





**ZCC USA Inc.**

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# GDO



**Series**

**A new generation twist drills  
for universal purpose**



**ZHUZHOU CEMENTED CARBIDE  
CUTTING TOOLS CO., LTD.**



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# GO

## Series

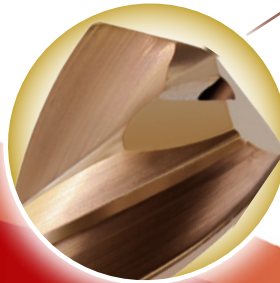
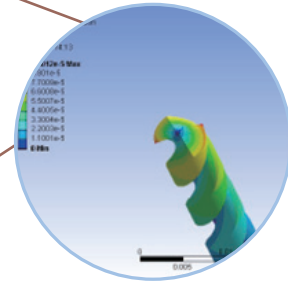
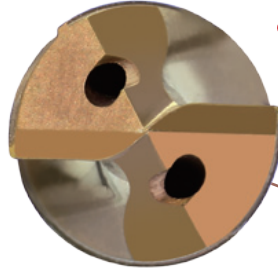
### A new generation twist drills for universal purpose



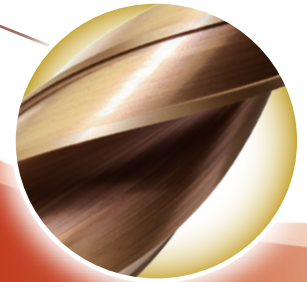
- Linear cutting edge with high strength

- Optimized drill point structure with better cutting performance

- Combination of drilling simulation and experiments for optimized performance.



- Double edge line design improve the machining stability.



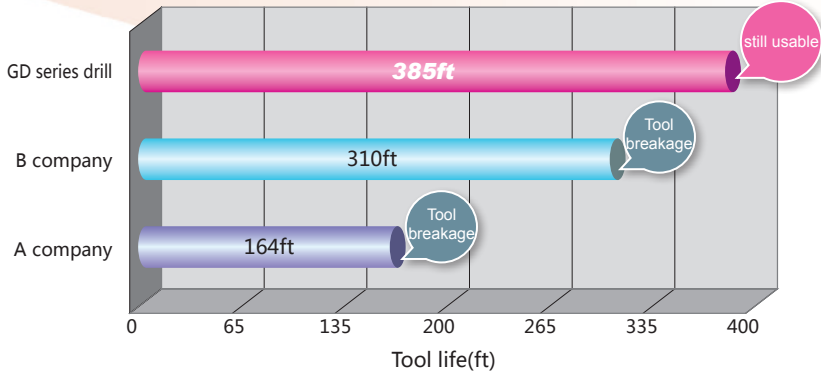
- Special surface treatment after coating, guarantees high efficient machining.

### Application range

Universal purpose drill for high efficient machining of P type (steel), M type (stainless steel), K type (cast iron ) and various materials.

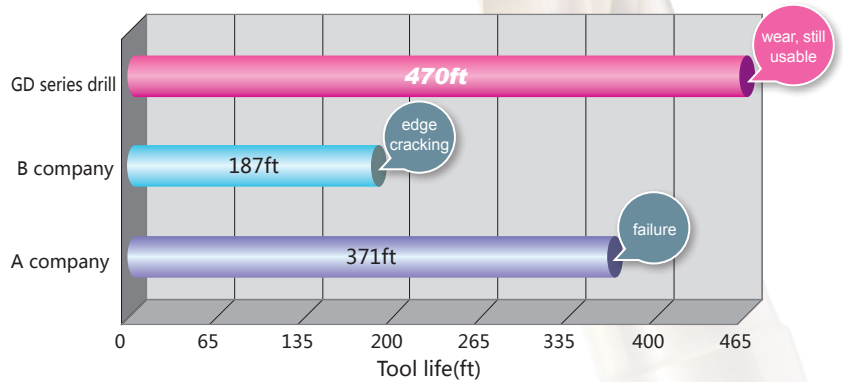


## Stable and enduring tool life



tool type:GD05C-0560  
 workpiece material: P20 mod  
 $V_c=320\text{SFPM}$  ;  $f_r=0.0059\text{in/r}$  ;  $H=1.063\text{in}$   
 cooling system: water soluble cooling

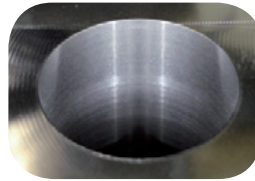
tool type: GD05C-1000  
 workpiece material : 1045  
 $V_c=490\text{SFPM}$  ;  $f_r=0.0098\text{in/r}$  ;  $H=1.575\text{in}$   
 cooling system : water soluble cooling



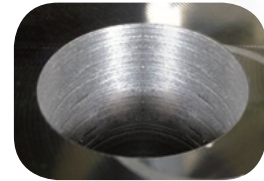
## outstanding machining precision

### quality of hole wall:

tool : GD03C-0820  
 workpiece material : P20 mod  
 $V_c=380\text{SFPM}$  ;  $f_r=0.0091\text{in/r}$  ;  $H=1.181\text{in}$   
 cooling system : water soluble cooling



GD series drill



A company

## excellent chip breaking performance

### chip breaking performance:

tool : GD05C-0600  
 workpiece material : 321  
 $V_c=240\text{SFPM}$  ;  $f_r=0.0079\text{in/r}$  ;  $H=1.181\text{in}$   
 cooling system : water soluble cooling



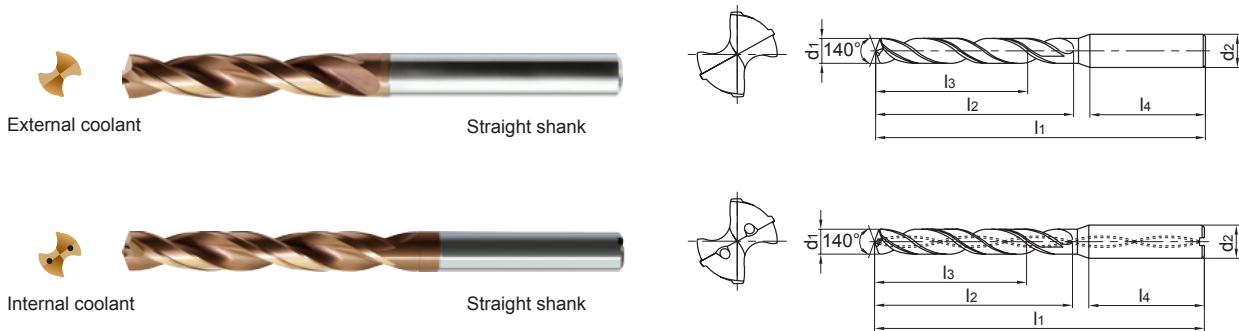
GD series drill



A company

**Solid carbide drills code key**

<p><b>Tool type</b> GD ▶ Universal-purpose twist drill</p>	<p><b>Mode of cooling</b> C ▶ internal cooling Default ▶ External cooling</p>	<p><b>Type of shank</b> S ▶ slim shank Default ▶ meet DIN6535HA standard</p>		
<b>GD</b>	<b>03</b>	<b>C</b>	<b>-0600</b>	<b>S</b>
	<p><b>Length code</b> 03 ▶ 3d 05 ▶ 5d 08 ▶ 8d</p>		<p><b>Specification</b> 0600 ▶ Nominal diameter in compliance with DIN6535HA regulation</p>	



● Suitable for high efficiency drilling in a variety of materials e.g steel, stainless steel, cast iron.

Drill diameter d <sub>1</sub> (m7)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter d <sub>2</sub> (h6)	Overall length l <sub>1</sub>	Flute length l <sub>2</sub>	Recommended drilling depth l <sub>3</sub>	Shank length l <sub>4</sub>	cutting taps / tread milling cutters	forming taps	
2.0	0.0787	--	3	External coolant	Straight shank	GD03-0200	4	58	13	9	28			●
	0.0787	--	5			GD05-0200	4	58	18	14	28		NO.2-64UNF	●
2.1	0.0827	--	3			GD03-0210	4	58	13	9	28		NO.3-48UNC	●
	0.0827	--	5			GD05-0210	4	58	18	14	28			●
2.15	0.0846	--	3			GD03-0215	4	58	13	9	28		NO.3-56UNF	●
	0.0846	--	5			GD05-0215	4	58	18	14	28			●
2.2	0.0866	--	3			GD03-0220	4	58	13	9	28			●
	0.0866	--	5			GD05-0220	4	58	18	14	28			●
2.3	0.0906	--	3			GD03-0230	4	58	13	9	28		M2.5×0.45	●
	0.0906	--	5			GD05-0230	4	58	18	14	28		NO.3-56UNF	●
2.35	0.0925	--	3			GD03-0235	4	58	17	12	28		NO.4-40UNC	●
	0.0925	--	5			GD05-0235	4	58	22	17	28			●
2.4	0.0945	--	3			GD03-0240	4	58	17	12	28		NO.4-48UNF	●
	0.0945	--	5			GD05-0240	4	58	22	17	28			●
2.5	0.0984	--	3			GD03-0250	4	58	17	12	28		M3×0.5	●
	0.0984	--	5			GD05-0250	4	58	22	17	28			●
2.55	0.1004	--	3			GD03-0255	4	58	17	12	28		NO.4-40UNC	●
	0.1004	--	5			GD05-0255	4	58	22	17	28			●

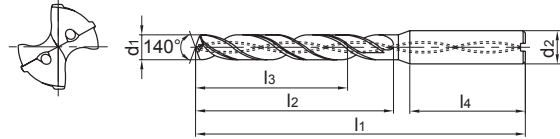
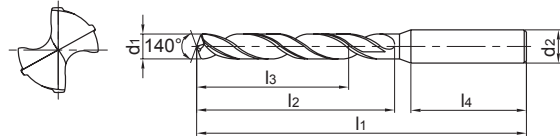
● Stock available    ○ Make-to-order



Drill diameter d <sub>1</sub> (mm)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter	Overall length	Flute length	Recommended drilling depth	Shank length	cutting taps / tread milling cutters	forming taps	
2.6	0.1024	--	3	External coolant	Straight shank	GD03-0260	4	58	17	12	28		NO.4-48UNF	●
	0.1024	--	5			GD05-0260	4	58	22	17	28			●
2.65	0.1043	--	3			GD03-0265	4	58	17	12	28	NO.5-40UNC	●	
	0.1043	--	5			GD05-0265	4	58	22	17	28		●	
2.7	0.1063	--	3			GD03-0270	4	58	17	12	28	NO.5-44UNF	●	
	0.1063	--	5			GD05-0270	4	58	22	17	28		●	
2.8	0.1102	--	3			GD03-0280	4	58	17	12	28	M3×0.5	●	
	0.1102	--	5			GD05-0280	4	58	22	17	28		●	
2.85	0.1122	--	3			GD03-0285	4	58	17	12	28	NO.6-32UNC	●	
	0.1122	--	5			GD05-0285	4	58	22	17	28		●	
2.9	0.1142	--	3			GD03-0290	4	58	17	12	28	NO.5-40UNC	●	
	0.1142	--	5			GD05-0290	4	58	22	17	28		NO.5-44UNF	●
2.95	0.1161	--	3			GD03-0295	4	58	17	12	28	NO.6-40UNF	●	
	0.1161	--	5			GD05-0295	4	58	22	17	28		●	
3.0	0.1181	--	3			GD03-0300	6	62	20	14	36		●	
	0.1181	--	5			GD05-0300	6	66	28	23	36		●	
	0.1181	--	3			GD03C-0300	6	62	20	14	36		●	
	0.1181	--	5			GD05C-0300	6	66	28	23	36		●	
	0.1181	--	8			GD08C-0300	6	72	34	29	36		○	
3.1	0.1220	--	3			GD03-0310S	4	62	20	14	36		●	
	0.1220	--	5	GD05-0310S	4	66	28	23	36	●				
	0.1220	--	3	GD03C-0310S	4	62	20	14	36	●				
	0.1220	--	5	GD05C-0310S	4	66	28	23	36	●				
	0.1220	--	3	GD03-0310	6	62	20	14	36	○				
	0.1220	--	5	GD05-0310	6	66	28	23	36	○				
	0.1220	--	3	GD03C-0310	6	62	20	14	36	○				
	0.1220	--	5	GD05C-0310	6	66	28	23	36	○				
3.175	0.1250	1/8	3	GD03-03175S	4	62	20	14	36		●			
	0.1250	1/8	5	GD05-03175S	4	66	28	23	36		●			
	0.1250	1/8	3	GD03C-03175S	4	62	20	14	36		●			
	0.1250	1/8	5	GD05C-03175S	4	66	28	23	36		●			
	0.1250	1/8	3	GD03-03175	6	62	20	14	36		○			
	0.1250	1/8	5	GD05-03175	6	66	28	23	36		○			
	0.1250	1/8	3	GD03C-03175	6	62	20	14	36		○			
	0.1250	1/8	5	GD05C-03175	6	66	28	23	36		○			
3.2	0.1260	--	3	GD03-0320S	4	62	20	14	36	NO.6-40UNF	●			
	0.1260	--	5	GD05-0320S	4	66	28	23	36		●			
	0.1260	--	3	GD03C-0320S	4	62	20	14	36		●			
	0.1260	--	5	GD05C-0320S	4	66	28	23	36		●			
	0.1260	--	3	GD03-0320	6	62	20	14	36		○			
	0.1260	--	5	GD05-0320	6	66	28	23	36		○			

Note: For drilling depth (l/d) of 8 ,namely GD08C series, tolerance of shank diameter is h<sub>5</sub>.

● Stock available ○ Make-to-order



● Suitable for high efficiency drilling in a variety of materials e.g steel, stainless steel, cast iron.

