

PRODUCT NEWS

PN-E-015

SERIES EXPANSION

KALIP TEKNİK

DIJET

SKS-GII

for high feed machining with 4corners.

SKG / MSG type



- SKG / MSG10 type

- Bore type : $\varnothing 50 \sim 80$
- Modular type : $\varnothing 25 \sim 42$

- SKG14 type

- Bore type : $\varnothing 50 \sim 100$

KALIP TEKNİK

www.kalipteknik.com.tr

SKS-GII

**SKG / MSG type, innovative High Feed Cutter
achieved extremely excellent metal removal rate !**

Feature 1

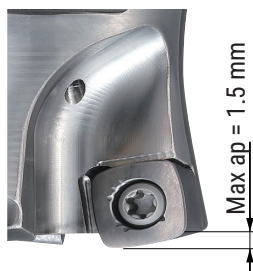
Provides stability even milling of deep cavities.

Feature 2

4 corner positive insert **with low cutting forces.**

Feature 3 **Flat top insert**

SKG-10 type : Max ap=1.5mm
(insert : SPNW100415ZTR)



SKG-14 type : Max ap=2.5mm
(insert : SPNW140515ZTR)



Feature 4 **Chip breaker insert**

Optimized cutting edge for machining of difficult to cut materials
like titanium alloy.

Effective for machining that requires reduced cutting loads or
long overhang application.



SM breaker for
difficult to cut materials



PM breaker for
mold steel

Feature 5

Insert grades for a wide range of materials

<JC8118> <JC8050> <JC7550> <DS150>



JC8118

for **mold steel, hardened steel**
from 38HRC upto 50HRC



JC8050

for **mold steel, general steel**
below 36HRC



JC7550

for **Titanium alloy, stainless steel**



DS150

for **Titanium alloy**

○ Application

ISO	P					M					K				S				H		
	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	K01	K10	K20	K30	S01	S10	S20	S30	H01	H10	H20
Range			JC8118									JC8118								JC8118	
				JC8050													DS150				
								JC7550									JC7550				

Feature 6

Excellent chip evacuation

SKG10 TYPE

Bore Type

Through
coolant
hole

G-
Body

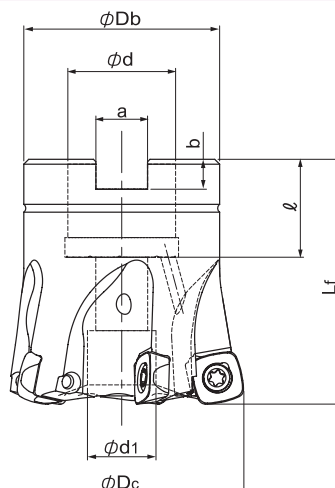
Face Milling

Copy Milling

Pocket Milling

Helical Interpolation

Plunge Milling



Cat.No.	Stock	No. of inserts	Dimensions (mm)							Arbor set bolt	Weight (kg)	Inserts		
			φD _c	L _f	φD _b	φd	φd1	a	b				ℓ	
SKG-4050R-10-22	●	4	50	50	40	22	14	10.4	6.3	20	M10X1.5X35★	0.3	SPNW10.. SPET10.. SPMT10..	
SKG-5050R-10-22	●	5					52				16.6	M10X1.5X35★		0.3
SKG-5052R-10-22	●										17	M10		0.3
SKG-5063R-10-22	○										63	48		27
SKG-5063R-10-27	○	22	17	10.4	6.3	20	M10	0.5						
SKG-6063R-10-22	●	6	66	50	27	20	12.4	7	22	M12X1.75X30★				0.5
SKG-6063R-10-27	●									M12X1.75X30★				0.6
SKG-6066R-10-27	●									M12X1.75X30★	0.9			
SKG-6080R-10-27	●	80	60											

Note) All cutters are supplied without inserts or wrenches.

