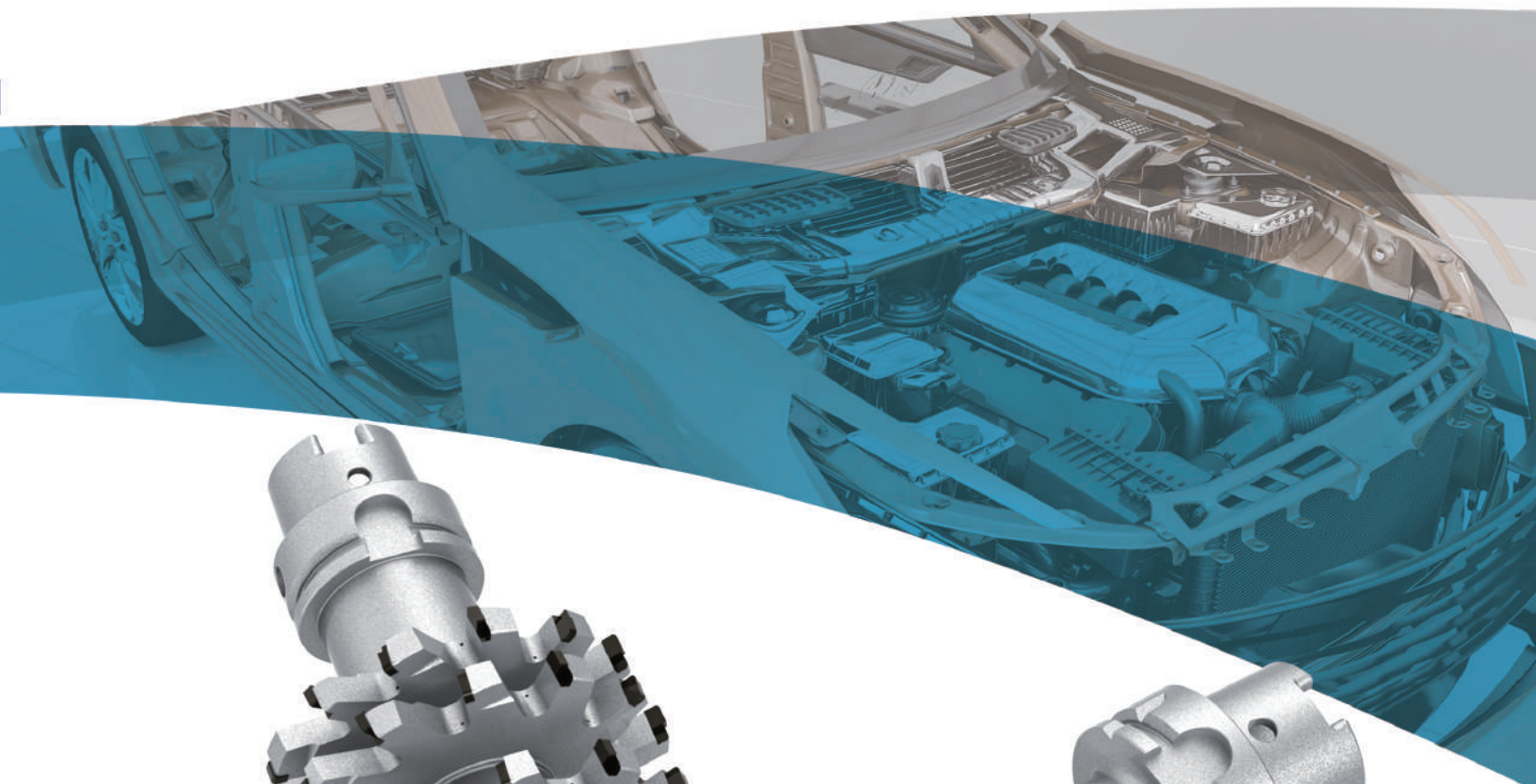




WORLDIA

08-T15-WBV10 EN



PCD Non-standard Tools

BEIJING WORLDIA DIAMOND TOOLS CO.,LTD.
JIAXING WORLDIA DIAMOND TOOLS CO.,LTD.



WORLDIA

As one of the first listed companies on the Shanghai Stock Exchange STAR Market, Beijing Worldia Diamond Tools Co., Ltd (stock code: 688028) is a national hi-tech enterprise who focuses upon R & D, production, sales and service of superhard cutting tools and superhard material products.

Our products and services are widely used in cutting for consumer electronics glass products such as touch screen, LCD panel etc. and for automotive core components including power system and other advanced manufacturing fields.



WORLDIA

嘉兴沃尔德金刚石工具有限公司

JIAXING WORLDIA DIAMOND TOOLS CO., LTD.



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WORLDIA® Specialty Tools Introduction

Products category:

1. Rotating tools: High-precision PCD/PCBN reamers, drill reamers, boring tools, end mills, profile cutters and etc.
2. Interchangeable: Welding/Integrated boring inserts, profile milling inserts, thread Inserts, roller inserts, planer tool;
3. Turning: Profile turning tools, internal/external groove cutters, thread turning tools:
4. Wear-resistant: high-precision PCD supportor, wear-resistant coupling, grinding wheel dresser.

Applications:

1. Processing of related parts and components in the automotive industry such as engines, wheel hubs, and brake disc;
2. Processing of key components in 3C industry, such as mobile phones, notebooks and tablet computers;
3. Processing of cast aluminum/cast iron such as air conditioner compressor housings and drive motors;
4. Processing of composite materials;
5. Processing of non-ferrous products such as resins, rubber, plastics, and semiconductors;
6. Processing of couplings, wear parts and etc. used in the oil drilling industry;
7. Processing of furniture, crafts and other wood-working industry.



Production Equipment



Equipment for specialty tools:

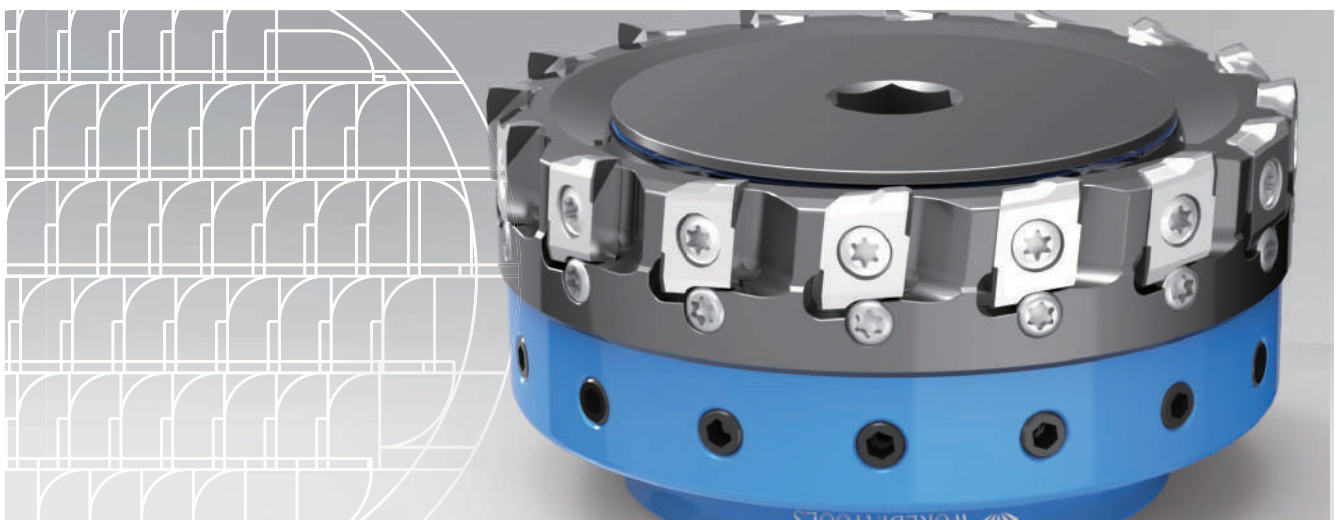
FANUC six-axis high-precision WEDM mainly undertakes the machining of specialty tools such as PCD/PCBN reamers, milling cutters and profile cutters. With the stable performance and reliable accuracy, the machine can keep higher edge and surface quality.

DMG high-precision laser cutting machine mainly undertakes the processing of specialty tools such as PCD/PCBN/CVD, which can ensure high processing precision and good appearance, especially in processing of PCD reamer chip breaker.

The Zoller pre-setting tools can pre-adjust, measure and manage all kinds of cutting tools conveniently and quickly. The equipment is equipped with HEIDENHAIN grating scales. The measurement data is accurate, repeatable and stable in reproducibility.

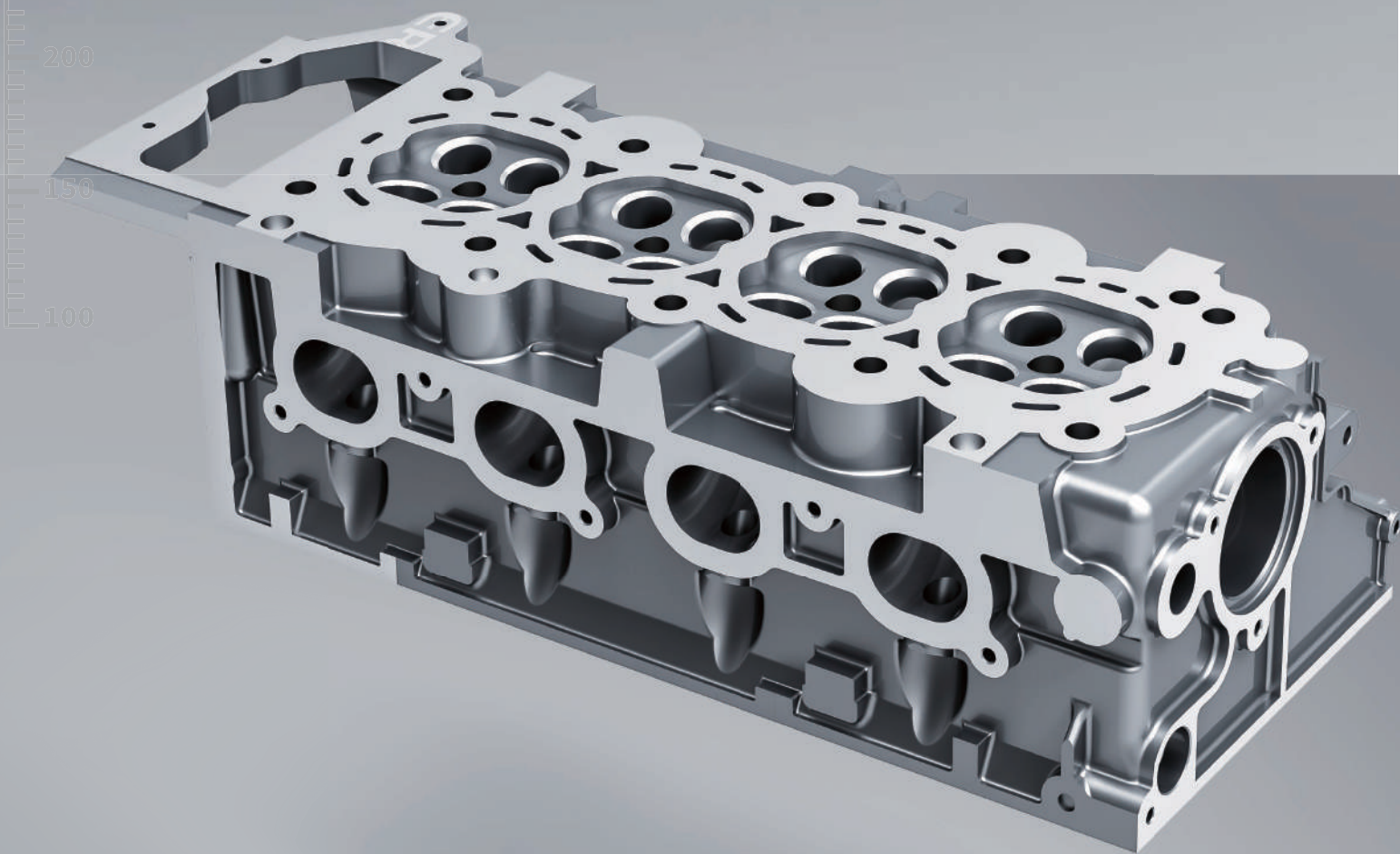
Z-MIKE laser diameter measuring instrument can collect measurement data automatically, process scientifically, calculate fast with stable measurement accuracy and high efficient measurement.

Haimer balance instrument can carry out single-side and double-side dynamic balance correction on the tool holder. It can achieve the accuracy of micron-level clamping by using laser marking and automatic positioning. The minimum measuring accuracy can be 0.5gmm, the calculation is accurate, and the operation is easy and quick.



