

**GK-ZAST**  
**NO BURRS**



**Giken Ltd.**  
The Japanese products

# No burr processing required A New Era of Drilling!



Drilling video available



*Fast and beautiful no burrs, even at the tip*

**NEW** For thin metal sheets - STUB series **Hole depth 2D**

## ZERO BURR STUB

**Aluminum** **Acrylic** **Copper** **Brass**

**Thin Sheets & Cross Hole** **Hybrid Drill**



*Surprisingly  
beautiful finish even  
with ultra-thin materials*

Lineup from dia. 1.0 to 16.0 in 0.1mm steps.

## ZERO BURR STUB debut!

### Tremendous Speedup

*(2-3 times more than our company's)*

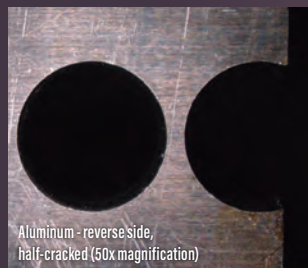
Capable of drilling in all directions,  
even through sharp edges and materials  
with complex shapes without difficulty.

Patent and design registration pending in EU, USA and China.

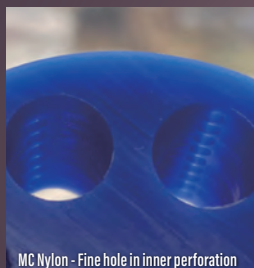
ZERO BURR Trademark registered.



*Stable finish even when drilling at an angle*



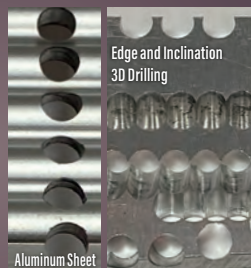
Aluminum - reverse side,  
half-cracked (50x magnification)



MC Nylon - Fine hole in inner perforation



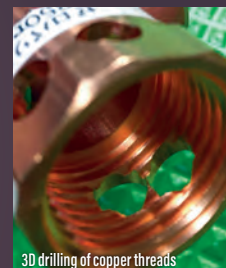
Acrylic rod



Aluminum Sheet



Brass Pipe



3D drilling of copper threads

# ZEROBURR STUB GK-ZAST

For Thin sheet & Cross hole  
Aluminum Acrylic Copper Brass

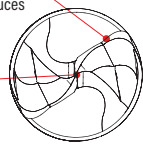
The superior characteristics of ZEROBURR STUB

### Fine Curve Flute

Waveform 3D composite radius shape reduces the risk of chip loss and excellent cutting and chip evacuation.

### XZR thinning

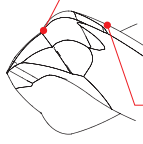
The compound R-thinning allows for Low-load biting and positioning is possible.



Waveform 3D composite radius shape

### Special Wave

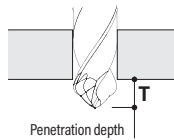
Waveform 3D compound R shape reduces cutting resistance to 1/4. Burrs are suppressed by moving the load in the direction of rotation.



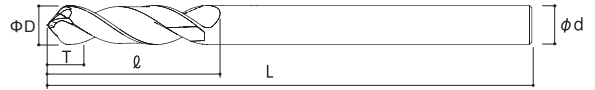
### Power Spiral Reamer

Reamer shape for beautifully finished inner wall of hole.

### PRECAUTIONS



- \* Please use for wet drilling.
- \* Be sure to fix the work material firmly, and use the drill to completely pass through the penetration depth.
- \* If the deflection is large when the drill is mounted, welding or the hole diameter may become large, or a spiral flaw may remain on a drilling surface of the work material.



## ZEROBURR STUB GK-ZAST LINEUP (Hole depth less than 2D)

Outer diameter tolerance 0~+0.01

\*Regrinding orders are accepted for sizes Φ2 and above.

