NPA

NEW

Member IMC Group Ingersoll Cutting Tools

New Product Announcement

TURNING

Holder Series

LVJBR
0.750" and 1.000"
20 mm and 25 mm

LVJBR-SH (Swiss)
0.625"
16 mm

Insert Series

VBMX

Corner Radii

0.008"
0.016"
0.031"

Grades

TT8115B
TT5080
TT3020
CT3000 (cermet)

MULTI-TURN™

VBMX Insert and Holders with Rigid Clamping

- 35° inserts & holder system for precision machining
- Groove on insert bottom prevents insert from moving in the pocket (when used with LVJBR holders)
- Simple, screw held clamping

See it in action! »

WINSFEED™ ADVANCED MACHINING

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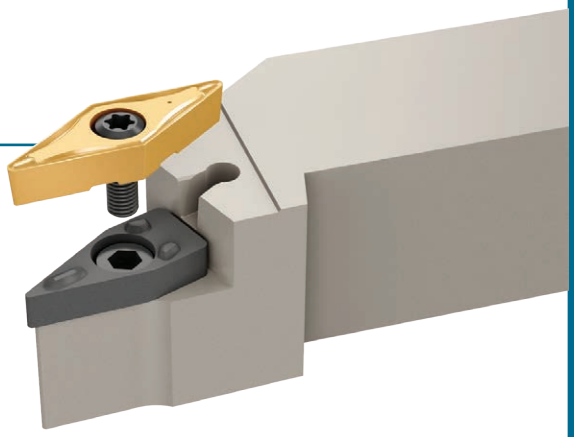
Ingersoll introduces a new VBMX turning and profiling insert featuring a rigid clamping system for anti-rotation during machining

Use of a 35° "V-shape" insert is common in turning applications, particularly for profiling applications and for hard-to-reach areas on the work piece. Over time, the insert pocket on the holder sustains wear from heat and pressure that disfigures the side walls of the pocket and causes the insert to move/rotate during the cut. This can create vibration that shortens tool life, and dimensional displacement that causes parts to become out of tolerance.

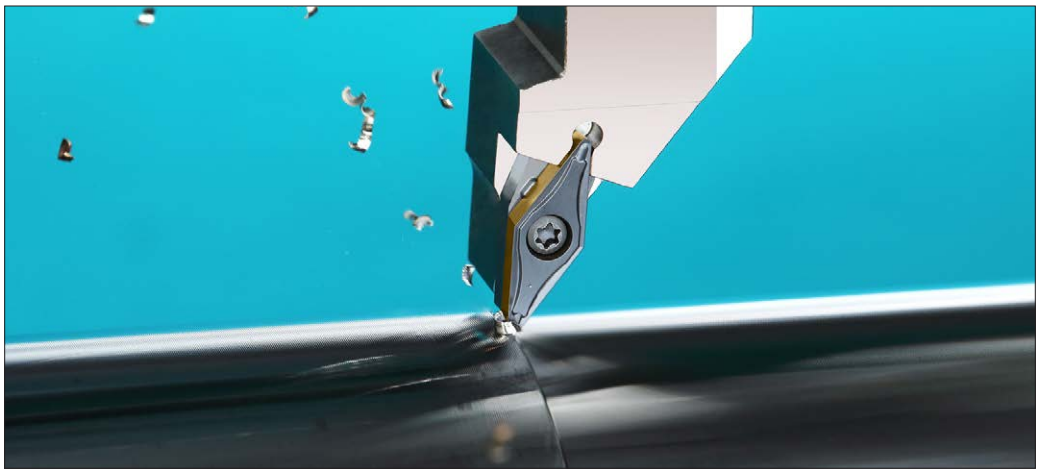
Multi-L-Turn VBMX inserts and dedicated holders overcome this problem by using a bottom groove on the insert to firmly position it against a specially shaped shim with a mating design. The back end of the insert contacts both sides of the pocket walls to further enhance stability. The result is longer tool life, excellent machining performance, and precise dimensional accuracy of the work piece.

