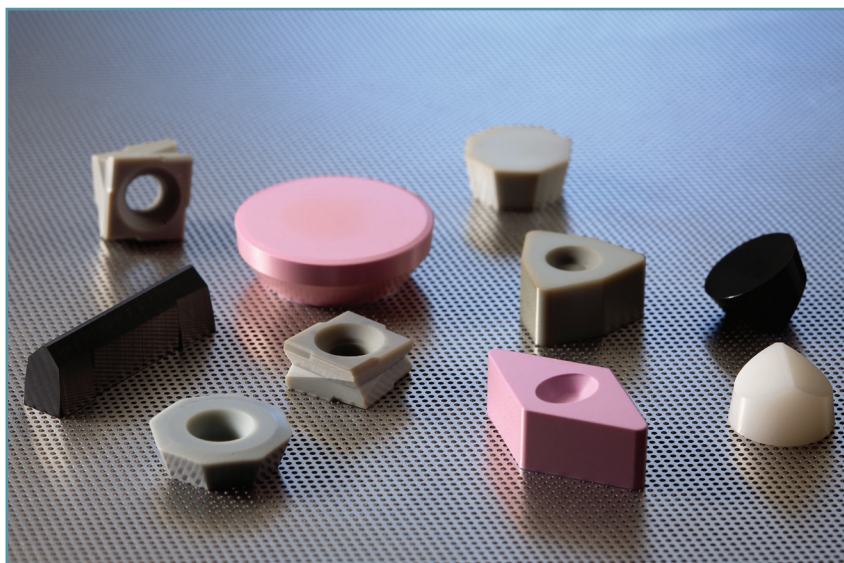




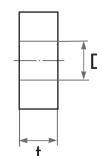
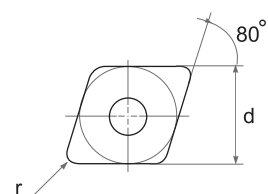
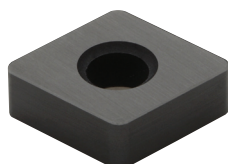


Ceramic

T urning	A 24
R oll Turning	A 52
G rooving	A 58
M illing	A 65
W iper(ZZ)	A 73
S pecial	A 77

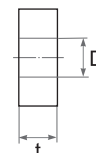
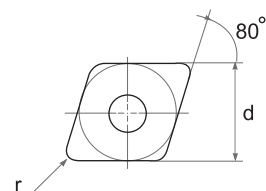
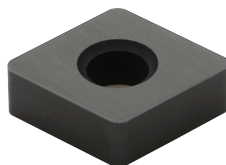
CERAMIC

CNGA



Type		Dimensions (mm)																				NEW	NEW	NEW
ISO	ASA	d	t	r	D	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800	
CNGA 120404	CNGA 431	12.70	4.76	0.4	5.16	●	●	●	●			●			●	●	●	●	●	●				
CNGA 120408	CNGA 432	12.70	4.76	0.8	5.16	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	
CNGA 120412	CNGA 433	12.70	4.76	1.2	5.16	●	●					●	●		●	●	●	●	●	●		●	●	
CNGA 120416	CNGA 434	12.70	4.76	1.6	5.16	●	●					●			●	●	●			●		●	●	
CNGA 120704	CNGA 451	12.70	7.94	0.4	5.16																			
CNGA 120708	CNGA 452	12.70	7.94	0.8	5.16	●	●						●		●	●								
CNGA 120712	CNGA 453	12.70	7.94	1.2	5.16	●	●	●					●		●	●				●		●	●	
CNGA 120716	CNGA 454	12.70	7.94	1.6	5.16	●							●		●	●				●				
CNGA 160608	CNGA 542	15.87	6.35	0.8	6.35										●									
CNGA 160612	CNGA 543	15.87	6.35	1.2	6.35										●	●	●					●	●	
CNGA 160616	CNGA 544	15.87	6.35	1.6	6.35	●											●							
CNGA 160708	CNGA 552	15.87	7.94	0.8	6.35	●	●																	
CNGA 160712	CNGA 553	15.87	7.94	1.2	6.35	●	●									●								
CNGA 160716	CNGA 554	15.87	7.94	1.6	6.35											●								
CNGA 190608	CNGA 642	19.05	6.35	0.8	7.93	●									●	●				●				
CNGA 190612	CNGA 643	19.05	6.35	1.2	7.93										●							●	●	
CNGA 190616	CNGA 644	19.05	6.35	1.6	7.93	●	●																	
CNGA 190712	CNGA 653	19.05	7.94	1.2	7.93																			
CNGA 190716	CNGA 654	19.05	7.94	1.6	7.93	●																		

CNMA

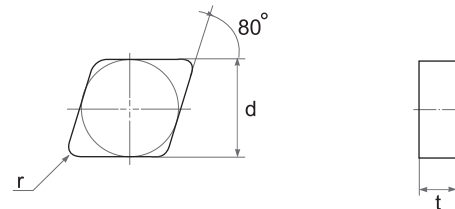
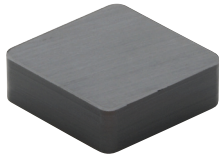


Type		Dimensions (mm)				new new new																	
ISO	ASA	d	t	r	D	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
CNMA 120408	CNMA 432	12.70	4.76	0.8	5.16											●	●						
CNMA 120412	CNMA 433	12.70	4.76	1.2	5.16											●	●	●	●	●			
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

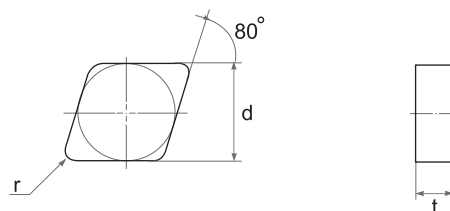
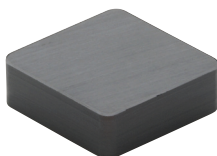
Turning & Milling

CNGN



Type		Dimensions (mm)			new new new																	
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	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

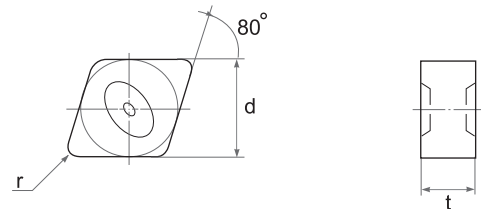
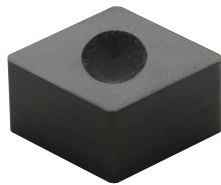


Turning & Milling

Type		Dimensions (mm)			new new new																	
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
CNMN 120412	CNMN 433	12.70	4.76	1.2												●			●			
CNMN 120416	CNMN 434	12.70	4.76	1.6												●			●			

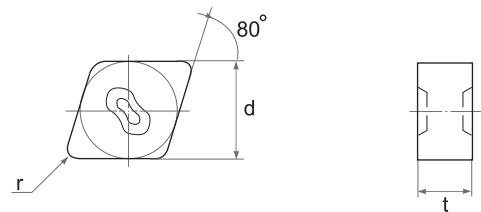
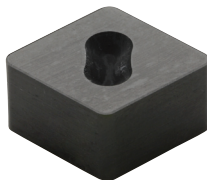
CERAMIC

CNGX



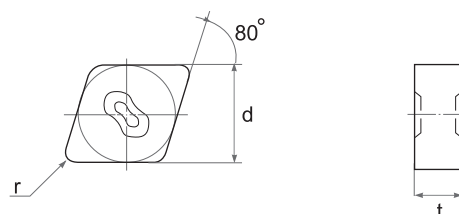
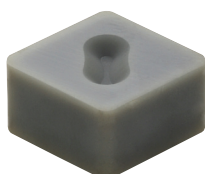
Type		Dimensions (mm)			NEW NEW NEW																	
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
CNGX 120412	CNGX 433	12.70	4.76	1.2											●	●						
CNGX 120416	CNGX 434	12.70	4.76	1.6												●						
CNGX 120708	CNGX 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



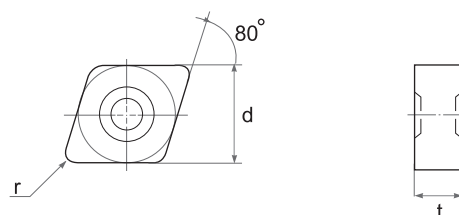
Type		Dimensions (mm)																			NEW	NEW	NEW
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800	
CNVX 120412	CNVX 433	12.70	4.76	1.2												●							
CNVX 120416	CNVX 434	12.70	4.76	1.6												●							
CNVX 120708	CNVX 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



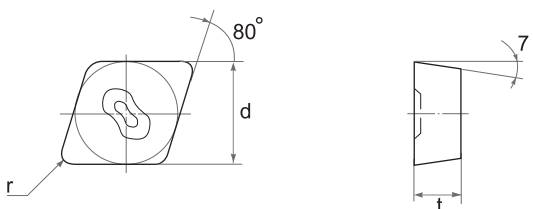
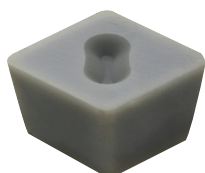
Type		Dimensions (mm)			ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	ASA	d	t	r																		
CNMX 120712	CNMX 453	12.70	7.94	1.2												●	●	●				
CNMX 120716	CNMX 454	12.70	7.94	1.6												●	●	●	●			

