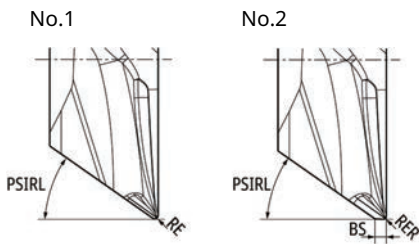
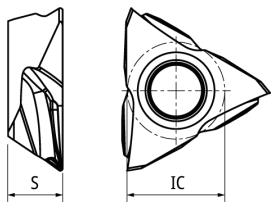


TF.. series/Inserts

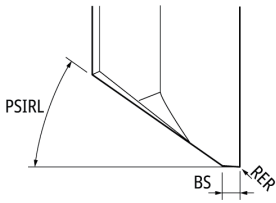
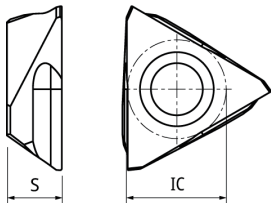
TFX The Front Max



● Diagram shows right-hand tool
All angles shown are obtained when insert is set in the holder.

Figure	Item Number	Hand	Wiper	APMX	IC	S	BS	PSIRL	RE	RER	Carbide PVD		
				mm	mm	mm	mm	°	mm	mm	DM4	ST4	ZM3
1	TFX3301MR	R	No	5	9.525	4.76	-	32	0.08	-	●	●	
1	TFX3302MR	R	No	5	9.525	4.76	-	32	0.18	-	●	●	
1	TFX3304MR	R	No	5	9.525	4.76	-	32	0.38	-	●	●	
2	TFX3301MRW	R	Straight	5	9.525	4.76	0.5	32	-	0.08	●	●	
2	TFX3302MRW	R	Straight	5	9.525	4.76	0.5	32	-	0.18	●	●	
2	TFX3304MRW	R	Straight	5	9.525	4.76	0.5	32	-	0.38	●	●	

TF

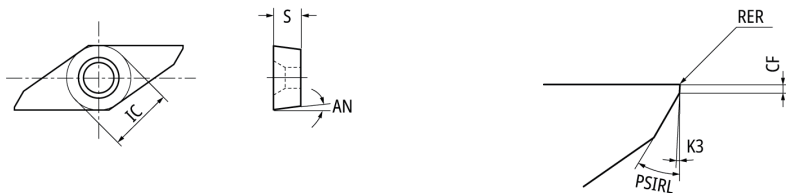


● Diagram shows right-hand tool
All angles shown are obtained when insert is set in the holder.

Item Number	Hand	Wiper	APMX	IC	S	BS	PSIRL	RER	Carbide PVD		
			mm	mm	mm	mm	°	mm	DT4	VM1	ZM3
TF3300R	R	Straight	4	9.525	4.76	0.5	32	0			●
TF3305R	R	Straight	4	9.525	4.76	0.5	32	0.05			●
TF3315R	R	Straight	4	9.525	4.76	0.5	32	0.15			●
TF3320R	R	Straight	4	9.525	4.76	0.5	32	0.2			○

CSVF.. series/Inserts Carbide

CSVF-V

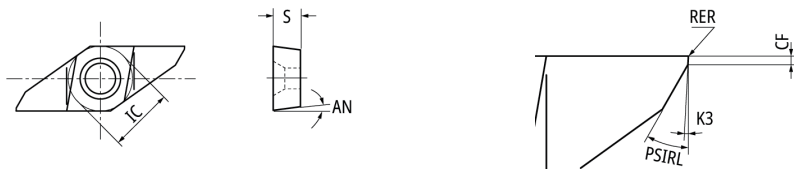


● Diagram shows right-hand tool
All angles shown are obtained when insert is set in the holder.



Item Number	Hand			APMX	EPSR	IC	S	AN	CF	K3	PSIRL	RER	Carbide		
				mm	°	mm	mm	°	mm	°	°	mm	DT4	PVD VM1	ZM3
CSVF11FRV	M	R	No	3	35	6.35	2.38	7	0.3	5	30	0		●	
CSVF11FRV-A	M	R	No	3	35	6.35	2.38	7	0.3	2	30	0		●	
CSVF11FRV-C	M	R	No	3	35	6.35	2.38	7	0.15	5	30	0		●	
CSVF11FRV-M	M	R	No	3	35	6.35	2.38	7	0.15	2	30	0	●	●	●
CSVF11FLV	M	L	No	3	35	6.35	2.38	7	0.3	5	30	0		●	
CSVF11FLV-M	M	L	No	3	35	6.35	2.38	7	0.15	2	30	0		●	

CSVF-VB

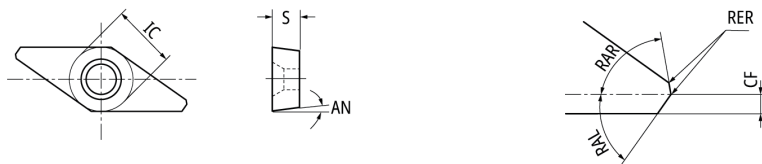


● Diagram shows right-hand tool
All angles shown are obtained when insert is set in the holder.



Item Number	Hand			APMX	EPSR	IC	S	AN	CF	K3	PSIRL	RER	Carbide		
				mm	°	mm	mm	°	mm	°	°	mm	DT4	PVD VM1	ZM3
CSVF11FRVB	M	R	Yes	3	35	6.35	2.38	7	0.3	5	30	0		●	
CSVF11FRVB-A	M	R	Yes	3	35	6.35	2.38	7	0.3	2	30	0		●	
CSVF11FRVB-C	M	R	Yes	3	35	6.35	2.38	7	0.15	5	30	0		●	
CSVF11FRVB-M	M	R	Yes	3	35	6.35	2.38	7	0.15	2	30	0	●	●	●
CSVF11FLVB	M	L	Yes	3	35	6.35	2.38	7	0.3	5	30	0		●	
CSVF11FLVB-M	M	L	Yes	3	35	6.35	2.38	7	0.15	2	30	0		●	

CSVF-VX For Profiling



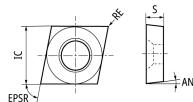
● Diagram shows left-hand tool
All angles shown are obtained when insert is set in the holder.



