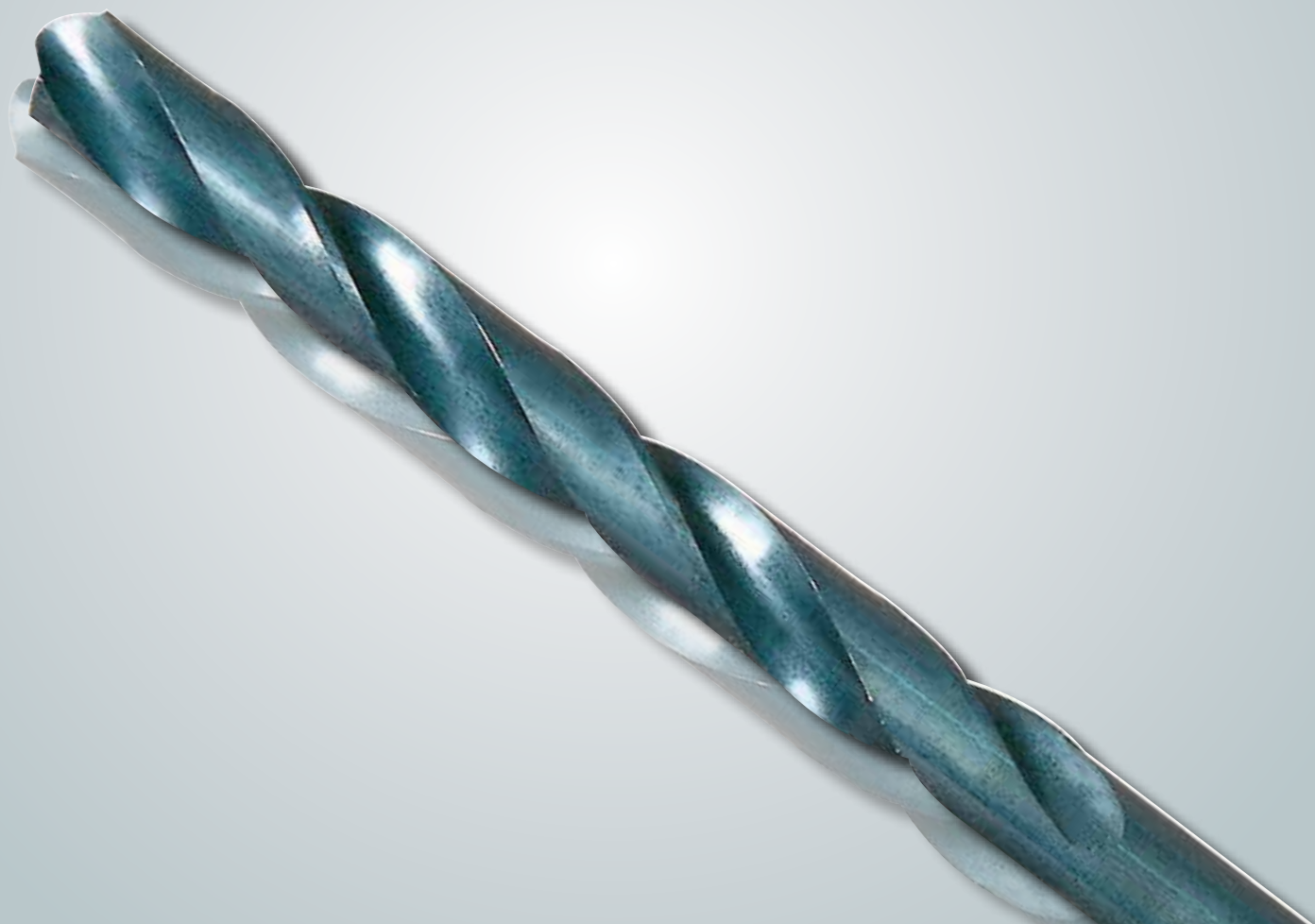


**SUPER HSS**

***SUPER-GP Drills***



**ШИРОКИЙ СПЕКТР ПРИМЕНЕНИЯ  
КАК НА  
НОВОМ, ТАК И НА УСТАРЕВШЕМ  
ОБОРУДОВАНИИ**



**Лидерство через Инновации**

# SUPER HSS

## SUPER-GP Drills

- ▶ **Материал:** улучшенная быстрорежущая сталь Super HSS
- ▶ **Диапазон диаметров:** от Ø 2.0мм до Ø 13.0мм (шаг 0.1 мм)
- ▶ **Длина:** Средняя
- ▶ **Стандарт:** DIN, JIS
- ▶ **Угол вершины:** 118°

