

# GÜHRING

## GROOVING SYSTEMS

### 德國鈷領 切槽 切斷刀



1. # 26601 22,020 中性雙頭鋼用2mm切斷刀片及刀把
2. # 26604 22,030 中性單頭鋼用3mm切斷刀片
3. # 26605 22,030 中性雙頭不銹鋼用3mm切斷刀片
4. # 26906 QG 106 鑽孔搪孔刀6mm柄徑 中心出水型
5. # 27290 QG 108 鑽孔搪孔刀8mm柄徑 中心出水型

## INNOVATION

# SYSTEM 222

## NEW SYSTEM

2 CUTTING EDGES | 22 MM LENGTH | FOR GROOVING AND PARTING OFF  
雙頭刃口可使用                      長度22mm                      可以切槽及切斷

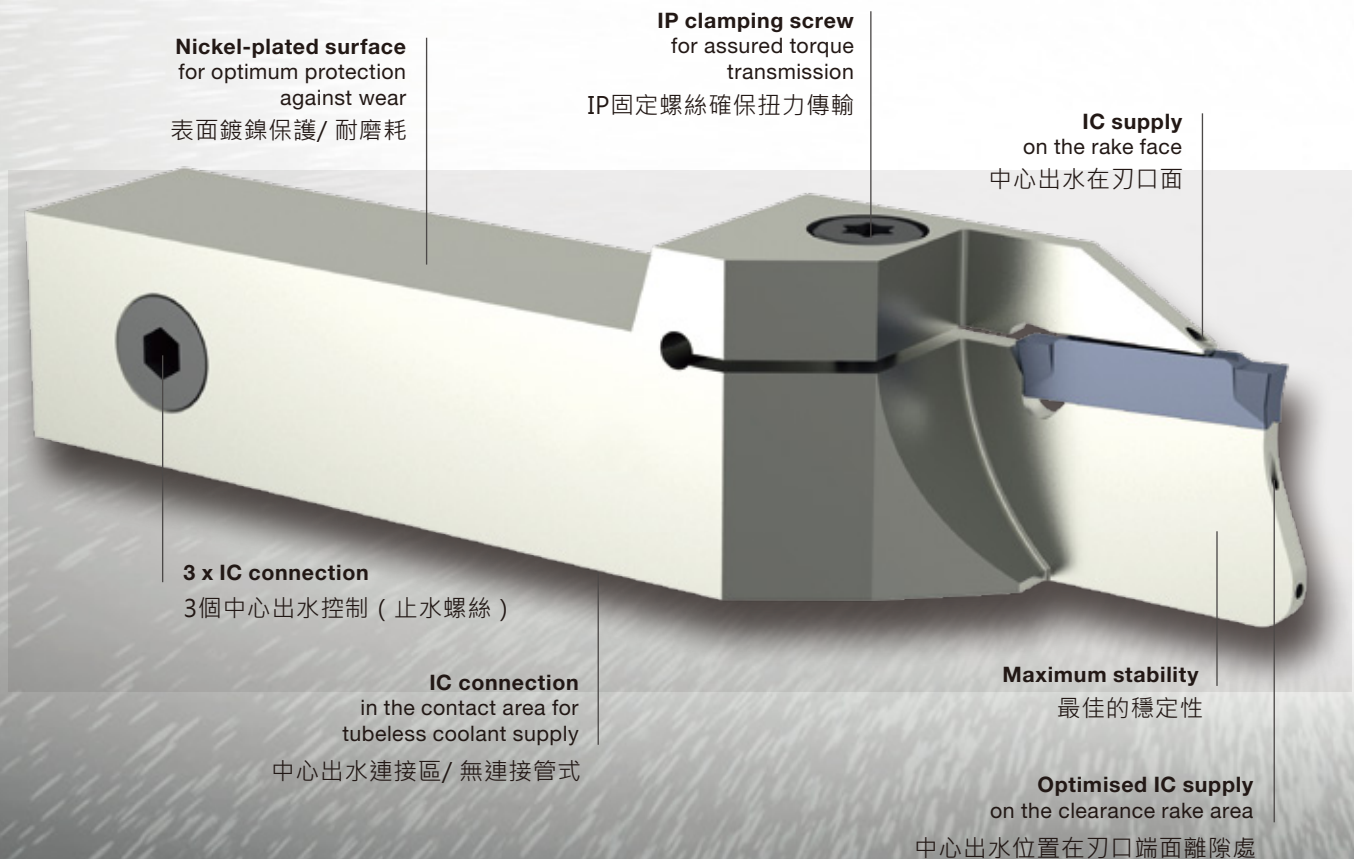
With System 222, Gühring continues in the pursuit of completing its range of turning and grooving tools. With the so-called pressed-to-size inserts, the chip former and cutting geometry are pressed in directly - for particularly high process reliability. The first step is the groove width of 3 mm. Chip formers and geometry are suitable for general applications in steel materials. We also offer an extensive range of tool holders with and without internal cooling.

鈷領222系統，持續致力於追求完善車削和切槽刀具的範圍。

按尺寸製造的刀片，刃口凹槽的切屑成形設計和幾何形狀具有很高的加工可靠性，首先是3 mm的凹槽寬度，切屑成形凹槽和幾何形狀適用於鋼材的加工，我們還提供各種帶有內部冷卻和外部冷卻的刀架。

