



**NEW**

# NDPG

## New Dolphin General

*Drill for General Purpose.  
Excellent performance in a variety of work area.*



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

### Feature

- Reduced cutting workload on starting by shorten cutting edge parts.
- Reduced cutting workload by Improved XR-Thinning
- Designed flutes for strength and chip emission
- Enhanced wear resistance and lubricity by AlCrN Base surface treatment.

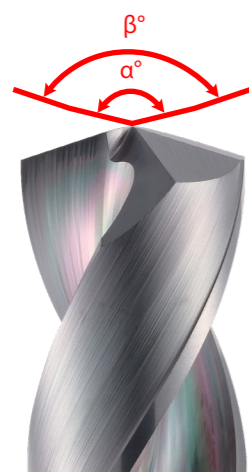
### Applicable working materials

Series	CARBON STEELS ~HB225	ALLOY STEELS HB225 ~325	PREHARDEN STEELS HRC30 ~50	PREHARDEN STEELS		CAST IRON	STAINLESS STEELS	CAST IRON & ALUMINIUM STEELS
				SKD61 ~HRC55	SKD11 HRC55~63			
NDPG	◎	◎	○			○	◎	
POWER	○	◎	○			◎		
POWER MAX	◎	○	◎	○		○	○	

○ : GOOD ◎ : BEST

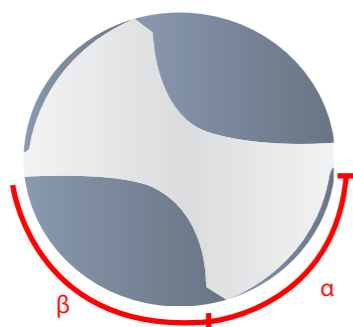
### Multi Point angle

Multi Point angle



- Cutting force dispersion by optimal match up on point angle.
- Enhanced strength on point by streamlined 1st Multi point angle
- Breakage reduction at the beginning of drilling

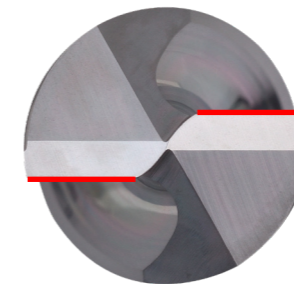
### Flute Design



- Section view A-A' -

- Flute groove for strength and chip emission (Wider  $\beta$  angle)
- Improved chip emission and reduced frictional heat by improved flute roughness

### Point part



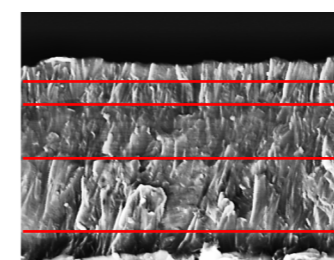
- Enhanced strength to cutting resistance by straight type flute and wider width
- Prevention outburst breakage and anti-chipping by improved flute roughness

