
SKS-GII

TYPE SKG 09 / MSG 09

EDITION 01



 **DIJET**



$$v_c = \frac{D_c \times \pi \times n}{1000}$$

$$F = F_z \times Z$$

$$V_c = F \times N$$

**FOR HEAT RESISTANT
ALLOY, TITANIUM
ALLOY AND HARDENED
STAINLESS STEEL.**

- Face mill type $\varnothing 40 \sim \varnothing 80$
- Modular type $\varnothing 20 \sim \varnothing 42$
- Endmill type $\varnothing 25 \sim \varnothing 42$

SKS-GII Type 09

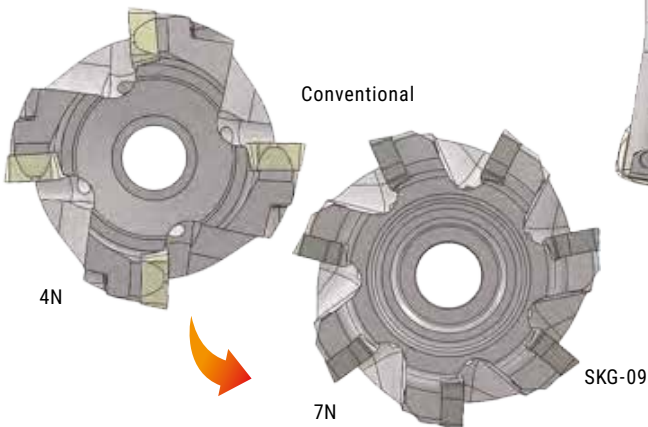


Specifically designed for high efficiency machining of difficult to cut materials

Feature 1

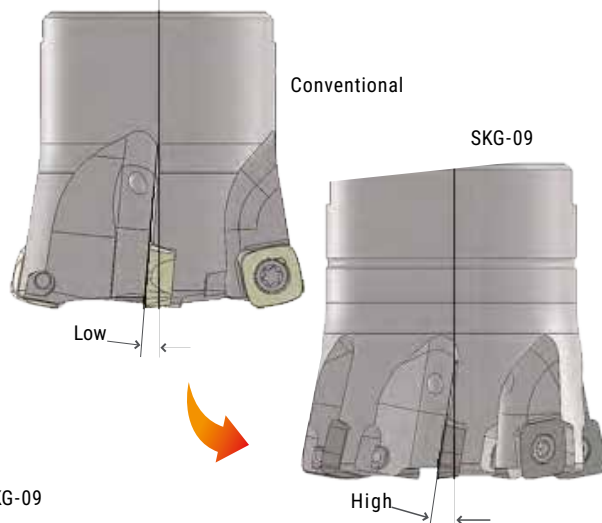
Multi-edge design enables high efficiency machining. Achieved Max $a_p=0.9$ mm even if difficult-to-cut materials such as titanium alloy, stainless steel & heat-resistant alloy

● Tool dia. $\varnothing 50$



Feature 2

The optimised cutting edge design provides the sharpness and low cutting resistance that is ideal for difficult-to-cut materials.



Feature 3

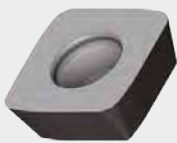
**Economical 4 cutting edges
Precise ground insert provides run out accuracy and longer tool life.**



● Line up

Wear resistance

Fracture resistance



SDEW090312ZER (JC7518/DS118)



SDET090312ZDER-SM (DS118)



SDEW090312ZER (JC7550/DS150)



SDET090312ZDER-SM (JC7550/DS150)

Insert	Titanium alloy	Inconel	SUS630	SUS316
SDEW090312ZER (JC7518)		■	◎	
SDEW090312ZER (JC7550)			●	◎
SDEW090312ZER (DS118)	◎			
SDEW090312ZER (DS150)	●			
SDET090312ZDER-SM (JC7550)		●	●	●
SDET090312ZDER-SM (DS150)	●			
SDET090312ZDER-SM (DS118)	●			

