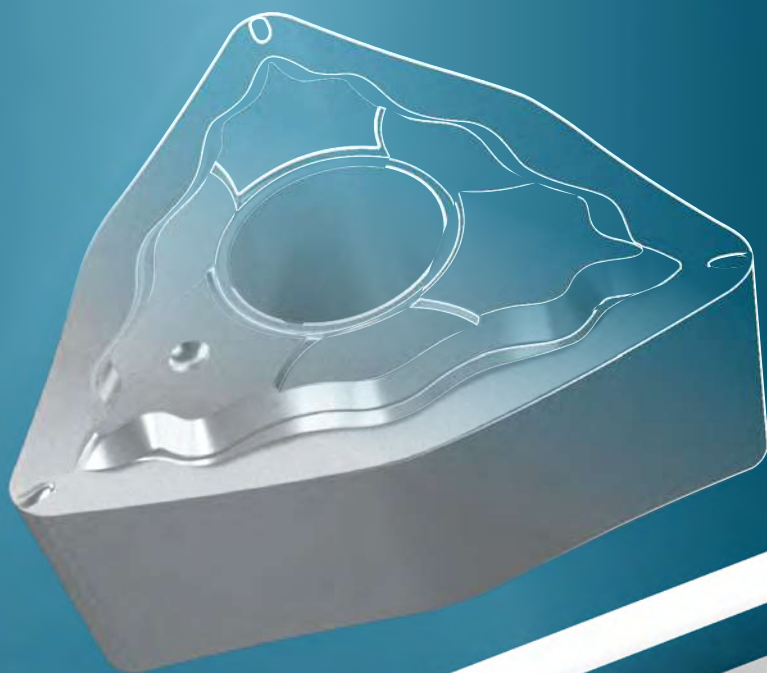


Sangeo
cutting tools

Cutting Tools 2019-2020



Sangeo
cutting tools



TURNING

GROOVING

THREADING

MILLING

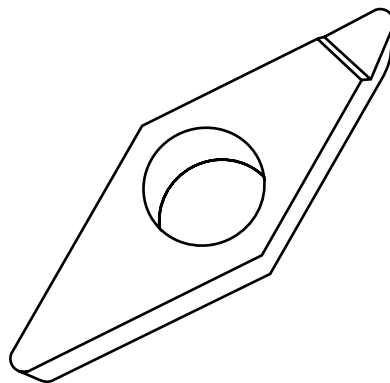
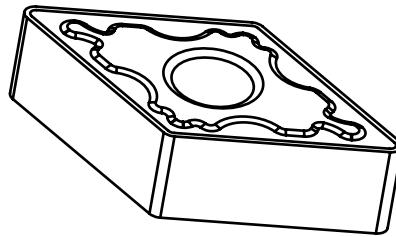
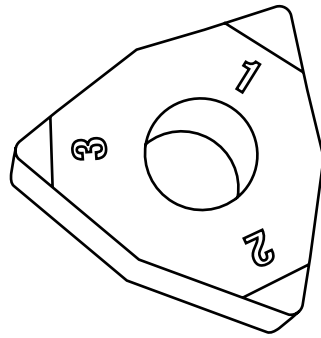
DRILLING

ENDMILLS

DRILLS

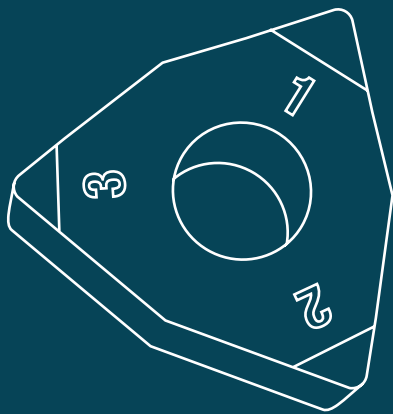
SPARE PARTS

INDEX

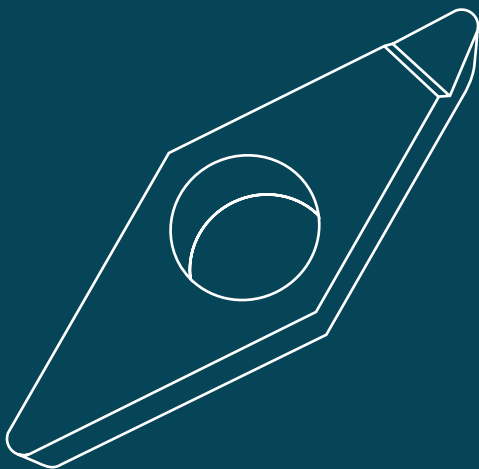
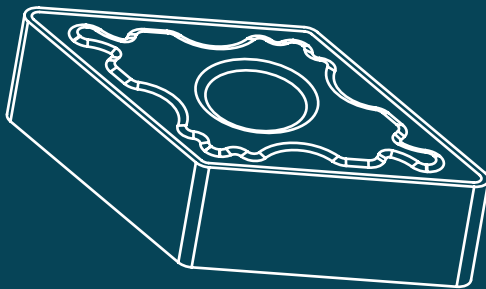


TURNING/

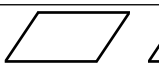
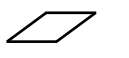
carbide /5
PCBN /59
diamond /79
ceramic /95
holders /117

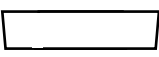
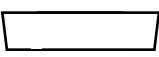
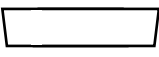
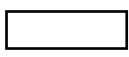


TURNING / **carbide**

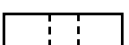
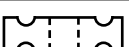
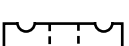
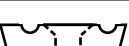


C	N	M	G	12	04	08
1	2	3	4	5	6	7

1	Geometry	
C		80°
D		55°
K		55°
S		90°
T		60°
V		35°
W		80°

2	Clearence Angle	
B		5°
C		7°
P		11°
N		0°

3	Tolerance	
		
G	±0,025	±0,13
M	±0,05 ±0,15	±0,13
U	±0,08 ±0,25	±0,13

4	Shape	
A		
G		
M		
T		
X	Special	

5	Shape	
C	06 09 12 16 19 25	
D	07 11 15	
K	16	
S	09 12 15 19 25	
T	09 11 16 22	
V	11 16 22	
W	06 08	

6	Thickness	
02	2,38	
03	3,18	
T3	3,97	
04	4,76	
06	6,35	
09	9,52	

7	Corner Radius	
02	0,20	
04	0,40	
08	0,80	
12	1,20	
16	1,60	
24	2,40	

U	M
8	9

CS	5	2	25	S
10	11	12	13	14

8	Series of C/B
H	Huskar Series
U	Undying Series
S	Spirit Series
T	Tusk Series
A	Aluminium

9	ISO Grade
Heavy Machining	P H. Roughing
	R Roughing
	F Functional
Turning	R Roughing
	M Medium
	F Finishing
	J Ultra Finishing
Stainless Steel	S Standart
	K Roughing
Aluminium	LU Functional

10	Coating & Material
CS	CVD Coated Carbide
CD	Double CVD Coated
PS	PVD Coated Carbide
PB	New PVD Coating
KS	Ceramic
SS	Cermet
US	Uncoated

11	Workpiece Material
2	Non-Ferrous Material
4	Hardened Steel
5	Steel
7	Stainless Steel
8	Cast Iron
9	General Machining

12	Machining
1~3	Turning
4	Threading
5	Grooving
9	Milling

13	ISO Grade
05	
10	
15	
20	
25	
30	
35	
40	
45	

14	Grade
S	Premium
non	Normal

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	CARBIDE CVD					CARBIDE CVD					CARBIDE CVD					CARBIDE CVD				
GROOVING																				
THREADING																				
MILLING																				
DRILLING																				
ENDMILLS	CARBIDE PVD					CARBIDE PVD					CARBIDE PVD					CARBIDE PVD				
DRILLS																				
SPARE PARTS																				
INDEX	CERMET UNCOATED					CERMET UNCOATED					CERMET UNCOATED					CERMET UNCOATED				
	SS9115					SS9115 SS9125					SS9115									

CVD Turning Grades

MATERIAL	GRADE	ISO	Color	Operation
P	CS5215	P05-P25	BLACK	MT-TiCN+TiC+Al ₂ O ₃ +TiN
				Optimization for high speed machining due to combining the substrate of superior wear resistance and toughness with the coating of excellent thermal crack/plastic deformation
	CS5215S	P05-P25	YELLOW	MT-TiCN+TiC+Al ₂ O ₃ +TiN
				Optimization for high speed machining due to combining the substrate of superior wear resistance and toughness with the coating of excellent thermal crack/plastic deformation
	CS5225	P15-P35 M10-M20	BLACK	MT-TiCN+TiC+Al ₂ O ₃ +TiN
				First recommended grade for general machining with the use of high toughness substrate and coating layer with improved welding/chipping resistance
	CS5225S	P15-P35 M10-M20	YELLOW	MT-TiCN+TiC+Al ₂ O ₃ +TiN
				First recommended grade for general machining with the use of high toughness substrate and coating layer with improved welding/chipping resistance
	CS5235	P25-P40 M25-M40	YELLOW - BLACK	MT-TiCN+TiC+Al ₂ O ₃ +TiN
				Medium to low speed machining of steel
	CS5240	P30-P40 M30-M40	YELLOW - BLACK	MT-TiCN+TiC+Al ₂ O ₃ +TiN
				Medium to high speed machining of stainless steel
M	CS7125S	M20-M30	BLACK	MT-TiCN+TiC+α-Al ₂ O ₃
K	CS8205	K01-K10	BLACK	MT-TiCN+TiC+Al ₂ O ₃ +TiN
				As adapting highly hard substrate with superior CVD coated which has excellent resistance for thermal & oxidation, Excellent performance in casting iron continuous machining
	CS8115	K10-K20	BLACK	MT-TiCN+TiC+Al ₂ O ₃ +TiN
				Medium speed machining of cast iron
	CS8215	K10-K20	BLACK	MT-TiCN+TiC+Al ₂ O ₃ +TiN
				Medium speed machining of cast iron
	CS8125	K20-K30	BLACK	MT-TiCN+TiC+Al ₂ O ₃ +TiN
				Interrupted cutting for gray cast iron and ductile cast iron

CS5225S

Universal grade especially for machining forged automobile components and bearing steel both in continuous and interrupted cutting. Available for all kinds of steels - carbon steel, alloy steel, rolled steel, tool steel, mild steel, bearing steel and other special kinds of steel. New coating technology increases welding resistance and chipping resistance, which leads to longer tool life



TiN coating layer with superior welding resistance

TiC + Al₂O₃ coating layer with superior heat resistance

TiCN coating layer with superior chipping resistance

Exclusive substrate material for coating with improved wear resistance.

PVD Turning Grades

MATERIAL	GRADE	ISO	Color	Operation
P	PS5125	P05-P25	DARK GRAY	2-4 micron Nano TiAlN PVD Coating
				Stable machinability with chipping resistance fracture resistance and welding resistance, Medium, roughing and heavy interrupted cutting for stainless steel and forged steel
M	PS7110S	M20-M30	COPPER	PVD(Cotated) - TiAlSiN, Premium grade
				As adapting highly hard substrate, Excellent in medium speed machining of stainless steel. As adapting Salina coating which has excellent resistance for thermal & oxidation
	PS7120	M15-M25	YELLOW	2-4 micron Nano AlCrN AlCrSiN Coating
				Medium, roughing and heavy interrupted cutting for st. steel and forged steel
	PS7220S	M10-M30	COPPER	PVD(Cotated) - TiAlSiN, Premium grade
				Excellent in medium speed machining of stainless steel. As adapting Salina coating which has excellent resistance for thermal & oxidation

Uncoated Carbide Grades

MATERIAL	GRADE	ISO	Color	Operation
N	US2115	K05-K25	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

Cermet Carbide Grades

MATERIAL	GRADE	ISO	Color	Operation
UNI	SS9115	P05-P25	SILVER	For continuous machining of cold/hot forged steel and Sintered ferrous alloy at high speed and low depth of cut
				
	SS9125	P05-P25	SILVER	For high interrupted machining of cold/hot forged steel and Sintered ferrous alloy at high feed and high depth of cut
				

Chipbreakers Selection (Negative)

	CN□□	DN□□	SN□□	TN□□	VN□□	WN□□
MA FLAT	21 	26 	32 	38 		47 
MG BOX	21 	26 	32 	38 	45 	47 
ALU	21 	26 	32 	38 		47 
HQ	21 	26 		39 		47 
PM	22 			39 	45 	47 
ST		26 		39 		48 
TK	22 	27 	32 	39 		48 
TM	22 	27 				48 
TS	22 	27 	32 	39 	45 	48 
UF		27 	33 	39 	45 	48 
UM	22 	27 	33 	39 	45 	48 
UR	23 	28 	33 	39 		48 
US	23 	28 	33 	39 		49 
OTHERS			32  (TF)	38  (R/L-P)		47  (HA)
			33  (ZR)	39  (R/L-C)		
			34  (HTR)	39  (UH)		
				39  (VQ)		

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

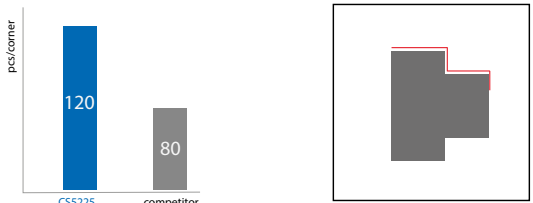
SPARE
PARTS

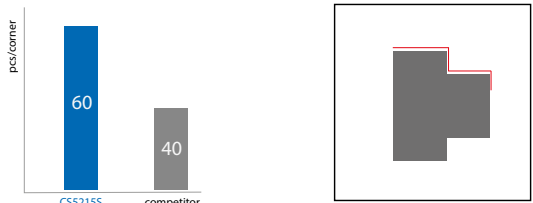
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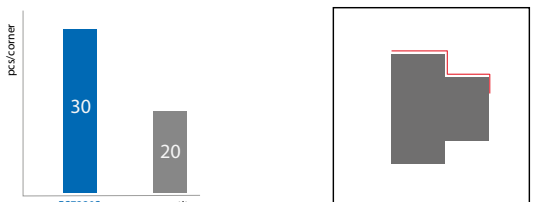
Chipbreakers Selection (Positive)

	CC □ □	DC □ □	SC □ □	TC □ □	VB □ □	VC □ □
ER/L-U	18 	24 				
L-F	18 					
L/R-W	18 					
L-Y					42 	
ALU	18 	24 	31 	36 	42 	44 
CG	19 	24 		36 	42 	44 
HF	19 	24 	31 	36 		
HM	19 	24 	31 	36 		
HQ	19 	25 		37 	42 	
HR	19 	25 		37 	42 	
TS	19 	25 		37 	43 	
VM	19 	25 		37 	43 	
VQ	19 	25 				
VW		25 				

Machining Examples

P	Carbon Steel (1.1040)	
■Workpiece	Hub	
■Cutting Conditions	Vc (m/min)= 250	fn (mm/rev)= 0.2
	ap (mm)= 1,5	Wet
■Designation	Insert	CNMG120408-UM CS5225
	Toolholder	DCLNR2525-M12
■Test Result 		

P	Alloy Steel (2379)	
■Workpiece	Automobile Part	
■Cutting Conditions	Vc (m/min)= 250	fn (mm/rev)= 0.2
	ap (mm)= 1,5	Wet
■Designation	Insert	CNMG120408-UM CS5215S
	Toolholder	DCLNR2525-M12
■Test Result 		

M	Stainless Steel (316L)	
■Workpiece	Valve	
■Cutting Conditions	Vc (m/min)= 120	fn (mm/rev)= 0.2
	ap (mm)= 1,5	Wet
■Designation	Insert	CNMG120408-TS PS7220S
	Toolholder	DCLNR2525-M12
■Test Result 		

K	Gray Cast Iron (GG25)	
■Workpiece	Disc	
■Cutting Conditions	Vc (m/min)= 350	fn (mm/rev)= 0.25
	ap (mm)= 1,5	Wet
■Designation	Insert	CNMA120408 CS8215
	Toolholder	DCLNR2525-M12
■Test Result 		

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

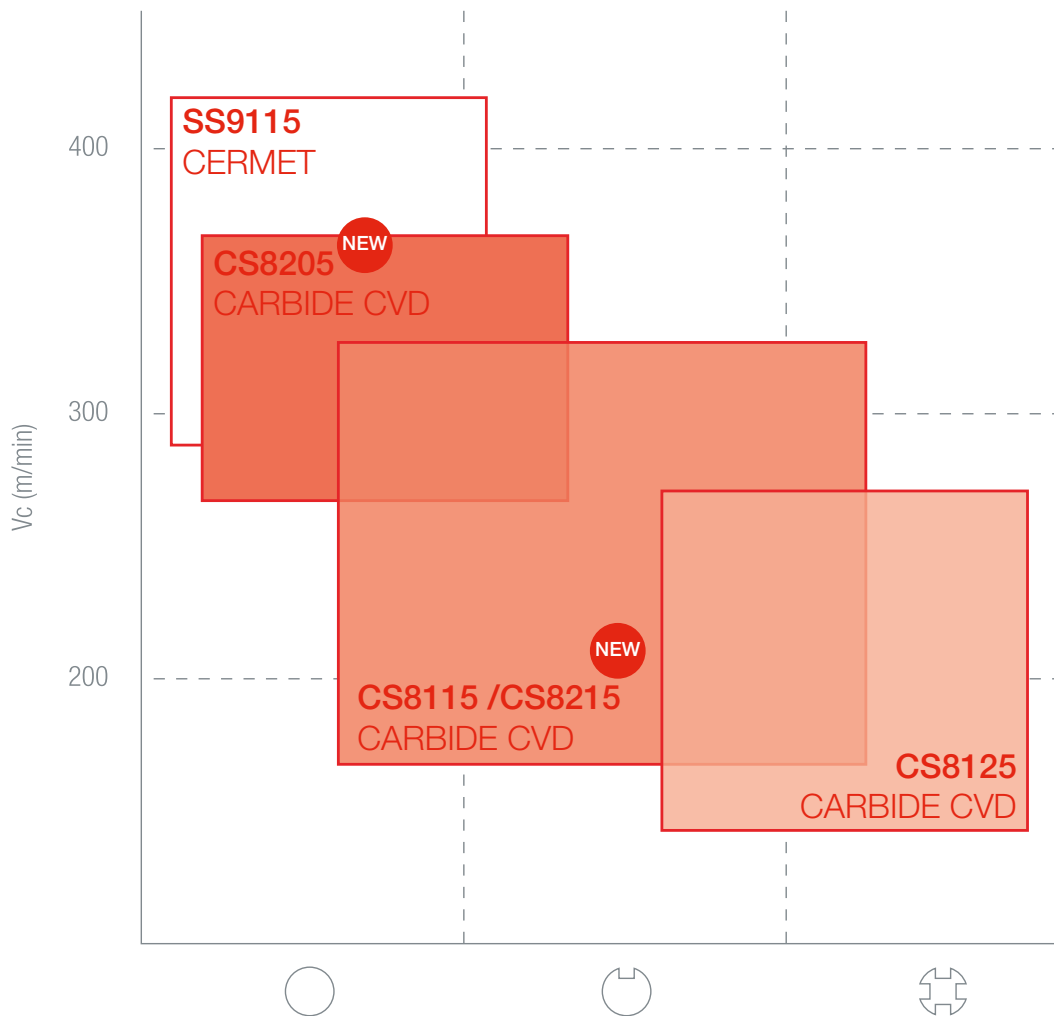
DRILLS

SPARE PARTS

INDEX

Range ISO **K**

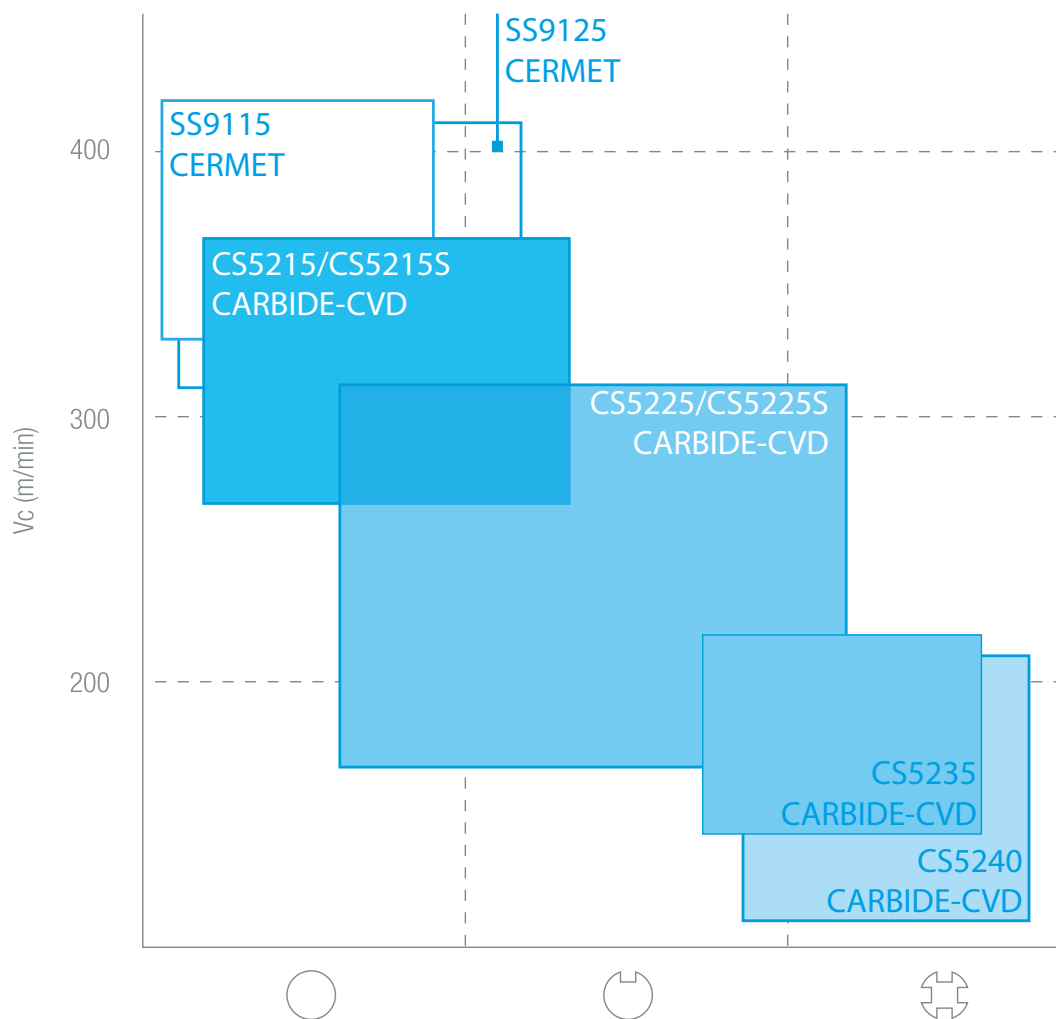
Grades



TURNING

Range ISO **P**

Grades



TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

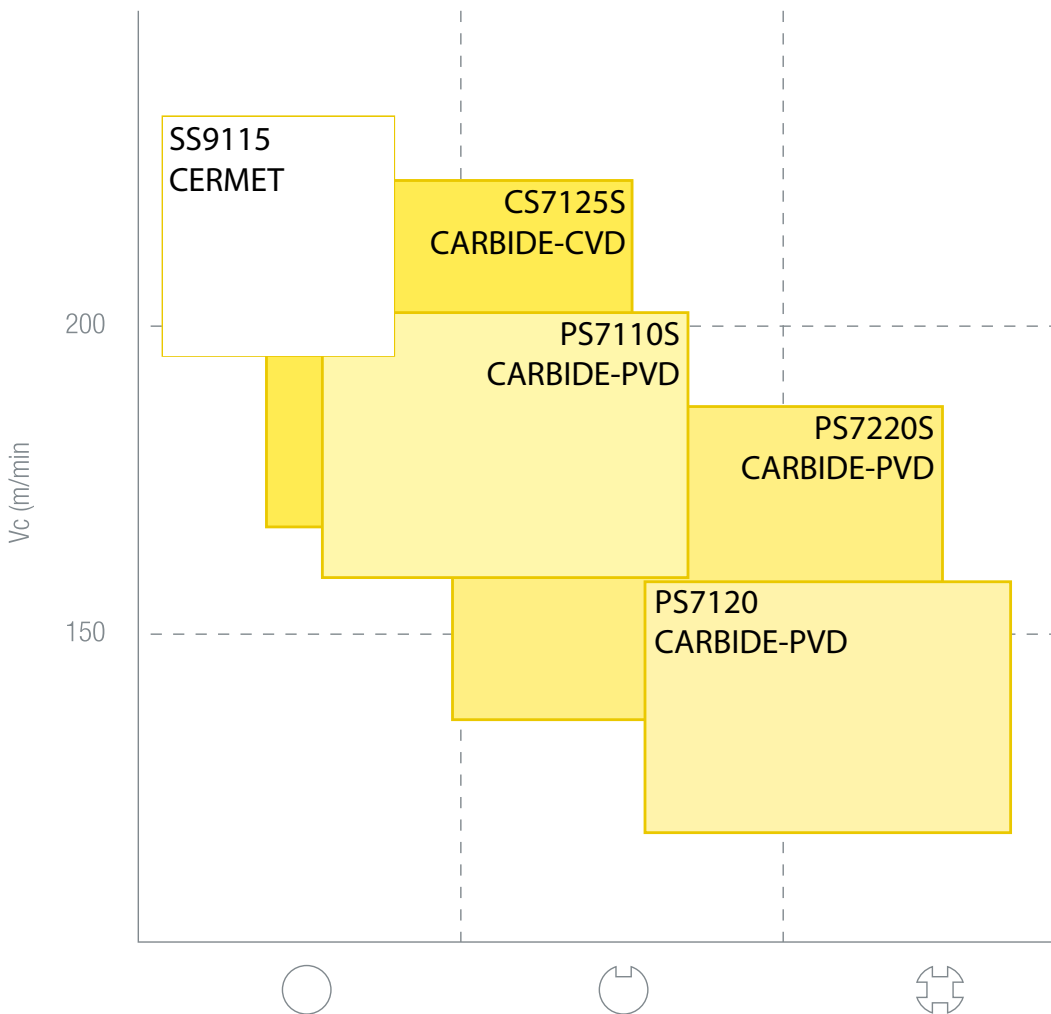
DRILLS

SPARE PARTS

INDEX

Range ISO **M**

Grades

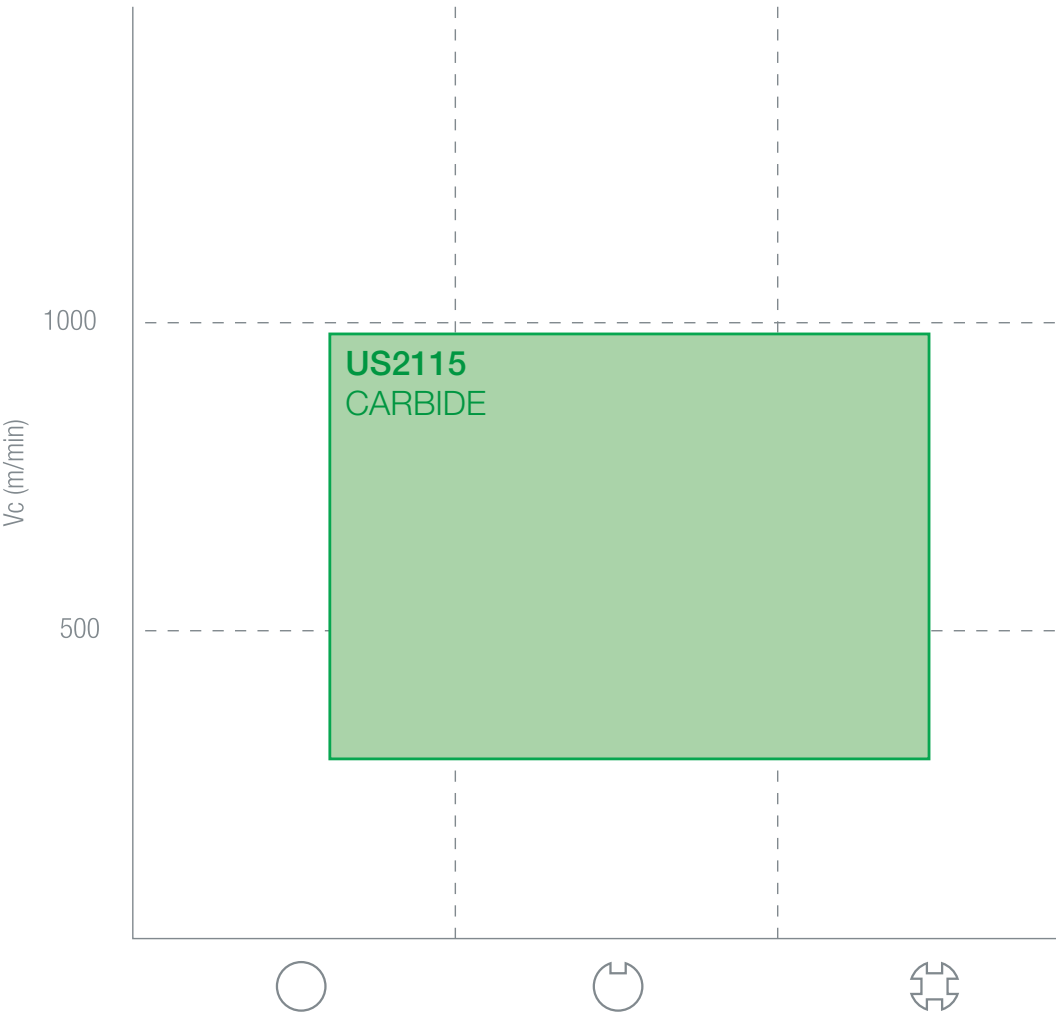


TURNING

Range ISO

N

Grades



TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE PARTS

INDEX

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

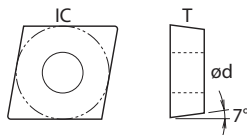
DRILLS

SPARE PARTS

INDEX

POSITIVE 7°
with hole

CC□□



CC □□	0602 □□	09T3 □□	1204 □□
IC	6,35	9,525	12,7
T	2,38	3,97	4,76
Ød	2,80	4,40	5,50
Holder	126	126	126

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET	CARBIDE				
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	CCGT060202EL-U																●		
	CCGT060204EL-U																●		
	CCGT09T302EL-U																●		
	CCGT09T304EL-U																●		
	CCGT060202ER-U																●		
	CCGT060204ER-U																●		
	CCGT09T302ER-U																●		
	CCGT09T304ER-U																●		
 	CCGT030102L-F																●		
	CCGT030104L-F																●		
	CCGT040102L-F																●		
	CCGT040104L-F																●		
 	CCGT060202L-W15																●		
	CCGT060204L-W15																●		
	CCGT060202R-W15																●		
	CCGT060204R-W15																●		
 	CCGT09T302L-W20																●		
	CCGT09T304L-W20																●		
	CCGT09T302R-W20																●		
	CCGT09T304R-W20																●		
 	CCGT060202-ALU																		●
	CCGT060204-ALU																		●
	CCGT060208-ALU																		●
	CCGT09T302-ALU																		●
	CCGT09T304-ALU																		●
	CCGT09T308-ALU																		●
	CCGT09T312-ALU																		●
	CCGT120404-ALU																		●
	CCGT120408-ALU																		●



finishing



medium



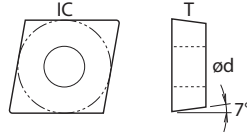
roughing

Vc • fn • ap

50

POSITIVE 7°
with hole

CC□□



CC □□	0602 □□	09T3 □□	1204 □□
IC	6,35	9,525	12,7
T	2,38	3,97	4,76
Ød	2,80	4,40	5,50
Holder	126	126	126

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET	CARBIDE				
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	CCMT060202-CG																●		
	CCMT060204-CG																●		
	CCMT060208-CG																●		
	CCMT09T304-CG																●		
	CCMT09T308-CG																●		
 	CCMT060202-HF	●														●			
	CCMT060204-HF	●		●		●	●			●	●				●	●			
	CCMT09T302-HF	●																	
	CCMT09T304-HF	●		●		●	●			●	●				●	●			
 	CCMT060204-HM	●		●		●	●			●	●					●			
	CCMT060208-HM	●		●		●	●			●	●					●			
	CCMT09T302-HM	●																	
	CCMT09T304-HM	●		●		●	●			●	●					●			
	CCMT09T308-HM	●		●		●	●			●	●					●			
	CCMT120404-HM	●		●		●	●			●	●				●	●			
	CCMT120408-HM	●		●		●	●			●	●				●	●			
	CCMT120412-HM									●									
 	CCMT060204-HQ																	●	
	CCMT09T304-HQ				●													●	
	CCMT09T308-HQ																	●	
 	CCMT060208-HR									●									
	CCMT09T308-HR									●									
	CCMT120408-HR									●									
 	CCMT060204-TS														●				
	CCMT060208-TS														●				
	CCMT09T304-TS														●				
	CCMT09T308-TS														●				



finishing



medium



roughing

Vc • fn • ap



50

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

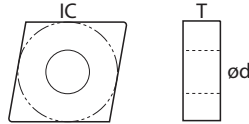
DRILLS

SPARE PARTS

INDEX

NEGATIVE
with hole

CN□□



CN □□	1204 □□	1606 □□	1906 □□
IC	12,7	15,875	12,7
T	4,76	6,35	4,76
ød	5,16	6,35	5,50
Holder	131	131	131

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET	CARBIDE				
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	CNMA120404									●	●								
	CNMA120408							●	●	●	●								
	CNMA120412							●	●	●	●								
	CNMA120416									●	●								
	CNMA160608							●	●	●	●								
	CNMA160612							●	●	●	●								
	CNMA160616							●	●	●	●								
	CNMA190612							●	●	●	●								
	CNMA190616							●	●	●	●								
 	CNMG120404									●	●		●	●					
	CNMG120408	●	●	●	●	●	●	●	●	●	●		●	●	●	●			
	CNMG120412	●	●	●	●	●	●	●	●	●	●		●	●	●	●			
	CNMG120416	●		●		●	●	●	●	●	●				●	●			
	CNMG160608	●	●	●	●	●	●	●	●	●	●		●	●	●	●			
	CNMG160612	●	●	●	●	●	●	●	●	●	●		●	●	●	●			
	CNMG160616	●	●	●	●			●	●				●	●					
	CNMG190608	●	●	●	●								●	●					
	CNMG190612							●	●										
	CNMG190616	●	●	●	●			●	●				●	●					
 	CNMG120402-ALU																		●
	CNMG120404-ALU																		●
	CNMG120408-ALU																		●
	CNMG120412-ALU																		●
 	CNMG120404-HQ				●							●	●	●			●		
	CNMG120408-HQ																●		



finishing



medium



roughing

Vc • fn • ap



50

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

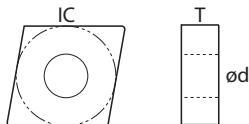
DRILLS

SPARE
PARTS

INDEX

NEGATIVE
with hole

CN□□



CN □□	0904 □□	1204 □□	1606 □□
IC	9,525	12,7	15,875
T	4,76	4,76	6,35
Ød	3,81	5,16	6,35
Holder	131	131	131

DESCRIPTION			CARBIDE-CVD								CARBIDE-PVD			CERMET		CARBIDE			
			CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125
 	CNMG120404-PM		●		●				●										
	CNMG120408-PM		●		●				●										
 	CNMG120404-TF														●	●			
	CNMG120408-TF														●	●			
 	CNMG090412-TK														●	●			
	CNMG120408-TK														●	●			
	CNMG120412-TK														●	●			
 	CNMG090408-TM			●		●													
 	CNMG090408-TS												●	●					
	CNMG090412-TS												●	●					
	CNMG120404-TS				●								●	●	●	●			
	CNMG120408-TS				●								●	●	●	●			
	CNMG120412-TS												●	●					
	CNMG160608-TS												●	●					
	CNMG160612-TS												●	●					
	CNMG190608-TS												●	●					
	CNMG190612-TS												●	●					
	CNMG190616-TS												●	●					



finishing



medium



roughing

Vc • fn • ap

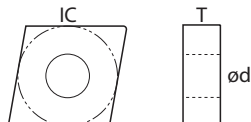


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TURNING

NEGATIVE
with hole

CN□□



CN □□	1204 □□	1606 □□	1906 □□
IC	12,7	15,875	12,7
T	4,76	6,35	4,76
ød	5,16	6,35	5,50
Holder	131	131	131

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET		CARBIDE			
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	CNMG120404-UM	●		●		●	●			●	●				●	●			
	CNMG120412-UM	●		●		●	●			●	●				●	●			
	CNMG120416-UM	●		●		●	●			●	●				●	●			
	CNMG120616-UM	●		●		●	●			●	●				●	●			
	CNMG160608-UM	●		●		●	●			●	●				●	●			
	CNMG160612-UM	●		●		●	●			●	●				●	●			
	CNMG160616-UM	●		●		●	●			●	●				●	●			
	CNMG190608-UM	●		●		●	●			●	●				●	●			
	CNMG190612-UM	●		●		●	●			●	●				●	●			
	CNMG190616-UM	●		●		●	●			●	●				●	●			
 	CNMG120408-UR	●		●		●													
	CNMG120412-UR	●		●		●													
	CNMG120612-UR	●		●		●													
	CNMG160612-UR	●		●		●													
	CNMG160616-UR	●		●		●													
	CNMG190612-UR	●		●		●	●				●				●	●			
	CNMG190616-UR	●		●		●	●			●	●				●				
	CNMG190624-UR			●		●													
	CNMM190612-UR			●		●													
	CNMM190616-UR			●		●													
	CNMM190624-UR			●		●													
	CNMM250724-UR			●		●													
	CNMM250924-UR			●	●	●													
 	CNMG120404-US	●		●															
	CNMG120408-US	●		●															



finishing



medium



roughing

Vc • fn • ap

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TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

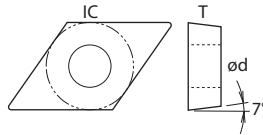
DRILLS

SPARE PARTS

INDEX

POSITIVE 7°
with hole

DC□□



DC □□	0702 □□	11T3 □□
IC	6,35	9,525
T	2,38	3,97
Ød	2,80	4,40
Holder	139	139

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET	CARBIDE				
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	DCGT070202-ALU																		●
	DCGT070204-ALU																		●
	DCGT070208-ALU																		●
	DCGT11T302-ALU																		●
	DCGT11T304-ALU																		●
	DCGT11T308-ALU																		●
	DCGT11T312-ALU																		●
 	DCGT11T302EL-U																●		
	DCGT11T304EL-U																●		
	DCGT11T302ER-U																●		
	DCGT11T304ER-U																●		
 	DCMT070204-CG																●		
	DCMT11T302-CG																●		
	DCMT11T304-CG																●		
	DCMT11T308-CG																●		
 	DCMT070202-HF	●		●		●	●			●	●				●	●			
	DCMT070204-HF	●		●		●	●			●	●				●	●			
	DCMT11T304-HF	●		●		●	●			●	●				●	●			
 	DCMT070204-HM	●		●		●	●			●	●					●			
	DCMT070208-HM	●		●		●	●			●	●					●			
	DCMT11T302-HM	●		●		●	●			●	●					●			
	DCMT11T304-HM	●		●		●	●			●	●					●			
	DCMT11T308-HM	●		●		●	●			●	●					●			
	DCMT11T312-HM	●		●		●										●			



finishing



medium



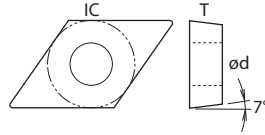
roughing

Vc • fn • ap

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POSITIVE 7°
with hole

DC□□



DC□□	0702□□	11T3□□
IC	6,35	9,525
T	2,38	3,97
Ød	2,80	4,40
Holder	139	139

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET	CARBIDE				
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	DCMT070202-HQ																●		
	DCMT070204-HQ																●		
	DCMT11T302-HQ																●		
	DCMT11T304-HQ																●		
	DCMT11T308-HQ																●		
 	DCMT11T304-HR	●		●		●	●			●	●				●	●			
 	DCMT070204-TS															●			
	DCMT070208-TS															●			
	DCMT11T302-TS															●			
	DCMT11T304-TS															●			
	DCMT11T308-TS															●			
 	DCMT11T304-VM			●	●								●	●					
 	DCMT070204-VQ			●	●								●	●					
	DCMT070208-VQ			●	●								●	●					
 	DCMT11T304-VW			●	●								●	●					
	DCMT11T308-VW			●	●								●	●					



finishing



medium



roughing

Vc • fn • ap



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TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE PARTS

INDEX

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

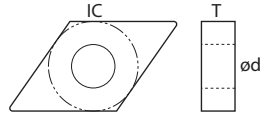
DRILLS

SPARE
PARTS

INDEX

NEGATIVE
with hole

DN□□



DN □□	1104 □□	1504 □□	1506 □□
IC	9,525	12,7	12,7
T	4,76	4,76	6,35
ød	3,81	5,16	5,16
Holder	149	149	149

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET	CARBIDE				
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	DNMA150408									•	•								
	DNMA150412									•	•								
	DNMA150608							•	•	•	•								
	DNMA150612							•	•	•	•								
	DNMA150616							•	•	•	•								
 	DNMG110408		•		•					•	•		•	•					
	DNMG150404		•		•					•	•		•	•					
	DNMG150408		•		•					•	•		•	•					
	DNMG150412		•		•					•	•		•	•					
	DNMG150604	•	•	•	•	•	•	•	•	•	•		•	•	•	•			
	DNMG150608	•	•	•	•	•	•	•	•	•	•		•	•	•	•			
	DNMG150612	•	•	•	•	•	•	•	•	•	•		•	•	•	•			
 	DNMG150602-ALU																		•
	DNMG150604-ALU																		•
	DNMG150608-ALU																		•
	DNMG150612-ALU																		•
 	DNMG150608-HA														•				
 	DNMG150608-HQ																•		
 	DNMG150604L-ST		•		•								•	•					
	DNMG150608L-ST		•		•								•	•					
	DNMG150604R-ST		•		•								•	•					
	DNMG150608R-ST		•		•								•	•					



finishing



medium



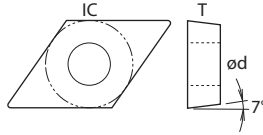
roughing

Vc • fn • ap

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NEGATIVE
with hole

DN□□



DN □□	1104 □□	1504 □□	1506 □□
IC	9,525	12,7	12,7
T	4,76	4,76	6,35
Ød	3,81	5,16	5,16
Holder	149	149	149

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET	CARBIDE				
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	DNMG110404-TK														●	●			
	DNMG110408-TK															●			
	DNMG150608-TK															●			
 	DNMG150608-TM		●		●								●	●					
 	DNMG110404-TS												●	●	●	●			
	DNMG110408-TS												●	●	●	●			
	DNMG110412-TS												●	●					
	DNMG150408-TS												●	●					
	DNMG150412-TS												●	●	●	●			
	DNMG150604-TS												●	●	●	●			
	DNMG150608-TS												●	●	●	●			
	DNMG150612-TS												●	●	●	●			
 	DNMG150404-UF	●		●		●													
	DNMG150408-UF	●		●		●													
	DNMG150604-UF	●		●		●													
 	DNMG110404-UM	●		●		●	●			●	●				●	●			
	DNMG110408-UM	●		●		●	●			●	●				●	●			
	DNMG110412-UM	●		●		●													
	DNMG150404-UM	●		●		●	●			●	●				●	●			
	DNMG150408-UM	●		●		●	●			●	●				●	●			
	DNMG150412-UM	●		●		●	●			●	●				●	●			
	DNMG150604-UM	●		●		●	●			●	●				●	●			
	DNMG150608-UM	●	●	●		●	●			●	●				●	●			
	DNMG150612-UM	●		●		●	●			●	●				●	●			



finishing



medium



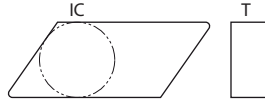
roughing

Vc • fn • ap

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KN 00

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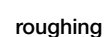
1604

9,525

4,76

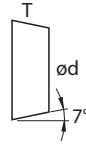
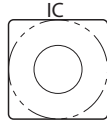


154

[illegible]

Vc • **in** • ap

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SC ☐ ☐

SC	09T3	1204
IC	9,525	12,7
T	3,97	4,76
Ød	4,40	5,16
 Holder	160	160

[illegible]

roughing

Vc •  • ap

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TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

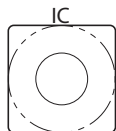
DRILLS

SPARE
PARTS

INDEX

NEGATIVE
with hole

SN□□



SN □□	1204□□	1206 □□	1506 □□
IC	12,7	12,7	15,875
T	4,76	6,35	6,35
ød	5,16	5,16	6,35
Holder	163	163	163

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET	CARBIDE				
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	SNMA120408							•	•	•	•				•				
	SNMA120412							•	•	•	•								
	SNMA120416							•	•	•	•								
	SNMA150612							•	•	•	•								
	SNMA150616							•	•										
	SNMA190612							•	•										
	SNMA190616							•	•	•									
	SNMA250924							•	•	•	•								
 	SNMG120404	•	•	•	•	•							•	•					
	SNMG120408	•	•	•	•	•		•	•	•	•		•	•					
	SNMG120412	•	•	•	•	•		•	•	•	•		•	•					
	SNMG120416							•	•										
	SNMG190612	•	•	•	•	•		•	•				•	•					
 	SNMG120402-ALU																		•
	SNMG120404-ALU																		•
	SNMG120408-ALU																		•
	SNMG120412-ALU																		•
 	SNMG120408-TF			•											•	•			
 	SNMG120404-TK														•	•			
	SNMG120408-TK														•	•			
	SNMG120412-TK														•	•			
	SNMG120612-TK														•	•			
 	SNMG120404-TS		•		•								•	•	•	•			
	SNMG120408-TS												•	•	•	•			
	SNMG120412-TS												•	•	•				
	SNMG150608-TS												•	•					



finishing



medium



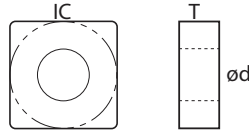
roughing

Vc • fn • ap

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NEGATIVE
with hole

SN □□



SN □□	1906 □□	2507 □□	2509 □□
IC	19,05	25,4	25,4
T	6,35	7,94	9,52
Ød	7,93	9,12	9,12
Holder	163	163	163

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET	CARBIDE				
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	SNMG120404-UF	●		●		●													
 	SNMG120404-UM	●		●		●	●			●	●				●	●			
	SNMG120408-UM	●		●		●	●			●	●				●	●			
	SNMG120412-UM	●		●		●	●			●	●				●	●			
	SNMG120616-UM	●		●		●													
	SNMG150608-UM	●		●		●	●			●	●				●	●			
	SNMG190612-UM	●		●		●													
	SNMG190616-UM			●		●										●			
 	SNMG120408-UR	●		●		●													
	SNMG120412-UR	●		●		●													
	SNMG120612-UR	●		●		●													
	SNMG150612-UR	●		●		●	●			●	●				●	●			
	SNMG190612-UR	●		●		●	●			●	●				●	●			
	SNMG190616-UR	●		●		●	●			●	●				●	●			
	SNMG190624-UR	●		●		●	●			●	●				●	●			
	SNMG250724-UR	●		●		●													
	SNMG250924-UR	●		●		●	●			●	●				●	●			
 	SNMG120404-US	●		●		●													
	SNMG120408-US	●		●		●	●			●	●				●	●			
	SNMG120412-US	●		●		●													
 	SNMG120412-ZR									●	●								
	SNMG120416-ZR									●	●								



finishing



medium



roughing

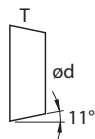
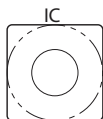
Vc • fn • ap



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POSITIVE 11°
with hole

SP □□

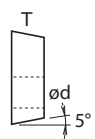


SP □□	1203 □□	1204 □□
IC	12,7	12,7
T	3,18	4,76
Ød	5,16	5,16

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET	CARBIDE				
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	SPMT120408														●	●			
	SPMT120412									●	●								
	SPMT120416									●	●								
	SPMT120420									●	●								
 	SPMT120408-HM			●											●	●			

POSITIVE 5°
with hole

TB □□



TB □□	0601 □□
IC	3,97
T	1,59
Ød	2,16

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET	CARBIDE				
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	TBGT060102L																●		
	TBGT060104L																●		

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE
PARTS

INDEX

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE PARTS

INDEX

POSITIVE 7°
with hole

TC □□



TC □□	0902□□	1102□□	16T3□□
IC	5,56	6,35	9,525
T	2,38	2,38	3,97
Ød	2,50	2,80	4,40
Holder	171	171	171

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET		CARBIDE			
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	TCGT090202-ALU																		●
	TCGT090204-ALU																		●
	TCGT090208-ALU																		●
	TCGT110202-ALU																		●
	TCGT110204-ALU																		●
	TCGT110208-ALU																		●
	TCGT16T302-ALU																		●
	TCGT16T304-ALU																		●
	TCGT16T308-ALU																		●
	TCGT16T312-ALU																		●
 	TCGW16T304									●	●								
	TCGW16T308									●	●								
	TCGW16T312									●	●								
 	TCMT110204-CG																●		
 	TCMT090204-HF	●		●		●	●			●	●				●	●			
	TCMT110204-HF	●		●		●	●			●	●				●	●			
	TCMT16T304-HF	●		●		●	●			●	●				●	●			
 	TCMT090204-HM	●		●		●	●			●	●				●	●			
	TCMT090208-HM	●		●		●	●			●	●				●	●			
	TCMT110204-HM	●		●		●	●			●	●					●			
	TCMT110208-HM	●		●		●	●			●	●				●	●			



finishing



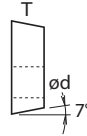
medium



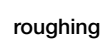
roughing

Vc • fn • ap

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TC 

TC 	0902 	1102 	16T3 
IC	5,56	6,35	9,525
T	2,38	2,38	3,97
Ød	2,50	2,80	4,40
 Holder 			

[illegible]

Vc • **in** • ap

50

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE
PARTS

INDEX

NEGATIVE
with hole

TN □□



TN □□	1604□□	2204□□	2706□□
IC	9,525	12,7	15,875
T	4,76	4,76	6,35
ød	3,81	5,16	6,35
Holder	178	178	178

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET	CARBIDE					
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115	
 	TNGG160402L-P																●			
	TNGG160404L-P																●		●	
	TNGG160402R-P																●			
	TNGG160404R-P																●		●	
 	TNMA160404									●	●									
	TNMA160408							●	●	●	●									
	TNMA160412							●	●	●	●									
	TNMA160416							●	●	●	●									
	TNMA220404									●	●									
	TNMA220408							●	●	●	●									
	TNMA220412							●	●	●	●									
	TNMA220416							●	●	●	●									
 	TNMG160404	●	●	●	●	●	●			●	●		●	●	●	●				
	TNMG160408	●	●	●	●	●	●	●	●	●	●		●	●	●	●				
	TNMG160412	●	●	●	●	●	●	●	●	●	●		●	●	●	●				
	TNMG220408	●		●		●	●	●	●	●	●				●	●				
	TNMG220412		●		●			●	●	●	●		●	●						
	TNMG220416		●		●					●	●		●	●						
	TNMG270612	●	●	●	●	●	●	●	●	●	●		●	●	●	●				
	TNMG270616	●	●	●	●	●	●			●	●		●	●	●	●				
	TNMG330704					●														
	TNMG330724			●		●														
	TNMG330924			●		●	●													
 	TNMG160402-ALU																		●	
	TNMG160404-ALU																		●	
	TNMG160408-ALU																		●	
	TNMG160412-ALU																		●	



finishing



medium



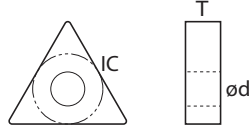
roughing

Vc • fn • ap

50

NEGATIVE
with hole

TN □□



TN □□	1604□□	2204□□	2706□□
IC	9,525	12,7	15,875
T	4,76	4,76	6,35
Ød	3,81	5,16	6,35
Holder	178	178	178

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET	CARBIDE				
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	TNMG160404-HQ																●		
	TNMG160408-HQ																●		
 	TNMG160404L-C																●		
	TNMG160408L-C																●		
	TNMG160404R-C																●		
	TNMG160408R-C																●		
 	TNMG160404-PM		●		●							●	●	●					
	TNMG160408-PM		●		●							●	●	●					
	TNMG160412-PM				●							●	●	●					
 	TNMG160404L-ST	●		●											●	●			
	TNMG160408L-ST	●		●											●	●			
	TNMG160404R-ST	●		●											●	●			
	TNMG160408R-ST	●		●											●	●			
 	TNMG160404-TK														●	●			
	TNMG220408-TK														●	●			
 	TNMG160404-TS				●			●	●			●	●	●	●	●			
	TNMG160408-TS				●			●	●			●	●	●	●	●			
	TNMG160412-TS														●	●			
	TNMG220404-TS																		
	TNMG220408-TS																		
 	TNMG160404-UF	●		●		●													
	TNMG160408-UF	●		●		●													



finishing



medium



roughing

Vc • fn • ap



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TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE PARTS

INDEX

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE
PARTS

INDEX

NEGATIVE
with hole

TN□□



TN □ □	1604 □ □	2204 □ □	2706 □ □
IC	9,525	12,7	15,875
T	4,76	4,76	6,35
ød	3,81	5,16	6,35
Holder	178	178	178

DESCRIPTION			CARBIDE-CVD								CARBIDE-PVD				CERMET		CARBIDE				
			CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115	
 	TNMG220412-UH	●		●																	
	TNMG220416-UH	●		●																	
 	TNMG160404-UM	●		●		●	●			●	●				●	●					
	TNMG160408-UM	●		●		●	●			●	●				●	●					
	TNMG160412-UM	●		●		●	●			●	●				●	●					
	TNMG160416-UM									●	●										
	TNMG220404-UM	●		●		●	●			●	●				●	●					
	TNMG220408-UM	●		●		●	●			●	●				●	●					
	TNMG220412-UM	●		●		●	●			●	●				●	●					
 	TNMG160408-UR	●		●		●	●			●	●				●	●					
	TNMG160412-UR	●		●		●	●			●	●				●	●					
	TNMG220416-UR	●		●		●	●			●	●				●	●					
	TNMG270612-UR			●		●	●														
	TNMG330924-UR			●		●	●														
 	TNMG160404-US	●		●		●															
	TNMG160408-US	●		●		●															
 	TNMG160404-VQ				●							●	●	●							
	TNMG160408-VQ				●							●	●	●							
 	TNMM220412-UR			●		●	●														
	TNMM220416-UR			●		●	●														
	TNMM270616-UR			●		●	●														



finishing



medium



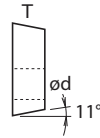
roughing

Vc • fn • ap

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POSITIVE 11°
with hole

TP □□



TP □□	0802□□	0902□□	1103□□
IC	4,76	5,56	6,35
T	2,38	2,38	3,18
ød	2,30	3,00	3,40
Holder	177	177	177

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET		CARBIDE			
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	TPGH080202L											●	●			●			
	TPGH080204L											●	●			●			
	TPGH090202L											●	●			●			
	TPGH090204L											●	●			●	●		
	TPGH110302L											●	●			●			
	TPGH110304L											●	●			●	●		
 	TPGN160308	●		●		●													
	TPGN220416	●		●		●													
 	TPGT110204-HM	●		●		●													
 	TPMT110304-CG															●			
 	TPMT110304-HQ															●			
	TPMT110308-HQ															●			
 	TPUN160304						●												
	TPUN160308						●												
	TPUN220412						●							●	●				



finishing



medium



roughing

Vc • fn • ap



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TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

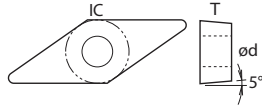
DRILLS

SPARE PARTS

INDEX

POSITIVE 5°
with hole

VB □□



VB □□	1103 □□	1604 □□
IC	6,35	9,525
T	3,18	4,76
Ød	2,80	4,40
Holder	183	183

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET	CARBIDE				
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	VBGT110302-ALU																		●
	VBGT110308-ALU																		●
	VBGT160402-ALU																		●
	VBGT160404-ALU																		●
	VBGT160408-ALU																		●
	VBGT160412-ALU																		●
 	VBGT110302L-Y																●		
	VBGT110304L-Y																●		
	VBGT110302R-Y																●		
	VBGT110304R-Y																●		
 	VBMT160404	●		●		●	●			●	●				●	●			
	VBMT160408	●		●		●	●			●	●				●	●			
 	VBMT110302-CG																●		
	VBMT110304-CG																●		
 	VBMT110304-HQ																●		
	VBMT110308-HQ																●		
	VBMT160404-HQ																●		
	VBMT160408-HQ																●		
 	VBMT160408-HR													●	●				



finishing



medium



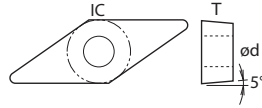
roughing

Vc • fn • ap

50

**POSITIVE 5°
with hole**

VB □□



VB 	1103 	1604 
IC	6,35	9,525
T	3,18	4,76
Ød	2,80	4,40
 Holder 		

[illegible]

finishing



medium



roughing

Vc •  • ap

50

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

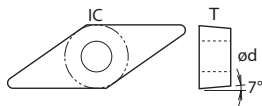
DRILLS

SPARE
PARTS

INDEX

POSITIVE 7°
with hole

VC □□



VC □□	1103 □□	1604 □□	2205 □□
IC	6,35	9,525	12,70
T	3,18	4,76	5,56
Ød	2,80	4,40	5,60
Holder	189	189	189

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET	CARBIDE				
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	VCGT110302-ALU																		●
	VCGT110304-ALU																		●
	VCGT110308-ALU																		●
	VCGT160402-ALU																		●
	VCGT160404-ALU																		●
	VCGT160408-ALU																		●
	VCGT160412-ALU																		●
	VCGT220516-ALU																		●
 	VCGT110304-VF													●	●				
 	VCGW110304									●	●								
	VCGW160404									●	●								
	VCGW160408									●	●								
 	VCMT160404	●		●	●	●	●			●	●	●	●	●	●	●			
 	VCMT110302-CG																●		
	VCMT110302-CG																●		



finishing



medium



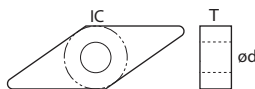
roughing

Vc • fn • ap

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NEGATIVE
with hole

VN □□



VN □□ 1604 □□

IC 9,525

T 4,76

ød 3,81

Holder 191

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET	CARBIDE				
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	VNMG160404	●		●		●	●			●	●		●	●	●	●			
	VNMG160408	●		●		●	●			●	●				●	●			
	VNMG160412	●		●		●	●			●	●				●	●			
 	VNMG160404-HQ																●		
	VNMG160408-HQ																●		
 	VNMG160404-PM		●		●								●	●					
	VNMG160408-PM		●		●								●	●					
 	VNMG160404-TS		●		●								●	●					
 	VNMG160404-UF	●		●		●													
	VNMG160408-UF	●		●		●													
 	VNMG160404-UM	●		●		●	●			●	●				●	●			
	VNMG160408-UM	●		●		●	●			●	●				●	●			
	VNMG160412-UM	●		●		●	●			●	●				●	●			



finishing



medium



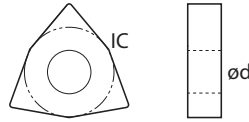
roughing

Vc • fn • ap

50

NEGATIVE
with hole

WN□□



WN □ □	0604 □ □	0804 □ □
IC	9,525	12,7
T	4,76	4,76
ød	3,81	5,16
Holder	194	194

DESCRIPTION		CARBIDE-CVD								CARBIDE-PVD				CERMET	CARBIDE				
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115
 	WNMA080404							●	●	●	●								
	WNMA080408							●	●	●	●								
	WNMA080412							●	●	●	●								
	WNMA080416							●	●	●	●								
 	WNMG080404	●		●		●	●	●	●	●	●				●	●			
	WNMG080408	●		●		●	●	●	●	●	●				●	●			
	WNMG080412	●		●		●	●	●	●	●	●				●	●			
	WNMG080416							●	●	●	●								
 	WNMG080404-ALU																		●
	WNMG080408-ALU																		●
 	WNMG080408-HA														●				
 	WNMG080404-HQ																●		
	WNMG080408-HQ		●		●								●	●			●		
	WNMG080412-HQ																●		
 	WNMG080404-PM		●		●								●	●					
	WNMG080408-PM		●	●	●								●	●					
	WNMG080412-PM		●		●								●	●					



finishing



medium



roughing

Vc • fn • ap



50

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE
PARTS

INDEX

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE
PARTS

INDEX

NEGATIVE
with hole

WN□□



WN □□	0604□□	0804□□
IC	9,525	12,7
T	4,76	4,76
Ød	3,81	5,16
Holder	191	191

DESCRIPTION			CARBIDE-CVD								CARBIDE-PVD			CERMET		CARBIDE			
			CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S	PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125
 	WNMG080404L-ST		●		●								●	●					
	WNMG080408L-ST		●		●								●	●					
	WNMG080408R-ST		●	●	●								●	●					
 	WNMG080408-TM		●		●								●	●					
 	WNMG080404-TK														●	●			
	WNMG080408-TK														●	●			
	WNMG080412-TK														●				
 	WNMG080404-TS		●		●								●	●	●	●			
	WNMG080408-TS		●		●								●	●	●	●			
 	WNMG080404-UF	●		●		●													
	WNMG080408-UF	●		●		●													
 	WNMG060408-UM	●		●		●	●			●	●				●	●			
	WNMG080404-UM	●		●		●	●			●	●				●	●			
	WNMG080408-UM	●		●		●	●			●	●				●	●			
	WNMG080412-UM	●		●		●	●			●	●				●	●			
 	WNMG080408-UR	●		●		●													
	WNMG080412-UR	●		●		●													



finishing



medium



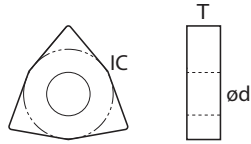
roughing

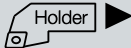
Vc • fn • ap

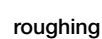
50

WN 00

80



WN	0604	0804
IC	9,525	12,7
T	4,76	4,76
Ød	3,81	5,16
	191	191

[illegible]

Vc •  • ap

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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-CVD										
		CS5215	CS5215S	CS5225	CS5225S	CS5235	CS5240	CS8205	CS8215	CS8115	CS8125	CS7125S
K	KG							250~450	200~360	200~360	160~300	
	KN							180~300	150~280	150~280	120~250	
P	PL	250~350	200~320	200~320	200~320	160~250						
	PM	220~300	180~260	180~260	180~260	140~200						
	PH	200~280	160~250	160~250	160~250	120~180	100~160					
	PA	180~250	150~220	150~220	150~220	100~170	90~160					
M	MM											160~260
	MA											140~220

MATERIAL		CARBIDE-PVD				CERMET		CARBIDE				
		PS7110S	PS7220S	PS7120	PS5125	SS9115	SS9125	US2115				
K	KG					250~400	250~400					
	KN					180~300	180~300					
P	PL				100~180	280~380	280~380					
	PM				80~160	240~330	240~330					
	PH				80~140	220~300	220~300					
	PA				60~120	200~280	200~280					
M	MM	120~220	100~150	100~150		180~250	180~250					
	MA	100~180	80~120	80~120		160~220	160~220					
N	NA							600~1500				
	NH							300~700				
	NB							250~400				
	NC							150~250				

Cutting Parameters a_p (mm) & f_n (mm/rev)negative 

NEGATIVE INSERT SIZE		CN □ □	-	1204..	1606..	1906..	2507.. 2509..
		DN □ □	1104..	1504.. 1506..	-	-	-
		SN □ □	0903..	1204..	-	1906..	2507.. 2509..
		TN □ □	-	1604..	2204..	-	-
		VN □ □	-	1604..	-	-	-
		WN □ □	0604..	0804..	-	-	-

Chip Breaker Form	Corner Radius	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)
MA FLAT	R02										
	R04			2,00-4,00	0,20-0,35						
	R08			2,00-6,00	0,25-0,50	4,00-8,00	0,34-0,60				
	R12			2,00-6,00	0,33-0,58	4,00-10,0	0,40-0,70	5,00-11,0	0,43-0,76	8,00-16,0	0,45-1,00
	R16 / R24			2,00-7,00	0,37-0,65	4,00-10,0	0,45-0,78	5,00-13,0	0,49-0,8	8,00-18,0	0,50-1,10
MG BOX	R02										
	R04			1,00-4,00	0,16-0,25					8,00-16,0	0,45-0,89
	R08	1,00-4,00	0,23-0,40	1,00-4,00	0,22-0,38	4,00-7,00	0,34-0,58	5,00-10,0	0,42-0,76		
	R12			1,00-5,00	0,26-0,44	4,00-8,00	0,40-0,68	5,00-11,0	0,43-0,76		
	R16 / R24			1,00-5,00	0,29-0,50	4,00-8,00	0,45-0,76	5,00-11,0	0,49-0,85	8,00-18,0	0,50-1,10
ALU	R02			0,10-3,00	0,05-0,30						
	R04			0,80-3,50	0,10-0,40						
	R08			0,80-3,50	0,10-0,40						
	R12			0,80-3,50	0,10-0,42						
	R16 / R24										
HA	R02										
	R04										
	R08										
	R12			0,80-3,50	0,05-0,30						
	R16 / R24										
HQ	R02										
	R04			0,50-2,50	0,05-0,25						
	R08			0,50-4,00	0,10-0,50						
	R12			0,50-4,00	0,13-0,60						
	R16 / R24										
HTR	R02										
	R04										
	R08										
	R12										
	R16 / R24									1,80-10,00	0,30-0,80
PM	R02										
	R04										
	R08			1,00-5,00	0,10-0,50						
	R12										
	R16 / R24										

