



PCBN TURNING

Product Overview

PCBN - Turning Inserts Overview

PCBN Turning Inserts

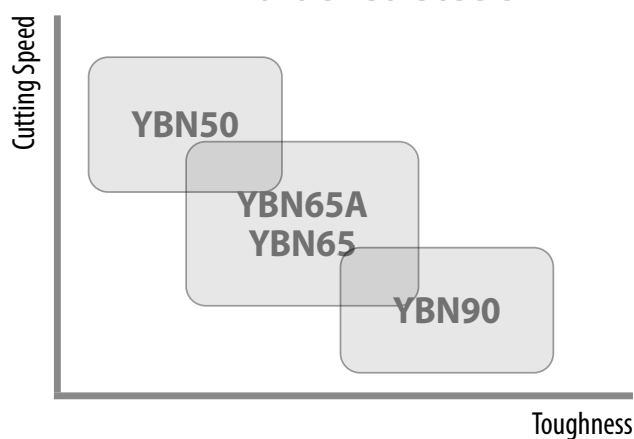
Product Overview

PCBN - Turning Grades

Turning Grades		K Cast iron				H Hardened Steel			
		K10	K20	K30		H10	H20	H30	
PCBN	YBN50					YBN50			
	YBN65						YBN65		
	YBN65A						YBN65A		
	YBN90		YBN90					YBN90	

NEW YBN50 H5 - H15			Uncoated PCBN grade for Continuous to light interrupted turning of hardened steels • Low content PCBN with excellent chemical wear resistance
NEW YBN65A H10 - H25			Coated PCBN Grade for Continuous to Medium interrupted turning of hardened steels • A coated (AlTiSiN Multi layer) PCBN grade for higher cutting speed • Medium content PCBN with superior edge toughness, Good flank and crater wear resistance • Suitable for both roughing and finishing
NEW YBN65 H10 - H25			Uncoated PCBN grade for Continuous to Medium interrupted turning of hardened steels • Medium content PCBN with superior edge toughness, good flank and crater wear resistance • Suitable for both roughing and finishing
NEW YBN90 H20 - H35 K05 - K20			Uncoated PCBN grade of Severe interrupted turning of hardened steels, and the Stable machining of Gray Cast iron, Sintered alloy steel • High content PCBN with high wear resistance, superior impact strength • Excellent edge quality and retention

H - Hardened Steels



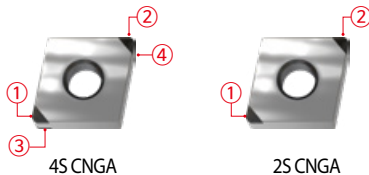
Product Overview

PCBN - Turning Insert Code System

1	2	3	4	5	6
2	S	CNGA120408	S	010 20	WG
Number of PCBN corner	PCBN Length	Insert ISO Code System	Edge preparation	① Chamfer width ② Chamfer angel	Special shape

1 - Number of PCBN corner

1	One corner PCBN
2	Two corner PCBN



3 - Insert ISO Code System

Refer to Page. 20

6 - Special shape

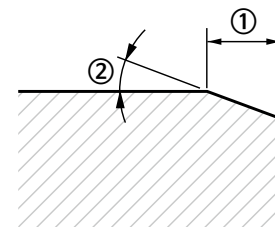
WG	Wiper
None	No Wiper

4 - Edge preparation

T	T-Land, None Honing
S	T-Land with Honed
X	Special land shape

5 - Chamfer

①	Chamfer width (010 means 0.10mm)
②	Chamfer angle (20 means 20°)



2 - PCBN Length

N	Normal PCBN tip length, Regrindable
S	Small PCBN tip length One time use
SD	Solid PCBN
FT	Full Top PCBN

Grade Name Code System

1	2	3	4
Y	BN	65	A
Company Name	Materials	Contents of PCBN	Kind of Coating

1 - Company Name

Y	YG-1
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2 - Materials

BN	PCBN
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3 - Contents of PCBN

50	50%
65	65%
90	90%

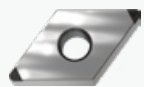
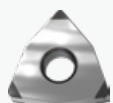
4 - Kind of Coating

