PRODUCT NEWS

No.002

NEW PRODUCT

DIJET

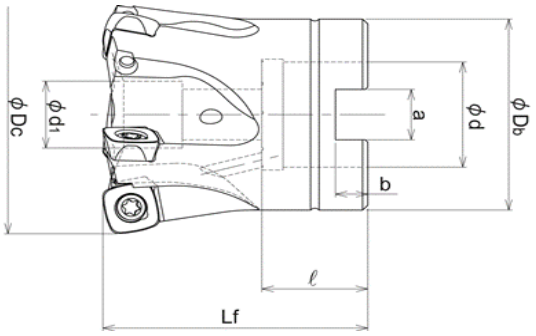
High feed machining cutter with 4 corners

SKS G Ⅱ

SKG/MSG type

DIJET GmbH

SKS G2 SKG TYPE / SPNW10 INSERT

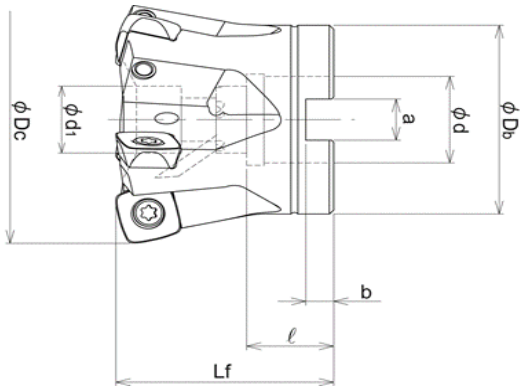


■BODY/FACE MILL TYPE/SPNW 10 INSERT

Item code	Stock	No. of inserts	Dimensions(mm)								Applicable inserts	Parts
			ΦDc	Lf	ΦDb	Φd	Φd1	a	b	ℓ		
SKG-4050R-10-22	●	4	50	50	40	22	14	10.4	6.3	20	SPNW 100415ZTR	Screw
SKG-5050R-10-22	●	5	50	50	40	22	14	10.4	6.3	20		TSW-3509H
SKG-5052R-10-22	●	5	52	50	42	22	16.6	10.4	6.3	20		
SKG-6063R-10-22	●	6	63	50	48	22	17	10.4	6.3	20		Wrench
SKG-6063R-10-27	●	6	63	50	48	27	20	12.4	7	22		A-15T
SKG-6066R-10-27	●	6	66	50	50	27	20	12.4	7	22		

●Standard stock item

SKS G2 SKG TYPE / SPNW14 INSERT

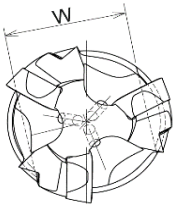


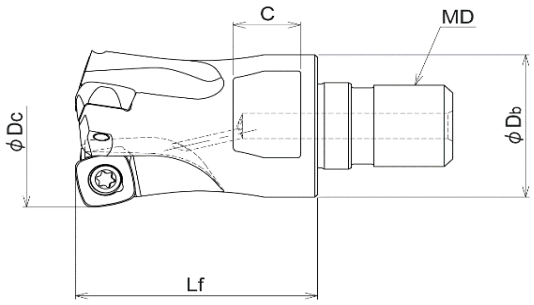
■BODY/FACE MILL TYPE/SPNW 14

Item code	Stock	No. of inserts	Dimensions(mm)								Applicable inserts	Parts
			ΦDc	Lf	ΦDb	Φd	Φd1	a	b	ℓ		
SKG-4050R-14-22	●	4	50	50	40	22	14	10.4	6.3	19.05	SPNW 140515ZTR	Screw
SKG-4052R-14-22	●	4	52	50	42	22	14	10.4	6.3	19.05		CSW-513H
SKG-4063R-14-22	●	4	63	50	48	22	17	10.4	6.3	20		
SKG-4063R-14-27	●	4	63	50	48	27	20	12.4	7	22		Wrench
SKG-5066R-14-27	●	5	66	50	50	27	20	12.4	7	22		A-20
SKG-5080R-14-27	●	5	80	50	60	27	20	12.4	7	22		
SKG-6100R-14-32	●	6	100	63	70	32	26	14.4	8	25		

