

# G-Series [Grounded Inserts]

## 1 Grade description

### MC1020

Applicable for Carbon steel and Alloy processing under HRC50

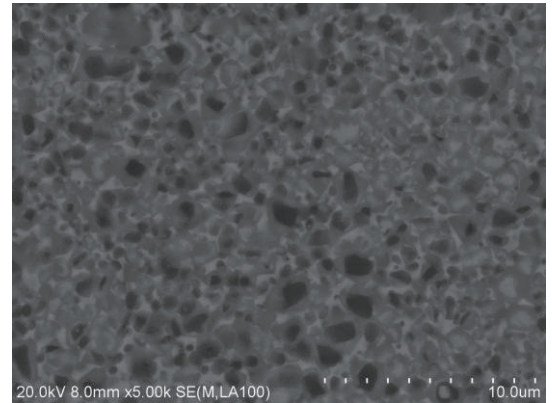
Machining range of Carbon Steel

In high Wear Resistance under processing condition  $A_p 1.0-2.5\text{mm}$ ,  $VC_{80-380\text{m/min}}$

Machining range of Alloy Steel

Fantastic processing performance under the range  $A_p 1.0-2.0\text{mm}$ ,  $VC_{80-380\text{m/min}}$

Density (g/cm <sup>3</sup> )	6.5	Hardness (HRA)	92.4
Bending (MPa)	≥1700	Breakage (MPa*m <sup>1/2</sup> )	∞



MC1020组织形貌图

## 2 Chipbreaker Description

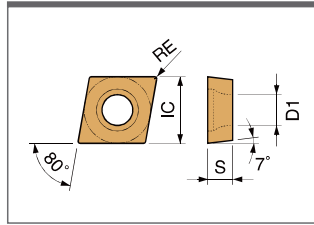
Variety of chipbreaker types for your selection

N=negative P=positive

Application	Type	Breaker name	Breaker geometry & Profile	Feature	Recommended parameter
Simi-Fine	N	G (2G)		Applied to continuous & interrupted cutting of low-carbon steel & medium carbon steel	<p>碳钢、合金钢</p>
Simi-Fine	P	Y		Excellent cutting performance to get fine-finished surface	<p>碳钢、合金钢</p>
Fine	N	25R		Double-edged chip breaker is beneficial to good cutting performance of viscous material like carbon steel.	<p>碳钢、合金钢</p>
Fine	P	2W15		Wide cutting edge is applied to variety of cutting processing scene.	<p>碳钢、合金钢</p>
LOW Feed	P	1U		Under low-feed condition, even cutting depth changes, cutting would be under control, make low resistance process possible.	<p>碳钢、合金钢</p>

Application	Type	Breaker name	Breaker geometry & Profile	Feature	Recommended parameter
Semi-Fine	N	2P		Excellent cutting performance of viscous material like carbon steel, under medium chip application.	Carbon Steel & Alloy 
					Carbon Steel & Alloy 
Semi-Fine	N	C		A general chip breaker applied to ordinary cutting mode.	Carbon Steel & Alloy 
					Carbon Steel & Alloy 
	N	H		Parallel chip breaker is good at medium & low feed cutting mode.	Carbon Steel & Alloy 
					Carbon Steel & Alloy 
					Carbon Steel & Alloy 
Fine	N	3F (F, F1)		Sharp cutting edge enable excellent cutting performance, while significantly lower cutting resistance, and effectively control cutting to make sure smooth chip removal.	Carbon Steel & Alloy 
					Carbon Steel & Alloy 
	P	4W		Wide cutting edge chip breaker is suitable to variety of finish applications.	Carbon Steel & Alloy 

### 3 Products Model



Example Model	IC	S	D1	Example Model	IC	S	D1
CC_0301_	3.50	1.40	1.90	CC_0602_	6.35	2.38	2.80
CC_0401_	4.30	1.80	2.30	CC_09T3_	9.525	3.97	4.40

