September 2019
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NPA

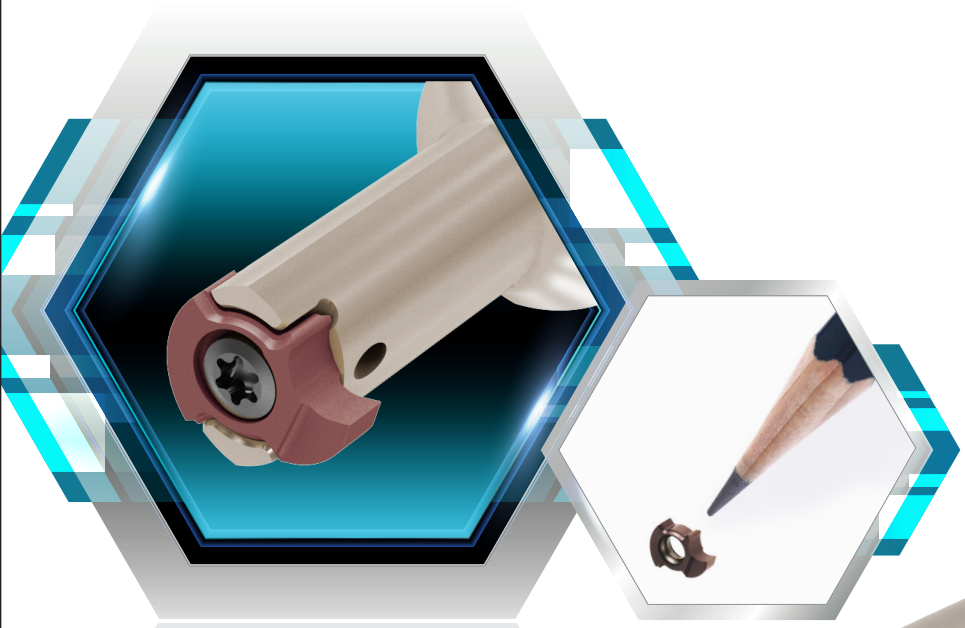
New Product Announcement No. 2019-21

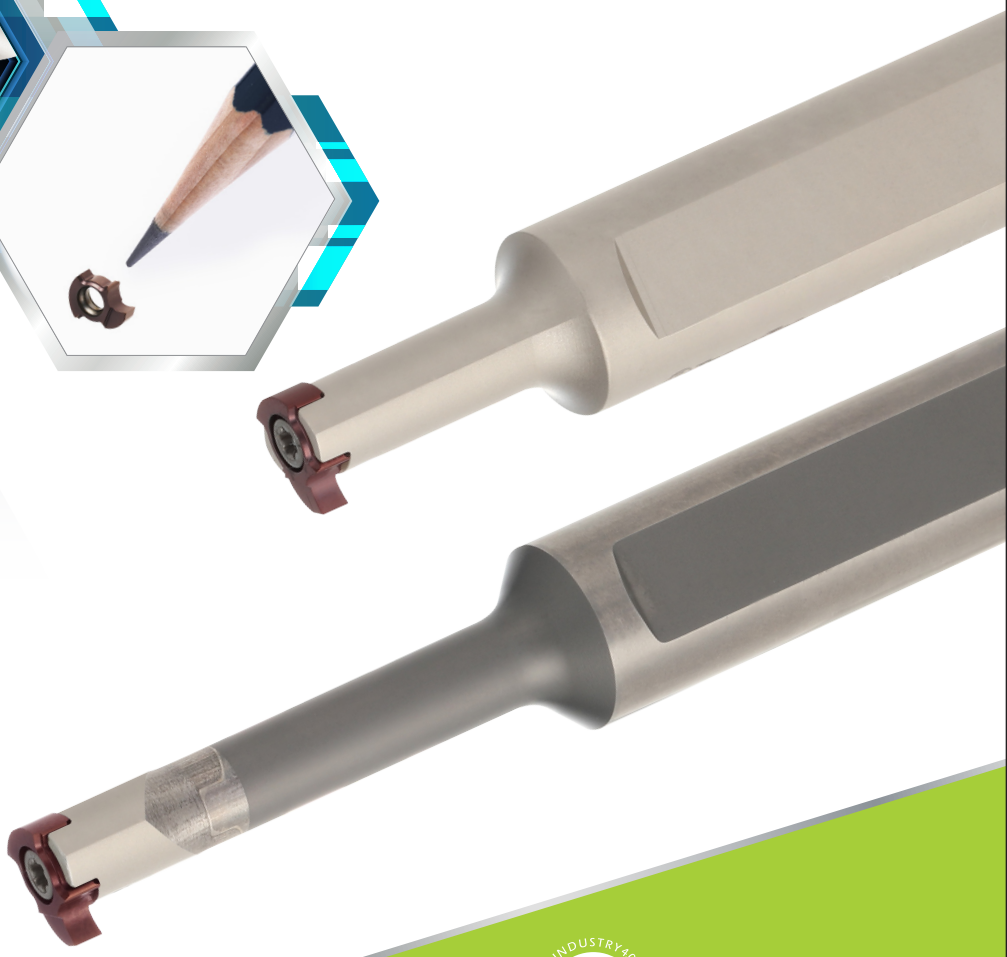
new

Speed to Feed

MINI iRUSH
INTERNAL GROOVING

Mini Size Inserts and Holders for Internal Shallow Grooving





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TaeguTec Industry 4.0

INDUSTRY 4.0