CNMX .. RD



Type		Dimensions (mm)			ST100	ST300	ST500	ST700	TC100	TC300	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											●	●						

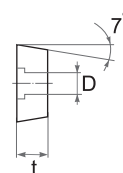
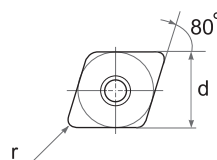
CCGX



Type		Dimensions (mm)			ST100	ST300	ST500	ST700	TC100	TC300	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

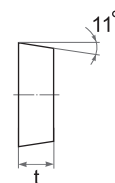
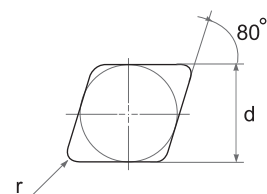
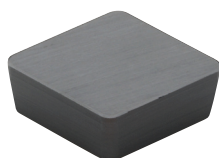
CCGW



Type	Dimensions (mm)																					
	d	t	r	D	ST100	ST300	ST500	ST700	TC100	TC300	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												●						

NEW NEW NEW

CPGN

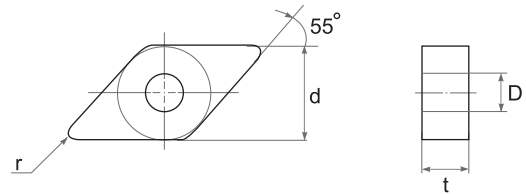
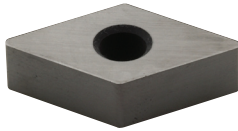


Turning & Milling

Type		Dimensions (mm)			NEW NEW NEW																	
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	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																		

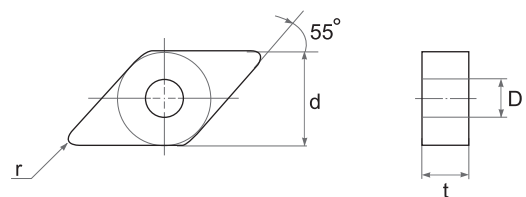
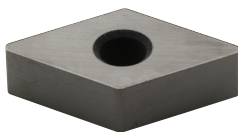
CERAMIC

DNGA



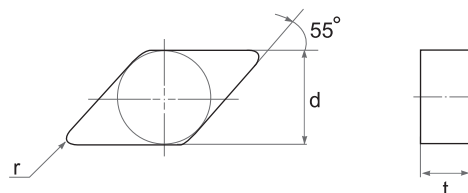
Type		Dimensions (mm)				NEW NEW NEW																	
ISO	ASA	d	t	r	D	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
DNGA 150404	DNGA 431	12.70	4.76	0.4	5.16	●	●		●														
DNGA 150408	DNGA 432	12.70	4.76	0.8	5.16	●	●	●	●		●				●	●	●					●	●
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)																					
ISO	ASA	d	t	r	D	ST100	ST300	ST500	ST700	TC100	TC300	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												●						

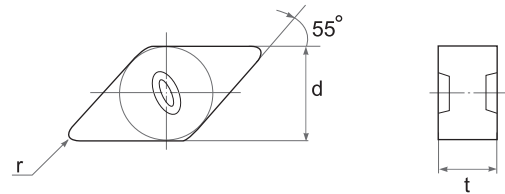
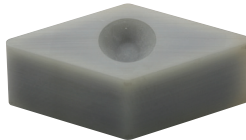
DNGN



Type		Dimensions (mm)			new new new																	
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	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	●	●						●		●	●	●			●			

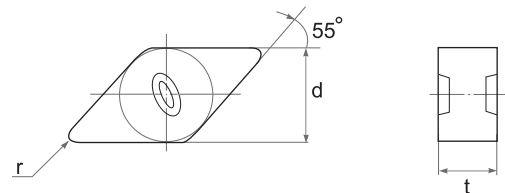
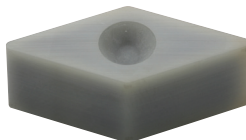
CERAMIC

DNGX



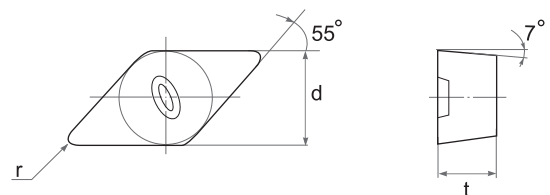
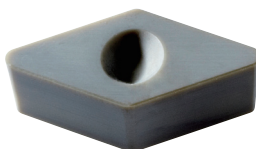
Type		Dimensions (mm)			NEW NEW NEW																	
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
DNGX 120708	DNGX 352	10.00	7.94	0.8								●				●						
DNGX 120712	DNGX 353	10.00	7.94	1.2								●			●	●	●	●	●			
DNGX 120716	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



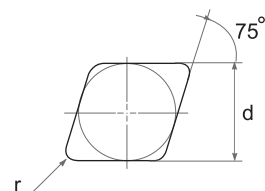
Type		Dimensions (mm)			NEW NEW NEW																	
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
DNMX 120708	DNMX 352	10.00	7.94	0.8													●					
DNMX 120712	DNMX 353	10.00	7.94	1.2												●	●					
DNMX 120716	DNMX 354	10.00	7.94	1.6												●	●	●				

DCGX



Type		Dimensions (mm)																		
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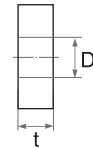
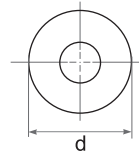
ENGN



Type		Dimensions (mm)			NEWNEWNEW																	
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	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	●	●					●			●	●	●						

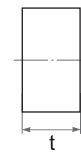
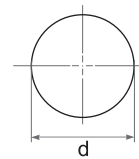
CERAMIC

RNGA



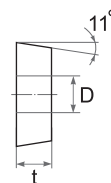
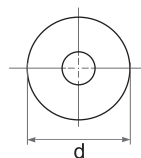
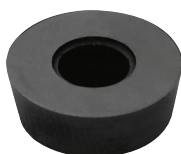
Type		Dimensions (mm)			NEW																	
ISO	ASA	d	t	D	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	NEW SW400	NEW SW800
RNGA 120400	RNGA 430	12.70	4.76	5.16	●	●																
RNGA 120700	RNGA 450	12.70	7.94	5.16	●	●															●	●

RNGN



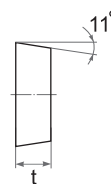
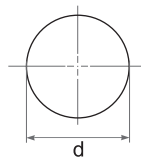
Type		Dimensions (mm)																			
ISO	ASA	d	t	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
RNGN 060300	RNGN 220	6.35	3.18		●																
RNGN 060400	RNGN 230	6.35	4.76	●		●															
RNGN 090300	RNGN 320	9.52	3.18	●		●							●	●							
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)			</																	
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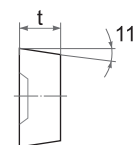
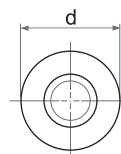
RPGN



Type		Dimensions (mm)																			
ISO	ASA	d	t	ST100	ST300	ST500	ST700	TC100	TC300	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		●																

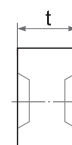
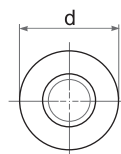
CERAMIC

RPGX .. DP



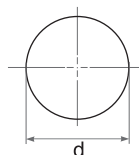
Type		Dimensions (mm)		ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	ASA	d	t																		
RPGX 1204 DP	RPGX 43 DP	12.70	4.76															●			
RPGX 1207 DP	RPGX 45 DP	12.70	7.94															●			

RNGX .. DP



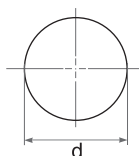
Type		Dimensions (mm)		ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	ASA	d	t																		
RNGX 1207 DP	RNGX 45 DP	12.70	7.94														●	●			

RBGN



Type		Dimensions (mm)		NEW NEW NEW																	
ISO	ASA	d	t	ST100	ST300	ST500	ST700	TC100	TC300	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																		

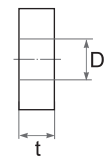
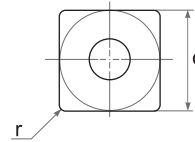
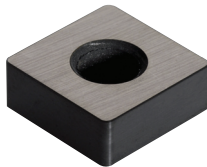
RCGN



Type	Dimensions (mm)		new new new																		
	ISO	d	t	ST100	ST300	ST500	ST700	TC100	TC300	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	●	●	●						●		●					●			

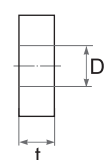
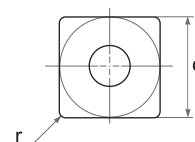
CERAMIC

