

New HF Chipbreaker DOUBLES YOUR FEED RATE!

Features

Feed rates from .020 to .118 ipr
Depth of cuts from .020 to .100"
6 cutting edges

Insert Styles

BNMX style, negative inserts
Inserts feature a .590" radius for
maximum feed and strength
Right and left-handed available

Grades

TT8115 - Wear resistant steel grade
TT8125 - General purpose steel grade

Holders

1" and 1 1/4" external
Right and left-handed



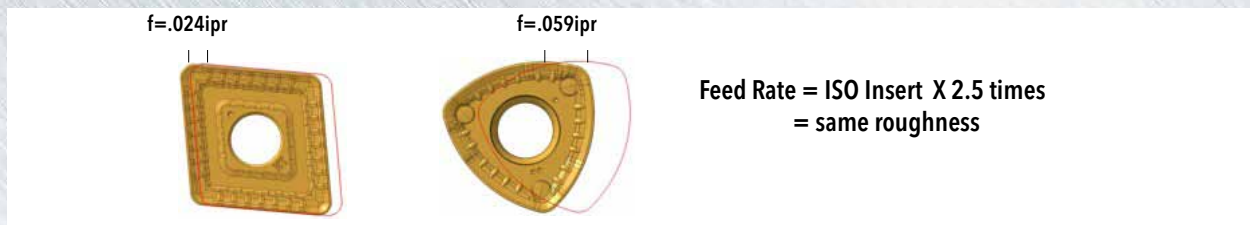
Ingersoll introduces a new, specialized turning insert for ultra high feed machining up to .118 inches per revolution (3.0mm/rev). The T-Feed insert has been developed to provide exceptionally high feed rates with a surprisingly smooth cutting action at cutting depths up to .100" (2.5mm).

The HF chip breaker's double-sided configuration offers economical advantages compared to other competitor's single sided high feed inserts. Suitable for facing and external turning, this chip breaker allows feed rates up to 2 1/2 times that of conventional turning inserts.

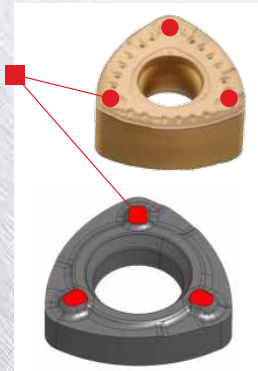
The inserts work in conjunction with a unique, hooked lever clamping system that firmly secures the rest pads on the insert surface to the pocket seat. The result is a very rigid system that provides an opportunity for dramatic reductions in cycle time!

Features:

- **Economy**
 - ✓ Utilizes double-sided technology with 6 cutting edges!
 - ✓ Reduces cycle time, increases productivity.
 - ✓ Double-sided insert offers economical advantages when compared to competitors inserts.
- **Performance**
 - ✓ Optimized chip breaker geometry designed for high feed machining, up to .118 inches per revolution (3mm/rev).
 - ✓ Reduced cutting forces and surprisingly smooth cutting action due to a positive, but strong, cutting edge.
 - ✓ Chip thinning principle reduces depth of cut notching, prolonging tool life.
 - ✓ Maximum feed rate = .118ipr , Maximum machining depth = .100"

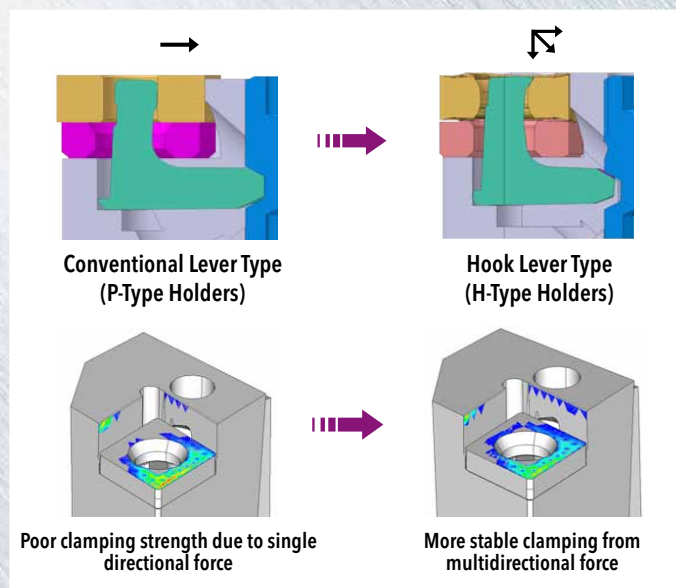


- **Stability & Design**
 - ✓ Increased clamping stability from unique & patented, 3-dimensional seat design that works in conjunction with rest pads on insert.
 - ✓ Unique clamping solution developed by Ingersoll is free from chip interruption.
 - ✓ Maximum clamping stability due to a hooked lever that provides multidirectional clamping force.



Clamping Features:

- ✓ Quick change lever lock system with rigid clamping force.
- ✓ Increased clamping force due to hooked lever design.

