



General Features

SEC-WaveMill WGX Type employs unique chipbreaker design to provide lower resistance and higher quality surface finishes than conventional tools.

Significant expansion of the insert grades and chipbreakers lineup and the utilization of the **New** ACM series for stainless steel and exotic alloys machining.



Characteristics

- Low cutting force
 - The high-rake chipbreaker designed for use with the WGX type achieves low cutting resistance.
- High Quality
 - Improved run-out precision and unique wiper edge shape ensure excellent surface finish quality.
 - Addition of chamfer reduces burrs and edge chipping.
- New Grade Coating
 - Features high-precision technology that reduces insert run-out variation and a new coating to provide stable and long tool life.
 - The new **New** ACM200 and **New** ACM300 grades for exotic alloy machining further expand the range of applications.

Insert Shape Characteristics

- General-purpose G Type Chipbreaker

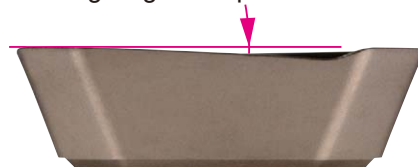


① Unique Wiper Edge Shape For Improved Surface Roughness



Optimal Nose Radius For High Strength

② Large Rake Angle And Cutting Edge Rake Angle Improves Cutting Edge Sharpness



- Low-Burr Design FG Type Chipbreaker



Addition of chamfer reduces burrs on cutting surfaces.

Series

Type	Cat No.	Cutter	No. of Teeth	Cutter Mounting
Standard Pitch	WGX13000R(S)	ø40 to ø250	3 to 10	Inch/Metric
Fine Pitch	WGX ^M 13000R(S)	ø50 to ø250	4 to 14	Inch/Metric
Extra-Fine Pitch	WGX ^F 13000R(S)	ø50 to ø250	5 to 24	Inch/Metric
Endmill Type	WGX13000EW	ø32 to ø63	3 to 5	Metric

Sizes of ø125mm and below have oil holes



WGX 13000R(S)
Standard Pitch



WGX^M 13000R(S)
Fine Pitch



WGX^F 13000R(S)
Extra-Fine Pitch



WGX 13000EW
Endmill Type

Application Range

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

Work Material	Grade	Finishing to Light Cutting	Medium Cut	Rough to Heavy Cutting
K Cast Iron	Coat	New ACK200	New ACK300	
N Non-Ferrous Metal	Coat		DL1000	
	Carbide		H1	

The letters "C" and "P" at either end of each grade indicate coating type. ▽ : CVD ▲ : PVD Blank: Non-coated

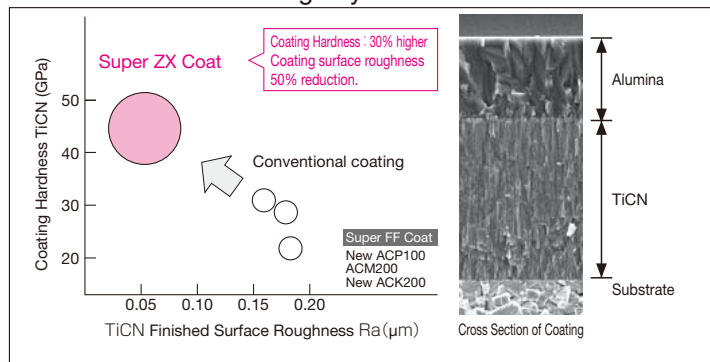
Features of Coating

C Super FF Coat (CVD : Chemical Vapor Deposition)

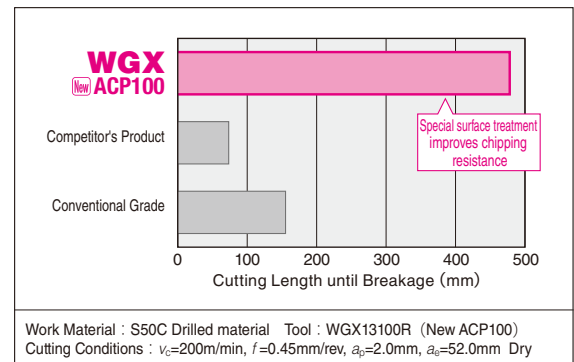
Our company's proprietary CVD process "Super FF Coat", with coating stress control technology and ultra-fine coating particles, exhibits excellent wear resistance and high reliability.

- ▶ Achieves excellent chipping resistance thanks to the smoothness of the coating and 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 over 2 times longer tool life compared to conventional grades under the same cutting conditions.

