GK-ZMST
NO BURRS

Giken Ltd.
The Japanese products

No burr processing required
A New Era of Drilling!

Drilling video available

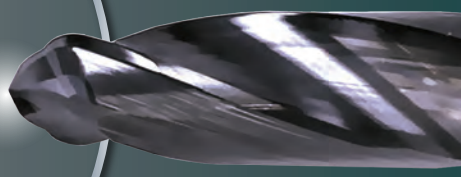
Fast and beautiful no burrs, even at the tip

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

ZERO BURR STUB

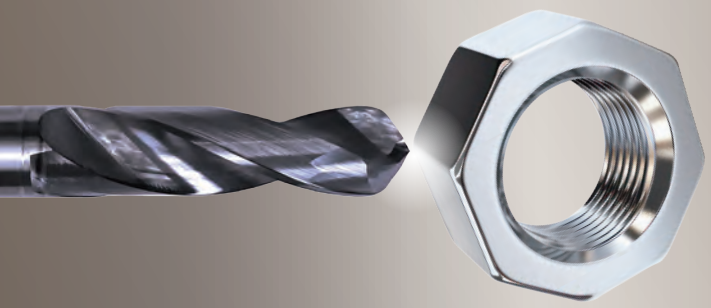
Carbon steel | Stainless steel | SCM | FC/FCD

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!



Stable finish even when drilling at an angle

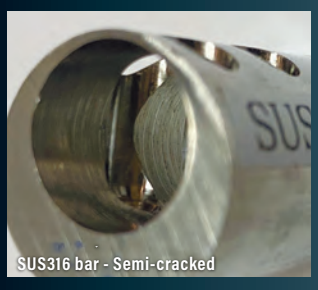
Tremendous Speedup

(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.


SUS316 bar - Semi-cracked

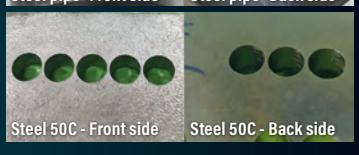

SUS Pipe


SUS Nut - Inner side


SCM420-Front side


SCM420-Back side


Steel pipe -Front side | Steel pipe -Back side


Steel 50C - Front side | Steel 50C - Back side

ZEROBURR STUB GK-ZMST *For Thin sheet & Cross hole*

Carbon steel | SUS | SCM | FC/FCD

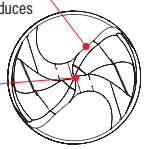
The superior characteristics of ZEROBURR STUB

Fine Curve Flute

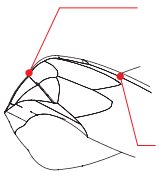
Waveform 3D composite radius shape reduces the risk of chip loss.and excellent cutting and chip evacuation.

