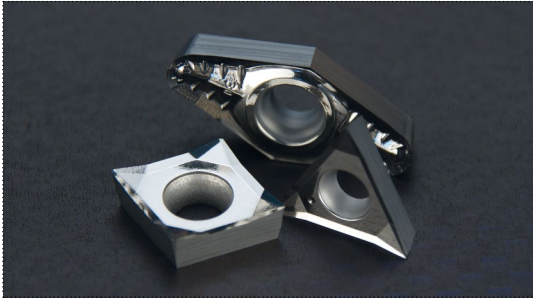


# INSERTS

Grades	<b>G02-03</b>
ISO Code Key	<b>G04-05</b>
Contents - Milling inserts	<b>G06</b>
Milling inserts	<b>G07-14</b>

**G**

## UNCOATED CARBIDE



### UNCOATED CARBIDE

- Excellent thermal crack resistance makes it possible to machine in wet cutting conditions.
- Cemented carbide can be applied for various workpieces.
- High toughness and low cutting force.
- Low affinity to workpiece.

## Features of UNCOATED CARBIDE

Material		Grade	Colour	Composition	Definition
<b>P</b> Steel		<b>PM25</b>		WC+TiC+TaC+Co	General purpose uncoated grade in the P30 range. This tough, economical grade is suitable to work carbon steels, alloyed steels, tool steels and stainless steels. PM25 provides toughness and resistance to deformation in roughing and semi-finishing applications.
		<b>PM40</b>		WC+TiC+TaC+Co	Roughing grade in the P35 range. This tough grade is for structural, cast and tool steels. It is recommended when toughness is more important than wear resistance.
<b>K</b> Cast iron		<b>KM15</b>		WC+Co	Finishing grade in the K10 range. This carbide grade is for use on cast iron, aluminium and heat-resistant alloys. This grade works well on cobalt based alloys and synthetic materials and is suitable for finishing on heat-resistant alloys.

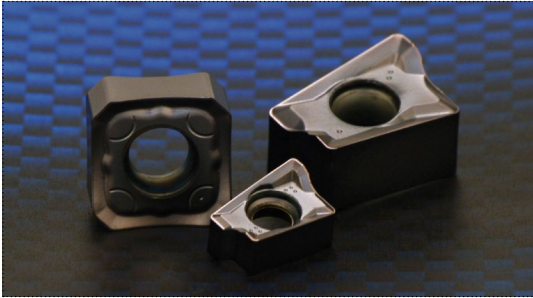
## Application

ISO	Composition	Features	Workpiece
<b>P</b>	WC+TiC+TaC+Co	Heat resistance, excellent plastic deformation resistance.	Carbon steel, alloy steel, stainless steel.
<b>M</b>	WC+TiC+TaC+Co	General tools stable heat resistance with strength.	Carbon steel, alloy steel, stainless steel, cast steel.
<b>K</b>	WC+Co	High strength and superior wear resistance.	Carbon iron, non-ferrous metal, plastic, etc.

## Properties

Grade	Hardness (HRA)	TRS (Kgf/mm <sup>2</sup> )	Young's modulus (103Kgf/mm <sup>2</sup> )	Thermal expansion coefficient (10 <sup>-6</sup> /°C)	Thermal conductivity (cal/cm·sec·°C)
<b>KM15</b>	90.9	250	63	-	105
<b>PM25</b>	91.9	200	56	5.2	45
<b>PM40</b>	91.3	230	53	5.2	-

## CVD / PVD



### CVD coated carbide

CVD coatings provide a high wear resistance due to its excellent adhesion to cemented carbide.

They are the first choice in a large turning range where wear resistance is important.

### PVD coated carbide

PVD coatings offer wear resistance due to their hardness.

They are recommended when sharp cutting edges are needed.

## Features of CVD and PVD coated carbide

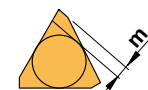
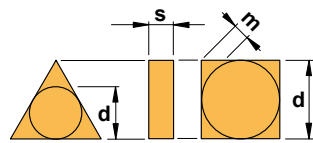
Material		Grade	Colour	Coating composition	Definition
P Steel		<b>TL10</b>	●	TiAlN	A K10 substrate premium grade with built-in wear resistance and a TiAlN-PVD coating for extended life during finishing applications. Used in ball nose finishing and back draft inserts for the die and mould industry, it is capable of running at moderate to high cutting speeds.
		<b>TL20</b>	●	TiAlN	Carbide with TiAlN and lubricity layer PVD coating. It has a lower friction coefficient and a lower cutting energy during finishing. The sharper cutting edge reduces the built-up edge damage and gives the workpiece an excellent surface finish. Recommended for alloyed steel.
		<b>TL40</b>	●	TiAlN	A tough, general-purpose TiAlN-PVD-coated carbide grade for medium to heavy milling applications for use in all steels, stainless steels and cast irons. TL40 can be used either wet or dry.
		<b>TIN21</b>	●	TiCN+Al <sub>2</sub> O <sub>3</sub>	A multilayered TiN-TiCN-Al <sub>2</sub> O <sub>3</sub> -TiN-PVD-coated carbide grade with a tough substrate used for medium machining of all steels and ductile cast irons. Best results when machining dry, but it can be used wet.
		<b>TIN25</b>	●	TiN-TiC-TiN	Coated with TiN-TiC-TiN. The CVD coating has a thickness of 3-5 microns for use on steel, alloyed steel and stainless steel, with or without coolant.
M Stainless		<b>TIN28</b>	●	TiCN	A thin PVD coated TiCN layer on a tough substrate, for milling, parting and grooving on stainless and alloyed steels at low to medium cutting speeds and for unstable machining conditions.
		<b>ML30</b>	●	TiAlSiN	Fine grained carbide substrate with thin, smooth PVD coating. Ideal grade for milling of austenitic stainless steels and materials from the Duplex group with low to medium cutting speeds. Also for wet machining, although minimum coolant supply is recommended.
N Non ferrous materials		<b>ZR10</b>	●	TiB <sub>2</sub>	Micrograin grade with an extremely hard single TiB <sub>2</sub> layer for machining aluminium, copper alloys and plastics.



