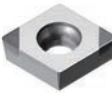
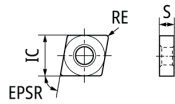


Steel									
Stainless Steel									
Cast Iron		●	●	●	●			○	○
Non-Ferrous Material									
Heat Resistant Alloy									
Hardened Material				●	●	●	●	●	●
Others (non-metallic)									

Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D2	Length	No. of edge	S1	CBN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
	(ISO)		°	mm	mm	°	mm	mm	mm		mm	mm	B16	B22	B23	B30	B36	B6K	B40	B52	B5K																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
			PVD	PVD	PVD	PVD	PVD	PVD	PVD		PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	CCGW060202PDFNX	Up-sharp edge	80	6.35	2.38	7	0.2	-	2.3	2	-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							</

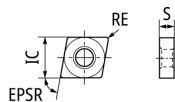


Steel
Stainless Steel
Cast Iron
Non-Ferrous Material
Heat Resistant Alloy
Hardened Material
Others (non-metallic)

Shape	Item Number (ISO)	CECC	EPSR °	IC mm	S mm	AN °	RE mm	D2 mm	Length of edge	No. of edge	S1 mm	B16 PVD	B22 PVD	B23 PVD	B30 PVD	B36 PVD	B6K PVD	B40 PVD	B52 PVD	B5K PVD
	CNGA120402PQS01015	S01015	80	12.7	4.76	-	0.2	-	2.3	4	-					●		●	●	
	CNGA120402PQS01325	S01325	80	12.7	4.76	-	0.2	-	2.3	4	-					●		●	●	
	CNGA120402PQS01535	S01535	80	12.7	4.76	-	0.2	-	2.3	4	-					●		●	●	
	CNGA120402PQT01020	T01020	80	12.7	4.76	-	0.2	-	2.3	4	-				●					
	CNGA120404PDFNX	Up-sharp edge	80	12.7	4.76	-	0.4	-	2.3	2	-				●				●	
	CNGA120404PQFNX	Up-sharp edge	80	12.7	4.76	-	0.4	-	2.3	4	-				●				●	
	CNGA120404PQS01015	S01015	80	12.7	4.76	-	0.4	-	2.3	4	-					●	●	●	●	●
	CNGA120404PQS01020	S01020	80	12.7	4.76	-	0.4	-	2.3	4	-			●						
	CNGA120404PQS01325	S01325	80	12.7	4.76	-	0.4	-	2.3	4	-					●	●	●	●	●
	CNGA120404PQS01535	S01535	80	12.7	4.76	-	0.4	-	2.3	4	-					●	●	●	●	●
	CNGA120404PQT01020	T01020	80	12.7	4.76	-	0.4	-	2.3	4	-				●					
	CNGA120408PDFNX	Up-sharp edge	80	12.7	4.76	-	0.8	-	2.2	2	-				●					
	CNGA120408PQFNX	Up-sharp edge	80	12.7	4.76	-	0.8	-	2.2	4	-				●				●	
	CNGA120408PQS01015	S01015	80	12.7	4.76	-	0.8	-	2.2	4	-					●	●	●	●	●
	CNGA120408PQS01020	S01020	80	12.7	4.76	-	0.8	-	2.2	4	-			●						
	CNGA120408PQS01325	S01325	80	12.7	4.76	-	0.8	-	2.2	4	-					●	●	●	●	●
	CNGA120408PQS01535	S01535	80	12.7	4.76	-	0.8	-	2.2	4	-					●	●	●	●	●
	CNGA120408PQT00515	T00515	80	12.7	4.76	-	0.8	-	2.2	4	-				●					
	CNGA120408PQT01020	T01020	80	12.7	4.76	-	0.8	-	2.2	4	-				●					
	CNGA120412PDFNX	Up-sharp edge	80	12.7	4.76	-	1.2	-	2.7	2	-				●					
	CNGA120412PQFNX	Up-sharp edge	80	12.7	4.76	-	1.2	-	2.7	4	-				●				●	
	CNGA120412PQS01015	S01015	80	12.7	4.76	-	1.2	-	2.7	4	-					●	●	●	●	●
	CNGA120412PQS01020	S01020	80	12.7	4.76	-	1.2	-	2.7	4	-			●						
	CNGA120412PQS01325	S01325	80	12.7	4.76	-	1.2	-	2.7	4	-					●	●	●	●	●
	CNGA120412PQS01535	S01535	80	12.7	4.76	-	1.2	-	2.7	4	-					●	●	●	●	●
	CNGA120412PQT00515	T00515	80	12.7	4.76	-	1.2	-	2.7	4	-				●					
	CNGA120412PQT01020	T01020	80	12.7	4.76	-	1.2	-	2.7	4	-				●					
	CNGA120416PQS01015	S01015	80	12.7	4.76	-	1.6	-	2.6	4	-					●		●	●	
	CNGA120416PQS01020	S01020	80	12.7	4.76	-	1.6	-	2.6	4	-			●						
	CNGA120416PQS01325	S01325	80	12.7	4.76	-	1.6	-	2.6	4	-					●	●	●	●	
	CNGA120416PQS01535	S01535	80	12.7	4.76	-	1.6	-	2.6	4	-					●		●	●	
	CNGA120416PQT01020	T01020	80	12.7	4.76	-	1.6	-	2.6	4	-				●					
	CNGA120420PQS01015	S01015	80	12.7	4.76	-	2	-	2.6	4	-					●		●	●	
	CNGA120420PQS01020	S01020	80	12.7	4.76	-	2	-	2.6	4	-			●						
	CNGA120420PQS01325	S01325	80	12.7	4.76	-	2	-	2.6	4	-					●	●	●	●	
	CNGA120420PQS01535	S01535	80	12.7	4.76	-	2	-	2.6	4	-					●		●	●	
	CNGA120420PQT01020	T01020	80	12.7	4.76	-	2	-	2.6	4	-				●					

Turning Insert
D

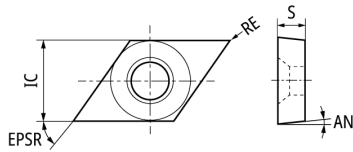
CNGA-W with wiper for higher feed



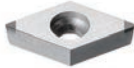
Steel
Stainless Steel
Cast Iron
Non-Ferrous Material
Heat Resistant Alloy
Hardened Material
Others (non-metallic)

