

TURNING TOOLS

EXTERNAL TURNING TOOLS

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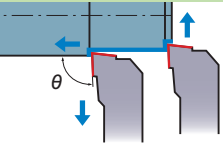
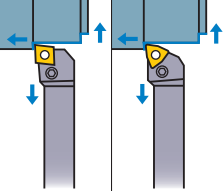
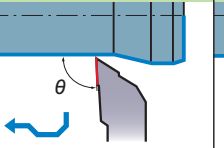
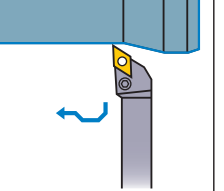
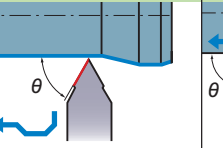
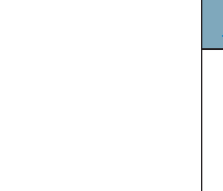
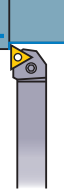
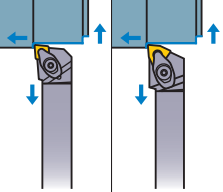
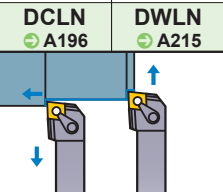
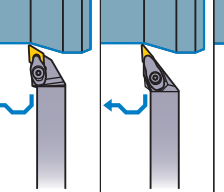
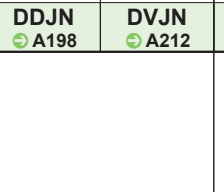
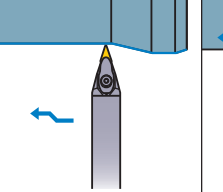
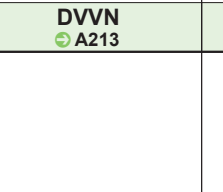
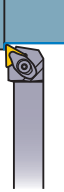
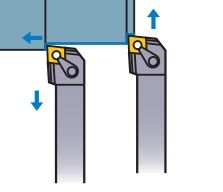
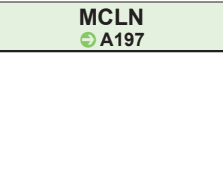
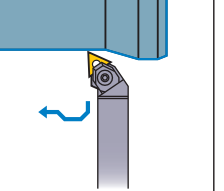
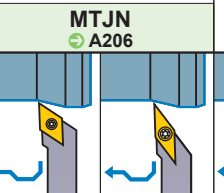
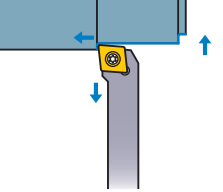
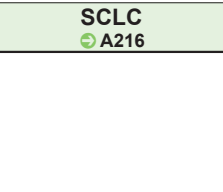
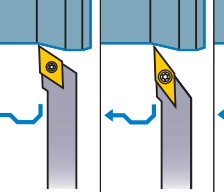
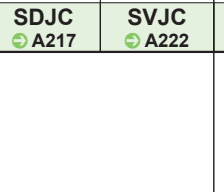
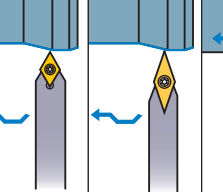
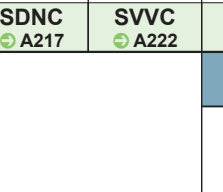
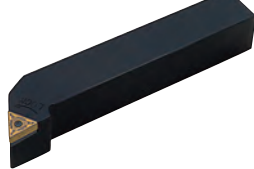
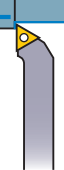
*Arranged by Alphabetical order

A201 CSBN	A202 MSSN	A232 RRSN
A204 CSDN	A208 MTEN	A216 SCLC
A226 CSDP	A206 MTJN	A217 SDJC
A205 CSKN	A211 MTQN	A228 SDJE
A210 CTFN	A197 PCBN	A217 SDNC
A227 CTFP	A196 PCLN	A228 SDNE
A208 CTGN	A199 PDHN	A219 SRDC
A227 CTGP	A198 PDJN	A219 SRGC
A196 DCLN	A218 PRDC	A220 SSSC
A198 DDJN	A218 PRGC	A221 STFC
A207 DTGN	A200 PSBN	A229 STFE
A212 DVJN	A203 PSDN	A221 STGC
A214 DVPN	A204 PSKN	A229 STGE
A213 DVVN	A202 PSSN	A222 SVJC
A215 DWLN	A201 PSTN	A230 SVJD
A203 ESSN	A209 PTFN	A223 SVPC
A209 ETEN	A206 PTGN	A222 SVVC
A210 ETFN	A212 PVJN	A224 SXZC
A207 ETGN	A214 PVPN	A233 TLHN
A211 ETXN	A213 PVVN	A233 TLHR
A197 MCLN	A215 PWLN	
A200 MSBN	A231 RRSD	

CLASSIFICATION

EXTERNAL
TURNING

CLASSIFICATION

Tool Holder	Features Shank Size (H x W x L)	External Turning, Facing	External Turning, Copying		External Turning	
		$\theta=95^\circ$	$\theta=93^\circ$	$\theta=63^\circ 30'$ $72^\circ 30'$	$\theta=90^\circ$	
LL Holder 	● Lever lock type. ● ISO standard. ● Various holder shapes. ● Suitable for light to heavy cutting. ● Economical negative insert. 10 x 10 x 70 12 x 12 x 80 16 x 16 x 100 20 x 20 x 125 25 x 25 x 150 32 x 25 x 170 32 x 32 x 170	 	 	 	 	
		PCLN ↻ A196	PWLN ↻ A215	PDJN ↻ A198	PTGN ↻ A206	
DOUBLE CLAMP Holder 	● New double clamp type. ● Holds inserts securely. ● Excellent cutting edge tolerance. ● Economical negative insert. ● Small insert series. 16 x 16 x 100 20 x 20 x 125 25 x 25 x 150 32 x 25 x 170	 	 	 	 	
		DCLN ↻ A196	DWLN ↻ A215	DDJN ↻ A198	DVJN ↻ A212	DVJN ↻ A212
				DVJN ↻ A212	DVJN ↻ A212	DTGN ↻ A207
DOUBLE CLAMP Holder (For heavy cutting) 	● Double clamp holder type. ● Holds inserts securely. ● Suitable for heavy cutting. ● Negative insert. 32 x 32 x 170 40 x 40 x 200	 				
		MCLN ↻ A197				
WP Holder 	● Double clamp holder type. ● Simple insert exchange. ● Economical negative insert. 20 x 20 x 125 25 x 25 x 150 32 x 25 x 170		 			
			MTJN ↻ A206			
SP Holder 	● Screw-on type. ● Miniature holder with 7° positive insert. 8 x 8 x 60 10 x 10 x 70 12 x 12 x 80 16 x 16 x 100 20 x 20 x 125 25 x 25 x 150	 	 	 	 	
		SCLC ↻ A216	SDJC ↻ A217	SVJC ↻ A222	SDNC ↻ A217	SVVC ↻ A222
					STGC ↻ A221	
ML Holder 	● Cam lock type. ● Economical negative insert. 12 x 12 x 80 16 x 16 x 100 20 x 20 x 125 25 x 25 x 150				 	
					ETGN ↻ A207	

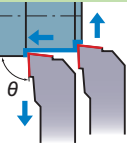
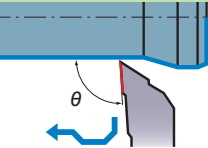
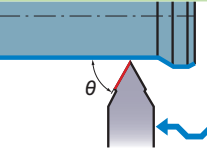
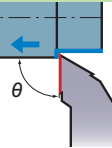
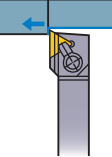
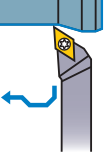
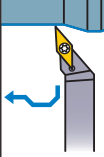
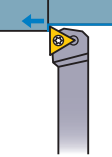
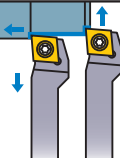
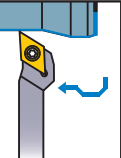
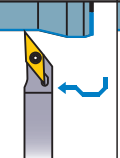
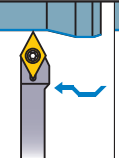
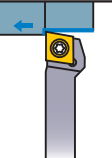
	External Turning	External Turning, Chamfering		External Turning, Facing, Chamfering	Facing		Facing, Copying	External Turning, Copying	Selection Standard				
	$\theta=75^\circ$	$\theta=60^\circ$	$\theta=45^\circ$	$\theta=45^\circ$	$\theta=15^\circ$	$\theta=0^\circ-1^\circ$	$\theta=10^\circ-$	Special Design	Economical	Low Cutting Resistance (Sharpness)	Clamp Rigidity	Operation Efficiency	Specialised
											◎	○	◎
	PCBN ➡ A197	PSBN ➡ A200	PSTN ➡ A201	PSDN ➡ A203	PSSN ➡ A202	PSKN ➡ A204	PTFN ➡ A209	PDHN ➡ A199	PRGC ➡ A218	PRDC ➡ A218			
											◎	◎	◎
							DVPN ➡ A214						
												◎	
	MSBN ➡ A200			MSSN ➡ A202									
											◎	◎	◎
		MTEN ➡ A208					MTQN ➡ A211						
											○		
				SSSC ➡ A220		STFC ➡ A221	SVPC ➡ A223	SRGC ➡ A219	SRDC ➡ A219				
											◎	◎	
		ETEN ➡ A209		ESSN ➡ A203		ETFN ➡ A210	ETXN ➡ A211						

(Note) ◎ : 1st recommendation. ○ : 2nd recommendation.

CLASSIFICATION

EXTERNAL
TURNING

CLASSIFICATION

Tool Holder	Features Shank Size (H x W x L)	External Turning, Facing	External Turning, Copying		External Turning	
		$\theta=99^\circ-95^\circ$	$\theta=93^\circ$	$\theta=62^\circ 30'$ $72^\circ 30'$	$\theta=90^\circ$	
Profile Holder 	- Screw-on type. 25° rhombic shape insert. - Possible to machine a face relief with up to 60° inclination. 25 x 25 x 150					
MP Holder 	- Pin lock type. 35° rhombic shape insert. - Suitable for recessing. 20 x 20 x 125 25 x 25 x 150					
			PVJN ↻ A212	PVVN ↻ A213		
MC Holder 	- Clamp-on Type. - Positive insert series. - Negative insert series. 16 x 16 x 100 20 x 20 x 125 25 x 25 x 150					
					CTGN ↻ A208	
AL Holder 	- Screw-on type. 20° positive insert. (35° rhombic shape insert is 15°) - High rake and good sharpness. 16 x 16 x 100 20 x 20 x 125 25 x 25 x 150					
			SDJE ↻ A228	SVJD ↻ A230	SDNE ↻ A228	STGE ↻ A229
TL Holder 	- Taper lock type. - Excellent finished surface with round shape insert. 20 x 20 x 125 25 x 25 x 150 32 x 25 x 170					
SMALL TOOLS (Tools for front turning) 	- Screw-on type. - Tools to be equipped on gang type tool posts. - Miniature holder with 7° positive insert. 8 x 8 x 125 10 x 10 x 125 12 x 12 x 150 16 x 16 x 150					
		SCLC-SM ↻ A242	SDJC-SM ↻ A243	SVJB-SM ↻ A244	SDNC-SM ↻ A243	SVVB-SM ↻ A244
SMALL TOOLS (Tools for back turning) 	- Screw-on type. - Tools to be equipped on gang type tool posts. - High rigidity due to designing of vertical insert. (BTA/CTB type) - Back machining. (BTA/CTB type) 8 x 10 x 120 10 x 10 x 120 12 x 12 x 120 16 x 16 x 120					

External Turning		External Turning, Chamfering	Facing		Facing, Copying	External Turning, Copying	Selection Standard				
$\theta=90^\circ$	$\theta=75^\circ$	$\theta=45^\circ$	$\theta=15^\circ$	$\theta=0^\circ - 1^\circ$	$\theta=10^\circ -$	Special Design	Economical	Low Cutting Resistance (Sharpness)	Clamp Rigidity	Operation Efficiency	Specialised
								◎	◎		
						SXZC ➡ A224					
								◎		◎	
						PVPN ➡ A214					
								◎	◎	◎	
CTGP ➡ A227	CSBN ➡ A201	CSDN ➡ A204	CSDP ➡ A226	CSKN ➡ A205	CTFN ➡ A210	CTFP ➡ A227		(Negative insert)	(Positive insert)		
					STFE ➡ A229						◎
								○			◎
						TLHR ➡ A233					
						TLHN ➡ A233					
								○			
						Special Design					
								○			
						BTAH ➡ A245					
						CTBH ➡ A246					
						BTVH ➡ A247					

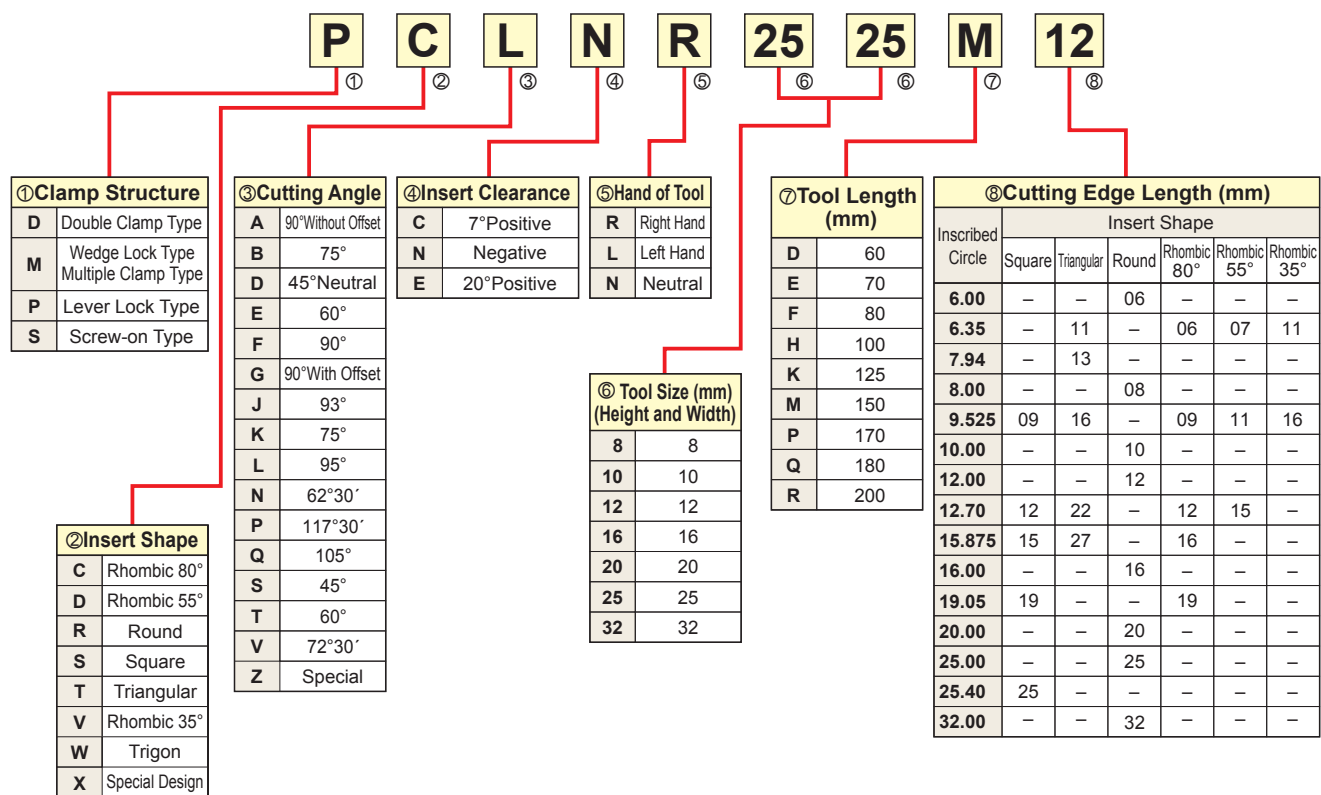
(Note) ◎ : 1st recommendation. ○ : 2nd recommendation.

