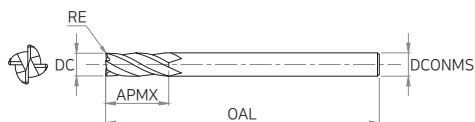
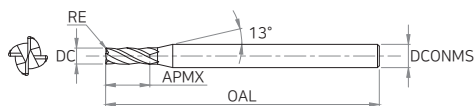
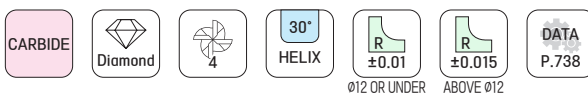
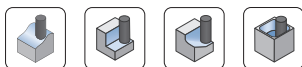


WGR504 4 Flutes Radius End Mill



► Tolerance

DC		Shank Dia
Ø3 ~ Ø12	0 ~ -0.02	h5
Ø16 ~ Ø20	0 ~ -0.03	



EDP No	DC	RE	APMX	OAL	DCONMS
WGR504 03002080	3	0.2	8	80	4
WGR504 03003080	3	0.3	8	80	4
WGR504 03005080	3	0.5	8	80	4
WGR504 04003100	4	0.3	10	100	4
WGR504 04005100	4	0.5	10	100	4
WGR504 04010100	4	1	10	100	4
WGR504 06003110	6	0.3	15	110	6
WGR504 06005110	6	0.5	15	110	6
WGR504 06010110	6	1	15	110	6
WGR504 08005110	8	0.5	20	110	8
WGR504 08010110	8	1	20	110	8
WGR504 08005130	8	0.5	20	130	8
WGR504 08010130	8	1	20	130	8
WGR504 10005130	10	0.5	25	130	10
WGR504 10010130	10	1	25	130	10
WGR504 10005150	10	0.5	25	150	10
WGR504 10010150	10	1	25	150	10
WGR504 12005130	12	0.5	30	130	12
WGR504 12010130	12	1	30	130	12
WGR504 12005150	12	0.5	30	150	12

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	~325	HRc30~50	~FCD500					
							◎	○		

WGR504 4 Flutes Radius End Mill

Endmill

EDP No	DC	RE	APMX	OAL	DCONMS
WGR504 12010150	12	1	30	150	12
WGR504 16005200	16	0.5	32	200	16
WGR504 16010200	16	1	32	200	16
WGR504 20005200	20	0.5	40	200	20
WGR504 20010200	20	1	40	200	20

Zamus
Star

E-Star

U-Wing

Zamus
Thunder

X-Star

S-Wing

A-Wing

Standard

Copper
-Mate

Gra
-Mate

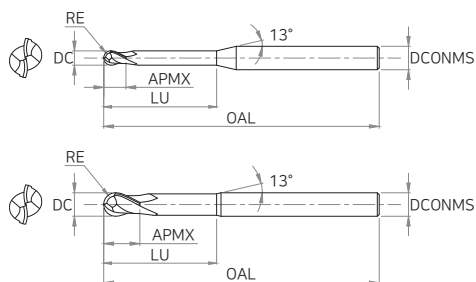
► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
							◎	○		



2 Flutes Neck Ball End Mill



► Tolerance

DC		Shank Dia
All Sizes	0 ~ -0.03	h6



All Sizes

EDP No	DC	RE	APMX	LU	OAL	DCONMS
G 00501003	0.5	0.25	1	3	50	4
G 00501006	0.5	0.25	1	6	50	4
G 00501010	0.5	0.25	1	10	50	4
G 00601203	0.6	0.3	1.2	3	50	4
G 00601206	0.6	0.3	1.2	6	50	4
G 00601208	0.6	0.3	1.2	8	50	4
G 00601210	0.6	0.3	1.2	10	50	4
G 00601212	0.6	0.3	1.2	12	50	4
G 0080164	0.8	0.4	1.6	4	50	4
G 0080166	0.8	0.4	1.6	6	50	4
G 0080168	0.8	0.4	1.6	8	50	4
G 0100306	1	0.5	3	6	60	4
G 0100308	1	0.5	3	8	60	4
G 0100310	1	0.5	3	10	60	4
G 0100312	1	0.5	3	12	60	4
G 0100314	1	0.5	3	14	60	4
G 0100316	1	0.5	3	16	60	4
G 0100318	1	0.5	3	18	60	4
G 0100320	1	0.5	3	20	60	4
G 0120410	1.2	0.6	4	10	70	4

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	~325	HRc30~50	~FCD500					
							◎	○		

Endmill

Zamus
Star

E-Star

U-Wing

Zamus
Thunder

X-Star

S-Wing

A-Wing

Standard

Copper
-Mate

Gra
-Mate



2 Flutes Neck Ball End Mill

Endmill

	EDP No	DC	RE	APMX	LU	OAL	DCONMS
Zamus Star	G 0150510	1.5	0.75	5	10	60	4
	G 0150512	1.5	0.75	5	12	60	4
	G 0150516	1.5	0.75	5	16	60	4
	G 0150520	1.5	0.75	5	20	60	4
	G 0150525	1.5	0.75	5	25	70	4
E-Star	G 0150530	1.5	0.75	5	30	70	4
	G 0200812	2	1	8	12	60	4
	G 0200816	2	1	8	16	60	4
U-Wing	G 0200820	2	1	8	20	60	4
	G 0200825	2	1	8	25	70	4
	G 0200830	2	1	8	30	70	4
Zamus Thunder	G 0200835	2	1	8	35	80	4
	G 0200840	2	1	8	40	80	4
	G 0201020	2	1	10	20	80	4
X-Star	G 0201020L	2	1	10	20	100	4
	G 0251020	2.5	1.25	10	20	80	4
	G 0301216	3	1.5	12	16	60	6
S-Wing	G 0301220	3	1.5	12	20	70	6
	G 0301225	3	1.5	12	25	70	6
	G 0301230	3	1.5	12	30	80	6
A-Wing	G 0301235	3	1.5	12	35	80	6
	G 0301240	3	1.5	12	40	90	6
	G 0301245	3	1.5	12	45	90	6
Standard	G 0301525	3	1.5	15	25	80	4
	G 04015S	4	2	15	-	50	4
	G 04015M	4	2	15	-	80	4
Copper -Mate	G 04015L	4	2	15	-	120	4
	G 0401520	4	2	15	20	60	6
	G 0401525	4	2	15	25	70	6
Gra -Mate	G 0401530	4	2	15	30	80	6
	G 0401535	4	2	15	35	80	6
	G 0401540	4	2	15	40	90	6
	G 0401545	4	2	15	45	90	6
	G 0401550	4	2	15	50	100	6

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	Steel ~HB225	HB225 ~325	Steel HRC30~50	~FCD500					
							◎	○		



2 Flutes Neck Ball End Mill

Endmill

EDP No	DC	RE	APMX	LU	OAL	DCONMS
G 0402030	4	2	20	30	80	4
G 0503050	5	2.5	30	50	100	6
G 0503050L	5	2.5	30	50	150	6
G 06020S	6	3	20	-	70	6
G 06020M	6	3	20	-	100	6
G 06020L	6	3	20	-	150	6
G 0603050	6	3	30	50	100	6
G 0603050L	6	3	30		150	6
G 08025S	8	4	25	-	70	8
G 08025M	8	4	25	-	110	8
G 08025L	8	4	25	-	160	8
G 0804060	8	4	40	60	110	8
G 0804060L	8	4	40		200	8
G 10030S	10	5	30	-	80	10
G 10030M	10	5	30	-	120	10
G 10030L	10	5	30	-	170	10
G 1005070	10	5	50	70	120	10
G 1005070L	10	5	50	70	200	10
G 12035S	12	6	35	-	80	12
G 12035M	12	6	35	-	130	12
G 12035L	12	6	35	-	180	12
G 1205575	12	6	55	75	130	12
G 1205575L	12	6	55	75	200	12

Zamus
Star

E-Star

U-Wing

Zamus
Thunder

X-Star

S-Wing

A-Wing

Standard

Copper
-Mate

Gra
-Mate

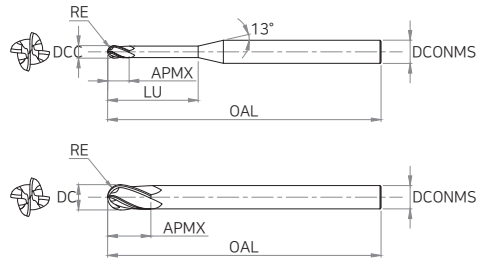
► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
							◎	○		

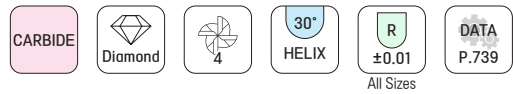
WGB504 4 Flutes Ball End Mill

Endmill



► Tolerance

DC		Shank Dia
Ø1 ~ Ø12	0 ~ -0.02	h6
Ø16 ~ Ø20	0 ~ -0.03	



EDP No	DC	RE	APMX	LU	OAL	DCONMS
WGB504 010	1	0.5	3	-	60	4
WGB504 01010	1	0.5	3	10	60	4
WGB504 01015	1	0.5	3	15	60	4
WGB504 01020	1	0.5	3	20	60	4
WGB504 01025	1	0.5	3	25	80	4
WGB504 01030	1	0.5	3	30	80	4
WGB504 015	1.5	0.75	4	-	60	4
WGB504 01510	1.5	0.75	4	10	80	4
WGB504 01515	1.5	0.75	4	15	80	4
WGB504 01520	1.5	0.75	4	20	80	4
WGB504 01525	1.5	0.75	4	25	80	4
WGB504 01530	1.5	0.75	4	30	80	4
WGB504 020	2	1	6	-	60	4
WGB504 02010	2	1	6	10	80	4
WGB504 02015	2	1	6	15	80	4
WGB504 02020	2	1	6	20	80	4
WGB504 02025	2	1	6	25	80	4
WGB504 02030	2	1	6	30	80	4
WGB504 02040	2	1	6	40	100	4
WGB504 030	3	1.5	9	-	60	4
WGB504 03015	3	1.5	9	15	100	4

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
							◎	○		

WGB504

4 Flutes Ball End Mill

Endmill

EDP No	DC	RE	APMX	LU	OAL	DCONMS
WGB504 03020	3	1.5	9	20	100	4
WGB504 03025	3	1.5	9	25	100	4
WGB504 03030	3	1.5	9	30	100	4
WGB504 03040	3	1.5	9	40	100	4
WGB504 03050	3	1.5	9	50	100	4
WGB504 040060	4	2	12	-	60	4
WGB504 040080	4	2	12	-	80	4
WGB504 040110	4	2	12	-	110	4
WGB504 040130	4	2	12	-	130	4
WGB504 040150	4	2	12	-	150	4
WGB504 050080	5	2.5	15	25	80	6
WGB504 050110	5	2.5	15	25	110	6
WGB504 060090	6	3	20	-	90	6
WGB504 060110	6	3	20	-	110	6
WGB504 060130	6	3	20	-	130	6
WGB504 060150	6	3	20	-	150	6
WGB504 060180	6	3	20	-	180	6
WGB504 080110	8	4	25	-	110	8
WGB504 080130	8	4	25	-	130	8
WGB504 080150	8	4	25	-	150	8
WGB504 080200	8	4	25	-	200	8
WGB504 100110	10	5	30	-	110	10
WGB504 100130	10	5	30	-	130	10
WGB504 100150	10	5	30	-	150	10
WGB504 100180	10	5	30	-	180	10
WGB504 100200	10	5	30	-	200	10
WGB504 120110	12	6	35	-	110	12
WGB504 120130	12	6	35	-	130	12
WGB504 120150	12	6	35	-	150	12
WGB504 120180	12	6	35	-	180	12
WGB504 120200	12	6	35	-	200	12
WGB504 160150	16	8	50	-	150	16
WGB504 160200	16	8	50	-	200	16
WGB504 200150	20	10	60	-	150	20
WGB504 200200	20	10	60	-	200	20

Zamus
Star

E-Star

U-Wing

Zamus
Thunder

X-Star

S-Wing

A-Wing

Standard

Copper
-Mate

Gra
-Mate

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	~325	HRc30~50	~FCD500					
							◎	○		

Drill Series

Dolphin Drill NEW General Purpose & Cast Iron Drill	P. 411
Dolphin Oil Hole Drill NEW General Purpose Oil Hole Drill	P. 430
Power Max Drill High Speed Drill	P. 452
Solid Spiral Drill Non-Ferrous Drill	P. 492

Dolphin Drill **NEW**

General Purpose Drill

Characteristics

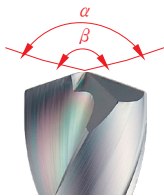
- Improved Cutting force, Stable Chip emission Reduced cutting workload, Improved working surface
- Drill for a wide range of workpieces Carbon steel, Alloy steel, Stainless etc.
- Satisfy Differing needs of the customers as 3D, 4D, 7D Standard

Features

- Improved cutting edge design reduces initial cutting forces
- Reduced cutting load through optimized thinning geometry
- Flute designed for high hardness and excellent chip evacuation
- AlCrN coating enhances wear resistance and lubricity
- Designed for a wide range of workpiece materials

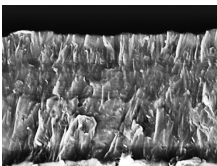
Multi Point angle

- Pointed angle reduces cutting forces
- Multi-point angle decreases drill breakage



AlCrN Base New Coating

- Enhanced chip evacuation enabled by improved flute lubricity
- Improved wear resistance and oxidation resistance through multi-layer thin coating



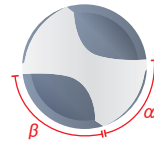
Cutting Edge

- Improved chipping resistance which decreases drill breakage
- Straight cutting edge provides lower cutting force



New Flute Design

- Designed to provide high surface hardness and excellent chip evacuation
- Smoother flute design provides excellent chip evacuation and reduces friction



A

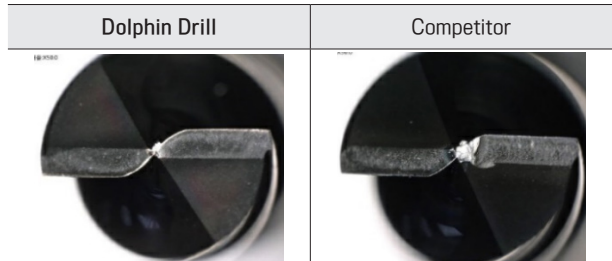
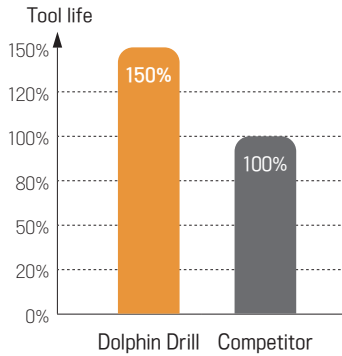
A'

Dolphin Drill NEW

General Purpose Drill

Case Study

► Carbon Steel(SM45C)

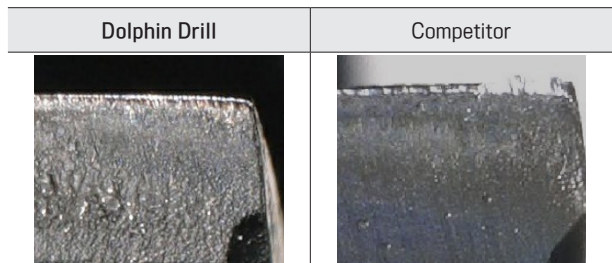
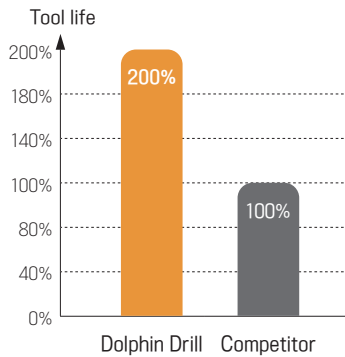


· Spec : NDPG507060 (D6.0-50/83-6)

· Cutting Condition

Vc	rpm	fn	Feed	Ap	Coolant
120	6,364	0.12	764	30	External

► Alloy Steel (SCM440)

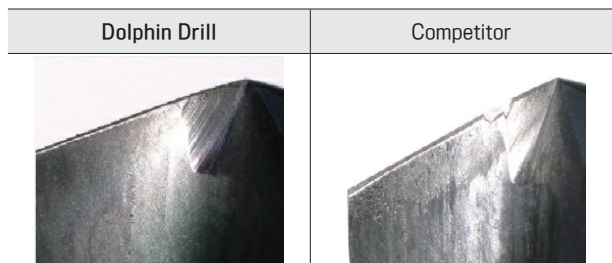
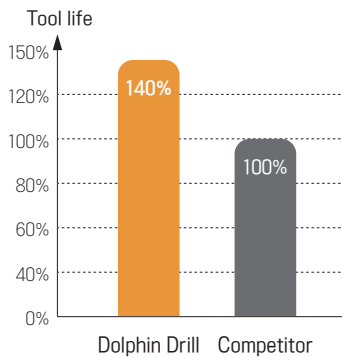


· Spec : NDPG507060 (D6.0-50/83-6)

· Cutting Condition

Vc	rpm	fn	Feed	Ap	Coolant
100	5,303	0.12	636	30	External

► Stainless Steel(SUS304)



· Spec : NDPG507060 (D6.0-50/83-6)

· Cutting Condition

Vc	rpm	fn	Feed	Ap	Coolant
30	1,591	0.04	64	5	External

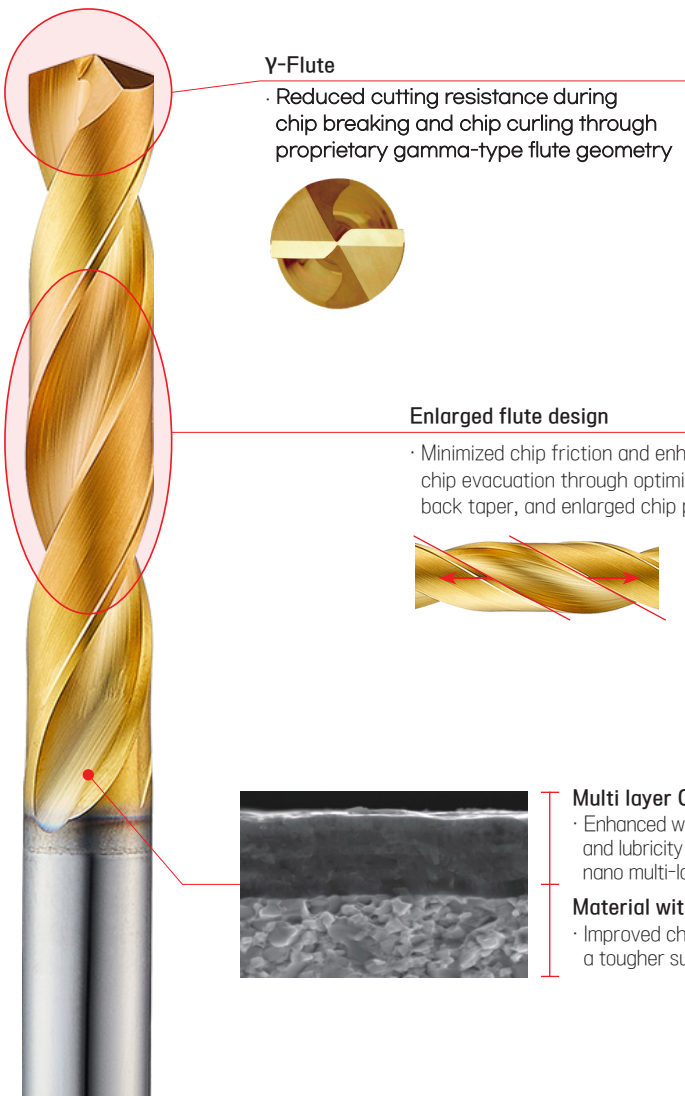
Dolphin Cast Iron Drill

NEW

Cast Iron Drill

Features

- Cost-effective drill optimized for a wide range of workpiece materials
- Increased wear resistance through optimized substrate and coating, suitable for various workpiece
 - *Excellent performance in cast iron*
- Improved chip evacuation and extended tool life through enhanced surface treatment
- Improved chip curling with newly developed gamma flute geometry
- High-precision machining without additional centering or reaming operations



Y-Flute

- Reduced cutting resistance during chip breaking and chip curling through proprietary gamma-type flute geometry

Enlarged flute design

- Minimized chip friction and enhanced chip evacuation through optimized margin, back taper, and enlarged chip pocket

Multi layer Coating

- Enhanced wear resistance, chipping resistance, and lubricity through advanced high-hardness nano multi-layer coating technology

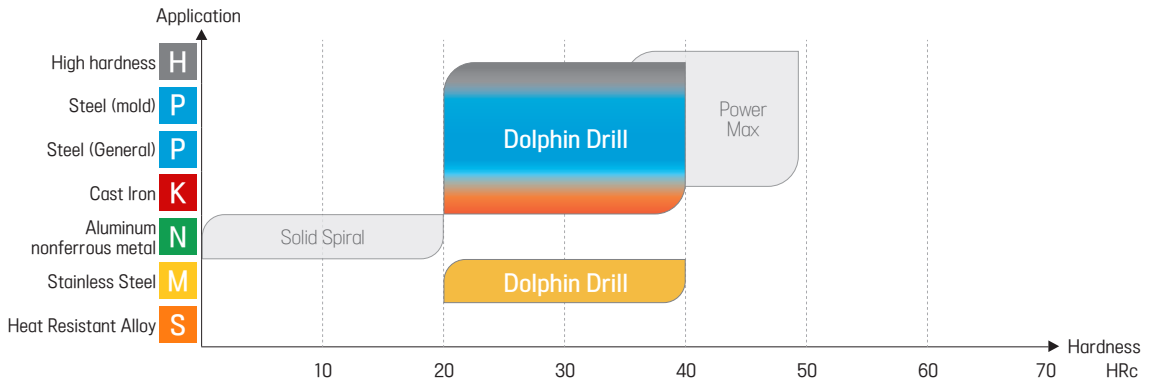
Material with enhanced toughness applied

- Improved chipping resistance through the use of a tougher substrate material

Dolphin Drill & Cast Iron Drill NEW

General Purpose & Cast Iron Drill

Applications



Contents

EDP No Spec (INCH : / METRIC :)	Flutes	Geometry	Length			Coolant	Margin	Tolerance	Diameter(DC)		Page
			3D	4D	7D				Min	Max	
NDPG503	2F		○			External	Single	h7	1	13	415
NDPG504				○		External	Single	h7	1	20	418
NDPG507					○	External	Single	h7	3	20	422
NDPK504				○		External	Single	h7	1	20	426
NDPK507					○	External	Single	h7	3	20	429

EDP No. System

*If expressed as an integer, the decimal point is omitted.

NDP	G	-	5	04	100	-
①	②	③	④	⑤	⑥	⑦

①	②	③	④	⑤	⑥	⑦
Series name	Work piece	Coolant Type	Grade	Working Depth	Cutting Dia	Standard
NDP : Dolphin	G : General K (ISO K : Cast Iron)	- : Non Coolant H : Oil-Hole Coolant	5 : Grade	03 : 3D 04 : 4D 07 : 7D	030 : Ø3.0 060 : Ø6.0 103 : Ø10.3	- : JIS D : DIN



It is a new brand name for all of Widin's rotating tools representing straight and dynamic image of cylindrical rotation pattern of tools when machining

NDPG503

Dolphin General Purpose Drill



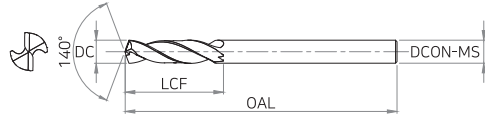
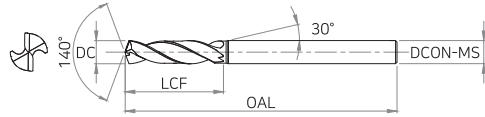
up to 1.5mm



D1.6~D1.9



over 1.9mm



► Tolerance

DC		Shank Dia
Ø1 ~ Ø3	0 ~ -0.010	h6
Ø3.1 ~ Ø6	0 ~ -0.012	
Ø6.1 ~ Ø10	0 ~ -0.015	
Ø10.1 ~ Ø13	0 ~ -0.018	



EDP No	DC	LCF	OAL	DCON MS	Applicable Tap Size Limit	
NDPG503 010	1	5	38	3	-	-
NDPG503 011	1.1	6	42	3	-	-
NDPG503 012	1.2	6	42	3	-	-
NDPG503 013	1.3	6	42	3	-	-
NDPG503 014	1.4	7	42	3	-	-
NDPG503 015	1.5	7	42	3	-	-
NDPG503 016	1.6	8	42	3	-	-
NDPG503 017	1.7	8	42	3	-	-
NDPG503 018	1.8	9	42	3	-	-
NDPG503 019	1.9	9	42	3	-	-
NDPG503 020	2	10	50	3	-	-
NDPG503 021	2.1	10	50	3	-	-
NDPG503 022	2.2	11	50	3	-	-
NDPG503 023	2.3	11	50	3	-	-
NDPG503 024	2.4	12	50	3	-	-
NDPG503 025	2.5	12	50	3	M3x0.5	WH1~4
NDPG503 026	2.6	12	50	3	M3x0.5	WH5~6
NDPG503 027	2.7	14	50	3	-	-
NDPG503 028	2.8	14	50	3	-	-
NDPG503 029	2.9	14	50	3	-	-

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap Size Limit	
NDPG503 030	3	14	55	3	-	-
NDPG503 031	3.1	16	55	4	-	-
NDPG503 03175	3.175	16	55	4	-	-
NDPG503 032	3.2	16	55	4	-	-
NDPG503 03264	3.264	16	55	4	-	-
NDPG503 033	3.3	16	55	4	M4x0.7	WH1~4
NDPG503 034	3.4	16	55	4	M4x0.7	WH5~6
NDPG503 035	3.5	16	55	4	-	-
NDPG503 03572	3.572	18	55	4	-	-
NDPG503 036	3.6	18	55	4	-	-
NDPG503 037	3.7	18	55	4	-	-
NDPG503 038	3.8	20	55	4	-	-
NDPG503 039	3.9	20	55	4	-	-
NDPG503 040	4	20	55	4	-	-
NDPG503 04039	4.039	20	55	5	-	-
NDPG503 041	4.1	20	55	5	-	-
NDPG503 042	4.2	20	62	5	M5x0.8	WH1~4
NDPG503 043	4.3	22	62	5	M5x0.8	WH5~6
NDPG503 044	4.4	22	62	5	-	-
NDPG503 045	4.5	22	62	5	-	-

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		◎	◎	○	○	○		○	○	

Drill

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

NDPG503

Dolphin General Purpose Drill

Drill

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPG503 046	4.6	22	62	5	-	-
NDPG503 047	4.7	22	62	5	-	-
NDPG503 04763	4.763	24	62	5	-	-
NDPG503 048	4.8	24	62	5	-	-
NDPG503 049	4.9	24	62	5	-	-
NDPG503 050	5	24	62	5	M6x1.0	WH1~4
NDPG503 051	5.1	24	62	6	M6x1.0	WH5~6
NDPG503 05159	5.159	28	66	6	-	-
NDPG503 052	5.2	28	66	6	-	-
NDPG503 053	5.3	28	66	6	-	-
NDPG503 054	5.4	28	66	6	-	-
NDPG503 055	5.5	28	66	6	-	-
NDPG503 05556	5.556	28	66	6	-	-
NDPG503 056	5.6	28	66	6	-	-
NDPG503 057	5.7	28	66	6	-	-
NDPG503 058	5.8	28	66	6	-	-
NDPG503 059	5.9	28	66	6	-	-
NDPG503 05953	5.953	28	66	6	-	-
NDPG503 060	6	28	66	6	-	-
NDPG503 061	6.1	30	66	7	-	-
NDPG503 062	6.2	34	74	7	-	-
NDPG503 063	6.3	34	74	7	-	-
NDPG503 0635	6.35	34	74	7	-	-
NDPG503 064	6.4	34	74	7	-	-
NDPG503 065	6.5	34	74	7	-	-
NDPG503 066	6.6	34	74	7	-	-
NDPG503 067	6.7	37	74	7	-	-
NDPG503 06747	6.747	37	74	7	-	-
NDPG503 068	6.8	37	74	7	M8x1.25	WH1~4
NDPG503 069	6.9	37	74	7	M8x1.25	WH5~6
NDPG503 070	7	37	74	7	M8x1.0	WH1~4
NDPG503 071	7.1	37	74	8	M8x1.0	WH5~6
NDPG503 07144	7.144	40	79	8	-	-
NDPG503 072	7.2	40	79	8	-	-
NDPG503 073	7.3	40	79	8	-	-
NDPG503 074	7.4	40	79	8	-	-
NDPG503 075	7.5	40	79	8	-	-
NDPG503 07541	7.541	40	79	8	-	-
NDPG503 076	7.6	40	79	8	-	-
NDPG503 077	7.7	40	79	8	-	-
NDPG503 078	7.8	40	79	8	-	-
NDPG503 079	7.9	40	79	8	-	-
NDPG503 07938	7.938	40	79	8	-	-
NDPG503 080	8	40	79	8	-	-
NDPG503 081	8.1	40	79	9	-	-
NDPG503 082	8.2	43	84	9	-	-
NDPG503 083	8.3	43	84	9	-	-
NDPG503 084	8.4	43	84	9	-	-
NDPG503 085	8.5	43	84	9	M10x1.5	WH1~4
NDPG503 086	8.6	43	84	9	M10x1.5	WH5~6
NDPG503 087	8.7	43	84	9	-	-
NDPG503 08731	8.731	43	84	9	-	-
NDPG503 088	8.8	43	84	9	M10x1.25	WH1~4
NDPG503 089	8.9	43	84	9	M10x1.25	WH5~6
NDPG503 090	9	43	84	9	M10x1.0	WH1~4
NDPG503 091	9.1	43	84	10	M10x1.0	WH5~6
NDPG503 092	9.2	47	89	10	-	-
NDPG503 093	9.3	47	89	10	-	-
NDPG503 094	9.4	47	89	10	-	-
NDPG503 095	9.5	47	89	10	-	-
NDPG503 09525	9.525	47	89	10	-	-
NDPG503 096	9.6	47	89	10	-	-
NDPG503 097	9.7	47	89	10	-	-
NDPG503 098	9.8	47	89	10	-	-
NDPG503 099	9.9	47	89	10	-	-
NDPG503 100	10	47	89	10	-	-
NDPG503 101	10.1	47	89	11	-	-
NDPG503 102	10.2	51	95	11	-	-

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
		◎	◎	○	○	○		○	○	

NDPG503

Dolphin General Purpose Drill

Drill

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPG503 103	10.3	51	95	11	M12x1.75	WH1~2
NDPG503 10319	10.319	51	95	11	M12x1.75	WH3~4
NDPG503 104	10.4	51	95	11	M12x1.75	WH5~6
NDPG503 105	10.5	51	95	11	M12x1.5	WH1~4
NDPG503 106	10.6	51	95	11	M12x1.5	WH5~6
NDPG503 107	10.7	51	95	11	-	-
NDPG503 10716	10.716	51	95	11	-	-
NDPG503 108	10.8	51	95	11	M12x1.25	WH1~4
NDPG503 109	10.9	51	95	11	M12x1.25	WH5~6
NDPG503 110	11	51	95	11	M12x1.0	WH1~4
NDPG503 111	11.1	51	95	12	M12x1.0	WH5~6
NDPG503 11113	11.113	54	102	12	-	-
NDPG503 112	11.2	54	102	12	-	-
NDPG503 113	11.3	54	102	12	-	-
NDPG503 114	11.4	54	102	12	-	-
NDPG503 115	11.5	54	102	12	-	-

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPG503 116	11.6	54	102	12	-	-
NDPG503 117	11.7	54	102	12	-	-
NDPG503 118	11.8	54	102	12	-	-
NDPG503 119	11.9	54	102	12	-	-
NDPG503 120	12	54	102	12	M14x2.0	WH1~4
NDPG503 121	12.1	54	102	13	M14x2.0	WH5~6
NDPG503 122	12.2	57	102	13	-	-
NDPG503 123	12.3	57	102	13	-	-
NDPG503 124	12.4	57	102	13	-	-
NDPG503 125	12.5	57	102	13	M14x1.5	WH1~4
NDPG503 126	12.6	57	102	13	M14x1.5	WH5~6
NDPG503 127	12.7	57	102	13	-	-
NDPG503 128	12.8	57	102	13	-	-
NDPG503 129	12.9	57	102	13	-	-
NDPG503 130	13	57	102	13	-	-

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	Steel HRc30~50	~FCD500					
		◎	◎	○	○	○		○	○	

NDPG504 Dolphin General Purpose Drill

Drill



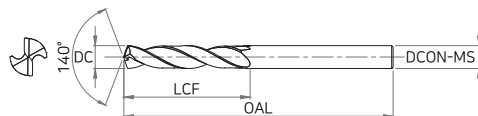
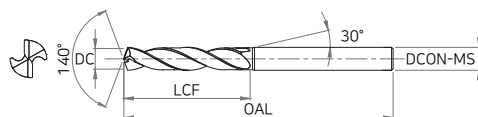
up to 1.5mm



D1.6~D1.9



over 1.9mm



► Tolerance

DC		Shank Dia
Ø1 ~ Ø3	0 ~ -0.010	h6
Ø3.1 ~ Ø6	0 ~ -0.012	
Ø6.1 ~ Ø10	0 ~ -0.015	
Ø10.1 ~ Ø18	0 ~ -0.018	
Ø18.1 ~	0 ~ -0.021	



EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPG504 010	1	8	38	3	-	-
NDPG504 011	1.1	9	42	3	-	-
NDPG504 012	1.2	10	42	3	-	-
NDPG504 013	1.3	10	42	3	-	-
NDPG504 014	1.4	11	42	3	-	-
NDPG504 015	1.5	11	42	3	-	-
NDPG504 016	1.6	12	42	3	-	-
NDPG504 017	1.7	12	42	3	-	-
NDPG504 018	1.8	13	42	3	-	-
NDPG504 019	1.9	13	42	3	-	-
NDPG504 020	2	18	50	3	-	-
NDPG504 021	2.1	18	50	3	-	-
NDPG504 022	2.2	18	50	3	-	-
NDPG504 023	2.3	18	50	3	-	-
NDPG504 024	2.4	18	50	3	-	-
NDPG504 025	2.5	18	50	3	M3x0.5	WH1~4
NDPG504 026	2.6	18	50	3	M3x0.5	WH5~6
NDPG504 027	2.7	18	50	3	-	-
NDPG504 028	2.8	18	50	3	-	-
NDPG504 029	2.9	18	50	3	-	-

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPG504 030	3	20	55	3	-	-
NDPG504 031	3.1	20	55	4	-	-
NDPG504 03175	3.175	20	55	4	-	-
NDPG504 032	3.2	20	55	4	-	-
NDPG504 03264	3.264	20	55	4	-	-
NDPG504 033	3.3	20	55	4	M4x0.7	WH1~4
NDPG504 034	3.4	20	55	4	M4x0.7	WH5~6
NDPG504 035	3.5	20	55	4	-	-
NDPG504 03572	3.572	25	55	4	-	-
NDPG504 036	3.6	25	55	4	-	-
NDPG504 037	3.7	25	55	4	-	-
NDPG504 038	3.8	25	55	4	-	-
NDPG504 039	3.9	25	55	4	-	-
NDPG504 040	4	25	55	4	-	-
NDPG504 04039	4.039	25	55	5	-	-
NDPG504 041	4.1	25	55	5	-	-
NDPG504 042	4.2	33	63	5	M5x0.8	WH1~4
NDPG504 043	4.3	33	63	5	M5x0.8	WH5~6
NDPG504 044	4.4	33	63	5	-	-
NDPG504 045	4.5	33	63	5	-	-

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
		◎	◎	○	○	○		○	○	

NDPG504 Dolphin General Purpose Drill

Drill

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPG504 046	4.6	33	63	5	-	-
NDPG504 047	4.7	33	63	5	-	-
NDPG504 04763	4.763	33	63	5	-	-
NDPG504 048	4.8	33	63	5	-	-
NDPG504 049	4.9	33	63	5	-	-
NDPG504 050	5	33	63	5	M6x1.0	WH1~4
NDPG504 051	5.1	33	63	6	M6x1.0	WH5~6
NDPG504 05159	5.159	36	66	6	-	-
NDPG504 052	5.2	36	66	6	-	-
NDPG504 053	5.3	36	66	6	-	-
NDPG504 054	5.4	36	66	6	-	-
NDPG504 055	5.5	36	66	6	-	-
NDPG504 05556	5.556	36	66	6	-	-
NDPG504 056	5.6	36	66	6	-	-
NDPG504 057	5.7	36	66	6	-	-
NDPG504 058	5.8	36	66	6	-	-
NDPG504 059	5.9	36	66	6	-	-
NDPG504 05953	5.953	36	66	6	-	-
NDPG504 060	6	36	66	6	-	-
NDPG504 061	6.1	36	66	7	-	-
NDPG504 062	6.2	42	75	7	-	-
NDPG504 063	6.3	42	75	7	-	-
NDPG504 0635	6.35	42	75	7	-	-
NDPG504 064	6.4	42	75	7	-	-
NDPG504 065	6.5	42	75	7	-	-
NDPG504 066	6.6	42	75	7	-	-
NDPG504 067	6.7	42	75	7	-	-
NDPG504 06747	6.747	42	75	7	-	-
NDPG504 068	6.8	42	75	7	M8x1.25	WH1~4
NDPG504 069	6.9	42	75	7	M8x1.25	WH5~6
NDPG504 070	7	42	75	7	M8x1.0	WH1~4
NDPG504 071	7.1	42	75	8	M8x1.0	WH5~6
NDPG504 07144	7.144	46	80	8	-	-
NDPG504 072	7.2	46	80	8	-	-
NDPG504 073	7.3	46	80	8	-	-
NDPG504 074	7.4	46	80	8	-	-
NDPG504 075	7.5	46	80	8	-	-
NDPG504 07541	7.541	46	80	8	-	-
NDPG504 076	7.6	46	80	8	-	-
NDPG504 077	7.7	46	80	8	-	-
NDPG504 078	7.8	46	80	8	-	-
NDPG504 079	7.9	46	80	8	-	-
NDPG504 07938	7.938	46	80	8	-	-
NDPG504 080	8	46	80	8	-	-
NDPG504 081	8.1	46	80	9	-	-
NDPG504 082	8.2	50	85	9	-	-
NDPG504 083	8.3	50	85	9	-	-
NDPG504 084	8.4	50	85	9	-	-
NDPG504 085	8.5	50	85	9	M10x1.5	WH1~4
NDPG504 086	8.6	50	85	9	M10x1.5	WH5~6
NDPG504 087	8.7	50	85	9	-	-
NDPG504 08731	8.731	50	85	9	-	-
NDPG504 088	8.8	50	85	9	M10x1.25	WH1~4
NDPG504 089	8.9	50	85	9	M10x1.25	WH5~6
NDPG504 090	9	50	85	9	M10x1.0	WH1~4
NDPG504 091	9.1	50	85	10	M10x1.0	WH5~6
NDPG504 092	9.2	55	90	10	-	-
NDPG504 093	9.3	55	90	10	-	-
NDPG504 094	9.4	55	90	10	-	-
NDPG504 095	9.5	55	90	10	-	-
NDPG504 09525	9.525	55	90	10	-	-
NDPG504 096	9.6	55	90	10	-	-
NDPG504 097	9.7	55	90	10	-	-
NDPG504 098	9.8	55	90	10	-	-
NDPG504 099	9.9	55	90	10	-	-
NDPG504 100	10	55	90	10	-	-
NDPG504 101	10.1	55	90	11	-	-
NDPG504 102	10.2	57	95	11	-	-

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		◎	◎	○	○	○		○	○	

NDPG504

Dolphin General Purpose Drill

Drill

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPG504 103	10.3	57	95	11	M12x1.75	WH1~2
NDPG504 10319	10.319	57	95	11	M12x1.75	WH3~4
NDPG504 104	10.4	57	95	11	M12x1.75	WH5~6
NDPG504 105	10.5	57	95	11	M12x1.5	WH1~4
NDPG504 106	10.6	57	95	11	M12x1.5	WH5~6
NDPG504 107	10.7	57	95	11	-	-
NDPG504 10716	10.716	57	95	11	-	-
NDPG504 108	10.8	57	95	11	M12x1.25	WH1~4
NDPG504 109	10.9	57	95	11	M12x1.25	WH5~6
NDPG504 110	11	57	95	11	M12x1.0	WH1~4
NDPG504 111	11.1	57	95	12	M12x1.0	WH5~6
NDPG504 11113	11.113	63	102	12	-	-
NDPG504 112	11.2	63	102	12	-	-
NDPG504 113	11.3	63	102	12	-	-
NDPG504 114	11.4	63	102	12	-	-
NDPG504 115	11.5	63	102	12	-	-
NDPG504 116	11.6	63	102	12	-	-
NDPG504 117	11.7	63	102	12	-	-
NDPG504 118	11.8	63	102	12	-	-
NDPG504 119	11.9	63	102	12	-	-
NDPG504 120	12	63	102	12	M14x2.0	WH1~4
NDPG504 121	12.1	63	102	13	M14x2.0	WH5~6
NDPG504 122	12.2	63	102	13	-	-
NDPG504 123	12.3	63	102	13	-	-
NDPG504 124	12.4	63	102	13	-	-
NDPG504 125	12.5	63	102	13	M14x1.5	WH1~4
NDPG504 126	12.6	63	102	13	M14x1.5	WH5~6
NDPG504 127	12.7	63	102	13	-	-
NDPG504 128	12.8	63	102	13	-	-
NDPG504 129	12.9	63	102	13	-	-
NDPG504 130	13	63	102	13	-	-
NDPG504 131	13.1	63	102	14	-	-
NDPG504 132	13.2	65	107	14	-	-
NDPG504 133	13.3	65	107	14	-	-
NDPG504 134	13.4	65	107	14	-	-
NDPG504 13494	13.494	65	107	14	-	-
NDPG504 135	13.5	65	107	14	-	-
NDPG504 136	13.6	65	107	14	-	-
NDPG504 137	13.7	65	107	14	-	-
NDPG504 138	13.8	65	107	14	-	-
NDPG504 139	13.9	65	107	14	-	-
NDPG504 140	14	65	107	14	M16x2.0	WH1~4
NDPG504 141	14.1	65	107	15	M16x2.0	WH5~6
NDPG504 142	14.2	67	111	15	-	-
NDPG504 143	14.3	67	111	15	-	-
NDPG504 144	14.4	67	111	15	-	-
NDPG504 145	14.5	67	111	15	M16x1.5	WH1~4
NDPG504 146	14.6	67	111	15	M16x1.5	WH5~6
NDPG504 147	14.7	67	111	15	-	-
NDPG504 148	14.8	67	111	15	-	-
NDPG504 149	14.9	67	111	15	-	-
NDPG504 150	15	67	111	15	-	-
NDPG504 151	15.1	67	111	16	-	-
NDPG504 152	15.2	69	115	16	-	-
NDPG504 153	15.3	69	115	16	-	-
NDPG504 154	15.4	69	115	16	-	-
NDPG504 155	15.5	69	115	16	M18x2.5	WH1~4
NDPG504 156	15.6	69	115	16	M18x2.5	WH5~6
NDPG504 157	15.7	69	115	16	-	-
NDPG504 158	15.8	69	115	16	-	-
NDPG504 15875	15.875	69	115	16	-	-
NDPG504 159	15.9	69	115	16	-	-
NDPG504 160	16	69	115	16	-	-
NDPG504 161	16.1	69	115	17	-	-
NDPG504 162	16.2	71	119	17	-	-
NDPG504 163	16.3	71	119	17	-	-
NDPG504 164	16.4	71	119	17	-	-
NDPG504 165	16.5	71	119	17	M18x1.5	WH1~6

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
		◎	◎	○	○	○		○	○	

NDPG504

Dolphin General Purpose Drill

Drill

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPG504 165	16.5	71	119	17	M18x1.5	WH1~6
NDPG504 166	16.6	71	119	17	-	-
NDPG504 16669	16.669	71	119	17	-	-
NDPG504 167	16.7	71	119	17	-	-
NDPG504 168	16.8	71	119	17	-	-
NDPG504 169	16.9	71	119	17	-	-
NDPG504 170	17	71	119	17	-	-
NDPG504 171	17.1	71	119	18	-	-
NDPG504 172	17.2	74	123	18	-	-
NDPG504 173	17.3	74	123	18	-	-
NDPG504 174	17.4	74	123	18	-	-
NDPG504 175	17.5	74	123	18	M20x2.5	WH1~6
NDPG504 176	17.6	74	123	18	-	-
NDPG504 177	17.7	74	123	18	-	-
NDPG504 178	17.8	74	123	18	-	-
NDPG504 179	17.9	74	123	18	-	-
NDPG504 180	18	74	123	18	-	-
NDPG504 181	18.1	74	123	19	-	-
NDPG504 182	18.2	76	127	19	-	-
NDPG504 183	18.3	76	127	19	-	-
NDPG504 184	18.4	76	127	19	-	-
NDPG504 185	18.5	76	127	19	M20x1.5	WH1~6
NDPG504 186	18.6	76	127	19	-	-
NDPG504 187	18.7	76	127	19	-	-
NDPG504 188	18.8	76	127	19	-	-
NDPG504 189	18.9	76	127	19	-	-
NDPG504 190	19	76	127	19	-	-
NDPG504 191	19.1	76	127	20	-	-
NDPG504 192	19.2	80	131	20	-	-
NDPG504 193	19.3	80	131	20	-	-
NDPG504 194	19.4	80	131	20	-	-
NDPG504 195	19.5	80	131	20	M22x2.5	WH1~6
NDPG504 196	19.6	80	131	20	-	-
NDPG504 197	19.7	80	131	20	-	-
NDPG504 198	19.8	80	131	20	-	-
NDPG504 200	20	80	131	20	-	-
NDPG504 199	19.9	80	131	20	-	-
NDPG504 200	20	80	131	20	-	-

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

► Applicable Working Material

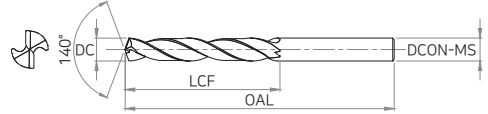
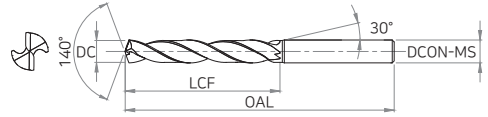
○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	Steel HRc30~50	~FCD500					
		◎	◎	○	○	○		○	○	

NDPG507

Dolphin General Purpose Drill

Drill



► Tolerance

DC		Shank Dia
Ø1 ~ Ø3	0 ~ -0.010	h6
Ø3.1 ~ Ø6	0 ~ -0.012	
Ø6.1 ~ Ø10	0 ~ -0.015	
Ø10.1 ~ Ø18	0 ~ -0.018	
Ø18.1 ~	0 ~ -0.021	



EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPG507 010	1	12	60	3	-	-
NDPG507 011	1.1	12	60	3	-	-
NDPG507 012	1.2	12	60	3	-	-
NDPG507 013	1.3	15	60	3	-	-
NDPG507 014	1.4	15	60	3	-	-
NDPG507 015	1.5	15	60	3	-	-
NDPG507 016	1.6	20	60	3	-	-
NDPG507 017	1.7	20	60	3	-	-
NDPG507 018	1.8	20	60	3	-	-
NDPG507 019	1.9	20	60	3	-	-
NDPG507 020	2	25	66	3	-	-
NDPG507 021	2.1	25	66	3	-	-
NDPG507 022	2.2	25	66	3	-	-
NDPG507 023	2.3	25	66	3	-	-
NDPG507 024	2.4	30	66	3	-	-
NDPG507 025	2.5	30	66	3	M3x0.5	WH1~4
NDPG507 026	2.6	30	66	3	M3x0.5	WH5~6
NDPG507 027	2.7	30	66	3	-	-
NDPG507 028	2.8	30	66	3	-	-
NDPG507 029	2.9	30	66	3	-	-

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPG507 030	3	45	80	3	-	-
NDPG507 031	3.1	45	80	4	-	-
NDPG507 03175	3.175	45	80	4	-	-
NDPG507 032	3.2	45	80	4	-	-
NDPG507 03264	3.264	45	80	4	-	-
NDPG507 033	3.3	45	80	4	M4x0.7	WH1~4
NDPG507 034	3.4	45	80	4	M4x0.7	WH5~6
NDPG507 035	3.5	45	80	4	-	-
NDPG507 03572	3.572	45	80	4	-	-
NDPG507 036	3.6	45	80	4	-	-
NDPG507 037	3.7	45	80	4	-	-
NDPG507 038	3.8	45	80	4	-	-
NDPG507 039	3.9	45	80	4	-	-
NDPG507 040	4	45	80	4	-	-
NDPG507 041	4.1	45	80	5	-	-
NDPG507 042	4.2	45	80	5	M5x0.8	WH1~4
NDPG507 043	4.3	45	80	5	M5x0.8	WH5~6
NDPG507 044	4.4	45	80	5	-	-
NDPG507 045	4.5	45	80	5	-	-
NDPG507 046	4.6	45	80	5	-	-

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
		◎	◎	○	○	○		○	○	

NDPG507

Dolphin General Purpose Drill

Drill

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPG507 047	4.7	45	80	5	-	-
NDPG507 04763	4.763	45	80	5	-	-
NDPG507 048	4.8	45	80	5	-	-
NDPG507 049	4.9	45	80	5	-	-
NDPG507 050	5	45	80	5	M6x1.0	WH1~4
NDPG507 051	5.1	45	80	6	M6x1.0	WH5~6
NDPG507 05159	5.159	50	83	6	-	-
NDPG507 052	5.2	50	83	6	-	-
NDPG507 053	5.3	50	83	6	-	-
NDPG507 054	5.4	50	83	6	-	-
NDPG507 055	5.5	50	83	6	-	-
NDPG507 05556	5.556	50	83	6	-	-
NDPG507 056	5.6	50	83	6	-	-
NDPG507 057	5.7	50	83	6	-	-
NDPG507 058	5.8	50	83	6	-	-
NDPG507 059	5.9	50	83	6	-	-
NDPG507 060	6	50	83	6	-	-
NDPG507 061	6.1	50	83	7	-	-
NDPG507 062	6.2	53	85	7	-	-
NDPG507 063	6.3	53	85	7	-	-
NDPG507 0635	6.35	53	85	7	-	-
NDPG507 064	6.4	53	85	7	-	-
NDPG507 065	6.5	53	85	7	-	-
NDPG507 066	6.6	53	85	7	-	-
NDPG507 067	6.7	53	85	7	-	-
NDPG507 06747	6.747	53	85	7	-	-
NDPG507 068	6.8	53	85	7	M8x1.25	WH1~4
NDPG507 069	6.9	53	85	7	M8x1.25	WH5~6
NDPG507 070	7	53	85	7	M8x1.0	WH1~4
NDPG507 071	7.1	53	85	8	M8x1.0	WH5~6
NDPG507 07144	7.144	58	90	8	-	-
NDPG507 072	7.2	58	90	8	-	-
NDPG507 073	7.3	58	90	8	-	-
NDPG507 074	7.4	58	90	8	-	-
NDPG507 075	7.5	58	90	8	-	-
NDPG507 076	7.6	58	90	8	-	-
NDPG507 077	7.7	58	90	8	-	-
NDPG507 078	7.8	58	90	8	-	-
NDPG507 079	7.9	58	90	8	-	-
NDPG507 07938	7.938	58	90	8	-	-
NDPG507 080	8	58	90	8	-	-
NDPG507 081	8.1	58	90	9	-	-
NDPG507 082	8.2	64	98	9	-	-
NDPG507 083	8.3	64	98	9	-	-
NDPG507 084	8.4	64	98	9	-	-
NDPG507 085	8.5	64	98	9	M10x1.5	WH1~4
NDPG507 086	8.6	64	98	9	M10x1.5	WH5~6
NDPG507 087	8.7	64	98	9	-	-
NDPG507 08731	8.731	64	98	9	-	-
NDPG507 088	8.8	64	98	9	M10x1.25	WH1~4
NDPG507 089	8.9	64	98	9	M10x1.25	WH5~6
NDPG507 090	9	64	98	9	M10x1.0	WH1~4
NDPG507 091	9.1	64	98	10	M10x1.0	WH5~6
NDPG507 092	9.2	68	105	10	-	-
NDPG507 093	9.3	68	105	10	-	-
NDPG507 094	9.4	68	105	10	-	-
NDPG507 095	9.5	68	105	10	-	-
NDPG507 09525	9.525	68	105	10	-	-
NDPG507 096	9.6	68	105	10	-	-
NDPG507 097	9.7	68	105	10	-	-
NDPG507 098	9.8	68	105	10	-	-
NDPG507 099	9.9	68	105	10	-	-
NDPG507 100	10	68	105	10	-	-
NDPG507 101	10.1	68	105	11	-	-
NDPG507 102	10.2	73	110	11	-	-
NDPG507 103	10.3	73	110	11	M12x1.75	WH1~2
NDPG507 10319	10.319	73	110	11	M12x1.75	WH3~4
NDPG507 104	10.4	73	110	11	M12x1.75	WH5~6

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		◎	◎	○	○	○		○	○	

NDPG507

Dolphin General Purpose Drill

Drill

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPG507 105	10.5	73	110	11	M12x1.5	WH1~4
NDPG507 106	10.6	73	110	11	M12x1.5	WH5~6
NDPG507 107	10.7	73	110	11	-	-
NDPG507 10716	10.716	73	110	11	-	-
NDPG507 108	10.8	73	110	11	M12x1.25	WH1~4
NDPG507 109	10.9	73	110	11	M12x1.25	WH5~6
NDPG507 110	11	73	110	11	M12x1.0	WH1~4
NDPG507 111	11.1	73	110	12	M12x1.0	WH5~6
NDPG507 11113	11.113	80	120	12	-	-
NDPG507 112	11.2	80	120	12	-	-
NDPG507 113	11.3	80	120	12	-	-
NDPG507 114	11.4	80	120	12	-	-
NDPG507 115	11.5	80	120	12	-	-
NDPG507 116	11.6	80	120	12	-	-
NDPG507 117	11.7	80	120	12	-	-
NDPG507 118	11.8	80	120	12	-	-
NDPG507 119	11.9	80	120	12	-	-
NDPG507 120	12	80	120	12	M14x2.0	WH1~4
NDPG507 121	12.1	80	120	13	M14x2.0	WH5~6
NDPG507 122	12.2	90	137	13	-	-
NDPG507 123	12.3	90	137	13	-	-
NDPG507 124	12.4	90	137	13	-	-
NDPG507 125	12.5	90	137	13	M14x1.5	WH1~4
NDPG507 126	12.6	90	137	13	M14x1.5	WH5~6
NDPG507 127	12.7	90	137	13	-	-
NDPG507 128	12.8	90	137	13	-	-
NDPG507 129	12.9	90	137	13	-	-
NDPG507 130	13	90	137	13	-	-
NDPG507 131	13.1	90	137	14	-	-
NDPG507 132	13.2	96	147	14	-	-
NDPG507 133	13.3	96	147	14	-	-
NDPG507 134	13.4	96	147	14	-	-
NDPG507 13494	13.494	96	147	14	-	-
NDPG507 135	13.5	96	147	14	-	-
NDPG507 136	13.6	96	147	14	-	-
NDPG507 137	13.7	96	147	14	-	-
NDPG507 138	13.8	96	147	14	-	-
NDPG507 13891	13.891	96	147	14	-	-
NDPG507 139	13.9	96	147	14	-	-
NDPG507 140	14	96	147	14	M16x2.0	WH1~4
NDPG507 141	14.1	96	147	15	M16x2.0	WH5~6
NDPG507 142	14.2	100	153	15	-	-
NDPG507 14288	14.288	100	153	15	-	-
NDPG507 143	14.3	100	153	15	-	-
NDPG507 144	14.4	100	153	15	-	-
NDPG507 145	14.5	100	153	15	M16x1.5	WH1~4
NDPG507 146	14.6	100	153	15	M16x1.5	WH5~6
NDPG507 147	14.7	100	153	15	-	-
NDPG507 148	14.8	100	153	15	-	-
NDPG507 149	14.9	100	153	15	-	-
NDPG507 150	15	100	153	15	-	-
NDPG507 151	15.1	100	153	16	-	-
NDPG507 152	15.2	112	160	16	-	-
NDPG507 153	15.3	112	160	16	-	-
NDPG507 154	15.4	112	160	16	-	-
NDPG507 155	15.5	112	160	16	M18x2.5	WH1~4
NDPG507 156	15.6	112	160	16	M18x2.5	WH5~6
NDPG507 157	15.7	112	160	16	-	-
NDPG507 158	15.8	112	160	16	-	-
NDPG507 15875	15.875	112	160	16	-	-
NDPG507 159	15.9	112	160	16	-	-
NDPG507 160	16	112	160	16	-	-
NDPG507 161	16.1	112	160	17	-	-
NDPG507 162	16.2	112	160	17	-	-
NDPG507 163	16.3	112	160	17	-	-
NDPG507 164	16.4	112	160	17	-	-
NDPG507 165	16.5	112	160	17	M18x1.5	WH1~6
NDPG507 166	16.6	112	160	17	-	-

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
		◎	◎	○	○	○		○	○	

NDPG507

Dolphin General Purpose Drill

Drill

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPG507 16669	16.669	112	160	17	-	-
NDPG507 167	16.7	112	160	17	-	-
NDPG507 168	16.8	112	160	17	-	-
NDPG507 169	16.9	112	160	17	-	-
NDPG507 170	17	112	160	17	-	-
NDPG507 171	17.1	112	160	18	-	-
NDPG507 172	17.2	112	160	18	-	-
NDPG507 173	17.3	112	160	18	-	-
NDPG507 174	17.4	112	160	18	-	-
NDPG507 17463	17.463	112	160	18	-	-
NDPG507 175	17.5	112	160	18	M20x2.5	WH1~6
NDPG507 176	17.6	112	160	18	-	-
NDPG507 177	17.7	112	160	18	-	-
NDPG507 178	17.8	112	160	18	-	-
NDPG507 179	17.9	112	160	18	-	-
NDPG507 180	18	112	160	18	-	-
NDPG507 181	18.1	112	160	18	-	-
NDPG507 182	18.2	112	160	19	-	-
NDPG507 183	18.3	112	160	19	-	-
NDPG507 184	18.4	112	160	19	-	-
NDPG507 185	18.5	112	160	19	M20x1.5	WH1~6
NDPG507 186	18.6	112	160	19	-	-
NDPG507 187	18.7	112	160	19	-	-
NDPG507 188	18.8	112	160	19	-	-
NDPG507 189	18.9	112	160	19	-	-
NDPG507 190	19	112	160	19	-	-
NDPG507 191	19.1	112	160	20	-	-
NDPG507 192	19.2	112	160	20	-	-
NDPG507 193	19.3	112	160	20	-	-
NDPG507 194	19.4	112	160	20	-	-
NDPG507 195	19.5	112	160	20	M22x2.5	WH1~6
NDPG507 196	19.6	112	160	20	-	-
NDPG507 197	19.7	112	160	20	-	-
NDPG507 198	19.8	112	160	20	-	-
NDPG507 199	19.9	112	160	20	-	-
NDPG507 200	20	112	160	20	-	-

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		◎	◎	○	○	○		○	○	

NDPK504 Dolphin Cast Iron Drill

Drill



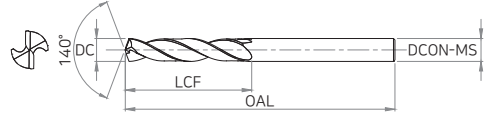
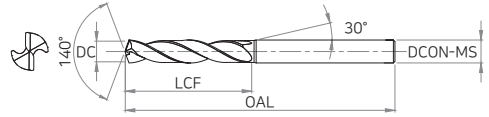
up to 1.5mm



D1.6~D1.9



over 1.9mm



► Tolerance

DC		Shank Dia
~ Ø3	0 ~ -0.010	h6
Ø3.1 ~ Ø6	0 ~ -0.012	
Ø6.1 ~ Ø10	0 ~ -0.015	
Ø10.1 ~ Ø18	0 ~ -0.018	
Ø18.1 ~	0 ~ -0.021	



EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPK504 010	1	8	38	3	-	-
NDPK504 011	1.1	9	42	3	-	-
NDPK504 012	1.2	10	42	3	-	-
NDPK504 013	1.3	10	42	3	-	-
NDPK504 014	1.4	11	42	3	-	-
NDPK504 015	1.5	11	42	3	-	-
NDPK504 016	1.6	12	42	3	-	-
NDPK504 017	1.7	12	42	3	-	-
NDPK504 018	1.8	13	42	3	-	-
NDPK504 019	1.9	13	42	3	-	-
NDPK504 020	2	18	50	3	-	-
NDPK504 021	2.1	18	50	3	-	-
NDPK504 022	2.2	18	50	3	-	-
NDPK504 023	2.3	18	50	3	-	-
NDPK504 024	2.4	18	50	3	-	-
NDPK504 025	2.5	18	50	3	M3x0.5	WH1~4
NDPK504 026	2.6	18	50	3	M3x0.5	WH5~6
NDPK504 027	2.7	18	50	3	-	-
NDPK504 028	2.8	18	50	3	-	-
NDPK504 029	2.9	18	50	3	-	-
NDPK504 030	3	20	55	3	-	-
NDPK504 031	3.1	20	55	4	-	-

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPK504 03175	3.175	20	55	4	-	-
NDPK504 032	3.2	20	55	4	-	-
NDPK504 03264	3.264	20	55	4	-	-
NDPK504 033	3.3	20	55	4	M4x0.7	WH1~4
NDPK504 034	3.4	20	55	4	M4x0.7	WH5~6
NDPK504 035	3.5	20	55	4	-	-
NDPK504 03572	3.572	25	55	4	-	-
NDPK504 036	3.6	25	55	4	-	-
NDPK504 037	3.7	25	55	4	-	-
NDPK504 038	3.8	25	55	4	-	-
NDPK504 039	3.9	25	55	4	-	-
NDPK504 040	4	25	55	4	-	-
NDPK504 04039	4.039	25	55	5	-	-
NDPK504 041	4.1	25	55	5	-	-
NDPK504 042	4.2	33	63	5	M5x0.8	WH1~4
NDPK504 043	4.3	33	63	5	M5x0.8	WH5~6
NDPK504 044	4.4	33	63	5	-	-
NDPK504 045	4.5	33	63	5	-	-
NDPK504 046	4.6	33	63	5	-	-
NDPK504 047	4.7	33	63	5	-	-
NDPK504 04763	4.763	33	63	5	-	-
NDPK504 048	4.8	33	63	5	-	-

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
		○	◎	○	◎					

NDPK504

Dolphin Cast Iron Drill

Drill

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPK504 049	4.9	33	63	5	-	-
NDPK504 050	5	33	63	5	M6x1.0	WH1~4
NDPK504 051	5.1	33	63	6	M6x1.0	WH5~6
NDPK504 05159	5.159	36	66	6	-	-
NDPK504 052	5.2	36	66	6	-	-
NDPK504 053	5.3	36	66	6	-	-
NDPK504 054	5.4	36	66	6	-	-
NDPK504 055	5.5	36	66	6	-	-
NDPK504 05556	5.556	36	66	6	-	-
NDPK504 056	5.6	36	66	6	-	-
NDPK504 057	5.7	36	66	6	-	-
NDPK504 058	5.8	36	66	6	-	-
NDPK504 059	5.9	36	66	6	-	-
NDPK504 05953	5.953	36	66	6	-	-
NDPK504 060	6	36	66	6	-	-
NDPK504 061	6.1	36	66	7	-	-
NDPK504 062	6.2	42	75	7	-	-
NDPK504 063	6.3	42	75	7	-	-
NDPK504 0635	6.35	42	75	7	-	-
NDPK504 064	6.4	42	75	7	-	-
NDPK504 065	6.5	42	75	7	-	-
NDPK504 066	6.6	42	75	7	-	-
NDPK504 067	6.7	42	75	7	-	-
NDPK504 06747	6.747	42	75	7	-	-
NDPK504 068	6.8	42	75	7	M8x1.25	WH1~4
NDPK504 069	6.9	42	75	7	M8x1.25	WH5~6
NDPK504 070	7	42	75	7	M8x1.0	WH1~4
NDPK504 071	7.1	42	75	8	M8x1.0	WH5~6
NDPK504 07144	7.144	46	80	8	-	-
NDPK504 072	7.2	46	80	8	-	-
NDPK504 073	7.3	46	80	8	-	-
NDPK504 074	7.4	46	80	8	-	-
NDPK504 075	7.5	46	80	8	-	-
NDPK504 07541	7.541	46	80	8	-	-
NDPK504 076	7.6	46	80	8	-	-
NDPK504 077	7.7	46	80	8	-	-
NDPK504 078	7.8	46	80	8	-	-
NDPK504 079	7.9	46	80	8	-	-
NDPK504 07938	7.938	46	80	8	-	-
NDPK504 080	8	46	80	8	-	-
NDPK504 081	8.1	46	80	9	-	-
NDPK504 082	8.2	50	85	9	-	-
NDPK504 083	8.3	50	85	9	-	-
NDPK504 084	8.4	50	85	9	-	-
NDPK504 085	8.5	50	85	9	M10x1.5	WH1~4
NDPK504 086	8.6	50	85	9	M10x1.5	WH5~6
NDPK504 087	8.7	50	85	9	-	-
NDPK504 08731	8.731	50	85	9	-	-
NDPK504 088	8.8	50	85	9	M10x1.25	WH1~4
NDPK504 089	8.9	50	85	9	M10x1.25	WH5~6
NDPK504 090	9	50	85	9	M10x1.0	WH1~4
NDPK504 091	9.1	50	85	10	M10x1.0	WH5~6
NDPK504 092	9.2	55	90	10	-	-
NDPK504 093	9.3	55	90	10	-	-
NDPK504 094	9.4	55	90	10	-	-
NDPK504 095	9.5	55	90	10	-	-
NDPK504 09525	9.525	55	90	10	-	-
NDPK504 096	9.6	55	90	10	-	-
NDPK504 097	9.7	55	90	10	-	-
NDPK504 098	9.8	55	90	10	-	-
NDPK504 099	9.9	55	90	10	-	-
NDPK504 100	10	55	90	10	-	-
NDPK504 101	10.1	55	90	11	-	-
NDPK504 102	10.2	57	95	11	-	-
NDPK504 103	10.3	57	95	11	M12x1.75	WH1~2
NDPK504 10319	10.319	57	95	11	M12x1.75	WH3~4
NDPK504 104	10.4	57	95	11	M12x1.75	WH5~6
NDPK504 105	10.5	57	95	11	M12x1.5	WH1~4
NDPK504 106	10.6	57	95	11	M12x1.5	WH5~6
NDPK504 107	10.7	57	95	11	-	-
NDPK504 10716	10.716	57	95	11	-	-
NDPK504 108	10.8	57	95	11	M12x1.25	WH1~4

