

TURNING	CN	CARBIDE Negative				ISO513	HC-CVD								HC-PVD		HW	HT			
		Size	IC	S	D1		JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JPS015	JPS025			JP9015	JP9030	JU6020
THREADING	<p>4 edges</p>	MICRO CN	7.50	3.18	3.60	P			200 380	180 360	140 300	100 240		80 220	60 180				200 380		
		0903□□	9.525	3.18	3.81	M						150 280	120 240	80 160	60 120	100 220	80 200		160 280		
		1204□□	12.70	4.76	5.16	K	180 380	150 300											200 400		
		1606□□	15.87	6.35	6.35	N													500 1500		
		1906□□	19.05	6.35	7.94	S									40 80						
		GRADE APPLICATION AREA	Stable machining, continuous cut																		
			General machining, light interruption																		
	Unstable machining, interrupted cut																				
GROOVING	<b>GB P M</b> <p>MICRONEGA, picture: right-hand</p>	MICRO CN.R04-GB%L	RE 0.4	a <sub>p</sub> 0.20 f <sub>n</sub> 0.05	0.50 0.10	0.80 0.15								▽							
		<b>NSP P</b> 	CNMG 090304-NSP	RE 0.4	a <sub>p</sub> 0.30 f <sub>n</sub> 0.06	0.70 0.12	1.10 0.18			●	●									●	
			CNMG 090308-NSP	RE 0.8	a <sub>p</sub> 0.30 f <sub>n</sub> 0.08	0.70 0.16	1.10 0.24			●	●									●	
		<b>NFM M</b> 	CNMG 120404-NFM	RE 0.4	a <sub>p</sub> 0.40 f <sub>n</sub> 0.08	1.20 0.15	2.00 0.22			●	●	●								●	
CNMG 120408-NFM	RE 0.8		a <sub>p</sub> 0.40 f <sub>n</sub> 0.10	1.20 0.22	2.00 0.34			●	●	●								●			
MILLING	<b>GM P M</b> <p>MICRONEGA</p>	MICRO CN.R04-GM	RE 0.4	a <sub>p</sub> 0.80 f <sub>n</sub> 0.08	1.60 0.15	2.40 0.22			○					●				▲			
		CN.R08-GM	RE 0.8	a <sub>p</sub> 0.80 f <sub>n</sub> 0.10	1.60 0.17	2.40 0.24								▽							
		<b>SS M</b> <p>MICRONEGA, polished surface</p>	MICRO CN.R02-SS	RE 0.2	a <sub>p</sub> 0.40 f <sub>n</sub> 0.06	1.20 0.11	2.00 0.16									●					
CN.R04-SS	RE 0.4		a <sub>p</sub> 0.40 f <sub>n</sub> 0.08	1.20 0.14	2.00 0.20										●			▲			
DRILLING	<b>SS M</b> 	<b>NMP P</b> 	CNMG 120404-NMP	RE 0.4	a <sub>p</sub> 1.50 f <sub>n</sub> 0.12	2.50 0.20	3.50 0.28			●	●										
			CNMG 120408-NMP	RE 0.8	a <sub>p</sub> 1.50 f <sub>n</sub> 0.16	2.50 0.25	3.50 0.34			●	●								▽		
			CNMG 120412-NMP	RE 1.2	a <sub>p</sub> 1.50 f <sub>n</sub> 0.20	2.50 0.30	3.50 0.40			●	●										
			CNMG 120416-NMP	RE 1.6	a <sub>p</sub> 1.50 f <sub>n</sub> 0.25	2.50 0.35	3.50 0.45			●	●										
		<b>NMP P</b> 	CNMG 160608-NMP	RE 0.8	a <sub>p</sub> 3.00 f <sub>n</sub> 0.20	4.50 0.30	6.00 0.40			●	●										
			CNMG 160612-NMP	RE 1.2	a <sub>p</sub> 3.00 f <sub>n</sub> 0.25	4.50 0.35	6.00 0.45			●	●										
			CNMG 160616-NMP	RE 1.6	a <sub>p</sub> 3.00 f <sub>n</sub> 0.30	4.50 0.40	6.00 0.50			●	●										

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion



CN	CARBIDE Negative				ISO513	HC-CVD								HC-PVD		HW	HT			
	Size	IC	S	D1		JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JPS015	JPS025			JPS015	JPS030	JU6020
<p>4 edges</p>					<b>P</b>															
	MICRO CN	7.50	3.18	3.60		<b>M</b>														
	0903□	9.525	3.18	3.81		<b>K</b>	180	150							80	60			200	380
	1204□	12.70	4.76	5.16		<b>N</b>	380	300							180	120	100	80	160	280
	1606□	15.87	6.35	6.35		<b>S</b>									80	60	220	200	200	400
	1906□	19.05	6.35	7.94		<b>H</b>									40	80			500	1500
GRADE APPLICATION AREA	Stable machining, continuous cut				+ Hardness - Toughness 															
main application	General machining, light interruption																			
applicable	Unstable machining, interrupted cut																			

