TOOLING NEWS E-166

SUMITOMO
CARBIDE - CBN - DIAMOND

Coated Grades for Steel Turning

AC8015P/AC8020P/AC8025P/AC8035P

New Grades for Steel Turning, Creating "Absolutely Stable Cutting"

Introducing **AC8020P**

P M K N S H

SUMITOMO ELECTRIC GROUP

AC8015P/AC8020P/AC8025P/AC8035P

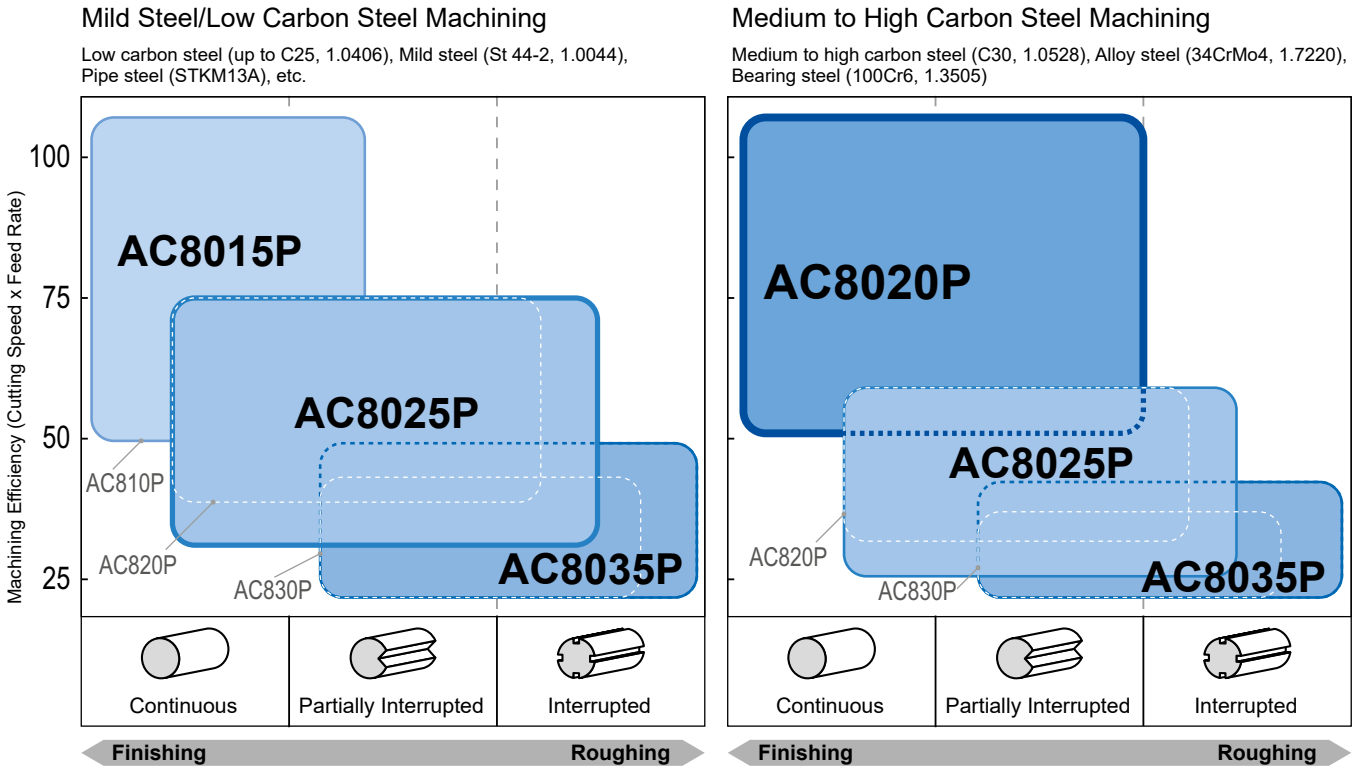
AC8020P - High Efficiency Turning Grade

Alumina coating with even higher strength balances outstanding stability and wear resistance in mill-scale work on forged material.
Gold-colored coating makes used corners easily identifiable.

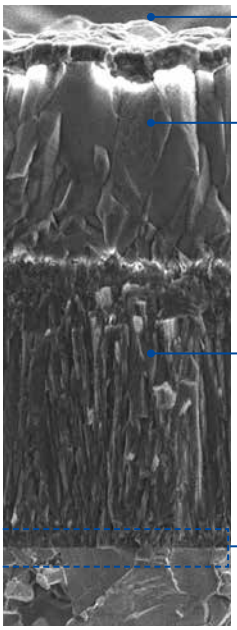
AC8015P/AC8020P/AC8025P/AC8035P

Covers a wide range of machining applications from high-speed to interrupted cutting and small lathes.

Application Range



Features of AC8000P Series



Special Surface Treatment
Chipping resistance and adhesion resistance are significantly improved by special surface treatments applied to suit the application.

High Strength Alumina Layer
Significantly improves the coating strength by controlling crystal growth direction.

High Hardness Fine Grained TiCN Layer
Significantly improves the coating hardness by using a fine and uniform crystal structure.

High Adhesion Technology
Significantly improves adhesion strength through a smooth interface between the coating and carbide substrate.

AC8015P / AC8035P
Prestressed
Creater Wear/Fracture Suppressed

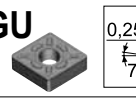
AC8025P
Smoothing
Adhesion/Chipping Suppressed

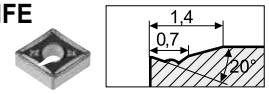
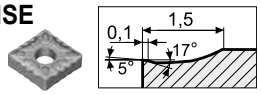
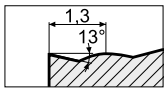
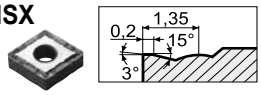
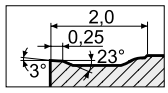
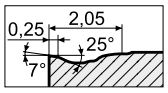
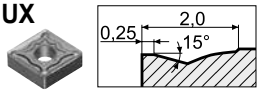
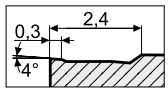
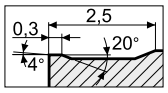
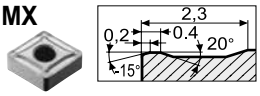
AC8020P
Prestressed, Gold-coloured Surface
Chipping Suppressed/Visibility Improved

Grades and Chipbreaker Selection Guide

1st Recommended Grade	
General Purpose	**AC8025P**

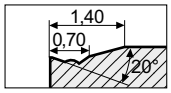
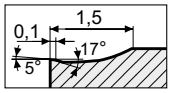
+ 1st Recommendation: **NGU**



	Chipbreakers for High-efficiency Machining	Main Chipbreakers	Strong Cutting Edge Chipbreakers
Finish – Small Depth	**NFE**  **NSE** 	**NSU** 	**NSX** 
General Purpose	**NGE** 	**NGU** 	**NUX** 
Rough – Larger Cutting Depth	**NME** 	**NMU** 	**NMX** 

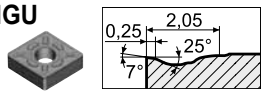
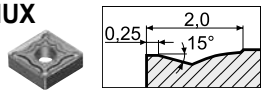
For High-speed Continuous Machining of Mild Steel

High Speed	**AC8015P**

To improve tool life at small depths of cut	**NFE** 
To improve finishing efficiency	**NSE** 

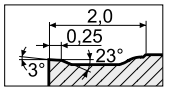
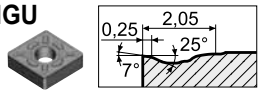
For Heavy Interrupted Cutting Emphasizing Stability

Interrupted Cut	**AC8035P**

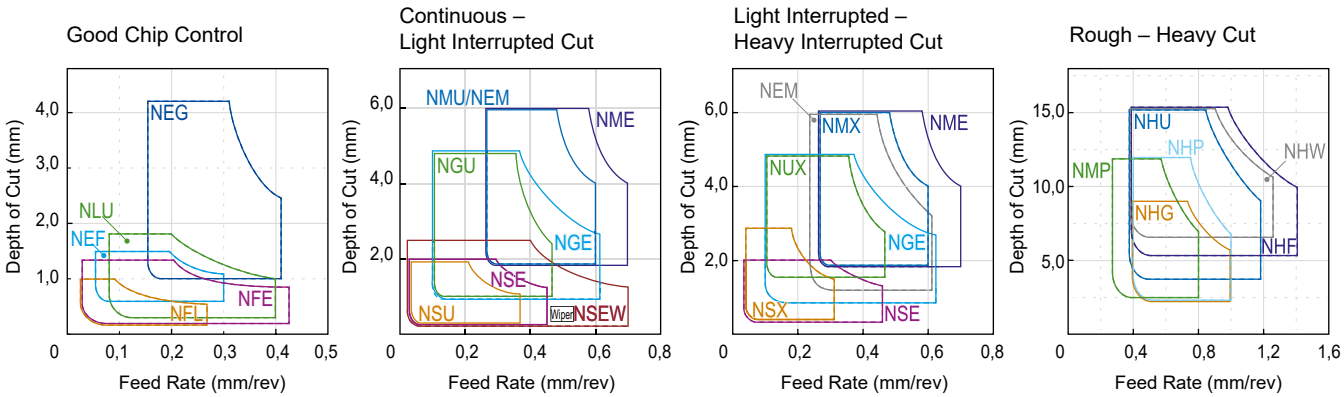
To improve tool life	**NGU** 
To improve machining stability	**NUX** 

For High-efficiency Machining of High Carbon Steel and Forged Steel

High Efficiency	**AC8020P**

To increase feed rate	**NGE** 
To increase cutting speed	**NGU** 

Chipbreaker Application Range



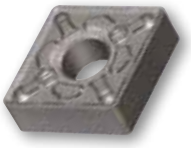
Cutting Performance

Suppresses crater damage due to chip abrasion. Crater wear resistance 2 x.

High-speed Machining

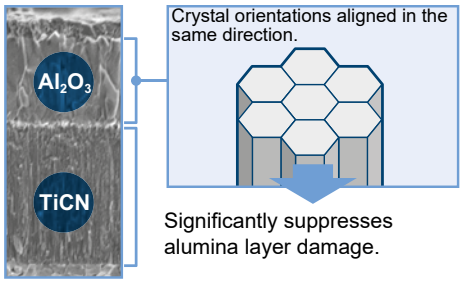
AC8015P

ABSOTECH | Controlled Crystal Alumina Layer | Excellent Wear Resistance

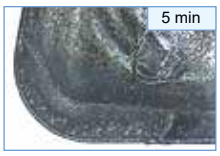


Control of the alumina layer crystal orientation suppresses crater damage due to chip abrasion.

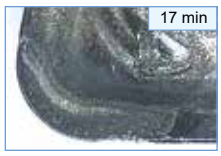
AC8015P



Significantly suppresses alumina layer damage.



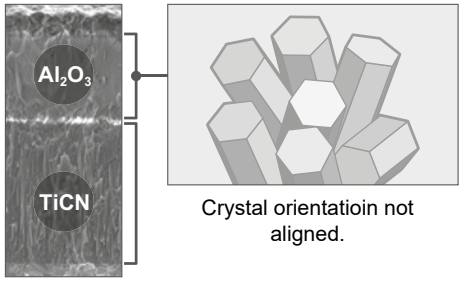
Minor wear



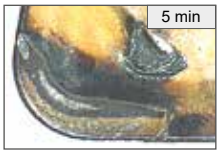
TiCN layer exposed

End of tool life

Conventional Tool



Crystal orientatioin not aligned.



TiCN layer exposed

End of tool life

Crater damage progression due to peeling of alumina layer

Work Material:	100Cr6 (external continuous)
Insert:	CNMG120408NGU AC8015P
Cutting Data:	v_c = 300 m/min, f = 0,3 mm/rev., a_p = 1,5 mm, wet

Recommended Cutting Conditions

Min - **Optimum** - Max

Insert Specification		Chipbreaker	Soft Steel, Low Carbon Steel, Low Alloy Steel < 180HB			High Carbon Steel, High Alloy Steel > 180HB		
			Depth of Cut a_p (mm)	Feed Rate f (mm/rev)	Cutting Speed v_c (m/min)	Depth of Cut a_p (mm)	Feed Rate f (mm/rev)	Cutting Speed v_c (m/min)
CNM_12 DNM_15 SNM_12	TNM_16 TNM_ 22 WNM_08	NFE	0,1–**0,4**–1,2	0,10–**0,20**–0,40	290–**410**–500	0,1–**0,4**–1,2	0,10–**0,20**–0,40	240–**360**–450
		NLU - NSU - NSE	0,5–**1,5**–2,0	0,10–**0,20**–0,40	170–**310**–470	0,5–**1,5**–2,0	0,10–**0,20**–0,40	130–**260**–420
		NSEW	0,5–**1,5**–2,5	0,10–**0,40**–0,60	170–**310**–470	0,5–**1,5**–2,5	0,10–**0,40**–0,60	130–**260**–420
		NGU - NGE - NUX	0,8–**2,2**–5,0	0,10–**0,30**–0,45	170–**310**–470	0,8–**2,2**–5,0	0,10–**0,30**–0,45	130–**260**–420
		NMU	1,8–**3,0**–6,0	0,20–**0,35**–0,60	140–**280**–400	1,8–**3,0**–6,0	0,20–**0,35**–0,60	110–**240**–350
		NME	1,0–**3,0**–6,0	0,20–**0,45**–0,70	140–**280**–400	1,0–**3,0**–6,0	0,20–**0,45**–0,70	110–**240**–350
		NHG	3,0–**4,5**–8,0	0,35–**0,50**–0,80	140–**280**–400	3,0–**4,5**–8,0	0,35–**0,50**–0,80	110–**240**–350
CNM_16	SNM_15	NGU - NGE - NUX	0,8–**3,5**–5,0	0,15–**0,30**–0,45	140–**280**–400	0,8–**3,5**–5,0	0,15–**0,30**–0,45	110–**240**–350
		NMU	1,8–**4,5**–6,0	0,20–**0,40**–0,60	140–**240**–330	1,8–**4,5**–6,0	0,20–**0,40**–0,60	110–**200**–280
		NME	1,5–**4,5**–7,0	0,20–**0,50**–0,70	140–**240**–330	1,5–**4,5**–7,0	0,20–**0,50**–0,70	110–**200**–280
		NHG	3,0–**5,0**–8,0	0,35–**0,60**–0,80	120–**210**–300	3,0–**5,0**–8,0	0,35–**0,60**–0,80	90–**170**–250
CNM_19 CNM_25 DNM_19	SNM_19 SNM_25 TNM_27	NMU	1,8–**5,0**–6,0	0,20–**0,40**–0,60	140–**240**–330	1,8–**5,0**–6,0	0,20–**0,40**–0,60	110–**200**–280
		NME	2,0–**5,0**–8,0	0,20–**0,50**–0,70	140–**240**–330	2,0–**5,0**–8,0	0,20–**0,50**–0,70	110–**200**–280
		NHG	3,0–**6,5**–9,0	0,35–**0,60**–0,80	120–**210**–300	3,0–**6,5**–9,0	0,35–**0,60**–0,80	90–**170**–250

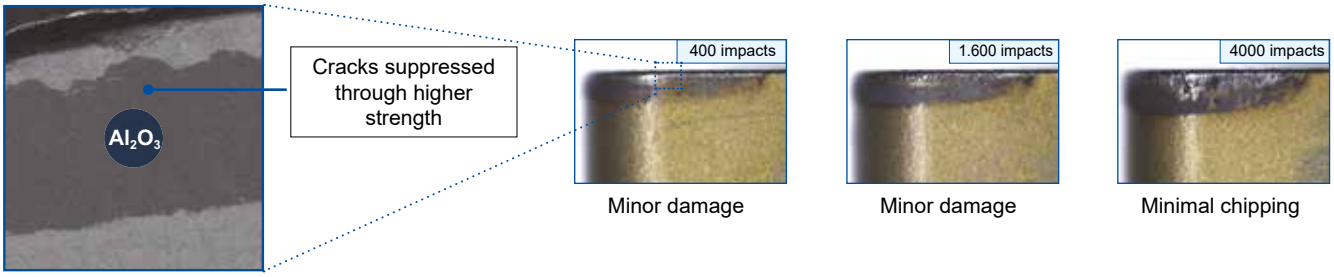
Cutting Performance

Balance of high wear resistance and stability. Chipping resistance 2,5 x or more.