As the VBMX insert shares the same outline design as the ISO-V type insert, it is also compatible with ISO holders. However, when precision machining is important, it's best to apply the dedicated holder for optimal accuracy.

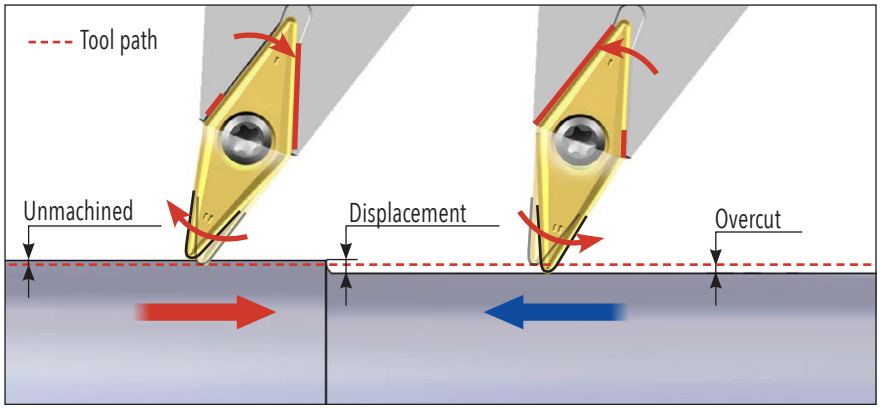
Features & Benefits

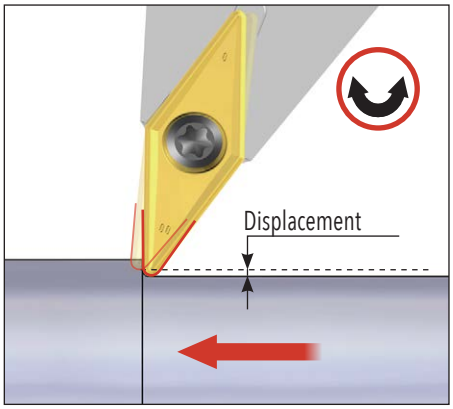


- Unique and powerful clamping design that minimizes insert rotation
- Excellent surface finish and precise machining dimensions; ideal for finishing and profiling applications
- Stable tool life and excellent machining performance
- Compatible with standard ISO holders



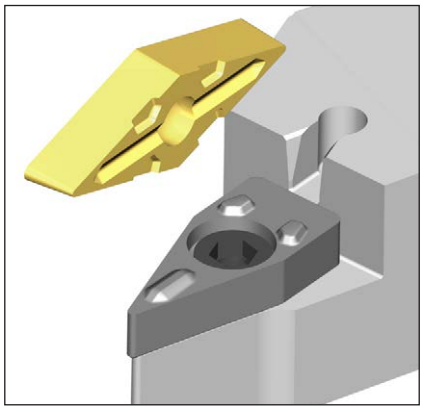
Displacement along the machining direction of conventional ISO inserts