Characteristics of Coating Layer



Fracture Resistance

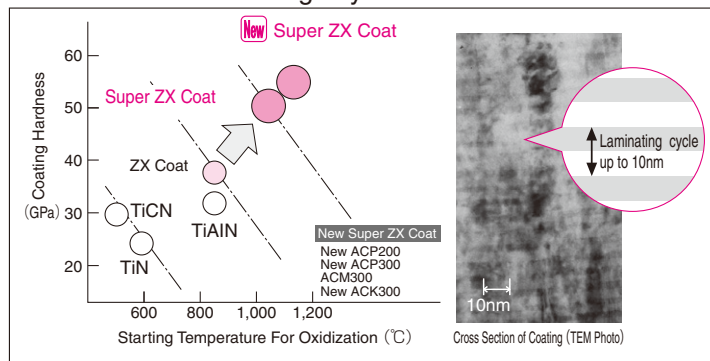


P New Super ZX Coat/Super ZX Coat (PVD : Physical Vapor Deposition)

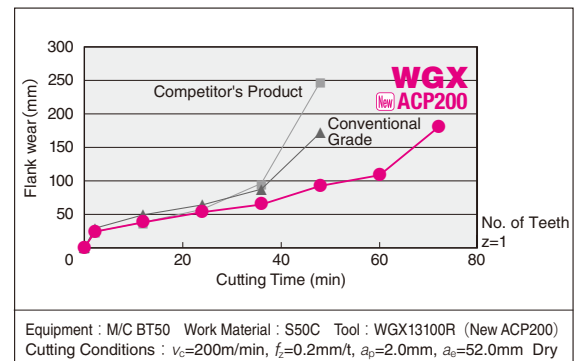
The New Super ZX Coat utilizes our proprietary thin-layer technology and advanced nanotechnology to create a coating that consists of a thousand layers of alternating, nanometer-thick coatings (1 nanometer is 1 billionth of a meter).

- ▶ Compared to conventional grades, the coating hardness has been increased by 40% and the oxidization 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.
- ▶ Achieves over 2 times longer tool life compared to conventional grades under the same cutting conditions.

Characteristics of Coating Layer



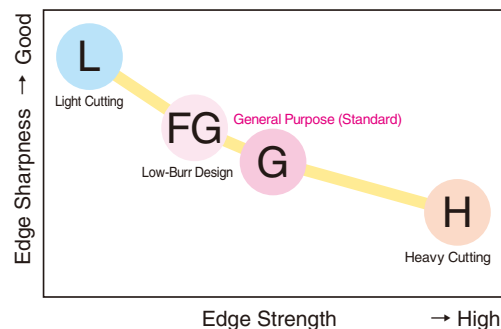
Wear Resistance



Chipbreaker Selection

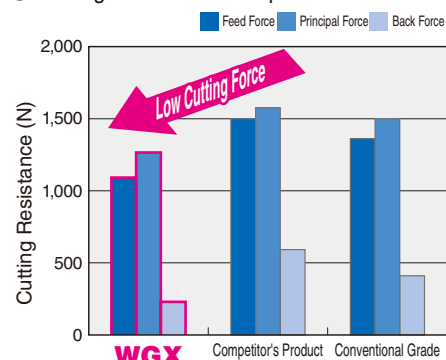
Work Material	P M K S N	P	M	K	S	P	K
Breaker	L	FG	G	H			W
Appearance							
Cutting Edge Insert Figure							
Characteristics	Low Cutting Force	Standard and with Wiper Flat	Standard	High Strength	Wiper		
Application	Light Cut	General Purpose and Low Burr	General Purpose	Heavy Cut	Emphasis on Surface Finish		

Chipbreaker Map



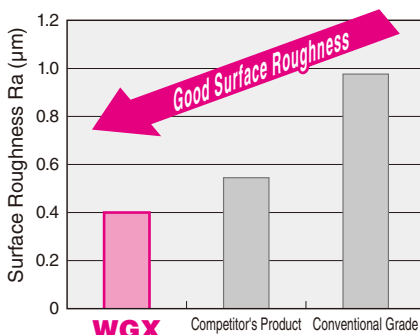
General-purpose G Type Chipbreaker

Cutting Resistance Comparison



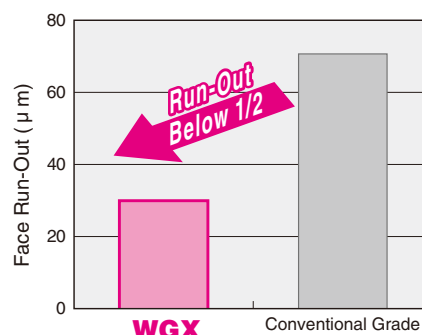
Work Material : S50C Tool : $\phi 100$
Cutting Conditions : $v_c=200\text{m/min}$, $f_z=0.2\text{mm/t}$, $a_p=3.0\text{mm}$

