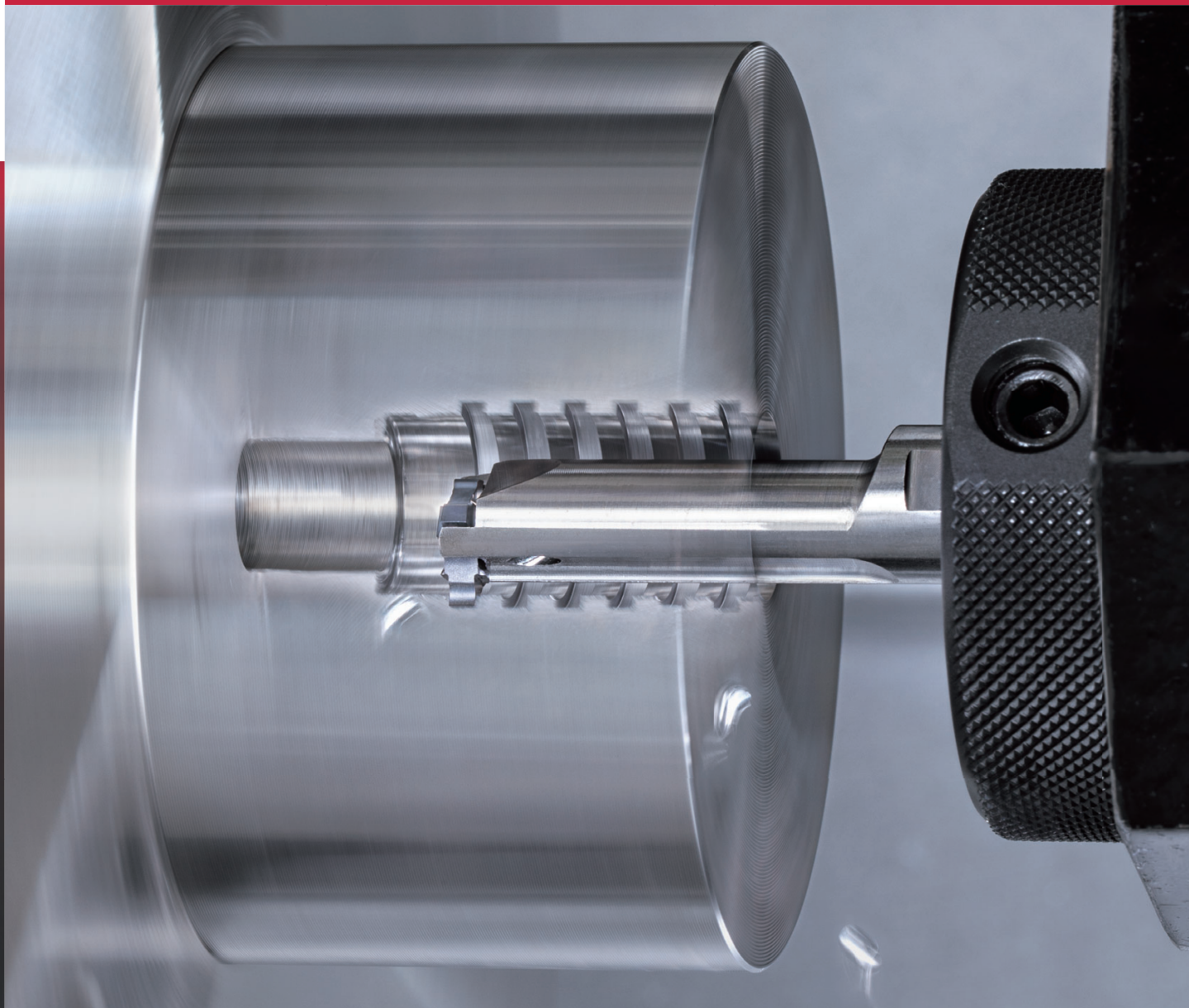


Internal grooving tool

ADD^{INTERNAL}**CUT**

Tungaloy Report No. 544-G

New 4-edged insert for ID grooving

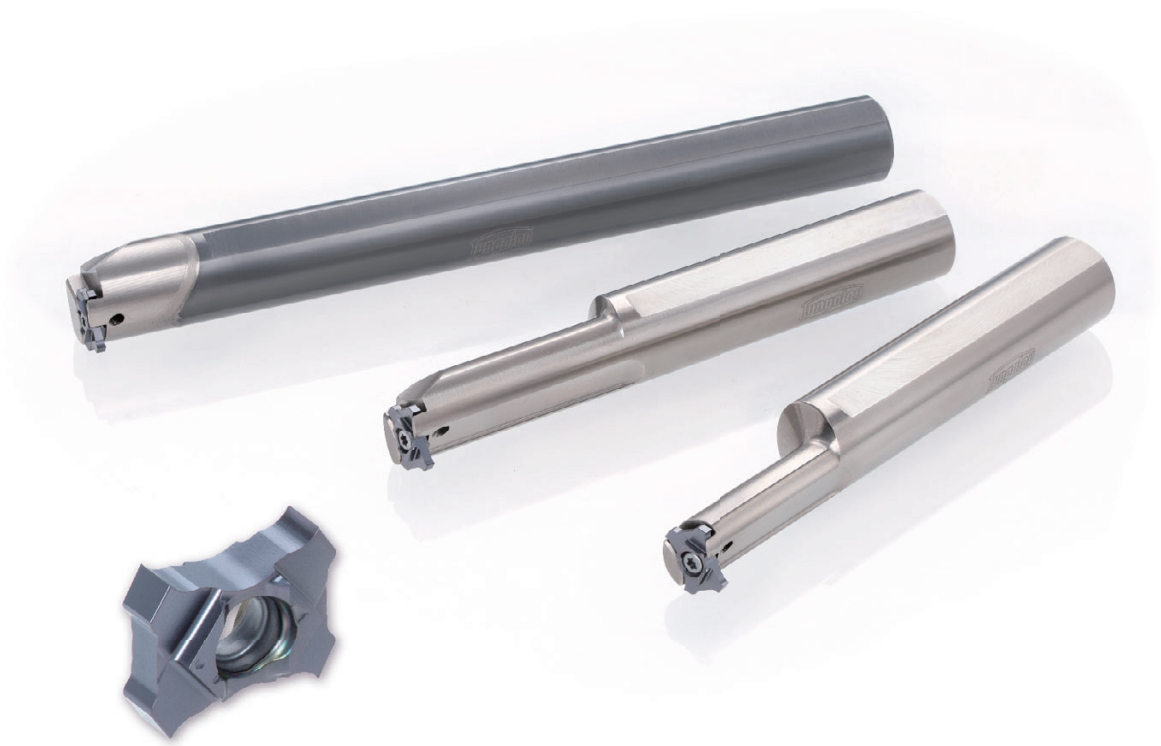




INDUSTRY 4.0
FEED the SPEED!



