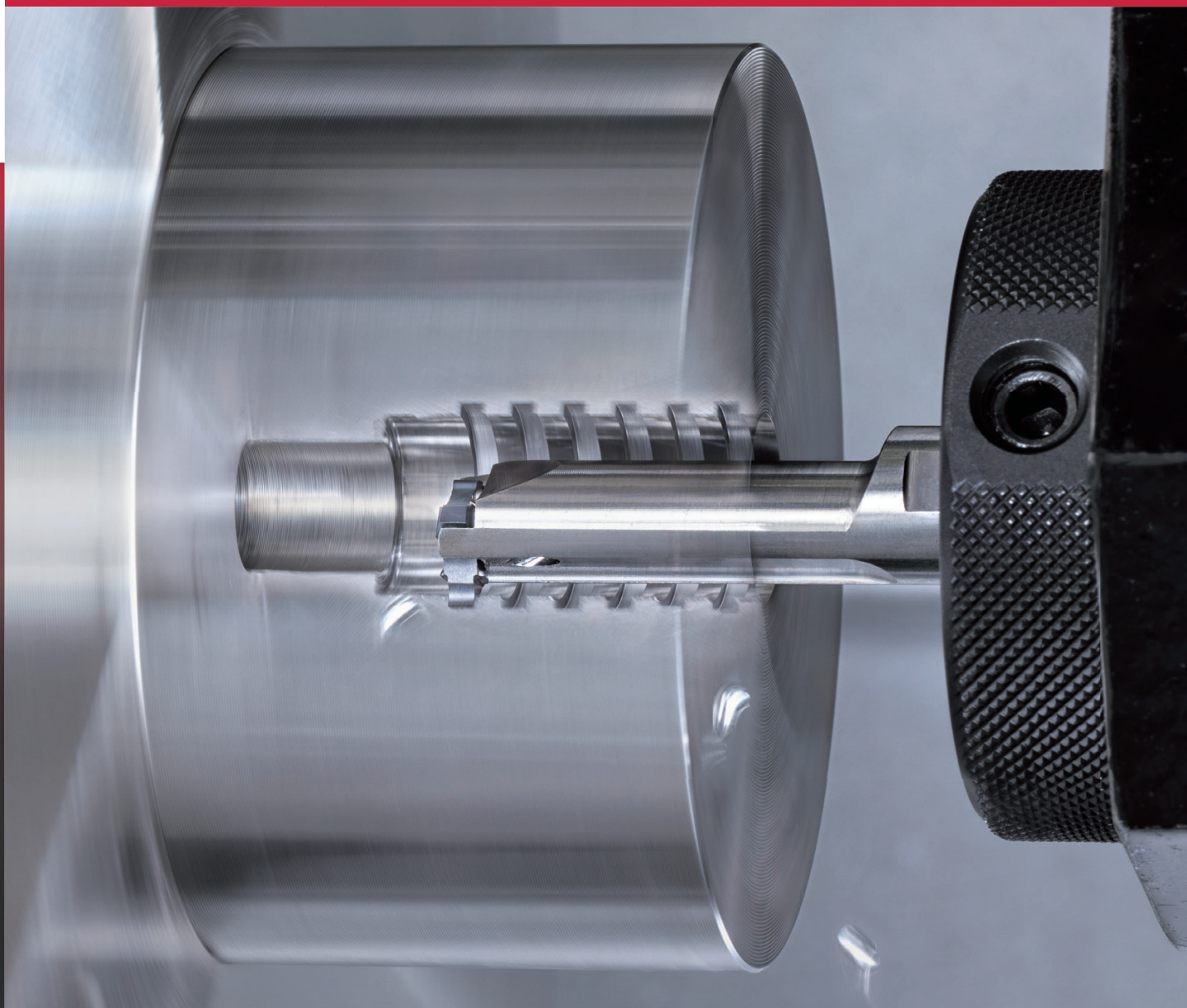


Internal grooving tool

ADD^{INTERNAL}**CUT**

Tungaloy Report No. 544-US

New 4-edged insert for ID grooving

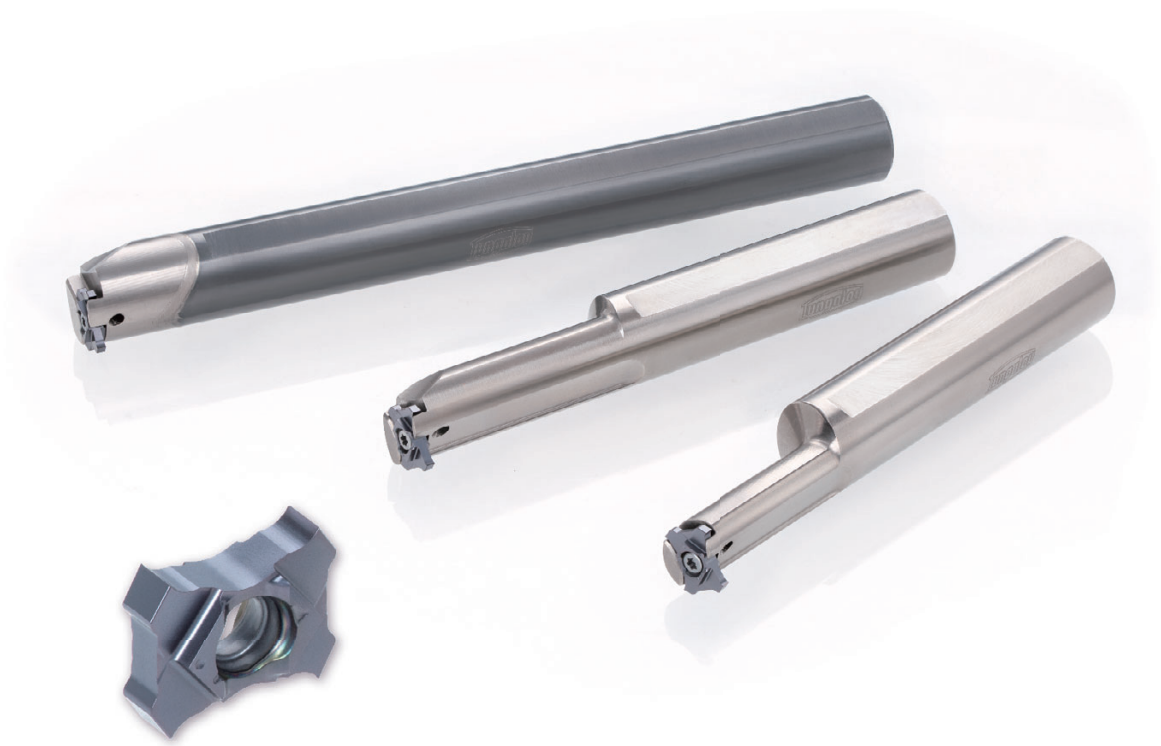




