-1055510212C3	10.5	33.2	55	102	100	1.8	12	3	
ZR111260ASH-1057111812C5	10.5	54.2	71	118	116	1.8	12	5	
ZR111260ASH-1059614112C8	10.5	84	96	141	139	1.8	12	8	
ZR111260ASH-1067111812C5	10.6	54.7	71	118	116	1.8	12	5	
ZR111260ASH-1075510212C3	10.7	33.8	55	102	100	1.8	12	3	
ZR111260ASH-1077111812C5	10.7	55.2	71	118	116	1.8	12	5	
ZR111260ASH-10717111812C5	10.71	55.3	71	118	116	1.8	12	5	
ZR111260ASH-1085510212C3	10.8	34.2	55	102	100	1.8	12	3	
ZR111260ASH-1087111812C5	10.8	55.8	71	118	116	1.8	12	5	
ZR111260ASH-1089614112C8	10.8	86.4	96	141	139	1.8	12	8	
ZR111260ASH-1097111812C5	10.9	56.3	71	118	116	1.9	12	5	
ZR111260ASH-115510212C3	11	34.8	55	102	100	1.9	12	3	
ZR111260ASH-117111812C5	11	56.8	71	118	116	1.9	12	5	
ZR111260ASH-119614112C7	11	77	96	141	139	1.9	12	7	
ZR111260ASH-1115510212C3	11.1	35.1	55	102	100	1.9	12	3	
ZR111260ASH-1117111812C5	11.1	57.3	71	118	116	1.9	12	5	
ZR111260ASH-1119614112C7	11.1	78	96	141	139	1.9	12	7	
ZR111260ASH-11115510212C3	11.11	35.1	55	102	100	1.9	12	3	
ZR111260ASH-11119614112C7	11.11	77.8	96	141	139	1.9	12	7	
ZR111260ASH-1125510212C3	11.2	35.4	55	102	100	1.9	12	3	
ZR111260ASH-1127111812C5	11.2	57.6	71	118	116	1.9	12	5	
ZR111260ASH-1129614112C7	11.2	78.4	96	141	139	1.9	12	7	
ZR111260ASH-1135510212C3	11.3	35.7	55	102	100	1.9	12	3	
ZR111260ASH-1137111812C5	11.3	57.4	71	118	116	1.9	12	5	
ZR111260ASH-1139614112C7	11.3	79.1	96	141	139	1.9	12	7	
ZR111260ASH-1145510212C3	11.4	36.1	55	102	100	2	12	3	
ZR111260ASH-1155510212C3	11.5	36.4	55	102	100	2	12	3	
ZR111260ASH-1157111812C5	11.5	57.2	71	118	116	2	12	5	
ZR111260ASH-1159614112C7	11.5	80.5	96	141	139	2	12	7	

Supports Non-Standard Customization

R Series

Specialized High-Performance Solid Carbide Drill – Internal Coolant (07)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZR111260ASH-1165510212C3	11.6	36.7	55	102	100	2	12	3	
ZR111260ASH-1175510212C3	11.7	37	55	102	100	2	12	3	
ZR111260ASH-1177111812C5	11.7	57	71	118	116	2	12	5	
ZR111260ASH-1185510212C3	11.8	37.3	55	102	100	2	12	3	
ZR111260ASH-1187111812C5	11.8	56.8	71	118	116	2	12	5	
ZR111260ASH-1189614112C7	11.8	82.6	96	141	139	2	12	7	
ZR111260ASH-1195510212C3	11.9	37.6	55	102	100	2	12	3	
ZR111260ASH-1199614112C7	11.9	83.3	96	141	139	2	12	7	
ZR111260ASH-125510212C3	12	38	55	102	99.9	2.1	12	3	
ZR111260ASH-127111812C5	12	60	71	118	116	2.1	12	5	
ZR111260ASH-129614112C7	12	84	96	141	139	2.1	12	7	
ZR111260ASH-1216010714C3	12.1	38.3	60	107	105	2.1	14	3	
ZR111260ASH-1217712414C5	12.1	62.5	77	124	122	2.1	14	5	
ZR111260ASH-12110815514C8	12.1	96.8	108	155	153	2.1	14	8	
ZR111260ASH-1226010714C3	12.2	38.6	60	107	105	2.1	14	3	
ZR111260ASH-1227712414C5	12.2	62.4	77	124	122	2.1	14	5	
ZR111260ASH-12210815514C8	12.2	97.6	108	155	153	2.1	14	8	
ZR111260ASH-1236010714C3	12.3	38.9	60	107	105	2.1	14	3	
ZR111260ASH-1237712414C5	12.3	62.2	77	124	122	2.1	14	5	
ZR111260ASH-12310815514C8	12.3	98.4	108	155	153	2.1	14	8	
ZR111260ASH-1256010714C3	12.5	39.5	60	107	105	2.1	14	3	
ZR111260ASH-1257712414C5	12.5	63	77	124	122	2.1	14	5	
ZR111260ASH-12510815514C7	12.5	88	108	155	153	2.1	14	7	
ZR111260ASH-1266010714C3	12.6	39.9	60	107	105	2.2	14	3	
ZR111260ASH-1276010714C3	12.7	40.2	60	107	105	2.2	14	3	
ZR111260ASH-1277712414C5	12.7	64	77	124	122	2.2	14	5	
ZR111260ASH-12710815514C7	12.7	88.9	108	155	153	2.2	14	7	
ZR111260ASH-1286010714C3	12.8	40.5	60	107	105	2.2	14	3	
ZR111260ASH-1287712414C5	12.8	64.6	77	124	122	2.2	14	5	
ZR111260ASH-12810815514C7	12.8	89.6	108	155	153	2.2	14	7	
ZR111260ASH-136010714C3	13	41.1	60	107	105	2.2	14	3	
ZR111260ASH-137712414C5	13	61.4	77	124	122	2.2	14	5	
ZR111260ASH-1310815514C7	13	91	108	155	153	2.2	14	7	
ZR111260ASH-1316010714C3	13.1	41.4	60	107	105	2.3	14	3	
ZR111260ASH-1317712414C5	13.1	61.3	77	124	122	2.3	14	5	
ZR111260ASH-13110815514C7	13.1	91.7	108	155	153	2.3	14	7	
ZR111260ASH-13257712414C5	13.25	61.1	77	124	122	2.3	14	5	
ZR111260ASH-1356010714C3	13.5	42.7	60	107	105	2.3	14	3	
ZR111260ASH-1357712414C5	13.5	60.8	77	124	122	2.3	14	5	
ZR111260ASH-13510815514C7	13.5	94.5	108	155	153	2.3	14	7	
ZR111260ASH-13757712414C5	13.75	60.5	77	124	122	2.4	14	5	
ZR111260ASH-1386010714C3	13.8	43.4	60	107	105	2.4	14	3	
ZR111260ASH-1387712414C5	13.8	60.4	77	124	122	2.4	14	5	
ZR111260ASH-13810815514C7	13.8	96.6	108	155	153	2.4	14	7	
ZR111260ASH-13897712414C5	13.89	60.3	77	124	122	2.4	14	5	
ZR111260ASH-146010714C3	14	44.3	60	107	105	2.4	14	3	
ZR111260ASH-147712414C5	14	63	77	124	122	2.4	14	5	
ZR111260ASH-1410815514C7	14	98	108	155	153	2.4	14	7	
ZR111260ASH-14256511516C3	14.25	45	65	115	113	2.5	16	3	
ZR111260ASH-14258313316C5	14.25	68.8	83	133	131	2.5	16	5	
ZR111260ASH-14296511516C3	14.29	45.2	65	115	113	2.5	16	3	

Supports Non-Standard Customization

R Series

Specialized High-Performance Solid Carbide Drill – Internal Coolant (08)

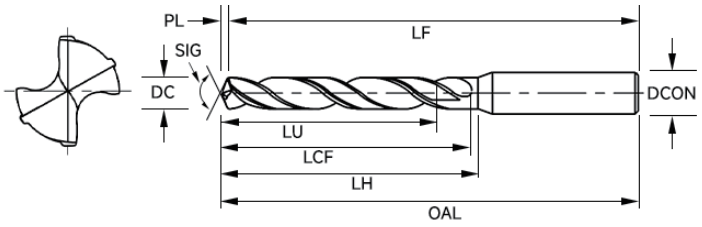
Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZR111260ASH-14298313316C5	14.29	68.7	83	133	131	2.5	16	5	
ZR111260ASH-1456511516C3	14.5	45.8	65	115	113	2.5	16	3	
ZR111260ASH-1458313316C5	14.5	68.5	83	133	131	2.5	16	5	
ZR111260ASH-14696511516C3	14.69	46.4	65	115	113	2.5	16	3	
ZR111260ASH-1488313316C5	14.8	68.2	83	133	130	2.6	16	5	
ZR111260ASH-156511516C3	15	47.4	65	115	112	2.6	16	3	
ZR111260ASH-158313316C5	15	68	83	133	130	2.6	16	5	
ZR111260ASH-1556511516C3	15.5	49	65	115	112	2.7	16	3	
ZR111260ASH-1558313316C5	15.5	67.5	83	133	130	2.7	16	5	
ZR111260ASH-1586511516C3	15.8	49.2	65	115	112	2.8	16	3	
ZR111260ASH-1588313316C5	15.8	67.2	83	133	130	2.8	16	5	
ZR111260ASH-15876511516C3	15.87	49.1	65	115	112	2.8	16	3	
ZR111260ASH-166511516C3	16	49	65	115	112	2.8	16	3	
ZR111260ASH-168313316C5	16	67	83	133	130	2.8	16	5	
ZR111260ASH-1612117116C7	16	111	121	171	168	2.8	16	7	

Supports Non-Standard Customization

R Series

Specialized High-Performance Solid Carbide Drill – External Coolant

▶ For specialized machinery, molds, automotive, and energy industries. Suitable for ISO groups P, M. Tolerance IT8-9, D3-D20mm, depth up to 8D.



WC DP Coat

Shank Tolerance	H6
SIG Angle	140°
Max Reconditioning	5

● = Best ○ = Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●						●						

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZR111260ASH-320624N3	3	9.5	20	62	61.5	0.5	4	3	
ZR111260ASH-326664N5	3	15.5	26	66	65.5	0.5	4	5	
ZR111260ASH-3120624N3	3.1	9.8	20	62	61.5	0.5	4	3	
ZR111260ASH-3126664N5	3.1	16	26	66	65.5	0.5	4	5	
ZR111260ASH-31720624N3	3.17	10	20	62	61.5	0.5	4	3	
ZR111260ASH-31726664N5	3.17	16.4	26	66	65.5	0.5	4	5	
ZR111260ASH-3220624N3	3.2	10.1	20	62	61.5	0.5	4	3	
ZR111260ASH-3226664N5	3.2	16.5	26	66	65.5	0.5	4	5	
ZR111260ASH-3320624N3	3.3	10.5	20	62	61.4	0.6	4	3	
ZR111260ASH-3326664N5	3.3	17.1	26	66	65.4	0.6	4	5	
ZR111260ASH-3420624N3	3.4	10.8	20	62	61.4	0.6	4	3	
ZR111260ASH-3426664N5	3.4	17.6	26	66	65.4	0.6	4	5	
ZR111260ASH-3520624N3	3.5	11.1	20	62	61.4	0.6	4	3	
ZR111260ASH-3526664N5	3.5	18.1	26	66	65.4	0.6	4	5	
ZR111260ASH-35520624N3	3.55	11.2	20	62	61.4	0.6	4	3	
ZR111260ASH-3620624N3	3.6	11.4	20	62	61.4	0.6	4	3	
ZR111260ASH-3626664N5	3.6	18.5	26	66	65.4	0.6	4	5	
ZR111260ASH-3720624N3	3.7	11.7	20	62	61.4	0.6	4	3	
ZR111260ASH-3726664N5	3.7	19.1	26	66	65.4	0.6	4	5	
ZR111260ASH-3824664N3	3.8	12.1	24	66	65.4	0.6	4	3	
ZR111260ASH-3924664N3	3.9	12.5	24	66	65.4	0.6	4	3	
ZR111260ASH-3934744N5	3.9	20.2	34	74	73.4	0.6	4	5	
ZR111260ASH-424664N3	4	12.7	24	66	65.3	0.7	4	3	
ZR111260ASH-434744N5	4	20.7	34	74	73.3	0.7	4	5	
ZR111260ASH-4124666N3	4.1	13	24	66	65.3	0.7	6	3	
ZR111260ASH-4134746N5	4.1	21.2	34	74	73.3	0.7	6	5	
ZR111260ASH-4224666N3	4.2	13.3	24	66	65.3	0.7	6	3	
ZR111260ASH-4234746N5	4.2	21.7	34	74	73.3	0.7	6	5	
ZR111260ASH-4324666N3	4.3	13.7	24	66	65.2	0.7	6	3	
ZR111260ASH-4334746N5	4.3	22.3	34	74	73.2	0.7	6	5	

