

LANGSUN CARBIDE

CARBIDE INSERTS

NINGBO LANGSUN CARBIDE CO., LTD
<http://www.ls-carbide.com>

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Grade Information

Coated grade

Grade	Coating	Color	Applications	ISO
ZP352	CVD	golden	It is used for roughing of steel. The substrate: ZP35.	P25-P45
ZP354	CVD	black		
ZP356	PVD	dark purple		
ZP357	PVD	golden		
ZP252	CVD	golden	It is used for finishing and Semi-finishing of steel and cast steel. The substrate: ZP20.	P15-P30
ZP254	CVD	black		
ZP256	PVD	dark purple		
ZP257	PVD	golden		
ZK202	CVD	golden	It is used for roughing and semi-finishing of cast iron and non-ferrite materials. The substrate: ZU820.	K10-K30
ZK204	CVD	black		
ZK206	PVD	dark purple		
ZK207	PVD	golden		
ZK102	CVD	golden	It is used for finishing of cast iron and non-ferrite materials. The substrate: ZU810.	K01-K10
ZK104	CVD	black		
ZK106	PVD	dark purple		
ZK107	PVD	golden		
ZM252	CVD	golden	It is used for roughing and semi-finishing of stainless steel. The substrate: ZM25A.	M20-M30
ZM254	CVD	black		
ZM256	PVD	dark purple		
ZM257	PVD	golden		

Uncoated grade

Grade	Density g/cm3	Hardness HRA	T.R.S Mpa	Applications	ISO
ZK10UF	14.6-15.0	>92.8	2060	Submicron grain size. It is used for roughing and semi-finishing of cast iron and non-ferrite	K01-K15
ZK20UF	14.5-14.9	>92.0	2360	Submicron grain size. It is used for finishing and semi-finishing of cast iron and non-ferrite materials.	K10-K30
ZK30UF	14.4-14.8	>91.5	2520	Submicron grain size. It is used to process cast iron and non-ferrite materials.	K15-K35
ZM15A	14.0-14.5	>91.5	2180	It is used to process stainless steel, non-ferrite materials and cast iron.	M10-M25
ZM25A	14.0-14.5	>91.0	2560	It is used to process stainless steel, non-ferrite materials and	M20-M35
ZP10	10.0-11.0	>92.0	1760	It is used for finishing and semi-finishing of steel and cast	P05-P15
ZP20	11.5-12.5	>91.5	1860	It is used to process alloy steel, high manganese steel and stainless steel.	P15-P30
ZP35	12.5-13.0	>90.0	2080	It is used for heavy duty roughing of cast steel and forged steel.	P25-P45
ZU810	14.6-14.8	≥93.0	3300	It is used to finishing of aluminum alloy, cast iron and stainless steel.	K01-K10
ZU820	14.8-15.0	≥92.5	3800	It is used for roughing and semi-finishing cast iron, stainless	K10-K20

Grade for aluminium turning inserts

Grade	Coating	Color	Applications	ISO
ZK309	DLC	black	Substrate: YG8	K25-K35
ZK209	DLC	black	Substrate: ZM15A	K10-K30
ZK109	DLC	black	Substrate: ZK10UF	K01-K10
ZU810	/	shining	Uncoated, polishing. It is ideal for roughing and semi-finishing aluminum alloy.	K01-K10

Grade for high precision turning inserts

Grade	Applications	ISO
ZP20	Uncoated. Polishing.	P15-P30
ZU810	Uncoated. Polishing.	K01-K10

Chip-breaker Application key

	Recommended geometry	Workpiece material	Recommended data
Finishing machining	-FB -FP -W KNUX-		ap=0.1-2.0(mm) fn=0.05-0.35(mm/r)
	-FB -FP W KNUX-		ap=0.1-2.0(mm) fn=0.1-0.3(mm/r)
	-FB -FP W -F -A -H KNUX- RCMX-		ap=0.5-2.0(mm) fn=0.075-0.4(mm/r)
	-LH		ap=0.1-2.0(mm) fn=0.05-0.4(mm/r)
Semi-finishing machining	-MB -MC -MP -GS -CK RCMX-	  	ap=1-4(mm) fn=0.2-0.5(mm/r)
	-MB -MP -GS -CK KNUX-		ap=1-3.5(mm) fn=0.2-0.4(mm/r)
	-MC -MP -CK RCMX-		ap=1-3(mm) fn=0.2-0.4(mm/r)
	-LH		ap=1-4(mm) fn=0.2-0.4(mm/r)
Rough machining	-RB -RP -CK RCMX-		ap=3-7(mm) fn=0.3-0.7(mm/r)
	-RB -RP -CK		ap=2-5(mm) fn=0.3-0.6(mm/r)
	-RB -CK		ap=3-6(mm) fn=0.3-0.6(mm/r)
	-LH		ap=0.5-5(mm) fn=0.2-0.6(mm/r)

All technology data in this catalog is used under some conditions, please use it as your producing environment.



Steel



Stainless steel



Cast iron



Non-ferrite
materials



Heat resistant
steel



Hardened
material

Products Overview

General Turning Inserts

								
CNMG-FB	CNMG-MB	CNMG-MC	CNMM-RB	CNMM-W	CNMA	DNMG-FB	DNMG-MB	DNMG-MC
B 1	B 1	B 2	B 2	B 3	B 3	B 4	B 4	B 5

								
DNMG-GS	DNMM-RB	DNMM-GS	DNMA	SNMG-FB	SNMG-MB	SNMG-MC	SNMM-V	SNGN
B 5	B 5	B 6	B 6	B 7	B 7	B 8	B 8	B 9

								
SNGA	TNMG-FB	TNMG-MB	TNMG-MC	TNMG-A	TNMG-CK	TNMM-W	TNMM-A	TNMM-CK
B 9	B 10	B 10	B 11	B 11	B 11	B 12	B 12	B 12

								
TNGA	VNMG-FB	VNMG-MB	VNMG-MC	WNMG-FB	WNMG-MB	WNMG-MC	WNMG-PS	WNMG-HS
B 13	B 13	B 13	B 14	B 14	B 14	B 15	B 15	B 15

								
WNMM-PS	WNMM-HS	WNMA	RNMG-V	CCMT-FP	CCMT-MP	CCMT-RP	CCMW	CPGW
B 16	B 16	B 16	B 17	B 17	B 18	B 18	B 19	B 19

								
DCMT-FP	DCMT-MP	DCMT-RP	DCGW	SCMT-FP	SCMT-MP	SCMT-V	SCMT-RP	SCMW
B 19	B 20	B 20	B 20	B 21	B 21	B 21	B 22	B 22

								
SPMW	SPMR-W	SPGN	TCMT-FP	TCMT-MP	TCMT-RP	TCGW	TPGB	TCGH
B 22	B 23	B 23	B 24	B 24	B 25	B 25	B 25	B 26

Products Overview

General Turning Inserts

								
TPGN	TPMR	TPGW	U3-U6	VBMT-FP	VBGW	VBMT-MP	WCMX-V	PD--
B 26	B 27	B 27	B 28	B 28	B 28	B 29	B 29	B 29

					
RCGT	KNUX	ZQMX	MGMN	External Threading	Internal Threading
B 30	B 30	B 31	B 31	B 32	B 32

Peeling Inserts

								
009241N2	HNMX	HNGX	RNGH	LPUC	LNUC	LNGF-F	LNGF	YNMX-L
B 33	B 33	B 33	B 33	B 34	B 34	B 34	B 34	B 35

		
XNGX	L40.2X25.4X9.6-2 Ø9.1	Welding scraping knife
B 35	B 35	B 35

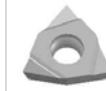
Alumimium Turning Inserts

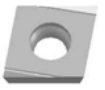
								
TCGX-LH	TCGT-LH	SCGX-LH	SCGT-LH	CCGX-LH	CCGT-LH	DCGX-LH	DCGT-LH	VCGX-LH
C 1	C 1	C 1	C 2	C 2	C 2	C 3	C 3	C 3

	
VCGT-LH	SEKT-LH
C 4	C 4

Products Overview

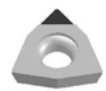
High Precision Turning Inserts

								
TNGG-A	TNGG-F	TCGT-F	WCGT-F	WPGT-F	SNGG-A	SPGR-A	CCET-H	CCGT-A
D 1	D 1	D 2	D 2	D 2	D 3	D 3	D 3	D 4

								
CPGT-F	DNGG-H	DCGT-H	DCGT-A	DCGT-F	VNGG-H	VBGT-H	VBGT-F	VCGT-F
D 4	D 4	D 5	D 5	D 5	D 6	D 6	D 6	D 6

PCBN & PCD Inserts

								
TNGN	TPGN	TNGA	TPMH	TPGB	TCMT	TCGWE/S	TNMM	TCGW
E 1	E 1	E 1	E 2	E 2	E 2	E 3	E 3	E 3

								
WPMT	WCMT	SNGN	SPGN	SEGN	SNGA	SPGB	CNGA	CCGW
E 4	E 4	E 4	E 4	E 5	E 5	E 5	E 5	E 6

								
CPGB	CNMM	CCMT	CCMH	DNGA	DCMW	DCMT	DNMM	VNGA
E 6	E 6	E 7	E 7	E 7	E 8	E 8	E 8	E 9

		
VNMM	VBGW	VCGW
E 9	E 9	E 9

Products Overview

Milling Inserts

							
TNEN	TNJN-ANEN	TPCN-PPN	TPCN-PDR/L	TECN	TFAN	SNAN-ENN	SNAN-ANN
F 1	F 1	F 1	F 2	F 2	F 2	F 3	F 3

							
SBEX-ZZ	SPEN-EDR	SPEN-WC	SPCN-APN	SPAN-EDR/	SPCN-ZDTR/	SPEN	SDCN-ZTN
F 4	F 4	F 4	F 4	F 5	F 5	F 5	F 6

							
SDKN-ZEN	SDKN-AEN	SECN-EER/L	SEKN-AFN	SEMN-AEN	SEKN-AZ	SEKR-YM	SFAN-EFR/ L
F 6	F 6	F 6	F 7	F 7	F 7	F 8	F 8

							
SFAN-ZZR	SOMX-AEN	SNEX-ENN	LPEX-EDR	SPEX-EDR/	SECX-EDR	SFCX-EFR/	TPCW-PDR/ L
F 8	F 8	F 9	F 9	F 9	F 9	F 10	F 10

							
CPCW-PDR	P2800-0	SPCW-EDR/L	P22215-00	P2706-3	RCKX-MP	HEEN532	OFXR-FB
F 10	F 10	F 11	F 11	F 11	F 11	F 12	F 12

							
OFER-NN	OFMT-NN	ODHW-ZZN	ODHT-M2.5	APMT-PDR	APKT-FC	APFT-PDR	APKT-R
F 12	F 12	F 12	F 13	F 13	F 13	F 13	F 13

							
LCMX	LCMX	CNE323	LNKX-MM	LNE32.524	LNE	FNC	LNHX
F 14	F 14	F 14	F 14	F 15	F 15	F 15	F 15

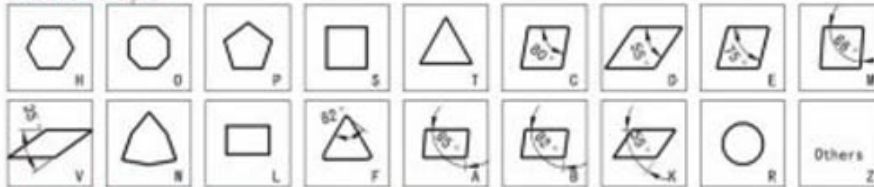
ISO – Indexable Insert Code Key

Example

Inscribed circle diameter							Thickness						Nose radius							
Code(Inch)	2	3	4	5	6	8	Code(Inch)	2	3	4	5	6	Code(Inch)	0	1	2	3	4	5	6
Inscribed circle diameter (mm)	0.20	0.250	0.315	0.398	0.500	0.625	Thickness (mm)	0.10	0.125	0.158	0.200	0.250	Nose radius (mm)	0.4	0.6	0.8	1.2	1.6	2.0	2.5

S	C	G	T	4	3	2			MP
1	2	3	4	5	6	7	8	9	10
T	N	M	M	16	03	04		R	-A2
1	2	3	4	5	6	7	8	9	10
S	P	K	N	15	04	ED	T	R	
1	2	3	4	5	6	7	8	9	

1 Insert shape

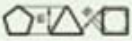


2 Major cutting edge clearance angle



3 Tolerances mm / inch

D.Theoretical diameter of inscribed circle
S. Insert thickness
m. See Fig



Letter symbol	Tolerances, in mm / inch			Tolerances in inches		
	m	s	d	m	s	d
A	±0.005	±0.025	±0.025	±0.0002	±0.001	±0.0010
F	±0.005	±0.025	±0.013	±0.0002	±0.001	±0.0005
C	±0.013	±0.025	±0.025	±0.0005	±0.001	±0.0010
H	±0.013	±0.025	±0.013	±0.0005	±0.001	±0.0005
E	±0.025	±0.025	±0.025	±0.0010	±0.001	±0.0010
G	±0.025	±0.13	±0.025	±0.0010	±0.005	±0.0010
J	±0.005	±0.025	±0.05 ±0.13	±0.0002	±0.001	±0.002 ±0.005
K	±0.013	±0.025	±0.05 ±0.13	±0.0005	±0.001	±0.002 ±0.005
L	±0.025	±0.025	±0.05 ±0.13	±0.0010	±0.001	±0.002 ±0.005
M	±0.08 ±0.18	±0.13	±0.05 ±0.13	±0.003 ±0.007	±0.005	±0.002 ±0.005
N	±0.08 ±0.18	±0.025	±0.05 ±0.13	±0.003 ±0.007	±0.001	±0.002 ±0.005
U	+0.13 ±0.38	±0.13	+0.08 ±0.25	±0.005 ±0.015	±0.005	+0.003 ±0.010

Varies depending on the insert size for insert shapes H, O, P, S, T, C, E, M, K, R, V and D. See table below.

Insert shapes K, O, P, S, T, C, E, M, K, R, V

Inscribed circle diameter		Tolerances for M				Tolerances for d			
		Class M		Class U		Class M, J, K, L		Class U	
(mm)	in	(mm)	in	(mm)	in	(mm)	in	(mm)	in
6.35	0.250	±0.08	±0.003	±0.13	±0.005	±0.05	±0.002	±0.008	±0.003
9.525 (10)	0.375	±0.08	±0.003	±0.13	±0.005	±0.05	±0.002	±0.008	±0.003
12.7 (12)	0.500	±0.13	±0.005	±0.20	±0.008	±0.08	±0.003	±0.013	±0.005
15.875 (16)	0.625	±0.15	±0.006	±0.27	±0.011	±0.10	±0.004	±0.018	±0.007
19.05 (20)	0.750	±0.15	±0.006	±0.27	±0.011	±0.10	±0.004	±0.018	±0.007
25.4	1.000	±0.18	±0.007	±0.38	±0.015	±0.13	±0.005	±0.025	±0.010

ISO – Indexable Insert Code Key

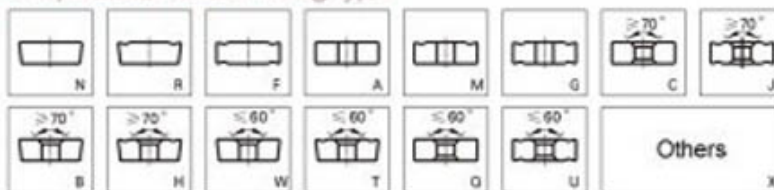
Insert shape D

Inscribed circle diameter		Tolerances for m		Tolerances for d	
(mm)	in	(mm)	in	(mm)	in
6.35	0.250	± 0.11	± 0.004	± 0.05	± 0.002
9.525	0.375	± 0.11	± 0.004	± 0.05	± 0.002
12.70	0.500	± 0.15	± 0.006	± 0.08	± 0.003
15.875	0.625	± 0.18	± 0.007	± 0.10	± 0.004
19.05	0.750	± 0.18	± 0.007	± 0.10	± 0.004

Insert shape V

Inscribed circle diameter		Tolerances for m		Tolerances for d	
(mm)	in	(mm)	in	(mm)	in
6.35	0.250	± 0.15	± 0.006	± 0.05	± 0.002
9.525	0.375	± 0.15	± 0.006	± 0.05	± 0.002
12.70	0.500	± 0.20	± 0.008	± 0.08	± 0.003
15.875	0.625	± 0.27	± 0.011	± 0.10	± 0.004
19.05	0.750	± 0.27	± 0.011	± 0.10	± 0.004

4 Chipbreaker and/or fixing type



5 Cutting edge length (mm)

Integers to be preceded by, eg. 9.52mm indicated with 09.

