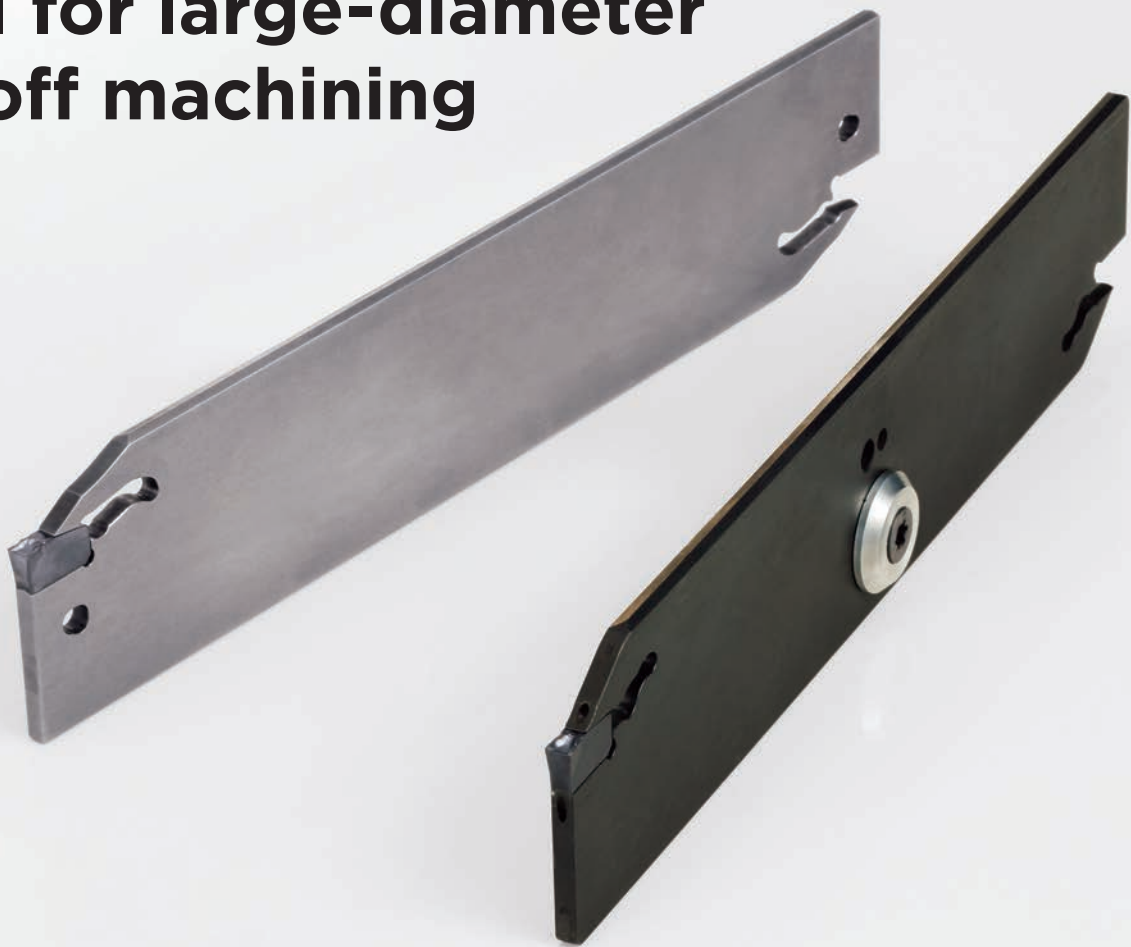


Self-Restrained Tool Holders for Cut-off Machining

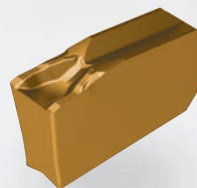
SEC-Cut-off Tool Holders **GLC** series

# Optimised blade shape ideal for large-diameter cut-off machining



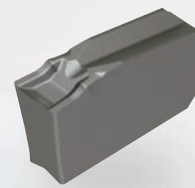
Internal coolant supply with GLC-SJ type

Three types of chipbreakers for various machining



General-purpose

**GG** type



Exotic alloys/  
Low cutting force

**GF** type



Low cutting force  
(handed)

**CF** type

*New*



■ **Features**

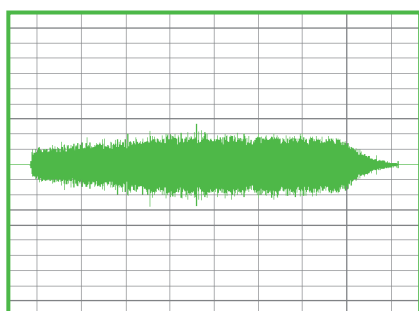
- Achieves high machining accuracy and durability with optimised blade shape
- Insert can be mounted and removed with just a wrench
- Internal coolant supply extends insert life
- Lineup includes steel holders, steel holders with internal coolant supply (max. cut-off dia.  $\varnothing 100\text{mm}$ ), and carbide holders (max. cut-off dia.  $\varnothing 140\text{mm}$ )
- Support for various machining through combination with three chipbreaker types (general-purpose chipbreaker GG type and low cutting force chipbreakers GF type (neutral) and CF type (handed))

■ **Cutting Performance**

● **Low vibration**

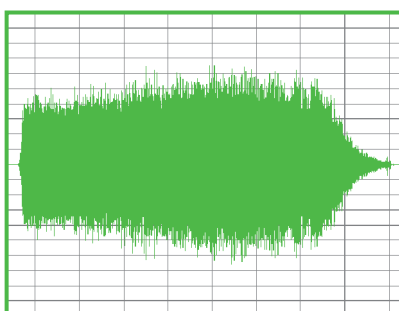
Achieves stable machining with a high-rigidity holder and strong clamping