Supports Non-Standard Customization

Specialized High-Performance Solid Carbide Drill – External Coolant (02)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZR111260ASH-4424666N3	4.4	14.1	24	66	65.3	0.7	6	3	
ZR111260ASH-4434746N5	4.4	22.8	34	74	73.3	0.7	6	5	
ZR111260ASH-4524666N3	4.5	14.3	24	66	65.3	0.7	6	3	
ZR111260ASH-4534746N5	4.5	23.3	34	74	73.3	0.7	6	5	
ZR111260ASH-45534746N5	4.55	23.5	34	74	73.2	0.8	6	5	
ZR111260ASH-4624666N3	4.6	14.6	24	66	65.2	0.8	6	3	
ZR111260ASH-4634746N5	4.6	23.8	34	74	73.2	0.8	6	5	
ZR111260ASH-47628666N3	4.76	15	28	66	65.2	0.8	6	3	
ZR111260ASH-4828666N3	4.8	15.2	28	66	65.2	0.8	6	3	
ZR111260ASH-4844826N5	4.8	24.8	44	82	81.2	0.8	6	5	
ZR111260ASH-4928666N3	4.9	15.5	28	66	65.2	0.8	6	3	
ZR111260ASH-4944826N5	4.9	25.3	44	82	81.2	0.8	6	5	
ZR111260ASH-528666N3	5	15.8	28	66	65.2	0.8	6	3	
ZR111260ASH-544826N5	5	25.8	44	82	81.2	0.8	6	5	
ZR111260ASH-5128666N3	5.1	16.1	28	66	65.2	0.8	6	3	
ZR111260ASH-5144826N5	5.1	26.3	44	82	81.2	0.8	6	5	
ZR111260ASH-51644826N5	5.16	26.6	44	82	81.2	0.8	6	5	
ZR111260ASH-5228666N3	5.2	16.4	28	66	65.1	0.9	6	3	
ZR111260ASH-5244826N5	5.2	26.8	44	82	81.1	0.9	6	5	
ZR111260ASH-5328666N3	5.3	16.7	28	66	65.1	0.9	6	3	
ZR111260ASH-5344826N5	5.3	27.3	44	82	81.1	0.9	6	5	
ZR111260ASH-5428666N3	5.4	17	28	66	65.1	0.9	6	3	
ZR111260ASH-5444826N5	5.4	27.8	44	82	81.1	0.9	6	5	
ZR111260ASH-5528666N3	5.5	17.4	28	66	65.1	0.9	6	3	
ZR111260ASH-5544826N5	5.5	28.4	44	82	81.1	0.9	6	5	
ZR111260ASH-55544826N5	5.55	28.7	44	82	81.1	0.9	6	5	
ZR111260ASH-55628666N3	5.56	17.5	28	66	65.1	0.9	6	3	
ZR111260ASH-55644826N5	5.56	28.7	44	82	81.1	0.9	6	5	
ZR111260ASH-5628666N3	5.6	17.7	28	66	65.1	0.9	6	3	
ZR111260ASH-5644826N5	5.6	28.9	44	82	81.1	0.9	6	5	
ZR111260ASH-5744826N5	5.7	29.4	44	82	81	1	6	5	
ZR111260ASH-5828666N3	5.8	17.6	28	66	65	1	6	3	
ZR111260ASH-5844826N5	5.8	29.9	44	82	81	1	6	5	
ZR111260ASH-5928666N3	5.9	18.2	28	66	65	1	6	3	
ZR111260ASH-5944826N5	5.9	30.4	44	82	81		6	5	
ZR111260ASH-59528666N3	5.95	18.2	28	66	65	1	6	3	
ZR111260ASH-59544826N5	5.95	30.7	44	82	81	1	6	5	
ZR111260ASH-628666N3	6	18.9	28	66	65		6	3	
ZR111260ASH-644826N5	6	30.9	44	82	81	1	6	5	
ZR111260ASH-6134798N3	6.1	19.3	34	79	78	1	8	3	
ZR111260ASH-6153918N5	6.1	31.5	53	91	90	1	8	5	
ZR111260ASH-6234798N3	6.2	19.6	34	79	77.9	1.1	8	3	
ZR111260ASH-6253918N5	6.2	32	53	91	89.9	1.1	8	5	
ZR111260ASH-6334798N3	6.3	19.9	34	79	77.9	1.1	8	3	
ZR111260ASH-6353918N5	6.3	32.5	53	91	89.9	1.1	8	5	
ZR111260ASH-63534798N3	6.35	20.1	34	79	78	1.1	8	3	
ZR111260ASH-63553918N5	6.35	32.8	53	91	90	1.1	8	5	
ZR111260ASH-6434798N3	6.4	20.2	34	79	77.9	1.1	8	3	
ZR111260ASH-6453918N5	6.4	33	53	91	89.9	1.1	8	5	
ZR111260ASH-6534798N3	6.5	20.6	34	79	77.9	1.1	8	3	
ZR111260ASH-6553918N5	6.5	33.6	53	91	89.9	1.1	8	5	

Supports Non-Standard Customization

Specialized High-Performance Solid Carbide Drill – External Coolant (03)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZR111260ASH-6634798N3	6.6	20.9	34	79	77.9	1.1	8	3	
ZR111260ASH-6653918N5	6.6	34.1	53	91	89.9	1.1	8	5	
ZR111260ASH-6734798N3	6.7	21.2	34	79	77.9	1.1	8	3	
ZR111260ASH-6753918N5	6.7	34.6	53	91	89.9	1.1	8	5	
ZR111260ASH-67534798N3	6.75	21.3	34	79	77.9	1.1	8	3	
ZR111260ASH-67553918N5	6.75	34.8	53	91	89.9	1.1	8	5	
ZR111260ASH-6834798N3	6.8	21.5	34	79	77.9	1.1	8	3	
ZR111260ASH-6853918N5	6.8	35.1	53	91	89.9	1.1	8	5	
ZR111260ASH-6934798N3	6.9	21.8	34	79	77.8	1.2	8	3	
ZR111260ASH-6953918N5	6.9	35.6	53	91	89.8	1.2	8	5	
ZR111260ASH-734798N3	7	22.1	34	79	77.8	1.2	8	3	
ZR111260ASH-753918N5	7	36.1	53	91	89.8	1.2	8	5	
ZR111260ASH-7141798N3	7.1	22.4	41	79	77.8	1.2	8	3	
ZR111260ASH-7153918N5	7.1	36.6	53	91	89.8	1.2	8	5	
ZR111260ASH-71441798N3	7.14	22.6	41	79	77.8	1.2	8	3	
ZR111260ASH-71453918N5	7.14	36.9	53	91	89.8	1.2	8	5	
ZR111260ASH-7241798N3	7.2	22.8	41	79	77.8	1.2	8	3	
ZR111260ASH-7253918N5	7.2	37.2	53	91	89.8	1.2	8	5	
ZR111260ASH-7353918N5	7.3	37.7	53	91	89.8	1.2	8	5	
ZR111260ASH-7441798N3	7.4	23.4	41	79	77.7	1.3	8	3	
ZR111260ASH-7453918N5	7.4	38.2	53	91	89.7	1.3	8	5	
ZR111260ASH-7541798N3	7.5	23.7	41	79	77.7	1.3	8	3	
ZR111260ASH-7553918N5	7.5	38.7	53	91	89.7	1.3	8	5	
ZR111260ASH-75453918N5	7.54	38.9	53	91	89.7	1.3	8	5	
ZR111260ASH-7641798N3	7.6	24	41	79	77.7	1.3	8	3	
ZR111260ASH-7741798N3	7.7	24.3	41	79	77.7	1.3	8	3	
ZR111260ASH-7753918N5	7.7	39.7	53	91	89.7	1.3	8	5	
ZR111260ASH-7841798N3	7.8	24.7	41	79	77.7	1.3	8	3	
ZR111260ASH-7853918N5	7.8	40.3	53	91	89.7	1.3	8	5	
ZR111260ASH-7941798N3	7.9	25	41	79	77.7	1.3	8	3	
ZR111260ASH-7953918N5	7.9	40.8	53	91	89.7	1.3	8	5	
ZR111260ASH-79441798N3	7.94	25.1	41	79	77.6	1.4	8	3	
ZR111260ASH-79453918N5	7.94	41	53	91	89.6	1.4	8	5	
ZR111260ASH-841798N3	8	25.3	41	79	77.6	1.4	8	3	
ZR111260ASH-853918N5	8	41.3	53	91	89.6	1.4	8	5	
ZR111260ASH-81478910N3	8.1	25.6	47	89	87.6	1.4	10	3	
ZR111260ASH-816110310N5	8.1	41.8	61	103	102	1.4	10	5	
ZR111260ASH-8156110310N5	8.15	42.1	61	103	102	1.4	10	5	
ZR111260ASH-82478910N3	8.2	25.9	47	89	87.6	1.4	10	3	
ZR111260ASH-826110310N5	8.2	42.3	61	103	102	1.4	10	5	
ZR111260ASH-83478910N3	8.3	26.3	47	89	87.6	1.4	10	3	
ZR111260ASH-836110310N5	8.3	42.9	61	103	102	1.4	10	5	
ZR111260ASH-8336110310N5	8.33	43	61	103	102	1.4	10	5	
ZR111260ASH-84478910N3	8.4	26.6	47	89	87.6	1.4	10	3	
ZR111260ASH-846110310N5	8.4	43.4	61	103	102	1.4	10	5	
ZR111260ASH-85478910N3	8.5	26.9	47	89	87.6	1.4	10	3	
ZR111260ASH-856110310N5	8.5	43.9	61	103	102	1.4	10	5	
ZR111260ASH-86478910N3	8.6	27.2	47	89	87.5	1.5	10	3	
ZR111260ASH-866110310N5	8.6	44.4	61	103	102	1.5	10	5	
ZR111260ASH-87478910N3	8.7	27.5	47	89	87.5	1.5	10	3	
ZR111260ASH-876110310N5	8.7	44.9	61	103	102	1.5	10	5	

Supports Non-Standard Customization

Specialized High-Performance Solid Carbide Drill – External Coolant (04)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZR111260ASH-873478910N3	8.73	27.6	47	89	87.5	1.5	10	3	
ZR111260ASH-8736110310N5	8.73	45.1	61	103	102	1.5	10	5	
ZR111260ASH-88478910N3	8.8	27.8	47	89	87.5	1.5	10	3	
ZR111260ASH-886110310N5	8.8	45.4	61	103	102	1.5	10	5	
ZR111260ASH-896110310N5	8.9	45.9	61	103	102	1.5	10	5	
ZR111260ASH-9478910N3	9	28.5	47	89	87.5	1.5	10	3	
ZR111260ASH-96110310N5	9	46.5	61	103	102	1.5	10	5	
ZR111260ASH-91478910N3	9.1	28.8	47	89	87.5	1.5	10	3	
ZR111260ASH-916110310N5	9.1	47	61	103	102	1.5	10	5	
ZR111260ASH-92478910N3	9.2	29.1	47	89	87.4	1.6	10	3	
ZR111260ASH-926110310N5	9.2	47.5	61	103	101	1.6	10	5	
ZR111260ASH-93478910N3	9.3	29.4	47	89	87.4	1.6	10	3	
ZR111260ASH-936110310N5	9.3	48	61	103	101	1.6	10	5	
ZR111260ASH-94478910N3	9.4	29.7	47	89	87.4	1.6	10	3	
ZR111260ASH-946110310N5	9.4	48.5	61	103	101	1.6	10	5	
ZR111260ASH-95478910N3	9.5	30	47	89	87.4	1.6	10	3	
ZR111260ASH-956110310N5	9.5	48.7	61	103	101	1.6	10	5	
ZR111260ASH-952478910N3	9.52	30.1	47	89	87.4	1.6	10	3	
ZR111260ASH-9526110310N5	9.52	48.6	61	103	101	1.6	10	5	
ZR111260ASH-9556110310N5	9.55	48.6	61	103	101	1.6	10	5	
ZR111260ASH-96478910N3	9.6	30.3	47	89	87.4	1.6	10	3	
ZR111260ASH-966110310N5	9.6	48.5	61	103	101	1.6	10	5	
ZR111260ASH-97478910N3	9.7	30.7	47	89	87.3	1.7	10	3	
ZR111260ASH-98478910N3	9.8	31	47	89	87.3	1.7	10	3	
ZR111260ASH-986110310N5	9.8	48.3	61	103	101	1.7	10	5	
ZR111260ASH-99478910N3	9.9	31.3	47	89	87.3	1.7	10	3	
ZR111260ASH-996110310N5	9.9	48.1	61	103	101	1.7	10	5	
ZR111260ASH-10478910N3	10	31.6	47	89	87.3	1.7	10	3	
ZR111260ASH-106110310N5	10	50	61	103	101	1.7	10	5	
ZR111260ASH-1015510212N3	10.1	31.9	55	102	100	1.7	12	3	
ZR111260ASH-1017111812N5	10.1	52.1	71	118	116	1.7	12	5	
ZR111260ASH-1025510212N3	10.2	32.3	55	102	100	1.7	12	3	
ZR111260ASH-1027111812N5	10.2	52.7	71	118	116	1.7	12	5	
ZR111260ASH-1035510212N3	10.3	32.6	55	102	100	1.8	12	3	
ZR111260ASH-1037111812N5	10.3	53.2	71	118	116	1.8	12	5	
ZR111260ASH-1035510212N3	10.3	32.6	55	102	100	1.8	12	3	
ZR111260ASH-1037111812N5	10.3	53.3	71	118	116	1.8	12	5	
ZR111260ASH-1045510212N3	10.4	32.9	55	102	100	1.8	12	3	
ZR111260ASH-1047111812N5	10.4	53.7	71	118	116	1.8	12	5	
ZR111260ASH-1055510212N3	10.5	33.2	55	102	100	1.8	12	3	
ZR111260ASH-1057111812N5	10.5	54.2	71	118	116	1.8	12	5	
ZR111260ASH-1067111812N5	10.6	54.7	71	118	116	1.8	12	5	
ZR111260ASH-1075510212N3	10.7	33.8	55	102	100	1.8	12	3	
ZR111260ASH-1077111812N5	10.7	55.2	71	118	116	1.8	12	5	
ZR111260ASH-1077111812N5	10.7	55.3	71	118	116	1.8	12	5	
ZR111260ASH-1085510212N3	10.8	34.2	55	102	100	1.8	12	3	
ZR111260ASH-1087111812N5	10.8	55.8	71	118	116	1.8	12	5	
ZR111260ASH-1097111812N5	10.9	56.3	71	118	116	1.9	12	5	
ZR111260ASH-115510212N3	11	34.8	55	102	100	1.9	12	3	
ZR111260ASH-117111812N5	11	56.8	71	118	116	1.9	12	5	
ZR111260ASH-1115510212N3	11.1	35.1	55	102	100	1.9	12	3	