		C	D	R	S	T	V	W	K
to mm	to inch								
3.97	5/32"				03	06			
5.0				05					
5.56	7/32"				05	09		03	
6.0				06				04	
6.35	1/4"	06	07		06	11	11		
8.0				08					
9.525	3/8"	09	11	09	09	16	16	06	16
10.0				10					
12.0				12					
12.7	1/2"	12	15	12	12	22	22	08	
15.875	5/8"	16	19	15	15	27		10	
16.0				16					
19.05	3/4"	19		19	19	33			
20.0				20					
25.0		25		25					
25.4	1"	25.4		25	25				
31.75				31					
32				32					

6 Insert thickness (mm)

to mm					
		00=0.79	01=1.59		
		T0=0.99	T1=1.98		
02=2.38	04=4.76	06=6.35	T9=9.72		
T2=2.58	T4=4.96	T6=6.75	11=11.11		
03=3.18	05=5.56	07=7.94	12=12.70		
T3=3.97	T5=5.95	09=9.525			

7 Nose radius, r mm

Milling inserts		Turning inserts
A-15°	A-3°	00-Sharp
D-60°	B-5°	02-0.2
E-75°	C-7°	04-0.4
F-85°	D-15°	08-0.8
P-90°	E-20°	12-1.2
Z-Others	F-25°	16-1.6
	G-30°	20-2.0
	N-0°	24-2.4
	P-11°	32-3.2
	Z-	X Other
	Other	

8 Cutting edge condition

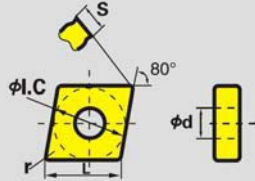
F					K
E					P
T					W
S					No mark

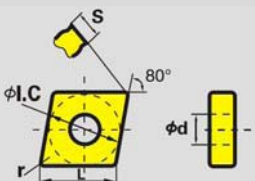
9 Feeding direction

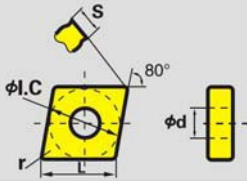


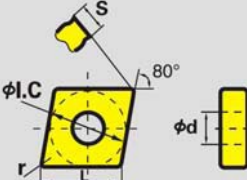
10 Chipbreakers code

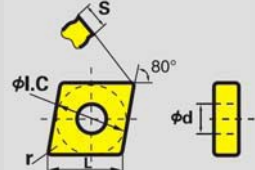
Position 10 indicates the cutting properties & chipbreakers of inserts

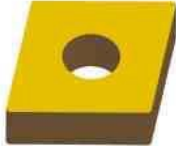
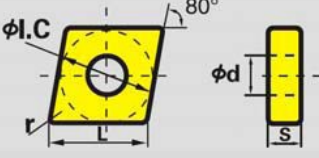
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
CNMG	090304-FB	321-FB	9.7	9.525	3.18	3.81	0.4
	090308-FB	322-FB	9.7	9.525	3.18	3.81	0.8
	120404-FB	431-FB	12.9	12.7	4.76	5.16	0.4
	120408-FB	432-FB	12.9	12.7	4.76	5.16	0.8
	120412-FB	433-FB	12.9	12.7	4.76	5.16	1.2
	160608-FB	542-FB	16.1	15.88	6.35	6.35	0.8
	160612-FB	543-FB	16.1	15.88	6.35	6.35	1.2

							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
CNMG	090304-MB	321-MB	9.7	9.525	3.18	3.81	0.4
	090308-MB	322-MB	9.7	9.525	3.18	3.81	0.8
	090312-MB	323-MB	9.7	9.525	3.18	3.81	1.2
	120404-MB	431-MB	12.9	12.7	4.76	5.16	0.4
	120408-MB	432-MB	12.9	12.7	4.76	5.16	0.8
	120412-MB	433-MB	12.9	12.7	4.76	5.16	1.2
	120416-MB	434-MB	12.9	12.7	4.76	5.16	1.6
	160608-MB	542-MB	16.1	15.875	6.35	6.35	0.8
	160612-MB	543-MB	16.1	15.875	6.35	6.35	1.2
	160616-MB	544-MB	16.1	15.875	6.35	6.35	1.6
	190608-MB	642-MB	19.3	19.05	6.35	7.94	0.8
	190612-MB	643-MB	19.3	19.05	6.35	7.94	1.2
	190616-MB	644-MB	19.3	19.05	6.35	7.94	1.6

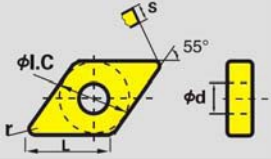
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
CNMG	090304-MC	321-MC	9.7	9.525	3.18	3.81	0.4
	090308-MC	322-MC	9.7	9.525	3.18	3.81	0.8
	090312-MC	323-MC	9.7	9.525	3.18	3.81	1.2
	120404-MC	431-MC	12.9	12.7	4.76	5.16	0.4
	120408-MC	432-MC	12.9	12.7	4.76	5.16	0.8
	120412-MC	433-MC	12.9	12.7	4.76	5.16	1.2
	120416-MC	434-MC	12.9	12.7	4.76	5.16	1.6
	160608-MC	542-MC	16.1	15.875	6.35	6.35	0.8
	160612-MC	543-MC	16.1	15.875	6.35	6.35	1.2
	160616-MC	544-MC	16.1	15.875	6.35	6.35	1.6
	190608-MC	642-MC	19.3	19.05	6.35	7.94	0.8
	190612-MC	643-MC	19.3	19.05	6.35	7.94	1.2
	190616-MC	644-MC	19.3	19.05	6.35	7.94	1.6

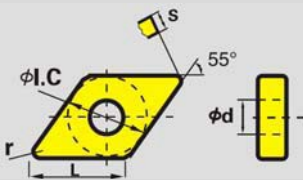
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
CNMM	120408-RB	432-RB	12.9	12.7	4.76	5.16	0.8
	120412-RB	433-RB	12.9	12.7	4.76	5.16	1.2
	120416-RB	434-RB	12.9	12.7	4.76	5.16	1.6
	160608-RB	542-RB	16.1	15.875	6.35	6.35	0.8
	160612-RB	543-RB	16.1	15.875	6.35	6.35	1.2
	160616-RB	544-RB	16.1	15.875	6.35	6.35	1.6
	190612-RB	643-RB	19.3	19.05	6.35	7.94	1.2
	190616-RB	644-RB	19.3	19.05	6.35	7.94	1.6
	190624-RB	646-RB	19.3	19.05	6.35	7.94	2.4

							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
CNMM	120404-W	431-W	12.9	12.7	4.76	5.16	0.4
	120408-W	432-W	12.9	12.7	4.76	5.16	0.8
	120412-W	433-W	12.9	12.7	4.76	5.16	1.2
	190608-W	642-W	19.3	19.05	6.35	7.94	0.8
	190612-W	643-W	19.3	19.05	6.35	7.94	1.2
	190616-W	644-W	19.3	19.05	6.35	7.94	1.6
	190624-W	646-W	19.3	19.05	6.35	7.94	2.4

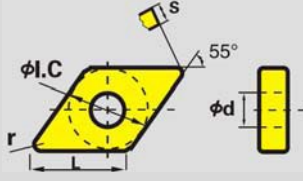
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
CNMA	120404	431	12.9	12.7	4.76	5.16	0.4
	120408	432	12.9	12.7	4.76	5.16	0.8
	120412	433	12.9	12.7	4.76	5.16	1.2
	120416	434	12.9	12.7	4.76	5.16	1.6
	160612	543	16.1	15.875	6.35	6.35	1.2
	160620	545	16.1	15.875	6.35	6.35	2
	190612	643	19.3	19.05	6.35	7.94	1.2
	190616	644	19.3	19.05	6.35	7.94	1.6

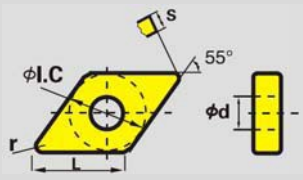
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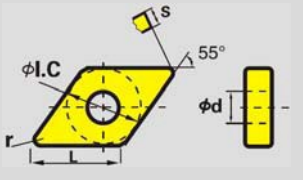
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
DNMG	110404-FB	331-FB	11.6	9.525	4.76	3.81	0.4
	110408-FB	332-FB	11.6	9.525	4.76	3.81	0.8
	110412-FB	333-FB	11.6	9.525	4.76	3.81	1.2
	150404-FB	431-FB	15.5	12.7	4.76	5.16	0.4
	150408-FB	432-FB	15.5	12.7	4.76	5.16	0.8
	150604-FB	441-FB	15.5	12.7	6.35	5.16	0.4
	150608-FB	442-FB	15.5	12.7	6.35	5.16	0.8
	150612-FB	443-FB	15.5	12.7	6.35	5.16	1.2

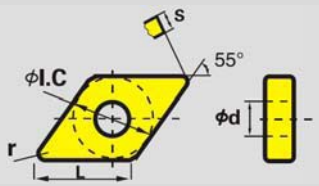
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
DNMG	110404-MB	331-MB	11.6	9.525	4.76	3.81	0.4
	110408-MB	332-MB	11.6	9.525	4.76	3.81	0.8
	110412-MB	333-MB	11.6	9.525	4.76	3.81	1.2
	150404-MB	431-MB	15.5	12.7	4.76	5.16	0.4
	150408-MB	432-MB	15.5	12.7	4.76	5.16	0.8
	150412-MB	433-MB	15.5	12.7	4.76	5.16	1.2
	150604-MB	441-MB	15.5	12.7	6.35	5.16	0.4
	150608-MB	442-MB	15.5	12.7	6.35	5.16	0.8
	150612-MB	443-MB	15.5	12.7	6.35	5.16	1.2
	150616-MB	444-MB	15.5	12.7	6.35	5.16	1.6

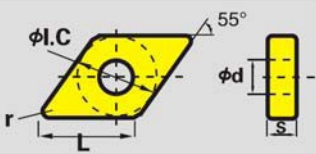
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Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
DNMG	110404-MC	331-MC	11.6	9.525	4.76	3.81	0.4
	110408-MC	332-MC	11.6	9.525	4.76	3.81	0.8
	110412-MC	333-MC	11.6	9.525	4.76	3.81	1.2
	150404-MC	431-MC	15.5	12.7	4.76	5.16	0.4
	150408-MC	432-MC	15.5	12.7	4.76	5.16	0.8
	150412-MC	433-MC	15.5	12.7	4.76	5.16	1.2
	150416-MC	434-MC	15.5	12.7	4.76	5.16	1.6
	150604-MC	441-MC	15.5	12.7	6.35	5.16	0.4
	150608-MC	442-MC	15.5	12.7	6.35	5.16	0.8
	150612-MC	443-MC	15.5	12.7	6.35	5.16	1.2
	150616-MC	444-MC	15.5	12.7	6.35	5.16	1.6

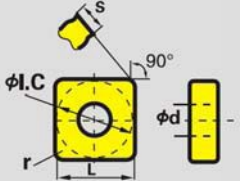
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
DNMG	110404-GS	331-GS	11.6	9.525	4.76	3.81	0.4
	150404-GS	431-GS	15.5	12.7	4.76	5.16	0.4
	150408-GS	432-GS	15.5	12.7	4.76	5.16	0.8

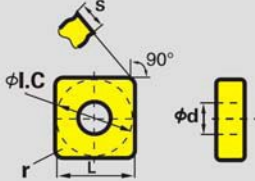
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
DNMM	150608-RB	442-RB	15.5	12.7	6.35	5.16	0.8
	150612-RB	443-RB	15.5	12.7	6.35	5.16	1.2
	150616-RB	444-RB	15.5	12.7	6.35	5.16	1.6

							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
DNMM	110404-GS	331-GS	11.6	9.525	4.76	3.81	0.4
	150404-GS	431-GS	15.5	12.7	4.76	5.16	0.4
	150408-GS	432-GS	15.5	12.7	4.76	5.16	0.8

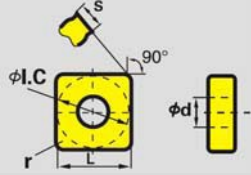
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
DNMA	110416	334	11.6	9.525	4.76	3.81	1.6
	110424	336	11.6	9.525	4.76	3.81	2.4
	150404	431	15.5	12.7	4.76	5.16	0.4
	150408	432	15.5	12.7	4.76	5.16	0.8
	150604	441	15.5	12.7	6.35	5.16	0.4
	150608	442	15.5	12.7	6.35	5.16	0.8
	150612	443	15.5	12.7	6.35	5.16	1.2
DNMA	110416	334	11.6	9.525	4.76	3.81	1.6
	110424	336	11.6	9.525	4.76	3.81	2.4
	150404	431	15.5	12.7	4.76	5.16	0.4
	150604	441	15.5	12.7	6.35	5.16	0.4
	150608	442	15.5	12.7	6.35	5.16	0.8
	150612	443	15.5	12.7	6.35	5.16	1.2
	150616	444	15.5	12.7	6.35	5.16	1.6

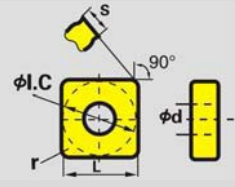
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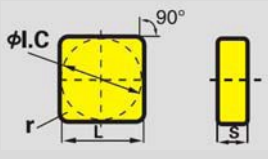
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
SNMG	120408-FB	432-FB	12.7	12.7	4.76	5.16	0.8
	120412-FB	433-FB	12.7	12.7	4.76	5.16	1.2

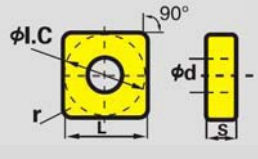
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
SNMG	090304-MB	321-MB	9.525	9.525	3.18	3.81	0.4
	090308-MB	322-MB	9.525	9.525	3.18	3.81	0.8
	090312-MB	323-MB	9.525	9.525	3.18	3.81	1.2
	120404-MB	431-MB	12.7	12.7	4.76	5.16	0.4
	120408-MB	432-MB	12.7	12.7	4.76	5.16	0.8
	120412-MB	433-MB	12.7	12.7	4.76	5.16	1.2
	120416-MB	434-MB	12.7	12.7	4.76	5.16	1.6
	150608-MB	542-MB	15.875	15.875	6.35	6.35	0.8
	150612-MB	543-MB	15.875	15.875	6.35	6.35	1.2
	150616-MB	544-MB	15.875	15.875	6.35	6.35	1.6
	190612-MB	643-MB	19.05	19.05	6.35	7.94	1.2
	190616-MB	644-MB	19.05	19.05	6.35	7.94	1.6

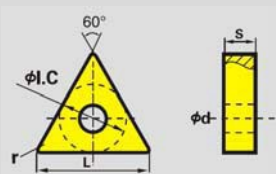
General Turning Inserts

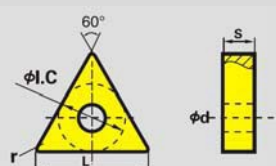
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
SNMG	090304-MC	321-MC	9.525	9.525	3.18	3.81	0.4
	090308-MC	322-MC	9.525	9.525	3.18	3.81	0.8
	090312-MC	323-MC	9.525	9.525	3.18	3.81	1.2
	120404-MC	431-MC	12.7	12.7	4.76	5.16	0.4
	120408-MC	432-MC	12.7	12.7	4.76	5.16	0.8
	120412-MC	433-MC	12.7	12.7	4.76	5.16	1.2
	120416-MC	434-MC	12.7	12.7	4.76	5.16	1.6
	150612-MC	543-MC	15.875	15.875	6.35	6.35	1.2
	190612-MC	643-MC	19.05	19.05	6.35	7.94	1.2

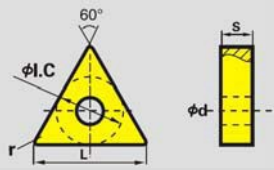
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
SNMM	090304	321	9.525	9.525	3.18	3.81	0.4
	090308	322	9.525	9.525	3.18	3.81	0.8
	120408	432	12.7	12.7	4.76	5.16	0.8
	120412	433	12.7	12.7	4.76	5.16	1.2
	120416	434	12.7	12.7	4.76	5.16	1.6
	150608	542	15.88	15.88	6.35	6.35	0.8
	150612	543	15.88	15.88	6.35	6.35	1.2
	190612	643	19.05	19.05	6.35	7.94	1.2
	190616	644	19.05	19.05	6.35	7.94	1.6

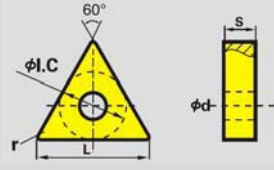
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
SNGN	090308	322	9.525	9.525	3.18	-	0.8
	120408	432	12.7	12.7	4.76	-	0.8
	150408	532	15.88	15.88	4.76	-	0.8
	190412	633	19.05	19.05	4.76	-	1.2

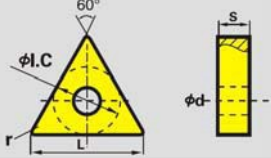
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
SNMA	090304	321	9.525	9.525	3.18	3.81	0.4
	090308	322	9.525	9.525	3.18	3.81	0.8
	120404	431	12.7	12.7	4.76	5.16	0.4
	120408	432	12.7	12.7	4.76	5.16	0.8
	120416	434	12.7	12.7	4.76	5.16	1.6
	150608	542	15.875	15.875	6.35	6.35	0.8
	190612	643	19.05	19.05	6.35	7.94	1.2
	190616	644	19.05	19.05	6.35	7.94	1.6
SNGA	090316	324	9.525	9.525	3.18	3.81	1.6
	090408	332	9.525	9.525	4.76	3.81	0.8
	120404	431	12.7	12.7	4.76	5.16	0.4
	120408	432	12.7	12.7	4.76	5.16	0.8

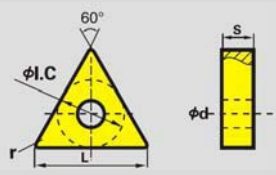
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
TNMG	160404-FB	331-FB	16.5	9.525	4.76	3.81	0.4
	160408-FB	332-FB	16.5	9.525	4.76	3.81	0.8
	160412-FB	333-FB	16.5	9.525	4.76	3.81	1.2
	220408-FB	432-FB	22	12.7	4.76	5.16	0.8
	220412-FB	433-FB	22	12.7	4.76	5.16	1.2

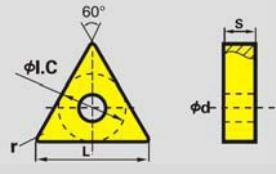
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
TNMG	110304-MB	221-MB	11	6.35	3.18	2.26	0.4
	160404-MB	331-MB	16.5	9.525	4.76	3.81	0.4
	160408-MB	332-MB	16.5	9.525	4.76	3.81	0.8
	160412-MB	333-MB	16.5	9.525	4.76	3.81	1.2
	220404-MB	431-MB	22	12.7	4.76	5.16	0.4
	220408-MB	432-MB	22	12.7	4.76	5.16	0.8
	220412-MB	433-MB	22	12.7	4.76	5.16	1.2
	220416-MB	434-MB	22	12.7	4.76	5.16	1.6

