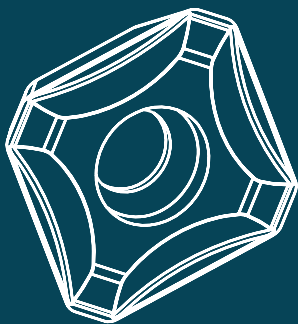
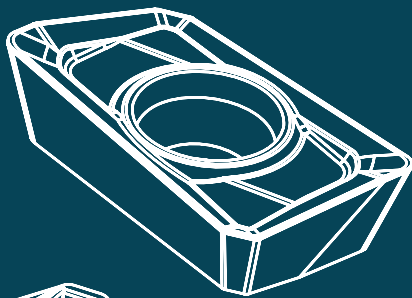









MILLING / carbide



Grades

	ISO DIN 513																			
	K					P					M					N				
	K01	K10	K20	K30	K40	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	N01	N10	N20	N30	N40
TURNING																				
GROOVING																				
THREADING																				
MILLING																				
DRILLING																				
ENDMILLS																				
DRILLS																				
SPARE PARTS																				
INDEX																				
CARBIDE CVD																				
CARBIDE PVD	CS8915					PS5915					PS7925									
	CS8925					PS5925														
						PS5960														
CARBIDE UNCOATED																US2915				
CERMET UNCOATED																				

CVD Turning Grades

MATERIAL	GRADE	ISO	Color	Operation
P	PS5915	P05-P25	BLACK	MT-TiCN+TiC+Al ₂ O ₃ +TiN
				Milling grade for medium and roughing of steel New coating layer with superior wear resistance with high toughness substrate
	PS5925	P15-P35 M10-M20	BLACK	MT-TiCN+TiC+Al ₂ O ₃ +TiN
				Universal grade for interrupted machining of steel, cast-iron, hard to cut materials and stainless steel with stable machinability
	PS5960	P20-P30	YELLOW	MT-TiCN+Al ₂ O ₃ +TiN
				General machining of steel
M	PS7925	M20-M30	YELLOW	MT-TiCN+TiC+α-Al ₂ O ₃
				Medium to roughing of hard to cut materials and stainless steel 2-4 micron Nano AlCrN AlCrSiN coating
K	CS8915	K01-K10	BLACK	MT-TiCN+TiC+Al ₂ O ₃ +TiN
				As adapting highly hard substrate with superior PVD coated which has excellent resistance for thermal & oxidation, Excellent performance in casting iron continuous machining
	CS8925	K10-K20	BLACK	MT-TiCN+TiC+Al ₂ O ₃ +TiN
N	US2915	K05-K25		General cutting for gray cast iron and ductile cast iron
			Silver	Ultra fine substrate
				Increased wear & chipping resistance as using a ultra fine substrate, Excellent tool life with special surface treatment & and sharp cutting edge of ALU chip breaker