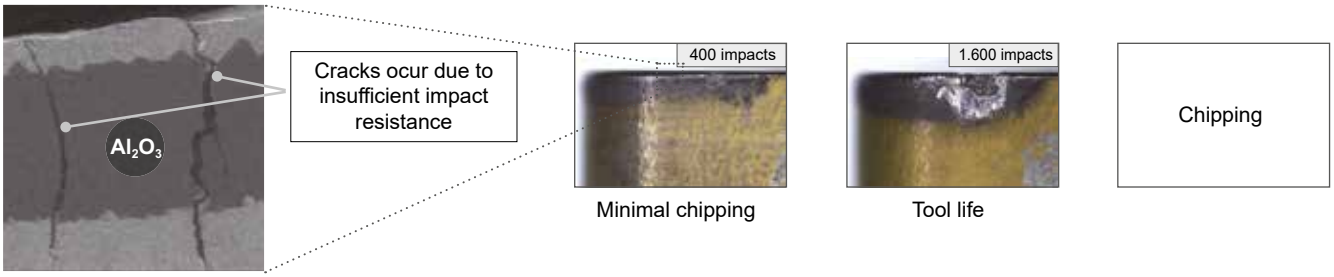
High Efficiency **AC8020P** ABSOTECH High Strength Alumina Layer | Excellent Chipping Resistance

Alumina layer with even higher strength suppresses chipping.

AC8020P



Conventional Tool



Work Material:	34CrMo34 (forged part with interrupted sections)
Insert:	CNMG120408NGU AC8020P
Cutting Data:	v_c = 250 m/min, f = 0,3 mm/rev., a_p = 1,5 mm, wet

Recommended Cutting Conditions

Min - **Optimum** - Max

Insert Specification		Chipbreaker	Soft Steel, Low Carbon Steel, Low Alloy Steel < 180HB			High Carbon Steel, High Alloy Steel > 180HB		
			Depth of Cut a_p (mm)	Feed Rate f (mm/rev)	Cutting Speed v_c (m/min)	Depth of Cut a_p (mm)	Feed Rate f (mm/rev)	Cutting Speed v_c (m/min)
CNM_12 DNM_15 SNM_12	TNM_16 TNM_ 22 WNM_08	NFE	0,1–**0,4**–1,2	0,10–**0,20**–0,40	180–**290**–450	0,1–**0,4**–1,2	0,10–**0,20**–0,40	130–**240**–400
		NLU - NSU - NSE	0,5–**1,5**–2,0	0,10–**0,20**–0,40	160–**290**–420	0,5–**1,5**–2,0	0,10–**0,20**–0,40	120–**240**–370
		NSEW	0,5–**1,5**–2,5	0,10–**0,40**–0,60	160–**290**–420	0,5–**1,5**–2,5	0,10–**0,40**–0,60	120–**240**–370
		NGU - NGE - NUX	0,8–**2,2**–5,0	0,10–**0,30**–0,45	160–**290**–420	0,8–**2,2**–5,0	0,10–**0,30**–0,45	120–**240**–370
		NMU	1,8–**3,0**–6,0	0,20–**0,35**–0,60	140–**250**–350	1,8–**3,0**–6,0	0,20–**0,35**–0,60	100–**220**–300
		NME	1,0–**3,0**–6,0	0,20–**0,45**–0,70	140–**250**–350	1,0–**3,0**–6,0	0,20–**0,45**–0,70	100–**220**–300
		NHG	3,0–**4,5**–8,0	0,35–**0,50**–0,80	120–**230**–330	3,0–**4,5**–8,0	0,35–**0,50**–0,80	100–**220**–300
CNM_16	SNM_15	NGU - NGE - NUX	0,8–**3,5**–5,0	0,15–**0,30**–0,45	110–**260**–350	0,8–**3,5**–5,0	0,15–**0,30**–0,45	100–**220**–300
		NMU	1,8–**4,5**–6,0	0,20–**0,40**–0,60	120–**220**–300	1,8–**4,5**– 6,0	0,20–**0,40**–0,60	100–**180**–250
		NME	1,5–**4,5**–7,0	0,20–**0,50**–0,70	120–**220**–300	1,5–**4,5**–7,0	0,20–**0,50**–0,70	100–**180**–250
		NHG	3,0–**5,0**–8,0	0,35–**0,60**–0,80	110–**190**–270	3,0–**5,0**–8,0	0,35–**0,60**–0,80	80–**150**–220
CNM_19 CNM_25 DNM_19	SNM_19 SNM_25 TNM_27	NMU	1,8–**5,0**–6,0	0,20–**0,40**–0,60	120–**220**–300	1,8–**5,0**–6,0	0,20–**0,40**–0,60	100–**180**–250
		NME	2,0–**5,0**–8,0	0,20–**0,50**–0,70	120–**220**–300	2,0–**5,0**–8,0	0,20–**0,50**–0,70	100–**180**–250
		NHG	3,0–**6,5**–9,0	0,35–**0,60**–0,80	110–**190**–270	3,0–**6,5**–9,0	0,35–**0,60**–0,80	80–**150**–220

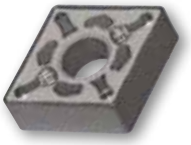
Cutting Performance

Suppresses adhesion with ultra-smooth surface. Adhesion fracture resistance 2 x or more.

General Machining

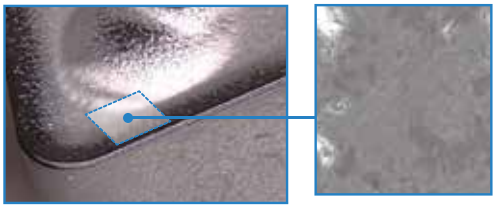
AC8025P

ABSOTECH Surface Smoothing Treatment — Absolute Reliability

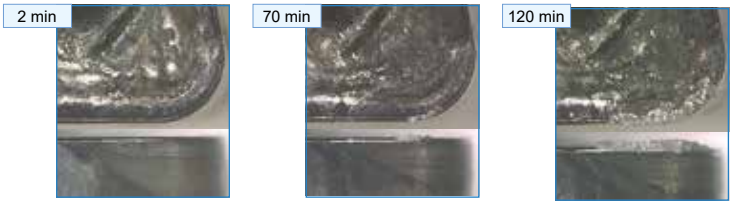


Surface smoothing treatment significantly suppresses adhesion and chipping.

AC8025P

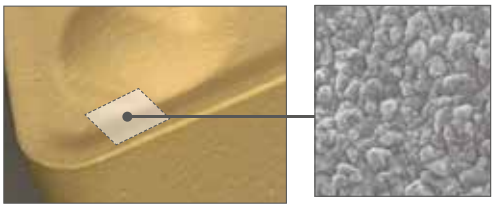


Ra 0,04 µm

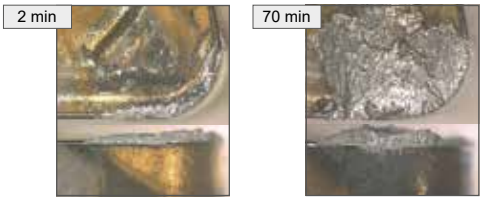


Normal wear — Minor damage only, able to continue

Conventional Tool



Ra 0,04 µm



Adhesion — Fracture

Unable to continue

Work Material:	15CrMo5 (facing)
Insert:	CNMG120408NGU AC8025P
Cutting Data:	v_c = 100–300 m/min, f = 0,3 mm/rev., a_p = 1,5 mm, wet

Recommended Cutting Conditions

Min - **Optimum** - Max

Insert Specification		Chipbreaker	Soft Steel, Low Carbon Steel, Low Alloy Steel < 180HB			High Carbon Steel, High Alloy Steel > 180HB		
			Depth of Cut a_p (mm)	Feed Rate f (mm/rev)	Cutting Speed v_c (m/min)	Depth of Cut a_p (mm)	Feed Rate f (mm/rev)	Cutting Speed v_c (m/min)
CNM_12 DNM_15 SNM_12	TNM_16 TNM_ 22 WNM_08	NFE	0,1–**0,4**–1,2	0,10–**0,25**–0,45	150–**250**–350	0,1–**0,4**–1,2	0,10–**0,25**–0,40	120–**210**–300
		NLU - NSU - NSE	0,5–**1,5**–2,0	0,10–**0,20**–0,40	150–**250**–350	0,5–**1,5**–2,0	0,10–**0,20**–0,40	120–**210**–300
		NSEW	0,5–**1,5**–2,5	0,10–**0,40**–0,60	150–**250**–350	0,5–**1,5**–2,5	0,10–**0,40**–0,60	120–**210**–300
		NGU - NGE - NUX	0,8–**2,2**–5,0	0,10–**0,30**–0,45	150–**230**–300	0,8–**2,2**–5,0	0,10–**0,30**–0,45	100–**180**–270
		NMU	1,8–**3,0**–6,0	0,20–**0,35**–0,60	130–**200**–280	1,8–**3,0**–6,0	0,20–**0,35**–0,60	80–**150**–230
		NME	1,0–**3,0**–6,0	0,20–**0,45**–0,70	130–**200**–280	1,0–**3,0**–6,0	0,20–**0,45**–0,70	80–**150**–230
		NHG	3,0–**4,5**–8,0	0,35–**0,50**–0,80	100–**180**–260	3,0–**4,5**–8,0	0,35–**0,50**–0,80	60–**130**–200
CNM_16	SNM_15	NGU - NGE - NUX	0,8–**3,5**–5,0	0,15–**0,30**–0,45	130–**200**–280	0,8–**3,5**–5,0	0,15–**0,30**–0,45	100–**160**–230
		NMU	1,8–**4,5**–6,0	0,20–**0,40**–0,60	100–**180**–260	1,8–**4,5**–6,0	0,20–**0,40**–0,60	80–**140**–210
		NME	1,5–**4,5**–7,0	0,20–**0,50**–0,70	100–**180**–260	1,5–**4,5**–7,0	0,20–**0,50**–0,70	80–**140**–210
		NHG	3,0–**5,0**–8,0	0,35–**0,60**–0,80	80–**160**–240	3,0–**5,0**–8,0	0,35–**0,60**–0,80	70–**120**–180
CNM_19 CNM_25 DNM_19	SNM_19 SNM_25 TNM_27	NMU	1,8–**5,0**–6,0	0,20–**0,40**–0,60	100–**180**–260	1,8–**5,0**–6,0	0,20–**0,40**–0,60	80–**140**–210
		NME	2,0–**5,0**–8,0	0,20–**0,50**–0,70	100–**180**–260	2,0–**5,0**–8,0	0,20–**0,50**–0,70	80–**140**–210
		NHG	3,0–**6,5**–9,0	0,35–**0,60**–0,80	80–**160**–240	3,0–**6,5**–9,0	0,35–**0,60**–0,80	70–**120**–180
		NHF	4,5–**8,0**–13,5	0,45–**0,80**–1,10	135–**170**–220	4,5–**8,0**–13,5	0,45–**0,80**–1,15	105–**140**–190

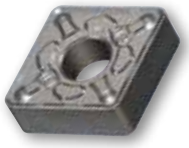
Cutting Performance

Suppresses crack growth and fractures by reducing tensile residual stress. Fracture resistance 2 x or more.

Interrupted Machining

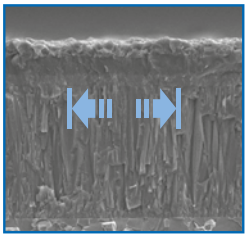
AC8035P

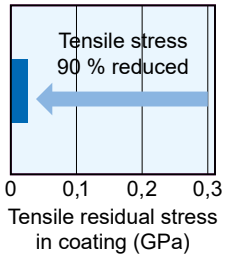
ABSOTECH Stress Control within Coating — Exceptional Stability

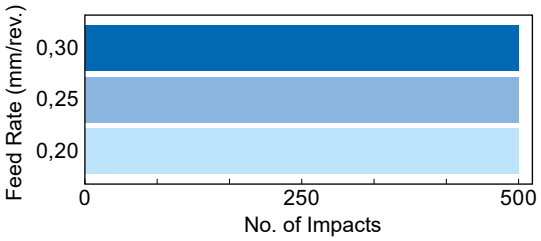


Special surface treatment reduces tensile stress in the coating layer, significantly suppressing fractures.

AC8035P

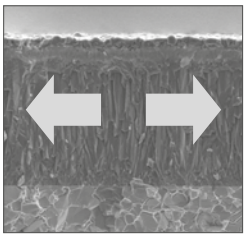


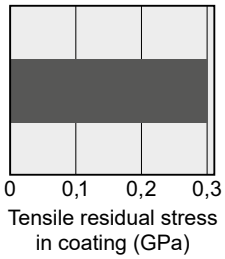


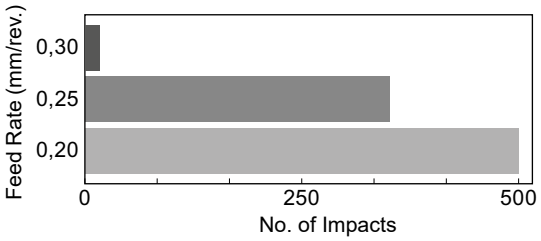


All corners able to continue

Conventional Tool







Unable to continue

Work Material:	34CrMo4 (external interrupted)
Insert:	CNMG120408NGU AC8035P
Cutting Data:	v_c = 160 m/min, f = 0,2–0,3 mm/rev., a_p = 2,0 mm, dry

Recommended Cutting Conditions

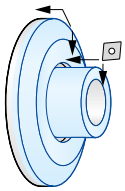
Min - **Optimum** - Max

Insert Specification		Chipbreaker	Soft Steel, Low Carbon Steel, Low Alloy Steel < 180HB			High Carbon Steel, High Alloy Steel > 180HB		
			Depth of Cut a_p (mm)	Feed Rate f (mm/rev)	Cutting Speed v_c (m/min)	Depth of Cut a_p (mm)	Feed Rate f (mm/rev)	Cutting Speed v_c (m/min)
CNM_12 DNM_15 SNM_12	TNM_16 TNM_ 22 WNM_08	NFE	0,1–**0,4**–1,2	0,10–**0,25**–0,45	120–**200**–300	0,1–**0,4**–1,2	0,10–**0,25**–0,45	120–**180**–250
		NLU - NSU - NSE	0,5–**1,3**–2,0	0,10–**0,20**–0,40	120–**200**–300	0,5–**1,3**–2,0	0,10–**0,20**–0,40	120–**180**–250
		NSEW	0,8–**2,2**–5,0	0,10–**0,30**–0,45	120–**200**–300	0,8–**2,2**–5,0	0,10–**0,30**–0,45	100–**150**–200
		NGU - NGE - NUX	1,8–**3,0**–6,0	0,20–**0,35**–0,60	100–**180**–250	1,8–**3,0**–6,0	0,20–**0,35**–0,60	80–**130**–180
		NMU	1,0–**3,0**–6,0	0,20–**0,45**–0,70	100–**180**–250	1,0–**3,0**–6,0	0,20–**0,45**–0,70	80–**130**–180
		NME	3,0–**4,5**–8,0	0,35–**0,50**–0,80	100–**150**–200	3,0–**4,5**–8,0	0,35–**0,50**–0,80	70–**100**–160
		NHG	3,0–**4,5**–8,0	0,15–**0,30**–0,45	100–**180**–250	3,0– **4,5**–8,0	0,15–**0,30**–0,45	90–**130**–170
CNM_16	SNM_15	NGU - NGE - NUX	0,8–**3,5**–5,0	0,20–**0,40**–0,60	100–**150**–200	0,8–**3,5**–5,0	0,20–**0,40**–0,60	70–**110**–150
		NMU	1,8–**4,5**–6,0	0,20–**0,50**–0,70	100–**150**–200	1,8–**4,5**–6,0	0,20–**0,50**–0,70	70–**110**–150
		NME	1,5–**4,5**–7,0	0,35–**0,60**–0,80	80–**130**–180	1,5–**4,5**–7,0	0,35–**0,60**–0,80	60–**100**–140
		NHG	3,0–**5,0**–8,0	0,20–**0,40**–0,60	100–**150**–200	3,0–**5,0**–8,0	0,20–**0,40**–0,60	70–**110**–150
CNM_19 CNM_25 DNM_19	SNM_19 SNM_25 TNM_27	NMU	2,0–**5,0**–8,0	0,20–**0,50**–0,70	100–**150**–200	2,0–**5,0**–8,0	0,20–**0,50**–0,70	70–**110**–150
		NME	3,0–**6,5**–9,0	0,35–**0,60**–0,80	80–**130**–180	3,0–**6,5**–9,0	0,35–**0,60**–0,80	60–**100**–140
		NHG	4,5–**8,0**–13,5	0,45–**0,80**–1,15	120–**150**–190	4,5–**8,0**–13,5	0,45–**0,80**–1,15	90–**120**–160
		NHF	5,0–**8,0**–13,5	0,80–**1,20**–1,60	70–**110**–150	5,0–**8,0**–13,5	0,80–**1,20**–1,60	50– **80**–120

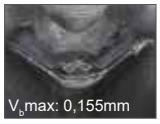
Application Examples

Gear, 20CrMo5, 1.7218

AC8015P ensures minimal wear and 1,5 times higher tool life.