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

negative 

NEGATIVE INSERT SIZE		CN □ □	-	1204..	1606..	1906..	2507.. 2509..
		DN □ □	1104..	1504.. 1506..	-	-	-
		SN □ □	0903..	1204..	-	1906..	2507.. 2509..
		TN □ □	-	1604..	2204..	-	-
		VN □ □	-	1604..	-	-	-
		WN □ □	0604..	0804..	-	-	-

Chip Breaker Form	Corner Radius	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)
ST	R02										
	R04			1,00-3,50	0,12-0,30						
	R08			1,80-7,00	0,15-0,50						
	R12										
	R16 / R24										
TF	R02										
	R04			0,05-1,00	0,04-0,28						
	R08			0,07-1,00	0,05-0,03						
	R12										
	R16 / R24										
TK	R02										
	R04	0,50-1,00	0,10-0,25	0,50-1,20	0,10-0,28						
	R08	0,50-1,20	0,10-0,28	0,50-1,50	0,10-0,30	0,80-2,00	0,10-0,35				
	R12			0,50-1,60	0,10-0,30						
	R16 / R24										
TM	R02										
	R04										
	R08			0,50-3,00	0,05-0,40						
	R12										
	R16 / R24										
TS	R02										
	R04	1,00-3,00	0,13-0,23	0,80-4,00	0,05-0,30						
	R08			0,80-4,00	0,10-0,40						
	R12			0,80-4,00	0,10-0,40						
	R16 / R24										
UF	R02										
	R04			0,30-1,80	0,05-0,35						
	R08			0,30-2,00	0,05-0,35						
	R12										
	R16 / R24										
UH	R02										
	R04										
	R08										
	R12					1,30-8,00	0,25-0,70				
	R16 / R24					1,80-8,00	0,30-0,80				

Cutting Parameters a_p (mm) & f_n (mm/rev)negative 

NEGATIVE INSERT SIZE		CN □ □	-	1204..	1606..	1906..	2507.. 2509..
		DN □ □	1104..	1504.. 1506..	-	-	-
		SN □ □	0903..	1204..	-	1906..	2507.. 2509..
		TN □ □	-	1604..	2204..	-	-
		VN □ □	-	1604..	-	-	-
		WN □ □	0604..	0804..	-	-	-

Chip Breaker Form	Corner Radius	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)
UM	R02										
	R04			1,00-4,50	0,10-0,33	2,00-7,50	0,13-0,33				
	R08			1,50-5,00	0,15-0,45	2,00-8,00	0,18-0,45	3,00-9,00	0,20-0,46		
	R12			1,50-5,50	0,15-0,50	2,00-8,00	0,22-0,50	3,00-10,0	0,24-0,50		
	R16 / R24			1,50-5,50	0,15-0,60	2,00-8,00	0,25-0,60	3,00-10,0	0,32-0,50		
UT	R02										
	R04										
	R08										
	R12					1,30-7,00	0,25-0,65				
	R16 / R24										
UR	R02										
	R04										
	R08			3,00-10,0	0,30-0,72	3,00-15,0	0,27-0,48	3,00-17,0	0,34-0,60		
	R12			3,00-15,00	0,30-0,80	3,00-15,5	0,32-0,50	3,00-18,0	0,38-0,68		
	R16 / R24					3,00-16,00	0,35-0,63	3,00-18,0	0,38-0,68	5,00-17,0	0,45-0,90
US	R02										
	R04			1,50-4,50	0,15-0,45						
	R08			1,50-5,00	0,15-0,5						
	R12			1,50-5,00	0,15-0,50						
	R16 / R24										
VQ	R02										
	R04										
	R08										
	R12										
	R16 / R24										
ZR	R02										
	R04										
	R08										
	R12			1,00-7,00	0,20-0,50						
	R16 / R24			1,80-7,00	0,32-0,75						
R/L-P R/L-C	R02			0,50-3,50	0,08-0,30						
	R04			1,00-3,50	0,12-0,30						
	R08			1,30-3,50	0,15-0,35						
	R12										
	R16 / R24										

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Cutting Parameters a_p (mm) & f_n (mm/rev)

positive



NEGATIVE INSERT SIZE		CC / CP ☐	0602..	09T3.. 0903..	1204..	-	-
		DC ☐	0702..	11T3..	..	-	-
		SC / SP ☐	-	09T3..	1204..	-	-
		TC / TP ☐	0902..	1102..	16T3..	2204..	-
		VB / VC ☐	-	1103..	1604..	2205..	-
		WB ☐	0601..	-	-	-	-

Chip Breaker Form	Corner Radius	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)
ER/L-U	R02	0,10-0,50	0,01-0,10	0,02-2,00	0,04-0,15						
	R04	0,10-0,50	0,01-0,10	0,50-3,00	0,08-0,30						
	R08										
	R12										
	R16 / R24										
L-F	R02	0,30-1,00	0,10-0,20	0,50-1,20	0,10-0,25						
	R04	0,50-1,00	0,10-0,25	0,70-1,50	0,12-0,30	0,20-4,00	0,02-0,30				
	R08					0,30-5,00	0,03-0,50				
	R12										
	R16 / R24										
L/R-W	R02	0,07-1,80	0,03-0,15	0,08-2,00	0,04-0,15						
	R04	0,1-2,00	0,05-0,2	0,1-2,20	0,08-0,2						
	R08										
	R12										
	R16 / R24										
L-Y	R02			0,06-1,70	0,03-0,13						
	R04			0,09-2,00	0,06-0,22						
	R08										
	R12										
	R16 / R24										
ALU	R02	0,03-3,00	0,01-0,12	0,05-4,00	0,02-0,30	0,05-4,00	0,02-0,30				
	R04	0,10-3,00	0,02-0,13	0,10-5,00	0,03-0,50	0,10-5,00	0,03-0,50				
	R08	0,10-4,00	0,02-0,20	0,10-5,00	0,03-0,50	0,10-5,50	0,04-0,80				
	R12			0,15-5,00	0,04-0,60	0,50-6,50	0,08-0,70	0,10-7,00	0,03-0,60		
	R16 / R24										
CG	R02	0,30-1,00	0,05-0,20								
	R04	0,30-1,00	0,10-0,25	0,30-1,5	0,10-0,25						
	R08	0,40-2,40	0,80-0,25	0,30-1,5	0,10-0,28						
	R12										
	R16 / R24										
HF	R02										
	R04										
	R08										
	R12										
	R16 / R24										

Cutting Parameters a_p (mm) & f_n (mm/rev)

positive



NEGATIVE INSERT SIZE		CC / CP ☐	0602..	09T3.. 0903..	1204..	-	-
		DC ☐	0702..	11T3..	..	-	-
		SC / SP ☐	-	09T3..	1204..	-	-
		TC / TP ☐	0902..	1102..	16T3..	2204..	-
		VB / VC ☐	-	1103..	1604..	2205..	-
		WB ☐	0601..	-	-	-	-

Chip Breaker Form	Corner Radius	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)
HM	R02	1,0-6,0	0,10-0,70								
	R04										
	R08										
	R12										
	R16 / R24										
HQ	R02	0,06-1,70	0,06-0,19	0,10-2,00	0,07-0,22						
	R04	0,10-2,00	0,11-0,25	0,80-3,00	0,08-0,30	0,80-3,00	0,08-0,28				
	R08	0,20-2,00	0,08-0,30	1,00-3,00	0,10-0,30	1,00-3,00	0,10-0,33				
	R12										
	R16 / R24										
HR	R02										
	R04										
	R08										
	R12										
	R16 / R24										
TS	R02										
	R04										
	R08										
	R12										
	R16 / R24										
VM	R02										
	R04										
	R08										
	R12										
	R16 / R24										
VQ	R02										
	R04										
	R08										
	R12										
	R16 / R24										
VW	R02										
	R04										
	R08										
	R12										
	R16 / R24										

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TURNING CVD Comparison table

MATERIAL	SANGEO	ISCAR	SECO	TEAGUTEC	KYOCERA	SANDVIK	KENAMETAL	MITSUBISHI	WALTER	KORLOY
P			TP0500	TT8105	CA5505	GC4305	KCP05(B)	UE6105	WPP10S	NC3010
	CS5215	IC8150	TP0501	TT8110	CA510	GC4205		UE6110	WKP13S	
	CS5215S		TP1500	TT8115	CA515	GC4315	KCP10(B)	MY5015		NC3215
			TP2500	TT8120	CA525	GC4215		MC6025	WPP20S	NC3220
	CS5225	IC8250	TP2501	LC025P	CA5525	GC4325	KCP25(B)	UE6020	WKP23S	NC3225
	CS5225S		T350M	TT8125		GC4225				
	CS5235	IC8350	TP3500	TT5100	CA530	GC4235	KCP30(B)	UE6035	WPP30S	NC3030
				TT8135	CA5535				WKP33S	NC500H
M	CS5240		TGP45	TT7100			KCP40(B)			NC5330
	CS7125S	IC6015	TM2000	TT9215	CA6515	GC2015	KCM15(M)	MC7015	WAM10	NC9020
			TM4000	TT9225	CA6525	GC2025	KCM25(B)	US7020	WAM20	NC9025
K								US735	WAM30	NC9030
	CS8205	IC5005	TK1001	TT7005	CA4505	GC3205	KCK05(B)	MC5005	WKK10S	NC6205
					CA4010	GC3210		UC5105		
	CS8215			TT7310						NC6210
	CS8115									
		IC5015	TK2001	TT7015	CA4515	GC3215	KCK15(B)	MC5015	WKK20S	NC6215
	CS8125		TGK1500		CA4115	GC3225		UC5115		

TURNING Cermet

MATERIAL	SANGEO	ISCAR	SECO	TEAGUTEC	KYOCERA	SANDVIK	KENAMETAL	MITSUBISHI	WALTER	KORLOY
UNI										
	SS9115	IC20N	C15M	CT3000	TN60	CT525	KT125	NX2525		CC1500
	SS9125	IC520N					HT5	NX3035		CN1500

TURNING PVD Comparison table

MATERIAL	SANGEOR	ISCAR	SECO	TEAGUTEC	KYOCERA	SANDVIK	KENAMETAL	MITSUBISHI	WALTER	KORLOY
P	PS7110S	IC507	CP200		PR1005					
		IC808			PR915		KU10T			PC8110
	PS7220S		CP250		PR1115		KU25T			PC230
	PS7120				PR930					
		IC3028		TT5030		GC1025		VP15TF	WTA43	PC5300
		IC908			PR1025			VP20MF	WTA41	PC8115
		IC830			PR630	GC4125				
M	PS5125		CP500		PR660					PC3545
	PS7110S	IC808	CP200			GC1005		MP9005		
	PS7220S	IC907			PR915	GC1105	KC5010	VP10RT	WSM10S	PC8110
			CP250				KC5510		WSM20S	PC8115
	PS7120				PR930	GC1020				
		IC3028					KC5025	VP15TF	WSM30S	PC5300
		IC830		TT5030	PR1125	GC1025	KC5525	VP20MF	WSM40S	
S					PR630	GC4125				PC9030
	PS5125		CP500	TT8020	PR660	GC2035				PC5400
	PS7110S	IC808	TS2000					VP05RT	WSM10	PC8105
		IC907			PR915	GC1105				
			CP500				KC5010	VP10RT	WSM20	PC8110
	PS7120									PC8115
	PS7220S	IC328	TS2500	TT5030	PR660	GC1025		VP15TF	WSM30	
					PR1325	GC2035	KC5025			PC5300
										PC5400

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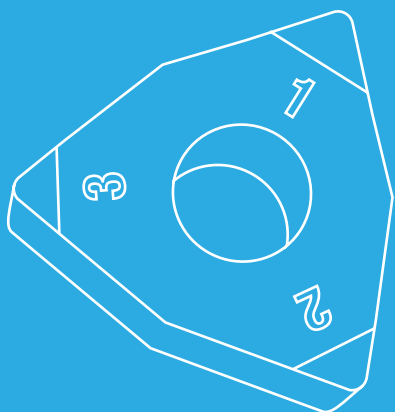
DRILLING

ENDMILLS

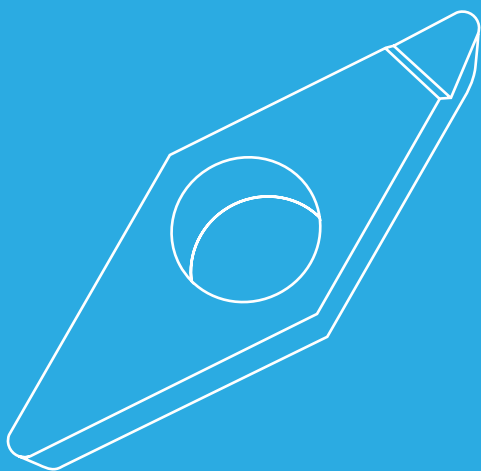
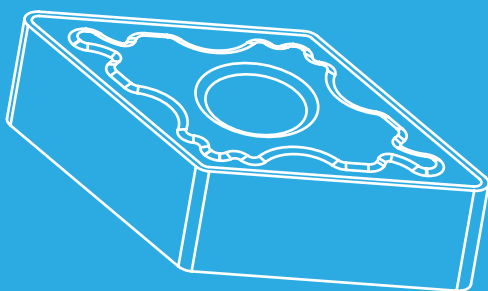
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TURNING / PCBN



C	C	G	W	12	04	08
1	2	3	4	5	6	7

1 Geometry

C		80
D		55
R		360
S		90
T		60
V		35
W		80

2 Clearance Angle

B		5°
C		7°
P		11°
N		0°

3 Tolerance

G	±0,025	±0,13
M	±0,05 ±0,15	±0,13
U	±0,08 ±0,25	±0,13

4 Shape

A	
G	
M	
W	
X	Special

5 Shape (mm)

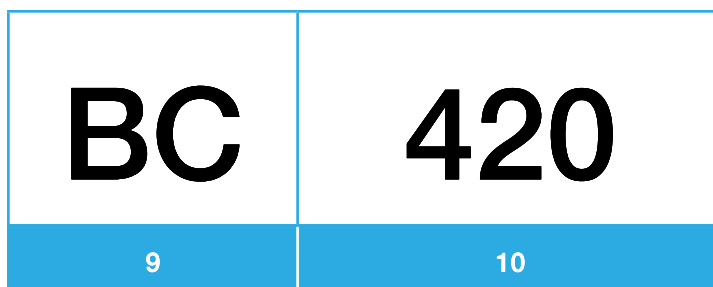
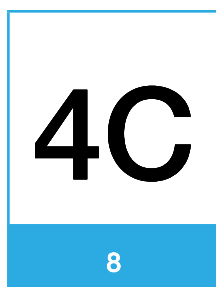
C	06 09 12 16 19 25	
D	07 11 15	
R	06 09 12 15 19 25	
S	09 12 15 19 25	
T	09 11 16 22	
V	11 16 22	
W	06 08	

6 Thickness (mm)

02	2,38
03	3,18
T3	3,97
04	4,76
06	6,35
07	7,94
09	9,52
10	10,00

7 Corner Radius

02	0,20 mm
04	0,40 mm
08	0,80 mm
12	1,20 mm
16	1,60 mm
24	2,40 mm



8	Number of Edges
1C	1 Corner
2C	2 Corners
3C	3 Corners
4C	4 Corners
6C	6 Corners
8C	8 Corners
FF	Full Face
SO	Solid PcBN

9	
BC	PCBN
SC	TiN Coating PCBN

10	Application
1 □□	Hardened Steel
2 □□	Cast Iron
3 □□	Super Alloy
4 □□	Universal

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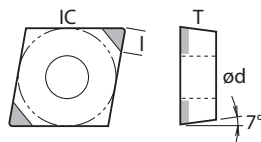
- TURNING
- GROOVING
- THREADING
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- ENDMILLS
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Grades

ISO DIN 513	K					H					S				
	K01	K10	K20	K30	K40	P01	P10	P20	P30	P40	S01	S10	S20	S30	S40
PCBN	BC250					BC150					BC350				
	SC250					BC170									
						SC150									
	BC420					BC420									
	COATED														

CC□□

80



CC 	0602 	09T3 	1204 
IC	6,35	9,525	12,7
T	2,38	3,97	4,76
Ød	2,80	4,40	5,50
 Holder 			

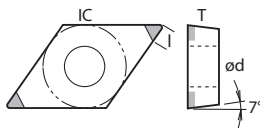
[illegible]

Vc • fn • ap

78

DC□□

55



DC 	0702 	11T3 
IC	6,35	9,525
T	2,38	3,97
Ød	2,80	4,40
 Holder 		

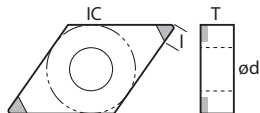
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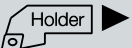
Vc • fn • ap

78

DN

55

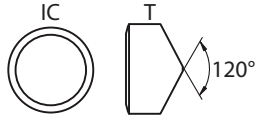


DN □□	1504 □□	1506 □□
IC	12,7	12,7
T	4,76	6,35
Ød	5,16	5,16
	149	149

[illegible]

RC□□

360



RC □□	0603 □□	0903 □□	1204 □□
IC	6,35	9,525	12,7
T	3,18	3,18	4,76
Ød	-	-	-
 Holder 			

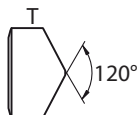
[illegible]

Vc • fn • ap

78

RC□□

360



RC 	0603 	0903 	1204 
IC	6,35	9,525	12,7
T	3,18	3,18	4,76
Ød	-	-	-
 Holder 			

[illegible]

Vc • fn • ap

78

NEGATIVE
without hole

RN□□

360

NEGATIVE
without hole

RN□□

360

NEGATIVE
without hole

RN□□

360

RN	0603	0903	1204
IC	6,35	9,525	12,70
T	3,18	3,18	4,76
Ød	-	-	-

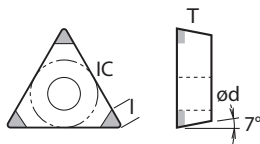
[illegible]

Vc • fn • ap

78

TC ☐ ☐

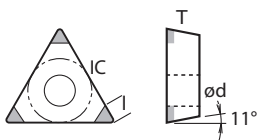
60



TC 	0902 	1102 	16T3 
IC	5,56	6,35	9,525
T	2,38	2,38	3,97
Ød	2,50	2,80	4,40
 Holder 			

[illegible]

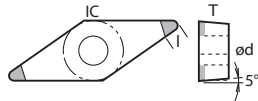
TP 00



TP 	0802 	0902 	1103 
IC	4,76	5,56	6,35
T	2,38	2,38	3,18
Ød	2,30	3,00	3,40
 Holder 			

[illegible]

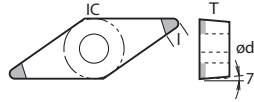
**POSITIVE 5°
with hole**

VB ☐ ☐

VB	1103	1604
IC	6,35	9,525
T	3,18	4,76
Ød	2,80	4,40
 Holder	183	183

[illegible]

**POSITIVE 7°
with hole**

VC ☐ ☐

VC	1103	1604
IC	6,35	9,525
T	3,18	4,76
Ød	2,80	4,40
 Holder	189	189

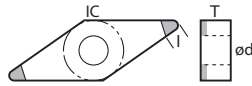
[illegible]

Vc • fn • ap

78

NEGATIVE with hole

VN 00

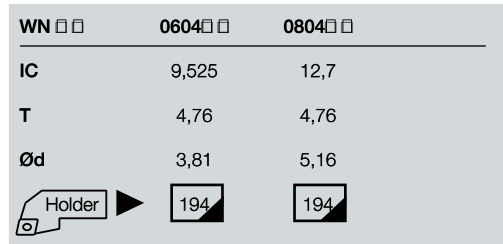
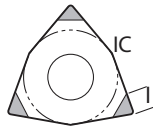


VN	1604
IC	9,525
T	4,76
Ød	3,81
 Holder	 191

[illegible]

NEGATIVE
with hole

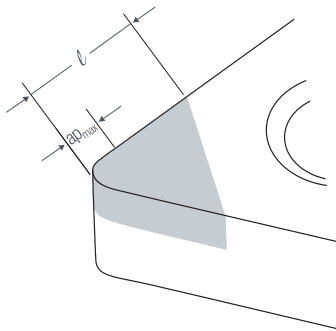
WN □ □



Cutting Parameters

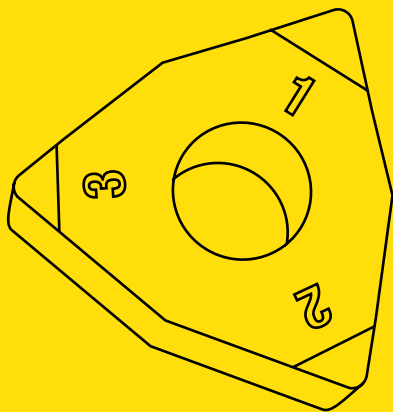
KG	GREY CAST IRON
KN	NODULAR CAST IRON
KW	WHITE CAST IRON
KS	SINTERED MATERIAL

HH	HARDENED STEEL
HC	CASE HARDENED STEEL
HB	BEARING STEEL
SA	SUPER ALLOYS (Ni Based)

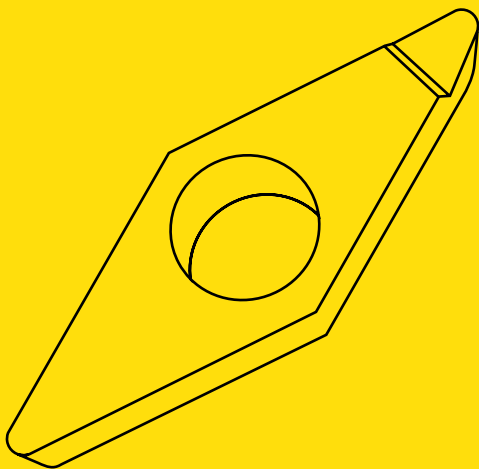
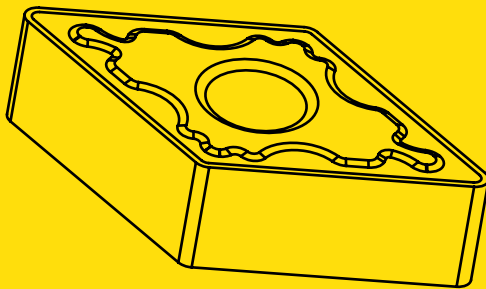


$$a_{p\max} < 20\sim30\% \ l$$

MATERIAL		ap (mm)	fn (mm/rev)	CUTTING CONDITION		PCBN						
						BC150	BC170	SC150	BC250	SC250	BC350	BC420
H	HH	0,05~0,25	0,05~0,20	○	◊	120~250	100~230	100~200				100~220
				⊕	◊			80~180				80~180
	HC	0,05~0,25	0,08~0,25	○	◊			100~180				100~200
				⊕	◊			80~160				80~160
	HB	0,05~0,25	0,05~0,20	○	◊	120~220	100~200	100~180				100~200
				⊕	◊			80~150				90~150
K	KG	0,10~0,50	0,10~0,30	○	◊					400~1000		400~1200
				⊕	◊					400~800		400~1000
	KN	0,10~0,30	0,05~0,20	○	◊				250~400			250~500
				⊕	◊				150~300			200~400
	KW	0,10~0,30	0,10~0,30	○	◊					60~100		60~120
				⊕	◊					50~80		50~100
	KS	0,05~0,20	0,05~0,25	○	◊				160~250	160~250		160~280
				⊕	◊							120~220
S	SA	0,05~0,20	0,10~0,20	○	◊						120~300	



TURNING / diamond



D

C

G

W

11

T3

04

1

2

3

4

5

6

7

1 Geometry

C		80
D		55
R		360
S		90
T		60
V		35
W		80

2 Clearance Angle

B		5°
C		7°
P		11°
N		0°

3 Tolerance

G	±0,025	±0,13
M	±0,05 ±0,15	±0,13
U	±0,08 ±0,25	±0,13

4 Shape

A	
G	
M	
W	
X	Special

5 Shape (mm)

C	06 09 12 16 19 25	
D	07 11 15	
R	06 09 12 15 19 25	
S	09 12 15 19 25	
T	09 11 16 22	
V	11 16 22	
W	06 08	

6 Thickness (mm)

02	2,38
03	3,18
T3	3,97
04	4,76
06	6,35
07	7,94
09	9,52
10	10,00

7 Corner Radius

02	0,20 mm
04	0,40 mm
08	0,80 mm
12	1,20 mm
16	1,60 mm
24	2,40 mm

1C

8

PC

9

150

10

8 Number of Edges

1C	1 Corner
2C	2 Corners
3C	3 Corners
FE	Full Edge

9

PC	PCD

10

Application

1 □□	Non - Ferrous Metal
3 □□	

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

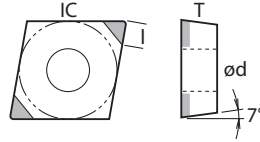
DRILLS

SPARE PARTS

INDEX

**POSITIVE 7°
with hole**

CC□□



CC □□	0602 □□	09T3 □□	1204 □□
IC	6,35	9,525	12,7
T	2,38	3,97	4,76
Ød	2,80	4,40	5,50
Holder	126	126	126

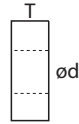
DESCRIPTION		EDGE		PCD					
				PC100	PC150	PC200	PC300		
	CCGT060202	1C			•	•	•		
	CCGT060204	1C		•	•	•	•		
	CCGT060208	1C		•	•		•		
	CCGT09T302	1C			•	•	•		
	CCGT09T304	1C		•	•	•	•		
	CCGT09T308	1C		•	•		•		
	CCGT120404	1C			•	•	•		
	CCGT120408	1C		•	•		•		
	CCGT09T302	2C			•	•	•		
	CCGT09T304	2C		•	•	•	•		
	CCGT09T308	2C		•	•		•		
	CCGT120404	2C			•	•	•		
	CCGT120408	2C		•	•		•		
	CCGW060202	1C			•	•	•		
	CCGW060204	1C		•	•	•	•		
	CCGW060208	1C		•	•		•		
	CCGW09T302	1C			•	•	•		
	CCGW09T304	1C		•	•	•	•		
	CCGW09T308	1C		•	•		•		
	CCGW120404	1C			•	•	•		
	CCGW120408	1C		•	•		•		
	CCGW09T302	2C			•	•	•		
	CCGW09T304	2C		•	•	•	•		
	CCGW09T308	2C		•	•		•		
	CCGW120404	2C			•	•	•		
	CCGW120408	2C		•	•		•		
	CCGX060204R/L	FE			•		•		
	CCGX09T304R/L	FE			•		•		

Vc • fn • ap

93

CN□□

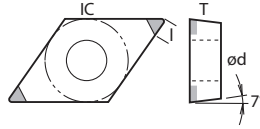
80

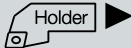


131

93

DC□□



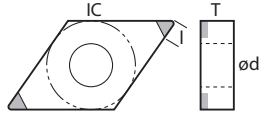
DC	0702	11T3
IC	6,35	9,525
T	2,38	3,97
Ød	2,80	4,40
	139	139

[illegible]

93

DN

55

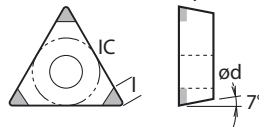


DN	1504	1506
IC	12,7	12,7
T	4,76	6,35
Ød	5,16	5,16
	149	149

[illegible]

POSITIVE 7°
with hole

TC □□



TC □□	0902□□	1102□□	16T3□□
IC	5,56	6,35	9,525
T	2,38	2,38	3,97
Ød	2,50	2,80	4,40
Holder	171	171	171

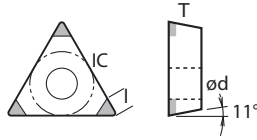
DESCRIPTION		EDGE		PCD					
				PC100	PC150	PC200	PC300		
	TCGT090202	1C			•	•	•		
	TCGT090204	1C		•	•	•	•		
	TCGT110202	1C			•	•	•		
	TCGT110204	1C		•	•	•	•		
	TCGT110208	1C		•	•		•		
	TCGT16T304	1C		•	•	•	•		
	TCGT16T308	1C		•	•		•		
	TCGT16T304	3C		•	•	•	•		
	TCGT16T308	3C		•	•		•		
	TCGW090202	1C			•	•	•		
	TCGW090204	1C		•	•	•	•		
	TCGW110202	1C			•	•	•		
	TCGW110204	1C		•	•	•	•		
	TCGW110208	1C		•	•		•		
	TCGW16T304	1C		•	•	•	•		
	TCGW16T308	1C		•	•		•		
	TCGW16T304	3C		•	•	•	•		
	TCGW16T308	3C		•	•		•		
	TCGX090204R/L	FE			•		•		
	TCGX110204R/L	FE			•		•		
	TCGX16T304R/L	FE			•		•		

Vc • fn • ap

93

TP □□

60

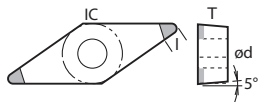


TP 	0802 	0902 	1103 
IC	4,76	5,56	6,35
T	2,38	2,38	3,18
Ød	2,30	3,00	3,40
 Holder 			

[illegible]

Vc • fn • ap

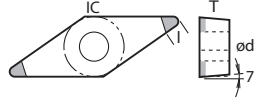
93

VB ☐ ☐

VB	1103	1604
IC	6,35	9,525
T	3,18	4,76
Ød	2,80	4,40
	183	183

[illegible]

VC □□



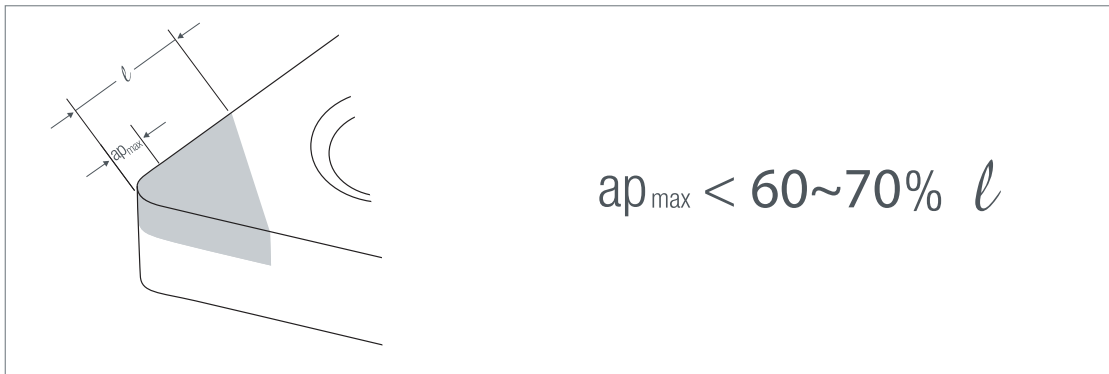
VC	1103	1604
IC	6,35	9,525
T	3,18	4,76
Ød	2,80	4,40
Holder	189	189

[illegible]

Cutting Parameters

NA	ALUMINIUM ALLOYS
NS	ALUMINIUM ALLOYS (Si≤15%)
NH	AL ALLOYS AGED AND HARDENED
NB	BRASS

NC	BRONZE AND ELECTROLYTIC COPPER
NG	GRAPHITE
HM	HARD METAL (Co≤16%)
ST	TITANIUM ALLOYS



MATERIAL		ap (mm)	fn (mm/rev)	CUTTING CONDITION			PCD						
							PC100	PC150	PC200	PC300			
N	NA	0,10~1,00	0,08~0,25	○	⊞	☹		600~2500		600~2500			
		1,00~2,50	0,15~0,50	○	⊞	☹		600~1600		600~1600			
	NS	0,10~1,00	0,05~0,20	○	⊞	☹			500~1800				
		1,00~2,50	0,08~0,35	○	⊞	☹			500~1200				
	NH	0,10~1,00	0,05~0,35	○	⊞	☹			400~1000				
		1,00~2,50	0,08~0,35	○	⊞	☹			400~800				
	NB	0,10~1,00	0,10~0,30	○	⊞	☹	400~1200	400~1200		400~1200			
		1,00~2,50	0,15~0,25	○	⊞	☹	400~1000	400~1000		400~1000			
	NC	0,10~1,00	0,10~0,30	○	⊞	☹	300~800	300~800		300~800			
		1,00~2,50	0,15~0,25	○	⊞	☹	300~500	300~500		300~500			
	NG	0,10~1,00	0,08~0,25	○	⊞	☹		300~800	300~800	300~800			
		1,00~2,50	0,15~0,50	○	⊞	☹		300~600	300~600	300~600			
H	HM	0,10~0,50	0,08~0,25	○		☹			10~40				
S	ST	0,10~1,00	0,05~0,20	○	⊞	☹	100~200	100~200	100~220	100~200			
		1,00~2,50	0,08~0,20	○	⊞	☹	100~150	100~150	100~220	100~150			

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

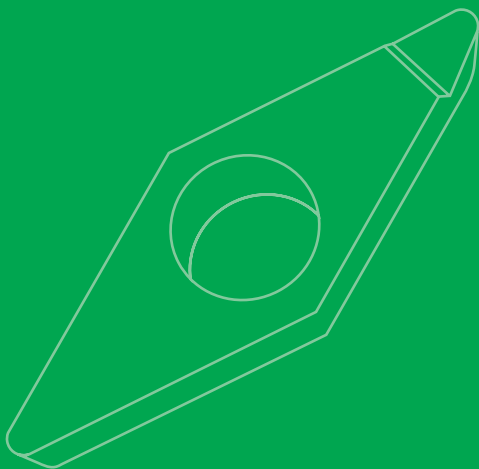
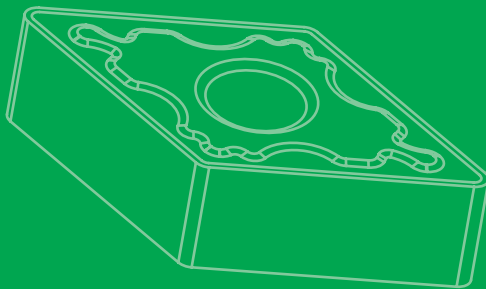
DRILLS

SPARE PARTS

INDEX

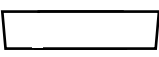
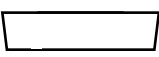
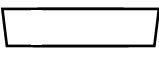
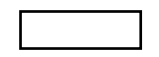


TURNING / ceramic

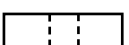
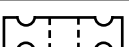
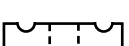
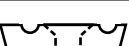


C	N	G	A	12	04	08
1	2	3	4	5	6	7

1	Geometry	
C		80°
D		55°
R		360°
S		90°
T		60°
V		35°
W		80°

2	Clearence Angle	
B		5°
C		7°
P		11°
N		0°

3	Tolerance	
		
G	±0,025	±0,13
M	±0,05 ±0,15	±0,13
U	±0,08 ±0,25	±0,13

4	Shape
A	
G	
M	
T	
X	Special

5	Shape (mm)	
C	06 09 12 16 19 25	
D	07 11 15	
R	06 09 12 15 19 25	
S	09 12 15 19 25	
T	09 11 16 22	
V	11 16 22	
W	06 08	

6	Thickness (mm)
02	2,38
03	3,18
T3	3,97
04	4,76
06	6,35
07	7,94
09	9,52
10	10,00

7	Corner Radius
02	0,20 mm
04	0,40 mm
08	0,80 mm
12	1,20 mm
16	1,60 mm
24	2,40 mm

T	04	00	0	KS	81	50
8	9	10	11	12	13	14

8	Chamfer	9	Chamfer Width 1	10	Cf Width 2 x Degree
T	Mono 20° Chamfer	01	0,05 mm	00	Mono type
K	Mono 30° Chamfer	02	0,10 mm	01	0,20 x 25
D	Double 10° Chamfer	03	0,15 mm	02	0,10 x 30
S	Double 15° Chamfer	04	0,20 mm	03	0,20 x 30
AD	After Double 10° Chamfer	05	1,00 mm	04	0,15 x 30
AS	After Double 15° Chamfer	06	2,00 mm	05	0,45 x 25
		10	1,20 mm		
		20	1,50 mm		
		30	0,75 mm		
		40	1,25 mm		

11	Honing (µm)	12	Grade	13	Workpiece	14	Application
0	No Honing	KS	$Al_2O_3 + TiC(N)$	41	Cast Iron	10	
1	10	KSC	$Al_2O_3 + TiC(N) + TiN$	71	Inconel & High Temp. Alloy	20	
2	20	KZ	$Al_2O_3 + ZrO_2$	81	Hardened Steel	30	
3	30	KN	Si_3N_4			40	
5	50	KA	$TiC + Al_2O_3$			50	
		KL	SiAlON			60	
		KW	Whisker			70	
							

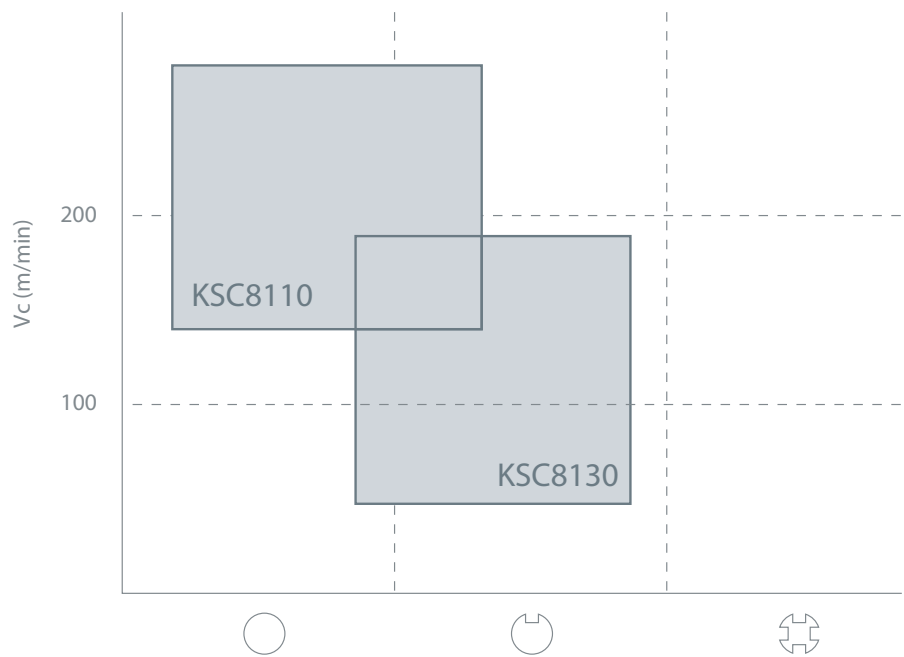
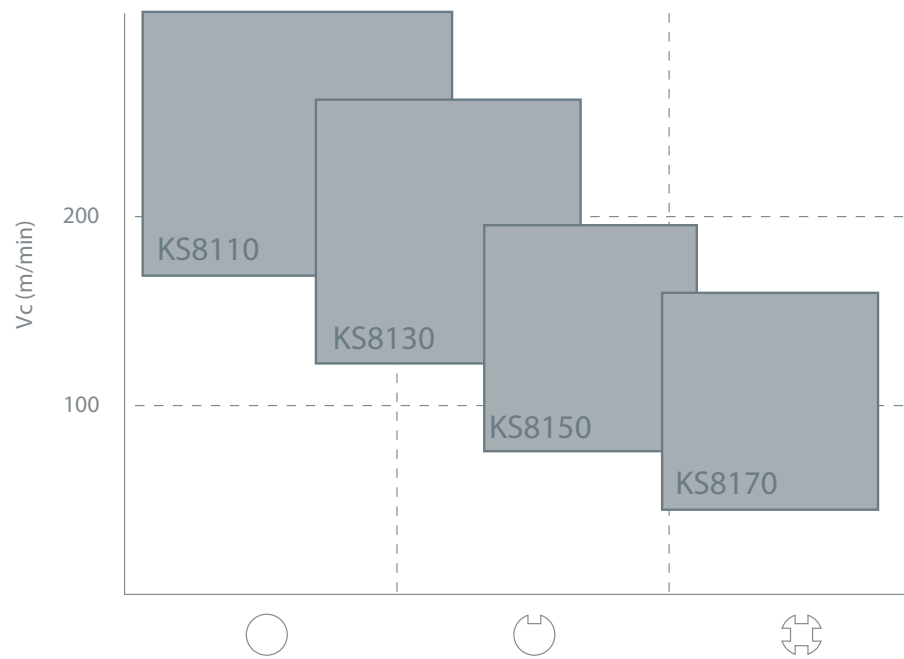
Grades

ISO DIN 513	K					H					S				
															
	K01	K10	K20	K30	K40	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40
AL ₂ O ₃ + TiC(N)						KS8110									
						KS8130									
						KS8150									
						KS8170									
AL ₂ O ₃ + TiC(N) PVD						KSC8110									
						KSC8130									
AL ₂ O ₃ + ZrO ₂	KZ4120														
	KZ4130														
Si ₃ N ₄	KN4110														
	KN4120														
	KN4130														
	KN4140														
	KN4150														
TiC + AL ₂ O ₃	KA4110														
SiAlON											KL7110				
											KL7120				
Whisker											KW7110				
											KW7120				
											COATED				

TURNING

Range ISO **H**

Grades



TURNING
GROOVING
THREADING
MILLING
DRILLING
ENDMILLS
DRILLS
SPARE PARTS
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TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

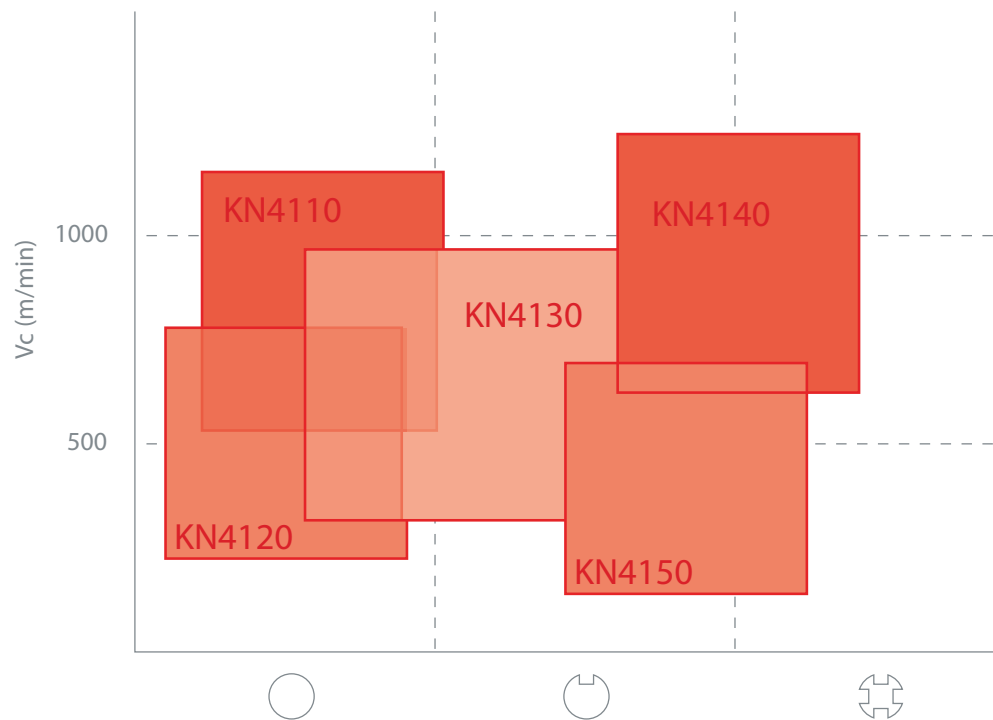
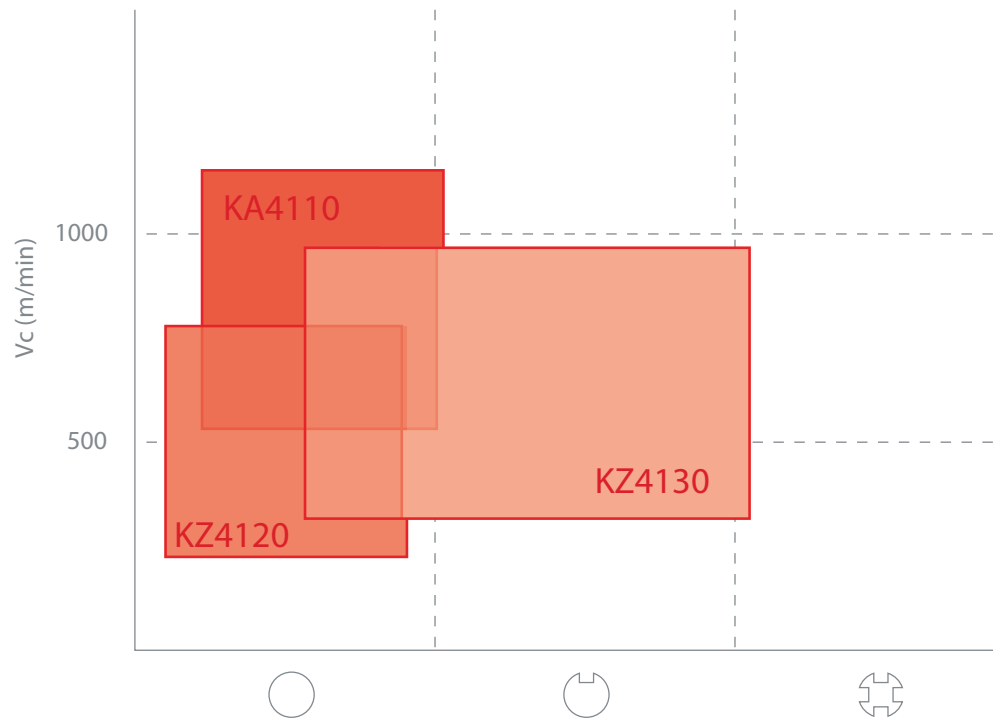
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Range ISO **K**

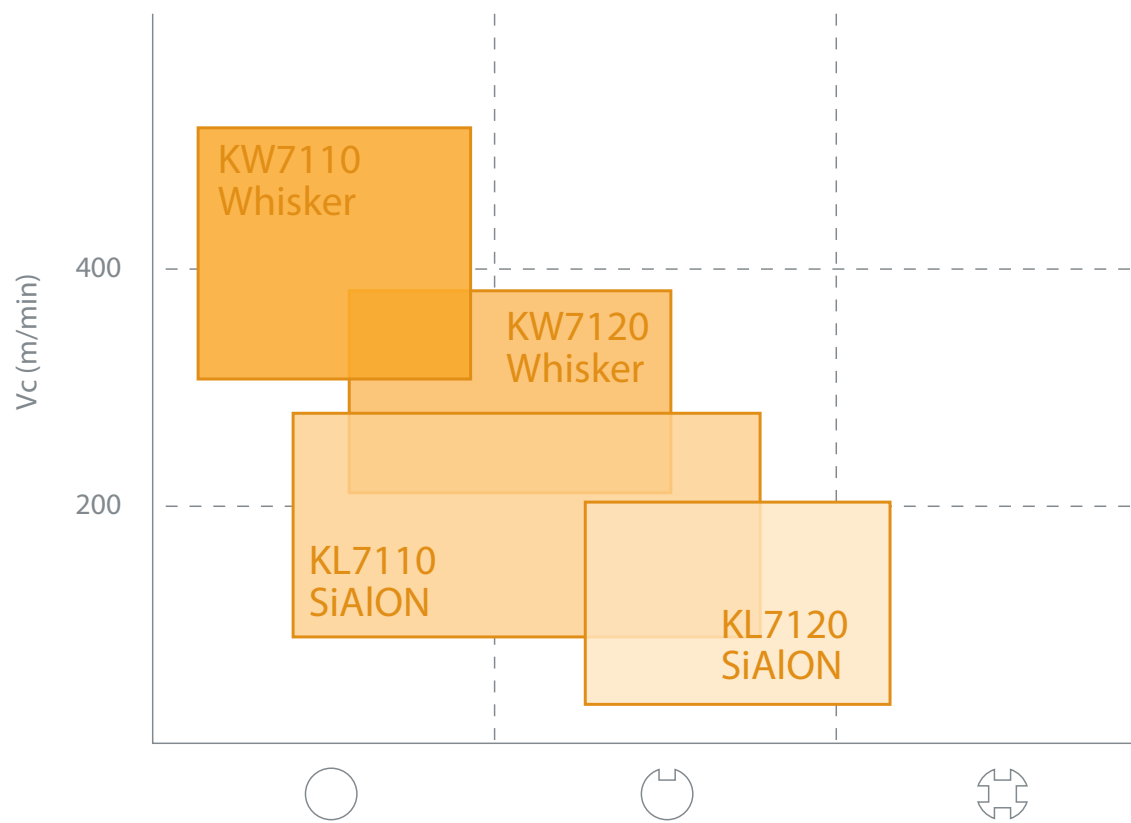
Grades



TURNING

Range ISO **S**

Grades

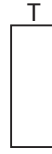
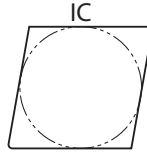


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ENDMILLS
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SPARE PARTS
INDEX

NEGATIVE without hole

CN□□

80



CN	1204	1207
IC	12,7	12,7
T	4,76	7,94
Ød	-	-
 Holder 		

[illegible]

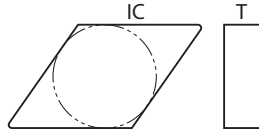
Vc • **fn** • ap

115

NEGATIVE without hole

DN

55



DN

1507

IC

12,70

T

7,94

Ød

-

[illegible]

Vc • **in** • ap

115

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE PARTS

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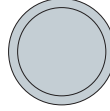
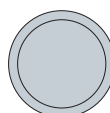
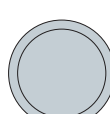
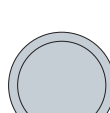
**POSITIVE 7°
without hole**

RC□□

360



RC □□	0606 □□	0607 □□	0907 □□	1207 □□	1510 □□	1910 □□
IC	6,35	6,35	9,525	12,70	15,87	19,05
T	6,35	7,94	7,94	7,94	10,00	10,00
Ød	-	-	-	-	-	-
Holder	156	156	156	156	156	156

DESCRIPTION			Al ₂ O ₃ + TiC(N)				+ PVD		ZrO ₂		Si ₃ N ₄						SiAlON		Whisker	
			KS8110	KS8130	KS8150	KS8170	KSC8110	KSC8130	KZ4120	KZ4130	KN4110	KN4120	KN4130	KN4140	KN4150	KA4110	KL7110	KL7120	KW7110	KW7120
	RCGX 060600	T04000	●	●	●		●	●										●	●	
	RCGX 060700	T04000	●	●	●		●	●										●	●	
	RCGX 090700	T04000	●	●	●		●	●										●	●	
	RCGX 120700	T04000	●	●	●		●	●										●	●	
	RCGX 151000	T04000	●	●	●		●	●										●	●	
	RCGX 191000	T04000	●	●	●		●	●										●	●	
	RCGX 251200	T04000	●	●	●		●	●										●	●	
	RCGX 060600	S20022	●	●	●		●	●										●	●	
	RCGX 060700	S20022	●	●	●		●	●										●	●	
	RCGX 090700	S20022	●	●	●		●	●										●	●	
	RCGX 120700	S20022	●	●	●		●	●										●	●	
	RCGX 151000	S20022	●	●	●		●	●										●	●	
	RCGX 191000	S20022	●	●	●		●	●										●	●	
	RCGX 251200	S20022	●	●	●		●	●										●	●	
	RCGX 060600	S06032	●	●	●		●	●										●	●	
	RCGX 060700	S06032	●	●	●		●	●										●	●	
	RCGX 090700	S06032	●	●	●		●	●										●	●	
	RCGX 120700	S06032	●	●	●		●	●										●	●	
	RCGX 151000	S06032	●	●	●		●	●										●	●	
	RCGX 191000	S06032	●	●	●		●	●										●	●	
	RCGX 251200	S06032	●	●	●		●	●										●	●	
	RCGX 060600	AS06032	●	●	●		●	●										●	●	
	RCGX 060700	AS06032	●	●	●		●	●										●	●	
	RCGX 090700	AS06032	●	●	●		●	●										●	●	
	RCGX 120700	AS06032	●	●	●		●	●										●	●	
	RCGX 151000	AS06032	●	●	●		●	●										●	●	
	RCGX 191000	AS06032	●	●	●		●	●										●	●	
	RCGX 251200	AS06032	●	●	●		●	●										●	●	

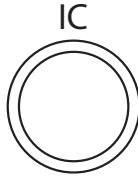
Vc • f • ap

115

NEGATIVE without hole

RN ☐ ☐

360



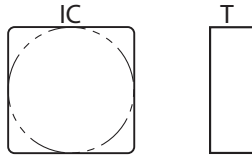
RN	1204	1207	1907
IC	12,70	12,70	19,05
T	4,76	7,94	7,94
Ød	-	-	-

[illegible]

Vc • **in** • ap

115

NEGATIVE without hole

SN 

SN □ □	0904 □ □	1204 □ □	1207 □ □
IC	9,52	12,70	12,70
T	4,76	4,76	7,94
Ød	3,81	5,16	5,16
 Holder 			

[illegible]

Vc • fn • ap

115

NEGATIVE without hole

TN 00



TN □ □	1604 □ □	2204 □ □	2706 □ □
IC	9,525	12,7	15,875
T	4,76	4,76	6,35
Ød	-	-	-
 Holder 			

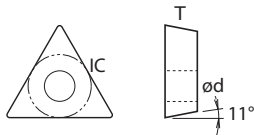
[illegible]

Vc • fn • ap

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POSITIVE 11°
without hole

TP □ □

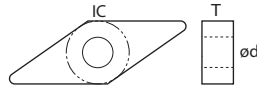


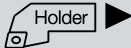
TP □ □	1103 □ □	1603 □ □
IC	6,35	9,525
T	3,18	3,18
Ød	-	-
Holder		

DESCRIPTION			Al ₂ O ₃ + TiC(N)				+ PVD		ZrO ₂		Si ₃ N ₄						SiAlON		Whisker	
			KS8110	KS8130	KS8150	KS8170	KSC8110	KSC8130	KZ4120	KZ4130	KN4110	KN4120	KN4130	KN4140	KN4150	KA4110	KL7110	KL7120	KW7110	KW7120
	TPGN110304	T04000	●	●							●		●			●				
	TPGN110308	T04000	●	●							●	●	●			●			●	●
	TPGN160304	T04000	●	●	●				●		●		●			●				
	TPGN160308	T04000	●	●					●		●	●	●	●		●			●	●
	TPGN160312	T04000	●	●									●	●					●	●
	TPGN160404	T04000	●		●															
	TPGN160408	T04000	●	●													●			
	TPGN160412	T04000	●														●			
	TPGN220404	T04000	●	●																
	TPGN220408	T04000	●	●							●								●	●
	TPGN220412	T04000	●	●								●	●							
	TPGN220416	T04000	●	●	●															
	TPGN110304	T04002	●	●							●		●			●				
	TPGN110308	T04002	●	●							●	●	●			●			●	●
	TPGN160304	T04002	●	●	●				●		●		●			●				
	TPGN160308	T04002	●	●					●		●	●	●	●		●			●	●
	TPGN160312	T04002	●	●									●	●					●	●
	TPGN160404	T04002	●		●															
	TPGN160408	T04002	●	●													●			
	TPGN160412	T04002	●														●			
	TPGN220404	T04002	●	●																
	TPGN220408	T04002	●	●							●								●	●
	TPGN220412	T04002	●	●								●	●							
	TPGN220416	T04002	●	●	●															

NEGATIVE with hole

VN 00



VN	1604
IC	9,525
T	4,76
Ød	3,81
	

[illegible]

Vc • fn • ap

115

TURNING

Cutting Parameters

HH	HARDENED STEEL
HC	CASE HARDENED STEEL
HB	BEARING STEEL

KG	GREY CAST IRON
KN	NOCULAR CAST IRON
SA	SUPER ALLOYS (Ni Based)

MATERIAL		ap (mm)	fn (mm/ rev)	CUTTING CONDITION		Al ₂ O ₃ + TiC(N)				+ PVD		SiAlON		Whisker		
						KS8110	KS8130	KS8150	KS8170	KSC8110	KSC8130	KL7110	KL7120	KW7110	KW7120	
H	HH	0,10~0,50	0,05~0,20	○	∅	130~250	120~240	110~230	100~220	100~220	120~240					
		0,50~2,00	0,10~0,30	○	∅	110~180	100~170	90~160	80~150	80~160	100~180					
	HC	0,10~0,50	0,05~0,20	○	∅	110~210	100~200	90~190	80~180	80~180	100~200					
		0,50~2,00	0,10~0,30	○	∅	90~150	80~140	70~130	60~120	60~120	80~140					
	HB	0,10~0,50	0,05~0,20	○	∅	110~230	100~220	90~210	80~200	80~200	100~220					
		0,50~2,00	0,10~0,30	○	∅	80~160	70~150	60~140	60~140	60~140	80~160					
K	KG	0,20~0,50	0,10~0,30	○	∅	∅			300~700							
				⊕	∅	∅										
		1,00~4,00	0,25~0,50	○	∅	∅										
			⊕	∅	∅											
	KN	0,20~0,50	0,10~0,30	○	∅	∅			300~600							
				⊕	∅	∅										
1,00~4,00		0,25~0,50	○	∅	∅							250~500				
		⊕	∅	∅							350~700					
S	SA	0,50~1,00	0,10~0,30	○	∅	∅							200~350		250~500	
				⊕	∅	∅							180~300	150~280	200~350	200~350
		1,00~4,00	0,15~0,40	○	∅	∅							150~250		200~400	
				⊕	∅	∅							140~240	120~220		

TURNING

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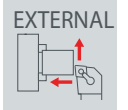
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Cutting Parameters

HH	HARDENED STEEL
HC	CASE HARDENED STEEL
HB	BEARING STEEL

KG	GREY CAST IRON
KN	NOCULAR CAST IRON
SA	SUPER ALLOYS (Ni Based)

MATERIAL		ap (mm)	fn (mm/rev)	CUTTING CONDITION			ZrO ₂		Si ₃ N ₄					
							KZ4120	KZ4130	KN4110	KN4120	KN4130	KN4140	KN4150	KA4110
H	HH	0,10~0,50	0,05~0,20	○	◊									
		0,50~2,00	0,10~0,30	○	◊									
	HC	0,10~0,50	0,05~0,20	○	◊									
		0,50~2,00	0,10~0,30	○	◊									
	HB	0,10~0,50	0,05~0,20	○	◊									
		0,50~2,00	0,10~0,30	○	◊									
K	KG	0,20~0,50	0,10~0,30	○	◊	◊	350~750	400~800	650~1200	600~1200	600~1200	500~1000		
				⊕	◊	◊			550~1100	500~1000	500~1000	450~800		
		1,00~4,00	0,25~0,50	○	◊	◊			650~1200	600~1200	600~1200	500~1000	450~800	
	KN			⊕	◊	◊			550~1100	500~1000	500~1000	450~800	400~600	
		0,20~0,50	0,10~0,30	○	◊	◊			450~800	400~800	400~800	350~700		450~800
				⊕	◊	◊			350~650	300~600	300~600	250~500		400~600
S	SA			○	◊	◊			450~900	400~800	400~800	350~700		
		0,50~1,00	0,10~0,30	⊕	◊	◊			300~600	300~600	300~600	250~500		
				○	◊	◊								
				⊕	◊	◊								
		1,00~4,00	0,15~0,40	○	◊	◊								
				⊕	◊	◊								



P C L N R 25 25 M 12

1 2 3 4 5 6 7 8 9

1	Clamping System	2	Geometry	3	Lead Angle	4	Clearance Angle
C		C		A		P	
D		D		B		R	
M		K		D		S	
P		S		F		V	
S		T		G			
		V		J			
		W		K			
				L			
				N			
5	Direction	6	Shank	7		8	Total Length
L		(H)		(B)			
N						H	100
R						K	125
						M	150
						P	170
						S	250
9	Edge Length						
C	06 09 12 16 19 25						
D	07 11 15						
K	16						
S	09 12 15 19 25						
T	09 11 16 22						
V	11 16 22						
W	06 08						

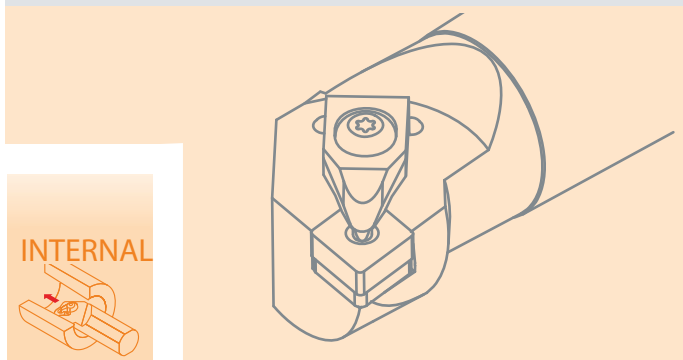
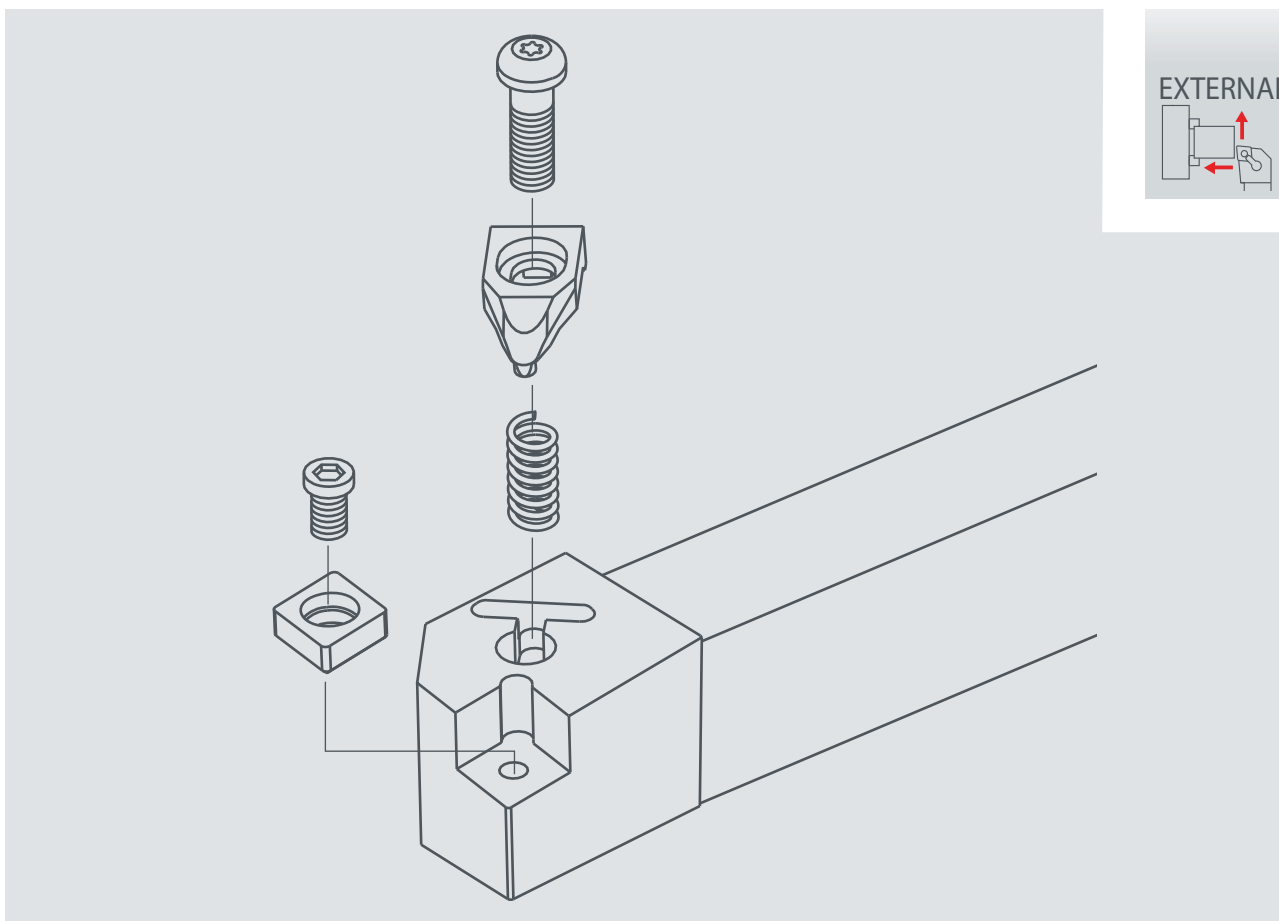
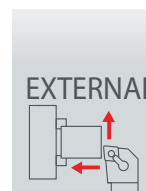


S	16	K	-	S	C	L	C	R	-	06
1	2	3		4	5	6	7	8		9

1	2	Shank Diameter	3	Total Length	4	Clamping System
A					D	
C			E	70		
S			F	80	M	
			H	100	P	
			K	125	S	
			M	150		
			Q	170		
			R	200		
			S	250		
			T	300		
			U	350		
			V	400		

5	9	6	Lead Angle	7	Clearance Angle	8	Direction
C	06 09 12 16 19 25	A		B	5°	L	
D	07 11 15	F		C	7°	R	
K	16	J		P	11°		
S	09 12 15 19 25	K		N	0°		
T	09 11 16 22	L					
V	11 16 22	Q					
W	06 08	U					
		Z					

