



High-performance & Low-carbon Forming Tap

GREEN TAP



GRT

High-performance &
Low-carbon Forming Tap

GRT: High-performance & Low-carbon Forming Tap



Large web diameter
High rigidity



Special thread configuration
Achieves both thread rigidity and lubrication effect

Original New Geometry

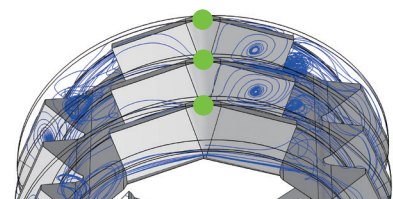
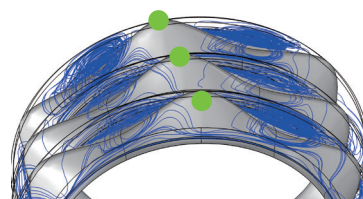
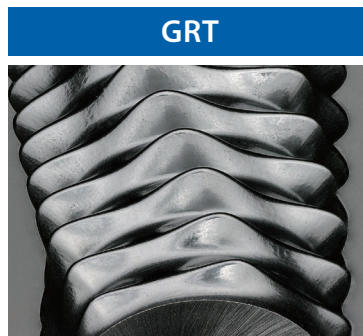
Improved durability

Special thread configuration

By supplying more coolant near the cutting edge where the most heat is generated, cooling effect is increased and durability is improved.

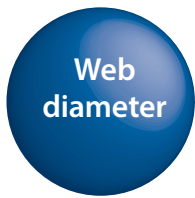
V Coating
High wear resistance

Powder Metallurgy HSS (CPM)
High wear resistance



● Cutting edge — Coolant flow

Size: M6x1 Cutting speed: 30m/min Computational fluid dynamics analysis result



High rigidity



Large web diameter improves breakage resistance. Achieves high durability without variation.

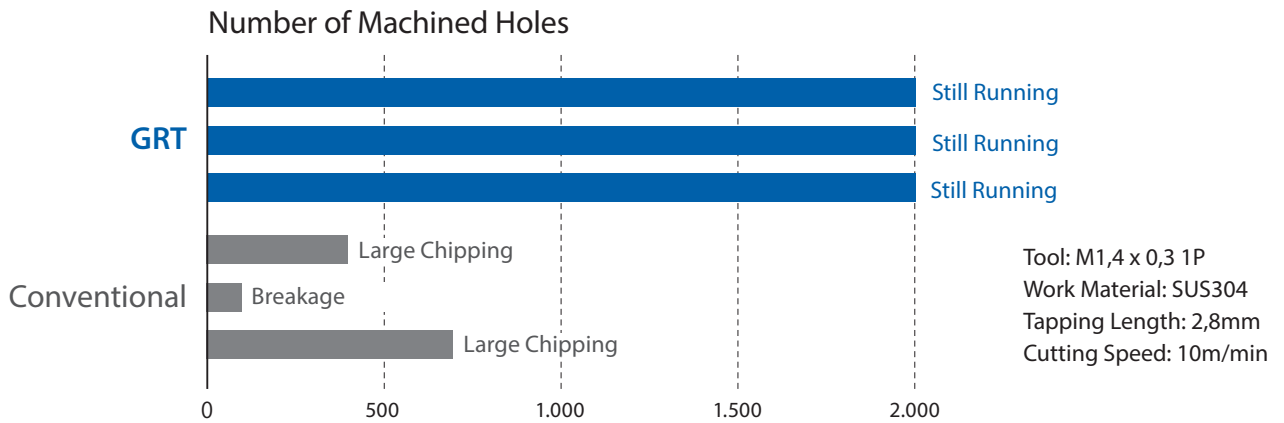
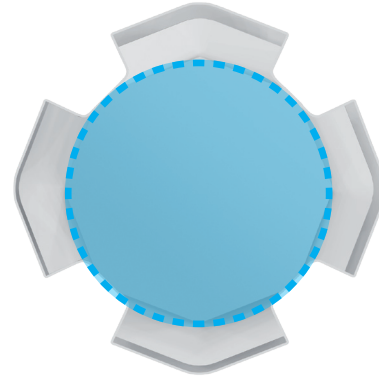
GRT