SNGA



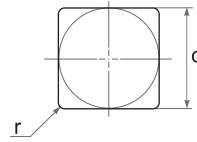
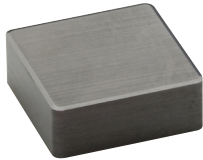
Type		Dimensions (mm)				new new new																	
ISO	ASA	d	t	r	D	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SNGA 090304	SNGA 321	9.52	3.18	0.4	3.81	●	●																
SNGA 090308	SNGA 322	9.52	3.18	0.8	3.81	●	●																
SNGA 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 NEW																	
ISO	ASA	d	t	r	D	ST100	ST300	ST500	ST700	TC100	TC300	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											●	●						

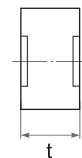
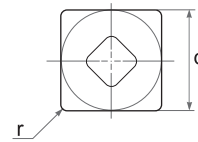
SNGN



Type		Dimensions (mm)			NEW NEW NEW																	
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	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	●		●	●				●		●	●	●			●			

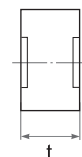
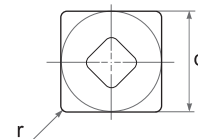
CERAMIC

SNGX



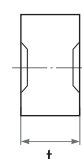
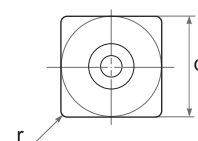
Type		Dimensions (mm)			NEW NEW NEW																	
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SNGX 120408	SNGX 432	12.70	4.76	0.8												●						
SNGX 120412	SNGX 433	12.70	4.76	1.2												●						
SNGX 120416	SNGX 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



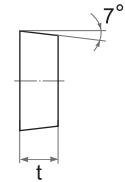
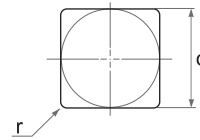
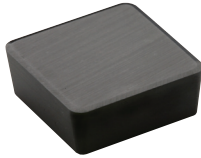
Type		Dimensions (mm)			NEW NEW NEW																	
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SNMX 120712	SNMX 453	12.70	7.94	1.2											●	●	●	●	●			
SNMX 120716	SNMX 454	12.70	7.94	1.6												●						

SNMX..RD



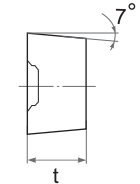
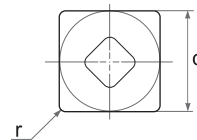
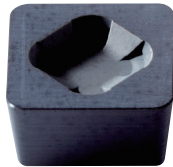
Type		Dimensions (mm)			NEW NEW NEW																	
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SNMX 120716 RD	SNMX 454 RD	12.70	7.94	1.6											●			●				

SCGN



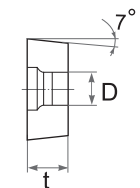
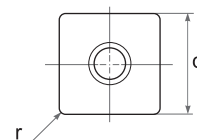
Type		Dimensions (mm)			NEW NEW NEW																	
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SCGN 090412	SCGN 333	9.52	4.76	1.2	●											●						
SCGN 090416	SCGN 334	9.52	4.76	1.6	●																	
SCGN 120404	SCGN 431	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 new																	
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	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																		

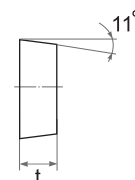
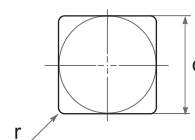
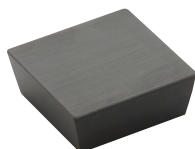
SCGW



Type	Dimensions (mm)				NEW NEW NEW																		
	d	t	r	D	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800	
ISO																							
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												●							

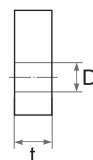
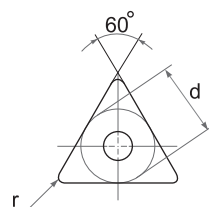
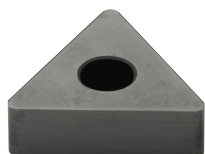
CERAMIC

SPGN



Type		Dimensions (mm)																				
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	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	●	●										●	●					

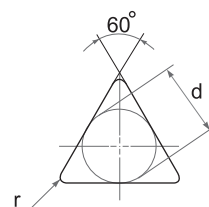
TNGA



Type		Dimensions (mm)																				NEW	NEW	NEW
ISO	ASA	d	t	r	D	ST100	ST300	ST500	ST700	TC100	TC300	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		●																	

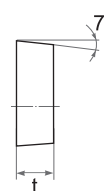
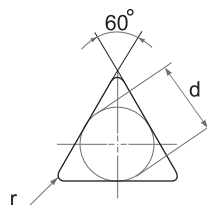
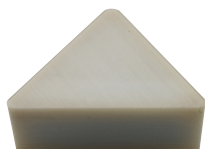
CERAMIC

TNGN



Type		Dimensions (mm)																				NEW	NEW	NEW
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	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

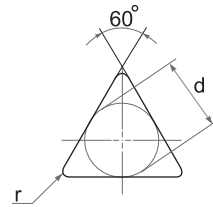
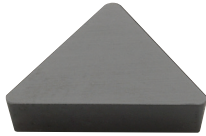


Turning & Milling

Type		Dimensions (mm)			</																	
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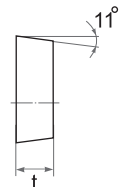
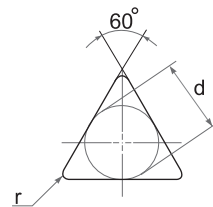
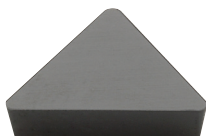
CERAMIC

TPGN



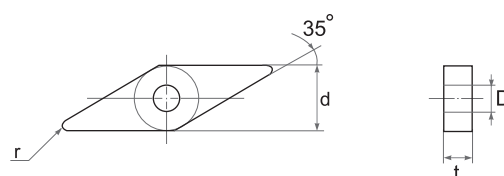
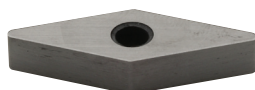
Type		Dimensions (mm)			NEW NEW NEW																	
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
TPGN 090204	TPGN 731	5.56	2.38	0.4		●																
TPGN 090208	TPGN 732	5.56	2.38	0.8		●																
TPGN 110304	TPGN 221	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)																		
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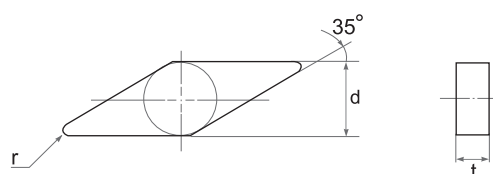
VNGA



Turning & Milling

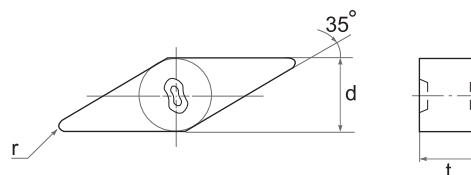
Type		Dimensions (mm)				new new new																	
ISO	ASA	d	t	r	D	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
VNGA 160404	VNGA 331	9.52	4.76	0.4	3.81	●	●	●							●								
VNGA 160408	VNGA 332	9.52	4.76	0.8	3.81	●	●	●	●		●			●	●	●	●	●		●			
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 NEW NEW																	
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
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																		

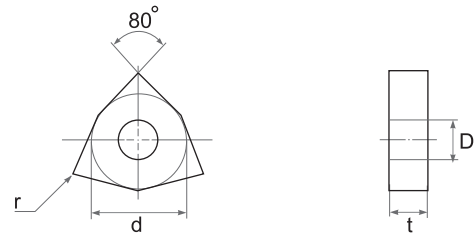
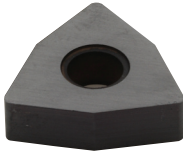
VNGX



Type		Dimensions (mm)																			NEW	NEW	NEW
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	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												●							

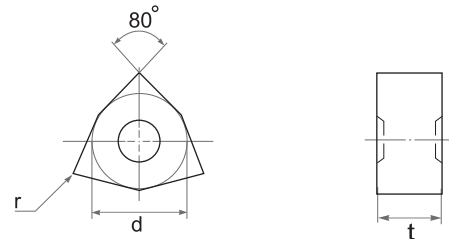
NEW NEW NEW

WNGA



Type		Dimensions (mm)				<																
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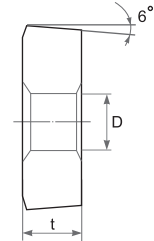
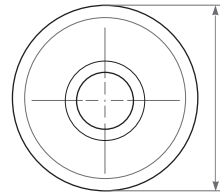
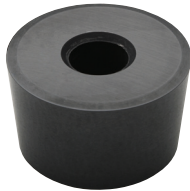
WNGX



Type		Dimensions (mm)			<																	
------	--	-----------------	--	--	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

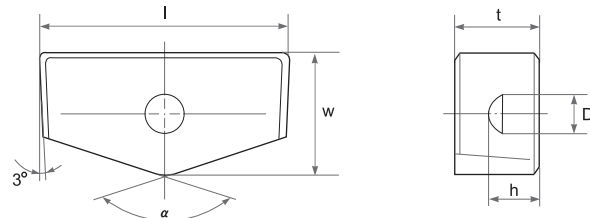
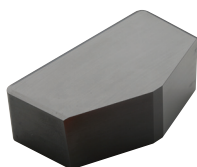
CERAMIC