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		○	◎	○	◎					

NDPK504 Dolphin Cast Iron Drill

Drill

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPK504 109	10.9	57	95	11	M12x1.25	WH5~6
NDPK504 110	11	57	95	11	M12x1.0	WH1~4
NDPK504 111	11.1	57	95	12	M12x1.0	WH5~6
NDPK504 11113	11.113	63	102	12	-	-
NDPK504 112	11.2	63	102	12	-	-
NDPK504 113	11.3	63	102	12	-	-
NDPK504 114	11.4	63	102	12	-	-
NDPK504 115	11.5	63	102	12	-	-
NDPK504 116	11.6	63	102	12	-	-
NDPK504 117	11.7	63	102	12	-	-
NDPK504 118	11.8	63	102	12	-	-
NDPK504 119	11.9	63	102	12	-	-
NDPK504 120	12	63	102	12	M14x2.0	WH1~4
NDPK504 121	12.1	63	102	13	M14x2.0	WH5~6
NDPK504 122	12.2	63	102	13	-	-
NDPK504 123	12.3	63	102	13	-	-
NDPK504 124	12.4	63	102	13	-	-
NDPK504 125	12.5	63	102	13	M14x1.5	WH1~4
NDPK504 126	12.6	63	102	13	M14x1.5	WH5~6
NDPK504 127	12.7	63	102	13	-	-
NDPK504 128	12.8	63	102	13	-	-
NDPK504 129	12.9	63	102	13	-	-
NDPK504 130	13	63	102	13	-	-
NDPK504 131	13.1	63	102	14	-	-
NDPK504 132	13.2	65	107	14	-	-
NDPK504 133	13.3	65	107	14	-	-
NDPK504 134	13.4	65	107	14	-	-
NDPK504 13494	13.494	65	107	14	-	-
NDPK504 135	13.5	65	107	14	-	-
NDPK504 136	13.6	65	107	14	-	-
NDPK504 137	13.7	65	107	14	-	-
NDPK504 138	13.8	65	107	14	-	-
NDPK504 139	13.9	65	107	14	-	-
NDPK504 140	14	65	107	14	M16x2.0	WH1~4
NDPK504 141	14.1	65	107	15	M16x2.0	WH5~6
NDPK504 142	14.2	67	111	15	-	-
NDPK504 143	14.3	67	111	15	-	-
NDPK504 144	14.4	67	111	15	-	-

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPK504 145	14.5	67	111	15	M16x1.5	WH1~4
NDPK504 146	14.6	67	111	15	M16x1.5	WH5~6
NDPK504 147	14.7	67	111	15	-	-
NDPK504 148	14.8	67	111	15	-	-
NDPK504 149	14.9	67	111	15	-	-
NDPK504 150	15	67	111	15	-	-
NDPK504 151	15.1	67	111	16	-	-
NDPK504 152	15.2	69	115	16	-	-
NDPK504 153	15.3	69	115	16	-	-
NDPK504 154	15.4	69	115	16	-	-
NDPK504 155	15.5	69	115	16	M18x2.5	WH1~4
NDPK504 156	15.6	69	115	16	M18x2.5	WH5~6
NDPK504 157	15.7	69	115	16	-	-
NDPK504 158	15.8	69	115	16	-	-
NDPK504 15875	15.875	69	115	16	-	-
NDPK504 159	15.9	69	115	16	-	-
NDPK504 160	16	69	115	16	-	-
NDPK504 161	16.1	69	115	17	-	-
NDPK504 163	16.3	71	119	17	-	-
NDPK504 165	16.5	71	119	17	M18x1.5	WH1~6
NDPK504 16669	16.669	71	119	17	-	-
NDPK504 167	16.7	71	119	17	-	-
NDPK504 170	17	71	119	17	-	-
NDPK504 171	17.1	71	119	18	-	-
NDPK504 172	17.2	74	123	18	-	-
NDPK504 175	17.5	74	123	18	M20x2.5	WH1~6
NDPK504 177	17.7	74	123	18	-	-
NDPK504 178	17.8	74	123	18	-	-
NDPK504 180	18	74	123	18	-	-
NDPK504 181	18.1	74	123	19	-	-
NDPK504 182	18.2	76	127	19	-	-
NDPK504 185	18.5	76	127	19	M20x1.5	WH1~6
NDPK504 190	19	76	127	19	-	-
NDPK504 191	19.1	76	127	20	-	-
NDPK504 195	19.5	80	131	20	M22x2.5	WH1~6
NDPK504 197	19.7	80	131	20	-	-
NDPK504 200	20	80	131	20	-	-

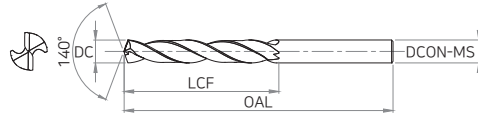
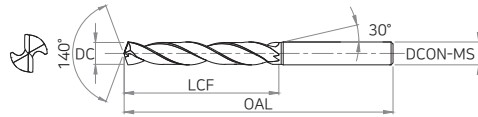
► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
		○	◎	○	◎					

NDPK507

Dolphin Cast Iron Drill



► Tolerance

DC		Shank Dia
~ Ø3	0 ~ -0.010	h6
Ø3.1 ~ Ø6	0 ~ -0.012	
Ø6.1 ~ Ø10	0 ~ -0.015	
Ø10.1 ~ Ø18	0 ~ -0.018	
Ø18.1 ~	0 ~ -0.021	



EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPK507 030	3	45	80	3	-	-
NDPK507 031	3.1	45	80	4	-	-
NDPK507 03175	3.175	45	80	4	-	-
NDPK507 032	3.2	45	80	4	-	-
NDPK507 03264	3.264	45	80	4	-	-
NDPK507 033	3.3	45	80	4	M4x0.7	WH1~4
NDPK507 034	3.4	45	80	4	M4x0.7	WH5~6
NDPK507 035	3.5	45	80	4	-	-
NDPK507 03572	3.572	45	80	4	-	-
NDPK507 036	3.6	45	80	4	-	-
NDPK507 037	3.7	45	80	4	-	-
NDPK507 038	3.8	45	80	4	-	-
NDPK507 039	3.9	45	80	4	-	-
NDPK507 040	4	45	80	4	-	-
NDPK507 041	4.1	45	80	5	-	-
NDPK507 042	4.2	45	80	5	M5x0.8	WH1~4
NDPK507 043	4.3	45	80	5	M5x0.8	WH5~6
NDPK507 044	4.4	45	80	5	-	-
NDPK507 045	4.5	45	80	5	-	-
NDPK507 046	4.6	45	80	5	-	-

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPK507 047	4.7	45	80	5	-	-
NDPK507 04763	4.763	45	80	5	-	-
NDPK507 048	4.8	45	80	5	-	-
NDPK507 049	4.9	45	80	5	-	-
NDPK507 050	5	45	80	5	M6x1.0	WH1~4
NDPK507 051	5.1	45	80	6	M6x1.0	WH5~6
NDPK507 05159	5.159	50	83	6	-	-
NDPK507 052	5.2	50	83	6	-	-
NDPK507 053	5.3	50	83	6	-	-
NDPK507 054	5.4	50	83	6	-	-
NDPK507 055	5.5	50	83	6	-	-
NDPK507 05556	5.556	50	83	6	-	-
NDPK507 056	5.6	50	83	6	-	-
NDPK507 057	5.7	50	83	6	-	-
NDPK507 058	5.8	50	83	6	-	-
NDPK507 059	5.9	50	83	6	-	-
NDPK507 060	6	50	83	6	-	-
NDPK507 061	6.1	50	83	7	-	-
NDPK507 062	6.2	53	85	7	-	-
NDPK507 063	6.3	53	85	7	-	-

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		○	◎	○	◎					

Drill

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

NDPK507

Dolphin Cast Iron Drill

Drill

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap		EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit						Size	Limit
NDPK507 0635	6.35	53	85	7	-	-	NDPK507 093	9.3	68	105	10	-	-
NDPK507 064	6.4	53	85	7	-	-	NDPK507 094	9.4	68	105	10	-	-
NDPK507 065	6.5	53	85	7	-	-	NDPK507 095	9.5	68	105	10	-	-
NDPK507 066	6.6	53	85	7	-	-	NDPK507 09525	9.525	68	105	10	-	-
NDPK507 067	6.7	53	85	7	-	-	NDPK507 096	9.6	68	105	10	-	-
NDPK507 06747	6.747	53	85	7	-	-	NDPK507 097	9.7	68	105	10	-	-
NDPK507 068	6.8	53	85	7	M8x1.25	WH1~4	NDPK507 098	9.8	68	105	10	-	-
NDPK507 069	6.9	53	85	7	M8x1.25	WH5~6	NDPK507 099	9.9	68	105	10	-	-
NDPK507 070	7	53	85	7	M8x1.0	WH1~4	NDPK507 100	10	68	105	10	-	-
NDPK507 071	7.1	53	85	8	M8x1.0	WH5~6	NDPK507 101	10.1	68	105	11	-	-
NDPK507 07144	7.144	58	90	8	-	-	NDPK507 102	10.2	73	110	11	-	-
NDPK507 072	7.2	58	90	8	-	-	NDPK507 103	10.3	73	110	11	M12x1.75	WH1~2
NDPK507 073	7.3	58	90	8	-	-	NDPK507 10319	10.319	73	110	11	M12x1.75	WH3~4
NDPK507 074	7.4	58	90	8	-	-	NDPK507 104	10.4	73	110	11	M12x1.75	WH5~6
NDPK507 075	7.5	58	90	8	-	-	NDPK507 105	10.5	73	110	11	M12x1.5	WH1~4
NDPK507 076	7.6	58	90	8	-	-	NDPK507 106	10.6	73	110	11	M12x1.5	WH5~6
NDPK507 077	7.7	58	90	8	-	-	NDPK507 107	10.7	73	110	11	-	-
NDPK507 078	7.8	58	90	8	-	-	NDPK507 10716	10.716	73	110	11	-	-
NDPK507 079	7.9	58	90	8	-	-	NDPK507 108	10.8	73	110	11	M12x1.25	WH1~4
NDPK507 07938	7.938	58	90	8	-	-	NDPK507 109	10.9	73	110	11	M12x1.25	WH5~6
NDPK507 080	8	58	90	8	-	-	NDPK507 110	11	73	110	11	M12x1.0	WH1~4
NDPK507 081	8.1	58	90	9	-	-	NDPK507 111	11.1	73	110	12	M12x1.0	WH5~6
NDPK507 082	8.2	64	98	9	-	-	NDPK507 11113	11.113	80	120	12	-	-
NDPK507 083	8.3	64	98	9	-	-	NDPK507 112	11.2	80	120	12	-	-
NDPK507 084	8.4	64	98	9	-	-	NDPK507 113	11.3	80	120	12	-	-
NDPK507 085	8.5	64	98	9	M10x1.5	WH1~4	NDPK507 114	11.4	80	120	12	-	-
NDPK507 086	8.6	64	98	9	M10x1.5	WH5~6	NDPK507 115	11.5	80	120	12	-	-
NDPK507 087	8.7	64	98	9	-	-	NDPK507 116	11.6	80	120	12	-	-
NDPK507 08731	8.731	64	98	9	-	-	NDPK507 117	11.7	80	120	12	-	-
NDPK507 088	8.8	64	98	9	M10x1.25	WH1~4	NDPK507 118	11.8	80	120	12	-	-
NDPK507 089	8.9	64	98	9	M10x1.25	WH5~6	NDPK507 119	11.9	80	120	12	-	-
NDPK507 090	9	64	98	9	M10x1.0	WH1~4	NDPK507 120	12	80	120	12	M14x2.0	WH1~4
NDPK507 091	9.1	64	98	10	M10x1.0	WH5~6	NDPK507 121	12.1	80	120	13	M14x2.0	WH5~6
NDPK507 092	9.2	68	105	10	-	-	NDPK507 122	12.2	90	137	13	-	-

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
		○	◎	○	◎					

NDPK507

Dolphin Cast Iron Drill

Drill

EDP No	DC	LCF	OAL	DCON MS	Applicable Tap	
					Size	Limit
NDPK507 123	12.3	90	137	13	-	-
NDPK507 124	12.4	90	137	13	-	-
NDPK507 125	12.5	90	137	13	M14x1.5	WH1~4
NDPK507 126	12.6	90	137	13	M14x1.5	WH5~6
NDPK507 127	12.7	90	137	13	-	-
NDPK507 128	12.8	90	137	13	-	-
NDPK507 129	12.9	90	137	13	-	-
NDPK507 130	13	90	137	13	-	-
NDPK507 131	13.1	90	137	14	-	-
NDPK507 132	13.2	96	147	14	-	-
NDPK507 133	13.3	96	147	14	-	-
NDPK507 134	13.4	96	147	14	-	-
NDPK507 13494	13.494	96	147	14	-	-
NDPK507 135	13.5	96	147	14	-	-
NDPK507 136	13.6	96	147	14	-	-
NDPK507 137	13.7	96	147	14	-	-
NDPK507 138	13.8	96	147	14	-	-
NDPK507 13891	13.891	96	147	14	-	-
NDPK507 139	13.9	96	147	14	-	-
NDPK507 140	14	96	147	14	M16x2.0	WH1~4
NDPK507 141	14.1	96	147	15	M16x2.0	WH5~6
NDPK507 142	14.2	100	153	15	-	-
NDPK507 14288	14.288	100	153	15	-	-
NDPK507 143	14.3	100	153	15	-	-
NDPK507 144	14.4	100	153	15	-	-
NDPK507 145	14.5	100	153	15	M16x1.5	WH1~4
NDPK507 146	14.6	100	153	15	M16x1.5	WH5~6
NDPK507 147	14.7	100	153	15	-	-
NDPK507 148	14.8	100	153	15	-	-
NDPK507 149	14.9	100	153	15	-	-
NDPK507 150	15	100	153	15	-	-
NDPK507 151	15.1	100	153	16	-	-
NDPK507 152	15.2	112	160	16	-	-
NDPK507 153	15.3	112	160	16	-	-
NDPK507 154	15.4	112	160	16	-	-
NDPK507 155	15.5	112	160	16	M18x2.5	WH1~4
NDPK507 156	15.6	112	160	16	M18x2.5	WH5~6
NDPK507 157	15.7	112	160	16	-	-
NDPK507 158	15.8	112	160	16	-	-
NDPK507 15875	15.875	112	160	16	-	-
NDPK507 159	15.9	112	160	16	-	-
NDPK507 160	16	112	160	16	-	-
NDPK507 161	16.1	112	160	17	-	-
NDPK507 163	16.3	112	160	17	-	-
NDPK507 165	16.5	112	160	17	M18x1.5	WH1~6
NDPK507 16669	16.669	112	160	17	-	-
NDPK507 170	17	112	160	17	-	-
NDPK507 171	17.1	112	160	18	-	-
NDPK507 172	17.2	112	160	18	-	-
NDPK507 17463	17.463	112	160	18	-	-
NDPK507 175	17.5	112	160	18	M20x2.5	WH1~6
NDPK507 176	17.6	112	160	18	-	-
NDPK507 177	17.7	112	160	18	-	-
NDPK507 178	17.8	112	160	18	-	-
NDPK507 180	18	112	160	18	-	-
NDPK507 182	18.2	112	160	19	-	-
NDPK507 185	18.5	112	160	19	M20x1.5	WH1~6
NDPK507 190	19	112	160	19	-	-
NDPK507 195	19.5	112	160	20	M22x2.5	WH1~6
NDPK507 197	19.7	112	160	20	-	-
NDPK507 200	20	112	160	20	-	-

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

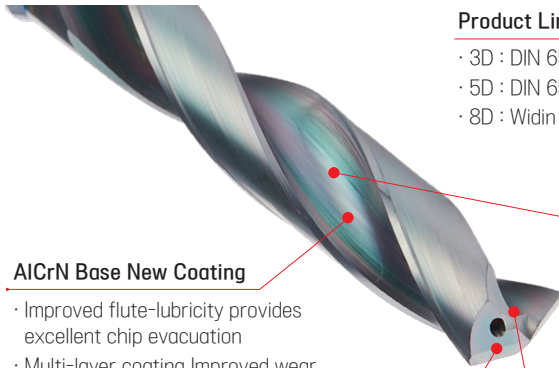
H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		○	◎	○	◎					

Dolphin Oil-Hole Drill NEW

General Purpose Internal Coolant Drill

Characteristics

- Designed for a wide range of work materials
- New flute design provides larger volume of fluid to cool the cutting edge
- XR thinning provides excellent chip evacuation and reduced cutting forces
- Wider flutes minimizes chip packing



Product Lineup

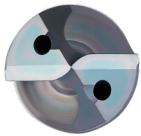
- 3D : DIN 6537, HB/HE Shank
- 5D : DIN 6537, HB/HE Shank
- 8D : Widin Standard

AICrN Base New Coating

- Improved flute-lubricity provides excellent chip evacuation
- Multi-layer coating Improved wear and oxidation resistance

XR Thinning

- Excellent chip evacuation
- Provides improved chipping resistance and prevents drill breakage
- Streamlined thinning shape reduces cutting forces



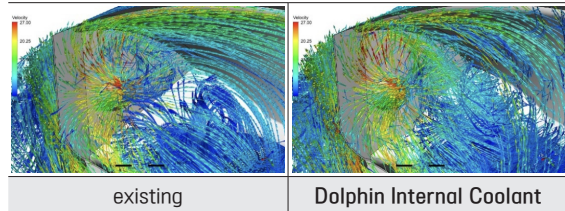
Reduced Chip Packing

- Wider flute design provides excellent chip evacuation
- Designed to reduce the friction in the flute surface for improved chip evacuation

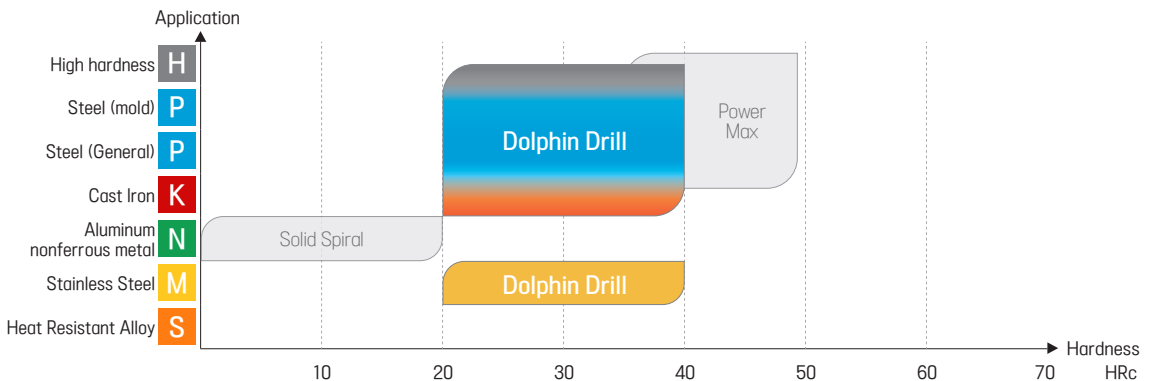
New Flute Geometry

- Lower cutting temperatures are possible due to higher volume of coolant
- Excellent chip evacuation

Improved Cooling

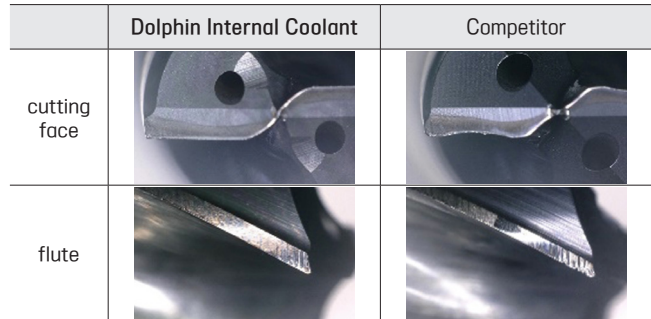
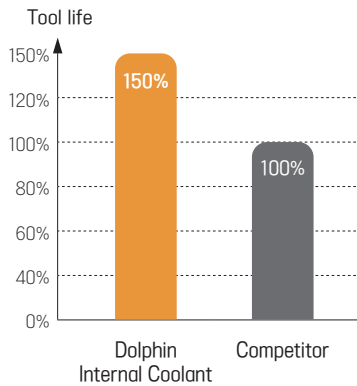


Applications



Case Study

► Carbon Steel (SM45C)

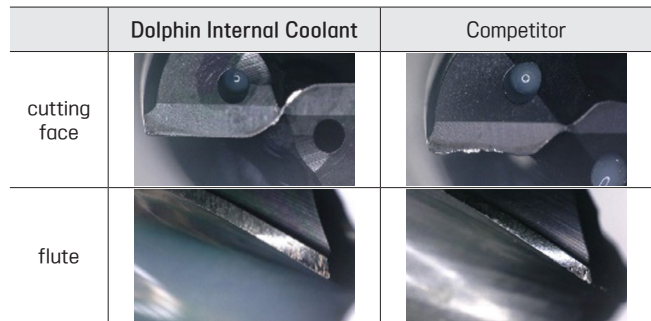
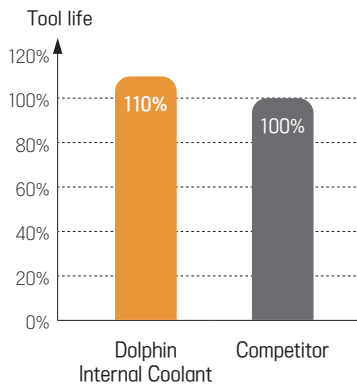


· Spec : NDPGH505060D (D6.0-44/82-6)

· Cutting Condition

Vc	rpm	fn	Feed	Ap	Coolant
100	5,300	0.24	1,272	30	Internal

► Alloy Steel (SCM440)

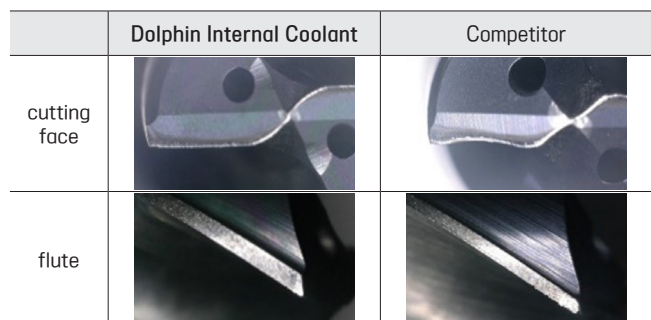
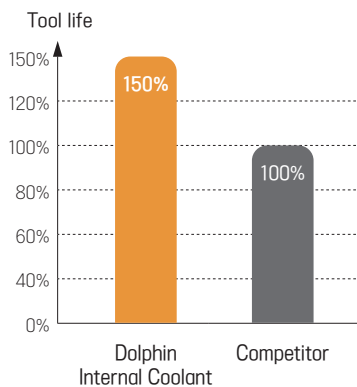


· Spec : NDPGH505060D (D6.0-44/82-6)

· Cutting Condition

Vc	rpm	fn	Feed	Ap	Coolant
80	4,250	0.20	850	30	Internal

► Stainless Steel(SUS304)



· Spec : NDPGH505060D (D6.0-44/82-6)

· Cutting Condition

Vc	rpm	fn	Feed	Ap	Coolant
60	3,175	0.14	445	19	Internal

Dolphin Oil-Hole Drill NEW

General Purpose Internal Coolant Drill

Contents

EDP No SPEC (INCH :  / METRIC : )	Flutes	Geometry	Length			Coolant	Margin	Tolerance	Diameter(DC)		Page
			3D	5D	8D				Min	Max	
NDPGH503  	2F		○			Internal	Single	m7	3	20	435
NDPGH505  				○		Internal	Single	m7	3	20	441
NDPGH508  					○	Internal	Single	m7	3	16	447

EDP No. System

*If expressed as an integer, the decimal point is omitted.

NDP	G	H	5	04	100	D
①	②	③	④	⑤	⑥	⑦

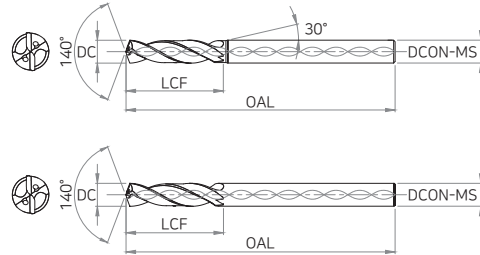
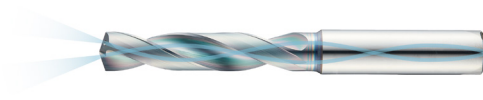
①	②	③	④	⑤	⑥	⑦
Series name	Work piece	Coolant Type	Grade	Working Depth	Cutting Dia	Standard
NDP : Dolphin	G : General K (ISO K : Cast Iron)	- : Non Coolant H : Oil-Hole Coolant	5 : Grade	03 : 3D 04 : 4D 07 : 7D	030 : Ø3.0 060 : Ø6.0 103 : Ø10.3	- : JIS D : DIN



It is a new brand name for all of Widin's rotating tools representing straight and dynamic image of cylindrical rotation pattern of tools when machining

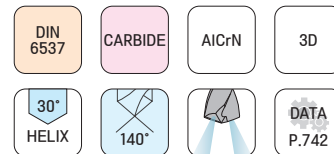
NDPGH503D

Dolphin General Purpose
Internal Coolant Drill



► Tolerance

DC		Shank Dia
~ Ø3	+0.002 ~ +0.012	h6
Ø3.1 ~ Ø6	+0.004 ~ +0.016	
Ø6.1 ~ Ø10	+0.006 ~ +0.021	
Ø10.1 ~ Ø18	+0.007 ~ +0.025	
Ø18.1 ~ Ø20	+0.008 ~ +0.029	



EDP No	DC	LCF	OAL	DCONMS	Applicable Tap	
					Size	Limit
NDPGH503 030D	3.0	20	62	6	-	-
NDPGH503 031D	3.1	20	62	6	-	-
NDPGH503 03175D	3.175	20	62	6	-	-
NDPGH503 032D	3.2	20	62	6	-	-
NDPGH503 033D	3.3	20	62	6	M4x0.7	WH1~4
NDPGH503 034D	3.4	20	62	6	M4x0.7	WH5~6
NDPGH503 035D	3.5	20	62	6	-	-
NDPGH503 03572D	3.572	20	62	6	-	-
NDPGH503 036D	3.6	20	62	6	-	-
NDPGH503 037D	3.7	20	62	6	-	-
NDPGH503 038D	3.8	24	66	6	-	-
NDPGH503 039D	3.9	24	66	6	-	-
NDPGH503 03969D	3.969	24	66	6	-	-
NDPGH503 040D	4.0	24	66	6	-	-
NDPGH503 04039D	4.039	24	66	6	-	-
NDPGH503 041D	4.1	24	66	6	-	-
NDPGH503 042D	4.2	24	66	6	M5x0.8	WH1~4
NDPGH503 043D	4.3	24	66	6	M5x0.8	WH5~6
NDPGH503 04366D	4.366	24	66	6	-	-
NDPGH503 044D	4.4	24	66	6	-	-

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	~HB225	HRc30~50	~FCD500					
		◎	◎	○	○	○		○	◎	

NDPGH503D

Dolphin General Purpose
Internal Coolant Drill

Drill

EDP No	DC	LCF	OAL	DCONMS	Applicable Tap	
					Size	Limit
NDPGH503 045D	4.5	24	66	6	-	-
NDPGH503 046D	4.6	24	66	6	-	-
NDPGH503 047D	4.7	24	66	6	-	-
NDPGH503 04763D	4.763	28	66	6	-	-
NDPGH503 048D	4.8	28	66	6	-	-
NDPGH503 049D	4.9	28	66	6	-	-
NDPGH503 050D	5.0	28	66	6	M6x1.0	WH1~4
NDPGH503 051D	5.1	28	66	6	M6x1.0	WH5~6
NDPGH503 05159D	5.159	28	66	6	-	-
NDPGH503 052D	5.2	28	66	6	-	-
NDPGH503 053D	5.3	28	66	6	-	-
NDPGH503 054D	5.4	28	66	6	-	-
NDPGH503 055D	5.5	28	66	6	-	-
NDPGH503 05556D	5.558	28	66	6	-	-
NDPGH503 056D	5.6	28	66	6	-	-
NDPGH503 057D	5.7	28	66	6	-	-
NDPGH503 058D	5.8	28	66	6	-	-
NDPGH503 059D	5.9	28	66	6	-	-
NDPGH503 05953D	5.953	28	66	6	-	-
NDPGH503 060D	6.0	28	66	6	-	-
NDPGH503 061D	6.1	34	79	8	-	-
NDPGH503 062D	6.2	34	79	8	-	-
NDPGH503 063D	6.3	34	79	8	-	-
NDPGH503 0635D	6.35	34	79	8	-	-
NDPGH503 064D	6.4	34	79	8	-	-
NDPGH503 065D	6.5	34	79	8	-	-
NDPGH503 06528D	6.528	34	79	8	-	-
NDPGH503 066D	6.6	34	79	8	-	-
NDPGH503 067D	6.7	34	79	8	-	-
NDPGH503 06747D	6.747	34	79	8	-	-
NDPGH503 068D	6.8	34	79	8	M8x1.25	WH1~4
NDPGH503 069D	6.9	34	79	8	M8x1.25	WH5~6
NDPGH503 070D	7.0	34	79	8	M8x1.0	WH1~4
NDPGH503 071D	7.1	41	79	8	M8x1.0	WH5~6

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
		◎	◎	○	○	○		○	◎	

NDPGH503D

Dolphin General Purpose
Internal Coolant Drill

Drill

EDP No	DC	LCF	OAL	DCONMS	Applicable Tap	
					Size	Limit
NDPGH503 07144D	7.144	41	79	8	-	-
NDPGH503 072D	7.2	41	79	8	-	-
NDPGH503 073D	7.3	41	79	8	-	-
NDPGH503 074D	7.4	41	79	8	-	-
NDPGH503 075D	7.5	41	79	8	-	-
NDPGH503 07541D	7.541	41	79	8	-	-
NDPGH503 076D	7.6	41	79	8	-	-
NDPGH503 077D	7.7	41	79	8	-	-
NDPGH503 078D	7.8	41	79	8	-	-
NDPGH503 079D	7.9	41	79	8	-	-
NDPGH503 07938D	7.938	41	79	8	-	-
NDPGH503 080D	8.0	41	79	8	-	-
NDPGH503 081D	8.1	47	89	10	-	-
NDPGH503 082D	8.2	47	89	10	-	-
NDPGH503 083D	8.3	47	89	10	-	-
NDPGH503 08334D	8.334	47	89	10	-	-
NDPGH503 084D	8.4	47	89	10	-	-
NDPGH503 08433D	8.433	47	89	10	-	-
NDPGH503 085D	8.5	47	89	10	M10x1.5	WH1~4
NDPGH503 086D	8.6	47	89	10	M10x1.5	WH5~6
NDPGH503 087D	8.7	47	89	10	-	-
NDPGH503 08731D	8.731	47	89	10	-	-
NDPGH503 088D	8.8	47	89	10	M10x1.25	WH1~4
NDPGH503 089D	8.9	47	89	10	M10x1.25	WH5~6
NDPGH503 090D	9.0	47	89	10	M10x1.0	WH1~4
NDPGH503 091D	9.1	47	89	10	M10x1.0	WH5~6
NDPGH503 09128D	9.128	47	89	10	-	-
NDPGH503 092D	9.2	47	89	10	-	-
NDPGH503 093D	9.3	47	89	10	-	-
NDPGH503 09347D	9.347	47	89	10	-	-
NDPGH503 094D	9.4	47	89	10	-	-
NDPGH503 095D	9.5	47	89	10	-	-
NDPGH503 09525D	9.525	47	89	10	-	-
NDPGH503 096D	9.6	47	89	10	-	-

Dolphin
Drill

Dolphin
Oil-Hole
Drill

Power
Max

Solid
Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		◎	◎	○	○	○		○	◎	

NDPGH503D

Dolphin General Purpose
Internal Coolant Drill

Drill

EDP No	DC	LCF	OAL	DCONMS	Applicable Tap	
					Size	Limit
NDPGH503 097D	9.7	47	89	10	-	-
NDPGH503 098D	9.8	47	89	10	-	-
NDPGH503 099D	9.9	47	89	10	-	-
NDPGH503 09922D	9.922	47	89	10	-	-
NDPGH503 100D	10.0	47	89	10	-	-
NDPGH503 101D	10.1	55	102	12	-	-
NDPGH503 102D	10.2	55	102	12	-	-
NDPGH503 103D	10.3	55	102	12	M12x1.75	WH1~2
NDPGH503 10319D	10.319	55	102	12	M12x1.75	WH3~4
NDPGH503 104D	10.4	55	102	12	M12x1.75	WH5~6
NDPGH503 105D	10.5	55	102	12	M12x1.5	WH1~4
NDPGH503 106D	10.6	55	102	12	M12x1.5	WH5~6
NDPGH503 107D	10.7	55	102	12	-	-
NDPGH503 10716D	10.716	55	102	12	-	-
NDPGH503 108D	10.8	55	102	12	M12x1.25	WH1~4
NDPGH503 109D	10.9	55	102	12	M12x1.25	WH5~6
NDPGH503 110D	11.0	55	102	12	M12x1.0	WH1~4
NDPGH503 111D	11.1	55	102	12	M12x1.0	WH5~6
NDPGH503 11113D	11.113	55	102	12	-	-
NDPGH503 112D	11.2	55	102	12	-	-
NDPGH503 113D	11.3	55	102	12	-	-
NDPGH503 114D	11.4	55	102	12	-	-
NDPGH503 115D	11.5	55	102	12	-	-
NDPGH503 11509D	11.509	55	102	12	-	-
NDPGH503 116D	11.6	55	102	12	-	-
NDPGH503 117D	11.7	55	102	12	-	-
NDPGH503 118D	11.8	55	102	12	-	-
NDPGH503 119D	11.9	55	102	12	-	-
NDPGH503 11906D	11.906	55	102	12	-	-
NDPGH503 120D	12.0	55	102	12	M14x2.0	WH1~4
NDPGH503 121D	12.1	60	107	14	M14x2.0	WH5~6
NDPGH503 122D	12.2	60	107	14	-	-
NDPGH503 123D	12.3	60	107	14	-	-
NDPGH503 12303D	12.303	60	107	14	-	-