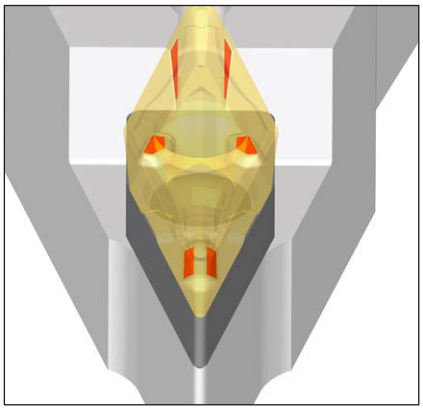


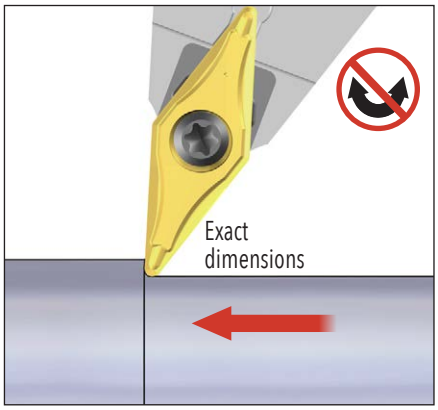


Unique and powerful clamping design

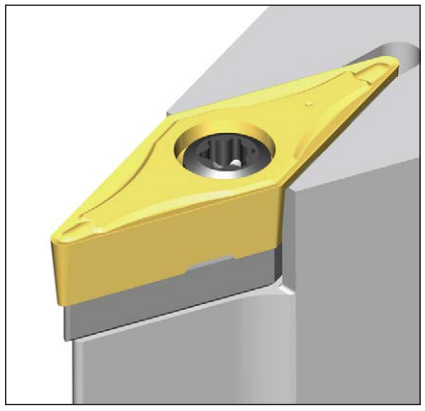
Insert's bottom face groove mates with a special shim. The back end of the insert contacts the side walls of a specially designed pocket





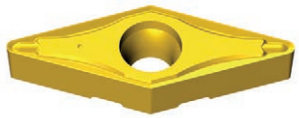
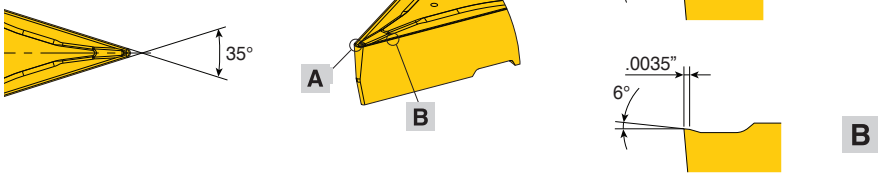