XZR thinning

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



Waveform 3D composite radius shape



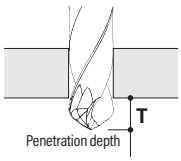
Special Wave

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

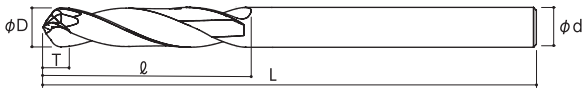
Power Spiral Reamer

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-ZMST 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-ZMST 0100	1	0.6	4	40	3
GK-ZMST 0110	1.1	0.9	6		
GK-ZMST 0120	1.2				
GK-ZMST 0130	1.3				
GK-ZMST 0140	1.4				
GK-ZMST 0150	1.5				
GK-ZMST 0160	1.6	1.2	8		
GK-ZMST 0170	1.7				
GK-ZMST 0180	1.8				
GK-ZMST 0190	1.9				
GK-ZMST 0200	2				
GK-ZMST 0210	2.1	1.5	10	45	
GK-ZMST 0220	2.2				
GK-ZMST 0230	2.3				
GK-ZMST 0240	2.4				
GK-ZMST 0250	2.5				
GK-ZMST 0260	2.6	1.8	12		
GK-ZMST 0270	2.7				
GK-ZMST 0280	2.8				
GK-ZMST 0290	2.9				
GK-ZMST 0300	3				
GK-ZMST 0310	3.1	2.1	14	50	4
GK-ZMST 0320	3.2				
GK-ZMST 0330	3.3				
GK-ZMST 0340	3.4				
GK-ZMST 0350	3.5				
GK-ZMST 0360	3.6	2.4	16		
GK-ZMST 0370	3.7				
GK-ZMST 0380	3.8				
GK-ZMST 0390	3.9				
GK-ZMST 0400	4				
GK-ZMST 0410	4.1	2.7	18	55	5
GK-ZMST 0420	4.2				
GK-ZMST 0430	4.3				
GK-ZMST 0440	4.4				
GK-ZMST 0450	4.5				
GK-ZMST 0460	4.6	3	20		
GK-ZMST 0470	4.7				
GK-ZMST 0480	4.8				
GK-ZMST 0490	4.9				
GK-ZMST 0500	5				
GK-ZMST 0510	5.1	3.3	22	60	6
GK-ZMST 0520	5.2				
GK-ZMST 0530	5.3				
GK-ZMST 0540	5.4				
GK-ZMST 0550	5.5				
GK-ZMST 0560	5.6	3.6	24		
GK-ZMST 0570	5.7				
GK-ZMST 0580	5.8				
GK-ZMST 0590	5.9				

Model number	ϕD Diameter	T Penetration Depth	ℓ Groove Length	L Overall Length	ϕd Shank
GK-ZMST 0600	6	3.6	24	60	6
GK-ZMST 0610	6.1	3.9	26	65	7
GK-ZMST 0620	6.2				
GK-ZMST 0630	6.3				
GK-ZMST 0640	6.4				
GK-ZMST 0650	6.5				
GK-ZMST 0660	6.6	4.2	28		
GK-ZMST 0670	6.7				
GK-ZMST 0680	6.8				
GK-ZMST 0690	6.9				
GK-ZMST 0700	7				
GK-ZMST 0710	7.1	4.5	30	70	8
GK-ZMST 0720	7.2				
GK-ZMST 0730	7.3				
GK-ZMST 0740	7.4				
GK-ZMST 0750	7.5				
GK-ZMST 0760	7.6	4.8	32		
GK-ZMST 0770	7.7				
GK-ZMST 0780	7.8				
GK-ZMST 0790	7.9				
GK-ZMST 0800	8				
GK-ZMST 0810	8.1	5.1	34	75	10
GK-ZMST 0820	8.2				
GK-ZMST 0830	8.3				
GK-ZMST 0840	8.4				
GK-ZMST 0850	8.5				
GK-ZMST 0860	8.6	5.4	36		
GK-ZMST 0870	8.7				
GK-ZMST 0880	8.8				
GK-ZMST 0890	8.9				
GK-ZMST 0900	9				
GK-ZMST 0910	9.1	5.7	38	80	
GK-ZMST 0920	9.2				
GK-ZMST 0930	9.3				
GK-ZMST 0940	9.4				
GK-ZMST 0950	9.5				
GK-ZMST 0960	9.6	6	40		
GK-ZMST 0970	9.7				
GK-ZMST 0980	9.8				
GK-ZMST 0990	9.9				
GK-ZMST 1000	10				
GK-ZMST 1010	10.1	6.3	42	85	12
GK-ZMST 1020	10.2				
GK-ZMST 1030	10.3				
GK-ZMST 1040	10.4				
GK-ZMST 1050	10.5				
GK-ZMST 1060	10.6	6.6	44		
GK-ZMST 1070	10.7				
GK-ZMST 1080	10.8				
GK-ZMST 1090	10.9				