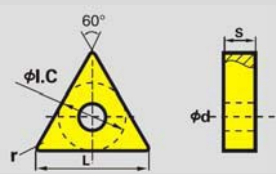
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
TNMG	110304-MC	221-MC	11	6.35	3.18	2.2	0.4
	110308-MC	222-MC	11	6.35	3.18	2.2	0.8
	160404-MC	331-MC	16.5	9.525	4.76	3.81	0.4
	160408-MC	332-MC	16.5	9.525	4.76	3.81	0.8
	160412-MC	333-MC	16.5	9.525	4.76	3.81	1.2
	220408-MC	432-MC	22	12.7	4.76	5.16	0.8
	220412-MC	433-MC	22	12.7	4.76	5.16	1.2
	220416-MC	434-MC	22	12.7	4.76	5.16	1.6

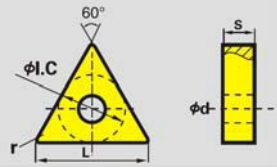
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
TNMG	160404R/L-A2	331R/L-A3	16.5	9.525	4.76	3.81	0.4
	160408R/L-A2	332R/L-A3	16.5	9.525	4.76	3.81	0.8

							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
TNMG	160404-CK	331-CK	16.5	9.525	4.76	3.81	0.4
	220408-CK	432-CK	22	12.7	4.76	5.16	0.8

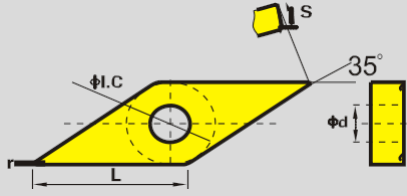
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
TNMM	160404-W	331-W	16.5	9.525	4.76	3.81	0.4
	160408-W	332-W	16.5	9.525	4.76	3.81	0.8
	160412-W	333-W	16.5	9.525	4.76	3.81	1.2
	220408-W	432-W	22	12.7	4.76	5.16	0.8
	220412-W	433-W	22	12.7	4.76	5.16	1.2
	220416-W	434-W	22	12.7	4.76	5.16	1.6
	270616-W	544-W	27.5	15.875	6.35	6.35	1.6

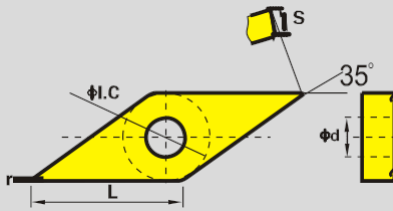
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
TNMM	160404R/L-A2	331R/L-A3	16.5	9.525	4.76	3.81	0.4
	160408R/L-A2	332R/L-A3	16.5	9.525	4.76	3.81	0.8

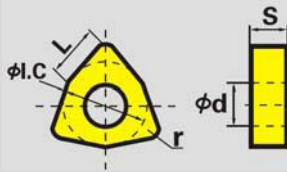
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
TNMM	160404-CK	331-CK	16.5	9.525	4.76	3.81	0.4
	220408-CK	432-CK	22	12.7	4.76	5.16	0.8

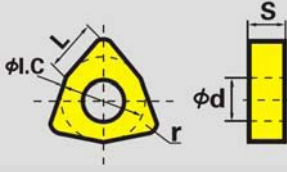
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
TNMA	160304	321	16.5	9.525	3.18	3.81	0.4
	160308	322	16.5	9.525	3.18	3.81	0.8
	160404	331	16.5	9.525	4.76	3.81	0.4
	160408	332	16.5	9.525	4.76	3.81	0.8
	160412	333	16.5	9.525	4.76	3.81	1.2
	160416	334	16.5	9.525	4.76	3.81	1.6
	220404	431	22	12.7	4.76	5.16	0.4
	220408	432	22	12.7	4.76	5.16	0.8
	270616	544	27.5	15.875	6.35	6.35	1.6
TNGA	110304	221	11	6.35	3.18	2.26	0.4
	110308	222	11	6.35	3.18	2.26	0.8
	160404	331	16.5	9.525	4.76	3.81	0.4
	160416	334	16.5	9.525	4.76	3.81	1.6

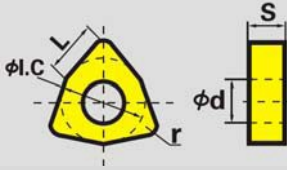
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
VNMG	160404-FB	331-FB	16.6	9.525	4.76	3.81	0.4
	160408-FB	332-FB	16.6	9.525	4.76	3.81	0.8

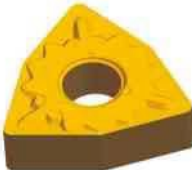
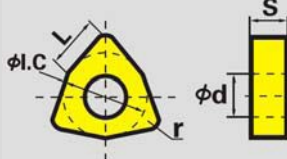
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
VNMG	160408-MB	332-MB	16.6	9.525	4.76	3.81	0.8
	160412-MB	333-MB	16.6	9.525	4.76	3.81	1.2

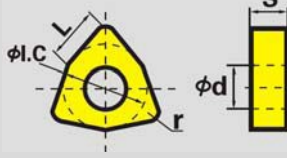
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
VNMG	160404-MC	331-MC	16.6	9.525	4.76	3.81	0.4
	160408-MC	332-MC	16.6	9.525	4.76	3.81	0.8
	160412-MC	333-MC	16.6	9.525	4.76	3.81	1.2

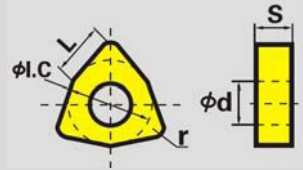
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
WNMG	060404-FB	331-FB	6.5	9.525	4.76	3.81	0.4
	060408-FB	332-FB	6.5	9.525	4.76	3.81	0.8
	060412-FB	333-FB	6.5	9.525	4.76	3.81	1.2
	080404-FB	431-FB	8.7	12.7	4.76	5.16	0.4
	080408-FB	432-FB	8.7	12.7	4.76	5.16	0.8
	080412-FB	433-FB	8.7	12.7	4.76	5.16	1.2

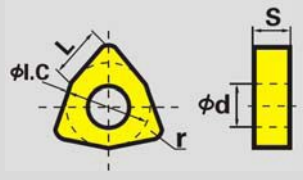
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
WNMG	060408-MB	332-MB	6.5	9.525	4.76	3.81	0.8
	060412-MB	333-MB	6.5	9.525	4.76	3.81	1.2
	080404-MB	431-MB	8.7	12.7	4.76	5.16	0.4
	080408-MB	432-MB	8.7	12.7	4.76	5.16	0.8
	080412-MB	433-MB	8.7	12.7	4.76	5.16	1.2

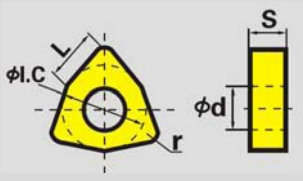
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
WNMG	060408-MC	332-MC	6.5	9.525	4.76	3.81	0.8
	060412-MC	333-MC	6.5	9.525	4.76	3.81	1.2
	080404-MC	431-MC	8.7	12.7	4.76	5.16	0.4
	080408-MC	432-MC	8.7	12.7	4.76	5.16	0.8
	080412-MC	433-MC	8.7	12.7	4.76	5.16	1.2
	080608-MC	442-MC	8.7	12.7	6.35	5.16	0.8

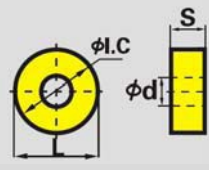
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
WNMG	080404-PS	431-PS	8.68	12.7	4.76	5.16	0.4
	080408-PS	432-PS	8.68	12.7	4.76	5.16	0.8
	100608-PS	542-PS	10.86	15.875	6.35	6.35	0.8

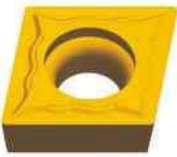
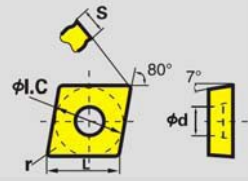
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
WNMG	080404-HS	431-HS	8.68	12.7	4.76	5.16	0.4
	080408-HS	432-HS	8.68	12.7	4.76	5.16	0.8
	100608-HS	542-HS	10.86	15.875	6.35	6.35	0.8

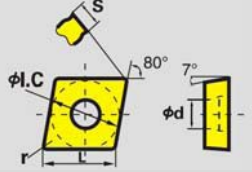
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
WNMM	080404-PS	431-PS	8.68	12.7	4.76	5.16	0.4
	080408-PS	432-PS	8.68	12.7	4.76	5.16	0.8
	100608-PS	542-PS	10.86	15.875	6.35	6.35	0.8

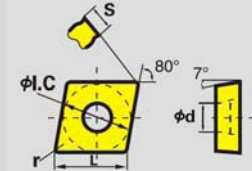
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
WNMM	080404-HS	431-HS	8.68	12.7	4.76	5.16	0.4
	080408-HS	432-HS	8.68	12.7	4.76	5.16	0.8
	100608-HS	542-HS	10.86	15.875	6.35	6.35	0.8

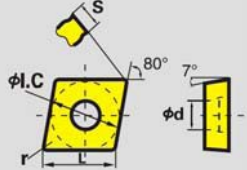
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
WNMA	06T308	3(2.5)2	6.5	9.525	3.97	3.81	0.8
	060408	332	6.5	9.525	4.76	3.81	0.8
	080404	431	8.7	12.7	4.76	5.16	0.4
	080412	433	8.7	12.7	4.76	5.16	1.2
	080416	434	8.7	12.7	4.76	5.16	1.6

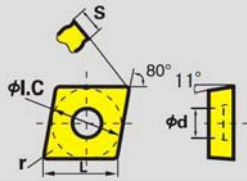
							
Type			Dimension ^ mm v				
	ISO	inch	Φ I.C	S	Φ d		
RNMG	0903MO	-	9.525	3.18	3.81		
	1204MO	-	12.7	4.76	5.16		
	080300	-	8	3.18	2.26		
	10T300	-	10	3.97	3.81		
	120400	-	12	4.76	5.16		
	160500	-	16	5.56	6.35		
	200600	-	20	6.35	7.93		
	250700	-	25	7.93	9.12		

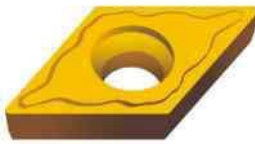
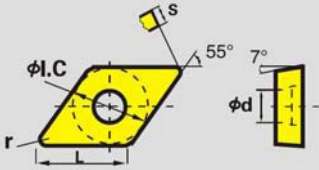
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
CCMT	050202-FP	1.8(1.5)0-FP	5.56	5.56	2.38	2.5	0.2
	060202-FP	2(1.5)0-FP	6.4	6.35	2.38	2.8	0.2
	060204-FP	2(1.5)1-FP	6.4	6.35	2.38	2.8	0.4
	060208-FP	2(1.5)2-FP	6.4	6.35	2.38	2.8	0.8
	09T308-FP	3(2.5)2-FP	9.7	9.525	3.97	4.4	0.8
	120404-FP	431-FP	12.9	12.7	4.76	5.5	0.4

							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
CCMT	050202-MP	1.8(1.5)0-MP	5.56	5.56	2.38	2.5	0.2
	060202-MP	2(1.5)0-MP	6.4	6.35	2.38	2.8	0.2
	060204-MP	2(1.5)1-MP	6.4	6.35	2.38	2.8	0.4
	060208-MP	2(1.5)2-MP	6.4	6.35	2.38	2.8	0.8
	09T304-MP	3(2.5)1-MP	9.7	9.525	3.97	4.4	0.4
	09T308-MP	3(2.5)2-MP	9.7	9.525	3.97	4.4	0.8
	120404-MP	431-MP	12.9	12.7	4.76	5.5	0.4
	120408-MP	432-MP	12.9	12.7	4.76	5.6	0.8
	120412-MP	433-MP	12.9	12.7	4.76	5.6	1.2

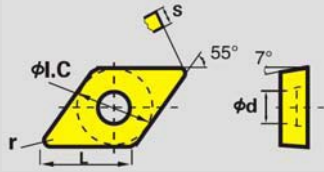
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
CCMT	060204-RP	2(1.5)1-RP	6.4	6.35	2.38	2.8	0.4
	060208-RP	2(1.5)2-RP	6.4	6.35	2.38	2.8	0.8
	09T304-RP	3(2.5)1-RP	9.7	9.525	3.97	4.4	0.4
	09T308-RP	3(2.5)2-RP	9.7	9.525	3.97	4.4	0.8
	120408-RP	432-RP	12.9	12.7	4.76	5.5	0.8
	120412-RP	433-RP	12.9	12.7	4.76	5.5	1.2

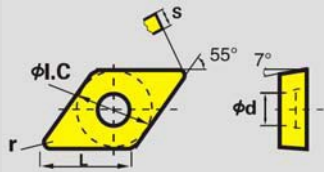
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
CCMW	060204	2(1.5)1	6.4	6.35	2.38	2.8	0.4
	090304	321	9.7	9.525	3.18	4.4	0.4
	09T304	3(2.5)1	9.7	9.525	3.97	4.4	0.4
	09T308	3(2.5)2	9.7	9.525	3.97	4.4	0.8
	120404	431	12.9	12.7	4.76	5.5	0.4
	120408	432	12.9	12.7	4.76	5.5	0.8

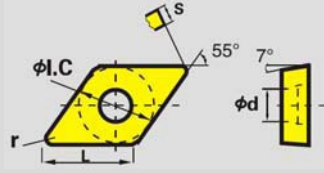
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
CPGW	050204	1.8(1.5)1	5.6	5.56	2.38	2.5	0.4
	060204	2(1.5)1	6.4	6.35	2.38	2.8	0.4

							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
DCMT	070202-FP	2(1.5)0-FP	7.8	6.35	2.38	2.8	0.2
	070204-FP	2(1.5)1-FP	7.8	6.35	2.38	2.8	0.4
	070208-FP	2(1.5)2-FP	7.8	6.35	2.38	2.8	0.8
	11T302-FP	3(2.5)0-FP	11.6	9.525	3.97	4.4	0.2
	11T304-FP	3(2.5)1-FP	11.6	9.525	3.97	4.4	0.4
	11T308-FP	3(2.5)2-FP	11.6	9.525	3.97	4.4	0.8

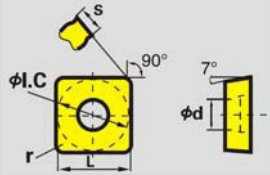
General Turning Inserts

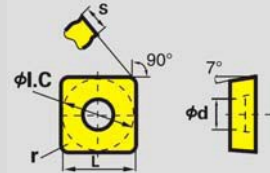
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
DCMT	070204-MP	2(1.5)1-MP	7.8	6.35	2.38	2.8	0.4
	070208-MP	2(1.5)2-MP	7.8	6.35	2.38	2.8	0.8
	11T304-MP	3(2.5)1-MP	11.6	9.525	3.97	4.4	0.4
	11T308-MP	3(2.5)2-MP	11.6	9.525	3.97	4.4	0.8
	11T312-MP	3(2.5)3-MP	11.6	9.525	3.97	4.4	1.2

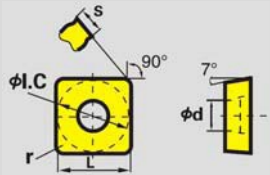
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
DCMT	11T304-RP	3(2.5)1-RP	11.6	9.525	3.97	4.4	0.4
	11T308-RP	3(2.5)2-RP	11.6	9.525	3.97	4.4	0.8
	11T312-RP	3(2.5)3-RP	11.6	9.525	3.97	4.4	1.2

							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
DCMW	11T304	3(2.5)1	11.6	9.525	3.97	4.4	0.4
	11T308	3(2.5)2	11.6	9.525	3.97	4.4	0.8
DPMW	11T304	3(2.5)1	11.6	9.525	3.97	4.4	0.4
	11T308	3(2.5)2	11.6	9.525	3.97	4.4	0.8
DCGW	11T304	3(2.5)1	11.6	9.525	3.97	4.4	0.4
	11T308	3(2.5)2	11.6	9.525	3.97	4.4	0.8

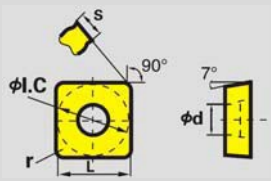
General Turning Inserts

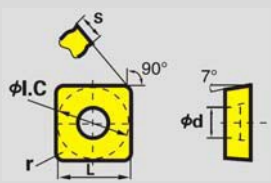
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
SCMT	09T302-FP	3(2.5)0-FP	9.525	9.525	3.97	4.4	0.2
	09T304-FP	3(2.5)1-FP	9.525	9.525	3.97	4.4	0.4
	09T308-FP	3(2.5)2-FP	9.525	9.525	3.97	4.4	0.8

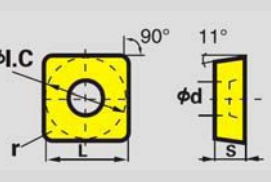
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
SCMT	09T304-MP	3(2.5)1-MP	9.525	9.525	3.97	4.4	0.4
	09T308-MP	3(2.5)2-MP	9.525	9.525	3.97	4.4	0.8
	120404-MP	431-MP	12.7	12.7	4.76	5.56	0.4
	120408-MP	432-MP	12.7	12.7	4.76	5.56	0.8
	120412-MP	433-MP	12.7	12.7	4.76	5.56	1.2

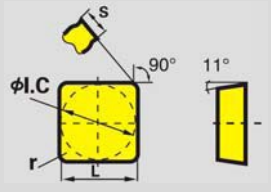
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
SCMT	09T304	3(2.5)1	9.525	9.525	3.97	4.4	0.4
	120408	431	12.7	12.7	4.76	5.5	0.4
	120408	432	12.7	12.7	4.76	5.5	0.8

