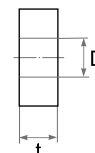
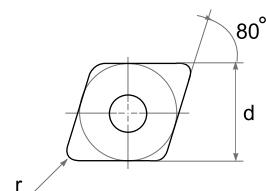
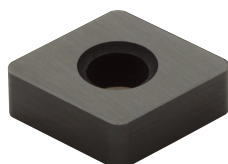


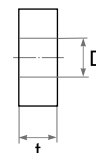
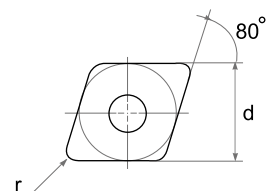
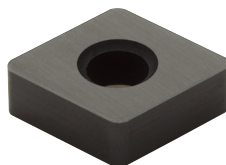
CERAMIC

CNGA



Type		Dimensions (mm)																			
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CNMA

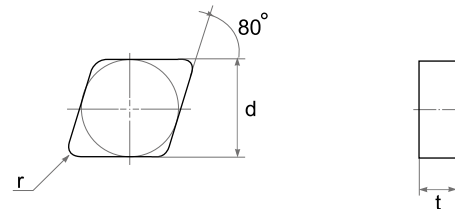
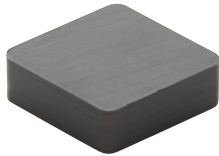


Type		Dimensions (mm)				new new																		
ISO	ASA	d	t	r	D	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
CNMA 120408	CNMA 432	12.70	4.76	0.8	5.16												●	●						
CNMA 120412	CNMA 433	12.70	4.76	1.2	5.16												●	●	●	●	●			
CNMA 120416	CNMA 434	12.70	4.76	1.6	5.16												●	●	●	●	●			
CNMA 160612	CNMA 543	15.87	6.35	1.2	6.35													●		●				
CNMA 160616	CNMA 544	15.87	6.35	1.6	6.35													●		●				

CERAMIC

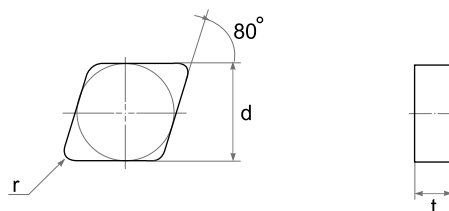
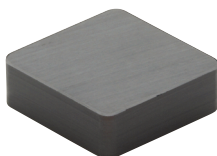
Turning & Milling

CNGN



Type		Dimensions (mm)			NEW																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
CNGN 090304	CNGN 321	9.52	3.18	0.4		●																	
CNGN 090308	CNGN 322	9.52	3.18	0.8			●												●	●			
CNGN 090312	CNGN 323	9.52	3.18	1.2															●	●			
CNGN 120304	CNGN 421	12.70	3.18	0.4	●																		
CNGN 120308	CNGN 422	12.70	3.18	0.8	●																		
CNGN 120312	CNGN 423	12.70	3.18	1.2	●																		
CNGN 120404	CNGN 431	12.70	4.76	0.4	●	●						●	●										
CNGN 120408	CNGN 432	12.70	4.76	0.8	●	●	●	●		●	●	●	●	●	●		●	●		●		●	●
CNGN 120412	CNGN 433	12.70	4.76	1.2	●	●	●	●				●	●		●		●	●	●	●		●	●
CNGN 120416	CNGN 434	12.70	4.76	1.6	●	●	●					●			●		●	●	●	●		●	●
CNGN 120704	CNGN 451	12.70	7.94	0.4																		●	●
CNGN 120708	CNGN 452	12.70	7.94	0.8											●	●				●			
CNGN 120712	CNGN 453	12.70	7.94	1.2	●	●						●	●		●		●	●		●		●	●
CNGN 120716	CNGN 454	12.70	7.94	1.6	●	●						●	●		●		●	●		●		●	●
CNGN 160608	CNGN 542	15.87	6.35	0.8																			
CNGN 160612	CNGN 543	15.87	6.35	1.2	●												●					●	●
CNGN 160616	CNGN 544	15.87	6.35	1.6	●																		
CNGN 160708	CNGN 552	15.87	7.94	0.8	●								●										
CNGN 160712	CNGN 553	15.87	7.94	1.2	●	●	●								●		●	●					
CNGN 160716	CNGN 554	15.87	7.94	1.6	●	●	●					●		●	●	●	●						
CNGN 160720	CNGN 555	15.87	7.94	2.0	●										●	●							
CNGN 190612	CNGN 643	19.05	6.35	1.2	●	●																	
CNGN 190616	CNGN 644	19.05	6.35	1.6	●	●																	
CNGN 190712	CNGN 653	19.05	7.94	1.2	●	●																	
CNGN 190716	CNGN 654	19.05	7.94	1.6	●	●																	
CNGN 190720	CNGN 655	19.05	7.94	2.0	●																		
CNGN 250724	CNGN 856	25.40	7.94	2.4	●										●								
CNGN 250924	CNGN 866	25.40	9.52	2.4	●	●	●								●								

CNMN

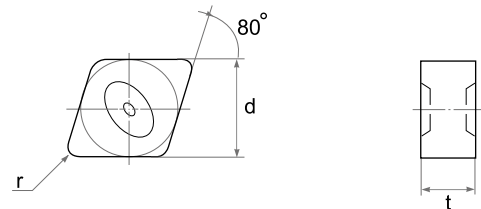
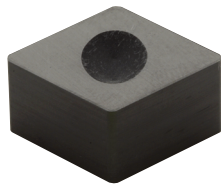


Turning & Milling

Type		Dimensions (mm)			ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	ASA	d	t	r																			
CNMN 120412	CNMN 433	12.70	4.76	1.2													●			●			
CNMN 120416	CNMN 434	12.70	4.76	1.6													●			●			

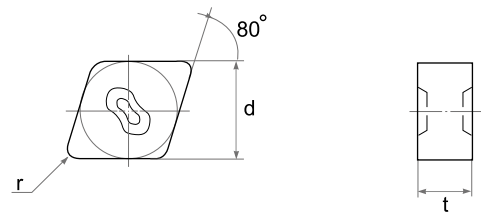
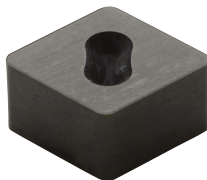
CERAMIC

