

## CBN Grooving System for Hardened Steels

# SUMIBORON **GWB** Type



Tangential Inserts – Double clamp holder

Groove Widths from 1,5 – 6,0mm

New grade for interrupted grooving

# SUMIBORON GWB Type

New CBN grooving system for hardened steels



## ■ Features

### Tangential insert

80 degree tangentially mounted insert improves rigidity

### New coated CBN grade BNC30G

Tough new coated CBN grade for interrupted hard grooving




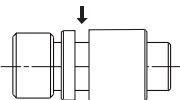

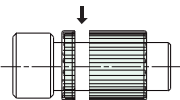
### Double clamping system

The double clamping system increases stability so even axial feeds are possible.

### Wide insert range 1,5 – 6,0mm

Wide range of width's and grades for continuous and interrupted cut grooving operations

## ■ Grades

| Grade  | Application   | Features   |
|--|---|--|
| BN250<br>         | Continuous grooving<br>  | Uncoated CBN grade for continuous cut grooving applications                    |
| <b>BNC30G</b><br> | Interrupted grooving<br> | Tough new CBN coated grade developed for interrupted cut grooving applications |

## ■ Recommended cutting Conditions

| Material              | Hardened steel           |
|-----------------------|--------------------------|
| Cutting speed (m/min) | 60 — 80 — 120 — 150      |
| Feed rate (mm/rev)    | 0,03 — 0,04 — 0,08 — 0,1 |
| Grade                 | BN250, BNC30G            |

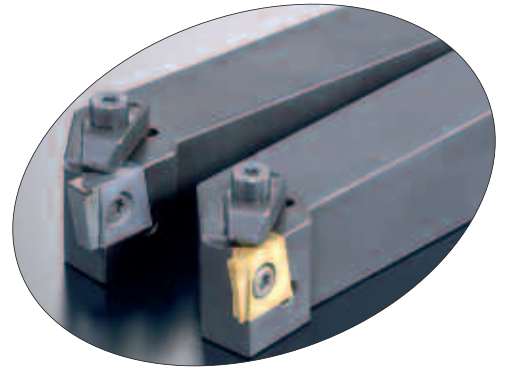
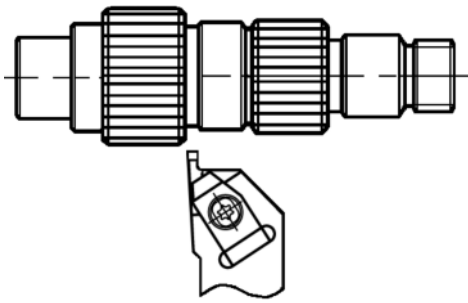
### Coolant:

Dry / Wet (for continuous cut)  
Dry only (for interrupted cut)

### Remarks:

To avoid thermal cracking of the cutting edge when interrupted cutting please ensure workpiece remains dry.

# SUMIBORON GWB Type



## ■ Holders

|  | Cat. No.                 | Stock |   | Dimensions (mm) |                |    |    |                |                  |     | Applicable Insert |
|--|--------------------------|-------|---|-----------------|----------------|----|----|----------------|------------------|-----|-------------------|
|  |                          | R     | L | h               | h <sub>1</sub> | b  | f  | l <sub>1</sub> | t <sup>(*)</sup> | ℓ   |                   |
|  | <b>GWB R/L 2020 - 45</b> | ○     | ○ | 20              | 20             | 20 | 30 | 150            | 1,5 < t ≤ 2,0    | 3,5 | CGA R/L 1504 ○○○  |
|  |                          |       |   |                 |                |    |    |                | 2,0 < t ≤ 3,0    | 4,0 |                   |
|  | <b>GWB R/L 2525 - 45</b> | ●     | ● | 25              | 25             | 25 | 30 | 150            | 1,5 < t ≤ 2,0    | 3,5 |                   |
|  |                          |       |   |                 |                |    |    |                | 2,0 < t ≤ 3,0    | 4,0 |                   |
|  | <b>GWB R/L 2525 - 60</b> | ●     | ● | 25              | 25             | 25 | 30 | 151            | 4,5 < t ≤ 6,0    | 5,0 | CGA R/L 1506 ○○○  |

Remark: Inserts are not included.

