



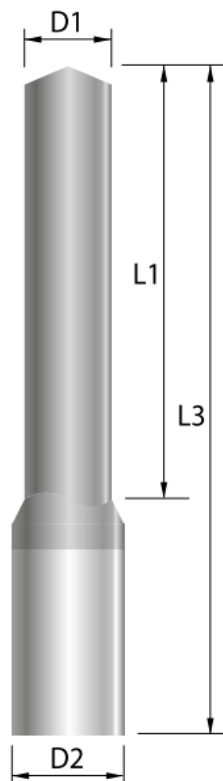
DAN

MICRO PUNTE 3XD



NEW PRODUCT

Carbide Drills



Type No.	Diameter	Flute Length	O.A.L.	Shank Dia.	Metric Thread Drill Size
	D1	L1	L3	D2	
DAN025	2.5	14.3	62	6	O
DAN030	3.0	17.1	62	6	
DAN033	3.3	18.8	62	6	O
DAN035	3.5	20.0	62	6	
DAN040	4.0	22.8	66	6	
DAN042	4.2	24.0	66	6	O
DAN045	4.5	25.7	66	6	
DAN050	5.0	28.6	66	6	O
DAN055	5.5	31.4	66	6	
DAN060	6.0	34.3	66	6	
DAN065	6.5	37.1	79	8	
DAN068	6.8	38.8	79	8	O
DAN070	7.0	40.0	79	8	
DAN080	8.0	45.7	79	8	
DAN085	8.5	48.5	103	10	O
DAN087	8.7	49.7	103	10	
DAN090	9.0	51.4	103	10	
DAN100	10.0	57.1	103	10	
DAN102	10.2	58.2	118	12	O
DAN110	11.0	62.8	118	12	
DAN120	12.0	68.5	118	12	O

La geometria speciale e il nuovo rivestimento G17 aumentano la durata dell'utensile. Adottando una nuova procedura di produzione, la superficie dell'utensile è più liscia, l'evacuazione del truciolo è più rapida e la durata dell'utensile è più lunga. Ideale per materiali difficili da tagliare, ad es. inconel, acciaio inossidabile. Adatto per acciai normali e acciaio temperato.



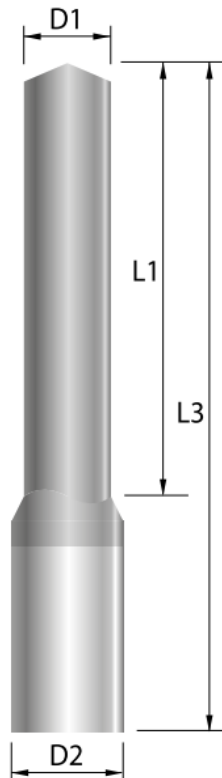
DAM

MICRO PUNTE 3XD



NEW PRODUCT

Carbide Micro Drills



Type No.	Diameter	Flute Length	O.A.L.	Shank Dia.
	D1	L1	L3	D2
DAM005	0.5	4.6	38	3
DAM006	0.6	4.8	38	3
DAM007	0.7	5	38	3
DAM008	0.8	5.2	38	3
DAM009	0.9	5.4	38	3
DAM010	1.0	6	38	3
DAM011	1.1	12	50	3
DAM012	1.2	12	50	3
DAM013	1.3	12	50	3
DAM014	1.4	12	50	3
DAM015	1.5	12	50	3
DAM016	1.6	12	50	3
DAM017	1.7	12	50	3
DAM018	1.8	12	50	3
DAM019	1.9	12	50	3
DAM020	2.0	12	50	3
DAM021	2.1	18	60	3
DAM022	2.2	18	60	3
DAM023	2.3	18	60	3
DAM024	2.4	18	60	3
DAM025	2.5	18	60	3
DAM026	2.6	18	60	3
DAM027	2.7	18	60	3
DAM028	2.8	18	60	3
DAM029	2.9	18	60	3
DAM030	3.0	18	60	3



DBM

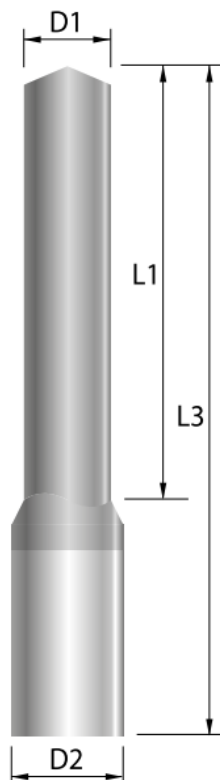
MICRO PUNTE 5XD



Type No.	Diameter	Flute Length	O.A.L.	Shank Dia.
	D1	L1	L3	D2
DBM005	0.5	10	50	3
DBM006	0.6	10	50	3
DBM007	0.7	10	50	3
DBM008	0.8	10	50	3
DBM009	0.9	10	50	3
DBM010	1.0	10	50	3
DBM011	1.1	20	50	3
DBM012	1.2	20	60	3
DBM013	1.3	20	60	3
DBM014	1.4	20	60	3
DBM015	1.5	20	60	3
DBM016	1.6	20	60	3
DBM017	1.7	20	60	3
DBM018	1.8	20	60	3
DBM019	1.9	20	60	3
DBM020	2.0	20	60	3
DBM021	2.1	28	66	3
DBM022	2.2	28	66	3
DBM023	2.3	28	66	3
DBM024	2.4	28	66	3
DBM025	2.5	28	66	3
DBM026	2.6	28	66	3
DBM027	2.7	28	66	3
DBM028	2.8	28	66	3
DBM029	2.9	28	66	3
DBM030	3.0	28	66	3

NEW PRODUCT

Carbide Micro Drills





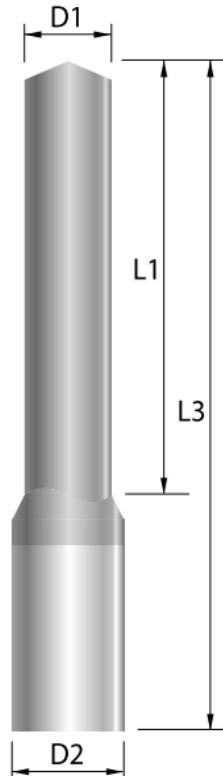
DAVO

PUNTE 3XD



NEW PRODUCT

Carbide Drills



Type No.	Diameter	Flute Length	O.A.L	Shank Dia.	Metric Thread
	D1	L1	L3	D2	
DAVO030	3	20	62	6	
DAVO031	3.1	20	62	6	
DAVO033	3.3	20	62	6	O
DAVO035	3.5	20	62	6	
DAVO040	4	24	66	6	
DAVO041	4.1	24	66	6	
DAVO042	4.2	24	66	6	O
DAVO045	4.5	24	66	6	
DAVO050	5	28	66	6	O
DAVO051	5.1	28	66	6	
DAVO055	5.5	28	66	6	
DAVO060	6	28	66	6	
DAVO065	6.5	34	79	8	
DAVO068	6.8	34	79	8	O
DAVO070	7	34	79	8	
DAVO075	7.5	41	79	8	
DAVO080	8	41	79	8	
DAVO085	8.5	47	89	10	O
DAVO087	8.7	47	89	10	
DAVO090	9	47	89	10	
DAVO100	10	47	89	10	
DAVO101	10.1	55	102	12	
DAVO103	10.3	55	102	12	O
DAVO110	11	55	102	12	
DAVO120	12	55	102	12	O

Design universale per forature da 18HRC a 52HRC, LUCIDANTE.
Punte "3D" per forature 3 volte il diametro, con fori di refrigerazione
Buon rapporto qualità/prezzo.



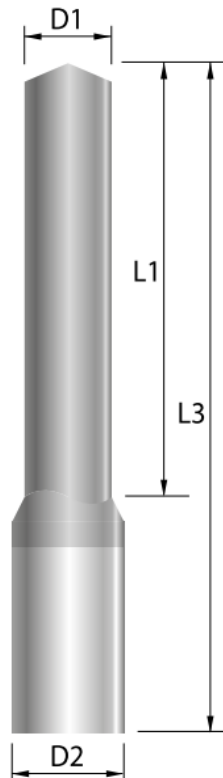
DBVO

PUNTE 5XD



NEW PRODUCT

Carbide Drills



Type No.	Diameter	Flute Length	O.A.L	Shank Dia.	Metric Thread Drill Size
	D1	L1	L3	D2	
DBVO030	3	28	66	6	
DBVO031	3.1	28	66	6	
DBVO033	3.3	28	66	6	O
DBVO035	3.5	28	66	6	
DBVO040	4	36	74	6	
DBVO041	4.1	36	74	6	
DBVO042	4.2	36	74	6	O
DBVO045	4.5	36	74	6	
DBVO050	5	44	82	6	O
DBVO051	5.1	44	82	6	
DBVO055	5.5	44	82	6	
DBVO060	6	44	82	6	
DBVO061	6.1	53	91	8	
DBVO065	6.5	53	91	8	
DBVO068	6.8	53	91	8	O
DBVO070	7	53	91	8	
DBVO071	7.1	53	91	8	
DBVO075	7.5	53	91	8	
DBVO080	8	53	91	8	
DBVO085	8.5	61	103	10	O
DBVO087	8.7	61	103	10	
DBVO090	9	61	103	10	
DBVO100	10	61	103	10	
DBVO110	11	71	118	12	
DBVO120	12	71	118	12	O

CARBIDE DRILL SERIES



INDEX

DAK



Explanation
P.1

Milling
Conditions

P.11
?
P.16

DBK



Explanation
P.3

Milling
Conditions

P.17
?
P.22

DAO



Explanation
P.5

Milling
Conditions

P.23
?
P.29

DBO



Explanation
P.7

Milling
Conditions

P.30
?
P.36

DCO



Explanation
P.9

Milling
Conditions

P.37
?
P.39

GUIDE LINE TO ICONS

CARBIDE



Super micro grain.

GRAIN SIZE



Grain size is 0.4 μm.

DRILLING DEPTH OF DIAMETER.



3 times of drilling depth of diameter.



5 times of drilling depth of diameter.



8 times of drilling depth of diameter.

HELIX ANGLE



Helix Angle is 30°

FLUTE



DRILL POINT HELIX



WORK MATERIAL HARDNESS



Work material hardness is up to HRC52.

COATING



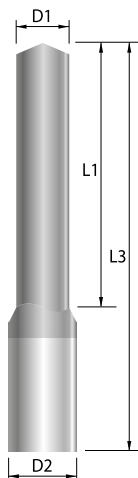
Good at difficult material, for MQL & Wet cutting.

