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tehnologija obdelave · vpenjalni sistemi



SKG09 Video



SKG09 Katalog

Specifically designed for high efficiency machining of difficult to cut materials

The optimized cutting edge design provides sharpness & low cutting resistance that is ideal for difficult-to-cut materials

Precise ground insert provides run out accuracy and longer tool life

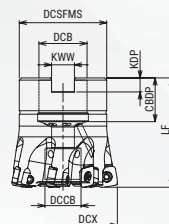
Multi-edge design enables high efficiency Machining

25-02

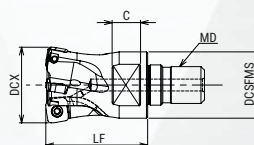
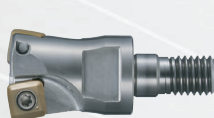
High Feed - Inox, Titan, Inconel



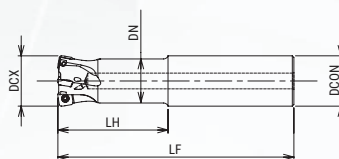
Za učinkovito in zanesljivo obdelavo zahtevnih materialov – Inox, Titan, Inconel



Držalo	DCX	z	DCB	LF	Ploščice	Brezplačno držalo ob nakupu ploščic
SKG-5040R-09-16	40	5	16	40	SDEW 0903... & SDET 0903...	50
SKG-7050R-09-22	50	7	22	50		60
SKG-7052R-09-22	52	7	22	50		60
SKG-8063R-09-22	63	8	22	50		70
SKG-8066R-09-27	66	8	27	50		70
SKG-9080R-09-27	80	9	27	50		80



Držalo	DCX	z	MD	LF	Ploščice	Brezplačno držalo ob nakupu ploščic
MSG-2020-09-M10	20	2	M10	30	SDEW 0903... & SDET 0903...	20
MSG-2022-09-M10	22	2	M10	30		20
MSG-3025-09-M12	25	3	M12	35		30
MSG-4028-09-M12	28	4	M12	35		40
MSG-4032-09-M16	32	4	M16	43		40
MSG-5035-09-M16	35	5	M16	43		50
MSG-5040-09-M16	40	5	M16	43		50
MSG-5042-09-M16	42	5	M16	43		50



Držalo	DCX	z	LH	LF	DCON	Ploščice	Brezplačno držalo ob nakupu ploščic
SKG-3025-60-09-S25	25	3	60	140	25	SDEW 0903... & SDET 0903...	30
SKG-3025-100-09-S25	25	3	100	180	25		30
SKG-4032-70-09-S32	32	4	70	150	32		40
SKG-4032-120-09-S32	32	4	120	200	32		40
SKG-5035-70-09-S32	35	5	70	150	32		50
SKG-5035-120-09-S32	35	5	120	200	32		50

Oznaka ploščice	Programski radij	Kvalitete			
SDEW 090312 ZER	Rp=2,0	DS118	DS150	DS217	DS250
SDET 090312 ZDER-SM		DS118	DS150		DS250



SDEW 09...



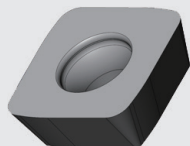
SDET 09...

SKG09/MSG09 Type

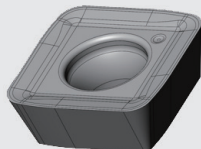
● Insert Lineup

Wear resistance

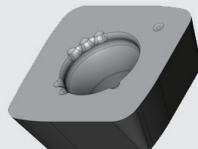
Fracture resistance



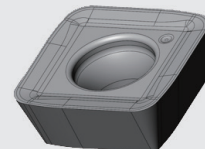
SDEW090312ZER
(JC7518/**DS217**/DS118)



SDET090312ZDER-SM
(DS118)



SDEW090312ZER
(JC7550/**DS250**/DS150)



SDET090312ZDER-SM
(JC7550/**DS250**/DS150)

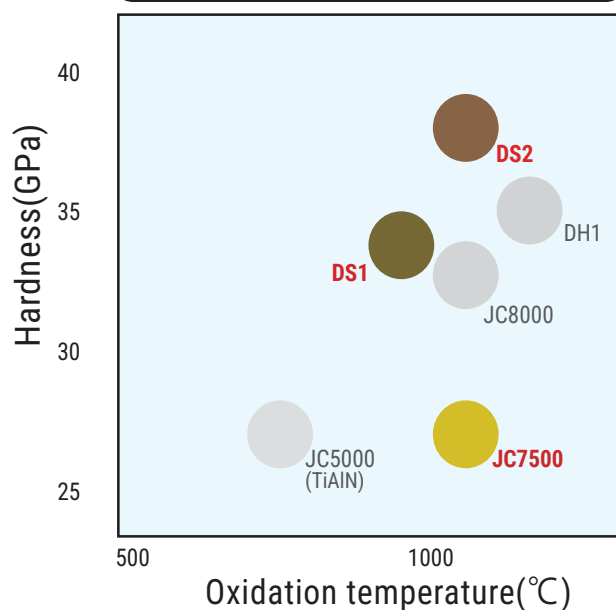
● Application

Insert	Titanium alloy	Inconel	SUS630	SUS316
SDEW090312ZER (DS217)		■	◎	
SDEW090312ZER (JC7518)		■	◎	
SDEW090312ZER (DS250)			●	◎
SDEW090312ZER (JC7550)			●	◎
SDEW090312ZER (DS118)	◎			
SDEW090312ZER (DS150)	●			
SDET090312ZDER-SM (DS250)		●	●	●
SDET090312ZDER-SM (JC7550)		●	●	●
SDET090312ZDER-SM (DS150)	●			
SDET090312ZDER-SM (DS118)	●			