Drill diameter d <sub>1</sub> (m7)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter d <sub>2</sub> (h <sub>6</sub> )	Overall length l <sub>1</sub>	Flute length l <sub>2</sub>	Recommended drilling depth l <sub>3</sub>	Shank length l <sub>4</sub>	cutting taps / tread milling cutters	forming taps	
3.2	0.1260	--	3	Internal coolant	Straight shank	GD03C-0320	6	62	20	14	36			○
	0.1260	--	5			GD05C-0320	6	66	28	23	36		NO.6-40UNF	○
	0.1260	--	8			GD08C-0320	6	72	34	29	36			○
3.25	0.1280	--	3	External coolant		GD03-0325S	4	62	20	14	36			●
	0.1280	--	5			GD05-0325S	4	66	28	23	36			●
	0.1280	--	3	Internal coolant		GD03C-0325S	4	62	20	14	36			●
	0.1280	--	5			GD05C-0325S	4	66	28	23	36			●
	0.1280	--	3	External coolant		GD03-0325	6	62	20	14	36			○
	0.1280	--	5			GD05-0325	6	66	28	23	36			○
3.3	0.1299	--	3	External coolant		GD03-0330S	4	62	20	14	36			●
	0.1299	--	5			GD05-0330S	4	66	28	23	36			●
	0.1299	--	3	Internal coolant		GD03C-0330S	4	62	20	14	36			●
	0.1299	--	5		GD05C-0330S	4	66	28	23	36			●	
	0.1299	--	3	External coolant	GD03-0330	6	62	20	14	36	M4×0.7		○	
	0.1299	--	5		GD05-0330	6	66	28	23	36			○	
	0.1299	--	3	Internal coolant	GD03C-0330	6	62	20	14	36			○	
	0.1299	--	5		GD05C-0330	6	66	28	23	36			○	
	0.1299	--	8		GD08C-0330	6	72	34	29	36			○	
	3.4	0.1339	--	3	External coolant	GD03-0340S	4	62	20	14	36			●
		0.1339	--	5		GD05-0340S	4	66	28	23	36			●
		0.1339	--	3	Internal coolant	GD03C-0340S	4	62	20	14	36			●
0.1339		--	5	GD05C-0340S		4	66	28	23	36			●	
0.1339		--	3	External coolant	GD03-0340	6	62	20	14	36			○	
0.1339		--	5		GD05-0340	6	66	28	23	36			○	
0.1339		--	3	Internal coolant	GD03C-0340	6	62	20	14	36			○	
0.1339		--	5		GD05C-0340	6	66	28	23	36			○	
0.1339		--	8		GD08C-0340	6	72	34	29	36			○	
3.5	0.1378	--	3	External coolant	GD03-0350S	4	62	20	14	36	M4×0.5		●	
	0.1378	--	5		GD05-0350S	4	66	28	23	36			●	
	0.1378	--	3	Internal coolant	GD03C-0350S	4	62	20	14	36	NO.8-32UNC		●	
	0.1378	--	5		GD05C-0350S	4	66	28	23	36	NO.8-36UNF		●	

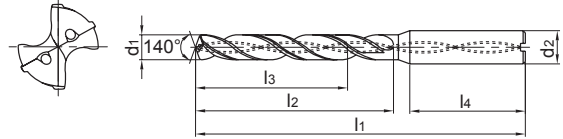
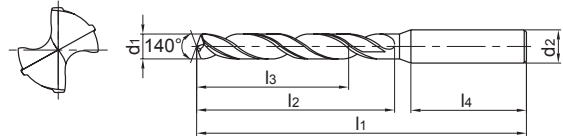
● Stock available ○ Make-to-order



Drill diameter d <sub>1</sub> (mm)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade		
mm	inch	Fraction					Shank diameter	Overall length	Flute length	Recommended drilling depth	Shank length	cutting taps / tread milling cutters	forming taps			
															d <sub>2</sub> (h <sub>6</sub> )	l <sub>1</sub>
3.5	0.1378	--	3	External coolant	Straight shank	GD03-0350	6	62	20	14	36	M4×0.5		○		
	0.1378	--	5			GD05-0350	6	66	28	23	36			○		
	0.1378	--	3	Internal coolant		GD03C-0350	6	62	20	14	36			NO.8-32UNC	○	
	0.1378	--	5			GD05C-0350	6	66	28	23	36				NO.8-36UNF	○
	0.1378	--	8			GD08C-0350	6	72	34	29	36				○	
3.6	0.1417	--	3	External coolant		GD03-0360S	4	62	20	14	36			●		
	0.1417	--	5			GD05-0360S	4	66	28	23	36			●		
	0.1417	--	3	Internal coolant		GD03C-0360S	4	62	20	14	36			●		
	0.1417	--	5			GD05C-0360S	4	66	28	23	36			●		
	0.1417	--	3	External coolant		GD03-0360	6	62	20	14	36			○		
	0.1417	--	5		GD05-0360	6	66	28	23	36	○					
	0.1417	--	3	Internal coolant	GD03C-0360	6	62	20	14	36	○					
	0.1417	--	5		GD05C-0360	6	66	28	23	36	○					
	0.1417	--	8		GD08C-0360	6	72	34	29	36	○					
	0.1457	--	3		External coolant	GD03-0370S	4	62	20	14	36			M4×0.7		●
0.1457	--	5	GD05-0370S	4		66	28	23	36	●						
0.1457	--	3	Internal coolant	GD03C-0370S	4	62	20	14	36	●						
0.1457	--	5		GD05C-0370S	4	66	28	23	36	●						
0.1457	--	3	External coolant	GD03-0370	6	62	20	14	36	○						
0.1457	--	5		GD05-0370	6	66	28	23	36	○						
0.1457	--	3	Internal coolant	GD03C-0370	6	62	20	14	36	○						
0.1457	--	5		GD05C-0370	6	66	28	23	36	○						
0.1457	--	8		GD08C-0370	6	72	34	29	36	○						
0.1496	--	3		External coolant	GD03-0380S	4	66	24	17	36	M4×0.5	NO.8-32UNC	●			
0.1496	--	5	GD05-0380S		4	74	36	29	36	●						
0.1496	--	3	Internal coolant	GD03C-0380S	4	66	24	17	36	●						
0.1496	--	5		GD05C-0380S	4	74	36	29	36	●						
0.1496	--	3	External coolant	GD03-0380	6	66	24	17	36	○						
0.1496	--	5		GD05-0380	6	74	36	29	36	○						
0.1496	--	3	Internal coolant	GD03C-0380	6	66	24	17	36	○						
0.1496	--	5		GD05C-0380	6	74	36	29	36	○						
0.1496	--	8		GD08C-0380	6	81	43	36	36	○						
0.1516	--	3		External coolant	GD03-0385S	4	66	24	17	36			NO.8-36UNF		●	
0.1516	--	5	GD05-0385S		4	74	36	29	36	●						
0.1516	--	3	Internal coolant	GD03C-0385S	4	66	24	17	36	●						
0.1516	--	5		GD05C-0385S	4	74	36	29	36	●						
0.1516	--	3	External coolant	GD03-0385	6	66	24	17	36	○						
0.1516	--	5		GD05-0385	6	74	36	29	36	○						
0.1516	--	3	Internal coolant	GD03C-0385	6	66	24	17	36	○						
0.1516	--	5		GD05C-0385	6	74	36	29	36	○						
0.1535	--	3		External coolant	GD03-0390S	4	66	24	17	36	NO.10-24UNC	●				
0.1535	--	5			GD05-0390S	4	74	36	29	36		●				

Note: For drilling depth (l/d) of 8, namely GD08C series, tolerance of shank diameter is h<sub>5</sub>.

● Stock available ○ Make-to-order



● Suitable for high efficiency drilling in a variety of materials e.g steel, stainless steel, cast iron.

Drill diameter d <sub>1</sub> (m7)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter d <sub>2</sub> (h <sub>6</sub> )	Overall length l <sub>1</sub>	Flute length l <sub>2</sub>	Recommended drilling depth l <sub>3</sub>	Shank length l <sub>4</sub>	cutting taps / tread milling cutters	forming taps	
3.9	0.1535	--	3	Internal coolant	Straight shank	GD03C-0390S	4	66	24	17	36	NO.10-24UNC	●	
	0.1535	--	5			GD05C-0390S	4	74	36	29	36		●	
	0.1535	--	3	External coolant		GD03-0390	6	66	24	17	36		○	
	0.1535	--	5			GD05-0390	6	74	36	29	36		○	
	0.1535	--	3	Internal coolant		GD03C-0390	6	66	24	17	36		○	
	0.1535	--	5			GD05C-0390	6	74	36	29	36		○	
3.97	0.1563	5/32	3	External coolant		GD03-03970S	4	66	24	17	36	●		
	0.1563	5/32	5			GD05-03970S	4	74	36	29	36	●		
	0.1563	5/32	3	Internal coolant		GD03C-03970S	4	66	24	17	36	●		
	0.1563	5/32	5			GD05C-03970S	4	74	36	29	36	●		
	0.1563	5/32	3	External coolant		GD03-03970	6	66	24	17	36	○		
	0.1563	5/32	5			GD05-03970	6	74	36	29	36	○		
	0.1563	5/32	3	Internal coolant	GD03C-03970	6	66	24	17	36	○			
	0.1563	5/32	5		GD05C-03970	6	74	36	29	36	○			
4.0	0.1575	--	3	External coolant	GD03-0400S	4	66	24	17	36	●			
	0.1575	--	5		GD05-0400S	4	74	36	29	36	●			
	0.1575	--	3	Internal coolant	GD03C-0400S	4	66	24	17	36	●			
	0.1575	--	5		GD05C-0400S	4	74	36	29	36	●			
	0.1575	--	3	External coolant	GD03-0400	6	66	24	17	36	○			
	0.1575	--	5		GD05-0400	6	74	36	29	36	○			
	0.1575	--	3	Internal coolant	GD03C-0400	6	66	24	17	36	○			
	0.1575	--	5		GD05C-0400	6	74	36	29	36	○			
	0.1575	--	8	GD08C-0400	6	81	43	36	36	○				
	4.1	0.1614	--	3	External coolant	GD03-0410	6	66	24	17	36	NO.10-32UNF	●	
0.1614		--	5	GD05-0410		6	74	36	29	36	●			
0.1614		--	3	Internal coolant	GD03C-0410	6	66	24	17	36	●			
0.1614		--	5		GD05C-0410	6	74	36	29	36	●			
0.1614		--	8	GD08C-0410	6	81	43	36	36	○				
4.2	0.1654	--	3	External coolant	GD03-0420	6	66	24	17	36	M5×0.8	●		
	0.1654	--	5		GD05-0420	6	74	36	29	36		●		

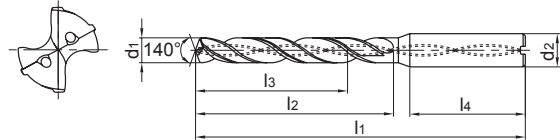
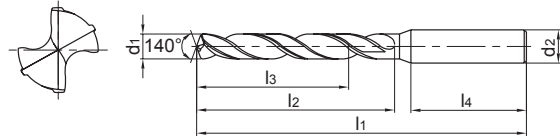
● Stock available ○ Make-to-order



Drill diameter d <sub>1</sub> (mm)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter	Overall length	Flute length	Recommended drilling depth	Shank length	cutting taps / tread milling cutters	forming taps	
4.2	0.1654	--	3	Internal coolant	Straight shank	GD03C-0420	6	66	24	17	36	M5×0.8	●	
	0.1654	--	5			GD05C-0420	6	74	36	29	36		●	
	0.1654	--	8			GD08C-0420	6	81	43	36	36		○	
4.3	0.1693	--	3	External coolant		GD03-0430	6	66	24	17	36	NO.10-24UNC	●	
	0.1693	--	5			GD05-0430	6	74	36	29	36		●	
	0.1693	--	3	Internal coolant		GD03C-0430	6	66	24	17	36		●	
	0.1693	--	5			GD05C-0430	6	74	36	29	36		●	
	0.1693	--	8			GD08C-0430	6	81	43	36	36		○	
	0.1713	--	3			External coolant	GD03-0435	6	66	24	17		36	●
0.1713	--	5	GD05-0435	6			74	36	29	36	●			
4.35	0.1713	--	3	Internal coolant		GD03C-0435	6	66	24	17	36	NO.10-24UNC	●	
	0.1713	--	5			GD05C-0435	6	74	36	29	36		●	
	0.1732	--	3	External coolant	GD03-0440	6	66	24	17	36	●			
	0.1732	--	5		GD05-0440	6	74	36	29	36	●			
4.4	0.1732	--	3	Internal coolant	GD03C-0440	6	66	24	17	36	NO.10-32UNF	●		
	0.1732	--	5		GD05C-0440	6	74	36	29	36		●		
	0.1732	--	8		GD08C-0440	6	81	43	36	36		○		
4.45	0.1752	--	3	External coolant	GD03-0445	6	66	24	17	36	NO.10-32UNF	●		
	0.1752	--	5		GD05-0445	6	74	36	29	36		●		
	0.1752	--	3	Internal coolant	GD03C-0445	6	66	24	17	36		●		
	0.1752	--	5		GD05C-0445	6	74	36	29	36		●		
4.5	0.1772	--	3	External coolant	GD03-0450	6	66	24	17	36	NO.12-24UNC	●		
	0.1772	--	5		GD05-0450	6	74	36	29	36		●		
	0.1772	--	3	Internal coolant	GD03C-0450	6	66	24	17	36		M5×0.5	●	
	0.1772	--	5		GD05C-0450	6	74	36	29	36			●	
	0.1772	--	8		GD08C-0450	6	81	43	36	36			○	
4.6	0.1811	--	3	External coolant	GD03-0460	6	66	24	17	36	NO.12-24UNC	●		
	0.1811	--	5		GD05-0460	6	74	36	29	36		●		
	0.1811	--	3	Internal coolant	GD03C-0460	6	66	24	17	36		M5×0.8	●	
	0.1811	--	5		GD05C-0460	6	74	36	29	36			●	
	0.1811	--	8		GD08C-0460	6	81	43	36	36			○	
4.65	0.1831	--	3	External coolant	GD03-0465	6	66	24	17	36	M5×0.8	●		
	0.1831	--	5		GD05-0465	6	74	36	29	36		●		
	0.1831	--	3	Internal coolant	GD03C-0465	6	66	24	17	36		NO.12-28UNF	●	
0.1831	--	5	GD05C-0465		6	74	36	29	36	●				
4.7	0.1850	--	3	External coolant	GD03-0470	6	66	24	17	36	NO.12-28UNF	●		
	0.1850	--	5		GD05-0470	6	74	36	29	36		●		
	0.1850	--	3	Internal coolant	GD03C-0470	6	66	24	17	36		NO.12-28UNF	●	
	0.1850	--	5		GD05C-0470	6	74	36	29	36			●	
	0.1850	--	8		GD08C-0470	6	81	43	36	36			○	
4.763	0.1875	3/16	3	External coolant	GD03-04763	6	66	24	17	36	NO.12-28UNF	●		
	0.1875	3/16	5		GD05-04763	6	74	36	29	36		●		

Note: For drilling depth (l/d) of 8 ,namely GD08C series, tolerance of shank diameter is h<sub>5</sub>.