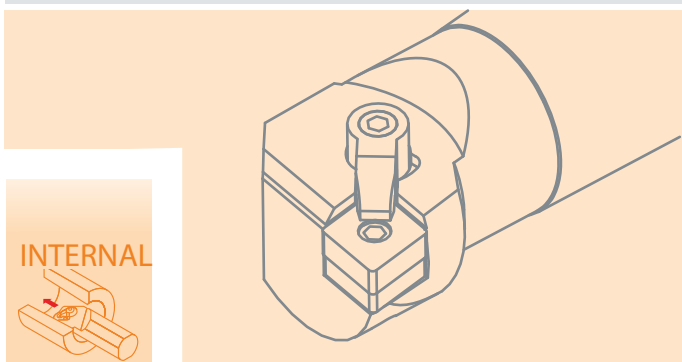
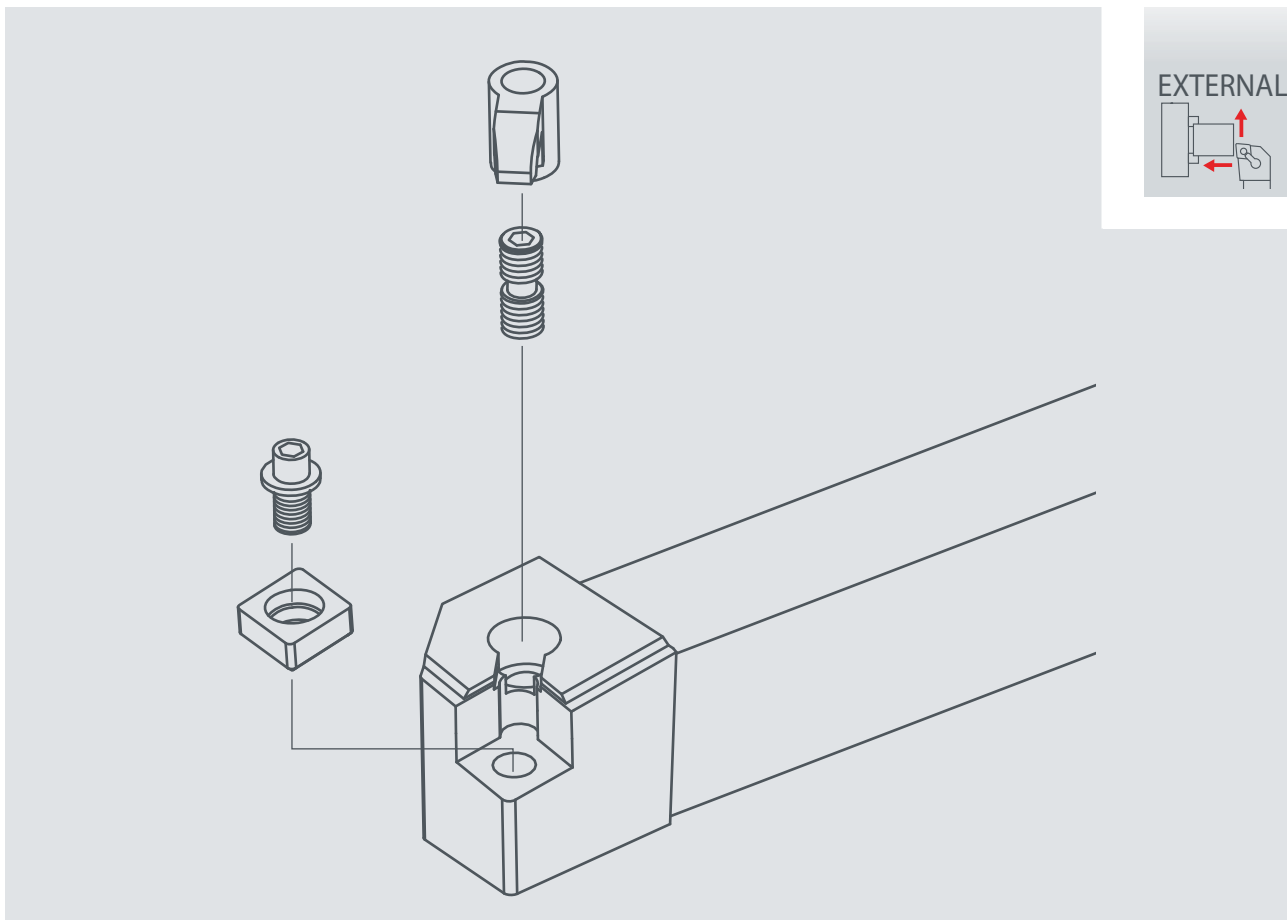
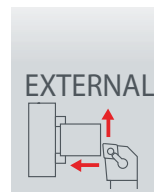
Fast Clamping - Ideal for short chip materials



CLAMPING SYSTEM (NEGATIVE)

High Clamping Strength - First choice for ceramic inserts

M



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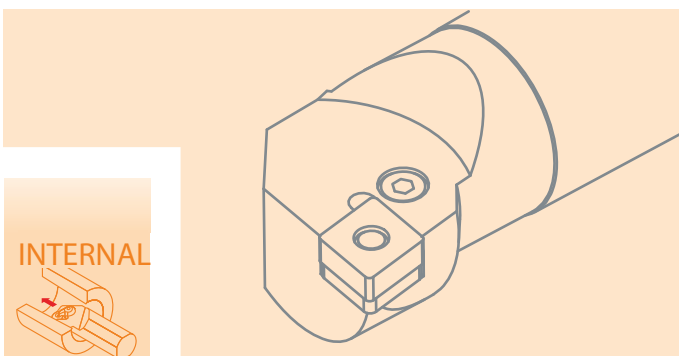
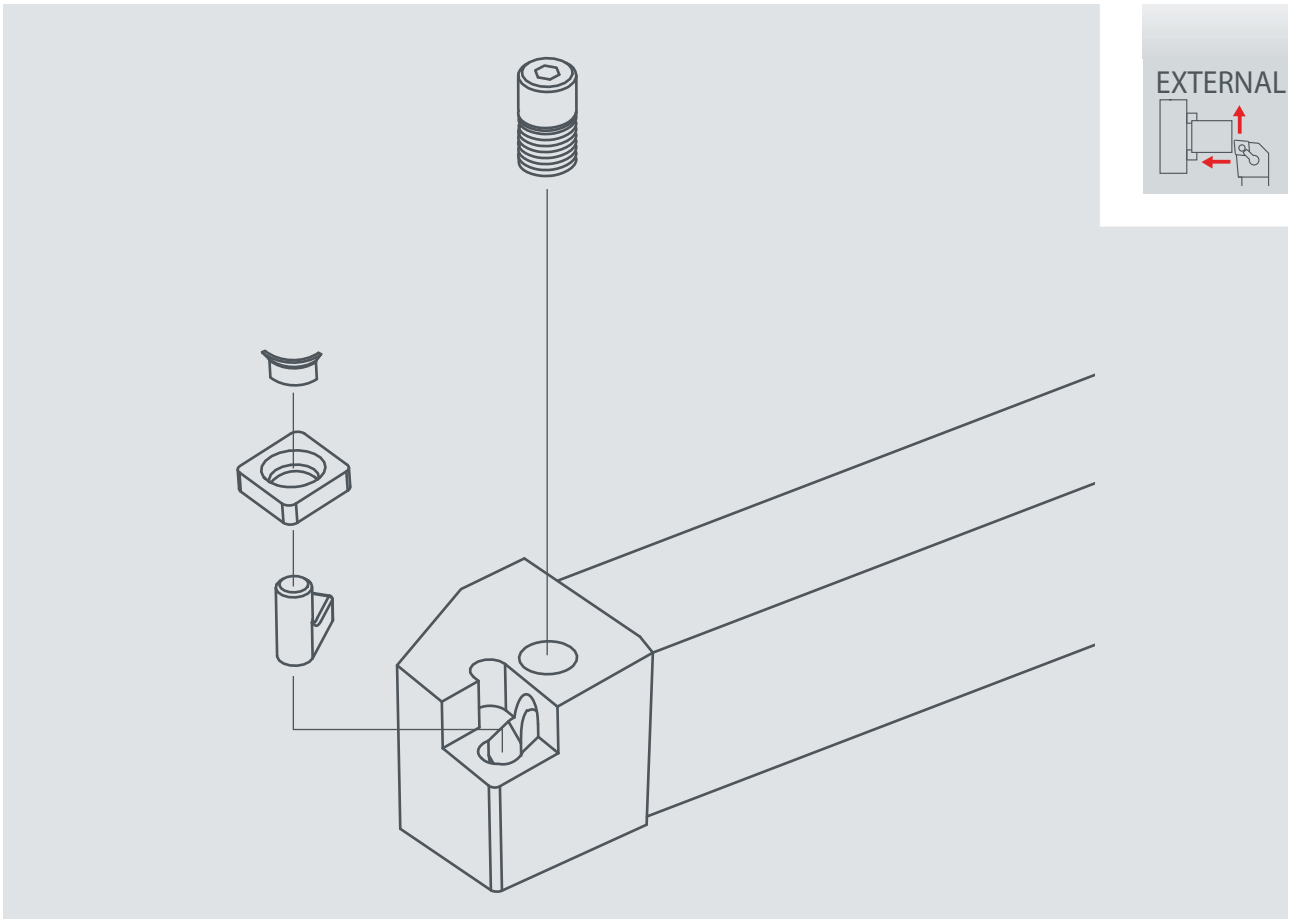
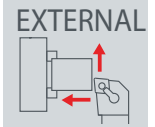
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CLAMPING SYSTEM (NEGATIVE)

Easy to use - Excellent chip ejection

P





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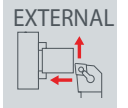
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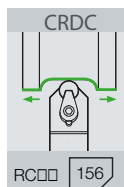
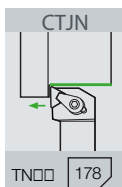
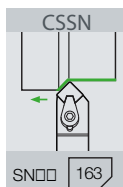
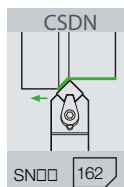
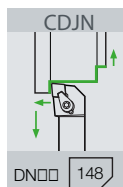
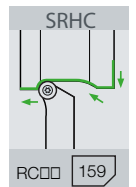
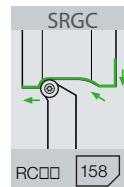
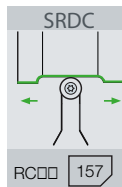
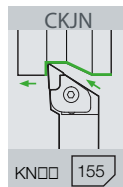
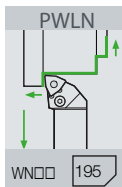
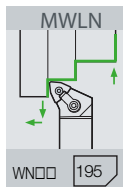
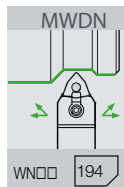
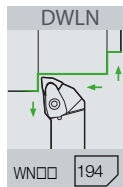
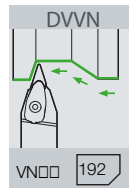
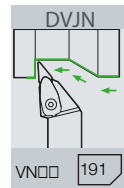
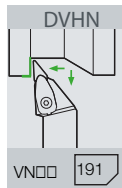
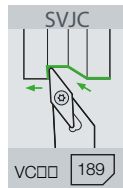
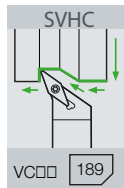
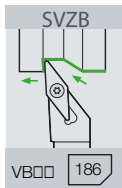
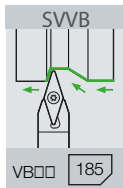
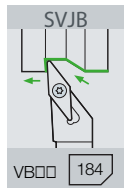
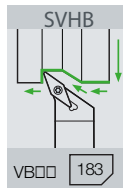
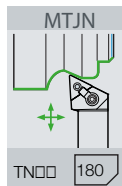
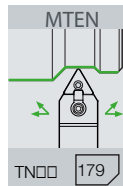
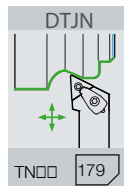
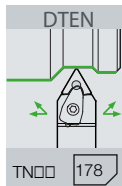
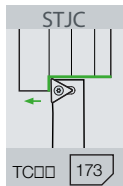
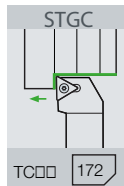
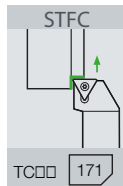
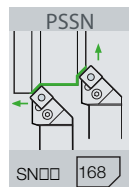
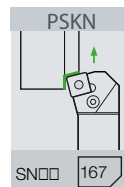
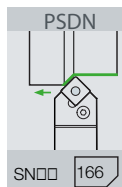
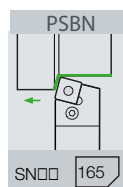
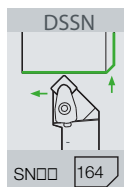
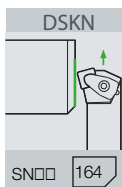
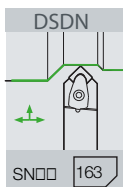
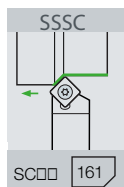
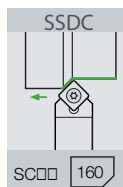
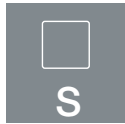
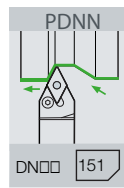
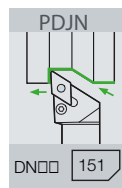
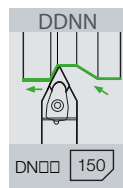
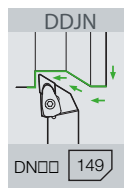
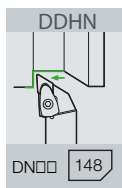
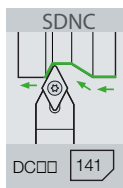
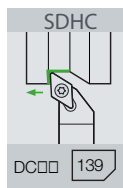
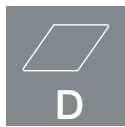
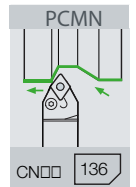
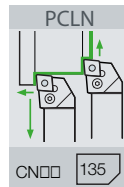
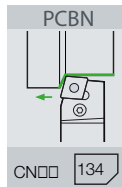
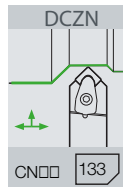
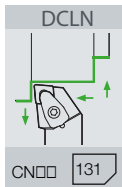
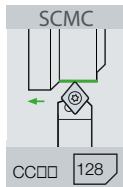
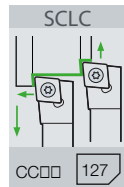
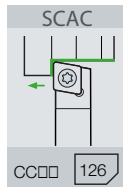
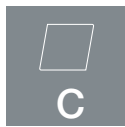
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TURNING

SCAC

POSITIVE 7°
with hole

CC BY-NC-SA



EXTERNAL

[illegible]

carbide

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PCBN

57

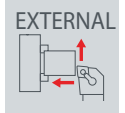
diamond

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SCLC

POSITIVE 7°
with hole

CC BY-NC-ND

[illegible]

carbide

18

PCBN

57

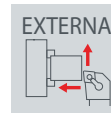
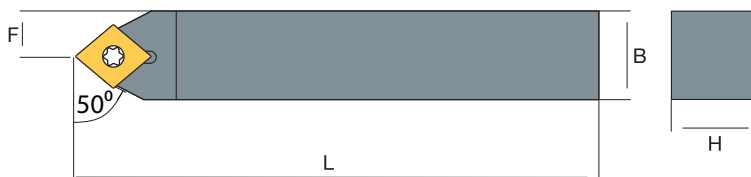
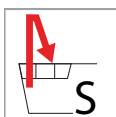
diamond

77

SCMCN

POSITIVE 7°
with hole

CC □ □



CC □ □	DESCRIPTION				STOCK	DIMENSIONS									
						H	B	L	F						
CC □ □0602	SCMCN	0808	E06	●		8	8	70	04	ST-SC0257	ST-WRT08				
		1010	E06	●		10	10	70	05	ST-SC0257	ST-WRT08				
CC □ □09T3	SCMCN	1212	F09	●		12	12	80	06	ST-SC3511	ST-WRT15				
		1616	H09	●		16	16	100	08	ST-SC3514	ST-WRT15	ST-SHCC09	ST-SC5011		
		2020	K09	●		20	20	125	10	ST-SC3514	ST-WRT15	ST-SHCC09	ST-SC5011		
		2525	M09	●		25	25	150	12.5	ST-SC3514	ST-WRT15	ST-SHCC09	ST-SC5011		
CC □ □1204	SCMCN	2020	K12	●		20	20	125	10	ST-SC0416	ST-WRT15	ST-SHCC12	ST-SC6011		
		2525	M12	●		25	25	150	12.5	ST-SC0416	ST-WRT15	ST-SHCC12	ST-SC6011		

carbide

18

PCBN

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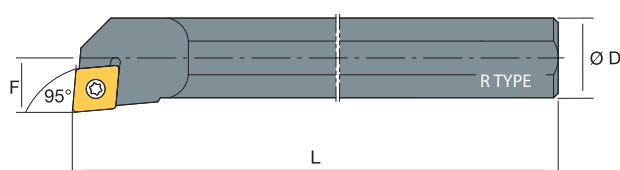
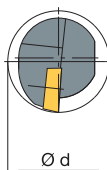
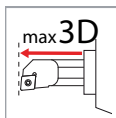
diamond

83

^sSCLC

POSITIVE 7°
with hole

CC□□



CC □ □	DESCRIPTION		STOCK		DIMENSIONS										
			R	L	ØD	Ød	L	F							
CC □ □ 0602	S06H08	SCLCR/L	06	●	●	06	>08	100	4.5	ST-SC0257	ST-WRT08				
	S08H		06	●	●	08	>11	100	06	ST-SC0257	ST-WRT08				
	S10K		06	●	●	10	>13	125	07	ST-SC0257	ST-WRT08				
	S10P16		06	●	●	16	>13	150	07	ST-SC0257	ST-WRT08				
	S12K		06	●	●	12	>16	125	09	ST-SC0257	ST-WRT08				
	S12K16		06	●	●	16	>13	150	09	ST-SC0257	ST-WRT08				
CC □ □ 09T3	S12K	SCLCR/L	09	●	●	12	>16	125	09	ST-SC3511	ST-WRT15				
	S16P		09	●	●	16	>21	170	11	ST-SC3511	ST-WRT15				
	S20R		09	●	●	20	>25	200	13	ST-SC3511	ST-WRT15				
	S25S		09	●	●	25	>32	250	17	ST-SC3511	ST-WRT15				
	S32T		09	●	●	32	>40	300	22	ST-SC3514	ST-WRT15	ST-SHCC09	ST-SC5011		
	S32T	SCLCR/L	12	●	●	32	>40	300	22	ST-SC0416	ST-WRT15	ST-SHCC12	ST-SC6011		
	S40T		12	●	●	40	>50	350	27	ST-SC0416	ST-WRT15	ST-SHCC12	ST-SC6011		

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PCBN

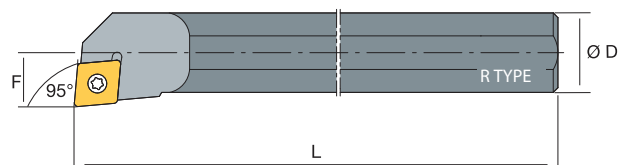
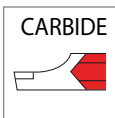
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diamond

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Holders

TURNING

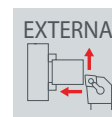
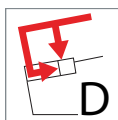


INTERNAL

[illegible]

83

CN

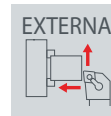


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TURNING

NEGATIVE with hole

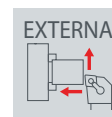
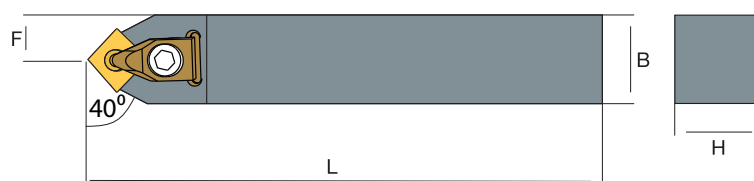
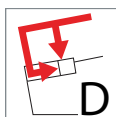
[illegible]

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Holdings

TURNING

PCBN

NEGATIVE
with hole

CN ☐ ☐



EXTERNAL

[illegible]

carbide

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PCBN

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diamond

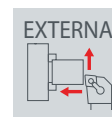
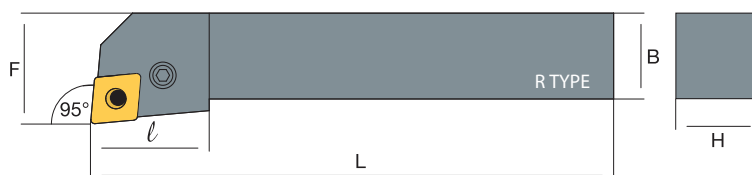
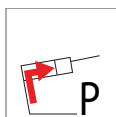
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ceramic

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NEGATIVE
with hole

CN 

TURNING

carbide

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ceramic

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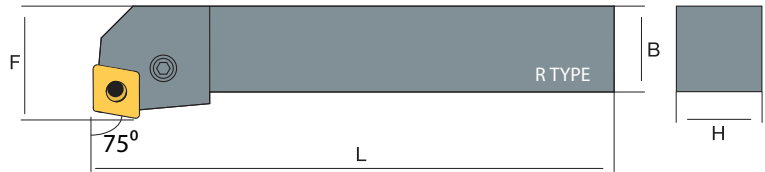
Holdings

TURNING

PCMNN

NEGATIVE
with hole

CN ☐ ☐



EXTERNAL

[illegible]

carbide

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PCBN

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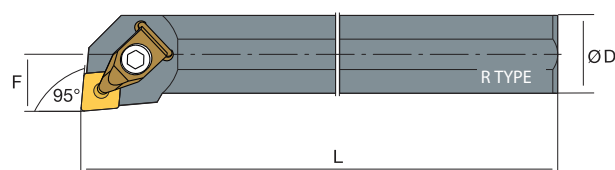
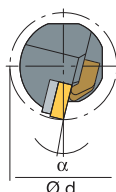
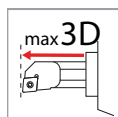
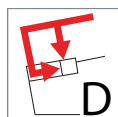
diamond

84

ceramic

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NEGATIVE
with hole

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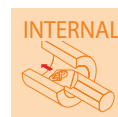
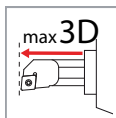
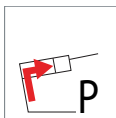
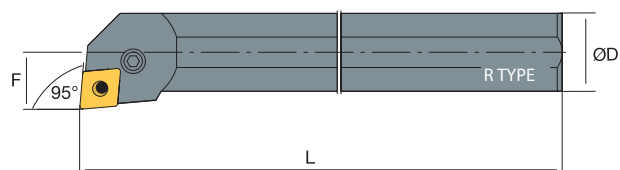
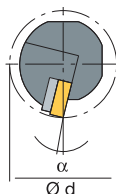
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TURNING

sPCLN

NEGATIVE
with hole

CN ☐ ☐

[illegible]

carbide

21

PCBN

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diamond

84

ceramic

102

DC

[illegible]

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</

TURNING

SDJC

**POSITIVE 7°
with hole**

DC 

EXTERNAL

[illegible]

carbide

24

PCBN

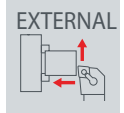
65

diamond

85

SDNCN

POSITIVE 7°
with hole

DC ☐ ☐[illegible]

carbide

24

PCBN

65

diamond

85

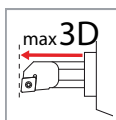
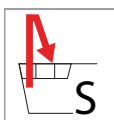
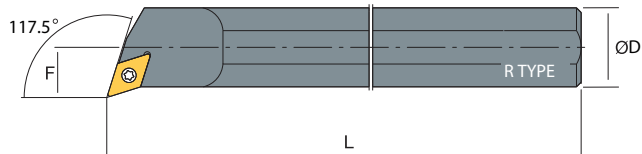
</

TURNING

sSDPC

**POSITIVE 7°
with hole**

DC



INTERNAL



An isometric diagram showing a cylindrical part with an internal thread. A red arrow points to the thread, and a small yellow label 'INTERNAL' is placed above it.

[illegible]

carbide

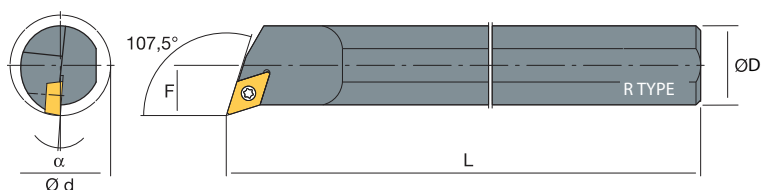
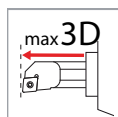
24

PCBN

65

diamond

85

DC 

INDEX	SPARE PARTS	DRILLS	ENDMILLS	DRILLING	MILLING	THREADING	GROOVING	TURNING
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24

65

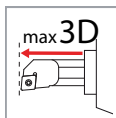
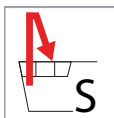
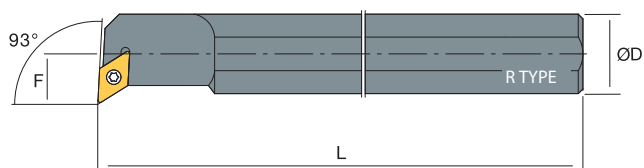
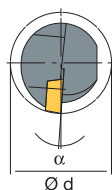
85

</

TURNING

sSDUC

**POSITIVE 7°
with hole**

DC 

INTERNAL

A diagram showing a cross-section of a pipe with a red arrow pointing to a small, irregular hole on the inner surface, representing internal corrosion.[illegible]

carbide

24

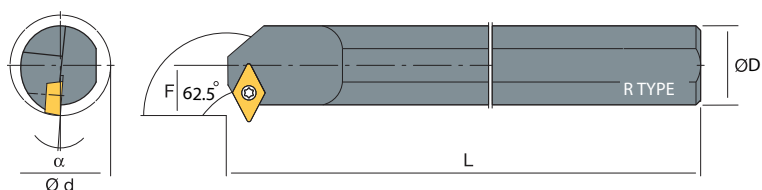
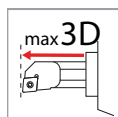
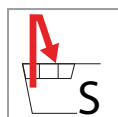
PCBN

65

diamond

85

^sSD-C

DC [illegible]

24

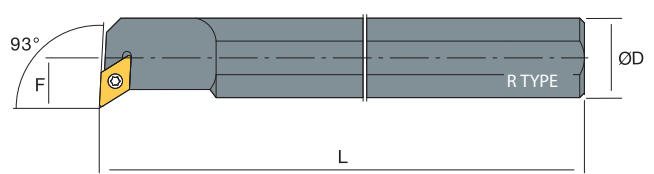
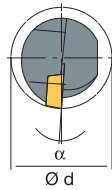
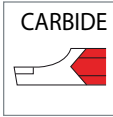
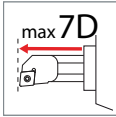
65

85

CSDUC

POSITIVE 7°
with hole

DC□□

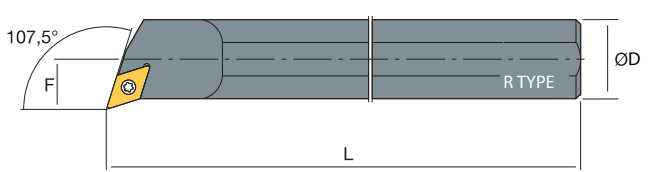
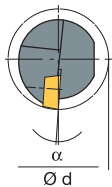
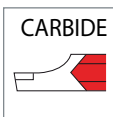
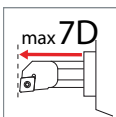


DC □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	Ø D	Ø d	L	F						
DC □ □ 0702	C10N	SDUCR/L	07	●	●	10	>13	160	07	ST-SC02555	ST-WRT08	-	-		
	C12Q		07	●	●	12	>16	180	09	ST-SC02555	ST-WRT08	-	-		
DC □ □ 11T3	C16X	SDUCR/L	11	●	●	16	>21	220	11	ST-SC3508	ST-WRT15	-	-		
	C20S		11	●	●	20	>25	250	13	ST-SC3508	ST-WRT15	-	-		
	C25T		11	●	●	25	>32	300	17	ST-SC3508	ST-WRT15	-	-		

CSDQC

POSITIVE 7°
with hole

DC□□



DC □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	Ø D	Ø d	L	F						
DC □ □ 0702	C10N	SDQCR/L	07	●	●	10	>14	160	09	ST-SC02555	ST-WRT08	-	-		
	C12Q		07	●	●	12	>18	180	11	ST-SC02555	ST-WRT08	-	-		
DC □ □ 11T3	C16X	SDQCR/L	11	●	●	16	>20	220	15	ST-SC3508	ST-WRT15	-	-		
	C20S		11	●	●	20	>25	250	19	ST-SC3508	ST-WRT15	-	-		
	C25T		11	●	●	25	>32	300	24	ST-SC3508	ST-WRT15	-	-		

carbide

24

PCBN

65

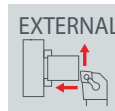
diamond

85

CDJN

NEGATIVE
without hole

DN □ □

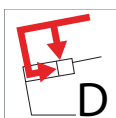


DN □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	H	B	L	F						
DN □ 1507	CDJNR/L	2525	M15	●	●	25	25	150	32	ST-SHDN15	ST-SC0410	ST-CS001	ST-SPR01	ST-SC630	ST-WR0030
		3232	P15	●	●	32	32	170	40	ST-SHDN15	ST-SC0410	ST-CS001	ST-SPR01	ST-SC630	ST-WR0030

DDHN

NEGATIVE
with hole

DN □ □



DN □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	H	B	L	F						
DN □ 1504	DDHNR/L	2525	M1504	●	●	25	25	150	32	ST-SHDN15	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
		3232	P1504	●	●	32	32	170	40	ST-SHDN15	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
DN □ 1506	DDHNR/L	2020	K15	●	●	20	20	125	25	ST-SHDN15	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
		2525	M15	●	●	25	25	150	32	ST-SHDN15	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
		3232	P15	●	●	32	32	170	40	ST-SHDN15	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030

carbide

26

PCBN

66

diamond

86

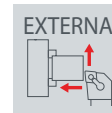
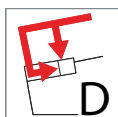
ceramic

104

DDJN

NEGATIVE
with hole

DN



DN	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	H	B	L	F						
DN 1104	DDJNR/L	1616	H11	●	●	16	16	100	20	ST-SHDN11	ST-SC0410	ST-CS001	ST-SPR04	ST-SC523	ST-WR0030
		2020	K11	●	●	20	20	125	25	ST-SHDN11	ST-SC0410	ST-CS001	ST-SPR04	ST-SC523	ST-WR0030
		2525	M11	●	●	25	25	150	32	ST-SHDN11	ST-SC0410	ST-CS001	ST-SPR04	ST-SC523	ST-WR0030
DN 1504	DDJNR/L	2020	K1504	●		20	20	125	25	ST-SHDN15	ST-SC0410	ST-CS002	ST-SPR04	ST-SC630	ST-WR0030
		2525	M1504	●		25	25	150	32	ST-SHDN15	ST-SC0410	ST-CS002	ST-SPR04	ST-SC630	ST-WR0030
		3232	P1504	●		32	32	170	40	ST-SHDN15	ST-SC0410	ST-CS002	ST-SPR04	ST-SC630	ST-WR0030
DN 1506	DDJNR/L	2020	K15	●	●	20	20	125	25	ST-SHDN15	ST-SC0410	ST-CS002	ST-SPR04	ST-SC630	ST-WR0030
		2525	M15	●	●	25	25	150	32	ST-SHDN15	ST-SC0410	ST-CS002	ST-SPR04	ST-SC630	ST-WR0030
		3232	P15	●	●	32	32	170	40	ST-SHDN15	ST-SC0410	ST-CS002	ST-SPR04	ST-SC630	ST-WR0030
		4040	S15	●	●	40	40	250	50	ST-SHDN15	ST-SC0410	ST-CS002	ST-SPR04	ST-SC630	ST-WR0030

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE PARTS

INDEX

carbide

26

PCBN

66

diamond

86

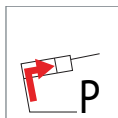
ceramic

104

PDJN

 NEGATIVE
with hole

DN □ □

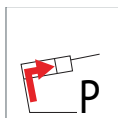


DN □ □	DESCRIPTION				STOCK		DIMENSIONS								
					R	L	H	B	L	F					
DN □ □1506	PDJNR/L	2020	K15	●	●	20	20	125	25		ST-SHDN15	ST-SPR001	ST-LV001	ST-SC820	ST-WR0030
		2525	M15	●	●	25	25	150	32		ST-SHDN15	ST-SPR001	ST-LV001	ST-SC820	ST-WR0030
		3232	P15	●	●	32	32	170	40		ST-SHDN15	ST-SPR001	ST-LV001	ST-SC820	ST-WR0030
		4040	S15	●	●	40	40	250	50		ST-SHDN15	ST-SPR001	ST-LV001	ST-SC820	ST-WR0030

PDNNN

 NEGATIVE
with hole

DN □ □



DN □ □	DESCRIPTION				STOCK	DIMENSIONS								
						H	B	L	F					
DN □ □1506	PDNNN	2020	K15	●		20	20	125	25	ST-SHDN15	ST-SPR001	ST-LV001	ST-SC820	ST-WR0030
		2525	M15	●		25	25	150	32	ST-SHDN15	ST-SPR001	ST-LV001	ST-SC820	ST-WR0030
		3232	P15	●		32	32	170	40	ST-SHDN15	ST-SPR001	ST-LV001	ST-SC820	ST-WR0030
		4040	S15	●		40	40	250	50	ST-SHDN15	ST-SPR001	ST-LV001	ST-SC820	ST-WR0030

carbide

26

PCBN

66

diamond

86

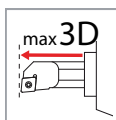
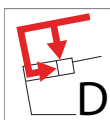
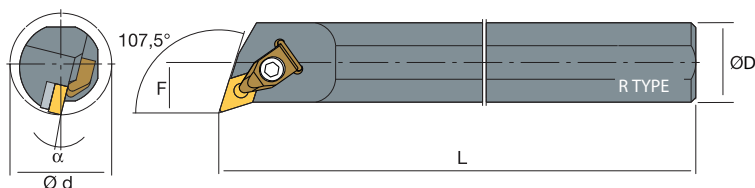
ceramic

104

^SDDQN

NEGATIVE
with hole

DN

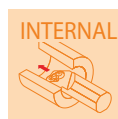
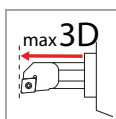
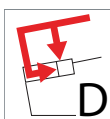
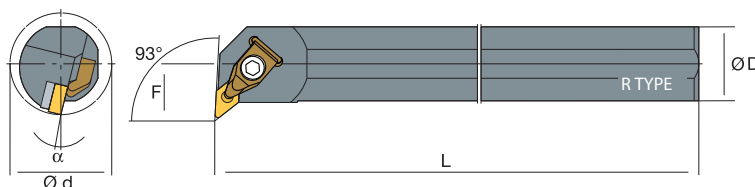


DN 	DESCRIPTION			STOCK		DIMENSIONS				 ← 		 ←  ←  ← 			
				R	L	ØD	Ød	L	F						
DN  1104	S25S	DDQNR/L	11	●	●	25	32	250	17	ST-SHDN11	ST-SC0410	ST-CS002	ST-SPR04	ST-SC523	ST-WR0030
	S32T		11	●	●	32	40	300	22	ST-SHDN11	ST-SC0410	ST-CS002	ST-SPR04	ST-SC523	ST-WR0030
DN  1506	S25S	DDQNR/L	15	●	●	25	32	250	17	ST-SHDN15	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
	S32T		15	●	●	32	40	300	22	ST-SHDN15	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
	S40U		15	●	●	40	50	350	27	ST-SHDN15	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
	S50V		15	●	●	50	63	400	35	ST-SHDN15	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030

^SDDUN

NEGATIVE
with hole

DN



DN  	DESCRIPTION			STOCK		DIMENSIONS				 ← 		 ←  ←  ← 			
				R	L	ØD	Ød	L	F						
DN   1104	S25S	DDUNR/L	11	●	●	25	32	250	17	ST-SHDN11	ST-SC0410	ST-CS002	ST-SPR04	ST-SC523	ST-WR0030
	S32T		11	●	●	32	40	300	22	ST-SHDN11	ST-SC0410	ST-CS002	ST-SPR04	ST-SC523	ST-WR0030
DN   1506	S25S	DDUNR/L	15	●	●	25	32	250	17	ST-SHDN15	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
	S32T		15	●	●	32	40	300	22	ST-SHDN15	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
	S40U		15	●	●	40	50	350	27	ST-SHDN15	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
	S50V		15	●	●	50	63	400	35	ST-SHDN15	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030

carbide

26

PCBN

66

diamond

86

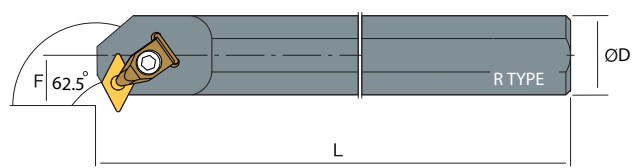
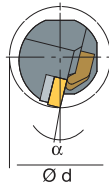
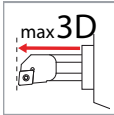
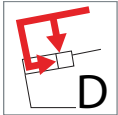
ceramic

104

^SDD-N

NEGATIVE
with hole

DN

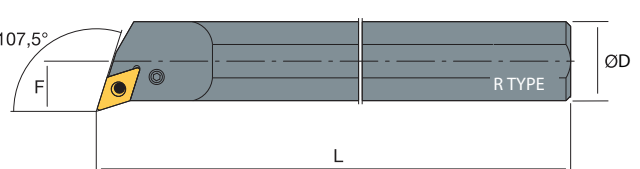
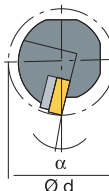
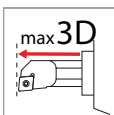
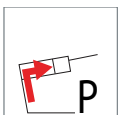


DN 	DESCRIPTION			STOCK		DIMENSIONS				 ← 		 ←  ←  ← 			
				R	L	ØD	Ød	L	F						
DN  1104	S25S	DD-NR/L	11	●	●	25	32	250	17	ST-SHDN11	ST-SC0410	ST-CS002	ST-SPR04	ST-SC523	ST-WR0030
DN  1506	S32T	DD-NR/L	15	●	●	32	44	300	26	ST-SHDN15	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
	S40U		15	●	●	40	52	350	29	ST-SHDN15	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
	S50V		15	●	●	50	67	400	35	ST-SHDN15	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030

^SPDQN

NEGATIVE
with hole

DN



DN 	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	ØD	Ød	L	F						
DN  1506	S25S	PDQNR/L	15	●	●	25	40	250	17	ST-SHDN15	ST-SPR001	ST-LV001	ST-SC820	ST-WR0030	
	S32T		15	●	●	32	40	300	22	ST-SHDN15	ST-SPR001	ST-LV001	ST-SC820	ST-WR0030	
	S40U		15	●	●	40	50	350	27	ST-SHDN15	ST-SPR001	ST-LV001	ST-SC820	ST-WR0030	
	S50V		15	●	●	50	63	400	35	ST-SHDN15	ST-SPR001	ST-LV001	ST-SC820	ST-WR0030	

carbide

26

PCBN

66

diamond

86

ceramic

104

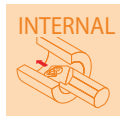
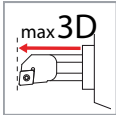
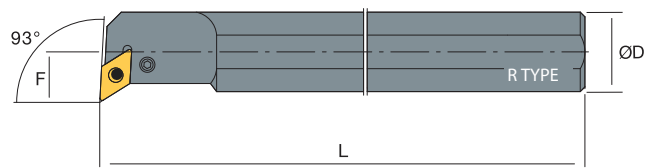
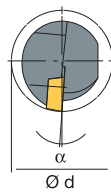
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TURNING

SPDUN

NEGATIVE
with hole

DN 〇〇

[illegible]

carbide

26

PCBN

66

diamond

86

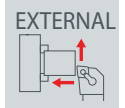
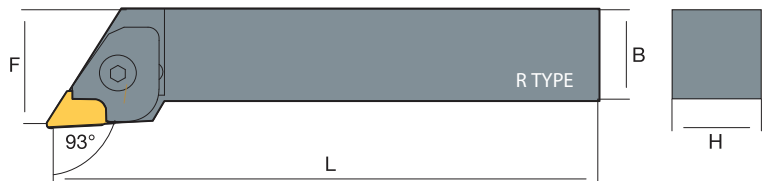
ceramic

104

CKJN

NEGATIVE
without hole

KN □ □



TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE PARTS

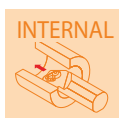
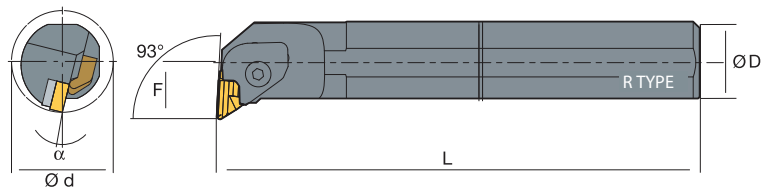
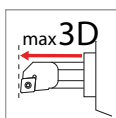
INDEX

KN □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	H	B	L	F						
KN □ N1604	CKJNR/L	2020	K16	●	●	25	25	125		ST-SHKN16	ST-SC0310	ST-CS011	-	ST-SC630	ST-WR0050
		2525	M16	●	●	25	25	150		ST-SHKN16	ST-SC0310	ST-CS011	-	ST-SC630	ST-WR0050
		3232	P16	●	●	32	32	170		ST-SHKN16	ST-SC0310	ST-CS011	-	ST-SC630	ST-WR0050
		4040	S16	●	●	40	40	250		ST-SHKN16	ST-SC0310	ST-CS011	-	ST-SC630	ST-WR0050

^SCKUN

NEGATIVE
without hole

KN □ □



KN □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	ØD	Ød	L	F						
KN □ □1604	S25S	CKUNR/L	16	●	●	25	34	250	17	ST-SHKN16	ST-SC0310	ST-CS011	-	ST-SC630	ST-WR0050
	S28S		16	●	●	28	38	290	17	ST-SHKN16	ST-SC0310	ST-CS011	-	ST-SC630	ST-WR0050
	S32T		16	●	●	32	40	300	22	ST-SHKN16	ST-SC0310	ST-CS011	-	ST-SC630	ST-WR0050
	S40U		16	●	●	40	50	350	27	ST-SHKN16	ST-SC0310	ST-CS011	-	ST-SC630	ST-WR0050
	S50V		16	●	●	50	63	400	35	ST-SHKN16	ST-SC0310	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030

carbide

29

CRDCN

POSITIVE
without hole

RC □ □



RC □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	H	B	L	F						
RCGX0606	CRDCN	2020	K06	●	●	20	20	125	10	ST-SHRC06	ST-SCRC6	ST-CSRC6	-	ST-SCRC6	ST-WR0040
		2525	M06	●	●	25	25	150	12.5	ST-SHRC06	ST-SCRC6	ST-CSRC6	-	ST-SCRC6	ST-WR0040
		3232	P06	●	●	32	32	170	16	ST-SHRC06	ST-SCRC6	ST-CSRC6	-	ST-SCRC6	ST-WR0040
		4040	S06	●	●	40	40	250	20	ST-SHRC06	ST-SCRC6	ST-CSRC6	-	ST-SCRC6	ST-WR0040
RCGX0907	CRDCN	2020	K09	●	●	20	20	125	10	ST-SHRC06	ST-SCRC9	ST-CSRC9	-	ST-SCRC9	ST-WR0040
		2525	M09	●	●	25	25	150	12.5	ST-SHRC06	ST-SCRC9	ST-CSRC9	-	ST-SCRC9	ST-WR0040
		3232	P09	●	●	32	32	170	16	ST-SHRC06	ST-SCRC9	ST-CSRC9	-	ST-SCRC9	ST-WR0040
		4040	S09	●	●	40	40	250	20	ST-SHRC06	ST-SCRC9	ST-CSRC9	-	ST-SCRC9	ST-WR0040
RCGX1207	CRDCN	2020	K12	●	●	20	20	125	10	ST-SHRC06	ST-SCR12	ST-CSR12	-	ST-SCR12	ST-WR0040
		2525	M12	●	●	25	25	150	12.5	ST-SHRC06	ST-SCR12	ST-CSR12	-	ST-SCR12	ST-WR0040
		3232	P12	●	●	32	32	170	16	ST-SHRC06	ST-SCR12	ST-CSR12	-	ST-SCR12	ST-WR0040
		4040	S12	●	●	40	40	250	20	ST-SHRC06	ST-SCR12	ST-CSR12	-	ST-SCR12	ST-WR0040
RCGX1510	CRDCN	2020	K15	●	●	20	20	125	10	ST-SHRC06	ST-SCR15	ST-CSR15	-	ST-SCR15	ST-WR0040
		2525	M15	●	●	25	25	150	12.5	ST-SHRC06	ST-SCR15	ST-CSR15	-	ST-SCR15	ST-WR0040
		3232	P15	●	●	32	32	170	16	ST-SHRC06	ST-SCR15	ST-CSR15	-	ST-SCR15	ST-WR0040
		4040	S15	●	●	40	40	250	20	ST-SHRC06	ST-SCR15	ST-CSR15	-	ST-SCR15	ST-WR0040
RCGX1910	CRDCN	2020	K19	●	●	20	20	125	10	ST-SHRC06	ST-SCR19	ST-CSR19	-	ST-SCR19	ST-WR0040
		2525	M19	●	●	25	25	150	12.5	ST-SHRC06	ST-SCR19	ST-CSR19	-	ST-SCR19	ST-WR0040
		3232	P19	●	●	32	32	170	16	ST-SHRC06	ST-SCR19	ST-CSR19	-	ST-SCR19	ST-WR0040
		4040	S19	●	●	40	40	250	20	ST-SHRC06	ST-SCR19	ST-CSR19	-	ST-SCR19	ST-WR0040
RCGX2512	CRDCN	2020	K25	●	●	20	20	125	10	ST-SHRC06	ST-SCR25	ST-CSR25	-	ST-SCR25	ST-WR0040
		2525	M25	●	●	25	25	150	12.5	ST-SHRC06	ST-SCR25	ST-CSR25	-	ST-SCR25	ST-WR0040
		3232	P25	●	●	32	32	170	16	ST-SHRC06	ST-SCR25	ST-CSR25	-	ST-SCR25	ST-WR0040
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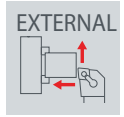
ceramic

106

SRDCN

POSITIVE 7°
with hole

RC □ □



RC □ □	DESCRIPTION				STOCK	DIMENSIONS									
						H	B	L	F						
RC □ □0602	SRDCN	1616	H06	●		16	16	100	8	ST-SC2507	ST-WRT08	-	-		
		2020	K06	●		20	20	125	10	ST-SC2507	ST-WRT08	-	-		
		2525	M06	●		25	25	150	12.5	ST-SC2507	ST-WRT08	-	-		
RC □ □0803	SRDCN	1616	H08	●		16	16	100	8	ST-SC3009	ST-WRT08	-	-		
		2020	K08	●		20	20	125	10	ST-SC3009	ST-WRT08	-	-		
		2525	M08	●		25	25	150	12.5	ST-SC3009	ST-WRT08	-	-		
		3232	P08	●		32	32	170	16	ST-SC3009	ST-WRT08	-	-		
RC □ □1003	SRDCN	1616	H10	●		16	16	100	8	ST-SC3511	ST-WRT15	-	-		
		2020	K10	●		20	20	125	10	ST-SC3511	ST-WRT15	-	-		
		2525	M10	●		25	25	150	12.5	ST-SC3511	ST-WRT15	-	-		
		3232	P10	●		32	32	170	16	ST-SC3511	ST-WRT15	-	-		
RC □ □1204	SRDCN	2020	K12	●		20	20	125	10	ST-SC3511	ST-WRT15	-	-		
		2525	M12	●		25	25	150	12.5	ST-SC3511	ST-WRT15	-	-		
		3232	P12	●		32	32	170	16	ST-SC3511	ST-WRT15	-	-		
RC □ □1605	SRDCN	2525	M16	●		25	25	150	12.5	ST-SC0512	ST-WRT20	-	-		
		3232	P16	●		32	32	170	16	ST-SC0512	ST-WRT20	-	-		
RC □ □2006	SRDCN	2525	M20	●		25	25	150	12.5	ST-SC0616	ST-WRT20	-	-		
		3232	P20	●		32	32	170	16	ST-SC0616	ST-WRT20	-	-		
		4040	S20	●		40	40	250	20	ST-SC3514	ST-WRT20	-	-		

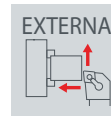
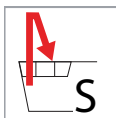
carbide

30

SRGC

POSITIVE 7°
with hole

RC □ □



RC □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	H	B	L	F						
RC □ □0602	SRGCR/L	1616	H06	●	●	16	16	100	20	ST-SC2507	ST-WRT08	-	-		
		2020	K06	●	●	20	20	125	25	ST-SC2507	ST-WRT08	-	-		
		2525	M06	●	●	25	25	150	32	ST-SC2507	ST-WRT08	-	-		
RC □ □0803	SRGCR/L	1616	H08	●	●	16	16	100	20	ST-SC3009	ST-WRT08	-	-		
		2020	K08	●	●	20	20	125	25	ST-SC3009	ST-WRT08	-	-		
		2525	M08	●	●	25	25	150	32	ST-SC3009	ST-WRT08	-	-		
		3232	P08	●	●	32	32	170	40	ST-SC3009	ST-WRT08	-	-		
RC □ □1003	SRGCR/L	1616	H10	●	●	16	16	100	20	ST-SC3511	ST-WRT15	-	-		
		2020	K10	●	●	20	20	125	25	ST-SC3511	ST-WRT15	-	-		
		2525	M10	●	●	25	25	150	32	ST-SC3511	ST-WRT15	-	-		
		3232	P10	●	●	32	32	170	40	ST-SC3511	ST-WRT15	-	-		
RC □ □1204	SRGCR/L	2020	K12	●	●	20	20	125	25	ST-SC3511	ST-WRT15	-	-		
		2525	M12	●	●	25	25	150	32	ST-SC3511	ST-WRT15	-	-		
		3232	P12	●	●	32	32	170	40	ST-SC3511	ST-WRT15	-	-		
RC □ □1605	SRGCR/L	2525	M16	●	●	25	25	150	32	ST-SC0512	ST-WRT20	-	-		
		3232	P16	●	●	32	32	170	40	ST-SC0512	ST-WRT20	-	-		
RC □ □2006	SRGCR/L	2525	M20	●	●	25	25	150	32	ST-SC0616	ST-WRT20	-	-		
		3232	P20	●	●	32	32	170	40	ST-SC0616	ST-WRT20	-	-		

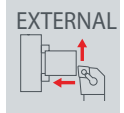
carbide



30

SRHC

POSITIVE 7°
with hole

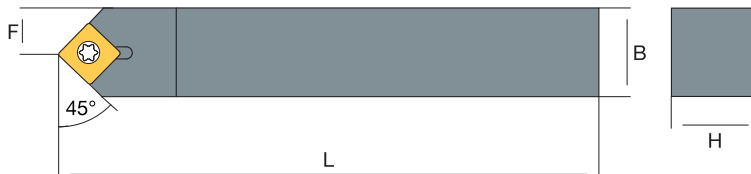
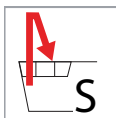
RC ☐ ☐[illegible]

carbide

30

</

TURNING

SC ☐ ☐

EXTERNAL

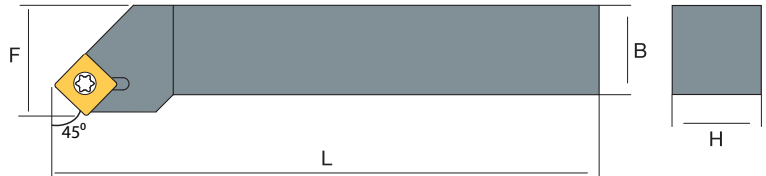
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31

SSSC

POSITIVE 7°
with hole

SC □□



EXTERNAL

[illegible]

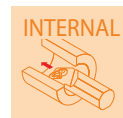
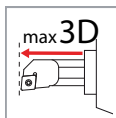
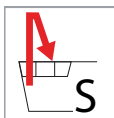
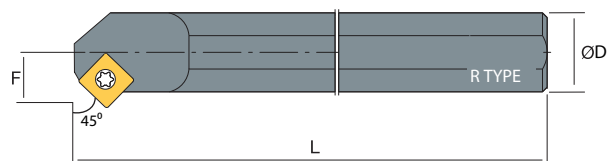
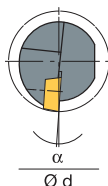
carbide

31

^sSSSC

POSITIVE 7°
with hole

SC □ □

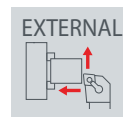
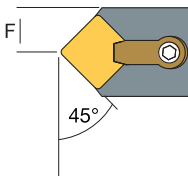


SC □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	ØD	Ød	L	F						
SC □ □09T3	S16P	SSSCR/L	09	●	●	16	>21	170	11			ST-SC3511	ST-WRT15	-	-
	S20R		09	●	●	20	>25	200	13			ST-SC3511	ST-WRT15	-	-
	S25S		09	●	●	25	>32	250	17			ST-SC3514	ST-WRT15	ST-SHSC09	ST-SC5011
SC □ □1204	S32T	SSSCR/L	12	●	●	32	>40	300	22			ST-SC4016	ST-WRT20	ST-SHSC12	ST-SC6011
	S40T		12	●	●	40	>50	350	27			ST-SC4016	ST-WRT20	ST-SHSC12	ST-SC6011

CSDNN

NEGATIVE
without hole

SN □ □



SN □ □	DESCRIPTION			STOCK		DIMENSIONS									
						H	B	L	F						
SN □ □1207	CSDNN	2525	M12	●		25	25	150	32	ST-SHSN12	ST-SC0410	ST-CS010	ST-SR001	ST-SC630	ST-WR0030
		3232	P12	●		32	32	170	40	ST-SHSN12	ST-SC0410	ST-CS010	ST-SR001	ST-SC630	ST-WR0030

carbide

31

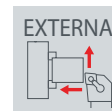
ceramic

108

CSSN

 NEGATIVE
without hole

SN □ □

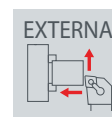
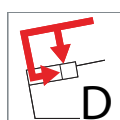


SN □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	H	B	L	F						
SN □ □ 1207	CSSNN	2525	M12	●	●	25	25	150	32	ST-SHSN12	ST-SC0410	ST-CS010	ST-SR001	ST-SC630	ST-WR0030
		3232	P12	●	●	32	32	170	40	ST-SHSN12	ST-SC0410	ST-CS010	ST-SR001	ST-SC630	ST-WR0030

DSDNN

 NEGATIVE
with hole

SN □ □



SN □ □	DESCRIPTION			STOCK	DIMENSIONS				 ← 		 ←  ←  ← 			
					H	B	L	F						
SN □ □1204	DSDNN	2020	K12	●	20	20	125	10	ST-SHSN12	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
		2525	M12	●	25	25	150	12.5	ST-SHSN12	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
		3232	P12	●	32	32	170	16	ST-SHSN12	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
SN □ □1504	DSDNN	2525	M15	●	25	25	150	12.5	ST-SHSN15	ST-SC6169	ST-CS003	-	ST-SC6307	ST-WR0040
		3232	P15	●	32	32	170	16	ST-SHSN15	ST-SC6169	ST-CS003	-	ST-SC6307	ST-WR0040
		4040	S15	●	40	40	250	20	ST-SHSN15	ST-SC6169	ST-CS003	-	ST-SC6307	ST-WR0040

carbide

32

PCBN

70

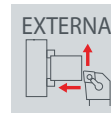
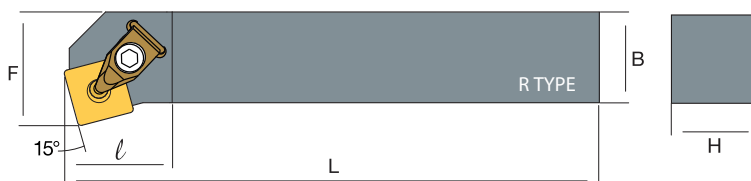
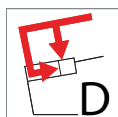
ceramic

108

DSKN

NEGATIVE
with hole

SN □ □

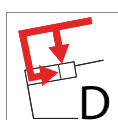


SN □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	H	B	L	F						
SN □ □1204	DSKNR/L	2020	K12	●	●	20	20	125	25	ST-SHSN12	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
		2525	M12	●	●	25	25	150	32	ST-SHSN12	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
		3232	P12	●	●	32	32	170	40	ST-SHSN12	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
SN □ □1504	DSKNR/L	2525	M15	●	●	25	25	150	32	ST-SHSN15	ST-SC0616	ST-CS003	-	ST-SC6307	ST-WR0040
		3232	P15	●	●	32	32	170	40	ST-SHSN15	ST-SC0616	ST-CS003	-	ST-SC6307	ST-WR0040

DSSN

NEGATIVE
with hole

SN □ □



SN □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	H	B	L	F						
SN □ □1204	DSSNR/L	2020	K12	●	●	20	20	125	25	ST-SHSN12	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
		2525	M12	●	●	25	25	150	32	ST-SHSN12	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
		3232	P12	●	●	32	32	170	40	ST-SHSN12	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
SN □ □1504	DSSNR/L	2525	M15	●	●	25	25	150	32	ST-SHSN15	ST-SC6169	ST-CS003	-	ST-SC6307	ST-WR0040
		3232	P15	●	●	32	32	170	40	ST-SHSN15	ST-SC6169	ST-CS003	-	ST-SC6307	ST-WR0040
		4040	S15	●	●	40	40	250	50	ST-SHSN15	ST-SC6169	ST-CS003	-	ST-SC6307	ST-WR0040

carbide

31

PCBN

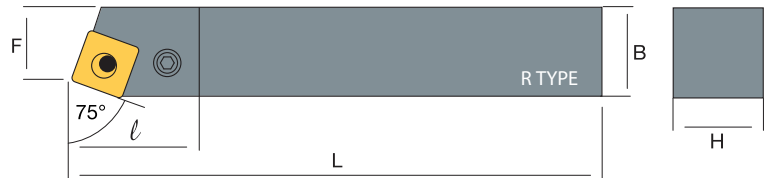
70

ceramic

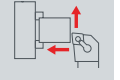
108

PSBN

NEGATIVE
with hole

SN ☐ ☐

EXTERNAL

[illegible]

carbide

32

PCBN

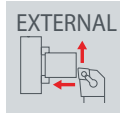
70

ceramic

108

PSKN

NEGATIVE
with hole

SN ☐ ☐[illegible]

carbide

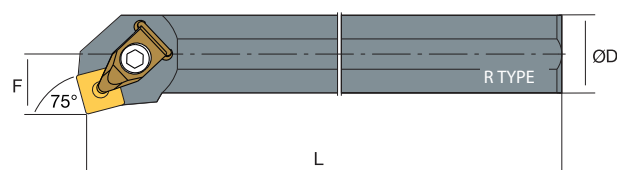
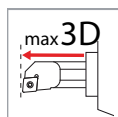
32

PCBN

70

ceramic

108

SN 

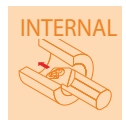
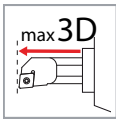
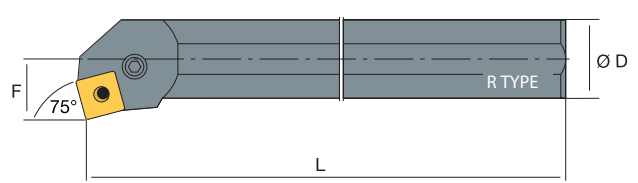
108

</

TURNING

S^sPSKN

NEGATIVE
with hole

SN [illegible]

carbide

31

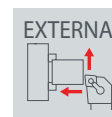
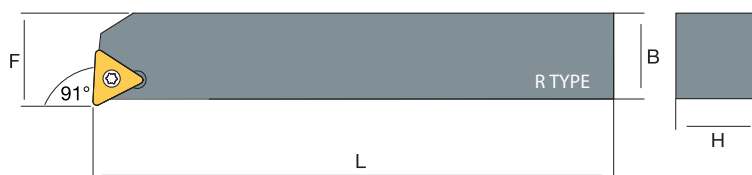
PCBN

70

ceramic

108

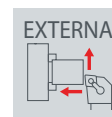
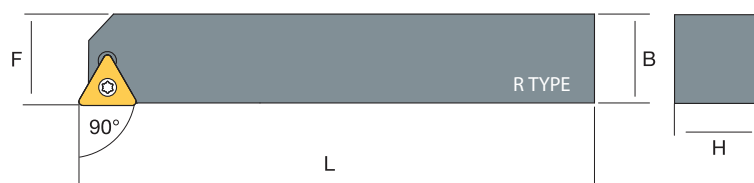
STFC

TC ☐ ☐[illegible]

36

71

87

TC ☐ ☐

INDEX	SPARE PARTS	DRILLS	ENDMILLS	DRILLING	MILLING	THREADING	GROOVING	TURNING
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36

71

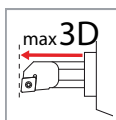
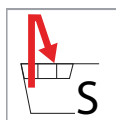
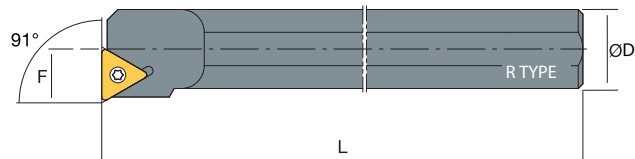
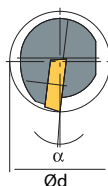
87

</

TURNING

^sSTFC

**POSITIVE 7°
with hole**

TC ☐ ☐[illegible]

carbide

36

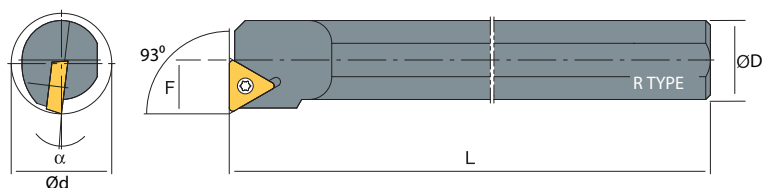
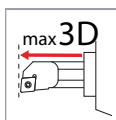
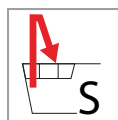
PCBN

71

diamond

87

^sSTUC

TC 

INTERNAL



A 3D perspective diagram showing a cylindrical part with a hole. A red arrow points into the hole, indicating the application of a repair material. The part is shown in a cross-section view.

