

MEGACUT



UD SERIES TWIST DRILL FOR GENERAL MACHINING

UD drills have excellent rigidity, performance stability, and good general machining application. It is widely used in machining of soft steel, stainless steel, alloy steel and cast iron. Special drill nose design brings lower cutting force.

- New developed curve edge flutes take into account edge strength, tool rigidity, and chip flowing space.

- The new design on regrinding parameters of the chisel edge can improve cutting performance effectively

- Optimized treatment on cutting edge to improve flutes strength and chip-breaking performance

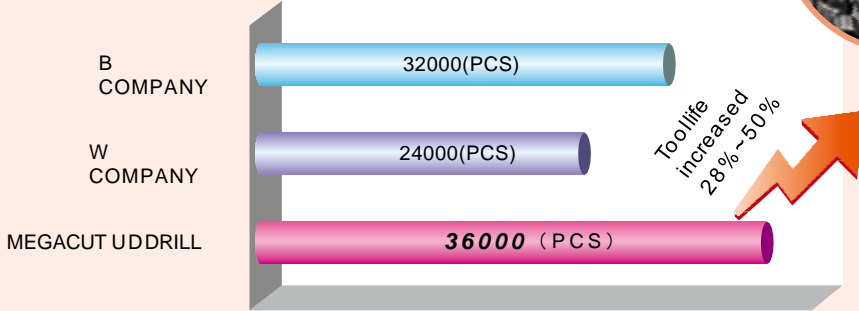
- Optimized coating post-treatment technology to significantly improve wear resistance.



Performance Advantages

UD drills have excellent rigidity, performance stability, and good general machining application. It is widely used in machining of soft steel, stainless steel, alloy steel and cast iron. Special drill nose design brings lower cutting force.

CASE 1



Industry: Automotive parts Workpiece: Inner ring of bearing

Machined material: 100Cr6 HB185~235 Drill's type: D11.23*61*D10*120

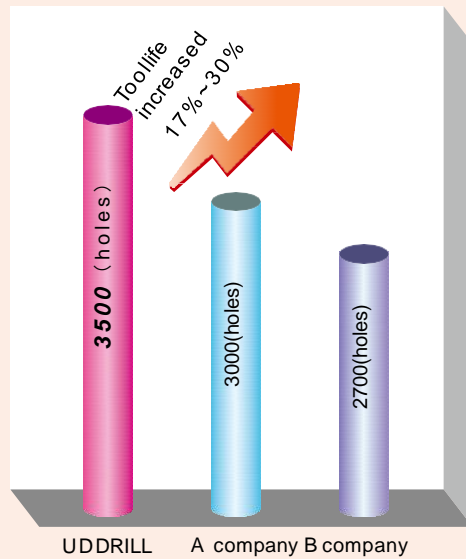
Cutting Parameters: S=3100rpm, f=600mm/min, H=40mm (one cutting depth is 40mm, total 8 pcs workpiece)

Equipment: Composite Turning center, 8 station machine at same time

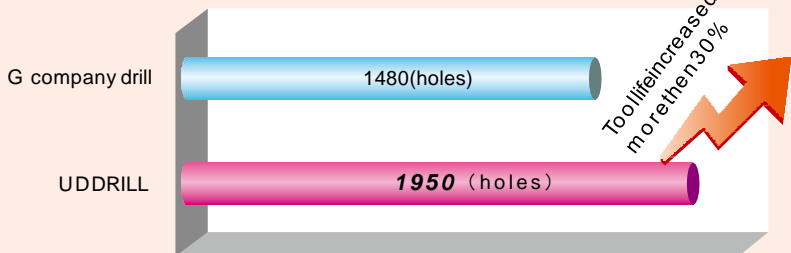
Coolant method: Oil water emulsion

CASE 2

Industry: Automotive Parts
 Workpiece: Hinge
 Machined material: Q345B HB280
 Drills Type : D14.2*50*D14*135
 Cutting Parameters: S=3365 rpm,
 f=673mm/min, H=25mm
 Cooling method: External coolant with Oil water emulsion



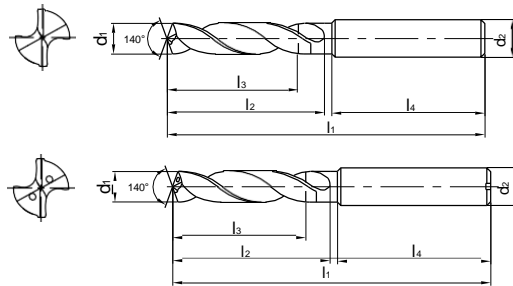
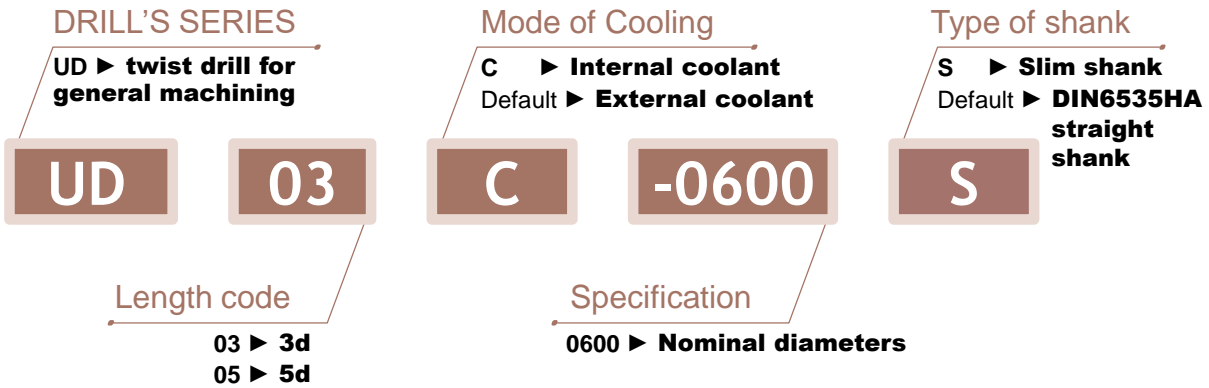
CASE 3



Workpiece: Plates of condenser pipe
 Machined Material: 304 stainless steel, HB180
 Drill's dimension: D9.7*55*D10*100
 Cutting parameters: S=2298rpm,
 f=344mm/min H=36mm
 Equipment: Vertical CNC
 Cooling way: Internal coolant with Oil water emulsion

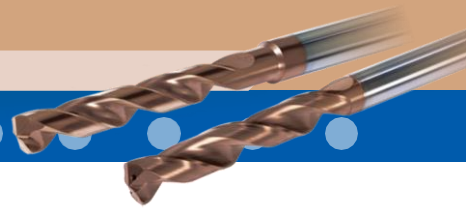
UD series twist drill for general machining

CODE KEY



Drill diameter d ₂ (mm)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/thread milling	Forming taps	
					d ₂ (h ₆)	l ₁	l ₂	l ₃	l ₄			
2	3	External coolant	Straight shank	UD03-0200S	3	46	13	9	30	NO.2-64UNF	○	
	5	External coolant	Straight shank	UD05-0200S	3	50	18	14	30		○	
	3	External coolant	Straight shank	UD03-0200	4	46	13	9	30		●	
	5	External coolant	Straight shank	UD05-0200	4	50	18	14	30		●	
2.1	3	External coolant	Straight shank	UD03-0210S	3	46	13	9	30	NO.3-48UNC	○	
	5	External coolant	Straight shank	UD05-0210S	3	50	18	14	30		○	
	3	External coolant	Straight shank	UD03-0210	4	46	13	9	30		●	
	5	External coolant	Straight shank	UD05-0210	4	50	18	14	30		●	
2.15	3	External coolant	Straight shank	UD03-0215S	3	46	13	9	30	NO.3-56UNF	○	
	5	External coolant	Straight shank	UD05-0215S	3	50	18	14	30		○	
	3	External coolant	Straight shank	UD03-0215	4	46	13	9	30		●	
	5	External coolant	Straight shank	UD05-0215	4	50	18	14	30		●	
2.2	3	External coolant	Straight shank	UD03-0220S	3	46	13	9	30		○	
	5	External coolant	Straight shank	UD05-0220S	3	50	18	14	30		○	
	3	External coolant	Straight shank	UD03-0220	4	46	13	9	30		●	
	5	External coolant	Straight shank	UD05-0220	4	50	18	14	30		●	
2.3	3	External coolant	Straight shank	UD03-0230S	3	46	13	9	30	M2.5*0.45; NO.3-56UNF	○	
	5	External coolant	Straight shank	UD05-0230S	3	50	18	14	30		○	
	3	External coolant	Straight shank	UD03-0230	4	46	13	9	30		●	
	5	External coolant	Straight shank	UD05-0230	4	50	18	14	30		●	

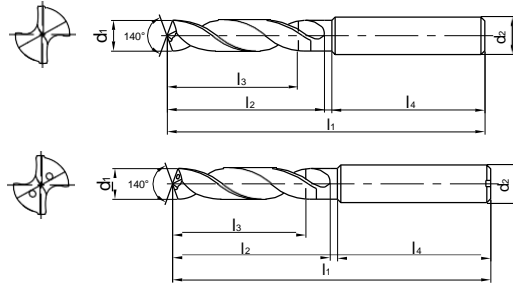
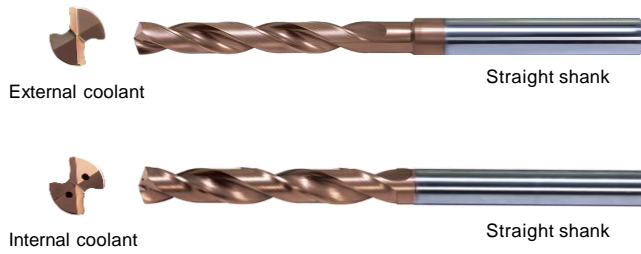
● Stock available ○ Make-to order



Drill diameter d ₁ (mm)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d ₂ (h _e)	l ₁	l ₂	l ₃	l ₄			
2.35	3	External coolant	Straight shank	UD03-0235S	3	46	13	9	30	NO.4-40UNC		○
	5	External coolant	Straight shank	UD05-0235S	3	50	18	14	30			○
	3	External coolant	Straight shank	UD03-0235	4	46	13	9	30			●
	5	External coolant	Straight shank	UD05-0235	4	50	18	14	30			●
2.4	3	External coolant	Straight shank	UD03-0240S	3	50	17	12	30	NO.4-48UNF		○
	5	External coolant	Straight shank	UD05-0240S	3	55	22	17	30			○
	3	External coolant	Straight shank	UD03-0240	4	50	17	12	30			●
	5	External coolant	Straight shank	UD05-0240	4	55	22	17	30			●
2.5	3	External coolant	Straight shank	UD03-0250S	3	50	17	12	30	M3*0.5		○
	5	External coolant	Straight shank	UD05-0250S	3	55	22	17	30			○
	3	External coolant	Straight shank	UD03-0250	4	50	17	12	30			●
	5	External coolant	Straight shank	UD05-0250	4	55	22	17	30			●
2.55	3	External coolant	Straight shank	UD03-0255S	3	50	17	12	30	NO.4-40UNC		○
	5	External coolant	Straight shank	UD05-0255S	3	55	22	17	30			○
	3	External coolant	Straight shank	UD03-0255	4	50	17	12	30			●
	5	External coolant	Straight shank	UD05-0255	4	55	22	17	30			●
2.6	3	External coolant	Straight shank	UD03-0260S	3	50	17	12	30	NO.4-48UNF		○
	5	External coolant	Straight shank	UD05-0260S	3	55	22	17	30			○
	3	External coolant	Straight shank	UD03-0260	4	50	17	12	30			●
	5	External coolant	Straight shank	UD05-0260	4	55	22	17	30			●
2.65	3	External coolant	Straight shank	UD03-0265S	3	50	17	12	30	NO.5-40UNC		○
	5	External coolant	Straight shank	UD05-0265S	3	55	22	17	30			○
	3	External coolant	Straight shank	UD03-0265	4	50	17	12	30			●
	5	External coolant	Straight shank	UD05-0265	4	55	22	17	30			●
2.7	3	External coolant	Straight shank	UD03-0270S	3	50	17	12	30	NO.5-44UNF		○
	5	External coolant	Straight shank	UD05-0270S	3	55	22	17	30			○
	3	External coolant	Straight shank	UD03-0270	4	50	17	12	30			●
	5	External coolant	Straight shank	UD05-0270	4	55	22	17	30			●
2.8	3	External coolant	Straight shank	UD03-0280S	3	50	17	12	30	M3*0.5		○
	5	External coolant	Straight shank	UD05-0280S	3	55	22	17	30			○
	3	External coolant	Straight shank	UD03-0280	4	50	17	12	30			●
	5	External coolant	Straight shank	UD05-0280	4	55	22	17	30			●
2.85	3	External coolant	Straight shank	UD03-0285S	3	50	17	12	30	NO.6-32UNC		○
	5	External coolant	Straight shank	UD05-0285S	3	55	22	17	30			○
	3	External coolant	Straight shank	UD03-0285	4	50	17	12	30			●
	5	External coolant	Straight shank	UD05-0285	4	55	22	17	30			●
2.9	3	External coolant	Straight shank	UD03-0290S	3	50	17	12	30	NO.5-40UNC NO.5-44UNF		○
	5	External coolant	Straight shank	UD05-0290S	3	55	22	17	30			○
	3	External coolant	Straight shank	UD03-0290	4	50	17	12	30			●
	5	External coolant	Straight shank	UD05-0290	4	55	22	17	30			●

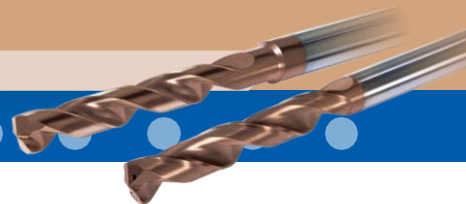
● Stock available ○ Make-to order

UD series twist drill for general machining



Drill diameter d_1 (mm)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d_2 (mm)	l_1	l_2	l_3	l_4			
2.95	3	External coolant	Straight shank	UD03-0295S	3	50	17	12	30	NO.6-40UNF		○
	5	External coolant	Straight shank	UD05-0295S	3	55	22	17	30			○
	3	External coolant	Straight shank	UD03-0295	4	50	17	12	30			●
	5	External coolant	Straight shank	UD05-0295	4	55	22	17	30			●
3	3	External coolant	Straight shank	UD03-0300S	3	62	20	14	36			○
	5	External coolant	Straight shank	UD05-0300S	3	66	28	23	36			○
	3	Internal coolant	Straight shank	UD03C-0300S	3	62	20	14	36			○
	5	Internal coolant	Straight shank	UD05C-0300S	3	66	28	23	36			○
	3	External coolant	Straight shank	UD03-0300	6	62	20	14	36			●
	5	External coolant	Straight shank	UD05-0300	6	66	28	23	36			●
	3	Internal coolant	Straight shank	UD03C-0300	6	62	20	14	36			●
	5	Internal coolant	Straight shank	UD05C-0300	6	66	28	23	36			●
3.1	3	External coolant	Straight shank	UD03-0310S	4	62	20	14	36			○
	5	External coolant	Straight shank	UD05-0310S	4	66	28	23	36			○
	3	Internal coolant	Straight shank	UD03C-0310S	4	62	20	14	36			○
	5	Internal coolant	Straight shank	UD05C-0310S	4	66	28	23	36			○
	3	External coolant	Straight shank	UD03-0310	6	62	20	14	36			●
	5	External coolant	Straight shank	UD05-0310	6	66	28	23	36			●
	3	Internal coolant	Straight shank	UD03C-0310	6	62	20	14	36			●
	5	Internal coolant	Straight shank	UD05C-0310	6	66	28	23	36			●
3.15	3	External coolant	Straight shank	UD03-0315S	4	62	20	14	36		NO.6-32UNC	○
	5	External coolant	Straight shank	UD05-0315S	4	66	28	23	36			○
	3	Internal coolant	Straight shank	UD03C-0315S	4	62	20	14	36			○
	5	Internal coolant	Straight shank	UD05C-0315S	4	66	28	23	36			○
	3	External coolant	Straight shank	UD03-0315	6	62	20	14	36			●
	5	External coolant	Straight shank	UD05-0315	6	66	28	23	36			●
	3	Internal coolant	Straight shank	UD03C-0315	6	62	20	14	36			●
	5	Internal coolant	Straight shank	UD05C-0315	6	66	28	23	36			●
3.2	3	External coolant	Straight shank	UD03-0320S	4	62	20	14	36		NO.6-40UNF	○
	5	External coolant	Straight shank	UD05-0320S	4	66	28	23	36			○
	3	Internal coolant	Straight shank	UD03C-0320S	4	62	20	14	36			○
	5	Internal coolant	Straight shank	UD05C-0320S	4	66	28	23	36			○