Специальная конструкция канавок для:

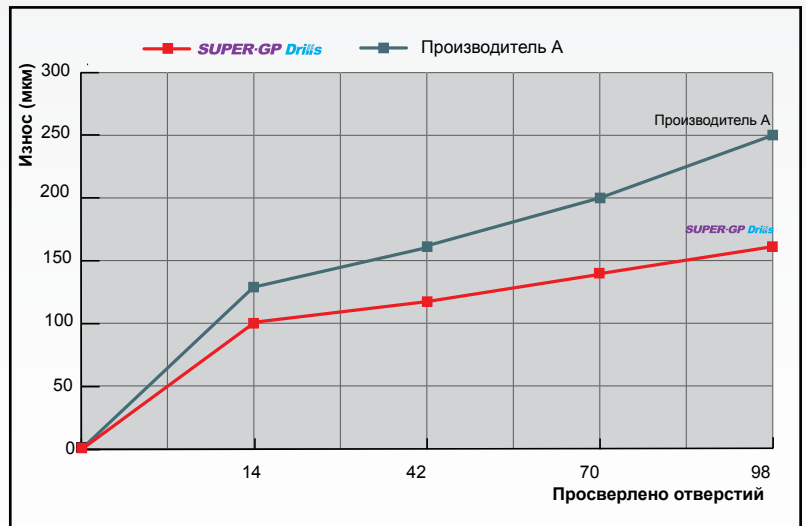
- ▶ Улучшения формирования и эвакуации стружки
- ▶ Увеличения стойкости инструмента
- ▶ Улучшения точности и качества обработки



- ▶ **Применение:** стали, чугун, легированные стали, ковкий чугун
- ▶ Отличная производительность на новом и на устаревшем оборудовании

## ПРИМЕР ПРИМЕНЕНИЯ

РЕЖИМЫ РЕЗАНИЯ	
Размер (мм)	Ø8.0 x 81 x 114
Материал заготовки	Сталь 45 (HRC20) DIN: C45 AISI: 1045
Частота вращения	1,050 об/мин
Скорость резания	26.39 м/мин
Подача	0.13 мм/об
Глубина сверления	24 мм (3xD)
Тип отверстия	Глухое отверстие
Охлаждение	Полив СОЖ



**SUPER-GP Drills**



**Производитель А**

За более подробной информацией обращайтесь к представителю YG-1 или дистрибьютеру

YE-GD15



SUPER HSS

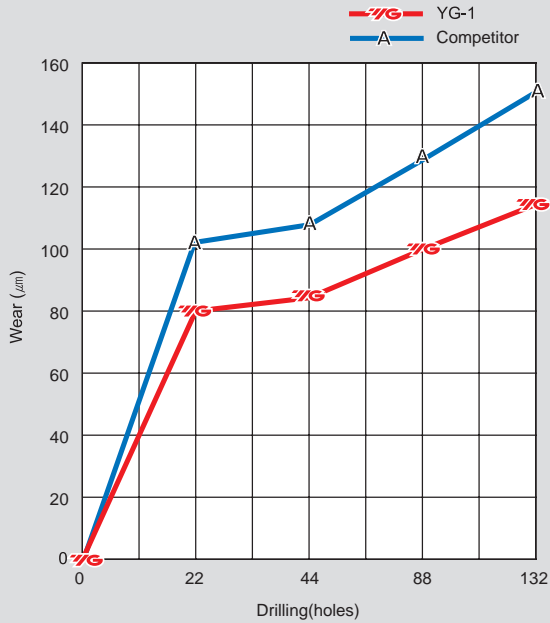
# **SUPER-GP** *Drills*

*All applications regardless of machine condition : Good or Poor*

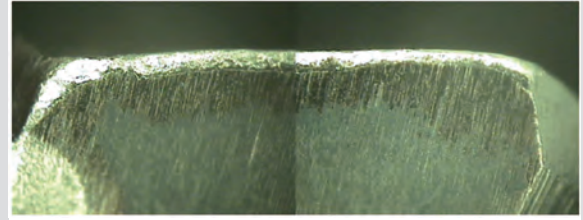


***YG*** YG-1 CO., LTD.

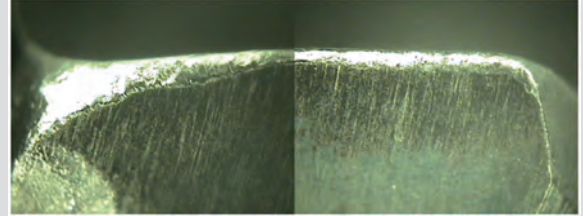
## TEST I - SUPER GP-DRILL



YG-1 (Total Drilling 132 Holes)