Surface Finish Comparison



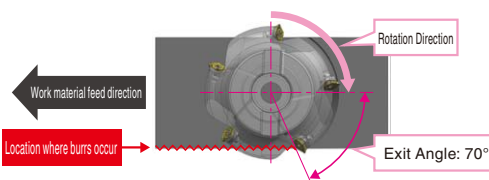
Work Material : S50C Tool : $\phi 100$
Cutting Conditions : $v_c=200\text{m/min}$, $f_z=0.2\text{mm/t}$, $a_p=3.0\text{mm}$

Insert Indexing Run-Out



Tool : WGX13100R ($\phi 100$)
No. of Teeth : 7 Teeth

Low-Burr Design FG Type Chipbreaker



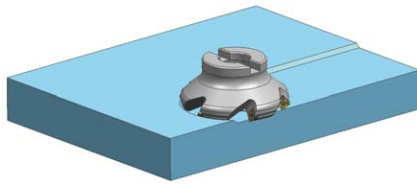
Cutting Surface Comparison

Work Material	FG Type	G Type	Conventional Grade	Competitor's Product
S50C				
SUS304				
SCM440				

Machine : M/C BT50 Tool : WGX13100R ($\phi 100$) Grade : ACP200
Cutting Conditions : $v_c=200\text{m/min}$, $f_z=0.2\text{mm/t}$, $a_p=3.0\text{mm}$, $a_e=80\text{mm}$ Dry

Application Examples

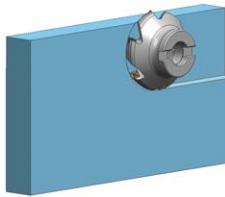
SCM420 Block Material



Huge improvement in surface roughness as compared to competitor's.
Excellent edge sharpness and low cutting resistance. Stable machining with low cutting load.

Tool : WGX13125R (ø125) Insert : SEMT13T3AGSR-G (ACP200)
Cutting Conditions : $v_c=220\text{m/min}$, $f_z=0.25\text{mm/t}$, $a_p=2.0\text{mm}$, $a_e=125\text{mm}$ Dry

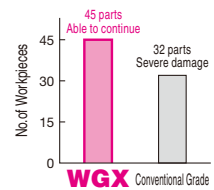
SS400 Machine Component



While conventional tool experience chattering with low rigidity machines, the WGX reduces chattering as well as the occurrence of exit burrs.

Tool : WGX13125R (ø125) Insert : SEMT13T3AGSR-FG (ACP200)
Cutting Conditions : $v_c=200\text{m/min}$, $f_z=0.2\text{mm/t}$, $a_p=1.0\text{mm}$, $a_e=100\text{mm}$ Wet

ST-52 Pipe Steel



The conventional grade suffered severe damage after 32 parts while WGX only had minor wear after 45 parts and is able to continue.

Tool : WGXM13125R (ø125) Insert : SEMT13T3AGSR-G (ACP200)
Cutting Conditions : $v_c=300\text{m/min}$, $f_z=0.12\text{mm/t}$, $a_p=4.0\text{mm}$, $a_e=100\text{mm}$ Wet

SCM440 Machine Component



In heavy interrupted machining of pocketed plate, WGX achieves longer tool life with better surface finish as compared to the competitor's.

Tool : WGX13080R (ø80) Insert : SEMT13T3AGSR-H (ACP200)
Cutting Conditions : $v_c=200\text{m/min}$, $f_z=0.15\text{mm/t}$, $a_p=3.0\text{mm}$ Dry

SUS304 Machine Component

Cutting Distance: 8.25m

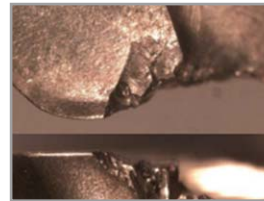


WGX

Cutting Distance: 3.75m



WGX



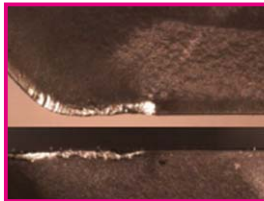
Competitor's Product



Tool
Cutter : WGX13100RS (ø100)
Insert : SEMT13T3AGSR-G (ACM300)
Cutting Conditions : $v_c=150\text{m/min}$
 $f_z=0.15\text{mm/t}$
 $a_p=2.0\text{mm}$
 $a_e=20.0\text{mm}$ Dry