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KEY POINT

TaeguTec launches new MINI-I-RUSH inserts and holders for internal grooving of small diameters from Ø 8 mm

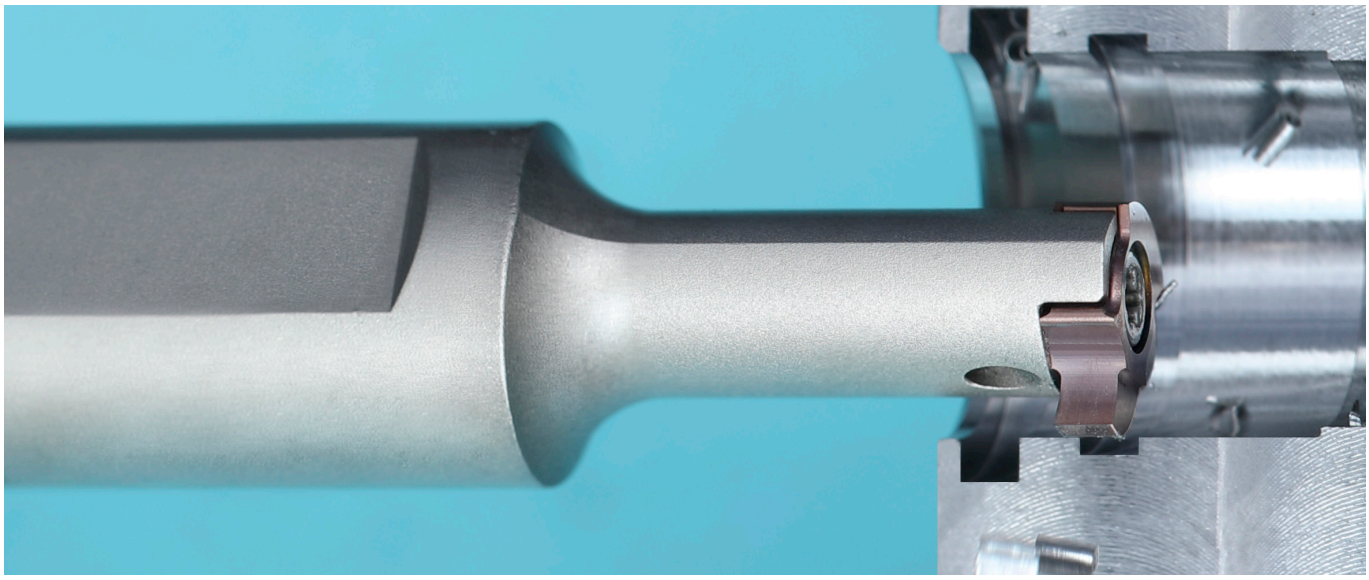
In general, vibration and noise due to long overhang machining happens during small diameter internal grooving operations – a challenge that reduces tool life and machining surface roughness.

