

External

D1~D40

Turning Toolholders Identification System D3

Product Lineup D4~D5

Clamping system D6~D7

Toolholders for General Purpose D8~D21

CN □□ Insert	DCLN / PCLN	D8
DN □□ Insert	DDJN / DDHN	D10
	PDJN / PDHN	D11
SN □□ Insert	DSBN / PSBN / PSKN	D12
	PSSN / PSDN	D13
TN □□ Insert	DTGN / PTGN / PTFN	D14
	WTJN-N / WTKN-N / WTEN-N	D15
VN □□ Insert	DVLN / DVPN / DVVN	D16
	MVLN / MVVN	D17
	PVLN / PVPN / PVVN	D18
RC □□ Insert	PRGC / PRXC	D19
RN □□ Insert	PRGN	D19
WN □□ Insert	DWLN / PWLN / WWLN	D20

Toolholders for Ceramic Tools D22~D31

CN □□ Insert	CCLN	D22
DN □□ Insert	CDJN	D23
EN □□ Insert	CELN	D23
SN □□ Insert	CSRN / CS-N / CSKN / CSYN	D24
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TN □□ Insert	CTJN / CTUN	D26
RN □□ Insert	CRSN / CRDN	D27
CN □□ GX Insert	CCLN-GX	D28
DN □□ GX Insert	CDHN-GX / CDJN-GX	D29
SN □□ CX Insert	CSRN-GX / CSDN-GX / CSSN-GX	D30
	CS-N-GX / CSKN-GX / CSYN-GX	D31

Toolholders for Solid CBN Tools D32~D36

CNMN Insert	CCRN-A / CCLN-A	D32
RNMN Insert	CRSN-A / CRDN-A	D33
SNMN Insert	CSRN-A / CSKN-A / CSYN-A	D34
	CSSN-A / CSDN-A	D35
TNMN Insert	CTJN-A / CTUN-A	D36

Toolholders for Bearing Machining D37~D38

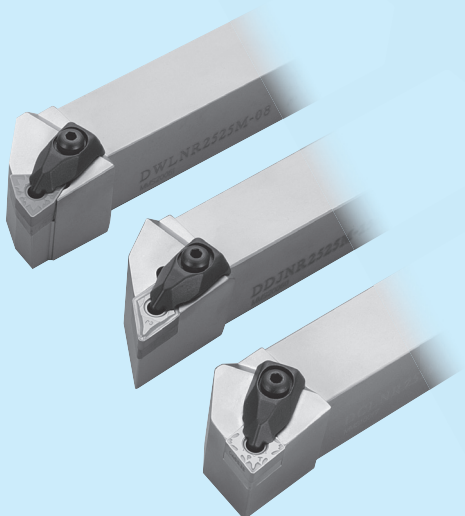
RCMT Insert	PRGC-BE / PRGC-BF	D37
SNMF Insert	CBSN	D38

Technical Information D39~D40

Recommended Cutting Conditions D39

Parts Compatibility of Lever Lock Toolholders R42

D



High rigidity holder

Double Clamp Series

Securely clamps the insert with a single action

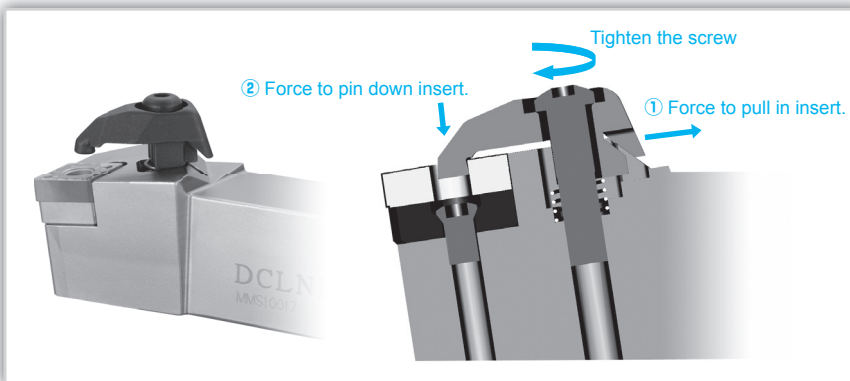
D



External

Improved Clamping Rigidity

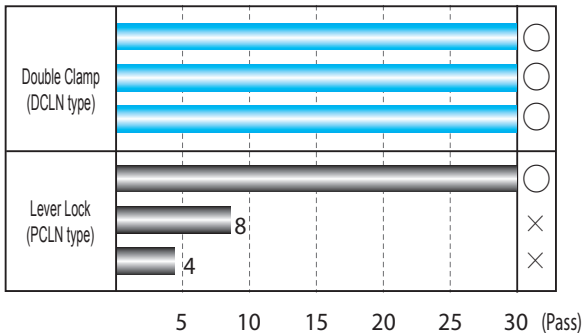
Firmly clamp the insert in two directions with one action.



Achieving long Insert Life

By strongly clamping the insert in two directions, good contact between the shim and insert can be maintained, even with high feed rates.

Along with improving the accuracy of the insert position, long insert life can be achieved.



<Cutting Conditions>
 34CrMo4(SCM435), Vc=150m/min, ap=1mm, f=0.4mm/rev
 CNMG120408PS, 30 Pass Interrupted Cutting

Comparison of shim and insert contact

Coating material is applied to the shim side of the insert, which is installed on the tool holder. Compare the shim contact surface after tightening.

PS Chipbreaker	Shim contact surface of double clamp	Shim contact surface of lever lock
	<p>Cutting edge side</p> <p>The shape of insert chipbreaker is transferred. There is a high level of contact.</p>	<p>Cutting edge side</p> <p>Only a part of the shape of insert chipbreaker is transferred. There is a low level of contact.</p>

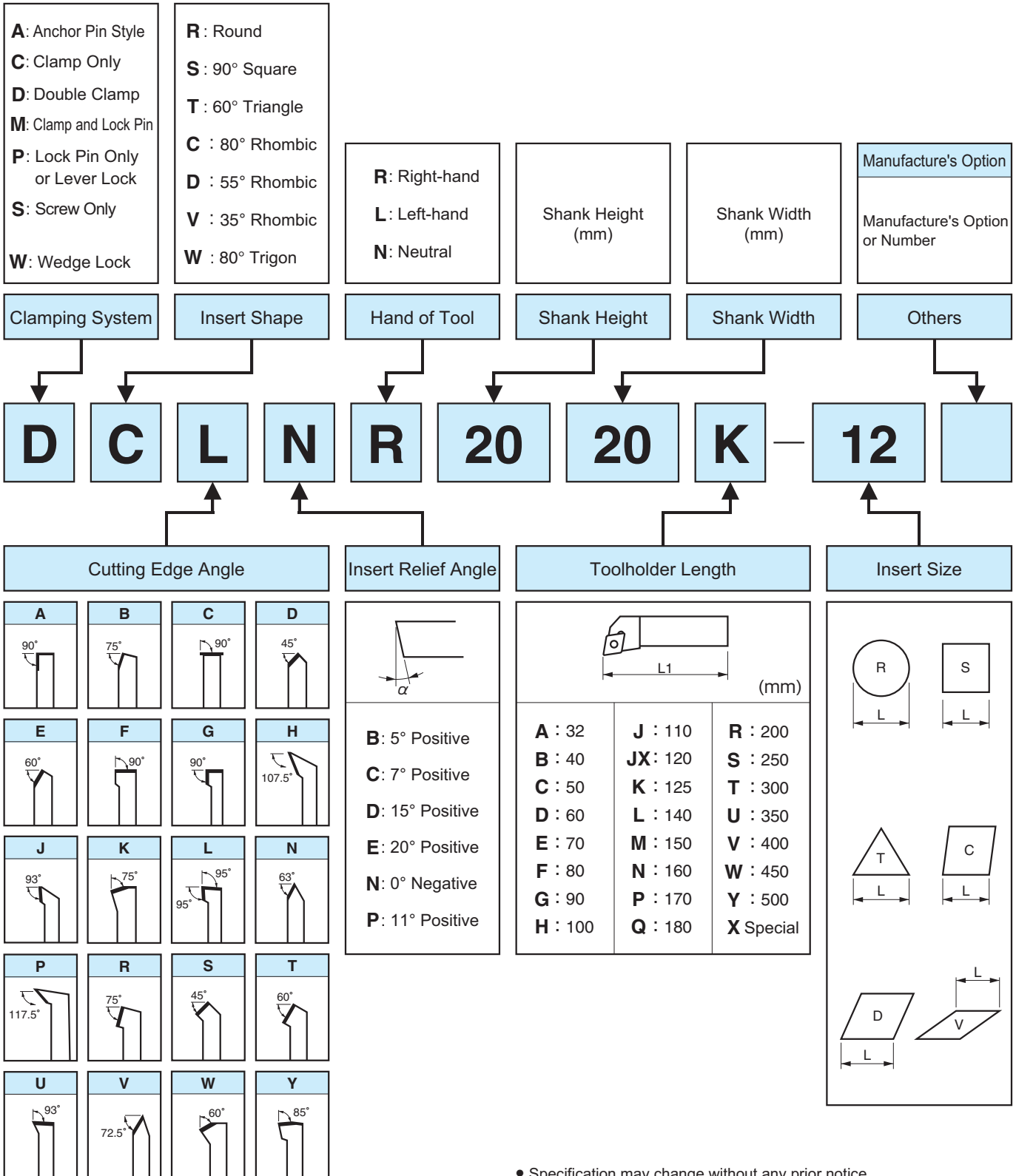
Convenient marking design



Screw	Tightening Torque (N·m)
CS-2D	1.7
CS-3D	3.9
CS-5D	3.0

Use the part-description for convenient ordering. The screw tightening torque is also indicated.

Identification System for Turning Toolholders (Square Shank)



External

- Specification may change without any prior notice.
- Due to the installation size constraints on the machine, the toolholder length of some products may not match with the symbol.

Product Lineup

Toolholders for General Purpose

	CN..	WN..	TN..	DN..	RC..		RN..	VN..
Applicable Insert Shape								
Application	External / Facing			External / Facing / Copying				External / Facing / Copying / Undercutting
Cutting Edge Angle	95°		105°	107.5°	Special			117.5°
Lever Lock (Pin Lock)								
Ref. Page	D8	D20		D11	D19	D19	D19	D18
Wedge Lock Multi Lock								
Ref. Page		D20	D15					
Double Clamp								
Ref. Page	D8	D20		D10				D16

Toolholders for Ceramic Tools

Application	External / Facing			External / Copying			External / Chamfering	External / Facing / Chamfering
Cutting Edge Angle	95°	97.5°	Special	93°	107.5°	Special	45°	45°
Top Clamp								
Ref. Page	D22	D23	D27	D23		D27	D25	D24
With dimple Top Clamp								
Ref. Page	D28			D29	D29		D30	D30

Toolholders for Solid CBN Tools

Application	External / Facing		External / Copying	External / Chamfering	External / Facing / Chamfering	External		
Cutting Edge Angle	95°	Special	Special	45°	45°	75°		93°
Top Clamp								
Ref. Page	D32	D33	D33	D35	D35	D32	D34	D36

D

External

VN..	DN..	VN..	SN..	TN..	SN..	SN..	TN..	SN..	TN..
External / Copying			External / Chamfering		External / Facing / Chamfering	External		Facing	
72.5°	93°	95°	45°	60°	45°	75°	91°	15°	-1°
PVVN (Pin Lock)	PDJN	PVLN (Pin Lock)	PSDN		PSSN	PSBN	PTGN	PSKN	PTFN
D18	D11	D18	D13		D13	D12	D14	D12	D14
MVVN	WTJN-N	MVLN		WTEN-N					
D17	D15	D17		D15					
DVVN	DDJN	DVLN				DSBN	DTGN		
D16	D10	D16				D12	D14		

External			Facing		
75°	85°	93°	5°	15°	-3°
CSRN	CS-N	CTJN	CSYN	CSKN	CTUN
D24	D24	D26	D24	D24	D26
CSRN-GX	CS-N-GX		CSYN-GX	CSKN-GX	
D30	D31		D31	D31	

Toolholders for Bearing Machining

Facing		
5°	15°	-3°
CSYN-A	CSKN-A	CTUN-A
D34	D34	D36

Application	External	Facing	Application	R Chamfering
Cutting Edge Angle	Special	Special	Cutting Edge Angle	Special
Lever Lock			Top Clamp	
Ref. Page	D37	D37	Ref. Page	D38

Clamping system

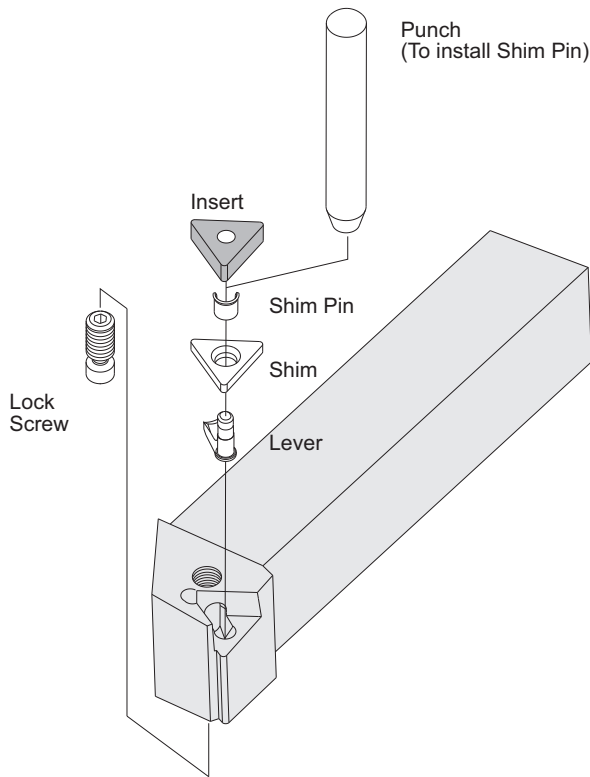
Clamping system

Series	Design		Features	Series	Design		Features
Clamp On (C)			<ul style="list-style-type: none"> Rigid Clamping Negative Insert ... Medium to Heavy Cutting (Mainly for Ceramic Insert) Positive Insert : Low Cutting Resistance 	Clamp and Lock Pin (M)			<ul style="list-style-type: none"> Combination of Top Clamp and Pin Lock Rigid Clamping Heavy Cutting
Double Clamp (D)			<ul style="list-style-type: none"> Firmly clamp the insert in two directions with one action 	Lever Lock (P)			<ul style="list-style-type: none"> Firm Clamping High precision Easy Insert Replacement General Use
Pin Lock (P)			<ul style="list-style-type: none"> Firm Clamping High precision Easy Insert Replacement 	Wedge Lock (W)			<ul style="list-style-type: none"> Rigid Clamping Heavy Cutting
Screw Clamp (S)			<ul style="list-style-type: none"> Simple Mechanism Fewer Parts Finishing to Medium Cutting 				

D

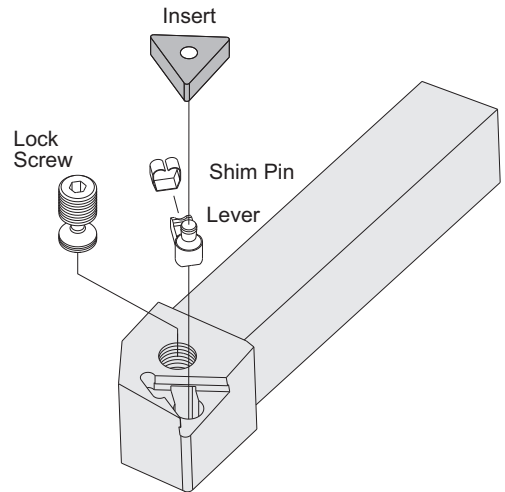
External

● Lever Lock



With Shim

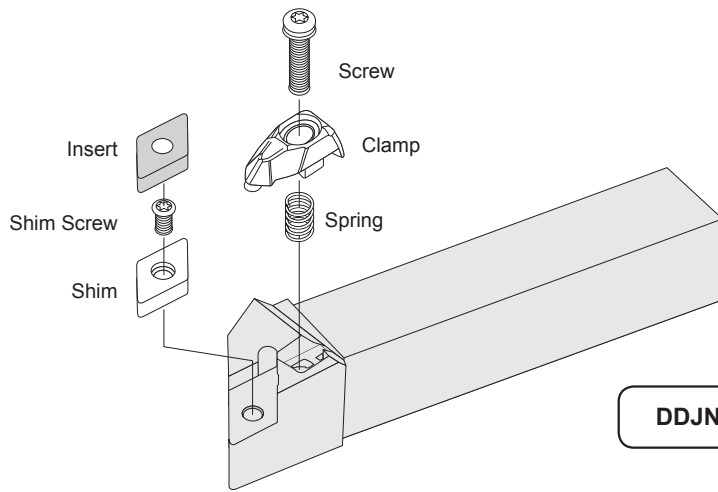
PCLN
PWLN
PTGN / PTFN / PTLN
PDJN / PDHN
PSBN / PSKN / PSSN / PSDN
PRGN
PRGC / PRXC



Without Shim

PTGN-11 / PTFN-11

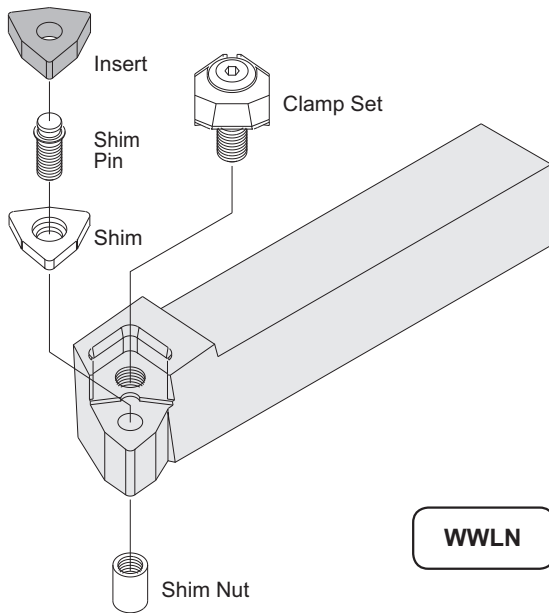
● Double Clamp



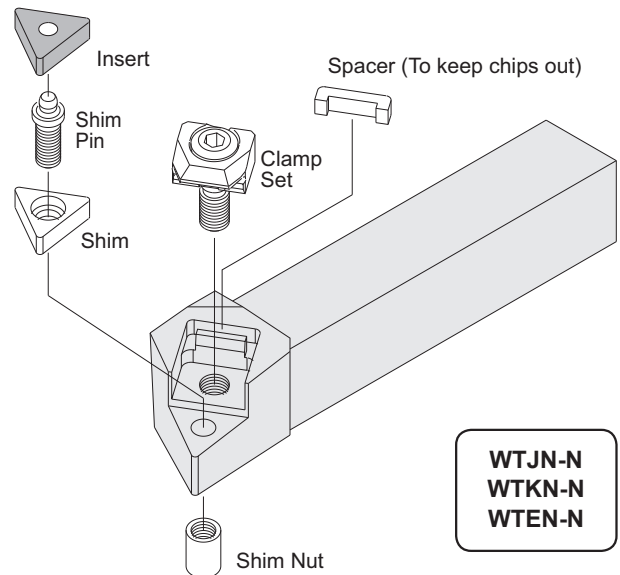
DCLN
DDJN / DDHN
DSBN
DTGN
DVLN / DVPN / DVVN
DWLN

DDJN

● Wedge Lock

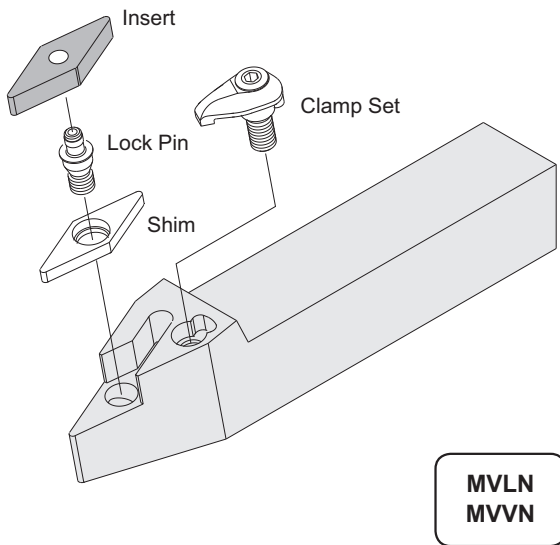


WWLN



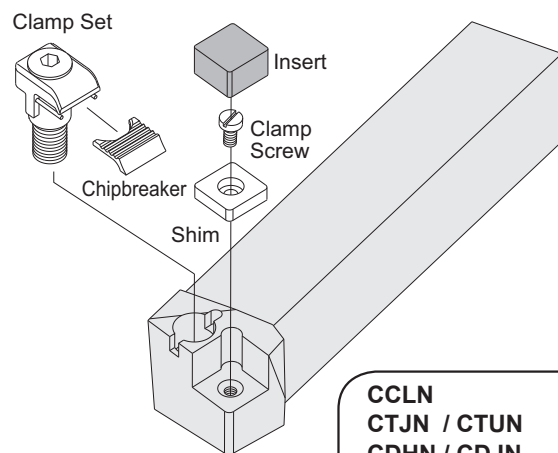
WTJN-N
WTKN-N
WTEN-N

● Multi Lock



MVLN
MVVN

● Top Clamp



CCLN
CTJN / CTUN
CDHN / CDJN
CELN
CSRN / CS-N / CSKN
CSYN / CSSN / CSDN
CRSN / CRDN

• A chipbreaker is not included with CRSN / CRDN.