#### Positive-Moulded Series

Appearance	Part No.	Re	Cermet Grade					Carbide Grade						
			MC1020	MC2010	MC3015	PV1120	PV2110	PV3115	PV4112	PV4212	PV4312	PV8110	PV8210	PV8310
	CCGT060202R/L-C	0.2	●			●			●		●			●
	CCGT060204R/L-C	0.4	●			●			●		●			●
	CCGT09T302R/L-C	0.2	●			●			●		●			●
	CCGT09T304R/L-C	0.4	●			●			●		●			●
	CCGT09T320R/L-C	2.0	●			●			●		●			●
	CCGT030102R/L-S	0.2	●			●			●		●			●
	CCGT030101R/L-S	0.1	●			●			●		●			●
	CCGT040101R/L-S	0.1	●			●			●		●			●
	CCGT040102R/L-S	0.2	●			●			●		●			●
	CCGT040104R/L-S	0.4	●			●			●		●			●
	CCGT060202R/L-S1	0.2	●						●		●			●
	CCGT060204R/L-S1	0.4	●						●		●			●
	CCGT09T302R/L-S1	0.2	●						●		●			●
	CCGT09T304R/L-S1	0.4	●						●		●			●
	CCGT060201ER/L-1U	0.1	●			●			●		●			●
	CCGT060202FR/L-1U	0.2	●			●			●		●			●
	CCGT060204FR/L-1U	0.4	●			●			●		●			●
	CCGT060202ER/L-1U	0.2	●			●			●		●			●
	CCGT060204ER/L-1U	0.4	●			●			●		●			●
	CCGT09T302R/L-1U	0.2	●			●			●		●			●
	CCGT09T304R/L-1U	0.4	●			●			●		●			●
	CCGT09T301FR/L-1U	0.1	●			●			●		●			●
	CCGT09T301R/L-1U	0.1	●			●			●		●			●

### 3 Products Model

	Example Model	IC	S	D1	Example Model	IC	S	D1
	CC_0301_	3.50	1.40	1.90	CC_0602_	6.35	2.38	2.80
	CC_0401_	4.30	1.80	2.30	CC_09T3_	9.525	3.97	4.40

#### Positive-Moulded Series

Appearance	Part No.	Re	Cermet Grade						Carbide Grade					
			MC1020	MC2010	MC3015	PV1120	PV2110	PV3115	PV4112	PV4212	PV4312	PV8110	PV8210	PV8310
	CCGT09T302FR/L-1U	0.2	●			●	●	●	●		●	●		●
	CCGT09T304FR/L-1U	0.4	●			●	●	●	●		●	●		●
	CCGT060200R/L-H	0	●			●	●	●	●		●	●		●
	CCGT060202R/L-H	0.2	●			●	●	●	●		●	●		●
	CCGT060204R/L-H	0.4	●			●	●	●	●		●	●		●
	CCGT09T300R/L-H	0	●			●	●	●	●		●	●		●
	CCGT09T302R/L-H	0.2	●			●	●	●	●		●	●		●
	CCGT09T304R/L-H	0.4	●			●	●	●	●		●	●		●

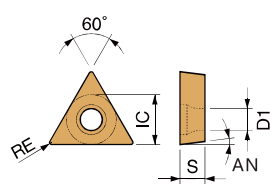
### 3 Products Model

	Example Model	IC	S	D1
	DC_0702_	6.35	2.38	2.80
	DC_11T3_	9.525	3.97	4.40

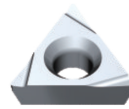
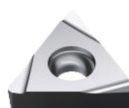
#### Positive- Grounded Series

Appearance	Part No.	Re	Cermet Grade					Carbide Grade					
			MC1020	MC2010	MC3015	PV1120	PV2110	PV3115	PV4112	PV4212	PV4312	PV8110	PV8210
	DCGT070202R/L-C	0.2	●			●			●		●		●
	DCGT070204R/L-C	0.4	●			●			●		●		●
	DCGT11T301R/L-C	0.1	●			●			●		●		●
	DCGT11T302R/L-C	0.2	●			●			●		●		●
	DCGT11T304R/L-C	0.4	●			●			●		●		●
	DCGT070201R/L-S1	0.1	●						●		●		●
	DCGT070202R/L-S1	0.2	●						●		●		●
	DCGT070204R/L-S1	0.4	●						●		●		●
	DCGT11T301R/L-S	0.1	●			●			●		●		●
	DCGT11T302R/L-S1	0.2	●						●		●		●
	DCGT11T304R/L-S1	0.4	●						●		●		●
	DCGT11T302R/L-H	0.2	●			●			●		●		●
	DCGT11T304R/L-H	0.4	●			●			●		●		●
	DCGT11T308R/L-H	0.8	●			●			●		●		●
	DCGT11T301FR/L-1U	0.1	●			●			●		●		●
	DCGT11T302FR/L-1U	0.2	●			●			●		●		●
	DCGT11T304FR/L-1U	0.4	●			●			●		●		●

