

TURNLINE

New grooving and parting off tools

TUNG

CUT

**Extended version
with items**

The complete grooving solution !

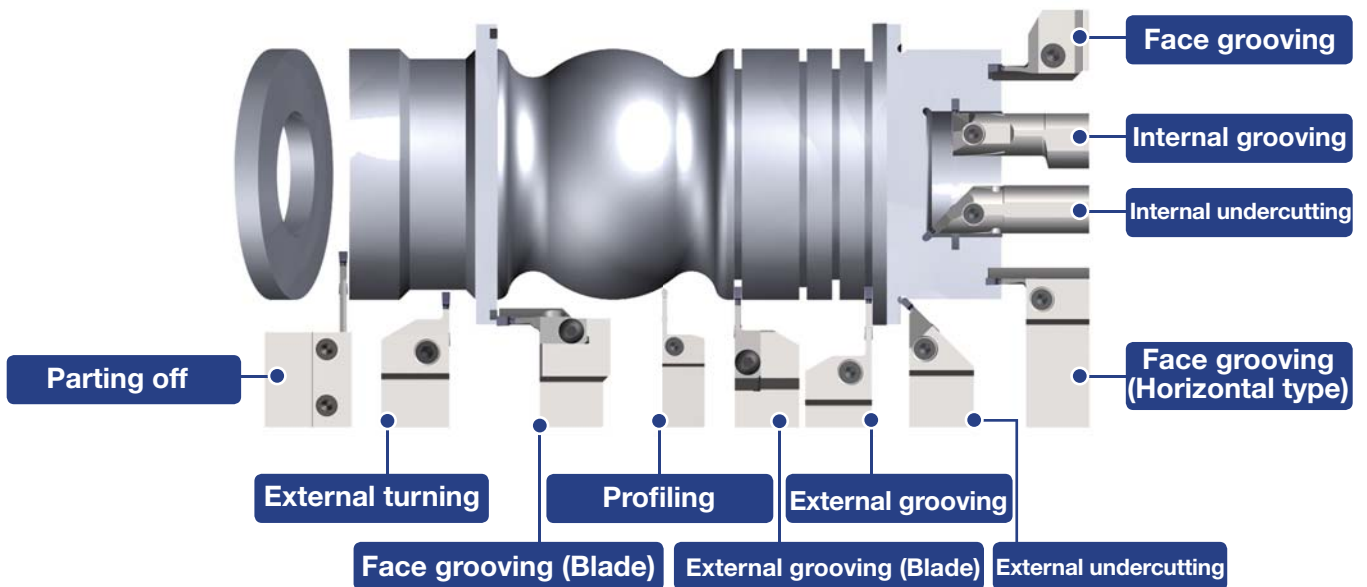


Multifunctional system diverse grooving ne

Features

● Suited to a wide variety of grooving operations

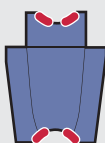
Multi-functional grooving system



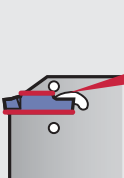
● High clamping rigidity

For stable tool life and accuracy

Clamping system

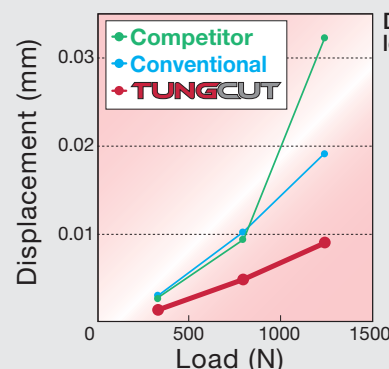


● Stable and safe contact points !

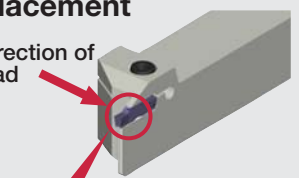


High repeatability and durability due to long pocket !

Limited cutting edge displacement



Direction of load



Measuring point

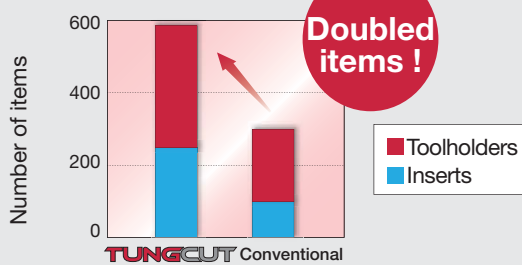
System for Needs!



● Great selection of standard items

HOLDERS AND INSERTS APPLICABLE FOR ALL GROOVING DEMANDS !

■ Comparison of items

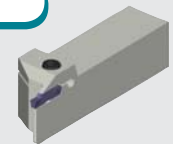


■ Line-up of width in TungCut

type	Application	TUNG CUT (mm)	Conventional (mm)
CTE	External grooving	2 - 8	2 - 5
CTI	Internal grooving	3 - 8	3 - 5
CTF	Face grooving	3 - 6	3 - 5
JCTE	Small lathe tools	1.4 - 3	2
CGP	Parting off (Blade type)	1.4 - 8	3 - 5
CGE	Parting off (Shank type)	1.4 - 4	2 - 5

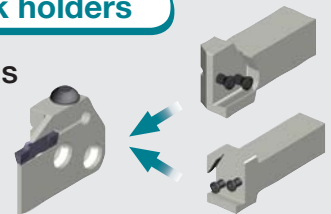
Mono block toolholders

High rigidity !



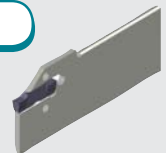
Blades with shank holders

Available for various machining !



Blades with tool blocks

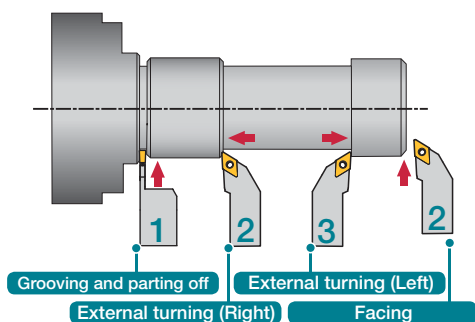
Suitable for large diameter machining !



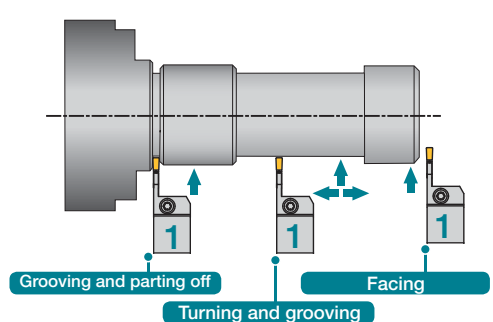
● Economical

Multi-functional tool reduces tool set-ups

Conventional



TUNG CUT

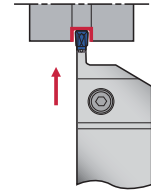


Cutting performance

● Chip control

Unique chipbreaker provides excellent chip control in various conditions !

Cutting condition	Carbon steels (S45C)					Stainless steels (SUS304)			
	Feed f (mm/rev)								
	0.10	0.15	0.20	0.25	0.30	0.10	0.15	0.20	0.25
TUNG CUT	Good					Good			
Competitor A	Unstable				With vibration	Unstable			

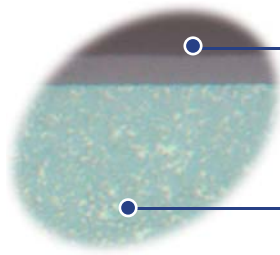


Insert : DGM4-030
 Toolholder : CTER2525-4T25
 Groove width : $W = 4$ mm
 Cutting speed: $V_c = 100$ m/min
 Feed : $f = 0.1 \sim 0.3$ mm/rev
 Coolant : Water soluble

Grades

● AH725

An all-round grade for most materials !



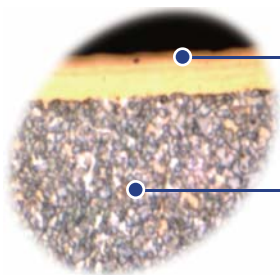
(Ti, Al)N PVD "Super-Flash" coating

Well controlled structure, and very strong coating layer !!
Improved adhesion strength!!

Fine grain cemented carbide with high toughness and plastic deformation strength

● GH130

Best use for interrupted or tough cutting !



TiCNO PVD coating layer

High hardness and wear resistance

Unique substrate with super high toughness and fracture strength

Grade	Substrate		Coating layer		Features
	Specific gravity	HRA	Main Composition	Thickness (μm)	
AH725	14.4	91.5	(Ti, Al)N	2	Well balanced grade with wear and chipping resistance.
GH130	14.1	89.5	TiCNO	3	High toughness and excellent chipping resistance. Suitable for heavy machining and roughing.
TH10	14.7	92.0	-	-	Well balanced grade of wear resistance and toughness.

Insert application

Insert	Application						
	Grooving			Parting off	Turning		
	External	Internal	Face		External	Internal	Face
DGM / SGM	●		●	●			
DGS / SGS	●		●	●			
DTE	●		●		●		●
DGE	●						
DTX	●	●	●	●	●	●	●
DTI		●				●	
DTF			●				●
DTR	●				●		
NEW DTIU	● (Undercutting)	● (Undercutting)					
NEW DTA					● (Al wheel machining)	● (Al wheel machining)	

Standard cutting conditions

Work materials	Hardness	Cutting speed Vc (m/min)		
		AH725	GH130	TH10
Steels S45C, SCM435 etc. (C45, 34CrMo4 etc.)	< 300 HB	50 ~ 180	40 ~ 150	-
Stainless steels SUS303, SUS304 etc. (X10CrNiS18-9 etc.)	< 200 HB	50 ~ 120	50 ~ 120	-
Grey cast irons, Ductile cast irons FC250, FCD450 etc. (EN-GJL-250 etc.)	-	-	50 ~ 180	-
Aluminium alloys (Si < 12%)	-	-	-	100 ~ 500
Titanium alloys (Ti-6Al-4V etc.)	< 40 HRC	20 ~ 80	20 ~ 80	-

Features of Inserts

External grooving and parting off

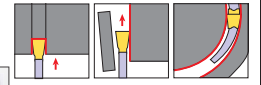
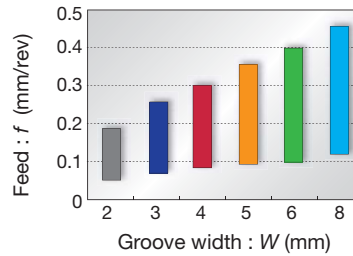
DGM type (2 corner)
SGM type (1 corner)



1st choice for external grooving and parting off

- Smooth chip evacuation
- Well designed edge with high strength
- Handed insert available