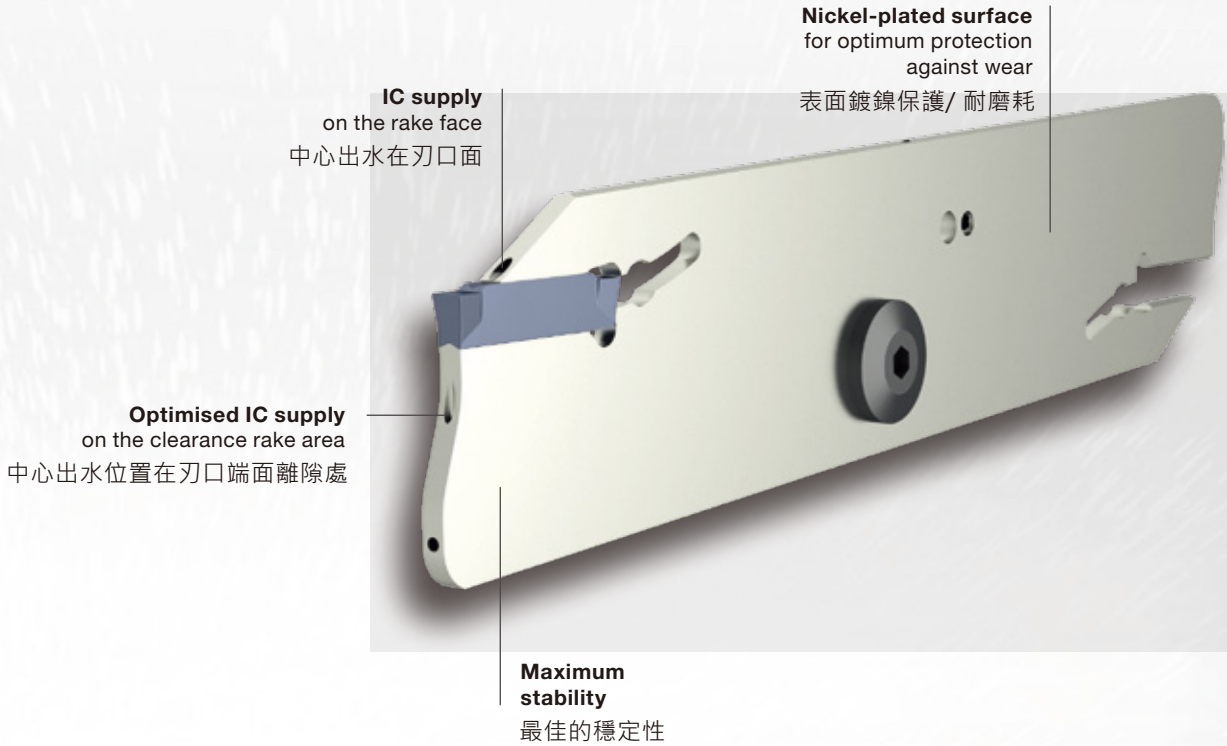
## TOOL HOLDER, 刀把

WITH AND WITHOUT INTERNAL COOLANT SUPPLY 帶有內部冷卻和外部冷卻的刀架



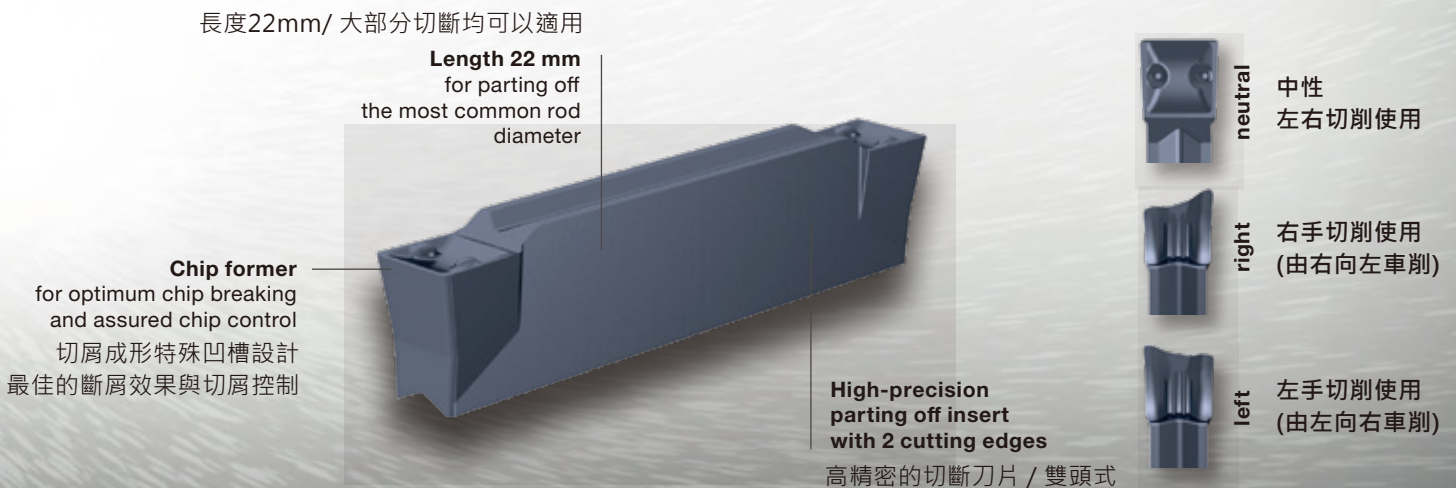
## PARTING OFF BLADE, 切斷刀

WITH AND WITHOUT INTERNAL COOLANT SUPPLY 帶有內部冷卻和外部冷卻的刀架



## INDEXABLE INSERT, 可轉位刀頭

VERSION NEUTRAL, RIGHT, LEFT



# NEW SYSTEM

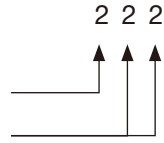
2 cutting edges | 22 mm length | for grooving and parting off

雙頭刃口可使用 長度22mm 可以切槽及切斷

Explanation of the article description

## System description 系統說明

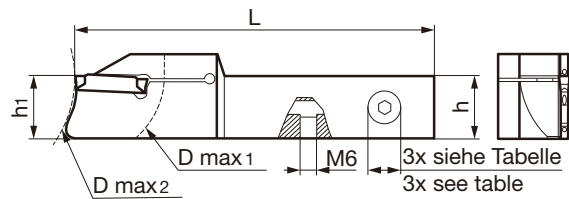
雙頭刃口可使用 2 usable cutting edges  
22mm刀片長度 22 mm length



## Article description

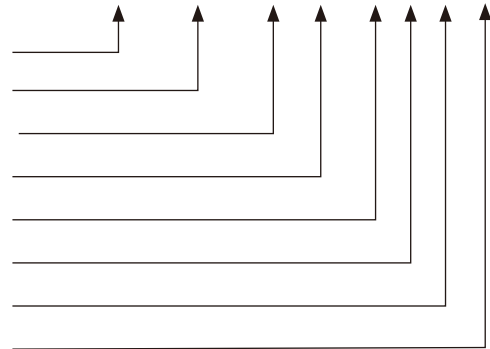
### Tool holder

### 切槽刀刀把說明



Tool description: Example: GH222.2020.109.00.03.R.IK.52

系統222 System 222  
柄部尺寸 Shank size  
總長度 Total length  
刀片位置 Insert position  
使用刀片的寬度尺寸 Size  
切削方向 Version R/L  
中心出水 IC  
材料被切削後的最大外徑 D max

