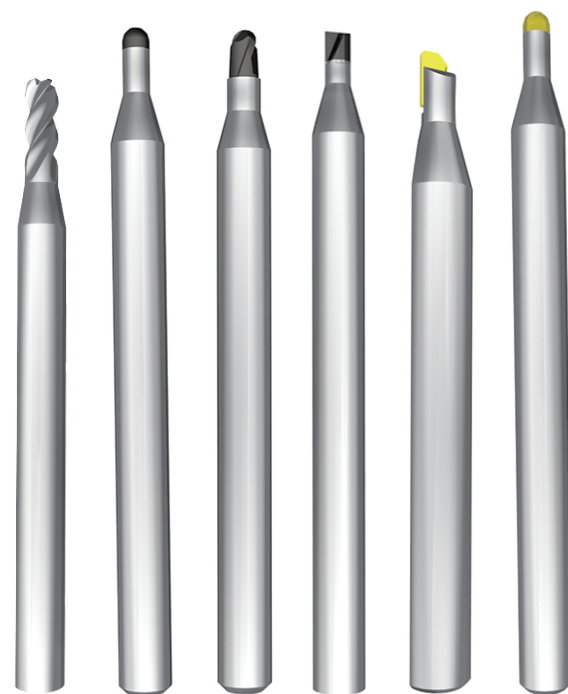




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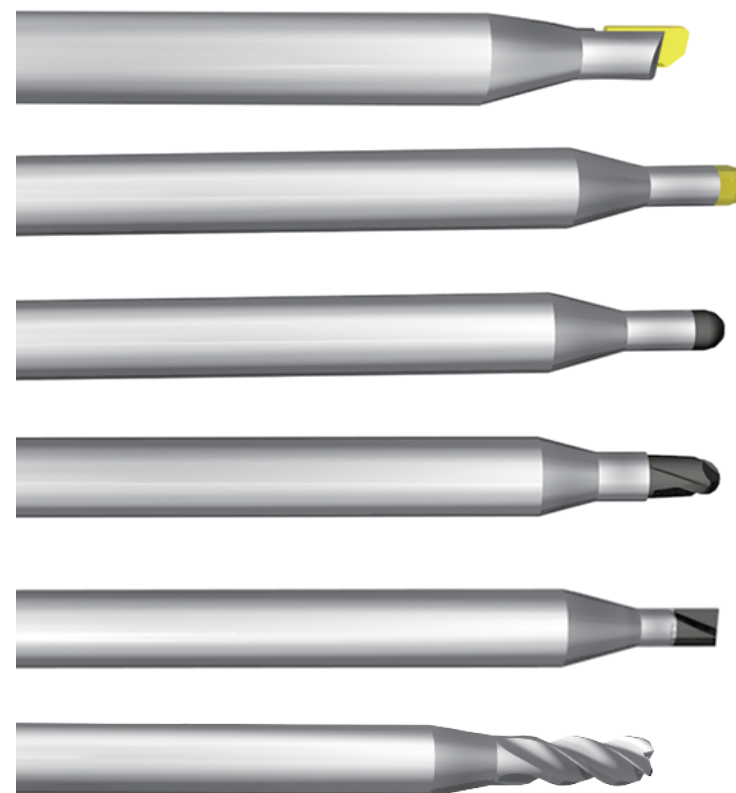
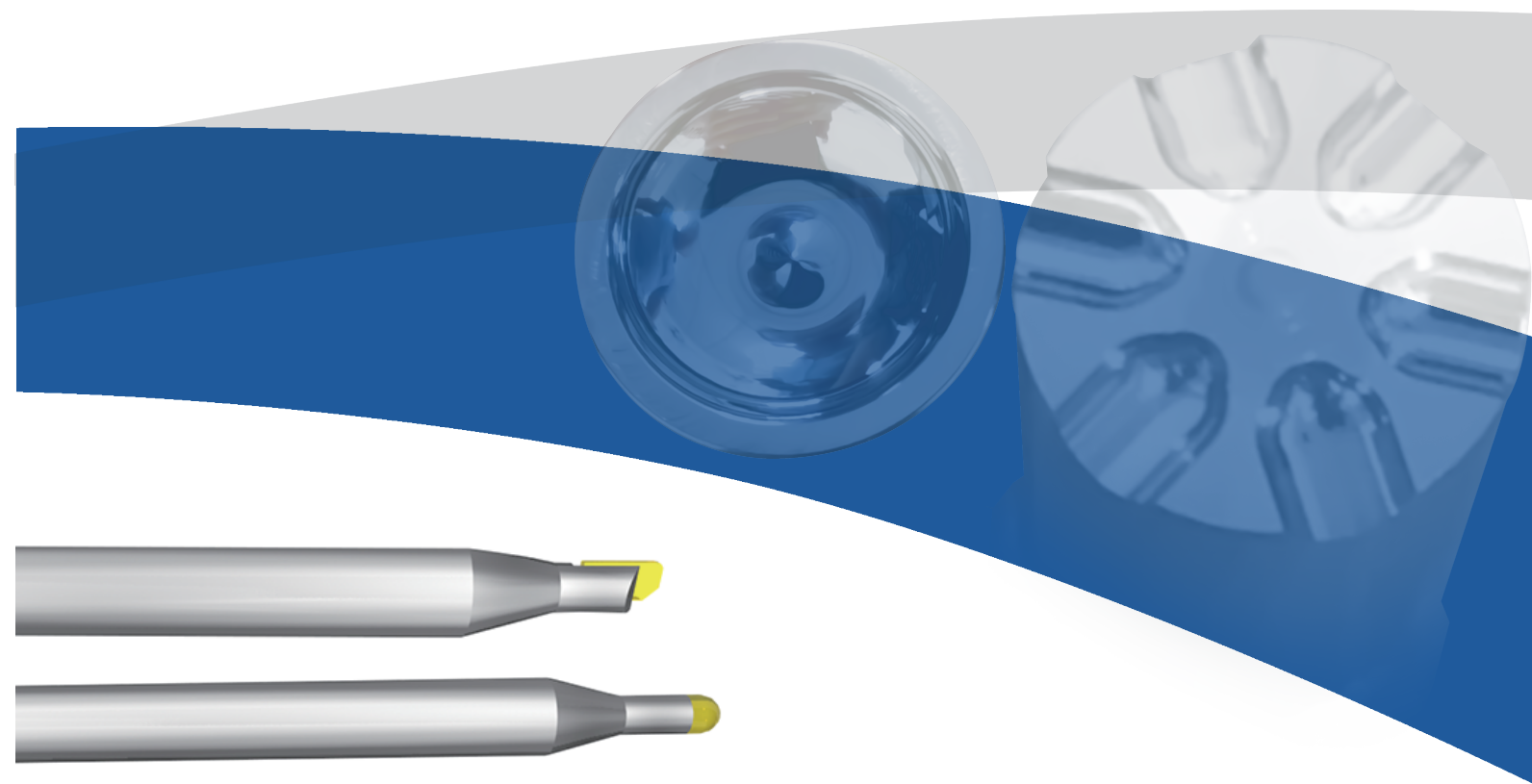
Office Add: H-03, 5F, M7 Building, No.1 Jiuxianqiao East Road, Chaoyang District, Beijing, China

