

Tools for Turning Mill

N1~N12



Tools for Turning Mill

N2~N12

HSK-T (ICTM Standard) Tooling

N2

Parts Compatibility of Lever Lock Toolholders

R42

N

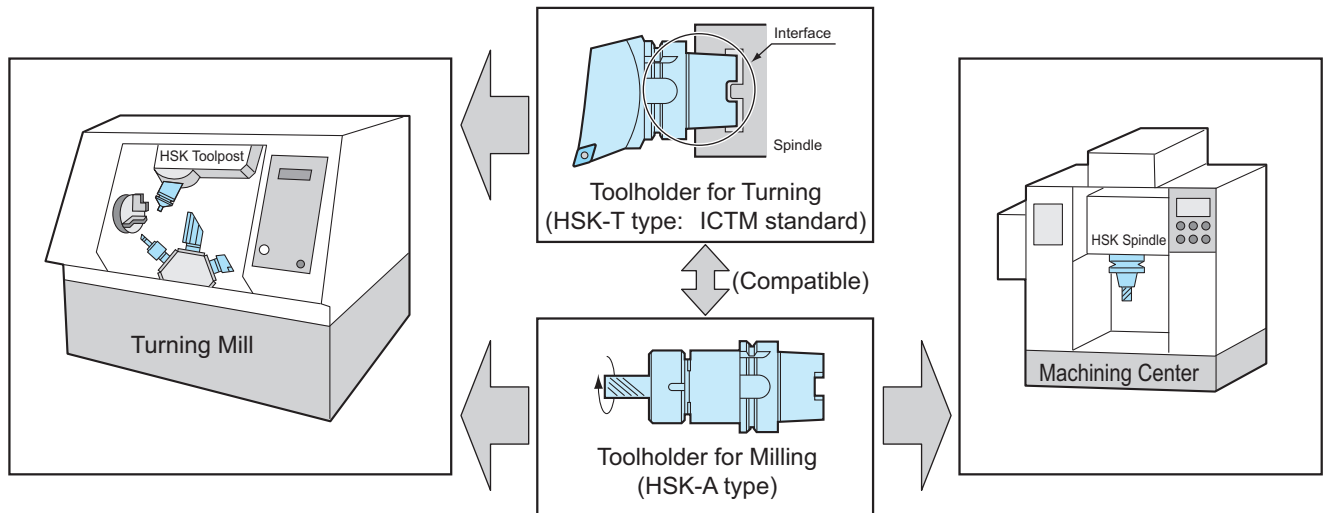


Tools for Turning Mill

- The turning mill is a machine that combines turning and milling functions. Now an interface (between workpiece and toolholder - equivalent to the arbor for milling) is available for the turning mill that fulfils the ICTM standard.
- ICTM standard was developed by 16 companies in Japan, as the interface between turning mill machines. It is based on the two-face restraint type standard "ISO 12164-1:2001 HSK Standard Shank".
- This standard became an International Standard as ISO Standard "ISO12164-3: 2008" in 2008. Description is indicated as HSK-T○○.

Features

- ① Compatible with HSK-A type for Machining Centers.

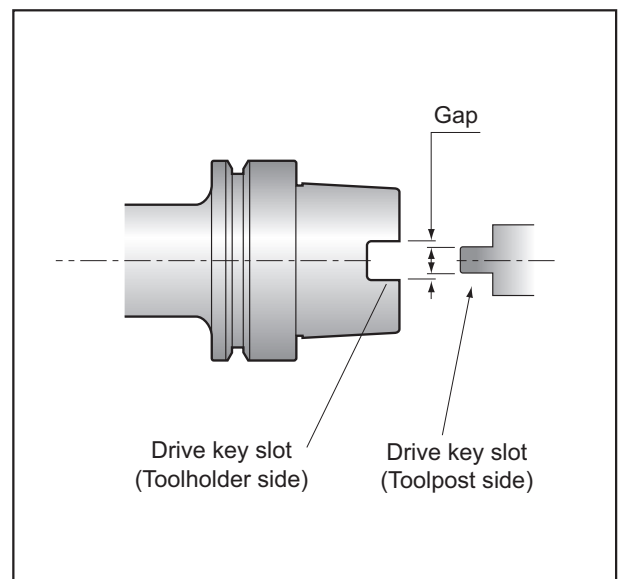


- ② Machining precision for turning has improved by minimizing the gap between the drive key slot on the toolholder side and the drive key on the toolpost side.

Table 1: Comparison of the gap of a key and key slot

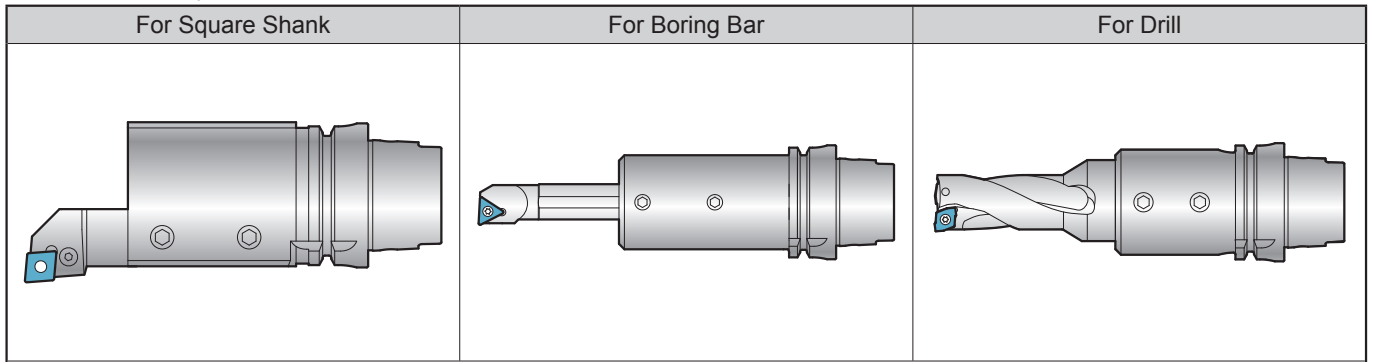
	(mm)				
HSK-A63 Tolerance	12.2	12.3	12.4	12.5	12.6
	Key tolerance 12.35 Min. gap 0.10 Max. gap 0.33 Key slot tolerance 12.58 Min. gap 0.15 Max. gap 0.08				
HSK-T63 Tolerance	Key tolerance 12.41 Min. gap 0.015 Max. gap 0.075 Key slot tolerance 12.46 Min. gap 0.025 Max. gap 0.035				