Low runout / stable vibration



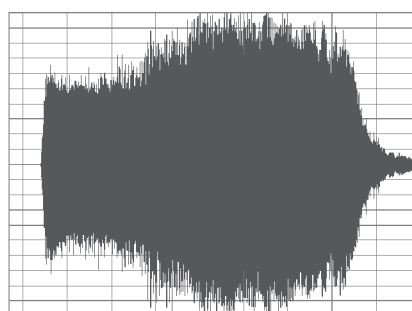
**GLC-C type**  
Carbide Holder

Stable vibration



**GLC-S type**  
Steel Holder

High runout / unstable vibration

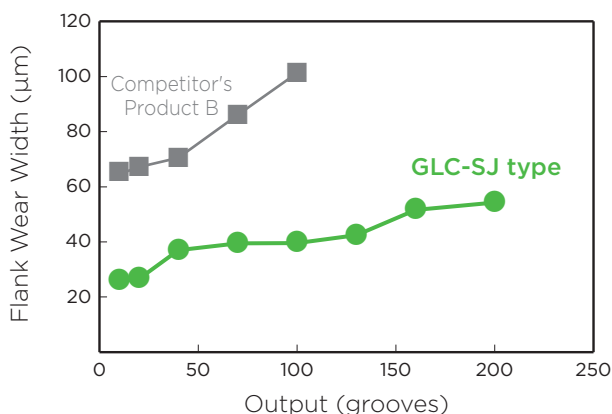


Competitor's Product A  
Steel Holder

Work Material: SUS316 ( $\varnothing 40$ ) Insert: WCFN3-GF (AC1030U) Holder: GLCBN32-3C (Carbide) / GLCBN32-3S (Steel)  
Cutting Conditions:  $v_c = 100\text{m/min}$ ,  $f = 0.1\text{mm/rev}$ , Wet (External Coolant Supply)

● **Tool life**

Achieves longer tool life with optimised coolant supply outlets and a wide lineup of grades



Work Material: SUS316  
Holder: GLCBN32-3SJ (Steel) Insert: WCFN3-GF (AC1030U)  
Cutting Conditions:  $v_c = 200\text{m/min}$ ,  $f = 0.1\text{mm/rev}$ , Wet (Internal Coolant Supply)

● **Chip control**

Outstanding chip control even in cut-off machining of stainless steel



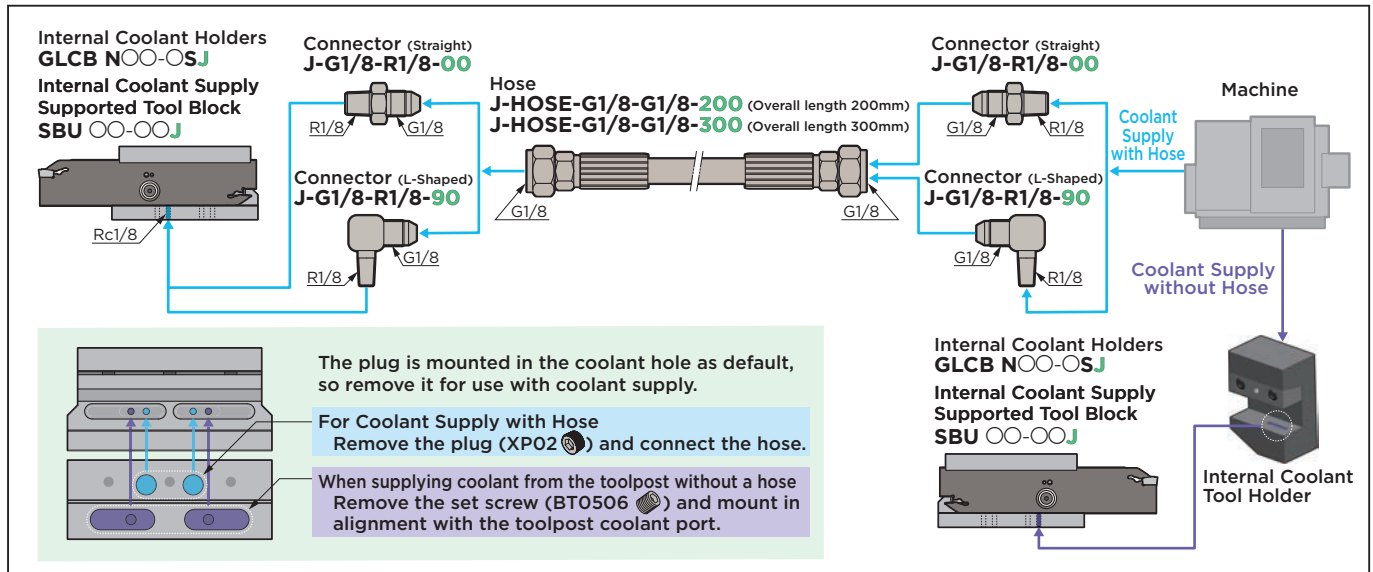
**GF type Chipbreaker**  
(AC1030U)



Competitor's Product C

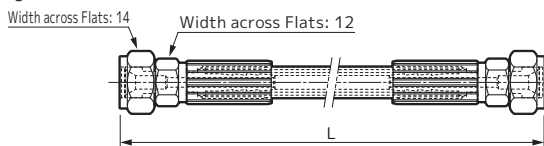
Work Material: SUS316  
Holder: GLCBN32-3S (Steel) Insert: WCFN3-GF (AC1030U)  
Cutting Conditions:  $v_c = 100\text{m/min}$ ,  $f = 0.1\text{mm/rev}$ , Wet (External Coolant Supply)

## ■ Piping Method for Hoses and Connectors



## ■ Hoses and Connectors

Fig 1



### Parts (Hose)

Cat. No.	Stock	L	Dimensions (mm)		Fig
			Screw Standard	Screw Standard	
J-HOSE-G1/8-G1/8-200	●	200	G1/8	G1/8	1
J-HOSE-G1/8-G1/8-300	●	300	G1/8	G1/8	1

Hoses are sold separately.