# ISO Code key

INSERT SHAPE		
V	Rhombic 35°	
D	Rhombic 55°	
E	Rhombic 75°	
C	Rhombic 80°	
M	Rhombic 86°	
K	Parallelogram 55°	
B	Parallelogram 82°	
A	Parallelogram 85°	
L	Rectangular 90°	
P	Pentagonal 108°	
H	Hexagonal 120°	
O	Octagonal 135°	
R	Round	
S	Square 90°	
T	Triangular 60°	
W	Trigon 80°	
X	Special design	

TOLERANCES										
	m	Ø d	s	Detail of M Class insert tolerance (Tolerance of nose height m)						
A	±0.005	±0.025	±0.025	D.I.C						
F	±0.005	±0.013	±0.025	<b>6.35</b>	±0.08	±0.08	±0.08	±0.11	±0.16	-
C	±0.013	±0.025	±0.025	<b>9.525</b>	±0.08	±0.08	±0.08	±0.11	±0.16	-
H	±0.013	±0.013	±0.025	<b>12.70</b>	±0.13	±0.13	±0.13	±0.15	-	-
E	±0.025	±0.025	±0.025	<b>15.875</b>	±0.15	±0.15	±0.15	±0.18	-	-
G	±0.025	±0.025	±0.013	<b>19.05</b>	±0.15	±0.15	±0.15	±0.18	-	-
J	±0.005	±0.05 - ±0.15	±0.025	<b>25.40</b>	-	±0.18	-	-	-	-
K	±0.013	±0.05 - ±0.15	±0.025	<b>31.75</b>	-	±0.20	-	-	-	-
L	±0.025	±0.05 - ±0.15	±0.025	Detail of M Class insert tolerance (Tolerance of inscribed circle d)						
M	±0.08 - ±0.20	±0.05 - ±0.15	±0.13	D.I.C						
N	±0.08 - ±0.20	±0.05 - ±0.15	±0.025	<b>6.35</b>	±0.05	±0.05	±0.05	±0.05	±0.05	-
U	±0.13 - ±0.38	±0.08 - ±0.25	±0.13	<b>9.525</b>	±0.05	±0.05	±0.05	±0.05	±0.05	±0.05
				<b>12.70</b>	±0.08	±0.08	±0.08	±0.08	-	±0.08
				<b>15.875</b>	±0.10	±0.10	±0.10	±0.10	-	±0.10
				<b>19.05</b>	±0.10	±0.10	±0.10	±0.10	-	±0.10
				<b>25.40</b>	-	±0.13	-	-	-	±0.13
				<b>31.75</b>	-	±0.15	-	-	-	±0.15



Triangular insert with a facet (Secondary cutting edge)

## S E K N

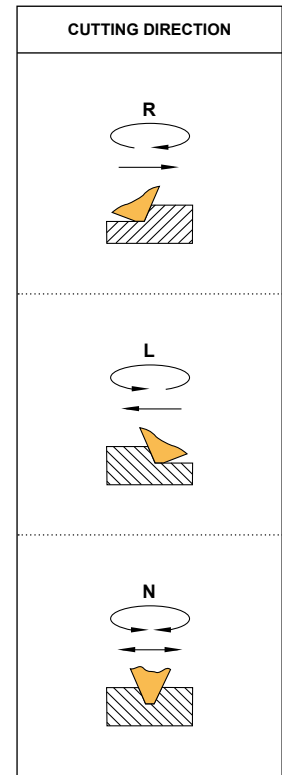
CLEARANCE ANGLE		
A	3°	
B	5°	
C	7°	
D	15°	
E	20°	
F	25°	
G	30°	
N	0°	
P	11°	

SYMBOL FOR FIXING AND/OR FOR CHIPBREAKER (Metric)				
	Hole	Hole configuration	Chipbreaker	Figure
N	Without hole	-	No	
R	Without hole	-	One-sided	
F	Without hole	-	Double-sided	
A	With hole	Cylindrical hole	No	
M	With hole	Cylindrical hole	One-sided	
G	With hole	Cylindrical hole	Double-sided	
W	With hole	Cylindrical hole + One countersink (40-60°)	No	
T	With hole	Cylindrical hole + One countersink (40-60°)	One-sided	
Q	With hole	Cylindrical hole + Double countersink (40-60°)	No	
U	With hole	Cylindrical hole + Double countersink (40-60°)	Double-sided	
B	With hole	Cylindrical hole + One countersink (70-90°)	No	
H	With hole	Cylindrical hole + One countersink (70-90°)	One-sided	
C	With hole	Cylindrical hole + Double countersink (70-90°)	No	
J	With hole	Cylindrical hole + Double countersink (70-90°)	Double-sided	
X	-	-	-	Special

SYMBOL FOR INSERT SIZE									
V	D	C	S	T	W	R			
	04	03	03	06			5/32	3,97	
08	05	04	04	08				4,76	
09	06	05	05	09	03		7/32	5,56	
						06		6,00	
11	07	06	06	11	04		1/4	6,35	
13	09	08	07	13	05			7,94	
						08		8,00	
16	11	09	09	16	06		3/8	9,52	
						10		10,00	
						12		12,00	
22	15	12	12	22	08		1/2	12,70	
	19	16	15	27	10		5/8	15,87	
	23	19	19	33	13		3/4	19,00	
	27	22	22	38				22,22	
						20		20,00	
						25		25,00	
	31	25	25	44			1	25,40	
	38	32	31	54				31,75	
						32		32,00	

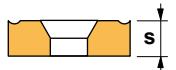
SYMBOL FOR INSERT SIZE (inch.)	