[illegible]

carbide

36

PCBN

71

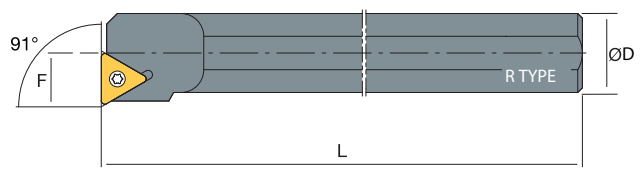
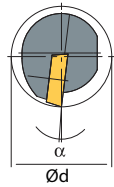
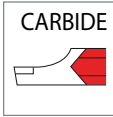
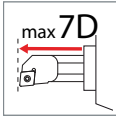
diamond

87

C_{STFC}

POSITIVE 7°
with hole

TC □ □

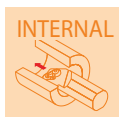
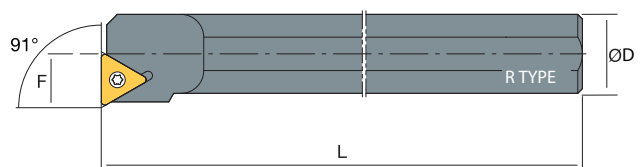
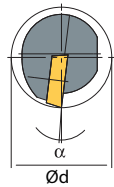
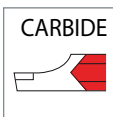
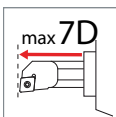


TC □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	ØD	Ød	L	F						
TC □ □1102	C10L	STFCR/L	11	●	●	10	>12	160	09	ST-SC02555	ST-WRT08	-	-		
	C12Q		11	●	●	12	>16	180	11	ST-SC02555	ST-WRT08	-	-		
	C16X		11	●	●	16	>20	220	15	ST-SC02555	ST-WRT08	-	-		
	C20S		11	●	●	20	>25	250	19	ST-SC02555	ST-WRT08	-	-		
	C25T		11	●	●	25	>32	300	24	ST-SC02555	ST-WRT08	-	-		

C_{STFP}

POSITIVE 11°
with hole

TP □ □



TP □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	ØD	Ød	L	F						
TP □ □0804	C08L	STFPR/L	08	●	●	08	>10	140	04	ST-SC02245	ST-WRT06	-	-		
TP □ □1103	C10N	STFPR/L	11	●	●	10	>12	160	09	ST-SC02555	ST-WRT08	-	-		
	C12Q		11	●	●	12	>16	180	11	ST-SC0352	ST-WRT08	-	-		
	C16X		11	●	●	16	>20	220	15	ST-SC0352	ST-WRT08	-	-		
	C20S		11	●	●	20	>25	250	19	ST-SC0352	ST-WRT08	-	-		
	C25T		11	●	●	25	>32	300	24	ST-SC0352	ST-WRT08	-	-		

carbide

41

PCBN

73

diamond

89

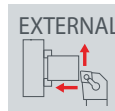
ceramic

112

CTJN

NEGATIVE
without hole

TN □□

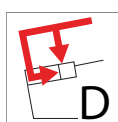


TN □□	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	H	B	L	F						
TN□N1607	CTJNR/L	2525	M16	●	●	25	25	150	32	ST-SHTN16	ST-SC0410	ST-CS013	ST-SPR001	ST-SC630	ST-WR0030
		3232	P16	●	●	32	32	170	40	ST-SHTN16	ST-SC0410	ST-CS013	ST-SPR001	ST-SC630	ST-WR0030

DTENN

NEGATIVE
with hole

TN □□



TN □□	DESCRIPTION			STOCK	DIMENSIONS									
					H	B	L	F						
TN□□1604	DTENN	2020	K16	●	20	20	125	10	ST-SHTN16	ST-SC0410	ST-CS002	ST-SPR04	ST-SC525	ST-WR0030
		2525	M16	●	25	25	150	12.5	ST-SHTN16	ST-SC0410	ST-CS002	ST-SPR04	ST-SC525	ST-WR0030
		3232	P16	●	32	32	170	16	ST-SHTN16	ST-SC0410	ST-CS002	ST-SPR04	ST-SC525	ST-WR0030
TN□□2204	DTENN	2525	M22	●	25	25	150	12.5	ST-SHTN22	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
		3232	P22	●	32	32	170	16	ST-SHTN22	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
		4040	S22	●	40	40	250	20	ST-SHTN22	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030

carbide

38

PCBN

72

diamond

88

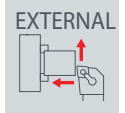
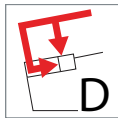
ceramic

110

DTJN

NEGATIVE
with hole

TN □ □

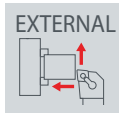
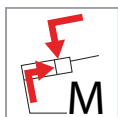


TN □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	H	B	L	F						
TN □ □1604	DTJNR/L	2020	K16	●	●	20	20	125	25	ST-SHTN16	ST-SC0410	ST-CS002	ST-SPR04	ST-SC525	ST-WR0030
		2525	M16	●	●	25	25	150	32	ST-SHTN16	ST-SC0410	ST-CS002	ST-SPR04	ST-SC525	ST-WR0030
		3232	P16	●	●	32	32	170	40	ST-SHTN16	ST-SC0410	ST-CS002	ST-SPR04	ST-SC525	ST-WR0030
TN □ □2204	DTJNR/L	2525	M22	●	●	25	25	150	32	ST-SHTN22	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
		3232	P22	●	●	32	32	170	40	ST-SHTN22	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
		4040	S22	●	●	40	40	250	50	ST-SHTN22	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030

MTENN

NEGATIVE
with hole

TN □ □



TN □ □	DESCRIPTION			STOCK	DIMENSIONS									
					H	B	L	F						
TN □ □1604	MTENN	2020	K16	●	20	20	125	10	ST-SHTN16	ST-SP001	ST-CS006	ST-SC630	ST-WR0030	
		2525	M16	●	25	25	150	12.5	ST-SHTN16	ST-SP001	ST-CS006	ST-SC630	ST-WR0030	
		3232	P16	●	32	32	170	16	ST-SHTN16	ST-SP001	ST-CS006	ST-SC630	ST-WR0030	
TN □ □2204	MTENN	2525	M22	●	25	25	150	12.5	ST-SHTN22	ST-SP001	ST-CS006	ST-SC630	ST-WR0030	
		3232	P22	●	32	32	170	16	ST-SHTN22	ST-SP001	ST-CS006	ST-SC630	ST-WR0030	
		4040	S22	●	40	40	250	20	ST-SHTN22	ST-SP001	ST-CS006	ST-SC630	ST-WR0030	

carbide

38

PCBN

72

diamond

88

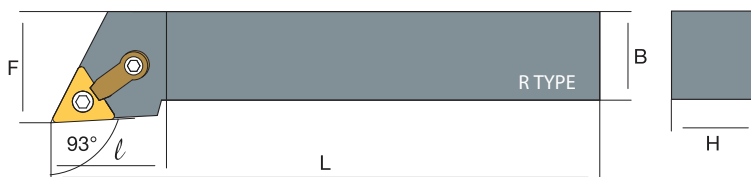
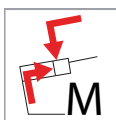
ceramic

110

MTJN

NEGATIVE
with hole

TN

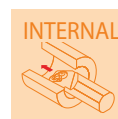
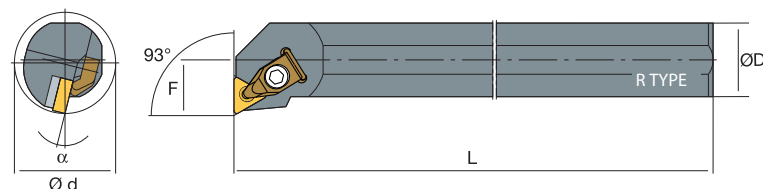
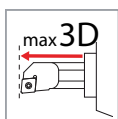
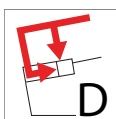


TN 	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	H	B	L	F						
TN 1604	MTJNR/L	2020	K16	●	●	20	20	125	10	ST-SHTN16	ST-SP001	ST-CS006	ST-SC630	ST-WR0030	
		2525	M16	●	●	25	25	150	12.5	ST-SHTN16	ST-SP001	ST-CS006	ST-SC630	ST-WR0030	
		3232	P16	●	●	32	32	170	16	ST-SHTN16	ST-SP001	ST-CS006	ST-SC630	ST-WR0030	
TN 2204	MTJNR/L	2525	M22	●	●	25	25	150	12.5	ST-SHTN22	ST-SP001	ST-CS006	ST-SC630	ST-WR0030	
		3232	P22	●	●	32	32	170	16	ST-SHTN22	ST-SP001	ST-CS006	ST-SC630	ST-WR0030	
		4040	S22	●	●	40	40	250	20	ST-SHTN22	ST-SP001	ST-CS006	ST-SC630	ST-WR0030	

^SDTUN

NEGATIVE
with hole

TN



TN 	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	ØD	Ød	L	F						
TN 1604	S25S	DTUNR/L	16	●	●	25	32	250	17	ST-SHTN16	ST-SC0410	ST-CS002	ST-SPR04	ST-SC523	ST-WR0030
	S32T		16	●	●	32	40	300	22	ST-SHTN16	ST-SC0410	ST-CS002	ST-SPR04	ST-SC523	ST-WR0030
TN 2204	S32T	DTUNR/L	22	●	●	32	40	300	22	ST-SHTN22	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
	S40U		22	●	●	40	50	350	27	ST-SHTN22	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
	S50V		22	●	●	50	53	400	35	ST-SHTN22	ST-SC0616	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030

carbide

38

PCBN

72

diamond

88

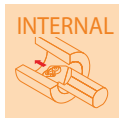
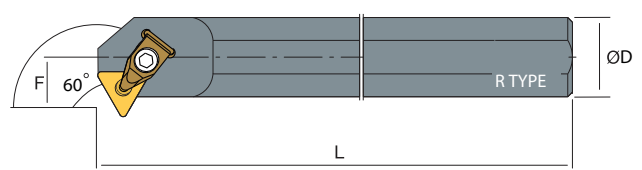
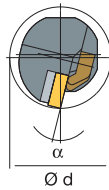
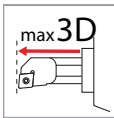
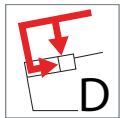
ceramic

110

^SDT-N

NEGATIVE
with hole

TN

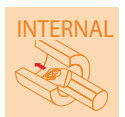
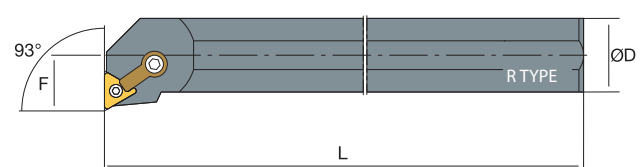
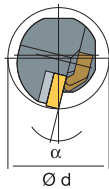
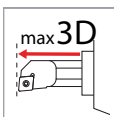
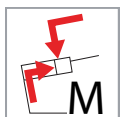


TN  	DESCRIPTION			STOCK		DIMENSIONS				 ← 		 ←  ←  ← 			
				R	L	ØD	Ød	L	F						
TN  1604	S25S	DT-NR/L	16	●	●	25	32	250	17	ST-SHTN16	ST-SC0410	ST-CS002	ST-SPR04	ST-SC523	ST-WR0030
	S32T		16	●	●	32	40	300	22	ST-SHTN16	ST-SC0410	ST-CS002	ST-SPR04	ST-SC523	ST-WR0030

^SMTUN

NEGATIVE
with hole

TN



TN 	DESCRIPTION			STOCK		DIMENSIONS				 ← 		 ← 			
				R	L	ØD	Ød	L	F						
TN  1604	S20R	MTUNR/L	16	●	●	20	25	200	13	-	-	ST-LV002	ST-SC523	ST-WR0030	
	S25S	MTUNR/L	16	●	●	25	32	250	17	ST-SHTN16	ST-SP001	ST-LV001	ST-SC630	ST-WR0030	
	S32T		16	●	●	32	40	300	22	ST-SHTN16	ST-SP001	ST-LV001	ST-SC630	ST-WR0030	
	S40U		16	●	●	40	50	350	27	ST-SHTN16	ST-SP001	ST-LV001	ST-SC630	ST-WR0030	
TN  2204	S32T	MTUNR/L	22	●	●	32	40	300	22	ST-SHTN22	ST-SP001	ST-LV001	ST-SC630	ST-WR0030	
	S40U		22	●	●	40	50	350	27	ST-SHTN22	ST-SP001	ST-LV001	ST-SC630	ST-WR0030	
	S50V		22	●	●	50	63	400	35	ST-SHTN22	ST-SP001	ST-LV001	ST-SC630	ST-WR0030	

carbide

38

PCBN

72

diamond

88

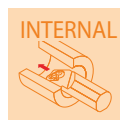
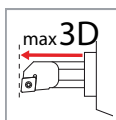
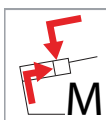
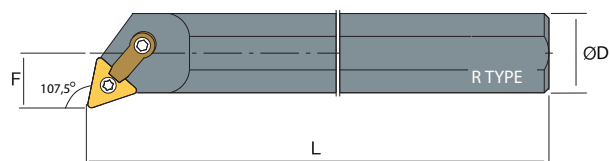
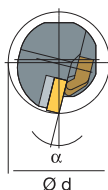
ceramic

110

^SMTQN

NEGATIVE
with hole

TN □ □

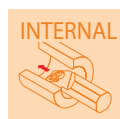
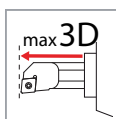
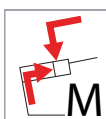
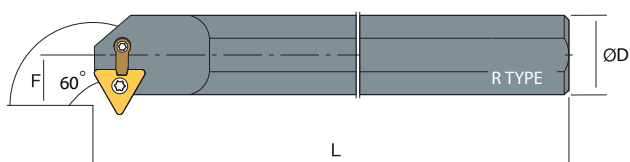
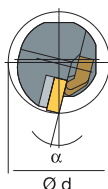


TN  	DESCRIPTION			STOCK		DIMENSIONS				 ← 		 ← 			
				R	L	ØD	Ød	L	F						
TN   1604	S20R	MTQNR/L	16	●	●	20	25	200	13	-	-	ST-LV002	ST-SC523	ST-WR0030	
	S25S		16	●	●	25	32	250	17	ST-SHTN16	ST-SP001	ST-LV001	ST-SC630	ST-WR0030	
	S32T		16	●	●	32	40	300	22	ST-SHTN16	ST-SP001	ST-LV001	ST-SC630	ST-WR0030	
	S40U		16	●	●	40	50	350	27	ST-SHTN16	ST-SP001	ST-LV001	ST-SC630	ST-WR0030	
TN   2204	S32T	MTQNR/L	22	●	●	32	40	300	22	ST-SHTN22	ST-SP001	ST-LV001	ST-SC630	ST-WR0030	
	S40U		22	●	●	40	50	350	27	ST-SHTN22	ST-SP001	ST-LV001	ST-SC630	ST-WR0030	
	S50V		22	●	●	50	63	400	35	ST-SHTN22	ST-SP001	ST-LV001	ST-SC630	ST-WR0030	

^SMT-N

NEGATIVE
with hole

TN □ □



TN  	DESCRIPTION			STOCK		DIMENSIONS				 ← 		 ← 			
				R	L	ØD	Ød	L	F						
TN   1604	S25S	MT-NR/L	16	●	●	25	32	250	17	ST-SHTN16	ST-SP001	ST-LV001	ST-SC630	ST-WR0030	
	S32T		16	●	●	32	40	300	22	ST-SHTN16	ST-SP001	ST-LV001	ST-SC630	ST-WR0030	
	S40U		16	●	●	40	50	350	27	ST-SHTN16	ST-SP001	ST-LV001	ST-SC630	ST-WR0030	
TN   2204	S32T	MT-NR/L	22	●	●	32	40	300	22	ST-SHTN22	ST-SP001	ST-LV001	ST-SC630	ST-WR0030	
	S40U		22	●	●	40	50	350	27	ST-SHTN22	ST-SP001	ST-LV001	ST-SC630	ST-WR0030	
	S50V		22	●	●	50	63	400	35	ST-SHTN22	ST-SP001	ST-LV001	ST-SC630	ST-WR0030	

carbide

38

PCBN

72

diamond

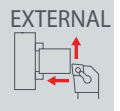
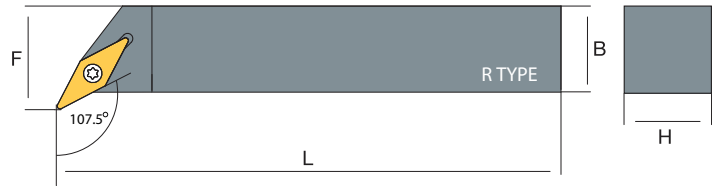
88

ceramic

110

SVHB

**POSITIVE 5°
with hole**

VB ☐ ☐[illegible]

carbide

42

PCBN

74

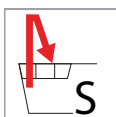
diamond

90

</

TURNING

POSITIVE 5°
with hole

VB ☐ ☐

EXTERNAL



The diagram shows a rectangular device with a power source connected to it. A red arrow points from the device to the power source, and another red arrow points from the power source to the device.

[illegible]

42



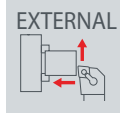
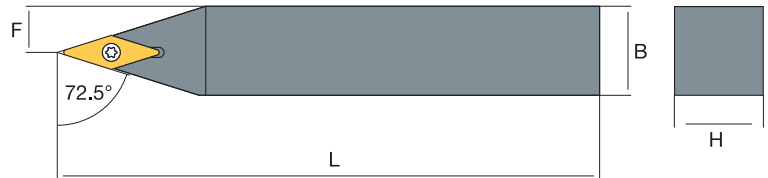
74



90

SVBN

**POSITIVE 5°
with hole**

VB ☐ ☐[illegible]

carbide

42

PCBN

74

diamond

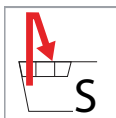
90

</

TURNING

SVZB

POSITIVE 5°
with hole

VB ☐ ☐

EXTERNAL

[illegible]

carbide

42

PCBN

74

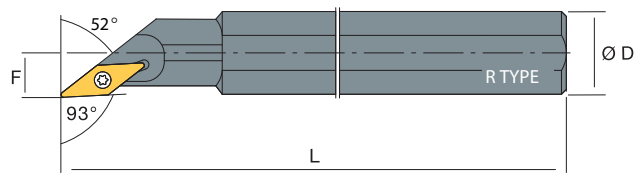
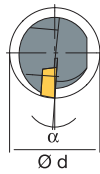
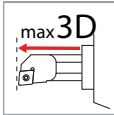
diamond

90

SVJB

POSITIVE 5°
with hole

VB □ □

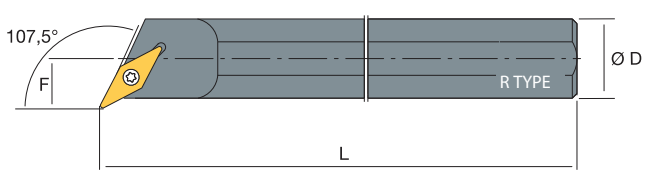
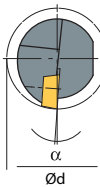
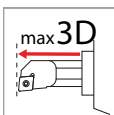


VB □ □	DESCRIPTION		STOCK	DIMENSIONS											
				R	L	ØD	Ød	L	F						
VB □ □1604	S25S	SVJBR/L	16	●	●	25	32	250	17	ST-SC0416	ST-WRT15	ST-SHVB	ST-SC5011		
	S32T		16	●	●	32	40	300	22	ST-SC3514	ST-WRT15	ST-SHVB	ST-SC5011		
	S40U		16	●	●	40	50	350	27	ST-SC3514	ST-WRT15	ST-SHVB	ST-SC5011		

SVQB

POSITIVE 5°
with hole

VB □ □



VB □ □	DESCRIPTION		STOCK	DIMENSIONS											
				R	L	ØD	Ød	L	F						
VB □ □1103	S16P	SVQBR/L	11	●	●	16	21	170	11	ST-SC0257	ST-WRT08	-	-		
	S20R		11	●	●	20	25	200	13	ST-SC0257	ST-WRT08	-	-		
VB □ □1604	S25S	SVQBR/L	16	●	●	25	32	250	17	ST-SC0416	ST-WRT15	ST-SHVB	ST-SC5011		
	S32T		16	●	●	32	40	300	22	ST-SC3514	ST-WRT15	ST-SHVB	ST-SC5011		
	S40U		16	●	●	40	50	350	27	ST-SC3514	ST-WRT15	ST-SHVB	ST-SC5011		

carbide

42

PCBN

74

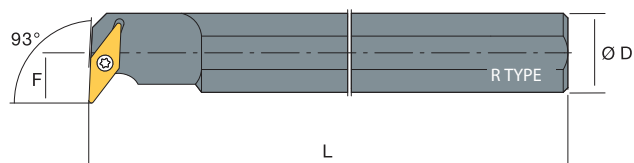
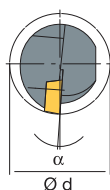
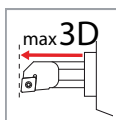
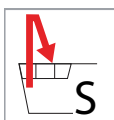
diamond

90

^sSVUB

POSITIVE 5°
with hole

VB

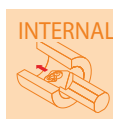
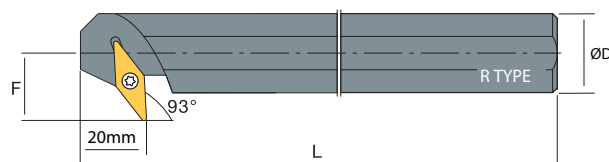
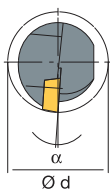
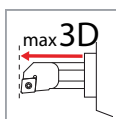
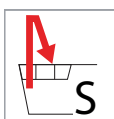


VB  	DESCRIPTION			STOCK		DIMENSIONS					 ← 		 ← 			
				R	L	ØD	Ød	L	F							
VB  1103	S16P	SVUBR/L	11	●	●	16	21	170	11		ST-SC0257	ST-WRT08	-	-		
	S20R		11	●	●	20	25	200	13		ST-SC0257	ST-WRT08	-	-		
VB   1604	S25S	SVUBR/L	16	●	●	25	32	250	17		ST-SC0416	ST-WRT15	ST-SHVB	ST-SC5011		
	S32T		16	●	●	32	40	300	22		ST-SC3514	ST-WRT15	ST-SHVB	ST-SC5011		
	S40U		16	●	●	40	50	350	27		ST-SC3514	ST-WRT15	ST-SHVB	ST-SC5011		

^sSVXB

POSITIVE 7°
with hole

VB



VB  	DESCRIPTION			STOCK		DIMENSIONS					 ← 		 ← 			
				R	L	ØD	Ød	L	F							
VB  1103	S16P	SVXBR/L	11	●	●	16	21	170	11		ST-SC0257	ST-WRT08	-	-		
	S20R		11	●	●	20	25	200	13		ST-SC0257	ST-WRT08	-	-		
VB   1604	S25S	SVXBR/L	16	●	●	25	32	250	17		ST-SC0416	ST-WRT15	ST-SHVB	ST-SC5011		
	S32T		16	●	●	32	40	300	22		ST-SC3514	ST-WRT15	ST-SHVB	ST-SC5011		
	S40U		16	●	●	40	50	350	27		ST-SC3514	ST-WRT15	ST-SHVB	ST-SC5011		

carbide

42

PCBN

74

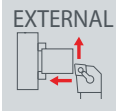
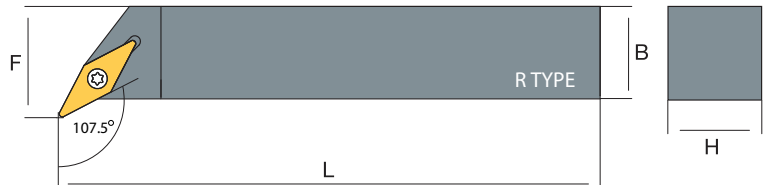
diamond

90

SVHC

POSITIVE 7°
with hole

VC □ □

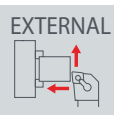


VC □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	H	B	L	F						
VC □ □1103	SVHCR/L	1616	H11	●	●	16	16	100	20	ST-SC0257	ST-WRT08	-	-		
		2020	K11	●	●	20	20	125	25	ST-SC0257	ST-WRT08	-	-		
VC □ □1604	SVHCR/L	2020	K16	●	●	25	25	150	32	ST-SC0257	ST-WRT15	-	-		
		2525	M16	●	●	16	16	100	20	ST-SC3514	ST-WRT15	ST-SHVC	ST-SC5011		
		3232	P16	●	●	20	20	125	25	ST-SC3514	ST-WRT15	ST-SHVC	ST-SC5011		

SVJC

POSITIVE 7°
with hole

VC □ □



VC □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	H	B	L	F						
VC □ □1103	SVJCR/L	1616	H11	●	●	16	16	100	20	ST-SC0257	ST-WRT08	-	-		
		2020	K11	●	●	20	20	125	25	ST-SC0257	ST-WRT08	-	-		
VC □ □1604	SVJCR/L	2020	K16	●	●	25	25	150	32	ST-SC0257	ST-WRT15	-	-		
		2525	M16	●	●	16	16	100	20	ST-SC3514	ST-WRT15	ST-SHVC	ST-SC5011		
		3232	P16	●	●	20	20	125	25	ST-SC3514	ST-WRT15	ST-SHVC	ST-SC5011		

carbide

44

PCBN

75

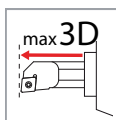
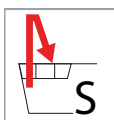
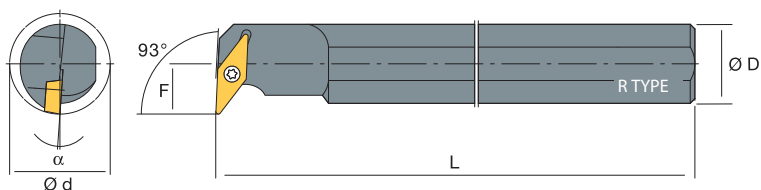
diamond

91

^sSVUC

POSITIVE 7°
with hole

VC

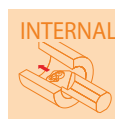
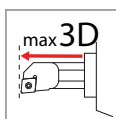
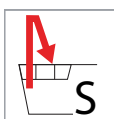
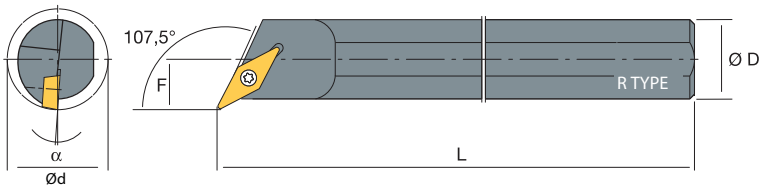


VC 	DESCRIPTION		STOCK		DIMENSIONS									
			R	L	ØD	Ød	L	F						
VC 1103	S16P	SVUCR/L	11	●	●	16	21	170	11	ST-SC0257	ST-WRT08	-	-	
	S20R		11	●	●	20	25	200	13	ST-SC0257	ST-WRT08	-	-	
VC 1604	S25S	SVUCR/L	16	●	●	25	32	250	17	ST-SC0416	ST-WRT15	ST-SHVC	ST-SC5011	
	S32T		16	●	●	32	40	300	22	ST-SC3514	ST-WRT15	ST-SHVC	ST-SC5011	
	S40U		16	●	●	40	50	350	27	ST-SC3514	ST-WRT15	ST-SHVC	ST-SC5011	

^sSVQC

POSITIVE 7°
with hole

VC



VC 	DESCRIPTION		STOCK		DIMENSIONS									
			R	L	ØD	Ød	L	F						
VC 1103	S16P	SVQCR/L	11	●	●	16	21	170	11	ST-SC0257	ST-WRT08	-	-	
	S20R		11	●	●	20	25	200	13	ST-SC0257	ST-WRT08	-	-	
VC 1604	S25S	SVQCR/L	16	●	●	25	32	250	17	ST-SC0416	ST-WRT15	ST-SHVC	ST-SC5011	
	S32T		16	●	●	32	40	300	22	ST-SC3514	ST-WRT15	ST-SHVC	ST-SC5011	
	S40U		16	●	●	40	50	350	27	ST-SC3514	ST-WRT15	ST-SHVC	ST-SC5011	

carbide

44

PCBN

75

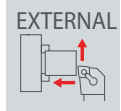
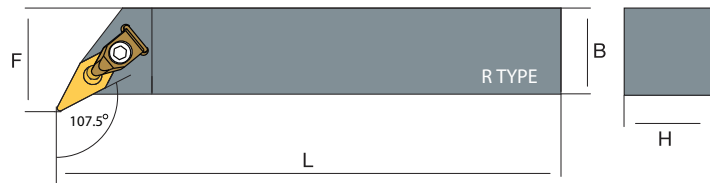
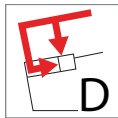
diamond

91

DVHN

NEGATIVE
with hole

VN □ □

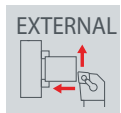
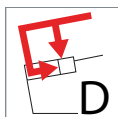


VN □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	H	B	L	F						
VN □ □1604	DVHNR/L	2020	K16	●	●	20	20	125	25	ST-SHVN16	ST-SC0410	ST-CS005	ST-SPR04	ST-SC630	ST-WR0030
		2525	M16	●	●	25	25	150	32	ST-SHVN16	ST-SC0410	ST-CS005	ST-SPR04	ST-SC630	ST-WR0030
		3232	P16	●	●	32	32	170	40	ST-SHVN16	ST-SC0410	ST-CS005	ST-SPR04	ST-SC630	ST-WR0030

DVJN

NEGATIVE
with hole

VN □ □



VN □ □	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	H	B	L	F						
VN □ □1604	DVJNR/L	2020	K16	●	●	20	20	125	25	ST-SHVN16	ST-SC0410	ST-CS005	ST-SPR04	ST-SC630	ST-WR0030
		2525	M16	●	●	25	25	150	32	ST-SHVN16	ST-SC0410	ST-CS005	ST-SPR04	ST-SC630	ST-WR0030
		3232	P16	●	●	32	32	170	40	ST-SHVN16	ST-SC0410	ST-CS005	ST-SPR04	ST-SC630	ST-WR0030
		4040	P16	●	●	40	40	250	50	ST-SHVN16	ST-SC0410	ST-CS005	ST-SPR04	ST-SC630	ST-WR0030

carbide

45

PCBN

76

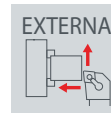
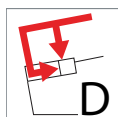
ceramic

113

DVVNN

NEGATIVE
with hole

VN



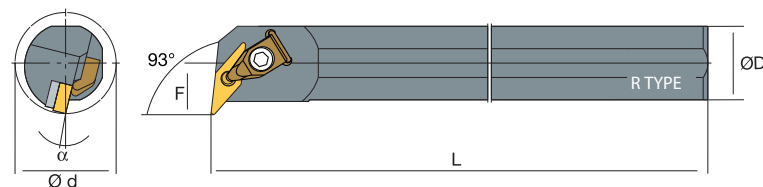
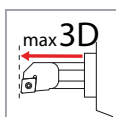
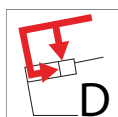
EXTERNAL

VN 	DESCRIPTION			STOCK	DIMENSIONS				 ← 		 ←  ←  ← 			
					H	B	L	F						
VN  1604	DVNN	2020	K16	●	20	20	125	25	ST-SHVN16	ST-SC0410	ST-CS005	ST-SPR04	ST-SC630	ST-WR0030
		2525	M16	●	25	25	150	32	ST-SHVN16	ST-SC0410	ST-CS005	ST-SPR04	ST-SC630	ST-WR0030
		3232	P16	●	32	32	170	40	ST-SHVN16	ST-SC0410	ST-CS005	ST-SPR04	ST-SC630	ST-WR0030
		4040	P16	●	40	40	250	50	ST-SHVN16	ST-SC0410	ST-CS005	ST-SPR04	ST-SC630	ST-WR0030

^SDVUN

NEGATIVE
with hole

VN



INTERNAL

VN	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	ØD	Ød	L	F						
VN 1604	S25S	DVUNR/L	16	●	●	25	32	250	17	ST-SHTN16	ST-SC0410	ST-CS005	ST-SPR04	ST-SC630	ST-WR0030
	S32T		16	●	●	32	40	300	22	ST-SHTN16	ST-SC0410	ST-CS005	ST-SPR04	ST-SC630	ST-WR0030
	S40U		16	●	●	50	50	400	27	ST-SHTN22	ST-SC0410	ST-CS005	ST-SPR04	ST-SC630	ST-WR0030

carbide

45

PCBN

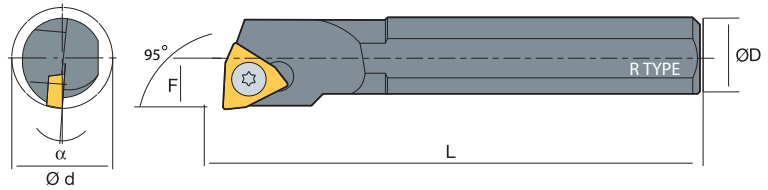
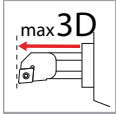
76

ceramic

113

sSWLC

POSITIVE 7°
with hole

WC ☐ ☐[illegible]

carbide

354

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

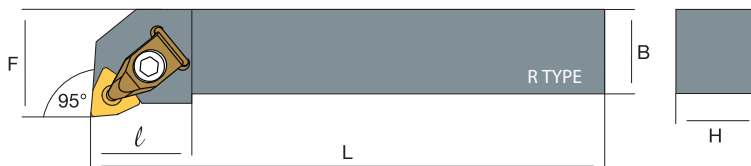
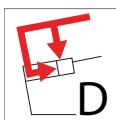
SPARE PARTS

INDEX

DWLN

NEGATIVE
with hole

WN □ □

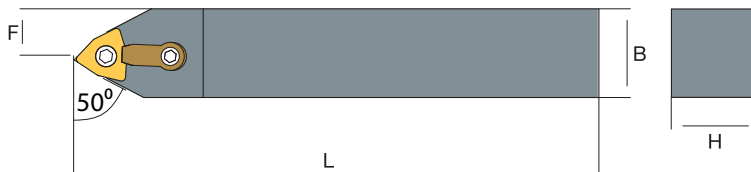
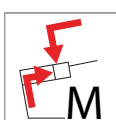


VN 	DESCRIPTION			STOCK		DIMENSIONS				 ← 		 ←  ←  ← 			
				R	L	H	B	L	F						
WN  0604	DWLN R/L	1616	H06	●	●	16	16	100	20	-	-	ST-CS002	ST-SPR04	ST-SC523	ST-WR0030
		2020	K06	●	●	20	20	125	25	-	-	ST-CS002	ST-SPR04	ST-SC523	ST-WR0030
		2525	M06	●	●	25	25	150	32	-	-	ST-CS002	ST-SPR04	ST-SC523	ST-WR0030
WN  0804	DWLN R/L	2020	K08	●	●	20	20	125	25	-	-	ST-CS001	ST-SPR04	ST-SC523	ST-WR0030
		2525	M08	●	●	25	25	150	32	ST-SHWN08	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
		3232	P08	●	●	32	32	170	40	ST-SHWN08	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030
		4040	S08	●	●	40	40	250	50	ST-SHWN08	ST-SC0410	ST-CS001	ST-SPR04	ST-SC630	ST-WR0030

MWDN

NEGATIVE
with hole

WN □ □



WN □ □	DESCRIPTION				STOCK	DIMENSIONS								
						H	B	L	F					
WN □ □0604	MWDNN	1616	H06	●	16	16	100	08	-	-	ST-CS009	ST-SM525	ST-WR0030	
		2020	K06	●	20	20	125	10	-	-	ST-CS009	ST-SM525	ST-WR0030	
		2525	M06	●	25	25	150	12.5	-	-	ST-CS009	ST-SM525	ST-WR0030	
WN □ □0804	MWDNN	2020	K08	●	20	20	125	10	ST-SHWN08	ST-SC0410	ST-CS008	ST-SM630	ST-WR0030	
		2525	M08	●	25	25	150	12.5	ST-SHWN08	ST-SC0410	ST-CS008	ST-SM630	ST-WR0030	
		3232	P08	●	32	32	170	16	ST-SHWN08	ST-SC0410	ST-CS008	ST-SM630	ST-WR0030	
		4040	S08	●	40	40	200	16	ST-SHWN08	ST-SC0410	ST-CS008	ST-SM630	ST-WR0030	

carbide

47

PCBN

77

diamond

92

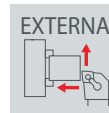
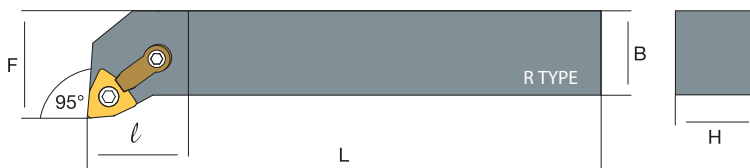
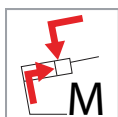
ceramic

114

MWLN

NEGATIVE
with hole

WN□□

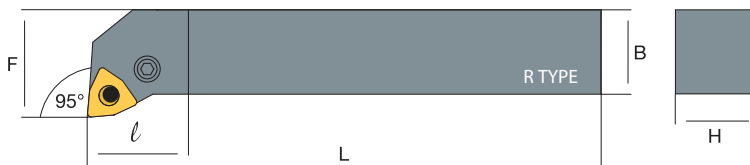
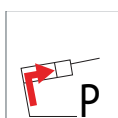


WN□□	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	H	B	L	F						
WN□□0604	MWLN R/L	1616	H06	●	●	16	16	100	20	-	-	ST-CS009	ST-SC525	ST-WR0030	
		2020	K06	●	●	20	20	125	25	-	-	ST-CS009	ST-SC525	ST-WR0030	
		2525	M06	●	●	25	25	150	32	-	-	ST-CS009	ST-SC525	ST-WR0030	
WN□□0804	MWLN R/L	2020	K08	●	●	20	20	125	25	ST-SHWN08	ST-SCV3506	ST-CS008	ST-SC630	ST-WR0030	
		2525	M08	●	●	25	25	150	32	ST-SHWN08	ST-SCV3506	ST-CS008	ST-SC630	ST-WR0030	
		3232	P08	●	●	32	32	170	40	ST-SHWN08	ST-SCV3506	ST-CS008	ST-SC630	ST-WR0030	
		4040	S08	●	●	40	40	200	40	ST-SHWN08	ST-SCV3506	ST-CS008	ST-SC630	ST-WR0030	

PWLN

NEGATIVE
with hole

WN□□



WN□□	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	H	B	L	F						
WN□□0804	PWLN R/L	2020	K08	●	●	20	20	125	25	ST-SHWN08	ST-SPR001	ST-LV001	ST-SC820	ST-WR0030	
		2525	M08	●	●	25	25	150	32	ST-SHWN08	ST-SPR001	ST-LV001	ST-SC820	ST-WR0030	
		3232	P08	●	●	32	32	170	40	ST-SHWN08	ST-SPR001	ST-LV001	ST-SC820	ST-WR0030	
		4040	S08	●	●	40	40	250	50	ST-SHWN08	ST-SPR001	ST-LV001	ST-SC820	ST-WR0030	

carbide

47

PCBN

77

diamond

92

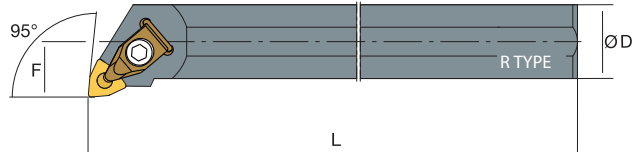
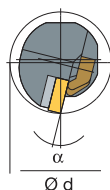
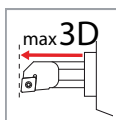
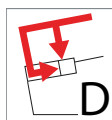
ceramic

114

^SDWLN

NEGATIVE
with hole

WN □ □

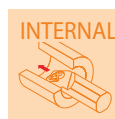
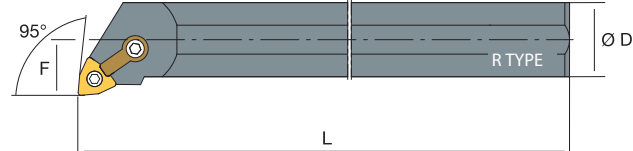
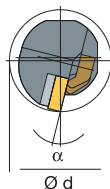
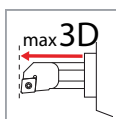
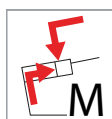


WN 	DESCRIPTION			STOCK		DIMENSIONS				 ← 		 ←  ←  ← 			
				R	L	ØD	Ød	L	F						
WN  0604	S25S	DWLN R/L	06	●	●	25	32	250	17	-	-	ST-CS009	-	ST-SC525	ST-WR0030
	S32T		06	●	●	32	40	300	22	-	-	ST-CS009		ST-SC525	ST-WR0030
WN  0804	S25S	DWLN R/L	08	●	●	25	32	250	17	ST-SHWN08	ST-SC0410	ST-CS008	ST-SPR04	ST-SC630	ST-WR0030
	S32T		08	●	●	32	40	300	22	ST-SHWN08	ST-SC0410	ST-CS008	ST-SPR04	ST-SC630	ST-WR0030
	S40U		08	●	●	40	37	350	27	ST-SHWN08	ST-SC0410	ST-CS008	ST-SPR04	ST-SC630	ST-WR0030
	S50V		08	●	●	50	47	400	35	ST-SHWN08	ST-SC0410	ST-CS008	ST-SPR04	ST-SC630	ST-WR0030

^SMWLN

NEGATIVE
with hole

WN □ □



WN 	DESCRIPTION			STOCK		DIMENSIONS									
				R	L	ØD	Ød	L	F						
WN  0604	S16P	MWLN/R/L	06	●	●	16	21	170	11			ST-CS009	ST-SM525	ST-WR0030	
	S20R		06	●	●	20	25	200	13			ST-CS009	ST-SM525	ST-WR0030	
	S25S		06	●	●	25	32	250	17			ST-CS009	ST-SM525	ST-WR0030	
WN  0804	S25S	MWLN/R/L	08	●	●	25	32	250	17	ST-SHWN08	ST-SCV0410	ST-CS008	ST-SM630	ST-WR0030	
	S32T		08	●	●	32	40	300	22	ST-SHWN08	ST-SCV0410	ST-CS008	ST-SM630	ST-WR0030	
	S40U		08	●	●	40	50	350	27	ST-SHWN08	ST-SCV0410	ST-CS008	ST-SM630	ST-WR0030	
	S50V		08	●	●	50	63	400	35	ST-SHWN08	ST-SCV0410	ST-CS008	ST-SM630	ST-WR0030	

carbide

47

PCBN

77

diamond

92

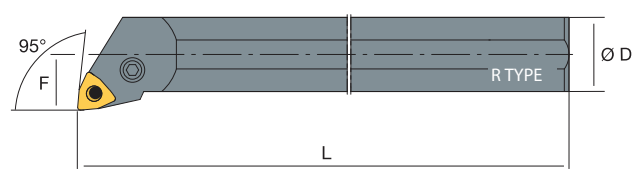
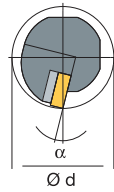
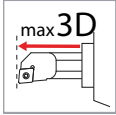
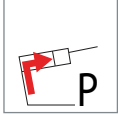
ceramic

114

SPWLN

NEGATIVE
with hole

WN 00

[illegible]

carbide

47

PCBN

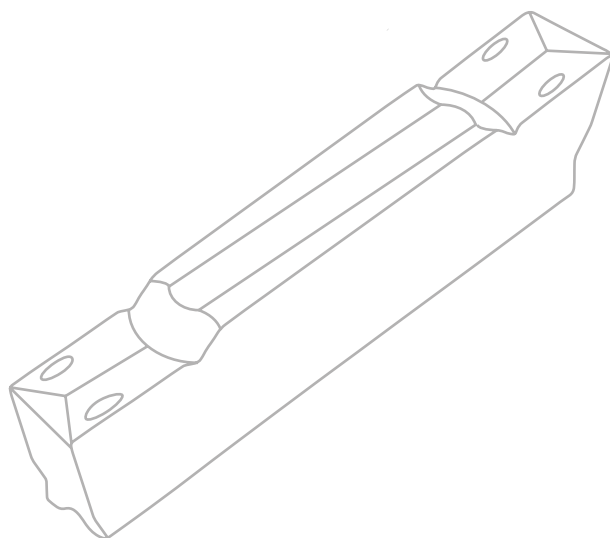
77

diamond

92

ceramic

114



GROOVING/

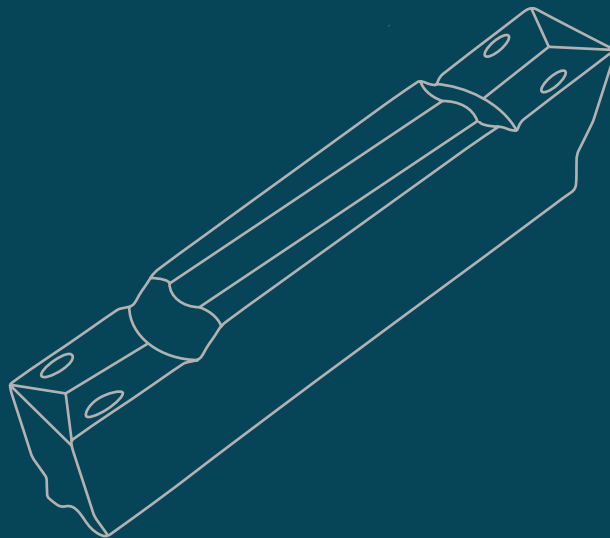
carbide /201

PCBN /223

diamond /227

holders /231

GROOVING / carbide



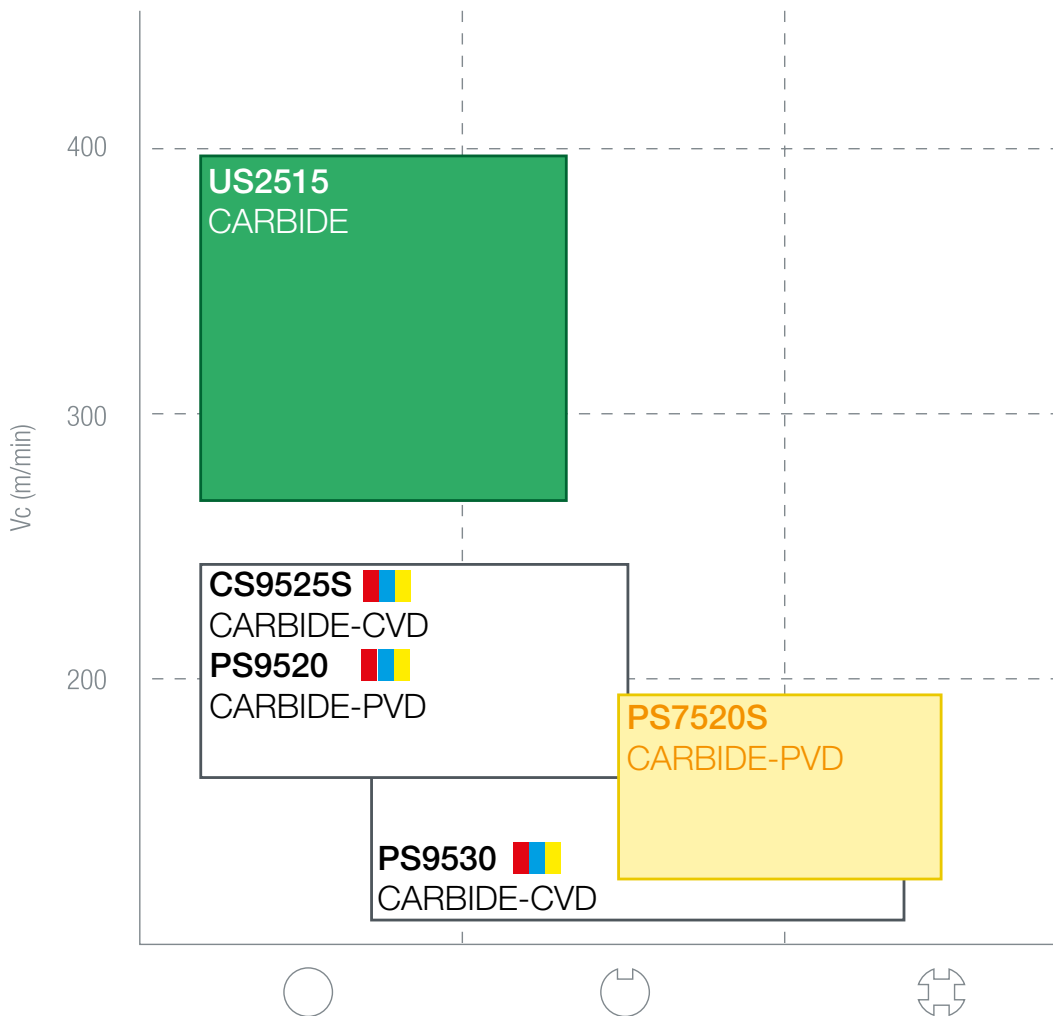
Grades

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

GROOVING

Range ISO **P** **M** **K**

Grades



TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE PARTS

INDEX

TURNING

GROOVING

THREADING

MILLING

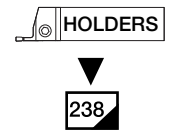
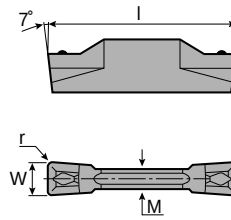
DRILLING

ENDMILLS

DRILLS

MAGC

PARTING & GROOVING



DESCRIPTION

DIMENSIONS

CARBIDE

CS9525S

PS9530

PS9520

PS7520S

US2515

W

r

L

M

h

α



MAGC200

MAGC250

MAGC300

MAGC400

MAGC500

MAGC600

2.0

0.2

16.0

1.2

3.5

-

2.5

0.2

18.5

2.0

3.85

-

3.0

0.4

21.0

2.35

4.8

-

4.0

0.4

21.0

3.3

4.8

-

5.0

0.8

26.0

4.1

5.8

-

6.0

0.8

26.0

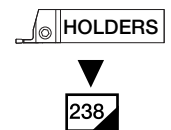
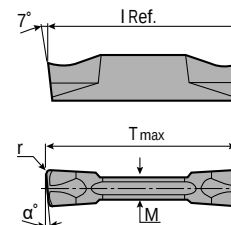
5.0

5.8

-

MAGD

PARTING



DESCRIPTION

DIMENSIONS

CARBIDE

CS9525S

PS9530

PS9520

PS7520S

US2515

W

r

L

M

h

α



MAGD200J-15D

MAGD300J-15D

2.0

0.2

16.0

1.2

3.5

15

3.0

0.4

21.0

2.35

4.8

15

Vc • fn



221

GROOVING

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

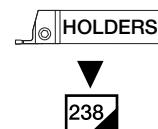
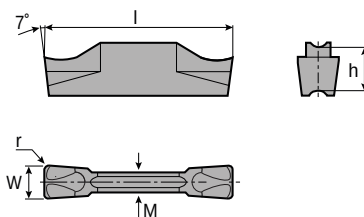
DRILLS

SPARE PARTS

INDEX

MAGJ

PARTING & GROOVING



DESCRIPTION

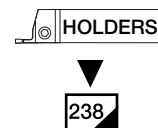
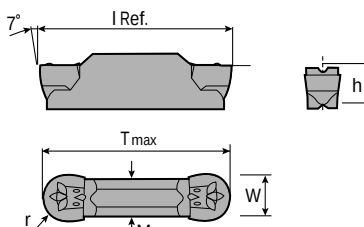
DIMENSIONS

CARBIDE

		W	r	l	M	h	α	CS9525S	PS9530	PS9520	PS7520S	US2515
	MAGJ150	1.5	0.15	16.0	1.2	3.5	-	●	●	●	●	
	MAGJ200	2.0	0.2	16.0	1.2	3.5	-	●	●	●	●	
	MAGJ250	2.5	0.2	18.5	2.0	3.85	-	●	●	●	●	
	MAGJ300	3.0	0.4	21.0	2.35	4.8	-	●	●	●	●	
	MAGJ400	4.0	0.4	21.0	3.3	4.8	-	●	●	●	●	
	MAGJ500	5.0	0.8	26.0	4.1	5.8	-	●	●	●	●	
	MAGJ600	6.0	0.8	26.0	5.0	5.8	-	●	●	●	●	

MAGR

PROFILING



DESCRIPTION

DIMENSIONS

CARBIDE

		W	r	l	M	h	α	CS9525S	PS9530	PS9520	PS7520S	US2515
	MAGR200	2.0	1.0	16.0	1.5	3.5	-	●	●	●	●	
	MAGR300	3.0	1.5	21.0	2.35	4.8	-	●	●	●	●	
	MAGR400	4.0	2.0	21.0	3.3	4.8	-	●	●	●	●	
	MAGR500	5.0	2.5	26.0	4.1	5.8	-	●	●	●	●	

Vc • fn  221

TURNING

GROOVING

THREADING

MILLING

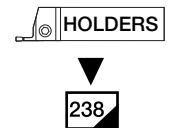
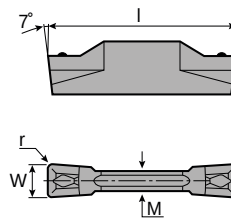
DRILLING

ENDMILLS

DRILLS

MAGN

PARTING & GROOVING



DESCRIPTION

DIMENSIONS

CARBIDE

CS9525S

PS9530

PS9520

PS7520S

US2515

W

r

L

M

h

α



MAGN200MA

2.0

0.2

16.0

1.2

3.5

-

MAGN300MA

3.0

0.4

21.0

2.35

4.8

-

MAGN200WA

2.0

0.2

16.0

1.2

3.5

-

MAGN300WA

3.0

0.4

21.0

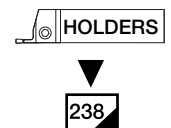
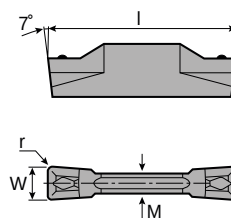
2.35

4.8

-

MAGS

PARTING & GROOVING



DESCRIPTION

DIMENSIONS

CARBIDE

CS9525S

PS9530

PS9520

PS7520S

US2515

W

r

L

M

h

α



MAGS200

2.0

0.2

16.0

1.2

3.5

-

MAGS250

2.5

0.2

18.5

2.0

3.85

-

MAGS300

3.0

0.4

21.0

2.35

4.8

-

MAGS400

4.0

0.4

21.0

3.3

4.8

-

MAGS500

5.0

0.8

26.0

4.1

5.8

-

MAGS600

6.0

0.8

26.0

5.0

5.8

-

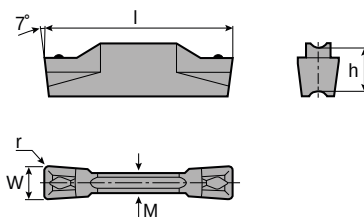
Vc • fn



221

SAGC

PARTING & GROOVING



HOLDERS

242

DESCRIPTION

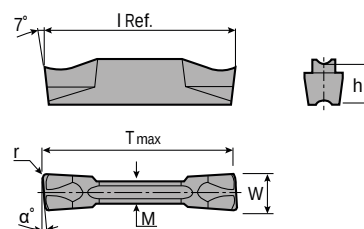
DIMENSIONS

CARBIDE

		W	r	l	M	h	α	CS9525S	PS9530	PS9520	PS7520S	US2515
	SAGC200-02	2.0	0.2	20.0	1.70	4.70	-	●	●	●	●	
	SAGC300-02	3.0	0.2	20.0	2.40	4.70	-	●	●	●	●	
	SAGC400-03	4.0	0.3	20.0	3.0	4.70	-	●	●	●	●	
	SAGC500-03	5.0	0.3	25.0	4.0	5.20	-	●	●	●	●	

SAGD

PARTING



HOLDERS

242

DESCRIPTION

DIMENSIONS

CARBIDE

		W	r	l	M	h	α	CS9525S	PS9530	PS9520	PS7520S	US2515
	SAGD200J-15D	2.0	0.2	20.0	1.70	4.70	15	●	●	●	●	
	SAGD200J-6D	2.0	0.2	20.0	1.70	4.70	6	●	●	●	●	
	SAGD300J-15D	3.0	0.2	20.0	2.40	4.70	15	●	●	●	●	
	SAGD300J-6D	3.0	0.2	20.0	2.40	4.70	15	●	●	●	●	
	SAGD400J-6D	4.0	0.3	20.0	3.0	4.70	6	●	●	●	●	
	SAGD400J-4D	4.0	0.3	20.0	3.0	4.70	4	●	●	●	●	
	SAGD500J-4D	5.0	0.3	25.0	4.0	5.20	4	●	●	●	●	

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TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

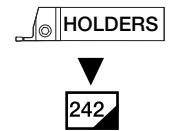
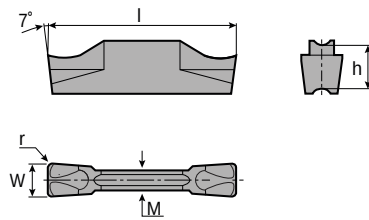
DRILLS

SPARE
PARTS

INDEX

SAGJ

PARTING & GROOVING



DESCRIPTION

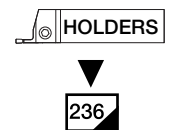
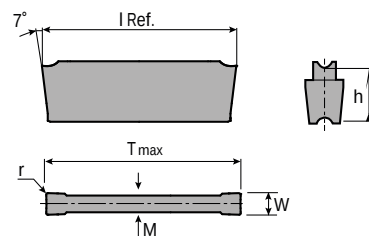
DIMENSIONS

CARBIDE

	DESCRIPTION	DIMENSIONS						CARBIDE				
		W	r	l	M	h	α	CS9525S	PS9530	PS9520	PS7520S	US2515
	SAGJ200-02	2.0	0.2	20.0	1.70	4.70	-	●	●	●	●	
	SAGJ300-02	3.0	0.2	20.0	2.40	4.70	-	●	●	●	●	
	SAGJ400-03	4.0	0.3	20.0	3.0	4.70	-	●	●	●	●	
	SAGJ500-03	5.0	0.3	25.0	4.0	5.20	-	●	●	●	●	

SDGN

PARTING & GROOVING



DESCRIPTION

DIMENSIONS

CARBIDE

	DESCRIPTION	DIMENSIONS						CARBIDE				
		W	r	l	M	h	α	CS9525S	PS9530	PS9520	PS7520S	US2515
	SDGN2002Z	2.0	0.2	21.0	1.7	6.0	-	●	●	●	●	
	SDGN2202J	2.2	0.2	19.8	1.9	6.0	-	●	●	●	●	
	SDGN3002Z	3.0	0.2	21.0	2.4	6.1	-	●	●	●	●	
	SDGN3102C	3.1	0.2	20.1	2.4	6.1	-	●	●	●	●	

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GROOVING

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

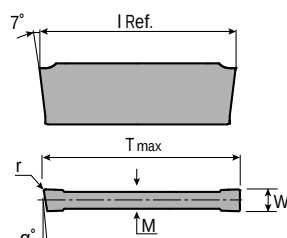
DRILLS

SPARE PARTS

INDEX

SDGR

PARTING



HOLDERS

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DESCRIPTION

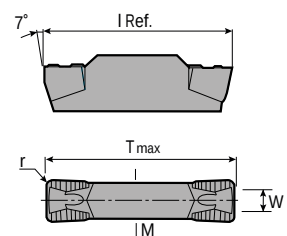
DIMENSIONS

CARBIDE

	DESCRIPTION	DIMENSIONS						CARBIDE				
		W	r	l	M	h	α	CS9525S	PS9530	PS9520	PS7520S	US2515
	SDGR2200JS-6D	2.2	0.2	19.8	1.9	6.0	6	●	●	●	●	
	SDGR2200JS-15D	2.2	0.2	19.8	1.9	6.0	15	●	●	●	●	

SGRIP

PARTING & GROOVING



HOLDERS

236

DESCRIPTION

DIMENSIONS

CARBIDE

	DESCRIPTION	DIMENSIONS						CARBIDE				
		W	r	l	M	h	α	CS9525S	PS9530	PS9520	PS7520S	US2515
	SGRIP300-M	3.0	0.2	16.0	2.3	4.4	-	●	●	●	●	
	SGRIP400-M	4.0	0.4	19.0	2.8	4.9	-	●	●	●	●	
	SGRIP500-M	5.0	0.5	19.0	3.4	5.4	-	●	●	●	●	

Vc • fn



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TURNING

GROOVING

THREADING

MILLING

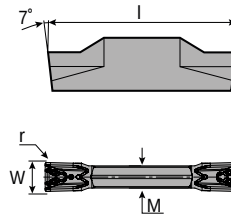
DRILLING

ENDMILLS

DRILLS

SGDM

PARTING & GROOVING



HOLDERS

234

DESCRIPTION

DIMENSIONS

CARBIDE

CS9525S

PS9530

PS9520

PS7520S

US2515

W

r

l

M

h

α



SGDM200

SGDM300

SGDM400

2.00

0.2

20

1.5

4.3

-

3.00

0.3

20

2.3

4.3

-

4.00

0.3

20

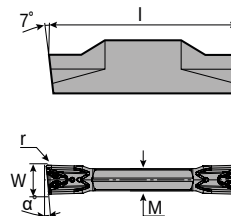
3.3

4.3

-

SGDD

PARTING



HOLDERS

234

DESCRIPTION

DIMENSIONS

CARBIDE

CS9525S

PS9530

PS9520

PS7520S

US2515

W

r

l

M

h

α



SGDD200-15D

SGDD300-15D

2.00

0.2

20

1.5

4.3

15

3.00

0.3

20

2.3

4.3

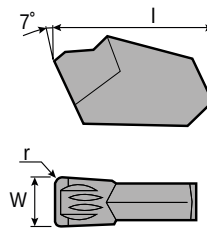
15

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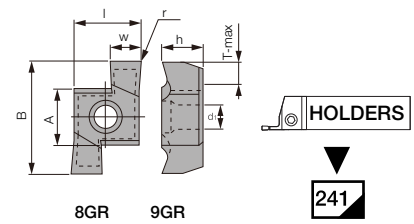
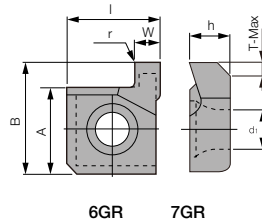
221

PARTING

[illegible]

IGR

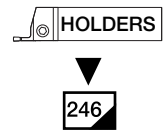
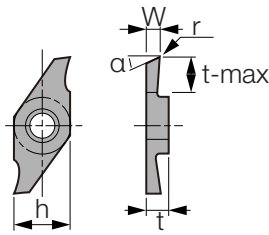
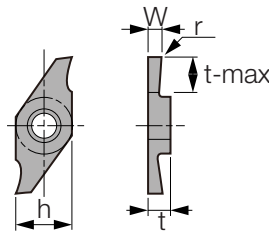
INTERNAL GROOVING



DESCRIPTION		DIMENSIONS								CARBIDE				
										CS9525S	PS9530	PS9520	PS7520S	US2515
		W	A	B	h	d1	l	r	Tmax					
	6GR-100	1.00	4.76	6.44	2.34	2.30	5.56	0.2	1.5			●		
	6GR-150	1.50	4.76	6.44	2.34	2.30	5.56	0.2	1.5			●		
	6GR-200	2.00	4.76	6.44	2.34	2.30	5.56	0.2	1.5			●		
	7GR-100	1.00	5.56	7.36	3.08	2.58	5.56	0.2	1.5			●		
	7GR-150	1.50	5.56	7.36	3.08	2.58	5.56	0.2	1.5			●		
	7GR-200	2.00	5.56	7.36	3.08	2.58	5.56	0.2	1.5			●		
	8GR-150	1.50	5.56	10.16	3.87	2.58	6.15	0.2	1.5			●		
	8GR-200	2.00	5.56	10.16	3.87	2.58	6.15	0.2	1.5			●		
	8GR-250	2.50	5.56	10.16	3.87	2.58	6.15	0.2	1.5			●		
	8GR-300	3.00	5.56	10.16	3.87	2.58	6.15	0.2	1.5			●		
	8GR-350	3.50	5.56	10.16	3.87	2.58	6.15	0.2	1.5			●		
	9GR-100	1.00	6.35	12.95	4.66	2.86	7.74	0.2	1.5			●		
	9GR-150	1.50	6.35	12.95	4.66	2.86	7.74	0.2	1.5			●		
	9GR-200	2.00	6.35	12.95	4.66	2.86	7.74	0.2	1.5			●		
	9GR-250	2.50	6.35	12.95	4.66	2.86	7.74	0.2	1.5			●		
	9GR-300	3.00	6.35	12.95	4.66	2.86	7.74	0.2	1.5			●		
	9GR-350	3.50	6.35	12.95	4.66	2.86	7.74	0.2	1.5			●		

SKFC

FINE TOOL



DESCRIPTION		DIMENSIONS						CARBIDE				
								CS9525S	PS9530	PS9520	PS7520S	US2515
		W	r	h	t	t-max	α					
	SKFC12R-050-N	0.50	0.03	8.7	3.0	2.5	-			●		
	SKFC12R-070-N	0.70	0.03	8.7	3.0	4.0	-			●		
	SKFC12R-100-N	1.00	0.03	8.7	3.0	6.0	-			●		
	SKFC12R-125-N	1.25	0.03	8.7	3.0	6.0	-			●		
	SKFC12R-150-N	1.50	0.03	8.7	3.0	6.0	-			●		
	SKFC12R-200-N	2.00	0.03	8.7	3.0	6.0	-			●		
	SKFC12L-050-N	0.50	0.03	8.7	3.0	2.5	-			●		
	SKFC12L-070-N	0.70	0.03	8.7	3.0	4.0	-			●		
	SKFC12L-100-N	1.00	0.03	8.7	3.0	6.0	-			●		
	SKFC12L-125-N	1.25	0.03	8.7	3.0	6.0	-			●		
	SKFC12L-150-N	1.50	0.03	8.7	3.0	6.0	-			●		
	SKFC12L-200-N	2.00	0.03	8.7	3.0	6.0	-			●		
	SKFC16L-150-N	1.50	0.03	9.5	4.0	8.0	-			●		
	SKFC16L-200-N	2.00	0.03	9.5	4.0	8.0	-			●		
	SKFC16R-150-N	1.50	0.03	9.5	4.0	8.0	-			●		
	SKFC16R-200-N	2.00	0.03	9.5	4.0	8.0	-			●		
	SKFC12L-100-S-20D	1.00	-	8.7	3.0	6.0	20			●		
	SKFC12R-100-S-20D	1.00	-	8.7	3.0	6.0	20			●		
	SKFC16L-150-S-20D	1.50	-	9.5	4.0	8.0	20			●		
	SKFC16R-150-S-20D	1.50	-	9.5	4.0	8.0	20			●		
	SKFC16L-200-S-20D	2.00	-	9.5	4.0	8.0	20			●		
	SKFC16R-200-S-20D	2.00	-	9.5	4.0	8.0	20			●		

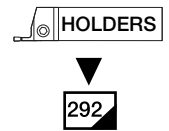
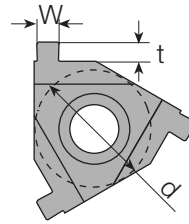
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16ER

EXTERNAL GROOVING

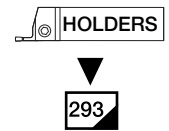
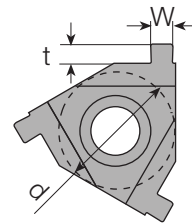


DESCRIPTION		DIMENSIONS				CARBIDE				
						CS9525S	PS9530	PS9520	PS7520S	US2515
		d	l	W	T					
	11ER-W0.50-T0.70	6.35	11	0.50	0.70			●		
	11ER-W0.60-T0.70	6.35	11	0.60	0.70			●		
	11ER-W0.80-T0.70	6.35	11	0.80	0.70			●		
	11ER-W1.00-T0.70	6.35	11	1.00	0.70			●		
	11ER-W1.20-T1.50	6.35	11	1.20	1.50			●		
	11ER-W1.40-T1.50	6.35	11	1.40	1.50			●		
	11ER-W1.50-T1.50	6.35	11	1.50	1.50			●		
	11ER-W1.80-T1.80	6.35	11	1.80	1.80			●		
	16ER-W0.33-T1.30	9.525	16	0.33	1.30			●		
	16ER-W0.50-T1.30	9.525	16	0.50	1.30			●		
	16ER-W0.75-T1.30	9.525	16	0.75	1.30			●		
	16ER-W0.80-T1.30	9.525	16	0.80	1.30			●		
	16ER-W1.00-T1.30	9.525	16	1.00	1.30			●		
	16ER-W1.10-T1.30	9.525	16	1.10	1.30			●		
	16ER-W1.20-T1.60	9.525	16	1.20	1.60			●		
	16ER-W1.30-T1.60	9.525	16	1.30	1.60			●		
	16ER-W1.40-T1.60	9.525	16	1.40	1.60			●		
	16ER-W1.50-T1.60	9.525	16	1.50	1.60			●		
	16ER-W1.60-T1.60	9.525	16	1.60	1.60			●		
	16ER-W1.70-T1.85	9.525	16	1.70	1.85			●		
	16ER-W1.80-T1.85	9.525	16	1.80	1.85			●		
	16ER-W1.85-T1.85	9.525	16	1.85	1.85			●		
	16ER-W2.00-T1.85	9.525	16	2.00	1.85			●		
	16ER-W2.15-T2.00	9.525	16	2.15	2.00			●		
	16ER-W2.30-T2.00	9.525	16	2.30	2.00			●		
	16ER-W2.40-T2.20	9.525	16	2.40	2.20			●		
	16ER-W2.65-T2.20	9.525	16	2.65	2.20			●		