Fig 1

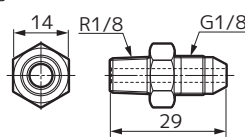
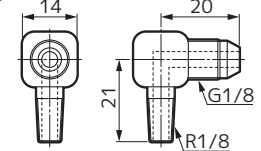


Fig 2



### Parts (Connector)

Cat. No.	Stock	Dimensions (mm)		Fig
		Screw Standard	Screw Standard	
J-G1/8-R1/8-00	●	G1/8	R1/8	1
J-G1/8-R1/8-90	●	G1/8	R1/8	2

Connectors are sold separately.

## Precautions for Coolant Supply without Hose

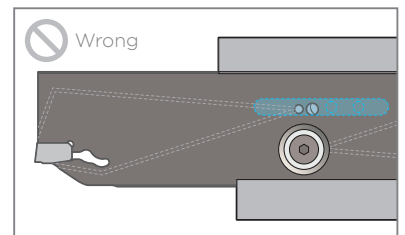
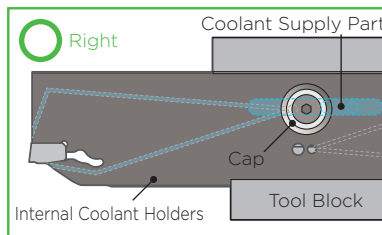
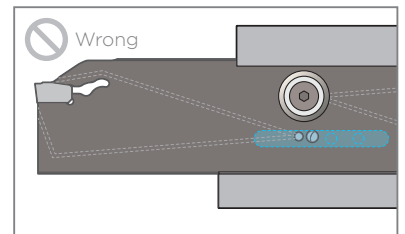
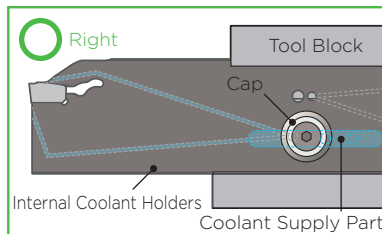
### ■ Internal Coolant Supply Supported Tool Block SBU-J type

- Mount the O-ring correctly.

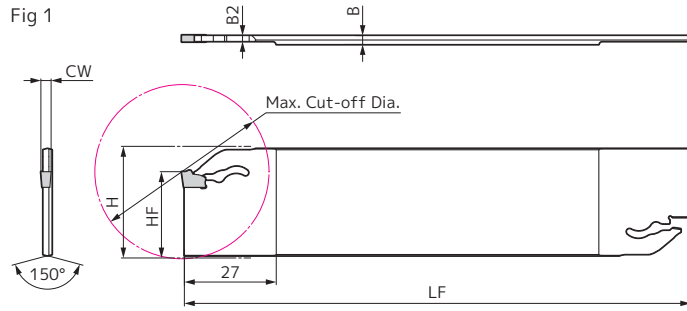
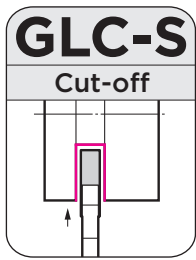


### ■ Internal Coolant Holder GLC-J type

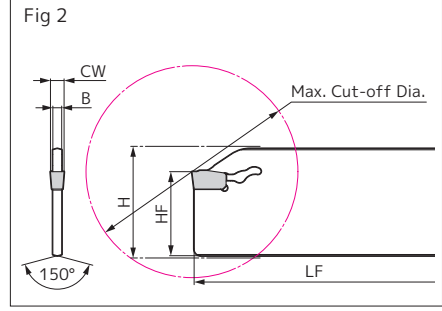
- To prevent coolant leakage, mount the cap in the correct position.



# GLC-S(J) type



Cut-off Holder/Tool Block type



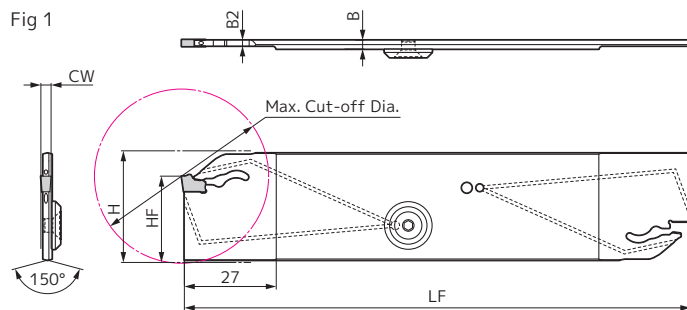
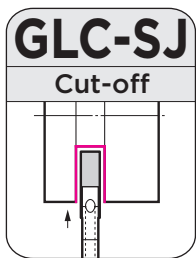
## Holder (Steel)