TURNING

GROOVING

THREADING

MILLING

DRILLING

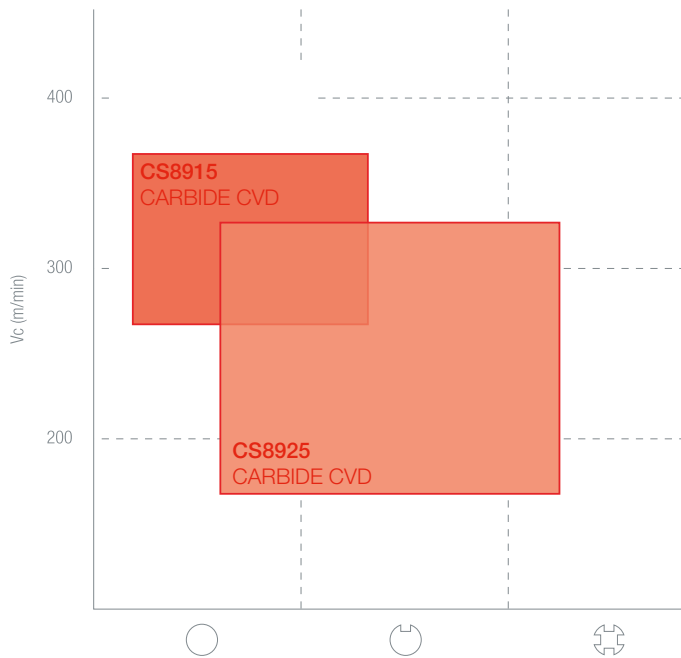
ENDMILLS

DRILLS

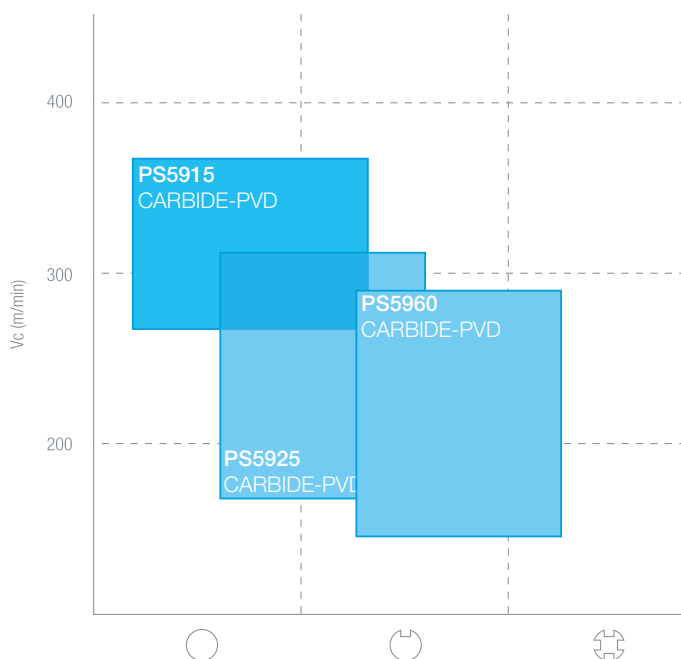
SPARE PARTS

INDEX

Range ISO **K**

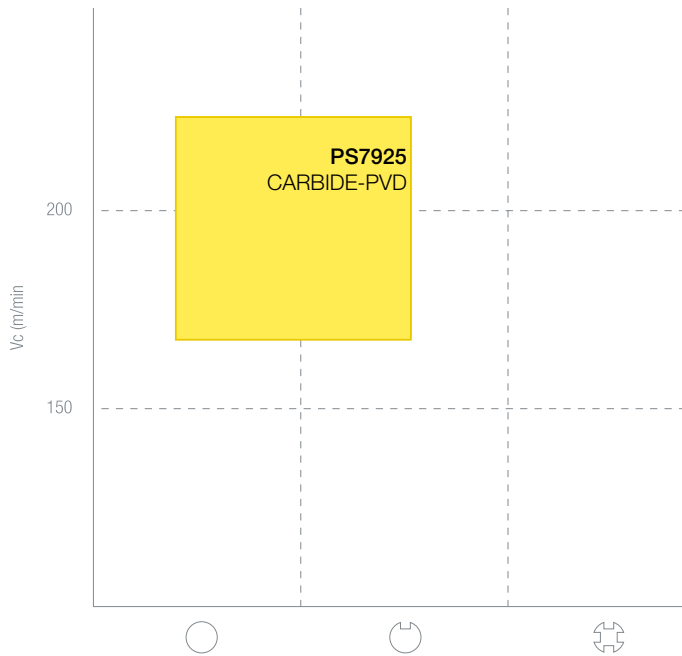


Range ISO **P**

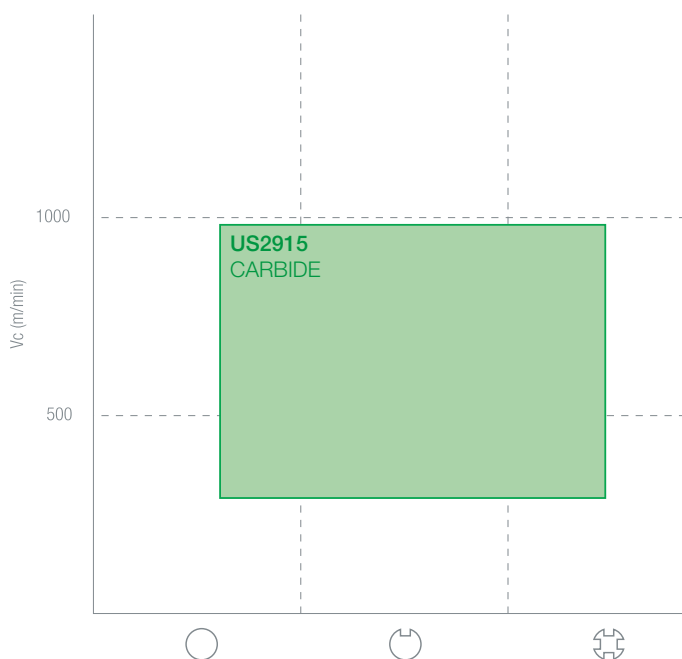


MILLING

Range ISO **M**



Range ISO **N**



TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE PARTS

INDEX

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

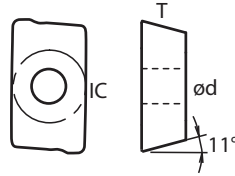
DRILLS

SPARE PARTS

INDEX

**POSITIVE 11°
with hole**

AP □□



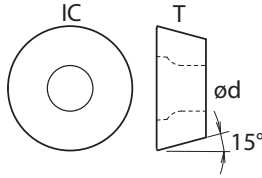
AP □□	1035 □□	1135 □□	1604 □□
IC	6,35	6,35	9,525
T	3,50	3,50	4,76
ød	2,80	2,80	4,50
Holder	322	322	322

DESCRIPTION			Carbide					CARBIDE					
			PS5915	PS5925	PS5960	CS8915	CS8925	PS7925	US2915				
	APMT	1003PDER-ALU							•				
		1604PDER-ALU							•				
	APKT	1135PDER-ALU							•				
		1604PDER-ALU							•				
		160420-ALU							•				
		160424-ALU							•				
	APKT	1204PER-ST		•									
		1705PER-ST		•									
	APMT	1135PDSR-QM		•	•								
	APMT	1135PDSR-QX		•									
	APMT	1035PDER-RM	•	•		•		•					
		1604PDER-RM	•	•				•					

MILLING

POSITIVE 15°
with hole

RD□□



RD □□	0501□□	0802□□	1003□□	12T3□□	1604□□
