

Milling Cutter for High Efficiency General Face Milling

SEC-Sumi Dual Mill **DGC**Series

Rev. 6

Two Unique Insert Types for DGC body design



Inserts for DGC series includes double-sided SNMT/SNET and ONMT/ONET types.
Up to 16 corners insert for excellent economy.
New ACM insert grades for stainless steel and exotic alloys.



DGC series insert lineup includes double-sided SNMT/SNET and ONMT/ONET types.

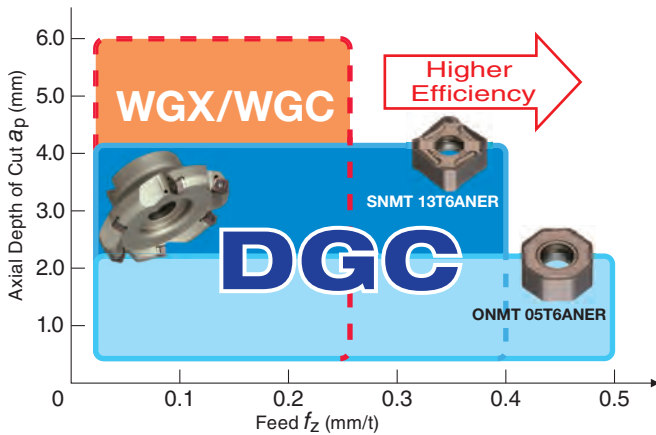
■ Features

SEC- DGC series utilizes double sided inserts with up to 16 corners for excellent economical value. DGC is a general-purpose cutter featuring high cutting edge strength for high efficiency milling and a low burr chipbreaker design that provides high quality machined surfaces.

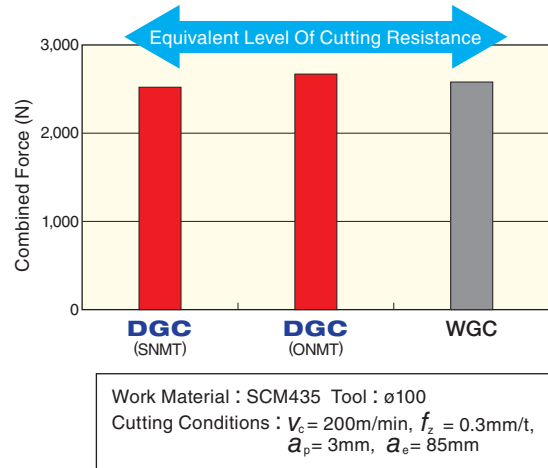


■ Characteristics

- Achieves the cutting conditions and excellent economy equivalent to single-sided insert cutter at a maximum cutting depth of $a_p=3\text{mm}$ or shallower.
- Recommended Cutting Conditions For General Steel Milling

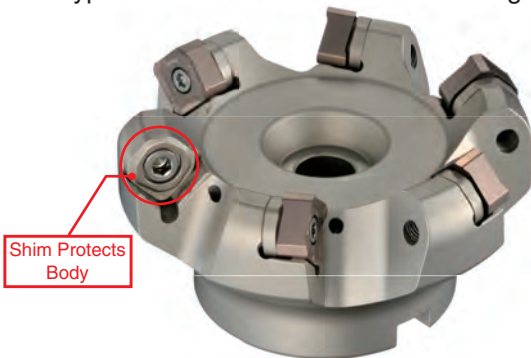


● Cutting Resistance Comparison



● Dual-Purpose Body Characteristics

Two types of inserts can be used with a single body depending on milling application to help reduce tool costs.



Use Two Types Of Insert For Different Applications

SNMT/SNET

- Stronger than single-sided insert cutters
- Economical double-sided design gives double the number of corners of standard inserts (Max. Depth of Cut = 6.0mm)

ONMT/ONET

- Double-sided design with 16 corners for excellent economy (Max. Depth of Cut = 3.0mm)

● DGC Product Offering

Cutter : $\phi 40\text{mm} \sim \phi 250\text{mm}$ Cutting Edges : 3 to 10 Mounting : Metric/Inch	Cutter : $\phi 50\text{mm} \sim \phi 250\text{mm}$ Cutting Edges : 4 to 14 Mounting : Metric/Inch	Cutter : $\phi 50\text{mm} \sim \phi 250\text{mm}$ Cutting Edges : 5 to 18 Mounting : Metric/Inch	Cutter : $\phi 40\text{mm} \sim \phi 63\text{mm}$ Cutting Edges : 3 to 4 Mounting : Metric/Inch
<p>DGC 13000R(S) Series Standard Pitch</p>	<p>DGC M 13000R(S) Series Fine Pitch</p>	<p>DGC F 13000R(S) Series Extra-Fine Pitch</p>	<p>DGC 13000EW Series Endmill Type</p>

Application Range

Material	Grade	Finishing to Light Cut	Medium Cut	Rough to Heavy Cut
P Steel	Coated Carbide	New ACP100	New ACP200	New ACP300
	Cermet		T4500A	
M Stainless Steel	Coated Carbide	ACM200		ACM300

Material	Grade	Finishing to Light Cut	Medium Cut	Rough to Heavy Cut
K Cast Iron	Coated Carbide	New ACK200	New ACK300	
	Coated Carbide		DL1000	
N Non-Ferrous Metal	Coated Carbide			
	Carbide		EH520	

The letters "C" and "P" at either end of each grade indicate coating type.
 ▽:CVD ▲:PVD No mark : Non-coated