IDENTIFICATION

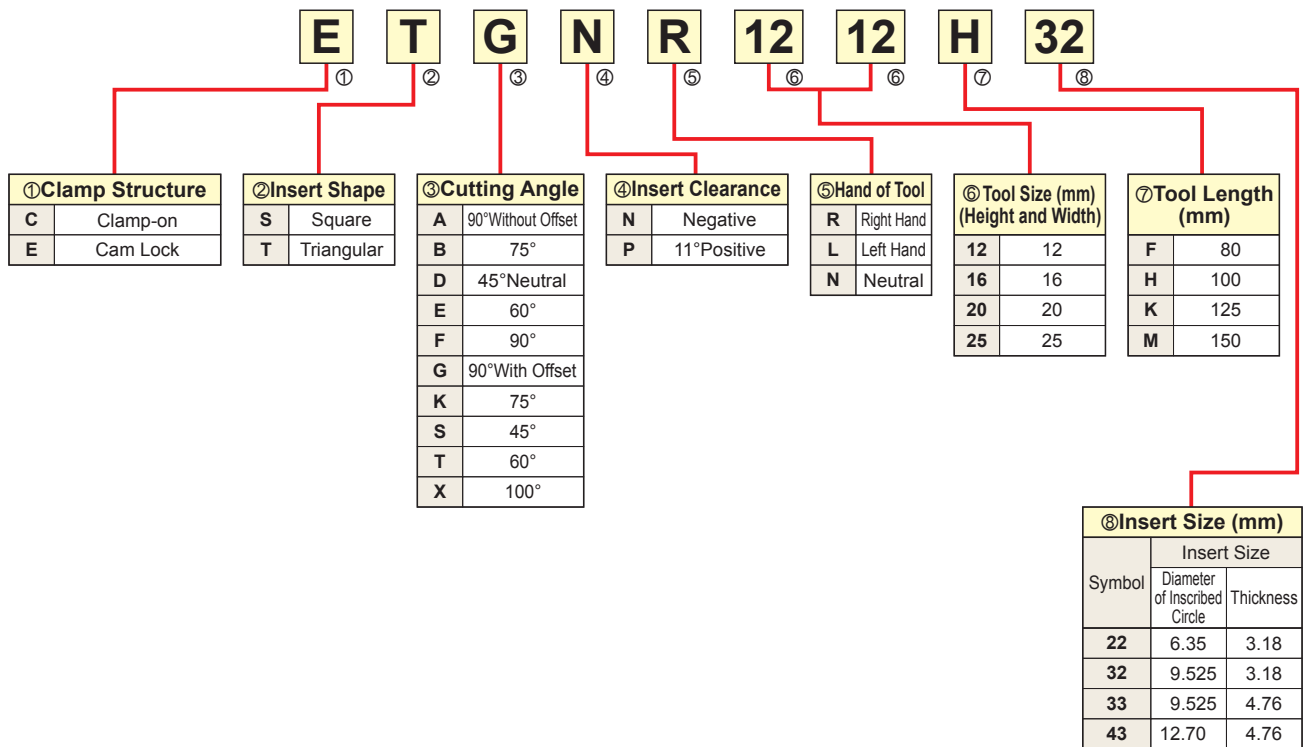
- LL Type, Double Clamp Type, WP Type,
SP Type, Profile Holder, AL Type

EXTERNAL
TURNING

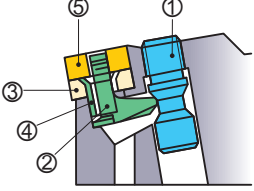
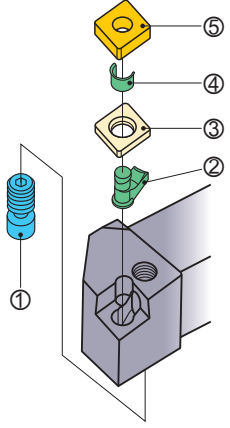
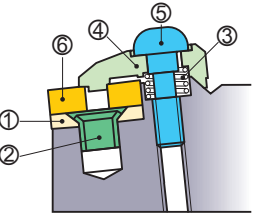
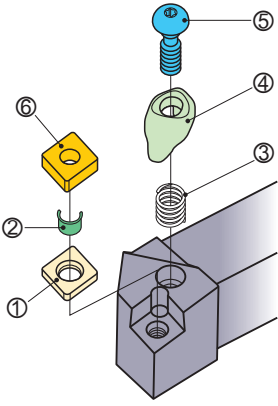
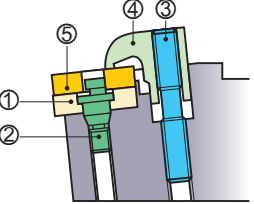
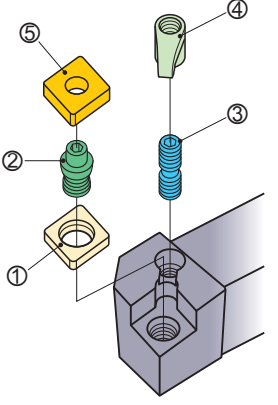
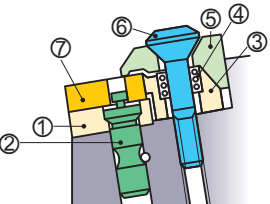
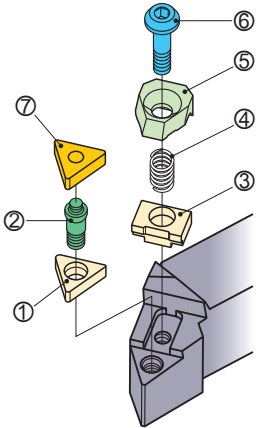
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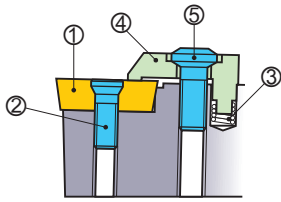
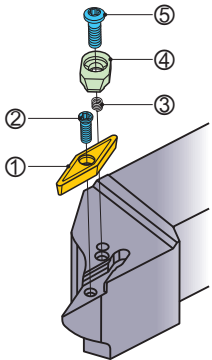
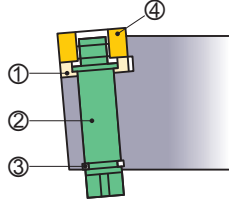
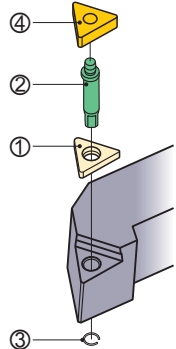
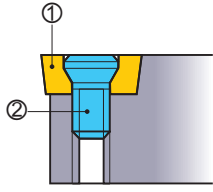
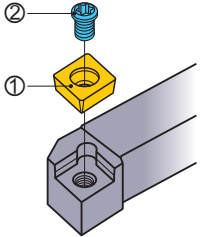
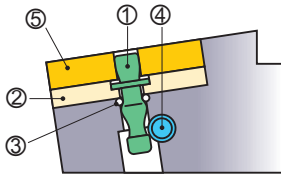
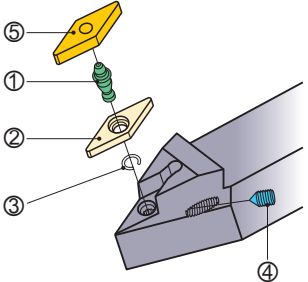
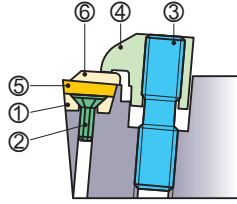
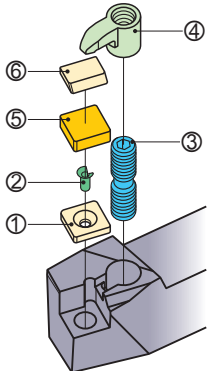


■ ML Type, MC Type



METHOD OF HOLDING

Type (Holder)	Structure
Lever Lock (LL HOLDER)	  ① Clamp Screw ② Lever ③ Shim ④ Shim Pin ⑤ Insert
Double Clamp (DOUBLE CLAMP) HOLDER	  ① Shim ② Shim Pin ③ Spring ④ Clamp Bridge ⑤ Clamp Screw ⑥ Insert
Multiple Clamp (DOUBLE CLAMP) HOLDER (For heavy cutting)	  ① Shim ② Shim Pin ③ Clamp Screw ④ Clamp Bridge ⑤ Insert
Wedge Lock (WP HOLDER)	  ① Shim ② Shim Pin ③ Plate ④ Spring ⑤ Clamp Bridge ⑥ Clamp Screw ⑦ Insert

Type (Holder)	Structure
Two action double clamp (PROFILE HOLDER)	 ①Insert ②Clamp Screw (1) ③Spring ④Clamp Bridge ⑤Clamp Screw (2) 
Cam Lock (ML HOLDER)	 ①Shim ②Lock Pin ③Stop Ring ④Insert 
Screw-on (SP HOLDER) (AL HOLDER)	 ①Insert ②Clamp Screw 
Pin lock (MP HOLDER)	 ①Lock Pin ②Shim ③Stop Ring ④Lock Screw ⑤Insert 
Clamp-on (MC HOLDER)	 ①Shim ②Shim Pin ③Clamp Screw ④Clamp Bridge ⑤Insert ⑥Breaker Piece 

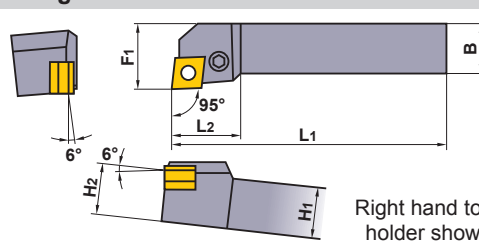
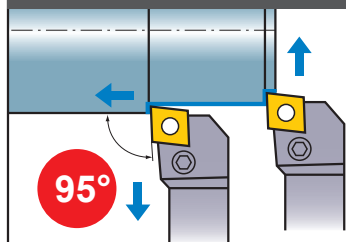
EXTERNAL TURNING TOOLS

CN^{○○} INSERTS TOOL HOLDERS

PCLN

External turning,
Facing

LL type



Right hand tool holder shown.

Finish	Light	Medium	Medium
FH  (12)	SH  (09, 12)	MP  (12, 16, 19)	MH  (12, 16, 19)
Medium	Medium to Semi-Heavy	Stainless	CBN
Standard  (09, 12, 16, 19)	GH  (12, 16, 19)	MS  (09, 12, 16, 19)	 (12)

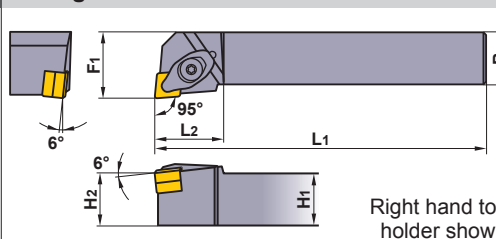
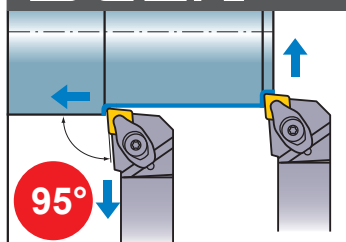
Order Number	Stock		Insert Number		Dimensions (mm)											
	R	L			H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Lever	Clamp Screw	Wrench	Punch
PCLNR/L1616H09	●	●	CNMG	09T3 ^{○○}	16	16	100	22	16	20	LLSCN3T3	LLP13	LLCL13	LLCS106	HKY25R	LLH3
2020K09	●	●		09T3 ^{○○}	20	20	125	22	20	25	LLSCN3T3	LLP13	LLCL13	LLCS106	HKY25R	LLH3
2525M09	●	●		09T3 ^{○○}	25	25	150	22	25	32	LLSCN3T3	LLP13	LLCL13	LLCS106	HKY25R	LLH3
2020K12	●	●	CNMA CNMG CNMM CNGG	1204 ^{○○}	20	20	125	28	20	25	LLSCN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4
2525M12	●	●		1204 ^{○○}	25	25	150	28	25	32	LLSCN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4
3225P12	●	●		1204 ^{○○}	32	25	170	28	32	32	LLSCN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4
3232P16	●	●		1606 ^{○○}	32	32	170	32	32	40	LLSCN53	LLP15	LLCL25	LLCS508	HKY30R	—
3232P19	●	●		1906 ^{○○}	32	32	170	40	32	40	LLSCN63	LLP16	LLCL16	LLCS310	HKY40R	—

* Clamp Torque (N · m) : LLCS106=2.2, LLCS108=3.3, LLCS508=3.3, LLCS310=7.0

DCLN

External turning,
Facing

DOUBLE CLAMP type



Right hand tool holder shown.

Finish	Light	Medium	Medium
FH  (12)	SH  (09, 12)	MP  (12)	MH  (12)
Medium	Medium to Semi-Heavy	Stainless	CBN
Standard  (09, 12)	GH  (12)	MS  (09, 12)	 (12)

Order Number	Stock		Insert Number		Dimensions (mm)					*2	(D1, L2)	(L2)	(D1, L2)	*1	(L2)		
	R	L			H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw	Wrench	Punch
DCLNR/L1616H09	●	●	CNMG	09T3	16	16	100	25	16	20	LLSCN3T3 (LLSCN33)	LLP23	DCK2211	DCS2	DC0520T	TKY15F	LLH3
2020K09	●	●		09T3	20	20	125	25	20	25	LLSCN3T3 (LLSCN33)	LLP23	DCK2211	DCS2	DC0520T	TKY15F	LLH3
2525M09	●	●		09T3	25	25	150	25	25	32	LLSCN3T3 (LLSCN33)	LLP23	DCK2211	DCS2	DC0520T	TKY15F	LLH3
2020K12	●	●	CNMA CNMG CNMM CNGG	1204	20	20	125	29	20	25	LLSCN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F	LLH4
2525M12	●	●		1204	25	25	150	29	25	32	LLSCN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F	LLH4
3225P12	●	●		1204	32	25	170	29	32	32	LLSCN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F	LLH4

*1 Clamp Torque (N · m) : DC0520T=3.5, DC0621T=5.0

*2 Please use shim no. LLSCN33 with 3.18mm thick inserts. When using 3.18mm thick inserts, shim should be ordered separately.

RECOMMENDED CUTTING CONDITIONS

Work Material	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P Mild Steel (≤180HB)	Finish	FY	NX3035	260—370
	Light	SY	NX3035	235—335
	Medium	MS	UE6110	260—440
	Finish	FH	NX3035	200—280
	Light	SH	UE6110	210—355
	Medium	MP	UE6110	190—325

Work Material	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
M Stainless Steel (≤200HB)	Finish	FH	US735	105—200
	Light	SH	US735	95—185
	Medium	MS	US735	85—165
K Gray Cast Iron (≤350MPa)	Light	MA	UC5115	160—295
	Medium	Standard	UC5115	160—295
	Semi-Heavy	Flat Top	UC5115	155—280

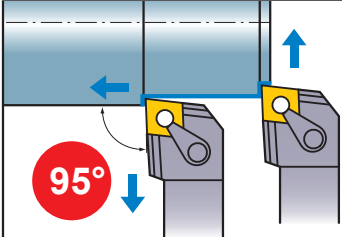
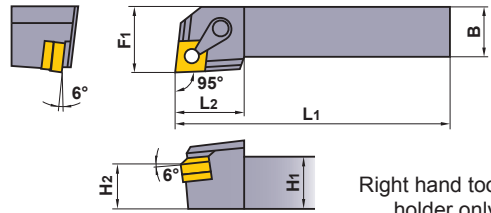
(Note) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

● : Inventory maintained in Japan.

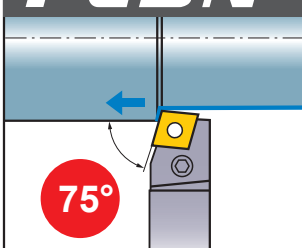
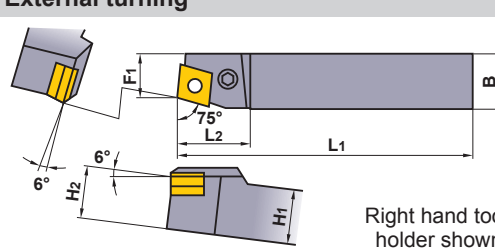
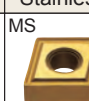
CBN & PCD
inserts
A142—A144, A172

PCLN type
inserts
A058—A062

DCLN type
inserts
A058—A062

MCLN				External turning, DOUBLE CLAMP type Facing For heavy cutting						Medium		Medium		Medium to Semi-Heavy			
				 Right hand tool holder only.						MH  (19)	Standard  (19)	MS  (19)	GH  (19)				
										Heavy	Heavy	Heavy	M Class				
										HZ  (19)	HX  (19)	HV  (19)	 (19)				
										Order Number				Stock	Insert Number		Dimensions (mm)
R		H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Bridge	Clamp Screw	Wrench					
MCLNR3232P19				●	CNMG	1906	32	32	170	36	32	40	MSCN63	MP6	CKW6	LS25	HKY40R
4040R19				●	CNMM CNMA	1906	40	40	200	36	40	50	MSCN63	MP6	CKW6	LS25	HKY40R

* Clamp Torque (N • m) : LS25=8.2

PCBN				External turning										LL type		Finish		Light		Medium		Medium	
														Right hand tool holder shown.									
																(12)	(12)	(12)	(12)				
																Medium	Medium to Semi-Heavy	Stainless					
																Standard	GH	MS					
																							
														(12)		(12)		(12)					
Order Number	Stock		Insert Number		Dimensions (mm)																		
	R	L			H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Lever	Clamp Screw	Wrench	Punch							
PCBNR/L2020K12	●	●	CNMA CNMG CNMM CNGG	1204	20	20	125	28	20	17	LLSCN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4							
2525M12	●	●		1204	25	25	150	25	25	22	LLSCN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4							

* Clamp Torque (N • m) : LLCS108=3.3

RECOMMENDED CUTTING CONDITIONS

Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)	Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FY	NX3035	260—370	M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SY	NX3035	235—335			Light	SH	US735	95—185
		Medium	MS	UE6110	260—440			Medium	MS	US735	85—165
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280	K	Gray Cast Iron (≤350MPa)	Light	MA	UC5115	160—295
		Light	SH	UE6110	210—355			Medium	Standard	UC5115	160—295
		Medium	MP	UE6110	190—325			Semi-Heavy	Flat Top	UC5115	155—280

CBN & PCD
inserts

A142—A144, A172

MCLN type
inserts

A059—A062

PCBN type
inserts

A058—A062

SPARE PARTS

E001

TECHNICAL
DATA

F001

EXTERNAL TURNING TOOLS

DN INSERTS TOOL HOLDERS

EXTERNAL TURNING

DN INSERTS TOOL HOLDERS

PDJN		External turning, Copying								LL type		Finish		Light		Medium		Medium	
											FH		SH		MP		MH		
													(15)		(15)		(15)		
											Medium to Semi-Heavy		Stainless		G Class		CBN		
													GH		MS		R/L		
											(15)		(15)		(15)		(15)		
Order Number	Stock	Insert Number		Dimensions (mm)							*2				*1				
				H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Lever	Clamp Screw	Wrench	Punch				
PDJNR/L2020K15	●●	DNMA	1504	20	20	125	35	20	25	LLSDN43 (LLSDN42)	LLP14	LLCL24	LLCS108	HKY30R	LLH4				
2525M15	●●	DNMG	1504	25	25	150	35	25	32	LLSDN43 (LLSDN42)	LLP14	LLCL24	LLCS108	HKY30R	LLH4				
3225P15	●●	DNMX	1504	32	25	170	35	32	32	LLSDN43 (LLSDN42)	LLP14	LLCL24	LLCS108	HKY30R	LLH4				
		DNGA																	
		DNGG																	

*1 Clamp Torque (N · m) : LLCS108=3.3

*2 Please use shim no. LLSDN42 with 6.35mm thick inserts. When using 6.35mm thick inserts, shim should be ordered separately.