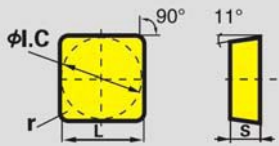
General Turning Inserts

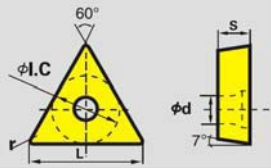
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
SCMT	09T304-RP	3(2.5)1-RP	9.525	9.525	3.97	4.4	0.4
	09T308-RP	3(2.5)2-RP	9.525	9.525	3.97	4.4	0.8
	120404-RP	431-RP	12.7	12.7	4.76	5.56	0.4
	120408-RP	432-RP	12.7	12.7	4.76	5.56	0.8
	120412-RP	433-RP	12.7	12.7	4.76	5.56	1.2

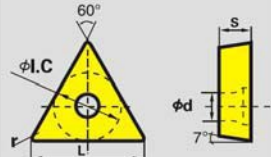
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
SCMW	060204	2(1.5)1	6.35	6.35	2.38	2.8	0.4
	09T304	3(2.5)1	9.525	9.525	3.97	4.4	0.4
	09T308	3(2.5)2	9.525	9.525	3.97	4.4	0.8
	120404	431	12.7	12.7	4.76	5.5	0.4
	150408	532	15.875	15.875	4.76	5.5	0.8

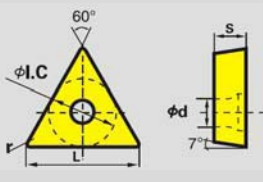
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
SPMW	09T304	3(2.5)1	9.525	9.525	3.97	4.4	0.4
	09T308	3(2.5)2	9.525	9.525	3.97	4.4	0.8

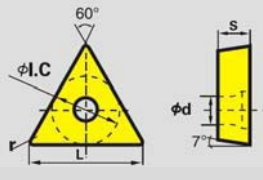
							
Type			Dimension $\wedge$ mm $\vee$				
	ISO	inch	L	Φ I.C	S	Φ d	r
SPMR	090304-W	321-W	9.525	9.525	3.18	-	0.4
	090308-W	322-W	9.525	9.525	3.18	-	0.8
	09T304-W	3(2.5)1-W	9.525	9.525	3.97	-	0.4
	09T308-W	3(2.5)2-W	9.525	9.525	3.97	-	0.8
	120304-W	421-W	12.7	12.7	3.18	-	0.4
	120308-W	422-W	12.7	12.7	3.18	-	0.8
	120312-W	423-W	12.7	12.7	3.18	-	1.2

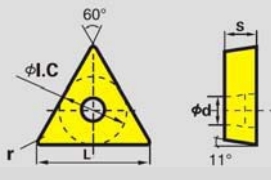
							
Type			Dimension $\wedge$ mm $\vee$				
	ISO	inch	L	Φ I.C	S	Φ d	r
SPGN	090304	321	9.525	9.525	3.18	-	0.4
	090308	322	9.525	9.525	3.18	-	0.8
	120308	422	12.7	12.7	3.18	-	0.8
	120404	431	12.7	12.7	4.76	-	0.4
	120408	432	12.7	12.7	4.76	-	0.8
	120412	433	12.7	12.7	4.76	-	1.2
	150404	531	15.875	15.875	4.76	-	0.4
	150408	532	15.875	15.875	4.76	-	0.8
	190408	632	19.05	19.05	4.76	-	0.8
	190416	634	19.05	19.05	4.76	-	1.6

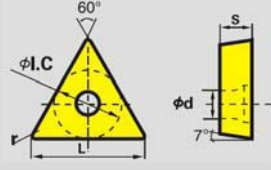
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
TCMT	06T102-FP	1.2(1.2)0-FP	6.4	3.97	1.98	2.2	0.2
	06T104-FP	1.2(1.2)1-FP	6.4	3.97	1.98	2.2	0.4
	06T108-FP	1.2(1.2)2-FP	6.4	3.97	1.98	2.2	0.8
	090202-FP	1.8(1.5)0-FP	9.6	5.56	2.38	2.5	0.2
	090204-FP	1.8(1.5)1-FP	9.6	5.56	2.38	2.5	0.4
	090208-FP	1.8(1.5)2-FP	9.6	5.56	2.38	2.5	0.8
	110202-FP	2(1.5)0-FP	11	6.35	2.38	2.8	0.2
	110204-FP	2(1.5)1-FP	11	6.35	2.38	2.8	0.4
	110208-FP	2(1.5)2-FP	11	6.35	2.38	2.8	0.8
	16T302-FP	3(2.5)0-FP	16.5	9.525	3.97	4.4	0.2
	16T304-FP	3(2.5)1-FP	16.5	9.525	3.97	4.4	0.4

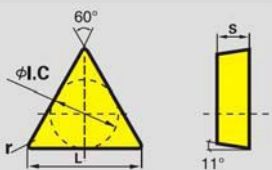
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
TCMT	090204-MP	1.8(1.5)1-MP	9.6	5.56	2.38	2.5	0.4
	090208-MP	1.8(1.5)2-MP	9.6	5.56	2.38	2.5	0.8
	110204-MP	2(1.5)1-MP	11	6.35	2.38	2.8	0.4
	110208-MP	2(1.5)2-MP	11	6.35	2.38	2.8	0.8
	16T304-MP	3(2.5)1-MP	16.5	9.525	3.97	4.4	0.4
	16T308-MP	3(2.5)2-MP	16.5	9.525	3.97	4.4	0.8
	16T312-MP	3(2.5)3-MP	16.5	9.525	3.97	4.4	1.2

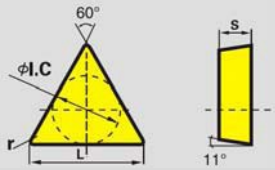
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
TCMT	090204-RP	1.8(1.5)1-RP	9.6	5.56	2.38	2.5	0.4
	090208-RP	1.8(1.5)2-RP	9.6	5.56	2.38	2.5	0.8
	16T304-RP	3(2.5)1-RP	16.5	9.525	3.97	4.4	0.4
	16T308-RP	3(2.5)2-RP	16.5	9.525	3.97	4.4	0.8
	16T312-RP	3(2.5)3-RP	16.5	9.525	3.97	4.4	1.2
	220408-RP	432-RP	22	12.7	4.76	5.5	0.8

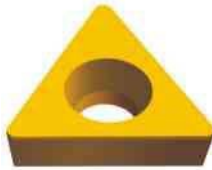
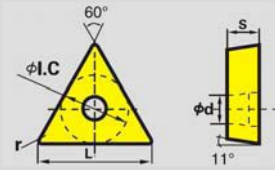
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
TCMW	110204	2(1.5)1	11	6.35	2.38	2.8	0.4
	16T304	3(2.5)1	16.5	9.525	3.97	4.4	0.4
	16T308	3(2.5)2	16.5	9.525	3.97	4.4	0.8
	16T312	3(2.5)3	16.5	9.525	3.97	4.4	1.2
	220408	432	22	12.7	4.76	5.5	0.8
TCGW	16T304	3(2.5)1	16.5	9.525	3.97	4.4	0.4
	16T308	3(2.5)2	16.5	9.525	3.97	4.4	0.8
	16T312	3(2.5)3	16.5	9.525	3.97	4.4	1.2

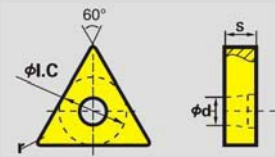
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
TPGB	090204	1.8(1.5)1	9.6	5.56	2.38	2.8	0.4
	090208	1.8(1.5)2	9.6	5.56	2.38	2.8	0.8
	270416	534	27.5	15.875	4.76	5.16	1.6

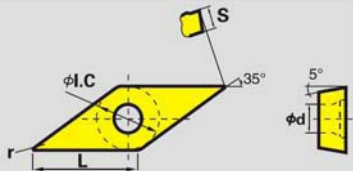
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
TCGH	110304	221	11	6.35	3.18	2.26	0.4
	110308	222	11	6.35	3.18	2.26	0.8
	160304	321	16.5	9.525	3.18	3.81	0.4
	160308	322	16.5	9.525	3.18	3.81	0.8

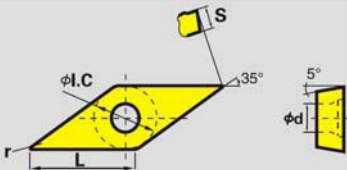
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	r	
TPGN	090204	1.8(1.5)1	9.6	5.56	2.38	0.4	
	090208	1.8(1.5)2	9.6	5.56	2.38	0.8	
	110204	2(1.5)1	11	6.35	2.38	0.4	
	110208	2(1.5)2	11	6.35	2.38	0.8	
	110304	221	11	6.35	3.18	0.4	
	110308	222	11	6.35	3.18	0.8	
	160304	321	16.5	9.525	3.18	0.4	
	160308	322	16.5	9.525	3.18	0.8	
	160408	332	16.5	9.525	4.76	0.8	
	220404	431	22	12.7	4.76	0.4	
	220408	432	22	12.7	4.76	0.8	
	220412	433	22	12.7	4.76	1.2	

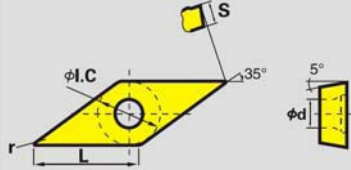
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	r	
TPMR	090204	1.8(1.5)1	9.6	5.56	2.38	0.4	
	110304	221	11	6.35	3.18	0.4	
	110308	222	11	6.35	3.18	0.8	
	160304	321	16.5	9.525	3.18	0.4	
	160308	322	16.5	9.525	3.18	0.8	
	160312	323	16.5	9.525	3.18	1.2	
	220412	433	22	12.7	4.76	1.2	

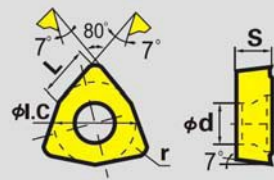
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
TPGW	090204	1.8(1.5)1	9.6	5.56	2.38	2.8	0.4
	090208	1.8(1.5)2	9.6	5.56	2.38	2.8	0.8
	110304	221	11	6.35	3.18	2.8	0.4
	110308	222	11	6.35	3.18	2.8	0.8
	160308	322	16.5	9.525	3.18	4.4	0.8
	16T302	3(2.5)0	16.5	9.525	3.97	4.4	0.2
	160400		16.5	9.525	4.76	4.4	0
	220408	432	22	12.7	4.76	5.5	0.8

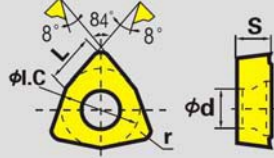
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	Φ d	r	
	U3-8003-L	-	4	1.8	2.2	0.3	
	U4-8004-L	-	5.6	2.5	2.8	0.4	
	U5-8005-L	-	8.2	3	3.4	0.5	
	U6-8006-L	-	12.7	4.3	4	0.8	

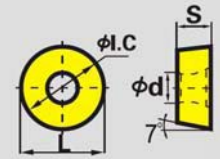
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
VBMT	110202-FP	2(1.5)0-FP	11	6.35	2.38	2.8	0.2
	110204-FP	2(1.5)1-FP	11	6.35	2.38	2.8	0.4
	110208-FP	2(1.5)2-FP	11	6.35	2.38	2.8	0.8

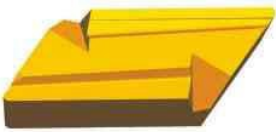
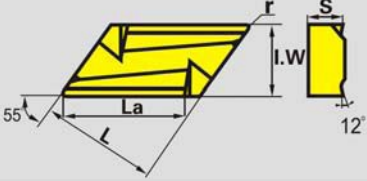
							
Type			Dimension ^ mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
VBMW	160404	331	16.6	9.525	4.76	4.4	0.4
VBGW	160404	331	16.6	9.525	4.76	4.4	0.4
	160408	332	16.6	9.525	4.76	4.4	0.8

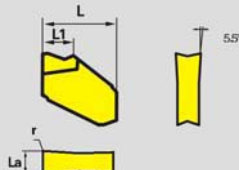
							
Type			Dimension $\wedge$ mm $\vee$				
	ISO	inch	L	Φ I.C	S	Φ d	r
VBMT	160404-MP	331-MP	16.6	9.525	4.76	4.4	0.4
	160408-MP	332-MP	16.6	9.525	4.76	4.4	0.8
	160412-MP	333-MP	16.6	9.525	4.76	4.4	1.2

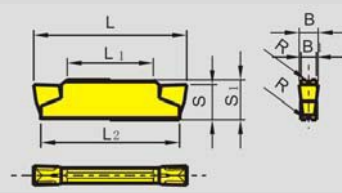
							
Type			Dimension $\wedge$ mm $\vee$				
	ISO	inch	L	Φ I.C	S	Φ d	r
WCMX	030208	1.8(1.5)2	3.8	5.56	2.38	2.8	0.8
	040202	2(1.5)0	4.3	6.35	2.38	2.8	0.2
	040208R	2(1.5)2	4.3	6.35	2.38	3.1	0.8
	050308R		5.4	7.94	3.18	3.2	0.8
	06T308R	3(2.5)2R	6.5	9.525	3.97	3.7	0.8
	080412R	433R	8.7	12.7	4.76	4.3	1.2
	080412T	433T	8.7	12.7	4.76	4.3	1.2
	06T308T	3(2.5)2T	6.5	9.525	3.97	3.7	0.8

							
Type			Dimension $\wedge$ mm $\vee$				
	ISO	inch	L	Φ I.C	S	Φ d	r
	PD02381204	-	-	8	3.8	2.8	0.4
	PD01381204	-	-	10	3.8	3.8	0.4
	PD01481204	-	-	12	4.8	4.8	0.4
	PD2531204	-	-	15	5.3	4.8	0.4
	PD3601208	-	-	17.6	6	5.8	0.8

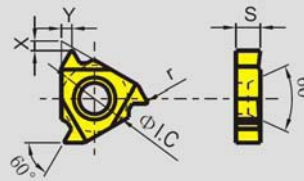
							
Type			Dimension $\wedge$ mm $\vee$				
	ISO	inch	Φ I.C	S	Φ d		
RCGT	1204MO	-	12	4.76	4.4		
	1906-MO	-	19.05	6.35	6.5		
RCMT	0803MO	-	8	3.18	3.4		
	1204MO	-	12	4.76	4.4		
	1606MO	-	16	6.35	5.5		
	2507MO	-	25	7.94	7.7		

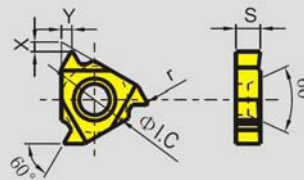
							
Type			Dimension $\wedge$ mm $\vee$				
	ISO	inch	La	L	$I.W$	S	r
KNUX	160405R/L11		16	16.15	9.525	4.76	0.5
	160410R/L11		16	16.15	9.525	4.76	1
	160415R/L11		16	16.15	9.525	4.76	1.5
	160405R/L12		16	16.15	9.525	4.76	0.5
	160410R/L12		16	16.15	9.525	4.76	1
	160415R/L12		16	16.15	9.525	4.76	1.5

								
Type	Dimension ^ mm v							
	L1	La	r	L				
ZQMX3N11-1E	4.4	3.125	0.3	11				
ZQMX4N11-1E	4.95	4.125	0.3	11				
ZQMX5N11-1E	5	5.125	0.3	11				
ZQMX6N11-1E	5.28	6.4	0.3	11				
ZQMX7N11-1E	4.53	7.05	0.3	11				

								
Type	Dimension ^ mm v							
	L	L1	L2	B	B1	S	S1	R
MGMN200-G	16	9	14.5	2	1.6	3.5	4.1	0.3
MGMN300-G	21	10.5	19	3	2.35	4.8	5.7	0.4
MGMN400-G	21	10.5	19	4	1.6	4.8	5.9	0.5

Threading Inserts

							
Type		Pitch (mm)	Dimension ^ mm v				
			Φ I.C	S	X	Y	r
External	16ER/L0.75ISO	0.75	9.525	3.5	0.8	0.8	0.11
	16ER/L1.00ISO	1	9.525	3.5	0.8	0.8	0.14
	16ER/L1.25ISO	1.25	9.525	3.5	0.8	0.8	0.18
	16ER/L1.50ISO	1.5	9.525	3.5	0.8	0.8	0.22
	16ER/L1.75ISO	1.75	9.525	3.5	1.2	1.5	1.25
	16ER/L2.00ISO	2	9.525	3.5	1.2	1.5	1.29
	16ER/L2.50ISO	2.5	9.525	3.5	1.2	1.5	1.36
	16ER/L3.00ISO	3	9.525	3.5	1.2	1.5	1.43
	22ER/L3.50ISO	3.5	12.7	4.6	1.8	2.5	0.5
	22ER/L4.00ISO	4	12.7	4.6	1.8	2.5	0.58
	22ER/L4.50ISO	4.5	12.7	4.6	1.8	2.5	0.65
	22ER/L5.00ISO	5	12.7	4.6	1.8	2.5	0.76

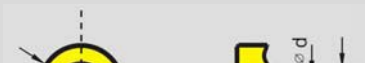
							
Type		Pitch (mm)	Dimension ^ mm v				
			Φ I.C	S	X	Y	r
Internal	16IR/L0.75ISO	0.75	9.525	3.5	0.8	0.8	0.05
	16IR/L1.00ISO	1	9.525	3.5	0.8	0.8	0.07
	16IR/L1.25ISO	1.25	9.525	3.5	0.8	0.8	0.09
	16IR/L1.50ISO	1.5	9.525	3.5	0.8	0.8	0.11
	16IR/L1.75ISO	1.75	9.525	3.5	1.2	1.5	0.13
	16IR/L2.00ISO	2	9.525	3.5	1.2	1.5	0.14
	16IR/L2.50ISO	2.5	9.525	3.5	1.2	1.5	0.18
	16IR/L3.00ISO	3	9.525	3.5	1.2	1.5	0.22
	22IR/3.50ISO	3.5	12.7	4.6	1.8	2.5	0.25
	22IR/4.00ISO	4	12.7	4.6	2	2.5	0.29
	22IR/4.50ISO	4.5	12.7	4.6	2.1	2.5	0.32
	22IR/5.00ISO	5	12.7	4.6	2.8	2.5	0.36

