Member IMC Group Tungaloy

TurnLine

For more information

Grades for heat-resistant alloy

AH8000 SERIES

Tungaloy Report No. 437S3-G

Expansion of **JS chipbreaker inserts for heat-resistant superalloy machining**

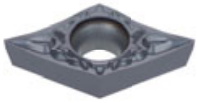
TUNGALOY ADDFORCE ACCELERATED LINES

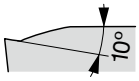
AH8000 SERIES

High precision G-class 3D chipbreaker

Provides excellent chip control and superior surface finishing in heat-resistant superalloys

JS First choice chipbreaker for finish cutting



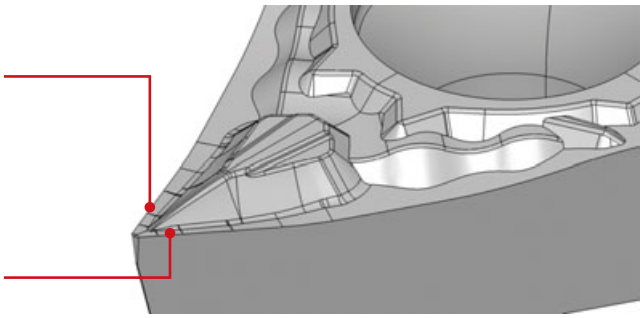


Chipbreaker geometry that allows light cutting action and excellent chip breaking

- A steep cutting edge inclination angle for better chip control and reduced cutting load
- A unique protrusion that extends towards the radius effectively controls chip flow from small to large cutting depths

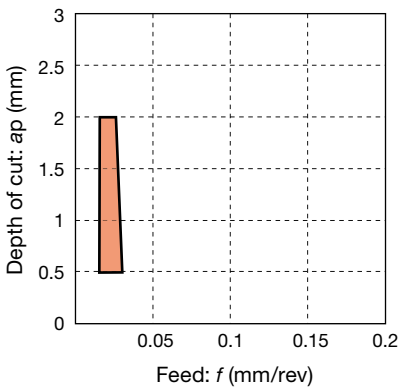
Cutting edge with a steep inclination angle
Provides good chip evacuation and reduced cutting loads

Rake with variable angles and steep protrusion
Provides stable chip control in the small to large cutting depth range and also maintains cutting edge integrity and sharpness over extended period of time

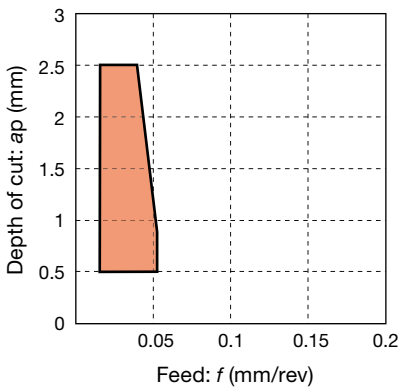


Chip control range

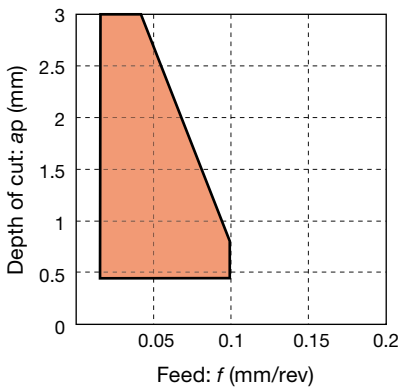
RE < 0.05 mm



RE < 0.1 mm

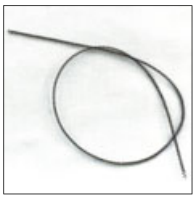


RE < 0.2 mm



Chip control

S
Insert : DCGT11T302M-JS AH8015
Workpiece material : Inconel718
Cutting speed : *Vc* = 30 m/min
Feed : *f* = 0.025 mm/rev
Depth of cut : *ap* = 2 mm
Coolant : Wet



S
Insert : DCGT11T302M-JS AH8015
Workpiece material : Inconel718
Cutting speed : *Vc* = 30 m/min
Feed : *f* = 0.05 mm/rev
Depth of cut : *ap* = 0.5 mm
Coolant : Wet

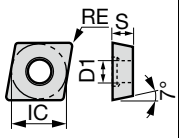
S
Insert : DCGT11T302M-JS AH8015
Workpiece material : Inconel718
Cutting speed : *Vc* = 30 m/min
Feed : *f* = 0.1 mm/rev
Depth of cut : *ap* = 0.1 mm
Coolant : Wet

● : Continuous cutting
◐ : Light interrupted cutting
✠ : Heavy interrupted cutting

