



QUALITY



SERVICE



VALUE

Zhuzhou Silvereagle Metal Material Co., Ltd.

2-105#KangyiMingcheng,No.306RenminZhong
Road,Lusong District,Zhuzhou, Hunan,China

Tel:+8673128227700

Fax:+8673128227711

CARBIDE RINGS & ROLLS

ZhuzhouSilvereagle MetalMaterialCo., Ltd.

MAIN GRADE OF CARBIDE ROLL RINGS

Grade	Chemical Composition %	Hardness (HRA)	Density (g/cm3)	Transverse Rupture Strength (MPa)	Compressive Strength (MPa)
Co					
SMH06	6	88.5	14.91	2620	3700
SMH08	8	87.8	14.71	2870	3500
SMH10	10	87	14.47	2710	3500
SMH13	13	86	14.25	2700	3400
SMH15	15	84.8	13.99	2870	3300
SMH18	18	83.8	13.73	2720	3200
SMH20	20	83.6	13.55	2840	3100
SMH25	25	82.1	13.03	2700	3000
SMH30	30	80.8	12.72	2730	3000
Co+Ni+Cr					
SMR10	10	87.2	14.49	2730	3400
SMR13	13	85.6	14.21	2780	3300
SMR15	15	84.2	13.98	2900	3200
SMR18	18	83.3	13.73	2640	3200
SMR20	20	81.7	13.52	2720	3000
SMR25	25	79.5	13.01	2630	2800
SMR30	30	79.1	12.71	2630	2600
Co+Ni+Cr					
SMA10	10	86	14.52	2750	3800
SMA15	15	84.4	13.95	2910	3700
SMA20	20	82	13.47	2760	3300

Note:

Physical & mechanical properties are for reference only and their variations are as per national or enterprises' standards.

ABOUT US



Zhuzhou Silvereagle Metal Co. Ltd. was found on April 4, 2002 with the purpose of providing high-performance Carbide products to the world.

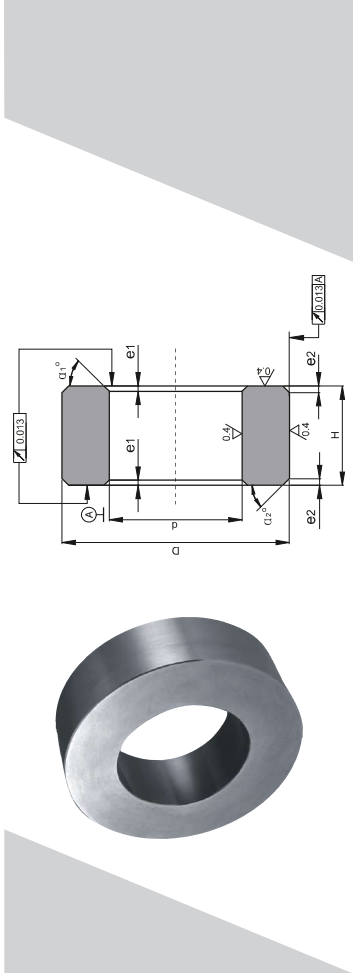
Base in Zhuzhou City of China, we are a company passionate in the carbide business and committed to always going beyond our customer's expectations when it comes to quality, packaging & delivery.

With a vast variety of carbide products, we hope to always have exactly what you are looking for with the material quality you expect.

Zhuzhou Silvereagle Metal Co., Ltd. Believes not only in high quality products, but the highest-quality customer service. With that said, we will always do our best to provide you with products that exceed your expectations and earn your trust. Our success is defined by 'Silvereagle Metal's dedication to customer service and the happiness of you, the customer.



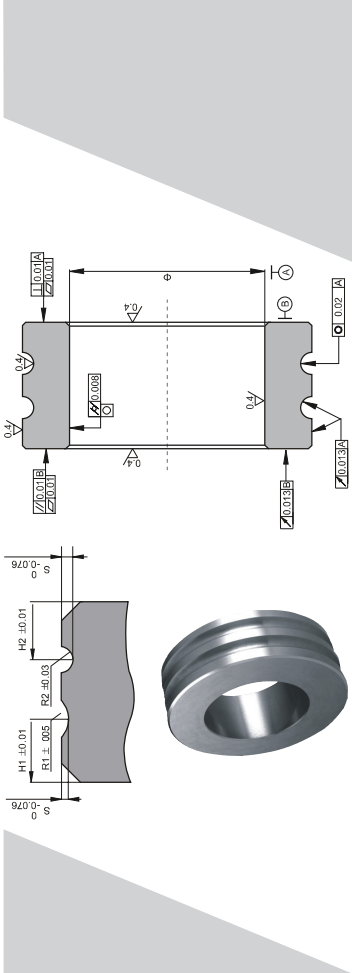
DIMENSIONS AND PRECISION OF FINISHED CARBIDE ROLL RINGS