INSERT CORNER			
00	0,0	12	1,2
M0	0,0	16	1,6
02	0,2	20	2,0
04	0,4	24	2,4
08	0,8	32	3,2
SECONDARY CUTTING EDGE			
A	45°	F	85°
D	60°	P	90°
E	75°		
CLEARANCE ANGLE			
A	3°	F	25°
B	5°	G	30°
C	7°	N	0°
D	15°	P	11°
E	20°	Z	Special

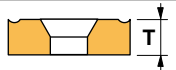


**12 03 AF 04 E N 3 A**  
**4 2**

SYMBOL FOR INSERT THICKNESS		
SYMBOL	inch.	mm
01	1/16	1,59
02	3/32	2,38
03	1/8	3,18
T3	5/32	3,97
04	3/16	4,76
05	7/32	5,56
06	1/4	6,35
07	5/16	7,94
09	3/8	9,52




SYMBOL FOR INSERT THICKNESS (inch.)	
1	1/16
2	1/8
3	3/16
4	1/4
5	5/16
6	3/8




SYMBOL FOR CUTTING EDGE CONDITION	
SYMBOL	CUTTING EDGE
F	Sharp
E	Honed
T	Chamfered
S	Chamfered and honed
K	Double-chamfered
P	Double-chamfered and honed
























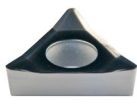

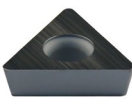
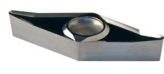

For special forms of the chip groove in the 10° position, manufacturer specific chip grooves and designations can be indicated.

CUTTING EDGE	
≤ 1,2	1
1,4	2
2,0	3
2,4	4



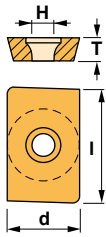
CUTTING DIRECTION	
0	A
0,08 x 40°	B
0,15 x 15°	C
0,15 x 25°	D
0,20 x 10°	E
0,20 x 15°	F
0,20 x 22°	G
0,15 x 20°	X




<p><b>ADMW-R</b></p>  <p>Page G07 15° <input checked="" type="checkbox"/></p>	<p><b>APHT-AL</b></p>  <p>Page G07 11° <input checked="" type="checkbox"/></p>	<p><b>APKT</b></p>  <p>Page G07 11° <input checked="" type="checkbox"/></p>	<p><b>APMT</b></p>  <p>Page G07 11° <input checked="" type="checkbox"/></p>		
<p><b>HIBF</b></p>  <p>Page G08</p>	<p><b>HIBS</b></p>  <p>Page G08</p>				
<p><b>LNMM</b></p>  <p>Page G08</p>	<p><b>NNMU</b></p>  <p>Page G09</p>				
<p><b>RDHW</b></p>  <p>Page G09 15° <input checked="" type="checkbox"/></p>	<p><b>RDMT</b></p>  <p>Page G09 15° <input checked="" type="checkbox"/></p>	<p><b>RDMW</b></p>  <p>Page G10 15° <input checked="" type="checkbox"/></p>	<p><b>RPMT</b></p>  <p>Page G10 11° <input checked="" type="checkbox"/></p>	<p><b>RPMW</b></p>  <p>Page G10 11° <input checked="" type="checkbox"/></p>	
<p><b>SDMT</b></p>  <p>Page G11 15° <input checked="" type="checkbox"/></p>	<p><b>SEHT</b></p>  <p>Page G11 20° <input checked="" type="checkbox"/></p>	<p><b>SEHT-AL</b></p>  <p>Page G11 20° <input checked="" type="checkbox"/></p>	<p><b>SEHW</b></p>  <p>Page G11 20° <input checked="" type="checkbox"/></p>	<p><b>SEMT</b></p>  <p>Page G11 20° <input checked="" type="checkbox"/></p>	<p><b>SNHX</b></p>  <p>Page G12 0° <input type="checkbox"/></p>
<p><b>SNMX</b></p>  <p>Page G12 0° <input type="checkbox"/></p>	<p><b>SPMT</b></p>  <p>Page G12 11° <input checked="" type="checkbox"/></p>	<p><b>SPMT</b></p>  <p>Page G13 11° <input checked="" type="checkbox"/></p>	<p><b>SPMX</b></p>  <p>Page G13 11° <input checked="" type="checkbox"/></p>		
<p><b>TCGT-AL</b></p>  <p>Page G13 7° <input checked="" type="checkbox"/></p>	<p><b>TCMT-39</b></p>  <p>Page G13 7° <input checked="" type="checkbox"/></p>	<p><b>TCMW</b></p>  <p>Page G14 7° <input checked="" type="checkbox"/></p>			
<p><b>VCGT-AL</b></p>  <p>Page G14 7° <input checked="" type="checkbox"/></p>	<p><b>VCGT-AP</b></p>  <p>Page G14 7° <input checked="" type="checkbox"/></p>				