● Stock available ○ Make-to-order



● Suitable for high efficiency drilling in a variety of materials e.g steel, stainless steel, cast iron.

Drill diameter d <sub>1</sub> (m7)	Drilling depth (l/d)			Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
	mm	inch	Fraction				Shank diameter d <sub>2</sub> (h6)	Overall length l <sub>1</sub>	Flute length l <sub>2</sub>	Recommended drilling depth l <sub>3</sub>	Shank length l <sub>4</sub>	cutting taps / tread milling cutters	forming taps	
4.763	0.1875	3/16	3	Internal coolant	Straight shank	GD03C-04763	6	66	24	17	36	M5×0.5	●	
	0.1875	3/16	5			GD05C-04763	6	74	36	29	36		●	
4.8	0.1890	--	3	External coolant		GD03-0480	6	66	28	20	36		●	
	0.1890	--	5			GD05-0480	6	82	44	35	36		●	
4.8	0.1890	--	3	Internal coolant		GD03C-0480	6	66	28	20	36		●	
	0.1890	--	5			GD05C-0480	6	82	44	35	36		●	
	0.1890	--	8			GD08C-0480	6	95	57	48	36		○	
4.9	0.1929	--	3	External coolant		GD03-0490	6	66	28	20	36		●	
	0.1929	--	5			GD05-0490	6	82	44	35	36		●	
	0.1929	--	3			Internal coolant	GD03C-0490	6	66	28	20		36	●
	0.1929	--	5				GD05C-0490	6	82	44	35		36	●
4.9	0.1929	--	8	External coolant		GD08C-0490	6	95	57	48	36		○	
	0.1969	--	3			Internal coolant	GD03-0500	6	66	28	20		36	●
	0.1969	--	5				GD05-0500	6	82	44	35		36	●
	0.1969	--	3				External coolant	GD03C-0500	6	66	28		20	36
0.1969	--	5	GD05C-0500	6				82	44	35	36		●	
5.0	0.1969	--	8	Internal coolant		GD08C-0500	6	95	57	48	36		○	
	0.2008	--	3			External coolant	GD03-0510	6	66	28	20		36	●
	0.2008	--	5				GD05-0510	6	82	44	35		36	●
	0.2008	--	3				Internal coolant	GD03C-0510	6	66	28		20	36
0.2008	--	5	GD05C-0510	6	82			44	35	36	●			
5.1	0.2008	--	8	External coolant	GD08C-0510	6	95	57	48	36	○			
	0.2047	--	3		Internal coolant	GD03-0520	6	66	28	20	36	●		
	0.2047	--	5			GD05-0520	6	82	44	35	36	●		
	0.2047	--	3			External coolant	GD03C-0520	6	66	28	20	36	●	
0.2047	--	5	GD05C-0520	6			82	44	35	36	●			
5.2	0.2047	--	8	Internal coolant	GD08C-0520	6	95	57	48	36	○			
	0.2067	--	3		External coolant	GD03-0525	6	66	28	20	36	●		
	0.2067	--	5			GD05-0525	6	82	44	35	36	●		
	0.2067	--	3			Internal coolant	GD03C-0525	6	66	28	20	36	M6×0.75 ●	
0.2067	--	5	GD05C-0525	6			82	44	35	36	●			

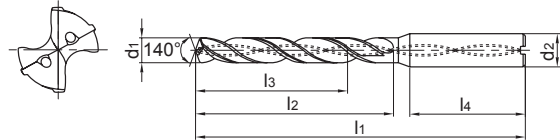
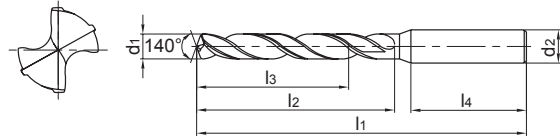
● Stock available ○ Make-to-order



Drill diameter d <sub>1</sub> (mm)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter	Overall length	Flute length	Recommended drilling depth	Shank length	cutting taps / tread milling cutters	forming taps	
5.3	0.2087	--	3	External coolant	Straight shank	GD03-0530	6	66	28	20	36	1/4-28UNF	●	
	0.2087	--	5			GD05-0530	6	82	44	35	36		●	
	0.2087	--	3	Internal coolant		GD03C-0530	6	66	28	20	36		●	
	0.2087	--	5			GD05C-0530	6	82	44	35	36		●	
	0.2087	--	8			GD08C-0530	6	95	57	48	36		○	
5.4	0.2126	--	3	External coolant		GD03-0540	6	66	28	20	36		1/4-28UNF	●
	0.2126	--	5			GD05-0540	6	82	44	35	36			●
	0.2126	--	3	Internal coolant		GD03C-0540	6	66	28	20	36			●
	0.2126	--	5			GD05C-0540	6	82	44	35	36			●
	0.2126	--	8			GD08C-0540	6	95	57	48	36			○
5.5	0.2165	--	3	External coolant	GD03-0550	6	66	28	20	36	1/4-28UNF	●		
	0.2165	--	5		GD05-0550	6	82	44	35	36		●		
	0.2165	--	3	Internal coolant	GD03C-0550	6	66	28	20	36		●		
	0.2165	--	5		GD05C-0550	6	82	44	35	36		●		
	0.2165	--	8		GD08C-0550	6	95	57	48	36		○		
5.558	0.2188	7/32	3	External coolant	GD03-05558	6	66	28	20	36		1/4-28UNF	●	
	0.2188	7/32	5		GD05-05558	6	82	44	35	36			●	
	0.2188	7/32	3	Internal coolant	GD03C-05558	6	66	28	20	36			●	
	0.2188	7/32	5		GD05C-05558	6	82	44	35	36			●	
	0.2188	7/32	8		GD08C-05558	6	95	57	48	36			○	
5.6	0.2205	--	3	External coolant	GD03-0560	6	66	28	20	36	M6×1		●	
	0.2205	--	5		GD05-0560	6	82	44	35	36			●	
	0.2205	--	3	Internal coolant	GD03C-0560	6	66	28	20	36			●	
	0.2205	--	5		GD05C-0560	6	82	44	35	36			●	
	0.2205	--	8		GD08C-0560	6	95	57	48	36			○	
5.7	0.2244	--	3	External coolant	GD03-0570	6	66	28	20	36		M6×0.75	●	
	0.2244	--	5		GD05-0570	6	82	44	35	36			●	
	0.2244	--	3	Internal coolant	GD03C-0570	6	66	28	20	36			●	
	0.2244	--	5		GD05C-0570	6	82	44	35	36			●	
	0.2244	--	8		GD08C-0570	6	95	57	48	36			○	
5.75	0.2264	--	3	External coolant	GD03-0575	6	66	28	20	36	1/4-20UNC		●	
	0.2264	--	5		GD05-0575	6	82	44	35	36			●	
	0.2264	--	3	Internal coolant	GD03C-0575	6	66	28	20	36			●	
	0.2264	--	5		GD05C-0575	6	82	44	35	36			●	
	0.2264	--	8		GD08C-0575	6	95	57	48	36			○	
5.8	0.2283	--	3	External coolant	GD03-0580	6	66	28	20	36		1/4-20UNC	●	
	0.2283	--	5		GD05-0580	6	82	44	35	36			●	
	0.2283	--	3	Internal coolant	GD03C-0580	6	66	28	20	36			●	
	0.2283	--	5		GD05C-0580	6	82	44	35	36			●	
	0.2283	--	8		GD08C-0580	6	95	57	48	36			○	
5.9	0.2323	--	3	External coolant	GD03-0590	6	66	28	20	36	1/4-20UNC		●	
	0.2323	--	5		GD05-0590	6	82	44	35	36			●	
	0.2323	--	3	Internal coolant	GD03C-0590	6	66	28	20	36			●	
	0.2323	--	5		GD05C-0590	6	82	44	35	36			●	
	0.2323	--	8		GD08C-0590	6	95	57	48	36			○	

Note: For drilling depth (l/d) of 8 ,namely GD08C series, tolerance of shank diameter is h<sub>8</sub>.

● Stock available ○ Make-to-order



● Suitable for high efficiency drilling in a variety of materials e.g steel, stainless steel, cast iron.

Drill diameter d1(m7)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter d2(h6)	Overall length l1	Flute length l2	Recommended drilling depth l3	Shank length l4	cutting taps / tread milling cutters	forming taps	
5.95	0.2343	--	3	External coolant	Straight shank	GD03-0595	6	66	28	20	36	M7x1	1/4-28UNF	●
	0.2343	--	5			GD05-0595	6	82	44	35	36			●
	0.2343	--	3	Internal coolant		GD03C-0595	6	66	28	20	36			●
	0.2343	--	5			GD05C-0595	6	82	44	35	36			●
6.0	0.2362	--	3	External coolant		GD03-0600	6	66	28	20	36			●
	0.2362	--	5			GD05-0600	6	82	44	35	36			●
	0.2362	--	3	Internal coolant		GD03C-0600	6	66	28	20	36			●
	0.2362	--	5			GD05C-0600	6	82	44	35	36			●
6.1	0.2402	--	3	External coolant	GD03-0610	8	79	34	24	36	●			
	0.2402	--	5		GD05-0610	8	91	53	43	36	●			
	0.2402	--	3	Internal coolant	GD03C-0610	8	79	34	24	36	●			
	0.2402	--	5		GD05C-0610	8	91	53	43	36	●			
6.2	0.2441	--	3	External coolant	GD03-0620	8	79	34	24	36	●			
	0.2441	--	5		GD05-0620	8	91	53	43	36	●			
	0.2441	--	3	Internal coolant	GD03C-0620	8	79	34	24	36	●			
	0.2441	--	5		GD05C-0620	8	91	53	43	36	●			
6.3	0.2480	--	3	External coolant	GD03-0630	8	79	34	24	36	●			
	0.2480	--	5		GD05-0630	8	91	53	43	36	●			
	0.2480	--	3	Internal coolant	GD03C-0630	8	79	34	24	36	●			
	0.2480	--	5		GD05C-0630	8	91	53	43	36	●			
6.35	0.2500	1/4	3	External coolant	GD03-06350	8	79	34	24	36	●			
	0.2500	1/4	5		GD05-06350	8	91	53	43	36	●			
	0.2500	1/4	3	Internal coolant	GD03C-06350	8	79	34	24	36	●			
	0.2500	1/4	5		GD05C-06350	8	91	53	43	36	●			
6.4	0.2520	--	3	External coolant	GD03-0640	8	79	34	24	36	●			
	0.2520	--	5		GD05-0640	8	91	53	43	36	●			

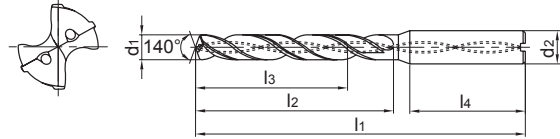
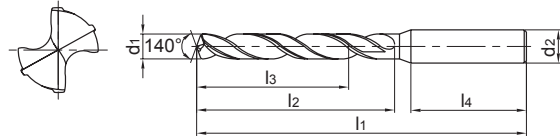
● Stock available ○ Make-to-order



Drill diameter d <sub>1</sub> (mm)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter	Overall length	Flute length	Recommended drilling depth	Shank length	cutting taps / tread milling cutters	forming taps	
6.4	0.2520	--	3	Internal coolant	Straight shank	GD03C-0640	8	79	34	24	36			●
	0.2520	--	5			GD05C-0640	8	91	53	43	36			●
	0.2520	--	8			GD08C-0640	8	114	76	66	36			○
6.5	0.2559	--	3	External coolant	Straight shank	GD03-0650	8	79	34	24	36			●
	0.2559	--	5			GD05-0650	8	91	53	43	36			●
	0.2559	--	3			GD03C-0650	8	79	34	24	36			●
6.6	0.2598	--	3	External coolant	Straight shank	GD03-0660	8	79	34	24	36	5/16-18UNC	M7×1	●
	0.2598	--	5			GD05-0660	8	91	53	43	36			●
	0.2598	--	3			GD03C-0660	8	79	34	24	36			●
6.7	0.2638	--	3	External coolant	Straight shank	GD03-0670	8	79	34	24	36			●
	0.2638	--	5			GD05-0670	8	91	53	43	36			●
	0.2638	--	3			GD03C-0670	8	79	34	24	36			●
6.746	0.2656	17/64	3	External coolant	Straight shank	GD03-06746	8	79	34	24	36			●
	0.2656	17/64	5			GD05-06746	8	91	53	43	36			●
	0.2656	17/64	3			GD03C-06746	8	79	34	24	36			●
6.8	0.2677	--	3	External coolant	Straight shank	GD03-0680	8	79	34	24	36			●
	0.2677	--	5			GD05-0680	8	91	53	43	36			●
	0.2677	--	3			GD03C-0680	8	79	34	24	36			●
6.9	0.2717	--	3	External coolant	Straight shank	GD03-0690	8	79	34	24	36	5/16-24UNF		●
	0.2717	--	5			GD05-0690	8	91	53	43	36		●	
	0.2717	--	3			GD03C-0690	8	79	34	24	36		●	
7.0	0.2756	--	3	External coolant	Straight shank	GD03-0700	8	79	34	24	36	M8×1		●
	0.2756	--	5			GD05-0700	8	91	53	43	36		●	
	0.2756	--	3			GD03C-0700	8	79	34	24	36		●	
7.1	0.2795	--	3	External coolant	Straight shank	GD03-0710	8	79	41	29	36			●
	0.2795	--	5			GD05-0710	8	91	53	43	36			●
	0.2795	--	3			GD03C-0710	8	79	41	29	36			●
7.1	0.2795	--	5	Internal coolant	Straight shank	GD05C-0710	8	91	53	43	36			●
	0.2795	--	8			GD08C-0710	8	116	76	66	36			○
	0.2795	--	3			GD03C-0710	8	79	41	29	36			●

Note: For drilling depth (l/d) of 8 ,namely GD08C series, tolerance of shank diameter is h<sub>5</sub>.