Table 2: Effect of the gap



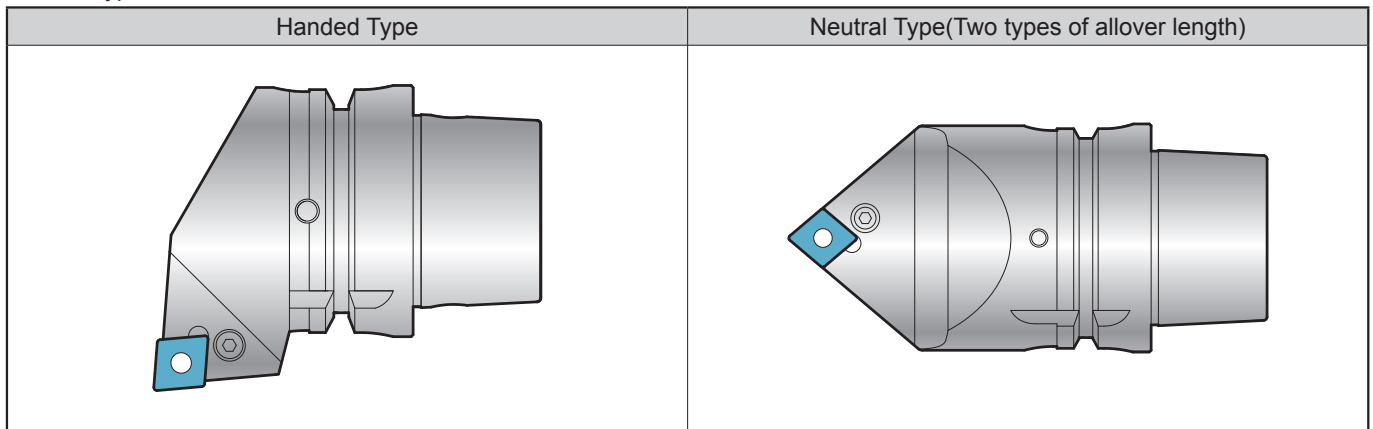
Toolholder Variation

● Conventional Type



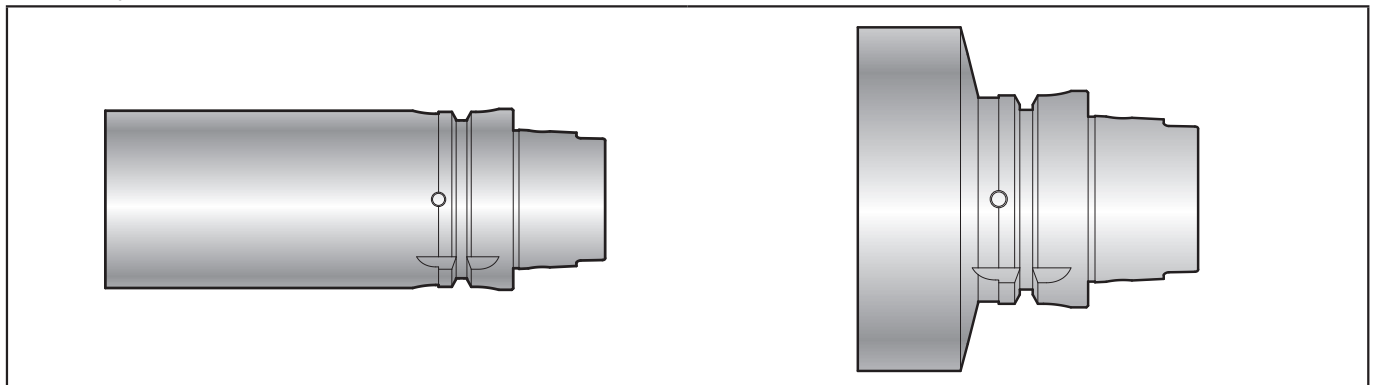
- 1) For square shank, boring bar and drilling on the conventional NC lathe machine.
- 2) Long type for boring bar and short type for drill are available.

● Solid type Toolholder



- 1) Solid type toolholder combining interface focusing on rigidity improvement.
- 2) Neutral type is available as double handed tool (right / left) by moving B-spindle of the spindle head.
- 3) Two different lengths available for Neutral type to prevent the spindle head from interfering with workpiece by selecting the suitable tool length depending on the spindle diameter.