Factory Add: No.2 Industry Road, Dachang Chaobaihe Industrial Park,
Langfang City, Hebei Province 065300, China

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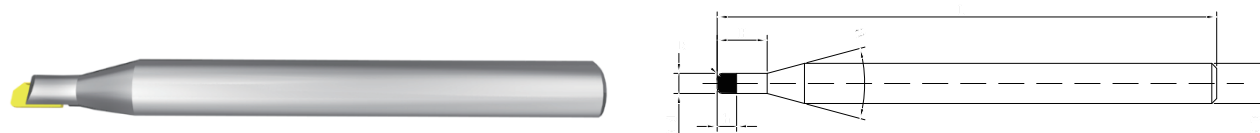
Mould Cutter Product Catalogue

北京沃尔德金刚石工具股份有限公司
BEIJING WORLDIA DIAMOND TOOLS CO.,LTD.



WORLDIA® MCD Monocrystal Diamond Tool

Ultra-precision Round Nose Milling Tool



Processing Materials (Note: ● Especially Suitable ○ Suitable)

Nickel Base Alloy	Copper Alloy	Aluminum Alloy	Resin	Stainless Steel	Hardened and Tempered Steel	Die Steel (HRC48-HRC68)	Hardened Steel	Cast Iron
●	○	●	○					

Parameter Specifications

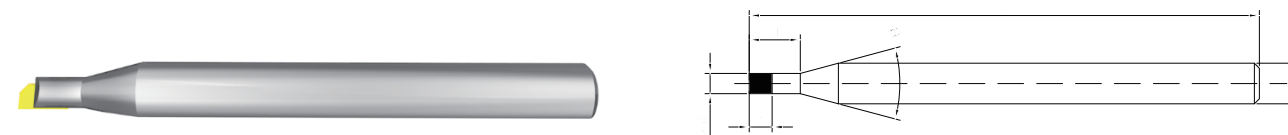
(In addition to the specifications listed, non-standard customizations can also be accepted)