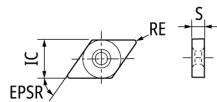
Shape	Item Number (ISO)	CECC	EPSR °	IC mm	S mm	AN °	RE mm	D2 mm	Length of edge	No. of edge	S1 mm	B16 PVD	B22 PVD	B23 PVD	B30 PVD	B36 PVD	B6K PVD	B40 PVD	B52 PVD	B5K PVD
	CNGA120404PQWS01015	S01015	80	12.7	4.76	-	0.4	-	2.3	4	-					●		●	●	
	CNGA120404PQWS01535	S01535	80	12.7	4.76	-	0.4	-	2.3	4	-					●		●	●	
	CNGA120408PQWS01015	S01015	80	12.7	4.76	-	0.8	-	2.2	4	-					●		●	●	
	CNGA120408PQWS01535	S01535	80	12.7	4.76	-	0.8	-	2.2	4	-					●		●	●	
	CNGA120412PQWS01015	S01015	80	12.7	4.76	-	1.2	-	2.7	4	-					●		●	●	
	CNGA120412PQWS01535	S01535	80	12.7	4.76	-	1.2	-	2.7	4	-					●		●	●	

Wiper Width: 0.25mm
Applicable holders: 95°cutting edge angle (C31, CCLN).



Steel										
Stainless Steel										
Cast Iron										
Non-Ferrous Material										
Heat Resistant Alloy										
Hardened Material										
Others (non-metallic)										

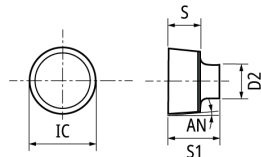
Shape	Item Number (ISO)	CECC	EPSR	IC	S	AN	RE	D2	Length of edge	No. of edge	S1	CBN									
			°	mm	mm	°	mm	mm			mm	B16 PVD	B22	B23	B30	B36	B6K PVD	B40	B52	B5K PVD	
	DCGW070202PDFNX	Up-sharp edge	55	6.35	2.38	7	0.2	-	2.4	2	-										
	DCGW070202PDS01015	S01015	55	6.35	2.38	7	0.2	-	2.4	2	-										
	DCGW070202PDS01535	S01535	55	6.35	2.38	7	0.2	-	2.4	2	-										
	DCGW070204PDFNX	Up-sharp edge	55	6.35	2.38	7	0.4	-	2.2	2	-										
	DCGW070204PDS01015	S01015	55	6.35	2.38	7	0.4	-	2.2	2	-										
	DCGW070204PDS01535	S01535	55	6.35	2.38	7	0.4	-	2.2	2	-										
	DCGW070208PDFNX	Up-sharp edge	55	6.35	2.38	7	0.8	-	1.9	2	-										
	DCGW070208PDS01015	S01015	55	6.35	2.38	7	0.8	-	1.9	2	-										
	DCGW070208PDS01535	S01535	55	6.35	2.38	7	0.8	-	1.9	2	-										
	DCGW070208PTS01325	S01325	55	6.35	2.38	7	0.8	-	1.9	2	-										
	DCGW11T301PDS01015	S01015	55	9.525	3.97	7	0.1	-	2.3	2	-										
	DCGW11T302PDFNX	Up-sharp edge	55	9.525	3.97	7	0.2	-	2.4	2	-										
	DCGW11T302PDS01015	S01015	55	9.525	3.97	7	0.2	-	2.4	2	-										
	DCGW11T302PTS01325	S01325	55	9.525	3.97	7	0.2	-	2.4	2	-										
	DCGW11T302PDS01535	S01535	55	9.525	3.97	7	0.2	-	2.4	2	-										
	DCGW11T304PDFNX	Up-sharp edge	55	9.525	3.97	7	0.4	-	2.2	2	-										
	DCGW11T304PDS01015	S01015	55	9.525	3.97	7	0.4	-	2.2	2	-										
	DCGW11T304PDS01535	S01535	55	9.525	3.97	7	0.4	-	2.2	2	-										
	DCGW11T304PDT01015	T01015	55	9.525	3.97	7	0.4	-	2.2	2	-										
	DCGW11T304PTS01325	S01325	55	9.525	3.97	7	0.4	-	2.2	2	-										
	DCGW11T308PDFNX	Up-sharp edge	55	9.525	3.97	7	0.8	-	1.9	2	-										
	DCGW11T308PDS01015	S01015	55	9.525	3.97	7	0.8	-	1.9	2	-										
	DCGW11T308PTS01325	S01325	55	9.525	3.97	7	0.8	-	1.9	2	-										
	DCGW11T308PDS01535	S01535	55	9.525	3.97	7	0.8	-	1.9	2	-										
	DCGW11T312PDS01015	S01015	55	9.525	3.97	7	1.2	-	2.6	2	-										



Steel	
Stainless Steel	
Cast Iron	● ● ● ● ○ ○
Non-Ferrous Material	
Heat Resistant Alloy	
Hardened Material	● ● ● ● ● ●
Others (non-metallic)	

Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D2	Length	No. of edge	S1	CBN										
	(ISO)		°	mm	mm	°	mm	mm	mm		PVD	B16	B22	B23	B30	B36	PVD	B6K	B40	B52	PVD	B5K
	DNGA150402PQS01015	S01015	55	12.7	4.76	–	0.2	–	2.4	4	–											
	DNGA150402PQS01325	S01325	55	12.7	4.76	–	0.2	–	2.4	4	–											
	DNGA150402PQS01535	S01535	55	12.7	4.76	–	0.2	–	2.4	4	–											
	DNGA150402PQT01020	T01020	55	12.7	4.76	–	0.2	–	2.4	4	–											
	DNGA150404PDFNX	Up-sharp edge	55	12.7	4.76	–	0.4	–	2.2	2	–											
	DNGA150404PQFNX	Up-sharp edge	55	12.7	4.76	–	0.4	–	2.2	4	–											
	DNGA150404PQS01015	S01015	55	12.7	4.76	–	0.4	–	2.2	4	–											
	DNGA150404PQS01020	S01020	55	12.7	4.76	–	0.4	–	2.2	4	–											
	DNGA150404PQS01325	S01325	55	12.7	4.76	–	0.4	–	2.2	4	–											
	DNGA150404PQS01535	S01535	55	12.7	4.76	–	0.4	–	2.2	4	–											
	DNGA150404PQT01020	T01020	55	12.7	4.76	–	0.4	–	2.2	4	–											
	DNGA150408PDFNX	Up-sharp edge	55	12.7	4.76	–	0.8	–	1.9	2	–											
	DNGA150408PQFNX	Up-sharp edge	55	12.7	4.76	–	0.8	–	1.9	4	–											
	DNGA150408PQS01015	S01015	55	12.7	4.76	–	0.8	–	1.9	4	–											
	DNGA150408PQS01020	S01020	55	12.7	4.76	–	0.8	–	1.9	4	–											
	DNGA150408PQS01325	S01325	55	12.7	4.76	–	0.8	–	1.9	4	–											
	DNGA150408PQS01535	S01535	55	12.7	4.76	–	0.8	–	1.9	4	–											
	DNGA150408PQT01020	T01020	55	12.7	4.76	–	0.8	–	1.9	4	–											
	DNGA150412PDFNX	Up-sharp edge	55	12.7	4.76	–	1.2	–	2.6	2	–											
	DNGA150412PQFNX	Up-sharp edge	55	12.7	4.76	–	1.2	–	2.6	4	–											
	DNGA150412PQS01015	S01015	55	12.7	4.76	–	1.2	–	2.6	4	–											
	DNGA150412PQS01020	S01020	55	12.7	4.76	–	1.2	–	2.6	4	–											
	DNGA150412PQS01325	S01325	55	12.7	4.76	–	1.2	–	2.6	4	–											
	DNGA150412PQS01535	S01535	55	12.7	4.76	–	1.2	–	2.6	4	–											
	DNGA150412PQT01020	T01020	55	12.7	4.76	–	1.2	–	2.6	4	–											
	DNGA150416PQS01015	S01015	55	12.7	4.76	–	1.6	–	2.2	4	–											
	DNGA150416PQS01020	S01020	55	12.7	4.76	–	1.6	–	2.2	4	–											
	DNGA150416PQS01325	S01325	55	12.7	4.76	–	1.6	–	2.2	4	–											
	DNGA150416PQS01535	S01535	55	12.7	4.76	–	1.6	–	2.2	4	–											
	DNGA150416PQT01020	T01020	55	12.7	4.76	–	1.6	–	2.2	4	–											
	DNGA150420PQS01015	S01015	55	12.7	4.76	–	2	–	2.4	4	–											
	DNGA150420PQS01325	S01325	55	12.7	4.76	–	2	–	2.4	4	–											
	DNGA150420PQS01535	S01535	55	12.7	4.76	–	2	–	2.4	4	–											
	DNGA150602PQS01015	S01015	55	12.7	6.35	–	0.2	–	2.4	4	–											
	DNGA150604PQS01015	S01015	55	12.7	6.35	–	0.4	–	2.2	4	–											
	DNGA150604PQS01325	S01325	55	12.7	6.35	–	0.4	–	2.2	4	–											
	DNGA150604PQT01020	T01020	55	12.7	6.35	–	0.4	–	2.2	4	–											
	DNGA150608PQS01015	S01015	55	12.7	6.35	–	0.8	–	1.9	4	–											
	DNGA150608PQS01325	S01325	55	12.7	6.35	–	0.8	–	1.9	4	–											
	DNGA150608PQT01020	T01020	55	12.7	6.35	–	0.8	–	1.9	4	–											
	DNGA150612PQS01015	S01015	55	12.7	6.35	–	1.2	–	2.6	4	–											
	DNGA150612PQS01325	S01325	55	12.7	6.35	–	1.2	–	2.6	4	–											
	DNGA150612PQT01020	T01020	55	12.7	6.35	–	1.2	–	2.6	4	–											
	DNGA150616PQS01015	S01015	55	12.7	6.35	–	1.6	–	2.2	4	–											
	DNGA150616PQS01325	S01325	55	12.7	6.35	–	1.6	–	2.2	4	–											
	DNGA150616PQT01020	T01020	55	12.7	6.35	–	1.6	–	2.2	4	–											

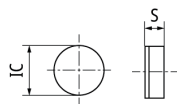
RBGX



Steel										
Stainless Steel										
Cast Iron			●	●	●	●			○	○
Non-Ferrous Material										
Heat Resistant Alloy										
Hardened Material				●	●	●	●	●	●	●
Others (non-metallic)										

Shape	Item Number (ISO)	CECC	EPSR	IC	S	AN	RE	D2	Length of edge	No. of edge	S1	CBN									
			°	mm	mm	°	mm	mm	mm		mm	B16 PVD	B22	B23	B30	B36	B6K PVD	B40	B52	B5K PVD	
	RBGX16S	S01015	-	16	8	5	-	8	-	-	13	●									
	RBGX20S	S01015	-	20	10	5	-	10	-	-	15	●									

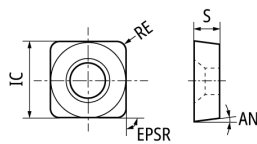
RN.N



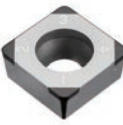
Steel										
Stainless Steel										
Cast Iron			●	●	●	●			○	○
Non-Ferrous Material										
Heat Resistant Alloy										
Hardened Material				●	●	●	●	●	●	●
Others (non-metallic)										

Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D2	Length of edge	No. of edge	S1	CBN								
	(ISO)		°	mm	mm	°	mm	mm	mm		mm	B16 PVD	B22	B23	B30	B36	B6K PVD	B40	B52	B5K PVD
	RNMN120300ST01025	T01025	-	12.7	3.18	-	-	-	-	-	-	●								
	RNMN120400ST01025	T01025	-	12.7	4.76	-	-	-	-	-	-	●								
	RNGN120400S	Z01015	-	12.7	4.76	-	-	-	-	-	-	●								

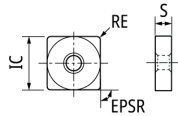
SCGW



Steel										
Stainless Steel										
Cast Iron			●	●	●	●			○	○
Non-Ferrous Material										
Heat Resistant Alloy										
Hardened Material				●	●	●	●	●	●	●
Others (non-metallic)										

Shape	Item Number (ISO)	CECC	EPSR	IC	S	AN	RE	D2	Length of edge	No. of edge	S1	CBN									
			°	mm	mm	°	mm	mm			mm	mm	B16 PVD	B22	B23	B30	B36	B6K PVD	B40	B52	B5K PVD
	SCGW09T304PQZ01015	Z01015	90	9.525	3.97	7	0.4	-	1.5	4	-					●					
	SCGW09T308PQZ01015	Z01015	90	9.525	3.97	7	0.8	-	1.3	4	-					●					

