



Solid carbide drills & taps



Solid Carbide End Mills Identification System

<p>P M K</p> <p>Steel, Cast Iron Stainless Steel Aluminium Alloy</p>	PD20	<p>PD20 Twist Drills for General Purpose</p> <ul style="list-style-type: none"> ● Suitable for drilling steel, stainless steel, cast iron, non-ferrous material. ● Stub chisel, excellent self-center capability. ● Radial point, smaller cutting resistance. ● Unique edge preparation, higher feed rate, higher efficiency.
<p>M S</p> <p>Stainless Steel Titanium Alloys</p>	MD20	<p>KD20 Twist Drills for Cast Iron</p> <ul style="list-style-type: none"> ● Suitable for drilling cast iron of automobile industry and other industries. ● Wave formed cutting lips provides lowered machining torque. ● Four margin, improves hole wall quality and accuracy. ● Increased Drills point strength through optimized chisel edge.
<p>K</p> <p>Aluminium Alloy</p>	KD20	<p>MD20 Twist Drills for Stainless Steel</p> <ul style="list-style-type: none"> ● Suitable for drilling stainless steel. ● Excellent edge strength, excellent self-centering capability. ● Straight lips, precise edge preparation is adapted, reinforce the strength of edge. ● Small edge home, large back taper, reduce friction and torque impact.
<p>N</p> <p>Graphite</p>	ND25UF	<p>ND25UF Twist Drills for alloys</p> <ul style="list-style-type: none"> ● Suitable for drilling cast iron, silicon-aluminium alloys. ● Surface Roughness Ra1-2 ● Increased Drills point strength through optimized chisel edge.
<p>H</p> <p>High Hardened Material</p>	HD15UF	<p>HD15UF Twist Drills for Hardened Steel</p> <ul style="list-style-type: none"> ● Suitable for drilling hardened steel. ● Large core thickness, small helix angle, high rigidity and strength. ● X-shaped Drills tip, excellent self-center capability. ● Radius Drills point, excellent hole wall quality.



PD20 A 3 N 0600

①	②	③	④	⑤																																			
<table border="1"> <thead> <tr> <th colspan="2">Shank Type</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>DIN6535HA</td> </tr> <tr> <td>E</td> <td>DIN6535HE</td> </tr> <tr> <td>B</td> <td>DIN6535HB</td> </tr> <tr> <td>Y</td> <td>Continuous Parallel Shank</td> </tr> </tbody> </table>	Shank Type		A	DIN6535HA	E	DIN6535HE	B	DIN6535HB	Y	Continuous Parallel Shank	<table border="1"> <thead> <tr> <th colspan="2">Drilling Depth</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>Drilling Depth ≤ 3D</td> </tr> <tr> <td>5</td> <td>Drilling Depth ≤ 5D</td> </tr> <tr> <td>90</td> <td>90° Point Angle</td> </tr> <tr> <td>120</td> <td>120° Point Angle</td> </tr> <tr> <td>145</td> <td>145° Point Angle</td> </tr> </tbody> </table>	Drilling Depth		3	Drilling Depth ≤ 3D	5	Drilling Depth ≤ 5D	90	90° Point Angle	120	120° Point Angle	145	145° Point Angle	<table border="1"> <thead> <tr> <th colspan="2">Coolant Type</th> </tr> </thead> <tbody> <tr> <td>C</td> <td>Inner Cooling</td> </tr> <tr> <td>N</td> <td>External Cooling</td> </tr> </tbody> </table>	Coolant Type		C	Inner Cooling	N	External Cooling	<table border="1"> <thead> <tr> <th colspan="2">Drills Diameter</th> </tr> </thead> <tbody> <tr> <td>0325</td> <td>Dia: Φ 3.25</td> </tr> <tr> <td>0600</td> <td>Dia: Φ 6.00</td> </tr> <tr> <td>1200</td> <td>Dia: Φ 12.00</td> </tr> </tbody> </table>	Drills Diameter		0325	Dia: Φ 3.25	0600	Dia: Φ 6.00	1200	Dia: Φ 12.00
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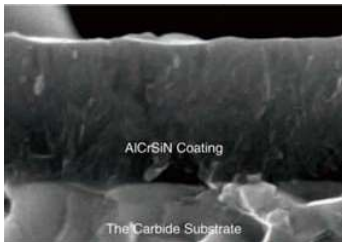
- Turning inserts
- External turning
- Internal turning
- Grooving & parting
- Threading
- Milling
- Boring & drilling
- Tool holder
- Solid carbide end mills
- Solid carbide drill & taps
- Technical information

Guidelines to Icons

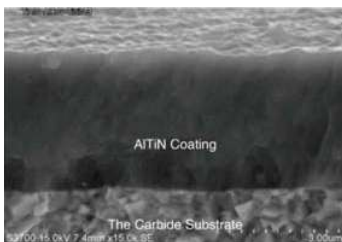
	Mark	Description
Shank		ISO Standard Shank
Coating		AlCrN Coating
		AlCrSiN Coating
		Nano Coating AlTiN
		Nano Coating AlTiN/TiSiN
		Ultra Fine Grain Diamond Coating

	Mark	Description
Drilling Depth		The Maximum Depth of Drilling is 3D
		The Maximum Depth of Drilling is 5D
Drills Type		Twist Drills
		Twist Drills with Inner Cooling
		Straight Flute Drills
		Straight Flute Drills with Inner Cooling

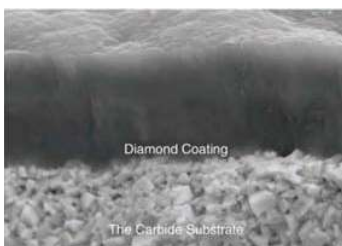
	Mark	Description
Workpiece Material		Steels
		Stainless Steels
		Cast Iron
		Non-ferrous Materials
		Heat-resistant Super Alloys, Titanium Alloys
		High Hardened Materials



SEM Photograph of Coating



SEM Photograph of Coating



Cross-section Image

Universal High Performance Coating AlCrSiN

Characteristics and Function

- Productivity increase due to significantly higher cutting speed and feed for applications in a wide range of materials. Significantly enhanced productivity.
- Particular design of structure brings good balance between toughness, thermo-shock stability and residual stress.

Nano Coating AlTiN

Characteristics and Function

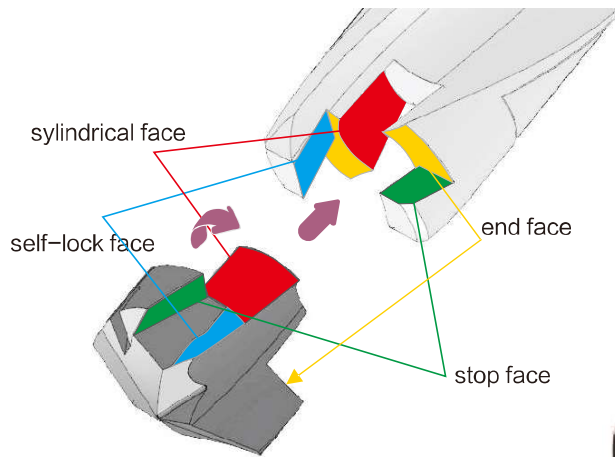
- High aluminum content provides excellent hot hardness and oxidation resistance.
- Special method optimizes the structure of coating, significantly improved stability, reducing the number of surface droplet.

Ultra Fine Grain Diamond Coating

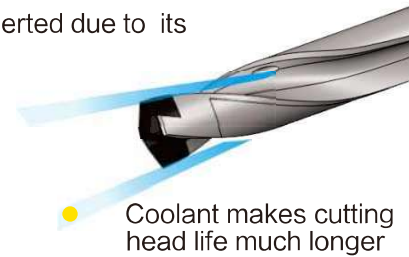
Characteristics and Function

- High purity diamond coating, with hardness up to 80GPa.
- Ultra smooth and shiny surface, low coefficient friction.
- Suitable for finish machining nonferrous materials, such as graphite, aluminium, carbon fiber, ceramic, etc.

Self-Locked clamping system



- Centering by cylindrical faces
- The cutting head can be self-locked with toolholder while inserted due to its seat elastic deformation
- Axial drill force is transferred to toolholder by end faces
- Drill torque is transferred to toolholder by stop faces



- Coolant makes cutting head life much longer

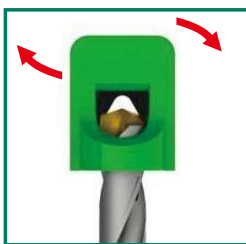
How to attach cutting heads



- 1**
Remove dust using air blast



- 2**
Turn lightly in a clockwise direction (Use gloves to protect your hand from any danger)



- 3**
Turn the wrench in a clockwise direction slowly, then turn strongly while passing self-locked face until cutting head won't move



- 4**
Complete

Turning inserts

External turning

Internal turning

Grooving & parting

Threading

Milling

Boring & drilling

Tool holder

Solid carbide end mills

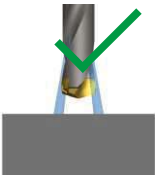
Solid carbide drill & taps

Technical information

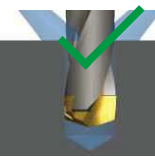
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Cooling method


- 1**



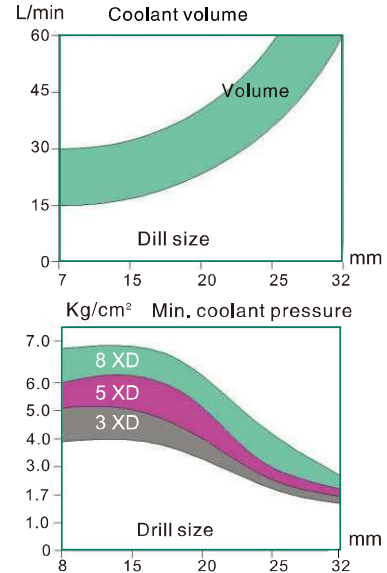
Suggest to select machine tools with inner cooling system
- 2**



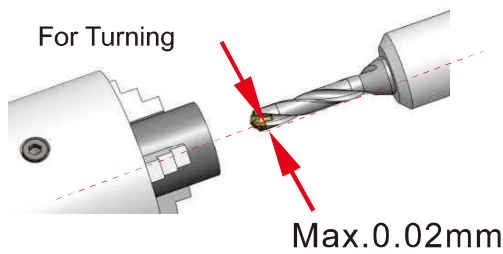
With outer cooling system, suggest to drill the hole size less than 3D diameter.
- 3**



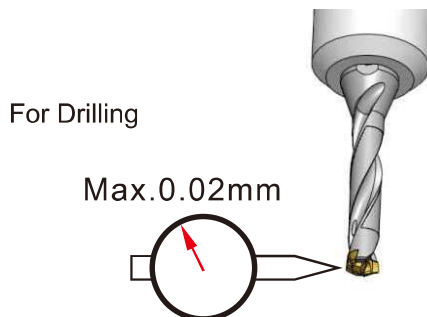
Do not dry cut



Usage precautions core deviation

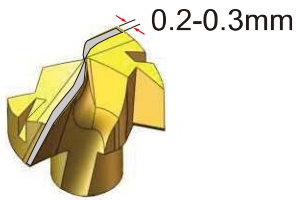


Set deviation amount under 0.02mm between the workpiece and the drill



Do not use any arbor with a deformed attachment surface.
Center of arbor deviation must be within 0.02mm

Indication of cutting head wear

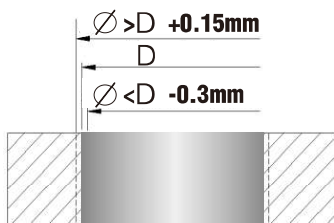


a) Wear Limit

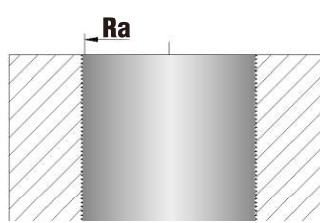


b) Power Restriction

(1) New cutting head
 (2) Increase 25% for wore-out cutting head



c) Diameter Change



d) Surface Finish Deterioration



e) Vibration Noise Drastically Increases

Application

Application Recommendation	Workpiece Shape	Application Not Recommendation	Workpiece Shape
Flat Face Recommended		Hole Expansion Not Recommended	
Stacked Plates Recommended (absolutely don't move between plates)		Slanted Surface Not Recommended	
Concave Surface Recommended (reduce a half of feed tate as normal)		Half Cylindrical Not Recommended	
Pipe Material Recommended		Cored Hole Not Recommended	

Turning inserts

External turning

Internal turning

Grooving & parting

Threading

Milling

Boring & drilling

Tool holder

Solid carbide end mills

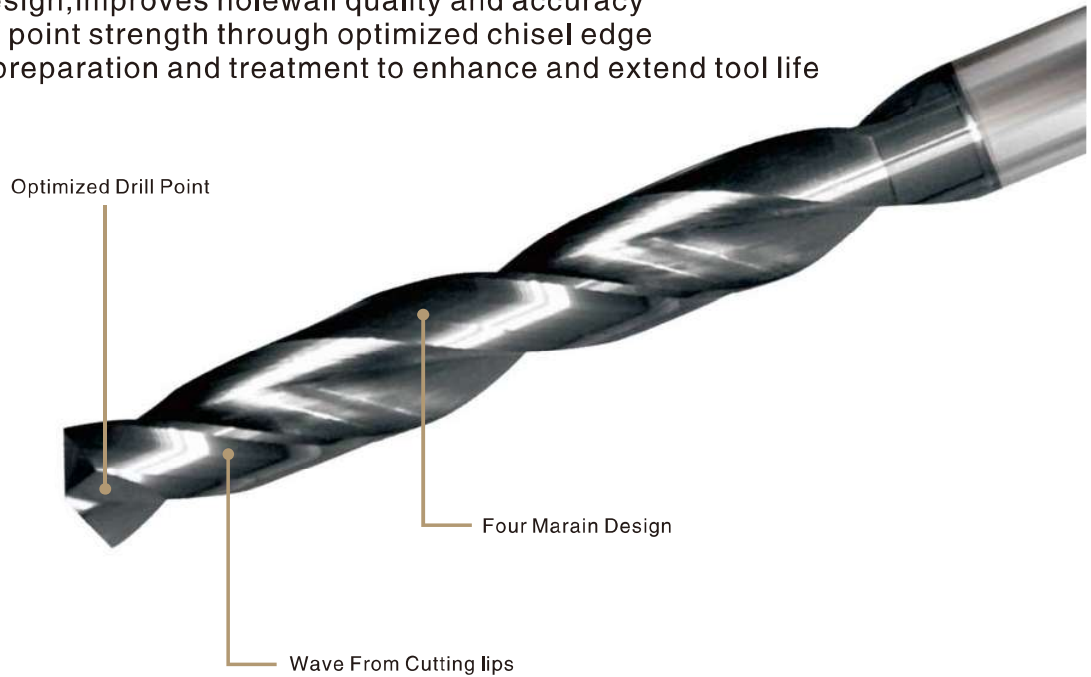
Solid carbide drill & taps

Technical information

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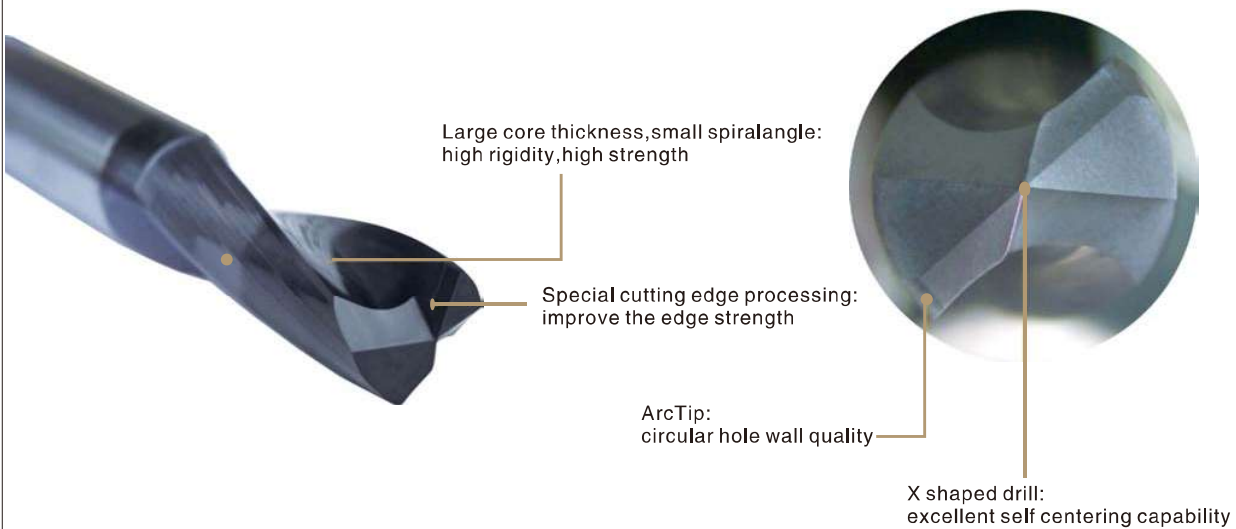
Outstanding Characteristics of KD20