DCLN (External / Facing)

Side Rake Angle: -6°
Angle of Inclination: -6°

● Applicable Inserts

Toolholder	Description
DCLN ^{R/L} ...-12	CN <input type="radio"/> A CN <input type="radio"/> G CN <input type="radio"/> M
	1204..

Description	Std.		Dimension (mm)							Standard Corner-R(°)	Spare Parts						
	R	L	H1=h	B	L1	L2	F1	F2	Clamp		Screw	Spring	Shim	Shim Screw	Wrench	Wrench (sold separately)	
DCLN ^{R/L} 2020K -12	●	●	20	20	125	33	25	20	0.8	CP-3D	CS-3D	SP-3D	DC-44	SB-4085TR	LW-3	FT-15	
DCLN ^{R/L} 2525M -12	●	●	25	25	150		32										

PCLN (External / Facing)

Side Rake Angle: -6°
Angle of Inclination: -6°

● Applicable Inserts

Toolholder	Description
PCLN ^{R/L} ...-09	CN <input type="radio"/> G
	0904..
PCLN ^{R/L} ...-12	CN <input type="radio"/> A CN <input type="radio"/> G
	1204..
PCLN ^{R/L} ...-16	CN <input type="radio"/> M CN <input type="radio"/> O
	1606..

● Toolholder Dimensions

Description	Std.		Dimension (mm)							Standard Corner-R(°)	Spare Parts					
	R	L	H1=h	B	L1	L2	F1	F2	Lever		Lock Screw	Shim	Shim Pin	Punch	Wrench	
PCLN ^{R/L} 1616H -09	●	●	16	16	100		20	14	0.8	LL-1N	LS-1N	LC-32N	LSP-1	PC-1	FH-2.5	
PCLN ^{R/L} 2020K -09	●	●	20	20	125	22	25	15								
PCLN ^{R/L} 2525M -09	●	●	25	25	150		32	18								
PCLN ^{R/L} 1616H -12	●	●	16	16	100		20	17	0.8	LL-2N	LS-2N	LC-42N	LSP-2	PC-2	LW-3	
PCLN ^{R/L} 2020H -12*	●		20	20	100		25	20								
PCLN ^{R/L} 2020K -12	●	●	20	20	125	27	25	20								
PCLN ^{R/L} 2525M -12	●	●	25	25	150		32		0.8	LL-5N	LS-4N	LC-53N	LSP-3	-	LW-3	
PCLN ^{R/L} 3225P -12	●	●	32	25	170		32	25								
PCLN ^{R/L} 2525M -16	●	●	25	25	150	32	32	25								
PCLN ^{R/L} 3232P -16	●	●	32	32	170		40	27								

* mark indicates short shank type.

● Applicable Inserts

Application	Finishing	Finishing-Medium	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing
Insert	WP (Wiper)	WQ (Wiper)	GP	HQ	CQ	CJ	TK	GS	PS
Size	12	12	09,12	09,12	12,16	12,16	12	09,12	12,16
Page	B14	B14	B14	B14	B14	B14	B14	B15	B15
Application	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing	Roughing	Roughing	One side / Roughing* High Feed Rate	Finishing	Medium
Insert	HS	CS	PT	GT	Standard	PH	PX	ℓ-S	ℓ
Size	12,16	12	12,16	12	12,16	12,16	12,16	09	09,12
Page	B15	B15	B15	B15	B16	B16	B16	B18	B18
Application	Medium-Roughing / Low Cutting Resistance type	Soft Steel Finishing	Soft Steel / Medium cutting	Soft Steel / Roughing	Stainless Steel	Stainless Finishing	Stainless Medium- Roughing	Stainless Medium- Roughing	Stainless Medium- Roughing
Insert	ℓ-25R	XP (-T)	XQ	XS	GU	MQ	MS	MU	TK
Size	12	12	12	12	12	12	12	12,16	12
Page	B18	B16	B16	B16	B17	B17	B17	B17	B17
Application	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Insert	C	ZS	GC	Without Chipbreaker	Ceramic	AH	A3	PCD	CBN
Size	12,16	12	12	12	12,16	12	12	12	12
Page	B17	B17	B18	B18	B85	B18	B18	C17	C5

For recommended cutting conditions, see page ● **D39~D40**

Short shank toolholder for **small lathe and turning mill**

Length of 100mm for 20mm square shank

- Optimal toolholder length for small lathe, conventionally for which shank was cut off
- Available also as toolholder for quick change system of turning mill

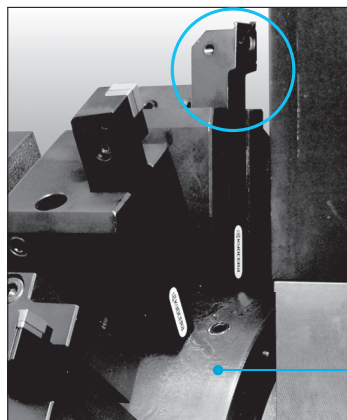


Short shank **PCLNR2020H-12**



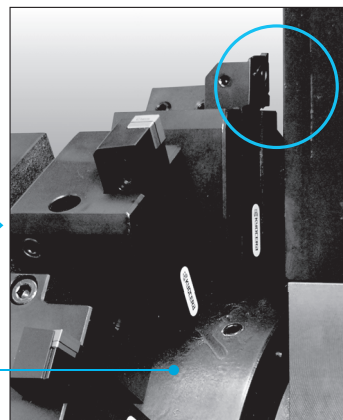
Conventional toolholder **PCLNR2020K-12**

Conventional Toolholder



Large overhang length due to contact of shank with toolpost drum.

Short Shank



May be set to optional overhang length since there is no interference with toolpost drum.

Toolholders for General Purpose [DN □ □ Insert]

DDJN (External / Copying)

Side Rake Angle: -6°
Angle of Inclination: -7°

● Applicable Inserts

Toolholder	Description	
DDJN ^{R/L} ...-1504	DN ○ A	1504.. (1506..)
	DN ○ G	
DDJN ^{R/L} ...-1506	DN ○ M	1506.. (1504..)

● Right-hand shown

DDHN (External / Face Grooving / Copying)

Side Rake Angle: -6°
Angle of Inclination: -6°

● Applicable Inserts

Toolholder	Description	
DDHN ^{R/L} ...-1504	DN ○ A	1504.. (1506..)
	DN ○ G	
DDHN ^{R/L} ...-1506	DN ○ M	1506.. (1504..)

● Right-hand shown

Description	Std.		Dimension (mm)							Standard Corner-R(°)	Spare Parts																									
	R	L	H1=h	B	L1	L2	F1	F2	Clamp		Screw	Spring	Shim	Shim Screw	Wrench	Wrench (sold separately)																				
DDJN ^{R/L} 2020K -1504	●	●	20	20	125	39	25	-	0.8	CP-3D	CS-3D	SP-3D	SB-4085TR	LW-3	FT-15																					
	●	●	25	25	150		32	25								DD-44 (DD-43)																				
DDJN ^{R/L} 2020K -1506	●	●	20	20	125	37	25	-								22																				
	●	●	25	25	150		32	25															DD-43 (DD-44)													
DDHN ^{R/L} 2020K -1504	●	●	20	20	125	37	25	-															22													
	●	●	25	25	150		32	25																						DD-44 (DD-43)						
DDHN ^{R/L} 2020K -1506	●	●	20	20	125	37	25	-																						22						
	●	●	25	25	150		32	25																												
DDHN ^{R/L} 2525M -1504	●	●	25	25	150	39	32	25	0.8	CP-3D	CS-3D	SP-3D	SB-4085TR	LW-3	FT-15																					
	●	●	20	20	125		25	-																												
DDHN ^{R/L} 2525M -1506	●	●	25	25	150	37	32	25								22																				
	●	●	20	20	125		25	-																												

Shims indicated within brackets () are not included with the toolholder. To change insert thickness, please purchase it separately.

● : Std. Item □ : Check Availability

PDJN (External / Copying)

Side Rake Angle: -6°
Angle of Inclination: -7°

● Applicable Inserts

Toolholder	Description
PDJN ^{R/L} ...-11	DN ○ A DN ○ G 1104..
PDJN ^{R/L} ...-15	DN ○ A DN ○ G 1504..
PDJN ^{R/L} ...-15U	DN ○ M DN ○ G 1506.. (1506..)

● Right-hand shown

PDHN (External / Face Grooving / Copying)

Side Rake Angle: -6°
Angle of Inclination: -6°

● Applicable Inserts

Toolholder	Description
PDHN ^{R/L} ...15	DN ○ A DN ○ G 1504.. DN ○ M (1506..)

● Right-hand shown

Description	Std.		Dimension (mm)						Standard Corner-R(r)	Spare Parts						
	R	L	H1=h	B	L1	L2	F1	F2		Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench	
PDJN ^{R/L}	1616H -11	●	●	16	16	100										
	2020K -11	●	●	20	20	125	28	25	-	0.4	LL-1DN	LS-1N	LD-32N	LSP-1	PC-1	FH-2.5
	2525M -11	●	●	25	25	150										
	2020H -15*	●	●	20	20	100										
	2020K -15	●	●	20	20	125										
	2525M -15	●	●	25	25	150	36	32	25	0.8	LL-3N	LS-2N	LD-42 *LD-42-20	LSP-2	PC-2	LW-3
	3225P -15	●	●	32	25	170										
PDJN ^{R/L}	2525M -15U	●	●	25	25	150	36	32	25	0.8	LL-4	LS-3	LD-42 *LD-42-20 (LD-43) (*LD-43-20)	LSP-2	PC-2	LW-3
	3232P -15U	●	●	32	32	170		40	28							
	PDHN ^{R/L}	2020K -15	●	●	20	20	125	36	25	22	0.8	LL-4	LS-3	LD-43 *LD-43-20 (LD-42) (*LD-42-20)	LSP-2	PC-2
	2525M -15	●	●	25	25	150		32	24							

* mark indicates short shank type.
 · Shim: PDJN^{R/L}-15U ...LD-42 is attached to PDJNR / L-15U. When using DN □□ 1504 type insert, prepare LD-43 separately.
 PDHN ...LD-43 is attached to PDHN. When using DN □□ 1506 type Insert, prepare LD-42 separately.
 · When using inserts with a corner R(r) that is greater than 1.6mm, please purchase a shim with * mark and use it in order to prevent workpiece and shim from interfering with each other.

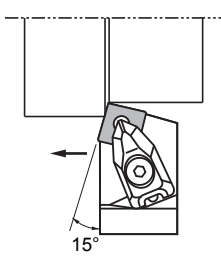
● Applicable Inserts

Application	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Roughing	Roughing	Roughing
Insert	GP	HQ	CQ	CJ	TK	GS	PS	PT	GT	Standard	PH
Size	1104,1504,1506	1104,1504,1506	1504,1506	1504,1506	1506	1104,1504,1506	1504,1506	1504,1506	1504,1506	1504,1506	1504,1506
Page	B20	B20	B20	B20	B20	B21	B21	B21	B21	B21	B21
Application	One side / Roughing / High Feed Rate	Finishing	Medium	Soft Steel Finishing	Soft Steel / Medium cutting	Soft Steel / Roughing	Stainless Steel	Stainless Finishing	Stainless Medium to Roughing	Stainless Medium to Roughing	
Insert	PX	^{R/L} -S	^{R/L}	XP (-T)	XQ	XS	GU	MQ	MS	MU	
Size	1504,1506	1104	1104,1504	1504	1504	1504,1506	1504,1506	1504,1506	1504,1506	1504,1506	
Page	B21	B23	B23	B22	B22	B22	B22	B22	B22	B22	
Application	Stainless Steel	Stainless Medium to Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials	
Insert	^{R/L} -ST	TK	C	ZS	GC	Ceramic	AH	^{R/L} -A3	PCD	CBN	
Size	1506	1504,1506	1504,1506	1504,1506	1504,1506	1504,1506	1504,1506	1504	1504	1504,1506	
Page	B22	B22	B23	B23	B23	B86	B23	B23	C17	C6	

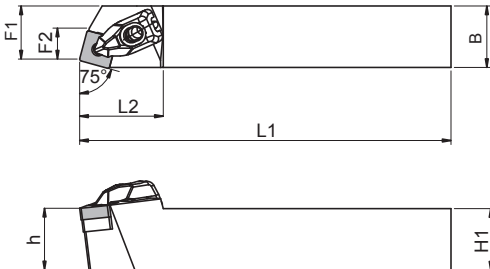
For recommended cutting conditions, see page ● D39~D40

● : Std. Item □ : Check Availability

DSBN (External)

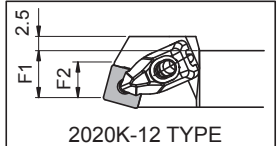


15°



75°

L1, L2, F1, F2, B, h, H1










2020K-12 TYPE

2.5

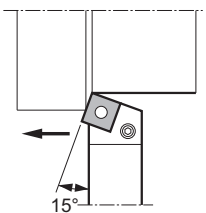
Side Rake Angle: -6°
 Angle of Inclination: -6°

● Applicable Inserts

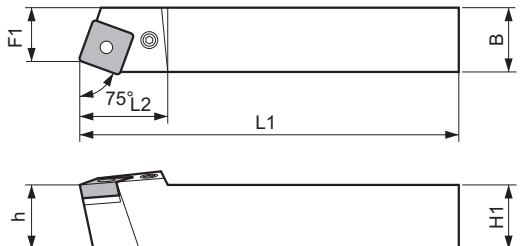
Toolholder	Description
DSBN^{R/L}...-12	SN○A SN○G SN○M
	1204..

Description	Std.		Dimension (mm)							Standard Corner-R(°)	Series						
	R	L	H1=h	B	L1	L2	F1	F2	Clamp		Screw	Spring	Shim	Shim Screw	Wrench	Wrench (sold separately)	
																	
DSBN^{R/L} 2020K -12	●	●	20	20	125	34	17	13	0.8	CP-3D	CS-3D	SP-3D	DS-44	SB-4085TR	LW-3	FT-15	
	●	●	25	25	150	22											

PSBN (External)



15°



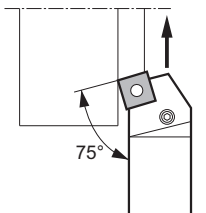
75°

L1, L2, B, h, H1

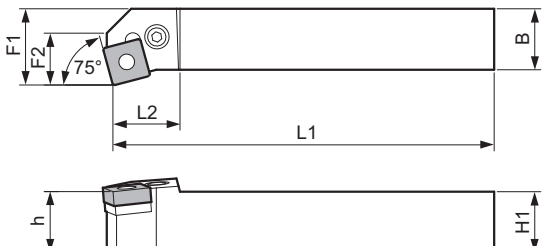
Side Rake Angle: -6°
Angle of Inclination: -6°

● Right-hand shown

PSKN (Facing)



75°









75°

L1, L2, B, h, H1

Side Rake Angle: -6°
Angle of Inclination: -6°

● Right-hand shown

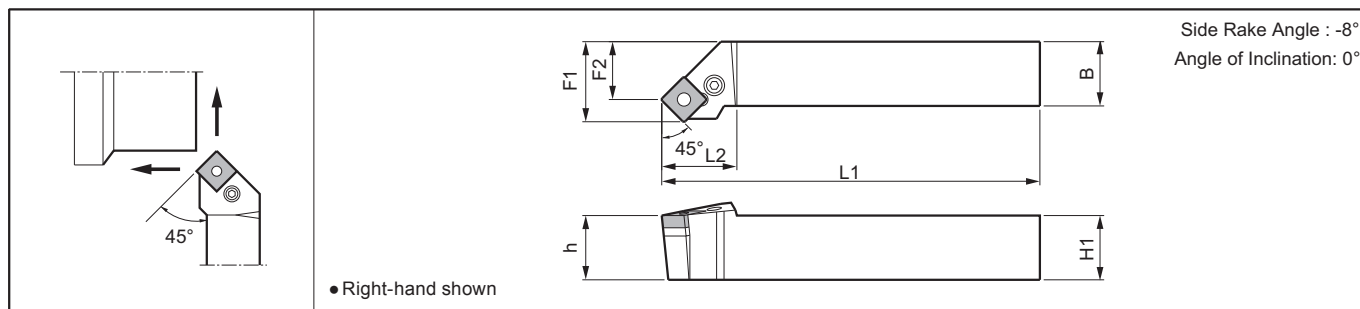
● Toolholder Dimensions

Description	Std.		Dimension (mm)							Standard Corner-R(°)	Spare Parts					
	R	L	H1=h	B	L1	L2	F1	F2	Lever		Lock Screw	Shim	Shim Pin	Punch	Wrench	
																
PSBN^{R/L} 1616H -09	●	●	16	16	100	21	13	-	0.8	LL-1N	LS-1N	LS-32	LSP-1	PC-1	FH-2.5	
	●	●	20	20	125	27	17	-	0.8	LL-2N	LS-2N	LS-42	LSP-2	PC-2	LW-3	
	●	●	25	25	150	24	22	-	0.8	LL-2N	LS-2N	LS-42	LSP-2	PC-2	LW-3	
PSKN^{R/L} 1616H -09	●	●	16	16	100	19	20	12.7	0.8	LL-1N	LS-1N	LS-32	LSP-1	PC-1	FH-2.5	
	●	●	20	20	125	22.5	25	17	0.8	LL-2N	LS-2N	LS-42	LSP-2	PC-2	LW-3	
	●	●	25	25	150	32	32	19	0.8	LL-2N	LS-2N	LS-42	LSP-2	PC-2	LW-3	

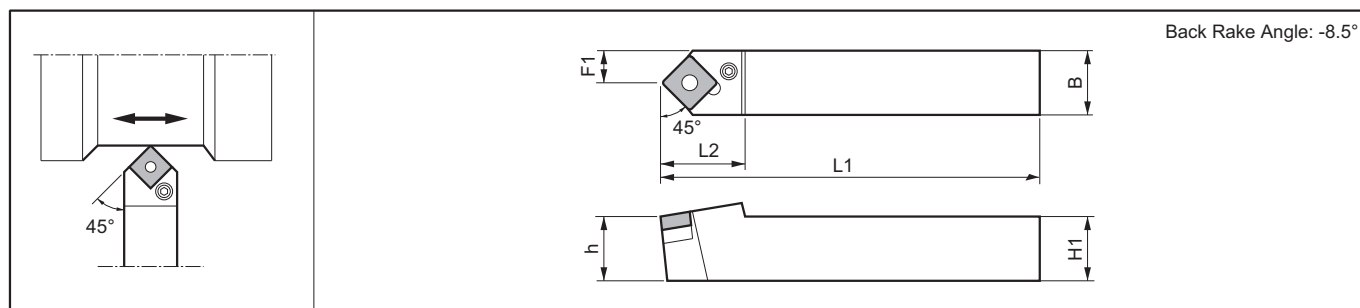
● PSKN^{R/L}: L-hand Insert for R-hand Toolholder, R-hand Insert for L-hand Toolholder.

● : Std. Item □ : Check Availability

PSSN (External / Facing / Chamfering)



PSDN (External / Chamfering)



● Toolholder Dimensions

Description	Std.	Dimension (mm)								Standard Corner-R(°)	Spare Parts						
		R	N	L	H1=h	B	L1	L2	F1		F2	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PSSN^{F/L}	1616H-09	●		●	16	16	100	22	20	13.6	0.8	LL-1N	LS-1N	LS-32	LSP-1	PC-1	FH-2.5
	2020K-12	●		●	20	20	125	29	25	16.4	0.8	LL-2N	LS-2N	LS-42	LSP-2	PC-2	LW-3
	2525M-12	●		●	25	25	150		32	23.4							
PSDNN	1616H-09			●	16	16	100	21	8	-	0.8	LL-1N	LS-1N	LS-32	LSP-1	PC-1	FH-2.5
	2020K-12			●	20	20	125	30	10	-	0.8	LL-2N	LS-2N	LS-42	LSP-2	PC-2	LW-3
	2525M-12			●	25	25	150		12.5	-							

● Applicable Inserts

Toolholder	Description	Application	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing	Roughing	Roughing	One side / Roughing / High Feed Rate
PSBN^{F/L}...-09	SN ○G 0903..	Insert	HQ	PS	HS	PT	HT	Standard	PH	PX	
PSKN^{F/L}...-09		Size	12	12	12	12	12	09, 12	12	12	
PSSN^{F/L}...-09		Page	B26	B26	B26	B26	B26	B26	B26	B27	
PSDNN...-09		Application	Finishing-Roughing	Medium-Roughing / Low Cutting Resistance type	Soft Steel Finishing	Soft Steel / Roughing	Soft Steel / Roughing	Stainless Finishing	Stainless Medium-Roughing	Cast Iron	
PSBN^{F/L}...-12	SN ○A SN ○G SN ○M 1204..	Insert	^{F/L}-□	^{F/L}-25R	XP	XQ	XS	MQ	MS	C	
PSKN^{F/L}...-12		Size	09, 12	12	12	12	12	12	12	12	
PSSN^{F/L}...-12		Page	B27	B27	B26	B26	B26	B26	B26	B26	
PSDNN...-12		Application	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Hard Materials				
		Insert	ZS	GC	Without Chipbreaker	Ceramic	CBN				
		Size	12	12	12	12	12				
		Page	B28	B28	B28	B88	C7				

^{F/L} PSSN^{F/L}: For External Turning, R-hand Insert for R-hand Toolholder, L-hand Insert for L-hand Toolholder
For Facing, L-hand Insert for R-hand Toolholder, R-hand Insert for L-hand Toolholder

For recommended cutting conditions, see page ● D39~D40

DTGN (External)

Side Rake Angle: -6°
Angle of Inclination: -6°

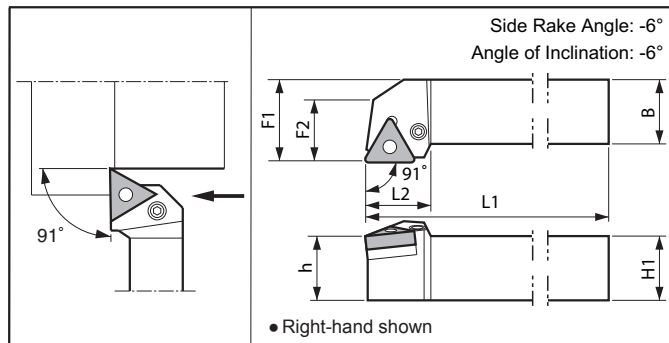
● Applicable Inserts

Toolholder	Description
DTGN ^{R/L}-16	TN○A TN○G TN○M 1604..