Competitor (Total Drilling 132 Holes)



### CUTTING CONDITION

**Size :** Ø4.2 x 54 x 83

**Work Material :** Carbon Steel(HRc20)

JIS : S45C

DIN : C45

AISI : 1045

**R.P.M :** 1895 rev./min.

**Cutting Speed :** 25m/min.

**Feed :** 0.06 mm/min.

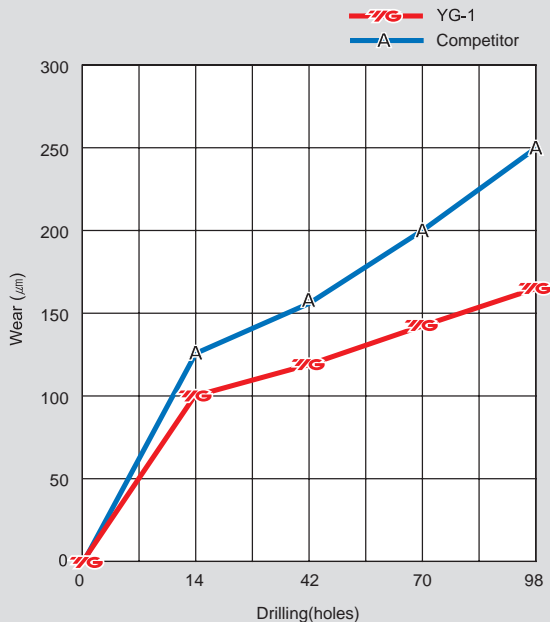
**Drilling Depth :** 12.6mm(3XD)

**Drilling Method :** Blind Hole

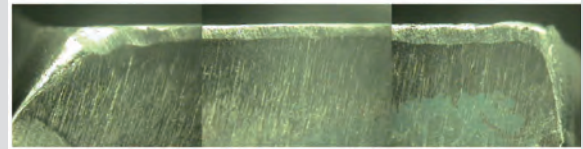
**Coolant :** Wet Cut

**Machine :** Machining Center

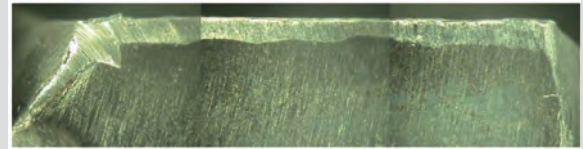
## TEST II - SUPER GP-DRILL



YG-1 (Total Drilling 98 Holes)



Competitor (Total Drilling 98 Holes)



### CUTTING CONDITION

**Size :** Ø8.0 x 81 x 114

**Work Material :** Carbon Steel(HRc20)

JIS : S45C

DIN : C45

AISI : 1045

**R.P.M :** 1050 rev./min.

**Cutting Speed :** 26.39 m/min.

**Feed :** 0.13 mm/min.

**Drilling Depth :** 24mm(3XD)

**Drilling Method :** Blind Hole

**Coolant :** Wet Cut

**Machine :** Machining Center

SUPER HSS

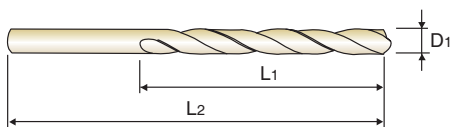
# SUPER-GP Drill (JIS)

- ▶ **Surface treatment** : Steam Tempered (Black Oxide Finish)
- ▶ **Applications** : Excellent tool performance in steels, cast iron, alloy steels and malleable cast iron.
- ▶ Special HSS improves toughness, wear resistance as well as extends dramatically the tool life.
- ▶ All applications regardless of machine condition: Good or Poor.



Unit : mm

\* Unique flute shape makes better chip formation and evacuation.  
\* New point geometry enhances machining ability.



EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
* DSH101020	2.0	29	55
* DSH101021	2.1	29	55
* DSH101022	2.2	33	58
* DSH101023	2.3	33	58
* DSH101024	2.4	35	61
* DSH101025	2.5	35	61
* DSH101026	2.6	37	64
* DSH101027	2.7	37	64
* DSH101028	2.8	39	67
* DSH101029	2.9	42	71
* DSH101030	3.0	42	71
* DSH101031	3.1	42	71
* DSH101032	3.2	42	71
* DSH101033	3.3	45	73
* DSH101034	3.4	45	73
* DSH101035	3.5	45	73
* DSH101036	3.6	48	76
* DSH101037	3.7	48	76
* DSH101038	3.8	48	76
* DSH101039	3.9	51	79
* DSH101040	4.0	54	83
* DSH101041	4.1	54	83
* DSH101042	4.2	54	83
* DSH101043	4.3	54	83
* DSH101044	4.4	56	86
* DSH101045	4.5	56	86
* DSH101046	4.6	56	86
* DSH101047	4.7	59	89
* DSH101048	4.8	59	89
* DSH101049	4.9	62	92
* DSH101050	5.0	62	92
* DSH101051	5.1	62	92
* DSH101052	5.2	64	95
* DSH101053	5.3	64	95
* DSH101054	5.4	64	95
* DSH101055	5.5	64	95
* DSH101056	5.6	67	98

\* 10pcs per package  
\*\* 5pcs per package

# DSH101 SERIES

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Cast Iron	Aluminum	Stainless Steels	Titanium	Mild Steels	Copper	Bronze	CFRP
-HB225	HB225-325	HRC30-45	HRC45-55	HRC55-								
◎	◎				○	○	○	○	○			

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
* DSH101057	5.7	67	98
* DSH101058	5.8	67	98
* DSH101059	5.9	67	98
* DSH101060	6.0	70	102
* DSH101061	6.1	70	102
* DSH101062	6.2	70	102
* DSH101063	6.3	70	102
* DSH101064	6.4	73	105
* DSH101065	6.5	73	105
* DSH101066	6.6	73	105
* DSH101067	6.7	73	105
* DSH101068	6.8	73	105
* DSH101069	6.9	73	105
* DSH101070	7.0	73	105
* DSH101071	7.1	75	108
* DSH101072	7.2	75	108
* DSH101073	7.3	75	108
* DSH101074	7.4	78	111
* DSH101075	7.5	78	111
* DSH101076	7.6	78	111
* DSH101077	7.7	81	114
* DSH101078	7.8	81	114
* DSH101079	7.9	81	114
* DSH101080	8.0	81	114
* DSH101081	8.1	84	117
* DSH101082	8.2	84	117
* DSH101083	8.3	84	117
** DSH101084	8.4	87	121
** DSH101085	8.5	87	121
** DSH101086	8.6	87	121
** DSH101087	8.7	87	121
** DSH101088	8.8	89	124
** DSH101089	8.9	89	124
** DSH101090	9.0	89	124
** DSH101091	9.1	89	124
** DSH101092	9.2	92	127
** DSH101093	9.3	92	127

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
** DSH101094	9.4	92	127
** DSH101095	9.5	92	127
** DSH101096	9.6	95	130
** DSH101097	9.7	95	130
** DSH101098	9.8	95	130
** DSH101099	9.9	95	130
** DSH101100	10.0	95	130
** DSH101101	10.1	98	133
** DSH101102	10.2	98	133
** DSH101103	10.3	98	133
** DSH101104	10.4	98	133
** DSH101105	10.5	100	137
** DSH101106	10.6	100	137
** DSH101107	10.7	100	137
** DSH101108	10.8	103	140
** DSH101109	10.9	103	140
** DSH101110	11.0	103	140
** DSH101111	11.1	103	140
** DSH101112	11.2	106	143
** DSH101113	11.3	106	143
** DSH101114	11.4	106	143
** DSH101115	11.5	106	143
** DSH101116	11.6	109	146
** DSH101117	11.7	109	146
** DSH101118	11.8	109	146
** DSH101119	11.9	109	146
** DSH101120	12.0	111	149
** DSH101121	12.1	111	149
** DSH101122	12.2	111	149
** DSH101123	12.3	111	149
** DSH101124	12.4	114	152
** DSH101125	12.5	114	152
** DSH101126	12.6	114	152
** DSH101127	12.7	114	152
** DSH101128	12.8	114	152
** DSH101129	12.9	114	152
** DSH101130	13.0	114	152

\* 10pcs per package  
\*\* 5pcs per package

SUPER HSS

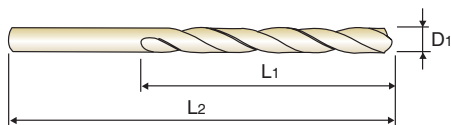
# SUPER-GP Drill (DIN338)

- ▶ **Surface treatment** : Steam Tempered (Black Oxide Finish)
- ▶ **Applications** : Excellent tool performance in steels, cast iron, alloy steels and malleable cast iron.
- ▶ Special HSS improves toughness, wear resistance as well as extends dramatically the tool life.
- ▶ All applications regardless of machine condition: Good or Poor.