INDUSTRY 4.0
FEED the SPEED!



ADD ^{INTERNAL} **CUT**

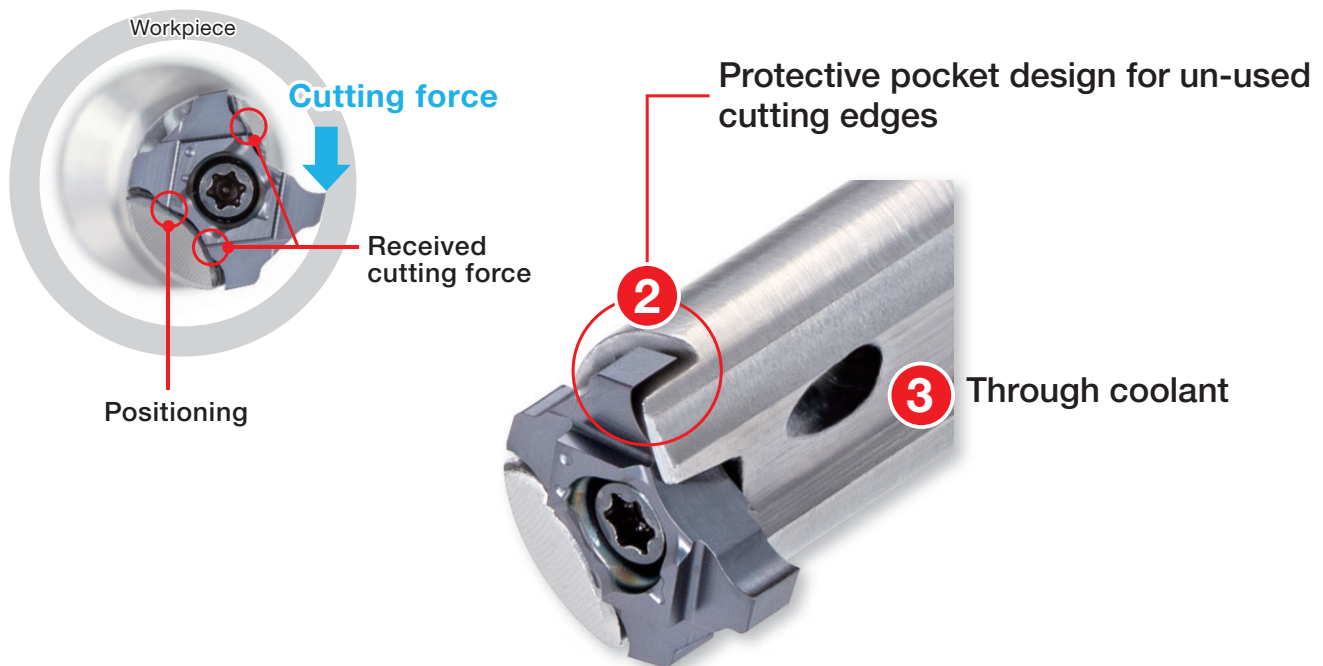


Unique insert clamping system ensures
high indexing repeatability and clamping rigidity