● Stock available ○ Make-to-order



● Suitable for high efficiency drilling in a variety of materials e.g steel, stainless steel, cast iron.

Drill diameter d <sub>1</sub> (m7)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter d <sub>2</sub> (h6)	Overall length l <sub>1</sub>	Flute length l <sub>2</sub>	Recommended drilling depth l <sub>3</sub>	Shank length l <sub>4</sub>	cutting taps / tread milling cutters	forming taps	
7.145	0.2813	9/32	3	External coolant	Straight shank	GD03-07145	8	79	41	29	36			●
	0.2813	9/32	5			GD05-07145	8	91	53	43	36			●
	0.2813	9/32	3	Internal coolant		GD03C-07145	8	79	41	29	36			●
	0.2813	9/32	5			GD05C-07145	8	91	53	43	36			●
7.2	0.2835	--	3	External coolant		GD03-0720	8	79	41	29	36			●
	0.2835	--	5			GD05-0720	8	91	53	43	36			●
	0.2835	--	3	Internal coolant		GD03C-0720	8	79	41	29	36			●
	0.2835	--	5			GD05C-0720	8	91	53	43	36			●
7.3	0.2874	--	3	External coolant		GD03-0730	8	79	41	29	36			●
	0.2874	--	5			GD05-0730	8	91	53	43	36			●
	0.2874	--	3	Internal coolant	GD03C-0730	8	79	41	29	36		5/16-18UNC	●	
	0.2874	--	5		GD05C-0730	8	91	53	43	36			●	
7.4	0.2913	--	3	External coolant	GD03-0740	8	79	41	29	36			●	
	0.2913	--	5		GD05-0740	8	91	53	43	36			●	
	0.2913	--	3	Internal coolant	GD03C-0740	8	79	41	29	36			●	
	0.2913	--	5		GD05C-0740	8	91	53	43	36			●	
7.45	0.2933	--	3	External coolant	GD03-0745	8	79	41	29	36			●	
	0.2933	--	5		GD05-0745	8	91	53	43	36		M8×1.25	●	
	0.2933	--	3	Internal coolant	GD03C-0745	8	79	41	29	36		5/16-24UNF	●	
	0.2933	--	5		GD05C-0745	8	91	53	43	36			●	
7.5	0.2953	--	3	External coolant	GD03-0750	8	79	41	29	36			●	
	0.2953	--	5		GD05-0750	8	91	53	43	36			●	
	0.2953	--	3	Internal coolant	GD03C-0750	8	79	41	29	36			●	
	0.2953	--	5		GD05C-0750	8	91	53	43	36			●	
7.541	0.2969	19/64	3	External coolant	GD03-07541	8	79	41	29	36			●	
	0.2969	19/64	5		GD05-07541	8	91	53	43	36			●	
	0.2969	19/64	3	Internal coolant	GD03C-07541	8	79	41	29	36			●	
	0.2969	19/64	5		GD05C-07541	8	91	53	43	36			●	

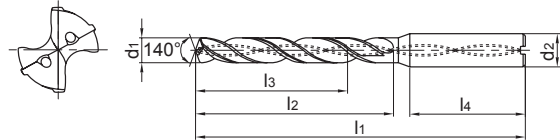
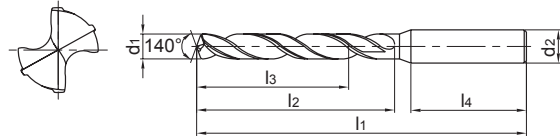
● Stock available ○ Make-to-order



Drill diameter d <sub>1</sub> (m7)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter	Overall length	Flute length	Recommended drilling depth	Shank length	cutting taps / tread milling cutters	forming taps	
7.6	0.2992	--	3	External coolant	Straight shank	GD03-0760	8	79	41	29	36	M8×1	●	
	0.2992	--	5			GD05-0760	8	91	53	43	36		●	
	0.2992	--	3	Internal coolant		GD03C-0760	8	79	41	29	36		●	
	0.2992	--	5			GD05C-0760	8	91	53	43	36		●	
	0.2992	--	8			GD08C-0760	8	116	76	66	36		○	
7.7	0.3031	--	3	External coolant		GD03-0770	8	79	41	29	36	●		
	0.3031	--	5			GD05-0770	8	91	53	43	36	●		
	0.3031	--	3	Internal coolant		GD03C-0770	8	79	41	29	36	●		
	0.3031	--	5			GD05C-0770	8	91	53	43	36	●		
	0.3031	--	8			GD08C-0770	8	116	76	66	36	○		
7.8	0.3071	--	3	External coolant	GD03-0780	8	79	41	29	36	●			
	0.3071	--	5		GD05-0780	8	91	53	43	36	●			
	0.3071	--	3	Internal coolant	GD03C-0780	8	79	41	29	36	●			
	0.3071	--	5		GD05C-0780	8	91	53	43	36	●			
	0.3071	--	8		GD08C-0780	8	116	76	66	36	○			
7.9	0.3110	--	3	External coolant	GD03-0790	8	79	41	29	36	●			
	0.3110	--	5		GD05-0790	8	91	53	43	36	●			
	0.3110	--	3	Internal coolant	GD03C-0790	8	79	41	29	36	●			
	0.3110	--	5		GD05C-0790	8	91	53	43	36	●			
	0.3110	--	8		GD08C-0790	8	116	76	66	36	○			
7.938	0.3125	5/16	3	External coolant	GD03-07938	8	79	41	29	36	●			
	0.3125	5/16	5		GD05-07938	8	91	53	43	36	●			
	0.3125	5/16	3	Internal coolant	GD03C-07938	8	79	41	29	36	●			
	0.3125	5/16	5		GD05C-07938	8	91	53	43	36	●			
	0.3150	--	3		External coolant	GD03-0800	8	79	41	29	36	●		
0.3150	--	5	GD05-0800	8		91	53	43	36	●				
0.3150	--	3	Internal coolant	GD03C-0800		8	79	41	29	36	3/8-16UNC	●		
0.3150	--	5		GD05C-0800		8	91	53	43	36	●			
0.3150	--	8		GD08C-0800		8	116	76	66	36	○			
8.1	0.3189	--	3	External coolant	GD03-0810	10	89	47	35	40	●			
	0.3189	--	5		GD05-0810	10	103	61	49	40	●			
	0.3189	--	3	Internal coolant	GD03C-0810	10	89	47	35	40	●			
	0.3189	--	5		GD05C-0810	10	103	61	49	40	●			
	0.3189	--	8		GD08C-0810	10	142	95	83	40	○			
8.2	0.3228	--	3	External coolant	GD03-0820	10	89	47	35	40	●			
	0.3228	--	5		GD05-0820	10	103	61	49	40	●			
	0.3228	--	3	Internal coolant	GD03C-0820	10	89	47	35	40	●			
	0.3228	--	5		GD05C-0820	10	103	61	49	40	●			
	0.3228	--	8		GD08C-0820	10	142	95	83	40	○			
8.3	0.3268	--	3	External coolant	GD03-0830	10	89	47	35	40	●			
	0.3268	--	5		GD05-0830	10	103	61	49	40	●			

Note: For drilling depth (l/d) of 8 ,namely GD08C series, tolerance of shank diameter is h<sub>5</sub>.

● Stock available ○ Make-to-order



● Suitable for high efficiency drilling in a variety of materials e.g steel, stainless steel, cast iron.

Drill diameter d <sub>1</sub> (m7)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter d <sub>2</sub> (h <sub>6</sub> )	Overall length l <sub>1</sub>	Flute length l <sub>2</sub>	Recommended drilling depth l <sub>3</sub>	Shank length l <sub>4</sub>	cutting taps / tread milling cutters	forming taps	
8.3	0.3268	--	3	Internal coolant	Straight shank	GD03C-0830	10	89	47	35	40			●
	0.3268	--	5			GD05C-0830	10	103	61	49	40			●
	0.3268	--	8			GD08C-0830	10	142	95	83	40			○
8.334	0.3281	21/64	3	External coolant		GD03-08334	10	89	47	35	40			●
	0.3281	21/64	5			GD05-08334	10	103	61	49	40			●
	0.3281	21/64	3	Internal coolant		GD03C-08334	10	89	47	35	40			●
	0.3281	21/64	5			GD05C-08334	10	103	61	49	40			●
8.4	0.3307	--	3	External coolant		GD03-0840	10	89	47	35	40			●
	0.3307	--	5			GD05-0840	10	103	61	49	40			●
	0.3307	--	3	Internal coolant		GD03C-0840	10	89	47	35	40			●
	0.3307	--	5			GD05C-0840	10	103	61	49	40			●
8.5	0.3346	--	3	External coolant		GD03-0850	10	89	47	35	40	M10×1.5 3/8-24UNF		●
	0.3346	--	5			GD05-0850	10	103	61	49	40			●
	0.3346	--	3	Internal coolant		GD03C-0850	10	89	47	35	40			●
	0.3346	--	5			GD05C-0850	10	103	61	49	40			●
	0.3346	--	8		GD08C-0850	10	142	95	83	40			○	
8.6	0.3386	--	3	External coolant	GD03-0860	10	89	47	35	40			●	
	0.3386	--	5		GD05-0860	10	103	61	49	40			●	
	0.3386	--	3	Internal coolant	GD03C-0860	10	89	47	35	40			●	
	0.3386	--	5		GD05C-0860	10	103	61	49	40			●	
	0.3386	--	8		GD08C-0860	10	142	95	83	40			○	
8.7	0.3425	--	3	External coolant	GD03-0870	10	89	47	35	40			●	
	0.3425	--	5		GD05-0870	10	103	61	49	40			●	
	0.3425	--	3	Internal coolant	GD03C-0870	10	89	47	35	40			●	
	0.3425	--	5		GD05C-0870	10	103	61	49	40			●	
	0.3425	--	8		GD08C-0870	10	142	95	83	40			○	
8.733	0.3438	11/32	3	External coolant	GD03-08733	10	89	47	35	40			●	
	0.3438	11/32	5		GD05-08733	10	103	61	49	40			●	
	0.3438	11/32	3	Internal coolant	GD03C-08733	10	89	47	35	40			●	
	0.3438	11/32	5		GD05C-08733	10	103	61	49	40			●	

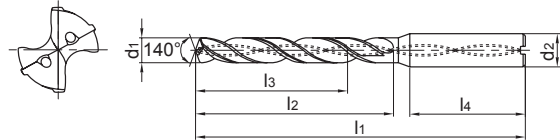
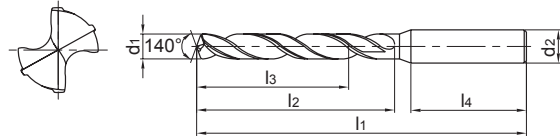
● Stock available ○ Make-to-order



Drill diameter d <sub>1</sub> (mm)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter	Overall length	Flute length	Recommended drilling depth	Shank length	cutting taps / tread milling cutters	forming taps	
8.8	0.3465	--	3	External coolant	Straight shank	GD03-0880	10	89	47	35	40	3/8-16UNC	●	
	0.3465	--	5			GD05-0880	10	103	61	49	40		●	
	0.3465	--	3	Internal coolant		GD03C-0880	10	89	47	35	40		●	
	0.3465	--	5			GD05C-0880	10	103	61	49	40		●	
	0.3465	--	8			GD08C-0880	10	142	95	83	40		○	
8.9	0.3504	--	3	External coolant		GD03-0890	10	89	47	35	40	3/8-24UNF	●	
	0.3504	--	5			GD05-0890	10	103	61	49	40		●	
	0.3504	--	3	Internal coolant		GD03C-0890	10	89	47	35	40		●	
	0.3504	--	5			GD05C-0890	10	103	61	49	40		●	
	0.3504	--	8			GD08C-0890	10	142	95	83	40		○	
9.0	0.3543	--	3	External coolant	GD03-0900	10	89	47	35	40	M10×1	3/8-24UNF	●	
	0.3543	--	5		GD05-0900	10	103	61	49	40			●	
	0.3543	--	3	Internal coolant	GD03C-0900	10	89	47	35	40			●	
	0.3543	--	5		GD05C-0900	10	103	61	49	40			●	
	0.3543	--	8		GD08C-0900	10	142	95	83	40			○	
9.1	0.3583	--	3	External coolant	GD03-0910	10	89	47	35	40	M10×1.5	3/8-24UNF	●	
	0.3583	--	5		GD05-0910	10	103	61	49	40			●	
	0.3583	--	3	Internal coolant	GD03C-0910	10	89	47	35	40			●	
	0.3583	--	5		GD05C-0910	10	103	61	49	40			●	
	0.3583	--	8		GD08C-0910	10	142	95	83	40			○	
9.129	0.3594	23/64	3	External coolant	GD03-09129	10	89	47	35	40	M10×1.5	3/8-24UNF	●	
	0.3594	23/64	5		GD05-09129	10	103	61	49	40			●	
	0.3594	23/64	3	Internal coolant	GD03C-09129	10	89	47	35	40			●	
	0.3594	23/64	5		GD05C-09129	10	103	61	49	40			●	
	0.3594	23/64	8		GD08C-09129	10	142	95	83	40			○	
9.2	0.3622	--	3	External coolant	GD03-0920	10	89	47	35	40	M10×1.5	3/8-24UNF	●	
	0.3622	--	5		GD05-0920	10	103	61	49	40			●	
	0.3622	--	3	Internal coolant	GD03C-0920	10	89	47	35	40			●	
	0.3622	--	5		GD05C-0920	10	103	61	49	40			●	
	0.3622	--	8		GD08C-0920	10	142	95	83	40			○	
9.3	0.3661	--	3	External coolant	GD03-0930	10	89	47	35	40	M10×1.5	3/8-24UNF	●	
	0.3661	--	5		GD05-0930	10	103	61	49	40			●	
	0.3661	--	3	Internal coolant	GD03C-0930	10	89	47	35	40			●	
	0.3661	--	5		GD05C-0930	10	103	61	49	40			●	
	0.3661	--	8		GD08C-0930	10	142	95	83	40			○	
9.35	0.3681	--	3	External coolant	GD03-0935	10	89	47	35	40	M10×1.5	3/8-24UNF	●	
	0.3681	--	5		GD05-0935	10	103	61	49	40			●	
	0.3681	--	3	Internal coolant	GD03C-0935	10	89	47	35	40			●	
	0.3681	--	5		GD05C-0935	10	103	61	49	40			●	
	0.3681	--	8		GD08C-0935	10	142	95	83	40			○	
9.4	0.3701	--	3	External coolant	GD03-0940	10	89	47	35	40	7/16-14UNC	3/8-24UNF	●	
	0.3701	--	5		GD05-0940	10	103	61	49	40			●	
	0.3701	--	3	Internal coolant	GD03C-0940	10	89	47	35	40			●	
	0.3701	--	5		GD05C-0940	10	103	61	49	40			●	
	0.3701	--	8		GD08C-0940	10	142	95	83	40			○	

Note: For drilling depth (l/d) of 8 ,namely GD08C series, tolerance of shank diameter is h<sub>8</sub>.