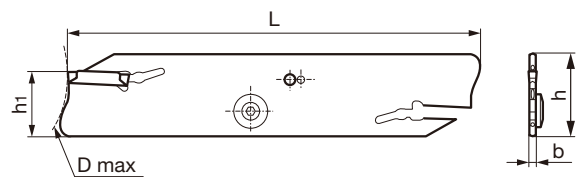


D max 2 ~ D max 1 為此刀把的工作範圍 D max 1 : 為切削後材料外徑 D max 2 : 材料切削前最大外徑

## Article description

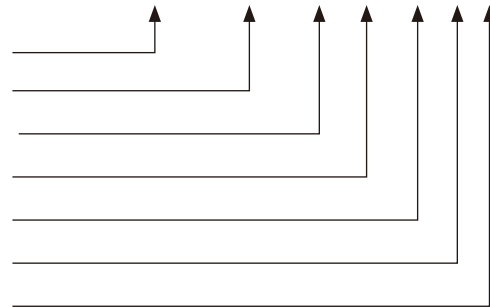
### Parting off blade

### 切斷刀刀把說明



Tool description: Example: GS222.0032.147.03.02.N.IK

系統222 System 222  
高度 Height  
總長度 Total length  
使用刀片的寬度尺寸 Size  
刀片座數量 No. of insert seats  
切削方向 中性 Version neutral  
中心出水 IC



D max 2 : 材料切削前最大外徑

When ordering please always state the **Article No. and the Code No.** i.e.:  
 Article GZ222.0300.020.PM.01.R.08,  
 FIRE-coated = **26602 22.030**

訂購時請說明主要【編號】與【編碼】  
 例如：26602 22.030

## Ordering example

Indexable inserts for parting off 

### Indexable inserts for parting off



- with chip-former

for tool holders type GH222/GS222 see from page 6

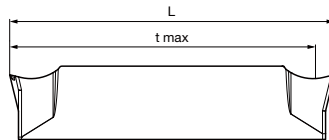
**GÜHRING** NAVIGATOR  
 Cutting data page 14

Tool material **Solid carbide**

Type GZ222

Surface 

FIRE



Right hand version shown  
 Left hand version mirror image

Article no. **26602**  
 Version right

Article no.  
 主要編碼

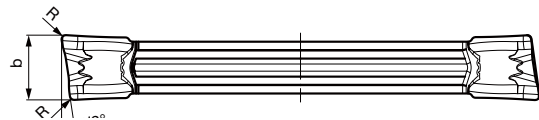
Code no.	Description	t max	b ±0.025	L ±0.1	R	W2
		mm	mm	mm	mm	°
22.030	GZ222.0300.020.PM.01.R.08	21.00	3.00	22.00	0.20	8

Code no. 編碼

## Article description

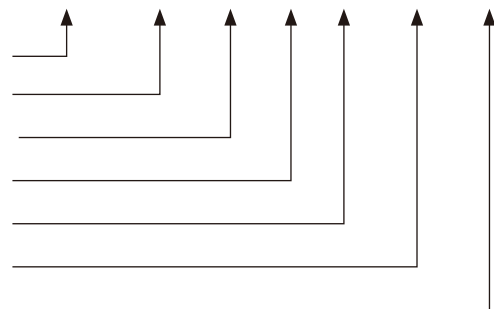
### Indexable insert

### 刀片說明



Tool description: Example: GZ222.0300.020.PM.01.N/R/L.08

系統222 System 222  
 刀片寬度 Insert width  
 刀片圓角 Corner radius  
 切屑成形槽型式 Chip former  
 應用的範圍 Range of application  
 切削方向 Version  
 前端刀口偏角 for R/L: angle

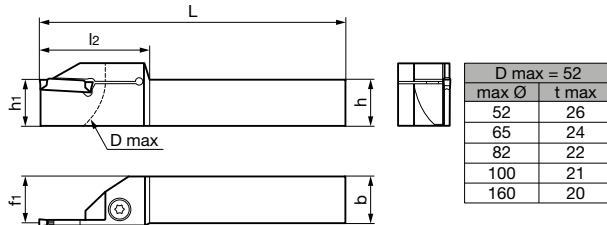




**Square shank holder straight, external machining, without IC 方形直柄刀把 / 無中心出水**

- tmax 21 mm: maximum grooving depth before 2nd cutting edge engages
- without internal coolant supply
- tmax : 最大切槽深度為接近另一端刀口前之距離
- 無中心出水

Type GH222



New products

Right hand version shown 上面圖示為右手切削刀把  
Left hand version mirror image 左手切削刀把則為鏡射相反方向

編號 Article no. **26100**

version right-hand

使用刀片寬度

Code no.	Description	h	b	L	l2	h1	f1	D max	Size	價格
編碼		mm	mm	mm	mm	mm	mm	mm		
22.110	GH222.1010.125.00.02.R.00.26	10.00	10.00	125.00	30.00	10.00	9.00	26.00	02	5,400
22.120	GH222.1212.125.00.02.R.00.26	12.00	12.00	125.00	30.00	12.00	11.00	26.00	02	5,700
22.121	GH222.1212.125.00.02.R.00.34	12.00	12.00	125.00	34.00	12.00	11.00	34.00	02	5,700
22.130	GH222.0500.500.00.02.R.00.26	12.70	12.70	127.00	30.00	12.70	11.70	26.00	02	5,700
22.131	GH222.0500.500.00.02.R.00.34	12.70	12.70	127.00	34.00	12.70	11.70	34.00	02	5,700
22.140	GH222.0625.500.00.02.R.00.45	15.87	15.87	127.00	39.50	15.87	14.87	45.00	02	6,100
22.150	GH222.1616.125.00.02.R.00.45	16.00	16.00	125.00	39.50	16.00	15.00	45.00	02	6,100
22.160	GH222.0750.500.00.02.R.00.45	19.05	19.05	127.00	39.00	19.05	19.05	45.00	02	6,700
22.170	GH222.2020.125.00.02.R.00.45	20.00	20.00	125.00	39.00	20.00	20.00	45.00	02	6,700
22.020	GH222.1212.125.00.03.R.00.34	12.00	12.00	125.00	34.00	12.00	10.50	34.00	03	6,500
22.030	GH222.0500.500.00.03.R.00.34	12.70	12.70	127.00	34.00	12.70	11.20	34.00	03	6,500
22.040	GH222.0625.500.00.03.R.00.45	15.87	15.87	127.00	39.50	15.87	14.37	45.00	03	7,000
22.050	GH222.1616.125.00.03.R.00.45	16.00	16.00	125.00	39.50	16.00	14.50	45.00	03	7,000
22.060	GH222.0750.500.00.03.R.00.52	19.05	19.05	127.00	45.00	19.05	19.05	52.00	03	7,500
22.070	GH222.2020.125.00.03.R.00.52	20.00	20.00	125.00	45.00	20.00	20.00	52.00	03	7,500
22.080	GH222.2525.150.00.03.R.00.52	25.00	25.00	150.00	45.00	25.00	25.00	52.00	03	7,800
22.090	GH222.1000.600.00.03.R.00.52	25.40	25.40	152.40	45.00	25.40	25.40	52.00	03	7,800