DDJN		External turning, <i>DOUBLE CLAMP</i> type Copying										Finish		Light		Medium		Medium	
												FH		SH		MP		MH	
												(15)		(11,15)		(15)		(15)	
												Medium to Semi-Heavy		Stainless		G Class		CBN	
												GH		MS		R/L			
												(15)		(11,15)		(15)		(15)	
Order Number	Stock	Insert Number		Dimensions (mm)							*2				*1				
	R			L	H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw	Wrench	Punch		
DDJNR/L1616H11	●●	DNMG	1104	16	16	100	28	16	20	LLSDN32	LLP23	DCK2211	DCS2	DC0520T	TKY15F	LLH3			
2020K11	●●		1104	20	20	125	28	20	25	LLSDN32	LLP23	DCK2211	DCS2	DC0520T	TKY15F	LLH3			
2525M11	●●		1104	25	25	150	28	25	32	LLSDN32	LLP23	DCK2211	DCS2	DC0520T	TKY15F	LLH3			
3225P11	●●		1104	32	25	170	28	32	32	LLSDN32	LLP23	DCK2211	DCS2	DC0520T	TKY15F	LLH3			
2020K15	●●	DNMA	1504	20	20	125	37	20	25	LLSDN43 (LLSDN42)	LLP24	DCK2613	DCS1	DC0621T	TKY20F	LLH4			
2525M15	●●	DNMG	1504	25	25	150	37	25	32	LLSDN43 (LLSDN42)	LLP24	DCK2613	DCS1	DC0621T	TKY20F	LLH4			
2525M15	●●	DNMM	1504	25	25	150	37	25	32	LLSDN43 (LLSDN42)	LLP24	DCK2613	DCS1	DC0621T	TKY20F	LLH4			
2525M15	●●	DNMX	1504	25	25	150	37	25	32	LLSDN43 (LLSDN42)	LLP24	DCK2613	DCS1	DC0621T	TKY20F	LLH4			
3225P15	●●	DNGA	1504	32	25	170	37	32	32	LLSDN43 (LLSDN42)	LLP24	DCK2613	DCS1	DC0621T	TKY20F	LLH4			
3225P15	●●	DNGG	1504	32	25	170	37	32	32	LLSDN43 (LLSDN42)	LLP24	DCK2613	DCS1	DC0621T	TKY20F	LLH4			

*1 Clamp Torque (N · m) : DC0520T=3.5, DC0621T=5.0

*2 Please use shim no. LLSDN42 with 6.35mm thick inserts. When using 6.35mm thick inserts, shim should be ordered separately.

RECOMMENDED CUTTING CONDITIONS

	Work Material	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FY	NX3035	260—370
		Light	SY	NX3035	235—335
		Medium	MS	UE6110	260—440
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280
		Light	SH	UE6110	210—355
		Medium	MP	UE6110	190—325

	Work Material	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SH	US735	95—185
		Medium	MS	US735	85—165
K	Gray Cast Iron (≤350MPa)	Light	MA	UC5115	160—295
		Medium	Standard	UC5115	160—295
		Semi-Heavy	Flat Top	UC5115	155—280

(Note) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

● : Inventory maintained in Japan.

CBN & PCD inserts
A145, A146, A172

PDJN type inserts
A063—A067

DDJN type inserts
A063—A067

PDHN			Facing, Copying								LL type		Finish	Light	Medium	Medium
 107°30'			 8° 107°30' L2 L1 B H1 H2								 8° 107°30' L1 L2 B H1 H2 Right hand tool holder shown.		 (15) Medium to Semi-Heavy	 (15) Stainless	 (15) G Class	 (15) CBN
													GH (15)	MS (15)	R/L (15)	(15)
Order Number	Stock		Insert Number	Dimensions (mm)							*2			*1		
	R	L		H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Lever	Clamp Screw	Wrench		
PDHNR/L2020K15	●	●	DNMA	1504	20	20	125	34	20	25	LLSDN43 (LLSDN42)	LLP14	LLCL24	LLCS108	HKY30R	
2525M15	●	●	DNMG	1504	25	25	150	34	25	32	LLSDN43 (LLSDN42)	LLP14	LLCL24	LLCS108	HKY30R	
3225P15	●	●	DNMM DNGA DNGG	1504	32	25	170	34	32	32	LLSDN43 (LLSDN42)	LLP14	LLCL24	LLCS108	HKY30R	

*1 Clamp Torque (N • m) : LLCS108=3.3

*2 Please use shim no. LLSDN42 with 6.35mm thick inserts. When using 6.35mm thick inserts, shim should be ordered separately.

EXTERNAL
TURNING

DN ○ INSERTS TOOL HOLDERS

RECOMMENDED CUTTING CONDITIONS

Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)	Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FY	NX3035	260—370	M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SY	NX3035	235—335			Light	SH	US735	95—185
		Medium	MS	UE6110	260—440			Medium	MS	US735	85—165
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280	K	Gray Cast Iron (≤350MPa)	Light	MA	UC5115	160—295
		Light	SH	UE6110	210—355			Medium	Standard	UC5115	160—295
		Medium	MP	UE6110	190—325			Semi-Heavy	Flat Top	UC5115	155—280

CBN & PCD
inserts
A145, A146, A172

PDHN type
inserts
A063—A067

SPARE PARTS
E001

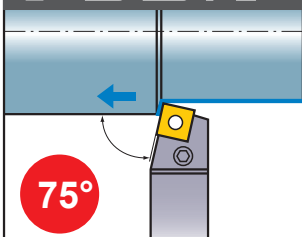
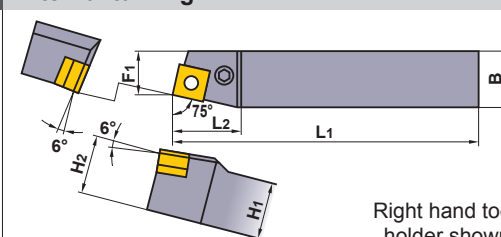
TECHNICAL
DATA
F001

EXTERNAL TURNING TOOLS

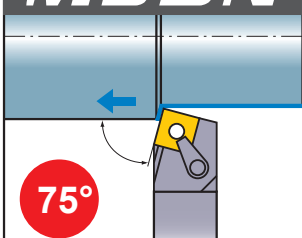
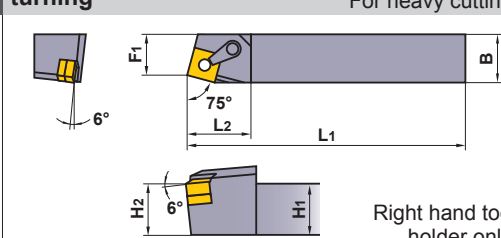
SN INSERTS TOOL HOLDERS

EXTERNAL TURNING

SN INSERTS TOOL HOLDERS

PSBN			External turning								LL type		Finish		Light		Medium		Medium	
											FH  (09,12)		SH  (12)		MP  (12,15,19)		MH  (12)			
											Medium to Semi-Heavy GH  (12,15,19)		Stainless MS  (09,12,15,19)		G Class R/L  (09,12)		CBN  (12)			
Order Number			Stock		Insert Number			Dimensions (mm)									 *			
			R	L				H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Lever	Clamp Screw	Wrench	Punch	
PSBNR/L1212F09			●	●	SNMA SNMG SNMM SNGA SNGG	0903	12	12	80	20	12	13	—	—	LLCL13S	LLCS105	HKY20R	—		
1616H09			●	●		0903	16	16	100	22	16	13	LLSSN33	LLP23	LLCL13	LLCS106	HKY25R	LLH3		
2020K12			●	●		1204	20	20	125	28	20	17	LLSSN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4		
2525M12			●	●		1204	25	25	150	25	25	22	LLSSN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4		
2525M15			●	●		1506	25	25	150	33	25	22	LLSSN53	LLP15	LLCL25	LLCS508	HKY30R	—		
3232P19			●	●		1906	32	32	170	40	32	27	LLSSN63	LLP16	LLCL16	LLCS310	HKY40R	—		

* Clamp Torque (N · m) : LLCS105=1.5, LLCS106=2.2, LLCS108=3.3, LLCS508=3.3, LLCS310=7.0

MSBN				External turning										DOUBLE CLAMP type For heavy cutting										Medium		Medium		Medium		Medium to Semi-Heavy	
														MH  (19)		Standard  (19)		MS  (19)		GH  (19)											
														Heavy HZ  (19)		Heavy HX  (19)		Heavy HV  (19)		M Class  (19)											
				Right hand tool holder only.																											
Order Number	Stock	Insert Number		Dimensions (mm)																											
	R			H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Bridge	Clamp Screw	Wrench																	
MSBNR3232P19	●	SNMG SNMM SNMA	1906	32	32	170	41	32	27	MSSN63	MP6	CKW6	LS25	HKY40R																	
4040R19	●		1906	40	40	200	41	40	35	MSSN63	MP6	CKW6	LS25	HKY40R																	

* Clamp Torque (N · m) : LS25=8.2

RECOMMENDED CUTTING CONDITIONS

Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)	Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FY	NX3035	260—370	M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SY	NX3035	235—335			Light	SH	US735	95—185
		Medium	MS	UE6110	260—440			Medium	MS	US735	85—165
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280	K	Gray Cast Iron (≤350MPa)	Light	MA	UC5115	160—295
		Light	SH	UE6110	210—355			Medium	Standard	UC5115	160—295
		Medium	MP	UE6110	190—325			Semi-Heavy	Flat Top	UC5115	155—280

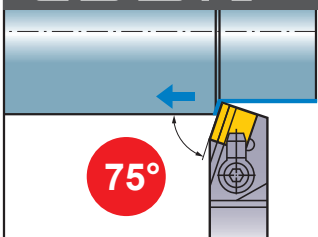
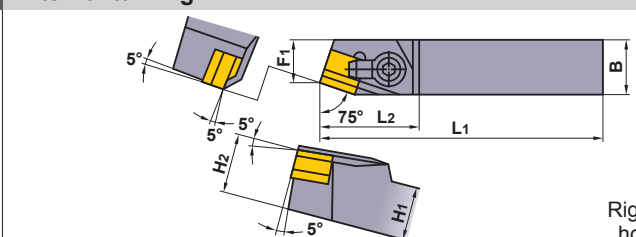
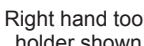
(Note) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

● : Inventory maintained in Japan.

CBN & PCD inserts
A147, A173

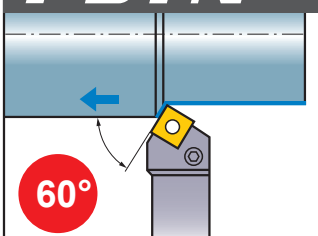
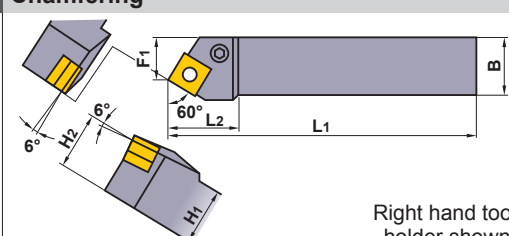
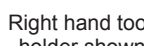
PSBN type inserts
A069—A073

MSBN type inserts
A070—A073

CSBN		External turning										MC type		M Class	G Class	
														 (12)	 (12)	
														CBN/PCD		
														 (12)		
Order Number	Stock		Insert Number		Dimensions (mm)						 *2			 *1		
	R	L			H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Bridge	Clamp Screw	Breaker Piece	Wrench
CSBNR/L2020	●	●	SNMN SNGN	1204	20	20	125	35	20	17	CS42	BCP301	CK342	LS2	CBS4	HKY40R
2525M43	●	●		1204	25	25	150	35	25	22	CS42 (CS43)	BCP301	CK342	LS3	CBS4N CBS4F	HKY40R

*1 Clamp Torque (N · m) : LS2=8.2, LS3=8.2

*2 Please use shim no. CS43 with 3.18mm thick inserts. When using 3.18mm thick inserts, shim should be ordered separately.

PSTN				External turning, Chamfering										LL type				Finish		Light		Medium		Medium	
																		FH		SH		MP		MH	
																		(09,12)		(12)		(12)		(12)	
																		Medium to Semi-Heavy		Stainless		G Class		CBN	
														GH		MS		R/L							
																									
														(12)		(09,12)		(09,12)		(12)					
Order Number		Stock		Insert Number		Dimensions (mm)																			
		R	L			H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Lever	Clamp Screw	Wrench	Punch								
PSTNR/L1616H09		●	●	SNMA	0903	16	16	100	20	16	13	LLSSN33	LLP23	LLCL13	LLCS106	HKY25R	LLH3								
2020K12		●	●	SNMG	1204	20	20	125	25	20	17	LLSSN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4								
2525M12		●	●	SNMM	1204	25	25	150	25	25	22	LLSSN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4								
				SNGA																					
				SNGG																					

* Clamp Torque (N · m) : LLCS106=2.2, LLCS108=3.3

RECOMMENDED CUTTING CONDITIONS

	Work Material	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FY	NX3035	260—370
		Light	SY	NX3035	235—335
		Medium	MS	UE6110	260—440
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280
		Light	SH	UE6110	210—355
		Medium	MP	UE6110	190—325

	Work Material	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SH	US735	95—185
		Medium	MS	US735	85—165
K	Gray Cast Iron (≤350MPa)	Light	MA	UC5115	160—295
		Medium	Standard	UC5115	160—295
		Semi-Heavy	Flat Top	UC5115	155—280

CBN & PCD
inserts

A147, A154, A173, A175

CSBN type
inserts

A086

PSTN type
inserts

A069—A073

SPARE PARTS

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A201

EXTERNAL TURNING TOOLS

SN INSERTS TOOL HOLDERS

EXTERNAL TURNING

SN INSERTS TOOL HOLDERS

PSSN		External turning, Facing, Chamfering										LL type		Finish		Light		Medium		Medium	
 45°				 0° 45° L2 L1 H1 H2 B Right hand tool holder shown.										FH (09,12)		SH (12)		MP (12,15,19)		MH (12)	
														Medium to Semi-Heavy GH (12,15,19)		Stainless MS (09,12,15,19)		G Class R/L (09,12)		CBN (12)	
Order Number		Stock		Insert Number		Dimensions (mm)															
		R	L			H1	B	L1	L2	H2	F1	F2	Shim	Shim Pin	Clamp Lever	Clamp Screw	Wrench	Punch			
PSSNR/L1616H09		●	●	SNMA SNMG SNMM SNGA SNGG	0903	16	16	100	22	16	20	(14)	LLSSN33	LLP23	LLCL13	LLCS106	HKY25R	LLH3			
2020K12		●	●		1204	20	20	125	31	20	25	(17)	LLSSN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4			
2525M12		●	●		1204	25	25	150	31	25	32	(24)	LLSSN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4			
3232P15		●	●		1506	32	32	170	34	32	40	(29)	LLSSN53	LLP15	LLCL25	LLCS508	HKY30R	—			
3232P19		●	●		1906	32	32	170	40	32	40	(27)	LLSSN63	LLP16	LLCL16	LLCS310	HKY40R	—			

(Note) When facing or chamfering only and using insert with right or left hand breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

* Clamp Torque (N · m) : LLCS106=2.2, LLCS108=3.3, LLCS508=3.3, LLCS310=7.0

MSSN				External turning, Facing, Chamfering		DOUBLE CLAMP type For heavy cutting										Medium		Medium		Medium		Semi-Heavy	
 45°				 Right hand tool holder only.										 (19)		 (19)		 (19)		 (19)			
														Heavy (19)		Heavy (19)		Heavy (19)		M Class (19)			
														 (19)		 (19)		 (19)		 (19)			
Order Number		Stock		Insert Number		Dimensions (mm)											*						
		R				H1	B	L1	L2	H2	F1	F2	Shim	Shim Pin	Clamp Bridge	Clamp Screw	Wrench						
MSSNR3232P19		●		SNMG	1906	32	32	170	44	32	40	27	MSSN63	MP6	CKW6	LS25	HKY40R						
4040R19		●		SNMM SNMA	1906	40	40	200	44	40	50	37	MSSN63	MP6	CKW6	LS25	HKY40R						

* Clamp Torque (N · m) : LS25=8.2

RECOMMENDED CUTTING CONDITIONS

Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)	Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FY	NX3035	260—370	M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SY	NX3035	235—335			Light	SH	US735	95—185
		Medium	MS	UE6110	260—440			Medium	MS	US735	85—165
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280	K	Gray Cast Iron (≤350MPa)	Light	MA	UC5115	160—295
		Light	SH	UE6110	210—355			Medium	Standard	UC5115	160—295
		Medium	MP	UE6110	190—325			Semi-Heavy	Flat Top	UC5115	155—280

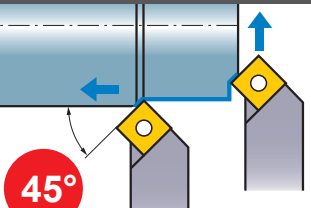
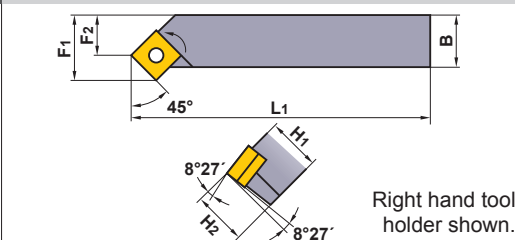
(Note) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

● : Inventory maintained in Japan.