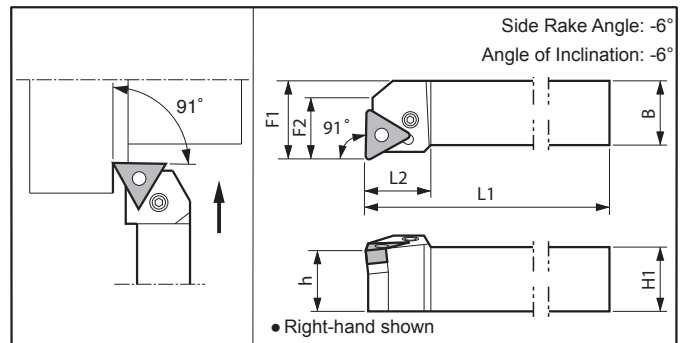
● Right-hand shown

Description	Std.		Dimension (mm)						Standard Corner-R(rε)	Spare Parts						
	R	L	H1=h	B	L1	L2	F1	F2		Clamp	Screw	Spring	Shim	Shim Screw	Wrench	Wrench (sold separately)
DTGN ^{R/L} 2020K -16	●	●	20	20	125	25	25	20	0.8	CP-2D	CS-2D	SP-2D	DT-32	SB-3080TR	LW-2.5	FT-10
2525M -16	●	●	25	25	150	32	20	0.8								

PTGN (External)



PTFN (Facing)



Description	Std.		Dimension (mm)						Standard Corner-R(rε)	Spare Parts					
	R	L	H1=h	B	L1	L2	F1	F2		Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PTGN ^{R/L} 1212F -11	●	●	12	12	80	18	16	12	0.8	LL-03N	LS-03N	-	P-03	-	FH-2
1616H -11	●	●	16	16	100	20	20	14	0.8	LL-03TN	LS-03SN	-	P-03S	-	FH-2.5
2020K -11	●	●	20	20	125	22	25	20	0.8	LL-03TN	LS-03SN	-	P-03S	-	FH-2.5
2525M -11	●	●	25	25	150	32	22	22	0.8	LL-03TN	LS-03SN	-	P-03S	-	FH-2.5
1616H -16	●	●	16	16	100	20	20	17	0.8	LL-1N	LS-1N	LT-32N	LSP-1	PC-1	FH-2.5
2020H -16*	●	●	20	20	100	24	25	20	0.8	LL-1N	LS-1N	*LT-32N-20	LSP-1	PC-1	FH-2.5
2020K -16	●	●	20	20	125	25	25	20	0.8	LL-1N	LS-1N	LT-32N	LSP-1	PC-1	FH-2.5
2525M -16	●	●	25	25	150	32	20	20	0.8	LL-1N	LS-1N	*LT-32N-20	LSP-1	PC-1	FH-2.5
2525M -22	●	●	25	25	150	29	32	24	0.8	LL-2N	LS-2N	LT-42N	LSP-2	PC-2	LW-3
PTFN ^{R/L} 1212F -11	●	●	12	12	80	15	16	12	0.8	LL-03N	LS-03N	-	P-03	-	FH-2
1616H -11	●	●	16	16	100	20	20	15	0.8	LL-03TN	LS-03SN	-	P-03S	-	FH-2.5
2020K -11	●	●	20	20	125	22.5	25	19	0.8	LL-03TN	LS-03SN	-	P-03S	-	FH-2.5
2525M -11	●	●	25	25	150	32	25	25	0.8	LL-03TN	LS-03SN	-	P-03S	-	FH-2.5
2020K -16	●	●	20	20	125	24	25	21	0.8	LL-1N	LS-1N	LT-32N	LSP-1	PC-1	FH-2.5
2525M -16	●	●	25	25	150	32	22	22	0.8	LL-1N	LS-1N	*LT-32N-20	LSP-1	PC-1	FH-2.5
2525M -22	●	●	25	25	150	29	32	25	0.8	LL-2N	LS-2N	LT-42N	LSP-2	PC-2	LW-3

* mark indicates short shank type.
 • When using inserts with a corner R(ε) that is greater than 1.6mm, please purchase a shim with * mark and use it in order to prevent workpiece and shim from interfering with each other.

● Applicable Inserts

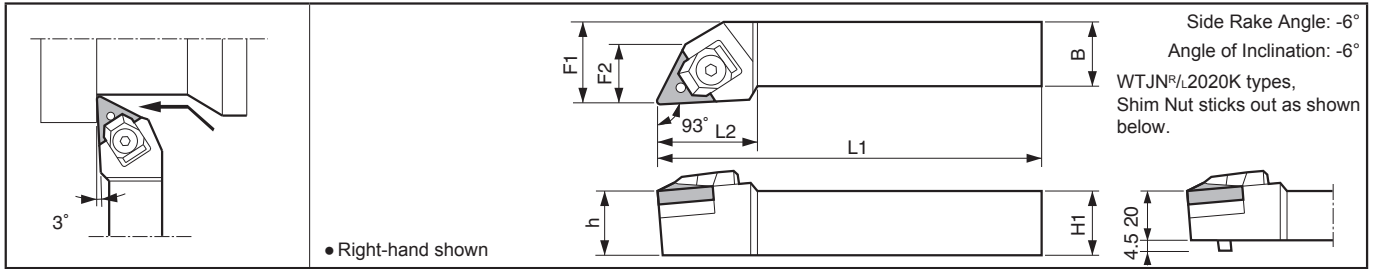
Toolholder	Description
PTON ^{R/L} 12...-11	TN○G 1103..
PTON ^{R/L} ...-11	TN○G 1104..
PTON ^{R/L} ...-16	TN○A TN○G TN○M 1604..
PTON ^{R/L} ...-22	TN○A TN○G TN○M 2204..

PTGN^{R/L} 1212F-11 } Insert applicable for above
 PTFN^{R/L} 1212F-11 }
 TN □□ 1103-type Insert is applicable.

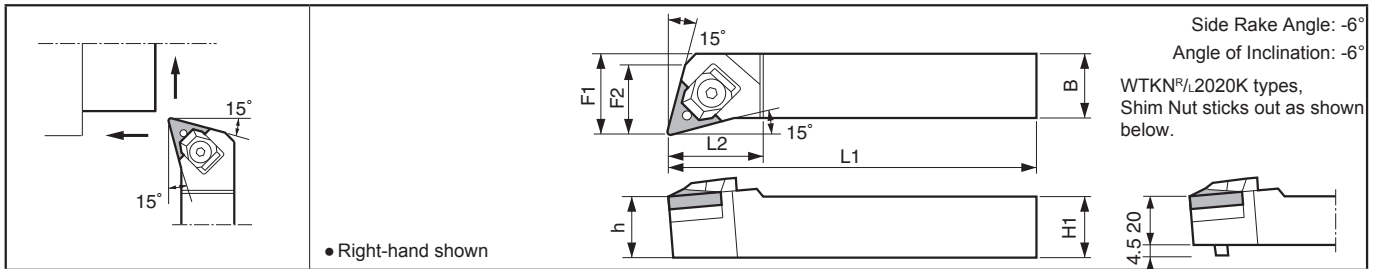
• PTFN^{R/L}: L-hand Insert for R-hand Toolholder, R-hand Insert for L-hand Toolholder.

● : Std. Item □ : Check Availability

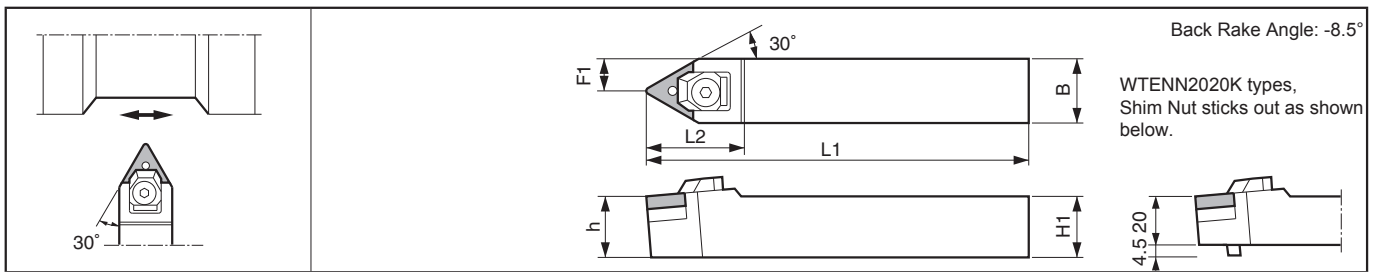
WTJN (External / Copying)



WTKN (External / Facing / Copying)



WTEN-N (External / Chamfering)



● Toolholder Dimensions

Description	Std.		Dimension (mm)							Standard Corner-R(r)	Spare Parts					
	R	N	L	H1=h	B	L1	L2	F1	F2		Clamp Set	Shim	Shim Pin	Shim Nut	Wrench	Spacer
WTJN^{R/L} 2020K -16N 2525M -16N	●	●	20	20	125	32	25	24	0.8	WCS-1N	WTKN-33 *WTN -33-20	WP-1S	WN-1	LW-3	WSP-1	
WTKN^{R/L} 2020K -16N 2525M -16N	●	●	20	20	125	32	25	-								
WTENN 2020K -16N 2525M -16N	●	●	20	20	125	32	10	-								

* When using inserts with a corner R(re) that is greater than 1.6mm, please purchase a shim with * mark and use it in order to prevent workpiece and shim from interfering with each other.

● Applicable Inserts

Toolholder	Description	
WTJN^{R/L}...-16N	TN○A TN○G TN○M	1604..
WTKN^{R/L}...-16N		
WTENN...-16N		

Application	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing* High Feed Rate	Medium-Roughing* High Feed Rate
Insert	GP	HQ	CQ	TK	GS	PS	HS	PT	GT
Size	1104,16	1104,16	16,22	16	1104,16	16,22	16,22	16	16
Page	B30	B30	B30	B30	B30	B30	B30	B31	B31
Application	Roughing	One side / Roughing* High Feed Rate	Roughing	Finishing-Roughing	Finishing-Roughing	Medium-Roughing / Low Cutting Resistance type	Soft Steel Finishing	Soft Steel / Medium cutting	Soft Steel / Roughing
Insert	PH	PX	Standard	^{R/L} -S	^{R/L} -□	^{R/L} -25R	XP-(T)	XQ	XS
Size	16,22	16,22	16,22	1104,16	1103,1104,16,22	16	16	16	16
Page	B31	B31	B31	B34	B34	B34	B31	B31	B31

Application	Stainless Finishing	Stainless Medium to Roughing	Stainless Medium to Roughing	Stainless Medium to Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Insert	MQ	MS	MU	TK	C	ZS	GC	Without Chipbreaker	Ceramic	AH	^{R/L} -A3	PCD	CBN
Size	16	16	16	16	16	16	16	1103,16,22	16	16	16	16	16
Page	B32	B32	B32	B32	B33	B33	B33	B33	B89	B33	B33	C17	C7

* In wedge lock, use of TN30 / PV30 and ceramic insert other than silicon nitride insert is not recommended due to strong restraint force.

● : Std. Item □ : Check Availability

For recommended cutting conditions, see page [D39~D40](#)

D
External

Toolholders for General Purpose [TN Insert]

DVLN (External / Copying)

Side Rake Angle: -6°
Angle of Inclination: -9°

● Applicable Inserts

Toolholder	Description
DVLN ^{R/L} ...-16	VN <input type="radio"/> A VN <input type="radio"/> G 1604..

DVPN (External / Facing / Copying / Undercutting)

2020K-16 TYPE

Side Rake Angle: -13°
Angle of Inclination: -10°

● Applicable Inserts

Toolholder	Description
DVPN ^{R/L} ...-16	VN <input type="radio"/> A VN <input type="radio"/> G 1604..

DVVN (External / Copying)

Back Rake Angle: -11°

● Applicable Inserts

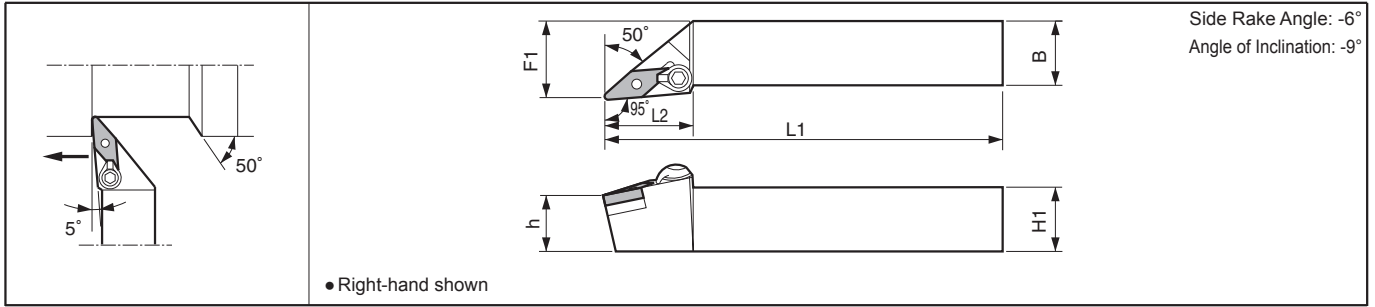
Toolholder	Description
DVVNN...-16	VN <input type="radio"/> A VN <input type="radio"/> G 1604..

Description	Std.		Dimension (mm)					Standard Corner-R(R _ε)	Spare Parts								
	R	N	L	H1=h	B	L1	L2		F1	F2	Clamp	Screw	Spring	Shim	Shim Screw	Wrench	Wrench (sold separately)
DVLN ^{R/L} 2020K-16	●		●	20	20	125		25									
								45	-								
2525M-16	●		●	25	25	150		32									
DVPN ^{R/L} 2020K-16	●		●	20	20	125		27									
								40	28	0.8	CP-5D	CS-5D	SP-5D	DV-33	SB-4085TR	LW-3	FT-15
2525M-16	●		●	25	25	150		32									
DVVNN 2020K-16			●	20	20	125		10									
			●	25	25	150		12.5									

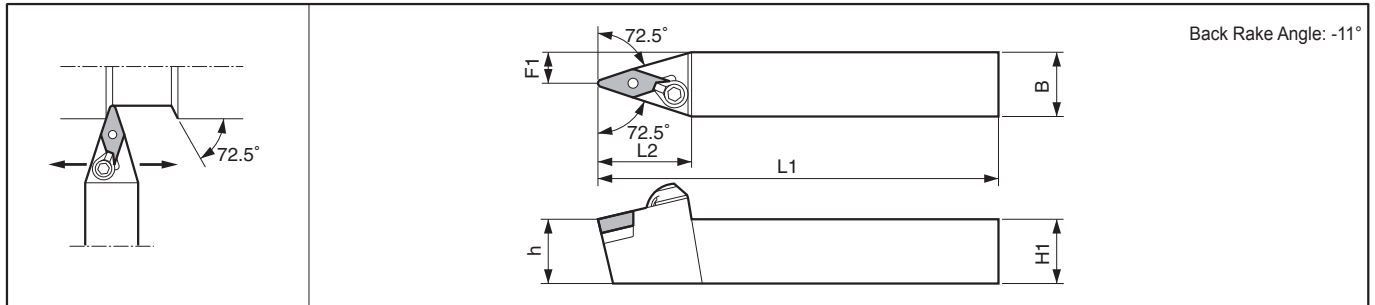
* Modification on toolholder and shim is required when using R1.6mm insert.

D
External

MVLN (External / Copying)



MVVN (External / Copying)



• Toolholder Dimensions

Description	Std.	Dimension (mm)								Standard Corner-R (r)	Spare Parts				
		R	N	L	H1=h	B	L1	L2	F1		Clamp Set	Wrench	Shim	Lock Pin	Wrench
MVLN^{R/L} 2020K -16	●	●	20	20	125	37	25		0.8	CPS-5 ^{R/L}	FH-2.5	MVN-32	TS-3S	FH-2	
2525M -16	●	●	25	25	150	37	32		0.8	CPS-5 ^{R/L}	FH-2.5	MVN-32	TS-3S	FH-2	
MVVN 2020K -16		●	20	20	125	39	10		0.8	CPS-5R	FH-2.5	MVN-32	TS-3S	FH-2	
2525M -16		●	25	25	150	39	12.5		0.8	CPS-5R	FH-2.5	MVN-32	TS-3S	FH-2	

• Clamp Set : CPS-5R for Right-hand Toolholder, CPS-5L for Left-hand Toolholder.
• Modification on toolholder and shim is required when using R1.6mm insert.

• Applicable Inserts

Toolholder	Description	Application	Finishing	Finishing-Medium	Finishing-Medium	Medium	Roughing	Finishing-Medium	Low Carbon Steel	Stainless Steel
MVLN^{R/L}....-16	VN ○ A	Insert						^{R/L}		
MVVN....-16	VN ○ G		1604..							
	VN ○ M									
		Size	16	16	16	16	16	16	16	16
		Page	B36	B36	B36	B36	B36	B36	B36	B36
		Application	Stainless Finishing	Stainless Medium to Roughing	Stainless Medium to Roughing	Cast Iron	Cast Iron	Non-ferrous Metals	Hard Materials	
		Insert				Without Chipbreaker				
		Size	16	16	16	16	16	16	16	
		Page	B36	B36	B36	B36	B91	C17	C8	

◆ Regarding rotation directions of the clamp set

For recommended cutting conditions, see page [D39~D40](#)

MVVNN type (Neutral) **MVLNR** type (R-hand Toolholder)

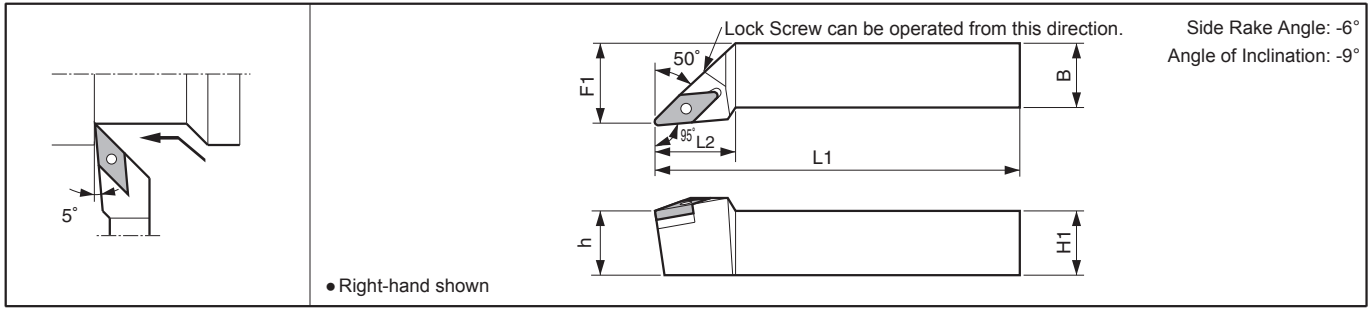
Clamp set: (CPS-5R) has R-hand thread.
When clamping the insert, turn the screw in the arrow direction (clockwise).
When removing the insert, turn the screw away from the arrow (counterclockwise).