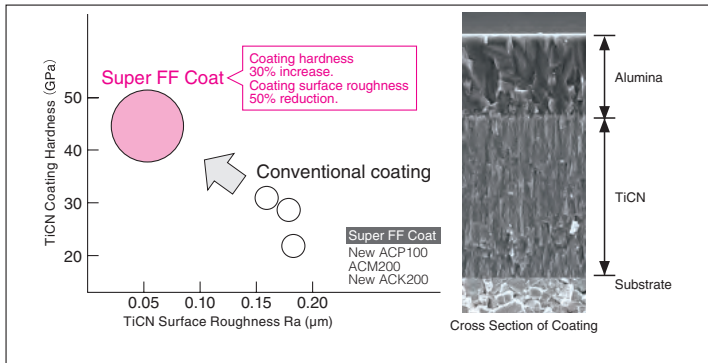
Coating Features

C Super FF Coat (CVD :Chemical Vapor Deposition)

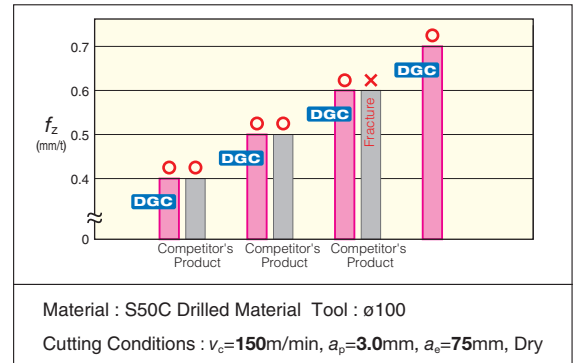
Sumitomo's Super FF coating incorporates proprietary CVD process, featuring the ultra-fine coating particles and coating stress control technology allowing inserts to achieve high reliability and superior wear resistance.

- ▶ Achieves excellent chipping resistance thanks to the smoothness of the coating and our coating stress control technology.
- ▶ High speed, high efficiency machining of more than 1.5 times that of conventional grades is possible, by hardening the coating layer.
- ▶ Achieves a tool life 2x or better that of conventional grades.

Characteristics of Coating Layer



Fracture Resistance

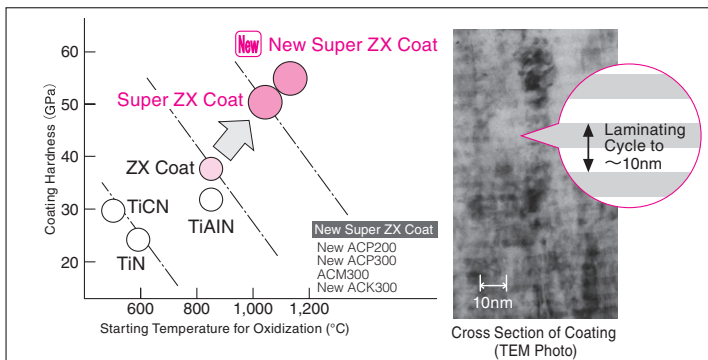


P NEW Super ZX Coat / Super ZX Coat (PVD : Physical Vapor Deposition)

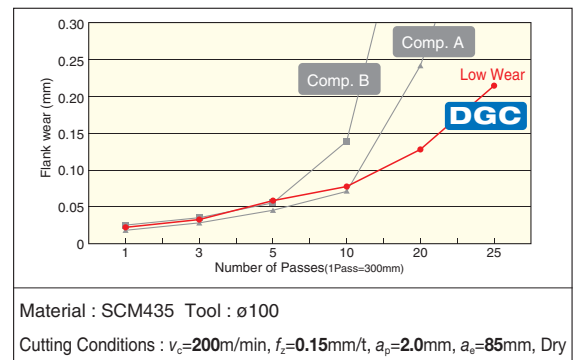
Utilizes the "New Super ZX Coat" featuring thousands of ultra-thin layers on the nanometer scale (a nanometer is one billionth of a meter), made possible with our proprietary thin layer coating technology and advanced nanotechnology.

- ▶ Compared to conventional grades, the coating hardness has been increased by 40% and the oxidation starting temperature has been increased by 200°C.
- ▶ High speed, high efficiency machining of more than 1.5 times that of conventional grades is possible, by hardening the coating layer.
- ▶ Achieves a tool life 2x or better that of conventional grades.

Characteristics of Coating Layer



Wear Resistance

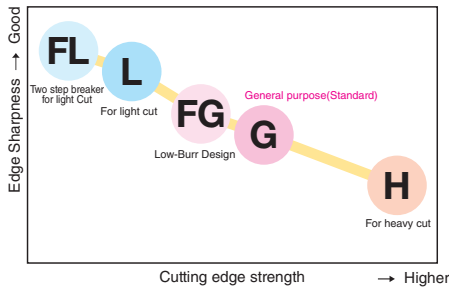


Chipbreaker Selection

Material	P M K S				N	P K	
Breaker	FL	L	FG	G	H	S	W
Appearance							
Cutting Edge Figure							
4 8	Not Available		Not Available		Not Available	Not Available	Double-Sided, 2 Corners (*)
Characteristics	Light Cut & Wiper flat	Light Cut	Standard & Wiper flat	Standard	High Strength	High Rake	Wiper
Application	Low cutting force & Burr prevention	Low cutting force	General purpose & Burr prevention	General purpose	Heavy Cut	Non-Ferrous Metal	Emphasis on Finishing Surface Roughness

* Can be used only in combination with square inserts.

Chipbreaker Map



Improved Milled Surface Quality

- FG type chipbreaker feature chamfered corners to minimize burrs and provide excellent milled surface quality.