None	Uncoated
A	AlTiSiN multi-layer
B	TiAlN-TiN

PCBN - Turning Inserts Overview

TURNING

Negative Inserts

Shape	Series	No. of PCBN Eege	Size & Thickness						Page
C		CNGA	2		1204				75
			4		1204				
D		DNGA	2			1504	1506		76
			4			1504			
S		SNGA	4		1204				77
T		TNGA	3					1604	78
			6					1604	
V		VNGA	2					1604	79
W		WNGA	3	0804					80
			6	0804					

PARTING & GROOVING

MILLING

DRILLING

Positive Inserts

Shape	Series	No. of PCBN Eege	Size & Thickness						Page
C		CCGW	2	0602		09T3			81
D		DCGW	2		0702			11T3	82
S		SCGW	2			09T3			83
T		TCGW	3			0902	1102		84
		TPGW	3			0902		1103	85
V		VBGW						1103	86
		VCGW						1103	87

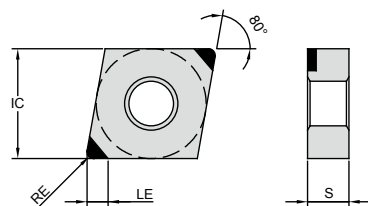
TECHNICAL INFORMATION

Turning Inserts - Negative

CNGA - PCBN (80° Rhombic)



Refer to
Turning holder
p. 92, 97, 113, 118, 124



Series	IC	S
CN.. 1204	12.70	4.76

EDP 2200..

● : Stock item ○ : Order made item

H05 - H15	H10 - H25	H10 - H25	H20 - H35
YBN50	YBN65	YBN65A	YBN90
●	●	●	●
3009	3010	3011	3065
●	●	●	●
3012	3013	3014	3015
●	●	●	●
3016	3017	3018	3066
●	●	●	●
3019	3020	3021	3067
●	●	●	●
3022			



CNGA	Designation	RE	LE	Fn (mm/rev.)	Ap (mm)	No. of PCBN Eege
	2S CNGA120404 S01225	0.4	2.5	0.03 ~ 0.20	0.05 ~ 0.30	2
	2S CNGA120408 S01225	0.8	2.4	0.03 ~ 0.20	0.05 ~ 0.30	2
	2S CNGA120408 T01020	0.8	2.4	0.03 ~ 0.20	0.05 ~ 0.30	2
	4S CNGA120408 S01225	0.8	2.4	0.03 ~ 0.20	0.05 ~ 0.30	4
	2S CNGA120412 S01225	1.2	2.3	0.03 ~ 0.20	0.05 ~ 0.30	2
	2S CNGA120404 S01215 WG	0.4	2.5	0.03 ~ 0.20	0.05 ~ 0.30	2
	2S CNGA120408 S01215 WG	0.8	2.4	0.03 ~ 0.20	0.05 ~ 0.30	2
	2S CNGA120408 T01020 WG	0.8	2.4	0.03 ~ 0.20	0.05 ~ 0.30	2
	4S CNGA120408 S01215 WG	0.8	2.4	0.03 ~ 0.20	0.05 ~ 0.30	4
	4S CNGA120408 T01020 WG	0.8	2.4	0.03 ~ 0.20	0.05 ~ 0.30	4
	2S CNGA120412 S01215 WG	1.2	2.3	0.03 ~ 0.20	0.05 ~ 0.30	2

TURNING

PARTING & GROOVING

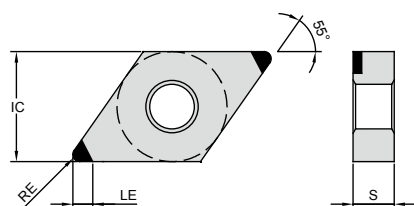
MILLING

DRILLING

TECHNICAL INFORMATION

Turning Inserts - Negative

DNGA - PCBN (55° Rhombic)

Refer to
Turning holder
p. 93, 98, 114, 119, 124


Series	IC	S
DN.. 1504	12.70	4.76
DN.. 1506	12.70	6.35

H05 - H15	H10 - H25	H10 - H25	H20 - H35
YBN50	YBN65	YBN65A	YBN90
●	●	●	●
3023	3024	3025	3026
●	●	●	●
3027	3028	3029	3030
●	●	●	●
3031	3032	3033	3034
●	●	●	●
3068	3069		

