

Expanded
Inserts

New Cermet Grade for Turning

NX3035

Tough cermet grade can operate reliably in severe conditions and maintain excellent component surface finishes.

- Outstanding performance provides high resistance to fracture, thermal shock and wear.
- Special alloy substrate binder allows a secure wet cutting performance.



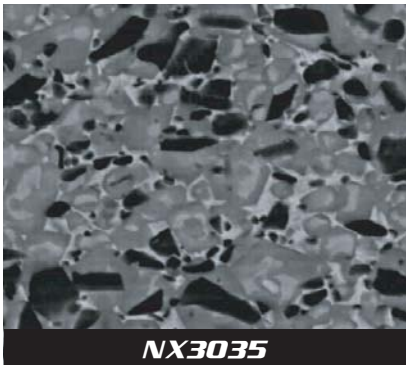
New Cermet Grade for Turning

NX3035

Features

The most advanced, all round cermet grade.
High thermal shock resistance, stable cutting and longer tool life

Cermet with a special alloy binder



● Highly stable cutting edge performance even during wet cutting

The special alloy binder with increased thermal conductivity has dramatically improved the thermal shock resistance properties. This gives a highly stable cutting edge performance even when wet cutting where conventional cermet grades usually exhibit an unstable and unpredictable performance.

● Increased stability and improved surface finishes

The special alloy binder has improved the binding of the hard substrate particles. Abnormal damage such as thermal cracks and micro-chipping are prevented and the superior surface finishes specific to cermet grades can be maintained.

Application range and recommended cutting conditions

Application Range

ISO	Application Range
P01	
P10	
P20	
P30	

Please use NX2525 grade for dry cutting only or with non-water soluble coolant.

Recommended Cutting Conditions

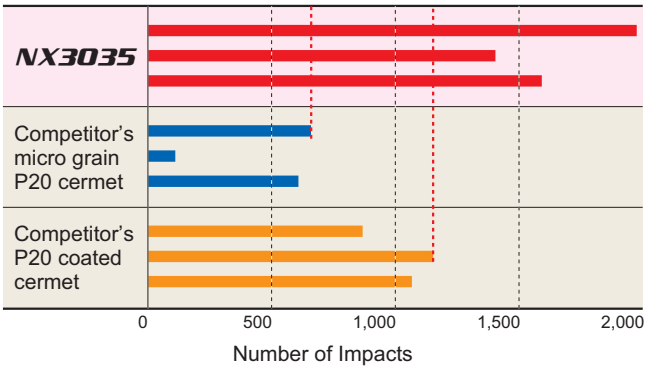
	Work Material	Hardness	Cutting Mode	Cutting Speed (m/min)
P	Mild Steel	≤180HB	General Cutting	300 (240—340)
	Carbon Steel Alloy Steel	≥180HB	General Cutting	230 (190—260)

Cutting Performance

Fracture and Thermal Shock Resistance

Wet interrupted cutting of alloy steel (JIS SCM440)

NX3035 is less likely to fracture, allowing stable cutting.



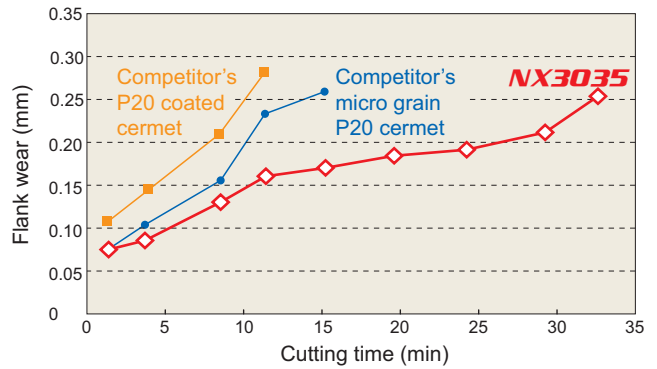
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Insert : CNMG120408- Coolant: W.S.O.
 Tool : PCLNR2525M12 Interrupted Cutting
 Cutting speed : 200m/min
 Feed : 0.2mm/rev
 Depth of cut : 1.5mm

Wear Resistance

Continuous cutting of carbon steel (JIS S45C)

NX3035 displays exceptional wear resistance.



<Cutting conditions>

Insert : CNMG120408- Coolant: W.S.O.
 Tool : PCLNR2525M12 External continuous cutting
 Cutting speed : 250m/min
 Feed : 0.15mm/rev
 Depth of cut : 1.0mm

Chipbreaker Applications

Negative Inserts For Steel

● Mild Steel

Material **P**

1st Recommendation Feed

FY Breaker
SY Breaker

	Breaker	Features	Cross Section Geometry
1st Recommendation Chipbreaker	FY 	First recommendation for finishing mild steel Double sided chipbreaker. Effectively controls adhesive chips. Suitable for mild steel finishing.	15° Flank 0.2 Nose
	SY 	First recommendation for light cutting of mild steel Double sided chipbreaker. Effectively controls adhesive chips. Suitable for mild steel light cutting.	10° Flank 0.2 Nose
Alternative Chipbreaker	MS 	Alternative chipbreaker for medium cutting of mild steel Double sided chipbreaker. The sharp edge gives best performance. Standard style, general purpose chipbreaker.	25° Flank 15° 0.5 Nose

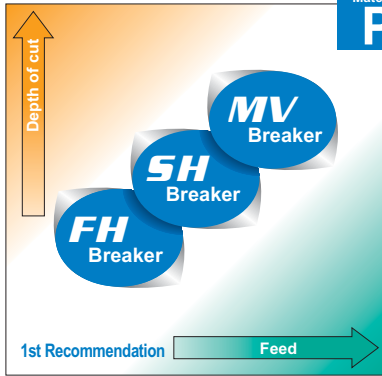
NX3035

Chipbreaker Applications

Negative Inserts For Steel

● Carbon Steel / Alloy Steel

Material
P

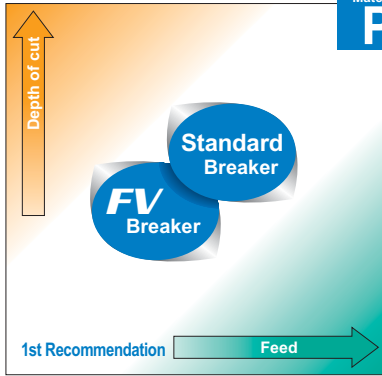


	Breaker	Features	Cross Section Geometry
1st Recommendation Chipbreaker	FH 	First recommendation for finishing general steel and alloy steel Double sided chipbreaker. Stable chip control even at small depths of cut.	
	SH 	First recommendation for light cutting of general steel and alloy steel Double sided chipbreaker. Can be used at low depths of cut at high feed rates. The curved edge allows smooth chip discharge. Recommended for workpieces in the 160–250HB range.	
	MV 	First recommendation for medium cutting of general steel and alloy steel Double sided chipbreaker. Suitable for medium to light cutting. Breaker geometry appropriate for copying and back turning. Positive land provides sharp cutting action.	
Alternative Chipbreaker	R/L-1M 	Alternative chipbreaker for light cutting of general steel and alloy steel Double sided chipbreaker. Parallel chipbreaker controls chip flow. Suitable for finish-light cutting.	
	C 	Alternative chipbreaker for light cutting of general steel and alloy steel Double sided chipbreaker. Suitable for light cutting. The curved edge allows smooth chip discharge.	
	SA 	Alternative chipbreaker for light cutting of general steel and alloy steel Double sided chipbreaker. Superior chip control at small depths of cut. Covers copying and back turning with wavy edge. Recommended for workpieces in the 200–300HB range.	
	SW 	Wiper insert for light cutting of general steel and alloy steel Double sided chipbreaker. The wiper allows up to two times higher feed. Wiper design for increased productivity and improved surface finish.	
	MA 	Alternative chipbreaker for medium cutting of general steel and alloy steel Double sided chipbreaker. Suitable for a wide range of application areas. Positive land provides sharp cutting action.	
	Standard 	Alternative chipbreaker for medium cutting of general steel and alloy steel Double sided chipbreaker. Flat land offers high edge strength. Standard style, general purpose chipbreaker.	
	R/L-2M 	Alternative chipbreaker for medium cutting of general steel and alloy steel Double sided chipbreaker. Parallel chipbreaker controls chip flow. Suitable for light to medium cutting.	