- Dimension a standard: Based on DIN6535HA
- Material: GU series of micro grain carbide from NiceCutt
- Coating: HELICA
- Wave formed cutting lips provides lowered machining torque
- four margin design, improves holewall quality and accuracy
- Increased drill point strength through optimized chisel edge
- Special edge preparation and treatment to enhance and extend tool life



HD15UF Series Drill Characteristics

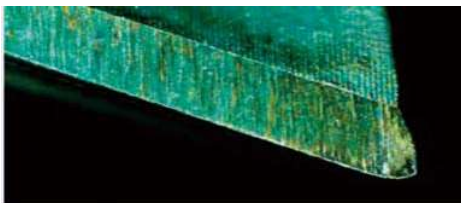
- Size standards: The design is based on DIN6539 standard
- Material: NiceCutt special GU series, submicron cemented carbide
- Coated layer: AlTiN



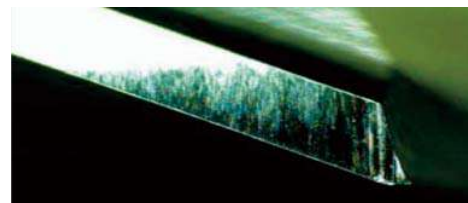
Case Study

Machining case of tap drill hole of cylinder block bearing in automobile engine

<p>Even wear well distribution, no chatter, provide outstanding drilling performance.</p>			
Description	Step Twist Drill		
Type	D928		
Size	D8.75		
Workpiece	FCH1C (HB180–240)		
Cutting Speed	140m/min (5093rpm)		
Feed Rate	0.295mm/r (1502mm/min)		
Cutting Method	Drilling		
Cutting Depth	$a_p = 30\text{mm}$		
Cooling Method	30Bar Internal coolant		
Machine	HELLER horizontal machine center		<p>Tool Life</p> <p>Production schedule requires drill change after finishing 500pcs(5000pcs holes), flank wear of D928 is smaller than M Japan Co.; Still able to drill 200pcs more after regrind and without recoating. drills fulfill customers , requirement of localizing cutting tools</p>



NiceCutt 5000holes
Cutting edge



S TiAlN coated carbide drill Cutting edge after 3700 holes machining

Turning inserts

External turning

Internal turning

Grooving & parting

Threading

Milling

Boring & drilling





















Tool holder

Solid carbide end mills

Solid carbide drill & taps

Technical information

- Turning inserts
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PM/PR head  P312~P313	Drill  P314~P315	PD20-A3N  P316	PD20-A3C  P317
PD20-A5N  P318	PD20-A5C  P319	KD20-A3N  P320	KD20-A3C  P320
KD20-A5N  P321	KD20-A5C  P321	MD20-A3N  P322	MD20-A3C  P323
MD20-A5C  P324	ND25UF-Y3N  P325	HD15UF-Y3N  P326	PD20-A90  P326
PD20-A120  P327	PD20-A145  P327	KZD20-A3N  P328	KZD20-A5C  P328
LJD20/SJD20  P329~P330	Forming tap  P337~P338	Cutting tap  P339	Plug gauge  P340

PM head



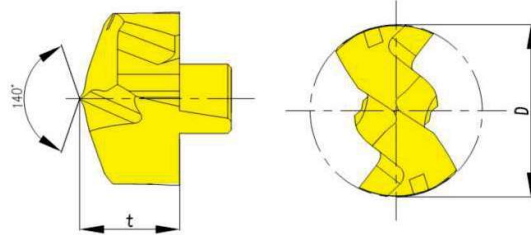
Recommend PM
Especially for less than 5D

PR head



Recommend PR
Especially for more than 5D

P	M	K	N
Low-carbon steels	Steel	Stainless Steel	Cast Iron Aluminium Alloy



Order No.	Dimensions (mm)		NS4125	NS9115	Tool holders
	D	t			
MSQD-080-PM/PR	8.0	5.4	●	●	MSQD080-12
MSQD-081-PM/PR	8.1	5.4	○	○	
MSQD-082-PM/PR	8.2	5.4	○	○	
MSQD-083-PM/PR	8.3	5.4	○	○	
MSQD-084-PM/PR	8.4	5.4	○	○	
MSQD-085-PM/PR	8.5	5.4	●	●	
MSQD-086-PM/PR	8.6	5.4	○	○	
MSQD-087-PM/PR	8.7	5.4	○	○	
MSQD-088-PM/PR	8.8	5.4	○	○	
MSQD-089-PM/PR	8.9	5.4	○	○	
MSQD-090-PM/PR	9.0	5.8	●	●	MSQD090-12
MSQD-091-PM/PR	9.1	5.8	○	○	
MSQD-092-PM/PR	9.2	5.8	○	○	
MSQD-093-PM/PR	9.3	5.8	○	○	
MSQD-094-PM/PR	9.4	5.8	○	○	
MSQD-095-PM/PR	9.5	5.8	●	●	
MSQD-096-PM/PR	9.6	5.8	○	○	
MSQD-097-PM/PR	9.7	5.8	○	○	
MSQD-098-PM/PR	9.8	5.8	○	○	
MSQD-099-PM/PR	9.9	5.8	○	○	
MSQD-100-PM/PR	10.0	6.2	●	●	MSQD100-12
MSQD-101-PM/PR	10.1	6.2	○	○	
MSQD-102-PM/PR	10.2	6.2	○	○	
MSQD-103-PM/PR	10.3	6.2	○	○	
MSQD-104-PM/PR	10.4	6.2	○	○	
MSQD-105-PM/PR	10.5	6.2	●	●	
MSQD-106-PM/PR	10.6	6.2	○	○	
MSQD-107-PM/PR	10.7	6.2	○	○	
MSQD-108-PM/PR	10.8	6.2	○	○	
MSQD-109-PM/PR	10.9	6.2	○	○	
MSQD-110-PM/PR	11.0	6.6	●	●	MSQD110-12
MSQD-111-PM/PR	11.1	6.6	○	○	
MSQD-112-PM/PR	11.2	6.6	○	○	
MSQD-113-PM/PR	11.3	6.6	○	○	
MSQD-114-PM/PR	11.4	6.6	○	○	
MSQD-115-PM/PR	11.5	6.6	●	●	
MSQD-116-PM/PR	11.6	6.6	○	○	
MSQD-117-PM/PR	11.7	6.6	○	○	
MSQD-118-PM/PR	11.8	6.6	○	○	
MSQD-119-PM/PR	11.9	6.6	○	○	

Order No.	Dimensions (mm)		NS4125	NS9115	Tool holders
	D	t			
MSQD-120-PM/PR	12.0	7.0	●	●	MSQD120-12
MSQD-121-PM/PR	12.1	7.0	○	○	
MSQD-122-PM/PR	12.2	7.0	○	○	
MSQD-123-PM/PR	12.3	7.0	○	○	
MSQD-124-PM/PR	12.4	7.0	○	○	
MSQD-125-PM/PR	12.5	7.0	●	●	
MSQD-126-PM/PR	12.6	7.0	○	○	
MSQD-127-PM/PR	12.7	7.0	○	○	
MSQD-128-PM/PR	12.8	7.0	○	○	
MSQD-129-PM/PR	12.9	7.0	○	○	
MSQD-130-PM/PR	13.0	7.6	●	●	MSQD130-12
MSQD-131-PM/PR	13.1	7.6	○	○	
MSQD-132-PM/PR	13.2	7.6	○	○	
MSQD-133-PM/PR	13.3	7.6	○	○	
MSQD-134-PM/PR	13.4	7.6	○	○	
MSQD-135-PM/PR	13.5	7.6	●	●	
MSQD-136-PM/PR	13.6	7.6	○	○	
MSQD-137-PM/PR	13.7	7.6	○	○	
MSQD-138-PM/PR	13.8	7.6	○	○	
MSQD-139-PM/PR	13.9	7.6	○	○	
MSQD-140-PM/PR	14.0	8.1	●	●	
MSQD-141-PM/PR	14.1	8.1	○	○	
MSQD-142-PM/PR	14.2	8.1	○	○	
MSQD-143-PM/PR	14.3	8.1	○	○	
MSQD-144-PM/PR	14.4	8.1	○	○	
MSQD-145-PM/PR	14.5	8.1	●	●	
MSQD-146-PM/PR	14.6	8.1	○	○	
MSQD-147-PM/PR	14.7	8.1	○	○	
MSQD-148-PM/PR	14.8	8.1	○	○	
MSQD-149-PM/PR	14.9	8.1	○	○	
MSQD-150-PM/PR	15.0	8.7	●	●	
MSQD-151-PM/PR	15.1	8.7	○	○	
MSQD-152-PM/PR	15.2	8.7	○	○	
MSQD-153-PM/PR	15.3	8.7	○	○	
MSQD-154-PM/PR	15.4	8.7	○	○	
MSQD-155-PM/PR	15.5	8.7	●	●	
MSQD-156-PM/PR	15.6	8.7	○	○	
MSQD-157-PM/PR	15.7	8.7	○	○	
MSQD-158-PM/PR	15.8	8.7	○	○	
MSQD-159-PM/PR	15.9	8.7	○	○	

● Stock ○ Available upon Order

Turning inserts

External turning

Internal turning

Grooving & parting

Threading

Milling

Boring & drilling

Tool holder

Solid carbide end mills

Solid carbide drill & taps

Technical information

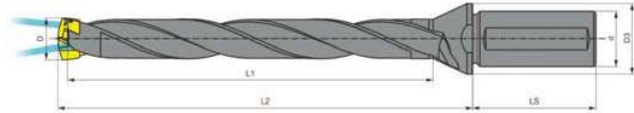
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MSQD-160-PM/PR	16.0	9.3	●	●	MSQD160-12
MSQD-161-PM/PR	16.1	9.3	○	○	
MSQD-162-PM/PR	16.2	9.3	○	○	
MSQD-163-PM/PR	16.3	9.3	○	○	
MSQD-164-PM/PR	16.4	9.3	○	○	
MSQD-165-PM/PR	16.5	9.3	●	●	
MSQD-166-PM/PR	16.6	9.3	○	○	
MSQD-167-PM/PR	16.7	9.3	○	○	
MSQD-168-PM/PR	16.8	9.3	○	○	
MSQD-169-PM/PR	16.9	9.3	○	○	
MSQD-170-PM/PR	17.0	9.9	●	●	MSQD170-12
MSQD-171-PM/PR	17.1	9.9	○	○	
MSQD-172-PM/PR	17.2	9.9	○	○	
MSQD-173-PM/PR	17.3	9.9	○	○	
MSQD-174-PM/PR	17.4	9.9	○	○	
MSQD-175-PM/PR	17.5	9.9	●	●	
MSQD-176-PM/PR	17.6	9.9	○	○	
MSQD-177-PM/PR	17.7	9.9	○	○	
MSQD-178-PM/PR	17.8	9.9	○	○	
MSQD-179-PM/PR	17.9	9.9	○	○	
MSQD-180-PM/PR	18.0	10.5	●	●	MSQD180-12
MSQD-181-PM/PR	18.1	10.5	○	○	
MSQD-182-PM/PR	18.2	10.5	○	○	
MSQD-183-PM/PR	18.3	10.5	○	○	
MSQD-184-PM/PR	18.4	10.5	○	○	
MSQD-185-PM/PR	18.5	10.5	●	●	
MSQD-186-PM/PR	18.6	10.5	○	○	
MSQD-187-PM/PR	18.7	10.5	○	○	
MSQD-188-PM/PR	18.8	10.5	○	○	
MSQD-189-PM/PR	18.9	10.5	○	○	
MSQD-190-PM/PR	19.0	11.0	●	●	MSQD190-12
MSQD-191-PM/PR	19.1	11.0	○	○	
MSQD-192-PM/PR	19.2	11.0	○	○	
MSQD-193-PM/PR	19.3	11.0	○	○	
MSQD-194-PM/PR	19.4	11.0	○	○	
MSQD-195-PM/PR	19.5	11.0	●	●	
MSQD-196-PM/PR	19.6	11.0	○	○	
MSQD-197-PM/PR	19.7	11.0	○	○	
MSQD-198-PM/PR	19.8	11.0	○	○	
MSQD-199-PM/PR	19.9	11.0	○	○	
MSQD-200-PM/PR	20.0	11.6	●	●	MSQD190-12
MSQD-201-PM/PR	20.1	11.6	○	○	
MSQD-202-PM/PR	20.2	11.6	○	○	
MSQD-203-PM/PR	20.3	11.6	○	○	
MSQD-204-PM/PR	20.4	11.6	○	○	
MSQD-205-PM/PR	20.5	11.6	●	●	
MSQD-206-PM/PR	20.6	11.6	○	○	
MSQD-207-PM/PR	20.7	11.6	○	○	
MSQD-208-PM/PR	20.8	11.6	○	○	
MSQD-209-PM/PR	20.9	11.6	○	○	

