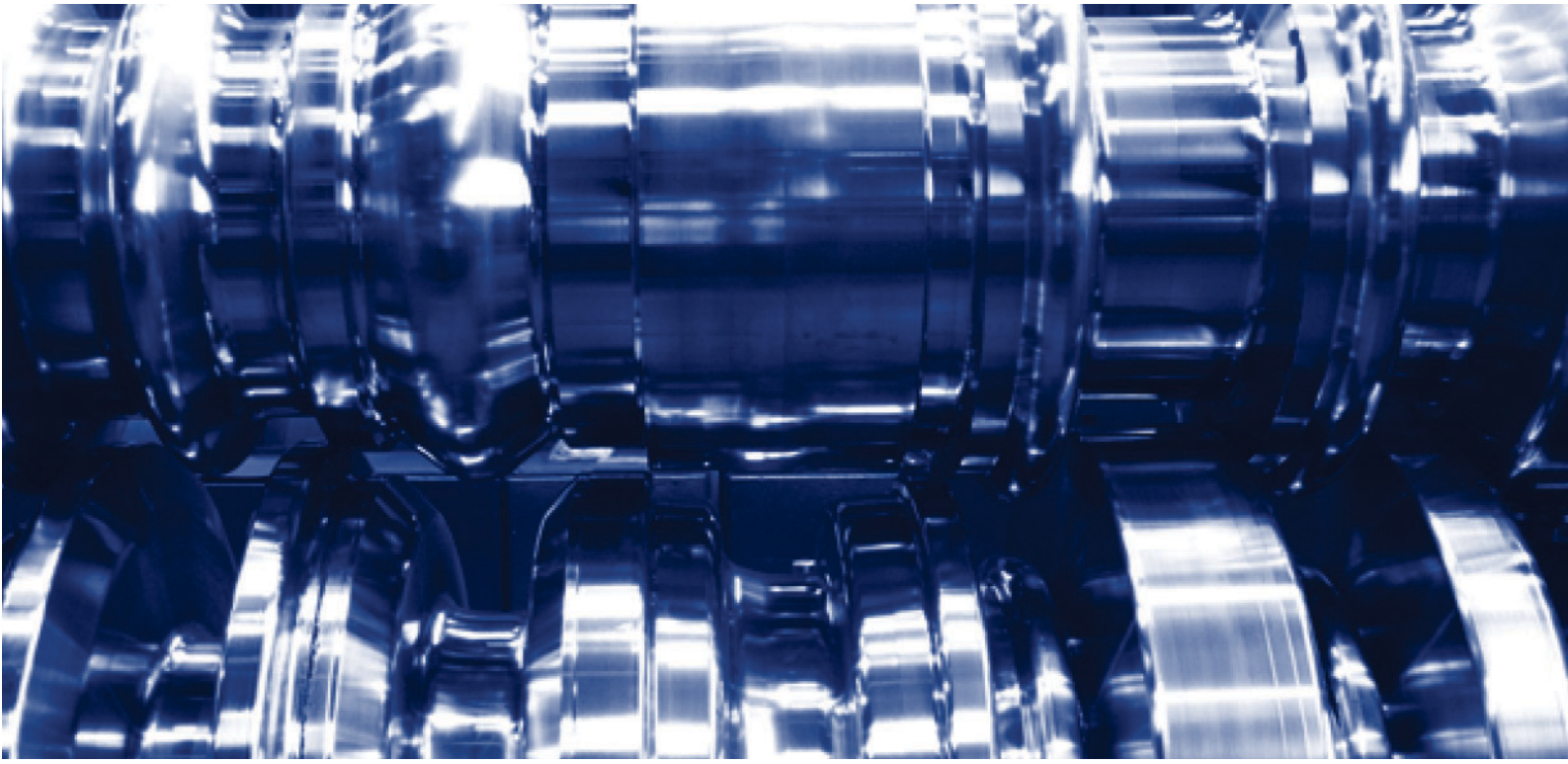


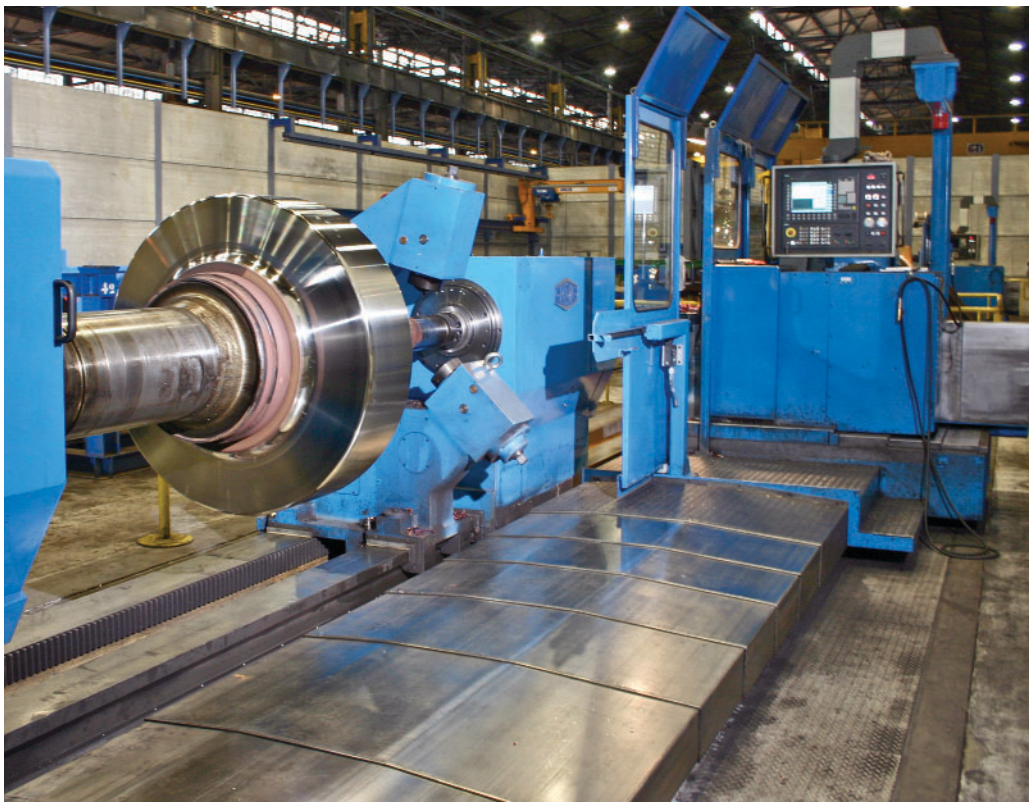
ToolingBox Solid CBN for Roller Machining

ToolingBox®

Materials

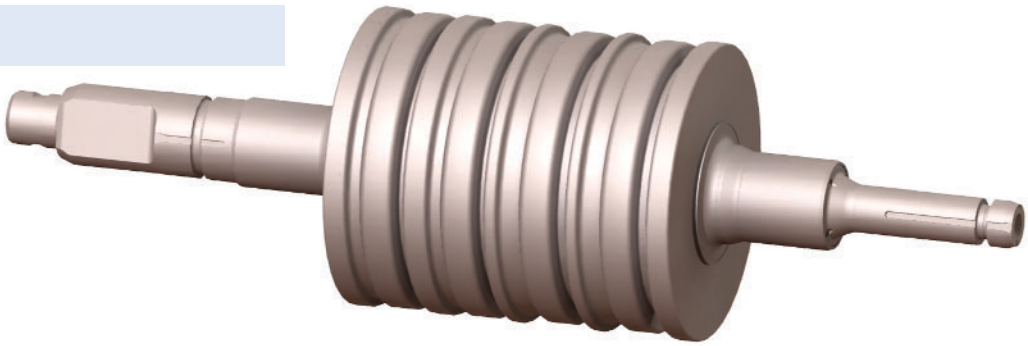
- **Spheroidal cast iron roll**
- **Cast iron rolls without graphite in the working layer**
- **Cast iron rolls with flake graphite in the working layer**
- **Chilled cast iron rolls**