ADD ^{INTERNAL} **CUT**

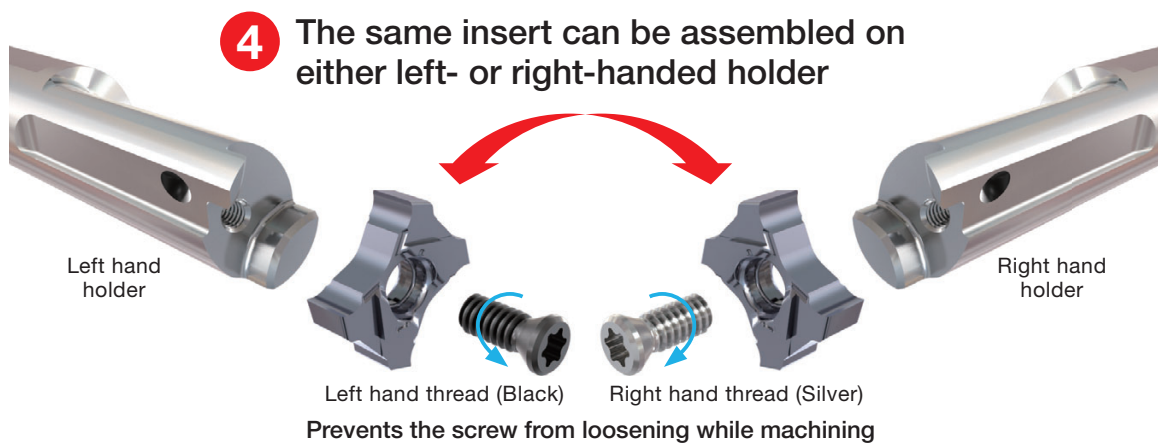
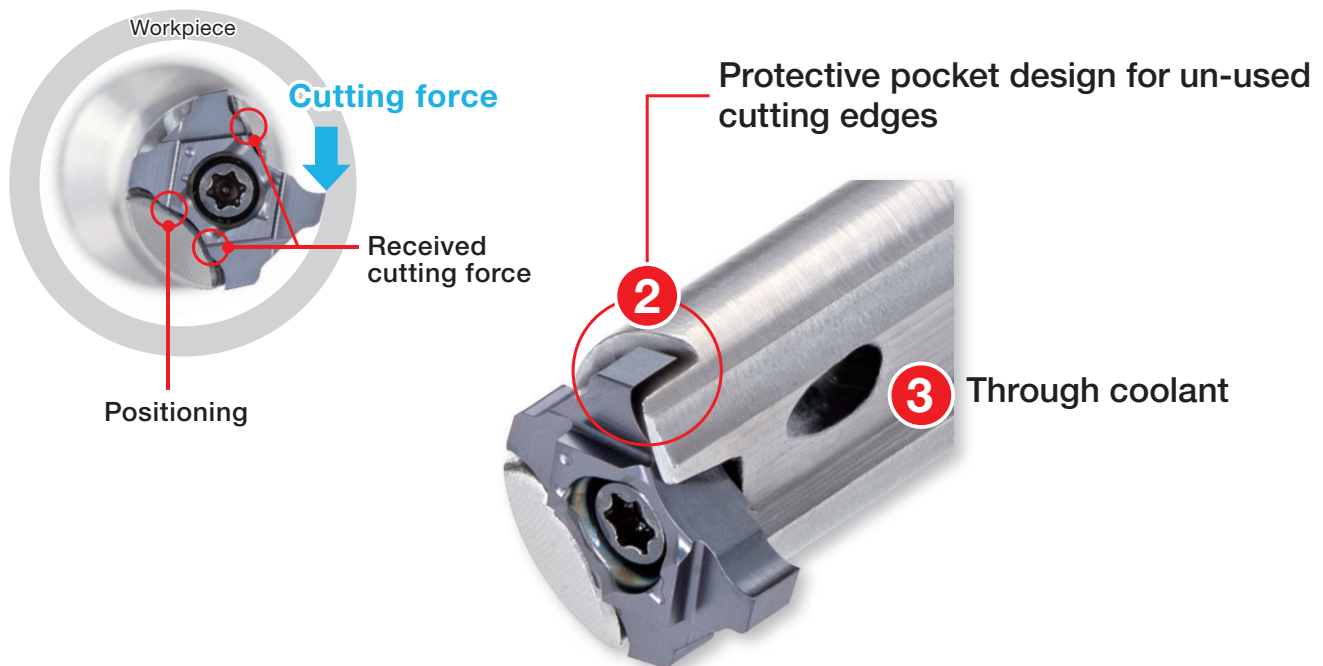


Unique insert clamping system ensures
high indexing repeatability and clamping rigidity

