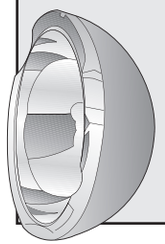
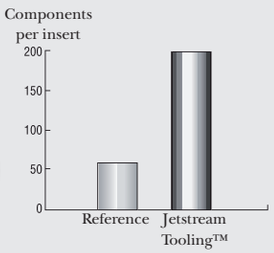
APPLICATION CASES

EXTERNAL PROFILE TURNING IN COBALT CHROME

Objective	Tool life		
Component	Cap		
Material	Cobalt chrome		
Insert	LCMF160500-0476-MP, 890		
		Jetstream Tooling™	Reference
Cutting data	v_c	110 m/min (360 sfm)	110 m/min (360 sfm)
	f	0.1 mm/rev (.004 inch)	0.1 mm/rev (.004 inch)
	a_p	0.25 mm (.01 inch)	0.25 mm (.01 inch)
Result	270% increase in tool life Improved chip control and tool life.		





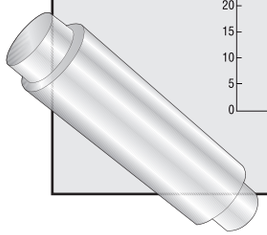
20 BAR
290 PSI

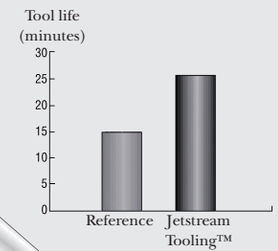
S

SUPER ALLOYS

ROUGH TURNING IN INCONEL 718

Objective	Cycle time		
Component	Shaft		
Material	Inconel 718		
Insert	SNMG120408-MR4, CP250		
		Jetstream Tooling™	Reference
Cutting data	v_c	90 m/min (295 sfm)	40 m/min (131 sfm)
	f	0.35 mm/rev (.014 inch)	0.35 mm/rev (.014 inch)
	a_p	2.0 mm (.08 inch)	2.0 mm (.08 inch)
Result	Improved chip control and tool life.		





70 BAR
1015 PSI

S

SUPER ALLOYS

CONTACT & INFORMATION

SECO MACHINING NAVIGATOR:

Turning Catalogue & Technical Guide 2009
Update catalogue 2010

ONLINE INFORMATION:

Complete Jetstream Tooling™ information:
http://www.secotools.com/jetstreamtooling

Seco Tools international website:
http://www.secotools.com

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www.secotools.com

02739990 ST20106254 GB SECO TOOLS AB, PA Group Karlstad 2010

TOOLS

TURNING

JETSTREAM TOOLING™

HIGH PRESSURE COOLANT STRAIGHT TO THE EDGE

COOLANT STRAIGHT TO THE EDGE

Jetstream Tooling ™ works by delivering a concentrated high pressure jet of coolant at high velocity straight to the optimum position close to the cutting edge. The coolant pressure ranging from 5 to 275 bar (70 – 4000 psi).

INCREASE PRODUCTIVITY

Jetstream Tooling removes the heat quickly by producing a rapid cooling effect resulting in brittle chips which quickly snap under the pressure of the coolant flow. Build up of chipping material leads to clogging and surface damage, a problem that is eradicated with Jetstream Tooling.

REDUCE COSTS

Jetstream Tooling produces an instant cooling effect millimetres from the cutting edge. Through an acute, high velocity jetstream which penetrates the friction zone, improved lubrication, cooling properties and small, manageable chips are achieved resulting in less downtime and improved surface finish.

RANGE

The product range includes holders for the most common insert shapes; C, D, S, T and W, both negative and positive.

Also a wide range of holders for Seco MDT is available.

Seco is now expanding the range of toolholders with holders for larger inserts, CNMx1606xx and SNMx1506xx, and a wide range of holders for Seco MDT

Holders are available with both square shank backend and Seco-Capto™ backend.

MAIN BENEFITS

- Elevated cutting data = increased productivity
- Extended tool-life = cost reductions = reduced program stops for insert indexing
- Improved control = less downtime due to operator intervention
- Improved surface finish

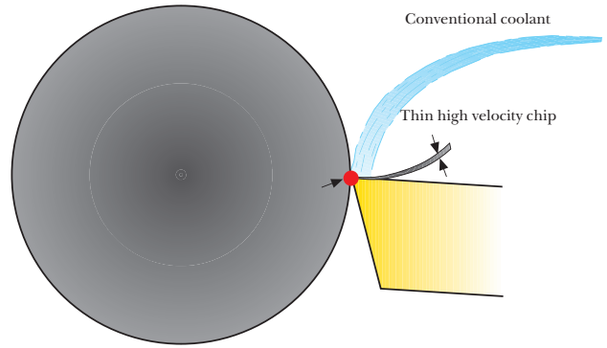
With conventional toolholder

With Jetstream Tooling™

HOW IT WORKS

CONVENTIONAL COOLANT

Titanium 6Al4V:
Low thermal conductivity
& low modulus of elasticity



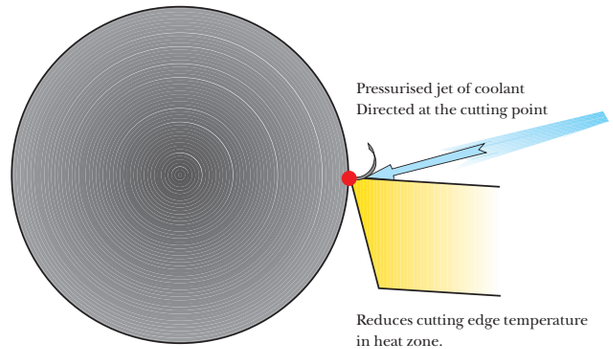
Small concentrated heat zone

Cutting speed: 40-60 m/min
Tool life approx: 20 minutes
Failure mode: typically flank wear
Feature: long uncontrollable swarf

PRESSURISED COOLANT

Titanium 6Al4V:
Low thermal conductivity
& low modulus of elasticity

Coolant pressure deflects swarf to break into smaller more manageable pieces.



Cutting data: 90-150 m/min
(often doubled)
Tool life increase 100% or more
Feature: small, controllable swarf

Reduces cutting edge temperature in heat zone.
Allowing higher cutting speed and longer tool life.

HOW TO IMPLEMENT ON THE MACHINES

Because the standard range of Jetstream Tooling is based on ISO toolholders (both square shanks and Seco-Capto) it is able to be mounted on a large selection of CNC machines.

Coolant can either be supplied to the toolholder externally through a coolant hose or internally in the case of using Seco-Capto™. Jetstream tooling work especially well with high pressure coolant pumps that can be retro fitted to existing CNC lathes.