MVLNL type (L-hand Toolholder)

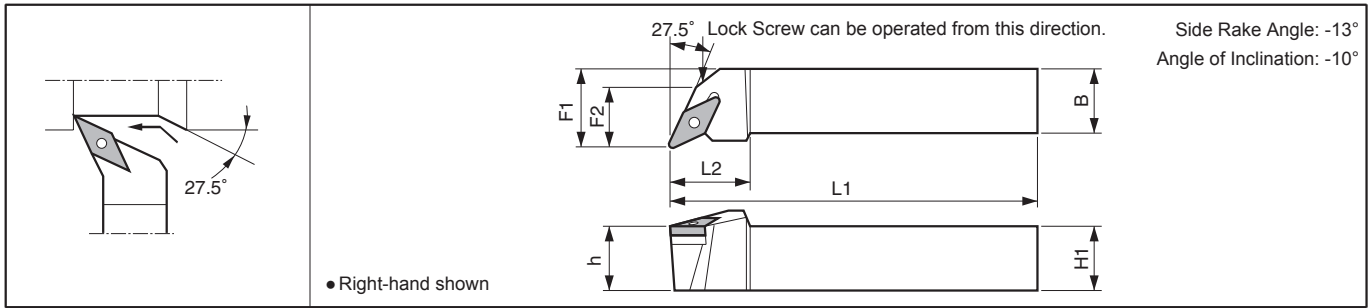
Clamp set: (CPS-5L) has L-hand thread.
When clamping the insert, turn the screw in the arrow direction (counterclockwise).
When removing the insert, turn the screw away from the arrow (clockwise).

● : Std. Item □ : Check Availability

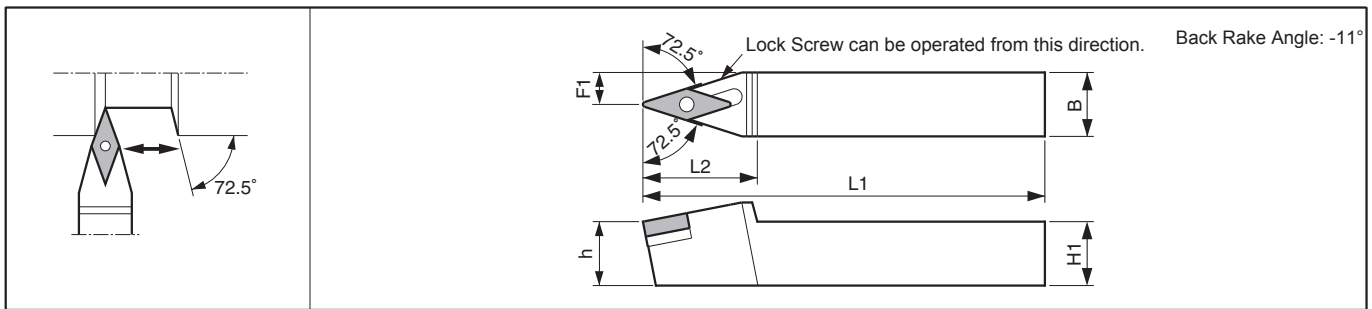
PVLN (External / Copying)



PVPN (External / Facing / Copying / Undercutting)



PVVN (External / Copying)



Toolholder Dimensions

Description	Std.		Dimension (mm)							Standard Corner-R(r)	Spare Parts			
	R	N	L	H1=h	B	L1	L2	F1	F2		Lock Pin	Lock Screw	Shim	Wrench
PVLN ^{P/L} 2525M-16Q	●		●	25	25	150	37	32	-	0.8	LP-6S	LS-15	KVN-32	LW-3
PVPN ^{P/L} 2020K-16Q	●		●	20	20	125	30	25	22	0.8	LP-2S	LS-11	KVN-32	LW-3
2525M-16Q	●		●	25	25	150	30	32	28		LP-6S			
PVVNN 2020K-16Q			●	20	20	125	35	10	-	0.8	LP-2S	LS-15	KVN-32	LW-3
2525M-16Q			●	25	25	150	40	12.5	-		LP-6S			

* Modification on toolholder and shim is required when using R1.6mm insert.

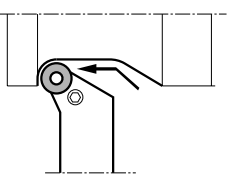
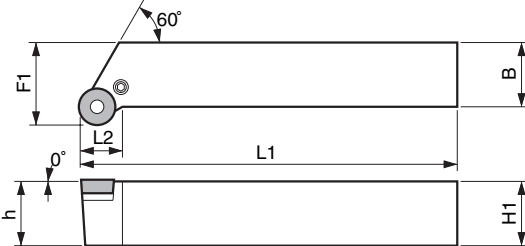
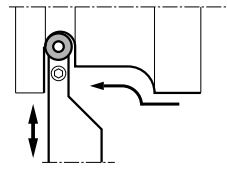
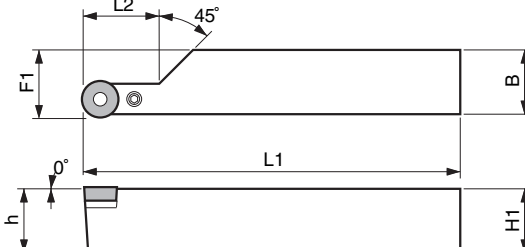
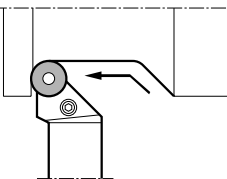
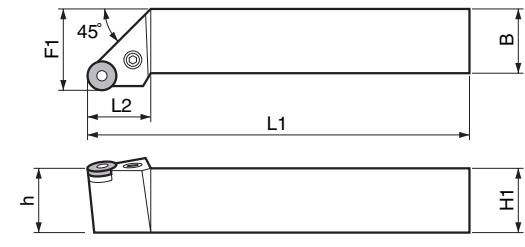
Applicable Inserts

Toolholder	Description	Application	Finishing	Finishing-Medium	Finishing-Medium	Medium	Roughing	Finishing-Medium	Low Carbon Steel	Stainless Steel
PVLN ^{P/L} ...-16Q	VN○A	Insert	GP	VF	HQ	TN-V	Standard	^{P/L}	XP	GU
PVPN ^{P/L} ...-16Q	VN○G		1604..							
PVVNN...-16Q	VN○M									
		Application	Stainless Finishing	Stainless Medium-Roughing	Stainless Medium to Roughing	Cast Iron	Cast Iron	Non-ferrous Metals	Hard Materials	
		Insert	MQ	MS	MU	Without Chipbreaker	Ceramic	PCD	CBN	
		Size	16	16	16	16	16	16	16	16
		Page	B36	B36	B36	B36	B36	B36	B36	B36
		Insert								
		Size	16	16	16	16	16	16	16	16
		Page	B36	B36	B36	B36	B91	C17	C8	


For recommended cutting conditions, see page [D39~D40](#)

● : Std. Item □ : Check Availability




PRGC / PRXC / PRGN (External / Facing / Undercutting)

<p>PRGC</p> 	 <p>Side Rake Angle: 0° Angle of Inclination: 0°</p> <p>• Right-hand shown</p>
<p>PRXC</p> 	 <p>Side Rake Angle: 0° Angle of Inclination: 0°</p> <p>• Right-hand shown</p>
<p>PRGN</p> 	 <p>Side Rake Angle: -6° Angle of Inclination: -6°</p> <p>• Right-hand shown</p>

● Toolholder Dimensions

Description	Std.		Dimension (mm)					Standard Corner-R(r)	Spare Parts						
	R	L	H1=h	B	L1	L2	F1		Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench	
															
PRGC ^{R/L}	2020K -10	●	●	20	20	125	15	25	-	LL-05C	LS-05	LR-10C	LSP-1	PC-1	FH-2
	2525M -10	●	●	25	25	150	15	32	-	LL-05C	LS-05	LR-10C	LSP-1	PC-1	FH-2
	2020K -12	●	●	20	20	125	14	25	-	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1	FH-2.5
	2525M -12	●	●	25	25	150	17	32	-	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1	FH-2.5
PRXC ^{R/L}	2020K -10	●	●	20	20	125	25	20.5	-	LL-05C	LS-05	LR-10C	LSP-1	PC-1	FH-2
	2525M -10	●	●	25	25	150	30	25.5	-	LL-05C	LS-05	LR-10C	LSP-1	PC-1	FH-2
	2525Q -10	●	●	25	25	180	30	25.5	-	LL-05C	LS-05	LR-10C	LSP-1	PC-1	FH-2
	2525M -12	●	●	25	25	150	30	25.7	-	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1	FH-2.5
PRGN ^{R/L}	2020K -09	●	●	20	20	125	19	25	-	LL-1N	LS-1N	LR-80	LSP-1	PC-1	FH-2.5
	2525M -12	●	●	25	25	150	26	32	-	LL-2N	LS-2N	LR-81	LSP-2	PC-2	LW-3

● Applicable Inserts

Toolholder	Description	Application	Medium	Non-ferrous Metals							
PRGC ^{R/L} ...-10	RCGX	Insert	Standard	AQ							
PRGC ^{R/L} ...-12			1003M0								
PRXC ^{R/L} ...-10			1204M0	Size	10, 12	10					
PRXC ^{R/L} ...-12			1003M0	Page	B60	B60					
PRGN ^{R/L} ...-09	RNMG	Insert	Medium-Roughing								
PRGN ^{R/L} ...-12			090300	Standard							
	120400	Size	09, 12								
		Page	B25								

For recommended cutting conditions, see page ● D39~D40

Toolholders for General Purpose [WN □□ Insert]

DWLN (External / Facing)

Side Rake Angle: -6°
Angle of Inclination: -6°

● Applicable Inserts

Toolholder	Description
DWLN ^{R/L} ...-08	WN ○ A WN ○ G WN ○ M
	0804...

Description	Std.		Dimension (mm)						Standard Corner-R(°)	Spare Parts						
	R	L	H1=h	B	L1	L2	F1	F2		Clamp	Screw	Spring	Shim	Shim Screw	Wrench	Wrench (sold separately)
DWLN ^{R/L} 2020K -08	●	●	20	20	125	34	25	20	0.8							
2525M -08	●	●	25	25	150		32									

PWLN (External / Facing)

Side Rake Angle: -6°
Angle of Inclination: -6°

● Applicable Inserts

Toolholder	Description
PWLN ^{R/L} ...-06	WN ○ A WN ○ G
	0604..
PWLN ^{R/L} ...-08	WN ○ M
	0804..

Description	Std.		Dimension (mm)						Standard Corner-R(°)	Spare Parts					
	R	L	H1=h	B	L1	L2	F1	F2		Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PWLN ^{R/L} 1616H -06	●	●	16	16	100	23	20	-	0.8						
2020K -06	●	●	20	20	125		25								
2525M -06	●	●	25	25	150	32									
2020K -08	●	●	20	20	125	27	25	-	0.8						
2525M -08	●	●	25	25	150		32								

WWLN (External / Facing)

Side Rake Angle: -6°
Angle of Inclination: -6°

● Applicable Inserts

Toolholder	Description
WWLN ^{R/L} ...-08	WN ○ A WN ○ G WN ○ M
	0804..

Description	Std.		Dimension (mm)						Standard Corner-R(°)	Spare Parts					
	R	L	H1=h	B	L1	L2	F1	F2		Clamp Set	Shim	Shim Pin	Shim Nut	Wrench	
WWLN ^{R/L} 2020K -08	●	●	20	20	125	30	25	-	1.2						
2525M -08	●	●	25	25	150		32								2.5

● : Std. Item □ : Check Availability

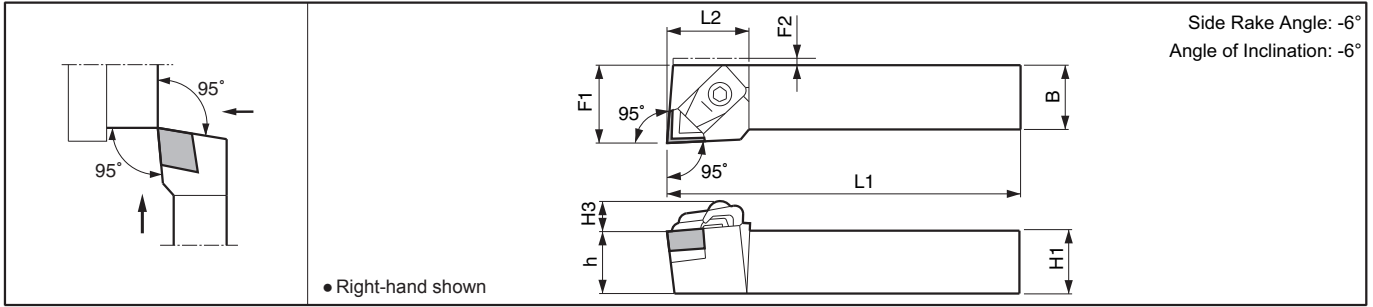
● Applicable Inserts

Application	Finishing	Finishing-Medium	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing
Insert	WP (Wiper)	WQ (Wiper)	GP	HQ	CQ	CJ	TK	GS	PS	PT	
Size	08	08	06,08	06,08	08	08	08	06,08	08	08	08
Page	B38	B38	B38	B38	B38	B38	B38	B38	B38	B38	B39
Application	Medium-Roughing	Roughing	Finishing	Medium	Soft Steel Finishing	Soft Steel / Medium cutting	Soft Steel / Roughing	Stainless Steel	Stainless Finishing	Stainless Medium to Roughing	
Insert	GT	Standard	$\frac{P}{L}$-S	$\frac{P}{L}$	XP	XQ	XS	GU	MQ	MS	
Size	08	08	06	06	08	08	08	08	08	08	08
Page	B39	B39	B40	B40	B39	B39	B39	B39	B39	B39	B39
Application	Stainless Medium to Roughing	Stainless Medium to Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Insert	MU	TK	C	ZS	GC	Without Chipbreaker	Ceramic	AH	PCD	CBN	
Size	08	08	08	08	08	08	08	08	08	08	08
Page	B39	B39	B39	B39	B39	B39	B91	B40	C17	C8	

* In wedge lock, use of TN30 / PV30 and ceramic insert other than silicon nitride insert is not recommended due to strong restraint force.

For recommended cutting conditions, see page [D39~D40](#)

CCLN (External / Facing)



Toolholder Dimensions

Description	Std.		Dimension (mm)								Standard Corner-R(℞)	Spare Parts				
	R	L	H1=H	H3	B	L1	L2	F1	F2	Chipbreaker		Clamp Set	Wrench	Shim	Shim Screw	
CCLN^{R/L} 2020K -12	●	●	20	14	20	125	32	27	5	0.8						
2525M -12	●	●	25		25	150	32	32	-							
2525M -16	●		25	14	25	150	35	32	-	0.8						
3225P -16	●		32		170											

* Shim & Shim Screw : When using CN 1204 Insert, purchase spare parts in () separately.

Applicable Inserts

Applications	Cast Iron / Hard Materials	Cast Iron / Hard Materials
Reference Page	B85	C9
Insert	Ceramic 	CBN(KBN900)
Toolholder		
CCLN^{R/L}...-12	CNGN1207..(CNGN1204..) CNMN1207	(CNMN1204)
CCLN^{R/L}...-16	CNGN1607..	-

For recommended cutting conditions, see page [D39~D40](#)

Selection of Ceramic Insert

Select the suitable Ceramic Insert and specifications (Corner-R(℞), Feed Rate, Chamfer, etc.) from the table below.

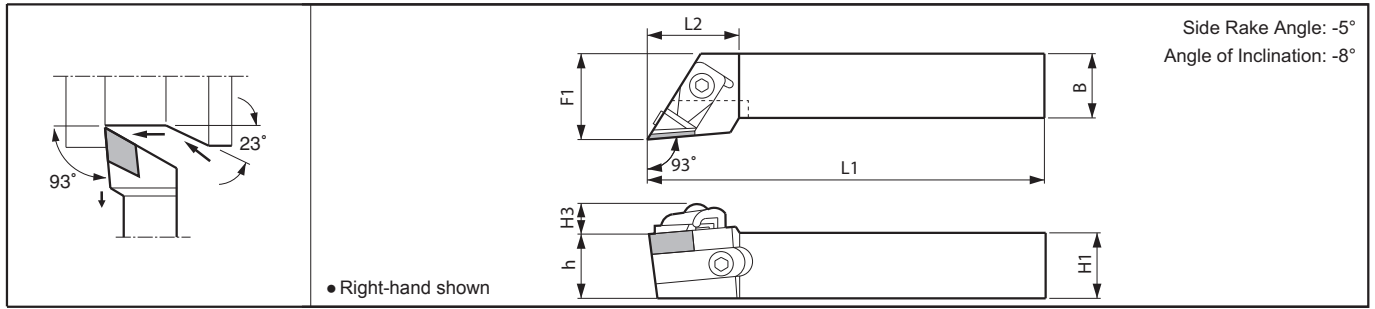
(FC250, Cutting Edge Angle: 0°-15°)

Insert Shape	Corner-R(℞)	f (mm/rev)										ap ap [mm]	
		0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.60		
	RN	-	→										0.3~4
	2.0	→										0.3~4	
	1.6	→											
	1.2	→										0.3~4	
	0.8	→											
	0.4	→											
	1.6	→										0.3~2	
	1.2	→											
	0.8	→											
Chamfer		0.05mm×20°		(0.1~0.2)mm×(20°~25°)				0.3mm×30°				-	
Insert Thickness		7.94mm										-	

● : Std. Item □ : Check Availability



CDJN (External / Copying / Back Turning)



Toolholder Dimensions

Description	Std.		Dimension (mm)							Standard Corner-R (r)	Spare Parts				
	R	L	H1=h	H3	B	L1	L2	F1	Chipbreaker		Clamp Set	Wrench	Shim	Shim Screw	
CDJN^{R/L} 2525M-15 3225P-15	●	●	25	16	25	150	32	32	0.8						

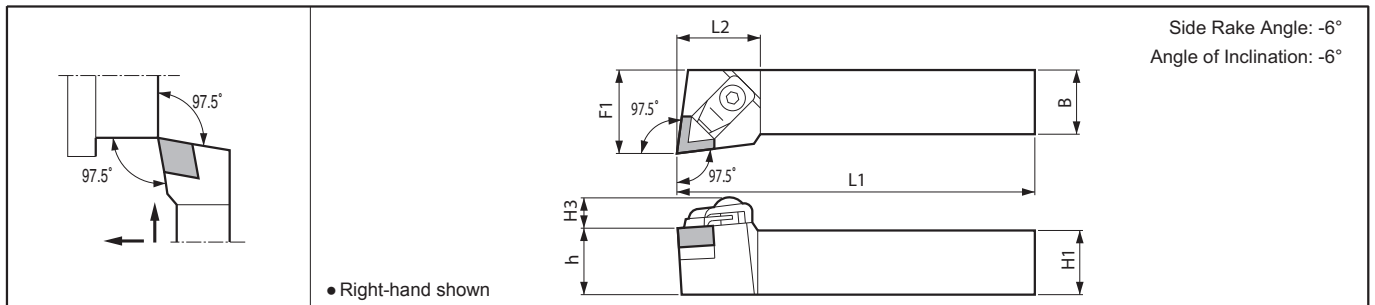
• Chipbreaker : CB-14 for Right-hand Toolholder, and CB-15 for Left-hand Toolholder.
• Shim : 556CR for Right-hand Toolholder, and 556CL for Left-hand Toolholder.

Applicable Inserts

Applications	Cast Iron / Hard Materials
Ref. Page	B86
Toolholder	Ceramic
CDJN^{R/L}...-15	DNGN1507..

For recommended cutting conditions, see page [D39~D40](#)

CELN (External / Facing)



Toolholder Dimensions

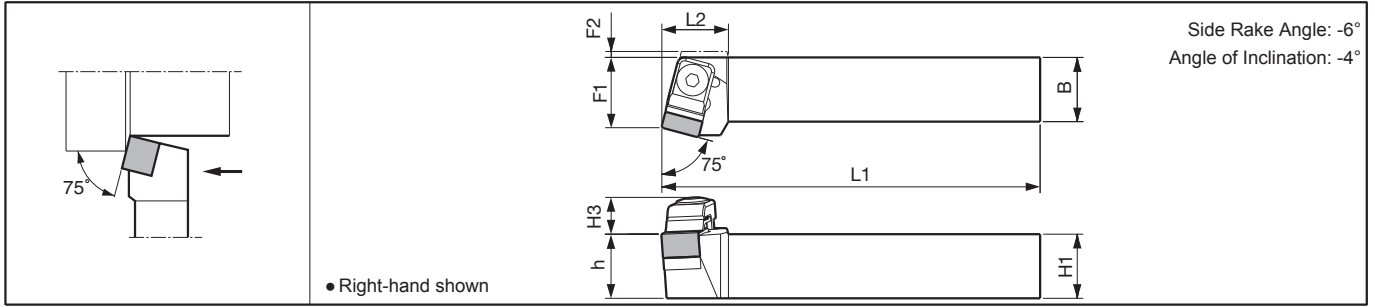
Description	Std.		Dimension (mm)							Standard Corner-R (r)	Spare Parts				
	R	L	H1=h	H3	B	L1	L2	F1	Chipbreaker		Clamp Set	Wrench	Shim	Shim Screw	
CELN^{R/L} 2525M-13	●	●	25	15	25	150	32	32	0.8						

Applicable Inserts

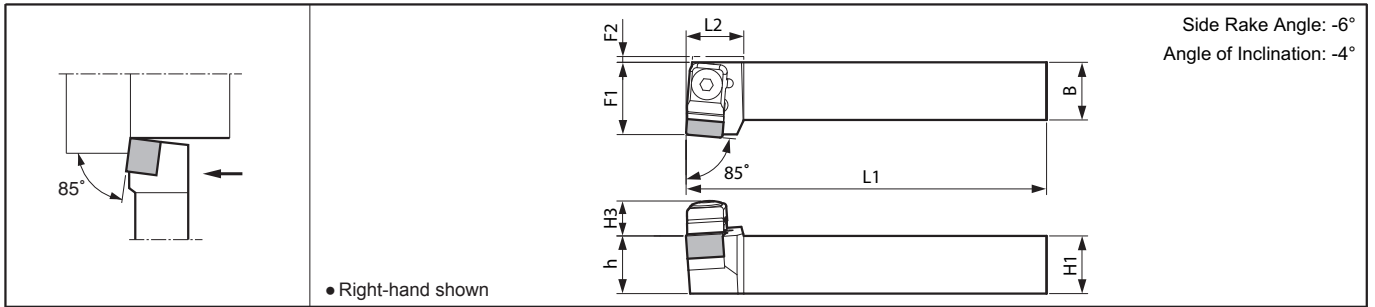
Applications	Cast Iron / Hard Materials
Ref. Page	B87
Toolholder	Ceramic
CELN^{R/L}...-13	ENGN1307..