● Stock available ○ Make-to-order



● Suitable for high efficiency drilling in a variety of materials e.g steel, stainless steel, cast iron.

Drill diameter d1(m7)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter d2(h6)	Overall length l1	Flute length l2	Recommended drilling depth l3	Shank length l4	cutting taps / tread milling cutters	forming taps	
9.45	0.3720	--	3	External coolant	Straight shank	GD03-0945	10	89	47	35	40	M10x1.25	●	
	0.3720	--	5			GD05-0945	10	103	61	49	40		●	
	0.3720	--	3	Internal coolant		GD03C-0945	10	89	47	35	40		●	
	0.3720	--	5			GD05C-0945	10	103	61	49	40		●	
9.5	0.3740	--	3	External coolant		GD03-0950	10	89	47	35	40	M10x1	●	
	0.3740	--	5			GD05-0950	10	103	61	49	40		●	
	0.3740	--	3	Internal coolant		GD03C-0950	10	89	47	35	40		●	
	0.3740	--	5			GD05C-0950	10	103	61	49	40		●	
9.525	0.3740	--	8	External coolant		GD08C-0950	10	142	95	83	40	○		
	0.3750	3/8	3			GD03-09525	10	89	47	35	40	●		
	0.3750	3/8	5			GD05-09525	10	103	61	49	40	●		
	0.3750	3/8	3			GD03C-09525	10	89	47	35	40	●		
9.6	0.3750	3/8	5	GD05C-09525	10	103	61	49	40	●				
	0.3780	--	3	External coolant	GD03-0960	10	89	47	35	40	M10x1	●		
	0.3780	--	5		GD05-0960	10	103	61	49	40		●		
	0.3780	--	3	Internal coolant	GD03C-0960	10	89	47	35	40		●		
0.3780	--	5	GD05C-0960		10	103	61	49	40	●				
9.7	0.3780	--	8	External coolant	GD08C-0960	10	142	95	83	40	○			
	0.3819	--	3		GD03-0970	10	89	47	35	40	●			
	0.3819	--	5		GD05-0970	10	103	61	49	40	●			
	0.3819	--	3		GD03C-0970	10	89	47	35	40	●			
9.8	0.3819	--	5	Internal coolant	GD05C-0970	10	103	61	49	40	●			
	0.3819	--	8		GD08C-0970	10	142	95	83	40	○			
	0.3858	--	3	External coolant	GD03-0980	10	89	47	35	40	7/16-20UNF	●		
	0.3858	--	5		GD05-0980	10	103	61	49	40		●		
0.3858	--	3	Internal coolant	GD03C-0980	10	89	47	35	40	●				
0.3858	--	5		GD05C-0980	10	103	61	49	40	●				
9.9	0.3858	--	8	External coolant	GD08C-0980	10	142	95	83	40	○			
	0.3898	--	3		GD03-0990	10	89	47	35	40	●			
	0.3898	--	5	GD05-0990	10	103	61	49	40	●				

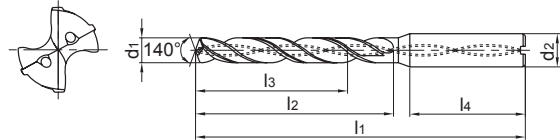
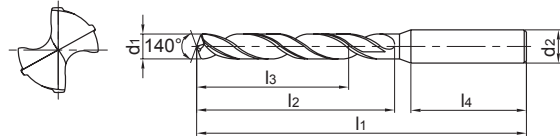
● Stock available ○ Make-to-order



Drill diameter d <sub>1</sub> (mm)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter	Overall length	Flute length	Recommended drilling depth	Shank length	cutting taps / tread milling cutters	forming taps	
9.9	0.3898	--	3	Internal coolant	Straight shank	GD03C-0990	10	89	47	35	40	7/16-20UNF	●	
	0.3898	--	5			GD05C-0990	10	103	61	49	40		●	
	0.3898	--	8			GD08C-0990	10	142	95	83	40		○	
9.921	0.3906	25/64	3	External coolant	Straight shank	GD03-09921	10	89	47	35	40		●	
	0.3906	25/64	5			GD05-09921	10	103	61	49	40		●	
	0.3906	25/64	3			GD03C-09921	10	89	47	35	40		●	
9.921	0.3906	25/64	5	Internal coolant	Straight shank	GD05C-09921	10	103	61	49	40		●	
	0.3937	--	3			GD03-1000	10	89	47	35	40		●	
	0.3937	--	5			GD05-1000	10	103	61	49	40		●	
10.0	0.3937	--	3	External coolant	Straight shank	GD03C-1000	10	89	47	35	40		●	
	0.3937	--	5			GD05C-1000	10	103	61	49	40		●	
	0.3937	--	8			GD08C-1000	10	142	95	83	40		○	
10.0	0.3937	--	3	Internal coolant	Straight shank	GD03C-1000	10	89	47	35	40		●	
	0.3937	--	5			GD05C-1000	10	103	61	49	40		●	
	0.3937	--	8			GD08C-1000	10	142	95	83	40		○	
10.1	0.3976	--	3	External coolant	Straight shank	GD03-1010	12	102	55	40	45		●	
	0.3976	--	5			GD05-1010	12	118	71	56	45		●	
	0.3976	--	3			GD03C-1010	12	102	55	40	45		●	
10.1	0.3976	--	5	Internal coolant	Straight shank	GD05C-1010	12	118	71	56	45		●	
	0.3976	--	8			GD08C-1010	12	162	114	99	45		○	
	0.4016	--	3			GD03-1020	12	102	55	40	45		●	
10.2	0.4016	--	5	External coolant	Straight shank	GD05-1020	12	118	71	56	45		●	
	0.4016	--	3			GD03C-1020	12	102	55	40	45		●	
	0.4016	--	5			GD05C-1020	12	118	71	56	45		●	
10.2	0.4016	--	8	Internal coolant	Straight shank	GD08C-1020	12	162	114	99	45		○	
	0.4035	--	3			GD03-1025	12	102	55	40	45		●	
	0.4035	--	5			GD05-1025	12	118	71	56	45		●	
10.25	0.4035	--	3	External coolant	Straight shank	GD03C-1025	12	102	55	40	45	M12×1.75	●	
	0.4035	--	5			GD05C-1025	12	118	71	56	45		●	
	0.4055	--	3			GD03-1030	12	102	55	40	45		●	
10.3	0.4055	--	5	External coolant	Straight shank	GD05-1030	12	118	71	56	45	7/16-14UNC	●	
	0.4055	--	3			GD03C-1030	12	102	55	40	45		●	
	0.4055	--	5			GD05C-1030	12	118	71	56	45		●	
10.3	0.4055	--	8	Internal coolant	Straight shank	GD08C-1030	12	162	114	99	45		○	
	0.4063	13/32	3			GD03-10320	12	102	55	40	45		●	
	0.4063	13/32	5			GD05-10320	12	118	71	56	45		●	
10.32	0.4063	13/32	3	External coolant	Straight shank	GD03C-10320	12	102	55	40	45		●	
	0.4063	13/32	5			GD05C-10320	12	118	71	56	45		●	
	0.4094	--	3			GD03-1040	12	102	55	40	45		●	
10.4	0.4094	--	5	External coolant	Straight shank	GD05-1040	12	118	71	56	45		●	
	0.4094	--	3			GD03C-1040	12	102	55	40	45		●	
	0.4094	--	5			GD05C-1040	12	118	71	56	45		●	
10.4	0.4094	--	8	Internal coolant	Straight shank	GD08C-1040	12	162	114	99	45		○	
	0.4134	--	3			GD03-1050	12	102	55	40	45		●	
	0.4134	--	5			GD05-1050	12	118	71	56	45		●	

Note: For drilling depth (l/d) of 8 ,namely GD08C series, tolerance of shank diameter is h<sub>5</sub>.

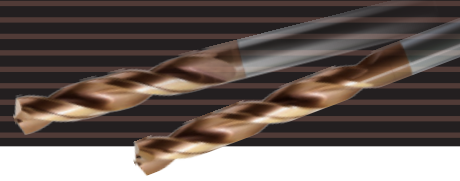
● Stock available ○ Make-to-order



● Suitable for high efficiency drilling in a variety of materials e.g steel, stainless steel, cast iron.

Drill diameter d <sub>1</sub> (m7)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade	
mm	inch	Fraction					Shank diameter d <sub>2</sub> (h <sub>6</sub> )	Overall length l <sub>1</sub>	Flute length l <sub>2</sub>	Recommended drilling depth l <sub>3</sub>	Shank length l <sub>4</sub>	cutting taps / tread milling cutters	forming taps		
10.5	0.4134	--	3	Internal coolant	Straight shank	GD03C-1050	12	102	55	40	45	M12×1.5	7/16-20UNF	●	
	0.4134	--	5			GD05C-1050	12	118	71	56	45			●	
	0.4134	--	8			GD08C-1050	12	162	114	99	45			○	
10.6	0.4173	--	3	External coolant		GD03-1060	12	102	55	40	45	M12×1.25		●	
	0.4173	--	5			GD05-1060	12	118	71	56	45			●	
	10.6	0.4173	--	3		Internal coolant	GD03C-1060	12	102	55	40			45	●
		0.4173	--	5			GD05C-1060	12	118	71	56			45	●
		0.4173	--	8			GD08C-1060	12	162	114	99			45	○
		10.7	0.4213	--			3	External coolant	GD03-1070	12	102			55	40
0.4213	--		5	GD05-1070		12	118		71	56	45	●			
10.7	0.4213		--	3		Internal coolant	GD03C-1070	12	102	55	40	45	●		
	0.4213		--	5			GD05C-1070	12	118	71	56	45	●		
	0.4213		--	8			GD08C-1070	12	162	114	99	45	○		
10.716	0.4219	27/64	3	External coolant		GD03-10716	12	102	55	40	45	M12×1.25		●	
	0.4219	27/64	5			GD05-10716	12	118	71	56	45			●	
	10.716	0.4219	27/64	3	Internal coolant	GD03C-10716	12	102	55	40	45			●	
		0.4219	27/64	5		GD05C-10716	12	118	71	56	45			●	
10.75	0.4232	--	3	External coolant	GD03-1075	12	102	55	40	45	M12×1.25		●		
	0.4232	--	5		GD05-1075	12	118	71	56	45			●		
	10.75	0.4232	--	3	Internal coolant	GD03C-1075	12	102	55	40			45	●	
		0.4232	--	5		GD05C-1075	12	118	71	56			45	●	
10.8	0.4252	--	3	External coolant	GD03-1080	12	102	55	40	45	1/2-13UNC		●		
	0.4252	--	5		GD05-1080	12	118	71	56	45			●		
	10.8	0.4252	--	3	Internal coolant	GD03C-1080	12	102	55	40			45	●	
		0.4252	--	5		GD05C-1080	12	118	71	56			45	●	
		0.4252	--	8		GD08C-1080	12	162	114	99			45	○	
10.9	0.4291	--	3	External coolant	GD03-1090	12	102	55	40	45			●		
	0.4291	--	5		GD05-1090	12	118	71	56	45			●		
	10.9	0.4291	--	3	Internal coolant	GD03C-1090	12	102	55	40			45	●	
		0.4291	--	5		GD05C-1090	12	118	71	56			45	●	
		0.4291	--	8		GD08C-1090	12	162	114	99			45	○	