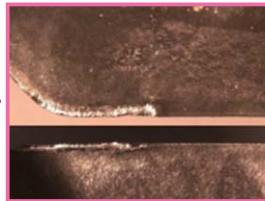
SUS630/H900 Machine Component

Cutting Distance: 15m

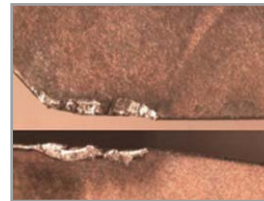


WGX

Cutting Distance: 7.5m



WGX



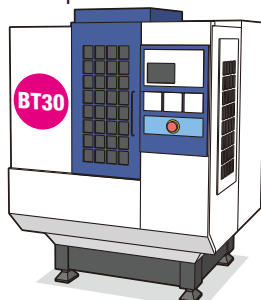
Competitor's Product



Tool
Cutter : WGX13100RS (ø100)
Insert : SEMT13T3AGSR-G (ACM200)
Cutting Conditions : $v_c=150\text{m/min}$
 $f_z=0.1\text{mm/t}$
 $a_p=1.0\text{mm}$
 $a_e=75.0\text{mm}$ Dry

The high wear resistance of CVD coating provides stable tool wear and a tool life that is over 2 times longer than that of our competitors.

S50C Machine Component



Stable cutting is achieved even with low-rigidity machines.

Cutting Resistance Comparison

	Cutting width a_e			
	10.0mm	20.0mm	30.0mm	40.0mm
WGX				
Competitor's Product				

Machine : M/C BT30
Tool : WGX13063RS (ø63) Insert : SEMT13T3AGSR-L (ACP200)
Cutting Conditions : $v_c=300\text{m/min}$, $f_z=0.1\text{mm/t}$, $a_p=4.0\text{mm}$ Dry

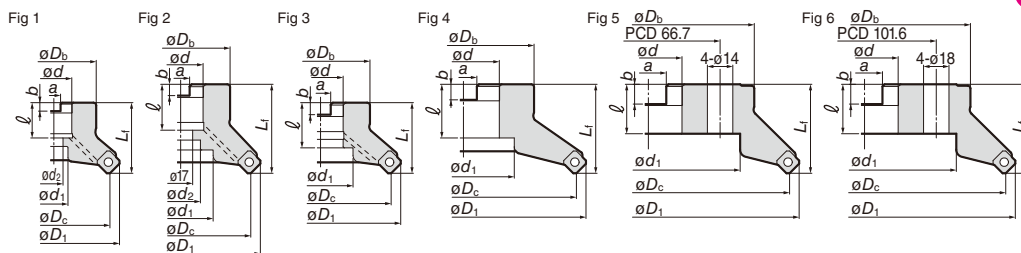
WGX13000R(S) Type

Rake Angle	Radial	-20° to -24°
	Axial	20° to 22°



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

Expansion



Body (Standard Pitch)

Cat. No.		Stock	Dimensions (mm)										No. of Teeth	Weight (kg)	Fig
			ϕD_c	ϕD_1	ϕD_b	L_f	ϕd	a	b	ℓ	ϕd_1	ϕd_2			
Metric	WGX 13040RS	●	40	52	32	40	16	8.4	5.6	18	14	9	3	0.3	1
	13050RS	●	50	62	40	40	22	10.4	6.3	20	18	11	3	0.4	1
	13063RS	●	63	76	50	40	22	10.4	6.3	20	18	11	4	0.6	1
	13080RS	●	*80	93	55	50	27	12.4	7	25	20	13.5	4	1.2	1
	13100RS	●	100	113	70	50	32	14.4	8.5	32	46	-	5	1.6	3
	13125RS	●	125	138	80	63	40	16.4	9.5	29	52	29	6	2.8	1
	13160RS	●	160	173	130	63	40	16.4	9.5	29	88	-	7	4.5	5
	13200RS	●	200	213	150	63	60	25.7	14	35	130	-	8	7.1	6
	13250RS	●	250	263	190	63	60	25.7	14	35	160	-	10	11.2	6
Inch	WGX 13080R	●	*80	93	60	50	25.4	9.5	6	25	20	13	4	1.2	1
	13100R	●	*100	113	70	63	31.75	12.7	8	32.5	46	28	5	2.3	2
	13125R	●	125	138	80	63	38.1	15.9	10	35.5	55	30	6	2.9	1
	13160R	●	160	173	100	63	50.8	19.1	11	38	72	-	7	4.5	4
	13200R	●	200	213	150	63	47.625	25.4	14	35	130	-	8	7.1	6
	13250R	●	250	263	190	63	47.625	25.4	14	35	150	-	10	11.2	6



Inserts are not included. Check the arbor attachment size (ϕd) when selecting the cutter. Sizes $\phi 160$ mm or above do not have coolant holes.

*Please use JIS B1176 hexagonal bolt ($\phi 80$: M12x30 to 35mm, $\phi 100$: M16x40 to 45mm) for securing $\phi 80/\phi 100$ cutter to the arbor.