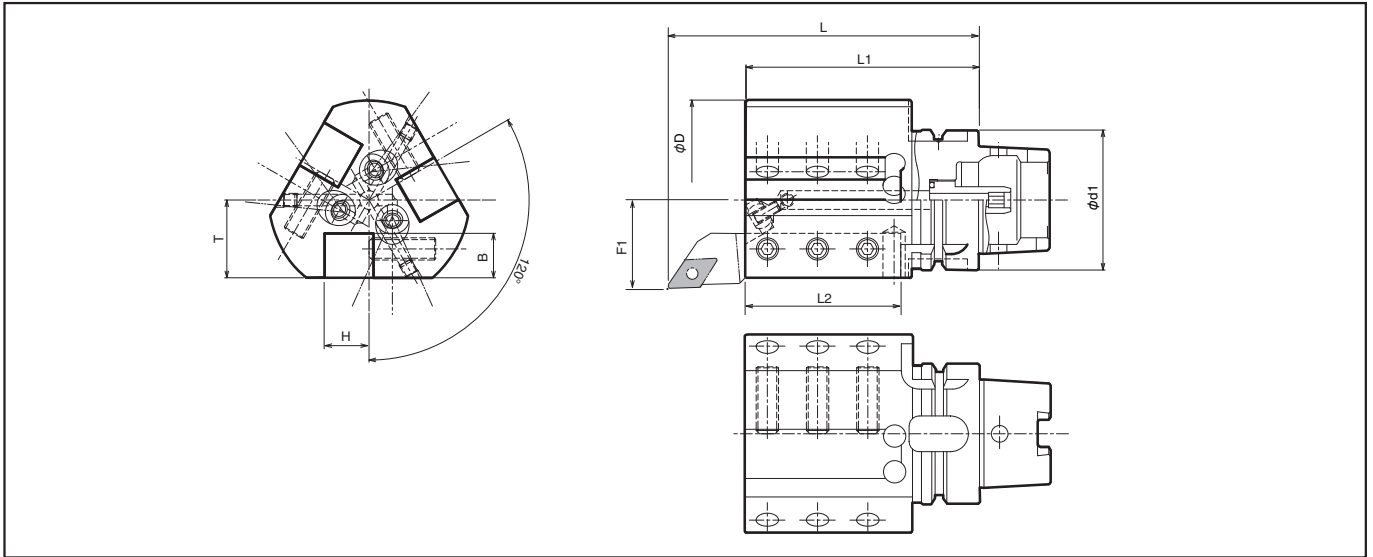
● Blank Type



- 1) Blank type for special order is available.
- 2) Interface part is already processed based on HSK-T Standard.

* About Milling Tool
For milling tool, use conventional HSK-A type shank. It is compatible with HSK-T standard.

Toolholder for Square Shank (For External / Facing)

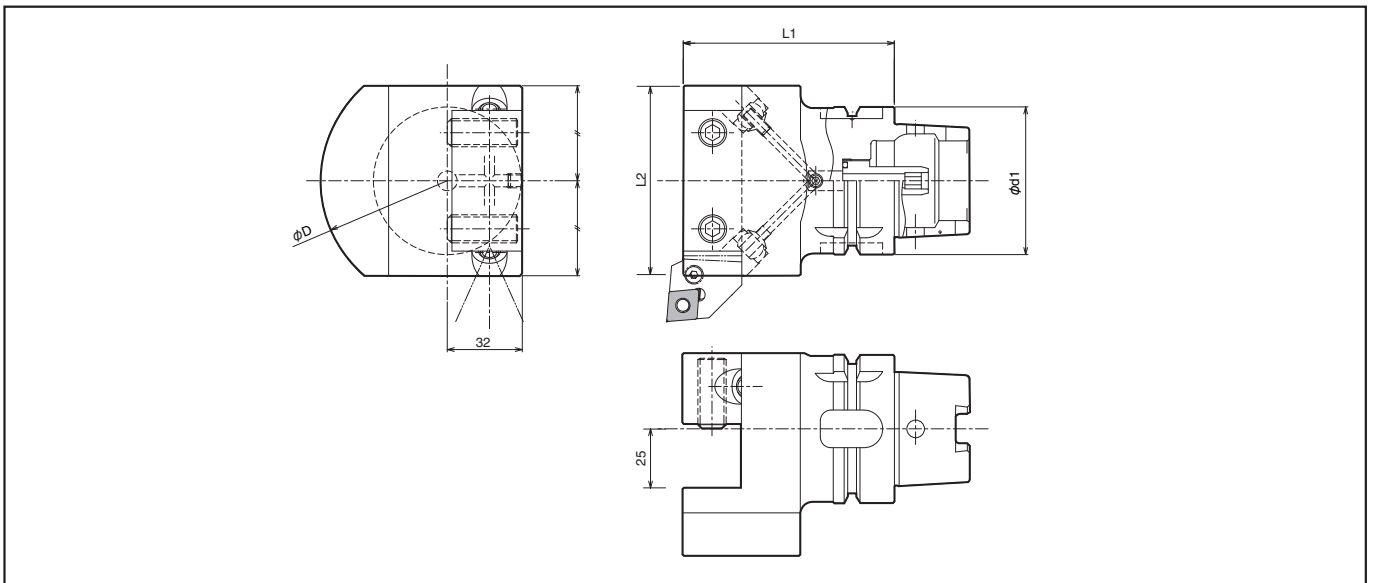


Toolholder Dimensions

Description	Attachment holder Shank Dimension	Std.	Dimension (mm)									Spare Parts		
			phi d1	phi D	H	B	T	L	L1	L2	F1	Clamp Screw	Wrench	Coolant Pipe
T63H- S2020R-105T	(20mm square)	<input type="checkbox"/>	63	90	20	20	35	150	105	70	40	HS12X30	LW-6	CL63-1
T100H- S2525R-150T	(25mm square)	<input type="checkbox"/>	100	118	25	25	48	190	150	110	55	HS12X35		CL100-1

*Coolant outlet direction is adjustable.