D max 為材料被切削後的最大外徑

編號 Article no. **26101**

version left-hand

使用刀片寬度

Code no.	Description	h	b	L	l2	h1	f1	D max	Size	價格
編碼		mm	mm	mm	mm	mm	mm	mm		
22.110	GH222.1010.125.00.02.L.00.26	10.00	10.00	125.00	30.00	10.00	9.00	26.00	02	5,400
22.120	GH222.1212.125.00.02.L.00.26	12.00	12.00	125.00	30.00	12.00	11.00	26.00	02	5,700
22.121	GH222.1212.125.00.02.L.00.34	12.00	12.00	125.00	34.00	12.00	11.00	34.00	02	5,700
22.130	GH222.0500.500.00.02.L.00.26	12.70	12.70	127.00	30.00	12.70	11.70	26.00	02	5,700
22.131	GH222.0500.500.00.02.L.00.34	12.70	12.70	127.00	34.00	12.70	11.70	34.00	02	5,700
22.140	GH222.0625.500.00.02.L.00.45	15.87	15.87	127.00	39.50	15.87	14.87	45.00	02	6,100
22.150	GH222.1616.125.00.02.L.00.45	16.00	16.00	125.00	39.50	16.00	15.00	45.00	02	6,100
22.160	GH222.0750.500.00.02.L.00.45	19.05	19.05	127.00	39.00	19.05	19.05	45.00	02	6,700
22.170	GH222.2020.125.00.02.L.00.45	20.00	20.00	125.00	39.00	20.00	20.00	45.00	02	6,700
22.020	GH222.1212.125.00.03.L.00.34	12.00	12.00	125.00	34.00	12.00	10.50	34.00	03	6,500
22.030	GH222.0500.500.00.03.L.00.34	12.70	12.70	127.00	34.00	12.70	11.20	34.00	03	6,500
22.040	GH222.0625.500.00.03.L.00.45	15.87	15.87	127.00	39.50	15.87	14.37	45.00	03	7,000
22.050	GH222.1616.125.00.03.L.00.45	16.00	16.00	125.00	39.50	16.00	14.50	45.00	03	7,000
22.060	GH222.0750.500.00.03.L.00.52	19.05	19.05	127.00	45.00	19.05	19.05	52.00	03	7,500
22.070	GH222.2020.125.00.03.L.00.52	20.00	20.00	125.00	45.00	20.00	20.00	52.00	03	7,500
22.080	GH222.2525.150.00.03.L.00.52	25.00	25.00	150.00	45.00	25.00	25.00	52.00	03	7,800
22.090	GH222.1000.600.00.03.L.00.52	25.40	25.40	152.40	45.00	25.40	25.40	52.00	03	7,800

D max 為材料被切削後的最大外徑



**Spare parts 備品**

售價	Article no.	Clamping screw	Tightening torque	Description
200	25906	固定螺絲	Nm 扭力	
	Code 4.000	M4x15.5x15IP	3.5	GH222.1010.....; GH222.0500.....; GH222.0625.....; GH222.1616.....

售價	Article no.	Clamping screw	Tightening torque	Description
300	25907	固定螺絲	Nm 扭力	
	Code 5.000	M5x18x25IP	6	GH222.0750.....; GH222.2020.....; GH222.2525.....; GH222.1000.....

售價	Article no.	Torx-Plus Wrench
350	25904	T型板手
	Code 15.001	T15IP

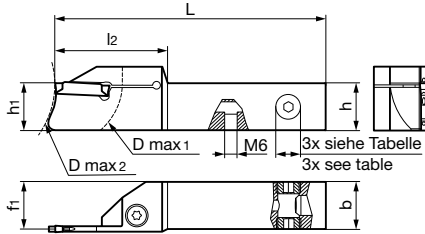
售價	Article no.	Torx-Plus Wrench
350	25922	T型板手
	Code 15.000	T25IP



**Square shank holder straight, external machining, with IC 方形直柄刀把 / 中心出水**

- **tmax 21 mm: maximum grooving depth before 2nd cutting edge engages**
- with internal coolant supply from above and below
- TL (tubeless): tubeless coolant supply from shank size 19.05x19.05 from location face
- **tmax** : 最大切槽深度為接近另一端刃口前之距離
- 刃口上下兩端有中心出水
- 無管式中心出水設計從尺寸19.05x 19.05刀把開始

Type GH222



□	⊙
12/12	M8x1
12,7/12,7	M8x1
15,87/15,87	G1/8
16/16	G1/8
19,05/19,05	G1/8
20/20	G1/8
25/25	G1/8
25,4/25,4	G1/8

D max 1 = 52	
max Ø	t max
52	26
65	24
82	22
100	21
120	20



New products

Right hand version shown 上面圖示為右手切削刀把  
Left hand version mirror image 左手切削刀把則為鏡射相反方向

編號 Article no. **26102**

version right-hand

使用刀片寬度

Code no. 編碼	Description	h mm	b mm	L mm	l2 mm	h1 mm	f1 mm	D max mm	Size	價格
22.110	GH222.1010.125.00.02.R.IK.26	10.00	10.00	125.00	30.00	10.00	9.00	26.00	02	8,900
22.120	GH222.1212.125.00.02.R.IK.26	12.00	12.00	125.00	30.00	12.00	11.00	26.00	02	9,400
22.121	GH222.1212.125.00.02.R.IK.34	12.00	12.00	125.00	34.00	12.00	11.00	34.00	02	9,400
22.130	GH222.0500.500.00.02.R.IK.26	12.70	12.70	127.00	30.00	12.70	11.70	26.00	02	9,400
22.131	GH222.0500.500.00.02.R.IK.34	12.70	12.70	127.00	34.00	12.70	11.70	34.00	02	9,400
22.140	GH222.0625.500.00.02.R.IK.45	15.87	15.87	127.00	39.50	15.87	14.87	45.00	02	9,700
22.150	GH222.1616.125.00.02.R.IK.45	16.00	16.00	125.00	39.50	16.00	15.00	45.00	02	9,700
22.160	GH222.0750.500.00.02.R.IK.45	19.05	19.05	127.00	39.00	19.05	19.05	45.00	02	10,000
22.170	GH222.2020.125.00.02.R.IK.45	20.00	20.00	125.00	39.00	20.00	20.00	45.00	02	10,000
22.020	GH222.1212.125.00.03.R.IK.34	12.00	12.00	125.00	34.00	12.00	10.50	34.00	03	11,000
22.030	GH222.0500.500.00.03.R.IK.34	12.70	12.70	127.00	34.00	12.70	11.20	34.00	03	11,000
22.040	GH222.0625.500.00.03.R.IK.45	15.87	15.87	127.00	39.50	15.87	14.37	45.00	03	11,000
22.050	GH222.1616.125.00.03.R.IK.45	16.00	16.00	125.00	39.50	16.00	14.50	45.00	03	11,000
22.060	GH222.0750.500.00.03.R.IK.52	19.05	19.05	127.00	45.00	19.05	19.05	52.00	03	10,000
22.070	GH222.2020.125.00.03.R.IK.52	20.00	20.00	125.00	45.00	20.00	20.00	52.00	03	10,000
22.080	GH222.2525.150.00.03.R.IK.52	25.00	25.00	150.00	45.00	25.00	25.00	52.00	03	11,000
22.090	GH222.1000.600.00.03.R.IK.52	25.40	25.40	152.40	45.00	25.40	25.40	52.00	03	11,000