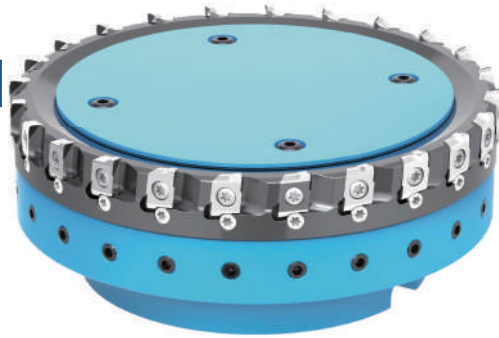
Cylinder Head

PCD SPECIALTY TOOLS
For Auto Parts



Face Milling Cutter

S=12000r/min
fz=0.05mm/z



Side and face milling

S=6000r/min
fz=0.03mm/z



Step Drilling Reamer

S=5500r/min
fz=0.12mm/z



End milling reamer

S=4000r/min
fz=0.03mm/z



Step Reamer

S=5500r/min
fz=0.05mm/z



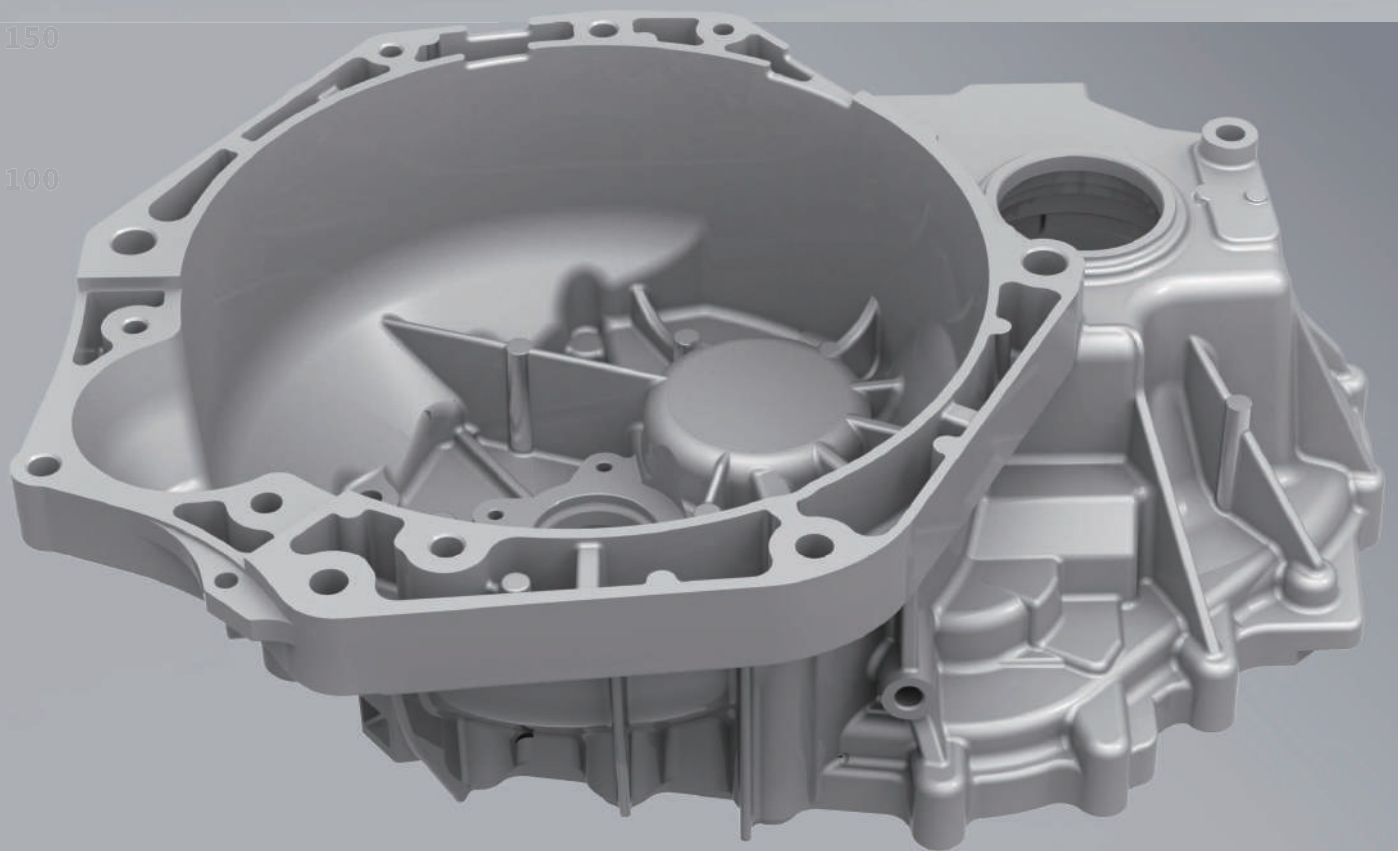
Step Reamer

S=3500r/min
fz=0.02mm/z



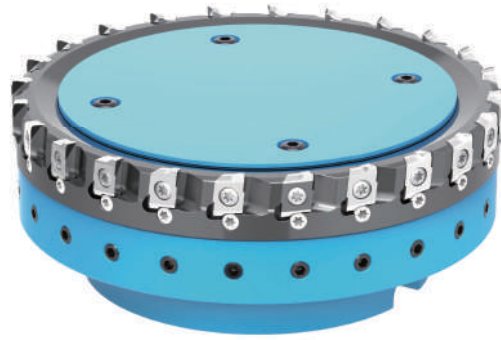
Clutch Housing

PCD SPECIALTY TOOLS
For Auto Parts



Face Milling Cutter

S=6000r/min
fz=0.03mm/z



Step boring cutter

S=4000r/min
fz=0.10mm/z



Step Reamer

S=5500r/min
fz=0.12mm/z



Guide bar boring cutter

S=2200r/min
fz=0.08mm/z



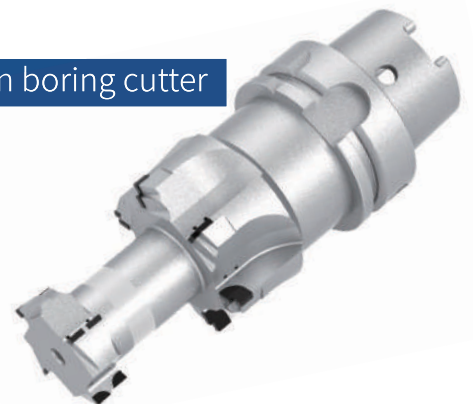
Forming milling cutter

S=6500r/min
fz=0.15mm/z



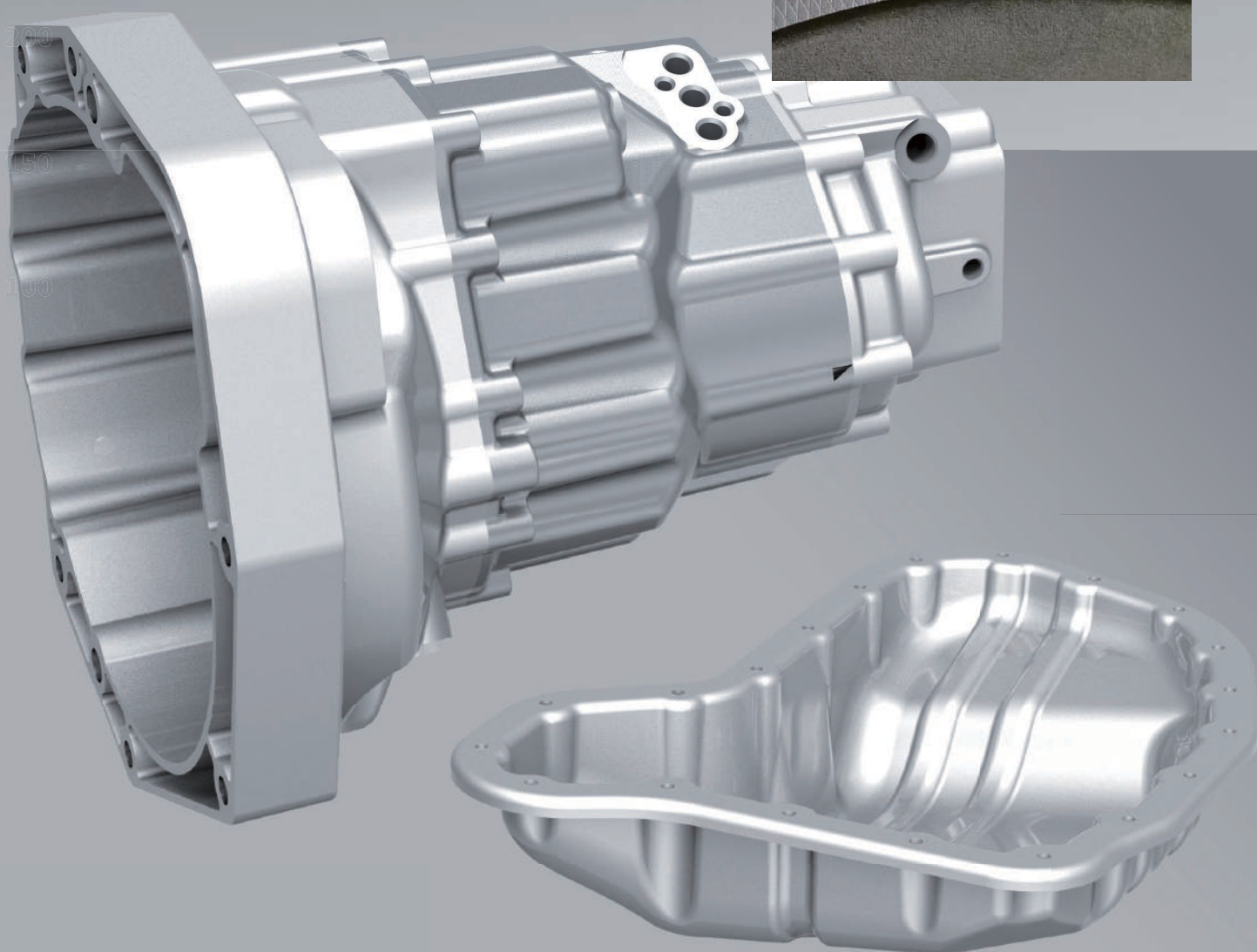
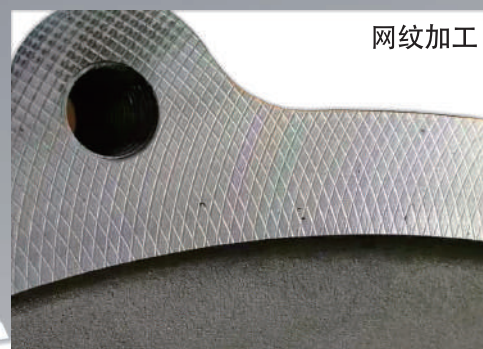
Combination boring cutter