Toolholder for Square Shank (For External / Facing)



Toolholder Dimensions

Description	(Previous Description)	Std.	Dimension (mm)				Spare Parts			
			phi d1	phi D	L1	L2	Clamp Screw	Wrench	Coolant Pipe	
T63H- S2525-90F	-	<input type="checkbox"/>	63	108	90	81	HS12X30	LW-6	CL63-1	
S2525-120F		<input type="checkbox"/>			120					
T100H- S2525-105F	-	<input type="checkbox"/>	100	118	105	96				CL100-1
S2525-150F		<input type="checkbox"/>			150					

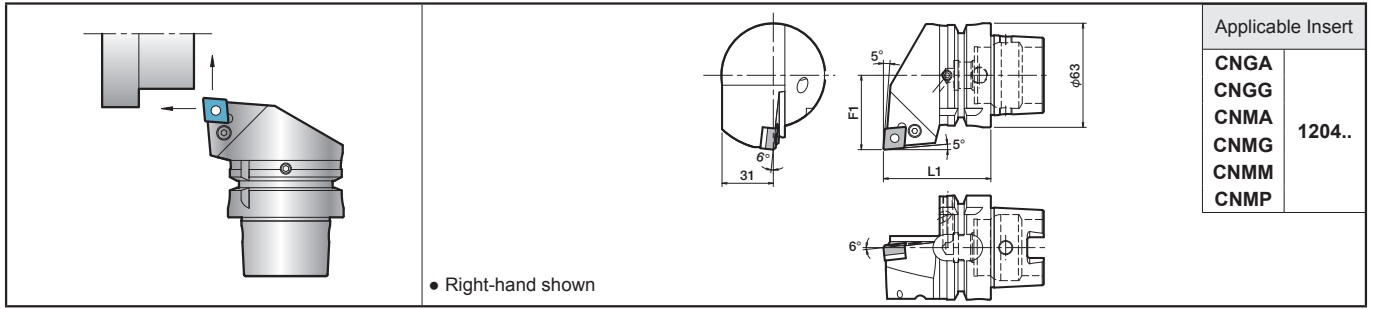
* Coolant outlet direction is adjustable.

* For 25mm square shank.

● : Std. Item □ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Tools for Turning Mill

PCLN (External / Facing)



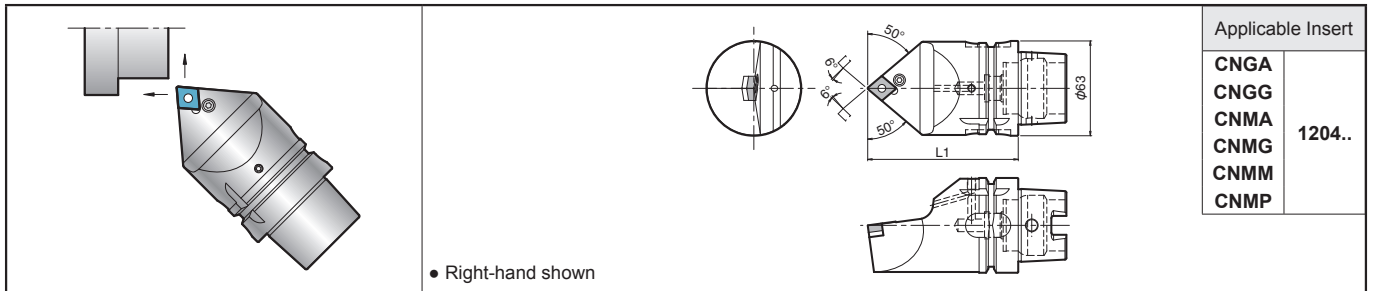
Applicable Insert	
CNGA CNGG CNMA CNMG CNMM CNMP	1204..

Toolholder Dimensions

Description	(Previous Description)	Std.	Dimension (mm)		Spare Parts						
			L1	F1	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench	Coolant Pipe
T63H- PCLNR-DX12 PCLNL-DX12	A63-WH- PCLNR-DX12 PCLNL-DX12	<input type="checkbox"/>	65	45	LL-2N (LL-2)	LS-2N (LS-2)	LC-42N (LC-42)	LSP-2	PC-2	LW-3	CL63-1

* New descriptions of spare parts (LL-2N, LS-2N, LC-42N) can be used for previous description toolholders.

PCMN (External / Facing)



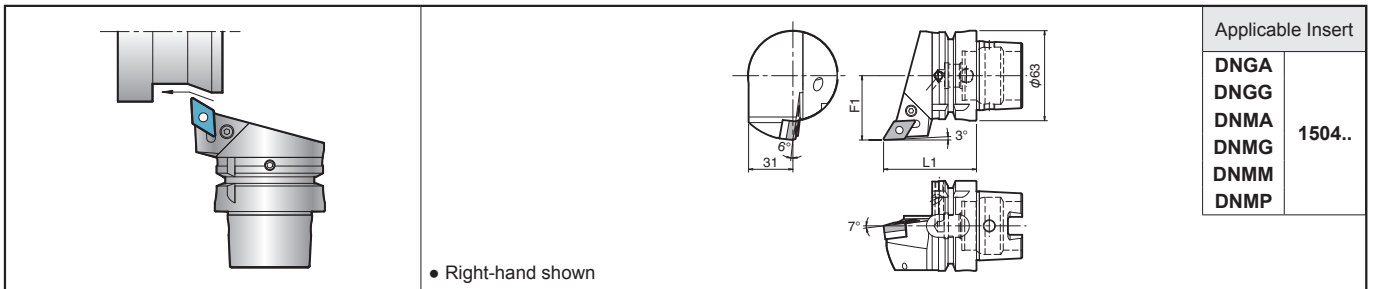
Applicable Insert	
CNGA CNGG CNMA CNMG CNMM CNMP	1204..