IC	5,00	8,00	10,0	12,0	16,0
T	1,51	2,38	3,18	3,97	4,76
ød	2,20	2,80	3,80	4,40	5,00
Holder	333	333	333	333	333

DESCRIPTION			Carbide					CARBIDE				
			PS5915	PS5925	PS5960	CS8915	CS8925	PS7925	US2915			
	RDHX	1003M0		•				•				
		12T3M0		•				•				
	RDMW	0501M0			•							
	RDMX	0802M0		•				•				
		1003M0		•				•				
		12T3M0		•				•				
		1604M0		•				•				

Vc • fn • ap 315

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

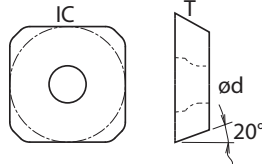
SPARE PARTS

INDEX

MILLING

POSITIVE 20°
with hole

SE □□



SE □□ 12T3 □□




IC 12,7

T 3,97

ød 4,40



339

DESCRIPTION			Carbide					CARBIDE			
			PS5915	PS5925	PS5960	CS8915	CS8925	PS7925	US2915		
	SEET	12T3-FM	•	•				•			
	SEET	12T3-SM		•							
	SEHT	12T3-CM						•			

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE PARTS

INDEX

Vc • fn • ap



315

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

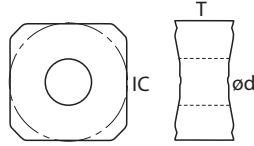
DRILLS

SPARE PARTS

INDEX

NEGATIVE
with hole

SNMX




SN □ □ 1205 □ □

IC 12,7

T 5,75

Ød 6,00

Holder 340

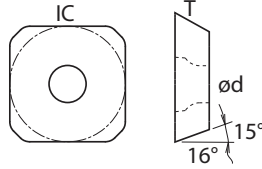
DESCRIPTION			Carbide					CARBIDE				
			PS5915	PS5925	PS5960	CS8915	CS8925	PS7925	US2915			
	SNMX	1205ANN		•	•	•	•	•				