S=3500r/min
fz=0.08mm/z



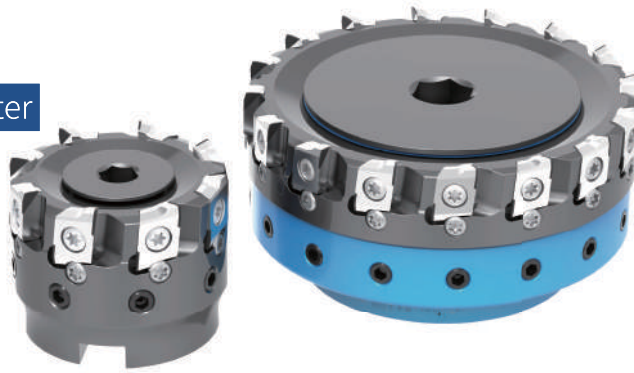
Gear-box/Oil Pan

PCD SPECIALTY TOOLS
For Auto Parts



Face Milling Cutter

S=6000r/min
fz=0.03mm/z



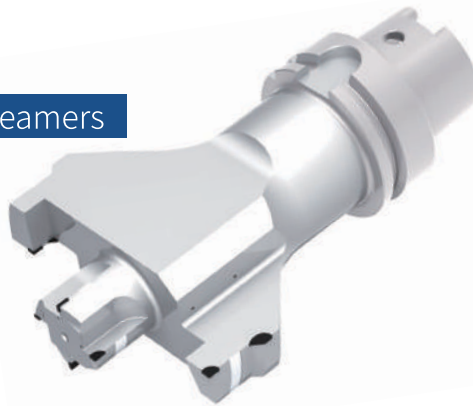
Step reamer

S=12000r/min
fz=0.05mm/z



Shell milling reamers

S=3500r/min
fz=0.02mm/z



Step reamer

S=4000r/min
fz=0.04mm/z



Multi-Edge End Mill

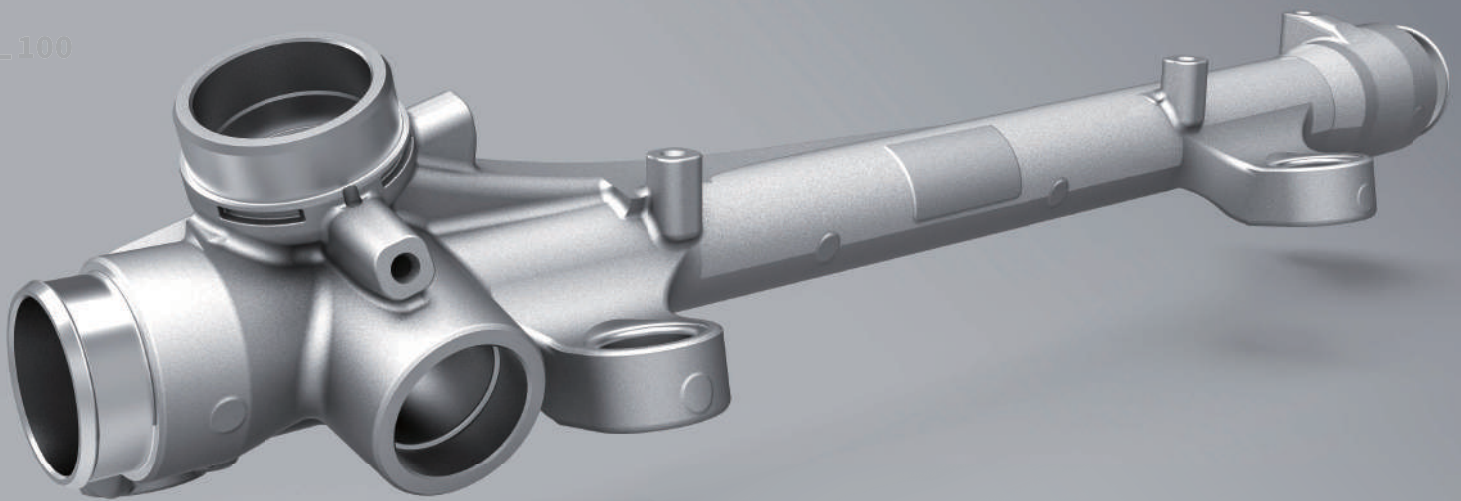
S=5500r/min
fz=0.05mm/z





Steering Gear

PCD SPECIALTY TOOLS
For Auto Parts



Step Drilling Reamer

S=4500r/min
fz=0.03mm/z



Multi step reamer

S=4000r/min
fz=0.08mm/z



Reverse chamfering milling cutter

S=3500r/min
fz=0.06mm/z



Multi step grooving milling cutter

S=3500r/min
fz=0.03mm/z



One step reamer

S=3500r/min
fz=0.1mm/z



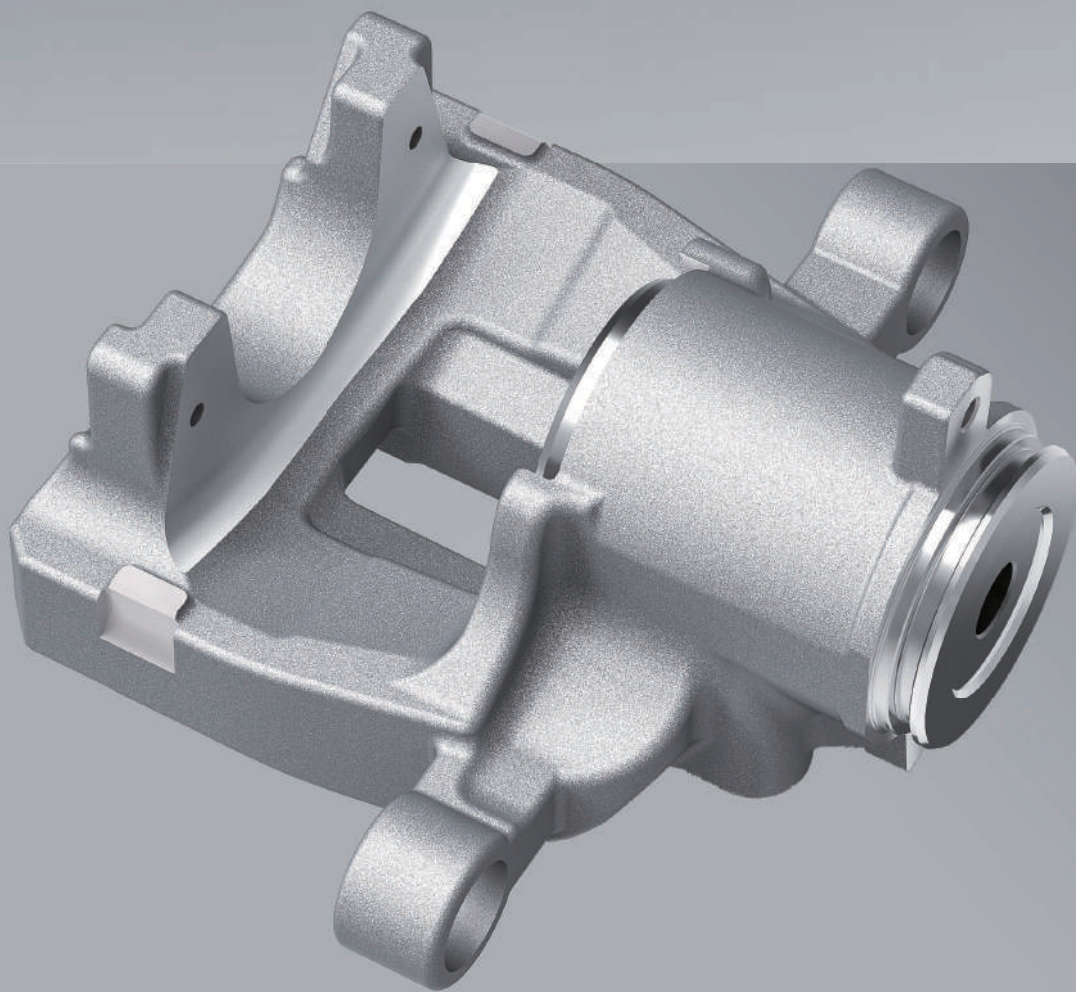
Shell Milling Cutter

S=3500r/min
fz=0.055mm/z



Brake Caliper

PCD SPECIALTY TOOLS
For Auto Parts



Side and face milling cutter

S=4500r/min
fz=0.035mm/z



Grooving cutter

S=6500r/min
fz=0.045mm/z



Shell milling grooving cutter

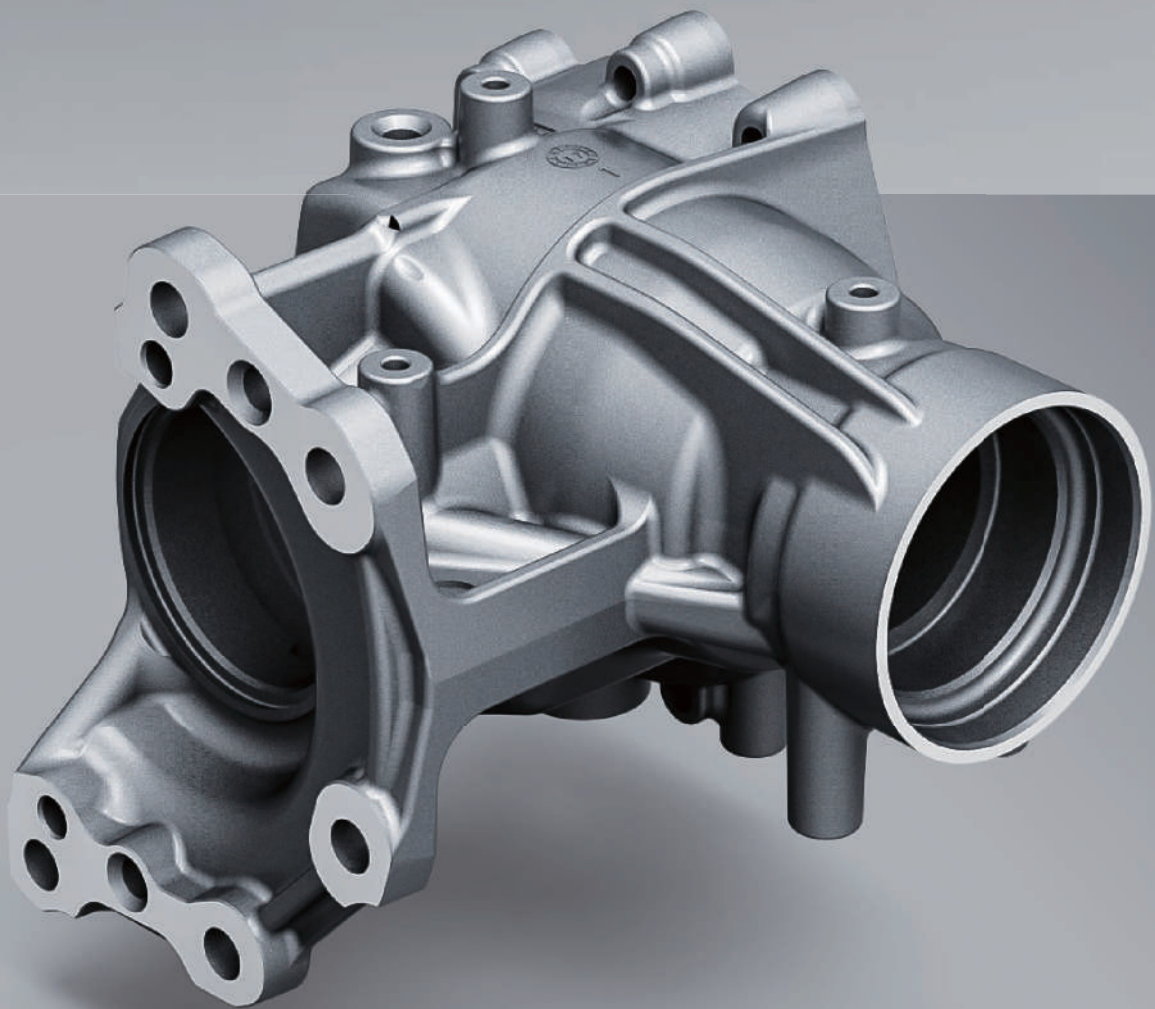
S=6000r/min
fz=0.05mm/z





Throttle Valve

PCD SPECIALTY TOOLS
For Auto Parts



Forming milling cutter

S=3500r/min
fz=0.045mm/z



Step Drilling Reamer

S=3600r/min
fz=0.015mm/z



Side milling cutter

S=4000r/min
fz=0.055mm/z



Step Drilling Reamer

S=3750r/min
fz=0.025mm/z



Step Reamer

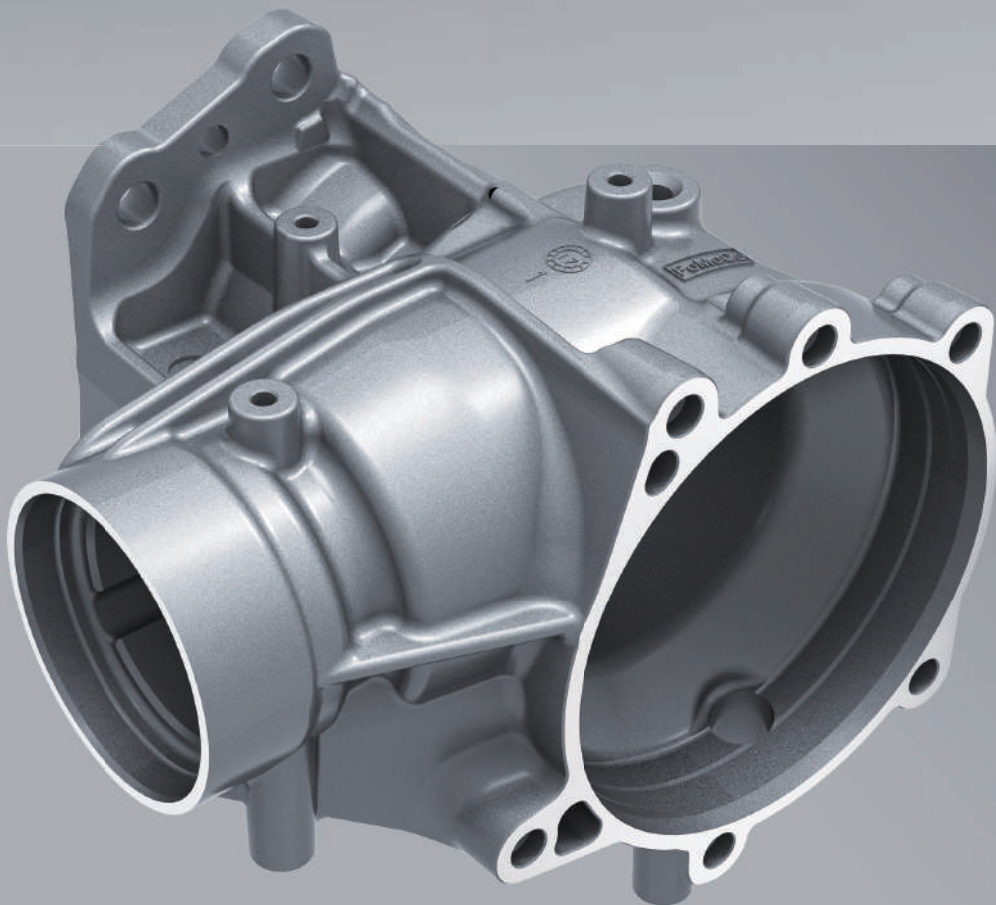
S=4200r/min
fz=0.015mm/z





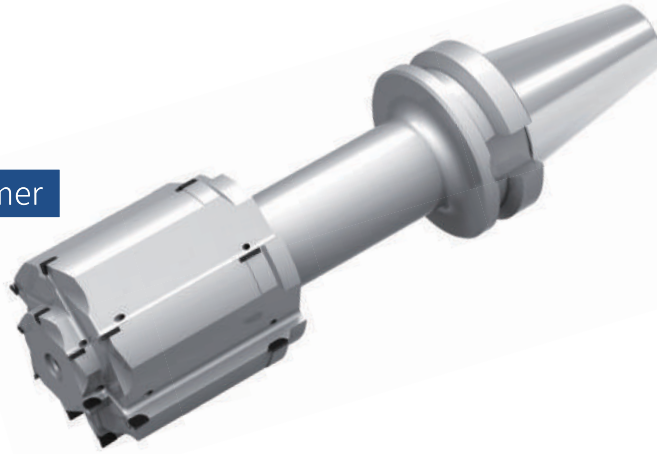
Throttle Valve

PCD SPECIALTY TOOLS
For Auto Parts



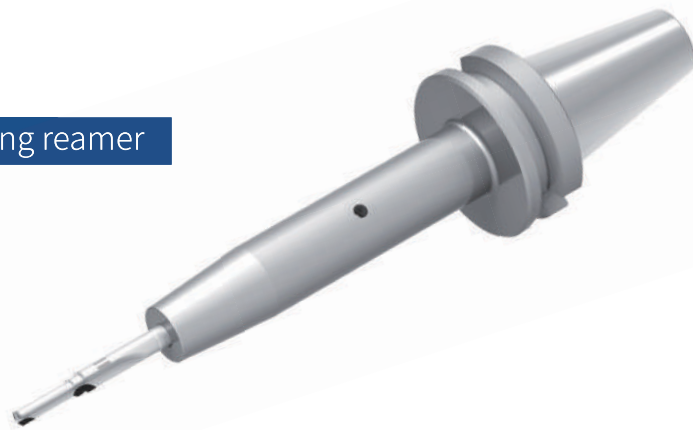
Dense-tooth multi step reamer

S=8000r/min
fz=0.05mm/z



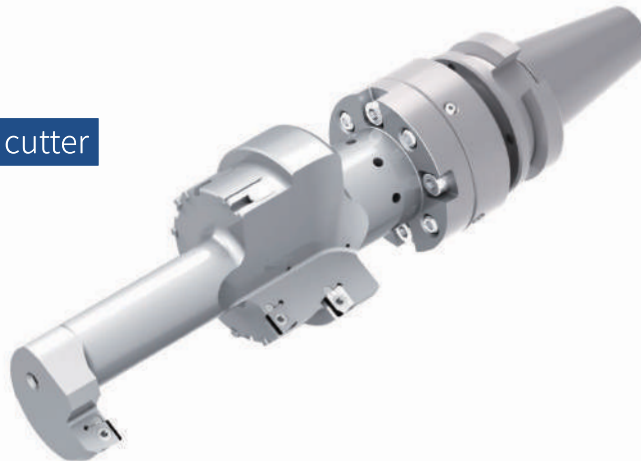
Deep-hole drilling reamer

S=3500r/min
fz=0.012mm/z



Adjustable precision boring cutter

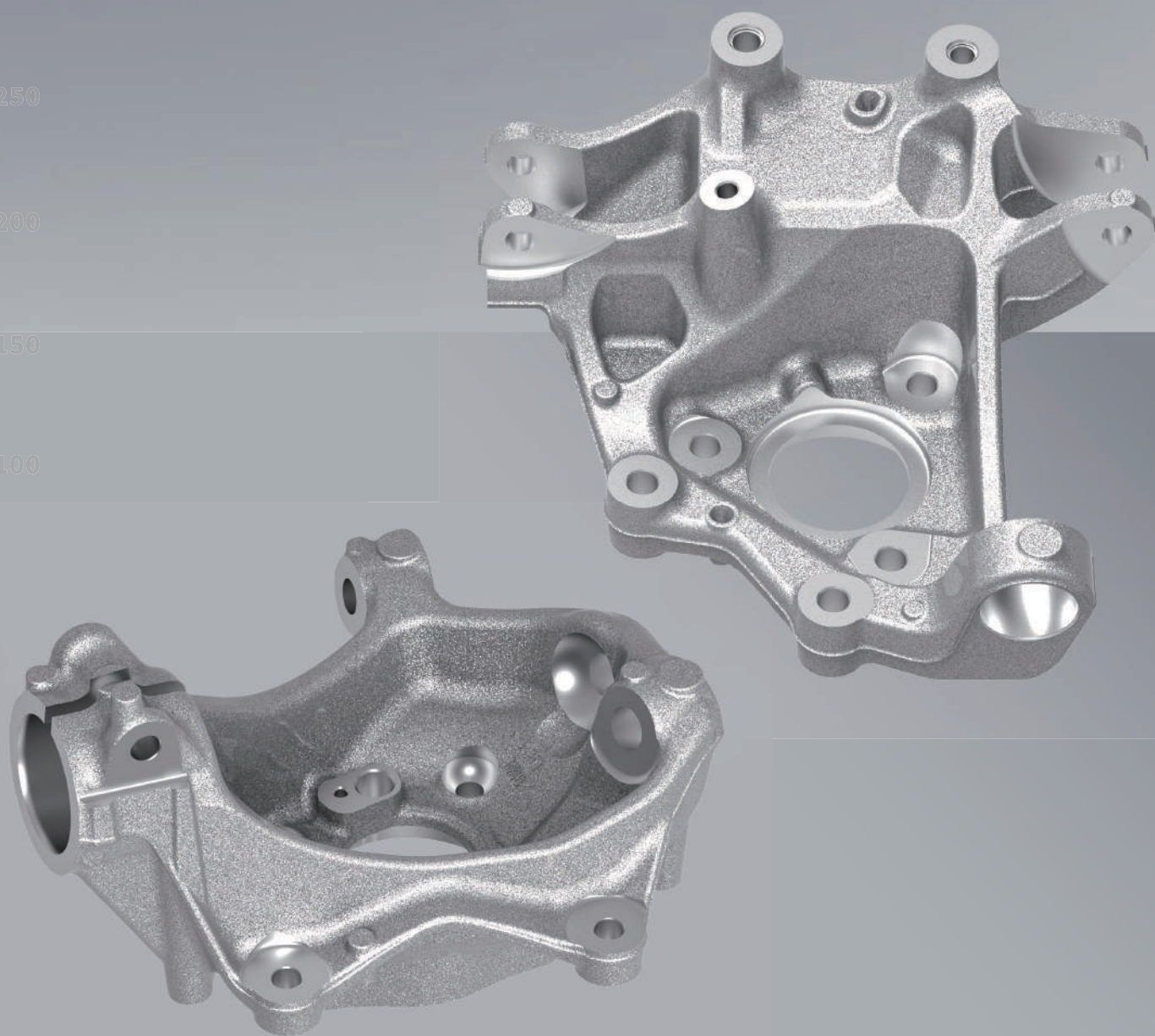
S=5500r/min
fz=0.05mm/z





Steering Knuckles

PCD SPECIALTY TOOLS
For Auto Parts



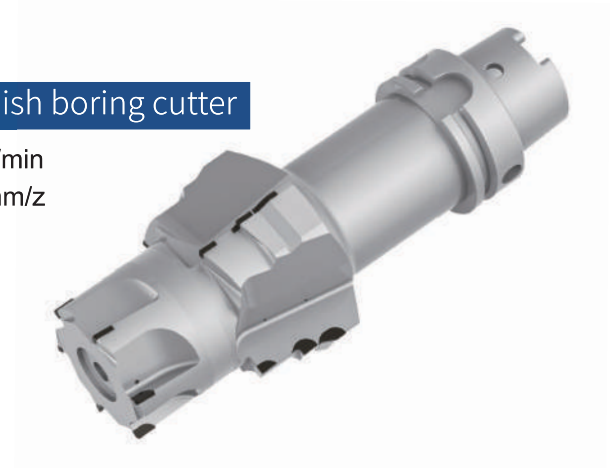
Rough&finish drilling Reamer

S=5500r/min
fz=0.09mm/z



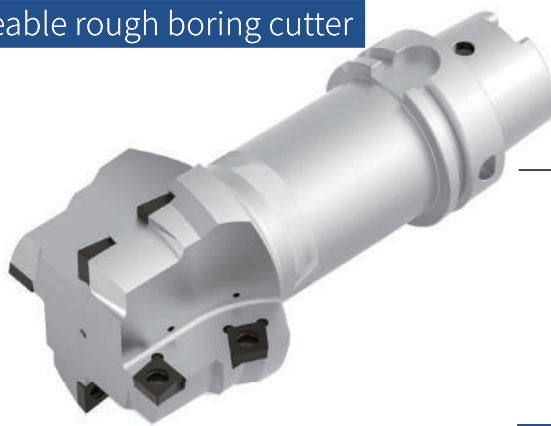
Step finish boring cutter

S=2500r/min
fz=0.10mm/z



Interchangeable rough boring cutter

S=1800r/min
fz=0.15mm/z



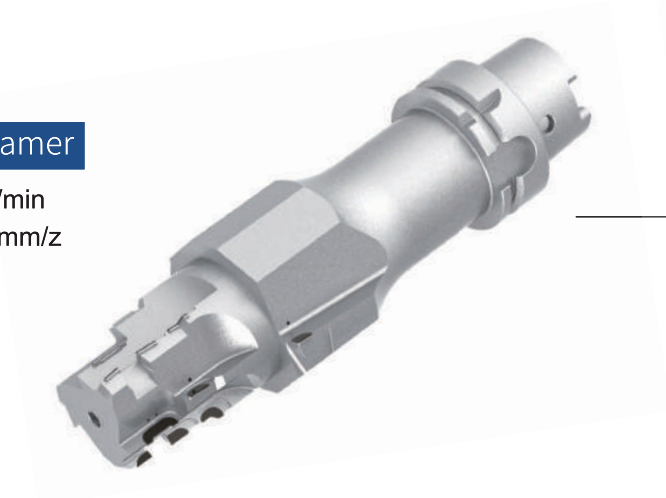
Contour milling cutter

S=3300r/min
fz=0.05mm/z



Step Reamer

