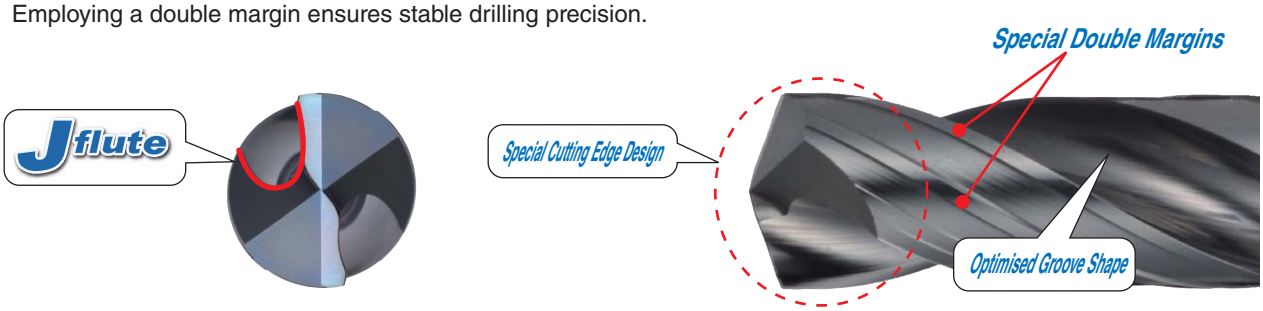
■ General Features

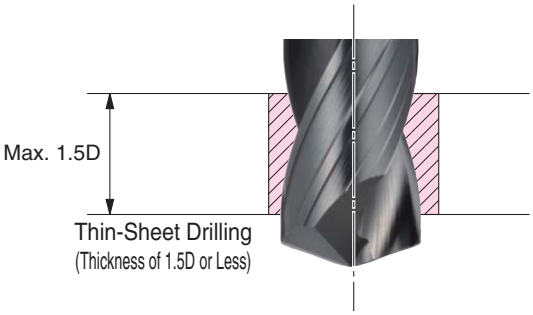
Super MultiDrill WGS type features a tuned J flute that improves chip size when machining thin sheets. Sharp edge minimises hardening from drilling.
Special double margin design gives stable drilling precision.

■ Characteristics · Applications

Super MultiDrill WGS type features J flute (groove shape) specially adjusted for thin sheets.
Employing a double margin ensures stable drilling precision.



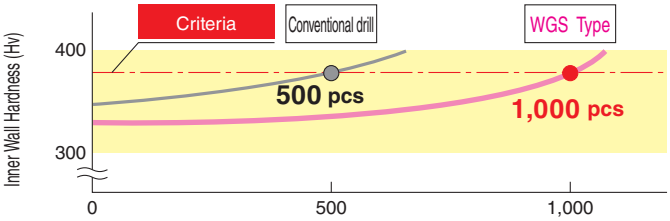
■ Applications



< Typical Automotive Components >
- Bearing Hubs (Inners/Outers)
- Knuckles
- Differential Rings
- Bolt Holes For Flanged Automotive Components

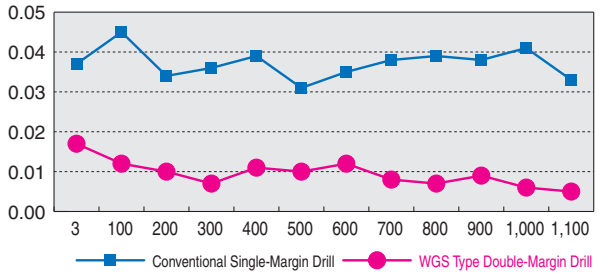
■ Performance

●Slowed Hardening of Work Surface from Drilling



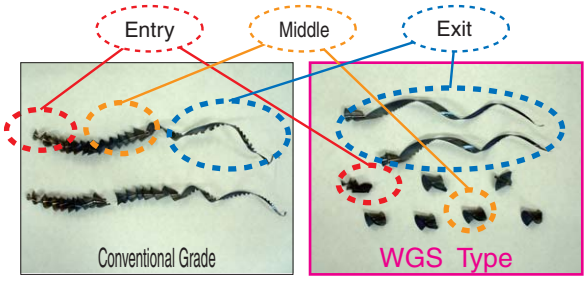
Work Material: S53C
Cutting Conditions: v_c=70m/min f=0.2mm/rev
H=13mm