Order Number	Specification	Arc(R)	Effective Length (H)	Blade Length (h)	Blade Diameter (d)	Shank Diameter (D)	Total Length(L)	Taper Angle(a)
1.10.0000.1001	MCD-D0.3-R0.02-0.3h-0.8H-1E-D4-50L	0.02	0.8	0.3	0.3	4	50	30°
1.10.0000.1002	MCD-D0.4-R0.02-0.4h-1H-1E-D4-50L	0.02	1	0.4	0.4	4	50	30°
1.10.0000.1003	MCD-D0.5-R0.02-0.5h-1.25H-1E-D4-50L	0.02	1.25	0.5	0.5	4	50	30°
1.10.0000.1004	MCD-D0.6-R0.05-0.6h-1.5H-1E-D4-50L	0.05	1.5	0.6	0.6	4	50	30°
1.10.0000.1005	MCD-D0.8-R0.05-2H-1E-D4-50L	0.05	2	2	0.8	4	50	30°
1.10.0000.1006	MCD-D1-R0.05-2.5H-1E-D4-50L	0.05	2.5	2.5	1	4	50	30°



WORLDIA® MCD Monocrystal Diamond Tool

Ultra-precision Milling Tool



Processing Materials (Note: ● Especially Suitable ○ Suitable)

Nickel Base Alloy	Copper Alloy	Aluminum Alloy	Resin	Stainless Steel	Hardened and Tempered Steel	Die Steel (HRC48-HRC68)	Hardened Steel	Cast Iron
●	○	●	○					

Parameter Specifications

(In addition to the specifications listed, non-standard customizations can also be accepted)

Order Number	Specification	Arc(R)	Effective Length (H)	Blade Length (h)	Blade Diameter (d)	Shank Diameter (D)	Total Length(L)	Taper Angle(a)
1.10.0000.1013	MCD-D0.2-0.3h-0.5H-1E-D4-50	\	0.5	0.3	0.2	4	50	30°
1.10.0000.1014	MCD-D0.3-0.3h-0.8H-1E-D4-50L	\	0.8	0.3	0.3	4	50	30°
1.10.0000.1015	MCD-D0.4-0.4h-1H-1E-D4-50L	\	1	0.4	0.4	4	50	30°
1.10.0000.1016	MCD-D0.5-0.5h-1.25H-1E-D4-50L	\	1.25	0.5	0.5	4	50	30°
1.10.0000.1017	MCD-D0.6-0.6h-1.5H-1E-D4-50L	\	1.5	0.6	0.6	4	50	30°
1.10.0000.1018	MCD-D0.8-2H-1E-D4-50L	\	2	2	0.8	4	50	30°
1.10.0000.1019	MCD-D1-2.5H-1E-D4-50L	\	2.5	2.5	1	4	50	30°

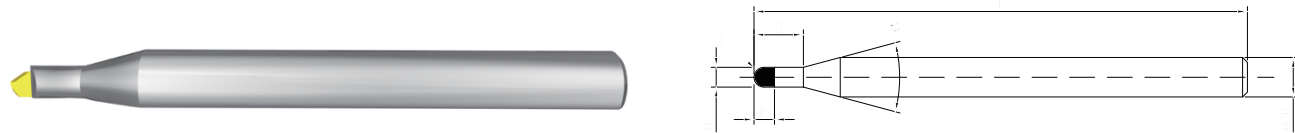


WORLDIA® MCD Monocrystal Diamond Tool

Ultra-precision Ball End Tool







Processing Materials (Note: ● Especially Suitable ○ Suitable)

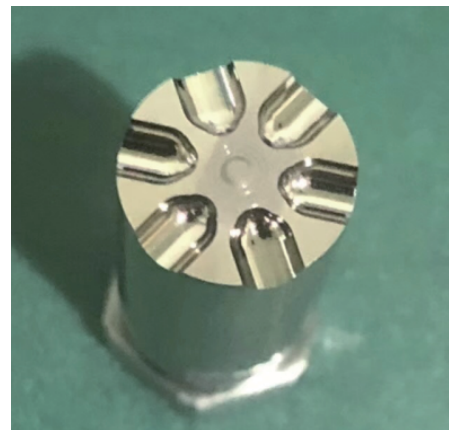
Nickel Base Alloy	Copper Alloy	Aluminum Alloy	Resin	Stainless Steel	Hardened and Tempered Steel	Die Steel (HRC48-HRC68)	Hardened Steel	Cast Iron
●	○	●	○					