Supports Non-Standard Customization

R Series

Specialized High-Performance Solid Carbide Drill – External Coolant (05)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZR111260ASH-1117111812N5	11.1	57.3	71	118	116	1.9	12	5	
ZR111260ASH-1115510212N3	11.1	35.1	55	102	100	1.9	12	3	
ZR111260ASH-1125510212N3	11.2	35.4	55	102	100	1.9	12	3	
ZR111260ASH-1127111812N5	11.2	57.6	71	118	116	1.9	12	5	
ZR111260ASH-1135510212N3	11.3	35.7	55	102	100	1.9	12	3	
ZR111260ASH-1137111812N5	11.3	57.4	71	118	116	1.9	12	5	
ZR111260ASH-1145510212N3	11.4	36.1	55	102	100	2	12	3	
ZR111260ASH-1155510212N3	11.5	36.4	55	102	100	2	12	3	
ZR111260ASH-1157111812N5	11.5	57.2	71	118	116	2	12	5	
ZR111260ASH-1165510212N3	11.6	36.7	55	102	100	2	12	3	
ZR111260ASH-1175510212N3	11.7	37	55	102	100	2	12	3	
ZR111260ASH-1177111812N5	11.7	57	71	118	116	2	12	5	
ZR111260ASH-1187111812N5	11.8	56.8	71	118	116	2	12	5	
ZR111260ASH-1195510212N3	11.9	37.6	55	102	100	2	12	3	
ZR111260ASH-125510212N3	12	38	55	102	99.9	2.1	12	3	
ZR111260ASH-127111812N5	12	60	71	118	116	2.1	12	5	
ZR111260ASH-1216010714N3	12.1	38.3	60	107	105	2.1	14	3	
ZR111260ASH-1217712414N5	12.1	62.5	77	124	122	2.1	14	5	
ZR111260ASH-1226010714N3	12.2	38.6	60	107	105	2.1	14	3	
ZR111261ASH-1227712414N5	12.2	62.4	77	124	122	2.1	14	5	
ZR111262ASH-1236010714N3	12.3	38.9	60	107	105	2.1	14	3	
ZR111263ASH-1237712414N5	12.3	62.2	77	124	122	2.1	14	5	
ZR111264ASH-1256010714N3	12.5	39.5	60	107	105	2.1	14	3	
ZR111265ASH-1257712414N5	12.5	63	77	124	122	2.1	14	5	
ZR111266ASH-1266010714N3	12.6	39.9	60	107	105	2.2	14	3	
ZR111267ASH-1276010714N3	12.7	40.2	60	107	105	2.2	14	3	
ZR111268ASH-1277712414N5	12.7	64	77	124	122	2.2	14	5	
ZR111269ASH-1286010714N3	12.8	40.5	60	107	105	2.2	14	3	
ZR111270ASH-1287712414N5	12.8	64.6	77	124	122	2.2	14	5	
ZR111271ASH-136010714N3	13	41.1	60	107	105	2.2	14	3	
ZR111272ASH-137712414N5	13	61.4	77	124	122	2.2	14	5	
ZR111273ASH-1316010714N3	13.1	41.4	60	107	105	2.3	14	3	
ZR111274ASH-1317712414N5	13.1	61.3	77	124	122	2.3	14	5	
ZR111275ASH-1337712414N5	13.3	61.1	77	124	122	2.3	14	5	
ZR111276ASH-1356010714N3	13.5	42.7	60	107	105	2.3	14	3	
ZR111277ASH-1357712414N5	13.5	60.8	77	124	122	2.3	14	5	
ZR111278ASH-1387712414N5	13.8	60.5	77	124	122	2.4	14	5	
ZR111279ASH-1386010714N3	13.8	43.4	60	107	105	2.4	14	3	
ZR111280ASH-1387712414N5	13.8	60.4	77	124	122	2.4	14	5	
ZR111281ASH-1397712414N5	13.9	60.3	77	124	122	2.4	14	5	
ZR111282ASH-146010714N3	14	44.3	60	107	105	2.4	14	3	
ZR111283ASH-147712414N5	14	63	77	124	122	2.4	14	5	
ZR111284ASH-1436511516N3	14.3	45	65	115	113	2.5	16	3	
ZR111285ASH-1438313316N5	14.3	68.8	83	133	131	2.5	16	5	
ZR111286ASH-1436511516N3	14.3	45.2	65	115	113	2.5	16	3	
ZR111287ASH-1438313316N5	14.3	68.7	83	133	131	2.5	16	5	
ZR111288ASH-1456511516N3	14.5	45.8	65	115	113	2.5	16	3	
ZR111289ASH-1458313316N5	14.5	68.5	83	133	131	2.5	16	5	
ZR111290ASH-1476511516N3	14.7	46.4	65	115	113	2.5	16	3	
ZR111291ASH-1488313316N5	14.8	68.2	83	133	130	2.6	16	5	
ZR111292ASH-156511516N3	15	47.4	65	115	112	2.6	16	3	

Supports Non-Standard Customization

R Series

Specialized High-Performance Solid Carbide Drill – External Coolant (06)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZR111293ASH-158313316N5	15	68	83	133	130	2.6	16	5	
ZR111294ASH-1556511516N3	15.5	49	65	115	112	2.7	16	3	
ZR111295ASH-1558313316N5	15.5	67.5	83	133	130	2.7	16	5	
ZR111296ASH-1586511516N3	15.8	49.2	65	115	112	2.8	16	3	
ZR111297ASH-1588313316N5	15.8	67.2	83	133	130	2.8	16	5	
ZR111298ASH-1596511516N3	15.9	49.1	65	115	112	2.8	16	3	
ZR111299ASH-166511516N3	16	49	65	115	112	2.8	16	3	
ZR111300ASH-168313316N5	16	67	83	133	130	2.8	16	5	

Supports Non-Standard Customization

Internal Coolant Design

ISO	Material Code	Workpiece Material	Brinell Hardness	Cutting Speed (VC) m/min		
				Minimum	Initial Value	Maximum
P	Non-Alloy Steel					
	P1.1.Z.AN	C=0.05-0.1%	125	90	130	170
	P1.1.Z.AN	C=0.1-0.25%	125	90	130	170
	P1.2.Z.AN	C=0.25-0.55%	150	90	120	170
	P1.3.Z.AN	C=0.55-0.80%	170	90	120	170
	High-Carbon Steel					
	P1.3.Z.AN	Carbon Tool Steel	210	100	110	150
	Low-Alloy Steel					
	P2.1.Z.AN	Non-Hardened	175	80	110	160
	P2.5.Z.HT	Tempered	275	50	70	90
	P2.5.Z.HT	Tempered	350	40	50	70
	High-Alloy Steel					
	P3.0.Z.AN	Annealed	200	40	80	90
	P3.0.Z.HT	Hardened Tool Steel	300	40	50	70
	Cast Steel					
	P1.5.C.UT	Non-Alloy	150	80	110	140
	P2.6.C.UT	Low-Alloy (≤ 5% Alloy Elements)	200	80	110	120

Drill Diameter (mm)	Feed per Revolution (mm/r) *		
	Minimum	Initial Value	Maximum
3	0.06	0.1	0.13
4	0.07	0.11	0.14
6	0.11	0.18	0.24
8	0.16	0.21	0.25
10	0.19	0.23	0.27
12	0.22	0.25	0.29
16	0.23	0.28	0.33
20	0.26	0.3	0.34

- Cutting parameters are valid only for internal cooling.
- Recommended minimum internal cooling pressure: 20 bar.
- For harder materials, reduce speed and feed proportionally.
- If using external cooling, adjust the speed to ensure good chip formation and smooth chip evacuation.
- If using external cooling, reduce feed per revolution as needed to ensure smooth chip evacuation.

Supports Non-Standard Customization

Application Guidelines for Material Processing (02)

Internal Coolant Design

ISO	Material Code	Workpiece Material	Brinell Hardness	Cutting Speed (VC) m/min		
				Minimum	Initial Value	Maximum
M	Austenitic Stainless Steel					
	M1.0.C.UT	Cast + Unprocessed	165	48	60	72
	M1.0.Z.AQ	Annealed / Quenched	200	48	60	72
	M1.0.Z.PH	Precipitation Hardened	350	44	55	66
	M1.1.Z.AQ	Improved Machinability	165	48	60	72
	M1.2.Z.AQ	Free-Cutting Steel	200	48	60	72
	M1.3.C.AQ	Titanium-Stabilized + Cast	200	48	60	72
	M1.3.Z.AQ	Titanium-Stabilized	200	48	60	72
	M1.4.Z.AQ	High Strength	250	64	80	96
	Premium Austenitic Stainless Steel (Ni > 20%)					
	M2.0.C.AQ	Cast + Annealed/Quenched	165	30	40	50
	M2.0.Z.AQ	Annealed / Quenched	200	30	40	50
	Duplex (Austenitic/Ferritic) Stainless Steel					
	M3.1. Z. AQ >60%	Ferritic (N < 0.10%)	250	40	50	70
	M3.2. Z. AQ <60%	Ferritic (N < 0.10%)	250	40	50	70

Drill Diameter (mm)	Feed per Revolution (mm/r) *		
	Minimum	Initial Value	Maximum
3	0.05	0.07	0.1
4	0.08	0.1	0.12
6	0.09	0.11	0.13
8	0.1	0.12	0.14
10	0.13	0.14	0.17
12	0.13	0.16	0.19
16	0.14	0.2	0.23
20	0.17	0.22	0.25

- Cutting parameters are valid only for internal cooling.
- Recommended minimum internal cooling pressure: 20 bar.
- For harder stainless steels (e.g., precipitation hardened), reduce parameters by 30%.
- If using external cooling, adjust speed to ensure good chip formation and smooth chip evacuation.
- If using external cooling, reduce feed per revolution as needed to ensure smooth chip evacuation.