CDH



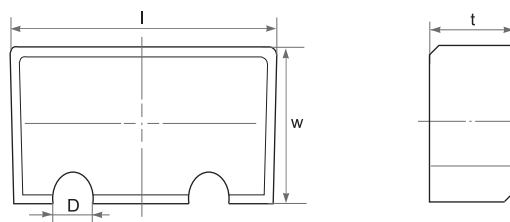
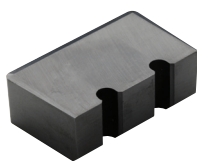
Type		Dimensions (mm)																				
ISO	ASA	d	t	D	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
CDH 120600	CDH 22	12.70	6.35	3.18	●	●	●															
CDH 120900	CDH 23	12.70	9.52	3.18	●																	
CDH 190900	CDH 33	19.05	9.52	6.35	●	●	●	●						●								
CDH 191200	CDH 34	19.05	12.70	6.35	●																	
CDH 251200	CDH 42	25.40	12.70	6.75	●	●	●					●	●	●								
CDH 251900	CDH 43	25.40	19.05	6.75	●							●	●	●								
CDH 320900	CDH 515	31.75	9.52	10.00	●	●						●	●	●	●							
CDH 321900	CDH 53	31.75	19.05	10.00	●	●	●	●				●	●	●	●							
CDH 381100		38.10	11.11	9.93	●																	

F-Series



Type	Dimensions (mm)						new new new																	
ISO	l	w	t	D	h	α	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
F 13941	32.00	19.05	12.00	6.50	6.00	120°	●	●						●		●	●							
F 10537	44.50	25.40	14.20	6.50	7.00	120°	●	●						●		●	●							

F-Series

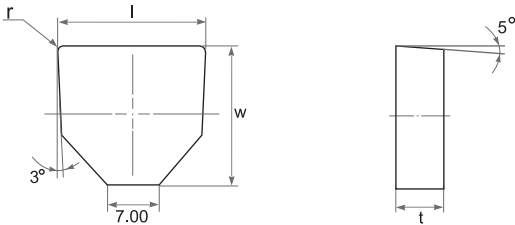
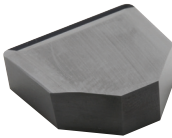


Type	Dimensions (mm)																						NEW	NEW	NEW
ISO	l	w	t	D	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800			
F 10537 V	44.00	26.00	15.00	5.00	●	●						●													

CERAMIC

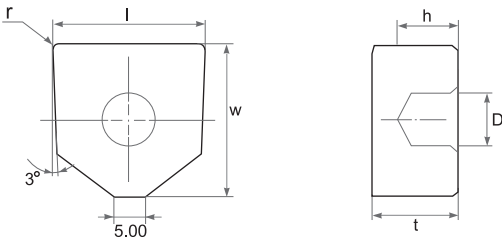
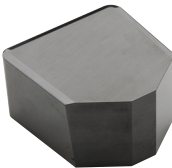
Turning & Milling

F-Series



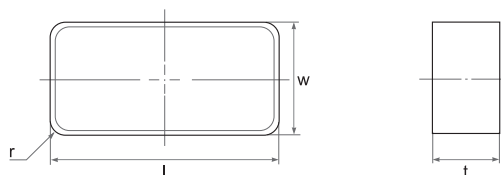
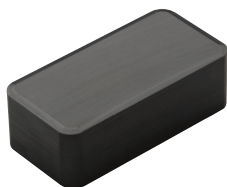
Type	Dimensions (mm)				ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	l	t	r	w																		
F 250723	25.00	7.94	1.20	23.00		●																

F-Series



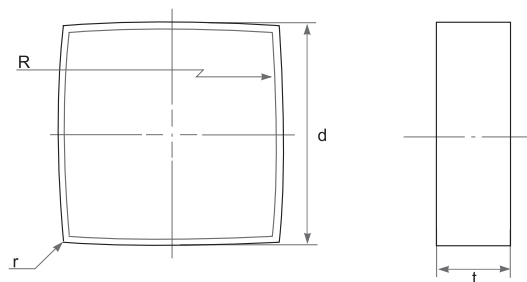
Type	Dimensions (mm)						ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	l	t	r	w	D	h																		
F 251425	25.00	14.40	2.40	25.40	9.17	10.00										●								
F251425 H65	25.40	14.40	2.40	25.40	6.50	10.00										●								

LNJ



Type	Dimensions (mm)																		
	l	w	t	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800
ISO																			
LNJ 5464	25.40	15.87	9.52	1.6	●	●													
LNJ 5568	31.75	15.87	9.52	3.2										●					
LNJ 6588	31.75	19.05	12.70	3.2	●	●	●	●				●		●	●				
LNJ 6688	38.10	19.05	12.70	3.2	●	●	●	●				●		●	●			●	●
LNJ 6898	48.10	21.05	12.70	3.2										●					

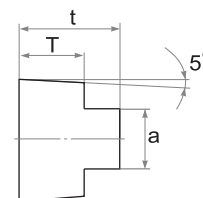
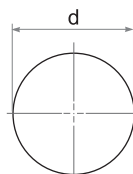
SNGN3812R



Type	Dimensions (mm)																		
	d	t	r	R	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800
ISO																			
SNGN 3812R	38.10	12.70	0.4	114	●	●	●												

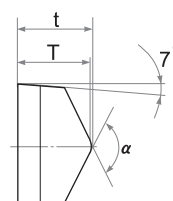
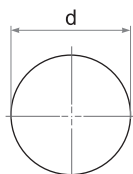
CERAMIC

RBGX



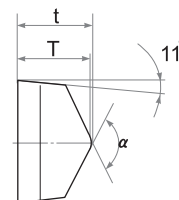
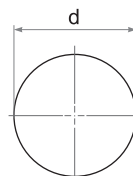
Type	Dimensions (mm)																						
	ISO	d	t	T	a	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
RBGX 06T	6.00	5.00	3.00	3.00	●	●																	
RBGX 08T	8.00	6.50	4.00	4.00	●	●																	
RBGX 10T	10.00	9.00	6.00	6.00		●																	
RBGX 12T	12.00	9.00	6.00	6.00	●	●																	
RBGX 16T	16.00	13.00	8.00	8.00	●	●																	
RBGX 20T	20.00	15.00	10.00	10.00	●	●	●	●															
RBGX 26T	26.00	15.00	10.00	14.00	●	●																	

RCGX



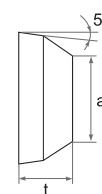
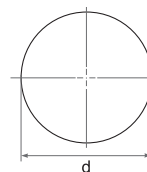
Type		Dimensions (mm)				NEW NEW NEW																	
ISO	ASA	d	t	T	α	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
RCGX 060400	RCGX 102	6.35	4.76	4.57	120°	●	●													●		●	●
RCGX 060600	RCGX 102	6.35	6.35	6.20	120°	●	●	●	●											●			
RCGX 060700	RCGX 102	6.35	7.94	7.70	120°	●	●	●	●						●					●			
RCGX 090700	RCGX 103	9.52	7.94	7.70	120°	●	●	●	●	●					●					●	●	●	●
RCGX 120700	RCGX 104	12.70	7.94	7.70	120°	●	●	●	●	●					●					●	●	●	●
RCGX 151000	RCGX 105	15.87	10.00	9.77	120°	●	●	●	●						●					●	●		
RCGX 191000	RCGX 106	19.05	10.00	9.77	120°	●	●	●	●						●					●			
RCGX 251200	RCGX 108	25.40	12.00	11.85	140°	●	●	●	●						●					●			

RPGX



Type	Dimensions (mm)				ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	d	t	T	α																		
RPGX 060400	6.35	4.76	4.57	120°																		
RPGX 090700	9.52	7.94	7.70	120°																		
RPGX 120700	12.70	7.94	7.70	120°																		

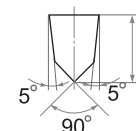
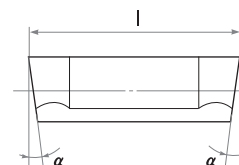
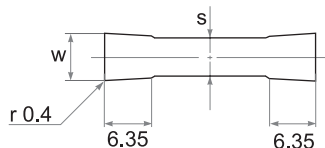
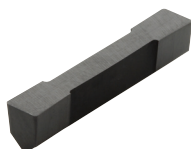
RXGX



Type	Dimensions (mm)			ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	d	t	a																		
RXGX 1207MO	12.00	7.94	6.90		●																
RXGX 1608MO	16.00	8.00	9.50		●						●										
RXGX 2508MO	25.00	8.00	18.20	●							●										

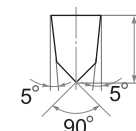
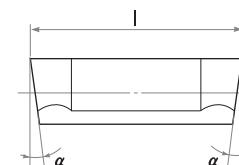
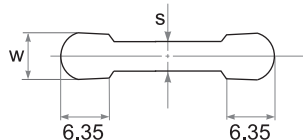
CERAMIC