Insert

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

Grade		Coat						Carbide	DLC	Cermert			
Application	High Speed/Light	P			K		M	S	K	N			
	General Purpose		P	M	K		M	S		N		P	
	Roughing		P	M		K		M	S				
Cat. No.		ACP100	ACP200	ACP300	ACK200	ACK300	ACM200	ACM300	H1	DL1000	T4500A	Application	Fig
SEET 13T3AGFR-L												Light Cutting (Non-Ferrous Metal)	1
13T3AGSR-L												Light Cutting	1
13T3AGSR-G												general purpose	1
SEMT 13T3AGSR-L												Light Cutting	1
13T3AGSR-G												general purpose	1
13T3AGSR-H												Heavy Cut	1
SEMT 13T3AGSR-FG												Burr prevention	2
XEEW 13T3AGER-WR												Wiper Insert	3

Fig 1

Fig 2

Fig 3

Wiper Insert

H9 (Be careful during installation.)

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

Identification Details

WGX 13 040 R S

(1) Cutter Series (2) Insert Size (3) Cutter (4) Direction (5) Metric Bore

Parts

Seat	Seat Screw	Insert Screw	Spanner (Insert)	Spanner (Seat)	Anti-seizure Cream
WGCS13R	BW0507F	BFTX03512P	TRDR15IP	LH035	SUMI-P

Recommended Tightening Torque (N·m)

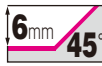
● mark: Standard stocked item (expanded item)

Recommended Cutting Conditions

ISO	Work Material	Hardness	Cutting Speed v_c (m/min) Min. - Optimum - Max.	Feed Rate f_z (mm/t) Min. - Optimum - Max.	Grade
P	General Steel	180 to 280HB	150-200-250	0.10-0.20-0.30	ACP200
	Soft Steel	≤ 180 HB	180-265-350	0.10-0.25-0.40	ACP200
	Die Steel	200 to 220HB	100-150-200	0.15-0.20-0.25	ACP200
M	Stainless Steel	—	160-205-250	0.15-0.23-0.30	ACM300
K	Cast Iron	250HB	100-175-250	0.15-0.23-0.30	ACK200
N	Non-Ferrous Alloy	—	500-750-1000	0.15-0.23-0.30	DL1000
S	Exotic Alloy	—	30-50-80	0.10-0.20-0.30	ACM300

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.

Rake Angle	Radial	-20° to -24°
	Axial	20° to 22°

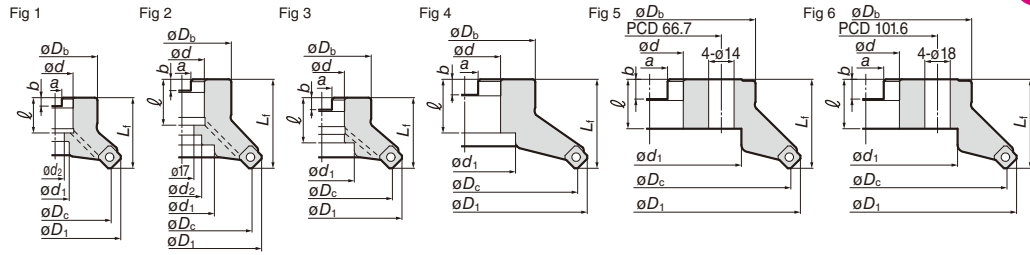


SEC-Wave Mill

WGX13000R(S) Type

Expansion

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



Body (Fine Pitch)

Cat. No.	Stock	Dimensions (mm)										No. of Teeth	Weight (kg)	Fig
		ϕD_c	ϕD_1	ϕD_b	L_f	ϕd	a	b	ℓ	ϕd_1	ϕd_2			
Metric	WGXM 13050RS	50	62	40	40	22	10.4	6.3	20	18	11	4	0.4	1
	13063RS	63	77	50	40	22	10.4	6.3	20	18	11	5	0.6	1
	13080RS	*80	94	55	50	27	12.4	7	25	20	13.5	6	1.1	1
	13100RS	100	114	70	50	32	14.4	8.5	32	46	-	7	1.6	3
	13125RS	125	139	80	63	40	16.4	9.5	29	52	29	8	2.8	1
	13160RS	160	174	130	63	40	16.4	9.5	29	88	-	10	4.5	5
	13200RS	200	214	150	63	60	25.7	14	35	130	-	12	7.0	6
	13250RS	250	264	190	63	60	25.7	14	35	160	-	14	11.1	6
Inch	WGXM 13080R	*80	94	60	50	25.4	9.5	6	25	20	13	6	1.1	1
	13100R	*100	114	70	63	31.75	12.7	8	32.5	46	28	7	2.2	2
	13125R	125	139	80	63	38.1	15.9	10	35.5	55	30	8	2.9	1
	13160R	160	174	100	63	50.8	19.1	11	38	72	-	10	4.5	4
	13200R	200	214	150	63	47.625	25.4	14	35	130	-	12	7.0	6
	13250R	250	264	190	63	47.625	25.4	14	35	150	-	14	11.1	6



Inserts are not included. Check the arbor attachment size (ϕd) when selecting the cutter. Sizes $\phi 160$ mm or above do not have coolant holes.