Order No.	Dimensions (mm)		NS4125	NS9115	Tool holders
	D	t			
MSQD-210-PM/PR	21.0	12.1	●	●	MSQD120-12
MSQD-211-PM/PR	21.1	12.1	○	○	
MSQD-212-PM/PR	21.2	12.1	○	○	
MSQD-213-PM/PR	21.3	12.1	○	○	
MSQD-214-PM/PR	21.4	12.1	○	○	
MSQD-215-PM/PR	21.5	12.1	●	●	
MSQD-216-PM/PR	21.6	12.1	○	○	
MSQD-217-PM/PR	21.7	12.1	○	○	
MSQD-218-PM/PR	21.8	12.1	○	○	
MSQD-219-PM/PR	21.9	12.1	○	○	
MSQD-220-PM/PR	22.0	12.7	●	●	MSQD130-12
MSQD-221-PM/PR	22.1	12.7	○	○	
MSQD-222-PM/PR	22.2	12.7	○	○	
MSQD-223-PM/PR	22.3	12.7	○	○	
MSQD-224-PM/PR	22.4	12.7	○	○	
MSQD-225-PM/PR	22.5	12.7	●	●	
MSQD-226-PM/PR	22.6	12.7	○	○	
MSQD-227-PM/PR	22.7	12.7	○	○	
MSQD-228-PM/PR	22.8	12.7	○	○	
MSQD-229-PM/PR	22.9	12.7	○	○	
MSQD-230-PM/PR	23.0	13.3	●	●	
MSQD-231-PM/PR	23.1	13.3	○	○	
MSQD-232-PM/PR	23.2	13.3	○	○	
MSQD-233-PM/PR	23.3	13.3	○	○	
MSQD-234-PM/PR	23.4	13.3	○	○	
MSQD-235-PM/PR	23.5	13.3	●	●	
MSQD-236-PM/PR	23.6	13.3	○	○	
MSQD-237-PM/PR	23.7	13.3	○	○	
MSQD-238-PM/PR	23.8	13.3	○	○	
MSQD-239-PM/PR	23.9	13.3	○	○	
MSQD-240-PM/PR	24.0	13.9	●	●	
MSQD-241-PM/PR	24.1	13.9	○	○	
MSQD-242-PM/PR	24.2	13.9	○	○	
MSQD-243-PM/PR	24.3	13.9	○	○	
MSQD-244-PM/PR	24.4	13.9	○	○	
MSQD-245-PM/PR	24.5	13.9	●	●	
MSQD-246-PM/PR	24.6	13.9	○	○	
MSQD-247-PM/PR	24.7	13.9	○	○	
MSQD-248-PM/PR	24.8	13.9	○	○	
MSQD-249-PM/PR	24.9	13.9	○	○	
MSQD-250-PM/PR	25.0	14.5	●	●	
MSQD-251-PM/PR	25.1	14.5	○	○	
MSQD-252-PM/PR	25.2	14.5	○	○	
MSQD-253-PM/PR	25.3	14.5	○	○	
MSQD-254-PM/PR	25.4	14.5	○	○	
MSQD-255-PM/PR	25.5	14.5	●	●	
MSQD-256-PM/PR	25.6	14.5	○	○	
MSQD-257-PM/PR	25.7	14.5	○	○	
MSQD-258-PM/PR	25.8	14.5	○	○	
MSQD-259-PM/PR	25.9	14.5	○	○	
MSQD-260-PM	26.0	14.5	●	●	

● Stock ○ Available upon Order

Drills (coolant through center)



code number	Applicable cutting head Dia. (mm)	Dimensions (mm)					Wrench
		d	D3	L1	Ls	D	
MSQD-080/089-12-5D	8,0-8,9	12	16	50	45	7,8	8-11,9
MSQD-090/099-12-5D	9,0-9,9	12	16	55	45	8,8	
MSQD-100/109-16-5D	10,0-10,9	16	20	60	48	9,8	
MSQD-110/119-16-5D	11,0-11,9	16	20	66	48	10,8	
MSQD-120/129-16-5D	12,0-12,9	16	20	71	48	11,8	12-16,9
MSQD-130/139-16-5D	13,0-13,9	16	20	77	48	12,8	
MSQD-140/149-16-5D	14,0-14,9	16	20	82	48	13,8	
MSQD-150/159-20-5D	15,0-15,9	20	25	88	50	14,8	
MSQD-160/169-20-5D	16,0-16,9	20	25	93	50	15,8	
MSQD-170/179-20-5D	17,0-17,9	20	25	99	50	16,8	17-20,9
MSQD-180/189-25-5D	18,0-18,9	25	32	104	56	17,8	
MSQD-190/199-25-5D	19,0-19,9	25	32	110	56	18,8	
MSQD-200/209-25-5D	20,0-20,9	25	32	115	56	19,8	
MSQD-210/219-25-5D	21,0-21,9	25	32	121	56	20,8	21-26
MSQD-220/229-25-5D	22,0-22,9	25	32	126	56	21,8	
MSQD-230/239-32-5D	23,0-23,9	32	42	132	60	22,8	
MSQD-240/249-32-5D	24,0-24,9	32	42	137	60	23,8	
MSQD-250/259-32-5D	25,0-25,9	32	42	143	60	24,8	



code number	Applicable cutting head Dia. (mm)	Dimensions (mm)					Wrench
		d	D3	L1	Ls	D	
MSQD-080/089-12-8D	8,0-8,9	12	16	76	45	7,8	8-11,9
MSQD-090/099-12-8D	9,0-9,9	12	16	85	45	8,8	
MSQD-100/109-16-8D	10,0-10,9	16	20	93	48	9,8	
MSQD-110/119-16-8D	11,0-11,9	16	20	102	48	10,8	
MSQD-120/129-16-8D	12,0-12,9	16	20	110	48	11,8	12-16,9
MSQD-130/139-16-8D	13,0-13,9	16	20	119	48	12,8	
MSQD-140/149-16-8D	14,0-14,9	16	20	127	48	13,8	
MSQD-150/159-20-8D	15,0-15,9	20	25	136	50	14,8	
MSQD-160/169-20-8D	16,0-16,9	20	25	144	50	15,8	
MSQD-170/179-20-8D	17,0-17,9	20	25	153	50	16,8	17-20,9
MSQD-180/189-25-8D	18,0-18,9	25	32	161	56	17,8	
MSQD-190/199-25-8D	19,0-19,9	25	32	170	56	18,8	
MSQD-200/209-25-8D	20,0-20,9	25	32	178	56	19,8	
MSQD-210/219-25-8D	21,0-21,9	25	32	187	56	20,8	21-26
MSQD-220/229-25-8D	22,0-22,9	25	32	195	56	21,8	
MSQD-230/239-32-8D	23,0-23,9	32	42	204	60	22,8	
MSQD-240/249-32-8D	24,0-24,9	32	42	212	60	23,8	
MSQD-250/259-32-8D	25,0-25,9	32	42	221	60	24,8	

Turning inserts

External turning

Internal turning

Grooving & parting

Threading

Milling

Boring & drilling

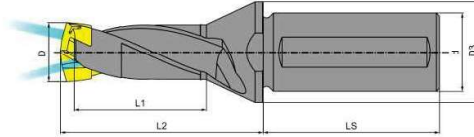
Tool holder

Solid carbide end mills

Solid carbide drill & taps

Technical information

Drills (coolant through center)



code number	Applicable cutting head Dia. (mm)	Dimensions (mm)					Wrench
		d	D3	L1	Ls	D	
MSQD-080/089-12-1.5D	8,0-8,9	12	16	16	45	7,8	8-11,9
MSQD-090/099-12-1.5D	9,0-9,9	12	16	18	45	8,8	
MSQD-100/109-16-1.5D	10,0-10,9	16	20	20	48	9,8	
MSQD-110/119-16-1.5D	11,0-11,9	16	20	22	48	10,8	
MSQD-120/129-16-1.5D	12,0-12,9	16	20	24	48	11,8	12-16,9
MSQD-130/139-16-1.5D	13,0-13,9	16	20	25	48	12,8	
MSQD-140/149-16-1.5D	14,0-14,9	16	20	27	48	13,8	
MSQD-150/159-20-1.5D	15,0-15,9	20	25	29	50	14,8	
MSQD-160/169-20-1.5D	16,0-16,9	20	25	30	50	15,8	17-20,9
MSQD-170/179-20-1.5D	17,0-17,9	20	25	32	50	16,8	
MSQD-180/189-25-1.5D	18,0-18,9	25	32	34	56	17,8	
MSQD-190/199-25-1.5D	19,0-19,9	25	32	36	56	18,8	
MSQD-200/209-25-1.5D	20,0-20,9	25	32	38	56	19,8	21-26
MSQD-210/219-25-1.5D	21,0-21,9	25	32	40	56	20,8	
MSQD-220/229-25-1.5D	22,0-22,9	25	32	42	56	21,8	
MSQD-230/239-32-1.5D	23,0-23,9	32	42	43	60	22,8	
MSQD-240/249-32-1.5D	24,0-24,9	32	42	45	60	23,8	21-26
MSQD-250/259-32-1.5D	25,0-25,9	32	42	47	60	24,8	



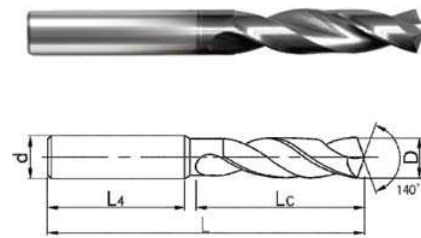
code number	Applicable cutting head Dia. (mm)	Dimensions (mm)					Wrench
		d	D3	L1	Ls	D	
MSQD-080/089-12-3D	8,0-8,9	12	16	32	45	7,8	8-11,9
MSQD-090/099-12-3D	9,0-9,9	12	16	35	45	8,8	
MSQD-100/109-16-3D	10,0-10,9	16	20	39	48	9,8	
MSQD-110/119-16-3D	11,0-11,9	16	20	42	48	10,8	
MSQD-120/129-16-3D	12,0-12,9	16	20	45	48	11,8	12-16,9
MSQD-130/139-16-3D	13,0-13,9	16	20	49	48	12,8	
MSQD-140/149-16-3D	14,0-14,9	16	20	53	48	13,8	
MSQD-150/159-20-3D	15,0-15,9	20	25	56	50	14,8	
MSQD-160/169-20-3D	16,0-16,9	20	25	60	50	15,8	17-20,9
MSQD-170/179-20-3D	17,0-17,9	20	25	63	50	16,8	
MSQD-180/189-25-3D	18,0-18,9	25	32	66	56	17,8	
MSQD-190/199-25-3D	19,0-19,9	25	32	70	56	18,8	
MSQD-200/209-25-3D	20,0-20,9	25	32	73	56	19,8	21-26
MSQD-210/219-25-3D	21,0-21,9	25	32	77	56	20,8	
MSQD-220/229-25-3D	22,0-22,9	25	32	80	56	21,8	
MSQD-230/239-32-3D	23,0-23,9	32	42	84	60	22,8	
MSQD-240/249-32-3D	24,0-24,9	32	42	88	60	23,8	21-26
MSQD-250/259-32-3D	25,0-25,9	32	42	91	60	24,8	

- Turning inserts
- External turning
- Internal turning
- Grooving & parting
- Threading
- Milling
- Boring & drilling
- Tool holder
- Solid carbide end mills
- Solid carbide drill & taps
- Technical information

PD20 Straight shank twist drill

Drill Diameter	3–20mm
Coolant Type	Outside
Maximum Depth	3D
Coating	TIAlN

P		M	K
Low-carbon steels	Steel	Stainless Steel	Cast Iron



Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
PD20-A3N-0300	●	3.00		6	62	20	36
PD20-A3N-0325	●	3.25		6	62	20	36
PD20-A3N-0330	●	3.30	M4	6	62	20	36
PD20-A3N-0340	●	3.40		6	62	20	36
PD20-A3N-0350	●	3.50		6	62	20	36
PD20-A3N-0370	●	3.70		6	62	20	36
PD20-A3N-0400	●	4.00		6	66	24	36
PD20-A3N-0420	●	4.20	M5	6	66	24	36
PD20-A3N-0430	●	4.30		6	66	24	36
PD20-A3N-0450	●	4.50		6	66	24	36
PD20-A3N-0465	●	4.65		6	66	24	36
PD20-A3N-0480	●	4.80		6	66	28	36
PD20-A3N-0500	●	5.00	M6	6	66	28	36
PD20-A3N-0510	●	5.10		6	66	28	36
PD20-A3N-0520	●	5.20		6	68	28	36
PD20-A3N-0550	●	5.50		6	68	28	36
PD20-A3N-0555	●	5.55		6	68	28	38
PD20-A3N-0580	●	5.80		6	68	28	38
PD20-A3N-0600	●	6.00		6	68	28	38
PD20-A3N-0610	●	6.10		8	79	34	38
PD20-A3N-0620	●	6.20		8	79	34	38
PD20-A3N-0630	●	6.30		8	79	34	38
PD20-A3N-0650	●	6.50		8	79	34	38
PD20-A3N-0660	●	6.60		8	79	34	38
PD20-A3N-0680	●	6.80	M8	8	79	34	38
PD20-A3N-0690	●	6.90		8	79	34	38
PD20-A3N-0700	●	7.00	M8x1	8	79	34	38
PD20-A3N-0710	●	7.10		8	79	41	38
PD20-A3N-0740	●	7.40		8	79	41	38
PD20-A3N-0750	●	7.50		8	79	41	38
PD20-A3N-0780	●	7.80		8	79	41	38
PD20-A3N-0800	●	8.00		8	79	41	38
PD20-A3N-0810	●	8.10		10	89	47	40
PD20-A3N-0840	●	8.40		10	89	47	40
PD20-A3N-0850	●	8.50	M10	10	89	47	40
PD20-A3N-0860	●	8.60		10	89	47	40
PD20-A3N-0870	●	8.70		10	89	47	40
PD20-A3N-0880	●	8.80		10	89	47	40
PD20-A3N-0900	●	9.00	M10x1	10	89	47	40
PD20-A3N-0930	●	9.30		10	89	47	40
PD20-A3N-0950	●	9.50		10	89	47	40
PD20-A3N-0960	●	9.60		10	89	47	40
PD20-A3N-0980	●	9.80		10	89	47	40

Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
PD20-A3N-1000	●	10.00		10	89	47	40
PD20-A3N-1025	●	10.25	M12	12	102	55	45
PD20-A3N-1040	●	10.40		12	102	55	45
PD20-A3N-1050	●	10.50	M12x1.5	12	102	55	45
PD20-A3N-1060	●	10.60		12	102	55	45
PD20-A3N-1080	●	10.80		12	102	55	45
PD20-A3N-1100	●	11.00		12	102	55	45
PD20-A3N-1120	●	11.20		12	102	55	45
PD20-A3N-1150	●	11.50		12	102	55	45
PD20-A3N-1180	●	11.80		12	102	55	45
PD20-A3N-1200	●	12.00	M14	12	102	55	45
PD20-A3N-1225	●	12.25		14	107	60	45
PD20-A3N-1250	●	12.50	M14x1.5	14	107	60	45
PD20-A3N-1270	●	12.70		14	107	60	45
PD20-A3N-1275	●	12.75		14	107	60	45
PD20-A3N-1280	●	12.80		14	107	60	45
PD20-A3N-1300	●	13.00		14	107	60	45
PD20-A3N-1310	●	13.10		14	107	60	45
PD20-A3N-1350	●	13.50		14	107	60	45
PD20-A3N-1380	●	13.80		14	107	60	45
PD20-A3N-1400	●	14.00	M16	14	107	60	45
PD20-A3N-1425	●	14.25		16	115	65	48
PD20-A3N-1450	●	14.50	M16x1.5	16	115	65	48
PD20-A3N-1475	●	14.75		16	115	65	48
PD20-A3N-1480	●	14.80		16	115	65	48
PD20-A3N-1500	●	15.00		16	115	65	48
PD20-A3N-1510	●	15.10		16	115	65	48
PD20-A3N-1550	●	15.50		16	115	65	48
PD20-A3N-1580	●	15.80		16	115	65	48
PD20-A3N-1600	●	16.00		16	115	65	48
PD20-A3N-1650	●	16.50		18	123	73	48
PD20-A3N-1675	●	16.75		18	123	73	48
PD20-A3N-1680	●	16.80		18	123	73	48
PD20-A3N-1700	●	17.00		18	123	73	48
PD20-A3N-1750	●	17.50		18	123	73	48
PD20-A3N-1780	●	17.80		18	123	73	48
PD20-A3N-1800	●	18.00		18	123	73	48
PD20-A3N-1850	●	18.50		20	131	79	50
PD20-A3N-1880	●	18.80		20	131	79	50
PD20-A3N-1900	●	19.00		20	131	79	50
PD20-A3N-1950	●	19.50		20	131	79	50
PD20-A3N-1980	●	19.80		20	131	79	50
PD20-A3N-2000	●	20.00		20	131	79	50