SNGA



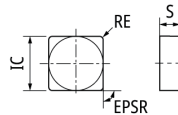
Steel
Stainless Steel
Cast Iron
Non-Ferrous Material
Heat Resistant Alloy
Hardened Material
Others (non-metallic)

Shape	Item Number (ISO)	CECC	EPSR °	IC mm	S mm	AN °	RE mm	D2 mm	Length of edge	No. of edge	S1 mm	B16 PVD	B22 PVD	B23 PVD	B30 PVD	B36 PVD	B6K PVD	B40 PVD	B52 PVD	B5K PVD
	SNGA120402PES01325	S01325	90	12.7	4.76	-	0.2	-	2.3	8	-					●		●	●	
	SNGA120404PES01015	S01015	90	12.7	4.76	-	0.4	-	2.3	8	-							●	●	
	SNGA120404PES01020	S01020	90	12.7	4.76	-	0.4	-	2.3	8	-			●						
	SNGA120404PES01325	S01325	90	12.7	4.76	-	0.4	-	2.3	8	-					●				
	SNGA120404PES01535	S01535	90	12.7	4.76	-	0.4	-	2.3	8	-							●	●	
	SNGA120404PET01020	T01020	90	12.7	4.76	-	0.4	-	2.3	8	-				●					
	SNGA120408PES01015	S01015	90	12.7	4.76	-	0.8	-	2.3	8	-							●	●	
	SNGA120408PES01020	S01020	90	12.7	4.76	-	0.8	-	2.3	8	-			●						
	SNGA120408PES01325	S01325	90	12.7	4.76	-	0.8	-	2.3	8	-					●				
	SNGA120408PES01535	S01535	90	12.7	4.76	-	0.8	-	2.3	8	-							●	●	
	SNGA120408PET01020	T01020	90	12.7	4.76	-	0.8	-	2.3	8	-				●					
	SNGA120412PES01015	S01015	90	12.7	4.76	-	1.2	-	2.8	8	-				●			●	●	
	SNGA120412PES01020	S01020	90	12.7	4.76	-	1.2	-	2.8	8	-			●						
	SNGA120412PES01325	S01325	90	12.7	4.76	-	1.2	-	2.8	8	-					●				
	SNGA120412PES01535	S01535	90	12.7	4.76	-	1.2	-	2.8	8	-							●	●	
	SNGA120412PET01020	T01020	90	12.7	4.76	-	1.2	-	2.8	8	-				●					
	SNGA120416PES01015	S01015	90	12.7	4.76	-	1.6	-	2.8	8	-								●	
	SNGA120416PES01325	S01325	90	12.7	4.76	-	1.6	-	2.8	8	-					●				
	SNGA120416PET01020	T01020	90	12.7	4.76	-	1.6	-	2.8	8	-				●					

Turning Insert

D

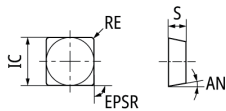
SNMN



Steel
Stainless Steel
Cast Iron
Non-Ferrous Material
Heat Resistant Alloy
Hardened Material
Others (non-metallic)

Shape	Item Number (ISO)	CECC	EPSR °	IC mm	S mm	AN °	RE mm	D2 mm	Length of edge	No. of edge	S1 mm	B16 PVD	B22 PVD	B23 PVD	B30 PVD	B36 PVD	B6K PVD	B40 PVD	B52 PVD	B5K PVD
	SNMN090308ST00525	T00525	90	9.525	3.18	-	0.8	-	-	8	-	●								
	SNMN090312ST01025	T01025	90	9.525	3.18	-	1.2	-	-	8	-	●								
	SNMN120308ST01025	T01025	90	12.7	3.18	-	0.8	-	-	8	-	●								
	SNMN120312ST01025	T01025	90	12.7	3.18	-	1.2	-	-	8	-	●								
	SNMN120408ST01025	T01025	90	12.7	4.76	-	0.8	-	-	8	-	●								
	SNMN120412ST02025	T02025	90	12.7	4.76	-	1.2	-	-	8	-	●								
	SNMN120416ST02025	T02025	90	12.7	4.76	-	1.6	-	-	8	-	●								

SPGN



Steel

Stainless Steel

Cast Iron

Non-Ferrous Material

Heat Resistant Alloy

Hardened Material

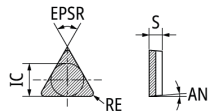
Others (non-metallic)

● ● ● ● ○ ○

● ● ● ● ●

Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D2	Length	No. of edge	S1	CBN									
	(ISO)		°	mm	mm	°	mm	mm	mm		of edge	mm	B16 PVD	B22	B23	B30	B36	B6K PVD	B40	B52	B5K PVD
	SPGN090304PQS01015	S01015	90	9.525	3.18	11	0.4	-	2.3	4	-							●	●		
	SPGN090304PQS01020	S01020	90	9.525	3.18	11	0.4	-	2.3	4	-		●								
	SPGN090304PQS01535	S01535	90	9.525	3.18	11	0.4	-	2.3	4	-							●	●		
	SPGN090304PQT01020	T01020	90	9.525	3.18	11	0.4	-	2.3	4	-			●							
	SPGN090308PQS01015	S01015	90	9.525	3.18	11	0.8	-	2.3	4	-							●	●		
	SPGN090308PQS01020	S01020	90	9.525	3.18	11	0.8	-	2.3	4	-			●							
	SPGN090308PQS01535	S01535	90	9.525	3.18	11	0.8	-	2.3	4	-							●	●		
	SPGN090308PQT01020	T01020	90	9.525	3.18	11	0.8	-	2.3	4	-				●						
	SPGN090312PQS01015	S01015	90	9.525	3.18	11	1.2	-	2.8	4	-							●	●		
	SPGN090312PQS01020	S01020	90	9.525	3.18	11	1.2	-	2.8	4	-			●							
	SPGN090312PQS01535	S01535	90	9.525	3.18	11	1.2	-	2.8	4	-							●	●		
	SPGN090312PQT01020	T01020	90	9.525	3.18	11	1.2	-	2.8	4	-				●						

TBGN



Steel

Stainless Steel

Cast Iron

Non-Ferrous Material

Heat Resistant Alloy

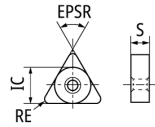
Hardened Material

Others (non-metallic)