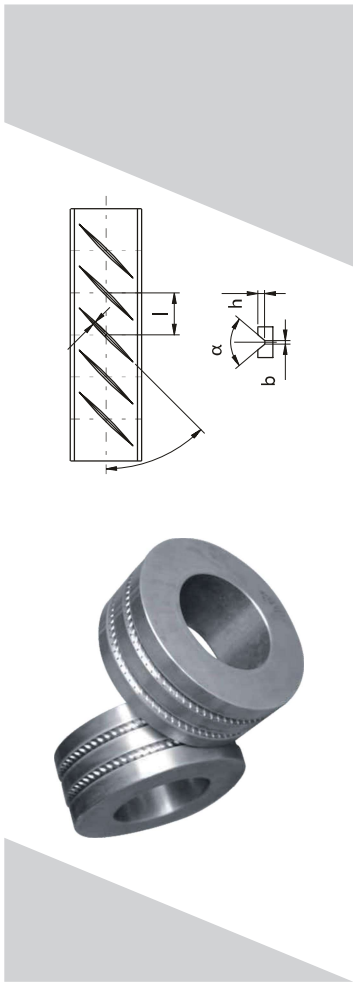
Range of O.D.	Range of I.D.	Range of height (H)
145-330	87-260	45-130

Note : We can supply them according to the drawings provided by customers

TECHNICAL SPECIFICATIONS OF FINISHED CARBIDE ROLL RINGS



ROLL RINGS FOR HIGH SPEED ROLLING OF RIBBED STEEL BARS

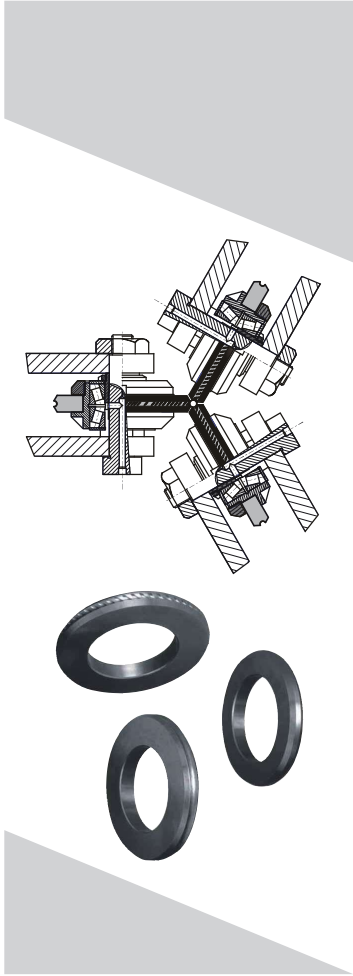


Range of O.D.	Range of I.D.	Range of height (H)
145-330	87-260	45-130

TOLERANCES ALLOWABLE FOR THE O.D.,I.D.AND HEIGHT OF ROLL RINGS

Precision class	I	II	III	IV	Special requirements
O.D. (±)	0.02	0.05	0.10	0.15	
I.D. (±)	IT 5	IT 6	IT 7	IT 8	
Height (-)	0.03	0.1	0.20	0.5	

THREE DIMENSIONAL CARBIDE ROLL RINGS FOR COLD ROLLING OF RIBBED STEEL BARS



MAIN PERFORMANCE INDICATORS

Grade	Chemical composition		Mechanical properties		Recommended applications
	WC %	Co %	Density g/cm ³	Hardness HRA	Transverse rupture strength (Sample B) Mpa
SMH15	85	15	13.99	84.8	2870
					Cold rolling ribbed steel bars

APPLICATION REQUIREMENT

- Any compact and knock on roll rings is strictly prohibited .
- When installing the whole assembly of roll rings, the clearance of the bearings should be on the tighter side.
- The precision of rotation of the whole assembly (circular runout and end runout) should be kept within ±0.05mm.
- The fitting of the whole assembly and the roll rings shall be a transitional fitting and fastened.
- The roll rings should not be cooled by water or oil water emulsion.
- The joints of the pipes in the internal cooling system should not be leaky and it is advisable that no inner cooling is applied.