7° Positive Inserts For Steel

Carbon Steel / Alloy Steel

Material
P

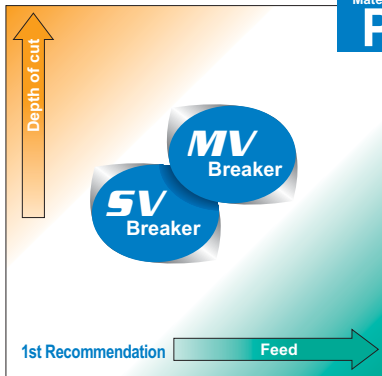


	Breaker	Features	Cross Section Geometry
1st Recommendation Chipbreaker	FV 	First recommendation for finishing general steel and alloy steel Suitable for low depths of cut and low feed rates. Sharp cutting edge and low resistance design achieves excellent cutting performance.	8° Flank 18° Nose
	Standard 	First recommendation for medium cutting of general steel and alloy steel Balance of edge strength and sharpness due to a combination of a flat land and large rake angle.	18° 0.1 Flank 18° 0.1 Nose
Alternative Chipbreaker	SV 	Alternative chipbreaker for light cutting of general steel, alloy steel and mild steel Large rake angle provides sharp cutting action. A peninsular dot ensures chip control at depths of cut under 1mm.	8° Flank 18° Nose
	MV 	Alternative chipbreaker for light cutting of general steel, alloy steel and mild steel A positive insert and the large rake angle achieve sharp cutting edge performance. The double breakers and round shape in the rake face achieve a wide range of chip discharge.	20° 0.2 Flank 18° 0.2 Nose

11° Positive Inserts For Steel

Carbon Steel / Alloy Steel

Material
P

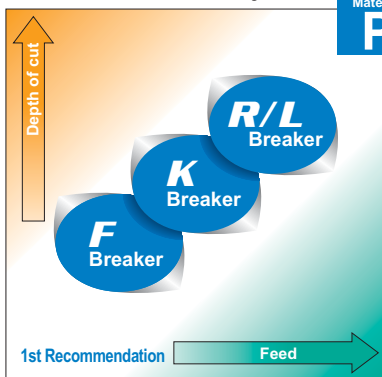


	Breaker	Features	Cross Section Geometry
1st Recommendation Chipbreaker	SV 	First recommendation for light cutting of general steel, alloy steel and mild steel Large rake angle provides sharp cutting action. A peninsular dot ensures chip control at depths of cut under 1mm.	8° Flank 18° Nose
	MV 	First recommendation for medium cutting of general steel, alloy steel and mild steel A positive insert and large rake angle achieves sharp cutting edge performance. Double breakers in the rake face achieve a wide range of chip discharge.	20° 0.2 Flank 18° 0.2 Nose

Angular And Parallel Chip Breakers (Negative Inserts)

Carbon Steel / Alloy Steel

Material
P


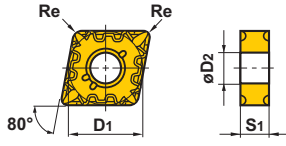

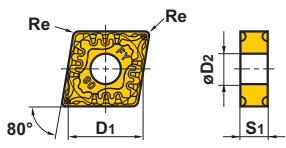

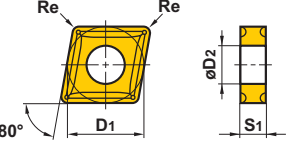

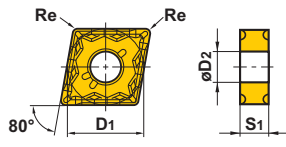

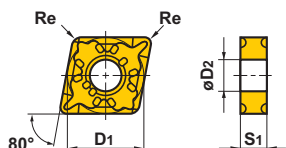

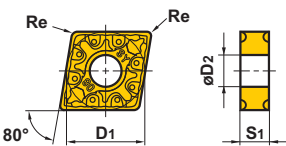

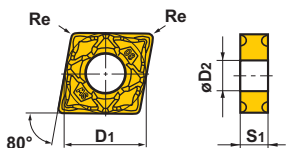

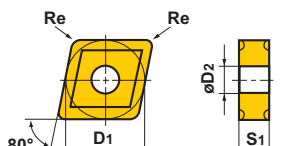



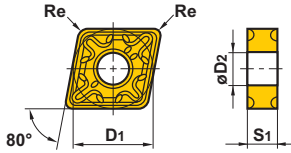

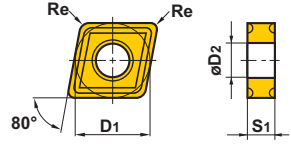

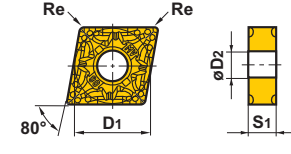

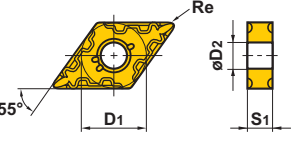

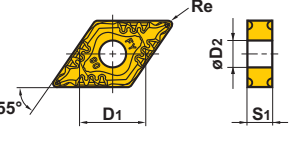

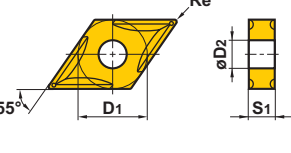

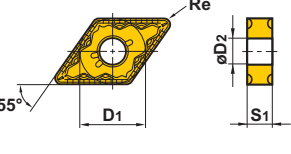

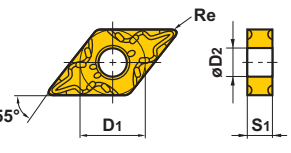
	Breaker	Features	Cross Section Geometry
1st Recommendation Chipbreaker	R/L-F 	First recommendation for finishing Double sided chipbreaker. Lead chipbreaker controls chip flow. The sharp edge produces a good surface finish.	14° Flank
	R/L-K 	First recommendation for light cutting Double sided chipbreaker. Parallel chipbreaker. Excellent chip control at low to medium feed rates.	14° 0.25 Flank
	R/L 	First recommendation for medium cutting Double sided chipbreaker. Parallel chipbreaker. Good chip control at medium feed rates.	14° 0.25 Flank

NX3035

Inserts

● Negative Inserts (With hole)