Low-BurrDesign
FG Type

With Chamfer
 Chamfered Corners Reduce Burrs

● FG Type

No Burrs

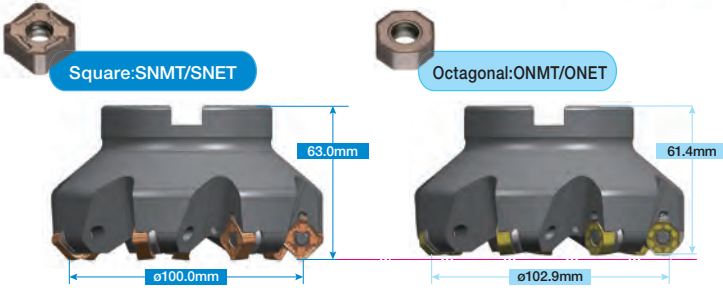
● Comp. A Type

Burr

FG type chipbreaker with low-burr design enable high-quality milling with few burrs and little edge chipping.

Material : SCM435
 Tool : $\phi 100$
 Cutting Conditions : $v_c=200\text{m/min}$,
 $f_z=0.2\text{mm/t}$
 $a_p=3\text{mm}$, $a_e=85\text{mm}$

Cutter Diameter And Cutting Edge Height



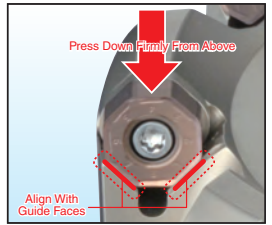
⚠ Note that while square inserts (SNMT/SNET) and octagonal inserts (ONMT/ONET) can be used interchangeably on the same body, they have different cutter diameters, cutting edge heights, and maximum cutting depths.

Body Shape (Example : With Cutter Diameter of 100mm)

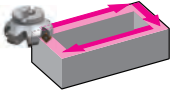
Insert	Cutter DC (mm)	Cutting Edge Height LF (mm)	Max. Depth of Cut APMX (mm)
SNMT/SNET	100.0	63.0	6.0
ONMT/ONET	102.9	61.4	3.0

Installing Octagonal Inserts

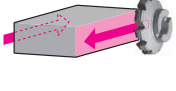
⚠ Firmly align insert with guide faces, press down in the direction of the arrow, and tighten the screw to fix the insert.



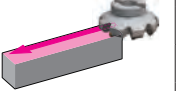
Application Examples

	Part / Material		Automotive Component/Cast Steel	
	Item	DGC series	Conventional	
	Tool	Body	DGCM13080R(ø80)	ø80
		Insert	SNMT13T6ANER-G (8 Corners)	Single-Sided (4 Corners)
		No. of Teeth	6	6
		Grade	ACP200	PVD Positive Type
		Cutting Conditions	Cutting Speed(m/min)	160
		Feed per Tooth (mm/t)	0.31	0.31
		Feed Rate(mm/min)	1,184	1,184
		Axial Depth of Cut(mm)	3	3
		Cutting Width(mm)	60	60
		No. of Workpieces	2	2
		Dry/Wet	Wet	Wet


Can be used under the same conditions as the single-sided inserts.
 Improves tool economy by doubling corners.

	Part / Material		Machine Component/S50C	
	Item	DGC series	Conventional	
	Tool	Body	DGCM13160R(ø160)	ø160
		Insert	SNMT13T6ANER-FG (8 Corners)	Single-Sided (8 Corners)
		No. of Teeth	10	10
		Grade	ACP200	PVD Positive Type
		Cutting Conditions	Cutting Speed(m/min)	133
		Feed per Tooth (mm/t)	0.132	0.132
		Feed Rate(mm/min)	350	350
		Axial Depth of Cut(mm)	2.5	2.5
		Cutting Time	287min	287min
		Dry/Wet	Dry	Dry

Reduces burrs and achieves higher milling quality compared to conventional grades.

	Part / Material		Machine Component/Cast Steel	
	Item	DGC series	Conventional	
	Tool	Body	DGCM13125(ø125)	ø125
		Insert	ONMT05T6ANER-G (16 Corners)	Double-Sided (8 Corners)
		No. of Teeth	8	8
		Grade	ACP200	PVD Positive Type
		Cutting Conditions	Cutting Speed(m/min)	160
		Feed per Tooth (mm/t)	0.29	0.29
		Feed Rate(mm/min)	945	945
		Axial Depth of Cut(mm)	2.5	2.5
		Dry/Wet	Dry	Dry

Improves tool economy by doubling corners.

	Part / Material		Automotive Component/Stainless Steel	
	Item	DGC series	Conventional	
	Tool	Body	DGC13100R(ø100)	ø100
		Insert	SNET13T6ANER-G (8 Corners)	Single-Sided (4 Corners)
		No. of Teeth	5	5
		Grade	ACM300	PVD Positive Type
		Cutting Conditions	Cutting Speed(m/min)	150
		Feed per Tooth (mm/t)	0.15	0.15
		Feed Rate(mm/min)	360	360
		Axial Depth of Cut(mm)	2.0	2.0
		Dry/Wet	Wet	Wet

Doubles corners and provides over 3 times longer tool life per corner compared to conventional grades.