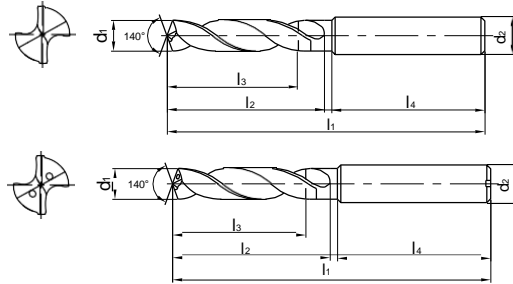
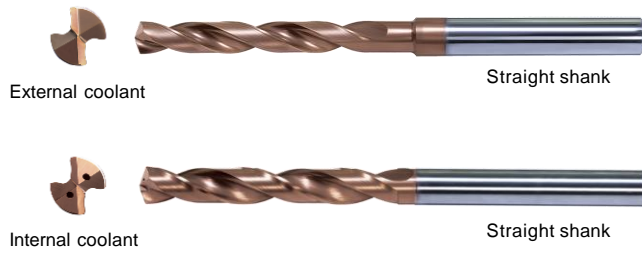
● Stock available ○ Make-to order



Drill diameter d ₁ (mm)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade KDG302 3
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d ₂ (h ₆)	l ₁	l ₂	l ₃	l ₄			
3.2	3	External coolant	Straight shank	UD03-0320	6	62	20	14	36	NO.6-40UNF	●	
	5	External coolant	Straight shank	UD05-0320	6	66	28	23	36		●	
	3	Internal coolant	Straight shank	UD03C-0320	6	62	20	14	36		●	
	5	Internal coolant	Straight shank	UD05C-0320	6	66	28	23	36		●	
3.25	3	External coolant	Straight shank	UD03-0325S	4	62	20	14	36		○	
	5	External coolant	Straight shank	UD05-0325S	4	66	28	23	36		○	
	3	Internal coolant	Straight shank	UD03C-0325S	4	62	20	14	36		○	
	5	Internal coolant	Straight shank	UD05C-0325S	4	66	28	23	36		○	
3.3	3	External coolant	Straight shank	UD03-0325	6	62	20	14	36		●	
	5	External coolant	Straight shank	UD05-0325	6	66	28	23	36		●	
	3	Internal coolant	Straight shank	UD03C-0325	6	62	20	14	36		●	
	5	Internal coolant	Straight shank	UD05C-0325	6	66	28	23	36		●	
3.3	3	External coolant	Straight shank	UD03-0330S	4	62	20	14	36	M4*0.7	○	
	5	External coolant	Straight shank	UD05-0330S	4	66	28	23	36		○	
	3	Internal coolant	Straight shank	UD03C-0330S	4	62	20	14	36		○	
	5	Internal coolant	Straight shank	UD05C-0330S	4	66	28	23	36		○	
3.3	3	External coolant	Straight shank	UD03-0330	6	62	20	14	36		●	
	5	External coolant	Straight shank	UD05-0330	6	66	28	23	36		●	
	3	Internal coolant	Straight shank	UD03C-0330	6	62	20	14	36		●	
	5	Internal coolant	Straight shank	UD05C-0330	6	66	28	23	36		●	
3.4	3	External coolant	Straight shank	UD03-0340S	4	62	20	14	36		○	
	5	External coolant	Straight shank	UD05-0340S	4	66	28	23	36		○	
	3	Internal coolant	Straight shank	UD03C-0340S	4	62	20	14	36		○	
	5	Internal coolant	Straight shank	UD05C-0340S	4	66	28	23	36		○	
3.4	3	External coolant	Straight shank	UD03-0340	6	62	20	14	36		●	
	5	External coolant	Straight shank	UD05-0340	6	66	28	23	36		●	
	3	Internal coolant	Straight shank	UD03C-0340	6	62	20	14	36		●	
	5	Internal coolant	Straight shank	UD05C-0340	6	66	28	23	36		●	
3.5	3	External coolant	Straight shank	UD03-0350S	4	62	20	14	36	M4*0.5 NO.8-32UNC NO.8-36UNF	○	
	5	External coolant	Straight shank	UD05-0350S	4	66	28	23	36		○	
	3	Internal coolant	Straight shank	UD03C-0350S	4	62	20	14	36		○	
	5	Internal coolant	Straight shank	UD05C-0350S	4	66	28	23	36		○	
3.5	3	External coolant	Straight shank	UD03-0350	6	62	20	14	36		●	
	5	External coolant	Straight shank	UD05-0350	6	66	28	23	36		●	
	3	Internal coolant	Straight shank	UD03C-0350	6	62	20	14	36		●	
	5	Internal coolant	Straight shank	UD05C-0350	6	66	28	23	36		●	
3.6	3	External coolant	Straight shank	UD03-0360S	4	62	20	14	36		○	
	5	External coolant	Straight shank	UD05-0360S	4	66	28	23	36		○	
	3	Internal coolant	Straight shank	UD03C-0360S	4	62	20	14	36		○	
	5	Internal coolant	Straight shank	UD05C-0360S	4	66	28	23	36		○	

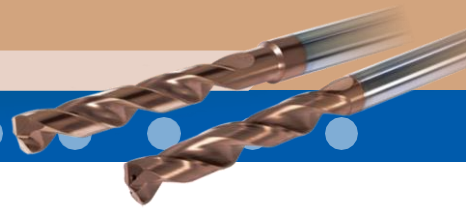
● Stock available ○ Make-to order

UD series twist drill for general machining



Drill diameter d_1 (m7)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade	
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps		
					ϕ_2 (h6)	l_1	l_2	l_3	l_4				
3.6	3	External coolant	Straight shank	UD03-0360	6	62	20	14	36			•	
	5	External coolant	Straight shank	UD05-0360	6	66	28	23	36			•	
	3	Internal coolant	Straight shank	UD03C-0360	6	62	20	14	36			•	
	5	Internal coolant	Straight shank	UD05C-0360	6	66	28	23	36			•	
3.7	3	External coolant	Straight shank	UD03-0370S	4	62	20	14	36		M4*0.7	○	
	5	External coolant	Straight shank	UD05-0370S	4	66	28	23	36			○	
	3	Internal coolant	Straight shank	UD03C-0370S	4	62	20	14	36			○	
	5	Internal coolant	Straight shank	UD05C-0370S	4	66	28	23	36			○	
	3	External coolant	Straight shank	UD03-0370	6	62	20	14	36			•	
	5	External coolant	Straight shank	UD05-0370	6	66	28	23	36			•	
	3	Internal coolant	Straight shank	UD03C-0370	6	62	20	14	36			•	
	5	Internal coolant	Straight shank	UD05C-0370	6	66	28	23	36			•	
	3	External coolant	Straight shank	UD03-0380S	4	66	24	17	36			M4*0.5 NO.8-32UNC	○
	5	External coolant	Straight shank	UD05-0380S	4	74	36	29	36				○
3	Internal coolant	Straight shank	UD03C-0380S	4	66	24	17	36		○			
5	Internal coolant	Straight shank	UD05C-0380S	4	74	36	29	36		○			
3	External coolant	Straight shank	UD03-0380	6	66	24	17	36		•			
5	External coolant	Straight shank	UD05-0380	6	74	36	29	36		•			
3	Internal coolant	Straight shank	UD03C-0380	6	66	24	17	36		•			
5	Internal coolant	Straight shank	UD05C-0380	6	74	36	29	36		•			
3	External coolant	Straight shank	UD03-0385S	4	66	24	17	36		NO.8-36UNF	○		
5	External coolant	Straight shank	UD05-0385S	4	74	36	29	36			○		
3	Internal coolant	Straight shank	UD03C-0385S	4	66	24	17	36			○		
5	Internal coolant	Straight shank	UD05C-0385S	4	74	36	29	36			○		
3	External coolant	Straight shank	UD03-0385	6	66	24	17	36			•		
5	External coolant	Straight shank	UD05-0385	6	74	36	29	36			•		
3	Internal coolant	Straight shank	UD03C-0385	6	66	24	17	36			•		
5	Internal coolant	Straight shank	UD05C-0385	6	74	36	29	36			•		
3.9	3	External coolant	Straight shank	UD03-0390S	4	66	24	17	36		NO.10- 24UNC		○
	5	External coolant	Straight shank	UD05-0390S	4	74	36	29	36				○
	3	Internal coolant	Straight shank	UD03C-0390S	4	66	24	17	36	○			
	5	Internal coolant	Straight shank	UD05C-0390S	4	74	36	29	36	○			

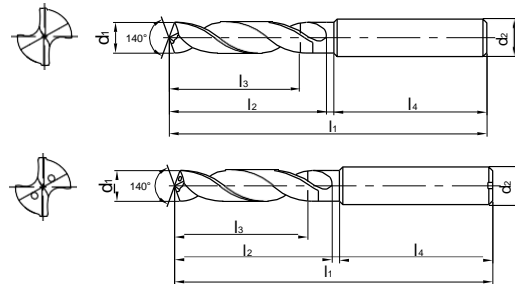
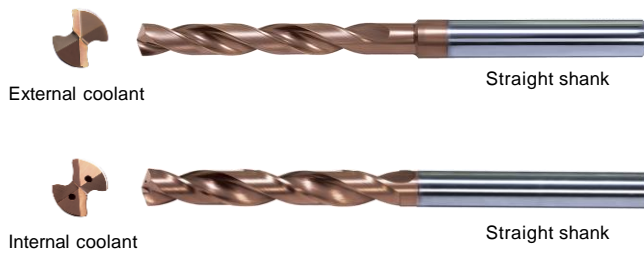
• Stock available ○ Make-to order



Drill diameter d ₁ (mm)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d ₂ (h _e)	l ₁	l ₂	l ₃	l ₄			
3.9	3	External coolant	Straight shank	UD03-0390	6	66	24	17	36	NO.10-24UNC		●
	5	External coolant	Straight shank	UD05-0390	6	74	36	29	36			●
	3	Internal coolant	Straight shank	UD03C-0390	6	66	24	17	36			●
	5	Internal coolant	Straight shank	UD05C-0390	6	74	36	29	36			●
4	3	External coolant	Straight shank	UD03-0400S	4	66	24	17	36			○
	5	External coolant	Straight shank	UD05-0400S	4	74	36	29	36			○
	3	Internal coolant	Straight shank	UD03C-0400S	4	66	24	17	36			○
	5	Internal coolant	Straight shank	UD05C-0400S	4	74	36	29	36			○
	3	External coolant	Straight shank	UD03-0400	6	66	24	17	36			●
	5	External coolant	Straight shank	UD05-0400	6	74	36	29	36			●
	3	Internal coolant	Straight shank	UD03C-0400	6	66	24	17	36			●
	5	Internal coolant	Straight shank	UD05C-0400	6	74	36	29	36			●
4.1	3	External coolant	Straight shank	UD03-0410S	5	66	24	17	36	NO.10-32UNF		○
	5	External coolant	Straight shank	UD05-0410S	5	74	36	29	36			○
	3	Internal coolant	Straight shank	UD03C-0410S	5	66	24	17	36			○
	5	Internal coolant	Straight shank	UD05C-0410S	5	74	36	29	36			○
	3	External coolant	Straight shank	UD03-0410	6	66	24	17	36			●
	5	External coolant	Straight shank	UD05-0410	6	74	36	29	36			●
	3	Internal coolant	Straight shank	UD03C-0410	6	66	24	17	36			●
	5	Internal coolant	Straight shank	UD05C-0410	6	74	36	29	36			●
4.2	3	External coolant	Straight shank	UD03-0420S	5	66	24	17	36	M5*0.8		○
	5	External coolant	Straight shank	UD05-0420S	5	74	36	29	36			○
	3	Internal coolant	Straight shank	UD03C-0420S	5	66	24	17	36			○
	5	Internal coolant	Straight shank	UD05C-0420S	5	74	36	29	36			○
	3	External coolant	Straight shank	UD03-0420	6	66	24	17	36			●
	5	External coolant	Straight shank	UD05-0420	6	74	36	29	36			●
	3	Internal coolant	Straight shank	UD03C-0420	6	66	24	17	36			●
	5	Internal coolant	Straight shank	UD05C-0420	6	74	36	29	36			●
4.3	3	External coolant	Straight shank	UD03-0430S	5	66	24	17	36			○
	5	External coolant	Straight shank	UD05-0430S	5	74	36	29	36			○
	3	Internal coolant	Straight shank	UD03C-0430S	5	66	24	17	36			○
	5	Internal coolant	Straight shank	UD05C-0430S	5	74	36	29	36			○
	3	External coolant	Straight shank	UD03-0430	6	66	24	17	36			●
	5	External coolant	Straight shank	UD05-0430	6	74	36	29	36			●
	3	Internal coolant	Straight shank	UD03C-0430	6	66	24	17	36			●
	5	Internal coolant	Straight shank	UD05C-0430	6	74	36	29	36			●
4.35	3	External coolant	Straight shank	UD03-0435S	5	66	24	17	36	NO.10-24UNC		○
	5	External coolant	Straight shank	UD05-0435S	5	74	36	29	36			○
	3	Internal coolant	Straight shank	UD03C-0435S	5	66	24	17	36			○
	5	Internal coolant	Straight shank	UD05C-0435S	5	74	36	29	36			○

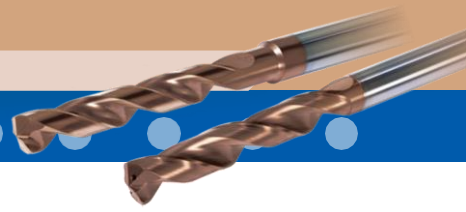
● Stock available ○ Make-to order

UD series twist drill for general machining



Drill diameter d ₁ (mm)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d ₂ (h ₆)	l ₁	l ₂	l ₃	l ₄			
4.35	3	External coolant	Straight shank	UD03-0435	6	66	24	17	36	NO.10-24UNC	•	
	5	External coolant	Straight shank	UD05-0435	6	74	36	29	36		•	
	3	Internal coolant	Straight shank	UD03C-0435	6	66	24	17	36		•	
	5	Internal coolant	Straight shank	UD05C-0435	6	74	36	29	36		•	
4.4	3	External coolant	Straight shank	UD03-0440S	5	66	24	17	36	NO.10-32UNF	○	
	5	External coolant	Straight shank	UD05-0440S	5	74	36	29	36		○	
	3	Internal coolant	Straight shank	UD03C-0440S	5	66	24	17	36		○	
	5	Internal coolant	Straight shank	UD05C-0440S	5	74	36	29	36		○	
	3	External coolant	Straight shank	UD03-0440	6	66	24	17	36		•	
	5	External coolant	Straight shank	UD05-0440	6	74	36	29	36		•	
	3	Internal coolant	Straight shank	UD03C-0440	6	66	24	17	36		•	
	5	Internal coolant	Straight shank	UD05C-0440	6	74	36	29	36		•	
4.45	3	External coolant	Straight shank	UD03-0445S	5	66	24	17	36	NO.12-24UNC	○	
	5	External coolant	Straight shank	UD05-0445S	5	74	36	29	36		○	
	3	Internal coolant	Straight shank	UD03C-0445S	5	66	24	17	36		○	
	5	Internal coolant	Straight shank	UD05C-0445S	5	74	36	29	36		○	
	3	External coolant	Straight shank	UD03-0445	6	66	24	17	36		•	
	5	External coolant	Straight shank	UD05-0445	6	74	36	29	36		•	
	3	Internal coolant	Straight shank	UD03C-0445	6	66	24	17	36		•	
	5	Internal coolant	Straight shank	UD05C-0445	6	74	36	29	36		•	
4.5	3	External coolant	Straight shank	UD03-0450S	5	66	24	17	36	NO.12-24UNC	○	
	5	External coolant	Straight shank	UD05-0450S	5	74	36	29	36		○	
	3	Internal coolant	Straight shank	UD03C-0450S	5	66	24	17	36		○	
	5	Internal coolant	Straight shank	UD05C-0450S	5	74	36	29	36		○	
	3	External coolant	Straight shank	UD03-0450	6	66	24	17	36		•	
	5	External coolant	Straight shank	UD05-0450	6	74	36	29	36		•	
	3	Internal coolant	Straight shank	UD03C-0450	6	66	24	17	36		•	
	5	Internal coolant	Straight shank	UD05C-0450	6	74	36	29	36		•	
4.6	3	External coolant	Straight shank	UD03-0460S	5	66	24	17	36	NO.12-24UNC	○	
	5	External coolant	Straight shank	UD05-0460S	5	74	36	29	36		○	
	3	Internal coolant	Straight shank	UD03C-0460S	5	66	24	17	36		○	
	5	Internal coolant	Straight shank	UD05C-0460S	5	74	36	29	36		○	