DAK

Carbide Drills



Carbide Drill Series



TOLERANCE

D1	D1 Tolerance
3.0~5.9	$\frac{0}{-0.012}$
6.0~11.9	$\frac{0}{-0.015}$
12.0~15.8	$\frac{0}{-0.018}$
16.0~20.0	$\frac{0}{-0.021}$

D2	D2 Tolerance
Ø6	$\frac{0}{-0.008}$
Ø8	$\frac{0}{-0.008}$
Ø10	$\frac{0}{-0.009}$
Ø12	$\frac{0}{-0.011}$
Ø14	$\frac{0}{-0.011}$
Ø16	$\frac{0}{-0.011}$
Ø18	$\frac{0}{-0.011}$
Ø20	$\frac{0}{-0.013}$

unit : mm

SPECIFICATIONS

Type No.	D1 Diameter	L1 Flute Length	L3 O.A.L.	D2 Shank Dia.
DAK030	3.0	20	62	6
DAK031	3.1	20	62	6
DAK032	3.2	20	62	6
DAK033	3.3	20	62	6
DAK034	3.4	20	62	6
DAK035	3.5	20	62	6
DAK036	3.6	20	62	6
DAK037	3.7	20	62	6
DAK038	3.8	24	66	6
DAK039	3.9	24	66	6
DAK040	4.0	24	66	6
DAK041	4.1	24	66	6
DAK042	4.2	24	66	6
DAK043	4.3	24	66	6
DAK044	4.4	24	66	6
DAK045	4.5	24	66	6
DAK046	4.6	24	66	6
DAK047	4.7	24	66	6
DAK048	4.8	28	66	6
DAK049	4.9	28	66	6
DAK050	5.0	28	66	6
DAK051	5.1	28	66	6
DAK052	5.2	28	66	6
DAK053	5.3	28	66	6
DAK054	5.4	28	66	6
DAK055	5.5	28	66	6
DAK056	5.6	28	66	6
DAK057	5.7	28	66	6
DAK058	5.8	28	66	6
DAK059	5.9	28	66	6
DAK060	6.0	28	66	6
DAK061	6.1	34	79	8
DAK062	6.2	34	79	8

Type No.	D1 Diameter	L1 Flute Length	L3 O.A.L.	D2 Shank Dia.
DAK063	6.3	34	79	8
DAK064	6.4	34	79	8
DAK065	6.5	34	79	8
DAK066	6.6	34	79	8
DAK067	6.7	34	79	8
DAK068	6.8	34	79	8
DAK069	6.9	34	79	8
DAK070	7.0	34	79	8
DAK071	7.1	41	79	8
DAK072	7.2	41	79	8
DAK073	7.3	41	79	8
DAK074	7.4	41	79	8
DAK075	7.5	41	79	8
DAK076	7.6	41	79	8
DAK077	7.7	41	79	8
DAK078	7.8	41	79	8
DAK079	7.9	41	79	8
DAK080	8.0	41	79	8
DAK081	8.1	47	89	10
DAK082	8.2	47	89	10
DAK083	8.3	47	89	10
DAK084	8.4	47	89	10
DAK085	8.5	47	89	10
DAK086	8.6	47	89	10
DAK087	8.7	47	89	10
DAK088	8.8	47	89	10
DAK089	8.9	47	89	10
DAK090	9.0	47	89	10
DAK091	9.1	47	89	10
DAK092	9.2	47	89	10
DAK093	9.3	47	89	10
DAK094	9.4	47	89	10
DAK095	9.5	47	89	10
DAK096	9.6	47	89	10
DAK097	9.7	47	89	10
DAK098	9.8	47	89	10
DAK099	9.9	47	89	10
DAK100	10.0	47	89	10
DAK101	10.1	55	102	12
DAK102	10.2	55	102	12
DAK103	10.3	55	102	12
DAK104	10.4	55	102	12
DAK105	10.5	55	102	12
DAK106	10.6	55	102	12

Type No.	D1 Diameter	L1 Flute Length	L3 O.A.L.	D2 Shank Dia.
DAK107	10.7	55	102	12
DAK108	10.8	55	102	12
DAK109	10.9	55	102	12
DAK110	11.0	55	102	12
DAK111	11.1	55	102	12
DAK112	11.2	55	102	12
DAK113	11.3	55	102	12
DAK114	11.4	55	102	12
DAK115	11.5	55	102	12
DAK116	11.6	55	102	12
DAK117	11.7	55	102	12
DAK118	11.8	55	102	12
DAK119	11.9	55	102	12
DAK120	12.0	55	102	12
DAK123	12.3	60	107	14
DAK125	12.5	60	107	14
DAK128	12.8	60	107	14
DAK130	13.0	60	107	14
DAK135	13.5	60	107	14
DAK138	13.8	60	107	14
DAK140	14.0	60	107	14
DAK145	14.5	65	115	16
DAK148	14.8	65	115	16
DAK150	15.0	65	115	16
DAK155	15.5	65	115	16
DAK158	15.8	65	115	16
DAK160	16.0	65	115	16
DAK165	16.5	73	123	18
DAK168	16.8	73	123	18
DAK170	17.0	73	123	18
DAK175	17.5	73	123	18
DAK178	17.8	73	123	18
DAK180	18.0	73	123	18
DAK185	18.5	79	131	20
DAK190	19.0	79	131	20
DAK195	19.5	79	131	20
DAK198	19.8	79	131	20
DAK200	20.0	79	131	20

P.11~16 Please find the milling condition on P.11~16

DBK

Carbide Drills

Super
mg

0.4
μm

5D

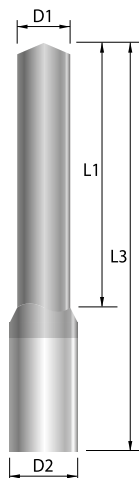
30°

2 Flutes

140°

HRC
52

G10



TOLERANCE

D1	D1 Tolerance
3.0~5.9	$\frac{0}{-0.012}$
6.0~11.9	$\frac{0}{-0.015}$
12.0~15.8	$\frac{0}{-0.018}$
16.0~20.0	$\frac{0}{-0.021}$

D2	D2 Tolerance
Ø6	$\frac{0}{-0.008}$
Ø8	$\frac{0}{-0.008}$
Ø10	$\frac{0}{-0.009}$
Ø12	$\frac{0}{-0.011}$
Ø14	$\frac{0}{-0.011}$
Ø16	$\frac{0}{-0.011}$
Ø18	$\frac{0}{-0.011}$
Ø20	$\frac{0}{-0.013}$

unit : mm

SPECIFICATIONS

Type No.	D1 Diameter	L1 Flute Length	L3 O.A.L.	D2 Shank Dia.
DBK030	3.0	28	66	6
DBK031	3.1	28	66	6
DBK032	3.2	28	66	6
DBK033	3.3	28	66	6
DBK034	3.4	28	66	6
DBK035	3.5	28	66	6
DBK036	3.6	28	66	6
DBK037	3.7	28	66	6
DBK038	3.8	36	74	6
DBK039	3.9	36	74	6
DBK040	4.0	36	74	6
DBK041	4.1	36	74	6
DBK042	4.2	36	74	6
DBK043	4.3	36	74	6
DBK044	4.4	36	74	6
DBK045	4.5	36	74	6
DBK046	4.6	36	74	6
DBK047	4.7	36	74	6
DBK048	4.8	44	82	6
DBK049	4.9	44	82	6
DBK050	5.0	44	82	6
DBK051	5.1	44	82	6
DBK052	5.2	44	82	6
DBK053	5.3	44	82	6
DBK054	5.4	44	82	6
DBK055	5.5	44	82	6
DBK056	5.6	44	82	6
DBK057	5.7	44	82	6
DBK058	5.8	44	82	6
DBK059	5.9	44	82	6
DBK060	6.0	44	82	6
DBK061	6.1	53	91	8
DBK062	6.2	53	91	8

Carbide Drill Series

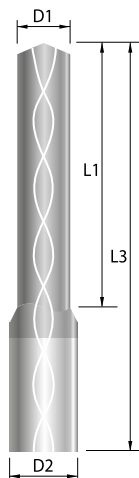
Type No.	D1 Diameter	L1 Flute Length	L3 O.A.L.	D2 Shank Dia.
DBK063	6.3	53	91	8
DBK064	6.4	53	91	8
DBK065	6.5	53	91	8
DBK066	6.6	53	91	8
DBK067	6.7	53	91	8
DBK068	6.8	53	91	8
DBK069	6.9	53	91	8
DBK070	7.0	53	91	8
DBK071	7.1	53	91	8
DBK072	7.2	53	91	8
DBK073	7.3	53	91	8
DBK074	7.4	53	91	8
DBK075	7.5	53	91	8
DBK076	7.6	53	91	8
DBK077	7.7	53	91	8
DBK078	7.8	53	91	8
DBK079	7.9	53	91	8
DBK080	8.0	53	91	8
DBK081	8.1	61	103	10
DBK082	8.2	61	103	10
DBK083	8.3	61	103	10
DBK084	8.4	61	103	10
DBK085	8.5	61	103	10
DBK086	8.6	61	103	10
DBK087	8.7	61	103	10
DBK088	8.8	61	103	10
DBK089	8.9	61	103	10
DBK090	9.0	61	103	10
DBK091	9.1	61	103	10
DBK092	9.2	61	103	10
DBK093	9.3	61	103	10
DBK094	9.4	61	103	10
DBK095	9.5	61	103	10
DBK096	9.6	61	103	10
DBK097	9.7	61	103	10
DBK098	9.8	61	103	10
DBK099	9.9	61	103	10
DBK100	10.0	61	103	10
DBK101	10.1	71	118	12
DBK102	10.2	71	118	12
DBK103	10.3	71	118	12
DBK104	10.4	71	118	12
DBK105	10.5	71	118	12
DBK106	10.6	71	118	12