Parameter Specifications

(In addition to the specifications listed, non-standard customizations can also be accepted)

Order Number	Specification	Arc(R)	Effective Length (H)	Blade Length (h)	Blade Diameter (d)	Shank Diameter (D)	Total Length(L)	Taper Angle(a)
1.10.0000.1007	MCD-D0.3-R0.15-0.3h-0.8H-1E-D4-50L	0.15	0.8	0.3	0.3	4	50	30°
1.10.0000.1008	MCD-D0.4-R0.2-0.4h-1H-1E-D4-50L	0.2	1	0.4	0.4	4	50	30°
1.10.0000.1009	MCD-D0.5-R0.25-0.5h-1.25H-1E-D4-50L	0.25	1.25	0.5	0.5	4	50	30°
1.10.0000.1010	MCD-D0.6-R0.3-0.6h-1.5H-1E-D4-50L	0.3	1.5	0.6	0.6	4	50	30°
1.10.0000.1011	MCD-D0.8-R0.4-2H-1E-D4-50L	0.4	2	2	0.8	4	50	30°
1.10.0000.1012	MCD-D1-R0.5-2.5H-1E-D4-50L	0.5	2.5	2.5	1	4	50	30°

Case of Processing



Processing Materials	Nickel Plating
Workpiece Diameter	Ø22mm
Processing Depth	0.5mm
Tool Specifications	Ø0.1-R0.5mm
Surface Roughness	Ra20nm
Spindle Speed	40000r/min
Feed Rate	300-600mm/min
Axial Depth of Cut (a _p)	0.003mm
Radial Depth of Cut (a _e)	0.003mm
Processing Time	12hr
Cooling Method	Oil Mist



WORLDIA® PCD Polycrystalline Diamond Tool

Ball End Tool






Processing Materials (Note: ● Especially Suitable ○ Suitable)

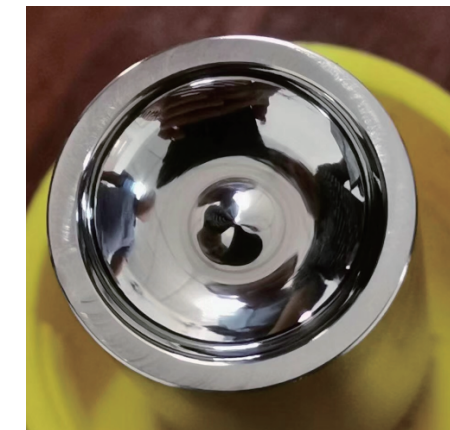
Nickel Base Alloy	Copper Alloy	Aluminum Alloy	Resin	Stainless Steel	Hardened and Tempered Steel	Die Steel (HRC48-HRC68)	Hardened Steel	Cast Iron
				○	○	●	○	○

Parameter Specifications

(In addition to the specifications listed, non-standard customizations can also be accepted)

Order Number	Specification	Arc(R)	Effective Length (H)	Blade Diameter (d)	Shank Diameter (D)	Total Length(L)	Taper Angle(a)
1.20.0000.1004	PCD-D0.5-R0.25-1.5H-D4-50L	0.25	1.5	0.5	4	50	30°
1.20.0000.1005	PCD-D0.6-R0.3-1.5H-D4-50L	0.3	1.5	0.6	4	50	30°
1.20.0000.1006	PCD-D1-R0.5-2.5H-D4-50L	0.5	2.5	1	4	50	30°
1.20.0000.1007	PCD-D1.5-R0.75-4H-D4-50L	0.75	4	1.5	4	50	30°
1.20.0000.1008	PCD-D2-R1-5H-D4-50L	1	5	2	4	50	30°
1.20.0000.1009	PCD-D3-R1.5-15H-D6-50L	1.5	15	3	6	50	30°
1.20.0000.1010	PCD-D4-R2-18H-D6-50L	2	18	4	6	50	30°
1.20.0000.1011	PCD-D6-R3-18H-D6-50L	3	18	6	6	50	30°

Case of processing



Processing Materials	Die Steel (HRC52)
Workpiece Size	20 mm
Processing Depth	3mm
Tool Specification (R)	0.75mm
Surface Roughness (Ra)	≤ 30 nm
Spindle Speed(n)	40000 r/min
Feed Rate (V _f)	400 mm/min
Axial Depth of Cut (a _p)	0.005 mm
Radial Depth of Cut (a _e)	0.005 mm
Processing Time	8.5 hr
Cooling Method	Cutting Liquid Cooling