● ● ● ● ○ ○

● ● ● ● ●

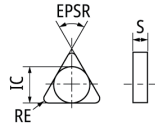
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D2	Length	No. of edge	S1	CBN									
	(ISO)		°	mm	mm	°	mm	mm	mm		of edge	mm	B16 PVD	B22	B23	B30	B36	B6K PVD	B40	B52	B5K PVD
	TBGN060102SS01015	S01015	60	3.97	1.59	5	0.2	-	6.5	3	-									●	
	TBGN060104SS01015	S01015	60	3.97	1.59	5	0.4	-	6.3	3	-									●	
	TBGN060108SS01015	S01015	60	3.97	1.59	5	0.8	-	5.7	3	-									●	



Steel
Stainless Steel
Cast Iron
Non-Ferrous Material
Heat Resistant Alloy
Hardened Material
Others (non-metallic)

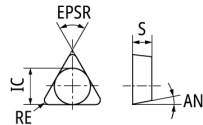
Shape	Item Number (ISO)	CECC	EPSR °	IC mm	S mm	AN °	RE mm	D2 mm	Length of edge	No. of edge	S1 mm	B16 PVD	B22 PVD	B23 PVD	B30 PVD	B36 PVD	B6K PVD	B40 PVD	B52 PVD	B5K PVD	CBN
	TNGA160401PHFNX	Up-sharp edge	60	9.525	4.76	-	0.1	-	2.1	6	-										
	TNGA160401PHS01015	S01015	60	9.525	4.76	-	0.1	-	2.1	6	-										
	TNGA160401PHS01325	S01325	60	9.525	4.76	-	0.1	-	2.1	6	-										
	TNGA160401PHS01535	S01535	60	9.525	4.76	-	0.1	-	2.1	6	-										
	TNGA160402PHFNX	Up-sharp edge	60	9.525	4.76	-	0.2	-	2.2	6	-										
	TNGA160402PHS01015	S01015	60	9.525	4.76	-	0.2	-	2.2	6	-										
	TNGA160402PHS01325	S01325	60	9.525	4.76	-	0.2	-	2.2	6	-										
	TNGA160402PHS01535	S01535	60	9.525	4.76	-	0.2	-	2.2	6	-										
	TNGA160402PTFNX	Up-sharp edge	60	9.525	4.76	-	0.2	-	2.2	3	-										
	TNGA160404PHFNX	Up-sharp edge	60	9.525	4.76	-	0.4	-	2	6	-										
	TNGA160404PHS01015	S01015	60	9.525	4.76	-	0.4	-	2	6	-										
	TNGA160404PHS01020	S01020	60	9.525	4.76	-	0.4	-	2	6	-										
	TNGA160404PHS01325	S01325	60	9.525	4.76	-	0.4	-	2	6	-										
	TNGA160404PHS01535	S01535	60	9.525	4.76	-	0.4	-	2	6	-										
	TNGA160404PHT01020	T01020	60	9.525	4.76	-	0.4	-	2	6	-										
	TNGA160404PTFNX	Up-sharp edge	60	9.525	4.76	-	0.4	-	2	3	-										
	TNGA160408PHFNX	Up-sharp edge	60	9.525	4.76	-	0.8	-	1.7	6	-										
	TNGA160408PHS01015	S01015	60	9.525	4.76	-	0.8	-	1.7	6	-										
	TNGA160408PHS01020	S01020	60	9.525	4.76	-	0.8	-	1.7	6	-										
	TNGA160408PHS01325	S01325	60	9.525	4.76	-	0.8	-	1.7	6	-										
	TNGA160408PHS01535	S01535	60	9.525	4.76	-	0.8	-	1.7	6	-										
	TNGA160408PHT01020	T01020	60	9.525	4.76	-	0.8	-	1.7	6	-										
	TNGA160408PTFNX	Up-sharp edge	60	9.525	4.76	-	0.8	-	1.7	3	-										
	TNGA160412PHFNX	Up-sharp edge	60	9.525	4.76	-	1.2	-	2.3	6	-										
	TNGA160412PHS01015	S01015	60	9.525	4.76	-	1.2	-	2.3	6	-										
	TNGA160412PHS01020	S01020	60	9.525	4.76	-	1.2	-	2.3	6	-										
	TNGA160412PHS01325	S01325	60	9.525	4.76	-	1.2	-	2.3	6	-										
	TNGA160412PHS01535	S01535	60	9.525	4.76	-	1.2	-	2.3	6	-										
	TNGA160412PHT01020	T01020	60	9.525	4.76	-	1.2	-	2.3	6	-										
	TNGA160412PTFNX	Up-sharp edge	60	9.525	4.76	-	1.2	-	2.3	3	-										
	TNGA160416PHS01015	S01015	60	9.525	4.76	-	1.6	-	2.1	6	-										
	TNGA160416PHS01325	S01325	60	9.525	4.76	-	1.6	-	2.1	6	-										
	TNGA160416PHS01535	S01535	60	9.525	4.76	-	1.6	-	2.1	6	-										
	TNGA160416PHT01020	T01020	60	9.525	4.76	-	1.6	-	2.1	6	-										
	TNGA220412PHS01015	S01015	60	12.7	4.76	-	1.2	-	2.3	6	-										
	TNGA220412PHS01535	S01535	60	12.7	4.76	-	1.2	-	2.3	6	-										

Turning Insert
D



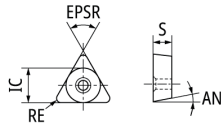
Steel
Stainless Steel
Cast Iron
Non-Ferrous Material
Heat Resistant Alloy
Hardened Material
Others (non-metallic)

Shape	Item Number (ISO)	CECC	EPSR °	IC mm	S mm	AN °	RE mm	D2 mm	Length of edge	No. of edge	S1 mm	B16 PVD	B22 PVD	B23 PVD	B30 PVD	B36 PVD	B6K PVD	B40 PVD	B52 PVD	B5K PVD	CBN
	TNMN110312ST01025	T01025	60	6.35	3.18	-	1.2	-	-	6	-										
	TNMN160408ST01025	T01025	60	9.525	4.76	-	0.8	-	-	6	-										
	TNMN160412ST01025	T01025	60	9.525	4.76	-	1.2	-	-	6	-										
	TNMN160412ST02025	T02025	60	9.525	4.76	-	1.2	-	-	6	-										

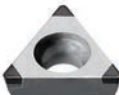


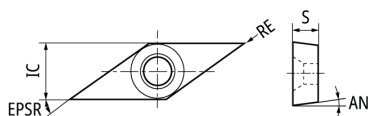
Steel										
Stainless Steel										
Cast Iron										
Non-Ferrous Material										
Heat Resistant Alloy										
Hardened Material										
Others (non-metallic)										