Toolholder Dimensions

Description	(Previous Description)	Std.	Dimension (mm)		Spare Parts						
			L1	F1	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench	Coolant Pipe
T63H- PCMNN-H12 PCMNN-L12	A63-WH- PCMNN-H12 PCMNN-L12	<input type="checkbox"/>	100	140	LL-2N (LL-2)	LS-2N (LS-2)	LC-42N (LC-42)	LSP-2	PC-2	LW-3	CL63-1

* New descriptions of spare parts (LL-2N, LS-2N, LC-42N) can be used for previous description toolholders.

PDJN (External / Copying)



Applicable Insert	
DNGA DNNG DNMA DNMG DNMM DNMP	1504..

Toolholder Dimensions

Description	(Previous Description)	Std.	Dimension (mm)		Spare Parts						
			L1	F1	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench	Coolant Pipe
T63H- PDJNR-DX15 PDJNL-DX15	A63-WH- PDJNR-DX15 PDJNL-DX15	<input type="checkbox"/>	65	45	LL-3N (LL-3)	LS-2N (LS-2)	LD-42	LSP-2	PC-2	LW-3	CL63-1

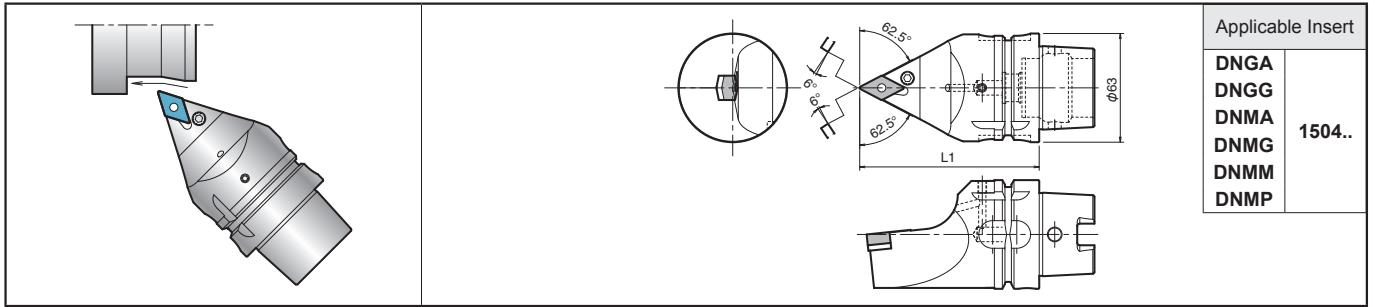
* New descriptions of spare parts (LL-3N, LS-2N) can be used for previous description toolholders.

● : Std. Item □ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

N

Tools for Turning Mill

PDNN (External / Copying)

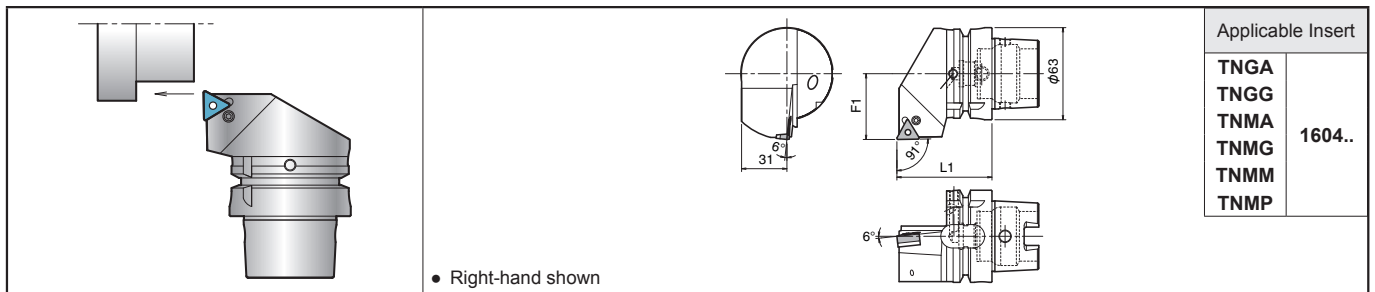


● Toolholder Dimensions

Description	(Previous Description)	Std.	Dimension (mm)		Spare Parts						
			L1	F1	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench	Coolant Pipe
T63H- PDNNN-H15 PDNNN-L15	A63-WH- PDNNN-H15 PDNNN-L15	<input type="checkbox"/>	100		LL-3N (LL-3)	LS-2N (LS-2)	LD-42	LSP-2	PC-2	LW-3	CL63-1
		<input type="checkbox"/>	140								

• New descriptions of spare parts (LL-3N, LS-2N) can be used for previous description toolholders.