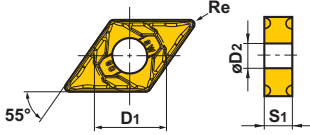

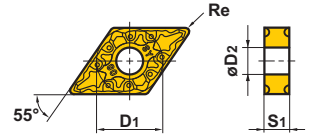

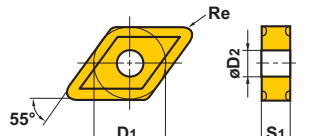

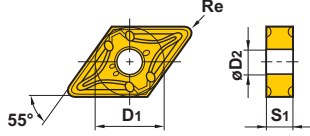

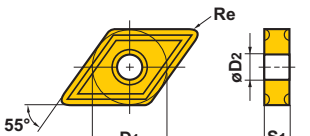

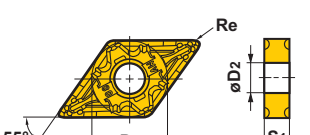

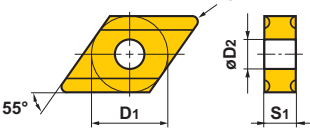
Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			<i>NX3035</i>	D1	S1	Re	D2	
FH Breaker  Finish Cutting	CNMG120404-FH	M	●	12.7	4.76	0.4	5.16	
	120408-FH	M	●	12.7	4.76	0.8	5.16	
FY Breaker  Finish Cutting	CNMG120404-FY	M	●	12.7	4.76	0.4	5.16	
	120408-FY	M	●	12.7	4.76	0.8	5.16	
C Breaker  Light Cutting	CNMG120404-C	M	●	12.7	4.76	0.4	5.16	
	120408-C	M	●	12.7	4.76	0.8	5.16	
SA Breaker  Light Cutting	CNMG120404-SA	M	●	12.7	4.76	0.4	5.16	
	120408-SA	M	●	12.7	4.76	0.8	5.16	
	120412-SA	M	●	12.7	4.76	1.2	5.16	
SH Breaker  Light Cutting	CNMG120404-SH	M	●	12.7	4.76	0.4	5.16	
	120408-SH	M	●	12.7	4.76	0.8	5.16	
	120412-SH	M	●	12.7	4.76	1.2	5.16	
SY Breaker  Light Cutting	CNMG120404-SY	M	●	12.7	4.76	0.4	5.16	
	120408-SY	M	●	12.7	4.76	0.8	5.16	
SW Breaker  Light Cutting (Wiper)	CNMG120404-SW	M	●	12.7	4.76	0.4	5.16	
	120408-SW	M	●	12.7	4.76	0.8	5.16	
	120412-SW	M	●	12.7	4.76	1.2	5.16	
Standard Breaker  Medium Cutting	CNMG120404	M	●	12.7	4.76	0.4	5.16	
	120408	M	●	12.7	4.76	0.8	5.16	
	120412	M	●	12.7	4.76	1.2	5.16	

Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			<i>NX3035</i>	D1	S1	Re	D2	
MA Breaker  Medium Cutting	CNMG120404-MA	M	●	12.7	4.76	0.4	5.16	
	120408-MA	M	●	12.7	4.76	0.8	5.16	
	120412-MA	M	●	12.7	4.76	1.2	5.16	
MS Breaker  Medium Cutting	CNMG120404-MS	M	●	12.7	4.76	0.4	5.16	
	120408-MS	M	●	12.7	4.76	0.8	5.16	
	120412-MS	M	●	12.7	4.76	1.2	5.16	
MV Breaker  Medium Cutting	CNMG120404-MV	M	●	12.7	4.76	0.4	5.16	
	120408-MV	M	●	12.7	4.76	0.8	5.16	
	120412-MV	M	●	12.7	4.76	1.2	5.16	
FH Breaker  Finish Cutting	DNMG150404-FH	M	●	12.7	4.76	0.4	5.16	
	150408-FH	M	●	12.7	4.76	0.8	5.16	
	150604-FH	M	●	12.7	6.35	0.4	5.16	
	150608-FH	M	●	12.7	6.35	0.8	5.16	
FY Breaker  Finish Cutting	DNMG150404-FY	M	●	12.7	4.76	0.4	5.16	
	150408-FY	M	●	12.7	4.76	0.8	5.16	
	150604-FY	M	●	12.7	6.35	0.4	5.16	
	150608-FY	M	●	12.7	6.35	0.8	5.16	
C Breaker  Light Cutting	DNMG150404-C	M	●	12.7	4.76	0.4	5.16	
	150408-C	M	●	12.7	4.76	0.8	5.16	
	150604-C	M	●	12.7	6.35	0.4	5.16	
	150608-C	M	●	12.7	6.35	0.8	5.16	
SA Breaker  Light Cutting	DNMG150404-SA	M	●	12.7	4.76	0.4	5.16	
	150408-SA	M	●	12.7	4.76	0.8	5.16	
	150412-SA	M	●	12.7	4.76	1.2	5.16	
	150604-SA	M	●	12.7	6.35	0.4	5.16	
	150608-SA	M	●	12.7	6.35	0.8	5.16	
	150612-SA	M	●	12.7	6.35	1.2	5.16	
SH Breaker  Light Cutting	DNMG150404-SH	M	●	12.7	4.76	0.4	5.16	
	150408-SH	M	●	12.7	4.76	0.8	5.16	
	150412-SH	M	●	12.7	4.76	1.2	5.16	
	150604-SH	M	●	12.7	6.35	0.4	5.16	
	150608-SH	M	●	12.7	6.35	0.8	5.16	
	150612-SH	M	●	12.7	6.35	1.2	5.16	


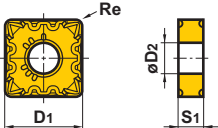

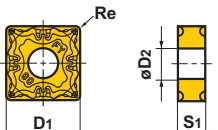

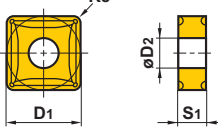

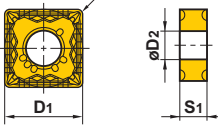

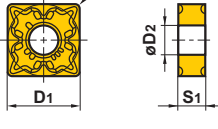

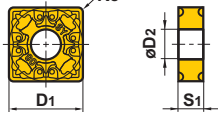

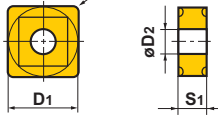

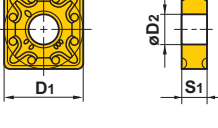
NX3035

Inserts

● Negative Inserts (With hole)

Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			NX3035	D1	S1	Re	D2	
SW Breaker  Light Cutting (Wiper)	DNMX150404-SW	M	●	12.7	4.76	0.4	5.16	
	150408-SW	M	●	12.7	4.76	0.8	5.16	
	150412-SW	M	●	12.7	4.76	1.2	5.16	
	150604-SW	M	●	12.7	6.35	0.4	5.16	
	150608-SW	M	●	12.7	6.35	0.8	5.16	
	150612-SW	M	●	12.7	6.35	1.2	5.16	
SY Breaker  Light Cutting	DNMG150404-SY	M	●	12.7	4.76	0.4	5.16	
	150408-SY	M	●	12.7	4.76	0.8	5.16	
	150604-SY	M	●	12.7	6.35	0.4	5.16	
	150608-SY	M	●	12.7	6.35	0.8	5.16	
Standard Breaker  Medium Cutting	DNMG150404	M	●	12.7	4.76	0.4	5.16	
	150408	M	●	12.7	4.76	0.8	5.16	
	150412	M	●	12.7	4.76	1.2	5.16	
	150604	M	●	12.7	6.35	0.4	5.16	
	150608	M	●	12.7	6.35	0.8	5.16	
	150612	M	●	12.7	6.35	1.2	5.16	
MA Breaker  Medium Cutting	DNMG150404-MA	M	●	12.7	4.76	0.4	5.16	
	150408-MA	M	●	12.7	4.76	0.8	5.16	
	150412-MA	M	●	12.7	4.76	1.2	5.16	
	150604-MA	M	●	12.7	6.35	0.4	5.16	
	150608-MA	M	●	12.7	6.35	0.8	5.16	
	150612-MA	M	●	12.7	6.35	1.2	5.16	
MS Breaker  Medium Cutting	DNMG150404-MS	M	●	12.7	4.76	0.4	5.16	
	150408-MS	M	●	12.7	4.76	0.8	5.16	
	150412-MS	M	●	12.7	4.76	1.2	5.16	
	150604-MS	M	●	12.7	6.35	0.4	5.16	
	150608-MS	M	●	12.7	6.35	0.8	5.16	
	150612-MS	M	●	12.7	6.35	1.2	5.16	
MV Breaker  Medium Cutting	DNMG150404-MV	M	●	12.7	4.76	0.4	5.16	
	150408-MV	M	●	12.7	4.76	0.8	5.16	
	150412-MV	M	●	12.7	4.76	1.2	5.16	
	150604-MV	M	●	12.7	6.35	0.4	5.16	
	150608-MV	M	●	12.7	6.35	0.8	5.16	
	150612-MV	M	●	12.7	6.35	1.2	5.16	
NEW R/L Breaker  Medium Cutting	DNGG150404R	G	●	12.7	4.76	0.4	5.16	
	150404L	G	●	12.7	4.76	0.4	5.16	
	150408R	G	●	12.7	4.76	0.8	5.16	
	150408L	G	●	12.7	4.76	0.8	5.16	
	150604R	G	●	12.7	6.35	0.4	5.16	
	150604L	G	●	12.7	6.35	0.4	5.16	
	150608R	G	●	12.7	6.35	0.8	5.16	
	150608L	G	●	12.7	6.35	0.8	5.16	