● Stock ○ Available upon Order

Turning inserts

External turning

Internal turning

Grooving & parting

Threading

Milling

Boring & drilling

Tool holder

Solid carbide end mills

Solid carbide drill & taps

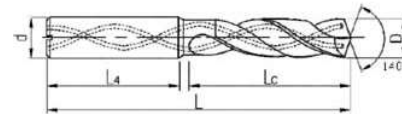
Technical information

- Turning inserts
- External turning
- Internal turning
- Grooving & parting
- Threading
- Milling
- Boring & drilling
- Toolholder
- Solid carbide end mills
- Solid carbide drill & taps**
- Technical information

PD20 Straight shank twist drill

Drill Diameter	5–20mm
Coolant Type	Inside
Maximum Depth	3D
Coating	TIAIN

P		M		K	
Low-carbon steels	Steel	Stainless Steel	Cast Iron		



Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
PD20-A3C-0500	●	5.00	M6	6	66	28	36
PD20-A3C-0510	●	5.10		6	66	28	36
PD20-A3C-0520	●	5.20		6	66	28	36
PD20-A3C-0550	●	5.50		6	66	28	36
PD20-A3C-0555	●	5.55		6	66	28	36
PD20-A3C-0580	●	5.80		6	66	28	36
PD20-A3C-0600	●	6.00		6	66	28	36
PD20-A3C-0610	●	6.10		8	79	34	36
PD20-A3C-0620	●	6.20		8	79	34	36
PD20-A3C-0630	●	6.30		8	79	34	36
PD20-A3C-0650	●	6.50		8	79	34	36
PD20-A3C-0660	●	6.60		8	79	34	36
PD20-A3C-0680	●	6.80	M8	8	79	34	36
PD20-A3C-0690	●	6.90		8	79	34	36
PD20-A3C-0700	●	7.00	M8x1	8	79	34	36
PD20-A3C-0740	●	7.40		8	79	41	38
PD20-A3C-0750	●	7.50		8	79	41	38
PD20-A3C-0780	●	7.80		8	79	41	38
PD20-A3C-0800	●	8.00		8	79	41	38
PD20-A3C-0810	●	8.10		10	89	47	40
PD20-A3C-0840	●	8.40		10	89	47	40
PD20-A3C-0850	●	8.50	M10	10	89	47	40
PD20-A3C-0860	●	8.60		10	89	47	40
PD20-A3C-0870	●	8.70		10	89	47	40
PD20-A3C-0880	●	8.80		10	89	47	40
PD20-A3C-0900	●	9.00	M10x1	10	89	47	40
PD20-A3C-0930	●	9.30		10	89	47	40
PD20-A3C-0950	●	9.50		10	89	47	40
PD20-A3C-0960	●	9.60		10	89	47	40
PD20-A3C-0980	●	9.80		10	89	47	40

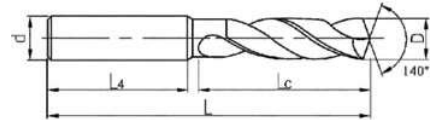
Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
PD20-A3C-1000	●	10.00	M12	10	89	47	40
PD20-A3C-1025	●	10.25		12	102	55	45
PD20-A3C-1040	●	10.40	M12x1,5	12	102	55	45
PD20-A3C-1050	●	10.50		12	102	55	45
PD20-A3C-1060	●	10.60		12	102	55	45
PD20-A3C-1080	●	10.80		12	102	55	45
PD20-A3C-1100	●	11.00		12	102	55	45
PD20-A3C-1120	●	11.20		12	102	55	45
PD20-A3C-1150	●	11.50		12	102	55	45
PD20-A3C-1180	●	11.80	M14	12	102	55	45
PD20-A3C-1200	●	12.00		12	102	55	45
PD20-A3C-1225	●	12.25	M14x1,5	14	107	60	45
PD20-A3C-1250	●	12.50		14	107	60	45
PD20-A3C-1270	●	12.70		14	107	60	45
PD20-A3C-1275	●	12.75		14	107	60	45
PD20-A3C-1280	●	12.80		14	107	60	45
PD20-A3C-1300	●	13.00		14	107	60	45
PD20-A3C-1310	●	13.10		14	107	60	45
PD20-A3C-1350	●	13.50		14	107	60	45
PD20-A3C-1380	●	13.80	M16	14	107	60	45
PD20-A3C-1400	●	14.00		14	107	60	45
PD20-A3C-1425	●	14.25	M18x1,5	16	115	65	48
PD20-A3C-1450	●	14.50		16	115	65	48
PD20-A3C-1475	●	14.75		16	115	65	48
PD20-A3C-1480	●	14.80		16	115	65	48
PD20-A3C-1500	●	15.00		16	115	65	48
PD20-A3C-1510	●	15.10		16	115	65	48
PD20-A3C-1550	●	15.50		16	115	65	48
PD20-A3C-1580	●	15.80		16	115	65	48
PD20-A3C-1600	●	16.00		16	115	65	48

● Stock ○ Available upon Order

PD20 Straight shank twist drill

Drill Diameter	3–20mm
Coolant Type	Outside
Maximum Depth	5D
Coating	TIAIN

P		M	K
Low-carbon steels	Steel	Stainless Steel	Cast Iron



Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
PD20-A5N-0300	●	3.00		6	68	28	36
PD20-A5N-0325	●	3.25		6	68	28	36
PD20-A5N-0330	●	3.30	M4	6	68	28	36
PD20-A5N-0340	●	3.40		6	68	28	36
PD20-A5N-0350	●	3.50		6	68	28	36
PD20-A5N-0370	●	3.70		6	68	28	36
PD20-A5N-0400	●	4.00		6	74	36	36
PD20-A5N-0420	●	4.20	M5	6	74	36	36
PD20-A5N-0430	●	4.30		6	74	36	36
PD20-A5N-0450	●	4.50		6	74	36	36
PD20-A5N-0465	●	4.65		6	74	36	36
PD20-A5N-0480	●	4.80		6	82	44	36
PD20-A5N-0500	●	5.00	M6	6	82	44	36
PD20-A5N-0510	●	5.10		6	82	44	36
PD20-A5N-0520	●	5.20		6	82	44	36
PD20-A5N-0550	●	5.50		6	82	44	36
PD20-A5N-0555	●	5.55		6	82	44	36
PD20-A5N-0580	●	5.80		6	82	44	36
PD20-A5N-0600	●	6.00		6	82	44	36
PD20-A5N-0610	●	6.10		8	91	53	36
PD20-A5N-0620	●	6.20		8	91	53	36
PD20-A5N-0630	●	6.30		8	91	53	36
PD20-A5N-0650	●	6.50		8	91	53	36
PD20-A5N-0660	●	6.60		8	91	53	36
PD20-A5N-0680	●	6.80	M6	8	91	53	36
PD20-A5N-0690	●	6.90		8	91	53	36
PD20-A5N-0700	●	7.00	M8x1	8	91	53	36
PD20-A5N-0710	●	7.10		8	91	53	36
PD20-A5N-0740	●	7.40		8	91	53	36
PD20-A5N-0750	●	7.50		8	91	53	36
PD20-A5N-0780	●	7.80		8	91	53	36
PD20-A5N-0800	●	8.00		8	91	53	36
PD20-A5N-0810	●	8.10		10	103	61	40
PD20-A5N-0840	●	8.40		10	103	61	40
PD20-A5N-0850	●	8.50	M10	10	103	61	40
PD20-A5N-0860	●	8.60		10	103	61	40
PD20-A5N-0870	●	8.70		10	103	61	40
PD20-A5N-0880	●	8.80		10	103	61	40
PD20-A5N-0900	●	9.00	M10x1	10	103	61	40
PD20-A5N-0930	●	9.30		10	103	61	40
PD20-A5N-0950	●	9.50		10	103	61	40
PD20-A5N-0960	●	9.60		10	103	61	40

Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
PD20-A5N-0980	●	9.80		10	103	61	40
PD20-A5N-1000	●	10.00		10	103	61	40
PD20-A5N-1025	●	10.25	M12	12	118	71	45
PD20-A5N-1040	●	10.40		12	118	71	45
PD20-A5N-1050	●	10.50	M12x1.5	12	118	71	45
PD20-A5N-1060	●	10.60		12	118	71	45
PD20-A5N-1080	●	10.80		12	118	71	45
PD20-A5N-1100	●	11.00		12	118	71	45
PD20-A5N-1120	●	11.20		12	118	71	45
PD20-A5N-1150	●	11.50		12	118	71	45
PD20-A5N-1180	●	11.80		12	118	71	45
PD20-A5N-1200	●	12.00	M14	12	118	71	45
PD20-A5N-1225	●	12.25		14	124	77	45
PD20-A5N-1250	●	12.50	M14x1.5	14	124	77	45
PD20-A5N-1270	●	12.70		14	124	77	45
PD20-A5N-1275	●	12.75		14	124	77	45
PD20-A5N-1280	●	12.80		14	124	77	45
PD20-A5N-1300	●	13.00		14	124	77	45
PD20-A5N-1350	●	13.50		14	124	77	45
PD20-A5N-1380	●	13.80		14	124	77	45
PD20-A5N-1400	●	14.00	M16	14	124	77	45
PD20-A5N-1425	●	14.25		14	133	83	48
PD20-A5N-1450	●	14.50	M16x1.5	16	133	83	48
PD20-A5N-1475	●	14.75		16	133	83	48
PD20-A5N-1480	●	14.80		16	133	83	48
PD20-A5N-1500	●	15.00		16	133	83	48
PD20-A5N-1510	●	15.10		16	133	83	48
PD20-A5N-1550	●	15.50		16	133	83	48
PD20-A5N-1580	●	15.80		16	133	83	48
PD20-A5N-1600	●	16.00		16	133	83	48
PD20-A5N-1650	●	16.50		16	143	93	48
PD20-A5N-1675	●	16.75		18	143	93	48
PD20-A5N-1680	●	16.80		18	143	93	48
PD20-A5N-1700	●	17.00		18	143	93	48
PD20-A5N-1750	●	17.50		18	143	93	48
PD20-A5N-1780	●	17.80		18	143	93	48
PD20-A5N-1800	●	18.00		18	143	93	48
PD20-A5N-1850	●	18.50		18	153	101	50
PD20-A5N-1900	●	19.00		20	153	101	50
PD20-A5N-1950	●	19.50		20	153	101	50
PD20-A5N-1980	●	19.80		20	153	101	50
PD20-A5N-2000	●	20.00		20	153	101	50

● Stock ○ Available upon Order

Turning inserts

External turning

Internal turning

Grooving & parting

Threading

Milling

Boring & drilling

Tool holder

Solid carbide end mills

Solid carbide drill & taps

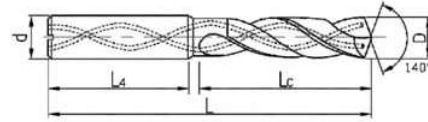
Technical information

- Turning inserts
- External turning
- Internal turning
- Grooving & parting
- Threading
- Milling
- Boring & drilling
- Toolholder
- Solid carbide end mills
- Solid carbide drill & taps
- Technical information

PD20 Straight shank twist drill

Drill Diameter	5–20mm
Coolant Type	Inside
Maximum Depth	5D
Coating	TIAIN

P		M		K	
Low-carbon steels	Steel	Stainless Steel	Cast Iron		



Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
PD20-A5C-0500	●	5.00	M6	6	82	44	36
PD20-A5C-0510	●	5.10		6	82	44	36
PD20-A5C-0520	●	5.20		6	82	44	36
PD20-A5C-0550	●	5.50		6	82	44	36
PD20-A5C-0555	●	5.55		6	82	44	36
PD20-A5C-0580	●	5.80		6	82	44	36
PD20-A5C-0600	●	3.00		6	82	44	36
PD20-A5C-0610	●	6.10		8	91	53	38
PD20-A5C-0620	●	6.20		8	91	53	38
PD20-A5C-0630	●	6.30		8	91	53	38
PD20-A5C-0650	●	6.50		8	91	53	38
PD20-A5C-0660	●	6.60		8	91	53	38
PD20-A5C-0680	●	6.80	M8	8	91	53	38
PD20-A5C-0690	●	6.90		8	91	53	38
PD20-A5C-0700	●	7.00	M8x1	8	91	53	38
PD20-A5C-0710	●	7.10		8	91	53	38
PD20-A5C-0740	●	7.40		8	91	53	38
PD20-A5C-0750	●	7.50		8	91	53	38
PD20-A5C-0780	●	7.80		8	91	53	38
PD20-A5C-0800	●	8.00		8	91	53	38
PD20-A5C-0810	●	8.10		10	103	61	40
PD20-A5C-0840	●	8.40		10	103	61	40
PD20-A5C-0850	●	8.50	M10	10	103	61	40
PD20-A5C-0860	●	8.60		10	103	61	40
PD20-A5C-0870	●	8.70		10	103	61	40
PD20-A5C-0880	●	8.80		10	103	61	40
PD20-A5C-0900	●	9.00	M10x1	10	103	61	40
PD20-A5C-0930	●	9.30		10	103	61	40
PD20-A5C-0950	●	9.50		10	103	61	40
PD20-A5C-0960	●	9.60		10	103	61	40
PD20-A5C-0980	●	9.80		10	103	61	40

Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
PD20-A5C-1000	●	10.00		10	103	61	40
PD20-A5C-1025	●	10.25	M12	12	118	71	45
PD20-A5C-1045	●	10.45		12	118	71	45
PD20-A5C-1050	●	10.50	M12x1,5	12	118	71	45
PD20-A5C-1060	●	10.60		12	118	71	45
PD20-A5C-1080	●	10.80		12	118	71	45
PD20-A5C-1100	●	11.00		12	118	71	45
PD20-A5C-1120	●	11.20		12	118	71	45
PD20-A5C-1150	●	11.50		12	118	71	45
PD20-A5C-1180	●	11.80		12	118	71	45
PD20-A5C-1200	●	12.00	M14	12	118	71	45
PD20-A5C-1220	●	12.20		14	124	77	45
PD20-A5C-1225	●	12.25		14	124	77	45
PD20-A5C-1250	●	12.50	M14x1,5	14	124	77	45
PD20-A5C-1270	●	12.70		14	124	77	45
PD20-A5C-1275	●	12.75		14	124	77	45
PD20-A5C-1280	●	12.80		14	124	77	45
PD20-A5C-1300	●	13.00		14	124	77	45
PD20-A5C-1310	●	13.10		14	124	77	45
PD20-A5C-1350	●	13.50		14	124	77	45
PD20-A5C-1380	●	13.80		14	124	77	45
PD20-A5C-1400	●	14.00	M16	14	124	77	45
PD20-A5C-1425	●	14.25		16	133	83	48
PD20-A5C-1450	●	14.50	M16x1,5	16	133	83	48
PD20-A5C-1475	●	14.75		16	133	83	48
PD20-A5C-1480	●	14.80		16	133	83	48
PD20-A5C-1500	●	15.00		16	133	83	48
PD20-A5C-1510	●	15.10		16	133	83	48
PD20-A5C-1550	●	15.50		16	133	83	48
PD20-A5C-1580	●	15.80		16	133	83	48
PD20-A5C-1600	●	16.00		16	133	83	48