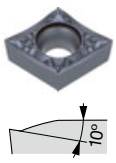
CC

Rhombic, 80° with hole Positive 7°

P	Steel	
M	Stainless	◐
K	Cast iron	
N	Non-ferrous	
S	Superalloy	◐
H	Hard material	



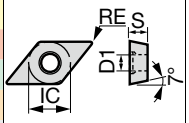
Application	Chipbreaker	Designation	Coated AH8015	RE	IC	S	D1
Finishing	JS	CCGT060201M-JS	●	<0.1	6.35	2.38	2.8
		CCGT060202M-JS	●	<0.2	6.35	2.38	2.8
		CCGT060204M-JS	●	<0.4	6.35	2.38	2.8
		CCGT09T301M-JS	●	<0.1	9.525	3.97	4.4
		CCGT09T302M-JS	●	<0.2	9.525	3.97	4.4
		CCGT09T304M-JS	●	<0.4	9.525	3.97	4.4



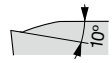
DC

Rhombic, 55° with hole Positive 7°

P	Steel	
M	Stainless	◐
K	Cast iron	
N	Non-ferrous	
S	Superalloy	◐
H	Hard material	



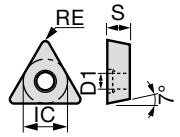
Application	Chipbreaker	Designation	Coated AH8015	RE	IC	S	D1
Finishing	JS	DCGT070201M-JS	●	<0.1	6.35	2.38	2.8
		DCGT070202M-JS	●	<0.2	6.35	2.38	2.8
		DCGT11T301M-JS	●	<0.1	9.525	3.97	4.4
		DCGT11T302M-JS	●	<0.2	9.525	3.97	4.4
		DCGT11T304M-JS	●	<0.4	9.525	3.97	4.4



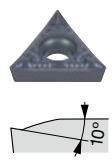
TC

Triangular, 60° with hole Positive 7°

P	Steel	
M	Stainless	◐
K	Cast iron	
N	Non-ferrous	
S	Superalloy	◐
H	Hard material	



Application	Chipbreaker	Designation	Coated AH8015	RE	IC	S	D1
Finishing	JS	TCGT110201M-JS	●	<0.1	6.35	2.38	2.8
		TCGT110202M-JS	●	<0.2	6.35	2.38	2.8
		TCGT110204M-JS	●	<0.4	6.35	2.38	2.8



Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : New product

Tolerance

AH8000 SERIES

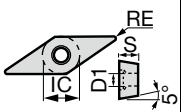
Insert POSITIVE TYPE

● : Continuous cutting
ɔ : Light interrupted cutting
✣ : Heavy interrupted cutting

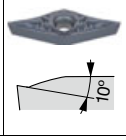
VB

Rhombic, 35° with hole Positive 5°

P	Steel	
M	Stainless	ɔ
K	Cast iron	
N	Non-ferrous	
S	Superalloy	ɔ
H	Hard material	



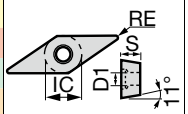
Application	Chipbreaker	Designation	Coated AH8015	Dimension (mm) RE	IC	S	D1
Finishing	JS	VBGT110301M-JS	●	<0.1	6.35	3.18	2.8
		VBGT110302M-JS	●	<0.2	6.35	3.18	2.8
		VBGT110304M-JS	●	<0.4	6.35	3.18	2.8



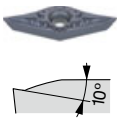
VP

35° Rhombic with hole Positive 11°

P	Steel	
M	Stainless	ɔ
K	Cast iron	
N	Non-ferrous	
S	Superalloy	ɔ
H	Hard material	



Application	Chipbreaker	Designation	Coated AH8015	Dimension (mm) RE	IC	S	D1
Finishing	JS	VPGT110301M-JS	●	<0.1	6.35	3.18	2.8
		VPGT110302M-JS	●	<0.2	6.35	3.18	2.8
		VPGT110304M-JS	●	<0.4	6.35	3.18	2.8



Corner radius (RE) with a sign of inequality (<) means minus tolerance.

● : New product

STANDARD CUTTING CONDITIONS

ISO	Workpiece materials	Chipbreaker	Grade	Cutting speed *Vc* (m/min)	Depth of cut *ap* (mm)	Feed: *f* (mm/rev) RE < 0.05	RE < 0.1	RE < 0.2	RE < 0.4
S	Superalloys Inconel718, etc.	JS	AH8015	20 - 80	0.5 - 3	0.02 - 0.03	0.02 - 0.05	0.02 - 0.1	0.05 - 0.2

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