

PVD SERIES

MULTI-PURPOSE TURNING & SMALL PART MACHINING

PVD coatings are thinner than CVD coatings and are ideally suited to turning smaller parts where the contact time is low, such as sliding head turning as well as multi-purpose general turning.

The PVD coating enables a sharper cutting edge compared to CVD and gives excellent performance across a wide range of materials where cutting time is short (ideally on workpieces below Ø50mm where metal removal is relatively small).

- **PC5300:** tough grade suitable for continuous or intermittent cutting of steel, stainless steel and exotics.
- **PC8110:** hard wearing grade suitable for continuous high speed cutting of tool steel, stainless steel, exotics & cast iron.

P Steel	H Hardened Steel	M Stainless Steel	S HRSA's	K Cast Iron	N Non-Ferrous
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1st CHOICE FOR SMALL PART OR MULTI-PURPOSE TURNING

PVD vs CVD COATINGS

The type of coating you use on a turning insert can make a huge difference to tool life, performance or surface finish. Just selecting a 'stainless steel grade' may not give you the results you want.

PVD coatings are thinner than CVD coatings, meaning the insert maintains a sharper cutting edge. PVD coated turning inserts give better performance when the duration of cutting is shorter which is normally in small part machining or finishing applications. PVD inserts are also excellent at cutting a wide range of different materials with 1 grade.

As CVD coatings are thicker, they are generally better suited to larger diameter workpieces where the contact time is longer and more heat is generated and therefore offer greater wear resistance than PVD coatings in these applications. However they do not offer good performance when turning small parts, finishing or in short contact time applications.

CHIP BREAKER GUIDE

VM

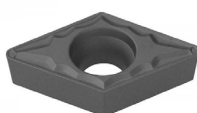
First choice chip breaker for steel and cast iron medium to heavy turning, also suitable for general machining of all metals (negative inserts only).



Depth of cut: 1.0-5.0mm
Feed rate: 0.15-0.45mm/rev

HMP

First choice chip breaker for positive geometry inserts for steel, stainless, cast iron and exotics. Excellent chip control from 0.5mm depth of cut.



Depth of cut: 0.5-3.5mm
Feed rate: 0.08-0.40mm/rev

HS

Medium to rough machining of stainless steels and HRSA's. Also suitable for general turning applications.



Depth of cut: 0.5-4.5mm
Feed rate: 0.10-0.40mm/rev

VP2

Medium to finish turning of stainless steels and HRSA's. High positive cutting edge design gives stable chip control and excellent surface finish in a wide range of cut depths.



Depth of cut: 0.5-4.5mm
Feed rate: 0.10-0.40mm/rev

RECOMMENDED CUTTING CONDITIONS

Material Group	Material	Surface Speed (m/min)	
		PC5300	PC8110
Steel	Low Carbon Steel	135-230	-
	Alloy Steel	105-175	-
	Pre-Hardened Steel / Tool Steel	65-110	70-130
Stainless Steel	Austenitic Stainless (e.g.316)	100-165	115-190
	Martensitic Stainless (e.g.404)	120-200	140-230
	Duplex	75-125	85-145
	17-4PH	75-125	85-145
HRSA's	Inconel, Nickel Alloy	30-50	40-65
	Titanium, Ti-Alloy	35-60	45-75
Cast Iron	Grey Cast Iron	80-130	100-170
	Titanium, Ti-Alloy	50-85	65-110