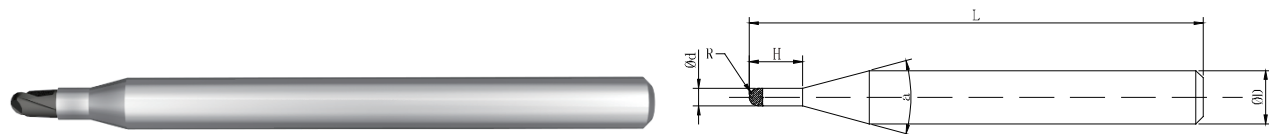


WORLDIA® CBN Cubic Boron Nitride Cutting Tool

2 Flutes Ball End Tool







Processing Materials (Note: ● Especially Suitable ○ Suitable)

Nickel Base Alloy	Copper Alloy	Aluminum Alloy	Resin	Stainless Steel	Hardened and Tempered Steel	Die Steel (HRC48-HRC68)	Hardened Steel	Cast Iron
				○	○	●	○	○

Parameter Specifications

(In addition to the specifications listed, non-standard customizations can also be accepted)

Order Number	Specification	Arc(R)	Effective Length (H)	Blade Diameter (d)	Shank Diameter (D)	Total Length(L)	Taper Angle(a)
1.51.0000.1004	CBN-D0.4-R0.2-1H-2E-D4-50L	0.2	1	0.4	4	50	30°
1.51.0000.1005	CBN-D0.5-R0.25-1H-2E-D4-50L	0.25	1	0.5	4	50	30°
1.51.0000.1006	CBN-D0.6-R0.3-1.2H-2E-D4-50L	0.3	1.2	0.6	4	50	30°
1.51.0000.1007	CBN-D0.8-R0.4-1.6H-2E-D4-50L	0.4	1.6	0.8	4	50	30°
1.51.0000.1008	CBN-D1-R0.5-2H-2E-D4-50L	0.5	2	1	4	50	30°
1.51.0000.1009	CBN-D1.5-R0.75-3.5H-2E-D4-50L	0.75	3.5	1.5	4	50	30°
1.51.0000.1010	CBN-D2-R1-4H-2E-D4-50L	1	4	2	4	50	30°
1.51.0000.1011	CBN-D3-R1.5-10H-2E-D6-50L	1.5	10	3	4	50	30°
1.51.0000.1012	CBN-D4-R2-12H-2E-D6-50L	2	12	4	4	50	30°
1.51.0000.1013	CBN-D5-R2.5-15H-2E-D6-50L	2.5	15	5	4	50	30°
1.51.0000.1014	CBN-D6-R3-18H-2E-D6-50L	3	18	6	4	50	30°

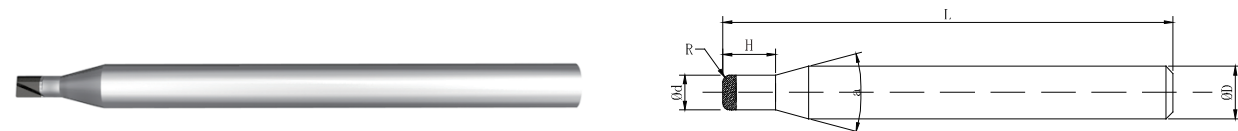


WORLDIA® CBN Cubic Boron Nitride Cutting Tool

2 Flutes Round Nose Milling Tool







Processing Materials (Note: ● Especially Suitable ○ Suitable)

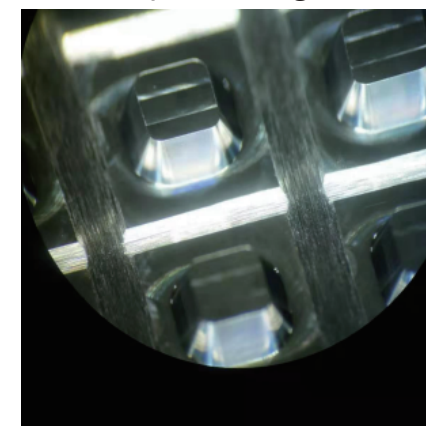
Nickel Base Alloy	Copper Alloy	Aluminum Alloy	Resin	Stainless Steel	Hardened and Tempered Steel	Die Steel (HRC48-HRC68)	Hardened Steel	Cast Iron
				○	○	●	○	○

Parameter Specifications

(In addition to the specifications listed, non-standard customizations can also be accepted)