Vc • fn • ap 315

MILLING

POSITIVE 16°/ 15°
with hole

SO / SP □□



SO/SP □□	0803 □□	1204 □□
IC	12,7	12,7
T	3,97	4,18
ød	5,16	5,16
Holder	341	341

DESCRIPTION			Carbide					CARBIDE					
			PS5915	PS5925	PS5960	CS8915	CS8925	PS7925	US2915				
	SOMW	080315-FH		•									
	SPMW	120420-FH		•									

- TURNING
- GROOVING
- THREADING
- MILLING
- DRILLING
- ENDMILLS
- DRILLS
- SPARE PARTS
- INDEX

Vc • fn • ap 315

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

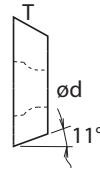
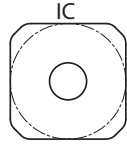
DRILLS

SPARE PARTS

INDEX

POSITIVE 11°
without hole

SPKN



SP □□ 1203 □□ 1504 □□

IC	12,7	15,875
T	3,18	4,76
ød	-	-



DESCRIPTION

Carbide

CARBIDE

PS5915

PS5925

PS5960

CS8915

CS8925

PS7925

US2915



SPKN	1203EDR-SU		•									
	1203EDSR-SU		•		•		•					
	1504EDSR-SU		•				•					

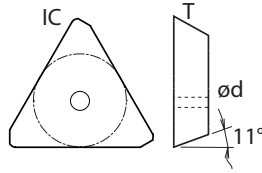


SPKN	1203EDFR				•	•						
	1203EDTR		•									
	1504EDTL							•				
	1504EDTR							•				


MILLING

POSITIVE 11°
with hole


TPKN



TP □□	1603 □□	2204 □□
IC	9,525	12,7
T	3,18	4,76
ød	-	-
Holder	343	343

DESCRIPTION			Carbide					CARBIDE				
			PS5915	PS5925	PS5960	CS8915	CS8925	PS7925	US2915			
	TPKN	1603PDTR-SU		•					•			
		2204PDTR-SU		•					•			

- TURNING
- GROOVING
- THREADING
- MILLING
- DRILLING
- ENDMILLS
- DRILLS
- SPARE PARTS
- INDEX

Vc • fn • ap  315

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

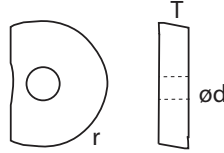
DRILLS

SPARE PARTS

INDEX

BALL NOSE
with hole

TW



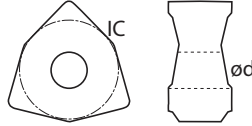
TW	08□□	10□□	12□□	16□□	20□□	25□□
r	12,7	12,7	12,7	12,7	12,7	12,7
T	4,76	4,76	4,76	4,76	4,76	4,76
ød	5,16	5,16	5,16	5,16	5,16	5,16
Holder	344	344	344	344	344	344

DESCRIPTION			Carbide					CARBIDE					
			PS5915	PS5925	PS5960	CS8915	CS8925	PS7925	US2915				
	TW	08020	•										
		10025	•										
		12025	•										
		16030	•										
		20030	•										
		25040	•										

MILLING

NEGATIVE
with hole

WNMU




WN □ □ 0806 □ □

IC 12,7

T 6,40

ød 4,40



DESCRIPTION			Carbide					CARBIDE				
			PS5915	PS5925	PS5960	CS8915	CS8925	PS7925	US2915			
	WNMU	080608EN-GM		•		•			•			

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE PARTS

INDEX

Vc • fn • ap ▶ 315

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

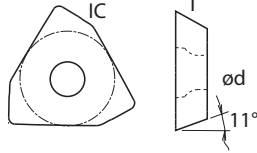
DRILLS

SPARE PARTS

INDEX

**POSITIVE 11°
with hole**

3PGX



3P □ □ 1004 □ □ 1505 □ □

IC	6,90	10,70
T	4,00	5,00
Ød	2,20	2,80



DESCRIPTION

Carbide

CARBIDE

PS5915

PS5925

PS5960

CS8915

CS8925

PS7925

US2915



3PGX 100404R-M

150508R-M

•

•

•

•

Vc • fn • ap

315

MILLING

Cutting Parameters Vc(m/min)

