

DSG-HSG type



“ Feathermill ”



“ Feathermill ”



■ DSG45-4000 Type

Small size inserts offer excellent total economy and transmit excellent machining.

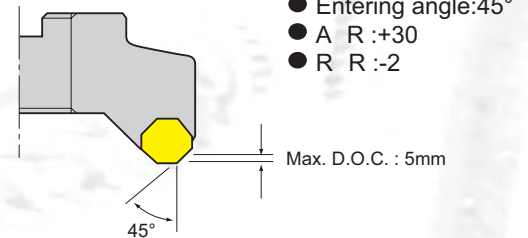


Fig.1

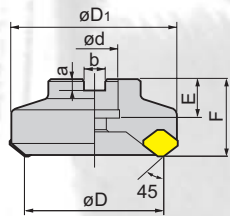


Fig.2

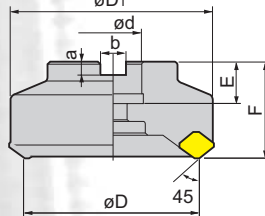


Fig.3

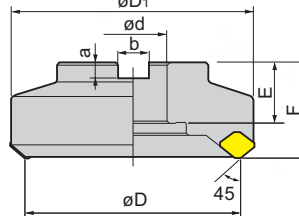
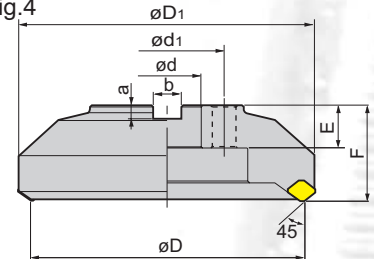


Fig.4



■ Body

Cat. No.	Stock	No. of inserts	Dimensions (mm)								Fig.
			ϕD	ϕD_1	F	ϕd	ϕd_1	a	b	E	
DSG45-4063M-22R-F	●	4	63	76	40	22	-	6	10.4	20	1
DSG45-4080M-27R-F	●	5	80	93	50	27	-	7	12.4	22	2
DSG45-4100M-32R-F	●	6	100	113	50	32	-	8	14.4	32	3
DSG45-4125M-40R-F	●	8	125	138	63	40	-	9	16.4	35	3
DSG45-4160M-40R-F	●	10	160	173	63	40	66.7	9	16.4	28	4
DSG45-4200M-60R-F	●	12	200	213	63	60	101.6	14	25.7	32	4

Fig.1 SGHN1203AZN-21

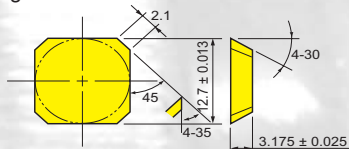


Fig.2 SGHN1203AZN-F2 (For aluminum alloy)

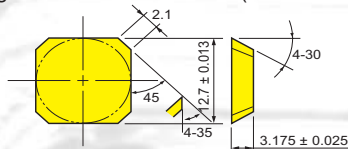
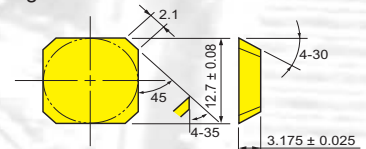


Fig.3 SGLN1203AZN-21



■ Inserts

Cat. No.	Coated				Cermet		Uncoated		Fig.
	JC5030	JC5040	NEW JC730U	JC610	CX90		KT9		
SGHN1203AZN-21	●	●	●	●	●		●	1	
SGHN1203AZN-F2							●	2	
NEW SGLN1203AZN-21	●							3	

■ Parts

Wedge	Wedge screw	Wrench
81106-1R	LS-180 (8.0 N-m)	A-27

■ Recommended cutting conditions

Work materials	Vc (m/min)	fz (mm/tooth)	Insert grades
Carbon steel & Alloy steel	150-300	0.2-0.5	CX90, JC730U JC5030, JC5040
Stainless steel	150-220	0.2-0.3	JC730U JC5030, JC5040
Cast iron	150-250	0.2-0.4	JC610
Aluminum alloy	300-800	0.2-0.5	KT9



“ Feathermill-Tough ”

Indexable Tools

■ HSG45-5000-RS Type

Inserts mounted in cartridges and strong clamping mechanism offer heavy duty cutting with good stability.