NUX AC8015P
(150pcs)

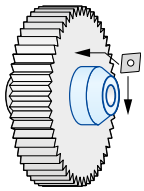


Competitor
(100 pcs)

Insert:	CNMG120412 NUX
Cutting Data:	v_c = 280 m/min, f = 0,25 mm/rev, a_p = 2,0-2,5 mm, wet

Gear, 34CrMo4, 1.7220

AC8015P ensures minimal crater wear and 1,5 times higher tool life.



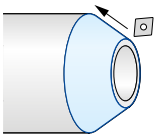
NGE AC8015P
(150 pcs)

Conventional
(100 pcs)

Insert:	CNMG120412 NGE
Cutting Data:	v_c = 200-260 m/min, f = 0,3-0,4 mm/rev, a_p = 1,5 mm, wet

Carbon Steel

AC8015P's excellent chipping resistance ensures minimal damage and double tool life.



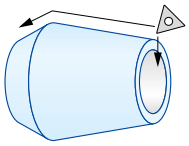
NMU AC8015P
(25 pcs)

Competitor
(12 pcs)

Insert:	CNMG120412 NMU
Cutting Data:	v_c = 160 m/min, f = 0,45 mm/rev, a_p = 2,5 mm, wet

Tool Holder, 100Cr6, 1.3505

AC8015P ensures minimal creater breakage and 1,7 times higher tool life.



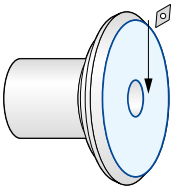
NGE AC8015P
(500 pcs)

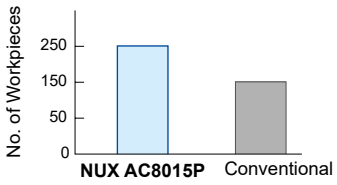
Competitor
(300 pcs)

Insert:	TNMG160404 NGE
Cutting Data:	v_c = 210-270 m/min, f = 0,2 mm/rev, a_p = 3,3 mm, wet

Hub, C55, 1.0535

AC8015P ensures minimal wear and 1,7 times higher tool life.

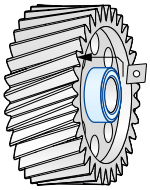


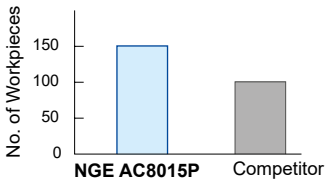


Insert:	DNMG150412 NUX
Cutting Data:	v_c = 240 m/min, f = 0,5 mm/rev, a_p = 1,0-2,5 mm, wet

Gear, 34CrMo4, 1.7220

AC8015P's excellent chipping resistance ensures minimal damage and 1,5 times higher tool life.

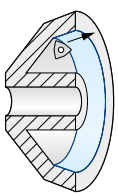




Insert:	CNMG120412 NGE
Cutting Data:	v_c = 200-260 m/min, f = 0,3-0,4 mm/rev, a_p = 2,0 mm, wet

CVT Component, 20CrMo5, 1.7218

AC8015P's excellent chipping resistance ensures minimal damage.



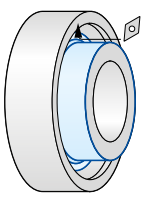
NSX AC8015P
(300 pcs)

Conventional
(300 pcs)

Insert:	WNMG080412 NSX
Cutting Data:	v_c = 300 m/min, f = 0,2-0,3 mm/rev, a_p = 1,0 mm, wet

Automotive Drive Component, 15CrMo5, 1.7262

Ac8015P improves machining efficiency by reducing chip entanglement.



NGU AC8015P

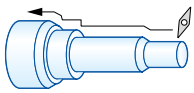
Conventional

Insert:	DCMT11T308 NGU
Cutting Data:	v_c = 180 m/min, f = 0,3 mm/rev, a_p = 1,5 mm, wet

Application Examples

CVJ Component, Cf53, 1.1213

AC8020P - suppresses chipping for 1,7 x longer tool life.



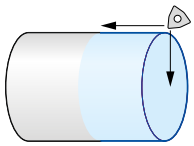
NSE AC8020P
(100 pcs)

Competitor
(60 pcs)

Insert:	DNMG150412 NSE
Cutting Data:	v_c = 220 m/min, f = 0,35 mm/rev, a_p = 1,0 mm, wet

Machine Tool Component, C35, 1.0501

AC8020P - suppresses both crater and flank wear for 2 x longer tool life.



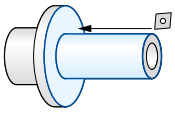
NSE AC8020P
(1.600 pcs)

Competitor
(800 pcs)

Insert:	WNMG080408 NSE
Cutting Data:	v_c = 240 m/min, f = 0,25 mm/rev, a_p = 1,0 mm, wet

Transmission Component, 34CrMo4, 1.7220

AC8020P - suppresses crater wear for 1.5 x longer tool life.



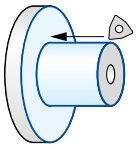
NGU AC8020P
(40 pcs)

Conventional
(26 pcs)

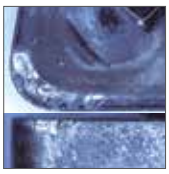
Insert:	CNMG120408 NGU
Cutting Data:	v_c = 250 m/min, f = 0,3 mm/rev, a_p = 1,5 mm, wet

Bearing, C45, 1.0503

AC8020P - suppresses crater wear and chipping for 1,4 x longer tool life.



NSU AC8020P
(230 pcs)

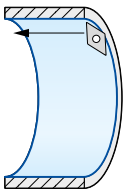


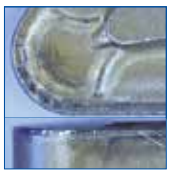
Conventional
(160 pcs)

Insert:	WNMG080408 NSU
Cutting Data:	v_c = 230 m/min, f = 0,26 mm/rev, a_p = 1,0 mm, wet

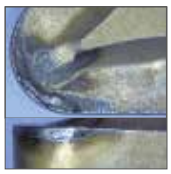
Bearing, 100Cr6, 1.3505

AC8020P - suppresses flank wear for 1,2 x longer tool life and stable machining.





NGE AC8020P
(600 pcs)

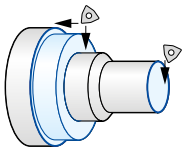


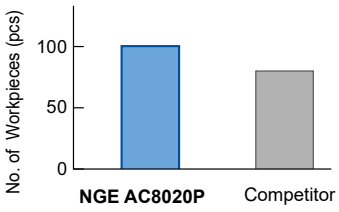
Competitor
(500 pcs)

Insert:	DNMG150412 NGE
Cutting Data:	v_c = 300 m/min, f = 0,3 mm/rev, a_p = 0,3 mm, wet

CVJ Component, C53, 1.1213

AC8020P 1,3 x longer tool life and stable machining.

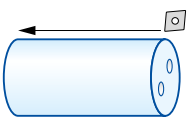


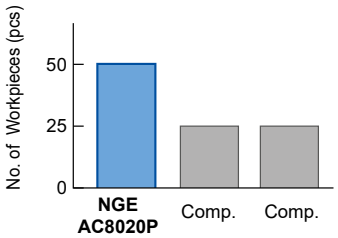


Insert:	WNMG080412 NGE
Cutting Data:	v_c = 260 m/min, f = 0,45 mm/rev, a_p = 1,5 mm, wet

Automotive Component, 42CrMo4, 1.7225

AC8020P - suppresses wear for 2 x longer tool lif and stable machining.





Insert:	DNMG120408 NGE
Cutting Data:	v_c = 190 m/min, f = 0,3 mm/rev, a_p = 3,0 mm, wet

Boron Steel Shaft

AC8020P - suppresses both crater wear and chipping for 3 x longer tool life.

NGU AC8020P
(220 pcs)

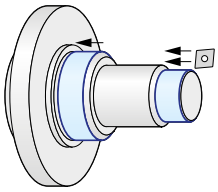
Conventional
(70 pcs)

Insert:	DNMG150412 NGU
Cutting Data:	v_c = 230 m/min, f = 0,55 mm/rev, a_p = 1,0 mm, wet

Application Examples

Hub, C45, 1.0503

AC8025P ensures minimal crater wear.



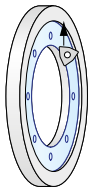
NMP AC8025P
(150 pcs)

Competitor
(150 pcs)

Insert:	CNMM120416 NMP
Cutting Data:	v_c = 180-200 m/min, f = 0,43-0,55 mm/rev, a_p = 1,0-3,0 mm, wet

Ring Gear, 15CrMo5, 1.7262

AC8025P ensures 1,5 times higher tool life.



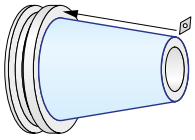
NME AC8025P
(150 pcs)

Competitor
(100 pcs)

Insert:	WNMG080416 NME
Cutting Data:	v_c = 250 m/min, f = 0,30-0,45 mm/rev, a_p = 2,5 mm, wet

Tool Holder, 15CrMo5, 1.7262

AC8025P's excellent chipping resistance ensures minimal damage.



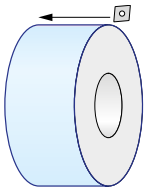
NEM AC8025P
(100 pcs)

Competitor
(100 pcs)

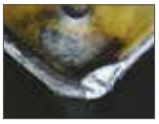
Insert:	DNMG150608 NEM
Cutting Data:	v_c = 150 m/min, f = 0,4 mm/rev, a_p = 4,0 mm, wet

Ring, C45, 1.0503

AC8025P 3 times higher tool life.



NGE AC8025P
(450 pcs)

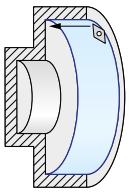


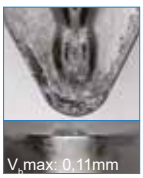
Competitor
(150 pcs)

Insert:	CNMG120408 NGE
Cutting Data:	v_c = 200-250 m/min, f = 0,25 mm/rev, a_p = 1,0 mm, wet

Cylinder, Soft Steel

AC8025P's excellent chipping resistance ensures minimal damage after attaining double tool life.





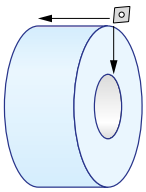
NSU AC8025P
(200 pcs)

Competitor
(100 pcs)

Insert:	DCMT11T308 NSU
Cutting Data:	v_c = 210 m/min, f = 0,15 mm/rev, a_p = 1,0 mm, wet

Bushing, 20MnCr5, 1.7147

AC8025P ensures excellent flank wear resistance.



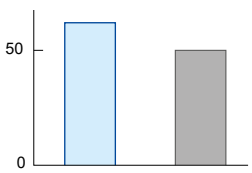
NME AC8025P
(200 pcs)

Competitor
(200 pcs)

Insert:	CNMG120416 NME
Cutting Data:	v_c = 260 m/min, f = 0,5-1,0 mm/rev, a_p = 1,5-2,0 mm, wet

Front Cover, Soft Steel

AC8025P shows excellent finishing surface by combination of NFE type chipbreaker and ensures 1,2 times higher tool life.



NFE AC8025P Competitor

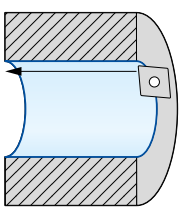
NFE AC8025P

Competitor

Insert:	TNMG160408 NFE
Cutting Data:	Facing: v_c = 450-480 m/min, f = 0,25-0,32 mm/rev, a_p = 0,05-0,25 mm, wet
	Internal Boring: v_c = 400 m/min, f = 0,2-0,3 mm/rev, a_p = 0,2-0,3 mm, wet

Fastening Component, 15CrMo5, 1.7262

Strong design realizes 1,5 x longer tool life.



NGU AC8025P

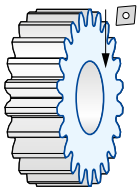
Competitor

Insert:	CCMT09T308 NGU
Cutting Data:	v_c = 190 m/min, f = 0,25 mm/rev, a_p = 1,0 mm, wet

Application Examples

Planetary Pinion, C35, 1.0501

AC8035P's excellent breakage resistance ensures minimal damage.



NUX AC8035P
(300 pcs)

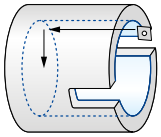
Conventional
(200 pcs)

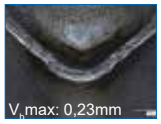
Interrupted cut

Insert:	CNMG120412 NUX
Cutting Data:	v_c = 180 m/min, f = 0,3 mm/rev, a_p = 2,0 mm, wet

Automotive Component, C25, 1.0406

AC8035P's excellent breakage resistance ensures minimal damage and a reliable tool life.





NUX AC8035P
(120 pcs)

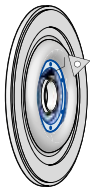
Conventional
(120 pcs)

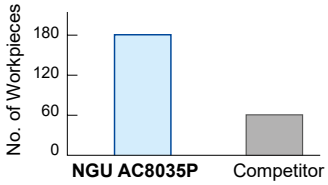
Interrupted cut

Insert:	CNMG120408 NUX
Cutting Data:	v_c = 100-130 m/min, f = 0,2 mm/rev, a_p = 1,0-3,2 mm, wet

Flange, 19Mn5, 1.0482

AC8035P's excellent chipping resistance ensures minimal damage and 3 times tool life.



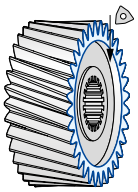


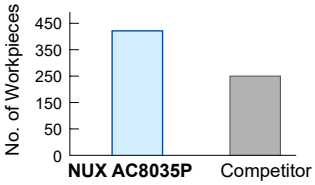
Roughing/Interrupted cut

Insert:	TNMG160408 NGU
Cutting Data:	v_c = 100 m/min, f = 0,3 mm/rev, a_p = 1,5 mm, wet

Gear, 34CrNiMo6, 1.6582

AC8035P's excellent chipping resistance ensures minimal damage and 1,7 times tool life.



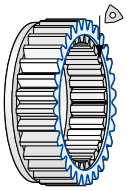


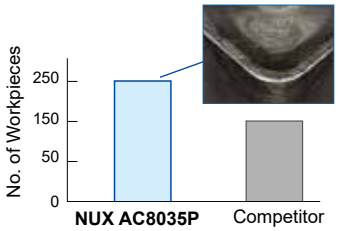
Roughing/Interrupted cut

Insert:	WNMG080408 NUX
Cutting Data:	v_c = 180 m/min, f = 0,15-0,40 mm/rev, a_p = 1,0 mm, wet

Gear, 20Cr4, 1.7027

AC8035P's excellent chipping resistance ensures minimal damage and 1,6 times tool life.



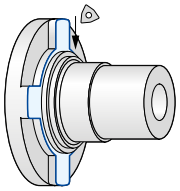


Roughing/Interrupted cut

Insert:	WNMG080408 NUX
Cutting Data:	v_c = 230m/min, f = 0,15-0,30mm/rev, a_p = 1,0-2,0mm, wet

Flange, 41Cr4, 1.7035

AC8035P's excellent chipping resistance ensures minimal damage and 1,5 times tool life.