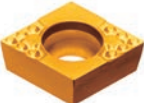
Item Number	Hand			APMX	EPSR	IC	S	AN	CF	RAL	RAR	RER	Carbide		
				mm	°	mm	mm	°	mm	mm	mm	mm	DT4	PVD VM1	ZM3
CSVF11FLVX	M	L	No	3	35	6.35	2.38	7	0.7	45	80	0		●	

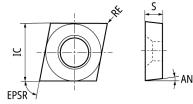
CC.. series/Inserts Carbide

CC..

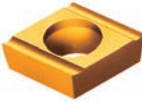
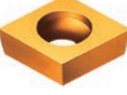


Steel	○	●	●	●	●	●	●	●	●
Stainless Steel	●	○	○	○	●	○	●	●	●
Cast Iron								●	
Non-Ferrous Material						○		○	●
Heat Resistant Alloy		●	○	○					
Hardened Material		○	○	○					
Others (non-metallic)									●

Shape	Item Number	CECC	EPSR	IC	S	AN	RE	BS	Carbide											Uncoated
									PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	CVD	CVD	
									ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7	KM1		
(ISO)	°	mm	mm	°	mm	mm														
	CCGT09T300YL	Up-sharp edge	80	9.525	3.97	7	0.03	-				●		●						
	CCGT09T301MYL	Up-sharp edge	80	9.525	3.97	7	0.08	-	●	●	●	●	●							
	CCGT09T302MYL	Up-sharp edge	80	9.525	3.97	7	0.18	-	●	●	●	●	●	●						
	CCGT09T304MYL	Up-sharp edge	80	9.525	3.97	7	0.38	-	●	●	●	●	●	●						
	CCGT09T308MYL	Up-sharp edge	80	9.525	3.97	7	0.78	-	●	●	●	●	●	●						
	CCGT060201MCL	Up-sharp edge	80	6.35	2.38	7	0.08	-	●	●	●	●	●	●						
	CCGT060202MCL	Up-sharp edge	80	6.35	2.38	7	0.18	-	●	●	●	●	●	●						
	CCGT09T300CL	Up-sharp edge	80	9.525	3.97	7	0.03	-				●		●						
	CCGT09T301MCL	Up-sharp edge	80	9.525	3.97	7	0.08	-	●	●	●	●	●	●						
	CCGT09T302MCL	Up-sharp edge	80	9.525	3.97	7	0.18	-	●	●	●	●	●	●						
	CCGT09T304MCL	Up-sharp edge	80	9.525	3.97	7	0.38	-	●	●	●	●	●	●						
	CCGT060200FNAM3	Up-sharp edge	80	6.35	2.38	7	0.03	-				●		●	●					
	CCGT060201MFNAM3	Up-sharp edge	80	6.35	2.38	7	0.08	-	●			●	●	●						
	CCGT060202FNAM3	Up-sharp edge	80	6.35	2.38	7	0.2	-							●	●				
	CCGT060202MFNAM3	Up-sharp edge	80	6.35	2.38	7	0.18	-	●			●	●	●						
	CCGT060204FNAM3	Up-sharp edge	80	6.35	2.38	7	0.4	-								●				
	CCGT060204MFNAM3	Up-sharp edge	80	6.35	2.38	7	0.38	-	●			●	●	●						
	CCGT09T300FNAM3	Up-sharp edge	80	9.525	3.97	7	0.03	-				●		●	●					
	CCGT09T301MFNAM3	Up-sharp edge	80	9.525	3.97	7	0.08	-	●			●	●	●	●	●				
	CCGT09T302FNAM3	Up-sharp edge	80	9.525	3.97	7	0.2	-					●		●					
	CCGT09T302MFNAM3	Up-sharp edge	80	9.525	3.97	7	0.18	-	●			●	●	●	●	●	●			
	CCGT09T304FNAM3	Up-sharp edge	80	9.525	3.97	7	0.4	-					●		●					
	CCGT09T304MFNAM3	Up-sharp edge	80	9.525	3.97	7	0.38	-	●			●	●	●	●	●	●			
	CCMT060202FNAM3	Up-sharp edge	80	6.35	2.38	7	0.2	-			●									
	CCMT060204FNAM3	Up-sharp edge	80	6.35	2.38	7	0.4	-			●									
	CCMT09T302FNAM3	Up-sharp edge	80	9.525	3.97	7	0.2	-			●									
	CCMT09T304FNAM3	Up-sharp edge	80	9.525	3.97	7	0.4	-			●									
	CCMT09T308FNAM3	Up-sharp edge	80	9.525	3.97	7	0.8	-			●									
	CCGT060200AZ7	Up-sharp edge	80	6.35	2.38	7	0.03	-					●							
	CCGT060201MAZ7	Up-sharp edge	80	6.35	2.38	7	0.08	-					●							
	CCGT060202MAZ7	Up-sharp edge	80	6.35	2.38	7	0.18	-					●							
	CCGT09T300AZ7	Up-sharp edge	80	9.525	3.97	7	0.03	-				●	●	●		●				
	CCGT09T301MAZ7	Up-sharp edge	80	9.525	3.97	7	0.08	-				●	●	●		●				
	CCGT09T302MAZ7	Up-sharp edge	80	9.525	3.97	7	0.18	-				●	●	●		●				
	CCGT09T304MAZ7	Up-sharp edge	80	9.525	3.97	7	0.38	-				●	●	●		●				
	CCMT060202E002AZ8	E002	80	6.35	2.38	7	0.2	-											●	
	CCMT060204E004AZ8	E004	80	6.35	2.38	7	0.4	-											●	
	CCMT060208E004AZ8	E004	80	6.35	2.38	7	0.8	-											●	
	CCMT09T302E002AZ8	E002	80	6.35	2.38	7	0.2	-											●	
	CCMT09T304E004AZ8	E004	80	6.35	2.38	7	0.4	-											●	
	CCMT09T308E004AZ8	E004	80	6.35	2.38	7	0.8	-											●	
	CCGT060200RS	Up-sharp edge	80	6.35	2.38	7	0.03	-				●			●	●				
	CCGT060200LS	Up-sharp edge	80	6.35	2.38	7	0.03	-							●	●				
	CCGT060201MRS	Up-sharp edge	80	6.35	2.38	7	0.08	-				●	●							
	CCGT060201RS	Up-sharp edge	80	6.35	2.38	7	0.1	-							●	●				
	CCGT060201LS	Up-sharp edge	80	6.35	2.38	7	0.1	-							●	●				
	CCGT060202MRS	Up-sharp edge	80	6.35	2.38	7	0.18	-				●	●							
	CCGT060202RS	Up-sharp edge	80	6.35	2.38	7	0.2	-							●	●				
	CCGT060202LS	Up-sharp edge	80	6.35	2.38	7	0.2	-							●	●				
	CCGT060204RS	Up-sharp edge	80	6.35	2.38	7	0.4	-												
	CCGT09T300RS	Up-sharp edge	80	9.525	3.97	7	0.03	-				●		●	●	●				
	CCGT09T300LS	Up-sharp edge	80	9.525	3.97	7	0.03	-							●					
	CCGT09T301MRS	Up-sharp edge	80	9.525	3.97	7	0.08	-				●	●	●						
	CCGT09T301RS	Up-sharp edge	80	9.525	3.97	7	0.1	-					●		●	●				
	CCGT09T301LS	Up-sharp edge	80	9.525	3.97	7	0.1	-							●	●				
	CCGT09T302MRS	Up-sharp edge	80	9.525	3.97	7	0.18	-				●	●	●						
	CCGT09T302RS	Up-sharp edge	80	9.525	3.97	7	0.2	-					●		●	●				
	CCGT09T302LS	Up-sharp edge	80	9.525	3.97	7	0.2	-							●					