SYBF



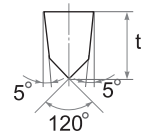
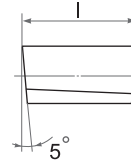
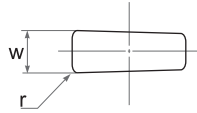
Type	Dimensions (mm)					NEW NEW NEW																	
	l	w	t	s	α	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO																							
SYBF 3228	28.58	3.18	6.35	2.69	5.0°	●	●																
SYBF 4828	28.58	4.78	6.35	3.66	5.0°	●	●																
SYBF 5528	28.58	5.54	6.35	3.66	5.0°																		
SYBF 6428	28.58	6.35	8.56	5.13	7.0°	●	●																
SYBF 7928	28.58	7.93	8.56	5.13	7.0°	●	●																
SYBF 9528	28.58	9.53	8.56	6.99	7.0°																		

SYBR



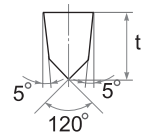
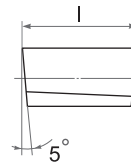
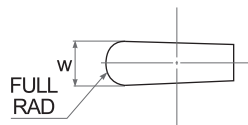
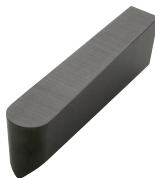
Type	Dimensions (mm)																							NEW	NEW	NEW
	l	w	t	s	α	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800			
ISO																										
SYBR 3228	28.58	3.18	6.35	2.69	5.0°	●	●																			
SYBR 4828	28.58	4.78	6.35	3.66	5.0°	●	●																			
SYBR 5528	28.58	5.54	6.35	3.66	5.0°																					
SYBR 6428	28.58	6.35	8.56	5.13	7.0°	●	●																			
SYBR 7928	28.58	7.93	8.56	5.13	7.0°	●	●																			
SYBR 9528	28.58	9.53	8.56	6.99	7.0°																					

SGF



Type	Dimensions (mm)																		
	l	w	t	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800
ISO																			
SGF 4012	12.00	4.00	5.00	0.50	●	●						●				●			
SGF 5012	12.00	5.00	5.00	0.80	●	●						●				●			
SGF 6015	15.00	6.00	7.50	0.80	●	●						●							
SGF 7015	15.00	7.00	7.50	0.80	●	●						●							
SGF 8015	15.00	8.00	7.50	0.80	●	●						●							
SGF 1015	15.00	10.00	7.50	0.80	●	●						●							

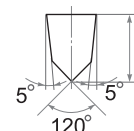
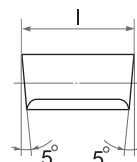
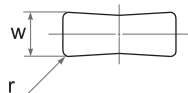
SGR



Type	Dimensions (mm)																		
	l	w	t	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900
ISO																			
SGR 4012	12.00	4.00	5.00	●	●						●				●				
SGR 5012	12.00	5.00	5.00	●	●						●				●				
SGR 6015	15.00	6.00	7.50	●	●						●								
SGR 7015	15.00	7.00	7.50	●	●						●								
SGR 8015	15.00	8.00	7.50	●	●						●								
SGR 1015	15.00	10.00	7.50	●	●						●								

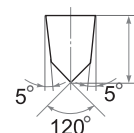
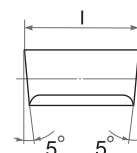
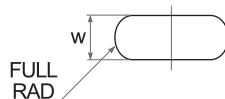
CERAMIC

SSF



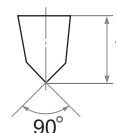
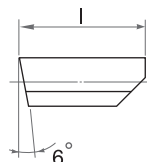
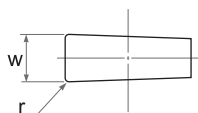
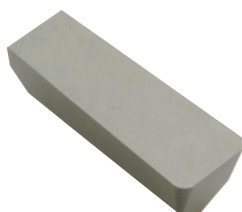
Type	Dimensions (mm)																		
	l	w	t	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800
ISO																			
SSF 4012	12.00	4.00	5.00	0.80	●	●						●							
SSF 5012	12.00	5.00	5.00	0.80	●	●						●							
SSF 6015	15.00	6.00	7.50	0.80	●	●						●							
SSF 7015	15.00	7.00	7.50	0.80	●	●													
SSF 8015	15.00	8.00	7.50	0.80	●	●													
SSF 1015	15.00	10.00	7.50	0.80	●	●													

SSR



Type	Dimensions (mm)																		
	l	w	t	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900
ISO																			
SSR 4012	12.00	4.00	5.00	●	●						●				●				
SSR 5012	12.00	5.00	5.00	●	●						●				●				
SSR 6015	15.00	6.00	7.50	●	●						●								
SSR 7015	15.00	7.00	7.50	●	●						●								
SSR 8015	15.00	8.00	7.50	●	●						●								
SSR 1015	15.00	10.00	7.50	●	●						●								

WFC

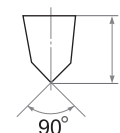
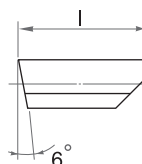
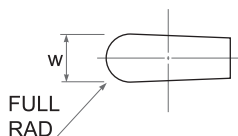


Type	Dimensions (mm)																					new	new	new
ISO	l	w	t	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800		
WFC 094050-A	12.70	2.388	4.75	0.40																				
WFC 094050-B	12.70	2.388	4.75	0.80																				
WFC 125050-A	12.70	3.175	4.75	0.40																				
WFC 125050-B	12.70	3.175	4.75	0.80																				
WFC 156050-A	12.70	3.962	4.75	0.40																				
WFC 156050-B	12.70	3.962	4.75	0.80																				
WFC 187050-A	12.70	4.750	4.75	0.40																				
WFC 187050-B	12.70	4.750	4.75	0.80																				
WFC 218075-A	19.05	5.537	6.35	0.40																				
WFC 218075-B	19.05	5.537	6.35	0.80																				
WFC 250075-A	19.05	6.350	6.35	0.40																				
WFC 250075-B	19.05	6.350	6.35	0.80																				
WFC 250075-C	19.05	6.350	6.35	1.20																				
WFC 281075-A	19.05	7.137	6.35	0.40																				
WFC 281075-B	19.05	7.137	6.35	0.80																				
WFC 281075-C	19.05	7.137	6.35	1.20																				
WFC 312100-A	25.40	7.925	8.56	0.40																				
WFC 312100-B	25.40	7.925	8.56	0.80																				
WFC 312100-C	25.40	7.925	8.56	1.20																				
WFC 312100-D	25.40	7.925	8.56	1.60																				
WFC 344100-A	25.40	8.738	8.56	0.40																		●		
WFC 344100-B	25.40	8.738	8.56	0.80																				
WFC 344100-C	25.40	8.738	8.56	1.20																				
WFC 344100-D	25.40	8.738	8.56	1.60																				
WFC 375100-A	25.40	9.525	8.56	0.40																				
WFC 375100-B	25.40	9.525	8.56	0.80																				
WFC 375100-C	25.40	9.525	8.56	1.20																				
WFC 375100-D	25.40	9.525	8.56	1.60																		●		

*The above inserts WFC Series are available only Whisker grade.

CERAMIC

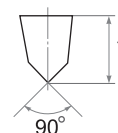
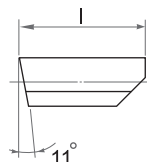
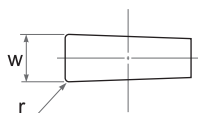
WRC



Type	Dimensions (mm)																			new	new	new
ISO	l	w	t	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800	
WRC 094050	12.70	2.388	4.75																			
WRC 125050	12.70	3.175	4.75																		●	
WRC 156050	12.70	3.962	4.75																			
WRC 187050	12.70	4.750	4.75																			
WRC 218075	19.05	5.537	6.35																			
WRC 250075	19.05	6.350	6.35																			
WRC 281075	19.05	7.137	6.35																			
WRC 312100	25.40	7.925	8.56																			
WRC 344100	25.40	8.738	8.56																			
WRC 375100	25.40	9.525	8.56																			

*The above inserts WRC Series are available only Whisker grade.