Unit : mm

\* Unique flute shape makes better chip formation and evacuation.  
\* New point geometry enhances machining ability.



EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
* DSH105020	2.0	24	49
* DSH105021	2.1	24	49
* DSH105022	2.2	27	53
* DSH105023	2.3	27	53
* DSH105024	2.4	30	57
* DSH105025	2.5	30	57
* DSH105026	2.6	30	57
* DSH105027	2.7	33	61
* DSH105028	2.8	33	61
* DSH105029	2.9	33	61
* DSH105030	3.0	33	61
* DSH105031	3.1	36	65
* DSH105032	3.2	36	65
* DSH105033	3.3	36	65
* DSH105034	3.4	39	70
* DSH105035	3.5	39	70
* DSH105036	3.6	39	70
* DSH105037	3.7	39	70
* DSH105038	3.8	43	75
* DSH105039	3.9	43	75
* DSH105040	4.0	43	75
* DSH105041	4.1	43	75
* DSH105042	4.2	43	75
* DSH105043	4.3	47	80
* DSH105044	4.4	47	80
* DSH105045	4.5	47	80
* DSH105046	4.6	47	80
* DSH105047	4.7	47	80
* DSH105048	4.8	52	86
* DSH105049	4.9	52	86
* DSH105050	5.0	52	86
* DSH105051	5.1	52	86
* DSH105052	5.2	52	86
* DSH105053	5.3	52	86
* DSH105054	5.4	57	93
* DSH105055	5.5	57	93
* DSH105056	5.6	57	93

\* 10pcs per package  
\*\* 5pcs per package

# DSH105 SERIES

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Cast Iron	Aluminum	Stainless Steels	Titanium	Mild Steels	Copper	Bronze	CFRP
-HB225	HB225-325	HRC30-45	HRC45-55	HRC55-								
◎	◎				○	○	○	○	○			

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
* DSH105057	5.7	57	93
* DSH105058	5.8	57	93
* DSH105059	5.9	57	93
* DSH105060	6.0	57	93
* DSH105061	6.1	63	101
* DSH105062	6.2	63	101
* DSH105063	6.3	63	101
* DSH105064	6.4	63	101
* DSH105065	6.5	63	101
* DSH105066	6.6	63	101
* DSH105067	6.7	63	101
* DSH105068	6.8	69	109
* DSH105069	6.9	69	109
* DSH105070	7.0	69	109
* DSH105071	7.1	69	109
* DSH105072	7.2	69	109
* DSH105073	7.3	69	109
* DSH105074	7.4	69	109
* DSH105075	7.5	69	109
* DSH105076	7.6	75	117
* DSH105077	7.7	75	117
* DSH105078	7.8	75	117
* DSH105079	7.9	75	117
* DSH105080	8.0	75	117
* DSH105081	8.1	75	117
* DSH105082	8.2	75	117
* DSH105083	8.3	75	117
** DSH105084	8.4	75	117
** DSH105085	8.5	75	117
** DSH105086	8.6	81	125
** DSH105087	8.7	81	125
** DSH105088	8.8	81	125
** DSH105089	8.9	81	125
** DSH105090	9.0	81	125
** DSH105091	9.1	81	125
** DSH105092	9.2	81	125
** DSH105093	9.3	81	125

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
** DSH105094	9.4	81	125
** DSH105095	9.5	81	125
** DSH105096	9.6	87	133
** DSH105097	9.7	87	133
** DSH105098	9.8	87	133
** DSH105099	9.9	87	133
** DSH105100	10.0	87	133
** DSH105101	10.1	87	133
** DSH105102	10.2	87	133
** DSH105103	10.3	87	133
** DSH105104	10.4	87	133
** DSH105105	10.5	87	133
** DSH105106	10.6	87	133
** DSH105107	10.7	94	142
** DSH105108	10.8	94	142
** DSH105109	10.9	94	142
** DSH105110	11.0	94	142
** DSH105111	11.1	94	142
** DSH105112	11.2	94	142
** DSH105113	11.3	94	142
** DSH105114	11.4	94	142
** DSH105115	11.5	94	142
** DSH105116	11.6	94	142
** DSH105117	11.7	94	142
** DSH105118	11.8	94	142
** DSH105119	11.9	101	151
** DSH105120	12.0	101	151
** DSH105121	12.1	101	151
** DSH105122	12.2	101	151
** DSH105123	12.3	101	151
** DSH105124	12.4	101	151
** DSH105125	12.5	101	151
** DSH105126	12.6	101	151
** DSH105127	12.7	101	151
** DSH105128	12.8	101	151
** DSH105129	12.9	101	151
** DSH105130	13.0	101	151