PC5300/PC8110 PVD COATED TURNING INSERTS FOR MULTI-PURPOSE & SMALL PART TURNING



GRADE		ORDER CODE		PRICE	FEED fn (mm/rev)	DEPTH OF CUT ap (mm)
ISO	RADIUS	PC5300	PC8110			
CCMT060202-HMP	0.2	1-02-040141	1-02-034748		0.03-0.12	0.10-1.50
CCMT060204-HMP	0.4	1-02-036390	1-02-034690		0.06-0.17	0.20-2.40
CCMT060208-HMP	0.8	1-02-039724	1-02-035227		0.08-0.23	0.40-2.40
CCMT09T302-HMP	0.2	1-02-040142	1-02-035228		0.07-0.22	0.10-2.00
CCMT09T304-HMP	0.4	1-02-036391	1-02-034714		0.08-0.23	0.30-3.00
CCMT09T308-HMP	0.8	1-02-036392	1-02-034715		0.10-0.30	0.50-3.00
CCMT120404-HMP	0.4	1-02-037140	-		0.09-0.27	0.30-3.60
CCMT120408-HMP	0.8	1-02-037141	-		0.24-0.36	1.00-3.60
CNMG120404-VM	0.4	1-02-040144	-		0.05-0.30	0.90-5.00
CNMG120408-VM	0.8	1-02-036484	-		0.10-0.50	1.00-5.00
CNMG120412-VM	1.2	1-02-037657	-		0.13-0.60	1.30-5.00
CNMG120404-HS	0.4	1-02-036398	1-02-034750		0.10-0.40	0.40-4.00
CNMG120408-HS	0.8	1-02-036399	1-02-034692		0.15-0.45	0.50-4.50
CNMG120412-HS	1.2	1-02-036400	1-02-034751		0.15-0.50	0.80-5.00
CNMG120404-VP2	0.4	1-02-040924	1-02-040925		0.05-0.30	0.10-3.00
CNMG120408-VP2	0.8	1-02-040927	1-02-040928		0.10-0.40	0.50-4.50
DCMT070202-HMP	0.2	1-02-043507	1-02-040856		0.03-0.12	0.10-1.50
DCMT070204-HMP	0.4	1-02-040150	1-02-034721		0.06-0.17	0.20-2.30
DCMT070208-HMP	0.8	1-02-045079	1-02-038965		0.08-0.23	0.40-2.30
DCMT11T302-HMP	0.2	1-02-036457	1-02-034722		0.04-0.22	0.10-2.00
DCMT11T304-HMP	0.4	1-02-036393	1-02-034723		0.08-0.23	0.30-3.00
DCMT11T308-HMP	0.8	1-02-036394	1-02-034724		0.10-0.30	0.50-3.00
DCMT11T312-HMP	1.2	1-02-046933	-		0.25-0.35	0.80-3.00
DNMG150404-VM	0.4	1-02-040152	-		0.05-0.30	0.90-5.00
DNMG150408-VM	0.8	1-02-039830	-		0.10-0.50	1.00-5.00
DNMG150412-VM	1.2	1-02-036310	-		0.13-0.60	1.30-5.00
DNMG150604-VM	0.4	1-02-053246	-		0.05-0.30	0.90-5.00
DNMG150608-VM	0.8	1-02-037178	-		0.10-0.50	1.00-5.00
DNMG150612-VM	1.2	1-02-047211	-		0.13-0.60	1.30-5.00
DNMG110404-HS	0.4	1-02-042471	1-02-043868		0.10-0.40	0.40-3.80
DNMG110408-HS	0.8	-	1-02-044614		0.15-0.40	0.50-4.00
DNMG150404-HS	0.4	-	1-02-035229		0.10-0.40	0.40-4.00
DNMG150408-HS	0.8	-	1-02-034784		0.15-0.45	0.50-4.50
DNMG150604-HS	0.4	1-02-036401	1-02-034787		0.10-0.40	0.40-4.00
DNMG150608-HS	0.8	1-02-036402	1-02-034727		0.15-0.45	0.50-4.50
DNMG150404-VP2	0.4	1-02-046233	1-02-046234		0.05-0.30	0.10-3.00
DNMG150408-VP2	0.8	1-02-046238	1-02-046220		0.10-0.40	0.50-4.50
DNMG150604-VP2	0.4	1-02-042369	1-02-046219		0.05-0.30	0.10-3.00
DNMG150608-VP2	0.8	1-02-042370	1-02-042371		0.10-0.40	0.50-4.50
SCMT09T304-HMP	0.4	1-02-037142	-		0.08-0.23	0.30-3.00
SCMT09T308-HMP	0.8	1-02-037143	-		0.10-0.30	0.50-3.00