◎: stable machining ●: unstable machining ■: light load machining

SKG09
TYPE

Bore Type

Through coolant hole

G-Body

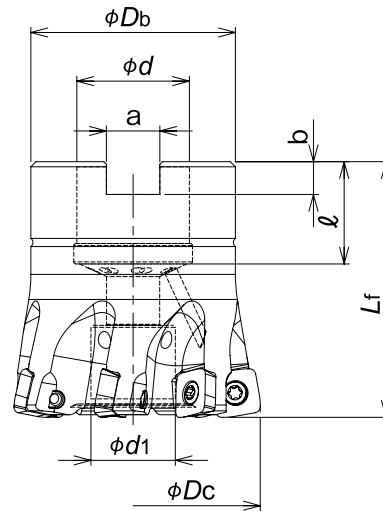
Face Milling

Copy Milling

Pocket Milling

Helical Interpolation

Plunge Milling



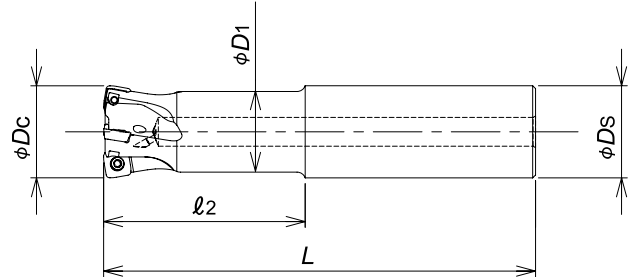
Cat.No.	Stock	No. of inserts	Dimensions (mm)								Arbor set bolt	Weight (kg)	Insert
			ϕD_c	L_f	ϕD_b	ϕd	ϕd_1	a	b	ℓ			
SKG-5040R-09-16	●	5	40	40	37	16	13.5	8.4	5.6	18	M8	0.21	SDEW090312ZER SDET090312ZDER-SM
SKG-7050R-09-22	●	7	50	50	40	22	16.5	10.4	6.3	20	M10	0.35	
SKG-7052R-09-22	●		52								M10	0.37	
SKG-8063R-09-22	●	8	63	50	48	27	20	12.4	7	22	M10	0.58	
SKG-8066R-09-27	●		66		M12X1.75X30★						0.60		
SKG-9080R-09-27	●	9	80	60	M12X1.75X30★	0.97							

Screw	Torque(N.m)	Wrench
DSW-307H	2.1	A-10

SKG09
TYPE

Shank Type

Through
coolant
hole



Cat.No.	Stock	No. of inserts	Dimensions (mm)					Insert
			φDc	ℓ2	L	φD1	φDs	
SKG-3025-60-09-S25	○	3	25	60	140	23	25	SDEW090312ZER SDET090312ZDER-SM
SKG-3025-100-09-S25	○			100	180			
SKG-4032-70-09-S32	○	4	32	70	150	28	32	
SKG-4032-120-09-S32	○			120	200			
SKG-5035-70-09-S32	○	5	35	70	150	31	32	
SKG-5035-120-09-S32	○			120	200			

Screw	Torque(N.m)	Wrench
DSW-307H	2.1	A-10

SKS-GII 09

MSG09
TYPE

Modular Type

Through
coolant
hole

G-
Body

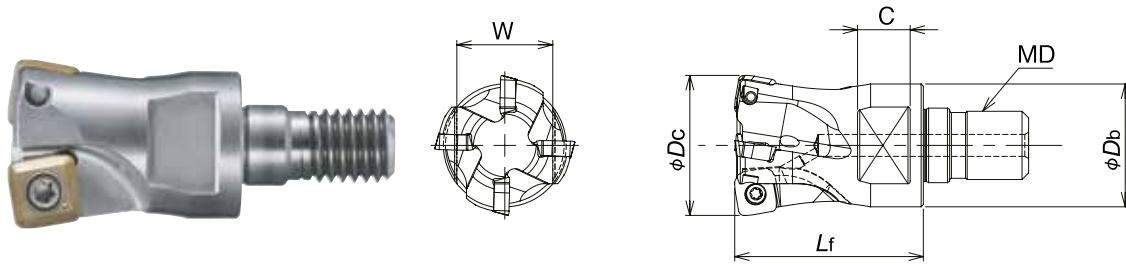
Face Milling

Copy Milling

Pocket Milling

Helical Interpolation

Plunge Milling



Cat.No.	Stock	No. of inserts	Dimensions (mm)						Insert	Parts
			ϕD_c	L_f	ϕD_b	MD	C	W		
MSG-2020-09-M10	●	2	20	30	19	M10	9	14	SDEW090312ZER SDET090312ZDER-SM	DSW-306H
MSG-2022-09-M10	○		22			M10				
MSG-3025-09-M12	●	3	25	35	23	11	19	DSW-307H		
MSG-4028-09-M12	○	4	28		23.6					M12
MSG-4032-09-M16	●	5	32	43	28	12	22			
MSG-5035-09-M16	●		35		29			M16		
MSG-5040-09-M16	●		40		14	26	M16			
MSG-5042-09-M16	●		42				M16			