## Parts Dimensions (mm)

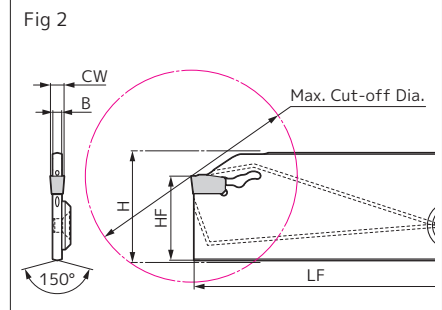
Cat. No.	Stock	Height H	Width B	Width B2	Overall Length LF	Cutting Edge Height HF	Width of Cut CW	Max. Cut-off Dia.	Applicable Insert	Applicable Tool Blocks	Fig	Wrench
<b>GLCB N26-2S</b>	○	26	2.6	1.7	120.0	21.4	2	50	WCF□2-□□	SB□20-26	1	SL-5(*)
<b>N26-3S</b>	○	26	2.6	—	120.0	21.4	3	70	WCF□3-□□		2	
<b>N26-4S</b>	○	26	3.6	—	120.0	21.4	4	70	WCF□4-□□		2	
<b>N26-5S</b>	○	26	4.6	—	120.0	21.4	5	70	WCF□5-□□		2	
<b>GLCB N32-2S</b>	○	32	2.6	1.7	148.8	25.0	2	50	WCF□2-□□	SB□20-32 SB□25-32	1	SL-5(*)
<b>N32-3S</b>	○	32	2.6	—	148.8	25.0	3	100	WCF□3-□□		2	
<b>N32-4S</b>	○	32	3.6	—	148.8	25.0	4	100	WCF□4-□□		2	
<b>N32-5S</b>	○	32	4.6	—	148.8	25.0	5	100	WCF□5-□□		2	

\*Wrench is sold separately from the main body. Refer to P5 for applicable inserts.

Tool Blocks



Cut-off with Internal Coolant Supply (Steel Holder/Tool Block type)



## Holder (Steel, Internal Coolant Supply)

## Parts

Dimensions (mm)

Cat. No.	Stock	Height H	Width B	Width B2	Overall Length LF	Cutting Edge Height HF	Width of Cut CW	Max. Cut-off Dia.	Applicable Insert	Applicable Tool Blocks	Fig	Wrench	Cap	Flat Head Screw
<b>GLCB N26-2SJ</b>	○	26	2.6	1.7	120.0	21.4	2	50	WCF□2-□□	SBU20-26J (SB□20-26)	1	SL-5(*)	RW14M4	BFT0405T15ZN
<b>N26-3SJ</b>	○	26	2.6	—	120.0	21.4	3	70	WCF□3-□□		2			
<b>N26-4SJ</b>	○	26	3.6	—	120.0	21.4	4	70	WCF□4-□□		2			
<b>N26-5SJ</b>	○	26	4.6	—	120.0	21.4	5	70	WCF□5-□□		2			
<b>GLCB N32-2SJ</b>	○	32	2.6	1.7	148.8	25.0	2	50	WCF□2-□□	SBU20-32J SBU25-32J (SB□20-32) (SB□25-32)	1	SL-5(*)	RW14M4	BFT0405T15ZN
<b>N32-3SJ</b>	○	32	2.6	—	148.8	25.0	3	100	WCF□3-□□		2			
<b>N32-4SJ</b>	○	32	3.6	—	148.8	25.0	4	100	WCF□4-□□		2			
<b>N32-5SJ</b>	○	32	4.6	—	148.8	25.0	5	100	WCF□5-□□		2			

\*Wrench is sold separately from the main body. Refer to P5 for applicable inserts. The parentheses for applicable tool blocks are for use without internal coolant supply.

Piping Method and Precautions

Tool Blocks

(■ Coated Carbide)

Fig 1 (Neutral (N))

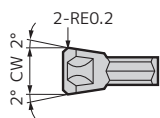


Fig 2 (Right Hand (R))

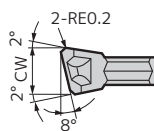
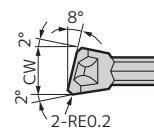
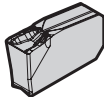
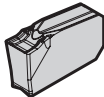
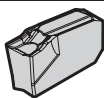


Fig 3 (Left Hand (L))



## Insert for GLC type (Common)

Dimensions (mm)

Appearance	Cat. No.	Width of Cut CW				Applicable Holder	Fig	
		AC830P	AC1030U	AC5015S	AC5025S			
WCF NO-GG General-purpose 	<b>WCF N2-GG</b>	●	●	●	●	2.0	GLCBNOO-2...	1
	<b>WCF N3-GG</b>	●	●	●	●	3.0	GLCBNOO-3...	1
	<b>WCF N4-GG</b>	●	●	●	●	4.0	GLCBNOO-4...	1
	<b>WCF N5-GG</b>	●	●	●	●	5.0	GLCBNOO-5...	1
WCF NO-GF Exotic Alloy Low-feed 	<b>WCF N2-GF</b>		●	●	●	2.0	GLCBNOO-2...	1
	<b>WCF N3-GF</b>		●	●	●	3.0	GLCBNOO-3...	1
	<b>WCF N4-GF</b>		●	●	●	4.0	GLCBNOO-4...	1
	<b>WCF N5-GF</b>		●	●	●	5.0	GLCBNOO-5...	1
WCF □O-CF Exotic Alloy Low-feed (Handed) 	<b>WCF R3-CF</b>		●	●	●	3.0	GLCBNOO-3...	2
	<b>WCF L3-CF</b>		●	●	●	3.0	GLCBNOO-3...	3
	<b>WCF R4-CF</b>		●	●	●	4.0	GLCBNOO-4...	2
	<b>WCF L4-CF</b>		●	●	●	4.0	GLCBNOO-4...	3