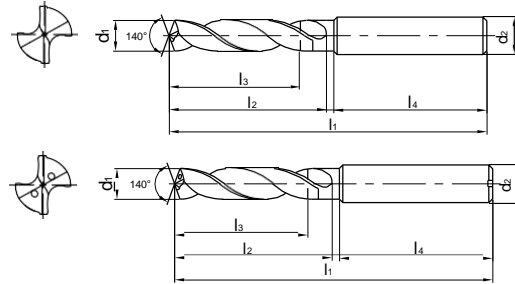
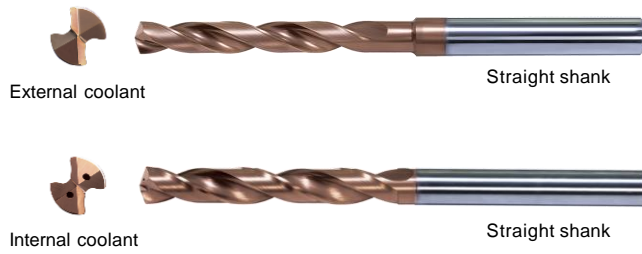
• Stock available ○ Make-to order



Drill diameter d ₁ (mm)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade	
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps		
					d ₂ (h _e)	l ₁	l ₂	l ₃	l ₄				
4.6	3	External coolant	Straight shank	UD03-0460	6	66	24	17	36			●	
	5	External coolant	Straight shank	UD05-0460	6	74	36	29	36			●	
	3	Internal coolant	Straight shank	UD03C-0460	6	66	24	17	36			●	
	5	Internal coolant	Straight shank	UD05C-0460	6	74	36	29	36			●	
4.65	3	External coolant	Straight shank	UD03-0465S	5	66	24	17	36		M5*0.8	○	
	5	External coolant	Straight shank	UD05-0465S	5	74	36	29	36			○	
	3	Internal coolant	Straight shank	UD03C-0465S	5	66	24	17	36			○	
	5	Internal coolant	Straight shank	UD05C-0465S	5	74	36	29	36			○	
	3	External coolant	Straight shank	UD03-0465	6	66	24	17	36			●	
	5	External coolant	Straight shank	UD05-0465	6	74	36	29	36			●	
	3	Internal coolant	Straight shank	UD03C-0465	6	66	24	17	36			●	
	5	Internal coolant	Straight shank	UD05C-0465	6	74	36	29	36			●	
	3	External coolant	Straight shank	UD03-0470S	5	66	24	17	36			NO.12- 28UNF	○
	5	External coolant	Straight shank	UD05-0470S	5	74	36	29	36				○
3	Internal coolant	Straight shank	UD03C-0470S	5	66	24	17	36		○			
5	Internal coolant	Straight shank	UD05C-0470S	5	74	36	29	36		○			
3	External coolant	Straight shank	UD03-0470	6	66	24	17	36		●			
5	External coolant	Straight shank	UD05-0470	6	74	36	29	36		●			
3	Internal coolant	Straight shank	UD03C-0470	6	66	24	17	36		●			
5	Internal coolant	Straight shank	UD05C-0470	6	74	36	29	36		●			
4.8	3	External coolant	Straight shank	UD03-0480S	5	66	28	20	36		M5*0.5		○
	5	External coolant	Straight shank	UD05-0480S	5	82	44	35	36				○
	3	Internal coolant	Straight shank	UD03C-0480S	5	66	28	20	36			○	
	5	Internal coolant	Straight shank	UD05C-0480S	5	82	44	35	36			○	
	3	External coolant	Straight shank	UD03-0480	6	66	28	20	36			●	
	5	External coolant	Straight shank	UD05-0480	6	82	44	35	36			●	
	3	Internal coolant	Straight shank	UD03C-0480	6	66	28	20	36			●	
	5	Internal coolant	Straight shank	UD05C-0480	6	82	44	35	36			●	
4.9	3	External coolant	Straight shank	UD03-0490S	5	66	28	20	36			○	
	5	External coolant	Straight shank	UD05-0490S	5	82	44	35	36			○	
	3	Internal coolant	Straight shank	UD03C-0490S	5	66	28	20	36			○	
	5	Internal coolant	Straight shank	UD05C-0490S	5	82	44	35	36			○	
	3	External coolant	Straight shank	UD03-0490	6	66	28	20	36			●	
	5	External coolant	Straight shank	UD05-0490	6	82	44	35	36			●	
	3	Internal coolant	Straight shank	UD03C-0490	6	66	28	20	36			●	
	5	Internal coolant	Straight shank	UD05C-0490	6	82	44	35	36			●	
5	3	External coolant	Straight shank	UD03-0500S	5	66	28	20	36		M6*1	NO.12- 24UNC	○
	5	External coolant	Straight shank	UD05-0500S	5	82	44	35	36				○
	3	Internal coolant	Straight shank	UD03C-0500S	5	66	28	20	36				○
	5	Internal coolant	Straight shank	UD05C-0500S	5	82	44	35	36				○

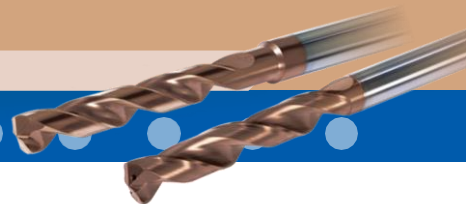
● Stock available ○ Make-to order

UD series twist drill for general machining



Drill diameter d ₁ (m ₇)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d ₂ (h ₈)	l ₁	l ₂	l ₃	l ₄			
5	3	External coolant	Straight shank	UD03-0500	6	66	28	20	36	M6*1	NO.12-24UNC	•
	5	External coolant	Straight shank	UD05-0500	6	82	44	35	36			•
	3	Internal coolant	Straight shank	UD03C-0500	6	66	28	20	36			•
	5	Internal coolant	Straight shank	UD05C-0500	6	82	44	35	36			•
5.1	3	External coolant	Straight shank	UD03-0510	6	66	28	20	36	1/4-20UNC	NO.12-28UNF	•
	5	External coolant	Straight shank	UD05-0510	6	82	44	35	36			•
	3	Internal coolant	Straight shank	UD03C-0510	6	66	28	20	36			•
	5	Internal coolant	Straight shank	UD05C-0510	6	82	44	35	36			•
5.2	3	External coolant	Straight shank	UD03-0520	6	66	28	20	36			•
	5	External coolant	Straight shank	UD05-0520	6	82	44	35	36			•
	3	Internal coolant	Straight shank	UD03C-0520	6	66	28	20	36			•
	5	Internal coolant	Straight shank	UD05C-0520	6	82	44	35	36			•
5.25	3	External coolant	Straight shank	UD03-0525	6	66	28	20	36	M6*0.75		•
	5	External coolant	Straight shank	UD05-0525	6	82	44	35	36			•
	3	Internal coolant	Straight shank	UD03C-0525	6	66	28	20	36			•
	5	Internal coolant	Straight shank	UD05C-0525	6	82	44	35	36			•
5.3	3	External coolant	Straight shank	UD03-0530	6	66	28	20	36			•
	5	External coolant	Straight shank	UD05-0530	6	82	44	35	36			•
	3	Internal coolant	Straight shank	UD03C-0530	6	66	28	20	36			•
	5	Internal coolant	Straight shank	UD05C-0530	6	82	44	35	36			•
5.4	3	External coolant	Straight shank	UD03-0540	6	66	28	20	36			•
	5	External coolant	Straight shank	UD05-0540	6	82	44	35	36			•
	3	Internal coolant	Straight shank	UD03C-0540	6	66	28	20	36			•
	5	Internal coolant	Straight shank	UD05C-0540	6	82	44	35	36			•
5.5	3	External coolant	Straight shank	UD03-0550	6	66	28	20	36	1/4-28UNF		•
	5	External coolant	Straight shank	UD05-0550	6	82	44	35	36			•
	3	Internal coolant	Straight shank	UD03C-0550	6	66	28	20	36			•
	5	Internal coolant	Straight shank	UD05C-0550	6	82	44	35	36			•
5.55	3	External coolant	Straight shank	UD03-0555	6	66	28	20	36			•
	5	External coolant	Straight shank	UD05-0555	6	82	44	35	36			•
	3	Internal coolant	Straight shank	UD03C-0555	6	66	28	20	36			•
	5	Internal coolant	Straight shank	UD05C-0555	6	82	44	35	36			•

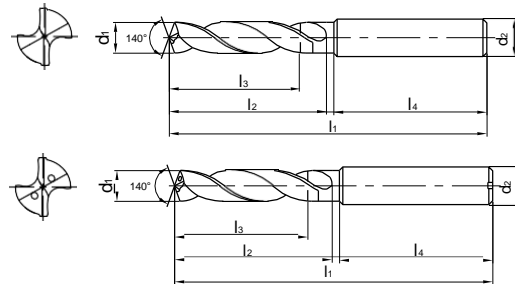
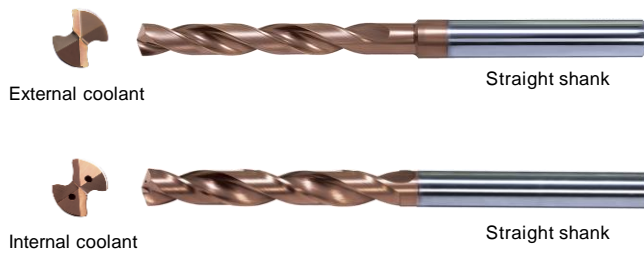
• Stock available ○ Make-to order



Drill diameter d ₁ (m ₇)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d ₂ (h ₆)	l ₁	l ₂	l ₃	l ₄			
5.6	3	External coolant	Straight shank	UD03-0560	6	66	28	20	36	M6*1	●	
	5	External coolant	Straight shank	UD05-0560	6	82	44	35	36		●	
	3	Internal coolant	Straight shank	UD03C-0560	6	66	28	20	36		●	
	5	Internal coolant	Straight shank	UD05C-0560	6	82	44	35	36		●	
5.7	3	External coolant	Straight shank	UD03-0570	6	66	28	20	36	M6*0.75	●	
	5	External coolant	Straight shank	UD05-0570	6	82	44	35	36		●	
	3	Internal coolant	Straight shank	UD03C-0570	6	66	28	20	36		●	
	5	Internal coolant	Straight shank	UD05C-0570	6	82	44	35	36		●	
5.75	3	External coolant	Straight shank	UD03-0575	6	66	28	20	36	1/4-20UNC	●	
	5	External coolant	Straight shank	UD05-0575	6	82	44	35	36		●	
	3	Internal coolant	Straight shank	UD03C-0575	6	66	28	20	36		●	
	5	Internal coolant	Straight shank	UD05C-0575	6	82	44	35	36		●	
5.8	3	External coolant	Straight shank	UD03-0580	6	66	28	20	36		●	
	5	External coolant	Straight shank	UD05-0580	6	82	44	35	36		●	
	3	Internal coolant	Straight shank	UD03C-0580	6	66	28	20	36		●	
	5	Internal coolant	Straight shank	UD05C-0580	6	82	44	35	36		●	
5.9	3	External coolant	Straight shank	UD03-0590	6	66	28	20	36		●	
	5	External coolant	Straight shank	UD05-0590	6	82	44	35	36		●	
	3	Internal coolant	Straight shank	UD03C-0590	6	66	28	20	36		●	
	5	Internal coolant	Straight shank	UD05C-0590	6	82	44	35	36		●	
5.95	3	External coolant	Straight shank	UD03-0595	6	66	28	20	36	1/4-28UNF	●	
	5	External coolant	Straight shank	UD05-0595	6	82	44	35	36		●	
	3	Internal coolant	Straight shank	UD03C-0595	6	66	28	20	36		●	
	5	Internal coolant	Straight shank	UD05C-0595	6	82	44	35	36		●	
6	3	External coolant	Straight shank	UD03-0600	6	66	28	20	36	M7*1	●	
	5	External coolant	Straight shank	UD05-0600	6	82	44	35	36		●	
	3	Internal coolant	Straight shank	UD03C-0600	6	66	28	20	36		●	
	5	Internal coolant	Straight shank	UD05C-0600	6	82	44	35	36		●	
6.1	3	External coolant	Straight shank	UD03-0610S	7	79	34	24	36		○	
	5	External coolant	Straight shank	UD05-0610S	7	91	53	43	36		○	
	3	Internal coolant	Straight shank	UD03C-0610S	7	79	34	24	36		○	
	5	Internal coolant	Straight shank	UD05C-0610S	7	91	53	43	36		○	
	3	External coolant	Straight shank	UD03-0610	8	79	34	24	36		●	
	5	External coolant	Straight shank	UD05-0610	8	91	53	43	36		●	
	3	Internal coolant	Straight shank	UD03C-0610	8	79	34	24	36		●	
	5	Internal coolant	Straight shank	UD05C-0610	8	91	53	43	36		●	
6.2	3	External coolant	Straight shank	UD03-0620S	7	79	34	24	36		○	
	5	External coolant	Straight shank	UD05-0620S	7	91	53	43	36		○	
	3	Internal coolant	Straight shank	UD03C-0620S	7	79	34	24	36		○	
	5	Internal coolant	Straight shank	UD05C-0620S	7	91	53	43	36		○	

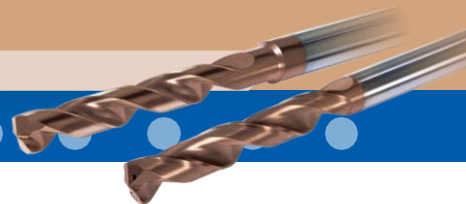
● Stock available ○ Make-to order

UD series twist drill for general machining



Drill diameter $d_1(m_7)$	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					$\phi_2(h_8)$	l_1	l_2	l_3	l_4			
6.2	3	External coolant	Straight shank	UD03-0620	8	79	34	24	36			●
	5	External coolant	Straight shank	UD05-0620	8	91	53	43	36			●
	3	Internal coolant	Straight shank	UD03C-0620	8	79	34	24	36			●
	5	Internal coolant	Straight shank	UD05C-0620	8	91	53	43	36			●
6.3	3	External coolant	Straight shank	UD03-0630S	7	79	34	24	36			○
	5	External coolant	Straight shank	UD05-0630S	7	91	53	43	36			○
	3	Internal coolant	Straight shank	UD03C-0630S	7	79	34	24	36			○
	5	Internal coolant	Straight shank	UD05C-0630S	7	91	53	43	36			○
	3	External coolant	Straight shank	UD03-0630	8	79	34	24	36			●
	5	External coolant	Straight shank	UD05-0630	8	91	53	43	36			●
	3	Internal coolant	Straight shank	UD03C-0630	8	79	34	24	36			●
	5	Internal coolant	Straight shank	UD05C-0630	8	91	53	43	36			●
6.4	3	External coolant	Straight shank	UD03-0640S	7	79	34	24	36			○
	5	External coolant	Straight shank	UD05-0640S	7	91	53	43	36			○
	3	Internal coolant	Straight shank	UD03C-0640S	7	79	34	24	36			○
	5	Internal coolant	Straight shank	UD05C-0640S	7	91	53	43	36			○
	3	External coolant	Straight shank	UD03-0640	8	79	34	24	36			●
	5	External coolant	Straight shank	UD05-0640	8	91	53	43	36			●
	3	Internal coolant	Straight shank	UD03C-0640	8	79	34	24	36			●
	5	Internal coolant	Straight shank	UD05C-0640	8	91	53	43	36			●
6.5	3	External coolant	Straight shank	UD03-0650S	7	79	34	24	36			○
	5	External coolant	Straight shank	UD05-0650S	7	91	53	43	36			○
	3	Internal coolant	Straight shank	UD03C-0650S	7	79	34	24	36			○
	5	Internal coolant	Straight shank	UD05C-0650S	7	91	53	43	36			○
	3	External coolant	Straight shank	UD03-0650	8	79	34	24	36			●
	5	External coolant	Straight shank	UD05-0650	8	91	53	43	36			●
	3	Internal coolant	Straight shank	UD03C-0650	8	79	34	24	36			●
	5	Internal coolant	Straight shank	UD05C-0650	8	91	53	43	36			●
6.6	3	External coolant	Straight shank	UD03-0660S	7	79	34	24	36	5/16-18UNC	M7*1	○
	5	External coolant	Straight shank	UD05-0660S	7	91	53	43	36			○
	3	Internal coolant	Straight shank	UD03C-0660S	7	79	34	24	36			○
	5	Internal coolant	Straight shank	UD05C-0660S	7	91	53	43	36			○

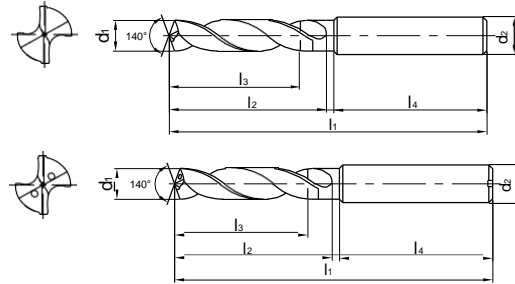
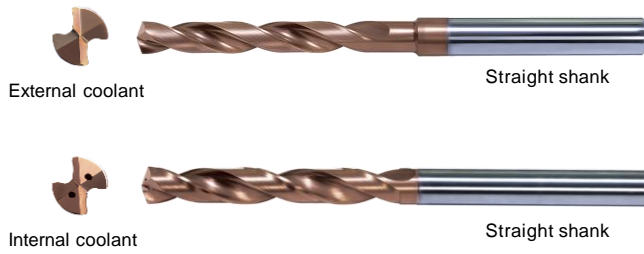
● Stock available ○ Make-to order