Machining



Rolls in different industries

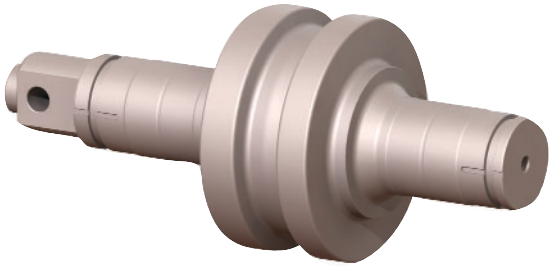
Rail rolls



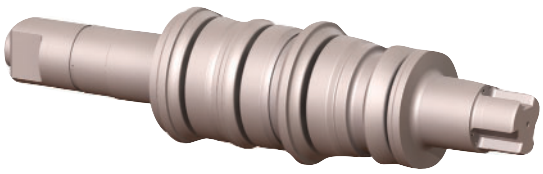
Roughing rolls

Billet rolls

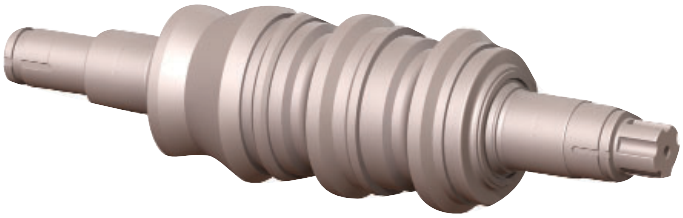
Warm-rolled edging rolls



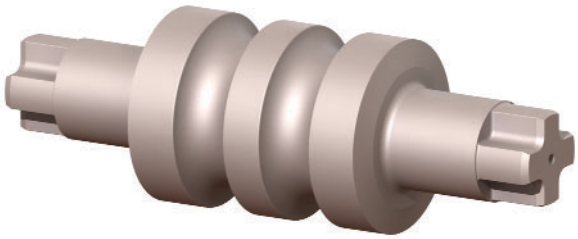
Special section rolls



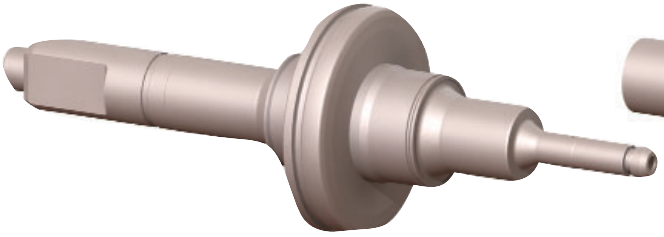
Piling section rolls



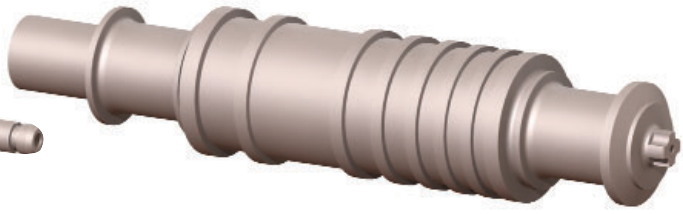
Tube rolls



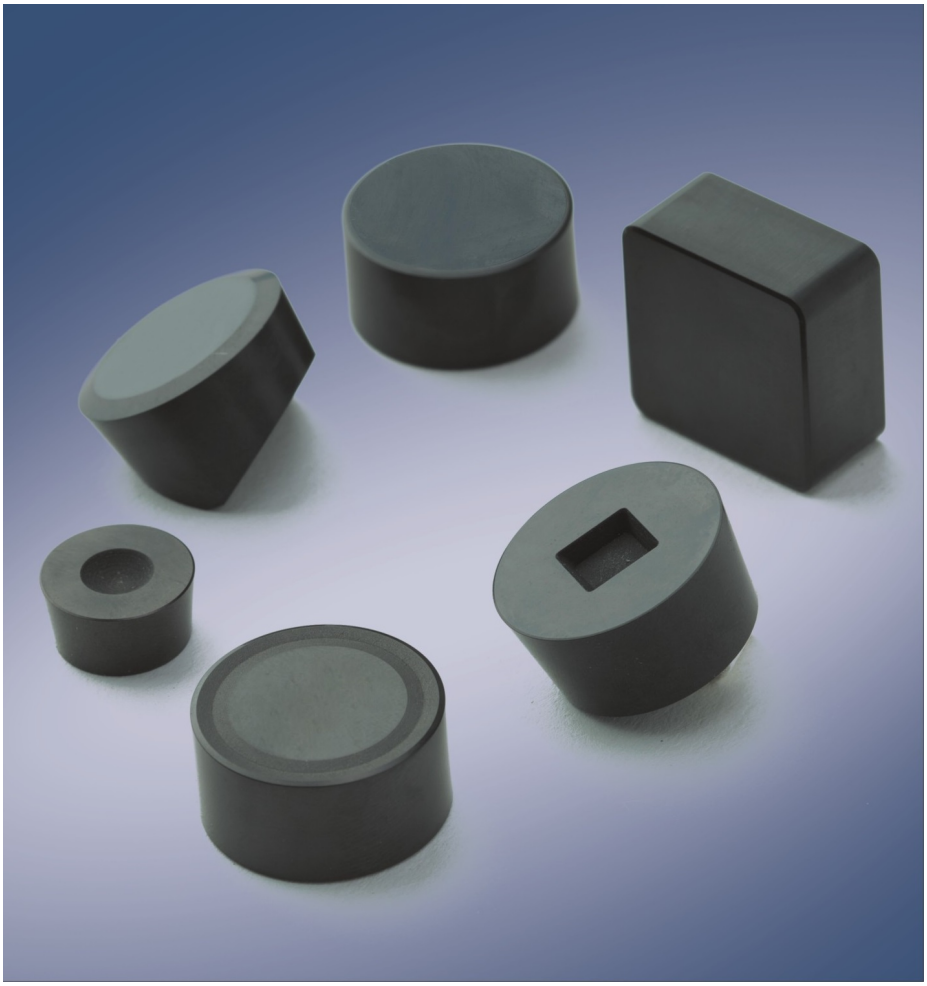
All-purpose rolls



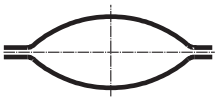
Cogging rolls



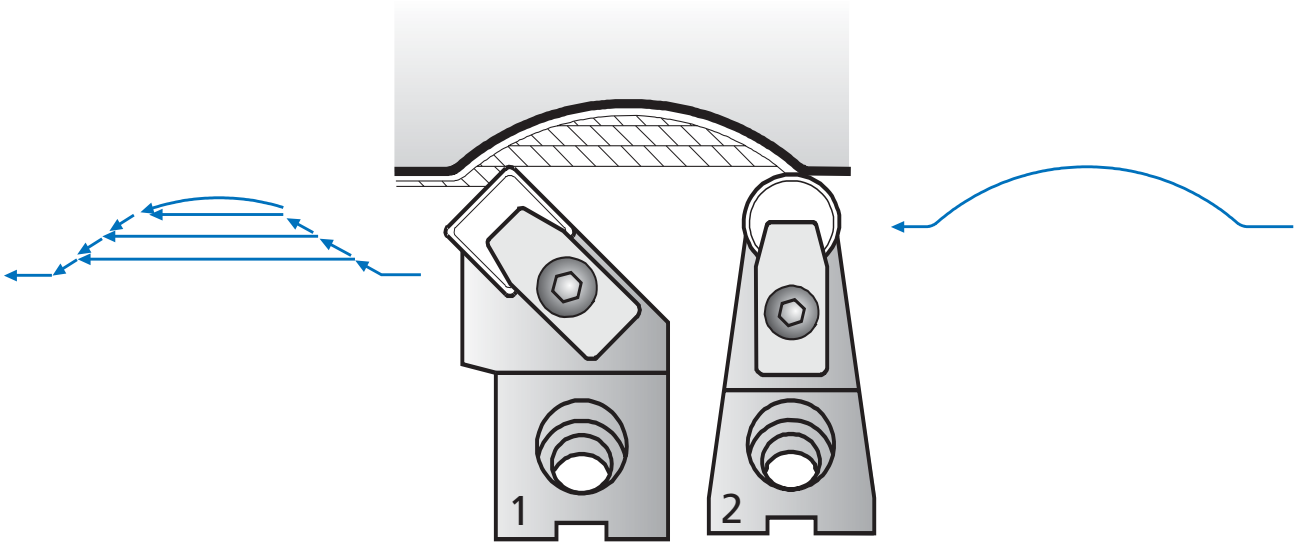
Grade	CBN Content(Vol%)	Particle size (um)	Application
TB100	88-94	8-12	high speed machining for normal gray cast iron,such as engine cylinder and cover
● TB200	50-70	2-4	Hard steel after heat treatment, such as hardened steel,bearing steel and die steel etc.
● TB300	90-95	30-40	Wear resistant alloy cast iron with high speed,such as brake disc and brake drum ans so on
● TB400	85-90	20-30	Alloy cast iron and alloy cast steel,such as roller,slurry pump and mine machinery etc.
TB500	85-90	1-3	High-temperature alloy,such as aero engine ect.