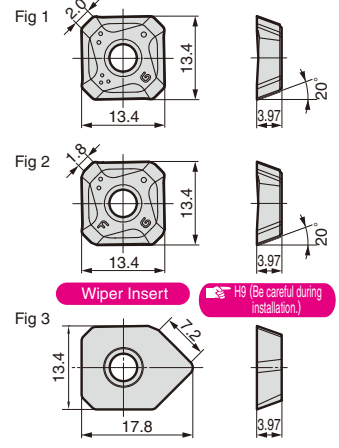
*Please use JIS B1176 hexagonal bolt ($\phi 80$: M12x30 to 35mm, $\phi 100$: M16x40 to 45mm) for securing $\phi 80/\phi 100$ cutter to the arbor.

Insert

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

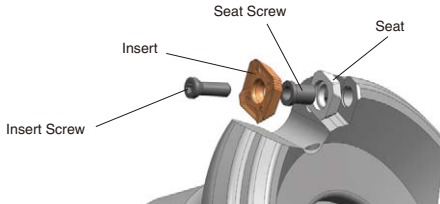
Grade		Coated Carbide					Carbide	DLC	Cermert	Application	Fig
Application		P	M	K	N	S	H	N	P		
High Speed/Light		P		K	M	S		N			
General Purpose		P	M	K	M	S		N	P		
Roughing		P	M	K	M	S		N			
Cat. No.		ACP100	ACP200	ACP300	ACK200	ACK300	ACM200	ACM300	H1	DL1000	T4500A
SEET 13T3AGFR-L											
13T3AGSR-L											
13T3AGSR-G											
SEMT 13T3AGSR-L											
13T3AGSR-G											
13T3AGSR-H											
SEMT 13T3AGSR-FG											
XEEW 13T3AGER-WR											

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



Milling Cutters
Face Milling
Radius
Multi-Purpose
Shoulder Milling
R/Copying
Groove/T-Slot
Chamfering
Aluminum/Light Alloys
High-Speed Cast Iron

Identification Details



WGX M 13 050 R S

(1) Cutter Series (2) M: Fine Pitched F: Extra-Fine Pitched (3) Insert Size (4) Cutter (5) Direction (6) Metric Bore

Recommended Cutting Conditions

ISO	Work Material	Hardness	Cutting Speed v_c (m/min) Min. - Optimum - Max.	Feed Rate f_z (mm/t) Min. - Optimum - Max.	Grade
P	General Steel	180 to 280HB	150-200-250	0.10-0.20-0.30	ACP200
	Soft Steel	≤ 180 HB	180-265-350	0.10-0.25-0.40	ACP200
	Die Steel	200 to 220HB	100-150-200	0.15-0.20-0.25	ACP200
M	Stainless Steel	—	160-205-250	0.15-0.23-0.30	ACM300
K	Cast Iron	250HB	100-175-250	0.15-0.23-0.30	ACK200
N	Non-Ferrous Alloy	—	500-750-1000	0.15-0.23-0.30	DL1000
S	Exotic Alloy	—	30-50-80	0.10-0.20-0.30	ACM300

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.

mark: Standard stocked item (expanded item)

Parts

Seat	Seat Screw	Insert Screw	Spanner (Insert)	Spanner (Seat)	Anti-seizure Cream
WGCS13R	BW0507F	BFTX03512IP	TRDR15IP	LH035	SUMI-P

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

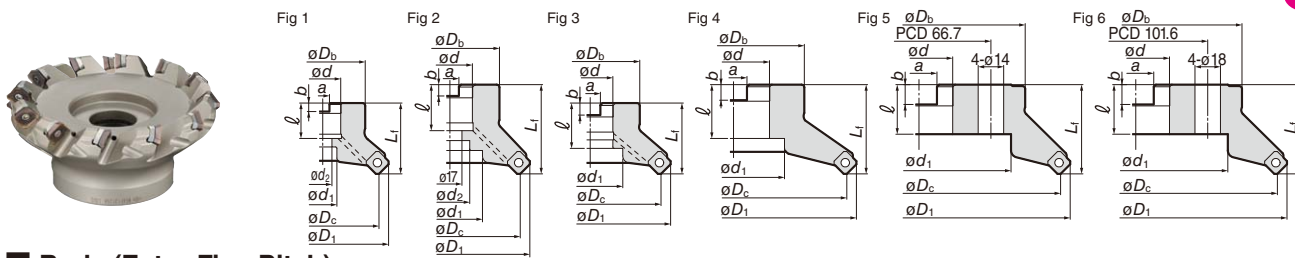
WGXF13000R(S) Type

Rake Angle	Radial	-20° to -24°
	Axial	20° to 22°



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

Expansion



Body (Extra-Fine Pitch)