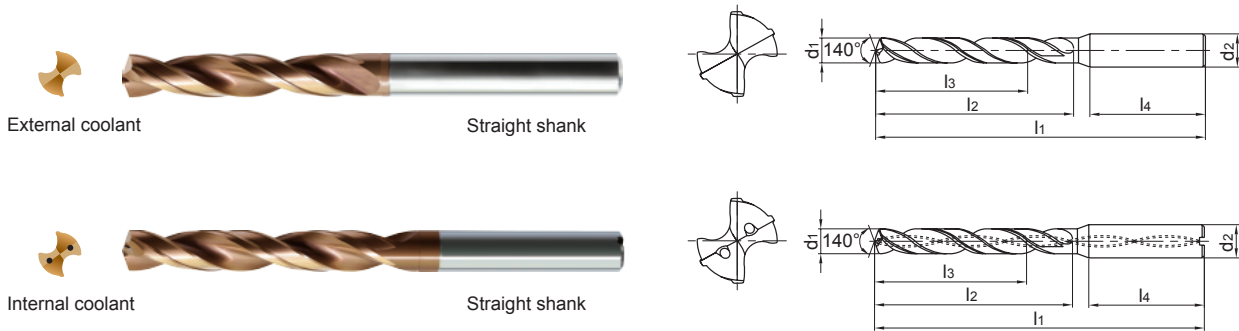
● Stock available ○ Make-to-order



Drill diameter d <sub>1</sub> (mm)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter	Overall length	Flute length	Recommended drilling depth	Shank length	cutting taps / tread milling cutters	forming taps	
11.0	0.4331	--	3	External coolant	Straight shank	GD03-1100	12	102	55	40	45			●
	0.4331	--	5			GD05-1100	12	118	71	56	45			●
	0.4331	--	3	Internal coolant		GD03C-1100	12	102	55	40	45			●
	0.4331	--	5			GD05C-1100	12	118	71	56	45			●
11.1	0.4370	--	8	External coolant		GD08C-1100	12	162	114	99	45			○
	0.4370	--	3			Internal coolant	GD03-1110	12	102	55	40	45		
	0.4370	--	5	GD05-1110			12	118	71	56	45			●
	0.4370	--	8	GD08C-1110		12	162	114	99	45			○	
11.113	0.4375	7/16	3	External coolant	GD03-11113	12	102	55	40	45			●	
	0.4375	7/16	5		GD05-11113	12	118	71	56	45			●	
	0.4375	7/16	3	Internal coolant	GD03C-11113	12	102	55	40	45			●	
	0.4375	7/16	5		GD05C-11113	12	118	71	56	45			●	
11.2	0.4409	--	3	External coolant	GD03-1120	12	102	55	40	45			●	
	0.4409	--	5		GD05-1120	12	118	71	56	45			●	
	0.4409	--	3	Internal coolant	GD03C-1120	12	102	55	40	45			●	
	0.4409	--	5		GD05C-1120	12	118	71	56	45			●	
	0.4409	--	8	GD08C-1120	12	162	114	99	45			○		
11.25	0.4429	--	3	External coolant	GD03-1125	12	102	55	40	45		M12×1.75	●	
	0.4429	--	5		GD05-1125	12	118	71	56	45			●	
	0.4429	--	3	Internal coolant	GD03C-1125	12	102	55	40	45			●	
	0.4429	--	5		GD05C-1125	12	118	71	56	45			●	
11.3	0.4449	--	3	External coolant	GD03-1130	12	102	55	40	45			●	
	0.4449	--	5		GD05-1130	12	118	71	56	45			●	
	0.4449	--	3	Internal coolant	GD03C-1130	12	102	55	40	45			●	
	0.4449	--	5		GD05C-1130	12	118	71	56	45			●	
11.35	0.4469	--	8	External coolant	GD08C-1130	12	162	114	99	45			○	
	0.4469	--	3		Internal coolant	GD03-1135	12	102	55	40	45		M12×1.5	●
	0.4469	--	5	GD05-1135		12	118	71	56	45		●		
	0.4469	--	3	Internal coolant	GD03C-1135	12	102	55	40	45		●		
0.4469	--	5	GD05C-1135		12	118	71	56	45		●			
11.4	0.4488	--	3	External coolant	GD03-1140	12	102	55	40	45			●	
	0.4488	--	5		GD05-1140	12	118	71	56	45			●	
	0.4488	--	3	Internal coolant	GD03C-1140	12	102	55	40	45			●	
	0.4488	--	5		GD05C-1140	12	118	71	56	45			●	
11.45	0.4488	--	8	External coolant	GD08C-1140	12	162	114	99	45			○	
	0.4508	--	3		Internal coolant	GD03-1145	12	102	55	40	45		M12×1.25	●
	0.4508	--	5	GD05-1145		12	118	71	56	45		●		
	0.4508	--	3	Internal coolant	GD03C-1145	12	102	55	40	45		●		
0.4508	--	5	GD05C-1145		12	118	71	56	45		●			

Note: For drilling depth (l/d) of 8 ,namely GD08C series, tolerance of shank diameter is h<sub>5</sub>.

● Stock available ○ Make-to-order



● Suitable for high efficiency drilling in a variety of materials e.g steel, stainless steel, cast iron.

Drill diameter d <sub>1</sub> (m7)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter d <sub>2</sub> (h6)	Overall length l <sub>1</sub>	Flute length l <sub>2</sub>	Recommended drilling depth l <sub>3</sub>	Shank length l <sub>4</sub>	cutting taps / tread milling cutters	forming taps	
11.5	0.4528	--	3	External coolant	Straight shank	GD03-1150	12	102	55	40	45	1/2-20UNF	●	
	0.4528	--	5			GD05-1150	12	118	71	56	45		●	
	0.4528	--	3	Internal coolant		GD03C-1150	12	102	55	40	45		●	
	0.4528	--	5			GD05C-1150	12	118	71	56	45		●	
	0.4528	--	8			GD08C-1150	12	162	114	99	45		○	
11.6	0.4567	--	3	External coolant		GD03-1160	12	102	55	40	45		●	
	0.4567	--	5			GD05-1160	12	118	71	56	45		●	
	0.4567	--	3	Internal coolant		GD03C-1160	12	102	55	40	45		●	
	0.4567	--	5			GD05C-1160	12	118	71	56	45		●	
	0.4567	--	8			GD08C-1160	12	162	114	99	45		○	
11.7	0.4606	--	3	External coolant	GD03-1170	12	102	55	40	45		●		
	0.4606	--	5		GD05-1170	12	118	71	56	45		●		
	0.4606	--	3	Internal coolant	GD03C-1170	12	102	55	40	45		●		
	0.4606	--	5		GD05C-1170	12	118	71	56	45		●		
	0.4606	--	8		GD08C-1170	12	162	114	99	45		○		
11.8	0.4646	--	3	External coolant	GD03-1180	12	102	55	40	45	1/2-13UNC	●		
	0.4646	--	5		GD05-1180	12	118	71	56	45		●		
	0.4646	--	3	Internal coolant	GD03C-1180	12	102	55	40	45		●		
	0.4646	--	5		GD05C-1180	12	118	71	56	45		●		
	0.4646	--	8		GD08C-1180	12	162	114	99	45		○		
11.9	0.4685	--	3	External coolant	GD03-1190	12	102	55	40	45		●		
	0.4685	--	5		GD05-1190	12	118	71	56	45		●		
	0.4685	--	3	Internal coolant	GD03C-1190	12	102	55	40	45		●		
	0.4685	--	5		GD05C-1190	12	118	71	56	45		●		
	0.4685	--	8		GD08C-1190	12	162	114	99	45		○		
12.0	0.4724	--	3	External coolant	GD03-1200	12	102	55	40	45	M14×2	●		
	0.4724	--	5		GD05-1200	12	118	71	56	45		●		
	0.4724	--	3	Internal coolant	GD03C-1200	12	102	55	40	45		●		
	0.4724	--	5		GD05C-1200	12	118	71	56	45		●		
	0.4724	--	8		GD08C-1200	12	162	114	99	45		○		
12.1	0.4764	--	3	External coolant	GD03-1210	14	107	60	43	45	1/2-20UNF	●		
	0.4764	--	5		GD05-1210	14	124	77	60	45		●		

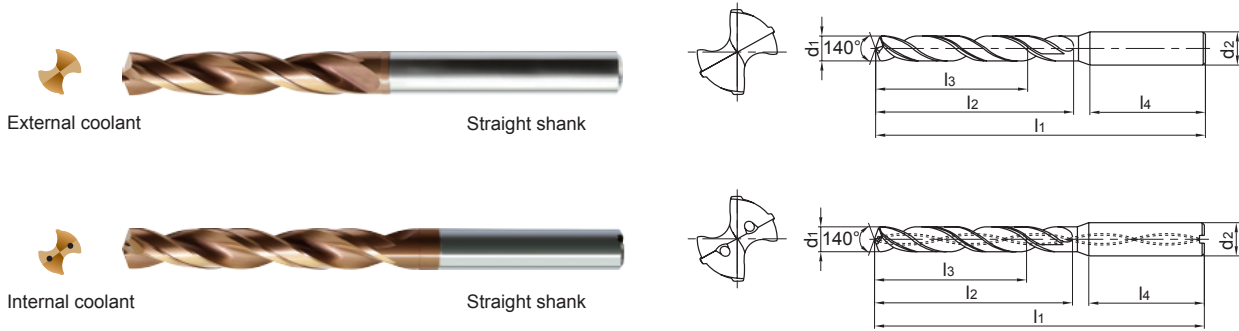
● Stock available ○ Make-to-order



Drill diameter d <sub>1</sub> (mm)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter	Overall length	Flute length	Recommended drilling depth	Shank length	cutting taps / tread milling cutters	forming taps	
12.1	0.4764	--	3	Internal coolant	Straight shank	GD03C-1210	14	107	60	43	45	1/2-20UNF	●	
	0.4764	--	5			GD05C-1210	14	124	77	60	45		●	
12.2	0.4803	--	3	External coolant		GD03-1220	14	107	60	43	45	9/16-12UNC	●	
	0.4803	--	5			GD05-1220	14	124	77	60	45		●	
	0.4803	--	3	Internal coolant		GD03C-1220	14	107	60	43	45		●	
	0.4803	--	5			GD05C-1220	14	124	77	60	45		●	
12.25	0.4823	--	3	External coolant		GD03-1225	14	107	60	43	45		●	
	0.4823	--	5			GD05-1225	14	124	77	60	45		●	
	0.4823	--	3	Internal coolant		GD03C-1225	14	107	60	43	45		●	
	0.4823	--	5			GD05C-1225	14	124	77	60	45		●	
12.304	0.4844	31/64	3	External coolant		GD03-12304	14	107	60	43	45		●	
	0.4844	31/64	5			GD05-12304	14	124	77	60	45		●	
	0.4844	31/64	3	Internal coolant	GD03C-12304	14	107	60	43	45	●			
	0.4844	31/64	5		GD05C-12304	14	124	77	60	45	●			
12.5	0.4921	--	3	External coolant	GD03-1250	14	107	60	43	45	M14×1.5	●		
	0.4921	--	5		GD05-1250	14	124	77	60	45		●		
	0.4921	--	3	Internal coolant	GD03C-1250	14	107	60	43	45		●		
	0.4921	--	5		GD05C-1250	14	124	77	60	45		●		
	0.4921	--	8		GD08C-1250	14	178	133	116	45		○		
12.7	0.5000	1/2	3	External coolant	GD03-1270	14	107	60	43	45		●		
	0.5000	1/2	5		GD05-1270	14	124	77	60	45		●		
	0.5000	1/2	3	Internal coolant	GD03C-1270	14	107	60	43	45		●		
	0.5000	1/2	5		GD05C-1270	14	124	77	60	45		●		
	0.5000	1/2	8		GD08C-1270	14	178	133	116	45		○		
12.75	0.5020	--	3	External coolant	GD03-1275	14	107	60	43	45		●		
	0.5020	--	5		GD05-1275	14	124	77	60	45		●		
	0.5020	--	3	Internal coolant	GD03C-1275	14	107	60	43	45		●		
	0.5020	--	5		GD05C-1275	14	124	77	60	45		●		
12.8	0.5039	--	3	External coolant	GD03-1280	14	107	60	43	45		●		
	0.5039	--	5		GD05-1280	14	124	77	60	45		●		
	0.5039	--	3	Internal coolant	GD03C-1280	14	107	60	43	45		●		
	0.5039	--	5		GD05C-1280	14	124	77	60	45		●		
	0.5039	--	8		GD08C-1280	14	178	133	116	45		○		
12.9	0.5079	--	3	External coolant	GD03-1290	14	107	60	43	45	9/16-18UNF	●		
	0.5079	--	5		GD05-1290	14	124	77	60	45		●		
	0.5079	--	3	Internal coolant	GD03C-1290	14	107	60	43	45		●		
	0.5079	--	5		GD05C-1290	14	124	77	60	45		●		
13.0	0.5118	--	3	External coolant	GD03-1300	14	107	60	43	45		●		
	0.5118	--	5		GD05-1300	14	124	77	60	45		●		
	0.5118	--	3	Internal coolant	GD03C-1300	14	107	60	43	45		●		
	0.5118	--	5		GD05C-1300	14	124	77	60	45		●		
	0.5118	--	8		GD08C-1300	14	178	133	116	45	○			

Note: For drilling depth (l/d) of 8 ,namely GD08C series, tolerance of shank diameter is h<sub>5</sub>.

