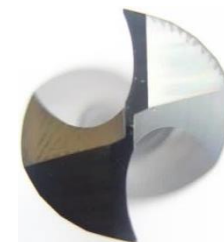




Micro grain  
**CARBIDE**

# DREAM DRILL **FLAT BOTTOM**

( 180 ° Point Angle without Coolant Holes )



*For Variety of Drilling*

## Product Introduction



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DREAM DRILLS **FLAT BOTTOM**

*Just ONE drill*

*Micro grain*  
**CARBIDE**  
**DREAM DRILL FLAT BOTTOM**

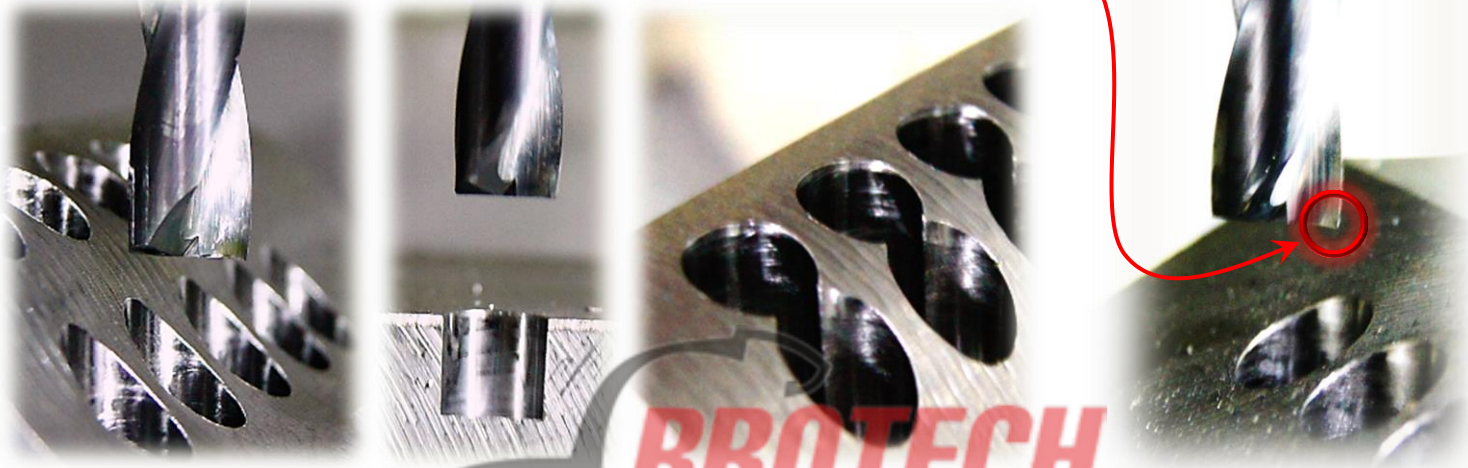
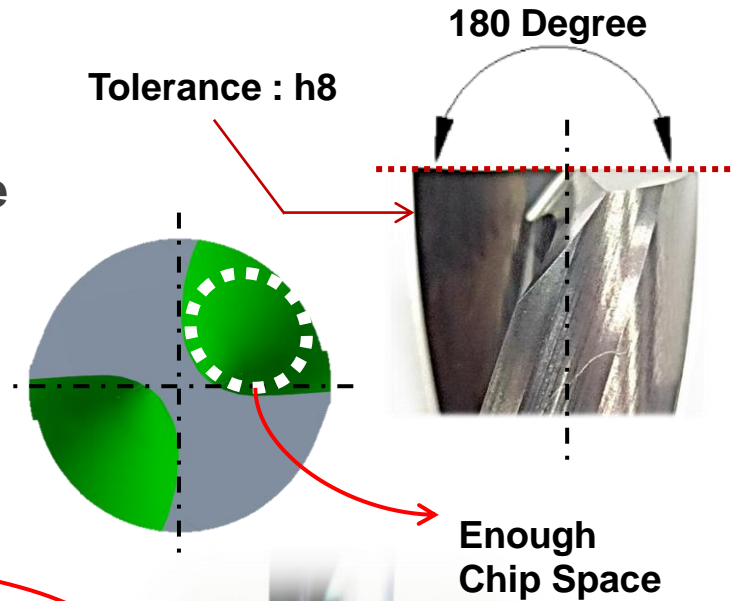
*For various angled surface*