■ Standard feed



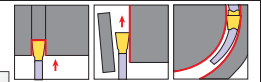
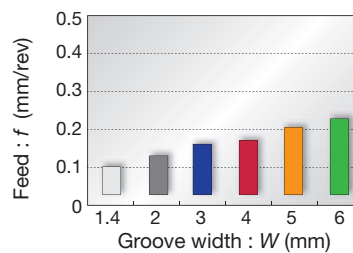
DGS type (2 corner)
SGS type (1 corner)



Lower cutting force and superior sharpness

- Unique designed edge and chipbreaker
- Handed insert available

■ Standard feed



External, face grooving and turning

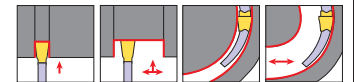
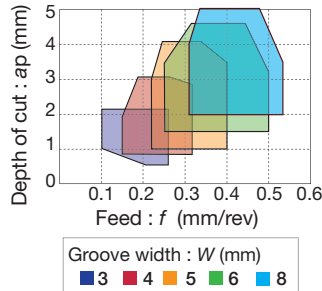
DTE type (2 corner)



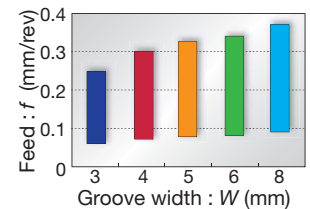
For general purpose

- Unique breaker makes chips shorter
- Molded and ground insert available

■ Standard feed and DoC



■ Standard feed



External, internal, face grooving and turning

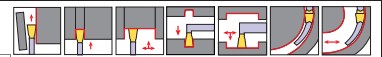
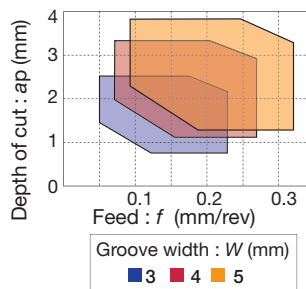
DTX type (2 corner)



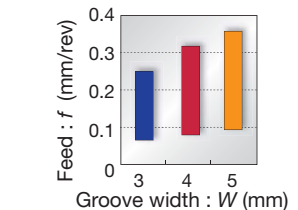
Multi-functional type

- Well balanced sharpness and strength
- Multi functional insert

■ Standard feed and DoC

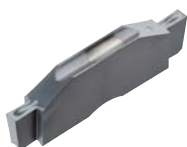


■ Standard feed



External grooving

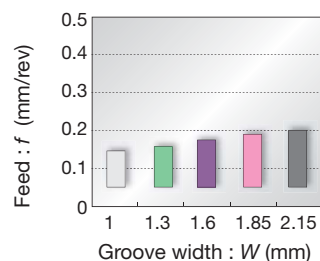
DGE type (2 corner)




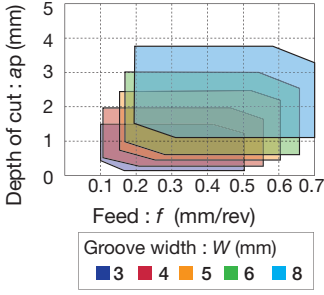
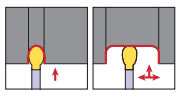

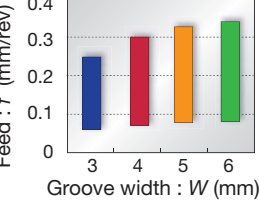
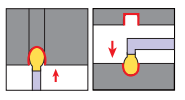
For high accurate and shallow groove

- Excellent chip control


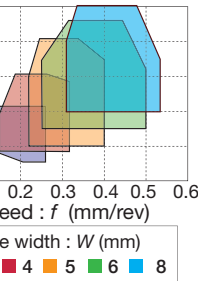
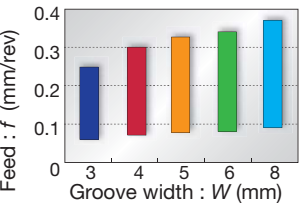
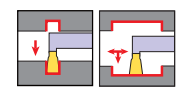
■ Standard feed




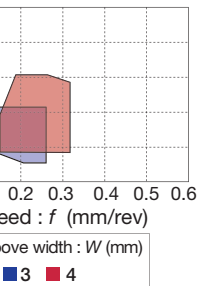
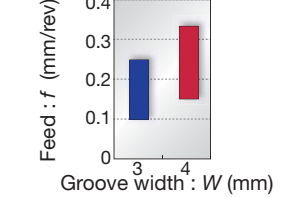
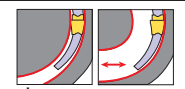
Profiling and Undercutting

<p>DTR type (2 corner)</p> <p>Molded</p> <p>Ground</p> 	<p>Full radius type</p> <ul style="list-style-type: none"> ● Excellent chip control ● Molded and ground insert available 	<p>■ Standard feed and DoC</p>  <p>Depth of cut : a_p (mm)</p> <p>Feed : f (mm/rev)</p> <p>Groove width : W (mm)</p> <p>■ 3 ■ 4 ■ 5 ■ 6 ■ 8</p> 
<p>DTIU type (2 corner)</p> <p>NEW</p> 	<p>Full radius type</p> <ul style="list-style-type: none"> ● Excellent chip control ● For undercutting 	<p>■ Standard feed and DoC</p>  <p>Feed : f (mm/rev)</p> <p>Groove width : W (mm)</p> 


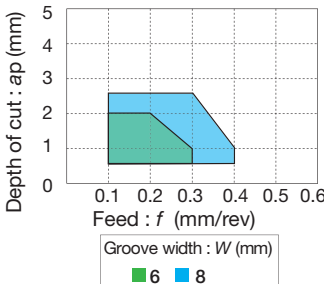
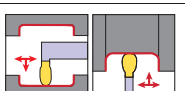
Internal grooving and turning

<p>DTI type (2 corner)</p> 	<p>1st choice for internal grooving</p> <ul style="list-style-type: none"> ● Unique chipbreaker makes chips shorter ● Molded and ground insert available 	<p>■ Standard feed and DoC</p>  <p>Depth of cut : a_p (mm)</p> <p>Feed : f (mm/rev)</p> <p>Groove width : W (mm)</p> <p>■ 3 ■ 4 ■ 5 ■ 6 ■ 8</p> <p>■ Standard feed</p>  <p>Feed : f (mm/rev)</p> <p>Groove width : W (mm)</p> 
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Face grooving and turning

<p>DTF type (2 corner)</p> 	<p>1st choice for face grooving</p> <ul style="list-style-type: none"> ● Unique chipbreaker makes chips shorter ● Handed insert 	<p>■ Standard feed and DoC</p>  <p>Depth of cut : a_p (mm)</p> <p>Feed : f (mm/rev)</p> <p>Groove width : W (mm)</p> <p>■ 3 ■ 4</p> <p>■ Standard feed</p>  <p>Feed : f (mm/rev)</p> <p>Groove width : W (mm)</p> 
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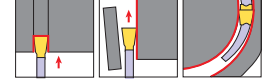
Aluminium wheel machining

<p>DTA type (2 corner)</p> <p>NEW</p> 	<p>Full radius type</p> <ul style="list-style-type: none"> ● Excellent chip control ● For aluminium wheel profiling ● Ground insert 	<p>■ Standard feed and DoC</p>  <p>Depth of cut : a_p (mm)</p> <p>Feed : f (mm/rev)</p> <p>Groove width : W (mm)</p> <p>■ 6 ■ 8</p> 
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Inserts

Notation of "insert seat size"

Seat size and grooving width are different. The seat size measure is for the specification of the setting insert. Please note this point.



DGM External grooving and parting off, 2 corner

	Insert seat size	Cat. No.	Grades				Dimensions (mm)					
			Coated				$W_{\pm 0.05}$	r_{ϵ}	L	h	κ	
			AH725		GH130							
			R	L	R	L						
Neutral												
Left hand												
Right hand												
		2	DGM 2-020	●	●	●	●	2	0.2	20	5	-
			DGM 2-020-6R/L	●	●	●	●	2	0.2	20	5	6°
			DGM 2-020-8R/L	●	●	●	●	2	0.2	20	5	8°
			DGM 2-020-15R/L	●	●	●	●	2	0.2	20	5	15°
			DGM 2-002-15R/L	●	●	●	●	2	0.02	19.6	5	15°
		3	DGM 3-020	●	●	●	●	3	0.2	20	5	-
			DGM 3-020-6R/L	●	●	●	●	3	0.2	20	5	6°
			DGM 3-002-6R/L	●	●	●	●	3	0.02	19.6	5	6°
			DGM 3-020-15R/L	●	●	●	●	3	0.2	20	5	15°
		4	DGM 4-030	●	●	●	●	4	0.3	20	5	-
			DGM 4-030-4R/L	●	●	●	●	4	0.3	20	5	4°
			DGM 4-030-15R/L	●	●	●	●	4	0.3	20	5	15°
		5	DGM 5-030	●	●	●	●	5	0.3	25	5.5	-
			DGM 5-030-4R	●	●	●	●	5	0.3	25	5.5	4°
		6	DGM 6-030	●	●	●	●	6	0.3	25	5.5	-
		8	DGM 8-040	●	●	●	●	8	0.4	30	6.7	-

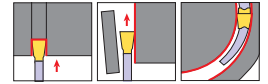
SGM External deep grooving and parting off, 1 corner

	Insert seat size	Cat. No.	Grades				Dimensions (mm)					
			Coated				$W_{\pm 0.05}$	r_{ϵ}	L	h	κ	
			AH725		GH130							
			R	L	R	L						
Neutral												
Left hand												
Right hand												
		2	SGM 2-020	●	●	●	●	2	0.2	20	5	-
			SGM 2-020-6R/L	●	●	●	●	2	0.2	20	5	6°
		3	SGM 3-020	●	●	●	●	3	0.2	20	5	-
			SGM 3-020-6R/L	●	●	●	●	3	0.2	20	5	6°
			SGM 3-020-15R/L	●	●	●	●	3	0.2	20	5	15°
		4	SGM 4-030	●	●	●	●	4	0.3	20	5	-
			SGM 4-030-4R/L	●	●	●	●	4	0.3	20	5	4°
		5	SGM 5-030	●	●	●	●	5	0.3	25	5.5	-
		6	SGM 6-030	●	●	●	●	6	0.3	25	5.5	-

● : Stocked items

DGS

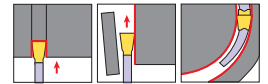
External grooving and parting off, 2 corner