D max 2~D max 1 為此刀具的工作範圍 D max 1 為切削後材料外徑 D max 2 材料切削前最大外徑

編號 Article no. **26103**

version left-hand

使用刀片寬度

Code no. 編碼	Description	h mm	b mm	L mm	l2 mm	h1 mm	f1 mm	D max mm	Size	價格
22.110	GH222.1010.125.00.02.L.IK.26	10.00	10.00	125.00	30.00	10.00	9.00	26.00	02	8,900
22.120	GH222.1212.125.00.02.L.IK.26	12.00	12.00	125.00	30.00	12.00	11.00	26.00	02	9,400
22.121	GH222.1212.125.00.02.L.IK.34	12.00	12.00	125.00	34.00	12.00	11.00	34.00	02	9,400
22.130	GH222.0500.500.00.02.L.IK.26	12.70	12.70	127.00	30.00	12.70	11.70	26.00	02	9,400
22.131	GH222.0500.500.00.02.L.IK.34	12.70	12.70	127.00	34.00	12.70	11.70	34.00	02	9,400
22.140	GH222.0625.500.00.02.L.IK.45	15.87	15.87	127.00	39.50	15.87	14.87	45.00	02	9,700
22.150	GH222.1616.125.00.02.L.IK.45	16.00	16.00	125.00	39.50	16.00	15.00	45.00	02	9,700
22.160	GH222.0750.500.00.02.L.IK.45	19.05	19.05	127.00	39.00	19.05	19.05	45.00	02	10,000
22.170	GH222.2020.125.00.02.L.IK.45	20.00	20.00	125.00	39.00	20.00	20.00	45.00	02	10,000
22.020	GH222.1212.125.00.03.L.IK.34	12.00	12.00	125.00	34.00	12.00	10.50	34.00	03	11,000
22.030	GH222.0500.500.00.03.L.IK.34	12.70	12.70	127.00	34.00	12.70	11.20	34.00	03	11,000
22.040	GH222.0625.500.00.03.L.IK.45	15.87	15.87	127.00	39.50	15.87	14.37	45.00	03	11,000
22.050	GH222.1616.125.00.03.L.IK.45	16.00	16.00	125.00	39.50	16.00	14.50	45.00	03	11,000
22.060	GH222.0750.500.00.03.L.IK.52	19.05	19.05	127.00	45.00	19.05	19.05	52.00	03	10,000
22.070	GH222.2020.125.00.03.L.IK.52	20.00	20.00	125.00	45.00	20.00	20.00	52.00	03	10,000
22.080	GH222.2525.150.00.03.L.IK.52	25.00	25.00	150.00	45.00	25.00	25.00	52.00	03	11,000
22.090	GH222.1000.600.00.03.L.IK.52	25.40	25.40	152.40	45.00	25.40	25.40	52.00	03	11,000

D max 2~D max 1 為此刀具的工作範圍 D max 1 為切削後材料外徑 D max 2 材料切削前最大外徑



**Spare parts 備品**

售價	Article no.	Clamping screw	Tightening torque	Description
200	25906	固定螺絲	Nm 扭力	
	Code 4.000	M4x15.5x15IP	3.5	GH222.1010.....; GH222.0500.....; GH222.0625.....; GH222.1616.....

售價	Article no.	Clamping screw	Tightening torque	Description
300	25907	固定螺絲	Nm 扭力	
	Code 5.000	M5x18x25IP	6	GH222.0750.....; GH222.2020.....; GH222.2525.....; GH222.1000.....

售價	Article no.	Torx-Plus Wrench
350	25904	T型板手
	Code 15.001	T15IP

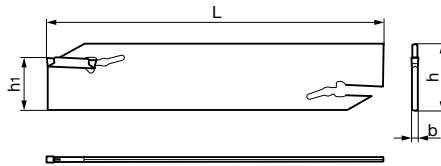
售價	Article no.	Torx-Plus Wrench
350	25922	T型板手
	Code 15.000	T25IP



## Parting off blade, without IC 切斷刀刀把 / 無中心出水

- without internal coolant supply 無中心出水

Type GS222



NEW



New products

編號 Article no. 26200

Code no.	Description	可切削深度 t max	刀把寬度 b	刀把高度 h	刃口高度 h1	總長 L	使用刀片寬度 Size	價格
編碼		mm	mm	mm	mm	mm		
22.102	GS222.0026.120.02.02.N	35.00	1.55	26.00	21.40	120.40	02	5,400
22.103	GS222.0032.150.02.02.N	45.00	1.55	32.00	25.00	150.00	02	6,000
22.002	GS222.0026.120.03.02.N	35.00	2.25	26.00	21.40	120.40	03	6,000
22.003	GS222.0032.150.03.02.N	45.00	2.25	32.00	25.00	150.00	03	6,800

## Spare parts

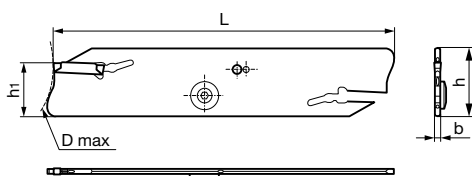
Article no.	Mounting key	價格
25921	刀片安裝專用扳手	800

Code 15.000

**Parting off blade, with IC 切斷刀刀把 / 中心出水**

- with internal coolant supply from above and below
- 刀口上下兩端有中心出水

Type GS222



編號 Article no. **26201**

Code no. 編碼	Description	可切削深度	刀把寬度	刀把高度	刀口高度	總長	使用刀片寬度		
		t max mm	b mm	h mm	h1 mm	L mm	D max mm	Size	價格
22.102	GS222.0026.118.02.02.N.IK	35.00	1.55	26.00	21.40	118.00	70.00	02	8,400
22.103	GS222.0032.147.02.02.N.IK	45.00	1.55	32.00	25.00	147.50	90.00	02	9,000
22.002	GS222.0026.118.03.02.N.IK	35.00	2.25	26.00	21.40	118.00	70.00	03	9,500
22.003	GS222.0032.147.03.02.N.IK	45.00	2.25	32.00	25.00	147.50	90.00	03	10,000