Order Number	Specification	Arc(R)	Effective Length (H)	Blade Diameter (d)	Shank Diameter (D)	Total Length(L)	Taper Angle(a)
1.51.0000.1018	CBN-D0.4-R0.02-1.0H-2E-D4-50L	0.02	1	0.4	4	50	30°
1.51.0000.1019	CBN-D0.5-R0.02-1.5H-2E-D4-50L	0.02	1.5	0.5	4	50	30°
1.51.0000.1020	CBN-D0.6-R0.02-2.0H-2E-D4-50L	0.02	2	0.6	4	50	30°
1.51.0000.1021	CBN-D0.8-R0.02-2.5H-2E-D4-50L	0.02	2.5	0.8	4	50	30°
1.51.0000.1022	CBN-D1.0-R0.02-3.5H-2E-D4-50L	0.02	3.5	1	4	50	30°
1.51.0000.1023	CBN-D1.5-R0.02-4.5H-2E-D4-50L	0.02	4.5	1.2	4	50	30°
1.51.0000.1024	CBN-D2.0-R0.05-6H-2E-D6-50L	0.05	6	2	6	50	30°
1.51.0000.1025	CBN-D3-R0.1-10H-2E-D6-50L	0.1	10	3	6	50	30°

Case of processing

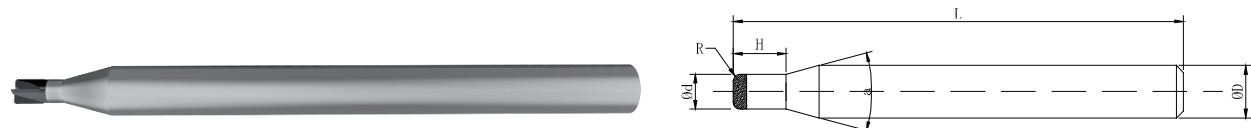


Processing Materials	Die Steel (HRC52)
Workpiece Size	20X20mm
Processing Depth	1.5mm
Tool Specification (R)	D1-R0.02mm
Surface Roughness (Ra)	Ra100nm
Spindle Speed(n)	40000 r/min
Feed Rate (V _f)	500 mm/min
Axial Depth of Cut (a _p)	0.005 mm
Radial Depth of Cut (a _e)	0.005 mm
Processing Time	5.5hr
Cooling Method	Oil Mist



WORLDIA® CBN Cubic Boron Nitride Cutting Tool

3 Flutes/4 Flutes Round Nose Milling Tool



Processing Materials (Note: ● Especially Suitable ○ Suitable)

Nickel Base Alloy	Copper Alloy	Aluminum Alloy	Resin	Stainless Steel	Hardened and Tempered Steel	Die Steel (HRC48-HRC68)	Hardened Steel	Cast Iron
				○	○	●	○	○

Parameter Specifications

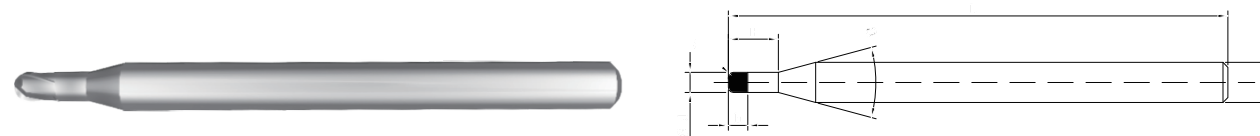
(In addition to the specifications listed, non-standard customizations can also be accepted)

Order Number	Specification	Arc(R)	Effective Length (H)	Blade Diameter (d)	Shank Diameter (D)	Total Length(L)	Taper Angle(a)
1.51.0000.1026	CBN-D0.5-R0.02-1.5H-3E-D4-50L	0.02	1.5	0.5	4	50	30°
1.51.0000.1027	CBN-D0.6-R0.02-2.0H-3E-D4-50L	0.02	2	0.6	4	50	30°
1.51.0000.1028	CBN-D0.8-R0.02-2.5H-3E-D4-50L	0.02	2.5	0.8	4	50	30°
1.51.0000.1029	CBN-D1-R0.02-3.5H-4E-D4-50L	0.02	3.5	1	4	50	30°
1.51.0000.1030	CBN-D1.5-R0.02-4.5H-4E-D4-50L	0.02	4.5	1.5	4	50	30°
1.51.0000.1031	CBN-D2-R0.05-6H-4E-D4-50L	0.05	6	2	4	50	30°
1.51.0000.1032	CBN-D3-R0.1-10H-4E-D4-50L	0.1	10	3	4	50	30°



WORLDIA® Carbide Tool

2 Flutes Ball End Tool



Processing Materials (Note: ● Especially Suitable ○ Suitable)