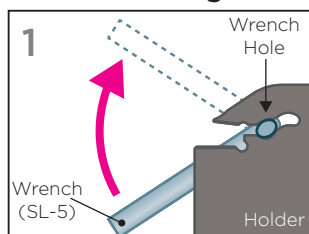
## Recommended Cutting Conditions

Work Material	Cutting Speed $v_c$ (m/min)			
	AC830P	AC1030U	AC5015S	AC5025S
<b>P</b> Carbon Steel / Alloy Steel	80-200	50-200	80-200	50-200
<b>M</b> Stainless Steel	70-150	50-150	70-150	50-150
<b>K</b> Cast Iron	—	50-200	60-200	50-200
<b>S</b> Exotic Alloy	—	20- 60	20- 80	20- 60
<b>N</b> Non-Ferrous Metal	—	150-300	—	—

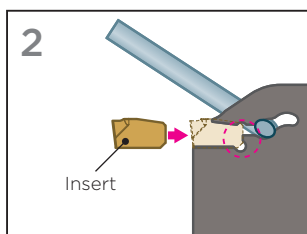
Chipbreaker	Feed Rate $f$ (mm/rev)			
	Neutral		Handed	
	GG General-purpose	GF Exotic Alloy/Low Cutting Force type	CF Low Cutting Force	
Width of Cut	2.0	0.05-0.15	0.03-0.12	—
CW	3.0	0.08-0.25	0.05-0.15	0.05-0.10
(mm)	4.0	0.10-0.30	0.05-0.18	0.05-0.10
	5.0	0.10-0.30	0.05-0.20	—

## Insert Mounting Method and Precautions (Steel Holder)

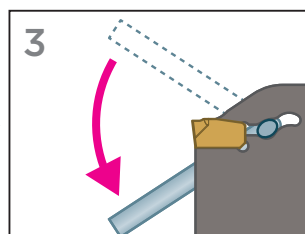
### Insert Mounting



Insert the wrench into the wrench hole above and rotate it in the direction of the arrow

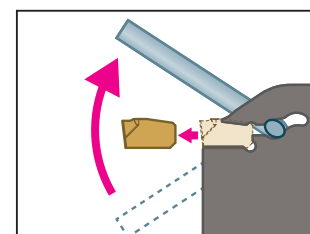


Push in the insert until its back touches the backstop of the holder



Rotate the wrench in the direction of the arrow to complete mounting

### Insert Removal



Perform step 1 on the left to remove the insert

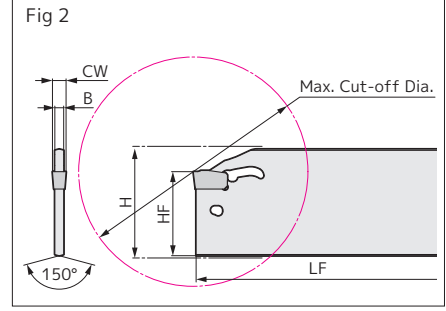
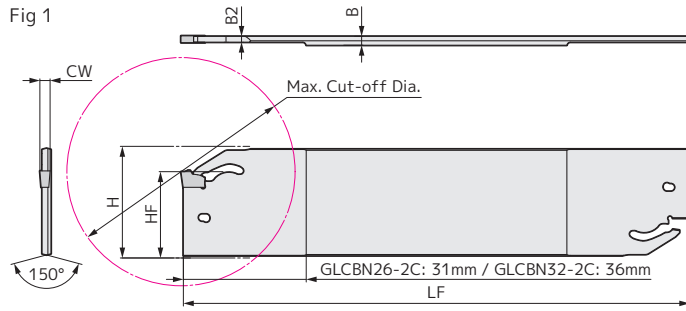
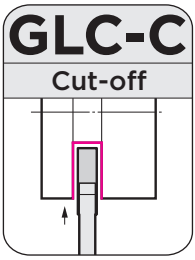
### Insert Mounting Precautions

- Remove any chips or other foreign matter on the insert and holder seats.
- To prevent breakage, do not insert the wrench anywhere else but the wrench hole.
- To prevent breakage, do not use anything but the dedicated wrench (sold separately).
- To extend tool life, lubricate the wrench and the wrench hole with oil, etc.

# GLC-C type



For Cut-off  
(Carbide Holder/Tool Block type)



## Holder

Parts Dimensions (mm)

Cat. No.	Stock	Height H	Width B	Width B2	Overall Length LF	Cutting Edge Height HF	Width of Cut CW	Max. Cut-off Dia.	Applicable Insert	Applicable Tool Blocks	Fig	Wrench
<b>GLCB N26-2C</b>	●	26	2.6	1.7	120.0	21.4	2	60	WCF□2-□□	SB□20-26	1	SL-2(*)
<b>N26-3C</b>	●	26	2.6	—	120.0	21.4	3	80	WCF□3-□□		2	SL-6(*)
<b>N26-4C</b>	●	26	3.6	—	120.0	21.4	4	80	WCF□4-□□		2	SL-6(*)
<b>N26-5C</b>	●	26	4.6	—	120.0	21.4	5	80	WCF□5-□□		2	SL-6(*)
<b>GLCB N32-2C</b>	●	32	2.6	1.7	148.8	25.0	2	68	WCF□2-□□	SB□20-32 SB□25-32	1	SL-2(*)
<b>N32-3C</b>	●	32	2.6	—	148.8	25.0	3	140	WCF□3-□□		2	SL-6(*)
<b>N32-4C</b>	●	32	3.6	—	148.8	25.0	4	140	WCF□4-□□		2	SL-6(*)
<b>N32-5C</b>	●	32	4.6	—	148.8	25.0	5	140	WCF□5-□□		2	SL-6(*)

\*Wrench is sold separately from the main body.  
Refer to P7 for applicable inserts.