CBN & PCD inserts
A147, A173

PSSN type inserts
A069—A073

MSSN type inserts
A070—A073

ESSN				External turning, Facing, Chamfering							ML type				Finish		Light		Medium		Medium	
											FH		SH		MP		MH					
											 (09.12)		 (12)		 (12)		 (12)					
											Medium Standard		Stainless MS		G Class R/L		CBN					
											 (09.12)		 (09.12)		 (09.12)		 (12)					
Order Number		Stock		Insert Number		Dimensions (mm)																
		R	L			H1	B	L1	H2	F1	F2	Shim	Lock Pin	Stop Ring	Spanner							
ESSNR/L1212		●	●	SNMA SNMG SNMM SNGA SNGG	0903	12	12	80	11.5	16	10	—	P321US	ER3	KY40							
1616H32		●	●		0903	16	16	100	15.5	20	14	—	P322US	ER3	KY40							
2020W		●	●		1204	20	20	125	19.5	25	17	ESS42	P433W	ER4	KY40							
2525W		●	●		1204	25	25	150	24.5	32	24	ESS42	P434W	ER4	KY40							

(Note) When facing or chamfering only and using insert with right or left hand breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

PSDN		External turning, Chamfering								LL type		Finish		Light		Medium		Medium	
 45°		 6° L1 L2 L1 B H2 6° H1								FH (09.12)		SH (12)		MP (12)		MH (12)			
										Medium to Semi-Heavy		Stainless		G Class		CBN			
										GH (12)		MS (09.12)		R/L (09.12)		 (12)			
Order Number	Stock	Insert Number		Dimensions (mm)									*						
				H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Lever	Clamp Screw	Wrench	Punch				
PSDNN1212F09	●	SNMA SNMG SNMM SNGA SNGG	0903	12	12	80	20	12	6.0	—	—	LLCL13S	LLCS105	HKY20R	—				
1616H09	●		0903	16	16	100	22	16	8.0	LLSSN33	LLP23	LLCL13	LLCS106	HKY25R	LLH3				
2020K12	●		1204	20	20	125	28	20	10.0	LLSSN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4				
2525M12	●		1204	25	25	150	28	25	12.5	LLSSN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4				
3225P12	●		1204	32	25	170	28	32	12.5	LLSSN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4				

* Clamp Torque (N · m) : LLCS105=1.5, LLCS106=2.2, LLCS108=3.3

RECOMMENDED CUTTING CONDITIONS

	Work Material	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)		Work Material	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FY	NX3035	260—370	M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SY	NX3035	235—335			Light	SH	US735	95—185
		Medium	MS	UE6110	260—440			Medium	MS	US735	85—165
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280	K	Gray Cast Iron (≤350MPa)	Light	MA	UC5115	160—295
		Light	SH	UE6110	210—355			Medium	Standard	UC5115	160—295
		Medium	MP	UE6110	190—325			Semi-Heavy	Flat Top	UC5115	155—280

CBN & PCD inserts
A147, A173

ESSN type inserts
A069—A073

PSDN type inserts
A069—A073

SPARE PARTS
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EXTERNAL TURNING TOOLS

SN INSERTS TOOL HOLDERS

EXTERNAL TURNING

SN INSERTS TOOL HOLDERS

CSDN		External turning, Chamfering										MC type		M Class	G Class
														(09,12)	(09,12)
												CBN/PCD			
														(09,12)	
Order Number	Stock	Insert Number		Dimensions (mm)						Shim	Shim Pin	Clamp Bridge	Clamp Screw	Breaker Piece	Wrench
				H1	B	L1	L2	H2	F1						
CSDNN1616	●	SNMN SNGN	0903	16	16	100	28	16	8.0	CS32	BCP251	CK232	LS1	CBS3D	HKY30R
2020	●		1204	20	20	125	35	20	10.0	CS42	BCP301	CK341	LS2	CBS4D	HKY40R
2525M43	●		1204	25	25	150	35	25	12.5	CS42 (CS43)	BCP301	CK341	LS3	CBS4D	HKY40R

*1 Clamp Torque (N · m) : LS1=5.0, LS2=8.2, LS3=8.2

*2 Please use shim no. CS43 with 3.18mm thick inserts. When using 3.18mm thick inserts, shim should be ordered separately.

PSKN		Facing										LL type			
												Finish	Light	Medium	Medium
												FH	SH	MP	MH
												(09,12)	(12)	(12)	(12)
												Medium to Semi-Heavy	Stainless	G Class	CBN
												GH	MS	R/L	
												(12)	(09,12)	(09,12)	(12)
Order Number	Stock	Insert Number		Dimensions (mm)						Shim	Shim Pin	Clamp Lever	Clamp Screw	Wrench	Punch
				H1	B	L1	L2	H2	F1						
PSKNR/L1616H09	● ●	SNMA SNMG SNMM SNGA SNGG	0903	16	16	100	20	16	20	LLSSN33	LLP23	LLCL13	LLCS106	HKY25R	LLH3
2020K12	● ●		1204	20	20	125	25	20	25	LLSSN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4
2525M12	● ●		1204	25	25	150	25	25	32	LLSSN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4

(Note) When using insert with right or left hand breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

* Clamp Torque (N · m) : LLCS106=2.2, LLCS108=3.3

RECOMMENDED CUTTING CONDITIONS

Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)	Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FY	NX3035	260—370	M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SY	NX3035	235—335			Light	SH	US735	95—185
		Medium	MS	UE6110	260—440			Medium	MS	US735	85—165
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280	K	Gray Cast Iron (≤350MPa)	Light	MA	UC5115	160—295
		Light	SH	UE6110	210—355			Medium	Standard	UC5115	160—295
		Medium	MP	UE6110	190—325			Semi-Heavy	Flat Top	UC5115	155—280

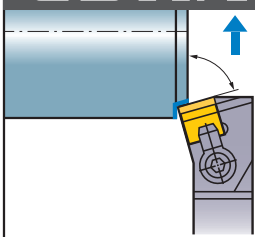
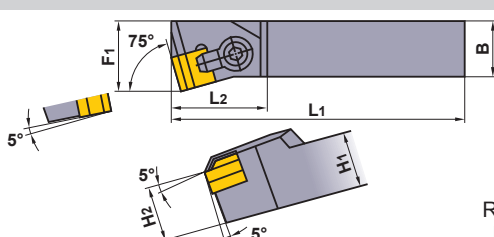
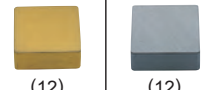
(Note) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

● : Inventory maintained in Japan.

CBN & PCD inserts
A147, A154, A173, A175

CSDN type inserts
A086

PSKN type inserts
A069—A073

CSKN		Facing										MC type		M Class	G Class	
														(12)	(12)	
														(12)		
Order Number	Stock		Insert Number		Dimensions (mm)						*2			*1		
	R	L														
CSKNR/L2020	●	●	SNMN SNGN	1204	20	20	125	32	20	25	CS42	BCP301	CK341	LS2	CBS4	HKY40R
2525M43	●	●		1204	25	25	150	32	25	32	CS42 (CS43)	BCP301	CK341	LS3	CBS4N CBS4F	HKY40R

*1 Clamp Torque (N • m) : LS2=8.2, LS3=8.2

*2 Please use shim no. CS43 with 3.18mm thick inserts. When using 3.18mm thick inserts, shim should be ordered separately.

EXTERNAL
TURNING

SN ○ INSERTS TOOL HOLDERS

RECOMMENDED CUTTING CONDITIONS

Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)	Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FY	NX3035	260—370	M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SY	NX3035	235—335			Light	SH	US735	95—185
		Medium	MS	UE6110	260—440			Medium	MS	US735	85—165
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280	K	Gray Cast Iron (≤350MPa)	Light	MA	UC5115	160—295
		Light	SH	UE6110	210—355			Medium	Standard	UC5115	160—295
		Medium	MP	UE6110	190—325			Semi-Heavy	Flat Top	UC5115	155—280

CBN & PCD
inserts
A154, A175

CSKN type
inserts
A086

SPARE PARTS
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EXTERNAL TURNING TOOLS

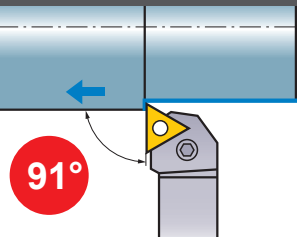
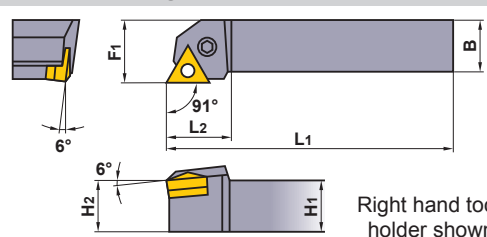
TN INSERTS TOOL HOLDERS

EXTERNAL TURNING

TN INSERTS TOOL HOLDERS

MTJN			External turning, Copying								WP type		Finish		Light		Medium		Medium	
													FH		SH		MP		MH	
													Medium to Semi-Heavy		Stainless		G Class		CBN	
											GH		MS		R/L					
											(16)		(16.22)		(16.22)		(16.22)			
											(16.22)		(16.22)		(16.22)		(16)			
											Right hand tool holder shown.									
Order Number		Stock		Insert Number		Dimensions (mm)														
		R	L			H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Bridge	Side Lock Plate	Spring	Clamp Screw	Wrench		
MTJNR/L2020K16N		●	●	TNMA TNMG TNMM TNGA TNGG	1604	20	20	125	31	20	25	WPSTN33	CCP33	CCK13	CPT13	MES2	SLCS105	HKY25R HKY40R		
2525M16N		●	●		1604	25	25	150	31	25	32	WPSTN33	CCP33	CCK13	CPT13	MES2	SLCS105	HKY25R HKY40R		
2525M22N		●	●		2204	25	25	150	38	25	32	WPSTN43	CCP34	CCK14	CPT14	MES3	SLCS106	HKY30R HKY40R		

* Clamp Torque (N · m) : SLCS105=7.0, SLCS106=7.0

PTGN			External turning								LL type		Finish	Light	Medium	Medium
													FH (11.16) Medium to Semi-Heavy	SH (16.22) Stainless	MP (16.22.27) G Class	MH (16.22) CBN
91°			Right hand tool holder shown.								GH (16.22.27)		MS (16.22)	R/L (11.16.22)	(16)	
Order Number	Stock		Insert Number	Dimensions (mm)												
	R	L		H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Lever	Clamp Screw	Wrench	Punch	
PTGNR/L1010E11	●	●	TNMA TNMG TNMM TNGA TNGG	1103	10	10	70	17	10	12	—	—	LLCL12S	LLCS105	HKY20R	—
1212F11	●	●		1103	12	12	80	17	12	16	—	—	LLCL12S	LLCS105	HKY20R	—
1616H16	●	●		1604	16	16	100	22	16	20	LLSTN32 (LLSTN33)	LLP13 (LLP23)	LLCL13	LLCS106	HKY25R	LLH3
2020K16	●	●		1604	20	20	125	22	20	25	LLSTN32 (LLSTN33)	LLP13 (LLP23)	LLCL13	LLCS106	HKY25R	LLH3
2525M16	●	●		1604	25	25	150	22	25	32	LLSTN32 (LLSTN33)	LLP13 (LLP23)	LLCL13	LLCS206	HKY25R	LLH3
2525M22	●	●		2204	25	25	150	28	25	32	LLSTN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4
3225P22	●	●		2204	32	25	170	28	32	32	LLSTN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4
3232P27	●	●		2706	32	32	170	35	32	40	LLSTN53	LLP15	LLCL25	LLCS508	HKY30R	—

*1 Clamp Torque (N · m) : LLCS105=1.5, LLCS106=2.2, LLCS206=2.2, LLCS108=3.3, LLCS508=3.3

*2 Please use shim no. LLSTN33 and shim pin no. LLP23 with 3.18mm thick inserts. When using 3.18mm thick inserts, shim and shim pin should be ordered separately.

RECOMMENDED CUTTING CONDITIONS

	Work Material	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FY	NX3035	260—370
		Light	SY	NX3035	235—335
		Medium	MS	UE6110	260—440
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280
		Light	SH	UE6110	210—355
		Medium	MP	UE6110	190—325

	Work Material	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SH	US735	95—185
		Medium	MS	US735	85—165
K	Gray Cast Iron (≤350MPa)	Finish	R/L-F	NX2525	180—245
		Light	MA	UC5115	160—295
		Medium	Standard	UC5115	160—295

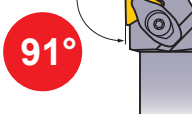
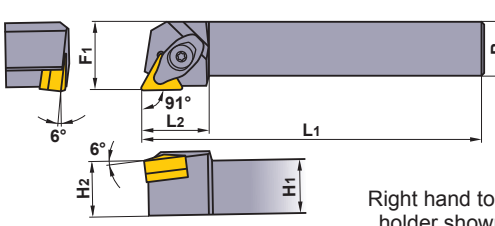
(Note) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

● : Inventory maintained in Japan.

CBN & PCD inserts
A148, A149, A173

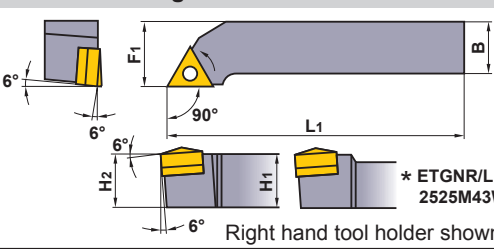
MTJN type inserts
A074—A079

PTGN type inserts
A074—A079

DTGN			DOUBLE CLAMP type										Finish		Light		Medium		Medium	
			External turning										FH		SH		MP		MH	
													(16)		(16)		(16)		(16)	
			Medium to Semi-Heavy		Stainless		G Class		CBN											
			Right hand tool holder shown.										GH		MS		R/L			
													(16)		(16)		(16)		(16)	
Order Number	Stock		Insert Number	Dimensions (mm)							*2	*2								
	R	L		H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw	Wrench	Punch				
DTGNR/L1616H16	●	●	TNMA	1604	16	16	100	25	16	20	LLSTN32 (LLSTN33)	LLP23	DCK2211	DCS2	DC0520T	TKY15F	LLH3			
2020K16	●	●	TNMG	1604	20	20	125	25	20	25	LLSTN32 (LLSTN33)	LLP23	DCK2211	DCS2	DC0520T	TKY15F	LLH3			
2525M16	●	●	TNMM	1604	25	25	150	25	25	32	LLSTN32 (LLSTN33)	LLP23	DCK2211	DCS2	DC0520T	TKY15F	LLH3			
			TNGA																	
			TNGG																	

*1 Clamp Torque (N · m) : DC0520T=3.5

*2 Please use shim no. LLSTN33 with 3.18mm thick inserts. When using 3.18mm thick inserts, shim should be ordered separately.