GROOVING

IR

INTERNAL GROOVING

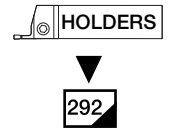
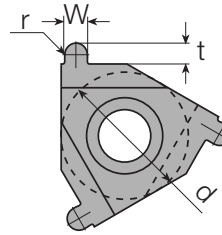


DESCRIPTION		DIMENSIONS				CARBIDE				
						CS9525S	PS9530	PS9520	PS7520S	US2515
	11IR-W0.50-T0.70	6.35	11	0.50	0.70			●		
	11IR-W0.60-T0.70	6.35	11	0.60	0.70			●		
	11IR-W0.80-T0.70	6.35	11	0.80	0.70			●		
	11IR-W1.00-T0.70	6.35	11	1.00	0.70			●		
	11IR-W1.20-T1.50	6.35	11	1.20	1.50			●		
	11IR-W1.40-T1.50	6.35	11	1.40	1.50			●		
	11IR-W1.50-T1.50	6.35	11	1.50	1.50			●		
	11IR-W1.80-T1.80	6.35	11	1.80	1.80			●		
	11IR-W2.20-T1.80	6.35	11	2.20	1.80			●		
	16IR-W0.33-T1.20	9.525	16	0.33	1.20			●		
	16IR-W0.50-T1.20	9.525	16	0.50	1.20			●		
	16IR-W0.75-T1.20	9.525	16	0.75	1.20			●		
	16IR-W0.80-T1.20	9.525	16	0.80	1.20			●		
	16IR-W1.00-T1.30	9.525	16	1.00	1.30			●		
	16IR-W1.10-T1.30	9.525	16	1.10	1.30			●		
	16IR-W1.20-T1.60	9.525	16	1.20	1.60			●		
	16IR-W1.30-T1.60	9.525	16	1.30	1.60			●		
	16IR-W1.40-T1.60	9.525	16	1.40	1.60			●		
	16IR-W1.50-T1.60	9.525	16	1.50	1.60			●		
	16IR-W1.60-T1.60	9.525	16	1.60	1.60			●		
	16IR-W1.70-T1.85	9.525	16	1.70	1.85			●		
	16IR-W1.80-T1.85	9.525	16	1.80	1.85			●		
	16IR-W1.85-T1.85	9.525	16	1.85	1.85			●		
	16IR-W2.00-T1.85	9.525	16	2.00	1.85			●		
	16IR-W2.15-T2.00	9.525	16	2.15	2.00			●		
	16IR-W2.30-T2.00	9.525	16	2.30	2.00			●		
	16IR-W2.50-T2.00	9.525	16	2.50	2.00			●		
	16IR-W2.65-T2.20	9.525	16	2.65	2.20			●		

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16ER

EXTERNAL ROUNDGROOVING



DESCRIPTION

DIMENSIONS

CARBIDE

CS9525S

PS9530

PS9520

PS7520S

US2515

d

l

W

R

T

16ER-W0.80-T0.60-R0.40

9.525

16

0.80

0.40

0.60

16ER-W1.00-T1.40-R0.50

9.525

16

1.00

0.50

1.40

16ER-W1.20-T0.80-R0.60

9.525

16

1.20

0.60

0.80

16ER-W1.20-T1.60-R0.60

9.525

16

1.20

0.60

1.60

16ER-W1.80-T1.10-R0.90

9.525

16

1.80

0.90

1.10

16ER-W1.80-T2.00-R0.90

9.525

16

1.80

0.90

2.00

16ER-W2.00-T1.20-R1.00

9.525

16

2.00

1.00

1.20

16ER-W2.00-T2.15-R1.00

9.525

16

2.00

1.00

2.15

16ER-W2.20-T2.15-R1.10

9.525

16

2.20

1.10

2.15

16ER-W2.40-T2.25-R1.20

9.525

16

2.40

1.20

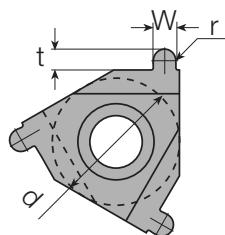
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INTERNAL ROUND GROOVING



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GROOVING

[illegible]

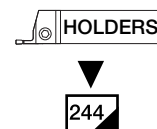
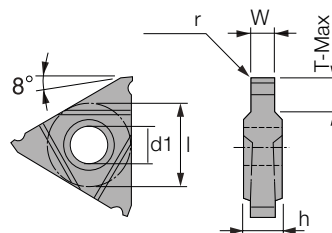
Vc • fn



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STGF

EXTERNAL GROOVING



DESCRIPTION

DIMENSIONS

CARBIDE

CS9525S

PS9530

PS9520

PS7520S

US2515

W

T-max

r

l

d1

h



STGF32R-050

0.50

1.00

0.05

9.525

3.18

4.4

STGF32R-100

1.00

2.00

0.05

9.525

3.18

4.4

STGF32R-110

1.10

2.00

0.05

9.525

3.18

4.4

STGF32R-120

1.20

2.00

0.05

9.525

3.18

4.4

STGF32R-125

1.25

2.00

0.20

9.525

3.18

4.4

STGF32R-145

1.45

2.00

0.20

9.525

3.18

4.4

STGF32R-150

1.50

2.00

0.20

9.525

3.18

4.4

STGF32R-175

1.75

2.00

0.20

9.525

3.18

4.4

STGF32R-185

1.85

2.50

0.20

9.525

3.18

4.4

STGF32R-200

2.00

2.50

0.20

9.525

3.18

4.4

STGF32R-250

2.50

2.50

0.20

9.525

3.18

4.4

STGF32R-300

3.00

3.00

0.20

9.525

3.18

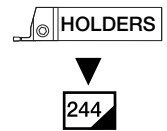
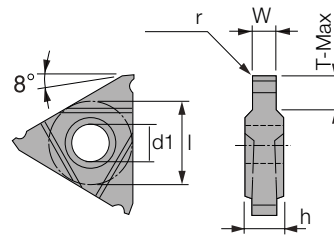
4.4

Vc • fn

221

STGF

EXTERNAL GROOVING

[illegible] $V_c \bullet f_n$ 

221

GROOVING

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-CVD	CARBIDE-PVD				CARBIDE
		CS9525S	PS9530	PS9520	PS7520S	US2515	
K	KG	250~450	200~360	200~360			
	KN	180~300	150~280	150~280			
P	PL	250~350	200~320	200~320			
	PM	220~300	180~260	180~260			
	PH	200~280	160~250	160~250			
	PA	180~250	150~220	150~220			
M	MM	160~260	160~260	160~260	160~260		
	MA	140~220	140~220	140~220	140~220		
N	NA					600~1500	
	NH					300~700	
	NB					250~400	
	NC					150~250	

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE PARTS

INDEX

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE PARTS

INDEX

Cutting Parameters f_n (mm/rev)

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

Parting-off

MATERIAL		CUTTING WIDTH				
		2 mm	3 mm	4 mm	5 mm	6 mm
K	KG	0.05~0.12	0.10~0.25	0.10~0.30	0.10~0.35	0.10~0.40
	KN	0.05~0.10	0.10~0.20	0.10~0.25	0.10~0.30	0.10~0.35
P	PL	0.02~0.15	0.03~0.20	0.08~0.30	0.10~0.40	0.12~0.50
	PM	0.02~0.15	0.03~0.20	0.08~0.30	0.10~0.40	0.12~0.50
	PH	0.02~0.15	0.03~0.20	0.08~0.30	0.10~0.40	0.12~0.50
	PA	0.02~0.15	0.03~0.20	0.08~0.30	0.10~0.40	0.12~0.50
M	MM	0.02~0.10	0.03~0.15	0.08~0.25	0.10~0.35	0.12~0.40
	MA	0.02~0.08	0.03~0.13	0.08~0.20	0.10~0.30	0.12~0.35
N	NA	0.05~0.10	0.05~0.20	0.05~0.25	0.05~0.30	0.05~0.35
	NH	0.05~0.10	0.05~0.20	0.05~0.25	0.05~0.30	0.05~0.35
	NB	0.05~0.10	0.05~0.20	0.05~0.25	0.05~0.30	0.05~0.35
	NC	0.05~0.10	0.05~0.20	0.05~0.25	0.05~0.30	0.05~0.35

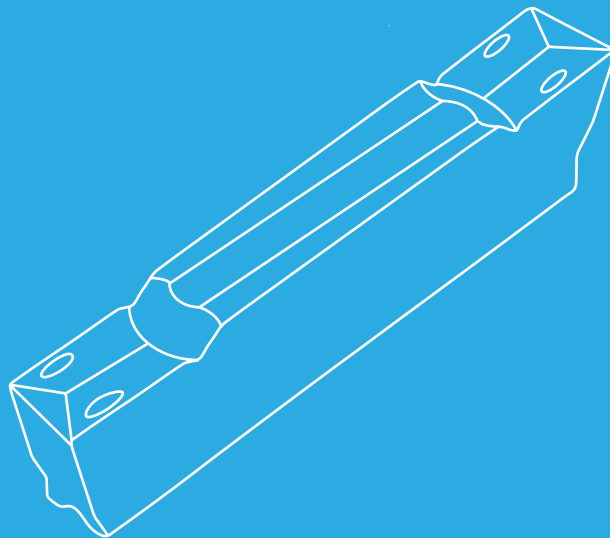
Facing

MATERIAL		CUTTING WIDTH		
		3 mm	4 mm	5 mm
K	KG	0.05~0.10	0.05~0.12	0.05~0.15
	KN	0.05~0.10	0.05~0.12	0.05~0.15
P	PL	0.05~0.10	0.05~0.12	0.05~0.15
	PM	0.05~0.10	0.05~0.12	0.05~0.15
	PH	0.05~0.10	0.05~0.12	0.05~0.15
	PA	0.05~0.10	0.05~0.12	0.05~0.15
M	MM	0.05~0.10	0.05~0.12	0.05~0.15
	MA	0.05~0.10	0.05~0.12	0.05~0.15
N	NA	0.05~0.15	0.08~0.15	0.08~0.15
	NH	0.05~0.15	0.08~0.15	0.08~0.15
	NB	0.05~0.15	0.08~0.15	0.08~0.15
	NC	0.05~0.15	0.08~0.15	0.08~0.15

Grooving, Groove Turning

MATERIAL		CUTTING WIDTH					
		0.5 ~ 1.0 mm	1.0 ~ 2.0 mm	2.0 ~ 3.0 mm	3.0 ~ 4.0 mm	4.0 ~ 5.0 mm	6.0 ~ 8.0 mm
K	KG	0.03~0.07	0.04~0.08	0.05~0.08	0.05~0.10	0.05~0.10	0.05~0.12
	KN	0.03~0.07	0.04~0.08	0.05~0.08	0.05~0.10	0.05~0.10	0.05~0.12
P	PL	0.03~0.08	0.04~0.09	0.05~0.10	0.05~0.12	0.05~0.15	0.05~0.20
	PM	0.03~0.08	0.04~0.09	0.05~0.10	0.05~0.12	0.05~0.15	0.05~0.20
	PH	0.03~0.07	0.04~0.08	0.05~0.08	0.05~0.10	0.05~0.12	0.05~0.15
	PA	0.03~0.07	0.04~0.08	0.05~0.08	0.05~0.10	0.05~0.12	0.05~0.15
M	MM	0.03~0.08	0.04~0.09	0.05~0.10	0.05~0.12	0.05~0.12	0.05~0.15
	MA	0.03~0.08	0.04~0.09	0.05~0.10	0.05~0.12	0.05~0.12	0.05~0.15
N	NA	0.05~0.12	0.05~0.15	0.05~0.15	0.08~0.15	0.08~0.15	0.10~0.20
	NH	0.05~0.12	0.05~0.15	0.05~0.15	0.08~0.15	0.08~0.15	0.10~0.20
	NB	0.05~0.12	0.05~0.15	0.05~0.15	0.08~0.15	0.08~0.15	0.10~0.20
	NC	0.05~0.12	0.05~0.15	0.05~0.15	0.08~0.15	0.08~0.15	0.10~0.20

GROOVING / PCBN

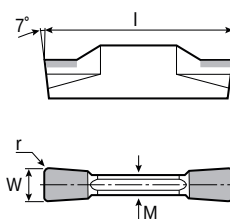


- TURNING
- GROOVING
- THREADING
- MILLING
- DRILLING
- ENDMILLS
- DRILLS
- SPARE PARTS
- INDEX

Grades

ISO DIN 513	K					H					S				
	K01	K10	K20	K30	K40	P01	P10	P20	P30	P40	S01	S10	S20	S30	S40
PCBN	BC250					BC150					BC350				
	SC250					BC170									
						SC150									
	BC420					BC420									
COATED															

PARTING & GROOVING

[illegible]

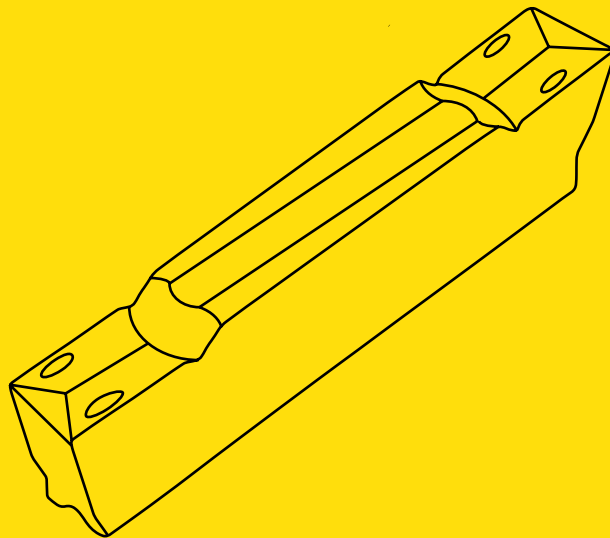
Cutting Parameters

KG	GREY CAST IRON
KN	NODULAR CAST IRON
KW	WHITE CAST IRON
KS	SINTERED MATERIAL

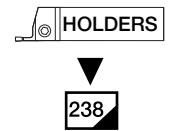
HH	HARDENED STEEL
HC	CASE HARDENED STEEL
HB	BEARING STEEL
SA	SUPER ALLOYS (Ni Based)

MATERIAL		fn (mm/rev)	CUTTING CONDITION			PCBN					
						BC150	BC170	SC150	BC250	SC250	BC350
H	HH	0,05~0,15				80~180	80~180				80~150
						60~120	60~120				80~150
	HC	0,05~0,15				80~140	80~140				80~140
						60~100	60~100				80~140
	HB	0,05~0,15				80~120	80~120				80~120
						60~100	60~100				80~120

GROOVING / **diamond**



PARTING & GROOVING

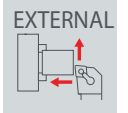


Cutting Parameters

NA	ALUMINIUM ALLOYS
NS	ALUMINIUM ALLOYS (Si≤15%)
NH	AL ALLOYS AGED AND HARDENED
NB	BRASS

NC	BRONZE AND ELECTROLYTIC COPPER
NG	GRAPHITE
HM	HARD METAL (Co≤16%)
ST	TITANIUM ALLOYS

MATERIAL		fn (mm/rev)	CUTTING CONDITION			PCD						
						PC100	PC150	PC200	PC300			
N	NA	0,05~0,15	○	⊕	△		600~2500	600~2500				
		0,05~0,15	○	⊕	△		600~2500	600~2500				
	NS	0,05~0,15	○	⊕	△		500~1500	500~1500				
		0,05~0,15	○	⊕	△		500~1500	500~1500				
	NB	0,05~0,15	○	⊕	△		400~1200	400~1200				
		0,05~0,15	○	⊕	△		400~1200	400~1200				
	NG	0,05~0,15	○	⊕	△		300~800	300~800				
		0,05~0,15	○	⊕	△		300~800	300~800				



S K T E R 25 25 - 2 T6

1	2	3	4
S	Steel Body	T	E
C	Carbide Body		I
			F

2	Insert Type
G	SGD
I	SDG
K	MAG
T	SAG
S	SK

3	Clamping Type
	Top Screw

4	Clearance Angle
	EXTERNAL
	INTERNAL
	FACE

5	Direction
L	
R	

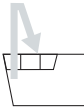
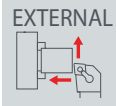
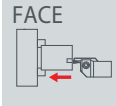
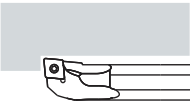
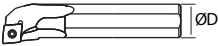
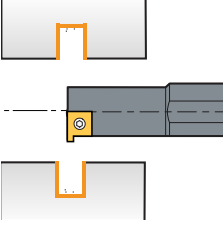
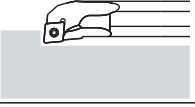
6	Shank	7
(H)		(B)

8	Grooving Width
...	

9	T-Max
...	



S	K	T	I	R	25	—	2	T6
1	2	3	4	5	6		7	8

1	2 Insert Type	3 Clamping Type	4 Clearance Angle
S Steel Body	G SGD□	T Top Screw 	E EXTERNAL 
C Carbide Body	I SDG□		I INTERNAL 
	K MAG□		F FACE 
	T SAG□		
	S SK□□		
5 Direction	6 Shank Diameter	7 Grooving Width	8 T-Max
L 	... 	... 	... 
R 			

TURNING

GROOVING

THREADING

MILLING

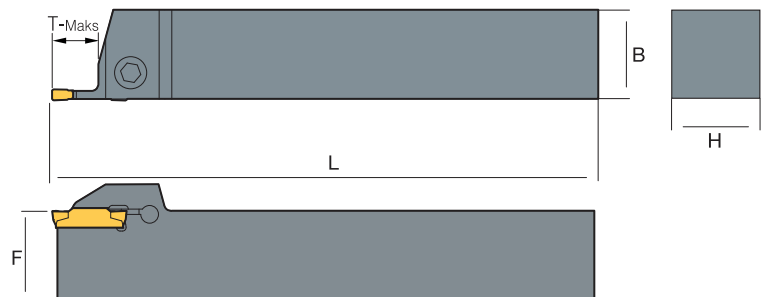
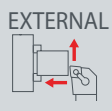
DRILLING

ENDMILLS

DRILLS

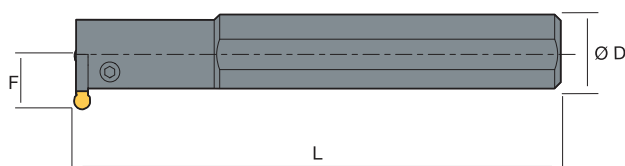
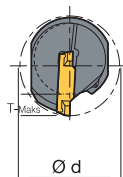
SPARE PARTS

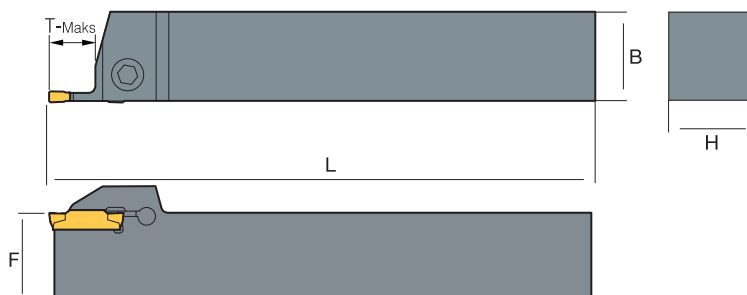
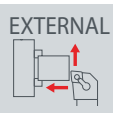
INDEX

SGD ☐/234

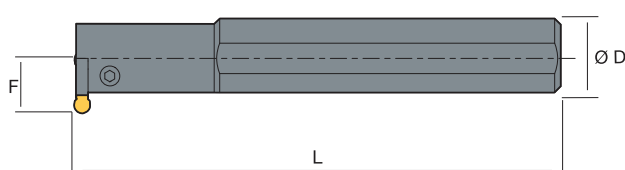
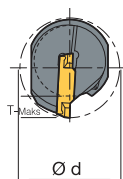
SGTI

SGD

[illegible]

SDG /236

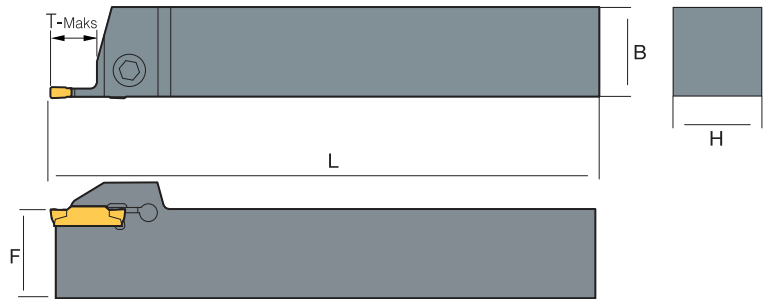
SITI

SDG [illegible]

SKTE

screw on

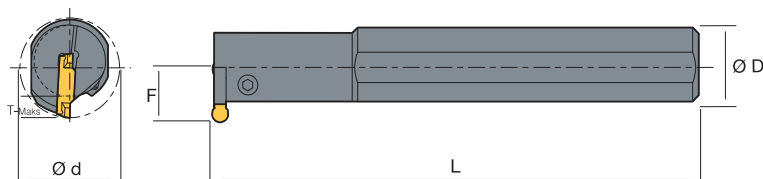
MAG



MAG	DESCRIPTION				STOCK		DIMENSIONS								
					R	L	H	B	L	F	tmax				
MAG-200	SKTER/L	1212	2T15	●	●	12	12	100	12.3	15		ST-SC520	ST-WRT0040		
		1616	2T18	●	●	16	16	100	16.3	18		ST-SC625	ST-WRT0050		
		2020	2T18	●	●	20	20	125	20.3	18		ST-SC625	ST-WRT0050		
		2020	2T12	●	●	25	25	150	20.3	12		ST-SC625	ST-WRT0050		
		2525	2T18	●	●	25	25	150	25.3	18		ST-SC625	ST-WRT0050		
		3232	2T18	●	●	32	32	170	32.3	18		ST-SC625	ST-WRT0050		
MAG-300	SKTER/L	1212	3T18	●	●	12	12	100	12.3	18		ST-SC520	ST-WRT0040		
		1616	3T18	●	●	16	16	100	16.4	18		ST-SC625	ST-WRT0050		
		2020	3T20	●	●	20	20	125	20.4	20		ST-SC625	ST-WRT0050		
		2020	3T22	●	●	20	20	125	25.4	22		ST-SC625	ST-WRT0050		
		2525	3T25	●	●	25	25	150	25.4	25		ST-SC625	ST-WRT0050		
		2525	3T40	●	●	25	25	150	25.4	40		ST-SC625	ST-WRT0050		
MAG-400	SKTER/L	2020	4T20	●	●	20	20	125	20.4	20		ST-SC625	ST-WRT0050		
		2020	4T25	●	●	20	20	125	20.4	25		ST-SC625	ST-WRT0050		
		2525	4T22	●	●	25	25	150	25.4	22		ST-SC625	ST-WRT0050		
		2525	4T25	●	●	25	25	150	25.4	25		ST-SC625	ST-WRT0050		
		2525	4T40	●	●	25	25	150	25.4	40		ST-SC625	ST-WRT0050		
		3232	4T22	●	●	32	32	170	32.4	22		ST-SC625	ST-WRT0050		
MAG-500	SKTER/L	2020	5T20	●	●	20	20	125	20.5	20		ST-SC625	ST-WRT0050		
		2525	5T25	●	●	25	25	150	25.5	25		ST-SC625	ST-WRT0050		
		3232	5T25	●	●	32	32	170	32.5	25		ST-SC625	ST-WRT0050		
MAG-600	SKTER/L	2525	6T25	●	●	25	25	150	25.6	25		ST-SC625	ST-WRT0050		
		3232	6T25	●	●	32	32	170	32.6	25		ST-SC625	ST-WRT0050		

SKTI

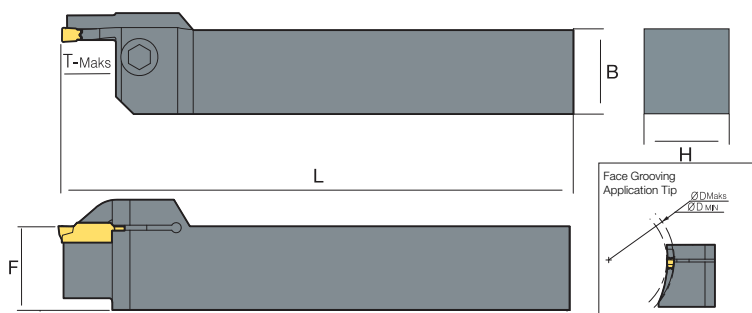
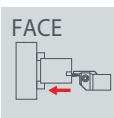
MAG



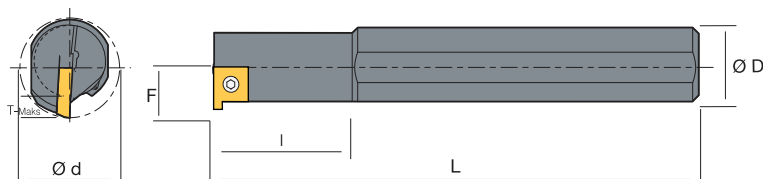
INTERNAL

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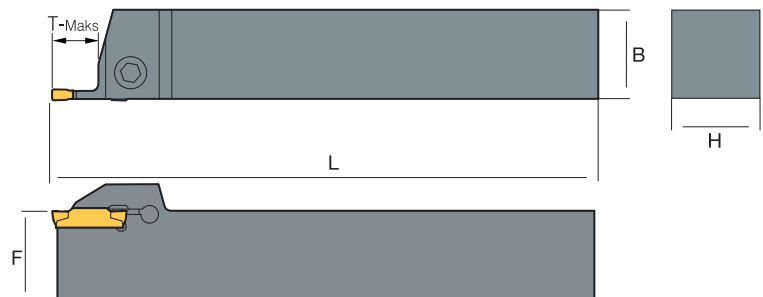
MAG

/240

screw on

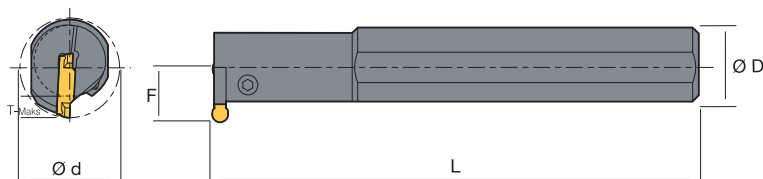
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EXTERNAL

/242

STTI

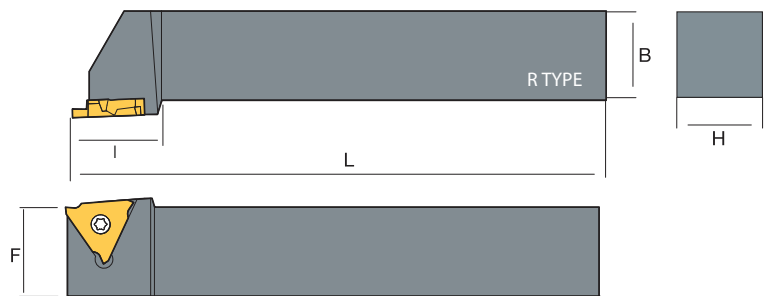
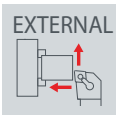
SAG 

[illegible]

SSTG

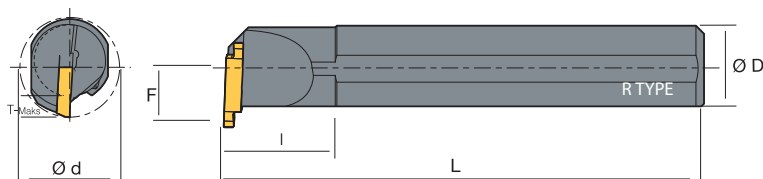
screw on

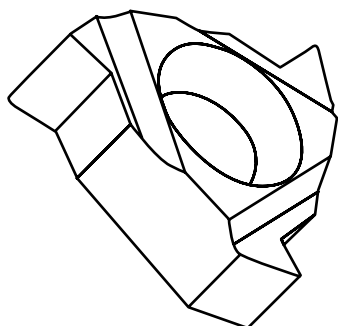
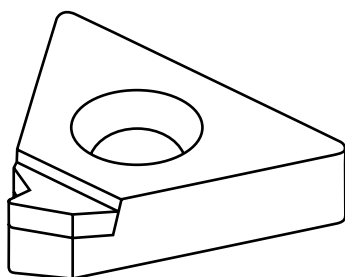
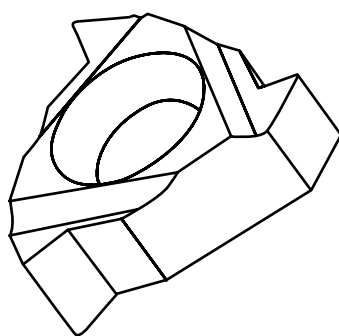
STGR

[illegible]

screw on

STGR

[illegible]

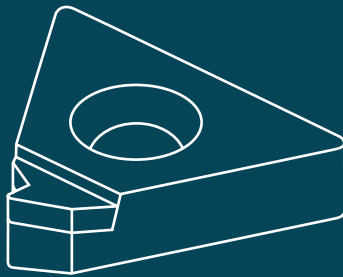


THREADING/

carbide /10
holders /115



THREADING / **carbide**



16 E R M — 1.50

1

2

3

4

5

1 Insert Size (d)

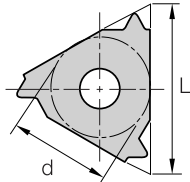
08 4,76mm

11 6,35mm

16 9,525mm

22 12,70mm

27 15,875mm



2 Insert Type

E External

I Internal

3 Hand of Insert

R Right

L Left

4 Chip Breaker

M

Chip
Breaker
Type

Non

Regular
Type

5* Pitch (Full Profile)

0.35~6.0 mm

3~72 TPI

5* Pitch (Partial Profile)

A 0.50~1.50

AG 0.50~3.00

G 1.75~3.00

N 3.50~5.00

Q 5.50~6.00

* Should use only one table based on profile type

* Should use only one table based on profile type

THREADING

ISO

6

PS

10

7

11

4

12

30

13

6 Thread Standard

60	Partial Profile 60°
55	Partial Profile 55°
STACME	Stub ACME
UN	American UN
W	Whitworth for BSW, BSP
BSPT	British Standard Pipe Thread
ABUT	American Buttress
BBUT	British Buttress

SAGE	Metric Buttress DIN513
BUT	API Buttress Casing
APIRD	API Round Casing & Tubing
EL	Extreme Line Casing
NPT	NPT
NPTF	NPTF
NPS	NPS
PG	Pg DIN 40430

API	API
ISO	ISO Metric
UNJ	UNJ
MJ	ISO 5855
TR	Trapez DIN103
ACME	ACME
RD	Round DIN405

10 Coating & Material

CS	CVD Coated Carbide
PS	PVD Coated Carbide
PB	New PVD Coating
KS	Ceramic
SS	Cermet
US	Uncoated

11 Workpiece Material

2	Non-Ferrous Material
4	Hardened Steel
5	Steel
7	Stainless Steel
8	Cast Iron
9	General Machining

12 Machining

1	Turning
2	Turning New
4	Threading
9	Milling

13 ISO Grade

05	
10	
15	
20	
25	
30	
35	
40	
45	

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE
PARTS

INDEX

GRADES

	ISO DIN 513	P					M					K					N				
		 ↔ 					 ↔ 					 ↔ 					 ↔ 				
		P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	K01	K10	K20	K30	K40	N01	N10	N20	N30	N40
CARBIDE CVD																					
CARBIDE PVD		PS9425					PS9425					PS9425									
		PS9430					PS9430					PS9430									
		PS7430					PS7430														
CARBIDE UNCOATED																	US2415				
CERMET UNCOATED																					

THREADING

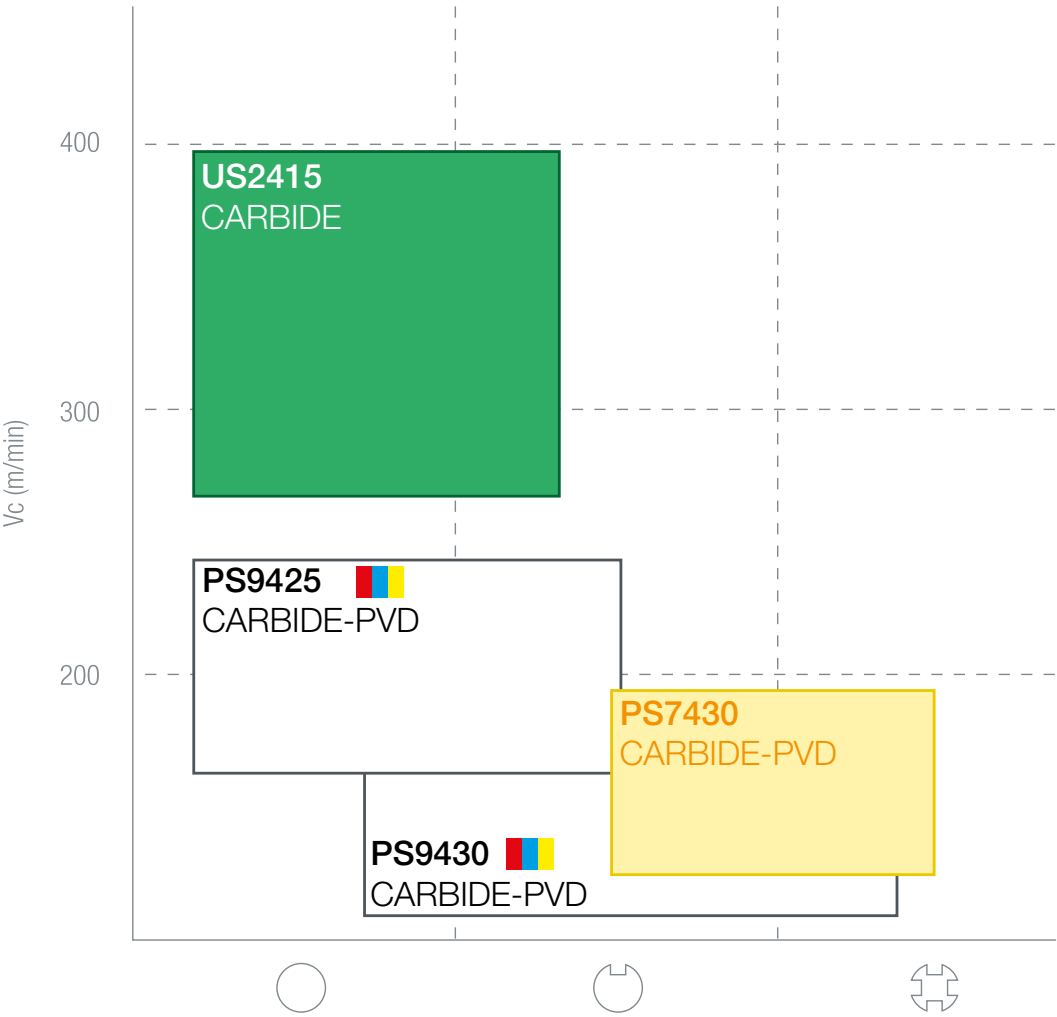
Range ISO

P

M

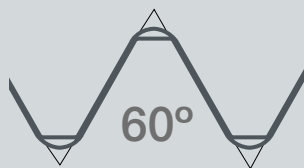
K

Grades

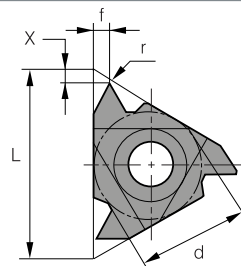


TURNING
GROOVING
THREADING
MILLING
DRILLING
ENDMILLS
DRILLS
SPARE PARTS
INDEX

16ER



EXTERNAL PARTIAL PROFILE



DESCRIPTION

DIMENSIONS

CARBIDE

PS9425

PS9430

PS7430

US2415



d

l

hmin

x

f



11ER-A60

0.5~1.5

48-16

6.35

11

0.05

0.8

0.9

●

●

●

●

16ER-A60

0.5~1.5

48-16

9.525

16

0.05

0.8

0.9

●

●

16ER-G60

1.75~3.0

14-8

9.525

16

0.27

1.2

1.7

●

●

16ER-AG60

0.5~3.0

48-8

9.525

16

0.08

1.2

1.7

●

●

●

22ER-N60

3.5~5.0

7-5

12.7

22

0.53

1.7

2.5

●

●

●

27ER-Q60

5.5~6.0

4.5-4

15.875

27

0.64

2.1

3.1

●



16ERM-AG60

0.5~3.0

48-8

9.525

16

0.08

1.2

1.7

●

16ERM-G60

1.75~3.0

14-8

9.525

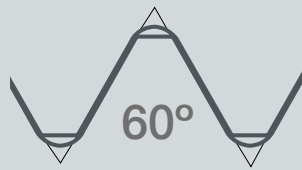
16

0.27

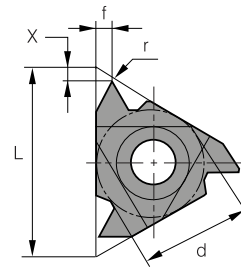
1.2

1.7

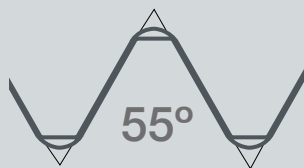
●



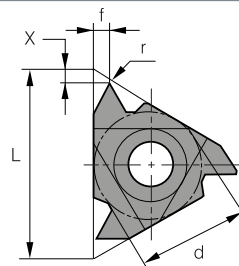
INTERNAL PARTIAL PROFILE

[illegible]

11ER



EXTERNAL PARTIAL PROFILE



DESCRIPTION

DIMENSIONS

CARBIDE

PS9425

PS9430

PS7430

US2415



d

l

hmin

x

f



11ER-A55

0.5~1.5

48-16

6.35

11

0.05

0.8

0.9

●

●

●

●

16ER-A55

0.5~1.5

48-16

9.525

16

0.05

0.8

0.9

●

●

●

●

16ER-G55

1.75~3.0

14-8

9.525

16

0.27

1.2

1.7

●

●

●

●

16ER-AG55

0.5~3.0

48-8

9.525

16

0.08

1.2

1.7

●

●

●

●

22ER-N55

3.5~5.0

7-5

12.7

22

0.53

1.7

2.5

●

●

●

●

27ER-Q55

5.5~6.0

4.5-4

15.875

27

0.64

2.1

3.1

●

●

●

●



16ERM-AG55

0.5~3.0

48-8

9.525

16

0.08

1.2

1.7

●

●

●

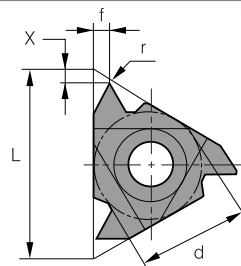
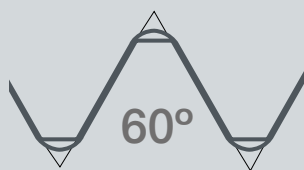
●

A diagram showing a zigzag line with a peak and a valley. The angle between the two segments forming the peak is labeled as 55° .

[illegible]

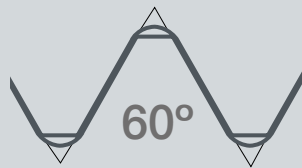
11ER

EXTERNAL METRIC

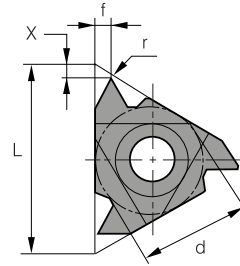


DESCRIPTION		DIMENSIONS							CARBIDE			
									PS9425	PS9430	PS7430	US2415
			d	l	hmin	x	f					
	11ER-0.35ISO	0.35	6.35	11	0.21	0.8	0.4	●				
	11ER-0.40ISO	0.40	6.35	11	0.25	0.7	0.4	●				
	11ER-0.45ISO	0.45	6.35	11	0.28	0.7	0.4	●				
	11ER-0.50ISO	0.50	6.35	11	0.31	0.6	0.4	●				
	11ER-0.60ISO	0.60	6.35	11	0.37	0.6	0.6	●				
	11ER-0.70ISO	0.70	6.35	11	0.43	0.6	0.6	●				
	11ER-0.75ISO	0.75	6.35	11	0.46	0.6	0.6	●				
	11ER-0.80ISO	0.80	6.35	11	0.49	0.6	0.6	●				
	11ER-1.00ISO	1.00	6.35	11	0.61	0.7	0.7	●	●	●		
	11ER-1.25ISO	1.25	6.35	11	0.77	0.8	0.9	●				
	11ER-1.50ISO	1.50	6.35	11	0.92	0.8	1.0	●	●	●		
	11ER-1.75ISO	1.75	6.35	11	1.07	0.8	1.1	●				
	11ER-2.00ISO	2.00	6.35	11	1.15	0.9	1.1	●				
	16ER-0.35ISO	0.35	9.525	16	0.21	0.8	0.4	●				
	16ER-0.40ISO	0.40	9.525	16	0.25	0.7	0.4	●				
	16ER-0.45ISO	0.45	9.525	16	0.28	0.7	0.4	●				
	16ER-0.50ISO	0.50	9.525	16	0.31	0.6	0.4	●				
	16ER-0.60ISO	0.60	9.525	16	0.37	0.6	0.6	●				
	16ER-0.70ISO	0.70	9.525	16	0.43	0.6	0.6	●				
	16ER-0.75ISO	0.75	9.525	16	0.46	0.6	0.6	●	●	●		
	16ER-0.80ISO	0.80	9.525	16	0.49	0.6	0.6	●				
	16ER-1.00ISO	1.00	9.525	16	0.61	0.7	0.7	●	●	●		
	16ER-1.25ISO	1.25	9.525	16	0.77	0.8	0.9	●	●	●		
	16ER-1.50ISO	1.50	9.525	16	0.92	0.8	1.0	●	●	●		
	16ER-1.75ISO	1.75	9.525	16	1.07	0.9	1.2	●	●	●		
	16ER-2.00ISO	2.00	9.525	16	1.23	1.0	1.3	●	●	●		
	16ER-2.50ISO	2.50	9.525	16	1.53	1.1	1.5	●	●	●		
	16ER-3.00ISO	3.00	9.525	16	1.84	1.2	1.6	●	●	●		

ER



EXTERNAL METRIC

[illegible]

TURNING

GROOVING

THREADING

MILLING

DRILLING

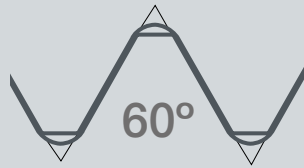
ENDMILLS

DRILLS

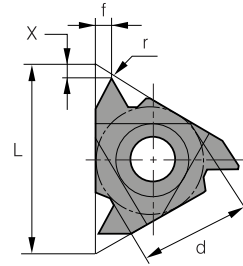
SPARE
PARTS

INDEX

11IR



INTERNAL METRIC



DESCRIPTION

DIMENSIONS

CARBIDE

PS9425

PS9430

PS7430

US2415



d

l

hmin

x

f



11IR-0.35ISO

0.35

6.35

11

0.21

0.8

0.4

●

●

●

11IR-0.40ISO

0.40

6.35

11

0.25

0.7

0.4

●

●

●

11IR-0.45ISO

0.45

6.35

11

0.28

0.7

0.4

●

●

●

11IR-0.50ISO

0.50

6.35

11

0.31

0.6

0.4

●

●

●

11IR-0.60ISO

0.60

6.35

11

0.37

0.6

0.6

●

●

●

11IR-0.70ISO

0.70

6.35

11

0.43

0.6

0.6

●

●

●

11IR-0.75ISO

0.75

6.35

11

0.46

0.6

0.6

●

●

●

11IR-0.80ISO

0.80

6.35

11

0.49

0.6

0.6

●

●

●

11IR-1.00ISO

1.00

6.35

11

0.61

0.7

0.7

●

●

●

11IR-1.25ISO

1.25

6.35

11

0.77

0.8

0.9

●

●

●

11IR-1.50ISO

1.50

6.35

11

0.92

0.8

1.0

●

●

●

11IR-1.75ISO

1.75

6.35

11

1.07

0.8

1.1

●

●

●

11IR-2.00ISO

2.00

6.35

11

1.15

0.9

1.1

●

●

●

16IR-0.35ISO

0.35

9.525

16

0.21

0.8

0.4

●

●

●

16IR-0.40ISO

0.40

9.525

16

0.25

0.7

0.4

●

●

●

16IR-0.45ISO

0.45

9.525

16

0.28

0.7

0.4

●

●

●

16IR-0.50ISO

0.50

9.525

16

0.31

0.6

0.4

●

●

●

16IR-0.60ISO

0.60

9.525

16

0.37

0.6

0.6

●

●

●

16IR-0.70ISO

0.70

9.525

16

0.43

0.6

0.6

●

●

●

16IR-0.75ISO

0.75

9.525

16

0.46

0.6

0.6

●

●

●

16IR-0.80ISO

0.80

9.525

16

0.49

0.6

0.6

●

●

●

16IR-1.00ISO

1.00

9.525

16

0.61

0.7

0.7

●

●

●

16IR-1.25ISO

1.25

9.525

16

0.77

0.8

0.9

●

●

●

16IR-1.50ISO

1.50

9.525

16

0.92

0.8

1.0

●

●

●

16IR-1.75ISO

1.75

9.525

16

1.07

0.9

1.2

●

●

●

16IR-2.00ISO

2.00

9.525

16

1.23

1.0

1.3

●

●

●

16IR-2.50ISO

2.50

9.525

16

1.53

1.1

1.5

●

●

●

16IR-3.00ISO

3.00

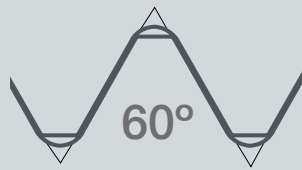
9.525

16

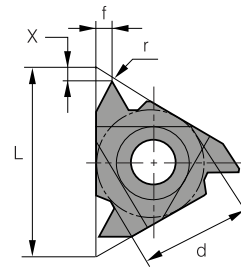
1.84

1.2

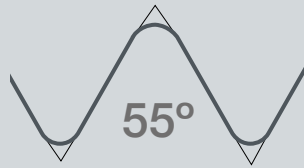
1.6



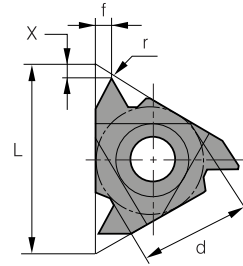
INTERNAL METRIC

[illegible]

11ER



EXTERNAL WHITWORTH



DESCRIPTION

DIMENSIONS

CARBIDE

PS9425

PS9430

PS7430

US2415



d

l

hmin

x

f



11ER-14W

14

6,35

11

1,16

0,9

1,1

●

●

●

11ER-16W

16

6,35

11

1,02

0,9

1,1

●

●

●

11ER-18W

18

6,35

11

0,9

0,8

1

●

●

●

11ER-19W

19

6,35

11

0,86

0,8

1

●

●

●

11ER-20W

20

6,35

11

0,81

0,8

0,9

●

●

●

11ER-22W

22

6,35

11

0,74

0,8

0,9

●

●

●

11ER-24W

24

6,35

11

0,68

0,7

0,8

●

●

●

11ER-26W

26

6,35

11

0,63

0,7

0,7

●

●

●

11ER-28W

28

6,35

11

0,58

0,6

0,7

●

●

●

11ER-32W

32

6,35

11

0,51

0,6

0,6

●

●

●

11ER-36W

36

6,35

11

0,45

0,6

0,6

●

●

●

11ER-40W

40

6,35

11

0,41

0,6

0,6

●

●

●

11ER-48W

48

6,35

11

0,34

0,6

0,6

●

●

●

11ER-56W

56

6,35

11

0,29

0,7

0,4

●

●

●

11ER-60W

60

6,35

11

0,27

0,7

0,4

●

●

●

11ER-72W

72

6,35

11

0,23

0,7

0,4

●

●

●

16ER-8W

8

9,52

16

2,03

1,2

1,5

●

●

●

16ER-9W

9

9,52

16

1,81

1,2

1,7

●

●

●

16ER-10W

10

9,52

16

1,63

1,1

1,5

●

●

●

16ER-11W

11

9,52

16

1,48

1,1

1,5

●

●

●

16ER-12W

12

9,52

16

1,36

1,1

1,4

●

●

●

16ER-14W

14

9,52

16

1,16

1

1,2

●

●

●

16ER-16W

16

9,52

16

1,02

0,9

1,1

●

●

●

16ER-18W

18

9,52

16

0,9

0,8

1

●

●

●

16ER-19W

19

9,52

16

0,86

0,8

1

●

●

●

16ER-20W

20

9,52

16

0,81

0,8

0,9

●

●

●

16ER-22W

22

9,52

16

0,74

0,8

0,9

●

●

●

16ER-24W

24

9,52

16

0,68

0,7

0,8

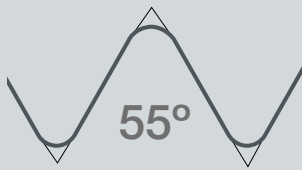
●

●

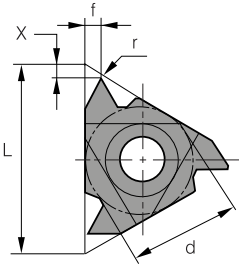
●

THREADING

16ER



EXTERNAL WHITWORTH



DESCRIPTION		DIMENSIONS							CARBIDE			
									PS9425	PS9430	PS7430	US2415
	16ER-26W		26	9,52	16	0,63	0,7	0,7	●			
	16ER-28W		28	9,52	16	0,58	0,6	0,7	●			
	16ER-30W		30	9,52	16	0,55	0,6	0,7	●			
	16ER-32W		32	9,52	16	0,51	0,6	0,6	●			
	16ER-36W		36	9,52	16	0,45	0,6	0,6	●			
	16ER-40W		40	9,52	16	0,41	0,6	0,6	●			
	16ER-48W		48	9,52	16	0,34	0,6	0,6	●			
	16ER-56W		56	9,52	16	0,29	0,7	0,4	●			
	16ER-60W		60	9,52	16	0,27	0,7	0,4	●			
	16ER-72W		72	9,52	16	0,23	0,7	0,4	●			
	22ER-5W		5	12,7	22	3,25	1,7	2,4	●			
	22ER-6W		6	12,7	22	2,71	1,6	2,3	●			
	22ER-7W		7	12,7	22	3,32	1,6	2,3	●			
	27ER-4W		4	15,88	27	4,07	2	2,9	●			
	27ER-4.5W		4,5	15,88	27	3,61	1,8	2,6	●			
	16ERM-8W		8	9,52	16	2,03	1,2	1,5	●			
	16ERM-11W		11	9,52	16	1,48	1,1	1,5	●			
	16ERM-14W		14	9,52	16	1,16	1	1,2	●			
	16ERM-24W		24	9,52	16	0,68	0,7	0,8	●			

TURNING
GROOVING
THREADING
MILLING
DRILLING
ENDMILLS
DRILLS
SPARE PARTS
INDEX

TURNING

GROOVING

THREADING

MILLING

DRILLING

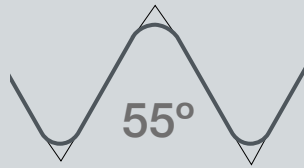
ENDMILLS

DRILLS

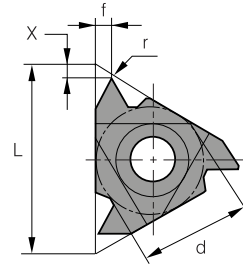
SPARE
PARTS

INDEX

11IR



INTERNAL WHITWORTH



DESCRIPTION

DIMENSIONS

CARBIDE

PS9425

PS9430

PS7430

US2415



d

l

hmin

x

f

11IR-14W

14

6,35

11

1,16

0,9

1,1

11IR-16W

16

6,35

11

1,02

0,9

1,1

11IR-18W

18

6,35

11

0,9

0,8

1

11IR-19W

19

6,35

11

0,86

0,8

1

11IR-20W

20

6,35

11

0,81

0,8

0,9

11IR-22W

22

6,35

11

0,74

0,8

0,9

11IR-24W

24

6,35

11

0,68

0,7

0,8

11IR-26W

26

6,35

11

0,63

0,7

0,7

11IR-28W

28

6,35

11

0,58

0,6

0,7

11IR-32W

32

6,35

11

0,51

0,6

0,6

11IR-36W

36

6,35

11

0,45

0,6

0,6

11IR-40W

40

6,35

11

0,41

0,6

0,6

11IR-48W

48

6,35

11

0,34

0,6

0,6

11IR-56W

56

6,35

11

0,29

0,7

0,4

11IR-60W

60

6,35

11

0,27

0,7

0,4

11IR-72W

72

6,35

11

0,23

0,7

0,4

16IR-8W

8

9,52

16

2,03

1,2

1,5

16IR-9W

9

9,52

16

1,81

1,2

1,7

16IR-10W

10

9,52

16

1,63

1,1

1,5

16IR-11W

11

9,52

16

1,48

1,1

1,5

16IR-12W

12

9,52

16

1,36

1,1

1,4

16IR-14W

14

9,52

16

1,16

1

1,2

16IR-16W

16

9,52

16

1,02

0,9

1,1

16IR-18W

18

9,52

16

0,9

0,8

1

16IR-19W

19

9,52

16

0,86

0,8

1

16IR-20W

20

9,52

16

0,81

0,8

0,9

16IR-22W

22

9,52

16

0,74

0,8

0,9

16IR-24W

24

9,52

16

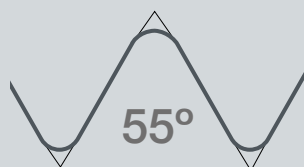
0,68

0,7

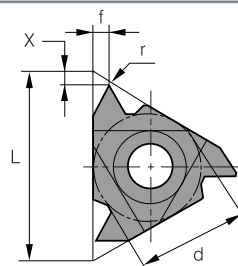
0,8

THREADING

IR



INTERNAL WHITWORTH



DESCRIPTION		DIMENSIONS							CARBIDE			
									PS9425	PS9430	PS7430	US2415
	16IR-26W		26	9,52	16	0,63	0,7	0,7	●			
	16IR-28W		28	9,52	16	0,58	0,6	0,7	●			
	16IR-30W		30	9,52	16	0,55	0,6	0,7	●			
	16IR-32W		32	9,52	16	0,51	0,6	0,6	●			
	16IR-36W		36	9,52	16	0,45	0,6	0,6	●			
	16IR-40W		40	9,52	16	0,41	0,6	0,6	●			
	16IR-48W		48	9,52	16	0,34	0,6	0,6	●			
	16IR-56W		56	9,52	16	0,29	0,7	0,4	●			
	16IR-60W		60	9,52	16	0,27	0,7	0,4	●			
	16IR-72W		72	9,52	16	0,23	0,7	0,4	●			
	22IR-5W		5	12,7	22	3,25	1,7	2,4	●			
	22IR-6W		6	12,7	22	2,71	1,6	2,3	●			
	22IR-7W		7	12,7	22	3,32	1,6	2,3	●			
	27IR-4W		4	15,88	27	4,07	2	2,9	●			
	27IR-4.5W		4,5	15,88	27	3,61	1,8	2,6	●			
	16IRM-11W		11	9,52	16	1,48	1,1	1,5	●			
	16IRM-14W		14	9,52	16	1,16	1	1,2	●			

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

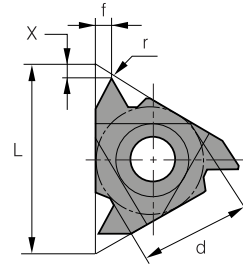
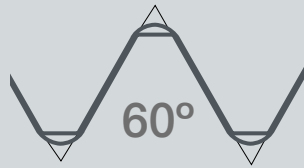
DRILLS

SPARE PARTS

INDEX

11ER

EXTERNAL UN



DESCRIPTION

DIMENSIONS

CARBIDE

PS9425

PS9430

PS7430

US2415



d

l

hmin

x

f



11ER-14UN

14

6,35

11

1,11

0,9

1,1

●

●

●

11ER-16UN

16

6,35

11

0,97

0,9

1,1

●

●

●

11ER-18UN

18

6,35

11

0,87

0,8

1

●

●

●

11ER-20UN

20

6,35

11

0,78

0,8

0,9

●

●

●

11ER-24UN

24

6,35

11

0,65

0,7

0,8

●

●

●

11ER-27UN

27

6,35

11

0,58

0,7

0,8

●

●

●

11ER-28UN

28

6,35

11

0,56

0,6

0,7

●

●

●

11ER-32UN

32

6,35

11

0,49

0,6

0,6

●

●

●

11ER-36UN

36

6,35

11

0,43

0,6

0,6

●

●

●

11ER-40UN

40

6,35

11

0,39

0,6

0,6

●

●

●

11ER-44UN

44

6,35

11

0,35

0,6

0,6

●

●

●

11ER-48UN

48

6,35

11

0,32

0,6

0,6

●

●

●

11ER-56UN

56

6,35

11

0,28

0,7

0,4

●

●

●

11ER-64UN

64

6,35

11

0,24

0,8

0,4

●

●

●

11ER-72UN

72

6,35

11

0,22

0,8

0,4

●

●

●

16ER-8UN

8

9,52

16

1,95

1,2

1,6

●

●

●

16ER-9UN

9

9,52

16

1,73

1,2

1,7

●

●

●

16ER-10UN

10

9,52

16

1,56

1,1

1,5

●

●

●

16ER-11UN

11

9,52

16

1,42

1,1

1,5

●

●

●

16ER-11.5UN

11,5

9,52

16

1,35

1,1

1,5

●

●

●

16ER-12UN

12

9,52

16

1,3

1,1

1,4

●

●

●

16ER-13UN

13

9,52

16

1,2

1

1,3

●

●

●

16ER-14UN

14

9,52

16

1,11

0,9

1,2

●

●

●

16ER-16UN

16

9,52

16

0,97

0,9

1,1

●

●

●

16ER-18UN

18

9,52

16

0,87

0,8

1

●

●

●

16ER-20UN

20

9,52

16

0,78

0,8

0,9

●

●

●

16ER-24UN

24

9,52

16

0,65

0,7

0,8

●

●

●

16ER-27UN

27

9,52

16

0,58

0,7

0,8

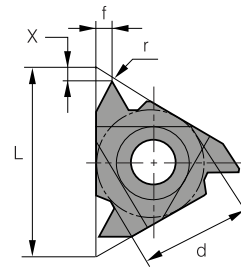
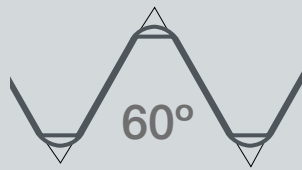
●

●

●

ER

EXTERNAL UN

[illegible]

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

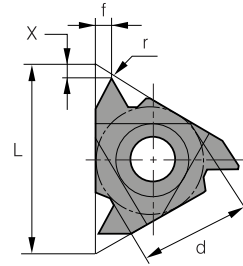
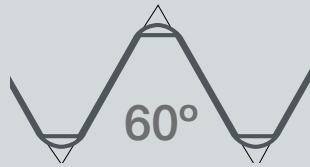
DRILLS

SPARE
PARTS

INDEX

11IR

INTERNAL UN



DESCRIPTION

DIMENSIONS

CARBIDE

PS9425

PS9430

PS7430

US2415



d

l

hmin

x

f

11IR-14UN

14

6,35

11

1,11

0,9

1,1

11IR-16UN

16

6,35

11

0,97

0,9

1,1

11IR-18UN

18

6,35

11

0,87

0,8

1

11IR-20UN

20

6,35

11

0,78

0,8

0,9

11IR-24UN

24

6,35

11

0,65

0,7

0,8

11IR-27UN

27

6,35

11

0,58

0,7

0,8

11IR-28UN

28

6,35

11

0,56

0,6

0,7

11IR-32UN

32

6,35

11

0,49

0,6

0,6

11IR-36UN

36

6,35

11

0,43

0,6

0,6

11IR-40UN

40

6,35

11

0,39

0,6

0,6

11IR-44UN

44

6,35

11

0,35

0,6

0,6

11IR-48UN

48

6,35

11

0,32

0,6

0,6

11IR-56UN

56

6,35

11

0,28

0,7

0,4

11IR-64UN

64

6,35

11

0,24

0,8

0,4

11IR-72UN

72

6,35

11

0,22

0,8

0,4

16IR-8UN

8

9,52

16

1,95

1,2

1,6

16IR-9UN

9

9,52

16

1,73

1,2

1,7

16IR-10UN

10

9,52

16

1,56

1,1

1,5

16IR-11UN

11

9,52

16

1,42

1,1

1,5

16IR-11.5UN

11,5

9,52

16

1,35

1,1

1,5

16IR-12UN

12

9,52

16

1,3

1,1

1,4

16IR-13UN

13

9,52

16

1,2

1

1,3

16IR-14UN

14

9,52

16

1,11

0,9

1,2

16IR-16UN

16

9,52

16

0,97

0,9

1,1

16IR-18UN

18

9,52

16

0,87

0,8

1

16IR-20UN

20

9,52

16

0,78

0,8

0,9

16IR-24UN

24

9,52

16

0,65

0,7

0,8

16IR-27UN

27

9,52

16

0,58

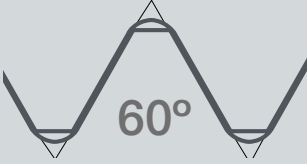
0,7

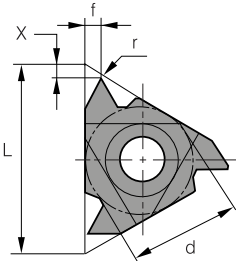
0,8

THREADING

16IR

INTERNAL UN





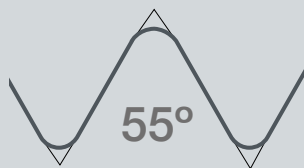
HOLDERS

293

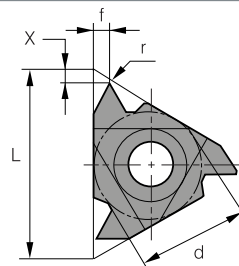
DESCRIPTION		DIMENSIONS							CARBIDE			
									PS9425	PS9430	PS7430	US2415
	16IR-28UN		28	9,52	16	0,56	0,6	0,7	●			
	16IR-32UN		32	9,52	16	0,49	0,6	0,6	●			
	16IR-36UN		36	9,52	16	0,43	0,6	0,6	●			
	16IR-40UN		40	9,52	16	0,39	0,6	0,6	●			
	16IR-44UN		44	9,52	16	0,35	0,6	0,6	●			
	16IR-48UN		48	9,52	16	0,32	0,6	0,6	●			
	16IR-56UN		56	9,52	16	0,28	0,7	0,4	●			
	16IR-64UN		64	9,52	16	0,24	0,8	0,4	●			
	16IR-72UN		72	9,52	16	0,22	0,8	0,4	●			
	22IR-5UN		5	12,7	22	3,12	1,6	2,3	●			
	22IR-6UN		6	12,7	22	2,6	1,6	2,3	●			
	22IR-7UN		7	12,7	22	2,22	1,6	2,3	●			
	27IR-4UN		4	15,88	27	3,89	1,8	2,7	●			
	27IR-4.5UN		4,5	15,88	27	3,46	1,7	2,4	●			
	16IRM-12UN		12	9,52	16	1,3	1,1	1,4	●			
	16IRM-16UN		16	9,52	16	0,97	0,9	1,1	●			
	16IRM-18UN		18	9,52	16	0,87	0,8	1	●			

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

11ER



EXTERNAL BSPT



DESCRIPTION

DIMENSIONS

CARBIDE

PS9425

PS9430

PS7430

US2415



d

l

hmin

x

f



11ER-14BSPT

14

6,35

11

1,16

0,9

1

●

●

●

11ER-19BSPT

19

6,35

11

0,86

0,8

0,9

●

●

●

11ER-28BSPT

28

6,35

11

0,58

0,6

0,6

●

●

●

16ER-11BSPT

11

9,52

16

1,48

1,1

1,5

●

●

●

16ER-14BSPT

14

9,52

16

1,16

1

1,2

●

●

●

16ER-19BSPT

19

9,52

16

0,86

0,8

0,9

●

●

●

16ER-28BSPT

28

9,52

16

0,58

0,6

0,6

●

●

●



16ERM-11BSPT

11

9,52

16

1,48

1,1

1,5

●

●

●

16ERM-14BSPT

14

9,52

16

1,16

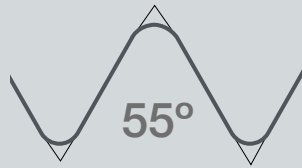
1

1,2

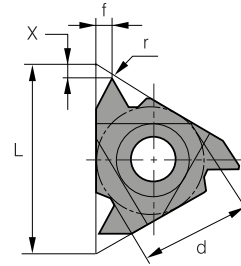
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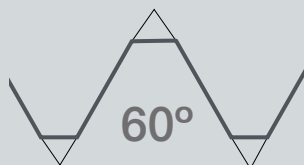
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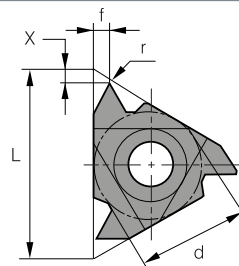
INTERNAL BSPT

[illegible]

11ER



EXTERNAL NPT



DESCRIPTION

DIMENSIONS

CARBIDE

PS9425

PS9430

PS7430

US2415



d

l

hmin

x

f



11ER-14NPT

14

6,35

11

1,33

0,8

1

●

●

●

11ER-18NPT

18

6,35

11

1,01

0,8

1

●

●

●

11ER-27NPT

27

6,35

11

0,66

0,7

0,8

●

●

●

16ER-11.5NPT

11,5

9,52

16

1,64

1,1

1,5

●

●

●

16ER-14NPT

14

9,52

16

1,33

0,9

1,2

●

●

●

16ER-18NPT

18

9,52

16

1,01

0,8

1

●

●

●

16ER-27NPT

27

9,52

16

0,66

0,7

0,8

●

●

●

16ER-8NPT

8

9,52

16

2,42

1,3

1,8

●

●

●



16ERM-11.5NPT

11,5

9,52

16

1,64

1,1

1,5

●

●

●

16ERM-14NPT

14

9,52

16

1,33

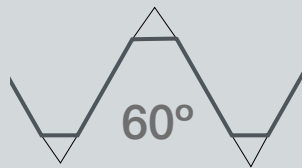
0,9

1,2

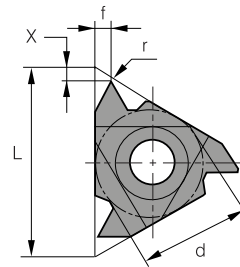
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●

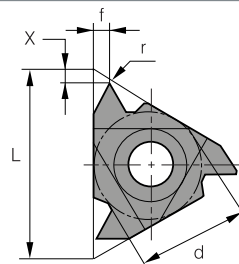


INTERNAL NPT

[illegible]

□□ER

EXTERNAL ROUND



DESCRIPTION

DIMENSIONS

CARBIDE

PS9425

PS9430

PS7430

US2415



16ER-6RND

16ER-8RND

16ER-10RND

22ER-4RND

22ER-6RND

27ER-4RND

6

8

10

4

6

4

9,52

9,52

9,52

12,7

12,7

15,88

16

16

16

22

22

27

2,12

1,59

1,27

3,18

2,12

3,18

1,5

1,4

1,1

2,2

1,5

2,2

1,7

1,3

1,2

2,3

1,7

2,3

●

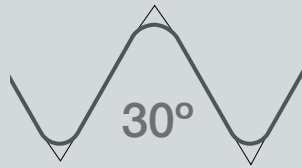
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●

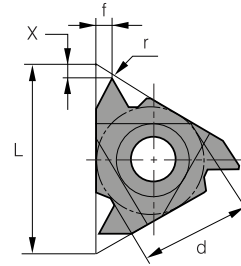
●

●

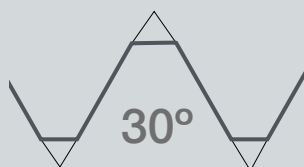
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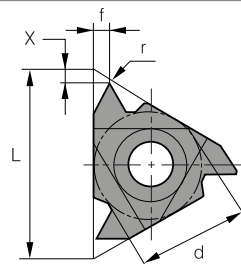
INTERNAL ROUND

[illegible]

11ER



EXTERNAL TRAPEZ



DESCRIPTION

DIMENSIONS

CARBIDE

PS9425

PS9430

PS7430

US2415



d

l

hmin

x

f



11ER-1.5TR

1,5

6,35

11

0,9

0,8

0,9

●

16ER-1.5TR

1,5

9,52

16

0,9

1

1,1

●

16ER-2.0TR

2

9,52

16

1,25

1

1,3

●

16ER-3.0TR

3

9,52

16

1,75

1,3

1,5

●

22ER-4.0TR

4

12,7

22

2,25

1,8

1,9

●

22ER-5.0TR

5

12,7

22

2,75

2

2,4

●

22ER-6.0TR

6

12,7

22

3,5

2

2,4

●

27ER-7.0TR

7

15,88

27

4

2,2

2,6

●



16ERM-2.0TR

2

9,52

16

1,25

1

1,3

●

16ERM-3.0TR

3

9,52

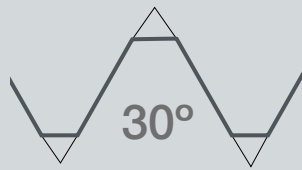
16

1,75

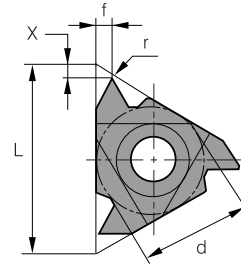
1,3

1,5

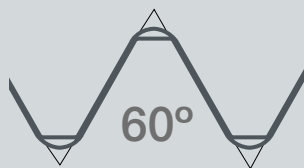
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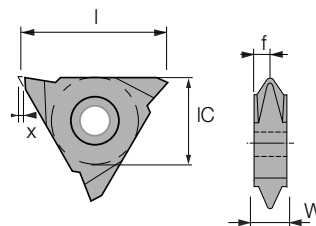
INTERNAL TRAPEZ

[illegible]

VER



EXTERNAL PARTIAL PROFILE



DESCRIPTION

DIMENSIONS

CARBIDE

PS9425

PS9430

PS7430

US2415



VER11-A60

0.5~1.5

48-16

6.35

11

3.2

0.69

2.3

●

●

●

●

VER16-A60

0.5~1.5

48-16

9.525

16

3.5

1.1

2.7

●

●

●

●

VER16-G60

1.75~3.0

14-8

9.525

16

3.5

1.1

1.9

●

●

●

●

VER16-AG60

0.5~3.0

48-8

9.525

16

3.5

1.1

1.9

●

●

●

●

VER22-N60

3.5~5.0

7-5

12.7

22

4.8

1.1

2.3

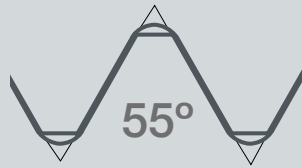
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●

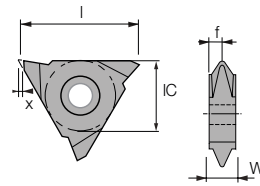
●

●

VER

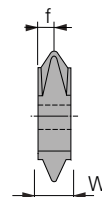
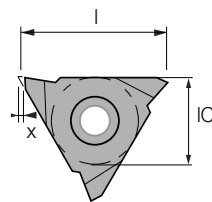
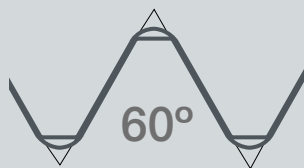


EXTERNAL PARTIAL PROFILE

[illegible]

VER

EXTERNAL METRIC



DESCRIPTION

DIMENSIONS

CARBIDE

PS9425

PS9430

PS7430

US2415



d

l

W

x

f



VER11-0.75ISO

0.75

6.35

11

3.2

0.7

2.6

●

●

●

VER11-1.00ISO

1.00

6.35

11

3.2

0.7

2.5

●

●

●

VER11-1.50ISO

1.50

6.35

11

3.2

0.7

2.2

●

●

●

VER11-1.75ISO

1.75

6.35

11

3.2

0.7

2.1

●

●

●

VER11-2.00ISO

2.00

6.35

11

3.2

0.7

1.9

●

●

●



VER16-0.35ISO

0.35

9.525

16

3.5

1.1

3.2

●

●

●

VER16-0.40ISO

0.40

9.525

16

3.5

1.1

3.2

●

●

●

VER16-0.50ISO

0.50

9.525

16

3.5

1.1

3.0

●

●

●

VER16-0.75ISO

0.75

9.525

16

3.5

1.1

3.0

●

●

●

VER16-0.80ISO

0.80

9.525

16

3.5

1.1

3.0

●

●

●

VER16-1.00ISO

1.00

9.525

16

3.5

1.1

2.9

●

●

●

VER16-1.25ISO

1.25

9.525

16

3.5

1.1

2.7

●

●

●

VER16-1.50ISO

1.50

9.525

16

3.5

1.1

2.6

●

●

●

VER16-1.75ISO

1.75

9.525

16

3.5

1.1

2.4

●

●

●

VER16-2.00ISO

2.00

9.525

16

3.5

1.1

2.3

●

●

●

VER16-2.50ISO

2.50

9.525

16

3.5

1.1

2.1

●

●

●

VER16-3.00ISO

3.00

9.525

16

3.5

1.1

2.0

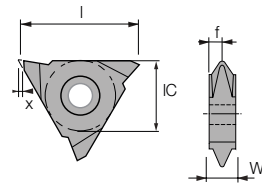
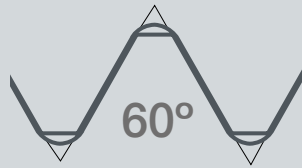
●

●

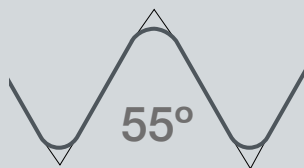
●

VER

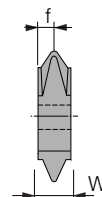
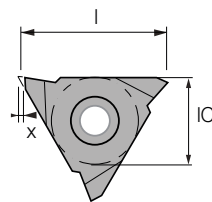
EXTERNAL UN

[illegible]

VER



EXTERNAL WHITWORTH



DESCRIPTION

DIMENSIONS

CARBIDE

PS9425

PS9430

PS7430

US2415



d

l

W

x

f



VER11-19W

19

6.35

11

3.2

0.7

2.3

●

VER11-14W

14

6.35

11

3.2

0.7

2.0

●

VER11-11W

11

6.35

11

3.2

0.7

1.7

●



VER16-19W

19

9.525

16

3.5

1.1

2.7

●

VER16-18W

18

9.525

16

3.5

1.1

2.6

●

VER16-16W

16

9.525

16

3.5

1.1

2.6

●

VER16-14W

14

9.525

16

3.5

1.1

2.4

●

VER16-12W

12

9.525

16

3.5

1.1

2.2

●

VER16-11W

11

9.525

16

3.5

1.1

2.1

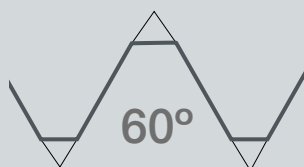
●

A diagram showing a sine wave. The peak of the wave is labeled with the text 55° .

