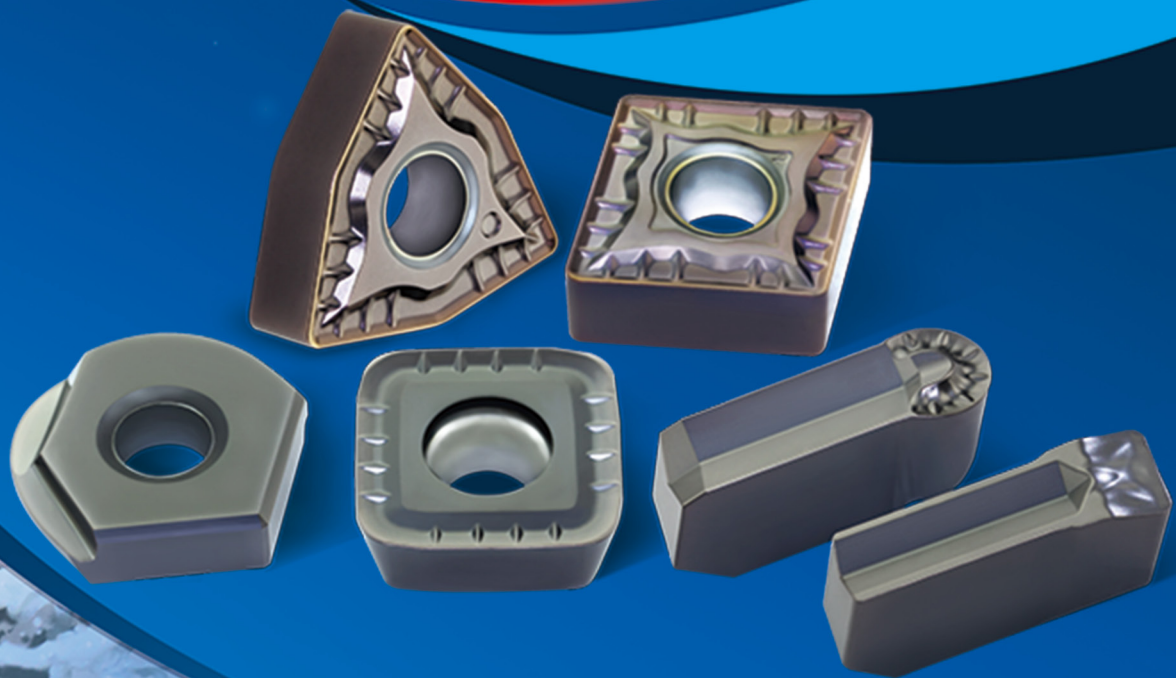




**New generation grades for  
difficult-to-cut materials**

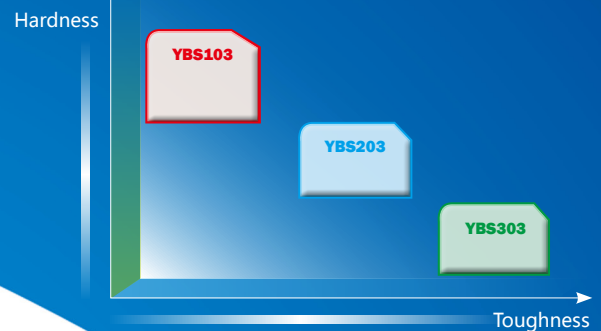
# **YBS** series



**ZHUZHOU CEMENTED CARBIDE  
CUTTING TOOLS CO., LTD.**

# YBS series

The YBS series offer the perfect solutions for difficult-to-cut materials, especially in HRSA(Heat resistant super alloy) materials such as nickel-based alloy and titanium alloy

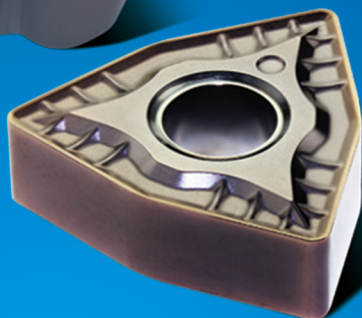


## YBS103

**Turning grade for nickel-based alloy of ISO S materials**

Good resistance against wear, built-up formation and high temperature oxidation.

Ideal for turning nickel-based heat resistant super alloy.



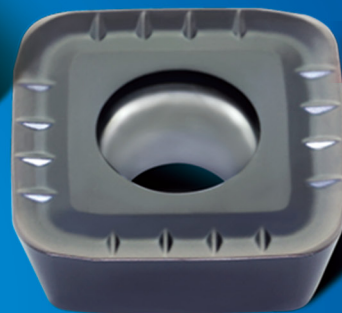
## YBS203

**General grade for ISO S materials**

Good resistance against crack propagation and high temperature oxidation.

A good balance of toughness and wear resistance.

Suitable for turning and milling of difficult-to-cut materials.