Recommended Cutting Conditions(SNMT/SNET)

ISO	Material	Hardness	Cutting Speed V_c (m/min) Min.- Optimum -Max.	Feed Rate f_z (mm/t) Min.- Optimum -Max.	Depth of Cut (mm)	Grade
P	General Steel	◎	150-200-250	0.10-0.25-0.40	< 4	ACP200 ACP300
	Soft Steel	◎	180-250-350	0.10-0.30-0.45	< 4	ACP200 ACP300
	Die Steel	◎	100-150-200	0.15-0.25-0.35	< 4	ACP200 ACP300
M	Stainless Steel	◎	160-200-250	0.15-0.23-0.30	< 3	ACM300
K	Cast Iron	◎	100-200-250	0.10-0.25-0.40	< 5	ACK200 ACK300
N	Non-Ferrous Metal	◎	500-750-1000	0.15-0.23-0.30	< 3	DL1000

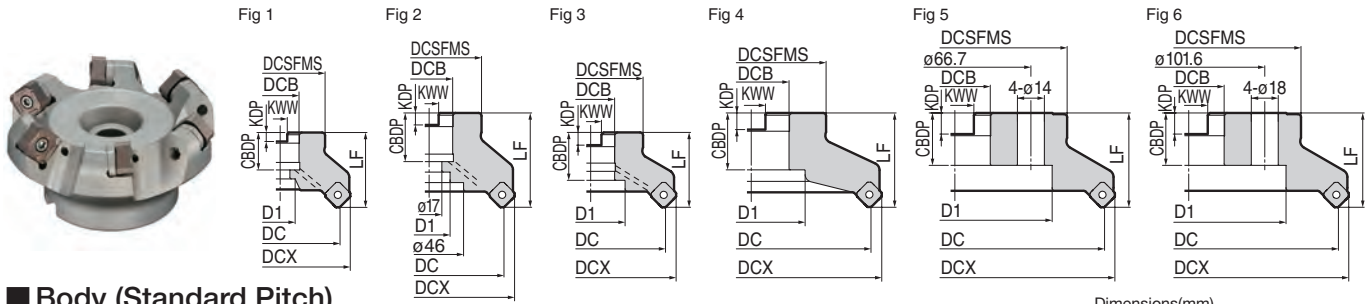
Note The cutting conditions above are a guide. Actual conditions will need to be adjusted according to machine rigidity, work clamp rigidity, cutting depth, and other factors.

Recommended Cutting Conditions(ONMT/ONET)

ISO	Material	Hardness	Cutting Speed V_c (m/min) Min.- Optimum -Max.	Feed Rate f_z (mm/t) Min.- Optimum -Max.	Depth of Cut (mm)	Grade
P	General Steel	◎	150-200-250	0.10-0.30-0.50	< 2	ACP200 ACP300
	Soft Steel	◎	180-250-350	0.10-0.50-0.50	< 2	ACP200 ACP300
	Die Steel	◎	100-150-200	0.15-0.25-0.30	< 2	ACP200 ACP300
M	Stainless Steel	◎	160-200-250	0.15-0.23-0.30	< 2	ACM300
K	Cast Iron	◎	100-200-250	0.10-0.30-0.50	< 2	ACK200 ACK300

Note The cutting conditions above are a guide. Actual conditions will need to be adjusted according to machine rigidity, work clamp rigidity, cutting depth, and other factors.

General Milling for Steel, Cast Iron, Exotic Alloy and Non-Ferrous Metal



Body (Standard Pitch)

Cat. No.	Stock	Dimensions(mm)													Fig			
		Diameter DC	Max. Diameter DCX	Flange Diameter DCSFMS	Height LF	Hole Size DCB	Grooving Width KWW	Grooving Depth KDP	Mounting Depth CDBP	Bolt Size D1	No. of Teeth	Weight (kg)						
Metric																		
DGC 13040RS	●	40 (42.9)	54	36	40 (38.44)	16	8.4	5.6	18	13.5	3	0.3	1					
13050RS	●	50 (52.9)	64	40	40 (38.44)	22	10.4	6.3	20	18	3	0.4	1					
13063RS	●	63 (65.9)	77	50	40 (38.44)	22	10.4	6.3	20	18	4	0.5	1					
13080RS	●	*80 (82.9)	94	60	50 (48.44)	27	12.4	7	25	20	4	1.2	1					
13100RS	●	100 (102.9)	114	70	50 (48.44)	32	14.4	8.5	32	46	5	1.6	3					
13125RS	●	125 (127.9)	139	80	63 (61.44)	40	16.4	9.5	29	52	6	2.8	1					
13160RS	●	160 (162.9)	174	130	63 (61.44)	40	16.4	9.5	29	88	7	4.5	5					
13200RS	●	200 (202.9)	214	150	63 (61.44)	60	25.7	14	35	130	8	7.1	6					
13250RS	●	250 (252.9)	264	190	63 (61.44)	60	25.7	14	35	160	10	11.2	6					
Inch																		
DGC 13080R	●	*80 (82.9)	94	60	50 (48.44)	25.4	9.5	6	25	20	4	1.2	1					
13100R	●	*100 (102.9)	114	70	63 (61.44)	31.75	12.7	8	32.5	28	5	2.2	2					
13125R	●	125 (127.9)	139	80	63 (61.44)	38.1	15.9	10	35.5	55	6	2.8	1					
13160R	●	160 (162.9)	174	100	63 (61.44)	50.8	19.1	11	38	72	7	4.5	4					
13200R	●	200 (202.9)	214	150	63 (61.44)	47.625	25.4	14	35	130	8	7.1	6					
13250R	●	250 (252.9)	264	190	63 (61.44)	47.625	25.4	14	35	150	10	11.2	6					

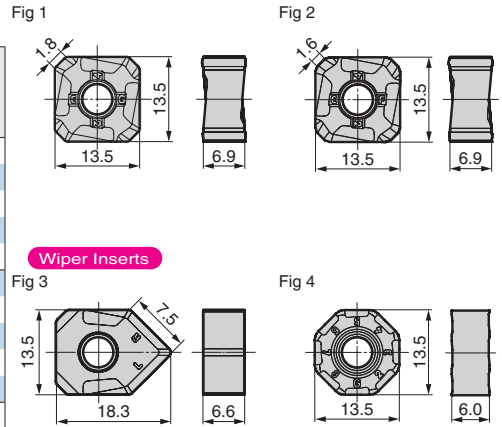


Inserts are not included. Sizes ø160 mm or above do not have coolant holes. Figures in parentheses indicate values for ONMT/ONET type inserts.
*Please use JIS B1176 hexagonal bolt (ø80: M12x30 to 35mm, ø100: M16x40 to 45mm) for securing ø80/ø100 cutter to the arbor.