## DREAM DRILLS **FLAT BOTTOM**

### ■ Geometry

- ✓ **180 Degree** Point Angle enables drilling of Horizontal Surface and Sloped Surface
- ✓ Optimized flute shape for **Excellent Chip Evacuation**
- ✓ High **Strength Cutting Edge** to improve tool life and versatility drilling

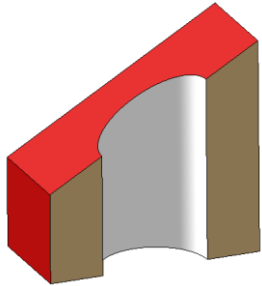


**BROTECH**

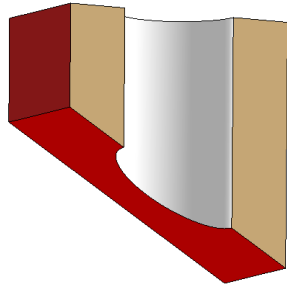
# DREAM DRILLS **FLAT BOTTOM**

## ■ Variety of Drilling

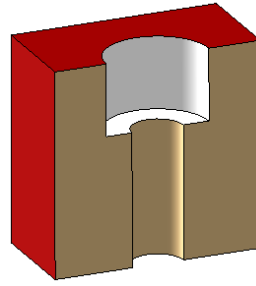
✓ Can be used in a variety of drilling applications



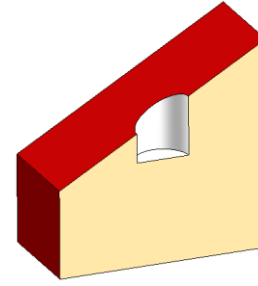
Inclined Entry



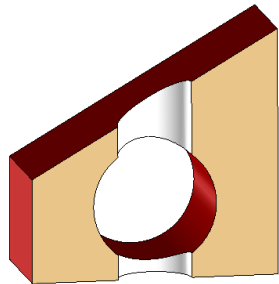
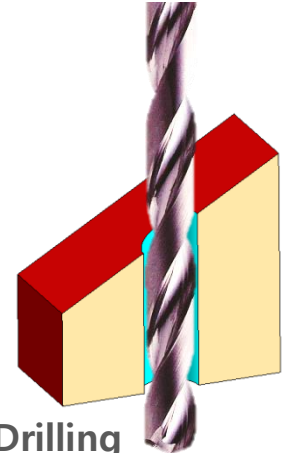
Inclined Exit