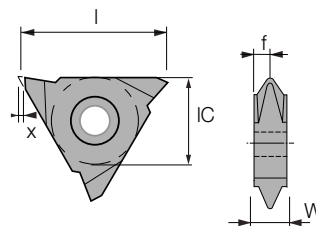


THREADING

VER



EXTERNAL NPT



DESCRIPTION

DIMENSIONS

CARBIDE

PS9425

PS9430

PS7430

US2415



d

l

W

x

f



VER11-27NPT

27

6.35

11

3.2

0.7

2.0

●

VER11-18NPT

18

6.35

11

3.2

0.7

1.8

●

VER11-14NPT

14

6.35

11

3.2

0.7

1.8

●



VER16-27NPT

27

9.525

16

3.5

1.1

2.9

●

VER16-18NPT

18

9.525

16

3.5

1.1

2.6

●

VER16-11.5NPT

11.5

9.525

16

3.5

1.1

2.1

●

SR 14 I			- 11 W		PS 9 4 25			
1	2	3	4	5	6	7	8	9

1	
SL	Screw on Left
SR	Screw on Right

3	Insert Type
E	External
I	Internal

5	Thread Standard
ISO	Metric
W	Whitworth for BSW, BSP
BSPT	British Standard Pipe Thread
UN	American UN
NPT	NPT
NPTF	NPTF
PG	Pg DIN40430

2	Insert Length
12	12mm
14	14mm
21	21mm
30	30mm
40	40mm

4	Pitch (Full Profile)
0.35~6.0	mm
3~72	TPI

10	Coating & Material
CS	CVD Coated Carbide
PS	PVD Coated Carbide
PB	New PVD Coating
KS	Ceramic
SS	Cermet
US	Uncoated

11	Workpiece Material
2	Non-Ferrous Material
4	Hardened Steel
5	Steel
7	Stainless Steel
8	Cast Iron
9	General Machining

12	Machining
1	Turning
2	Turning New
4	Threading
9	Milling

13	ISO Grade
05	
10	
15	
20	
25	
30	
35	
40	
45	

TURNING

GROOVING

THREADING

MILLING

DRILLING

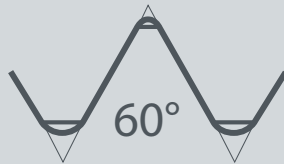
ENDMILLS

DRILLS

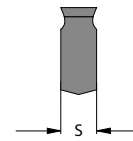
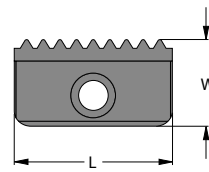
SPARE PARTS

INDEX

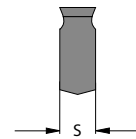
SR00



INTERNAL METRIC

[illegible]

A diagram showing a zigzag line with a central peak and two valleys. The angle between the two lines forming the central peak is labeled 60° .



HOLDERS

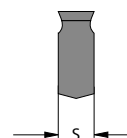
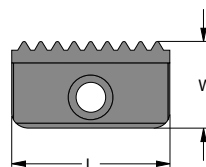
295

THREADING

SR□□



INTERNAL WHITWORTH



DESCRIPTION

DIMENSIONS

CARBIDE

PS9425



I

W

S



SR14I-24W

24

14

7.9

3.2

●

SR14I-20W

20

14

7.9

3.2

●

SR14I-19W

19

14

7.9

3.2

●

SR14I-16W

16

14

7.9

3.2

●

SR14I-14W

14

14

7.9

3.2

●

SR21I-11W

11

14

7.9

3.2

●

SR21I-20W

20

21

12.6

4.8

●

SR21I-19W

19

21

12.6

4.8

●

SR21I-16W

16

21

12.6

4.8

●

SR21I-14W

14

21

12.6

4.8

●

SR21I-11W

11

21

12.6

4.8

●

SR30I-16W

16

30

16.7

5.6

●

SR30I-14W

14

30

16.7

5.6

●

SR30I-11W

11

30

16.7

5.6

●

SR40I-11W

11

40

20.8

6.4

●

SR40I-8W

8

40

20.8

6.4

●

E	ST	B	06	04	C	5	-	11	W
1	2	3	4	5	6	7		8	9

1	
E	External
Non	Internal

2	Type
ST	Solide Thread Mill

3	Endmill Type
Non	Without Coolant
B	With Coolant

4	Shank Diameter
06	6mm
08	8mm
10	10mm
12	12mm
14	14mm
16	16mm
20	20mm
25	25mm

5	Cutting Diameter
06	6mm
08	8mm
10	10mm
12	12mm
14	14mm
16	16mm
20	20mm
25	25mm

6	Number of Flutes
C	3
D	4
E	5
F	6

7	Cutting Length
☐ ☐	mm

8	Pitch (Full Profile)
0.35~6.0	mm
3~72	TPI

9	Thread Standard
ISO	Metric
W	Whitworth for BSW, BSP
BSPT	British Standard Pipe Thread
UN	American UN
NPT	NPT
NPTF	NPTF
PG	Pg DIN40430

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

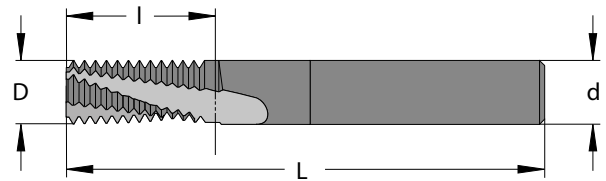
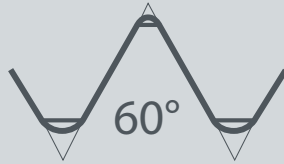
DRILLS

SPARE PARTS

INDEX

ST

INTERNAL METRIC

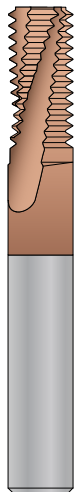


DESCRIPTION

DIMENSIONS

Z

Carbide



ST06022C5-0.50ISO

0,50

6

2,2

5,3

58

3

●

ST06031C7-0.70ISO

0,70

6

3,1

7,4

58

3

●

ST06036C9-0.80ISO

0,80

6

3,6

9,2

58

3

●

ST0604C10-1.00ISO

1,00

6

4,0

10,5

58

3

●

ST0604C14-1.00ISO

1,00

6

4,0

14,5

58

3

●

ST0605C14-1.25ISO

1,25

6

5,0

14,4

58

3

●

ST0605C19-1.25ISO

1,25

6

5,0

17,3

58

3

●

ST0807C17-1.50ISO

1,50

8

7,0

17,3

64

3

●

ST0807C24-1.50ISO

1,50

8

7,0

24,8

76

3

●

ST0808C20-1.75ISO

1,75

8

8,0

20,1

64

3

●

ST0808C28-1.75ISO

1,75

8

8,0

28,9

76

3

●

ST1010C27-2.00ISO

2,00

10

10

27,0

73

3

●

ST1010C39-2.00ISO

2,00

10

10

39,0

105

3

●

ST1414D33-2.50ISO

2,50

14

14

33,8

84

4

●

ST1414D48-2.50ISO

2,50

14

14

48,8

105

4

●

ST1616C40-3.00ISO

3,00

16

16

40,5

105

3

●

ST1616C58-3.00ISO

3,00

16

16

58,5

120

3

●

ST2020D43-3.00ISO

3,00

20

20

43,5

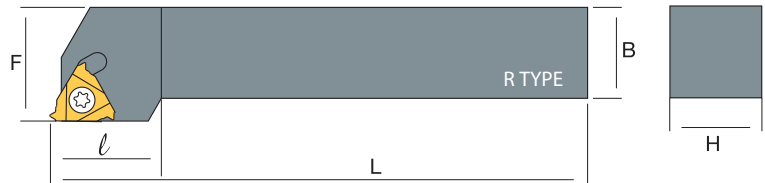
105

4

●

SSER /SSEL

□ □ ER



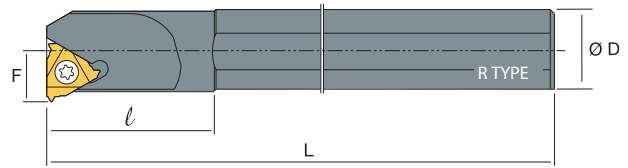
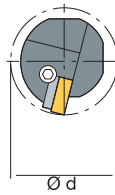
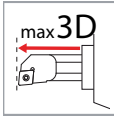
EXTERNAL

[illegible]

SSIR / SSIL

screw on

IR



	DESCRIPTION			STOCK		DIMENSIONS				R			L	
				R	L	D	d	L	F					
08IR-□□	S16M07	SSIR/L	08	●	●	16	7,8	150	5,3	-	-	-	ST-SC0226	ST-WRT07
11IR-□□	S10K	SSIR/L	11	●	●	10	12	125	7,4	-	-	-	ST-SC0257	ST-WRT08
	S12K		11	●	●	12	16	125	8,4	-	-	-	ST-SC0257	ST-WRT08
	S16M10		11	●	●	16	12	150	7,4	-	-	-	ST-SC0257	ST-WRT08
	S16Q		11	●	●	16	20	180	8,9	-	-	-	ST-SC0257	ST-WRT08
	S16Q	SSIR/L	16	●	●	16	16	180	10,2	-	-	-	ST-SC3511	ST-WRT15
16ER-□□	S20R		16	●	●	20	24	200	13,7	-	-	-	ST-SC3511	ST-WRT15
	S25S		16	●	●	25	29	250	16,2	ST-SHEI16	ST-SC5011	ST-WR0030	ST-SC3514	ST-WRT15
	S32T		16	●	●	32	36	300	19,7	ST-SHEI16	ST-SC5011	ST-WR0030	ST-SC3514	ST-WRT15
	S40V		16	●	●	40	44	350	23,7	ST-SHEI16	ST-SC5011	ST-WR0030	ST-SC3514	ST-WRT15
	S20R	SSIR/L	22	●	●	20	24	200	14	ST-SHEI22	ST-SC6011	ST-WR0040	ST-SC0411	ST-WRT15
22ER-□□	S25S		22	●	●	25	29	250	18,1	ST-SHEI22	ST-SC6011	ST-WR0040	ST-SC0411	ST-WRT15
	S32T		22	●	●	32	38	300	21,6	ST-SHEI22	ST-SC6011	ST-WR0040	ST-SC0411	ST-WRT15
	S40V		22	●	●	40	46	350	25,6	ST-SHEI22	ST-SC6011	ST-WR0040	ST-SC0411	ST-WRT15
	S50W		22	●	●	50	63	400	35,6	ST-SHEI22	ST-SC6011	ST-WR0040	ST-SC0411	ST-WRT15

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

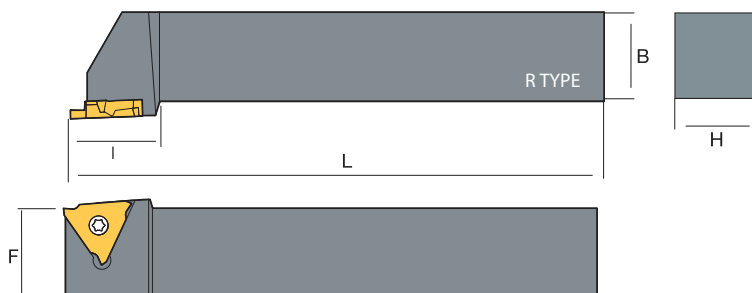
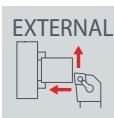
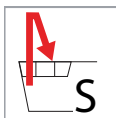
DRILLS

SPARE PARTS

INDEX

SSER-VS

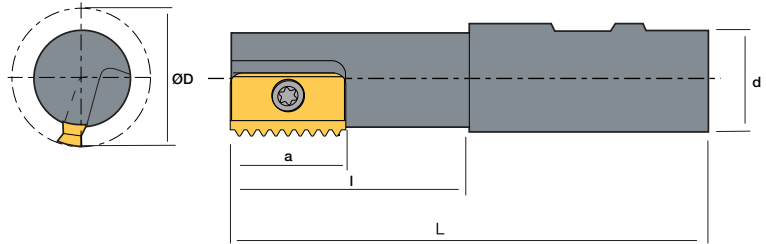
VER

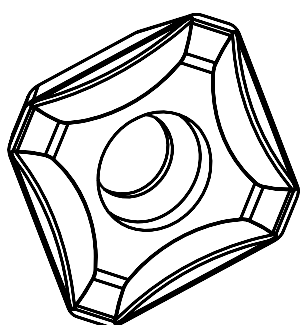
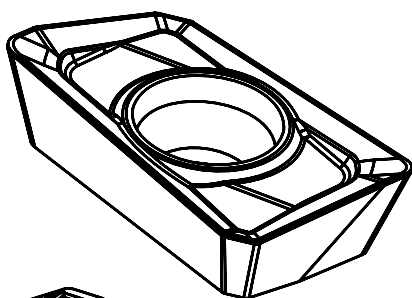
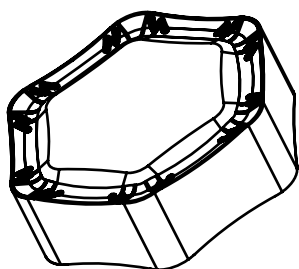


VER	DESCRIPTION			STOCK		DIMENSIONS							
				R	L	H	B	L	F				
VER11	SSER/L	0808	F11VS	●		08	08	80	08	ST-SC0257	ST-WRT07		
		1010	F11VS	●		10	10	80	10	ST-SC0257	ST-WRT07		
		1212	F11VS	●		12	12	80	12	ST-SC0257	ST-WRT07		
		1616	H11VS	●		16	16	100	16	ST-SC0257	ST-WRT07		
VER16	SSER/L	1010	F16VS	●		10	10	80	10	ST-SC3514	ST-WRT15		
		1212	F16VS	●		12	12	80	12	ST-SC3514	ST-WRT15		
		1616	H16VS	●		16	16	100	16	ST-SC3514	ST-WRT15		
		2020	K16VS	●		20	20	125	20	ST-SC3514	ST-WRT15		
		2525	M16VS	●		25	25	150	25	ST-SC3514	ST-WRT15		
		3232	P16VS	●		32	32	170	32	ST-SC3514	ST-WRT15		
		4040	R16VS	●		40	40	250	40	ST-SC3514	ST-WRT15		
VER22	SSER/L	2525	M22VS	●		25	25	150	25	ST-SC0416	ST-WRT15		
		3232	P22VS	●		32	32	170	32	ST-SC0416	ST-WRT15		
		4040	R22VS	●		40	40	250	40	ST-SC0416	ST-WRT15		

MSSR

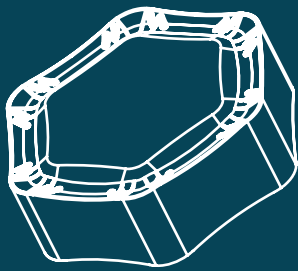
SR□□

[illegible]

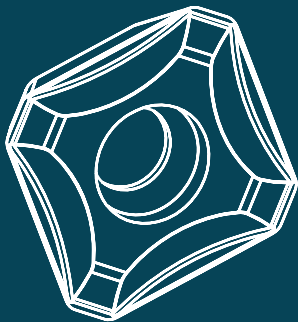
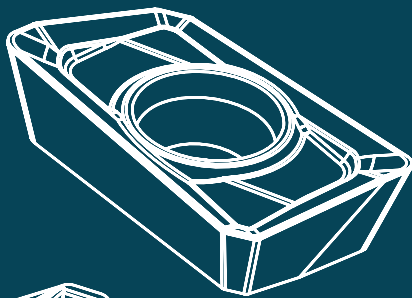


MILLING/

carbide /299
holders /321



MILLING / carbide



Grades

	K										P					M					N				
	ISO DIN 513																								
	K01	K10	K20	K30	K40	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	N01	N10	N20	N30	N40					
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
				General cutting for gray cast iron and ductile cast iron
N	US2915	K05-K25	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

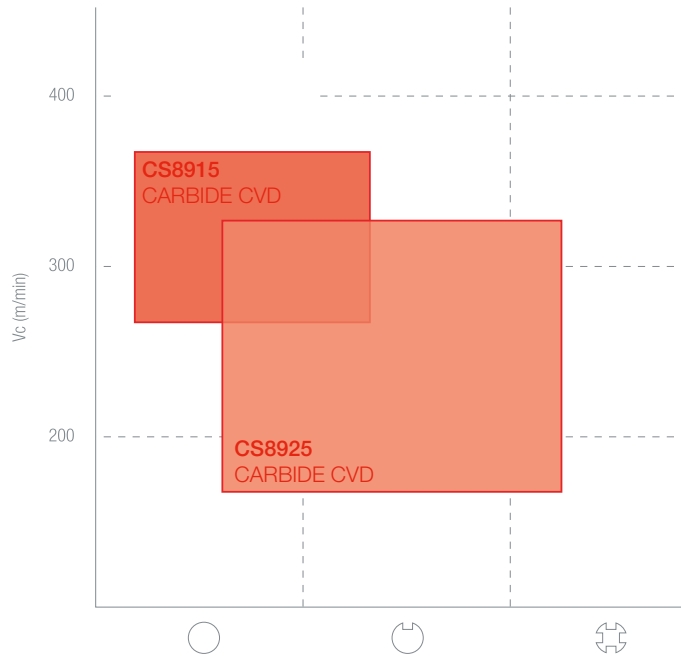
ENDMILLS

DRILLS

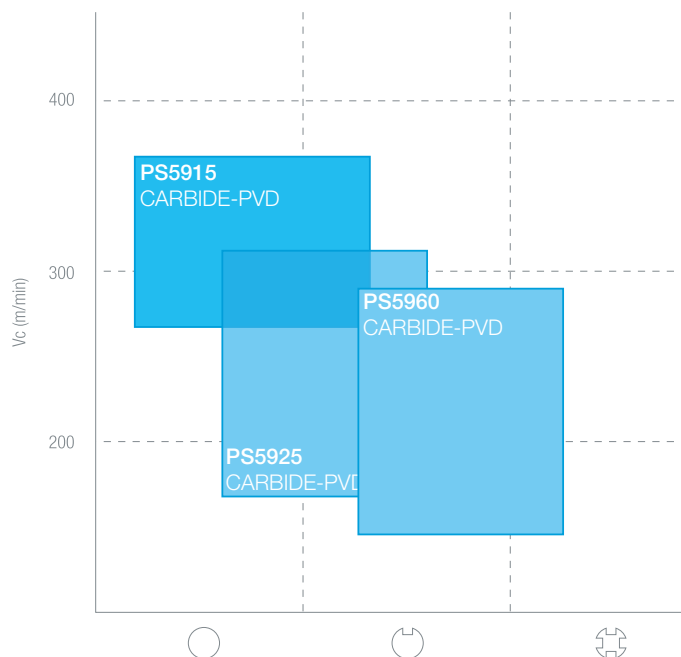
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Range ISO **K**

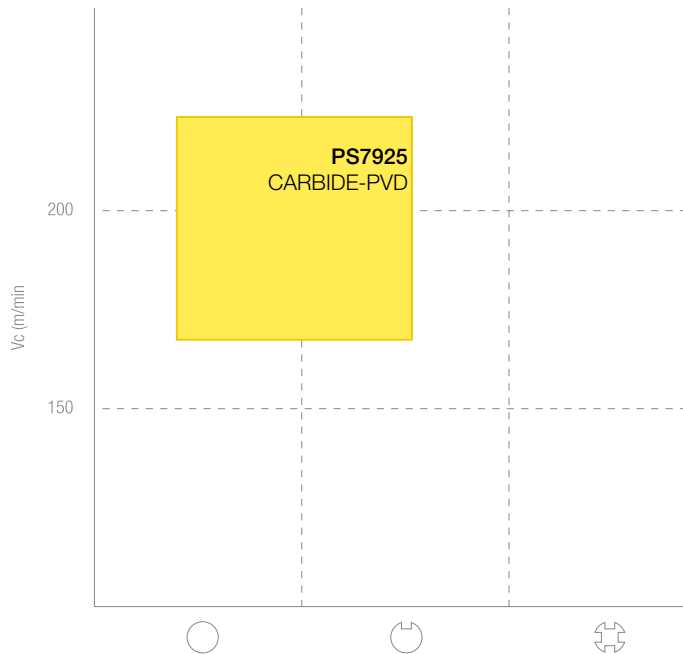


Range ISO **P**

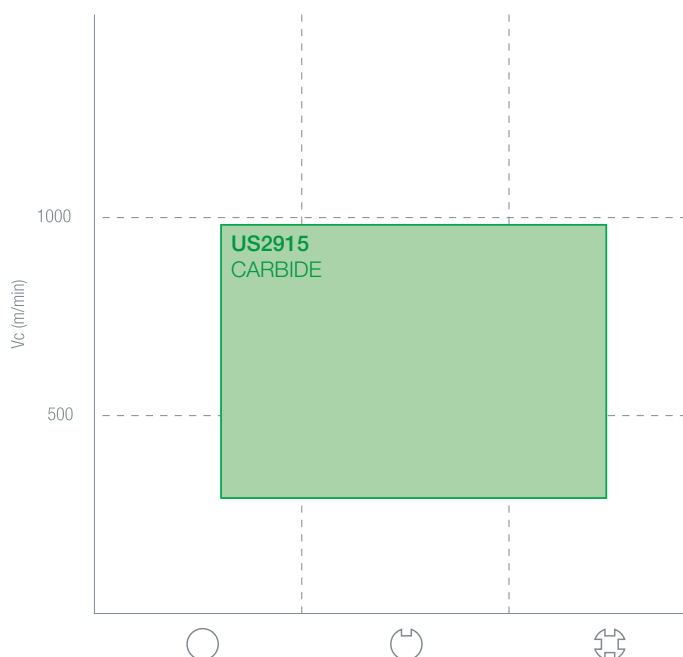


MILLING

Range ISO **M**



Range ISO **N**



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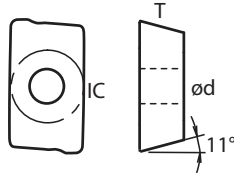
DRILLS

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**POSITIVE 11°
with hole**

AP □□

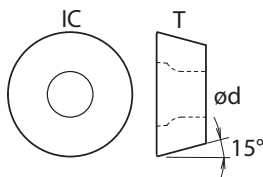


AP □□	1035 □□	1135 □□	1604 □□
IC	6,35	6,35	9,525
T	3,50	3,50	4,76
ød	2,80	2,80	4,50
Holder	322	322	322

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	•	•				•					

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

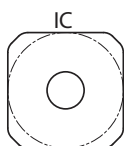
DESCRIPTION			Carbide					CARBIDE				
			PS5915	PS5925	PS5960	CS8915	CS8925	PS7925	US2915			
	RDHX	1003M0		•				•				
		12T3M0		•				•				
	RDMW	0501M0			•							
	RDMX	0802M0		•				•				
		1003M0		•				•				
		12T3M0		•				•				
		1604M0		•				•				

Vc • fn • ap

315

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							•			

Vc • fn • ap

315

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ENDMILLS

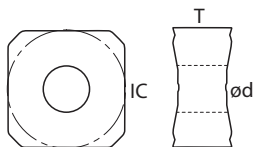
DRILLS

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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

•

•

•

•

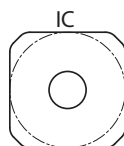
•

Vc • fn • ap

315

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
		

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

Vc • fn • ap

315

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

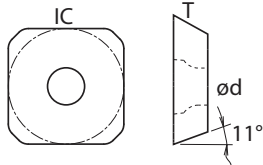
DRILLS

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**POSITIVE 11°
without hole**

SPKN



SP 11 1203 1504

SP 11	1203 11	1504 11
IC	12,7	15,875
T	3,18	4,76
Ød	-	-
Holder		

DESCRIPTION			Carbide						CARBIDE				
			PS5915	PS5925	PS5960	CS8915	CS8925	PS7925	US2915				
	SPKN	1203EDR-SU		•									
		1203EDSR-SU		•		•		•					
		1504EDSR-SU		•				•					
	SPKN	1203EDFR				•	•						
		1203EDTR		•									
		1504EDTL							•				
		1504EDTR							•				

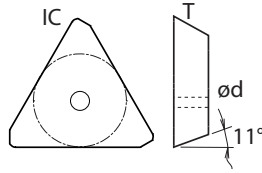
Vc • fn • ap



315

POSITIVE 11°
with hole

TPKN



TP	1603	2204
IC	9,525	12,7
T	3,18	4,76
Ød	-	-
		

[illegible]Vc • **fn** • ap

315

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

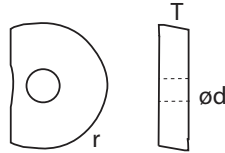
DRILLS

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**BALL NOSE
with hole**

TW

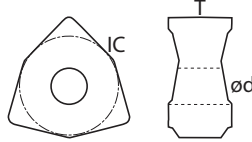


TW	08	10	12	16	20	25
r	12,7	12,7	12,7	12,7	12,7	12,7
T	4,76	4,76	4,76	4,76	4,76	4,76
Ød	5,16	5,16	5,16	5,16	5,16	5,16
Holder	344	344	344	344	344	344

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

NEGATIVE with hole

WNMU



WN □□	0806 □□
IC	12,7
T	6,40
Ød	4,40
	

[illegible]

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			

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Cutting Parameters a_p (mm) & f_n (mm/rev)

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

Material	Chip Breaker	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (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	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (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	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (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	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (mm/rev)	a_p (mm)	f_n (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											

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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											

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												

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											

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											

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
M	PS5925	IC928	F40M	TT8020	PR660	GC1030	KC7140	VP30RT	WKP35	PC5400
		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

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GROOVING

THREADING

MILLING

DRILLING

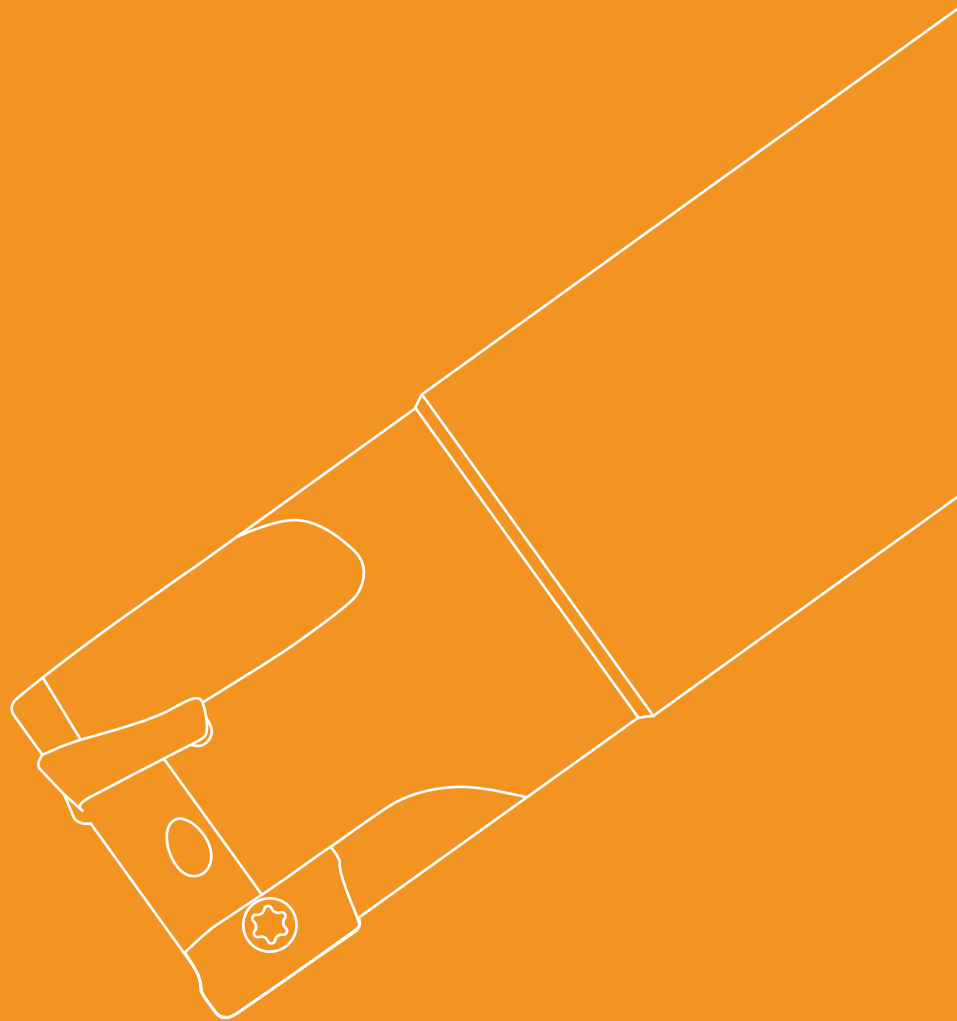
ENDMILLS

DRILLS

SPARE
PARTS

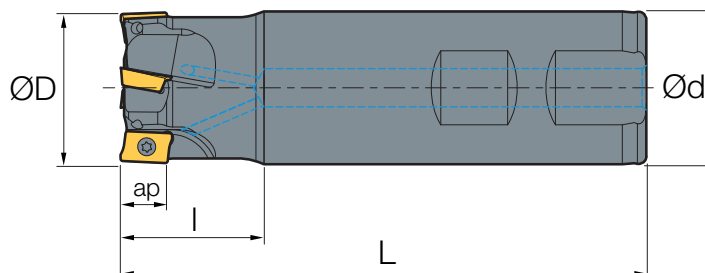
INDEX

MILLING / holders



MSAP

AP□□10



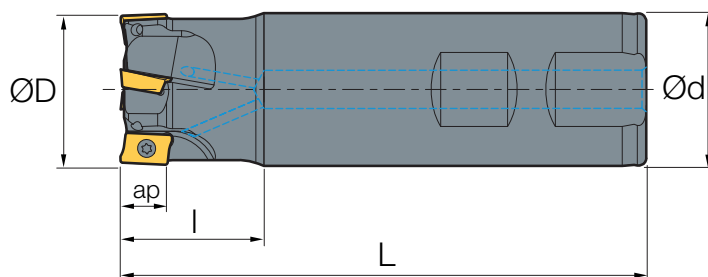
AP□□	DESCRIPTION		STOCK	DIMENSIONS						 			
				D	L	l	d	Z	ap				
AP□□10	MSAP	12-120-10-12-1T	●	12	120	30	12	1T	10	ST-SC0256	ST-WRT08		
		12-120-10-16-1T	●	12	120	30	16	1T	10	ST-SC0256	ST-WRT08		
		14-120-10-16-1T	●	14	120	30	16	1T	10	ST-SC0256	ST-WRT08		
		16-120-10-16-2T	●	16	120	30	16	2T	10	ST-SC0256	ST-WRT08		
		16-120-10-16-2T-C	●	16	120	30	16	2T	10	ST-SC0256	ST-WRT08		
		16-150-10-16-2T	●	16	150	40	16	2T	10	ST-SC0256	ST-WRT08		
		16-150-10-16-2T-C	●	16	150	40	16	2T	10	ST-SC0256	ST-WRT08		
		16-200-10-16-2T	●	16	200	50	16	2T	10	ST-SC0256	ST-WRT08		
		18-120-10-16-2T	●	18	120	30	16	2T	10	ST-SC0256	ST-WRT08		
		18-150-10-16-2T	●	18	150	40	16	2T	10	ST-SC0256	ST-WRT08		
		18-200-10-16-2T	●	18	200	50	16	2T	10	ST-SC0256	ST-WRT08		
		20-120-10-20-3T	●	20	120	30	20	3T	10	ST-SC0256	ST-WRT08		
		20-120-10-20-3T-C	●	20	120	30	20	3T	10	ST-SC0256	ST-WRT08		
		20-150-10-20-3T	●	20	150	40	20	3T	10	ST-SC0256	ST-WRT08		
		20-200-10-20-3T	●	20	200	50	20	3T	10	ST-SC0256	ST-WRT08		
		22-120-10-20-3T	●	22	120	30	20	3T	10	ST-SC0256	ST-WRT08		
		22-150-10-20-3T	●	22	150	40	20	3T	10	ST-SC0256	ST-WRT08		
		22-200-10-20-3T	●	22	200	50	20	3T	10	ST-SC0256	ST-WRT08		
		23-120-10-20-3T	●	23	120	30	20	3T	10	ST-SC0256	ST-WRT08		
		24-120-10-20-3T	●	24	120	30	20	3T	10	ST-SC0256	ST-WRT08		
		24-150-10-20-3T	●	24	150	40	20	3T	10	ST-SC0256	ST-WRT08		

carbide

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MSAP

AP□□10



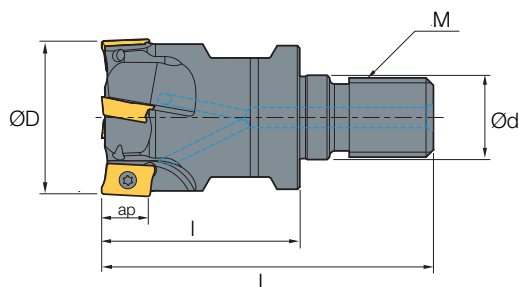
AP□□	DESCRIPTION		STOCK	DIMENSIONS									
				D	L	l	d	Z	ap				
AP□□10	MSAP	24-200-10-20-3T	●	24	200	50	20	3T	10	ST-SC0256	ST-WRT08		
		25-120-10-25-3T	●	25	120	30	25	3T	10	ST-SC0256	ST-WRT08		
		25-120-10-25-3T-C	●	25	120	30	25	3T	10	ST-SC0256	ST-WRT08		
		25-150-10-25-3T	●	25	150	40	25	3T	10	ST-SC0256	ST-WRT08		
		25-200-10-25-3T	●	25	200	50	25	3T	10	ST-SC0256	ST-WRT08		
		25-250-10-25-3T	●	25	250	50	25	3T	10	ST-SC0256	ST-WRT08		
		26-120-10-25-3T	●	26	120	30	25	3T	10	ST-SC0256	ST-WRT08		
		26-120-10-25-3T-C	●	26	120	30	25	3T	10	ST-SC0256	ST-WRT08		
		26-150-10-25-3T	●	26	150	40	25	3T	10	ST-SC0256	ST-WRT08		
		26-200-10-25-3T	●	26	200	50	25	3T	10	ST-SC0256	ST-WRT08		
		30-120-10-25-4T	●	30	120	30	25	4T	10	ST-SC0256	ST-WRT08		
		30-150-10-25-4T	●	30	150	40	25	4T	10	ST-SC0256	ST-WRT08		
		32-120-10-25-4T	●	32	120	30	25	4T	10	ST-SC0256	ST-WRT08		
		32-120-10-32-4T	●	32	120	30	32	4T	10	ST-SC0256	ST-WRT08		
		32-120-10-32-4T-C	●	32	120	30	32	4T	10	ST-SC0256	ST-WRT08		
		32-150-10-25-4T	●	32	150	40	25	4T	10	ST-SC0256	ST-WRT08		
		32-150-10-32-4T	●	32	150	40	32	4T	10	ST-SC0256	ST-WRT08		
		32-300-10-32-4T	●	32	300	50	32	4T	10	ST-SC0256	ST-WRT08		
		35-120-10-32-5T	●	35	120	30	32	5T	10	ST-SC0256	ST-WRT08		
		40-120-10-32-5T	●	40	120	30	32	5T	10	ST-SC0256	ST-WRT08		
		40-150-10-32-5T	●	40	150	40	32	5T	10	ST-SC0256	ST-WRT08		

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MMAP

AP[®] 10

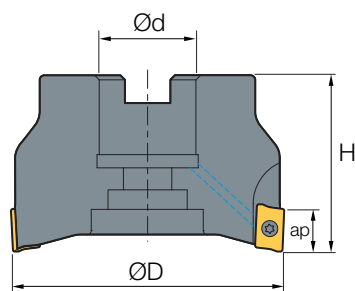
[illegible]

carbide



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AP 10

[illegible]

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TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

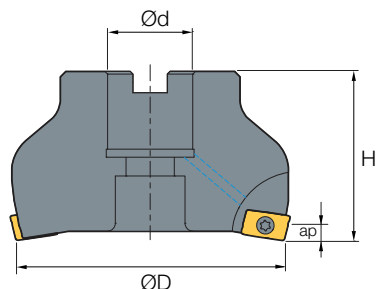
DRILLS

SPARE
PARTS

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MFAP

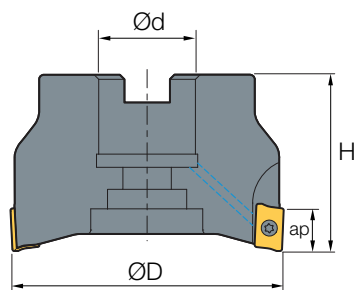
AP□□10



AP□□	DESCRIPTION		STOCK	DIMENSIONS					 			
				D	H	d	Z	ap				
AP□□10	MFAP	75063R-10-5T	●	63	40	22	5T	5	ST-SC0257	ST-WRT08		
		75063R-10-5T-C	●	63	40	22	5T	5	ST-SC0257	ST-WRT08		
		75080R-10-6T	●	80	40	27	6T	5	ST-SC0257	ST-WRT08		
		75080R-10-6T-C	●	80	40	27	6T	5	ST-SC0257	ST-WRT08		
		75100R-10-7T	●	100	50	32	7T	5	ST-SC0257	ST-WRT08		
		75100R-10-7T-C	●	100	50	32	7T	5	ST-SC0257	ST-WRT08		

MFAP

AP□□12



AP□□	DESCRIPTION		STOCK	DIMENSIONS					 			
				D	H	d	Z	ap				
AP□□12	MFAP	90050R-12-6T	●	50	40	22	6T	12	ST-SC0257	ST-WRT08		
		90063R-12-7T	●	63	40	22	7T	12	ST-SC0257	ST-WRT08		
		90080R-12-8T	●	80	50	27	8T	12	ST-SC0257	ST-WRT08		

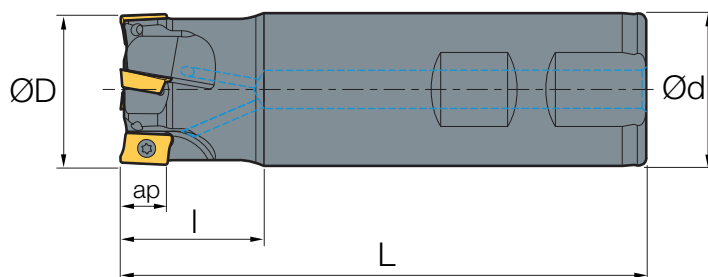
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MSAP

AP□□11



AP□□	DESCRIPTION		STOCK	DIMENSIONS									
				D	L	l	d	Z	ap				
AP□□11	MSAP	16-160-11-15-2T-C	●	16	160	40	15	2T	11	ST-SC0256	ST-WRT08		
		16-160-11-16-2T-C	●	16	160	40	16	2T	11	ST-SC0256	ST-WRT08		
		16-200-11-16-2T-C	●	16	200	50	16	2T	11	ST-SC0256	ST-WRT08		
		17-160-11-16-2T-C	●	17	160	40	16	2T	11	ST-SC0256	ST-WRT08		
		17-200-11-16-2T-C	●	17	200	50	16	2T	11	ST-SC0256	ST-WRT08		
		20-160-11-20-3T-C	●	20	160	40	20	3T	11	ST-SC0256	ST-WRT08		
		20-200-11-20-3T-C	●	20	200	50	20	3T	11	ST-SC0256	ST-WRT08		
		21-160-11-20-3T-C	●	21	160	40	20	3T	11	ST-SC0256	ST-WRT08		
		21-200-11-20-3T-C	●	21	200	50	20	3T	11	ST-SC0256	ST-WRT08		
		25-160-11-25-3T-C	●	25	160	40	25	3T	11	ST-SC0256	ST-WRT08		
		25-200-11-25-3T-C	●	25	200	50	25	3T	11	ST-SC0256	ST-WRT08		
		26-160-11-25-3T-C	●	26	160	40	25	3T	11	ST-SC0256	ST-WRT08		
		26-200-11-25-3T-C	●	26	200	50	25	3T	11	ST-SC0256	ST-WRT08		
		32-160-11-32-4T-C	●	32	160	40	32	4T	11	ST-SC0256	ST-WRT08		
		33-160-11-32-4T-C	●	33	160	40	32	4T	11	ST-SC0256	ST-WRT08		
		33-200-11-32-4T-C	●	33	200	50	32	4T	11	ST-SC0256	ST-WRT08		

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

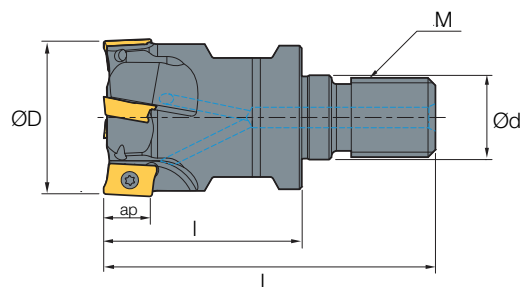
SPARE PARTS

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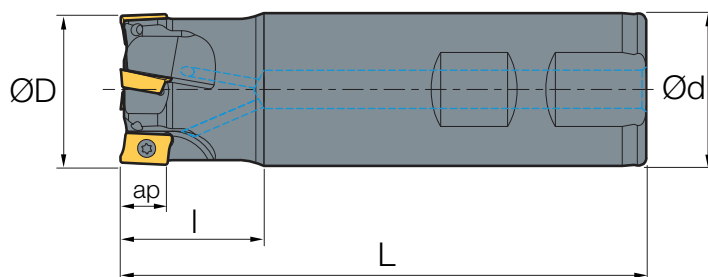
AP 11

[illegible]

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MSAP

AP□□16



AP□□	DESCRIPTION		STOCK	DIMENSIONS									
				D	L	l	d	Z	ap				
AP□□16	MSAP	25-120-16-25-2T	●	25	120	30	25	2T	16	ST-SC0256	ST-WRT08		
		25-150-16-25-2T	●	25	150	40	25	2T	16	ST-SC0256	ST-WRT08		
		25-200-16-25-2T	●	25	200	50	25	2T	16	ST-SC0256	ST-WRT08		
		25-250-16-25-2T	●	25	250	70	25	2T	16	ST-SC0256	ST-WRT08		
		26-120-16-25-2T	●	26	120	30	25	2T	16	ST-SC0256	ST-WRT08		
		26-150-16-25-2T	●	26	150	40	25	2T	16	ST-SC0256	ST-WRT08		
		26-200-16-25-2T	●	26	200	50	25	2T	16	ST-SC0256	ST-WRT08		
		30-150-16-25-3T	●	30	150	40	25	3T	16	ST-SC0256	ST-WRT08		
		30-200-16-25-3T	●	30	200	50	25	3T	16	ST-SC0256	ST-WRT08		
		32-120-16-25-3T	●	32	120	30	25	3T	16	ST-SC0256	ST-WRT08		
		32-120-16-32-3T	●	32	120	30	32	3T	16	ST-SC0256	ST-WRT08		
		32-150-16-25-3T	●	32	150	50	25	3T	16	ST-SC0256	ST-WRT08		
		32-200-16-32-3T	●	32	200	50	32	3T	16	ST-SC0256	ST-WRT08		
		32-250-16-32-3T	●	32	250	70	32	3T	16	ST-SC0256	ST-WRT08		
		32-300-16-32-3T	●	32	300	70	32	3T	16	ST-SC0256	ST-WRT08		
		34-120-16-32-3T	●	34	120	30	32	3T	16	ST-SC0256	ST-WRT08		
		34-150-16-32-3T	●	34	150	50	32	3T	16	ST-SC0256	ST-WRT08		
		34-200-16-32-3T	●	34	200	50	32	3T	16	ST-SC0256	ST-WRT08		
		35-120-16-32-3T	●	35	120	30	32	3T	16	ST-SC0256	ST-WRT08		
		35-150-16-32-3T	●	35	150	50	32	3T	16	ST-SC0256	ST-WRT08		
		35-200-16-32-3T	●	35	200	50	32	3T	16	ST-SC0256	ST-WRT08		
		36-120-16-32-3T	●	36	120	30	32	3T	16	ST-SC0256	ST-WRT08		
		38-120-16-32-4T	●	38	120	30	32	4T	16	ST-SC0256	ST-WRT08		
		40-120-16-32-4T	●	40	120	30	32	4T	16	ST-SC0256	ST-WRT08		
		40-150-16-25-4T	●	40	150	50	25	4T	16	ST-SC0256	ST-WRT08		
		40-150-16-32-4T	●	40	150	50	32	4T	16	ST-SC0256	ST-WRT08		
		40-200-16-32-4T	●	40	200	50	32	4T	16	ST-SC0256	ST-WRT08		

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TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

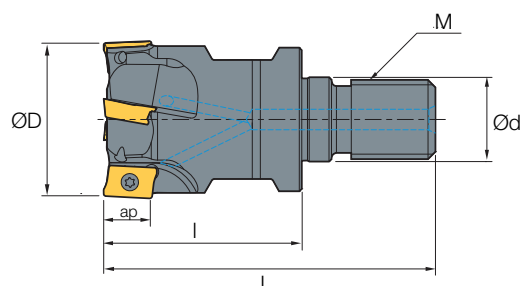
DRILLS

SPARE PARTS

INDEX

MMAP

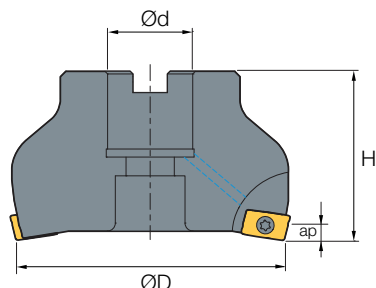
AP□□16



AP□□	DESCRIPTION		STOCK	DIMENSIONS												
				D	L	I	d	Z	ap	M						
AP□□16	MMAP	25-M12-16-2T-C	●	25	60	43	12	2T	16	12	ST-SC0257	ST-WRT08				
		32-M16-16-3T-C	●	32	60	43	16	3T	16	16	ST-SC0257	ST-WRT08				
		40-M16-16-4T-C	●	40	60	43	16	4T	16	16	ST-SC0257	ST-WRT08				
		42-M16-16-4T-C	●	42	60	43	16	4T	16	16	ST-SC0257	ST-WRT08				

MFAP

AP□□16

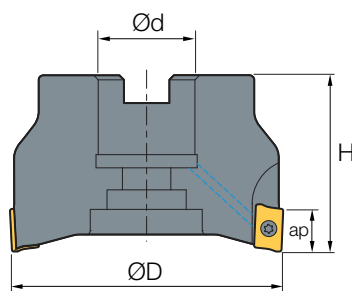


AP□□	DESCRIPTION		STOCK	DIMENSIONS												
				D	H	d	ap	Z								
AP□□16	MFAP	75063R-16-4T	●	63	40	22	16	4T	ST-SC0257	ST-WRT08						
		75063R-16-4T-C	●	63	40	22	16	4T	ST-SC0257	ST-WRT08						
		75080R-16-6T	●	80	40	27	16	6T	ST-SC0257	ST-WRT08						
		75080R-16-6T-C	●	80	40	27	16	6T								
		75100R-16-7T	●	100	50	32	16	7T								
		75100R-16-7T-C	●	100	50	32	16	7T								

carbide

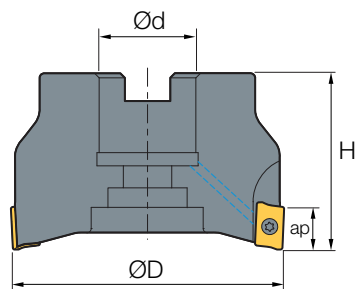
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AP 16

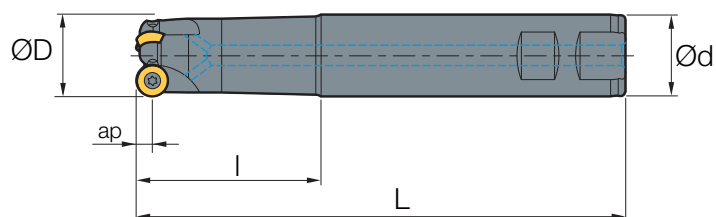
[illegible]

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AP 17

[illegible]

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RD ☐ ☐[illegible]

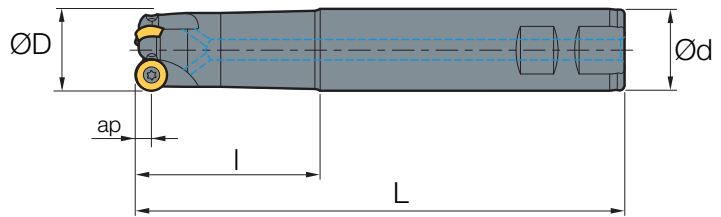
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</

MILLING

MILLING

MSRD

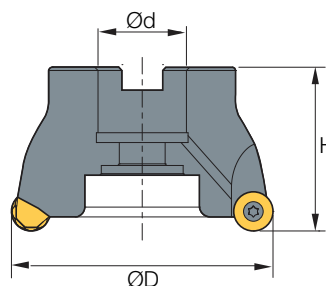
RD ☐ ☐[illegible]

carbide

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MFRD

RD□□



RD□□	DESCRIPTION		STOCK	DIMENSIONS					 			
				D	H	d	ap	Z				
RD□□10	MFRD	040R-10-4T	●	40	40	16	5	4T	ST-SC3509	ST-WRT15		
		040R-10-4T-C	●	40	40	16	5	4T	ST-SC3509	ST-WRT15		
		050R-10-5T	●	50	50	22	5	5T	ST-SC3509	ST-WRT15		
		050R-10-5T-C	●	50	50	22	5	5T	ST-SC3509	ST-WRT15		
		063R-10-6T	●	63	50	27	5	6T	ST-SC3509	ST-WRT15		
		063R-10-6T-C	●	63	50	27	5	6T	ST-SC3509	ST-WRT15		
		080R-10-7T	●	80	50	27	5	7T	ST-SC3509	ST-WRT15		
		080R-10-7T-C	●	80	50	27	5	7T	ST-SC3509	ST-WRT15		
		100R-10-8T	●	100	50	32	5	8T	ST-SC3509	ST-WRT15		
		100R-10-8T-C	●	100	50	32	5	8T	ST-SC3509	ST-WRT15		
		125R-10-9T	●	125	63	40	5	9T	ST-SC3509	ST-WRT15		
RD□□12	MFRD	040R-12-4T	●	40	40	16	6	4T	ST-SC3509	ST-WRT15		
		040R-12-4T-C	●	40	40	16	6	4T	ST-SC3509	ST-WRT15		
		050R-12-5T	●	50	50	22	6	5T	ST-SC3509	ST-WRT15		
		050R-12-5T-C	●	50	50	22	6	5T	ST-SC3509	ST-WRT15		
		063R-12-6T	●	63	50	27	6	6T	ST-SC3509	ST-WRT15		
		063R-12-6T-C	●	63	50	27	6	6T	ST-SC3509	ST-WRT15		
		080R-12-7T	●	80	50	27	6	7T	ST-SC3509	ST-WRT15		
		080R-12-7T-C	●	80	50	27	6	7T	ST-SC3509	ST-WRT15		
		100R-12-8T	●	100	50	32	6	8T	ST-SC3509	ST-WRT15		
		100R-12-8T-C	●	125	50	32	6	8T	ST-SC3509	ST-WRT15		
		125R-12-9T	●	125	63	40	6	9T	ST-SC3509	ST-WRT15		

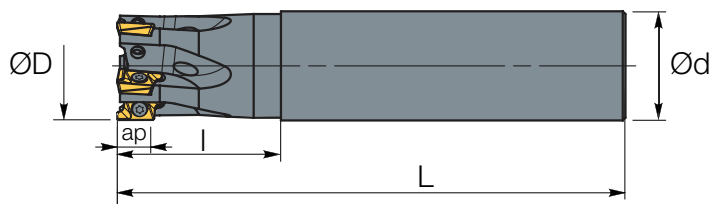
carbide



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MSRT

RT□□



RT□□	DESCRIPTION		STOCK	DIMENSIONS									
				D	L	I	d	Z	ap				
RT□□07	MSRT	10-120-07-10-2T	●	10	120	30	10	2T	07	ST-SC0204	ST-WRT06		
		12-120-07-12-2T	●	12	120	30	12	2T	07	ST-SC0204	ST-WRT06		
		14-120-07-12-2T	●	14	120	30	12	2T	07	ST-SC0204	ST-WRT06		
RT□□10	MSRT	16-120-10-16-2T	●	16	120	30	16	2T	10	ST-SC02507	ST-WRT08		
		16-150-10-16-2T	●	16	150	40	16	2T	10	ST-SC02507	ST-WRT08		
		16-200-10-16-2T	●	16	200	50	16	2T	10	ST-SC02507	ST-WRT08		
		17-150-10-16-2T	●	17	150	40	16	2T	10	ST-SC02507	ST-WRT08		
		18-120-10-16-2T	●	18	120	30	16	2T	10	ST-SC02507	ST-WRT08		
		20-120-10-20-3T	●	20	120	30	20	2T	10	ST-SC02507	ST-WRT08		
		20-150-10-20-3T	●	20	150	40	20	3T	10	ST-SC02507	ST-WRT08		
		20-200-10-20-3T	●	20	200	50	20	3T	10	ST-SC02507	ST-WRT08		
		22-120-10-20-3T	●	22	120	30	20	3T	10	ST-SC02507	ST-WRT08		
		22-150-10-20-3T	●	22	150	40	20	3T	10	ST-SC02507	ST-WRT08		
		22-200-10-20-3T	●	22	200	50	20	3T	10	ST-SC02507	ST-WRT08		
		25-120-10-25-4T	●	25	120	30	25	4T	10	ST-SC02507	ST-WRT08		
		25-150-10-25-4T	●	25	150	40	25	4T	10	ST-SC02507	ST-WRT08		
		25-200-10-25-4T	●	25	200	50	25	4T	10	ST-SC02507	ST-WRT08		
		32-120-10-32-5T	●	32	120	30	32	5T	10	ST-SC02507	ST-WRT08		
		32-150-10-32-5T	●	32	150	40	32	5T	10	ST-SC02507	ST-WRT08		
		32-200-10-32-5T	●	32	200	50	32	5T	10	ST-SC02507	ST-WRT08		

carbide

306

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

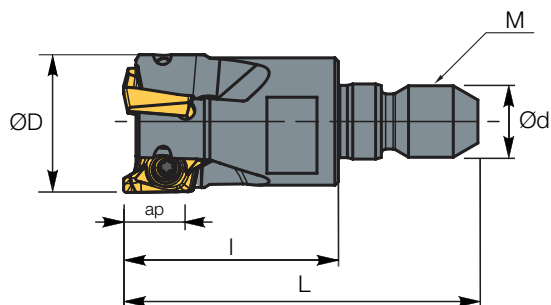
DRILLS

SPARE
PARTS

INDEX

MMRT

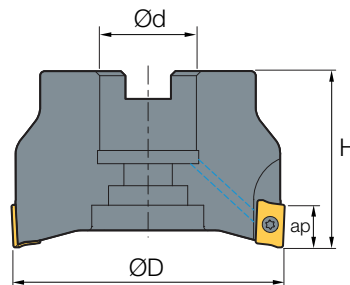
RT



RD	DESCRIPTION		STOCK	DIMENSIONS							ST-SC0257	ST-WRT08		
				D	L	I	d	Z	ap	M				
RT	MMRT	25-M12-10-4T-C	●	25	52	23	25	4T	10	12	ST-SC0257	ST-WRT08		
		32-M16-10-5T-C	●	32	64	30	32	5T	10	16	ST-SC0257	ST-WRT08		
		42-M16-10-6T-C	●	42	67	35	42	6T	10	16	ST-SC0257	ST-WRT08		

MFRT

RT

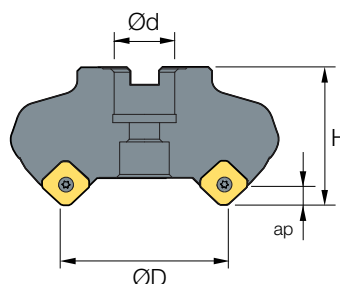


RT	DESCRIPTION		STOCK	DIMENSIONS					ST-SC0257	ST-WRT08		
				D	H	d	ap	Z				
RT	MFRT	90040R-10-6T	●	40	40	16	10	6T	ST-SC0257	ST-WRT08		
		90040R-10-6T-C	●	40	40	16	10	6T	ST-SC0257	ST-WRT08		
		90050R-10-7T	●	50	40	22	10	7T	ST-SC0257	ST-WRT08		
		90050R-10-7T-C	●	50	40	22	10	7T	ST-SC0257	ST-WRT08		
		90063R-10-9T	●	63	40	27	10	9T	ST-SC0257	ST-WRT08		
		90063R-10-9T-C	●	63	40	27	10	9T	ST-SC0257	ST-WRT08		

carbide

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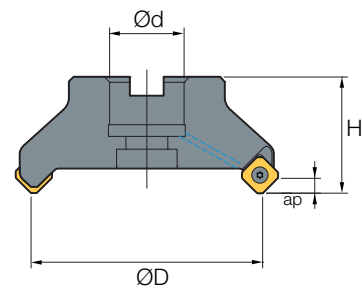
SE0012