### Parallelogram inserts / Positive



**USE CLASSIFICATION**

- Continuous
- ◐ Slight interruption
- ⊕ Interruption

**AVAILABILITY**

- Standard item
- Check availability

<b>P</b> Steel	●	⊕	⊕	⊕	⊕	●	●	⊕
<b>M</b> Stainless	●	●	●	●	●	●	●	●
<b>K</b> Cast iron	●	⊕	⊕	⊕	⊕	●	●	●
<b>N</b> Non ferrous materials	⊕	●	●	●	●	●	●	⊕
<b>S</b> Heat-resistant alloys	●	●	●	●	●	●	●	●
<b>H</b> Hard materials	●	●	●	●	●	●	●	●

### ADMW-R



Reference	l	T	d	r	KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
ADMW1503R0.031	0.590	0.125	0.375	1/32					●					
ADMW1503R0.046	0.590	0.125	0.375	3/64					●					
ADMW1503R0.062	0.590	0.125	0.375	1/16					●					
ADMW1503R0.078	0.590	0.125	0.375	5/64					●					
ADMW1503R0.093	0.590	0.125	0.375	3/32					●					
ADMW1503R0.109	0.590	0.125	0.375	7/64					●					
ADMW1503R0.125	0.590	0.125	0.375	1/8					●					
ADMW1503R0.156	0.590	0.125	0.375	5/32					●					
ADMW1503R0.171	0.590	0.125	0.375	11/64					●					
ADMW1503R0.187	0.590	0.125	0.375	3/16					●					

### APHT-AL



Reference	l	T	d	r	H	KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
APHT1003PDFR-AL	0.375	0.125	0.250	-	0.110	●									●
APHT1604PDFR-AL	0.669	0.187	0.375	-	0.110	●									●

### APKT



Reference	l	T	d	r	H	KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
APKT1003PDR	0.375	0.125	0.250	0.016	0.110						●				
APKT1003PDTR	0.375	0.125	0.250	0.016	0.110		●		●	●					
APKT1604PDR	0.630	0.187	0.375	0.031	0.110		●		●	●	●				
APKT160416	0.630	0.187	0.375	0.060	0.110				●	●	●				
APKT160424	0.630	0.187	0.375	0.094	0.173				●	●	●				
APKT160432	0.630	0.187	0.375	0.125	0.173				●	●	●				

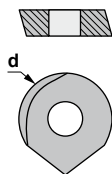
### APMT



Reference	l	T	d	r	H	KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
APMT1604PDER	0.630	0.187	0.375	0.031	0.173	●	●			●				●	



## Round inserts / Positive



**USE CLASSIFICATION**

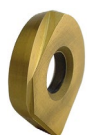
- Continuous
- ◐ Slight interruption
- ⊕ Interruption

**AVAILABILITY**

- Standard item
- Check availability

<b>P</b> Steel	●	⊕	●	⊕	●	⊕	●	⊕	●	⊕
<b>M</b> Stainless	●	●	●	●	●	●	●	●	●	●
<b>K</b> Cast iron	●	⊕	⊕	⊕	⊕	●	⊕	⊕	⊕	⊕
<b>N</b> Non ferrous materials	⊕	●	●	●	●	●	●	●	●	⊕
<b>S</b> Heat-resistant alloys	●	●	●	●	●	●	●	●	●	●
<b>H</b> Hard materials	●	●	●	●	●	●	●	●	●	●

### HIBF



Reference	d
HIBF0375	0.375
HIBF0500	0.500
HIBF0625	0.625
HIBF0750	0.750
HIBF1000	1.000
HIBF1250	1.250

KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
●	●	●	●	●	●	●	●	●	●

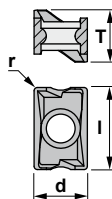
### HIBS



Reference	d
HIBS0375	0.375
HIBS0500	0.500
HIBS0625	0.625
HIBS0750	0.750
HIBS1000	1.000
HIBS1250	1.250

KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
●	●	●	●	●	●	●	●	●	●

## Rectangular inserts / Negative



**USE CLASSIFICATION**

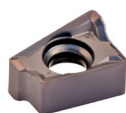
- Continuous
- ◐ Slight interruption
- ⊕ Interruption

**AVAILABILITY**

- Standard item
- Check availability

<b>P</b> Steel	●	⊕	●	⊕	●	⊕	●	⊕	●	⊕
<b>M</b> Stainless	●	●	●	●	●	●	●	●	●	●
<b>K</b> Cast iron	●	⊕	⊕	⊕	⊕	●	⊕	⊕	⊕	⊕
<b>N</b> Non ferrous materials	⊕	●	●	●	●	●	●	●	●	⊕
<b>S</b> Heat-resistant alloys	●	●	●	●	●	●	●	●	●	●
<b>H</b> Hard materials	●	●	●	●	●	●	●	●	●	●

### LNMM

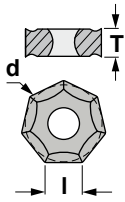


Reference	l	T	d	r
LNMM100605	0.394	0.256	0.256	0.020
LNMM151008	0.590	0.394	0.394	0.031