For recommended cutting conditions, see page [D39~D40](#)

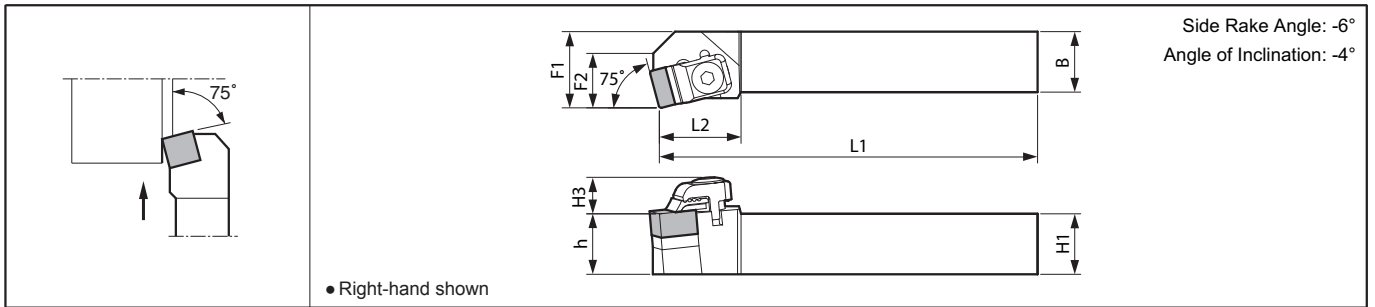
CSRN (External)



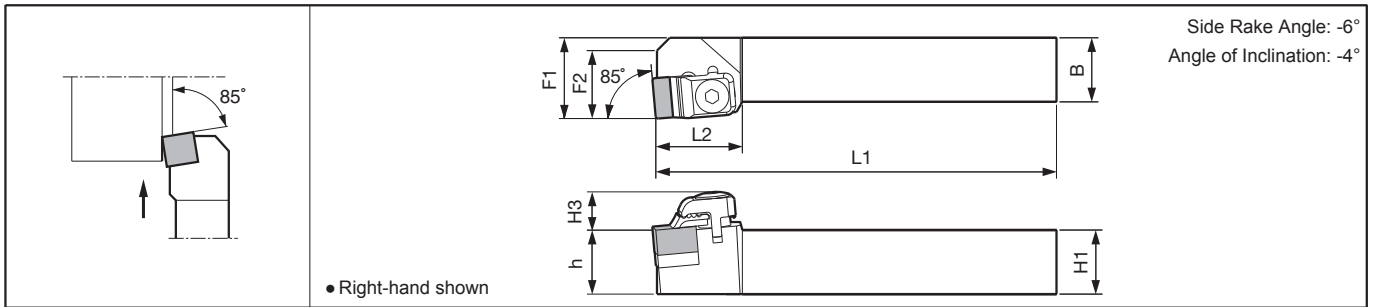
CS-N (External)



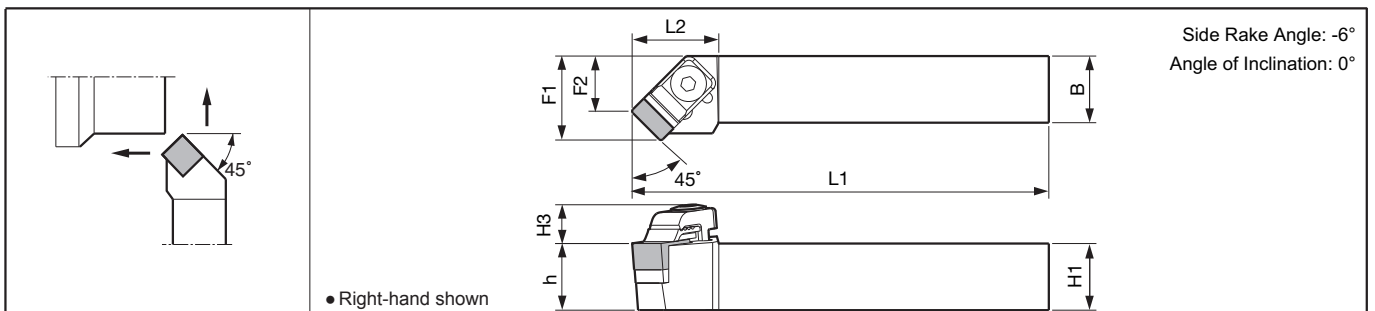
CSKN (Facing)



CSYN (Facing)



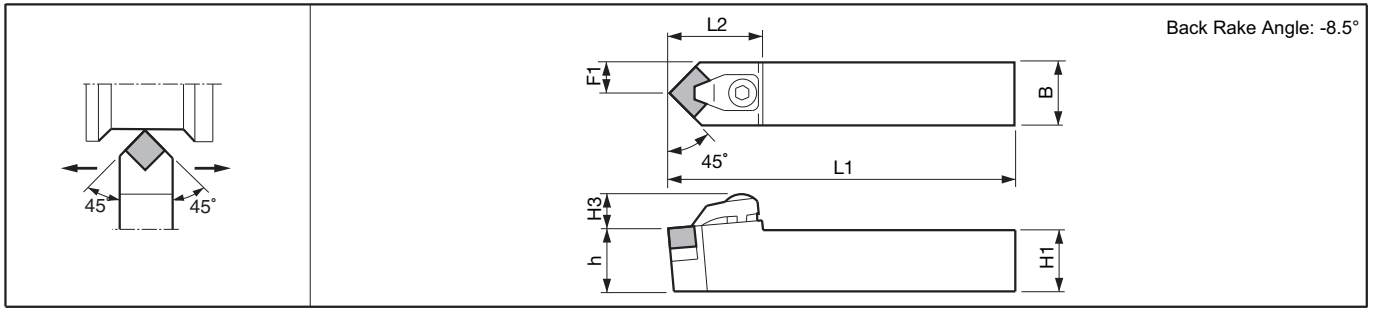
CSSN (External / Facing / Chamfering)



D

External

CSDN (External / Chamfering)



● Toolholder Dimensions

Description	Std.		Dimension (mm)								Standard Corner-R(r)	Spare Parts				
	R	N	L	H1=h	H3	B	L1	L2	F1	F2		Chipbreaker	Clamp Set	Wrench	Shim	Shim Screw
CSRN^{R/L} 2020K -12 2525M -12 3225P -12 3225P -15 4040R -15	●	●	20		20	125		22	2		0.8					
	●	●	25	12	25	150	22	27	-							
	●	●	32		25	170		27	-							
	●	●	32	15	25	170	30	32	-							
CS-N^{R/L} 2020K -12 2525M -12	●	●	20		20	125		25	2		0.8					
	●	●	25	12	25	150	20	25	-							
CSKN^{R/L} 2020K -12 2525M -12 3225P -15	●	●	20		20	125		25			0.8					
	●	●	25	12	25	150	27	32	18							
	●		32	15	25	170	37	32	20							
CSYN^{R/L} 2020K -12 2525M -12	●	●	20		20	125		25			0.8					
	●	●	25	12	25	150	27	32	21							
CSSN^{R/L} 2020K -12 2525M -12	●	●	20		20	125		25			0.8					
	●	●	25	12	25	150	26	32	23							
CSDNN 2020K -12 2525M -12 3225P -12	●		20		20	125		10			0.8					
	●	●	25	13	25	150	32	12.5	-							
	●	●	32		25	170		12.5								

· Shim & Shim Screw : When using SN 1204 Insert, purchase spare parts in () separately.

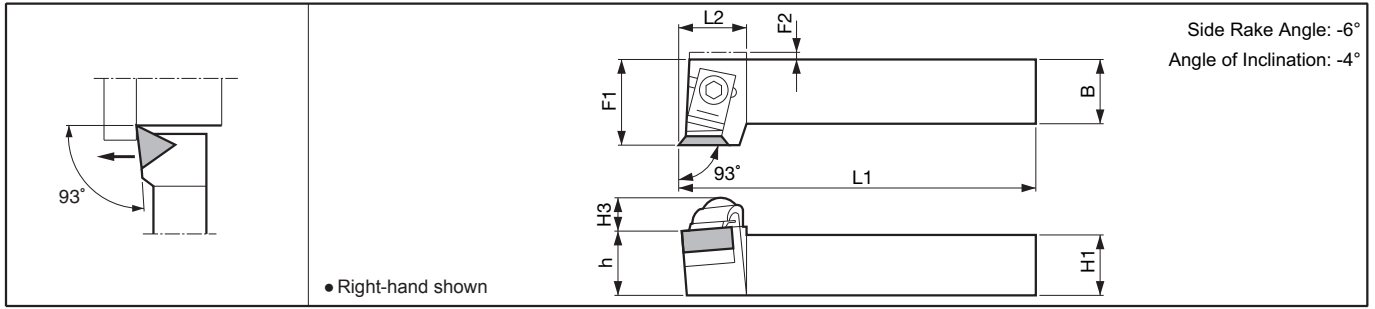
● Applicable Inserts

Applications	Cast Iron / Hard Materials	Cast Iron	Cast Iron / Hard Materials	When using as toolholder for CBN tools (KBN900), prepare spare parts below separately.		
Ref. Page	B88, B89	B28	C9	Clamp Set	Shim	Shim Screw
Toolholder \ Insert	Ceramic 	Coating 	CBN(KBN900) 			
	CSRN^{R/L} ...-12	SNGN1207..(SNGN1204..) SNMN1207..	(SNMN1204..)	(SNMN1204..)	CE-030A	SP-143
CSRN^{R/L} ...-15	SNGN1507..	-	-	-		
CS-N^{R/L} ...-12	SNGN1207..(SNGN1204..) SNMN1207..	(SNMN1204..)	(SNMN1204..)	CE-030A	SP-143	M3X12
CSKN^{R/L} ...-12	SNGN1207..(SNGN1204..) SNMN1207..	(SNMN1204..)	(SNMN1204..)	CE-030A	SP-143	M3X12
CSKN^{R/L} ...-15	SNGN1507..	-	-	-		
CSYN^{R/L} ...-12	SNGN1207..(SNGN1204..) SNMN1207..	(SNMN1204..)	(SNMN1204..)	CE-030A	SP-143	M3X12
CSSN^{R/L} ...-12	SNGN1207..(SNGN1204..) SNMN1207..	(SNMN1204..)	(SNMN1204..)	CE-030A	SP-143	M3X12
CSDNN ...-12	SNGN1207..(SNGN1204..) SNMN1207..	(SNMN1204..)	(SNMN1204..)	-	SP-143	M3X12

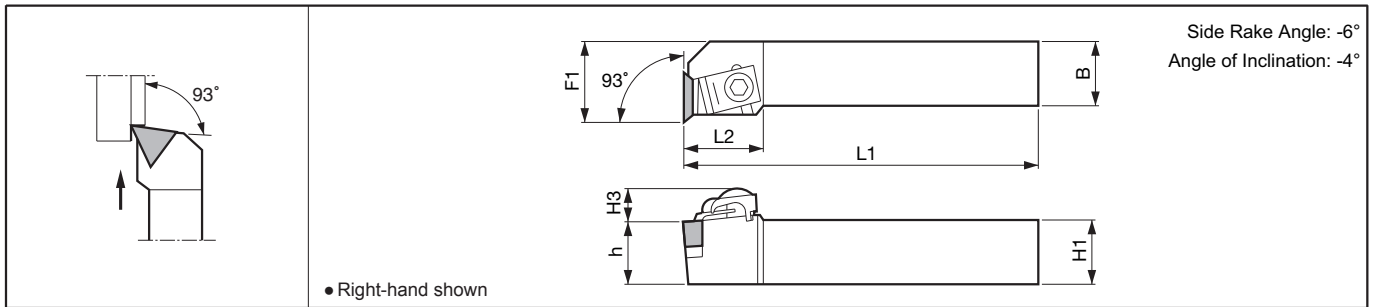
· CSDNN...-12 : Clamp Set CE-040 is used continuously.

For recommended cutting conditions, see page ● D39-D40

CTJN (External)



CTUN (Facing)



Toolholder Dimensions

Description	Std.		Dimension (mm)								Standard Corner-R(r _e)	Spare Parts				
	R	L	H1-h	H3	B	L1	L2	F1	F2	Chipbreaker		Clamp Set	Wrench	Shim	Shim Screw	
	CTJN^{R/L}	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	20	11	20	125	21	25	2		0.8				
2525M-16	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	25	11	25	150	21	32	-	0.8	CB-12 / 13	CE-020	LW-4	SP-221 (SP-223)	M3X8 (M3X12)	
CTUN^{R/L}	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	20	11	20	125	27	25	-	0.8						
2525M-16	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	25	11	25	150	27	32	-	0.8	CB-13 / 12	CE-020	LW-4	SP-221 (SP-223)	M3X8 (M3X12)	

• CTJN (Chipbreaker): **CB-12** for R-hand Toolholder, **CB-13** for L-hand Toolholder.

• CTUN (Chipbreaker): **CB-13** for R-hand Toolholder, **CB-12** for L-hand Toolholder.

• Shim & Shim Screw : When using **TN 1604** Insert, purchase spare parts in () separately.

Applicable Inserts

Applications	Cast Iron / Hard Materials	Cast Iron / Hard Materials	Cast Iron
Ref. Page	B89, B90	C9	B34
Insert	Ceramic 	CBN(KBN900) 	Coated
CTJN^{R/L}....-16	TNGN1607..(TNGN1604..) (TNMN1604..)	(TNMN1604..)	(TNGN1604..)
CTUN^{R/L}....-16			

For recommended cutting conditions, see page [D39~D40](#)

CRSN (External / Facing)

Side Rake Angle: -6°
Angle of Inclination: -6°

• Right-hand shown

CRDN (External / Copying)

Back Rake Angle: -8.5°

Toolholder Dimensions

Description	Std.	Dimension (mm)									Standard Corner-R(r _e)	Spare Parts			
		R	N	L	H1=h	H3	B	L1	L2	F1		Clamp Set	Wrench	Shim	Shim Screw
CRSN^{R/L} 2020K -12 2525M -12 3225P -12	●	●	20		20	125	25			-	CE-030	LW-4	SP-841 (SP-843)	M3X8 (M3X12)	
	●	●	25	11	25	150	26	32							
	●	●	32		25	170		32							
CRDNN 2020K -12 2525M -12 3225P -12 3232P -15 4040R -15		●	20		20	125	10			-	CE-030	LW-4	SP-841 (SP-843)	M3X8 (M3X12)	
		●	25	11	25	150	28	12.5							
		●	32		25	170		12.5							
		●	32	13	32	170	35	16							
	●	40		40	200		20		-	CE-040	LW-4	SP-861	M4X10		

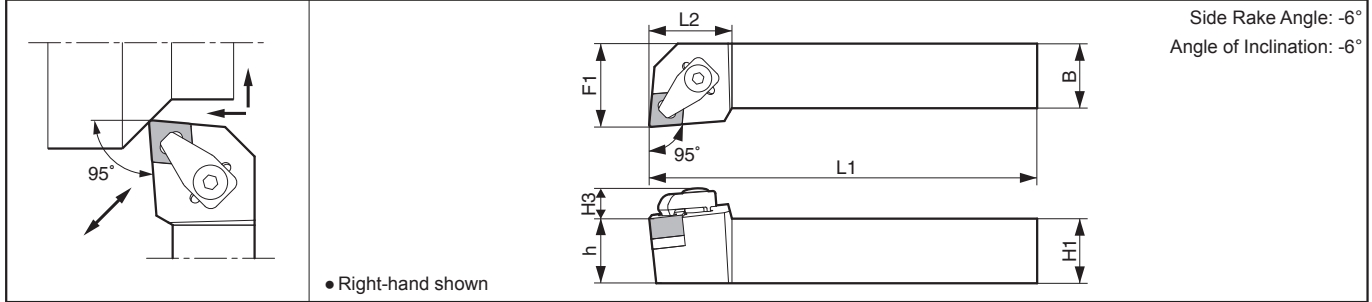
* Shim & Shim Screw : When using RN 1204 Insert, purchase spare parts in () separately.

Applicable Inserts

Applications	Cast Iron / Hard Materials	Cast Iron / Hard Materials	When using as toolholder for CBN tools (KBN900), prepare spare parts below separately.		
Ref. Page	B87	C9	Clamp Set	Shim	Shim Screw
Insert	Ceramic	CBN(KBN900)			
Toolholder					
CRSN^{R/L} ...-12	RNGN120700(RNGN120400)	(RNMN120400)	CE-030A	SP-843	M3X12
CRDNN ...-12	RNGN120700(RNGN120400)	(RNMN120400)	CE-030A	SP-843	M3X12
CRDNN ...-15	RNGN150700	-	-	-	-

For recommended cutting conditions, see page [D39~D40](#)

CCLN-GX (External / Facing / Back Turning)



D

External

Toolholder Dimensions

Description	Std.		Dimension (mm)							Standard Corner-R(r/c)	Spare Parts				
	R	L	H1=h	H3	B	L1	L2	F1	Clamp Set		Wrench	Shim	Shim Screw		
CCLN^{F/L} 2525M-12GX	●	●	25	13	25	150	30	32	1.2	CE-410	LW-4	SP-441	M3X8		

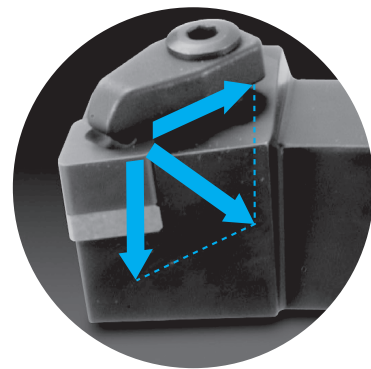
Applicable Inserts

Applications	Cast Iron
Ref. Page	B85
Toolholder	Ceramic
CCLN^{F/L}...12GX	CNGX1207..