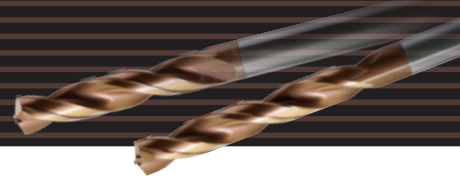
● Stock available ○ Make-to-order



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Drill diameter d <sub>1</sub> (m7)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter	Overall length	Flute length		Recommended drilling depth	Shank length	cutting taps / tread milling cutters	
							d <sub>2</sub> (h6)	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>			KDG3013
13.1	0.5157	--	3	External coolant	Straight shank	GD03-1310	14	107	60	43	45	M14×2	●	
	0.5157	--	5	External coolant		GD05-1310	14	124	77	60	45		●	
	0.5157	--	3	Internal coolant		GD03C-1310	14	107	60	43	45		●	
	0.5157	--	5	Internal coolant		GD05C-1310	14	124	77	60	45		●	
13.35	0.5256	--	3	External coolant		GD03-1335	14	107	60	43	45	M14×1.5 9/16-12UNC	●	
	0.5256	--	5	External coolant		GD05-1335	14	124	77	60	45		●	
	0.5256	--	3	Internal coolant		GD03C-1335	14	107	60	43	45		●	
	0.5256	--	5	Internal coolant		GD05C-1335	14	124	77	60	45		●	
13.5	0.5315	--	3	External coolant		GD03-1350	14	107	60	43	45	5/8-11UNC	●	
	0.5315	--	5	External coolant		GD05-1350	14	124	77	60	45		●	
	0.5315	--	3	Internal coolant		GD03C-1350	14	107	60	43	45		●	
	0.5315	--	5	Internal coolant		GD05C-1350	14	124	77	60	45		●	
	0.5315	--	8	Internal coolant		GD08C-1350	14	178	133	116	45		○	
13.65	0.5374	--	3	External coolant		GD03-1365	14	107	60	43	45	9/16-18UNF	●	
	0.5374	--	5	External coolant		GD05-1365	14	124	77	60	45		●	
	0.5374	--	3	Internal coolant		GD03C-1365	14	107	60	43	45		●	
	0.5374	--	5	Internal coolant		GD05C-1365	14	124	77	60	45		●	
13.8	0.5433	--	3	External coolant		GD03-1380	14	107	60	43	45		●	
	0.5433	--	5	External coolant		GD05-1380	14	124	77	60	45		●	
	0.5433	--	3	Internal coolant		GD03C-1380	14	107	60	43	45		●	
	0.5433	--	5	Internal coolant	GD05C-1380	14	124	77	60	45	●			
14.0	0.5512	--	3	External coolant	GD03-1400	14	107	60	43	45	M16×2	●		
	0.5512	--	5	External coolant	GD05-1400	14	124	77	60	45		●		
	0.5512	--	3	Internal coolant	GD03C-1400	14	107	60	43	45		●		
	0.5512	--	5	Internal coolant	GD05C-1400	14	124	77	60	45		●		
	0.5512	--	8	Internal coolant	GD08C-1400	14	178	133	116	45		○		
14.25	0.5610	--	3	External coolant	GD03-1425	16	115	65	45	48		●		
	0.5610	--	5	External coolant	GD05-1425	16	133	83	63	48		●		
	0.5610	--	3	Internal coolant	GD03C-1425	16	115	65	45	48		●		
	0.5610	--	5	Internal coolant	GD05C-1425	16	133	83	63	48		●		
14.288	0.5625	9/16	3	External coolant	GD03-14288	16	115	65	45	48		●		
	0.5625	9/16	5	External coolant	GD05-14288	16	133	83	63	48		●		

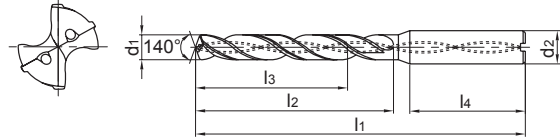
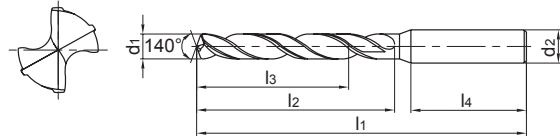
● Stock available ○ Make-to-order



Drill diameter d <sub>1</sub> (mm)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter	Overall length	Flute length	Recommended drilling depth	Shank length	cutting taps / tread milling cutters	forming taps	
14.288	0.5625	9/16	3	Internal coolant	Straight shank	GD03C-14288	16	115	65	45	48			●
	0.5625	9/16	5			GD05C-14288	16	133	83	63	48			●
14.3	0.5630	--	3	External coolant	Straight shank	GD03-1430	16	115	65	45	48			●
	0.5630	--	5			GD05-1430	16	133	83	63	48			●
	0.5630	--	3	Internal coolant		GD03C-1430	16	115	65	45	48			●
	0.5630	--	5			GD05C-1430	16	133	83	63	48			●
14.5	0.5709	--	3	External coolant	Straight shank	GD03-1450	16	115	65	45	48	M16×1.5 5/8-18UNF		●
	0.5709	--	5			GD05-1450	16	133	83	63	48			●
	0.5709	--	3	Internal coolant		GD03C-1450	16	115	65	45	48			●
	0.5709	--	5			GD05C-1450	16	133	83	63	48			●
	0.5709	--	8			GD08C-1450	16	204	152	132	48			○
14.684	0.5781	37/64	3	External coolant	Straight shank	GD03-14684	16	115	65	45	48			●
	0.5781	37/64	5			GD05-14684	16	133	83	63	48			●
	0.5781	37/64	3	Internal coolant		GD03C-14684	16	115	65	45	48			●
	0.5781	37/64	5			GD05C-14684	16	133	83	63	48			●
14.75	0.5807	--	3	External coolant	Straight shank	GD03-1475	16	115	65	45	48			●
	0.5807	--	5			GD05-1475	16	133	83	63	48			●
	0.5807	--	3	Internal coolant		GD03C-1475	16	115	65	45	48			●
	0.5807	--	5			GD05C-1475	16	133	83	63	48			●
14.8	0.5827	--	3	External coolant	Straight shank	GD03-1480	16	115	65	45	48		5/8-11UNC	●
	0.5827	--	5			GD05-1480	16	133	83	63	48			●
	0.5827	--	3	Internal coolant		GD03C-1480	16	115	65	45	48			●
	0.5827	--	5			GD05C-1480	16	133	83	63	48			●
	0.5827	--	8			GD08C-1480	16	204	152	132	48			○
15.0	0.5906	--	3	External coolant	Straight shank	GD03-1500	16	115	65	45	48			●
	0.5906	--	5			GD05-1500	16	133	83	63	48			●
	0.5906	--	3	Internal coolant		GD03C-1500	16	115	65	45	48			●
	0.5906	--	5			GD05C-1500	16	133	83	63	48			●
	0.5906	--	8			GD08C-1500	16	204	152	132	48			○
15.1	0.5945	--	3	External coolant	Straight shank	GD03-1510	16	115	65	45	48		M16×2	●
	0.5945	--	5			GD05-1510	16	133	83	63	48			●
	0.5945	--	3	Internal coolant		GD03C-1510	16	115	65	45	48			●
	0.5945	--	5			GD05C-1510	16	133	83	63	48			●
15.25	0.6004	--	3	External coolant	Straight shank	GD03-1525	16	115	65	45	48		5/8-18UNF	●
	0.6004	--	5			GD05-1525	16	133	83	63	48			●
	0.6004	--	3	Internal coolant		GD03C-1525	16	115	65	45	48			●
	0.6004	--	5			GD05C-1525	16	133	83	63	48			●
15.35	0.6043	--	3	External coolant	Straight shank	GD03-1535	16	115	65	45	48		M16×1.5	●
	0.6043	--	5			GD05-1535	16	133	83	63	48			●
	0.6043	--	3	Internal coolant		GD03C-1535	16	115	65	45	48			●
	0.6043	--	5			GD05C-1535	16	133	83	63	48			●
15.5	0.6102	--	3	External coolant	Straight shank	GD03-1550	16	115	65	45	48	M18×2.5		●
	0.6102	--	5			GD05-1550	16	133	83	63	48			●

Note: For drilling depth (l/d) of 8 ,namely GD08C series, tolerance of shank diameter is h<sub>8</sub>.

● Stock available ○ Make-to-order



● Suitable for high efficiency drilling in a variety of materials e.g steel, stainless steel, cast iron.

Drill diameter d <sub>1</sub> (m7)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter d <sub>2</sub> (h6)	Overall length l <sub>1</sub>	Flute length l <sub>2</sub>	Recommended drilling depth l <sub>3</sub>	Shank length l <sub>4</sub>	cutting taps / tread milling cutters	forming taps	
15.5	0.6102	--	3	Internal coolant	Straight shank	GD03C-1550	16	115	65	45	48	M18x2.5	●	
	0.6102	--	5			GD05C-1550	16	133	83	63	48		●	
	0.6102	--	8			GD08C-1550	16	204	152	132	48		○	
15.8	0.6220	--	3	External coolant		GD03-1580	16	115	65	45	48		●	
	0.6220	--	5			GD05-1580	16	133	83	63	48		●	
	0.6220	--	3			GD03C-1580	16	115	65	45	48		●	
15.875	0.6250	5/8	3	Internal coolant		GD05C-1580	16	133	83	63	48		●	
	0.6250	5/8	5			GD03-15875	16	115	65	45	48		●	
	0.6250	5/8	3			GD05C-15875	16	133	83	63	48		●	
16.0	0.6299	--	3	External coolant		GD03C-15875	16	115	65	45	48		●	
	0.6299	--	5			GD05-15875	16	133	83	63	48		●	
	0.6299	--	3			GD03-1600	16	115	65	45	48		M18x2	●
16.5	0.6299	--	5	Internal coolant		GD05C-1600	16	133	83	63	48			●
	0.6299	--	8			GD08C-1600	16	204	152	132	48			○
	0.6496	--	3			External coolant	GD03-1650	18	123	73	51		48	3/4-10UNC
0.6496	--	5	GD05-1650	18	143		93	71	48	●				
0.6496	--	3	Internal coolant	GD03C-1650	18		123	73	51	48		●		
16.75	0.6496	--		5	GD05C-1650	18	143	93	71	48		●		
	0.6496	--		8	GD08C-1650	18	223	171	149	48		○		
	16.8	0.6594	--	3	External coolant	GD03-1675	18	123	73	51	48		●	
0.6594		--	5	GD05-1675		18	143	93	71	48	●			
0.6594		--	3	Internal coolant		GD03C-1675	18	123	73	51	48			●
17.0	0.6594	--	5		GD05C-1675	18	143	93	71	48	●			
	0.6614	--	3		External coolant	GD03-1680	18	123	73	51	48	M18x2.5		●
	0.6614	--	5	GD05-1680		18	143	93	71	48	●			
0.6614	--	3	Internal coolant	GD03C-1680		18	123	73	51	48			●	
17.0	0.6614	--		5	GD05C-1680	18	143	93	71	48		●		
	0.6693	--		3	External coolant	GD03-1700	18	123	73	51		48		●
	0.6693	--	5	GD05-1700		18	143	93	71	48	●			

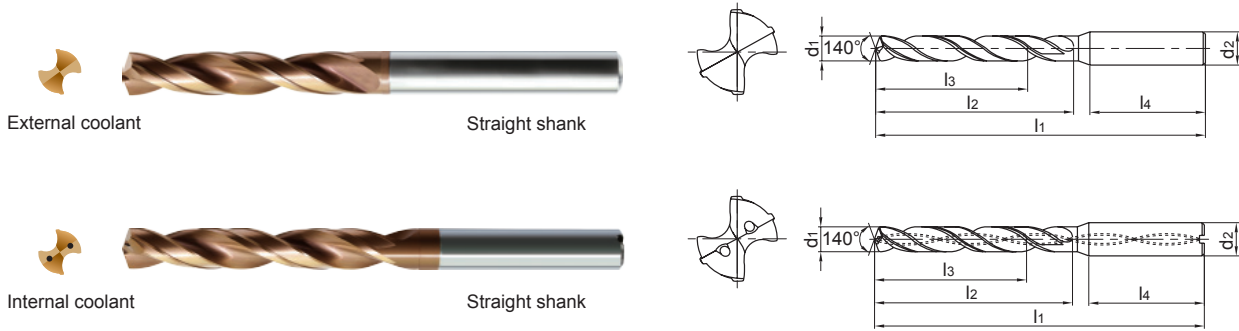
● Stock available ○ Make-to-order



Drill diameter d <sub>1</sub> (m7)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter	Overall length	Flute length	Recommended drilling depth	Shank length	cutting taps / tread milling cutters	forming taps	
17.0	0.6693	--	3	Internal coolant	Straight shank	GD03C-1700	18	123	73	51	48			●
	0.6693	--	5			GD05C-1700	18	143	93	71	48			●
	0.6693	--	8			GD08C-1700	18	223	171	149	48			○
17.463	0.6875	11/16	3	External coolant	Straight shank	GD03-17463	18	123	73	51	48			●
	0.6875	11/16	5			GD05-17463	18	143	93	71	48			●
	0.6875	11/16	3	Internal coolant		GD03C-17463	18	123	73	51	48			●
	0.6875	11/16	5			GD05C-17463	18	143	93	71	48			●
17.5	0.6890	--	3	External coolant	Straight shank	GD03-1750	18	123	73	51	48	M20×2.5 3/4-16UNF		●
	0.6890	--	5			GD05-1750	18	143	93	71	48			●
	0.6890	--	3	Internal coolant		GD03C-1750	18	123	73	51	48			●
	0.6890	--	5			GD05C-1750	18	143	93	71	48			●
	0.6890	--	8			GD08C-1750	18	223	171	149	48			○
17.8	0.7008	--	3	External coolant	Straight shank	GD03-1780	18	123	73	51	48			●
	0.7008	--	5			GD05-1780	18	143	93	71	48			●
	0.7008	--	3	Internal coolant		GD03C-1780	18	123	73	51	48			●
	0.7008	--	5			GD05C-1780	18	143	93	71	48			●
17.9	0.7047	--	3	External coolant	Straight shank	GD03-1790	18	123	73	51	48	3/4-10UNC		●
	0.7047	--	5			GD05-1790	18	143	93	71	48			●
	0.7047	--	3	Internal coolant		GD03C-1790	18	123	73	51	48			●
	0.7047	--	5			GD05C-1790	18	143	93	71	48			●
18.0	0.7087	--	3	External coolant	Straight shank	GD03-1800	18	123	73	51	48	M20×2		●
	0.7087	--	5			GD05-1800	18	143	93	71	48			●
	0.7087	--	3	Internal coolant		GD03C-1800	18	123	73	51	48			●
	0.7087	--	5			GD05C-1800	18	143	93	71	48			●
	0.7087	--	8			GD08C-1800	18	223	171	149	48			○
18.3	0.7205	--	3	External coolant	Straight shank	GD03-1830	20	131	79	55	50	3/4-16UNF		●
	0.7205	--	5			GD05-1830	20	153	101	77	50			●
	0.7205	--	3	Internal coolant		GD03C-1830	20	131	79	55	50			●
	0.7205	--	5			GD05C-1830	20	153	101	77	50			●
18.5	0.7283	--	3	External coolant	Straight shank	GD03-1850	20	131	79	55	50			●
	0.7283	--	5			GD05-1850	20	153	101	77	50			●
	0.7283	--	3	Internal coolant		GD03C-1850	20	131	79	55	50			●
	0.7283	--	5			GD05C-1850	20	153	101	77	50			●
18.8	0.7402	--	3	External coolant	Straight shank	GD03-1880	20	131	79	55	50	M20×2.5		●
	0.7402	--	5			GD05-1880	20	153	101	77	50			●
	0.7402	--	3	Internal coolant		GD03C-1880	20	131	79	55	50			●
	0.7402	--	5			GD05C-1880	20	153	101	77	50			●
19.0	0.7480	--	3	External coolant	Straight shank	GD03-1900	20	131	79	55	50			●
	0.7480	--	5			GD05-1900	20	153	101	77	50			●
	0.7480	--	3	Internal coolant		GD03C-1900	20	131	79	55	50			●
	0.7480	--	5			GD05C-1900	20	153	101	77	50			●

Note: For drilling depth (l/d) of 8, namely GD08C series, tolerance of shank diameter is h<sub>5</sub>.