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
		◎	◎	○	○	○		○	◎	

NDPGH503D

Dolphin General Purpose
Internal Coolant Drill

Drill

EDP No	DC	LCF	OAL	DCONMS	Applicable Tap	
					Size	Limit
NDPGH503 124D	12.4	60	107	14	-	-
NDPGH503 125D	12.5	60	107	14	M14x1.5	WH1~4
NDPGH503 126D	12.6	60	107	14	M14x1.5	WH5~6
NDPGH503 127D	12.7	60	107	14	-	-
NDPGH503 128D	12.8	60	107	14	-	-
NDPGH503 129D	12.9	60	107	14	-	-
NDPGH503 130D	13.0	60	107	14	-	-
NDPGH503 131D	13.1	60	107	14	-	-
NDPGH503 132D	13.2	60	107	14	-	-
NDPGH503 133D	13.3	60	107	14	-	-
NDPGH503 134D	13.4	60	107	14	-	-
NDPGH503 135D	13.5	60	107	14	-	-
NDPGH503 136D	13.6	60	107	14	-	-
NDPGH503 137D	13.7	60	107	14	-	-
NDPGH503 138D	13.8	60	107	14	-	-
NDPGH503 13891D	13.891	60	107	14	-	-
NDPGH503 139D	13.9	60	107	14	-	-
NDPGH503 140D	14.0	60	107	14	M16x20	WH1~4
NDPGH503 141D	14.1	65	115	16	M16x20	WH5~6
NDPGH503 142D	14.2	65	115	16	-	-
NDPGH503 14288D	14.288	65	115	16	-	-
NDPGH503 143D	14.3	65	115	16	-	-
NDPGH503 144D	14.4	65	115	16	-	-
NDPGH503 145D	14.5	65	115	16	M16x1.5	WH1~4
NDPGH503 146D	14.6	65	115	16	M16x1.5	WH5~6
NDPGH503 14684D	14.684	65	115	16	-	-
NDPGH503 147D	14.7	65	115	16	-	-
NDPGH503 148D	14.8	65	115	16	-	-
NDPGH503 149D	14.9	65	115	16	-	-
NDPGH503 150D	15.0	65	115	16	-	-
NDPGH503 15081D	15.081	65	115	16	-	-
NDPGH503 151D	15.1	65	115	16	-	-
NDPGH503 152D	15.2	65	115	16	-	-
NDPGH503 153D	15.3	65	115	16	-	-

Dolphin
Drill

Dolphin
Oil-Hole
Drill

Power
Max

Solid
Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		◎	◎	○	○	○		○	◎	

NDPGH503D

Dolphin General Purpose
Internal Coolant Drill

Drill

EDP No	DC	LCF	OAL	DCONMS	Applicable Tap	
					Size	Limit
NDPGH503 154D	15.4	65	115	16	-	-
NDPGH503 15478D	15.478	65	115	16	-	-
NDPGH503 155D	15.5	65	115	16	M18x2.5	WH1~4
NDPGH503 156D	15.6	65	115	16	M18x2.5	WH5~6
NDPGH503 157D	15.7	65	115	16	-	-
NDPGH503 158D	15.8	65	115	16	-	-
NDPGH503 15875D	15.875	65	115	16	-	-
NDPGH503 159D	15.9	65	115	16	-	-
NDPGH503 160D	16.0	65	115	16	-	-
NDPGH503 16272D	16.272	73	123	18	-	-
NDPGH503 165D	16.5	73	123	18	M18x1.5	WH1~6
NDPGH503 16669D	16.669	73	123	18	-	-
NDPGH503 170D	17.0	73	123	18	-	-
NDPGH503 17066D	17.066	73	123	18	-	-
NDPGH503 17463D	17.463	73	123	18	-	-
NDPGH503 175D	17.5	73	123	18	M20x2.5	WH1~6
NDPGH503 17859D	17.859	73	123	18	-	-
NDPGH503 180D	18.0	73	123	18	-	-
NDPGH503 18256D	18.256	79	131	20	-	-
NDPGH503 185D	18.5	79	131	20	M20x1.5	WH1~6
NDPGH503 18654D	18.654	79	131	20	-	-
NDPGH503 190D	19.0	79	131	20	-	-
NDPGH503 1905D	19.050	79	131	20	-	-
NDPGH503 1925D	19.25	79	131	20	-	-
NDPGH503 19447D	19.447	79	131	20	-	-
NDPGH503 195D	19.5	79	131	20	M22x2.5	WH1~6
NDPGH503 19844D	19.844	79	131	20	-	-
NDPGH503 200D	20.0	79	131	20	-	-

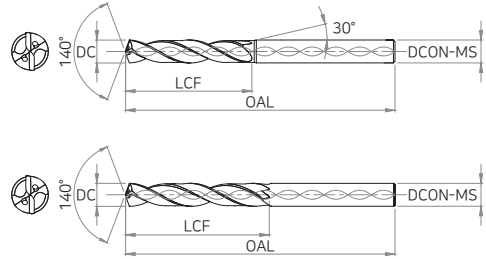
► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
		◎	◎	○	○	○		○	◎	

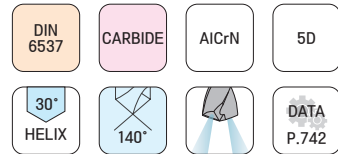
NDPGH505D

Dolphin General Purpose
Internal Coolant Drill



► Tolerance

DC		Shank Dia
~ Ø3	+0.002 ~ +0.012	h6
Ø3.1 ~ Ø6	+0.004 ~ +0.016	
Ø6.1 ~ Ø10	+0.006 ~ +0.021	
Ø10.1 ~ Ø18	+0.007 ~ +0.025	
Ø18.1 ~ Ø20	+0.008 ~ +0.029	



EDP No	DC	LCF	OAL	DCONMS	Applicable Tap	
					Size	Limit
NDPGH505 030D	3.0	28	66	6	-	-
NDPGH505 031D	3.1	28	66	6	-	-
NDPGH505 03175D	3.175	28	66	6	-	-
NDPGH505 032D	3.2	28	66	6	-	-
NDPGH505 033D	3.3	28	66	6	M4x0.7	WH1~4
NDPGH505 034D	3.4	28	66	6	M4x0.7	WH 5~6
NDPGH505 035D	3.5	28	66	6	-	-
NDPGH505 03572D	3.572	28	66	6	-	-
NDPGH505 036D	3.6	28	66	6	-	-
NDPGH505 037D	3.7	28	66	6	-	-
NDPGH505 038D	3.8	36	74	6	-	-
NDPGH505 039D	3.9	36	74	6	-	-
NDPGH505 03969D	3.969	36	74	6	-	-
NDPGH505 040D	4.0	36	74	6	-	-
NDPGH505 04039D	4.039	36	74	6	-	-
NDPGH505 041D	4.1	36	74	6	-	-
NDPGH505 042D	4.2	36	74	6	M5x0.8	WH1~4
NDPGH505 043D	4.3	36	74	6	M5x0.8	WH5~6
NDPGH505 04366D	4.366	36	74	6	-	-
NDPGH505 044D	4.4	36	74	6	-	-

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	Steel HRc30~50	~FCD500					
		◎	◎	○	○	○		○	◎	

Drill

Dolphin
Drill

Dolphin
Oil-Hole
Drill

Power
Max

Solid
Spiral

NDPGH505D

Dolphin General Purpose
Internal Coolant Drill

Drill

EDP No	DC	LCF	OAL	DCONMS	Applicable Tap	
					Size	Limit
NDPGH505 045D	4.5	36	74	6	-	-
NDPGH505 046D	4.6	36	74	6	-	-
NDPGH505 047D	4.7	36	74	6	-	-
NDPGH505 04763D	4.763	36	74	6	-	-
NDPGH505 048D	4.8	44	82	6	-	-
NDPGH505 049D	4.9	44	82	6	-	-
NDPGH505 050D	5.0	44	82	6	M6x1.0	WH1~4
NDPGH505 051D	5.1	44	82	6	M6x1.0	WH5~6
NDPGH505 05159D	5.159	44	82	6	-	-
NDPGH505 052D	5.2	44	82	6	-	-
NDPGH505 053D	5.3	44	82	6	-	-
NDPGH505 054D	5.4	44	82	6	-	-
NDPGH505 055D	5.5	44	82	6	-	-
NDPGH505 05556D	5.558	44	82	6	-	-
NDPGH505 056D	5.6	44	82	6	-	-
NDPGH505 057D	5.7	44	82	6	-	-
NDPGH505 058D	5.8	44	82	6	-	-
NDPGH505 059D	5.9	44	82	6	-	-
NDPGH505 05953D	5.953	44	82	6	-	-
NDPGH505 060D	6.0	44	82	6	-	-
NDPGH505 061D	6.1	53	91	8	-	-
NDPGH505 062D	6.2	53	91	8	-	-
NDPGH505 063D	6.3	53	91	8	-	-
NDPGH505 0635D	6.35	53	91	8	-	-
NDPGH505 064D	6.4	53	91	8	-	-
NDPGH505 065D	6.5	53	91	8	-	-
NDPGH505 06528D	6.528	53	91	8	-	-
NDPGH505 066D	6.6	53	91	8	-	-
NDPGH505 067D	6.7	53	91	8	-	-
NDPGH505 06747D	6.747	53	91	8	-	-
NDPGH505 068D	6.8	53	91	8	M8x1.25	WH1~4
NDPGH505 069D	6.9	53	91	8	M8x1.25	WH5~6
NDPGH505 070D	7.0	53	91	8	M8x1.0	WH1~4
NDPGH505 071D	7.1	53	91	8	M8x1.0	WH5~6

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
		◎	◎	○	○	○		○	◎	

NDPGH505D

Dolphin General Purpose
Internal Coolant Drill

Drill

EDP No	DC	LCF	OAL	DCONMS	Applicable Tap	
					Size	Limit
NDPGH505 07144D	7.144	53	91	8	-	-
NDPGH505 072D	7.2	53	91	8	-	-
NDPGH505 072D	7.2	53	91	8	-	-
NDPGH505 073D	7.3	53	91	8	-	-
NDPGH505 074D	7.4	53	91	8	-	-
NDPGH505 075D	7.5	53	91	8	-	-
NDPGH505 07541D	7.541	53	91	8	-	-
NDPGH505 076D	7.6	53	91	8	-	-
NDPGH505 077D	7.7	53	91	8	-	-
NDPGH505 078D	7.8	53	91	8	-	-
NDPGH5050 79D	7.9	53	91	8	-	-
NDPGH505 07938D	7.938	53	91	8	-	-
NDPGH505 080D	8.0	53	91	8	-	-
NDPGH505 081D	8.1	61	103	10	-	-
NDPGH505 082D	8.2	61	103	10	-	-
NDPGH505 083D	8.3	61	103	10	-	-
NDPGH505 08334D	8.334	61	103	10	-	-
NDPGH505 084D	8.4	61	103	10	-	-
NDPGH505 08433D	8.433	61	103	10	-	-
NDPGH505 085D	8.5	61	103	10	M10x1.5	WH1~4
NDPGH505 086D	8.6	61	103	10	M10x1.5	WH5~6
NDPGH505 087D	8.7	61	103	10	-	-
NDPGH505 08731D	8.731	61	103	10	-	-
NDPGH505 088D	8.8	61	103	10	M10x1.25	WH1~4
NDPGH505 089D	8.9	61	103	10	M10x1.25	WH5~6
NDPGH505 090D	9.0	61	103	10	M10x1.0	WH1~4
NDPGH505 091D	9.1	61	103	10	M10x1.0	WH5~6
NDPGH505 09128D	9.128	61	103	10	-	-
NDPGH505 092D	9.2	61	103	10	-	-
NDPGH505 093D	9.3	61	103	10	-	-
NDPGH505 09347D	9.347	61	103	10	-	-
NDPGH505 094D	9.4	61	103	10	-	-
NDPGH505 095D	9.5	61	103	10	-	-
NDPGH505 09525D	9.525	61	103	10	-	-

Dolphin
Drill

Dolphin
Oil-Hole
Drill

Power
Max

Solid
Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	Steel HRc30~50	~FCD500					
		◎	◎	○	○	○		○	◎	

NDPGH505D

Dolphin General Purpose
Internal Coolant Drill

Drill

EDP No	DC	LCF	OAL	DCONMS	Applicable Tap	
					Size	Limit
NDPGH505 096D	9.6	61	103	10	-	-
NDPGH505 097D	9.7	61	103	10	-	-
NDPGH505 098D	9.8	61	103	10	-	-
NDPGH505 099D	9.9	61	103	10	-	-
NDPGH505 098D	9.8	61	103	10	-	-
NDPGH505 099D	9.9	61	103	10	-	-
NDPGH505 09922D	9.922	61	103	10	-	-
NDPGH505 100D	10.0	61	103	10	-	-
NDPGH505 101D	10.1	71	118	12	-	-
NDPGH505 102D	10.2	71	118	12	-	-
NDPGH505 103D	10.3	71	118	12	M12x1.75	WH1~2
NDPGH505 10319D	10.319	71	118	12	M12x1.75	WH3~4
NDPGH505 104D	10.4	71	118	12	M12x1.75	WH5~6
NDPGH505 105D	10.5	71	118	12	M12x1.5	WH1~4
NDPGH505 106D	10.6	71	118	12	M12x1.5	WH5~6
NDPGH505 107D	10.7	71	118	12	-	-
NDPGH505 10716D	10.716	71	118	12	-	-
NDPGH505 108D	10.8	71	118	12	M12x1.25	WH1~4
NDPGH505 109D	10.9	71	118	12	M12x1.25	WH5~6
NDPGH505 110D	11.0	71	118	12	M12x1.0	WH1~4
NDPGH505 111D	11.1	71	118	12	M12x1.0	WH5~6
NDPGH505 11113D	11.113	71	118	12	-	-
NDPGH505 112D	11.2	71	118	12	-	-
NDPGH505 113D	11.3	71	118	12	-	-
NDPGH505 114D	11.4	71	118	12	-	-
NDPGH505 115D	11.5	71	118	12	-	-
NDPGH505 11509D	11.509	71	118	12	-	-
NDPGH505 116D	11.6	71	118	12	-	-
NDPGH505 117D	11.7	71	118	12	-	-
NDPGH505 118D	11.8	71	118	12	-	-
NDPGH505 119D	11.9	71	118	12	-	-
NDPGH505 11906D	11.906	71	118	12	-	-
NDPGH505 120D	12.0	71	118	12	M14x2.0	WH1~4
NDPGH505 121D	12.1	77	124	14	M14x2.0	WH5~6

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
		◎	◎	○	○	○		○	◎	

NDPGH505D

Dolphin General Purpose
Internal Coolant Drill

Drill

EDP No	DC	LCF	OAL	DCONMS	Applicable Tap	
					Size	Limit
NDPGH505 122D	12.2	77	124	14	-	-
NDPGH505 123D	12.3	77	124	14	-	-
NDPGH505 12303D	12.303	77	124	14	-	-
NDPGH505 124D	12.4	77	124	14	-	-
NDPGH505 125D	12.5	77	124	14	M14x1.5	WH1~4
NDPGH505 126D	12.6	77	124	14	M14x1.5	WH5~6
NDPGH505 127D	12.7	77	124	14	-	-
NDPGH505 128D	12.8	77	124	14	-	-
NDPGH505 129D	12.9	77	124	14	-	-
NDPGH505 130D	13.0	77	124	14	-	-
NDPGH505 131D	13.1	77	124	14	-	-
NDPGH505 132D	13.2	77	124	14	-	-
NDPGH505 133D	13.3	77	124	14	-	-
NDPGH505 134D	13.4	77	124	14	-	-
NDPGH505 135D	13.5	77	124	14	-	-
NDPGH505 136D	13.6	77	124	14	-	-
NDPGH505 137D	13.7	77	124	14	-	-
NDPGH505 138D	13.8	77	124	14	-	-
NDPGH505 13891D	13.891	77	124	14	-	-
NDPGH505 139D	13.9	77	124	14	-	-
NDPGH505 140D	14.0	77	124	14	M16x2.0	WH1~4
NDPGH505 141D	14.1	83	133	16	M16x2.0	WH5~6
NDPGH505 142D	14.2	83	133	16	-	-
NDPGH505 14288D	14.288	83	133	16	-	-
NDPGH505 143D	14.3	83	133	16	-	-
NDPGH505 144D	14.4	83	133	16	-	-
NDPGH505 145D	14.5	83	133	16	M16x1.5	WH1~4
NDPGH505 146D	14.6	83	133	16	M16x1.5	WH5~6
NDPGH505 14684D	14.684	83	133	16	-	-
NDPGH505 147D	14.7	83	133	16	-	-
NDPGH505 148D	14.8	83	133	16	-	-
NDPGH505 149D	14.9	83	133	16	-	-
NDPGH505 150D	15.0	83	133	16	-	-
NDPGH505 15081D	15.081	83	133	16	-	-

Dolphin
Drill

Dolphin
Oil-Hole
Drill

Power
Max

Solid
Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	Steel HRc30~50	~FCD500					
		◎	◎	○	○	○		○	◎	

NDPGH505D

Dolphin General Purpose
Internal Coolant Drill

Drill

EDP No	DC	LCF	OAL	DCONMS	Applicable Tap	
					Size	Limit
NDPGH505 151D	15.1	83	133	16	-	-
NDPGH505 152D	15.2	83	133	16	-	-
NDPGH505 153D	15.3	83	133	16	-	-
NDPGH505 154D	15.4	83	133	16	-	-
NDPGH505 15478D	15.478	83	133	16	-	-
NDPGH505 155D	15.5	83	133	16	M18x2.5	WH1~4
NDPGH505 156D	15.6	83	133	16	M18x2.5	WH5~6
NDPGH505 157D	15.7	83	133	16	-	-
NDPGH505 158D	15.8	83	133	16	-	-
NDPGH505 15875D	15.875	83	133	16	-	-
NDPGH505 159D	15.9	83	133	16	-	-
NDPGH505 160D	16.0	83	133	16	-	-
NDPGH505 16272D	16.272	93	143	18	-	-
NDPGH505 165D	16.5	93	143	18	M18x1.5	WH1~6
NDPGH505 16669D	16.669	93	143	18	-	-
NDPGH505 170D	17.0	93	143	18	-	-
NDPGH505 17066D	17.066	93	143	18	-	-
NDPGH505 17463D	17.463	93	143	18	-	-
NDPGH505 175D	17.5	93	143	18	M20x2.5	WH1~6
NDPGH505 17859D	17.859	93	143	18	-	-
NDPGH505 180D	18.0	93	143	18	-	-
NDPGH505 18256D	18.256	101	153	20	-	-
NDPGH505 185D	18.5	101	153	20	M20x1.5	WH1~6
NDPGH505 18654D	18.654	101	153	20	-	-
NDPGH505 190D	19.0	101	153	20	-	-
NDPGH505 1905D	19.050	101	153	20	-	-
NDPGH505 1925D	19.25	101	153	20	-	-
NDPGH505 19447D	19.447	101	153	20	-	-
NDPGH505 195D	19.5	101	153	20	M22x2.5	WH1~6
NDPGH505 19844D	19.844	101	153	20	-	-
NDPGH505 200D	20.0	101	153	20	-	-

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
		◎	◎	○	○	○		○	◎	

NDPGH508D

Dolphin General Purpose
Internal Coolant Drill

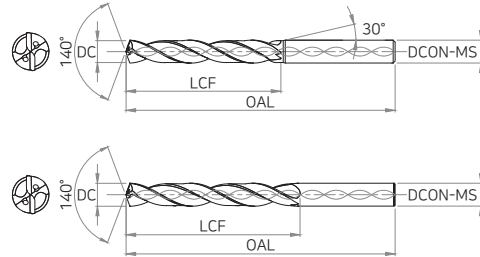
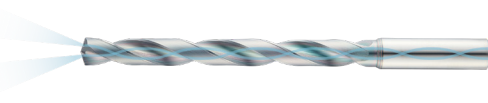
Drill

Dolphin
Drill

Dolphin
Oil-Hole
Drill

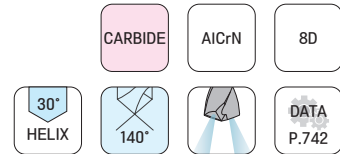
Power
Max

Solid
Spiral



► Tolerance

DC		Shank Dia
~ Ø3	+0.002 ~ +0.012	h6
Ø3.1 ~ Ø6	+0.004 ~ +0.016	
Ø6.1 ~ Ø10	+0.006 ~ +0.021	
Ø10.1 ~ Ø16	+0.007 ~ +0.025	



EDP No	DC	LCF	OAL	DCONMS	Applicable Tap	
					Size	Limit
NDPGH508 030D	3.0	31	74	6	-	-
NDPGH508 031D	3.1	36	81	6	-	-
NDPGH508 03175D	3.175	36	81	6	-	-
NDPGH508 032D	3.2	36	81	6	-	-
NDPGH508 033D	3.3	36	81	6	M4x0.7	WH1~4
NDPGH508 034D	3.4	36	81	6	M4x0.7	WH 5~6
NDPGH508 035D	3.5	36	81	6	-	-
NDPGH508 03572D	3.572	41	86	6	-	-
NDPGH508 036D	3.6	41	86	6	-	-
NDPGH508 037D	3.7	41	86	6	-	-
NDPGH508 038D	3.8	41	86	6	-	-
NDPGH508 039D	3.9	41	86	6	-	-
NDPGH508 03969D	3.969	41	86	6	-	-
NDPGH508 040D	4.0	41	86	6	-	-
NDPGH508 04039D	4.039	46	91	6	-	-
NDPGH508 041D	4.1	46	91	6	-	-
NDPGH508 042D	4.2	46	91	6	M5x0.8	WH1~4
NDPGH508 043D	4.3	46	91	6	M5x0.8	WH5~6
NDPGH508 04366D	4.366	46	91	6	-	-
NDPGH508 044D	4.4	46	91	6	-	-
NDPGH508 045D	4.5	46	91	6	-	-

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel ~HB225	Alloy Steel HB225 ~325	Prehardened Steel HRC30~50	Cast Iron ~FCD500	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~									
		◎	◎	○	○	○		○	◎	

NDPGH508D

Dolphin General Purpose
Internal Coolant Drill

Drill

EDP No	DC	LCF	OAL	DCONMS	Applicable Tap	
					Size	Limit
NDPGH508 046D	4.6	51	96	6	-	-
NDPGH508 047D	4.7	51	96	6	-	-
NDPGH508 04763D	4.763	51	96	6	-	-
NDPGH508 048D	4.8	51	96	6	-	-
NDPGH508 049D	4.9	51	96	6	-	-
NDPGH508 050D	5.0	51	96	6	M6x1.0	WH1~4
NDPGH508 051D	5.1	57	102	6	M6x1.0	WH5~6
NDPGH508 05159D	5.159	57	102	6	-	-
NDPGH508 052D	5.2	57	102	6	-	-
NDPGH508 053D	5.3	57	102	6	-	-
NDPGH508 054D	5.4	57	102	6	-	-
NDPGH508 055D	5.5	57	102	6	-	-
NDPGH508 05556D	5.556	62	107	6	-	-
NDPGH508 056D	5.6	62	107	6	-	-
NDPGH508 057D	5.7	62	107	6	-	-
NDPGH508 058D	5.8	62	107	6	-	-
NDPGH508 059D	5.9	62	107	6	-	-
NDPGH508 05953D	5.953	62	107	6	-	-
NDPGH508 060D	6.0	62	107	6	-	-
NDPGH508 061D	6.1	71	116	8	-	-
NDPGH508 062D	6.2	71	116	8	-	-
NDPGH508 063D	6.3	71	116	8	-	-
NDPGH508 0635D	6.35	71	116	8	-	-
NDPGH508 064D	6.4	71	116	8	-	-
NDPGH508 065D	6.5	71	116	8	-	-
NDPGH508 06528D	6.528	71	116	8	-	-
NDPGH508 066D	6.6	71	116	8	-	-
NDPGH508 067D	6.7	71	116	8	-	-
NDPGH508 06747D	6.747	71	116	8	-	-
NDPGH508 068D	6.8	71	116	8	M8x1.25	WH1~4
NDPGH508 069D	6.9	71	116	8	M8x1.25	WH5~6
NDPGH508 070D	7.0	71	116	8	M8x1.0	WH1~4
NDPGH508 071D	7.1	81	126	8	M8x1.0	WH5~6
NDPGH508 07144D	7.144	81	126	8	-	-
NDPGH508 072D	7.2	81	126	8	-	-
NDPGH508 073D	7.3	81	126	8	-	-

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
		◎	◎	○	○	○		○	◎	

NDPGH508D

Dolphin General Purpose
Internal Coolant Drill

Drill

EDP No	DC	LCF	OAL	DCONMS	Applicable Tap	
					Size	Limit
NDPGH508 074D	7.4	81	126	8	-	-
NDPGH508 075D	7.5	81	126	8	-	-
NDPGH508 07541D	7.541	81	126	8	-	-
NDPGH508 076D	7.6	81	126	8	-	-
NDPGH508 077D	7.7	81	126	8	-	-
NDPGH508 078D	7.8	81	126	8	-	-
NDPGH508 079D	7.9	81	126	8	-	-
NDPGH508 07938D	7.938	81	126	8	-	-
NDPGH508 080D	8.0	81	126	8	-	-
NDPGH508 081D	8.1	92	137	10	-	-
NDPGH508 082D	8.2	92	137	10	-	-
NDPGH508 083D	8.3	92	137	10	-	-
NDPGH508 08334D	8.334	92	137	10	-	-
NDPGH508 084D	8.4	92	137	10	-	-
NDPGH508 08433D	8.433	92	137	10	-	-
NDPGH508 085D	8.5	92	137	10	M10x1.5	WH1~4
NDPGH508 086D	8.6	92	137	10	M10x1.5	WH5~6
NDPGH508 087D	8.7	92	137	10	-	-
NDPGH508 08731D	8.731	92	137	10	-	-
NDPGH508 088D	8.8	92	137	10	M10x1.25	WH1~4
NDPGH508 089D	8.9	92	137	10	M10x1.25	WH5~6
NDPGH508 090D	9.0	92	137	10	M10x1.0	WH1~4
NDPGH508 091D	9.1	102	147	10	M10x1.0	WH5~6
NDPGH508 09128D	9.128	102	147	10	-	-
NDPGH508 092D	9.2	102	147	10	-	-
NDPGH508 093D	9.3	102	147	10	-	-
NDPGH508 09347D	9.347	102	147	10	-	-
NDPGH508 094D	9.4	102	147	10	-	-
NDPGH508 095D	9.5	102	147	10	-	-
NDPGH508 09525D	9.525	102	147	10	-	-
NDPGH508 096D	9.6	102	147	10	-	-
NDPGH508 097D	9.7	102	147	10	-	-
NDPGH508 098D	9.8	102	147	10	-	-
NDPGH508 099D	9.9	102	147	10	-	-
NDPGH508 09922D	9.922	102	147	10	-	-
NDPGH508 100D	10.0	102	147	10	-	-

Dolphin
Drill

Dolphin
Oil-Hole
Drill

Power
Max

Solid
Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRc55~	~HB225	HB225 ~325	Steel HRc30~50	~FCD500					
		◎	◎	○	○	○		○	◎	

NDPGH508D

Dolphin General Purpose
Internal Coolant Drill

Drill

EDP No	DC	LCF	OAL	DCONMS	Applicable Tap	
					Size	Limit
NDPGH508 101D	10.1	113	158	12	-	-
NDPGH508 102D	10.2	113	158	12	-	-
NDPGH508 103D	10.3	113	158	12	M12x1.75	WH1~2
NDPGH508 10319D	10.319	113	158	12	M12x1.75	WH3~4
NDPGH508 104D	10.4	113	158	12	M12x1.75	WH5~6
NDPGH508 105D	10.5	113	158	12	M12x1.5	WH1~4
NDPGH508 106D	10.6	113	158	12	M12x1.5	WH5~6
NDPGH508 107D	10.7	113	158	12	-	-
NDPGH508 10716D	10.716	113	158	12	-	-
NDPGH508 108D	10.8	113	158	12	M12x1.25	WH1~4
NDPGH508 109D	10.9	113	158	12	M12x1.25	WH5~6
NDPGH508 110D	11.0	113	158	12	M12x1.0	WH1~4
NDPGH508 111D	11.1	123	168	12	M12x1.0	WH5~6
NDPGH508 11113D	11.113	123	168	12	-	-
NDPGH508 112D	11.2	123	168	12	-	-
NDPGH508 113D	11.3	123	168	12	-	-
NDPGH508 114D	11.4	123	168	12	-	-
NDPGH508 115D	11.5	123	168	12	-	-
NDPGH508 11509D	11.509	123	168	12	-	-
NDPGH508 116D	11.6	123	168	12	-	-
NDPGH508 117D	11.7	123	168	12	-	-
NDPGH508 118D	11.8	123	168	12	-	-
NDPGH508 119D	11.9	123	168	12	-	-
NDPGH508 11906D	11.906	123	168	12	-	-
NDPGH508 120D	12.0	123	168	12	M14x2.0	WH1~4
NDPGH508 121D	12.1	134	179	14	M14x2.0	WH5~6
NDPGH508 122D	12.2	134	179	14	-	-
NDPGH508 123D	12.3	134	179	14	-	-
NDPGH508 12303D	12.303	134	179	14	-	-
NDPGH508 124D	12.4	134	179	14	-	-
NDPGH508 125D	12.5	134	179	14	M14x1.5	WH1~4
NDPGH508 126D	12.6	134	179	14	M14x1.5	WH5~6
NDPGH508 127D	12.7	134	179	14	-	-
NDPGH508 128D	12.8	134	179	14	-	-
NDPGH508 129D	12.9	134	179	14	-	-
NDPGH508 130D	13.0	134	179	14	-	-

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
		◎	◎	○	○	○		○	◎	

NDPGH508D

Dolphin General Purpose
Internal Coolant Drill

Drill

EDP No	DC	LCF	OAL	DCONMS	Applicable Tap	
					Size	Limit
NDPGH508 131D	13.1	144	189	14	-	-
NDPGH508 132D	13.2	144	189	14	-	-
NDPGH508 133D	13.3	144	189	14	-	-
NDPGH508 134D	13.4	144	189	14	-	-
NDPGH508 135D	13.5	144	189	14	-	-
NDPGH508 136D	13.6	144	189	14	-	-
NDPGH508 137D	13.7	144	189	14	-	-
NDPGH508 138D	13.8	144	189	14	-	-
NDPGH508 13891D	13.891	144	189	14	-	-
NDPGH508 139D	13.9	144	189	14	-	-
NDPGH508 140D	14.0	144	189	14	M16x2.0	WH1~4
NDPGH508 141D	14.1	155	200	16	M16x2.0	WH5~6
NDPGH508 142D	14.2	155	200	16	-	-
NDPGH508 14288D	14.288	155	200	16	-	-
NDPGH508 143D	14.3	155	200	16	-	-
NDPGH508 144D	14.4	155	200	16	-	-
NDPGH508 145D	14.5	155	200	16	M16x1.5	WH1~4
NDPGH508 146D	14.6	155	200	16	M16x1.5	WH5~6
NDPGH508 14684D	14.684	155	200	16	-	-
NDPGH508 147D	14.7	155	200	16	-	-
NDPGH508 148D	14.8	155	200	16	-	-
NDPGH508 149D	14.9	155	200	16	-	-
NDPGH508 150D	15.0	155	200	16	-	-
NDPGH508 15081D	15.081	165	210	16	-	-
NDPGH508 151D	15.1	165	210	16	-	-
NDPGH508 152D	15.2	165	210	16	-	-
NDPGH508 153D	15.3	165	210	16	-	-
NDPGH508 154D	15.4	165	210	16	-	-
NDPGH508 15478D	15.478	165	210	16	-	-
NDPGH508 155D	15.5	165	210	16	M18x2.5	WH1~4
NDPGH508 156D	15.6	165	210	16	M18x2.5	WH5~6
NDPGH508 157D	15.7	165	210	16	-	-
NDPGH508 158D	15.8	165	210	16	-	-
NDPGH508 15875D	15.875	165	210	16	-	-
NDPGH508 159D	15.9	165	210	16	-	-
NDPGH508 160D	16.0	165	210	16	-	-

Dolphin
Drill

Dolphin
Oil-Hole
Drill

Power
Max

Solid
Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	Steel HRc30~50	~FCD500					
		◎	◎	○	○	○		○	◎	

Power Max Drill

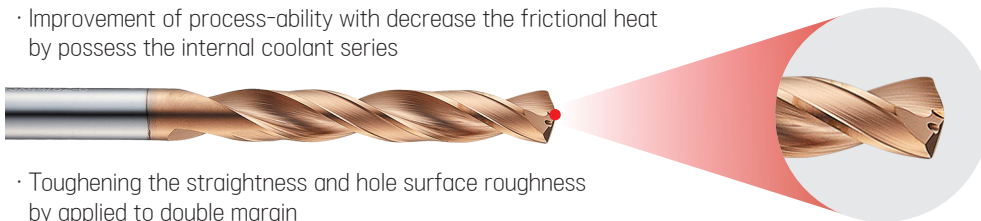
High Speed Drill

Characteristics

- Suitable to High speed work for Alloy steels, Cast iron, Stainless steels, Prehardened Steels
[Recommendation : ~HRC50]
- Extensive coverage of 3D ~ 20D Diameter

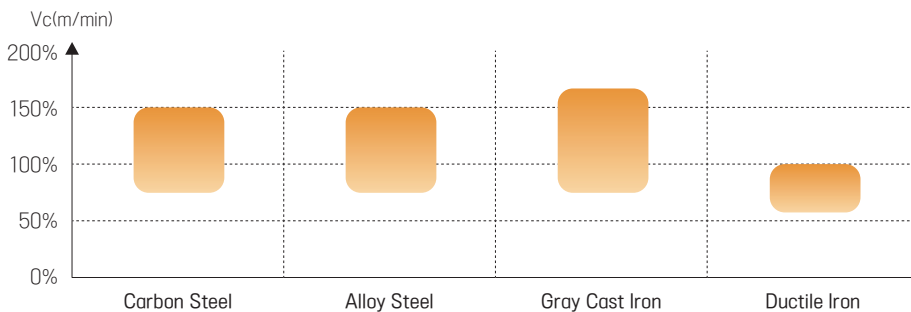
Features

- High chipping resistance with high feed by used the high toughness material
- Toughening the surface hardness with heat resistance by applied to AlTiN coating
- Improvement of process-ability with decrease the frictional heat by possess the internal coolant series

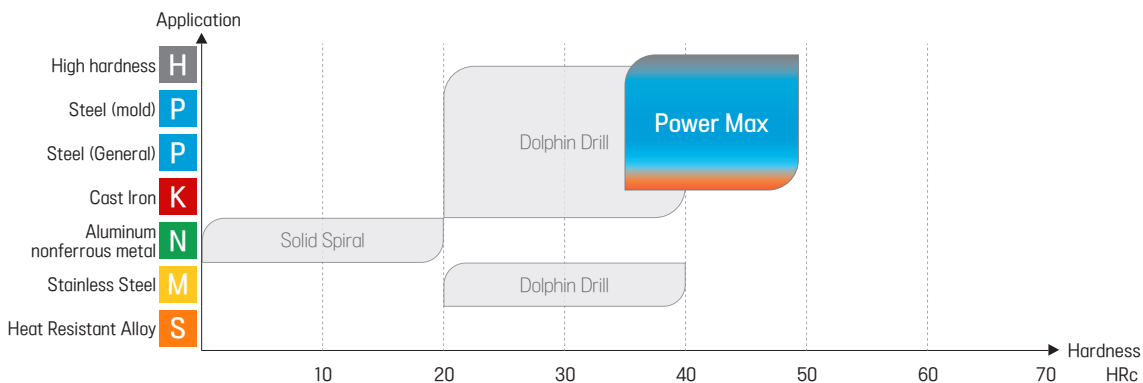


- Toughening the straightness and hole surface roughness by applied to double margin
- Toughening the chip emission by applied to wide chip pocket
- Improvement of processing efficiency with versatility who customer can choose between the external and internal coolant depends on the drilling depth

Vc by Application area



Applications



Contents

EDP No	Flutes	Geometry	Length					Coolant	Margin	Tolerance	Diameter(DC)		Page
Spec (INCH :  / METRIC : )			3D	5D	8D	10D	12D				Min	Max	
PF503  	2F		○					External	Single	h8	2	20	454
PF505  				○				External	Single	h8	3	20	458
SF503  			○					Internal	Single	h8	3	20	461
SF505  				○				Internal	Single	h8	3	20	464
SF508  					○			Internal	Single	h8	3	20	467
SF510  						○		Internal	Double	h8	3	13	470
SF520  							○	Internal	Double	h8	4.1	10	472
HP503  			○					External	Double	m7	3	16	474
HPI503  			○					Internal	Double	m7	3	20	476
HPI505  				○				Internal	Double	m7	3	20	479
HPI508-N  					○			Internal	Double	m7	3	20	483
P503A(F)  			○					External	Single	m7	3	20	486
P505A(F)  				○				External	Single	m7	3	20	489

EDP No. System

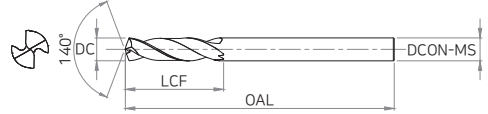
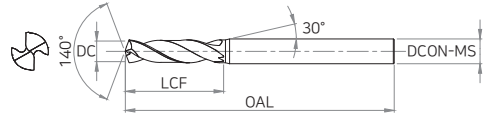
*If expressed as an integer, the decimal point is omitted.