Screw	Torque(N.m)	Wrench
DSW-306H	1.8	A-10
DSW-307H	2.1	A-10

SKG/MSG09
TYPE

Insert

Fig. 1



Fig. 1

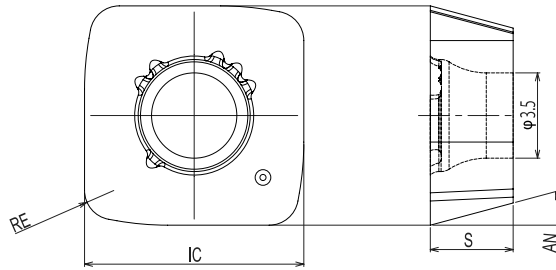
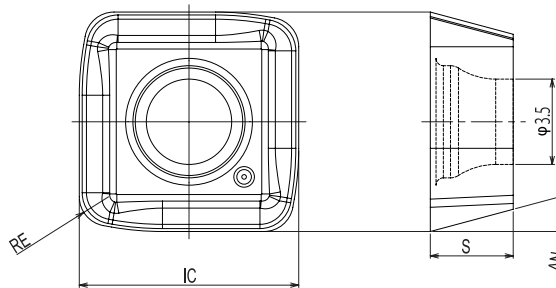


Fig. 2

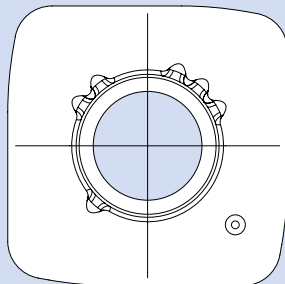


Fig. 2

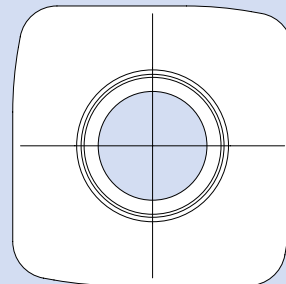


Cat.No.	Tolerance	PVD Coating				Dimensions (mm)				Fig.
		DS118	DS150	JC7518	JC7550	RE	IC	S	AN	
SDEW090312ZER	E	●	●	●	●	1.2	9	3.4	15°	1
SDET090312ZDER-SM		●	●		●					2

GRADE MARKING



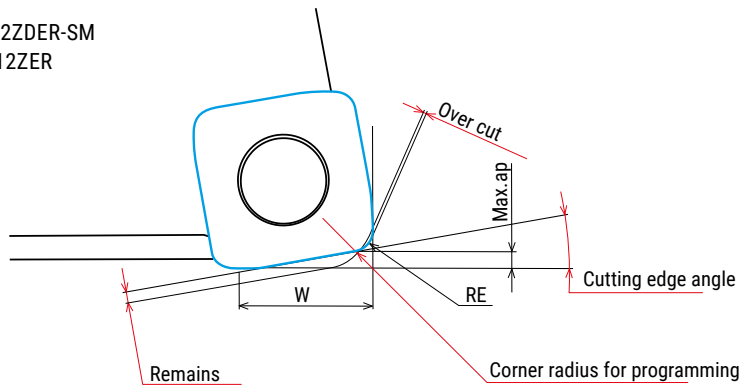
JC7550/DS150



JC7518/DS118

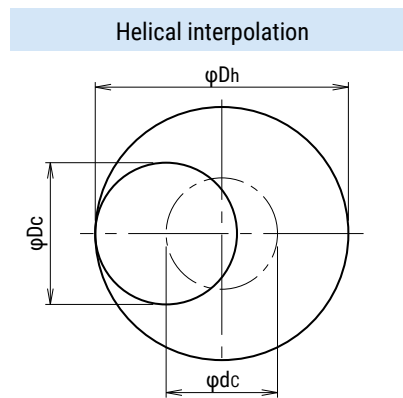
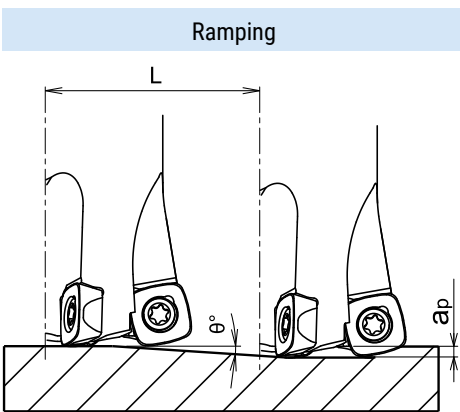
Definition of corner shape for programming