### XR-Thinning

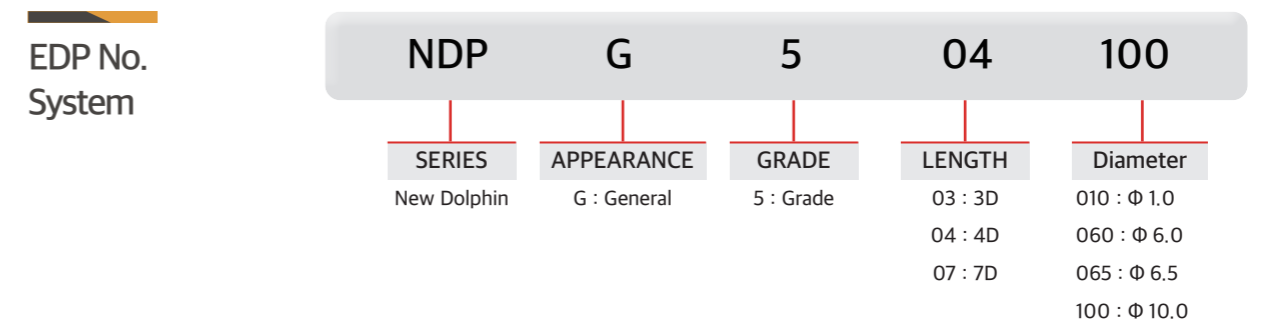
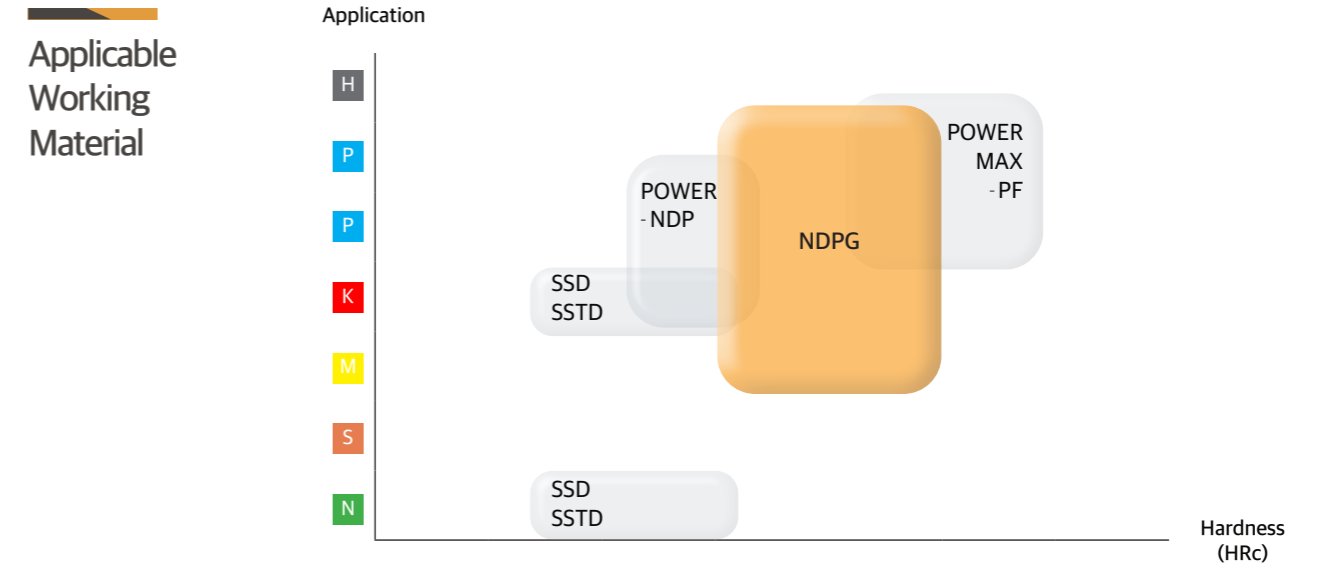