Size: M6x1



Conventional

Size: M6x1



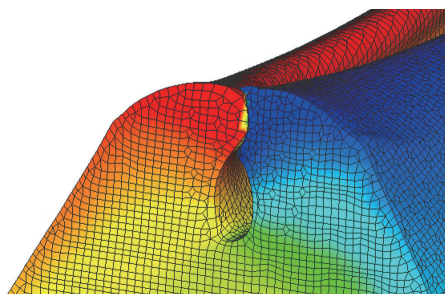
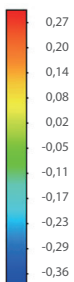
Threading | Forming taps



Formation of stable internal threads

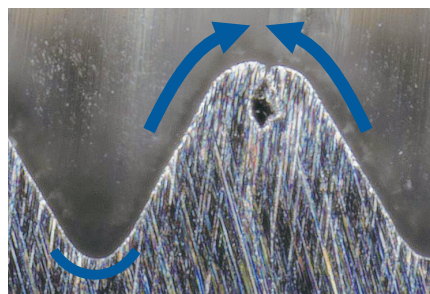
Special thread specification designed using computer simulation of plastic deformation to enable the formation of good internal threads that will not collapse easily.

Axial Displacement (mm)



Threading direction

Computer simulation of plastic deformation



Threading direction

Internal threads machined by GRT

Tool: M1,4 x 0,3 1P
Work Material: SUS304
Drill Hole Size: Ø1,28x4,5mm (Blind)
Tapping Length: 2,8mm
Cutting Speed: 10m/min
Coolant: Water-soluble Chlorine-free (5%)

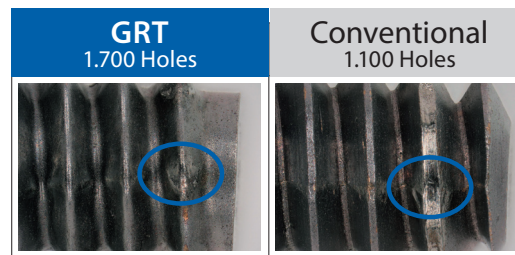
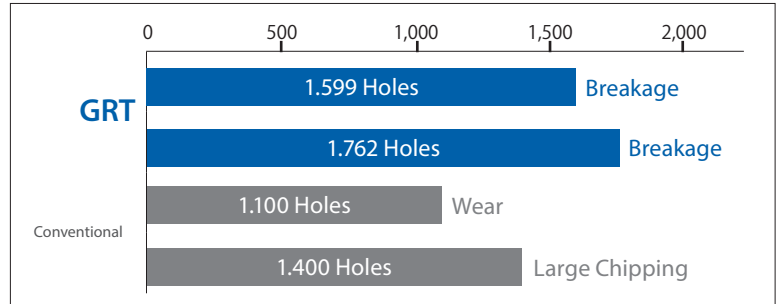
CUTTING DATA

Stable machining in difficult-to-machine stainless steel

M1×0,25

Tool	GRT M1×0,25 1P
Work Material	SUS304
Drill Hole Size	Ø0,91×3,5mm (Blind)
Tapping length	2mm
Cutting Speed	10m/min (3.183min ⁻¹)
Coolant	Water-soluble Chlorine-free (5%)
Machine	(BT30) Vertical Machining Center

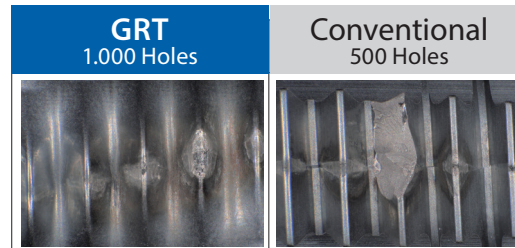
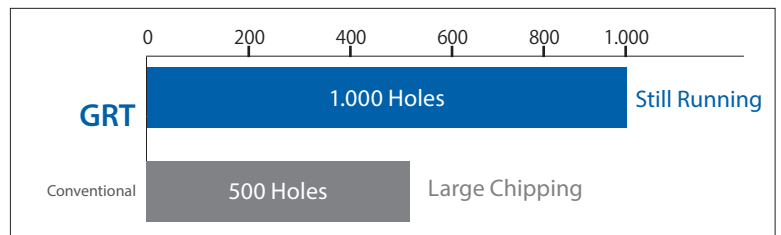
Number of Machined Holes