CNGX



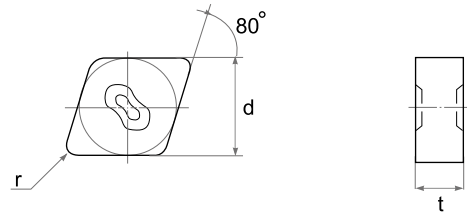
Type		Dimensions (mm)			NEW NEW																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
CNGX 120412	CNGX 433	12.70	4.76	1.2												●	●						
CNGX 120416	CNGX 434	12.70	4.76	1.6													●						
CNGX 120708	CNGX 452	12.70	7.94	0.8	●	●										●							
CNGX 120712	CNGX 453	12.70	7.94	1.2	●	●										●	●	●					
CNGX 120716	CNGX 454	12.70	7.94	1.6	●	●										●	●	●	●				
CNGX 160708	CNGX 552	15.87	7.94	0.8												●							
CNGX 160712	CNGX 553	15.87	7.94	1.2												●	●	●					
CNGX 160716	CNGX 554	15.87	7.94	1.6												●	●						

CNVX



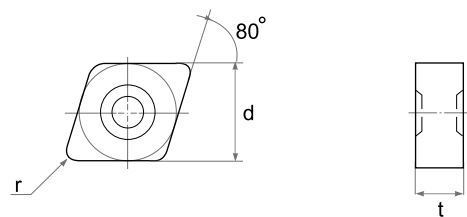
Type		Dimensions (mm)			NEW																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
CNVX 120412	CNVX 433	12.70	4.76	1.2													●						
CNVX 120416	CNVX 434	12.70	4.76	1.6													●						
CNVX 120708	CNVX 452	12.70	7.94	0.8	●								●			●							
CNVX 120712	CNVX 453	12.70	7.94	1.2	●	●							●			●	●	●	●	●			
CNVX 120716	CNVX 454	12.70	7.94	1.6		●		●					●			●	●	●	●	●			
CNVX 160708	CNVX 552	15.87	7.94	0.8																			
CNVX 160712	CNVX 553	15.87	7.94	1.2																			
CNVX 160716	CNVX 554	15.87	7.94	1.6																			

CNMX



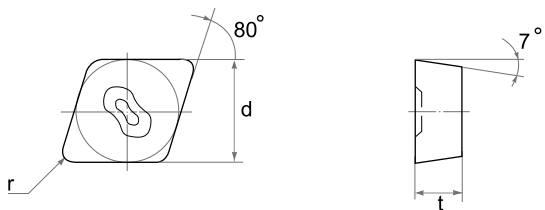
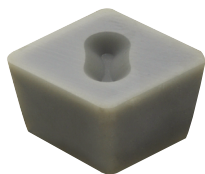
Type		Dimensions (mm)			ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	ASA	d	t	r																			
CNMX 120712	CNMX 453	12.70	7.94	1.2													●	●	●				
CNMX 120716	CNMX 454	12.70	7.94	1.6													●	●	●	●			

CNMX .. RD



Type		Dimensions (mm)			ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	ASA	d	t	r																			
CNMX 120716 RD	CNMX 454 RD	12.7	7.94	1.6												●	●						

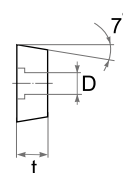
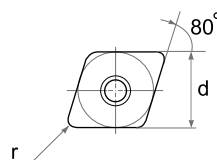
CCGX



Type		Dimensions (mm)			ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	ASA	d	t	r																			
CCGX 120608	CCGX 442	12.70	6.35	0.8													●						
CCGX 120612	CCGX 443	12.70	6.35	1.2													●	●	●	●			
CCGX 120616	CCGX 444	12.70	6.35	1.6													●						

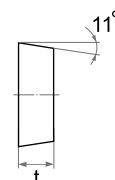
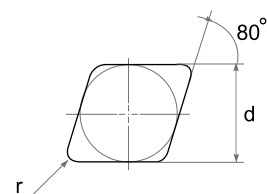
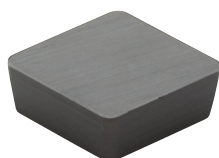
CERAMIC

CCGW



Type	Dimensions (mm)				new																		
	d	t	r	D	ST100	ST300	ST500	ST900	TC100	TC300	new TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO																							
CCGW 09T304	9.52	3.97	0.4	4.40								●				●	●						
CCGW 09T308	9.52	3.97	0.8	4.40								●				●	●		●				
CCGW 09T312	9.52	3.97	1.2	4.40												●	●		●				
CCGW 120408	12.70	4.76	0.8	5.50													●						
CCGW 120412	12.70	4.76	1.2	5.50													●						

CPGN

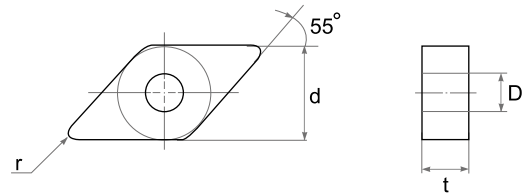
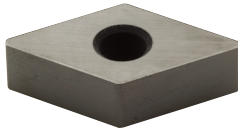


Turning & Milling

Type		Dimensions (mm)			new new																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
CPGN 090304	CPGN 321	9.52	3.18	0.4																		●	●
CPGN 090308	CPGN 322	9.52	3.18	0.8																		●	●
CPGN 120408	CPGN 432	12.70	4.76	0.8	●																	●	●
CPGN 120412	CPGN 433	12.70	4.76	1.2																			
CPGN 120416	CPGN 434	12.70	4.76	1.6																			

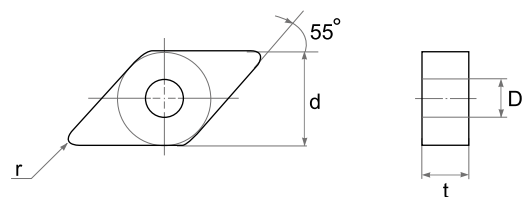
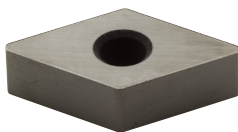
CERAMIC