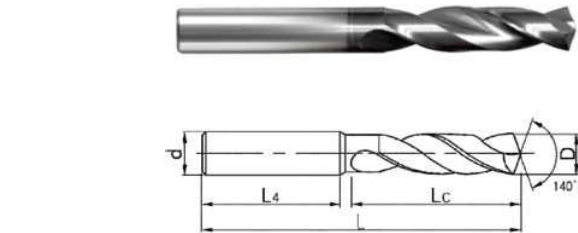
● Stock ○ Available upon Order

KD20 Straight shank twist drill

Drill Diameter	3–20mm
Coolant Type	Outside
Maximum Depth	3D
Coating	TIAIN

K
Cast Iron

Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
KD20-A3N-0300	●	3,00		6	62	20	36
KD20-A3N-0330	●	3,30		6	62	20	36
KD20-A3N-0400	●	4,00	M4	6	66	20	36
KD20-A3N-0420	●	4,20	M5	6	66	24	36
KD20-A3N-0500	●	5,00	M6	6	66	28	36
KD20-A3N-0600	●	6,00		6	68	28	36
KD20-A3N-0680	●	6,80	M8	8	79	34	38
KD20-A3N-0700	●	7,00	M8x1	8	79	34	38
KD20-A3N-0800	●	8,00		8	79	34	38
KD20-A3N-0850	●	8,50	M10	10	89	47	40
KD20-A3N-0900	●	9,00	M10x1	10	89	47	40
KD20-A3N-1000	●	10,00		10	89	47	40
KD20-A3N-1025	●	10,25	M12	12	102	55	45



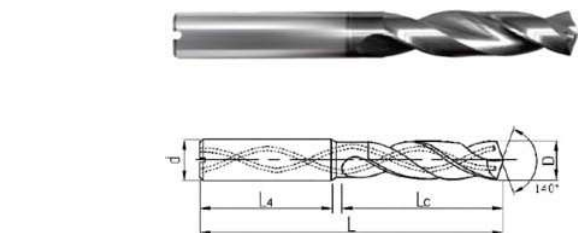
Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
KD20-A3N-1050	●	10,50		12	102	55	45
KD20-A3N-1100	●	11,00	M12	12	102	55	45
KD20-A3N-1200	●	12,00		12	102	55	45
KD20-A3N-1250	●	12,50	M12x1,5	14	107	60	45
KD20-A3N-1300	●	13,00	M14	14	107	60	45
KD20-A3N-1400	●	14,00	M14x1,5	14	107	60	45
KD20-A3N-1450	●	14,50		16	115	65	48
KD20-A3N-1500	●	15,00	M16	16	115	65	48
KD20-A3N-1600	●	16,00	M16x1,5	16	115	65	48
KD20-A3N-1700	●	17,00		18	123	73	48
KD20-A3N-1800	●	18,00		18	123	73	48
KD20-A3N-1900	●	19,00		20	131	79	50
KD20-A3N-2000	●	20,00		20	131	79	50

KD20 Straight shank twist drill

Drill Diameter	5–16mm
Coolant Type	Inside
Maximum Depth	3D
Coating	HELICA

K
Cast Iron

Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
KD20-A3C-0500	●	5,00	M6	6	66	28	36
KD20-A3C-0600	●	6,00		6	66	28	36
KD20-A3C-0680	●	6,80	M8	8	79	34	38
KD20-A3C-0700	●	7,00	M8x1	8	79	34	38
KD20-A3C-0800	●	8,00		8	79	41	38
KD20-A3C-0850	●	8,50	M10	10	89	47	40
KD20-A3C-0900	●	9,00	M10x1	10	89	47	40
KD20-A3C-1000	●	10,00		10	89	47	40
KD20-A3C-1025	●	10,25	M12	12	102	55	45



Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
KD20-A3C-1050	●	10,50	M12x1,5	12	102	55	45
KD20-A3C-1100	●	11,00		12	102	55	45
KD20-A3C-1200	●	12,00	M14	12	102	55	45
KD20-A3C-1250	●	12,50	M14x1,5	14	107	60	45
KD20-A3C-1300	●	13,00		14	107	60	45
KD20-A3C-1400	●	14,00	M16	14	107	60	45
KD20-A3C-1450	●	14,50	M18x1,5	16	115	65	48
KD20-A3C-1500	●	15,00		16	115	65	48
KD20-A3C-1600	●	16,00		16	115	65	48

● Stock ○ Available upon Order

Turning inserts

External turning

Internal turning

Grooving & parting

Threading

Milling

Boring & drilling

Tool holder

Solid carbide end mills

Solid carbide drill & taps

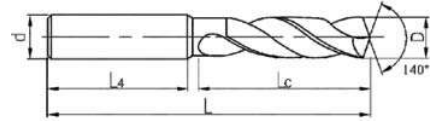
Technical information

- Turning inserts
- External turning
- Internal turning
- Grooving & parting
- Threading
- Milling
- Boring & drilling
- Tool holder
- Solid carbide end mills
- Solid carbide drill & taps**
- Technical information

KD20 Straight shank twist drill

Drill Diameter	5–16mm
Coolant Type	Outside
Maximum Depth	5D
Coating	HELICA

K
Cast Iron



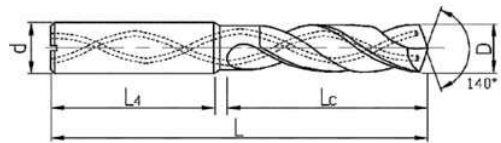
Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
KD20-A5N-0500	●	5.00	M6	6	82	44	36
KD20-A5N-0600	●	6.00		6	82	44	36
KD20-A5N-0680	●	6.80	M8	8	91	53	38
KD20-A5N-0700	●	7.00	M8x1	8	91	53	38
KD20-A5N-0800	●	8.00		8	91	53	38
KD20-A5N-0850	●	8.50	M10	10	103	61	40
KD20-A5N-0900	●	9.00	M10x1	10	103	61	40
KD20-A5N-1000	●	10.00		10	103	61	40
KD20-A5N-1025	●	10,25	M12	12	118	71	45

Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
KD20-A5N-1050	●	10,50	M12x1,5	12	118	71	45
KD20-A5N-1100	●	11,00		12	118	71	45
KD20-A5N-1200	●	12,00	M14	12	118	71	45
KD20-A5N-1250	●	12,50	M14x1,5	14	124	77	45
KD20-A5N-1300	●	13,00		14	124	77	45
KD20-A5N-1400	●	14,00	M16	14	124	77	45
KD20-A5N-1450	●	14,50	M18x1,5	16	133	83	48
KD20-A5N-1500	●	15,00		16	133	83	48
KD20-A5N-1600	●	16,00		16	133	83	48

KD20 Straight shank twist drill

Drill Diameter	5–16mm
Coolant Type	Inside
Maximum Depth	5D
Coating	HELICA

K
Cast Iron



Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
KD20-A5C-0500	●	5.00	M6	6	82	44	36
KD20-A5C-0600	●	6.00		6	82	44	36
KD20-A5C-0680	●	6.80	M8	8	91	53	38
KD20-A5C-0700	●	7.00	M8x1	8	91	53	38
KD20-A5C-0800	●	8.00		8	91	53	38
KD20-A5C-0850	●	8,50	M10	10	103	61	40
KD20-A5C-0900	●	9.00	M10x1	10	103	61	40
KD20-A5C-1000	●	10.00		10	103	61	40
KD20-A5C-1025	●	10,25	M12	12	118	71	45

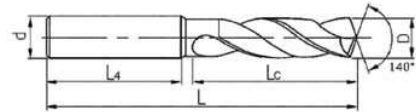
Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
KD20-A5C-1050	●	10,50	M12x1,5	12	118	71	45
KD20-A5C-1100	●	11,00		12	118	71	45
KD20-A5C-1200	●	12,00	M14	12	118	71	45
KD20-A5C-1250	●	12,50	M14x1,5	14	124	77	45
KD20-A5C-1300	●	13,00		14	124	77	45
KD20-A5C-1400	●	14,00	M16	14	124	77	45
KD20-A5C-1450	●	14,50	M18x1,5	16	133	83	48
KD20-A5C-1500	●	15,00		16	133	83	48
KD20-A5C-1600	●	16,00		16	133	83	48

● Stock ○ Available upon Order

MD20 Straight shank twist drill for stainless steels

Drill Diameter	3–20mm
Coolant Type	Outside
Maximum Depth	3D
Coating	AlCrN/TiSiN

M		S	
Stainless Steel	Titanium Alloys	Heat Resistant super Alloy	



Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
MD20-A3N-0300	●	3.00		6	62	20	36
MD20-A3N-0325	●	3.25		6	62	20	36
MD20-A3N-0330	●	3.30	M4	6	62	20	36
MD20-A3N-0340	●	3.40		6	62	20	36
MD20-A3N-0350	●	3.50		6	62	20	36
MD20-A3N-0370	●	3.70		6	62	20	36
MD20-A3N-0400	●	4.00		6	66	24	36
MD20-A3N-0420	●	4.20	M5	6	66	24	36
MD20-A3N-0430	●	4.30		6	66	24	36
MD20-A3N-0450	●	4.50		6	66	24	36
MD20-A3N-0465	●	4.65		6	66	24	36
MD20-A3N-0480	●	4.80		6	66	28	36
MD20-A3N-0500	●	5.00	M6	6	66	28	36
MD20-A3N-0510	●	5.10		6	66	28	36
MD20-A3N-0520	●	5.20		6	68	28	36
MD20-A3N-0550	●	5.50		6	68	28	36
MD20-A3N-0555	●	5.55		6	68	28	38
MD20-A3N-0580	●	5.80		6	68	28	38
MD20-A3N-0600	●	6.00		6	68	28	38
MD20-A3N-0610	●	6.10		8	79	34	38
MD20-A3N-0620	●	6.20		8	79	34	38
MD20-A3N-0630	●	6.30		8	79	34	38
MD20-A3N-0650	●	6.50		8	79	34	38
MD20-A3N-0660	●	6.60		8	79	34	38
MD20-A3N-0680	●	6.80	M8	8	79	34	38
MD20-A3N-0690	●	6.90		8	79	34	38
MD20-A3N-0700	●	7.00	M8x1	8	79	34	38
MD20-A3N-0710	●	7.10		8	79	41	38
MD20-A3N-0740	●	7.40		8	79	41	38
MD20-A3N-0750	●	7.50		8	79	41	38
MD20-A3N-0780	●	7.80		8	79	41	38
MD20-A3N-0800	●	8.00		8	79	41	38
MD20-A3N-0810	●	8.10		10	89	47	40
MD20-A3N-0840	●	8.40		10	89	47	40
MD20-A3N-0850	●	8.50	M10	10	89	47	40
MD20-A3N-0860	●	8.60		10	89	47	40
MD20-A3N-0870	●	8.70		10	89	47	40
MD20-A3N-0880	●	8.80		10	89	47	40
MD20-A3N-0900	●	9.00	M10x1	10	89	47	40
MD20-A3N-0930	●	9.30		10	89	47	40
MD20-A3N-0950	●	9.50		10	89	47	40
MD20-A3N-0960	●	9.60		10	89	47	40
MD20-A3N-0980	●	9.80		10	89	47	40

Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
MD20-A3N-1000	●	10.00	M12x1,5	10	89	47	40
MD20-A3N-1025	●	10.25		12	102	55	45
MD20-A3N-1040	●	10.40		12	102	55	45
MD20-A3N-1050	●	10.50		12	102	55	45
MD20-A3N-1060	●	10.60		12	102	55	45
MD20-A3N-1080	●	10.80		12	102	55	45
MD20-A3N-1100	●	11.00		12	102	55	45
MD20-A3N-1120	●	11.20	M14	12	102	55	45
MD20-A3N-1150	●	11.50		12	102	55	45
MD20-A3N-1180	●	11.80	M14x1,5	12	102	55	45
MD20-A3N-1200	●	12.00		12	102	55	45
MD20-A3N-1225	●	12.25		14	107	60	45
MD20-A3N-1250	●	12.50		14	107	60	45
MD20-A3N-1270	●	12.70		14	107	60	45
MD20-A3N-1275	●	12.75		14	107	60	45
MD20-A3N-1280	●	12.80		14	107	60	45
MD20-A3N-1300	●	13.00		14	107	60	45
MD20-A3N-1310	●	13.10	M16	14	107	60	45
MD20-A3N-1350	●	13.50		14	107	60	45
MD20-A3N-1380	●	13.80	M16x1,5	14	107	60	45
MD20-A3N-1400	●	14.00		14	107	60	45
MD20-A3N-1425	●	14.25		16	115	65	48
MD20-A3N-1450	●	14.50		16	115	65	48
MD20-A3N-1475	●	14.75		16	115	65	48
MD20-A3N-1480	●	14.80		16	115	65	48
MD20-A3N-1500	●	15.00		16	115	65	48
MD20-A3N-1510	●	15.10		16	115	65	48
MD20-A3N-1550	●	15.50		16	115	65	48
MD20-A3N-1580	●	15.80		16	115	65	48
MD20-A3N-1600	●	16.00		16	115	65	48
MD20-A3N-1650	●	16.50		18	123	73	48
MD20-A3N-1675	●	16.75		18	123	73	48
MD20-A3N-1680	●	16.80		18	123	73	48
MD20-A3N-1700	●	17.00		18	123	73	48
MD20-A3N-1750	●	17.50		18	123	73	48
MD20-A3N-1780	●	17.80		18	123	73	48
MD20-A3N-1800	●	18.00		18	123	73	48
MD20-A3N-1850	●	18.50		20	131	79	50
MD20-A3N-1880	●	18.80		20	131	79	50
MD20-A3N-1900	●	19.00		20	131	79	50
MD20-A3N-1950	●	19.50		20	131	79	50
MD20-A3N-1980	●	19.80		20	131	79	50
MD20-A3N-2000	●	20.00		20	131	79	50

● Stock ○ Available upon Order

Turning inserts

External turning

Internal turning

Grooving & parting

Threading

Milling

Boring & drilling

Tool holder

Solid carbide end mills

Solid carbide drill & taps

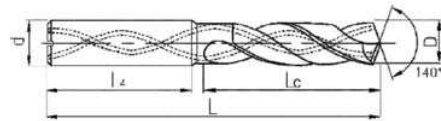
Technical information

- Turning inserts
- External turning
- Internal turning
- Grooving & parting
- Threading
- Milling
- Boring & drilling
- Toolholder
- Solid carbide end mills
- Solid carbide drill & taps**
- Technical information

MD20 Straight shank twist drill for stainless steels

Drill Diameter	5–20mm
Coolant Type	Inside
Maximum Depth	3D
Coating	AlCrN/TiSiN

M	S	
Stainless Steel	Titanium Alloys	Heat Resistant super Alloy



Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
MD20-A3C-0500	●	5.00	M6	6	66	28	36
MD20-A3C-0510	●	5.10		6	66	28	36
MD20-A3C-0520	●	5.20		6	66	28	36
MD20-A3C-0550	●	5.50		6	66	28	36
MD20-A3C-0555	●	5.55		6	66	28	36
MD20-A3C-0580	●	5.80		6	66	28	36
MD20-A3C-0600	●	6.00		6	66	28	36
MD20-A3C-0610	●	6.10		8	79	34	38
MD20-A3C-0620	●	6.20		8	79	34	38
MD20-A3C-0630	●	6.30		8	79	34	38
MD20-A3C-0650	●	6.50		8	79	34	38
MD20-A3C-0660	●	6.60		8	79	34	38
MD20-A3C-0680	●	6.80	M8	8	79	34	38
MD20-A3C-0690	●	6.90		8	79	34	38
MD20-A3C-0700	●	7.00	M8x1	8	79	34	38
MD20-A3C-0710	●	7.10		8	79	41	38
MD20-A3C-0740	●	7.40		8	79	41	38
MD20-A3C-0750	●	7.50		8	79	41	38
MD20-A3C-0780	●	7.80		8	79	41	38
MD20-A3C-0800	●	8.00		8	79	41	38
MD20-A3C-0810	●	8.10		10	89	47	40
MD20-A3C-0840	●	8.40		10	89	47	40
MD20-A3C-0850	●	8.50	M10	10	89	47	40
MD20-A3C-0860	●	8.60		10	89	47	40
MD20-A3C-0870	●	8.70		10	89	47	40
MD20-A3C-0880	●	8.80		10	89	47	40
MD20-A3C-0900	●	9.00	M10x1	10	89	47	40
MD20-A3C-0930	●	9.30		10	89	47	40
MD20-A3C-0950	●	9.50		10	89	47	40
MD20-A3C-0960	●	9.60		10	89	47	40
MD20-A3C-0980	●	9.80		10	89	47	40