[illegible]

307

MFSN

SN□□12

[illegible]

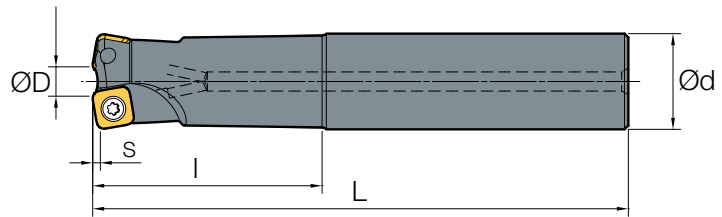
carbide



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MSSO

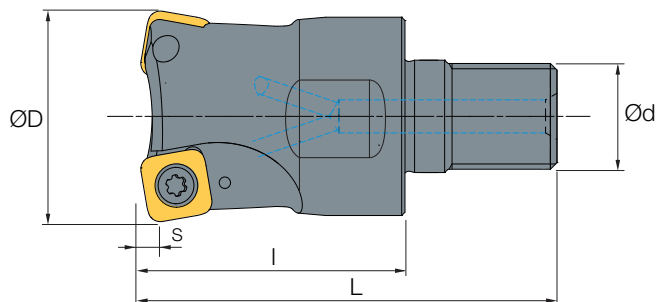
SOMW



SO		DESCRIPTION	STOCK	DIMENSIONS						PROGRAM RADIUS	MAX. ANGLE FOR RAMPING		
				D	L	I	d	Z	S				
SOMW08	MSSO	20-160-08-20-2T	●	20	160	40	20	2T	2	2,5	2°30'	ST-SC0309	ST-WRT15
		20-200-08-20-2T	●	20	200	50	20	2T	2	2,5	2°30'	ST-SC0309	ST-WRT15
		25-160-08-25-3T	●	25	160	40	25	3T	2	2,5	1°30'	ST-SC0309	ST-WRT15
		25-200-08-25-3T	●	25	200	50	25	3T	2	2,5	1°30'	ST-SC0309	ST-WRT15
		32-160-08-32-4T	●	32	160	40	32	4T	2	2,5	1°00'	ST-SC0309	ST-WRT15
		32-200-08-32-4T	●	32	200	50	32	4T	2	2,5	1°00'	ST-SC0309	ST-WRT15

MMSO

SOMW



SO 	DESCRIPTION		STOCK	DIMENSIONS							PROGRAM RADIUS	MAX. ANGLE FOR RAMPING	 ← 	
				D	L	I	d	Z	S	M				
SOMW08	MMSO	20-M10-08-2T-C	●	20	52	30	12,5	2T	2	10	2,5	2°30'	ST-SC0309	ST-WRT15
		25-M12-08-3T-C	●	25	52	35	12,5	3T	2	12	2,5	1°30'	ST-SC0309	ST-WRT15
		32-M16-08-4T-C	●	32	64	43	17	4T	2	16	2,5	1°00'	ST-SC0309	ST-WRT15
		40-M16-08-5T-C	●	40	67	43	17	5T	2	16	2,5	0°50'	ST-SC0309	ST-WRT15
		42-M16-08-5T-C	●	42	67	43	17	5T	2	16	2,5	0°40'	ST-SC0309	ST-WRT15

carbide

309

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

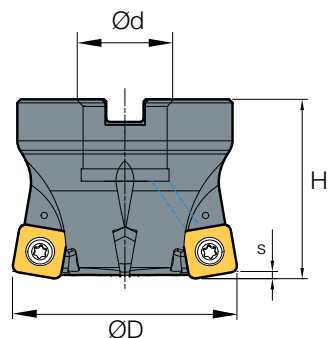
DRILLS

SPARE
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MFSO

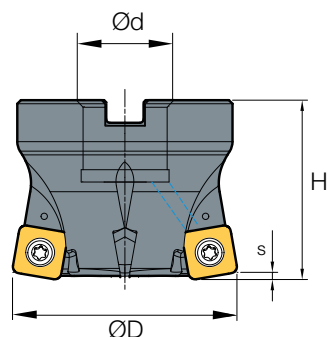
SOMW



SO□□	DESCRIPTION		STOCK	DIMENSIONS					PROGRAM RADIUS	MAX. ANGLE FOR RAMPING		
				D	H	d	S	Z				
SOMW08	MFSO	040R-08-5T-C	●	40	40	16	2	5T	2,5	0°50'	ST-SC0309	ST-WRT15
		050R-08-6T-C	●	50	40	22	2	6T	3,5	0°40'	ST-SC0309	ST-WRT15
		063R-08-7T-C	●	63	40	22	2	7T	3,5	0°30'	ST-SC0309	ST-WRT15

MFSP

SPMW

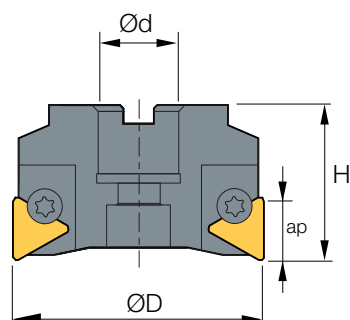


SO□□	DESCRIPTION		STOCK	DIMENSIONS					PROGRAM RADIUS	MAX. ANGLE FOR RAMPING		
				D	H	d	S	Z				
SPMW12	MFSP	050R-12-4T-C	●	50	40	22	3	4T	4,0	1°00'	ST-SC0410	ST-WRT15
		063R-12-6T-C	●	63	40	22	3	6T	4,5	0°40'	ST-SC0410	ST-WRT15

carbide

309

MFTP

TP ☐ ☐[illegible]

311

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

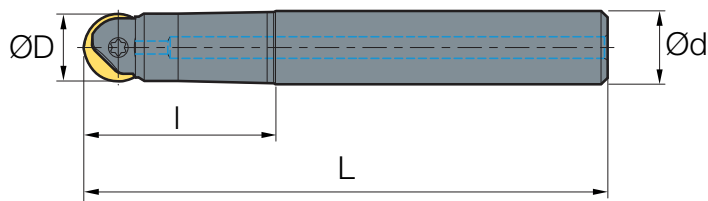
DRILLS

SPARE
PARTS

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MSTW

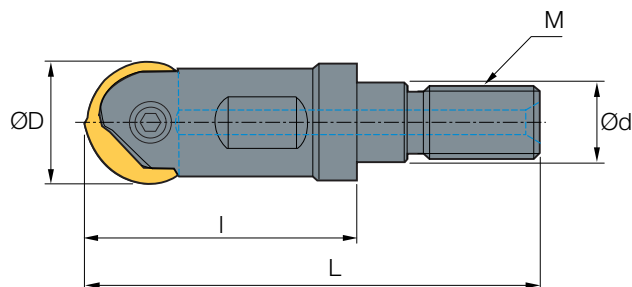
TW □□



TW□□	DESCRIPTION		STOCK	DIMENSIONS								
				D	L	I	d	Z				
TW08	MSTW	08-110-D10	●	08	110	25	08	1T	ST-TC170	ST-WRT08		
TW10	MSTW	10-130-D12	●	10	130	30	10	1T	ST-TC172	ST-WRT15		
TW12	MSTW	12-130-D12	●	12	130	32	12	1T	ST-TC174	ST-WRT20		
TW16	MSTW	16-175-D16	●	16	175	60	16	1T	ST-TC176	ST-WRT20		
TW20	MSTW	20-200-D20	●	20	200	100	20	1T	ST-TC178	ST-WRT20		
TW25	MSTW	25-200-D25	●	25	200	100	25	1T	ST-TC181	ST-WR0030		

MMTW

TW □□

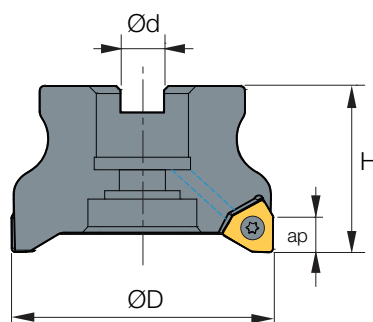


TW□□	DESCRIPTION		STOCK	DIMENSIONS									
				D	L	I	d	Z	M				
TW16	MMTW	16-M08-16	●	16	52	30	10,5	1T	8	ST-TC176	ST-WRT20		
TW20	MMTW	20-M10-20	●	20	52	35	12,5	1T	10	ST-TC178	ST-WRT20		
TW25	MMTW	25-M12-25	●	25	64	43	17	1T	12	ST-TC181	ST-WR0030		

carbide

312

WNMU

[illegible]

313

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE
PARTS

INDEX

MAT

Steel Shaft



			STOCK	DIMENSIONS								
				D	d	L	I	M				
	MAT	M10-120-S18/20	●	18	20	120	60	10				
		M10-170-S18/20	●	18	20	170	90	10				
		M12-160-S24/25	●	24	25	160	80	12				
		M12-200-S24/25	●	24	25	200	100	12				
		M12-250-S24/25	●	24	25	250	150	12				
		M16-160-S31/32	●	31	32	160	80	16				
		M16-200-S31/32	●	31	32	200	100	16				
		M16-250-S31/32	●	31	32	250	150	16				

MFT

Carbide Shaft



			STOCK	DIMENSIONS								
				D	d	L	I	M				
	MFT	08-08-100-M4	●	8	8	100	-	M4				
		10-10-080-M5	●	10	10	80	-	M5				
		10-10-100-M5	●	10	10	100	-	M5				
		10-10-100-M6	●	10	10	100	-	M6				
		10-10-150-M5	●	10	10	150	-	M5				
		12-12-100-M6	●	12	12	100	-	M6				
		12-12-150-M6	●	12	12	150	-	M6				
		12-12-200-M6	●	12	12	200	-	M6				

MFT

Carbide Shaft



□□	DESCRIPTION		STOCK	DIMENSIONS								
				D	d	L	I	M				
MFT	16-15-100-M8	●	16	15	100	50	M8					
	16-15-150-M8	●	16	15	150	50	M8					
	16-15-200-M8	●	16	15	200	50	M8					
	17-16-100-M8	●	16	16	100	-	M8					
	17-16-150-M8	●	16	16	150	-	M8					
	17-16-200-M8	●	16	16	200	-	M8					
	17-16-250-M8	●	16	16	250	-	M8					
	17-16-300-M8	●	16	16	300	-	M8					
	20-19-150-M10	●	20	19	150	50	M10					
	20-19-250-M10	●	20	19	250	100	M10					
	21-20-100-M10	●	20	20	100	-	M10					
	21-20-150-M10	●	20	20	150	-	M10					
	21-20-200-M10	●	20	20	200	-	M10					
	21-20-250-M10	●	20	20	250	-	M10					
	21-20-300-M10	●	20	20	300	-	M10					
	25-24-150-M12	●	25	24	150	50	M12					
	25-24-200-M12	●	25	24	200	50	M12					
	25-24-250-M12	●	25	24	250	100	M12					
	25-24-300-M12	●	25	24	300	100	M12					
	26-25-150-M12	●	25	25	150	-	M12					
	26-25-200-M12	●	25	25	200	-	M12					
	26-25-250-M12	●	25	25	250	-	M12					
	26-25-300-M12	●	25	25	300	-	M12					
	35-32-150-M16	●	35	32	150	50	M16					
	35-32-200-M16	●	35	32	200	50	M16					
	35-32-250-M16	●	35	32	250	100	M16					
	35-32-300-M16	●	35	32	300	100	M16					
	35-32-350-M16	●	35	32	350	150	M16					
	35-32-400-M16	●	35	32	400	200	M16					

TURNING

GROOVING

THREADING

MILLING

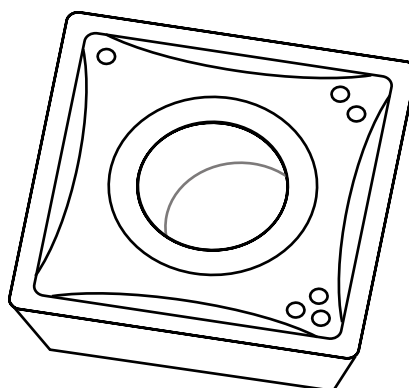
DRILLING

ENDMILLS

DRILLS

SPARE PARTS

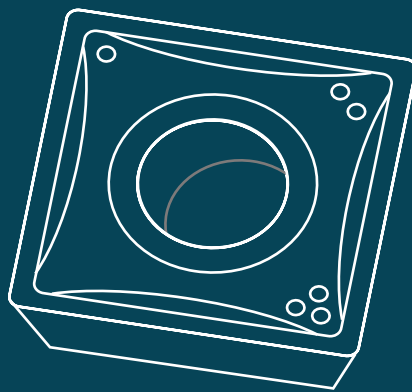
INDEX



DRILLING/

carbide /351
holders /355

DRILLING / **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																				
CARBIDE UNCOATED																				
CERMET UNCOATED																				

PS5960

PS7120

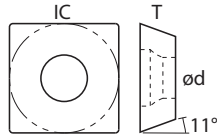
PS5960

PS7120

PS5960

POSITIVE 11°
with hole

SP □□



SP	0502	0602	07T3	0904	1104	1405
IC	5,56	6,00	7,94	9,80	11,50	14,30
T	2,38	2,38	3,97	4,30	4,76	5,56
Ød	2,50	2,80	2,80	4,10	4,40	5,50
holders	356	356	356	356	356	356

[illegible]

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE
PARTS

INDEX

POSITIVE 7°
with hole

WC



WC	0302	0402	0503	06T3	0804
IC	5,56	6,35	7,94	9,525	12,70
T	2,38	2,38	3,18	3,97	4,76
Ød	2,80	3,00	3,40	3,70	4,30
	363	363	363	363	363



DESCRIPTION

CARBIDE PVD

PS5960

PS7120

WCMX030208-S

WCMX040208-S

WCMX050308-S

WCMX06T308-S

WCMX080412-S

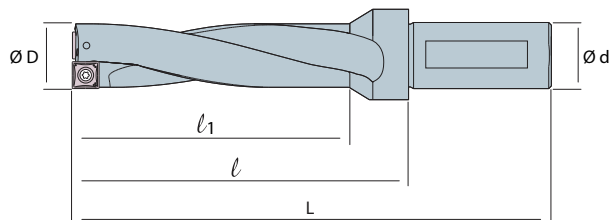
DRILLING / holders



SS2D

2xD

SP □□

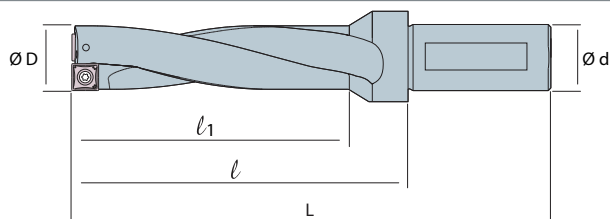


SP□□	DESCRIPTION		STOCK	DIMENSIONS					 		
				ØD	Ød	L	I	l ₁			
SPMG0502	SS2D	125-05	●	12.5	20	107	37	44	ST-SC0206	ST-WRT06	
		130-05	●	13	20	107	39	44	ST-SC0206	ST-WRT06	
		135-05	●	13.5	20	110	40.5	46	ST-SC0206	ST-WRT06	
		140-05	●	14	20	110	42	46	ST-SC0206	ST-WRT06	
		145-05	●	14.5	20	113	43.5	49	ST-SC0206	ST-WRT06	
		150-05	●	15	20	113	45	49	ST-SC0206	ST-WRT06	
SPMG0602	SS2D	155-06	●	15.5	20	124	46.5	52	ST-SC0226	ST-WRT07	
		160-06	●	16	25	124	48	52	ST-SC0226	ST-WRT07	
		165-06	●	16.5	25	127	49.5	54	ST-SC0226	ST-WRT07	
		170-06	●	17	25	127	51	54	ST-SC0226	ST-WRT07	
		175-06	●	17.5	25	130	52.5	57	ST-SC0226	ST-WRT07	
		180-06	●	18	25	130	54	57	ST-SC0226	ST-WRT07	
		185-06	●	18.5	25	134	55.5	59	ST-SC0226	ST-WRT07	
		190-06	●	19	25	134	57	59	ST-SC0226	ST-WRT07	
		195-06	●	19.5	25	139	58.5	63	ST-SC0226	ST-WRT07	
		200-06	●	20	25	139	60	63	ST-SC0226	ST-WRT07	
		205-06	●	20.5	25	142	61.5	65	ST-SC0226	ST-WRT07	
		210-06	●	21	25	142	63	65	ST-SC0226	ST-WRT07	
		215-06	●	21.5	25	145	64.5	67	ST-SC0257	ST-WRT07	
		220-07	●	22	25	145	66	67	ST-SC0257	ST-WRT08	
SPMG07T3		225-07	●	22.5	25	150	67.5	71	ST-SC0257	ST-WRT08	
		230-07	●	23	25	150	69	71	ST-SC0257	ST-WRT08	
		235-07	●	23.5	25	154	70.5	74	ST-SC0257	ST-WRT08	
		240-07	●	24	25	158	72	74	ST-SC0257	ST-WRT08	
		245-07	●	24.5	25	158	73.5	77	ST-SC0257	ST-WRT08	
		250-07	●	25	25	161	75	77	ST-SC0257	ST-WRT08	
		255-07	●	25.5	25	161	76.5	79	ST-SC0257	ST-WRT08	
		260-07	●	26	25	164	78	79	ST-SC0257	ST-WRT08	

SS2D

2xD

SP □□



SP□□	DESCRIPTION		STOCK	DIMENSIONS								
				ØD	Ød	L	I	I ₁				
SPMG07T3	SS2D	265-07	●	26.5	25	137	53	81	ST-SC0257	ST-WRT08		
		270-07	●	27	25	137	54	81	ST-SC0257	ST-WRT08		
		275-07	●	27.5	25	140	55	84	ST-SC0257	ST-WRT08		
SPMG0904	SS2D	280-09	●	28	25	140	56	84	ST-SC3511	ST-WRT15		
		285-09	●	28.5	25	142	57	86	ST-SC3511	ST-WRT15		
		290-09	●	29	25	142	58	86	ST-SC3511	ST-WRT15		
		295-09	●	29.5	25	147	59	91	ST-SC3511	ST-WRT15		
		300-09	●	30	32	151	60	91	ST-SC3511	ST-WRT15		
		310-09	●	31	32	154	62	94	ST-SC3511	ST-WRT15		
		320-09	●	32	32	156	64	96	ST-SC3511	ST-WRT15		
		330-09	●	33	32	159	66	99	ST-SC3511	ST-WRT15		
SPMG1104	SS2D	340-11	●	34	32	161	68	101	ST-SC0411	ST-WRT15		
		350-11	●	35	32	164	70	104	ST-SC0411	ST-WRT15		
		360-11	●	36	32	167	72	107	ST-SC0411	ST-WRT15		
		370-11	●	37	32	170	74	110	ST-SC0411	ST-WRT15		
		380-11	●	38	32	173	76	113	ST-SC0411	ST-WRT15		
		390-11	●	39	32	175	78	115	ST-SC0411	ST-WRT15		
		400-11	●	40	32	178	80	118	ST-SC0411	ST-WRT15		
		410-11	●	41	32	181	82	121	ST-SC0411	ST-WRT15		
SPMG1405	SS2D	420-14	●	42	32	183	84	123	ST-SC0511	ST-WRT20		
		430-14	●	43	32	186	86	126	ST-SC0511	ST-WRT20		
		440-14	●	44	32	188	88	128	ST-SC0511	ST-WRT20		
		450-14	●	45	40	202	90	132	ST-SC0511	ST-WRT20		
		460-14	●	46	40	205	92	135	ST-SC0511	ST-WRT20		
		470-14	●	47	40	207	94	137	ST-SC0511	ST-WRT20		
		480-14	●	48	40	210	96	140	ST-SC0511	ST-WRT20		
		490-14	●	49	40	212	98	142	ST-SC0511	ST-WRT20		
		500-14	●	50	40	215	140	145	ST-SC0511	ST-WRT20		

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

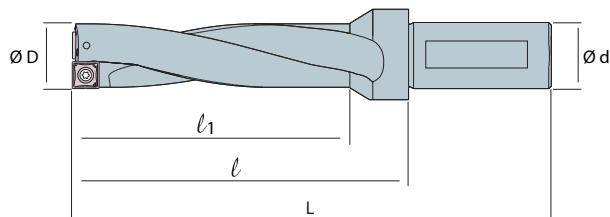
SPARE PARTS

INDEX

SS3D

3xD

SP □□

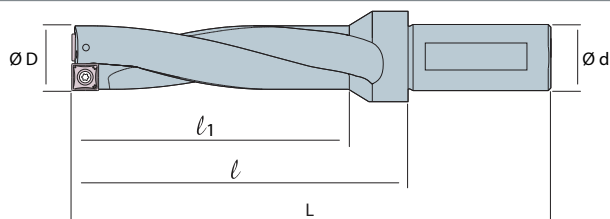


SP□□	DESCRIPTION		STOCK	DIMENSIONS								
				ØD	Ød	L	I	l ₁				
SPMG0502	SS3D	125-05	●	12.5	20	94	25	57	ST-SC0206	ST-WRT06		
		130-05	●	13	20	94	26	57	ST-SC0206	ST-WRT06		
		135-05	●	13.5	20	96	27	60	ST-SC0206	ST-WRT06		
		140-05	●	14	20	96	28	60	ST-SC0206	ST-WRT06		
		145-05	●	14.5	20	99	29	63	ST-SC0206	ST-WRT06		
		150-05	●	15	20	99	30	63	ST-SC0206	ST-WRT06		
SPMG0602	SS3D	155-06	●	15.5	20	102	31	68	ST-SC0226	ST-WRT07		
		160-06	●	16	25	108	32	68	ST-SC0226	ST-WRT07		
		165-06	●	16.5	25	110	33	71	ST-SC0226	ST-WRT07		
		170-06	●	17	25	110	34	71	ST-SC0226	ST-WRT07		
		175-06	●	17.5	25	113	35	75	ST-SC0226	ST-WRT07		
		180-06	●	18	25	113	36	75	ST-SC0226	ST-WRT07		
		185-06	●	18.5	25	115	37	78	ST-SC0226	ST-WRT07		
		190-06	●	19	25	115	38	78	ST-SC0226	ST-WRT07		
		195-06	●	19.5	25	119	39	83	ST-SC0226	ST-WRT07		
		200-06	●	20	25	119	40	83	ST-SC0226	ST-WRT07		
		205-06	●	20.5	25	121	41	86	ST-SC0226	ST-WRT07		
		210-06	●	21	25	121	42	86	ST-SC0226	ST-WRT07		
		215-06	●	21.5	25	125	43	89	ST-SC0257	ST-WRT07		
		220-07	●	22	25	123	44	89	ST-SC0257	ST-WRT08		
SPMG07T3		225-07	●	22.5	25	127	45	94	ST-SC0257	ST-WRT08		
		230-07	●	23	25	127	46	94	ST-SC0257	ST-WRT08		
		235-07	●	23.5	25	130	47	98	ST-SC0257	ST-WRT08		
		240-07	●	24	25	130	48	98	ST-SC0257	ST-WRT08		
		245-07	●	24.5	25	133	49	102	ST-SC0257	ST-WRT08		
		250-07	●	25	25	133	50	102	ST-SC0257	ST-WRT08		
		255-07	●	25.5	25	135	51	105	ST-SC0257	ST-WRT08		
		260-07	●	26	25	135	52	105	ST-SC0257	ST-WRT08		

SS3D

3xD

SP □□



SP□□	DESCRIPTION		STOCK	DIMENSIONS								
				ØD	Ød	L	I	I ₁				
SPMG07T3	SS3D	265-07	●	26.5	25	164	79.5	108	ST-SC0257	ST-WRT08		
		270-07	●	27	25	164	81	108	ST-SC0257	ST-WRT08		
		275-07	●	27.5	25	168	82.5	112	ST-SC0257	ST-WRT08		
SPMG0904	SS3D	280-09	●	28	25	168	84	112	ST-SC3511	ST-WRT15		
		285-09	●	28.5	25	171	85.5	115	ST-SC3511	ST-WRT15		
		290-09	●	29	25	171	87	115	ST-SC3511	ST-WRT15		
		295-09	●	29.5	25	177	88.5	121	ST-SC3511	ST-WRT15		
		300-09	●	30	32	181	90	121	ST-SC3511	ST-WRT15		
		310-09	●	31	32	185	93	125	ST-SC3511	ST-WRT15		
		320-09	●	32	32	188	96	128	ST-SC3511	ST-WRT15		
		330-09	●	33	32	192	99	132	ST-SC3511	ST-WRT15		
SPMG1104	SS3D	340-11	●	34	32	195	102	135	ST-SC0411	ST-WRT15		
		350-11	●	35	32	199	105	139	ST-SC0411	ST-WRT15		
		360-11	●	36	32	203	108	143	ST-SC0411	ST-WRT15		
		370-11	●	37	32	207	111	147	ST-SC0411	ST-WRT15		
		380-11	●	38	32	211	114	151	ST-SC0411	ST-WRT15		
		390-11	●	39	32	214	117	154	ST-SC0411	ST-WRT15		
		400-11	●	40	32	218	120	158	ST-SC0411	ST-WRT15		
		410-11	●	41	32	222	123	162	ST-SC0411	ST-WRT15		
SPMG1405	SS3D	420-14	●	42	32	225	126	165	ST-SC0511	ST-WRT20		
		430-14	●	43	32	229	129	169	ST-SC0511	ST-WRT20		
		440-14	●	44	32	232	132	172	ST-SC0511	ST-WRT20		
		450-14	●	45	40	247	135	177	ST-SC0511	ST-WRT20		
		460-14	●	46	40	251	138	181	ST-SC0511	ST-WRT20		
		470-14	●	47	40	254	141	184	ST-SC0511	ST-WRT20		
		480-14	●	48	40	258	144	188	ST-SC0511	ST-WRT20		
		490-14	●	49	40	261	147	191	ST-SC0511	ST-WRT20		
		500-14	●	50	40	265	150	195	ST-SC0511	ST-WRT20		
		510-14	●	51	40	268	153	198	ST-SC0511	ST-WRT20		
		520-14	●	52	40	271	156	201	ST-SC0511	ST-WRT20		
		530-14	●	53	40	274	159	204	ST-SC0511	ST-WRT20		
		540-14	●	54	40	277	162	207	ST-SC0511	ST-WRT20		

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

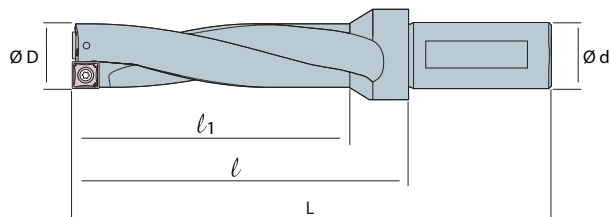
SPARE PARTS

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SS4D

4xD

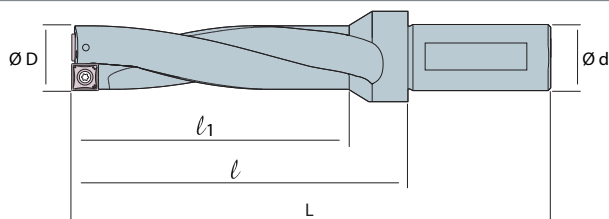
SP □□



SP□□	DESCRIPTION		STOCK	DIMENSIONS								
				ØD	Ød	L	I	l ₁				
SPMG0502	SS4D	125-05	●	12.5	20	120	52	70	ST-SC0206	ST-WRT06		
		130-05	●	13	20	120	52	70	ST-SC0206	ST-WRT06		
		135-05	●	13.5	20	120	52	70	ST-SC0206	ST-WRT06		
		140-05	●	14	20	124	56	76	ST-SC0206	ST-WRT06		
		145-05	●	14.5	20	124	56	76	ST-SC0206	ST-WRT06		
		150-05	●	15	20	128	60	80	ST-SC0206	ST-WRT06		
SPMG0602	SS4D	155-06	●	15.5	20	128	60	80	ST-SC0226	ST-WRT07		
		160-06	●	16	25	140	64	84	ST-SC0226	ST-WRT07		
		165-06	●	16.5	25	140	64	84	ST-SC0226	ST-WRT07		
		170-06	●	17	25	144	68	88	ST-SC0226	ST-WRT07		
		175-06	●	17.5	25	144	68	88	ST-SC0226	ST-WRT07		
		180-06	●	18	25	149	72	92	ST-SC0226	ST-WRT07		
		185-06	●	18.5	25	149	72	92	ST-SC0226	ST-WRT07		
		190-06	●	19	25	153	76	97	ST-SC0226	ST-WRT07		
		195-06	●	19.5	25	153	76	97	ST-SC0226	ST-WRT07		
		200-06	●	20	25	159	80	103	ST-SC0226	ST-WRT07		
		205-06	●	20.5	25	159	80	103	ST-SC0226	ST-WRT07		
		210-06	●	21	25	163	84	107	ST-SC0226	ST-WRT07		
		215-06	●	21.5	25	163	84	107	ST-SC0226	ST-WRT07		
		220-07	●	22	25	167	88	111	ST-SC0257	ST-WRT08		
SPMG07T3		225-07	●	22.5	25	167	88	111	ST-SC0257	ST-WRT08		
		230-07	●	23	25	173	92	117	ST-SC0257	ST-WRT08		
		235-07	●	23.5	25	173	92	117	ST-SC0257	ST-WRT08		
		240-07	●	24	25	178	96	122	ST-SC0257	ST-WRT08		
		245-07	●	24.5	25	178	96	122	ST-SC0257	ST-WRT08		
		250-07	●	25	25	183	100	127	ST-SC0257	ST-WRT08		
		255-07	●	25.5	25	183	100	127	ST-SC0257	ST-WRT08		
		260-07	●	26	25	187	104	131	ST-SC0257	ST-WRT08		
		265-07	●	26.5	25	187	104	131	ST-SC0257	ST-WRT08		
		270-07	●	27	25	191	108	135	ST-SC0257	ST-WRT08		
		275-07	●	27.5	25	191	108	135	ST-SC0257	ST-WRT08		

4xD

SP ☐ ☐

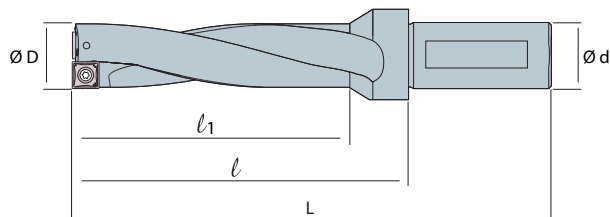


DRILLING

SS5D

5xD

SP □□

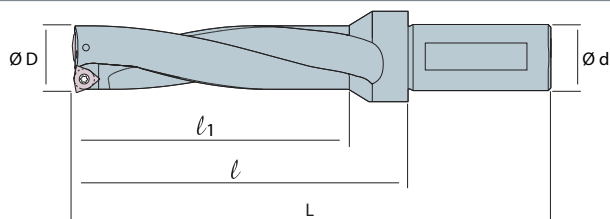


SP □□	DESCRIPTION		STOCK	DIMENSIONS								
				ØD	Ød	L	I	l ₁				
SPMG0502	SS5D	130-05	●	13	20	135	65	85	ST-SC0206	ST-WRT06		
		140-05	●	14	20	140	70	90	ST-SC0206	ST-WRT06		
		150-05	●	15	20	145	75	95	ST-SC0206	ST-WRT06		
SPMG0602	SS5D	160-06	●	16	25	156	80	100	ST-SC0226	ST-WRT07		
		170-06	●	17	25	161	85	105	ST-SC0226	ST-WRT07		
		180-06	●	18	25	167	90	111	ST-SC0226	ST-WRT07		
		190-06	●	19	25	172	95	116	ST-SC0226	ST-WRT07		
		200-06	●	20	25	179	100	123	ST-SC0226	ST-WRT07		
		210-06	●	21	25	184	105	128	ST-SC0226	ST-WRT07		
SPMG07T3	SS5D	220-07	●	22	25	189	110	133	ST-SC0257	ST-WRT08		
		230-07	●	23	25	193	115	137	ST-SC0257	ST-WRT08		
		240-07	●	24	25	198	120	142	ST-SC0257	ST-WRT08		
		250-07	●	25	25	203	125	147	ST-SC0257	ST-WRT08		
		260-07	●	26	25	207	130	151	ST-SC0257	ST-WRT08		
		270-07	●	27	25	212	135	156	ST-SC0257	ST-WRT08		
SPMG0904	SS5D	280-09	●	28	25	218	140	162	ST-SC3511	ST-WRT15		
		290-09	●	29	25	222	145	166	ST-SC3511	ST-WRT15		
		300-09	●	30	32	227	150	171	ST-SC3511	ST-WRT15		
		310-09		31	32	245	155	185	ST-SC3511	ST-WRT15		
		320-09		32	32	250	160	190	ST-SC3511	ST-WRT15		
		330-09		33	32	255	165	195	ST-SC3511	ST-WRT15		
SPMG1104	SS5D	340-11		34	32	260	170	200	ST-SC0411	ST-WRT15		
		350-11		35	32	265	175	205	ST-SC0411	ST-WRT15		
		360-11		36	32	270	180	210	ST-SC0411	ST-WRT15		
		370-11		37	32	275	185	215	ST-SC0411	ST-WRT15		
		380-11		38	32	280	190	220	ST-SC0411	ST-WRT15		
		390-11		39	32	285	195	225	ST-SC0411	ST-WRT15		
		400-11		40	32	290	200	230	ST-SC0411	ST-WRT15		

SW2D

2xD

WC□□



WC□□	DESCRIPTION		STOCK	DIMENSIONS								
				ØD	Ød	L	I	l ₁				
WCMX030208	SW2D	160-03	●	16	25	108	32	52	ST-SC0257	ST-WRT08		
		165-03	●	16.5	25	110	33	54	ST-SC0257	ST-WRT08		
		170-03	●	17	25	110	34	54	ST-SC0257	ST-WRT08		
		175-03	●	17.5	25	113	35	57	ST-SC0257	ST-WRT08		
		180-03	●	18	25	113	36	57	ST-SC0257	ST-WRT08		
		185-03	●	18.5	25	115	37	59	ST-SC0257	ST-WRT08		
		190-03	●	19	25	115	38	59	ST-SC0257	ST-WRT08		
		195-03	●	19.5	25	119	39	63	ST-SC0257	ST-WRT08		
WCMX040208	SW2D	200-04	●	20	25	119	40	63	ST-SC0257	ST-WRT08		
		205-04	●	20.5	25	121	41	65	ST-SC0257	ST-WRT08		
		210-04	●	21	25	121	42	65	ST-SC0257	ST-WRT08		
		215-04	●	21.5	25	123	43	67	ST-SC0257	ST-WRT08		
		220-04	●	22	25	123	44	67	ST-SC0257	ST-WRT08		
		225-04	●	22.5	25	127	45	71	ST-SC0257	ST-WRT08		
		230-04	●	23	25	127	46	71	ST-SC0257	ST-WRT08		
		235-04	●	23.5	25	130	47	74	ST-SC0257	ST-WRT08		
WCMX050308	SW2D	240-05	●	24	25	130	48	74	ST-SC0309	ST-WRT15		
		245-05	●	24.5	25	133	49	77	ST-SC0309	ST-WRT15		
		250-05	●	25	25	133	50	77	ST-SC0309	ST-WRT15		
		255-05	●	25.5	25	135	51	79	ST-SC0309	ST-WRT15		
		260-05	●	26	25	135	52	79	ST-SC0309	ST-WRT15		
		265-05	●	26.5	25	137	53	81	ST-SC0309	ST-WRT15		
		270-05	●	27	25	137	54	81	ST-SC0309	ST-WRT15		
		275-05	●	27.5	25	140	55	84	ST-SC0309	ST-WRT15		
		280-05	●	28	25	140	56	84	ST-SC0309	ST-WRT15		
		285-05	●	28.5	25	142	57	86	ST-SC0309	ST-WRT15		
		290-05	●	29	25	142	58	86	ST-SC0309	ST-WRT15		
		295-05	●	29.5	25	151	59	91	ST-SC0309	ST-WRT15		
WCMX06T308	SW2D	300-06	●	30	32	151	60	91	ST-SC3511	ST-WRT15		
		310-06	●	31	32	154	62	94	ST-SC3511	ST-WRT15		

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

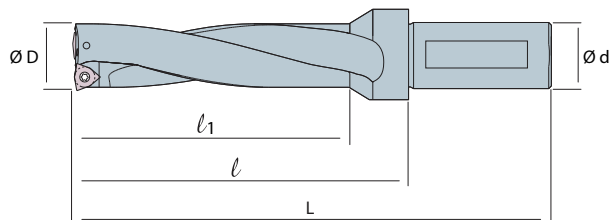
SPARE PARTS

INDEX

SW2D

2xD

WC□□

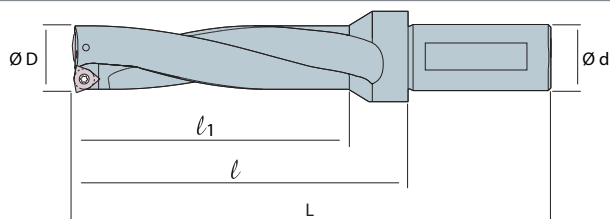


WC□□	DESCRIPTION		STOCK	DIMENSIONS								
				ØD	Ød	L	l	l ₁				
WCMX06T308	SW2D	320-06	●	32	32	156	64	96	ST-SC3511	ST-WRT15		
		330-06	●	33	32	159	66	99	ST-SC3511	ST-WRT15		
		340-06	●	34	32	161	68	101	ST-SC3511	ST-WRT15		
		350-06	●	35	32	164	70	104	ST-SC3511	ST-WRT15		
		360-06	●	36	32	167	72	107	ST-SC3511	ST-WRT15		
		370-06	●	37	32	170	74	110	ST-SC3511	ST-WRT15		
		380-06	●	38	32	173	76	113	ST-SC0411	ST-WRT15		
		390-06	●	39	32	175	78	115	ST-SC3511	ST-WRT15		
		400-06	●	40	32	178	80	118	ST-SC3511	ST-WRT15		
		410-06	●	41	32	181	82	121	ST-SC3511	ST-WRT15		
		420-06	●	42	32	183	84	123	ST-SC3511	ST-WRT15		
		430-06	●	43	32	186	86	126	ST-SC3511	ST-WRT15		
		440-06	●	44	32	188	88	128	ST-SC3511	ST-WRT15		
		450-08	●	45	40	202	90	132	ST-SC0411	ST-WRT15		
WCMX080412		460-08	●	46	40	205	92	135	ST-SC0411	ST-WRT15		
		470-08	●	47	40	207	94	137	ST-SC0411	ST-WRT15		
		480-08	●	48	40	210	96	140	ST-SC0411	ST-WRT15		
		490-08	●	49	40	212	98	142	ST-SC0411	ST-WRT15		
		500-08	●	50	40	215	100	145	ST-SC0411	ST-WRT15		
		510-08	●	51	40	217	102	147	ST-SC0411	ST-WRT15		
		520-08	●	52	40	220	104	150	ST-SC0411	ST-WRT15		
		530-08	●	53	40	222	106	152	ST-SC0411	ST-WRT15		
		540-08	●	54	40	225	108	155	ST-SC0411	ST-WRT15		
		550-08	●	55	40	227	110	157	ST-SC0411	ST-WRT15		
		560-08	●	56	40	230	112	160	ST-SC0411	ST-WRT15		
		570-08	●	57	40	232	114	162	ST-SC0411	ST-WRT15		
		580-08	●	58	40	235	116	165	ST-SC0411	ST-WRT15		
		590-08	●	59	40	237	118	167	ST-SC0411	ST-WRT15		
		600-08	●	60	40	240	120	170	ST-SC0411	ST-WRT15		

SW3D

3xD

WC□□



WC□□	DESCRIPTION		STOCK	DIMENSIONS								
				ØD	Ød	L	I	l ₁				
WCMX030208	SW3D	160-03	●	16	25	108	32	68	ST-SC0257	ST-WRT08		
		165-03	●	16.5	25	110	33	71	ST-SC0257	ST-WRT08		
		170-03	●	17	25	110	34	71	ST-SC0257	ST-WRT08		
		175-03	●	17.5	25	113	35	75	ST-SC0257	ST-WRT08		
		180-03	●	18	25	113	36	75	ST-SC0257	ST-WRT08		
		185-03	●	18.5	25	115	37	78	ST-SC0257	ST-WRT08		
		190-03	●	19	25	115	38	78	ST-SC0257	ST-WRT08		
		195-03	●	19.5	25	119	39	83	ST-SC0257	ST-WRT08		
WCMX040208	SW3D	200-04	●	20	25	119	40	83	ST-SC0257	ST-WRT08		
		205-04	●	20.5	25	121	41	86	ST-SC0257	ST-WRT08		
		210-04	●	21	25	121	42	86	ST-SC0257	ST-WRT08		
		215-04	●	21.5	25	123	43	89	ST-SC0257	ST-WRT08		
		220-04	●	22	25	123	44	89	ST-SC0257	ST-WRT08		
		225-04	●	22.5	25	127	45	94	ST-SC0257	ST-WRT08		
		230-04	●	23	25	127	46	94	ST-SC0257	ST-WRT08		
		235-04	●	23.5	25	130	47	98	ST-SC0309	ST-WRT15		
WCMX050308	SW3D	240-05	●	24	25	130	48	98	ST-SC0309	ST-WRT15		
		245-05	●	24.5	25	133	49	102	ST-SC0309	ST-WRT15		
		250-05	●	25	25	133	50	102	ST-SC0309	ST-WRT15		
		255-05	●	25.5	25	135	51	105	ST-SC0309	ST-WRT15		
		260-05	●	26	25	135	52	105	ST-SC0309	ST-WRT15		
		265-05	●	26.5	25	137	79.5	108	ST-SC0309	ST-WRT15		
		270-05	●	27	25	137	81	108	ST-SC0309	ST-WRT15		
		275-05	●	27.5	25	140	82.5	112	ST-SC0309	ST-WRT15		
		280-05	●	28	25	140	84	112	ST-SC0309	ST-WRT15		
		285-05	●	28.5	25	142	85.5	115	ST-SC0309	ST-WRT15		
		290-05	●	29	25	142	87	115	ST-SC0309	ST-WRT15		
		295-05	●	29.5	25	151	88.5	121	ST-SC3511	ST-WRT08		
WCMX06T308	SW3D	300-06	●	30	32	151	90	121	ST-SC3511	ST-WRT15		

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

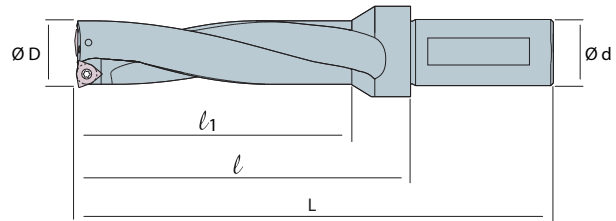
SPARE PARTS

INDEX

SW3D

3xD

WC□□

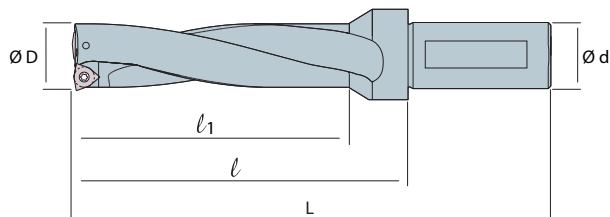


WC□□	DESCRIPTION		STOCK	DIMENSIONS								
				ØD	Ød	L	I	l ₁				
WCMX06T308	SW3D	310-06	●	31	32	154	93	125	ST-SC3511	ST-WRT15		
		320-06	●	32	32	156	96	128	ST-SC3511	ST-WRT15		
		330-06	●	33	32	159	99	132	ST-SC3511	ST-WRT15		
		340-06	●	34	32	161	102	135	ST-SC3511	ST-WRT15		
		350-06	●	35	32	164	105	139	ST-SC3511	ST-WRT15		
		360-06	●	36	32	167	108	143	ST-SC3511	ST-WRT15		
		370-06	●	37	32	170	111	147	ST-SC3511	ST-WRT15		
		380-06	●	38	32	173	114	151	ST-SC0411	ST-WRT15		
		390-06	●	39	32	175	117	154	ST-SC3511	ST-WRT15		
		400-06	●	40	32	178	120	158	ST-SC3511	ST-WRT15		
		410-06	●	41	32	181	123	162	ST-SC3511	ST-WRT15		
		420-06	●	42	32	183	126	165	ST-SC3511	ST-WRT15		
		430-06	●	43	32	186	129	169	ST-SC3511	ST-WRT15		
		440-06	●	44	32	188	132	172	ST-SC3511	ST-WRT15		
WCMX080412	SW3D	450-08	●	45	40	202	135	177	ST-SC0411	ST-WRT15		
		460-08	●	46	40	205	138	181	ST-SC0411	ST-WRT15		
		470-08	●	47	40	207	141	184	ST-SC0411	ST-WRT15		
		480-08	●	48	40	210	144	188	ST-SC0411	ST-WRT15		
		490-08	●	49	40	212	147	191	ST-SC0411	ST-WRT15		
		500-08	●	50	40	215	150	195	ST-SC0411	ST-WRT15		
		510-08	●	51	40	217	153	198	ST-SC0411	ST-WRT15		
		520-08	●	52	40	220	156	201	ST-SC0411	ST-WRT15		
		530-08	●	53	40	222	159	204	ST-SC0411	ST-WRT15		
		540-08	●	54	40	225	162	207	ST-SC0411	ST-WRT15		
		550-08	●	55	40	227	165	210	ST-SC0411	ST-WRT15		
		560-08	●	56	40	230	168	213	ST-SC0411	ST-WRT15		
		570-08	●	57	40	232	171	216	ST-SC0411	ST-WRT15		
		580-08	●	58	40	235	174	219	ST-SC0411	ST-WRT15		
		590-08	●	59	40	237	177	222	ST-SC0411	ST-WRT15		
		600-08	●	60	40	240	180	225	ST-SC0411	ST-WRT15		

SW4D

4xD

WC□□



WC□□	DESCRIPTION		STOCK	DIMENSIONS								
				ØD	Ød	L	I	l ₁				
WCMX030208	SW4D	160-03	●	16	25	140	64	84	ST-SC0257	ST-WRT08		
		165-03	●	16.5	25	140	64	84	ST-SC0257	ST-WRT08		
		170-03	●	17	25	144	68	88	ST-SC0257	ST-WRT08		
		175-03	●	17.5	25	144	68	88	ST-SC0257	ST-WRT08		
		180-03	●	18	25	149	72	92	ST-SC0257	ST-WRT08		
		185-03	●	18.5	25	149	72	92	ST-SC0257	ST-WRT08		
		190-03	●	19	25	153	76	97	ST-SC0257	ST-WRT08		
		195-03	●	19.5	25	153	76	97	ST-SC0257	ST-WRT08		
WCMX040208	SW4D	200-04	●	20	25	159	80	103	ST-SC0257	ST-WRT08		
		205-04	●	20.5	25	159	80	103	ST-SC0257	ST-WRT08		
		210-04	●	21	25	163	84	107	ST-SC0257	ST-WRT08		
		215-04	●	21.5	25	163	84	107	ST-SC0257	ST-WRT08		
		220-04	●	22	25	167	88	111	ST-SC0257	ST-WRT08		
		225-04	●	22.5	25	167	88	111	ST-SC0257	ST-WRT08		
		230-04	●	23	25	173	92	117	ST-SC0257	ST-WRT08		
		235-04	●	23.5	25	173	92	117	ST-SC0309	ST-WRT08		
WCMX050308	SW4D	240-05	●	24	25	178	96	122	ST-SC0309	ST-WRT08		
		245-05	●	24.5	25	178	96	122	ST-SC0309	ST-WRT08		
		250-05	●	25	25	183	100	127	ST-SC0309	ST-WRT08		
		255-05	●	25.5	25	183	100	127	ST-SC0309	ST-WRT08		
		260-05	●	26	25	187	104	131	ST-SC0309	ST-WRT08		
		265-05	●	26.5	25	187	104	131	ST-SC0309	ST-WRT08		
		270-05	●	27	25	191	108	135	ST-SC0309	ST-WRT08		
		275-05	●	27.5	25	191	108	135	ST-SC0309	ST-WRT08		
		280-05	●	28	25	196	112	140	ST-SC0309	ST-WRT08		
		285-05	●	28.5	25	196	112	140	ST-SC0309	ST-WRT08		
		290-05	●	29	25	200	116	144	ST-SC0309	ST-WRT08		
		295-05	●	29.5	25	200	116	144	ST-SC0309	ST-WRT08		

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

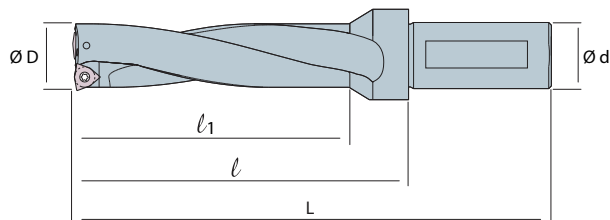
SPARE PARTS

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SW4D

4xD

WC□□

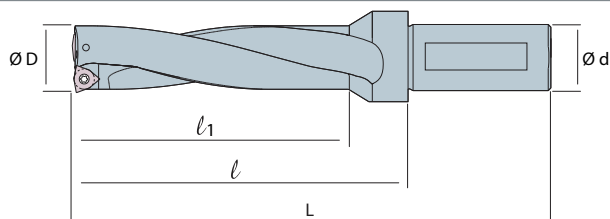


WC□□	DESCRIPTION		STOCK	DIMENSIONS								
				∅D	∅d	L	I	I ₁				
WCMX06T308	SW4D	300-06	●	30	32	211	120	151	ST-SC3511	ST-WRT15		
		310-06	●	31	32	216	124	156	ST-SC3511	ST-WRT15		
		320-06	●	32	32	220	128	160	ST-SC3511	ST-WRT15		
		330-06	●	33	32	225	132	165	ST-SC3511	ST-WRT15		
		335-06	●	33.5	32	227	134	167	ST-SC3511	ST-WRT15		
		340-06	●	34	32	229	136	169	ST-SC3511	ST-WRT15		
		350-06	●	35	32	234	140	174	ST-SC3511	ST-WRT15		
		360-06	●	36	32	239	144	179	ST-SC3511	ST-WRT15		
		370-06	●	37	32	244	148	184	ST-SC3511	ST-WRT15		
		380-06	●	38	32	251	152	189	ST-SC3511	ST-WRT15		
		385-06	●	38.5	32	253	154	191	ST-SC3511	ST-WRT15		
		390-06	●	39	32	258	156	193	ST-SC3511	ST-WRT15		
		400-06	●	40	32	263	160	198	ST-SC3511	ST-WRT15		
		410-06	●	41	32	267	164	203	ST-SC3511	ST-WRT15		
WCMX080412	SW4D	420-08	●	42	32	272	168	207	ST-SC3511	ST-WRT15		
		430-08	●	43	32	276	172	212	ST-SC3511	ST-WRT15		
		440-08	●	44	32	292	176	216	ST-SC0411	ST-WRT15		
		450-08	●	45	32	297	180	222	ST-SC0411	ST-WRT20		
		460-08	●	46	32	301	184	227	ST-SC0411	ST-WRT20		
		470-08	●	47	32	306	188	231	ST-SC0411	ST-WRT20		
		480-08	●	48	32	310	192	236	ST-SC0411	ST-WRT20		
		490-08	●	49	32	315	196	240	ST-SC0411	ST-WRT20		
		500-08	●	50	32	310	200	245	ST-SC0411	ST-WRT20		

SW5D

5xD

WC□□



WC□□	DESCRIPTION		STOCK	DIMENSIONS								
				ØD	Ød	L	I	l ₁				
WCMX030208	SW5D	160-03	●	16	25	156	80	100	ST-SC0257	ST-WRT08		
		170-03	●	17	25	161	85	105	ST-SC0257	ST-WRT08		
		180-03	●	18	25	167	90	111	ST-SC0257	ST-WRT08		
		190-03	●	19	25	172	95	116	ST-SC0257	ST-WRT08		
WCMX040208	SW5D	200-04	●	20	25	179	100	123	ST-SC0257	ST-WRT08		
		210-04	●	21	25	184	105	128	ST-SC0257	ST-WRT08		
		220-04	●	22	25	189	110	133	ST-SC0257	ST-WRT08		
		230-04	●	23	25	193	115	137	ST-SC0257	ST-WRT08		
WCMX050308	SW5D	240-05	●	24	25	198	120	142	ST-SC0309	ST-WRT08		
		250-05	●	25	25	203	125	147	ST-SC0309	ST-WRT08		
		260-05	●	26	25	207	130	151	ST-SC0309	ST-WRT08		
		270-05	●	27	25	212	135	156	ST-SC0309	ST-WRT08		
		280-05	●	28	25	218	140	162	ST-SC0309	ST-WRT08		
		290-05	●	29	25	222	145	166	ST-SC0309	ST-WRT08		
WCMX06T308	SW5D	300-06		30	32	227	150	171	ST-SC3511	ST-WRT15		
		310-06		31	32	245	155	185	ST-SC3511	ST-WRT15		
		320-06		32	32	250	160	190	ST-SC3511	ST-WRT15		
		330-06		33	32	255	165	195	ST-SC3511	ST-WRT15		
		340-06		34	32	260	170	200	ST-SC3511	ST-WRT15		
		350-06		35	32	265	175	205	ST-SC3511	ST-WRT15		
		360-06		36	32	270	180	210	ST-SC3511	ST-WRT15		
		370-06		37	32	275	185	215	ST-SC3511	ST-WRT15		
		380-06		38	32	280	190	220	ST-SC3511	ST-WRT15		
		390-06		39	32	285	195	225	ST-SC3511	ST-WRT15		
		400-06		40	32	290	200	230	ST-SC3511	ST-WRT15		

TURNING

GROOVING

THREADING

MILLING

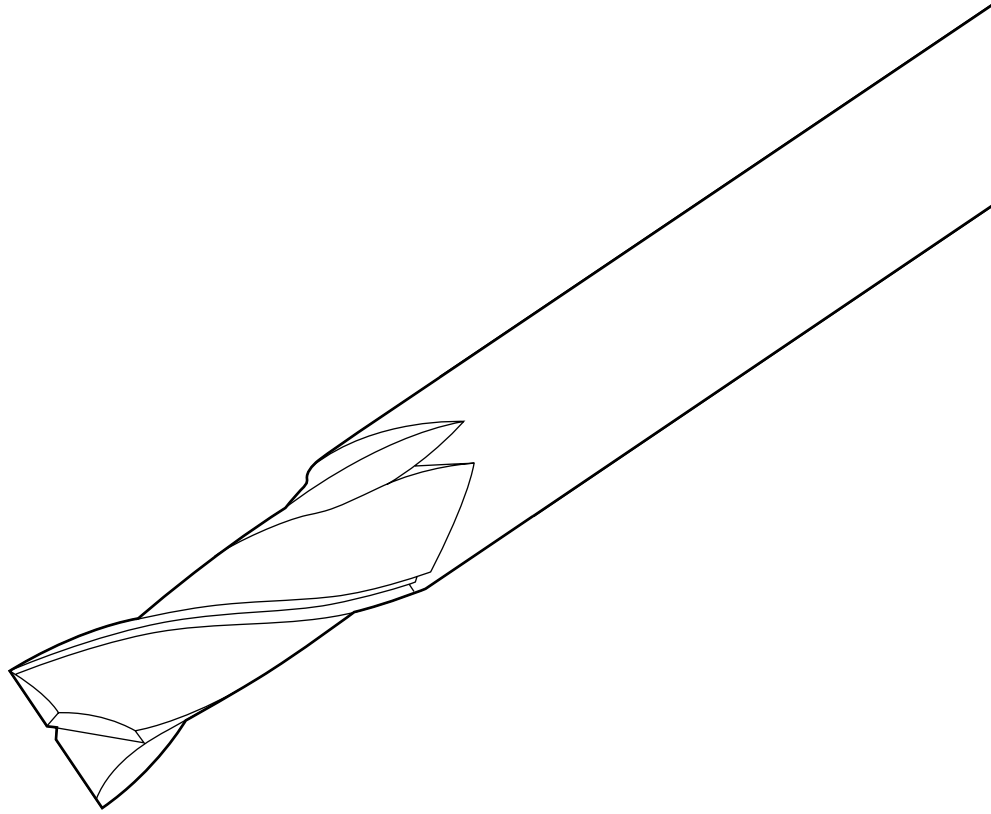
DRILLING

ENDMILLS

DRILLS

SPARE PARTS

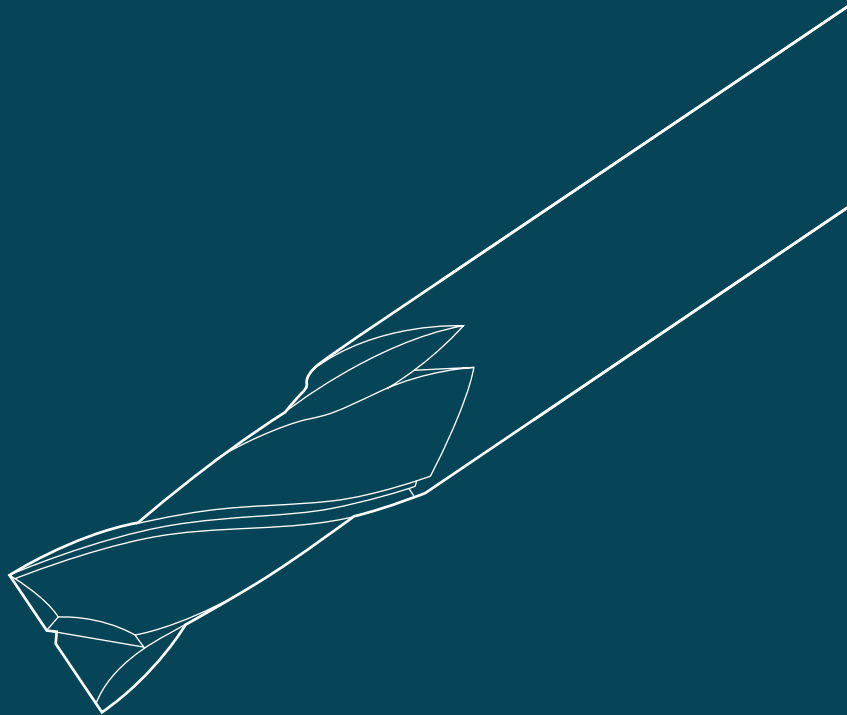
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ENDMILLS/

carbide /373

ENDMILLS / carbide



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MILLING

DRILLING

ENDMILLS

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D X C 4 080 - 050 - 08 - R1

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3

4

5

6

7

8

1 Endmill Series

D Dream

U Ultra

2 Hardness

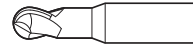
G General (HRC45)

X Extreme (HRC55)

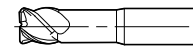
W Wrath (HRC68)

3 Type

B



C



F



4 Flute

2



3



4



6



5 Cutting Dia.

...

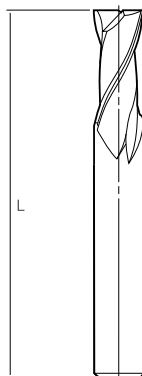
ØD



6 Length(mm)

...

L



7 Shaft Dia.

...