DNGA



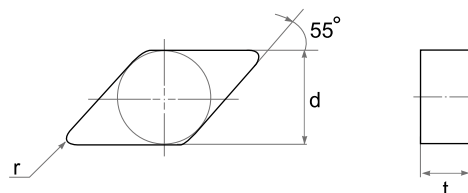
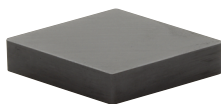
Type		Dimensions (mm)				NEW				NEW															
ISO	ASA	d	t	r	D	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800	
DNGA 150404	DNGA 431	12.70	4.76	0.4	5.16	●	●		●			●													
DNGA 150408	DNGA 432	12.70	4.76	0.8	5.16	●	●	●	●		●	●				●	●	●					●	●	
DNGA 150412	DNGA 433	12.70	4.76	1.2	5.16	●	●	●	●								●	●	●		●		●	●	
DNGA 150416	DNGA 434	12.70	4.76	1.6	5.16	●										●							●	●	
DNGA 150604	DNGA 441	12.70	6.35	0.4	5.16	●	●	●	●				●		●										
DNGA 150608	DNGA 442	12.70	6.35	0.8	5.16	●	●	●	●				●			●		●							
DNGA 150612	DNGA 443	12.70	6.35	1.2	5.16	●	●	●	●							●		●	●		●				
DNGA 150616	DNGA 444	12.70	6.35	1.6	5.16	●	●	●																	
DNGA 150704	DNGA 451	12.70	7.94	0.4	5.16	●	●																		
DNGA 150708	DNGA 452	12.70	7.94	0.8	5.16	●	●								●	●	●	●							
DNGA 150712	DNGA 453	12.70	7.94	1.2	5.16	●	●								●		●	●	●		●				
DNGA 150716	DNGA 454	12.70	7.94	1.6	5.16																				
DNGA 190608	DNGA 542	15.87	6.35	0.8	6.35	●	●																		
DNGA 190612	DNGA 543	15.87	6.35	1.2	6.35	●	●								●	●		●			●				
DNGA 190616	DNGA 544	15.87	6.35	1.6	6.35	●																			

DNMA



Type		Dimensions (mm)				NEW NEW																		
ISO	ASA	d	t	r	D	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
DNMA 150612	DNMA 443	12.70	6.35	1.2	5.16												●	●						
DNMA 150616	DNMA 444	12.70	6.35	1.6	5.16													●						

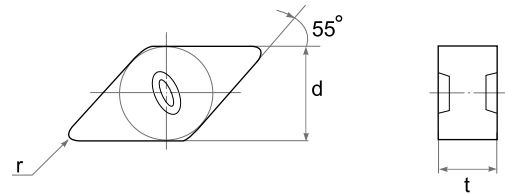
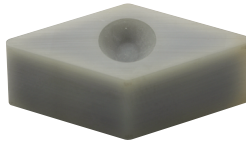
DNGN



Type		Dimensions (mm)			NEW				NEW															
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800	
DNGN 150404	DNGN 431	12.70	4.76	0.4																				
DNGN 150408	DNGN 432	12.70	4.76	0.8	●						●						●					●	●	
DNGN 150412	DNGN 433	12.70	4.76	1.2	●							●			●		●					●	●	
DNGN 150416	DNGN 434	12.70	4.76	1.6																		●	●	
DNGN 150604	DNGN 441	12.70	6.35	0.4																				
DNGN 150608	DNGN 442	12.70	6.35	0.8	●			●									●			●				
DNGN 150612	DNGN 443	12.70	6.35	1.2	●	●		●									●			●				
DNGN 150616	DNGN 444	12.70	6.35	1.6																				
DNGN 150704	DNGN 451	12.70	7.94	0.4	●	●																		
DNGN 150708	DNGN 452	12.70	7.94	0.8	●	●	●	●					●	●	●	●				●				
DNGN 150712	DNGN 453	12.70	7.94	1.2	●	●	●	●					●	●	●	●	●			●				
DNGN 150716	DNGN 454	12.70	7.94	1.6	●	●							●		●	●	●			●				

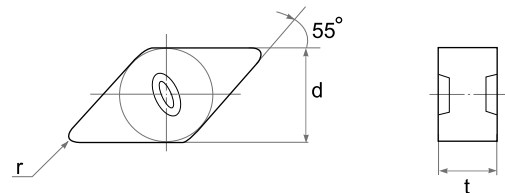
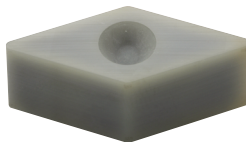
CERAMIC

DNGX



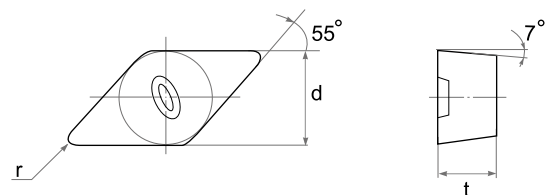
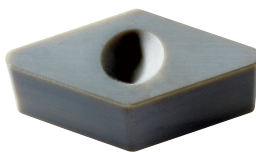
Type		Dimensions (mm)			NEW NEW																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
DNGX 120708	DNGX 352	10.00	7.94	0.8									●				●						
DNGX 120712	DNGX 353	10.00	7.94	1.2									●			●	●	●	●	●			
DNGX 120716	DNGX 354	10.00	7.94	1.6									●			●	●	●		●			
DNGX 150708	DNGX 452	12.70	7.94	0.8																			
DNGX 150712	DNGX 453	12.70	7.94	1.2									●			●	●						
DNGX 150716	DNGX 454	12.70	7.94	1.6												●	●	●	●	●			

DNMX



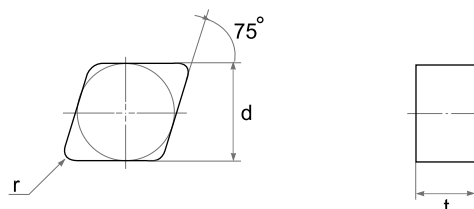
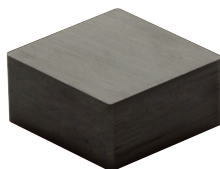
Type		Dimensions (mm)			NEW NEW																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
DNMX 120708	DNMX 352	10.00	7.94	0.8														●					
DNMX 120712	DNMX 353	10.00	7.94	1.2													●	●					
DNMX 120716	DNMX 354	10.00	7.94	1.6													●	●	●				