NGU AC8035P
(90 pcs)

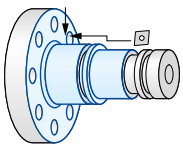
Competitor
(60 pcs)

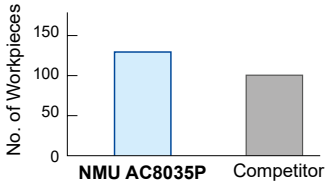
Roughing/Interrupted cut

Insert:	WNMG080412 NGU
Cutting Data:	v_c = 80-200m/min, f = 0,2mm/rev, a_p = 1,5mm, dry

Hub

AC8035P's excellent chipping resistance ensures minimal damage and 1,3 times tool life.

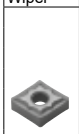




Mill-Scaled Work /
Continuous to Interrupted cut

Insert:	CNMG190616 NMU
Cutting Data:	v_c = 140-280 m/min, f = 0,5 mm/rev, a_p = 5 mm, dry

80° Diamond Type

Shape	Cat. No.	Stock AC8015P	AC8020P	AC8025P	AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	CNMG 090308 NFL			❍		9,525	3,18	3,81	0,8
	CNMG 120404 NFL			❍		12,7	4,76	4,16	0,4
	120408 NFL			❍					0,8
	CNMG 090304 NFE	❍	❍	❍	❍	9,525	3,18	3,81	0,4
	090308 NFE	❍	❍	❍	❍				0,8
	CNMG 090404 NFE	❍	❍	❍	❍	9,525	4,76	3,81	0,4
	090408 NFE	❍	❍	❍	❍				0,8
	CNMG 120402 NFE	❍	❍	❍	❍	12,7	4,76	5,16	0,2
	120404 NFE	❍	❍	❍	❍				0,4
	120408 NFE	❍	❍	❍	❍				0,8
	120412 NFE	❍	❍	❍	❍				1,2
	CNMG 090304 NLU	❍	❍	❍		9,525	3,18	3,81	0,4
	090308 NLU	❍	❍	❍					0,8
	120404 NLU	●	●	●	❍	12,7	4,76	5,16	0,4
	120408 NLU	●	●	●	❍				0,8
	120412 NLU	●	●	●	❍				1,2
 Wiper	CNMG 120404 NLUW	●	●	●		12,7	4,76	5,16	0,4
	120408 NLUW	●	●	●					0,8
	120412 NLUW	●	●	●					1,2
	CNMG 090304 NSU	❍	●	●		9,525	3,18	3,81	0,4
	090308 NSU	●	❍	❍					0,8
	CNMG 09T304 NSU	❍	❍	❍		9,525	3,97	3,81	0,4
	09T308 NSU	❍	❍	❍					0,8
	CNMG 090404 NSU	❍	❍	❍		9,525	4,76	3,81	0,4
	090408 NSU	❍	❍	❍					0,8
	090412 NSU	❍	❍	❍	❍				1,2
	CNMG 120404 NSU	●	●	●	●	12,7	4,76	5,16	0,4
	120408 NSU	●	●	●	●				0,8
	120412 NSU	●	●	●	❍				1,2
	CNMG 120404 NSE	●	●	●	❍	12,7	4,76	5,16	0,4
	120408 NSE	●	●	●	❍				0,8
	120412 NSE	●	●	●	●				1,2
 Wiper	CNMG 090404 NSEW	❍	❍	❍	❍	9,525	4,76	3,81	0,4
	090408 NSEW	❍	❍	❍	❍				0,8
	CNMG 120404 NSEW	●	❍	❍		12,7	4,76	5,16	0,4
	120408 NSEW	●	●	●					0,8
	120412 NSEW	❍	●	●					1,2
	CNMG 120404 NEF	❍	●	●	❍	12,7	4,76	5,16	0,4
	120408 NEF	❍	●	●	❍				0,8
	120412 NEF	❍	●	●	❍				1,2
	CNMG 120404 NSX	❍	❍	❍	❍	12,7	4,76	5,16	0,4
	120408 NSX	●	●	●	●				0,8
	120412 NSX	●	❍	❍	❍				1,2
	CNMG 090304 NGU	❍	●	●	❍	9,525	3,18	3,81	0,4
	090308 NGU	❍	●	●	❍				0,8
	CNMG 090404 NGU			❍		9,525	4,76	3,81	0,4
	090408 NGU			❍					0,8
	090412 NGU	❍	❍	❍	❍				1,2
	CNMG 120404 NGU	●	●	●	●	12,7	4,76	5,16	0,4
	120408 NGU	●	●	●	●				0,8
	120412 NGU	●	●	●	●				1,2
	120416 NGU	❍	●	●	●				1,6
	CNMG 160608 NGU	●	●	●	❍	15,875	6,35	6,35	0,8
	160612 NGU	●	●	●	●				1,2
	160616 NGU	●	●	●	❍				1,6
	CNMG 120404 NGE	●	●	●	●	12,7	4,76	5,16	0,4
	120408 NGE	●	●	●	●				0,8
	120412 NGE	●	●	●	●				1,2
	120416 NGE	●	●	●	❍				1,6
	CNMG 160608 NGE	❍	❍	❍	❍	15,875	6,35	6,35	0,8
	160612 NGE	●	●	●	❍				1,2
	160616 NGE	●	●	●	●				1,6
	CNMG 190612 NGE	●	●	●	❍	19,05	6,35	7,94	1,2
	190616 NGE	❍	●	●	❍				1,6
 Wiper	CNMG 120408 NGUW	●	●	●		12,7	4,76	5,16	0,8
	120412 NGUW	●	●	●					1,2
	CNMG 160612 NGUW	❍	❍	❍	❍	15,875	6,35	6,35	1,2
	CNMG 090304 NUX				❍	9,525	3,18	3,1	0,4
	090308 NUX				❍				0,8
	CNMG 120404 NUX	❍	●	●	●	12,7	4,76	5,16	0,4
	120408 NUX	●	●	●	●				0,8
	120412 NUX	●	●	●	●				1,2
	120416 NUX	●	●	●	❍				1,6
	CNMG 160608 NUX	●	❍	❍	❍	15,875	6,35	6,35	0,8
	160612 NUX	●	●	●	●				1,2
	160616 NUX	●	●	●	❍				1,6
	CNMG 190608 NUX				●	19,05	6,35	7,94	0,8
	190612 NUX	❍	❍	❍	❍				1,2
	190616 NUX	❍	●	●	❍				1,6
	CNMG 120404 NUP		●	●	●	12,7	4,76	5,16	0,4
	120408 NUP		●	●	●				0,8
	120412 NUP		●	●	●				1,2
	CNMG 160608 NUP				●	15,875	6,35	6,35	0,8
	160612 NUP								1,2
	CNMG 190612 NUP		●	●	●	19,05	6,35	7,94	1,2
	CNMG 090304 NUG			❍	❍	9,525	3,18	3,81	0,4
	090308 NUG			❍	❍				0,8

80° Diamond Type

Shape	Cat. No.	Stock AC8015P	AC8020P	AC8025P	AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	CNMG 09T304 NUG			❍		9,525	3,97	3,81	0,4
	09T308 NUG			❍					0,8
	CNMG 090404 NUG			❍		9,525	4,76	3,81	0,4
	090408 NUG			❍	❍				0,8
	CNMG 120404 NUG		●	●	●	12,7	4,76	5,16	0,4
	120408 NUG	●	●	●	●				0,8
	120412 NUG	●	●	●	●				1,2
	120416 NUG			❍	●				1,6
	CNMG 160608 NUG				❍	15,875	6,35	6,35	0,8
	160612 NUG				❍				1,2
	160616 NUG			❍	❍				1,6
	CNMG 190608 NUG				❍	19,05	6,35	7,94	0,8
	190612 NUG			❍	●				1,2
	190616 NUG			❍	❍				1,6
	CNMG 120404 NEG	❍	●	●	❍	12,7	4,76	5,16	0,4
	120408 NEG	❍	●	●	❍				0,8
	120412 NEG	❍	●	●	❍				1,2
	CNMG 160608 NEG	❍	●	●	❍	15,875	6,35	6,35	0,8
	160612 NEG	❍	●	●	❍				1,2
	160616 NEG	❍	❍		❍				1,6
	CNMG 190612 NEG	❍	❍	❍	❍	19,05	6,35	7,94	1,2
	190616 NEG	❍	❍	❍	❍				1,6
	CNMG 120408 NEX					12,7	4,76	5,16	0,8
									
	CNMG 120408 NMU	●	●	●	●	12,7	4,76	5,16	0,8
	120412 NMU	●	●	●	●				1,2
	120416 NMU	●	●	●	❍				1,6
	CNMG 160608 NMU	●	●	●	●	15,875	6,35	6,35	0,8
	160612 NMU	●	●	●	●				1,2
	160616 NMU	●	●	●	●				1,6
	CNMG 190608 NMU				●	19,05	6,35	7,94	0,8
	190612 NMU	●	●	●	●				1,2
	190616 NMU	●	●	●	●				1,6
	190624 NMU	❍	❍	❍	❍				2,4
	CNMG 250924 NMU	❍	❍	❍	●	25,4	9,52	9,12	2,4
	CNMG 120408 NEM	❍	●	●	❍	12,7	4,76	5,16	0,8
	120412 NEM	❍	●	●	❍				1,2
	120416 NEM	❍	❍	●	❍				1,6
	CNMG 160608 NEM	❍	❍	●	❍	15,875	6,35	6,35	0,8
	160612 NEM	❍	●	●	❍				1,2
	160616 NEM	❍	●	●	❍				1,6
	CNMG 190612 NEM	❍	●	●	❍	19,05	6,35	7,94	1,2
	190616 NEM	❍	●	●	❍				1,6
	190624 NEM	❍	❍	❍	❍				2,4
	CNMG 250924 NEM	❍	❍			25,4	9,52	9,12	2,4
	CNMG 120408 NME	●	●	●	●	12,7	4,76	5,16	0,8
	120412 NME	●	●	●	●				1,2
	120416 NME	●	●	●	❍				1,6
	CNMG 160608 NME	❍	●	●	❍	15,875	6,35	6,35	0,8
	160612 NME	●	●	●	●				1,2
	160616 NME	●	●	●	❍				1,6
	CNMG 190612 NME	❍	❍	❍	❍	19,05	6,35	7,94	1,2
	190616 NME	●	●	●	●				1,6
	190624 NME	❍	❍	❍	❍				2,4
	CNMG 250924 NME	❍	❍	❍	❍	25,4	9,52	9,12	2,4
	CNMG 120408 NMX		●	●	●	12,7	4,76	5,16	0,8
	120412 NMX		●	●	●				1,2
	120416 NMX		●	●	●				1,6
	CNMG 160608 NMX		●	●		15,875	6,35	6,35	0,8
	160612 NMX		●	●	●				1,2
	160616 NMX		●	●	●				1,6
	CNMG 190612 NMX		●	●	●	19,05	6,35	7,94	1,2
	190616 NMX		●	●	●				1,6
	CNMG 120404 NUZ			❍		12,7	4,76	5,16	0,4
	120408 NUZ		●	❍	❍				0,8
	120412 NUZ			❍	❍				1,2
	120416 NUZ			❍					1,6
	CNMG 160608 NUZ			❍	❍	15,875	6,35	6,35	0,8
	160612 NUZ			❍	❍				1,2
	160616 NUZ			❍	❍				1,6
	CNMG 190608 NUZ			❍	❍	19,05	6,35	7,94	0,8
	190612 NUZ			❍	❍				1,2
	190616 NUZ			❍	❍				1,6
	CNMM 120408 NMP	●	●	●	●	12,7	4,76	5,16	0,8
	120412 NMP	●	●	●	●				1,2
	120416 NMP	❍	●	●	●				1,6
	CNMM 160608 NMP			●	●	15,875	6,35	6,35	0,8
	160612 NMP	●	●	●	●				1,2
	160616 NMP	●	●	●	●				1,6
	160624 NMP		●	●					2,4
	CNMM 190608 NMP			●	●	19,05	6,35	7,94	0,8
	190612 NMP	❍	●	●	●				1,2
	190616 NMP	●	●	●	●				1,6
	190624 NMP	❍	●	●	●				2,4
	CNMM 250724 NMP			❍		25,4	7,94	9,12	2,4
	250924 NMP			❍		25,4	9,52	9,12	2,4

● Euro stock ❍ Japan stock

80° Diamond Type

Shape	Cat. No.	Stock AC8015P	AC8020P	AC8025P	AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	CNMM 160612 NMH	●	●	●	●	15,875	6,35	6,35	1,2
	160616 NMH	●	●	●	●				1,6
	CNMM 190612 NMH	●	●	●	●	19,05	6,35	7,94	1,2
	190616 NMH	●	●	●	●				1,6
	190624 NMH		●	●					2,4
	CNMM 250924 NMH		●	●	●	25,4	9,52	9,12	2,4
	CNMM 120408 NHG	●	●	●	●	12,7	4,76	5,16	0,8
	120412 NHG	●	●	●	●				1,2
	120416 NHG			❍					1,6
	CNMM 160608 NHG	●				15,875	6,35	6,35	0,8
	160612 NHG	●	●	●	●				1,2
	160616 NHG	●	●	●	●				1,6
	160624 NHG		●	●					2,4
	CNMM 190612 NHG	●	●	●	●	19,05	6,35	7,94	1,2
	190616 NHG	●	●	●	●				1,6
	190624 NHG	●	●	●	●				2,4
	CNMM 120408 NHP			●	●	12,7	4,76	5,16	0,8
	120412 NHP			●	●				1,2
	120416 NHP			❍	❍				1,6
	CNMM 160608 NHP			❍	●	15,875	6,35	6,35	0,8
	160612 NHP			❍	●				1,2
	160616 NHP		●	●	●				1,6
	CNMM 190608 NHP			❍	●	19,05	6,35	7,94	0,8
	190612 NHP			●	●				1,2
	190616 NHP			●	●				1,6
	190624 NHP		●	●	●				2,4
	CNMM 190616 NHF			❍	❍	19,05	6,35	7,94	1,6
	190624 NHF			❍	❍				2,4
	CNMM 250924 NHF			❍	❍	25,4	9,52	9,12	2,4
	250932 NHF			❍	❍				3,2
	CNMX 120408 L/R		●	●		12,7	4,76	5,16	0,8