Inserts

P Steel M Stainless Steel K Cast Iron N Non-Ferrous Metal S Exotic Alloy H Hardened Steel

Grade	Coated Carbide						Carbide	DLC	Cermet	Fig	
	ACP100	ACP200	ACP300	ACK200	ACK300	ACM200	ACM300	EH620	DL1000		T4500A
Application	High Speed/Light	P		K	M			N		P	
	General Purpose	M	M	K	M			S	N	P	
	Roughing	M	M	K	M						
Cat. No.											
SNMT	13T6ANER-L	●	●	●	●	—	—	—	—	—	1
	13T6ANER-G	●	●	●	●	—	—	●	—	—	1
	13T6ANER-H	●	●	●	●	—	—	—	—	—	1
	13T6ANER-FL	●	●	●	●	—	—	—	—	—	2
	13T6ANER-FG	●	●	●	●	—	—	—	—	—	2
SNET	13T6ANER-L	—	—	—	—	●	●	—	—	—	1
	13T6ANER-G	—	—	—	—	●	●	—	—	—	1
	13T6ANER-FL	—	—	—	—	●	●	—	—	—	2
	13T6ANER-FG	—	—	—	—	●	●	—	—	—	2
	13T6ANFR-S	—	—	—	—	—	—	●	—	—	1
XNEU	13T6ANEN-W	—	●	—	—	●	—	—	—	●	3
ONMT	05T6ANER-L	●	●	●	●	—	—	—	—	—	4
	05T6ANER-G	●	●	●	●	—	—	—	—	—	4
ONET	05T6ANER-L	—	—	—	—	●	●	—	—	—	4
	05T6ANER-G	—	—	—	—	●	●	—	—	—	4



Wiper inserts can be used only in combination with square inserts.

* The new ACP100 and new ACK200 may vary in color or luster, but these variations do not affect the performance.



Identification Details

DGC 13 040 R S
Cutter Series Insert Size Cutter Direction Metric Bore

Parts

Shim	Shim Screw	L Type Wrench	Insert Screw	Wrench	Anti-seizure Cream
DGCS13R	BW0609F	LH040	BFTX0412IP	TRDR151P	SUMI-P

Recommended

Cutting Conditions

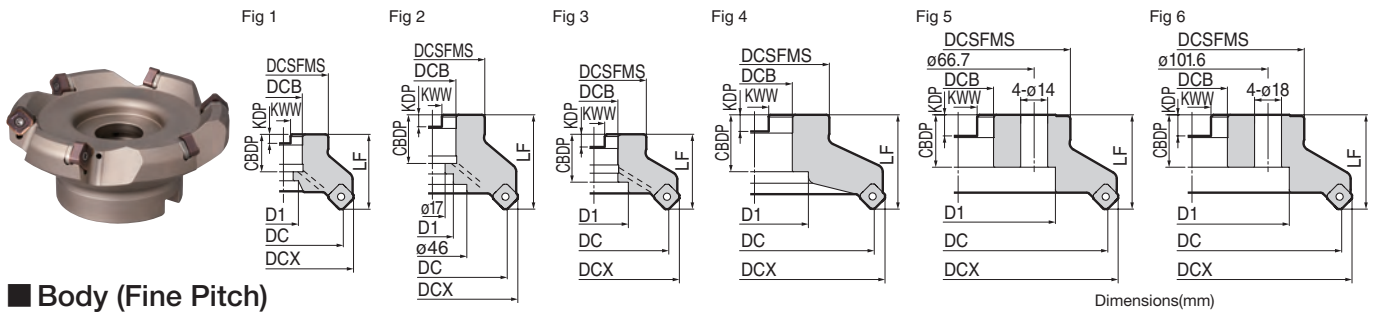
P.5

N·m Recommended Tightening Torque (N·m)

*Corners can be changed simply by loosening the screw. Only applies to DGC / DGCM with body size ø80 or above.

●mark: Standard stocked item Blank: Made to order item —mark: Not to be manufactured

General Milling for Steel, Cast Iron, Exotic Alloy and Non-Ferrous Metal



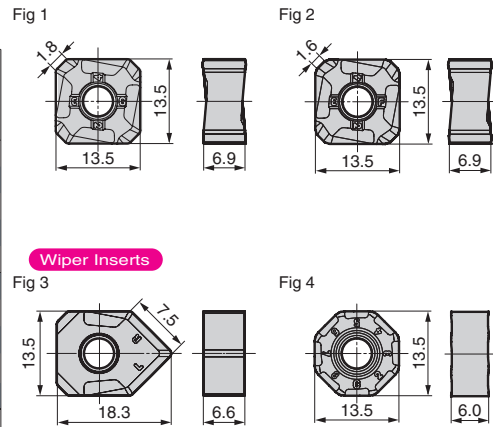
Body (Fine Pitch)