Profil Profile



New profiling



SNGN 190720 S20015

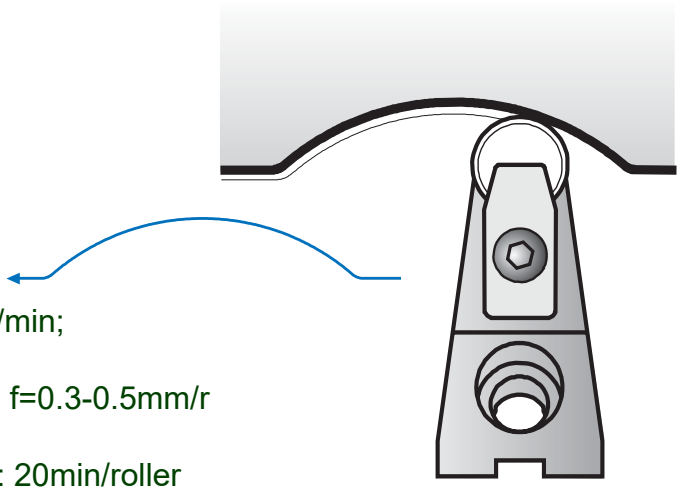
RCMX201200V

Reprofiling, roughing

Roller's Dia: D600mm

Roller Materials:
Chilled casting iron

HSD=50-67



Vc=40-60m/min;