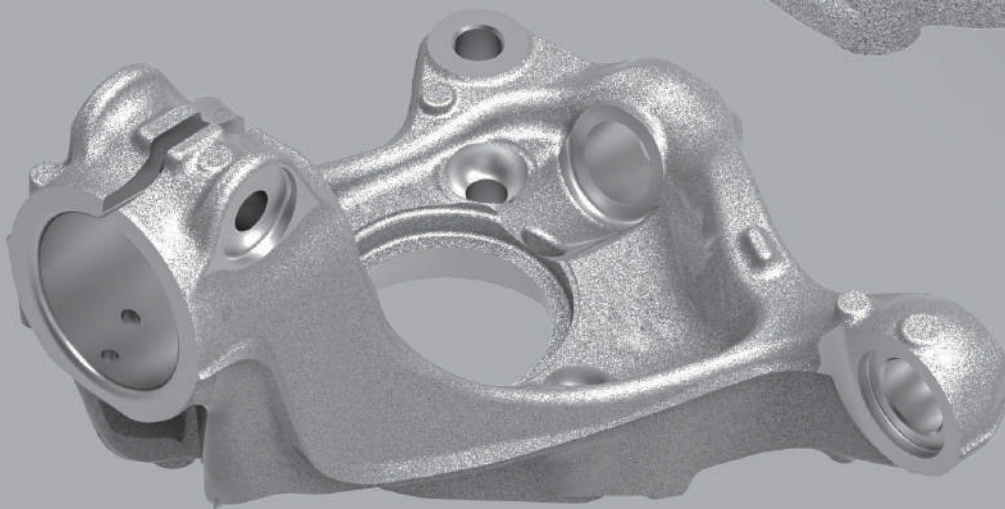
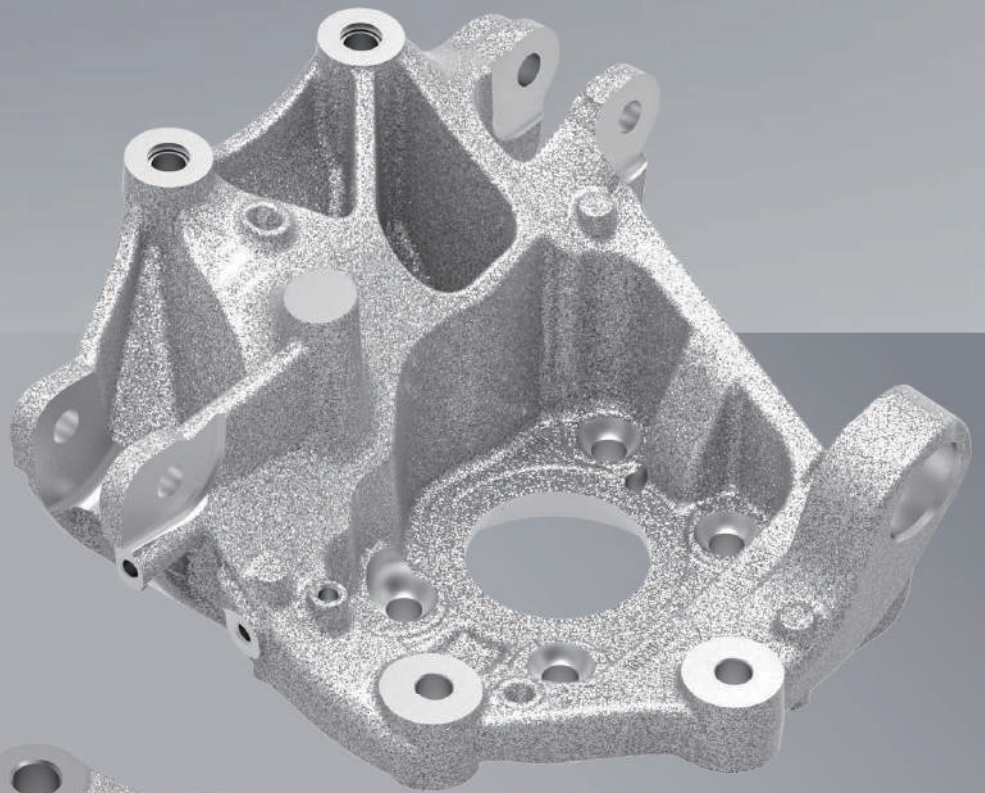
S=4200r/min
fz=0.015mm/z





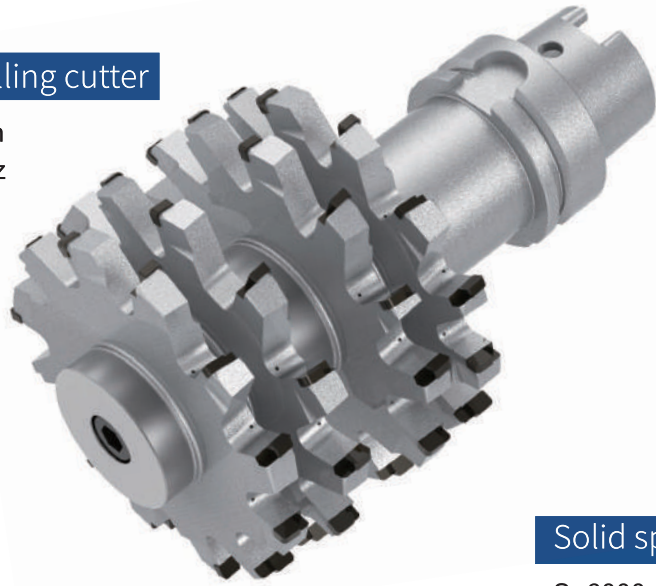
Steering Knuckles

PCD SPECIALTY TOOLS
For Auto Parts



4-layer milling cutter

S=3500r/min
fz=0.16mm/z



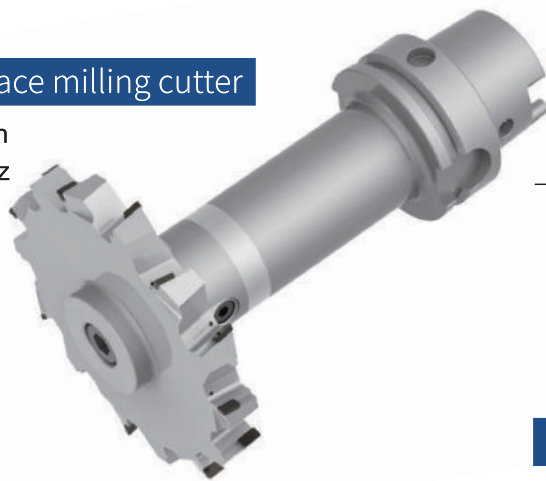
Solid spherical concave milling cutter

S=6000r/min
fz=0.10mm/z



side and face milling cutter

S=2600r/min
fz=0.08mm/z



End mill

S=6500r/min
fz=0.08mm/z





Turbocharger

PCD SPECIALTY TOOLS
For Auto Parts



Profile contour milling cutter

S=8000r/min
fz=0.15mm/z



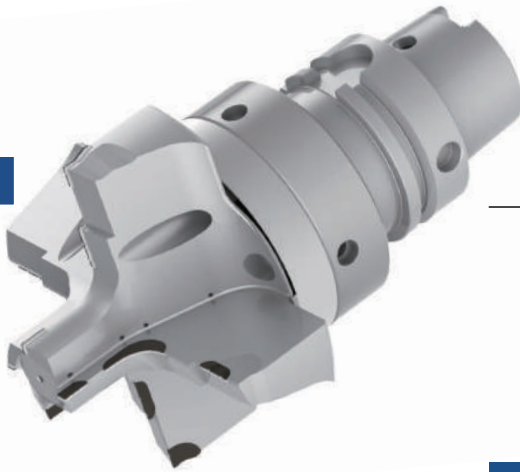
Taper milling cutter

S=6000r/min
fz=0.08mm/z



Forming drill

S=4500r/min
fz=0.10mm/z



Forming shell milling cutter

S=4200r/min
fz=0.13mm/z



Step drilling

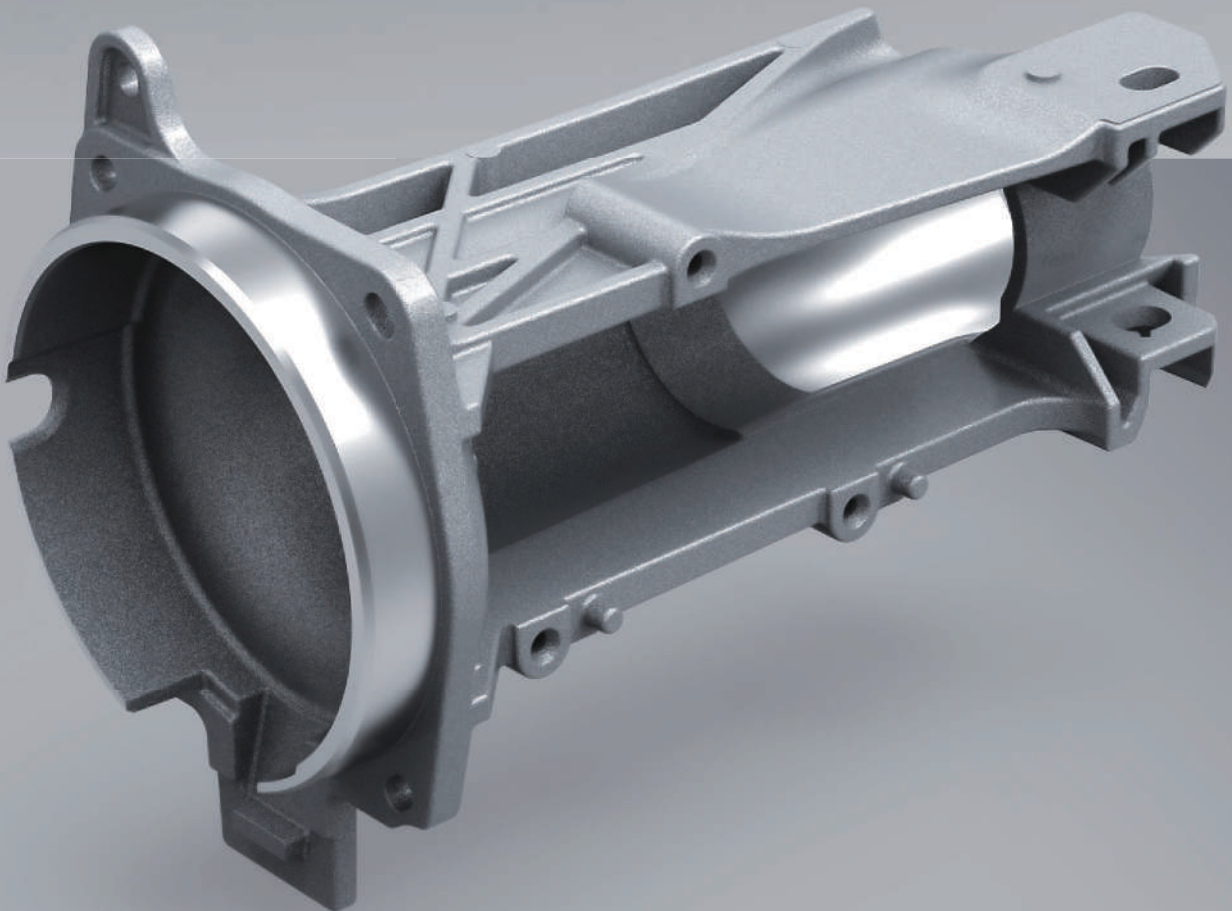
S=4000r/min
fz=0.10mm/z





Aluminium Products

PCD SPECIALTY TOOLS
For Auto Parts



Reverse milling cutter

S=8000r/min
fz=0.05mm/z



Adjustable precision boring cutter

S=8000r/min
fz=0.035mm/z



Side and face milling cutter

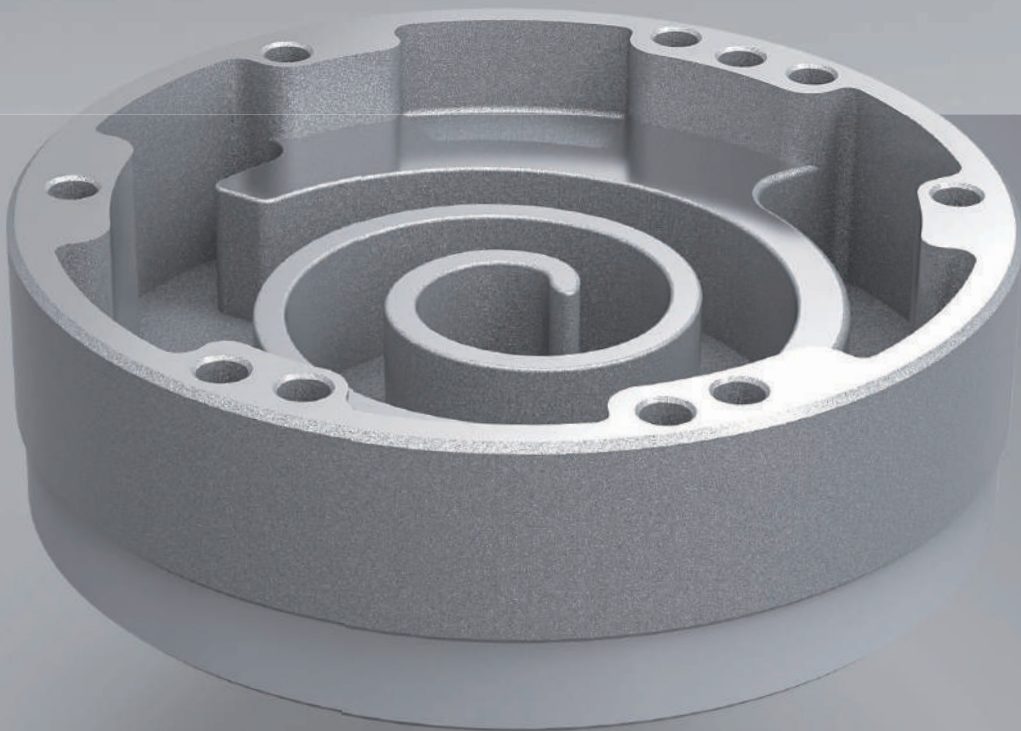
S=8000r/min
fz=0.065mm/z





Scroll Plate

PCD SPECIALTY TOOLS
For Auto Parts



Drilling Reamer

S=4500r/min
fz=0.05mm/z



Side milling cutter

S=39800r/min
fz=0.10mm/z



Helical milling cutter

S=39800r/min
fz=0.05mm/z



Helical milling cutter

Milling Cutter

PCD SPECIALTY TOOLS For Auto Parts

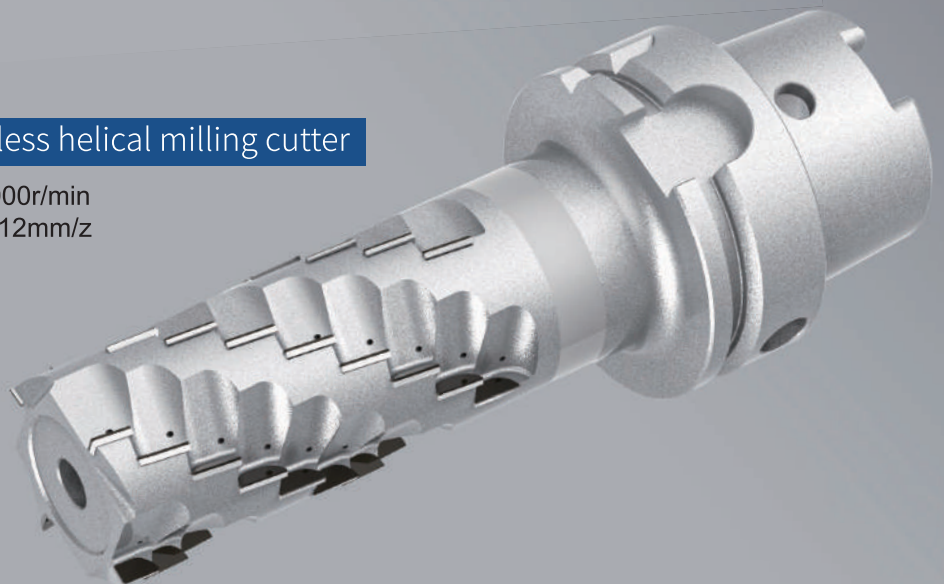
Slotted helical milling cutter

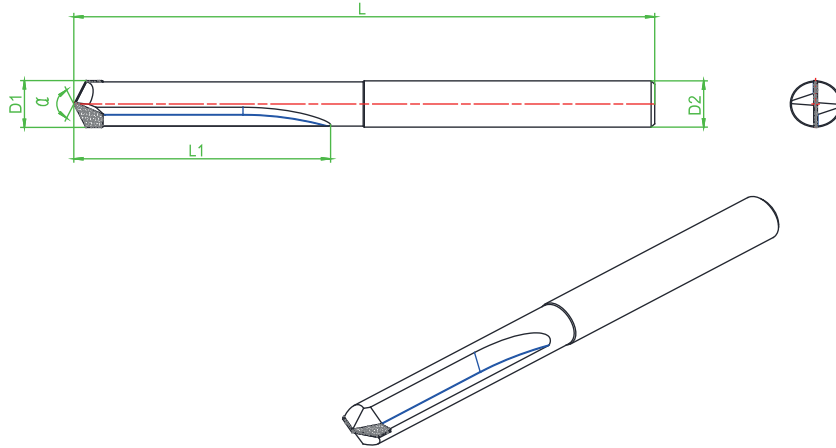
S=6000r/min
fz=0.15mm/z



Slotless helical milling cutter

S=8000r/min
fz=0.12mm/z

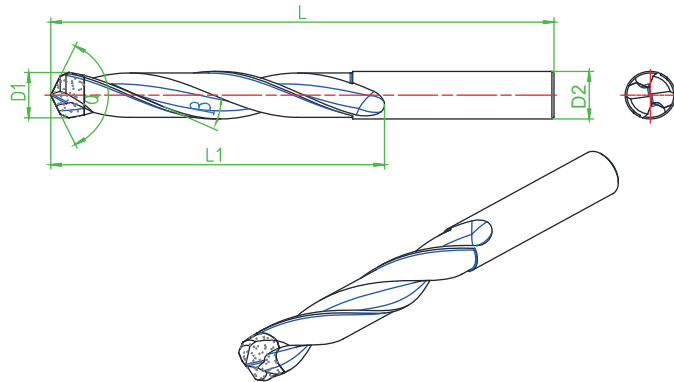




PCD Straight flute drill -- Metric

Type	Specification	D1	L1	D2	L	α	Material
RD1CR00SW-121R	D4*25*SD4*SL65	4	25	4	65	130°	PCD
RD1CR00SW-121R	D5*25*SD6*SL65	5	25	6	65	130°	PCD
RD1CR00SW-121R	D6*25*SD6*SL65	6	25	6	65	130°	PCD
RD1CR00SW-121R	D8*35*SD8*SL82	8	35	8	82	130°	PCD
RD1CR00SW-121R	D10*35*SD10*SL82	10	35	10	82	130°	PCD
RD1CR00SW-121R	D12*35*SD12*SL82	12	35	12	82	130°	PCD
RD1CR00SW-121R	D14*45*SD14*SL108	14	45	14	108	130°	PCD
RD1CR00SW-121R	D16*45*SD16*SL108	16	45	16	108	130°	PCD
RD1CR00SW-121R	D18*45*SD18*SL108	18	45	18	108	130°	PCD
RD1CR00SW-121R	D20*50*SD20*SL108	20	50	20	108	130°	PCD