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

	DS2 Coating	DS1 Coating	JC7500 Coating
Composition	TiAlSiN	TiB ₂	AlTiCrN
Hardness (GPa)	36 - 38	33 - 35	27 - 28
Oxidation temperature (°C)	1100 - 1200	900 - 1000	1000 - 1100
Coefficient of friction	0.3	0.4	0.5

DIJET Coating MAP



SKG09
TYPE

Bore Type

Through
coolant
hole

**G-
Body**

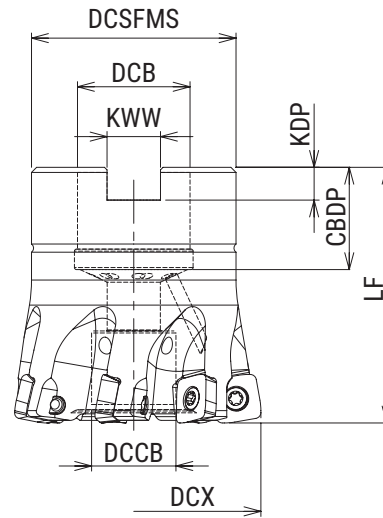
Face Milling

Copy Milling

Pocket Milling

Helical Interpolation

Plunge Milling



Cat.No.	Stock	No. of inserts	Dimensions (mm)								Arbor set bolt	Weight (kg)	Insert
			DCX	LF	DCSFMS	DCB	DCCB	KWW	KDP	CBDP			
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		48	27	20	12.4	7	22	M10	0.58	
SKG-8066R-09-27	●		66		50						M12X1.75X30★	0.60	
SKG-9080R-09-27	●	9	80		60						M12X1.75X30★	0.97	

All cutters are supplied without inserts or wrench.

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

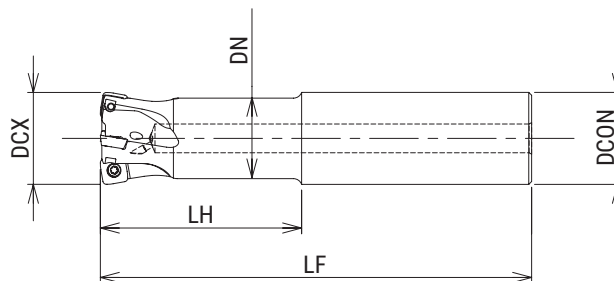
SKG09/MSG09 type

Through
coolant
hole



SKG09
TYPE

Shank Type



Cat.No.	Stock	No. of inserts	Dimensions (mm)					Insert
			DCX	LH	LF	DN	DCON	
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		
SKG-5035-120-09-S32	○			120	200			

All cutters are supplied without inserts or wrench.

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

MSG09
TYPE

Modular Type

Through
coolant
hole

**G-
Body**

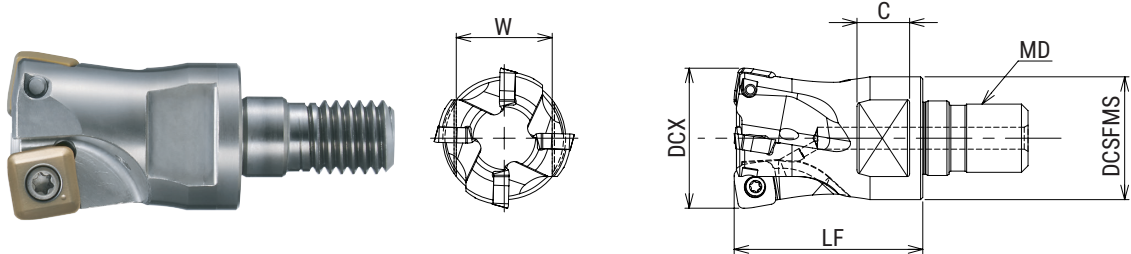
Face Milling

Copy Milling

Pocket Milling

Helical Interpolation

Plunge Milling



Cat.No.	Stock	No. of inserts	Dimensions (mm)						Insert	Parts
			DCX	LF	DCSFMS	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				DSW-307H
MSG-3025-09-M12	●	3	25	35	23	M12	11	19		
MSG-4028-09-M12	○	4	28		23.6	M12				
MSG-4032-09-M16	●		5	32	43	28	M16	12		
MSG-5035-09-M16	●	35		29		M16				
MSG-5040-09-M16	●	40		32		M16	14	26		
MSG-5042-09-M16	●	42	M16							

All cutters are supplied without inserts or wrench.