55° Diamond Type

Shape	Cat. No.	Stock AC8015P	AC8020P	AC8025P	AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	DNMG 150408 NFL			❍		12,7	4,76	5,16	0,4
	150412 NFL			❍					0,8
									1,2
	DNMG 110404 NFE	❍	❍	❍	❍	9,525	4,76	3,81	0,4
	110408 NFE	❍	❍	❍	❍				0,8
	110412 NFE	❍	❍	❍	❍				1,2
	DNMG 150402 NFE	❍	❍	❍	❍	12,7	4,76	5,16	0,2
	150404 NFE	❍	❍	❍	❍				0,4
	150408 NFE	❍	❍	❍	❍				0,8
	150412 NFE	❍	❍	❍	❍				1,2
	DNMG 150602 NFE	❍	❍	❍	❍	12,7	6,35	5,16	0,2
	150604 NFE	❍	❍	❍	❍				0,4
	150608 NFE	❍	❍	❍	❍				0,8
	150612 NFE	❍	❍	❍	❍				1,2
	DNMG 110404 NLU	●	●	●		9,525	4,76	3,81	0,4
	110408 NLU	●	❍	❍					0,8
	DNMG 150402 NLU	❍	❍	❍		12,7	4,76	5,16	0,2
	150404 NLU	❍	❍	❍	❍				0,4
	150408 NLU	❍	❍	❍	❍				0,8
	150412 NLU	❍	❍	❍	❍				1,2
	DNMG 150604 NLU	●	●	●		12,7	6,35	5,16	0,4
	150608 NLU	●	●	●					0,8
	150612 NLU	●	●	●					1,2
	DNMG 110404 NSU	●	●	●	❍	9,525	4,76	3,81	0,4
	110408 NSU	●	●	●	❍				0,8
	110412 NSU	❍	❍	❍	❍				1,2
	DNMG 150404 NSU	❍	❍	❍	❍	12,7	4,76	5,16	0,4
	150408 NSU	❍	❍	❍	❍				0,8
	150412 NSU	❍	❍	❍					1,2
	DNMG 150604 NSU	●	●	●	●	12,7	6,35	5,16	0,4
	150608 NSU	●	●	●	●				0,8
	150612 NSU	●	●	●	●				1,2
	DNMG 110408 NSE	●	❍	❍	❍	9,525	4,76	3,81	0,8
	DNMG 150404 NSE	●	❍	❍	❍	12,7	4,76	5,16	0,4
	150408 NSE	❍	❍	❍	❍				0,8
	150412 NSE	●	❍	❍	❍				1,2
	DNMG 150604 NSE	●	●	●		12,7	6,35	5,16	0,4
	150608 NSE	●	●	●					0,8
	150612 NSE	●	●	●					1,2
 Wiper	DNMX 110404 NSEW	●	❍	❍	❍	9,525	4,76	3,81	0,4
	110408 NSEW	❍	❍	❍	❍				0,8
	110412 NSEW	❍	❍	❍	❍				1,2
	DNMX 150404 NSEW	❍	❍	❍		12,7	4,76	5,16	0,4
	150408 NSEW	❍	❍	❍					0,8
	150412 NSEW	❍	❍	❍					1,2
	DNMX 150604 NSEW	●	●	●		12,7	6,35	5,16	0,4
	150608 NSEW	●	●	●					0,8
	150612 NSEW	●							1,2
	DNMG 110404 NEF	❍	●	●	❍	9,525	4,76	3,81	0,4
	110408 NEF	❍	●	●	❍				0,8
	110412 NEF	❍	❍	❍	❍				1,2

55° Diamond Type

Shape	Cat. No.	Stock AC8015P	AC8020P	AC8025P	AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	DNMG 150404 NEF	❍	❍	❍	❍	12,7	4,76	5,16	0,4
	150408 NEF	❍	❍	❍	❍				0,8
	150412 NEF	❍	❍	❍	❍				1,2
	DNMG 150604 NEF	❍	●	●	❍	12,7	6,35	5,16	0,4
	150608 NEF	❍	●	●	❍				0,8
	150612 NEF	❍	●	●	❍				1,2
	DNMG 150404 NSX	❍	❍	❍	❍	12,7	4,76	5,16	0,4
	150408 NSX	❍	❍	❍	❍				0,8
	150412 NSX	❍	❍	❍	❍				1,2
	DNMG 150608 NSX	●				12,7	6,35	5,16	0,8
	DNMG 110404 NGU	●	●	●	❍	9,525	4,76	3,81	0,4
	110408 NGU	●	●	●	●				0,8
	110412 NGU	●	●	●	❍				1,2
	DNMG 150404 NGU	❍	❍	❍	❍	12,7	4,76	5,16	0,4
	150408 NGU	❍	❍	❍	❍				0,8
	150412 NGU	❍	❍	❍	❍				1,2
	150416 NGU			❍					1,6
	DNMG 150604 NGU	●	●	●	●	12,7	6,35	5,16	0,4
	150608 NGU	●	●	●	●				0,8
	150612 NGU	●	●	●	❍				1,2
	150616 NGU			❍					1,6
	DNMG 110408 NGE	❍	❍	❍	❍	9,525	4,76	3,81	0,8
	110412 NGE	❍	❍	❍	❍				1,2
	DNMG 150404 NGE	❍	❍	❍	❍	12,7	4,76	5,16	0,4
	150408 NGE	❍	❍	❍	❍				0,8
	150412 NGE	❍	❍	❍	❍				1,2
	150416 NGE			❍					1,6
	DNMG 150604 NGE	●	●	●	❍	12,7	6,35	5,16	0,4
	150608 NGE	●	●	●	●				0,8
	150612 NGE	●	●	●	●				1,2
	150616 NGE	●	●	●	❍				1,6
	DNMG 110408 NUX	❍	❍	❍	❍	9,525	4,76	3,81	0,8
	DNMG 150404 NUX	❍	❍	❍	❍	12,7	4,76	5,16	0,4
	150408 NUX	❍	❍	❍	❍				0,8
	150412 NUX	❍	❍	❍	❍				1,2
	DNMG 150604 NUX	❍	●	●	❍	12,7	6,35	5,16	0,4
	150608 NUX	●	●	●	●				0,8
	150612 NUX	●	●	●	●				1,2
	150616 NUX			●					1,6
	DNMG 150604 NUP		●	●	●	12,7	6,35	5,16	0,4
	150608 NUP		●	●	●				0,8
	150612 NUP				●				1,2
	DNMG 110404 NUG			❍	●	9,525	4,76	3,81	0,4
	110408 NUG			❍	❍				0,8
	DNMG 150404 NUG				❍	12,7	4,76	5,16	0,4
	150408 NUG			❍	❍				0,8
	150412 NUG			❍	❍				1,2
	DNMG 150604 NUG	●		❍		12,7	6,35	5,16	0,4
	150608 NUG	●		●	❍				0,8
	150612 NUG			❍					1,2
	150616 NUG			❍					1,6
	DNMG 110408 NEG	❍	●	●	❍	9,525	4,76	3,81	0,8
	110412 NEG	❍	●	●	❍				1,2
	DNMG 150404 NEG	❍	❍	❍	❍	12,7	4,76	5,16	0,4
	150408 NEG	❍	❍	❍	❍				0,8
	150412 NEG	❍	❍	❍	❍				1,2
	DNMG 150604 NEG	❍	●	●	❍	12,7	6,35	5,16	0,4
	150608 NEG	❍	●	●	❍				0,8
	150612 NEG	❍	●	●	❍				1,2
	DNMG 150408 NMU	❍	❍	❍	❍	12,7	4,76	5,16	0,8
	150412 NMU	❍	❍	❍	❍				1,2
	150416 NMU			❍	❍				1,6
	DNMG 150608 NMU	●	●	●	●	12,7	6,35	5,16	0,8
	150612 NMU	●	●	●	●				1,2
	150616 NMU	●		●					1,6
	DNMG 150408 NEM	❍	❍	❍	❍	12,7	4,76	5,16	0,8
	150412 NEM	❍	❍	❍	❍				1,2
	150416 NEM			❍	❍				1,6
	DNMG 150608 NEM	❍	●	●	❍	12,7	6,35	5,16	0,8
	150612 NEM	❍	●	●	❍				1,2
	150616 NEM		●	●					1,6
	DNMG 150408 NME	❍	❍	❍	❍	12,7	4,76	5,16	0,8
	150412 NME	❍	❍	❍	❍				1,2
	150416 NME			❍					1,6
	DNMG 150608 NME	●	●	●	●	12,7	6,35	5,16	0,8
	150612 NME	●	●	●	❍				1,2
	150616 NME	●	●	●	❍				1,6
	DNMG 150408 NMX		❍	❍	❍	12,7	4,76	5,16	0,8
	150412 NMX		❍	❍	❍				1,2
	DNMG 150608 NMX		●	●		12,7	6,35	5,16	0,8
	150612 NMX		●	●					1,2
	DNMG 150404 NUZ			❍		12,7	4,76	5,16	0,4
	150408 NUZ			❍	❍				0,8
	150412 NUZ			❍	❍				1,2
	DNMG 150608 NUZ			❍		12,7	6,35	5,16	0,8
	150612 NUZ			❍					1,2

● Euro stock ❍ Japan stock

55° Diamond Type

Shape	Cat. No.	Stock AC8015P	Stock AC8020P	Stock AC8025P	Stock AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	DNMG 150404 RHM	❍	❍	❍	❍	12,7	4,76	5,16	0,4
	150404 LHM			❍					0,4
	150408 RHM	❍	❍	❍	❍				0,8
	150408 LHM			❍					0,8
	DNMM 150404 NMP			❍	❍	12,7	4,76	5,16	0,4
	150408 NMP	❍	❍	❍	❍				0,8
	150412 NMP	❍	❍	❍	❍				1,2
	150416 NMP	❍	❍	❍					1,6
	DNMM 150604 NMP			●	●	12,7	6,35	5,16	0,4
	150608 NMP	●	●	●	●				0,8
	150612 NMP	●	●	●	●				1,2
	150616 NMP	❍	●	●	●				1,6
	DNMM 150608 NHG	●			●	12,7	6,35	5,16	0,8
	150612 NHG	●	●	●					1,2
	150616 NHG	●	●	●					1,6
	DNMM 150404 NHP			❍	❍	12,7	4,76	5,16	0,4
	150408 NHP			❍	❍				0,8
	150412 NHP			❍	❍				1,2
	150416 NHP			❍					1,6
	DNMM 150604 NHP			❍		12,7	6,35	5,16	0,4
	150608 NHP			●	❍				0,8
	150612 NHP			❍	❍				1,2
	150616 NHP			❍					1,6

Square Type

Shape	Cat. No.	Stock AC8015P	Stock AC8020P	Stock AC8025P	Stock AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	SNMG 120408 NFL			❍		12,7	4,76	5,16	0,8
	SNMG 120404 NFE	❍	❍	❍	❍	12,7	4,76	5,16	0,4
	120408 NFE	❍	❍	❍	❍				0,8
	120412 NFE	❍	❍	❍	❍				1,2
	SNMG 120408 NLU	❍	❍	❍		12,7	4,76	5,16	0,8
	120412 NLU	❍	●	●					1,2
	SNMG 120408 NSU	●	●	●	❍	12,7	4,76	5,16	0,8
	SNMG 120408 NSE	❍	❍	❍	❍	12,7	4,76	5,16	0,8
	120412 NSE	●	●	●	❍				1,2
	SNMG 120404 NEF	❍	❍	❍	❍	12,7	4,76	5,16	0,4
	120408 NEF	❍	●	●	❍				0,8
	SNMG 120408 NSX	❍	❍	❍	❍	12,7	4,76	5,16	0,8
	120412 NSX	❍	❍	❍	❍				1,2
	SNMG 090304 NGU			●		9,525	3,18	3,81	0,4
	090308 NGU	❍	●	●	❍				0,8
	SNMG 120404 NGU	●	●	●	❍	12,7	4,76	5,16	0,4
	120408 NGU	●	●	●	●				0,8
	120412 NGU	●	●	●	●				1,2
	120416 NGU	●	●	●	❍				1,6
	SNMG 150608 NGU	❍	❍	❍	❍	15,875	6,35	6,35	0,8
	150612 NGU	❍	❍	❍	❍				1,2
	150616 NGU	❍	❍	❍	❍				1,6
	SNMG 120408 NGE	❍	●	●	❍	12,7	4,76	5,16	0,8
	120412 NGE	❍	●	●	●				1,2
	120416 NGE	❍	●	●	❍				1,6
	SNMG 150608 NGE	❍	❍	❍	❍	15,875	6,35	6,35	0,8
	150612 NGE	❍	❍	❍	❍				1,2
	150616 NGE	❍	❍	❍	❍				1,6
	SNMG 090308 NUX				❍	9,525	3,18	3,81	0,8
	SNMG 120404 NUX				❍	12,7	4,76	5,16	0,4
	120408 NUX	●	●	●	●				0,8
	120412 NUX	●	●	●	●				1,2
	120416 NUX	❍	❍	❍	❍				1,6
	SNMG 190612 NUX	❍	❍	❍	❍	19,05	6,35	7,94	1,2
	190616 NUX	❍	❍	❍	❍				1,6
	SNMG 120404 NUP		●	●	●	12,7	4,76	5,16	0,4
	120408 NUP		●	●	●				0,8
	SNMG 090308 NUG			❍	●	9,525	3,18	3,81	0,8
	SNMG 120408 NUG			❍	●	12,7	4,76	5,16	0,8
	120412 NUG			❍	●				1,2
	120416 NUG	●			❍				1,6
	SNMG 150612 NUG				❍	15,875	6,35	6,35	1,2
	SNMG 190612 NUG				❍	19,05	6,35	7,94	1,2
	190616 NUG				❍				1,6
	SNMG 250924 NUG				❍	25,4	9,52	9,12	2,4
	SNMG 120404 NEG	❍	●	●	❍	12,7	4,76	5,16	0,4
	120408 NEG	❍	●	●	❍				0,8
	120412 NEG	❍	●	●	❍				1,2
	SNMG 150608 NEG	❍	❍	❍	❍	15,875	6,35	6,35	0,8
	150612 NEG	❍	❍	❍	❍				1,2
	150616 NEG	❍	❍	❍	❍				1,6

● Euro stock ❍ Japan stock

Square Type

Shape	Cat. No.	Stock AC8015P	Stock AC8020P	Stock AC8025P	Stock AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	SNMG 190612 NEG	❍	❍	❍	❍	19,05	6,35	7,94	1,2
	190616 NEG	❍	❍	❍	❍				1,6
	SNMG 120408 NMU	●	●	●	●	12,7	4,76	5,16	0,8
	120412 NMU	❍	●	●	●				1,2
	120416 NMU	●	❍	❍	❍				1,6
	SNMG 150608 NMU	❍	❍	❍	❍	15,875	6,35	6,35	0,8
	150612 NMU	●	❍	❍	●				1,2
	150616 NMU	●	●	●	●				1,6
	SNMG 190612 NMU	●	●	●	●	19,05	6,35	7,94	1,2
	190616 NMU	●	●	●	●				1,6
	190624 NMU	❍	❍	❍	❍				2,4
	SNMG 250924 NMU	❍	❍	❍	●	25,4	9,52	9,12	2,4
	SNMG 120408 NEM	❍	●	●	❍	12,7	4,76	5,16	0,8
	120412 NEM	❍	●	●	❍				1,2
	SNMG 150608 NEM	❍	❍	❍	❍	15,875	6,35	6,35	0,8
	150612 NEM	❍	●	●	❍				1,2
	150616 NEM	❍	❍		❍				1,6
	SNMG 190612 NEM	❍	●	●	❍	19,05	6,35	7,94	1,2
	190616 NEM	❍	●	●	❍				1,6
	190624 NEM	❍	❍	❍	❍				2,4
	SNMG 250924 NEM	❍	❍	❍	❍	25,4	9,52	9,12	2,4
	SNMG 120408 NME	❍	●	●	●	12,7	4,76	5,16	0,8
	120412 NME	❍	❍	❍	❍				1,2
	120416 NME	❍	❍	❍	❍				1,6
	SNMG 150608 NME	❍	❍	❍	❍	15,875	6,35	6,35	0,8
	150612 NME	❍	●	●	❍				1,2
	150616 NME	❍	❍	❍	❍				1,6
	SNMG 190612 NME	❍	❍	❍	❍	19,05	6,35	7,94	1,2
	190616 NME	❍	●	●	●				1,6
	190624 NME	❍	❍	❍	❍				2,4
	SNMG 250924 NME	❍	❍	❍	❍	25,4	9,52	9,12	2,4
	SNMG 120408 NMX		❍	❍	❍	12,7	4,76	5,16	0,8
	120412 NMX		❍	❍	●				1,2
	120416 NMX		❍	❍					1,6
	SNMG 150612 NMX		●	●		15,875	6,35	6,35	1,2
	150616 NMX		●	●					1,6
	SNMG 190612 NMX		●	●	●	19,05	6,35	7,94	1,2
	190616 NMX		❍	❍	●				1,6
	SNMG 120408 NUZ			❍	❍	12,7	4,76	5,16	0,8
	120412 NUZ			❍	❍				1,2
	120416 NUZ			❍	❍				1,6
	SNMG 150612 NUZ			❍	❍	15,875	6,35	6,35	1,2
	SNMG 190612 NUZ			❍	❍	19,05	6,35	7,94	0,8
	190616 NUZ			❍	❍				1,2
	SNMG 120408 RHM	❍	❍	❍	❍	12,7	4,76	5,16	0,8
	120408 LHM	❍	❍	❍	❍				0,8
	SNMM 120408 NMP	❍	●	●	●	12,7	4,76	5,16	0,8
	120412 NMP	❍	❍	❍	●				1,2
	120416 NMP	❍	●	●	❍				1,6
	120420 NMP			●	●				2,0
	SNMM 150612 NMP	❍	●	●	●	15,875	6,35	6,35	1,2
	150616 NMP	●	●	●	●				1,6
	SNMM 190612 NMP	❍	●	●	●	19,05	6,35	7,94	1,2
	190616 NMP	●	●	●	●				1,6
	190624 NMP	●	●	●					2,4
	SNMM 250724 NMP	❍	❍	❍	●	25,4	7,94	9,12	2,4
	SNMM 250924 NMP	❍	❍	❍		25,4	9,52	9,12	2,4
	SNMM 310924 NMP	❍	❍	❍		31,75	9,52	8,8	2,4
	SNMM 190612 NMH	●	●	●	●	19,05	6,35	7,94	1,2
	190616 NMH	●	●	●	●				1,6
	SNMM 250724 NMH		●	●	●	25,4	7,94	9,12	2,4
	SNMM 250924 NMH		●	●	●	25,4	9,52	9,12	2,4
	SNMM 120408 NHG	●	❍	❍	❍	12,7	4,76	5,16	0,8
	120412 NHG	❍	●	●	❍				1,2
	120416 NHG	❍	❍		❍				1,6
	SNMM 150616 NHG	❍	●	●		15,875	6,35	6,35	1,6
	SNMM 190612 NHG	❍	❍	❍	●	19,05	6,35	7,94	1,2
	190616 NHG	●	●	●	●				1,6
	190624 NHG	❍	●	●	●				2,4
	SNMM 190616 NHGS			●		19,05	6,35	7,94	1,6
	SNMM 120408 NHP			❍	●	12,7	4,76	5,16	0,8
	120412 NHP			●	●				1,2
	120416 NHP			❍	❍				1,6
	SNMM 150612 NHP				●	15,875	6,35	6,35	1,2
	SNMM 190612 NHP			●	●	19,05	6,35	7,94	1,2
	190616 NHP			●	●				1,6
	190624 NHP		●	●	●				2,4
	SNMM 250724 NHP	❍	●	●	●	25,4	7,94	9,12	2,4
	SNMM 250924 NHP	❍	❍	❍	●	25,4	9,52	9,12	2,4
	SNMM 310924 NHP	❍	●	●		31,75	9,52	8,8	2,4