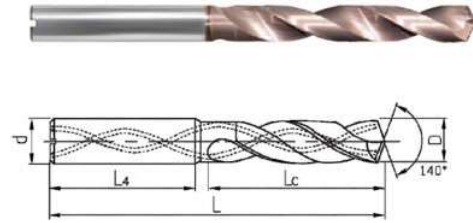
Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
MD20-A3C-1000	●	10.00		10	89	47	40
MD20-A3C-1025	●	10.25	M12	12	102	55	45
MD20-A3C-1040	●	10.40		12	102	55	45
MD20-A3C-1050	●	10.50	M12x1.5	12	102	55	45
MD20-A3C-1060	●	10.60		12	102	55	45
MD20-A3C-1080	●	10.80		12	102	55	45
MD20-A3C-1100	●	11.00		12	102	55	45
MD20-A3C-1120	●	11.20		12	102	55	45
MD20-A3C-1150	●	11.50		12	102	55	45
MD20-A3C-1180	●	11.80		12	102	55	45
MD20-A3C-1200	●	12.00	M14	12	102	55	45
MD20-A3C-1225	●	12.25		14	107	60	45
MD20-A3C-1250	●	12.50		14	107	60	45
MD20-A3C-1270	●	12.70	M14x1.5	14	107	60	45
MD20-A3C-1275	●	12.75		14	107	60	45
MD20-A3C-1280	●	12.80		14	107	60	45
MD20-A3C-1300	●	13.00		14	107	60	45
MD20-A3C-1310	●	13.10		14	107	60	45
MD20-A3C-1350	●	13.50		14	107	60	45
MD20-A3C-1380	●	13.80		14	107	60	45
MD20-A3C-1400	●	14.00	M16	14	107	60	45
MD20-A3C-1425	●	14.25		16	115	65	48
MD20-A3C-1450	●	14.50	M16x1.5	16	115	65	48
MD20-A3C-1475	●	14.75		16	115	65	48
MD20-A3C-1480	●	14.80		16	115	65	48
MD20-A3C-1500	●	15.00		16	115	65	48
MD20-A3C-1510	●	15.10		16	115	65	48
MD20-A3C-1550	●	15.50		16	115	65	48
MD20-A3C-1580	●	15.80		16	115	65	48
MD20-A3C-1600	●	16.00		16	115	65	48

● Stock ○ Available upon Order

MD20 Straight shank twist drill for stainless steels

Drill Diameter	5–20mm
Coolant Type	Inside
Maximum Depth	5D
Coating	AlCrN/TisiN

M	S	
Stainless Steel	Titanium Alloys	Heat Resistant super Alloy



Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
MD20-A5C-0500	●	5.00	M6	6	82	44	36
MD20-A5C-0510	●	5.10		6	82	44	36
MD20-A5C-0520	●	5.20		6	82	44	36
MD20-A5C-0550	●	5.50		6	82	44	36
MD20-A5C-0555	●	5.55		6	82	44	36
MD20-A5C-0580	●	5.80		6	82	44	36
MD20-A5C-0600	●	6.00		6	82	44	36
MD20-A5C-0610	●	6.10		8	91	53	38
MD20-A5C-0620	●	6.20		8	91	53	38
MD20-A5C-0630	●	6.30		8	91	53	38
MD20-A5C-0650	●	6.50		8	91	53	38
MD20-A5C-0660	●	6.60		8	91	53	38
MD20-A5C-0680	●	6.80	M8	8	91	53	38
MD20-A5C-0690	●	6.90		8	91	53	38
MD20-A5C-0700	●	7.00	M8x1	8	91	53	38
MD20-A5C-0710	●	7.10		8	91	53	38
MD20-A5C-0740	●	7.40		8	91	53	38
MD20-A5C-0750	●	7.50		8	91	53	38
MD20-A5C-0780	●	7.80		8	91	53	38
MD20-A5C-0800	●	8.00		8	91	53	38
MD20-A5C-0810	●	8.10		10	103	61	40
MD20-A5C-0840	●	8.40		10	103	61	40
MD20-A5C-0850	●	8.50	M10	10	103	61	40
MD20-A5C-0860	●	8.60		10	103	61	40
MD20-A5C-0870	●	8.70		10	103	61	40
MD20-A5C-0880	●	8.80		10	103	61	40
MD20-A5C-0900	●	9.00	M10x1	10	103	61	40
MD20-A5C-0930	●	9.30		10	103	61	40
MD20-A5C-0950	●	9.50		10	103	61	40
MD20-A5C-0960	●	9.60		10	103	61	40
MD20-A5C-0980	●	9.80		10	103	61	40

Ordering Code	Stock	D(h6)	Screw Thread Din	d(h6)	L	Lc	L4
MD20-A5C-1000	●	10.00		10	103	61	40
MD20-A5C-1025	●	10.25	M12	12	118	71	45
MD20-A5C-1040	●	10.40		12	118	71	45
MD20-A5C-1050	●	10.50	M12x1.5	12	118	71	45
MD20-A5C-1060	●	10.60		12	118	71	45
MD20-A5C-1080	●	10.80		12	118	71	45
MD20-A5C-1100	●	11.00		12	118	71	45
MD20-A5C-1120	●	11.20		12	118	71	45
MD20-A5C-1150	●	11.50		12	118	71	45
MD20-A5C-1180	●	11.80		12	118	71	45
MD20-A5C-1200	●	12.00	M14	12	118	71	45
MD20-A5C-1220	●	12.25		14	124	77	45
MD20-A5C-1225	●	12.50		14	124	77	45
MD20-A5C-1250	●	12.70	M14x1.5	14	124	77	45
MD20-A5C-1270	●	12.75		14	124	77	45
MD20-A5C-1275	●	12.80		14	124	77	45
MD20-A5C-1280	●	13.00		14	124	77	45
MD20-A5C-1300	●	13.10		14	124	77	45
MD20-A5C-1350	●	13.50		14	124	77	45
MD20-A5C-1380	●	13.80		14	124	77	45
MD20-A5C-1400	●	14.00	M16	14	124	77	45
MD20-A5C-1425	●	14.25		16	133	83	48
MD20-A5C-1450	●	14.50	M16x1.5	16	133	83	48
MD20-A5C-1475	●	14.75		16	133	83	48
MD20-A5C-1480	●	14.80		16	133	83	48
MD20-A5C-1500	●	15.00		16	133	83	48
MD20-A5C-1510	●	15.10		16	133	83	48
MD20-A5C-1550	●	15.50		16	133	83	48
MD20-A5C-1580	●	15.80		16	133	83	48
MD20-A5C-1600	●	16.00		16	133	83	48

● Stock ○ Available upon Order

Turning inserts

External turning

Internal turning

Grooving & parting

Threading

Milling

Boring & drilling

Tool holder

Solid carbide end mills

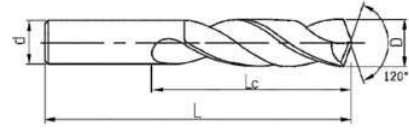
Solid carbide drill & taps

Technical information

- Turning inserts
- External turning
- Internal turning
- Grooving & parting
- Threading
- Milling
- Boring & drilling
- Toolholder
- Solid carbide end mills
- Solid carbide drill & taps**
- Technical information

ND25UF Straight shank twist drill

Drill Diameter	2–16mm
Coolant Type	Outside
Maximum Depth	3D



Ordering Code	Stock	D(h6)	d(h6)	L	Lc
ND25UF-Y3N-0200	●	2.00	2.0	38	12
ND25UF-Y3N-0250	●	2.50	2.5	43	14
ND25UF-Y3N-0280	●	2.80	2.8	46	16
ND25UF-Y3N-0300	●	3.00	3.0	46	16
ND25UF-Y3N-0310	●	3.10	3.1	49	18
ND25UF-Y3N-0320	●	3.20	3.2	49	18
ND25UF-Y3N-0330	●	3.30	3.3	49	20
ND25UF-Y3N-0340	●	3.40	3.4	52	20
ND25UF-Y3N-0350	●	3.50	3.5	52	20
ND25UF-Y3N-0360	●	3.60	3.6	52	20
ND25UF-Y3N-0370	●	3.70	3.7	52	20
ND25UF-Y3N-0380	●	3.80	3.8	55	22
ND25UF-Y3N-0390	●	3.90	3.9	55	22
ND25UF-Y3N-0400	●	4.00	4.0	55	22
ND25UF-Y3N-0410	●	4.10	4.1	55	22
ND25UF-Y3N-0420	●	4.20	4.2	55	22
ND25UF-Y3N-0430	●	4.30	4.3	58	24
ND25UF-Y3N-0440	●	4.40	4.4	58	24
ND25UF-Y3N-0450	●	4.50	4.5	58	24
ND25UF-Y3N-0460	●	4.60	4.6	58	24
ND25UF-Y3N-0470	●	4.70	4.7	58	24
ND25UF-Y3N-0480	●	4.80	4.8	62	26
ND25UF-Y3N-0490	●	4.90	4.9	62	26
ND25UF-Y3N-0500	●	5.00	5.0	62	26
ND25UF-Y3N-0510	●	5.10	5.1	62	26
ND25UF-Y3N-0520	●	5.20	5.2	62	26
ND25UF-Y3N-0530	●	5.30	5.3	62	26
ND25UF-Y3N-0540	●	5.40	5.4	66	28
ND25UF-Y3N-0550	●	5.50	5.5	66	28
ND25UF-Y3N-0560	●	5.60	5.6	66	28
ND25UF-Y3N-0570	●	5.70	5.7	66	28
ND25UF-Y3N-0580	●	5.80	5.8	66	28
ND25UF-Y3N-0590	●	5.90	5.9	66	28
ND25UF-Y3N-0600	●	6.00	6.0	66	28
ND25UF-Y3N-0610	●	6.10	6.1	70	31
ND25UF-Y3N-0620	●	6.20	6.2	70	31
ND25UF-Y3N-0630	●	6.30	6.3	70	31
ND25UF-Y3N-0640	●	6.40	6.4	70	31
ND25UF-Y3N-0650	●	6.50	6.5	70	31
ND25UF-Y3N-0660	●	6.60	6.6	70	31
ND25UF-Y3N-0670	●	6.70	6.7	70	31
ND25UF-Y3N-0680	●	6.80	6.8	74	34
ND25UF-Y3N-0690	●	6.90	6.9	74	34
ND25UF-Y3N-0700	●	7.00	7.0	74	34
ND25UF-Y3N-0710	●	7.10	7.1	74	34
ND25UF-Y3N-0720	●	7.20	7.2	74	34
ND25UF-Y3N-0730	●	7.30	7.3	74	34
ND25UF-Y3N-0740	●	7.40	7.4	74	34

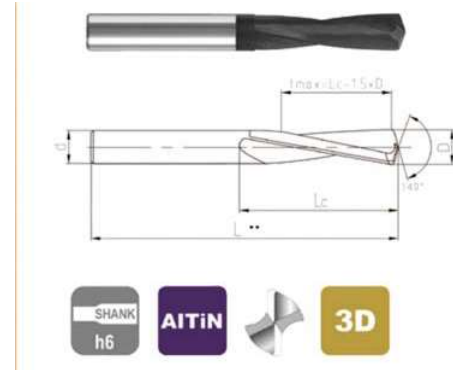
Ordering Code	Stock	D(h6)	d(h6)	L	Lc
ND25UF-Y3N-0750	●	7.50	7.5	74	34
ND25UF-Y3N-0760	●	7.60	7.6	79	37
ND25UF-Y3N-0770	●	7.70	7.7	79	37
ND25UF-Y3N-0780	●	7.80	7.8	79	37
ND25UF-Y3N-0790	●	7.90	7.9	79	37
ND25UF-Y3N-0800	●	8.00	8.0	79	37
ND25UF-Y3N-0810	●	8.10	8.1	79	37
ND25UF-Y3N-0820	●	8.20	8.2	79	37
ND25UF-Y3N-0830	●	8.30	8.3	79	37
ND25UF-Y3N-0840	●	8.40	8.4	79	37
ND25UF-Y3N-0850	●	8.50	8.5	79	37
ND25UF-Y3N-0860	●	8.60	8.6	84	40
ND25UF-Y3N-0870	●	8.70	8.7	84	40
ND25UF-Y3N-0880	●	8.80	8.8	84	40
ND25UF-Y3N-0890	●	8.90	8.9	84	40
ND25UF-Y3N-0900	●	9.00	9.0	84	40
ND25UF-Y3N-0910	●	9.10	9.1	84	40
ND25UF-Y3N-0920	●	9.20	9.2	84	40
ND25UF-Y3N-0930	●	9.30	9.3	84	40
ND25UF-Y3N-0940	●	9.40	9.4	84	40
ND25UF-Y3N-0950	●	9.50	9.5	84	40
ND25UF-Y3N-0960	●	9.60	9.6	89	43
ND25UF-Y3N-0970	●	9.70	9.7	89	43
ND25UF-Y3N-0980	●	9.80	9.8	89	43
ND25UF-Y3N-0990	●	9.90	9.9	89	43
ND25UF-Y3N-1000	●	10.00	10.0	89	43
ND25UF-Y3N-1010	●	10.10	10.1	89	43
ND25UF-Y3N-1020	●	10.20	10.2	89	43
ND25UF-Y3N-1030	●	10.30	10.3	89	43
ND25UF-Y3N-1040	●	10.40	10.4	89	43
ND25UF-Y3N-1050	●	10.50	10.5	89	43
ND25UF-Y3N-1060	●	10.60	10.6	89	43
ND25UF-Y3N-1070	●	10.70	10.7	95	47
ND25UF-Y3N-1080	●	10.80	10.8	95	47
ND25UF-Y3N-1100	●	11.00	11.0	95	47
ND25UF-Y3N-1150	●	11.50	11.5	95	47
ND25UF-Y3N-1200	●	12.00	12.0	102	51
ND25UF-Y3N-1250	●	12.50	12.5	102	51
ND25UF-Y3N-1280	●	12.80	12.8	102	51
ND25UF-Y3N-1300	●	13.00	13.0	102	51
ND25UF-Y3N-1310	●	13.10	13.1	102	51
ND25UF-Y3N-1350	●	13.50	13.5	107	54
ND25UF-Y3N-1400	●	14.00	14.0	107	54
ND25UF-Y3N-1430	●	14.30	14.3	111	56
ND25UF-Y3N-1450	●	14.50	14.5	111	56
ND25UF-Y3N-1500	●	15.00	15.0	111	56
ND25UF-Y3N-1600	●	16.00	16.0	115	56

● Stock ○ Available upon Order

HD15UF Straight shank twist drill

Drill Diameter	4–16mm
Coolant Type	Outside
Maximum Depth	3D
Coating	TIAlN
The hole tolerance	IT8–9
The surface roughness	Ra 1–2
To adapt to the situation	Hardened steel(<55–60HRC)