● Stock available ○ Make-to-order



● Suitable for high efficiency drilling in a variety of materials e.g steel, stainless steel, cast iron.

Drill diameter d <sub>1</sub> (m7)			Drilling depth (l/d)	Cooling mode	Shank type	Type	Basic dimension(mm)					Suitable for thread		Grade
mm	inch	Fraction					Shank diameter	Overall length	Flute length		Recommended drilling depth	Shank length	cutting taps / tread milling cutters	
							d <sub>2</sub> (h6)	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>			KDG3013
19.05	0.7500	3/4	3	External coolant	Straight shank	GD03-1905	20	131	79	55	50			●
	0.7500	3/4	5			GD05-1905	20	153	101	77	50			●
	0.7500	3/4	3	Internal coolant		GD03C-1905	20	131	79	55	50			●
	0.7500	3/4	5			GD05C-1905	20	153	101	77	50			●
19.5	0.7677	--	3	External coolant		GD03-1950	20	131	79	55	50	M22×2.5 7/8-9UNC		●
	0.7677	--	5			GD05-1950	20	153	101	77	50		●	
	0.7677	--	3	Internal coolant		GD03C-1950	20	131	79	55	50		●	
	0.7677	--	5			GD05C-1950	20	153	101	77	50		●	
19.8	0.7795	--	3	External coolant	GD03-1980	20	131	79	55	50			●	
	0.7795	--	5		GD05-1980	20	153	101	77	50			●	
	0.7795	--	3	Internal coolant	GD03C-1980	20	131	79	55	50			●	
	0.7795	--	5		GD05C-1980	20	153	101	77	50			●	
20.0	0.7874	--	3	External coolant	GD03-2000	20	131	79	55	50	M22×2		●	
	0.7874	--	5		GD05-2000	20	153	101	77	50		●		
	0.7874	--	3	Internal coolant	GD03C-2000	20	131	79	55	50		●		
	0.7874	--	5		GD05C-2000	20	153	101	77	50		●		

Note: For drilling depth (l/d) of 8 ,namely GD08C series, tolerance of shank diameter is hs.

● Stock available ○ Make-to-order

● Applicable material table

● Very suitable ○ Suitable

Grade	Workpiece material										
	Mild steel HB ≤ 180	Carbon steel, Alloy steel	Pre-hardened steel, Hardened steel			Stainless steel	Cast iron	Nodular cast iron	Aluminum alloy	Copper alloy	Heat resistant alloy
			~40HRC	~50HRC	~60HRC						
KDG3013	○	●	●			○	●	●			○



## GD series twist drills(external coolant)



workpiece material	Mild steel HB≤180		Carbon steel, alloy steel ~30HRC		Pre-hardened steel ~40HRC		Stainless steel		Cast iron		Nodular cast iron		Heat resistant alloy	
Cutting speed	200~395SFPM		200~395SFPM		135~230SFPM		85~135SFPM		200~395SFPM		165~330SFPM		50~85SFPM	
Diameter (mm)	Rotating speed (r/min)	Feed rate (in/rev)	Rotating speed (r/min)	Feed rate (in/rev)	Rotating speed (r/min)	Feed rate (in/rev)	Rotating speed (r/min)	Feed rate (in/rev)	Rotating speed (r/min)	Feed rate (in/rev)	Rotating speed (r/min)	Feed rate (in/rev)	Rotating speed (r/min)	Feed rate (in/rev)
2	14000	0.0024~0.0031	14000	0.0024~0.0031	9500	0.0024~0.0031	5500	0.0008~0.002	14000	0.0024~0.0031	11000	0.0024~0.0031	3200	0.0008~0.0016
3	9500	0.0035~0.0047	9500	0.0035~0.0047	6300	0.0035~0.0047	3700	0.0012~0.0028	9500	0.0035~0.0047	7400	0.0035~0.0047	2100	0.0012~0.0024
4	7000	0.0039~0.0059	7000	0.0039~0.0059	4700	0.0039~0.0059	2700	0.0016~0.0031	7000	0.0039~0.0059	5600	0.0039~0.0059	1600	0.0016~0.0028
5	5700	0.0047~0.0071	5700	0.0047~0.0071	3800	0.0047~0.0071	2200	0.002~0.0039	5700	0.0047~0.0071	4500	0.0047~0.0071	1250	0.002~0.0035
6	4700	0.0055~0.0079	4700	0.0055~0.0079	3100	0.0055~0.0079	1850	0.0024~0.0047	4700	0.0055~0.0079	3700	0.0055~0.0079	1050	0.0024~0.0043
8	3600	0.0063~0.0094	3600	0.0063~0.0094	2400	0.0063~0.0094	1400	0.0031~0.0063	3600	0.0063~0.0094	2800	0.0063~0.0094	800	0.0031~0.0055
10	2800	0.0071~0.0106	2800	0.0071~0.0106	1900	0.0071~0.0106	1100	0.0039~0.0071	2800	0.0071~0.0106	2200	0.0071~0.0106	600	0.0039~0.0063
12	2400	0.0079~0.0118	2400	0.0079~0.0118	1600	0.0079~0.0118	930	0.0047~0.0079	2400	0.0079~0.0118	1900	0.0079~0.0118	500	0.0047~0.0071
14	2100	0.0087~0.0138	2100	0.0087~0.0138	1400	0.0087~0.0138	800	0.0051~0.0087	2100	0.0087~0.0138	1600	0.0087~0.0138	450	0.0051~0.0079
16	1800	0.0098~0.0142	1800	0.0098~0.0142	1200	0.0098~0.0142	700	0.0055~0.0098	1800	0.0098~0.0142	1400	0.0098~0.0142	400	0.0055~0.0091
18	1600	0.0110~0.0150	1600	0.0110~0.0150	1100	0.0110~0.0150	620	0.0059~0.011	1600	0.0110~0.0150	1200	0.0110~0.0150	350	0.0059~0.0098
20	1400	0.0118~0.0157	1400	0.0118~0.0157	950	0.0118~0.0157	550	0.0063~0.0118	1400	0.0118~0.0157	1100	0.0118~0.0157	320	0.0063~0.011

1. When the tool is used for the first time, please do a test cutting with 90% of the cutting speed or 85% of the feed rate stated above. As cutting conditions become stable, gradually increase the cutting speed and feed rate.
2. The cutting conditions above are applicable for drilling with water-soluble cutting liquid.
3. When clamping drill, please use a collet without any defect or dust, and keep the radial run-out of drill under 0.02mm.
4. These conditions above are applicable for cutting depth under 5D.

**GD series twist drills(internal coolant)**



workpiece material	Mild steel HB≤180		Carbon steel, alloy steel ~30HRC		Pre-hardened steel ~40HRC		Stainless steel		Cast iron		Nodular cast iron		Heat resistant alloy	
Cutting speed	265~500SFPM		265~500SFPM		165~265SFPM		165~265SFPM		265~500SFPM		200~395SFPM		50~85SFPM	
Diameter (mm)	Rotating speed (r/min)	Feed rate (in/rev)	Rotating speed (r/min)	Feed rate (in/rev)	Rotating speed (r/min)	Feed rate (in/rev)	Rotating speed (r/min)	Feed rate (in/rev)	Rotating speed (r/min)	Feed rate (in/rev)	Rotating speed (r/min)	Feed rate (in/rev)	Rotating speed (r/min)	Feed rate (in/rev)
3	12700	0.0035-0.0047	12700	0.0035-0.0047	7400	0.0035-0.0047	6300	0.0012-0.0028	12700	0.0035-0.0047	9500	0.0035-0.0047	2100	0.0012-0.0024
4	9600	0.0039-0.0059	9600	0.0039-0.0059	5600	0.0039-0.0059	4700	0.0016-0.0031	9600	0.0039-0.0059	7000	0.0039-0.0059	1600	0.0016-0.0028
5	7600	0.0047-0.0071	7600	0.0047-0.0071	4500	0.0047-0.0071	3800	0.002-0.0039	7600	0.0047-0.0071	5700	0.0047-0.0071	1250	0.002-0.0035
6	6400	0.0055-0.0079	6400	0.0055-0.0079	3700	0.0055-0.0079	3200	0.0024-0.0047	6400	0.0055-0.0079	4700	0.0055-0.0079	1050	0.0024-0.0043
8	4800	0.0063-0.0094	4800	0.0063-0.0094	2800	0.0063-0.0094	2400	0.0031-0.0063	4800	0.0063-0.0094	3600	0.0063-0.0094	800	0.0031-0.0055
10	3800	0.0071-0.0106	3800	0.0071-0.0106	2200	0.0071-0.0106	1900	0.0039-0.0071	3800	0.0071-0.0106	2800	0.0071-0.0106	600	0.0039-0.0063
12	3200	0.0079-0.0118	3200	0.0079-0.0118	1900	0.0079-0.0118	1600	0.0047-0.0079	3200	0.0079-0.0118	2400	0.0079-0.0118	500	0.0047-0.0071
14	2700	0.0087-0.0138	2700	0.0087-0.0138	1600	0.0087-0.0138	1350	0.0051-0.0087	2700	0.0087-0.0138	2100	0.0087-0.0138	450	0.0051-0.0079
16	2400	0.0098-0.0142	2400	0.0098-0.0142	1400	0.0098-0.0142	1200	0.0055-0.0098	2400	0.0098-0.0142	1800	0.0098-0.0142	400	0.0055-0.0091
18	2100	0.011-0.015	2100	0.011-0.015	1200	0.011-0.015	1050	0.0059-0.011	2100	0.011-0.015	1600	0.011-0.015	350	0.0059-0.0098
20	1900	0.0118-0.0157	1900	0.0118-0.0157	1100	0.0118-0.0157	950	0.0063-0.0118	1900	0.0118-0.0157	1400	0.0118-0.0157	320	0.0063-0.011

1. When the tool is used for the first time, please do a test cutting with 90% of the cutting speed or 85% of the feed rate stated above. As cutting conditions become stable, gradually increase the cutting speed and feed rate.
2. The cutting conditions above are applicable for drilling with water-soluble cutting liquid.
3. When clamping drill, please use a collet without any defect or dust, and keep the radial run-out of drill under 0.02mm.
4. These conditions above are applicable for cutting depth under 5D.



## GD series twist drills(internal coolant)

8D

workpiece material	Mild steel HB≤180		Carbon steel, alloy steel ~30HRC		Pre-hardened steel ~40HRC		Stainless steel		Cast iron		Nodular cast iron		Heat resistant alloy	
Cutting speed	265~500SFPM		265~500SFPM		165~265SFPM		135~200SFPM		265~500SFPM		200~395SFPM		50~85SFPM	
Diameter (mm)	Rotating speed (r/min)	Feed rate (in/rev)	Rotating speed (r/min)	Feed rate (in/rev)	Rotating speed (r/min)	Feed rate (in/rev)	Rotating speed (r/min)	Feed rate (in/rev)	Rotating speed (r/min)	Feed rate (in/rev)	Rotating speed (r/min)	Feed rate (in/rev)	Rotating speed (r/min)	Feed rate (in/rev)
3	12700	0.0024-0.0039	12700	0.0024-0.0039	7400	0.0024-0.0039	5300	0.0012-0.0028	12700	0.0024-0.0039	9500	0.0024-0.0039	2100	0.0012-0.0024
4	9600	0.0031-0.0047	9600	0.0031-0.0047	5600	0.0031-0.0047	4000	0.0016-0.0031	9600	0.0031-0.0047	7000	0.0031-0.0047	1600	0.0016-0.0028
5	7600	0.0039-0.0055	7600	0.0039-0.0055	4500	0.0039-0.0055	3200	0.002-0.0039	7600	0.0039-0.0055	5700	0.0039-0.0055	1250	0.002-0.0035
6	6400	0.0043-0.0063	6400	0.0043-0.0063	3700	0.0043-0.0063	2700	0.0024-0.0047	6400	0.0043-0.0063	4700	0.0043-0.0063	1050	0.0024-0.0043
8	4800	0.0051-0.0075	4800	0.0051-0.0075	2800	0.0051-0.0075	2000	0.0031-0.0063	4800	0.0051-0.0075	3600	0.0051-0.0075	800	0.0031-0.0055
10	3800	0.0055-0.0087	3800	0.0055-0.0087	2200	0.0055-0.0087	1600	0.0039-0.0071	3800	0.0055-0.0087	2800	0.0055-0.0087	600	0.0039-0.0063
12	3200	0.0063-0.0094	3200	0.0063-0.0094	1900	0.0063-0.0094	1300	0.0047-0.0079	3200	0.0063-0.0094	2400	0.0063-0.0094	500	0.0047-0.0071
14	2700	0.0071-0.011	2700	0.0071-0.011	1600	0.0071-0.011	1100	0.0051-0.0087	2700	0.0071-0.011	2100	0.0071-0.011	450	0.0051-0.0079
16	2400	0.0079-0.0114	2400	0.0079-0.0114	1400	0.0079-0.0114	1000	0.0055-0.0098	2400	0.0079-0.0114	1800	0.0079-0.0114	400	0.0055-0.0091
18	2100	0.0094-0.0126	2100	0.0094-0.0126	1200	0.0094-0.0126	880	0.0059-0.011	2100	0.0094-0.0126	1600	0.0094-0.0126	350	0.0059-0.0098

1. When the tool is used for the first time, please do a test cutting with 90% of the cutting speed or 85% of the feed rate stated above. As cutting conditions become stable, gradually increase the cutting speed and feed rate.
2. The cutting conditions above are applicable for drilling with emulsion.
3. When clamping drill, please use a collet without any defect or dust, and keep the radial run-out of drill under 0.02mm.
4. These conditions above are applicable for cutting depth under 8D.