Cat. No.	Stock	Dimensions (mm)										No. of Teeth	Weight (kg)	Fig
		ϕD_c	ϕD_1	ϕD_b	L_f	ϕd	a	b	ℓ	ϕd_1	ϕd_2			
Metric	WGXF 13050RS	50	62	40	40	22	10.4	6.3	20	18	11	5	0.4	1
	13063RS	63	77	50	40	22	10.4	6.3	20	18	11	6	0.6	1
	13080RS	*80	94	55	50	27	12.4	7	25	20	13.5	8	1.1	1
	13100RS	100	114	70	50	32	14.4	8.5	32	46	-	10	1.5	3
	13125RS	125	139	80	63	40	16.4	9.5	29	52	29	12	2.7	1
	13160RS	160	174	130	63	40	16.4	9.5	29	88	-	16	4.5	5
	13200RS	200	214	150	63	60	25.7	14	35	130	-	20	6.9	6
	13250RS	250	264	190	63	60	25.7	14	35	160	-	24	11.0	6
Inch	WGXF 13080R	*80	94	60	50	25.4	9.5	6	25	20	13	8	1.1	1
	13100R	*100	114	70	63	31.75	12.7	8	32.5	46	28	10	2.1	2
	13125R	125	139	80	63	38.1	15.9	10	35.5	55	30	12	2.8	1
	13160R	160	174	100	63	50.8	19.1	11	38	72	-	16	4.5	4
	13200R	200	214	150	63	47.625	25.4	14	35	130	-	20	6.9	6
	13250R	250	264	190	63	47.625	25.4	14	35	150	-	24	11.0	6

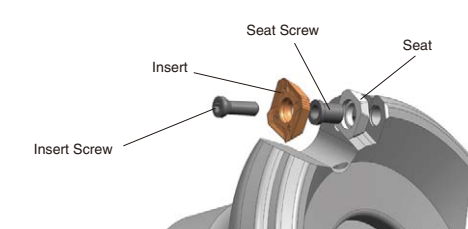
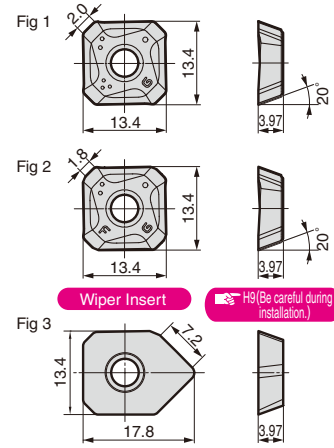
Inserts are not included. Check the arbor attachment size (ϕd) when selecting the cutter. Sizes $\phi 160$ mm or above do not have coolant holes.*Please use JIS B1176 hexagonal bolt ($\phi 80$: M12x30 to 35mm, $\phi 100$: M16x40 to 45mm) for securing $\phi 80/\phi 100$ cutter to the arbor.

Insert

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

Grade		Coated Carbide			Carbide	DLC	Cermet	Application	Fig
Application		P	M	K	N	S	H		
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	
SEET 13T3AGFR-L									Light Cutting (Non-Ferrous Metal)
13T3AGSR-L									Light Cutting
13T3AGSR-G									general purpose
SEMT 13T3AGSR-L									Light Cutting
13T3AGSR-G									general purpose
13T3AGSR-H									Heavy Cut
SEMT 13T3AGSR-FG									Burr prevention
XEEW 13T3AGER-WR									Wiper Insert

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



Identification Details

WGXF	F	13 050	R S		
(1) Cutter Series	(2) M : Fine Pitched F : Extra-Fine Pitched	(3) Insert Size	(4) Cutter	(5) Direction	(6) Metric Bore

Recommended Cutting Conditions

ISO	Work Material	Hardness	Cutting Speed v_c (m/min) Min. - Optimum - Max.	Feed Rate f_z (mm/t) Min. - Optimum - Max.	Grade
P	General Steel	180 to 280HB	150-200-250	0.10-0.20-0.30	ACP200
	Soft Steel	≤ 180 HB	180-265-350	0.10-0.25-0.40	ACP200
	Die Steel	200 to 220HB	100-150-200	0.15-0.20-0.25	ACP200
M	Stainless Steel	—	160-205-250	0.15-0.23-0.30	ACM300
K	Cast Iron	250HB	100-175-250	0.15-0.23-0.30	ACK200
N	Non-Ferrous Alloy	—	500-750-1000	0.15-0.23-0.30	DL1000
S	Exotic Alloy	—	30-50-80	0.10-0.20-0.30	ACM300

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.