Counter Boring



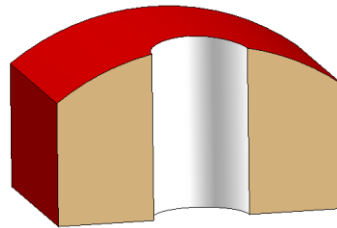
Guide Drilling



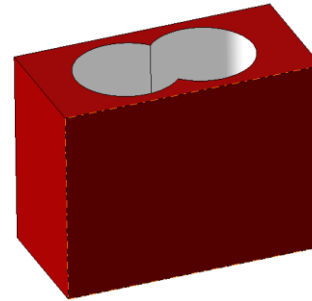
Cross Drilling



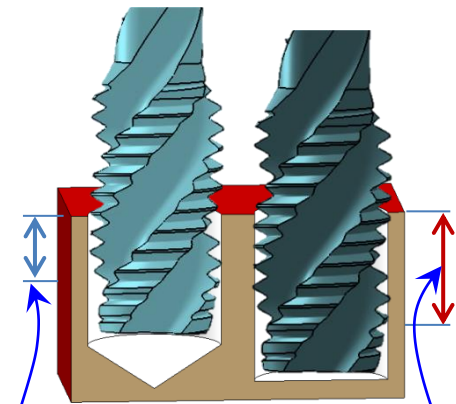
Thin Plate



Curved Surface



Chained Hole



Blind Hole for Threading