Type No.	D1 Diameter	L1 Flute Length	L3 O.A.L.	D2 Shank Dia.
DBK107	10.7	71	118	12
DBK108	10.8	71	118	12
DBK109	10.9	71	118	12
DBK110	11.0	71	118	12
DBK111	11.1	71	118	12
DBK112	11.2	71	118	12
DBK113	11.3	71	118	12
DBK114	11.4	71	118	12
DBK115	11.5	71	118	12
DBK116	11.6	71	118	12
DBK117	11.7	71	118	12
DBK118	11.8	71	118	12
DBK119	11.9	71	118	12
DBK120	12.0	71	118	12
DBK123	12.3	77	124	14
DBK125	12.5	77	124	14
DBK128	12.8	77	124	14
DBK130	13.0	77	124	14
DBK135	13.5	77	124	14
DBK138	13.8	77	124	14
DBK140	14.0	77	124	14
DBK145	14.5	83	133	16
DBK148	14.8	83	133	16
DBK150	15.0	83	133	16
DBK155	15.5	83	133	16
DBK158	15.8	83	133	16
DBK160	16.0	83	133	16
DBK165	16.5	93	143	18
DBK168	16.8	93	143	18
DBK170	17.0	93	143	18
DBK175	17.5	93	143	18
DBK178	17.8	93	143	18
DBK180	18.0	93	143	18
DBK185	18.5	101	153	20
DBK190	19.0	101	153	20
DBK195	19.5	101	153	20
DBK198	19.8	101	153	20
DBK200	20.0	101	153	20

P.17~22 Please find the milling condition on P.17~22

DAO

Carbide Drills W/ Internal Coolant Hole



TOLERANCE

D1	D1 Tolerance
3.0~5.9	$\frac{0}{-0.012}$
6.0~11.9	$\frac{0}{-0.015}$
12.0~15.8	$\frac{0}{-0.018}$
16.0~20.0	$\frac{0}{-0.021}$

D2	D2 Tolerance
Ø6	$\frac{0}{-0.008}$
Ø8	$\frac{0}{-0.008}$
Ø10	$\frac{0}{-0.009}$
Ø12	$\frac{0}{-0.011}$
Ø14	$\frac{0}{-0.011}$
Ø16	$\frac{0}{-0.011}$
Ø18	$\frac{0}{-0.011}$
Ø20	$\frac{0}{-0.013}$

unit : mm

SPECIFICATIONS

Type No.	D1 Diameter	L1 Flute Length	L3 O.A.L.	D2 Shank Dia.
DAO030	3.0	20	62	6
DAO031	3.1	20	62	6
DAO032	3.2	20	62	6
DAO033	3.3	20	62	6
DAO034	3.4	20	62	6
DAO035	3.5	20	62	6
DAO036	3.6	20	62	6
DAO037	3.7	20	62	6
DAO038	3.8	24	66	6
DAO039	3.9	24	66	6
DAO040	4.0	24	66	6
DAO041	4.1	24	66	6
DAO042	4.2	24	66	6
DAO043	4.3	24	66	6
DAO044	4.4	24	66	6
DAO045	4.5	24	66	6
DAO046	4.6	24	66	6
DAO047	4.7	24	66	6
DAO048	4.8	28	66	6
DAO049	4.9	28	66	6
DAO050	5.0	28	66	6
DAO051	5.1	28	66	6
DAO052	5.2	28	66	6
DAO053	5.3	28	66	6
DAO054	5.4	28	66	6
DAO055	5.5	28	66	6
DAO056	5.6	28	66	6
DAO057	5.7	28	66	6
DAO058	5.8	28	66	6
DAO059	5.9	28	66	6
DAO060	6.0	28	66	6
DAO061	6.1	34	79	8
DAO062	6.2	34	79	8

Carbide Drill Series

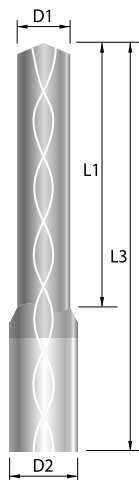
Type No.	D1 Diameter	L1 Flute Length	L3 O.A.L.	D2 Shank Dia.
DAO063	6.3	34	79	8
DAO064	6.4	34	79	8
DAO065	6.5	34	79	8
DAO066	6.6	34	79	8
DAO067	6.7	34	79	8
DAO068	6.8	34	79	8
DAO069	6.9	34	79	8
DAO070	7.0	34	79	8
DAO071	7.1	41	79	8
DAO072	7.2	41	79	8
DAO073	7.3	41	79	8
DAO074	7.4	41	79	8
DAO075	7.5	41	79	8
DAO076	7.6	41	79	8
DAO077	7.7	41	79	8
DAO078	7.8	41	79	8
DAO079	7.9	41	79	8
DAO080	8.0	41	79	8
DAO081	8.1	47	89	10
DAO082	8.2	47	89	10
DAO083	8.3	47	89	10
DAO084	8.4	47	89	10
DAO085	8.5	47	89	10
DAO086	8.6	47	89	10
DAO087	8.7	47	89	10
DAO088	8.8	47	89	10
DAO089	8.9	47	89	10
DAO090	9.0	47	89	10
DAO091	9.1	47	89	10
DAO092	9.2	47	89	10
DAO093	9.3	47	89	10
DAO094	9.4	47	89	10
DAO095	9.5	47	89	10
DAO096	9.6	47	89	10
DAO097	9.7	47	89	10
DAO098	9.8	47	89	10
DAO099	9.9	47	89	10
DAO100	10.0	47	89	10
DAO101	10.1	55	102	12
DAO102	10.2	55	102	12
DAO103	10.3	55	102	12
DAO104	10.4	55	102	12
DAO105	10.5	55	102	12
DAO106	10.6	55	102	12

Type No.	D1 Diameter	L1 Flute Length	L3 O.A.L.	D2 Shank Dia.
DAO107	10.7	55	102	12
DAO108	10.8	55	102	12
DAO109	10.9	55	102	12
DAO110	11.0	55	102	12
DAO111	11.1	55	102	12
DAO112	11.2	55	102	12
DAO113	11.3	55	102	12
DAO114	11.4	55	102	12
DAO115	11.5	55	102	12
DAO116	11.6	55	102	12
DAO117	11.7	55	102	12
DAO118	11.8	55	102	12
DAO119	11.9	55	102	12
DAO120	12.0	55	102	12
DAO125	12.5	60	107	14
DAO130	13.0	60	107	14
DAO135	13.5	60	107	14
DAO140	14.0	60	107	14
DAO145	14.5	65	115	16
DAO150	15.0	65	115	16
DAO155	15.5	65	115	16
DAO160	16.0	65	115	16
DAO165	16.5	73	123	18
DAO170	17.0	73	123	18
DAO175	17.5	73	123	18
DAO180	18.0	73	123	18
DAO185	18.5	79	131	20
DAO190	19.0	79	131	20
DAO195	19.5	79	131	20
DAO200	20.0	79	131	20

P.23~29 Please find the milling condition on P.23~29

DBO

Carbide Drills W/ Internal Coolant Hole



TOLERANCE

D1	D1 Tolerance
3.0~5.9	$\frac{0}{-0.012}$
6.0~11.9	$\frac{0}{-0.015}$
12.0~15.8	$\frac{0}{-0.018}$
16.0~20.0	$\frac{0}{-0.021}$

D2	D2 Tolerance
Ø6	$\frac{0}{-0.008}$
Ø8	$\frac{0}{-0.008}$
Ø10	$\frac{0}{-0.009}$
Ø12	$\frac{0}{-0.011}$
Ø14	$\frac{0}{-0.011}$
Ø16	$\frac{0}{-0.011}$
Ø18	$\frac{0}{-0.011}$
Ø20	$\frac{0}{-0.013}$

unit : mm

SPECIFICATIONS

Type No.	D1 Diameter	L1 Flute Length	L3 O.A.L.	D2 Shank Dia.
DBO030	3.0	28	66	6
DBO031	3.1	28	66	6
DBO032	3.2	28	66	6
DBO033	3.3	28	66	6
DBO034	3.4	28	66	6
DBO035	3.5	28	66	6
DBO036	3.6	28	66	6
DBO037	3.7	28	66	6
DBO038	3.8	36	74	6
DBO039	3.9	36	74	6
DBO040	4.0	36	74	6
DBO041	4.1	36	74	6
DBO042	4.2	36	74	6
DBO043	4.3	36	74	6
DBO044	4.4	36	74	6
DBO045	4.5	36	74	6
DBO046	4.6	36	74	6
DBO047	4.7	36	74	6
DBO048	4.8	44	82	6
DBO049	4.9	44	82	6
DBO050	5.0	44	82	6
DBO051	5.1	44	82	6
DBO052	5.2	44	82	6
DBO053	5.3	44	82	6
DBO054	5.4	44	82	6
DBO055	5.5	44	82	6
DBO056	5.6	44	82	6
DBO057	5.7	44	82	6
DBO058	5.8	44	82	6
DBO059	5.9	44	82	6
DBO060	6.0	44	82	6
DBO061	6.1	53	91	8
DBO062	6.2	53	91	8

Carbide Drill Series

Type No.	D1 Diameter	L1 Flute Length	L3 O.A.L.	D2 Shank Dia.
DBO063	6.3	53	91	8
DBO064	6.4	53	91	8
DBO065	6.5	53	91	8
DBO066	6.6	53	91	8
DBO067	6.7	53	91	8
DBO068	6.8	53	91	8
DBO069	6.9	53	91	8
DBO070	7.0	53	91	8
DBO071	7.1	53	91	8
DBO072	7.2	53	91	8
DBO073	7.3	53	91	8
DBO074	7.4	53	91	8
DBO075	7.5	53	91	8
DBO076	7.6	53	91	8
DBO077	7.7	53	91	8
DBO078	7.8	53	91	8
DBO079	7.9	53	91	8
DBO080	8.0	53	91	8
DBO081	8.1	61	103	10
DBO082	8.2	61	103	10
DBO083	8.3	61	103	10
DBO084	8.4	61	103	10
DBO085	8.5	61	103	10
DBO086	8.6	61	103	10
DBO087	8.7	61	103	10
DBO088	8.8	61	103	10
DBO089	8.9	61	103	10
DBO090	9.0	61	103	10
DBO091	9.1	61	103	10
DBO092	9.2	61	103	10
DBO093	9.3	61	103	10
DBO094	9.4	61	103	10
DBO095	9.5	61	103	10
DBO096	9.6	61	103	10
DBO097	9.7	61	103	10
DBO098	9.8	61	103	10
DBO099	9.9	61	103	10
DBO100	10.0	61	103	10
DBO101	10.1	71	118	12
DBO102	10.2	71	118	12
DBO103	10.3	71	118	12
DBO104	10.4	71	118	12
DBO105	10.5	71	118	12
DBO106	10.6	71	118	12