### 3 Products Model

	Example Model	IC	S	D1	AN	Example Model	IC	S	D1	AN
	TP_1103_	6.35	3.18	3.30	11°	TB_0601_	3.97	1.59	2.30	5°
	TC_1102_	6.35	2.38	2.80	7°	TP_0802_	4.76	2.38	2.30	11°
	TP_16T3_	9.525	3.97	4.40	11°	TP_0902_	5.56	2.38	3.00	11°

#### Positive-Grounded Series

Appearance	Part No.	Re	Cermet Grade					Carbide Grade					
			MC1020	MC2010	MC3015	PV1120	PV2110	PV3115	PV4112	PV4212	PV4312	PV8110	PV8210
	TBGH060102R/L-S1	0.2	●						●	●			●
	TBGH060104R/L-S1	0.4	●						●	●			●
	TPGH080202R/L-S1	0.2	●						●	●			●
	TPGH080204R/L-S1	0.4	●						●	●			●
	TPGH080201R/L-S	0.1	●			●			●	●			●
	TPGH080208R/L-S	0.8	●			●			●	●			●
	TPGH090202R/L-S1	0.2	●						●	●			●
	TPGH090204R/L-S1	0.4	●						●	●			●
	TPGH090208R/L-S	0.8	●			●			●	●			●
	TPGH090201R/L-S	0.1	●			●			●	●			●
	TPGH110302R/L-S1	0.2	●						●	●			●
	TPGH110304R/L-S1	0.4	●						●	●			●
	TPGH110301R/L-S	0.1	●			●			●	●			●
	TPGH110308R/L-S	0.8	●			●			●	●			●
	TBGT060102R/L-S1	0.2	●						●	●			●
	TBGT060104R/L-S1	0.4	●						●	●			●
	TPGT080202R/L-S1	0.2	●						●	●			●
	TPGT080204R/L-S1	0.4	●						●	●			●
	TPGT090202R/L-S1	0.2	●						●	●			●
	TPGT090204R/L-S1	0.4	●						●	●			●
	TCGT110202R/L-S1	0.2	●						●	●			●
	TCGT110204R/L-S1	0.4	●						●	●			●

### 3 Products Model

	Example Model	IC	S	D1	AN	Example Model	IC	S	D1	AN
	TP_1103_	6.35	3.18	3.30	11°	TB_0601_	3.97	1.59	2.30	5°
	TC_1102_	6.35	2.38	2.80	7°	TP_0802_	4.76	2.38	2.30	11°
	TP_16T3_	9.525	3.97	4.40	11°	TP_0902_	5.56	2.38	3.00	11°

Positive-Grounded Series

Appearance	Part No.	Re	Cermet Grade						Carbide Grade					
			MC1020	MC2010	MC3015	PV1120	PV2110	PV3115	PV4112	PV4212	PV4312	PV8110	PV8210	PV8310
	TBGT060102R/L-4W	0.2		●			●			●	●		●	
	TBGT060104R/L-4W	0.4		●			●			●	●		●	
	TPGT080202R/L-4W	0.2		●			●			●	●		●	
	TPGT080204R/L-4W	0.4		●			●			●	●		●	
	TPGT090202R/L-4W	0.2		●			●			●	●		●	
	TPGT090204R/L-4W	0.4		●			●			●	●		●	
	TCGT110202R/L-4W	0.2		●			●			●	●		●	
	TCGT110204R/L-4W	0.4		●			●			●	●		●	
	TPGT110302R/L-4W	0.2		●			●			●	●		●	
	TPGT110304R/L-4W	0.4		●			●			●	●		●	
	TPGT110302R/L-S1	0.2	●						●	●		●		
	TPGT110304R/L-S1	0.4	●						●	●		●		
	TCGT110201R/L-S	0.1	●			●			●	●		●		
	TCGT110208R/L-S	0.8	●			●			●	●		●		
	TCGT110202R/L-C	0.2	●			●			●	●		●		
	TCGT110204R/L-C	0.4	●			●			●	●		●		
	TPGH110302R/L-2W15	0.2	●			●			●	●		●		
	TPGH110304R/L-2W15	0.4	●			●			●	●		●		