● = Euro stock  
○ = Delivery on request

## ■ Inserts

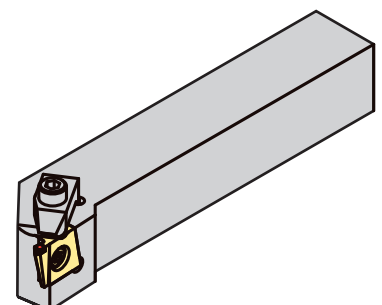
|  | Cat. No.                | Stock |   |        |   | Dimensions (mm)  |     |     |        |      | Applicable Holder                      |
|--|-------------------------|-------|---|--------|---|------------------|-----|-----|--------|------|--|
|  |                         | BN250 |   | BNC30G |   | t <sup>(*)</sup> | ℓ   | r   | I.C.   | T    |  |
|  |                         | R     | L | R      | L |                  |     |     |        |      |  |
|  | <b>CGA R/L 1504 150</b> | ●     | ● | ●      | ● | 1,5              | 3,5 | 0,2 | 15,875 | 4,76 | GWB R/L 2020 - 45<br>GWB R/L 2525 - 45 |
|  | <b>CGA R/L 1504 200</b> | ●     | ● | ●      | ● | 2,0              |     |     |        |      |  |
|  | <b>CGA R/L 1504 250</b> | ●     | ● | ●      | ● | 2,5              |     |     |        |      |  |
|  | <b>CGA R/L 1504 300</b> | ●     | ● | ●      | ● | 3,0              | 4,0 |     |        |      |  |
|  | <b>CGA R/L 1504 350</b> | ●     | ● | ●      | ● | 3,5              |     |     |        |      |  |
|  | <b>CGA R/L 1504 400</b> | ●     | ● | ●      | ● | 4,0              | 5,0 |     |        |      |  |
|  | <b>CGA R/L 1504 450</b> | ●     | ● | ●      | ● | 4,5              |     |     |        |      |  |
|  | <b>CGA R/L 1506 500</b> | ●     | ● | ●      | ● | 5,0              |     |     |        |      |  |
|  | <b>CGA R/L 1506 550</b> | ●     | ● | ●      | ● | 5,5              |     |     |        |      |  |
|  | <b>CGA R/L 1506 600</b> | ●     | ● | ●      | ● | 6,0              |     |     |        |      | 6,35                                   |

\*) Special widths available on request

● = Euro stock

## ■ Spare Parts

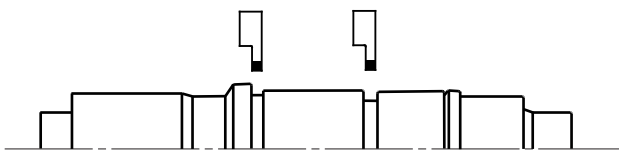
| Holder                   | Clamp finger            | Clamp screw  | Insert screw   | Spring    | Wrench    |
|--------------------------|-------------------------|--------------|----------------|-----------|-----------|
| <b>GWB R/L 2020 - 45</b> |                         |              |                |           |           |
| <b>GWB R/L 2525 - 45</b> | TF 72<br>(Right handed) | BX<br>0520 T | BFTX<br>0511 N | GSP<br>06 | TRX<br>20 |
| <b>GWB R/L 2525 - 60</b> | TF 73<br>(Left handed)  |              |                |           |           |



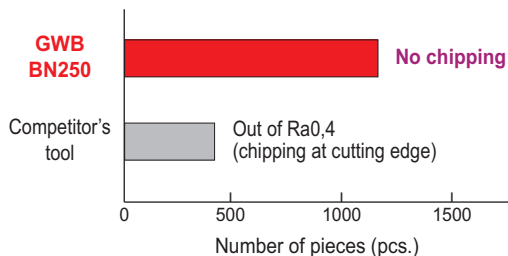
# SUMIBORON GWB Type

## Application Example

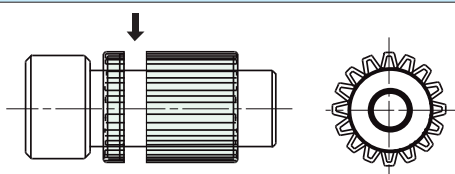
### Input shaft (continuous cut)



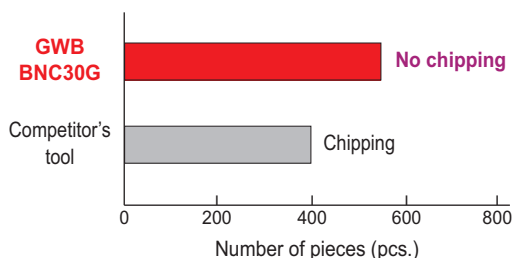
Work: carburised steel HRC58-62  
 Depth of groove: 2mm  
 Surface roughness: Ra 0,4µm  
 Cutting condition:  $v_c=120\text{m/min}$ ,  $f=0,05\text{mm/rev}$   
 Insert: CGAR1504200 BN250



### Splined shaft (interrupted cut)



Work: carburised steel HRC58-62  
 Depth of groove: 1,6mm  
 Surface roughness: Ra 0,4µm  
 Cutting condition:  $v_c=100\text{m/min}$ ,  $f=0,05\text{mm/rev}$   
 Insert: CGAR1504200 BNC30G



**CARBIDE - CBN - DIAMOND**

(Germany)  
 SUMITOMO ELECTRIC Hartmetal GmbH  
 Siemensring 84, D-47877 Willich

Tel. (02154) 4992-0, FAX (02154) 4 10 7 2  
 e-Mail: [Info@SumitomoTool.com](mailto:Info@SumitomoTool.com)  
 Internet: [www.SumitomoTool.com](http://www.SumitomoTool.com)



(UK and Ireland)  
 SUMITOMO ELECTRIC Hardmetal Ltd.  
 Summerleys Road, Princes Risborough  
 Buckinghamshire HP27 9PW, UK

Tel. (01844) 34 20 81, FAX: (01844) 34 24 15  
 e-Mail: [enquiries@sumitomo-hardmetal.co.uk](mailto:enquiries@sumitomo-hardmetal.co.uk)  
 Internet: [www.sumitomo-hardmetal.co.uk](http://www.sumitomo-hardmetal.co.uk)



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