ETGN		External turning ML type										Finish	Light	Medium	Medium
												FH (11.16)	SH (16.22)	MP (16.22)	MH (16.22)
												Medium Standard (16.22)	Stainless MS (16.22)	G Class R/L (11.16.22)	CBN (16)
												Right hand tool holder shown.			
Order Number	Stock		Insert Number	Dimensions (mm)											
	R	L		H1	B	L1	H2	F1	Shim	Lock Pin	Stop Ring	Spanner			
ETGNR/L1212	●	●	TNMA TNMG TNMM TNGA TNGG	1103	12	12	80	11.5	16	—	P221US	ER2	KY25		
1616H32	●	●		1603	16	16	100	15.5	20	—	P322US	ER3	KY40		
1616H33	●	●		1604	16	16	100	15.5	20	—	P332US	ER3	KY40		
2020K32W	●	●		1603	20	20	125	19.5	25	EST32	P323WS	ER3	KY40		
2020K33W	●	●		1604	20	20	125	19.5	25	EST32	P333WS	ER3	KY40		
2525M33W	●	●		1604	25	25	150	24.5	32	EST32	P334WS	ER3	KY40		
* 2525M43W	●	●		2204	25	25	150	24.5	32	EST43	P434W	ER4	KY40		

RECOMMENDED CUTTING CONDITIONS

	Work Material	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)		Work Material	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FY	NX3035	260—370	M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SY	NX3035	235—335			Light	SH	US735	95—185
		Medium	MS	UE6110	260—440			Medium	MS	US735	85—165
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280	K	Gray Cast Iron (≤350MPa)	Finish	R/L-F	NX2525	180—245
		Light	SH	UE6110	210—355			Light	MA	UC5115	160—295
		Medium	MP	UE6110	190—325			Medium	Standard	UC5115	160—295

CBN & PCD inserts
A148, A149, A173

DTGN type inserts
A074—A079

ETGN type inserts
A074—A079

SPARE PARTS
E001

TECHNICAL DATA
F001

EXTERNAL TURNING TOOLS

TN INSERTS TOOL HOLDERS

CTGN

External turning

MC type

M Class

G Class



(16)



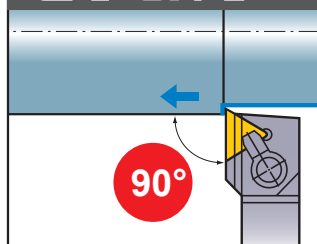
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CBN/PCD

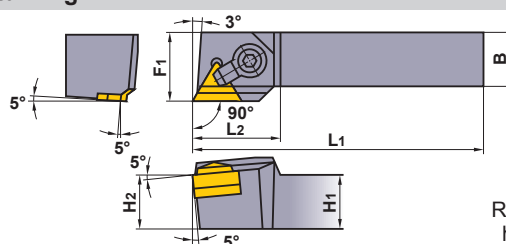


(16)

Right hand tool holder shown.



90°



Order Number	Stock		Insert Number		Dimensions (mm)						 *2			 *1		
	R	L			H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Bridge	Clamp Screw	Breaker Piece	Wrench
CTGNR/L2020	●	●	TNMN TNGN	1604 	20	20	125	31	20	25	CT32	BCP301	CK341	LS2	CBT3	HKY40R
2525	●	●		1604 	25	25	150	31	25	32	CT32 (CT33)	BCP301	CK341	LS3	CBT3N CBT3F	HKY40R

*1 Clamp Torque (N · m) : LS2=8.2, LS3=8.2

*2 Please use shim no. CT33 with 3.18mm thick inserts. When using 3.18mm thick inserts, shim should be ordered separately.

MTEN

External turning, Chamfering

WP type

Finish

Light

Medium

Medium



(16)



(16.22)



(16.22)



(16.22)

Medium to Semi-Heavy

Stainless

G Class

CBN



(16.22)



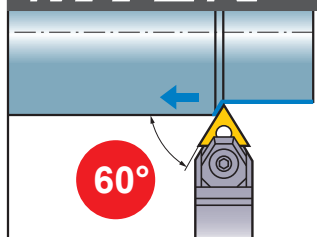
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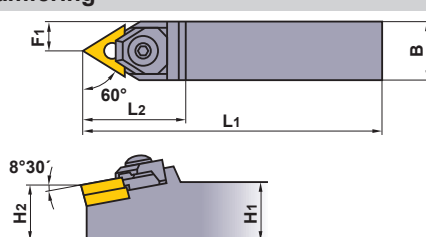
(16.22)



(16)



60°



Order Number	Stock	Insert Number		Dimensions (mm)													*
				H1	B	L1	L2	H2	F2	Shim	Shim Pin	Clamp Bridge	Side Lock Plate	Spring	Clamp Screw	Wrench	
MTENN2020K16N	●	TNMA	1604	20	20	125	34	20	10	WPSTN33	CCP33	CCK13	CPT13	MES2	SLCS105	HKY25R	HKY40R
2525M22N	●	TNMG	2204	25	25	150	44	25	12.5	WPSTN43	CCP34	CCK14	CPT14	MES3	SLCS106	HKY30R	HKY40R
		TNMM															
		TNGA															
		TNGG															

* Clamp Torque (N · m) : SLCS105=7.0, SLCS106=7.0

RECOMMENDED CUTTING CONDITIONS

Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FY	NX3035	260—370
		Light	SY	NX3035	235—335
		Medium	MS	UE6110	260—440
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280
		Light	SH	UE6110	210—355
		Medium	MP	UE6110	190—325

Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SH	US735	95—185
		Medium	MS	US735	85—165
K	Gray Cast Iron (≤350MPa)	Finish	R/L-F	NX2525	180—245
		Light	MA	UC5115	160—295
		Medium	Standard	UC5115	160—295

(Note) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

● : Inventory maintained in Japan.

CBN & PCD
inserts

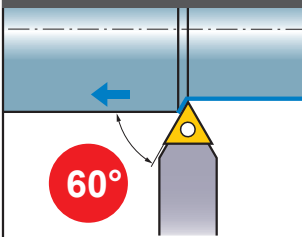
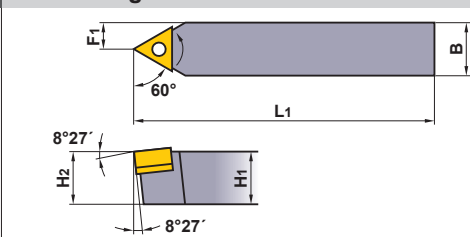
A148, A149, A155, A173

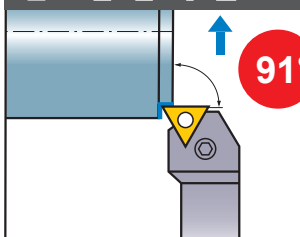
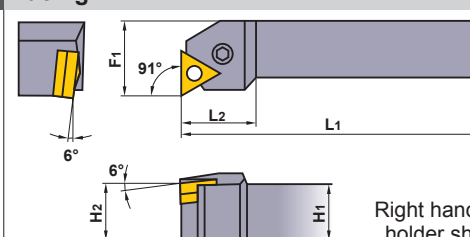
CTGN type
inserts

A087

MTEN type
inserts

A074—A079

ETEN		External turning, Chamfering ML type							Finish	Light	Medium	Medium
									 (11.16)	 (16.22)	 (16.22)	 (16.22)
									Medium	Stainless	G Class	CBN
									 (16.22)	 (16.22)	 (11.16.22)	 (16)
Order Number	Stock	Insert Number		Dimensions (mm)								
				H1	B	L1	H2	F1	Shim	Lock Pin	Stop Ring	Spanner
ETENN1212	●	TNMA TNMG TNMM TNGA TNGG	1103	12	12	80	11.5	6	—	P221US	ER2	KY25
1616H33	●		1604	16	16	100	15.5	8	—	P332US	ER3	KY40
2020K33W	●		1604	20	20	125	19.5	10	EST32	P333WS	ER3	KY40
2525M33W	●		1604	25	25	150	24.5	12.5	EST32	P334WS	ER3	KY40
2525M43W	●		2204	25	25	150	24.5	12.5	EST43	P434W	ER4	KY40

PTFN		Facing										LL type										Finish		Light		Medium		Medium	
												FH		SH		MP		MH											
												(16)		(16.22)		(16.22)		(16.22)											
												Medium to Semi-Heavy		Stainless		G Class		CBN											
												GH		MS		R/L													
												(16.22)		(16.22)		(16.22)		(16)											
Order Number		Stock		Insert Number		Dimensions (mm)						 *2		 *2				 *1											
		R	L			H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Lever	Clamp Screw	Wrench	Punch												
PTFNR/L1616H16		●	●	TNMA	1604	16	16	100	22	16	20	LLSTN32 (LLSTN33)	LLP13 (LLP23)	LLCL13	LLCS106	HKY25R	LLH3												
2020K16		●	●	TNMG	1604	20	20	125	22	20	25	LLSTN32 (LLSTN33)	LLP13 (LLP23)	LLCL13	LLCS106	HKY25R	LLH3												
2525M16		●	●	TNMM	1604	25	25	150	22	25	32	LLSTN32 (LLSTN33)	LLP13 (LLP23)	LLCL13	LLCS206	HKY25R	LLH3												
2525M22		●	●	TNGA	2204	25	25	150	28	25	32	LLSTN42	LLP14	LLCL14	LLCS108	HKY30R	LLH4												

(Note) When using insert with right or left hand breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

*1 Clamp Torque (N · m) : LLCS106=2.2, LLCS206=2.2, LLCS108=3.3

*2 Please use shim no. LLSTN33 and shim pin no. LLP23 with 3.18mm thick inserts. When using 3.18mm thick inserts, shim should be ordered separately.

RECOMMENDED CUTTING CONDITIONS

Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)	Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FY	NX3035	260—370	M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SY	NX3035	235—335			Light	SH	US735	95—185
		Medium	MS	UE6110	260—440			Medium	MS	US735	85—165
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280	K	Gray Cast Iron (≤350MPa)	Finish	R/L-F	NX2525	180—245
		Light	SH	UE6110	210—355			Light	MA	UC5115	160—295
		Medium	MP	UE6110	190—325			Medium	Standard	UC5115	160—295

CBN & PCD inserts
A148, A149, A173

ETEN type inserts
A074—A079

PTFN type inserts
A074—A079

SPARE PARTS
E001

TECHNICAL DATA
F001

EXTERNAL TURNING TOOLS

TN INSERTS TOOL HOLDERS

EXTERNAL TURNING

TN INSERTS TOOL HOLDERS

ETFN		Facing							ML type				
									Finish	Light	Medium	Medium	
									FH	SH	MP	MH	
									(11,16)	(16)	(16)	(16)	
									Medium	Stainless	G Class	CBN	
									Standard	MS	R/L		
									(16)	(16)	(11,16)	(16)	
									Right hand tool holder shown.				
Order Number	Stock		Insert Number	Dimensions (mm)									
	R	L		H1	B	L1	H2	F1	Shim	Lock Pin	Stop Ring	Spanner	
ETFNR/L1212	●	●	TNMA TNMG TNMM TNGA TNGG	1103	12	12	80	11.5	16	—	P221US	ER2	KY25
1616H33	●	●		1604	16	16	100	15.5	20	—	P332US	ER3	KY40
2020K33W	●	●		1604	20	20	125	19.5	25	EST32	P333WS	ER3	KY40
2525M33W	●	●		1604	25	25	150	24.5	32	EST32	P334WS	ER3	KY40

(Note) When using insert with right or left hand breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

CTFN		Facing										MC type				M Class	G Class
																(16)	(11,16)
																CBN/PCD	
																(16)	
												Right hand tool holder shown.					
Order Number	Stock		Insert Number	Dimensions (mm)													
	R	L		H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Bridge	Clamp Screw	Breaker Piece	Wrench		
CTFNR/L1616	●	●	TNMN TNGN	1103	16	16	100	23	16	20	CT22	BCP201	CK231	LS1	CBT2 CBT2N	HKY30R	
2020	●	●		1604	20	20	125	28	20	25	CT32	BCP301	CK341	LS2	CBT3 CBT3N	HKY40R	
2525	●	●		1604	25	25	150	28	25	32	CT32	BCP301	CK341	LS3	CBT3F	HKY40R	

(Note) When using insert with right or left hand breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

* Clamp Torque (N · m) : LS1=5.0, LS2=8.2, LS3=8.2

RECOMMENDED CUTTING CONDITIONS

Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)	Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FY	NX3035	260—370	M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SY	NX3035	235—335			Light	SH	US735	95—185
		Medium	MS	UE6110	260—440			Medium	MS	US735	85—165
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280	K	Gray Cast Iron (≤350MPa)	Finish	R/L-F	NX2525	180—245
		Light	SH	UE6110	210—355			Light	MA	UC5115	160—295
		Medium	MP	UE6110	190—325			Medium	Standard	UC5115	160—295

(Note) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

● : Inventory maintained in Japan.

CBN & PCD inserts
A148, A149, A155, A173

ETFN type inserts
A074—A079

CTFN type inserts
A087

MTQN			Facing, Copying								WP type		Finish		Light		Medium		Medium	
 105°			 6° Right hand tool holder shown.								FH		SH		MP		MH			
											(16)		(16.22)		(16.22)		(16.22)			
											Medium to Semi-Heavy		Stainless		G Class		CBN			
											GH		MS		R/L					
											(16.22)		(16.22)		(16.22)		(16)			
Order Number	Stock		Insert Number	Dimensions (mm)												*				
	R	L		H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Bridge	Side Lock Plate	Spring	Clamp Screw	Wrench				
MTQNR/L2020K16N	●	●	TNMA TNMG TNMM	1604	20	20	125	31	20	25	WPSTN33	CCP33	CCK13	CPT13	MES2	SLCS105	HKY25R HKY40R HKY30R HKY40R			
2525M22N	●	●	TNGA TNGG	2204	25	25	150	36	25	32	WPSTN43	CCP34	CCK14	CPT14	MES3	SLCS106				

(Note) When facing only and using insert with right or left hand breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

* Clamp Torque (N · m) : SLCS105=7.0, SLCS106=7.0

ETXN		Facing							ML type				
									Finish	Light	Medium	Medium	
									FH (11,16) Medium Standard	SH (16) Stainless	MP (16) G Class	MH (16) CBN	
									(11,16)	(16)	(11,16)	(16)	
Order Number	Stock		Insert Number	Dimensions (mm)									
	R	L		H1	B	L1	H2	F1					Shim
ETXNR/L1212	●	●	TNMA TNMG TNMM TNGA TNGG	1103	12	12	80	11.5	16	—	P221US	ER2	KY25
1616H33	●	●		1604	16	16	100	15.5	20	—	P332US	ER3	KY40
2020K33W	●	●		1604	20	20	125	19.5	25	EST32	P333WS	ER3	KY40
2525M33W	●	●		1604	25	25	150	24.5	32	EST32	P334WS	ER3	KY40

(Note) When using insert with right or left hand breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

RECOMMENDED CUTTING CONDITIONS

Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)	Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FY	NX3035	260—370	M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SY	NX3035	235—335			Light	SH	US735	95—185
		Medium	MS	UE6110	260—440			Medium	MS	US735	85—165
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280	K	Gray Cast Iron (≤350MPa)	Finish	R/L-F	NX2525	180—245
		Light	SH	UE6110	210—355			Light	MA	UC5115	160—295
		Medium	MP	UE6110	190—325			Medium	Standard	UC5115	160—295

CBN & PCD inserts
A148, A149, A173

MTQN type inserts
A074—A079

ETXN type inserts
A074—A079

SPARE PARTS
E001

TECHNICAL DATA
F001

EXTERNAL TURNING

TN INSERTS TOOL HOLDERS

EXTERNAL TURNING TOOLS

VN⁰⁰ INSERTS TOOL HOLDERS

EXTERNAL
TURNING

VN⁰⁰ INSERTS TOOL HOLDERS

PVJN		External turning, Copying										MP type		Finish		Light		Medium		Medium	
												FH (16)		SH (16)		MP (16)		MH (16)			
		Medium		Stainless		G Class		CBN													
		Standard		MS		R/L															
		(16)		(16)		(16)		(16)													
Order Number		Stock		Insert Number		Dimensions (mm)										*					
		R	L			H1	B	L1	L2	H2	F1	Shim	Lock Pin	Lock Screw	Stop Ring	Wrench					
PVJNR/L2020K16		●	●	VNMG	1604	20	20	125	32	20	25	PV321	P11S	HSP05008C	E03	HKY25R					
2525M16		●	●	VNMG VNGA VNGG	1604	25	25	150	38	25	32	PV322 PV323	P11S	HSP05008C	E03	HKY25R					

* Clamp Torque (N • m) : HSP05008C=2.5

DVJN		External turning, <i>DOUBLE CLAMP</i> type Copying										Finish		Light		Medium		Medium	
												FH	SH	MP	MH				
												(16)	(16)	(16)	(16)				
												Medium	Stainless	G Class	CBN				
Standard	MS	R/L																	
(16)	(16)	(16)	(16)																

Order Number		Stock		Insert Number		Dimensions (mm)										*		
		R	L			H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw	Wrench	Punch
DVJNR/L2020K16		●	●	VNMG	1604	20	20	125	41	20	25	DCSVN32	LLP13	DCK3113	DCS2	DC0520T	TKY15F	LLH3
2525M16		●	●	VNMG VNGA VNGG	1604	25	25	150	41	25	32	DCSVN32	LLP13	DCK3113	DCS2	DC0520T	TKY15F	LLH3

* Clamp Torque (N • m) : DC0520T=3.5

RECOMMENDED CUTTING CONDITIONS

Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FS	NX2525	260—370
		Light	SH	NX3035	235—335
		Medium	MS	UE6110	260—440
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280
		Light	SH	UE6110	210—355
		Medium	MP	UE6110	190—325

Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SH	US735	95—185
		Medium	MS	US735	85—165
K	Gray Cast Iron (≤350MPa)	Light	MA	UC5115	160—295
		Medium	Standard	UC5115	160—295

(Note) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

● : Inventory maintained in Japan.