Shape	Item Number (ISO)	CECC	EPSR	IC	S	AN	RE	D2	Length of edge	No. of edge	S1	CBN									
			°	mm	mm	°	mm	mm	mm		mm	B16 PVD	B22	B23	B30	B36	B6K PVD	B40	B52	B5K PVD	
	TPGN110302PTS01015	S01015	60	6.35	3.18	11	0.2	-	2.2	3	-										●
	TPGN110302PTS01020	S01020	60	6.35	3.18	11	0.2	-	2.2	3	-							●			
	TPGN110302PTS01325	S01325	60	6.35	3.18	11	0.2	-	2.2	3	-							●	●		
	TPGN110302PTS01535	S01535	60	6.35	3.18	11	0.2	-	2.2	3	-							●	●		
	TPGN110304PTS01015	S01015	60	6.35	3.18	11	0.4	-	2	3	-							●	●		
	TPGN110304PTS01020	S01020	60	6.35	3.18	11	0.4	-	2	3	-							●			
	TPGN110304PTS01325	S01325	60	6.35	3.18	11	0.4	-	2	3	-							●	●		
	TPGN110304PTS01535	S01535	60	6.35	3.18	11	0.4	-	2	3	-							●	●		
	TPGN110304PTT01020	T01020	60	6.35	3.18	11	0.4	-	2	3	-				●						
	TPGN110308PTS01015	S01015	60	6.35	3.18	11	0.8	-	1.7	3	-							●	●		
	TPGN110308PTS01020	S01020	60	6.35	3.18	11	0.8	-	1.7	3	-							●			
	TPGN110308PTS01325	S01325	60	6.35	3.18	11	0.8	-	1.7	3	-							●	●		
	TPGN110308PTS01535	S01535	60	6.35	3.18	11	0.8	-	1.7	3	-							●	●		
	TPGN110308PTT01020	T01020	60	6.35	3.18	11	0.8	-	1.7	3	-				●						
	TPGN110312PTS01015	S01015	60	6.35	3.18	11	1.2	-	2.3	3	-							●	●		
	TPGN110312PTS01020	S01020	60	6.35	3.18	11	1.2	-	2.3	3	-							●			
	TPGN110312PTS01325	S01325	60	6.35	3.18	11	1.2	-	2.3	3	-							●	●		
	TPGN110312PTS01535	S01535	60	6.35	3.18	11	1.2	-	2.3	3	-							●	●		
	TPGN110312PTT01020	T01020	60	6.35	3.18	11	1.2	-	2.3	3	-				●						
	TPGN160302PTS01015	S01015	60	9.525	3.18	11	0.2	-	2.2	3	-							●	●		
	TPGN160302PTS01325	S01325	60	9.525	3.18	11	0.2	-	2.2	3	-							●	●		
	TPGN160302PTS01535	S01535	60	9.525	3.18	11	0.2	-	2.2	3	-							●	●		
	TPGN160304PTS01015	S01015	60	9.525	3.18	11	0.4	-	2	3	-							●	●		
	TPGN160304PTS01020	S01020	60	9.525	3.18	11	0.4	-	2	3	-							●			
	TPGN160304PTS01325	S01325	60	9.525	3.18	11	0.4	-	2	3	-							●	●		
	TPGN160304PTS01535	S01535	60	9.525	3.18	11	0.4	-	2	3	-							●	●		
	TPGN160304PTT01020	T01020	60	9.525	3.18	11	0.4	-	2	3	-				●						
	TPGN160308PTS01015	S01015	60	9.525	3.18	11	0.8	-	1.7	3	-							●	●		
	TPGN160308PTS01020	S01020	60	9.525	3.18	11	0.8	-	1.7	3	-							●			
	TPGN160308PTS01325	S01325	60	9.525	3.18	11	0.8	-	1.7	3	-							●	●		
	TPGN160308PTS01535	S01535	60	9.525	3.18	11	0.8	-	1.7	3	-							●	●		
	TPGN160308PTT01020	T01020	60	9.525	3.18	11	0.8	-	1.7	3	-				●						
	TPGN160312PTS01015	S01015	60	9.525	3.18	11	1.2	-	2.3	3	-							●	●		
	TPGN160312PTS01020	S01020	60	9.525	3.18	11	1.2	-	2.3	3	-							●			
	TPGN160312PTS01325	S01325	60	9.525	3.18	11	1.2	-	2.3	3	-							●	●		
	TPGN160312PTS01535	S01535	60	9.525	3.18	11	1.2	-	2.3	3	-							●	●		
	TPGN160312PTT01020	T01020	60	9.525	3.18	11	1.2	-	2.3	3	-				●						

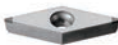


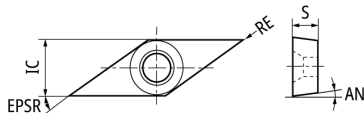
Steel
Stainless Steel
Cast Iron
Non-Ferrous Material
Heat Resistant Alloy
Hardened Material
Others (non-metallic)

Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D2	Length of edge	No. of edge	S1	CBN									
	(ISO)											B16 PVD	B22	B23	B30	B36	B6K	B40	B52	B5K PVD	
	TPGW090202PTS01015	S01015	60	5.56	2.38	11	0.2	-	2.2	3	-						●			●	
	TPGW090202PTS01325	S01325	60	5.56	2.38	11	0.2	-	2.2	3	-						●			●	
	TPGW090202PTS01535	S01535	60	5.56	2.38	11	0.2	-	2.2	3	-						●			●	
	TPGW090204PTS01015	S01015	60	5.56	2.38	11	0.4	-	2	3	-						●			●	
	TPGW090204PTS01325	S01325	60	5.56	2.38	11	0.4	-	2	3	-						●			●	
	TPGW090204PTS01535	S01535	60	5.56	2.38	11	0.4	-	2	3	-						●			●	
	TPGW090208PTS01015	S01015	60	5.56	2.38	11	0.8	-	1.7	3	-						●			●	
	TPGW090208PTS01325	S01325	60	5.56	2.38	11	0.8	-	1.7	3	-						●			●	
	TPGW090208PTS01535	S01535	60	5.56	2.38	11	0.8	-	1.7	3	-						●			●	
	TPGW090312PTS01015	S01015	60	5.56	3.18	11	1.2	-	2.3	3	-						●			●	
	TPGW090312PTS01325	S01325	60	5.56	3.18	11	1.2	-	2.3	3	-						●			●	
	TPGW090312PTS01535	S01535	60	5.56	3.18	11	1.2	-	2.3	3	-						●			●	
	TPGW110302PTS01015	S01015	60	6.35	3.18	11	0.2	-	2.2	3	-						●		●	●	
	TPGW110302PTS01325	S01325	60	6.35	3.18	11	0.2	-	2.2	3	-						●			●	
	TPGW110302PTS01535	S01535	60	6.35	3.18	11	0.2	-	2.2	3	-						●		●	●	
	TPGW110302PTT01020	T01020	60	6.35	3.18	11	0.2	-	2.2	3	-					●					
	TPGW110304PTS01015	S01015	60	6.35	3.18	11	0.4	-	2	3	-						●		●	●	
	TPGW110304PTS01325	S01325	60	6.35	3.18	11	0.4	-	2	3	-						●		●	●	
	TPGW110304PTS01535	S01535	60	6.35	3.18	11	0.4	-	2	3	-						●		●	●	
	TPGW110304PTT01020	T01020	60	6.35	3.18	11	0.4	-	2	3	-					●					
	TPGW110304PTT01515	T01515	60	6.35	3.18	11	0.4	-	2	3	-				●	●					
	TPGW110308PTS01015	S01015	60	6.35	3.18	11	0.8	-	1.7	3	-						●		●	●	
	TPGW110308PTS01325	S01325	60	6.35	3.18	11	0.8	-	1.7	3	-						●		●	●	
	TPGW110308PTS01535	S01535	60	6.35	3.18	11	0.8	-	1.7	3	-						●		●	●	
	TPGW110308PTT01020	T01020	60	6.35	3.18	11	0.8	-	1.7	3	-					●					
	TPGW110308PTT01515	T01515	60	6.35	3.18	11	0.8	-	1.7	3	-				●						
	TPGW110312PTS01015	S01015	60	6.35	3.18	11	1.2	-	2.3	3	-								●	●	
	TPGW110312PTS01325	S01325	60	6.35	3.18	11	1.2	-	2.3	3	-								●	●	
	TPGW110312PTS01535	S01535	60	6.35	3.18	11	1.2	-	2.3	3	-								●	●	
	TPGW110312PTT01020	T01020	60	6.35	3.18	11	1.2	-	2.3	3	-					●					
	TPGW110312PTT01515	T01515	60	6.35	3.18	11	1.2	-	2.3	3	-				●						



Steel										
Stainless Steel										
Cast Iron										
Non-Ferrous Material										
Heat Resistant Alloy										
Hardened Material										
Others (non-metallic)										

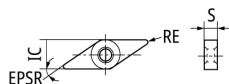
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	D2	Length	No. of edge	S1	CBN									
	(ISO)		°	mm	mm	°	mm	mm	mm		of edge	mm	B16 PVD	B22	B23	B30	B36	B6K PVD	B40	B52	B5K PVD
	VBGW110302PDFNX	Up-sharp edge	35	6.35	3.18	5	0.2	-	2.6	2	-					●					
	VBGW110302PDS01015	S01015	35	6.35	3.18	5	0.2	-	2.6	2	-						●			●	
	VBGW110302PDS01535	S01535	35	6.35	3.18	5	0.2	-	2.6	2	-						●			●	
	VBGW110302PDS01325	S01325	35	6.35	3.18	5	0.2	-	2.6	2	-						●			●	
	VBGW110304PDFNX	Up-sharp edge	35	6.35	3.18	5	0.4	-	2.5	2	-					●					
	VBGW110304PDS01015	S01015	35	6.35	3.18	5	0.4	-	2.5	2	-						●			●	
	VBGW110304PDS01535	S01535	35	6.35	3.18	5	0.4	-	2.5	2	-						●			●	
	VBGW110304PDT01020	T01020	35	6.35	3.18	5	0.4	-	2.5	2	-					●					
	VBGW110304PDS01325	S01325	35	6.35	3.18	5	0.4	-	2.5	2	-						●			●	
	VBGW110308PDS01015	S01015	35	6.35	3.18	5	0.8	-	1.6	2	-									●	
	VBGW110308PDS01535	S01535	35	6.35	3.18	5	0.8	-	1.6	2	-									●	
	VBGW110308PDT01020	T01020	35	6.35	3.18	5	0.8	-	1.6	2	-					●					
	VBGW110308PDS01325	S01325	35	6.35	3.18	5	0.8	-	1.6	2	-									●	
	VBGW110312PDS01015	S01015	35	6.35	3.18	5	1.2	-	2.7	2	-									●	
	VBGW110312PDS01535	S01535	35	6.35	3.18	5	1.2	-	2.7	2	-									●	
	VBGW110312PDT01020	T01020	35	6.35	3.18	5	1.2	-	2.7	2	-					●					
	VBGW110312PDS01325	S01325	35	6.35	3.18	5	1.2	-	2.7	2	-									●	
	VBGW160402PDS01015	S01015	35	9.525	4.76	5	0.2	-	2.6	2	-									●	
	VBGW160402PDS01535	S01535	35	9.525	4.76	5	0.2	-	2.6	2	-									●	
	VBGW160402PDS01325	S01325	35	9.525	4.76	5	0.2	-	2.6	2	-									●	
	VBGW160404PDS01015	S01015	35	9.525	4.76	5	0.4	-	2.5	2	-									●	
	VBGW160404PDS01535	S01535	35	9.525	4.76	5	0.4	-	2.5	2	-									●	
	VBGW160404PDS01325	S01325	35	9.525	4.76	5	0.4	-	2.5	2	-									●	
	VBGW160408PDS01015	S01015	35	9.525	4.76	5	0.8	-	1.6	2	-						●			●	
	VBGW160408PDS01535	S01535	35	9.525	4.76	5	0.8	-	1.6	2	-						●			●	
	VBGW160408PDS01325	S01325	35	9.525	4.76	5	0.8	-	1.6	2	-						●			●	
	VBGW160412PDS01015	S01015	35	9.525	4.76	5	1.2	-	2.7	2	-									●	
	VBGW160412PDS01535	S01535	35	9.525	4.76	5	1.2	-	2.7	2	-									●	
	VBGW160412PDS01325	S01325	35	9.525	4.76	5	1.2	-	2.7	2	-									●	



Steel
Stainless Steel
Cast Iron
Non-Ferrous Material
Heat Resistant Alloy
Hardened Material
Others (non-metallic)