KG	GREY CAST IRON
KN	NODULAR CAST IRON
PL	LOW CARBON AND FREE CUTTING STEEL
PM	MEDIUM CARBON STEEL
PH	HIGH CARBON STEEL
PA	ALLOY STEEL

MM	MARTENSITIC AND FERRITIC STAINLESS STEEL
MA	AUSTENITIC STAINLESS STEEL
NA	ALUMINIUM ALLOYS
NH	ALUMINIUM ALLOYS AGED AND HARDENED
NB	BRASS
NC	BRONZE AND ELECTROLYTIC COPPER

MATERIAL		CARBIDE						CARBIDE				
		PS5915	PS5925	PS5960	CS8915	CS8925	PS7925	US2915				
K	KG				220-350	120-250						
	KN				180-280	100-200						
P	PL	200-280	220-300	240-320								
	PM	200-280	220-300	240-320								
	PH	180-260	200-280	220-300								
	PA	160-230	180-250	200-270								
M	MM						160-280					
	MA						140-260					
N	NA							400-1000				
	NH							300-800				
	NB							300-600				
	NC							200-500				

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE PARTS

INDEX


Cutting Parameters ap (mm) & fn (mm/rev)

AP		1035	1135	1204	1604	1705
----	---	------	------	------	------	------


Material	Chip Breaker	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)
K	RM	0,8-8,0	0,1-0,25								
P	ST/RM	0,8-8,0	0,08-0,2	1,0-9,0	0,1-0,2	1,0-11,0	0,1-0,25	1,0-14,0	0,1-0,25	1,0-15,0	0,1-0,25
P	QM/QX			0,7-3,0	0,5-1,2						
M	RM	0,8-8,0	0,05-0,15					1,0-14,0	0,1-0,2		
N	ALU	0,8-8,0	0,15-0,3	1,0-9,0	0,15-0,3			1,0-14,0	0,15-0,3		

RD		0501	0802	1003	12T3	1604
----	---	------	------	------	------	------

Material	Chip Breaker	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)
K	-					0,5-4,0	0,08-0,4	0,5-5,0	0,08-0,6	0,6-7,0	0,1-0,6
P	-	0,25-2,5	0,1-0,25	0,4-3,5	0,07-0,35	0,5-4,0	0,08-0,3	0,5-5,0	0,08-0,4	0,6-7,0	0,1-0,5
M	-					0,5-4,0	0,08-0,25	0,5-5,0	0,08-0,25	0,6-7,0	0,1-0,4
N	-										

RT		0702	1003	-	-	-
----	---	------	------	---	---	---

Material	Chip Breaker	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)
K											
P	R-81	0,5-5,0	0,05-0,3	0,5-7,0	0,08-0,3						
M	R-81	0,5-5,0	0,05-0,25	0,5-7,0	0,05-0,25						
N											

SE		12T3	-	-	-	-
----	---	------	---	---	---	---


Material	Chip Breaker	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)
K											
P	FM/SM	1,0-10,0	0,1-0,3								
M	FM/SM	1,0-10,0	0,1-0,25								
N	CM	1,0-10,0	0,1-0,35								

MILLING


Cutting Parameters ap (mm) & fn (mm/rev)

SNMX		1205	-	-	-	-
-------------	---	-------------	---	---	---	---

Material	Chip Breaker	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)
K	-	1,0~7,0	0,1~0,4								
P	-	1,0~7,0	0,1~0,35								
M	-	1,0~7,0	0,1~0,35								
N											

SOMW		0803	-	-	-	-
-------------	---	-------------	---	---	---	---

Material	Chip Breaker	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)
K	FH	0,5~1,0	0,5~2,0								
P	FH	0,5~1,0	0,5~2,0								
M	FH	0,5~1,0	0,4~1,0								
N											

SPMW		1204	-	-	-	-
-------------	---	-------------	---	---	---	---

Material	Chip Breaker	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)
K	FH	0,8~1,5	0,5~1,8								
P	FH	0,8~1,5	0,8~2,0								
M	FH	0,8~1,5	0,4~1,0								
N											

