

Heavy Duty Turning



Hi-Tech Cutting Tool Co., Ltd.

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CONTENTS



GEOMETRY AND GRADE P3

CUTTING PARAMETER P4

HEAVY TURNING INSERTS P5

NEGATIVE TURNING INSERTS	<u>CNMM16 ...80° Diamond</u>	<u>P5-P6</u>
	<u>CNMM19 ...80° Diamond</u>	<u>P5-P6</u>
	<u>CNMM25 ...80° Diamond</u>	<u>P5-P6</u>
	<u>SNMM15 ...90° Square</u>	<u>P5-P6</u>
	<u>SNMM19 ...90° Square</u>	<u>P5-P6</u>
	<u>SNMM25 ...90° Square</u>	<u>P5-P6</u>
	<u>CNMG16 ...80° Diamond</u>	<u>P7</u>
	<u>CNMG19 ...80° Diamond</u>	<u>P7</u>
	<u>DNMG15 ...80° Diamond</u>	<u>P7</u>
	<u>SNMG15 ...90° Square</u>	<u>P8</u>
	<u>SNMG19 ...90° Square</u>	<u>P8</u>
	<u>SNMG25 ...90° Square</u>	<u>P8</u>
	<u>TNMG27 ...90° Triangle</u>	<u>P8</u>

APPLICATION CASES P9

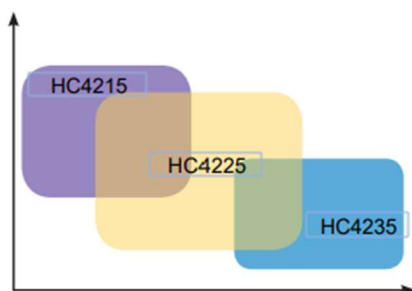
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Geometry and Grades

				
HL Light turning	HM 1st option, general	HI Interrupted turning	HL-D Light turning	HM-D 1st option, general
Light cutting, wide chip breaking range, suitable for continuous cutting or heavy turning with small allowance.	The geometry structure takes into the requirements of chip control and strength, suitable for continuous and weakly interrupted heavy turning.	The cutting edge is strengthened with high safety, suitable for heavy-duty turning under intermittent and other unstable conditions.	Double-sided inserts, heavy-duty with low-parameter geometry, good chip flow control, suitable for stable working conditions or small allowance turning.	Double-sided inserts, general geometry, the structure takes into chip control and strength, is extremely economical under stable working conditions.

Hardness



CVD Coating	HC4215	High hardness substrate, thick TiCN and Al ₂ O ₃ coating, Excellent wear resistance, suitable for heavy turning under continuous working conditions
	HC4225	Substrate with both hardness and strength, thick TiCN and Al ₂ O ₃ coating, excellent wear resistance, applied in continuous and light intermittent turning.
	HC4235	High strength substrate, thick TiCN and Al ₂ O ₃ coating, excellent impact resistance, suitable for heavy intermittent heavy turning.

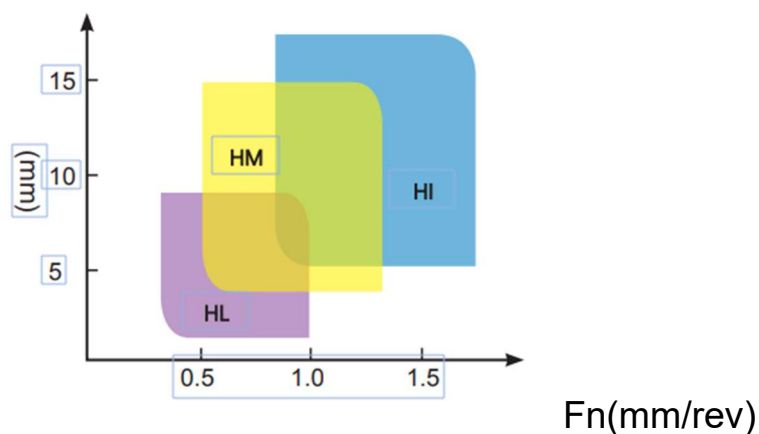
Toughness

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Cutting parameter

$A_p(\text{mm})$



● Recommend cutting parameter

Turning area	Continued-Light interrupted		Heavy interrupted
Grades	HC4215	HC4225	HC4235
Vc	160(100-220)	140(80-200)	120(70-150)

● Recommend A_p and F_n

Geometry	Continued	Light interrupted	Interrupted	Heavy interrupted
HL Single-face	A_p : 2~8 F_n : 0.3~1.0	A_p : 2~8 F_n : 0.3~0.6	----	----
HM Single-face	----	A_p : 4~15 F_n : 0.5~1.3	A_p : 4~10 F_n : 0.5~0.9	----
HI Double-face	----	----	A_p : 5~20 F_n : 0.7~1.5	A_p : 5~15 F_n : 0.7~1.0
HL Single-face	A_p : 2~8 F_n : 0.3~1.0	A_p : 2~8 F_n : 0.3~0.6	----	----
HM Double-face	A_p : 4~12 F_n : 0.5~1.0	A_p : 4~8 F_n : 0.5~1.0	----	----