	Insert seat size	Cat. No.	Grades				Dimensions (mm)					
			Coated				$W_{\pm 0.05}$	r_{ϵ}	L	h	κ	
			AH725		GH130							
			R	L	R	L						
Neutral		1	DGS1.4-016	●	●	1.4	0.16	16	4.3	-		
Left hand		2	DGS2-020	●	●	2	0.2	20	5	-		
			DGS2-020-6R/L	●	●	●	●	2	0.2	20	5	6°
			DGS2-002-6R/L	●	●	●	●	2	0.02	19.6	5	6°
			DGS2-020-15R/L	●	●	●	●	2	0.2	20	5	15°
			DGS2-002-15R/L	●	●	●	●	2	0.02	19.6	5	15°
Right hand		3	DGS3-020	●	●	3	0.2	20	5	-		
			DGS3-020-6R/L	●	●	●	●	3	0.2	20	5	6°
			DGS3-002-6R/L	●	●	●	●	3	0.02	19.6	5	6°
			DGS3-020-15R/L	●	●	●	●	3	0.2	20	5	15°
			DGS3-002-15R/L	●	●	●	●	3	0.02	19.6	5	15°
		4	DGS4-030	●	●	4	0.3	20	5	-		
			DGS4-030-4R/L	●	●	●	●	4	0.3	20	5	4°
		5	DGS5-030	●	●	5	0.3	25	5.5	-		
		6	DGS6-030	●	●	6	0.3	25	5.5	-		

SGS

External deep grooving and parting off, 1 corner



	Insert seat size	Cat. No.	Grades				Dimensions (mm)					
			Coated				$W_{\pm 0.05}$	r_{ϵ}	L	h	κ	
			AH725		GH130							
			R	L	R	L						
Neutral		2	SGS 2-020	●	●	2	0.2	20	5	-		
Left hand	SGS 2-020-6R/L		●	●	●	●	2	0.2	20	5	6°	
	SGS 2-020-15R/L		●	●	●	●	2	0.2	20	5	15°	
Right hand		3	SGS 3-020	●	●	3	0.2	20	5	-		
			SGS 3-020-6R/L	●	●	●	●	3	0.2	20	5	6°
			SGS 3-002-6R/L	●	●	●	●	3	0.02	19.8	5	6°
			SGS 3-020-15R/L	●	●	●	●	3	0.2	20	5	15°
			SGS 3-002-15R/L	●	●	●	●	3	0.02	20	5	15°
		4	SGS 4-030	●	●	4	0.3	20	5	-		
		5	SGS 5-030	●	●	5	0.3	25	5.5	-		
		6	SGS 6-030	●	●	6	0.3	25	5.5	-		

● : Stocked items



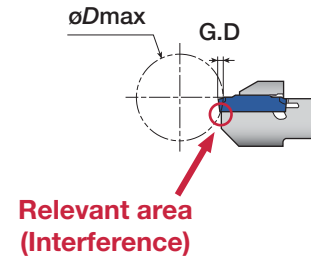
DGE External grooving (Ground)

	Insert seat size	Cat. No.	Grades		Dimensions (mm)						
			Coated		$W_{\pm 0.02}$	$r_{\epsilon \pm 0.05}$	L_1	L	h		
			AH725	GH130							
			2	DGE100-000	●	●	1	0	2.5	20	5
				DGE130-000	●	●	1.3	0	2.5	20	5
				DGE160-010	●	●	1.6	0.1	2.5	20	5
DGE185-010	●	●		1.85	0.1	3.5	20	5			
DGE215-015	●	●		2.15	0.15	3.5	20	5			

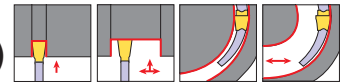
Caution

ϕD_{max} is limited as shown in picture in right according to groove depth, G.D. Please refer to the following table. G.D = Groove depth

Cat. No.	Max. groove depth (mm)	ϕD_{max} (mm)				
		G.D = 1	G.D = 1.5	G.D = 2	G.D = 2.5	G.D = 3
DGE100-000	2	∞	18.6	11.5	-	-
DGE130-000					-	-
DGE160-010					-	-
DGE185-010	3	∞	18.6	11.5	8.8	7
DGE215-015						



DTE External, face grooving and turning (Ground)



	Insert seat size	Cat. No.	Grades		Dimensions (mm)					
			Coated		$W_{\pm 0.02}$	$r_{\epsilon \pm 0.05}$	L	h		
			AH725	GH130						
			3	DTE265-015	●	●	2.65	0.15	20	5
				DTE300-020	●	●	3	0.2	20	5
				DTE300-040	●	●	3	0.4	20	5
				DTE315-015	●	●	3.15	0.15	20	5
			4	DTE400-040	●	●	4	0.4	20	5
				DTE400-080	●	●	4	0.8	20	5
				DTE415-015	●	●	4.15	0.15	20	5
			5	DTE478-055	●	●	4.78	0.55	25	5.5
				DTE500-040	●	●	5	0.4	25	5.5
				DTE500-080	●	●	5	0.8	25	5.5
				DTE515-015	●	●	5.15	0.15	25	5.5
			6	DTE600-080	●	●	6	0.8	25	5.5
				DTE600-120	●	●	6	1.2	25	5.5
8	DTE800-080	●	●	8	0.8	30	6.7			
	DTE800-120	●	●	8	1.2	30	6.7			

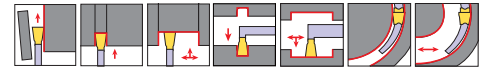
External, face grooving and turning (Molded)

	Insert seat size	Cat. No.	Grades		Dimensions (mm)			
			Coated		$W_{\pm 0.05}$	r_{ϵ}	L	h
			AH725	GH130				
			3	DTE3-040	●	●	3	0.4
4	DTE4-040	●	●	4	0.4	20	5	

● : Stocked items

DTX

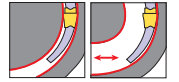
External, internal, face grooving and turning



	Insert seat size	Cat. No.	Grades		Dimensions (mm)			
			Coated		$W_{\pm 0.05}$	r_{ϵ}	L	h
			AH725	GH130				
	3	DTX3-030	●	●	3	0.3	20	5
	4	DTX4-040	●	●	4	0.4	20	5
	5	DTX5-040	●	●	5	0.4	25	5.5

DTF

Face grooving and turning



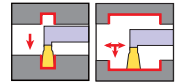
	Insert seat size	Cat. No.	Grades				Dimensions (mm)				
			Coated				$W_{\pm 0.05}$	r_{ϵ}	L	h	L_1
			AH725		GH130						
			R	L	R	L					
	3	DTF3-040-R/L	●	●	●	●	3	0.4	20	5	16
	4	DTF4-040-R/L	●	●	●	●	4	0.4	20	5	16

Right hand (R) shown.

Apply right hand inserts on right hand holders and left hand inserts on left hand holders.

DTI

Internal grooving and turning (Ground)

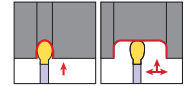


	Insert seat size	Cat. No.	Grades		Dimensions (mm)			
			Coated		$W_{\pm 0.02}$	$r_{\epsilon} \pm 0.05$	L	h
			AH725	GH130				
	3	DTI300-040	●	●	3	0.4	20	5
	4	DTI400-040	●	●	4	0.4	20	5
		DTI400-080	●	●	4	0.8	20	5
	5	DTI500-040	●	●	5	0.4	25	5.5
		DTI500-080	●	●	5	0.8	25	5.5
	6	DTI600-080	●	●	6	0.8	25	5.5
		DTI600-120	●	●	6	1.2	25	5.5
	8	DTI800-080	●	●	8	0.8	30	6.7
		DTI800-120	●	●	8	1.2	30	6.7

Internal grooving and turning (Molded)

	Insert seat size	Cat. No.	Grades		Dimensions (mm)			
			Coated		$W_{\pm 0.05}$	r_{ϵ}	L	h
			AH725	GH130				
	3	DTI3-040	●	●	3	0.4	20	5
	4	DTI4-040	●	●	4	0.4	20	5

● : Stocked items

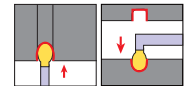


DTR Profiling and undercutting (Ground)

	Insert seat size	Cat. No.	Grades Coated		Dimensions (mm)			
			AH725	GH130	$W \pm 0.02$	r_ϵ	L	h
	3	DTR300-150	●	●	3	1.5	20	5
	4	DTR400-200	●	●	4	2	20	5
	5	DTR478-239	●	●	4.78	2.39	25	5.5
		DTR500-250	●	●	5	2.5	25	5.5
	6	DTR600-300	●	●	6	3	25	5.5

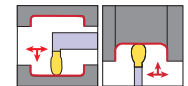
Profiling and undercutting (Molded)

	Insert seat size	Cat. No.	Grades Coated		Dimensions (mm)			
			AH725	GH130	$W \pm 0.05$	r_ϵ	L	h
	3	DTR3-150	●	●	3	1.5	20	5
	4	DTR4-200	●	●	4	2	20	5
	5	DTR5-250	●	●	5	2.5	25	5.5
	6	DTR6-300	●	●	6	3	25	5.5
	8	DTR8-400	●	●	8	4	30	6.7



DTIU Profiling and undercutting (Ground)

	Insert seat size	Cat. No.	Grades Coated		Dimensions (mm)			
			AH725	GH130	$W \pm 0.02$	r_ϵ	L	h
NEW	3	DTIU300-150	●	●	3	1.5	20	5
	4	DTIU400-200	●	●	4	2	20	5
	5	DTIU500-250	●	●	5	2.5	25	5.5
	6	DTIU600-300	●	●	6	3	25	5.5



DTA Aluminium wheel machining (Ground)

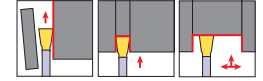
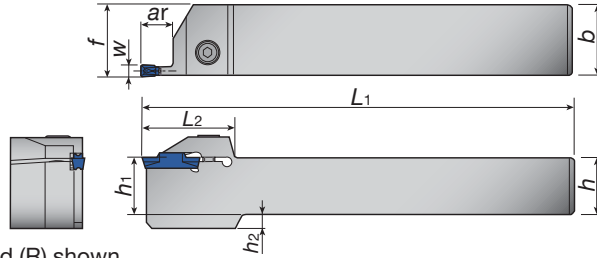
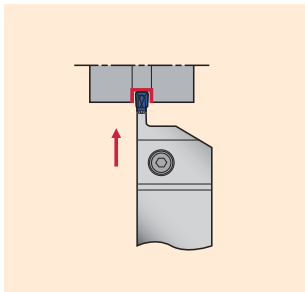
	Insert seat size	Cat. No.	Grades Carbide		Dimensions (mm)				
			TH10		$W \pm 0.02$	r_ϵ	L	h	A
NEW	6	DTA 600-300	●		6	3	25	5.5	7°
	8	DTA 800-400	●		8	4	30	6.7	10°

Toolholders

● Mono block type

CTE R/L

External grooving and turning



Right hand (R) shown.