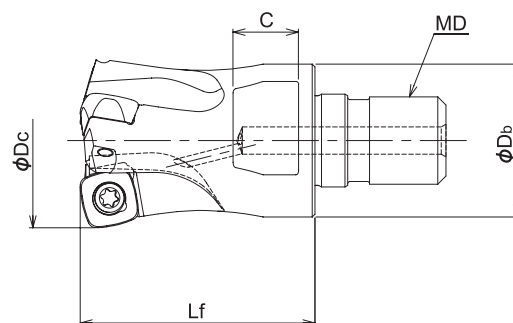
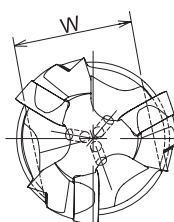
Screw	Torque(N.m)	Wrench
TSW-3509H	3.0	A-15T

Through
coolant
hole

G-
Body

MSG10 TYPE

Modular Type



Cat.No.	Stock	No. of inserts	Dimensions (mm)						Insert
			φDc	Lf	φDb	MD	C	W	
MSG-2025-10-M12	●	2	25	35	23	M12	11	19	SPNW10.. SPET10.. SPMT10..
MSG-3032-10-M16	●	3	32	43	28	M16	12	22	
MSG-3035-10-M16	○		35		30		14	26	
MSG-4040-10-M16	●	4	40		32				
MSG-4042-10-M16	●		42						

Note) All cutters are supplied without inserts or wrenches.

Screw	Torque(N.m)	Wrench
TSW-3509H	3.0	A-15

SKG/MSG10 TYPE

Insert



Fig. 1

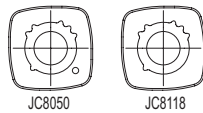
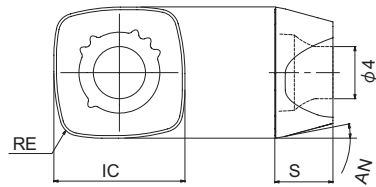


Fig. 2

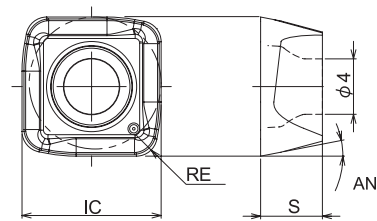


Fig. 3

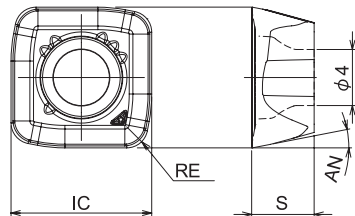
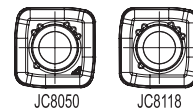
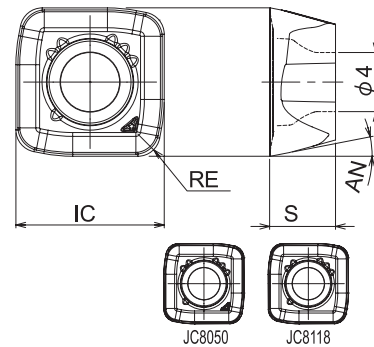


Fig. 4



Cat.No.	Tolerance	PVD Coating				Dimensions (mm)				Fig.
		DS150	JC7550	JC8050	JC8118	RE	IC	S	AN	
SPNW100415ZTR	N			●	●	1.5	10	4.46	11°	1
SPET100415ZPER-SM	E	●	●							2
SPMT100415ZPER-SM	M	●	●							3
SPMT100415ZPTR-PM				●	●					4

Note) 10 inserts per case.