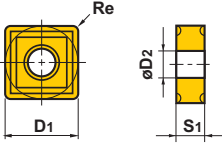

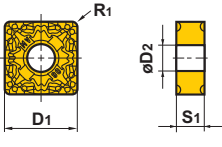

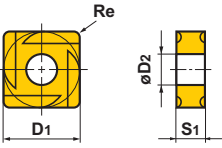

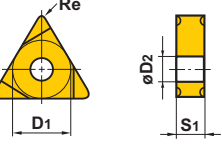

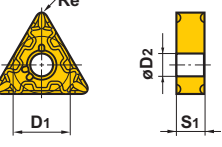

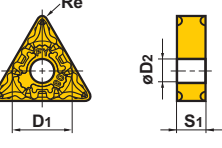

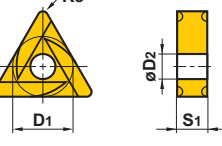
Right hand insert shown.


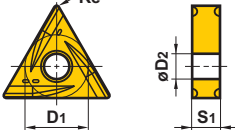

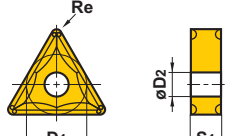

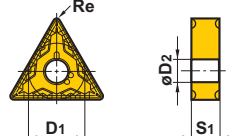

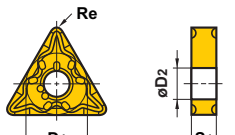

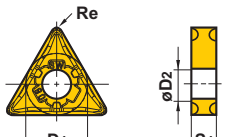

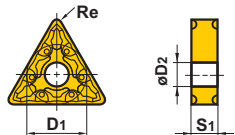

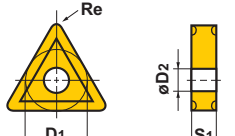

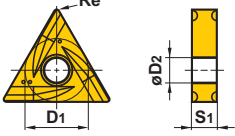
Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			<i>NX3035</i>	D1	S1	Re	D2	
FH Breaker  Finish Cutting	SNMG120404-FH	M	●	12.7	4.76	0.4	5.16	
	120408-FH	M	●	12.7	4.76	0.8	5.16	
FY Breaker  Finish Cutting	SNMG120408-FY	M	●	12.7	4.76	0.8	5.16	
C Breaker  Light Cutting	SNMG120408-C	M	●	12.7	4.76	0.8	5.16	
SA Breaker  Light Cutting	SNMG120404-SA	M	●	12.7	4.76	0.4	5.16	
	120408-SA	M	●	12.7	4.76	0.8	5.16	
	120412-SA	M	●	12.7	4.76	1.2	5.16	
SH Breaker  Light Cutting	SNMG120404-SH	M	●	12.7	4.76	0.4	5.16	
	120408-SH	M	●	12.7	4.76	0.8	5.16	
	120412-SH	M	●	12.7	4.76	1.2	5.16	
SY Breaker  Light Cutting	SNMG120408-SY	M	●	12.7	4.76	0.8	5.16	
Standard Breaker  Medium Cutting	SNMG090304	M	●	9.525	3.18	0.4	3.81	
	090308	M	●	9.525	3.18	0.8	3.81	
	120404	M	●	12.7	4.76	0.4	5.16	
	120408	M	●	12.7	4.76	0.8	5.16	
	120412	M	●	12.7	4.76	1.2	5.16	
	120416	M	●	12.7	4.76	1.6	5.16	
MA Breaker  Medium Cutting	SNMG120404-MA	M	●	12.7	4.76	0.4	5.16	
	120408-MA	M	●	12.7	4.76	0.8	5.16	
	120412-MA	M	●	12.7	4.76	1.2	5.16	

NX3035

Inserts

● Negative Inserts (With hole)


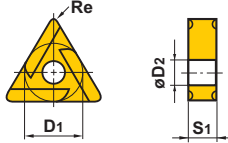

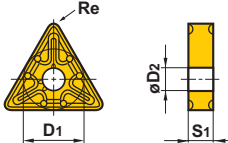

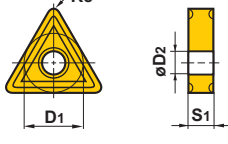

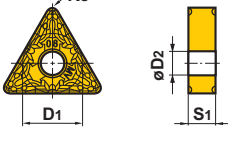
Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			NX3035	D1	S1	Re	D2	
MS Breaker  Medium Cutting	SNMG120404-MS	M	●	12.7	4.76	0.4	5.16	
	120408-MS	M	●	12.7	4.76	0.8	5.16	
	120412-MS	M	●	12.7	4.76	1.2	5.16	
MV Breaker  Medium Cutting	SNMG120404-MV	M	●	12.7	4.76	0.4	5.16	
	120408-MV	M	●	12.7	4.76	0.8	5.16	
	120412-MV	M	●	12.7	4.76	1.2	5.16	
NEW R/L Breaker  Medium Cutting	SNGG090304R	G	●	9.525	3.18	0.4	3.81	 <p style="text-align: right;">Right hand insert shown.</p>
	090304L	G	●	9.525	3.18	0.4	3.81	
	090308R	G	●	9.525	3.18	0.8	3.81	
	090308L	G	●	9.525	3.18	0.8	3.81	
	120404R	G	●	12.7	4.76	0.4	5.16	
	120404L	G	●	12.7	4.76	0.4	5.16	
	120408R	G	●	12.7	4.76	0.8	5.16	
	120408L	G	●	12.7	4.76	0.8	5.16	
R/L-F Breaker  Finish Cutting	TNGG160402R-F	G	●	9.525	4.76	0.2	3.81	 <p style="text-align: right;">Right hand insert shown.</p>
	160402L-F	G	●	9.525	4.76	0.2	3.81	
	160404R-F	G	●	9.525	4.76	0.4	3.81	
	160404L-F	G	●	9.525	4.76	0.4	3.81	
	160408R-F	G	●	9.525	4.76	0.8	3.81	
FH Breaker  Finish Cutting	TNMG160404-FH	M	●	9.525	4.76	0.4	3.81	
	160408-FH	M	●	9.525	4.76	0.8	3.81	
FY Breaker  Finish Cutting	TNMG160404-FY	M	●	9.525	4.76	0.4	3.81	
	160408-FY	M	●	9.525	4.76	0.8	3.81	
R/L-K Breaker  Light Cutting	TNGG160402R-K	G	●	9.525	4.76	0.2	3.81	 <p style="text-align: right;">Right hand insert shown.</p>
	160402L-K	G	●	9.525	4.76	0.2	3.81	
	160404R-K	G	●	9.525	4.76	0.4	3.81	
	160404L-K	G	●	9.525	4.76	0.4	3.81	
	160408R-K	G	●	9.525	4.76	0.8	3.81	
160408L-K	G	●	9.525	4.76	0.8	3.81		