Tool Blocks

(  Coated Carbide)

Fig 1 (Neutral (N))

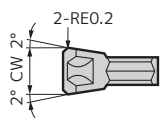


Fig 2 (Right Hand (R))

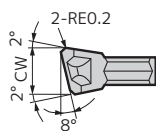
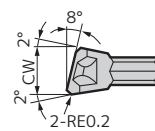
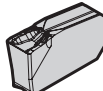
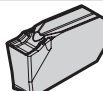
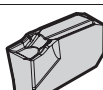


Fig 3 (Left Hand (L))



## Insert for GLC type (Common)

Dimensions (mm)

Appearance	Cat. No.	AC830P	AC1030U	AC5015S	AC5025S	Width of Cut CW	Applicable Holder	Fig
WCF NO-GG General-purpose 	<b>WCF N2-GG</b>	●	●	●	●	2.0	GLCBNOO-2...	1
	<b>WCF N3-GG</b>	●	●	●	●	3.0	GLCBNOO-3...	1
	<b>WCF N4-GG</b>	●	●	●	●	4.0	GLCBNOO-4...	1
	<b>WCF N5-GG</b>	●	●	●	●	5.0	GLCBNOO-5...	1
WCF NO-GF Exotic Alloy Low-feed 	<b>WCF N2-GF</b>		●	●	●	2.0	GLCBNOO-2...	1
	<b>WCF N3-GF</b>		●	●	●	3.0	GLCBNOO-3...	1
	<b>WCF N4-GF</b>		●	●	●	4.0	GLCBNOO-4...	1
	<b>WCF N5-GF</b>		●	●	●	5.0	GLCBNOO-5...	1
WCF □O-CF Exotic Alloy Low-feed (Handed) 	<b>WCF R3-CF</b>		●	●		3.0	GLCBNOO-3...	2
	<b>WCF L3-CF</b>		●	●		3.0	GLCBNOO-3...	3
	<b>WCF R4-CF</b>		●	●		4.0	GLCBNOO-4...	2
	<b>WCF L4-CF</b>		●	●		4.0	GLCBNOO-4...	3

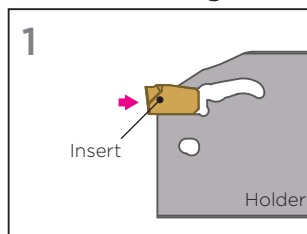
## Recommended Cutting Conditions

Work Material	Cutting Speed $v_c$ (m/min)			
	AC830P	AC1030U	AC5015S	AC5025S
<b>P</b> Carbon Steel / Alloy Steel	80-200	50-200	80-200	50-200
<b>M</b> Stainless Steel	70-150	50-150	70-150	50-150
<b>K</b> Cast Iron	—	50-200	60-200	50-200
<b>S</b> Exotic Alloy	—	20- 60	20- 80	20- 60
<b>N</b> Non-Ferrous Metal	—	150-300	—	—

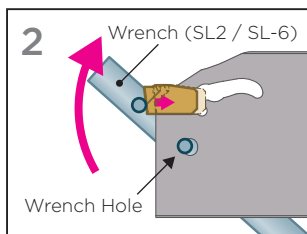
Chipbreaker	Feed Rate $f$ (mm/rev)			
	Neutral		Handed	
	GG General-purpose	GF Exotic Alloy/Low Cutting Force type	CF Low Cutting Force	
Width of Cut	<b>2.0</b>	0.05-0.15	0.03-0.12	—
CW	<b>3.0</b>	0.08-0.25	0.05-0.15	0.05-0.10
(mm)	<b>4.0</b>	0.10-0.30	0.05-0.18	0.05-0.10
	<b>5.0</b>	0.10-0.30	0.05-0.20	—

## Insert Mounting Method and Precautions (Carbide Holder)

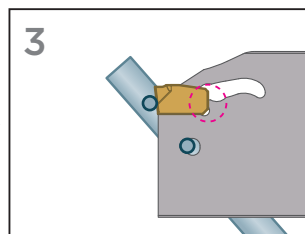
### Insert Mounting



Gently put the insert into the holder

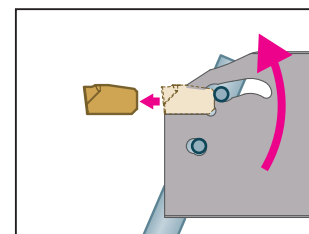


Insert the wrench into the wrench hole as shown and push in the insert from the front while rotating it in the direction of the arrow



Push in the insert until its backstop touches the backstop of the holder to complete mounting

### Insert Removal

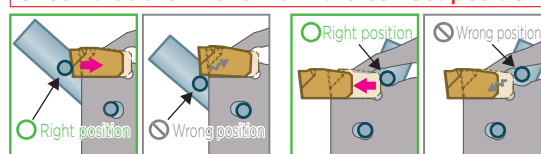


Insert the wrench into the wrench hole as shown and push out the insert from the back while rotating it in the direction of the arrow

### Insert Mounting Precautions

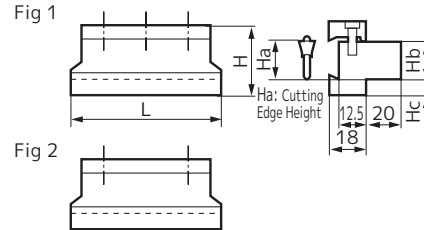
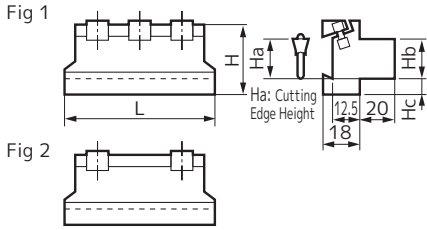
- Remove any chips or other foreign matter on the insert and holder seats.
- To prevent holder breakage, check that the wrench is in the correct position.
- To prevent breakage, do not use anything but the dedicated wrench (sold separately).
- When removing the insert, the wrench will contact the clamp portion of the holder; do not apply excessive force to the holder after contact is made.