Peeling Inserts

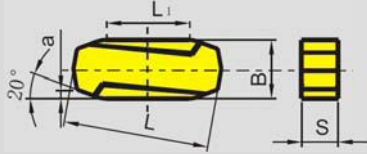
							
Type	Dimension ^ mm v						
	Φ I.C	S	r	R	L1	L2	
009241N2-R25	15.875	4.76	1.2	25	0.6	2.5	

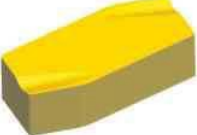
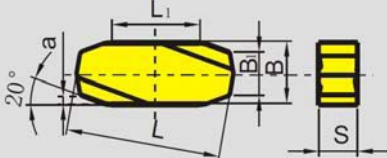
							
Type	Dimension ^ mm v						
HNMX141020-85°	Φ I.C	S	R	a			
	21.6	10	2	3.6			

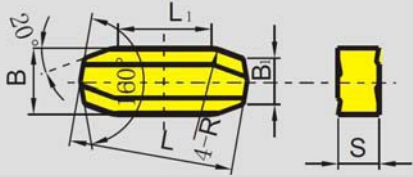
							
Type	Dimension ^ mm v						
	Φ I.C	S	R				
HNGX241330-85°	31.75	13.1	3				

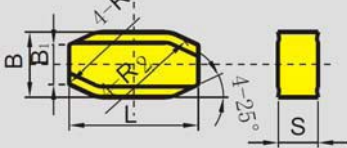
							
Type	Dimension $\wedge$ mm $\vee$						
	Φ I.C	S	Φ d	Φ d1			
RINGH5018MO	50	18	12.7	21.6			

Peeling Inserts

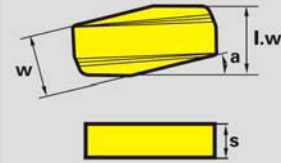
							
7ASH	LPHQVLRQ ^PP						
	%	/	6	/1	D		
/38&12 15 17	12, 0	31, 0	7, 5	17, 0	1, 5		
/38&18 20 20	18, 0	37, 0	12, 0	20, 0	2, 0		
/38&18 20 27	18, 0	43, 0	12, 0	27, 0	2, 0		
/38&18 30 20	18, 0	43, 0	12, 0	20, 0	3, 0		
/38&18 30 27	18, 0	47, 0	12, 0	27, 0	3, 0		

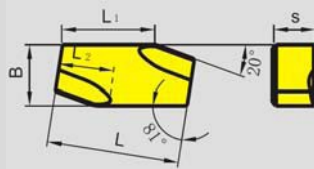
							
7ASH	LPHQVLRQ ^PP						
	%	/	6	/1	D		
/18&12 15 17	12, 0	31, 0	7, 5	17, 0	1, 5		
/18&18 20 20	18, 0	37, 0	12, 0	20, 0	2, 0		
/18&18 20 27	18, 0	43, 0	12, 0	27, 0	2, 0		
/18&18 30 20	18, 0	43, 0	12, 0	20, 0	3, 0		

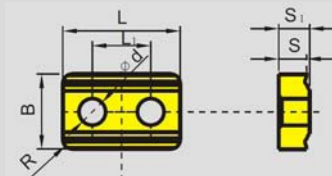
							
7ASH	LPHQVLRQ ^PP						
	%	/	6	/1	%1	5	
/1*)3008-)	12	30	7.5	17.5	8.31	5	

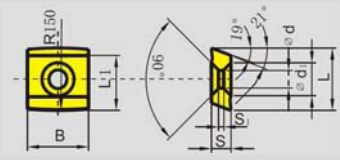
							
7ASH	LPHQVLRQ ^PP						
	%	/	6	/1	%1	5	
/1*)4012	20	40	12.4	12.15	0.5	8.5	

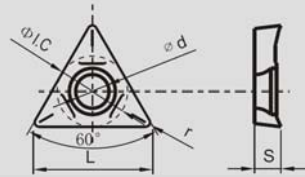
Peeling Inserts

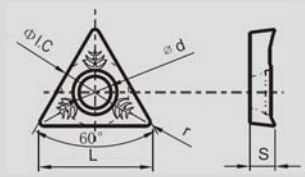
							
Type	Dimension ^mm ^						
	I.W	W	S	a			
YNMX1812L	18	22	12	20°			
YNMX2518173L	25	25	18	7°			
YNUX1812150L	18	18	12	15°			

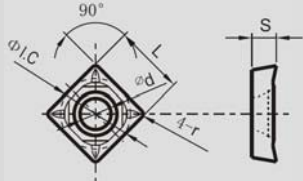
							
Type	Dimension ^mm^ ∨						
	B	L	S	L1	L2		
XNGX20.171138R	17.5	38.3	12	27	16.2		

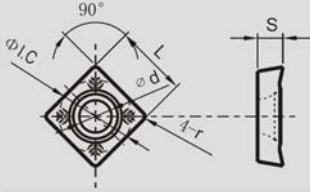
							
Type	Dimension ^mm^						
	B	L	L1	S	S1	d	R
L40.2X25.4X9.6-2 Φ9.1	25.4	40.2	20	9.6	10.6	9.1	3.2

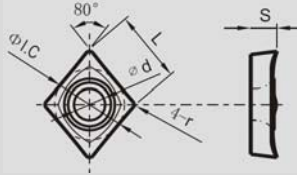
							
Type	Dimension ^mm^						
	B	L	L1	S	S1	d	d1
Welding scraping knife	25.01	25	22	8	2.2	6.9	13.1

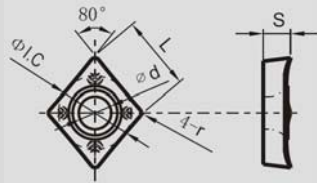
							
Type			Dimension ^mm V				
	ISO	inch	L	Φ I.C	S	Φ d	r
TCGX	110204-LH	2(1.5)1-LH	11	6.35	2.38	2.8	0.4
	110304-LH	221-LH	11	6.35	3.18	2.8	0.4
	16T304-LH	3(2.5)1-LH	16.5	9.525	3.97	4.4	0.4
	16T308-LH	3(2.5)2-LH	16.5	9.525	3.97	4.4	0.8

							
Type			Dimension ^mm V				
	ISO	inch	L	Φ I.C	S	Φ d	r
TCGT	110204-LH	2(1.5)1-LH	11	6.35	2.38	2.8	0.4
	110304-LH	221-LH	11	6.35	3.18	2.8	0.4
	16T304-LH	3(2.5)1-LH	16.5	9.525	3.97	4.4	0.4
	16T308-LH	3(2.5)2-LH	16.5	9.525	3.97	4.4	0.8

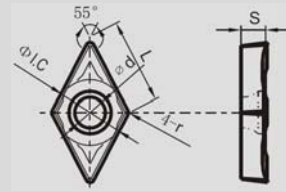
							
Type			Dimension ^mm V				
	ISO	inch	L	Φ I.C	S	Φ d	r
SCGX	120408-LH	432-LH	12.7	12.7	4.76	5.5	0.8

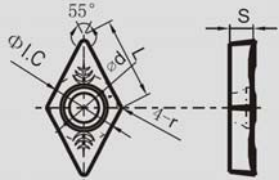
							
Type			Dimension ^mm V				
	ISO	inch	L	Φ I.C	S	Φ d	r
SCGT	120408-LH	432-LH	12.7	12.7	4.76	5.5	0.8

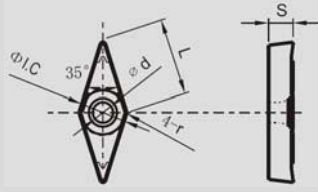
							
Type			Dimension ^mm V				
	ISO	inch	L	Φ I.C	S	Φ d	r
CCGX	060204-LH	2(1.5)1-LH	6.4	6.35	2.38	2.8	0.4
	09T304-LH	3(2.5)1-LH	9.7	9.525	3.97	4.4	0.4
	09T308-LH	3(2.5)2-LH	9.7	9.525	3.97	4.4	0.8
	120404-LH	431-LH	12.9	12.7	4.76	5.5	0.4
	120408-LH	432-LH	12.9	12.7	4.76	5.5	0.8

							
Type			Dimension ^mm V				
	ISO	inch	L	Φ I.C	S	Φ d	r
CCGT	060204-LH	2(1.5)1-LH	6.4	6.35	2.38	2.8	0.4
	09T304-LH	3(2.5)1-LH	9.7	9.525	3.97	4.4	0.4
	09T308-LH	3(2.5)2-LH	9.7	9.525	3.97	4.4	0.8
	120404-LH	431-LH	12.9	12.7	4.76	5.5	0.4
	120408-LH	432-LH	12.9	12.7	4.76	5.5	0.8

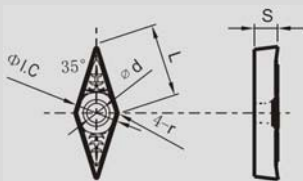
Aluminium Turning Inserts

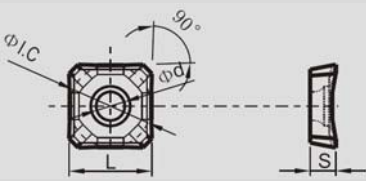
							
Type			Dimension ^mm V				
	ISO	inch	L	Φ I.C	S	Φ d	r
DCGX	070204-LH	2(1.5)1-LH	7.7	6.35	2.38	2.8	0.4
	11T302-LH	3(2.5)0-LH	11.6	9.525	3.97	4.4	0.2
	11T304-LH	3(2.5)1-LH	11.6	9.525	3.97	4.4	0.4
	11T308-LH	3(2.5)2-LH	11.6	9.525	3.97	4.4	0.8

							
Type			Dimension ^mm V				
	ISO	inch	L	Φ I.C	S	Φ d	r
DCGT	070204-LH	2(1.5)1-LH	7.7	6.35	2.38	2.8	0.4
	11T302-LH	3(2.5)0-LH	11.6	9.525	3.97	4.4	0.2
	11T304-LH	3(2.5)1-LH	11.6	9.525	3.97	4.4	0.4
	11T308-LH	3(2.5)2-LH	11.6	9.525	3.97	4.4	0.8

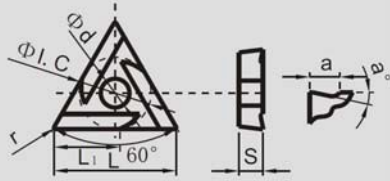
							
Type			Dimension ^mm V				
	ISO	inch	L	Φ I.C	S	Φ d	r
VCGX	110204-LH	2(1.5)1-LH	11	6.35	2.38	2.8	0.4
	160404-LH	331-LH	16.6	9.525	4.76	4.4	0.4
	160408-LH	332-LH	16.6	9.525	4.76	4.4	0.8
	160412-LH	333-LH	16.6	9.525	4.76	4.4	1.2

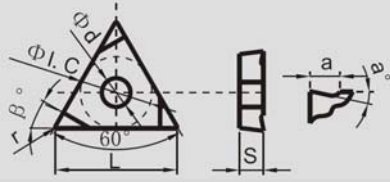
Aluminium Turning Inserts

							
Type			Dimension ^mm v				
	ISO	inch	L	Φ I.C	S	Φ d	r
VCGT	110204-LH	2(1.5)1-LH	11	6.35	2.38	2.8	0.4
	160404-LH	331-LH	16.6	9.525	4.76	4.4	0.4
	160408-LH	332-LH	16.6	9.525	4.76	4.4	0.8
	160412-LH	333-LH	16.6	9.525	4.76	4.4	1.2

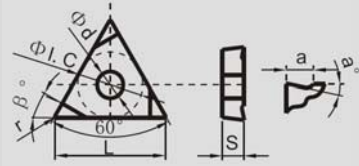
							
Type			Dimension ^mm v				
	ISO	inch	L	Φ I.C	S	Φ d	
SEKT	1204AFFN-LH-1		12.7	12.7	4.76	5.5	

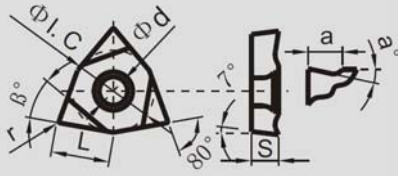
High Precision Turning Inserts

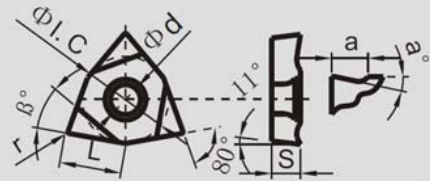
										
Type			Dimension $\wedge$ mm $\vee$							
	ISO	inch	L	Φ I.C	S	Φ d	r	a	a°	L1
TNGG	110302R/L-A1.3	220R/L-A1.3	11	6.35	3.18	2.26	0.2	1.3	15°	3.2
	110304R/L-A1.3	221R/L-A1.3	11	6.35	3.18	2.26	0.4	1.3	15°	3
	110308R/L-A1.3	222R/L-A1.3	11	6.35	3.18	2.26	0.8	1.3	15°	2.7
	160304R/L-A2.3	321R/L-A2.3	16.5	9.525	3.18	3.81	0.4	2.3	15°	5.4
	160308R/L-A2.3	322R/L-A2.3	16.5	9.525	3.18	3.81	0.8	2.3	15°	5.1
	160402R/L-A2.3	330R/L-A2.3	16.5	9.525	4.76	3.81	0.2	2.3	15°	8.7
	160404R/L-A2.3	331R/L-A2.3	16.5	9.525	4.76	3.81	0.4	2.3	15°	5.4
	160408R/L-A2.3	332R/L-A2.3	16.5	9.525	4.76	3.81	0.8	2.3	15°	5.1
	160412R/L-A2.3	333R/L-A2.3	16.5	9.525	4.76	3.81	1.2	2.3	15°	4.8
	220404R/L-A2.8	431R/L-A2.8	22	12.7	4.76	5.16	0.4	2.8	15°	9.4
	220408R/L-A2.8	432R/L-A2.8	22	12.7	4.76	5.16	0.8	2.8	15°	9.1
	220412R/L-A2.8	433R/L-A2.8	22	12.7	4.76	5.16	1.2	2.8	15°	8.8

										
Type			Dimension $\wedge$ mm $\vee$							
	ISO	inch	L	Φ I.C	S	Φ d	r	a	a°	β°
TNGG	160402R/L-F1.3	330R/L-F1.3	16.5	9.525	4.76	3.81	0.2	1.3	15°	30°
	160404R/L-F1.3	331R/L-F1.3	16.5	9.525	4.76	3.81	0.4	1.3	15°	30°
	160408R/L-F1.3	332R/L-F1.3	16.5	9.525	4.76	3.81	0.8	1.3	15°	30°
	160402R/L-F2.5	330R/L-F2.5	16.5	9.525	4.76	3.81	0.2	2.5	15°	30°
	160404R/L-F2.5	331R/L-F2.5	16.5	9.525	4.76	3.81	0.4	2.5	15°	30°
	160408R/L-F2.5	332R/L-F2.5	16.5	9.525	4.76	3.81	0.8	2.5	15°	30°

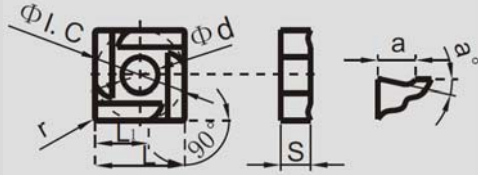
High Precision Turning Inserts

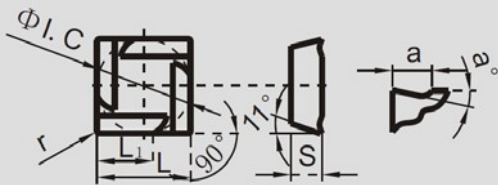
										
Type			Dimension ^mm V							
	ISO	inch	L	Φ I.C	S	Φ d	r	a	a°	β°
TCGT	080202R/L-F1.3	1.5(1.5)0R/L-F1.3	8.24	4.76	2.38	2.2	0.2	1.3	10°	20°
	080204R/L-F1.3	1.5(1.5)1R/L-F1.3	8.24	4.76	2.38	2.2	0.4	1.3	10°	20°
	090202R/L-F1.6	1.8(1.5)0R/L-F1.6	9.6	5.56	2.38	2.5	0.2	1.6	10°	20°
	090204R/L-F1.6	1.8(1.5)1R/L-F1.6	9.6	5.56	2.38	2.5	0.4	1.6	10°	20°
	090208R/L-F1.8	1.8(1.5)2R/L-F1.6	9.6	5.56	2.38	2.5	0.8	1.6	10°	20°
	110302R/L-F1.8	220R/L-F1.8	11	6.35	3.18	2.26	0.2	1.8	10°	20°
	110304R/L-F1.8	221R/L-F1.8	11	6.35	3.18	2.26	0.4	1.8	10°	20°
	110308R/L-F1.8	222R/L-F1.8	11	6.35	3.18	2.26	0.8	1.8	10°	20°

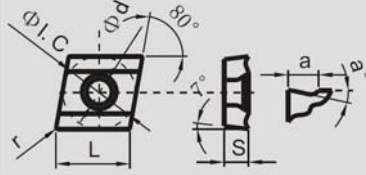
										
Type			Dimension ^mm V							
	ISO	inch	L	Φ I.C	S	Φ d	r	a	a°	β°
WCGT	020102R/L-F1.0		3.25	4.76	1.59	2.2	0.2	1	15°	30°
	020104R/L-F1.0		3.25	4.76	1.59	2.2	0.4	1	15°	30°