Cat. No.	Stock	Diameter		Flange Diameter	Height	Hole Size	Grooving Width	Grooving Depth	Mounting Depth	Bolt Size	No. of Teeth	Weight (kg)	Fig
		DC	DCX										
Metric													
DGCM 13050RS	●	50 (52.9)	64	40	40 (38.44)	22	10.4	6.3	20	18	4	0.3	1
13063RS	●	63 (65.9)	77	50	40 (38.44)	22	10.4	6.3	20	18	5	0.5	1
13080RS	●	*80 (82.9)	94	60	50 (48.44)	27	12.4	7	25	20	6	1.1	1
13100RS	●	100 (102.9)	114	70	50 (48.44)	32	14.4	8.5	32	46	7	1.5	3
13125RS	●	125 (127.9)	139	80	63 (61.44)	40	16.4	9.5	29	52	8	2.8	1
13160RS	●	160 (162.9)	174	130	63 (61.44)	40	16.4	9.5	29	88	10	4.6	5
13200RS	●	200 (202.9)	214	150	63 (61.44)	60	25.7	14	35	130	12	7	6
13250RS	●	250 (252.9)	264	190	63 (61.44)	60	25.7	14	35	160	14	11.1	6
Inch													
DGCM 13080R	●	*80 (82.9)	94	60	50 (48.44)	25.4	9.5	6	25	20	6	1.1	1
13100R	●	*100 (102.9)	114	70	63 (61.44)	31.75	12.7	8	32.5	28	7	2.2	2
13125R	●	125 (127.9)	139	80	63 (61.44)	38.1	15.9	10	35.5	55	8	2.8	1
13160R	●	160 (162.9)	174	100	63 (61.44)	50.8	19.1	11	38	72	10	4.6	4
13200R	●	200 (202.9)	214	150	63 (61.44)	47.625	25.4	14	35	130	12	7	6
13250R	●	250 (252.9)	264	190	63 (61.44)	47.625	25.4	14	35	150	14	11.1	6

Inserts are not included. Sizes ø160 mm or above do not have coolant holes. Figures in parentheses indicate values for ONMT/ONET type inserts.
*Please use JIS B1176 hexagonal bolt (ø80: M12x30 to 35mm, ø100: M16x40 to 45mm) for securing ø80/ø100 cutter to the arbor.

Inserts

Grade	Coated Carbide					Carbide	DLC	Cermet				
	P	M	K	N	S	H						
Application	High Speed/Light	P	M	K	N	S	H					
	General Purpose	P	M	K	N	S	H					
	Roughing	P	M	K	N	S	H					
Cat. No.	ACP100	ACP200	ACP300	ACK200	ACK300	ACM200	ACM300	HI	EH620	DL1000	T4500A	Fig
SNMT 13T6ANER-L	●	●	●	●	●	—	—	—	—	—	—	1
13T6ANER-G	●	●	●	●	●	—	—	—	●	—	—	1
13T6ANER-H	●	●	●	●	●	—	—	—	—	—	—	1
13T6ANER-FL	●	●	●	●	●	—	—	—	—	—	—	2
13T6ANER-FG	●	●	●	●	●	—	—	—	—	—	—	2
SNET 13T6ANER-L	—	—	—	—	—	●	●	—	—	—	—	1
13T6ANER-G	—	—	—	—	—	●	●	—	—	—	—	1
13T6ANER-FL	—	—	—	—	—	●	●	—	—	—	—	2
13T6ANER-FG	—	—	—	—	—	●	●	—	—	—	—	2
13T6ANFR-S	—	—	—	—	—	—	—	●	—	●	—	1
XNEU 13T6ANEN-W	—	●	—	—	●	—	—	—	—	—	●	3
ONMT 05T6ANER-L	●	●	●	●	●	—	—	—	—	—	—	4
05T6ANER-G	●	●	●	●	●	—	—	—	—	—	—	4
ONET 05T6ANER-L	—	—	—	—	—	●	●	—	—	—	—	4
05T6ANER-G	—	—	—	—	—	●	●	—	—	—	—	4



Wiper inserts can be used only in combination with square inserts.

*The new ACP100 and new ACK200 may vary in color or luster, but these variations do not affect the performance.



Identification Details

DGC M 13 050 R S
Cutter Series M: Fine Pitched F: Extra-Fine Pitched Insert Size Cutter Direction Metric Bore

Parts

Shim	Shim Screw	L Type Wrench	Insert Screw	Wrench	Anti-seizure Cream
DGCS13R	BW0609F	LH040	BFTX0412IP	TRDR15IP	SUMI-P

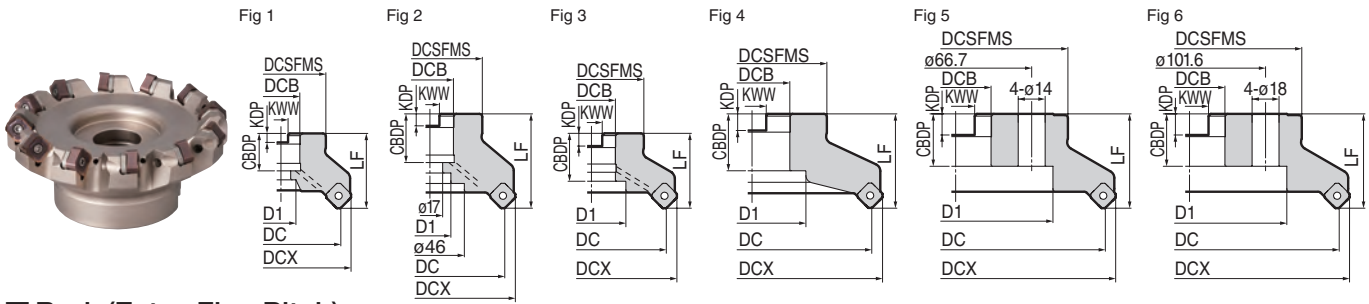
(N·m) Recommended Tightening Torque (N·m)

*Corners can be changed simply by loosening the screw. Only applies to DGC / DGCM with body size ø80 or above.

