

WGX Series

Rake Angle	Radial	-20° to -24°	6mm 45°	<table border="1"> <tr> <td>P</td> <td>M</td> <td>K</td> <td>N</td> <td>S</td> <td>H</td> </tr> <tr> <td>Steel</td> <td>Cast Iron</td> <td>Cast Iron</td> <td>Titanium</td> <td>Aluminum</td> <td>Super Alloy</td> </tr> </table>	P	M	K	N	S	H	Steel	Cast Iron	Cast Iron	Titanium	Aluminum	Super Alloy
P	M	K			N	S	H									
Steel	Cast Iron	Cast Iron	Titanium	Aluminum	Super Alloy											
	Axial	20° to 22°														

Features & Benefits



Stable Machining

Special chipbreaker designed for WGX Type ensures low cutting resistance

High Quality

Improved run-out precision and unique wiper edge shape ensure excellent surface finish quality
Optimized chamfer shape reduces burrs and edge chipping

Long Tool Life

Features high-precision technology that reduces insert run-out variation and a new coating to provide stable and long tool life

- New Super ZX, Super FF and DLC coated grades available

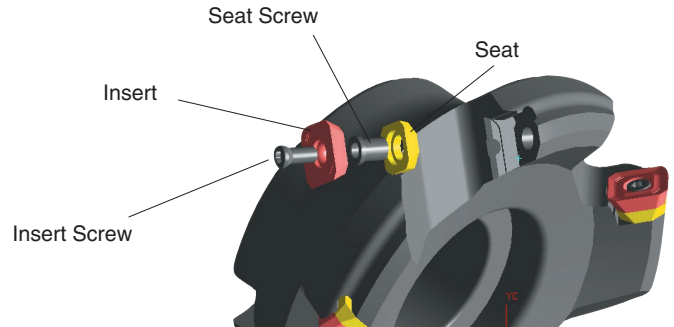
- Available in Standard, Fine Pitch and Extra-Fine Pitch cutters

Insert Information

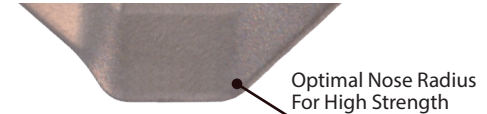
Inserts	P		K	M	S	N	Dimensions							
	ACP100	ACP200	ACP300	T4500A	ACK200	ACK300	ACM200	ACM300	DL1000	H1	IC	Thickness	Facet Width	
SEMT13T3AGSR-L	•	•	•		•	•	•	•				0.528	0.156	0.0787
SEMT13T3AGSR-G	•	•	•		•	•	•	•						
SEMT13T3AGSR-H	•	•	•		•	•	•	•						
SEMT13T3AGSR-FG	•	•	•		•	•	•	•						
SEET13T3AGSR-L	•	•	•	★	•	•	•	•						
SEET13T3AGSR-G	•	•	•	★	•	•	•	•						
SEET13T3AGFR-L									•	•				
XEEW13T3AGER-AWR	•		•		•								0.320	

Applicable Cutters	Seat	Seat Screw	Insert Screw	Spanner (For Insert)	Recommended Tightening Torque Inch / LBs	Spanner (For Seat)
WGX cutters except for model below	WGCS13R	BW0507F	BFTX03512IP	TRDR15IP	25	LH035
WGX13032EW	—	—	BFTX03512IP	TRDR15IP	25	—