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Heavy Turning Insert (Single-face)

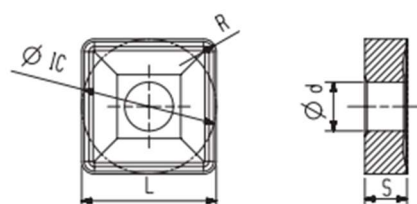


Photo	Code	Dimensions					CVD			PVD
		L	IC	d	S	R	HC4215	HC4225	HC4235	HP2220
	CNMM160608-HL	16.1	15.875	6.35	6.35	0.8	★		●	○
	CNMM160612-HL	16.1	15.875	6.35	6.35	1.2	★		●	○
	CNMM160616-HL	16.1	15.875	6.35	6.35	1.6	★		●	○
	CNMM190612-HL	19.3	19.05	7.94	6.35	1.2	★		●	○
	CNMM190616-HL	19.3	19.05	7.94	6.35	1.6	★		●	○
	CNMM190624-HL	19.3	19.05	7.94	6.35	2.4	★		●	○
	CNMM250924-HL	25.8	25.4	9.12	9.525	2.4	★		●	○
	SNMM150608-HL	15.875	15.875	6.35	6.35	0.8	★		●	○
	SNMM150612-HL	15.875	15.875	6.35	6.35	1.2	★		●	○
	SNMM150616-HL	15.875	15.875	6.35	6.35	1.6	★		●	○
	SNMM190612-HL	19.05	19.05	7.94	6.35	1.2	★		●	○
	SNMM190616-HL	19.05	19.05	7.94	6.35	1.6	★		●	○
	SNMM190624-HL	19.05	19.05	7.94	6.35	2.4	★		●	○
	SNMM250724-HL	25.4	25.4	9.12	7.94	2.4	★		●	○
	CNMM190612-HM	19.3	19.05	7.94	6.35	1.2		★		○
	CNMM190616-HM	19.3	19.05	7.94	6.35	1.6		★		○
	CNMM190624-HM	19.3	19.05	7.94	6.35	2.4		★		○
	CNMM250724-HM	25.8	25.4	9.12	7.94	2.4		★		○
	CNMM250924-HM	25.8	25.4	9.12	9.525	2.4		★		○
	SNMM190612-HM	19.05	19.05	7.94	6.35	1.2		★		○
	SNMM190616-HM	19.05	19.05	7.94	6.35	1.6		★		○
	SNMM190624-HM	19.05	19.05	7.94	6.35	2.4		★		○
	SNMM250724-HM	25.4	25.4	9.12	7.94	2.4		★		○
	SNMM250924-HM	25.4	25.4	9.12	9.525	2.4		★		○

★Standing stock ●Optional stock ○Make-to-order

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Heavy Turning Insert (Single-face)

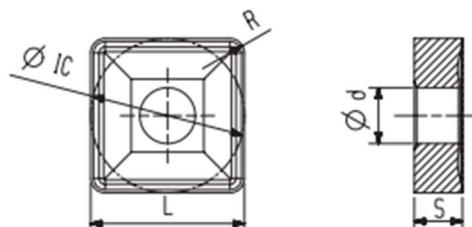


Photo	Code	Dimensions					CVD			PVD
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	CNMM190624-HI	19.3	19.05	7.94	6.35	2.4		●		★
	CNMM250724-HI	25.8	25.4	9.12	7.94	2.4		●		★
	CNMM250924-HI	25.8	25.4	9.12	9.525	2.4		●		★
	SNMM190624-HI	19.05	19.05	7.94	6.35	2.4		●		★
	SNMM250724-HI	25.4	25.4	9.12	7.94	2.4		●		★
	SNMM250924-HI	25.4	25.4	9.12	9.525	2.4		●		★
	SNMM250932-HI	25.4	25.4	9.12	9.525	3.2		●		★

★ Standing stock ● Optional stock ○ Make-to-order

Heavy Turning Insert (Double-face)

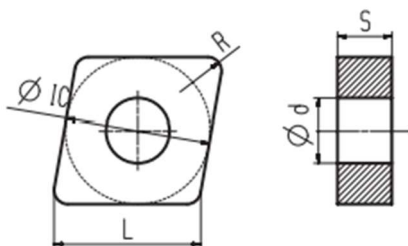
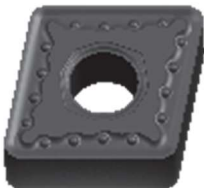