P	I	5	05	A	040
①	②	③	④	⑤	⑥

①	②	③	④	⑤	⑥
Section	Appearance	Grade	Working Depth	Shank Type	Cutting Dia
P : Power Max	F : Facet Point	5 : Grade	03 : 3D	A : Plane	Ø3
S : Spiral Coolant	I : Internal Coolant		05 : 5D	F : DIN 6535 HE	~
HP : High Precision			08 : 8D		Ø20
			10 : 10D		
			20 : 20D		

PF503 High Speed Drill - 3D

Drill



► Tolerance

DC		Shank Dia
~ Ø3	0 ~ -0.014	h6
Ø3.1 ~ Ø6	0 ~ -0.018	
Ø6.1 ~ D10	0 ~ -0.022	
Ø10.1 ~ Ø18	0 ~ -0.027	
Ø18.1 ~	0 ~ -0.033	



EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch			
PF503 020	2	-	.0787	14	50	3
PF503 021	2.1	-	.0827	14	50	3
PF503 022	2.2	-	.0866	14	50	3
PF503 023	2.3	-	.0906	14	50	3
PF503 024	2.4	-	.0945	14	50	3
PF503 025	2.5	-	.0984	14	50	3
PF503 026	2.6	-	.1024	14	50	3
PF503 027	2.7	-	.1063	14	50	3
PF503 028	2.8	-	.1102	14	50	3
PF503 029	2.9	-	.1142	14	50	3
PF503 030	3	-	.1181	18	60	3
PF503 031	3.1	-	.1220	20	60	4
PF503 03175	3.175	1/8	.1250	20	60	4
PF503 032	3.2	-	.1260	20	60	4
PF503 03264	3.264	-	.1285	20	60	4
PF503 033	3.3	-	.1299	20	60	4
PF503 034	3.4	-	.1339	22	60	4
PF503 035	3.5	-	.1378	22	60	4
PF503 03572	3.572	9/64	.1406	22	60	4
PF503 036	3.6	-	.1417	22	60	4
PF503 037	3.7	-	.1457	22	60	4
PF503 038	3.8	-	.1496	24	60	4
PF503 039	3.9	-	.1535	24	60	4
PF503 040	4	-	.1575	24	60	4
PF503 04039	4.039	-	.1590	24	60	4
PF503 041	4.1	-	.1614	24	60	4
PF503 042	4.2	-	.1654	26	62	5
PF503 043	4.3	-	.1693	26	62	5
PF503 044	4.4	-	.1732	26	62	5
PF503 045	4.5	-	.1772	26	62	5
PF503 046	4.6	-	.1811	26	62	5
PF503 047	4.7	-	.1850	26	62	5
PF503 04763	4.763	3/16	.1875	26	62	5
PF503 048	4.8	-	.1890	26	62	5
PF503 049	4.9	-	.1920	26	62	5
PF503 050	5	-	.1969	26	62	5
PF503 051	5.1	-	.2008	26	62	5
PF503 05159	5.159	13/64	.2031	28	66	6
PF503 052	5.2	-	.2047	28	66	6
PF503 053	5.3	-	.2087	28	66	6

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	~325	HRC30~50	~FC500					
○	○	○	◎	◎	◎					

PF503

High Speed Drill - 3D

Drill

EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
PF503 054	5.4	-	.2126	28	66	6	PF503 081	8.1	-	.3189	40	79	8
PF503 055	5.5	-	.2165	28	66	6	PF503 082	8.2	-	.3228	43	84	9
PF503 05558	5.558	7/32	.2188	30	66	6	PF503 083	8.3	-	.3268	43	84	9
PF503 056	5.6	-	.2205	30	66	6	PF503 08334	8.334	21/64	.3281	43	84	9
PF503 057	5.7	-	.2244	30	66	6	PF503 084	8.4	-	.3307	43	84	9
PF503 058	5.8	-	.2283	30	66	6	PF503 085	8.5	-	.3320	43	84	9
PF503 059	5.9	-	.2323	30	66	6	PF503 086	8.6	-	.3346	43	84	9
PF503 05953	5.953	15/64	.2344	30	66	6	PF503 087	8.7	-	.3386	43	84	9
PF503 060	6	-	.2362	30	66	6	PF503 08733	8.733	-	.3425	43	84	9
PF503 061	6.1	-	.2402	30	66	6	PF503 088	8.8	-	.3438	43	84	9
PF503 062	6.2	-	.2441	34	74	7	PF503 089	8.9	-	.3465	43	84	9
PF503 063	6.3	-	.2480	34	74	7	PF503 090	9	-	.3504	43	84	9
PF503 0635	6.35	1/4	.2500	34	74	7	PF503 091	9.1	-	.3543	43	84	9
PF503 064	6.4	-	.2520	34	74	7	PF503 09129	9.129	23/64	.3594	47	89	10
PF503 065	6.5	-	.2559	34	74	7	PF503 092	9.2	-	.3622	47	89	10
PF503 066	6.6	-	.2598	34	74	7	PF503 093	9.3	-	.3661	47	89	10
PF503 067	6.7	-	.2638	37	74	7	PF503 09347	9.347	-	.3680	47	89	10
PF503 06747	6.747	17/64	.2656	37	74	7	PF503 094	9.4	-	.3701	47	89	10
PF503 068	6.8	-	.2677	37	74	7	PF503 095	9.5	-	.3740	47	89	10
PF503 069	6.9	-	.2717	37	74	7	PF503 09525	9.525	3/8	.3750	47	89	10
PF503 070	7	-	.2756	37	74	7	PF503 096	9.6	-	.3780	47	89	10
PF503 071	7.1	-	.2795	37	74	7	PF503 097	9.7	-	.3819	47	89	10
PF503 07145	7.145	9/32	.2813	40	79	8	PF503 098	9.8	-	.3858	47	89	10
PF503 072	7.2	-	.2835	40	79	8	PF503 099	9.9	-	.3898	47	89	10
PF503 073	7.3	-	.2874	40	79	8	PF503 09921	9.921	25/64	.3906	47	89	10
PF503 074	7.4	-	.2913	40	79	8	PF503 100	10	-	.3937	47	89	10
PF503 075	7.5	-	.2953	40	79	8	PF503 101	10.1	-	.3976	47	89	10
PF503 07541	7.541	19/64	.2969	40	79	8	PF503 102	10.2	-	.4016	51	95	11
PF503 076	7.6	-	.2992	40	79	8	PF503 103	10.3	-	.4055	51	95	11
PF503 077	7.7	-	.3031	40	79	8	PF503 1032	10.32	13/32	.4063	51	95	11
PF503 078	7.8	-	.3071	40	79	8	PF503 104	10.4	-	.4094	51	95	11
PF503 079	7.9	-	.3110	40	79	8	PF503 105	10.5	-	.4134	51	95	11
PF503 07938	7.938	5/16	.3125	40	79	8	PF503 106	10.6	-	.4173	51	95	11
PF503 080	8	-	.3150	40	79	8	PF503 107	10.7	-	.4213	51	95	11

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

PF503

High Speed Drill - 3D

Drill

EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
PF503 10716	10.716	27/64	.4219	51	95	11	PF503 136	13.6	-	.5354	60	107	14
PF503 108	10.8	-	.4252	51	95	11	PF503 137	13.7	-	.5394	60	107	14
PF503 109	10.9	-	.4291	51	95	11	PF503 138	13.8	-	.5433	60	107	14
PF503 110	11	-	.4331	51	95	11	PF503 13891	13.891	35/64	.5469	60	107	14
PF503 111	11.1	-	.4370	51	95	11	PF503 139	13.9	-	.5472	60	107	14
PF503 11113	11.113	7/16	.4375	54	102	12	PF503 140	14	-	.5512	60	107	14
PF503 112	11.2	-	.4409	54	102	12	PF503 141	14.1	-	.5551	60	107	14
PF503 113	11.3	-	.4449	54	102	12	PF503 142	14.2	-	.5591	62	111	15
PF503 114	11.4	-	.4488	54	102	12	PF503 14288	14.288	9/16	.5625	62	111	15
PF503 115	11.5	-	.4528	54	102	12	PF503 143	14.3	-	.5630	62	111	15
PF503 116	11.6	-	.4531	54	102	12	PF503 144	14.4	-	.5669	62	111	15
PF503 117	11.7	-	.4567	54	102	12	PF503 145	14.5	-	.5709	62	111	15
PF503 118	11.8	-	.4606	54	102	12	PF503 146	14.6	-	.5748	62	111	15
PF503 119	11.9	15/32	.4646	54	102	12	PF503 147	14.7	-	.5787	62	111	15
PF503 11908	11.908	-	.4685	54	102	12	PF503 148	14.8	-	.5827	62	111	15
PF503 120	12	-	.4688	54	102	12	PF503 149	14.9	-	.5866	62	111	15
PF503 121	12.1	-	.4724	54	102	12	PF503 150	15	-	.5906	62	111	15
PF503 122	12.2	-	.4803	57	102	13	PF503 15081	15.081	19/32	.5937	62	111	15
PF503 123	12.3	-	.4843	57	102	13	PF503 151	15.1	-	.5945	62	111	15
PF503 12304	12.304	31/64	.4844	57	102	13	PF503 152	15.2	-	.5984	64	115	16
PF503 124	12.4	-	.4882	57	102	13	PF503 153	15.3	-	.6063	64	115	16
PF503 125	12.5	-	.4921	57	102	13	PF503 154	15.4	-	.6102	64	115	16
PF503 126	12.6	-	.4961	57	102	13	PF503 155	15.5	-	.6142	64	115	16
PF503 127	12.7	-	.5000	57	102	13	PF503 156	15.6	-	.6181	64	115	16
PF503 128	12.8	-	.5039	57	102	13	PF503 157	15.7	-	.6220	64	115	16
PF503 129	12.9	-	.5079	57	102	13	PF503 158	15.8	-	.6250	64	115	16
PF503 130	13	-	.5118	57	102	13	PF503 15875	15.875	5/8	.6299	64	115	16
PF503 13096	13.096	33/64	.5156	57	102	13	PF503 160	16	-	.6339	64	115	16
PF503 131	13.1	-	.5157	57	102	13	PF503 161	16.1	-	.6371	64	115	16
PF503 132	13.2	-	.5197	60	107	14	PF503 163	16.3	-	.6417	66	119	17
PF503 133	13.3	-	.5236	60	107	14	PF503 165	16.5	-	.6496	66	119	17
PF503 134	13.4	-	.5276	60	107	14	PF503 16667	16.667	21/32	.6562	66	119	17
PF503 13494	13.494	17/32	.5313	60	107	14	PF503 170	17	-	.6693	66	119	17
PF503 135	13.5	-	.5315	60	107	14	PF503 171	17.1	-	.6732	66	119	17

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	~325	HRC30~50	~FCD500					
○	○	○	◎	◎	◎					

PF503

High Speed Drill - 3D

Drill

EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
PF503 172	17.2	-	.6772	66	123	18	PF503 182	18.2	-	.7165	70	127	19
PF503 17463	17.463	11/16	.6772	66	123	18	PF503 185	18.5	-	.7283	70	127	19
PF503 175	17.5	-	.6875	66	123	18	PF503 190	19	-	.7480	70	127	19
PF503 177	17.7	-	.6890	66	123	18	PF503 191	19.1	-	.7520	70	127	19
PF503 178	17.8	-	.6969	66	123	18	PF503 195	19.5	-	.7677	70	131	20
PF503 180	18	-	.7008	66	123	18	PF503 197	19.7	-	.7756	70	131	20
PF503 181	18.1	-	.7087	66	123	18	PF503 200	20	-	.7874	70	131	20

Dolphin
Drill

Dolphin
Oil-Hole
Drill

Power
Max

Solid
Spiral

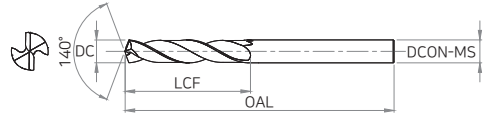
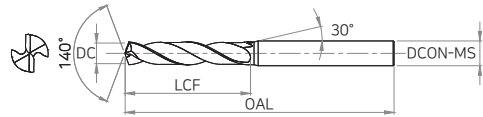
► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

PF505 High Speed Drill - 5D

Drill



► Tolerance

DC		Shank Dia
~ Ø3	0 ~ -0.014	h6
Ø3.1 ~ Ø6	0 ~ -0.018	
Ø6.1 ~ Ø10	0 ~ -0.022	
Ø10.1 ~ Ø18	0 ~ -0.027	
Ø18.1 ~	0 ~ -0.033	



EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch			
PF505 030	3	-	.1181	25	60	3
PF505 031	3.1	-	.122	27	60	4
PF505 03175	3.175	1/8	.125	27	60	4
PF505 032	3.2	-	.126	27	60	4
PF505 03264	3.264	#30	.1285	27	60	4
PF505 033	3.3	-	.1299	27	60	4
PF505 034	3.4	-	.1339	30	65	4
PF505 035	3.5	-	.1378	30	65	4
PF505 03572	3.572	9/64	.1406	30	65	4
PF505 036	3.6	-	.1417	30	65	4
PF505 037	3.7	-	.1457	30	65	4
PF505 038	3.8	-	.1496	33	71	4
PF505 039	3.9	-	.1535	33	71	4
PF505 040	4	-	.1575	33	71	4
PF505 04039	4.039	#21	.1575	33	71	5
PF505 041	4.1	-	.159	33	71	5
PF505 042	4.2	-	.1614	33	71	5
PF505 043	4.3	-	.1654	36	71	5
PF505 044	4.4	-	.1693	36	71	5
PF505 045	4.5	-	.1732	36	71	5
PF505 046	4.6	-	.1772	36	71	5
PF505 047	4.7	-	.1811	36	71	5
PF505 04763	4.763	3/16	.185	39	71	5
PF505 048	4.8	-	.1875	39	71	5
PF505 049	4.9	-	.189	39	71	5
PF505 050	5	-	.192	39	71	5
PF505 051	5.1	-	.2008	39	83	6
PF505 05159	5.159	13/64	.2031	39	83	6
PF505 052	5.2	-	.2047	39	83	6
PF505 053	5.3	-	.2087	39	83	6
PF505 054	5.4	-	.2126	43	83	6
PF505 055	5.5	-	.2165	43	83	6
PF505 05558	5.558	7/32	.2188	43	83	6
PF505 056	5.6	-	.2205	43	83	6
PF505 057	5.7	-	.2244	43	83	6
PF505 058	5.8	-	.2283	43	83	6
PF505 059	5.9	-	.2323	43	83	6
PF505 05953	5.953	15/64	.2344	43	83	6
PF505 060	6	-	.2362	43	83	6
PF505 061	6.1	-	.2402	47	87	7

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	~325	HRC30~50	~FC500					
○	○	○	◎	◎	◎					

PF505

High Speed Drill - 5D

Drill

EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
PF505 062	6.2	-	.2441	47	87	7	PF505 089	8.9	-	.3504	56	96	9
PF505 063	6.3	-	.248	47	87	7	PF505 090	9	-	.3543	56	96	9
PF505 065	6.35	1/4	.25	47	87	7	PF505 091	9.1	-	.3583	62	105	10
PF505 064	6.4	-	.252	47	87	7	PF505 09129	9.129	23/64	.3594	62	105	10
PF505 065	6.5	-	.2559	47	87	7	PF505 092	9.2	-	.3622	62	105	10
PF505 066	6.6	-	.2598	47	87	7	PF505 093	9.3	-	.3661	62	105	10
PF505 067	6.7	-	.2638	47	87	7	PF505 094	9.4	-	.3701	62	105	10
PF505 06747	6.747	17/64	.2656	47	87	7	PF505 095	9.5	-	.374	62	105	10
PF505 068	6.8	-	.2677	47	87	7	PF505 09525	9.525	3/8	.375	62	105	10
PF505 069	6.9	-	.2717	47	87	7	PF505 096	9.6	-	.378	62	105	10
PF505 070	7	-	.2756	47	87	7	PF505 097	9.7	-	.3819	62	105	10
PF505 071	7.1	-	.2795	52	92	8	PF505 098	9.8	-	.3858	62	105	10
PF505 07145	7.145	9/32	.2813	52	92	8	PF505 099	9.9	-	.3898	62	105	10
PF505 072	7.2	-	.2835	52	92	8	PF505 09921	9.921	25/64	.3906	62	105	10
PF505 073	7.3	-	.2874	52	92	8	PF505 100	10	-	.3937	62	105	10
PF505 074	7.4	-	.2913	52	92	8	PF505 101	10.1	-	.3976	68	115	11
PF505 075	7.5	-	.2953	52	92	8	PF505 102	10.2	-	.4016	68	115	11
PF505 07541	7.541	19/64	.2969	52	92	8	PF505 103	10.3	-	.4055	68	115	11
PF505 076	7.6	-	.2992	52	92	8	PF505 1032	10.32	13/32	.4063	68	115	11
PF505 077	7.7	-	.3031	52	92	8	PF505 104	10.4	-	.4094	68	115	11
PF505 078	7.8	-	.3071	52	92	8	PF505 105	10.5	-	.4134	68	115	11
PF505 079	7.9	-	.311	52	92	8	PF505 106	10.6	-	.4173	68	115	11
PF505 07938	7.938	5/16	.3125	52	92	8	PF505 107	10.7	-	.4213	68	115	11
PF505 080	8	-	.315	52	92	8	PF505 10716	10.716	27/64	.4219	68	115	11
PF505 081	8.1	-	.3189	56	96	9	PF505 108	10.8	-	.4252	68	115	11
PF505 082	8.2	-	.3228	56	96	9	PF505 109	10.9	-	.4291	68	115	11
PF505 083	8.3	-	.3268	56	96	9	PF505 110	11	-	.4331	68	115	11
PF505 08334	8.334	21/64	.3281	56	96	9	PF505 111	11.1	-	.437	71	121	12
PF505 084	8.4	-	.3307	56	96	9	PF505 11113	11.113	7/16	.4375	71	121	12
PF505 085	8.5	-	.3346	56	96	9	PF505 112	11.2	-	.4409	71	121	12
PF505 086	8.6	-	.3386	56	96	9	PF505 113	11.3	-	.4449	71	121	12
PF505 087	8.7	-	.3425	56	96	9	PF505 114	11.4	-	.4488	71	121	12
PF505 08733	8.733	11/32	.3438	56	96	9	PF505 115	11.5	-	.4528	71	121	12
PF505 088	8.8	-	.3465	56	96	9	PF505 116	11.6	-	.4567	71	121	12

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

PF505

High Speed Drill - 5D

Drill

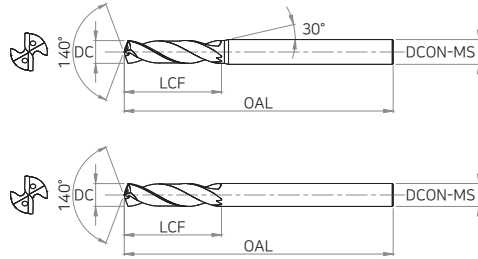
EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
PF505 117	11.7	-	.4606	71	121	12	PF505 146	14.6	-	.5748	83	143	15
PF505 118	11.8	-	.4646	71	121	12	PF505 147	14.7	-	.5787	83	143	15
PF505 119	11.9	-	.4685	71	121	12	PF505 148	14.8	-	.5827	83	143	15
PF505 11908	11.908	15/32	.4688	71	121	12	PF505 149	14.9	-	.5866	83	143	15
PF505 120	12	-	.4724	71	121	12	PF505 150	15	-	.5906	83	143	15
PF505 121	12.1	-	.4764	75	125	13	PF505 15081	15.081	19/32	.5937	90	152	16
PF505 122	12.2	-	.4803	75	125	13	PF505 151	15.1	-	.5945	90	152	16
PF505 123	12.3	-	.4843	75	125	13	PF505 152	15.2	-	.5984	90	152	16
PF505 12304	12.304	31/64	.4844	75	125	13	PF505 154	15.4	-	.6063	90	152	16
PF505 124	12.4	-	.4882	75	125	13	PF505 155	15.5	-	.6102	90	152	16
PF505 125	12.5	-	.4921	75	125	13	PF505 156	15.6	-	.6142	90	152	16
PF505 126	12.6	-	.4961	75	125	13	PF505 157	15.7	-	.6181	90	152	16
PF505 127	12.7	-	.5	75	125	13	PF505 158	15.8	-	.622	90	152	16
PF505 128	12.8	-	.5039	75	125	13	PF505 15875	15.875	5/8	.625	90	152	16
PF505 129	12.9	-	.5079	75	125	13	PF505 160	16	-	.6299	90	152	16
PF505 130	13	-	.5118	75	125	13	PF505 161	16.1	-	.6339	95	155	17
PF505 13096	13.096	33/64	.5156	80	134	14	PF505 163	16.3	-	.6417	95	155	17
PF505 131	13.1	-	.5157	80	134	14	PF505 165	16.5	-	.6496	95	155	17
PF505 132	13.2	-	.5197	80	134	14	PF505 16667	16.667	21/32	.6562	95	155	17
PF505 133	13.3	-	.5236	80	134	14	PF505 170	17	-	.6693	95	155	17
PF505 134	13.4	-	.5276	80	134	14	PF505 171	17.1	-	.6732	100	157	18
PF505 13494	13.494	17/32	.5313	80	134	14	PF505 172	17.2	-	.6772	100	157	18
PF505 135	13.5	-	.5315	80	134	14	PF505 17463	17.463	11/16	.6875	100	157	18
PF505 136	13.6	-	.5354	80	134	14	PF505 175	17.5	-	.689	100	157	18
PF505 137	13.7	-	.5394	80	134	14	PF505 177	17.7	-	.6969	100	157	18
PF505 138	13.8	-	.5433	80	134	14	PF505 178	17.8	-	.7008	100	157	18
PF505 13891	13.891	35/64	.5469	80	134	14	PF505 180	18	-	.7087	100	157	18
PF505 139	13.9	-	.5472	80	134	14	PF505 181	18.1	-	.7126	105	160	19
PF505 140	14	-	.5512	80	134	14	PF505 182	18.2	-	.7165	105	160	19
PF505 141	14.1	-	.5551	83	143	15	PF505 185	18.5	-	.7283	105	160	19
PF505 142	14.2	-	.5591	83	143	15	PF505 190	19	-	.748	105	160	19
PF505 14288	14.288	-	.5625	83	143	15	PF505 191	19.1	-	.752	110	163	20
PF505 143	14.3	-	.563	83	143	15	PF505 195	19.5	-	.7677	110	163	20
PF505 144	14.4	-	.5669	83	143	15	PF505 197	19.7	-	.7756	110	163	20
PF505 145	14.5	-	.5709	83	143	15	PF505 200	20	-	.7874	110	163	20

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	Steel ~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

SF503 High Speed Internal Coolant Drill - 3D



► Tolerance

DC		Shank Dia
~ Ø3	0 ~ -0.014	h6
Ø3.1 ~ Ø6	0 ~ -0.018	
Ø6.1 ~ Ø10	0 ~ -0.022	
Ø10.1 ~ Ø18	0 ~ -0.027	
Ø18.1 ~	0 ~ -0.033	



EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
SF503 030	3	-	.1181	18	60	3	SF503 046	4.6	-	.1811	26	62	5
SF503 031	3.1	-	.1220	20	60	4	SF503 047	4.7	-	.1850	26	62	5
SF503 03175	3.175	1/8	.1250	20	60	4	SF503 04763	4.763	3/16	.1875	26	62	5
SF503 032	3.2	-	.1260	20	60	4	SF503 048	4.8	-	.1890	26	62	5
SF503 03264	3.264	-	.1285	20	60	4	SF503 049	4.9	-	.1920	26	62	5
SF503 033	3.3	-	.1299	20	60	4	SF503 050	5	-	.1969	26	62	5
SF503 034	3.4	-	.1339	22	60	4	SF503 051	5.1	-	.2008	28	66	6
SF503 035	3.5	-	.1378	22	60	4	SF503 05159	5.159	13/64	.2031	28	66	6
SF503 03572	3.572	9/64	.1406	22	60	4	SF503 052	5.2	-	.2047	28	66	6
SF503 036	3.6	-	.1417	22	60	4	SF503 053	5.3	-	.2087	28	66	6
SF503 037	3.7	-	.1457	22	60	4	SF503 054	5.4	-	.2126	28	66	6
SF503 038	3.8	-	.1496	24	60	4	SF503 055	5.5	-	.2165	28	66	6
SF503 039	3.9	-	.1535	24	60	4	SF503 05558	5.558	7/32	.2188	30	66	6
SF503 040	4	-	.1575	24	60	4	SF503 056	5.6	-	.2205	30	66	6
SF503 04039	4.039	-	.1590	24	62	5	SF503 057	5.7	-	.2244	30	66	6
SF503 041	4.1	-	.1614	24	62	5	SF503 058	5.8	-	.2283	30	66	6
SF503 042	4.2	-	.1654	26	62	5	SF503 059	5.9	-	.2323	30	66	6
SF503 043	4.3	-	.1693	26	62	5	SF503 05953	5.953	15/64	.2344	30	66	6
SF503 044	4.4	-	.1732	26	62	5	SF503 060	6	-	.2362	30	66	6
SF503 045	4.5	-	.1772	26	62	5	SF503 061	6.1	-	.2402	34	74	7

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

SF503

High Speed Internal Coolant Drill - 3D

Drill

EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
SF503 062	6.2	-	.2441	34	74	7	SF503 089	8.9	-	.3504	43	84	9
SF503 063	6.3	-	.2480	34	74	7	SF503 090	9	-	.3543	43	84	9
SF503 0635	6.350	1/4	.2500	34	74	7	SF503 091	9.1	-	.3583	47	89	10
SF503 064	6.4	-	.2520	34	74	7	SF503 09129	9.129	23/64	.3594	47	89	10
SF503 065	6.5	-	.2559	34	74	7	SF503 092	9.2	-	.3622	47	89	10
SF503 066	6.6	-	.2598	34	74	7	SF503 093	9.3	-	.3661	47	89	10
SF503 067	6.7	-	.2638	37	74	7	SF503 094	9.4	-	.3701	47	89	10
SF503 06747	6.747	17/64	.2656	37	74	7	SF503 095	9.5	-	.3740	47	89	10
SF503 068	6.8	-	.2677	37	74	7	SF503 09525	9.525	3/8	.3750	47	89	10
SF503 069	6.9	-	.2717	37	74	7	SF503 096	9.6	-	.3780	47	89	10
SF503 070	7	-	.2756	37	74	7	SF503 097	9.7	-	.3819	47	89	10
SF503 071	7.1	-	.2795	40	79	8	SF503 098	9.8	-	.3858	47	89	10
SF503 07145	7.145	9/32	.2813	40	79	8	SF503 099	9.9	-	.3898	47	89	10
SF503 072	7.2	-	.2835	40	79	8	SF503 09921	9.921	25/64	.3906	47	89	10
SF503 073	7.3	-	.2874	40	79	8	SF503 100	10	-	.3937	47	89	10
SF503 074	7.4	-	.2913	40	79	8	SF503 101	10.1	-	.3976	51	95	11
SF503 075	7.5	-	.2953	40	79	8	SF503 102	10.2	-	.4016	51	95	11
SF503 07541	7.541	19/64	.2969	40	79	8	SF503 103	10.3	-	.4055	51	95	11
SF503 076	7.6	-	.2992	40	79	8	SF503 1032	10.32	13/32	.4063	51	95	11
SF503 077	7.7	-	.3031	40	79	8	SF503 104	10.4	-	.4094	51	95	11
SF503 078	7.8	-	.3071	40	79	8	SF503 105	10.5	-	.4134	51	95	11
SF503 079	7.9	-	.3110	40	79	8	SF503 106	10.6	-	.4173	51	95	11
SF503 07938	7.938	5/16	.3125	40	79	8	SF503 107	10.7	-	.4213	51	95	11
SF503 080	8	-	.3150	40	79	8	SF503 10716	10.716	27/64	.4219	51	95	11
SF503 081	8.1	-	.3189	43	84	9	SF503 108	10.8	-	.4252	51	95	11
SF503 082	8.2	-	.3228	43	84	9	SF503 109	10.9	-	.4291	51	95	11
SF503 083	8.3	-	.3268	43	84	9	SF503 110	11	-	.4331	51	95	11
SF503 08334	8.334	21/64	.3281	43	84	9	SF503 111	11.1	-	.4370	54	102	12
SF503 084	8.4	-	.3307	43	84	9	SF503 11113	11.113	7/16	.4375	54	102	12
SF503 085	8.5	-	.3346	43	84	9	SF503 112	11.2	-	.4409	54	102	12
SF503 086	8.6	-	.3386	43	84	9	SF503 113	11.3	-	.4449	54	102	12
SF503 087	8.7	-	.3425	43	84	9	SF503 114	11.4	-	.4488	54	102	12
SF503 08733	8.733	11/32	.3438	43	84	9	SF503 115	11.5	-	.4528	54	102	12
SF503 088	8.8	-	.3465	43	84	9	SF503 11509	11.509	29/64	.4531	54	102	12

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	~325	HRC30~50	~FCD500					
○	○	○	◎	◎	◎					

SF503

High Speed Internal Coolant Drill - 3D

Drill

EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
SF503 116	11.6	-	.4567	54	102	12	SF503 146	14.6	-	.5748	62	111	15
SF503 117	11.7	-	.4606	54	102	12	SF503 147	14.7	-	.5787	62	111	15
SF503 118	11.8	-	.4646	54	102	12	SF503 148	14.8	-	.5827	62	111	15
SF503 119	11.9	-	.4685	54	102	12	SF503 149	14.9	-	.5866	62	111	15
SF503 11908	11.908	15/32	.4688	54	102	12	SF503 150	15	-	.5906	62	111	15
SF503 120	12	-	.4724	54	102	12	SF503 15081	15.081	19/32	.5937	64	115	16
SF503 121	12.1	-	.4764	57	102	13	SF503 151	15.1	-	.5945	64	115	16
SF503 122	12.2	-	.4803	57	102	13	SF503 152	15.2	-	.5984	64	115	16
SF503 123	12.3	-	.4843	57	102	13	SF503 154	15.4	-	.6063	64	115	16
SF503 12304	12.304	31/64	.4844	57	102	13	SF503 155	15.5	-	.6102	64	115	16
SF503 124	12.4	-	.4882	57	102	13	SF503 156	15.6	-	.6142	64	115	16
SF503 125	12.5	-	.4921	57	102	13	SF503 157	15.7	-	.6181	64	115	16
SF503 126	12.6	-	.4961	57	102	13	SF503 158	15.8	-	.6220	64	115	16
SF503 127	12.7	1/2	.5000	57	102	13	SF503 15875	15.875	5/8	.6250	64	115	16
SF503 128	12.8	-	.5039	57	102	13	SF503 160	16	-	.6299	64	115	16
SF503 129	12.9	-	.5079	57	102	13	SF503 161	16.1	-	.6339	66	119	17
SF503 130	13	-	.5118	57	102	13	SF503 163	16.3	-	.6417	66	119	17
SF503 13096	13.096	33/64	.5156	60	107	14	SF503 165	16.5	-	.6496	66	119	17
SF503 131	13.1	-	.5157	60	107	14	SF503 16667	16.667	21/32	.6562	66	119	17
SF503 132	13.2	-	.5197	60	107	14	SF503 170	17	-	.6693	66	119	17
SF503 133	13.3	-	.5236	60	107	14	SF503 171	17.1	-	.6732	66	123	18
SF503 134	13.4	-	.5276	60	107	14	SF503 172	17.2	-	.6772	66	123	18
SF503 13494	13.494	17/32	.5313	60	107	14	SF503 17463	17.463	11/16	.6875	66	123	18
SF503 135	13.5	-	.5315	60	107	14	SF503 175	17.5	-	.6890	66	123	18
SF503 136	13.6	-	.5354	60	107	14	SF503 177	17.7	-	.6969	66	123	18
SF503 137	13.7	-	.5394	60	107	14	SF503 178	17.8	-	.7008	66	123	18
SF503 138	13.8	-	.5433	60	107	14	SF503 180	18	-	.7087	66	123	18
SF503 13891	13.891	35/64	.5469	60	107	14	SF503 181	18.1	-	.7126	70	127	19
SF503 139	13.9	-	.5472	60	107	14	SF503 182	18.2	-	.7165	70	127	19
SF503 140	14	-	.5512	60	107	14	SF503 185	18.5	-	.7283	70	127	19
SF503 141	14.1	-	.5551	62	111	15	SF503 190	19	-	.7480	70	127	19
SF503 142	14.2	-	.5591	62	111	15	SF503 191	19.1	-	.7520	70	131	20
SF503 14288	14.288	9/16	.5625	62	111	15	SF503 195	19.5	-	.7677	70	131	20
SF503 143	14.3	-	.5630	62	111	15	SF503 197	19.7	-	.7756	70	131	20
SF503 144	14.4	-	.5669	62	111	15	SF503 200	20	-	.7874	70	131	20
SF503 145	14.5	-	.5709	62	111	15							