To solve this problem, the **MINI-I-RUSH** is a small diameter internal grooving solution with a robust three-area contact structure of the insert and holder for the prevention of possible vibration and holder breakage during internal grooving operations. The TMIS 8 inserts also ensure the repeatability of the position of the insert's cutting edge and offers excellent surface finish and durability. In addition, the insert is equipped with a neutral holder in four directions for easy set-up and stock management.

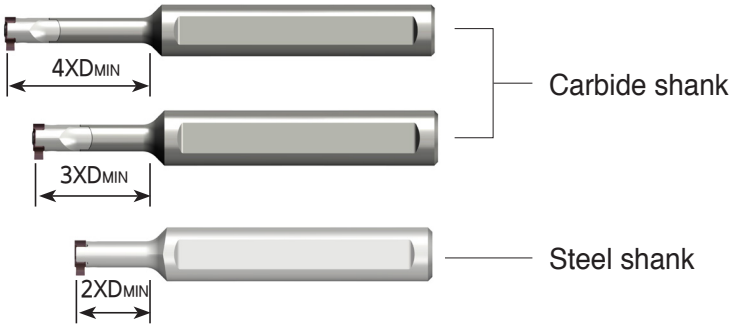
It is optimally suited for internal grooving and turning from a bore diameter of Ø 8 mm. The TT4430 new PVD coated grade with sharp edge treatment provides higher cutting reliability.

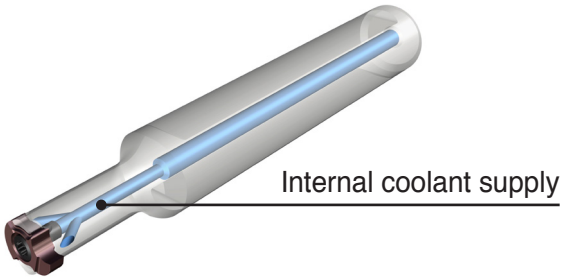
Features

- Suitable for small diameter grooving with minimum bore diameter of Ø 8 mm
  - Wide range of applications with internal grooving and turning
- Robust 3-area contact with screw clamping design prevents vibration and holder breakage
  - Stable machining with strong clamping and excellent surface finish
- Economical compared to the solid carbide tools, no setup required
- Inserts can be mounted into 4-direction neutral holders
- Internal coolant supply
- Carbide shank for deep bore machining and standard steel shank provided
- TT4430 new PVD coated grade with sharp cutting edge
  - Ideal combination of tough submicron substrate and a multi AlTiCrN coated layer for anti-chipping and reliable performance
  - General machining of small parts for steel, stainless steel and titanium alloy
  - Reduces burrs, good surface finish and longer tool life