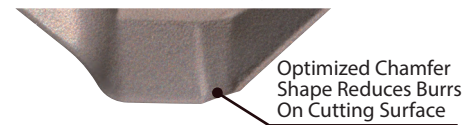
Parts Diagram



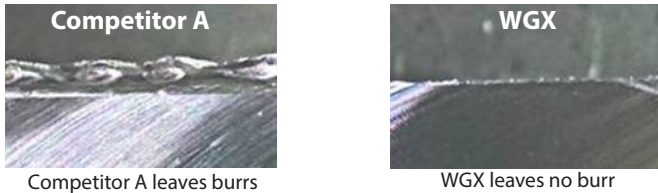
General Purpose G Type Chipbreaker



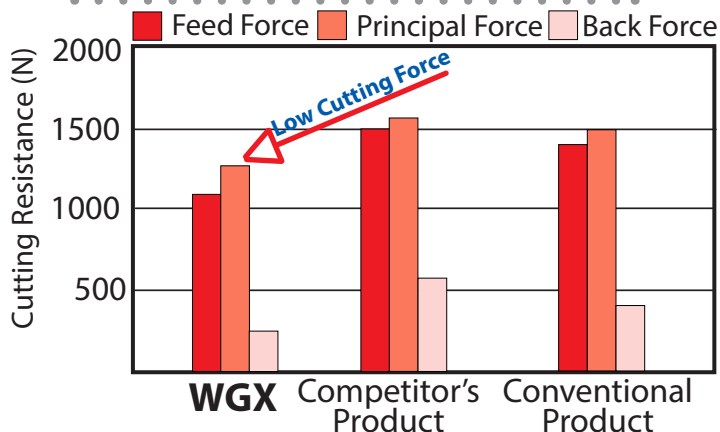
Low-Burr Design FG Type Chipbreaker



Part Exit Comparison

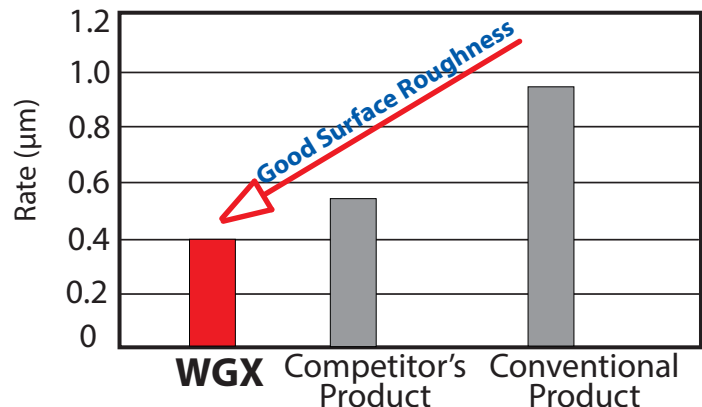


Cutting Resistance Comparison



Workpiece Material: 1049 Steel Cutter Diameter: 4.000"
Cutting Conditions: V_c : 650 SFM f_z : 0.0079 ipt a_p : .118 in