●Standard stock item

SKS G2 MODULAR HEAD MSG TYPE

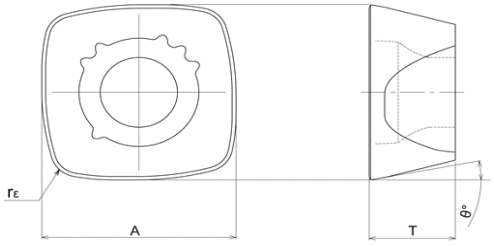




■BODY

Item code	Stock	No. of inserts	Dimensions(mm)						Applicable inserts	Parts	
			ΦDc	Lf	ΦDb	MD	C	W		Screw	Wrench
MSG-2025-10-M12	●	2	25	35	23	M12	11	19	SPNW 100415ZTR	TSW-3509H	A-15
MSG-3032-10-M16	●	3	32	43	28	M16	12	22			
MSG-4040-10-M16	●	4	40	43	32	M16	14	26			
MSG-4042-10-M16	●	4	42	43	32	M16	14	26			

●Standard stock item



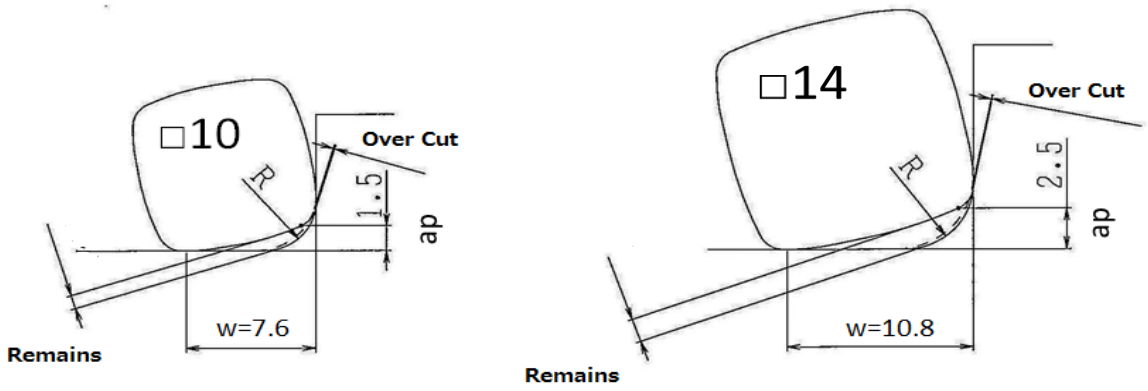
■INSERTS

Item code	Tolerance	Dimensions(mm)				PVD Coat	
		A	T	rε	θ°	JC8050	JC8118
SPNW100415ZTR	N	10.05	4.46	1.5	11	●	●
SPNW140515ZTR		13.7	5.56	1.5	11	●	●

●Standard stock item

SKS G2 SKG/MSG TYPE

●**Definition of corner shape for programming**



(mm)

	Corner radius for programming	Over Cut	Remains
SPNW10 insert	R2.5	0	0.99
	R3.0	0	0.84
	R3.5	0.09	0.71
	R4.0	0.23	0.59

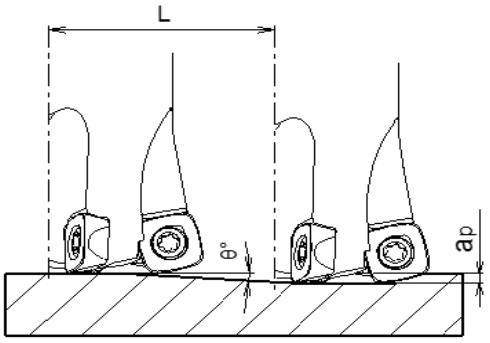
(mm)

	Corner radius for programming	Over Cut	Remains
SPNW14 insert	R3.5	0	1.6
	R4.0	0	1.46
	R4.5	0.06	1.32
	R5.0	0.17	1.19

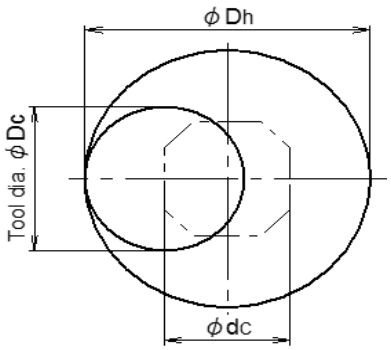
SKS G2 SKG/MSG TYPE

●Attention for profile milling

Ramping



Helical interpolation



SPNW10 insert

Tool dia. ϕD (mm)	Eff. Cutting dia. ϕD1 (mm)	Max depth of cut (mm)	Ramping		Helical interpolation	
			Max. ramping angle θ°	Total cutting length at Max. Ap	Min. bore dia. ΦDh min(mm)	Max. bore dia. ΦDh min(mm)
25	9.8	1.5	1	95.5	36	48
32	16.8	1.5	1	95.5	50	62
40	24.8	1.5	1	95.5	66	78
42	26.8	1.5	1	95.5	70	82
50	34.8	1.5	1	95.5	86	98
52	36.8	1.5	1	95.5	90	102
63	47.8	1.5	45'	127.3	112	124
66	50.8	1.5	45'	127.3	118	130
80	64.8	1.5	30'	191	146	158