Supports Non-Standard Customization

2025
New Product

Deep Hole Drill A

Overview and Applications

- Covers many material groups
  Conventional drilling, cross holes & inclined surface
- Hole tolerance IT8-9
- Diameter range: 3.0–20.0 mm
- Drill length range 12-40xD

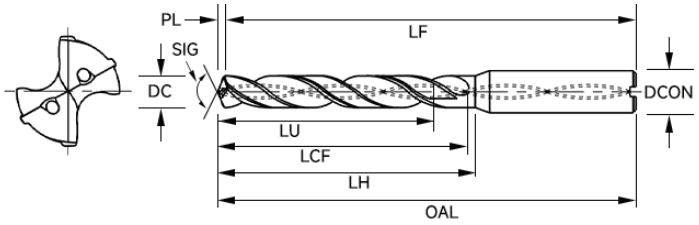
Features and Technical Advantages

- Optimized drill center design helps to reduce axial cutting force
- Provide internal coolant solutions
- Curve cutting edge generates low cutting force
- Secure tool life through high reconditioning quality
- Good chips evacuation thanks to chips flute optimization design
- Advanced ER treatment which reduce the risk of cutting edge breakage

A Series

Deep Hole Drill for Steel and Cast Iron – Internal Coolant

▶ Suitable for machining steel and cast iron, for conventional drilling, intersecting holes, and angled surfaces. Hole tolerance H8-H9, diameter range D3–20mm, drilling depth 12–40D.



P K WC DH Coat

Shank Tolerance	H6
SIG Angle	135°
Workpiece Material	ISO-P、K

● = Best ○ = Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
●	●	●					●							

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZA81255ASH-347896C10	3	31.5	47	89	88.5	0.5	6	10	
ZA81255ASH-352946C12	3	36.5	52	94	93.5	0.5	6	12	
ZA81255ASH-3147896C10	3.1	32.7	47	89	88.5	0.5	6	10	
ZA81255ASH-3152946C12	3.1	37.7	52	94	93.5	0.5	6	12	
ZA81255ASH-3247896C10	3.2	33.9	47	89	88.5	0.5	6	10	
ZA81255ASH-3252946C12	3.2	38.9	52	94	93.5	0.5	6	12	
ZA81255ASH-3347896C10	3.3	35.1	47	89	88.5	0.5	6	10	
ZA81255ASH-3352946C12	3.3	40.1	52	94	93.5	0.5	6	12	
ZA81255ASH-3447896C10	3.4	36.4	47	89	88.4	0.6	6	10	
ZA81255ASH-3452946C12	3.4	41.4	52	94	93.4	0.6	6	12	
ZA81255ASH-3547896C10	3.5	37.6	47	89	88.4	0.6	6	10	
ZA81255ASH-3552946C12	3.5	42.6	52	94	93.4	0.6	6	12	
ZA81255ASH-35631056C15	3.5	53.1	63	105	104.4	0.6	6	15	
ZA81255ASH-3747896C10	3.7	38.9	47	89	88.4	0.6	6	10	
ZA81255ASH-3752946C11	3.7	43.9	52	94	93.4	0.6	6	11	
ZA81255ASH-38601026C10	3.8	39.2	60	102	101.4	0.6	6	10	
ZA81255ASH-38671096C12	3.8	46.2	67	109	108.4	0.6	6	12	
ZA81255ASH-38681106C15	3.8	57.6	68	110	109.4	0.6	6	15	
ZA81255ASH-4601026C10	4	41.7	60	102	101.3	0.7	6	10	
ZA81255ASH-4671096C12	4	48.7	67	109	108.3	0.7	6	12	
ZA81255ASH-4721146C15	4	60.7	72	114	113.3	0.7	6	15	
ZA81255ASH-4921346C20	4	80.7	92	134	133.3	0.7	6	20	
ZA81255ASH-41321746C30	4	120.7	132	174	173.3	0.7	6	30	
ZA81255ASH-41601026C10	4.1	42.9	60	102	101.3	0.7	6	10	
ZA81255ASH-41671096C12	4.1	49.9	67	109	108.3	0.7	6	12	
ZA81255ASH-42601026C10	4.2	44.1	60	102	101.3	0.7	6	10	
ZA81255ASH-42671096C12	4.2	51.1	67	109	108.3	0.7	6	12	
ZA81255ASH-42761186C15	4.2	63.7	76	118	117.3	0.7	6	15	
ZA81255ASH-42971396C20	4.2	84.7	97	139	138.3	0.7	6	20	
ZA81255ASH-43601026C10	4.3	45.3	60	102	101.3	0.7	6	10	

Supports Non-Standard Customization

A Series

Deep Hole Drill for Steel and Cast Iron – Internal Coolant (02)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZA81255ASH-43671096C12	4.3	52.3	67	109	108.3	0.7	6	12	
ZA81255ASH-45601026C10	4.5	47.7	60	102	101.3	0.7	6	10	
ZA81255ASH-45671096C12	4.5	54.7	67	109	108.3	0.7	6	12	
ZA81255ASH-45811236C15	4.5	68.2	81	123	122.3	0.7	6	15	
ZA81255ASH-451041466C20	4.5	90.7	104	146	145.3	0.7	6	20	
ZA81255ASH-451491916C30	4.5	135.7	149	191	190.3	0.7	6	30	
ZA81255ASH-451672096C40	4.5	153.7	167	209	208.3	0.7	6	40	
ZA81255ASH-46601026C10	4.6	49	60	102	101.2	0.8	6	10	
ZA81255ASH-46671096C12	4.6	56	67	109	108.2	0.8	6	12	
ZA81255ASH-48601026C10	4.8	51.4	60	102	101.2	0.8	6	10	
ZA81255ASH-48861286C12	4.8	58.4	86	128	127.2	0.8	6	12	
ZA81255ASH-48861286C15	4.8	72.8	86	128	127.2	0.8	6	15	
ZA81255ASH-481101526C20	4.8	96.8	110	152	151.2	0.8	6	20	
ZA81255ASH-5681106C10	5	50.8	68	110	109.2	0.8	6	10	
ZA81255ASH-5861286C12	5	60.8	86	128	127.2	0.8	6	12	
ZA81255ASH-5901326C15	5	75.8	90	132	131.2	0.8	6	15	
ZA81255ASH-51151576C20	5	100.8	115	157	156.2	0.8	6	20	
ZA81255ASH-51652076C30	5	150.8	165	207	206.2	0.8	6	30	
ZA81255ASH-52152576C40	5	200.8	215	257	256.2	0.8	6	40	
ZA81255ASH-51751176C10	5.1	52	75	117	116.2	0.8	6	10	
ZA81255ASH-51861286C12	5.1	62	86	128	127.2	0.8	6	12	
ZA81255ASH-52751176C10	5.2	53.3	75	117	116.1	0.9	6	10	
ZA81255ASH-52861286C12	5.2	63.3	86	128	127.1	0.9	6	12	
ZA81255ASH-55751176C10	5.5	56.9	75	117	116.1	0.9	6	10	
ZA81255ASH-55861286C12	5.5	66.9	86	128	127.1	0.9	6	12	
ZA81255ASH-55991416C15	5.5	83.4	99	141	140.1	0.9	6	15	
ZA81255ASH-551271696C20	5.5	110.9	127	169	168.1	0.9	6	20	
ZA81255ASH-551822246C30	5.5	165.9	182	224	223.1	0.9	6	30	
ZA81255ASH-552372796C40	5.5	220.9	237	279	278.1	0.9	6	40	
ZA81255ASH-58751176C10	5.8	59.6	75	117	116	1	6	10	
ZA81255ASH-58861286C12	5.8	70.6	86	128	127	1	6	12	
ZA81255ASH-581041466C15	5.8	88	104	146	145	1	6	15	
ZA81255ASH-581331756C20	5.8	117	133	175	174	1	6	20	
ZA81255ASH-6751176C10	6	61	75	117	116	1	6	10	
ZA81255ASH-6861286C12	6	73	86	128	127	1	6	12	
ZA81255ASH-61081506C15	6	91	108	150	149	1	6	15	
ZA81255ASH-61381806C20	6	121	138	180	179	1	6	20	
ZA81255ASH-61982406C30	6	181	198	240	239	1	6	30	
ZA81255ASH-62583006C40	6	241	258	300	299	1	6	40	
ZA81255ASH-61861288C10	6.1	62	86	128	127	1	8	10	
ZA81255ASH-611161588C12	6.1	74.2	116	158	157	1	8	12	
ZA81255ASH-62861288C10	6.2	63	86	128	127	1	8	10	
ZA81255ASH-621161588C12	6.2	75.4	116	158	157	1	8	12	
ZA81255ASH-63861288C10	6.3	64	86	128	127	1	8	10	
ZA81255ASH-631161588C12	6.3	76.6	116	158	157	1	8	12	
ZA81255ASH-65861288C10	6.5	66.1	86	128	126.9	1.1	8	10	
ZA81255ASH-651161588C12	6.5	79.1	116	158	156.9	1.1	8	12	
ZA81255ASH-651161588C15	6.5	98.6	116	158	156.9	1.1	8	15	
ZA81255ASH-651501928C20	6.5	131.1	150	192	190.9	1.1	8	20	
ZA81255ASH-652152578C30	6.5	196.1	215	257	255.9	1.1	8	30	
ZA81255ASH-652803228C40	6.5	261.1	280	322	320.9	1.1	8	40	

Supports Non-Standard Customization

A Series

Deep Hole Drill for Steel and Cast Iron – Internal Coolant (03)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZA81255ASH-66861288C10	6.6	67.1	86	128	126.9	1.1	8	10	
ZA81255ASH-661161588C12	6.6	80.3	116	158	156.9	1.1	8	12	
ZA81255ASH-67861288C10	6.7	68.1	86	128	126.9	1.1	8	10	
ZA81255ASH-671161588C12	6.7	81.5	116	158	156.9	1.1	8	12	
ZA81255ASH-68861288C10	6.8	69.1	86	128	126.9	1.1	8	10	
ZA81255ASH-681161588C12	6.8	82.7	116	158	156.9	1.1	8	12	
ZA81255ASH-681221648C15	6.8	103.1	122	164	162.9	1.1	8	15	
ZA81255ASH-681561988C20	6.8	137.1	156	198	196.9	1.1	8	20	
ZA81255ASH-69861288C10	6.9	70.1	86	128	126.9	1.1	8	10	
ZA81255ASH-691161588C12	6.9	83.9	116	158	156.9	1.1	8	12	
ZA81255ASH-7861288C10	7	71.1	86	128	126.9	1.1	8	10	
ZA81255ASH-71161588C12	7	85.1	116	158	156.9	1.1	8	12	
ZA81255ASH-71261688C15	7	106.1	126	168	166.9	1.1	8	15	
ZA81255ASH-71612038C20	7	141.1	161	203	201.9	1.1	8	20	
ZA81255ASH-72312738C30	7	211.1	231	273	271.9	1.1	8	30	
ZA81255ASH-73013438C40	7	281.1	301	343	341.9	1.1	8	40	
ZA81255ASH-741011438C10	7.4	75.2	101	143	141.8	1.2	8	10	
ZA81255ASH-741161588C12	7.4	90	116	158	156.8	1.2	8	12	
ZA81255ASH-751011438C10	7.5	76.2	101	143	141.8	1.2	8	10	
ZA81255ASH-751161588C12	7.5	91.2	116	158	156.8	1.2	8	12	
ZA81255ASH-751351778C15	7.5	113.7	135	177	175.8	1.2	8	15	
ZA81255ASH-751732158C20	7.5	151.2	173	215	213.8	1.2	8	20	
ZA81255ASH-752482908C30	7.5	226.2	248	290	288.8	1.2	8	30	
ZA81255ASH-753233658C40	7.5	301.2	323	365	363.8	1.2	8	40	
ZA81255ASH-761011438C10	7.6	77.2	101	143	141.8	1.2	8	10	
ZA81255ASH-761161588C12	7.6	92.4	116	158	156.8	1.2	8	12	
ZA81255ASH-771011438C10	7.7	78.3	101	143	141.7	1.3	8	10	
ZA81255ASH-771161588C12	7.7	93.7	116	158	156.7	1.3	8	12	
ZA81255ASH-781011438C10	7.8	79.3	101	143	141.7	1.3	8	10	
ZA81255ASH-781161588C12	7.8	94.9	116	158	156.7	1.3	8	12	
ZA81255ASH-81011438C10	8	81.3	101	143	141.7	1.3	8	10	
ZA81255ASH-81161588C12	8	97.3	116	158	156.7	1.3	8	12	
ZA81255ASH-81441868C15	8	121.3	144	186	184.7	1.3	8	15	
ZA81255ASH-81842268C20	8	161.3	184	226	224.7	1.3	8	20	
ZA81255ASH-82643068C30	8	241.3	264	306	304.7	1.3	8	30	
ZA81255ASH-83443868C40	8	321.3	344	386	384.7	1.3	8	40	
ZA81255ASH-8110615210C10	8.1	82.3	106	152	150.7	1.3	10	10	
ZA81255ASH-8114619210C12	8.1	98.5	146	192	190.7	1.3	10	12	
ZA81255ASH-8210615210C10	8.2	83.3	106	152	150.7	1.3	10	10	
ZA81255ASH-8214619210C12	8.2	99.7	146	192	190.7	1.3	10	12	
ZA81255ASH-8410615210C10	8.4	85.4	106	152	150.6	1.4	10	10	
ZA81255ASH-8414619210C12	8.4	102.2	146	192	190.6	1.4	10	12	
ZA81255ASH-8510615210C10	8.5	86.4	106	152	150.6	1.4	10	10	
ZA81255ASH-8514619210C12	8.5	103.4	146	192	190.6	1.4	10	12	
ZA81255ASH-8515319910C15	8.5	128.9	153	199	197.6	1.4	10	15	
ZA81255ASH-8519624210C20	8.5	171.4	196	242	240.6	1.4	10	20	
ZA81255ASH-8528132710C30	8.5	256.4	281	327	325.6	1.4	10	30	
ZA81255ASH-8610615210C10	8.6	87.4	106	152	150.6	1.4	10	10	
ZA81255ASH-8614619210C12	8.6	104.6	146	192	190.6	1.4	10	12	
ZA81255ASH-8710615210C10	8.7	88.4	106	152	150.6	1.4	10	10	
ZA81255ASH-8714619210C12	8.7	105.8	146	192	190.6	1.4	10	12	