Unique clamping system for high precision grooving

Features

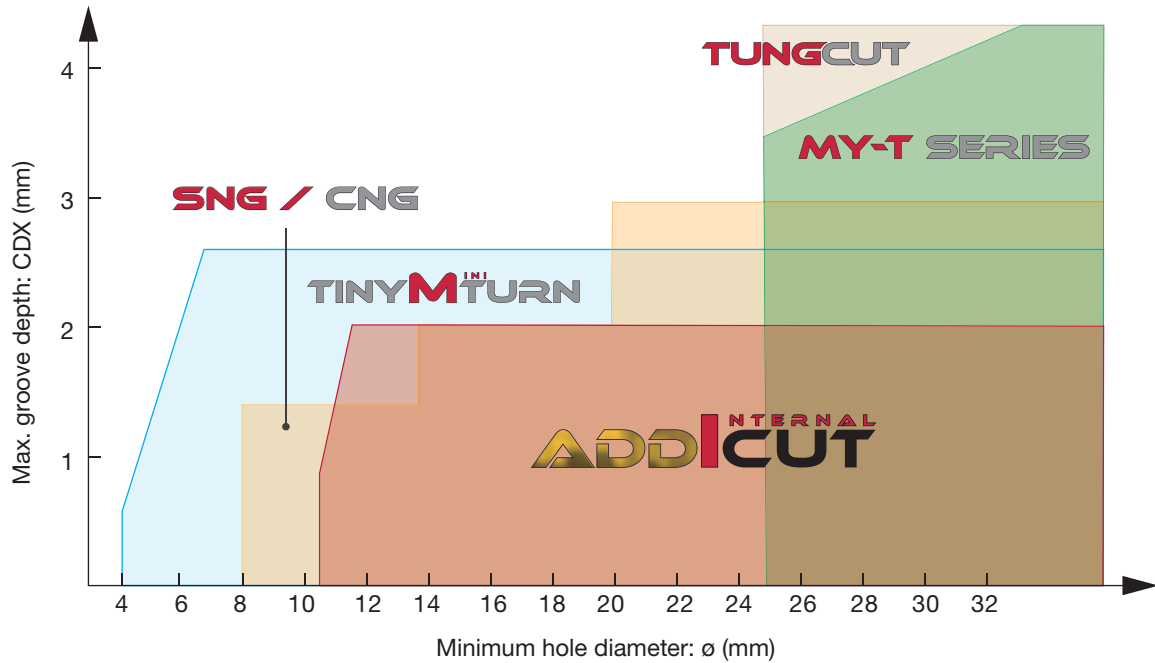
- 1** The insert is supported at three optimized positions for rigid clamping and superior repeatability





