



Zhengzhou Halnn Superhard Materials Co., Ltd.

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## PDC Cutter for Chain Saw Machine Working in Marble Quarry



## ENTERPRISE INTRODUCTION

Zhengzhou Halnn Superhard Material Co., Ltd. (herein-after referred to as "Halnn Superhard") is a high-tech enterprise, specialized in the production of superhard and abrasives tools, also is a demonstrated enterprise of new materials in Henan Province and the No.1 in the export of superhard materials in China.

Halnn Superhard, as a pioneer in the localization of superhard tools in China, relying on the national key laboratory of superhard materials and Henan University of Science and Technology as technical support, it has its own superhard tool research and development center, focusing on the processing of brittle and hard materials and difficult-to-cut materials. With more than 10 years focus on the research of CBN inserts and high-grade diamond tools, Halnn has achieved breakthroughs in new materials, new technologies, and new processes for well-known tool brands in the field of difficult-to-machine materials and earned great reputation. Customers are from many countries such as China, Germany, Italy, USA, South Korea and Japan, etc.



### Precision Cutting Tools

CBN cutting tools have a market share of more than 60% in the bearing hard turning/high-speed steel roll market



### Diamond Dressing Wheel

The benchmark for domestic ultra-precision diamond tools, and the drafting unit of the domestic industry standard for precision trimming rollers



### Special Field Cutting Tools

The new PDC material for marble mining has been exported to many foreign countries on a large scale.

## ENTERPRISE CERTIFICATE





## ADVANTAGES OF HALNN TOOLS

### 01 Pioneer in the localization of superhard tools

With the background of Henan Superhard Materials Research Institute, Halnn Superhard has undertaken the national key production-university-research project and new material planning CBN product scientific and technological research project Since 2002. It has gradually realized localization in the field of brittle and hard materials, which is a worldwide breakthrough.

### 02 New stable and efficient material for marble mining

As a new demonstrated enterprise in the materials industry in Henan Province, Halnn superhard PCD chain saw teeth for marble mining has high wear resistance and impact resistance, becoming the No.1 in the exports of superhard new materials in China.

### 03 "Tailor-made" service, focus on more professional

Halnn Superhard has always been committed to providing customers with "tailor-made" services, providing a complete set of solutions according to customer needs, and responding quickly with standardized processes, creating value for customers beyond the contract.



## SPECIFICATIONS OF PCD CUTTER

Pattern	Type	dimension(mm)	
		$\phi$ l.C	S
	R0805	8.00	5.0
	R0808	8.00	8.0
	R1005	10.00	5.0
	R1008	10.00	8.0
	R1304	13.30	4.5
	R1305	13.30	5.0
	R1308	13.44	8.0
	R1313	13.44	13.2
	R1613	16.00	13.2

Note: Other sizes can be customized.

Pattern	Type	dimension(mm)		
		$\phi$ l.C	S	$\phi$ d
	R0808-04	8.00	8.0	4
	R0808-06	8.00	8.0	6
	R1008-04	10.00	8.0	4
	R1008-06	10.00	8.0	6
	R1308-04	13.44	8.0	4
	R1308-06	13.44	8.0	6
	R1313-04	13.44	13.2	4
	R1313-06	13.44	13.2	6

Note: Other sizes can be customized.

Pattern	Type	dimension(mm)	
		L	S
	S1308	9.50	8.0
	S1313	9.50	13.2
	S1613	12.75	13.2

Note: Other sizes can be customized.

Pattern	dimension(mm)		
	L	S	$\phi$ d
S1308-04	9.50	8.0	4
S1613-04	12.75	13.2	4
S1613-06	12.75	13.2	6
S.....	..	..	..

Note: Other sizes can be customized.