Unique clamping system for high precision grooving

Features

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



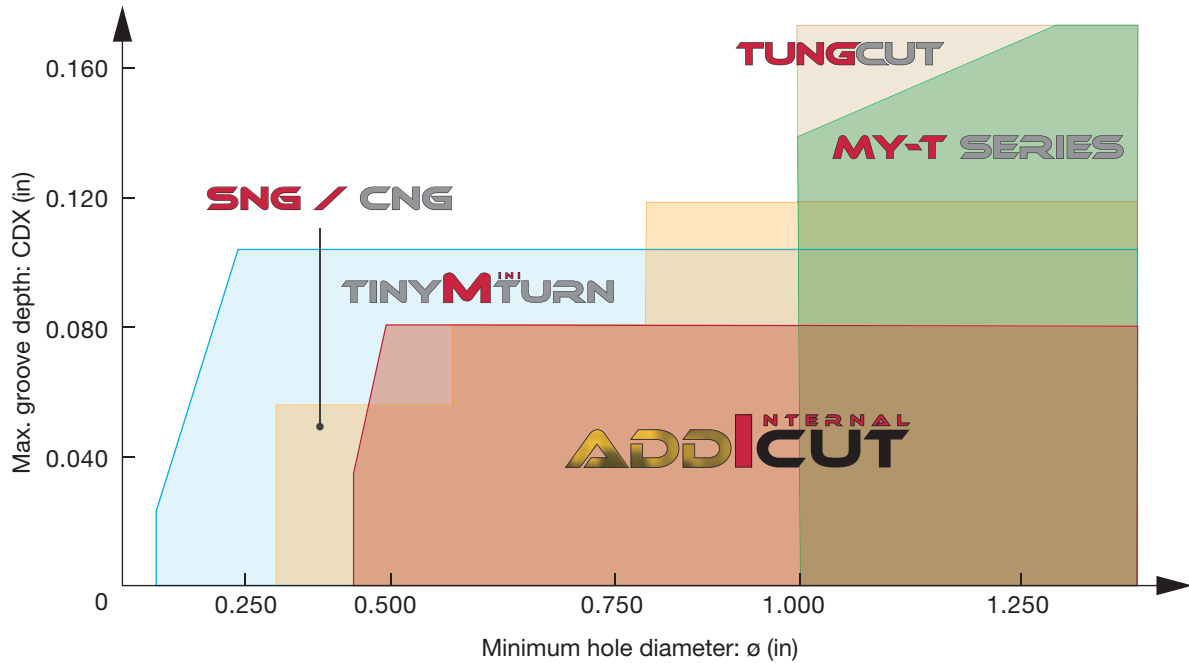
- 4** The same insert can be assembled on either left- or right-handed holder





TCIG...

Free cutting geometry for superior surface finish
 CW = 0.059" - 0.098"



CUTTING PERFORMANCE

Chip control

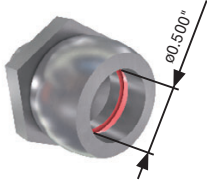
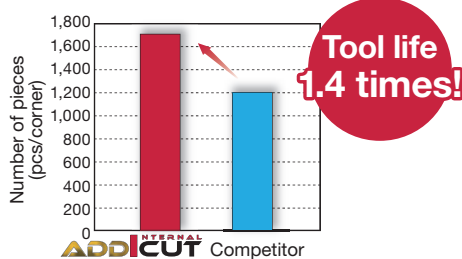
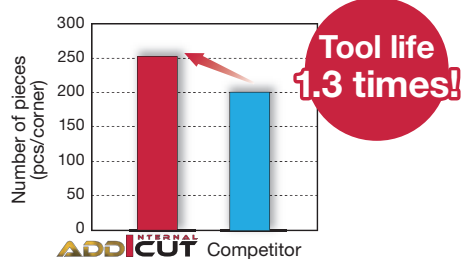
Cutting speed: Vc (sfm)	Feed: f (ipr)		
	0.002	0.003	0.004
390			
330			
260			

Toolholder : A08-STCIR10-D08U
 Insert : TCIG10-200-010 AH725
 Workpiece material : 1045
 Groove width : CW = 0.079"
 Hole diameter : ø0.500"
 Coolant : Wet

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Priority	Cutting speed Vc (sfm)	Feed f (ipr)
P	Steel 1045, 4140, etc.	< 300 HB	First choice	98 - 262	0.0004 - 0.002
M	Stainless steel 304, 316, etc.	< 200 HB	First choice	98 - 164	0.0004 - 0.002
S	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	33 - 164	0.0004 - 0.002

PRACTICAL EXAMPLES

Workpiece type		Adapter	Cylinder Head
Toolholder		A08-STCIR10-D07U	A08-STCIR10-D08U
Insert		TCIG10-200-010	TCIG10-200-010
Grade		AH725	AH725
Workpiece material		SUM23 (Free alloy steel)	1045
			
Cutting conditions	Grooving width (in)	0.079	0.079
	Grooving depth (in)	0.039	0.045
	Cutting speed : Vc (sfm)	164	295
	Feed : f (ipr)	0.002	0.002
	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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