CBN & PCD
inserts
A150, A174

PVJN type
inserts
A080, A081

DVJN type
inserts
A080, A081

DVVN				External turning, <i>DOUBLE CLAMP</i> type Copying							Finish		Light		Medium		Medium	
 72° 30'				 16°							FH (16)		SH (16)		MP (16)		MH (16)	
											Medium		Stainless		G Class		CBN	
											Standard (16)		MS (16)		R/L (16)		 (16)	
Order Number	Stock	Insert Number		Dimensions (mm)										*				
				H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw	Wrench	Punch		
DVVNN2020K16	●	VNMA	1604	20	20	125	44	20	10	DCSVN32	LLP13	DCK3113	DCS2	DC0520T	TKY15F	LLH3		
2525M16	●	VNMG VNGA VNCG	1604	25	25	150	44	25	12.5	DCSVN32	LLP13	DCK3113	DCS2	DC0520T	TKY15F	LLH3		

* Clamp Torque (N • m) : DC0520T=3.5

PVVN				External turning, Copying							MP type					Finish		Light		Medium		Medium	
											FH		SH		MP		MH						
											(16)		(16)		(16)		(16)						
											Medium		Stainless		G Class		CBN						
Standard		MS		R/L																			
(16)		(16)		(16)		(16)																	
Order Number		Stock	Insert Number		Dimensions (mm)								*										
					H1	B	L1	L2	H2	F1	Shim	Lock Pin	Lock Screw	Stop Ring	Wrench								
PVVNN2020K16		●	VNMA	1604	20	20	125	38	20	10	PV321	P11S	HSP05008C	E03	HKY25R								
2525M16		●	VNMG	1604	25	25	150	38	25	12.5	PV322	P11S	HSP05008C	E03	HKY25R								
			VNGA								PV323												
			VNCG																				

* Clamp Torque (N • m) : HSP05008C=2.5

RECOMMENDED CUTTING CONDITIONS

Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FS	NX2525	260—370
		Light	SH	NX3035	235—335
		Medium	MS	UE6110	260—440
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280
		Light	SH	UE6110	210—355
		Medium	MP	UE6110	190—325

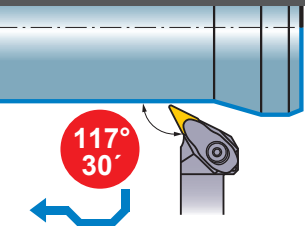
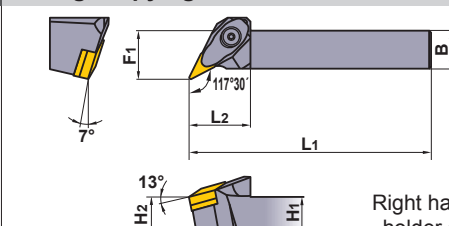
Work Material		Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SH	US735	95—185
		Medium	MS	US735	85—165
K	Gray Cast Iron (≤350MPa)	Light	MA	UC5115	160—295
		Medium	Standard	UC5115	160—295

EXTERNAL TURNING TOOLS

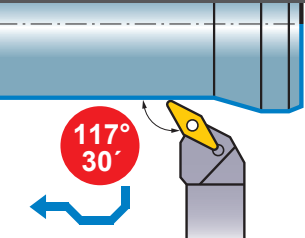
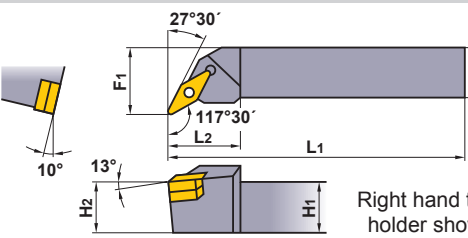
VN⁰⁰ INSERTS TOOL HOLDERS

EXTERNAL
TURNING

VN⁰⁰ INSERTS TOOL HOLDERS

DVPN				DOUBLE CLAMP type							Finish		Light		Medium		Medium	
																		
											(16)	(16)	(16)	(16)				
											Medium	Stainless	G Class	CBN				
											Standard	MS	R/L					
																		
											(16)	(16)	(16)	(16)				
Order Number	Stock	Insert Number		Dimensions (mm)														
				H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw	Wrench	Punch		
DVPNR/L2020K16	● ●	VNMG	1604	20	20	125	32	20	25	DCSVN32	LLP13	DCK3113	DCS2	DC0520T	TKY15F	LLH3		
2525M16	● ●	VNMG	1604	25	25	150	32	25	32	DCSVN32	LLP13	DCK3113	DCS2	DC0520T	TKY15F	LLH3		

* Clamp Torque (N • m) : DC0520T=3.5

PVPN				Facing, Copying							MP type		Finish		Light		Medium		Medium												
											FH		SH		MP		MH														
																															
											(16)		(16)		(16)		(16)														
											Medium		Stainless		G Class		CBN														
											Standard		MS		R/L																
																															
											(16)		(16)		(16)		(16)														
Order Number				Stock		Insert Number		Dimensions (mm)																							
														R L		Shim		Lock Pin		Lock Screw		Stop Ring		Wrench							
PVPNR/L2020K16				● ●		VNMG		1604		20		20		125		32		20		25		PV321		P11S		HSP05008C		E03		HKY25R	
2525M16				● ●		VNGA		1604		25		25		150		32		25		32		PV322		P11S		HSP05008C		E03		HKY25R	
						VNGG																PV323									

* Clamp Torque (N • m) : HSP05008C=2.5

RECOMMENDED CUTTING CONDITIONS

	Work Material	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FS	NX2525	260—370
		Light	SH	NX3035	235—335
		Medium	MS	UE6110	260—440
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280
		Light	SH	UE6110	210—355
		Medium	MP	UE6110	190—325

	Work Material	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SH	US735	95—185
		Medium	MS	US735	85—165
K	Gray Cast Iron (≤350MPa)	Light	MA	UC5115	160—295
		Medium	Standard	UC5115	160—295

(Note) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

● : Inventory maintained in Japan.

CBN & PCD
inserts
A150, A174

DVPN type
inserts
A080, A081

PVPN type
inserts
A080, A081

WN INSERTS TOOL HOLDERS

PWLN		External turning, Facing										LL type		Light	Medium	
 95°		 Right hand tool holder shown.										 (06)	 (06)			
												Stainless				
												 (06)				
Order Number	Stock		Insert Number	Dimensions (mm)						*2			*1			
	R	L		H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Lever	Clamp Screw	Wrench	Punch	
PWLN/L1616H06	●	●	WNMG	06T3	16	16	100	22	16	20	LLSWN3T3 (LLSWN32)	LLP13	LLCL13	LLCS106	HKY25R	LLH3
2020K06	●	●		06T3	20	20	125	22	20	25	LLSWN3T3 (LLSWN32)	LLP13	LLCL13	LLCS106	HKY25R	LLH3
2525M06	●	●		06T3	25	25	150	25	25	32	LLSWN3T3 (LLSWN32)	LLP13	LLCL13	LLCS106	HKY25R	LLH3

*1 Clamp Torque (N · m) : LLCS106=2.2

*2 Please use shim no. LLSWN32 with 4.76mm thick inserts. When using 4.76mm thick inserts, shim should be ordered separately.

DWLN			External turning, Facing DOUBLE CLAMP type								Finish		Light		Medium		Medium	
 95°			 Right hand tool holder shown.								 (08)	 (06,08)	 (06,08)	 (08)				
											Medium		Medium to Semi-Heavy		Stainless		CBN	
											Standard		GH		MS			
											 (08)	 (08)	 (06,08)					
Order Number	Stock		Insert Number		Dimensions (mm)						*2				*1			
	R	L			H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Bridge	Spring	Clamp Screw	Wrench	Punch	
DWLN/L1616H06	●	●	WNMG	06T3	16	16	100	25	16	20	LLSWN3T3 (LLSWN32)	LLP23	DCK2211	DCS2	DC0520T	TKY15F	LLH3	
2020K06	●	●		06T3	20	20	125	25	20	25	LLSWN3T3 (LLSWN32)	LLP23	DCK2211	DCS2	DC0520T	TKY15F	LLH3	
2525M06	●	●		06T3	25	25	150	25	25	32	LLSWN3T3 (LLSWN32)	LLP23	DCK2211	DCS2	DC0520T	TKY15F	LLH3	
2020K08	●	●	WNMA WNMG	0804	20	20	125	31	20	25	LLSWN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F	LLH4	
2525M08	●	●		0804	25	25	150	31	25	32	LLSWN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F	LLH4	
3225P08	●	●		0804	32	25	170	31	32	32	LLSWN42	LLP14	DCK2613	DCS1	DC0621T	TKY20F	LLH4	

*1 Clamp Torque (N · m) : DC0520T=3.5, DC0621T=5.0

*2 Please use shim no. LLSWN32 with 4.76mm thick inserts. When using 4.76mm thick inserts, shim should be ordered separately.

RECOMMENDED CUTTING CONDITIONS

	Work Material	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel (≤180HB)	Finish	FY	NX3035	260—370
		Light	SY	NX3035	235—335
		Medium	MS	UE6110	260—440
	Carbon Steel Alloy Steel (180HB—280HB)	Finish	FH	NX3035	200—280
		Light	SH	UE6110	210—355
		Medium	MP	UE6110	190—325

	Work Material	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
M	Stainless Steel (≤200HB)	Finish	FH	US735	105—200
		Light	SH	US735	95—185
		Medium	MS	US735	85—165
K	Gray Cast Iron (≤350MPa)	Light	MA	UC5115	160—295
		Medium	Standard	UC5115	160—295
		Semi-Heavy	Flat Top	UC5115	155—280

CBN inserts
A151

PWLN type inserts
A082—A084

DWLN type inserts
A082—A085

SPARE PARTS
E001

TECHNICAL DATA
F001

EXTERNAL TURNING

WN INSERTS TOOL HOLDERS

A215

EXTERNAL TURNING TOOLS

CC INSERTS TOOL HOLDERS

SCLC

External turning,
Facing

SP type

Finish

Medium

FV

Standard



(06,09)

(06,09,12)

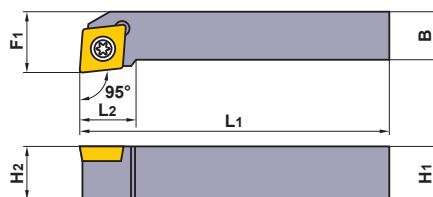
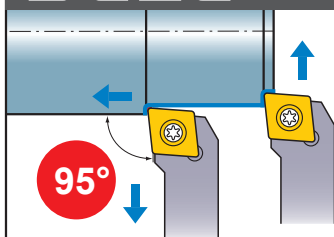
Flat Top

CBN/PCD



(06,09,12)

(06,09,12)



Right hand tool holder shown.

Order Number	Stock		Insert Number		Dimensions (mm)						 *	
	R	L			H1	B	L1	L2	H2	F1	Clamp Screw	Wrench
SCLCR/L0808D06	●	●	CCMW CCMT CCGW	0602	8	8	60	8.9	8	10	TS25	TKY08F
1010E06	●	●		0602	10	10	70	8.9	10	12	TS25	TKY08F
1212F09	●	●		09T3	12	12	80	13.6	12	16	TS43	TKY15F
1616H12	●	●		1204	16	16	100	16.7	16	20	TS5	TKY25F

* Clamp Torque (N • m) : TS25=1.0, TS43=3.5, TS5=7.5

RECOMMENDED CUTTING CONDITIONS

	Work Material	Hardness	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel	≤180HB	Finish Cutting	FV	NX3035	205—290
			Medium Cutting	Standard	UE6110	205—350
	Carbon Steel, Alloy Steel	180HB—280HB	Finish Cutting	FV	NX3035	160—225
			Medium Cutting	Standard	UE6110	150—260
M	Stainless Steel	≤200HB	Light Cutting	Standard	US735	70—130
K	Gray Cast Iron	Tensile Strength ≤350MPa	Medium Cutting	Flat Top	UC5115	130—235

(Note) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

● : Inventory maintained in Japan.

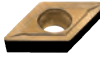
CBN & PCD
inserts

A156—A158, A176

SCLC type
inserts

A089—A092

DC INSERTS TOOL HOLDERS

SDJC		External turning, Copying		SPtype						Finish		Finish		Light		Medium	
										 (07,11)		 (07,11)		 (07,11)		 (07,11)	
										Medium		Flat Top		CBN/PCD			
										Standard							
										 (07,11)		 (07,11)		 (07,11)			
Order Number		Stock		Insert Number		Dimensions (mm)											
												* Clamp Screw		 Wrench			
SDJCR/L1010E07		●	●	DCMW DCMT DCGW	0702	10	10	70	12	10	12	TS25		TKY08F			
1212F11		●	●		11T3	12	12	80	18	12	16	TS43		TKY15F			
1616H11		●	●		11T3	16	16	100	18	16	20	TS43		TKY15F			

* Clamp Torque (N • m) : TS25=1.0, TS43=3.5

SDNC		External turning, Copying		SPtype					Finish		Finish		Light		Medium	
 62° 30°		 62°30' L1		 H2 H1		FV		R/L-F		SV		MV				
						(07,11)		(07,11)		(07,11)		(07,11)				
						Medium		Flat Top		CBN/PCD						
						Standard										
						(07,11)		(07,11)		(07,11)						
Order Number		Stock	Insert Number		Dimensions (mm)					*						
					H1	B	L1	H2	F1	Clamp Screw		Wrench				
SDNCN0808D07		●	DCMW DCMT DCGW	0702	8	8	60	8	4	TS25		TKY08F				
1010E07		●		0702	10	10	70	10	5	TS25		TKY08F				
1212F11		●		11T3	12	12	80	12	6	TS43		TKY15F				
1616H11		●		11T3	16	16	100	16	8	TS43		TKY15F				

* Clamp Torque (N • m) : TS25=1.0, TS43=3.5

RECOMMENDED CUTTING CONDITIONS

	Work Material	Hardness	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel	≤180HB	Finish Cutting	FV	NX3035	205—290
			Medium Cutting	Standard	UE6110	205—350
	Carbon Steel, Alloy Steel	180HB—280HB	Finish Cutting	FV	NX3035	160—225
			Medium Cutting	Standard	UE6110	150—260
M	Stainless Steel	≤200HB	Light Cutting	Standard	US735	70—130
K	Gray Cast Iron	Tensile Strength ≤350MPa	Medium Cutting	Flat Top	UC5115	130—235

CBN & PCD inserts
A160, A161, A177

SDJC type inserts
A094—A097

SDNC type inserts
A094—A097

SPARE PARTS
E001

TECHNICAL DATA
F001

EXTERNAL TURNING

DC INSERTS TOOL HOLDERS

EXTERNAL TURNING TOOLS

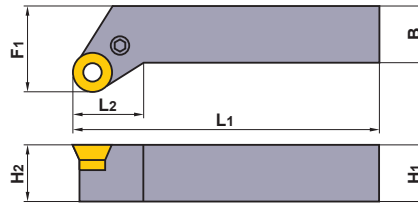
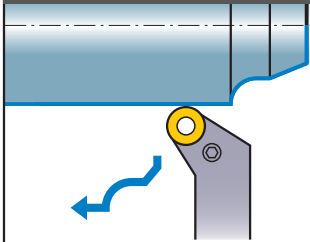
RC INSERTS TOOL HOLDERS

PRGC

External turning,
Facing, Copying

LL type

Medium



Right hand tool holder shown.



(10,12,16,20)

Order Number	Stock		Insert Number	Dimensions (mm)									 *			
	R	L		H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Lever	Clamp Screw	Wrench	Punch	
PRGCR/L2525M10	●	●	RCMX	1003M0	25	25	150	16.7	25	32	LLSRN103	LLP13	LLCL110	LLCS205	HKY20R	LLH3
2525M12	●	●		1204M0	25	25	150	17.5	25	32	LLSRN123	LLP13	LLCL112	LLCS106	HKY25R	LLH3
2525M16	●	●		1606M0	25	25	150	19.9	25	32	LLSRN164	LLP24	LLCL116	LLCS306	HKY25R	LLH4
3232P20	●	●		2006M0	32	32	170	23.8	32	40	LLSRN204	LLP15	LLCL120	LLCS508	HKY30R	—

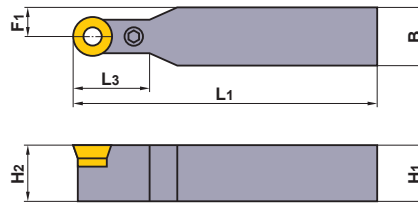
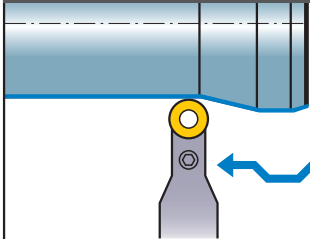
* Clamp Torque (N · m) : LLCS205=1.5, LLCS106=2.2, LLCS306=2.2, LLCS508=3.3

PRDC

External turning,
Copying

LL type

Medium



(10,12,16,20)

Order Number	Stock	Insert Number		Dimensions (mm)									 *		
				H1	B	L1	L3	H2	F1	Shim	Shim Pin	Clamp Lever	Clamp Screw	Wrench	Punch
PRDCN2020K10	●	RCMX	1003M0	20	20	125	23	20	10.0	LLSRN103	LLP13	LLCL110	LLCS205	HKY20R	LLH3
2525M12	●		1204M0	25	25	150	24	25	12.5	LLSRN123	LLP13	LLCL112	LLCS106	HKY25R	LLH3
3225P12	●		1204M0	32	25	170	24	32	12.5	LLSRN123	LLP13	LLCL112	LLCS106	HKY25R	LLH3
3225P16	●		1606M0	32	25	170	28	32	12.5	LLSRN164	LLP24	LLCL116	LLCS306	HKY25R	LLH4
3232P20	●		2006M0	32	32	170	33	32	16.0	LLSRN204	LLP15	LLCL120	LLCS508	HKY30R	—

* Clamp Torque (N · m) : LLCS205=1.5, LLCS106=2.2, LLCS306=2.2, LLCS508=3.3

RECOMMENDED CUTTING CONDITIONS

Work Material	Hardness	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P Mild Steel	≤180HB	Medium Cutting	Standard	UE6110	205—350
Carbon Steel, Alloy Steel	180HB—280HB	Medium Cutting	Standard	UE6110	150—260
M Stainless Steel	≤200HB	Medium Cutting	Standard	US735	70—130

(Note) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

● : Inventory maintained in Japan.