ap=5mm; f=0.3-0.5mm/r

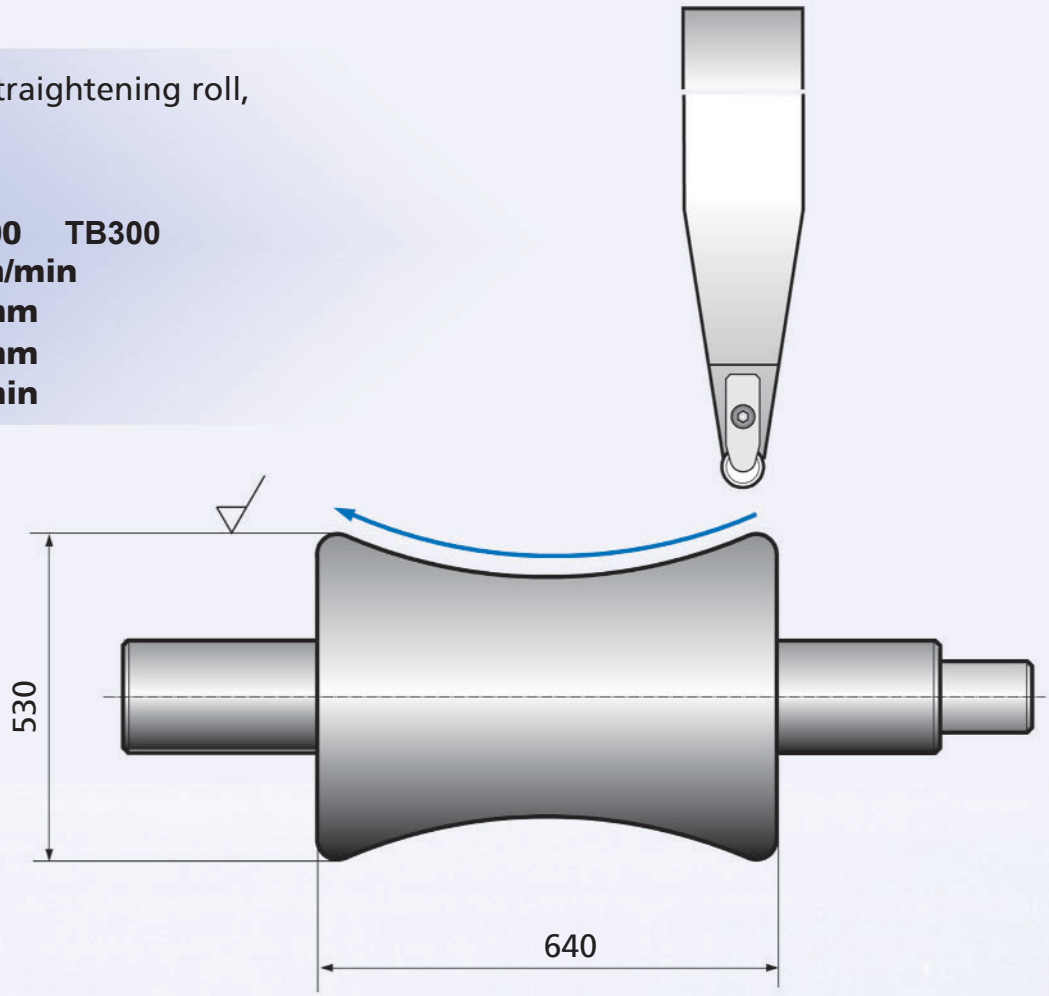
Productivity: 20min/roller

Tool life: 2 rollers/edge

RCMX201200V

finishing for Straightening roll,
85 Shore C

RCGX 120700 TB300
v_c = 100 m/min
f = 0,3 mm
a_p = 0,5 mm
t = 32 min



Main Solid CBN Grade for Roller

Phone: +86-10-5290-2905 Fax: +86-10-6572-3756 E-Mail: toolingbox@126.com Web: www.toolingbox.com

ToolingBox®
THE INDUSTRIAL SOLUTION EXPERTS

Designation system for indexable inserts ISO 1832

V	35°	
D	55°	
E	75°	
C	80°	
M	86°	
K	55°	
B	82°	
A	85°	
R		
S	90°	
T	60°	
W	80°	
L		
P	108°	
H	120°	
O	135°	

Insert style

N	0°
A	3°
B	5°
C	7°
P	11°
D	15°
E	20°
F	25°
G	30°
O	

Clearance angle requiring special definition.

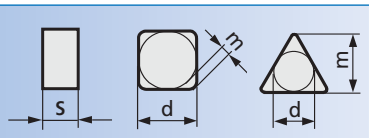
Insert normal clearance

Inscribed circle d mm	RC, RN S	O 135°	T 60°	C 80°	E 75°	D 55°	V 35°	W 80°	Inscribed circle d mm	RB (Typ MO)
3,97			06						6,0	06
5,56			09						7,0	07
6,35			11	06		07			8,0	08
9,52	09		16	09		11	16	06	9,0	09
10,00						12			10,0	10
12,70	12	05	22	12	13	15	22	08	12,0	12
15,88	15	06	27	16					16,0	16
19,05	19		33						20,0	20
25,40	25		44						25,0	25

Insert size

S	N	G	N	19	07

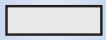
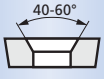
Tolerances



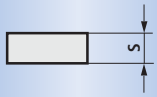
* Allowable deviation for insert shape, depends on insert size

	s ±mm	d ±mm	m ±mm	Inscribed circle d mm	Tolerance class m ±mm M	m ±mm U	d ±mm J, K, L, M	d ±mm U
A	0,025	0,025	0,005					
C	0,025	0,025	0,013					
E	0,025	0,025	0,025					
F	0,025	0,013	0,005	3,97	0,08	0,13	0,05	0,08
G	0,130	0,025	0,025	5,56				
H	0,025	0,013	0,013	6,35				
J	0,025	0,05-0,13*	0,005	9,52				
K	0,025	0,05-0,13*	0,013	12,70	0,13	0,20	0,08	0,13
L	0,025	0,05-0,13*	0,025	15,88	0,15	0,27	0,10	0,18
M	0,130	0,05-0,13*	0,08-0,18*	19,05				
U	0,130	0,08-0,25*	0,13-0,38*	25,40	0,18	0,38	0,13	0,25