Recommended Cutting Conditions
P.5

●mark: Standard stocked item Blank: Made to order item —mark: Not to be manufactured

General Milling for Steel, Cast Iron, Exotic Alloy and Non-Ferrous Metal



Body(Extra-Fine Pitch)

Dimensions(mm)

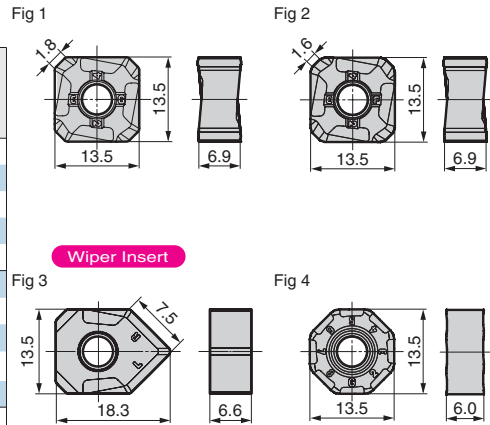
Cat. No.	Stock	Diameter	Max. Diameter	Flange Diameter	Height	Hole Size	Grooving Width	Grooving Depth	Mounting Depth	Bolt Size	No. of Teeth	Weight (kg)	Fig
		DC	DCX	DCSFMS	LF	DCB	KWW	KDP	CBDF	D1			
DGCF 13050RS	●	50 (52.9)	64	40	40 (38.44)	22	10.4	6.3	20	18	5	0.3	1
13063RS	●	63 (65.9)	77	50	40 (38.44)	22	10.4	6.3	20	18	6	0.5	1
13080RS	●	*80 (82.9)	94	60	50 (48.44)	27	12.4	7	25	20	8	1.1	1
13100RS	●	100 (102.9)	114	70	50 (48.44)	32	14.4	8.5	32	46	10	1.4	3
13125RS	●	125 (127.9)	139	80	63 (61.44)	40	16.4	9.5	29	52	12	2.7	1
13160RS	●	160 (162.9)	174	130	63 (61.44)	40	16.4	9.5	29	88	14	4.4	5
13200RS	●	200 (202.9)	214	150	63 (61.44)	60	25.7	14	35	130	16	6.9	6
13250RS	●	250 (252.9)	264	190	63 (61.44)	60	25.7	14	35	160	18	11	6
DGCF 13080R	●	*80 (82.9)	94	60	50 (48.44)	25.4	9.5	6	25	20	8	1.1	1
13100R	●	*100 (102.9)	114	70	63 (61.44)	31.75	12.7	8	32.5	28	10	2.1	2
13125R	●	125 (127.9)	139	80	63 (61.44)	38.1	15.9	10	35.5	55	12	2.7	1
13160R	●	160 (162.9)	174	100	63 (61.44)	50.8	19.1	11	38	72	14	4.4	4
13200R	●	200 (202.9)	214	150	63 (61.44)	47.625	25.4	14	35	130	16	6.9	6
13250R	●	250 (252.9)	264	190	63 (61.44)	47.625	25.4	14	35	150	18	11	6

Inserts are not included. Sizes ø160 mm or above do not have coolant holes. Figures in parentheses indicate values for ONMT/ONET type inserts.
*Please use JIS B1176 hexagonal bolt (ø80: M12x30 to 35mm, ø100: M16x40 to 45mm) for securing ø80/ø100 cutter to the arbor.

Inserts

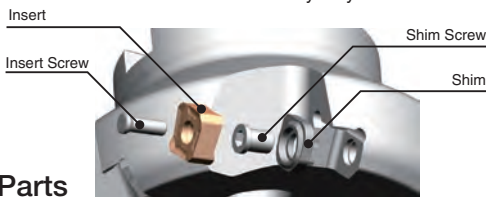
P Steel M Stainless Steel K Cast Iron N Non-Ferrous Metal S Exotic Alloy H Hardened Steel

Application	Grade		Coated Carbide				Carbide	DLC	Cermet	Fig
	High Speed/Light	General Purpose	P	M	K	N	S	H		
	High Speed/Light	General Purpose	P	M	K	N	S	H		
		Roughing	P	M	K	N	S	H		
Cat. No.	ACP100	ACP200	ACP300	ACK200	ACK300	ACM1200	ACM1300	EH520	DL1000	T4500A
SNMT 13T6ANER-L	●	●	●	●	●	—	—	—	—	—
13T6ANER-G	●	●	●	●	●	—	—	●	—	—
13T6ANER-H	●	●	●	●	●	—	—	—	—	—
13T6ANER-FL	●	●	●	●	●	—	—	—	—	—
13T6ANER-FG	●	●	●	●	●	—	—	—	—	—
SNET 13T6ANER-L	—	—	—	—	—	●	●	—	—	—
13T6ANER-G	—	—	—	—	—	●	●	—	—	—
13T6ANER-FL	—	—	—	—	—	●	●	—	—	—
13T6ANER-FG	—	—	—	—	—	●	●	—	—	—
13T6ANFR-S	—	—	—	—	—	—	—	●	●	—
XNEU 13T6ANEN-W	—	●	—	—	—	—	—	—	—	●
ONMT 05T6ANER-L	●	●	●	●	●	—	—	—	—	—
05T6ANER-G	●	●	●	●	●	—	—	—	—	—
ONET 05T6ANER-L	—	—	—	—	—	●	●	—	—	—
05T6ANER-G	—	—	—	—	—	●	●	—	—	—



Wiper inserts can be used only in combination with square inserts.

* The new ACP100 and new ACK200 may vary in color or luster, but these variations do not affect the performance.