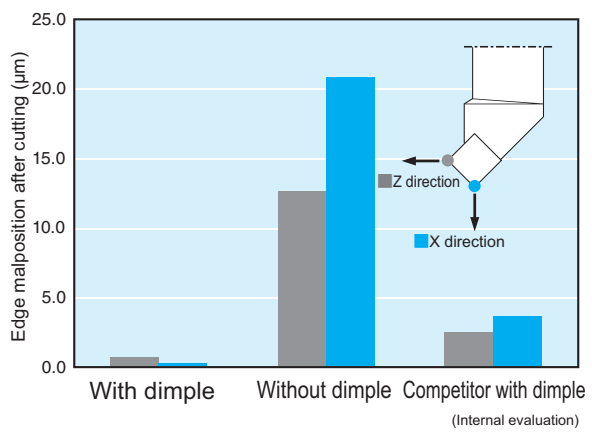
For recommended cutting conditions, see page [D39~D40](#)

Features

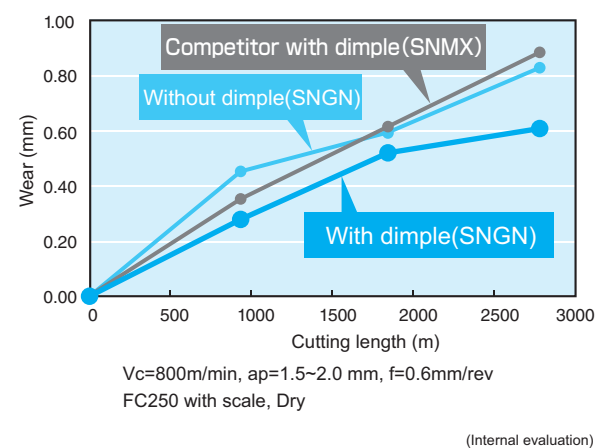
1. Improved clamping stability due to the dimple design.
2. Improved machining stability and machinability



Edge displacement

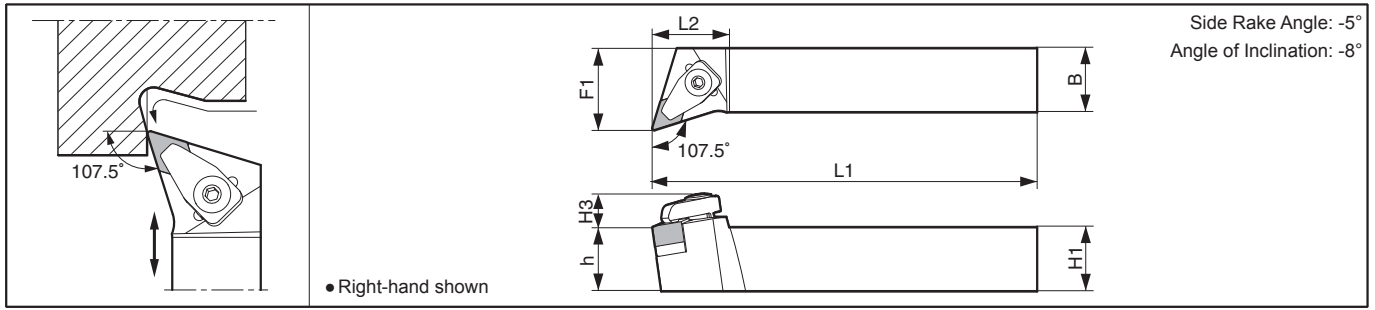


Cutting Capability

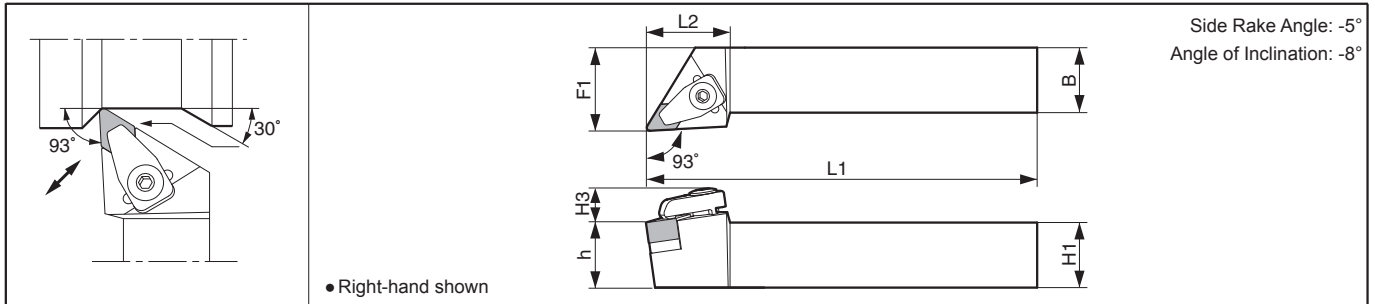


● : Std. Item □ : Check Availability

CDHN-GX (External / Copying / Back Turning)



CDJN-GX (External / Copying / Back Turning)



Toolholder Dimensions

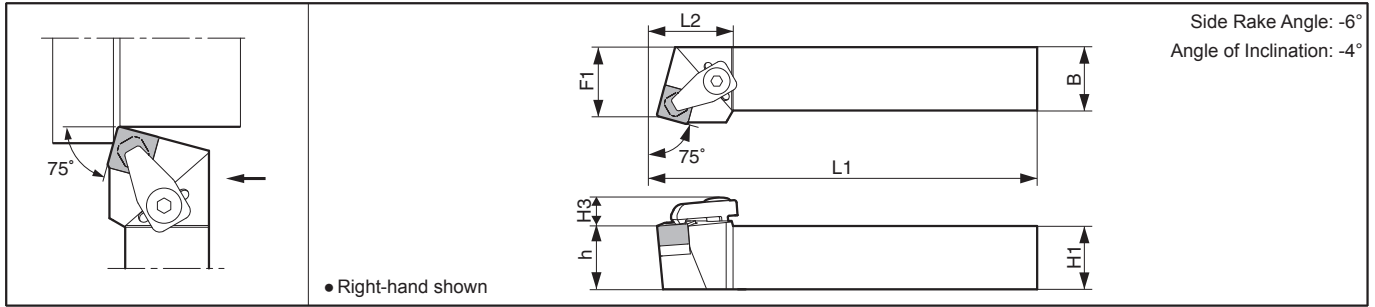
Description	Std.		Dimension (mm)							Standard Corner-R(r)	Spare Parts				
	R	L	H1=h	H3	B	L1	L2	F1	Clamp Set		Wrench	Shim	Shim Screw		
CDHN ^{R/L} 2525M-12GX	●	●	25	14	25	150	30	32	1.2	CE-410	LW-4	SP-521	M3X8		
	●	●	25	15	25	150	33	32	1.2	CE-430		SP-541	M3X8		
CDJN ^{R/L} 2525M-12GX	●	●	25	14	25	150	32	32	1.2	CE-410	LW-4	SP-521	M3X8		
	●	●	25	15	25	150	38	32	1.2	CE-430		SP-541	M3X8		

Applicable Inserts

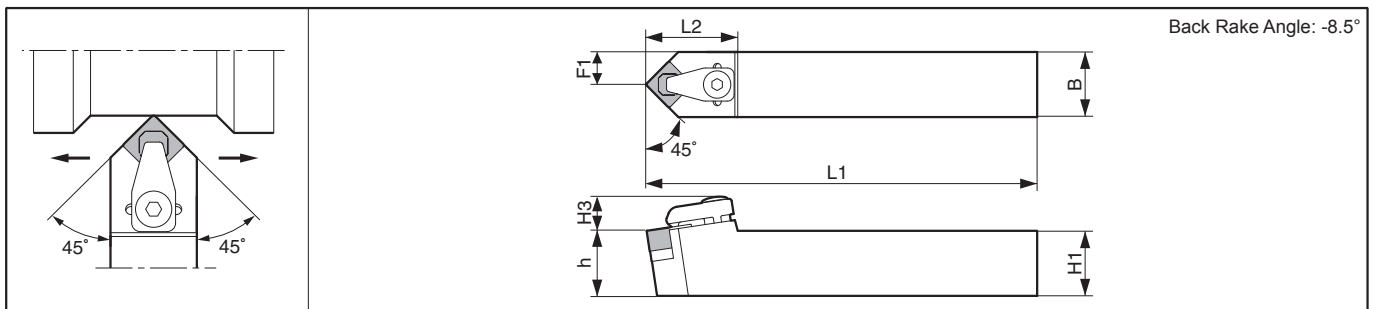
Applications	Cast Iron
Ref. Page	B86
Toolholder	Ceramic
CDHN ^{R/L} 2525M-12GX	DNGX1207 ...
2525M-15GX	DNGX1507 ...
CDJN ^{R/L} 2525M-12GX	DNGX1207 ...
2525M-15GX	DNGX1507 ...

For recommended cutting conditions, see page [D39~D40](#)

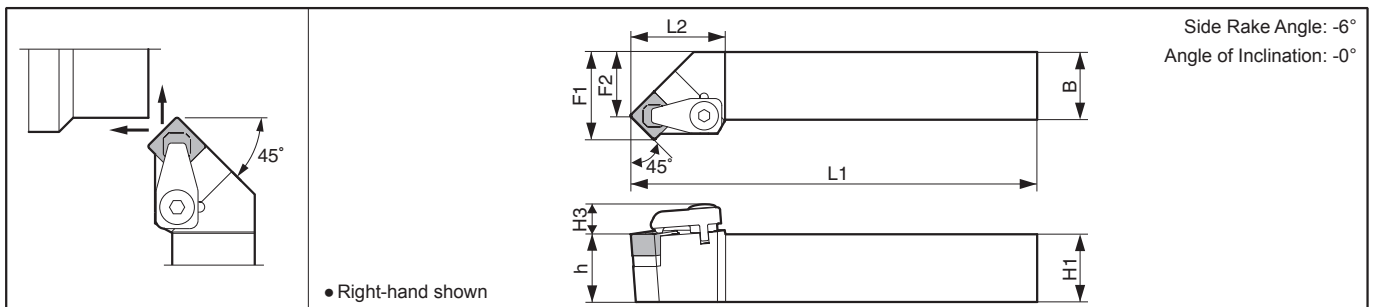
CSRN-GX (External)



CSDN-GX (External / Chamfering)



CSSN-GX (External / Facing / Chamfering)



Toolholder Dimensions

Description	Std.	Dimension (mm)										Standard Corner-R (°)	Spare Parts				
		R	N	L	H1=h	H3	B	L1	L2	F1	F2		Clamp Set	Wrench	Shim	Shim Screw	
CSRN ^{R/L}	2525M-12GX	●	●	25	12	25	150	30	27	-	1.2	CE-410	LW-4	SP-141	M3X8		
	2525M-15GX	●	●	25	13	25	150	35	27	-	1.2	CE-410	LW-4	SP-162	M4X10		
CSDNN	2525M-12GX		●	25	13	25	150	35	12.5	-	1.2	CE-410	LW-4	SP-141	M3X8		
	2525M-15GX		●	25	14	25	150	40	12.5	-	1.2	CE-410	LW-4	SP-162	M4X10		
CSSN ^{R/L}	2525M-12GX	●	●	25	12	25	150	35	32	23	1.2	CE-410	LW-4	SP-141	M3X8		
	2525M-15GX	●	●	25	13	25	150	40	32	21	1.2	CE-410	LW-4	SP-162	M4X10		

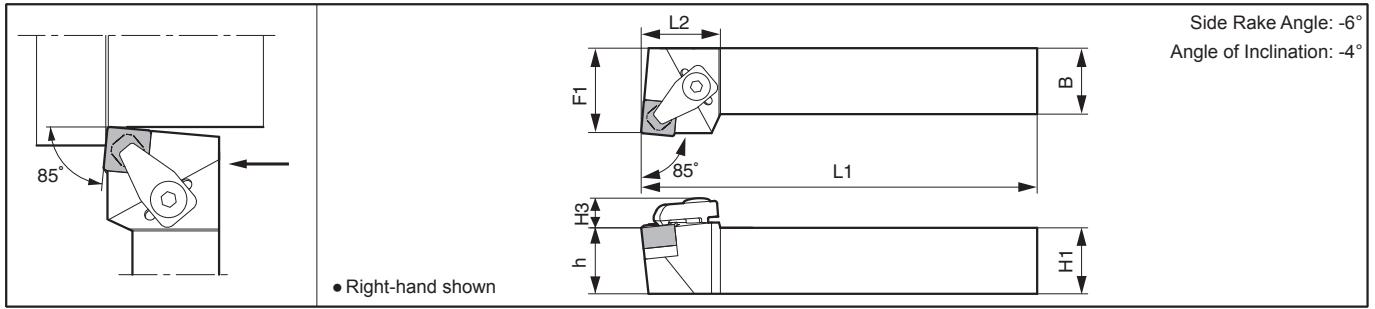
Applicable Inserts

Applications	Cast Iron
Ref. Page	B89
Toolholder	Ceramic
CSRN ^{R/L}	2525M-12GX SNGX1207 ...
	2525M-15GX SNGX1507 ...
CSDNN	2525M-12GX SNGX1207 ...
	2525M-15GX SNGX1507 ...
CSSN ^{R/L}	2525M-12GX SNGX1207 ...
	2525M-15GX SNGX1507 ...

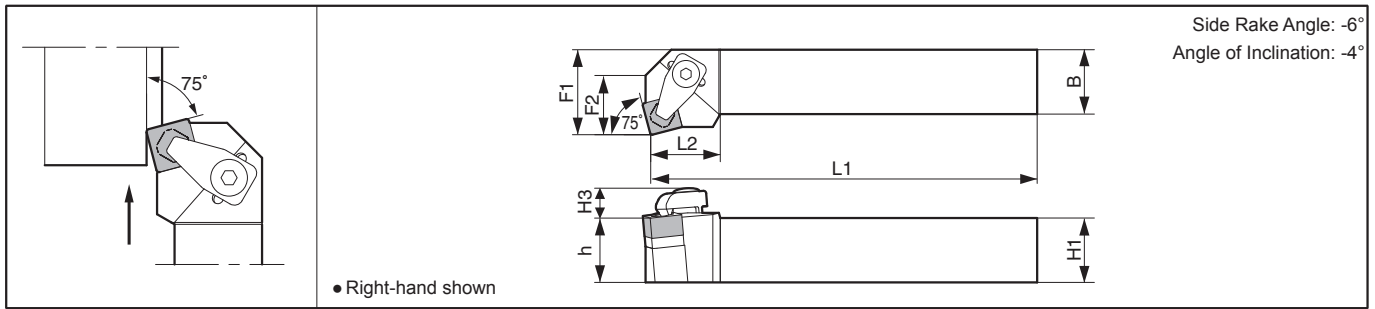
For recommended cutting conditions, see page [D39~D40](#)

● : Std. Item □ : Check Availability

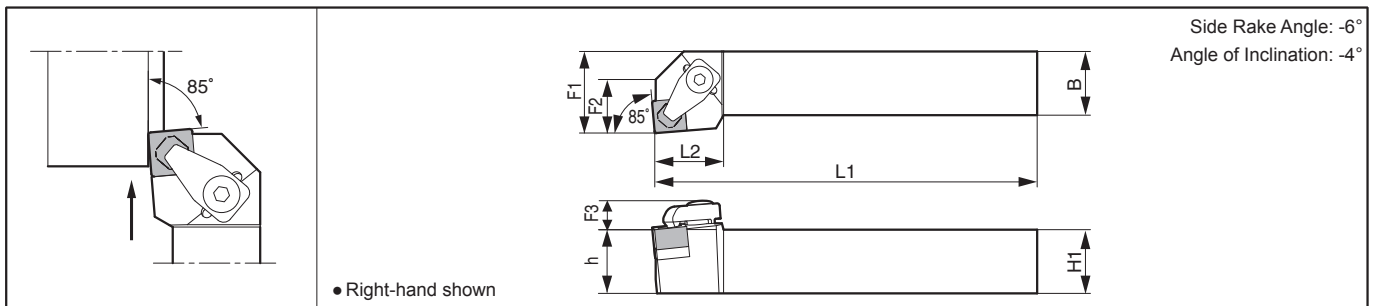
CS-N-GX (External)



CSKN-GX (Facing)



CSYN-GX (Facing)



● Toolholder Dimensions

Description	Std.	Dimension (mm)									Standard Corner-R(R)	Spare Parts				
		R	L	H1-h	H3	B	L1	L2	F1	F2		Clamp Set	Wrench	Shim	Shim Screw	
CS-N^{R/L} 2525M -12GX	●	●	25	12	25	150	30	32	-	1.2	CE-410	LW-4	SP-141	M3X8		
	●	●	25	13	25	150	30	32	-	1.2	CE-410	LW-4	SP-162	M4X10		
CSKN^{R/L} 2525M -12GX	●	●	25	12	25	150	27	32	23	1.2	CE-410	LW-4	SP-141	M3X8		
	●	●	25	13	25	150	28	32	23	1.2	CE-410	LW-4	SP-162	M4X10		
CSYN^{R/L} 2525M -12GX	●	●	25	12	25	150	27	32	21	1.2	CE-410	LW-4	SP-141	M3X8		
	●	●	25	13	25	150	29	32	23	1.2	CE-410	LW-4	SP-162	M4X10		

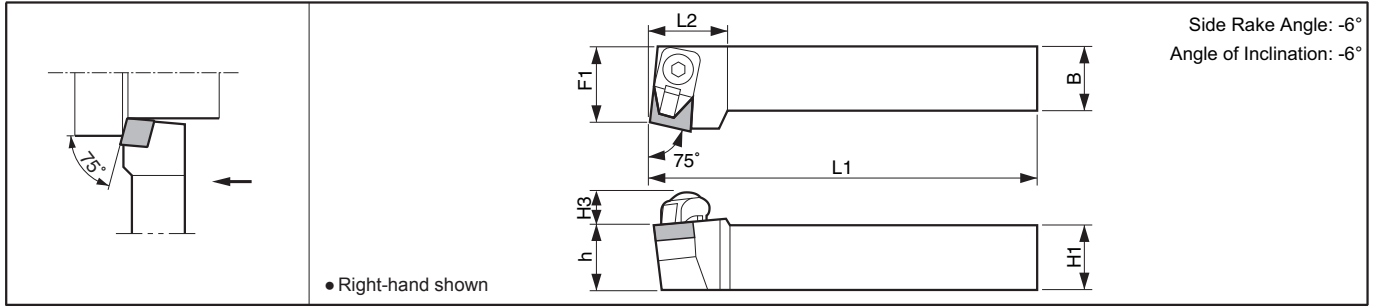
● Applicable Inserts

Applications	Cast Iron
Ref. Page	B89
Toolholder	Ceramic SNGX1207 ... SNGX1507 ...
CS-N^{R/L} 2525M -12GX	SNGX1207 ...
2525M -15GX	SNGX1507 ...
CSKN^{R/L} 2525M -12GX	SNGX1207 ...
2525M -15GX	SNGX1507 ...
CSYN^{R/L} 2525M -12GX	SNGX1207 ...
2525M -15GX	SNGX1507 ...

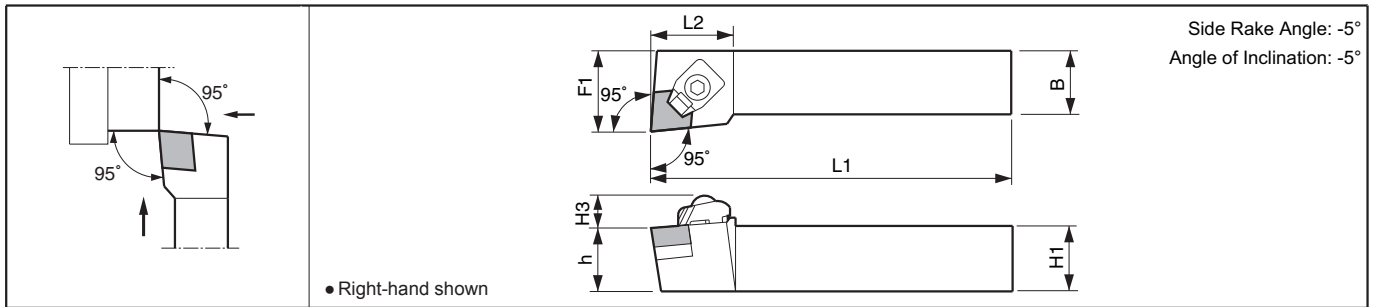
For recommended cutting conditions, see page ● D39~D40

● : Std. Item □ : Check Availability

CCRN-A (External)



CCLN-A (External / Facing)



Toolholder Dimensions

Description	Std.		Dimension (mm)							Standard Corner-R (R _e)	Spare Parts				
	R	L	H1=h	H3	B	L1	L2	F1	Clamp Set		Wrench	Shim	Shim Screw		
	CCRN^{R/L} 2525M-09A	●	●	25	11	25	150	27	27		0.8				
CCLN^{R/L} 2525M-09A	●	●	25	11	25	150	35	32	0.8						
3225P-09A	●	●	32	11	25	170	35	32	0.8						

Applicable Inserts

Applications	Cast Iron / Hard Materials
Ref. Page	C9
Insert	CBN(KBN900)
Toolholder	CNMN0903..
CCRN^{R/L}...-09A	
CCLN^{R/L}...-09A	

* For **CNMN1204** Insert holder, see page **D22**.

For recommended cutting conditions, see page **D39~D40**

CRSN-A (External / Facing)

Side Rake Angle: -6°
Angle of Inclination: -6°

• Right-hand shown

CRDN-A (External / Copying)

Back Rake Angle: -8.5°

Toolholder Dimensions

Description	Std.	Dimension (mm)									Standard Corner-R (rc)	Spare Parts					
		R	N	L	H1-h	H3	B	L1	L2	F1		Clamp Set	Wrench	Shim		Shim Screw	
														HH	BH		
CRSN ^{R/L}	2525M-09A	●	●	25	11	25	150	26	32	-	CE-030A	LW-4	SP-829	-	HH3X12		
	3225P-09A	●	●	32	11	25	170	26	32	-			-	SP-849 (SP-843)	BH3X12		
	2525M-12A	●	●	25	11	25	150	26	32	-	CE-030A	LW-4	SP-829	-	HH3X12		
	3225P-12A	●	●	32	11	25	170	29	12.5	-			-	SP-849 (SP-843)	BH3X12		

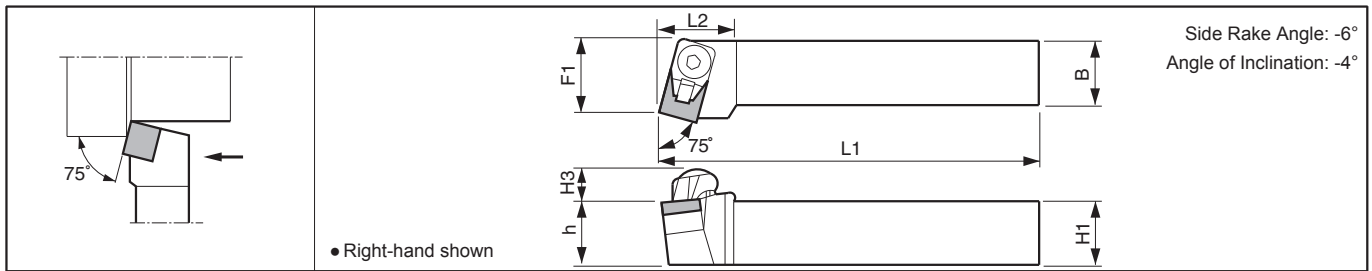
• 12A Holder Shim: When using RN □ □ 1204 Insert, purchase spare parts: SP-843 in () separately.