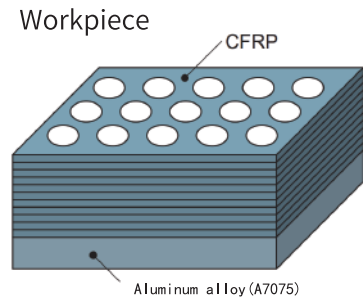
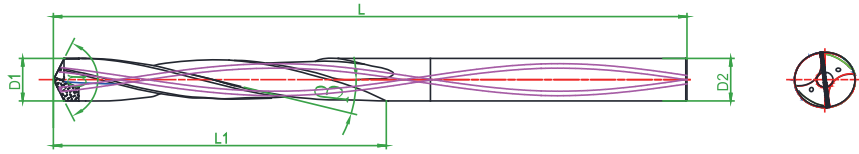
Customized size



PCD Solid Drill—Metric

Type	Specification	D1	L1	D2	L	α	β	Material
RD1CR00SW-121R	D2.5*25*SD4*SL57	2.5	25	4	57	130°	30°	PCD
RD1CR00SW-121R	D3.0*25*SD4*SL57	3.0	25	4	57	130°	30°	PCD
RD1CR00SW-121R	D3.5*25*SD4*SL57	3.5	25	4	57	130°	30°	PCD
RD1CR00SW-121R	D4.0*25*SD4*SL57	4.0	25	4	57	130°	30°	PCD
RD1CR00SW-121R	D4.5*30*SD6*SL68	4.5	30	6	68	130°	30°	PCD
RD1CR00SW-121R	D5.0*30*SD6*SL68	5.0	30	6	68	130°	30°	PCD
RD1CR00SW-121R	D5.5*30*SD6*SL68	5.5	30	6	68	130°	30°	PCD
RD1CR00SW-121R	D6.0*30*SD6*SL68	6.0	30	6	68	130°	30°	PCD
RD1CR00SW-121R	D6.5*35*SD8*SL86	6.5	35	8	86	130°	30°	PCD
RD1CR00SW-121R	D7.0*35*SD8*SL86	7.0	35	8	86	130°	30°	PCD
RD1CR00SW-121R	D7.5*35*SD8*SL86	7.5	35	8	86	130°	30°	PCD
RD1CR00SW-121R	D8.0*35*SD8*SL86	8.0	35	8	86	130°	30°	PCD

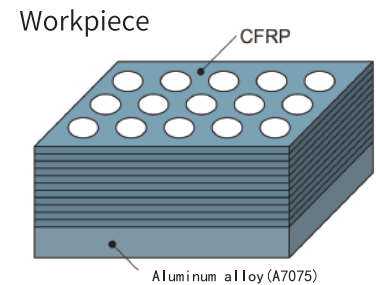
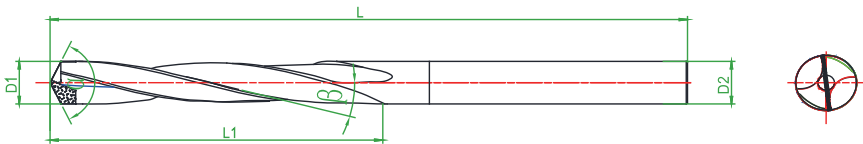
Customized size



PCD twist drill-- Metric(with internal coolant)

Type	Specification	D1	L1	D2	L	α	β	Material
RD1CRAMSW-121R	D4*25*SD4*SL65	4	25	4	65	130°	15°	PCD
RD1CRAMSW-121R	D5*25*SD6*SL65	5	25	6	65	130°	15°	PCD
RD1CRAMSW-121R	D6*25*SD6*SL65	6	25	6	65	130°	15°	PCD
RD1CRAMSW-121R	D8*35*SD8*SL82	8	35	8	82	130°	15°	PCD
RD1CRAMSW-121R	D10*35*SD10*SL82	10	35	10	82	130°	15°	PCD
RD1CRAMSW-121R	D12*35*SD12*SL82	12	35	12	82	130°	15°	PCD
RD1CRAMSW-121R	D14*45*SD14*SL108	14	45	14	108	130°	15°	PCD
RD1CRAMSW-121R	D16*45*SD16*SL108	16	45	16	108	130°	15°	PCD
RD1CRAMSW-121R	D18*45*SD18*SL108	18	45	18	108	130°	15°	PCD
RD1CRAMSW-121R	D20*50*SD20*SL108	20	50	20	108	130°	15°	PCD

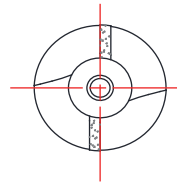
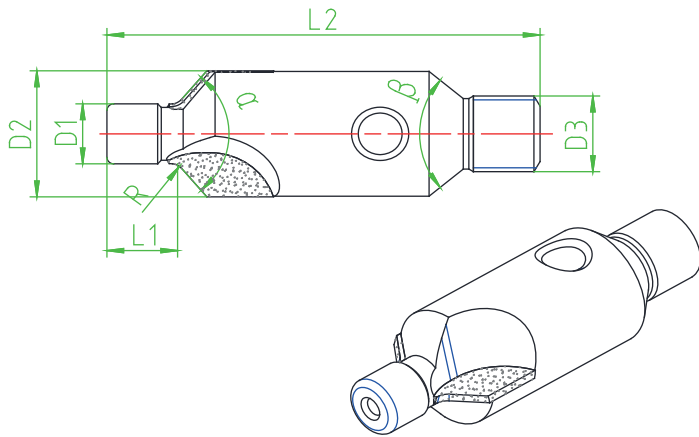
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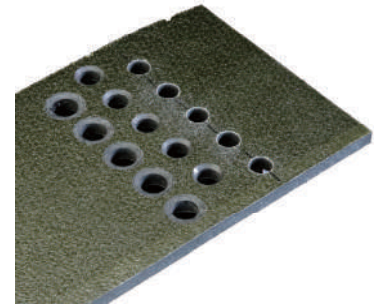
PCD double angle twist drill-- Metric (without internal cold)

Type	Specification	D1	L1	D2	L	α	β	Material
RD1CR00SW-121R	D4*25*SD4*SL65	4	25	4	65	130°	15°	PCD
RD1CR00SW-121R	D5*25*SD6*SL65	5	25	6	65	130°	15°	PCD
RD1CR00SW-121R	D6*25*SD6*SL65	6	25	6	65	130°	15°	PCD
RD1CR00SW-121R	D8*35*SD8*SL82	8	35	8	82	130°	15°	PCD
RD1CR00SW-121R	D10*35*SD10*SL82	10	35	10	82	130°	15°	PCD
RD1CR00SW-121R	D12*35*SD12*SL82	12	35	12	82	130°	15°	PCD
RD1CR00SW-121R	D14*45*SD14*SL108	14	45	14	108	130°	15°	PCD
RD1CR00SW-121R	D16*45*SD16*SL108	16	45	16	108	130°	15°	PCD
RD1CR00SW-121R	D18*45*SD18*SL108	18	45	18	108	130°	15°	PCD
RD1CR00SW-121R	D20*50*SD20*SL108	20	50	20	108	130°	15°	PCD

Customized size



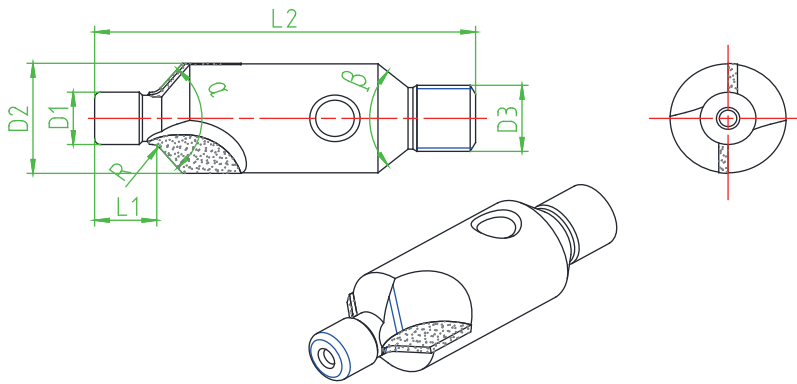
Workpiece



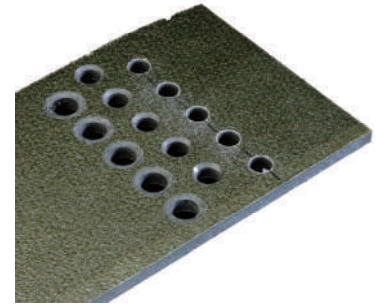
PCD socket drill-- Metric

Type	Specification	D1	L1	D2	α	L2	β	D3	R	Z	Material
RP1TRRSPC-122R	D4. 14*7. 5*D10-A100*36	4. 140	7. 5	10	100°	36	120°	1/4--28	0. 9	2	PCD
RP1TRRSPC-122R	D4. 14*7. 5*D10-A130*36	4. 140	7. 5	10	130°	36	120°	1/4--28	0. 6	2	PCD
RP1TRRSPC-122R	D4. 8*7. 5*D10-A100*36. 58	4. 800	7. 5	10	100°	36. 58	120°	1/4--28	0. 9	2	PCD
RP1TRRSPC-122R	D4. 8*7. 5*D10-A130*36. 58	4. 800	7. 5	10	130°	36. 58	120°	1/4--28	0. 6	2	PCD
RP1TRRSPC-122R	D5. 53*7. 5*D10-A100*36. 58	5. 530	7. 5	10	100°	36. 58	120°	1/4--28	0. 9	2	PCD
RP1TRRSPC-122R	D5. 53*7. 5*D10-A130*36. 58	5. 530	7. 5	10	130°	36. 58	120°	1/4--28	0. 6	2	PCD
RP1TRRSPC-122R	D6. 32*7. 5*D14-A100*37. 82	6. 320	7. 5	14	100°	37. 82	120°	1/4--28	0. 9	2	PCD
RP1TRRSPC-122R	D6. 32*7. 5*D14-A130*37. 82	6. 320	7. 5	14	130°	37. 82	120°	1/4--28	0. 6	2	PCD
RP1TRRSPC-122R	D7. 91*7. 5*D18-A100*39. 73	7. 910	7. 5	18	100°	39. 73	120°	1/4--28	1. 15	2	PCD
RP1TRRSPC-122R	D7. 91*7. 5*D18-A130*39. 73	7. 910	7. 5	18	130°	39. 73	120°	1/4--28	0. 9	2	PCD
RP1TRRSPC-122R	D9. 5*8. 5*D20-A100*49. 5	9. 500	8. 5	20	100°	49. 5	120°	3/4--24	1. 15	2	PCD
RP1TRRSPC-122R	D9. 5*8. 5*D20-A130*49. 5	9. 500	8. 5	20	130°	49. 5	120°	3/4--24	0. 9	2	PCD
RP1TRRSPC-122R	D11. 09*8. 5*D23-A100*51	11. 090	8. 5	23	100°	51	120°	3/4--24	1. 4	2	PCD
RP1TRRSPC-122R	D11. 09*8. 5*D23-A130*51	11. 090	8. 5	23	130°	51	120°	3/4--24	1. 2	2	PCD
RP1TRRSPC-122R	D12. 68*8. 5*D26-A100*49	12. 680	8. 5	26	100°	49	120°	3/4--24	1. 4	2	PCD
RP1TRRSPC-122R	D12. 68*8. 5*D26-A130*49	12. 680	8. 5	26	130°	49	120°	3/4--24	1. 2	2	PCD

Customized size



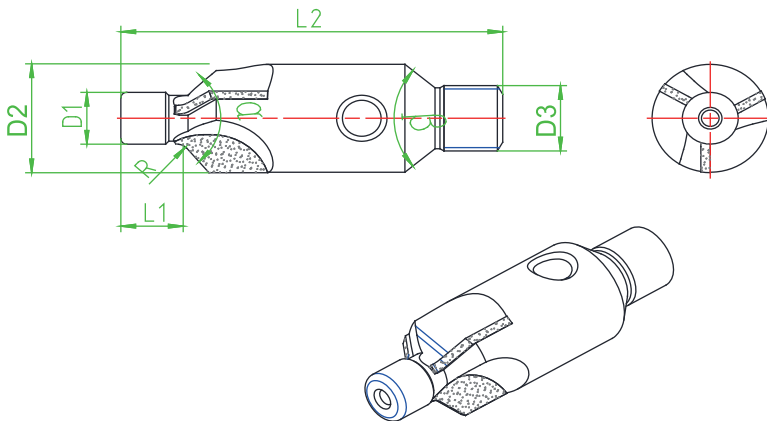
Workpiece



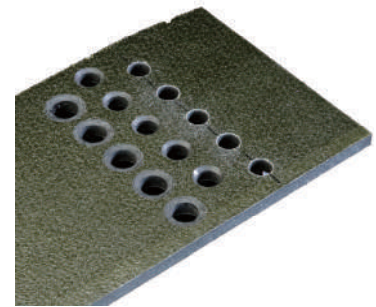
PCD socket drill--Imperial

Type	Specification	D1	L1	D2	α	L2	β	D3	R	Z	Material
RP1TRRSPC-122R	D4.8*7.62*D9.525-A100*25.4	4.800	7.62	9.525	100°	25.4	120°	1/4--28	1	2	PCD
RP1TRRSPC-122R	D6.299*15.24*D13.97-A100*38.1	6.299	15.24	13.970	100°	38.1	120°	1/4--28	1	2	PCD
RP1TRRSPC-122R	D6.578*7.62*D13.97-A130*25.4	6.578	7.62	13.970	130°	25.4	120°	1/4--28	1	2	PCD
RP1TRRSPC-122R	D9.525*7.62*D22.225-A100*38.1	9.525	7.62	22.225	100°	38.1	120°	3/8--24	1	2	PCD
RP1TRRSPC-122R	D9.525*7.62*D22.225-A130*38.1	9.525	7.62	22.225	130°	38.1	120°	3/8--24	1	2	PCD
RP1TRRSPC-122R	D7.925*7.62*D22.225-A130*38.1	7.925	7.62	22.225	130°	38.1	120°	3/8--24	1	2	PCD
RP1TRRSPC-122R	D7.925*7.62*D22.225-A100*38.1	7.925	7.62	22.225	100°	38.1	120°	3/8--24	1	2	PCD