\* 10pcs per package  
\*\* 5pcs per package



SUPER HSS

# SUPER-GP Drill

## CUTTING CONDITION

	P										M		S	
WORK MATERIAL	CARBON STEELS		CARBON STEELS		CARBON STEELS		ALLOY STEELS		ALLOY STEELS		STAINLESS STEELS		TITANIUM ALLOYS	
HARDNESS			~ HRc23		~ HRc23 ~ 28		HRc23 ~ 34		HRc34 ~ 38		HRc23			
STRENGTH	570 N/mm <sup>2</sup>		~ 830 N/mm <sup>2</sup>		830 ~ 950 N/mm <sup>2</sup>		830 ~ 1110 N/mm <sup>2</sup>		1110 ~ 1260 N/mm <sup>2</sup>		830 N/mm <sup>2</sup>		410 N/mm <sup>2</sup>	
DRILLING SPEED	22 ~ 27 m/min		15 ~ 20 m/min		10 ~ 15 m/min		15 ~ 20 m/min		8 ~ 12 m/min		15 ~ 20 m/min		8 ~ 12 m/min	
DIAMETER	N	S	N	S	N	S	N	S	N	S	N	S	N	S
2.5	3380	0.025	2550	0.025	1900	0.015	2380	0.020	1400	0.015	2550	0.025	1400	0.020
3	2700	0.050	2000	0.050	1500	0.025	1880	0.050	1100	0.020	2000	0.050	1100	0.025
5	1700	0.063	1280	0.063	960	0.038	1190	0.063	700	0.025	1280	0.063	700	0.038
6	1350	0.085	1000	0.085	750	0.051	950	0.085	550	0.029	1000	0.085	550	0.051
8	1050	0.130	780	0.130	590	0.076	730	0.130	430	0.038	780	0.130	430	0.076
10	850	0.140	640	0.140	480	0.076	600	0.150	350	0.047	600	0.140	350	0.076
11	750	0.150	560	0.150	425	0.076	520	0.180	310	0.050	560	0.150	300	0.076
13	640	0.160	470	0.160	360	0.083	440	0.186	260	0.050	470	0.160	250	0.083

	P		K		N							
WORK MATERIAL	TOOL STEELS		CAST IRON		ALUMINUM ALLOYS		MAGNESIUM ALLOYS		ZINC ALLOYS		PLASTICS	
HARDNESS			~ HRc21									
STRENGTH	270 N/mm <sup>2</sup>		~ 800 N/mm <sup>2</sup>									
DRILLING SPEED	20 ~ 25 m/min		15 ~ 20 m/min		45 ~ 50 m/min		55 ~ 65 m/min		40 ~ 50 m/min		20 ~ 25 m/min	
DIAMETER	N	S	N	S	N	S	N	S	N	S	N	S
2.5	3180	0.042	2250	0.025	6400	0.038	8600	0.038	6400	0.038	3380	0.025
3	2500	0.050	2000	0.050	5000	0.063	6800	0.063	5000	0.063	2700	0.050
5	1590	0.063	1280	0.063	3200	0.076	4300	0.076	3200	0.076	1700	0.063
6	1250	0.085	1000	0.085	2500	0.111	3400	0.111	2500	0.111	1350	0.085
8	970	0.130	780	0.130	2000	0.180	2600	0.180	2000	0.180	1050	0.130
10	780	0.160	640	0.140	1600	0.190	2100	0.190	1600	0.190	850	0.140
11	700	0.180	560	0.150	1400	0.200	1900	0.200	1400	0.200	750	0.150
13	600	0.186	460	0.160	1200	0.213	1600	0.213	1200	0.213	650	0.160

N = R.P.M

S = Feed per Revolution (mm/rev.)

# ***SUPER-GP*** *Drills*

All applications regardless of machine condition :  
Good or Poor

 **YG-1 CO., LTD.**

## **HEAD OFFICE**

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**Http://www.yg1.kr**

**E-mail:yg1@yg1.kr**

Tool specifications are subject to change without prior notice.