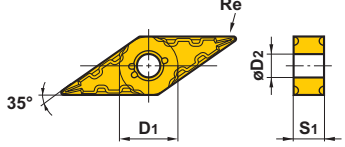

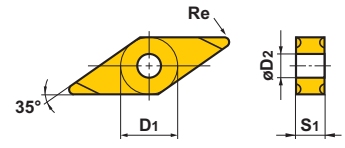

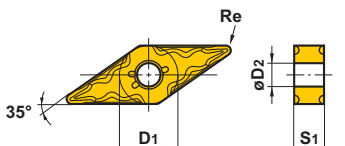

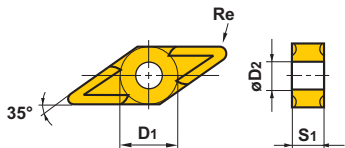

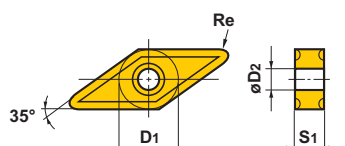

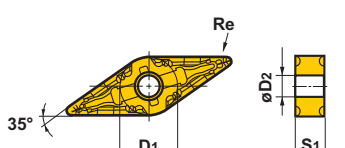

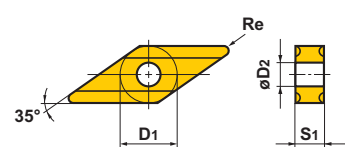
Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			<i>NX3035</i>	D1	S1	Re	D2	
R/L-1M Breaker  Light Cutting	TNMG160404R-1M	M	●	9.525	4.76	0.4	3.81	 Right hand insert shown.
	160404L-1M	M	●	9.525	4.76	0.4	3.81	
	160408R-1M	M	●	9.525	4.76	0.8	3.81	
	160408L-1M	M	●	9.525	4.76	0.8	3.81	
C Breaker  Light Cutting	TNMG160404-C	M	●	9.525	4.76	0.4	3.81	
	160408-C	M	●	9.525	4.76	0.8	3.81	
	220404-C	M	●	12.7	4.76	0.4	5.16	
	220408-C	M	●	12.7	4.76	0.8	5.16	
SA Breaker  Light Cutting	TNMG160404-SA	M	●	9.525	4.76	0.4	3.81	
	160408-SA	M	●	9.525	4.76	0.8	3.81	
	160412-SA	M	●	9.525	4.76	1.2	3.81	
SH Breaker  Light Cutting	TNMG160404-SH	M	●	9.525	4.76	0.4	3.81	
	160408-SH	M	●	9.525	4.76	0.8	3.81	
	160412-SH	M	●	9.525	4.76	1.2	3.81	
SW Breaker  Light Cutting (Wiper)	TNMX160404-SW	M	●	9.525	4.76	0.4	3.81	
	160408-SW	M	●	9.525	4.76	0.8	3.81	
SY Breaker  Light Cutting	TNMG160404-SY	M	●	9.525	4.76	0.4	3.81	
	160408-SY	M	●	9.525	4.76	0.8	3.81	
Standard Breaker  Medium Cutting	TNMG160404	M	●	9.525	4.76	0.4	3.81	
	160408	M	●	9.525	4.76	0.8	3.81	
	160412	M	●	9.525	4.76	1.2	3.81	
	160416	M	●	9.525	4.76	1.6	3.81	
	220404	M	●	12.7	4.76	0.4	5.16	
	220408	M	●	12.7	4.76	0.8	5.16	
R/L-2M Breaker  Medium Cutting	TNMG160404R-2M	M	●	9.525	4.76	0.4	3.81	 Right hand insert shown.
	160404L-2M	M	●	9.525	4.76	0.4	3.81	
	160408R-2M	M	●	9.525	4.76	0.8	3.81	
	160408L-2M	M	●	9.525	4.76	0.8	3.81	

NX3035

Inserts


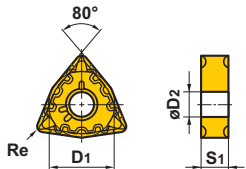

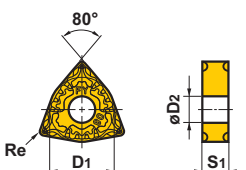
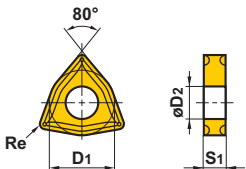

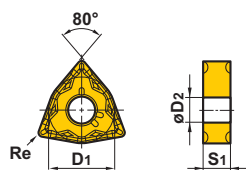

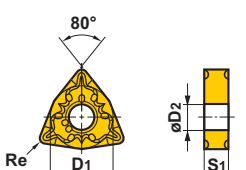

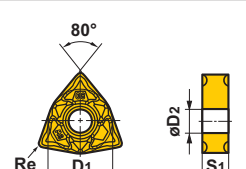

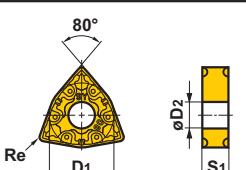

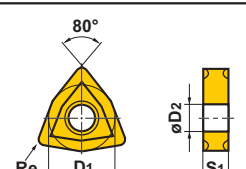
● Negative Inserts (With hole)

Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			<i>NX3035</i>	D1	S1	Re	D2	
 R/L Breaker	TNGG110302R	G	●	6.35	3.18	0.2	2.26	 Right hand insert shown.
	110302L	G	●	6.35	3.18	0.2	2.26	
	110304R	G	●	6.35	3.18	0.4	2.26	
	110304L	G	●	6.35	3.18	0.4	2.26	
	110308R	G	●	6.35	3.18	0.8	2.26	
	110308L	G	●	6.35	3.18	0.8	2.26	
	160304R	G	●	9.525	3.18	0.4	3.81	
	160304L	G	●	9.525	3.18	0.4	3.81	
	160308R	G	●	9.525	3.18	0.8	3.81	
	160308L	G	●	9.525	3.18	0.8	3.81	
	160402R	G	●	9.525	4.76	0.2	3.81	
	160402L	G	●	9.525	4.76	0.2	3.81	
	160404R	G	●	9.525	4.76	0.4	3.81	
	160404L	G	●	9.525	4.76	0.4	3.81	
	160408R	G	●	9.525	4.76	0.8	3.81	
	160408L	G	●	9.525	4.76	0.8	3.81	
	160412R	G	●	9.525	4.76	1.2	3.81	
	160412L	G	●	9.525	4.76	1.2	3.81	
	220404R	G	●	12.7	4.76	0.4	5.16	
	220404L	G	●	12.7	4.76	0.4	5.16	
220408R	G	●	12.7	4.76	0.8	5.16		
220408L	G	●	12.7	4.76	0.8	5.16		
Medium Cutting								
 MA Breaker	TNMG160404-MA	M	●	9.525	4.76	0.4	3.81	
	160408-MA	M	●	9.525	4.76	0.8	3.81	
	160412-MA	M	●	9.525	4.76	1.2	3.81	
Medium Cutting								
 MS Breaker	TNMG160404-MS	M	●	9.525	4.76	0.4	3.81	
	160408-MS	M	●	9.525	4.76	0.8	3.81	
	160412-MS	M	●	9.525	4.76	1.2	3.81	
Medium Cutting								
 MV Breaker	TNMG160404-MV	M	●	9.525	4.76	0.4	3.81	
	160408-MV	M	●	9.525	4.76	0.8	3.81	
	160412-MV	M	●	9.525	4.76	1.2	3.81	
Medium Cutting								


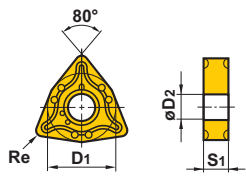

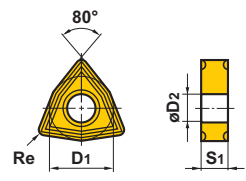

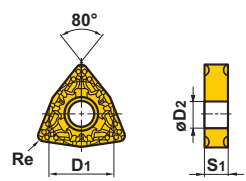
Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			<i>NX3035</i>	D1	S1	Re	D2	
FH Breaker  Finish Cutting	VNMG160404-FH	M	●	9.525	4.76	0.4	3.81	
	160408-FH	M	●	9.525	4.76	0.8	3.81	
R/L-F Breaker  Finish Cutting	VNGG160402R-F	G	●	9.525	4.76	0.2	3.81	 Right hand insert shown.
	160402L-F	G	●	9.525	4.76	0.2	3.81	
	160404R-F	G	●	9.525	4.76	0.4	3.81	
	160404L-F	G	●	9.525	4.76	0.4	3.81	
SH Breaker  Light Cutting	VNMG160404-SH	M	●	9.525	4.76	0.4	3.81	
	160408-SH	M	●	9.525	4.76	0.8	3.81	
Standard Breaker  Medium Cutting	VNMG160404	M	●	9.525	4.76	0.4	3.81	
	160408	M	●	9.525	4.76	0.8	3.81	
	160412	M	●	9.525	4.76	1.2	3.81	
MS Breaker  Medium Cutting	VNMG160404-MS	M	●	9.525	4.76	0.4	3.81	
	160408-MS	M	●	9.525	4.76	0.8	3.81	
MV Breaker  Medium Cutting	VNMG160404-MV	M	●	9.525	4.76	0.4	3.81	
	160408-MV	M	●	9.525	4.76	0.8	3.81	
NEW R/L Breaker  Medium Cutting	VNGG160404R	G	●	9.525	4.76	0.4	3.81	 Right hand insert shown.
	160404L	G	●	9.525	4.76	0.4	3.81	