SKG14 TYPE

Bore Type

Through
coolant
hole

G-
Body

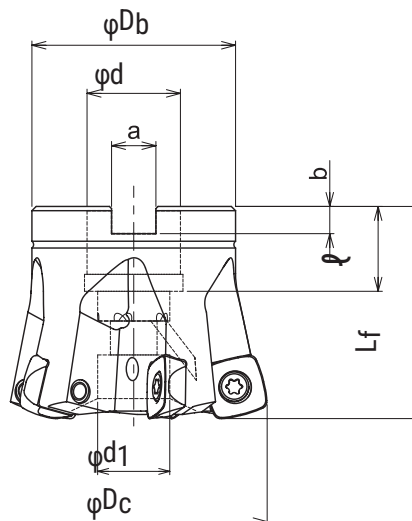
Face Milling

Copy Milling

Pocket Milling

Helical Interpolation

Plunge Milling



Cat.No.	Stock	No. of inserts	Dimensions (mm)								Arbor set bolt	Weight (kg)	Inserts					
			φDc	Lf	φDb	φd	φd1	a	b	ℓ								
SKG-4050R-14-22	●	4	50	50	40	22	14	10.4	6.3	19.05	M10X1.5X35★	0.3	SPNW14.. SPMT14..					
SKG-4052R-14-22	●		52		42		17				M10X1.5X35★	0.3						
SKG-4063R-14-22	●		63		48		20				M10	0.5						
SKG-4063R-14-27	●										M12X1.75X35★	0.5						
SKG-5066R-14-27	●	5	66		50	27	20	12.4	7	22	M12X1.75X35★	0.5						
SKG-5080R-14-27	●		80		60		37				M12X1.75X35★	0.8						
SKG-6100R-14-32	●		6	100	63		70				32	45		14.4	8	25	M16	1.6

Note) All cutters are supplied without inserts or wrenches.

Screw	Torque(N.m)	Wrench
CSW-513H	5.5	A-20

SKG14
TYPE

Insert


Fig. 1

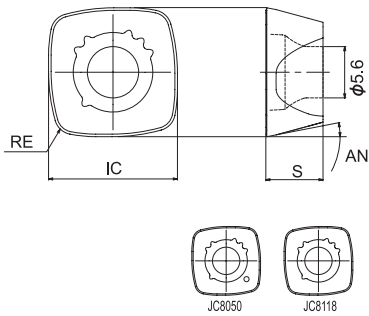


Fig. 2

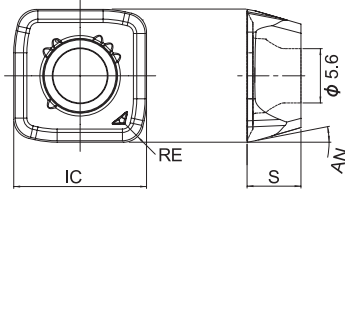
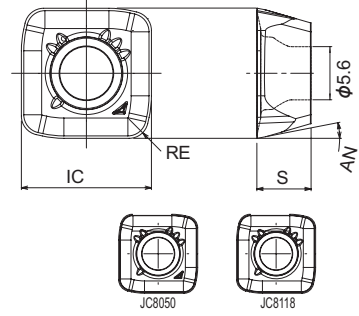


Fig. 3

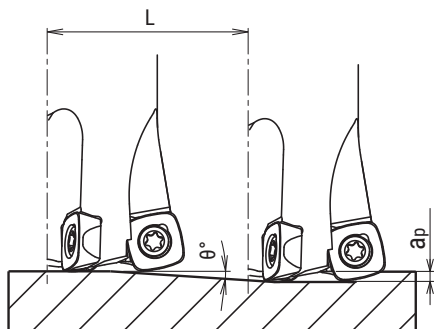


Cat.No.	Tolerance	PVD Coating				Dimensions (mm)				Fig.		
		DS150	JC7550	JC8050	JC8118	RE	IC	S	AN			
SPNW140515ZTR	N			●	●	1.5	13.7	5.56	11°	1		
SPMT140520ZPER-SM	M	●	●			2						2
SPMT140520ZPTR-PM				●	●							3

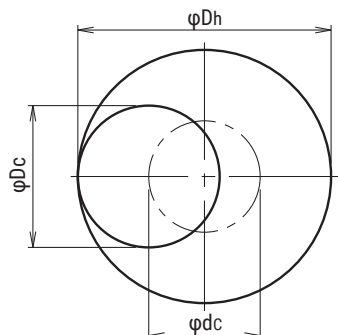
Note) 10 inserts per case.

Recommended Data for Profile Milling

Ramping



Helical interpolation



- Calculation of tool pass dia.

$$\phi_{dc} = \phi_{Dh} - \phi_{Dc}$$

Tool pass dia. Bore dia. Tool Dia.

- Depth of cut per one circuit should not exceed max. depth of cut A_p
- Down cutting is recommended, tool pass rotation should be counterclockwise

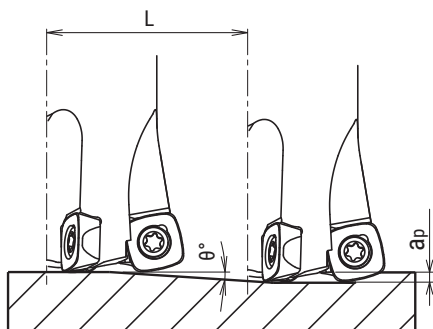
- In case of ramping and helical interpolation, apply 70% or less feed (V_f) from standard cutting condition table.