Insert seat size	Cat. No.	Stock		Max. groove depth ⁽¹⁾ ar (mm)	Dimensions (mm)								Inserts	Parts	
		R	L		h ₁	b	h	L ₁	f ⁽²⁾	W	h ₂	L ₂		Clamping screw	Wrench
2	CTER/L1616-2T08	●	●	8	16	16	16	110	16.1	2	4	33	DGM/SGM DGS/SGS DGE DTX DTE DTR DTA	CM5x0.8x16-A	P-4
	CTER/L2020-2T08	●	●	8	20	20	20	125	20.1	2	-	33		CM5x0.8x20-A	
	CTER/L2525-2T08	●	●	8	25	25	25	150	25.1	2	-	33		CM5x0.8x25-A	
	CTER/L1616-2T12	●	●	12	16	16	16	110	16.1	2	4	32		CM5x0.8x16-A	
	CTER/L2020-2T12	●	●	12	20	20	20	125	20.1	2	-	32		CM5x0.8x20-A	
	CTER/L2525-2T12	●	●	12	25	25	25	150	25.1	2	-	32		CM5x0.8x25-A	
	CTER/L1616-2T17	●	●	17	16	16	16	110	16.1	2	4	37		CM5x0.8x16-A	
	CTER/L2020-2T17	●	●	17	20	20	20	125	20.1	2	-	37		CM5x0.8x20-A	
	CTER/L2525-2T17	●	●	17	25	25	25	150	25.1	2	-	37		CM5x0.8x25-A	
3	CTER/L1616-3T09	●	●	9	16	16	16	110	16.3	3	4	32	DGM/SGM DGS/SGS DGE DTX DTE DTR DTA	CM5x0.8x16-A	P-4
	CTER/L2020-3T09	●	●	9	20	20	20	125	20.3	3	-	32		CM5x0.8x20-A	
	CTER/L2525-3T09	●	●	9	25	25	25	150	25.3	3	-	32		CM5x0.8x25-A	
	CTER/L1616-3T20	●	●	20	16	16	16	110	16.3	3	4	38.5		CM5x0.8x16-A	
	CTER/L2020-3T20	●	●	20	20	20	20	125	20.3	3	-	38.5		CM5x0.8x20-A	
	CTER/L2525-3T20	●	●	20	25	25	25	150	25.3	3	-	38.5		CM5x0.8x25-A	
	CTER/L2525-3T25	●	●	25	25	25	25	150	25.3	3	-	44.5		CM5x0.8x25-A	
	CTER/L1616-4T10	●	●	10	16	16	16	110	16.5	4	4	32		CM6x1x16-A	
CTER/L2020-4T10	●	●	10	20	20	20	125	20.5	4	-	32	CM6x1x20-A			
CTER/L2525-4T10	●	●	10	25	25	25	150	25.5	4	-	32	CM6x1x25-A			
CTER/L1616-4T25	●	●	25	16	16	16	110	16.5	4	4	45	CM6x1x16-A			
CTER/L2020-4T25	●	●	25	20	20	20	125	20.5	4	-	45	CM6x1x20-A			
CTER/L2525-4T25	●	●	25	25	25	25	150	25.5	4	-	45	CM6x1x25-A			
CTER/L3232-4T25	●	●	25	32	32	32	170	32.5	4	-	45	CM6x1x25-A			
CTER/L2020-5T12	●	●	12	20	20	20	125	20.6	5	-	37	CM6x1x20-A			
5	CTER/L2525-5T12	●	●	12	25	25	25	150	25.6	5	-	37	CM6x1x25-A		
	CTER/L2525-5T32	●	●	32	25	25	25	150	25.5	5	-	56	CM6x1x25-A		
	CTER/L3232-5T32	●	●	32	32	32	32	170	32.5	5	-	56	CM6x1x25-A		
	CTER/L2020-6T12	●	●	12	20	20	20	125	20.6	6	-	37	CM8x1.25x20-A	P-6	
CTER/L2525-6T12	●	●	12	25	25	25	150	25.6	6	7	37				
CTER/L2525-6T32	●	●	32	25	25	25	150	25.5	6	7	56				
CTER/L3232-6T32	●	●	32	32	32	32	170	32.5	6	-	56				
8	CTER/L2525-8T16	●	●	16	25	25	25	150	26.1	8	7	47	CM8x1.25x20-A	P-6	
	CTER/L2525-8T25	●	●	25	25	25	25	150	26.1	8	7	47			
	CTER/L3232-8T25	●	●	25	32	32	32	170	33.1	8	-	47			
	CTER/L2525-8T36	●	●	36	25	25	25	150	26.1	8	7	60			
	CTER/L3232-8T36	●	●	36	32	32	32	170	33.1	8	-	60			

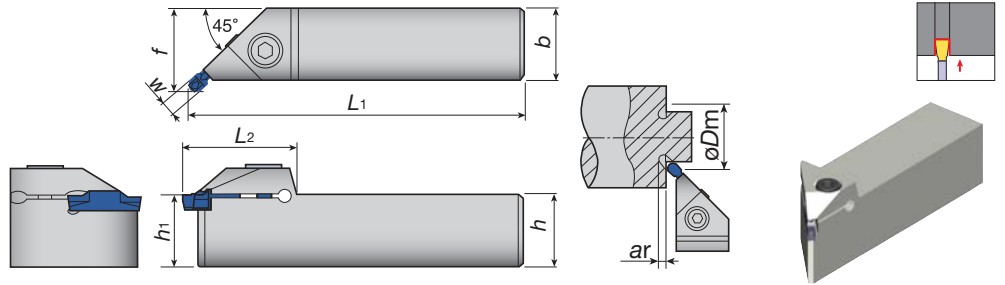
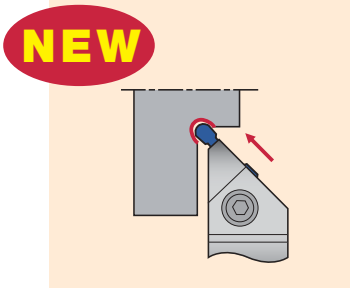
(1) When depth is deeper than insert length, 1 corner type is recommended.

(2) "f" value in the above table is calculated with groove width "W" shown in the table.

● : Stocked items

CGEUR/L

External undercutting

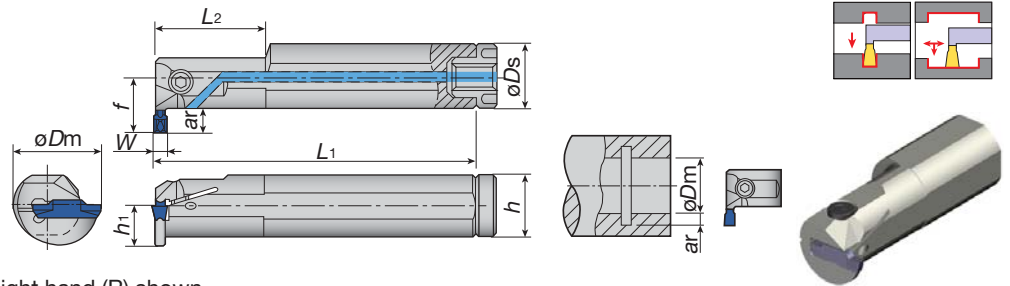
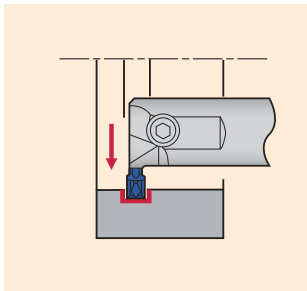


Insert seat size	Cat. No.	Stock		Min. dia. øDm (mm)	Max. groove depth ar (mm)	Dimensions (mm)						Inserts	Parts		
		R	L			b	h	L ₁	f ⁽¹⁾	W	h ₁		L ₂	Clamping screw	Wrench
3	CGEUR/L 1616-3T02	●	●	32	2.8	16	16	110	19.3	3	16	30	DTIU	CM5x0.8x16-A	P-4
	CGEUR/L 2020-3T02	●	●	32	2.8	20	20	125	23.3	3	20	30			
	CGEUR/L 2525-3T02	●	●	32	2.8	25	25	150	28.3	3	25	30			
4	CGEUR/L 1616-4T02	●	●	32	2.8	16	16	110	19.5	4	16	31	DTIU	CM6x1x16-A CM6x1x20-A CM6x1x25-A	P-5
	CGEUR/L 2020-4T02	●	●	32	2.8	20	20	125	23.5	4	20	31			
	CGEUR/L 2525-4T02	●	●	32	2.8	25	25	150	28.5	4	25	31			
5, 6	CGEUR/L 2525-6T03	●	●	34	3.4	25	25	150	28.9	6	25	35		CM6x1x25-A	P-5

(1) "f" value in the above table is calculated with groove width "W" shown in the table.

CTI R/L

Internal grooving and turning



Right hand (R) shown.

Insert seat size	Cat. No.	Stock		Min. dia. øDm (mm)	Max. groove depth ar (mm)	Dimensions (mm)						Inserts	Parts				
		R	L			øDs	h ₁	h	L ₁ ⁽¹⁾	f	W		L ₂	Clamping screw	Wrench	Seal cap	Internal screw
3	CTIR/L20-3T06-D250	●	●	25	6	20	9	18	160	15.8	3	40	DTI DTX	CM5x0.8x12-A CM5x0.8x16-A	P-4	CA-20	M6
	CTIR/L25-3T05-D250	●	●	25	5.1	25	11.5	23	200	17.5	3	40				CA-25	R1/8"
	CTIR/L25-3T08-D320	●	●	32	8	25	11.5	23	200	21.5	3	40				CA-32	R1/8"
	CTIR/L32-3T10-D400	●	●	40	10	32	15	30	250	27	3	60					
4	CTIR/L20-4T06-D250	●	●	25	6	20	9	18	160	15.8	4	40	DTI DTX	CM5x0.8x12-A CM5x0.8x16-A	P-4	CA-20	M6
	CTIR/L25-4T08-D320	●	●	32	8	25	11.5	23	200	21.5	4	40				CA-25	R1/8"
	CTIR/L32-4T04-D310	●	●	31	4	32	15	30	250	20.8	4	60				CA-32	R1/8"
	CTIR/L32-4T10-D400	●	●	40	10	32	15	30	250	27	4	60					
5	CTIR/L25-5T05-D310	●	●	31	5	25	11.5	23	200	17.3	5	60	DTI DTX	CM6x1x16-A CM6x1x20-A	P-5	CA-25	R1/8"
	CTIR/L32-5T10-D400	●	●	40	10	32	15	30	250	27	5	60				CA-32	R1/8"
6	CTIR/L32-6T04-D310	●	●	31	4	32	15	30	250	20.8	6	60	DTI DTX	CM6x1x20-A	P-5	CA-32	R1/8"
	CTIR/L32-6T10-D400	●	●	40	10	32	15	30	250	27	6	60					
8	CTIR/L32-8T05-D370	●	●	37	5	32	15	30	250	21.3	8	60	DTI DTX	CM6x1x25-A	P-5	CA-32	R1/8"
	CTIR/L40-8T05-D420	●	●	42	5.8	40	19	38	300	25.8	8	65				CA-40	R1/8"