Stock Items

Square Type

Shape	Cat. No.	Stock AC8015P	AC8020P	AC8025P	AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	SNMM 250724 NHU	❍	●	●		25,4	7,94	9,12	2,4
	SNMM 250924 NHU	❍	❍	❍		25,4	9,52	9,12	2,4
	SNMM 310924 NHU	❍	❍	❍		31,75	9,52	8,8	2,4
	SNMM 250724 NHW	❍	●	●		25,4	7,94	9,12	2,4
	SNMM 250924 NHW	❍	●	●		25,4	9,52	9,12	2,4
	SNMM 310924 NHW	❍	❍	❍		31,75	9,52	8,8	2,4
	SNMM 190616 NHF			❍	❍	19,05	6,35	7,94	1,6
	190624 NHF			❍	●				2,4
	SNMM 250724 NHF			❍	❍	25,4	7,94	9,12	2,4
	250732 NHF			❍	❍				3,2
	SNMM 250924 NHF			❍	●	25,4	9,52	9,12	2,4
	250932 NHF			❍	❍				3,2
	SNMM 310924 NHF			❍	❍	31,75	9,52	8,8	2,4

Triangular Type

Shape	Cat. No.	Stock AC8015P	AC8020P	AC8025P	AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	TNMG 160404 NFL			❍		9,525	4,76	3,81	0,4
	160408 NFL			❍					0,8
	TNMG 160402 NFE	❍	❍	❍	❍	9,525	4,76	3,81	0,2
	160404 NFE	❍	❍	❍	❍				0,4
	160408 NFE	❍	❍	❍	❍				0,8
	160412 NFE	❍	❍	❍	❍				1,2
	TNMG 160404 NLU	●	●	●	❍	9,525	4,76	3,81	0,4
	160408 NLU	●	●	●	❍				0,8
	160412 NLU	●	●	●	❍				1,2
	TNMG 160404 NSU	●	●	●	●	9,525	4,76	3,81	0,4
	160408 NSU	●	●	●	●				0,8
	160412 NSU	●	●	●					1,2
	TNMG 160404 NSE	●	●	●	❍	9,525	4,76	3,81	0,4
	160408 NSE	●	●	●	❍				0,8
	160412 NSE	●	●	●	❍				1,2
	TNMG 220404 NSE	●	●	●	❍	12,7	4,76	5,16	0,4
	220408 NSE	●	❍	❍	❍				0,8
	220412 NSE	❍	❍	❍	❍				1,2
	TNMG 160404 NEF	❍	●	●	❍	9,525	4,76	3,81	0,4
	160408 NEF	❍	●	●	❍				0,8
	TNMG 160304 NSX	❍	❍			9,525	3,18	3,81	0,4
	160308 NSX	❍	❍		❍				0,8
	TNMG 160404 NSX	●	❍	❍	❍	9,525	4,76	3,81	0,4
	160408 NSX	❍	●	●	❍				0,8
	TNMG 220404 NSX	❍	❍	❍	❍	12,7	4,76	5,16	0,4
	220408 NSX	❍	❍	❍	❍				0,8
	220412 NSX	❍	❍	❍	❍				1,2
	TNMG 160404 NGU	●	●	●	●	9,525	4,76	3,81	0,4
	160408 NGU	●	●	●	●				0,8
	160412 NGU	●	●	●	●				1,2
	160416 NGU	❍	●	●	●				1,6
	TNMG 220404 NGU			❍		12,7	4,76	5,16	0,4
	220408 NGU	●	●	●	❍				0,8
	220412 NGU	●	❍	❍	●				1,2
	TNMG 160404 NGE	●	●	●	❍	9,525	4,76	3,81	0,4
	160408 NGE	●	●	●	❍				0,8
	160412 NGE	●	●	●	●				1,2
	TNMG 220408 NGE	❍	●	●	●	12,7	4,76	5,16	0,8
	220412 NGE	❍	❍	❍	●				1,2
	TNMG 160404 NUX	❍	●	●	❍	9,525	4,76	3,81	0,4
	160408 NUX	●	●	●	●				0,8
	160412 NUX	●	●	●	❍				1,2
	TNMG 220408 NUX	❍	❍	❍	❍	12,7	4,76	5,16	0,8
	220412 NUX	❍	●	●	❍				1,2
	TNMG 160404 NUP		●	●	●	9,525	4,76	3,81	0,4
	160408 NUP		●	●	●				0,8
	TMMG 220408 NUP		●	●	●	12,7	4,76	5,16	0,8
	TNMG 160404 NUG	●		❍	●	9,525	4,76	3,81	0,4
	160408 NUG	●		●	●				0,8
	160412 NUG			❍	❍				1,2
	160416 NUG	●		❍	❍				1,6
	TNMG 220408 NUG			❍	●	12,7	4,76	5,16	0,8
	220412 NUG			❍	❍				1,2
	TNMG 160404 RUM	●				9,525	4,76	3,81	0,4
	160408 RUM	●							0,8
	TNMG 160404 NEG	❍	●	●	❍	9,525	4,76	3,81	0,4
	160408 NEG	❍	●	●	❍				0,8
	160412 NEG	❍	●	●	❍				1,2

Triangular Type

Shape	Cat. No.	Stock AC8015P	AC8020P	AC8025P	AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	TNMG 160408 NMU	●	●	●	●	9,525	4,76	3,81	0,8
	160412 NMU	●	●	●	❍				1,2
	TNMG 220408 NMU	●	●	●	●	12,7	4,76	5,16	0,8
	220412 NMU	●	●	●	●				1,2
	220416 NMU	●	●	●	●				1,6
	TNMG 270612 NMU			●	●	15,875	6,35	6,35	1,2
	270616 NMU			❍					1,6
	TNMG 160408 NEM	❍	●	●	❍	9,525	4,76	3,81	0,8
	160412 NEM	❍	❍		❍				1,2
	TNMG 330924 NEM			❍	❍	19,05	9,52	7,93	2,4
	TNMG 160408 NME	❍	●	●	❍	9,525	4,76	3,81	0,8
	160412 NME	●	●	●	❍				1,2
	TNMG 220408 NME	❍	❍	❍	❍	12,7	4,76	5,16	0,8
	220412 NME	❍	❍	❍	❍				1,2
	220416 NME	❍	❍	❍	❍				1,6
	TNMG 160408 NMX		❍	❍	❍	9,525	4,76	3,81	0,8
	160412 NMX		●	●	●				1,2
	TNMG 220408 NMX		❍	❍	❍	12,7	4,76	5,16	0,8
	220412 NMX		❍	❍	❍				1,2
	TNMG 160404 NUZ			❍		9,525	4,76	3,81	0,4
	160408 NUZ			❍	❍				0,8
	160412 NUZ			❍	❍				1,2
	160416 NUZ			❍					1,6
	160420 NUZ			❍					2,0
	TNMG 220408 NUZ			❍	●	12,7	4,76	5,16	0,8
	220412 NUZ			❍	❍				1,2
	220416 NUZ			❍	❍				1,6
	TNMG 270608 NUZ			❍		15,875	6,35	6,35	0,8
	270612 NUZ			❍					1,2
	270616 NUZ			❍	❍				1,6
	TNMG 160404 RHM	●	❍	❍	❍	9,525	4,76	3,81	0,4
	160404 LHM	❍	❍	❍	❍				0,4
	160408 RHM	❍	❍	❍	❍				0,8
	160408 LHM	❍	❍	❍	❍				0,8
	TNMG 220404 RHM	❍	❍	❍	❍	12,7	4,76	5,16	0,4
	220404 LHM	❍	❍	❍	❍				0,4
	220408 RHM	❍	❍	❍	❍				0,8
	220408 LHM	❍	❍	❍	❍				0,8
	TNMM 160404 NMP			❍		9,525	4,76	3,81	0,4
	160408 NMP	●		●	●				0,8
	160412 NMP			●	●				1,2
	TNMM 220408 NMP			●	●	12,7	4,76	5,16	0,8
	220412 NMP	●		●	●				1,2
	220416 NMP			●	●				1,6
	TNMM 270612 NMP			❍		15,875	6,35	6,35	1,2
	270616 NMP			❍					1,6
	TNMM 160408 NHG	●				9,525	4,76	3,81	0,8
	160412 NHG	●							1,2
	TNMM 220408 NHG			❍	❍	12,7	4,76	5,16	0,8
	220412 NHG			●	●				1,2
	220416 NHG			●	❍				1,6
	TNMM 160408 NHP				❍	9,525	4,76	3,81	0,8
	160412 NHP			❍	●				1,2
	TNMM 220408 NHP			❍	❍	12,7	4,76	5,16	0,8
	220412 NHP			❍	●				1,2
	220416 NHP			❍					1,6
	TNMM 270612 NHP			❍	●	15,875	6,35	6,35	1,2
	270616 NHP			❍	❍				1,6

35° Diamond Type

Shape	Cat. No.	Stock AC8015P	AC8020P	AC8025P	AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	VNMG 160404 NFL			❍		9,525	4,76	3,81	0,4
	160408 NFL		●	●					0,8
	VNMG 160402 NFE	❍	❍	❍	❍	9,525	4,76	3,81	0,2
	160404 NFE	❍	❍	❍	❍				0,4
	160408 NFE	❍	❍	❍	❍				0,8
	160412 NFE	❍	❍	❍	❍				1,2
	VNMG 160404 NLU	●	●	●		9,525	4,76	3,81	0,4
	160408 NLU	●	●	●					0,8
	160412 NLU	●	❍						1,2
	VNMG 160404 NSU	●	●	●	❍	9,525	4,76	3,81	0,4
	160408 NSU	●	●	●	●				0,8
	VNMG 160404 NSE	❍	❍	❍	❍	9,525	4,76	3,81	0,4
	160408 NSE	●	●	●	❍				0,8
	VNMG 160404 NSX	❍	❍	❍	❍	9,525	4,76	3,81	0,4
	160408 NSX	❍	❍	❍	❍				0,8

● Euro stock ❍ Japan stock

35° Diamond Type

Shape	Cat. No.	Stock AC8015P	Stock AC8020P	Stock AC8025P	Stock AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	VNMG 160402 NEF	❍	❍	❍	❍	9,525	4,76	3,81	0,2
	160404 NEF	❍	●	●	❍				0,4
	160408 NEF	❍	●	●	❍				0,8
	VNMG 160404 NGU	●	●	●	❍	9,525	4,76	3,81	0,4
	160408 NGU	●	●	●	❍				0,8
	160412 NGU	❍	●	●	❍				1,2
	VNMG 160404 NGE	❍	❍	❍	❍	9,525	4,76	3,81	0,4
	160408 NGE	❍	●	●	❍				0,8
	160412 NGE	❍	❍	❍	❍				1,2
	VNMG 160404 NUX	❍	❍	❍	❍	9,525	4,76	3,81	0,4
	160408 NUX	❍	❍	❍	❍				0,8
	160412 NUX	❍	❍	❍	❍				1,2
	VNMG 160404 NUP		●	●	●	9,525	4,76	3,81	0,4
	160408 NUP		●	●	●				0,8
	VNMG 160404 NUG			❍	❍	9,525	4,76	3,81	0,4
	160408 NUG			❍	❍				0,8
	160412 NUG	●							1,2
	VNMG 160404 NEG	❍	❍	●	❍	9,525	4,76	3,81	0,4
	160408 NEG	❍	●	●	❍				0,8
	160412 NEG	❍	●	●	❍				1,2
	VNMG 160404 NUZ			❍	❍	9,525	4,76	3,81	0,4
	160408 NUZ			❍	❍				0,8
	160412 NUZ			❍	❍				1,2

Trigon Type

Shape	Cat. No.	Stock AC8015P	Stock AC8020P	Stock AC8025P	Stock AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	WNMG 080404 NFL			❍		12,7	4,76	5,16	0,4
	080408 NFL			❍					0,8
	WNMG 060404 NFE	❍	❍	❍	❍	9,525	4,76	3,81	0,4
	060408 NFE	❍	❍	❍	❍				0,8
	WNMG 080402 NFE	❍	❍	❍	❍	12,7	4,76	5,16	0,2
	080404 NFE	❍	❍	❍	❍				0,4
	080408 NFE	❍	❍	❍	❍				0,8
	080412 NFE	❍	❍	❍	❍				1,2
	WNMG 060404 NLU	❍	❍	❍	❍	9,525	4,76	3,81	0,4
	060408 NLU	❍	❍	❍	❍				0,8
	060412 NLU	❍	❍	❍	❍				1,2
	WNMG 080404 NLU	●	●	●	❍	12,7	4,76	5,16	0,4
	080408 NLU	●	●	●	❍				0,8
	080412 NLU	❍	●	●	❍				1,2
 Wiper	WNMG 060404 NLUW	●	●	●		9,525	4,76	3,81	0,4
	060408 NLUW	●	●	●					0,8
 Wiper	WNMG 080404 NLUW	●	●	●		12,7	4,76	5,16	0,4
	080408 NLUW	●	●	●					0,8
	080412 NLUW	●	❍						1,2
	WNMG 06T304 NSU			❍		9,525	3,97	3,81	0,4
	06T308 NSU			❍					0,8
	WNMG 060404 NSU	●	●	●	❍	9,525	4,76	3,81	0,4
	060408 NSU	●	●	●	❍				0,8
	060412 NSU	❍	❍	❍	❍				1,2
	WNMG 080404 NSU	●	●	●	●	12,7	4,76	5,16	0,4
	080408 NSU	●	●	●	●				0,8
	080412 NSU	●	●	●	●				1,2
	WNMG 080404 NSE	●	●	●	❍	12,7	4,76	5,16	0,4
	080408 NSE	●	●	●	❍				0,8
	080412 NSE	●	●	●	❍				1,2
 Wiper	WNMG 060404 NSEW	❍	❍	❍	❍	9,525	4,76	3,81	0,4
	060408 NSEW	❍	❍	❍	❍				0,8
	WNMG 080404 NSEW	●	●	●		12,7	4,76	5,16	0,4
	080408 NSEW	●	●	●					0,8
	080412 NSEW	●	●	●					1,2
	WNMG 060404 NEF	❍	●	●	❍	9,525	4,76	3,81	0,4
	060408 NEF	❍	●	●	❍				0,8
	WNMG 080404 NEF	❍	●	●	❍	12,7	4,76	5,16	0,4
	080408 NEF	❍	●	●	❍				0,8
	WNMG 080404 NSX	❍	❍	❍	❍	12,7	4,76	5,16	0,4
	080408 NSX	●	❍	❍	●				0,8
	080412 NSX	❍	❍	❍	❍				1,2
	WNMG 060404 NGU	●	●	●	❍	9,525	4,76	3,81	0,4
	060408 NGU	●	●	●	❍				0,8
	060412 NGU	●	●	●	❍				1,2
	WNMG 080404 NGU	●	●	●	●	12,7	4,76	5,16	0,4
	080408 NGU	●	●	●	●				0,8
	080412 NGU	●	●	●	●				1,2
 Wiper	WNMG 060408 NGUW	❍	❍	❍	❍	9,525	4,76	3,81	0,8
	WNMG 080408 NGUW	●	●	●		12,7	4,76	5,16	0,8
	080412 NGUW	●	●	●					1,2
	WNMG 060408 NGE	●	❍	❍	❍	9,525	4,76	3,81	0,8
	060412 NGE	●	●	●	❍				1,2