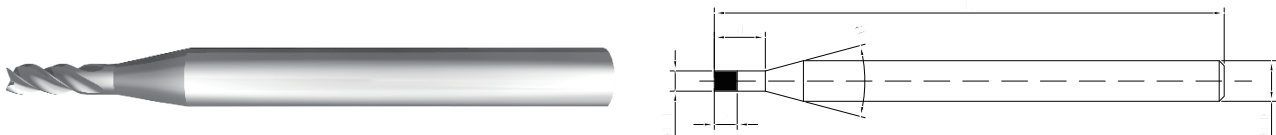
Nickel Base Alloy	Copper Alloy	Aluminum Alloy	Resin	Stainless Steel	Hardened and Tempered Steel	Die Steel (HRC48-HRC68)	Hardened Steel	Cast Iron
				○	○	●	○	○

Parameter Specifications

(In addition to the specifications listed, non-standard customizations can also be accepted)

Order Number	Specification	Arc(R)	Effective Length (H)	Blade Length (h)	Blade Diameter (d)	Shank Diameter (D)	Total Length(L)	Taper Angle(a)
1.31.0000.1001	WC-D0.2-R0.1-0.2H-2E-D-50L	0.1	0.2	0.2	0.2	4	50	30°
1.31.0000.1002	WC-D0.4-R0.2-0.6H-2E-D4-50L	0.2	0.6	0.6	0.4	4	50	30°
1.31.0000.1003	WC-D0.5-R0.25-0.8H-2E-D4-50L	0.25	0.8	0.8	0.5	4	50	30°
1.31.0000.1004	WC-D0.6-R0.3-0.9H-2E-D4-50L	0.3	0.9	0.9	0.6	4	50	30°
1.31.0000.1005	WC-D0.8-R0.4-1.0H-2E-D4-50L	0.4	1.0	1.0	0.8	4	50	30°
1.31.0000.1006	WC-D1.0-R0.5-1.2H-2E-D4-50L	0.5	2.0	1.2	1.0	4	50	30°
1.31.0000.1007	WC-D2.0-R1.0-1.6H-2E-D4-50L	1.0	4.0	1.6	2.0	4	50	30°
1.31.0000.1008	WC-D3.0-R1.5-2.4H-2E-D4-50L	1.5	6.0	2.4	3.0	4	50	30°
1.31.0000.1009	WC-D4.0-R2.0-6.0H-2E-D4-50L	2.0	/	6.0	4.0	4	50	30°
1.31.0000.1010	WC-D6.0-R3.0-9.0H-2E-D6-50L	3.0	/	9.0	6.0	6	50	/
1.31.0000.1011	WC-D8.0-R4.0-12H-2E-D8-60L	4.0	/	12.0	8.0	8	60	/
1.31.0000.1012	WC-D10-R5.0-15H-2E-D10-75L	5.0	/	15.0	10.0	10	75	/
1.31.0000.1013	WC-D12-R6.0-18H-2E-D12-100L	6.0	/	18.0	12.0	12	100	/
1.31.0000.1014	WC-D16-R8.0-24H-2E-D16-100L	8.0	/	24.0	16.0	16	100	/

2 Flutes/4 Flutes Flat End Tool



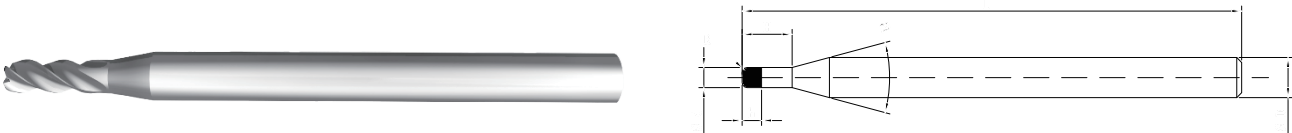
Processing Materials (Note: ● Especially Suitable ○ Suitable)

Nickel Base Alloy	Copper Alloy	Aluminum Alloy	Resin	Stainless Steel	Hardened and Tempered Steel	Die Steel (HRC48-HRC68)	Hardened Steel	Cast Iron
				○	○	●	○	○

Parameter Specifications

(In addition to the specifications listed, non-standard customizations can also be accepted)