Drill diameter d ₁ (m ₇)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d ₂ (h ₈)	l ₁	l ₂	l ₃	l ₄			
6.6	3	External coolant	Straight shank	UD03-0660	8	79	34	24	36	5/16-18UNC	M7*1	●
	5	External coolant	Straight shank	UD05-0660	8	91	53	43	36			●
	3	Internal coolant	Straight shank	UD03C-0660	8	79	34	24	36			●
	5	Internal coolant	Straight shank	UD05C-0660	8	91	53	43	36			●
6.7	3	External coolant	Straight shank	UD03-0670S	7	79	34	24	36			○
	5	External coolant	Straight shank	UD05-0670S	7	91	53	43	36			○
	3	Internal coolant	Straight shank	UD03C-0670S	7	79	34	24	36			○
	5	Internal coolant	Straight shank	UD05C-0670S	7	91	53	43	36			○
6.7	3	External coolant	Straight shank	UD03-0670	8	79	34	24	36			●
	5	External coolant	Straight shank	UD05-0670	8	91	53	43	36			●
	3	Internal coolant	Straight shank	UD03C-0670	8	79	34	24	36			●
	5	Internal coolant	Straight shank	UD05C-0670	8	91	53	43	36			●
6.75	3	External coolant	Straight shank	UD03-0675S	7	79	34	24	36	M8*1.25		○
	5	External coolant	Straight shank	UD05-0675S	7	91	53	43	36			○
	3	Internal coolant	Straight shank	UD03C-0675S	7	79	34	24	36			○
	5	Internal coolant	Straight shank	UD05C-0675S	7	91	53	43	36			○
6.75	3	External coolant	Straight shank	UD03-0675	8	79	34	24	36			●
	5	External coolant	Straight shank	UD05-0675	8	91	53	43	36			●
	3	Internal coolant	Straight shank	UD03C-0675	8	79	34	24	36			●
	5	Internal coolant	Straight shank	UD05C-0675	8	91	53	43	36			●
6.8	3	External coolant	Straight shank	UD03-0680S	7	79	34	24	36			○
	5	External coolant	Straight shank	UD05-0680S	7	91	53	43	36			○
	3	Internal coolant	Straight shank	UD03C-0680S	7	79	34	24	36			○
	5	Internal coolant	Straight shank	UD05C-0680S	7	91	53	43	36			○
6.8	3	External coolant	Straight shank	UD03-0680	8	79	34	24	36			●
	5	External coolant	Straight shank	UD05-0680	8	91	53	43	36			●
	3	Internal coolant	Straight shank	UD03C-0680	8	79	34	24	36			●
	5	Internal coolant	Straight shank	UD05C-0680	8	91	53	43	36			●
6.9	3	External coolant	Straight shank	UD03-0690S	7	79	34	24	36	5/16-24UNF		○
	5	External coolant	Straight shank	UD05-0690S	7	91	53	43	36			○
	3	Internal coolant	Straight shank	UD03C-0690S	7	79	34	24	36			○
	5	Internal coolant	Straight shank	UD05C-0690S	7	91	53	43	36			○
6.9	3	External coolant	Straight shank	UD03-0690	8	79	34	24	36			●
	5	External coolant	Straight shank	UD05-0690	8	91	53	43	36			●
	3	Internal coolant	Straight shank	UD03C-0690	8	79	34	24	36			●
	5	Internal coolant	Straight shank	UD05C-0690	8	91	53	43	36			●
7	3	External coolant	Straight shank	UD03-0700S	7	79	34	24	36	M8*1		○
	5	External coolant	Straight shank	UD05-0700S	7	91	53	43	36			○
	3	Internal coolant	Straight shank	UD03C-0700S	7	79	34	24	36			○
	5	Internal coolant	Straight shank	UD05C-0700S	7	91	53	43	36			○

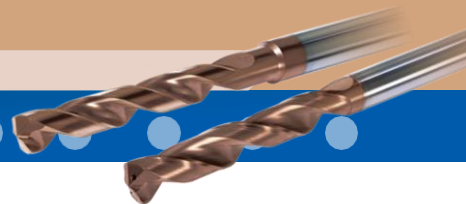
● Stock available ○ Make-to order

UD series twist drill for general machining



Drill diameter d ₁ (m ₇)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d ₂ (h ₈)	l ₁	l ₂	l ₃	l ₄			
7	3	External coolant	Straight shank	UD03-0700	8	79	34	24	36	M8*1		•
	5	External coolant	Straight shank	UD05-0700	8	91	53	43	36			•
	3	Internal coolant	Straight shank	UD03C-0700	8	79	34	24	36			•
	5	Internal coolant	Straight shank	UD05C-0700	8	91	53	43	36			•
7.1	3	External coolant	Straight shank	UD03-0710	8	79	41	29	36			•
	5	External coolant	Straight shank	UD05-0710	8	91	53	43	36			•
	3	Internal coolant	Straight shank	UD03C-0710	8	79	41	29	36			•
	5	Internal coolant	Straight shank	UD05C-0710	8	91	53	43	36			•
7.2	3	External coolant	Straight shank	UD03-0720	8	79	41	29	36			•
	5	External coolant	Straight shank	UD05-0720	8	91	53	43	36			•
	3	Internal coolant	Straight shank	UD03C-0720	8	79	41	29	36			•
	5	Internal coolant	Straight shank	UD05C-0720	8	91	53	43	36			•
7.3	3	External coolant	Straight shank	UD03-0730	8	79	41	29	36		5/16-18UNC	•
	5	External coolant	Straight shank	UD05-0730	8	91	53	43	36			•
	3	Internal coolant	Straight shank	UD03C-0730	8	79	41	29	36			•
	5	Internal coolant	Straight shank	UD05C-0730	8	91	53	43	36			•
7.4	3	External coolant	Straight shank	UD03-0740	8	79	41	29	36			•
	5	External coolant	Straight shank	UD05-0740	8	91	53	43	36			•
	3	Internal coolant	Straight shank	UD03C-0740	8	79	41	29	36			•
	5	Internal coolant	Straight shank	UD05C-0740	8	91	53	43	36			•
7.45	3	External coolant	Straight shank	UD03-0745	8	79	41	29	36		M8*1.25 5/16-24UNF	•
	5	External coolant	Straight shank	UD05-0745	8	91	53	43	36			•
	3	Internal coolant	Straight shank	UD03C-0745	8	79	41	29	36			•
	5	Internal coolant	Straight shank	UD05C-0745	8	91	53	43	36			•
7.5	3	External coolant	Straight shank	UD03-0750	8	79	41	29	36			•
	5	External coolant	Straight shank	UD05-0750	8	91	53	43	36			•
	3	Internal coolant	Straight shank	UD03C-0750	8	79	41	29	36			•
	5	Internal coolant	Straight shank	UD05C-0750	8	91	53	43	36			•
7.6	3	External coolant	Straight shank	UD03-0760	8	79	41	29	36		M8*1	•
	5	External coolant	Straight shank	UD05-0760	8	91	53	43	36			•
	3	Internal coolant	Straight shank	UD03C-0760	8	79	41	29	36			•
	5	Internal coolant	Straight shank	UD05C-0760	8	91	53	43	36			•

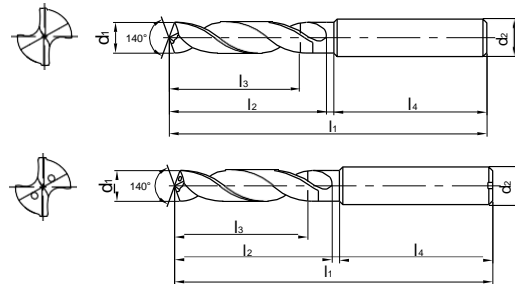
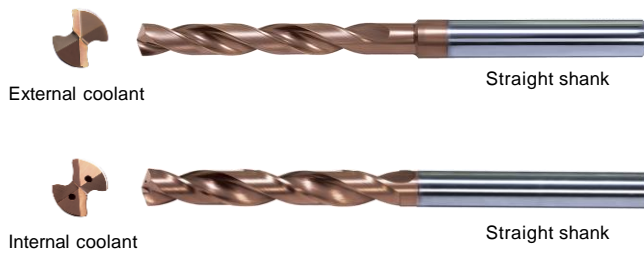
• Stock available ○ Make-to order



Drill diameter d ₁ (m ₇)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d ₂ (h ₆)	l ₁	l ₂	l ₃	l ₄			
7.7	3	External coolant	Straight shank	UD03-0770	8	79	41	29	36			●
	5	External coolant	Straight shank	UD05-0770	8	91	53	43	36			●
	3	Internal coolant	Straight shank	UD03C-0770	8	79	41	29	36			●
	5	Internal coolant	Straight shank	UD05C-0770	8	91	53	43	36			●
7.8	3	External coolant	Straight shank	UD03-0780	8	79	41	29	36			●
	5	External coolant	Straight shank	UD05-0780	8	91	53	43	36			●
	3	Internal coolant	Straight shank	UD03C-0780	8	79	41	29	36			●
	5	Internal coolant	Straight shank	UD05C-0780	8	91	53	43	36			●
7.9	3	External coolant	Straight shank	UD03-0790	8	79	41	29	36			●
	5	External coolant	Straight shank	UD05-0790	8	91	53	43	36			●
	3	Internal coolant	Straight shank	UD03C-0790	8	79	41	29	36			●
	5	Internal coolant	Straight shank	UD05C-0790	8	91	53	43	36			●
8	3	External coolant	Straight shank	UD03-0800	8	79	41	29	36	3/8-16UNC		●
	5	External coolant	Straight shank	UD05-0800	8	91	53	43	36			●
	3	Internal coolant	Straight shank	UD03C-0800	8	79	41	29	36			●
	5	Internal coolant	Straight shank	UD05C-0800	8	91	53	43	36			●
8.1	3	External coolant	Straight shank	UD03-0810S	9	89	47	35	40			○
	5	External coolant	Straight shank	UD05-0810S	9	103	61	49	40			○
	3	Internal coolant	Straight shank	UD03C-0810S	9	89	47	35	40			○
	5	Internal coolant	Straight shank	UD05C-0810S	9	103	61	49	40			○
	3	External coolant	Straight shank	UD03-0810	10	89	47	35	40			●
	5	External coolant	Straight shank	UD05-0810	10	103	61	49	40			●
	3	Internal coolant	Straight shank	UD03C-0810	10	89	47	35	40			●
	5	Internal coolant	Straight shank	UD05C-0810	10	103	61	49	40			●
8.2	3	External coolant	Straight shank	UD03-0820S	9	89	47	35	40			○
	5	External coolant	Straight shank	UD05-0820S	9	103	61	49	40			○
	3	Internal coolant	Straight shank	UD03C-0820S	9	89	47	35	40			○
	5	Internal coolant	Straight shank	UD05C-0820S	9	103	61	49	40			○
	3	External coolant	Straight shank	UD03-0820	10	89	47	35	40			●
	5	External coolant	Straight shank	UD05-0820	10	103	61	49	40			●
	3	Internal coolant	Straight shank	UD03C-0820	10	89	47	35	40			●
	5	Internal coolant	Straight shank	UD05C-0820	10	103	61	49	40			●
8.3	3	External coolant	Straight shank	UD03-0830S	9	89	47	35	40			○
	5	External coolant	Straight shank	UD05-0830S	9	103	61	49	40			○
	3	Internal coolant	Straight shank	UD03C-0830S	9	89	47	35	40			○
	5	Internal coolant	Straight shank	UD05C-0830S	9	103	61	49	40			○
	3	External coolant	Straight shank	UD03-0830	10	89	47	35	40			●
	5	External coolant	Straight shank	UD05-0830	10	103	61	49	40			●
	3	Internal coolant	Straight shank	UD03C-0830	10	89	47	35	40			●
	5	Internal coolant	Straight shank	UD05C-0830	10	103	61	49	40			●

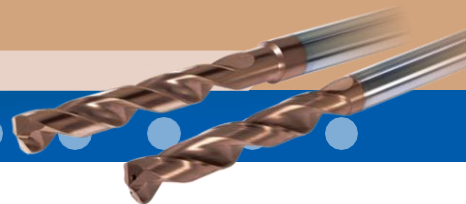
● Stock available ○ Make-to order

UD series twist drill for general machining



Drill diameter d ₁ (m ₇)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d ₂ (h ₈)	l ₁	l ₂	l ₃	l ₄			
8.4	3	External coolant	Straight shank	UD03-0840S	9	89	47	35	40	M10*1.5; 3/8-24UNF	○	
	5	External coolant	Straight shank	UD05-0840S	9	103	61	49	40		○	
	3	Internal coolant	Straight shank	UD03C-0840S	9	89	47	35	40		○	
	5	Internal coolant	Straight shank	UD05C-0840S	9	103	61	49	40		○	
	3	External coolant	Straight shank	UD03-0840	10	89	47	35	40		●	
	5	External coolant	Straight shank	UD05-0840	10	103	61	49	40		●	
	3	Internal coolant	Straight shank	UD03C-0840	10	89	47	35	40		●	
5	Internal coolant	Straight shank	UD05C-0840	10	103	61	49	40	●			
8.5	3	External coolant	Straight shank	UD03-0850S	9	89	47	35	40		○	
	5	External coolant	Straight shank	UD05-0850S	9	103	61	49	40		○	
	3	Internal coolant	Straight shank	UD03C-0850S	9	89	47	35	40		○	
	5	Internal coolant	Straight shank	UD05C-0850S	9	103	61	49	40		○	
	3	External coolant	Straight shank	UD03-0850	10	89	47	35	40		●	
	5	External coolant	Straight shank	UD05-0850	10	103	61	49	40		●	
	3	Internal coolant	Straight shank	UD03C-0850	10	89	47	35	40	●		
5	Internal coolant	Straight shank	UD05C-0850	10	103	61	49	40	●			
8.6	3	External coolant	Straight shank	UD03-0860S	9	89	47	35	40	○		
	5	External coolant	Straight shank	UD05-0860S	9	103	61	49	40	○		
	3	Internal coolant	Straight shank	UD03C-0860S	9	89	47	35	40	○		
	5	Internal coolant	Straight shank	UD05C-0860S	9	103	61	49	40	○		
	3	External coolant	Straight shank	UD03-0860	10	89	47	35	40	●		
	5	External coolant	Straight shank	UD05-0860	10	103	61	49	40	●		
	3	Internal coolant	Straight shank	UD03C-0860	10	89	47	35	40	●		
5	Internal coolant	Straight shank	UD05C-0860	10	103	61	49	40	●			
8.7	3	External coolant	Straight shank	UD03-0870S	9	89	47	35	40	○		
	5	External coolant	Straight shank	UD05-0870S	9	103	61	49	40	○		
	3	Internal coolant	Straight shank	UD03C-0870S	9	89	47	35	40	○		
	5	Internal coolant	Straight shank	UD05C-0870S	9	103	61	49	40	○		
	3	External coolant	Straight shank	UD03-0870	10	89	47	35	40	●		
	5	External coolant	Straight shank	UD05-0870	10	103	61	49	40	●		
	3	Internal coolant	Straight shank	UD03C-0870	10	89	47	35	40	●		
5	Internal coolant	Straight shank	UD05C-0870	10	103	61	49	40	●			

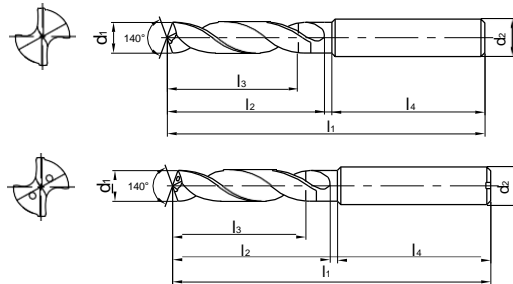
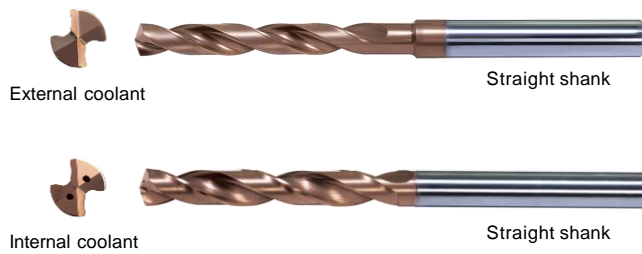
● Stock available ○ Make-to order