PTGN (External)



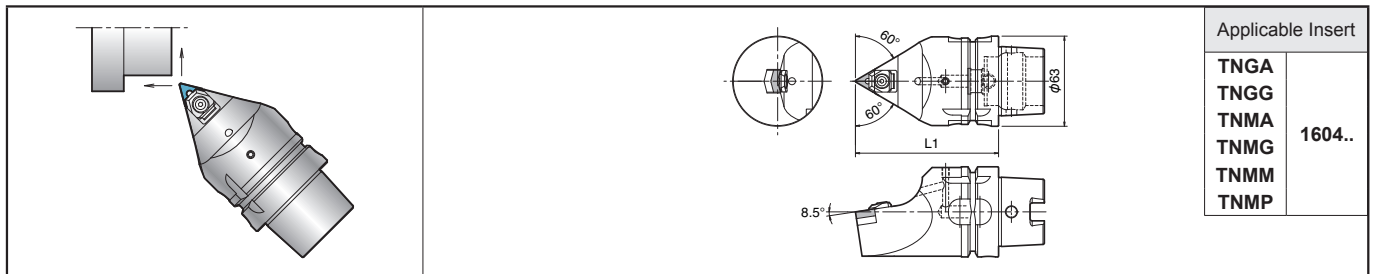
● Right-hand shown

● Toolholder Dimensions

Description	(Previous Description)	Std.	Dimension (mm)		Spare Parts						
			L1	F1	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench	Coolant Pipe
T63H- PTGNR-DX16 PTGNL-DX16	A63-WH- PTGNR-DX16 PTGNL-DX16	<input type="checkbox"/>	65	45	LL-1N (LL-1)	LS-1N (LS-1)	LT-32N (LT-32)	LSP-1	PC-1	FH-2.5	CL63-1
		<input type="checkbox"/>									

• New descriptions of spare parts (LL-3N, LS-2N) can be used for previous description toolholders.

WTEN (External)



● Toolholder Dimensions

Description	(Previous Description)	Std.	Dimension (mm)		Spare Parts						
			L1	F1	Clamp Set	Shim	Shim Pin	Shim Nut	Wrench	Spacer	Coolant Pipe
T63H- WTENN-H16 WTENN-L16	A63-WH- WTENN-H16 WTENN-L16	<input type="checkbox"/>	100		WCS-1N	WTN-33	WP-1S	WN-1	LW-3	WSP-1	CL63-1
		<input type="checkbox"/>	140								

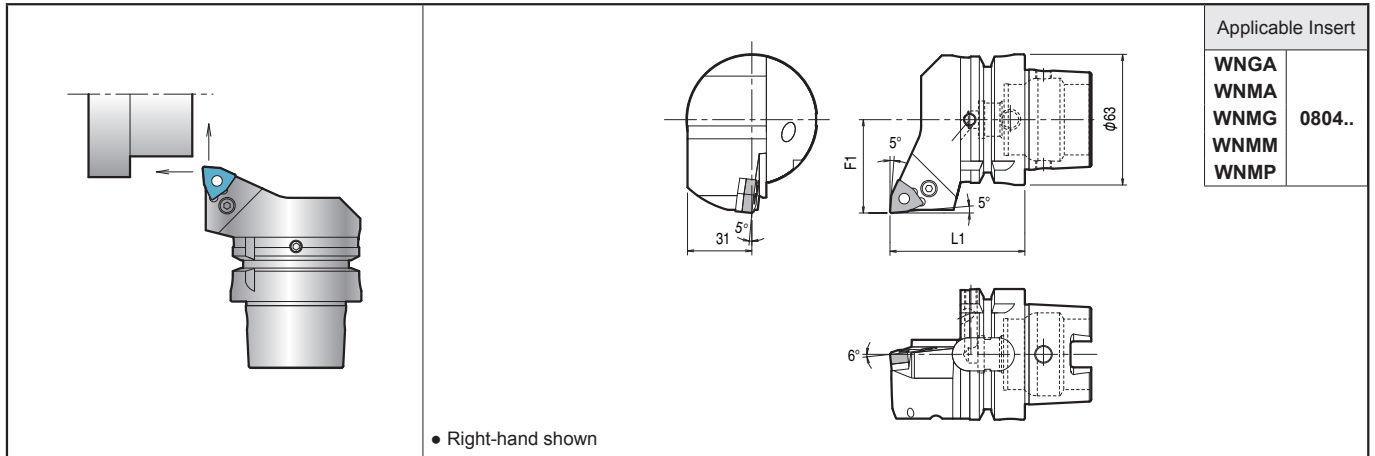
● : Std. Item □ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)



Tools for Turning Mill

Tools for Turning Mill

PWLN (External / Facing)