Inserts


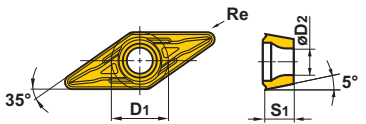

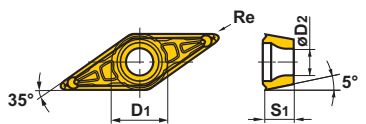

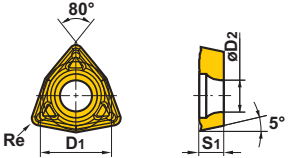
● Negative Inserts (With hole)

Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			<i>NX3035</i>	D1	S1	Re	D2	
FH Breaker  Finish Cutting	WNMG080404-FH	M	●	12.7	4.76	0.4	5.16	
	080408-FH	M	●	12.7	4.76	0.8	5.16	
FY Breaker  Finish Cutting	WNMG080404-FY	M	●	12.7	4.76	0.4	5.16	
	080408-FY	M	●	12.7	4.76	0.8	5.16	
C Breaker  Light Cutting	WNMG080404-C	M	●	12.7	4.76	0.4	5.16	
	080408-C	M	●	12.7	4.76	0.8	5.16	
SA Breaker  Light Cutting	WNMG080404-SA	M	●	12.7	4.76	0.4	5.16	
	080408-SA	M	●	12.7	4.76	0.8	5.16	
	080412-SA	M	●	12.7	4.76	1.2	5.16	
SH Breaker  Light Cutting	WNMG080404-SH	M	●	12.7	4.76	0.4	5.16	
	080408-SH	M	●	12.7	4.76	0.8	5.16	
	080412-SH	M	●	12.7	4.76	1.2	5.16	
SW Breaker  Light Cutting (Wiper)	WNMG080404-SW	M	●	12.7	4.76	0.4	5.16	
	080408-SW	M	●	12.7	4.76	0.8	5.16	
	080412-SW	M	●	12.7	4.76	1.2	5.16	
SY Breaker  Light Cutting	WNMG080404-SY	M	●	12.7	4.76	0.4	5.16	
	080408-SY	M	●	12.7	4.76	0.8	5.16	
Standard Breaker  Medium Cutting	WNMG080404	M	●	12.7	4.76	0.4	5.16	
	080408	M	●	12.7	4.76	0.8	5.16	
	080412	M	●	12.7	4.76	1.2	5.16	

● Negative Inserts (With hole)

Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			<i>NX3035</i>	D1	S1	Re	D2	
MA Breaker  Medium Cutting	WNMG080404-MA	M	●	12.7	4.76	0.4	5.16	
	080408-MA	M	●	12.7	4.76	0.8	5.16	
	080412-MA	M	●	12.7	4.76	1.2	5.16	
MS Breaker  Medium Cutting	WNMG080404-MS	M	●	12.7	4.76	0.4	5.16	
	080408-MS	M	●	12.7	4.76	0.8	5.16	
	080412-MS	M	●	12.7	4.76	1.2	5.16	
MV Breaker  Medium Cutting	WNMG080404-MV	M	●	12.7	4.76	0.4	5.16	
	080408-MV	M	●	12.7	4.76	0.8	5.16	
	080412-MV	M	●	12.7	4.76	1.2	5.16	

● 5° Positive Inserts (With hole)


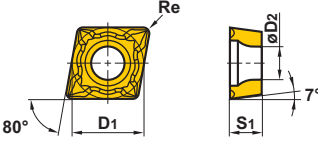

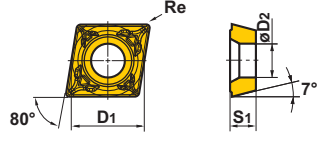

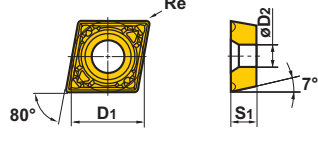

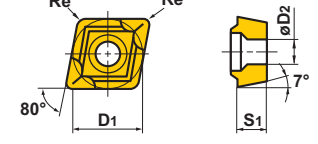

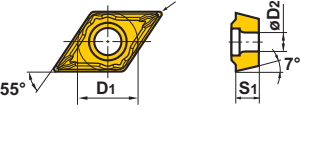

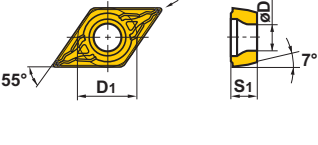

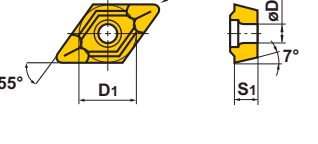
Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			<i>NX3035</i>	D1	S1	Re	D2	
SV Breaker  Light Cutting	VBMT110304-SV	M	●	6.35	3.18	0.4	2.85	
	110308-SV	M	●	6.35	3.18	0.8	2.85	
	160404-SV	M	●	9.525	4.76	0.4	4.43	
	160408-SV	M	●	9.525	4.76	0.8	4.43	
MV Breaker  Medium Cutting	VBMT110304-MV	M	●	6.35	3.18	0.4	2.85	
	110308-MV	M	●	6.35	3.18	0.8	2.85	
	160404-MV	M	●	9.525	4.76	0.4	4.43	
	160408-MV	M	●	9.525	4.76	0.8	4.43	
R/L-MV Breaker  Medium Cutting	WBMTL30202R-MV	M	●	4.76	2.38	0.2	2.3	
	L30202L-MV	M	●	4.76	2.38	0.2	2.3	
	L30204R-MV	M	●	4.76	2.38	0.4	2.3	
	L30204L-MV	M	●	4.76	2.38	0.4	2.3	


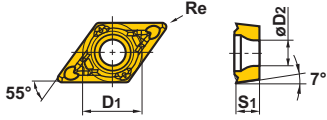

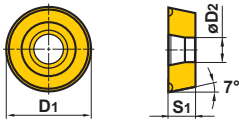



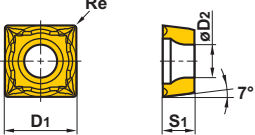

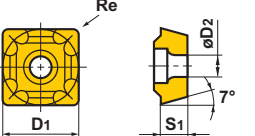

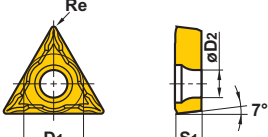

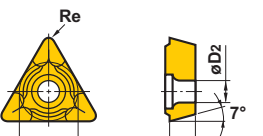
Right hand insert shown.