Finishing Surface Roughness Comparison

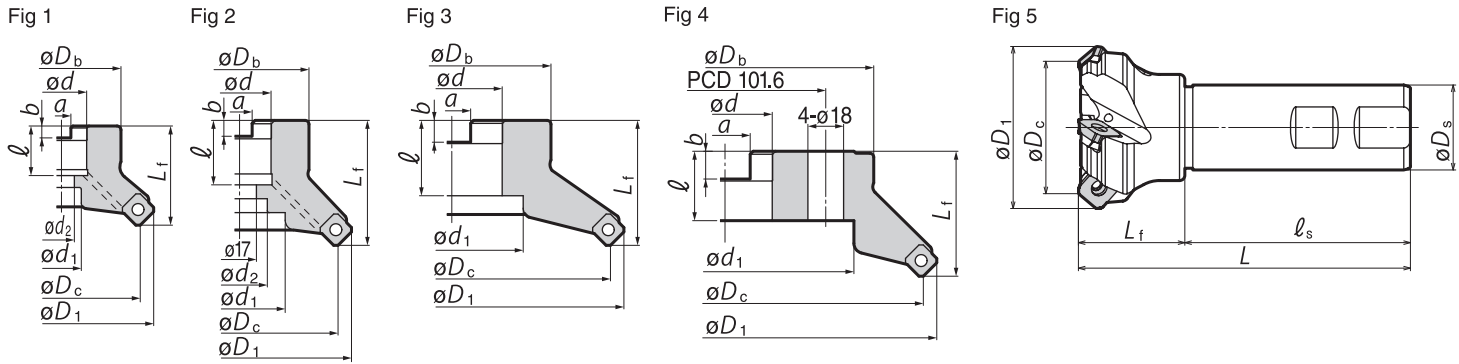


Workpiece Material: 1049 Steel Cutter Diameter: 4.000"
Cutting Conditions: V_c : 650 SFM f_z : .00079ipt a_p : .118 in



Rake Angle	Radial	-20° to -24°	6mm 45°	
	Axial	20° to 22°		

WGX Series



WGX Cutter Bodies- Standard Pitch-INCH

Catalog No.	Stock	ϕD_c	ϕD_1	ϕD_b	L_f	ϕd	ϕd_1	a	b	ℓ	Teeth	Weight (lbs)	Fig.
WGX42000R	●	2.000	2.461	1.500	1.750	0.750	0.609	0.312	0.190	0.750	3	0.9	1
WGX42500R	●	2.500	3.008	1.750	1.750	1.000	0.797	0.375	0.220	0.750	4	1.3	1
WGX43000R	●	3.000	3.504	2.250	1.750	1.000	0.787	0.375	0.220	0.750	4	2.2	1
WGX44000R	●	4.000	4.500	2.870	2.000	1.250	1.000	0.500	0.280	0.750	5	3.5	2
WGX44000R-1.50	●	4.000	4.500	3.750	2.500	1.500	2.000	0.625	0.380	1.000	5	4.5	3
WGX45000R	●	5.000	5.496	3.750	2.500	1.500	2.000	0.625	0.380	1.000	6	7.2	1
WGX46000R	●	6.000	6.496	4.380	2.500	1.500	2.000	0.625	0.380	1.060	7	9.5	3
WGX48000R	●	8.000	8.496	5.906	2.500	2.500	5.118	1.000	0.560	1.594	8	15.6	4
WGX410000R	●	10.000	10.492	7.480	2.756	2.500	6.299	1.000	0.531	1.575	10	23.5	4

WGX Cutter Bodies-Fine Pitch-INCH

Catalog No.	Stock	ϕD_c	ϕD_1	ϕD_b	L_f	ϕd	ϕd_1	a	b	ℓ	Teeth	Weight (lbs)	Fig.
WGX42000R	●	2.000	2.461	1.500	1.750	0.750	0.609	0.312	0.190	0.750	4	0.9	1
WGX42500R	●	2.500	3.008	1.750	1.750	1.000	0.797	0.375	0.220	0.750	5	1.9	1
WGX43000R	●	3.000	3.504	2.250	1.750	1.000	0.787	0.375	0.220	0.750	6	3.1	1
WGX44000R	●	4.000	4.500	2.870	2.000	1.250	1.000	0.500	0.280	0.750	7	4.8	2
WGX44000R-1.50	●	4.000	4.500	3.750	2.500	1.500	2.000	0.625	0.380	1.000	7	5.5	3
WGX45000R	●	5.000	5.496	3.750	2.500	1.500	2.000	0.625	0.380	1.000	8	7.2	1
WGX46000R	●	6.000	6.496	4.380	2.500	1.500	2.000	0.625	0.380	1.060	10	9.5	3
WGX48000R	●	8.000	8.496	5.906	2.500	2.500	5.118	1.000	0.560	1.594	12	15.6	4