### Check that the wrench is in the correct position



When mounting insert    When removing insert

● mark: Standard stocked item    Blank: Made-to-order item



### Tool Block SBN type (Integrated) Parts

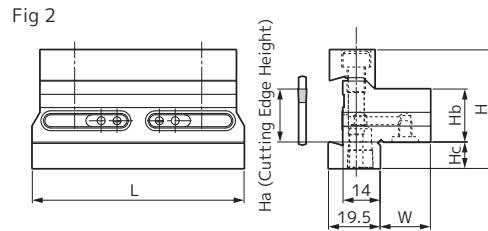
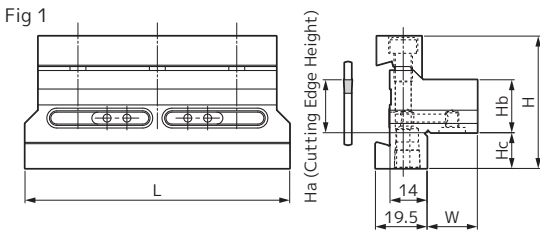
Dimensions (mm)

Cat. No.	Stock	Cutting Edge Height Ha	Mounting Length Hb	Mounting Position Hc	Height H	Overall Length L	Fig	Parts		
								Clamp Plate	Double Screw	Wrench
<b>SBN 20-26</b>	●	20	20	10.0	45	80	2			
<b>20-32</b>	●	20	20	13.5	50	100	1	BWS30	WB8-20	LH040
<b>25-32</b>	●	25	25	8.5	50	110	1			

### Tool Block SBU type (Split type) Parts

Dimensions (mm)

Cat. No.	Stock	Cutting Edge Height Ha	Mounting Length Hb	Mounting Position Hc	Height H	Overall Length L	Fig	Parts		
								Clamp Wedge	Cap Screw	Wrench
<b>SBU 20-26</b>	●	20	20	10.0	45	80	2			
<b>20-32</b>	●	20	20	13.5	50	100	1	BCS15 BCS20 BCS25	BX0622	LH050
<b>25-32</b>	●	25	25	8.5	50	110	1			



### Tool Block for Internal Coolant Supply SBU-J type (Split type) Parts

Dimensions (mm)

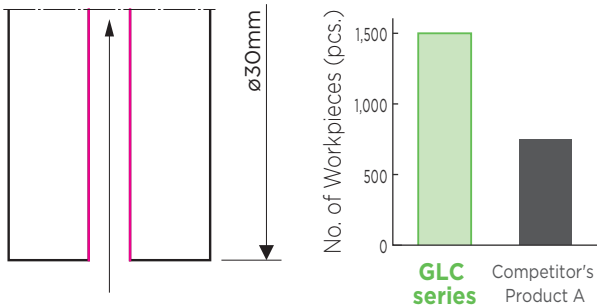
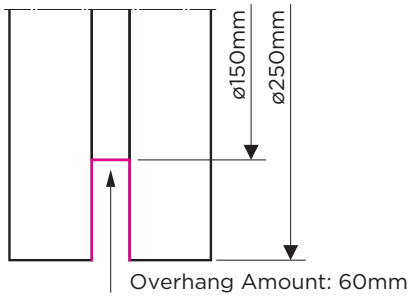
Cat. No.	Stock	Cutting Edge Height Ha	Mounting Length Hb	Mounting Position Hc	Height H	Width W	Overall Length L	Fig	Parts					
									Clamp Wedge	O-ring	Cap Screw	Set Screw	Wrench	Plug
<b>SBU 20-26J</b>	○	20	20	10	45	19	80	2						
<b>20-32J</b>	○	20	20	13.5	50	19	100	1	BCS15 BCS20 BCS25	ID210W1	BX0622	BT0506	LH050	XP02
<b>25-32J</b>	○	25	25	8.5	50	23	110	1		ID255W1				
										ID280W1				

For Internal Coolant Supply Supported Holder GLC-SJ type.