Insert type

N	
A	
W	
X	Special type

Insert thickness



01	1,59
02	2,38
03	3,18
T3	3,97
04	4,76
06	6,35
07	7,94
09	9,52
12	12,70

Designation system for indexable inserts ISO 1832

F Sharp

E Rounded

T Chamfered

S Chamfered and rounded

K Double chamfered

P Double chamfered and rounded

Cutting edge type

F PCBN one-sided full face laminated

S PCBN solid

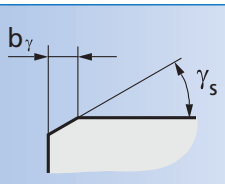
Execution variants

20	S	20015	- S

Corner radius

00	RN, RC
M0	RB
02	0,2
04	0,4
08	0,8
12	1,2
16	1,6
24	2,4
32	3,2
40	4,0
ZZ	Special type

Chamfer type

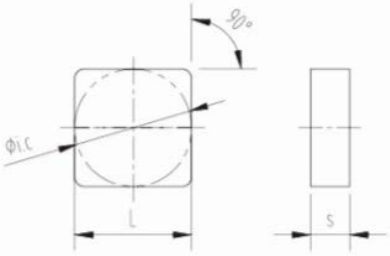


Width of chamfer b_γ in 1/100 mm and angle γ_s without degree symbol

z.B. · eg. · *exemple*
2,0 x 15° = 20015
0,5 x 15° = 05015

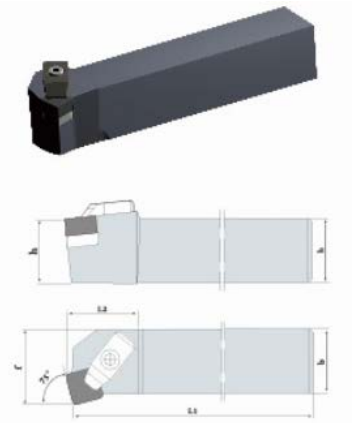
Phone: +86-10-5290-2905 Fax: +86-10-6572-3756 E-Mail: toolingbox@126.com Web: www.toolingbox.com

ToolingBox Solid CBN for Roller : SNMN

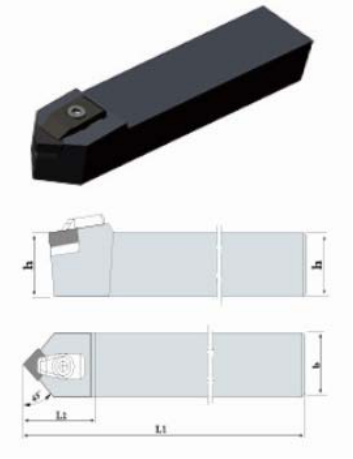


ISO Grade	Dimension				Materials Grade		
	L	Ø I.C	s	r	TB200	TB300	TB400
SNMN120408	12.7	12.7	4.76	0.8	●	●	●
SNMN120712	12.7	12.7	7.94	1.2	●	●	●
SNMN150720	15.875	15.875	7.94	2.0	●	●	●
SNMN201020	20	20	10	2.0	●	●	●

The related tool holders:



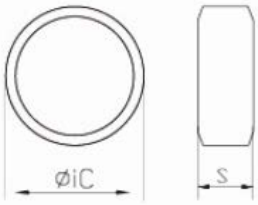
ISO Type	Dimension	Insert grade
CSKNR3232P1204	32X32X170-40X40	SNMN1204
CSKNR3232P1207	32X32X170-45X40	SNMN1207
CSKNR4040S1507	40X40X250-46X49	SNMN1507
CSKNR5050T2010	50X50X300-50X60	SNMN2010



ISO Type	Dimension	Insert grade
CSDNN3232P1207	32X32X170-48	SNMN1207
CSDNN4040S1507	40X40X250-52	SNMN1507
CSDNN5050T2010	50X50X300-58	SNMN2010

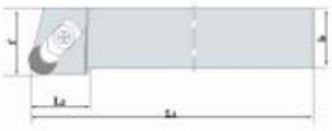
ToolingBox Solid CBN for Roller :

RNMN

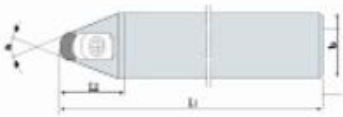


ISO Grade	Dimension				Materials Grade		
	L	ø I.C	s	r	TB200	TB300	TB400
RNMN090400	9.525	9.525	4.76	0	●	●	●
RNMN120400	12.7	12.7	4.76	0	●	●	●
RNMN120700	12.7	12.7	7.94	0	●	●	●
RNMN150700	15.875	15.875	7.94	0	●	●	●
RNMN190700	19.05	19.05	7.94	0	●	●	●
RNMN201000	20	20	10	0	●	●	●
RNMN251000	25.4	25.4	10	0	●	●	●

The related tool holders:



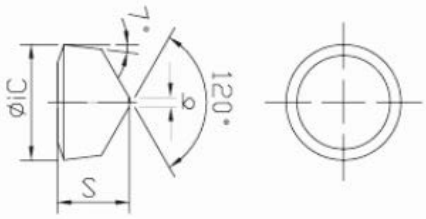
ISO Type	Dimension	Insert grade
CRGNR3232P1207	32X32X170-40X37	RNMN1207
CRGNR4040S1507	40X40X250-42X45	RNMN1507
CRGNR5050T1907	50X50X300-42X55	RNMN1907
CRGNR5050T2010	50X50X300-42X55	RNMN2010