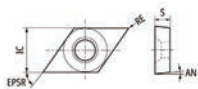


Steel	○	●	●	●	●	●	●	●	●
Stainless Steel	●	○	○	○	●	○	●	●	●
Cast Iron								●	
Non-Ferrous Material						○	○		●
Heat Resistant Alloy		●	○	○					
Hardened Material		○	○	○					
Others (non-metallic)									●

Shape	Item Number	CECC	Carbide																	Uncoated
			EPSR	IC	S	AN	RE	BS	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD		
			°	mm	mm	°	mm	mm	ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7	KM1		
(ISO)																				
	CCGT09T304MRS	Up-sharp edge	80	9.525	3.97	7	0.38	-			●	●	●							
	CCGT09T304RS	Up-sharp edge	80	9.525	3.97	7	0.4	-				●								
	CCGT060200RU	Up-sharp edge	80	6.35	2.38	7	0.03	-			●					●				
	CCGT060201RU	Up-sharp edge	80	6.35	2.38	7	0.1	-			●					●				
	CCGT060201LU	Up-sharp edge	80	6.35	2.38	7	0.1	-								●				
	CCGT060202RU	Up-sharp edge	80	6.35	2.38	7	0.2	-			●					●				
	CCGT060202LU	Up-sharp edge	80	6.35	2.38	7	0.2	-								●				
	CCGT09T300RU1	Up-sharp edge	80	9.525	3.97	7	0.03	-			●		●			●				
	CCGT09T300LU1	Up-sharp edge	80	9.525	3.97	7	0.03	-								●				
	CCGT09T301RU1	Up-sharp edge	80	9.525	3.97	7	0.1	-			●		●			●				
	CCGT09T301LU1	Up-sharp edge	80	9.525	3.97	7	0.1	-								●				
	CCGT09T302RU1	Up-sharp edge	80	9.525	3.97	7	0.2	-			●		●			●				
	CCGT09T302LU1	Up-sharp edge	80	9.525	3.97	7	0.2	-								●				
	CCGT09T304RU1	Up-sharp edge	80	9.525	3.97	7	0.4	-			●		●			●				
	CCGT09T304LU1	Up-sharp edge	80	9.525	3.97	7	0.4	-								●				
	CCET0602005RKHG	Up-sharp edge	80	6.35	2.38	7	0.05	-							●					
	CCET0602005LKHG	Up-sharp edge	80	6.35	2.38	7	0.05	-								●				
	CCET0602008RKHG	Up-sharp edge	80	6.35	2.38	7	0.08	-								●				
	CCET0602008LKHG	Up-sharp edge	80	6.35	2.38	7	0.08	-								●				
	CCET0602018RKHG	Up-sharp edge	80	6.35	2.38	7	0.18	-								●				
	CCET0602018LKHG	Up-sharp edge	80	6.35	2.38	7	0.18	-								●				
	CCET060202RKHG	Up-sharp edge	80	6.35	2.38	7	0.2	-								●				
	CCET060202LKHG	Up-sharp edge	80	6.35	2.38	7	0.2	-								●				
	CCET09T3005RKHG	Up-sharp edge	80	9.525	3.97	7	0.05	-					●	●						
	CCET09T3005LKHG	Up-sharp edge	80	9.525	3.97	7	0.05	-						●						
	CCET09T3008RKHG	Up-sharp edge	80	9.525	3.97	7	0.08	-					●	●						
	CCET09T3008LKHG	Up-sharp edge	80	9.525	3.97	7	0.08	-						●						
	CCET09T3018RKHG	Up-sharp edge	80	9.525	3.97	7	0.18	-					●	●						
	CCET09T3018LKHG	Up-sharp edge	80	9.525	3.97	7	0.18	-						●						
	CCET09T302RKHG	Up-sharp edge	80	9.525	3.97	7	0.2	-					●	●						
CCET09T302LKHG	Up-sharp edge	80	9.525	3.97	7	0.2	-							●						
	CCGT060201FRF1	Up-sharp edge	80	6.35	2.38	7	0.1	-	●			●	●							
	CCGT060202FRF1	Up-sharp edge	80	6.35	2.38	7	0.2	-	●			●	●							
	CCGT060204FRF1	Up-sharp edge	80	6.35	2.38	7	0.4	-	●			●	●							
	CCGT09T302FRF1	Up-sharp edge	80	6.35	2.38	7	0.2	-	●			●	●							
	CCGT09T304FRF1	Up-sharp edge	80	6.35	2.38	7	0.4	-	●			●	●							
	CCGW09T30V	Up-sharp edge	80	9.525	3.97	7	0	-							●					
	CCGW09T300FN	Up-sharp edge	80	9.525	3.97	7	0.03	-								●				
	CCGW09T300H	Up-sharp edge	80	9.525	3.97	7	0.03	-										●		
	CCGW09T301FN	Up-sharp edge	80	9.525	3.97	7	0.1	-								●				
	CCGW09T301H	Up-sharp edge	80	9.525	3.97	7	0.1	-										●		
	CCGW09T301P	Up-sharp edge	80	9.525	3.97	7	0.1	-							●					
	CCGW09T302H	Up-sharp edge	80	9.525	3.97	7	0.2	-										●		
	CCGW09T302MP	Up-sharp edge	80	9.525	3.97	7	0.18	-			●									
	CCGW09T302P	Up-sharp edge	80	9.525	3.97	7	0.2	-							●					

DC.. series/Inserts Carbide

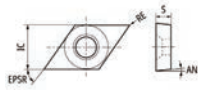
DC..