Customized size



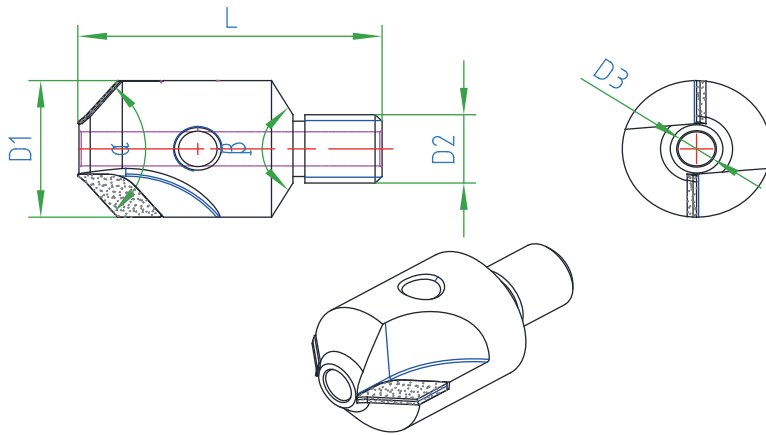
Workpiece



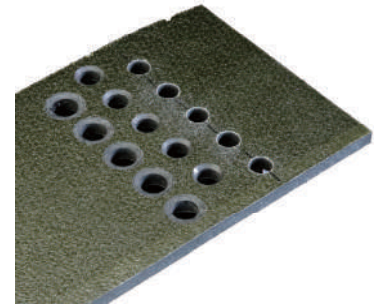
PCD socket drill--Imperial

Type	Specification	D1	L1	D2	α	L2	β	D3	R	Z	Material
RP1TRRSPC-133R	D4.8*7.62*D9.525-A100*25.4	4.800	7.62	9.525	100°	25.4	120°	1/4--28	1	3	PCD
RP1TRRSPC-133R	D6.299*15.24*D13.97-A100*38.1	6.299	15.24	13.970	100°	38.1	120°	1/4--28	1	3	PCD
RP1TRRSPC-133R	D6.578*7.62*D13.97-A130*25.4	6.578	7.62	13.970	130°	25.4	120°	1/4--28	1	3	PCD
RP1TRRSPC-133R	D9.525*7.62*D22.225-A100*38.1	9.525	7.62	22.225	100°	38.1	120°	3/8--24	1	3	PCD
RP1TRRSPC-133R	D9.525*7.62*D22.225-A130*38.1	9.525	7.62	22.225	130°	38.1	120°	3/8--24	1	3	PCD
RP1TRRSPC-133R	D7.925*7.62*D22.225-A130*38.1	7.925	7.62	22.225	130°	38.1	120°	3/8--24	1	3	PCD
RP1TRRSPC-133R	D7.925*7.62*D22.225-A100*38.1	7.925	7.62	22.225	100°	38.1	120°	3/8--24	1	3	PCD

Customized size



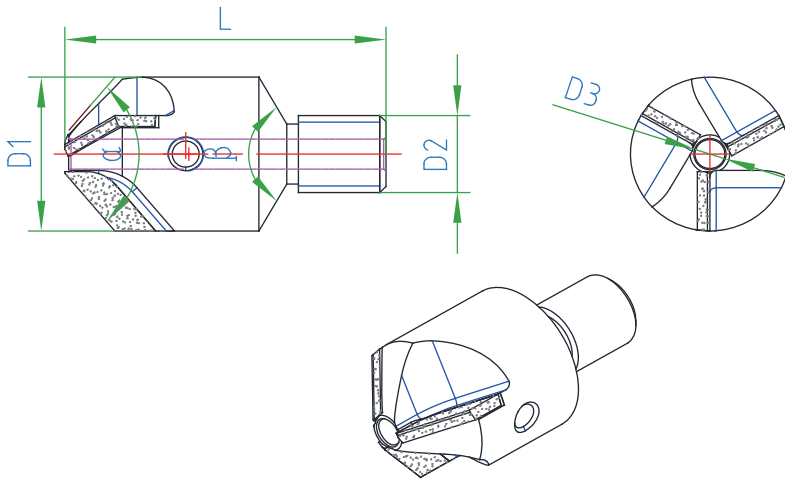
Workpiece



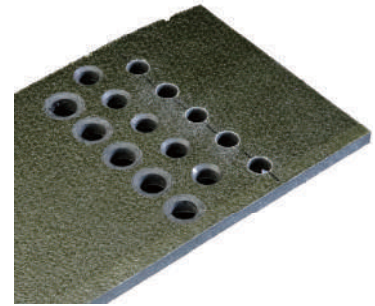
PCD socket drill with pin hole--Imperial

Type	Specification	D1	D3	α	L	D2	β	Z	Material
RP1TR00PC-122R	D10*D2-A100*28	10	2	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D10*D2.5-A100*28	10	2.5	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D10*D3-A100*28	10	3	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D10*D3.5-A100*28	10	3.5	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D14*D2.5-A100*28	14	2.5	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D14*D3-A100*28	14	3	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D14*D3.5-A100*28	14	3.5	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D14*D4-A100*28	14	4	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D17*D3-A100*28	17	3	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D17*D3.5-A100*28	17	3.5	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D17*D4-A100*28	17	4	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D17*D5-A100*28	17	5	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D21*D3.5-A100*28	21	3.5	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D21*D4-A100*28	21	4	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D21*D5-A100*28	21	5	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D22.225*D6-A100*28	22.225	6	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D25.4*D6-A100*28	25.4	6	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D28.575*D6-A100*28	28.575	6	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D31.75*D6-A100*28	31.75	6	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D34.925*D6-A100*28	34.925	6	100°	28	1/4-28 UNF	120°	2	PCD
RP1TR00PC-122R	D38.1*D6-A100*28	38.1	6	100°	28	1/4-28 UNF	120°	2	PCD

Customized size



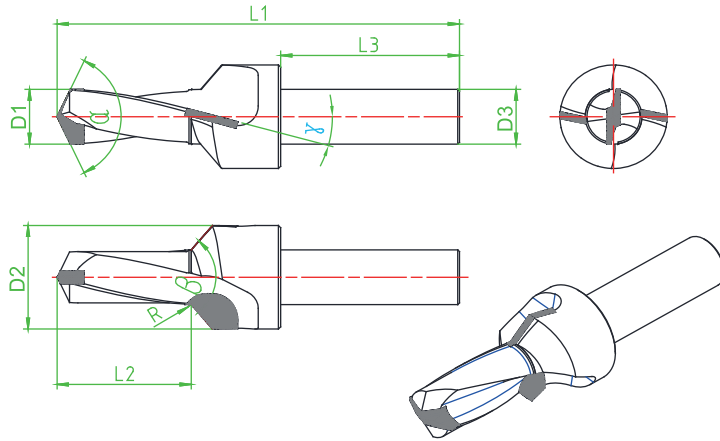
Workpiece



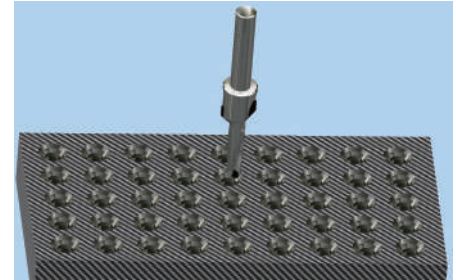
PCD socket drill with pin hole--Imperial

Type	Specification	D1	D3	α	L	D2	β	Z	Material
RP1TR00PC-133R	D10*D2-A100*28	10	2	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D10*D2.5-A100*28	10	2.5	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D10*D3-A100*28	10	3	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D10*D3.5-A100*28	10	3.5	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D14*D2.5-A100*28	14	2.5	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D14*D3-A100*28	14	3	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D14*D3.5-A100*28	14	3.5	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D14*D4-A100*28	14	4	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D17*D3-A100*28	17	3	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D17*D3.5-A100*28	17	3.5	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D17*D4-A100*28	17	4	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D17*D5-A100*28	17	5	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D21*D3.5-A100*28	21	3.5	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D21*D4-A100*28	21	4	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D21*D5-A100*28	21	5	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D22.225*D6-A100*28	22.225	6	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D25.4*D6-A100*28	25.4	6	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D28.575*D6-A100*28	28.575	6	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D31.75*D6-A100*28	31.75	6	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D34.925*D6-A100*28	34.925	6	100°	28	1/4-28 UNF	120°	3	PCD
RP1TR00PC-133R	D38.1*D6-A100*28	38.1	6	100°	28	1/4-28 UNF	120°	3	PCD

Customized size



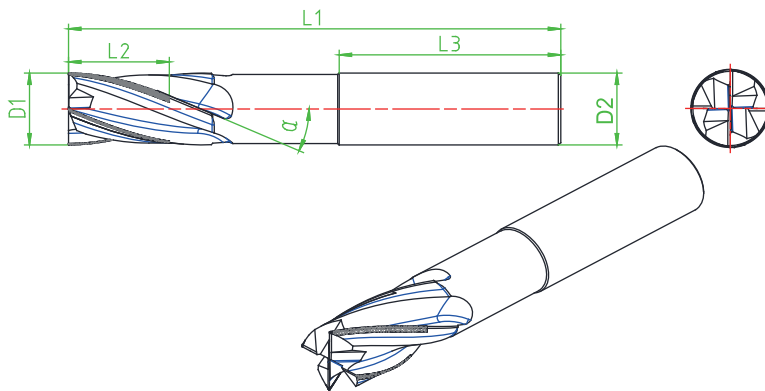
Workpiece



PCD twist drill countersink -- Metric(US/Imperial standard, refer to Conversion Table at Page 45)

Type	Specification	D1	L2	D2	D3	L1	α	β	γ	L3	Z	Material
RD1CR00SW-122R	D4*30*D10*SD8*SL90	4	30	10	8	90	120°	100°	15°	40	2	PCD
RD1CR00SW-122R	D5*30*D12*SD10*SL90	5	30	12	10	90	120°	100°	15°	40	2	PCD
RD1CR00SW-122R	D6*30*D14*SD12*SL90	6	30	14	12	90	120°	100°	15°	40	2	PCD
RD1CR00SW-122R	D8*30*D18*SD16*SL90	8	30	18	16	90	120°	100°	15°	40	2	PCD
RD1CR00SW-122R	D10*30*D20*SD18*SL90	10	30	20	18	90	120°	100°	15°	40	2	PCD
RD1CR00SW-122R	D12*30*D22*SD20*SL90	12	30	22	20	90	120°	100°	15°	40	2	PCD

Customized size



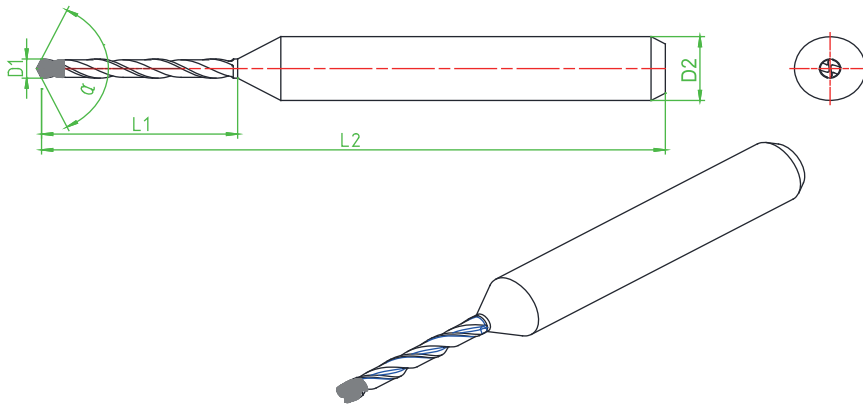
Workpiece



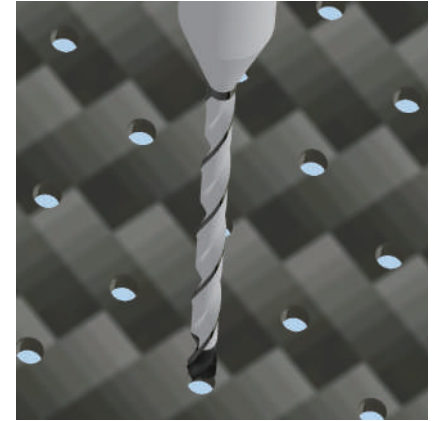
PCD spiral milling cutter -- Metric(US/Imperial standard, refer to Conversion Table at Page 45)

Type	Specification	D1	L2	D2	L1	L4	α	Z	Material
RE1CR00SW-144R	D6*20*SD6*SL80	6	20	6	80	45	15° /30°	4	PCD
RE1CR00SW-144R	D8*20*SD8*SL80	8	20	8	80	45	15° /30°	4	PCD
RE1CR00SW-144R	D10*20*SD10*SL80	10	20	10	80	45	15° /30°	4	PCD
RE1CR00SW-144R	D12*20*SD12*SL100	12	20	12	100	45	15° /30°	4	PCD
RE1CR00SW-144R	D14*20*SD16*SL100	14	20	16	100	45	15° /30°	4	PCD
RE1CR00SW-144R	D16*20*SD16*SL100	16	20	16	100	45	15° /30°	4	PCD
RE1CR00SW-144R	D20*25*SD20*SL110	20	25	20	110	50	15° /30°	4	PCD

Customized size



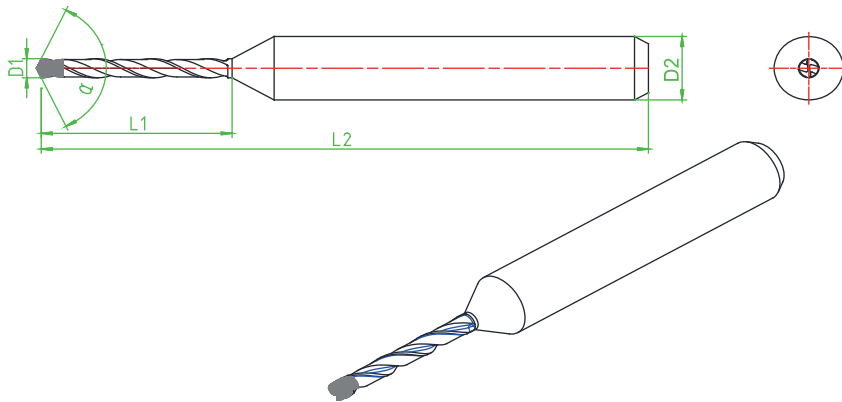
Workpiece



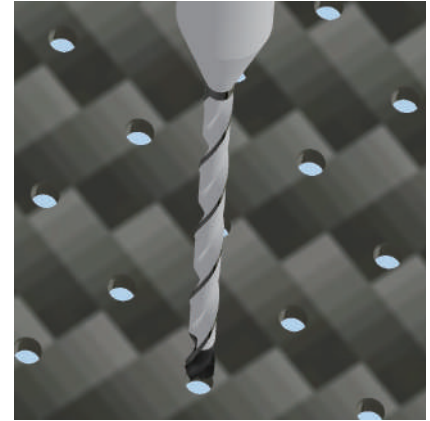
PCD ultra-small drill—Imperial

Type	Specification	D1	L1	D2	L2	α	Material
RD1CR00SW-122R	D0.40*8*SD3.175*SL38	0.40	8	3.175	38	130°	PCD
RD1CR00SW-122R	D0.45*8*SD3.175*SL38	0.45	8	3.175	38	130°	PCD
RD1CR00SW-122R	D0.50*8*SD3.175*SL38	0.50	8	3.175	38	130°	PCD
RD1CR00SW-122R	D0.55*8*SD3.175*SL38	0.55	8	3.175	38	130°	PCD
RD1CR00SW-122R	D0.60*8*SD3.175*SL38	0.60	8	3.175	38	130°	PCD
RD1CR00SW-122R	D0.65*8*SD3.175*SL38	0.65	8	3.175	38	130°	PCD
RD1CR00SW-122R	D0.70*8*SD3.175*SL38	0.70	8	3.175	38	130°	PCD
RD1CR00SW-122R	D0.75*8*SD3.175*SL38	0.75	8	3.175	38	130°	PCD
RD1CR00SW-122R	D0.80*8*SD3.175*SL38	0.80	8	3.175	38	130°	PCD
RD1CR00SW-122R	D0.85*8*SD3.175*SL38	0.85	8	3.175	38	130°	PCD
RD1CR00SW-122R	D0.90*8*SD3.175*SL38	0.90	8	3.175	38	130°	PCD
RD1CR00SW-122R	D0.95*8*SD3.175*SL38	0.95	8	3.175	38	130°	PCD
RD1CR00SW-122R	D1.0*8*SD3.175*SL38	1.00	8	3.175	38	130°	PCD
RD1CR00SW-122R	D1.1*11*SD3.175*SL38	1.10	11	3.175	38	130°	PCD
RD1CR00SW-122R	D1.2*11*SD3.175*SL38	1.20	11	3.175	38	130°	PCD
RD1CR00SW-122R	D1.3*11*SD3.175*SL38	1.30	11	3.175	38	130°	PCD
RD1CR00SW-122R	D1.4*11*SD3.175*SL38	1.40	11	3.175	38	130°	PCD
RD1CR00SW-122R	D1.5*11*SD3.175*SL38	1.50	11	3.175	38	130°	PCD
RD1CR00SW-122R	D1.6*11*SD3.175*SL38	1.60	11	3.175	38	130°	PCD
RD1CR00SW-122R	D1.7*11*SD3.175*SL38	1.70	11	3.175	38	130°	PCD
RD1CR00SW-122R	D1.8*11*SD3.175*SL38	1.80	11	3.175	38	130°	PCD
RD1CR00SW-122R	D1.9*11*SD3.175*SL38	1.90	11	3.175	38	130°	PCD
RD1CR00SW-122R	D2.0*11*SD3.175*SL38	2.00	11	3.175	38	130°	PCD
RD1CR00SW-122R	D2.1*11*SD3.175*SL38	2.10	11	3.175	38	130°	PCD
RD1CR00SW-122R	D2.2*11*SD3.176*SL38	2.20	11	3.175	38	130°	PCD
RD1CR00SW-122R	D2.3*11*SD3.175*SL38	2.30	11	3.175	38	130°	PCD
RD1CR00SW-122R	D2.4*11*SD3.175*SL38	2.40	11	3.175	38	130°	PCD
RD1CR00SW-122R	D2.5*11*SD3.175*SL38	2.50	11	3.175	38	130°	PCD