D max 材料切削前最大外徑

**Spare parts**

Article no.	Mounting key	價格
25921	刀片安裝專用扳手	800

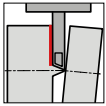
Code 15.000

Article no.	IC locking screw	價格
25909	中心出水鈕切換專用扳手	600

Code 4.000



## Indexable insert for parting off 切斷刀片



- with chip former
- 刃口有特殊切屑成形凹槽設計

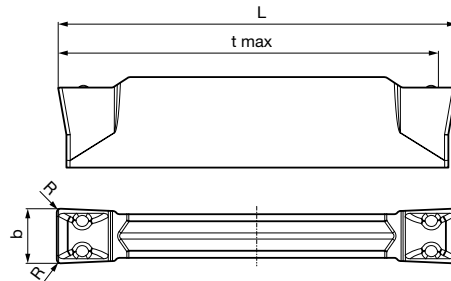
Tool material **Solid carbide**

Type GZ222

Surface **F**

FIRE

New products



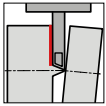
新增加2mm寬規格

編號 Article no. **26601**

切削方向 version left and right 中性

Code no.	Description	可切削長度 t max	刀片寬度 b ±0,02	刀片長度 L ±0,1	圓角 R	價格
編碼		mm	mm	mm	mm	
22.020	GZ222.0200.020.PP.02.N	21.00	2.00	22.00	0.20	950
22.030	GZ222.0300.020.PP.02.N	21.00	3.00	22.00	0.20	950

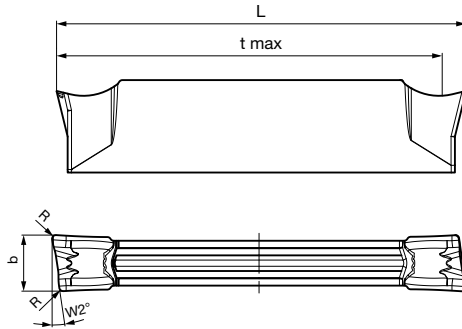
**Indexable insert for parting off 切斷刀片**



- with chip former
- 刀口有特殊切屑成形凹槽設計



上面圖示為右手切削刀片  
 左手切削刀片則為鏡射相反方向  
 Right hand version shown  
 Left hand version mirror image



Tool material	<b>Solid carbide</b>
Type	GZ222
Surface	<b>F</b> FIRE

編號 Article no. **26602**

切削方向 version right-hand 右手切削

Code no.	Description	可切削長度 t max	刀片寬度 b ±0,02	刀片長度 L ±0,1	圓角 R	前端刀口偏角 W2	價格
編碼		mm	mm	mm	mm	°	
22.030	GZ222.0300.020.PM.01.R.08	21.00	3.00	22.35	0.20	8	950

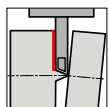
編號 Article no. **26603**

切削方向 version left-hand 左手切削

Code no.	Description	可切削長度 t max	刀片寬度 b ±0,02	刀片長度 L ±0,1	圓角 R	前端刀口偏角 W2	價格
編碼		mm	mm	mm	mm	°	
22.030	GZ222.0300.020.PM.01.L.08	21.00	3.00	22.35	0.20	8	950

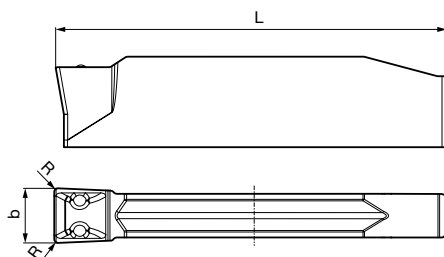


**Indexable insert for parting off 單頭式切斷刀片**



- with chip former
- 刃口有特殊切屑成形凹槽設計

P	●
M	○
K	○
N	○
S	○
H	○



Tool material	<b>Solid carbide</b>
Type	GZ122
Surface	<b>F</b> FIRE
	<b>NEW</b>

New products

編號 Article no. **26604**

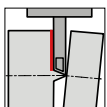
切削方向 version left and right 中性

Code no.	Description	刀片寬度 b ±0,02	刀片長度 L ±0,1	圓角 R	價格
編碼		mm	mm	mm	
22.030	GZ122.0300.020.PP.02.N	3.00	21.54	0.20	700



New products

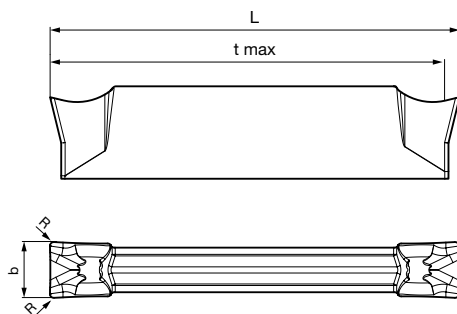
Indexable insert for parting off 切斷刀片



- with chip former
- 刃口有特殊切屑成形凹槽設計

P	○
M	●
K	
N	
S	
H	

不銹鋼材質用



Tool material	<b>Solid carbide</b>
Type	GZ222
Surface	<b>a</b>
	TiAlN-nanoA



編號 Article no. 26605

切削方向 version left and right 中性

Code no.	Description	可切削長度 t max	刀片寬度 b ±0,02	刀片長度 L ±0,1	圓角 R	價格
編碼		mm	mm	mm	mm	
22.030	GZ222.0300.020.MP.02.N	21.00	3.00	22.00	0.20	950

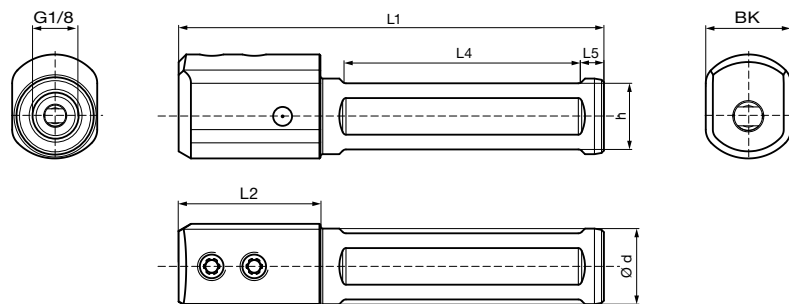


**Round shank holder, clamping screw above, four clamping surfaces GB 106 圓形側固中心出水刀把**

- for inserts type 106 with IC
- with central internal coolant supply
- 搭配106系列車刀使用