Model number	ϕD Diameter	T Penetration Depth	ℓ Groove Length	L Overall Length	ϕd Shank
GK-ZMST 1100	11	6.6	44	85	12
GK-ZMST 1110	11.1	6.9	46	90	
GK-ZMST 1120	11.2				
GK-ZMST 1130	11.3				
GK-ZMST 1140	11.4				
GK-ZMST 1150	11.5				
GK-ZMST 1160	11.6	7.2	48		
GK-ZMST 1170	11.7				
GK-ZMST 1180	11.8				
GK-ZMST 1190	11.9				
GK-ZMST 1200	12				
GK-ZMST 1210	12.1	7.5	50	95	14
GK-ZMST 1220	12.2				
GK-ZMST 1230	12.3				
GK-ZMST 1240	12.4				
GK-ZMST 1250	12.5				
GK-ZMST 1260	12.6	7.8	52		
GK-ZMST 1270	12.7				
GK-ZMST 1280	12.8				
GK-ZMST 1290	12.9				
GK-ZMST 1300	13				
GK-ZMST 1310	13.1	8.1	54	100	
GK-ZMST 1320	13.2				
GK-ZMST 1330	13.3				
GK-ZMST 1340	13.4				
GK-ZMST 1350	13.5				
GK-ZMST 1360	13.6	8.4	56		
GK-ZMST 1370	13.7				
GK-ZMST 1380	13.8				
GK-ZMST 1390	13.9				
GK-ZMST 1400	14				
GK-ZMST 1410	14.1	8.7	58	105	16
GK-ZMST 1420	14.2				
GK-ZMST 1430	14.3				
GK-ZMST 1440	14.4				
GK-ZMST 1450	14.5				
GK-ZMST 1460	14.6	9	60		
GK-ZMST 1470	14.7				
GK-ZMST 1480	14.8				
GK-ZMST 1490	14.9				
GK-ZMST 1500	15				
GK-ZMST 1510	15.1	9.3	62	110	
GK-ZMST 1520	15.2				
GK-ZMST 1530	15.3				
GK-ZMST 1540	15.4				
GK-ZMST 1550	15.5				
GK-ZMST 1560	15.6	9.6	64		
GK-ZMST 1570	15.7				
GK-ZMST 1580	15.8				
GK-ZMST 1590	15.9				
GK-ZMST 1600	16				

Recommended cutting conditions

Work Material	Mild Steel, Low Carbon Steel SS400・S10C		Carbon Steel S35C・S50C		Alloy Steel SCM		Cast Iron FC250		Ductile Cast Iron FCD450		Stainless Steel	
Cutting Speed	30~45m/min		30~40m/min		25~35m/min		30~40m/min		25~35m/min		15~25m/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)	Rotation Speed (min - 1)	Feed Amount (mm/rev)
1	11,500	0.015~0.03	11,500	0.015~0.03	9,500	0.015~0.03	11,500	0.015~0.03	9,500	0.015~0.03	5,800	0.01~0.02
2	5,500	0.03~0.06	5,500	0.03~0.06	4,800	0.03~0.06	5,500	0.03~0.06	4,800	0.03~0.06	2,900	0.02~0.04
3	3,800	0.05~0.1	3,800	0.05~0.1	3,200	0.05~0.1	3,800	0.05~0.1	3,200	0.05~0.1	1,900	0.03~0.06
4	2,800	0.06~0.12	2,800	0.06~0.12	2,400	0.06~0.12	2,800	0.06~0.12	2,400	0.06~0.12	1,500	0.04~0.08
5	2,300	0.08~0.16	2,300	0.08~0.16	2,000	0.08~0.16	2,300	0.08~0.16	2,000	0.08~0.16	1,200	0.05~0.1
6	1,900	0.1~0.2	1,900	0.1~0.2	1,600	0.1~0.2	1,900	0.1~0.2	1,600	0.1~0.2	1,000	0.06~0.12
8	1,400	0.12~0.24	1,400	0.12~0.24	1,200	0.12~0.24	1,400	0.12~0.24	1,200	0.12~0.24	730	0.08~0.16
10	1,100	0.16~0.32	1,100	0.16~0.32	1,000	0.16~0.32	1,100	0.16~0.32	1,000	0.16~0.32	600	0.1~0.2
12	950	0.2~0.4	950	0.2~0.4	800	0.2~0.4	950	0.2~0.4	800	0.2~0.4	500	0.12~0.24
16	700	0.24~0.48	700	0.24~0.48	600	0.24~0.48	700	0.24~0.48	600	0.24~0.48	400	0.16~0.32

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