NX3035

Inserts

● 7° Positive Inserts (With hole)


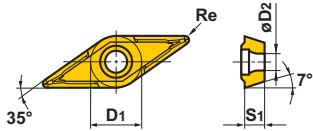

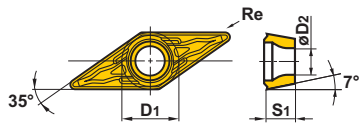

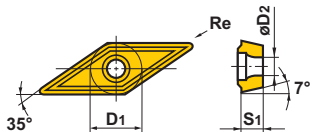

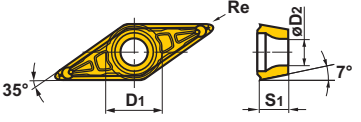

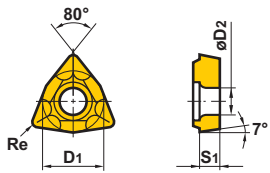
Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			NX3035	D1	S1	Re	D2	
FV Breaker 	CCMT060202-FV	M	●	6.35	2.38	0.2	2.8	
	060204-FV	M	●	6.35	2.38	0.4	2.8	
	09T302-FV	M	●	9.525	3.97	0.2	4.4	
	09T304-FV	M	●	9.525	3.97	0.4	4.4	
	09T308-FV	M	●	9.525	3.97	0.8	4.4	
Finish Cutting								
SV Breaker 	CCMH060202-SV	M	●	6.35	2.38	0.2	2.8	
	060204-SV	M	●	6.35	2.38	0.4	2.8	
Light Cutting								
MV Breaker 	CCMH060202-MV	M	●	6.35	2.38	0.2	2.8	
	060204-MV	M	●	6.35	2.38	0.4	2.8	
Medium Cutting								
Standard Breaker 	CCMT060202	M	●	6.35	2.38	0.2	2.8	
	060204	M	●	6.35	2.38	0.4	2.8	
	080304	M	●	7.94	3.18	0.4	3.4	
	09T302	M	●	9.525	3.97	0.2	4.4	
	09T304	M	●	9.525	3.97	0.4	4.4	
	09T308	M	●	9.525	3.97	0.8	4.4	
	120404	M	●	12.7	4.76	0.4	5.5	
	120408	M	●	12.7	4.76	0.8	5.5	
120412	M	●	12.7	4.76	1.2	5.5		
Medium Cutting								
FV Breaker 	DCMT070202-FV	M	●	6.35	2.38	0.2	2.8	
	070204-FV	M	●	6.35	2.38	0.4	2.8	
	11T304-FV	M	●	9.525	3.97	0.4	4.4	
	11T308-FV	M	●	9.525	3.97	0.8	4.4	
Finish Cutting								
SV Breaker 	DCMT070202-SV	M	●	6.35	2.38	0.2	2.8	
	070204-SV	M	●	6.35	2.38	0.4	2.8	
	070208-SV	M	●	6.35	2.38	0.8	2.8	
	11T302-SV	M	●	9.525	3.97	0.2	4.4	
	11T304-SV	M	●	9.525	3.97	0.4	4.4	
Light Cutting								
Standard Breaker 	DCMT070202	M	●	6.35	2.38	0.2	2.8	
	070204	M	●	6.35	2.38	0.4	2.8	
	070208	M	●	6.35	2.38	0.8	2.8	
	11T302	M	●	9.525	3.97	0.2	4.4	
	11T304	M	●	9.525	3.97	0.4	4.4	
	11T308	M	●	9.525	3.97	0.8	4.4	
	150404	M	●	12.7	4.76	0.4	5.5	
150408	M	●	12.7	4.76	0.8	5.5		
Medium Cutting								

Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			<i>NX3035</i>	D1	S1	Re	D2	
MV Breaker  Medium Cutting	DCMT070202-MV	M	●	6.35	2.38	0.2	2.8	
	070204-MV	M	●	6.35	2.38	0.4	2.8	
	070208-MV	M	●	6.35	2.38	0.8	2.8	
	11T302-MV	M	●	9.525	3.97	0.2	4.4	
	11T304-MV	M	●	9.525	3.97	0.4	4.4	
	11T308-MV	M	●	9.525	3.97	0.8	4.4	
Standard Breaker  Medium Cutting	RCMT0602M0	M	●	6	2.38	—	2.8	
	0803M0	M	●	8	3.18	—	3.4	
Standard Breaker  Medium Cutting	RCMX1003M0	M	●	10	3.18	—	3.6	
	1204M0	M	●	12	4.76	—	4.2	
FV Breaker  Finish Cutting	SCMT09T304-FV	M	●	9.525	3.97	0.4	4.4	
Standard Breaker  Medium Cutting	SCMT09T304	M	●	9.525	3.97	0.4	4.4	
	09T308	M	●	9.525	3.97	0.8	4.4	
	120404	M	●	12.7	4.76	0.4	5.5	
	120408	M	●	12.7	4.76	0.8	5.5	
FV Breaker  Finish Cutting	TCMT110204-FV	M	●	6.35	2.38	0.4	2.8	
	16T304-FV	M	●	9.525	3.97	0.4	4.4	
Standard Breaker  Medium Cutting	TCMT080204	M	●	4.76	2.38	0.4	2.3	
	090204	M	●	5.56	2.38	0.4	2.5	
	110202	M	●	6.35	2.38	0.2	2.8	
	110204	M	●	6.35	2.38	0.4	2.8	
	130302	M	●	7.94	3.18	0.2	3.4	
	130304	M	●	7.94	3.18	0.4	3.4	
	16T304	M	●	9.525	3.97	0.4	4.4	
16T308	M	●	9.525	3.97	0.8	4.4		


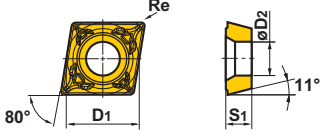

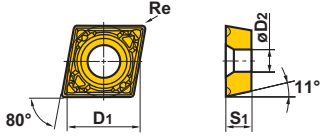
NX3035

Inserts


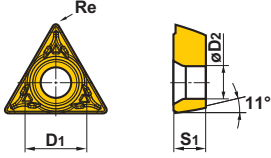

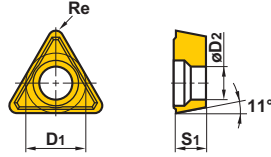

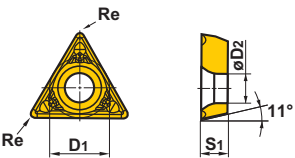

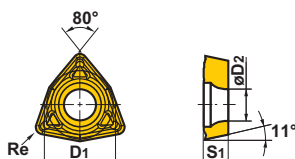
● 7° Positive Inserts (With hole)

Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			NX3035	D1	S1	Re	D2	
FV Breaker  Finish Cutting	VCMT160404-FV	M	●	9.525	4.76	0.4	4.4	
	160408-FV	M	●	9.525	4.76	0.8	4.4	
SV Breaker  Light Cutting	VCMT080202-SV	M	●	4.76	2.38	0.2	2.9	
	080204-SV	M	●	4.76	2.38	0.4	2.9	
Standard Breaker  Medium Cutting	VCMT110304	M	●	6.35	3.18	0.4	2.8	
	160404	M	●	9.525	4.76	0.4	4.4	
	160408	M	●	9.525	4.76	0.8	4.4	
	160412	M	●	9.525	4.76	1.2	4.4	
MV Breaker  Medium Cutting	VCMT080202-MV	M	●	4.76	2.38	0.2	2.9	
	080204-MV	M	●	4.76	2.38	0.4	2.9	
Standard Breaker  Medium Cutting	WCMT020102	M	●	3.97	1.59	0.2	2.3	
	020104	M	●	3.97	1.59	0.4	2.3	
	L30202	M	●	4.76	2.38	0.2	2.3	
	L30204	M	●	4.76	2.38	0.4	2.3	
	040202	M	●	6.35	2.38	0.2	2.8	
	040204	M	●	6.35	2.38	0.4	2.8	
	06T304	M	●	9.525	3.97	0.4	4.4	
	06T308	M	●	9.525	3.97	0.8	4.4	


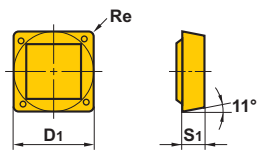

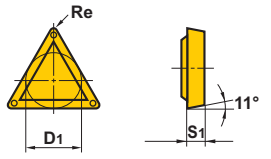
● 11° Positive Inserts (With hole)

Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			NX3035	D1	S1	Re	D2	
SV Breaker  Light Cutting	CPMH080202-SV	M	●	7.94	2.38	0.2	3.5	
	080204-SV	M	●	7.94	2.38	0.4	3.5	
	090302-SV	M	●	9.525	3.18	0.2	4.5	
	090304-SV	M	●	9.525	3.18	0.4	4.5	
	090308-SV	M	●	9.525	3.18	0.8	4.5	
MV Breaker  Medium Cutting	CPMH080204-MV	M	●	7.94	2.38	0.4	3.5	
	080208-MV	M	●	7.94	2.38	0.8	3.5	
	090304-MV	M	●	9.525	3.18	0.4	4.5	
	090308-MV	M	●	9.525	3.18	0.8	4.5	

● 11° Positive Inserts (With hole)

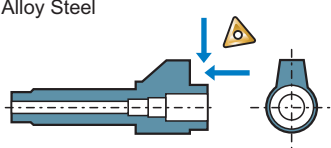
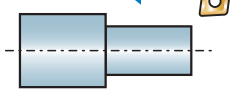
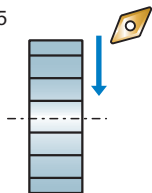
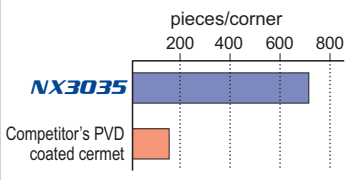
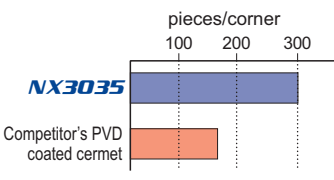
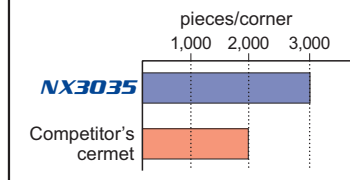
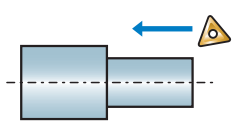
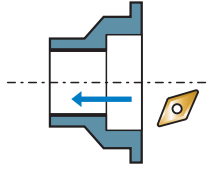
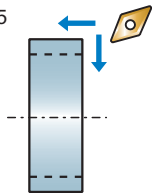
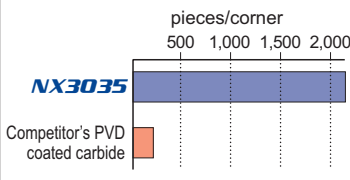
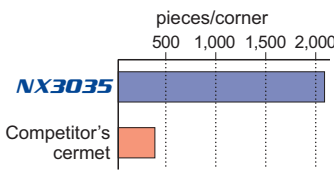
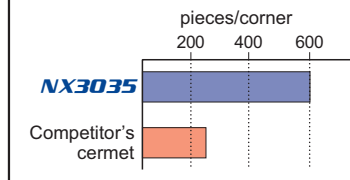
Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			<i>NX3035</i>	D1	S1	Re	D2	
SV Breaker  Light Cutting	TPMH080202-SV	M	●	4.76	2.38	0.2	2.4	
	080204-SV	M	●	4.76	2.38	0.4	2.4	
	090202-SV	M	●	5.56	2.38	0.2	2.9	
	090204-SV	M	●	5.56	2.38	0.4	2.9	
	110302-SV	M	●	6.35	3.18	0.2	3.4	
	110304-SV	M	●	6.35	3.18	0.4	3.4	
	110308-SV	M	●	6.35	3.18	0.8	3.4	
	160302-SV	M	●	9.525	3.18	0.2	4.4	
	160304-SV	M	●	9.525	3.18	0.4	4.4	
160308-SV	M	●	9.525	3.18	0.8	4.4		
Standard Breaker  Medium Cutting	TPMX110304	M	●	6.35	3.18	0.4	3.5	
	110308	M	●	6.35	3.18	0.8	3.5	
MV Breaker  Medium Cutting	TPMH080202-MV	M	●	4.76	2.38	0.2	2.4	
	080204-MV	M	●	4.76	2.38	0.4	2.4	
	090202-MV	M	●	5.56	2.38	0.2	2.9	
	090204-MV	M	●	5.56	2.38	0.4	2.9	
	090208-MV	M	●	5.56	2.38	0.8	2.9	
	110302-MV	M	●	6.35	3.18	0.2	3.4	
	110304-MV	M	●	6.35	3.18	0.4	3.4	
	110308-MV	M	●	6.35	3.18	0.8	3.4	
	160304-MV	M	●	9.525	3.18	0.4	4.4	
160308-MV	M	●	9.525	3.18	0.8	4.4		
MV Breaker  Medium Cutting	WPMT040202-MV	M	●	6.35	2.38	0.2	2.8	
	040204-MV	M	●	6.35	2.38	0.4	2.8	
	060304-MV	M	●	9.525	3.18	0.4	4.4	
	060308-MV	M	●	9.525	3.18	0.8	4.4	

● 11° Positive Inserts (Without hole)

Shape	Order Number	Class	Stock	Dimensions (mm)				Geometry
			<i>NX3035</i>	D1	S1	Re	D2	
Standard Breaker  Light to Medium Cutting	SPMR090304	M	●	9.525	3.18	0.4	—	
	090308	M	●	9.525	3.18	0.8	—	
	120304	M	●	12.7	3.18	0.4	—	
	120308	M	●	12.7	3.18	0.8	—	
Standard Breaker  Light to Medium Cutting	TPMR090202	M	●	5.56	2.38	0.2	—	
	090204	M	●	5.56	2.38	0.4	—	
	090208	M	●	5.56	2.38	0.8	—	
	110302	M	●	6.35	3.18	0.2	—	
	110304	M	●	6.35	3.18	0.4	—	
	110308	M	●	6.35	3.18	0.8	—	
	160304	M	●	9.525	3.18	0.4	—	
	160308	M	●	9.525	3.18	0.8	—	
160312	M	●	9.525	3.18	1.2	—		

NX3035

Application Examples

Insert		TNMG160404-FH	CNMG120408-MV	VNMG160404
Workpiece		Alloy Steel 	JIS SS400 	JIS SCM415 
Cutting Conditions	Cutting Speed (m/min)	150	120	250
	Feed (mm/rev)	0.15	0.15	0.2
	Depth of Cut (mm)	0.15	2.5	0.2
Coolant		Wet cutting	Wet cutting	Wet cutting
Results		 <p>NX3035 achieved 4 times longer tool life without any abnormal wear.</p>	 <p>NX3035 achieved 1.7 times longer tool life without any abnormal wear.</p>	 <p>NX3035 achieved 1.5 times longer tool life without any abnormal wear.</p>
Insert		TNMG160404-SY	DNMG150404-FH	DNMG150404-SH
Workpiece		Carbon Steel 	JIS S48C 	JIS SCM415 
Cutting Conditions	Cutting Speed (m/min)	100	150	200
	Feed (mm/rev)	0.2	0.2	0.25
	Depth of Cut (mm)	0.3	0.2	0.3
Coolant		Wet cutting	Wet cutting	Wet cutting
Results		 <p>NX3035 achieved 15 times longer tool life without any abnormal wear.</p>	 <p>NX3035 achieved 5 times longer tool life without any abnormal wear.</p>	 <p>NX3035 achieved 2 times longer tool life without any abnormal wear.</p>

For Your Safety

- Don't handle inserts and chips without gloves.
- Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage.
- Please use safety covers and wear safety glasses.
- When using compounded cutting oils, please take fire precautions.
- When attaching inserts or spare parts, please use only the correct wrench or spanner.

MITSUBISHI MATERIALS CORPORATION



The Scope of the Registration:
Design, Development, and
Production of Cemented
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The Scope of the Registration:
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(Tools specifications subject to change without notice.)