

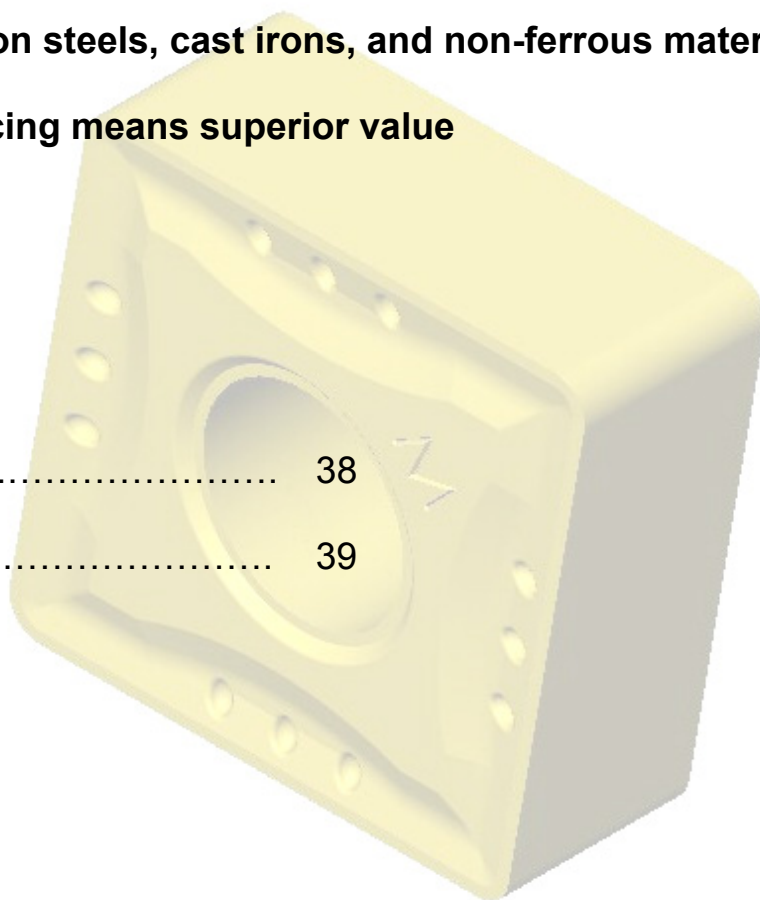
American Value™ Inserts

A targeted selection of the most popular inserts in the metalworking industry

Solid grades that will run well on steels, cast irons, and non-ferrous materials

High quality and economic pricing means superior value


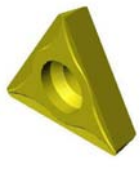



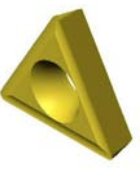


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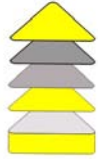


American Value™ Inserts

Insert Geometries, Grade and Application Data

<p>xPGH-HF High Feed Finishing</p>  	<p>Single-sided positive rake peripheral ground insert</p> <p>High positive cutting land</p> <p>Broad chipbreaking range</p> <p>Designed for high feed applications</p> <p>Application Range Feed: .010" - .035" DOC: .025" - .090"</p>	<p>xCGT/xPGT Light Machining</p>  	<p>Single-sided positive rake peripheral ground insert</p> <p>Broad chipbreaking range</p> <p>Good edge toughness</p> <p>Application Range Feed: .005" - .047" DOC: .047" - .189"</p>
<p>xPGH Medium Machining</p>  	<p>Single-sided positive rake peripheral ground insert</p> <p>Strong cutting edge for reliability</p> <p>Broad chipbreaking range</p> <p>Application Range Feed: .008" - .020" DOC: .020" - .112"</p>	<p>xNMG-VM Medium Machining</p>  	<p>Double-sided insert</p> <p>Offers a wide range of chip control at medium feeds</p> <p>Can be used in most materials</p> <p>Negative-land geometry for general purpose turning</p> <p>Application Range Feed: .008" - .024" DOC: .090" - .200"</p>

UNCOATED			
Grade	ISO Class	Industry Class	Description
C2VAL Roughing to Semi-Finishing	K10-K25 N05-N15 S10-S20	C2	C2VAL is an uncoated, unalloyed grade with good abrasive wear resistance. Designed for medium to rough turning of cast iron, non-ferrous materials, and high temperature alloys.