DNGA	Designation	RE	LE	Fn (mm/rev.)	Ap (mm)	No. of PCBN Eege
2S	DNGA150404 S01225	0.4	2.5	0.03 ~ 0.20	0.05 ~ 0.30	2
2S	DNGA150408 S01225	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	2
2S	DNGA150408 T01020	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	2
4S	DNGA150408 S01225	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	4
2S	DNGA150412 S01225	1.2	2	0.03 ~ 0.20	0.05 ~ 0.30	2
2S	DNGA150604 S01225	0.4	2.5	0.03 ~ 0.20	0.05 ~ 0.30	2
2S	DNGA150608 S01225	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	2
2S	DNGA150608 T01020	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	2
2S	DNGA150612 S01225	1.2	2.0	0.03 ~ 0.20	0.05 ~ 0.30	2



TURNING

PARTING & GROOVING

MILLING

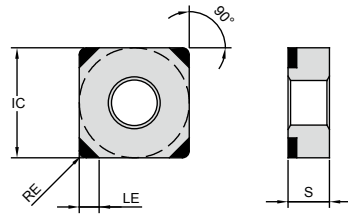
DRILLING

TECHNICAL INFORMATION

Turning Inserts - Negative

SNGA - PCBN (Square)

Refer to
Turning holder
p. 94, 100, 115, 120



Series	IC	S
SN.. 1204	12.70	4.76

SNGA	Designation	RE	LE	Fn (mm/rev.)	Ap (mm)	No. of PCBN Eege	H05 - H15	H10 - H25	H10 - H25	H20 - H35 K05 - K20
							YBN50	YBN65	YBN65A	YBN90
	4S SNGA120404 S01225	0.4	2.3	0.03 ~ 0.20	0.05 ~ 0.30	4		● 3035		
	4S SNGA120408 S01225	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	4	● 3036	● 3037	● 3038	
	4S SNGA120408 T01020	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	4				● 3070
	4S SNGA120412 S01225	1.2	2.3	0.03 ~ 0.20	0.05 ~ 0.30	4		● 3039		

TURNING

PARTING & GROOVING

MILLING

DRILLING

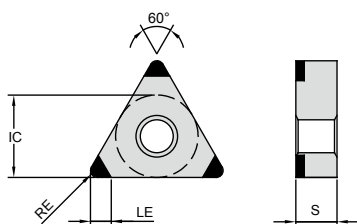
TECHNICAL INFORMATION

Turning Inserts - Negative

TNGA - PCBN (60° Triangle)

Refer to
Turning holder
p. 95, 101, 116, 121, 125

Series	IC	S
TN.. 1604	9.525	4.76



TNGA	Designation	RE	LE	Fn (mm/rev.)	Ap (mm)	No. of PCBN Edge	H05 - H15	H10 - H25	H10 - H25	H20 - H35 K05 - K20
							YBN50	YBN65	YBN65A	YBN90
	3S TNGA160404 S01225	0.4	2.6	0.03 ~ 0.20	0.05 ~ 0.30	3		● 3040		
	3S TNGA160408 S01225	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	3	● 3041	● 3042	● 3043	
	3S TNGA160408 T01020	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	3				● 3071
	6S TNGA160408 S01225	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	6		● 3044	● 3045	
	3S TNGA160412 S01225	1.2	2	0.03 ~ 0.20	0.05 ~ 0.30	3		● 3046		

TURNING

PARTING & GROOVING

MILLING

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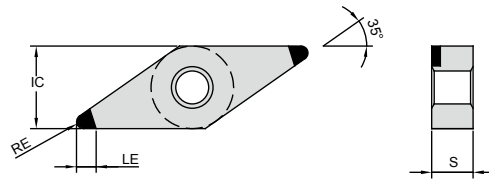
TECHNICAL INFORMATION

Turning Inserts - Negative

VNGA - PCBN (35° Rhombic)



Refer to
Turning holder
p. 102, 122



Series	IC	S
VN.. 1604	9.525	4.76

VNGA	Designation	RE	LE	Fn (mm/rev.)	Ap (mm)	No. of PCBN Eege	H05 - H15	H10 - H25	H10 - H25	H20 - H35
							YBN50	YBN65	YBN65A	K05 - K20
	2SVNGA160404 S01225	0.4	2.5	0.03 ~ 0.20	0.05 ~ 0.30	2		● 3047		
	2SVNGA160408 S01225	0.8	2	0.03 ~ 0.20	0.05 ~ 0.30	2	● 3048	● 3049	● 3050	
	2SVNGA160408 T01020	0.8	2	0.03 ~ 0.20	0.05 ~ 0.30	2				● 3072

