CDT

CARBIDE DRILLS FOR TITANIUM ALLOY

High-Efficiency Chip Breaking

Drills available in 3×d and 5×d cutting lengths !

ALL-NEW

P M K N S H

CDT CARBIDE DRILLS FOR TITANIUM ALLOY- High Performance

1. A specialized drill bit specifically developed for titanium alloy, nickel-based alloy and stainless steel.

2. The double margin design on the side edges enhances stability and improves precision in drilling.

3. The unique drill tip geometry enables effective chip breaking and prevents chip accumulation.

4. The optimized flute design ensures smoother chip evacuation and significantly enhances machining efficiency.

EFFECTIVE CHIP BREAKING!

Internal Coolant Drilling —
Effectively Achieve Chip Breaking !

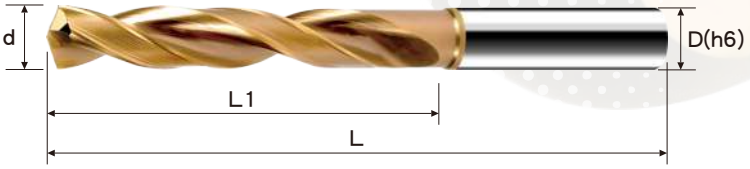
CMTéc

CDTC20800A (Φ8mm)

Material	SUS304	
Cutting speed	60	m/min
Spindle speed	2400	rpm
Feed rate	720	mm/min
Feed per revolution	0.3	mm/rev
Axial depth of cutting	20	mm

CMTéc

Carbide Drills For Titanium Alloy- 3d



MG 3xD 140° 30°

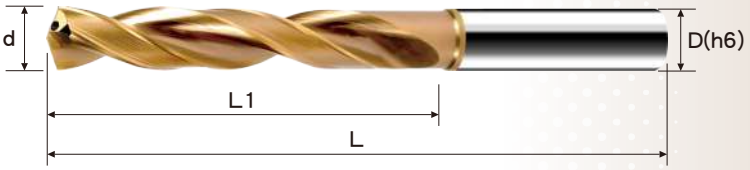
P M K N S H

d	L1	L	D	Non-coolant	Coolant
3.90	24	66	4	—	CDTC20390A
4.00	24	66	6	CDT20400A	CDTC20400A
4.10	24	66	6	CDT20410A	CDTC20410A
4.20	24	66	6	CDT20420A	CDTC20420A
4.30	24	66	6	CDT20430A	CDTC20430A
4.40	24	66	6	CDT20440A	CDTC20440A
4.50	24	66	6	CDT20450A	CDTC20450A
4.60	24	66	6	CDT20460A	CDTC20460A
4.65	24	66	6	CDT20465A	CDTC20465A
4.70	24	66	6	CDT20470A	CDTC20470A
4.76	24	66	6	CDT20476A	CDTC20476A
4.80	28	66	6	CDT20480A	CDTC20480A
4.90	28	66	6	CDT20490A	CDTC20490A
5.00	28	66	6	CDT20500A	CDTC20500A
5.10	28	66	6	CDT20510A	CDTC20510A
5.20	28	66	6	CDT20520A	CDTC20520A
5.30	28	66	6	CDT20530A	CDTC20530A
5.40	28	66	6	CDT20540A	CDTC20540A
5.50	28	66	6	CDT20550A	CDTC20550A
5.56	28	66	6	CDT20556A	CDTC20556A
5.60	28	66	6	CDT20560A	CDTC20560A
5.70	28	66	6	CDT20570A	CDTC20570A
5.80	28	66	6	CDT20580A	CDTC20580A
5.90	28	66	6	CDT20590A	CDTC20590A
6.00	28	66	6	CDT20600A	CDTC20600A
6.10	34	79	8	CDT20610A	CDTC20610A
6.20	34	79	8	CDT20620A	CDTC20620A
6.30	34	79	8	CDT20630A	CDTC20630A
6.35	34	79	8	CDT20635A	CDTC20635A
6.40	34	79	8	CDT20640A	CDTC20640A
6.50	34	79	8	CDT20650A	CDTC20650A
6.60	34	79	8	CDT20660A	CDTC20660A
6.70	34	79	8	CDT20670A	CDTC20670A
6.80	34	79	8	CDT20680A	CDTC20680A
6.90	34	79	8	CDT20690A	CDTC20690A
7.00	34	79	8	CDT20700A	CDTC20700A
7.10	41	79	8	CDT20710A	CDTC20710A
7.14	41	79	8	CDT20714A	CDTC20714A
7.20	41	79	8	CDT20720A	CDTC20720A
7.30	41	79	8	CDT20730A	CDTC20730A
7.40	41	79	8	CDT20740A	CDTC20740A
7.50	41	79	8	CDT20750A	CDTC20750A
7.60	41	79	8	CDT20760A	CDTC20760A
7.70	41	79	8	CDT20770A	CDTC20770A
7.80	41	79	8	CDT20780A	CDTC20780A
7.90	41	79	8	CDT20790A	CDTC20790A
7.94	41	79	8	CDT20794A	CDTC20794A
8.00	41	79	8	CDT20800A	CDTC20800A