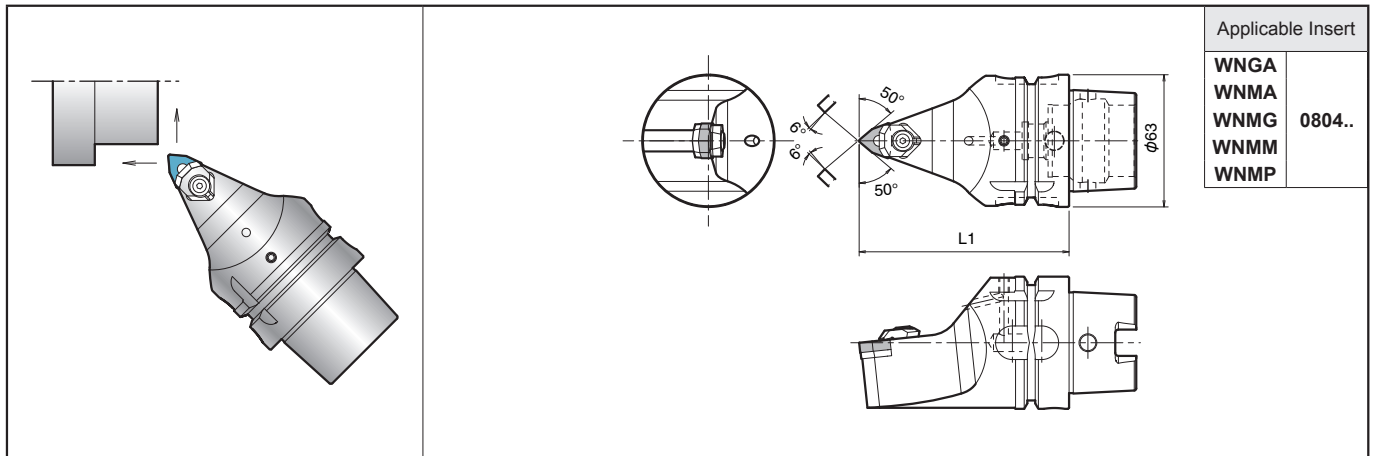


Toolholder Dimensions

Description	(Previous Description)	Std.	Dimension (mm)		Spare Parts						
			L1	F1	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench	Coolant Pipe
T63H- PWLNR-DX08	A63-WH- PWLNR-DX08	<input type="checkbox"/>	65	45							
PWLNL-DX08	PWLNL-DX08	<input type="checkbox"/>			LL-2N (LL-2)	LS-2N (LS-2)	LW-42N (LW42)	LSP-2	PC-2	LW-3	CL63-1

* New descriptions of spare parts (LL-2N, LS-2N, LW-42N) can be used for previous description toolholders.

WWMN (External / Facing)

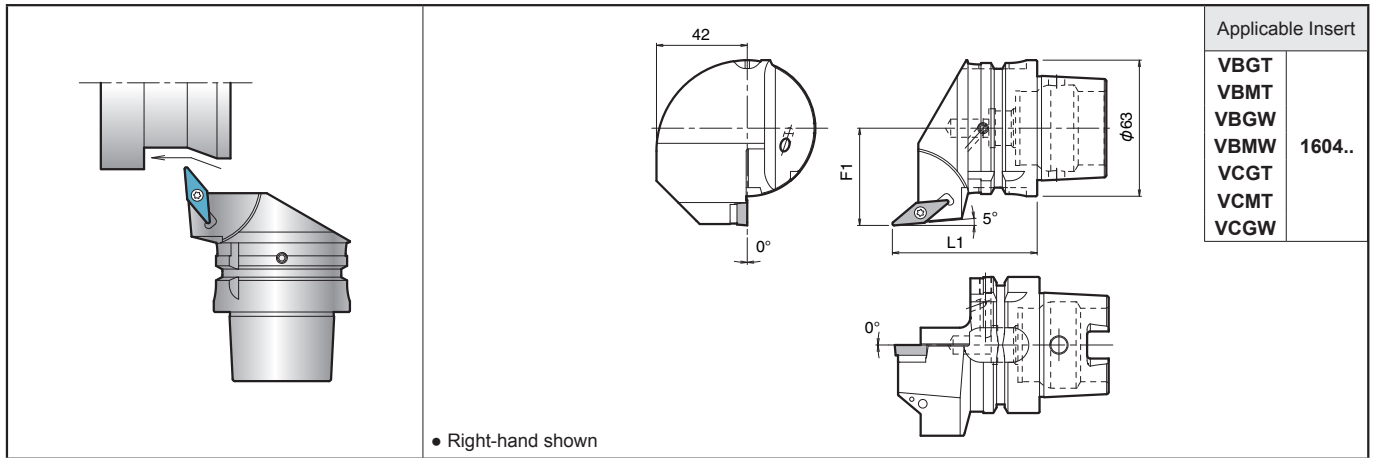


Toolholder Dimensions

Description	(Previous Description)	Std.	Dimension (mm)	Spare Parts					
			L1	Clamp Set	Shim	Shim Pin	Shim Nut	Wrench	Coolant Pipe
T63H- WWMNN-H08	A63-WH- WWMNN-H08	<input type="checkbox"/>	100						
WWMNN-L08	WWMNN-L08	<input type="checkbox"/>	140	WCS-8	WWN-42	WP5X15	WN-1	LW-3	CL63-1

● : Std. Item □ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)







SVLB (External / Copying)



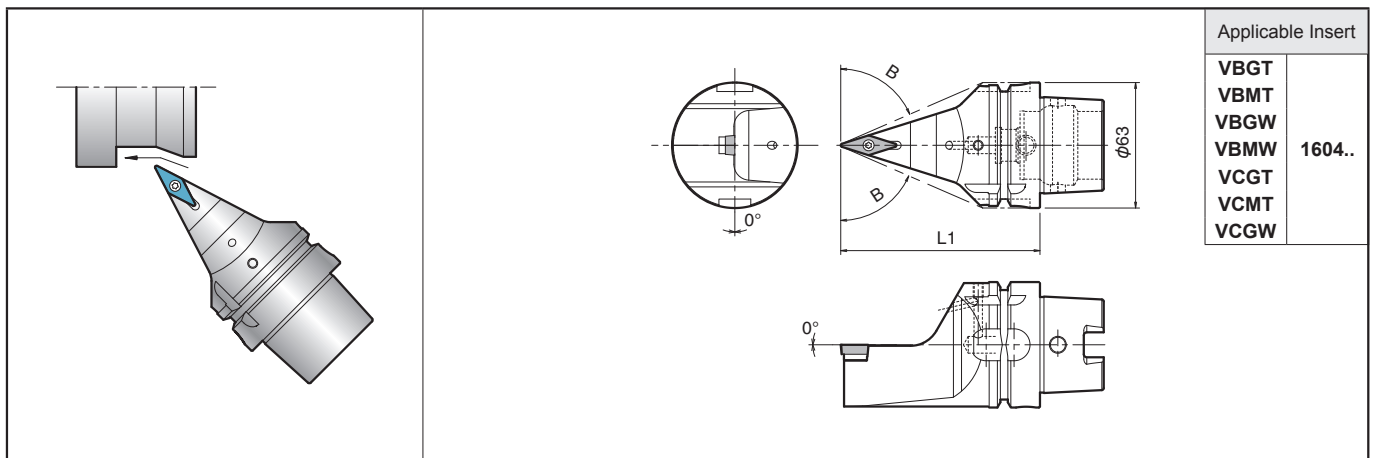
Applicable Insert	
VBGT	1604..
VBMT	
VBGW	
VBMW	
VCGT	
VCMT	
VCGW	