Supports Non-Standard Customization

A Series

Deep Hole Drill for Steel and Cast Iron – Internal Coolant (04)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZA81255ASH-8810615210C10	8.8	89.4	106	152	150.6	1.4	10	10	
ZA81255ASH-8814619210C12	8.8	107	146	192	190.6	1.4	10	12	
ZA81255ASH-912817410C10	9	91.5	128	174	172.5	1.5	10	10	
ZA81255ASH-914619210C12	9	109.5	146	192	190.5	1.5	10	12	
ZA81255ASH-916220810C15	9	136.5	162	208	206.5	1.5	10	15	
ZA81255ASH-920725310C20	9	181.5	207	253	251.5	1.5	10	20	
ZA81255ASH-929734310C30	9	271.5	297	343	341.5	1.5	10	30	
ZA81255ASH-9312817410C10	9.3	94.5	128	174	172.5	1.5	10	10	
ZA81255ASH-9314619210C12	9.3	113.1	146	192	190.5	1.5	10	12	
ZA81255ASH-9512817410C10	9.5	96.6	128	174	172.4	1.6	10	10	
ZA81255ASH-9514619210C12	9.5	115.6	146	192	190.4	1.6	10	12	
ZA81255ASH-9517121710C15	9.5	144.1	171	217	215.4	1.6	10	15	
ZA81255ASH-9521926510C20	9.5	191.6	219	265	263.4	1.6	10	20	
ZA81255ASH-9531436010C30	9.5	286.6	314	360	358.4	1.6	10	30	
ZA81255ASH-9812817410C10	9.8	99.6	128	174	172.4	1.6	10	10	
ZA81255ASH-9814619210C12	9.8	119.2	146	192	190.4	1.6	10	12	
ZA81255ASH-1012817410C10	10	101.6	128	174	172.4	1.6	10	10	
ZA81255ASH-1014619210C12	10	121.6	146	192	190.4	1.6	10	12	
ZA81255ASH-1018022610C15	10	151.6	180	226	224.4	1.6	10	15	
ZA81255ASH-1023027610C20	10	201.6	230	276	274.4	1.6	10	20	
ZA81255ASH-1033037610C30	10	301.6	330	376	374.4	1.6	10	30	
ZA81255ASH-10215620812C10	10.2	103.7	156	208	206.3	1.7	12	10	
ZA81255ASH-10217622812C12	10.2	124.1	176	228	226.3	1.7	12	12	
ZA81255ASH-10315620812C10	10.3	104.7	156	208	206.3	1.7	12	10	
ZA81255ASH-10317622812C12	10.3	125.3	176	228	226.3	1.7	12	12	
ZA81255ASH-10415620812C10	10.4	105.7	156	208	206.3	1.7	12	10	
ZA81255ASH-10417622812C12	10.4	126.5	176	228	226.3	1.7	12	12	
ZA81255ASH-10515620812C10	10.5	106.7	156	208	206.3	1.7	12	10	
ZA81255ASH-10517622812C12	10.5	127.7	176	228	226.3	1.7	12	12	
ZA81255ASH-10518824012C15	10.5	159.2	188	240	238.3	1.7	12	15	
ZA81255ASH-10524129312C20	10.5	211.7	241	293	291.3	1.7	12	20	
ZA81255ASH-1115620812C10	11	111.8	156	208	206.2	1.8	12	10	
ZA81255ASH-1117622812C12	11	133.8	176	228	226.2	1.8	12	12	
ZA81255ASH-1119724912C15	11	166.8	197	249	247.2	1.8	12	15	
ZA81255ASH-1125230412C20	11	221.8	252	304	302.2	1.8	12	20	
ZA81255ASH-11215620812C10	11.2	113.8	156	208	206.2	1.8	12	10	
ZA81255ASH-11217622812C12	11.2	136.2	176	228	226.2	1.8	12	12	
ZA81255ASH-11515620812C10	11.5	116.9	156	208	206.1	1.9	12	10	
ZA81255ASH-11517622812C12	11.5	139.9	176	228	226.1	1.9	12	12	
ZA81255ASH-11520625812C15	11.5	174.4	206	258	256.1	1.9	12	15	
ZA81255ASH-11526431612C20	11.5	231.9	264	316	314.1	1.9	12	20	
ZA81255ASH-11815620812C10	11.8	119.9	156	208	206.1	1.9	12	10	
ZA81255ASH-11817622812C12	11.8	143.5	176	228	226.1	1.9	12	12	
ZA81255ASH-1215620812C10	12	122	156	208	206	2	12	10	
ZA81255ASH-1217622812C12	12	146	176	228	226	2	12	12	
ZA81255ASH-1221526712C15	12	182	215	267	265	2	12	15	
ZA81255ASH-1227532712C20	12	242	275	327	325	2	12	20	
ZA81255ASH-12318223414C10	12.3	125.1	182	234	232	2	14	10	
ZA81255ASH-12320625814C12	12.3	149.7	206	258	256	2	14	12	
ZA81255ASH-12518223414C10	12.5	127	182	234	232	2	14	10	
ZA81255ASH-12520625814C12	12.5	152	206	258	256	2	14	12	

Supports Non-Standard Customization

A Series

Deep Hole Drill for Steel and Cast Iron – Internal Coolant (05)

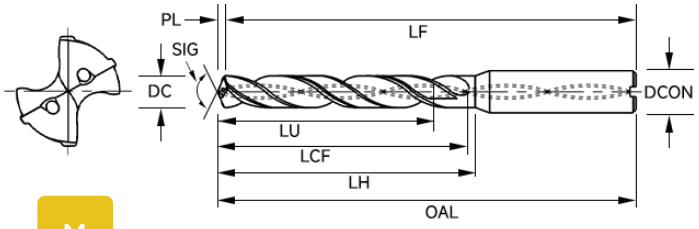
Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZA81255ASH-12718223414C10	12.7	129.1	182	234	231.9	2.1	14	10	
ZA81255ASH-12720625814C12	12.7	154.5	206	258	255.9	2.1	14	12	
ZA81255ASH-1318223414C10	13	132.1	182	234	231.9	2.1	14	10	
ZA81255ASH-1320625814C12	13	158.1	206	258	255.9	2.1	14	12	
ZA81255ASH-13118223414C10	13.1	133.1	182	234	231.9	2.1	14	10	
ZA81255ASH-13120625814C12	13.1	159.3	206	258	255.9	2.1	14	12	
ZA81255ASH-13518223414C10	13.5	137.2	182	234	231.8	2.2	14	10	
ZA81255ASH-13520625814C12	13.5	164.2	206	258	255.8	2.2	14	12	
ZA81255ASH-1418223414C10	14	142.3	182	234	231.7	2.3	14	10	
ZA81255ASH-1420625814C12	14	170.3	206	258	255.7	2.3	14	12	
ZA81255ASH-14520726216C10	14.5	147.4	207	262	259.6	2.4	16	10	
ZA81255ASH-14523629116C12	14.5	176.4	236	291	288.6	2.4	16	12	
ZA81255ASH-1520726216C10	15	152.5	207	262	259.5	2.5	16	10	
ZA81255ASH-1523629116C12	15	182.5	236	291	288.5	2.5	16	12	
ZA81255ASH-15520726216C10	15.5	157.5	207	262	259.5	2.5	16	10	
ZA81255ASH-15523629116C12	15.5	188.5	236	291	288.5	2.5	16	12	
ZA81255ASH-1620726216C10	16	162.6	207	262	259.4	2.6	16	10	
ZA81255ASH-1623629116C12	16	194.6	236	291	288.4	2.6	16	12	

Supports Non-Standard Customization

A Series

Deep Hole Drill for Stainless Steel – Internal Coolant

▶ Suitable for machining stainless steel, for conventional drilling, intersecting holes, and angled surfaces. Hole tolerance H8-H9, diameter range D3–20mm, drilling depth 12–40D.



M

WC DP Coat

Shank Tolerance	H6
SIG Angle	135°
Workpiece Material	ISO-M

● = 最佳 Best ○ = 适合 Good

P			H				K	M	N				S	
Carbon Steel	Alloy Steel	Prehardened Steel	Quenched Steel				Cast Iron	Stainlee Steels	Aluminium Alloys	Copper Alloys	Plastic Cement	Acrylic	Superalloy	Titanium Alloy
			~45HRC	~55HRC	~60HRC	~65HRC								
								●						

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZA111245ASH-347896C10	3	31.5	47	89	88.5	0.5	6	10	
ZA111245ASH-352946C12	3	36.5	52	94	93.5	0.5	6	12	
ZA111245ASH-3147896C10	3.1	32.7	47	89	88.5	0.5	6	10	
ZA111245ASH-3152946C12	3.1	37.7	52	94	93.5	0.5	6	12	
ZA111245ASH-3247896C10	3.2	33.9	47	89	88.5	0.5	6	10	
ZA111245ASH-3252946C12	3.2	38.9	52	94	93.5	0.5	6	12	
ZA111245ASH-3347896C10	3.3	35.1	47	89	88.5	0.5	6	10	
ZA111245ASH-3352946C12	3.3	40.1	52	94	93.5	0.5	6	12	
ZA111245ASH-3447896C10	3.4	36.4	47	89	88.4	0.6	6	10	
ZA111245ASH-3452946C12	3.4	41.4	52	94	93.4	0.6	6	12	
ZA111245ASH-3547896C10	3.5	37.6	47	89	88.4	0.6	6	10	
ZA111245ASH-3552946C12	3.5	42.6	52	94	93.4	0.6	6	12	
ZA111245ASH-35631056C15	3.5	53.1	63	105	104.4	0.6	6	15	
ZA111245ASH-3747896C10	3.7	38.9	47	89	88.4	0.6	6	10	
ZA111245ASH-3752946C11	3.7	43.9	52	94	93.4	0.6	6	11	
ZA111245ASH-38601026C10	3.8	39.2	60	102	101.4	0.6	6	10	
ZA111245ASH-38671096C12	3.8	46.2	67	109	108.4	0.6	6	12	
ZA111245ASH-38681106C15	3.8	57.6	68	110	109.4	0.6	6	15	
ZA111245ASH-4601026C10	4	41.7	60	102	101.3	0.7	6	10	
ZA111245ASH-4671096C12	4	48.7	67	109	108.3	0.7	6	12	
ZA111245ASH-4721146C15	4	60.7	72	114	113.3	0.7	6	15	
ZA111245ASH-4921346C20	4	80.7	92	134	133.3	0.7	6	20	
ZA111245ASH-41321746C30	4	120.7	132	174	173.3	0.7	6	30	
ZA111245ASH-41601026C10	4.1	42.9	60	102	101.3	0.7	6	10	
ZA111245ASH-41671096C12	4.1	49.9	67	109	108.3	0.7	6	12	
ZA111245ASH-42601026C10	4.2	44.1	60	102	101.3	0.7	6	10	
ZA111245ASH-42671096C12	4.2	51.1	67	109	108.3	0.7	6	12	
ZA111245ASH-42761186C15	4.2	63.7	76	118	117.3	0.7	6	15	
ZA111245ASH-42971396C20	4.2	84.7	97	139	138.3	0.7	6	20	
ZA111245ASH-43601026C10	4.3	45.3	60	102	101.3	0.7	6	10	

