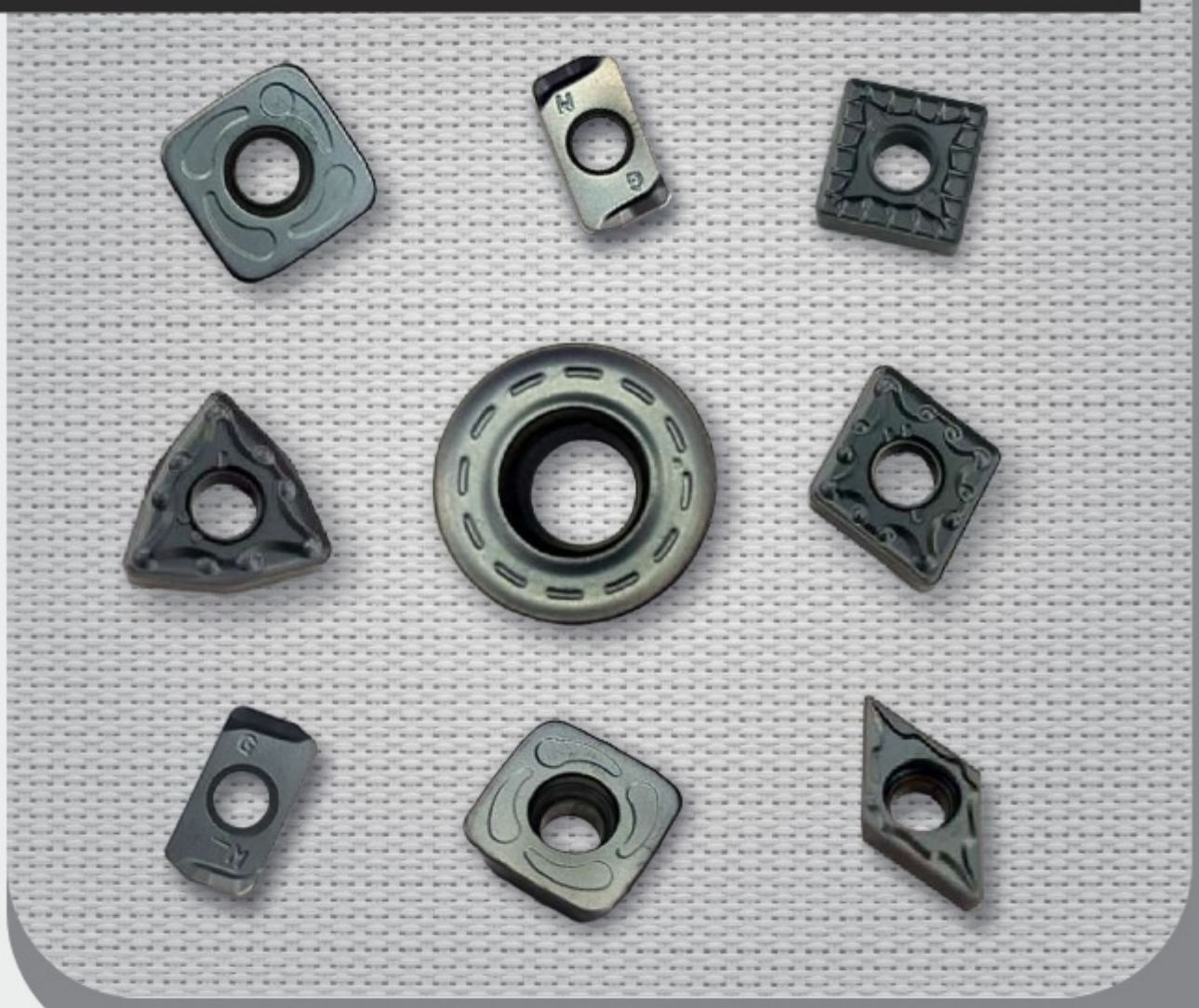
XCUT® TECHNOLOGIES

Innovative solutions
Indian values

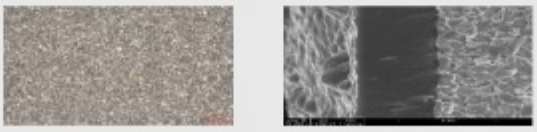
XT1010

New PVD Grade For Hard Part & Superalloy Machining



XT1010 Overview

- Low cobalt, ultra-fine wear-resistant and heat-resistant grain structure.
- PVD high alumina coating to improve oxidation and wear resistance.
- Suitable for milling of hardened materials.
- Suitable for continuous semi-finish to finish turning of heat-resistant alloys and hard materials.