d	L1	L	D	Non-coolant	Coolant
8.10	47	89	10	CDT20810A	CDTC20810A
8.20	47	89	10	CDT20820A	CDTC20820A
8.30	47	89	10	CDT20830A	CDTC20830A
8.40	47	89	10	CDT20840A	CDTC20840A
8.50	47	89	10	CDT20850A	CDTC20850A
8.60	47	89	10	CDT20860A	CDTC20860A
8.70	47	89	10	CDT20870A	CDTC20870A
8.80	47	89	10	CDT20880A	CDTC20880A
8.90	47	89	10	CDT20890A	CDTC20890A
9.00	47	89	10	CDT20900A	CDTC20900A
9.10	47	89	10	CDT20910A	CDTC20910A
9.20	47	89	10	CDT20920A	CDTC20920A
9.25	47	89	10	CDT20925A	CDTC20925A
9.30	47	89	10	CDT20930A	CDTC20930A
9.40	47	89	10	CDT20940A	CDTC20940A
9.50	47	89	10	CDT20950A	CDTC20950A
9.52	47	89	10	CDT20952A	CDTC20952A
9.60	47	89	10	CDT20960A	CDTC20960A
9.70	47	89	10	CDT20970A	CDTC20970A
9.80	47	89	10	CDT20980A	CDTC20980A
9.90	47	89	10	CDT20990A	CDTC20990A
10.00	47	89	10	CDT21000A	CDTC21000A
10.20	55	102	12	CDT21020A	CDTC21020A
10.50	55	102	12	CDT21050A	CDTC21050A
10.70	55	102	12	CDT21070A	CDTC21070A
11.00	55	102	12	CDT21100A	CDTC21100A
11.10	55	102	12	CDT21110A	—
11.20	55	102	12	CDT21120A	CDTC21120A
11.50	55	102	12	CDT21150A	CDTC21150A
11.70	55	102	12	CDT21170A	CDTC21170A
11.90	55	102	12	CDT21190A	—
12.00	55	102	12	CDT21200A	CDTC21200A
12.50	60	107	14	CDT21250A	CDTC21250A
12.70	60	107	14	CDT21270A	CDTC21270A
13.00	60	107	14	CDT21300A	CDTC21300A
13.50	60	107	14	—	CDTC21350A
13.70	60	107	14	—	CDTC21370A
14.00	60	107	14	CDT21400A	CDTC21400A
14.50	65	115	16	—	CDTC21450A
14.70	65	115	16	—	CDTC21470A
15.00	65	115	16	—	CDTC21500A
15.50	65	115	16	—	CDTC21550A
15.70	65	115	16	—	CDTC21570A
16.00	65	115	16	CDT21600A	CDTC21600A
18.00	73	123	18	CDT21800A	CDTC21800A
19.00	79	131	20	—	CDTC21900A
20.00	79	131	20	—	CDTC22000A

※ Non-coolant drills for machining titanium alloy, stainless steel and nickel-based alloy, G83 code (peck drilling) is recommended.