DCGX



Type		Dimensions (mm)			NEW NEW																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
DCGX 150612	DCGX 443	12.70	6.35	1.2													●		●				
DCGX 150616	DCGX 444	12.70	6.35	1.6													●	●	●				

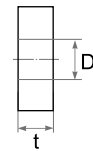
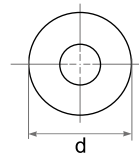
ENG



Type		Dimensions (mm)			NEW				NEW														
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ENGN 130404	ENGN 431	12.70	4.76	0.4																			
ENGN 130408	ENGN 432	12.70	4.76	0.8		●									●		●						
ENGN 130412	ENGN 433	12.70	4.76	1.2		●									●		●						
ENGN 130704	ENGN 451	12.70	7.94	0.4	●	●																	
ENGN 130708	ENGN 452	12.70	7.94	0.8	●	●	●	●					●	●	●	●	●						
ENGN 130712	ENGN 453	12.70	7.94	1.2	●	●	●	●							●	●	●			●		●	●
ENGN 130716	ENGN 454	12.70	7.94	1.6	●	●						●			●	●	●						

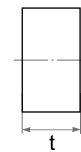
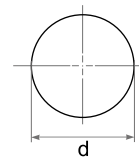
CERAMIC

RNGA



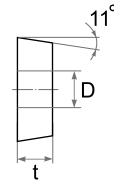
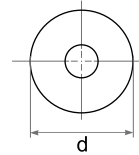
Type		Dimensions (mm)			NEW NEW																		
ISO	ASA	d	t	D	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
RNGA 120400	RNGA 430	12.70	4.76	5.16	●	●																	
RNGA 120700	RNGA 450	12.70	7.94	5.16	●	●																●	●

RNGN



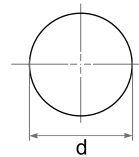
Type		Dimensions (mm)		NEW NEW																		
ISO	ASA	d	t	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
RNGN 060300	RNGN 220	6.35	3.18		●																	
RNGN 060400	RNGN 230	6.35	4.76	●		●																
RNGN 090300	RNGN 320	9.52	3.18	●		●								●	●							
RNGN 090400	RNGN 330	9.52	4.76	●	●	●					●			●	●				●		●	●
RNGN 120300	RNGN 420	12.70	3.18											●					●			
RNGN 120400	RNGN 430	12.70	4.76	●	●	●				●	●	●		●	●	●	●	●	●		●	●
RNGN 120600	RNGN 440	12.70	6.35																			
RNGN 120700	RNGN 450	12.70	7.94	●	●	●	●		●	●		●	●	●	●	●			●		●	●
RNGN 150700	RNGN 550	15.87	7.94	●											●	●						
RNGN 190600	RNGN 640	19.05	6.35	●	●									●					●			
RNGN 190700	RNGN 650	19.05	7.94	●	●	●						●			●				●		●	●
RNGN 250700	RNGN 850	25.40	7.94	●		●	●					●	●	●	●							
RNGN 250900	RNGN 860	25.40	9.52																			
RNGN 320900	RNGN 106	31.75	9.52	●																		
RNGN 0807MO		8.00	7.94	●																		
RNGN 1007MO		10.00	7.94	●																		
RNGN 1207MO		12.00	7.94	●																		

RPGA



Type		Dimensions (mm)			NEW NEW																		
ISO	ASA	d	t	D	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
RPGA 120400	RPGA 430	12.70	4.76	5.16	●																		
RPGA 120700	RPGA 450	12.70	7.94	5.16	●																		

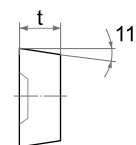
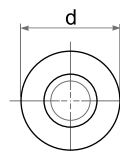
RPGN



Type		Dimensions (mm)		NEW NEW																		
ISO	ASA	d	t	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
RPGN 090300	RPGN 320	9.52	3.18	●	●														●			
RPGN 090400	RPGN 330	9.52	4.76	●	●	●																
RPGN 120300	RPGN 420	12.70	3.18																			
RPGN 120400	RPGN 430	12.70	4.76	●	●											●			●		●	●
RPGN 120700	RPGN 450	12.70	7.94	●	●														●			
RPGN 150700	RPGN 550	15.87	7.94																			
RPGN 190700	RPGN 650	19.05	7.94		●																	

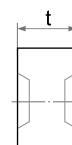
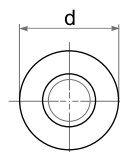
CERAMIC

RPGX .. DP



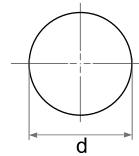
Type		Dimensions (mm)		new new																		
ISO	ASA	d	t	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
RPGX 1204 DP	RPGX 43 DP	12.70	4.76																●			
RPGX 1207 DP	RPGX 45 DP	12.70	7.94																●			

RNGX .. DP



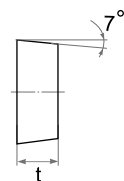
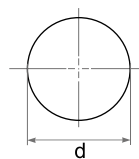
Type		Dimensions (mm)		NEW NEW																		
ISO	ASA	d	t	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
RNGX 1207 DP	RNGX 45 DP	12.70	7.94															●	●			

RBGN



Type		Dimensions (mm)		NEW NEW																		
ISO	ASA	d	t	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
RBGN 060300	RBGN 220	6.35	3.18		●																	
RBGN 060400	RBGN 230	6.35	4.76		●																	
RBGN 090300	RBGN 320	9.52	3.18	●																		
RBGN 090400	RBGN 330	9.52	4.76	●																		
RBGN 120400	RBGN 430	12.70	4.76	●	●	●										●						
RBGN 120600	RBGN 440	12.70	6.35	●																		
RBGN 120700	RBGN 450	12.70	7.94	●	●										●	●			●			
RBGN 0604MO		6.00	4.76		●																	
RBGN 0804MO		8.00	4.76		●																	
RBGN 1007MO		10.00	7.94	●													●					
RBGN 1207MO		12.00	7.94																			
RBGN 1607MO		16.00	7.94																			