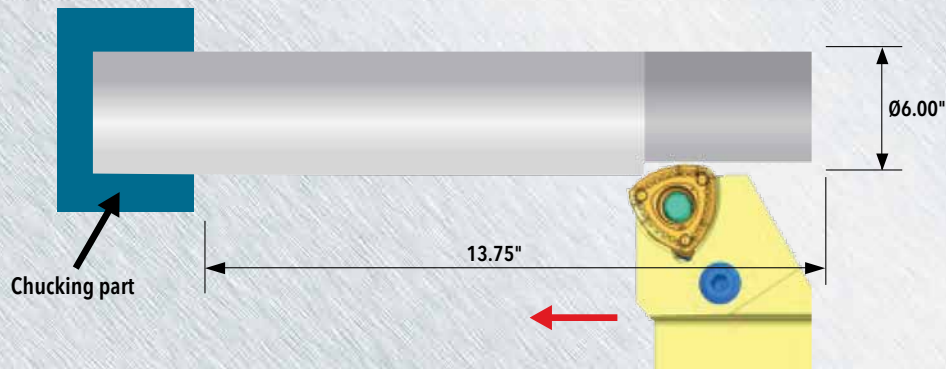


1. TEST RESULTS

Surface Finish

* Cutting condition: $V_c=495\text{sfm}$, $\text{DOC}(\text{inch}) \times \text{F}(\text{ipr}) = .060" \times .060" \rightarrow .060" \times .080" \rightarrow .060" \times .100" \rightarrow .060" \times .118"$

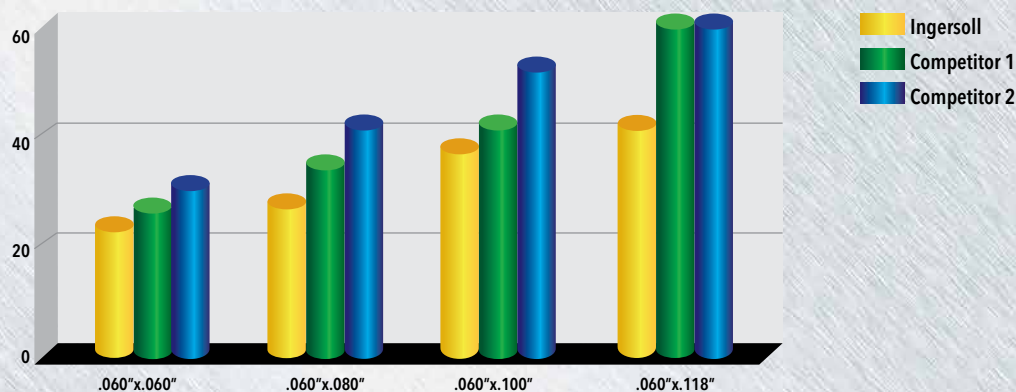
* Material: 0.45% carbon steel



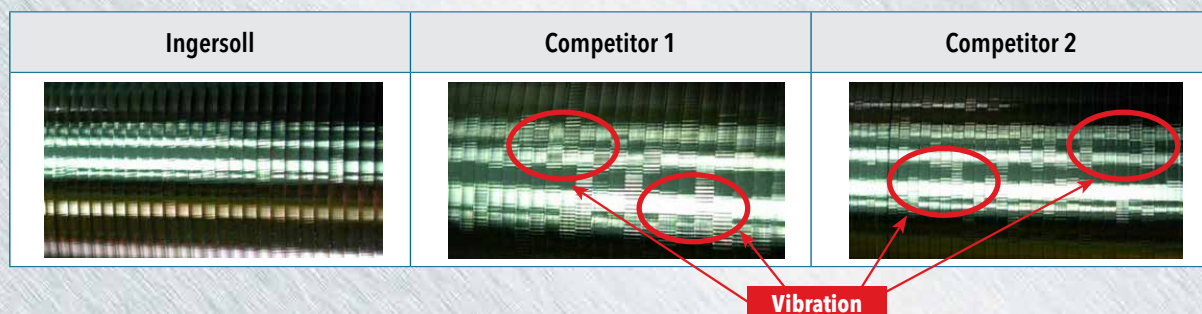
Cutting Force (Load meter) (Ra: μm)

DOC (inch) x F (ipr)	.060" x .060"	.060" x .080"	.060" x .100"	.060" x .118"
Ingersoll	22	27	33	41
Competitor 1	25	33	44	Breakage
Competitor 2	29	41	55	Breakage

• Under the same machining conditions, T•FEED produced the best surface finish.