■ SDET090312ZDER-SM
SDEW090312ZER



Corner radius for programming	Remains	Over cut	Max.ap	W	Cutting edge angle
1.5	0.81	0	0.9	7.1	10°
2 (Standard)	0.73	0			
2.5	0.65	0.08			

Recommended Data for Profile Milling



● Calculation of tool pass dia.

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

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

Cat.No.	Tool dia.	Effective cutting dia.	Max.depth of cut : ap	Ramping		Helical interpolation	
				Max.ramping angle θ	Total cutting length at Max.ap : L(mm)	Min.Bore dia. (mm)	Max.Bore dia. (mm)
MSG-2020-09-M10	20	5.6	0.9	1°	51.6	27	38
MSG-2022-09-M10	22	7.7	0.9	1°	51.6	31	42
MSG-3025-09-M12	25	10.7	0.9	1°	51.6	37	48
MSG-4028-09-M12	28	13.7	0.9	1°	51.6	43	54
MSG-4032-09-M16	32	17.6	0.9	1°	51.6	51	62
MSG-5035-09-M16	35	20.6	0.9	1°	51.6	57	68
MSG-5040-09-M16	40	25.7	0.9	1°	51.6	67	78
MSG-5042-09-M16	42	27.7	0.9	1°	51.6	71	82
SKG-3025-60-09-S25	25	10.7	0.9	1°	51.6	37	48
SKG-3025-100-09-S25	25	10.7	0.9	1°	51.6	37	48
SKG-4032-70-09-S32	32	17.6	0.9	1°	51.6	51	62
SKG-4032-120-09-S32	32	17.6	0.9	1°	51.6	51	62
SKG-5035-70-09-S32	35	20.6	0.9	1°	51.6	57	68
SKG-5035-120-09-S32	35	20.6	0.9	1°	51.6	57	68
SKG-5040R-09-16	40	25.7	0.9	1°	51.6	67	78
SKG-7050R-09-22	50	35.6	0.9	1°	51.6	87	98
SKG-7052R-09-22	52	37.6	0.9	1°	51.6	91	102
SKG-8063R-09-22	63	48.7	0.9	0°45'	68.8	113	124
SKG-8066R-09-27	66	51.7	0.9	0°45'	68.8	119	130
SKG-9080R-09-27	80	65.7	0.9	0°30'	103.1	147	158

CUTTING CONDITIONS

■ Recommended Cutting Conditions - SKSG2-09 type -

Material	Insert	Grade	Vc	fz	ap	ae
Austenitic Stainless Steel	SDEW (SDET)	JC7550	125 - 150	0.8 - 1.0	0.3 - 0.8	0.6 Dc
Martensitic Stainless Steel	SDEW	JC7550	155 - 190	0.8 - 1.0	0.3 - 0.8	0.6 Dc
Duplex Stainless Steel	SDEW	JC7518 (JC7550)	85 - 100	0.25 - 0.3	0.3 - 0.8	0.4~0.6 Dc
Titanium Alloy	SDEW	DS150 (DS118)	60	0.5 - 0.6	0.3 - 0.8	0.6 Dc
Heat Resistant Alloy	SDEW	JC7518 (JC7550)	25 - 30	0.5 - 0.6	0.2 - 0.5	0.4~0.6 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.
5. Wet cutting is recommended for machining Super Duplex, Titanium Alloy, Heat Resistant Alloy.

SIX SIGMA TOOLS
CUTTING TOOL EXPERTS



- The cutting data are guide values. The data must be adjusted accordingly depending on the clamping and machine.
- Use of this cutting data at your own responsibility. All information is provided without a guarantee. Model and colour changes reserved.
- In all other respects, our GTC's apply (www.sixsigmatools.com/AGB-GmbH.pdf)
- Technical changes possible without prior notice. Our general terms and conditions apply. | Printing 2024

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