SPKN		1203	1504	-	-	-
-------------	---	-------------	-------------	---	---	---

Material	Chip Breaker	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)
K	SU	0,8~8,0	0,05~0,3	1,0~10,0	0,05~0,3						
P	SU	0,8~8,0	0,05~0,2	1,0~10,0	0,05~0,2						
M	SU	0,8~8,0	0,05~0,2	1,0~10,0	0,05~0,2						
N											

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE PARTS

INDEX

TURNING

Cutting Parameters ap (mm) & fn (mm/rev)

TPKN		1603	2204	-	-	-
-------------	---	-------------	-------------	---	---	---

Material	Chip Breaker	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)
K	SU	1,0-12,0	0,05-0,3	1,0-15,0	0,1-8,0						
P	SU	1,0-12,0	0,05-0,25	1,0-15,0	0,8-8,0						
M	SU	1,0-12,0	0,05-0,2	1,0-15,0	0,8-8,0						
N											

GROOVING


THREADING

TW	08020	10025	12025	16030	20030	25040
-----------	--------------	--------------	--------------	--------------	--------------	--------------

Material	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)
K	0,2-0,4	0,1-0,3	0,2-0,7	0,1-0,3	0,5-0,84	0,1-0,3	0,5-1,12	0,1-0,3	0,8-1,4	0,1-0,3	0,8-1,75	0,1-0,3
P	0,25-0,5	0,1-0,25	0,3-0,7	0,1-0,25	0,36-0,84	0,1-0,25	0,48-1,12	0,1-0,25	0,6-1,4	0,1-0,25	0,75-1,75	0,1-0,25
M	0,2-0,4	0,1-0,2	0,2-0,5	0,1-0,2	0,3-0,6	0,1-0,2	0,4-0,8	0,1-0,2	0,5-1,0	0,1-0,2	0,7-1,25	0,1-0,2
N												

MILLING

DRILLING

WNMU		080608	-	-	-	-
-------------	---	---------------	---	---	---	---

Material	Chip Breaker	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)
K	GM	1,0-8,0	0,1-0,30								
P	GM	1,0-8,0	0,1-0,25								
M	GM	1,0-8,0	0,1-0,20								
N											

ENDMILLS

DRILLS

3PGX		1004	1505	-	-	-
-------------	---	-------------	-------------	---	---	---

Material	Chip Breaker	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)	ap (mm)	fn (mm/rev)
K	M	1,0-7,0	0,09-0,2	1,0-11,0	0,1-0,2						
P	M	1,0-7,0	0,07-0,15	1,0-11,0	0,12-0,25						
M	M	1,0-7,0	0,07-0,15	1,0-11,0	0,1-0,17						
N											

SPARE PARTS

INDEX

MILLING

MILLING PVD Comparison Table

MATERIAL	SANGEO	ISCAR	SECO	TEAGUTEC	KYOCERA	SANDVIK	KENAMETAL	MITSUBISHI	WALTER	KORLOY
P										PC2005
						P20A				PC2010
	PS5915					GC1010		AP20M		PC2015
								MP6120	WKP25	
	PS5915							VP15TF		
	PS5925	IC903	MP3000	TT7070			KC522M			PC3500
		IC908		TT7080	PR730	GC1025	KCU20M	UP20M	WKP35	
	PS5960	IC950	F25M	TT7030		GC1030				
PS5915		F30M		PR830		KC935M			PC5300	
PS5925	IC928	F40M	TT8020	PR660	GC1030	KC7140	VP30RT	WKP35	PC5400	
M		IC903			PR730		KC5510			
							KC7020			
	PS7925	IC908				GC1125	KC522M	MP7130		
						GC1025	KC725M			
		IC900	F25M							
	PS7925	IC250	F30M	TT9030	PR1025	GC2030	KC735M		WQM35	PC5300
	PS5925	IC928	F40M	TT9080	PR660	GC1030	KC722	KC7140	WSM35S	PC5400
	IC328		TT8020					WSP45	PC3545	
S						GC1025		VP15TF		
		IC328	F40M	TT9030	PR620	GC1040	KC510M	VP30RT		
	PS5915	IC408	MS2050	TT9080	PR660	S40T	KCU30M	MP9130	WSM35S	PC5300
	PS7925			TT8020	PR1535				WSM45S	PC5400

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE PARTS

INDEX