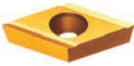
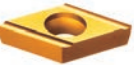
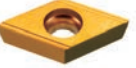
Steel	○	●	●	●	●	●	●	●	●
Stainless Steel	●	○	○	○	●	○	●	●	●
Cast Iron								●	
Non-Ferrous Material						○		○	●
Heat Resistant Alloy		●	○	○					
Hardened Material		○	○	○					
Others (non-metallic)									●

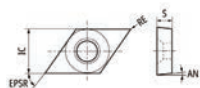
Front Turning

Shape	Item Number	CECC	EPSR	IC	S	AN	RE	BS	Carbide											Uncoated
									PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	CVD	CVD	
									ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7	KM1		
(ISO)	°	mm	mm	°	mm	mm	ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7	KM1				
	DCGT11T301MRTMV	Up-sharp edge	55	9.525	3.97	7	0.08	-	●	●				●						
	DCGT11T301MRTMV2	Up-sharp edge	55	9.525	3.97	7	0.08	-	●	●				●						
	DCGT11T302MRTMV	Up-sharp edge	55	9.525	3.97	7	0.18	-	●	●				●						
	DCGT11T302MRTMV2	Up-sharp edge	55	9.525	3.97	7	0.18	-	●	●				●						
	DCGT11T304MRTMV	Up-sharp edge	55	9.525	3.97	7	0.38	-	●	●				●						
	DCGT11T304MRTMV2	Up-sharp edge	55	9.525	3.97	7	0.38	-	●	●				●						
	DCGT070201MYL	Up-sharp edge	55	6.35	2.38	7	0.08	-		●			●							
	DCGT070202MYL	Up-sharp edge	55	6.35	2.38	7	0.18	-		●			●							
	DCGT070204MYL	Up-sharp edge	55	6.35	2.38	7	0.38	-		■			■							
	DCGT11T300YL	Up-sharp edge	55	9.525	3.97	7	0.03	-				●			●					
	DCGT11T301MYL	Up-sharp edge	55	9.525	3.97	7	0.08	-	●	●	●	●	●							
	DCGT11T302MYL	Up-sharp edge	55	9.525	3.97	7	0.18	-	●	●	●	●	●							
	DCGT11T304MYL	Up-sharp edge	55	9.525	3.97	7	0.38	-	●	●	●	●	●							
	DCGT11T308MYL	Up-sharp edge	55	9.525	3.97	7	0.78	-	●	●	●	●	●							
	DCGT070201MCL	Up-sharp edge	55	6.35	2.38	7	0.08	-	●	●	●	●	●							
	DCGT070202MCL	Up-sharp edge	55	6.35	2.38	7	0.18	-	●	●	●	●	●							
	DCGT070204MCL	Up-sharp edge	55	6.35	2.38	7	0.38	-	●	●	●	●	●							
	DCGT11T301MCL	Up-sharp edge	55	9.525	3.97	7	0.08	-	●	●	●	●	●							
	DCGT11T302MCL	Up-sharp edge	55	9.525	3.97	7	0.18	-	●	●	●	●	●							
	DCGT11T304MCL	Up-sharp edge	55	9.525	3.97	7	0.38	-	●	●	●	●	●							
	DCGT070201FNAM3	Up-sharp edge	55	6.35	2.38	7	0.1	-						●		●				
	DCGT070202FNAM3	Up-sharp edge	55	6.35	2.38	7	0.2	-						●		●				
	DCGT070204FNAM3	Up-sharp edge	55	6.35	2.38	7	0.4	-						●		●				
	DCGT070200FNAM3	Up-sharp edge	55	6.35	2.38	7	0.03	-				●		●	●	●				
	DCGT070201MFNAM3	Up-sharp edge	55	6.35	2.38	7	0.08	-	●			●	●	●						
	DCGT070202MFNAM3	Up-sharp edge	55	6.35	2.38	7	0.18	-	●			●	●	●						
	DCGT070204MFNAM3	Up-sharp edge	55	6.35	2.38	7	0.38	-	●			●	●	●						
	DCGT11T300FNAM3	Up-sharp edge	55	9.525	3.97	7	0.03	-				●			●		●			
	DCGT11T301MFNAM3	Up-sharp edge	55	9.525	3.97	7	0.08	-	●			●	●	●	●	●				
	DCGT11T302FNAM3	Up-sharp edge	55	9.525	3.97	7	0.2	-				●			●		●			
	DCGT11T302MFNAM3	Up-sharp edge	55	9.525	3.97	7	0.18	-	●			●	●	●	●	●				
	DCGT11T304FNAM3	Up-sharp edge	55	9.525	3.97	7	0.4	-				●			●		●			
	DCGT11T304MFNAM3	Up-sharp edge	55	9.525	3.97	7	0.38	-	●			●	●	●	●	●				
	DCMT070202FNAM3	Up-sharp edge	55	6.35	2.38	7	0.2	-			●									
	DCMT070204FNAM3	Up-sharp edge	55	6.35	2.38	7	0.4	-			●									
	DCMT11T302FNAM3	Up-sharp edge	55	9.525	3.97	7	0.2	-			●									
	DCMT11T304FNAM3	Up-sharp edge	55	9.525	3.97	7	0.4	-			●									
DCMT11T308FNAM3	Up-sharp edge	55	9.525	3.97	7	0.8	-			●										
	DCGT070201MAMX	Up-sharp edge	55	6.35	2.38	7	0.08	-		●	●			●						
	DCGT070202MAMX	Up-sharp edge	55	6.35	2.38	7	0.18	-		●	●			●						
	DCGT070204MAMX	Up-sharp edge	55	6.35	2.38	7	0.38	-		●	●			●						
	DCGT11T301MAMX	Up-sharp edge	55	9.525	3.97	7	0.08	-		●	●			●						
	DCGT11T302MAMX	Up-sharp edge	55	9.525	3.97	7	0.18	-		●	●			●						
	DCGT11T304MAMX	Up-sharp edge	55	9.525	3.97	7	0.38	-		●	●			●						
	DCGT11T308MAMX	Up-sharp edge	55	9.525	3.97	7	0.8	-		●										
	DCGT070200AZ7	Up-sharp edge	55	6.35	2.38	7	0.03	-					●							
	DCGT070201MAZ7	Up-sharp edge	55	6.35	2.38	7	0.08	-					●							
	DCGT070202MAZ7	Up-sharp edge	55	6.35	2.38	7	0.18	-					●							
	DCGT11T300AZ7	Up-sharp edge	55	9.525	3.97	7	0.03	-				●	●	●			●			
	DCGT11T301MAZ7	Up-sharp edge	55	9.525	3.97	7	0.08	-				●	●	●			●			
	DCGT11T302MAZ7	Up-sharp edge	55	9.525	3.97	7	0.18	-				●	●	●			●			
	DCGT11T304MAZ7	Up-sharp edge	55	9.525	3.97	7	0.38	-				●	●	●			●			
	DCGT11T308AZ7	Up-sharp edge	55	9.525	3.97	7	0.8	-				●	●			●				
	DCMT11T304E004AZ8	E004	55	9.525	3.97	7	0.4	-									●			
	DCMT11T308E004AZ8	E004	55	9.525	3.97	7	0.8	-									●			