Identification Details

DGC F 13 050 R S
Cutter Series M: Fine Pitched Insert Size Cutter Direction Metric Bore
F: Extra-Fine Pitched

Parts

Shim	Shim Screw	L Type Wrench	Insert Screw	Wrench	Anti-seizure Cream
DGCS13R	BW0609F	LH040	BFTX0412IP 3.0	TRDR15IP	SUMI-P

Recommended Cutting Conditions

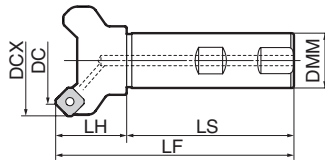
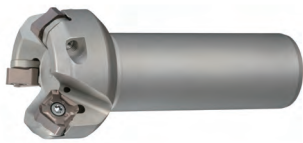


Recommended Tightening Torque (N·m)

*Corners can be changed simply by loosening the screw. Only applies to DGC / DGCM with body size ø80 or above.

●mark: Standard stocked item Blank: Made to order item —mark: Not to be manufactured

General Milling for Steel, Cast Iron, Exotic Alloy and Non-Ferrous Metal



Body(Shank Type)

Dimensions(mm)

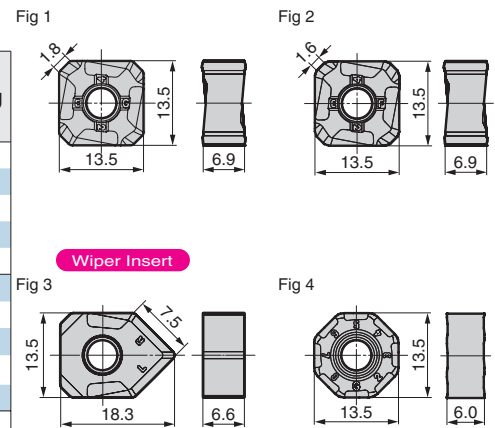
Cat. No.	Stock	Diameter	Max. Diameter	Shank Diameter	Head Length	Shank Length	Total Length	No. of Teeth	Weight (kg)
		DC	DCX	DMM	LH	LS	LF		
DGC 13040EW	●	40(42.9)	54	32	40(38.44)	85	125	3	0.7
13050EW	●	50(52.9)	64	32	40(38.44)	85	125	3	0.9
13063EW	●	63(65.9)	77	32	40(38.44)	85	125	4	1.1

Figures in parentheses indicate values for ONMT/ONET type inserts. Inserts are not included.

Inserts

P Steel M Stainless Steel K Cast Iron N Non-Ferrous Metal S Exotic Alloy H Hardened Steel

Grade	Coated Carbide			Carbide	DLC	Cermet	Fig					
	ACP100	ACP200	ACP300	ACK200	ACK300	ACM200		ACM300	EH1	EH520	DL1000	T4500A
Application	High Speed/Light	P		K		M		N				
	General Purpose	P	M	K		M		S	N		P	
	Roughing	P	M	K		M						
Cat. No.												
SNMT 13T6ANER-L	●	●	●	●	●	—	—	—	—	—	—	1
13T6ANER-G	●	●	●	●	●	—	—	●	—	—	—	1
13T6ANER-H	●	●	●	●	●	—	—	—	—	—	—	1
13T6ANER-FL	●	●	●	●	●	—	—	—	—	—	—	2
13T6ANER-FG	●	●	●	●	●	—	—	—	—	—	—	2
SNET 13T6ANER-L	—	—	—	—	—	●	●	—	—	—	—	1
13T6ANER-G	—	—	—	—	—	●	●	—	—	—	—	1
13T6ANER-FL	—	—	—	—	—	●	●	—	—	—	—	2
13T6ANER-FG	—	—	—	—	—	●	●	—	—	—	—	2
13T6ANFR-S	—	—	—	—	—	—	—	●	—	●	—	1
XNEU 13T6ANEN-W	—	●	—	—	●	—	—	—	—	—	●	3
ONMT 05T6ANER-L	●	●	●	●	●	—	—	—	—	—	—	4
05T6ANER-G	●	●	●	●	●	—	—	—	—	—	—	4
ONET 05T6ANER-L	—	—	—	—	—	●	●	—	—	—	—	4
05T6ANER-G	—	—	—	—	—	●	●	—	—	—	—	4



Wiper Insert

Wiper inserts can be used only in combination with square inserts.

* The new ACP100 and new ACK200 may vary in color or luster, but these variations do not affect the performance.



Identification Details

DGC 13 040 EW
Cutter Series Insert Size Cutting Diameter Shank Type

Parts

Shim	Shim Screw	L Type Wrench	Insert Screw	Wrench	Anti-seizure Cream
DGCS13R	BW0609F	LH040	BFTX0412IP	TRDR15IP	SUMI-P

Recommended Tightening Torque (N·m)

*Corners can be changed simply by loosening the screw. Only applies to DGC / DGCM with body size ø80 or above.

Recommended Cutting Conditions

P.5

MEMO

A large grid of dotted lines for writing a memo. The grid consists of 20 columns and 30 rows of small squares, providing a structured space for text.

MEMO

A large grid of dotted lines for writing a memo. The grid consists of 20 columns and 30 rows of small squares, providing a structured space for text entry.



- Very hot or lengthy chips may be discharged while the machine is in operation. Therefore, machine guards, safety goggles or other protective covers must be used. Fire safety precautions must also be considered.

< SAFETY NOTES >

- Please handle with care as this product has sharp edges.
- Improper cutting conditions or mis-handling of the tool may result in breakages or projectiles. Therefore, please use the tool within its recommended conditions.

- When using non-water soluble cutting oil, precautions against fire must be taken and please ensure that a fire extinguisher is placed near the machine.

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