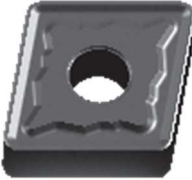
Photo	Code	Dimensions					CVD			PVD
		L	IC	d	S	R	HC4215	HC4225	HC4235	HP2220
	CNMG160608-HL	16.1	15.875	6.35	6.35	0.8	★		●	
	CNMG160612-HL	16.1	15.875	6.35	6.35	1.2	★		●	
	CNMG160616-HL	16.1	15.875	6.35	6.35	1.6	★		●	
	CNMG190612-HL	19.3	19.05	7.94	6.35	1.2	★		●	
	CNMG190616-HL	19.3	19.05	7.94	6.35	1.6	★		●	
	CNMG190624-HL	19.3	19.05	7.94	6.35	2.4	★		●	
	DNMG150608-HL	15.5	12.7	5.16	6.35	0.8	★		●	
	DNMG150612-HL	15.5	12.7	5.16	6.35	1.2	★		●	
	DNMG150616-HL	15.5	12.7	5.16	6.35	1.6	★		●	

★Standing stock ●Optional stock ○Make-to-order

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Heavy Turning Insert (Double-face)

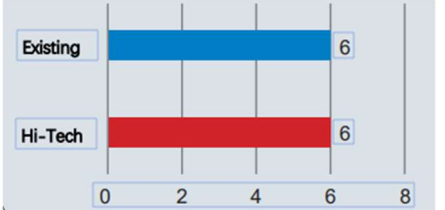
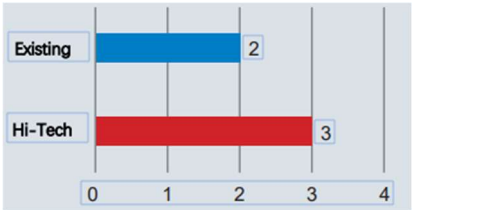
Photo	Code	Dimensions					CVD			PVD
		L	IC	d	S	R	HC4215	HC4225	HC4235	HP2220
	SNMG150608-HL	15.875	15.875	6.35	6.35	0.8	★		●	
	SNMG150612-HL	15.875	15.875	6.35	6.35	1.2	★		●	
	SNMG150616-HL	15.875	15.875	6.35	6.35	1.6	★		●	
	SNMG190612-HL	19.05	19.05	7.94	6.35	1.2	★		●	
	SNMG190616-HL	19.05	19.05	7.94	6.35	1.6	★		●	
	SNMG190624-HL	19.05	19.05	7.94	6.35	2.4	★		●	
	TNMG270608-HL	27.5	15.875	6.35	6.35	0.8		○		
	TNMG270612-HL	27.5	15.875	6.35	6.35	1.2		○		
	TNMG270616-HL	27.5	15.875	6.35	6.35	1.6		○		
	CNMG190612-HM	19.3	19.05	7.94	6.35	1.2		★		●
	CNMG190616-HM	19.3	19.05	7.94	6.35	1.6		★		●
	CNMG190624-HM	19.3	19.05	7.94	6.35	2.4		★		●
	CNMG250924-HM	25.8	25.4	9.12	9.525	2.4		★		●
	SNMG190612-HM	19.05	19.05	7.94	6.35	1.2		★		●
	SNMG190616-HM	19.05	19.05	7.94	6.35	1.6		★		●
	SNMG190624-HM	19.05	19.05	7.94	6.35	2.4		★		●
	SNMG250924-HM	25.4	25.4	9.12	9.525	2.4		★		●

★Standing stock ●Optional stock ○Make-to-order

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Successful cases

Spindle in wind power industry	Slewing bear	Joint in Oil&gas industry
		
- Work piece material: alloy steel - Lathe type: horizontal - Insert: SNMM250924-HM HC4215 - Compared insert: another famous brand	- Work piece material: 40CrNiMo - Lathe type: vertical - Insert: CNMG190616-HM HC4215 - Compared insert: another famous brand	- Work piece material: 40CrNiMo - Lathe type: vertical - Insert: CNMM250924-HI HC4235 - Compared insert: another famous brand
- Processing content: External roughing - Insert change criteria: Excessive wear or rough surface - Coolant: No - Cutting parameters: Vc=80-120m/min Fn=0.9mm/r Ap=5~10mm	- Processing content: External roughing - Insert change criteria: Excessive wear or rough surface - Coolant: No - Cutting parameters: Vc=80-120m/min Fn=0.63mm/r Ap=2~8mm	- Processing content: External roughing - Insert change criteria: Excessive wear or rough surface - Coolant: No - Cutting parameters: Vc=80-120m/min Fn=1.3mm/r Ap=8~15mm
		



Your Professional Cutting Partner!

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