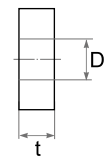
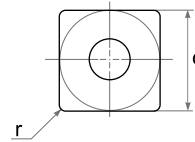
RCGN



Type	Dimensions (mm)		NEW				NEW															
ISO	d	t	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800	
RCGN 060400	6.35	4.76	●	●														●				
RCGN 060600	6.35	6.35	●	●	●								●					●				
RCGN 060700	6.35	7.94	●	●	●						●							●				
RCGN 070400	7.94	4.76		●																		
RCGN 090700	9.52	7.94	●	●	●								●					●	●			
RCGN 120700	12.70	7.94	●	●	●						●		●					●	●			
RCGN 151000	15.87	10.00	●	●	●						●		●					●				
RCGN 191000	19.05	10.00	●	●	●						●		●					●				
RCGN 251200	25.40	12.70	●	●	●						●		●					●				

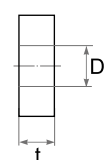
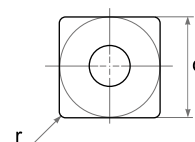
CERAMIC

SNGA



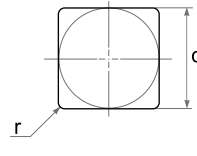
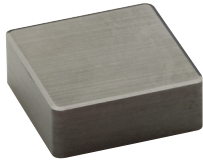
Type		Dimensions (mm)				NEW NEW																		
ISO	ASA	d	t	r	D	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SNGA 090304	SNGA 321	9.52	3.18	0.4	3.81	●	●																	
SNGA 090308	SNGA 322	9.52	3.18	0.8	3.81	●	●																	
SNGA 090312	SNGA 323	9.52	3.18	1.2	3.81	●	●																	
SNGA 090404	SNGA 331	9.52	4.76	0.4	3.81																			
SNGA 090408	SNGA 332	9.52	4.76	0.8	3.81																			
SNGA 090412	SNGA 333	9.52	4.76	1.2	3.81																			
SNGA 090416	SNGA 334	9.52	4.76	1.6	3.81													●						
SNGA 120404	SNGA 431	12.70	4.76	0.4	5.16	●		●					●			●								
SNGA 120408	SNGA 432	12.70	4.76	0.8	5.16	●	●	●				●	●			●	●		●		●	●	●	●
SNGA 120412	SNGA 433	12.70	4.76	1.2	5.16	●	●	●					●	●		●	●	●		●	●	●		
SNGA 120416	SNGA 434	12.70	4.76	1.6	5.16	●							●			●				●	●			
SNGA 120708	SNGA 452	12.70	7.94	0.8	5.16	●																		
SNGA 120712	SNGA 453	12.70	7.94	1.2	5.16	●										●	●							
SNGA 120716	SNGA 454	12.70	7.94	1.6	5.16	●								●		●	●				●			
SNGA 150608	SNGA 542	15.87	6.35	0.8	6.35		●																	
SNGA 150612	SNGA 543	15.87	6.35	1.2	6.35	●	●																	
SNGA 150616	SNGA 544	15.87	6.35	1.6	6.35		●																	
SNGA 190612	SNGA 643	19.05	6.35	1.2	7.94	●										●	●							
SNGA 190616	SNGA 644	19.05	6.35	1.6	7.94																			

SNMA



Type		Dimensions (mm)				NEW NEW																		
ISO	ASA	d	t	r	D	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SNMA 120408	SNMA 432	12.70	4.76	0.8	5.16													●		●				
SNMA 120412	SNMA 433	12.70	4.76	1.2	5.16												●	●		●	●			
SNMA 120416	SNMA 434	12.70	4.76	1.6	5.16												●	●						
SNMA 150616	SNMA 544	15.87	6.35	1.6	6.35												●	●						

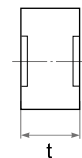
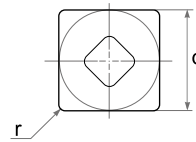
SNGN



Type		Dimensions (mm)			NEW NEW																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SNGN 090304	SNGN 321	9.52	3.18	0.4	●	●																	
SNGN 090308	SNGN 322	9.52	3.18	0.8	●	●	●					●			●		●						
SNGN 090312	SNGN 323	9.52	3.18	1.2	●	●																	
SNGN 090404	SNGN 331	9.52	4.76	0.4																			
SNGN 090408	SNGN 332	9.52	4.76	0.8	●												●						
SNGN 090412	SNGN 333	9.52	4.76	1.2									●				●						
SNGN 120404	SNGN 431	12.70	4.76	0.4	●										●								
SNGN 120408	SNGN 432	12.70	4.76	0.8	●	●	●	●		●	●	●			●	●	●			●	●	●	●
SNGN 120412	SNGN 433	12.70	4.76	1.2	●	●	●	●		●		●		●	●	●	●		●	●	●	●	●
SNGN 120416	SNGN 434	12.70	4.76	1.6	●	●				●		●		●	●	●	●	●		●	●	●	●
SNGN 120420	SNGN 435	12.70	4.76	2.0	●										●	●	●	●					
SNGN 120604	SNGN 441	12.70	6.35	0.4																			
SNGN 120608	SNGN 442	12.70	6.35	0.8	●																		
SNGN 120612	SNGN 443	12.70	6.35	1.2	●																		
SNGN 120616	SNGN 444	12.70	6.35	1.6	●																		
SNGN 120704	SNGN 451	12.70	7.94	0.4		●											●						
SNGN 120708	SNGN 452	12.70	7.94	0.8	●	●	●	●					●		●	●	●			●		●	●
SNGN 120712	SNGN 453	12.70	7.94	1.2	●	●	●	●				●	●		●	●	●	●	●	●	●	●	●
SNGN 120716	SNGN 454	12.70	7.94	1.6	●	●	●	●				●	●	●	●	●	●	●	●	●		●	●
SNGN 120720	SNGN 455	12.70	7.94	2.0	●	●	●					●	●		●	●	●						
SNGN 150404	SNGN 531	15.87	4.76	0.4		●																	
SNGN 150408	SNGN 532	15.87	4.76	0.8		●																	
SNGN 150412	SNGN 533	15.87	4.76	1.2	●								●			●	●						
SNGN 150416	SNGN 534	15.87	4.76	1.6	●											●							
SNGN 150708	SNGN 552	15.87	7.94	0.8	●																		
SNGN 150712	SNGN 553	15.87	7.94	1.2	●	●						●	●		●	●	●						
SNGN 150716	SNGN 554	15.87	7.94	1.6	●								●	●	●	●	●	●	●				
SNGN 190608	SNGN 642	19.05	6.35	0.8																			
SNGN 190612	SNGN 643	19.05	6.35	1.2	●										●		●			●			
SNGN 190616	SNGN 644	19.05	6.35	1.6	●										●					●		●	●
SNGN 190712	SNGN 653	19.05	7.94	1.2	●																		
SNGN 190716	SNGN 654	19.05	7.94	1.6	●	●	●	●				●	●		●		●			●			
SNGN 190720	SNGN 655	19.05	7.94	2.0	●								●		●								
SNGN 250720	SNGN 854	25.40	7.94	2.0	●											●							
SNGN 250724	SNGN 856	25.40	7.94	2.4	●	●									●	●							
SNGN 250924	SNGN 866	25.40	9.52	2.4	●		●	●					●		●	●	●			●			