Applicable Inserts

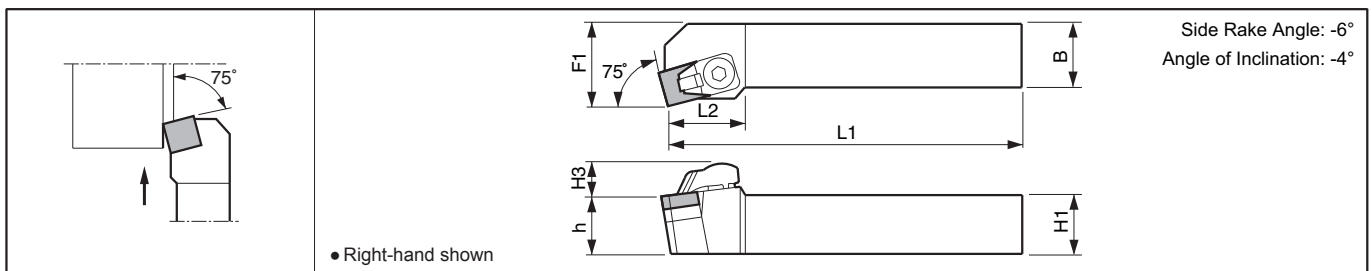
Applications	Cast Iron / Hard Materials	Cast Iron / Hard Materials	Cast Iron / Hard Materials	When using as toolholder for ceramic tools, prepare spare parts below separately.	
Ref. Page	C9	B87	B87	Shim	Shim Screw
Insert	CBN(KBN900)	Ceramic	Ceramic	Shim	Shim Screw
	Toolholder				
CRSN ^{R/L} ...-09A	RNMN090300	RNGN090300	(RNGN090400)	SP-826	-
CRSN ^{R/L} ...-12A	RNMN120300 (RNMN120400)	-	(RNGN120400)	SP-843	M3X12
			(RNGN120700)	SP-841	M3X8
			(RNGN090400)	SP-826	-
CRDNN...-09A	RNMN090300	RNGN090300	(RNGN120400)	SP-843	M3X12
CRDNN...-12A	RNMN120300 (RNMN120400)	-	(RNGN120700)	SP-841	M3X8

For recommended cutting conditions, see page [D39~D40](#)

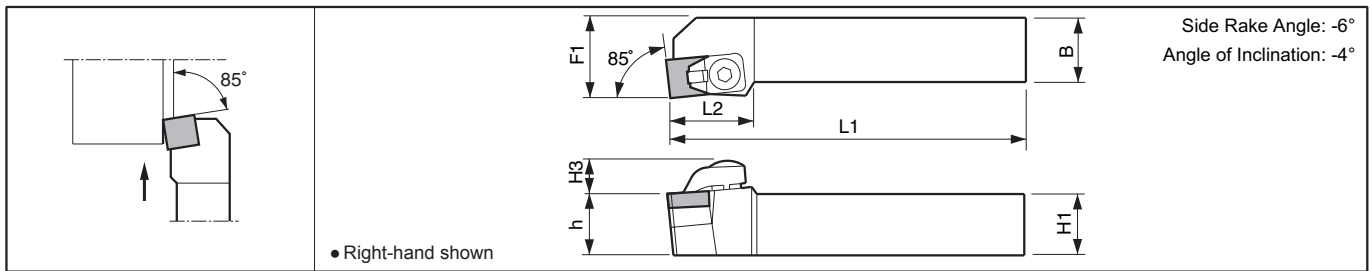
CSRN-A (External)



CSKN-A (Facing)



CSYN-A (Facing)



Toolholder Dimensions

Description	Std.		Dimension (mm)							Standard Corner-R (r)	Spare Parts					
	R	L	H1-h	H3	B	L1	L2	F1	Clamp Set		Wrench	Shim		Shim Screw		
																HH
CSRN ^{R/L} 2525M-09A	●	●	25	11	25	150	22	27	0.8	CE-030A	LW-4	SP-129	-	HH3X12		
	●	●	25	11	25	150	22	27				-	SP-148 (SP-143)	BH3X12		
CSKN ^{R/L} 2525M-09A	●		25	11	25	150	27	32	0.8	CE-030A	LW-4	SP-129	-	HH3X12		
	●		25	11	25	150	27	32				-	SP-148 (SP-143)	BH3X12		
CSYN ^{R/L} 2525M-09A	●	●	25	11	25	150	26	32	0.8	CE-030A	LW-4	SP-129	-	HH3X12		
	●	●	25	11	25	150	26	32				-	SP-148 (SP-143)	BH3X12		

* 12A Holder Shim: When using SN 1204 Insert, purchase spare parts: SP-143 in () separately.

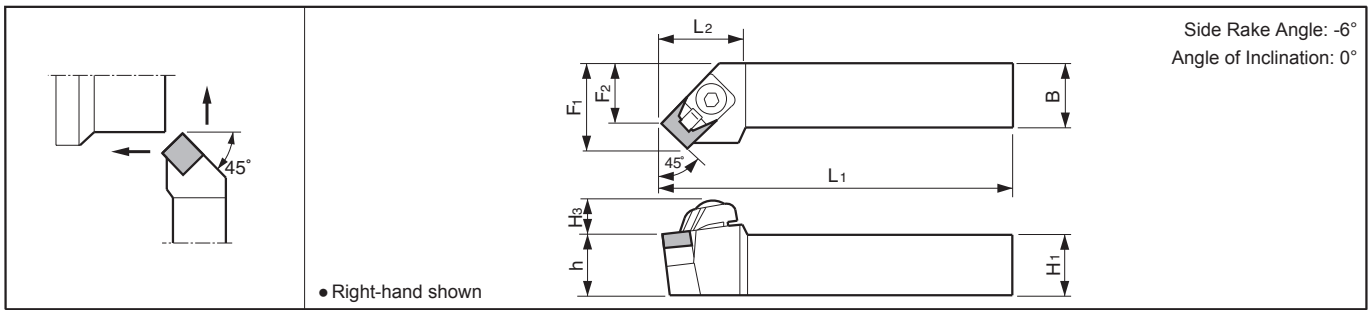
Applicable Inserts

Applications Ref. Page	Cast Iron / Hard Materials	Cast Iron	Cast Iron / Hard Materials				When using as toolholder for ceramic tools, prepare spare parts below separately.			
	C9	B28	B88, B89		Ceramic	Chipbreaker	Clamp Set	Shim	Shim Screw	
Insert	CBN(KBN900)	coated Carbide								
	Toolholder									
CSRN ^{R/L}-09A	SNMN0903..	-			-					
CSRN ^{R/L}-12A	SNMN1203..	(SNMN1204..)			(SNGN1204..) (SNMN1204..)	CB-11	CE-020	SP-143	M3X12	
	(SNMN1204..)				(SNGN1207..) (SNMN1207..)			SP-141	M3X8	
CSKN ^{R/L}-09A	SNMN0903..	-			-					
CSKN ^{R/L}-12A	SNMN1203..	(SNMN1204..)			(SNGN1204..) (SNMN1204..)	CB-11	CE-020	SP-143	M3X12	
	(SNMN1204..)				(SNGN1207..) (SNMN1207..)			SP-141	M3X8	
CSYN ^{R/L}-09A	SNMN0903..	-			-					
CSYN ^{R/L}-12A	SNMN1203..	(SNMN1204..)			(SNGN1204..) (SNMN1204..)	CB-11	CE-020	SP-143	M3X12	
	(SNMN1204..)				(SNGN1207..) (SNMN1207..)			SP-141	M3X8	

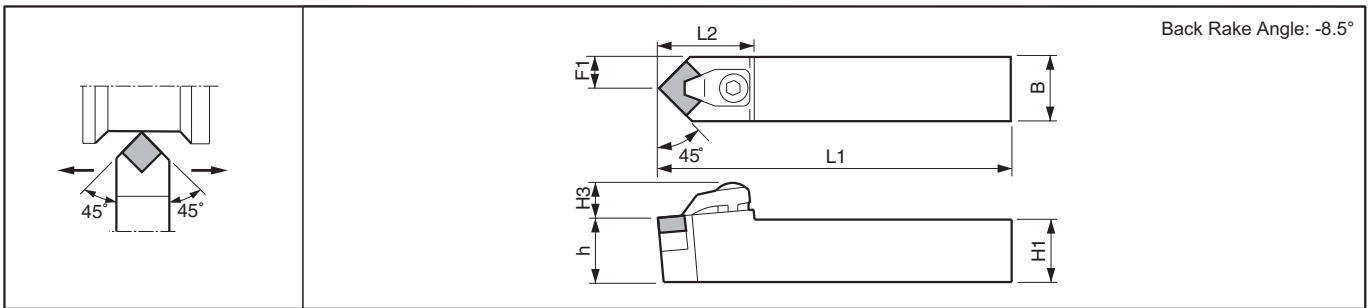
For recommended cutting conditions, see page [D39~D40](#)

● : Std. Item □ : Check Availability

CSSN-A (External / Facing / Chamfering)



CSDN-A (External / Chamfering)



● Toolholder Dimensions

Description	Std.	Dimension (mm)										Standard Corner-R (r)	Spare Parts					
		R	N	L	H1=h	H3	B	L1	L2	F1	F2		Clamp Set	Wrench	Shim		Shim Screw	
																		HH
CSSN^{R/L} 2525M-09A	●	●	25	11	25	150	27	32	25	0.8	CE-030A	LW-4	SP-129	-	HH3X12			
	●	●	25	11	25	150	27	32	23				-	SP-148 (SP-143)	BH3X12			
CSDNN 2525M-09A	●	●	25	13	25	150	33	12.5	-	0.8	CE-040	LW-4	SP-129	-	HH3X12			
	●	●	32												170	SP-148 (SP-143)	BH3X12	
3225P-09A	●	●	25	13	25	150	33	12.5	-	0.8	CE-040	LW-4	SP-129	-	HH3X12			
	●	●	25												170	SP-148 (SP-143)	BH3X12	
2525M-12A	●	●	25	13	25	150	33	12.5	-	0.8	CE-040	LW-4	SP-129	SP-148 (SP-143)	BH3X12			

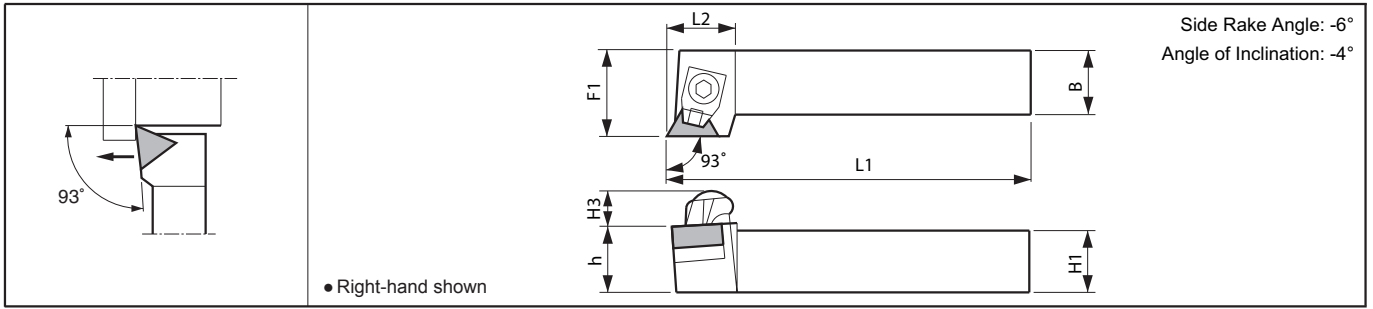
• 12A Holder Shim: When using SN 1204 Insert, purchase spare parts: SP-143 in () separately.

● Applicable Inserts

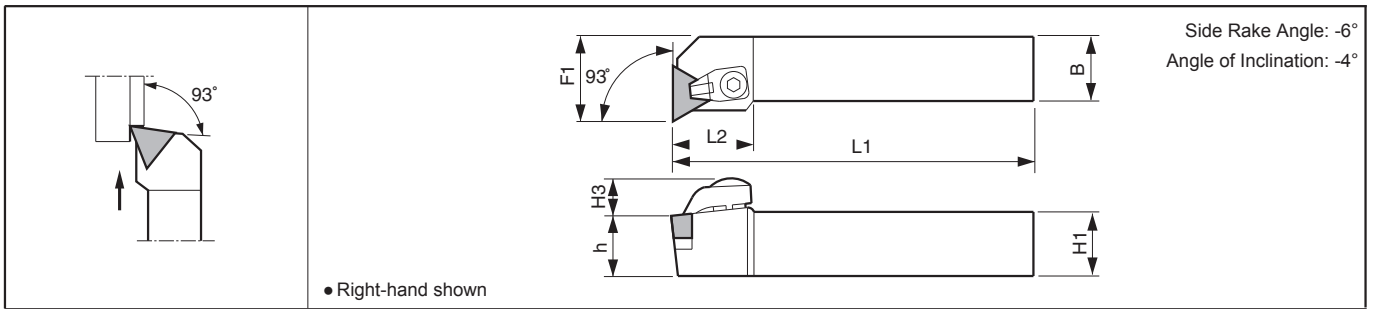
Applications	Cast Iron / Hard Materials	Cast Iron	Cast Iron / Hard Materials	When using as toolholder for ceramic tools, prepare spare parts below separately.			
Ref. Page	C9	B28	B88, B89	Chipbreaker	Clamp Set	Shim	Shim Screw
Insert	CBN(KBN900)	coated Carbide	Ceramic				
CSSN^{R/L}... 09A	SNMN0903..	-	-	-	-	-	-
CSSN^{R/L}... 12A	SNMN1203.. (SNMN1204..)	(SNMN1204..)	(SNGN1204..) (SNMN1204..) (SNGN1207..) (SNMN1207..)	CB-11	CE-020	SP-143	M3X12
CSDNN... 09A	SNMN0903..	-	-			SP-141	M3X8
CSDNN... 12A	SNMN1203.. (SNMN1204..)	(SNMN1204..)	(SNGN1204..) (SNMN1204..) (SNGN1207..) (SNMN1207..)	-	-	SP-143	M3X12
						SP-141	M3X8

For recommended cutting conditions, see page ● D39~D40

CTJN-A (External)



CTUN-A (Facing)



Toolholder Dimensions

Description	Std.		Dimension (mm)						Standard Corner-R(r_c)	Spare Parts			
	R	L	H1=h	H3	B	L1	L2	F1		Clamp Set	Wrench	Shim	Shim Screw
CTJN^{R/L} 2525M -11A	●	●	25	11	25	150	22	32	0.8	CE-030A	LW-4	SP-219	HH3X12
CTUN^{R/L} 2525M -11A	●	●	25	11	25	150	28	32	0.8	CE-030A	LW-4	SP-219	HH3X12
3225P -11A	●		32			170							

Applicable Inserts

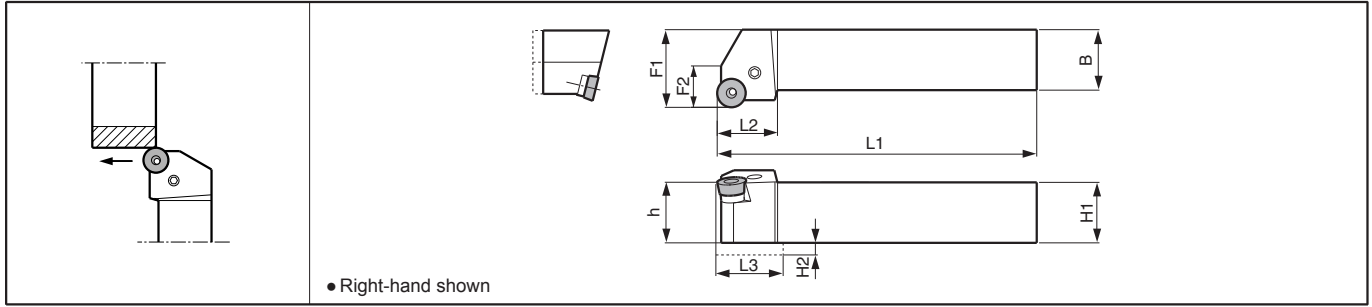
Applications	Cast Iron / Hard Materials	Cast Iron / Hard Materials
Ref. Page	C9	B90
Insert	CBN(KBN900)	Ceramic
Toolholder		
CTJN^{R/L}...-11A	TNMN1103..	TNGN1103..
CTUN^{R/L}...-11A		

* TNMN1604 Insert holder is described on **D26**.

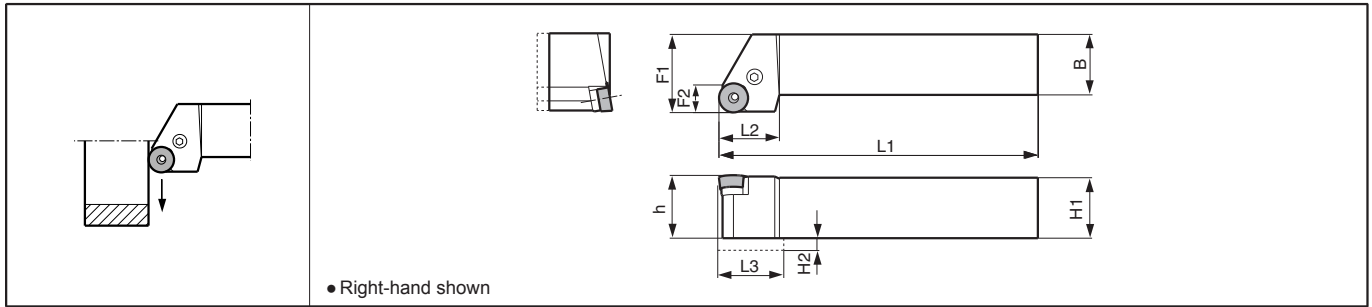
For recommended cutting conditions, see page **D39~D40**



PRGC-BE (External)



PRGC-BF (Facing)



Toolholder Dimensions

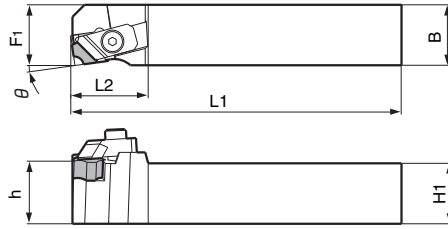
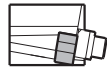
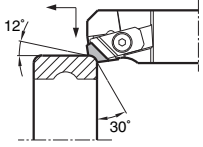
Description	Std.	Dimension (mm)										Spare Parts						Applicable Inserts ● B80
		R	L	H1-h	H2	B	L1	L2	L3	F1	F2	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench	
PRGC ^{R/L}	2020K -12BE	●	●	20	-	20	125	22	-	25	15	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1	FH-2.5	RCMT 1204M0-BB
	2525M -12BE	●	●	25	-	25	150	25	-	32	17							
	2020K -16BE	●	●	20	5	20	125	27	27	29	22	LL-2C	LS-1T	LR-16C	LSP-2	PC-2	FH-2.5	RCMT 1606M0-BB
	2525M -16BE	●	●	25	-	25	150	27	-	32	22							
PRGC ^{R/L}	2020K -12BF	●	●	20	-	20	125	22	-	25	10	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1	FH-2.5	RCMT 1204M0-BB
	2525M -12BF	●	●	25	-	25	150	25	-	32	11							
	2020K -16BF	●	●	20	5	20	125	27	27	25	17	LL-2C	LS-1T	LR-16C	LSP-2	PC-2	FH-2.5	RCMT 1606M0-BB
	2525M -16BF	●	●	25	-	25	150	27	-	32	17							

Applicable Inserts

Insert	Description	Dimension (mm)				Angle (°)
		A	T	ød	rε	α
	RCMT 1204M0-BB	12.0	4.76	4.2	-	7°
	1606M0-BB	16.0	6.35	5.5	-	7°

For recommended cutting conditions, see page [D39~D40](#)

CBSN (External Round Chamfering)



• Right-hand shown

Toolholder Dimensions

Description	Std.		Dimension (mm)					θ	Spare Parts				Applicable Inserts ● B80
	R	L	H1=h	B	L1	L2	F1		Clamp Set	Wrench	Shim	Shim Screw	
	CBSN ^{R/L} 2020K -12	●	●	20	20	125	32		20	9°	CP-RC ^{R/L}	LW-5	
2525M -12	●	●	25	25	150	32	25						

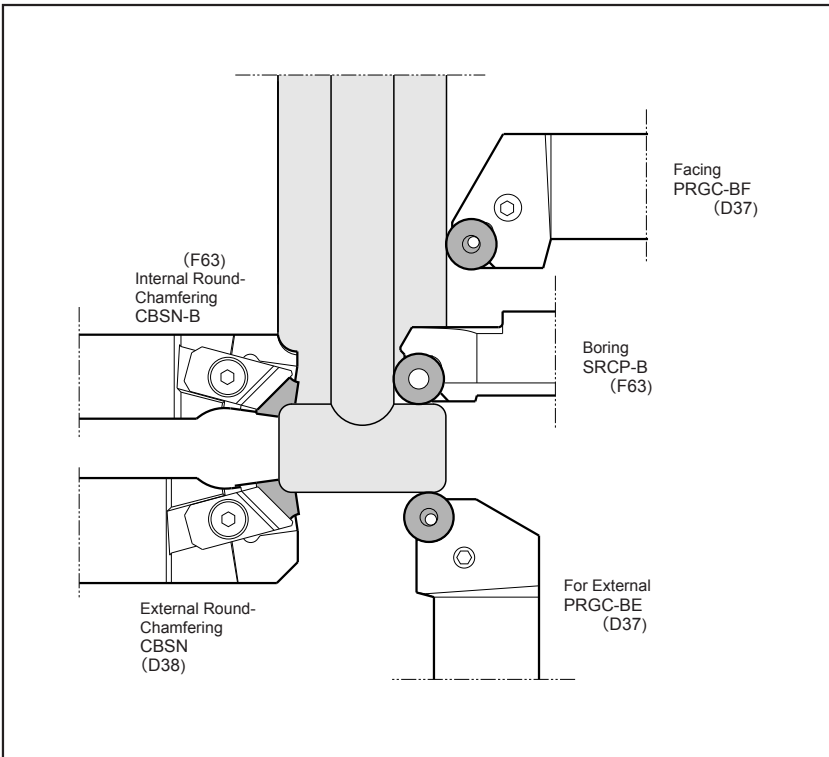
* Clamp Set : RP-RCR for Right-hand Toolholder, and CP-RCL for Left-hand Toolholder.