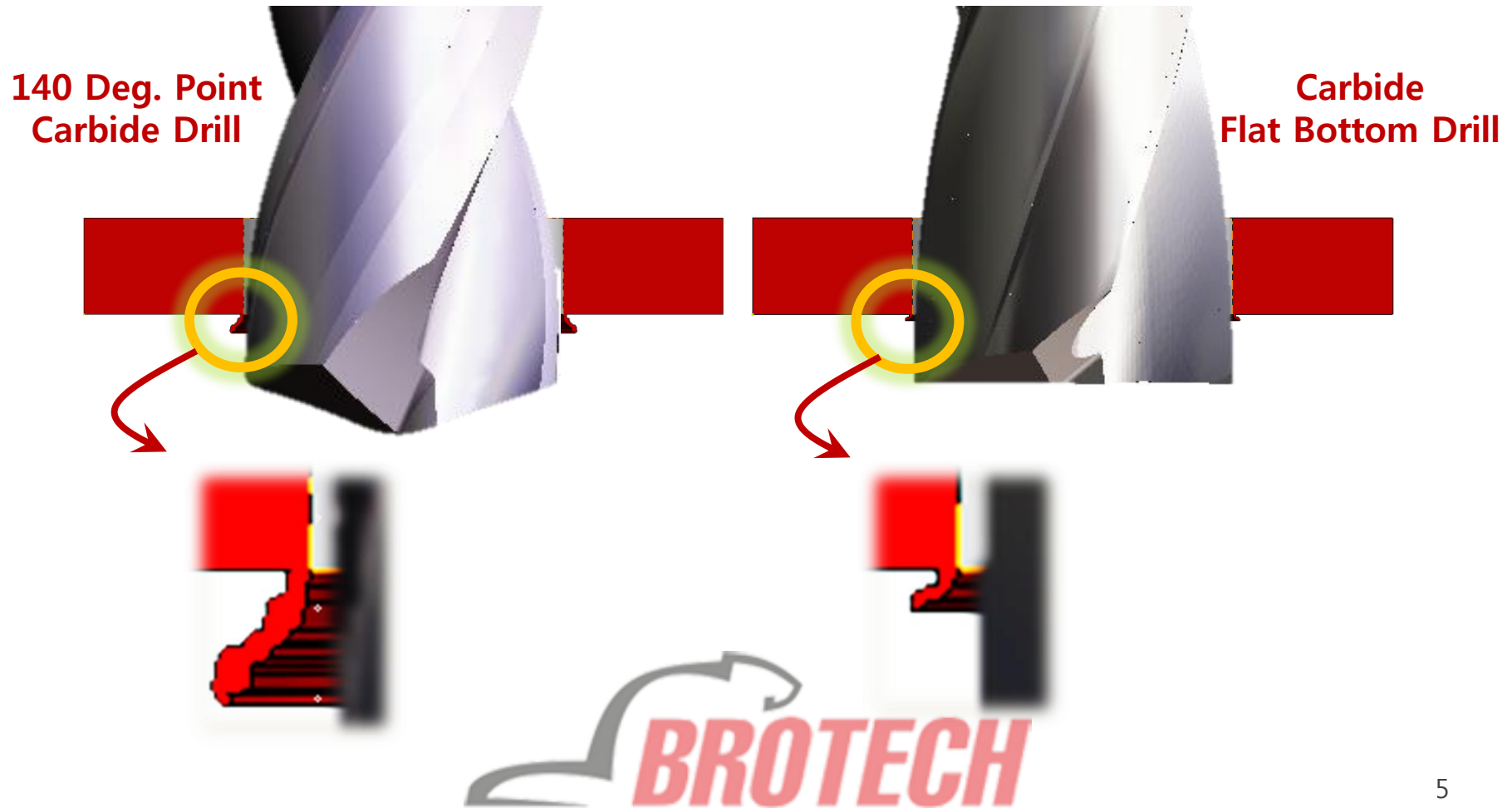
*Internal Thread Length*



## DREAM DRILLS **FLAT BOTTOM**

### ■ For Through Hole

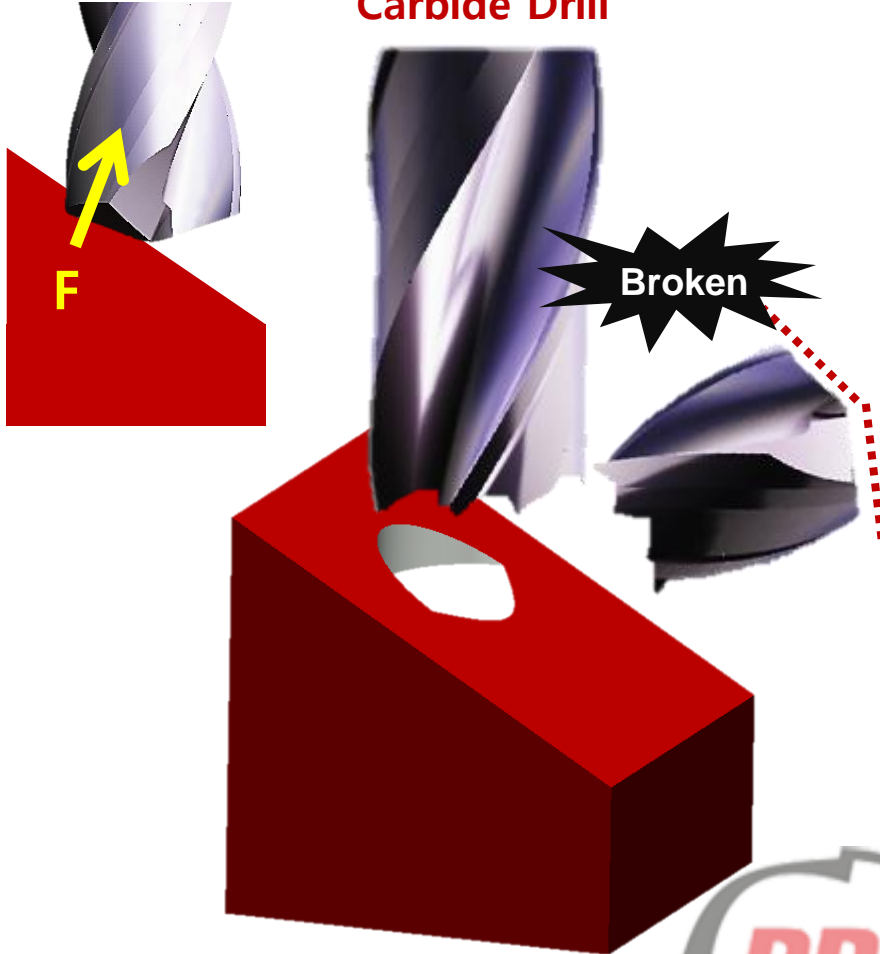
- ✓ **Minimized Burrs** at entrance and exit when drilling **Thin Plate**