GRADE		ORDER CODE		PRICE	FEED fn (mm/rev)	DEPTH OF CUT ap (mm)
ISO	RADIUS	PC5300	PC8110			
SNMG120404-VM	0.4	1-02-040157	-		0.05-0.30	0.90-5.00
SNMG120408-VM	0.8	1-02-040158	-		0.10-0.50	1.00-5.00
SNMG120412-VM	1.2	1-02-041008	-		0.13-0.60	1.30-5.00
SNMG120404-VP2	0.4	1-02-046224	1-02-046229		0.05-0.30	0.10-3.00
SNMG120408-VP2	0.8	1-02-046239	1-02-046235		0.10-0.40	0.50-4.50
TCMT110204-HMP	0.4	1-02-037145	1-02-041310		0.06-0.19	0.20-2.50
TCMT110208-HMP	0.8	1-02-037146	-		0.09-0.26	0.40-2.50
TCMT16T304-HMP	0.4	1-02-036395	1-02-034839		0.08-0.23	0.30-3.00
TCMT16T308-HMP	0.8	1-02-037147	1-02-038156		0.10-0.30	0.50-3.00
TNMG160404-VM	0.4	1-02-038686	-		0.05-0.30	0.90-5.00
TNMG160408-VM	0.8	1-02-038598	-		0.10-0.50	1.00-5.00
TNMG160412-VM	1.2	1-02-040161	-		0.13-0.60	1.30-5.00
TNMG220404-VM	0.4	1-02-040164	-		0.05-0.30	0.90-6.60
TNMG220408-VM	0.8	1-02-040167	-		0.10-0.50	1.00-6.60
TNMG160404-HS	0.4	1-02-037122	1-02-034732		0.10-0.40	0.40-3.50
TNMG160408-HS	0.8	1-02-036410	1-02-034773		0.15-0.45	0.50-4.00
TNMG160404-VP2	0.4	1-02-046225	1-02-046230		0.05-0.30	0.10-3.00
TNMG160408-VP2	0.8	1-02-046240	1-02-046218		0.10-0.45	0.50-5.00
TNMG220404-VP2	0.4	1-02-046167	1-02-051719		0.05-0.30	0.80-5.00
TNMG220408-VP2	0.8	1-02-047148	1-02-051720		0.10-0.40	0.80-5.00
VBMT110304-HMP	0.4	1-02-036985	-		0.03-0.20	0.15-2.70
VBMT160404-HMP	0.4	1-02-042704	1-02-034777		0.07-0.20	0.20-2.70
VBMT160408-HMP	0.8	1-02-037148	1-02-034746		0.09-0.27	0.50-2.70
VCMT160404-HMP	0.4	1-02-040172	1-02-036124		0.07-0.20	0.20-2.70
VCMT160408-HMP	0.8	1-02-040173	1-02-036153		0.09-0.27	0.50-2.70
VNMG160404-VM	0.4	1-02-038601	-		0.05-0.30	0.90-5.00
VNMG160408-VM	0.8	1-02-038950	-		0.10-0.50	1.00-5.00
VNMG160404-VP2	0.4	-	1-02-069235		0.05-0.30	0.10-3.00
WNMG060404-VM	0.4	1-02-039831	-		0.10-0.45	1.00-3.50
WNMG060408-VM	0.8	1-02-039832	-		0.10-0.50	1.00-4.00
WNMG080404-VM	0.4	1-02-040182	-		0.05-0.30	0.90-5.00
WNMG080408-VM	0.8	1-02-038008	-		0.10-0.50	1.00-5.00
WNMG080412-VM	1.2	1-02-040186	-		0.10-0.50	1.00-5.00
WNMG060404-HS	0.4	1-02-037124	1-02-034736		0.10-0.40	0.40-2.80
WNMG060408-HS	0.8	1-02-036413	1-02-034737		0.15-0.45	0.50-3.00
WNMG060412-HS	1.2	1-02-037125	1-02-037455		0.15-0.50	0.80-3.20
WNMG080404-HS	0.4	1-02-038794	1-02-034739		0.10-0.40	0.40-4.00
WNMG080408-HS	0.8	1-02-036414	1-02-034741		0.15-0.45	0.50-4.50
WNMG080412-HS	1.2	1-02-040185	1-02-036125		0.15-0.50	0.80-5.00
WNMG080404-VP2	0.4	1-02-046226	1-02-046227		0.10-0.45	0.50-5.00
WNMG080408-VP2	0.8	1-02-045612	1-02-046228		0.12-0.50	0.50-5.00
WNMG080412-VP2	1.2	1-02-046497	1-02-046496		0.05-0.30	0.10-3.00

POSITIVE TURNING INSERTS

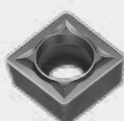
CCMT



TCMT



SCMT



DCMT



VBMT

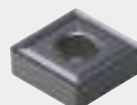


VCMT



NEGATIVE TURNING INSERTS

CNMG



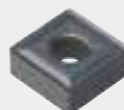
TNMG



DNMG



SNMG



VNMG



WNMG