KM15	PM25	PM40	TIN21	TIN25	ML30	TL10	TL20	TL40	ZR10
●	●	●	●	●	●	●	●	●	●



### Heptagonal inserts / Negative



**USE CLASSIFICATION**

- Continuous
- ◐ Slight interruption
- ⊕ Interruption

**AVAILABILITY**

- Standard item
- Check availability

<b>P</b> Steel	●	⊕	●	⊕	●	⊕	●	⊕	●	⊕
<b>M</b> Stainless	●	●	●	●	●	●	●	●	●	●
<b>K</b> Cast iron	●	⊕	⊕	⊕	⊕	●	⊕	⊕	●	⊕
<b>N</b> Non ferrous materials	⊕	●	●	●	●	●	●	●	●	⊕
<b>S</b> Heat-resistant alloys										
<b>H</b> Hard materials										

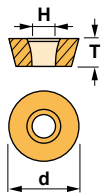


### NNMU

Reference	l	T	d
NNMU200708	0.323	0.285	0.787

KM15	PM25	PM40	TIN21	TIN25	ML30	TL10	TL20	TL40	ZR10
------	------	------	-------	-------	------	------	------	------	------

### Round inserts / Positive



**USE CLASSIFICATION**

- Continuous
- ◐ Slight interruption
- ⊕ Interruption

**AVAILABILITY**

- Standard item
- Check availability

<b>P</b> Steel	●	⊕	●	⊕	●	⊕	●	⊕	●	⊕
<b>M</b> Stainless	●	●	●	●	●	●	●	●	●	●
<b>K</b> Cast iron	●	⊕	⊕	⊕	⊕	●	⊕	⊕	●	⊕
<b>N</b> Non ferrous materials	⊕	●	●	●	●	●	●	●	●	⊕
<b>S</b> Heat-resistant alloys										
<b>H</b> Hard materials										



### RDHW



Reference	T	d	H
RDHW0702M0	0.094	0.275	0.108
RDHW1003M0	0.125	0.394	0.159
RDHW12T3M0	0.156	0.472	0.165
RDHW1604M0	0.187	0.630	0.201
RDHW2006M0	0.250	0.787	0.219

KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
------	------	------	-------	-------	-------	------	------	------	------



### RDMT

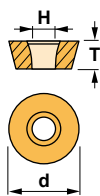


Reference	T	d	H
RDMT1003M0	0.125	0.394	0.159
RDMT12T3M0	0.156	0.472	0.165
RDMT1604M0	0.187	0.630	0.200

KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
------	------	------	-------	-------	-------	------	------	------	------



## Round inserts / Positive



- USE CLASSIFICATION**
- Continuous
  - ◐ Slight interruption
  - ⊕ Interruption
- AVAILABILITY**
- Standard item
  - Check availability

<b>P</b> Steel	●	⊕	●	⊕	●	⊕	●	⊕
<b>M</b> Stainless	●	●	●	●	●	●	●	●
<b>K</b> Cast iron	●	⊕	⊕	⊕	●	●	●	●
<b>N</b> Non ferrous materials	⊕	●	●	●	●	●	●	⊕
<b>S</b> Heat-resistant alloys	●	●	●	●	●	●	●	●
<b>H</b> Hard materials	●	●	●	●	●	●	●	●



### RDMW



Reference	T	d	H	KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
RDMW1003M0	0.125	0.394	0.165								●	●	
RDMW12T3M0	0.156	0.472	0.165								●	●	
RDMW1204M0	0.187	0.472	0.165								●	●	
RDMW1604M0	0.187	0.630	0.200									●	



### RPMT



Reference	T	d	H	KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
RPMT120400-39	0.187	0.500	0.203		●			●					
RPMT1204M0	0.187	0.472	0.203				●	●					



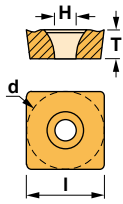
### RPMW



Reference	T	d	H	KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
RPMW0802M0	0.094	0.315	0.126		●			●				●	
RPMW1003M0	0.125	0.394	0.165		●			●				●	
RPMW1204M0	0.187	0.472	0.165										
RPMW1204M0T	0.187	0.472	0.165				●	●					



## Square inserts / Positive



**USE CLASSIFICATION**

- Continuous
- ◐ Slight interruption
- ⊕ Interruption

**AVAILABILITY**

- Standard item
- Check availability

<b>P</b> Steel	●	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
<b>M</b> Stainless	●	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
<b>K</b> Cast iron	●	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
<b>N</b> Non ferrous materials	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
<b>S</b> Heat-resistant alloys	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
<b>H</b> Hard materials	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕



### SDMT



Reference	l	T	d	r	KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
SDMT09T308	0.375	0.156	0.375	0.031				●						
SDMT120508	0.486	0.197	0.486	0.031				●					●	



### SEHT



Reference	l	T	d	H	KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
SEHT43AFN	0.500	0.187	0.500	0.203				●	●					



### SEHT-AL



Reference	l	T	d	H	KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
SEHT1204AFFN-AL	0.500	0.125	0.500	0.203	●									●



### SEHW



Reference	l	T	d	H	KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
SEHW43AFEN001	0.500	0.187	0.500	0.203	●									
SEHW43AFSN151	0.500	0.187	0.500	0.203		●		●	●					



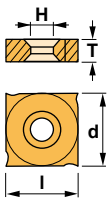
### SEMT



Reference	l	T	d	KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
SEMT1204AFTN	0.500	0.187	0.500						●				



### Square inserts / Negative



- USE CLASSIFICATION**
- Continuous
  - ◐ Slight interruption
  - ⊕ Interruption
- AVAILABILITY**
- Standard item
  - Check availability