CEMENTED CARBIDE ROLL RINGS FOR HOT ROLLING OF SEAMLESS STEEL TUBES



The lifetime of cemented carbide roll rings is 50-80 times that of conventional roll rings when they are used at tension tube, and the surface quality and dimensional precision is substantially improved. Based on the conditions of tension tube reducing machines (rolling force, speed, tube diameter) what is recommended is the use of either integrated roll rings or composite roll rings, achieving a good performance -price ratio.

Optional cemented carbide grades: SMR25 SMR30 For properties see the table above.

INSTALLATION AND APPLICATIONS OF CEMENTED CARBIDE ROLL RINGS

- A small clearance fit or transition fit is recommended for roll rings and roll shafts to avoid slipping between roll rings and roll shafts.
- During assembling the preheating temperature for roll rings shall not exceed 300°C. Otherwise it will reduce the performances of roll rings.
- Water nozzles shall be installed in a proper position and run smoothly.
- As the operating lifetime of roll rings is very long. The inspection of the stands on-time should be done and lubricant oil should be replenished after each rolling operation.
- A correct cooling can reduce the wear of roll rings and increase the lifetime of roll rings, cutting down the times of roll changes and keeping the surface quality of rolled material in a good state as well. The water pressure required is 0.2-0.4Mpa and the water flow rate is 20-40m³/hr.

TITANIUM CARBIDE GUIDE ROLLER



Grade	Chemical composition	Mechanical properties		
		Hardness HRA	TRS Mpa	Density g/cm ³
SMT35	Fe+TiC	86.5	1450	6.43

COMPOSITE CEMENTED CARBIDE ROLL RINGS FOR HOT ROLLING RODS AND RIBBED STEEL BARS



Installed on the front stands of machines for rolling ribbed steel bars and rods .composite roll rings can substantially reduce the times of groove changes and roll changes, reduce labor intensity, increase productivity, improve surface quality and yield of rolled material,thus achieving outstanding economic benefits.

- With hydraulic nuts locking devices and in-feed of oil with pressure of 100-200 Mpa, the hydraulic nuts create an axial pretightening force of 500-1500KN and fasten the cemented carbide roll rings to the mother shafts. The devices are practical in use and reliable and they can insure higher performances of composite cemented carbide roll rings under the protection of a proper prestress.
- Various composite cemented carbide roll rings for hot rolling ribbed steel bar and rods.
- Services are provided such as composite rolls design , groove machining and thread processing.
- Various compatible tools can be provided for machining composite cemented carbide roll rings.

CARBIDE COMPOSITE ROLLS FOR HOT ROLLING RODS AND REBAR

Stand	Single rolling	2 slit rolling	3 slit rolling	Recommend materials
K1				Cemented carbide
K2				Cemented carbide
K4				Cemented carbide

We can design and manufacture single-line rolling, two-slit rolling, three-slit rolling and combined Carbide rolls according to customer Rolling line. The products include wire, bar, rebar, angle bar.

The high output of the cemented carbide composite roll can effectively reduce the times of roll changes and increase the unit output. The products are produced have the characteristics of good quality on the surface, small deformation, high negative tolerance rate and finished product rate.

CARBIDE RINGS & ROLLS GRADES COMPARISONS

Viper Carbide	Binder %	SinterMet (USA)	Sandvik (Sweden)	TaeguTec (Korea)
CoNiCr				
SMR10/SMA10	10	SM63	H10C	T11L
SMR13	13	SM64		T14L
SMR15/SMA15	15	SM59	C15C	T15M
SMR18	18	SM65		T17L
SMR20/SMA20	20	SM60	C20C	T20M
SMR25	25	SM61	C25C	T27M
SMR30	30	SM62	C30T	T30M
Co				
SMH06	6		H6T	T06S
SMH08	8	SM80		
SMH10	10		H10T	T10S
SMH13	13	SM79	H13C	
SMH15	15	SM78	H15C	T15S
SMH18	18	SM77		
SMH20	20	SM75	H20C	T20S
SMH25	25	SM70	H25P	T25S
SMH30	30	SM69S	H30P	T30S