SPNW14 insert

Tool dia. ϕD (mm)	Eff. Cutting dia. ϕD1 (mm)	Max depth of cut (mm)	Ramping		Helical interpolation	
			Max. ramping angle θ°	Total cutting length at Max. Ap	Min. bore dia. ΦDh min(mm)	Max. bore dia. ΦDh min(mm)
50	28.4	2.5	1	143.2	80	98
52	30.4	2.5	1	143.2	84	102
63	41.4	2.5	45'	191	106	124
66	44.4	2.5	45'	191	112	130
80	58.4	2.5	30'	286.5	140	158
100	78.4	2.5	20'	430	180	198
125	123.4	2.5	20'	430	230	248
160	138.4	2.5	15'	573	300	318

SKS G2 SKG/MSG TYPE

■RECOMMENDED CUTTING CONDITIONS FOR SKG ' SPNW10-type inserts'

Work Materials	Grades	Tool dia.(mm) 50 No of teeth 4N					Tool dia.(mm) 50/52 No of teeth 5N					Tool dia.(mm) 63/66 No of teeth 6N				
		ℓ (mm)	Ap (mm)	Ae (mm)	N (min-1)	Vf (mm/min)	ℓ (mm)	Ap (mm)	Ae (mm)	N (min-1)	Vf (mm/min)	ℓ (mm)	Ap (mm)	Ae (mm)	N (min-1)	Vf (mm/min)
Carbon steel (C50,C55) Below 250HB	JC8050 (JC8118)	~150	1.5	~32	1,020	7,340	~150	1.5	~32	1,020	9,180	~150	1.5	~44	1,020	9,180
		200	1.2	~32	1,020	7,340	200	1.5	~32	1,020	9,180	200	1.5	~44	1,020	9,180
		250	0.8	~32	890	5,340	250	1.2	~32	890	6,680	250	1.2	~42	890	6,680
		300	0.6	~32	830	4,980	300	1	~32	830	6,230	300	1	~42	830	6,230
		350	0.5	~32	830	4,650	350	0.5	~32	830	5,810	350	0.5	~42	830	5,810
Die steel, (1.2344,1.2379) Below 255HB	JC8050 (JC8118)	~150	1.5	~32	1,020	7,340	~150	1.5	~32	1,020	9,180	~150	1.5	~44	1,020	9,180
		200	1.2	~32	1,020	7,340	200	1.5	~32	1,020	9,180	200	1.5	~44	1,020	9,180
		250	0.8	~32	890	5,340	250	1.2	~32	890	6,680	250	1.2	~42	890	6,680
		300	0.6	~32	830	4,980	300	1	~32	830	6,230	300	1	~42	830	6,230
		350	0.5	~32	830	4,650	350	0.5	~32	830	5,810	350	0.5	~42	830	5,810
Mold steel (1.2311,P20) 30-36HRC	JC8050 (JC8118)	~150	1.5	~32	1,020	7,340	~150	1.5	~32	1,020	9,180	~150	1.5	~44	1,020	9,180
		200	1.2	~32	1,020	7,340	200	1.5	~32	1,020	9,180	200	1.5	~44	1,020	9,180
		250	0.8	~32	890	5,340	250	1.2	~32	890	6,680	250	1.2	~42	890	6,680
		300	0.6	~32	830	4,980	300	1	~32	830	6,230	300	1	~42	830	6,230
		350	0.5	~32	830	4,650	350	0.5	~32	830	5,810	350	0.5	~42	830	5,810
Mold steel (1.2311,P21) 38-43HRC	JC8118 (JC8050)	~150	1.2	~32	700	4,200	~150	1.2	~32	700	5,250	~150	1.2	~44	700	5,250
		200	1	~32	700	4,200	200	1.2	~32	700	5,250	200	1.2	~44	700	5,250
		250	0.7	~32	640	3,840	250	1	~32	640	4,800	250	1	~42	640	4,800
		300	0.6	~32	510	2,860	300	0.5	~32	510	3,570	300	0.5	~42	510	3,570
		350	-	-	-	-	350	-	-	-	-	350	-	-	-	-
Hardened die steel (1.2344,1.2379) 42-52HRC	JC8118	~150	1..0	~32	640	3,580	~150	1..0	~32	640	4,480	~150	1..0	~44	640	4,480
		200	0.8	~32	640	3,330	200	0.8	~32	640	4,160	200	0.8	~44	640	4,160
		250	0.6	~32	640	3,070	250	0.6	~32	640	3,840	250	0.6	~42	640	3,840
		300	-	-	-	-	300	-	-	-	-	300	-	-	-	-
		350	-	-	-	-	350	-	-	-	-	350	-	-	-	-
Grey & Nodular cast iron (GG,GGG) Below 300HB	JC8118	~150	1.5	~32	1,150	8,280	~150	1.5	~32	1,150	10,350	~150	1.5	~44	1,150	10,350
		200	1.5	~32	1,150	8,280	200	1.5	~32	1,150	10,350	200	1.5	~44	1,150	10,350
		250	1.2	~32	1,150	6,900	250	1.2	~32	1,150	8,630	250	1.2	~42	1,150	8,630
		300	0.8	~32	1,020	6,120	300	0.8	~32	1,020	7,650	300	0.8	~42	1,020	7,650
		350	0.5	~32	1,020	6,120	350	0.5	~32	1,020	7,650	350	0.5	~42	1,020	7,650