<b>P</b> Steel	●	⊕	●	⊕	●	⊕	●	⊕
<b>M</b> Stainless	●	●	●	⊕	●	●	●	●
<b>K</b> Cast iron	●	⊕	⊕	⊕	●	●	●	●
<b>N</b> Non ferrous materials	⊕	●	●	●	●	●	●	⊕
<b>S</b> Heat-resistant alloys	●	●	●	●	●	●	●	●
<b>H</b> Hard materials	●	●	●	●	●	●	●	●

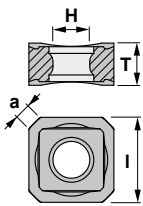
### SNHX



Reference	l	T	d	H
SNHX1102XX	0.433	0.094	0.433	0.165
SNHX1103XX	0.433	0.106	0.433	0.165
SNHX1203XX	0.500	0.125	0.500	0.203
SNHX12045XX	0.500	0.177	0.500	0.203
SNHX1205XX	0.500	0.213	0.500	0.203
SNHX1207XX	0.500	0.276	0.500	0.203

KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
●	●	●	●	●	●	●	●	●	●

### Square inserts / Negative



- USE CLASSIFICATION**
- Continuous
  - ◐ Slight interruption
  - ⊕ Interruption
- AVAILABILITY**
- Standard item
  - Check availability

<b>P</b> Steel	●	⊕	●	⊕	●	⊕	●	⊕
<b>M</b> Stainless	●	●	●	⊕	●	●	●	●
<b>K</b> Cast iron	●	⊕	⊕	⊕	●	●	●	●
<b>N</b> Non ferrous materials	⊕	●	●	●	●	●	●	⊕
<b>S</b> Heat-resistant alloys	●	●	●	●	●	●	●	●
<b>H</b> Hard materials	●	●	●	●	●	●	●	●

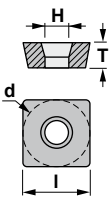
### SNMX



Reference	l	T	a
SNMX1206ANSN	0.500	0.250	0.093

KM15	PM25	PM40	TIN21	TIN25	ML30	TL10	TL20	TL40	ZR10
●	●	●	●	●	●	●	●	●	●

### Square inserts / Positive



- USE CLASSIFICATION**
- Continuous
  - ◐ Slight interruption
  - ⊕ Interruption
- AVAILABILITY**
- Standard item
  - Check availability

<b>P</b> Steel	●	⊕	●	⊕	●	⊕	●	⊕
<b>M</b> Stainless	●	●	●	⊕	●	●	●	●
<b>K</b> Cast iron	●	⊕	⊕	⊕	●	●	●	●
<b>N</b> Non ferrous materials	⊕	●	●	●	●	●	●	⊕
<b>S</b> Heat-resistant alloys	●	●	●	●	●	●	●	●
<b>H</b> Hard materials	●	●	●	●	●	●	●	●

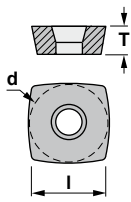
### SPMT



Reference	l	T	d	r	H
SPMT060304	0.250	0.125	0.250	0.016	0.105
SPMT070308	0.312	0.125	0.312	0.031	0.105
SPMT090308	0.375	0.125	0.375	0.031	0.133
SPMT120408	0.500	0.187	0.500	0.031	0.220

KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
●	●	●	●	●	●	●	●	●	●

### High feed inserts / Positive



- USE CLASSIFICATION**
- Continuous
  - ◐ Slight interruption
  - ⊕ Interruption
- AVAILABILITY**
- Standard item
  - Check availability

<b>P</b> Steel	●	⊕	●	⊕	●	⊕	●	⊕	●	⊕
<b>M</b> Stainless	●	●	●	●	●	●	●	●	●	●
<b>K</b> Cast iron	●	⊕	⊕	⊕	⊕	●	⊕	⊕	⊕	⊕
<b>N</b> Non ferrous materials	⊕	●	●	●	●	●	●	●	●	⊕
<b>S</b> Heat-resistant alloys	●	●	●	●	●	●	●	●	●	●
<b>H</b> Hard materials	●	●	●	●	●	●	●	●	●	●



#### SPMT



Reference	l	T	d
SPMT073505	0.275	0.137	0.275
SPMT094506	0.380	0.173	0.380
SPMT115506	0.457	0.212	0.457

KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	ML30	TL40	ZR10
●	●	●	●	●	●	●	●	●	●



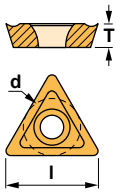
#### SPMX



Reference	l	T	d
SPMX073505	0.275	0.137	0.275
SPMX094506	0.380	0.173	0.380
SPMX115506	0.457	0.212	0.457

KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
●	●	●	●	●	●	●	●	●	●

### Triangular inserts / Positive



- USE CLASSIFICATION**
- Continuous
  - ◐ Slight interruption
  - ⊕ Interruption
- AVAILABILITY**
- Standard item
  - Check availability

<b>P</b> Steel	●	⊕	●	⊕	●	⊕	●	⊕	●	⊕
<b>M</b> Stainless	●	●	●	●	●	●	●	●	●	●
<b>K</b> Cast iron	●	⊕	⊕	⊕	⊕	●	⊕	⊕	⊕	⊕
<b>N</b> Non ferrous materials	⊕	●	●	●	●	●	●	●	●	⊕
<b>S</b> Heat-resistant alloys	●	●	●	●	●	●	●	●	●	●
<b>H</b> Hard materials	●	●	●	●	●	●	●	●	●	●