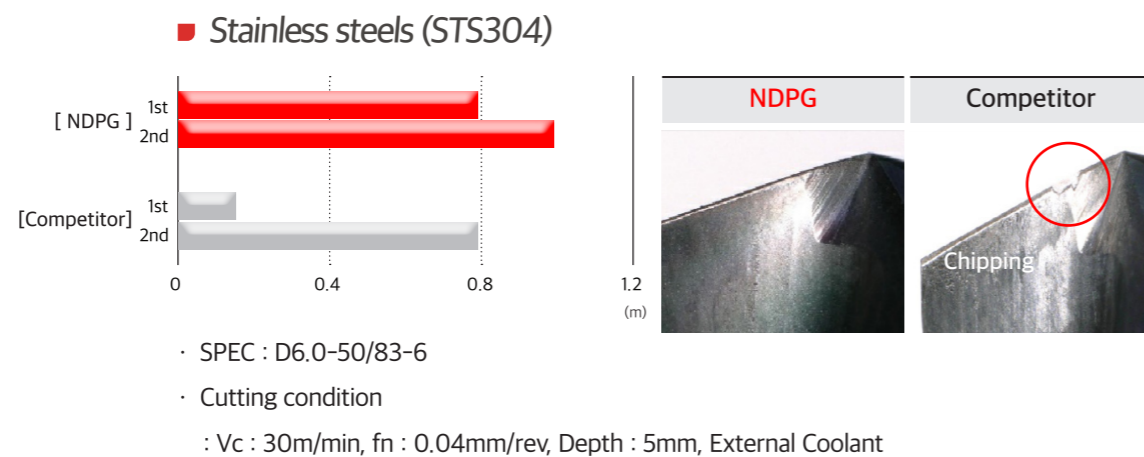
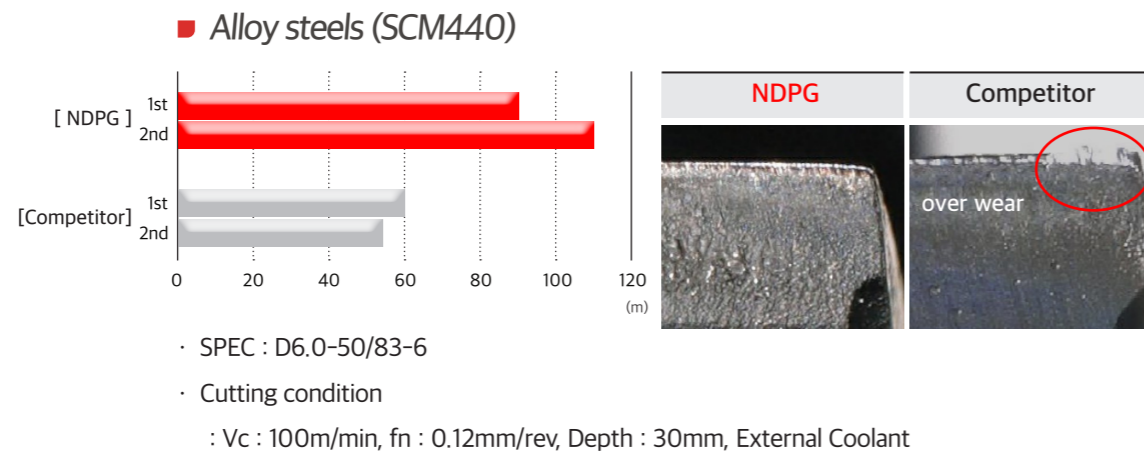
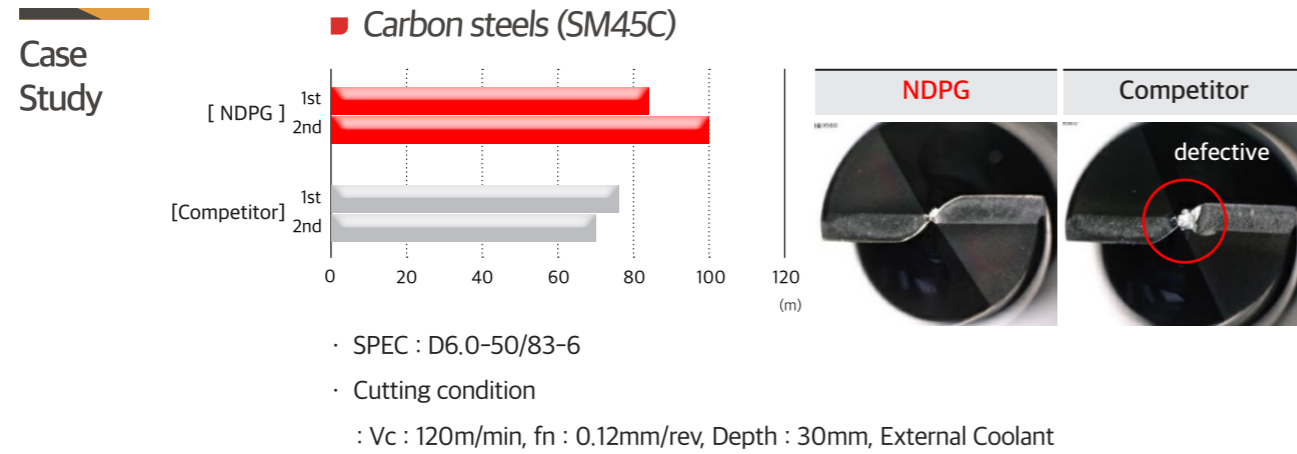