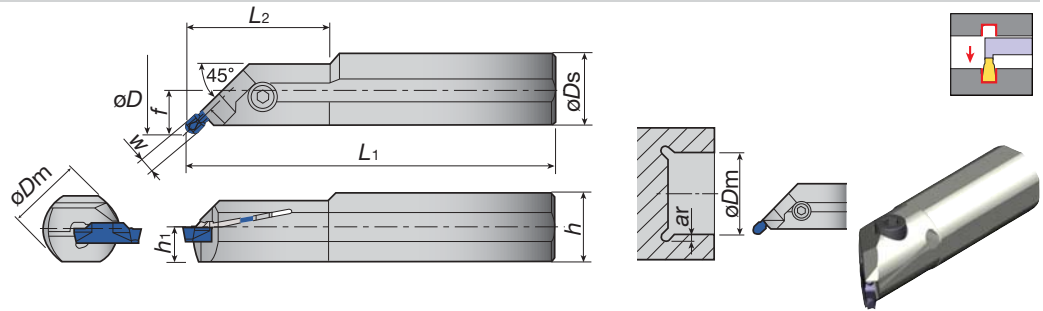
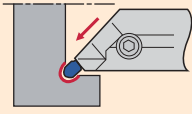
(1) "L₁" value in the above table is calculated with groove width "W" shown in the table.

● : Stocked items

CGIUR/L

Internal undercutting

NEW

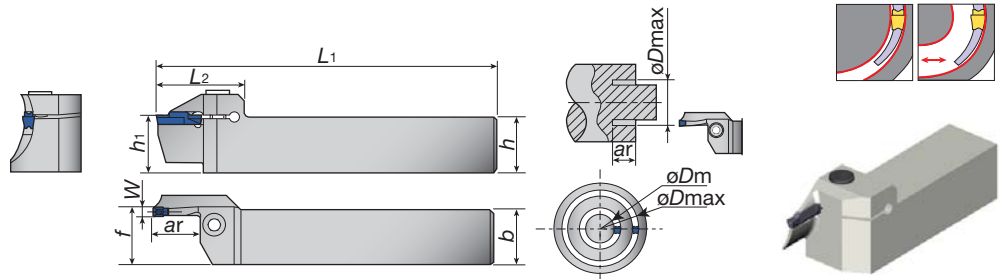
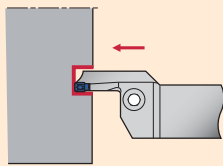


Cat. No.	Stock		Min. dia. øDm (mm)	Max. groove depth ar (mm)	Dimensions (mm)							Inserts	Parts	
	R	L			øDs	h ₁	h	L ₁	f ⁽¹⁾	W	L ₂		Clamping screw	Wrench
CGIUR/L 20-3T02-D380	●	●	38	2.8	20	9.5	19	160	12.8	3	-	DTIU	CM5x0.8x12-A	P-4
CGIUR/L 25-3T02-D380	●	●	38	2.8	25	11.5	23	200	14.8	3	40		CM5x0.8x16-A	
CGIUR/L 20-4T02-D380	●	●	38	2.8	20	9.5	19	160	12.9	4	-		CM5x0.8x16-A	
CGIUR/L 25-4T02-D460	●	●	46	2.8	25	11.5	23	200	14.9	4	40			
CGIUR/L 25-6T02-D460	●	●	46	2.8	25	11.5	23	200	15.2	6	-		CM6x1x16-A	P-5

(1) "f" value in the above table is calculated with groove width "W" shown in the table.

CTF R/L

Face grooving and turning



Right hand (R) shown.

Insert seat size	Cat. No.	Stock		Min. dia. øDm (mm)	Max. dia. øDm (mm)	Max. groove depth ⁽¹⁾ ar (mm)	Dimensions (mm)							Inserts ⁽⁴⁾	Parts	
		R	L				h ₁	b	h	L ₁	f ⁽³⁾	W	L ₂		Clamping screw	Wrench
3	CTFR/L2525-3T10-024035	●	●	24	35	10	25	25	25	150	25.5	3	38	DTF / DTX	CM6x1x25-A	P-5
	CTFR/L2525-3T10-029040	●	●	29	40	10	25	25	25	150		3	38			
	CTFR/L2525-3T10-034050	●	●	34	50	10	25	25	25	150		3	38	DTF / DTX / DTE / DGM / DGS		
	CTFR/L2525-3T15-044070	●	●	44	70	15	25	25	25	150		3	38			
	CTFR/L2525-3T15-064100	●	●	64	100	15	25	25	25	150		3	38			
4	CTFR/L2525-4T10-022036	●	●	22	36	10	25	25	25	150	25.6	4	39	DTF / DTX	CM6x1x25-A	P-5
	CTFR/L2525-4T20-028042	●	●	28	42	20 ⁽²⁾	25	25	25	150		4	39			
	CTFR/L2525-4T20-034050	●	●	34	50	20 ⁽²⁾	25	25	25	150		4	39	DTF / DTX / DTE / DGM / DGS		
	CTFR/L2525-4T20-042070	●	●	42	70	20	25	25	25	150		4	39			
	CTFR/L2525-4T20-062120	●	●	62	120	20	25	25	25	150		4	39			
	CTFR/L2525-4T20-112200	●	●	112	200	20	25	25	25	150		4	39			
5	CTFR/L2525-5T25-050080	●	●	50	80	25	25	25	25	150	25.6	5	49	DTX / DTE / DGM / DGS	CM8x1.25x25-A	P-6
	CTFR/L2525-5T25-070110	●	●	70	110	25	25	25	25	150		5	49			
	CTFR/L2525-5T25-100150	●	●	100	150	25	25	25	25	150		5	49			
	CTFR/L2525-5T25-140200	●	●	140	200	25	25	25	25	150		5	49			
6	CTFR/L2525-6T25-048070	●	●	48	70	25	25	25	25	150	25.6	6	49	DTE / DGM / DGS	CM8x1.25x25-A	P-6
	CTFR/L2525-6T25-058100	●	●	58	100	25	25	25	25	150		6	49			
	CTFR/L2525-6T25-088180	●	●	88	180	25	25	25	25	150		6	49			
	CTFR/L2525-6T25-168400	●	●	168	400	25	25	25	25	150		6	49			

(1) When depth is deeper than insert length, 1 corner type is recommended.

(2) When DTF insert is installed, Max. "ar" should be 15 mm.

(3) "f" value in the above table is calculated with groove width "W" shown in the table.

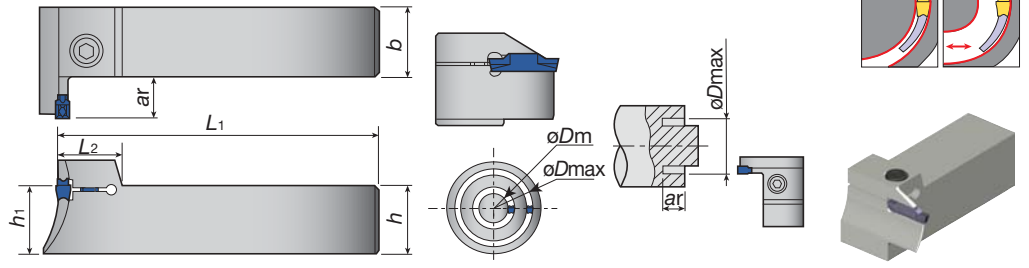
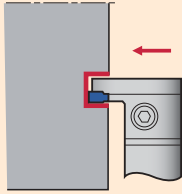
(4) Please see "Caution" in page 16.

● : Stocked items

CTFV R/L

Face grooving and turning

NEW



Insert seat size	Cat. No.	Stock		Min. dia. øDm (mm)	Max. dia. øDm (mm)	Max. groove depth ar (mm)	Dimensions (mm)						Inserts ⁽¹⁾	Parts	
		R	L				h ₁	b	h	L ₁	W	L ₂		Clamping screw	Wrench
3	CTFVR/L 2525-3T10-024035	●	●	24	35	10	25	25	25	150	3	18	DTF / DTX	CM5x0.8x25-A	P-4
	CTFVR/L 2525-3T10-029040	●	●	29	40	10	25	25	25	150	3	18			
	CTFVR/L 2525-3T10-034050	●	●	34	50	10	25	25	25	150	3	18	DTF / DTX / DTE / DGM / DGS		
	CTFVR/L 2525-3T15-044060	●	●	44	60	15	25	25	25	150	3	18			
	CTFVR/L 2525-3T15-054085	●	●	54	85	15	25	25	25	150	3	18			
4	CTFVR/L 2525-4T12-022040	●	●	22	40	12	25	25	25	150	4	18.5	DTF / DTX	CM6x1x25-A	P-5
	CTFVR/L 2525-4T15-032050	●	●	32	50	15	25	25	25	150	4	18.5			
	CTFVR/L 2525-4T15-042060	●	●	42	60	15	25	25	25	150	4	18.5	DTF / DTX / DTE / DGM / DGS		
	CTFVR/L 2525-4T15-052085	●	●	52	85	15	25	25	25	150	4	18.5			
5	CTFVR/L 2525-5T20-050080	●	●	50	80	20	25	25	25	150	5	22	DTX / DTE / DGM / DGS	CM8x1.25x25-A	P-6
	CTFVR/L 2525-5T20-070110	●	●	70	110	20	25	25	25	150	5	22			
	CTFVR/L 2525-5T20-100150	●	●	100	150	20	25	25	25	150	5	22			
	CTFVR/L 2525-5T20-140200	●	●	140	200	20	25	25	25	150	5	22			
6	CTFVR/L 2525-6T20-048085	●	●	48	85	20	25	25	25	150	6	22	DTE / DGM / DGS	CM8x1.25x25-A	P-6
	CTFVR/L 2525-6T20-073150	●	●	73	150	20	25	25	25	150	6	22			
	CTFVR/L 2525-6T20-138250	●	●	138	250	20	25	25	25	150	6	22			

Caution

In DTF and DTX insert types, seat size "6" inserts are not available. When 6 size insert is required, the DTE, DGM or DGS type is recommended.