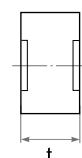
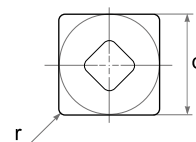
CERAMIC

SNGX



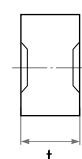
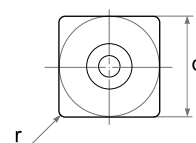
Type		Dimensions (mm)			NEW NEW																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SNGX 120408	SNGX 432	12.70	4.76	0.8													●						
SNGX 120412	SNGX 433	12.70	4.76	1.2													●						
SNGX 120416	SNGX 434	12.70	4.76	1.6													●						
SNGX 120708	SNGX 452	12.70	7.94	0.8	●											●		●					
SNGX 120712	SNGX 453	12.70	7.94	1.2	●	●										●	●	●		●			
SNGX 120716	SNGX 454	12.70	7.94	1.6												●	●	●	●	●			
SNGX 150708	SNGX 552	15.87	7.94	0.8	●	●										●		●					
SNGX 150712	SNGX 553	15.87	7.94	1.2	●	●										●		●		●			
SNGX 150716	SNGX 554	15.87	7.94	1.6												●	●	●					

SNMX



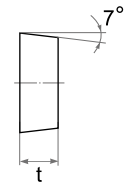
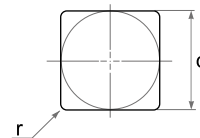
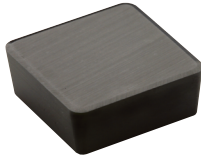
Type		Dimensions (mm)			NEW NEW																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SNMX 120712	SNMX 453	12.70	7.94	1.2												●	●	●	●	●			
SNMX 120716	SNMX 454	12.70	7.94	1.6													●						

SNMX..RD



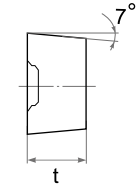
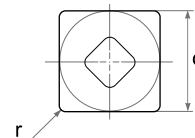
Type		Dimensions (mm)			NEW																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SNMX 120716 RD	SNMX 454 RD	12.70	7.94	1.6												●			●				

SCGN



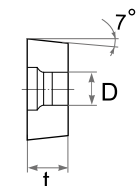
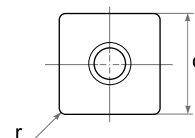
Type		Dimensions (mm)			NEW NEW																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SCGN 090412	SCGN 333	9.52	4.76	1.2	●												●						
SCGN 090416	SCGN 334	9.52	4.76	1.6	●																		
SCGN 120404	SCGN 431	12.70	4.76	0.4		●																	
SCGN 120408	SCGN 432	12.70	4.76	0.8	●	●																	
SCGN 120412	SCGN 433	12.70	4.76	1.2										●		●	●		●	●			
SCGN 120416	SCGN 434	12.70	4.76	1.6	●	●																	

SCGX



Type		Dimensions (mm)			NEW NEW																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SCGX 120408	SCGX 432	12.70	4.76	0.8																			
SCGX 120616	SCGX 444	12.70	6.35	1.6															●				
SCGX 120716	SCGX 454	12.70	7.94	1.6																			

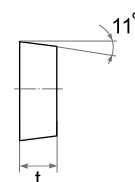
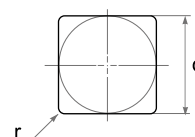
SCGW



Type	Dimensions (mm)				NEW NEW																		
					ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	d	t	r	D																			
SCGW 09T304	9.52	3.97	0.4	4.40														●					
SCGW 09T308	9.52	3.97	0.8	4.40														●					
SCGW 120408	12.70	4.76	0.8	5.50														●					

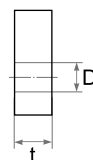
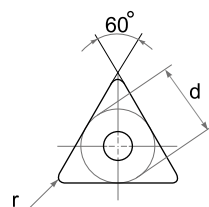
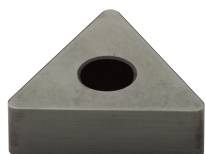
CERAMIC

SPGN



Type		Dimensions (mm)			Heat																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SPGN 090304	SPGN 321	9.52	3.18	0.4	●	●									●								
SPGN 090308	SPGN 322	9.52	3.18	0.8	●	●						●				●	●	●				●	●
SPGN 090312	SPGN 323	9.52	3.18	1.2	●																		
SPGN 120304	SPGN 421	12.70	3.18	0.4	●	●																	
SPGN 120308	SPGN 422	12.70	3.18	0.8	●	●					●		●		●		●						
SPGN 120312	SPGN 423	12.70	3.18	1.2	●	●						●			●		●		●				
SPGN 120404	SPGN 431	12.70	4.76	0.4																			
SPGN 120408	SPGN 432	12.70	4.76	0.8	●	●	●								●		●					●	●
SPGN 120412	SPGN 433	12.70	4.76	1.2	●	●						●			●	●	●	●	●	●	●	●	●
SPGN 120416	SPGN 434	12.70	4.76	1.6	●	●						●				●	●	●				●	●
SPGN 150408	SPGN 532	15.87	4.76	0.8																			
SPGN 150412	SPGN 533	15.87	4.76	1.2		●										●							
SPGN 190412	SPGN 633	19.05	4.76	1.2	●																		
SPGN 190416	SPGN 634	19.05	4.76	1.6	●	●											●	●					