● SPNW100415ZTR / SPNW140515ZTR

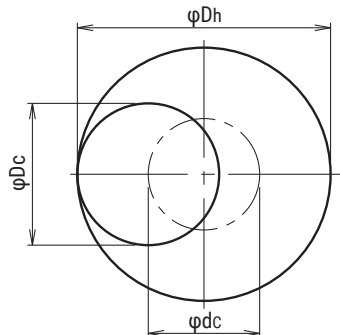
Cat.No.	Tool dia. (mm)	Effective Cutting dia. (mm)	Max.depth of cut : $\hat{a}_p$ (mm)	Ramping		Helical interpolation	
				Max.ramping angle θ°	Total cutting length at Max. ($\hat{a}_p$) L (mm)	Min.Bore dia. Dh min.(mm)	Max.Bore dia. Dh max. (mm)
MSG-2025-10	25	9.8	1.5	1°	85.9	36	48
MSG-3032-10	32	16.8	1.5	1°	85.9	50	62
MSG-3035-10	35	19.8	1.5	1°	85.9	56	70
MSG-4040-10	40	24.8	1.5	1°	85.9	66	78
MSG-4042-10	42	26.8	1.5	1°	85.9	70	82
SKG-*050R-10	50	34.8	1.5	1°	85.9	86	98
SKG-5052R-10	52	36.8	1.5	1°	85.9	90	102
SKG-*063R-10	63	47.8	1.5	0°45'	114.6	112	124
SKG-6066R-10	66	50.8	1.5	0°45'	114.6	118	130
SKG-6080R-10	80	64.8	1.5	0°30'	171.9	146	158
SKG-4050R-14	50	28.4	2.5	1°	143.2	80	98
SKG-4052R-14	52	30.4	2.5	1°	143.2	84	102
SKG-*063R-14	63	41.4	2.5	0°45'	191	106	124
SKG-5066R-14	66	44.4	2.5	0°45'	191	112	130
SKG-5080R-14	80	58.4	2.5	0°30'	286.5	140	158
SKG-6100R-14	100	78.4	2.5	0°20'	430	180	198

Recommended Data for Profile Milling

Ramping



Helical interpolation



- Calculation of tool pass dia.

$$\phi Dc = \phi Dh - \phi Dc$$

Tool pass dia. Bore dia. Tool Dia.

- Depth of cut per one circuit should not exceed max. depth of cut Ap
- Down cutting is recommended, tool pass rotation should be counterclockwise

- In case of ramping and helical interpolation, apply 70% or less feed (Vf) from standard cutting condition table.

- SPE (M) T100415ZPER-SM, SPMT100415ZPTR-PM

- SPMT140520ZPER-SM, SPMT140520ZPTR-PM

Cat.No.	Tool dia. (mm)	Effective Cutting dia. (mm)	Max.depth of cut : ap (mm)	Ramping		Helical interpolation	
				Max.ramping angle θ°	Total cutting length at Max.(ap) L (mm)	Min.Bore dia. Dh min.(mm)	Max.Bore dia. Dh max. (mm)
MSG-2025-10	25	10	1.0	1°	57.3	36	48
MSG-3032-10	32	17	1.0	1°	57.3	50	62
MSG-3035-10	35	20	1.0	1°	57.3	56	70
MSG-4040-10	40	25	1.0	1°	57.3	66	78
MSG-4042-10	42	27	1.0	1°	57.3	70	82
SKG-*050R-10	50	35	1.0	1°	57.3	86	98
SKG-5052R-10	52	37	1.0	1°	57.3	90	102
SKG-*063R-10	63	48	1.0	0°45'	76.4	112	124
SKG-6066R-10	66	51	1.0	0°45'	76.4	118	130
SKG-6080R-10	80	65	1.0	0°30'	114.6	146	158
SKG-4050R-14	50	28.8	1.8	1°	103.1	80	98
SKG-4052R-14	52	30.8	1.8	1°	103.1	84	102
SKG-*063R-14	63	41.8	1.8	0°45'	137.5	106	124
SKG-5066R-14	66	44.8	1.8	0°45'	137.5	112	130
SKG-5080R-14	80	58.8	1.8	0°30'	206.3	140	158
SKG-6100R-14	100	78.8	1.8	0°20'	206.3	180	198