MEDIUM	NMP <b>P</b>	CNMG 190612-NMP	RE 1.2	a <sub>p</sub> 4.00 f <sub>n</sub> 0.30	6.00 0.40	8.00 0.50																							
NUP <b>P M</b>		CNMG 090304-NUP	RE 0.4	a <sub>p</sub> 0.70 f <sub>n</sub> 0.08	1.50 0.15	2.30 0.22																							
		CNMG 090308-NUP	RE 0.8	a <sub>p</sub> 0.70 f <sub>n</sub> 0.12	1.50 0.20	2.30 0.28																							
		CNMG 120404-NUP	RE 0.4	a <sub>p</sub> 1.00 f <sub>n</sub> 0.10	2.50 0.20	4.00 0.30																							
							CNMG 120408-NUP	RE 0.8	a <sub>p</sub> 1.00 f <sub>n</sub> 0.15	2.50 0.25	4.00 0.35																		
		CNMG 120412-NUP	RE 1.2	a <sub>p</sub> 1.00 f <sub>n</sub> 0.18	2.50 0.30	4.00 0.42																							
CNMG 120416-NUP	RE 1.6	a <sub>p</sub> 1.00 f <sub>n</sub> 0.20	2.50 0.35	4.00 0.50																									
CNMG 160608-NUP	RE 0.8	a <sub>p</sub> 2.00 f <sub>n</sub> 0.18	4.50 0.30	7.00 0.42																									
CNMG 160612-NUP	RE 1.2	a <sub>p</sub> 2.00 f <sub>n</sub> 0.22	4.50 0.35	7.00 0.48																									
CNMG 190608-NUP	RE 0.8	a <sub>p</sub> 3.00 f <sub>n</sub> 0.22	6.00 0.35	9.00 0.48																									
CNMG 190612-NUP	RE 1.2	a <sub>p</sub> 3.00 f <sub>n</sub> 0.25	6.00 0.40	9.00 0.55																									
CNMG 190616-NUP	RE 1.6	a <sub>p</sub> 3.00 f <sub>n</sub> 0.30	6.00 0.45	9.00 0.60																									
NMU <b>P</b>	<p>picture: right-hand</p>	CNMG 120408*/-NMU	RE 0.8	a <sub>p</sub> 1.00 f <sub>n</sub> 0.20	2.50 0.30	4.00 0.40																							
NMM <b>M</b>		CNMG 090304-NMM	RE 0.4	a <sub>p</sub> 0.70 f <sub>n</sub> 0.13	1.50 0.20	2.30 0.27																							
		CNMG 090308-NMM	RE 0.8	a <sub>p</sub> 0.70 f <sub>n</sub> 0.18	1.50 0.25	2.30 0.32																							
		CNMG 120404-NMM	RE 0.4	a <sub>p</sub> 1.00 f <sub>n</sub> 0.15	2.50 0.25	4.00 0.35																							
							CNMG 120408-NMM	RE 0.8	a <sub>p</sub> 1.00 f <sub>n</sub> 0.20	2.50 0.30	4.00 0.40																		
		CNMG 120412-NMM	RE 1.2	a <sub>p</sub> 1.00 f <sub>n</sub> 0.25	2.50 0.35	4.00 0.45																							
CNMG 120416-NMM	RE 1.6	a <sub>p</sub> 1.00 f <sub>n</sub> 0.30	2.50 0.40	4.00 0.50																									
CNMG 160608-NMM	RE 0.8	a <sub>p</sub> 2.00 f <sub>n</sub> 0.25	4.50 0.35	7.00 0.45																									
CNMG 160612-NMM	RE 1.2	a <sub>p</sub> 2.00 f <sub>n</sub> 0.30	4.50 0.40	7.00 0.50																									
CNMG 160616-NMM	RE 1.6	a <sub>p</sub> 2.00 f <sub>n</sub> 0.35	4.50 0.45	7.00 0.55																									