Type No.	D1 Diameter	L1 Flute Length	L3 O.A.L.	D2 Shank Dia.
DBO107	10.7	71	118	12
DBO108	10.8	71	118	12
DBO109	10.9	71	118	12
DBO110	11.0	71	118	12
DBO111	11.1	71	118	12
DBO112	11.2	71	118	12
DBO113	11.3	71	118	12
DBO114	11.4	71	118	12
DBO115	11.5	71	118	12
DBO116	11.6	71	118	12
DBO117	11.7	71	118	12
DBO118	11.8	71	118	12
DBO119	11.9	71	118	12
DBO120	12.0	71	118	12
DBO125	12.5	77	124	14
DBO130	13.0	77	124	14
DBO135	13.5	77	124	14
DBO140	14.0	77	124	14
DBO145	14.5	83	133	16
DBO150	15.0	83	133	16
DBO155	15.5	83	133	16
DBO160	16.0	83	133	16
DBO165	16.5	93	143	18
DBO170	17.0	93	143	18
DBO175	17.5	93	143	18
DBO180	18.0	93	143	18
DBO185	18.5	101	153	20
DBO190	19.0	101	153	20
DBO195	19.5	101	153	20
DBO200	20.0	101	153	20

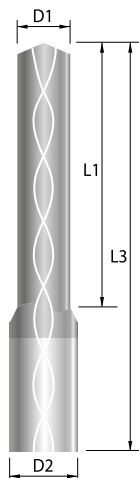
P.30~36 Please find the milling condition on P.30~36

DCO

Carbide Drills W/ Internal Coolant Hole



Carbide Drill Series



TOLERANCE

D1	D1 Tolerance
3.0~5.9	$0_{-0.012}$
6.0~11.9	$0_{-0.015}$
12.0	$0_{-0.018}$

D2	D2 Tolerance
Ø6	$0_{-0.008}$
Ø8	$0_{-0.008}$
Ø10	$0_{-0.009}$
Ø12	$0_{-0.011}$

unit : mm

SPECIFICATIONS

Type No.	D1 Diameter	L1 Flute Length	L3 O.A.L.	D2 Shank Dia.
DCO040	4.0	43	81	6
DCO041	4.1	43	81	6
DCO042	4.2	43	81	6
DCO043	4.3	43	81	6
DCO044	4.4	43	81	6
DCO045	4.5	43	81	6
DCO046	4.6	43	81	6
DCO047	4.7	43	81	6
DCO048	4.8	57	95	6
DCO049	4.9	57	95	6
DCO050	5.0	57	95	6
DCO051	5.1	57	95	6
DCO052	5.2	57	95	6
DCO053	5.3	57	95	6
DCO054	5.4	57	95	6
DCO055	5.5	57	95	6
DCO056	5.6	57	95	6
DCO057	5.7	57	95	6
DCO058	5.8	57	95	6
DCO059	5.9	57	95	6
DCO060	6.0	57	95	6
DCO061	6.1	76	114	8
DCO062	6.2	76	114	8
DCO063	6.3	76	114	8
DCO064	6.4	76	114	8
DCO065	6.5	76	114	8
DCO066	6.6	76	114	8
DCO067	6.7	76	114	8
DCO068	6.8	76	114	8
DCO069	6.9	76	114	8
DCO070	7.0	76	114	8
DCO071	7.1	76	114	8
DCO072	7.2	76	114	8

Type No.	D1 Diameter	L1 Flute Length	L3 O.A.L.	D2 Shank Dia.
DCO073	7.3	76	114	8
DCO074	7.4	76	114	8
DCO075	7.5	76	114	8
DCO076	7.6	76	114	8
DCO077	7.7	76	114	8
DCO078	7.8	76	114	8
DCO079	7.9	76	114	8
DCO080	8.0	76	114	8
DCO081	8.1	95	142	10
DCO082	8.2	95	142	10
DCO083	8.3	95	142	10
DCO084	8.4	95	142	10
DCO085	8.5	95	142	10
DCO086	8.6	95	142	10
DCO087	8.7	95	142	10
DCO088	8.8	95	142	10
DCO089	8.9	95	142	10
DCO090	9.0	95	142	10
DCO091	9.1	95	142	10
DCO092	9.2	95	142	10
DCO093	9.3	95	142	10
DCO094	9.4	95	142	10
DCO095	9.5	95	142	10
DCO096	9.6	95	142	10
DCO097	9.7	95	142	10
DCO098	9.8	95	142	10
DCO099	9.9	95	142	10
DCO100	10.0	95	142	10
DCO101	10.1	114	162	12
DCO102	10.2	114	162	12
DCO103	10.3	114	162	12
DCO104	10.4	114	162	12
DCO105	10.5	114	162	12
DCO106	10.6	114	162	12
DCO107	10.7	114	162	12
DCO108	10.8	114	162	12
DCO109	10.9	114	162	12
DCO110	11.0	114	162	12
DCO111	11.1	114	162	12
DCO112	11.2	114	162	12
DCO113	11.3	114	162	12
DCO114	11.4	114	162	12
DCO115	11.5	114	162	12
DCO116	11.6	114	162	12

Type No.	D1 Diameter	L1 Flute Length	L3 O.A.L.	D2 Shank Dia.
DCO117	11.7	114	162	12
DCO118	11.8	114	162	12
DCO119	11.9	114	162	12
DCO120	12.0	114	162	12

P.37~39 Please find the milling condition on P.37~39

DAK

MILLING CONDITIONS

Carbide Drill Series

Work Material		Aluminum Alloy : 5052 / 6061 / 7075		
Coolant Type		Wet coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DAK030~035	85	9000	5000~5500	0.29
DAK030~035	170	18000	7000~7500	0.2
DAK036~045	115	9000	5500~6000	0.31
DAK036~045	225	18000	7500~8000	0.21
DAK046~055	130	8500	4000~4500	0.25
DAK046~055	235	15000	6000~6500	0.2
DAK056~065	150	8000	3500~4000	0.23
DAK056~065	245	13000	5500~6000	0.22
DAK066~075	165	7500	3000~3500	0.21
DAK066~075	250	11500	4500~5000	0.2
DAK076~085	175	7000	2500~3000	0.19
DAK076~085	250	10000	4000~4500	0.21
DAK086~095	175	6200	1500~2000	0.14
DAK086~095	250	8800	2700~3200	0.16
DAK096~105	175	5600	1000~1500	0.11
DAK096~105	250	8000	2200~2700	0.15
DAK106~115	175	5100	1000~1500	0.12
DAK106~115	250	7200	2200~2700	0.17
DAK116~120	175	4700	1000~1500	0.13
DAK116~120	250	6600	2000~2500	0.17
DAK123	175	4600	1000~1500	0.13
DAK123	250	6500	2000~2500	0.17
DAK125	175	4500	1000~1500	0.13
DAK125	250	6400	2000~2500	0.17
DAK128	175	4400	1000~1500	0.14
DAK128	250	6200	2000~2500	0.18
DAK130	175	4300	1000~1500	0.14
DAK130	250	6100	2000~2500	0.18
DAK135	175	4100	1000~1500	0.15
DAK135	250	5900	2000~2500	0.19
DAK138	175	4000	1000~1500	0.15
DAK138	250	5800	1900~2400	0.18
DAK140	175	4000	1000~1500	0.15
DAK140	250	5700	1800~2300	0.17
DAK145	175	3800	1000~1500	0.16
DAK145	250	5500	1700~2200	0.17
DAK148	175	3800	1000~1500	0.16
DAK148	250	5400	1700~2100	0.17
DAK150	175	3700	800~1300	0.14
DAK150	250	5300	1600~2000	0.16

Aluminum Alloy: 5052 / 6061 / 7075				
Wet coolant				
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DAK155	175	3600	800~1300	0.14
DAK155	250	5100	1500~1900	0.16
DAK158	175	3500	800~1300	0.15
DAK158	250	5000	1500~1900	0.17
DAK160	175	3500	800~1300	0.15
DAK160	250	5000	1400~1900	0.16
DAK165	175	3400	800~1300	0.15
DAK165	250	4800	1400~1800	0.16
DAK168	175	3300	800~1300	0.15
DAK168	250	4700	1400~1800	0.17
DAK170	175	3300	700~1100	0.13
DAK170	250	4700	1300~1700	0.15
DAK175	175	3200	700~1100	0.14
DAK175	250	4600	1200~1600	0.15
DAK178	175	3100	700~1100	0.14
DAK178	250	4500	1200~1600	0.15
DAK180	175	3100	700~1000	0.13
DAK180	250	4400	1100~1500	0.14
DAK185	175	3000	700~1000	0.14
DAK185	250	4300	1000~1500	0.14
DAK190	175	2900	600~900	0.12
DAK190	250	4200	900~1300	0.13
DAK195	175	2900	600~900	0.12
DAK195	250	4100	800~1200	0.12
DAK198	175	2800	500~800	0.11
DAK198	250	4000	800~1100	0.11
DAK200	175	2800	500~800	0.11
DAK200	250	4000	700~1000	0.1

DAK

MILLING CONDITIONS

Carbide Drill Series

Work Material	Carbon Steels / Cast Iron			
	S50C / Fc250 / S5440 : 1.1210 / 0.6025 / 1.0036 : 1050 / NO.35 / A570 Gr.45 (~HRc22)			
Coolant Type	Wet coolant			
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DAK030~035	115	12000	1600~2000	0.07
DAK036~045	115	9000	800~1100	0.05
DAK046~055	125	8000	1000~1400	0.07
DAK056~065	125	6600	1000~1400	0.09
DAK066~075	125	5700	700~1000	0.07
DAK076~085	125	5000	700~1000	0.08
DAK086~095	125	4400	600~900	0.08
DAK096~105	125	4000	500~800	0.08
DAK106~115	125	3600	500~800	0.09
DAK116~120	125	3300	500~800	0.09
DAK123	125	3200	400~700	0.08
DAK125	125	3200	400~700	0.08
DAK128	125	3100	400~700	0.08
DAK130	125	3100	400~700	0.08
DAK135	125	3000	400~700	0.09
DAK138	125	2900	400~700	0.09
DAK140	125	2800	400~700	0.09
DAK145	125	2800	400~700	0.09
DAK148	125	2700	400~700	0.1
DAK150	125	2700	300~600	0.08
DAK155	125	2600	300~600	0.08
DAK158	125	2500	300~600	0.09
DAK160	125	2500	300~600	0.09
DAK165	125	2400	300~600	0.09
DAK168	125	2400	300~600	0.09
DAK170	125	2350	300~500	0.08
DAK175	125	2300	300~500	0.08
DAK178	125	2250	300~500	0.08
DAK180	125	2200	300~500	0.09
DAK185	125	2150	250~450	0.08
DAK190	125	2100	250~450	0.08
DAK195	125	2050	200~400	0.07
DAK198	125	2000	200~400	0.07
DAK200	125	2000	200~400	0.07