Model number	ΦD Diameter	T Penetration Depth	ℓ Groove Length	L Overall Length	φd Shank
GK-ZAST 0100	1	0.6	4	40	3
GK-ZAST 0110	1.1	0.9	6		
GK-ZAST 0120	1.2				
GK-ZAST 0130	1.3	1.2	8		
GK-ZAST 0140	1.4				
GK-ZAST 0150	1.5				
GK-ZAST 0160	1.6				
GK-ZAST 0170	1.7	1.5	10		
GK-ZAST 0180	1.8				
GK-ZAST 0190	1.9				
GK-ZAST 0200	2				
GK-ZAST 0210	2.1				
GK-ZAST 0220	2.2				
GK-ZAST 0230	2.3				
GK-ZAST 0240	2.4				
GK-ZAST 0250	2.5			2.1	14
GK-ZAST 0260	2.6				
GK-ZAST 0270	2.7				
GK-ZAST 0280	2.8				
GK-ZAST 0290	2.9	2.4	16		
GK-ZAST 0300	3				
GK-ZAST 0310	3.1				
GK-ZAST 0320	3.2				
GK-ZAST 0330	3.3	2.7	18		
GK-ZAST 0340	3.4				
GK-ZAST 0350	3.5				
GK-ZAST 0360	3.6				
GK-ZAST 0370	3.7			3	20
GK-ZAST 0380	3.8				
GK-ZAST 0390	3.9				
GK-ZAST 0400	4				
GK-ZAST 0410	4.1			3.3	22
GK-ZAST 0420	4.2				
GK-ZAST 0430	4.3				
GK-ZAST 0440	4.4				
GK-ZAST 0450	4.5	3.6	24		
GK-ZAST 0460	4.6				
GK-ZAST 0470	4.7				
GK-ZAST 0480	4.8				
GK-ZAST 0490	4.9	60	6		
GK-ZAST 0500	5				
GK-ZAST 0510	5.1				
GK-ZAST 0520	5.2				
GK-ZAST 0530	5.3				
GK-ZAST 0540	5.4				
GK-ZAST 0550	5.5				
GK-ZAST 0560	5.6				
GK-ZAST 0570	5.7				
GK-ZAST 0580	5.8				
GK-ZAST 0590	5.9				

Model number	ΦD Diameter	T Penetration Depth	ℓ Groove Length	L Overall Length	φd Shank
GK-ZAST 0600	6	3.6	24	60	6
GK-ZAST 0610	6.1	3.9	26		
GK-ZAST 0620	6.2				
GK-ZAST 0630	6.3	4.2	28		
GK-ZAST 0640	6.4				
GK-ZAST 0650	6.5				
GK-ZAST 0660	6.6				
GK-ZAST 0670	6.7	4.5	30		
GK-ZAST 0680	6.8				
GK-ZAST 0690	6.9				
GK-ZAST 0700	7				
GK-ZAST 0710	7.1			4.8	32
GK-ZAST 0720	7.2				
GK-ZAST 0730	7.3				
GK-ZAST 0740	7.4				
GK-ZAST 0750	7.5			5.1	34
GK-ZAST 0760	7.6				
GK-ZAST 0770	7.7				
GK-ZAST 0780	7.8				
GK-ZAST 0790	7.9	5.4	36		
GK-ZAST 0800	8				
GK-ZAST 0810	8.1				
GK-ZAST 0820	8.2				
GK-ZAST 0830	8.3	5.7	38		
GK-ZAST 0840	8.4				
GK-ZAST 0850	8.5				
GK-ZAST 0860	8.6				
GK-ZAST 0870	8.7			6	40
GK-ZAST 0880	8.8				
GK-ZAST 0890	8.9				
GK-ZAST 0900	9				
GK-ZAST 0910	9.1			6.3	42
GK-ZAST 0920	9.2				
GK-ZAST 0930	9.3				
GK-ZAST 0940	9.4				
GK-ZAST 0950	9.5	6.6	44		
GK-ZAST 0960	9.6				
GK-ZAST 0970	9.7				
GK-ZAST 0980	9.8				
GK-ZAST 0990	9.9	85	12		
GK-ZAST 1000	10				
GK-ZAST 1010	10.1				
GK-ZAST 1020	10.2				
GK-ZAST 1030	10.3				
GK-ZAST 1040	10.4				
GK-ZAST 1050	10.5				
GK-ZAST 1060	10.6				
GK-ZAST 1070	10.7				
GK-ZAST 1080	10.8				
GK-ZAST 1090	10.9				