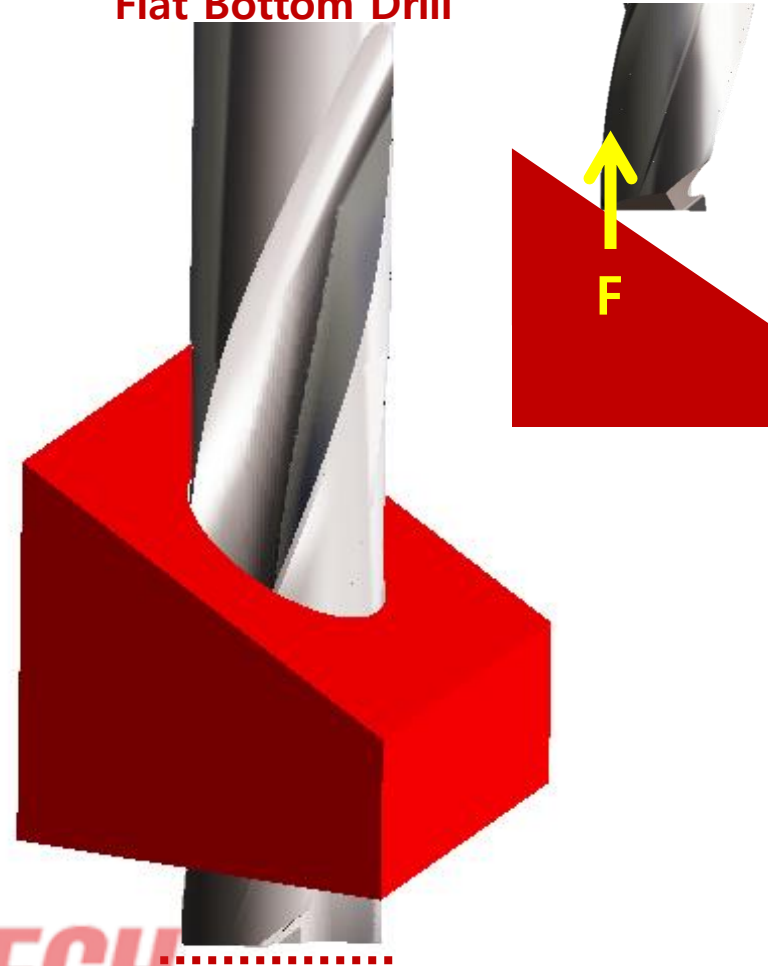
# DREAM DRILLS **FLAT BOTTOM**

## ■ For holes on Angled surface

140 Deg. Point  
Carbide Drill



Carbide  
Flat Bottom Drill

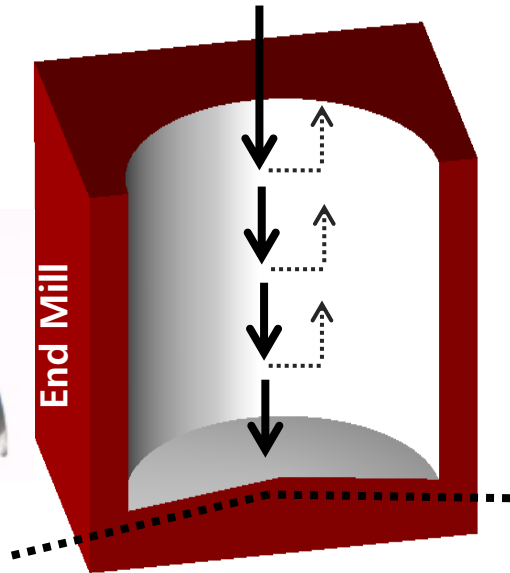


# DREAM DRILLS **FLAT BOTTOM**

## ■ Comparison with End Mill

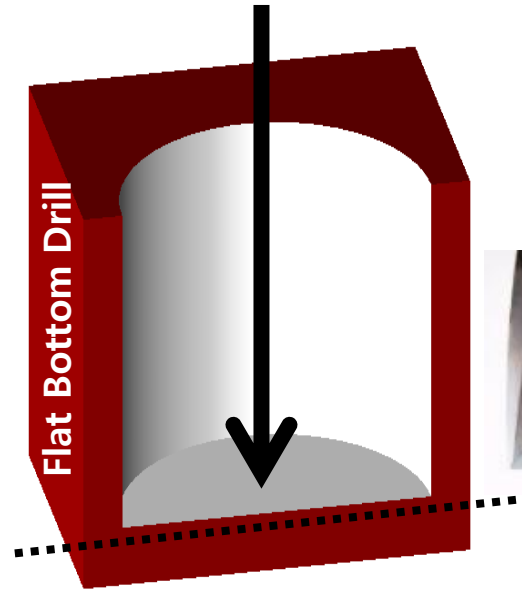
- ✓ **Over 3 times faster drilling** than End Mill