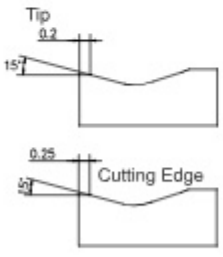
ISO	Electron Microscopy Image	Grade
H10-20 S05-S15		XT1010

Industry Application

- Die & Mould
- Valve Industry
- General Engineering
- Automobile Industry
- Aerospace

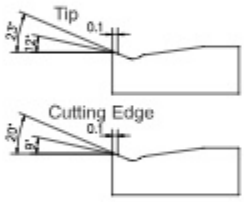
Geometry Details

GF
M/S-level single sided chipbreaker, suitable for boring and OD application finishing of difficult to machine materials.

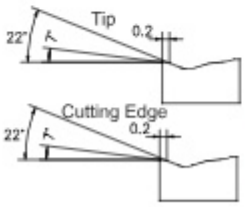


GM
M/S-level single sided chipbreaker, suitable for semi finishing of boring and OD of materials.

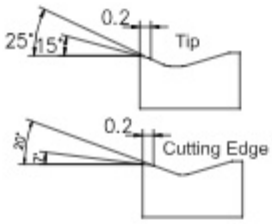
Geometry Details



BF
M/S-level double-sided chipbreaker, small edge width double positive rake angle, sharp blade edge, low cutting resistance, special edge inclination design can obtain high - quality machined surface.



CR
Good cutting edge strength, general processing chip breaker with a wide range of applications.



SM
M/S-level double- sided chipbreaker. Adopting the double positive rake angle combines the sharpness and strength of the insert; the cutting resistance is small and the wider chipbreaker ensures enough space for chip deformation,reducing groove wear.

Chipbreaker's Chart

Geometry	ap = (mm)	fn = (mm / rev)
GF	0.4 - 1.5	0.05 - 0.20
CR	0.5 - 3.0	0.10 - 0.30
SM	0.8 - 3.0	0.10 - 0.35
BF	0.5 - 2.5	0.08 - 0.30
GM	0.5 - 3.0	0.08 - 0.25

Parameters

Material	Grade	Recommended Cutting Speed
Hard Materials	XT1010	30-70 m/min
Super Alloys	XT1010	30-90 m/min

Turning

• Positive Inserts

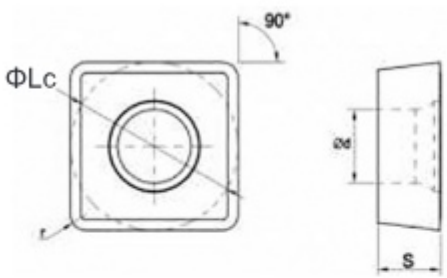
Insert	Grade	GF	GM
CCMT	060204	●	
	060208		●
	09T304	●	
	09T308		●
DCMT	11T304		●
	11T308		●
TCMT	110204	●	
	110208		●
VBMT	160404	●	
	160408		●

• Negative Inserts

Insert	Grade	BF	CR	SM
CNMG	120404		●	
	120408		●	
	120412		●	
DNMG	150604			●
	150608			●
SNMG	120408			●
TNMG	160404	●		●
	160408	●	o	o
	160412		●	
WNMG	080408		●	o
	080412		●	o