Carbide Drills For Titanium Alloy- 5d



MG 5xD 140° 30°

P M K N S H

d	L1	L	D	Coolant
3.40	28	60	4	CDTCF20340A
3.50	28	60	4	CDTCF20350A
3.70	28	60	4	CDTCF20370A
3.80	36	74	4	CDTCF20380A
4.00	36	74	6	CDTCF20400A
4.10	36	74	6	CDTCF20410A
4.20	36	74	6	CDTCF20420A
4.30	36	74	6	CDTCF20430A
4.40	36	74	6	CDTCF20440A
4.50	36	74	6	CDTCF20450A
4.60	36	74	6	CDTCF20460A
4.65	36	74	6	CDTCF20465A
4.70	36	74	6	CDTCF20470A
4.76	36	74	6	CDTCF20476A
4.80	44	82	6	CDTCF20480A
4.90	44	82	6	CDTCF20490A
5.00	44	82	6	CDTCF20500A
5.10	44	82	6	CDTCF20510A
5.20	44	82	6	CDTCF20520A
5.30	44	82	6	CDTCF20530A
5.40	44	82	6	CDTCF20540A
5.50	44	82	6	CDTCF20550A
5.55	44	82	6	CDTCF20555A
5.60	44	82	6	CDTCF20560A
5.70	44	82	6	CDTCF20570A
5.80	44	82	6	CDTCF20580A
5.90	44	82	6	CDTCF20590A
6.00	44	82	6	CDTCF20600A
6.10	53	91	8	CDTCF20610A
6.20	53	91	8	CDTCF20620A
6.30	53	91	8	CDTCF20630A
6.35	53	91	8	CDTCF20635A
6.40	53	91	8	CDTCF20640A
6.50	53	91	8	CDTCF20650A
6.60	53	91	8	CDTCF20660A
6.70	53	91	8	CDTCF20670A
6.80	53	91	8	CDTCF20680A
6.90	53	91	8	CDTCF20690A
7.00	53	91	8	CDTCF20700A
7.10	53	91	8	CDTCF20710A
7.14	53	91	8	CDTCF20714A
7.20	53	91	8	CDTCF20720A
7.30	53	91	8	CDTCF20730A
7.40	53	91	8	CDTCF20740A
7.50	53	91	8	CDTCF20750A
7.60	53	91	8	CDTCF20760A
7.70	53	91	8	CDTCF20770A
7.80	53	91	8	CDTCF20780A