■ Recommended Cutting Conditions - SKSG2-10 type -

Material	Insert	Grade	Vc	fz	ap	ae
Carbon Steel below 250HB	SPNW SPMT-PM	JC8050 (JC8118)	130 - 160 - 180	1.4 - 1.5 - 1.8	0.5 - 1.0 - 1.5	0.7 Dc
Tool & Die Steel below 255HB	SPNW SPMT-PM	JC8050 (JC8118)	130 - 160 - 180	1.4 - 1.5 - 1.8	0.5 - 1.0 - 1.5	0.7 Dc
Mold Steel 30-36HRC	SPNW SPMT-PM	JC8050 (JC8118)	130 - 160 - 180	1.4 - 1.5 - 1.8	0.5 - 1.0 - 1.5	0.7 Dc
Mold Steel 38-43HRC	SPNW SPMT-PM	JC8118 (JC8050)	80 - 110	1.2 - 1.3 - 1.5	0.5 - 1.0 - 1.2	0.6 Dc
Hardened Die Steel 42-52HRC	SPNW	JC8118	100	1.0 - 1.2 - 1.4	0.3 - 0.6 - 1.0	0.5 Dc
Grey & Nodular Cast Iron	SPNW SPMT-PM	JC8118	160 - 180	1.5 - 1.8	0.5 - 1.2 - 1.5	0.7 Dc
Stainless Steel	SPMT-SM SPET-SM	JC7550	100 - 130 - 150	0.9 - 1.0 - 1.4	0.5 - 1.0	0.6 Dc
Titanium Alloy	SPMT-SM SPET-SM	DS150	60	0.4 - 0.6	0.4 - 1.0	0.6 Dc

Note

1. Please adjust cutting conditions according to machine rigidity or work rigidity. (the above table is guide for cutting on a BT50 machine.)
 2. In case of chatter occurring, recommended to reduce ap or rpm and keep feed per tooth.
 3. ap should be reduced when using on low rigidity machine.
 4. Use air blow.
- ★ap ≤1.0 when using SPMT/SPET insert.

■ Recommended Cutting Conditions - SKSG2-14 type -

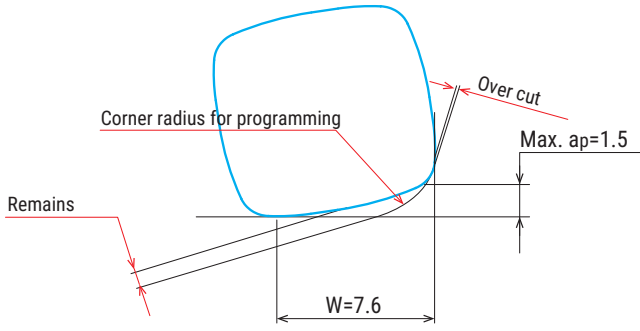
Material	Insert	Grade	Vc	fz	ap	ae
Carbon Steel below 250HB	SPNW SPMT-PM	JC8050 (JC8118)	100 - 150	1.4 - 1.8	0.6 - 2.0	0.7 Dc
Tool & Die Steel below 255HB	SPNW SPMT-PM	JC8050 (JC8118)	100 - 150	1.4 - 1.8	0.6 - 2.0	0.7 Dc
Mold Steel 30-36HRC	SPNW SPMT-PM	JC8050 (JC8118)	100 - 150	1.4 - 1.8	0.6 - 2.0	0.7 Dc
Mold Steel 38-43HRC	SPNW SPMT-PM	JC8118 (JC8050)	80 - 100	1.4 - 1.5	0.7 - 1.6	0.6 Dc
Hardened Die Steel 42-52HRC	SPNW	JC8118	70 - 90	0.7 - 1.2	0.5 - 1.0	0.5 Dc
Grey & Nodular Cast Iron	SPNW SPMT-PM	JC8118	160 - 180	1.4 - 1.8	0.6 - 2.0	0.7 Dc
Stainless Steel	SPMT-SM	JC7550	100 - 150	1.0 - 1.3	0.7 - 1.5	0.6 Dc
Titanium Alloy	SPMT-SM	DS150	60	0.4 - 0.6	0.7 - 1.3	0.6 Dc