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TECHNICAL INFORMATION

Turning Inserts - Negative

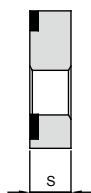
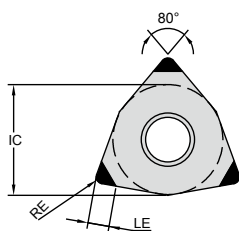
WNGA - PCBN (80° Trigon)



Refer to
Turning holder

p. 96, 103, 105, 117, 123, 126

Series	IC	S
WN.. 0804	12.70	4.76



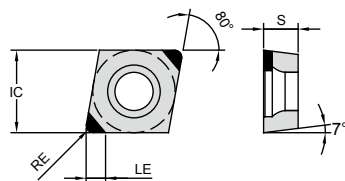
WNGA	Designation	RE	LE	Fn (mm/rev.)	Ap (mm)	No. of PCBN Eege	H05 - H15	H10 - H25	H10 - H25	H20 - H35
							YBN50	YBN65	YBN65A	K05 - K20 YBN90
	3S WNGA080404 S01225	0.4	2.5	0.03 ~ 0.20	0.05 ~ 0.30	3		● 3051		
	3S WNGA080408 S01225	0.8	2.4	0.03 ~ 0.20	0.05 ~ 0.30	3	● 3052	● 3053	● 3054	
	3S WNGA080408 T01020	0.8	2.4	0.03 ~ 0.20	0.05 ~ 0.30	3				● 3073
	6S WNGA080408 S01225	0.8	2.4	0.03 ~ 0.20	0.05 ~ 0.30	6		● 3055	● 3056	
	3S WNGA080412 S01225	1.2	2.3	0.03 ~ 0.20	0.05 ~ 0.30	3		● 3057		
	3S WNGA080404 S01215 WG	0.4	2.5	0.03 ~ 0.20	0.05 ~ 0.30	3		● 3058		
	3S WNGA080408 S01215 WG	0.8	2.4	0.03 ~ 0.20	0.05 ~ 0.30	3	● 3059	● 3060	● 3061	
	3S WNGA080408 T01020 WG	0.8	2.4	0.03 ~ 0.20	0.05 ~ 0.30	3				● 3074
	6S WNGA080408 S01215 WG	0.8	2.4	0.03 ~ 0.20	0.05 ~ 0.30	6		● 3062	● 3063	
	3S WNGA080412 S01215 WG	1.2	2.3	0.03 ~ 0.20	0.05 ~ 0.30	3		● 3064		

Turning Inserts - Positive

CCGW - PCBN (80° Rhombic)



Refer to
Turning holder
p. 106, 128, 129



Series	IC	S
CC.. 0602	6.35	2.38
CC.. 09T3	9.525	3.97



CCGW	Designation	RE	LE	Fn (mm/rev.)	Ap (mm)	No. of PCBN Eege	H05 - H15	H10 - H25	H10 - H25	H20 - H35
							YBN50	YBN65	YBN65A	K05 - K20
	2S CCGW060202 S01225	0.2	2.6	0.03 ~ 0.20	0.05 ~ 0.30	2		● 3075		
	2S CCGW060204 S01225	0.4	2.5	0.03 ~ 0.20	0.05 ~ 0.30	2	● 3076	● 3077	● 3078	
	2S CCGW060204 T01020	0.4	2.5	0.03 ~ 0.20	0.05 ~ 0.30	2				● 3133
	2S CCGW060208 S01225	0.8	2.4	0.03 ~ 0.20	0.05 ~ 0.30	2		● 3079	● 3080	
	2S CCGW09T302 S01225	0.2	2.6	0.03 ~ 0.20	0.05 ~ 0.30	2		● 3081		
	2S CCGW09T304 S01225	0.4	2.5	0.03 ~ 0.20	0.05 ~ 0.30	2		● 3082	● 3083	
	2S CCGW09T308 S01225	0.8	2.4	0.03 ~ 0.20	0.05 ~ 0.30	2	● 3084	● 3085	● 3086	
	2S CCGW09T308 T01020	0.8	2.4	0.03 ~ 0.20	0.05 ~ 0.30	2				● 3134
	2S CCGW09T304 S01215 WG	0.4	2.5	0.03 ~ 0.20	0.05 ~ 0.30	2		● 3087	● 3088	
	2S CCGW09T308 S01215 WG	0.8	2.4	0.03 ~ 0.20	0.05 ~ 0.30	2		● 3089	● 3090	