d	L1	L	D	Coolant
7.90	53	91	8	CDTCF20790A
7.94	53	91	8	CDTCF20794A
8.00	53	91	8	CDTCF20800A
8.10	61	103	10	CDTCF20810A
8.20	61	103	10	CDTCF20820A
8.30	61	103	10	CDTCF20830A
8.40	61	103	10	CDTCF20840A
8.50	61	103	10	CDTCF20850A
8.60	61	103	10	CDTCF20860A
8.70	61	103	10	CDTCF20870A
8.80	61	103	10	CDTCF20880A
8.90	61	103	10	CDTCF20890A
9.00	61	103	10	CDTCF20900A
9.10	61	103	10	CDTCF20910A
9.20	61	103	10	CDTCF20920A
9.25	61	103	10	CDTCF20925A
9.30	61	103	10	CDTCF20930A
9.40	61	103	10	CDTCF20940A
9.50	61	103	10	CDTCF20950A
9.52	61	103	10	CDTCF20952A
9.60	61	103	10	CDTCF20960A
9.70	61	103	10	CDTCF20970A
9.80	61	103	10	CDTCF20980A
9.90	61	103	10	CDTCF20990A
10.00	61	103	10	CDTCF21000A
10.20	71	118	12	CDTCF21020A
10.50	71	118	12	CDTCF21050A
10.70	71	118	12	CDTCF21070A
11.00	71	118	12	CDTCF21100A
11.20	71	118	12	CDTCF21120A
11.50	71	118	12	CDTCF21150A
11.70	71	118	12	CDTCF21170A
12.00	71	118	12	CDTCF21200A
12.50	77	124	14	CDTCF21250A
12.70	77	124	14	CDTCF21270A
13.00	77	124	14	CDTCF21300A
13.50	77	124	14	CDTCF21350A
13.70	77	124	14	CDTCF21370A
14.00	77	124	14	CDTCF21400A
14.50	83	133	16	CDTCF21450A
14.70	83	133	16	CDTCF21470A
15.00	83	133	16	CDTCF21500A
15.50	83	133	16	CDTCF21550A
15.70	83	133	16	CDTCF21570A
16.00	83	133	16	CDTCF21600A
18.00	93	143	18	CDTCF21800A
19.00	101	153	20	CDTCF21900A
20.00	101	153	20	CDTCF22000A

CMTec / 2025-08-2K-VER.01

CUTTING TABLE

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Table 88 CDT CARBIDE DRILLS FOR TITANIUM ALLOY

SOLID CARBIDE DRILLS- DRILLING CONDITION TABLE

Material	Carbon Steels Alloy Steels		Stainless Steels				Titanium Alloys		Nickel-Based Alloys	
Material Code	S35C,S45C,S50C SCM,SKT,SKD		SUS304		SUS410,SUS440		Ti-6Al-4V		Inconel 718	
Hardness	HRC<35		—		HRC<45		HRC<45		HRC<45	
Vc	60~100m/min		50~90m/min		40~80m/min		20~40m/min		15~30m/min	
Diameter	S (rpm)	f (mm/rev)	S (rpm)	f (mm/rev)	S (rpm)	f (mm/rev)	S (rpm)	f (mm/rev)	S (rpm)	f (mm/rev)
4mm	4,800~8,000	0.04~0.12	4,000~7,200	0.04~0.11	3,200~6,400	0.04~0.11	1,600~3,200	0.04~0.08	1,200~2,400	0.04~0.08
6mm	3,200~5,300	0.06~0.18	2,700~4,800	0.06~0.17	2,100~4,200	0.06~0.17	1,000~2,100	0.06~0.12	800~1,600	0.06~0.12
8mm	2,400~4,000	0.08~0.24	2,000~3,600	0.08~0.22	1,600~3,200	0.08~0.22	800~1,600	0.08~0.16	600~1,200	0.08~0.16
10mm	1,900~3,200	0.10~0.30	1,600~2,900	0.10~0.28	1,300~2,500	0.10~0.28	600~1,300	0.10~0.20	500~1,000	0.10~0.20
12mm	1,600~2,700	0.12~0.36	1,300~2,400	0.12~0.33	1,000~2,100	0.12~0.33	500~1,100	0.12~0.24	400~800	0.12~0.24
16mm	1,200~2,000	0.16~0.40	1,000~1,800	0.16~0.32	800~1,600	0.16~0.32	400~800	0.16~0.32	300~600	0.16~0.32
20mm	1,000~1,600	0.20~0.50	800~1,400	0.20~0.40	600~1,300	0.20~0.40	300~600	0.20~0.40	240~480	0.20~0.40
Remarks	※ Non-coolant drills for machining titanium alloy, stainless steel and nickel-based alloy, G83 code (peck drilling cycle) is recommended. ※ Depth per peck：0.2~0.5D ※ Coolant drills are suitable for straight drilling operations.									

※ Cutting Formula：S = Vc × 1000 / D / π (3.14)　　F = f × S

1. When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.