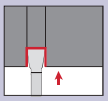
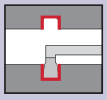
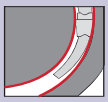
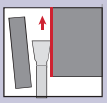
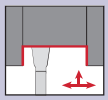
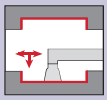
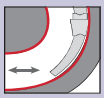
Insert application

Insert	Application						
	Grooving			Parting off	Traversing		
	External	Internal	Face		External	Internal	Face
							
DGM / SGM	●		●	●			
DGS / SGS	●		●	●			
DTE	●		●		●		●
DGE	●						
DTX	●	●	●	●	●	●	●
DTI		●				●	
NEW DGIM / DGIS		●					
DTF			●				●
DTR	●		●		●		●
DTIU	● Undercutting	● Undercutting					
DTA					● Al wheel machining	● Al wheel machining	
NEW SGN	●						

Standard cutting conditions

Work materials	Hardness	Priority	Grade	Cutting speed *Vc* (sfm)
Steels 1045 SAE, 4135 SAE etc.	< 300 HB	First choice	**AH725**	160 - 600
		Priority for wear resistance	**T9125**	260 - 660
		Priority for impact resistance	**GH130**	160 - 400
		Priority for surface finish	**NS9530**	260 - 720
Stainless steels 303, 304 etc.	< 200 HB	First choice	**AH725**	160 - 400
		Priority for impact resistance	**GH130**	160 - 400
Gray cast irons CLASS 25 etc.	-	First choice	**GH130**	160 - 600
Ductile cast irons 65-45-12 etc.	-	First choice	**GH130**	160 - 400
Aluminum alloys (Si < 12%)	-	First choice	**TH10**	330 - 1650
Titanium alloys Ti-6Al-4V etc.	< 40 HRC	First choice	**AH905**	60 - 260
		Priority for impact resistance	**AH725**	
Hardened steels 4137 etc.	> 50 HRC	First choice	**BX360**	260 - 500

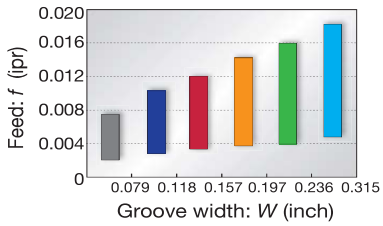
Features of inserts

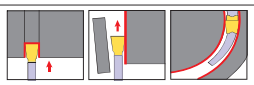
External grooving and parting off

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

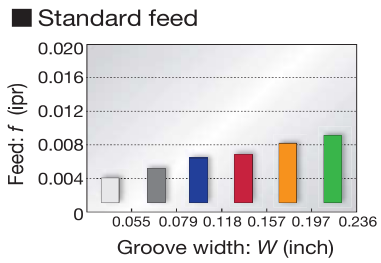


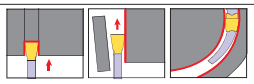


DGS type (2 corner)
SGS type (1 corner)

Lower cutting force and superior sharpness

- Unique designed edge and chipbreaker
- Handed insert available



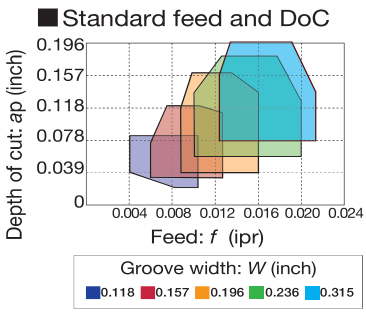


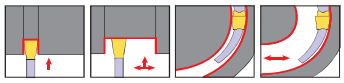
External, face grooving and traversing

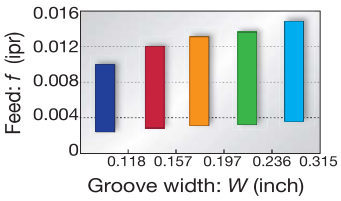
DTE type (2 corner)

For general purpose

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





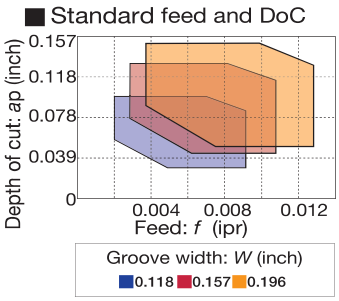


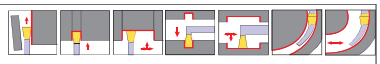
External, internal, face grooving and traversing

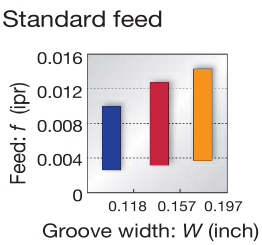
DTX type (2 corner)

Multi-functional type

- Well balanced sharpness and strength
- Multi functional insert





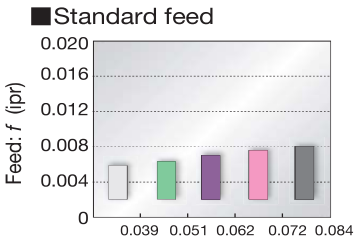


External grooving

DGE type (2 corner)

For highly accurate and shallow grooving

- Excellent chip control



Profiling and undercutting

DTR type (2 corner)

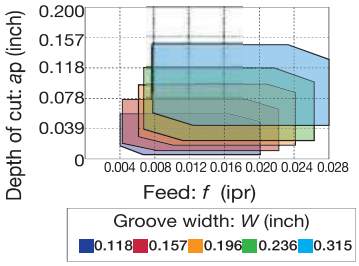
Molded

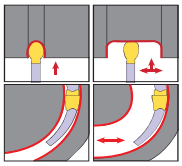
Ground

Full radius type

- Excellent chip control
- Molded and ground insert available

■Standard feed and DoC



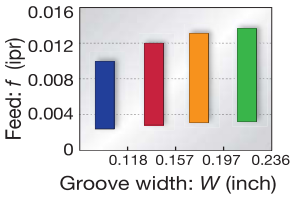


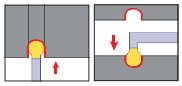
DTIU type (2 corner)