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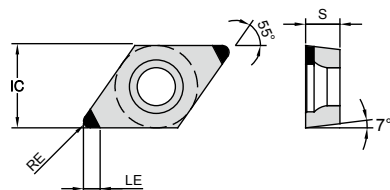
MILLING

DRILLING

TECHNICAL INFORMATION

Turning Inserts - Positive

DCGW - PCBN (55° Rhombic)

Refer to
Turning holder
p. 107, 130, 131


Series	IC	S
DC.. 0702	6.35	2.38
DC.. 11T3	9.525	3.97

H05 - H15	H10 - H25	H10 - H25	H20 - H35
YBN50	YBN65	YBN65A	YBN90
	● 3091		
	● 3092	● 3093	
● 3094	● 3095	● 3096	
			● 3135
	● 3097	● 3098	
	● 3099	● 3100	
● 3101	● 3102	● 3103	
			● 3136

DCGW	Designation	RE	LE	Fn (mm/rev.)	Ap (mm)	No. of PCBN Eege
	2S DCGW070202 S01225	0.2	2.7	0.03 ~ 0.20	0.05 ~ 0.30	2
	2S DCGW070204 S01225	0.4	2.5	0.03 ~ 0.20	0.05 ~ 0.30	2
	2S DCGW070208 S01225	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	2
	2S DCGW070208 T01020	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	2
	2S DCGW11T302 S01225	0.2	2.7	0.03 ~ 0.20	0.05 ~ 0.30	2
	2S DCGW11T304 S01225	0.4	2.5	0.03 ~ 0.20	0.05 ~ 0.30	2
	2S DCGW11T308 S01225	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	2
	2S DCGW11T308 T01020	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	2



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MILLING

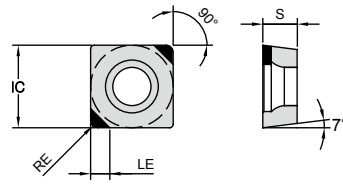
DRILLING

TECHNICAL INFORMATION

Turning Inserts - Positive

SCGW - PCBN (Square)

Refer to
Turning holder
p. 109, 133



Series	IC	S
SC.. 09T3	9.525	3.97

SCGW	Designation	RE	LE	Fn (mm/rev.)	Ap (mm)	No. of PCBN Eege	H05 - H15	H10 - H25	H10 - H25	H20 - H35
							YBN50	YBN65	YBN65A	K05 - K20
	2S SCGW09T304 S01225	0.4	2.3	0.03 ~ 0.20	0.05 ~ 0.30	2		● 3104		
	2S SCGW09T308 S01225	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	2		● 3105		

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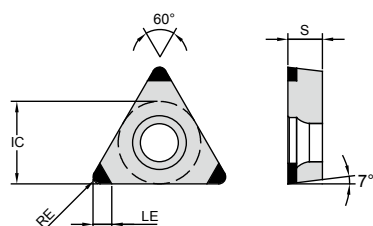
MILLING

DRILLING

TECHNICAL INFORMATION

Turning Inserts - Positive

TCGW - PCBN (Triangle)

Refer to
Turning holder
p. 110, 134


Series	IC	S
TC.. 0902	5.56	2.38
TC.. 1102	6.35	2.38
TC.. 16T3	9.525	3.97

H05 - H15	H10 - H25	H10 - H25	H20 - H35
YBN50	YBN65	YBN65A	YBN90
	● 3106		
	● 3107	● 3108	
	● 3109	● 3110	
	● 3111	● 3112	
● 3113	● 3114	● 3115	
			● 3137

TCGW	Designation	RE	LE	Fn (mm/rev.)	Ap (mm)	No. of PCBN Eege
	3STCGW090204 S01225	0.4	2.6	0.03 ~ 0.20	0.05 ~ 0.30	3
	3STCGW110204 S01225	0.4	2.6	0.03 ~ 0.20	0.05 ~ 0.30	3
	3STCGW110208 S01225	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	3
	3STCGW16T304 S01225	0.4	2.6	0.03 ~ 0.20	0.05 ~ 0.30	3
	3STCGW16T308 S01225	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	3
	3STCGW16T308 T01020	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	3

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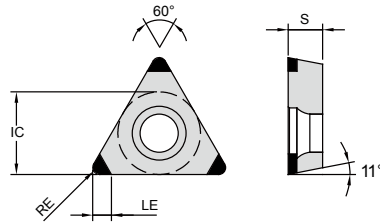
MILLING