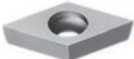


Steel	○	●	●	●	●	●	●	●	●
Stainless Steel	●	○	○	○	●	○	●	●	●
Cast Iron								●	
Non-Ferrous Material						○	○		●
Heat Resistant Alloy		●	○	○					
Hardened Material		○	○	○					
Others (non-metallic)									●

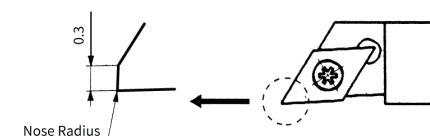
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	BS	Carbide											Uncoated
									PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	
									ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7	KM1		
(ISO)	°	mm	mm	°	mm	mm														
	DCGT070200RS	Up-sharp edge	55	6.35	2.38	7	0.03	-			●				●	●				
	DCGT070200LS	Up-sharp edge	55	6.35	2.38	7	0.03	-							●	●				
	DCGT070201MRS	Up-sharp edge	55	6.35	2.38	7	0.08	-			●	●								
	DCGT070201RS	Up-sharp edge	55	6.35	2.38	7	0.1	-							●	●				
	DCGT070201LS	Up-sharp edge	55	6.35	2.38	7	0.1	-							●	●				
	DCGT070202MRS	Up-sharp edge	55	6.35	2.38	7	0.18	-			●	●								
	DCGT070202RS	Up-sharp edge	55	6.35	2.38	7	0.2	-							●	●				
	DCGT070202LS	Up-sharp edge	55	6.35	2.38	7	0.2	-							●	●				
	DCGT070204RS	Up-sharp edge	55	6.35	2.38	7	0.4	-												
	DCGT11T300RS	Up-sharp edge	55	9.525	3.97	7	0.03	-			●			●	●	●				
	DCGT11T300LS	Up-sharp edge	55	9.525	3.97	7	0.03	-							●					
	DCGT11T301MRS	Up-sharp edge	55	9.525	3.97	7	0.08	-			●	●	●							
	DCGT11T301RS	Up-sharp edge	55	9.525	3.97	7	0.1	-				●			●	●				
	DCGT11T301LS	Up-sharp edge	55	9.525	3.97	7	0.1	-							●					
	DCGT11T302MRS	Up-sharp edge	55	9.525	3.97	7	0.18	-			●	●	●							
	DCGT11T302RS	Up-sharp edge	55	9.525	3.97	7	0.2	-				●			●	●				
	DCGT11T302LS	Up-sharp edge	55	9.525	3.97	7	0.2	-							●					
	DCGT11T304MRS	Up-sharp edge	55	9.525	3.97	7	0.38	-			●	●	●							
	DCGT11T304RS	Up-sharp edge	55	9.525	3.97	7	0.4	-				●								
	DCGT070200RU	Up-sharp edge	55	6.35	2.38	7	0.03	-							●	●				
	DCGT070201RU	Up-sharp edge	55	6.35	2.38	7	0.1	-							●	●				
	DCGT070202RU	Up-sharp edge	55	6.35	2.38	7	0.2	-							●	●				
	DCGT070202LU	Up-sharp edge	55	6.35	2.38	7	0.2	-									●			
	DCGT11T300RU1	Up-sharp edge	55	9.525	3.97	7	0.03	-			●			●	●	●				
	DCGT11T300LU1	Up-sharp edge	55	9.525	3.97	7	0.03	-								●				
	DCGT11T301RU1	Up-sharp edge	55	9.525	3.97	7	0.1	-			●			●	●	●				
	DCGT11T301LU1	Up-sharp edge	55	9.525	3.97	7	0.1	-								●				
	DCGT11T302RU1	Up-sharp edge	55	9.525	3.97	7	0.2	-			●			●	●	●				
	DCGT11T302LU1	Up-sharp edge	55	9.525	3.97	7	0.2	-								●				
	DCGT11T304RU1	Up-sharp edge	55	9.525	3.97	7	0.4	-			●			●	●	●				
	DCGT11T304LU1	Up-sharp edge	55	9.525	3.97	7	0.4	-								●				
	DCET0702005RKHG	Up-sharp edge	55	6.35	2.38	7	0.05	-							●					
	DCET0702005LKHG	Up-sharp edge	55	6.35	2.38	7	0.05	-							●					
	DCET0702008RKHG	Up-sharp edge	55	6.35	2.38	7	0.08	-							●					
	DCET0702008LKHG	Up-sharp edge	55	6.35	2.38	7	0.08	-							●					
	DCET0702018RKHG	Up-sharp edge	55	6.35	2.38	7	0.18	-							●					
	DCET0702018LKHG	Up-sharp edge	55	6.35	2.38	7	0.18	-							●					
	DCET070202RKHG	Up-sharp edge	55	6.35	2.38	7	0.2	-							●					
	DCET070202LKHG	Up-sharp edge	55	6.35	2.38	7	0.2	-							●					
	DCET11T3005RKHG	Up-sharp edge	55	9.525	3.97	7	0.05	-					●		●					
	DCET11T3005LKHG	Up-sharp edge	55	9.525	3.97	7	0.05	-							●					
	DCET11T3008RKHG	Up-sharp edge	55	9.525	3.97	7	0.08	-					●		●					
	DCET11T3008LKHG	Up-sharp edge	55	9.525	3.97	7	0.08	-							●					
	DCET11T3018RKHG	Up-sharp edge	55	9.525	3.97	7	0.18	-					●		●					
	DCET11T3018LKHG	Up-sharp edge	55	9.525	3.97	7	0.18	-							●					
	DCET11T302RKHG	Up-sharp edge	55	9.525	3.97	7	0.2	-					●		●					
DCET11T302LKHG	Up-sharp edge	55	9.525	3.97	7	0.2	-							●						
	DCET0702008RUHG	Up-sharp edge	55	6.35	2.38	7	0.08	-							●					
	DCET11T3008RUHG	Up-sharp edge	55	9.525	3.97	7	0.08	-							●					
	DCET11T301MRAT	 Up-sharp edge	55	9.525	3.97	7	0.08	-						●						
	DCET11T302MRAT	 Up-sharp edge	55	9.525	3.97	7	0.18	-						●						
	DCGT11T3005AM3-WP	Up-sharp edge	55	9.525	3.97	7	0.05	(0.3)			●	●	●							
	DCGT11T3015AM3-WP	Up-sharp edge	55	9.525	3.97	7	0.15	(0.3)			●	●	●							
	DCGT0702005RS-WP	Up-sharp edge	55	6.35	2.38	7	0.05	(0.3)					●		●	●				
	DCGT0702005LS-WP	Up-sharp edge	55	6.35	2.38	7	0.05	(0.3)								●				
	DCGT0702015RS-WP	Up-sharp edge	55	6.35	2.38	7	0.15	(0.3)				●				●				
	DCGT0702015LS-WP	Up-sharp edge	55	6.35	2.38	7	0.15	(0.3)								●				
	DCGT11T3005RS-WP	Up-sharp edge	55	9.525	3.97	7	0.05	(0.3)				●			●	●				
DCGT11T3015RS-WP	Up-sharp edge	55	9.525	3.97	7	0.15	(0.3)					●			●					