CVD COATED				
Grade	ISO Class	Industry Class	Description	Coating
C5CVAL Roughing to Semi-Finishing	P20-P35	C5 C6	C5CVAL has a multi-layered TiN/TiC/TiCN/TiN coating over an alloyed, cobalt-rich substrate. Offers a good balance of wear resistance and toughness. For general purpose to heavy roughing of carbon and alloy steels at medium speeds and feeds. Can withstand light interruptions.	 TiN TiCN TiC TiN Substrate

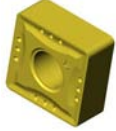
<p>P</p> <p>Steel alloys, cast steels, ferritic and martensitic stainless steels, and long chipping malleable irons</p>	<p>K</p> <p>Cast iron and short chipping malleable iron</p>	<p>N</p> <p>Non-ferrous metals, plastics, and wood</p>	<p>S</p> <p>High temperature alloys (nickel, iron, and cobalt based), titanium and titanium alloys</p>
C8 C7 C6 C5	C4 C3 C2 C1		
P01 P10 P20 P30 P40	K01 K10 K20 K30 K40	N01 N10 N20 N30 N40	S01 S10 S20 S30 S40
More Wear ← → More Toughness	More Wear ← → More Toughness	More Wear ← → More Toughness	More Wear ← → More Toughness



NEGATIVE TURNING

with chip control, for lock pin fastening systems

CNMG-VM 80°
Medium Machining Diamond



Part Number	Grades		Dimensions (inches)			
	C5CVAL	C2VAL	IC	Thick.	Radius	Hole
CNMG 432-VM	•	•	1/2	3/16	1/32	.203
CNMG 433-VM	•	•	1/2	3/16	3/64	.203
CNMG 543-VM	•		5/8	1/4	3/64	.250
CNMG 643-VM	•		3/4	1/4	3/64	.312
SNMG 432-VM	•	•	1/2	3/16	1/32	.203
SNMG 543-VM	•		5/8	1/4	3/64	.250
SNMG 643-VM	•		3/4	1/4	3/64	.312
TNMG 321-VM	•	•	3/8	1/8	1/64	.150
TNMG 322-VM	•	•	3/8	1/8	1/32	.150
TNMG 332-VM	•	•	3/8	3/16	1/32	.150
TNMG 431-VM	•	•	1/2	3/16	1/64	.203
TNMG 432-VM	•	•	1/2	3/16	1/32	.203
TNMG 433-VM	•	•	1/2	3/16	3/64	.203
TNMG 543-VM	•		5/8	1/4	3/64	.250
TNMG 544-VM	•		5/8	1/4	1/16	.250

SNMG-VM Square
Medium Machining



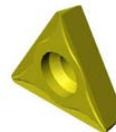
TNMG-VM Triangle
Medium Machining



POSITIVE TURNING

with chip control, for screw fastening systems

TPGH-HF Triangle
High Feed Finishing



Part Number	Grades		Dimensions (inches)			
	C5CVAL	C2VAL	IC	Thick.	Radius	Hole
TPGH 321-HF	•	•	3/8	1/8	1/64	.177
TPGH 322-HF	•	•	3/8	1/8	1/32	.177
TPGH 32.51-HF	•	•	3/8	5/32	1/64	.177
TPGH 32.52-HF	•	•	3/8	5/32	1/32	.177
TCGT 21.50	•	•	1/4	3/32	.005	.123
TCGT 21.51	•	•	1/4	3/32	1/64	.123
TCGT 21.52	•	•	1/4	3/32	1/32	.123
TCGT 221	•	•	1/4	1/8	1/64	.123
TCGT 222	•	•	1/4	1/8	1/32	.123
TCGT 321	•	•	3/8	1/8	1/64	.177
TCGT 322	•	•	3/8	1/8	1/32	.177
TCGT 323	•	•	3/8	1/8	3/64	.177
TCGT 32.51	•	•	3/8	5/32	1/64	.177
TCGT 32.52	•	•	3/8	5/32	1/32	.177
TCGT 431	•	•	1/2	3/16	1/64	.218
TCGT 432	•	•	1/2	3/16	1/32	.218
TCGT 433	•	•	1/2	3/16	3/64	.218

TCGT Triangle
Light Machining





POSITIVE TURNING

with chip control, for screw fastening systems

TPGT

Light Machining

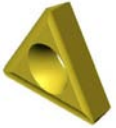


Triangle

Part Number	Grades		Dimensions (inches)			
	C5CVAL	C2VAL	IC	Thick.	Radius	Hole
TPGT 21.50	•	•	1/4	3/32	.005	.123
TPGT 21.51	•	•	1/4	3/32	1/64	.123
TPGT 21.52	•	•	1/4	3/32	1/32	.123
TPGT 221	•	•	1/4	1/8	1/64	.123
TPGT 222	•	•	1/4	1/8	1/32	.123
TPGT 321	•	•	3/8	1/8	1/64	.177
TPGT 322	•	•	3/8	1/8	1/32	.177
TPGT 323	•	•	3/8	1/8	3/64	.177
TPGT 32.51	•	•	3/8	5/32	1/64	.177
TPGT 32.52	•	•	3/8	5/32	1/32	.177
TPGT 431	•	•	1/2	3/16	1/64	.218
TPGT 432	•	•	1/2	3/16	1/32	.218
TPGT 433	•	•	1/2	3/16	3/64	.218
TPGH 21.51	•	•	1/4	3/32	1/64	.123
TPGH 21.52	•	•	1/4	3/32	1/32	.123

TPGH

Medium Machining



Triangle