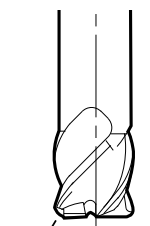
ØD



8 Radius

R..

r



PVD Turning Grades

MATERIAL	GRADE	Color	Operation
P/M/K	Dream General	DARK GRAY	General milling for steel up to 45HrC
			Ultra fine substrate, PVD coating
	Dream Extreme	COPPER	High cutting on hardened steel up to 55HrC
			Ultra fine substrate, PVD coating
	Dream Wraith	DARK BLUE	High cutting on hardened steel up to 68HrC
			Ultra fine substrate, PVD coating
N	Dream Aluminium	GRAY	General milling for aluminium and brass
			Ultra fine substrate

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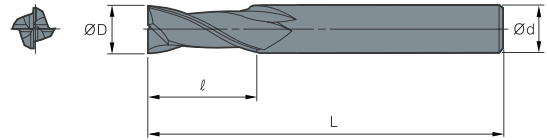
DRILLS

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DGF

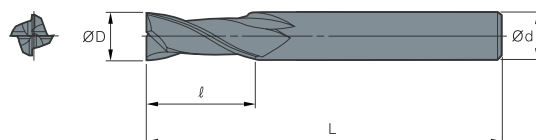
UP TO HRC45



	DESCRIPTION	STOCK	DIMENSIONS				
			ØD	Ød	l	L	r
DGF	4010-050-04	●	1	4	3	50	-
	4010-050-06	●	1	6	3	50	-
	4015-050-04	●	1,5	4	4	50	-
	4015-050-06	●	1,5	6	4	50	-
	4020-050-04	●	2	4	6	50	-
	4020-050-06	●	2	6	6	50	-
	4025-050-04	●	2,5	4	8	50	-
	4025-050-06	●	2,5	6	8	50	-
	4030-050-03	●	3	3	8	50	-
	4030-050-04	●	3	4	8	50	-
	4030-050-06	●	3	6	8	50	-
	4035-050-04	●	3,5	4	11	50	-
	4035-050-06	●	3,5	6	11	50	-
	4040-050-04	●	4	4	11	50	-
	4040-050-06	●	4	6	11	50	-
	4040-075-04	●	4	4	20	75	-
	4040-100-04	●	4	4	20	100	-
	4050-050-05	●	5	5	13	50	-
	4050-050-06	●	5	6	13	50	-
	4050-075-05	●	5	5	20	75	-
	4050-100-05	●	5	5	20	100	-
	4060-050-06	●	6	6	15	50	-
	4060-075-06	●	6	6	20	75	-

DGF

UP TO HRC45



	DESCRIPTION		STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DGF	4060-100-06	●	6	6	25	100	-
		4060-150-06	●	6	6	40	150	-
		4070-060-08	●	7	8	20	60	-
		4080-060-08	●	8	8	20	60	-
		4080-075-08	●	8	8	25	75	-
		4080-100-08	●	8	8	40	100	-
		4080-150-08	●	8	8	40	150	-
		4090-075-10	●	9	10	25	75	-
		4100-075-10	●	10	10	25	75	-
		4100-100-10	●	10	10	40	100	-
		4100-150-10	●	10	10	50	150	-
		4120-075-12	●	12	12	30	75	-
		4120-100-12	●	12	12	45	100	-
		4120-150-12	●	12	12	50	150	-
		4140-080-14	●	14	14	40	80	-
		4140-100-14	●	14	14	50	100	-
		4140-150-14	●	14	14	50	150	-
		4160-100-16	●	16	16	45	100	-
		4160-150-16	●	16	16	50	150	-
		4180-100-18	●	18	18	45	100	-
		4180-150-18	●	18	18	50	150	-
		4200-100-20	●	20	20	45	100	-
		4200-150-20	●	20	20	75	150	-

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

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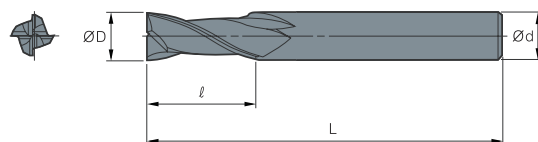
DRILLS

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DXF

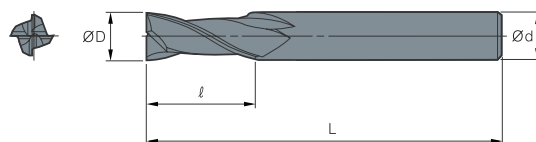
UP TO HRC55



	DESCRIPTION	STOCK	DIMENSIONS				
			ØD	Ød	l	L	r
DXF	4010-050-04	●	1	4	3	50	-
	4010-050-06	●	1	6	3	50	-
	4015-050-04	●	1,5	4	4	50	-
	4015-050-06	●	1,5	6	4	50	-
	4020-050-04	●	2	4	6	50	-
	4020-050-06	●	2	6	6	50	-
	4025-050-04	●	2,5	4	8	50	-
	4025-050-06	●	2,5	6	8	50	-
	4030-050-03	●	3	3	8	50	-
	4030-050-04	●	3	4	8	50	-
	4030-050-06	●	3	6	8	50	-
	4035-050-04	●	3,5	4	11	50	-
	4035-050-06	●	3,5	6	11	50	-
	4040-050-04	●	4	4	11	50	-
	4040-050-06	●	4	6	11	50	-
	4040-075-04	●	4	4	20	75	-
	4040-100-04	●	4	4	20	100	-
	4050-050-05	●	5	5	13	50	-
	4050-050-06	●	5	6	13	50	-
	4050-075-05	●	5	5	20	75	-
	4050-100-05	●	5	5	20	100	-
	4060-050-06	●	6	6	15	50	-
	4060-075-06	●	6	6	20	75	-

DXF

UP TO HRC55



	DESCRIPTION		STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DXF	4060-100-06	●	6	6	25	100	-
		4060-150-06	●	6	6	40	150	-
		4070-060-08	●	7	8	20	60	-
		4080-060-08	●	8	8	20	60	-
		4080-075-08	●	8	8	25	75	-
		4080-100-08	●	8	8	40	100	-
		4080-150-08	●	8	8	40	150	-
		4090-075-10	●	9	10	25	75	-
		4100-075-10	●	10	10	25	75	-
		4100-100-10	●	10	10	40	100	-
		4100-150-10	●	10	10	50	150	-
		4120-075-12	●	12	12	30	75	-
		4120-100-12	●	12	12	45	100	-
		4120-150-12	●	12	12	50	150	-
		4140-080-14	●	14	14	40	80	-
		4140-100-14	●	14	14	50	100	-
		4140-150-14	●	14	14	50	150	-
		4160-100-16	●	16	16	45	100	-
		4160-150-16	●	16	16	50	150	-
		4180-100-18	●	18	18	45	100	-
		4180-150-18	●	18	18	50	150	-
		4200-100-20	●	20	20	45	100	-
		4200-150-20	●	20	20	75	150	-

TURNING

GROOVING

THREADING

MILLING

DRILLING

ENDMILLS

DRILLS

SPARE PARTS

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TURNING

GROOVING

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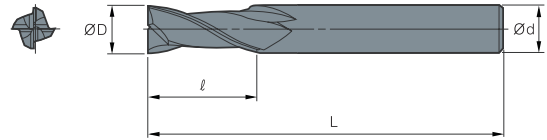
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DWF

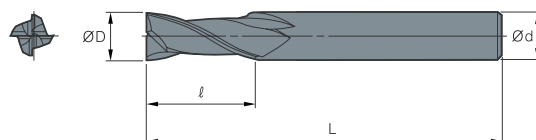
UP TO HRC68



		DESCRIPTION	STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DWF	4010-050-04	●	1	4	3	50	-
		4010-050-06	●	1	6	3	50	-
		4015-050-04	●	1,5	4	4	50	-
		4015-050-06	●	1,5	6	4	50	-
		4020-050-04	●	2	4	6	50	-
		4020-050-06	●	2	6	6	50	-
		4025-050-04	●	2,5	4	8	50	-
		4025-050-06	●	2,5	6	8	50	-
		4030-050-03	●	3	3	8	50	-
		4030-050-04	●	3	4	8	50	-
		4030-050-06	●	3	6	8	50	-
		4035-050-04	●	3,5	4	11	50	-
		4035-050-06	●	3,5	6	11	50	-
		4040-050-04	●	4	4	11	50	-
		4040-050-06	●	4	6	11	50	-
		4040-075-04	●	4	4	20	75	-
		4040-100-04	●	4	4	20	100	-
		4050-050-05	●	5	5	13	50	-
		4050-050-06	●	5	6	13	50	-
		4050-075-05	●	5	5	20	75	-
		4050-100-05	●	5	5	20	100	-
		4060-050-06	●	6	6	15	50	-
		4060-075-06	●	6	6	20	75	-

DWF

UP TO HRC68



	DESCRIPTION		STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DWF	4060-100-06	●	6	6	25	100	-
		4060-150-06	●	6	6	40	150	-
		4070-060-08	●	7	8	20	60	-
		4080-060-08	●	8	8	20	60	-
		4080-075-08	●	8	8	25	75	-
		4080-100-08	●	8	8	40	100	-
		4080-150-08	●	8	8	40	150	-
		4090-075-10	●	9	10	25	75	-
		4100-075-10	●	10	10	25	75	-
		4100-100-10	●	10	10	40	100	-
		4100-150-10	●	10	10	50	150	-
		4120-075-12	●	12	12	30	75	-
		4120-100-12	●	12	12	45	100	-
		4120-150-12	●	12	12	50	150	-
		4140-080-14	●	14	14	40	80	-
		4140-100-14	●	14	14	50	100	-
		4140-150-14	●	14	14	50	150	-
		4160-100-16	●	16	16	45	100	-
		4160-150-16	●	16	16	50	150	-
		4180-100-18	●	18	18	45	100	-
		4180-150-18	●	18	18	50	150	-
		4200-100-20	●	20	20	45	100	-
		4200-150-20	●	20	20	75	150	-

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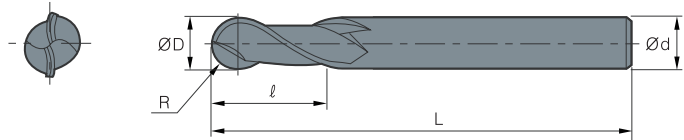
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DGB

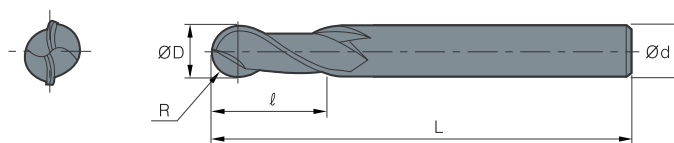
UP TO HRC45



		DESCRIPTION	STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DGB	2010-050-04	•	1	4	3	50	-
		2010-050-06	•	1	6	3	50	-
		2015-050-04	•	1,5	4	4	50	-
		2015-050-06	•	1,5	6	4	50	-
		2020-050-04	•	2	4	6	50	-
		2020-050-06	•	2	6	6	50	-
		2025-050-04	•	2,5	4	8	50	-
		2025-050-06	•	2,5	6	8	50	-
		2030-050-03	•	3	3	8	50	-
		2030-050-04	•	3	4	8	50	-
		2030-050-06	•	3	6	8	50	-
		2035-050-04	•	3,5	4	11	50	-
		2035-050-06	•	3,5	6	11	50	-
		2040-050-04	•	4	4	11	50	-
		2040-050-06	•	4	6	11	50	-
		2040-075-04	•	4	4	20	75	-
		2040-100-04	•	4	4	20	100	-
		2050-050-05	•	5	5	13	50	-
		2050-050-06	•	5	6	13	50	-
		2050-075-05	•	5	5	20	75	-
		2050-100-05	•	5	5	20	100	-
		2060-050-06	•	6	6	15	50	-
		2060-075-06	•	6	6	20	75	-

DGB

UP TO HRC45



	DESCRIPTION		STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DGB	2060-100-06	●	6	6	25	100	-
		2060-150-06	●	6	6	40	150	-
		2070-060-08	●	7	8	20	60	-
		2080-060-08	●	8	8	20	60	-
		2080-075-08	●	8	8	25	75	-
		2080-150-08	●	8	8	40	150	-
		2090-075-10	●	9	10	25	75	-
		2100-075-10	●	10	10	25	75	-
		2100-100-10	●	10	10	40	100	-
		2100-150-10	●	10	10	50	150	-
		2120-075-12	●	12	12	30	75	-
		2120-100-12	●	12	12	45	100	-
		2120-150-12	●	12	12	50	150	-
		2140-080-14	●	14	14	40	80	-
		2140-100-14	●	14	14	50	100	-
		2140-150-14	●	14	14	50	150	-
		2160-100-16	●	16	16	45	100	-
		2160-150-16	●	16	16	50	150	-
		2180-100-18	●	18	18	45	100	-
		2180-150-18	●	18	18	50	150	-
		2200-100-20	●	20	20	45	100	-
		2200-150-20	●	20	20	75	150	-

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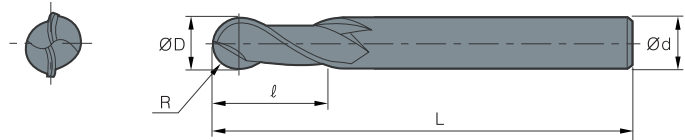
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DXB

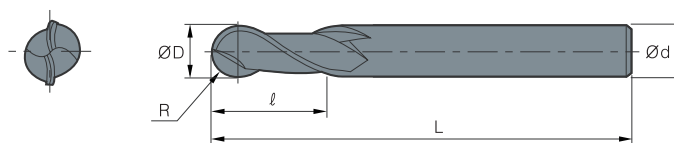
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	DESCRIPTION		STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
DXB		2010-050-04	•	1	4	3	50	-
		2010-050-06	•	1	6	3	50	-
		2015-050-04	•	1,5	4	4	50	-
		2015-050-06	•	1,5	6	4	50	-
		2020-050-04	•	2	4	6	50	-
		2020-050-06	•	2	6	6	50	-
		2025-050-04	•	2,5	4	8	50	-
		2025-050-06	•	2,5	6	8	50	-
		2030-050-03	•	3	3	8	50	-
		2030-050-04	•	3	4	8	50	-
		2030-050-06	•	3	6	8	50	-
		2035-050-04	•	3,5	4	11	50	-
		2035-050-06	•	3,5	6	11	50	-
		2040-050-04	•	4	4	11	50	-
		2040-050-06	•	4	6	11	50	-
		2040-075-04	•	4	4	20	75	-
		2040-100-04	•	4	4	20	100	-
		2050-050-05	•	5	5	13	50	-
		2050-050-06	•	5	6	13	50	-
		2050-075-05	•	5	5	20	75	-
		2050-100-05	•	5	5	20	100	-
		2060-050-06	•	6	6	15	50	-
		2060-075-06	•	6	6	20	75	-

DXB

UP TO HRC55



	DESCRIPTION		STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DXB	2060-100-06	●	6	6	25	100	-
		2060-150-06	●	6	6	40	150	-
		2070-060-08	●	7	8	20	60	-
		2080-060-08	●	8	8	20	60	-
		2080-075-08	●	8	8	25	75	-
		2080-150-08	●	8	8	40	150	-
		2090-075-10	●	9	10	25	75	-
		2100-075-10	●	10	10	25	75	-
		2100-100-10	●	10	10	40	100	-
		2100-150-10	●	10	10	50	150	-
		2120-075-12	●	12	12	30	75	-
		2120-100-12	●	12	12	45	100	-
		2120-150-12	●	12	12	50	150	-
		2140-080-14	●	14	14	40	80	-
		2140-100-14	●	14	14	50	100	-
		2140-150-14	●	14	14	50	150	-
		2160-100-16	●	16	16	45	100	-
		2160-150-16	●	16	16	50	150	-
		2180-100-18	●	18	18	45	100	-
		2180-150-18	●	18	18	50	150	-
		2200-100-20	●	20	20	45	100	-
		2200-150-20	●	20	20	75	150	-

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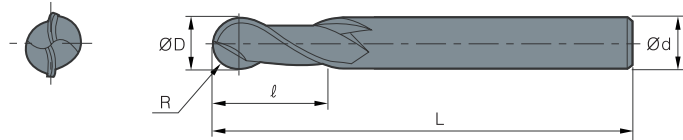
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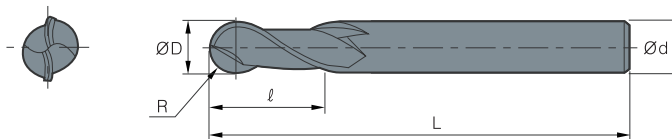
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	DESCRIPTION		STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DWB	2010-050-04	●	1	4	3	50	-
		2010-050-06	●	1	6	3	50	-
		2015-050-04	●	1,5	4	4	50	-
		2015-050-06	●	1,5	6	4	50	-
		2020-050-04	●	2	4	6	50	-
		2020-050-06	●	2	6	6	50	-
		2025-050-04	●	2,5	4	8	50	-
		2025-050-06	●	2,5	6	8	50	-
		2030-050-03	●	3	3	8	50	-
		2030-050-04	●	3	4	8	50	-
		2030-050-06	●	3	6	8	50	-
		2035-050-04	●	3,5	4	11	50	-
		2035-050-06	●	3,5	6	11	50	-
		2040-050-04	●	4	4	11	50	-
		2040-050-06	●	4	6	11	50	-
		2040-075-04	●	4	4	20	75	-
		2040-100-04	●	4	4	20	100	-
		2050-050-05	●	5	5	13	50	-
		2050-050-06	●	5	6	13	50	-
		2050-075-05	●	5	5	20	75	-
		2050-100-05	●	5	5	20	100	-
		2060-050-06	●	6	6	15	50	-
		2060-075-06	●	6	6	20	75	-

DWB

UP TO HRC68



	DESCRIPTION		STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DWB	2060-100-06	●	6	6	25	100	-
		2060-150-06	●	6	6	40	150	-
		2070-060-08	●	7	8	20	60	-
		2080-060-08	●	8	8	20	60	-
		2080-075-08	●	8	8	25	75	-
		2080-150-08	●	8	8	40	150	-
		2090-075-10	●	9	10	25	75	-
		2100-075-10	●	10	10	25	75	-
		2100-100-10	●	10	10	40	100	-
		2100-150-10	●	10	10	50	150	-
		2120-075-12	●	12	12	30	75	-
		2120-100-12	●	12	12	45	100	-
		2120-150-12	●	12	12	50	150	-
		2140-080-14	●	14	14	40	80	-
		2140-100-14	●	14	14	50	100	-
		2140-150-14	●	14	14	50	150	-
		2160-100-16	●	16	16	45	100	-
		2160-150-16	●	16	16	50	150	-
		2180-100-18	●	18	18	45	100	-
		2180-150-18	●	18	18	50	150	-
		2200-100-20	●	20	20	45	100	-
		2200-150-20	●	20	20	75	150	-

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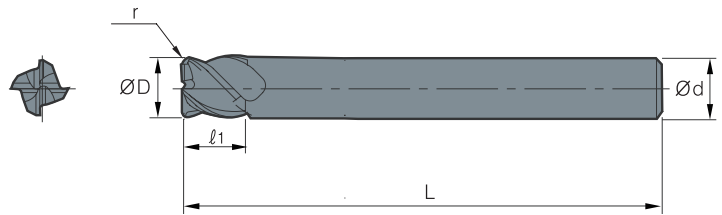
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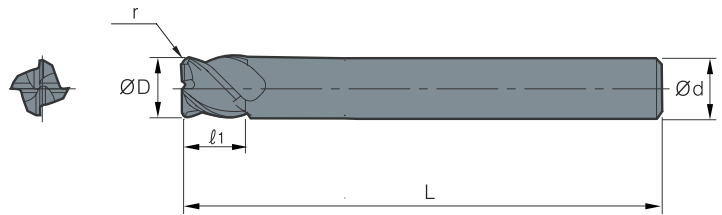
UP TO HRC45



		DESCRIPTION	STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DGC	4020-050-04-R0.5	●	2	4	6	50	0.5
		4020-050-06-R0.5	●	2	6	6	50	0.5
		4030-050-03-R0.5	●	3	3	8	50	0.5
		4030-050-03-R1.0	●	3	3	8	50	1.0
		4030-050-04-R0.5	●	3	4	8	50	0.5
		4030-050-04-R1.0	●	3	4	8	50	1.0
		4030-050-06-R0.5	●	3	6	8	50	0.5
		4030-050-06-R1.0	●	3	6	8	50	1.0
		4040-050-04-R0.5	●	4	4	11	50	0.5
		4040-050-04-R1.0	●	4	4	11	50	1.0
		4040-050-06-R0.5	●	4	6	11	50	0.5
		4040-050-06-R1.0	●	4	6	11	50	1.0
		4040-075-04-R0.5	●	4	4	11	75	0.5
		4040-075-04-R1.0	●	4	4	11	75	1.0
		4040-100-04-R0.5	●	4	4	11	100	0.5
		4040-100-04-R1.0	●	4	4	11	100	1.0
		4050-050-05-R0.5	●	5	5	13	50	0.5
		4050-050-05-R1.0	●	5	5	13	50	1.0
		4050-050-06-R0.5	●	5	6	13	50	0.5
		4050-050-06-R1.0	●	5	6	13	50	1.0
		4050-075-05-R0.5	●	5	5	13	75	0.5
		4050-075-05-R1.0	●	5	5	13	75	1.0
		4050-100-05-R0.5	●	5	5	13	100	0.5
		4050-100-05-R1.0	●	5	5	13	100	1.0
		4060-050-06-R0.5	●	6	6	15	50	0.5

DGC

UP TO HRC45



	DESCRIPTION		STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DGC	4060-050-06-R1.0	●	6	6	15	50	1.0
		4060-075-06-R0.5	●	6	6	15	75	0.5
		4060-075-06-R1.0	●	6	6	15	75	1.0
		4060-100-06-R0.5	●	6	6	15	100	0.5
		4060-100-06-R1.0	●	6	6	15	100	1.0
		4060-150-06-R0.5	●	6	6	15	150	0.5
		4060-150-06-R1.0	●	6	6	15	150	1.0
		4070-060-08-R0.5	●	7	8	20	60	0.5
		4070-060-08-R1.0	●	7	8	20	60	1.0
		4080-060-08-R0.5	●	8	8	20	60	0.5
		4080-060-08-R1.0	●	8	8	20	60	1.0
		4080-075-08-R0.5	●	8	8	20	75	0.5
		4080-075-08-R1.0	●	8	8	20	75	1.0
		4080-100-08-R0.5	●	8	8	20	100	0.5
		4080-100-08-R1.0	●	8	8	20	100	1.0
		4080-150-08-R0.5	●	8	8	20	150	0.5
		4080-150-08-R1.0	●	8	8	20	150	1.0
		4090-075-10-R0.5	●	9	10	25	75	0.5
		4090-075-10-R1.0	●	9	10	25	75	1.0
		4100-075-10-R0.5	●	10	10	25	75	0.5
		4100-075-10-R1.0	●	10	10	25	75	1.0
		4100-100-10-R0.5	●	10	10	25	100	0.5
		4100-100-10-R1.0	●	10	10	25	100	1.0
		4100-150-10-R0.5	●	10	10	25	150	0.5
		4100-150-10-R1.0	●	10	10	25	150	1.0

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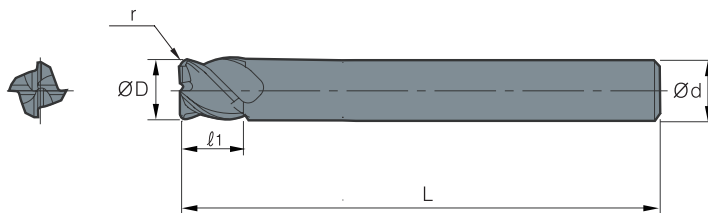
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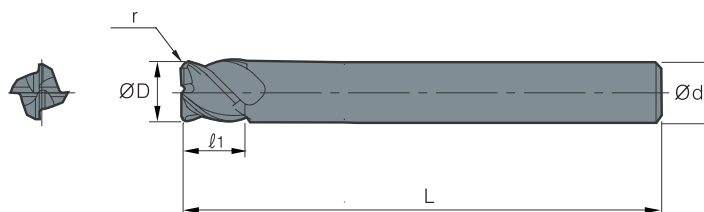
UP TO HRC45



		DESCRIPTION	STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DGC	4120-075-12-R0.5	●	12	12	30	75	0.5
		4120-075-12-R1.0	●	12	12	30	75	1.0
		4120-100-12-R0.5	●	12	12	30	100	0.5
		4120-100-12-R1.0	●	12	12	30	100	1.0
		4120-150-12-R0.5	●	12	12	30	150	0.5
		4120-150-12-R1.0	●	12	12	30	150	1.0
		4140-080-14-R0.5	●	14	14	30	80	0.5
		4140-080-14-R1.0	●	14	14	30	80	1.0
		4140-100-14-R0.5	●	14	14	30	100	0.5
		4140-100-14-R1.0	●	14	14	30	100	1.0
		4140-150-14-R0.5	●	14	14	30	150	0.5
		4140-150-14-R1.0	●	14	14	30	150	1.0
		4160-100-16-R0.5	●	16	16	30	100	0.5
		4160-100-16-R1.0	●	16	16	30	100	1.0
		4160-150-16-R0.5	●	16	16	30	150	0.5
		4160-150-16-R1.0	●	16	16	30	150	1.0
		4180-100-18-R0.5	●	18	18	30	100	0.5
		4180-100-18-R1.0	●	18	18	30	100	1.0
		4180-150-18-R0.5	●	18	18	30	150	0.5
		4180-150-18-R1.0	●	18	18	30	150	1.0
		4200-100-20-R0.5	●	20	20	30	100	0.5
		4200-100-20-R1.0	●	20	20	30	100	1.0
		4200-150-20-R0.5	●	20	20	30	150	0.5
		4200-150-20-R1.0	●	20	20	30	150	1.0

DXC

UP TO HRC55



	DESCRIPTION		STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DXC	4020-050-04-R0.5	●	2	4	6	50	0.5
		4020-050-06-R0.5	●	2	6	6	50	0.5
		4030-050-03-R0.5	●	3	3	8	50	0.5
		4030-050-03-R1.0	●	3	3	8	50	1.0
		4030-050-04-R0.5	●	3	4	8	50	0.5
		4030-050-04-R1.0	●	3	4	8	50	1.0
		4030-050-06-R0.5	●	3	6	8	50	0.5
		4030-050-06-R1.0	●	3	6	8	50	1.0
		4040-050-04-R0.5	●	4	4	11	50	0.5
		4040-050-04-R1.0	●	4	4	11	50	1.0
		4040-050-06-R0.5	●	4	6	11	50	0.5
		4040-050-06-R1.0	●	4	6	11	50	1.0
		4040-075-04-R0.5	●	4	4	11	75	0.5
		4040-075-04-R1.0	●	4	4	11	75	1.0
		4040-100-04-R0.5	●	4	4	11	100	0.5
		4040-100-04-R1.0	●	4	4	11	100	1.0
		4050-050-05-R0.5	●	5	5	13	50	0.5
		4050-050-05-R1.0	●	5	5	13	50	1.0
		4050-050-06-R0.5	●	5	6	13	50	0.5
		4050-050-06-R1.0	●	5	6	13	50	1.0
		4050-075-05-R0.5	●	5	5	13	75	0.5
		4050-075-05-R1.0	●	5	5	13	75	1.0
		4050-100-05-R0.5	●	5	5	13	100	0.5
		4050-100-05-R1.0	●	5	5	13	100	1.0
		4060-050-06-R0.5	●	6	6	15	50	0.5

TURNING

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ENDMILLS

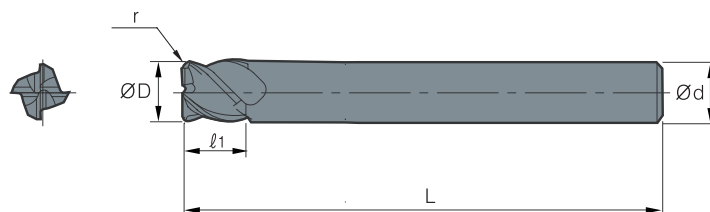
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DXC

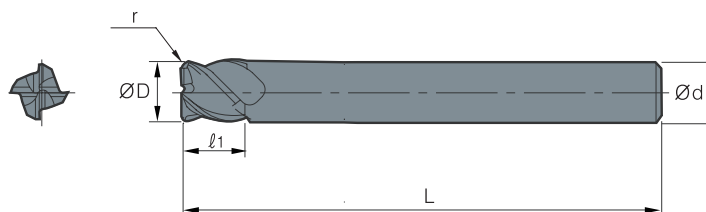
UP TO HRC55



		DESCRIPTION	STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DXC	4060-050-06-R1.0	●	6	6	15	50	1.0
		4060-075-06-R0.5	●	6	6	15	75	0.5
		4060-075-06-R1.0	●	6	6	15	75	1.0
		4060-100-06-R0.5	●	6	6	15	100	0.5
		4060-100-06-R1.0	●	6	6	15	100	1.0
		4060-150-06-R0.5	●	6	6	15	150	0.5
		4060-150-06-R1.0	●	6	6	15	150	1.0
		4070-060-08-R0.5	●	7	8	20	60	0.5
		4070-060-08-R1.0	●	7	8	20	60	1.0
		4080-060-08-R0.5	●	8	8	20	60	0.5
		4080-060-08-R1.0	●	8	8	20	60	1.0
		4080-075-08-R0.5	●	8	8	20	75	0.5
		4080-075-08-R1.0	●	8	8	20	75	1.0
		4080-100-08-R0.5	●	8	8	20	100	0.5
		4080-100-08-R1.0	●	8	8	20	100	1.0
		4080-150-08-R0.5	●	8	8	20	150	0.5
		4080-150-08-R1.0	●	8	8	20	150	1.0
		4090-075-10-R0.5	●	9	10	25	75	0.5
		4090-075-10-R1.0	●	9	10	25	75	1.0
		4100-075-10-R0.5	●	10	10	25	75	0.5
		4100-075-10-R1.0	●	10	10	25	75	1.0
		4100-100-10-R0.5	●	10	10	25	100	0.5
		4100-100-10-R1.0	●	10	10	25	100	1.0
		4100-150-10-R0.5	●	10	10	25	150	0.5
		4100-150-10-R1.0	●	10	10	25	150	1.0

DXC

UP TO HRC55



	DESCRIPTION		STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DXC	4120-075-12-R0.5	●	12	12	30	75	0.5
		4120-075-12-R1.0	●	12	12	30	75	1.0
		4120-100-12-R0.5	●	12	12	30	100	0.5
		4120-100-12-R1.0	●	12	12	30	100	1.0
		4120-150-12-R0.5	●	12	12	30	150	0.5
		4120-150-12-R1.0	●	12	12	30	150	1.0
		4140-080-14-R0.5	●	14	14	30	80	0.5
		4140-080-14-R1.0	●	14	14	30	80	1.0
		4140-100-14-R0.5	●	14	14	30	100	0.5
		4140-100-14-R1.0	●	14	14	30	100	1.0
		4140-150-14-R0.5	●	14	14	30	150	0.5
		4140-150-14-R1.0	●	14	14	30	150	1.0
		4160-100-16-R0.5	●	16	16	30	100	0.5
		4160-100-16-R1.0	●	16	16	30	100	1.0
		4160-150-16-R0.5	●	16	16	30	150	0.5
		4160-150-16-R1.0	●	16	16	30	150	1.0
		4180-100-18-R0.5	●	18	18	30	100	0.5
		4180-100-18-R1.0	●	18	18	30	100	1.0
		4180-150-18-R0.5	●	18	18	30	150	0.5
		4180-150-18-R1.0	●	18	18	30	150	1.0
		4200-100-20-R0.5	●	20	20	30	100	0.5
		4200-100-20-R1.0	●	20	20	30	100	1.0
		4200-150-20-R0.5	●	20	20	30	150	0.5
		4200-150-20-R1.0	●	20	20	30	150	1.0

TURNING

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ENDMILLS

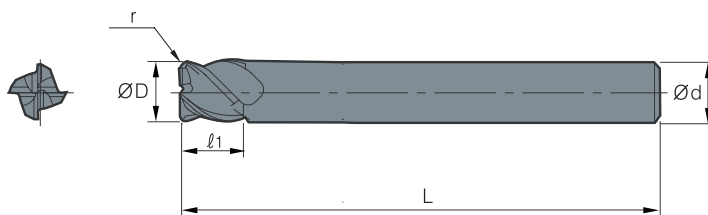
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DWC

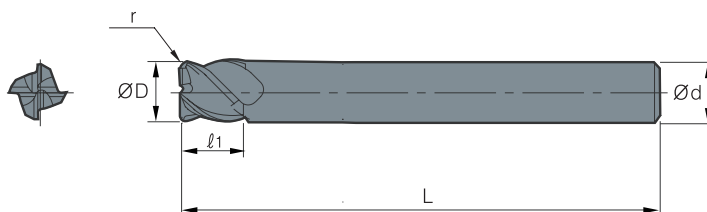
UP TO HRC68



		DESCRIPTION	STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
DWC		4020-050-04-R0.5	●	2	4	6	50	0.5
		4020-050-06-R0.5	●	2	6	6	50	0.5
		4030-050-03-R0.5	●	3	3	8	50	0.5
		4030-050-03-R1.0	●	3	3	8	50	1.0
		4030-050-04-R0.5	●	3	4	8	50	0.5
		4030-050-04-R1.0	●	3	4	8	50	1.0
		4030-050-06-R0.5	●	3	6	8	50	0.5
		4030-050-06-R1.0	●	3	6	8	50	1.0
		4040-050-04-R0.5	●	4	4	11	50	0.5
		4040-050-04-R1.0	●	4	4	11	50	1.0
		4040-050-06-R0.5	●	4	6	11	50	0.5
		4040-050-06-R1.0	●	4	6	11	50	1.0
		4040-075-04-R0.5	●	4	4	11	75	0.5
		4040-075-04-R1.0	●	4	4	11	75	1.0
		4040-100-04-R0.5	●	4	4	11	100	0.5
		4040-100-04-R1.0	●	4	4	11	100	1.0
		4050-050-05-R0.5	●	5	5	13	50	0.5
		4050-050-05-R1.0	●	5	5	13	50	1.0
		4050-050-06-R0.5	●	5	6	13	50	0.5
		4050-050-06-R1.0	●	5	6	13	50	1.0
		4050-075-05-R0.5	●	5	5	13	75	0.5
		4050-075-05-R1.0	●	5	5	13	75	1.0
		4050-100-05-R0.5	●	5	5	13	100	0.5
		4050-100-05-R1.0	●	5	5	13	100	1.0
		4060-050-06-R0.5	●	6	6	15	50	0.5

DWC

UP TO HRC68



	DESCRIPTION		STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DWC	4060-050-06-R1.0	●	6	6	15	50	1.0
		4060-075-06-R0.5	●	6	6	15	75	0.5
		4060-075-06-R1.0	●	6	6	15	75	1.0
		4060-100-06-R0.5	●	6	6	15	100	0.5
		4060-100-06-R1.0	●	6	6	15	100	1.0
		4060-150-06-R0.5	●	6	6	15	150	0.5
		4060-150-06-R1.0	●	6	6	15	150	1.0
		4070-060-08-R0.5	●	7	8	20	60	0.5
		4070-060-08-R1.0	●	7	8	20	60	1.0
		4080-060-08-R0.5	●	8	8	20	60	0.5
		4080-060-08-R1.0	●	8	8	20	60	1.0
		4080-075-08-R0.5	●	8	8	20	75	0.5
		4080-075-08-R1.0	●	8	8	20	75	1.0
		4080-100-08-R0.5	●	8	8	20	100	0.5
		4080-100-08-R1.0	●	8	8	20	100	1.0
		4080-150-08-R0.5	●	8	8	20	150	0.5
		4080-150-08-R1.0	●	8	8	20	150	1.0
		4090-075-10-R0.5	●	9	10	25	75	0.5
		4090-075-10-R1.0	●	9	10	25	75	1.0
		4100-075-10-R0.5	●	10	10	25	75	0.5
		4100-075-10-R1.0	●	10	10	25	75	1.0
		4100-100-10-R0.5	●	10	10	25	100	0.5
		4100-100-10-R1.0	●	10	10	25	100	1.0
		4100-150-10-R0.5	●	10	10	25	150	0.5
		4100-150-10-R1.0	●	10	10	25	150	1.0

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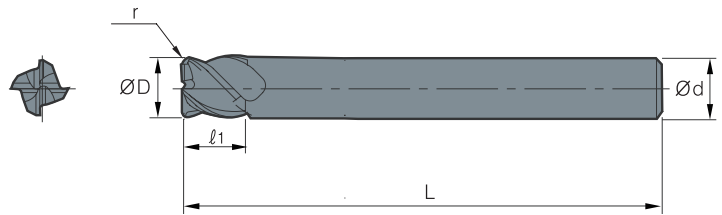
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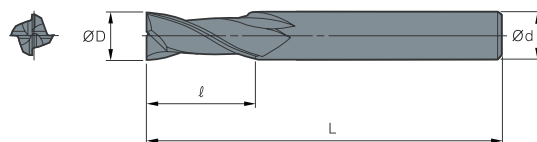


		DESCRIPTION	STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
DWC		4120-075-12-R0.5	●	12	12	30	75	0.5
		4120-075-12-R1.0	●	12	12	30	75	1.0
		4120-100-12-R0.5	●	12	12	30	100	0.5
		4120-100-12-R1.0	●	12	12	30	100	1.0
		4120-150-12-R0.5	●	12	12	30	150	0.5
		4120-150-12-R1.0	●	12	12	30	150	1.0
		4140-080-14-R0.5	●	14	14	30	80	0.5
		4140-080-14-R1.0	●	14	14	30	80	1.0
		4140-100-14-R0.5	●	14	14	30	100	0.5
		4140-100-14-R1.0	●	14	14	30	100	1.0
		4140-150-14-R0.5	●	14	14	30	150	0.5
		4140-150-14-R1.0	●	14	14	30	150	1.0
		4160-100-16-R0.5	●	16	16	30	100	0.5
		4160-100-16-R1.0	●	16	16	30	100	1.0
		4160-150-16-R0.5	●	16	16	30	150	0.5
		4160-150-16-R1.0	●	16	16	30	150	1.0
		4180-100-18-R0.5	●	18	18	30	100	0.5
		4180-100-18-R1.0	●	18	18	30	100	1.0
		4180-150-18-R0.5	●	18	18	30	150	0.5
		4180-150-18-R1.0	●	18	18	30	150	1.0
		4200-100-20-R0.5	●	20	20	30	100	0.5
		4200-100-20-R1.0	●	20	20	30	100	1.0
		4200-150-20-R0.5	●	20	20	30	150	0.5
		4200-150-20-R1.0	●	20	20	30	150	1.0

DGA

2Z

Uncoated Carbide



	DESCRIPTION		STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DGA	2010-050-04	●	1	4	3	50	-
		2010-050-06	●	1	6	3	50	-
		2020-050-04	●	2	4	6	50	-
		2020-050-06	●	2	6	6	50	-
		2030-050-03	●	3	3	8	50	-
		2030-050-04	●	3	4	8	50	-
		2030-050-06	●	3	6	8	50	-
		2040-050-04	●	4	4	11	50	-
		2040-050-06	●	4	6	11	50	-
		2040-075-04	●	4	4	20	75	-
		2040-100-04	●	4	4	20	100	-
		2050-050-05	●	5	5	13	50	-
		2050-050-06	●	5	6	13	50	-
		2050-075-05	●	5	5	20	75	-
		2050-100-05	●	5	5	20	100	-
		2060-050-06	●	6	6	15	50	-
		2060-075-06	●	6	6	20	75	-

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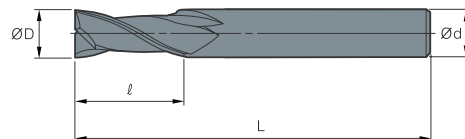
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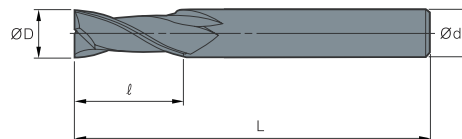


	DESCRIPTION		STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DGA	2060-100-06	•	6	6	25	100	-
		2060-150-06	•	6	6	40	150	-
		2080-060-08	•	8	8	20	60	-
		2080-075-08	•	8	8	25	75	-
		2080-100-08	•	8	8	40	100	-
		2080-150-08	•	8	8	40	150	-
		2100-075-10	•	10	10	25	75	-
		2100-100-10	•	10	10	40	100	-
		2120-075-12	•	12	12	30	75	-
		2120-100-12	•	12	12	45	100	-
		2120-150-12	•	12	12	50	150	-
		2140-080-14	•	14	14	40	80	-
		2140-100-14	•	14	14	50	100	-
		2160-100-16	•	16	16	45	100	-
		2180-100-18	•	18	18	45	100	-
		2200-100-20	•	20	20	45	100	-
		2200-150-20	•	20	20	75	150	-

DGA

3Z

Uncoated Carbide



	DESCRIPTION		STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
	DGA	3010-050-04	●	1	4	3	50	-
		3010-050-06	●	1	6	3	50	-
		3020-050-04	●	2	4	6	50	-
		3020-050-06	●	2	6	6	50	-
		3030-050-03	●	3	3	8	50	-
		3030-050-04	●	3	4	8	50	-
		3030-050-06	●	3	6	8	50	-
		3040-050-04	●	4	4	11	50	-
		3040-050-06	●	4	6	11	50	-
		3040-075-04	●	4	4	20	75	-
		3040-100-04	●	4	4	20	100	-
		3050-050-05	●	5	5	13	50	-
		3050-050-06	●	5	6	13	50	-
		3050-075-05	●	5	5	20	75	-
		3050-100-05	●	5	5	20	100	-
		3060-050-06	●	6	6	15	50	-
		3060-075-06	●	6	6	20	75	-

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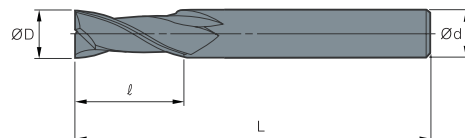
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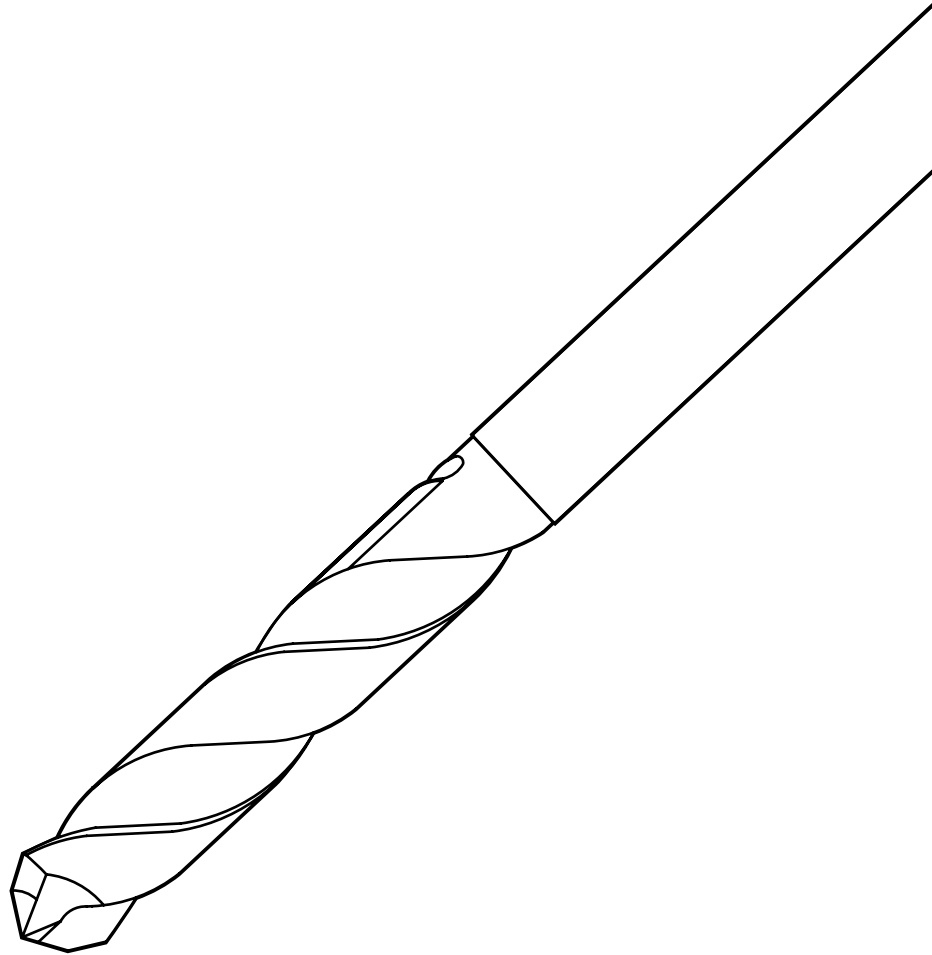
DGA

3Z

Uncoated Carbide



	DESCRIPTION		STOCK	DIMENSIONS				
				ØD	Ød	l	L	r
DGA		3060-100-06	●	6	6	25	100	-
		3060-150-06	●	6	6	40	150	-
		3080-060-08	●	8	8	20	60	-
		3080-075-08	●	8	8	25	75	-
		3080-100-08	●	8	8	40	100	-
		3080-150-08	●	8	8	40	150	-
		3100-075-10	●	10	10	25	75	-
		3100-100-10	●	10	10	40	100	-
		3120-075-12	●	12	12	30	75	-
		3120-100-12	●	12	12	45	100	-
		3120-150-12	●	12	12	50	150	-
		3140-080-14	●	14	14	40	80	-
		3140-100-14	●	14	14	50	100	-
		3160-100-16	●	16	16	45	100	-
		3180-100-18	●	18	18	45	100	-
		3200-100-20	●	20	20	45	100	-
		3200-150-20	●	20	20	75	150	-



DRILLS/

carbide /361

DRILLS / **carbide**



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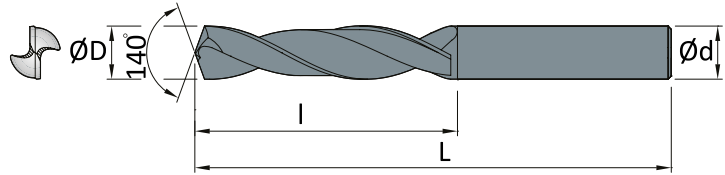
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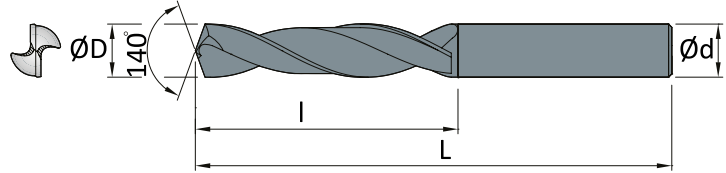
3XD



DESCRIPTION		STOCK	DIMENSIONS			
			ØD	I	L	Ød
DSD	2010-35-3	●	1.0	7	35	3
	2011-35-3	●	1.1	7	35	3
	2012-35-3	●	1.2	8	35	3
	2013-35-3	●	1.3	8	35	3
	2014-35-3	●	1.4	9	35	3
	2015-40-3	●	1.5	9	40	3
	2016-40-3	●	1.6	10	40	3
	2017-40-3	●	1.7	10	40	3
	2018-40-3	●	1.8	11	40	3
	2019-40-3	●	1.9	11	40	3
	2020-45-3	●	2.0	13	45	3
	2021-45-3	●	2.1	13	45	3
	2022-45-3	●	2.2	13	45	3
	2023-45-3	●	2.3	13	45	3
	2024-45-3	●	2.4	15	45	3
	2025-50-3	●	2.5	15	50	3
	2026-50-3	●	2.6	15	50	3
	2027-50-3	●	2.7	17	50	3
	2028-50-3	●	2.8	17	50	3
	2029-50-3	●	2.9	17	50	3
	2030-62-6	●	3.0	20	62	6
	2031-62-6	●	3.1	20	62	6
	2032-62-6	●	3.2	20	62	6
	2033-62-6	●	3.3	20	62	6
	2034-62-6	●	3.4	20	62	6
	2035-62-6	●	3.5	20	62	6

DESCRIPTION		STOCK	DIMENSIONS			
			ØD	I	L	Ød
DSD	2036-62-6	●	3.6	20	62	6
	2037-62-6	●	3.7	20	62	6
	2038-66-6	●	3.8	24	66	6
	2039-66-6	●	3.9	24	66	6
	2040-66-6	●	4.0	24	66	6
	2041-66-6	●	4.1	24	66	6
	2042-66-6	●	4.2	24	66	6
	2043-66-6	●	4.3	24	66	6
	2044-66-6	●	4.4	24	66	6
	2045-66-6	●	4.5	24	66	6
	2046-66-6	●	4.6	24	66	6
	2047-66-6	●	4.7	24	66	6
	2048-66-6	●	4.8	28	66	6
	2049-66-6	●	4.9	28	66	6
	2050-66-6	●	5.0	28	66	6
	2051-66-6	●	5.1	28	66	6
	2052-66-6	●	5.2	28	66	6
	2053-66-6	●	5.3	28	66	6
	2054-66-6	●	5.4	28	66	6
	2055-66-6	●	5.5	28	66	6
	2056-66-6	●	5.6	28	66	6
	2057-66-6	●	5.7	28	66	6
	2058-66-6	●	5.8	28	66	6
	2059-66-6	●	5.9	28	66	6
	2060-66-6	●	6.0	28	66	6
	2061-79-8	●	6.1	34	79	8

DRILLS

DSD
3XD

DESCRIPTION		STOCK	DIMENSIONS			
			ØD	I	L	Ød
DSD	2062-79-8	●	6.2	34	79	8
	2063-79-8	●	6.3	34	79	8
	2064-79-8	●	6.4	34	79	8
	2065-79-8	●	6.5	34	79	8
	2066-79-8	●	6.6	34	79	8
	2067-79-8	●	6.7	34	79	8
	2068-79-8	●	6.8	34	79	8
	2069-79-8	●	6.9	34	79	8
	2070-79-8	●	7.0	34	79	8
	2071-79-8	●	7.1	41	79	8
	2072-79-8	●	7.2	41	79	8
	2073-79-8	●	7.3	41	79	8
	2074-79-8	●	7.4	41	79	8
	2075-79-8	●	7.5	41	79	8
	2076-79-8	●	7.6	41	79	8
	2077-79-8	●	7.7	41	79	8
	2078-79-8	●	7.8	41	79	8
	2079-79-8	●	7.9	41	79	8
	2080-79-8	●	8.0	41	79	8
	2081-89-10	●	8.1	47	89	10
	2082-89-10	●	8.2	47	89	10
	2083-89-10	●	8.3	47	89	10
	2084-89-10	●	8.4	47	89	10
	2085-89-10	●	8.5	47	89	10
	2086-89-10	●	8.6	47	89	10
	2087-89-10	●	8.7	47	89	10

DESCRIPTION		STOCK	DIMENSIONS			
			ØD	I	L	Ød
DSD	2088-89-10	●	8.8	47	89	10
	2089-89-10	●	8.9	47	89	10
	2090-89-10	●	9.0	47	89	10
	2091-89-10	●	9.1	47	89	10
	2092-89-10	●	9.2	47	89	10
	2093-89-10	●	9.3	47	89	10
	2094-89-10	●	9.4	47	89	10
	2095-89-10	●	9.5	47	89	10
	2096-89-10	●	9.6	47	89	10
	2097-89-10	●	9.7	47	89	10
	2098-89-10	●	9.8	47	89	10
	2099-89-10	●	9.9	47	89	10
	2100-89-10	●	10.0	47	89	10
	2101-102-12	●	10.1	55	102	12
	2102-102-12	●	10.2	55	102	12
	2103-102-12	●	10.3	55	102	12
	2104-102-12	●	10.4	55	102	12
	2105-102-12	●	10.5	55	102	12
	2106-102-12	●	10.6	55	102	12
	2107-102-12	●	10.7	55	102	12
	2108-102-12	●	10.8	55	102	12
	2109-102-12	●	10.9	55	102	12
	2110-102-12	●	11.0	55	102	12
	2111-102-12	●	11.1	55	102	12
	2112-102-12	●	11.2	55	102	12
	2113-102-12	●	11.3	55	102	12

TURNING

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THREADING

MILLING

DRILLING

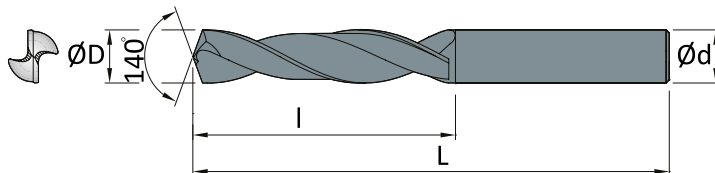
ENDMILLS

DRILLS

SPARE PARTS

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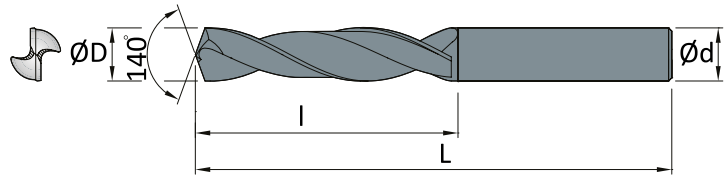
3XD

[illegible]

DRILLS

DLD

5XD



DESCRIPTION		STOCK	DIMENSIONS			
			ØD	L	L	Ød
DLD	2010-38-3	●	1.0	9	38	3
	2011-38-3	●	1.1	9	38	3
	2012-38-3	●	1.2	11	38	3
	2013-38-3	●	1.3	11	38	3
	2014-38-3	●	1.4	12	38	3
	2015-45-3	●	1.5	12	45	3
	2016-45-3	●	1.6	14	45	3
	2017-45-3	●	1.7	14	45	3
	2018-45-3	●	1.8	16	45	3
	2019-45-3	●	1.9	16	45	3
	2020-50-3	●	2.0	18	50	3
	2021-50-3	●	2.1	18	50	3
	2022-52-3	●	2.2	20	52	3
	2023-52-3	●	2.3	20	52	3
	2024-52-3	●	2.4	22	52	3
	2025-56-3	●	2.5	22	56	3
	2026-56-3	●	2.6	22	56	3
	2027-56-3	●	2.7	23	56	3
	2028-56-3	●	2.8	23	56	3
	2029-56-3	●	2.9	23	56	3
	2030-66-6	●	3.0	28	66	6
	2031-66-6	●	3.1	28	66	6
	2032-66-6	●	3.2	28	66	6
	2033-66-6	●	3.3	28	66	6
	2034-66-6	●	3.4	28	66	6
	2035-66-6	●	3.5	28	66	6

DESCRIPTION		STOCK	DIMENSIONS			
			ØD	L	L	Ød
DLD	2036-74-6	●	3.6	36	74	6
	2037-74-6	●	3.7	36	74	6
	2038-74-6	●	3.8	36	74	6
	2039-74-6	●	3.9	36	74	6
	2040-74-6	●	4.0	36	74	6
	2041-74-6	●	4.1	36	74	6
	2042-74-6	●	4.2	36	74	6
	2043-74-6	●	4.3	36	74	6
	2044-74-6	●	4.4	36	74	6
	2045-74-6	●	4.5	36	74	6
	2046-74-6	●	4.6	36	74	6
	2047-74-6	●	4.7	36	74	6
	2048-82-6	●	4.8	44	82	6
	2049-82-6	●	4.9	44	82	6
	2050-82-6	●	5.0	44	82	6
	2051-82-6	●	5.1	44	82	6
	2052-82-6	●	5.2	44	82	6
	2053-82-6	●	5.3	44	82	6
	2054-82-6	●	5.4	44	82	6
	2055-82-6	●	5.5	44	82	6
	2056-82-6	●	5.6	44	82	6
	2057-82-6	●	5.7	44	82	6
	2058-82-6	●	5.8	44	82	6
	2059-82-6	●	5.9	44	82	6
	2060-82-6	●	6.0	44	82	6
	2061-91-8	●	6.1	53	91	8

TURNING

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MILLING

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ENDMILLS

DRILLS

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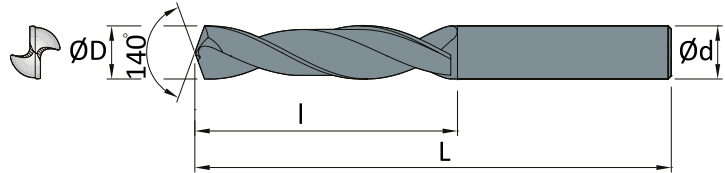
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DLD

5XD

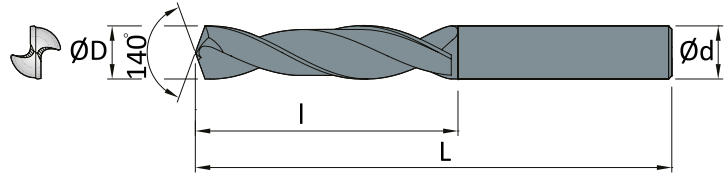


DESCRIPTION		STOCK	DIMENSIONS			
			ØD	I	L	Ød
DLD	2062-91-8	●	6.2	53	91	8
	2063-91-8	●	6.3	53	91	8
	2064-91-8	●	6.4	53	91	8
	2065-91-8	●	6.5	53	91	8
	2066-91-8	●	6.6	53	91	8
	2067-91-8	●	6.7	53	91	8
	2068-91-8	●	6.8	53	91	8
	2069-91-8	●	6.9	53	91	8
	2070-91-8	●	7.0	53	91	8
	2071-91-8	●	7.1	53	91	8
	2072-91-8	●	7.2	53	91	8
	2073-91-8	●	7.3	53	91	8
	2074-91-8	●	7.4	53	91	8
	2075-91-8	●	7.5	53	91	8
	2076-91-8	●	7.6	53	91	8
	2077-91-8	●	7.7	53	91	8
	2078-91-8	●	7.8	53	91	8
	2079-91-8	●	7.9	53	91	8
	2080-91-8	●	8.0	53	91	8
	2081-103-10	●	8.1	61	103	10
	2082-103-10	●	8.2	61	103	10
	2083-103-10	●	8.3	61	103	10
	2084-103-10	●	8.4	61	103	10
	2085-103-10	●	8.5	61	103	10
	2086-103-10	●	8.6	61	103	10
	2087-103-10	●	8.7	61	103	10

DESCRIPTION		STOCK	DIMENSIONS			
			ØD	I	L	Ød
DLD	2088-103-10	●	8.8	61	103	10
	2089-103-10	●	8.9	61	103	10
	2090-103-10	●	9.0	61	103	10
	2091-103-10	●	9.1	61	103	10
	2092-103-10	●	9.2	61	103	10
	2093-103-10	●	9.3	61	103	10
	2094-103-10	●	9.4	61	103	10
	2095-103-10	●	9.5	61	103	10
	2096-103-10	●	9.6	61	103	10
	2097-103-10	●	9.7	61	103	10
	2098-103-10	●	9.8	61	103	10
	2099-103-10	●	9.9	61	103	10
	2100-103-10	●	10.0	61	103	10
	2101-118-12	●	10.1	71	118	12
	2102-118-12	●	10.2	71	118	12
	2103-118-12	●	10.3	71	118	12
	2104-118-12	●	10.4	71	118	12
	2105-118-12	●	10.5	71	118	12
	2106-118-12	●	10.6	71	118	12
	2107-118-12	●	10.7	71	118	12
	2108-118-12	●	10.8	71	118	12
	2109-118-12	●	10.9	71	118	12
	2110-118-12	●	11.0	71	118	12
	2111-118-12	●	11.1	71	118	12
	2112-118-12	●	11.2	71	118	12
	2113-118-12	●	11.3	71	118	12

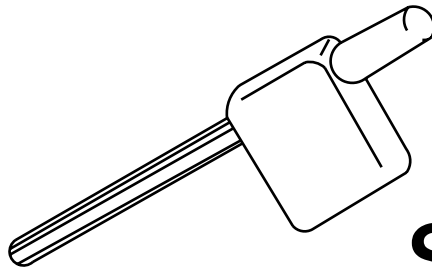
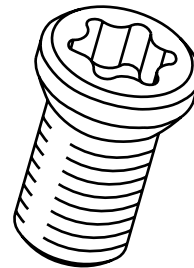
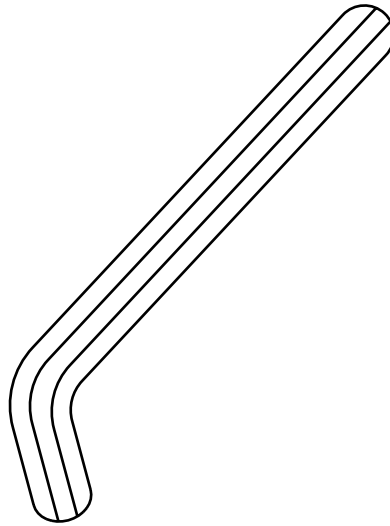
DLD

5XD



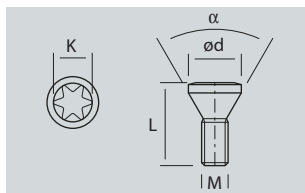
Description		Stock	Dimensions			
			ØD	I	L	Ød
DLD	2114-118-12	●	11.4	71	118	12
	2115-118-12	●	11.5	71	118	12
	2116-118-12	●	11.6	71	118	12
	2117-118-12	●	11.7	71	118	12
	2118-118-12	●	11.8	71	118	12
	2119-118-12	●	11.9	71	118	12
	2120-118-12	●	12.0	71	118	12
	2121-124-14	●	12.1	77	124	14
	2122-124-14	●	12.2	77	124	14
	2123-124-14	●	12.3	77	124	14
	2124-124-14	●	12.4	77	124	14
	2125-124-14	●	12.5	77	124	14
	2126-124-14	●	12.6	77	124	14
	2127-124-14	●	12.7	77	124	14
	2128-124-14	●	12.8	77	124	14
	2129-124-14	●	12.9	77	124	14
	2130-124-14	●	13.0	77	124	14
	2131-124-14	●	13.1	77	124	14
	2132-124-14	●	13.2	77	124	14
	2133-124-14	●	13.3	77	124	14
	2134-124-14	●	13.4	77	124	14
	2135-124-14	●	13.5	77	124	14
	2140-124-14	●	14.0	77	124	14
	2145-133-16	●	14.5	83	133	16
	2150-133-16	●	15.0	83	133	16
	2155-133-16	●	15.5	83	133	16

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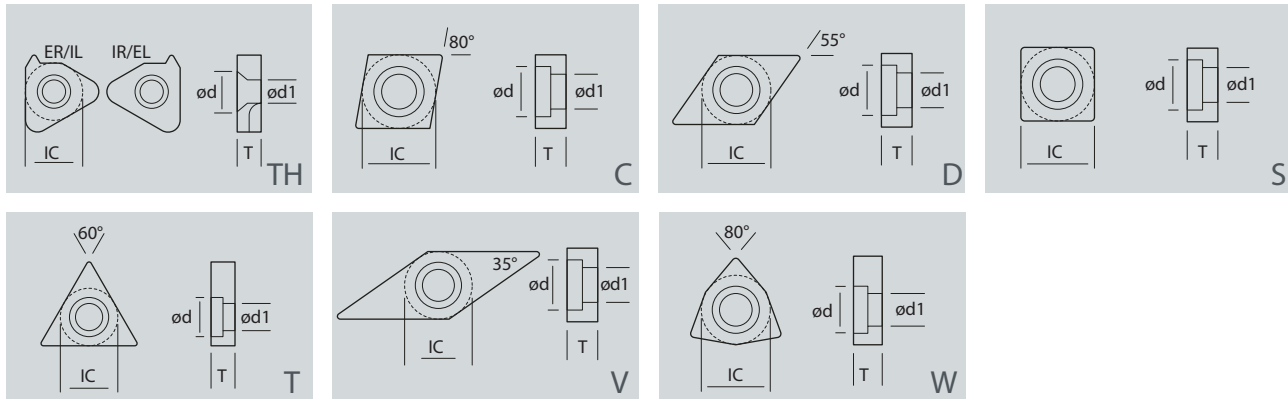
SPARE PARTS/

INSERTS CLAMPING SCREW



DESCRIPTION	d	M	L	α	K	TORQUE (Nm)
ST-SC1804	2.60	M1.8 x 0.40	4.00	60°	T6	0.50
ST-SC0206	2.70	M2.0 x 0.40	6.00	60°	T6	0.50
ST-SC0226	3.10	M2.2 x 0.45	6.00	60°	T7	0.80
ST-SC0257	3.10	M2.5 x 0.45	7.00	60°	T7	0.80
ST-SC0309	4.30	M3.0 x 0.50	9.00	90°	T10	1.40
ST-SC3511	5.30	M3.5 x 0.60	11.0	60°	T15	3.50
ST-SC3514	5.30	M3.5 x 0.60	14.0	60°	T15	3.50
ST-SC3507	5.30	M3.5 x 0.60	7.00	60°	T15	3.50
ST-SC0411	5.50	M4.0 x 0.70	11.0	60°	T15	3.50
ST-SC0416	5.50	M4.0 x 0.70	16.0	60°	T15	3.50
ST-SC0415	5.50	M4.0 x 0.70	15.0	60°	T15	3.50
ST-SC4516	6.20	M4.5 x 0.75	16.0	60°	T15	3.50
ST-SC0513	7.00	M5.0 x 0.80	13.0	60°	T20	4.50
ST-SC0511	7.00	M5.0 x 0.80	11.0	60°	T20	4.50
ST-SC0512	7.00	M5.0 x 0.80	12.0	60°	T20	4.50
ST-SC0616	8.00	M6.0 x 1.00	16.0	60°	T20	4.50
ST-SC0523	7.00	M5.0 x 0.80	23.0	60°	T20	4.50
ST-SC0525	7.00	M5.0 x 0.80	25.0	60°	T20	4.50
ST-SC0630	8.00	M6.0 x 1.00	30.0	60°	T20	4.50
ST-SC6307	8.00	M6.0 x 1.00	30.0	90°	T20	4.50
ST-SC0830	9.50	M8.0 x 1.25	30.0	60°	T20	5.50
ST-SC6301	8.00	M6.0 x 1.00	30.0	90°	T20	4.50
ST-SC420	5.50	M4.0 x 0.70	20.0	60°	T15	3.50
ST-SC512	7.00	M5.0 x 0.80	12.0	60°	T20	4.50
ST-SC625	8.00	M6.0 x 1.00	25.0	60°	T20	4.50
ST-SC8301	9.50	M8.0 x 1.25	30.0	90°	T20	5.50
ST-SC610	8.00	M6.0 x 1.00	10.0	90°	T20	4.50
ST-SC810	9.50	M8.0 x 1.25	10.0	60°	T20	5.50

SHIM



DESCRIPTION	IC	T	Ød	Ød1	INSERT	DRAWING
ST-SHDN11	8.50	3.20	6.60	5.20	DC□□11, DN□□11	ref. D
ST-SHDN15	12.50	3.20	8.40	6.70	DN□□1506	ref. D
ST-SHCN12	12.50	3.20	8.40	6.70	CN□□12	ref. C
ST-SHCN16	15.50	4.80	10.80	9.70	CN□□16	ref. C
ST-SHCN19	18.70	4.80	13.10	11.20	CN□□19	ref. C
ST-SHWN08	12.20	4.80	8.00	7.30	WN□□08	ref. W
ST-SHSN12	12.30	4.80	8.00	7.30	SN□□12	ref. S
ST-SHSN19	18.70	4.80	13.10	11.20	SN□□19	ref. S
ST-SHTN16	9.30	3.20	6.60	5.80	TN□□16	ref. T
ST-SHTN22	18.70	4.80	8.00	7.30	TN□□22	ref. T
ST-SHVN16	9.20	3.20	6.60	5.80	VN□□16	ref. V
ST-SHDC11	8.50	3.20	6.60	5.20	DC□□11	ref. D
ST-SHSC09	12.20	4.80	8.00	7.30	SC□□09	ref. S
ST-SHSC12	11.40	3.90	8.40	6.70	SC□□12	ref. S
ST-SHCC09	8.50	3.20	6.60	5.20	CC□□09	ref. C
ST-SHCC12	11.40	3.90	8.40	6.70	CC□□12	ref. C
ST-SHVB16	8.20	3.20	6.60	5.40	VB□□16	ref. V
ST-SHTC16	9.10	3.20	6.60	4.50	TC□□16	ref. T
ST-SHVC16	8.20	3.20	6.60	5.40	VC□□16	ref. V
ST-SHKNR/L	11.40	3.20	6.60	7.30	KN□□16	ref. K
ST-SHEI16	9.50	3.20	6.00	4.20	16ER/16IR	ref. TH
ST-SHEI22	18.70	4.80	8.00	7.30	22ER/22IR	ref. TH

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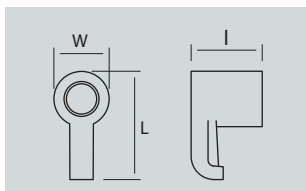
ENDMILLS

DRILLS

SPARE PARTS

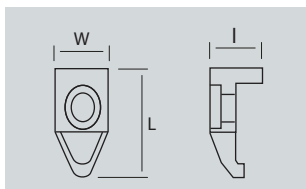
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CLAMPS (M-STYLE CLAMPING)



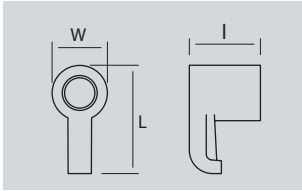
DESCRIPTION	W	L	I			
ST-CS006	9.40	18.20	13.50			
ST-CS007	7.90	16.90	7.90			
ST-CS008	7.75	14.90	10.95			
ST-CS009	9.40	18.20	13.50			

CLAMPS (D-STYLE CLAMPING)



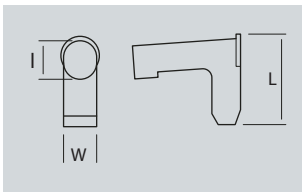
DESCRIPTION	Ød	M	L			
ST-CS001	9.70	M6x1	24.00			
ST-CS002	9.70	M6x1	24.00			
ST-CS003	9.70	M6x1	24.00			
ST-CS004	9.70	M6x1	24.00			
ST-CS004	9.70	M6x1	24.00			

CLAMPS (C-STYLE CLAMPING)



DESCRIPTION	W	L	I			
ST-CS010	9.40	18.20	13.50			
ST-CS011	7.90	16.90	7.90			
ST-CS012	9.40	18.20	13.50			
ST-CS013	7.90	16.90	7.90			

LEVER (P-STYLE CLAMPING)



DESCRIPTION	W	L	I			
ST-LV001	4.75	13.60	4.45			
ST-LV002	4.60	14.50	5.00			
ST-LV003	4.70	14.80	5.10			

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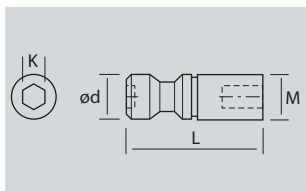
ENDMILLS

DRILLS

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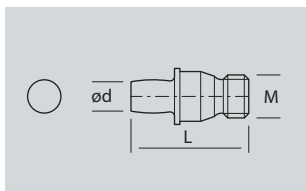
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LEVER LOCKING SYSTEM (P-STYLE CLAMPING)



DESCRIPTION	d	M	L	K		
ST-SC820	8.00	M8.0 x 1.00	20.0	HEXA 3		
ST-SC822	8.00	M8.0 x 1.00	22.0	HEXA 3		
ST-SC1020	10.00	M10.0 x 1.25	20.0	HEXA 4		
ST-SC1022	10.00	M10.0 x 1.25	22.0	HEXA 4		

ECCENTRIC LOCK PIN (M-STYLE CLAMPING)



DESCRIPTION	M	L	I			
ST-SP001	5.00	17.7	5.00			
ST-SP002	6.00	21.8	6.20			
ST-SP003	4.50	14.0	3.70			

DESCRIPTION		
08IR-A55	■ THREADING carbide	257
08IR-A60	■ THREADING carbide	255
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Sangeo
cutting tools



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