ISO Type	Dimension	Insert grade
CRDNN3232P1207	32X32X170-64X20°	RNMN1207
CRDNN4040S1507	40X40X250-80X20°	RNMN1507
CRDNN5050T2010	50X50X300-99X20°	RNMN2010

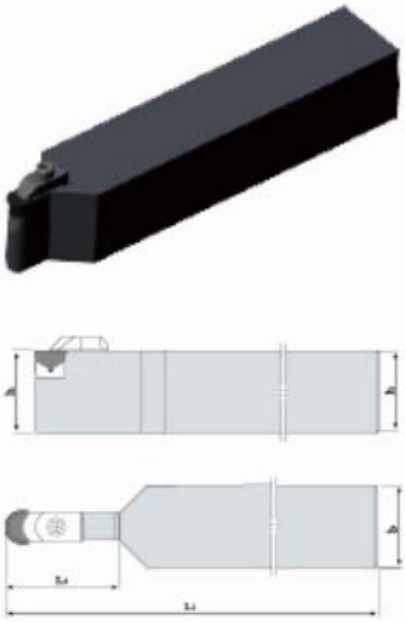
ToolingBox Solid CBN for Roller :

RCMX



ISO Grade	Dimension			Materials Grade		
	L	s	b	TB200	TB300	TB400
RCMX090700V	9.525	7.94	1.0	●	●	●
RCMX120700V	12.76	7.94	1.5	●	●	●
RCMX150700V	15.875	7.94	2	●	●	●
RCMX191000V	19.05	10	2	●	●	●
RCMX201200V	20	12	2	●	●	●

The related tool holders:



ISO Type	Dimension	Insert grade
CRDCN3232P0907V	32X32X170-29	RCMX090700V
CRDCN3232P1207V	32X32X170-33	RCMX120700V
CRDCN4040S1507V	40X40X250-38	RCMX150700V
CRDCN5050T1910V	50X50X300-45	RCMX191000V
CRDCN5050T2012V	50X50X300-45	RCMX201200V

* We can produce the special inserts according to your requirement!

Cutting data recommendations chilled cast iron

Solid CBN:

Roller Dia: 600mm

Hardness Shore C	Cutting speed Vc(m/min) Rec. value	Cutting speed Vc(m/min) Total range	Depth of cut ap(mm)	Feed (mm) Rec. value	Feed (mm) Total range	Grade
12.5	Roughing					
66 - 86	50	40 - 60	1 - 6	0.22	0.5 - 0.8	TB300
	50	40 - 60	1 - 6	0.22	0.5 - 0.8	TB400
	50	40 - 60	1 - 6	0.22	0.5 - 0.8	TB200
6.3	Semi-roughing					
66 - 86	50	40 - 60	0,1 - 1,0	0.2	0.1- 0.3	TB300
	50	40 - 60	0,1 - 1,0	0.2	0.1 - 0.3	TB400
	50	40 - 60	0,1 - 1,0	0.2	0.1 - 0.3	TB200

Cutting data recommendations hardened steel

Solid CBN

Roller Dia: 600mm

Hardness (HRC)	Cutting speed Vc(m/min) Rec. value	Cutting speed Vc(m/min) Total range	Depth of cut ap(mm)	Feed (mm) Rec. value	Feed (mm) Total range	Grade
1.6	finishing					
48 - 56	100	80 -120	0,10 - 0,5	0.1	0.05- 0.2	TB400
	100	80-120	0,10 - 0,5	0.1	0.05- 0.2	TB200
57 - 64	100	80-120	0,10 - 0,5	0.1	0.05-0.2	TB400
	100	80-120	0,10 - 0,5	0.1	0.05-0.2	TB200

www.toolingbox.com

ToolingBox®
THE INDUSTRIAL SOLUTION EXPERTS

Rm2505,Unit 2,Building 7,
No.7 Chaoyang Road,Chaoyang
District,Beijing, 100024
P.R of China

Phone: +86 10 5290 2905
Fax: +86 10 6572 3756
toolingbox@126.com
www.toolingbox.com