Model number	ΦD Diameter	T Penetration Depth	ℓ Groove Length	L Overall Length	φd Shank
GK-ZAST 1100	11	6.6	44	85	90
GK-ZAST 1110	11.1	6.9	46		
GK-ZAST 1120	11.2				
GK-ZAST 1130	11.3	7.2	48		
GK-ZAST 1140	11.4				
GK-ZAST 1150	11.5				
GK-ZAST 1160	11.6				
GK-ZAST 1170	11.7	7.5	50		
GK-ZAST 1180	11.8				
GK-ZAST 1190	11.9				
GK-ZAST 1200	12				
GK-ZAST 1210	12.1			7.8	
GK-ZAST 1220	12.2				
GK-ZAST 1230	12.3				
GK-ZAST 1240	12.4				
GK-ZAST 1250	12.5			8.1	54
GK-ZAST 1260	12.6				
GK-ZAST 1270	12.7				
GK-ZAST 1280	12.8				
GK-ZAST 1290	12.9	8.4	56		
GK-ZAST 1300	13				
GK-ZAST 1310	13.1				
GK-ZAST 1320	13.2				
GK-ZAST 1330	13.3	8.7	58		
GK-ZAST 1340	13.4				
GK-ZAST 1350	13.5				
GK-ZAST 1360	13.6				
GK-ZAST 1370	13.7			9	60
GK-ZAST 1380	13.8				
GK-ZAST 1390	13.9				
GK-ZAST 1400	14				
GK-ZAST 1410	14.1			9.3	62
GK-ZAST 1420	14.2				
GK-ZAST 1430	14.3				
GK-ZAST 1440	14.4				
GK-ZAST 1450	14.5	9.6	64		
GK-ZAST 1460	14.6				
GK-ZAST 1470	14.7				
GK-ZAST 1480	14.8				
GK-ZAST 1490	14.9	100	14		
GK-ZAST 1500	15				
GK-ZAST 1510	15.1				
GK-ZAST 1520	15.2				
GK-ZAST 1530	15.3				
GK-ZAST 1540	15.4				
GK-ZAST 1550	15.5				
GK-ZAST 1560	15.6				
GK-ZAST 1570	15.7				
GK-ZAST 1580	15.8				
GK-ZAST 1590	15.9				
GK-ZAST 1600	16				

## Recommended cutting conditions

Work Material	Aluminum Alloy Casting ADC • AC		Aluminum Wrought Material A7075 • A2024		Aluminum Wrought Material A5052 • A6063		Copper Alloy C1020 • C6140		Hard Resin Acrylic		Soft Resin MC Nylon • PP • PE • PVC			
	60~100m/min		60~100m/min		60~100m/min		30~60m/min		50~80m/min		50~80m/min			
Diameter	Rotation Speed (min-1)	Feed Amount (mm/rev)	Rotation Speed (min-1)	Feed Amount (mm/rev)	Rotation Speed (min-1)	Feed Amount (mm/rev)	Rotation Speed (min-1)	Feed Amount (mm/rev)	Rotation Speed (min-1)	Feed Amount (mm/rev)	Step Machining	Rotation Speed (min-1)	Feed Amount (mm/rev)	Step Machining
1	19,110	0.03~0.06	19,110	0.03~0.06	19,110	0.03~0.06	12,800	0.03~0.06	18,000	0.03~0.06	1mm interval (G83)	18,000	0.05~0.08	1mm interval (G83)
2	9,550	0.06~0.12	9,550	0.06~0.12	9,550	0.06~0.12	6,400	0.06~0.12	8,800	0.06~0.12		8,800	0.1~0.15	
3	6,370	0.09~0.18	6,370	0.09~0.18	6,370	0.09~0.18	4,300	0.09~0.18	5,800	0.09~0.18		5,800	0.15~0.25	
4	4,780	0.12~0.24	4,780	0.12~0.24	4,780	0.12~0.24	3,200	0.12~0.24	4,400	0.12~0.22		4,400	0.2~0.3	
5	3,820	0.15~0.3	3,820	0.15~0.3	3,820	0.15~0.3	2,500	0.15~0.3	3,500	0.15~0.25		3,500	0.25~0.4	
6	3,180	0.18~0.36	3,180	0.18~0.36	3,180	0.18~0.36	2,200	0.18~0.36	3,000	0.18~0.3		3,000	0.3~0.5	
8	2,390	0.24~0.48	2,390	0.24~0.48	2,390	0.24~0.48	1,600	0.24~0.48	2,200	0.24~0.44		2,200	0.4~0.6	
10	1,910	0.3~0.6	1,910	0.3~0.6	1,910	0.3~0.6	1,300	0.3~0.6	1,800	0.3~0.5		1,800	0.5~0.8	
12	1,590	0.36~0.72	1,590	0.36~0.72	1,590	0.36~0.72	1,100	0.36~0.72	1,500	0.36~0.6		1,500	0.6~0.9	
16	1,190	0.48~0.96	1,190	0.48~0.96	1,190	0.48~0.96	800	0.48~0.96	1,000	0.4~0.8		1,000	0.7~1.0	

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