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

► Applicable Working Material

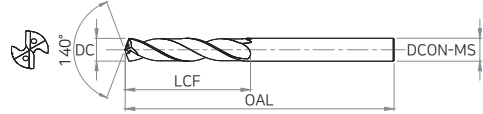
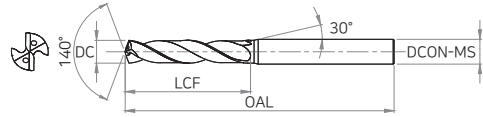
○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

SF505

High Speed Internal Coolant Drill - 5D

Drill



► Tolerance

DC		Shank Dia
~ Ø3	0 ~ -0.014	h6
Ø3.1 ~ Ø6	0 ~ -0.018	
Ø6.1 ~ Ø10	0 ~ -0.022	
Ø10.1 ~ Ø18	0 ~ -0.027	
Ø18.1 ~	0 ~ -0.033	



EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch			
SF505 030	3.0	-	.1181	27	74	3
SF505 031	3.1	-	.1220	27	74	4
SF505 03175	3.175	1/8	.1250	27	74	4
SF505 032	3.2	-	.1260	27	74	4
SF505 03264	3.264	-	.1285	27	74	4
SF505 033	3.3	-	.1299	27	74	4
SF505 034	3.4	-	.1339	30	74	4
SF505 035	3.5	-	.1378	30	74	4
SF505 03572	3.572	9/64	.1406	30	74	4
SF505 036	3.6	-	.1417	30	74	4
SF505 037	3.7	-	.1457	30	74	4
SF505 038	3.8	-	.1496	33	74	4
SF505 039	3.9	-	.1535	33	74	4
SF505 040	4	-	.1575	33	74	4
SF505 04039	4.039	-	.1590	33	80	5
SF505 041	4.1	-	.1614	33	80	5
SF505 042	4.2	-	.1654	33	80	5
SF505 043	4.3	-	.1693	36	80	5
SF505 044	4.4	-	.1732	36	80	5
SF505 045	4.5	-	.1772	36	80	5
SF505 046	4.6	-	.1811	36	80	5
SF505 047	4.7	-	.1850	36	80	5
SF505 04763	4.763	3/16	.1875	39	80	5
SF505 048	4.8	-	.1890	39	80	5
SF505 049	4.9	-	.1920	39	80	5
SF505 050	5	-	.1969	39	80	5
SF505 051	5.1	-	.2008	39	87	6
SF505 05159	5.159	13/64	.2031	39	87	6
SF505 052	5.2	-	.2047	39	87	6
SF505 053	5.3	-	.2087	39	87	6
SF505 054	5.4	-	.2126	43	87	6
SF505 055	5.5	-	.2165	43	87	6
SF505 05558	5.558	7/32	.2188	43	87	6
SF505 056	5.6	-	.2205	43	87	6
SF505 057	5.7	-	.2244	43	87	6
SF505 058	5.8	-	.2283	43	87	6
SF505 059	5.9	-	.2323	43	87	6
SF505 05953	5.953	15/64	.2344	43	87	6
SF505 060	6	-	.2362	43	87	6
SF505 061	6.1	-	.2402	47	95	7

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	~325	HRC30~50	~FCD500					
○	○	○	◎	◎	◎					

SF505

High Speed Internal Coolant Drill - 5D

Drill

EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
SF505 062	6.2	-	.2441	47	95	7	SF505 089	8.9	-	.3504	56	105	9
SF505 063	6.3	-	.2480	47	95	7	SF505 090	9	-	.3543	56	105	9
SF505 0635	6.350	1/4	.2500	47	95	7	SF505 091	9.1	-	.3583	62	108	10
SF505 064	6.4	-	.2520	47	95	7	SF505 09129	9.129	23/64	.3594	62	108	10
SF505 065	6.5	-	.2559	47	95	7	SF505 092	9.2	-	.3622	62	108	10
SF505 066	6.6	-	.2598	47	95	7	SF505 093	9.3	-	.3661	62	108	10
SF505 067	6.7	-	.2638	47	95	7	SF505 094	9.4	-	.3701	62	108	10
SF505 06747	6.747	17/64	.2656	47	95	7	SF505 095	9.5	-	.3740	62	108	10
SF505 068	6.8	-	.2677	47	95	7	SF505 09525	9.525	3/8	.3750	62	108	10
SF505 069	6.9	-	.2717	47	95	7	SF505 096	9.6	-	.3780	62	108	10
SF505 070	7	-	.2756	47	95	7	SF505 097	9.7	-	.3819	62	108	10
SF505 071	7.1	-	.2795	52	103	8	SF505 098	9.8	-	.3858	62	108	10
SF505 07145	7.145	9/32	.2813	52	103	8	SF505 099	9.9	-	.3898	62	108	10
SF505 072	7.2	-	.2835	52	103	8	SF505 09921	9.921	25/64	.3906	62	108	10
SF505 073	7.3	-	.2874	52	103	8	SF505 100	10	-	.3937	62	108	10
SF505 074	7.4	-	.2913	52	103	8	SF505 101	10.1	-	.3976	68	125	11
SF505 075	7.5	-	.2953	52	103	8	SF505 102	10.2	-	.4016	68	125	11
SF505 07541	7.541	19/64	.2969	52	103	8	SF505 103	10.3	-	.4055	68	125	11
SF505 076	7.6	-	.2992	52	103	8	SF505 1032	10.32	13/32	.4063	68	125	11
SF505 077	7.7	-	.3031	52	103	8	SF505 104	10.4	-	.4094	68	125	11
SF505 078	7.8	-	.3071	52	103	8	SF505 105	10.5	-	.4134	68	125	11
SF505 079	7.9	-	.3110	52	103	8	SF505 106	10.6	-	.4173	68	125	11
SF505 07938	7.938	5/16	.3125	52	103	8	SF505 107	10.7	-	.4213	68	125	11
SF505 080	8	-	.3150	52	103	8	SF505 10716	10.716	27/64	.4219	68	125	11
SF505 081	8.1	-	.3189	56	105	9	SF505 108	10.8	-	.4252	68	125	11
SF505 082	8.2	-	.3228	56	105	9	SF505 109	10.9	-	.4291	68	125	11
SF505 083	8.3	-	.3268	56	105	9	SF505 110	11	-	.4331	68	125	11
SF505 08334	8.334	21/64	.3281	56	105	9	SF505 111	11.1	-	.4370	71	133	12
SF505 084	8.4	-	.3307	56	105	9	SF505 11113	11.113	7/16	.4375	71	133	12
SF505 085	8.5	-	.3346	56	105	9	SF505 112	11.2	-	.4409	71	133	12
SF505 086	8.6	-	.3386	56	105	9	SF505 113	11.3	-	.4449	71	133	12
SF505 087	8.7	-	.3425	56	105	9	SF505 114	11.4	-	.4488	71	133	12
SF505 08733	8.733	11/32	.3438	56	105	9	SF505 115	11.5	-	.4528	71	133	12
SF505 088	8.8	-	.3465	56	105	9	SF505 116	11.6	-	.4567	71	133	12

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

SF505

High Speed Internal Coolant Drill - 5D

Drill

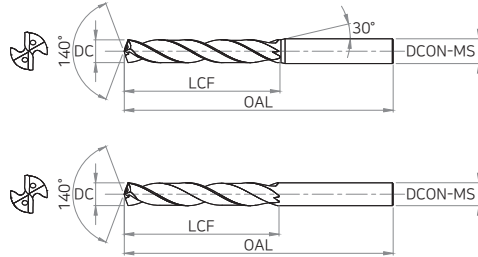
EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
SF505 117	11.7	-	.4606	71	133	12	SF505 146	14.6	-	.5748	83	148	15
SF505 118	11.8	-	.4646	71	133	12	SF505 147	14.7	-	.5787	83	148	15
SF505 119	11.9	-	.4685	71	133	12	SF505 148	14.8	-	.5827	83	148	15
SF505 11908	11.908	15/32	.4688	71	133	12	SF505 149	14.9	-	.5866	83	148	15
SF505 120	12	-	.4724	71	133	12	SF505 150	15	-	.5906	83	148	15
SF505 121	12.1	-	.4764	75	137	13	SF505 15081	15.081	19/32	.5937	90	152	16
SF505 122	12.2	-	.4803	75	137	13	SF505 151	15.1	-	.5945	90	152	16
SF505 123	12.3	-	.4843	75	137	13	SF505 152	15.2	-	.5984	90	152	16
SF505 12304	12.304	31/64	.4844	75	137	13	SF505 154	15.4	-	.6063	90	152	16
SF505 124	12.4	-	.4882	75	137	13	SF505 155	15.5	-	.6102	90	152	16
SF505 125	12.5	-	.4921	75	137	13	SF505 156	15.6	-	.6142	90	152	16
SF505 126	12.6	-	.4961	75	137	13	SF505 157	15.7	-	.6181	90	152	16
SF505 127	12.7	-	.5000	75	137	13	SF505 158	15.8	-	.6220	90	152	16
SF505 128	12.8	-	.5039	75	137	13	SF505 15875	15.875	5/8	.6250	90	152	16
SF505 129	12.9	-	.5079	75	137	13	SF505 160	16	-	.6299	90	152	16
SF505 130	13	-	.5118	75	137	13	SF505 161	16.1	-	.6339	95	155	17
SF505 13096	13.096	33/64	.5156	80	142	14	SF505 163	16.3	-	.6417	95	155	17
SF505 131	13.1	-	.5157	80	142	14	SF505 165	16.5	-	.6496	95	155	17
SF505 132	13.2	-	.5197	80	142	14	SF505 16667	16.667	21/32	.6562	95	155	17
SF505 133	13.3	-	.5236	80	142	14	SF505 170	17	-	.6693	95	155	17
SF505 134	13.4	0.5276	.80	142	14	14	SF505 171	17.1	-	.6732	100	157	18
SF505 13494	13.494	-	.5313	80	142	14	SF505 172	17.2	-	.6772	100	157	18
SF505 135	13.5	17/32	.5315	80	142	14	SF505 17463	17.463	11/16	.6875	100	157	18
SF505 136	13.6	-	.5354	80	142	14	SF505 175	17.5	-	.6890	100	157	18
SF505 137	13.7	-	.5394	80	142	14	SF505 177	17.7	-	.6969	100	157	18
SF505 138	13.8	-	.5433	80	142	14	SF505 178	17.8	-	.7008	100	157	18
SF505 13891	13.891	35/64	.5469	80	142	14	SF505 180	18	-	.7087	100	157	18
SF505 139	13.9	-	.5472	80	142	14	SF505 181	18.1	-	.7126	105	160	19
SF505 140	14	-	.5512	80	142	14	SF505 182	18.2	-	.7165	105	160	19
SF505 141	14.1	-	.5551	83	148	15	SF505 185	18.5	-	.7283	105	160	19
SF505 142	14.2	-	.5591	83	148	15	SF505 190	19	-	.7480	105	160	19
SF505 14288	14.288	9/16	.5625	83	148	15	SF505 191	19.1	-	.7520	110	163	20
SF505 143	14.3	-	.5630	83	148	15	SF505 195	19.5	-	.7677	110	163	20
SF505 144	14.4	-	.5669	83	148	15	SF505 197	19.7	-	.7756	110	163	20
SF505 145	14.5	-	.5709	83	148	15	SF505 200	20	-	.7874	110	163	20

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

SF508 High Speed Internal Coolant Drill - 8D



► Tolerance

DC		Shank Dia
~ Ø3	0 ~ -0.014	h6
Ø3.1 ~ Ø6	0 ~ -0.018	
Ø6.1 ~ Ø10	0 ~ -0.022	
Ø10.1 ~ Ø18	0 ~ -0.027	



EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
SF508 030	3	-	.1181	43	80	3	SF508 045	4.5	-	.1772	49	87	5
SF508 031	3.1	-	.1120	43	80	4	SF508 046	4.6	-	.1811	49	87	5
SF508 03175	3.175	1/8	.1250	43	80	4	SF508 047	4.7	-	.1850	49	87	5
SF508 032	3.2	-	.1260	43	80	4	SF508 04763	4.763	3/16	.1875	56	94	5
SF508 033	3.3	-	.1299	43	80	4	SF508 048	4.8	-	.1890	56	94	5
SF508 034	3.4	-	.1339	43	80	4	SF508 049	4.9	-	.1929	56	94	5
SF508 035	3.5	-	.1378	43	80	4	SF508 050	5	-	.1969	56	94	5
SF508 03572	3.572	-	.1406	43	80	4	SF508 051	5.1	-	.2008	56	94	6
SF508 036	3.6	-	.1417	43	80	4	SF508 05159	5.159	13/64	.2031	56	94	6
SF508 037	3.7	-	.1457	43	80	4	SF508 052	5.2	-	.2047	56	94	6
SF508 038	3.8	-	.1496	49	87	4	SF508 053	5.3	-	.2087	56	94	6
SF508 039	3.9	-	.1535	49	87	4	SF508 054	5.4	-	.2126	56	94	6
SF508 0397	3.97	9/64	.1563	49	87	4	SF508 0541	5.41	-	.2130	56	94	6
SF508 040	4	-	.1575	49	87	4	SF508 055	5.5	-	.2165	56	94	6
SF508 04039	4.039	-	.1590	49	87	5	SF508 05558	5.558	7/32	.2188	56	94	6
SF508 041	4.1	-	.1614	49	87	5	SF508 056	5.6	-	.2205	56	94	6
SF508 042	4.2	-	.1654	49	87	5	SF508 057	5.7	-	.2244	56	94	6
SF508 043	4.3	-	.1693	49	87	5	SF508 058	5.8	-	.2283	56	94	6
SF508 04366	4.366	-	.1719	49	87	5	SF508 059	5.9	-	.2323	56	94	6
SF508 044	4.4	-	.1732	49	87	5	SF508 05953	5.953	15/64	.2344	56	94	6

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

SF508

High Speed Internal Coolant Drill - 8D

Drill

EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
SF508 060	6	-	.2362	56	94	6	SF508 086	8.6	-	.3386	87	131	9
SF508 061	6.1	-	.2402	67	105	7	SF508 087	8.7	-	.3425	87	131	9
SF508 062	6.2	-	.2441	67	105	7	SF508 08733	8.733	11/32	.3438	87	131	9
SF508 063	6.3	-	.2480	67	105	7	SF508 088	8.8	-	.3465	87	131	9
SF508 0635	6.35	1/4	.2500	67	105	7	SF508 089	8.9	-	.3504	87	131	9
SF508 064	6.4	-	.2520	67	105	7	SF508 090	9	-	.3543	87	131	9
SF508 065	6.5	-	.2559	67	105	7	SF508 091	9.1	-	.3583	95	139	10
SF508 06528	6.528	-	.2570	67	105	7	SF508 09129	9.129	23/64	.3594	95	139	10
SF508 066	6.6	-	.2598	67	105	7	SF508 092	9.2	-	.3622	95	139	10
SF508 067	6.7	-	.2638	67	105	7	SF508 093	9.3	-	.3661	95	139	10
SF508 06747	6.747	17/64	.2656	67	105	7	SF508 094	9.4	-	.3701	95	139	10
SF508 068	6.8	-	.2677	67	105	7	SF508 095	9.5	-	.3740	95	139	10
SF508 069	6.9	-	.2717	67	105	7	SF508 09525	9.525	3/8	.3750	95	139	10
SF508 070	7	-	.2756	76	116	7	SF508 096	9.6	-	.3780	95	139	10
SF508 071	7.1	-	.2795	76	116	8	SF508 097	9.7	-	.3819	95	139	10
SF508 07145	7.145	9/32	.2813	76	116	8	SF508 098	9.8	-	.3858	95	139	10
SF508 072	7.2	-	.2835	76	116	8	SF508 099	9.9	-	.3898	95	139	10
SF508 073	7.3	-	.2874	76	116	8	SF508 09921	9.921	25/64	.3906	95	139	10
SF508 074	7.4	-	.2913	76	116	8	SF508 100	10	-	.3937	95	139	10
SF508 075	7.5	-	.2953	76	116	8	SF508 101	10.1	-	.3976	106	155	11
SF508 07541	7.541	19/64	.2969	76	116	8	SF508 102	10.2	-	.4016	106	155	11
SF508 076	7.6	-	.2992	76	116	8	SF508 103	10.3	-	.4055	106	155	11
SF508 077	7.7	-	.3031	76	116	8	SF508 1032	10.32	13/32	.4063	106	155	11
SF508 078	7.8	-	.3071	76	116	8	SF508 104	10.4	-	.4094	106	155	11
SF508 079	7.9	-	.3110	76	116	8	SF508 105	10.5	-	.4134	106	155	11
SF508 07938	7.938	5/16	.3125	76	116	8	SF508 106	10.6	-	.4173	106	155	11
SF508 080	8	-	.3150	76	116	8	SF508 107	10.7	-	.4213	106	155	11
SF508 081	8.1	-	.3189	87	131	9	SF508 10716	10.716	27/64	.4219	106	155	11
SF508 082	8.2	-	.3228	87	131	9	SF508 108	10.8	-	.4252	106	155	11
SF508 083	8.3	-	.3268	87	131	9	SF508 109	10.9	-	.4291	106	155	11
SF508 08334	8.334	21/64	.3281	87	131	9	SF508 110	11	-	.4331	106	155	11
SF508 084	8.4	-	.3307	87	131	9	SF508 111	11.1	-	.4370	114	163	12
SF508 08433	8.433	-	.3320	87	131	9	SF508 11113	11.113	7/16	.4375	114	163	12
SF508 085	8.5	-	.3346	87	131	9	SF508 112	11.2	-	.4409	114	163	12

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	Steel ~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

SF508

High Speed Internal Coolant Drill - 8D

Drill

EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
SF508 113	11.3	-	.4449	114	163	12	SF508 137	13.7	-	.5394	133	182	14
SF508 114	11.4	-	.4488	114	163	12	SF508 140	14	-	.5512	133	182	14
SF508 115	11.5	-	.4528	114	163	12	SF508 14288	14.288	9/16	.5625	152	204	15
SF508 11509	11.509	29/64	.4531	114	163	12	SF508 143	14.3	-	.5630	152	204	15
SF508 116	11.6	-	.4567	114	163	12	SF508 144	14.4	-	.5669	152	204	15
SF508 117	11.7	-	.4606	114	163	12	SF508 145	14.5	-	.5709	152	204	15
SF508 118	11.8	-	.4646	114	163	12	SF508 14683	14.683	37/64	.5781	152	204	15
SF508 119	11.9	-	.4685	114	163	12	SF508 147	14.7	-	.5787	152	204	15
SF508 11908	11.908	15/32	.4688	114	163	12	SF508 150	15	-	.5906	152	204	15
SF508 120	12	-	.4724	114	163	12	SF508 15081	15.081	19/32	.5937	152	204	16
SF508 121	12.1	-	.4764	133	182	13	SF508 155	15.5	-	.6102	152	204	16
SF508 122	12.2	-	.4803	133	182	13	SF508 157	15.7	-	.6181	152	204	16
SF508 123	12.3	-	.4843	133	182	13	SF508 15875	15.875	5/8	.6250	152	204	16
SF508 12304	12.304	31/64	.4844	133	182	13	SF508 160	16	-	.6299	152	204	16
SF508 125	12.5	-	.4921	133	182	13	SF508 165	16.5	-	.6496	171	223	17
SF508 126	12.6	-	.4961	133	182	13	SF508 16667	16.667	21/32	.6562	171	223	17
SF508 127	12.7	1/2	.5000	133	182	13	SF508 170	17	-	.6693	171	223	17
SF508 128	12.8	-	.5039	133	182	13	SF508 17463	17.463	11/16	.6875	171	223	18
SF508 129	12.9	-	.5079	133	182	13	SF508 175	17.5	-	.6890	171	223	18
SF508 130	13	-	.5118	133	182	13	SF508 180	18	-	.7087	171	223	18
SF508 131	13.1	-	.5157	133	182	14	SF508 185	18.5	-	.7283	191	244	19
SF508 132	13.2	-	.5197	133	182	14	SF508 190	19	-	.7480	191	244	19
SF508 133	13.3	-	.5236	133	182	14	SF508 1905	19.05	3/4	.7500	191	244	20
SF508 134	13.4	-	.5276	133	182	14	SF508 19446	19.446	49/64	.7656	191	244	20
SF508 13494	13.494	17/32	.5313	133	182	14	SF508 195	19.5	-	.7677	191	244	20
SF508 135	13.5	-	.5315	133	182	14	SF508 200	20	-	.7874	191	244	20
SF508 136	13.6	-	.5354	133	182	14							

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

► Applicable Working Material

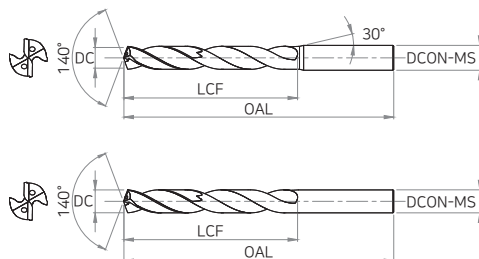
○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

SF510

High Speed Internal Coolant Drill - 10D

Drill



► Tolerance

DC		Shank Dia
~ Ø3	0 ~ -0.014	h5
Ø3.1 ~ Ø6	0 ~ -0.018	
Ø6.1 ~ Ø10	0 ~ -0.022	
Ø10.1 ~ Ø13	0 ~ -0.027	



EDP No	DC	LCF	OAL	DCONMS	EDP No	DC	LCF	OAL	DCONMS
SF510 030	3	39	87	3	SF510 050	5	66	117	5
SF510 031	3.1	46	94	4	SF510 051	5.1	72	123	6
SF510 032	3.2	46	94	4	SF510 052	5.2	72	123	6
SF510 033	3.3	46	94	4	SF510 053	5.3	72	123	6
SF510 034	3.4	46	94	4	SF510 054	5.4	72	123	6
SF510 035	3.5	46	94	4	SF510 055	5.5	72	123	6
SF510 036	3.6	52	101	4	SF510 056	5.6	79	130	6
SF510 037	3.7	52	101	4	SF510 057	5.7	79	130	6
SF510 038	3.8	52	101	4	SF510 058	5.8	79	130	6
SF510 039	3.9	52	101	4	SF510 059	5.9	79	130	6
SF510 040	4	52	101	4	SF510 060	6	79	130	6
SF510 041	4.1	59	108	5	SF510 061	6.1	85	138	7
SF510 042	4.2	59	108	5	SF510 062	6.2	85	138	7
SF510 043	4.3	59	108	5	SF510 063	6.3	85	138	7
SF510 044	4.4	59	108	5	SF510 064	6.4	85	138	7
SF510 045	4.5	59	108	5	SF510 065	6.5	85	138	7
SF510 046	4.6	66	117	5	SF510 066	6.6	92	145	7
SF510 047	4.7	66	117	5	SF510 067	6.7	92	145	7
SF510 048	4.8	66	117	5	SF510 068	6.8	92	145	7
SF510 049	4.9	66	117	5	SF510 069	6.9	92	145	7

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	Steel ~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

SF510

High Speed Internal Coolant Drill - 10D

Drill

EDP No	DC	LCF	OAL	DCONMS	EDP No	DC	LCF	OAL	DCONMS
SF510 070	7	92	145	7	SF510 101	10.1	138	193	11
SF510 071	7.1	98	153	8	SF510 102	10.2	138	193	11
SF510 072	7.2	98	153	8	SF510 103	10.3	138	193	11
SF510 073	7.3	98	153	8	SF510 104	10.4	138	193	11
SF510 074	7.4	98	153	8	SF510 105	10.5	138	193	11
SF510 075	7.5	98	153	8	SF510 106	10.6	144	205	11
SF510 076	7.6	105	160	8	SF510 107	10.7	144	205	11
SF510 077	7.7	105	160	8	SF510 108	10.8	144	205	11
SF510 078	7.8	105	160	8	SF510 109	10.9	144	205	11
SF510 079	7.9	105	160	8	SF510 110	11	144	205	11
SF510 080	8	105	160	8	SF510 111	11.1	151	212	12
SF510 081	8.1	111	166	9	SF510 112	11.2	151	212	12
SF510 082	8.2	111	166	9	SF510 113	11.3	151	212	12
SF510 083	8.3	111	166	9	SF510 114	11.4	151	212	12
SF510 084	8.4	111	166	9	SF510 115	11.5	151	212	12
SF510 085	8.5	111	166	9	SF510 116	11.6	157	218	12
SF510 086	8.6	118	173	9	SF510 117	11.7	157	218	12
SF510 087	8.7	118	173	9	SF510 118	11.8	157	218	12
SF510 088	8.8	118	173	9	SF510 119	11.9	157	218	12
SF510 089	8.9	118	173	9	SF510 120	12	157	218	12
SF510 090	9	118	173	9	SF510 121	12.1	164	225	13
SF510 091	9.1	124	179	10	SF510 122	12.2	164	225	13
SF510 092	9.2	124	179	10	SF510 123	12.3	164	225	13
SF510 093	9.3	124	179	10	SF510 124	12.4	164	225	13
SF510 094	9.4	124	179	10	SF510 125	12.5	164	225	13
SF510 095	9.5	124	179	10	SF510 126	12.6	170	236	13
SF510 096	9.6	131	186	10	SF510 127	12.7	170	236	13
SF510 097	9.7	131	186	10	SF510 128	12.8	170	236	13
SF510 098	9.8	131	186	10	SF510 129	12.9	170	236	13
SF510 099	9.9	131	186	10	SF510 130	13	170	236	13
SF510 100	10	131	186	10					

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

► Applicable Working Material

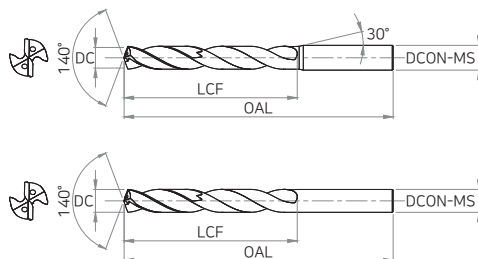
○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

SF520

High Speed Internal Coolant Drill - 20D

Drill



► Tolerance

DC		Shank Dia
~ Ø6	0 ~ -0.018	h5
Ø6.1 ~ Ø10	0 ~ -0.022	



EDP No	DC	LCF	OAL	DCONMS	EDP No	DC	LCF	OAL	DCONMS
SF520 041	4.1	104	155	5	SF520 061	6.1	150	203	7
SF520 042	4.2	104	155	5	SF520 062	6.2	150	203	7
SF520 043	4.3	104	155	5	SF520 063	6.3	150	203	7
SF520 044	4.4	104	155	5	SF520 064	6.4	150	203	7
SF520 045	4.5	104	155	5	SF520 065	6.5	150	203	7
SF520 046	4.6	116	167	5	SF520 066	6.6	162	215	7
SF520 047	4.7	116	167	5	SF520 067	6.7	162	215	7
SF520 048	4.8	116	167	5	SF520 068	6.8	162	215	7
SF520 049	4.9	116	167	5	SF520 069	6.9	162	215	7
SF520 050	5	116	167	5	SF520 070	7	162	215	7
SF520 051	5.1	127	178	6	SF520 071	7.1	173	228	8
SF520 052	5.2	127	178	6	SF520 072	7.2	173	228	8
SF520 053	5.3	127	178	6	SF520 073	7.3	173	228	8
SF520 054	5.4	127	178	6	SF520 074	7.4	173	228	8
SF520 055	5.5	127	178	6	SF520 075	7.5	173	228	8
SF520 056	5.6	139	190	6	SF520 076	7.6	185	240	8
SF520 057	5.7	139	190	6	SF520 077	7.7	185	240	8
SF520 058	5.8	139	190	6	SF520 078	7.8	185	240	8
SF520 059	5.9	139	190	6	SF520 079	7.9	185	240	8
SF520 060	6	139	190	6	SF520 080	8	185	240	8

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
○	○	○	◎	◎	◎					

SF520

High Speed Internal Coolant Drill - 20D

Drill

EDP No	DC	LCF	OAL	DCONMS	EDP No	DC	LCF	OAL	DCONMS
SF520 081	8.1	196	251	9	SF520 091	9.1	219	274	10
SF520 082	8.2	196	251	9	SF520 092	9.2	219	274	10
SF520 083	8.3	196	251	9	SF520 093	9.3	219	274	10
SF520 084	8.4	196	251	9	SF520 094	9.4	219	274	10
SF520 085	8.5	196	251	9	SF520 095	9.5	219	274	10
SF520 086	8.6	208	263	9	SF520 096	9.6	231	286	10
SF520 087	8.7	208	263	9	SF520 097	9.7	231	286	10
SF520 088	8.8	208	263	9	SF520 098	9.8	231	286	10
SF520 089	8.9	208	263	9	SF520 099	9.9	231	286	10
SF520 090	9	208	263	9	SF520 100	10	231	286	10

Dolphin
Drill

Dolphin
Oil-Hole
Drill

Power
Max

Solid
Spiral

► Applicable Working Material

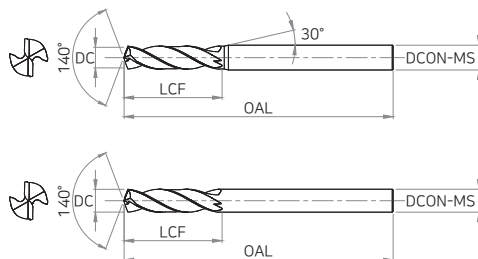
○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

HP503

Double Margin Drill - DIN6537K

Drill



► Tolerance

DC		Shank Dia
Ø3	+0.002 ~ +0.012	h6
Ø3.1 ~ Ø6	+0.004 ~ +0.016	
Ø6.1 ~ Ø10	+0.006 ~ +0.021	
Ø10.1 ~ Ø16	+0.007 ~ +0.025	



EDP No	DC		LCF	OAL	DCON MS	EDP No	DC		LCF	OAL	DCON MS
	mm	inch					mm	inch			
HP503 030	3	.1181	20	62	6	HP503 052	5.2	.2047	28	66	6
HP503 031	3.1	.1220	20	62	6	HP503 053	5.3	.2087	28	66	6
HP503 032	3.2	.1260	20	62	6	HP503 054	5.4	.2126	28	66	6
HP503 033	3.3	.1299	20	62	6	HP503 055	5.5	.2165	28	66	6
HP503 034	3.4	.1339	20	62	6	HP503 056	5.6	.2205	28	66	6
HP503 035	3.5	.1378	20	62	6	HP503 057	5.7	.2244	28	66	6
HP503 036	3.6	.1417	20	62	6	HP503 058	5.8	.2283	28	66	6
HP503 037	3.7	.1457	20	62	6	HP503 059	5.9	.2322	28	66	6
HP503 038	3.8	.1496	24	66	6	HP503 060	6	.2362	28	66	6
HP503 039	3.9	.1535	24	66	6	HP503 061	6.1	.2402	34	79	8
HP503 040	4	.1575	24	66	6	HP503 062	6.2	.2441	34	79	8
HP503 041	4.1	.1614	24	66	6	HP503 063	6.3	.2480	34	79	8
HP503 042	4.2	.1654	24	66	6	HP503 064	6.4	.2520	34	79	8
HP503 043	4.3	.1693	24	66	6	HP503 065	6.5	.2559	34	79	8
HP503 044	4.4	.1732	24	66	6	HP503 066	6.6	.2598	34	79	8
HP503 045	4.5	.1772	24	66	6	HP503 067	6.7	.2638	34	79	8
HP503 046	4.6	.1811	24	66	6	HP503 068	6.8	.2677	34	79	8
HP503 047	4.7	.1850	24	66	6	HP503 069	6.9	.2717	34	79	8
HP503 048	4.8	.1890	28	66	6	HP503 070	7	.2756	34	79	8
HP503 049	4.9	.1929	28	66	6	HP503 071	7.1	.2795	41	79	8
HP503 050	5	.1969	28	66	6	HP503 072	7.2	.2835	41	79	8
HP503 051	5.1	.2008	28	66	6	HP503 073	7.3	.2874	41	79	8