Shape	Item Number (ISO)	CECC	EPSR °	IC mm	S mm	AN °	RE mm	D2 mm	Length of edge	No. of edge	S1 mm	B16 PVD	B22	B23	B30	B36 PVD	B6K PVD	B40	B52	B5K PVD
	VCGW080202PDS01015	S01015	35	4.76	2.38	7	0.2	-	2.6	2	-									●
	VCGW080204PDS01015	S01015	35	4.76	2.38	7	0.4	-	2.5	2	-									●
	VCGW080208PDS01015	S01015	35	4.76	2.38	7	0.8	-	1.6	2	-									●
	VCGW110302PDS01015	S01015	35	6.35	3.18	7	0.2	-	2.6	2	-								●	●
	VCGW110302PDS01535	S01535	35	6.35	3.18	7	0.2	-	2.6	2	-								●	●
	VCGW110304PDS01015	S01015	35	6.35	3.18	7	0.4	-	2.5	2	-								●	●
	VCGW110304PDS01535	S01535	35	6.35	3.18	7	0.4	-	2.5	2	-								●	●
	VCGW110308PDS01015	S01015	35	6.35	3.18	7	0.8	-	1.6	2	-								●	●
	VCGW110308PDS01535	S01535	35	6.35	3.18	7	0.8	-	1.6	2	-								●	●
	VCGW110312PDS01015	S01015	35	6.35	3.18	7	1.2	-	2.7	2	-								●	●
	VCGW110312PDS01535	S01535	35	6.35	3.18	7	1.2	-	2.7	2	-								●	●
	VCGW160402PDS01015	S01015	35	9.525	4.76	7	0.2	-	2.6	2	-								●	
	VCGW160402PDS01535	S01535	35	9.525	4.76	7	0.2	-	2.6	2	-								●	
	VCGW160404PDS01015	S01015	35	9.525	4.76	7	0.4	-	2.5	2	-								●	●
	VCGW160404PDS01535	S01535	35	9.525	4.76	7	0.4	-	2.5	2	-								●	●
	VCGW160404PDT01020	T01020	35	9.525	4.76	7	0.4	-	2.5	2	-				●					
	VCGW160408PDS01015	S01015	35	9.525	4.76	7	0.8	-	1.6	2	-								●	●
	VCGW160408PDS01535	S01535	35	9.525	4.76	7	0.8	-	1.6	2	-								●	●
	VCGW160408PDT01020	T01020	35	9.525	4.76	7	0.8	-	1.6	2	-				●					
	VCGW160412PDS01015	S01015	35	9.525	4.76	7	1.2	-	2.7	2	-								●	●
	VCGW160412PDS01535	S01535	35	9.525	4.76	7	1.2	-	2.7	2	-								●	●
	VCGW160412PDT01020	T01020	35	9.525	4.76	7	1.2	-	2.7	2	-				●					

Turning Insert
D



Steel
Stainless Steel
Cast Iron
Non-Ferrous Material
Heat Resistant Alloy
Hardened Material
Others (non-metallic)

Shape	Item Number (ISO)	CECC	EPSR °	IC mm	S mm	AN °	RE mm	D2 mm	Length of edge	No. of edge	S1 mm	B16 PVD	B22	B23	B30	B36 PVD	B6K PVD	B40	B52	B5K PVD
	VNGA160401PQS01015	S01015	35	9.525	4.76	-	0.1	-	2.7	4	-									●
	VNGA160401PQS01535	S01535	35	9.525	4.76	-	0.1	-	2.7	4	-								●	
	VNGA160402PDFNX	Up-sharp edge	35	9.525	4.76	-	0.2	-	2.6	2	-				●					
	VNGA160402PQFNX	Up-sharp edge	35	9.525	4.76	-	0.2	-	2.6	4	-				●					
	VNGA160402PQS01015	S01015	35	9.525	4.76	-	0.2	-	2.6	4	-					●		●	●	●
	VNGA160402PQS01325	S01325	35	9.525	4.76	-	0.2	-	2.6	4	-					●		●	●	●
	VNGA160402PQS01535	S01535	35	9.525	4.76	-	0.2	-	2.6	4	-					●		●	●	●
	VNGA160402PQT01020	T01020	35	9.525	4.76	-	0.2	-	2.6	4	-				●					
	VNGA160404PDFNX	Up-sharp edge	35	9.525	4.76	-	0.4	-	2.5	2	-				●					
	VNGA160404PQFNX	Up-sharp edge	35	9.525	4.76	-	0.4	-	2.5	4	-				●				●	
	VNGA160404PQS01015	S01015	35	9.525	4.76	-	0.4	-	2.5	4	-					●	●	●	●	●
	VNGA160404PQS01325	S01325	35	9.525	4.76	-	0.4	-	2.5	4	-					●	●	●	●	●
	VNGA160404PQS01535	S01535	35	9.525	4.76	-	0.4	-	2.5	4	-					●	●	●	●	●
	VNGA160404PQT01020	T01020	35	9.525	4.76	-	0.4	-	2.5	4	-				●					
	VNGA160408PDFNX	Up-sharp edge	35	9.525	4.76	-	0.8	-	1.6	2	-				●					
	VNGA160408PQFNX	Up-sharp edge	35	9.525	4.76	-	0.8	-	1.6	4	-				●				●	
	VNGA160408PQS01015	S01015	35	9.525	4.76	-	0.8	-	1.6	4	-					●	●	●	●	●
	VNGA160408PQS01325	S01325	35	9.525	4.76	-	0.8	-	1.6	4	-					●	●	●	●	●
	VNGA160408PQS01535	S01535	35	9.525	4.76	-	0.8	-	1.6	4	-					●	●	●	●	●
	VNGA160408PQT01020	T01020	35	9.525	4.76	-	0.8	-	1.6	4	-				●					
	VNGA160412PDFNX	Up-sharp edge	35	9.525	4.76	-	1.2	-	2.7	2	-				●					
	VNGA160412PQS01015	S01015	35	9.525	4.76	-	1.2	-	2.7	4	-					●	●	●	●	●
	VNGA160412PQS01325	S01325	35	9.525	4.76	-	1.2	-	2.7	4	-					●	●	●	●	●
	VNGA160412PQS01535	S01535	35	9.525	4.76	-	1.2	-	2.7	4	-					●	●	●	●	●
	VNGA160412PQT01020	T01020	35	9.525	4.76	-	1.2	-	2.7	4	-				●					