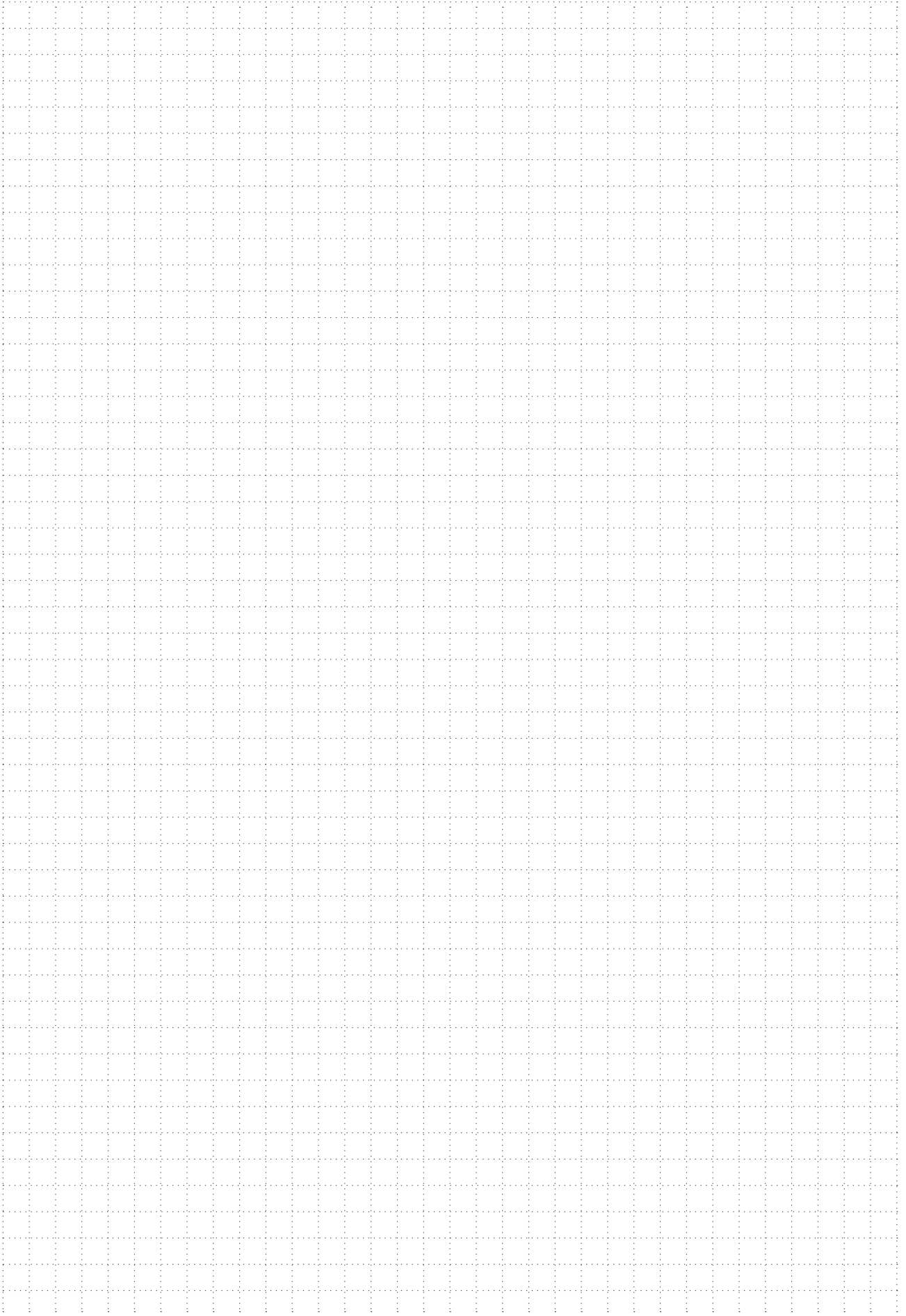
Piping Method and Precautions

### Tool Block type Selection Guide

Integrated type	<p><b>SBN type</b> Example: SBN20-32</p> <p>· Applicable to toolpost shown on the right <b>A</b>.</p>	<p><b>A</b> General-purpose Lathe, etc. SBN type SBU(-J) type</p> <p>Toolpost Tool Block Spacer (Clamp from above)</p>	<p><b>B</b> Turret type Toolpost, etc. SBU(-J) type</p> <p>Toolpost Tool Block Wedge (Clamp from the side)</p>
	<p><b>SBU(-J) type</b> Example: SBU20-32</p> <p>· Applicable to toolpost shown on the right <b>A B</b>. · Large clamp plate ensures a wide clamp area that enables long holder overhang.</p>		

SUS303 Semiconductor Manufacturing Equipment Component <b>M</b>	SUS630 Measuring Instrument Component <b>M</b>						
<p>Achieves 1.5x longer insert life than competitor's product in stainless steel machining</p>  <p>No. of Workpieces (pcs.)</p> <table border="1"> <tr> <th>Product</th> <th>No. of Workpieces (pcs.)</th> </tr> <tr> <td>GLC series</td> <td>1500</td> </tr> <tr> <td>Competitor's Product A</td> <td>750</td> </tr> </table>	Product	No. of Workpieces (pcs.)	GLC series	1500	Competitor's Product A	750	<p>Realises stable machining with 60mm overhang amount thanks to carbide holder</p>  <p>Overhang Amount: 60mm</p>
Product	No. of Workpieces (pcs.)						
GLC series	1500						
Competitor's Product A	750						
<p>Holder: GLCBN32-3SJ Insert: WCFN3-GF(AC5015S) Cutting Conditions: <math>vc = 50\text{m/min}</math> <math>f = 0.05\text{mm/rev}</math> Wet (Internal Coolant Supply / Cut-off Machining)</p>	<p>Holder: GLCBN32-5C Insert: WCFN5-GF(AC5015S) Cutting Conditions: <math>vc = 80\text{m/min}</math> <math>f = 0.1\text{mm/rev}</math> Wet (External Coolant Supply / Grooving)</p>						

# MEMO



# MEMO

A large grid of dotted lines for writing a memo. The grid consists of 20 columns and 30 rows of small squares, providing a structured space for notes or a report.



- Very hot or lengthy chips may be discharged while the machine is in operation. Therefore, machine guards, safety goggles or other protective covers must be used. Fire safety precautions must also be considered.

**< SAFETY NOTES >**

- Please handle with care as this product has sharp edges.
- Improper cutting conditions or mis-handling of the tool may result in breakages or projectiles. Therefore, please use the tool within its recommended conditions.

- When using non-water soluble cutting oil, precautions against fire must be taken and please ensure that a fire extinguisher is placed near the machine.

 **Sumitomo Electric Industries, Ltd.**

**Hardmetal Division**

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<https://www.sumitool.com/global>