Compatible with standard ISO holders

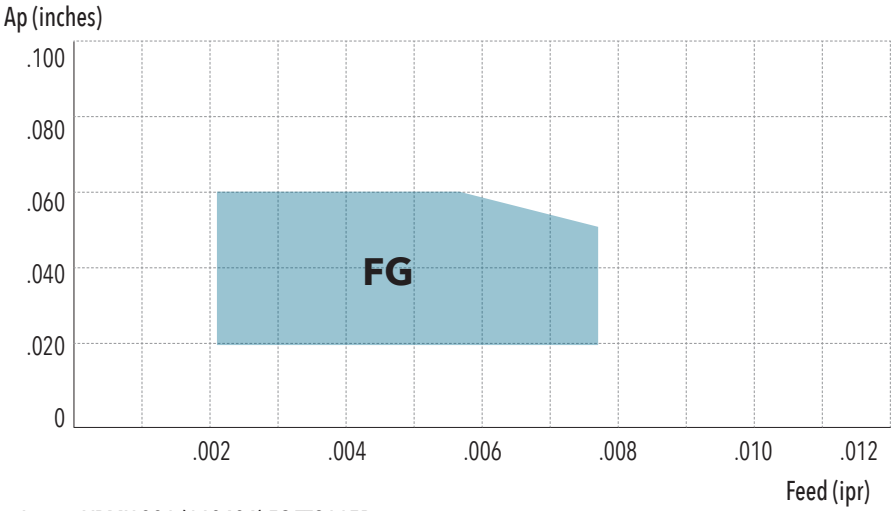


VBMX FG insert geometry

Same cutting edge as VBMT FG

Chip breaker	Geometry
 FG	

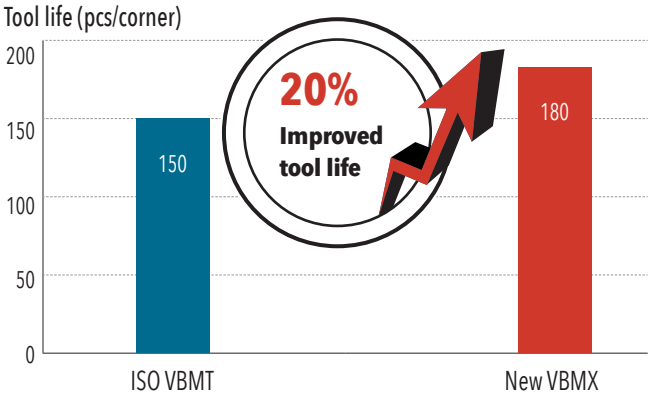
VBMX FG cutting conditions

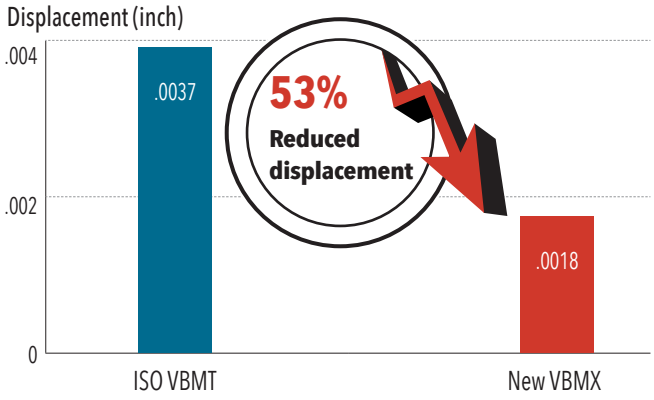


- Insert: VBMX 331 (160404) FG TT8115B
- Holder: LVJBR12-3B
- Cutting speed (V): 650 sfm
- Workpiece: 4140 (HB230-260)

Case Study 1

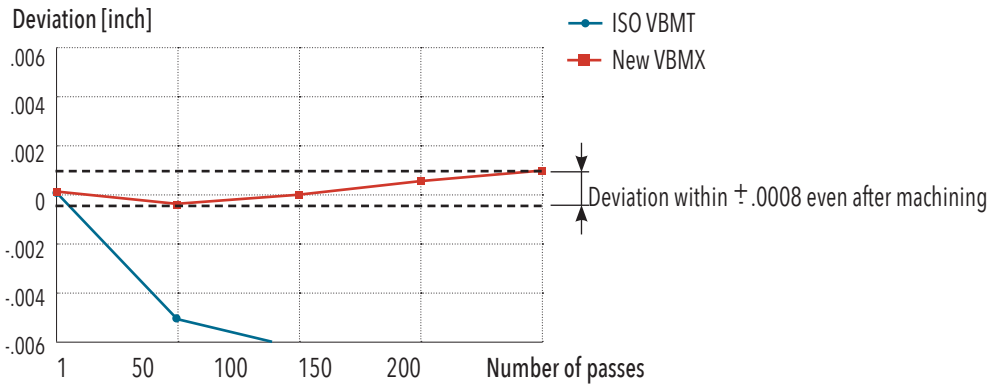
		ISO	New
Material		Inconel 718 (HB352)	
Application		Turning	
Insert		VBMT 332 FG TT3020	VBMX 332 FG TT3020
Holder		SVJBR16-3D	LVJBR 16-3D
Cutting speed	V (sfm)	130	
Feed	f (ipr)	.008	
Depth of cut	Ap (inch)	.040	
Coolant		Wet	
Tool life (pcs/corner)		150	180
Displacement (inch)		.0037	.0018





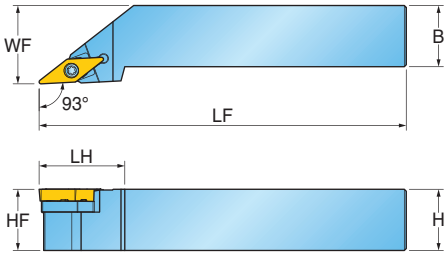
Case Study 2

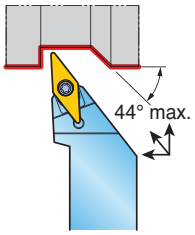
		ISO	New
Material		Carbon steel, 1045 (HB 200)	
Insert		VBMT 331 FA TT5080	VBMX 331 FG TT5080
Holder		SVJBR 1616 K16-SH	LVJBR 1616 K16-SH
Cutting speed	V (sfm)	492	
Feed	f (ipr)	.004	
Depth of cut	Ap (inch)	.040	
Coolant		Wet	
Displacement after machining (inch)	1 pass	.0004	.0004
	50 passes	-.0047	-.0004
	200 passes	-	.0008