Drill diameter d ₁ (m ₇)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d ₂ (h ₈)	l ₁	l ₂	l ₃	l ₄			
8.75	3	External coolant	Straight shank	UD03-0875S	9	89	47	35	40	M10*1.25		○
	5	External coolant	Straight shank	UD05-0875S	9	103	61	49	40			○
	3	Internal coolant	Straight shank	UD03C-0875S	9	89	47	35	40			○
	5	Internal coolant	Straight shank	UD05C-0875S	9	103	61	49	40			○
	3	External coolant	Straight shank	UD03-0875	10	89	47	35	40			●
	5	External coolant	Straight shank	UD05-0875	10	103	61	49	40			●
	3	Internal coolant	Straight shank	UD03C-0875	10	89	47	35	40			●
	5	Internal coolant	Straight shank	UD05C-0875	10	103	61	49	40			●
8.8	3	External coolant	Straight shank	UD03-0880S	9	89	47	35	40	3/8-16UNC		○
	5	External coolant	Straight shank	UD05-0880S	9	103	61	49	40			○
	3	Internal coolant	Straight shank	UD03C-0880S	9	89	47	35	40			○
	5	Internal coolant	Straight shank	UD05C-0880S	9	103	61	49	40			○
	3	External coolant	Straight shank	UD03-0880	10	89	47	35	40			●
	5	External coolant	Straight shank	UD05-0880	10	103	61	49	40			●
	3	Internal coolant	Straight shank	UD03C-0880	10	89	47	35	40			●
	5	Internal coolant	Straight shank	UD05C-0880	10	103	61	49	40			●
8.9	3	External coolant	Straight shank	UD03-0890S	9	89	47	35	40			○
	5	External coolant	Straight shank	UD05-0890S	9	103	61	49	40			○
	3	Internal coolant	Straight shank	UD03C-0890S	9	89	47	35	40			○
	5	Internal coolant	Straight shank	UD05C-0890S	9	103	61	49	40			○
	3	External coolant	Straight shank	UD03-0890	10	89	47	35	40			●
	5	External coolant	Straight shank	UD05-0890	10	103	61	49	40			●
	3	Internal coolant	Straight shank	UD03C-0890	10	89	47	35	40			●
	5	Internal coolant	Straight shank	UD05C-0890	10	103	61	49	40			●
9	3	External coolant	Straight shank	UD03-0900S	9	89	47	35	40	M10*1	3/8-24UNF	○
	5	External coolant	Straight shank	UD05-0900S	9	103	61	49	40			○
	3	Internal coolant	Straight shank	UD03C-0900S	9	89	47	35	40			○
	5	Internal coolant	Straight shank	UD05C-0900S	9	103	61	49	40			○
	3	External coolant	Straight shank	UD03-0900	10	89	47	35	40			●
	5	External coolant	Straight shank	UD05-0900	10	103	61	49	40			●
	3	Internal coolant	Straight shank	UD03C-0900	10	89	47	35	40			●
	5	Internal coolant	Straight shank	UD05C-0900	10	103	61	49	40			●
9.1	3	External coolant	Straight shank	UD03-0910	10	89	47	35	40		●	
	5	External coolant	Straight shank	UD05-0910	10	103	61	49	40		●	
	3	Internal coolant	Straight shank	UD03C-0910	10	89	47	35	40		●	
	5	Internal coolant	Straight shank	UD05C-0910	10	103	61	49	40		●	
9.2	3	External coolant	Straight shank	UD03-0920	10	89	47	35	40		●	
	5	External coolant	Straight shank	UD05-0920	10	103	61	49	40		●	
	3	Internal coolant	Straight shank	UD03C-0920	10	89	47	35	40		●	
	5	Internal coolant	Straight shank	UD05C-0920	10	103	61	49	40		●	

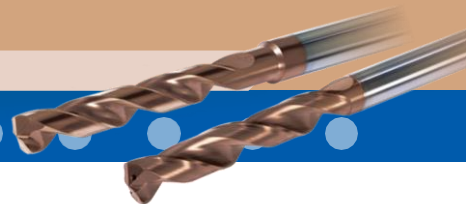
● Stock available ○ Make-to order

UD series twist drill for general machining



Drill diameter d ₁ (m ₇)	Drilling depth l/d	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d ₂ (h ₈)	l ₁	l ₂	l ₃	l ₄			
9.3	3	External coolant	Straight shank	UD03-0930	10	89	47	35	40			•
	5	External coolant	Straight shank	UD05-0930	10	103	61	49	40			•
	3	Internal coolant	Straight shank	UD03C-0930	10	89	47	35	40			•
	5	Internal coolant	Straight shank	UD05C-0930	10	103	61	49	40			•
9.35	3	External coolant	Straight shank	UD03-0935	10	89	47	35	40	M10*1.5		•
	5	External coolant	Straight shank	UD05-0935	10	103	61	49	40			•
	3	Internal coolant	Straight shank	UD03C-0935	10	89	47	35	40			•
	5	Internal coolant	Straight shank	UD05C-0935	10	103	61	49	40			•
9.4	3	External coolant	Straight shank	UD03-0940	10	89	47	35	40	7/16-14UNC		•
	5	External coolant	Straight shank	UD05-0940	10	103	61	49	40			•
	3	Internal coolant	Straight shank	UD03C-0940	10	89	47	35	40			•
	5	Internal coolant	Straight shank	UD05C-0940	10	103	61	49	40			•
9.45	3	External coolant	Straight shank	UD03-0945	10	89	47	35	40	M10*1.25		•
	5	External coolant	Straight shank	UD05-0945	10	103	61	49	40			•
	3	Internal coolant	Straight shank	UD03C-0945	10	89	47	35	40			•
	5	Internal coolant	Straight shank	UD05C-0945	10	103	61	49	40			•
9.5	3	External coolant	Straight shank	UD03-0950	10	89	47	35	40			•
	5	External coolant	Straight shank	UD05-0950	10	103	61	49	40			•
	3	Internal coolant	Straight shank	UD03C-0950	10	89	47	35	40			•
	5	Internal coolant	Straight shank	UD05C-0950	10	103	61	49	40			•
9.6	3	External coolant	Straight shank	UD03-0960	10	89	47	35	40	M10*1		•
	5	External coolant	Straight shank	UD05-0960	10	103	61	49	40			•
	3	Internal coolant	Straight shank	UD03C-0960	10	89	47	35	40			•
	5	Internal coolant	Straight shank	UD05C-0960	10	103	61	49	40			•
9.7	3	External coolant	Straight shank	UD03-0970	10	89	47	35	40			•
	5	External coolant	Straight shank	UD05-0970	10	103	61	49	40			•
	3	Internal coolant	Straight shank	UD03C-0970	10	89	47	35	40			•
	5	Internal coolant	Straight shank	UD05C-0970	10	103	61	49	40			•
9.8	3	External coolant	Straight shank	UD03-0980	10	89	47	35	40			•
	5	External coolant	Straight shank	UD05-0980	10	103	61	49	40			•
	3	Internal coolant	Straight shank	UD03C-0980	10	89	47	35	40			•
	5	Internal coolant	Straight shank	UD05C-0980	10	103	61	49	40			•

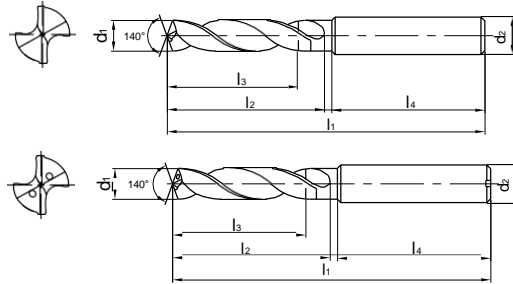
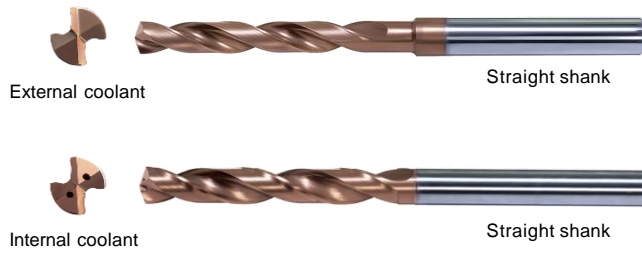
• Stock available ○ Make-to order



Drill diameter d ₁ (m ₇)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d ₂ (h ₈)	l ₁	l ₂	l ₃	l ₄			
9.9	3	External coolant	Straight shank	UD03-0990	10	89	47	35	40	7/16-20UNF		●
	5	External coolant	Straight shank	UD05-0990	10	103	61	49	40			●
	3	Internal coolant	Straight shank	UD03C-0990	10	89	47	35	40			●
	5	Internal coolant	Straight shank	UD05C-0990	10	103	61	49	40			●
10	3	External coolant	Straight shank	UD03-1000	10	89	47	35	40			●
	5	External coolant	Straight shank	UD05-1000	10	103	61	49	40			●
	3	Internal coolant	Straight shank	UD03C-1000	10	89	47	35	40			●
	5	Internal coolant	Straight shank	UD05C-1000	10	103	61	49	40			●
10.1	3	External coolant	Straight shank	UD03-1010S	11	102	55	40	45			○
	5	External coolant	Straight shank	UD05-1010S	11	118	71	56	45			○
	3	Internal coolant	Straight shank	UD03C-1010S	11	102	55	40	45			○
	5	Internal coolant	Straight shank	UD05C-1010S	11	118	71	56	45			○
	3	External coolant	Straight shank	UD03-1010	12	102	55	40	45			●
	5	External coolant	Straight shank	UD05-1010	12	118	71	56	45			●
	3	Internal coolant	Straight shank	UD03C-1010	12	102	55	40	45			●
	5	Internal coolant	Straight shank	UD05C-1010	12	118	71	56	45			●
10.2	3	External coolant	Straight shank	UD03-1020S	11	102	55	40	45			○
	5	External coolant	Straight shank	UD05-1020S	11	118	71	56	45			○
	3	Internal coolant	Straight shank	UD03C-1020S	11	102	55	40	45			○
	5	Internal coolant	Straight shank	UD05C-1020S	11	118	71	56	45			○
	3	External coolant	Straight shank	UD03-1020	12	102	55	40	45			●
	5	External coolant	Straight shank	UD05-1020	12	118	71	56	45			●
	3	Internal coolant	Straight shank	UD03C-1020	12	102	55	40	45			●
	5	Internal coolant	Straight shank	UD05C-1020	12	118	71	56	45			●
10.25	3	External coolant	Straight shank	UD03-1025S	11	102	55	40	45	M12*1.75		○
	5	External coolant	Straight shank	UD05-1025S	11	118	71	56	45			○
	3	Internal coolant	Straight shank	UD03C-1025S	11	102	55	40	45			○
	5	Internal coolant	Straight shank	UD05C-1025S	11	118	71	56	45			○
	3	External coolant	Straight shank	UD03-1025	12	102	55	40	45			●
	5	External coolant	Straight shank	UD05-1025	12	118	71	56	45			●
	3	Internal coolant	Straight shank	UD03C-1025	12	102	55	40	45			●
	5	Internal coolant	Straight shank	UD05C-1025	12	118	71	56	45			●
10.3	3	External coolant	Straight shank	UD03-1030S	12	102	55	40	45	7/16-14UNC		○
	5	External coolant	Straight shank	UD05-1030S	12	118	71	56	45			○
	3	Internal coolant	Straight shank	UD03C-1030S	12	102	55	40	45			○
	5	Internal coolant	Straight shank	UD05C-1030S	12	118	71	56	45			○
	3	External coolant	Straight shank	UD03-1030	12	102	55	40	45			●
	5	External coolant	Straight shank	UD05-1030	12	118	71	56	45			●
	3	Internal coolant	Straight shank	UD03C-1030	12	102	55	40	45			●
	5	Internal coolant	Straight shank	UD05C-1030	12	118	71	56	45			●

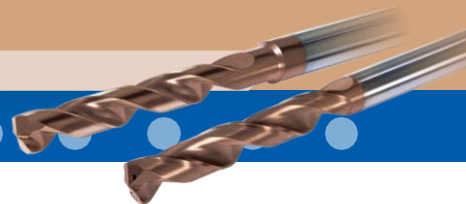
● Stock available ○ Make-to order

UD series twist drill for general machining



Drill diameter $d_1(m_7)$	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					$\phi_2(h_8)$	l_1	l_2	l_3	l_4			
10.4	3	External coolant	Straight shank	UD03-1040S	11	102	55	40	45	M12*1.5	7/16-20UNF	○
	5	External coolant	Straight shank	UD05-1040S	11	118	71	56	45			○
	3	Internal coolant	Straight shank	UD03C-1040S	11	102	55	40	45			○
	5	Internal coolant	Straight shank	UD05C-1040S	11	118	71	56	45			○
	3	External coolant	Straight shank	UD03-1040	12	102	55	40	45			●
	5	External coolant	Straight shank	UD05-1040	12	118	71	56	45			●
	3	Internal coolant	Straight shank	UD03C-1040	12	102	55	40	45			●
	5	Internal coolant	Straight shank	UD05C-1040	12	118	71	56	45			●
10.5	3	External coolant	Straight shank	UD03-1050S	11	102	55	40	45	M12*1.5	7/16-20UNF	○
	5	External coolant	Straight shank	UD05-1050S	11	118	71	56	45			○
	3	Internal coolant	Straight shank	UD03C-1050S	11	102	55	40	45			○
	5	Internal coolant	Straight shank	UD05C-1050S	11	118	71	56	45			○
	3	External coolant	Straight shank	UD03-1050	12	102	55	40	45			●
	5	External coolant	Straight shank	UD05-1050	12	118	71	56	45			●
	3	Internal coolant	Straight shank	UD03C-1050	12	102	55	40	45			●
	5	Internal coolant	Straight shank	UD05C-1050	12	118	71	56	45			●
10.6	3	External coolant	Straight shank	UD03-1060S	11	102	55	40	45	M12*1.5	7/16-20UNF	○
	5	External coolant	Straight shank	UD05-1060S	11	118	71	56	45			○
	3	Internal coolant	Straight shank	UD03C-1060S	11	102	55	40	45			○
	5	Internal coolant	Straight shank	UD05C-1060S	11	118	71	56	45			○
	3	External coolant	Straight shank	UD03-1060	12	102	55	40	45			●
	5	External coolant	Straight shank	UD05-1060	12	118	71	56	45			●
	3	Internal coolant	Straight shank	UD03C-1060	12	102	55	40	45			●
	5	Internal coolant	Straight shank	UD05C-1060	12	118	71	56	45			●
10.7	3	External coolant	Straight shank	UD03-1070S	11	102	55	40	45	M12*1.5	7/16-20UNF	○
	5	External coolant	Straight shank	UD05-1070S	11	118	71	56	45			○
	3	Internal coolant	Straight shank	UD03C-1070S	11	102	55	40	45			○
	5	Internal coolant	Straight shank	UD05C-1070S	11	118	71	56	45			○
	3	External coolant	Straight shank	UD03-1070	12	102	55	40	45			●
	5	External coolant	Straight shank	UD05-1070	12	118	71	56	45			●
	3	Internal coolant	Straight shank	UD03C-1070	12	102	55	40	45			●
	5	Internal coolant	Straight shank	UD05C-1070	12	118	71	56	45			●

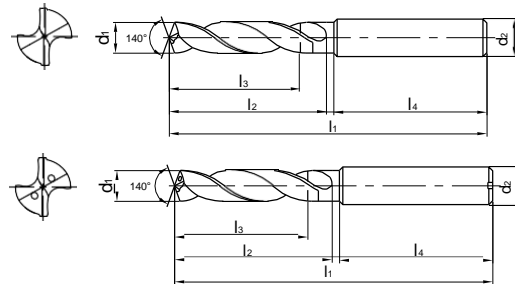
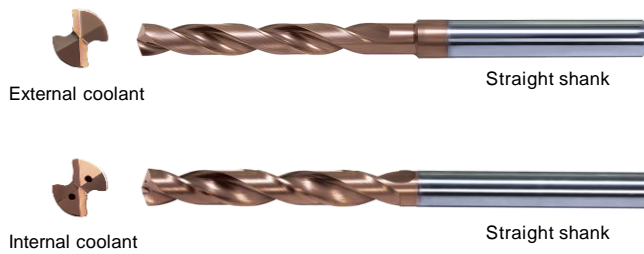
● Stock available ○ Make-to order