(1) Min. diameter øDm of DTE, DGS and DGM insert

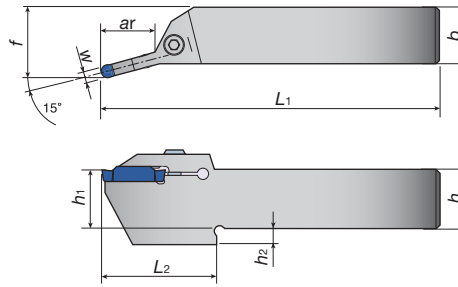
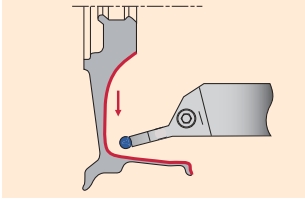
Inserts	øDm (mm)	Note
DTE 3 / DGS 3 / DGM 3	ø44	When diameter is smaller than øDm, DTF or DTX type insert is recommended.
DTE 4 / DGS 4 / DGM 4	ø42	
DTE 5 / DGS 5 / DGM 5	ø50	
DTE 6 / DGS 6 / DGM 6	ø48	

● : Stocked items

CTER/L-15A

Internal turing for aluminium wheel machining

NEW

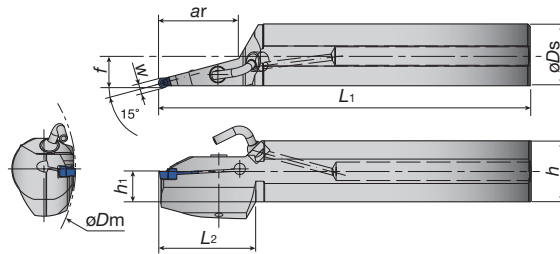
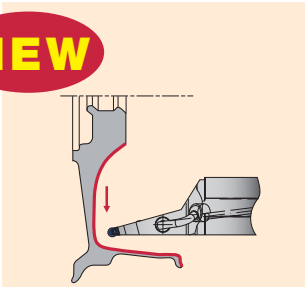


Insert seat size	Cat. No.	Stock		Max. groove depth ⁽¹⁾ ar (mm)	Dimensions (mm)							Inserts	Parts	
		R	L		h ₁	b	h	h ₂	L ₁	W	L ₂		Clamping screw	Wrench
6	CTER/L 2525-6T25-15A	●	●	25	25	25	25	7	150	6	50.5	DTA	CM6x1x25-A	P-5
8	CTER/L 2525-8T30-15A	●	●	30	25	25	25	7	150	8	55			

CGIUR/L-15A

Internal turing for aluminium wheel machining

NEW



Insert seat size	Cat. No.	Stock		Min. dia. øDm (mm)	Max. groove depth ⁽¹⁾ ar (mm)	Dimensions (mm)							Inserts	Parts			
		R	L			øDs	h ₁	h	L ₁	f	W	L ₂		Clamping screw	Wrench	Seal cap	Internal screw
6	CGIUR/L 40-6T50-D160-15A	●	●	160	50	40	19	38.5	320	19.7	6	60	DTA	CM6x1x25-A	P-5	CA-40	R1/8"
8	CGIUR/L 40-8T83-D160-15A	●	●	160	83	40	19	38.5	320	20.5	8	85					
6	CGIUR/L 50-6T85-D200-15A	●	●	200	85	50	23.5	48.5	350	25.2	6	85					
8	CGIUR/L 50-8T85-D200-15A	●	●	200	85	50	23.5	48.5	350	25.9	8	85					

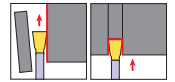
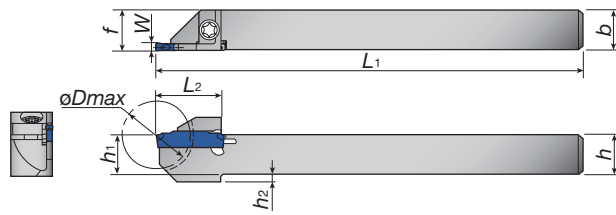
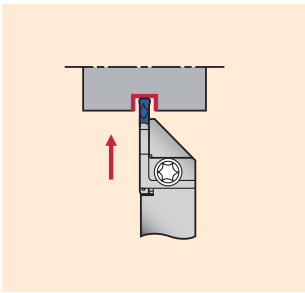
Nozzle parts

Coolant pipe	Coolant nozzle
PNZ5	CNZ125

● : Stocked items

JCTE R/L

For small lathes



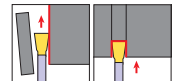
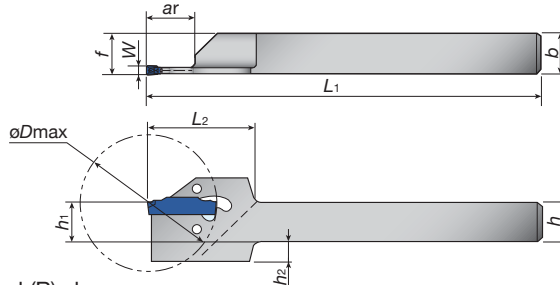
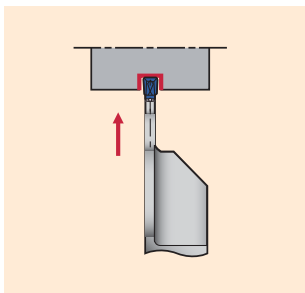
Right hand (R) shown.

Insert seat size	Cat. No.	Stock		Max. dia. øDm (mm)	Dimensions (mm)							Inserts	Parts		
		R	L		h ₁	b	h	L ₁	f ⁽¹⁾	W	h ₂		L ₂	Clamping screw	Wrench
1	JCTER/L1010-1.4T10	●	●	20	10	10	10	125	10.2	1.4	-	18	DGS1.4-0.16	CSHB-4-A	T-15F
	JCTER/L1212-1.4T12	●	●	24	12	12	12	125	12.2	1.4	-	19.5			
	JCTER/L1414-1.4T12	●	●	24	14	14	14	125	14.2	1.4	-	19.5			
	JCTER/L1616-1.4T16	●	●	32	16	16	16	125	16.2	1.4	-	24			
2	JCTER/L1010-2T10	●	●	20	10	10	10	125	10.1	2	2	19	DGM/SGM DGS/SGS DGE	CSHB-4-A	T-15F
	JCTER/L1212-2T12	●	●	24	12	12	12	125	12.1	2	2	19			
	JCTER/L1414-2T12	●	●	24	14	14	14	125	14.1	2	-	19			
	JCTER/L1616-2T16	●	●	32	16	16	16	125	16.1	2	-	24			
3	JCTER/L1212-3T12	●	●	24	12	12	12	125	12.3	3	-	19	DTE	CSHB-4-A	T-15F
	JCTER/L1616-3T16	●	●	32	16	16	16	125	16.3	3	-	24			
	JCTER/L2020-3T16	●	●	32	20	20	20	125	20.3	3	-	24			

(1) "f" value in the above table is calculated with groove width "W" shown in the table.

CGE R/L

Deep grooving and parting off



Right hand (R) shown.

Insert seat size	Cat. No.	Stock		Max. dia. øDm (mm)	Max. groove depth ar (mm)	Dimensions (mm)							Inserts	Parts		
		R	L			DGS/M	SGS/M	h ₁	b	h	L ₁	f ⁽¹⁾		W	h ₂	L ₂
1	CGER/L2020-1.4T14	●	●	29	29	9.7	20	20	20	125	20.2	1.4	-	30	DGS1.4-016	CRW23
2	CGER/L1212-2T17	●	●	35	35	11.8	12	12	12	150	12.1	2	6	30	DGM/SGM DGS/SGS	CRW33
	CGER/L1616-2T17	●	●	35	35	11.8	16	16	16	150	16.1	2	2	30		
	CGER/L2020-2T17	●	●	35	35	9.8	20	20	20	125	20.1	2	-	30		
3	CGER/L1212-3T19	●	●	38	40	12	12	12	12	150	12.3	3	6	30	DGS/SGS	CRW33
	CGER/L1616-3T19	●	●	38	45	14.9	16	16	16	150	16.3	3	2	30		
	CGER/L2020-3T19	●	●	38	45	13.2	20	20	20	125	20.3	3	-	30		
4	CGER/L2020-4T19	●	●	38	55	20.3	20	20	20	125	20.4	4	-	32		CRW33

(1) "f" value in the above table is calculated with groove width "W" shown in the table.

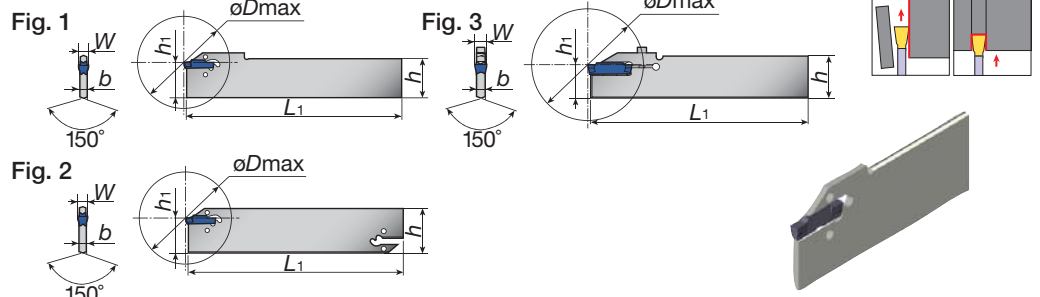
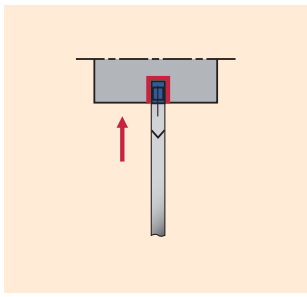
(2) Wrench, CRW□□, should be ordered separately.

Please see next page about the use of wrench.