- Cutting force dispersion and reduced cutting workload by streamlined thinning design
- Reduced hole scratch by improved chip braking

### AlCrN base New Coating



- Improved chip emission by improved flute lubricity
- Improved wear resistance and oxidation resistant by multi-layer coating



**Contents**

[ Inch : ◆ / Metric : ◇ ]

EDP No.	SPEC	SPEC	Flutes	Length			Intenal Coolant	Magin Type	Tolerance	Diameter		Page
				3D	4D	7D				Min	Max	
NDPG503		◆◇	2	0			-	Single	h7	1	13	6
NDPG504		◆◇	2		0		-	Single	h7	1	20	8
NDPG507		◆◇	2			0	-	Single	h7	3	20	11
recommended cutting condition											13	





# NDPG504

NEW DOLPHIN GENERAL PURPOSE DRILL

EDP#	Description(mm)				TAP		EDP#	Description(mm)				TAP	
	D	L1	L2	D2	Size	Limit		D	L1	L2	D2	Size	Limit
NDPG504137	13.7	65	107	14	-	-	NDPG50415875	15.875	69	115	16	-	-
NDPG504138	13.8	65	107	14	-	-	NDPG504160	16	69	115	16	-	-
NDPG504139	13.9	65	107	14	-	-	NDPG504161	16.1	69	115	17	-	-
NDPG504140	14	65	107	14	M16x2.0	WH1-4	NDPG504163	16.3	71	119	17	-	-
NDPG504141	14.1	65	107	15	M16x2.0	WH5-6	NDPG504165	16.5	71	119	17	M18x1.5	WH1-6
NDPG504142	14.2	67	111	15	-	-	NDPG50416669	16.669	71	119	17	-	-
NDPG504143	14.3	67	111	15	-	-	NDPG504170	17	71	119	17	-	-
NDPG504144	14.4	67	111	15	-	-	NDPG504171	17.1	71	119	18	-	-
NDPG504145	14.5	67	111	15	M16x1.5	WH1-4	NDPG504172	17.2	74	123	18	-	-
NDPG504146	14.6	67	111	15	M16x1.5	WH5-6	NDPG504175	17.5	74	123	18	M20x2.5	WH1-6
NDPG504147	14.7	67	111	15	-	-	NDPG504177	17.7	74	123	18	-	-
NDPG504148	14.8	67	111	15	-	-	NDPG504178	17.8	74	123	18	-	-
NDPG504149	14.9	67	111	15	-	-	NDPG504180	18	74	123	18	-	-
NDPG504150	15	67	111	15	-	-	NDPG504181	18.1	74	123	19	-	-
NDPG504151	15.1	67	111	16	-	-	NDPG504182	18.2	76	127	19	-	-
NDPG504152	15.2	69	115	16	-	-	NDPG504185	18.5	76	127	19	M20x1.5	WH1-6
NDPG504154	15.4	69	115	16	-	-	NDPG504190	19	76	127	19	-	-
NDPG504155	15.5	69	115	16	M18x2.5	WH1-4	NDPG504191	19.1	76	127	20	-	-
NDPG504156	15.6	69	115	16	M18x2.5	WH5-6	NDPG504195	19.5	80	131	20	M22x2.5	WH1-6
NDPG504157	15.7	69	115	16	-	-	NDPG504197	19.7	80	131	20	-	-
NDPG504158	15.8	69	115	16	-	-	NDPG504200	20	80	131	20	-	-

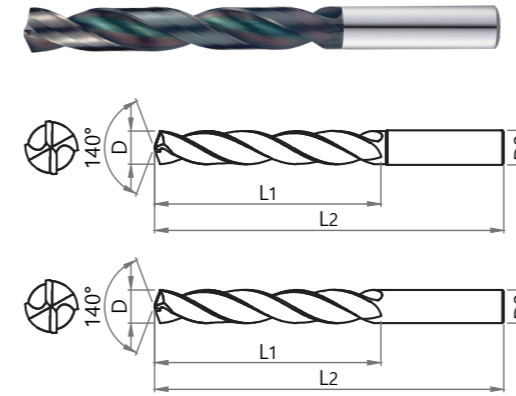
■ APPLICATION

Carbon steels ~HB225	Alloy steels HB225~325	Pre hardened steels HRC30~50	Hardened steels		Cast iron	Stainless steels	Nonferrous steels & Aluminum
			SKD61 ~HRC55	SKD11 HRC55~63			
◎	◎	○			○	◎	

○ : GOOD ◎ : BEST

NEW DOLPHIN GENERAL PURPOSE DRILL

# NDPG507



- General purpose 7D drill with external coolant
- Reduced initial load by improving the cutting edge distance and applying a low cutting force shape
- Offer stability machining from flute design for better chip evacuation and unique edge technology
- Improved machining in various workpieces from reinforced base material and multi-layer coating gives better wear resistance and oxidation resistance

■ Tolerance

D		SD
D3	0 ~ -0.010mm	h6
D3.1 ~ D6	0 ~ -0.012mm	
D6.1 ~ D10	0 ~ -0.015mm	
D10.1 ~ D18	0 ~ -0.018mm	
D18.1 ~	0 ~ -0.021mm	



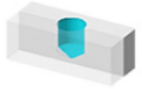
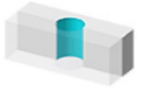