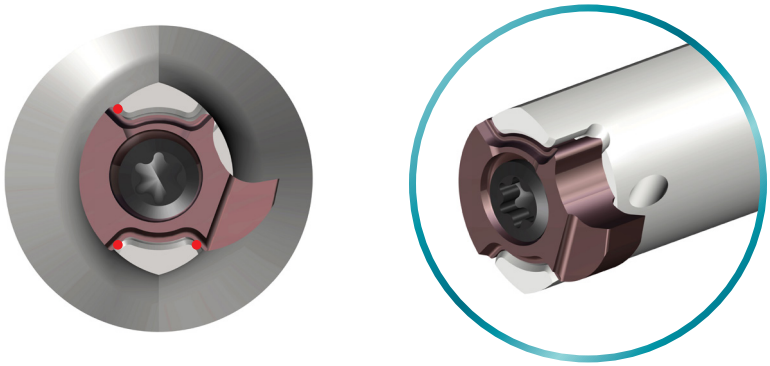


■ Machining depth by shank materials and internal coolant supply

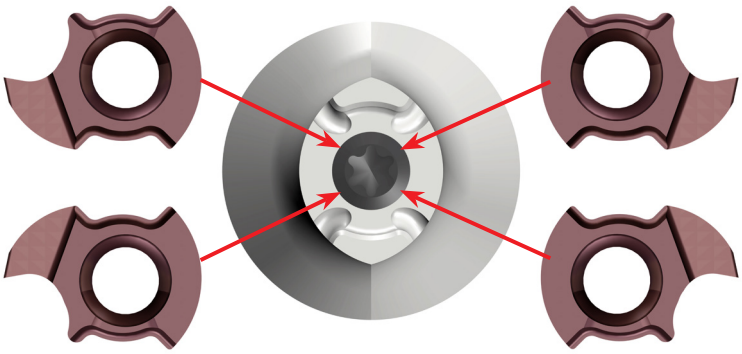




■ Robust 3-area contact and screw clamping



■ Insert can be mounted onto 4-directional neutral holders



Availability
In stock

Price
Available in the GAL system

Sincerely,
TaeguTec

Bae Dae-wi
Non-Rotating General PM

Sincerely,
TaeguTec

Cha Byung-jae
T-Clamp & Threading Product Manager

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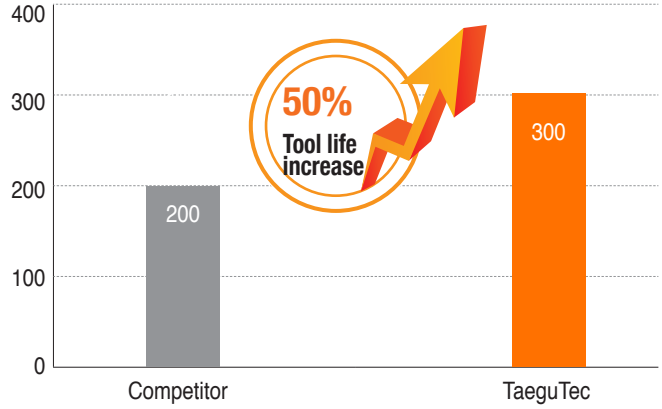
Case study 1

		Competitor	TaeguTec
Material		AISI 1045	
Operation		Internal grooving (Ø20)	
Insert		Single-ended insert	TMIS 8-2.00-0.10 TT4430
Holder		Ø12 internal grooving holder	TMIHN 12-16-8
Cutting speed	V (m/min)	100	100
Feed rate	f (mm/rev)	0.01, 0.02, 0.03	0.01, 0.02, 0.03
Depth of cut	ap (mm)	1.5	1.5
Coolant		wet	wet
Machined surface		 Noise, Vibration and Bad surface finish	 Less noise, Less Vibration and Good surface finish

Case study 2

		Competitor	TaeguTec
Material		AISI 1045	
Operation		Internal grooving	
Insert		Single-ended insert	TMIS 8-2.00-0.10 TT4430
Holder		Ø12 internal grooving holder	TMIHN 12-16-8
Cutting speed	V (m/min)	100	100
Feed rate	f (mm/rev)	0.04	0.04
Depth of cut	ap (mm)	1	1
Coolant		wet	wet
Tool life (pcs/corner)		200	300

Tool life (pcs/corner)



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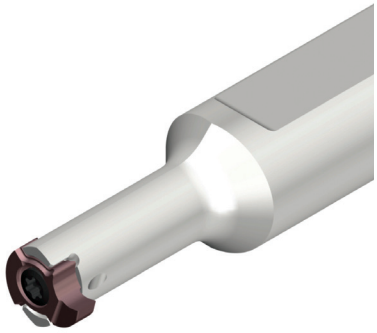
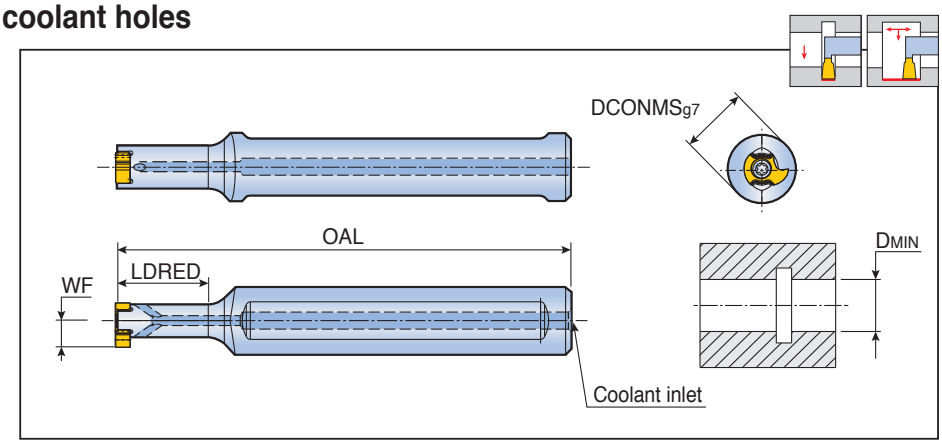
TMIHN