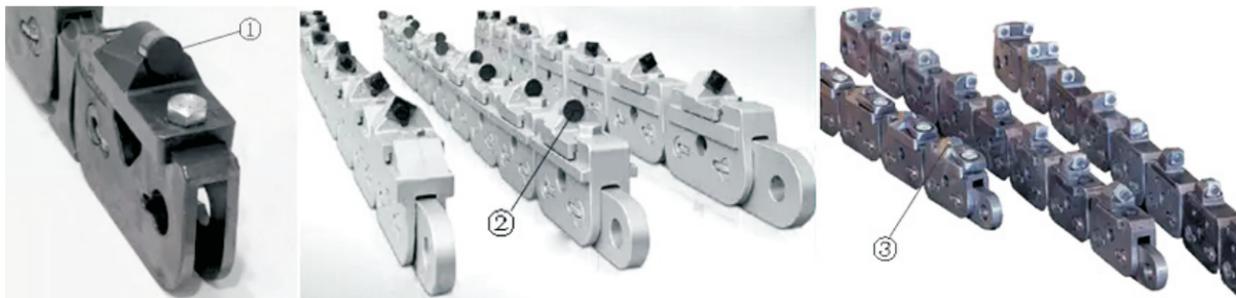
## TECHNICAL PARAMETER

Properties	PCD Insert	Tungsten Carbide	Steel(4140)
Coefficient Of Friction	0.09	0.2-0.25	0.42
Thermal Conductivity(W/Mk)	543	67	42.6
Fracture Toughness	13-15	10-20	50
Hardness(Gpa)	45.7	1.7	0.2
Compressive Strength(Gpa)	6.9-7.6	2.68	
Young's Modulus(Gpa)	805	625	205
Tensile Strength(Mpa)	1150-1500	323	415
Thermal Stability	650 °C		

## WORKING CAPACITIES

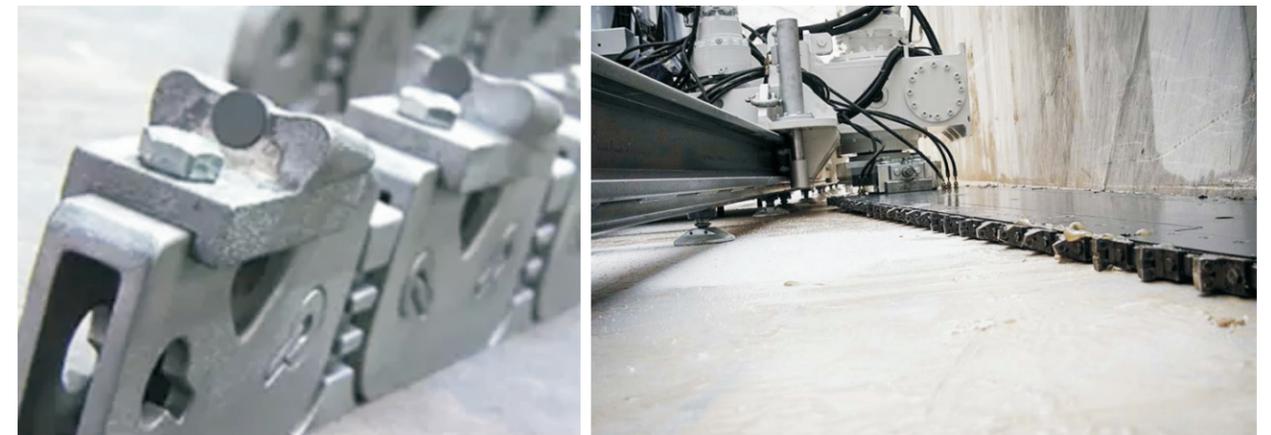
- ★ 2D & 3D Straight cutting, Taper cutting, Shape engraving with excellent topdimension precision at +/-0.008mm.
- ★ Straight through hole, Blind hole drilling at smallest hole size of 0.1mm, Taper hole drilling, Counter bore (Counter sink) Drilling Etc.
- ★ Surface grinding, Outer round surface grinding, Inner round surface grinding, Inner hole grinding.
- ★ Surface/Inner hole mirror polishing smoothness is controlled within 20nm.
- ★ High precision and qualified vacuum brazing work.

If you are looking for business cooperation regarding building the whole set of production line of PCD tools, We are very happy to professionally guide you with one stop of the best qualified machinery made in china with most effective cost.



① ② ③ – PCD Cutter

## NON-STANDARD CUSTOMIZED PRODUCTS



Note: Halnn superhard provide customization with given drawings.

