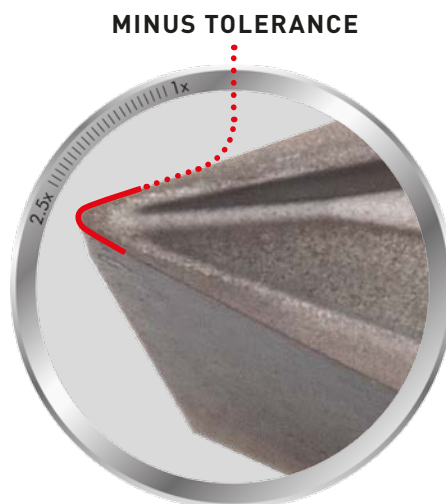


MS6015

PVD COATED CARBIDE GRADE
FOR SMALL PART MACHINING



DIAEDGE

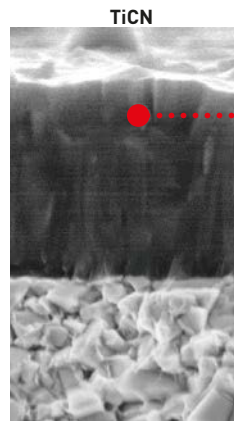
 **MITSUBISHI MATERIALS**

MS6015

PVD COATED CARBIDE GRADE FOR CARBON STEEL

A fine compatible collaboration of a special carbide substrate and a new PVD coating that greatly improves wear resistance.

	MS6015	Conventional
Coating	TiCN Multi-layer	TiAlN
Hardness (HV)	3000	2800
Friction Coefficient	Low	High
Base Material Hardness (HRA)	92.0	92.0
T.R.S (GPa)	2.0	2.0



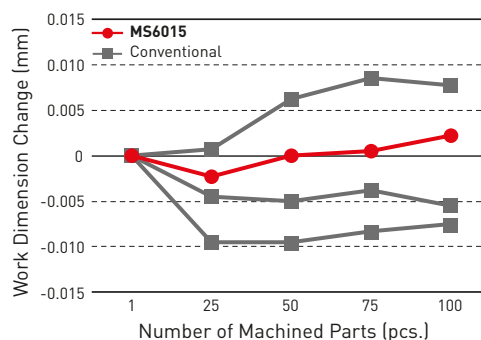
Superior wear and welding resistance and demonstrating the best possible results for carbon steel.

Excellent dimensional accuracy and surface finish.

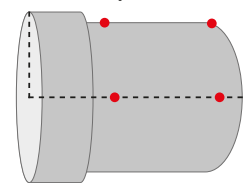
CUTTING PERFORMANCE

MS6015 has superior chip discharge welding of cutting edges compared with conventional products as well as minimal changes in exterior diameter dimensions.

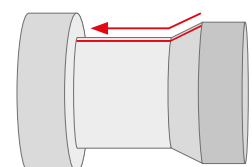
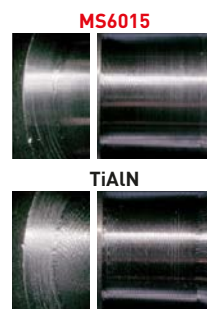
Insert	DCGT11T302
Work Material	DIN C22
Cutting Speed Vc (m/min)	100
Feed f (mm/rev)	0.05
Depth of Cut ap (mm)	1
Coolant	Wet Cutting



Average measurement of 4 points.



Insert	DCGT11T302
Work Material	Low carbon steel (JIS S20C)
Cutting Speed Vc (m/min)	100
Feed f (mm/rev)	0.04
Depth of Cut ap (mm)	2.5 mm



CORNER RADIUS INSERT WITH MINUS TOLERANCE

Order Number:	DCGT11T301 M R-SN	→ 01M ⌀ R0.08mm (R0.05 — R0.10mm)
	DCGT11T302 M R-SN	→ 02M ⌀ R0.18mm (R0.15 — R0.20mm)
	DCGT11T304 M -SMG	→ 04M ⌀ R0.38mm (R0.35 — R0.40mm)

Printing example:

DCGT11T301MR-SN
DCGT32.50.2MRSN
MS6015 R0.08



BREAKER SYSTEM

Application Tolerance	Breaker Name and Picture	Features	Cross Section Geometry
Light Cutting G	R-SS	Light cutting of automatic lathe machining A parallel chipbreaker. Excellent chip control at low feed rates.	Carbon Steel • Alloy Steel
	R-SN	Medium cutting of automatic lathe machining A parallel chipbreaker. Excellent chip control at low to medium feed rates.	Carbon Steel • Alloy Steel
Medium Cutting G	SMG	Medium cutting of automatic lathe machining 3D moulded chipbreaker provides good chip control. G class insert gives sharp cutting action, allowing high precision machining. Breaker geometry appropriate for copying and back turning.	Carbon Steel • Alloy Steel