● stock standard, ○ non-standard stock, ▽ stock exhaustion



TURNING  
THREADING  
GROOVING  
MILLING  
DRILLING  
ACCESSORIES

TURNING		<b>CARBIDE</b> Negative				<b>ISO513</b>	HC-CVD								HC-PVD	HW	HT								
		<b>Size</b>	<b>IC</b>	<b>S</b>	<b>D1</b>		<b>P</b>	JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JPS015	JPS025	JPS015	JPS025	JPS030	JU6020	JU4015			
		<b>MICRO CN</b>	7.50	3.18	3.60			<b>M</b>			200 380	180 360	140 300	100 240			80 220	60 180					200 380		
		<b>0903</b>	9.525	3.18	3.81			<b>K</b>	180 380	150 300							80 170	60 120	100 220	80 200			200 400		
		<b>1204</b>	12.70	4.76	5.16			<b>N</b>														500 1500			
		<b>1606</b>	15.87	6.35	6.35			<b>S</b>									40 80								
		<b>1906</b>	19.05	6.35	7.94			<b>H</b>																	
		<b>GRADE APPLICATION AREA</b>	Stable machining, continuous cut				<b>+</b>																		
main application	General machining, light interruption				<b>-</b>																				
applicable	Unstable machining, interrupted cut				<b>+</b>																				

GROOVING		<b>MMM M</b>	CNMG	190612-NMM	RE 1.2	a <sub>p</sub> 3.00 f <sub>n</sub> 0.35	6.00 0.45	9.00 0.55																			
				190616-NMM	RE 1.6	a <sub>p</sub> 3.00 f <sub>n</sub> 0.40	6.00 0.50	9.00 0.60																			
				CNMG	120404-NMK	RE 0.4	a <sub>p</sub> 0.50 f <sub>n</sub> 0.10	2.00 0.20	3.50 0.30	●	○																
					120408-NMK	RE 0.8	a <sub>p</sub> 0.50 f <sub>n</sub> 0.15	2.00 0.25	3.50 0.35	●	●																
					120412-NMK	RE 1.2	a <sub>p</sub> 0.50 f <sub>n</sub> 0.20	2.00 0.30	3.50 0.40	●	●																
					120416-NMK	RE 1.6	a <sub>p</sub> 0.50 f <sub>n</sub> 0.25	2.00 0.35	3.50 0.45	●	○																
				CNMG	160608-NMK	RE 0.8	a <sub>p</sub> 2.00 f <sub>n</sub> 0.25	4.00 0.35	6.00 0.45	●	○																
					160612-NMK	RE 1.2	a <sub>p</sub> 2.00 f <sub>n</sub> 0.30	4.00 0.40	6.00 0.50	●	○																
					160616-NMK	RE 1.6	a <sub>p</sub> 2.00 f <sub>n</sub> 0.35	4.00 0.45	6.00 0.55	●	○																
				CNMG	190612-NMK	RE 1.2	a <sub>p</sub> 3.00 f <sub>n</sub> 0.35	5.00 0.45	7.00 0.55	○	○																
190616-NMK	RE 1.6	a <sub>p</sub> 3.00 f <sub>n</sub> 0.40	5.00 0.50		7.00 0.60	○	○																				
MILLING		<b>NWU P K</b>	CNMG	120408-NWU	RE 0.8	a <sub>p</sub> 0.80 f <sub>n</sub> 0.20	2.00 0.40	3.20 0.60	●				●														
				120412-NWU	RE 1.2	a <sub>p</sub> 0.80 f <sub>n</sub> 0.25	2.00 0.45	3.20 0.65	●				●														
				CNGG	120404-NMN	RE 0.4	a <sub>p</sub> 0.50 f <sub>n</sub> 0.10	2.00 0.20	3.50 0.30															●			
					120408-NMN	RE 0.8	a <sub>p</sub> 0.50 f <sub>n</sub> 0.15	2.00 0.25	3.50 0.35																●		
CNGG	120412-NMN	RE 1.2	a <sub>p</sub> 0.50 f <sub>n</sub> 0.20	2.00 0.30	3.50 0.40																●						
	CNMG	120408-NRP	RE 0.8	a <sub>p</sub> 2.00 f <sub>n</sub> 0.25	4.00 0.35	6.00 0.45				●	●	●	●														
		120412-NRP	RE 1.2	a <sub>p</sub> 2.00 f <sub>n</sub> 0.30	4.00 0.40	6.00 0.50				●	●	●	●														
120416-NRP		RE 1.6	a <sub>p</sub> 2.00 f <sub>n</sub> 0.35	4.00 0.45	6.00 0.55				●	●	●	●															
CNMG	160612-NRP	RE 1.2	a <sub>p</sub> 4.00 f <sub>n</sub> 0.35	6.00 0.50	8.00 0.65				●	●	●	●															
	160616-NRP	RE 1.6	a <sub>p</sub> 4.00 f <sub>n</sub> 0.40	6.00 0.55	8.00 0.70				●	●	●	●															