WFP

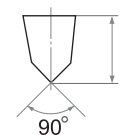
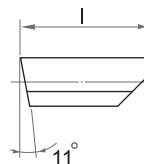
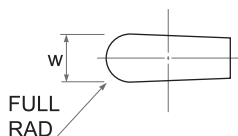


Type	Dimensions (mm)																						NEW	NEW	NEW
	l	w	t	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800			
ISO																									
WFP 094050-A	12.70	2.388	4.75	0.40																			●		
WFP 094050-B	12.70	2.388	4.75	0.80																					
WFP 125050-A	12.70	3.175	4.75	0.40																			●		
WFP 125050-B	12.70	3.175	4.75	0.80																			●		
WFP 156050-A	12.70	3.962	4.75	0.40																			●		
WFP 156050-B	12.70	3.962	4.75	0.80																			●		
WFP 187050-A	12.70	4.750	4.75	0.40																		●	●		
WFP 187050-B	12.70	4.750	4.75	0.80																		●	●		
WFP 218075-A	19.05	5.537	6.35	0.40																		●	●		
WFP 218075-B	19.05	5.537	6.35	0.80																					
WFP 250075-A	19.05	6.350	6.35	0.40																		●	●		
WFP 250075-B	19.05	6.350	6.35	0.80																		●	●		
WFP 250075-C	19.05	6.350	6.35	1.20																		●	●		
WFP 281075-A	19.05	7.137	6.35	0.40																		●	●		
WFP 281075-B	19.05	7.137	6.35	0.80																					
WFP 281075-C	19.05	7.137	6.35	1.20																					
WFP 312100-A	25.40	7.925	8.56	0.40																			●		
WFP 312100-B	25.40	7.925	8.56	0.80																			●		
WFP 312100-C	25.40	7.925	8.56	1.20																			●		
WFP 312100-D	25.40	7.925	8.56	1.60																					
WFP 344100-A	25.40	8.738	8.56	0.40																					
WFP 344100-B	25.40	8.738	8.56	0.80																					
WFP 344100-C	25.40	8.738	8.56	1.20																					
WFP 344100-D	25.40	8.738	8.56	1.60																					
WFP 375100-A	25.40	9.525	8.56	0.40																					
WFP 375100-B	25.40	9.525	8.56	0.80																			●		
WFP 375100-C	25.40	9.525	8.56	1.20																					
WFP 375100-D	25.40	9.525	8.56	1.60																			●		

*The above inserts WFP Series are available only Whisker grade.

CERAMIC

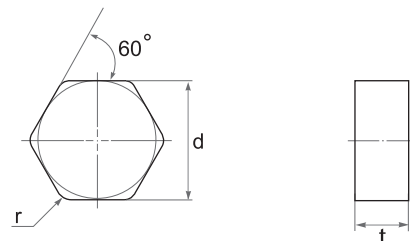
WRP



Type	Dimensions (mm)																			new	new	new
	ISO	l	w	t	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
WRP 094050	12.70	2.388	4.75																			
WRP 125050	12.70	3.175	4.75																			●
WRP 156050	12.70	3.962	4.75																			●
WRP 187050	12.70	4.750	4.75																			●
WRP 218075	19.05	5.537	6.35																		●	●
WRP 250075	19.05	6.350	6.35																		●	●
WRP 281075	19.05	7.137	6.35																		●	●
WRP 312100	25.40	7.925	8.56																		●	●
WRP 344100	25.40	8.738	8.56																			
WRP 375100	25.40	9.525	8.56																			●

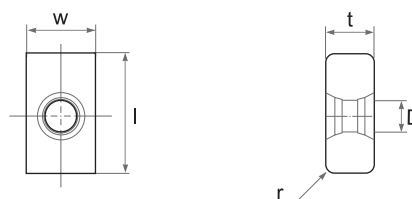
*The above inserts WRP Series are available only Whisker grade.

HNEN



Type	Dimensions (mm)			ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	d	t	r																		
HNEN 090520	16.20	5.56	2.0											●	●						
HNEN 090530	16.20	5.56	3.0											●	●						
HNEN 090508 ANSN	15.87	5.64	0.8											●	●		●				

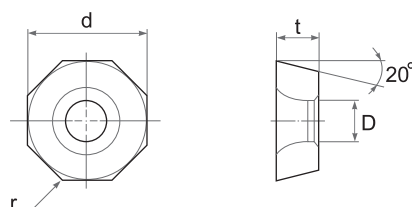
LNE



Type	Dimensions (mm)					ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	l	w	t	D	r																		
LNE 040904	15.87	9.52	4.76	4.41	0.4											●	●						
LNE 040908	15.87	9.52	4.76	4.41	0.8											●	●						
LNE 040912	15.87	9.52	4.76	4.41	1.2											●	●						
LNE 1007	15.67	9.52	6.35	4.10	1.2											●	●						

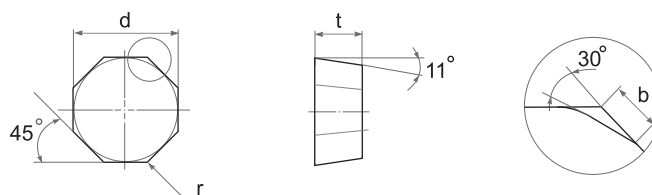
CERAMIC

OEGB



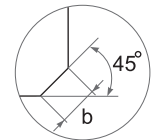
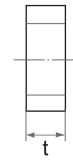
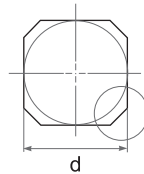
Type	Dimensions (mm)				ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	d	t	D	r																		
OEGB 070408	15.87	4.76	5.18	0.8												●						
OEGB 070416	15.87	4.76	5.18	1.6											●	●		●				
OEGB 070516	15.87	5.13	5.18	1.6											●	●						

OPEN



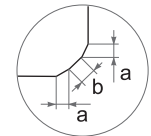
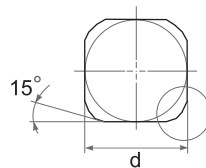
Type	Dimensions (mm)				ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	d	t	r	b																		
OPEN 050408 TR	13.97	4.76	0.80	2.10												●						
OPEN 050608 TR	13.97	6.35	0.80	2.10												●		●				

SNCN



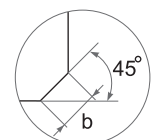
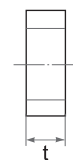
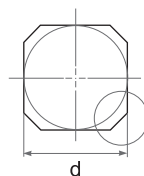
Type		Dimensions (mm)																		
------	--	-----------------	--	--	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SNCN .. ENTN



Type		Dimensions (mm)				NEW NEW NEW																	
ISO	ASA	d	t	a	b	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SNCN 1204 ENTN	SNCN 43 ENTN	12.70	4.76	1.40	1.00										●	●	●						
SNCN 1504 ENTN	SNCN 53 ENTN	15.87	4.76	1.40	1.00										●	●	●						

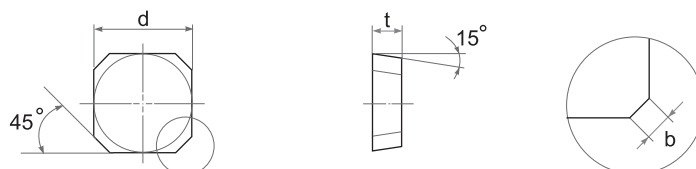
SNGN .. ING



Type		Dimensions (mm)			ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	ASA	d	t	b																		
SNGN 1204 ING	SNGN 43 ING	12.70	4.76	1.50											●	●						
SNGN 1904 ING	SNGN 63 ING	19.05	4.76	2.50											●	●						

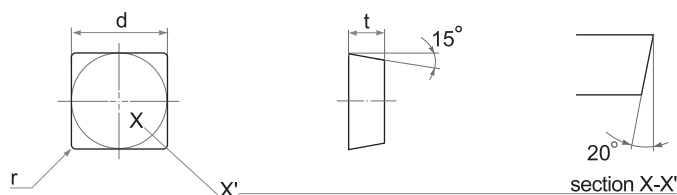
CERAMIC

SDCN



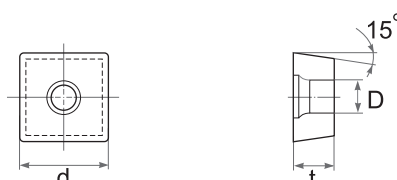
Type		Dimensions (mm)																			NEW	NEW	NEW
ISO	ASA	d	t	b	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800	
SDCN 1203 AETN 12	SDCN 42 AETN 12	12.70	3.18	1.2												●							
SDCN 1203 AETN	SDCN 42 AETN	12.70	3.18	2.0												●							
SDCN 1504 AETN	SDCN 53 AETN	15.87	4.76	2.0												●							

SDCN .. T



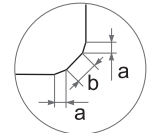
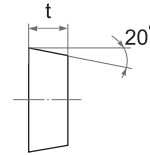
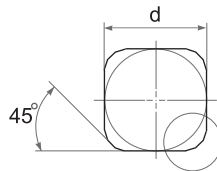
Type		Dimensions (mm)			NEW NEW NEW																	
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SDCN 120408 T20	SDCN 432 T20	12.70	4.76	0.8												●						
SDCN 120412 T20	SDCN 433 T20	12.70	4.76	1.2												●						

SDCW



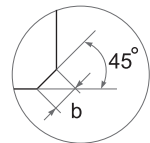
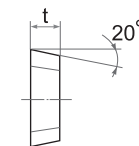
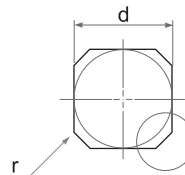
Type		Dimensions (mm)																			NEW	NEW	NEW
ISO	ASA	d	t	D	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800	
SDCW 1204 PDSR	SDCW 43 PDSR	12.70	4.76	4.40												●		●					