WGX Cutter Bodies-Extra Fine Pitch-INCH

Catalog No.	Stock	ϕD_c	ϕD_1	ϕD_b	L_f	ϕd	ϕd_1	a	b	ℓ	Teeth	Weight (lbs)	Fig.
WGX42000R	●	2.000	2.461	1.500	1.750	0.750	0.609	0.312	0.190	0.750	5	0.9	1
WGX42500R	●	2.500	3.008	1.750	1.750	1.000	0.797	0.375	0.220	0.750	6	1.5	1
WGX43000R	●	3.000	3.504	2.250	1.750	1.000	0.787	0.375	0.220	0.750	8	3.1	1
WGX44000R	●	4.000	4.500	2.870	2.000	1.250	1.000	0.500	0.280	0.750	10	4.7	2
WGX44000R-1.50	●	4.000	4.500	3.750	2.500	1.500	2.000	0.625	0.380	1.000	10	6.5	3
WGX45000R	●	5.000	5.496	3.750	2.500	1.500	2.000	0.625	0.380	1.000	12	8.2	1
WGX46000R	●	6.000	6.496	4.380	2.500	1.500	2.000	0.625	0.380	1.060	16	10.5	3
WGX48000R	●	8.000	8.496	5.906	2.500	2.500	5.118	1.000	0.560	1.594	20	15.2	4

Cutter diameters 6.000" and above do not have coolant holes

WGX Cutter Bodies - Shank - INCH

Catalog No.	Stock	ϕD_c	ϕD_1	ϕD_s	L_f	ℓ_s	L	Teeth	Fig.
WGX42000EW	●	2.000	2.461	1.250	1.591	2.379	3.970	4	5
WGX42500EW	●	2.500	3.008	1.250	1.591	2.379	3.970	5	5

Identification Details - Shell (Inch)

WGX F 4 2000 R

1 Cutter Series 2 M. Fine Pitched / F. Extra-Fine Pitched 3 Insert Series 4 Diameter (2.000") 5 Cutter Type

Identification Details - Shank (Inch)

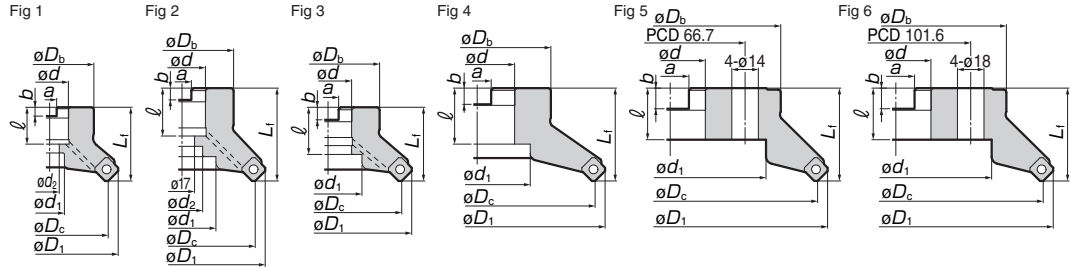
WGX 4 2000 EW

1 Cutter Series 2 Insert Series 3 Diameter (2.000") 4 Endmill Type



WGX Series

Rake Angle	Radial	-20° to -24°	6mm 45°	<table border="1"> <tr> <td>P</td><td>M</td><td>K</td><td>N</td><td>S</td><td>H</td> </tr> <tr> <td>Steel</td><td>Cast Iron</td><td>Cast Iron</td><td>Titanium</td><td>Aluminum</td><td>Cast Alloy</td> </tr> </table>	P	M	K	N	S	H	Steel	Cast Iron	Cast Iron	Titanium	Aluminum	Cast Alloy
P	M	K			N	S	H									
Steel	Cast Iron	Cast Iron	Titanium	Aluminum	Cast Alloy											
	Axial	20° to 22°														