●Stability Of Oversized Drilled Holes



Work Material: S50C
Cutting Conditions: v_c=80m/min f=0.25mm/rev
H=16mm

●Smaller Chip Size

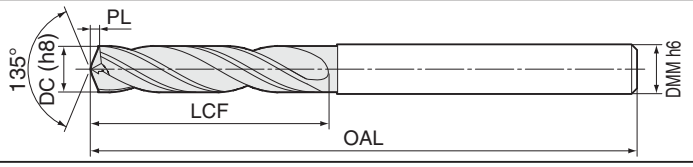


Work Material: SUJ2
Cutting Conditions: v_c=80m/min f=0.25mm/rev
H=13mm

External Coolant Supply (WGS Type)

Carbon Steel Up to 0.28%	Alloy Steel From 0.29%	Tempered Steel	Hardened Steel Up to 45HRC	Hardened Steel From 45HRC	Stainless Steel	Ti Alloy	Heat-resistant Steels	Cast Iron	Ductile Cast Iron	Aluminum Alloy	Copper Alloy	Composite CFRP
○	◎	◎	○		○			○	○	○		

DEX Coat 2D



■Body Diameter ø6.8 to 16.0mm

Diameter DC (mm)	Cat. No.	Dimensions(mm) Flute Length LCF	Total length OAL	Tip PL	Shank DMM (mm)
6.8 to 7.0	MDW 0680 to 0700WGS2	34	74	1.4	7.0
7.1 to 7.5	MDW 0710 to 0750WGS2	35	80	1.5	8.0
7.6 to 8.0	0760 to 0800WGS2	38	80	1.6	
8.1 to 8.5	MDW 0810 to 0850WGS2	38	84	1.7	9.0
8.6 to 9.0	0860 to 0900WGS2	40	84	1.8	
9.1 to 9.5	MDW 0910 to 0950WGS2	40	89	1.9	10.0
9.6 to 10.0	0960 to 1000WGS2	43	89	2.0	
10.1 to 10.5	MDW 1010 to 1050WGS2	43	95	2.1	11.0
10.6 to 11.0	1060 to 1100WGS2	47	95	2.2	
11.1 to 11.5	MDW 1110 to 1150WGS2	47	102	2.3	12.0
11.6 to 12.0	1160 to 1200WGS2	49	102	2.4	
12.1 to 12.5	MDW 1210 to 1250WGS2	50	103	2.6	13.0
12.6 to 13.0	1260 to 1300WGS2	52	103	2.7	
13.1 to 13.5	MDW 1310 to 1350WGS2	53	108	2.8	14.0
13.6 to 14.0	1360 to 1400WGS2	55	108	2.9	
14.1 to 14.5	MDW 1410 to 1450WGS2	55	111	3.0	15.0
14.6 to 15.0	1460 to 1500WGS2	56	111	3.1	
15.1 to 15.5	MDW 1510 to 1550WGS2	56	115	3.2	16.0
15.6 to 16.0	1560 to 1600WGS2	58	115	3.3	

■ This is a made-to-order product. Please specify hole diameter (including tolerance) when ordering.

■ Recommended Cutting Conditions (v_c: Cutting Speed m/min f: Feed Rate mm/rev)

Drill Diameter DC (mm)	Cutting Conditions	Soft Steel/General Steel (Up to 300HB)	Stainless Steel (Up to 200HB)	Gray Cast Iron FC250	Ductile Cast Iron FCD450
Up to ø10.0	v_c	50 - **80** - 130	15 - **40** - 60	50 - **60** - 80	50 - **60** - 70
	f	0.20 - **0.25** - 0.35	0.10 - **0.15** - 0.20	0.20 - **0.30** - 0.35	0.20 - **0.25** - 0.35
Up to ø16.0	v_c	60 - **100** - 140	20 - **40** - 60	60 - **80** - 100	50 - **60** - 80
	f	0.25 - **0.30** - 0.35	0.10 - **0.15** - 0.20	0.25 - **0.30** - 0.35	0.25 - **0.30** - 0.35

* Recommended cutting conditions are affected by machine rigidity, work clamps, and other factors, and must therefore be adjusted to suit the environment in question. Min. - **Optimum** - Max.
* If hardening from drilling occurs, we recommend that the lower speed indicated in the recommended cutting conditions is selected.