**Slow** Feedrate  
& **Pecking** cycle



**Concavity** on bottom face

**Fast** Feedrate



**180° Flat** on bottom face



## DREAM DRILLS **FLAT BOTTOM**

### ■ Without Internal Coolant Holes & **Single Margin**

[ UNIT : mm ]

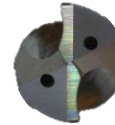


- \* Drilling Depth : **2xD**
- \* Diameter Range : **Ø 3.0 ~ Ø 20.0**

\* 'X' Coating (Upgraded AlCrN-based / Light Grey )

\* Available from Jan. 2017

### ■ With **Internal Coolant Holes** & **Double Margin** : **Under Developing**



- \* Drilling Depth : **5xD**
- \* Diameter Range : **Ø 3.0 ~ Ø 20.0**

\* 'X' Coating (Upgraded AlCrN-based / Light Grey )

### ■ **WORK MATERIALS**

Excellent : ◎ Good : ○

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Cast Iron	Stainless Steel	Aluminum	Copper	CFRP	Titanium
~ HB225	HB225~325	HRc30~45	HRc45~55	HRc55~						
◎	◎	○			◎		○	○		

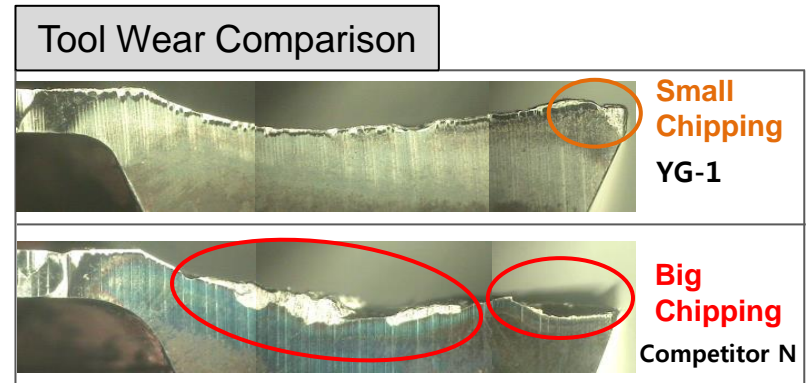
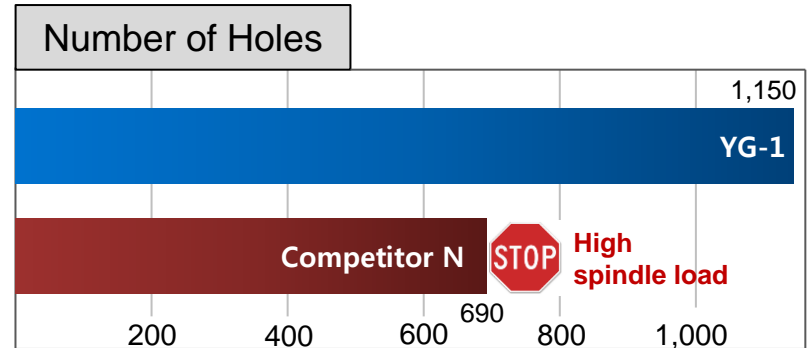
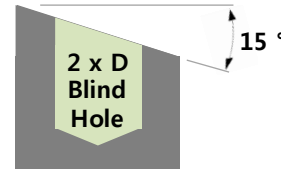




