September 2019
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NPA

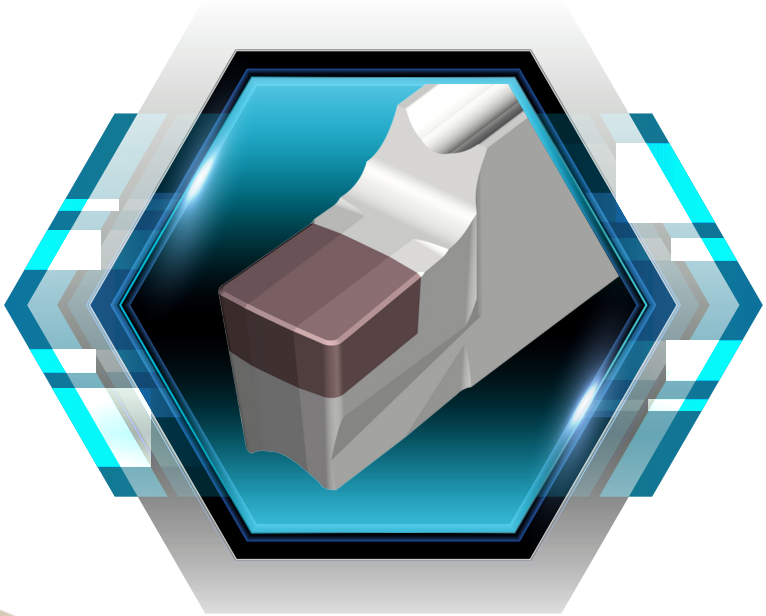
New Product Announcement No. 2019-22

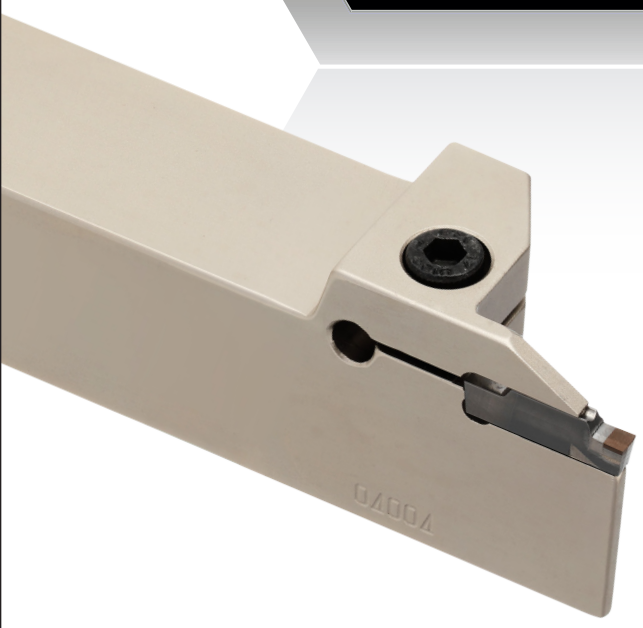
new

Speed to Feed

T-CLAMP
PARTING & GROOVING

High Feed CBN Inserts for Hardened Materials





ADVANCE MACHINING
TaeguTec Industry 4.0

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TaeguTec
Member IMC Group

KEY POINT

TaeguTec has released T-Clamp CBN inserts for high feed turning and excellent machining surface finish of high-hardened workpiece materials.

When excellent machining surface roughness is required in the high feed turning of high-hardened workpiece materials, the conventional solution is to use CBN turning inserts with a wiper. However, due to the excessive contact and bending by radial cutting forces at low depths of cut, there is a tendency to experience the issue of surface roughness deterioration of the workpiece.