TCIG...

Free cutting geometry for superior surface finish
CW = 1.5 - 2.5 mm



CUTTING PERFORMANCE

Chip control

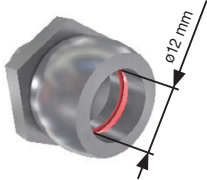
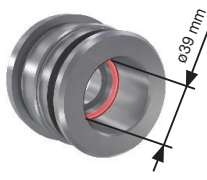
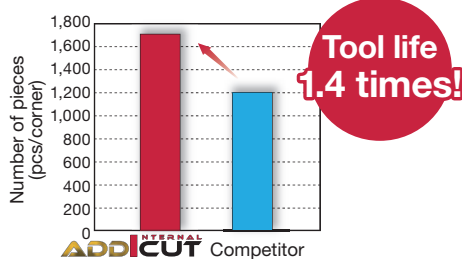
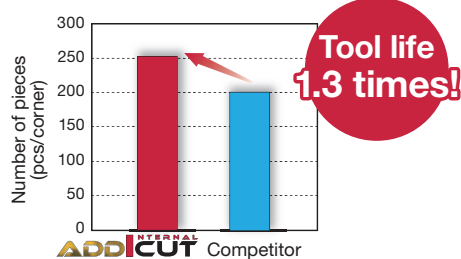
Cutting speed: Vc (m/min)		Feed: f (mm/rev)		
		0.05	0.08	0.1
120				
100				
80				

Toolholder : A12H-STCIR10-D120
 Insert : TCIG10-200-010 AH725
 Workpiece material : S45C / C45
 Groove width : CW = 2 mm
 Hole diameter : ø12 mm
 Coolant : Wet

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Priority	Cutting speed Vc (m/min)	Feed f (mm/rev)
P	Steel S45C, C45, SCM435, 34CrMo4, etc.	< 300 HB	First choice	30 - 80	0.01 - 0.05
M	Stainless steel SUS303, X10CrNiS18-9, etc.	< 200 HB	First choice	30 - 50	0.01 - 0.05
S	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	10 - 50	0.01 - 0.05

PRACTICAL EXAMPLES

Workpiece type		Adapter	Cylinder Head
Toolholder		A12H-STCIR10-D105	A12H-STCIR10-D120
Insert		TCIG10-200-010	TCIG10-200-010
Grade		AH725	AH725
Workpiece material		SUM23 (Free alloy steel)	S45C /C45
		 P	 P
Cutting conditions	Grooving width (mm)	2	2
	Grooving depth (mm)	1	1.15
	Cutting speed : Vc (m/min)	50	90
	Feed : f (mm/rev)	0.05	0.05
	Machining	Internal grooving	Internal grooving
	Coolant	Wet	Wet
Results		 AddInternalCut provided part quality consistency thanks to secure insert clamping and also provided 1.4 times tool life increase.	 AddInternalCut provided 1.3 times tool life and excellent surface finish due to highly rigid insert clamping.

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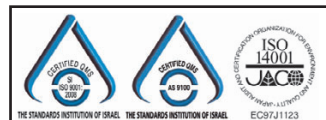
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