Order Number	Specification	No. of Flutes (E)	Effective Length (H)	Blade Length (h)	Blade Diameter (d)	Shank Diameter (D)	Total Length(L)	Taper Angle(a)
1.31.0000.1015	WC-D0.2-0.4H-2E-D4-50L	2	/	0.4	0.2	4	50	30°
1.31.0000.1016	WC-D0.4-1.2H-2E-D4-50L	2	/	1.2	0.4	4	50	30°
1.31.0000.1017	WC-D0.5-1.5H-2E-D4-50L	2	/	1.5	0.5	4	50	30°
1.31.0000.1018	WC-D0.6-1.8H-2E-D4-50L	2	/	1.8	0.6	4	50	30°
1.31.0000.1019	WC-D0.8-2.4H-2E-D4-50L	2	/	2.4	0.8	4	50	30°
1.31.0000.1020	WC-D1.0-3.0H-2E-D4-50L	2	/	3.0	1.0	4	50	30°
1.31.0000.1021	WC-D1.0-3.0H-4E-D4-50L	4	/	3.0	1.0	4	50	30°
1.31.0000.1022	WC-D2.0-6.0H-4E-D4-50L	4	/	6.0	2.0	4	50	30°
1.31.0000.1023	WC-D4.0-11H-4E-D4-50L	4	/	11.0	4.0	4	50	/
1.31.0000.1024	WC-D6.0-16H-4E-D6-50L	4	/	16.0	6.0	6	50	/
1.31.0000.1025	WC-D8.0-20H-4E-D8-75L	4	/	20.0	8.0	8	75	/
1.31.0000.1026	WC-D10-25H-4E-D10-75L	4	/	25.0	10.0	10	75	/
1.31.0000.1027	WC-D12-30H-4E-D12-75L	4	/	30.0	12.0	12	75	/
1.31.0000.1028	WC-D20-45H-4E-D20-100L	4	/	45.0	20.0	20	100	/



Processing Materials (Note: ● Especially Suitable ○ Suitable)

Nickel Base Alloy	Copper Alloy	Aluminum Alloy	Resin	Stainless Steel	Hardened and Tempered Steel	Die Steel (HRC48-HRC68)	Hardened Steel	Cast Iron
				○	○	●	○	○

Parameter Specifications

(In addition to the specifications listed, non-standard customizations can also be accepted)

Order Number	Specification	No. of Flutes (E)	Effective Length (H)	Blade Length (h)	Blade Diameter (d)	Shank Diameter (D)	Total Length(L)	Taper Angle(a)
1.31.0000.1029	WC-D1-R0.2-2H-2E-D4-50L	2	0.2	0.2	1.0	4	50	30°
1.31.0000.1030	WC-D1-R0.2-2H-4E-D4-50L	4	0.2	2.0	1.0	4	50	30°
1.31.0000.1031	WC-D1.5-R0.2-3H-2E-D4-50L	2	0.3	3.0	1.5	4	50	30°
1.31.0000.1032	WC-D1.5-R0.2-3H-4E-D4-50L	4	0.2	3.0	1.5	4	50	30°
1.31.0000.1033	WC-D2-R0.2-4H-2E-D4-50L	2	0.2	4.0	2.0	4	50	30°
1.31.0000.1034	WC-D2-R0.2-4H-4E-D4-50L	4	0.2	4.0	2.0	4	50	30°
1.31.0000.1035	WC-D3-R0.2-6H-2E-D4-50L	2	0.2	6.0	3.0	4	50	30°
1.31.0000.1036	WC-D3-R0.2-6H-4E-D4-50L	4	0.2	6.0	3.0	4	50	30°
1.31.0000.1037	WC-D4-R0.2-8H-2E-D4-50L	2	0.2	8.0	4.0	4	50	/
1.31.0000.1038	WC-D4-R0.2-8H-4E-D4-50L	4	0.2	8.0	4.0	4	50	/
1.31.0000.1039	WC-D4-R0.5-8H-2E-D4-50L	2	0.5	8.0	4.0	4	50	/
1.31.0000.1040	WC-D4-R0.5-8H-4E-D4-50L	4	0.5	8.0	4.0	4	50	/
1.31.0000.1041	WC-D6-R0.2-12H-4E-D6-50L	4	0.2	12.0	6.0	6	50	/
1.31.0000.1042	WC-D6-R0.5-12H-4E-D6-50L	4	0.2	12.0	6.0	6	50	/
1.31.0000.1043	WC-D8-R0.5-16H-4E-D8-60L	4	0.5	16.0	8.0	8	60	/
1.31.0000.1044	WC-D8-R1.0-16H-4E-D8-60L	4	1.0	16.0	8.0	8	60	/
1.31.0000.1045	WC-D10-R0.5-20H-4E-D10-75L	4	0.5	20.0	10.0	10	75	/
1.31.0000.1046	WC-D10-R1-20H-4E-D10-75L	4	1.0	20.0	10.0	10	75	/
1.31.0000.1047	WC-D12-R0.5-24H-4E-D12-75L	4	0.5	24.0	12.0	12	75	/
1.31.0000.1048	WC-D12-R1.0-24H-4E-D12-75L	4	1.0	24.0	12.0	12	75	/