Customized size



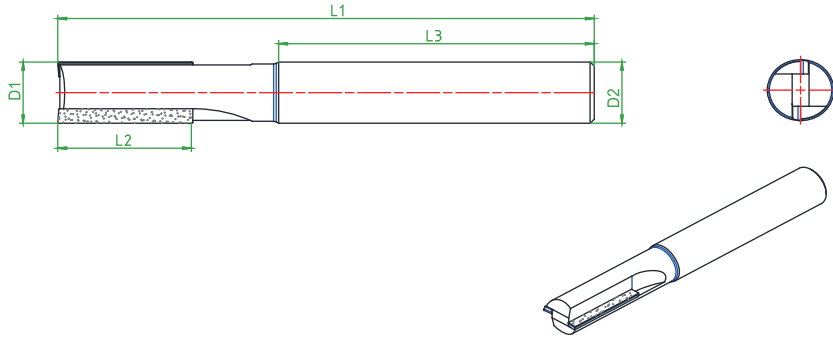
Workpiece



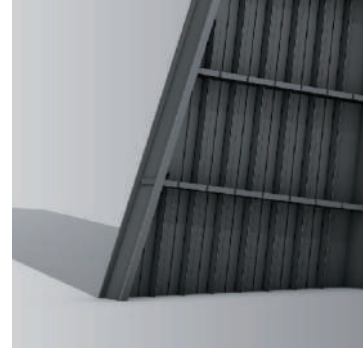
PCD ultra-small drill--Metric(US/Imperial standard, refer to Conversion Table at Page 45)

Type	Specification	D1	L1	D2	L2	α	Material
RD1CR00SW-122R	D0.40*8*SD4*SL38	0.40	8	4	38	130°	PCD
RD1CR00SW-122R	D0.45*8*SD4*SL38	0.45	8	4	38	130°	PCD
RD1CR00SW-122R	D0.50*8*SD4*SL38	0.50	8	4	38	130°	PCD
RD1CR00SW-122R	D0.55*8*SD4*SL38	0.55	8	4	38	130°	PCD
RD1CR00SW-122R	D0.60*8*SD4*SL38	0.60	8	4	38	130°	PCD
RD1CR00SW-122R	D0.65*8*SD4*SL38	0.65	8	4	38	130°	PCD
RD1CR00SW-122R	D0.70*8*SD4*SL38	0.70	8	4	38	130°	PCD
RD1CR00SW-122R	D0.75*8*SD4*SL38	0.75	8	4	38	130°	PCD
RD1CR00SW-122R	D0.80*8*SD4*SL38	0.80	8	4	38	130°	PCD
RD1CR00SW-122R	D0.85*8*SD4*SL38	0.85	8	4	38	130°	PCD
RD1CR00SW-122R	D0.90*8*SD4*SL38	0.90	8	4	38	130°	PCD
RD1CR00SW-122R	D0.95*8*SD4*SL38	0.95	8	4	38	130°	PCD
RD1CR00SW-122R	D1.0*8*SD4*SL38	1.00	8	4	38	130°	PCD
RD1CR00SW-122R	D1.1*11*SD4*SL38	1.10	11	4	38	130°	PCD
RD1CR00SW-122R	D1.2*11*SD4*SL38	1.20	11	4	38	130°	PCD
RD1CR00SW-122R	D1.3*11*SD4*SL38	1.30	11	4	38	130°	PCD
RD1CR00SW-122R	D1.4*11*SD4*SL38	1.40	11	4	38	130°	PCD
RD1CR00SW-122R	D1.5*11*SD4*SL38	1.50	11	4	38	130°	PCD
RD1CR00SW-122R	D1.6*11*SD4*SL38	1.60	11	4	38	130°	PCD
RD1CR00SW-122R	D1.7*11*SD4*SL38	1.70	11	4	38	130°	PCD
RD1CR00SW-122R	D1.8*11*SD4*SL38	1.80	11	4	38	130°	PCD
RD1CR00SW-122R	D1.9*11*SD4*SL38	1.90	11	4	38	130°	PCD
RD1CR00SW-122R	D2.0*11*SD4*SL38	2.00	11	4	38	130°	PCD
RD1CR00SW-122R	D2.1*11*SD4*SL38	2.10	11	4	38	130°	PCD
RD1CR00SW-122R	D2.2*11*SD4*SL38	2.20	11	4	38	130°	PCD
RD1CR00SW-122R	D2.3*11*SD4*SL38	2.30	11	4	38	130°	PCD
RD1CR00SW-122R	D2.4*11*SD4*SL38	2.40	11	4	38	130°	PCD
RD1CR00SW-122R	D2.5*11*SD4*SL38	2.50	11	4	38	130°	PCD

Customized size



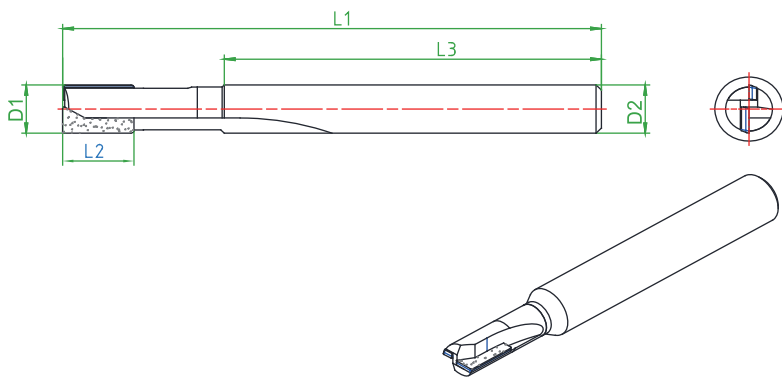
Workpiece



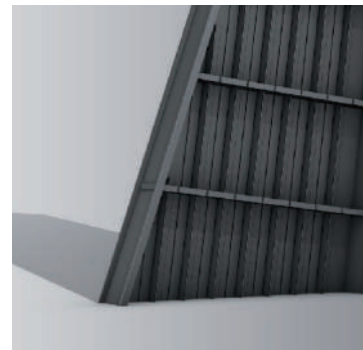
PCD milling cutter(not over center)--Imperial

Type	Specification	D1	L2	D2	L1	L3	Z	Material
RE1CR0000-122R	D4.76*6.35*SD4.76*SL52	4.760	6.35	4.760	52	35	2	PCD
RE1CR0000-122R	D6.35*12.7*SD6.35*SL63.5	6.350	12.7	6.350	63.5	37	2	PCD
RE1CR0000-122R	D9.525*19.05*SD9.525*SL101.6	9.525	19.05	9.525	101.6	61	2	PCD
RE1CR0000-122R	D12.7*25.4*SD12.7*SL102	12.700	25.4	12.700	102	61	2	PCD
RE1CR0000-122R	D19.05*25.4*SD19.05*SL102	19.050	25.4	19.050	102	61	2	PCD

Customized size



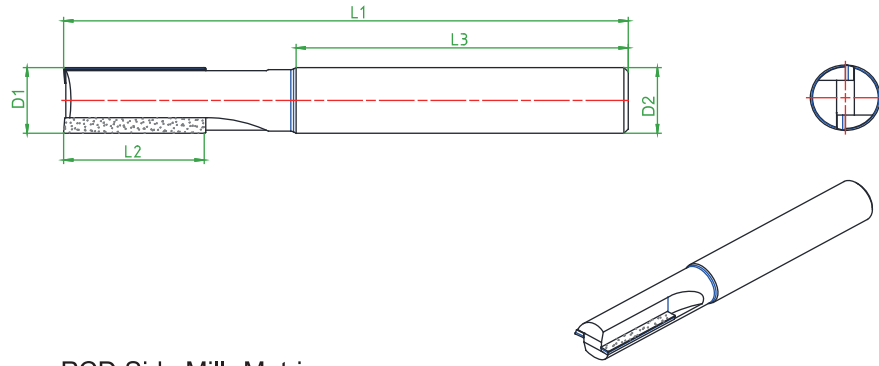
Workpiece



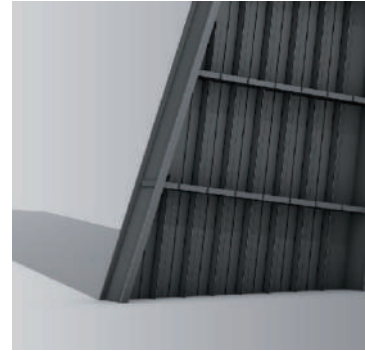
PCD milling cutter(over center)--Imperial

Type	Specification	D1	L2	D2	L1	L3	Z	Material
RE1CR00CC-122R	D4.76*6.35*SD4.76*SL52	4.760	6.35	4.760	52	35	2	PCD
RE1CR00CC-122R	D6.35*12.7*SD6.35*SL63.5	6.350	12.7	6.350	63.5	37	2	PCD
RE1CR00CC-122R	D9.525*19.05*SD9.525*SL101.6	9.525	19.05	9.525	101.6	61	2	PCD
RE1CR00CC-122R	D12.7*25.4*SD12.7*SL102	12.700	25.4	12.700	102	61	2	PCD
RE1CR00CC-122R	D19.05*25.4*SD19.05*SL102	19.050	25.4	19.050	102	61	2	PCD

Customized size



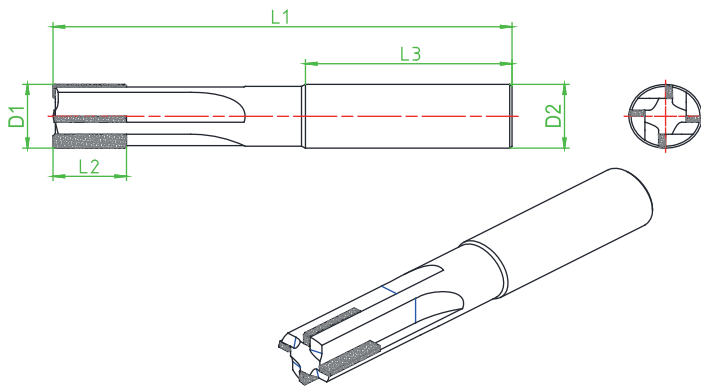
Workpiece



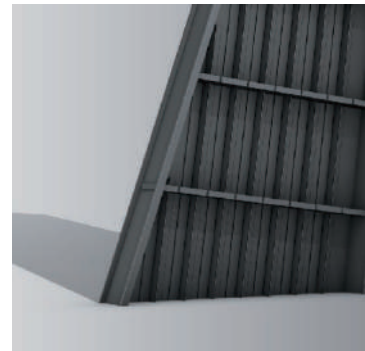
PCD Side Mill--Metric

Type	Specification	D1	L2	D2	L1	L3	Z	Material
RE1CR0000-122R	D6*9*SD6*SL50	6	9	6	50	30	2	PCD
RE1CR0000-122R	D8*12*SD8*SL60	8	12	8	60	30	2	PCD
RE1CR0000-122R	D10*15*SD10*SL80	10	15	10	80	45	2	PCD
RE1CR0000-122R	D12*18*SD12*SL100	12	18	12	100	45	2	PCD
RE1CR0000-122R	D16*25*SD16*SL110	16	25	16	110	55	2	PCD

Customized size



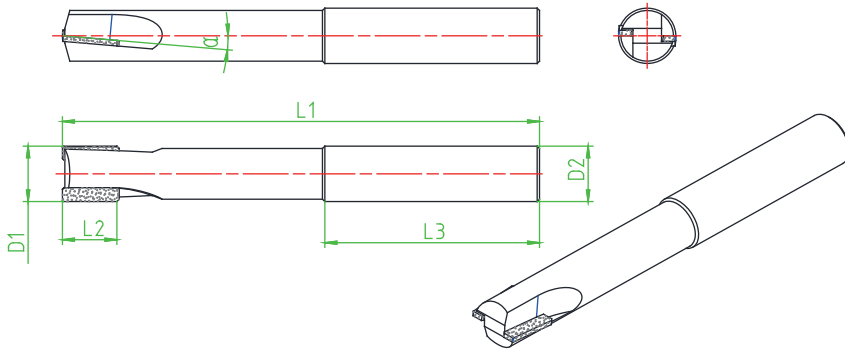
Workpiece



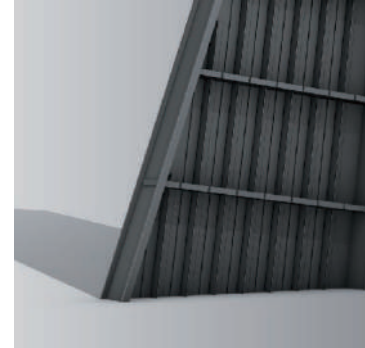
PCD Side Mill--Metric

Type	Specification	D1	L2	D2	L1	L3	Z	Material
RE1CR0000-144R	D10*15*SD10*SL80	10	15	10	80	45	4	PCD
RE1CR0000-144R	D12*18*SD12*SL100	12	18	12	100	45	4	PCD
RE1CR0000-144R	D16*25*SD16*SL110	16	25	16	110	55	4	PCD
RE1CR0000-144R	D18*25*SD18*SL110	18	25	18	110	55	4	PCD
RE1CR0000-144R	D20*30*SD20*SL110	20	30	20	110	55	4	PCD

Customized size



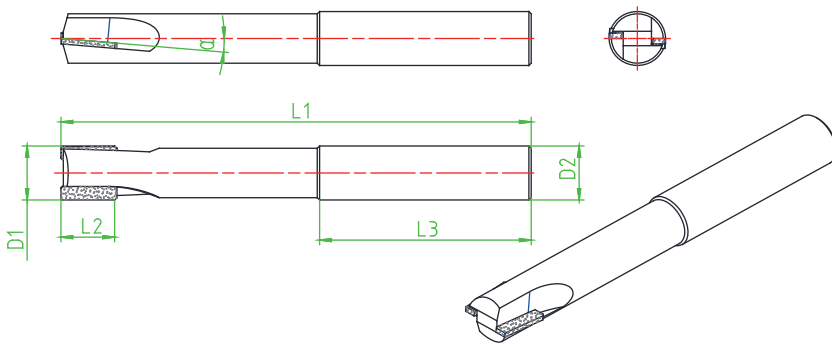
Workpiece



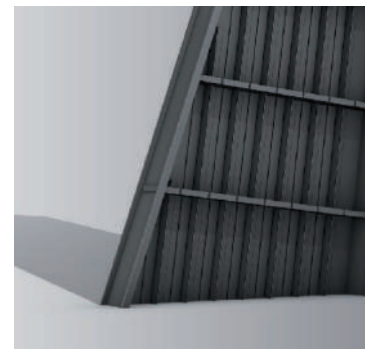
PCD Side Mill--Imperial

Type	Specification	D1	L2	D2	L1	L3	Z	α	Material
RE1CR0000-122R	D4.76*6.35*SD4.76*SL52	4.760	6.35	4.760	52	35	2	5°	PCD
RE1CR0000-122R	D6.35*12.7*SD6.35*SL63.5	6.350	12.7	6.350	63.5	37	2	5°	PCD
RE1CR0000-122R	D9.525*19.05*SD9.525*SL101.6	9.525	19.05	9.525	101.6	61	2	5°	PCD
RE1CR0000-122R	D12.7*25.4*SD12.7*SL102	12.700	25.4	12.700	102	61	2	5°	PCD
RE1CR0000-122R	D19.05*25.4*SD19.05*SL102	19.050	25.4	19.050	102	61	2	5°	PCD