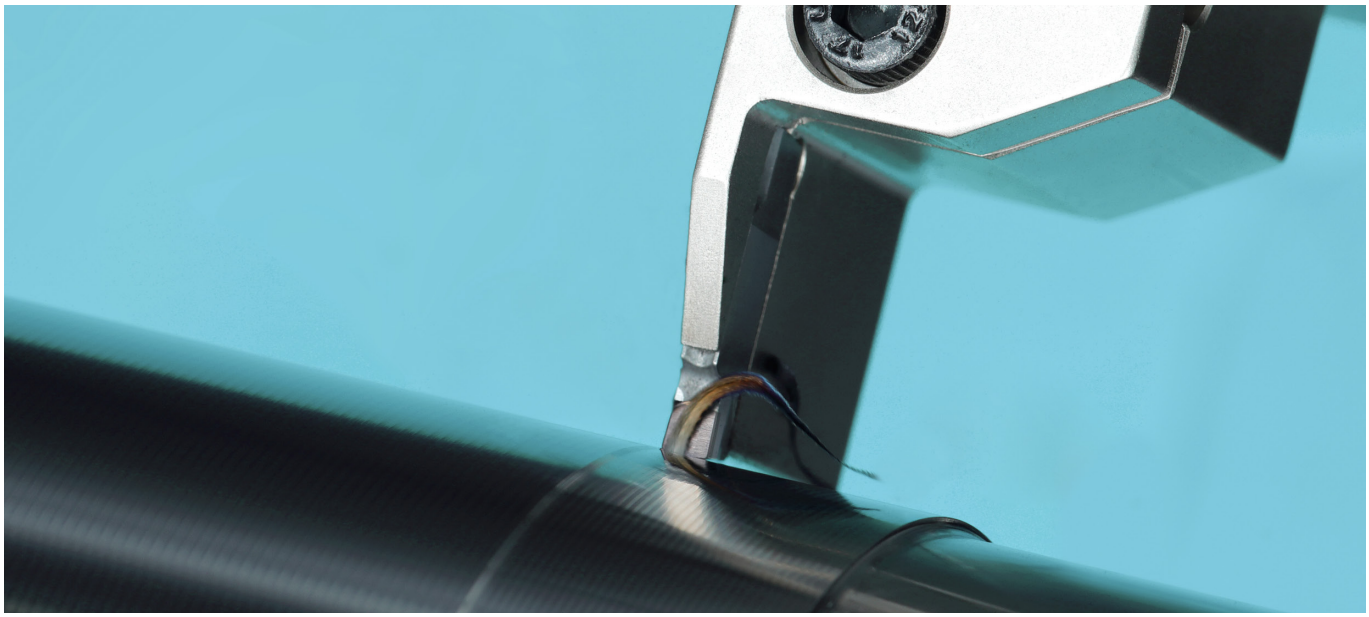
To solve this problem, TaeguTec has developed a T-Clamp CBN insert which is designed to enable bi-directional high feed turning and obtain the effect of superior surface finish due to the natural bending of the T-Clamp holder during machining.

With a maximum feed rate from 0.8 to 1.2 mm/rev, this new line greatly contributes to the productivity improvement of high-hardened automotive parts such as shafts, gears and transmissions. Furthermore, it enables at least more than twice of the high feed machining performance when compared to conventional turning CBN wiper inserts.

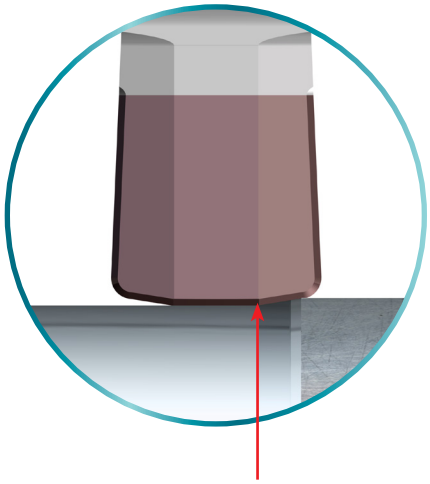
* As part of the new campaign, the design for the new **T-CLAMP** line highlights TaeguTec's new direction.