Work Material		Chromium Molybdenum Alloy Steel SCM440 : 1.7225 : 4140 : 42CrMoA (HRC25~28)		
Coolant Type		Wet coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DAK030~035	115	12000	1400~1700	0.06
DAK036~045	115	9000	700~1000	0.04
DAK046~055	125	8000	700~900	0.05
DAK056~065	125	6600	700~900	0.06
DAK066~075	125	5700	700~1000	0.07
DAK076~085	125	5000	700~1000	0.08
DAK086~095	125	4400	500~800	0.07
DAK096~105	125	4000	500~800	0.08
DAK106~115	125	3600	500~800	0.09
DAK116~120	125	3300	500~800	0.09
DAK123	125	3200	400~700	0.08
DAK125	125	3200	400~700	0.08
DAK128	125	3100	400~700	0.08
DAK130	125	3100	400~700	0.08
DAK135	125	3000	400~700	0.09
DAK138	125	2900	400~700	0.09
DAK140	125	2800	400~700	0.09
DAK145	125	2800	400~700	0.09
DAK148	125	2700	400~700	0.1
DAK150	125	2700	300~600	0.08
DAK155	125	2600	300~600	0.08
DAK158	125	2500	300~600	0.09
DAK160	125	2500	300~600	0.09
DAK165	125	2400	300~600	0.09
DAK168	125	2400	300~600	0.09
DAK170	125	2350	300~500	0.08
DAK175	125	2300	300~500	0.08
DAK178	125	2250	300~500	0.08
DAK180	125	2200	300~500	0.09
DAK185	125	2150	250~450	0.08
DAK190	125	2100	250~450	0.08
DAK195	125	2050	200~400	0.07
DAK198	125	2000	200~400	0.07
DAK200	125	2000	200~350	0.06

DAK

MILLING CONDITIONS

Carbide Drill Series

Work Material		Alloy Tool Steels / Carbon Tool Steels P20 / P5 / SK3 / SKD61 / SKD11 : 1.2311 / 1.1545 / 1.2379 / 1.2344 : H13 / D2 (HRc23~32)		
Coolant Type		Wet coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DAK030~035	90	9600	1000~1300	0.05
DAK036~045	90	7200	700~1000	0.05
DAK046~055	90	5800	500~700	0.05
DAK056~065	90	4800	500~700	0.06
DAK066~075	90	4200	500~700	0.07
DAK076~085	90	3600	500~700	0.08
DAK086~095	90	3200	400~600	0.07
DAK096~105	90	2900	300~500	0.06
DAK106~115	90	2600	300~500	0.07
DAK116~120	90	2400	300~500	0.08
DAK123	90	2400	300~500	0.08
DAK125	90	2300	300~500	0.08
DAK128	90	2300	300~500	0.08
DAK130	90	2200	300~500	0.09
DAK135	90	2100	300~500	0.09
DAK138	90	2100	300~500	0.09
DAK140	90	2100	300~500	0.09
DAK145	90	2000	300~500	0.1
DAK148	90	1900	300~500	0.1
DAK150	90	1900	300~500	0.1
DAK155	90	1900	200~400	0.07
DAK158	90	1800	200~400	0.08
DAK160	90	1800	200~400	0.08
DAK165	90	1700	200~400	0.08
DAK168	90	1700	200~400	0.08
DAK170	90	1700	200~350	0.08
DAK175	90	1650	200~300	0.07
DAK178	90	1600	200~300	0.07
DAK180	90	1600	200~300	0.07
DAK185	90	1550	200~300	0.08
DAK190	90	1500	150~250	0.06
DAK195	90	1500	150~250	0.06
DAK198	90	1450	150~250	0.06
DAK200	90	1450	150~250	0.06

Work Material		Hardened Steels : SKD61 / STAVAX / 17-4PH : 1.2083 / 1.2344 / 1.4542 : H13 / 420 (HRc48~54)		
Coolant Type		Wet coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DAK030~035	30	3200	70~100	0.01
DAK036~045	30	2400	70~100	0.01
DAK046~055	30	1900	50~80	0.01
DAK056~065	30	1600	50~80	0.02
DAK066~075	30	1400	40~70	0.01
DAK076~085	30	1200	40~70	0.02
DAK086~095	30	1100	30~60	0.02
DAK096~105	30	960	30~60	0.02
DAK106~115	30	900	30~60	0.02
DAK116~120	30	800	30~60	0.02
DAK123	30	780	30~60	0.02
DAK125	30	770	30~60	0.02
DAK128	30	750	30~60	0.03
DAK130	30	740	30~60	0.03
DAK135	30	700	30~60	0.03
DAK138	30	700	30~60	0.03
DAK140	30	690	30~60	0.03
DAK145	30	660	30~60	0.03
DAK148	30	650	30~60	0.03
DAK150	30	640	20~50	0.02
DAK155	30	620	20~50	0.02
DAK158	30	610	20~50	0.02
DAK160	30	600	20~50	0.02
DAK165	30	580	20~50	0.03
DAK168	30	570	20~50	0.03
DAK170	30	560	20~50	0.03
DAK175	30	550	20~50	0.03
DAK178	30	540	20~50	0.03
DAK180	30	530	20~50	0.03
DAK185	30	520	20~50	0.03
DAK190	30	500	20~40	0.03
DAK195	30	490	20~40	0.03
DAK198	30	480	20~40	0.03
DAK200	30	480	20~30	0.02

DAK

MILLING CONDITIONS

Carbide Drill Series

DBK

MILLING CONDITIONS

Carbide Drill Series

Work Material		Aluminum Alloy : 5052 / 6061 / 7075		
Coolant Type		Wet coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DBK030~035	85	9000	3000~3500	0.18
DBK030~035	170	18000	4500~5000	0.13
DBK036~045	115	9000	3500~4000	0.2
DBK036~045	225	18000	5000~5500	0.14
DBK046~055	135	8500	3000~3500	0.19
DBK046~055	190	12000	3500~4000	0.15
DBK056~065	150	8000	2500~3000	0.17
DBK056~065	190	10000	3000~3500	0.16
DBK066~075	150	7000	2000~2500	0.16
DBK066~075	190	8700	2500~3000	0.15
DBK076~085	150	6000	1500~2000	0.14
DBK076~085	190	7500	2000~2500	0.15
DBK086~095	150	5300	1200~1700	0.13
DBK086~095	190	6700	1700~2200	0.14
DBK096~105	150	4800	1200~1700	0.15
DBK096~105	190	6000	1700~2200	0.16
DBK106~115	150	4300	1200~1700	0.16
DBK106~115	190	5500	1700~2200	0.17
DBK116~120	150	4000	1200~1600	0.17
DBK116~120	190	5000	1600~2000	0.18
DBK123	150	3900	1200~1600	0.17
DBK123	190	4900	1500~1900	0.17
DBK125	150	3800	1100~1500	0.17
DBK125	190	4800	1400~1800	0.16
DBK128	150	3800	1000~1400	0.15
DBK128	190	4800	1300~1700	0.15
DBK130	150	3700	1000~1400	0.16
DBK130	190	4700	1300~1700	0.15
DBK135	150	3600	900~1300	0.15
DBK135	190	4500	1300~1700	0.16
DBK138	150	3500	900~1300	0.15
DBK138	190	4400	1300~1700	0.17
DBK140	150	3400	900~1300	0.16
DBK140	190	4300	1300~1700	0.17
DBK145	150	3300	800~1300	0.15
DBK145	190	4200	1200~1700	0.17
DBK148	150	3200	800~1300	0.16
DBK148	190	4100	1200~1700	0.17
DBK150	150	3200	800~1200	0.15
DBK150	190	4000	1100~1600	0.16

Work Material		Aluminum Alloy : 5052 / 6061 / 7075		
Coolant Type		Wet coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DBK155	150	3100	700~1100	0.14
DBK155	190	3900	1000~1500	0.16
DBK158	150	3000	700~1100	0.15
DBK158	190	3800	1000~1500	0.16
DBK160	150	3000	700~1100	0.15
DBK160	190	3800	1000~1500	0.16
DBK165	150	2900	700~1000	0.14
DBK165	190	3700	900~1400	0.15
DBK168	150	2900	700~1000	0.14
DBK168	190	3600	900~1400	0.15
DBK170	150	2800	600~900	0.13
DBK170	190	3600	800~1300	0.14
DBK175	150	2700	500~800	0.12
DBK175	190	3500	700~1100	0.12
DBK178	150	2700	500~800	0.12
DBK178	190	3400	600~1000	0.11
DBK180	150	2700	500~800	0.12
DBK180	190	3400	600~900	0.11
DBK185	150	2600	500~800	0.12
DBK185	190	3300	600~900	0.11
DBK190	150	2500	400~700	0.11
DBK190	190	3200	500~800	0.1
DBK195	150	2450	400~700	0.11
DBK195	190	3100	500~800	0.1
DBK198	150	2400	400~700	0.11
DBK198	190	3100	500~800	0.1
DBK200	150	2400	400~700	0.11
DBK200	190	3000	500~800	0.1

DBK

MILLING CONDITIONS

Carbide Drill Series

Work Material	Carbon Steels / Cast Iron			
	S50C / Fc250 / S5440 : 1.1210 / 0.6025 / 1.0036 : 1050 / NO.35 / A570 Gr.45 (~HRc22)			
Coolant Type	Wet coolant			
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DBK030~035	115	12000	1600~2000	0.07
DBK036~045	115	9000	800~1100	0.05
DBK046~055	125	8000	800~1200	0.06
DBK056~065	125	6600	800~1200	0.07
DBK066~075	125	5700	500~800	0.05
DBK076~085	125	5000	500~800	0.06
DBK086~095	125	4400	500~800	0.07
DBK096~105	125	4000	500~800	0.08
DBK106~115	125	3600	500~800	0.09
DBK116~120	125	3300	500~800	0.09
DBK123	125	3200	400~700	0.08
DBK125	125	3200	400~700	0.08
DBK128	125	3100	400~700	0.08
DBK130	125	3100	400~700	0.08
DBK135	125	3000	400~700	0.09
DBK138	125	2900	400~700	0.09
DBK140	125	2800	400~700	0.09
DBK145	125	2800	400~700	0.09
DBK148	125	2700	400~700	0.1
DBK150	125	2700	400~700	0.1
DBK155	125	2600	300~600	0.08
DBK158	125	2500	300~600	0.09
DBK160	125	2500	300~600	0.09
DBK165	125	2400	300~600	0.09
DBK168	125	2400	300~600	0.09
DBK170	125	2350	300~600	0.09
DBK175	125	2300	300~500	0.08
DBK178	125	2250	300~500	0.08
DBK180	125	2200	300~500	0.09
DBK185	125	2150	250~450	0.08
DBK190	125	2100	250~450	0.08
DBK195	125	2050	200~400	0.07
DBK198	125	2000	200~400	0.07
DBK200	125	2000	200~400	0.07