● : Stocked items

CGP blades

CGP Deep grooving and parting off



Insert seat size	Cat. No.	Stock	*Max. parting off dia. øDm (mm)	Dimensions (mm)					Inserts	Parts		Shape
				h ₁	b	h	L ₁	W		Clamping screw	Wrench	
1	CGP 26-1.4S	●	26	21.4	1	26	150	1.4	DGS1.4-016	-	CRW23	Fig. 1
	CGP 32-1.4D	●	25	24.8	1	32	150	1.4		-	CRW23	Fig. 2
2	CGP 26-2S	●	40	21.4	1.8	26	150	2	SGM	-	CRW33	Fig. 1
	CGP 32-2D	●	50	24.8	1.8	32	150	2		-	CRW33	Fig. 2
3	CGP 26-3S	●	50	21.4	2.4	26	150	3	SGS	-	CRW33	Fig. 1
	CGP 32-3D	●	100	24.8	2.4	32	150	3		-	CRW33	Fig. 2
4	CGP 26-4S	●	80	21.4	3.2	26	150	4	DGM8-040	-	CRW33	Fig. 1
	CGP 32-4D	●	100	24.9	3.2	32	150	4		-	CRW33	Fig. 2
	CGP 45-4D	●	120	38.1	3.2	45	150	4		-	CRW33	Fig. 2
5	CGP 32-5D	●	120	24.9	4	32	150	5	-	CRW33	Fig. 2	
6	CGP 32-6D	●	120	24.9	5.2	32	150	6	-	CRW33	Fig. 2	
8	CGP 32-8S-CL ⁽¹⁾	●	80	24.9	6.2	32	150	8	CM4x0.7x20-MO-A	P-3	Fig. 3	

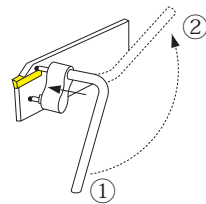
(1) Max groove depth is 28.5 mm.

Caution

Wrench, CRW□□, should be ordered separately.

Newly developed wrench

Insert is clamped by the elastic deformation of upper jaw.
Low clamping stress increases the stability and tool life.



① → ② : unclamp
② → ① : clamp

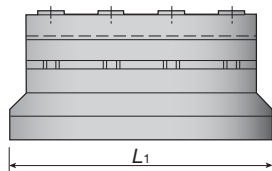
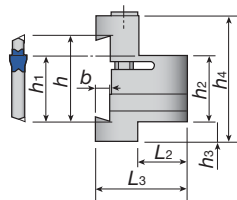


● : Stocked items

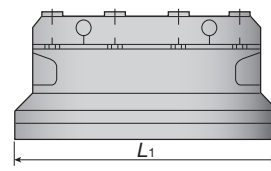
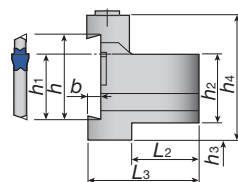
Tool block for CGP blades

CTBF / CTBU Deep grooving and parting off

CTBF type



CTBU type

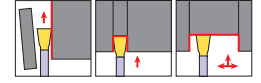
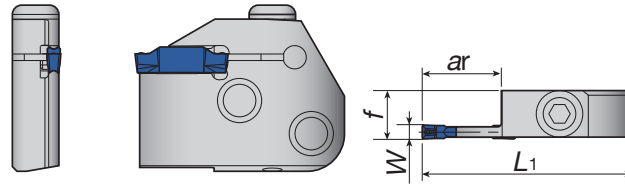


Cat. No.	Stock	Dimensions (mm)									Blade	Parts		
		h ₁	b	h	L ₁	h ₂	h ₃	h ₄	L ₂	L ₃		Clamping screw	Clamp	Wrench
CTBF25-45	●	38.1	5.5	45	110	25	25	66	22	40	CGP	CM6x1.0x40-A	-	P-5
CTBF32-45	●	38.1	5.5	45	120	32	18	66	28	45		CM6x1.0x40-A	-	
CTBU20-26	●	21.4	4	26	86	20	9	43	21	38		CM6x30-S	CT-86	
CTBU25-26	●	21.4	4	26	110	25	5	45	23	42		CM6x30-S	CT-100	
CTBU20-32	●	24.8	5.3	32	100	20	13	50	19	38		CM6x30-S	CT-105	
CTBU25-32	●	24.8	5.3	32	110	25	8	50	23	42		CM6x30-S	CT-110	
CTBU32-32	●	24.8	5.3	32	110	32	5	54	29	48		CM6x30-S	CT-110	

● : Stocked items

Blades (For general purpose)

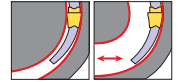
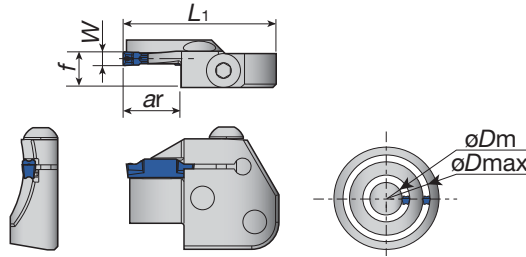
CAE R/L External grooving and turning



Right hand (R) shown.

Insert seat size	Cat. No.	Stock		*Max. groove depth ar (mm)	Dimensions (mm)			Inserts	Shank	Parts	
		R	L		L ₁	f	W			Clamping screw	Wrench
3	CAER/L-3T16	●	●	16	45	10.4	3	DGS / SGS DGM / SGM DTX DTE DTR	CHFVR/L CHSR/L	BHM6-20-A	P-4
4	CAER/L-4T16	●	●	16	45	10.5	4				
5	CAER/L-5T20	●	●	20	49	10.5	5				
6	CAER/L-6T20	●	●	20	49	10.5	6				

CAF R/L Face grooving and turning



Right hand (R) shown.

Insert seat size	Cat. No.	Stock		Min. dia. øDm (mm)	Max. dia. øDm (mm)	Max. groove depth ar (mm)	Dimensions (mm)			Inserts ⁽³⁾	Shank	Parts	
		R	L				L ₁	f ⁽²⁾	W			Clamping screw	Wrench
3	CAFR/L-3T12-040055	●	●	40	55	12	45	10.4	3	DTF	CHFVR/L CHSR/L	BHM6-20-A	P-4
	CAFR/L-3T12-055075	●	●	55	75	12	45	10.4	3				
	CAFR/L-3T12-075100	●	●	75	100	12	45	10.4	3				
	CAFR/L-3T12-100140	●	●	100	140	12	45	10.4	3				
	CAFR/L-3T12-140200	●	●	140	200	12	45	10.4	3				
4	CAFR/L-4T16-050070	●	●	50	70	16	45	10.5	4	DTF DTE DTX DGS DGM	CHFVR/L CHSR/L	BHM6-20-A	P-4
	CAFR/L-4T16-070100	●	●	70	100	16	45	10.5	4				
	CAFR/L-4T16-100150	●	●	100	150	16	45	10.5	4				
	CAFR/L-4T16-150250	●	●	150	250	16	45	10.5	4				
5	CAFR/L-5T20-055080	●	●	55	80	20	49	10.5	5	DTF DTE DTX DGS DGM	CHFVR/L CHSR/L	BHM6-20-A	P-4
	CAFR/L-5T20-080120	●	●	80	120	20	49	10.5	5				
	CAFR/L-5T20-120180	●	●	120	180	20	49	10.5	5				
	CAFR/L-5T20-180300	●	●	180	300	20	49	10.5	5				
	CAFR/L-5T20-300000	●	●	300	∞	20	49	10.5	5				
6	CAFR/L-6T25-060090	●	●	60	90	25 ⁽¹⁾	55	10.5	6	DTF DTE DTX DGS DGM	CHFVR/L CHSR/L	BHM6-20-A	P-4
	CAFR/L-6T25-090150	●	●	90	150	25 ⁽¹⁾	55	10.5	6				
	CAFR/L-6T25-150250	●	●	150	250	25 ⁽¹⁾	55	10.5	6				
	CAFR/L-6T25-250400	●	●	250	400	25 ⁽¹⁾	55	10.5	6				

(1) When depth is deeper than insert length, 1 corner type is recommended.

(2) "f" value in the above table is calculated with groove width "W" shown in the table.

Caution

In DTF and DTX insert types, seat size "6" inserts are not available. When 6 size insert is required, the DTE, DGM or DGS type is recommended.

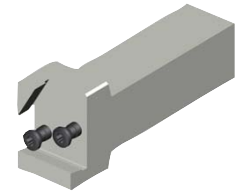
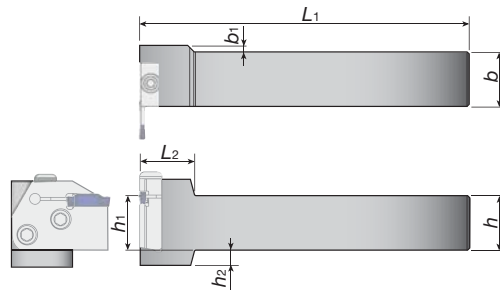
(3) Min. diameter øDm of DTE, DGS and DGM insert

Inserts	øDm (mm)	Note
DTE 3 / DGS 3 / DGM 3	ø44	When diameter is smaller than øDm, DTF or DTX type insert is recommended.
DTE 4 / DGS 4 / DGM 4	ø42	
DTE 5 / DGS 5 / DGM 5	ø50	
DTE 6 / DGS 6 / DGM 6	ø48	

● : Stocked items

● Toolholders for blades

CHFV R/L Horizontal type



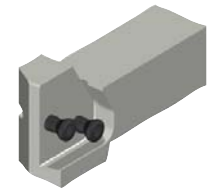
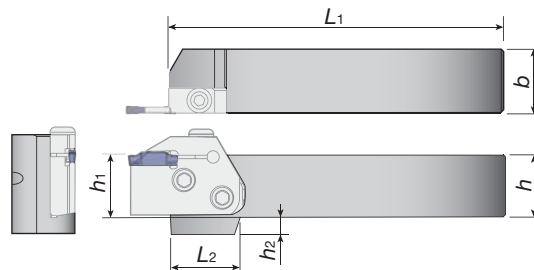
Right hand (R) shown.

Cat. No.	Stock		Dimensions (mm)							Blades	Parts	
	R	L	h_1	b	h	L_1	b_1	h_2	L_2		Clamping screw	Wrench
CHFVR/L2020	●	●	20	20	20	150	8	12	25	CAER/L CAFR/L	CSHB-6-A	P-4
CHFVR/L2525	●	●	25	25	25	150	3	7	25			
CHFVR/L3232	●	●	32	32	32	170	-	-	25			

■ Combination of blade and toolholder

Toolholders	Blades			
	CAER□□□	CAEL□□□	CAFR□□□	CAFL□□□
CHFVR***		●	●	
CHFVL***	●			●

CHS R/L Vertical type



Right hand (R) shown.

Cat. No.	Stock		Dimensions (mm)						Blades	Parts	
	R	L	h_1	b	h	L_1	h_2	L_2		Clamping screw	Wrench
CHSR/L2020	●	●	20	20	20	133	12	35	CAER/L CAFR/L	CSHB-6-A	P-4
CHSR/L2525	●	●	25	25	25	133	7	28			
CHSR/L3232	●	●	32	32	32	153	-	28			

■ Combination of blade and toolholder

Toolholders	Blades			
	CAER□□□	CAEL□□□	CAFR□□□	CAFL□□□
CHSR***	●			●
CHSL***		●	●	

● : Stocked items

Guideline for ordering special inserts

Specially designed inserts are available upon request.