● stock standard, ○ non-standard stock



CN	CARBIDE Negative				ISO513	HC-CVD								HC-PVD		HW	HT					
	Size	IC	S	D1		JC7010	JC7020	JC8005	JC8015	JC8025	JC8035	JC9010	JC9025	JPS015	JPS025					JPS015	JPS030	JU6020
<p>4 edges</p>	MICRO CN	7.50	3.18	3.60	P			200 380	180 360	140 300	100 240			80 220	60 180			200 380				
	0903□	9.525	3.18	3.81	M						150 280	120 240			80 160	60 220	100 200	80	160 280			
	1204□	12.70	4.76	5.16	K	180 380	150 300												200 400			
	1606□	15.87	6.35	6.35	N													500 1500				
	1906□	19.05	6.35	7.94	S									40 80								
	1906□	19.05	6.35	7.94	H																	
GRADE APPLICATION AREA	Stable machining, continuous cut																					
main application	General machining, light interruption																					
applicable	Unstable machining, interrupted cut																					
<b>ROUGHING</b> 	NRP <b>P</b>	CNMG	190612-NRP	RE 1.2	a <sub>p</sub> 6.00 f <sub>n</sub> 0.40	8.00 0.55	10.0 0.70															
				190616-NRP	RE 1.6	a <sub>p</sub> 6.00 f <sub>n</sub> 0.45	8.00 0.60	10.0 0.75														
				190624-NRP	RE 2.4	a <sub>p</sub> 6.00 f <sub>n</sub> 0.50	8.00 0.65	10.0 0.80														
	NTP <b>P</b>	CNMG	160612-NTP	RE 1.2	a <sub>p</sub> 5.00 f <sub>n</sub> 0.40	7.00 0.55	9.00 0.70															
				190612-NTP	RE 1.2	a <sub>p</sub> 7.00 f <sub>n</sub> 0.45	9.00 0.60	11.0 0.75														
				190616-NTP	RE 1.6	a <sub>p</sub> 7.00 f <sub>n</sub> 0.50	9.00 0.65	11.0 0.80														
	NRK <b>K</b>	CNMG	120408-NRK	RE 0.8	a <sub>p</sub> 1.50 f <sub>n</sub> 0.20	4.00 0.30	6.50 0.40															
				120412-NRK	RE 1.2	a <sub>p</sub> 1.50 f <sub>n</sub> 0.25	4.00 0.35	6.50 0.45														
				120416-NRK	RE 1.6	a <sub>p</sub> 1.50 f <sub>n</sub> 0.30	4.00 0.40	6.50 0.50														
			CNMG	160612-NRK	RE 1.2	a <sub>p</sub> 3.00 f <sub>n</sub> 0.40	6.00 0.55	9.00 0.70														
				160616-NRK	RE 1.6	a <sub>p</sub> 3.00 f <sub>n</sub> 0.45	6.00 0.60	9.00 0.75														
				190612-NRK	RE 1.2	a <sub>p</sub> 5.00 f <sub>n</sub> 0.45	8.00 0.60	11.0 0.75														
	Flat <b>K</b>		CNMA	120404	RE 0.4	a <sub>p</sub> 2.00 f <sub>n</sub> 0.15	4.00 0.25	6.00 0.35														
				120408	RE 0.8	a <sub>p</sub> 2.00 f <sub>n</sub> 0.25	4.00 0.35	6.00 0.45														
				120412	RE 1.2	a <sub>p</sub> 2.00 f <sub>n</sub> 0.35	4.00 0.45	6.00 0.55														
				120416	RE 1.6	a <sub>p</sub> 2.00 f <sub>n</sub> 0.45	4.00 0.55	6.00 0.65														
				CNMA	160612	RE 1.2	a <sub>p</sub> 4.00 f <sub>n</sub> 0.45	7.00 0.60	10.0 0.75													
				160616	RE 1.6	a <sub>p</sub> 4.00 f <sub>n</sub> 0.50	7.00 0.65	10.0 0.80														
			CNMA	190612	RE 1.2	a <sub>p</sub> 6.00 f <sub>n</sub> 0.50	9.00 0.65	12.0 0.80														
			190616	RE 1.6	a <sub>p</sub> 6.00 f <sub>n</sub> 0.55	9.00 0.70	12.0 0.85															
<b>HEAVY ROUGHING</b> <p>2 edges, single side</p>		CNMM	190616-MRP	RE 1.6	a <sub>p</sub> 6.00 f <sub>n</sub> 0.60	9.00 0.75	12.0 0.90															
			190624-MRP	RE 2.4	a <sub>p</sub> 6.00 f <sub>n</sub> 0.65	9.00 0.80	12.0 0.95															
			250924-MRP	RE 2.4	a <sub>p</sub> 8.00 f <sub>n</sub> 0.70	12.0 0.85	16.0 1.00															

● stock standard, ○ non-standard stock, ▽ stock exhaustion



- TURNING
- THREADING
- GROOVING
- MILLING
- DRILLING
- ACCESSORIES