Ap: Depth of cut, N: Spindle speed, Vf: Feed speed, Pc: Net power consumption

SKS G2 SKG/MSG TYPE

■RECOMMENDED CUTTING CONDITIONS FOR SKG 'SPNW14-type inserts'

Work Materials	Grades	Tool dia.(mm) 50/52 No of teeth 4N					Tool dia.(mm) 63/ No of teeth 4N					Tool dia.(mm) 66/ No of teeth 5N				
		ℓ (mm)	Ap (mm)	Ae (mm)	N (min-1)	Vf (mm/min)	ℓ (mm)	Ap (mm)	Ae (mm)	N (min-1)	Vf (mm/min)	ℓ (mm)	Ap (mm)	Ae (mm)	N (min-1)	Vf (mm/min)
Carbon steel (C50,C55) Below 250HB	JC8050 (JC8118)	～150	2	～28	890	6,410	～150	2	～40	710	5,110	～150	2	～44	680	6,120
		200	1.8	～28	890	6,410	200	1.8	～40	710	5,110	200	1.8	～44	680	6,120
		250	1.5	～28	830	4,980	250	1.5	～40	660	3,960	250	1.5	～44	630	4,730
		300	0.8	～28	760	4,560	300	0.8	～40	610	3,660	300	0.8	～44	580	4,350
		350	0.6	～28	640	3,580	350	0.6	～40	510	2,860	350	0.6	～44	480	3,360
Die steel, (1.2344,1.2379) Below 255HB	JC8050 (JC8118)	～150	2	～28	890	6,410	～150	2	～40	710	5,110	～150	2	～44	680	6,120
		200	1.8	～28	890	6,410	200	1.8	～40	710	5,110	200	1.8	～44	680	6,120
		250	1.5	～28	830	4,980	250	1.5	～40	660	3,960	250	1.5	～44	630	4,730
		300	0.8	～28	760	4,560	300	0.8	～40	610	3,660	300	0.8	～44	580	4,350
		350	0.6	～28	640	3,580	350	0.6	～40	510	2,860	350	0.6	～44	480	3,360
Mold steel (1.2311,P20) 30-36HRC	JC8050 (JC8118)	～150	2	～28	890	6,410	～150	2	～40	710	5,110	～150	2	～44	680	6,120
		200	1.8	～28	890	6,410	200	1.8	～40	710	5,110	200	1.8	～44	680	6,120
		250	1.5	～28	830	4,980	250	1.5	～40	660	3,960	250	1.5	～44	630	4,730
		300	0.8	～28	760	4,560	300	0.8	～40	610	3,660	300	0.8	～44	580	4,350
		350	0.6	～28	640	3,580	350	0.6	～40	510	2,860	350	0.6	～44	480	3,360
Mold steel (1.2311,P21) 38-43HRC	JC8118 (JC8050)	～150	1.6	～28	640	3,840	～150	1.6	～40	510	3,060	～150	1.6	～44	480	3,600
		200	1.4	～28	640	3,840	200	1.4	～40	510	3,060	200	1.4	～44	480	3,600
		250	1.2	～28	640	3,840	250	1.2	～40	510	3,060	250	1.2	～44	480	3,600
		300	0.7	～28	510	2,860	300	0.7	～40	400	2,240	300	0.7	～44	390	2,730
		350	-	-	-	-	350	-	-	-	-	350	-	-	-	-
Hardened die steel (1.2344,1.2379) 42-52HRC	JC8118	～150	1	～28	570	2,740	～150	1	～40	450	2,160	～150	1	～44	430	2,580
		200	1	～28	570	2,280	200	1	～40	450	1,800	200	1	～44	430	2,150
		250	0.8	～28	570	1,820	250	0.8	～40	450	1,440	250	0.8	～44	430	1,720
		300	-	-	-	-	300	-	-	-	-	300	-	-	-	-
		350	-	-	-	-	350	-	-	-	-	350	-	-	-	-
Grey & Nodular cast iron (GG,GGG) Below 300HB	JC8118	～150	2	～28	1,150	8,280	～150	2	～40	910	6,550	～150	2	～44	870	7,830
		200	1.8	～28	1,150	8,280	200	1.8	～40	910	6,550	200	1.8	～44	870	7,830
		250	1.5	～28	1,150	6,900	250	1.5	～40	910	5,460	250	1.5	～44	870	6,530
		300	0.8	～28	1,020	6,120	300	0.8	～40	810	4,860	300	0.8	～44	770	5,780
		350	0.6	～28	1,020	5,710	350	0.6	～40	810	4,540	350	0.6	～44	770	5,390