Work Material		Chromium Molybdenum Alloy Steel SCM440 : 1.7225 : 4140 : 42CrMoA (HRC25~28)		
Coolant Type		Wet coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DBK030~035	115	12000	1000~1400	0.05
DBK036~045	115	9000	700~900	0.04
DBK046~055	125	8000	600~800	0.04
DBK056~065	125	6600	600~800	0.05
DBK066~075	125	5700	400~700	0.04
DBK076~085	125	5000	400~700	0.05
DBK086~095	125	4400	400~700	0.06
DBK096~105	125	4000	400~700	0.06
DBK106~115	125	3600	400~700	0.07
DBK116~120	125	3300	400~700	0.08
DBK123	125	3200	400~700	0.08
DBK125	125	3200	400~700	0.08
DBK128	125	3100	400~700	0.08
DBK130	125	3100	400~700	0.08
DBK135	125	3000	400~700	0.09
DBK138	125	2900	400~700	0.09
DBK140	125	2800	400~700	0.09
DBK145	125	2800	400~700	0.09
DBK148	125	2700	400~700	0.1
DBK150	125	2700	400~700	0.1
DBK155	125	2600	300~600	0.08
DBK158	125	2500	300~600	0.09
DBK160	125	2500	300~600	0.09
DBK165	125	2400	300~600	0.09
DBK168	125	2400	300~600	0.09
DBK170	125	2350	300~600	0.09
DBK175	125	2300	300~500	0.08
DBK178	125	2250	300~500	0.08
DBK180	125	2200	300~500	0.09
DBK185	125	2150	250~450	0.08
DBK190	125	2100	250~450	0.08
DBK195	125	2050	200~400	0.07
DBK198	125	2000	200~400	0.07
DBK200	125	2000	200~400	0.07

DBK

MILLING CONDITIONS

Carbide Drill Series

Work Material		Alloy Tool Steels / Carbon Tool Steels P20 / P5 / SK3 / SKD61 / SKD11 : 1.2311 / 1.1545 / 1.2379 / 1.2344 : H13 / D2 (HRc23~32)		
Coolant Type		Wet coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DBK030~035	90	9600	500~700	0.03
DBK036~045	90	7200	400~600	0.03
DBK046~055	90	5800	400~600	0.04
DBK056~065	90	4800	400~600	0.05
DBK066~075	90	4200	400~600	0.05
DBK076~085	90	3600	400~600	0.06
DBK086~095	90	3200	300~500	0.06
DBK096~105	90	2900	300~500	0.06
DBK106~115	90	2600	300~500	0.07
DBK116~120	90	2400	300~500	0.08
DBK123	90	2400	300~500	0.08
DBK125	90	2300	300~500	0.08
DBK128	90	2300	300~500	0.08
DBK130	90	2200	300~500	0.09
DBK135	90	2100	300~500	0.09
DBK138	90	2100	300~500	0.09
DBK140	90	2100	300~500	0.09
DBK145	90	2000	300~500	0.1
DBK148	90	1900	300~500	0.1
DBK150	90	1900	300~500	0.1
DBK155	90	1900	250~450	0.09
DBK158	90	1800	250~450	0.09
DBK160	90	1800	250~450	0.09
DBK165	90	1700	200~400	0.08
DBK168	90	1700	200~400	0.08
DBK170	90	1700	200~300	0.07
DBK175	90	1650	200~300	0.07
DBK178	90	1600	200~300	0.07
DBK180	90	1600	200~300	0.07
DBK185	90	1550	200~300	0.08
DBK190	90	1500	150~250	0.06
DBK195	90	1500	150~250	0.06
DBK198	90	1450	150~250	0.06
DBK200	90	1450	150~250	0.06

Work Material		Hardened Steels : SKD61 / STAVAX / 17-4PH : 1.2083 / 1.2344 / 1.4542 : H13 / 420 (HRc48~54)		
Coolant Type		Wet coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DBK030~035	30	3200	40~70	0.01
DBK036~045	30	2400	40~70	0.01
DBK046~055	30	1900	30~60	0.01
DBK056~065	30	1600	30~60	0.01
DBK066~075	30	1400	30~60	0.01
DBK076~085	30	1200	30~60	0.01
DBK086~095	30	1100	20~50	0.01
DBK096~105	30	960	20~50	0.01
DBK106~115	30	900	20~50	0.01
DBK116~120	30	800	20~50	0.02
DBK123	30	780	20~50	0.02
DBK125	30	770	20~50	0.02
DBK128	30	750	20~50	0.02
DBK130	30	740	20~50	0.02
DBK135	30	700	20~50	0.02
DBK138	30	700	20~50	0.02
DBK140	30	690	20~40	0.02
DBK145	30	660	20~40	0.02
DBK148	30	650	20~40	0.02
DBK150	30	640	20~40	0.02
DBK155	30	620	20~40	0.02
DBK158	30	610	20~40	0.02
DBK160	30	600	20~40	0.02
DBK165	30	580	20~40	0.02
DBK168	30	570	20~40	0.02
DBK170	30	560	20~40	0.02
DBK175	30	550	20~40	0.02
DBK178	30	540	20~40	0.02
DBK180	30	530	20~40	0.02
DBK185	30	520	20~40	0.02
DBK190	30	500	20~30	0.02
DBK195	30	490	20~30	0.02
DBK198	30	480	20~30	0.02
DBK200	30	480	20~30	0.02

DBK

MILLING CONDITIONS

Carbide Drill Series

DAO

MILLING CONDITIONS

Carbide Drill Series

Work Material		Aluminum Alloy : 5052 / 6061 / 7075		
Coolant Type		Internal coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DAO030~035	85	9000	5500~6000	0.3
DAO030~035	170	18000	7500~8000	0.21
DAO036~045	115	9000	6000~6500	0.34
DAO036~045	225	18000	8000~8500	0.22
DAO046~055	130	8500	4500~5000	0.27
DAO046~055	235	15000	6500~7000	0.22
DAO056~065	150	8000	4000~4500	0.26
DAO056~065	245	13000	6000~6500	0.24
DAO066~075	165	7500	3500~4000	0.25
DAO066~075	250	11500	5000~5500	0.22
DAO076~085	175	7000	3000~3500	0.23
DAO076~085	250	10000	4500~5000	0.23
DAO086~095	175	6200	2000~2500	0.18
DAO086~095	250	8800	3300~3800	0.2
DAO096~105	175	5600	1700~2200	0.17
DAO096~105	250	8000	2800~3300	0.19
DAO106~115	175	5100	1600~2100	0.18
DAO106~115	250	7200	2800~3300	0.21
DAO116~120	175	4700	1500~2000	0.18
DAO116~120	250	6600	2700~3200	0.22
DAO125	175	4500	1500~2000	0.19
DAO125	250	6400	2600~3100	0.22
DAO130	175	4300	1500~2000	0.2
DAO130	250	6100	2500~3000	0.22
DAO135	175	4100	1400~1900	0.2
DAO135	250	5900	2400~2900	0.22
DAO140	175	4000	1400~1900	0.2
DAO140	250	5700	2300~2800	0.22
DAO145	175	3800	1300~1800	0.2
DAO145	250	5500	2200~2700	0.22
DAO150	175	3700	1300~1800	0.2
DAO150	250	5300	2100~2600	0.22
DAO155	175	3600	1200~1600	0.19
DAO155	250	5100	2000~2500	0.22
DAO160	175	3500	1200~1600	0.2
DAO160	250	5000	1900~2400	0.21

Work Material		Aluminum Alloy: 5052 / 6061 / 7075		
Coolant Type		Internal coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DAO165	175	3400	1200~1600	0.2
DAO165	250	4800	1800~2300	0.21
DAO170	175	3300	1100~1500	0.19
DAO170	250	4700	1700~2200	0.2
DAO175	175	3200	1000~1400	0.18
DAO175	250	4600	1600~2100	0.2
DAO180	175	3100	1000~1400	0.19
DAO180	250	4400	1500~2000	0.19
DAO185	175	3000	1000~1400	0.2
DAO185	250	4300	1400~1900	0.19
DAO190	175	2900	800~1100	0.16
DAO190	250	4200	1200~1600	0.16
DAO195	175	2900	700~1000	0.14
DAO195	250	4100	1100~1500	0.15
DAO200	175	2800	600~900	0.13
DAO200	250	4000	800~1200	0.12

DAO

MILLING CONDITIONS

Carbide Drill Series

DAO

MILLING CONDITIONS

Carbide Drill Series

Work Material	Carbon Steels / Cast Iron			
	S50C / Fc250 / S5440 : 1.1210 / 0.6025 / 1.0036 : 1050 / NO.35 / A570 Gr.45 (~HRc22)			
Coolant Type	Internal coolant			
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DAO030~035	115	12000	1800~2200	0.08
DAO036~045	115	9000	1400~1700	0.08
DAO046~055	125	8000	1400~1800	0.1
DAO056~065	125	6600	1400~1800	0.12
DAO066~075	125	5700	1000~1400	0.1
DAO076~085	125	5000	1000~1400	0.12
DAO086~095	125	4400	900~1300	0.12
DAO096~105	125	4000	900~1300	0.13
DAO106~115	125	3600	900~1300	0.15
DAO116~120	125	3300	800~1200	0.15
DAO125	125	3200	700~1100	0.14
DAO130	125	3100	700~1100	0.14
DAO135	125	3000	700~1100	0.15
DAO140	125	2800	600~1000	0.14
DAO145	125	2800	600~1000	0.14
DAO150	125	2700	500~900	0.12
DAO155	125	2600	500~800	0.12
DAO160	125	2500	500~800	0.13
DAO165	125	2400	500~800	0.13
DAO170	125	2350	400~700	0.11
DAO175	125	2300	400~700	0.11
DAO180	125	2200	400~700	0.12
DAO185	125	2150	400~700	0.12
DAO190	125	2100	300~600	0.1
DAO195	125	2050	300~600	0.1
DAO200	125	2000	300~500	0.11