# DREAM DRILLS **FLAT BOTTOM**

## ■ Ø6.0mm, Carbon Steel

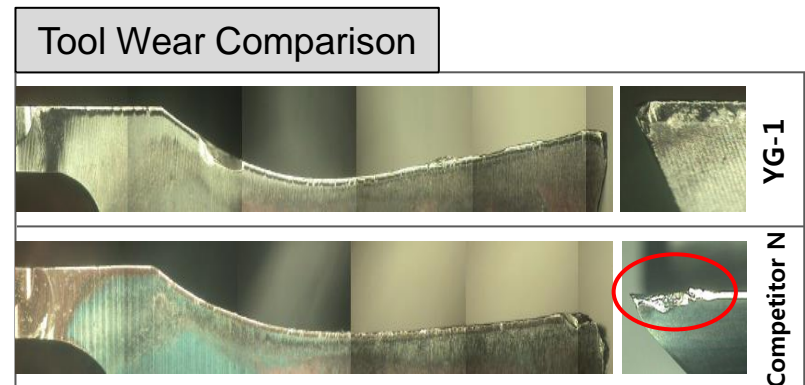
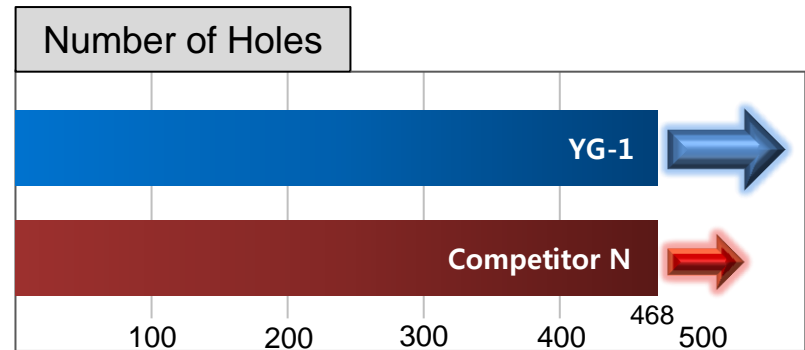
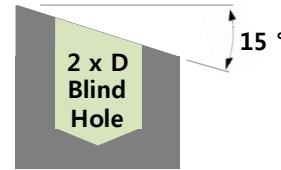
Tool	YG-1	Competitor N
O.D Size (mm)	Ø6.0 (0.2362 inch)	
Work Material	DIN: C45    AISI: 1045 JIS: S45C Hardness : HRc 20 ( HB 228 )	
Cutting Speed	75.4 m/min ( 244.4 ft/min.)	
RPM	4,000 rev/min	
Feed	0.1 mm/rev ( 0.0039 in/rev.)	
Drilling Depth	12.0 mm (2XD) - Blind / without Pecking	
Cooling Method	External Cooling Water Soluble ( 9% Emulsion)	
Machine	Vertical Machining Center (BT#40)	



## DREAM DRILLS **FLAT BOTTOM**

■ **Ø12.0mm, Carbon Steel**

Tool	YG-1	Competitor N
O.D Size (mm)	Ø12.0 (0.4724 inch)	
Work Material	DIN: C45    AISI: 1045 JIS: S45C Hardness : HRc 20 ( HB 228 )	
Cutting Speed	75.4 m/min ( 244.4 ft/min.)	
RPM	2,000 rev/min	
Feed	0.21 mm/rev ( 0.0083 in/rev.)	
Drilling Depth	24.0 mm (2XD) - Blind / without Pecking	
Cooling Method	External Cooling Water Soluble ( 9% Emulsion)	
Machine	Vertical Machining Center (BT#40)	



# DREAM DRILLS **FLAT BOTTOM**

## ■ Ø6.0mm, Alloy Steel

Tool	YG-1	Competitor N
O.D Size (mm)	Ø6.0 (0.2362 inch)	
Work Material	DIN: 42CrMo4    AISI: 4140 JIS: SCM440 Hardness : HRc 30 ( HB 286 )	
Cutting Speed	65.0 m/min ( 213.3 ft/min.)	
RPM	3,448 rev/min	
Feed	0.1 mm/rev ( 0.0039 in/rev.)	
Drilling Depth	12.0 mm (2XD) - Blind / without Pecking	
Cooling Method	External Cooling Water Soluble ( 9% Emulsion)	
Machine	Vertical Machining Center (BT#40)	