RECOMMENDED CUTTING CONDITIONS

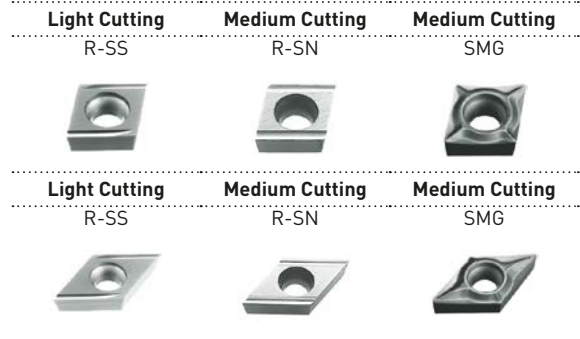
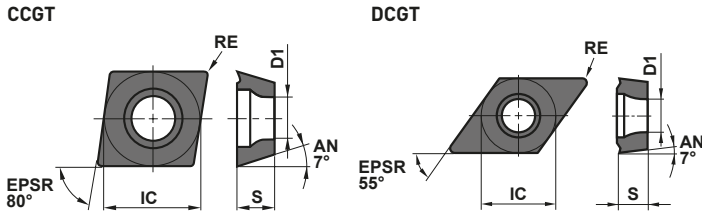
Work Material	Grade	Cutting Speed (m/min)	Feed (mm/rev)
P Carbon Steel · Alloy Steel	MS6015	100 (50—150)	0.08 (0.01—0.15)
Pure Iron · Free Cutting Steel		150 (50—250)	0.08 (0.01—0.15)

MS6015

7° POSITIVE INSERTS (WITH HOLE)

P

G Class
CCGT



Order Number	Cutting Area	MS6015	IC	S	RE *	D1
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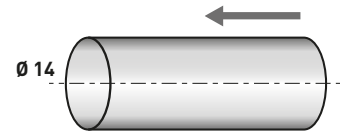
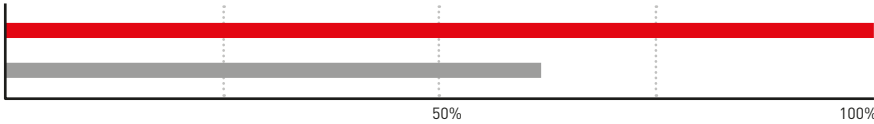
NEW	CCGT060201MR-SS	L	●	6.35	2.38	0.08	2.8
NEW	CCGT060202MR-SS	L	●	6.35	2.38	0.18	2.8
NEW	CCGT09T301MR-SS	L	●	9.525	3.97	0.08	4.4
NEW	CCGT09T302MR-SS	L	●	9.525	3.97	0.18	4.4
NEW	CCGT09T304MR-SS	L	●	9.525	3.97	0.38	4.4
NEW	CCGT060201MR-SN	M	●	6.35	2.38	0.08	2.8
NEW	CCGT060202MR-SN	M	●	6.35	2.38	0.18	2.8
NEW	CCGT09T301MR-SN	M	●	9.525	3.97	0.08	4.4
NEW	CCGT09T302MR-SN	M	●	9.525	3.97	0.18	4.4
NEW	CCGT09T304MR-SN	M	●	9.525	3.97	0.38	4.4
NEW	CCGT060201M-SMG	M	●	6.35	2.38	0.08	2.8
NEW	CCGT060202M-SMG	M	●	6.35	2.38	0.18	2.8
NEW	CCGT060204M-SMG	M	●	6.35	2.38	0.38	2.8
NEW	CCGT09T301M-SMG	M	●	9.525	3.97	0.08	4.4
NEW	CCGT09T302M-SMG	M	●	9.525	3.97	0.18	4.4
NEW	CCGT09T304M-SMG	M	●	9.525	3.97	0.38	4.4
NEW	DCGT070201MR-SS	L	●	6.35	2.38	0.08	2.8
NEW	DCGT070202MR-SS	L	●	6.35	2.38	0.18	2.8
NEW	DCGT11T301MR-SS	L	●	9.525	3.97	0.08	4.4
NEW	DCGT11T302MR-SS	L	●	9.525	3.97	0.18	4.4
NEW	DCGT11T304MR-SS	L	●	9.525	3.97	0.38	4.4
NEW	DCGT070201MR-SN	M	●	6.35	2.38	0.08	2.8
NEW	DCGT070202MR-SN	M	●	6.35	2.38	0.18	2.8
NEW	DCGT11T301MR-SN	M	●	9.525	3.97	0.08	4.4
NEW	DCGT11T302MR-SN	M	●	9.525	3.97	0.18	4.4
NEW	DCGT11T304MR-SN	M	●	9.525	3.97	0.38	4.4
NEW	DCGT070201M-SMG	M	●	6.35	2.38	0.08	2.8
NEW	DCGT070202M-SMG	M	●	6.35	2.38	0.18	2.8
NEW	DCGT070204M-SMG	M	●	6.35	2.38	0.38	2.8
NEW	DCGT11T301M-SMG	M	●	9.525	3.97	0.08	4.4
NEW	DCGT11T302M-SMG	M	●	9.525	3.97	0.18	4.4
NEW	DCGT11T304M-SMG	M	●	9.525	3.97	0.38	4.4