Body (Standard Pitch) - Metric

Cat. No.	Stock	Dimensions (mm)										No. of Teeth	Weight (kg)	Fig.
		øDc	øD1	øDb	Lf	ød	a	b	ℓ	ød1	ød2			
WGX13040RS	★	40	52	32	40	16	8.4	5.6	18	14	9	3	0.3	1
WGX13050RS	★	50	62	40	40	22	10.4	6.3	20	18	11	3	0.4	1
WGX13063RS	★	63	76	50	40	22	10.4	6.3	20	18	11	4	0.6	1
WGX13080R	★	80	93	60	50	25.4	9.5	6	25	20	13	4	1.2	1
WGX13100R	★	100	113	70	63	31.75	12.7	8	32.5	46	28	5	2.3	2
WGX13125R	★	125	138	80	63	38.1	15.9	10	35.5	55	30	6	2.9	1
WGX13160R	★	160	173	100	63	50.8	19	11	38	72	-	7	4.5	4
WGX13200R	★	200	213	150	63	47.625	25.4	14	35	130	-	8	7.1	6
WGX13250R	★	250	263	190	63	47.625	25.4	14	35	150	-	10	11.2	6

Body (Fine Pitch) - Metric

Cat. No.	Stock	Dimensions (mm)										No. of Teeth	Weight (kg)	Fig.
		øDc	øD1	øDb	Lf	ød	a	b	ℓ	ød1	ød2			
WGXM13050RS	★	50	62	40	40	22	10.4	6.3	20	18	11	4	0.4	1
WGXM13063RS	★	63	77	50	40	22	10.4	6.3	20	18	11	5	0.6	1
WGXM13080R	★	80	94	60	50	25.4	9.5	6	25	20	13	6	1.1	1
WGXM13100R	★	100	114	70	63	31.75	12.7	8	32.5	46	28	7	2.2	2
WGXM13125R	★	125	139	80	63	38.1	15.9	10	35.5	55	30	8	2.9	1
WGXM13160R	★	160	174	100	63	50.8	19	11	38	72	-	10	4.5	4
WGXM13200R	★	200	214	150	63	47.625	25.4	14	35	130	-	12	7.0	6
WGXM13250R	★	250	264	190	63	47.625	25.4	14	35	150	-	14	11.1	6

Body (Extra-Fine Pitch) - Metric

Cat. No.	Stock	Dimensions (mm)										No. of Teeth	Weight (kg)	Fig.
		øDc	øD1	øDb	Lf	ød	a	b	ℓ	ød1	ød2			
WGXF13050RS	★	50	62	40	40	22	10.4	6.3	20	18	11	5	0.4	1
WGXF13063RS	★	63	77	50	40	22	10.4	6.3	20	18	11	6	0.6	1
WGXF 13080R	★	80	94	60	50	25.4	9.5	6	25	20	13	8	1.1	1
WGXF13100R	★	100	114	70	63	31.75	12.7	8	32.5	46	28	10	2.1	2
WGXF13125R	★	125	139	80	63	38.1	15.9	10	35.5	55	30	12	2.8	1
WGXF13160R	★	160	174	100	63	50.8	19	11	38	72	-	16	4.5	4
WGXF13200R	★	200	214	150	63	47.625	25.4	14	35	130	-	20	6.9	6
WGXF13250R	★	250	264	190	63	47.625	25.4	14	35	150	-	24	11.0	6

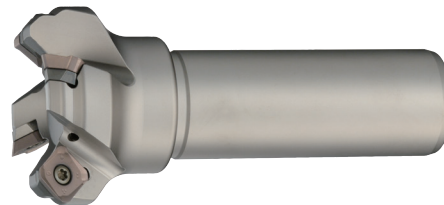
★: Worldwide Warehouse Item

Sizes ø160 mm or above do not have coolant holes

Body (Shank Type)

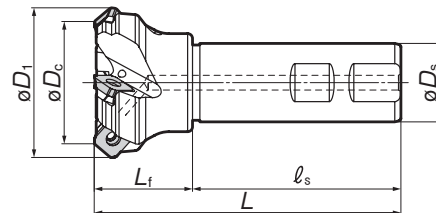
Cat. No.	Stock	Dimensions (mm)						No. of Teeth
		øDc	øD1	øDs	Lf	ℓs	L	
WGX13032EW	★	32	44	32	40	85	125	3
WGX13040EW	★	40	52	32	40	85	125	3
WGX13050EW	★	50	62	32	40	85	125	4
WGX13063EW	★	63	76	32	40	85	125	5