Work Material		Chromium Molybdenum Alloy Steel SCM440 : 1.7225 : 4140 : 42CrMoA (HRc25~28)		
Coolant Type		Internal coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DAO030~035	115	12000	1600~2000	0.07
DAO036~045	115	9000	1200~1600	0.07
DAO046~055	125	8000	1200~1500	0.08
DAO056~065	125	6600	1200~1500	0.1
DAO066~075	125	5700	900~1200	0.09
DAO076~085	125	5000	900~1200	0.1
DAO086~095	125	4400	700~1100	0.1
DAO096~105	125	4000	700~1100	0.11
DAO106~115	125	3600	700~1100	0.12
DAO116~120	125	3300	700~1100	0.13
DAO125	125	3200	700~1000	0.13
DAO130	125	3100	700~1000	0.13
DAO135	125	3000	700~1000	0.14
DAO140	125	2800	600~900	0.13
DAO145	125	2800	500~800	0.11
DAO150	125	2700	400~800	0.11
DAO155	125	2600	400~700	0.1
DAO160	125	2500	400~700	0.11
DAO165	125	2400	400~700	0.11
DAO170	125	2350	300~600	0.09
DAO175	125	2300	300~600	0.09
DAO180	125	2200	300~600	0.1
DAO185	125	2150	300~600	0.1
DAO190	125	2100	300~500	0.09
DAO195	125	2050	300~500	0.09
DAO200	125	2000	200~400	0.07

DAO

MILLING CONDITIONS

Carbide Drill Series

DAO

MILLING CONDITIONS

Carbide Drill Series

Work Material	Alloy Tool Steels / Carbon Tool Steels P20 / P5 / SK3 / SKD61 / SKD11 : 1.2311 / 1.1545 / 1.2379 / 1.2344 : H13 / D2 (HRc23~32)			
	Internal coolant			
Coolant Type				
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DAO030~035	90	9600	1200~1500	0.07
DAO036~045	90	7200	1100~1400	0.08
DAO046~055	90	5800	700~1000	0.07
DAO056~065	90	4800	700~1000	0.08
DAO066~075	90	4200	700~1100	0.1
DAO076~085	90	3600	700~1100	0.12
DAO086~095	90	3200	500~800	0.1
DAO096~105	90	2900	500~800	0.11
DAO106~115	90	2600	500~800	0.12
DAO116~120	90	2400	500~800	0.13
DAO125	90	2300	500~800	0.14
DAO130	90	2200	500~800	0.14
DAO135	90	2100	500~800	0.15
DAO140	90	2100	500~800	0.15
DAO145	90	2000	500~800	0.16
DAO150	90	1900	300~600	0.11
DAO155	90	1900	300~600	0.11
DAO160	90	1800	300~600	0.12
DAO165	90	1700	300~600	0.13
DAO170	90	1700	300~500	0.11
DAO175	90	1650	300~500	0.12
DAO180	90	1600	300~500	0.12
DAO185	90	1550	300~500	0.12
DAO190	90	1500	200~400	0.1
DAO195	90	1500	200~400	0.1
DAO200	90	1450	200~300	0.08

Work Material		Stainless Steels SUS304 : 1.4301 : AISI 304 (HRc28~32)		
Coolant Type		Internal coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DAO030~035	75	8000	250~350	0.01
DAO036~045	75	6000	300~400	0.02
DAO046~055	75	4800	300~500	0.04
DAO056~065	75	4000	300~500	0.05
DAO066~075	75	3400	300~400	0.05
DAO076~085	75	3000	300~400	0.05
DAO086~095	75	2600	300~450	0.07
DAO096~105	75	2400	300~450	0.07
DAO106~115	75	2200	300~450	0.08
DAO116~120	75	2000	300~450	0.09
DAO125	75	1900	300~450	0.09
DAO130	75	1900	250~400	0.08
DAO135	75	1800	250~400	0.09
DAO140	75	1700	250~400	0.09
DAO145	75	1700	250~400	0.09
DAO150	75	1600	200~400	0.09
DAO155	75	1500	200~400	0.1
DAO160	75	1500	200~350	0.09
DAO165	75	1450	200~350	0.09
DAO170	75	1400	150~300	0.08
DAO175	75	1400	150~300	0.08
DAO180	75	1350	150~250	0.08
DAO185	75	1300	150~250	0.08
DAO190	75	1250	100~200	0.06
DAO195	75	1250	100~200	0.06
DAO200	75	1200	80~150	0.04

DAO

MILLING CONDITIONS

Carbide Drill Series

DAO

MILLING CONDITIONS

Carbide Drill Series

Work Material	Hardened Steels : SKD61 / STAVAX / 17-4PH : 1.2083 / 1.2344 / 1.4542 : H13 / 420 (HRc48~54)			
	Coolant Type			
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DAO030~035	30	3200	120~150	0.02
DAO036~045	30	2400	100~130	0.02
DAO046~055	30	1900	80~110	0.02
DAO056~065	30	1600	80~110	0.02
DAO066~075	30	1400	70~100	0.03
DAO076~085	30	1200	70~100	0.03
DAO086~095	30	1100	60~90	0.03
DAO096~105	30	960	60~90	0.03
DAO106~115	30	900	60~90	0.04
DAO116~120	30	800	60~90	0.04
DAO125	30	770	60~90	0.04
DAO130	30	740	60~90	0.05
DAO135	30	700	60~90	0.05
DAO140	30	690	60~90	0.05
DAO145	30	660	60~90	0.05
DAO150	30	640	50~80	0.05
DAO155	30	620	50~80	0.05
DAO160	30	600	50~80	0.05
DAO165	30	580	50~80	0.05
DAO170	30	560	50~80	0.05
DAO175	30	550	50~80	0.05
DAO180	30	530	50~80	0.06
DAO185	30	520	50~80	0.06
DAO190	30	500	40~70	0.05
DAO195	30	490	40~70	0.05
DAO200	30	480	30~60	0.04

Work Material		Aluminum Alloy: 5052 / 6061 / 7075		
Coolant Type		Internal coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DBO030~035	85	9000	3500~4000	0.2
DBO030~035	170	18000	5000~5500	0.14
DBO036~045	115	9000	4000~4500	0.23
DBO036~045	225	18000	5500~6000	0.15
DBO046~055	135	8500	3500~4000	0.22
DBO046~055	190	12000	5000~5500	0.21
DBO056~065	150	8000	3000~3500	0.2
DBO056~065	190	10000	4500~5000	0.23
DBO066~075	150	7000	2500~3000	0.19
DBO066~075	190	8700	3300~3800	0.2
DBO076~085	150	6000	2000~2500	0.18
DBO076~085	190	7500	2500~3000	0.18
DBO086~095	150	5300	1700~2200	0.18
DBO086~095	190	6700	2200~2700	0.18
DBO096~105	150	4800	1700~2200	0.2
DBO096~105	190	6000	2200~2700	0.2
DBO106~115	150	4300	1700~2200	0.22
DBO106~115	190	5500	2200~2700	0.22
DBO116~120	150	4000	1500~2000	0.21
DBO116~120	190	5000	2000~2500	0.22
DBO125	150	3800	1500~2000	0.23
DBO125	190	4800	1800~2300	0.21
DBO130	150	3700	1300~1800	0.2
DBO130	190	4700	1700~2200	0.2
DBO135	150	3600	1300~1800	0.21
DBO135	190	4500	1700~2200	0.21
DBO140	150	3400	1300~1800	0.22
DBO140	190	4300	1700~2200	0.22
DBO145	150	3300	1300~1800	0.23
DBO145	190	4200	1700~2200	0.23
DBO150	150	3200	1100~1600	0.2
DBO150	190	4000	1500~2000	0.21
DBO155	150	3100	1000~1500	0.2
DBO155	190	3900	1400~1900	0.21
DBO160	150	3000	1000~1500	0.2
DBO160	190	3800	1300~1800	0.2

DBO

MILLING CONDITIONS

Carbide Drill Series

DBO

MILLING CONDITIONS

Carbide Drill Series

Work Material		Aluminum Alloy : 5052 / 6061 / 7075		
Coolant Type		Internal coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DBO165	150	2900	1000~1500	0.21
DBO165	190	3700	1300~1800	0.2
DBO170	150	2800	800~1200	0.17
DBO170	190	3600	1200~1700	0.2
DBO175	150	2700	800~1200	0.18
DBO175	190	3500	1100~1600	0.19
DBO180	150	2700	800~1200	0.18
DBO180	190	3400	1000~1500	0.18
DBO185	150	2600	700~1100	0.17
DBO185	190	3300	1000~1400	0.18
DBO190	150	2500	600~1000	0.16
DBO190	190	3200	700~1100	0.13
DBO195	150	2450	500~800	0.13
DBO195	190	3100	700~1000	0.13
DBO200	150	2400	400~700	0.11
DBO200	190	3000	500~800	0.1

Work Material	Carbon Steels / Cast Iron S50C / Fc250 /SS440 : 1.1210 / 0.6025 / 1.0036 : 1050 / NO.35 / A570 Gr.45 (~HRc22)			
	Coolant Type	Internal coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DBO030~035	115	12000	1800~2200	0.08
DBO036~045	115	9000	1200~1400	0.07
DBO046~055	125	8000	1200~1400	0.08
DBO056~065	125	6600	1200~1400	0.09
DBO066~075	125	5700	800~1200	0.08
DBO076~085	125	5000	800~1200	0.1
DBO086~095	125	4400	800~1200	0.11
DBO096~105	125	4000	800~1200	0.12
DBO106~115	125	3600	800~1200	0.13
DBO116~120	125	3300	700~1100	0.13
DBO125	125	3200	700~1100	0.14
DBO130	125	3100	700~1000	0.14
DBO135	125	3000	700~1000	0.15
DBO140	125	2800	600~900	0.13
DBO145	125	2800	600~900	0.13
DBO150	125	2700	500~800	0.12
DBO155	125	2600	500~800	0.12
DBO160	125	2500	500~800	0.13
DBO165	125	2400	500~800	0.13
DBO170	125	2350	400~700	0.11
DBO175	125	2300	400~700	0.11
DBO180	125	2200	400~700	0.12
DBO185	125	2150	400~700	0.12
DBO190	125	2100	300~600	0.1
DBO195	125	2050	300~600	0.1
DBO200	125	2000	300~500	0.1