PRGC type
inserts **A099**

PRDC type
inserts **A099**

SRGC		External turning, Facing, Copying										SPtype		Medium Standard	
														Right hand tool holder shown.	
Order Number		Stock		Insert Number		Dimensions (mm)						*			
		R	L			H1	B	L1	L2	H2	F1	Clamp Screw		Wrench	
SRGCR/L1616H06		●	●	RCMT	0602	16	16	100	10	16	20	TS25		TKY08F	
1616H08		●	●		0803	16	16	100	14.5	16	22	TS3		TKY08F	

* Clamp Torque (N • m) : TS25=1.0, TS3=1.0

SRDC		External turning, Copying										SPtype		Medium Standard	
Order Number	Stock	Insert Number		Dimensions (mm)						*					
				H1	B	L1	L3	H2	F1	Clamp Screw	Wrench				
SRDCN1616H06	●	RCMT	0602	16	16	100	12	16	8	TS25	TKY08F				
1616H08	●		0803	16	16	100	16	16	8	TS3	TKY08F				

* Clamp Torque (N • m) : TS25=1.0, TS3=1.0

RECOMMENDED CUTTING CONDITIONS

	Work Material	Hardness	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel	≤180HB	Medium Cutting	Standard	UE6110	205—350
	Carbon Steel, Alloy Steel	180HB—280HB	Medium Cutting	Standard	UE6110	150—260
M	Stainless Steel	≤200HB	Medium Cutting	Standard	US735	70—130

EXTERNAL TURNING TOOLS

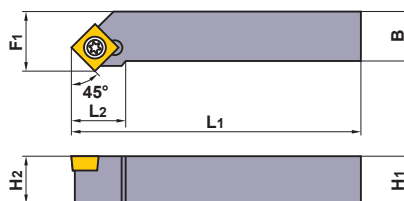
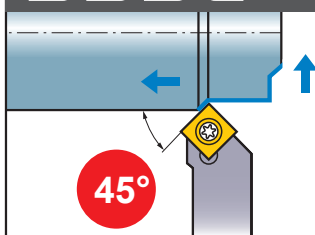
SC INSERTS TOOL HOLDERS

SSSC

External turning,
Facing, Chamfering

SP type

Finish	Medium
FV  (09)	Standard  (09)
Flat Top  (09)	



Right hand tool holder shown.

Order Number	Stock		Insert Number		Dimensions (mm)						 *	
	R	L			H1	B	L1	L2	H2	F1	Clamp Screw	Wrench
SSSCR/L1212F09	●	●	SCMW SCMT	09T3 	12	12	80	15.2	12	13	TS43	TKY15F
1616H09	●	●		09T3 	16	16	100	15.2	16	17	TS43	TKY15F

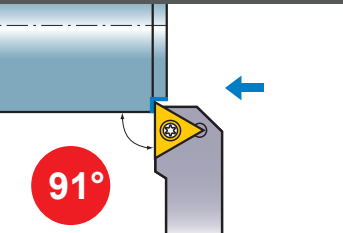
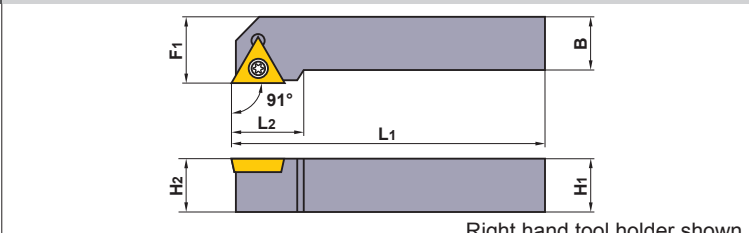
* Clamp Torque (N • m) : TS43=3.5

RECOMMENDED CUTTING CONDITIONS

	Work Material	Hardness	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel	≤180HB	Finish Cutting	FV	NX3035	205—290
			Medium Cutting	Standard	UE6110	205—350
	Carbon Steel, Alloy Steel	180HB—280HB	Finish Cutting	FV	NX3035	160—225
			Medium Cutting	Standard	UE6110	150—260
M	Stainless Steel	≤200HB	Light Cutting	Standard	US735	70—130
K	Gray Cast Iron	Tensile Strength ≤350MPa	Medium Cutting	Flat Top	UC5115	130—235

(Note) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

● : Inventory maintained in Japan.

STGC		External turning								SP type		Finish	Medium
										FV	Standard		
													
										(11,16)	(11,13,16)		
										Flat Top	CBN/PCD		
													
										(11,13,16)	(11,13)		
Right hand tool holder shown.													
Order Number	Stock		Insert Number		Dimensions (mm)						 *		
	R	L			H1	B	L1	L2	H2	F1	Clamp Screw	Wrench	
STGCR/L1010E11	●	●	TCMW TCMT	1102	10	10	70	13.5	10	12	TS25	TKY08F	
1212F13	●	●		1303	12	12	80	17.6	12	16	TS3	TKY08F	
1616H16	●	●		16T3	16	16	100	20.7	16	20	TS43	TKY15F	

* Clamp Torque (N • m) : TS25=1.0, TS3=1.0, TS43=3.5

STFC		Facing										SP type		Finish	Medium
												FV	Standard		
												(11)	(11,13)		
												Flat Top	CBN/PCD		
												(11,13)	(11,13)		
Right hand tool holder shown.															
Order Number	Stock		Insert Number	Dimensions (mm)						*					
	R	L		H1	B	L1	L2	H2	F1	Clamp Screw	Wrench				
STFCR/L1010E11	●	●	TCMW TCMT	1102	10	10	70	12.5	10	12	TS25	TKY08F			
1212F13	●	●		1303	12	12	80	14.5	12	16	TS3	TKY08F			
1616H13	●	●		1303	16	16	100	14.5	16	20	TS3	TKY08F			

(Note) When using insert with right or left hand breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

* Clamp Torque (N • m) : TS25=1.0, TS3=1.0

RECOMMENDED CUTTING CONDITIONS

	Work Material	Hardness	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel	≤180HB	Finish Cutting	FV	NX3035	205—290
			Medium Cutting	Standard	UE6110	205—350
	Carbon Steel, Alloy Steel	180HB—280HB	Finish Cutting	FV	NX3035	160—225
			Medium Cutting	Standard	UE6110	150—260
M	Stainless Steel	≤200HB	Light Cutting	Standard	US735	70—130
K	Gray Cast Iron	Tensile Strength ≤350MPa	Medium Cutting	Flat Top	UC5115	130—235

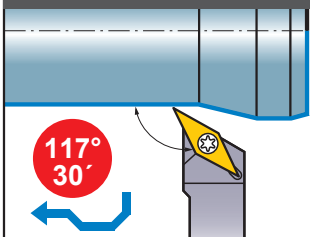
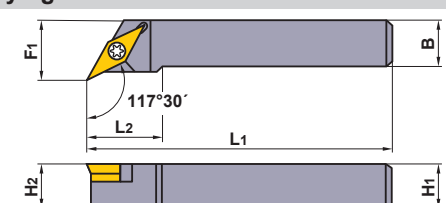
EXTERNAL TURNING TOOLS

VC INSERTS TOOL HOLDERS

EXTERNAL TURNING

VC INSERTS TOOL HOLDERS

SVJC		External turning, Copying										SPtype		Finish		Medium			
 93°				 Right hand tool holder shown.										 (16)		 (11,16)			
														Flat Top					
														 (11,16)					
Order Number		Stock		Insert Number		Dimensions (mm)										* 			
		R	L			H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Screw	Wrench				
SVJCR/L1010E11		●	●	VCMT VCMW	1103	10	10	70	17	10	12	—	—	TS25	①TKY08F				
1616H16		●	●		1604	16	16	100	25	16	20	—	—	TS43	①TKY15F				
2020K16		●	●		1604	20	20	125	40	20	25	SPSVN32	BCP141	TS44	②TKY15R				
2525M16		●	●		1604	25	25	150	40	25	32	SPSVN32	BCP141	TS44	②TKY15R				

SVPC		Facing, Copying										SP type		Finish	Medium
												FV		Standard	
												 (16)		 (16)	
		Right hand tool holder shown.										 (16)			
Order Number	Stock		Insert Number		Dimensions (mm)								 *		
	R	L			H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Screw	Wrench	
SVPCR/L2020K16	●	●	VCMT VCMW	1604	20	20	125	30	20	25	SPSVN32	BCP141	TS44	TKY15R	
2525M16	●	●		1604	25	25	150	30	25	32	SPSVN32	BCP141	TS44	TKY15R	

* Clamp Torque (N • m) : TS44=3.5

EXTERNAL
TURNING

VC INSERTS TOOL HOLDERS

RECOMMENDED CUTTING CONDITIONS

	Work Material	Hardness	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel	≤180HB	Finish Cutting	FV	NX3035	205—290
			Medium Cutting	Standard	UE6110	205—350
	Carbon Steel, Alloy Steel	180HB—280HB	Finish Cutting	FV	NX3035	160—225
			Medium Cutting	Standard	UE6110	150—260
M	Stainless Steel	≤200HB	Light Cutting	Standard	US735	70—130
K	Gray Cast Iron	Tensile Strength ≤350MPa	Medium Cutting	Flat Top	UC5115	130—235

CBN inserts
A166

SVPC type
inserts
A110

SPARE PARTS
E001

TECHNICAL
DATA
F001

EXTERNAL TURNING TOOLS

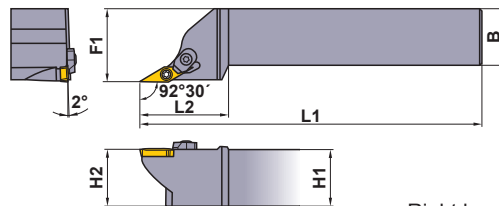
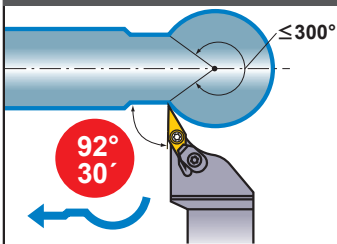
XC INSERTS TOOL HOLDERS

SXZC **NEW**

External turning,
Copying

Profile Holder

Finish
SVX



Right hand tool holder shown.

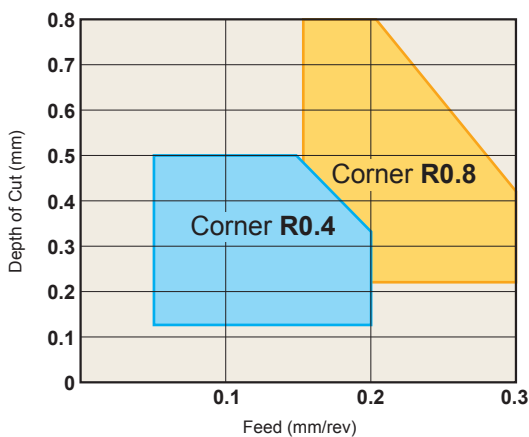


(15)

Order Number	Stock		Insert Number		Dimensions (mm)											
	R	L			H1	B	L1	L2	H2	F1	Clamp Screw	Clamp Bridge	Clamp Bridge Screw	Spring	Insert Wrench	Wrench for clamp bridge
SXZCR/L1616H15	●	●	XCMT	1503	16	16	100	35	16	20	TS255	AMS3	AJS3010T10	ASS2	TKY08F	TKY10F
2020K15	●	●		1503	20	20	125	35	20	25	TS255	AMS3	AJS3010T10	ASS2	TKY08F	TKY10F
2525M15	●	●		1503	25	25	150	40	25	32	TS255	AMS3	AJS3010T10	ASS2	TKF08F	TKF10F

* Clamp Torque (N • m) : TS255=1.0, AJS3010T10=2.5

Applicable range



RECOMMENDED CUTTING CONDITIONS

Work Material	Hardness	Grade	Cutting Speed (m/min)
P Mild Steel	≤180HB	UE6020	150—350
Carbon Steel, Alloy Steel	150HB—250HB	UE6020	100—250

(Note) The above cutting conditions are general guidelines.

Adjustments maybe necessary depending on machine rigidity, workpiece geometry and clamping.

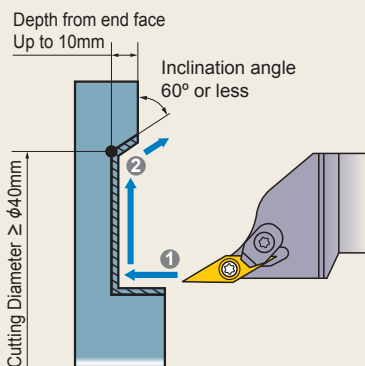
(Note) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

● : Inventory maintained in Japan.

NOTE

Notes when end face copying

Pay special attention to the following when face copying.



●Machining of an outer diameter (Step ①)

- To prevent burr formation, the depth of cut should be below half the nose radius.

●Machining of an inclination (Step ②)

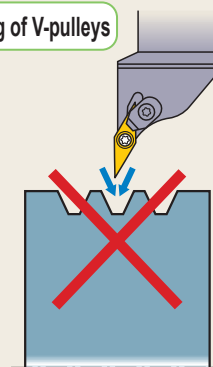
- To reduce the contact length of chips, the depth of cut should be below half the nose radius.
- To prevent interference between the tool and the workpiece, the cutting diameter should be 40mm or larger, inclination angle 60° or less and depth from the end face up to 10mm.

●When changing inserts

- When indexing the inserts, it is recommended to preset the cutting edge position to maintain machining accuracy.

Not possible

Machining of V-pulleys



When machining V-pulleys, use a VNMG insert.

EXTERNAL TURNING TOOLS

SP INSERTS TOOL HOLDERS

CSDP

External turning,
Chamfering

MC type

M Class

M Class

G Class



(09,12)



(09,12)



(09)

G Class

CBN/PCD



(09,12)



(09,12)



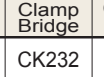
Shim



Shim Pin



Clamp Bridge



Clamp Screw



Breaker Piece



Wrench



PS31



BCP201



CK232



LS1



CBS3D



HKY30R



PS42



BCP251



CK342



LS2



CBS4D



HKY40R



PS42



BCP251



CK342



LS3



CBS4D



HKY40R



PS42



BCP251



CK342



LS3



CBS4D



HKY40R



PS42



BCP251



CK342



LS3



CBS4D



HKY40R



PS42



BCP251



CK342



LS3



CBS4D



HKY40R



PS42



BCP251



CK342



LS3



CBS4D



HKY40R



PS42



BCP251



CK342



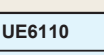
LS3



CBS4D



HKY40R



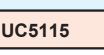
PS42



BCP251



CK342



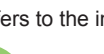
LS3



CBS4D



HKY40R



PS42



BCP251



CK342



LS3



CBS4D



HKY40R

PS42

BCP251

CK342

LS3

CBS4D

HKY40R

PS42

BCP251

CK342

LS3

CBS4D

HKY40R

PS42

BCP251

CK342

LS3

CBS4D

HKY40R

PS42

BCP251

CK342

LS3

CBS4D

HKY40R

PS42

BCP251

CK342

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CK342

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HKY40R

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CK342

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HKY40R

PS42

BCP251

CK342

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CBS4D

HKY40R

PS42

BCP251

CK342

LS3

CBS4D

HKY40R

PS42

BCP251

CK342

LS3

CBS4D

HKY40R

PS42

BCP251

CK342

LS3

CBS4D

HKY40R

PS42

BCP251

CK342

LS3

CBS4D

HKY40R

PS42

BCP251

TP INSERTS TOOL HOLDERS

CTFP				Facing										MC type		M Class	M Class	G Class
														Right hand tool holder shown.				R/L
																G Class	CBN/PCD	
Order Number	Stock		Insert Number		Dimensions (mm)													
	R	L			H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Bridge	Clamp Screw	Breaker Piece	Wrench		
CTFPR/L1616	●	●	TPMN	1103	16	16	100	22	16	20	PT21	BCP141	CK231	LS1	CBT2 CBT2N CBT3 CBT3N CBT3F	HKY30R		
2020	●	●	TPMR	1603	20	20	125	26	20	25	PT32	BCP201	CK341	LS2		HKY40R		
2525	●	●	TPGN	1603	25	25	150	26	25	32	PT32	BCP201	CK341	LS3		HKY40R		
			TPGR															

(Note) When using insert with right or left hand breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