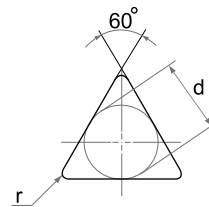
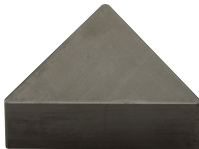
TNGA



Type		Dimensions (mm)				NEW NEW																		
ISO	ASA	d	t	r	D	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
TNGA 110304	TNGA 221	6.35	3.18	0.4	2.26	●	●																	
TNGA 110308	TNGA 222	6.35	3.18	0.8	2.26	●	●																	
TNGA 160304	TNGA 321	9.52	3.18	0.4	3.81	●	●																	
TNGA 160308	TNGA 322	9.52	3.18	0.8	3.81	●	●							●		●								
TNGA 160312	TNGA 323	9.52	3.18	1.2	3.81	●	●																	
TNGA 160404	TNGA 331	9.52	4.76	0.4	3.81	●	●	●	●			●	●			●	●	●	●		●			
TNGA 160408	TNGA 332	9.52	4.76	0.8	3.81	●	●	●	●			●	●		●	●	●	●	●		●		●	●
TNGA 160412	TNGA 333	9.52	4.76	1.2	3.81	●	●	●	●				●		●	●	●	●	●		●			
TNGA 160416	TNGA 334	9.52	4.76	1.6	3.81	●	●	●						●		●	●	●	●		●			
TNGA 220404	TNGA 431	12.70	4.76	0.4	5.16	●	●									●								
TNGA 220408	TNGA 432	12.70	4.76	0.8	5.16	●	●									●		●			●			
TNGA 220412	TNGA 433	12.70	4.76	1.2	5.16	●	●									●		●			●			
TNGA 220416	TNGA 434	12.70	4.76	1.6	5.16	●	●							●		●		●						
TNGA 220708	TNGA 452	12.70	7.94	0.8	5.16	●	●																	
TNGA 220712	TNGA 453	12.70	7.94	1.2	5.16	●																		
TNGA 270608	TNGA 542	15.87	6.35	0.8	6.35		●																	
TNGA 270612	TNGA 543	15.87	6.35	1.2	6.35		●																	
TNGA 330924	TNGA 666	19.05	9.52	2.4	7.94		●																	

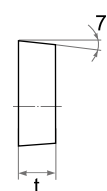
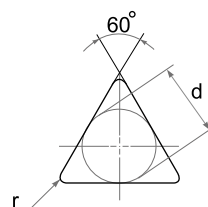
CERAMIC

TNGN



Type		Dimensions (mm)			NEW NEW																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
TNGN 110304	TNGN 221	6.35	3.18	0.4	●	●									●								
TNGN 110308	TNGN 222	6.35	3.18	0.8	●	●							●		●	●							
TNGN 160404	TNGN 331	9.52	4.76	0.4	●	●						●	●		●								
TNGN 160408	TNGN 332	9.52	4.76	0.8	●	●	●	●		●	●	●	●		●	●	●		●				
TNGN 160412	TNGN 333	9.52	4.76	1.2	●	●	●	●		●					●	●	●					●	●
TNGN 160416	TNGN 334	9.52	4.76	1.6	●	●	●	●				●			●	●	●						
TNGN 160704	TNGN 351	9.52	7.94	0.4	●																		
TNGN 160708	TNGN 352	9.52	7.94	0.8	●	●						●				●							
TNGN 160712	TNGN 353	9.52	7.94	1.2	●	●							●		●	●							
TNGN 160716	TNGN 354	9.52	7.94	1.6	●	●									●								
TNGN 220404	TNGN 431	12.70	4.76	0.4	●																		
TNGN 220408	TNGN 432	12.70	4.76	0.8	●	●									●					●		●	●
TNGN 220412	TNGN 433	12.70	4.76	1.2	●	●									●		●			●		●	●
TNGN 220416	TNGN 434	12.70	4.76	1.6		●									●		●					●	●
TNGN 220708	TNGN 452	12.70	7.94	0.8	●																		
TNGN 220712	TNGN 453	12.70	7.94	1.2		●																	
TNGN 220716	TNGN 454	12.70	7.94	1.6		●																	
TNGN 270608	TNGN 542	15.87	6.35	0.8	●	●																	
TNGN 270612	TNGN 543	15.87	6.35	1.2	●	●																	
TNGN 270616	TNGN 544	15.87	6.35	1.6		●														●			
TNGN 330924	TNGN 666	19.05	9.52	2.4		●																	
TNGN 440932	TNGN 868	25.40	9.52	3.2	●	●									●								

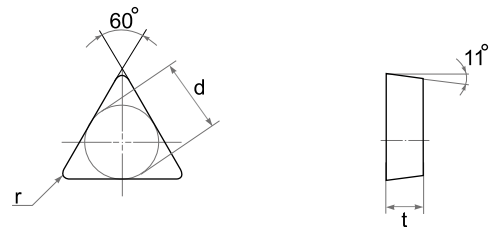
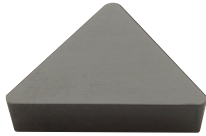
TCUN



Type		Dimensions (mm)			new new																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
TCUN 160408	TCUN 332	9.52	4.76	0.8		●										●	●						
TCUN 160412	TCUN 333	9.52	4.76	1.2		●											●						
TCUN 160416	TCUN 334	9.52	4.76	1.6		●											●						

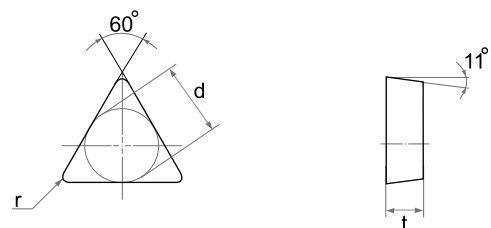
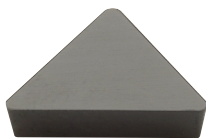
CERAMIC