Trigon Type

Shape	Cat. No.	Stock AC8015P	Stock AC8020P	Stock AC8025P	Stock AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	WNMG 080404 NGE	❍	●	●	❍	12,7	4,76	5,16	0,4
	080408 NGE	●	●	●	●				0,8
	080412 NGE	●	●	●	●				1,2
	080416 NGE	●	●	●	❍				1,6
	WNMG 080404 NUX	❍	●	●	●	12,7	4,76	5,16	0,4
	080408 NUX	●	●	●	●				0,8
	080412 NUX	●	●	●	●				1,2
	WNMG 080408 NUP		●	●	●	12,7	4,76	5,16	0,8
	080412 NUP		●	●					1,2
	WNMG 06T304 NUG			❍		9,525	3,97	3,81	0,4
	06T308 NUG			❍					0,8
	WNMG 060404 NUG			❍		9,525	4,76	3,81	0,4
	060408 NUG			❍					0,8
	WNMG 080404 NUG			❍	❍	12,7	4,76	5,16	0,4
	080408 NUG	●	●	●	●				0,8
	080412 NUG		●	●	●				1,2
	WNMG 060408 NEG	❍	●	●	❍	9,525	4,76	3,81	0,8
	060412 NEG	❍	❍		❍				1,2
	WNMG 080404 NEG	❍	●	●	❍	12,7	4,76	5,16	0,4
	080408 NEG	❍	●	●	❍				0,8
	080412 NEG	❍	●	●	❍				1,2
	WNMG 060408 NMU	●		❍	●	9,525	4,76	3,81	0,8
	060412 NMU	●							1,2
	WNMG 080408 NMU	●	●	●	●	12,7	4,76	5,16	0,8
	080412 NMU	●	●	●	●				1,2
	080416 NMU	●	●	●					1,6
	WNMG 080408 NEM	❍	●	●	❍	12,7	4,76	5,16	0,8
	080412 NEM	❍	●	●	❍				1,2
	WNMG 060408 NME	❍	❍	❍	❍	9,525	4,76	3,81	0,8
	060412 NME	❍	●	●	❍				1,2
	WNMG 080408 NME	●	●	●	●	12,7	4,76	5,16	0,8
	080412 NME	●	●	●	●				1,2
	080416 NME	●	●	●	❍				1,6
	WNMG 080408 NMX		❍	❍	●	12,7	4,76	5,16	0,8
	080412 NMX		❍	❍	●				1,2
	WNMG 080404 NUZ			❍		12,7	4,76	5,16	0,4
	080408 NUZ			❍	❍				0,8
	080412 NUZ			❍	❍				1,2
	WNMM 080408 NMP	●	●	●	●	12,7	4,76	5,16	0,8
	080412 NMP	●	●	●	●				1,2
	WNMM 080412 NHG	●				12,7	4,76	5,16	1,2

Inserts for T-REX

55° Corner Angle

Shape	Cat. No.	Stock AC8015P	Stock AC8020P	Stock AC8025P	Stock AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	TRM 551704 FL			❍		10,0	5,0		0,4
	551708 FL			❍					0,8
	TRM 551704 GU			❍		10,0	5,0		0,4
	551708 GU			❍					0,8
	551712 GU			❍					1,2
	TRM 551704 LU	●		❍		10,0	5,0		0,4
	551708 LU	●		❍					0,8
	551712 LU			❍					1,2
	TRM 551704 SU			❍		10,0	5,0		0,4
	551708 SU			❍					0,8
	551712 SU			❍					1,2

● Euro stock ❍ Japan stock

80° Diamond Type

Shape	Relief Angle	Cat. No.	Stock AC8015P	AC8020P	AC8025P	AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	7°	CCMT 060208 NFP	❍				6,35	2,38	2,8	0,8
	7°	CCMT 060202 NLU	●	●	●		6,35	2,38	2,8	0,2
		060204 NLU	●	●	●					0,4
		CCMT 09T304 NLU	●	●	●		9,525	3,97	4,4	0,4
		09T308 NLU	●	●	●					0,8
Wiper	7°	CCMT 09T304 NLUW	●	●	●		9,525	3,97	4,4	0,4
		09T308 NLUW	●	●	●					0,8
	7°	CCMT 060202 NLB		❍	❍	❍	6,35	2,38	2,8	0,2
		060204 NLB		❍	❍	❍				0,4
		060208 NLB		❍	❍	❍				0,8
		CCMT 09T302 NLB		❍	❍	❍	9,525	3,97	4,4	0,2
		09T304 NLB		❍	❍	❍				0,4
		09T308 NLB		❍	❍	❍				0,8
	7°	CCMT 060202 NSU	●	●	●	●	6,35	2,38	2,8	0,2
		060204 NSU	●	●	●	●				0,4
		060208 NSU	●	●	●	●				0,8
		CCMT 09T302 NSU	❍	●	●	❍	9,525	3,97	4,4	0,2
		09T304 NSU	●	●	●	●				0,4
		09T308 NSU	●	●	●	●				0,8
		CCMT 120404 NSU	●	●	●	●	12,7	4,76	5,5	0,4
		120408 NSU	●	●	●	●				0,8
	7°	CCMT 060204 NSC			❍		6,35	2,38	2,8	0,4
		CCMT 080304 NSC		●	●		7,94	3,18	3,4	0,4
		CCMT 090308 NSC			❍		9,525	3,18	4,4	0,8
		CCMT 120408 NSC			❍		12,7	4,76	5,5	0,8
	7°	CCMT 060204 NGU	●	●	●	●	6,35	2,38	2,8	0,4
		060208 NGU	●	●	●	❍				0,8
		CCMT 09T304 NGU	●	●	●	●	9,525	3,97	4,4	0,4
		09T308 NGU	●	●	●	●				0,8
		CCMT 120408 NGU	●	●	●	●	12,7	4,76	5,5	0,8
	7°	CCMT 060204 NSK	●	●	●	●	6,35	2,38	2,8	0,4
		060208 NSK			●	●				0,8
		CCMT 09T304 NSK			●	●	9,525	3,97	4,4	0,4
		09T308 NSK			●	●				0,8
		CCMT 120404 NSK			●	●	12,7	4,76	5,5	0,4
		120408 NSK			●	●				0,8
	7°	CCMT 09T304 NMU	●	●	●	●	9,525	3,97	4,4	0,4
		09T308 NMU	●	●	●	●				0,8
	7°	CCMT 09T308 NUS				●	9,525	3,97	4,4	0,8
	11°	CPMT 080204 NLU	❍	❍	❍		7,94	2,38	3,4	0,4
		CPMT 090304 NLU	❍	❍	❍		9,525	3,18	4,4	0,4
		090308 NLU	❍	❍	❍					0,8
Wiper	11°	CPMT 090304 NLUW	❍	❍	❍		9,525	3,18	4,4	0,4
		090308 NLUW	❍	❍	❍					0,8
	11°	CPMT 080204 NLB		❍	❍	❍	7,94	2,38	3,4	0,4
		CPMT 090304 NLB		❍	❍	❍	9,525	3,18	4,4	0,4
		090308 NLB		❍	❍	❍				0,8
	11°	CPMT 060204 NSU					6,35	2,38	2,8	0,4
		060208 NSU								0,8
		CPMT 080204 NSU	❍	❍	❍	❍	7,94	2,38	3,4	0,4
		080208 NSU	❍	❍	❍	❍				0,8
		CPMT 090304 NSU	❍	❍	❍	❍	9,525	3,18	4,4	0,4
		090308 NSU	❍	●	●	❍				0,8
	11°	CPMT 090304 NGU	❍	❍	❍	❍	9,525	3,18	4,4	0,4
		090308 NGU	❍	❍	❍	❍				0,8
	11°	CPMT 080204 NMU	❍	❍	❍		7,94	2,38	3,4	0,4
		080208 NMU	❍	❍	❍					0,8
		CPMT 090304 NMU	❍	❍	❍		9,525	3,18	4,4	0,4
		090308 NMU	❍	❍	❍					0,8
	11°	CPMT 060204 NUS				●	6,35	2,38	2,8	0,4
		CPMT 080308 NUS				●	7,94	3,18	3,4	0,8
		CPMT 09T308 NUS				●	9,525	3,97	4,4	0,8
	11°	CPMH 120408 NUS				●	12,7	4,76	5,5	0,8

55° Diamond Type

Shape	Relief Angle	Cat. No.	Stock AC8015P	AC8020P	AC8025P	AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	7°	DCMT 070202 NLU	●	❍	❍		6,35	2,38	2,8	0,2
		070204 NLU	●	●	●					0,4
		DCMT 11T302 NLU	●	●	●		9,525	3,97	4,4	0,2
		11T304 NLU	●	●	●					0,4
		11T308 NLU	●	●	●					0,8
Wiper	7°	DCMX 11T308 NLUW	●				9,525	3,97	4,4	0,8
	7°	DCMT 070202 NLB		❍	❍	❍	6,35	2,38	2,8	0,2
		070204 NLB		❍	❍	❍				0,4
		070208 NLB		❍	❍	❍				0,8
		DCMT 11T302 NLB		❍	❍	❍	9,525	3,97	4,4	0,2
		11T304 NLB		❍	❍	❍				0,4
		11T308 NLB		❍	❍	❍				0,8
	7°	DCMT 070202 NSU	●	●	●	●	6,35	2,38	2,8	0,2
		070204 NSU	●	●	●	●				0,4
		070208 NSU	●	●	●	●				0,8
		DCMT 11T302 NSU	●	●	●	❍	9,525	3,97	4,4	0,2
		11T304 NSU	●	●	●	●				0,4
		11T308 NSU	●	●	●	●				0,8
	7°	DCMT 070204 NGU	●	●	●	●	6,35	2,38	2,8	0,4
		070208 NGU	●	●	❍	❍				0,8
		DCMT 11T302 NGU	●	●	●	❍	9,525	3,97	4,4	0,2
		11T304 NGU	●	●	●	●				0,4
		11T308 NGU	●	●	●	●				0,8
		11T312 NGU			❍					1,2
	7°	DCMT 070204 NSK			●	●	6,35	2,38	2,8	0,4
		070208 NSK			●	●				0,8
		DCMT 11T304 NSK			●	●	9,525	3,97	4,4	0,4
		11T308 NSK	●		●	●				0,8
		11T312 NSK			●					1,2
	7°	DCMT 11T304 NMU	●	●	●	●	9,525	3,97	4,4	0,4
		11T308 NMU	●	●	●	●				0,8

Square Type

Shape	Relief Angle	Cat. No.	Stock AC8015P	AC8020P	AC8025P	AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	7°	SCMT 09T304 NLU	❍	❍	❍		9,525	3,97	4,4	0,4
		09T308 NLU	●	❍	❍					0,8
		SCMT 120412 NLU		●	●		12,7	4,76	5,5	1,2
	7°	SCMT 09T304 NLB		❍	❍	❍	9,525	3,97	4,4	0,4
		09T308 NLB		❍	❍	❍				0,8
	7°	SCMT 09T304 NSU	●	●	●	●	9,525	3,97	4,4	0,4
		09T308 NSU	●	●	●	●				0,8
		120404 NSU	❍	●	●	●	12,7	4,76	5,5	0,4
		120408 NSU	●	●	●	●				0,8
	7°	SCMT 09T304 NGU	●	●	●	❍	9,525	3,97	4,4	0,4
		09T308 NGU	●	●	●	●				0,8
		120408 NGU	❍	●	●	❍	12,7	4,76	5,5	0,8
	7°	SCMT 09T304 NSK			●	●	9,525	3,97	4,4	0,4
		09T308 NSK			●	●				0,8
		SCMT 120404 NSK			●		12,7	4,76	5,5	0,4
		120408 NSK			●	●				0,8
		120412 NSK			●					1,2
	7°	SCMT 09T308 NMU	❍	●	●	●	9,525	3,97	4,4	0,8
		SCMT 120408 NMU	●	●	●	●	12,7	4,76	5,5	0,8
		120412 NMU		●	●					1,2
	7°	SPMT 090304 NLU	❍	❍	❍		9,525	3,18	3,4	0,4
		090308 NLU	❍	❍	❍					0,8
	11°	SPMT 090304 NLB		❍	❍	❍	9,525	3,18	3,4	0,4
		090308 NLB		❍	❍	❍				0,8
	11°	SPMT 090304 NSF			❍	❍	9,525	3,18	3,3	0,4
		090308 NSF			❍	●				0,8

Round Type

Shape	Relief Angle	Cat. No.	Stock AC8015P	AC8020P	AC8025P	AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	7°	RCMT 1003M0NRX	●	●	●	❍	10,0	3,18	3,6	-
		10T3M0NRX	●	●	●	●	10,0	3,97	3,6	-
		1204M0NRX	●	●	●	●	12,0	4,76	4,4	-
		1606M0NRX	●	●	●	●	16,0	6,35	5,0	-
		2006M0NRX	●	●	●	●	20,0	6,35	6,5	-
		2507M0NRX	❍	❍	❍	❍	25,0	7,94	7,6	-
	7°	RCMT 1204M0NRH	❍	❍	❍	❍	12,0	4,76	4,4	-
		1606M0NRH	❍	●	●	❍	16,0	6,35	5,0	-
		2006M0NRH	❍	❍	❍	❍	20,0	6,35	6,5	-
	7°	RCMX 1003M0NRP	❍	●	●	●	10,0	3,18	3,6	-
		1204M0NRP	❍	●	●	●	12,0	4,76	4,2	-
		1606M0NRP	❍	●	●	●	16,0	6,35	5,2	-
		2006M0NRP	❍	●	●	●	20,0	6,35	6,5	-
		2507M0NRP	❍	❍	❍	❍	25,0	7,94	7,2	-
		3209M0NRP	❍	❍	❍		32,0	9,52	9,5	-