Drill diameter d ₁ (mm)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d ₂ (h _e)	l ₁	l ₂	l ₃	l ₄			
10.75	3	External coolant	Straight shank	UD03-1075S	11	102	55	40	45	M12*1.25		○
	5	External coolant	Straight shank	UD05-1075S	11	118	71	56	45			○
	3	Internal coolant	Straight shank	UD03C-1075S	11	102	55	40	45			○
	5	Internal coolant	Straight shank	UD05C-1075S	11	118	71	56	45			○
	3	External coolant	Straight shank	UD03-1075	12	102	55	40	45			●
	5	External coolant	Straight shank	UD05-1075	12	118	71	56	45			●
	3	Internal coolant	Straight shank	UD03C-1075	12	102	55	40	45			●
10.8	5	Internal coolant	Straight shank	UD05C-1075	12	118	71	56	45		●	
	3	External coolant	Straight shank	UD03-1080S	11	102	55	40	45	1/2-13UNC		○
	5	External coolant	Straight shank	UD05-1080S	11	118	71	56	45			○
	3	Internal coolant	Straight shank	UD03C-1080S	11	102	55	40	45			○
	5	Internal coolant	Straight shank	UD05C-1080S	11	118	71	56	45			○
	3	External coolant	Straight shank	UD03-1080	12	102	55	40	45			●
	5	External coolant	Straight shank	UD05-1080	12	118	71	56	45			●
3	Internal coolant	Straight shank	UD03C-1080	12	102	55	40	45			●	
10.9	5	Internal coolant	Straight shank	UD05C-1080	12	118	71	56	45		●	
	3	External coolant	Straight shank	UD03-1090S	11	102	55	40	45			○
	5	External coolant	Straight shank	UD05-1090S	11	118	71	56	45			○
	3	Internal coolant	Straight shank	UD03C-1090S	11	102	55	40	45			○
	5	Internal coolant	Straight shank	UD05C-1090S	11	118	71	56	45			○
	3	External coolant	Straight shank	UD03-1090	12	102	55	40	45			●
	5	External coolant	Straight shank	UD05-1090	12	118	71	56	45			●
3	Internal coolant	Straight shank	UD03C-1090	12	102	55	40	45			●	
11	5	Internal coolant	Straight shank	UD05C-1090	12	118	71	56	45		●	
	3	External coolant	Straight shank	UD03-1100S	11	102	55	40	45			○
	5	External coolant	Straight shank	UD05-1100S	11	118	71	56	45			○
	3	Internal coolant	Straight shank	UD03C-1100S	11	102	55	40	45			○
	5	Internal coolant	Straight shank	UD05C-1100S	11	118	71	56	45			○
	3	External coolant	Straight shank	UD03-1100	12	102	55	40	45			●
	5	External coolant	Straight shank	UD05-1100	12	118	71	56	45			●
3	Internal coolant	Straight shank	UD03C-1100	12	102	55	40	45			●	
11.1	5	Internal coolant	Straight shank	UD05C-1100	12	118	71	56	45		●	
	3	External coolant	Straight shank	UD03-1110	12	102	55	40	45		●	
	5	External coolant	Straight shank	UD05-1110	12	118	71	56	45		●	
	3	Internal coolant	Straight shank	UD03C-1110	12	102	55	40	45		●	
11.2	5	Internal coolant	Straight shank	UD05C-1110	12	118	71	56	45		●	
	3	External coolant	Straight shank	UD03-1120	12	102	55	40	45		●	
	5	External coolant	Straight shank	UD05-1120	12	118	71	56	45		●	
	3	Internal coolant	Straight shank	UD03C-1120	12	102	55	40	45		●	
11.2	5	Internal coolant	Straight shank	UD05C-1120	12	118	71	56	45		●	

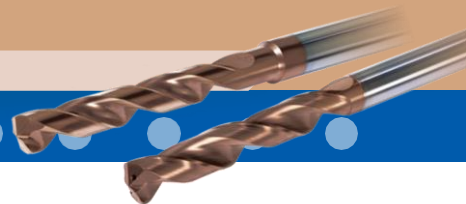
● Stock available ○ Make-to order

UD series twist drill for general machining



Drill diameter d1 (m7)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension (mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d2 (h6)	l1	l2	l3	l4			
11.25	3	External coolant	Straight shank	UD03-1125	12	102	55	40	45	M12*1.75	•	
	5	External coolant	Straight shank	UD05-1125	12	118	71	56	45		•	
	3	Internal coolant	Straight shank	UD03C-1125	12	102	55	40	45		•	
	5	Internal coolant	Straight shank	UD05C-1125	12	118	71	56	45		•	
11.3	3	External coolant	Straight shank	UD03-1130	12	102	55	40	45	M12*1.5	•	
	5	External coolant	Straight shank	UD05-1130	12	118	71	56	45		•	
	3	Internal coolant	Straight shank	UD03C-1130	12	102	55	40	45		•	
	5	Internal coolant	Straight shank	UD05C-1130	12	118	71	56	45		•	
11.35	3	External coolant	Straight shank	UD03-1135	12	102	55	40	45	M12*1.25	•	
	5	External coolant	Straight shank	UD05-1135	12	118	71	56	45		•	
	3	Internal coolant	Straight shank	UD03C-1135	12	102	55	40	45		•	
	5	Internal coolant	Straight shank	UD05C-1135	12	118	71	56	45		•	
11.4	3	External coolant	Straight shank	UD03-1140	12	102	55	40	45	M12*1.25	•	
	5	External coolant	Straight shank	UD05-1140	12	118	71	56	45		•	
	3	Internal coolant	Straight shank	UD03C-1140	12	102	55	40	45		•	
	5	Internal coolant	Straight shank	UD05C-1140	12	118	71	56	45		•	
11.45	3	External coolant	Straight shank	UD03-1145	12	102	55	40	45	M12*1.25	•	
	5	External coolant	Straight shank	UD05-1145	12	118	71	56	45		•	
	3	Internal coolant	Straight shank	UD03C-1145	12	102	55	40	45		•	
	5	Internal coolant	Straight shank	UD05C-1145	12	118	71	56	45		•	
11.5	3	External coolant	Straight shank	UD03-1150	12	102	55	40	45	1/2-20UNF	•	
	5	External coolant	Straight shank	UD05-1150	12	118	71	56	45		•	
	3	Internal coolant	Straight shank	UD03C-1150	12	102	55	40	45		•	
	5	Internal coolant	Straight shank	UD05C-1150	12	118	71	56	45		•	
11.6	3	External coolant	Straight shank	UD03-1160	12	102	55	40	45	M12*1.25	•	
	5	External coolant	Straight shank	UD05-1160	12	118	71	56	45		•	
	3	Internal coolant	Straight shank	UD03C-1160	12	102	55	40	45		•	
	5	Internal coolant	Straight shank	UD05C-1160	12	118	71	56	45		•	
11.7	3	External coolant	Straight shank	UD03-1170	12	102	55	40	45	M12*1.25	•	
	5	External coolant	Straight shank	UD05-1170	12	118	71	56	45		•	
	3	Internal coolant	Straight shank	UD03C-1170	12	102	55	40	45		•	
	5	Internal coolant	Straight shank	UD05C-1170	12	118	71	56	45		•	

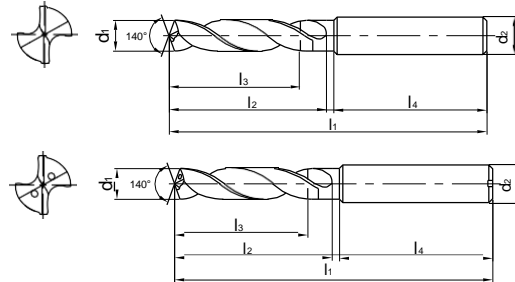
• Stock available ○ Make-to order



Drill diameter d ₁ (m ₇)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d ₂ (h ₈)	l ₁	l ₂	l ₃	l ₄			
11.8	3	External coolant	Straight shank	UD03-1180	12	102	55	40	45	1/2-13UNC	●	
	5	External coolant	Straight shank	UD05-1180	12	118	71	56	45		●	
	3	Internal coolant	Straight shank	UD03C-1180	12	102	55	40	45		●	
	5	Internal coolant	Straight shank	UD05C-1180	12	118	71	56	45		●	
11.9	3	External coolant	Straight shank	UD03-1190	12	102	55	40	45		●	
	5	External coolant	Straight shank	UD05-1190	12	118	71	56	45		●	
	3	Internal coolant	Straight shank	UD03C-1190	12	102	55	40	45		●	
	5	Internal coolant	Straight shank	UD05C-1190	12	118	71	56	45		●	
12	3	External coolant	Straight shank	UD03-1200	12	102	55	40	45	M14*2	●	
	5	External coolant	Straight shank	UD05-1200	12	118	71	56	45		●	
	3	Internal coolant	Straight shank	UD03C-1200	12	102	55	40	45		●	
	5	Internal coolant	Straight shank	UD05C-1200	12	118	71	56	45		●	
12.1	3	External coolant	Straight shank	UD03-1210	14	107	60	43	45	1/2-20UNF	●	
	5	External coolant	Straight shank	UD05-1210	14	124	77	60	45		●	
	3	Internal coolant	Straight shank	UD03C-1210	14	107	60	43	45		●	
	5	Internal coolant	Straight shank	UD05C-1210	14	124	77	60	45		●	
12.2	3	External coolant	Straight shank	UD03-1220	14	107	60	43	45	9/16-12UNC	●	
	5	External coolant	Straight shank	UD05-1220	14	124	77	60	45		●	
	3	Internal coolant	Straight shank	UD03C-1220	14	107	60	43	45		●	
	5	Internal coolant	Straight shank	UD05C-1220	14	124	77	60	45		●	
12.25	3	External coolant	Straight shank	UD03-1225	14	107	60	43	45		●	
	5	External coolant	Straight shank	UD05-1225	14	124	77	60	45		●	
	3	Internal coolant	Straight shank	UD03C-1225	14	107	60	43	45		●	
	5	Internal coolant	Straight shank	UD05C-1225	14	124	77	60	45		●	
12.3	3	External coolant	Straight shank	UD03-1230	14	107	60	43	45		●	
	5	External coolant	Straight shank	UD05-1230	14	124	77	60	45		●	
	3	Internal coolant	Straight shank	UD03C-1230	14	107	60	43	45		●	
	5	Internal coolant	Straight shank	UD05C-1230	14	124	77	60	45		●	
12.4	3	External coolant	Straight shank	UD03-1240	14	107	60	43	45		○	
	5	External coolant	Straight shank	UD05-1240	14	124	77	60	45		○	
	3	Internal coolant	Straight shank	UD03C-1240	14	107	60	43	45		○	
	5	Internal coolant	Straight shank	UD05C-1240	14	124	77	60	45		○	
12.5	3	External coolant	Straight shank	UD03-1250	14	107	60	43	45	M14*1.5	●	
	5	External coolant	Straight shank	UD05-1250	14	124	77	60	45		●	
	3	Internal coolant	Straight shank	UD03C-1250	14	107	60	43	45		●	
	5	Internal coolant	Straight shank	UD05C-1250	14	124	77	60	45		●	
12.6	3	External coolant	Straight shank	UD03-1260	14	107	60	43	45		○	
	5	External coolant	Straight shank	UD05-1260	14	124	77	60	45		○	
	3	Internal coolant	Straight shank	UD03C-1260	14	107	60	43	45		○	
	5	Internal coolant	Straight shank	UD05C-1260	14	124	77	60	45		○	

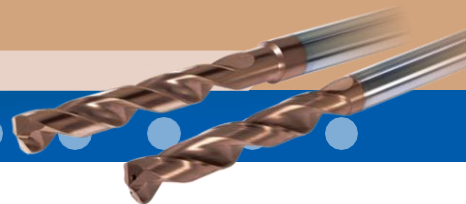
● Stock available ○ Make-to order

UD series twist drill for general machining



Drill diameter d ₁ (m ₇)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					∅ ₂ (h ₈)	l ₁	l ₂	l ₃	l ₄			
12.7	3	External coolant	Straight shank	UD03-1270	14	107	60	43	45			●
	5	External coolant	Straight shank	UD05-1270	14	124	77	60	45			●
	3	Internal coolant	Straight shank	UD03C-1270	14	107	60	43	45			●
	5	Internal coolant	Straight shank	UD05C-1270	14	124	77	60	45			●
12.75	3	External coolant	Straight shank	UD03-1275	14	107	60	43	45			●
	5	External coolant	Straight shank	UD05-1275	14	124	77	60	45			●
	3	Internal coolant	Straight shank	UD03C-1275	14	107	60	43	45			●
	5	Internal coolant	Straight shank	UD05C-1275	14	124	77	60	45			●
12.8	3	External coolant	Straight shank	UD03-1280	14	107	60	43	45			●
	5	External coolant	Straight shank	UD05-1280	14	124	77	60	45			●
	3	Internal coolant	Straight shank	UD03C-1280	14	107	60	43	45			●
	5	Internal coolant	Straight shank	UD05C-1280	14	124	77	60	45			●
12.9	3	External coolant	Straight shank	UD03-1290	14	107	60	43	45	9/16-18UNF		●
	5	External coolant	Straight shank	UD05-1290	14	124	77	60	45			●
	3	Internal coolant	Straight shank	UD03C-1290	14	107	60	43	45			●
	5	Internal coolant	Straight shank	UD05C-1290	14	124	77	60	45			●
13	3	External coolant	Straight shank	UD03-1300	14	107	60	43	45			●
	5	External coolant	Straight shank	UD05-1300	14	124	77	60	45			●
	3	Internal coolant	Straight shank	UD03C-1300	14	107	60	43	45			●
	5	Internal coolant	Straight shank	UD05C-1300	14	124	77	60	45			●
13.1	3	External coolant	Straight shank	UD03-1310	14	107	60	43	45	M14*2		●
	5	External coolant	Straight shank	UD05-1310	14	124	77	60	45			●
	3	Internal coolant	Straight shank	UD03C-1310	14	107	60	43	45			●
	5	Internal coolant	Straight shank	UD05C-1310	14	124	77	60	45			●
13.2	3	External coolant	Straight shank	UD03-1320	14	107	60	43	45			○
	5	External coolant	Straight shank	UD05-1320	14	124	77	60	45			○
	3	Internal coolant	Straight shank	UD03C-1320	14	107	60	43	45			○
	5	Internal coolant	Straight shank	UD05C-1320	14	124	77	60	45			○
13.3	3	External coolant	Straight shank	UD03-1330	14	107	60	43	45			○
	5	External coolant	Straight shank	UD05-1330	14	124	77	60	45			○
	3	Internal coolant	Straight shank	UD03C-1330	14	107	60	43	45			○
	5	Internal coolant	Straight shank	UD05C-1330	14	124	77	60	45			○

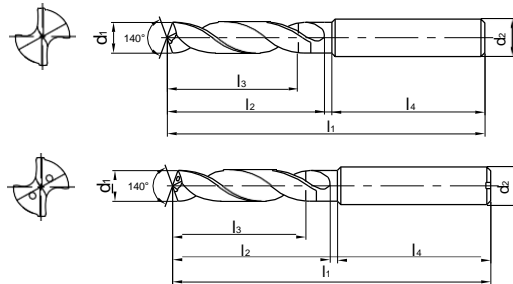
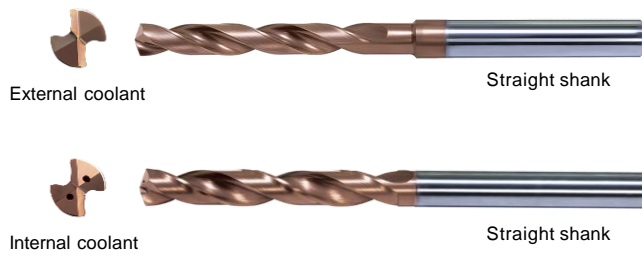
● Stock available ○ Make-to order