K	H
Cast Iron	Hardened steel

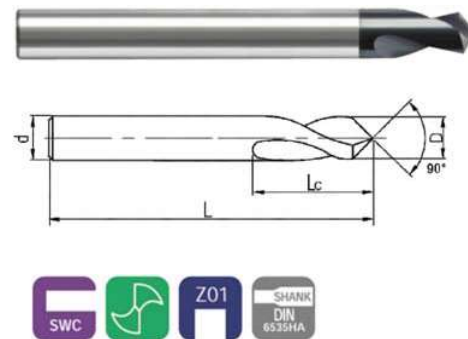


Ordering Code	Stock	D(h6)	d(h6)	L	Lc
HD15UF–Y3N–0400	●	4.00	4	55	22
HD15UF–Y3N–0500	●	5.00	5	62	26
HD15UF–Y3N–0600	●	6.00	6	66	28
HD15UF–Y3N–0700	●	7.00	7	74	34
HD15UF–Y3N–0800	●	8.00	8	79	37
HD15UF–Y3N–0900	●	9.00	9	84	40
HD15UF–Y3N–1000	●	10.00	10	89	43
HD15UF–Y3N–1100	●	11.00	11	95	47
HD15UF–Y3N–1200	●	12.00	12	102	51
HD15UF–Y3N–1300	●	13.00	13	102	51
HD15UF–Y3N–1400	●	14.00	14	107	54
HD15UF–Y3N–1500	●	15.00	15	111	56
HD15UF–Y3N–1600	●	16.00	16	115	58

PD20–A90 Straight Shank 90° NC center drill

Drill Diameter	5–20mm
Coolant Type	Outside
Coating	TIAlN

P	M	K
Low-carbon steels	Steel	Stainless Steel Cast Iron



Ordering Code	Stock	D(h6)	d(h6)	L	Lc
PD20–A90–0500	●	5.00	5.0	62	10
PD20–A90–0600	●	6.00	6.0	66	15
PD20–A90–0800	●	8.00	8.0	79	17
PD20–A90–1000	●	10.00	10.0	89	20
PD20–A90–1200	●	12.00	12.0	102	25
PD20–A90–1400	●	14.00	14.0	107	30
PD20–A90–1600	●	16.00	16.0	115	35
PD20–A90–2000	●	20.00	10.0	131	40

● Stock ○ Available upon Order

Turning inserts

External turning

Internal turning

Grooving & parting

Threading

Milling

Boring & drilling

Tool holder

Solid carbide end mills

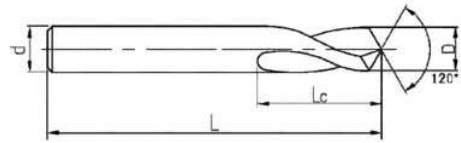
Solid carbide drill & taps

Technical information

- Turning inserts
- External turning
- Internal turning
- Grooving & parting
- Threading
- Milling
- Boring & drilling
- Tool holder
- Solid carbide end mills
- Solid carbide drill & taps**
- Technical information

PD20-A120 Straight shank 120° NC center drill

Drill Diameter	5-20mm
Coolant Type	Outside
Coating	TiAIN



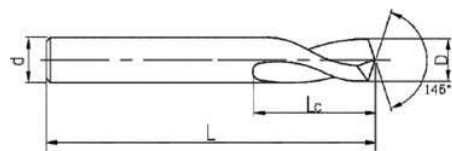
P		M	K
Low-carbon steels	Steel	Stainless Steel	Cast Iron



Ordering Code	Stock	D(h6)	d(h6)	L	Lc
PD20-A120-0500	●	5.00	5.0	62	10
PD20-A120-0600	●	6.00	6.0	66	15
PD20-A120-0800	●	8.00	8.0	79	17
PD20-A120-1000	●	10.00	10.0	89	20
PD20-A120-1200	●	12.00	12.0	102	25
PD20-A120-1400	●	14.00	14.0	107	30
PD20-A120-1600	●	16.00	16.0	115	35
PD20-A120-2000	●	20.00	20.0	131	40

PD20-A145 Straight Shank 145° NC center drill

Drill Diameter	5-20mm
Coolant Type	Outside
Coating	TiAIN



P		M	K
Low-carbon steels	Steel	Stainless Steel	Cast Iron



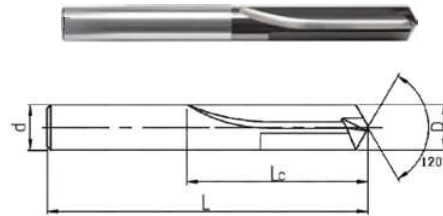
Ordering Code	Stock	D(h6)	d(h6)	L	Lc
PD20-A145-0500	●	5.00	5.0	62	10
PD20-A145-0600	●	6.00	6.0	66	15
PD20-A145-0800	●	8.00	8.0	79	17
PD20-A145-1000	●	10.00	10.0	89	20
PD20-A145-1200	●	12.00	12.0	102	25
PD20-A145-1400	●	14.00	14.0	107	30
PD20-A145-1600	●	16.00	16.0	115	35
PD20-A145-2000	●	20.00	20.0	131	40

● Stock ○ Available upon Order

KZD20 Straight flute drill

Drill Diameter	4–20mm
Coolant Type	Outside
Maximum Depth	3D

K
Cast Iron



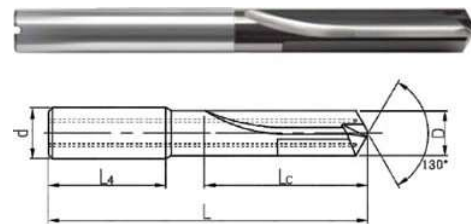
Ordering Code	Stock	D(h6)	d(h6)	L	Lc
KZD20-A3N-0400	●	4.00	4.00	55	22
KZD20-A3N-0420	●	4.20	4.20	55	22
KZD20-A3N-0500	●	5.00	5.00	62	26
KZD20-A3N-0600	●	6.00	6.00	66	28
KZD20-A3N-0680	●	6.80	6.80	74	34
KZD20-A3N-0700	●	7.00	7.00	74	34
KZD20-A3N-0800	●	8.00	8.00	79	37
KZD20-A3N-0850	●	8.50	8.50	79	37
KZD20-A3N-0900	●	9.00	9.00	84	40
KZD20-A3N-1000	●	10.00	10.00	89	43
KZD20-A3N-1025	●	10.25	10.25	89	43
KZD20-A3N-1100	●	11.00	11.00	95	47

Ordering Code	Stock	D(h6)	d(h6)	L	Lc
KZD20-A3N-1200	●	12.00	12.00	102	51
KZD20-A3N-1300	●	13.00	13.00	102	51
KZD20-A3N-1400	●	14.00	14.00	107	54
KZD20-A3N-1500	●	15.00	15.00	111	56
KZD20-A3N-1550	●	15.50	15.50	115	58
KZD20-A3N-1600	●	16.00	16.00	115	58
KZD20-A3N-1700	●	17.00	17.00	119	60
KZD20-A3N-1750	●	17.50	17.50	123	62
KZD20-A3N-1800	●	18.00	18.00	123	62
KZD20-A3N-1950	●	19.50	19.50	131	66
KZD20-A3N-2000	●	20.00	20.00	131	66

KZD20 Straight Flute Drill

Drill Diameter	4–20mm
Coolant Type	Inside
Maximum Depth	5D

K
Cast Iron



Ordering Code	Stock	D(h6)	d(h6)	L	Lc	L4
KZD20-A5C-0500	●	5.00	6.0	82	44	36
KZD20-A5C-0600	●	6.00	6.0	82	44	36
KZD20-A5C-0680	●	6.80	8.0	91	53	36
KZD20-A5C-0700	●	7.00	8.0	91	53	36
KZD20-A5C-0800	●	8.00	8.0	91	53	36
KZD20-A5C-0850	●	8.50	10.0	103	61	40
KZD20-A5C-0900	●	9.00	10.0	103	61	40
KZD20-A5C-1000	●	10.00	10.0	103	61	40

Ordering Code	Stock	D(h6)	d(h6)	L	Lc	L4
KZD20-A5C-1025	●	10.25	12.0	118	71	45
KZD20-A5C-1100	●	11.00	12.0	118	71	45
KZD20-A5C-1200	●	12.00	12.0	118	71	45
KZD20-A5C-1300	●	13.00	14.0	124	77	45
KZD20-A5C-1400	●	14.00	14.0	124	77	45
KZD20-A5C-1500	●	15.00	16.0	133	83	48
KZD20-A5C-1550	●	15.50	16.0	133	83	48
KZD20-A5C-1600	●	16.00	16.0	133	83	48

Turning inserts

External turning

Internal turning

Grooving & parting

Threading

Milling

Boring & drilling

Tool holder

Solid carbide end mills

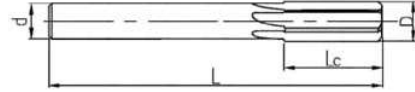
Solid carbide drill & taps

Technical information

- Turning inserts
- External turning
- Internal turning
- Grooving & parting
- Threading
- Milling
- Boring & drilling
- Tool holder
- Solid carbide end mills
- Solid carbide drill & taps
- Technical information

LJD20 Solid carbide straight flute reamer

Precision class	H7 H8
Type of shank	Straight shank
Flute type	Straight flute
Application	Suitable for silicon-aluminium alloys and cast iron



Ordering Code	Stock	D(h6)	d(h6)	L	Lc	L4
LJD20-H7-B-0400	●	4.00	3.55	56	20	4.0
LJD20-H7-B-0500	●	5.00	4.00	63	22	6.0
LJD20-H7-B-0600	●	6.00	5.00	63	22	6.0
LJD20-H7-B-0700	●	7.00	6.30	71	25	6.0
LJD20-H7-B-0800	●	8.00	6.30	71	25	6.0
LJD20-H7-B-0900	●	9.00	8.00	71	25	6.0
LJD20-H7-B-1000	●	10.00	8.00	71	25	6.0
LJD20-H7-B-1100	●	11.00	10.00	80	28	6.0
LJD20-H7-B-1200	●	12.00	10.00	80	28	6.0
LJD20-H7-B-1300	●	13.00	10.00	80	28	6.0
LJD20-H7-B-1400	●	14.00	12.50	90	32	6.0
LJD20-H7-B-1500	●	15.00	12.50	90	32	6.0
LJD20-H7-B-1600	●	16.00	12.50	90	32	6.0
LJD20-H7-B-1700	●	17.00	12.50	90	32	6.0
LJD20-H7-B-1800	●	18.00	16.00	100	36	6.0
LJD20-H7-B-1900	●	19.00	16.00	100	36	6.0
LJD20-H7-B-2000	●	20.00	16.00	100	36	6.0

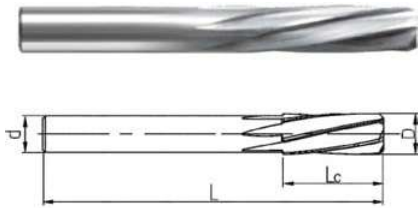


Ordering Code	Stock	D(h6)	d(h6)	L	Lc	L4
LJD20-H8-B-0400	●	4.00	3.55	56	20	4.0
LJD20-H8-B-0500	●	5.00	4.00	63	22	6.0
LJD20-H8-B-0600	●	6.00	5.00	63	22	6.0
LJD20-H8-B-0700	●	7.00	6.30	71	25	6.0
LJD20-H8-B-0800	●	8.00	6.30	71	25	6.0
LJD20-H8-B-0900	●	9.00	8.00	71	25	6.0
LJD20-H8-B-1000	●	10.00	8.00	71	25	6.0
LJD20-H8-B-1100	●	11.00	10.00	80	28	6.0
LJD20-H8-B-1200	●	12.00	10.00	80	28	6.0
LJD20-H8-B-1300	●	13.00	10.00	80	28	6.0
LJD20-H8-B-1400	●	14.00	12.50	90	32	6.0
LJD20-H8-B-1500	●	15.00	12.50	90	32	6.0
LJD20-H8-B-1600	●	16.00	12.50	90	32	6.0
LJD20-H8-B-1700	●	17.00	12.50	100	32	6.0
LJD20-H8-B-1800	●	18.00	16.00	100	36	6.0
LJD20-H8-B-1900	●	19.00	16.00	100	36	6.0
LJD20-H8-B-2000	●	20.00	16.00	100	36	6.0

● Stock ○ Available upon Order

SJD20 Solid carbide straight flute reamer

Precision class	H7
Type of shank	Straight shank
Flute type	Left hand flute
Application	Suitable for silicon-aluminium alloys and cast iron



Ordering Code	Stock	D(h6)	d(h6)	L	Lc	L4
SJD20-H7-B-0400	●	4.00	3.55	56	20	4.0
SJD20-H7-B-0500	●	5.00	4.00	63	22	6.0
SJD20-H7-B-0600	●	6.00	5.00	63	22	6.0
SJD20-H7-B-0700	●	7.00	6.30	71	25	6.0
SJD20-H7-B-0800	●	8.00	6.30	71	25	6.0
SJD20-H7-B-0900	●	9.00	8.00	71	25	6.0
SJD20-H7-B-1000	●	10.00	8.00	71	25	6.0
SJD20-H7-B-1100	●	11.00	10.00	80	28	6.0
SJD20-H7-B-1200	●	12.00	10.00	80	28	6.0
SJD20-H7-B-1300	●	13.00	10.00	80	28	6.0
SJD20-H7-B-1400	●	14.00	12.50	90	32	6.0
SJD20-H7-B-1500	●	15.00	12.50	90	32	6.0
SJD20-H7-B-1600	●	16.00	12.50	90	32	6.0
SJD20-H7-B-1700	●	17.00	12.50	90	32	6.0
SJD20-H7-B-1800	●	18.00	16.00	100	36	6.0
SJD20-H7-B-1900	●	19.00	16.00	100	36	6.0
SJD20-H7-B-2000	●	20.00	16.00	100	36	6.0



Ordering Code	Stock	D(h6)	d(h6)	L	Lc	L4
SJD20-H8-B-0400	●	4.00	3.55	56	20	4.0
SJD20-H8-B-0500	●	5.00	4.00	63	22	6.0
SJD20-H8-B-0600	●	6.00	5.00	63	22	6.0
SJD20-H8-B-0700	●	7.00	6.30	71	25	6.0
SJD20-H8-B-0800	●	8.00	6.30	71	25	6.0
SJD20-H8-B-0900	●	9.00	8.00	71	25	6.0
SJD20-H8-B-1000	●	10.00	8.00	71	25	6.0
SJD20-H8-B-1100	●	11.00	10.00	80	28	6.0
SJD20-H8-B-1200	●	12.00	10.00	80	28	6.0
SJD20-H8-B-1300	●	13.00	10.00	80	28	6.0
SJD20-H8-B-1400	●	14.00	12.50	90	32	6.0
SJD20-H8-B-1500	●	15.00	12.50	90	32	6.0
SJD20-H8-B-1600	●	16.00	12.50	90	32	6.0
SJD20-H8-B-1700	●	17.00	12.50	100	32	6.0
SJD20-H8-B-1800	●	18.00	16.00	100	36	6.0
SJD20-H8-B-1900	●	19.00	16.00	100	36	6.0
SJD20-H8-B-2000	●	20.00	16.00	100	36	6.0

● Stock ○ Available upon Order

Turning inserts

External turning

Internal turning

Grooving & parting

Threading

Milling

Boring & drilling

Tool holder

Solid carbide end mills

Solid carbide drill & taps

Technical information

- Turning inserts
- External turning
- Internal turning
- Grooving & parting
- Threading
- Milling
- Boring & drilling
- Tool holder
- Solid carbide end mills
- Solid carbide drill & taps
- Technical information