Customized size



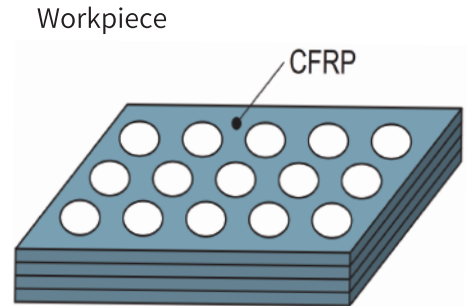
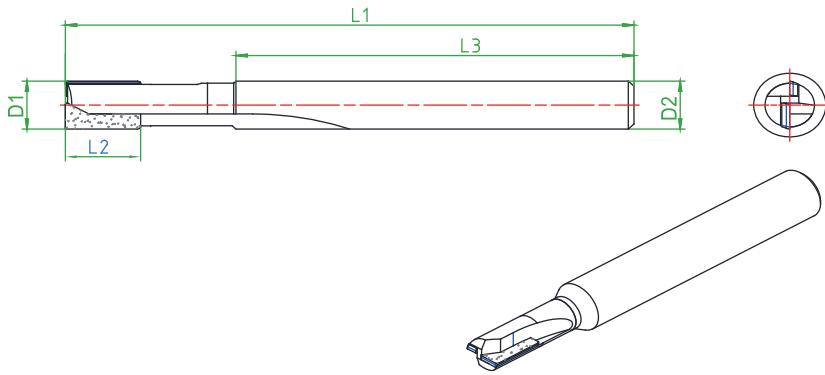
Workpiece



PCD Side Mill--Metric

Type	Specification	D1	L2	D2	L1	L3	Z	α	Material
RE1CR0000-122R	D6*9*SD6*SL50	6	9	6	50	30	2	5°	PCD
RE1CR0000-122R	D8*12*SD8*SL60	8	12	8	60	30	2	5°	PCD
RE1CR0000-122R	D10*15*SD10*SL80	10	15	10	80	45	2	5°	PCD
RE1CR0000-122R	D12*18*SD12*SL100	12	18	12	100	45	2	5°	PCD
RE1CR0000-122R	D16*25*SD16*SL110	16	25	16	110	55	2	5°	PCD

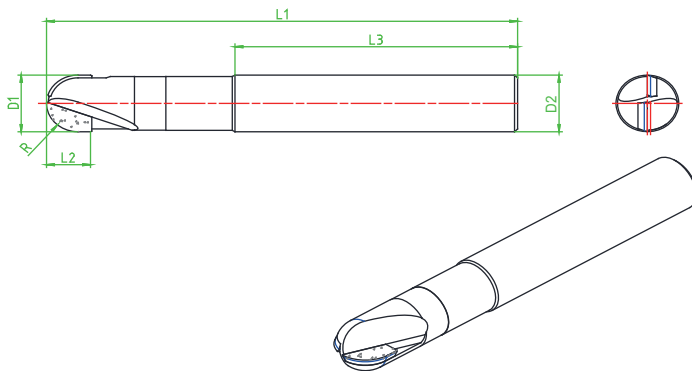
Customized size



PCD End Mill--Metric

Type	Specification	D1	L2	D2	L1	L3	Z	Material
RE1CR00CC-122R	D6*9*SD6*SL50	6	9	6	50	30	2	PCD
RE1CR00CC-122R	D8*12*SD8*SL60	8	12	8	60	30	2	PCD
RE1CR00CC-122R	D10*15*SD10*SL80	10	15	10	80	45	2	PCD
RE1CR00CC-122R	D12*18*SD12*SL100	12	18	12	100	45	2	PCD
RE1CR00CC-122R	D16*25*SD16*SL110	16	25	16	110	55	2	PCD

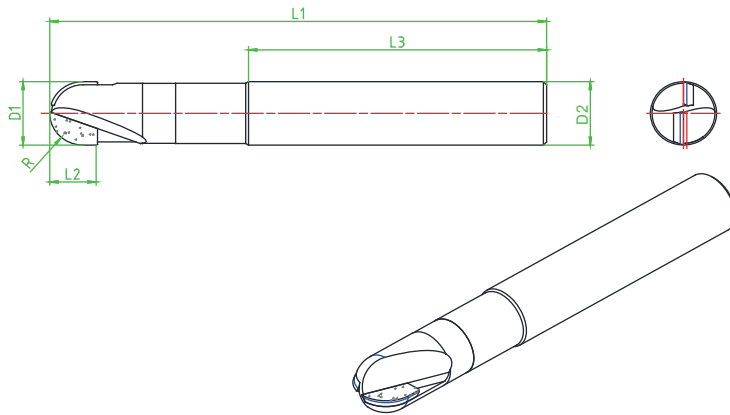
Customized size



PCD ball nose mill-- Metric

Type	Specification	D1	L2	D2	L1	R	L3	Z	Material
RE1CR00CC-122R	D4*6*SD4*SL45	4	6	4	45	2	35	2	PCD
RE1CR00CC-122R	D6*9*SD6*SL50	6	9	6	50	3	35	2	PCD
RE1CR00CC-122R	D8*12*SD8*SL60	8	12	8	60	4	35	2	PCD
RE1CR00CC-122R	D10*15*SD10*SL70	10	15	10	70	5	40	2	PCD
RE1CR00CC-122R	D12*18*SD12*SL80	12	18	12	80	6	45	2	PCD

Customized size



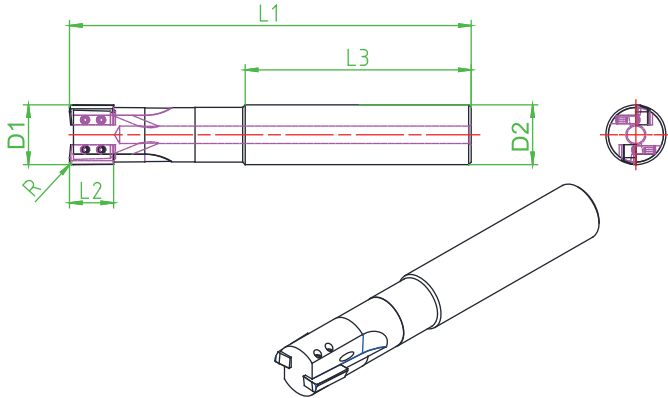
Workpiece



PCD ball nose mill--Imperial

Type	Specification	D1	L2	D2	L1	R	L3	Z	Material
RE1CR00CC-122R	D4.76*6.35*SD4.76*SL50	4.760	6.35	4.76	50	2.38	30	2	PCD
RE1CR00CC-122R	D6.35*9.525*SD6.35*SL60	6.350	9.525	6.35	60	3.18	35	2	PCD
RE1CR00CC-122R	D9.525*12.7*SD9.525*SL70	9.525	12.7	9.525	70	4.76	40	2	PCD
RE1CR00CC-122R	D12.7*14.7*SD12.7*SL80	12.700	14.7	12.7	80	6.35	45	2	PCD
RE1CR00CC-122R	D19.05*20.4*SD19.05*SL90	19.050	20.4	19.05	90	9.53	45	2	PCD

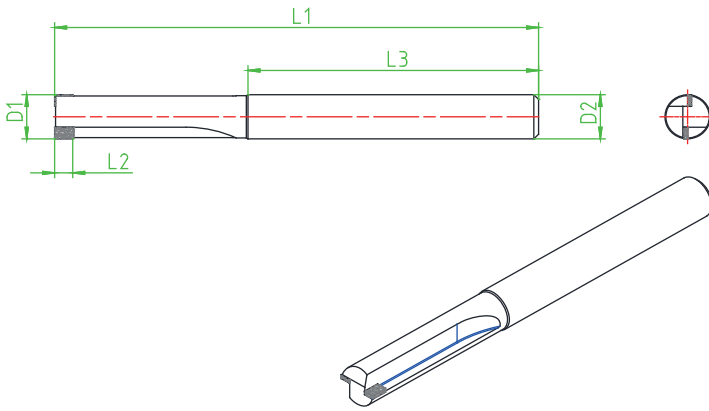
Customized size



PCD quick change milling cutter-- Metric

Type	Specification	D1	L2	D2	L1	L3	R	α	Z	Material
RR1CR00SW-122R	D12*8*SD12*SL80	12	8	12	80	45	0.4	3°	2	PCD
RR1CR00SW-122R	D14*10*SD16*SL90	14	10	16	90	45	0.4	3°	2	PCD
RR1CR00SW-122R	D16*10*SD16*SL100	16	10	16	100	45	0.4	3°	2	PCD
RR1CR00SW-122R	D18*12*SD20*SL120	18	12	20	120	45	0.4	3°	2	PCD
RR1CR00SW-122R	D20*12*SD20*SL120	20	12	20	120	45	0.4	3°	2	PCD
RR1CR00SW-122R	D25*12*SD25*SL150	25	12	25	150	45	0.4	3°	2	PCD
RR1CR00SW-122R	D32*12*SD32*SL150	32	12	32	150	45	0.4	3°	2	PCD

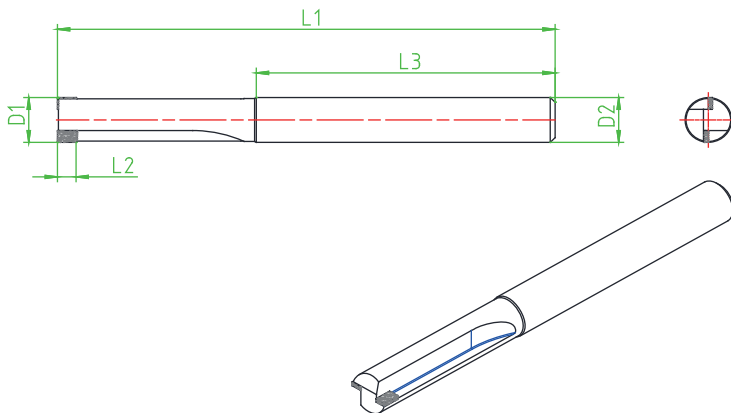
Customized size



CVD Side Mill--Imperial

Type	Specification	D1	L2	D2	L1	L3	Z	Material
RE1CR0000-122R	D4.76*4.76*SD4.76*SL52	4.760	4.76	4.760	52	35	2	CVDD
RE1CR0000-122R	D6.35*6.35*SD6.35*SL63.5	6.350	6.35	6.350	63.5	37	2	CVDD
RE1CR0000-122R	D9.525*6.35*SD9.525*SL101.6	9.525	6.35	9.525	101.6	61	2	CVDD
RE1CR0000-122R	D12.7*6.35*SD12.7*SL102	12.700	6.35	12.700	102	60	2	CVDD
RE1CR0000-122R	D15.875*6.35*SD19.05*SL102	15.875	6.35	19.050	102	61	2	CVDD

Customized size



CVD Side Mill--Metric

Type	Specification	D1	L2	D2	L1	L3	Z	Material
RE1CR0000-122R	D6*4*SD6*SL50	6	4	6	50	30	2	CVDD
RE1CR0000-122R	D8*6*SD8*SL60	8	6	8	60	30	2	CVDD
RE1CR0000-122R	D10*6*SD10*SL80	10	6	10	80	45	2	CVDD
RE1CR0000-122R	D12*6*SD12*SL100	12	6	12	100	45	2	CVDD
RE1CR0000-122R	D16*6*SD16*SL110	16	6	16	110	55	2	CVDD

Customized size



Worldia® Specialty Tools Business Scope

1. Design and produce PCD/PCBN reamer, milling cutter and specialty tools products according to customer drawings;
2. According to customer requirements, undertake the design, production and technical service of the entire set of tools programs;
3. Replace the original cutters to help customers optimize the existing cutter program to meet the needs of improving life and reducing costs;
4. Regrinding and retipping for PCD/PCBN specialty tools

Worldia® After-sales Service and Customer Service

Pre-sale service

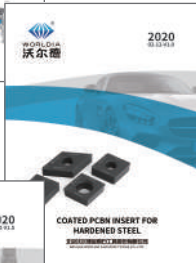
Provide pre-sale services including conduct technical investigations on the customer's processing conditions like workpiece materials, tooling fixtures, production cycle, machine tool parameters, and provide feasibility solutions for the optimization and upgrade of the original products;

After-sales service

Provide after-sale technical services and technical following-up for product performance, meet customer processing requirements with higher dimensional accuracy, better processing performance, longer service life, and faster production cycle.



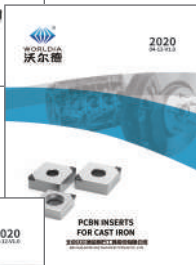
00-11
Super Hard Cutting Tools
Comprehensive Catalogue



01-11
Coated PCBN Insert
For Hardened Steel



02-11
PCBN Inserts For Hardened Steel



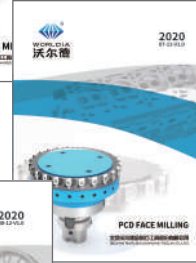
03-11
PCBN Inserts For Cast Iron



04-11
PCBN insert For Power Metallurgy



05-11
PCBN Face Milling



06-11
PCD Face Milling cutters



07-11
PCD/CVDD Inserts



08-11
PCD Specialty Tools



11-11
Grooving Solutions

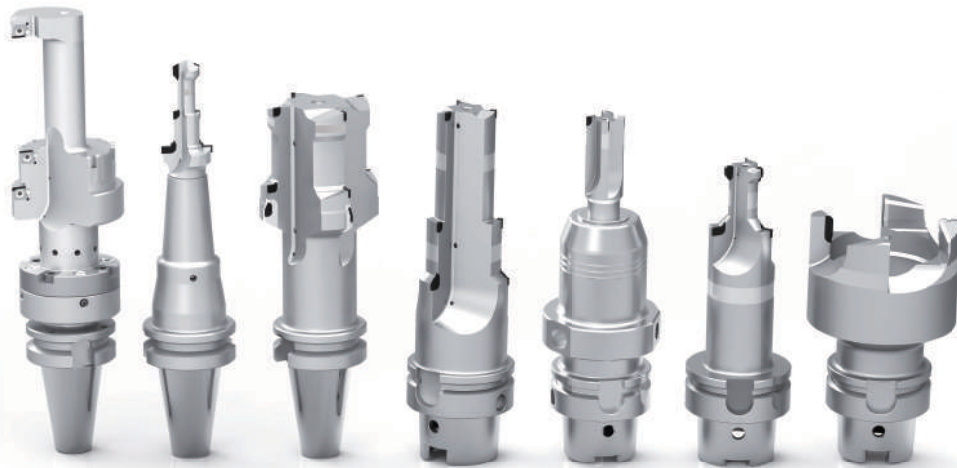
Metric and Imperial Conversion Table

Metric unit:mm				Imperial unit:mm			
in (")	mm	in (")	mm	in (")	mm	in (")	mm
1/64	0.3969	17/64	6.7469	33/64	13.0969	49/64	19.4469
1/32	0.7938	9/32	7.1438	17/32	13.4938	25/32	19.8438
3/64	1.1906	19/64	7.5406	35/64	13.8906	51/64	20.2406
1/16	1.5875	5/16	7.9375	9/16	14.2875	13/16	20.6375
5/64	1.9844	21/64	8.3344	37/64	14.6844	53/64	21.0344
3/32	2.3813	11/32	8.7313	19/32	15.0813	27/32	21.4313
7/64	2.7781	23/64	9.1281	39/64	15.4781	55/64	21.8281
1/8	3.1750	3/8	9.5250	5/8	15.8750	7/8	22.2250
9/64	3.5719	25/64	9.9219	41/64	16.2719	57/64	22.6219
5/32	3.9688	13/64	10.3188	21/32	16.6688	29/32	23.0188
11/64	4.3656	27/64	10.7156	43/64	17.0656	59/64	23.4156
3/16	4.7625	7/16	11.1125	11/16	17.4625	15/16	23.8125
13/64	5.1594	29/64	11.5094	45/64	17.8594	61/64	24.2094
7/32	5.5563	15/32	11.9063	23/32	18.2563	31/32	24.6063
15/64	5.9531	31/64	12.3031	47/64	18.6531	63/64	25.0031
1/4	6.3500	1/2	12.7000	3/4	19.0500	1	25.4000



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