Acceptable specification

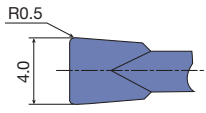
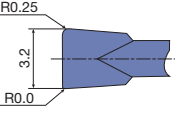
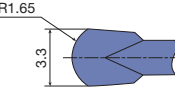
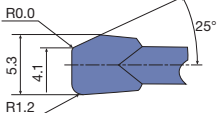
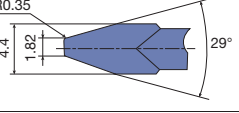
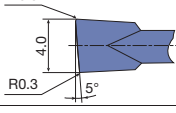
- *Specialised inserts must be manufactured from the main insert styles shown below.*
- *AH725, GH130 and the TH10 grades are available.*
- ✧ *Please contact Tungaloy for more details.*

External turning & grooving		Internal turning & grooving	Profiling & undercutting	
DTE (Ground)	DGE (Ground)	DTI (Ground)	DTR (Ground)	DTIU (Ground)
				

Designation system for special inserts (sample)

DTE	320	- 000R-025L	AH725
1 Main style of insert	2 Max. width of insert	3 Additional codes	4 Grade

Sample of shape

Shape	Samples of designation	Note
	DTE400-050 GH130	Main style: DTE type Special corner radius
	DTE320-000R 025L AH725	Main style: DTE type Special corner radius, asymmetric type
	DTR330-165 TH10	Main style: DTR type Full radius type with special insert width
	DTE530-120R-25LA TH10	Main style: DTE type Special figure of groove, asymmetric type
	DTE440-035-29A TH10	Main style: DTE type Special figure of groove
	DTE400-030R-005RA TH10	Main style: DTE type Right handed insert with special angle and corner radius.

Notice in “turning”

When turning, the insert is pushed by the directional cutting force feed. As a result of this condition the diameter of the workpiece may change. (see Fig. 1) In such cases, trial cutting is essential to measure the actual diameter. For your reference, sample of compensated values are shown in Fig.2.

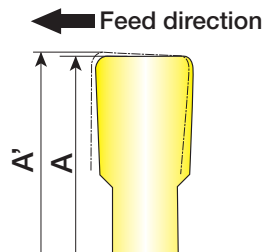
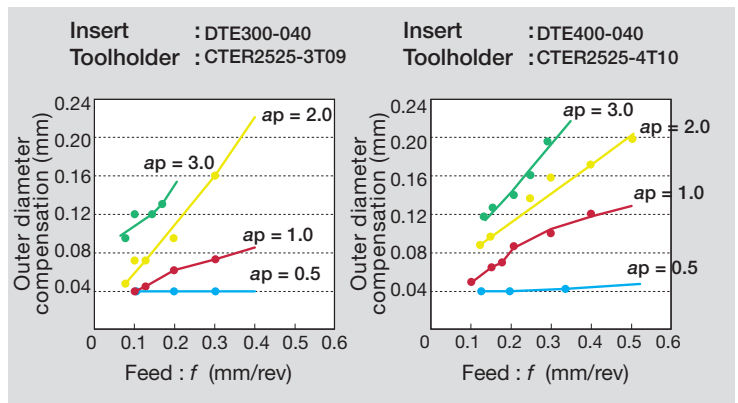
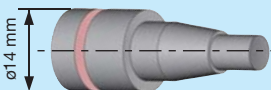
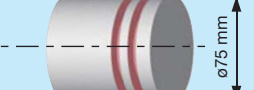
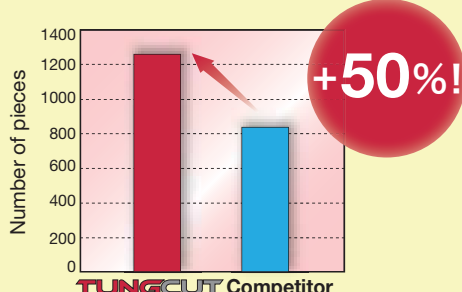
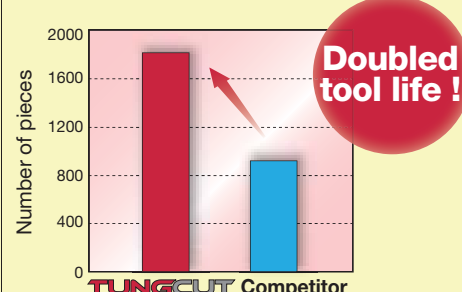


Fig. 1

Fig. 2 Value of compensation



Practical Examples

Work piece type		Automotive parts	Machine parts
Toolholder		CTER1616-2T08	CTER2525-4T10
Insert		DGM2-020	DGM4-030
Grade		AH725	AH725
Work material		SCr440, 41Cr4	SCr440, 41Cr4
			
Cutting conditions	Grooving width : W (mm)	2	4
	Cutting speed: Vc (m/min)	94	150
	Feed : f (mm/rev)	0.08	0.10
	Machining	Parting off	Grooving (Depth 6 mm)
	Coolant	Water soluble	Water soluble
Results		 <p>+50%!</p> <p>TungCut has higher wear resistance and achieves tool life improvements of 150%.</p>	 <p>Doubled tool life!</p> <p>TungCut provides better chip control and doubles tool life.</p>



Tungaloy Corporation (Head office)

11-1 Yoshima-Kogyodanchi
Iwaki-city, Fukushima, 970-1144 Japan
Phone: +81-246-36-8501 Fax: +81-246-36-8542
<http://www.tungaloy.co.jp/>

Tungaloy America, Inc.

3726 N Ventura Drive, Arlington Heights, IL 60004, U.S.A.
Phone: +1-888-554-8394 Fax: +1-888-554-8392
<http://www.tungaloyamerica.com>

Tungaloy Canada

432 Elgin St. Unit 3, Brantford, Ontario N3S 7P7, Canada
Phone: +1-519-758-5779 Fax: +1-519-758-5791
<http://www.tungaloyamerica.com/>

Tungaloy de Mexico S.A.

C Los Arellano 113, Parque Industrial Siglo XXI
Aguascalientes, AGS, Mexico 20290
Phone: +52-449-929-5410 Fax: +52-449-929-5411
<http://www.tungaloyamerica.com/>

Tungaloy do Brasil Comércio de Ferramentas de Corte Ltda.

Rua dos Sabias N.104
13280-000 Vinhedo, São Paulo, Brazil
Phone: +55-19-38262757 Fax: +55-19-38262757
<http://www.tungaloy.co.jp/br/>

Tungaloy Germany GmbH

Elisabeth-Selbert-Str. 3
D-40764 Langenfeld, Germany
Phone: +49-2173-90420-0 Fax: +49-2173-90420-19
<http://www.tungaloy.de>.

Tungaloy France S.A.S.

ZA Courtaboeuf - Le Rio, 1 rue de la Terre de feu
F-91952 Courtaboeuf Cedex, France
Phone: +33-1-6486-4300 Fax: +33-1-6907-7817
<http://www.tungaloy-eu.com>

Tungaloy Italia S.r.l.

Via E. Andolfato 10
I-20126 Milano, Italy
Phone: +39-02-252012-1 Fax: +39-02-252012-65
<http://www.tungaloy-eu.com/>

Tungaloy Czech s.r.o

Tuřanka 115
CZ-627 00 Brno, Czech Republic
Phone: +420-532 123 391 Fax: +420-532 123 392
<http://www.tungaloy.co.jp/cz/>

Tungaloy Ibérica S.L.

C/La Pau, n°46
E-08243 Manresa (BCN), SPAIN
Phone: +34 93 1131360 Fax: +34 93 1131361
<http://www.tungaloy.co.jp/es/>

Tungaloy Scandinavia AB

S:t Lars Väg 42A
SE-22270 Lund, Sweden
Phone: +46-462119200 Fax: +46-462119207
<http://www.tungaloy.co.jp/se/>

Tungaloy Rus, LLC

36-G Kostukova str.
308012 Belgorod, Russia
Phone: +7 4722 58 57 57 Fax: +7 4722 58 57 83
<http://www.tungaloy.co.jp/ru/>

Tungaloy Polska Sp. z o.o.

ul. Genewska 24
03-963 Warszawa, Poland
Phone: +48-22-617-0890 Fax: +48-22-617-0890
<http://www.tungaloy.co.jp/pl/>

Tungaloy U.K. Ltd

Woodgate Business Park, Bartley Green
Birmingham B32 3DE, UK
Phone: +44 121 244 3064 Fax: +44 121 270 9694
<http://www.tungaloy.co.jp/uk> salesinfo@tungaloyuk.co.uk

Tungaloy Cutting Tool (Shanghai) Co.,Ltd.

Rm No 401 No.88 Zhabei, Jiangchang No.3 Rd
Shanghai 200436, China
Phone: +86-21-3632-1880 Fax: +86-21-3621-1918
<http://www.tungaloy.co.jp/tcts/>

Tungaloy Cutting Tool (Thailand) Co.,Ltd.

11th Floor, Sorachai Bldg. 23/7, Soi Sukhumvit 63
Klongtonnue, Wattana, Bangkok 10110, Thailand
Phone: +66-2-714-3130 Fax: +66-2-714-3134
<http://www.tungaloy.co.th/>

Tungaloy Singapore (Pte.), Ltd.

50 Kallang Avenue #06-03 Noel Corporate Building
Singapore 339505
Phone: +65-6391-1833 Fax: +65-6299-4557
<http://www.tungaloy.co.jp/tspl/>

Tungaloy India Pvt. Ltd.

Unit#13, B wing, 8th Floor, Kamala Mills Compound
Trade World, Lower Parel (West), Mumbai - 4000 13, India
Phone: +91-22-6124-8804 Fax: +91-22-6124-8899
<http://www.tungaloy.co.jp/in/>

Tungaloy Korea Co., Ltd

#1312, Byucksan Digital Valley 5-cha
60-73 Gasan-dong, Geumcheon-gu
153-788 Seoul, Korea
Phone: +82-2-6393-8930 Fax: +82-2-6393-8952
<http://www.tungaloy.co.jp/kr/>

Tungaloy Malaysia Sdn Bhd

50 K-2, Kelana Mall, Jalan SS6/14, Kelana Jaya, 47301
Petaling Jaya, Selangor Darul Ehsan, Malaysia
Phone: +603-7805-3222 Fax: +603-7804-8563
<http://www.tungaloy.co.jp/my/>

Tungaloy Australia Pty Ltd

Unit 308/33 Lexington Drive
Bella Vista NSW 2153, Australia
Phone: +612-9672-6844 Fax: +612-9672-6866
<http://www.tungaloy.co.jp/au>

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