Drill diameter d ₁ (m ₇)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade KDG302 3
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d ₂ (h ₆)	l ₁	l ₂	l ₃	l ₄			
13.35	3	External coolant	Straight shank	UD03-1335	14	107	60	43	45	M14*1.5 9/16-12UNC	●	
	5	External coolant	Straight shank	UD05-1335	14	124	77	60	45		●	
	3	Internal coolant	Straight shank	UD03C-1335	14	107	60	43	45		●	
	5	Internal coolant	Straight shank	UD05C-1335	14	124	77	60	45		●	
13.4	3	External coolant	Straight shank	UD03-1340	14	107	60	43	45	5/8-11UNC	○	
	5	External coolant	Straight shank	UD05-1340	14	124	77	60	45		○	
	3	Internal coolant	Straight shank	UD03C-1340	14	107	60	43	45		○	
	5	Internal coolant	Straight shank	UD05C-1340	14	124	77	60	45		○	
13.5	3	External coolant	Straight shank	UD03-1350	14	107	60	43	45	9/16-18UNF	●	
	5	External coolant	Straight shank	UD05-1350	14	124	77	60	45		●	
	3	Internal coolant	Straight shank	UD03C-1350	14	107	60	43	45		●	
	5	Internal coolant	Straight shank	UD05C-1350	14	124	77	60	45		●	
13.6	3	External coolant	Straight shank	UD03-1360	14	107	60	43	45	M16*2	○	
	5	External coolant	Straight shank	UD05-1360	14	124	77	60	45		○	
	3	Internal coolant	Straight shank	UD03C-1360	14	107	60	43	45		○	
	5	Internal coolant	Straight shank	UD05C-1360	14	124	77	60	45		○	
13.65	3	External coolant	Straight shank	UD03-1365	14	107	60	43	45	M16*2	●	
	5	External coolant	Straight shank	UD05-1365	14	124	77	60	45		●	
	3	Internal coolant	Straight shank	UD03C-1365	14	107	60	43	45		●	
	5	Internal coolant	Straight shank	UD05C-1365	14	124	77	60	45		●	
13.7	3	External coolant	Straight shank	UD03-1370	14	107	60	43	45	M16*2	○	
	5	External coolant	Straight shank	UD05-1370	14	124	77	60	45		○	
	3	Internal coolant	Straight shank	UD03C-1370	14	107	60	43	45		○	
	5	Internal coolant	Straight shank	UD05C-1370	14	124	77	60	45		○	
13.8	3	External coolant	Straight shank	UD03-1380	14	107	60	43	45	M16*2	●	
	5	External coolant	Straight shank	UD05-1380	14	124	77	60	45		●	
	3	Internal coolant	Straight shank	UD03C-1380	14	107	60	43	45		●	
	5	Internal coolant	Straight shank	UD05C-1380	14	124	77	60	45		●	
13.9	3	External coolant	Straight shank	UD03-1390	14	107	60	43	45	M16*2	○	
	5	External coolant	Straight shank	UD05-1390	14	124	77	60	45		○	
	3	Internal coolant	Straight shank	UD03C-1390	14	107	60	43	45		○	
	5	Internal coolant	Straight shank	UD05C-1390	14	124	77	60	45		○	
14	3	External coolant	Straight shank	UD03-1400	14	107	60	43	45	M16*2	●	
	5	External coolant	Straight shank	UD05-1400	14	124	77	60	45		●	
	3	Internal coolant	Straight shank	UD03C-1400	14	107	60	43	45		●	
	5	Internal coolant	Straight shank	UD05C-1400	14	124	77	60	45		●	
14.1	3	External coolant	Straight shank	UD03-1410	16	115	65	45	48	M16*2	○	
	5	External coolant	Straight shank	UD05-1410	16	133	83	63	48		○	
	3	Internal coolant	Straight shank	UD03C-1410	16	115	65	45	48		○	
	5	Internal coolant	Straight shank	UD05C-1410	16	133	83	63	48		○	

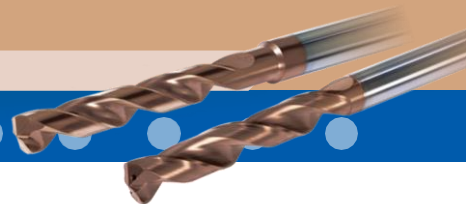
● Stock available ○ Make-to order

UD series twist drill for general machining



Drill diameter d ₁ (m ₇)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					∅ ₂ (h ₈)	l ₁	l ₂	l ₃	l ₄			
14.2	3	External coolant	Straight shank	UD03-1420	16	115	65	45	48			○
	5	External coolant	Straight shank	UD05-1420	16	133	83	63	48			○
	3	Internal coolant	Straight shank	UD03C-1420	16	115	65	45	48			○
	5	Internal coolant	Straight shank	UD05C-1420	16	133	83	63	48			○
14.25	3	External coolant	Straight shank	UD03-1425	16	115	65	45	48			●
	5	External coolant	Straight shank	UD05-1425	16	133	83	63	48			●
	3	Internal coolant	Straight shank	UD03C-1425	16	115	65	45	48			●
	5	Internal coolant	Straight shank	UD05C-1425	16	133	83	63	48			●
14.3	3	External coolant	Straight shank	UD03-1430	16	115	65	45	48			●
	5	External coolant	Straight shank	UD05-1430	16	133	83	63	48			●
	3	Internal coolant	Straight shank	UD03C-1430	16	115	65	45	48			●
	5	Internal coolant	Straight shank	UD05C-1430	16	133	83	63	48			●
14.4	3	External coolant	Straight shank	UD03-1440	16	115	65	45	48			○
	5	External coolant	Straight shank	UD05-1440	16	133	83	63	48			○
	3	Internal coolant	Straight shank	UD03C-1440	16	115	65	45	48			○
	5	Internal coolant	Straight shank	UD05C-1440	16	133	83	63	48			○
14.5	3	External coolant	Straight shank	UD03-1450	16	115	65	45	48	M16*1.5; 5/8-18UNF		●
	5	External coolant	Straight shank	UD05-1450	16	133	83	63	48			●
	3	Internal coolant	Straight shank	UD03C-1450	16	115	65	45	48			●
	5	Internal coolant	Straight shank	UD05C-1450	16	133	83	63	48			●
14.6	3	External coolant	Straight shank	UD03-1460	16	115	65	45	48			○
	5	External coolant	Straight shank	UD05-1460	16	133	83	63	48			○
	3	Internal coolant	Straight shank	UD03C-1460	16	115	65	45	48			○
	5	Internal coolant	Straight shank	UD05C-1460	16	133	83	63	48			○
14.7	3	External coolant	Straight shank	UD03-1470	16	115	65	45	48			○
	5	External coolant	Straight shank	UD05-1470	16	133	83	63	48			○
	3	Internal coolant	Straight shank	UD03C-1470	16	115	65	45	48			○
	5	Internal coolant	Straight shank	UD05C-1470	16	133	83	63	48			○
14.75	3	External coolant	Straight shank	UD03-1475	16	115	65	45	48			●
	5	External coolant	Straight shank	UD05-1475	16	133	83	63	48			●
	3	Internal coolant	Straight shank	UD03C-1475	16	115	65	45	48			●
	5	Internal coolant	Straight shank	UD05C-1475	16	133	83	63	48			●

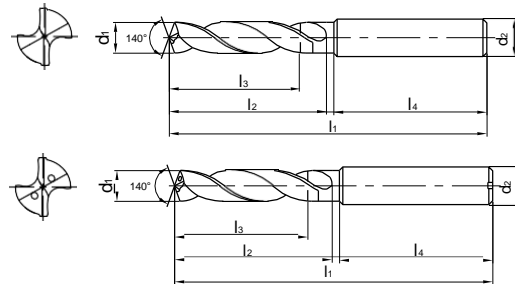
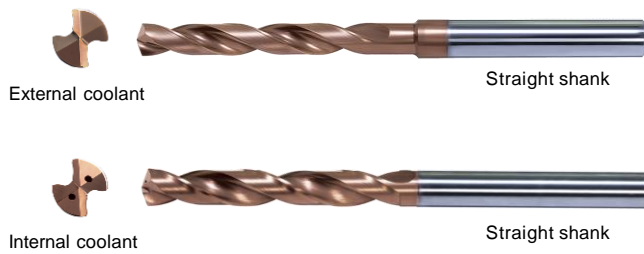
● Stock available ○ Make-to order



Drill diameter d ₁ (m ₇)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d ₂ (h ₈)	l ₁	l ₂	l ₃	l ₄			
14.8	3	External coolant	Straight shank	UD03-1480	16	115	65	45	48	5/8-11UNC	●	
	5	External coolant	Straight shank	UD05-1480	16	133	83	63	48		●	
	3	Internal coolant	Straight shank	UD03C-1480	16	115	65	45	48		●	
	5	Internal coolant	Straight shank	UD05C-1480	16	133	83	63	48		●	
14.9	3	External coolant	Straight shank	UD03-1490	16	115	65	45	48		○	
	5	External coolant	Straight shank	UD05-1490	16	133	83	63	48		○	
	3	Internal coolant	Straight shank	UD03C-1490	16	115	65	45	48		○	
	5	Internal coolant	Straight shank	UD05C-1490	16	133	83	63	48		○	
15	3	External coolant	Straight shank	UD03-1500	16	115	65	45	48		●	
	5	External coolant	Straight shank	UD05-1500	16	133	83	63	48		●	
	3	Internal coolant	Straight shank	UD03C-1500	16	115	65	45	48		●	
	5	Internal coolant	Straight shank	UD05C-1500	16	133	83	63	48		●	
15.1	3	External coolant	Straight shank	UD03-1510	16	115	65	45	48	M16*2	●	
	5	External coolant	Straight shank	UD05-1510	16	133	83	63	48		●	
	3	Internal coolant	Straight shank	UD03C-1510	16	115	65	45	48		●	
	5	Internal coolant	Straight shank	UD05C-1510	16	133	83	63	48		●	
15.2	3	External coolant	Straight shank	UD03-1520	16	115	65	45	48		○	
	5	External coolant	Straight shank	UD05-1520	16	133	83	63	48		○	
	3	Internal coolant	Straight shank	UD03C-1520	16	115	65	45	48		○	
	5	Internal coolant	Straight shank	UD05C-1520	16	133	83	63	48		○	
15.25	3	External coolant	Straight shank	UD03-1525	16	115	65	45	48	5/8-18UNF	●	
	5	External coolant	Straight shank	UD05-1525	16	133	83	63	48		●	
	3	Internal coolant	Straight shank	UD03C-1525	16	115	65	45	48		●	
	5	Internal coolant	Straight shank	UD05C-1525	16	133	83	63	48		●	
15.3	3	External coolant	Straight shank	UD03-1530	16	115	65	45	48		○	
	5	External coolant	Straight shank	UD05-1530	16	133	83	63	48		○	
	3	Internal coolant	Straight shank	UD03C-1530	16	115	65	45	48		○	
	5	Internal coolant	Straight shank	UD05C-1530	16	133	83	63	48		○	
15.35	3	External coolant	Straight shank	UD03-1535	16	115	65	45	48	M16*1.5	●	
	5	External coolant	Straight shank	UD05-1535	16	133	83	63	48		●	
	3	Internal coolant	Straight shank	UD03C-1535	16	115	65	45	48		●	
	5	Internal coolant	Straight shank	UD05C-1535	16	133	83	63	48		●	
15.4	3	External coolant	Straight shank	UD03-1540	16	115	65	45	48		○	
	5	External coolant	Straight shank	UD05-1540	16	133	83	63	48		○	
	3	Internal coolant	Straight shank	UD03C-1540	16	115	65	45	48		○	
	5	Internal coolant	Straight shank	UD05C-1540	16	133	83	63	48		○	
15.5	3	External coolant	Straight shank	UD03-1550	16	115	65	45	48	M18*2.5	●	
	5	External coolant	Straight shank	UD05-1550	16	133	83	63	48		●	
	3	Internal coolant	Straight shank	UD03C-1550	16	115	65	45	48		●	
	5	Internal coolant	Straight shank	UD05C-1550	16	133	83	63	48		●	

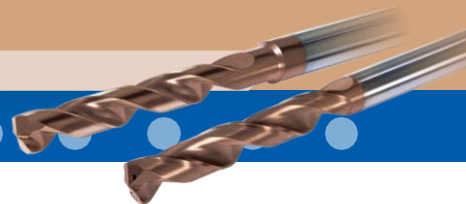
● Stock available ○ Make-to order

UD series twist drill for general machining



Drill diameter $d_1(m_7)$	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					$\phi_2(h_8)$	l_1	l_2	l_3	l_4			
15.6	3	External coolant	Straight shank	UD03-1560	16	115	65	45	48			○
	5	External coolant	Straight shank	UD05-1560	16	133	83	63	48			○
	3	Internal coolant	Straight shank	UD03C-1560	16	115	65	45	48			○
	5	Internal coolant	Straight shank	UD05C-1560	16	133	83	63	48			○
15.7	3	External coolant	Straight shank	UD03-1570	16	115	65	45	48			○
	5	External coolant	Straight shank	UD05-1570	16	133	83	63	48			○
	3	Internal coolant	Straight shank	UD03C-1570	16	115	65	45	48			○
	5	Internal coolant	Straight shank	UD05C-1570	16	133	83	63	48			○
15.8	3	External coolant	Straight shank	UD03-1580	16	115	65	45	48			●
	5	External coolant	Straight shank	UD05-1580	16	133	83	63	48			●
	3	Internal coolant	Straight shank	UD03C-1580	16	115	65	45	48			●
	5	Internal coolant	Straight shank	UD05C-1580	16	133	83	63	48			●
15.9	3	External coolant	Straight shank	UD03-1590	16	115	65	45	48			○
	5	External coolant	Straight shank	UD05-1590	16	133	83	63	48			○
	3	Internal coolant	Straight shank	UD03C-1590	16	115	65	45	48			○
	5	Internal coolant	Straight shank	UD05C-1590	16	133	83	63	48			○
16	3	External coolant	Straight shank	UD03-1600	16	115	65	45	48	M18*2		●
	5	External coolant	Straight shank	UD05-1600	16	133	83	63	48			●
	3	Internal coolant	Straight shank	UD03C-1600	16	115	65	45	48			●
	5	Internal coolant	Straight shank	UD05C-1600	16	133	83	63	48			●
16.5	3	External coolant	Straight shank	UD03-1650	18	123	73	51	48	3/4-10UNC		●
	5	External coolant	Straight shank	UD05-1650	18	143	93	71	48			●
	3	Internal coolant	Straight shank	UD03C-1650	18	123	73	51	48			●
	5	Internal coolant	Straight shank	UD05C-1650	18	143	93	71	48			●
16.75	3	External coolant	Straight shank	UD03-1675	18	123	73	51	48			●
	5	External coolant	Straight shank	UD05-1675	18	143	93	71	48			●
	3	Internal coolant	Straight shank	UD03C-1675	18	123	73	51	48			●
	5	Internal coolant	Straight shank	UD05C-1675	18	143	93	71	48			●
16.8	3	External coolant	Straight shank	UD03-1680	18	123	73	51	48	M18*2.5		●
	5	External coolant	Straight shank	UD05-1680	18	143	93	71	48			●
	3	Internal coolant	Straight shank	UD03C-1680	18	123	73	51	48			●
	5	Internal coolant	Straight shank	UD05C-1680	18	143	93	71	48			●

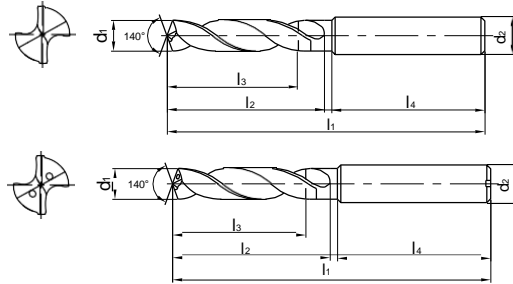
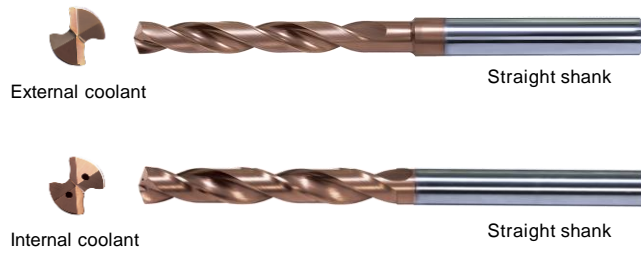
● Stock available ○ Make-to order



Drill diameter d ₂ (m ₇)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps	
					d ₂ (h ₆)	l ₁	l ₂	l ₃	l ₄			
17	3	External coolant	Straight shank	UD03-1700	18	123	73	51	48			●
	5	External coolant	Straight shank	UD05-1700	18	143	93	71	48			●
	3	Internal coolant	Straight shank	UD03C-1700	18	123	73	51	48			●
	5	Internal coolant	Straight shank	UD05C-1700	18	143	93	71	48			●
17.5	3	External coolant	Straight shank	UD03-1750	18	123	73	51	48	M20*2.5; 3/4-16UNF		●
	5	External coolant	Straight shank	UD05-1750	18	143	93	71	48			●
	3	Internal coolant	Straight shank	UD03C-1750	18	123	73	51	48			●
	5	Internal coolant	Straight shank	UD05C-1750	18	143	93	71	48			●
17.8	3	External coolant	Straight shank	UD03-1780	18	123	73	51	48			●
	5	External coolant	Straight shank	UD05-1780	18	143	93	71	48			●
	3	Internal coolant	Straight shank	UD03C-1780	18	123	73	51	48			●
	5	Internal coolant	Straight shank	UD05C-1780	18	143	93	71	48			●
17.9	3	External coolant	Straight shank	UD03-1790	18	123	73	51	48		3/4-10UNC	●
	5	External coolant	Straight shank	UD05-1790	18	143	93	71	48			●
	3	Internal coolant	Straight shank	UD03C-1790	18	123	73	51	48			●
	5	Internal coolant	Straight shank	UD05C-1790	18	143	93	71	48			●
18	3	External coolant	Straight shank	UD03-1800	18	123	73	51	48	M20*2		●
	5	External coolant	Straight shank	UD05-1800	18	143	93	71	48			●
	3	Internal coolant	Straight shank	UD03C-1800	18	123	73	51	48			●
	5	Internal coolant	Straight shank	UD05C-1800	18	143	93	71	48			●
18.3	3	External coolant	Straight shank	UD03-1830	20	131	79	55	50		3/4-16UNF	●
	5	External coolant	Straight shank	UD05-1830	20	153	101	77	50			●
	3	Internal coolant	Straight shank	UD03C-1830	20	131	79	55	50			●
	5	Internal coolant	Straight shank	UD05C-1830	20	153	101	77	50			●
18.5	3	External coolant	Straight shank	UD03-1850	20	131	79	55	50			●
	5	External coolant	Straight shank	UD05-1850	20	153	101	77	50			●
	3	Internal coolant	Straight shank	UD03C-1850	20	131	79	55	50			●
	5	Internal coolant	Straight shank	UD05C-1850	20	153	101	77	50			●
18.8	3	External coolant	Straight shank	UD03-1880	20	131	79	55	50		M20*2.5	●
	5	External coolant	Straight shank	UD05-1880	20	153	101	77	50			●
	3	Internal coolant	Straight shank	UD03C-1880	20	131	79	55	50			●
	5	Internal coolant	Straight shank	UD05C-1880	20	153	101	77	50			●
19	3	External coolant	Straight shank	UD03-1900	20	131	79	55	50			●
	5	External coolant	Straight shank	UD05-1900	20	153	101	77	50			●
	3	Internal coolant	Straight shank	UD03C-1900	20	131	79	55	50			●
	5	Internal coolant	Straight shank	UD05C-1900	20	153	101	77	50			●
19.5	3	External coolant	Straight shank	UD03-1950	20	131	79	55	50		M22*2.5; 7/8-9UNC	●
	5	External coolant	Straight shank	UD05-1950	20	153	101	77	50			●
	3	Internal coolant	Straight shank	UD03C-1950	20	131	79	55	50			●
	5	Internal coolant	Straight shank	UD05C-1950	20	153	101	77	50			●