Features

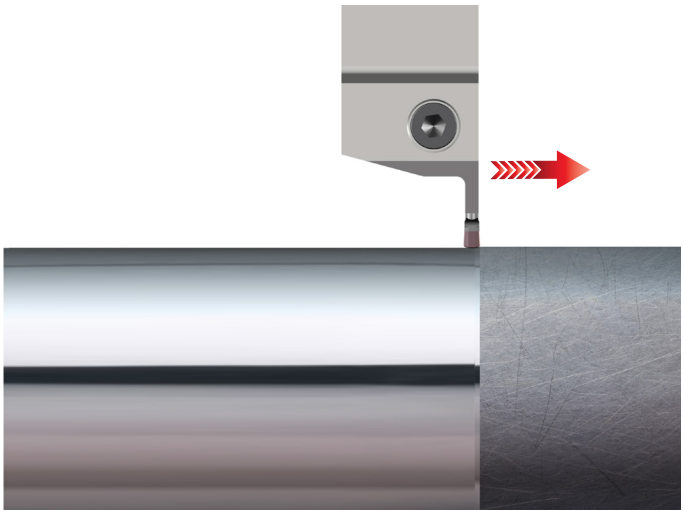
- T-Clamp CBN inserts for high feed turning of high-hardened workpiece materials
- Inclined chip breaker for good chip control at shallow depths of cut up to 0.12 mm
- Optimized cutting edge design for high feed bi-directional turning
- Excellent surface finish
- Significantly improved productivity with a maximum feed rate from 0.8 to 1.2 mm/rev
- TB2015 CBN grade
  - Excellent combination of high hardness and moderate fracture toughness
  - Continuous and light interrupted machining of hardened steel



