

## **Ingersoll** **TAEГУ** line INTRODUCES...

### THE NEW "VIBRATION FREE" CHIP BREAKER "VF"

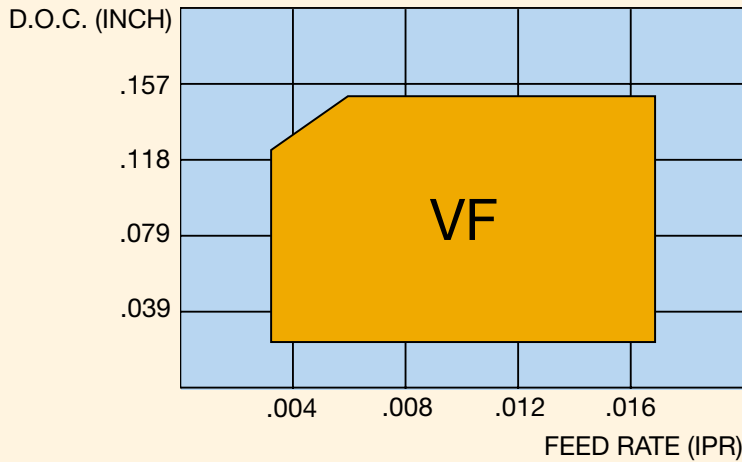


General chip breakers can often cause vibration or premature insert chipping when trying to machine at high feed rates or increased depths of cut on long or slender workpieces. The VF chip breaker has been developed to avoid such situations when machining under these conditions.

#### **FEATURES:**

- Designed with a high positive rake and helix angle on the cutting edge, the insert tool life increases considerably by minimizing the heat generated during machining.
- Minimizes vibration when machining slender bars.
- Provides excellent surface finish.
- Suitable for cutting steel, mild steel, low carbon steel, stainless steel, and difficult to cut materials.
- Available in DNMG and TNMG shapes.
- Available in 4 grades.

## CHIP CONTROL RANGE:



### Recommended Cutting Conditions

- DNMG 431 R-VF
- Material: SAE1045(HB180)
- $a_p = .028 \sim .138$  INCH
- $f = .003 \sim .016$  IPR

## COMPARISON TEST:

Work piece:  $\varnothing .700'' \times 7.9''$  Long  
 Material: SAE1045 Steel  
 Cutting speed(V): 656 SFM  
 Feed rate(f): .008 IPR and .012 IPR  
 Depth of cut(d): .059'' and .118''  
 Dry cutting.

## TEST RESULTS:

Cutting Conditions (SFM, IPR, DOC)	TaeguTec		Sandvik	
	TNMG 331 R-VF		TNMG 331 R-K	
	Vibration	Spindle load %	Vibration	Spindle load %
656, .008, .059	Low	25-26	High	27-28
656, .012, .118	Low	33-34	High	35-36

## CASE STORY:

Component Name: Pinion  
 Material: SAE1020  
 Cutting speed(V): 1148 SFM  
 Feed (f): .016 IPR  
 Depth of cut(d): .098"  
 Operation: External turning, wet cutting

### Tool Life:

Existing insert: DNMG 442 R-K 150pieces/edge  
 Test insert: DNMG 442 R-VF TT1500 180pieces/edge

## AVAILABLE STOCK ITEMS:

Stock Code	Item No.	ISO Designation	Grade
	5517439	DNMG 150404(431) L-VF	TT3500
	5517440	DNMG 150404(431) L-VF	TT5100
•	5517280	DNMG 150404(431) R-VF	TT1500
•	5516830	DNMG 150404(431) R-VF	TT3500
•	5517279	DNMG 150404(431) R-VF	TT5100
	5517424	DNMG 150408(432) L-VF	TT1500
	5517425	DNMG 150408(432) L-VF	TT3500
•	5517527	DNMG 150408(432) R-VF	TT1500
•	5517528	DNMG 150408(432) R-VF	TT3500
	5750028	DNMG 150604(441) L-VF	CT3000
	5517421	DNMG 150604(441) L-VF	TT1500
	5517422	DNMG 150604(441) L-VF	TT3500
	5517423	DNMG 150604(441) L-VF	TT5100
	5750004	DNMG 150604(441) R-VF	CT3000
	5517378	DNMG 150604(441) R-VF	TT1500
	5517379	DNMG 150604(441) R-VF	TT3500
	5517380	DNMG 150604(441) R-VF	TT5100
	5517430	DNMG 150608(442) L-VF	TT1500
	5517431	DNMG 150608(442) L-VF	TT3500
	5517432	DNMG 150608(442) L-VF	TT5100

Stock Code	Item No.	ISO Designation	Grade
	5750029	DNMG 150608(442) R-VF	CT3000
	5517427	DNMG 150608(442) R-VF	TT1500
	5517428	DNMG 150608(442) R-VF	TT3500
	5517429	DNMG 150608(442) R-VF	TT5100
	5750030	TNMG 160404(331) L-VF	CT3000
	5517441	TNMG 160404(331) L-VF	TT1500
	5517442	TNMG 160404(331) L-VF	TT3500
	5517443	TNMG 160404(331) L-VF	TT5100
•	5750027	TNMG 160404(331) R-VF	CT3000
•	5517381	TNMG 160404(331) R-VF	PV3010
•	5517310	TNMG 160404(331) R-VF	TT1500
•	5517311	TNMG 160404(331) R-VF	TT3500
•	5517312	TNMG 160404(331) R-VF	TT5100
	5517436	TNMG 160408(332) L-VF	TT1500
	5517437	TNMG 160408(332) L-VF	TT3500
	5517438	TNMG 160408(332) L-VF	TT5100
•	5517433	TNMG 160408(332) R-VF	TT1500
•	5517434	TNMG 160408(332) R-VF	TT3500
•	5517435	TNMG 160408(332) R-VF	TT5100

• Stocked at Ingersoll USA, Rockford, Illinois