Series LVJBR/L

SCREW TYPE HOLDERS (VBMX INSERT)





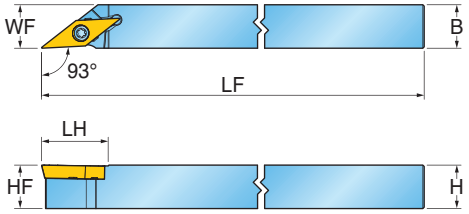
Approach Angle: 93°	Part Number	H Shank Height	HF Functional Height	B Shank Width	LF Functional Length	LH Head Length	WF Functional Width	Insert
	INCH							
	LVJBR/L 12-3B	.750	.750	.750	4.5	1.378	1.00	VBMX33... (1604...)
	LVJBR/L 16-3D	1.000	1.000	1.000	6.0	1.378	1.25	
	METRIC							
	LVJBR/L 2020 K16	20 mm	20 mm	20 mm	125 mm	35 mm	25 mm	VBMX1604... (33...)
	LVJBR/L 2525 M16	25 mm	25 mm	25 mm	150 mm	35 mm	32 mm	

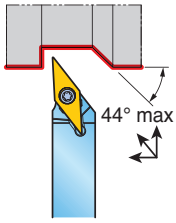
Hardware

Part Number	Screw	Shim	Shim Screw	Hex Driver	Torx Driver
LVJBR/L	SO 35124I	SSVX 32	TS 5035062S	L-W 3.5	T 15

Series LVJBR-SH

SCREW TYPE HOLDERS FOR SWISS (VBMX INSERT)



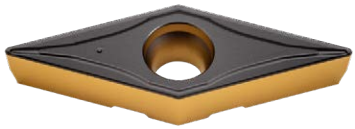
Approach Angle: 93°	Part Number	H Shank Height	HF Functional Height	B Shank Width	LF Functional Length	LH Head Length	WF Functional Width	Insert
	**INCH**							
	LVJBR 10-3C-SH	.625	.625	.625	5.0	.965	.625	VBMX33... (1604...)
	METRIC							
	LVJBR 1616K16-SH	16 mm	16 mm	16 mm	125 mm	24.5 mm	16 mm	VBMX1604... (33...)

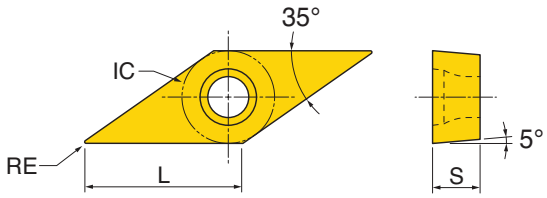
Hardware

Part Number	Screw	Shim	Shim Screw	Hex Driver	Torx Driver
LVJBR-SH	SO 35080I	-	-	-	T 15

Series VBMX

POSITIVE 5° CLEARANCE 35° RHOMBIC INSERTS





Size	Dimensions (inch)			
	IC	S	RE	L
330.5	.375	.187	.008	.654
331	.375	.187	.016	.654
332	.375	.187	.031	.654

Part Number	ap (inch)	Feed (ipr)	Cermet	CVD Coated	PVD Coated	
			CT3000	TT8115B	TT5080	TT3020
INCH						
VBMX330.5 (160402) FG	.012–.060	.002–.008	•	•	•	
VBMX331 (160404) FG	.012–.060	.003–.008	•	•	•	
VBMX332 (160408) FG	.030–.080	.004–.010	•	•	•	•

Insert can also be assembled onto an ISO holder

• = Standard Items