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

● : Standard stock items

○ : Stock in Japan

SKG/MSG09 TYPE

Insert

Fig. 1



Fig. 1

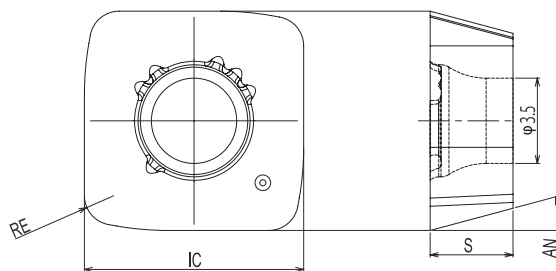
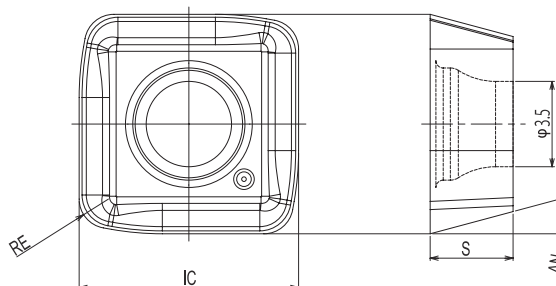


Fig. 2



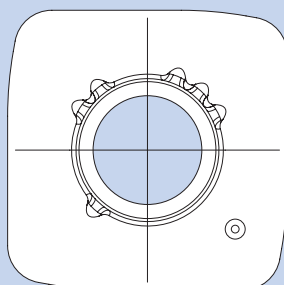
Fig. 2



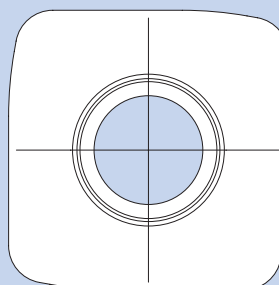
Cat.No.	Tolerance	PVD Coating						Dimensions (mm)				Fig.
		DS118	DS150	NEW DS217	JC7518	NEW DS250	JC7550	RE	IC	S	AN	
SDEW090312ZER	E	●	●	●	●	●	●	1.2	9	3.4	15°	1
SDET090312ZDER-SM		●	●			●	●					2

Note) 10 inserts per case.

GRADE MARKING



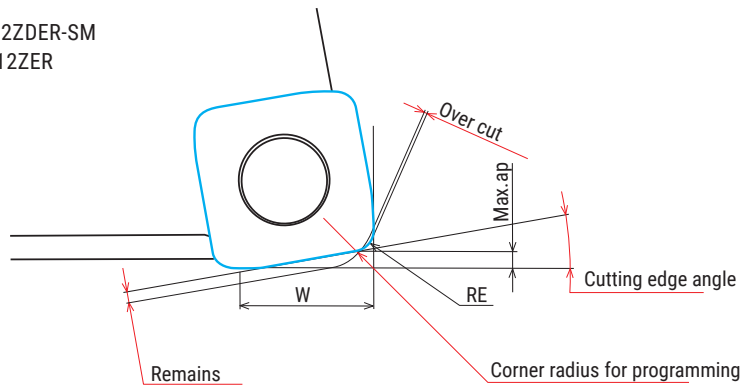
JC7550/DS250/DS150



JC7518/DS217/DS118

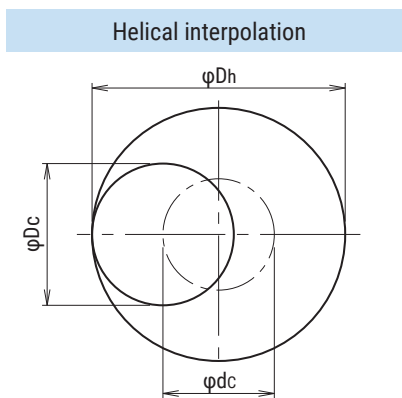
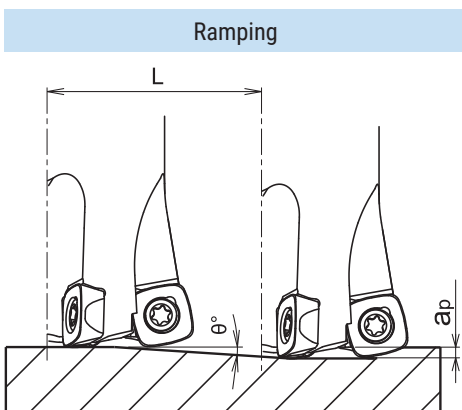
Definition of corner shape for programming

■ 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.

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

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

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

■ Recommended Cutting Conditions - SKSG2-09 type -

Material	Insert	Grade	Vc	fz	ap	ae
Austenitic Stainless Steel	SDEW (SDET)	JC7550 (DS250)	125 - 150	0.8 - 1.0	0.3 - 0.8	0.6 Dc
Martensitic Stainless Steel	SDEW	JC7550 (DS250)	155 - 190	0.8 - 1.0	0.3 - 0.8	0.6 Dc
Duplex Stainless Steel	SDEW	DS217 JC7518 (JC7550) (DS250)	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	DS217 (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.



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