MINIRUSH INTERNAL GROOVING

Internal grooving holder with coolant holes





Designation	Dimension (mm)					Coolant inlet	Insert
	DCONMS	OAL	LDRED	WF	DMIN		
TMIHN 12-16-8	12	80	16	4.7	8	Ø3	TMIS 8

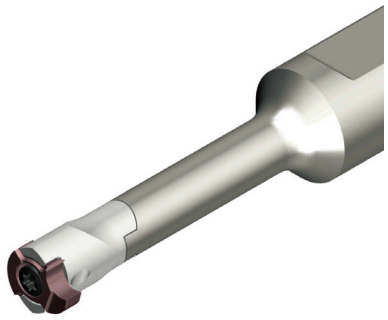
Spare parts

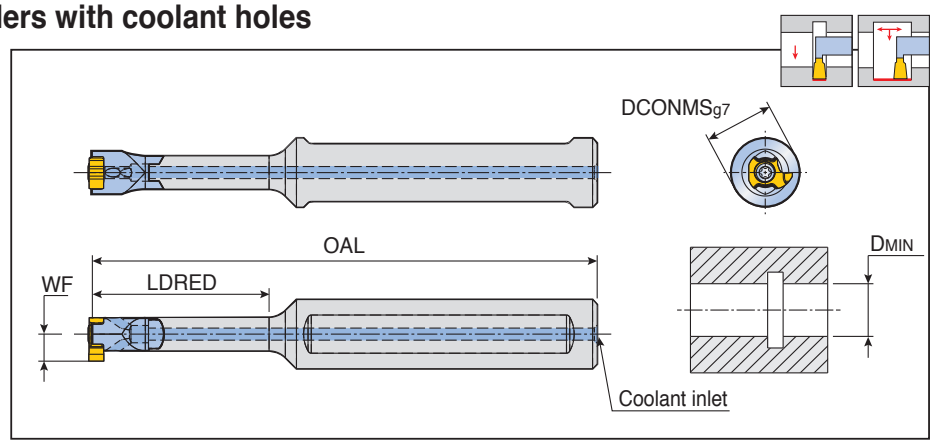
Designation	Screw	Wrench		
				
TMIHN	TS 22052I/HG	T 7		

TMIHN -C

MINIRUSH INTERNAL GROOVING

Internal grooving carbide holders with coolant holes





Designation	Dimension (mm)					Coolant inlet	Insert
	DCONMS	OAL	LDRED	WF	DMIN		
TMIHN 12C-24-8	12	92	24	4.7	8	Ø2	TMIS 8
12C-32-8	12	100	32	4.7	8	Ø2	