Supports Non-Standard Customization

A Series

Deep Hole Drill for Stainless Steel – Internal Coolant (02)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZA111245ASH-43671096C12	4.3	52.3	67	109	108.3	0.7	6	12	
ZA111245ASH-45601026C10	4.5	47.7	60	102	101.3	0.7	6	10	
ZA111245ASH-45671096C12	4.5	54.7	67	109	108.3	0.7	6	12	
ZA111245ASH-45811236C15	4.5	68.2	81	123	122.3	0.7	6	15	
ZA111245ASH-451041466C20	4.5	90.7	104	146	145.3	0.7	6	20	
ZA111245ASH-451491916C30	4.5	135.7	149	191	190.3	0.7	6	30	
ZA111245ASH-451672096C40	4.5	153.7	167	209	208.3	0.7	6	40	
ZA111245ASH-46601026C10	4.6	49	60	102	101.2	0.8	6	10	
ZA111245ASH-46671096C12	4.6	56	67	109	108.2	0.8	6	12	
ZA111245ASH-48601026C10	4.8	51.4	60	102	101.2	0.8	6	10	
ZA111245ASH-48861286C12	4.8	58.4	86	128	127.2	0.8	6	12	
ZA111245ASH-48861286C15	4.8	72.8	86	128	127.2	0.8	6	15	
ZA111245ASH-481101526C20	4.8	96.8	110	152	151.2	0.8	6	20	
ZA111245ASH-5681106C10	5	50.8	68	110	109.2	0.8	6	10	
ZA111245ASH-5861286C12	5	60.8	86	128	127.2	0.8	6	12	
ZA111245ASH-5901326C15	5	75.8	90	132	131.2	0.8	6	15	
ZA111245ASH-51151576C20	5	100.8	115	157	156.2	0.8	6	20	
ZA111245ASH-51652076C30	5	150.8	165	207	206.2	0.8	6	30	
ZA111245ASH-52152576C40	5	200.8	215	257	256.2	0.8	6	40	
ZA111245ASH-51751176C10	5.1	52	75	117	116.2	0.8	6	10	
ZA111245ASH-51861286C12	5.1	62	86	128	127.2	0.8	6	12	
ZA111245ASH-52751176C10	5.2	53.3	75	117	116.1	0.9	6	10	
ZA111245ASH-52861286C12	5.2	63.3	86	128	127.1	0.9	6	12	
ZA111245ASH-55751176C10	5.5	56.9	75	117	116.1	0.9	6	10	
ZA111245ASH-55861286C12	5.5	66.9	86	128	127.1	0.9	6	12	
ZA111245ASH-55991416C15	5.5	83.4	99	141	140.1	0.9	6	15	
ZA111245ASH-551271696C20	5.5	110.9	127	169	168.1	0.9	6	20	
ZA111245ASH-551822246C30	5.5	165.9	182	224	223.1	0.9	6	30	
ZA111245ASH-552372796C40	5.5	220.9	237	279	278.1	0.9	6	40	
ZA111245ASH-58751176C10	5.8	59.6	75	117	116	1	6	10	
ZA111245ASH-58861286C12	5.8	70.6	86	128	127	1	6	12	
ZA111245ASH-581041466C15	5.8	88	104	146	145	1	6	15	
ZA111245ASH-581331756C20	5.8	117	133	175	174	1	6	20	
ZA111245ASH-6751176C10	6	61	75	117	116	1	6	10	
ZA111245ASH-6861286C12	6	73	86	128	127	1	6	12	
ZA111245ASH-61081506C15	6	91	108	150	149	1	6	15	
ZA111245ASH-61381806C20	6	121	138	180	179	1	6	20	
ZA111245ASH-61982406C30	6	181	198	240	239	1	6	30	
ZA111245ASH-62583006C40	6	241	258	300	299	1	6	40	
ZA111245ASH-61861288C10	6.1	62	86	128	127	1	8	10	
ZA111245ASH-611161588C12	6.1	74.2	116	158	157	1	8	12	
ZA111245ASH-62861288C10	6.2	63	86	128	127	1	8	10	
ZA111245ASH-621161588C12	6.2	75.4	116	158	157	1	8	12	
ZA111245ASH-63861288C10	6.3	64	86	128	127	1	8	10	
ZA111245ASH-631161588C12	6.3	76.6	116	158	157	1	8	12	
ZA111245ASH-65861288C10	6.5	66.1	86	128	126.9	1.1	8	10	
ZA111245ASH-651161588C12	6.5	79.1	116	158	156.9	1.1	8	12	
ZA111245ASH-651161588C15	6.5	98.6	116	158	156.9	1.1	8	15	
ZA111245ASH-651501928C20	6.5	131.1	150	192	190.9	1.1	8	20	
ZA111245ASH-652152578C30	6.5	196.1	215	257	255.9	1.1	8	30	
ZA111245ASH-652803228C40	6.5	261.1	280	322	320.9	1.1	8	40	

Supports Non-Standard Customization

A Series

Deep Hole Drill for Stainless Steel – Internal Coolant (03)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZA111245ASH-66861288C10	6.6	67.1	86	128	126.9	1.1	8	10	
ZA111245ASH-661161588C12	6.6	80.3	116	158	156.9	1.1	8	12	
ZA111245ASH-67861288C10	6.7	68.1	86	128	126.9	1.1	8	10	
ZA111245ASH-671161588C12	6.7	81.5	116	158	156.9	1.1	8	12	
ZA111245ASH-68861288C10	6.8	69.1	86	128	126.9	1.1	8	10	
ZA111245ASH-681161588C12	6.8	82.7	116	158	156.9	1.1	8	12	
ZA111245ASH-681221648C15	6.8	103.1	122	164	162.9	1.1	8	15	
ZA111245ASH-681561988C20	6.8	137.1	156	198	196.9	1.1	8	20	
ZA111245ASH-69861288C10	6.9	70.1	86	128	126.9	1.1	8	10	
ZA111245ASH-691161588C12	6.9	83.9	116	158	156.9	1.1	8	12	
ZA111245ASH-7861288C10	7	71.1	86	128	126.9	1.1	8	10	
ZA111245ASH-71161588C12	7	85.1	116	158	156.9	1.1	8	12	
ZA111245ASH-71261688C15	7	106.1	126	168	166.9	1.1	8	15	
ZA111245ASH-71612038C20	7	141.1	161	203	201.9	1.1	8	20	
ZA111245ASH-72312738C30	7	211.1	231	273	271.9	1.1	8	30	
ZA111245ASH-73013438C40	7	281.1	301	343	341.9	1.1	8	40	
ZA111245ASH-741011438C10	7.4	75.2	101	143	141.8	1.2	8	10	
ZA111245ASH-741161588C12	7.4	90	116	158	156.8	1.2	8	12	
ZA111245ASH-751011438C10	7.5	76.2	101	143	141.8	1.2	8	10	
ZA111245ASH-751161588C12	7.5	91.2	116	158	156.8	1.2	8	12	
ZA111245ASH-751351778C15	7.5	113.7	135	177	175.8	1.2	8	15	
ZA111245ASH-751732158C20	7.5	151.2	173	215	213.8	1.2	8	20	
ZA111245ASH-752482908C30	7.5	226.2	248	290	288.8	1.2	8	30	
ZA111245ASH-753233658C40	7.5	301.2	323	365	363.8	1.2	8	40	
ZA111245ASH-761011438C10	7.6	77.2	101	143	141.8	1.2	8	10	
ZA111245ASH-761161588C12	7.6	92.4	116	158	156.8	1.2	8	12	
ZA111245ASH-771011438C10	7.7	78.3	101	143	141.7	1.3	8	10	
ZA111245ASH-771161588C12	7.7	93.7	116	158	156.7	1.3	8	12	
ZA111245ASH-781011438C10	7.8	79.3	101	143	141.7	1.3	8	10	
ZA111245ASH-781161588C12	7.8	94.9	116	158	156.7	1.3	8	12	
ZA111245ASH-81011438C10	8	81.3	101	143	141.7	1.3	8	10	
ZA111245ASH-81161588C12	8	97.3	116	158	156.7	1.3	8	12	
ZA111245ASH-81441868C15	8	121.3	144	186	184.7	1.3	8	15	
ZA111245ASH-81842268C20	8	161.3	184	226	224.7	1.3	8	20	
ZA111245ASH-82643068C30	8	241.3	264	306	304.7	1.3	8	30	
ZA111245ASH-83443868C40	8	321.3	344	386	384.7	1.3	8	40	
ZA111245ASH-8110615210C10	8.1	82.3	106	152	150.7	1.3	10	10	
ZA111245ASH-8114619210C12	8.1	98.5	146	192	190.7	1.3	10	12	
ZA111245ASH-8210615210C10	8.2	83.3	106	152	150.7	1.3	10	10	
ZA111245ASH-8214619210C12	8.2	99.7	146	192	190.7	1.3	10	12	
ZA111245ASH-8410615210C10	8.4	85.4	106	152	150.6	1.4	10	10	
ZA111245ASH-8414619210C12	8.4	102.2	146	192	190.6	1.4	10	12	
ZA111245ASH-8510615210C10	8.5	86.4	106	152	150.6	1.4	10	10	
ZA111245ASH-8514619210C12	8.5	103.4	146	192	190.6	1.4	10	12	
ZA111245ASH-8515319910C15	8.5	128.9	153	199	197.6	1.4	10	15	
ZA111245ASH-8519624210C20	8.5	171.4	196	242	240.6	1.4	10	20	
ZA111245ASH-8528132710C30	8.5	256.4	281	327	325.6	1.4	10	30	
ZA111245ASH-8610615210C10	8.6	87.4	106	152	150.6	1.4	10	10	
ZA111245ASH-8614619210C12	8.6	104.6	146	192	190.6	1.4	10	12	
ZA111245ASH-8710615210C10	8.7	88.4	106	152	150.6	1.4	10	10	
ZA111245ASH-8714619210C12	8.7	105.8	146	192	190.6	1.4	10	12	

Supports Non-Standard Customization

A Series

Deep Hole Drill for Stainless Steel – Internal Coolant (04)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZA111245ASH-8810615210C10	8.8	89.4	106	152	150.6	1.4	10	10	
ZA111245ASH-8814619210C12	8.8	107	146	192	190.6	1.4	10	12	
ZA111245ASH-912817410C10	9	91.5	128	174	172.5	1.5	10	10	
ZA111245ASH-914619210C12	9	109.5	146	192	190.5	1.5	10	12	
ZA111245ASH-916220810C15	9	136.5	162	208	206.5	1.5	10	15	
ZA111245ASH-920725310C20	9	181.5	207	253	251.5	1.5	10	20	
ZA111245ASH-929734310C30	9	271.5	297	343	341.5	1.5	10	30	
ZA111245ASH-9312817410C10	9.3	94.5	128	174	172.5	1.5	10	10	
ZA111245ASH-9314619210C12	9.3	113.1	146	192	190.5	1.5	10	12	
ZA111245ASH-9512817410C10	9.5	96.6	128	174	172.4	1.6	10	10	
ZA111245ASH-9514619210C12	9.5	115.6	146	192	190.4	1.6	10	12	
ZA111245ASH-9517121710C15	9.5	144.1	171	217	215.4	1.6	10	15	
ZA111245ASH-9521926510C20	9.5	191.6	219	265	263.4	1.6	10	20	
ZA111245ASH-9531436010C30	9.5	286.6	314	360	358.4	1.6	10	30	
ZA111245ASH-9812817410C10	9.8	99.6	128	174	172.4	1.6	10	10	
ZA111245ASH-9814619210C12	9.8	119.2	146	192	190.4	1.6	10	12	
ZA111245ASH-1012817410C10	10	101.6	128	174	172.4	1.6	10	10	
ZA111245ASH-1014619210C12	10	121.6	146	192	190.4	1.6	10	12	
ZA111245ASH-1018022610C15	10	151.6	180	226	224.4	1.6	10	15	
ZA111245ASH-1023027610C20	10	201.6	230	276	274.4	1.6	10	20	
ZA111245ASH-1033037610C30	10	301.6	330	376	374.4	1.6	10	30	
ZA111245ASH-10215620812C10	10.2	103.7	156	208	206.3	1.7	12	10	
ZA111245ASH-10217622812C12	10.2	124.1	176	228	226.3	1.7	12	12	
ZA111245ASH-10315620812C10	10.3	104.7	156	208	206.3	1.7	12	10	
ZA111245ASH-10317622812C12	10.3	125.3	176	228	226.3	1.7	12	12	
ZA111245ASH-10415620812C10	10.4	105.7	156	208	206.3	1.7	12	10	
ZA111245ASH-10417622812C12	10.4	126.5	176	228	226.3	1.7	12	12	
ZA111245ASH-10515620812C10	10.5	106.7	156	208	206.3	1.7	12	10	
ZA111245ASH-10517622812C12	10.5	127.7	176	228	226.3	1.7	12	12	
ZA111245ASH-10518824012C15	10.5	159.2	188	240	238.3	1.7	12	15	
ZA111245ASH-10524129312C20	10.5	211.7	241	293	291.3	1.7	12	20	
ZA111245ASH-11215620812C10	11.2	113.8	156	208	206.2	1.8	12	10	
ZA111245ASH-11217622812C12	11.2	136.2	176	228	226.2	1.8	12	12	
ZA111245ASH-11515620812C10	11.5	116.9	156	208	206.1	1.9	12	10	
ZA111245ASH-11517622812C12	11.5	139.9	176	228	226.1	1.9	12	12	
ZA111245ASH-11520625812C15	11.5	174.4	206	258	256.1	1.9	12	15	
ZA111245ASH-11526431612C20	11.5	231.9	264	316	314.1	1.9	12	20	
ZA111245ASH-11815620812C10	11.8	119.9	156	208	206.1	1.9	12	10	
ZA111245ASH-11817622812C12	11.8	143.5	176	228	226.1	1.9	12	12	
ZA111245ASH-1215620812C10	12	122	156	208	206	2	12	10	
ZA111245ASH-1217622812C12	12	146	176	228	226	2	12	12	
ZA111245ASH-1221526712C15	12	182	215	267	265	2	12	15	
ZA111245ASH-1227532712C20	12	242	275	327	325	2	12	20	
ZA111245ASH-12318223414C10	12.3	125.1	182	234	232	2	14	10	
ZA111245ASH-12320625814C12	12.3	149.7	206	258	256	2	14	12	
ZA111245ASH-12518223414C10	12.5	127	182	234	232	2	14	10	
ZA111245ASH-12520625814C12	12.5	152	206	258	256	2	14	12	
ZA111245ASH-12718223414C10	12.7	129.1	182	234	231.9	2.1	14	10	
ZA111245ASH-12720625814C12	12.7	154.5	206	258	255.9	2.1	14	12	
ZA111245ASH-1318223414C10	13	132.1	182	234	231.9	2.1	14	10	
ZA111245ASH-1320625814C12	13	158.1	206	258	255.9	2.1	14	12	