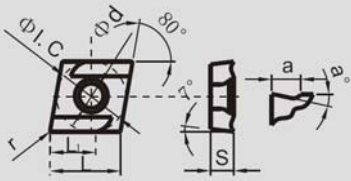
										
Type			Dimension ^mm V							
	ISO	inch	L	Φ I.C	S	Φ d	r	a	a°	β°
WPGT	040202R/L-F1.0	2(1.5)0R/L-F1.0	4.34	6.35	2.38	2.5	0.2	1	15°	20°
	040204R/L-F1.0	2(1.5)1R/L-F1.1	4.34	6.35	2.38	2.5	0.4	1	15°	20°
	060304R/L-F1.0	321R/L-F1.0	6.25	9.525	3.18	4.4	0.4	1	15°	20°
	060308R/L-F1.0	322R/L-F1.0	6.25	9.525	3.18	4.4	0.8	1	15°	20°

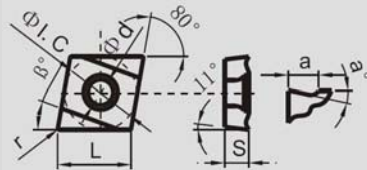
High Precision Turning Inserts

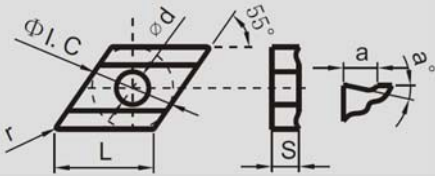
										
Type			Dimension ^mm V							
	ISO	inch	L	Φ I.C	S	Φ d	r	a	α°	L1
SNGG	090304R/L-A1.8	321R/L-A1.8	9.525	9.525	3.18	3.81	0.4	1.8	15°	1.6
	090308R/L-A1.8	322R/L-A1.8	9.525	9.525	3.18	3.81	0.8	1.8	15°	1.6
	120404R/L-A2.3	431R/L-A2.3	12.7	12.7	4.76	5.16	0.4	2.3	15°	3.7
	120408R/L-A2.3	432R/L-A2.3	12.7	12.7	4.76	5.16	0.8	2.3	15°	3.7

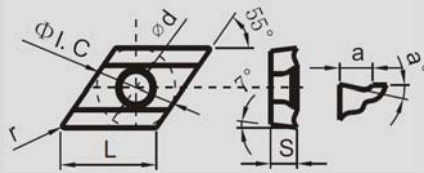
										
Type			Dimension ^mm V							
	ISO	inch	L	Φ I.C	S	r	a	α°	L1	
SPGR	090304R/L-A1.8	321R/L-R1.8	9.525	9.525	3.18	0.4	1.8	15°	1.6	

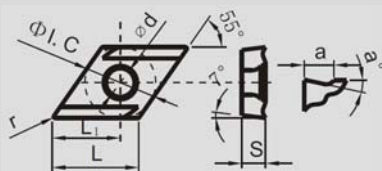
										
Type			Dimension ^mm V							
	ISO	inch	L	Φ I.C	S	Φ d	r	a	α°	
CCET	060200R/L-H1.0		6.4	6.35	2.38	2.8	0	1	20°	
	060201R/L-H1.0		6.4	6.35	2.38	2.8	0.1	1	20°	
	060202R/L-H1.0	2(1.5)0R/L-H1.0	6.4	6.35	2.38	2.8	0.2	1	20°	
	060204R/L-H1.0	2(1.5)1R/L-H1.0	6.4	6.35	2.38	2.8	0.4	1	20°	
	09T300R/L-H1.5		9.7	9.525	3.97	4.4	0	1.5	20°	
	09T301R/L-H1.5		9.7	9.525	3.97	4.4	0.1	1.5	20°	
	09T302R/L-H1.5	3(2.5)0R/L-H1.5	9.7	9.525	3.97	4.4	0.2	1.5	20°	
	09T304R/L-H1.5	3(2.5)1R/L-H1.5	9.7	9.525	3.97	4.4	0.4	1.5	20°	

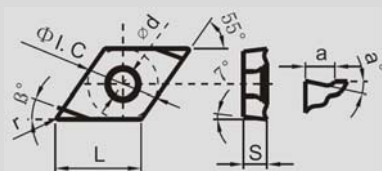
										
7ASH			'LPHQVLRQ ^PP √							
	,62	LQFK	/	.,&	6	G	U	D	De	/1
&*7	0602005//-\$1.0		6.4	6.35	2.38	2.8	0	1	20e	3
	0602015//-\$1.0		6.4	6.35	2.38	2.8	0.1	1	20e	3
	0602025//-\$1.0	2(1.5)05//-\$1.0	6.4	6.35	2.38	2.8	0.2	1	20e	3
	0602045//-\$1.0	2(1.5)15//-\$1.0	6.4	6.35	2.38	2.8	0.4	1	20e	3
	0973005//-\$1.5		9.7	9.525	3.97	4.4	0	1.5	20e	5
	0973015//-\$1.5		9.7	9.525	3.97	4.4	0.1	1.5	20e	5
	0973025//-\$1.5	3(2.5)05//-\$1.5	9.7	9.525	3.97	4.4	0.2	1.5	20e	5
	0973045//-\$1.5	3(2.5)15//-\$1.5	9.7	9.525	3.97	4.4	0.4	1.5	20e	5

										
7ASH			'LPHQVLRQ ^PP √							
	,62	LQFK	/	.,&	6	G	U	D	De	SE
&3*7	0802045//-)0.6		8.1	7.93	2.38	3.4	0.4	0.6	15e	20e
	0903025//-)0.8	3205//-)0.8	9.7	9.525	3.18	4.4	0.2	0.8	15e	20e
	0903045//-)0.8	3215//-)0.8	9.7	9.525	3.18	4.4	0.4	0.8	15e	20e

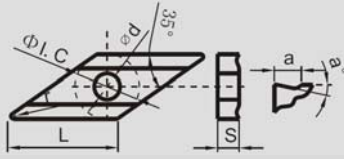
										
7ASH			'LPHQVLRQ ^PP √							
	,62	LQFK	/	.,&	6	G	U	D	De	
'1**	1504045//+2.8	4315//+2.8	15.5	12.7	4.76	5.16	0.4	2.8	15e	
	1504085//+2.8	4325//+2.8	15.5	12.7	4.76	5.16	0.8	2.8	15e	

										
7ASH			'LPHQVLRQ ^PP √							
	,62	LQFK	/	.,&	6	G	U	D	De	
'&*7	0702005//+1.0		7.75	6.35	2.38	2.8	0	1	20e	
	0702015//+1.0		7.75	6.35	2.38	2.8	0.1	1	20e	
	0702025//+1.0	2(1.5)05//+1.0	7.75	6.35	2.38	2.8	0.2	1	20e	
	1173005//+1.5		11.6	9.525	3.97	4.4	0	1.5	20e	
	1173015//+1.5		11.6	9.525	3.97	4.4	0.1	1.5	20e	
	1173025//+1.5	3(2.5)05//+1.5	11.6	9.525	3.97	4.4	0.2	1.5	20e	

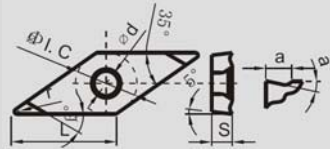
										
7ASH			'LPHQVLRQ ^PP √							
	,62	LQFK	/	.,&	6	G	U	D	De	/1
'&*7	0702005//-\$1.0		7.75	6.35	2.38	2.8	0	1	20e	3.5
	0702015//-\$1.0		7.75	6.35	2.38	2.8	0.1	1	20e	3.5
	0702025//-\$1.0	2(1.5)05//-\$1.0	7.75	6.35	2.38	2.8	0.2	1	20e	3.5
	1173005//-\$1.5		11.6	9.525	3.97	4.4	0	1.5	20e	6.5
	1173015//-\$1.5		11.6	9.525	3.97	4.4	0.1	1.5	20e	6.5
	1173025//-\$1.5	3(2.5)05//-\$1.5	11.6	9.525	3.97	4.4	0.2	1.5	20e	6.5

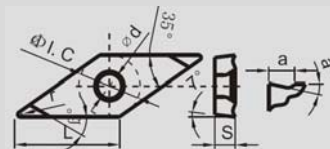
										
7ASH			'LPHQVLRQ ^PP √							
	,62	LQFK	/	.,&	6	G	U	D	De	
'&*7	0702025//-)1.0	2(1.5)05//-)1.0	7.75	6.35	2.38	2.8	0.2	1	17e	20e
	0702045//-)1.0	2(1.5)15//-)1.0	7.75	6.35	2.38	2.8	0.4	1	17e	20e
	1173025//-)1.0	3(2.5)05//-)1.0	11.6	9.525	3.97	4.4	0.2	1	17e	20e
	1173045//-)1.0	3(2.5)15//-)1.0	11.6	9.525	3.97	4.4	0.4	1	17e	20e

High Precision Turning Inserts

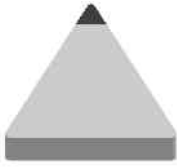
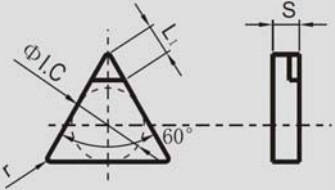
									
Type			Dimension ∠mm √						
	ISO	inch	L	Φ I.C	S	Φ d	r	a	a°
VNGG	160404R/L-H1.8	331R/L-H1.8	16.6	9.525	4.76	4.4	0.4	1.8	15°
	160408R/L-H1.8	332R/L-H1.8	16.6	9.525	4.76	4.4	0.8	1.8	15°

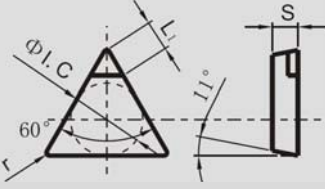
									
Type			Dimension ∠mm √						
	ISO	inch	L	Φ I.C	S	Φ d	r	a	a°
VBGT	110300R/L-H1.0		11.6	6.35	3.18	2.8	0	1	20°
	110301R/L-H1.0		11.6	6.35	3.18	2.8	0.1	1	20°
	110302R/L-H1.0	220R/L-H1.0	11.6	6.35	3.18	2.8	0.2	1	20°
	110304R/L-H1.0	221R/L-H1.0	11.6	6.35	3.18	2.8	0.4	1	20°

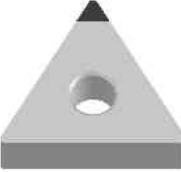
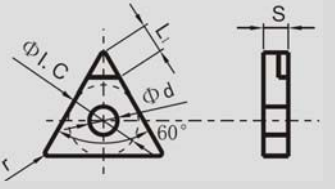
										
Type			Dimension ^mm v							
	ISO	inch	L	Φ I.C	S	Φ d	r	a	a°	β°
VBGT	110302R/L-F1.0	220R/L-F1.0	11.6	6.35	3.18	2.8	0.2	1	13°	20°
	110304R/L-F1.0	221R/L-F1.0	11.6	6.35	3.18	2.8	0.4	1	13°	20°
	160402R/L-F1.5	330R/L-F1.0	16.6	9.525	4.76	4.4	0.2	1.5	13°	20°
	160404R/L-F1.5	331R/L-F1.0	16.6	9.525	4.76	4.4	0.4	1.5	13°	20°

										
Type			Dimension ^mm v							
	ISO	inch	L	Φ I.C	S	Φ d	r	a	a°	β°
VCGT	110302R/L-F1.0	220R/L-F1.0	11.6	6.35	3.18	2.8	0.2	1	13°	20°
	110304R/L-F1.0	221R/L-F1.0	11.6	6.35	3.18	2.8	0.4	1	13°	20°
	160402R/L-F1.5	330R/L-F1.5	16.6	9.525	4.76	4.4	0.2	1.5	13°	20°
	160404R/L-F1.5	331R/L-F1.5	16.6	9.525	4.76	4.4	0.4	1.5	13°	20°

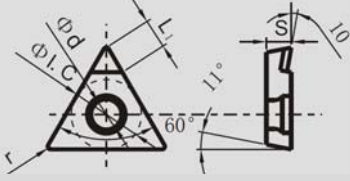
PCBN & PCD Inserts

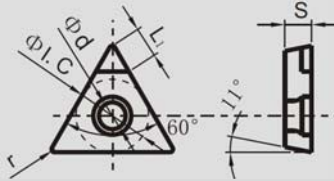
							
Type			Dimension ^mm V				
	ISO	inch	Φ I.C	S	L1	r	
TNGN	160404E/S	331E/S	9.525	4.76	3	0.4	
	160408E/S	332E/S	9.525	4.76	3	0.8	
	160412E/S	333E/S	9.525	4.76	3	1.2	

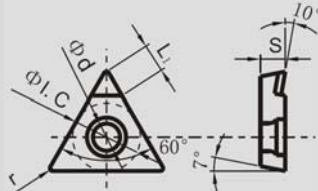
							
Type			Dimension ^mm V				
	ISO	inch	Φ I.C	S	L1	r	
TPGN	090202E/S	1.8(1.5)0E/S	5.56	2.38	2	0.2	
	090204E/S	1.8(1.5)1E/S	5.56	2.38	2	0.4	
	110302E/S	220E/S	6.35	3.18	3	0.2	
	110304E/S	221E/S	6.35	3.18	3	0.4	
	110308E/S	222E/S	6.35	3.18	3	0.8	
	160302E/S	320E/S	9.525	3.18	3	0.2	
	160304E/S	321E/S	9.525	3.18	3	0.4	
	160308E/S	322E/S	9.525	3.18	3	0.8	

							
Type			Dimension ^mm V				
	ISO	inch	Φ I.C	S	Φ d	L1	r
TNGA	160404E/S	331E/S	9.525	4.76	3.81	3	0.4
	160408E/S	332E/S	9.525	4.76	3.81	3	0.8
	160412E/S	333E/S	9.525	4.76	3.81	3	1.2

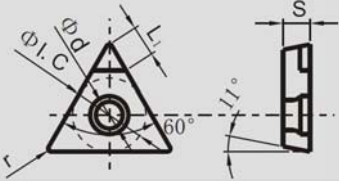
PCBN & PCD Inserts

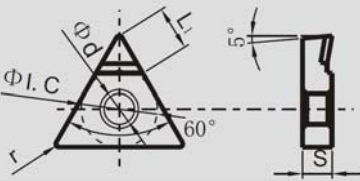
							
Type			Dimension ∟mm∟				
	ISO	inch	Φ I.C	S	Φ d	L1	r
TPMH	090201E/S		5.56	2.38	3	2	0.1
	090202E/S	1.8(1.5)0E/S	5.56	2.38	3	2	0.2
	090204E/S	1.8(1.5)1E/S	5.56	2.38	3	2	0.4
	110301E/S		6.35	3.18	3.5	3	0.1
	110302E/S	220E/S	6.35	3.18	3.5	3	0.2
	160302E/S	320E/S	9.525	3.18	4.5	3	0.2
	160304E/S	321E/S	9.525	3.18	4.5	3	0.4

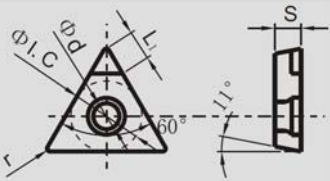
							
Type			Dimension ∟mm∟				
	ISO	inch	Φ I.C	S	Φ d	L1	r
TPGB	110302E/S	220E/S	6.35	3.18	3.5	3	0.2
	110304E/S	221E/S	6.35	3.18	3.5	3	0.4
	110308E/S	222E/S	6.35	3.18	3.5	3	0.8
	160304E/S	321E/S	9.525	3.18	4.5	3	0.4
	160308E/S	322E/S	9.525	3.18	4.5	3	0.8

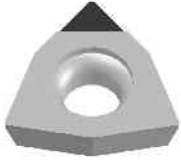
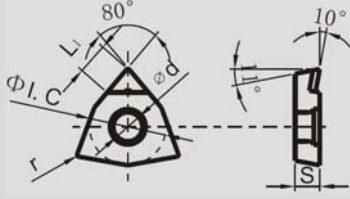
							
Type			Dimension ∟mm∟				
	ISO	inch	Φ I.C	S	Φ d	L1	r
TCMT	080201E/S		4.76	2.38	2.3	2	0.1
	080202E/S	1.5(1.5)0E/S	4.76	2.38	2.3	2	0.2
	110301E/S		6.35	3.18	2.8	3	0.1
	110302E/S	220E/S	6.35	3.18	2.8	3	0.2
	110304E/S	221E/S	6.35	3.18	2.8	3	0.4

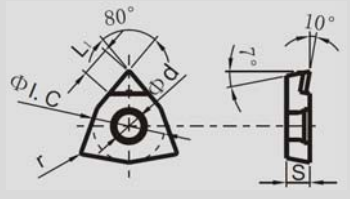
PCBN & PCD Inserts

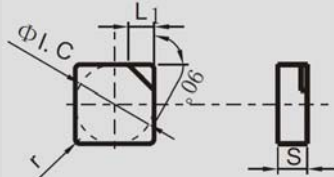
							
Type			Dimension ∟mm∟				
	ISO	inch	Φ I.C	S	Φ d	L1	r
TCGW	110302E/S	220E/S	6.35	3.18	2.8	3	0.2
	110304E/S	221E/S	6.35	3.18	2.8	3	0.4

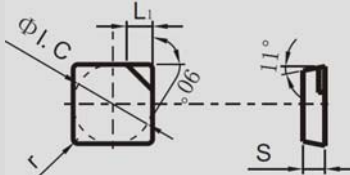
							
Type			Dimension ∟mm∟				
	ISO	inch	Φ I.C	S	Φ d	L1	r
TNMM	160402	330	9.525	4.76	3.81	3.8	0.2
	160404	331	9.525	4.76	3.81	3.7	0.4
	160408	332	9.525	4.76	3.81	3.4	0.8
	160412	333	9.525	4.76	3.81	3.1	1.2