PD20/A90/A120/A145 Cutting data recommendation

code number	ISO	Vc(m/min)		fn(mm/rev)							
		coolant type outside	coolant type inside	φ5	φ6	φ8	φ10	φ12	φ14	φ16	φ20
01-10	P	120	160	0.15	0.2	0.26	0.30	0.32	0.35	0.40	0.45
10-20	P	105	125	0.15	0.2	0.26	0.30	0.32	0.35	0.40	0.45
30-40	P	100	120	0.13	0.2	0.20	0.23	0.26	0.28	0.32	0.38
01-10	K	90	110	0.08	0.1	0.12	0.14	0.17	0.18	0.21	0.25
10-20	K	80	100	0.08	0.1	0.12	0.14	0.17	0.18	0.21	0.25
20-30	K	70	90	0.08	0.1	0.12	0.14	0.17	0.18	0.21	0.25
30-40	K	60	80	0.08	0.1	0.12	0.14	0.17	0.18	0.21	0.25
10-20	N	150	200	0.12	0.2	0.20	0.23	0.26	0.28	0.32	0.38
20-30	N	120	180	0.12	0.2	0.20	0.23	0.26	0.28	0.32	0.38

PD20/MD20/KD20/ND25UF Cutting data recommendation

code number	ISO	Vc(m/min)		fn(mm/rev)									
		coolant type outside	coolant type inside	φ3	φ4	φ6	φ8	φ10	φ12	φ14	φ16	φ18	φ20
01-10	P	135-110-80	160-135-45	0.09-0.13-0.16	0.11-0.15-0.19	0.14-0.19-0.23	0.19-0.25-0.31	0.23-0.30-0.38	0.24-0.30-0.38	0.28-0.38-0.45	0.30-0.42-0.50	0.33-0.42-0.50	0.34-0.43-0.51
10-20	P	140-120-70	170-145-55	0.09-0.13-0.16	0.11-0.15-0.19	0.014-0.19-0.23	0.19-0.25-0.31	0.23-0.30-0.38	0.24-0.30-0.38	0.28-0.38-0.45	0.30-0.42-0.50	0.33-0.42-0.50	0.34-0.43-0.51
20-30	P	130-100-70	160-130-60	0.09-0.12-0.14	0.10-0.14-0.17	0.13-0.17-0.22	0.17-0.23-0.29	0.21-0.28-0.35	0.22-0.30-0.37	0.26-0.35-0.41	0.28-0.37-0.44	0.31-0.38-0.46	0.31-0.39-0.47
30-40	P	85-100-70	100-85-50	0.08-0.10-0.13	0.09-0.12-0.15	0.11-0.15-0.19	0.15-0.20-0.25	0.18-0.24-0.30	0.20-0.26-0.33	0.23-0.30-0.36	0.24-0.32-0.40	0.27-0.33-0.40	0.27-0.34-0.41
10-20	M	80-60-40	100-80-50	0.05-0.09-0.11	0.06-0.11-0.13	0.07-0.14-0.16	0.10-0.17-0.20	0.12-0.21-0.24	0.13-0.23-0.26	0.15-0.26-0.29	0.16-0.28-0.31	0.17-0.30-0.33	0.18-0.30-0.33
20-30	M	60-50-30	80-70-40	0.04-0.07-0.08	0.05-0.09-0.11	0.06-0.11-0.13	0.08-0.14-0.17	0.10-0.16-0.19	0.11-0.18-0.21	0.12-0.21-0.24	0.13-0.23-0.26	0.15-0.24-0.27	0.15-0.25-0.28
30-40	M	50-40-20	70-60-30	0.03-0.05-0.06	0.04-0.06-0.07	0.05-0.08-0.10	0.07-0.11-0.13	0.08-0.13-0.16	0.09-0.15-0.17	0.10-0.17-0.19	0.11-0.18-0.20	0.12-0.19-0.21	0.12-0.20-0.22
10-20	K	140-110-80	170-140-60	0.13-0.17-0.21	0.15-0.20-0.26	0.19-0.26-0.32	0.26-0.34-0.43	0.31-0.41-0.51	0.33-0.44-0.55	0.38-0.51-0.61	0.41-0.54-0.65	0.45-0.57-0.68	0.40-0.56-0.69
20-30	K	120-100-60	150-120-60	0.11-0.15-0.18	0.14-0.18-0.22	0.17-0.23-0.27	0.23-0.30-0.36	0.27-0.36-0.43	0.29-0.39-0.47	0.34-0.45-0.54	0.36-0.48-0.58	0.40-0.50-0.60	0.41-0.51-0.61
30-40	K	110-90-60	110-90-60	0.06-0.09-0.11	0.08-0.10-0.13	0.10-0.13-0.16	0.13-0.17-0.21	0.15-0.20-0.26	0.17-0.21-0.26	0.19-0.26-0.31	0.20-0.27-0.33	0.23-0.28-0.34	0.23-0.29-0.35
10-20	N	240-160-110	320-260-60	0.13-0.16-0.20	0.15-0.19-0.24	0.22-0.28-0.35	0.25-0.32-0.40	0.31-0.38-0.48	0.33-0.42-0.52	0.38-0.48-0.58	0.41-0.51-0.61	0.43-0.53-0.64	0.44-0.54-0.65
10-20	S	58-55-50	68-65-60	0.08-0.10-0.12	0.09-0.11-0.14	0.11-0.13-0.16	0.12-0.15-0.18	0.13-0.18-0.22	0.17-0.21-0.26	0.21-0.25-0.29	0.22-0.26-0.30	0.25-0.30-0.35	0.26-0.32-0.37
20-30	S	40-35-35	55-50-45	0.06-0.08-0.10	0.07-0.09-0.11	0.08-0.10-0.12	0.11-0.13-0.16	0.13-0.17-0.20	0.16-0.19-0.23	0.19-0.15-0.18	0.20-0.25-0.30	0.20-0.25-0.30	0.21-0.26-0.32
30-40	S	30-25-27	40-35-30	0.04-0.05-0.07	0.05-0.06-0.08	0.05-0.06-0.08	0.06-0.08-0.11	0.08-0.11-0.14	0.09-0.13-0.16	0.11-0.15-0.18	0.12-0.16-0.20	0.12-0.16-0.20	0.13-0.17-0.21
10-20	H	80-60-50	100-80-60	0.06-0.08-0.10	0.07-0.10-0.12	0.09-0.12-0.15	0.12-0.16-0.20	0.14-0.19-0.24	0.16-0.21-0.26	0.18-0.24-0.29	0.19-0.26-0.31	0.21-0.27-0.32	0.22-0.27-0.33

LJD20/SJD20-H7/H8 Cutting data recommendation

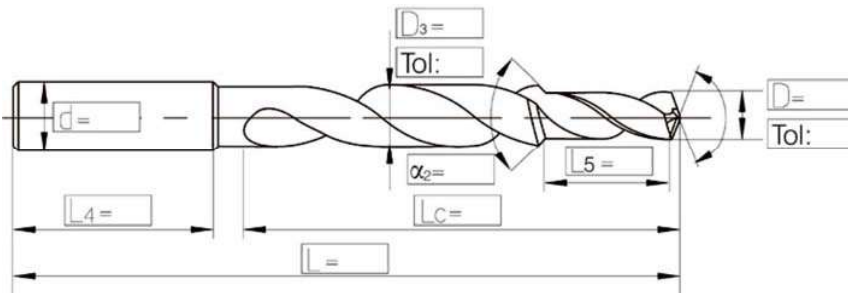
code number	ISO	Vc(m/min)		fn(mm/rev)								
		coolant type outside	coolant type inside	φ4	φ6	φ8	φ10	φ12	φ14	φ16	φ18	φ20
01-10	K	45	45	0.16	0.19	0.26	0.30	0.33	0.35	0.40	0.43	0.45
10-20	K	35	35	0.16	0.19	0.26	0.30	0.33	0.35	0.40	0.43	0.45
20-30	K	28	28	0.13	0.15	0.20	0.24	0.26	0.28	0.32	0.36	0.40
30-40	K	26	26	0.05	0.08	0.10	0.12	0.13	0.14	0.15	0.18	0.20
01-10	N	40	40	0.20	0.24	0.32	0.40	0.43	0.45	0.51	0.58	0.64
10-20	N	35	35	0.20	0.24	0.32	0.40	0.43	0.45	0.51	0.58	0.64

HD15UF Cutting data recommendation

ISO	Nicecutter	Hardness	Vc(m/min)		fn(mm/rev)						
			coolant type outside		φ4	φ6	φ8	φ10	φ12	φ14	φ16
H	H1	44-48HRC	20-40		0.06	0.08	0.10	0.12	0.14	0.15	0.16
H	H2	48-55HRC	15-30		0.05	0.06	0.08	0.10	0.12	0.13	0.14
H	H3	55-60HRC	10-20		0.04	0.04	0.04	0.06	0.06	0.08	0.08

● General Information

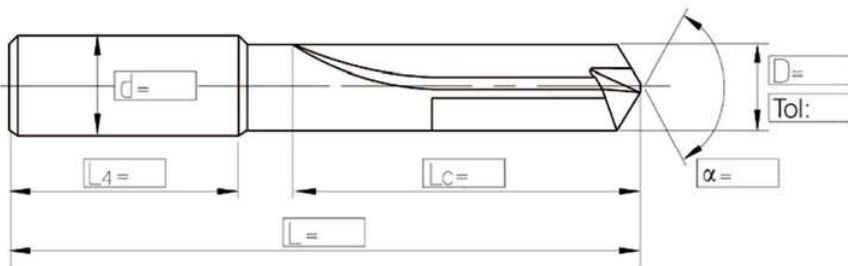
Coating	Y		Coolant Type	Outside	
	N			Inside	



DIN 6535	<input type="checkbox"/>	Form HA
	<input type="checkbox"/>	Form HB
	<input type="checkbox"/>	Form HE
	<input type="checkbox"/>	
	<input type="checkbox"/>	DIN 1809
	<input type="checkbox"/>	MT <input type="checkbox"/>

● General Information

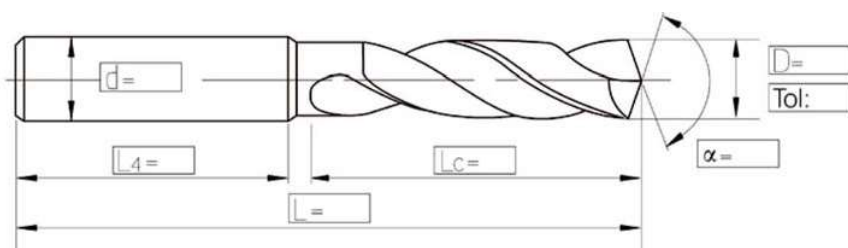
Coating	Y		Coolant Type	Outside	
	N			Inside	



DIN 6535	<input type="checkbox"/>	Form HA
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	<input type="checkbox"/>	Form HE
	<input type="checkbox"/>	
	<input type="checkbox"/>	DIN 1809
	<input type="checkbox"/>	MT <input type="checkbox"/>

● General Information

Coating	Y		Coolant Type	Outside	
	N			Inside	



DIN 6535	<input type="checkbox"/>	Form HA
	<input type="checkbox"/>	Form HB
	<input type="checkbox"/>	Form HE
	<input type="checkbox"/>	
	<input type="checkbox"/>	DIN 1809
	<input type="checkbox"/>	MT <input type="checkbox"/>

● Stock ○ Available upon Order

Turning inserts

External turning

Internal turning

Grooving & parting

Threading

Milling

Boring & drilling

Tool holder

Solid carbide end mills

Solid carbide drill & taps

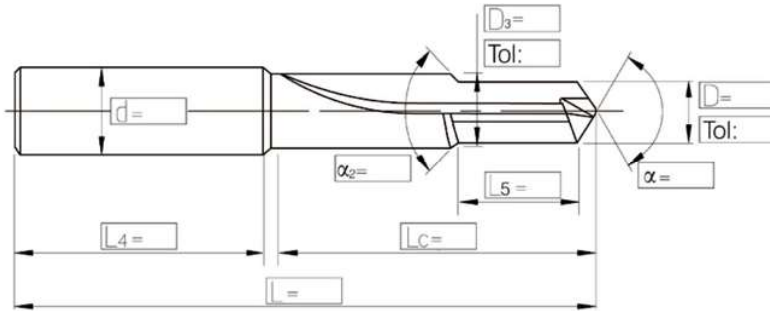
Technical information

- Turning inserts
- External turning
- Internal turning
- Grooving & parting
- Threading
- Milling
- Boring & drilling
- Tool holder
- Solid carbide end mills
- Solid carbide drill & taps**
- Technical information

● General Information

Coating	Y	
	N	

Coolant Type	Outside	
	Inside	

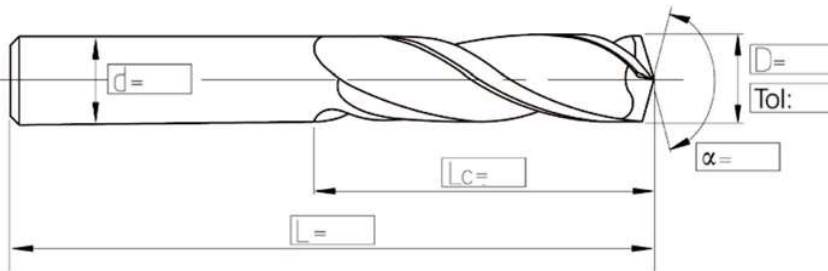


DIN 6535	<input type="checkbox"/>	Form HA
	<input type="checkbox"/>	Form HB
	<input type="checkbox"/>	Form HE
	<input type="checkbox"/>	
	<input type="checkbox"/>	DIN 1809
	<input type="checkbox"/>	MT <input type="checkbox"/>

● General Information

Coating	Y	
	N	

Coolant Type	Outside	
	Inside	



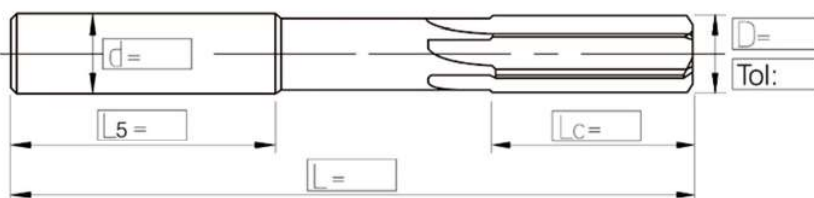
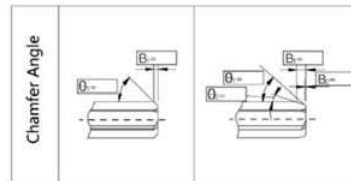
DIN 6535	<input type="checkbox"/>	Form HA
	<input type="checkbox"/>	Form HB
	<input type="checkbox"/>	Form HE
	<input type="checkbox"/>	
	<input type="checkbox"/>	DIN 1809
	<input type="checkbox"/>	MT <input type="checkbox"/>

● General Information

Coating	Y	
	N	

Coolant Type	Outside	
	Inside	

Type of the flute	<input type="checkbox"/> Left		<input type="checkbox"/> Straight		<input type="checkbox"/> Right	



DIN 6535	<input type="checkbox"/>	Form HA
	<input type="checkbox"/>	Form HB
	<input type="checkbox"/>	Form HE
	<input type="checkbox"/>	
	<input type="checkbox"/>	DIN 1809
	<input type="checkbox"/>	MT <input type="checkbox"/>

● Stock ○ Available upon Order