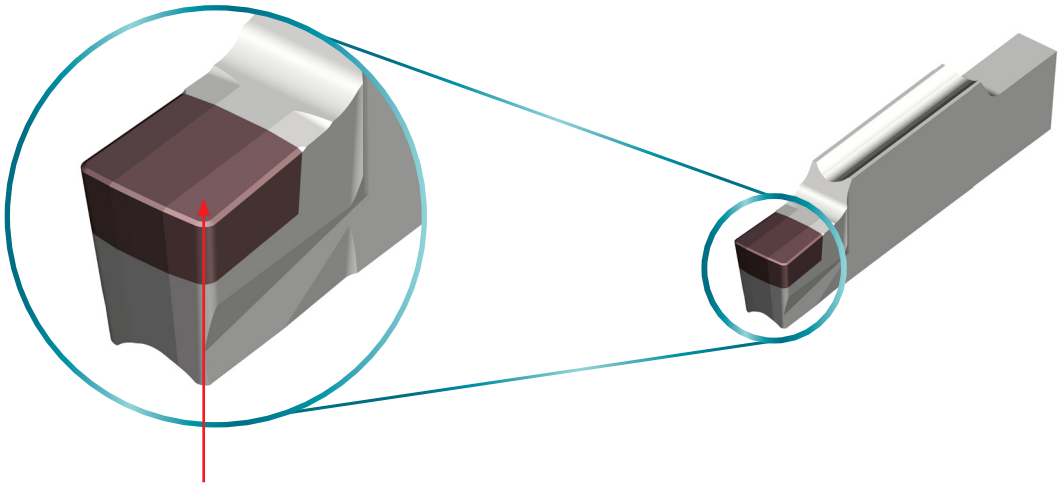
Insert features



Optimized cutting edge design
for high feed turning



High feed turning with excellent surface finish



Inclined chip breaker design for chip control at low depths of cut

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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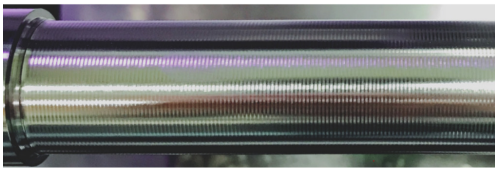
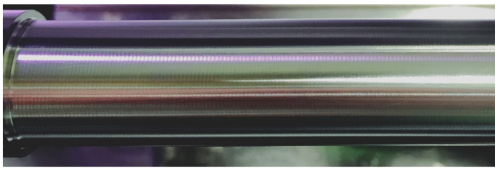
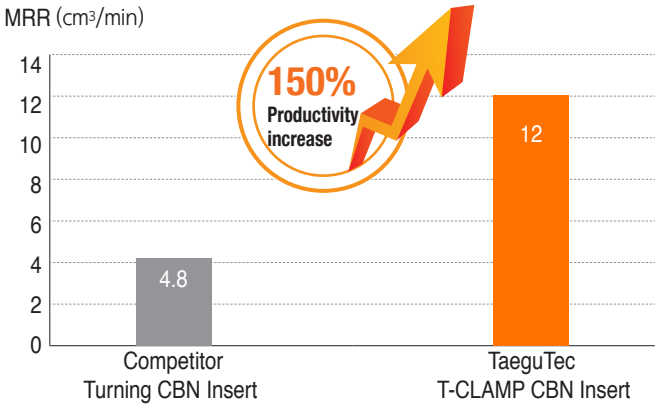
Case study 1

		Competitor	TaeguTec
Material		D2, X165CrMoV12 (HRc 58)	
Operation		External Turning	
Insert		High-feed type CBN coated grip insert	TSG 3.0-0.5-HF TB2015
Holder		Grooving Holder	TTER 2525-3
Cutting speed	V (m/min)	100	100
Feed rate	f (mm/rev)	0.8	0.8
Depth of cut	ap (mm)	0.1	0.1
Coolant		Wet	Wet
Machined surface		 Vibration	 No vibration, Ra 0.6μm

Case study 2

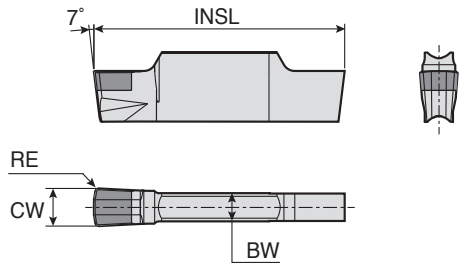
		Competitor	TaeguTec
Material		D2, X165CrMoV12 (HRc 58)	
Operation		External Turning	
Insert		CNGA 120408 CBN wiper insert	TSG 5.0-0.3-HF TB2015
Holder		PCLNR 2525 M12	TTER 2525-5
Cutting speed	V (m/min)	120	120
Feed rate	f (mm/rev)	0.4	1
Depth of cut	ap (mm)	0.1	0.1
Table feed	F (mm/min)	203.6	509
Coolant		Wet	Wet
MRR (cm³/min)		4.8	12



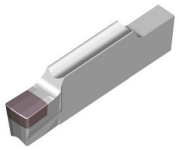
TSG-HF

T-CLAMP PARTING & GROOVING

CBN inserts for high feed turning



Size	Dimension (mm)					
	CW	RE	BW	INSL		
3	3.0	0.3	2.2	20		
5	5.0	0.3	4.0	25		

Insert	Designation	Insert seat size	ap (mm)	Feed (mm/rev)	CBN TB2015
	**TSG 3.0-0.3-HF**	3	0.08-0.12	0.40-0.80	●
	5.0-0.3-HF	5	0.08-0.12	0.40-1.20	●

●: Standard items

KIT COLLECTIONS

These kit products are available in the format listed below.

Cat. No.	Designation	Bill of materials	Qty.
6334883	**KISFT-TSG 3-HF-25R-3T20**	TTER 2525-3T20	1
		TSG 3.0-0.3-HF TB2015	2
6334884	**KISFT-TSG 5-HF-25R-5T20**	TTER 2525-5	1
		TSG 5.0-0.3-HF TB2015	2

Cat. No.	Designation	Bill of materials	Qty.
6337944	**KISFS-TSG 3-HF-25R-3T20**	TTER 2525-3T20	1
		TSG 3.0-0.3-HF TB2015	5
6337945	**KISFS-TSG 5-HF-25R-5T20**	TTER 2525-5	1
		TSG 5.0-0.3-HF TB2015	5