Full radius type

- Excellent chip control
- For undercutting

■ Standard feed and DoC





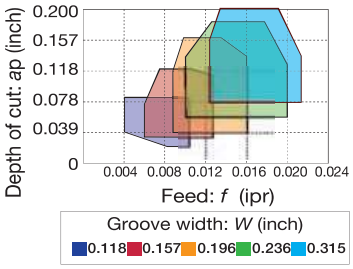
Internal grooving and traversing

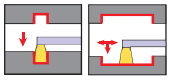
DTI type (2 corner)

1st choice for internal grooving

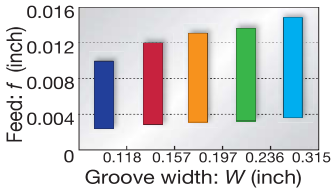
- Unique chipbreaker makes chips shorter
- Molded and ground insert available

■Standard feed and DoC





■Standard feed



Small diameter internal grooving

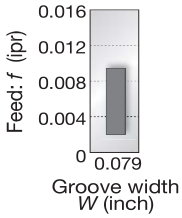
DGIM type (2 corner)

NEW

0.079" insert width only (For general purpose)

- Unique chipbreaker for excellent chip control
- Excellent fracture resistance due to optimum land on the cutting edge
- For general applications on steels & stainless steels

■ Standard feed



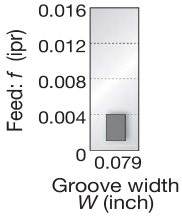
DGIS type (2 corner)

NEW

0.079" insert width only (Lower cutting force)

- Low cutting force due to a unique land geometry
- Applicable for low carbon steels & stainless steels

■ Standard feed



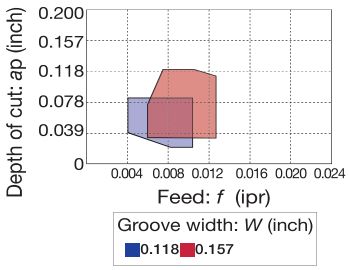
Face grooving and traversing

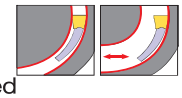
DTF type (2 corner)

1st choice for face grooving

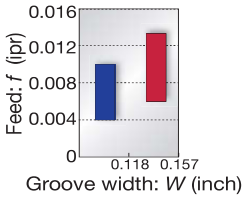
- Unique chipbreaker makes chips shorter
- Handed insert

■Standard feed and DoC





■ Standard feed



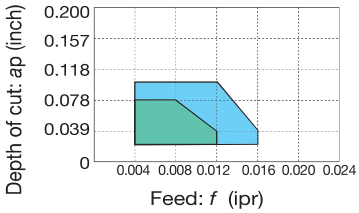
Aluminum wheel machining

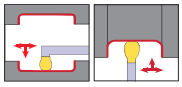
DTA type (2 corner)

Full radius type

- Excellent chip control
- For aluminum wheel profiling
- Ground insert

■Standard feed and DoC

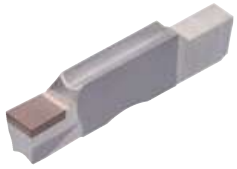




Groove width : W (inch)
0.236 0.315

External grooving of hardened steels

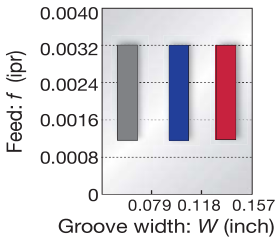
SGN type (1 corner)



For hardened steel cutting

- Optimum cutting edge shape for grooving of hardened steels
- Tight tolerance width for finishing (W = ±0.001")

■ Standard feed



Designation System for TungCut

Inserts

D	G	M	-	2 / 200	-	020	-	15	R
①	②	③		④		⑤		⑥	⑦

① Number of edge	
D	Double corners
S	Single corner

② Application	
T	Turning and grooving
G	Grooving

③ For use	
M	Grooving
S	Grooving (sharpness)
E	External
I	Internal
F	Face grooving
R	Round for profiling
X	Multi purpose

④ Groove width (mm)	
2	2 (molded)
200	2.00 (ground)

⑤ Corner Radius (mm)	
002	0.02
020	0.2

⑥ Front Angle	
4	4°
6	6°
8	8°
15	15°

⑦ Hand of tool	
L	left
R	right

Toolholders

J	C	G	P	L/R	2525 / 20	-	3	T19	-	044070 / D250
①	②	③	④	⑤	⑥		⑦	⑧		⑨

① J series	
J	For small lathe

② Clamp on	
C	Clamp on

③ For use	
T	Turning and grooving
G	Grooving
A	Adapter
H	Holder

④ For use	
P	Parting & Grooving
E	External
I	Internal
F	Facing
FV	Holder (Horizontal)
S	Holder (Vertical)

⑤ Hand of tool	
L	left
R	right

⑥ Shank size (mm)	
2525	25 (height) × 25 (width)
20	ø20 (shank dia)
	20 (shank height)

⑦ Groove width (mm)	
2	2
3	3
4	4

⑧ Overhang (mm)	
T19	19
T25	25

⑨ Bore.dia. (mm)	
044070	44 ~ 70 (Facing)
D250	ø250 ~

Insert application

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