Note

1. Please adjust cutting conditions according to machine rigidity or work rigidity. (the above table is guide for cutting on a BT50 machine.)
 2. In case of chatter occurring, recommended to reduce ap or rpm and keep feed per tooth.
 3. ap should be reduced when using on low rigidity machine.
 4. Use air blow.
- ★ap ≤1.8 when using SPMT insert.

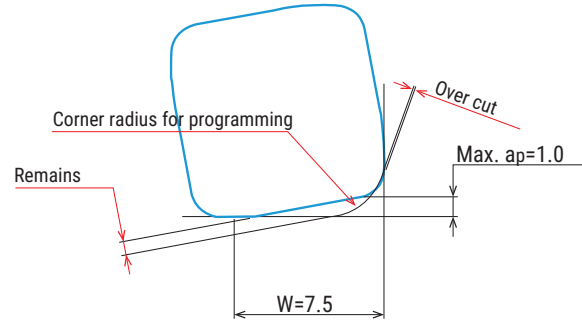
■ Definition of corner shape for programming

● SPNW100415ZTR



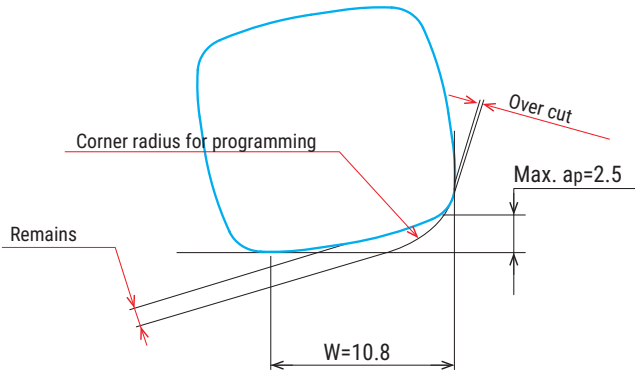
Corner radius for programming	Over cut	Remains
R2.5	0	0.99
R3.0 (Standard)	0	0.84
R3.5	0.09	0.71
R4.0	0.23	0.59

● SPE(M)T100415ZPER-SM / SPMT100415ZPTR-PM



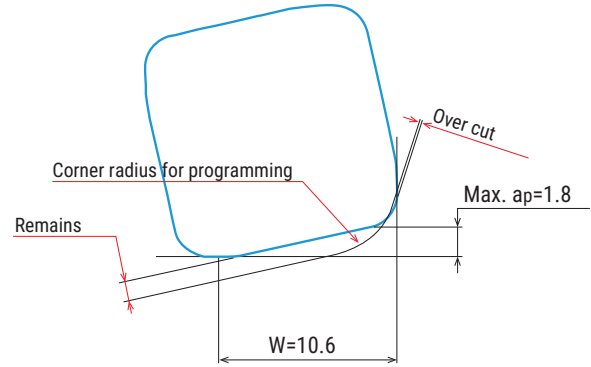
Corner radius for programming	Over cut	Remains
R2.5 (Standard)	0	0.77
R3.0	0.09	0.68
R3.5	0.25	0.60
R4.0	0.43	0.52

● SPNW140515ZTR



Corner radius for programming	Over cut	Remains
R3.5	0	1.60
R4.0 (Standard)	0	1.46
R4.5	0.06	1.32
R5.0	0.17	1.19

● SPMT140520ZPER-SM / SPMT140520ZPTR-PM



Corner radius for programming	Over cut	Remains
R3.5 (Standard)	0	1.35
R4.0	0.02	1.25
R4.5	0.14	1.12
R5.0	0.29	1.05

Adres: İkitelli OSB. Tormak San Sit.
Tormak Sosyal Tesisleri A Blok No:2
Başakşehir/İSTANBUL
Phone: 0212 486 28 56
+90 552 719 30 45



JQA-2089 JQA-EM1580