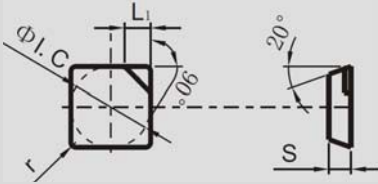
							
Type			Dimension ∟mm∟				
	ISO	inch	Φ I.C	S	Φ d	L1	r
TCGW	090204	1.8(1.5)1	5.56	2.38	2.5	2	0.4
	110204	2(1.5)1	6.35	2.38	2.8	3	0.4
	110208	2(1.5)2	6.35	2.38	2.8	3	0.8
	16T304	3(2.5)1	9.525	3.97	4.4	4.5	0.4
	16T308	3(2.5)2	9.525	3.97	4.4	4.5	0.8

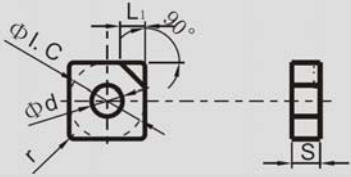
							
Type			Dimension ^mm V				
	ISO	inch	Φ I.C	S	Φ d	L1	r
WPMT	040202	2(1.5)0	6.35	2.38	2.8	2.5	0.2

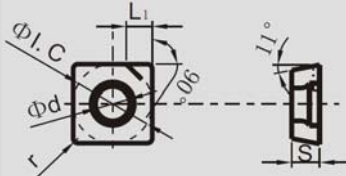
							
Type			Dimension ^mm V				
	ISO	inch	Φ I.C	S	Φ d	L1	r
WCMT	020202L	1.5(1.5)0L	4.76	2.38	2.3	2	0.2

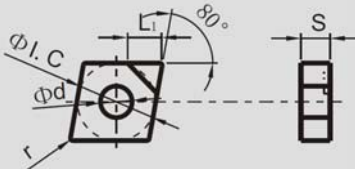
							
Type			Dimension ^mm V				
	ISO	inch	Φ I.C	S	Φ d	L1	r
SNGN	120408E/S	432E/S	12.7	4.76	-	3.5	0.8
	120412E/S	433E/S	12.7	4.76	-	3.5	1.2
	120416E/S	434E/S	12.7	4.76	-	3.5	1.6

							
Type			Dimension ^mm V				
	ISO	inch	Φ I.C	S	Φ d	L1	r
SPGN	090302E/S	320E/S	9.525	3.18	-	3.5	0.2
	090304E/S	321E/S	9.525	3.18	-	3.5	0.4
	090308E/S	322E/S	9.525	3.18	-	3.5	0.8
	120304E/S	421E/S	12.7	3.18	-	3.5	0.4

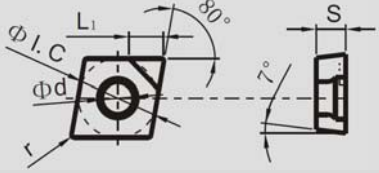
							
7ASH			'LPHQVLRQ ^PP √				
	,62	LQFK	..&	6	G	/1	U
6(*1	120304(/6	421(/6	12.7	3.18	-	3.5	0.4
	120308(/6	422(/6	12.7	3.18	-	3.5	0.8

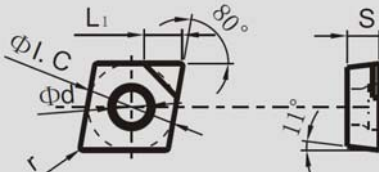
							
7ASH			'LPHQVLRQ ^PP √				
	,62	LQFK	..&	6	G	/1	U
61*\$	120408(/6	432(/6	12.7	4.76	5.16	3.5	0.8
	120412(/6	433(/6	12.7	4.76	5.16	3.5	1.2
	120416(/6	434(/6	12.7	4.76	5.16	3.5	1.6

							
7ASH			'LPHQVLRQ ^PP √				
	,62	LQFK	..&	6	G	/1	U
63*%	120304	421	12.7	3.18	5.5	3.5	0.4

							
7ASH			'LPHQVLRQ ^PP √				
	,62	LQFK	..&	6	G	/1	U
&1*\$	120404(/6	431(/6	12.7	4.76	5.16	3.5	0.4
	120408(/6	432(/6	12.7	4.76	5.16	3.5	0.8
	120412(/6	433(/6	12.7	4.76	5.16	3.5	1.2

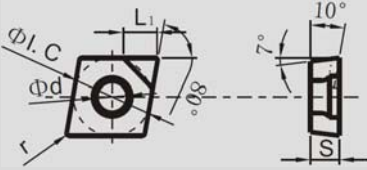
PCBN & PCD Inserts

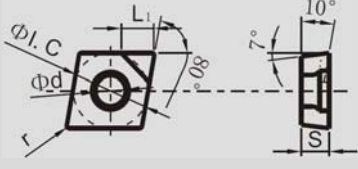
							
Type			Dimension ^mm V				
	ISO	inch	Φ I.C	S	Φ d	L1	r
CCGW	060204E/S	2(1.5)1E/S	6.35	2.38	2.8	2	0.4
	060208E/S	2(1.5)2E/S	6.35	2.38	2.8	2	0.8
	09T304E/S	3(2.5)1E/S	9.525	3.97	4.4	3	0.4
	09T308E/S	3(2.5)2E/S	9.525	3.97	4.4	3	0.8

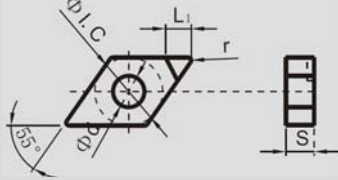
							
Type			Dimension ^mm V				
	ISO	inch	Φ I.C	S	Φ d	L1	r
CPGB	080204E/S		7.94	2.38	3.5	2	0.4
	080208E/S		7.94	2.38	3.5	2	0.8
	090304E/S	321E/S	9.525	3.18	4.5	3	0.4
	090308E/S	322E/S	9.525	3.18	4.5	3	0.8

							
Type			Dimension ^mm V				
	ISO	inch	Φ I.C	S	Φ d	L1	r
CNMM	120402	430	12.7	4.76	5.16	5.9	0.2
	120404	431	12.7	4.76	5.16	5.8	0.4
	120408	432	12.7	4.76	5.16	5.7	0.8
	120412	433	12.7	4.76	5.16	5.7	1.2

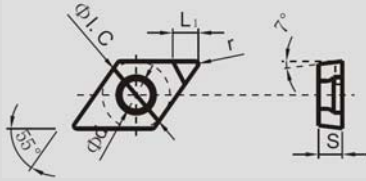
PCBN & PCD Inserts

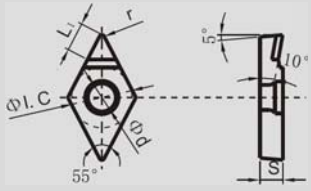
							
Type			Dimension ^mm V				
	ISO	inch	Φ I.C	S	Φ d	L1	r
CCMT	060201		6.35	2.38	2.8	2	0.1
	060202	2(1.5)0	6.35	2.38	2.8	2	0.2
	09T301		9.525	3.97	4.4	3	0.1
	09T302	3(2.5)0	9.525	3.97	4.4	3	0.2

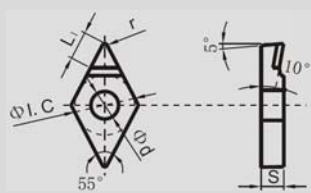
							
Type			Dimension ^mm V				
	ISO	inch	Φ I.C	S	Φ d	L1	r
CCMH	080201		7.94	2.38	3.5	2	0.1
	080202		7.94	2.38	3.5	2	0.2
	080204		7.94	2.38	3.5	2	0.4
	090301		9.525	3.18	4.5	3	0.1
	090302	320	9.525	3.18	4.5	3	0.2
	090304	321	9.525	3.18	4.5	3	0.4

							
Type			Dimension ^mm V				
	ISO	inch	Φ I.C	S	Φ d	L1	r
DNGA	150404E/S	431E/S	12.7	4.76	5.16	4	0.4
	150408E/S	432E/S	12.7	4.76	5.16	4	0.8
	150412E/S	433E/S	12.7	4.76	5.16	4	1.2

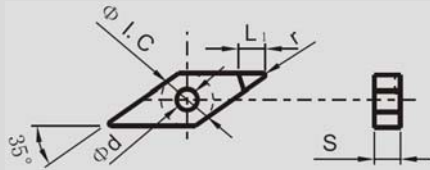
PCBN & PCD Inserts

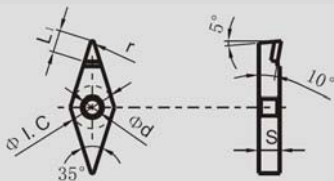
							
Type			Dimension ^mm V				
	ISO	inch	Φ I.C	S	Φ d	L1	r
DCMW	11T302E/S	3(2.5)0E/S	9.525	3.97	4.4	3	0.2
	11T304E/S	3(2.5)1E/S	9.525	3.97	4.4	3	0.4

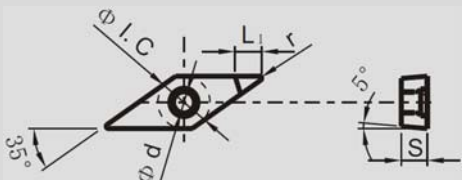
							
Type			Dimension ^mm V				
	ISO	inch	Φ I.C	S	Φ d	L1	r
DCMT	070201		6.35	2.38	2.8	3	0.1
	070202	2(1.5)0	6.35	2.38	2.8	3	0.2
	11T301		9.525	3.97	4.4	3	0.1
	11T302	3(2.5)0	9.525	3.97	4.4	3	0.2
	11T304	3(2.5)1	9.525	3.97	4.4	3	0.4

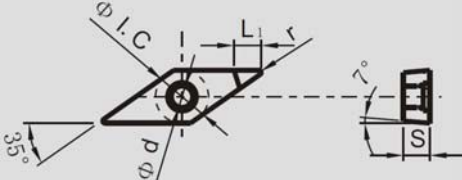
							
Type			Dimension ^mm V				
	ISO	inch	Φ I.C	S	Φ d	L1	r
DNMM	150402	430	12.7	4.76	5.16	6	0.2
	150404	431	12.7	4.76	5.16	5.9	0.4
	150408	432	12.7	4.76	5.16	5.5	0.8
	150412	433	12.7	4.76	5.16	5.1	1.2

PCBN & PCD Inserts

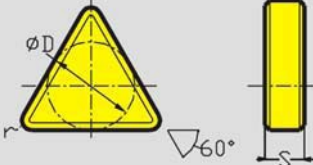
							
Type			Dimension ∠mm √				
	ISO	inch	Φ I.C	S	Φ d	L1	r
VNGA	160404	331	9.525	4.76	3.81	3.5	0.4
	160408	332	9.525	4.76	3.81	3.5	0.8

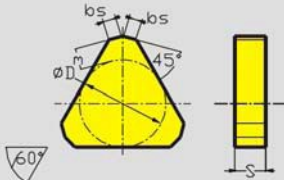
							
Type			Dimension ∠mm √				
	ISO	inch	Φ I.C	S	Φ d	L1	r
VNMM	160402M	330M	9.525	4.76	3.81	5.3	0.2
	160404M	331M	9.525	4.76	3.81	4.9	0.4
	160408M	332M	9.525	4.76	3.81	4	0.8
	160412M	333M	9.525	4.76	3.81	3.1	1.2

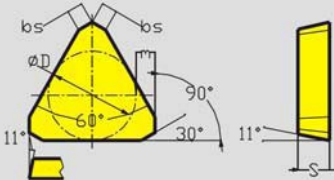
							
Type			Dimension ∠mm √				
	ISO	inch	Φ I.C	S	Φ d	L1	r
VBGW	160404	331	9.525	4.76	4.4	16.6	0.4
VMW	160408	332	9.525	4.76	4.4	16.6	0.8

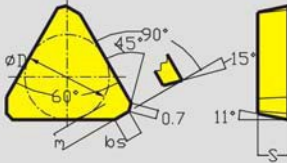
							
Type			Dimension ∠mm √				
	ISO	inch	Φ I.C	S	Φ d	L1	r
VCGW VCMW	160404	331	9.525	4.76	4.4	16.6	0.4
	160408	332	9.525	4.76	4.4	16.6	0.8
	160412	333	9.525	4.76	4.4	16.6	1.2

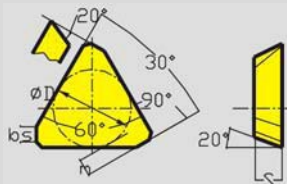
Milling Inserts

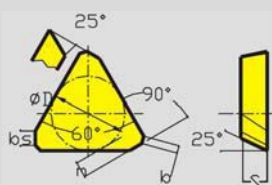
							
Type	Dimension $\wedge$ mm $\vee$						
	D	S	r				
TNEN160620	9.525	6.35	2				
TNEN270645	15.875	6.35	4.5				

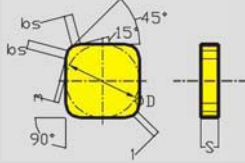
							
Type	Dimension $\wedge$ mm $\vee$						
	D	S	bs				
TNEN2204ANEN	12.7	4.76	3.08				

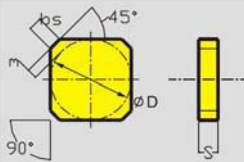
							
Type	Dimension $\wedge$ mm $\vee$						
	D	S	bs	m			
TPAN1103PPN	6.35	3.175	0.7	1.72			
TPCN1103PPN	6.35	3.175	0.7	1.72			
TPKN1103PPN	6.35	3.175	0.7	1.72			
TPAN1603PPN	9.525	3.175	1.2	2.45			
TPCN1603PPN	9.525	3.175	1.2	2.45			
TPKN1603PPN	9.525	3.175	1.2	2.45			
TPAN2204PPN	12.7	4.76	1.3	3.55			
TPCN2204PPN	12.7	4.76	1.3	3.55			
TPKN2204PPN	12.7	4.76	1.3	3.55			

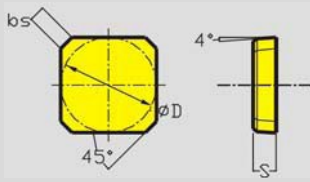
							
7SH	'LPHQVLRQ ^PP						
	°	6	EV	P			
73\$116033'5	9.525	3.175	1.3	2.45			
73\$116033'/'	9.525	3.175	1.3	2.45			
73&116033'5	9.525	3.175	1.3	2.45			
73&116033'/'	9.525	3.175	1.3	2.45			
73.116033'5	9.525	3.175	1.3	2.45			
73.116033'/'	9.525	3.175	1.3	2.45			
73\$122043'5	12.7	4.76	1.4	3.55			
73\$122043'/'	12.7	4.76	1.4	3.55			
73&122043'5	12.7	4.76	1.4	3.55			
73&122043'/'	12.7	4.76	1.4	3.55			
73.122043'5	12.7	4.76	1.4	3.55			
73.122043'/'	12.7	4.76	1.4	3.55			

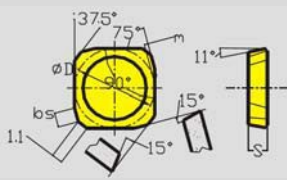
							
7SH	'LPHQVLRQ ^PP						
	°	6	EV	P			
7(&116033(5	9.525	3.175	2	2.19			
7(&116033(/	9.525	3.175	2	2.19			

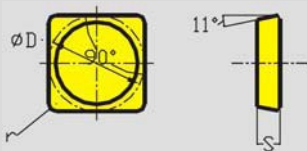
							
7SH	'LPHQVLRQ ^PP						
	°	6	EV	E			
7)\$122033)5	12.7	3.175	2.5	0.7			
7)\$122033)/	12.7	3.175	2.5	0.7			

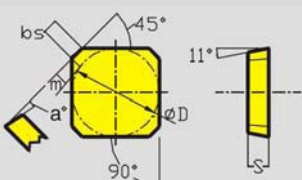
							
Type	Dimension ^mm V						
	D	S	bs	m			
SNAN1204ENN	12.7	4.76	1.4	0.8			
SNCN1204ENN	12.7	4.76	1.4	0.8			
SNKN1204ENN	12.7	4.76	1.4	0.8			
SNAN1504ENN	15.875	4.76	1.4	1.5			
SNCN1504ENN	15.875	4.76	1.4	1.5			
SNKN1504ENN	15.875	4.76	1.4	1.5			
SNAN1904ENN	19.05	4.76	2	1.3			
SNCN1904ENN	19.05	4.76	2	1.3			
SNKN1904ENN	19.05	4.76	2	1.3			

							
Type	Dimension ^mm V						
	D	S	bs	m			
SNAN1204ANN	12.7	4.76	2	1.6			
SNCN1204ANN	12.7	4.76	2	1.6			
SNKN1204ANN	12.7	4.76	2	1.6			
SNEN1204ANN-2	12.7	4.76	2	1.94			
SNAN1504ANN	15.875	4.76	2.5	2			
SNCN1504ANN	15.875	4.76	2.5	2			
SNKN1504ANN	15.875	4.76	2.5	2			
SNAN1904ANN	19.05	4.76	3	2.5			
SNCN1904ANN	19.05	4.76	3	2.5			
SNKN1904ANN	19.05	4.76	3	2.5			

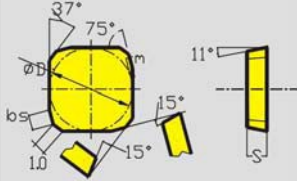
							
Type	Dimension ^mm V						
	D	S	bs				
SBEX1203ZZ	12.7	3.175	0.8				
SBEX1204ZZ	12.7	4.76	0.8				
SBMX1204ZZ	12.7	4.76	0.8				