● Euro stock ❍ Japan stock

Triangular Type

Shape	Relief Angle	Cat. No.	Stock AC8015P	Stock AC8020P	Stock AC8025P	Stock AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	7°	TCMT 110204 NLU	❍	●	●		6,35	2,38	2,8	0,4
		110208 NLU	❍	❍	❍					0,8
	7°	TCMT 110204 NLB		❍	❍	❍	6,35	2,38	2,8	0,4
		110208 NLB		❍	❍	❍				0,8
	7°	TCMT 110204 NSU	●	●	●	●	6,35	2,38	2,8	0,4
		110208 NSU	●	●	●	●				0,8
		TCMT 16T304 NSU	●	●	●	●	9,525	3,97	4,3	0,4
		16T308 NSU	●	●	●	●				0,8
	7°	TCMT 110204 NSK			●	●	6,35	2,38	2,8	0,4
		110208 NSK			●	●				0,8
		TCMT 16T304 NSK			●	●				0,4
		16T308 NSK			●	●	9,525	3,97	4,3	0,8
		16T312 NSK			●					1,2
	11°	TPMT 080204 NLU	●				4,76	2,38	2,4	0,4
		TPMT 090202 NLU	❍	❍	❍		5,56	2,38	2,8	0,2
		090204 NLU	❍	❍	❍					0,4
		TPMT 110304 NLU	●	❍	❍		6,35	3,18	3,4	0,4
		110308 NLU	●	❍	❍					0,8
	11°	TPMT 080202 NLB		❍	❍	❍	4,76	2,38	2,4	0,2
		080204 NLB		❍	❍	❍				0,4
		TPMT 090202 NLB		❍	❍	❍	5,56	2,38	2,8	0,2
		090204 NLB		❍	❍	❍				0,4
		TPMT 110302 NLB		❍	❍	❍				0,2
		110304 NLB		❍	❍	❍	6,35	3,18	3,4	0,4
		110308 NLB		❍	❍	❍				0,8
		TPMT 160304 NLB		❍	❍	❍	9,525	3,18	4,4	0,4
		160308 NLB		❍	❍	❍				0,8
		TPMT 160404 NLB		❍	❍	❍	9,525	4,76	4,4	0,4
		160408 NLB		❍	❍	❍				0,8
	11°	TPMT 110302 NSU	❍	❍	❍	❍				0,2
		110304 NSU	●	●	●	❍	6,35	3,18	3,4	0,4
		110308 NSU	●	●	●	❍				0,8
		TPMT 160404 NSU	●	❍	❍	❍	9,525	4,76	4,4	0,4
		160408 NSU	●	❍	❍	❍				0,8
	11°	TPMT 110304 NGU	❍	●	●	❍	6,35	3,18	3,4	0,4
		110308 NGU	❍	❍	❍	❍				0,8
		160404 NGU	❍	❍	❍	❍	9,525	4,76	4,4	0,4
		160408 NGU	●	❍	❍	❍				0,8
	11°	TPMT 110304 NMU	❍	❍	❍		6,35	3,18	3,4	0,4
		110308 NMU	❍	❍	❍					0,8
	11°	TPMT 160404 NMU	❍	❍	❍		9,525	4,76	4,4	0,4
		160408 NMU	❍	❍						0,8
	11°	TPMH 110304 NSF		●	●	●	6,35	3,18	3,3	0,4
		110308 NSF		●	●	●				0,8
		TPMT 160404 NSF			❍	●	9,525	4,76	4,4	0,4
		160408 NSF		●	●	●				0,8

35° Diamond Type

Shape	Relief Angle	Cat. No.	Stock AC8015P	Stock AC8020P	Stock AC8025P	Stock AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	5°	VBMT 110304 NLU	❍	●	●		6,35	3,18	2,8	0,4
		110308 NLU	❍	❍	❍					0,8
		VBMT 160404 NLU	●	❍	❍		9,525	4,76	4,4	0,4
		160408 NLU	●	●	●					0,8
	5°	VBMT 110302 NLB		❍	❍	❍	6,35	3,18	2,8	0,2
		110304 NLB		❍	❍	❍				0,4
		110308 NLB		❍	❍	❍				0,8
		VBMT 160404 NLB		❍	❍	❍	9,525	4,76	4,4	0,4
		160408 NLB		❍	❍	❍				0,8
		160412 NLB		❍	❍	❍				1,2
	5°	VBMT 110204 NSU	●				6,35	2,38	2,8	0,4
		110208 NSU	●	●	●					0,8
		VBMT 110304 NSU	●	●	●		6,35	3,18	2,8	0,4
		110308 NSU	●	●	●					0,8
		VBMT 160404 NSU	●	●	●	●	9,525	4,76	4,4	0,4
		160408 NSU	●	●	●	●				0,8
		160412 NSU	❍	❍	❍					1,2
	5°	VBMT 110304 NGU	❍	❍	❍	❍	6,35	3,18	2,8	0,4
		110308 NGU	●	❍	❍	❍				0,8
		VBMT 160404 NGU	●	●	●	❍	9,525	4,76	4,4	0,4
		160408 NGU	●	●	●	●				0,8
	5°	VBMT 110204 NSK			●	●	6,35	2,38	2,8	0,4
		110208 NSK			●					0,8
		VBMT 160404 NSK	●		●	●				0,4
		160406 NSK			●	●	9,525	4,76	4,4	0,6
		160408 NSK	●		●	●				0,8
		160412 NSK	●	●	●	●				1,2
	5°	VBMT 160408 NMU	●				9,525	4,76	4,4	0,8

35° Diamond Type

Shape	Relief Angle	Cat. No.	Stock AC8015P	Stock AC8020P	Stock AC8025P	Stock AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	7°	VCMT 160404 NLU	❍	❍	❍		9,525	4,76	4,4	0,4
		160408 NLU	❍	❍	❍					0,8
	7°	VCMT 080202 NLB		❍	❍	❍	4,76	2,38	2,3	0,2
		080204 NLB		❍	❍	❍				0,4
		VCMT 160404 NLB		❍	❍	❍	9,525	4,76	4,4	0,4
		160408 NLB		❍	❍	❍				0,8
	7°	VCMT 110304 NSU		❍	❍		6,35	3,18	2,8	0,4
		110308 NSU		❍	❍					0,8
		VCMT 160404 NSU	●	●	●	●	9,525	4,76	4,4	0,4
		160408 NSU	●	●	●	●				0,8
	7°	VCMT 160404 NGU	●	●	●	❍	9,525	4,76	4,4	0,4
		160408 NGU	●	●	●	❍				0,8
	7°	VCMT 160404 NSK		●	●	●	9,525	4,76	4,4	0,4
		160408 NSK		●	●	●				0,8

Trigon Type

Shape	Relief Angle	Cat. No.	Stock AC8015P	Stock AC8020P	Stock AC8025P	Stock AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	11°	WPMT 110204 NLB		❍	❍	❍	6,35	2,38	2,8	0,4
		WPMT 160308 NLB		❍	❍	❍	9,525	3,18	4,4	0,8

Square Type (without Insert Hole)

Shape	Relief Angle	Cat. No.	Stock AC8015P	Stock AC8020P	Stock AC8025P	Stock AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	11°	SPMR 090304 NSF			❍	❍	9,525	3,18	-	0,4
		090308 NSF			❍	❍				0,8
		SPMR 120304 NSF			●	❍				0,4
		120308 NSF		●	●	●	12,7	3,18	-	0,8
		120312 NSF		●	●					1,2
	11°	SPMR 090304 NUJ			❍		9,525	3,18	-	0,4
		090308 NUJ			❍	❍				0,8
		SPMR 120304 NUJ			❍		12,7	3,18	-	0,4
		120308 NUJ			❍	❍				0,8

Triangular Type (without Insert Hole)

Shape	Relief Angle	Cat. No.	Stock AC8015P	Stock AC8020P	Stock AC8025P	Stock AC8035P	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	11°	TPMR 110304 NSF		●	●	●	6,35	3,18	-	0,4
		110308 NSF		●	●	●				0,8
		TPMR 160304 NSF		●	●	●				0,4
		160308 NSF		●	●	●	9,525	3,18	-	0,8
		160312 NSF		●	●	●				1,2
		TPMR 220408 NSF					12,7	4,76	-	0,8
		220412 NSF								1,2
	11°	TPMR 110304 NUJ			❍	❍	6,35	3,18	-	0,4
		110308 NUJ			❍	❍				0,8
		TPMR 160304 NUJ			❍	●	9,525	3,18	-	0,4
		160308 NUJ			❍	●				0,8

● Euro stock ❍ Japan stock

Inserts for Grooving Tools GND Type (for Grooving / Cut-off)

Fig. 1

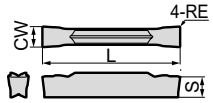


Fig. 2

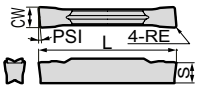
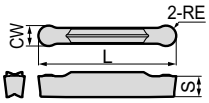


Fig. 3



Grooving / Traversing

Cat. No.	Stock AC8025P	Stock AC8035P	Dimensions (mm) CW Width of Cut	CW Tolerance	RE	L	S	Pcs./Pack	Fig.
GCM N3002 MG	●	●	3,0	±0,03	0,2	21,1	3,8		1
N3004 MG	●	●	3,0	±0,03	0,4	21,1	3,8		1
GCM N4002 MG	●	●	4,0	±0,03	0,2	26,4	4,0		1
N4004 MG	●	●	4,0	±0,03	0,4	26,4	4,0		1
N4008 MG	●	●	4,0	±0,03	0,8	26,4	4,0		1
GCM N5004 MG	●	●	5,0	±0,03	0,4	26,4	4,1		1
N5008 MG	●	●	5,0	±0,03	0,8	26,4	4,1	5	1
GCM N6004 MG	●	●	6,0	±0,03	0,4	26,4	4,5		1
N6008 MG	●	●	6,0	±0,03	0,8	26,4	4,5		1
GCM N7004 MG	●	●	7,0	±0,04	0,4	28,8	5,5		1
N7008 MG	●	●	7,0	±0,04	0,8	28,8	5,5		1
GCM N8004 MG	●	●	8,0	±0,04	0,4	28,8	6,0		1
N8008 MG	●	●	8,0	±0,04	0,8	28,8	6,0		1
GCM N3002 ML	●	●	3,0	±0,03	0,2	21,1	3,8		1
N3004 ML	●	●	3,0	±0,03	0,4	21,1	3,8		1
GCM N4002 ML	●	●	4,0	±0,03	0,2	26,4	4,0		1
N4004 ML	●	●	4,0	±0,03	0,4	26,4	4,0		1
N4008 ML	●	●	4,0	±0,03	0,8	26,4	4,0		1
GCM N5004 ML	●	●	5,0	±0,03	0,4	26,4	4,1		1
N5008 ML	●	●	5,0	±0,03	0,8	26,4	4,1	5	1
GCM N6004 ML	●	●	6,0	±0,03	0,4	26,4	4,5		1
N6008 ML	●	●	6,0	±0,03	0,8	26,4	4,5		1
GCM N7004 ML	●	●	7,0	±0,04	0,4	28,8	5,5		1
N7008 ML	●	●	7,0	±0,04	0,8	28,8	5,5		1
GCM N8004 ML	●	●	8,0	±0,04	0,4	28,8	6,0		1
N8008 ML	●	●	8,0	±0,04	0,8	28,8	6,0		1

Grooving / Cut-Off Machining

Cat. No.	Stock AC8025P	Stock AC8035P	Dimensions (mm) CW Width of Cut	CW Tolerance	RE	L	S	Pcs./Pack	Fig.
GCM N2002 GG		●	2,0	±0,03	0,2	21,1	3,6		1
GCM N3002 GG		●	3,0	±0,03	0,2	21,1	3,8		1
N3004 GG		●	3,0	±0,03	0,4	26,4	3,8		1
GCM N4002 GG		●	4,0	±0,03	0,2	26,4	4,0		1
N4004 GG		●	4,0	±0,03	0,4	26,4	4,0		1
GCM N5002 GG		●	5,0	±0,03	0,2	26,4	4,1	5	1
N5004 GG		●	5,0	±0,03	0,4	26,4	4,1		1
GCM N6002 GG		●	6,0	±0,03	0,2	26,4	4,5		1
N6004 GG		●	6,0	±0,03	0,4	26,4	4,5		1
GCM N7004 GG		●	7,0	±0,04	0,4	28,8	5,5		1
GCM N8004 GG		●	8,0	±0,04	0,4	28,8	6,0		1
GCM N2002 GL		●	2,0	±0,03	0,2	21,1	3,6		1
N2004 GL		●	2,0	±0,03	0,4	21,1	3,6		1
GCM N3002 GL		●	3,0	±0,03	0,2	21,1	3,8		1
N3004 GL		●	3,0	±0,03	0,4	21,1	3,8		1
GCM N4002 GL		●	4,0	±0,03	0,2	26,4	4,0		1
N4004 GL		●	4,0	±0,03	0,4	26,4	4,0		1
GCM N5002 GL		●	5,0	±0,03	0,2	26,4	4,1	5	1
N5004 GL		●	5,0	±0,03	0,4	26,4	4,1		1
GCM N6002 GL		●	6,0	±0,03	0,2	26,4	4,5		1
N6004 GL		●	6,0	±0,03	0,4	26,4	4,5		1
GCM N7004 GL		●	7,0	±0,04	0,4	28,8	5,5		1
GCM N8004 GL		●	8,0	±0,04	0,4	28,8	6,0		1
GCM N3002 GF		●	3,0	±0,03	0,2	21,1	3,8		1
N3004 GF		●	3,0	±0,03	0,4	21,1	3,8		1
GCM N4002 GF		●	4,0	±0,03	0,2	26,4	4,0		1
N4004 GF		●	4,0	±0,03	0,4	26,4	4,0		1
GCM N5002 GF		●	5,0	±0,03	0,2	26,4	4,1		1
N5004 GF		●	5,0	±0,03	0,4	26,4	4,1		1
GCM N6002 GF		●	6,0	±0,03	0,2	26,4	4,5	5	1
N6004 GF		●	6,0	±0,03	0,4	26,4	4,5		1
GCM N7002 GF		●	7,0	±0,04	0,2	28,8	5,5		1
N7004 GF		●	7,0	±0,04	0,4	28,8	5,5		1
GCM N8002 GF		●	8,0	±0,04	0,2	28,8	6,0		1
N8004 GF		●	8,0	±0,04	0,4	28,8	6,0		1

● Euro stock

Cut-Off Machining (Handed Edge)

Cat. No.	Stock AC8025P		Dimensions (mm) CW Width of Cut	CW Tolerance	RE	L	S	Pcs./Pack	Fig.
GCM R2002 CG 05	●	5°	2,0	±0,03	0,2	21,1	3,6		2
L2002 CG 05	●	5°	2,0	±0,03	0,2	21,1	3,6		2
GCM R3002 CG 05	●	5°	3,0	±0,03	0,2	21,3	3,8		2
L3002 CG 05	●	5°	3,0	±0,03	0,2	21,3	3,8	5	2
GCM R4002 CG 05	●	5°	4,0	±0,04	0,2	26,7	4,0		2
L4002 CG 05	●	5°	4,0	±0,04	0,2	26,7	4,0		2

External Profiling / External Radius Grooving

Cat. No.	Stock AC8025P	Stock AC8035P	Dimensions (mm) CW Width of Cut	CW Tolerance	RE	L	S	Pcs./Pack	Fig.
GCM N3015 RG	●	●	3,0	±0,03	1,5	21,1	3,8		3
N4020 RG	●	●	4,0	±0,03	2,0	26,4	4,0		3
N5025 RG	●	●	5,0	±0,03	2,5	27,2	4,1		3
N6030 RG	●	●	6,0	±0,03	3,0	27,5	4,5	5	3
GCM N7035 RG	●	●	7,0	±0,04	3,5	29,1	5,5		3
N8040 RG	●	●	8,0	±0,04	4,0	29,3	6,0		3

Profiling / Radius Grooving / Necking

Cat. No.	Stock AC8025P	Stock AC8035P	Dimensions (mm) CW Width of Cut	CW Tolerance	RE	L	S	Pcs./Pack	Fig.
GCM N3015 RN	●	●	3,0	±0,03	1,5	22,6	3,8		3
N4020 RN	●	●	4,0	±0,03	2,0	28,2	4,0		3
N5025 RN	●	●	5,0	±0,03	2,5	28,3	4,1	5	3
N6030 RN	●	●	6,0	±0,03	3,0	28,3	4,5		3

GCM R: Right hand GCM L: Left hand

Combine the insert with a holder such that the width of cut (CW) matches.

Part Number Suffix Code (Chipbreakers)

Type	Symbol	Applications
Grooving/traversing	**MG**	Multi functional/general purpose
	ML	Multi functional/low feed
Grooving/cut-off machining	**GG**	Grooving/general purpose
	GL	Grooving/low feed
	GF	Grooving/low cutting force
Cut off (handed edge)	**CG**	Cut off/general purpose
External profiling/ext. radius groov.	**RG**	Profiling/general purpose
Profiling/radius grooving/necking	**RN**	Facing/necking/general purpose

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