### 3 Products Model

	Example Model	IC	S	D1	AN
	VC_1103_	6.35	3.18	2.80	7°
	VC_1604_	9.525	4.76	4.40	7°
	VB_1103_	6.35	3.18	2.80	5°
	VB_1604_	9.525	4.76	4.40	5°

#### Positive-Grounded Series

Appearance	Part No.	Re	Cermet Grade					Carbide Grade					
			MC1020	MC2010	MC3015	PV1120	PV2110	PV3115	PV4112	PV4212	PV4312	PV8110	PV8210
	VCGT110301R/L-S	0.1	●			●			●		●		●
	VCGT110302R/L-S	0.2	●			●			●		●		●
	VCGT110304R/L-S	0.4	●			●			●		●		●
	VCGT110308R/L-S	0.8	●			●			●		●		●
	VBGT110301R/L-S1	0.1	●						●		●		●
	VBGT110302R/L-S1	0.2	●						●		●		●
	VBGT110304R/L-S1	0.4	●						●		●		●
	VBGT160402R/L-S1	0.2	●						●		●		●
	VBGT160404R/L-S1	0.4	●						●		●		●
	VBGT160408R/L-S1	0.8	●						●		●		●
	VCGT160402R/L-S1	0.2	●						●		●		●
	VCGT160404R/L-S1	0.4	●						●		●		●
	VCGT160408R/L-S1	0.8	●						●		●		●
	VBGT110301R/L-Y	0.1	●			●			●		●		●
	VBGT110302R/L-Y	0.2	●			●			●		●		●
	VBGT110304R/L-Y	0.4	●			●			●		●		●
	VBGT160402R/L-Y	0.2	●			●			●		●		●
	VBGT160404R/L-Y	0.4	●			●			●		●		●
	VBGT160408R/L-Y	0.8	●			●			●		●		●
	VBGT160402R/L-H	0.2	●			●			●		●		●
	VBGT160404R/L-H	0.4	●			●			●		●		●
	VBGT160408R/L-H	0.8	●			●			●		●		●



### 3 Products Model

	Example Model	IC	S	D1	AN
	VC_1103_	6.35	3.18	2.80	7°
	VC_1604_	9.525	4.76	4.40	7°
	VB_1103_	6.35	3.18	2.80	5°
	VB_1604_	9.525	4.76	4.40	5°

Positive-Grounded Series

Appearance	Part No.	Re	Cermet Grade					Carbide Grade					
			MC1020	MC2010	MC3015	PV1120	PV2110	PV3115	PV4112	PV4212	PV4312	PV8110	PV8210
	VBGT110302R/L-C	0.2	●			●			●		●		●
	VBGT110304R/L-C	0.4	●			●			●		●		●
	VCGT110301R/L-C	0.1	●			●			●		●		●
	VCGT110302R/L-C	0.2	●			●			●		●		●
	VCGT110304R/L-C	0.4	●			●			●		●		●
	VBGT160402R/L-C	0.2	●			●			●		●		●
	VBGT160404R/L-C	0.4	●			●			●		●		●
	VBGT160408R/L-C	0.8	●			●			●		●		●
	VCGT160402R/L-C	0.2	●			●			●		●		●
	VCGT160404R/L-C	0.4	●			●			●		●		●
	VCGT160408R/L-C	0.8	●			●			●		●		●
	VBGT110301FR/L-P1	0.1	●						●		●		●
	VBGT110302FR/L-P1	0.2	●						●		●		●
	VBGT110304FR/L-P1	0.4	●						●		●		●
	VBGT160402R/L-P	0.2	●			●			●		●		●
	VBGT160404R/L-P	0.4	●			●			●		●		●
	VBGT160408R/L-P	0.8	●			●			●		●		●
	VCGT160402R/L-P	0.2	●			●			●		●		●
	VCGT160404R/L-P	0.4	●			●			●		●		●
	VCGT160408R/L-P	0.8	●			●			●		●		●
	WBGT060102R/L-S1	0.2	●						●		●		●
	WBGT060104R/L-S1	0.4	●						●		●		●