#### TCGT-AL



Reference	l	T	d	r	H
TCGT21.50-AL	0.433	0.094	0.250	0.008	0.110
TCGT21.51-AL	0.433	0.094	0.250	0.016	0.110
TCGT32.50-AL	0.650	0.156	0.375	0.008	0.173
TCGT32.51-AL	0.650	0.156	0.375	0.016	0.173
TCGT32.52-AL	0.650	0.156	0.375	0.031	0.173

KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
●	●	●	●	●	●	●	●	●	○



#### TCMT-39

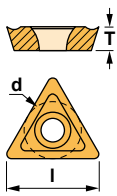


Reference	l	T	d	r	H
TCMT32.52-39	0.650	0.156	0.375	0.031	0.173
TCMT32.53-39	0.650	0.156	0.375	0.047	0.173

KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
●	●	●	●	●	●	●	●	●	○

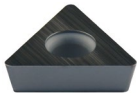


Triangular inserts / Positive



- USE CLASSIFICATION**
- Continuous
  - Slight interruption
  - ⊕ Interruption
- AVAILABILITY**
- Standard item
  - Check availability

<b>P</b> Steel	●	●	●	●	●	●	●	●	●
<b>M</b> Stainless	●	●	●	●	●	●	●	●	●
<b>K</b> Cast iron	●	⊕	⊕	⊕	●	●	●	●	●
<b>N</b> Non ferrous materials	●	●	●	●	●	●	●	●	●
<b>S</b> Heat-resistant alloys	●	●	●	●	●	●	●	●	●
<b>H</b> Hard materials	●	●	●	●	●	●	●	●	●

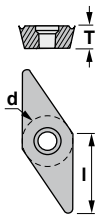


**TCMW**



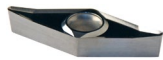
Reference	l	T	d	r	H	KM15	PM25	PM40	TIN21	TIN25	TIN28	TL10	TL20	TL40	ZR10
TCMW21.51	0.433	0.094	0.250	0.016	0.016	○	●								
TCMW32.51	0.650	0.156	0.375	0.016	0.016	●									
TCMW32.52	0.650	0.156	0.375	0.031	0.031	●	●							○	

35° Rhombic inserts / Positive



- USE CLASSIFICATION**
- Continuous
  - Slight interruption
  - ⊕ Interruption
- AVAILABILITY**
- Standard item
  - Check Availability

<b>P</b> Steel	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>M</b> Stainless	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>K</b> Cast iron	●	⊕	⊕	●	●	●	●	●	●	●	●	●	●	●	●
<b>N</b> Non ferrous materials	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>S</b> Heat-resistant alloys	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>H</b> Hard materials	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●



**VCGT-AL**



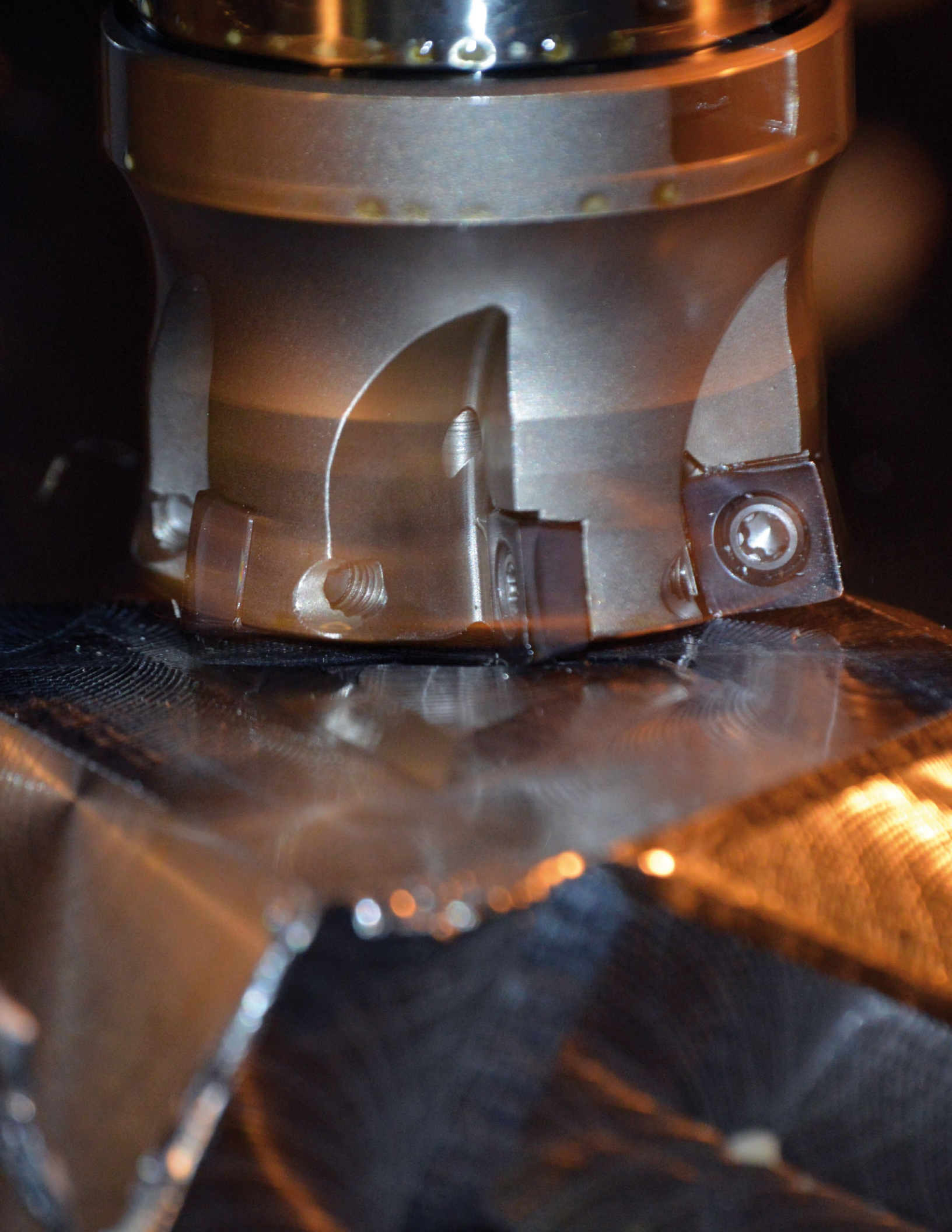
Reference	l	T	d	r	KM15	PM25	PM40	NC25	TN15	TN20	TN30	TN35	TK15	TS15	TS20	TIN25	ZR10
VCGT331-AL	0.650	0.187	0.375	0.016	●												○
VCGT332-AL	0.650	0.187	0.375	0.031	●												○
VCGT333-AL	0.650	0.187	0.375	0.047	●												○
VCGT220530-AL	0.870	0.219	0.500	0.118	●												○