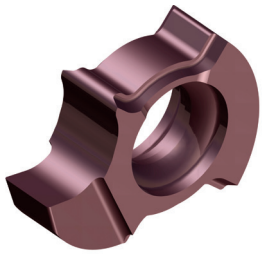
Spare parts

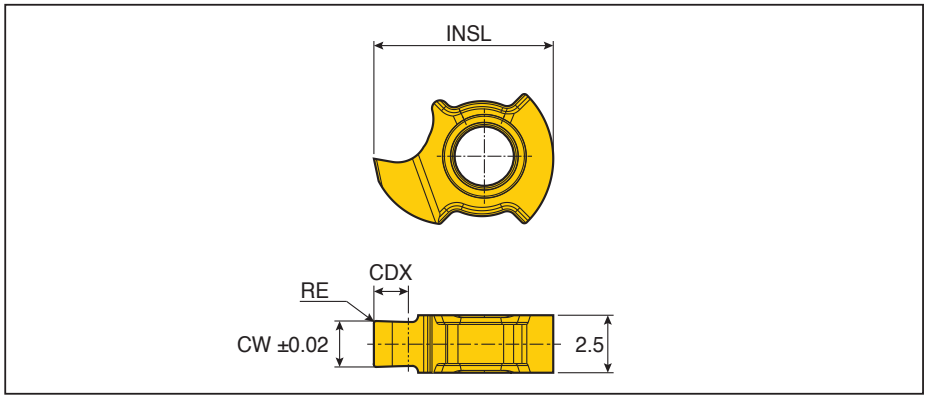
Designation	Screw	Wrench		
				
TMIHN -C	TS 22052I/HG	T 7		

TMIS 8

MINIRUSH INTERNAL GROOVING

Precise inserts for internal shallow grooving





Designation	Feed (mm/rev)	Dimension (mm)				Grade
		CW	RE	CDX	INSL	TT4430
TMIS **8-0.50-0.00**	0.01-0.03	0.50	0.00	0.70	7.8	●
8-1.00-0.00	0.01-0.03	1.00	0.00	1.50	7.8	●
8-1.50-0.05	0.01-0.03	1.50	0.05	1.50	7.8	●
8-2.00-0.10	0.01-0.03	2.00	0.10	1.50	7.8	●

●: Standard items

KIT COLLECTIONS

These kit products are available in the format listed below.

Cat. No.	Designation	Bill of materials	Qty.
6334877	**KISFT-TMIS 8-1000-12-16**	TMIHN 12-16-8	1
		TMIS 8-1.00-0.00 TT4430	3
6334878	**KISFT-TMIS 8-15005-12-16**	TMIHN 12-16-8	1
		TMIS 8-1.50-0.05 TT4430	3
6334879	**KISFT-TMIS 8-2001-12-16**	TMIHN 12-16-8	1
		TMIS 8-2.00-0.10 TT4430	3
6334880	**KISFT-TMIS 8-1000-12C-24**	TMIHN 12C-24-8	1
		TMIS 8-1.00-0.00 TT4430	3
6334881	**KISFT-TMIS 8-15005-12C-24**	TMIHN 12C-24-8	1
		TMIS 8-1.50-0.05 TT4430	3
6334882	**KISFT-TMIS 8-2001-12C-24**	TMIHN 12C-24-8	1
		TMIS 8-2.00-0.10 TT4430	3

Cat. No.	Designation	Bill of materials	Qty.
6337938	**KISFS-TMIS 8-1000-12-16**	TMIHN 12-16-8	1
		TMIS 8-1.00-0.00 TT4430	20
6337939	**KISFS-TMIS 8-15005-12-16**	TMIHN 12-16-8	1
		TMIS 8-1.50-0.05 TT4430	20
6337940	**KISFS-TMIS 8-2001-12-16**	TMIHN 12-16-8	1
		TMIS 8-2.00-0.10 TT4430	20
6337941	**KISFS-TMIS 8-1000-12C-24**	TMIHN 12C-24-8	1
		TMIS 8-1.00-0.00 TT4430	20
6337942	**KISFS-TMIS 8-15005-12C-24**	TMIHN 12C-24-8	1
		TMIS 8-1.50-0.05 TT4430	20
6337943	**KISFS-TMIS 8-2001-12C-24**	TMIHN 12C-24-8	1
		TMIS 8-2.00-0.10 TT4430	20

Cat. No.	Designation	Bill of materials	Qty.
6338484	**KISFF-A-TMIS8-1000 TT4430**	TMIS 8-1.00-0.00 TT4430	50
6338485	**KISFF-B-TMIS8-1000 TT4430**		100
6338486	**KISFF-A-TMIS8-15005TT4430**	TMIS 8-1.50-0.05 TT4430	50
6338487	**KISFF-B-TMIS8-15005TT4430**		100
6338488	**KISFF-A-TMIS8-2001 TT4430**	TMIS 8-2.00-0.10 TT4430	50
6338489	**KISFF-B-TMIS8-2001 TT4430**		100