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	BS	Carbide											Uncoated
									PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	
									ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7	KM1		
(ISO)	°	mm	mm	°	mm	mm														
	DCGT0702005RU-WP	Up-sharp edge	55	6.35	2.38	7	0.05	(0.3)					●		●	●				
	DCGT0702015RU-WP	Up-sharp edge	55	6.35	2.38	7	0.15	(0.3)					●			●				
	DCGT11T3005RU1-WP	Up-sharp edge	55	9.525	3.97	7	0.05	(0.3)					●		●	●				
	DCGT11T3015RU1-WP	Up-sharp edge	55	9.525	3.97	7	0.15	(0.3)					●			●				
	DCGW07020V	Up-sharp edge	55	6.35	2.38	7	0	-							●					
	DCGW070200FN	Up-sharp edge	55	6.35	2.38	7	0.03	-								●				
	DCGW070200H	Up-sharp edge	55	6.35	2.38	7	0.03	-										●		
	DCGW070201FN	Up-sharp edge	55	6.35	2.38	7	0.1	-								●				
	DCGW070201H	Up-sharp edge	55	6.35	2.38	7	0.1	-										●		
	DCGW070202H	Up-sharp edge	55	6.35	2.38	7	0.2	-										●		
	DCGW11T30V	Up-sharp edge	55	9.525	3.97	7	0	-							●					
	DCGW11T300FN	Up-sharp edge	55	9.525	3.97	7	0.03	-								●				
	DCGW11T300H	Up-sharp edge	55	9.525	3.97	7	0.03	-										●		
	DCGW11T301FN	Up-sharp edge	55	9.525	3.97	7	0.1	-								●				
	DCGW11T301H	Up-sharp edge	55	9.525	3.97	7	0.1	-										●		
	DCGW11T302H	Up-sharp edge	55	9.525	3.97	7	0.2	-										●		
	DCGW0702005RH-WP	Up-sharp edge	55	6.35	2.38	7	0.05	(0.3)										●		
	DCGW11T3005RH-WP	Up-sharp edge	55	9.525	3.97	7	0.05	(0.3)										●		

Features of DC.T-WP insert



NTK WP style inserts have a wiper facet design.

The insert has a 0.3mm flat on the cutting edge when the insert is set into the toolholder.

The flat on the cutting edge ensures a superior surface when feed rates are increased.

WP style inserts can be used in toolholders: SDJC, CH-SDUL and DS-SDUL.

VC.. series/Inserts Carbide

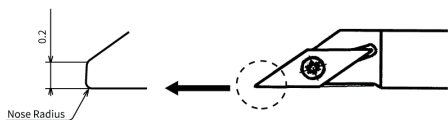
VC..



