

SUPER HSS SUPER-GP Drill

CUTTING CONDITION

WORK MATERIAL	P								M		S			
	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 ²		~ 830 N/mm ²		830 ~ 950 N/mm ²		830 ~ 1110 N/mm ²		1110 ~ 1260 N/mm ²		830 N/mm ²		410 N/mm ²	
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	
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

WORK MATERIAL	P		K		N							
	TOOL STEELS		CAST IRON		ALUMINUM ALLOYS		MAGNESIUM ALLOYS		ZINC ALLOYS		PLASTICS	
HARDNESS	~ HRC21		~ HRC21									
STRENGTH	270 N/mm ²		~ 800 N/mm ²									
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 YG-1 CO., LTD.

HEAD OFFICE

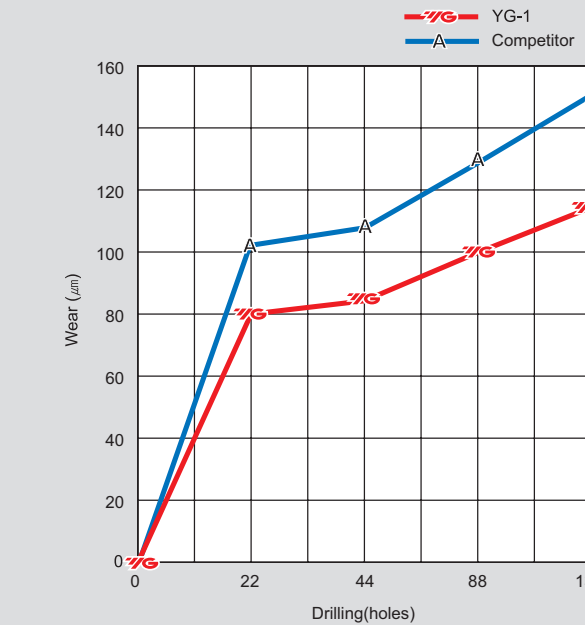
211, Sewolcheon-ro, Bupyeong-gu, Incheon, Korea
PHONE: +82-32-526-0909, FAX: +82-32-526-4373
Http://www.yg1.kr
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Tool specifications are subject to change without prior notice.

YE-GD15

SUPER HSS SUPER-GP Drills

All applications regardless of machine condition : Good or Poor



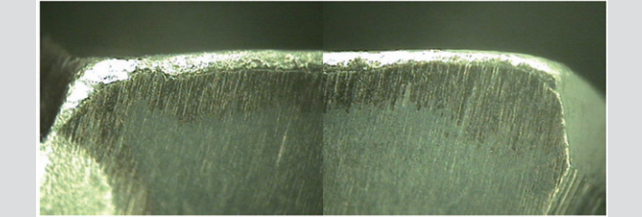
CUTTING CONDITION

Size : Ø4.2 x 54 x 83
Work Material : Carbon Steel(HRC20)
JIS : S45C
DIN : C45
AISI : 1045
R.P.M : 1895 rev./min.

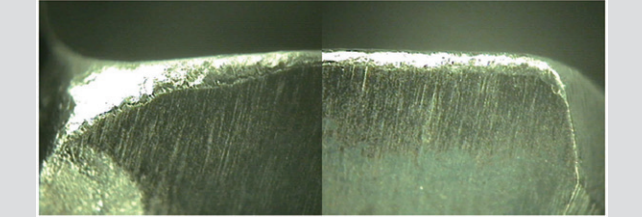
Cutting Speed : 25m/min.
Feed : 0.06 mm/min.
Drilling Depth : 12.6mm(3XD)
Drilling Method : Blind Hole
Coolant : Wet Cut
Machine : Machining Center

TEST I - SUPER GP-DRILL

YG-1 (Total Drilling 132 Holes)

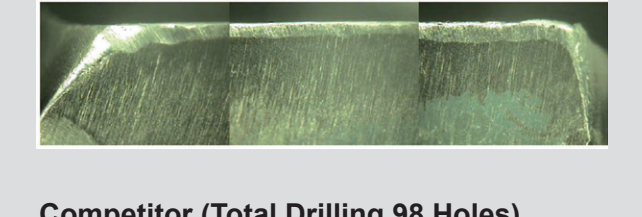


Competitor (Total Drilling 132 Holes)

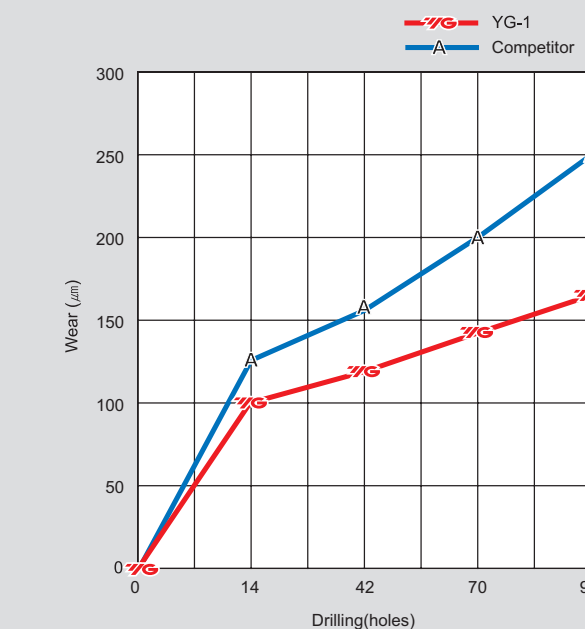
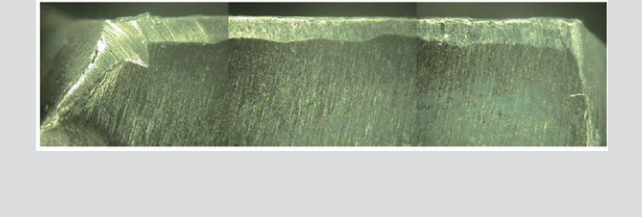


TEST II - SUPER GP-DRILL

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

YG1YEGD150121001

YG YG-1 CO., LTD.

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

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
*6pcs 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

*10pcs per package
**5pcs per package

SUPER HSS SUPER-GP Drill (DIN338)

DSH105 SERIES

- ▶ **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

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

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

*10pcs per package
*6pcs per package