Supports Non-Standard Customization

A Series

Deep Hole Drill for Stainless Steel – Internal Coolant (05)

Order Number	Dimensions (mm)							L/D Ratio	Stock
	DC	LU	LCF	OAL	LF	PL	DCON		
ZA111245ASH-13118223414C10	13.1	133.1	182	234	231.9	2.1	14	10	
ZA111245ASH-13120625814C12	13.1	159.3	206	258	255.9	2.1	14	12	
ZA111245ASH-13518223414C10	13.5	137.2	182	234	231.8	2.2	14	10	
ZA111245ASH-13520625814C12	13.5	164.2	206	258	255.8	2.2	14	12	
ZA111245ASH-1418223414C10	14	142.3	182	234	231.7	2.3	14	10	
ZA111245ASH-1420625814C12	14	170.3	206	258	255.7	2.3	14	12	
ZA111245ASH-14520726216C10	14.5	147.4	207	262	259.6	2.4	16	10	
ZA111245ASH-14523629116C12	14.5	176.4	236	291	288.6	2.4	16	12	
ZA111245ASH-1520726216C10	15	152.5	207	262	259.5	2.5	16	10	
ZA111245ASH-1523629116C12	15	182.5	236	291	288.5	2.5	16	12	
ZA111245ASH-15520726216C10	15.5	157.5	207	262	259.5	2.5	16	10	
ZA111245ASH-15523629116C12	15.5	188.5	236	291	288.5	2.5	16	12	
ZA111245ASH-1620726216C10	16	162.6	207	262	259.4	2.6	16	10	
ZA111245ASH-1623629116C12	16	194.6	236	291	288.4	2.6	16	12	

Supports Non-Standard Customization

Internal Coolant Design

ISO	Material Code	Workpiece Material	Brinell Hardness	Cutting Speed (VC) m/min		
				Minimum	Initial Value	Maximum
P	Non-Alloy Steel					
	P1.1.Z.AN	C=0.05-0.1%	125	60	90	120
	P1.1.Z.AN	C=0.1-0.25%	125	60	90	120
	P1.2.Z.AN	C=0.25-0.55%	150	60	90	120
	P1.3.Z.AN	C=0.55-0.80%	170	60	90	120
	High-Carbon Steel					
	P1.3.Z.AN	Carbon Tool Steel	210	60	80	100
	Low-Alloy Steel					
	P2.1.Z.AN	Non-Hardened	175	60	80	120
	P2.5.Z.HT	Tempered	275	50	80	100
	P2.5.Z.HT	Tempered	350	40	50	70
	High-Alloy Steel					
	P3.0.Z.AN	Annealed	200	40	80	90
	P3.0.Z.HT	Hardened Tool Steel	300	40	50	70
	Cast Steel					
	P1.5.C.UT	Non-Alloy	150	80	110	140
	P2.6.C.UT	Low-Alloy (≤ 5% Alloy Elements)	200	80	110	120

Drill Diameter (mm)	Feed per Revolution (mm/r) *		
	Minimum	Initial Value	Maximum
3	0.06	0.1	0.13
4	0.06	0.1	0.13
6	0.11	0.18	0.24
8	0.16	0.21	0.25
10	0.19	0.23	0.27
12	0.2	0.25	0.3
16	0.2	0.25	0.3
20	0.2	0.25	0.3

- Cutting parameters are valid only for internal cooling.
- Recommended minimum internal cooling pressure: 20 bar.
- For harder materials, reduce speed and feed proportionally.

Supports Non-Standard Customization

A Series

Application Guidelines for Material Processing (02)

Internal Coolant Design

ISO	Material Code	Workpiece Material	Brinell Hardness	Cutting Speed (VC) m/min		
				Minimum	Initial Value	Maximum
M	Austenitic Stainless Steel					
	M1.0.C.UT	Cast + Unprocessed	165	30	40	60
	M1.0.Z.AQ	Annealed / Quenched	200	30	40	60
	M1.0.Z.PH	Precipitation Hardened	350	30	40	60
	M1.1.Z.AQ	Improved Machinability	165	30	40	60
	M1.2.Z.AQ	Free-Cutting Steel	200	30	40	60
	M1.3.C.AQ	Titanium-Stabilized + Cast	200	30	40	60
	M1.3.Z.AQ	Titanium-Stabilized	200	30	40	60
	M1.4.Z.AQ	High Strength	250	30	40	60
	Premium Austenitic Stainless Steel (Ni > 20%)					
	M2.0.C.AQ	Cast + Annealed/Quenched	165	20	30	40
	M2.0.Z.AQ	Annealed / Quenched	200	20	30	40
	Duplex (Austenitic/Ferritic) Stainless Steel					
	M3.1. Z. AQ >60%	Ferritic (N < 0.10%)	250	30	40	60
	M3.2. Z. AQ <60%	Ferritic (N < 0.10%)	250	30	40	60

Drill Diameter (mm)	Feed per Revolution (mm/r) *		
	Minimum	Initial Value	Maximum
3	0.05	0.1	0.15
4	0.05	0.1	0.15
6	0.06	0.11	0.16
8	0.06	0.11	0.16
10	0.07	0.12	0.17
12	0.08	0.13	0.18
16	0.09	0.14	0.19
20	0.1	0.15	0.2

- Cutting parameters are valid only for internal cooling.
- Recommended minimum internal cooling pressure: 20 bar.
- For harder materials, reduce speed and feed proportionally.

Supports Non-Standard Customization

Internal Coolant Design

ISO	Material Code	Workpiece Material	Brinell Hardness	Cutting Speed (VC) m/min		
				Minimum	Initial Value	Maximum
K	Ferritic Pearlitic					
	K1.1.C.NS	Ferritic Pearlitic	200	60	80	120
	Gray Cast Iron (GCI)					
	K2.1.C.UT	Low Tensile Strength	180	60	80	120
	K2.2.C.UT	High Tensile Strength	245	60	80	120
	K2.3.C.UT	High Tensile Strength	175	60	80	120
	Nodular/Ductile Cast Iron (NDI)					
	K3.1.C.UT	Ferritic Pearlitic	155	60	70	80
	K3.2.C.UT	Pearlitic	215	60	70	80
	K3.3.C.UT	Pearlitic	265	60	70	80
	K3.5.C.UT	Pearlitic	190	60	70	80
	K5.1.C.UT	ADI (Ausempered Ductile Iron)	300	60	70	80

Drill Diameter (mm)	Feed per Revolution (mm/r) *		
	Minimum	Initial Value	Maximum
3	0.06	0.09	0.12
4	0.07	0.1	0.13
6	0.08	0.12	0.16
8	0.16	0.2	0.24
10	0.16	0.2	0.28
12	0.16	0.2	0.28
16	0.2	0.25	0.3
20	0.2	0.25	0.3

- Cutting parameters are valid only for internal cooling.
- Recommended minimum internal cooling pressure: 20 bar.
- For harder materials, reduce speed and feed proportionally.

Supports Non-Standard Customization

A Series

Application Guidelines for Material Processing (04)

Internal Coolant Design

ISO	Material Code	Workpiece Material	Brinell Hardness	Cutting Speed (VC) m/min		
				Minimum	Initial Value	Maximum
N	Aluminum					
	N1.2.Z.UT	Industrial Pure Aluminum	60	110	150	180
	N1.2.Z.AG	Silicon-Aluminum Alloy (Si ≤ 1%)	100	110	150	180
	N1.3.C.UT	Cast Aluminum, Non-Aged	75	110	150	180
	N1.3.C.UT	Cast Aluminum with Aging Treatment	90	110	130	160
	N1.4.C.NS	Silicon-Containing Cast Aluminum (Si ≥ 13%)	130	80	100	120
	Copper Alloys					
	N3.3.U.UT	Free-Cutting Copper Alloys (Pb > 1%)	110	70	90	110
	N3.1.U.UT	Lead-Free Copper Alloys (including Electrolytic Copper)	100	70	80	100

Drill Diameter (mm)	Feed per Revolution (mm/r) *		
	Minimum	Initial Value	Maximum
3	0.08	0.15	0.2
4	0.1	0.15	0.2
6	0.16	0.28	0.35
8	0.16	0.28	0.35
10	0.2	0.25	0.35
12	0.2	0.25	0.35
16	0.2	0.28	0.35
20	0.2	0.3	0.35

- Cutting parameters are valid only for internal cooling.
- Recommended minimum internal cooling pressure: 20 bar.
- For harder materials, reduce speed and feed proportionally.

Supports Non-Standard Customization

Excellent Flexibility and Customization

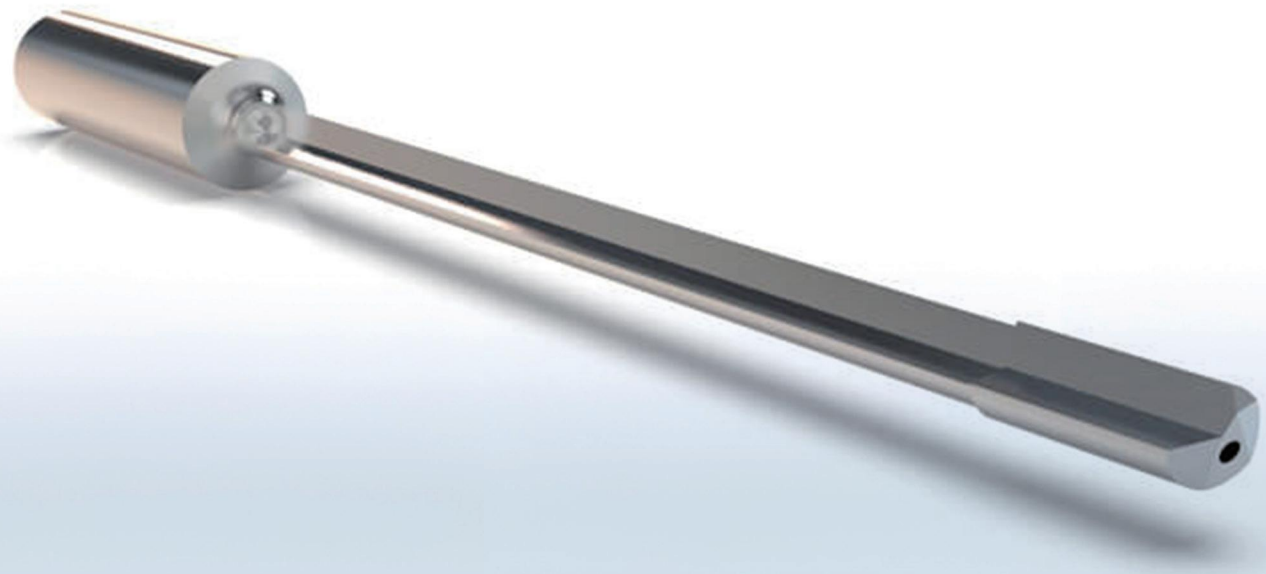
Insert, Guided Gun Drill: Features a flexible single-edge design with replaceable carbide inserts and support guides for quick maintenance and replacement. Available in lengths up to 3000mm, with diameters ranging from 10mm to 40mm in 0.5mm increments. Compatible with any carbide grade and coating, suitable for most materials.