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	BS	Carbide											Uncoated
									PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	
									ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7	KM1		
(ISO)	°	mm	mm	°	mm	mm														
	VCGT110301MYL	Up-sharp edge	35	6.35	3.18	7	0.08	-	●	●	●	●	●							
	VCGT110302MYL	Up-sharp edge	35	6.35	3.18	7	0.18	-	●	●	●	●	●							
	VCGT110304MYL	Up-sharp edge	35	6.35	3.18	7	0.38	-	●	●	●	●	●							
	VCGT110202MCL	Up-sharp edge	35	6.35	2.38	7	0.18	-		●	●	●	●	●						
	VCGT110301MCL	Up-sharp edge	35	6.35	3.18	7	0.08	-	●	●	●	●	●							
	VCGT110302MCL	Up-sharp edge	35	6.35	3.18	7	0.18	-	●	●	●	●	●							
	VCGT110300FNAM3	Up-sharp edge	35	6.35	3.18	7	0.03	-			●		●	●						
	VCGT110301MFNAM3	Up-sharp edge	35	6.35	3.18	7	0.08	-	●		●	●	●	●						
	VCGT110301FNAM3	Up-sharp edge	35	6.35	3.18	7	0.1	-						●	●					
	VCGT110302MFNAM3	Up-sharp edge	35	6.35	3.18	7	0.18	-	●		●	●	●	●						
	VCGT110302FNAM3	Up-sharp edge	35	6.35	3.18	7	0.2	-						●	●					
	VCGT110304MFNAM3	Up-sharp edge	35	6.35	3.18	7	0.38	-	●		●	●	●	●						
	VCMT110302FNAM3	Up-sharp edge	35	6.35	3.18	7	0.2	-		●										
	VCMT110304FNAM3	Up-sharp edge	35	6.35	3.18	7	0.4	-		●										
	VCGT110300AZ7	Up-sharp edge	35	6.35	3.18	7	0.03	-				●				●				
	VCGT110301MAZ7	Up-sharp edge	35	6.35	3.18	7	0.08	-				●				●				
	VCGT110302MAZ7	Up-sharp edge	35	6.35	3.18	7	0.18	-				●				●				
	VCGT110304MAZ7	Up-sharp edge	35	6.35	3.18	7	0.38	-				●				●				
	VCGT130300FR2M	Up-sharp edge	35	7.94	3.18	7	-	-		●										
	VCGT130300FL2M	Up-sharp edge	35	7.94	3.18	7	-	-		●										
	VCGT130301FR2M	Up-sharp edge	35	7.94	3.18	7	-	-		●										
	VCGT130301FL2M	Up-sharp edge	35	7.94	3.18	7	-	-		●										
	VCGT110300RU	Up-sharp edge	35	6.35	3.18	7	0.03	-						●	●					
	VCGT110301MRU	Up-sharp edge	35	6.35	3.18	7	0.08	-			●									
	VCGT110301RU	Up-sharp edge	35	6.35	3.18	7	0.1	-						●	●					
	VCGT110302MRU	Up-sharp edge	35	6.35	3.18	7	0.18	-			●									
	VCGT110302RU	Up-sharp edge	35	6.35	3.18	7	0.2	-						●	●					
	VCET1103008RUHG	Up-sharp edge	35	6.35	3.18	7	0.08	-						●						
	VCGT1103005RU-WP	Up-sharp edge	35	6.35	3.18	7	0.05	(0.2)						●	●					
	VCGT110301RU-WP	Up-sharp edge	35	6.35	3.18	7	0.1	(0.2)						●	●					
	VCGT1103005RSX-WP	Up-sharp edge	35	6.35	3.18	7	0.05	(0.2)						●	●					
	VCGT110301RSX-WP	Up-sharp edge	35	6.35	3.18	7	0.1	(0.2)						●	●					
	VCGW110300H	Up-sharp edge	35	6.35	3.18	7	0.03	-												●
	VCGW110301H	Up-sharp edge	35	6.35	3.18	7	0.1	-												●
	VCGW110302H	Up-sharp edge	35	6.35	3.18	7	0.2	-												●

Features of VCGT-WP insert



NTK WP style inserts have a wiper facet design.

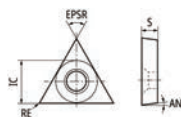
The insert has a 0.2mm flat on the cutting edge when the insert is set into the toolholder.

The flat on the cutting edge ensures a superior surface when feed rates are increased.

WP style inserts can be used in toolholders: SVAC

TC.. series/Inserts Carbide

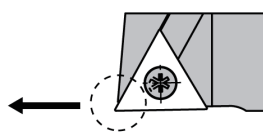
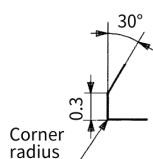
TC..



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	BS	Carbide											Uncoated
									PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	CVD	CVD		
									ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7	KM1		
(ISO)	°	mm	mm	°	mm	mm														
	TCGT090201RS	Up-sharp edge	60	5.56	2.38	7	0.1	-							●	●				
	TCGT090201LS	Up-sharp edge	60	5.56	2.38	7	0.1	-							●					
	TCGT090202RS	Up-sharp edge	60	5.56	2.38	7	0.2	-								●				
	TCGT110201RS	Up-sharp edge	60	6.35	2.38	7	0.1	-							●	●				
	TCGT110201LS	Up-sharp edge	60	6.35	2.38	7	0.1	-							●					
	TCGT090201RU	Up-sharp edge	60	5.56	2.38	7	0.1	-								●				
	TCGT090202RU	Up-sharp edge	60	5.56	2.38	7	0.2	-								●				
	TCGT0902005RS-WP	Up-sharp edge	60	5.56	2.38	7	0.05	(0.3)								●				
	TCGT0902005LS-WP	Up-sharp edge	60	5.56	2.38	7	0.05	(0.3)								●				
	TCGT0902015RS-WP	Up-sharp edge	60	5.56	2.38	7	0.15	(0.3)								●				
	TCGT0902015LS-WP	Up-sharp edge	60	5.56	2.38	7	0.15	(0.3)								●				
	TCGT1102005RS-WP	Up-sharp edge	60	6.35	2.38	7	0.05	(0.3)								●				
	TCGT1102015RS-WP	Up-sharp edge	60	6.35	2.38	7	0.15	(0.3)								●				
	TCGT0902005RU-WP	Up-sharp edge	60	5.56	2.38	7	0.05	(0.3)								●				
	TCGT0902015RU-WP	Up-sharp edge	60	5.56	2.38	7	0.15	(0.3)								●				
	TCGT1102005RU1-WP	Up-sharp edge	60	6.35	2.38	7	0.05	(0.3)								●				
	TCGT1102015RU1-WP	Up-sharp edge	60	6.35	2.38	7	0.15	(0.3)								●				
	TCGW090200FN	Up-sharp edge	60	5.56	2.38	7	0.03	-								●				
	TCGW090201FN	Up-sharp edge	60	5.56	2.38	7	0.1	-								●				
	TCGW110200FN	Up-sharp edge	60	6.35	2.38	7	0.03	-								●				
	TCGW110201FN	Up-sharp edge	60	6.35	2.38	7	0.1	-								●				

Features of TCGT-WP insert



NTK WP style inserts have a wiper facet design.

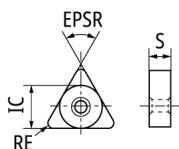
The insert has a 0.3mm flat on the cutting edge when the insert is set into the toolholder.

The flat on the cutting edge ensures a superior surface when feed rates are increased.

WP style inserts can be used in toolholders: STAC

TN.. series/Inserts Carbide

TN..