Ap: Depth of cut, N: Spindle speed, Vf: Feed speed, Pc: Net power consumption

SKS G2 SKG/MSG TYPE

■RECOMMENDED CUTTING CONDITIONS FOR SKG 'SPNW14-type inserts'

Work Materials	Grades	Tool dia.(mm) 80/ No of teeth 5N					Tool dia.(mm) 100/ No of teeth 6N				
		ℓ (mm)	Ap (mm)	Ae (mm)	N (min-1)	Vf (mm/min)	ℓ (mm)	Ap (mm)	Ae (mm)	N (min-1)	Vf (mm/min)
Carbon steel (C50,C55) Below 250HB	JC8050 (JC8118)	~150	2	~56	600	5,400	~150	2	~70	480	5,180
		200	1.8	~56	600	5,400	200	1.8	~70	480	5,180
		250	1.5	~56	560	4,200	250	1.5	~70	450	4,050
		300	0.8	~56	520	3,900	300	0.8	~70	410	3,690
		350	0.6	~56	440	3,080	350	0.6	~70	350	2,940
Die steel, (1.2344,1.2379) Below 255HB	JC8050 (JC8118)	~150	2	~56	600	5,400	~150	2	~70	480	5,180
		200	1.8	~56	600	5,400	200	1.8	~70	480	5,180
		250	1.5	~56	560	4,200	250	1.5	~70	450	4,050
		300	0.8	~56	520	3,900	300	0.8	~70	410	3,690
		350	0.6	~56	440	3,080	350	0.6	~70	350	2,940
Mold steel (1.2311,P20) 30-36HRC	JC8050 (JC8118)	~150	2	~56	600	5,400	~150	2	~70	480	5,180
		200	1.8	~56	600	5,400	200	1.8	~70	480	5,180
		250	1.5	~56	560	4,200	250	1.5	~70	450	4,050
		300	0.8	~56	520	3,900	300	0.8	~70	410	3,690
		350	0.6	~56	440	3,080	350	0.6	~70	350	2,940
Mold steel (1.2311,P21) 38-43HRC	JC8118 (JC8050)	~150	1.6	~56	400	3,000	~150	1.6	~70	320	2,880
		200	1.4	~56	400	3,000	200	1.4	~70	320	2,880
		250	1.2	~56	400	3,000	250	1.2	~70	320	2,880
		300	0.7	~56	320	2,240	300	0.7	~70	250	2,100
		350	-	-	-	-	350	-	-	-	-
Hardened die steel (1.2344,1.2379) 42-52HRC	JC8118	~150	1	~56	360	2,160	~150	1	~70	290	2,090
		200	1	~56	360	1,800	200	1	~70	290	1,740
		250	0.8	~56	360	1,440	250	0.8	~70	290	1,390
		300	-	-	-	-	300	-	-	-	-
		350	-	-	-	-	350	-	-	-	-
Grey & Nodular cast iron (GG,GGG) Below 300HB	JC8118	~150	2	~56	720	6,480	~150	2	~70	570	6,160
		200	1.8	~56	720	6,480	200	1.8	~70	570	6,160
		250	1.5	~56	720	5,400	250	1.5	~70	570	5,130
		300	0.8	~56	640	4,800	300	0.8	~70	510	4,590
		350	0.6	~56	640	4,480	350	0.6	~70	510	4,280