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

HP503

Double Margin Drill - DIN6537K

Drill

EDP No	DC		LCF	OAL	DCON MS	EDP No	DC		LCF	OAL	DCON MS
	mm	inch					mm	inch			
HP503 074	7.4	.2913	41	79	8	HP503 110	11	.4331	55	102	12
HP503 075	7.5	.2953	41	79	8	HP503 111	11.1	.4370	55	102	12
HP503 076	7.6	.2992	41	79	8	HP503 112	11.2	.4409	55	102	12
HP503 077	7.7	.3031	41	79	8	HP503 113	11.3	.4449	55	102	12
HP503 078	7.8	.3071	41	79	8	HP503 114	11.4	.4488	55	102	12
HP503 079	7.9	.3110	41	79	8	HP503 115	11.5	.4528	55	102	12
HP503 080	8	.3150	41	79	8	HP503 116	11.6	.4567	55	102	12
HP503 081	8.1	.3189	47	89	10	HP503 117	11.7	.4606	55	102	12
HP503 082	8.2	.3228	47	89	10	HP503 118	11.8	.4646	55	102	12
HP503 083	8.3	.3268	47	89	10	HP503 119	11.9	.4685	55	102	12
HP503 084	8.4	.3307	47	89	10	HP503 120	12	.4724	55	102	12
HP503 085	8.5	.3346	47	89	10	HP503 121	12.1	.4764	60	107	14
HP503 086	8.6	.3386	47	89	10	HP503 122	12.2	.4803	60	107	14
HP503 087	8.7	.3425	47	89	10	HP503 123	12.3	.4843	60	107	14
HP503 088	8.8	.3465	47	89	10	HP503 124	12.4	.4882	60	107	14
HP503 089	8.9	.3504	47	89	10	HP503 125	12.5	.4921	60	107	14
HP503 090	9	.3543	47	89	10	HP503 126	12.6	.4961	60	107	14
HP503 091	9.1	.3583	47	89	10	HP503 127	12.7	.5000	60	107	14
HP503 092	9.2	.3622	47	89	10	HP503 128	12.8	.5039	60	107	14
HP503 093	9.3	.3661	47	89	10	HP503 129	12.9	.5079	60	107	14
HP503 094	9.4	.3701	47	89	10	HP503 130	13	.5118	60	107	14
HP503 095	9.5	.3740	47	89	10	HP503 131	13.1	.5157	60	107	14
HP503 096	9.6	.3780	47	89	10	HP503 132	13.2	.5157	60	107	14
HP503 097	9.7	.3819	47	89	10	HP503 133	13.3	.5236	60	107	14
HP503 098	9.8	.3858	47	89	10	HP503 135	13.5	.5315	60	107	14
HP503 099	9.9	.3898	47	89	10	HP503 137	13.7	.5394	60	107	14
HP503 100	10	.3937	47	89	10	HP503 140	14	.5512	60	107	14
HP503 101	10.1	.3976	55	102	12	HP503 142	14.2	.5591	65	115	16
HP503 102	10.2	.4016	55	102	12	HP503 143	14.3	.5630	65	115	16
HP503 103	10.3	.4055	55	102	12	HP503 145	14.5	.5709	65	115	16
HP503 104	10.4	.4094	55	102	12	HP503 146	14.6	.5787	65	115	16
HP503 105	10.5	.4134	55	102	12	HP503 148	14.8	.5827	65	115	16
HP503 106	10.6	.4173	55	102	12	HP503 150	15	.5906	65	115	16
HP503 107	10.7	.4213	55	102	12	HP503 155	15.5	.6102	65	115	16
HP503 108	10.8	.4252	55	102	12	HP503 157	15.7	.6181	65	115	16
HP503 109	10.9	.4291	55	102	12	HP503 160	16	.6299	65	115	16

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

► Applicable Working Material

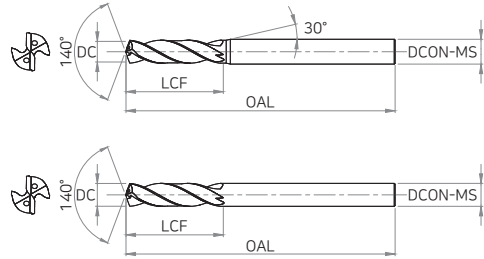
○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

HPI503

Double Margin Internal Coolant Drill - DIN6537K

Drill



► Tolerance

DC		Shank Dia
Ø3	+0.002 ~ +0.012	h6
Ø3.1 ~ Ø6	+0.004 ~ +0.016	
Ø6.1 ~ Ø10	+0.006 ~ +0.021	
Ø10.1 ~ Ø18	+0.007 ~ +0.025	
Ø18.1 ~ Ø20	+0.008 ~ +0.029	

DIN
6537K

CARBIDE

AlTiN

3D

30°
HELIX

140°

DATA
P.743

EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch			
HPI503 030	3	-	.1181	20	62	6
HPI503 031	3.1	-	.112	20	62	6
HPI503 03175	3.175	1/8	.125	20	62	6
HPI503 032	3.2	-	.126	20	62	6
HPI503 03264	3.264	-	.1285	20	62	6
HPI503 033	3.3	-	.1299	20	62	6
HPI503 034	3.4	-	.1339	20	62	6
HPI503 035	3.5	-	.1378	20	62	6
HPI503 03572	3.572	9/64	.1406	20	62	6
HPI503 036	3.6	-	.1417	20	62	6
HPI503 037	3.7	-	.1457	20	62	6
HPI503 038	3.8	-	.1496	24	66	6
HPI503 039	3.9	-	.1535	24	66	6
HPI503 0397	3.97	5/32	.1563	24	66	6
HPI503 040	4	-	.1575	24	66	6
HPI503 04039	4.039	-	.159	24	66	6
HPI503 041	4.1	-	.1614	24	66	6
HPI503 042	4.2	-	.1654	24	66	6
HPI503 043	4.3	-	.1693	24	66	6
HPI503 04366	4.366	-	.1719	24	66	6
HPI503 044	4.4	-	.1732	24	66	6
HPI503 045	4.5	-	.1772	24	66	6
HPI503 046	4.6	-	.1811	24	66	6
HPI503 047	4.7	-	.185	24	66	6
HPI503 04763	4.763	3/16	.1875	28	66	6
HPI503 048	4.8	-	.189	28	66	6
HPI503 049	4.9	-	.1929	28	66	6
HPI503 050	5	-	.1969	28	66	6
HPI503 051	5.1	-	.2008	28	66	6
HPI503 05159	5.159	13/64	.2031	28	66	6
HPI503 052	5.2	-	.2047	28	66	6
HPI503 053	5.3	-	.2087	28	66	6
HPI503 054	5.4	-	.2126	28	66	6
HPI503 055	5.5	-	.2165	28	66	6
HPI503 05558	5.558	7/32	.2188	28	66	6
HPI503 056	5.6	-	.2205	28	66	6
HPI503 057	5.7	-	.2244	28	66	6
HPI503 058	5.8	-	.2283	28	66	6
HPI503 059	5.9	-	.2323	28	66	6
HPI503 05953	5.953	15/64	.2344	28	66	6

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

HPI503

Double Margin Internal Coolnat Drill - DIN6537K

Drill

EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
HPI503 060	6	-	.2362	28	66	6	HPI503 087	8.7	-	.3425	47	89	10
HPI503 061	6.1	-	.2402	34	79	8	HPI503 08733	8.733	11/32	.3438	47	89	10
HPI503 062	6.2	-	.2441	34	79	8	HPI503 088	8.8	-	.3465	47	89	10
HPI503 063	6.3	-	.248	34	79	8	HPI503 089	8.9	-	.6504	47	89	10
HPI503 0635	6.35	1/4	.25	34	79	8	HPI503 090	9	-	.3543	47	89	10
HPI503 064	6.4	-	.252	34	79	8	HPI503 091	9.1	-	.3583	47	89	10
HPI503 065	6.5	-	.2559	34	79	8	HPI503 09129	9.129	23/64	.3594	47	89	10
HPI503 066	6.6	-	.2598	34	79	8	HPI503 092	9.2	-	.3622	47	89	10
HPI503 067	6.7	-	.2638	34	79	8	HPI503 093	9.3	-	.3661	47	89	10
HPI503 06747	6.747	17/64	.2656	34	79	8	HPI503 094	9.4	-	.368	47	89	10
HPI503 068	6.8	-	.2677	34	79	8	HPI503 095	9.5	-	.374	47	89	10
HPI503 069	6.9	-	.2717	34	79	8	HPI503 09525	9.525	3/8	.375	47	89	10
HPI503 070	7	-	.2756	34	79	8	HPI503 096	9.6	-	.378	47	89	10
HPI503 071	7.1	-	.2795	41	79	8	HPI503 097	9.7	-	.3819	47	89	10
HPI503 07145	7.145	9/32	.2813	41	79	8	HPI503 098	9.8	-	.3858	47	89	10
HPI503 072	7.2	-	.2835	41	79	8	HPI503 099	9.9	-	.3898	47	89	10
HPI503 073	7.3	-	.2874	41	79	8	HPI503 09921	9.9921	25/64	.3906	47	89	10
HPI503 074	7.4	-	.2913	41	79	8	HPI503 100	10	-	.3937	47	89	10
HPI503 075	7.5	-	.2953	41	79	8	HPI503 101	10.1	-	.3976	55	105	12
HPI503 07541	7.541	19/64	.2969	41	79	8	HPI503 102	10.2	-	.4016	55	105	12
HPI503 076	7.6	-	.2992	41	79	8	HPI503 103	10.3	-	.4055	55	105	12
HPI503 077	7.7	-	.3031	41	79	8	HPI503 1032	10.32	13/32	.4063	55	105	12
HPI503 078	7.8	-	.3071	41	79	8	HPI503 104	10.4	-	.4094	55	105	12
HPI503 079	7.9	-	.311	41	79	8	HPI503 105	10.5	-	.4134	55	105	12
HPI503 07938	7.938	5/16	.3125	41	79	8	HPI503 106	10.6	-	.4173	55	105	12
HPI503 080	8	-	.315	41	79	8	HPI503 107	10.7	-	.4213	55	105	12
HPI503 081	8.1	-	.3189	47	89	10	HPI503 10716	10.716	27/64	.4219	55	105	12
HPI503 082	8.2	-	.3228	47	89	10	HPI503 108	10.8	-	.4252	55	105	12
HPI503 083	8.3	-	.3268	47	89	10	HPI503 109	10.9	-	.4291	55	105	12
HPI503 08334	8.334	21/64	.3281	47	89	10	HPI503 110	11	-	.4331	55	105	12
HPI503 0834	8.34	-	.3283	47	89	10	HPI503 111	11.1	-	.437	55	105	12
HPI503 084	8.4	-	.3307	47	89	10	HPI503 11113	11.113	7/16	.4375	55	105	12
HPI503 085	8.5	-	.3346	47	89	10	HPI503 112	11.2	-	.4409	55	105	12
HPI503 086	8.6	-	.3386	47	89	10	HPI503 113	11.3	-	.4449	55	105	12

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

HPI503

Double Margin Internal Coolnat Drill - DIN6537K

Drill

EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
HPI503 114	11.4	-	.4488	55	105	12	HPI503 142	14.2	-	.5591	65	115	16
HPI503 115	11.5	-	.4528	55	105	12	HPI503 14288	14.288	9/16	.5625	65	115	16
HPI503 11509	11.509	29/64	.4531	55	105	12	HPI503 145	14.5	-	.5709	65	115	16
HPI503 116	11.6	-	.4567	55	105	12	HPI503 146	14.6	-	.5746	65	115	16
HPI503 117	11.7	-	.4606	55	105	12	HPI503 147	14.7	-	.5787	65	115	16
HPI503 118	11.8	-	.4646	55	105	12	HPI503 150	15	-	.5906	65	115	16
HPI503 119	11.9	-	.4685	55	105	12	HPI503 15081	15.081	19/32	.5937	65	115	16
HPI503 11908	11.908	15/32	.4688	55	105	12	HPI503 155	15.5	-	.6102	65	115	16
HPI503 120	12	-	.4724	55	105	12	HPI503 157	15.7	-	.6181	65	115	16
HPI503 121	12.1	-	.4764	60	107	14	HPI503 158	15.8	-	.622	65	115	16
HPI503 122	12.2	-	.4803	60	107	14	HPI503 15875	15.875	5/8	.625	65	115	16
HPI503 123	12.3	-	.4843	60	107	14	HPI503 160	16	-	.6299	65	115	16
HPI503 12304	12.304	31/64	.4844	60	107	14	HPI503 162	16.2	-	.6378	73	123	18
HPI503 124	12.4	-	.4882	60	107	14	HPI503 163	16.3	-	.6417	73	123	18
HPI503 125	12.5	-	.4921	60	107	14	HPI503 165	16.5	-	.6496	73	123	18
HPI503 126	12.6	-	.4961	60	107	14	HPI503 167	16.7	-	.6575	73	123	18
HPI503 127	12.7	1/2	.5	60	107	14	HPI503 168	16.8	-	.6614	73	123	18
HPI503 128	12.8	-	.5039	60	107	14	HPI503 170	17	-	.6693	73	123	18
HPI503 129	12.9	-	.5079	60	107	14	HPI503 171	17.1	-	.6732	73	123	18
HPI503 130	13	-	.5118	60	107	14	HPI503 17463	17.463	11/16	.6875	73	123	18
HPI503 132	13.2	-	.5197	60	107	14	HPI503 175	17.5	-	.689	73	123	18
HPI503 133	13.3	-	.5236	60	107	14	HPI503 180	18	-	.7087	73	123	18
HPI503 13494	13.494	17/32	.5313	60	107	14	HPI503 185	18.5	-	.7883	79	131	20
HPI503 135	13.5	-	.5315	60	107	14	HPI503 190	19	-	.748	79	131	20
HPI503 137	13.7	-	.5394	60	107	14	HPI503 1905	19.05	3/4	.75	79	131	20
HPI503 13891	13.891	35/64	.5469	60	107	14	HPI503 197	19.7	-	.7756	79	131	20
HPI503 140	14	-	.5512	60	107	14	HPI503 200	20	-	.7874	79	131	20
HPI503 141	14.1	-	.5551	65	115	16							

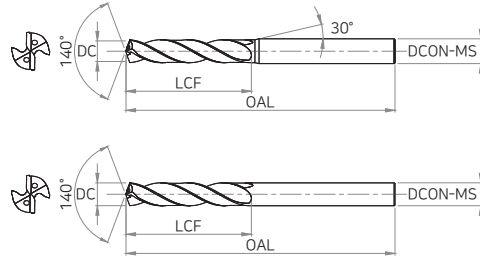
► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

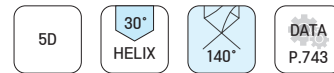
HPI505

Double Margin Internal Coolant Drill - DIN6537L



► Tolerance

DC		Shank Dia
Ø3	+0.002 ~ +0.012	h6
Ø3.1 ~ Ø6	+0.004 ~ +0.016	
Ø6.1 ~ Ø10	+0.006 ~ +0.021	
Ø10.1 ~ Ø18	+0.007 ~ +0.025	
Ø18.1 ~ Ø20	+0.008 ~ +0.029	



EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
HPI505 030	3	-	.1181	30	66	6	HPI505 044	4.4	-	.1732	36	74	6
HPI505 031	3.1	-	.1120	30	66	6	HPI505 045	4.5	-	.1772	36	74	6
HPI505 03175	3.175	-	.1250	30	66	6	HPI505 0458	4.58	-	.1803	36	74	6
HPI505 032	3.2	-	.1260	30	66	6	HPI505 046	4.6	-	.1811	36	74	6
HPI505 03264	3.264	1/8	.1285	30	66	6	HPI505 04623	4.623	-	.1820	36	74	6
HPI505 033	3.3	-	.1299	30	66	6	HPI505 047	4.7	-	.1850	36	74	6
HPI505 034	3.4	-	.1339	30	66	6	HPI505 04763	4.763	3/16	.1875	44	82	6
HPI505 035	3.5	-	.1378	30	66	6	HPI505 048	4.8	-	.1890	44	82	6
HPI505 03572	3.572	9/64	.1406	30	66	6	HPI505 049	4.9	-	.1929	44	82	6
HPI505 036	3.6	-	.1417	30	66	6	HPI505 050	5	-	.1969	44	82	6
HPI505 037	3.7	-	.1457	30	66	6	HPI505 051	5.1	-	.2008	44	82	6
HPI505 038	3.8	-	.1496	36	74	6	HPI505 05159	5.159	13/64	.2031	44	82	6
HPI505 039	3.9	-	.1535	36	74	6	HPI505 052	5.2	-	.2047	44	82	6
HPI505 0397	3.97	5/32	.1563	36	74	6	HPI505 053	5.3	-	.2087	44	82	6
HPI505 040	4	-	.1575	36	74	6	HPI505 054	5.4	-	.2126	44	82	6
HPI505 04039	4.039	-	.1590	36	74	6	HPI505 0541	5.41	-	.2130	44	82	6
HPI505 041	4.1	-	.1614	36	74	6	HPI505 055	5.5	-	.2165	44	82	6
HPI505 042	4.2	-	.1654	36	74	6	HPI505 05558	5.558	7/32	.2188	44	82	6
HPI505 043	4.3	-	.1693	36	74	6	HPI505 056	5.6	-	.2205	44	82	6
HPI505 04366	4.366	-	.1719	36	74	6	HPI505 057	5.7	-	.2244	44	82	6

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

HPI505

Double Margin Internal Coolant Drill - DIN6537L

Drill

EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
HPI505 058	5.8	-	.2283	44	82	6	HPI505 08334	8.334	21/64	.3281	61	103	10
HPI505 059	5.9	-	.2323	44	82	6	HPI505 084	8.4	-	.3307	61	103	10
HPI505 05953	5.953	15/64	.2344	44	82	6	HPI505 08433	8.433	-	.3320	61	103	10
HPI505 060	6	-	.2362	44	82	6	HPI505 085	8.5	-	.3346	61	103	10
HPI505 061	6.1	-	.2402	53	91	8	HPI505 086	8.6	-	.3386	61	103	10
HPI505 062	6.2	-	.2441	53	91	8	HPI505 087	8.7	-	.3425	61	103	10
HPI505 063	6.3	-	.2480	53	91	8	HPI505 08733	8.733	11/32	.3438	61	103	10
HPI505 0635	6.35	1/4	.2500	53	91	8	HPI505 088	8.8	-	.3465	61	103	10
HPI505 064	6.4	-	.2520	53	91	8	HPI505 089	8.9	-	.3504	61	103	10
HPI505 065	6.5	-	.2559	53	91	8	HPI505 090	9	-	.3543	61	103	10
HPI505 06528	6.528	-	.2570	53	91	8	HPI505 091	9.1	-	.3583	61	103	10
HPI505 066	6.6	-	.2598	53	91	8	HPI505 09129	9.129	23/64	.3594	61	103	10
HPI505 067	6.7	-	.2638	53	91	8	HPI505 092	9.2	-	.3622	61	103	10
HPI505 06747	6.747	17/64	.2656	53	91	8	HPI505 093	9.3	-	.3661	61	103	10
HPI505 068	6.8	-	.2677	53	91	8	HPI505 09347	9.347	-	.3680	61	103	10
HPI505 069	6.9	-	.2717	53	91	8	HPI505 094	9.4	-	.3701	61	103	10
HPI505 06909	6.909	-	.2720	53	91	8	HPI505 095	9.5	-	.3740	61	103	10
HPI505 070	7	-	.2756	53	91	8	HPI505 09525	9.525	3/8	.3750	61	103	10
HPI505 071	7.1	-	.2795	53	91	8	HPI505 096	9.6	-	.3780	61	103	10
HPI505 07145	7.145	9/32	.2813	53	91	8	HPI505 097	9.7	-	.3819	61	103	10
HPI505 072	7.2	-	.2835	53	91	8	HPI505 09703	9.703	-	.3820	61	103	10
HPI505 073	7.3	-	.2874	53	91	8	HPI505 09746	9.746	-	.3837	61	103	10
HPI505 074	7.4	-	.2913	53	91	8	HPI505 098	9.8	-	.3858	61	103	10
HPI505 075	7.5	-	.2953	53	91	8	HPI505 099	9.9	-	.3898	61	103	10
HPI505 07541	7.541	19/64	.2969	53	91	8	HPI505 09921	9.921	25/64	.3906	61	103	10
HPI505 076	7.6	-	.2992	53	91	8	HPI505 100	10	-	.3937	61	103	10
HPI505 077	7.7	-	.3031	53	91	8	HPI505 101	10.1	-	.3976	71	118	12
HPI505 078	7.8	-	.3071	53	91	8	HPI505 102	10.2	-	.4016	71	118	12
HPI505 079	7.9	-	.3110	53	91	8	HPI505 103	10.3	-	.4055	71	118	12
HPI505 07938	7.938	5/16	.3125	53	91	8	HPI505 1032	10.32	13/32	.4063	71	118	12
HPI505 080	8	-	.3150	53	91	8	HPI505 104	10.4	-	.4074	71	118	12
HPI505 081	8.1	-	.3189	61	103	10	HPI505 105	10.5	-	.4134	71	118	12
HPI505 082	8.2	-	.3228	61	103	10	HPI505 106	10.6	-	.4173	71	118	12
HPI505 083	8.3	-	.3268	61	103	10	HPI505 107	10.7	-	.4213	71	118	12

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	Steel ~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

HPI505

Double Margin Internal Coolnat Drill - DIN6537L

Drill

EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
HPI505 10716	10.716	27/64	.4219	71	118	12	HPI505 13494	13.494	17/32	.5313	77	124	14
HPI505 108	10.8	-	.4252	71	118	12	HPI505 135	13.5	-	.5315	77	124	14
HPI505 109	10.9	-	.4291	71	118	12	HPI505 137	13.7	-	.5394	77	124	14
HPI505 110	11	-	.4331	71	118	12	HPI505 138	13.8	-	.5433	77	124	14
HPI505 111	11.1	-	.4370	71	118	12	HPI505 13891	13.981	35/64	.5504	77	124	14
HPI505 11113	11.113	7/16	.4375	71	118	12	HPI505 140	14	-	.5512	77	124	14
HPI505 112	11.2	-	.4409	71	118	12	HPI505 141	14.1	-	.5551	83	133	16
HPI505 113	11.3	-	.4449	71	118	12	HPI505 142	14.2	-	.5591	83	133	16
HPI505 114	11.4	-	.4488	71	118	12	HPI505 14288	14.288	9/16	.5625	83	133	16
HPI505 115	11.5	-	.4528	71	118	12	HPI505 145	14.5	-	.5709	83	133	16
HPI505 11509	11.509	29/64	.4531	71	118	12	HPI505 146	14.6	-	.5748	83	133	16
HPI505 116	11.6	-	.4567	71	118	12	HPI505 147	14.7	-	.5787	83	133	16
HPI505 117	11.7	-	.4606	71	118	12	HPI505 148	14.8	-	.5827	83	133	16
HPI505 118	11.8	-	.4646	71	118	12	HPI505 149	14.9	-	.5866	83	133	16
HPI505 119	11.9	-	.4685	71	118	12	HPI505 150	15	-	.5906	83	133	16
HPI505 11908	11.908	15/32	.4688	71	118	12	HPI505 15081	15.081	19/32	.5937	83	133	16
HPI505 120	12	-	.4724	71	118	12	HPI505 151	15.1	-	.5945	83	133	16
HPI505 121	12.1	-	.4764	77	124	14	HPI505 152	15.2	-	.5984	83	133	16
HPI505 122	12.2	-	.4803	77	124	14	HPI505 155	15.5	-	.6102	83	133	16
HPI505 123	12.3	-	.4843	77	124	14	HPI505 156	15.6	-	.6142	83	133	16
HPI505 12304	12.304	31/64	.4844	77	124	14	HPI505 157	15.7	-	.6181	83	133	16
HPI505 124	12.4	-	.4882	77	124	14	HPI505 158	15.8	-	.622	83	133	16
HPI505 125	12.5	-	.4921	77	124	14	HPI505 15875	15.875	5/8	.625	83	133	16
HPI505 126	12.6	-	.4961	77	124	14	HPI505 159	15.9	-	.626	83	133	16
HPI505 127	12.7	1/2	.5	77	124	14	HPI505 160	16	-	.6299	83	133	16
HPI505 128	12.8	-	.5039	77	124	14	HPI505 16078	16.078	-	.633	93	143	18
HPI505 129	12.9	-	.5079	77	124	14	HPI505 162	16.2	-	.6378	93	143	18
HPI505 12903	12.903	-	.508	77	124	14	HPI505 164	16.4	-	.6457	93	143	18
HPI505 130	13	-	.5118	77	124	14	HPI505 165	16.5	-	.6496	93	143	18
HPI505 13096	13.096	33/64	.5156	77	124	14	HPI505 166	16.6	-	.6535	93	143	18
HPI505 131	13.1	-	.5157	77	124	14	HPI505 16667	16.667	21/32	.6562	93	143	18
HPI505 132	13.2	-	.5197	77	124	14	HPI505 167	16.7	-	.6575	93	143	18
HPI505 133	13.3	-	.5236	77	124	14	HPI505 170	17	-	.6693	93	143	18
HPI505 134	13.4	-	.5276	77	124	14	HPI505 171	17.1	-	.6732	93	143	18

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

HPI505

Double Margin Internal Coolant Drill - DIN6537L

Drill

EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
HPI505 172	17.2	-	.6772	93	143	18	HPI505 188	18.8	-	.7402	101	153	20
HPI505 173	17.3	-	.6811	93	143	18	HPI505 189	18.9	-	.7441	101	153	20
HPI505 17463	17.463	11/16	.6875	93	143	18	HPI505 190	19	-	.748	101	153	20
HPI505 175	17.5	-	.689	93	143	18	HPI505 1905	19.05	3/4	.75	101	153	20
HPI505 176	17.6	-	.6929	93	143	18	HPI505 192	19.2	-	.7559	101	153	20
HPI505 177	17.7	-	.6969	93	143	18	HPI505 19253	19.253	-	.758	101	153	20
HPI505 178	17.8	-	.7008	93	143	18	HPI505 19446	19.446	49/64	.7656	101	153	20
HPI505 179	17.9	-	.7047	93	143	18	HPI505 195	19.5	-	.7677	101	153	20
HPI505 180	18	-	.7087	93	143	18	HPI505 197	19.7	-	.7756	101	153	20
HPI505 184	18.4	-	.7244	101	153	20	HPI505 19844	19.844	25/32	.7813	101	153	20
HPI505 185	18.5	-	.7283	101	153	20	HPI505 200	20	-	.7874	101	153	20
HPI505 186	18.6	-	.7323	101	153	20							

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

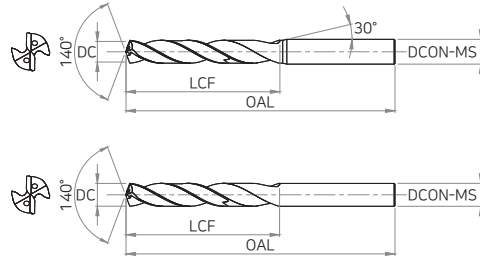
► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
○	○	○	◎	◎	◎					

HPI508-N

Double Margin Internal Coolant Drill - 8D



► Tolerance

DC		Shank Dia
Ø3	+0.002 ~ +0.012	h6
Ø3.1 ~ Ø6	+0.004 ~ +0.016	
Ø6.1 ~ Ø10	+0.006 ~ +0.021	
Ø10.1 ~ Ø18	+0.007 ~ +0.025	
Ø18.1 ~ Ø20	+0.008 ~ +0.029	



EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
HPI508 030N	3	-	.1181	43	80	6	HPI508 044N	4.4	-	.1732	49	87	6
HPI508 031N	3.1	-	.122	43	80	6	HPI508 045N	4.5	-	.1772	49	87	6
HPI508 03175N	3.175	1/8	.125	43	80	6	HPI508 046N	4.6	-	.1811	49	87	6
HPI508 032N	3.2	-	.126	43	80	6	HPI508 047N	4.7	-	.185	49	87	6
HPI508 03264N	3.264	-	.1285	43	80	6	HPI508 04763N	4.763	3/16	.1875	56	94	6
HPI508 033N	3.3	-	.1299	43	80	6	HPI508 048N	4.8	-	.189	56	94	6
HPI508 034N	3.4	-	.1339	43	80	6	HPI508 049N	4.9	-	.1929	56	94	6
HPI508 035N	3.5	-	.1378	43	80	6	HPI508 050N	5	-	.1969	56	94	6
HPI508 03572N	3.572	9/64	.1406	43	80	6	HPI508 051N	5.1	-	.2008	56	94	6
HPI508 036N	3.6	-	.1417	43	80	6	HPI508 05159N	5.159	13/64	.2031	56	94	6
HPI508 037N	3.7	-	.1457	43	80	6	HPI508 052N	5.2	-	.2047	56	94	6
HPI508 038N	3.8	-	.1496	49	87	6	HPI508 053N	5.3	-	.2087	56	94	6
HPI508 039N	3.9	-	.1535	49	87	6	HPI508 054N	5.4	-	.2126	56	94	6
HPI508 0397N	3.97	5/32	.1563	49	87	6	HPI508 055N	5.5	-	.2165	56	94	6
HPI508 040N	4	-	.1575	49	87	6	HPI508 05558N	5.558	7/32	.2188	56	94	6
HPI508 04039N	4.039	-	.159	49	87	6	HPI508 056N	5.6	-	.2205	56	94	6
HPI508 041N	4.1	-	.1614	49	87	6	HPI508 057N	5.7	-	.2244	56	94	6
HPI508 042N	4.2	-	.1654	49	87	6	HPI508 058N	5.8	-	.2283	56	94	6
HPI508 043N	4.3	-	.1693	49	87	6	HPI508 059N	5.9	-	.2323	56	94	6
HPI508 04366N	4.366	-	.1719	49	87	6	HPI508 05953N	5.953	15/64	.2344	56	94	6

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

HPI508-N

Double Margin Internal Coolnat Drill - 8D

Drill

EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
HPI508 060N	6	-	.2362	65	94	6	HPI508 08733N	8.733	11/32	.3438	87	131	10
HPI508 061N	6.1	-	.2402	67	105	8	HPI508 088N	8.8	-	.3465	87	131	10
HPI508 062N	6.2	-	.2441	67	105	8	HPI508 089N	8.9	-	.3504	87	131	10
HPI508 063N	6.3	-	.248	67	105	8	HPI508 090N	9	-	.3543	87	131	10
HPI508 0635N	6.35	1/4	.2500	67	105	8	HPI508 091N	9.1	-	.3583	95	139	10
HPI508 064N	6.4	-	.252	67	105	8	HPI508 09129N	9.129	23/64	.3594	95	139	10
HPI508 065N	6.5	-	.2559	67	105	8	HPI508 092N	9.2	-	.3622	95	139	10
HPI508 066N	6.6	-	.2598	67	105	8	HPI508 093N	9.3	-	.3661	95	139	10
HPI508 067N	6.7	-	.2638	67	105	8	HPI508 094N	9.4	-	.3701	95	139	10
HPI508 06747N	6.747	17/64	.2656	67	105	8	HPI508 095N	9.5	-	.374	95	139	10
HPI508 068N	6.8	-	.2677	67	105	8	HPI508 09525N	9.525	3/8	.375	95	139	10
HPI508 069N	6.9	-	.2717	67	105	8	HPI508 096N	9.6	-	.378	95	139	10
HPI508 070N	7	-	.2756	76	116	8	HPI508 097N	9.7	-	.3819	95	139	10
HPI508 071N	7.1	-	.2795	76	116	8	HPI508 098N	9.8	-	.3858	95	139	10
HPI508 07145N	7.145	9/32	.2813	76	116	8	HPI508 099N	9.9	-	.3898	95	139	10
HPI508 072N	7.2	-	.2835	76	116	8	HPI508 09921N	9.921	25/64	.3906	95	139	10
HPI508 073N	7.3	-	.2874	76	116	8	HPI508 100N	10	-	.3937	95	139	10
HPI508 074N	7.4	-	.2913	76	116	8	HPI508 101N	10.1	-	.3976	106	155	12
HPI508 075N	7.5	-	.2953	76	116	8	HPI508 102N	10.2	-	.4016	106	155	12
HPI508 07541N	7.541	19/64	.2969	76	116	8	HPI508 103N	10.3	-	.4055	106	155	12
HPI508 076N	7.6	-	.2992	76	116	8	HPI508 1032N	10.32	13/32	.4063	106	155	12
HPI508 077N	7.7	-	.3031	76	116	8	HPI508 104N	10.4	-	.4094	106	155	12
HPI508 078N	7.8	-	.3071	76	116	8	HPI508 105N	10.5	-	.4134	106	155	12
HPI508 079N	7.9	-	.311	76	116	8	HPI508 107N	10.7	-	.4213	106	155	12
HPI508 07938N	7.938	5/16	.3125	76	116	8	HPI508 10716N	10.716	27/64	.4219	106	155	12
HPI508 080N	8	-	.315	76	116	8	HPI508 108N	10.8	-	.4252	106	155	12
HPI508 081N	8.1	-	.3189	87	131	10	HPI508 109N	10.9	-	.4291	106	155	12
HPI508 082N	8.2	-	.3228	87	131	10	HPI508 110N	11	-	.4331	106	155	12
HPI508 083N	8.3	-	.3268	87	131	10	HPI508 111N	11.1	-	.437	114	163	12
HPI508 08334N	8.334	21/64	.3281	87	131	10	HPI508 11113N	11.113	7/16	.4375	114	163	12
HPI508 084N	8.4	-	.3307	87	131	10	HPI508 112N	11.2	-	.4409	114	163	12
HPI508 085N	8.5	-	.3346	87	131	10	HPI508 113N	11.3	-	.4449	114	163	12
HPI508 086N	8.6	-	.3386	87	131	10	HPI508 114N	11.4	-	.4488	114	163	12
HPI508 087N	8.7	-	.3425	87	131	10	HPI508 115N	11.5	-	.4528	114	163	12

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	Steel ~HB225	HB225 ~325	Steel HRC30~50	~FCD500					
○	○	○	◎	◎	◎					