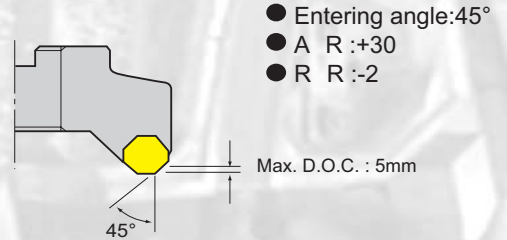
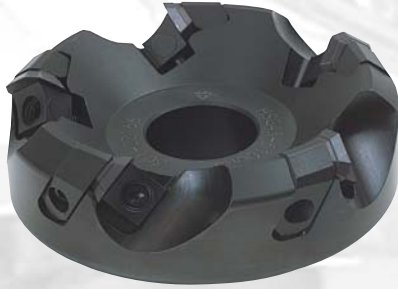


Fig.1

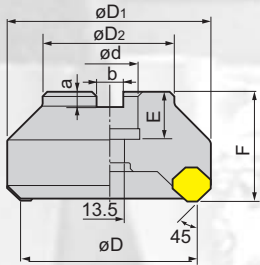


Fig.2

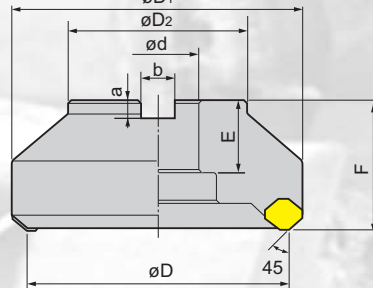
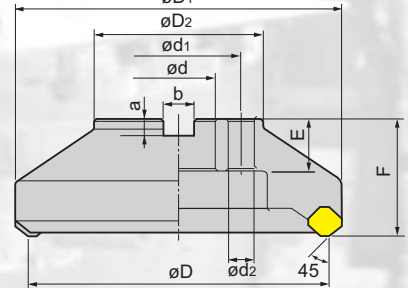


Fig.3



■ Body

Cat. No.	Stock	No. of inserts	Dimensions (mm)										Fig.
			ϕD	ϕD_1	ϕD_2	F	ϕd	ϕd_1	ϕd_2	a	b	E	
HSG45-5080-27RS-F	●	4	80	93	60	50	27	-	-	7	12.4	22	1
HSG45-5100-32RS-F	●	5	100	113	70	50	32	-	-	8	14.4	32	2
HSG45-5125-40RS-F	●	6	125	138	85	63	40	-	-	9	16.4	35	2
HSG45-5160-40RS-F	●	8	160	173	100	63	40	66.7	14	9	16.4	28	3
HSG45-5200-60RS-F	●	10	200	213	154	63	60	101.6	18	14	25.7	32	3
HSG45-5250-60RS-F	●	12	250	263	154	63	60	101.6	18	14	25.7	32	3

Fig.1 SGHN1504AZN-44

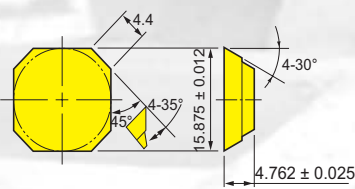


Fig.2 SGHN1504AZR-F1 For devibration

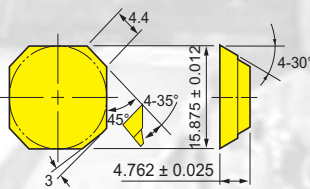


Fig.3 SGLN1504AZN-44

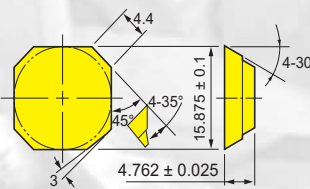
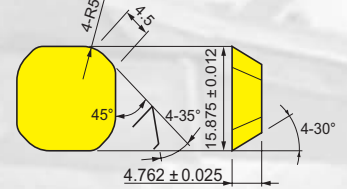


Fig.4 SGHN1504AZR5



■ Inserts

Cat. No.	Coated				Cermet		Uncoated		Fig.
	JC5030	JC5040	NEW JC730U	JC610	CX90		KT9		
SGHN1504AZN-44	●	●	●	●	●		●	1	
SGHN1504AZR-F1	●			●	●		○	2	
NEW SGLN1504AZN-44	●							3	
NEW SGLN1504AZR5		●						4	

○ Will not be available after current stock exhausted.

“ Feathermill-Tough ”



■ HSG45-5000RS Type

■ Parts

Wedge	Wedge screw	Wrench	Cartridges	Cartridge screw
DX-80808	LS-180 (8.0 N-m)	A-27	ST451R for \varnothing 80 & 100mm. or ST452R for \varnothing 125+250 mm.	LS-140

■ Recommended cutting conditions

Work materials	Vc (m/min)	fz (mm/tooth)	Insert grades
Carbon steel & Alloy steel	150-300	0.2-0.5	CX90, JC730U JC5030, JC5040
Stainless steel	150-220	0.2-0.3	JC730U JC5030, JC5040
Cast iron	150-250	0.2-0.4	JC610
Aluminum alloy	300-800	0.2-0.5	KT9

■ Recommended cutting conditions for high feed application with SGHN1504AZR5

Work materials	Hardness (HB)	Insert grade	Vc (m/min)	fz (mm/tooth)	Depth Ap
Carbon steel & Alloy steel	180 - 280	JC5040	150 - 200	1.0 - 2.0	Up to 5

Note: Over 1.5mm depth of cut requires machine's kW. (40cm³/kW)