Solid Carbide Gun Drill

Features: Utilizes brazed carbide tip technology, with a maximum effective cutting length of up to 2800mm. Available in diameters ranging from 1.5mm to 40mm.
Versatility: Offers a wide selection suitable for various materials and machining requirements. Comprehensive range includes even inch sizes, ensuring full coverage of customer needs.

High Precision, Stability, and Long Life

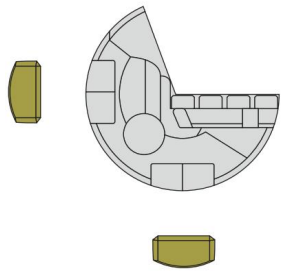
Optimized Chip Pocket Design: Improves chip evacuation, prevents chip blockage, and enhances machining efficiency.
Internal Cooling Channels: Directly cool the cutting zone and lubricate the cutting edge, reducing temperatures and extending tool life.



Q Series

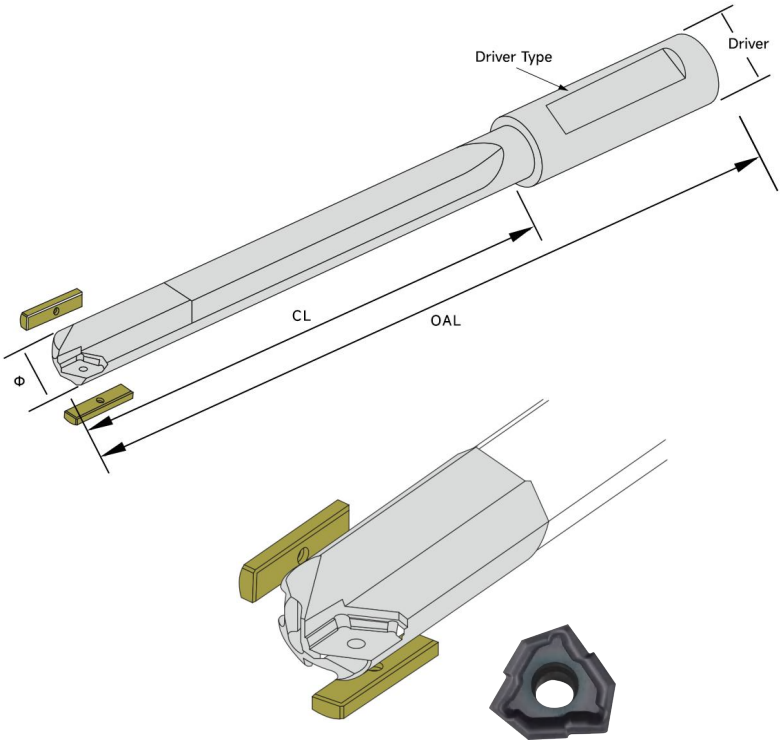
Inserted Guide pad single flute Gun Drill

INSERTS



Φ	INSERTS	GUIDE PAD
10.02-10.52	ZSGT060204R Single-Sided	GPO4-045
11.02	ZSGT060204R Single-Sided	GP04-050
11.52-13.52	LOGT060204R	GP04-055
14.02-14.52	TOGT070304R	GP05-60
15.02-15.52	TOGT070304R	GP05-60
16.02-16.52	TOGT080305R	GP05-75
17.02-17.52	TOGT080305R	GP05-75
18.02-18.52	TOGT090305R	GP06-85
19.02-19.52	TOGT090305R	GP06-85
20.02-20.52	TOGT100305R	GP06-85
21.02-21.52	TOGT100305R	GP06-100
22.02-22.52	TOGT110405R	GP06-100
23.02-23.52	TOGT110405R	GP06-100
24.02-24.52	TOGT110405R	GP06-100
25.02-25.52	TOGT120405R	GP06-120
26.02-26.52	TOGT120405R	GP06-120
27.02-27.52	TOGT120405R	GP06-120
28.02-28.52	TOGT120405R	GP06-120
29.02-29.52	TOGT130408R	GP06-120
30.02-30.52	TOGT130408R	GP07-120
31.02-31.52	TOGT130408R	GP07-120
32.02-32.52	TOGT130408R	GP07-120
30.02	NPHT 070404R NPMT 060404R NPMT 060408L	GP07-120
31.02	NPHT 070404R NPMT 060404R NPMT 060408L	GP07-120
32.02	NPHT 070404R NPMT 060404R NPMT 060408L	GP07-120
33.02	NPHT 070404R NPMT 060404R NPMT 060408L	GP07-120

HOLDERS



Φ	INSERTS	GUIDE PAD
34.02	NPHT 070404R NPMT 060404R NPMT 060408L	GP07-120
35.02	NPHT 070404R NPMT 060404R NPMT 080408L	GP07-120
36.02	NPHT 070404R NPMT 060404R NPMT 080408L	GP07-120
37.02	NPHT 070404R NPMT 060404R NPMT 080408L	GP07-120
38.02	NPHT 090404R NPMT 060404R NPMT 080408L	GP07-120
39.02	NPHT 090404R NPMT 060404R NPMT 080408L	GP08-155
40.02	NPHT 090404R NPMT 080404R NPMT 080408L	GP08-155

Type A

Type B

Type C

Pilot drill

Order + Customization Fill in your required dimensions here:

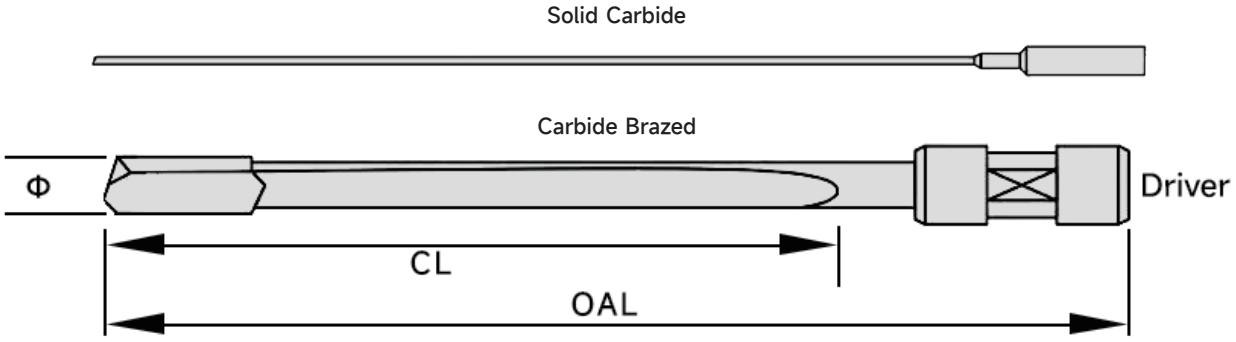
Φ	Drill length	OAL	Driver Φ	Driver Type	Material to be cut	Inserts	Guide Pad
Size:							
Tol:							

NOTE:
1、Other dimensions will be provided upon request.
2、All specifications are subject to change without prior notice.

Supports Non-Standard Customization

Q Series

Solid Carbide Gun Drill, Brazed Gun Drill



Φ	CL	Gun Drill Types
1.52 -2.0	MAX 0.2m	Solid Carbide
2.0-3.0	MAX 0.3m	Solid Carbide
3.00-3.59	MAX 0.3m	Carbide Brazed
3.6-4.59	MAX 0.3m	Carbide Brazed
4.6-5.59	MAX 1.2m	Carbide Brazed
5.6-6.59	MAX 1.8m	Carbide Brazed
6.6-7.59	MAX 2.4m	Carbide Brazed
7.6-8.59	MAX 2.4m	Carbide Brazed
8.6-9.59	MAX 2.4m	Carbide Brazed
9.6-10.59	MAX 2.8m	Carbide Brazed
10.6-11.59	MAX 2.8m	Carbide Brazed
11.6-12.59	MAX 2.8m	Carbide Brazed
12.6-13.59	MAX 2.8m	Carbide Brazed
13.6-14.59	MAX 2.8m	Carbide Brazed
14.6-15.59	MAX 2.8m	Carbide Brazed
15.6-16.59	MAX 2.8m	Carbide Brazed
16.6-17.59	MAX 2.8m	Carbide Brazed
17.6-18.59	MAX 2.8m	Carbide Brazed
18.6-19.59	MAX 2.8m	Carbide Brazed
19.6-20.59	MAX 2.8m	Carbide Brazed
20.6-21.59	MAX 2.8m	Carbide Brazed
21.6-22.59	MAX 2.8m	Carbide Brazed
22.6-23.59	MAX 2.8m	Carbide Brazed
23.6-24.59	MAX 2.8m	Carbide Brazed
24.6-25.59	MAX 2.8m	Carbide Brazed
25.6-26.59	MAX 2.8m	Carbide Brazed
26.6-27.59	MAX 2.8m	Carbide Brazed
27.6-28.59	MAX 2.8m	Carbide Brazed
28.6-29.59	MAX 2.8m	Carbide Brazed
29.6-30.59	MAX 2.8m	Carbide Brazed
30.6-31.59	MAX 2.8m	Carbide Brazed
31.6-32.59	MAX 2.8m	Carbide Brazed
32.6-34.59	MAX 2.8m	Carbide Brazed
34.6-36.59	MAX 2.8m	Carbide Brazed
36.6-38.59	MAX 2.8m	Carbide Brazed
38.6-40.59	MAX 2.8m	Carbide Brazed

Φ	Driver
< 3mm	Φ10x50
3mm—12mm	Φ16x50
> 12mm	Φ20x70 / Φ25x70 / Φ32x70

Type A

Type B

Type C

Pilot drill

Order + Customization Fill in your required dimensions here:

Φ	CL	OAL	Driver	Driver Type	Material to be cut	Pilot Drill	
Size:							
Tol:							

NOTE:
1、Other dimensions will be provided upon request.
2、All specifications are subject to change without prior notice.

Supports Non-Standard Customization

Shengdefu cutting tools
Non-standard customization

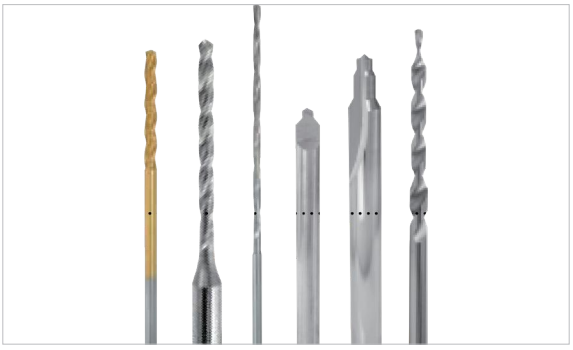
With 18 years of experience in customization, there are over 50,000 cases

- For complex shapes, only one forming cutter and one setup are needed!
- Reduce the investment cost of machines!
- Shorten the steps and cut down the programming time!
- Keep consistent quality and production efficiency!

Custom Product Types

Tungsten carbide brazed tools

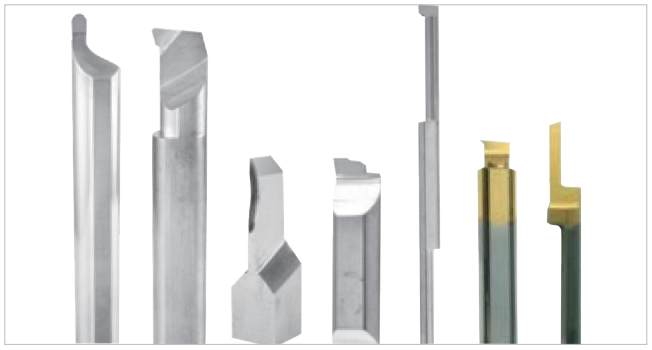
Tungsten carbide drill bits / Long series drill bits / Tapered countersink drill bits.



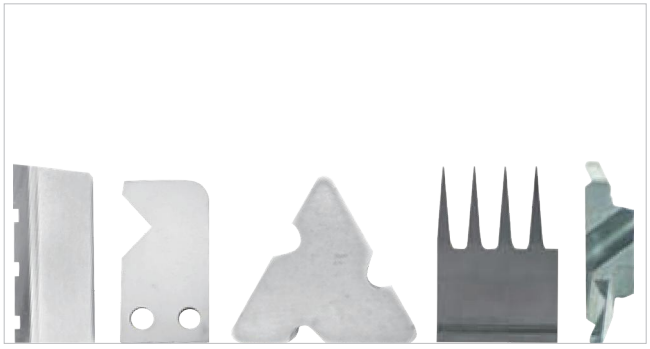
Tungsten carbide end mills / Hollow milling cutters / Thread milling cutters

Tungsten carbide special forming cutters

Tungsten carbide groove milling cutters and boring cutters.



Tungsten carbide special forming inserts / PCD (Polycrystalline Diamond).



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