Parts

Seat	Seat Screw	Insert Screw	Spanner (Insert)	Spanner (Seat)	Anti-seizure Cream
WGCS13R	BW0507F	BFTX03512IP	TRDR15IP	LH035	SUMI-P

N·m Recommended Tightening Torque (N·m)

● mark: Standard stocked item (expanded item)

Rake Angle	Radial	-20° to -24°
	Axial	20° to 22°

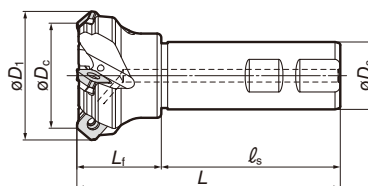


SEC-Wave Mill

WGX13000EW Type

Expansion

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



Body (Shank Type)

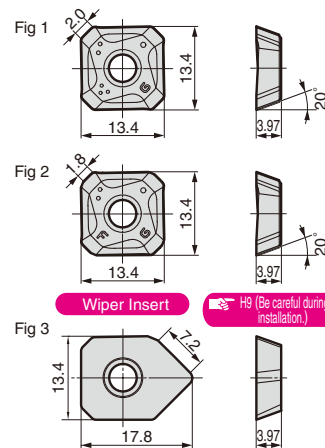
Cat. No.	Stock	Dimensions (mm)						No. of Teeth
		ϕD_c	ϕD_1	ϕD_s	L_f	ℓ_s	L	
WGX 13032EW	●	32	44	32	40	85	125	3
13040EW	●	40	52	32	40	85	125	3
13050EW	●	50	62	32	40	85	125	4
13063EW	●	63	76	32	40	85	125	5

Inserts are not included. $\phi 32$ mm size does not have seats.

Insert

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

Grade		Coated Carbide						Carbide	DLC	Cermet	Application	Fig
Application		P	M	K	N	S	H					
High Speed/Light		P		K					N			
General Purpose		P		K					N	P		
Roughing		P	P	K								
Cat. No.		ACP100	ACP200	ACP300	ACK200	ACK300	ACK300	ACM200	ACM300	H1	DL1000	T4500A
SEET 13T3AGFR-L		New	New	New	New	New	New	New	New	●	●	
13T3AGSR-L		●	●	●	●	●	●	●	●			●
13T3AGSR-G		●	●	●	●	●	●	●	●			●
SEMT 13T3AGSR-L		●	●	●	●	●	●	●	●			
13T3AGSR-G		●	●	●	●	●	●	●	●			
13T3AGSR-H		●	●	●	●	●	●	●	●			
SEMT 13T3AGSR-FG		●	●	●	●	●	●	●	●			
XEEW 13T3AGER-WR		●	●	●	●	●	●	●	●			●

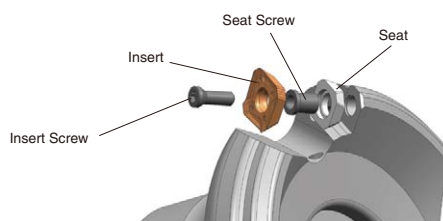


* The new ACP100 and new ACK200 may vary in color or luster, but these variations do not affect the performance.

Identification Details

WGX 13 032 EW

(1) Cutter Series (2) Insert Size (3) Cutter (4) Endmill Type



Parts

Applicable Cutters	Seat	Seat Screw	Insert Screw	Spanner (Insert)	Spanner (Seat)	Anti-seizure Cream
Other WGX13000EW types except the following items	WGCS13R	BW0507F	BFTX03512IP	TRDR15IP	LH035	SUMI-P
WGX13032EW	—	—	BFTX03512IP	TRDR15IP	—	SUMI-P

Recommended Tightening Torque (N·m)

Recommended Cutting Conditions

ISO	Work Material	Hardness	Cutting Speed v_c (m/min) Min. - Optimum - Max.	Feed Rate f_z (mm/t) Min. - Optimum - Max.	Grade
P	General Steel	180 to 280HB	150-200-250	0.10-0.20-0.30	ACP200
	Soft Steel	≤ 180 HB	180-265-350	0.10-0.25-0.40	ACP200
	Die Steel	200 to 220HB	100-150-200	0.15-0.20-0.25	ACP200
M	Stainless Steel	—	160-205-250	0.15-0.23-0.30	ACM300
K	Cast Iron	250HB	100-175-250	0.15-0.23-0.30	ACK200
N	Non-Ferrous Alloy	—	500-750-1000	0.15-0.23-0.30	DL1000
S	Exotic Alloy	—	30-50-80	0.10-0.20-0.30	ACM300

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.

● mark: Standard stocked item (expanded item)

H25

H
Milling
Cutters

Face
Milling

Radius

Multi-
Purpose

Shoulder
Milling

R/Copying

Groove/
T-Slot

Chamfering

Aluminium/
Light Alloys

High-Speed
Cast Iron