DRILLING

TECHNICAL INFORMATION

Turning Inserts - Positive

TPGW - PCBN (Triangle)



Series	IC	S
TP.. 0902	5.56	2.38
TP.. 1103	6.35	3.18
TP.. 1604	9.525	4.76

TPGW	Designation	RE	LE	Fn (mm/rev.)	Ap (mm)	No. of PCBN Eege	H05 - H15	H10- H25	H10- H25	H20- H35
							YBN50	YBN65	YBN65A	K05 - K20 YBN90
	3STPGW090204 S01225	0.4	2.6	0.03 ~ 0.20	0.05 ~ 0.30	3		● 3116		
	3STPGW090208 S01225	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	3		● 3117		
	3STPGW110304 S01225	0.4	2.6	0.03 ~ 0.20	0.05 ~ 0.30	3		● 3118		
	3STPGW110308 S01225	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	3		● 3119		
	3STPGW160404 S01225	0.4	2.6	0.03 ~ 0.20	0.05 ~ 0.30	3		● 3120		
	3STPGW160408 S01225	0.8	2.3	0.03 ~ 0.20	0.05 ~ 0.30	3		● 3121		

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PARTING & GROOVING

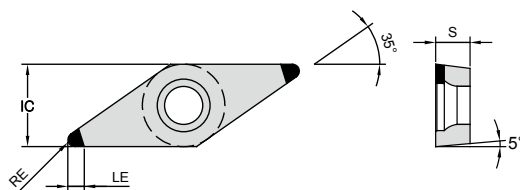
MILLING

DRILLING

TECHNICAL INFORMATION

Turning Inserts - Positive

VBGW - PCBN (35° Rhombic)

Refer to
Turning holder
p. 111, 135


Series	IC	S
VB.. 1103	6.35	3.18
VB.. 1604	9.525	4.76

H05 - H15	H10 - H25	H10 - H25	H20 - H35 K05 - K20
YBN50	YBN65	YBN65A	YBN90
	● 3122		
	● 3123		
	● 3124	● 3125	
● 3126	● 3127	● 3128	
			● 3138

VBGW	Designation	RE	LE	Fn (mm/rev.)	Ap (mm)	No. of PCBN Eege
	2S VBGW110304 S01225	0.4	2.5	0.03 ~ 0.20	0.05 ~ 0.30	2
	2S VBGW110308 S01225	0.8	2	0.03 ~ 0.20	0.05 ~ 0.30	2
	2S VBGW160404 S01225	0.4	2.5	0.03 ~ 0.20	0.05 ~ 0.30	2
	2S VBGW160408 S01225	0.8	2	0.03 ~ 0.20	0.05 ~ 0.30	2
	2S VBGW160408 T01020	0.8	2	0.03 ~ 0.20	0.05 ~ 0.30	2

TURNING

PARTING & GROOVING

MILLING

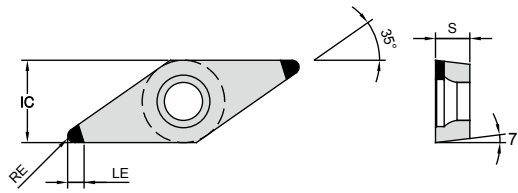
DRILLING

TECHNICAL INFORMATION

Turning Inserts - Positive

VCGW - PCBN (35° Rhombic)

Refer to
Turning holder
p. 112, 136



Series	IC	S
VC.. 1103	6.35	3.18
VC.. 1604	9.525	4.76

VCGW	Designation	RE	LE	Fn (mm/rev.)	Ap (mm)	No. of PCBN Eege	H05 - H15	H10 - H25	H10 - H25	H20 - H35
							YBN50	YBN65	YBN65A	K05 - K20
	2SVCGW110304 S01225	0.4	2.5	0.03 ~ 0.20	0.05 ~ 0.30	2		● 3129		
	2SVCGW110308 S01225	0.8	2	0.03 ~ 0.20	0.05 ~ 0.30	2		● 3130		
	2SVCGW160404 S01225	0.4	2.5	0.03 ~ 0.20	0.05 ~ 0.30	2		● 3131		
	2SVCGW160408 S01225	0.8	2	0.03 ~ 0.20	0.05 ~ 0.30	2		● 3132		

TURNING

PARTING & GROOVING

MILLING

DRILLING

TECHNICAL INFORMATION