● = Stockable / o = Non Stockable

Drilling

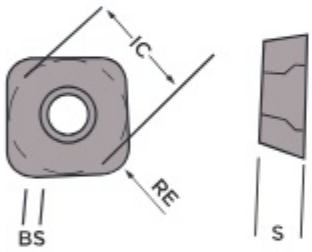


Description	ΦLc	S	r	Φd	Feed (mm / tooth)		XT1010
					MIN	MAX	
SPMG050204-GM	5	2.38	0.4	2.25	0.04	0.12	o
SPMG060204-GM	6	2.38	0.4	2.61	0.04	0.12	●
SPMG07T308-GM	7.94	3.97	0.8	2.85	0.05	0.15	●
SPMG090408-GM	9.8	4.3	0.8	4.05	0.06	0.15	●
SPMG110408-GM	11.5	4.8	0.8	4.45	0.06	0.18	o
SPMG140512-GM	14.3	5.2	1.2	5.75	0.08	0.2	o

● = Stockable / o = Non Stockable

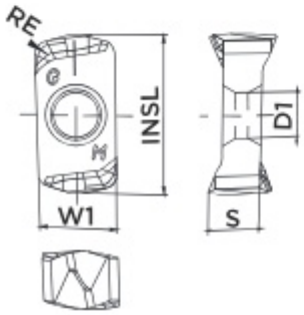
Milling

Hi-Feed



Description	Grade	RE	BS	IC	S	FZ	AP max	Stock
SDKW130420 - HF	XT1010	2.0	1.45	12.7	4.7	0.3 - 1.20	0.3-2	●

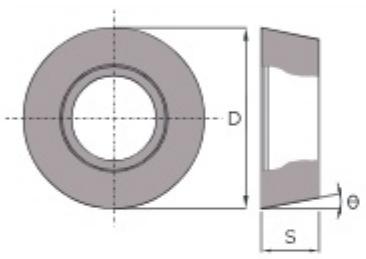
● = Stockable / o = Non Stockable



Description	Grade	Dimensions					Feed (mm / tooth)		AP (mm)		Stock
		W1	S	D1	INSL	RE	MIN	MAX	MIN	MAX	
XOGU110310-GM	XT1010	6.2	3.96	3.45	11.9	1	0.3	1	0.2	1	●

● = Stockable / o = Non Stockable

ISO Milling



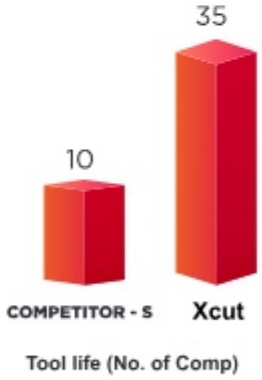
Description	Grade	Dimensions					Feed (mm / tooth)		Depth Of Cut (MM)		Stock
		L	D	S	Ø	R	MIN	MAX	MIN	MAX	
RPMT1204MO - XR	XT1010	-	12	4.76	11	-	0.14	0.74	0.3	3	o

● = Stockable / o = Non Stockable

Trial Reports

- Turning

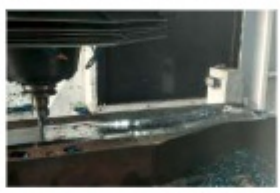
PRODUCT DESCRIPTION	CNMG120408CR-XT1010	
MATERIAL & HARDNESS	FG260 & 50-55 HRC	
PARAMETERS	COMPETITOR (S)	XCUT
Depth of Cut	0.2	0.2
Vc : m/min	60	60
Fz : mm/tooth	0.12	0.12
CPC Reduced by 82% ↓		

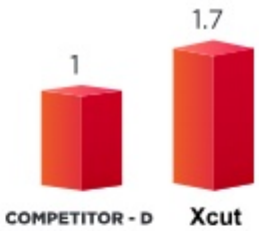


Tool life (No. of Comp)

- Hi-Feed

PRODUCT DESCRIPTION	SDKW130420-HF-XT1010	
MATERIAL & HARDNESS	Forging Die, 50 TO 55HRC	
PARAMETERS	COMPETITOR (D)	XCUT
Depth of Cut	0.5 mm	0.5 mm
Vc : m/min	62	86
Fz : mm/tooth	1200/0.75	1200/0.54
CPC reduced by 40% ↓		





Tool life (No. of Comp)