Type GB106

可搭配QG106 鑽孔搪孔車刀使用



New products

編號 Article no. 25325

Code no. 編碼	Description	d mm	h mm	L1 mm	L2 mm	L4 mm	L5 mm	BK mm	價格
6.001	GB106.0016.090.00.22.N.IK.Z	16.00	14.00	90.00	30.00	50.00	4.00	18.0	6,300
6.002	GB106.0020.095.00.22.N.IK.Z	20.00	18.00	95.00	30.00	55.00	4.00		6,100
6.003	GB106.0022.095.00.22.N.IK.Z	22.00	20.00	95.00		55.00	4.00		6,100

**Spare parts**

Article no.	Clamping screw	Tightening torque	價格
25900	固定螺絲	Nm	
Code 6.000	M6x7.5x15IP	4-4.5	200

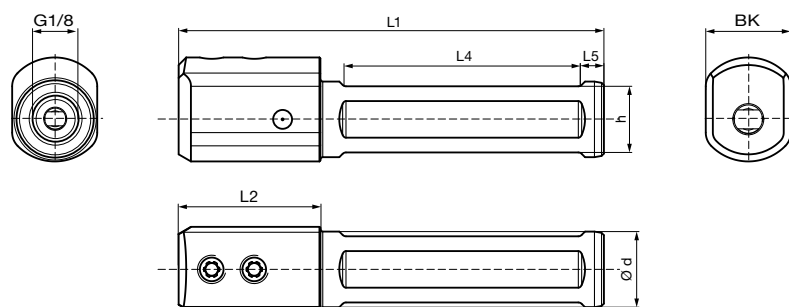
Article no.	Torx-Plus Wrench	價格
25904	T型扳手	
Code 15.000	T15IP T-handle	300

**Round shank holder, clamping screw above, four clamping surfaces GB 108 圓形側固中心出水刀把**

- for inserts type 108 with IC
- with central internal coolant supply
- 搭配108系列車刀使用

Type GB108

可搭配QG108 鑽孔搪孔車刀使用



編號 Article no. 27018

Code no.	Description	d	h	L1	L2	L4	L5	BK	價格
編碼		mm	mm	mm	mm	mm	mm	mm	
8.001	GB108.0016.090.00.22.N.IK.Z	16.00	14.00	90.00	30.00	50.00	4.00	16.5	6,300
8.002	GB108.0020.095.00.22.N.IK.Z	20.00	18.00	95.00	30.00	55.00	4.00	20.5	6,100
8.003	GB108.0022.095.00.22.N.IK.Z	22.00	20.00	95.00	30.00	55.00	4.00		6,100

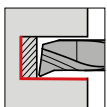
**Spare parts**

Article no.	Clamping screw	Tightening torque	價格
25900	固定螺絲	Nm	
Code 6.000	M6x7.5x15IP	4-4.5	200

Article no.	Torx-Plus Wrench	價格
25904	T型扳手	
Code 15.000	T15IP T-handle	300



Cutting insert for drilling and boring QG 106 中心出水鑽孔搪孔刀



- radial free 5°
- drilling depth 2.5xD and 4.0xD
- with internal cooling
- 徑向離隙角5°
- 鑽孔深度2.5D及4D
- 中心出水

Tool material **Solid carbide**

Type QG106

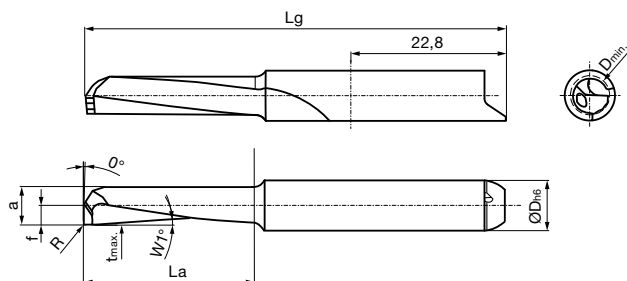
Surface

Signum



New products

需搭配 GB106 夾持刀桿

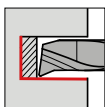


編號 Article no. **26906**

切削方向 Cutting direction right-hand 右手

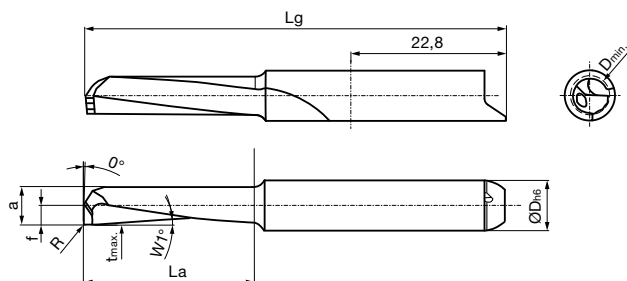
Code no.	Description	D min	R	W1	f	a	t max	La	Lg	D h6	價格
編碼		mm	mm	°	mm	mm	mm	mm	mm	mm	
6.001	QG106.0538.020.11.40.R	4.00	0.20	5	2.00	3.80	0.20	11.00	47.00	6.00	2,800
6.003	QG106.0548.020.13.50.R	5.00	0.20	5	2.50	4.80	0.20	13.50	47.00	6.00	2,900
6.002	QG106.0538.020.17.40.R	4.00	0.20	5	2.00	3.80	0.20	17.00	52.00	6.00	2,800
6.004	QG106.0548.020.21.50.R	5.00	0.20	5	2.50	4.80	0.20	21.00	52.00	6.00	2,900

Cutting insert for drilling and boring QG 108 中心出水鑽孔搪孔刀



- radial free 5°
- drilling depth 2.5xD and 4.0xD
- with internal cooling
- 徑向離隙角5°
- 鑽孔深度2.5D及4D
- 中心出水

需搭配 GB108 夾持刀桿



Tool material	<b>Solid carbide</b>
Type	QG108
Surface	
	Signum



編號 Article no. **27290**

切削方向 Cutting direction right-hand 右手

Code no.	Description	D min	R	W1	f	a	t max	La	Lg	D h6	價格
編碼		mm	mm	°	mm	mm	mm	mm	mm	mm	
8.001	QG108.0558.020.16.60.R	6.00	6.00	5	3.00	5.80	0.20	16.00	52.00	8.00	3,000
8.003	QG108.0568.020.18.70.R	7.00	7.00	5	3.50	6.80	0.20	18.00	57.00	8.00	3,100
8.002	QG108.0558.020.25.60.R	6.00	6.00	5	3.00	5.80	0.20	25.00	62.00	8.00	3,000
8.004	QG108.0568.020.29.70.R	7.00	7.00	5	3.50	6.80	0.20	29.00	67.00	8.00	3,100

**Clamping screw 固定螺絲**



- Accessory for tool holders GH222
- GH222刀把使用



Article no. 編號 25906

Size	d1	for shank size <input type="checkbox"/>	Code no.	價格
		mm	編碼	
15IP	M4	12/12 – 16/16	4.000	200