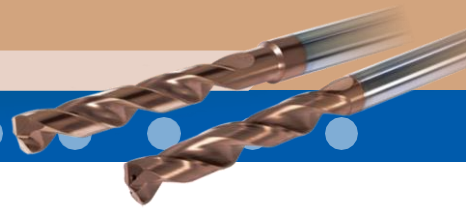
● Stock available ○ Make-to order

UD series twist drill for general machining



Drill diameter d ₁ (m ₇)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade	
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps		
					d ₂ (h ₈)	l ₁	l ₂	l ₃	l ₄				
19.8	3	External coolant	Straight shank	UD03-1980	20	131	79	55	50			●	
	5	External coolant	Straight shank	UD05-1980	20	153	101	77	50			●	
	3	Internal coolant	Straight shank	UD03C-1980	20	131	79	55	50			●	
	5	Internal coolant	Straight shank	UD05C-1980	20	153	101	77	50			●	
20	3	External coolant	Straight shank	UD03-2000	20	131	79	55	50	M22*2		●	
	5	External coolant	Straight shank	UD05-2000	20	153	101	77	50			●	
	3	Internal coolant	Straight shank	UD03C-2000	20	131	79	55	50	M22*2		●	
	5	Internal coolant	Straight shank	UD05C-2000	20	153	101	77	50			●	
20.4	3	External coolant	Straight shank	UD03-2040	20	141	86	60	50	7/8-14UNF		●	
	5	External coolant	Straight shank	UD05-2040	20	167	112	85	50			●	
	3	Internal coolant	Straight shank	UD03C-2040	20	141	86	60	50			●	
	5	Internal coolant	Straight shank	UD05C-2040	20	167	112	85	50			●	
20.5	3	External coolant	Straight shank	UD03-2050	20	141	86	60	50			●	
	5	External coolant	Straight shank	UD05-2050	20	167	112	85	50			●	
	3	Internal coolant	Straight shank	UD03C-2050	20	141	86	60	50			●	
	5	Internal coolant	Straight shank	UD05C-2050	20	167	112	85	50			●	
21	3	External coolant	Straight shank	UD03-2100	20	141	86	60	50	M24*3	7/8-9UNC	●	
	5	External coolant	Straight shank	UD05-2100	20	167	112	85	50				●
	3	Internal coolant	Straight shank	UD03C-2100	20	141	86	60	50				●
	5	Internal coolant	Straight shank	UD05C-2100	20	167	112	85	50				●
21.4	3	External coolant	Straight shank	UD03-2140	20	141	86	60	50	7/8-14UNF		●	
	5	External coolant	Straight shank	UD05-2140	20	167	112	85	50			●	
	3	Internal coolant	Straight shank	UD03C-2140	20	141	86	60	50			●	
	5	Internal coolant	Straight shank	UD05C-2140	20	167	112	85	50			●	
21.5	3	External coolant	Straight shank	UD03-2150	20	141	86	60	50			●	
	5	External coolant	Straight shank	UD05-2150	20	167	112	85	50			●	
	3	Internal coolant	Straight shank	UD03C-2150	20	141	86	60	50			●	
	5	Internal coolant	Straight shank	UD05C-2150	20	167	112	85	50			●	
22	3	External coolant	Straight shank	UD03-2200	20	141	86	60	50	M24*2		●	
	5	External coolant	Straight shank	UD05-2200	20	167	112	85	50			●	
	3	Internal coolant	Straight shank	UD03C-2200	20	141	86	60	50			●	
	5	Internal coolant	Straight shank	UD05C-2200	20	167	112	85	50			●	

● Stock available ○ Make-to order



Drill diameter d ₁ (m ₇)	Drilling depth (l/d)	Cooling mode	Shank type	Type	Dimension(mm)					suitable threading tools		Grade	
					shank diameter	ovrrall length	flute length	recommended drilling depth	shank length	Cutting taps/ thread milling	Forming taps		
					d ₂ (h ₈)	l ₁	l ₂	l ₃	l ₄				
22.25	3	External coolant	Straight shank	UD03-2225	25	153	95	65	56	1-8UNC		•	
	5	External coolant	Straight shank	UD05-2225	25	184	126	98	56			•	
	3	Internal coolant	Straight shank	UD03C-2225	25	153	95	65	56			•	
	5	Internal coolant	Straight shank	UD05C-2225	25	184	126	98	56			•	
22.5	3	External coolant	Straight shank	UD03-2250	25	153	95	65	56			•	
	5	External coolant	Straight shank	UD05-2250	25	184	126	98	56			•	
	3	Internal coolant	Straight shank	UD03C-2250	25	153	95	65	56			•	
	5	Internal coolant	Straight shank	UD05C-2250	25	184	126	98	56			•	
23	3	External coolant	Straight shank	UD03-2300	25	153	95	65	56	M25*2		•	
	5	External coolant	Straight shank	UD05-2300	25	184	126	98	56			•	
	3	Internal coolant	Straight shank	UD03C-2300	25	153	95	65	56			•	
	5	Internal coolant	Straight shank	UD05C-2300	25	184	126	98	56			•	
23.25	3	External coolant	Straight shank	UD03-2325	25	153	95	65	56	1-12UNF		•	
	5	External coolant	Straight shank	UD05-2325	25	184	126	98	56			•	
	3	Internal coolant	Straight shank	UD03C-2325	25	153	95	65	56			•	
	5	Internal coolant	Straight shank	UD05C-2325	25	184	126	98	56			•	
23.5	3	External coolant	Straight shank	UD03-2350	25	153	95	65	56			•	
	5	External coolant	Straight shank	UD05-2350	25	184	126	98	56			•	
	3	Internal coolant	Straight shank	UD03C-2350	25	153	95	65	56			•	
	5	Internal coolant	Straight shank	UD05C-2350	25	184	126	98	56			•	
24	3	External coolant	Straight shank	UD03-2400	25	153	95	65	56	M27*3	1-8UNC	•	
	5	External coolant	Straight shank	UD05-2400	25	184	126	98	56				•
	3	Internal coolant	Straight shank	UD03C-2400	25	153	95	65	56				•
	5	Internal coolant	Straight shank	UD05C-2400	25	184	126	98	56				•
24.5	3	External coolant	Straight shank	UD03-2450	25	153	95	65	56		1-12UNF	•	
	5	External coolant	Straight shank	UD05-2450	25	184	126	98	56				•
	3	Internal coolant	Straight shank	UD03C-2450	25	153	95	65	56				•
	5	Internal coolant	Straight shank	UD05C-2450	25	184	126	98	56				•
25	3	External coolant	Straight shank	UD03-2500	25	153	95	65	56	M27*2; 11/8-7UNC		•	
	5	External coolant	Straight shank	UD05-2500	25	184	126	98	56			•	
	3	Internal coolant	Straight shank	UD03C-2500	25	153	95	65	56			•	
	5	Internal coolant	Straight shank	UD05C-2500	25	184	126	98	56			•	

• Stock available ○ Make-to order

• Applicable material table

⊙ Very suitable ○ Suitable

Workpiece material										
Soft steel HB ≤ 180	Carbon steel, alloy steel	Pre-hardened steel, Hardened steel			Stainless steel	Cast iron	Nodular cast iron	Alluminium alloy	Copper alloy	Heat resistant alloy
		~40HRC	~50HRC	~60HRC						
⊙	⊙	⊙	○		⊙	⊙	⊙			○

3D

5D

UD series drill(external coolant)

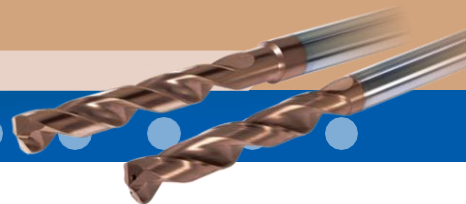
Workpiece material	Soft steel HB≤180		Carbon steel, alloy steel~30HRC		Pre-hardened steel ~40HRC		Stainless steel		Cast iron		Nodular cast iron		Heat-resistant alloy	
Cutting speed	60~150m/min		60~150m/min		40~70m/min		25~60m/min		60~150m/min		50~120m/min		15~30m/min	
Diameter (mm)	Rotating speed (min ⁻¹)	Feed rate (mm/r)	Rotating speed (min ⁻¹)	Feed rate (mm/r)	Rotating speed (min ⁻¹)	Feed rate (mm/r)	Rotating speed (min ⁻¹)	Feed rate (mm/r)	Rotating speed (min ⁻¹)	Feed rate (mm/r)	Rotating speed (min ⁻¹)	Feed rate (mm/r)	Rotating speed (min ⁻¹)	Feed rate (mm/r)
2	15000	0.06~0.10	15000	0.06~0.10	9500	0.06~0.10	5500	0.02~0.06	15000	0.06~0.10	11000	0.06~0.10	3200	0.02~0.05
3	10500	0.09~0.15	10500	0.09~0.15	6300	0.09~0.15	4500	0.03~0.09	10500	0.09~0.15	9000	0.09~0.15	2500	0.03~0.07
4	7700	0.10~0.18	7700	0.10~0.18	4700	0.10~0.18	3500	0.04~0.10	7700	0.10~0.18	6800	0.10~0.18	2000	0.04~0.09
5	6800	0.12~0.21	6800	0.12~0.21	3800	0.12~0.21	3000	0.05~0.12	6800	0.12~0.21	5500	0.12~0.21	1500	0.05~0.10
6	6400	0.14~0.24	6400	0.14~0.24	3100	0.14~0.24	2500	0.06~0.15	6400	0.14~0.24	4800	0.14~0.24	1200	0.06~0.12
8	5500	0.16~0.27	5500	0.16~0.27	2400	0.16~0.27	2000	0.08~0.18	5500	0.16~0.27	4000	0.16~0.27	1000	0.08~0.15
10	3500	0.18~0.30	3500	0.18~0.30	1900	0.18~0.30	1500	0.10~0.21	3500	0.18~0.30	3200	0.18~0.30	800	0.10~0.18
12	3000	0.20~0.33	3000	0.20~0.33	1600	0.20~0.33	1200	0.12~0.24	3000	0.20~0.33	2500	0.20~0.33	600	0.12~0.20
14	2800	0.22~0.35	2800	0.22~0.35	1400	0.22~0.35	1100	0.13~0.27	2800	0.22~0.35	2200	0.22~0.35	540	0.13~0.22
16	2500	0.25~0.36	2500	0.25~0.36	1200	0.25~0.36	900	0.14~0.30	2500	0.25~0.36	1800	0.25~0.36	480	0.14~0.24
18	2000	0.28~0.38	2000	0.28~0.38	1100	0.28~0.38	800	0.15~0.30	2000	0.28~0.38	1600	0.28~0.38	420	0.15~0.26
20	1800	0.30~0.40	1800	0.30~0.40	950	0.30~0.40	750	0.16~0.32	1800	0.30~0.40	1400	0.30~0.40	360	0.16~0.28
25	1600	0.32~0.42	1600	0.32~0.42	900	0.32~0.42	700	0.17~0.32	1600	0.32~0.42	1200	0.32~0.42	300	0.17~0.30

1. When the tool is used for first time, please do a test cutting with 90% of the cutting speed or 85% of the feed rate stated above. 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 deflector dust, and keep the radial run-out of drill under 0.02mm.

4. These conditions above are applicable for cutting depth under 5D.



UD series drill (internal coolant)

3D

5D

Workpiece material	Soft steel HB≤180		Carbon steel, alloy steel~30HRC		Pre-hardened steel ~40HRC		Stainless steel		Cast iron		Nodular cast iron		Heat-resistant alloy	
Cutting speed	60~150m/min		60~150m/min		40~70m/min		25~60m/min		60~150m/min		50~120m/min		15~30m/min	
Diameter (mm)	Rotating speed (min ⁻¹)	Feed rate (mm/r)	Rotating speed (min ⁻¹)	Feed rate (mm/r)	Rotating speed (min ⁻¹)	Feed rate (mm/r)	Rotating speed (min ⁻¹)	Feed rate (mm/r)	Rotating speed (min ⁻¹)	Feed rate (mm/r)	Rotating speed (min ⁻¹)	Feed rate (mm/r)	Rotating speed (min ⁻¹)	Feed rate (mm/r)
3	13000	0.09~ 0.15	13000	0.09~ 0.15	7400	0.09~ 0.15	8000	0.03~ 0.08	13000	0.09~ 0.15	10000	0.09~ 0.15	3000	0.03~ 0.08
4	10600	0.10~ 0.18	10600	0.10~ 0.18	5600	0.10~ 0.18	6000	0.04~ 0.10	10600	0.10~ 0.18	8000	0.10~ 0.18	2400	0.04~ 0.10
5	9000	0.12~ 0.21	9000	0.12~ 0.21	4500	0.12~ 0.21	5000	0.05~ 0.12	9000	0.12~ 0.21	6700	0.12~ 0.21	1800	0.05~ 0.12
6	8000	0.14~ 0.24	8000	0.14~ 0.24	3700	0.14~ 0.24	4000	0.06~ 0.15	8000	0.14~ 0.24	6000	0.14~ 0.24	1600	0.06~ 0.14
8	6400	0.16~ 0.27	6400	0.16~ 0.27	2800	0.16~ 0.27	3000	0.08~ 0.18	6400	0.16~ 0.27	4800	0.16~ 0.27	1200	0.08~ 0.16
10	4800	0.18~ 0.30	4800	0.18~ 0.30	2200	0.18~ 0.30	2500	0.10~ 0.21	4800	0.18~ 0.30	3500	0.18~ 0.30	800	0.10~ 0.18
12	4000	0.20~ 0.33	4000	0.20~ 0.33	1900	0.20~ 0.33	2000	0.12~ 0.24	4000	0.20~ 0.33	3000	0.20~ 0.33	700	0.12~ 0.20
14	3500	0.22~ 0.35	3500	0.22~ 0.35	1600	0.22~ 0.35	1500	0.13~ 0.26	3500	0.22~ 0.35	2500	0.22~ 0.35	600	0.13~ 0.22
16	3000	0.25~ 0.36	3000	0.25~ 0.36	1400	0.25~ 0.36	1200	0.14~ 0.28	3000	0.25~ 0.36	2200	0.25~ 0.36	500	0.14~ 0.24
18	2500	0.28~ 0.38	2500	0.28~ 0.38	1200	0.28~ 0.38	1050	0.15~ 0.30	2500	0.28~ 0.38	2000	0.28~ 0.38	450	0.15~ 0.26
20	2200	0.30~ 0.40	2200	0.30~ 0.40	1100	0.30~ 0.40	950	0.16~ 0.32	2200	0.30~ 0.40	1600	0.30~ 0.40	400	0.16~ 0.28
25	1800	0.32~ 0.42	1800	0.32~ 0.42	900	0.32~ 0.42	700	0.17~ 0.34	1800	0.32~ 0.42	1200	0.32~ 0.42	320	0.17~ 0.30

1. When the tool is used for first time, please do a test cutting with 90% of the cutting speed or 85% of the feed rate stated above. 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 collect without any defector dust, and keep the radial run-out of drill under 0.02mm 4. These conditions above are applicable for cutting depth under 5D.

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