SEAN



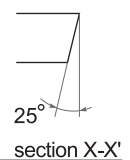
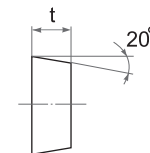
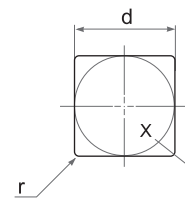
Type		Dimensions (mm)				NEWNEWNEW																	
ISO	ASA	d	t	a	b	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SEAN 1203 AFTN	SEAN 42 AFTN	12.70	3.18	0.50	1.80										●	●	●						
SEAN 1504 AFTN	SEAN 53 AFTN	12.70	4.76	0.70	2.00										●	●	●						

SEAN .. NW



Type		Dimensions (mm)				NEWNEWNEW																	
ISO	ASA	d	t	b	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SEAN 1203 NWAFTN	SEAN 42 NWAFTN	12.70	3.18	2.40	0.4										●								
SEAN 1204 AFTNW25	SEAN 43 AFTNW25	12.70	4.76	2.50	1.2												●						

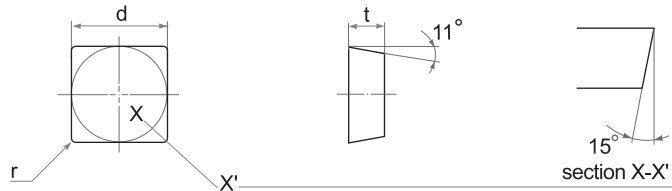
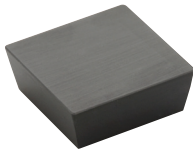
SEAN .. T



Type		Dimensions (mm)			NEW NEW NEW																	
ISO	ASA	d	t	r	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SEAN 120412 T25	SEAN 433 T25	12.70	4.76	1.2												●			●			
SEAN 120416 T25	SEAN 434 T25	12.70	4.76	1.6												●			●			

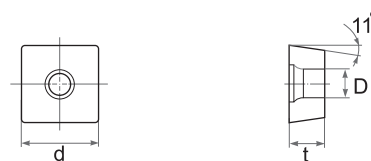
CERAMIC

SPCN .. T



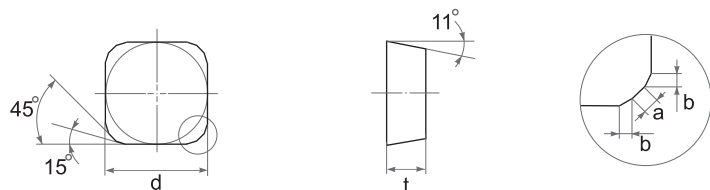
Type		Dimensions (mm)			ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	ASA	d	t	r																		
SPCN 120412 T15	SPCN 433 T15	12.70	4.76	1.2												●						
SPCN 120416 T15	SPCN 434 T15	12.70	4.76	1.6												●						

SPCW



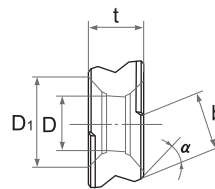
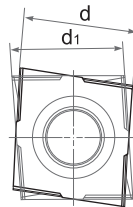
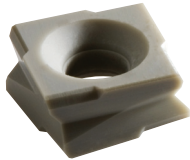
Type		Dimensions (mm)			ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	ASA	d	t	D																		
SPCW 10T3ZX	SPCW 10T3ZX	10.00	3.97	3.52												●						

SPEN



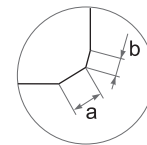
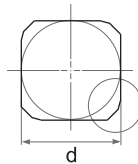
Type		Dimensions (mm)				ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	ASA	d	t	a	b																		
SPEN 1206 APTN	SPEN 44 APTN	12.70	6.35	1.20	1.20												●		●				

SPHX



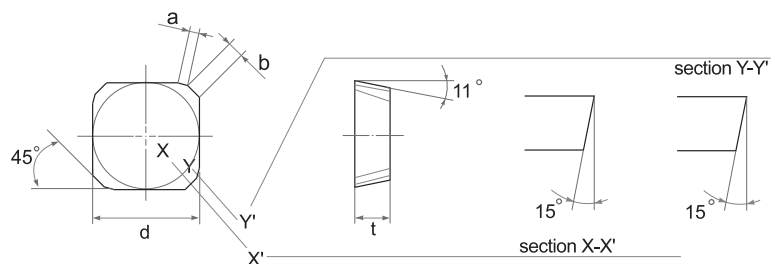
Type	Dimensions (mm)							NEW NEW NEW																	
ISO	d	d ₁	t	D	D ₁	α	b	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SPHX 1205NR 480T	11.67	11.33	5.50	5.10	8.41	45	8.0												●		●				
SPHX 1205NL 480T	11.67	11.33	5.50	5.10	8.41	45	8.0																		
SPHX 1205ER 855T	12.09	11.33	5.50	5.10	8.41	35	5.50												●		●				
SPHX 1205EL 855T	12.09	11.33	5.50	5.10	8.41	35	5.50												●						
SPHX 15T6NR 880T	14.58	14.33	6.60	6.10	10.18	45	8.80												●		●				
SPHX 15T6ER 865T	15.50	14.33	6.60	6.10	10.18	35	6.50												●		●				

SPKN



Type		Dimensions (mm)				NEW NEW NEW																	
ISO	ASA	d	t	a	b	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SPKN 1203 EDTR	SPKN 42 EDTR	12.70	3.18	1.40	1.00											●	●					●	●
SPKN 1504 EDTR	SPKN 53 EDTR	15.87	4.76	1.40	1.00											●	●					●	●

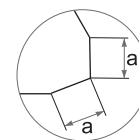
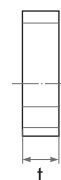
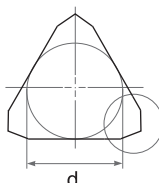
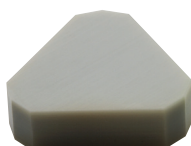
SPKN .. SP



Type		Dimensions (mm)				NEW NEW NEW																	
ISO	ASA	d	t	a	b	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SPKN 1204SP EDTR	SPKN 43SP EDTR	12.70	4.76	1.10	1.30												●						

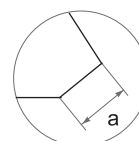
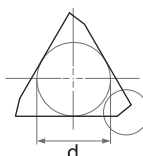
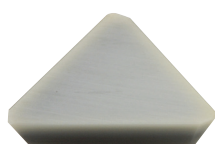
CERAMIC

TNCN



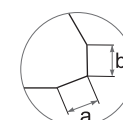
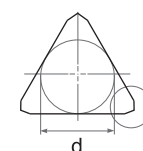
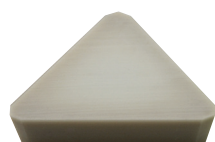
Type		Dimensions (mm)																		
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TEKN



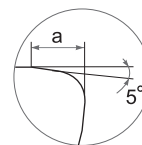
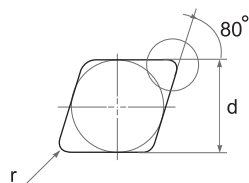
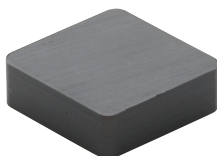
Type		Dimensions (mm)			NEW NEW NEW																	
ISO	ASA	d	t	a	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
TEKN 1603 PFTR	TEKN 32 PFTR	9.52	3.18	1.40											●	●						
TEKN 2204 PFTR	TEKN 43 PFTR	12.70	4.76	2.10											●	●						

TPKN



Type		Dimensions (mm)																				NEW	NEW	NEW																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
						ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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CNGN .. AZ

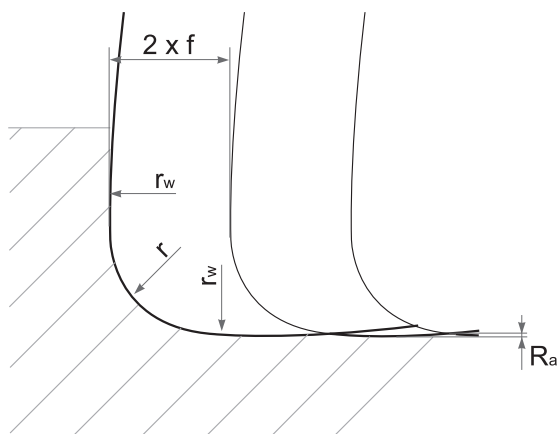


Turning & Milling

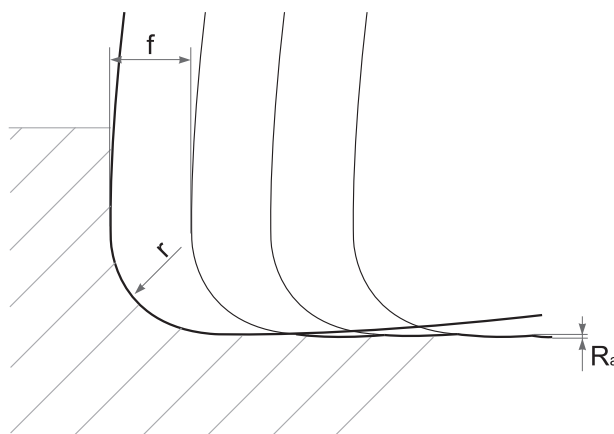
Type		Dimensions (mm)				</															
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Advantage of Wiper Insert

f : feed (mm)
r : corner radius
r_w : wiper radius (large radius)
R_a : surface finish