M6×1

Tool	GRT M6×1 2P
Work Material	SUS304
Drill Hole Size	Ø5,52×20mm (Through)
Tapping length	12mm
Cutting Speed	7m/min (371min ⁻¹)
Coolant	Water-soluble Chlorine-free (5%)
Machine	(BT30) Vertical Machining Center

Number of Machined Holes



Improved durability due to lubrication effect

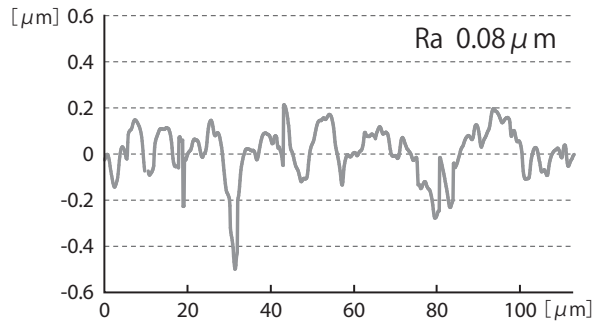
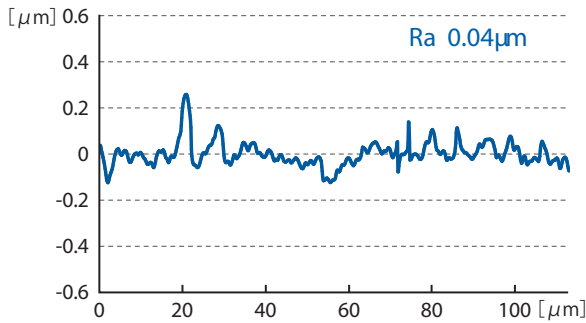
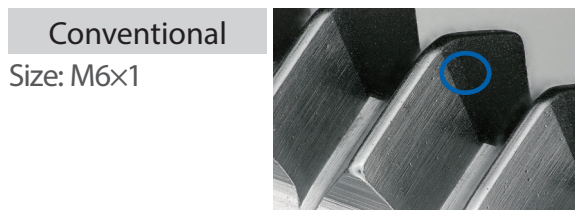
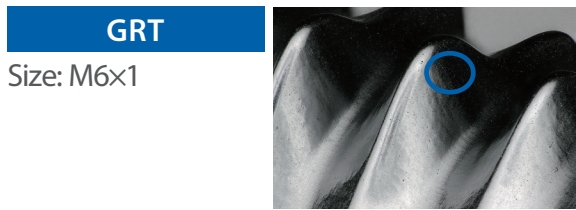
Tool	GRT M6×1 2P
Work Material	ADC12
Drill Hole Size	Ø5,54×13mm (Blind)
Tapping length	10mm
Cutting Speed	56,5m/min (3.000min ⁻¹)
Coolant	Water-soluble Chlorine-free (10%)
Machine	(BT40) Vertical Machining Center

Number of Machined Holes



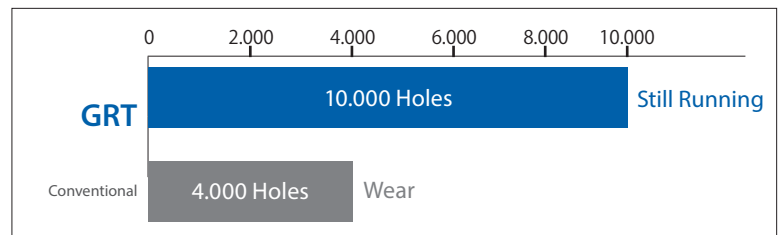
CUTTING DATA

Improved durability due to excellent surface roughness of the threads



Tool	GRT M6×1 2P
Work Material	S45C
Drill Hole Size	Ø5,52×20mm (Through)
Tapping length	12mm
Cutting Speed	15m/min (796min ⁻¹)
Coolant	Water-soluble Chlorine-free (5%)
Machine	(BT30) Vertical Machining Center