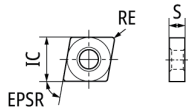


Steel	○	●	●	●	●	●	●	●	●
Stainless Steel	●	○	○	○	●	○	●	●	●
Cast Iron								●	
Non-Ferrous Material						○	○		●
Heat Resistant Alloy		●	○	○					
Hardened Material		○	○	○					
Others (non-metallic)									●

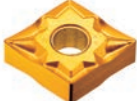
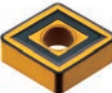
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	BS	Carbide											KM1	Uncoated
									PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD		
									ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7				
(ISO)	°	mm	mm	°	mm	mm	ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7						
	TNGG160401MFNUL	Up-sharp edge	60	9.525	4.76	-	0.1	-	●	●		●	●								
	TNGG160402MFNUL	Up-sharp edge	60	9.525	4.76	-	0.2	-	●	●		●	●								
	TNGG160404MFNUL	Up-sharp edge	60	9.525	4.76	-	0.4	-	●	●		●	●								
	TNGG160408MFNUL	Up-sharp edge	60	9.525	4.76	-	0.8	-	●	●		●	●								
	TNGG160402FNZP	Up-sharp edge	60	9.525	4.76	-	0.2	-		●		●	●	●	●						
	TNGG160404FNZP	Up-sharp edge	60	9.525	4.76	-	0.4	-		●		●	●	●	●						
	TNGG160408FNZP	Up-sharp edge	60	9.525	4.76	-	0.8	-		●		●		●	●						
	TNMG160408G	-	60	9.525	4.76	-	0.8	-								●					
	TNMG160412G	-	60	9.525	4.76	-	1.2	-								●					
	TNMG160404T00525Z5	T00525	60	9.525	4.76	-	0.4	-		●		●									
	TNMG160408T00525Z5	T00525	60	9.525	4.76	-	0.8	-		●		●									
	TNEG160402FLD1	Up-sharp edge	60	9.525	4.76	-	0.2	-					●								
	TNEG160402FRD1	Up-sharp edge	60	9.525	4.76	-	0.2	-					●								
	TNEG160404FLD1	Up-sharp edge	60	9.525	4.76	-	0.4	-					●								
	TNEG160404FRD1	Up-sharp edge	60	9.525	4.76	-	0.4	-					●								
	TNEG160408FLD1	Up-sharp edge	60	9.525	4.76	-	0.8	-					●								
	TNEG160408FRD1	Up-sharp edge	60	9.525	4.76	-	0.8	-					●								
	TNGG160401FRU2	Up-sharp edge	60	9.525	4.76	-	0.1	-						●	●						
	TNGG160402FLU2	Up-sharp edge	60	9.525	4.76	-	0.2	-		●					●						
	TNGG160402FRU2	Up-sharp edge	60	9.525	4.76	-	0.2	-		●					●						
	TNGG160404FLU2	Up-sharp edge	60	9.525	4.76	-	0.4	-		●					●						
	TNGG160404FRU2	Up-sharp edge	60	9.525	4.76	-	0.4	-		●					●						
	TNGG160408FLU2	Up-sharp edge	60	9.525	4.76	-	0.8	-							●						
	TNGG160408FRU2	Up-sharp edge	60	9.525	4.76	-	0.8	-							●						
	TNGG160402FRC	Up-sharp edge	60	9.525	4.76	-	0.2	-								●					
	TNGG160401FRDA	Up-sharp edge	60	9.525	4.76	-	0.1	-						●	●						

CN.. series/Inserts Carbide

CN..



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

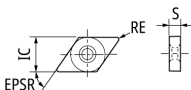
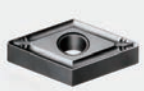
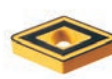
Shape	Item Number	CECC	EPSR	IC	S	AN	RE	BS	Carbide											Uncoated
									PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	PVD	
									ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7	KM1		
(ISO)			°	mm	mm	°	mm	mm												
	CNGG120404FNUL	Up-sharp edge	80	12.7	4.76	-	0.4	-		●		●	●							
	CNGG120408FNUL	Up-sharp edge	80	12.7	4.76	-	0.8	-		●		●	●							
	CNGG120404FNZP	Up-sharp edge	80	12.7	4.76	-	0.4	-		●		●			●					
	CNGG120408FNZP	Up-sharp edge	80	12.7	4.76	-	0.8	-		●		●			●					
	CNMG120408T00525Z5	T00525	80	12.7	4.76	-	0.8	-		●		●								
	CNMG120408G	-	80	12.7	4.76	-	0.8	-									●			
	CNMG120412G	-	80	12.7	4.76	-	1.2	-									●			
	CNMG120416G	-	80	12.7	4.76	-	1.6	-									●			

Front Turning

DN.. series/Inserts Carbide

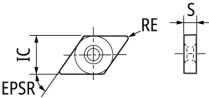
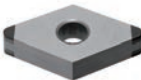
DN..

Front Turning

			Steel														
			Stainless Steel														
			Cast Iron														
			Non-Ferrous Material														
			Heat Resistant Alloy														
			Hardened Material														
			Others (non-metallic)														
Shape	Item Number	CECC	Carbide														
			EPSR	IC	S	AN	RE	BS	PVD	PVD	PVD	PVD	PVD	PVD	PVD	CVD	CVD
	(ISO)		°	mm	mm	°	mm	mm	ST4	DM4	DT4	QM3	TM4	VM1	ZM3	CP1	CP7
	DNMG150404FNZP	Up-sharp edge	55	12.7	4.76	-	0.4	-									
	DNMG150408FNZP	Up-sharp edge	55	12.7	4.76	-	0.8	-									
	DNMG150408T00525Z5	T00525	55	12.7	4.76	-	0.8	-									
	DNMG150404TNG	T01025	55	12.7	4.76	-	0.4	-									
	DNMG150404G	-	55	12.7	4.76	-	0.4	-									
	DNMG150408G	-	55	12.7	4.76	-	0.8	-									
	DNMG150412G	-	55	12.7	4.76	-	1.2	-									

DN.. series/Inserts CBN

DNGA

													Steel									
													Stainless Steel									
													Cast Iron									
													Non-Ferrous Material									
													Heat Resistant Alloy									
													Hardened Material									
													Others (non-metallic)									
Shape	Item Number	CECC	EPSR °	IC mm	S mm	AN °	RE mm	D2 mm	Length of edge	No. of edge	S1 mm	CBN										
	(ISO)											B16 PVD	B22 PVD	B23 PVD	B30 PVD	B36 PVD	B6K PVD	B40 PVD	B52 PVD	B5K PVD		
	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	-											