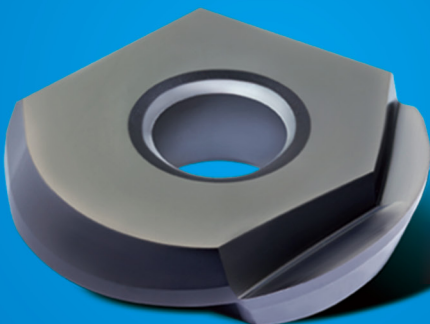


## YBS303

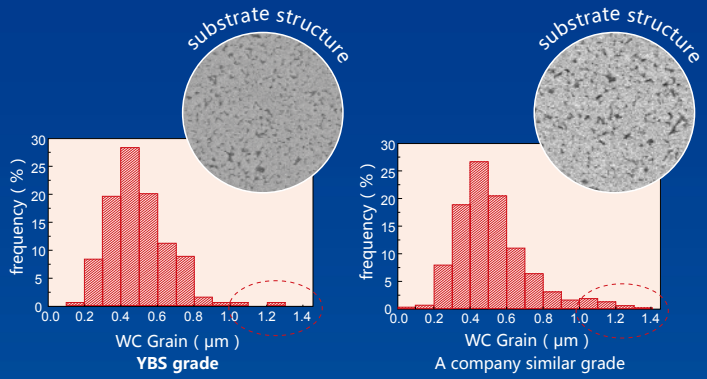
**Milling grade for titanium alloy of ISO S materials**

Good resistance against impact loading

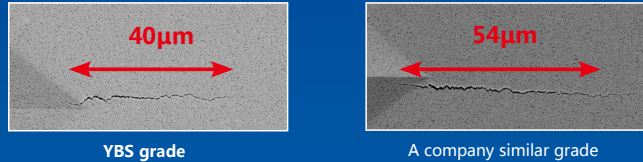
Ideal for milling titanium alloy



Improved uniformity of substrate and restraining the trend of coarse grain in fine crystal through optimized sintering process.



Ensuring high wear resistance combined with good resistance against crack propagation and breakage through technologies of alloy toughness enhancement.

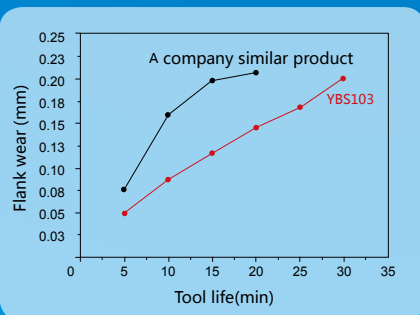


Due to totally new carbide substrate contents, significantly improved high temperature performance and extended tool life

Grade	Insert hardness Hv ( kgf/mm <sup>2</sup> )		When machining ISO S materials in same cutting conditions, the hot hardness of YBS grade is greatly improved and better stability compared with the similar grade of Company A after the actual cutting temperature reaches 600 °C
	Room-temperature Hv ( kgf/mm <sup>2</sup> )	600°C Hv ( kgf/mm <sup>2</sup> )	
A company similar grade	1300	1170	
YBS grade	1320	1270	

### Application case ( 1 )

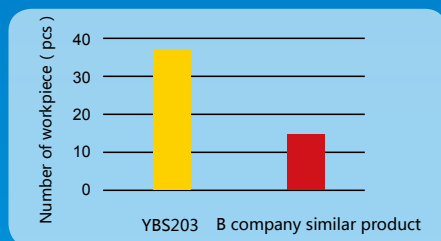
Workpiece material : GH4169  
 Inserts : YBS103 /CNMG120408-NM  
 Cutting data : V=60 m/min , f=0.15 mm/r , ap=0.5mm  
 Cutting method : external turning with coolant



YBS103 grade products have better wear resistance and longer tool life in the same cutting conditions

### Application case ( 2 )

Workpiece : car component  
 Workpiece material : GX40CrNiSi25-20  
 Inserts : YBS203/HNMX060432NY  
 Cutting data : V=125 m/min , f=0.15 mm/z , ap=1.0 mm  
 Cutting method: milling with external coolant



Compared with similar products of Company B, YBS203 grade products have good resistance against wear and breakage



**ZHUZHOU CEMENTED CARBIDE  
CUTTING TOOLS CO., LTD.**

Address: Huanghe Southern Road, Tianyuan Zone, Zhuzhou,  
Hunan Province, China

Postcode: 412007

Tel: Asia: 0086-731-22889050, 0086-731-22884423

South America: 0086-731-22887837

North America: 001-734-997-3811

Europe: 0049-211-989240-0

Other regions: 0086-731-22887833

Website: [www.zccct.com](http://www.zccct.com) [www.zccct-europe.com](http://www.zccct-europe.com)

[www.zccusa.com](http://www.zccusa.com)

Email: [export@zccct.com](mailto:export@zccct.com)