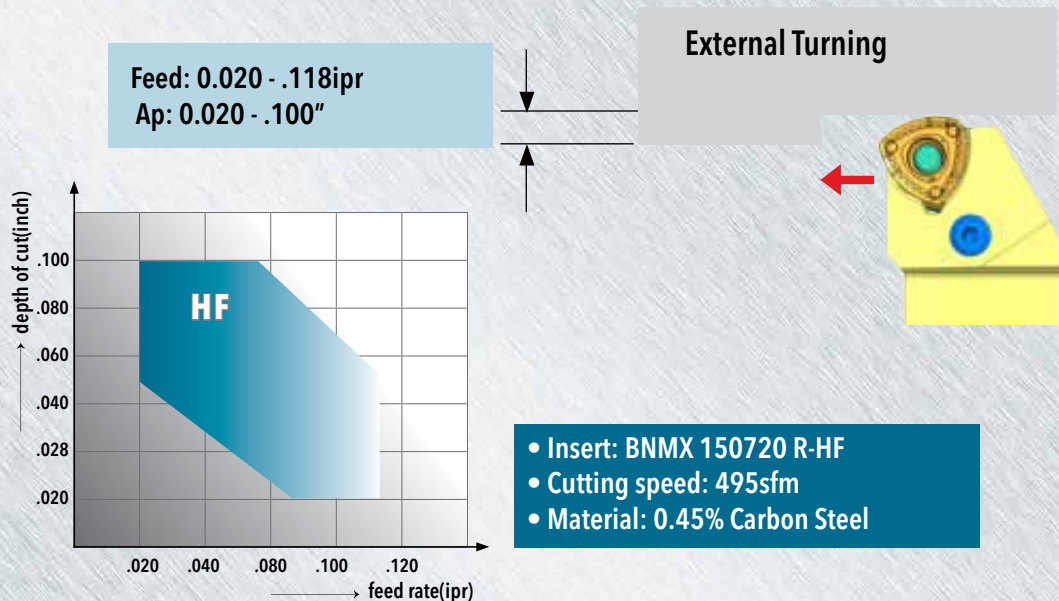
2. VIBRATION COMPARISON TEST RESULTS



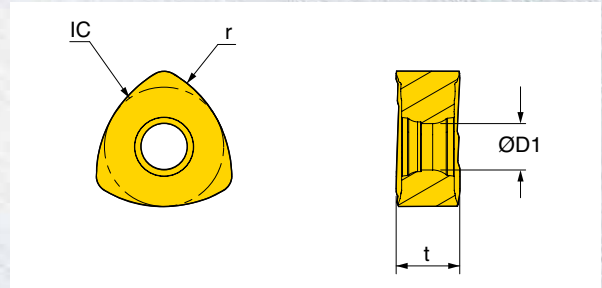
3. CHIP BREAKING COMPARISON TEST RESULTS

DOC (inch) x F (ipr)	Ingersoll	Competitor 1	Competitor 2
.060"x.060"			
.060"x.080"			
.060"x.100"			
.060"x.118"		Breakage	Breakage

4. CHIP BREAKING RANGE: EXTERNAL TURNING

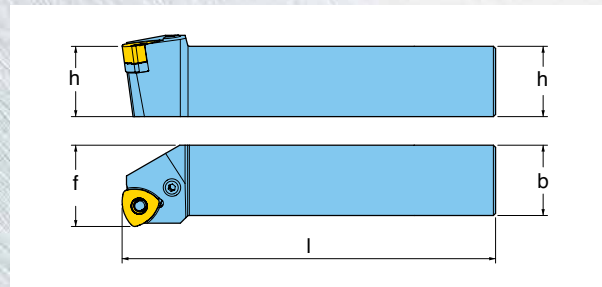
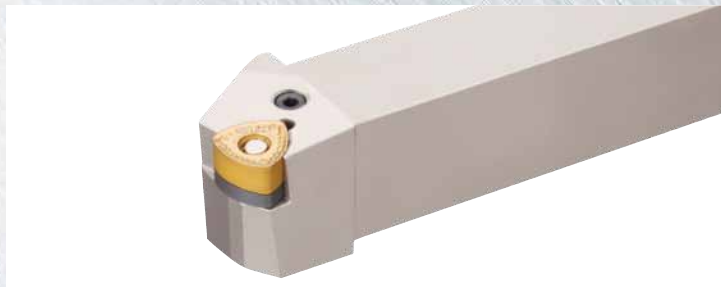


■ BNMX HF



ANSI Number	ISO Number	feed (ipr)	DOC (inch)	Dimensions (inch)				Grade	TT8115	TT8125
				IC	t	r	D1			
BNMX 150720R/L HF	BNMX 150720R/L HF	.020 - .118	.020 - .100	.590	.315	.590	.244	●	●	●
● = P ● = M ● = K ● = N ● = S ○ = H										

■ HBXNR/L



DESIGNATION	Dimensions (inch)				Insert	Lever	Screw	Shim	Shim Pin	Shim Pin Punch	Wrench
	h	b	l	f							
HBXNR/L 16-55D	1.00	1.00	6.00	1.15	BNMX 150720R/L-HF	LCL 16-NX	LCS 5-L25.5	LSB 53 R/L	LSP 5	SPP 5-6	L-W3
HBXNR/L 20-55E	1.25	1.25	7.00	1.45	BNMX 150720R/L-HF	LCL 16-NX	LCS 5-L25.5	LSB 53 R/L	LSP 5	SPP 5-6	L-W3

*Note: Right hand insert uses right hand holder.
Left hand insert uses left hand holder.