HPI508-N

Double Margin Internal Coolnat Drill - 8D

Drill

EDP No	DC			LCF	OAL	DCON MS	EDP No	DC			LCF	OAL	DCON MS
	mm	fraction	inch					mm	fraction	inch			
HPI508 11509N	11.509	29/64	.4531	114	163	12	HPI508 152N	15.2	-	.5984	152	204	16
HPI508 116N	11.6	-	.4567	114	163	12	HPI508 153N	15.3	-	.6024	152	204	16
HPI508 117N	11.7	-	.4606	114	163	12	HPI508 155N	15.5	-	.6102	152	204	16
HPI508 118N	11.8	-	.4646	114	163	12	HPI508 158N	15.8	-	.622	152	204	16
HPI508 119N	11.9	-	.4685	114	163	12	HPI508 15875N	15.875	5/8	.625	152	204	16
HPI508 11908N	11.908	15/32	.4688	114	163	12	HPI508 160N	16	-	.6299	152	204	16
HPI508 120N	12	-	.4724	114	163	12	HPI508 16078N	16.078	-	.633	171	223	18
HPI508 12304N	12.304	31/64	.4844	133	182	14	HPI508 162N	16.2	-	.6378	171	223	18
HPI508 125N	12.5	-	.4921	133	182	14	HPI508 165N	16.5	-	.6496	171	223	18
HPI508 127N	12.7	1/2	.5	133	182	14	HPI508 170N	17	-	.6693	171	223	18
HPI508 128N	12.8	-	.5039	133	182	14	HPI508 17463N	17.463	11/16	.6875	171	223	18
HPI508 130N	13	-	.5118	133	182	14	HPI508 175N	17.5	-	.689	171	223	18
HPI508 13494N	13.494	-	.5313	133	182	14	HPI508 180N	18	-	.7087	171	223	18
HPI508 135N	13.5	-	.5315	133	182	14	HPI508 185N	18.5	-	.7283	191	244	20
HPI508 140N	14	-	.5512	133	182	14	HPI508 190N	19	-	.748	191	244	20
HPI508 14288N	14.288	9/16	.5625	152	204	16	HPI508 1905N	19.05	3/4	.75	191	244	20
HPI508 145N	14.5	-	.5709	152	204	16	HPI508 19253N	19.253	-	.758	191	244	20
HPI508 150N	15	-	.5906	152	204	16	HPI508 198N	19.8	-	.7795	191	244	20
HPI508 151N	15.1	-	.5945	152	204	16	HPI508 200N	20	-	.7874	191	244	20

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

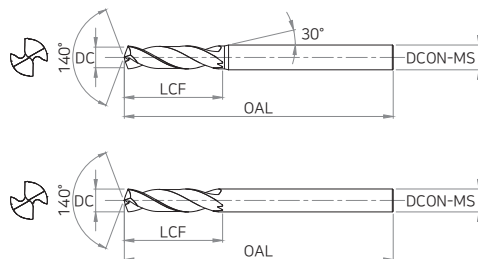
► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

P503A(F) High Speed Drill - DIN6537K

Drill



► Tolerance

DC		Shank Dia
~ Ø3	+0.002 ~ +0.012	h6
Ø3.1 ~ Ø6	+0.004 ~ +0.016	
Ø6.1 ~ Ø10	+0.006 ~ +0.021	
Ø10.1 ~ Ø18	+0.007 ~ +0.025	
Ø18.1 ~ Ø20	+0.008 ~ +0.029	

Series	Standard	Shank Shape
P503A~	STRAIGHT	
P503F~	6535HE (FLAT 2°)	



EDP No	EDP No Weldon shank	DC	LCF	OAL	DCON MS	EDP No	EDP No Weldon shank	DC	LCF	OAL	DCON MS
P503A 030	P503F 030	3	20	62	6	P503A 050	P503F 050	5	28	66	6
P503A 031	P503F 031	3.1	20	62	6	P503A 051	P503F 051	5.1	28	66	6
P503A 032	P503F 032	3.2	20	62	6	P503A 052	P503F 052	5.2	28	66	6
P503A 033	P503F 033	3.3	20	62	6	P503A 053	P503F 053	5.3	28	66	6
P503A 034	P503F 034	3.4	20	62	6	P503A 054	P503F 054	5.4	28	66	6
P503A 035	P503F 035	3.5	20	62	6	P503A 055	P503F 055	5.5	28	66	6
P503A 036	P503F 036	3.6	20	62	6	P503A 056	P503F 056	5.6	28	66	6
P503A 037	P503F 037	3.7	20	62	6	P503A 057	P503F 057	5.7	28	66	6
P503A 038	P503F 038	3.8	24	66	6	P503A 058	P503F 058	5.8	28	66	6
P503A 039	P503F 039	3.9	24	66	6	P503A 059	P503F 059	5.9	28	66	6
P503A 040	P503F 040	4	24	66	6	P503A 060	P503F 060	6	28	66	6
P503A 041	P503F 041	4.1	24	66	6	P503A 061	P503F 061	6.1	34	79	8
P503A 042	P503F 042	4.2	24	66	6	P503A 062	P503F 062	6.2	34	79	8
P503A 043	P503F 043	4.3	24	66	6	P503A 063	P503F 063	6.3	34	79	8
P503A 044	P503F 044	4.4	24	66	6	P503A 064	P503F 064	6.4	34	79	8
P503A 045	P503F 045	4.5	24	66	6	P503A 065	P503F 065	6.5	34	79	8
P503A 046	P503F 046	4.6	24	66	6	P503A 066	P503F 066	6.6	34	79	8
P503A 047	P503F 047	4.7	24	66	6	P503A 067	P503F 067	6.7	34	79	8
P503A 048	P503F 048	4.8	28	66	6	P503A 068	P503F 068	6.8	34	79	8
P503A 049	P503F 049	4.9	28	66	6	P503A 069	P503F 069	6.9	34	79	8

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
○	○	○	◎	◎	◎					

P503A(F)

High Speed Drill - DIN6537K

Drill

EDP No	EDP No Weldon shank	DC	LCF	OAL	DCON MS	EDP No	EDP No Weldon shank	DC	LCF	OAL	DCON MS
P503A 070	P503F 070	7	34	79	8	P503A 104	P503F 104	10.4	55	102	12
P503A 071	P503F 071	7.1	41	79	8	P503A 105	P503F 105	10.5	55	102	12
P503A 072	P503F 072	7.2	41	79	8	P503A 106	P503F 106	10.6	55	102	12
P503A 073	P503F 073	7.3	41	79	8	P503A 107	P503F 107	10.7	55	102	12
P503A 074	P503F 074	7.4	41	79	8	P503A 108	P503F 108	10.8	55	102	12
P503A 075	P503F 075	7.5	41	79	8	P503A 109	P503F 109	10.9	55	102	12
P503A 076	P503F 076	7.6	41	79	8	P503A 110	P503F 110	11	55	102	12
P503A 077	P503F 077	7.7	41	79	8	P503A 111	P503F 111	11.1	55	102	12
P503A 078	P503F 078	7.8	41	79	8	P503A 112	P503F 112	11.2	55	102	12
P503A 079	P503F 079	7.9	41	79	8	P503A 113	P503F 113	11.3	55	102	12
P503A 080	P503F 080	8	41	79	8	P503A 114	P503F 114	11.4	55	102	12
P503A 081	P503F 081	8.1	47	89	10	P503A 115	P503F 115	11.5	55	102	12
P503A 082	P503F 082	8.2	47	89	10	P503A 116	P503F 116	11.6	55	102	12
P503A 083	P503F 083	8.3	47	89	10	P503A 117	P503F 117	11.7	55	102	12
P503A 084	P503F 084	8.4	47	89	10	P503A 118	P503F 118	11.8	55	102	12
P503A 085	P503F 085	8.5	47	89	10	P503A 119	P503F 119	11.9	55	102	12
P503A 086	P503F 086	8.6	47	89	10	P503A 120	P503F 120	12	55	102	12
P503A 087	P503F 087	8.7	47	89	10	P503A 121	P503F 121	12.1	60	107	14
P503A 088	P503F 088	8.8	47	89	10	P503A 122	P503F 122	12.2	60	107	14
P503A 089	P503F 089	8.9	47	89	10	P503A 123	P503F 123	12.3	60	107	14
P503A 090	P503F 090	9	47	89	10	P503A 124	P503F 124	12.4	60	107	14
P503A 091	P503F 091	9.1	47	89	10	P503A 125	P503F 125	12.5	60	107	14
P503A 092	P503F 092	9.2	47	89	10	P503A 126	P503F 126	12.6	60	107	14
P503A 093	P503F 093	9.3	47	89	10	P503A 127	P503F 127	12.7	60	107	14
P503A 094	P503F 094	9.4	47	89	10	P503A 128	P503F 128	12.8	60	107	14
P503A 095	P503F 095	9.5	47	89	10	P503A 129	P503F 129	12.9	60	107	14
P503A 096	P503F 096	9.6	47	89	10	P503A 130	P503F 130	13	60	107	14
P503A 097	P503F 097	9.7	47	89	10	P503A 131	P503F 131	13.1	60	107	14
P503A 098	P503F 098	9.8	47	89	10	P503A 132	P503F 132	13.2	60	107	14
P503A 099	P503F 099	9.9	47	89	10	P503A 133	P503F 133	13.3	60	107	14
P503A 100	P503F 100	10	47	89	10	P503A 134	P503F 134	13.4	60	107	14
P503A 101	P503F 101	10.1	55	102	12	P503A 135	P503F 135	13.5	60	107	14
P503A 102	P503F 102	10.2	55	102	12	P503A 136	P503F 136	13.6	60	107	14
P503A 103	P503F 103	10.3	55	102	12	P503A 137	P503F 137	13.7	60	107	14

Dolphin
Drill

Dolphin
Oil-Hole
Drill

Power
Max

Solid
Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

P503A(F) High Speed Drill - DIN6537K

Drill

EDP No	EDP No Weldon shank	DC	LCF	OAL	DCON MS	EDP No	EDP No Weldon shank	DC	LCF	OAL	DCON MS
P503A 138	P503F 138	13.8	60	107	14	P503A 159	P503F 159	15.9	65	115	16
P503A 139	P503F 139	13.9	60	107	14	P503A 160	P503F 160	16	65	115	16
P503A 140	P503F 140	14	60	107	14	P503A 161	P503F 161	16.1	73	123	18
P503A 141	P503F 141	14.1	65	115	16	P503A 163	P503F 163	16.3	73	123	18
P503A 142	P503F 142	14.2	65	115	16	P503A 165	P503F 165	16.5	73	123	18
P503A 143	P503F 143	14.3	65	115	16	P503A 170	P503F 170	17	73	123	18
P503A 144	P503F 144	14.4	65	115	16	P503A 171	P503F 171	17.1	73	123	18
P503A 145	P503F 145	14.5	65	115	16	P503A 172	P503F 172	17.2	73	123	18
P503A 146	P503F 146	14.6	65	115	16	P503A 175	P503F 175	17.5	73	123	18
P503A 147	P503F 147	14.7	65	115	16	P503A 177	P503F 177	17.7	73	123	18
P503A 148	P503F 148	14.8	65	115	16	P503A 178	P503F 178	17.8	73	123	18
P503A 149	P503F 149	14.9	65	115	16	P503A 180	P503F 180	18	73	123	18
P503A 150	P503F 150	15	65	115	16	P503A 181	P503F 181	18.1	79	131	20
P503A 151	P503F 151	15.1	65	115	16	P503A 182	P503F 182	18.2	79	131	20
P503A 152	P503F 152	15.2	65	115	16	P503A 185	P503F 185	18.5	79	131	20
P503A 153	P503F 153	15.3	65	115	16	P503A 190	P503F 190	19	79	131	20
P503A 154	P503F 154	15.4	65	115	16	P503A 191	P503F 191	19.1	79	131	20
P503A 155	P503F 155	15.5	65	115	16	P503A 195	P503F 195	19.5	79	131	20
P503A 156	P503F 156	15.6	65	115	16	P503A 197	P503F 197	19.7	79	131	20
P503A 157	P503F 157	15.7	65	115	16	P503A 200	P503F 200	20	79	131	20
P503A 158	P503F 158	15.8	65	115	16						

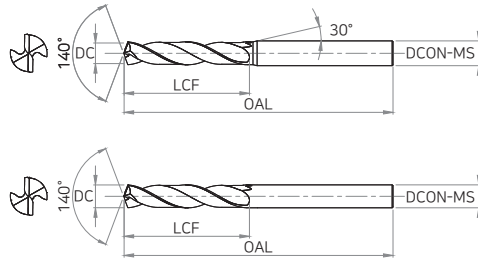
► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

P505A(F)

High Speed Drill - DIN6537L



► Tolerance

DC		Shank Dia
~ Ø3	+0.002 ~ +0.012	h6
Ø3.1 ~ Ø6	+0.004 ~ +0.016	
Ø6.1 ~ Ø10	+0.006 ~ +0.021	
Ø10.1 ~ Ø18	+0.007 ~ +0.025	
Ø18.1 ~ Ø20	+0.008 ~ +0.029	

Series	Standard	Shank Shape
P505A~	STRAIGHT	
P505F~	6535HE (FLAT 2°)	



EDP No	EDP No Weldon shank	DC	LCF	OAL	DCON MS	EDP No	EDP No Weldon shank	DC	LCF	OAL	DCON MS
P505A 030	P505F 030	3	28	66	6	P505A 050	P505F 050	5	44	82	6
P505A 031	P505F 031	3.1	28	66	6	P505A 051	P505F 051	5.1	44	82	6
P505A 032	P505F 032	3.2	28	66	6	P505A 052	P505F 052	5.2	44	82	6
P505A 033	P505F 033	3.3	28	66	6	P505A 053	P505F 053	5.3	44	82	6
P505A 034	P505F 034	3.4	28	66	6	P505A 054	P505F 054	5.4	44	82	6
P505A 035	P505F 035	3.5	28	66	6	P505A 055	P505F 055	5.5	44	82	6
P505A 036	P505F 036	3.6	28	66	6	P505A 056	P505F 056	5.6	44	82	6
P505A 037	P505F 037	3.7	28	66	6	P505A 057	P505F 057	5.7	44	82	6
P505A 038	P505F 038	3.8	36	74	6	P505A 058	P505F 058	5.8	44	82	6
P505A 039	P505F 039	3.9	36	74	6	P505A 059	P505F 059	5.9	44	82	6
P505A 040	P505F 040	4	36	74	6	P505A 060	P505F 060	6	44	82	6
P505A 041	P505F 041	4.1	36	74	6	P505A 061	P505F 061	6.1	53	91	8
P505A 042	P505F 042	4.2	36	74	6	P505A 062	P505F 062	6.2	53	91	8
P505A 043	P505F 043	4.3	36	74	6	P505A 063	P505F 063	6.3	53	91	8
P505A 044	P505F 044	4.4	36	74	6	P505A 064	P505F 064	6.4	53	91	8
P505A 045	P505F 045	4.5	36	74	6	P505A 065	P505F 065	6.5	53	91	8
P505A 046	P505F 046	4.6	36	74	6	P505A 066	P505F 066	6.6	53	91	8
P505A 047	P505F 047	4.7	36	74	6	P505A 067	P505F 067	6.7	53	91	8
P505A 048	P505F 048	4.8	44	82	6	P505A 068	P505F 068	6.8	53	91	8
P505A 049	P505F 049	4.9	44	82	6	P505A 069	P505F 069	6.9	53	91	8

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

Drill

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

P505A(F) High Speed Drill - DIN6537L

Drill

EDP No	EDP No Weldon shank	DC	LCF	OAL	DCON MS	EDP No	EDP No Weldon shank	DC	LCF	OAL	DCON MS
P505A 070	P505F 070	7	53	91	8	P505A 104	P505F 104	10.4	71	118	12
P505A 071	P505F 071	7.1	53	91	8	P505A 105	P505F 105	10.5	71	118	12
P505A 072	P505F 072	7.2	53	91	8	P505A 106	P505F 106	10.6	71	118	12
P505A 073	P505F 073	7.3	53	91	8	P505A 107	P505F 107	10.7	71	118	12
P505A 074	P505F 074	7.4	53	91	8	P505A 108	P505F 108	10.8	71	118	12
P505A 075	P505F 075	7.5	53	91	8	P505A 109	P505F 109	10.9	71	118	12
P505A 076	P505F 076	7.6	53	91	8	P505A 110	P505F 110	11	71	118	12
P505A 077	P505F 077	7.7	53	91	8	P505A 111	P505F 111	11.1	71	118	12
P505A 078	P505F 078	7.8	53	91	8	P505A 112	P505F 112	11.2	71	118	12
P505A 079	P505F 079	7.9	53	91	8	P505A 113	P505F 113	11.3	71	118	12
P505A 080	P505F 080	8	53	91	8	P505A 114	P505F 114	11.4	71	118	12
P505A 081	P505F 081	8.1	61	103	10	P505A 115	P505F 115	11.5	71	118	12
P505A 082	P505F 082	8.2	61	103	10	P505A 116	P505F 116	11.6	71	118	12
P505A 083	P505F 083	8.3	61	103	10	P505A 117	P505F 117	11.7	71	118	12
P505A 084	P505F 084	8.4	61	103	10	P505A 118	P505F 118	11.8	71	118	12
P505A 085	P505F 085	8.5	61	103	10	P505A 119	P505F 119	11.9	71	118	12
P505A 086	P505F 086	8.6	61	103	10	P505A 120	P505F 120	12	71	118	12
P505A 087	P505F 087	8.7	61	103	10	P505A 121	P505F 121	12.1	77	124	14
P505A 088	P505F 088	8.8	61	103	10	P505A 122	P505F 122	12.2	77	124	14
P505A 089	P505F 089	8.9	61	103	10	P505A 123	P505F 123	12.3	77	124	14
P505A 090	P505F 090	9	61	103	10	P505A 124	P505F 124	12.4	77	124	14
P505A 091	P505F 091	9.1	61	103	10	P505A 125	P505F 125	12.5	77	124	14
P505A 092	P505F 092	9.2	61	103	10	P505A 126	P505F 126	12.6	77	124	14
P505A 093	P505F 093	9.3	61	103	10	P505A 127	P505F 127	12.7	77	124	14
P505A 094	P505F 094	9.4	61	103	10	P505A 128	P505F 128	12.8	77	124	14
P505A 095	P505F 095	9.5	61	103	10	P505A 129	P505F 129	12.9	77	124	14
P505A 096	P505F 096	9.6	61	103	10	P505A 130	P505F 130	13	77	124	14
P505A 097	P505F 097	9.7	61	103	10	P505A 131	P505F 131	13.1	77	124	14
P505A 098	P505F 098	9.8	61	103	10	P505A 132	P505F 132	13.2	77	124	14
P505A 099	P505F 099	9.9	61	103	10	P505A 133	P505F 133	13.3	77	124	14
P505A 100	P505F 100	10	61	103	10	P505A 134	P505F 134	13.4	77	124	14
P505A 101	P505F 101	10.1	71	118	12	P505A 135	P505F 135	13.5	77	124	14
P505A 102	P505F 102	10.2	71	118	12	P505A 136	P505F 136	13.6	77	124	14
P505A 103	P505F 103	10.3	71	118	12	P505A 137	P505F 137	13.7	77	124	14

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
○	○	○	◎	◎	◎					

P505A(F)

High Speed Drill - DIN6537L

Drill

EDP No	EDP No Weldon shank	DC	LCF	OAL	DCON MS	EDP No	EDP No Weldon shank	DC	LCF	OAL	DCON MS
P505A 138	P505F 138	13.8	77	124	14	P505A 170	P505F 170	17	93	143	18
P505A 139	P505F 139	13.9	77	124	14	P505A 171	P505F 171	17.1	93	143	18
P505A 140	P505F 140	14	77	124	14	P505A 172	P505F 172	17.2	93	143	18
P505A 141	P505F 141	14.1	83	133	16	P505A 173	P505F 173	17.3	93	143	18
P505A 142	P505F 142	14.2	83	133	16	P505A 174	P505F 174	17.4	93	143	18
P505A 143	P505F 143	14.3	83	133	16	P505A 175	P505F 175	17.5	93	143	18
P505A 144	P505F 144	14.4	83	133	16	P505A 176	P505F 176	17.6	93	143	18
P505A 145	P505F 145	14.5	83	133	16	P505A 177	P505F 177	17.7	93	143	18
P505A 146	P505F 146	14.6	83	133	16	P505A 178	P505F 178	17.8	93	143	18
P505A 147	P505F 147	14.7	83	133	16	P505A 179	P505F 179	17.9	93	143	18
P505A 148	P505F 148	14.8	83	133	16	P505A 180	P505F 180	18	93	143	18
P505A 149	P505F 149	14.9	83	133	16	P505A 181	P505F 181	18.1	101	153	20
P505A 150	P505F 150	15	83	133	16	P505A 182	P505F 182	18.2	101	153	20
P505A 151	P505F 151	15.1	83	133	16	P505A 183	P505F 183	18.3	101	153	20
P505A 152	P505F 152	15.2	83	133	16	P505A 184	P505F 184	18.4	101	153	20
P505A 153	P505F 153	15.3	83	133	16	P505A 185	P505F 185	18.5	101	153	20
P505A 154	P505F 154	15.4	83	133	16	P505A 186	P505F 186	18.6	101	153	20
P505A 155	P505F 155	15.5	83	133	16	P505A 187	P505F 187	18.7	101	153	20
P505A 156	P505F 156	15.6	83	133	16	P505A 188	P505F 188	18.8	101	153	20
P505A 157	P505F 157	15.7	83	133	16	P505A 189	P505F 189	18.9	101	153	20
P505A 158	P505F 158	15.8	83	133	16	P505A 190	P505F 190	19	101	153	20
P505A 159	P505F 159	15.9	83	133	16	P505A 191	P505F 191	19.1	101	153	20
P505A 160	P505F 160	16	83	133	16	P505A 192	P505F 192	19.2	101	153	20
P505A 161	P505F 161	16.1	93	143	18	P505A 193	P505F 193	19.3	101	153	20
P505A 162	P505F 162	16.2	93	143	18	P505A 194	P505F 194	19.4	101	153	20
P505A 163	P505F 163	16.3	93	143	18	P505A 195	P505F 195	19.5	101	153	20
P505A 164	P505F 164	16.4	93	143	18	P505A 196	P505F 196	19.6	101	153	20
P505A 165	P505F 165	16.5	93	143	18	P505A 197	P505F 197	19.7	101	153	20
P505A 166	P505F 166	16.6	93	143	18	P505A 198	P505F 198	19.8	101	153	20
P505A 167	P505F 167	16.7	93	143	18	P505A 199	P505F 199	19.9	101	153	20
P505A 168	P505F 168	16.8	93	143	18	P505A 200	P505F 200	20	101	153	20
P505A 169	P505F 169	16.9	93	143	18						

Dolphin
Drill

Dolphin
Oil-Hole
Drill

Power
Max

Solid
Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	HB225 ~325	HRc30~50	~FCD500					
○	○	○	◎	◎	◎					

Solid Spiral Drill

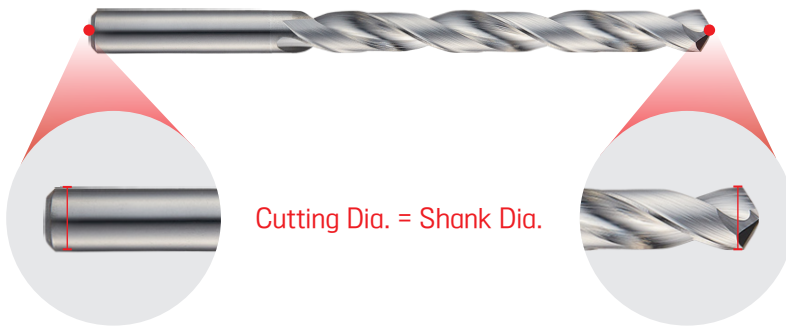
Non-Ferrous Drill

Characteristics

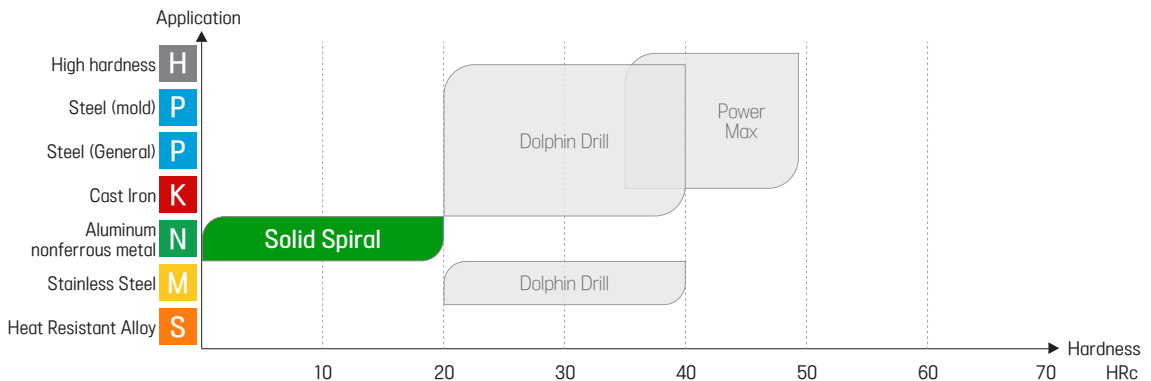
- Suitable to work for Copper, Aluminum, Alloy steels, Non-ferrous steels
- Reasonable price and extensive coverage

Features

- High chipping resistance by applied to the high toughness material
- Improvement of Flute hardness and excellent chip mission by applied to TiN, DLC coating
- Improve to customer variety of choice by applied to equal to Diameter with Shank Diameter



Applications



Contents

EDP No Spec (INCH :  / METRIC : )	Flutes	Geometry	Length			Margin	Tolerance	Diameter(DC)		Page
			3D	5D	8D			Min	Max	
SSD 	2F		○			Single	h8	1	13	494
SSDL 					○	Single	h8	1	10	497
SSTD 			○			Single	h8	0.5	13	499
SSTD L 					○	Single	h8	1	10	502
APF505  	3F			○		Single	0 ~ -0.012	3	16	504

EDP No. System

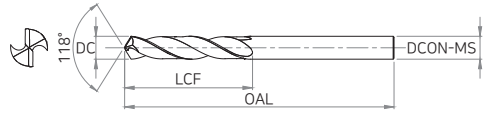
*If expressed as an integer, the decimal point is omitted.

SS	D	L	051
①	②	③	④

① Section	② Appearance	③ Working Depth	④ Cutting Dia
SS : Solid Spiral	D : Drill	L : Long	∅0.5
AP : Aluminium Power	TD : TiN Coated Drill	505 : 5D	~
	F : Facet Point		∅16

SSD Non-Ferrous Drill - Regular

Drill



► Tolerance

DC		Shank Dia
~ Ø3	0 ~ -0.014	h6
Ø3.1 ~ Ø6	0 ~ -0.018	
Ø6.1 ~ Ø10	0 ~ -0.022	
Ø10.1 ~ Ø13	0 ~ -0.027	



EDP No	DC	LCF	OAL	DCONMS	EDP No	DC	LCF	OAL	DCONMS
SSD 010	1	10	38	1	SSD 020	2	16	45	2
SSD 0105	1.05	10	38	1.05	SSD 0205	2.05	16	45	2.05
SSD 011	1.1	10	38	1.1	SSD 021	2.1	16	45	2.1
SSD 0115	1.15	10	38	1.15	SSD 0215	2.15	16	45	2.15
SSD 012	1.2	10	38	1.2	SSD 022	2.2	16	45	2.2
SSD 0125	1.25	10	38	1.25	SSD 0225	2.25	16	45	2.25
SSD 013	1.3	10	38	1.3	SSD 023	2.3	16	45	2.3
SSD 0135	1.35	10	38	1.35	SSD 0235	2.35	16	45	2.35
SSD 014	1.4	10	38	1.4	SSD 024	2.4	18	50	2.4
SSD 0145	1.45	10	38	1.45	SSD 0245	2.45	18	50	2.45
SSD 015	1.5	13	38	1.5	SSD 025	2.5	20	50	2.5
SSD 0155	1.55	13	38	1.55	SSD 0255	2.55	20	50	2.55
SSD 016	1.6	13	38	1.6	SSD 026	2.6	20	50	2.6
SSD 0165	1.65	13	38	1.65	SSD 0265	2.65	20	50	2.65
SSD 017	1.7	13	38	1.7	SSD 027	2.7	22	50	2.7
SSD 0175	1.75	13	38	1.75	SSD 0275	2.75	22	50	2.75
SSD 018	1.8	13	38	1.8	SSD 028	2.8	22	50	2.8
SSD 0185	1.85	13	38	1.85	SSD 0285	2.85	22	50	2.85
SSD 019	1.9	13	38	1.9	SSD 029	2.9	22	50	2.9
SSD 0195	1.95	13	38	1.95	SSD 0295	2.95	22	50	2.95

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
		○				○		◎		

SSD

Non-Ferrous Drill - Regular

Drill

EDP No	DC	LCF	OAL	DCONMS	EDP No	DC	LCF	OAL	DCONMS
SSD 030	3	22	50	3	SSD 064	6.4	38	75	6.4
SSD 031	3.1	25	50	3.1	SSD 065	6.5	38	75	6.5
SSD 032	3.2	25	50	3.2	SSD 066	6.6	45	80	6.6
SSD 033	3.3	25	50	3.3	SSD 067	6.7	45	80	6.7
SSD 034	3.4	25	50	3.4	SSD 068	6.8	45	80	6.8
SSD 035	3.5	25	50	3.5	SSD 069	6.9	45	80	6.9
SSD 036	3.6	28	55	3.6	SSD 070	7	45	80	7
SSD 037	3.7	28	55	3.7	SSD 071	7.1	45	80	7.1
SSD 038	3.8	28	55	3.8	SSD 072	7.2	45	80	7.2
SSD 039	3.9	28	55	3.9	SSD 073	7.3	45	80	7.3
SSD 040	4	28	55	4	SSD 074	7.4	45	80	7.4
SSD 041	4.1	30	60	4.1	SSD 075	7.5	45	80	7.5
SSD 042	4.2	30	60	4.2	SSD 076	7.6	50	85	7.6
SSD 043	4.3	30	60	4.3	SSD 077	7.7	50	85	7.7
SSD 044	4.4	30	60	4.4	SSD 078	7.8	50	85	7.8
SSD 045	4.5	30	60	4.5	SSD 079	7.9	50	85	7.9
SSD 046	4.6	33	65	4.6	SSD 080	8	50	85	8
SSD 047	4.7	33	65	4.7	SSD 081	8.1	50	85	8.1
SSD 048	4.8	35	65	4.8	SSD 082	8.2	50	85	8.2
SSD 049	4.9	35	65	4.9	SSD 083	8.3	50	85	8.3
SSD 050	5	35	65	5	SSD 084	8.4	50	85	8.4
SSD 051	5.1	35	65	5.1	SSD 085	8.5	50	85	8.5
SSD 052	5.2	35	65	5.2	SSD 086	8.6	50	95	8.6
SSD 053	5.3	35	65	5.3	SSD 087	8.7	50	95	8.7
SSD 054	5.4	35	65	5.4	SSD 088	8.8	50	95	8.8
SSD 055	5.5	35	65	5.5	SSD 089	8.9	50	95	8.9
SSD 056	5.6	38	75	5.6	SSD 090	9	50	95	9
SSD 057	5.7	38	75	5.7	SSD 091	9.1	50	95	9.1
SSD 058	5.8	38	75	5.8	SSD 092	9.2	50	95	9.2
SSD 059	5.9	38	75	5.9	SSD 093	9.3	50	95	9.3
SSD 060	6	38	75	6	SSD 094	9.4	50	95	9.4
SSD 061	6.1	38	75	6.1	SSD 095	9.5	50	95	9.5
SSD 062	6.2	38	75	6.2	SSD 096	9.6	50	95	9.6
SSD 063	6.3	38	75	6.3	SSD 097	9.7	50	95	9.7

Dolphin Drill

Dolphin Oil-Hole Drill

Power Max

Solid Spiral

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRc55	SKD11 HRc55~	~HB225	~325	HRc30~50	~FCD500					
		○				○		◎		

EDP No	DC	LCF	OAL	DCONMS	EDP No	DC	LCF	OAL	DCONMS
SSD 098	9.8	50	95	9.8	SSD 115	11.5	65	120	11.5
SSD 099	9.9	55	100	9.9	SSD 116	11.6	65	120	11.6
SSD 100	10	55	100	10	SSD 117	11.7	65	120	11.7
SSD 101	10.1	55	115	10.1	SSD 118	11.8	65	120	11.8
SSD 102	10.2	55	115	10.2	SSD 119	11.9	65	120	11.9
SSD 103	10.3	55	115	10.3	SSD 120	12	65	120	12
SSD 104	10.4	55	115	10.4	SSD 121	12.1	70	125	12.1
SSD 105	10.5	55	115	10.5	SSD 122	12.2	70	125	12.2
SSD 106	10.6	60	115	10.6	SSD 123	12.3	70	125	12.3
SSD 107	10.7	60	115	10.7	SSD 124	12.4	70	125	12.4
SSD 108	10.8	60	115	10.8	SSD 125	12.5	70	125	12.5
SSD 109	10.9	60	115	10.9	SSD 126	12.6	70	125	12.6
SSD 110	11	60	115	11	SSD 127	12.7	70	125	12.7
SSD 111	11.1	65	120	11.1	SSD 128	12.8	70	125	12.8
SSD 112	11.2	65	120	11.2	SSD 129	12.9	70	125	12.9
SSD 113	11.3	65	120	11.3	SSD 130	13	75	130	13
SSD 114	11.4	65	120	11.4					

► Applicable Working Material

○ : GOOD ◎ : EXCELLENT

H		P			K	N			M	S
Hardened Steel		Carbon Steel	Alloy Steel	Prehardened Steel	Cast Iron	Copper	Graphite	Aluminum	Stainless Steel	Heat Resistant Alloy
SKD61 ~HRC55	SKD11 HRC55~	~HB225	HB225 ~325	HRC30~50	~FCD500					
		○				○		◎		