**Clamping screw 固定螺絲**



- Accessory for tool holders GH222
- GH222刀把使用



Article no. 編號 25907

Size	d1	for shank size <input type="checkbox"/>	Code no.	價格
		mm	編碼	
25IP	M5	19.05/19.05 – 25.4/25.4	5.000	280

**IC locking screw for tubeless coolant supply (TL) 無管式中心出水切換刀把使用螺絲**



- Accessory for tool holders GH222
- GH222刀把使用



Article no. 編號 25910

Size	d1	l1	Code no.	價格
		mm	編碼	
SW 3	M6	6.00	6.000	270

**Set screw 設定螺絲 (中心出水孔)**



- Accessory for tool holders GH222 with IC
- GH222刀把使用



Article no. 編號 25905

Size	d1	l1	Code no.	價格
		mm	編碼	
SW 4	G1/8	5.00	5.000	100

**Set screw 設定螺絲 (中心出水孔)**



- Accessory for tool holders GH222 with IC
- GH222刀把使用



Article no. 編號 25913

Size	d1	l1	Code no.	價格
		mm	編碼	
SW 4	M8 x 1	5.00	8.000	320


**Torx-Plus wrench T型扳手**


- Accessory for tool holders GH222
- GH222刀把使用



Article no. 編號 **25904**

Size	l1	Code no.	價格
	mm	編碼	
15IP	65.00	15.001	340

**Torx-Plus wrench T型扳手**


- Accessory for tool holders GH222
- GH222刀把使用



Article no. 編號 **25922**

Size	l1	Code no.	價格
	mm	編碼	
25IP	80.00	15.000	340

**Mounting key 刀片安裝扳手**


- Accessory for parting off blades GS222
- GH222切斷刀把使用



Article no. 編號 **25921**

l1	Code no.	價格
mm	編碼	
120.00	15.000	780

**IC locking screw 中心出水鎖固螺絲**


- Accessory for parting off blades GS222
- GH222切斷刀把使用



Article no. 編號 **25909**

Size	d1	l1	Code no.	價格
		mm	編碼	
SW 3	M4	4.60	4.000	580



# GÜHRING NAVIGATOR

## System 222

	<b>Feed rate f (mm / rev.)</b>		<b>Feed rate f (mm / rev.)</b>	<b>General formulas</b>
	↓ 0.06 - 0.18		↓ 0.04 - 0.10	Cutting speed ( $v_c$ ) $v_c = \frac{d_1 \cdot \pi \cdot n}{1000} \text{ [m/min]}$
				Revolutions per minute (n) $n = \frac{v_c \cdot 1000}{d_1 \cdot \pi} \text{ [U/min]}$
<b>Geometry .PP02</b>		<b>Geometry .PM01</b>		Feed rate ( $v_f$ ) $v_f = f \cdot n \text{ [mm/min]}$

↓ = radial feed direction 徑向進給

ISO	Material 工件材質	Material examples/ material number 材質代號	Tensile strength (N/mm <sup>2</sup> ) 抗拉強度	Brinell- Hardness (HB) HB硬度	Cutting speed $v_c$ (m/min) 切削速度		
					FIRE		
P	Carbon steel 碳鋼	C <= 0,15%	11SMn30+C / 1.0715 C15 / 1.0401	500 600	150 180	150-220	
		C ≥= 0,15-0,45%	S235JR (ST37-2) / 1.0037 Ck22 / 1.1151	400 600	120 180		
		C >= 0,45%	S355JO (St52-3) / 1.0553 C60 / 1.0601	600 900	180 270		
	Low-alloyed steel alloy content ≤ 5%) 低合金鋼	annealed 退火過	16MnCr5 / 1.7131 18CrNi8 / 1.5920	650 650	200 200	120-170	
		heat-treatable 熱處理過	25CrMoV4 / 1.7218 42CrMo4V / 1.7225	900 1100	270 320	90-150	
		High-alloyed steel alloy content > 5%) 高合金鋼	annealed 退火過	X37CrMoV5-1 / 1.2343 X153CrMoV12 / 1.2379	750 850	220 250	130-180
			heat-treatable 熱處理過	55NiCrMoV7 / 1.2714	1200	350	70-120
	Cast steel 鑄鐵	un-alloyed, low-alloyed 低合金	GS52 / 1.0552	600	180	130-180	
high-alloyed 高合金		GX40CrNiSi22-10 / 1.4826	750	220	100-140		
M	Stainless steel 不銹鋼	martensitic, ferritic, tempered 馬田散鐵, 肥粒鐵熱處理過	X14CrMoS17 / 1.4104 X4CrNiMo16-5-1 / 1.4418	800 1000	240 300	90-160	
		austenitic, Ni > 8% 含鎳超過8% SUS 304/ 316	X5CrNi18-10 / 1.4301 X2CrNiMo17-12-2 / 1.4404	650	200	90-160	
		austenitic, ferritic (Duplex) 沃斯田鐵, 肥粒鐵複合材	X2CrNiMoCuN25-6-3 / 1.4507 X2CrNiMoN25-7-4 / 1.4410	850	250	70-100	

The specified values must be adapted to the machine and machining conditions.

## General machining information 一般加工資訊

- The use of neutral indexable inserts is always preferable to the use of right-hand or left-hand cutting inserts:
  - better chip control
  - even wear on the cutting edge
  - higher process reliability
  - higher feed rates possible
  - even for parting off a neutral insert is first choice for reduced edge wear
- Reduce feed rate by approx. 40% when using right or left-hand indexable inserts.
- Reduce the feed rate by approx. 50%-60% when the cutting edge reaches 2-3 mm from centre.
- 使用中性可轉換切削方向的刀片總是比使用單獨右手或左手切削刀片來的更好，原因如下：
  - 更好的切屑控制
  - 刃口磨耗均勻
  - 切削過程可靠性高
  - 更高的進給速度
  - 即使是單獨用作切斷使用，中性刀片也是降低磨耗的首選
- 當使用右手或左手切削刀片時，需降低進給速度約40%。
- 當切削時刃口逐漸接近工件中心 2~3mm時，需降低進給速度約 50%-60%。

# SYSTEM OVERVIEW

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## SYSTEM 104

Micro-precision tools from  $\varnothing$  0.7 mm  
Broaching from  $\varnothing$  1.5 mm



## SYSTEM 106

Micro-precision tools from  $\varnothing$  5 mm  
Broaching from  $\varnothing$  6 mm



## SYSTEM 108

Micro-precision tools from  $\varnothing$  7 mm  
Broaching from  $\varnothing$  9 mm



## SYSTEM 110

Micro-precision tools for special solutions



## SYSTEM 305

Indexable inserts and tool holders  
for grooving and parting off



## SYSTEM 222

New system  
for grooving and parting off



# GÜHRING

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