* RE – Corner radius size is smaller than standard



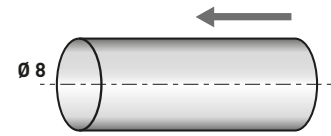
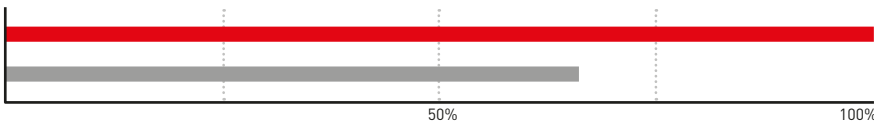
APPLICATION EXAMPLES

Insert	DCGT11T302M-SMG (MS6015)
Workpiece Material	Pure Iron (JIS SUR)
Cutting mode	External, Continuous
Cutting Speed Vc (m/min)	197 (4500min ⁻¹)
Feed f (mm/rev)	0.1
Depth of Cut ap (mm)	0.1
Coolant	Wet cutting (oil)
Result	Number of work pieces: 500



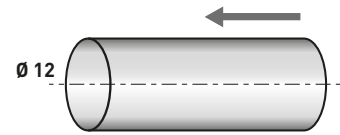
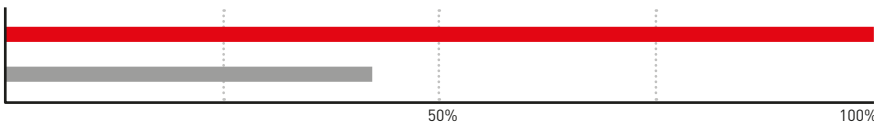
An excellent finished surface and 1.4x longer life compared with conventional products. Stable SMG breaker and chip discharge management.

Insert	DCGT11T301MR-SN (MS6015)
Workpiece Material	Free Cutting Steels (JIS SUM24L)
Cutting mode	External, Continuous
Cutting Speed Vc (m/min)	125 (5000min ⁻¹)
Feed f (mm/rev)	0.05
Depth of Cut ap (mm)	0.3
Coolant	Wet cutting (oil)
Result	Number of work pieces: 3000



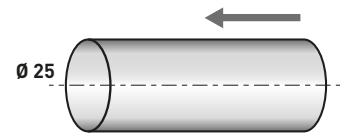
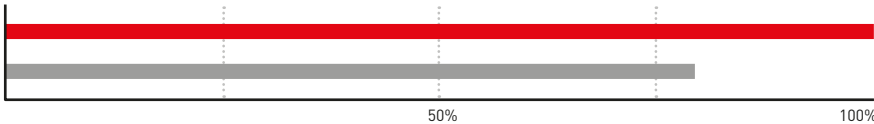
MS6015 has minimal welding and maintains secure dimensional accuracy.

Insert	DCGT11T302MR-SN (MS6015)
Workpiece Material	Carbon Steel (DIN Ck45)
Cutting mode	External, Continuous
Cutting Speed Vc (m/min)	113 (3000min ⁻¹)
Feed f (mm/rev)	0.03
Depth of Cut ap (mm)	1.0
Coolant	Wet cutting (oil)
Result	Number of work pieces: 1100



MS6015 has superior wear resistance and achieves 2x longer life compared with conventional products.

Insert	DCGT11T302M-SMG (MS6015)
Workpiece Material	Mild Steel (DIN Ck15)
Cutting mode	External, Continuous
Cutting Speed Vc (m/min)	100 (1300min ⁻¹)
Feed f (mm/rev)	0.12
Depth of Cut ap (mm)	1.3
Coolant	Wet cutting (oil)
Result	Number of work pieces: 500



MS6015 has superior welding resistance and achieves 1.3x longer life compared with conventional products.

MEMO

A series of horizontal dashed lines for writing.

MEMO

A series of horizontal dashed lines for writing.

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