TPGN



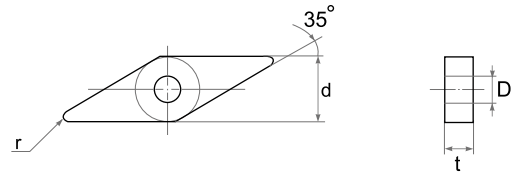
Type		Dimensions (mm)			NEW NEW																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
TPGN 090204	TPGN 731	5.56	2.38	0.4		●																	
TPGN 090208	TPGN 732	5.56	2.38	0.8		●																	
TPGN 110304	TPGN 221	6.35	3.18	0.4	●	●					●	●			●		●						
TPGN 110308	TPGN 222	6.35	3.18	0.8	●	●					●	●			●	●	●			●		●	●
TPGN 160304	TPGN 321	9.52	3.18	0.4	●	●	●				●	●	●		●		●						
TPGN 160308	TPGN 322	9.52	3.18	0.8	●	●					●	●	●		●	●	●	●		●		●	●
TPGN 160312	TPGN 323	9.52	3.18	1.2	●	●											●	●				●	●
TPGN 160404	TPGN 331	9.52	4.76	0.4	●		●																
TPGN 160408	TPGN 332	9.52	4.76	0.8	●	●														●			
TPGN 160412	TPGN 333	9.52	4.76	1.2	●															●			
TPGN 160416	TPGN 334	9.52	4.76	1.6	●																		
TPGN 220404	TPGN 431	12.70	4.76	0.4	●	●																	
TPGN 220408	TPGN 432	12.70	4.76	0.8	●	●									●							●	●
TPGN 220412	TPGN 433	12.70	4.76	1.2	●	●										●	●						
TPGN 220416	TPGN 434	12.70	4.76	1.6	●	●	●																
TPGN 220712	TPGN 453	12.70	7.94	1.2																			
TPGN 220716	TPGN 454	12.70	7.94	1.6																			
TPGN 271232	TPGN 588	15.87	12.70	3.2		●																	

TPUN



Type		Dimensions (mm)			NEW NEW																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
TPUN 110308	TPUN 222	6.35	3.18	0.8													●						
TPUN 110312	TPUN 223	6.35	3.18	1.2													●						

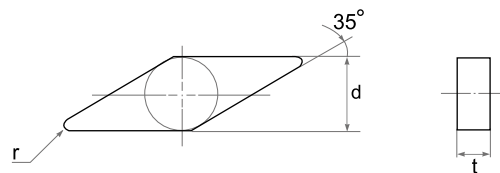
VNGA



Turning & Milling

Type		Dimensions (mm)				NEW NEW																		
ISO	ASA	d	t	r	D	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
VNGA 160404	VNGA 331	9.52	4.76	0.4	3.81	●	●	●				●				●								
VNGA 160408	VNGA 332	9.52	4.76	0.8	3.81	●	●	●	●		●	●			●	●	●	●	●		●			
VNGA 160412	VNGA 333	9.52	4.76	1.2	3.81	●	●	●	●						●	●	●	●	●					
VNGA 160604	VNGA 341	9.52	6.35	0.4	3.81	●	●																	
VNGA 160608	VNGA 342	9.52	6.35	0.8	3.81	●	●																	
VNGA 160612	VNGA 343	9.52	6.35	1.2	3.81	●	●																	
VNGA 220404	VNGA 431	12.70	4.76	0.4	5.16	●	●																	
VNGA 220408	VNGA 432	12.70	4.76	0.8	5.16	●	●											●						
VNGA 220412	VNGA 433	12.70	4.76	1.2	5.16	●	●											●						
VNGA 220424	VNGA 436	12.70	4.76	2.4	5.16																		●	●

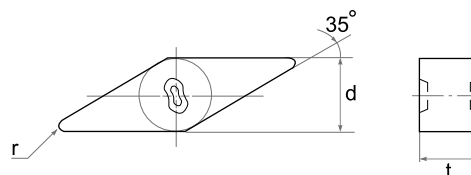
VNGN



Type		Dimensions (mm)			NEW																		
					ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	ASA	d	t	r																			
VNGN 160404	VNGN 331	9.52	4.76	0.4		●																	
VNGN 160408	VNGN 332	9.52	4.76	0.8		●																	
VNGN 160704	VNGN 351	9.52	7.94	0.4		●																	
VNGN 160708	VNGN 352	9.52	7.94	0.8		●																	
VNGN 160712	VNGN 353	9.52	7.94	1.2																			
VNGN 160716	VNGN 354	9.52	7.94	1.6																			

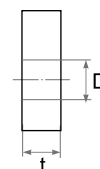
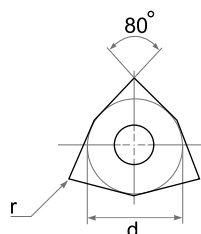
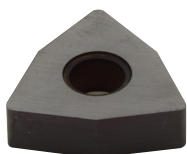
CERAMIC

VNGX



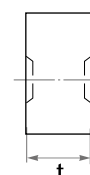
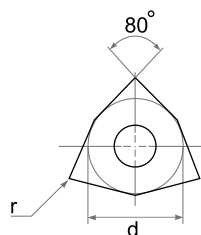
Type		Dimensions (mm)			new				new														
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
VNGX 160708	VNGX 352	9.52	7.94	0.8		●							●				●						
VNGX 160712	VNGX 353	9.52	7.94	1.2		●							●				●		●				
VNGX 160716	VNGX 354	9.52	7.94	1.6													●						

WNGA



Type		Dimensions (mm)				new new																		
ISO	ASA	d	t	r	D	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
WNGA 080404	WNGA 431	12.70	4.76	0.4	5.16	●	●	●																
WNGA 080408	WNGA 432	12.70	4.76	0.8	5.16	●	●	●								●	●	●	●	●	●		●	●
WNGA 080412	WNGA 433	12.70	4.76	1.2	5.16	●	●	●								●	●	●	●	●	●			

WNGX



Type		Dimensions (mm)			NEW NEW																		
ISO	ASA	d	t	r	ST100	ST300	ST500	ST900	TC100	TC300	TM300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
WNGX 080708	WNGX 452	12.70	7.94	0.8													●						
WNGX 080712	WNGX 453	12.70	7.94	1.2											●		●	●	●	●			
WNGX 080716	WNGX 454	12.70	7.94	1.6													●						