EDP#	Description(mm)				TAP		EDP#	Description(mm)				TAP	
	D	L1	L2	D2	Size	Limit		D	L1	L2	D2	Size	Limit
NDPG507030	3	45	80	3	-	-	NDPG50705159	5.159	50	83	6	-	-
NDPG507031	3.1	45	80	4	-	-	NDPG507052	5.2	50	83	6	-	-
NDPG50703175	3.175	45	80	4	-	-	NDPG507053	5.3	50	83	6	-	-
NDPG507032	3.2	45	80	4	-	-	NDPG507054	5.4	50	83	6	-	-
NDPG50703264	3.264	45	80	4	-	-	NDPG507055	5.5	50	83	6	-	-
NDPG507033	3.3	45	80	4	M4x0.7	WH1-4	NDPG50705556	5.556	50	83	6	-	-
NDPG507034	3.4	45	80	4	M4x0.7	WH5-6	NDPG507056	5.6	50	83	6	-	-
NDPG507035	3.5	45	80	4	-	-	NDPG507057	5.7	50	83	6	-	-
NDPG50703572	3.572	45	80	4	-	-	NDPG507058	5.8	50	83	6	-	-
NDPG507036	3.6	45	80	4	-	-	NDPG507059	5.9	50	83	6	-	-
NDPG507037	3.7	45	80	4	-	-	NDPG507060	6	50	83	6	-	-
NDPG507038	3.8	45	80	4	-	-	NDPG507061	6.1	50	83	7	-	-
NDPG507039	3.9	45	80	4	-	-	NDPG507062	6.2	53	85	7	-	-
NDPG507040	4	45	80	4	-	-	NDPG507063	6.3	53	85	7	-	-
NDPG507041	4.1	45	80	5	-	-	NDPG5070635	6.35	53	85	7	-	-
NDPG507042	4.2	45	80	5	M5x0.8	WH1-4	NDPG507064	6.4	53	85	7	-	-
NDPG507043	4.3	45	80	5	M5x0.8	WH5-6	NDPG507065	6.5	53	85	7	-	-
NDPG507044	4.4	45	80	5	-	-	NDPG507066	6.6	53	85	7	-	-
NDPG507045	4.5	45	80	5	-	-	NDPG507067	6.7	53	85	7	-	-
NDPG507046	4.6	45	80	5	-	-	NDPG50706747	6.747	53	85	7	-	-
NDPG507047	4.7	45	80	5	-	-	NDPG507068	6.8	53	85	7	M8x1.25	WH1-4
NDPG50704763	4.763	45	80	5	-	-	NDPG507069	6.9	53	85	7	M8x1.25	WH5-6
NDPG507048	4.8	45	80	5	-	-	NDPG507070	7	53	85	7	M8x1.0	WH1-4
NDPG507049	4.9	45	80	5	-	-	NDPG507071	7.1	53	85	8	M8x1.0	WH5-6
NDPG507050	5	45	80	5	M6x1.0	WH1-4	NDPG50707144	7.144	58	90	8	-	-
NDPG507051	5.1	45	80	6	M6x1.0	WH5-6	NDPG507072	7.2	58	90	8	-	-

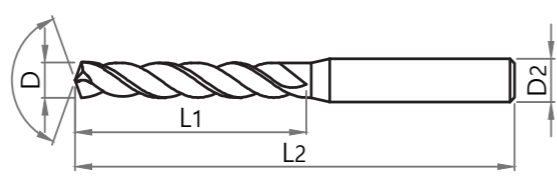
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◎	◎	○			○	◎	

○ : GOOD ◎ : BEST



Workpiece	① carbon steel, alloy steel		<input type="checkbox"/>
	② Cast iron		<input type="checkbox"/>
	③ aluminium		<input type="checkbox"/>
	④ heat resisting alloy, titanium		<input type="checkbox"/>
	⑤ nonferrous, aluminium		<input type="checkbox"/>
	⑥ ETC.		<input type="checkbox"/>
Work processing	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  Blind hole         </div> <div style="text-align: center;">  Through hole         </div> </div>		
Specification	number of flutes		
	D		
	L1		
	L2		
	D2		
	point angle		
Shank type	plain	<input type="checkbox"/>	   plain      Whistle notch      Flat
	Whistle notch	<input type="checkbox"/>	
	Flat	<input type="checkbox"/>	
Oil	internal	<input type="checkbox"/>	external
coating	coating	<input type="checkbox"/>	non coating
MOQ			
Details			








WD2022.01-ENG-BO4

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