Applicable Inserts

Insert	Description	Dimension (mm)				Angle (°)
		A	T	B	ε	θ
			SNMF 120406-21 120410-21 120416-21 120421-21 120426-21	12.70	4.76	1.5 3.0 3.1 3.2 3.3

Tooling for Bearing Machining

For recommended cutting conditions, see page ● D39~D40



● : Std. Item □ : Check Availability

D
External

Recommended Cutting Conditions

Recommended Cutting Conditions - External Turning (Negative Insert)

(ap indicates radius)

ISO Classification	Workpiece Material	Hardness	Cutting Range	Application	Recommended Chipbreaker	Recommended Grade	Corner-R (rε)	Lower Limit - Recommendation - Upper Limit		
								Vc(m/min)	ap(mm)	f(mm/rev)
P	Low-carbon Steel Low-carbon Alloy	HB 300	Finishing (Gloss Oriented)	Continuous Interruption	XP	TN6020 TN6020	0.4 0.8	250 - 320 - 380 220 - 300 - 360	0.2 - 0.5 - 0.7 0.2 - 0.5 - 0.7	0.07 - 0.12 - 0.2 0.07 - 0.12 - 0.2
			Finishing (Finish Oriented)	Continuous Interruption	XP	PV7010 PV7025	0.4 0.8	250 - 300 - 350 220 - 280 - 340	0.2 - 0.5 - 0.7 0.2 - 0.5 - 0.7	0.07 - 0.12 - 0.2 0.07 - 0.12 - 0.2
			Finishing-Medium (Gloss Oriented)	Continuous Interruption	XQ	TN6020 TN6020	0.4 0.8	250 - 300 - 350 220 - 260 - 320	0.5 - 1.0 - 1.5 0.5 - 1.0 - 1.5	0.17 - 0.25 - 0.3 0.17 - 0.25 - 0.3
			Finishing-Medium (Finish Oriented)	Continuous Interruption	XQ	PV7010 PV7025	0.8 0.8	250 - 300 - 350 220 - 260 - 320	0.5 - 1.0 - 1.5 0.5 - 1.0 - 1.5	0.17 - 0.25 - 0.3 0.17 - 0.25 - 0.3
			Medium-Roughing	Continuous Interruption	XS	PV7025 CA5515	0.8 0.8	200 - 250 - 300 160 - 210 - 260	0.8 - 1.5 - 2.0 0.8 - 1.5 - 2.0	0.25 - 0.3 - 0.4 0.25 - 0.3 - 0.4
			Roughing	Continuous Interruption	PS	CA5515 CA5525	0.8 1.2	180 - 220 - 260 150 - 200 - 240	1.0 - 2.5 - 3.5 1.0 - 2.5 - 3.5	0.2 - 0.3 - 0.4 0.2 - 0.3 - 0.4
			Medium-Roughing High Feed Rate	Continuous Interruption	PT	CA5515 CA5525	0.8 1.2	150 - 200 - 240 120 - 180 - 220	1.5 - 3.0 - 4.5 1.5 - 3.0 - 4.5	0.25 - 0.35 - 0.45 0.25 - 0.35 - 0.45
			Roughing High Feed Rate	Continuous Interruption	PH	CA5515	1.2	150 - 200 - 240 120 - 180 - 220	2.0 - 5.0 - 8.0 2.0 - 5.0 - 8.0	0.4 - 0.6 - 0.8 0.3 - 0.5 - 0.7
			Roughing (Low Cutting Force)	Continuous Interruption	PX (Single Side)	CA5515 CA5525	1.2 1.6	150 - 200 - 240 120 - 180 - 220	2.0 - 5.0 - 8.0 2.0 - 5.0 - 8.0	0.4 - 0.6 - 0.8 0.3 - 0.5 - 0.7
			Finishing (Time Oriented)	Continuous Interruption	WP (Wiper)	PV7010 CA5515	0.8 0.8	200 - 250 - 300 160 - 220 - 280	0.3 - 0.5 - 1.0 0.3 - 0.5 - 1.0	0.2 - 0.3 - 0.4 0.2 - 0.3 - 0.4
	Finishing-Medium (Time Oriented)	Continuous Interruption	WQ (Wiper)	PV7010 CA5525	0.8 0.8	180 - 220 - 260 130 - 180 - 240	1.0 - 2.0 - 3.0 1.0 - 2.0 - 3.0	0.2 - 0.3 - 0.4 0.2 - 0.3 - 0.4		
	Finishing (Gloss Oriented)	Continuous Interruption	GP	TN6010 TN6010	0.4 0.8	200 - 250 - 300 180 - 230 - 280	0.3 - 0.5 - 1.0 0.3 - 0.5 - 1.0	0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2		
	Finishing (Finish Oriented)	Continuous Interruption	GP	PV7010 PV7025	0.4 0.8	200 - 250 - 300 200 - 240 - 280	0.3 - 0.5 - 1.0 0.3 - 0.5 - 1.0	0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2		
	Finishing-Medium (Gloss Oriented)	Continuous Interruption	CQ	TN6010 TN6020	0.8 1.2	180 - 230 - 270 150 - 210 - 250	0.5 - 1.5 - 2.5 0.5 - 1.5 - 2.5	0.1 - 0.2 - 0.25 0.1 - 0.15 - 0.2		
	Finishing-Medium (Finish Oriented)	Continuous Interruption	CQ	PV7010 CA5525	0.8 0.8	160 - 210 - 260 140 - 200 - 240	0.5 - 1.5 - 2.5 0.5 - 1.5 - 2.5	0.1 - 0.2 - 0.25 0.1 - 0.15 - 0.2		
	Medium-Roughing	Continuous Interruption	GS	CA5515 CA5525	0.8 1.2	150 - 200 - 240 120 - 180 - 220	1.0 - 2.0 - 3.0 1.0 - 2.0 - 3.0	0.2 - 0.3 - 0.5 0.15 - 0.2 - 0.3		
	Roughing	Continuous Interruption	PS	CA5515 CA5525	0.8 1.2	150 - 200 - 240 120 - 160 - 200	1.0 - 2.5 - 3.5 1.0 - 2.5 - 3.5	0.2 - 0.3 - 0.4 0.2 - 0.3 - 0.4		
	Medium-Roughing High Feed Rate	Continuous Interruption	PT	CA5515 CA5525	0.8 1.2	120 - 180 - 230 100 - 150 - 200	1.5 - 3.0 - 4.5 1.5 - 3.0 - 4.5	0.25 - 0.35 - 0.45 0.25 - 0.35 - 0.45		
	Roughing High Feed Rate	Continuous Interruption	PH	CA5515	1.2	120 - 180 - 230 100 - 150 - 200	2.0 - 5.0 - 8.0 2.0 - 5.0 - 8.0	0.4 - 0.6 - 0.8 0.3 - 0.5 - 0.7		
	Roughing (Low Cutting Force)	Continuous Interruption	PX (Single Side)	CA5515 CA5525	1.2 1.6	120 - 180 - 230 100 - 150 - 200	2.0 - 5.0 - 8.0 2.0 - 5.0 - 8.0	0.4 - 0.6 - 0.8 0.3 - 0.5 - 0.7		
	Finishing (Gloss Oriented)	Continuous Interruption	GP	TN6010 TN6020	0.4 0.8	150 - 200 - 250 120 - 180 - 220	0.3 - 0.5 - 1.0 0.3 - 0.5 - 1.0	0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2		
	Finishing (Finish Oriented)	Continuous Interruption	GP	PV7010 CA5515	0.4 0.8	120 - 180 - 240 100 - 150 - 200	0.3 - 0.5 - 1.0 0.3 - 0.5 - 1.0	0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2		
	Finishing-Medium	Continuous Interruption	CQ	CA5515 CA5525	0.8 0.8	120 - 160 - 220 100 - 140 - 180	0.5 - 1.5 - 2.5 0.5 - 1.5 - 2.5	0.15 - 0.25 - 0.3 0.15 - 0.2 - 0.25		
	Medium-Roughing	Continuous Interruption	PS	CA5515 CA5525	0.8 0.8	120 - 150 - 200 100 - 130 - 180	1.0 - 2.0 - 3.0 1.0 - 2.0 - 3.0	0.2 - 0.3 - 0.5 0.15 - 0.2 - 0.3		
	Medium-Roughing High Feed Rate	Continuous Interruption	PT	CA5515 CA5525	0.8 1.2	100 - 140 - 180 80 - 120 - 160	1.5 - 3.0 - 4.5 1.5 - 3.0 - 4.5	0.25 - 0.35 - 0.45 0.25 - 0.35 - 0.45		
	Roughing High Feed Rate	Continuous Interruption	PH	CA5515	1.2	100 - 140 - 180 80 - 120 - 160	2.0 - 5.0 - 8.0 2.0 - 5.0 - 8.0	0.4 - 0.6 - 0.8 0.3 - 0.5 - 0.7		
	Roughing (Low Cutting Force)	Continuous Interruption	PX (Single Side)	CA5515 CA5525	1.2 1.6	100 - 140 - 180 80 - 120 - 160	2.0 - 5.0 - 8.0 2.0 - 5.0 - 8.0	0.4 - 0.6 - 0.8 0.3 - 0.5 - 0.7		



External

Recommended Cutting Conditions

Recommended Cutting Conditions - External Turning (Negative Insert)

(ap indicates radius)

ISO Classification	Workpiece Material	Hardness	Cutting Range	Application	Recommended Chipbreaker	Recommended Grade	Corner-R (r)	Lower Limit - Recommendation - Upper Limit		
								vc(m/min)	ap(mm)	f(mm/rev)
M	Stainless Steel	HB _{IT} 220	Finishing (Gloss Oriented)	Continuous Interruption	HQ	TN6020 TN6020	0.8 0.8	120 - 160 - 200 100 - 120 - 150	0.5 - 1.0 - 1.5 0.5 - 1.0 - 1.5	0.08 - 0.15 - 0.2 0.05 - 0.1 - 0.15
			Finishing	Continuous Interruption	MQ	CA6515 CA6525	0.4 0.8	120 - 180 - 240 100 - 160 - 220	0.5 - 1.0 - 1.5 0.5 - 1.0 - 1.5	0.08 - 0.15 - 0.2 0.05 - 0.1 - 0.15
			Medium-Roughing (Chip Control Oriented)	Continuous Interruption	MS	CA6515 CA6525	0.4 0.8	120 - 160 - 200 80 - 140 - 180	1.0 - 2.0 - 3.0 1.0 - 2.0 - 3.0	0.1 - 0.2 - 0.3 0.2 - 0.3 - 0.4
			Medium-Roughing (Sharpness Oriented)	Continuous Interruption	MU	CA6515 CA6525	0.4 0.8	120 - 160 - 200 80 - 140 - 180	1.0 - 2.0 - 3.0 1.0 - 2.0 - 3.0	0.15 - 0.25 - 0.35 0.15 - 0.25 - 0.3
			Roughing	Continuous Interruption	Standard	CA6515 CA6525	0.8 1.2	100 - 140 - 180 80 - 120 - 150	1.0 - 2.0 - 4.0 1.0 - 2.0 - 4.0	0.2 - 0.3 - 0.4 0.2 - 0.3 - 0.4
	Stainless Steel	HB _{IT} 300	Finishing (Gloss Oriented)	Continuous Interruption	HQ	TN6020 TN6020	0.8 0.8	100 - 120 - 150 80 - 100 - 120	0.5 - 1.0 - 1.5 0.5 - 1.0 - 1.5	0.05 - 0.1 - 0.15 0.05 - 0.08 - 0.1
			Finishing	Continuous Interruption	MQ	CA6515 CA6525	0.4 0.8	100 - 120 - 150 80 - 100 - 120	0.5 - 1.0 - 1.5 0.5 - 1.0 - 1.5	0.08 - 0.15 - 0.2 0.05 - 0.1 - 0.15
			Medium-Roughing (Chip Control Oriented)	Continuous Interruption	MS	CA6515 CA6525	0.4 0.8	100 - 120 - 150 80 - 100 - 120	1.0 - 1.5 - 2.0 1.0 - 2.0 - 3.0	0.1 - 0.15 - 0.25 0.1 - 0.15 - 0.2
			Medium-Roughing (Sharpness Oriented)	Continuous Interruption	MU	CA6515 CA6525	0.4 0.8	100 - 120 - 150 80 - 100 - 120	1.0 - 1.5 - 2.0 1.0 - 2.0 - 3.0	0.1 - 0.15 - 0.25 0.1 - 0.15 - 0.2
			Roughing	Continuous Interruption	Standard	CA6515 CA6525	0.8 1.2	80 - 100 - 120 60 - 80 - 100	1.0 - 2.0 - 3.0 1.0 - 2.0 - 4.0	0.2 - 0.3 - 0.4 0.2 - 0.3 - 0.4
K	Gray Cast Iron	HB _{IT} 250	High Speed Cutting	Continuous Interruption	Without Chipbreaker	KBN60M KBN900 KBN900	0.8 1.2 1.2	400 - 700 - 900 500 - 900 - 1200 500 - 700 - 900	0.05 - 0.2 - 0.5 0.1 - 0.5 - 1.0 0.5 - 1.0 - 1.5	0.03 - 0.05 - 0.1 0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2
			Finishing (Gloss Oriented)	Continuous Interruption	Standard	PV7005 TN6020	0.8 0.8	300 - 350 - 400 100 - 150 - 200	0.5 - 1.0 - 1.5 0.5 - 1.0 - 1.5	0.1 - 0.2 - 0.3 0.08 - 0.15 - 0.2
			Finishing (Ceramic)	Continuous Interruption	Without Chipbreaker	KA30 PT600M	1.2 0.8	300 - 500 - 700 300 - 450 - 600	0.3 - 0.5 - 1.0 0.3 - 0.5 - 1.0	0.1 - 0.2 - 0.3 0.1 - 0.2 - 0.3
			Medium (Ceramic)	Continuous Interruption	Without Chipbreaker	CS7050 KS6050	1.2 1.2	300 - 450 - 550 250 - 400 - 500	1.0 - 2.0 - 3.0 1.0 - 2.0 - 3.0	0.15 - 0.25 - 0.35 0.15 - 0.2 - 0.3
			Medium	Continuous Interruption	Standard	CA4505 CA4515	0.8 1.2	200 - 250 - 300 150 - 200 - 250	0.5 - 2.0 - 2.5 0.5 - 2.0 - 2.5	0.1 - 0.2 - 0.3 0.08 - 0.15 - 0.2
			Roughing	Continuous Interruption	ZS	CA4505 CA4515	0.8 1.2	200 - 250 - 300 150 - 200 - 250	1.0 - 2.0 - 4.0 1.0 - 2.0 - 4.0	0.2 - 0.3 - 0.4 0.2 - 0.3 - 0.4
	Nodular Cast Iron	HB _{IT} 270	High Speed Cutting	Continuous Interruption	Without Chipbreaker	KBN60M PT600M	0.4 0.8	200 - 300 - 400 200 - 250 - 350	0.1 - 0.3 - 0.5 0.1 - 0.5 - 1.0	0.1 - 0.15 - 0.2 0.1 - 0.2 - 0.4
			Finishing (Gloss Oriented)	Continuous Interruption	Standard	PV7005 TN6020	0.8 0.8	150 - 250 - 300 100 - 150 - 180	0.5 - 1.0 - 1.5 0.5 - 1.0 - 1.5	0.1 - 0.2 - 0.3 0.08 - 0.15 - 0.2
			Medium	Continuous Interruption	Standard	CA4505 CA4515	0.8 1.2	150 - 200 - 250 120 - 180 - 220	0.5 - 2.0 - 2.5 0.5 - 2.0 - 2.5	0.1 - 0.2 - 0.3 0.08 - 0.15 - 0.2
			Roughing	Continuous Interruption	ZS	CA4505 CA4515	0.8 1.2	150 - 200 - 250 120 - 180 - 220	1.0 - 2.0 - 4.0 1.0 - 2.0 - 4.0	0.2 - 0.3 - 0.4 0.2 - 0.3 - 0.4
N	Non-ferrous Metals	HB _{IT} 100	High Speed Cutting (Rainbow Surface Gross)	Continuous	Without Chipbreaker	KPD001	0.4	300 - 800 - 2000	0.05 - 0.5 - 1.0	0.05 - 0.1 - 0.15
			Finishing	Continuous Interruption	A3	KW10 KW10	0.8 0.8	400 - 500 - 700 400 - 500 - 700	0.5 - 1.0 - 2.0 0.5 - 1.0 - 2.0	0.1 - 0.2 - 0.25 0.1 - 0.2 - 0.25
			Medium	Continuous Interruption	AH	KW10 KW10	0.8 0.8	200 - 300 - 500 200 - 300 - 500	1.0 - 2.0 - 3.5 1.0 - 2.0 - 3.5	0.1 - 0.3 - 0.4 0.1 - 0.3 - 0.4
S	Titanium Alloy	HB _{IT} 400	Precision Cutting (Rainbow Surface Gross)	Continuous Interruption	Without Chipbreaker	KPD001 KPD001	0.4 0.4	100 - 150 - 180 70 - 120 - 150	0.05 - 0.3 - 0.5 0.05 - 0.3 - 0.5	0.03 - 0.1 - 0.15 0.03 - 0.07 - 0.1
			Finishing	Continuous Interruption	MQ	SW05 SW05	0.4 0.4	40 - 70 - 100 40 - 70 - 100	0.2 - 0.5 - 1.0 0.2 - 1.5 - 1.0	0.05 - 0.2 - 0.3 0.05 - 0.15 - 0.2
			Medium	Continuous Interruption	MU	SW05 SW05	0.8 0.8	40 - 60 - 80 40 - 60 - 80	0.5 - 1.0 - 3.0 0.5 - 1.0 - 3.0	0.1 - 0.25 - 0.35 0.1 - 0.2 - 0.3
	Heat-resistant Alloys	HB _{IT} 350	Finishing	Continuous Interruption	MQ	PR1310 PR1310	0.4 0.8	40 - 60 - 80 40 - 60 - 80	0.2 - 0.5 - 1.5 0.2 - 0.5 - 1.5	0.03 - 0.08 - 0.12 0.05 - 0.1 - 0.15
			Medium	Continuous Interruption	MS	PR1310 PR1310	0.8 1.2	40 - 60 - 80 40 - 60 - 80	0.5 - 1.0 - 2.0 0.5 - 1.0 - 2.0	0.05 - 0.1 - 0.15 0.1 - 0.15 - 0.2
H	Hard Materials	40 ~ 50 HRC	Finishing	Continuous Interruption	HQ Standard	CA5515 CA5515	0.8 0.8	60 - 100 - 120 30 - 50 - 70	0.1 - 0.3 - 0.5 0.1 - 0.3 - 0.5	0.05 - 0.08 - 0.1 0.05 - 0.08 - 0.1
			Finishing	Continuous Interruption	Without Chipbreaker	PT600M PT600M	0.8 1.2	60 - 80 - 100 30 - 40 - 60	0.2 - 0.5 - 0.7 0.2 - 0.5 - 0.7	0.05 - 0.1 - 0.15 0.05 - 0.1 - 0.15
		50-68 HRC	Finishing	Continuous Interruption	Without Chipbreaker	KBN05M KBN25M	0.8 1.2	100 - 150 - 200 80 - 120 - 160	0.05 - 0.3 - 0.5 0.05 - 0.3 - 0.5	0.05 - 0.08 - 0.1 0.05 - 0.08 - 0.1
			Medium	Continuous Interruption	Without Chipbreaker	KBN900 KBN900	1.2 1.2	80 - 100 - 120 70 - 90 - 110	0.5 - 1.0 - 2.0 0.3 - 0.7 - 1.0	0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.15
			Medium	Continuous Interruption	Without Chipbreaker	KBN900 KBN900	1.2 1.2	80 - 100 - 120 70 - 90 - 110	0.5 - 1.0 - 2.0 0.3 - 0.7 - 1.0	0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.15

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External