■ Cutting data for high feed Feathermill High metal removal rate (f=1.45mm/tooth at 5mm depth)

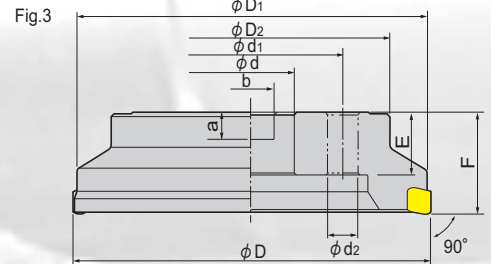
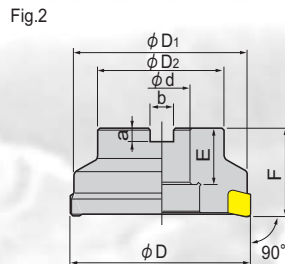
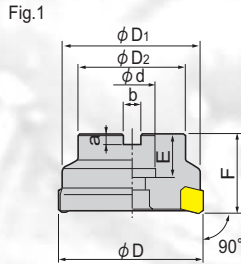
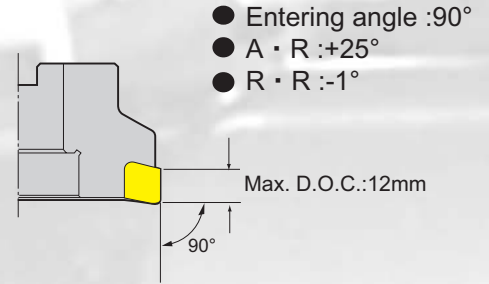
Chips at face milling 1) $A_p=2\text{mm}$, $f=1.45\text{mm/th}$, $Q=800\text{cm}^3$ 	Work	Part name	Frame
		Material	Low carbon steel (SS400)
1) $A_p=5\text{mm}$, $f=1.45\text{mm/th}$, $Q=2,000\text{cm}^3$ 	Tool	Tool No.	HSG45-5125R (125, 6N)
		Insert No.	SGLN1504AZR5, JC5040
Result	Cutting conditions	Cutting speed	181 m/min (460 min ⁻¹)
		Feed speed	4,000 mm/min, 1.45 mm/th
		Ap	1): 2 mm, 2): 5 mm
		Ae	100 mm
		Coolant	Air blow
		Machine	Horizontal NC milling, 70kW
Current condition is $A_p=8\text{mm}$, $F=800\text{mm/min}$. $Q=832\text{cm}^3/\text{min}$. Feathermill could cut with 2) condition. $Q=2,000\text{cm}^3/\text{min}$.			

“ Feathermill-Sumiyoshi ”



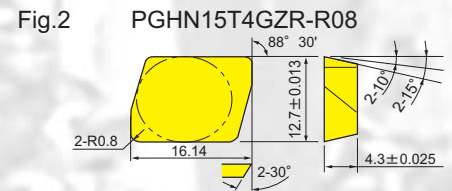
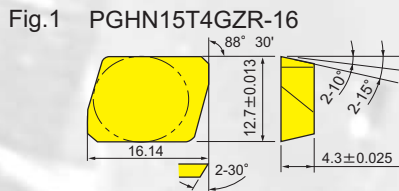
■ DPG90-5000 Type

High impact resistance offers high productivity and security. Able to cut up to 12mm deep.



■ Body

Cat. No.	Stock	No. of inserts	Dimensions (mm)										Fig.
			ϕ D	ϕ D ₁	ϕ D ₂	F	ϕ d	ϕ d ₁	ϕ d ₂	a	b	E	
DPG90-5080-27R-F	●	5	80	76	60	50	27	—	—	7	12.4	22	1
DPG90-5100-32R-F	●	6	100	96	70	50	32	—	—	8	14.4	32	2
DPG90-5125-40R-F	●	8	125	121	85	63	40	—	—	9	16.4	35	2
DPG90-5160-40R-F	●	10	160	156	100	63	40	66.7	14	9	16.4	28	3
DPG90-5200-60R-F	●	12	200	196	154	63	60	101.6	18	14	25.7	32	3
DPG90-5250-60R-F	●	14	250	246	154	63	60	101.6	18	14	25.7	32	3



■ Inserts

Cat. No.	Coated		Cermet		Uncoated		Fig.
	JC5030	JC610	CX90		KT9		
PGHN15T4GZR-16	●	●	●		●		1
PGHN15T4GZR-R08	●	●	●		●		2

■ Parts

Wedge	Wedge screw	Wrench
81406-1R	LS-180 (8.0 N-m)	A-27

■ Recommended cutting conditions

Work materials	Vc (m/min)	fz (mm/tooth)	Insert grades
Carbon steel & Alloy steel	150–250	0.15–0.4	CX90 JC5030
Stainless steel	150–220	0.15–0.3	CX90 JC5030
Cast iron	80–250	0.2–0.4	JC610 KT9
Aluminum alloy	300–800	0.2–0.5	KT9