DBO

MILLING CONDITIONS

Carbide Drill Series

DBO

MILLING CONDITIONS

Carbide Drill Series

Work Material		Chromium Molybdenum Alloy Steel SCM440 : 1.7225 : 4140 : 42CrMoA (HRC25~28)		
Coolant Type		Internal coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DBO030~035	115	12000	1600~2000	0.07
DBO036~045	115	9000	800~1100	0.05
DBO046~055	125	8000	800~1200	0.06
DBO056~065	125	6600	800~1200	0.07
DBO066~075	125	5700	700~1100	0.07
DBO076~085	125	5000	700~1100	0.09
DBO086~095	125	4400	700~1100	0.1
DBO096~105	125	4000	700~1100	0.11
DBO106~115	125	3600	700~1100	0.12
DBO116~120	125	3300	700~1100	0.13
DBO125	125	3200	700~1000	0.13
DBO130	125	3100	600~900	0.12
DBO135	125	3000	600~900	0.12
DBO140	125	2800	600~900	0.13
DBO145	125	2800	500~800	0.11
DBO150	125	2700	500~800	0.12
DBO155	125	2600	400~700	0.1
DBO160	125	2500	400~700	0.11
DBO165	125	2400	400~700	0.11
DBO170	125	2350	300~600	0.09
DBO175	125	2300	300~600	0.09
DBO180	125	2200	300~600	0.1
DBO185	125	2150	300~600	0.1
DBO190	125	2100	300~500	0.09
DBO195	125	2050	300~500	0.09
DBO200	125	2000	200~400	0.07

Work Material	Alloy Tool Steels / Carbon Tool Steels P20 / P5 / SK3 / SKD61 / SKD11 : 1.2311 / 1.1545 / 1.2379 / 1.2344 : H13 / D2 (HRC23~32)			
	Coolant Type Internal coolant			
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DBO030~035	90	9600	1000~1400	0.06
DBO036~045	90	7200	700~1000	0.05
DBO046~055	90	5800	700~1100	0.07
DBO056~065	90	4800	700~1100	0.09
DBO066~075	90	4200	700~1000	0.1
DBO076~085	90	3600	700~1000	0.1
DBO086~095	90	3200	500~800	0.1
DBO096~105	90	2900	400~700	0.09
DBO106~115	90	2600	400~700	0.1
DBO116~120	90	2400	400~700	0.11
DBO125	90	2300	400~700	0.11
DBO130	90	2200	400~700	0.12
DBO135	90	2100	400~700	0.13
DBO140	90	2100	400~600	0.11
DBO145	90	2000	400~600	0.12
DBO150	90	1900	400~600	0.13
DBO155	90	1900	300~500	0.1
DBO160	90	1800	300~500	0.11
DBO165	90	1700	300~500	0.11
DBO170	90	1700	200~400	0.08
DBO175	90	1650	200~400	0.09
DBO180	90	1600	200~400	0.09
DBO185	90	1550	200~400	0.09
DBO190	90	1500	200~300	0.08
DBO195	90	1500	200~300	0.08
DBO200	90	1450	150~250	0.06

DBO

MILLING CONDITIONS

Carbide Drill Series

Work Material	Stainless Steels			
	SUS304 : 1.4301 : AISI 304 (HRc28~32)			
Coolant Type	Internal coolant			
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DBO030~035	75	8000	200~300	0.01
DBO036~045	75	6000	250~400	0.02
DBO046~055	75	4800	300~500	0.04
DBO056~065	75	4000	300~500	0.05
DBO066~075	75	3400	300~400	0.05
DBO076~085	75	3000	300~400	0.05
DBO086~095	75	2600	300~450	0.07
DBO096~105	75	2400	300~450	0.07
DBO106~115	75	2200	300~450	0.06
DBO116~120	75	2000	300~450	0.09
DBO125	75	1900	300~450	0.09
DBO130	75	1900	300~450	0.09
DBO135	75	1800	300~450	0.1
DBO140	75	1700	300~450	0.11
DBO145	75	1700	300~450	0.11
DBO150	75	1600	200~400	0.09
DBO155	75	1500	200~400	0.1
DBO160	75	1500	200~400	0.1
DBO165	75	1450	200~400	0.1
DBO170	75	1400	150~300	0.08
DBO175	75	1400	150~300	0.08
DBO180	75	1350	150~300	0.08
DBO185	75	1300	150~300	0.08
DBO190	75	1250	100~200	0.06
DBO195	75	1250	100~200	0.06
DBO200	75	1200	80~180	0.05

Work Material		Hardened Steels : SKD61 / STAVAX / 17-4PH : 1.2083 / 1.2344 / 1.4542 : H13 / 420 (HRC48~54)		
Coolant Type		Internal coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DBO030~035	30	3200	80~110	0.01
DBO036~045	30	2400	80~110	0.01
DBO046~055	30	1900	60~90	0.01
DBO056~065	30	1600	60~90	0.02
DBO066~075	30	1400	50~80	0.02
DBO076~085	30	1200	50~80	0.02
DBO086~095	30	1100	40~70	0.02
DBO096~105	30	960	40~70	0.02
DBO106~115	30	900	40~70	0.03
DBO116~120	30	800	40~70	0.03
DBO125	30	770	40~70	0.03
DBO130	30	740	40~70	0.03
DBO135	30	700	40~70	0.03
DBO140	30	690	40~70	0.03
DBO145	30	660	40~70	0.04
DBO150	30	640	30~60	0.03
DBO155	30	620	30~60	0.03
DBO160	30	600	30~60	0.03
DBO165	30	580	30~60	0.03
DBO170	30	560	30~60	0.04
DBO175	30	550	30~60	0.04
DBO180	30	530	30~60	0.04
DBO185	30	520	30~60	0.04
DBO190	30	500	20~50	0.03
DBO195	30	490	20~50	0.03
DBO200	30	480	20~40	0.03

DBO

MILLING CONDITIONS

Carbide Drill Series

Work Material		Aluminum Alloy : 5052 / 6061 / 7075		
Coolant Type		Internal coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DCO040~045	115	9000	4000~4500	0.23
DCO040~045	225	18000	5500~6000	0.15
DCO046~055	135	8500	3500~4000	0.22
DCO046~055	190	12000	5000~5500	0.21
DCO056~065	150	8000	3000~3500	0.2
DCO056~065	245	13000	4500~5000	0.18
DCO066~075	150	7000	2500~3000	0.19
DCO066~075	190	8700	3000~3500	0.18
DCO076~085	150	6000	2000~2500	0.18
DCO076~085	190	7500	2500~3000	0.18
DCO086~095	150	5300	1700~2200	0.18
DCO086~095	190	6700	2200~2700	0.18
DCO096~105	150	4800	1700~2200	0.2
DCO096~105	190	6000	2200~2700	0.2
DCO106~115	150	4300	1700~2200	0.22
DCO106~115	190	5500	2200~2700	0.22
DCO116~120	150	4000	1400~1900	0.2
DCO116~120	190	5000	1800~2300	0.2

Work Material	Carbon Steels / Cast Iron S50C / Fc250 / S5440 : 1.1210 / 0.6025 / 1.0036 : 1050 / NO.35 / A570 Gr.45 (~HRc22)			
Coolant Type	Internal coolant			
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DCO040~045	115	9000	1100~1300	0.06
DCO046~055	115	7200	1200~1400	0.09
DCO056~065	115	6000	1200~1400	0.1
DCO066~075	115	5200	800~1200	0.09
DCO076~085	115	4500	800~1200	0.11
DCO086~095	115	4000	800~1200	0.12
DCO096~105	115	3600	800~1200	0.13
DCO106~115	115	3300	800~1200	0.15
DCO116~120	115	3000	700~1100	0.15

Work Material	Chromium Molybdenum Alloy Steel SCM440 : 1.7225 : 4140 : 42CrMoA (HRc25~28)			
Coolant Type	Internal coolant			
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DCO040~045	115	9000	1100~1300	0.06
DCO046~055	115	7200	1200~1400	0.09
DCO056~065	115	6000	1200~1400	0.1
DCO066~075	115	5200	700~1100	0.08
DCO076~085	115	4500	700~1100	0.1
DCO086~095	115	4000	700~1100	0.11
DCO096~105	115	3600	700~1000	0.11
DCO106~115	115	3300	700~900	0.12
DCO116~120	115	3000	700~900	0.13

DCO

MILLING CONDITIONS

Carbide Drill Series

Work Material		Alloy Tool Steels / Carbon Tool Steels P20 / P5 / SK3 / SKD61 / SKD11 : 1.2311 / 1.1545 / 1.2379 / 1.2344 : H13 / D2 (HRC23~32)		
Coolant Type		Internal coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DCO040~045	90	7200	200~350	0.01
DCO046~055	90	5800	700~1100	0.07
DCO056~065	90	4800	700~1100	0.09
DCO066~075	90	4200	700~1000	0.1
DCO076~085	90	3600	700~1000	0.11
DCO086~095	90	3200	400~700	0.08
DCO096~105	90	2900	400~700	0.09
DCO106~115	90	2600	400~700	0.1
DCO116~120	90	2400	400~700	0.11

Work Material		Stainless Steels SUS304 : 1.4301 : AISI 304 (HRC28~32)		
Coolant Type		Internal coolant		
Type No.	Cutting Speed (m/min)	Speed (min ⁻¹)	Feed (mm/min)	fz (mm)
DCO040~045	75	6000	250~400	0.02
DCO046~055	75	4800	300~500	0.04
DCO056~065	75	4000	300~500	0.05
DCO066~075	75	3400	300~400	0.05
DCO076~085	75	3000	300~400	0.05
DCO086~095	75	2600	300~400	0.06
DCO096~105	75	2400	300~400	0.07
DCO106~115	75	2200	300~400	0.07
DCO116~120	75	2000	300~400	0.08



DHF Precision Tool Co., Ltd.

No.425, Da Dun 6th St., Nantun District, Taichung
40867, Taiwan
TEL : 886-4-23815088 FAX : 886-4-23814488
<http://www.endmill.com.tw>
E-mail : dhf@endmill.com.tw



DHF Italia srl
P.I. 01486270935
Viale M. Grigoletti, 107
33170 PORDENONE
tel: +39.0434.367053
fax: +39.0434.554731
email: info@dhfitalia.it
web: www.dhfitalia.it

Distributor