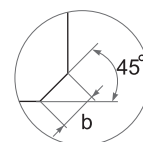
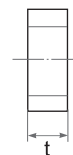
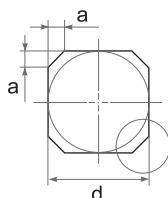


Wiper Insert



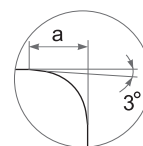
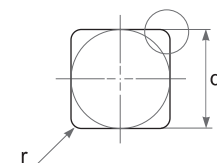
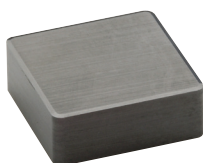
Standard Insert

SNCN .. ZYT



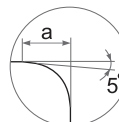
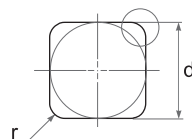
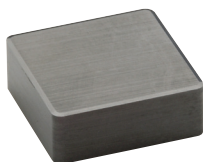
Type		Dimensions (mm)				NEW NEW NEW																	
ISO	ASA	d	t	a	b	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SNCN 0904 ZYT	SNCN 33 ZYT	9.52	4.76	1.30	1.10												●	●					
SNCN 1204 ZYT	SNCN 43 ZYT	12.70	4.76	3.25	1.10		●										●	●					

SNCN .. GZ



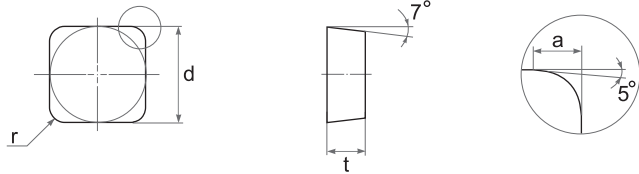
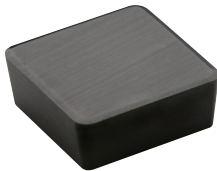
Type		Dimensions (mm)																				NEW	NEW	NEW
ISO	ASA	d	t	r	a	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800	
SNCN 0904 GZ	SNCN 33 GZ	9.52	4.76	0.8	1.00												●							

SNCN .. KZ



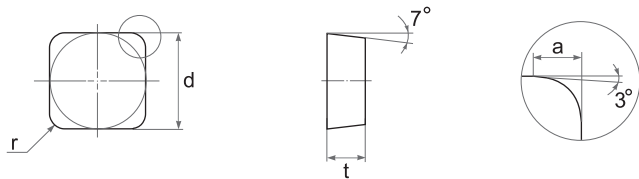
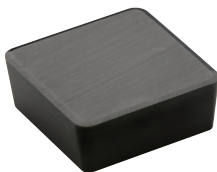
Type		Dimensions (mm)																				NEW	NEW	NEW
ISO	ASA	d	t	r	a	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800	
SNCN 1204 KZ	SNCN 43 KZ	12.70	4.76	1.2	1.80												●							

SCGN .. WZ



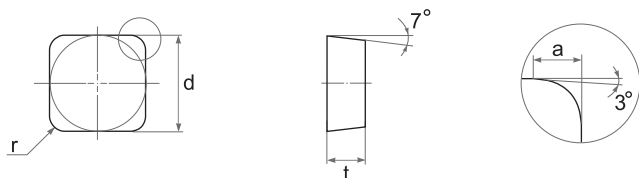
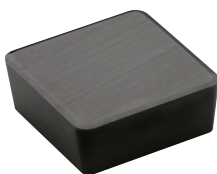
Type		Dimensions (mm)																				NEW	NEW	NEW
ISO	ASA	d	t	r	a	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800	
SCGN 0904 WZ	SCGN 33 WZ	9.52	4.76	0.8	1.60												●							
SCGN 1204 WZ	SCGN 43 WZ	12.70	4.76	0.8	1.60												●							

SCGN .. XZ



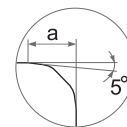
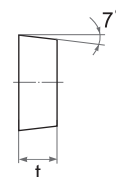
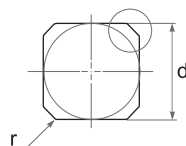
Type		Dimensions (mm)																					
ISO	ASA	d	t	r	a	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SCGN 0904 XZ	SCGN 33 XZ	9.52	4.76	0.8	1.20												●						
SCGN 1204 XZ	SCGN 43 XZ	12.70	4.76	0.8	1.20												●						

SCGN .. ZZ



Type		Dimensions (mm)																					
ISO	ASA	d	t	r	a	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SCGN 0904 ZZ	SCGN 33 ZZ	9.52	4.76	0.8	1.00												●						
SCGN 1204 ZZ	SCGN 43 ZZ	12.70	4.76	0.8	1.00												●						

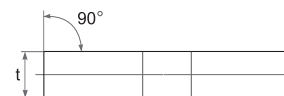
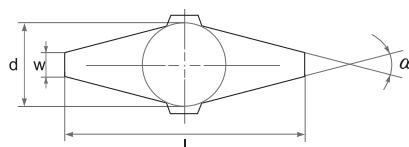
SCGN .. MZ



Type		Dimensions (mm)				NEW NEW NEW																	
ISO	ASA	d	t	r	a	ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
SCGN 0904 MZ	SCGN 33 MZ	9.52	4.76	0.8	1.80												●						
SCGN 1204 MZ	SCGN 43 MZ	12.70	4.76	0.8	1.80												●						

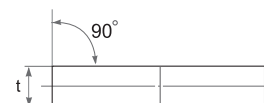
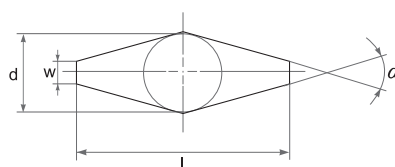
NEW NEW NEW

SVW



Type	Dimensions (mm)					ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	l	α	d	t	w																		
SVW 38260	26.00	38°	9.88	7.94	2.23								●										
SVW 38320	32.00	38°	12.93	7.94	3.22								●										
SVW 34400	40.00	34°	16.14	7.94	5.07								●										

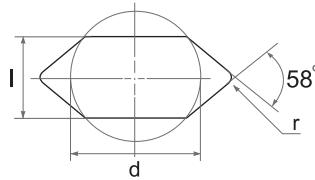
GVGN



Type	Dimensions (mm)					ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	l	α	d	t	w																		
GVGN 38320	32.00	38°	13.46	7.94	3.22								●										
GVGN 38335	33.50	38°	13.28	8.00	3.06								●										
GVGN 36340	34.00	36°	13.59	7.94	3.25								●										
GVGN 38360	36.00	38°	17.38	7.94	5.98								●										
GVGN 34360	36.00	34°	17.42	7.94	7.22								●										

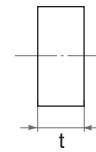
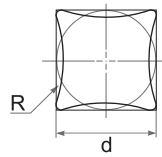
CERAMIC

SZT 5810



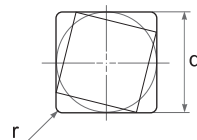
Type	Dimensions (mm)				ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	d	l	t	r																		
SZT 581004	14.70	10.00	7.94	0.4	●	●																
SZT 581008	14.70	10.00	7.94	0.8	●	●																
SZT 581012	14.70	10.00	7.94	1.2	●	●																

SNMX



Type	Dimensions (mm)			ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	d	t	R																		
SNMX 121007	12.70	10.00	7.0								●										
SNMX 121009	12.70	10.00	9.0								●										
SNMX 121012	12.70	10.00	12.0								●										
SNMX 121015	12.70	10.00	15.0								●										
SNMX 121020	12.70	10.00	20.0								●										
SNMX 121025	12.70	10.00	25.0								●										
SNMX 121030	12.70	10.00	30.0								●										
SNMX 121040	12.70	10.00	40.0								●										
SNMX 121050	12.70	10.00	50.0								●										

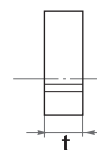
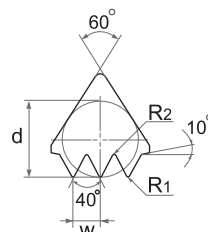
SNGF



Type		Dimensions (mm)			ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	ASA	d	t	r																		
SNGF 120412	SNGF 433	12.70	4.76	1.2												●						

NEW NEW NEW

INGN



Type	Dimensions (mm)					ST100	ST300	ST500	ST700	TC100	TC300	SD200	SZ200	SZ300	SN26	SN300	SN400	SN500	SN600	SN800	SN900	SW400	SW800
ISO	d	t	w	R1	R2																		
INGN 160435 F303	9.52	4.76	3.56	0.5	0.3								●										
INGN 160435 F304	9.52	4.76	3.56	0.5	0.4								●										
INGN 220435 F403	12.70	4.76	3.56	0.5	0.3								●										
INGN 220435 F404	12.70	4.76	3.56	0.5	0.4								●										

NEW NEW NEW