* Clamp Torque (N · m) : LS1=5.0, LS2=8.2, LS3=8.2

CTGP		External turning										MC type		M Class	M Class	G Class
												Right hand tool holder shown.				R/L
														G Class	CBN/PCD	
Order Number	Stock		Insert Number		Dimensions (mm)											
	R	L			H1	B	L1	L2	H2	F1	Shim	Shim Pin	Clamp Bridge	Clamp Screw	Breaker Piece	Wrench
CTGPR/L1616	●	●	TPMN TPMR TPGN TPGR	1103	16	16	100	21	16	20	PT21	BCP141	CK231	LS1	CBT2 CBT2N CBT3 CBT3N CBT3F	HKY30R
2020	●	●		1603	20	20	125	29	20	25	PT32	BCP201	CK341	LS2		HKY40R
2525	●	●		1603	25	25	150	29	25	32	PT32	BCP201	CK341	LS3		HKY40R

* Clamp Torque (N · m) : LS1=5.0, LS2=8.2, LS3=8.2

RECOMMENDED CUTTING CONDITIONS

	Work Material	Hardness	Cutting Mode	Breaker	Grade	Cutting Speed (m/min)
P	Mild Steel	≤180HB	Medium Cutting	Standard	UE6110	205—350
	Carbon Steel, Alloy Steel	180HB—280HB	Medium Cutting	Standard	UE6110	150—260
K	Gray Cast Iron	Tensile Strength ≤350MPa	Medium Cutting	Flat Top	UC5115	130—235

CBN & PCD
inserts
A169, A185

CTFP type
inserts
A120, A121

CTGP type
inserts
A120, A121

SPARE PARTS
E001

TECHNICAL
DATA
F001

EXTERNAL
TURNING

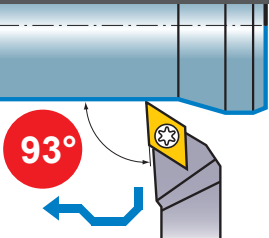
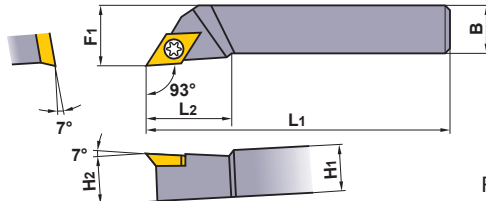
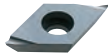
TP INSERTS TOOL HOLDERS

EXTERNAL TURNING TOOLS [FOR ALUMINIUM]

DE⁰⁰INSERTS TOOL HOLDERS

EXTERNAL
TURNING

DE⁰⁰ INSERTS TOOL HOLDERS

SDJE		External turning, Copying										AL type		Finish		Medium	
												R/L-F		R/L			
																	
												(15)		(15)			
												PCD					
												R/L-F					
																	
												(15)					
												Right hand tool holder shown.					
Order Number	Stock		Insert Number		Dimensions (mm)						 *						
	R	L			H1	B	L1	L2	H2	F1	Clamp Screw	Wrench					
SDJER/L1616H15	●	●	DEGX	1504 ⁰⁰	16	16	100	27	16	20	CS451190T	TKY20F					
2020K15	●	●		1504 ⁰⁰	20	20	125	35	20	25	CS451190T	TKY20F					
2525M15	●	●		1504 ⁰⁰	25	25	150	35	25	32	CS451190T	TKY20F					

* Clamp Torque (N • m) : CS451190T=5.0

SDNE		External turning, Copying								AL type	
										Finish	Medium
										R/L-F	R/L
										(15)	(15)
										PCD	
										R/L-F	
										(15)	
Order Number	Stock		Insert Number	Dimensions (mm)						* Clamp Screw	 Wrench
	R	L		H1	B	L1	L2	H2	F1		
SDNEN1616H15	●		DEGX	1504 ⁰⁰	16	16	100	16	8	CS451190T	TKY20F
2020K15	●			1504 ⁰⁰	20	20	125	20	10	CS451190T	TKY20F
2525M15	●			1504 ⁰⁰	25	25	150	25	12.5	CS451190T	TKY20F

* Clamp Torque (N • m) : CS451190T=5.0

RECOMMENDED CUTTING CONDITIONS

Work Material	Grade	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
N	Aluminium Alloy	HTi10	400	0.05—0.3
		MD220	800	0.05—0.3

(Note) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

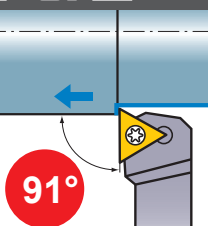
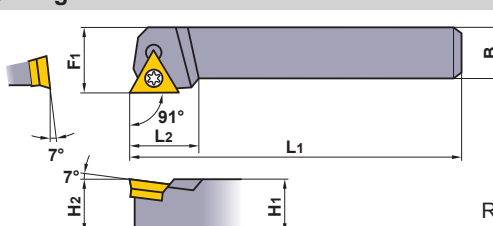
● : Inventory maintained in Japan.

PCD inserts
A183

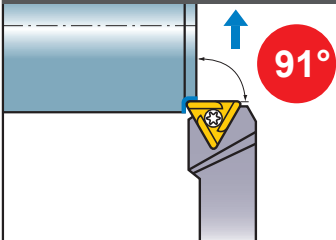
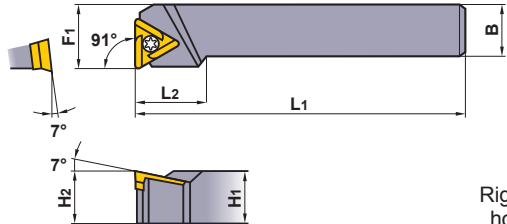
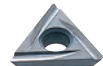
SDJE type inserts
A098

SDNE type inserts
A098

TE INSERTS TOOL HOLDERS

STGE		External turning										AL type		Medium		PCD	
												Right hand tool holder shown.		R/L	R/L		
																	
														(16)		(16)	
														PCD			
																	
														(16)			
Order Number	Stock		Insert Number		Dimensions (mm)						 *						
	R	L			H1	B	L1	L2	H2	F1	Clamp Screw	Wrench					
STGER/L1616H16	●	●	TEGX	1603	16	16	100	22	16	20	FC400890T	TKY10F					
2020K16	●	●		1603	20	20	125	22	20	25	FC400890T	TKY10F					
2525M16	●	●		1603	25	25	150	22	25	32	FC400890T	TKY10F					

* Clamp Torque (N • m) : FC400890T=2.5

STFE		Facing										AL type		Medium	PCD
		 Right hand tool holder shown.										R/L	R/L		
															
												PCD			
															
												(16)	(16)		
												Right hand tool holder shown.		(16)	
Order Number	Stock		Insert Number	Dimensions (mm)						 *					
	R	L		H1	B	L1	L2	H2	F1	Clamp Screw	Wrench				
STFER/L1616H16	●	●	TEGX	1603	16	16	100	22	16	20	FC400890T	TKY10F			
2020K16	●	●		1603	20	20	125	22	20	25	FC400890T	TKY10F			
2525M16	●	●		1603	25	25	150	22	25	32	FC400890T	TKY10F			

(Note) When using insert with right or left hand breaker, please use left hand insert for right hand holder and right hand insert for left hand holder.

* Clamp Torque (N • m) : FC400890T=2.5

RECOMMENDED CUTTING CONDITIONS

Work Material	Grade	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
N	Aluminium Alloy	HTi10	400	0.05—0.3
		MD220	800	0.05—0.3

PCD inserts
A183

STGE type inserts
A105

STFE type inserts
A105

SPARE PARTS
E001

TECHNICAL DATA
F001

EXTERNAL TURNING TOOLS [FOR ALUMINIUM]

VD INSERTS TOOL HOLDERS

SVJD

External turning,
Copying

AL type

Finish
R/L



(16)

Flat Top



(16)

Right hand tool holder shown.

Order Number	Stock		Insert Number		Dimensions (mm)						 *	
	R	L			H1	B	L1	L3	H2	F1	Clamp Screw	Wrench
SVJDR/L1616H16	●	●	VDGX	1603	16	16	100	30	16	20	FC400890T	TKY10F
2020K16	●	●		1603	20	20	125	30	20	25	FC400890T	TKY10F
2525M16	●	●		1603	25	25	150	30	25	32	FC400890T	TKY10F

* Clamp Torque (N • m) : FC400890T=2.5

RECOMMENDED CUTTING CONDITIONS

Work Material	Grade	Cutting Speed (m/min)	Feed (mm/rev)	Depth of Cut (mm)
N	HTi10	400	0.05—0.3	0.2—3.0
	MD220	800	0.05—0.3	0.2—3.0

(Note) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

● : Inventory maintained in Japan.

PCD inserts
A184

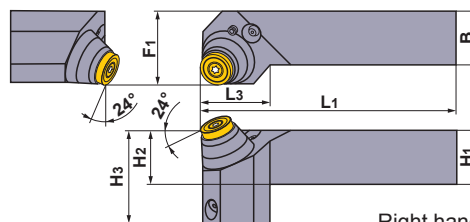
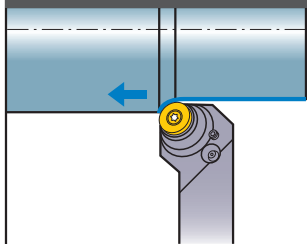
SVJD type
inserts
A111

EXTERNAL TURNING TOOLS

RD INSERTS TOOL HOLDERS

RRSD

ROTARY Holder



Right hand tool holder shown.

Order Number	Stock		Insert Number	Dimensions (mm)									 *			
	R	L		H1	B	L1	L3	H2	H3	F1	Locator	Locator Screw	Clamp Screw	Wrench (Locator)	Fixed Wrench	Wrench (Insert)
RRSDR/L2525M12	●	●	RDGH120400-M4	25	25	150	40	25	53	40	RRSDS1	HSP02505	CS401990T	HKY13R	RRKY4	TKY20T
3232P12	●	●		32	32	170	40	32	53	40	RRSDS1	HSP02505	CS401990T	HKY13R	RRKY4	TKY20T

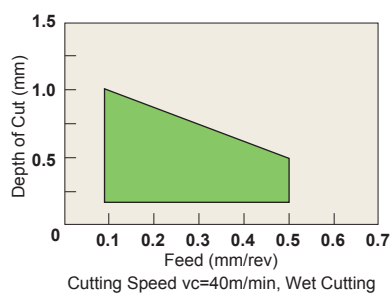
* Clamp Torque (N • m) : CS401990T=3.5

INSERT

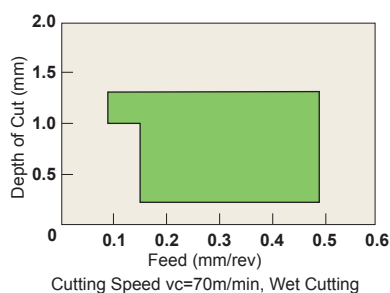
Shape	Order Number	Stock		Geometry
		US735	TF15	
	RDGH120400-M4	●	●	

CHIP CONTROL RANGES

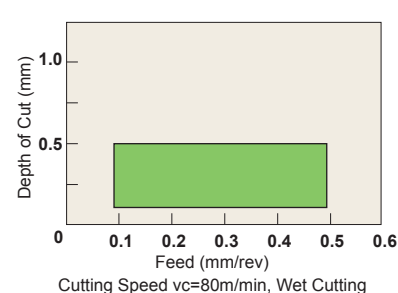
Inconel 718 (Nickel Base Alloy)



Titanium Alloy Ti-6Al-4V



Stainless Steel JIS SUS304



EXTERNAL TURNING

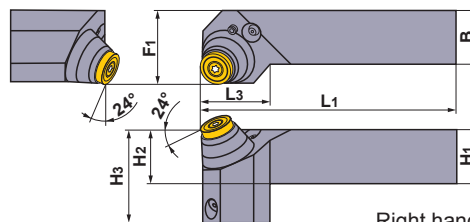
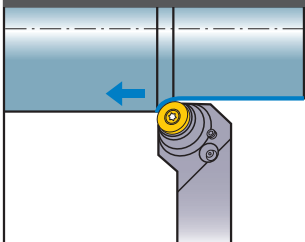
RD INSERTS TOOL HOLDERS

EXTERNAL TURNING TOOLS

RN INSERTS TOOL HOLDERS

RRSN

ROTARY Holder



Right hand tool holder shown.

Order Number	Stock		Insert Number	Dimensions (mm)									 *			
	R	L		H1	B	L1	L3	H2	H3	F1	Locator	Locator Screw	Clamp Screw	Wrench (Locator)	Fixed Wrench	Wrench (Insert)
RRSNR/L3232P19	●	●	RNGJ190600-M5	32	32	170	43	32	55	43	RRSNS1	CFM02004-1	CS502190T	6100-1-75	RRKY4	TKY27T
4040R19	●	●		40	40	200	43	40	55	43	RRSNS1	CFM02004-1	CS502190T	6100-1-75	RRKY4	TKY27T

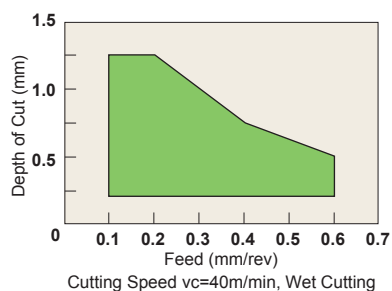
* Clamp Torque (N • m) : CS502190T=7.5

INSERT

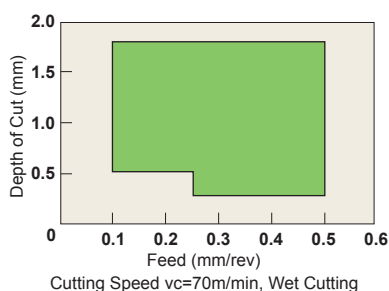
Shape	Order Number	Stock		Geometry
		US735	TF15	
	RNGJ190600-M5	●	●	

CHIP CONTROL RANGES

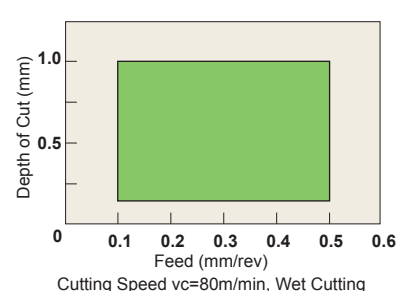
Inconel 718 (Nickel Base Alloy)



Titanium Alloy Ti-6Al-4V



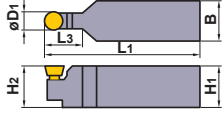
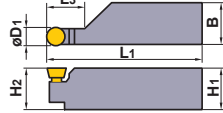
Stainless Steel JIS SUS304



● : Inventory maintained in Japan. (10 inserts in one case)

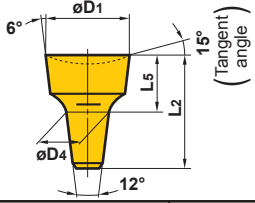
TL HOLDER

HOLDER

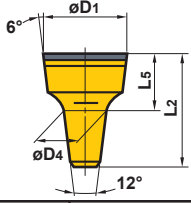
Geometry	Revised order number	Conventional order number	Stock	Insert Number	Dimensions (mm)					
					D1	H1	B	H2	L1	L3
TLHN (External turning, Copying) 	TLHN2020K5	TLHN2020K5	●	RTG05A	5	20	20	20	125	16
	2525M7	44M7	●	07A	7	25	25	25	150	20
	2525M8	2525M8	●	08A	8	25	25	25	150	20
	3225P10	54P10	●	10A	10	32	25	32	170	25
TLHR (External turning, Copying) 	TLHR2020K5	TLHR2020K5	●	RTG05A	5	20	20	20	125	16
	2020K6	2020K6	●	06A	6	20	20	20	125	16
	2525M7	2525M7	●	07A	7	25	25	25	150	20
	2525M8	44M8	●	08A	8	25	25	25	150	20
	3225P10	54P10	●	10A	10	32	25	32	170	25

EXTERNAL TURNING
TL HOLDER

INSERTS

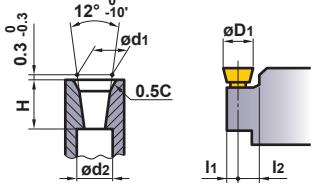
						
Order Number	Stock Carbide		Dimensions (mm)			
	UTi20T	HTi10	D1	L2	D4	L5
RTG05A	●	●	5	7.5	2.5	3.5
06A	●	●	6	7.5	3.5	3.5
07A	●	●	7	11	3.5	5
08A	●	●	8	11	4.5	5
10A	●	●	10	14	5.5	6.5
12A	●	●	12	14	7.5	6.5

INSERTS (CBN)

					
Order Number	Stock CBN	Dimensions (mm)			
	MB825	D1	L2	D4	L5
RTG05A	●	5	7.5	2.5	3.5
06A	●	6	7.5	3.5	3.5
07A	●	7	11	3.5	5
08A	●	8	11	4.5	5
10A	●	10	14	5.5	6.5

INSERT SEAT LOCATION

When manufacturing a special tool holder, please machine insert seat in accordance to the drawing.

Insert Seat Dimensions 	Insert Diameter D1	Dimensions (mm)					Taper Diameter
		H	d1	d2	l1	l2	
	5	4	2.5	1.9	1.85	3.2	1.5
	6	4	3.5	2.9	2.35	3.7	2.5
	7	6	3.5	2.5	2.75	4.3	2.1
	8	6	4.5	3.5	3.25	4.8	3.1
	10	7.5	5.5	4.2	4.15	5.9	3.8
	12	7.5	7.5	6.2	5.15	6.9	5.8