Ap: Depth of cut, N: Spindle speed, Vf: Feed speed, Pc: Net power consumption

SKS G2 SKG/MSG TYPE

■RECOMMENDED CUTTING CONDITIONS FOR MSG MODULAR HEAD

Work Materials	Grades	Tool dia.(mm) 25/26 No of teeth 2N					Tool dia.(mm) 32 No of teeth 3N					Tool dia.(mm) 40/42 No of teeth 4N				
		ℓ (mm)	Ap (mm)	Ae (mm)	N (min-1)	Vf (mm/min)	ℓ (mm)	Ap (mm)	Ae (mm)	N (min-1)	Vf (mm/min)	ℓ (mm)	Ap (mm)	Ae (mm)	N (min-1)	Vf (mm/min)
Carbon steel (C50,C55) Below 250HB	JC8050 (JC8118)	～75	1	～9	2,290	6,870	～100	1	～14	1,790	8,060	～100	1	～24	1,430	8,580
		125	0.8	～9	2,290	6,870	150	0.8	～14	1,790	8,060	150	0.8	～24	1,430	8,580
		175	0.6	～9	2,290	6,410	210	0.6	～14	1,790	7,520	210	0.6	～24	1,430	8,010
Die steel, (1.2344,1.2379) Below 255HB	JC8050 (JC8118)	～75	1	～9	1,910	5,730	～100	1	～14	1,490	4,470	～100	1	～24	1,190	7,140
		125	0.8	～9	1,910	5,730	150	0.8	～14	1,490	4,470	150	0.8	～24	1,190	7,140
		175	0.6	～9	1,910	5,350	210	0.6	～14	1,490	4,170	210	0.6	～24	1,190	6,660
Mold steel (1.2311,P20) 30-36HRC	JC8050 (JC8118)	～75	1	～9	1,910	5,730	～100	1	～14	1,490	4,470	～100	1	～24	1,190	7,140
		125	0.8	～9	1,910	5,730	150	0.8	～14	1,490	4,470	150	0.8	～24	1,190	7,140
		175	0.6	～9	1,910	5,350	210	0.6	～14	1,490	4,170	210	0.6	～24	1,190	6,660
Mold steel (1.2311,P21) 38-43HRC	JC8118 (JC8050)	～75	1	～9	1,400	3,640	～100	1	～14	1,090	2,830	～100	1	～24	880	4,580
		125	0.8	～9	1,400	3,640	150	0.8	～14	1,090	2,830	150	0.8	～24	880	4,580
		175	0.6	～9	1,400	3,360	210	0.6	～14	1,090	2,620	210	0.6	～24	880	4,220
Hardened die steel (1.2344,1.2379) 42-52HRC	JC8118	～75	0.6	～9	1,270	3,050	～100	0.6	～14	990	2,380	～100	0.6	～24	800	3,840
		125	0.4	～9	1,270	3,050	150	0.4	～14	990	2,380	150	0.4	～24	800	3,840
		175	0.3	～9	1,270	2,540	210	0.3	～14	990	1,980	210	0.3	～24	800	3,200
Grey & Nodular cast iron (GG,GGG) Below 300HB	JC8118	～75	1.2	～9	2,290	6,870	～100	1.2	～14	1,790	5,370	～100	1.2	～24	1,430	8,580
		125	1	～9	2,290	6,870	150	1	～14	1,790	5,370	150	1	～24	1,430	8,580
		175	0.8	～9	2,290	6,870	210	0.8	～14	1,790	5,370	210	0.8	～24	1,430	8,580

Ap: Depth of cut, N: Spindle speed, Vf: Feed speed, Pc: Net power consumption

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