★: Worldwide Warehouse Item



Identification Details:

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



WGX Recommended Cutting Conditions							
ISO	Material	Hardness	Grade	Depth of Cut			Feed per Tooth
				.002 -.050	.050 - .125	.125 & over	
P	Low and Medium Carbon Steels	<250 Bhn	ACP100	775-1300	725-1250	675-1200	.006-.015
			ACP200	725-1200	675-1150	600-1125	.006-.015
			ACP300	675-1075	650-1025	525-925	.006-.015
	Medium Carbon Alloy Steels	<250 Bhn	ACP100	600-975	575-950	550-900	.006-.015
			ACP200	550-900	525-900	500-875	.006-.015
			ACP300	525-875	500-825	475-800	.006-.015
	Medium-High Carbon Steels	<250 Bhn	ACP100	600-975	575-950	550-900	.006-.015
			ACP200	575-950	550-925	500-875	.006-.015
			ACP300	550-925	525-900	525-850	.006-.015
	Free Machining Steels and Alloys	<250 Bhn	ACP100	775-1300	700-1250	675-1200	.006-.015
			ACP200	750-1275	675-1225	650-1150	.006-.015
			ACP300	675-1075	650-1050	650-1025	.006-.015
	Tool Steels	<250 Bhn	ACP100	475-820	450-790	425-750	.006-.012
			ACP200	450-800	435-775	400-725	.006-.012
			ACP300	435-785	425-760	400-715	.006-.012
		Bhn 220 - 350	ACP100	425-775	400-735	400-700	.004-.012
			ACP200	415-750	400-725	375-690	.004-.012
			ACP300	405-700	410-690	375-680	.004-.012
>33 Hrc	ACP100	325-650	300-630	300-590	.004-.012		
	ACP200	315-640	300-625	300-580	.004-.012		
M	Martensitic and Ferritic Stainless Steels	<250 Bhn	ACM300	535-850	520-820	275-800	.004-.012
			ACM300	525-825	515-800	250-775	.004-.012
		>250 Bhn	ACM200	350-800	325-775	300-750	.004-.012
			ACM300	300-750	275-725	250-700	.004-.012
Austenitic and Precipitation Hardening Stainless Steels	<250 Bhn	ACM300	500-740	475-720	450-675	.004-.012	
	>250Bhn	ACM200	250-750	225-725	200-700	.004-.012	
K	Grey Cast Iron	>250 Bhn	ACK200	600-950	525-825	490-800	.004-.012
			ACK300	500-850	475-775	450-750	.004-.012
		<250 Bhn	ACK200	700-1050	625-925	590-900	.004-.015
			ACK300	600-950	575-875	550-850	.004-.015
Ductile Iron	>250 Bhn	ACK200	600-925	550-875	490-800	.004-.012	
		ACK300	550-825	500-775	450-750	.004-.012	
S	Exotic Alloys: Inconel, Hastalloy, Waspalloy, etc.	>300Bhn	ACM200	125-550	110-500	95-450	.004-.010
			ACM300	100-160	70-150	60-135	.004-.010
N	Non-Ferrous Material		H1 DL1000	1000-4000	1000-4000	1000-4000	.006-.015

Indexable Milling

Shoulder Milling

Face Milling

High Feed Milling

Multi-purpose

Modular Tooling

UFO & SumiMill

Discontinued

WGX + DGC Comparison

Needs	Surface Finish	Cutting Force	High Feed Rate	Insert Strength	Chip Evacuation	Cost Per Edge	General Versatility
Recommend	WGX	WGX	DGC	DGC	WGX	DGC	WGX