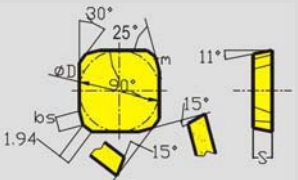
							
Type	Dimension ^mm V						
	D	S	bs				
SPEN1203EDR-WC	12.7	3.175	1.3				

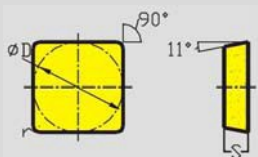
							
Type	Dimension ^mm V						
	D	S	r				
SPEN120416-WC	12.7	4.76	1.6				
SPEN190424-TW	19.05	4.76	2.4				

							
Type	Dimension ^mm V						
	D	S	bs	a			
SPCN1204APN	12.7	4.76	2.22	11°			
SPCN1904APN	19.05	4.76	4.48	10°			

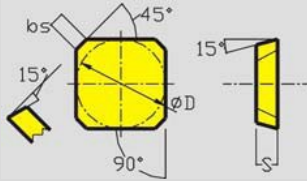
Milling Inserts

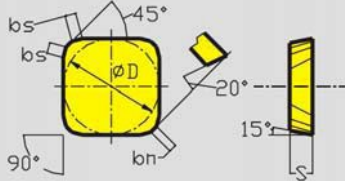
							
Type	Dimension ^mm √						
	D	S	bs	m			
SPAN1203EDR	12.7	3.175	1.4	0.9			
SPAN1203EDL	12.7	3.175	1.4	0.9			
SPCN1203EDR	12.7	3.175	1.4	0.9			
SPCN1203EDL	12.7	3.175	1.4	0.9			
SPKN1203EDR	12.7	3.175	1.4	0.9			
SPKN1203EDL	12.7	3.175	1.4	0.9			
SPAN1504EDR	15.875	4.76	1.4	1.25			
SPAN1504EDL	15.875	4.76	1.4	1.25			
SPCN1504EDR	15.875	4.76	1.4	1.25			
SPCN1504EDL	15.875	4.76	1.4	1.25			
SPKN1504EDR	15.875	4.76	1.4	1.25			
SPKN1504EDL	15.875	4.76	1.4	1.25			

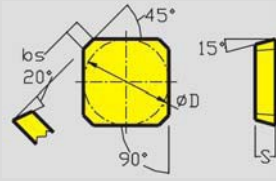
							
Type	Dimension ^mm ∨						
	D	S	bs				
SPCN1203ZDTR	12.7	3.175	0.55				
SPCN1203ZDRL	12.7	3.175	0.55				

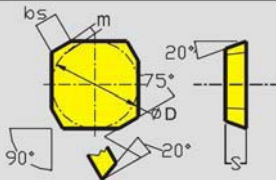
							
Type	Dimension ^mm ∨						
	D	S	r				
SPEN120408	12.7	4.76	0.8				
SPEN150412	15.875	4.76	1.2				
SPEN190416	19.05	4.76	1.6				

Milling Inserts

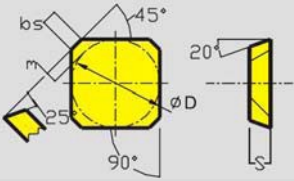
							
Type	Dimension ^mm V						
	D	S	bs				
SDCN1203ZTN	12.7	3.175	1.2				
SDCN1203ZFN	12.7	3.175	1.2				
SDCN1504ZTN	15.875	4.76	1.2				
SDCN1504ZFN	15.875	4.76	1.2				
SDKN1203ZTN	12.7	3.175	1.2				
SDKN1203ZFN	12.7	3.175	1.2				
SDKN1504ZTN	15.875	4.76	1.2				
SDKN1504ZFN	15.875	4.76	1.2				

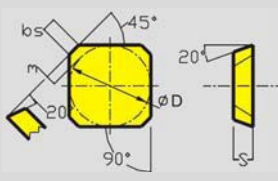
							
Type	Dimension ^mm V						
	D	S	bs	bn			
SDKN1504ZEN	15.875	4.76	0.466	1.46			

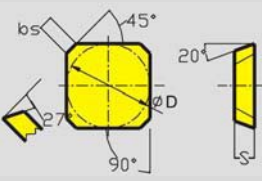
							
Type	Dimension ^mm V						
	D	S	bs				
SDKN1504AEN	15.875	4.76	1.9				

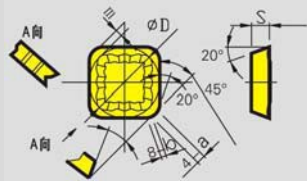
							
Type	Dimension ^mm V						
	D	S	bs	m			
SECN1203EER	12.7	3.175	2.5	0.8			
SECN1203EEL	12.7	3.175	2.5	0.8			

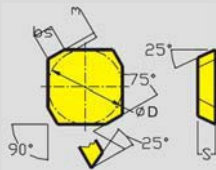
Milling Inserts

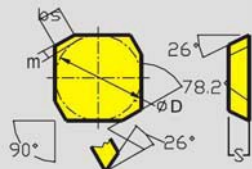
							
Type	Dimension ^mm V						
	D	S	bs	m			
SEKN1203AFN	12.7	3.175	2	1.6			
SEKN1203AFTN	12.7	3.175	2	1.6			
SEKN1204AFN	12.7	4.76	2	1.6			
SEKN1204AFTN	12.7	4.76	2	1.6			
SEKN1205AFN	12.7	5.56	2	1.6			
SEKN1504AFN	15.875	4.76	2.5	2			
SEKN1504AFTN	15.875	4.76	2.5	2			

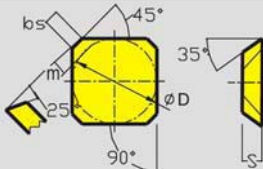
							
Type	Dimension ^mm V						
	D	S	bs				
SEMN1204AEN	12.7	4.76	2.1				
SECN1203AEN	12.7	3.175	2.48				

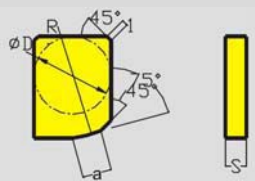
							
Type	Dimension ^mm V						
	D	S	bs				
SEKN1204AZ	12.7	4.76	2				
SEMN1204AZ	12.7	4.76	2				
SEKN1504AZ	15.875	4.76	2				
SEMN1203AZ	12.7	3.175	2				
SEHN1204AZ	12.7	4.76	2				

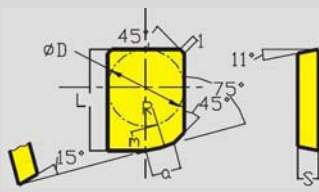
							
Type	Dimension ^mm V						
	D	S	m	a	b		
SEKR1203AZ-YM	12.7	3.18	1.43	1.6	0.84		
SEKR1204AZ-YM	12.7	4.76	1.43	1.6	0.84		

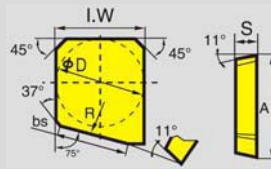
							
Type	Dimension ^mm V						
	D	S	bs				
SFAN1203EFR	12.7	3.175	2.5				
SFAN1203EFL	12.7	3.175	2.5				

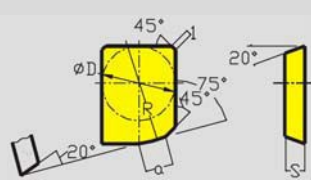
							
Type	Dimension ^mm V						
	D	S	bs				
SFAN1203ZZR	12.7	3.175	2.39				
SFAN1203ZZL	12.7	3.175	2.39				

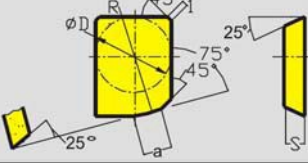
							
Type	Dimension ^mm V						
	D	S	bs				
SOMX1603AEN	16.55	3.175	0.99				

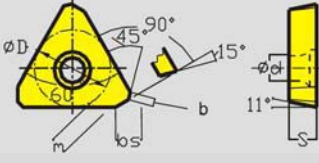
							
Type	Dimension ^mm v						
	D	S	a	R			
SNEX1204ENN-1	12.7	4.76	10	500			
SNEX1504ENN-1	15.875	4.76	10	500			

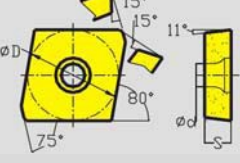
							
Type	Dimension ^mm v						
	L	D	S	m	a	R	
LPEX1403EDR	14.7	12.7	3.175	0.97	8°	500	
LPEX1403EDL	14.7	12.7	3.175	0.97	8°	500	
LPEX1804EDR	18.3	15.875	4.76	1.32	10°	500	
LPEX1804EDL	18.3	15.875	4.76	1.32	10°	500	

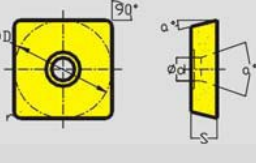
							
Type	Dimension ^mm v						
	A	D	bs	S	R		
SPEX1203EDL-1	15	12.7	10	3.18	500		
SPEX1203EDR-1	15	12.7	10	3.18	500		
SPEX1504EDL-1	18.2	15.875	10	4.76	500		
SPEX1504EDR-1	18.2	15.875	10	4.76	500		

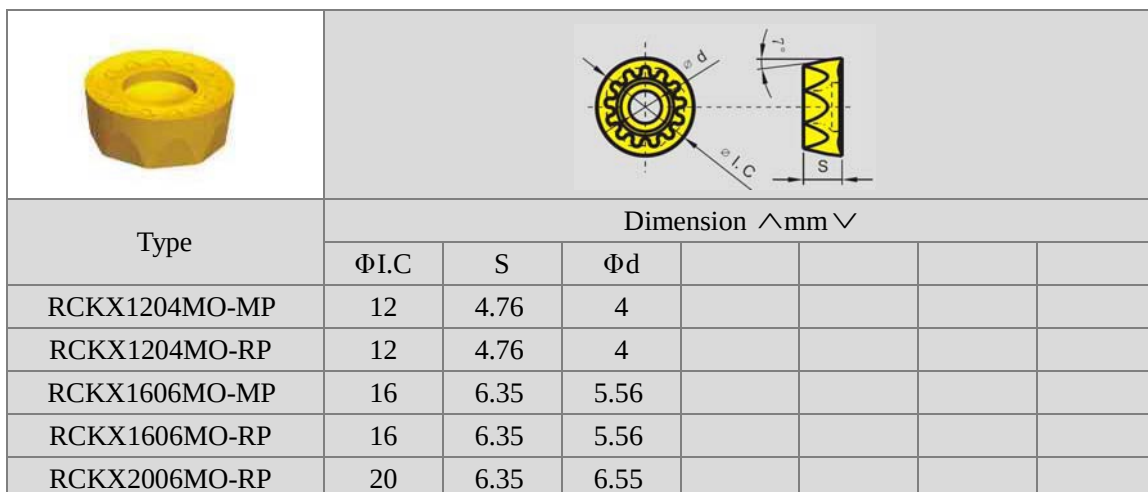
							
Type	Dimension ^mm v						
	D	S	a	R			
SECX1203EER-1	12.7	3.175	10°	500			
SECX1203EEL-1	12.7	3.175	10°	500			

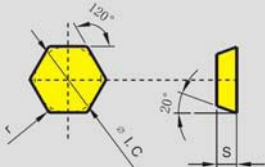
							
Type	Dimension ^mm V						
	D	S	a	R			
SFCX1203EFR-1	12.7	3.175	10°	500			
SFCX1203EFL-1	12.7	3.175	10°	500			

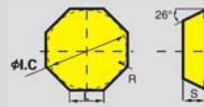
							
Type	Dimension ^mm V						
	D	S	bs	d	b		
TPCW2204PDR	12.7	4.76	1.4	5.6	0.7		
TPCW2204PDL	12.7	4.76	1.4	5.6	0.7		

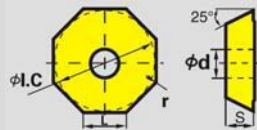
							
Type	Dimension ^mm V						
	D	S	d				
CPCW1204PDR	12.7	4.76	5.5				

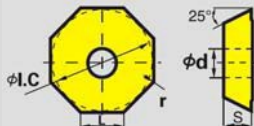
							
Type	Dimension ^mm V						
	D	S	a				
P2800-0	9.525	3.175	14°				
P2808-1	12.7	4.76	11°				
P2809-1	12.7	4.76	11°				
P2803-1	12.7	4.76	11°				
P2800-2	15.88	4.76	11°				
P28415-0	9.525	3.175	14°				
P28495-0	12.7	4.76	11°				



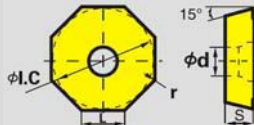
							
Type	Dimension ^mm v						
	ΦI.C	S	r				
HEEN532	15.88	4.76	0.8				

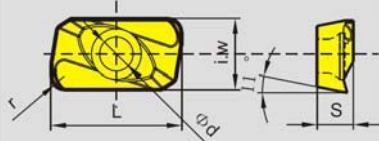
							
Type	Dimension ^mm v						
	L	ΦI.C	S	R			
OFXR0704-FB	7.45	17.94	4.76	0.8			

							
Type	Dimension ^mm v						
	L	ΦI.C	S	Φd	r		
OFER070405-NN	7.46	18	4.76	2.3	0.5		

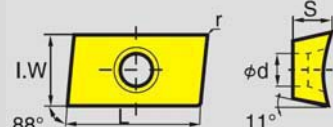
							
Type	Dimension $\wedge$ mm $\vee$						
	L	$\Phi I.C$	S	Φd	r		
OFMT05T305-NN	5.26	12.7	3.97	4.4	0.5		
OFMT070405-NN	7.46	18	4.76	5.5	0.5		

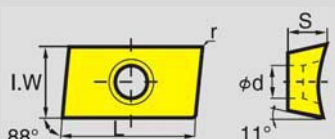
							
Type	Dimension ^mm v						
	L	Φ I.C	S	Φ d	r		
ODHW0504ZZN		12.7	4.76	4.4			

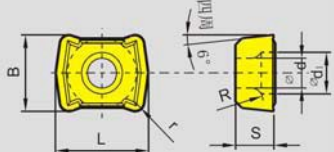
							
Type	Dimension ^mm ∨						
	L	ϕI.C	S	ϕd	r		
ODHT0504ZZN-M2.5		12.7	4.76	4.4			

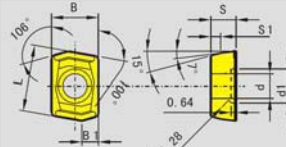
							
Type	Dimension ^mm √						
	I.W	L	S	Φd	r		
APMT1135PDR	6.2	11.24	3.5	2.8	0.4		
APMT1604PDR	9.25	17.3	4.76	4.4	0.8		

							
Type	Dimension ^mm V						
	I.W	L	S	Φd	r		
APKT11T304-FC	6.5	12.24	3.6	2.8	0.4		
APKT160408-FC	9.33	17.877	4.76	4.4	0.8		

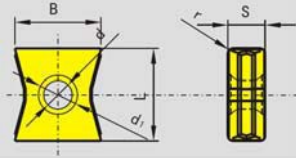
							
Type	Dimension ^mm V						
	I.W	L	S	Φd	r		
APFT1604PDR	9.525	16.9	4.76	4.5	0.86		

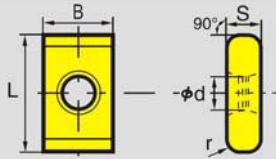
							
Type	Dimension ^mm ∨						
	I.W	L	S	Φd	r		
APKT150412R	12.7	16.23	4.76	5.4	1.2		

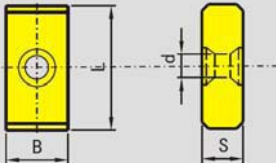
							
Type	Dimension ^mm V						
	L	B	S	r	d	d1	R
LCMX030308	8	6.5	3.18	0.8	2.5	3.5	2
LCMX040308	10	8	3.18	0.8	2.8	3.9	2.5

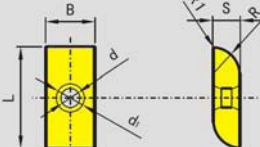
							
Type	Dimension ^mm V						
	L	B	S	B1	S1	d	d1
LCMX060204- Φ2.5	6.7	4.76	2.38	3.36	0.75	2.5	3.3

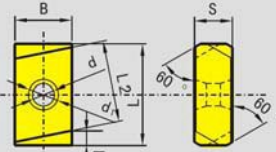
							
Type	Dimension ^mm V						
	L	B	S	d	r		
CNE323	12.7	9.525	4.8	4.2	/		
CNE323-R0.8	12.7	9.525	4.8	4.2	/		
CNE44	12.7	12.7	6.35	5.4	/		
CNE44-R0.8	12.7	12.7	6.35	5.4	/		
CNE454	16.3	14.28	6.35	5.4	/		
CNE544R0.8-0.2	16	12	6.35	5.4	0.8		

							
Type	Dimension ^mm V						
	L	B	S	r	d	d1	
LNKX1606PN-N MM	15	13.9	6	0.8	4.6	6.3	

							
Type	Dimension ^mm ∨						
	L	B	S	Φd	r		
LNE32·524	15.88	9.525	4.76	4.4	1.6		
FNC443-01	25.4	14.3	4.76	5.7	2.4		

							
Type	Dimension ^mm ∨						
	L	B	S	d			
LNE322	15.9	9.5	3.9	4.2			
LNE323	15.9	9.5	4.8	4.2			
LNE323-02	15.9	9.5	4.8	4.2			
LNE424R01	15.9	12.7	6.4	5.4			
LNE434-02	19.1	14.3	6.4	5.4			
LNE446R01	28.6	14.3	9.5	5.4			
LNE446L01	28.6	14.3	9.5	5.4			

							
Type	Dimension ^mm V						
	L	B	S	Φd	r		
FNC334-103T05	23.5	11.5	6.4	6.5	0.4	4.4	6.5
FNC484-103	51	14.3	6.3	6.3	0.8X45°	5.6	8.45

							
Type	Dimension ^mm V						
	L	B	S	d	L1	L2	
LNHX2509	25.4	14.3	9.5	5.5	3.74	20.4	

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