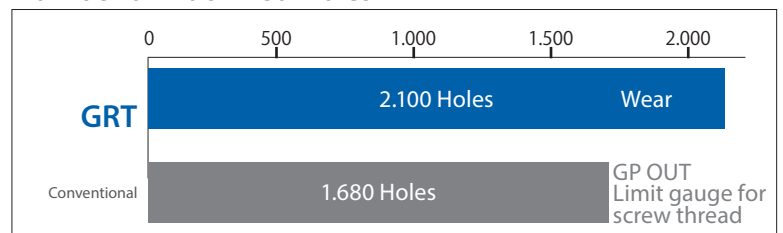
Number of Machined Holes

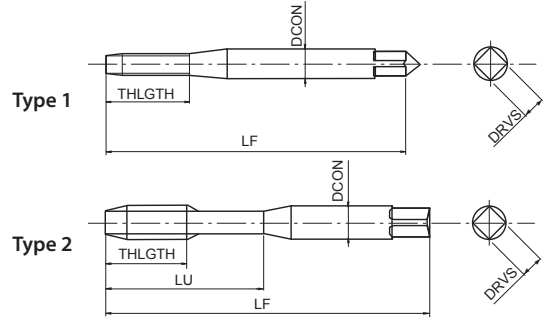


Threading in high carbon chromium bearing steel (SUJ3)

Tool	GRT M6×1 2P
Work Material	SUJ3
Drill Hole Size	Ø5,54×15mm (Blind)
Tapping length	11mm
Cutting Speed	9,4m/min (500min ⁻¹)
Coolant	Water-soluble Chlorine-free (10%)
Machine	(BT40) Vertical Machining Center

Number of Machined Holes





- Environmentally friendly
- Powder metal forming tap for through and blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium

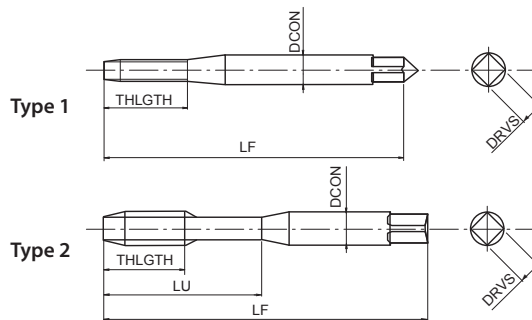
Threading | Forming taps

P 0,25<C<0,4	P C ≥ 0,45%	P SCM	M INOX	N Al	N AC, ADC		m/min
15-40	15-30	15-30	5-15	20-40	20-40		
M	PM	V	ISO 2 6HX	C/2,5			DIN 2174

EDP	TD	TP	LF	THLGTH	LU	DCON	DRVS	NOF	PHD	Type	DIN
48432125	2	0,4	45	9	-	2,8	2,1	0	1,82 ~ 1,85	1	2174
48432138	3	0,5	56	10,5	18	3,5	2,7	0	2,77~2,82	2	2174
48432144	4	0,7	63	12	21	4,5	3,4	0	3,66~3,72	2	2174
48432149	5	0,8	70	13	25	6	4,9	0	4,62~4,68	2	2174
48432155	6	1	80	14	30	6	4,9	0	5,51~5,59	2	2174

GRT FORM F

Threading | Forming taps | Metric



- Environmentally friendly
- Powder metal forming tap for through and blind holes
- Multilayer TiCN coating
- For general steels, stainless steels, aluminium
- Chamfer Form F

P 0,25 < C < 0,4	P C ≥ 0,45%	P SCM	M INOX	N Al	N AC, ADC	
15-40	15-30	15-30	5-15	20-40	20-40	m/min



*Tolerance 4HX

EDP	TD	TP	LF	THLGTH	LU	DCON	DRVS	NOF	PHD	Type	DIN
*48423111	1	0,25	40	5,5	-	2,5	2,1	0	0,89 ~ 0,90	1	2174
*48423113	1,2	0,25	40	6,5	-	2,5	2,1	0	1,09 ~ 1,10	1	2174
*48423115	1,4	0,3	40	7	-	2,5	2,1	0	1,26 ~ 1,28	1	2174
48423125	2	0,4	45	9	-	2,8	2,1	0	1,82 ~ 1,85	1	2174
48423138	3	0,5	56	10,5	18	3,5	2,7	0	2,77 ~ 2,82	2	2174
48423144	4	0,7	63	12	21	4,5	3,4	0	3,66 ~ 3,72	2	2174
48423149	5	0,8	70	13	25	6	4,9	0	4,62 ~ 4,68	2	2174
48423155	6	1	70	14	30	6	4,9	0	5,51 ~ 5,59	2	2174





shaping your dreams

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