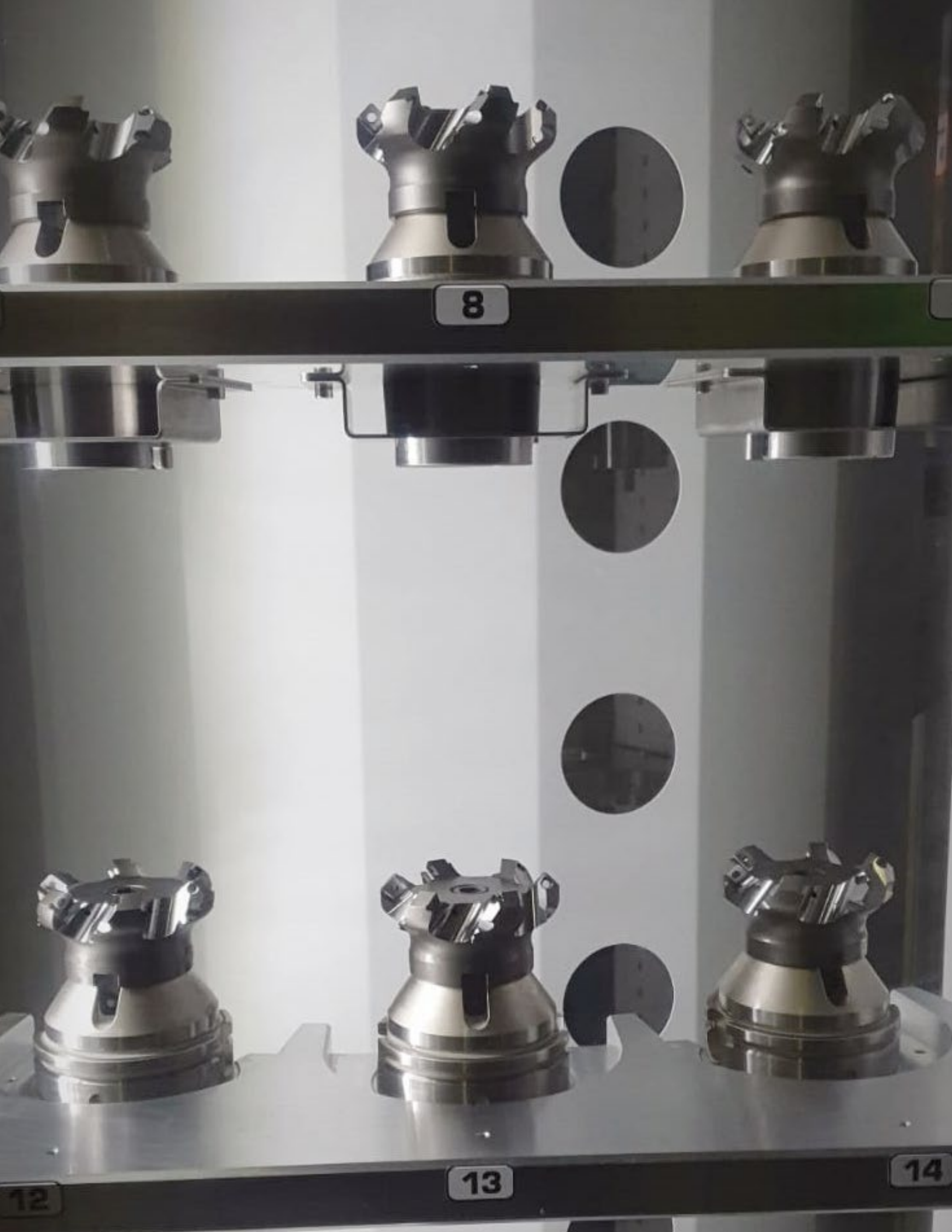


**VCGT-AP**



Reference	l	T	d	r	KM15	PM25	PM40	NC25	TN15	TN20	TN30	TN35	TK15	TS15	TS20	TIN25	ZR10
VCGT331-AP	0.650	0.187	0.375	0.016	●												○
VCGT332-AP	0.650	0.187	0.375	0.031	●												○
VCGT333-AP	0.650	0.187	0.375	0.047	●												○
VCGT220530-AP	0.870	0.219	0.500	0.118	●												○





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