• Right-hand shown

● Toolholder Dimensions







Description	Std.	Dimension (mm)		Spare Parts					
		L1	F1	Clamp Screw	Wrench	Shim	Shim Screw	Wrench (for Shim Screw)	Coolant Pipe
									
T63H- SVLBR-DX16N	<input type="checkbox"/>	65	45	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4	CL63-1
SVLBL-DX16N	<input type="checkbox"/>								

SVVB (External / Copying)

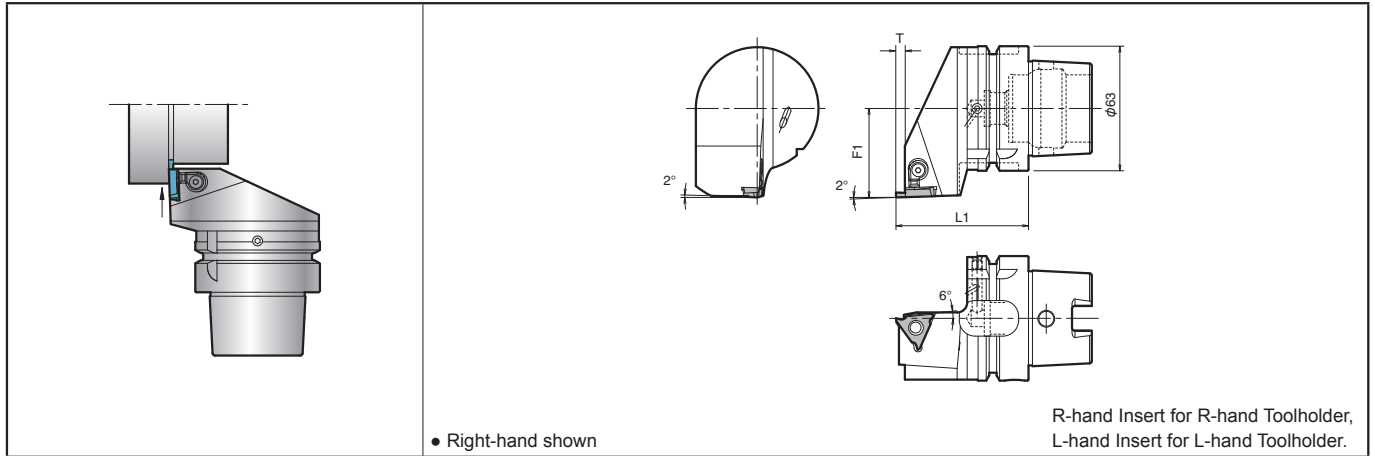


Applicable Insert	
VBGT	1604..
VBMT	
VBGW	
VBMW	
VCGT	
VCMT	
VCGW	

● Toolholder Dimensions

Description	Std.	Dimension (mm)		Spare Parts					
		L1	*B (°)	Clamp Screw	Wrench	Shim	Shim Screw	Wrench (for Shim Screw)	Coolant Pipe
									
T63H- SVVBN-H16N	<input type="checkbox"/>	100	66.5	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4	CL63-1
SVVBN-L16N	<input type="checkbox"/>	140	72.5						

KGBA (External Grooving)



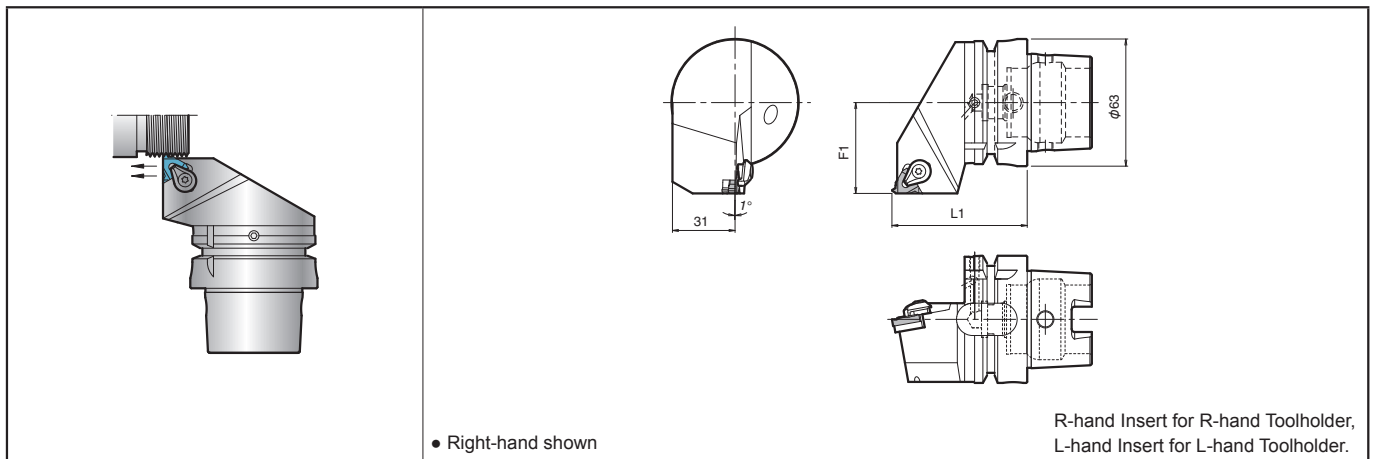
Toolholder Dimensions

Description	(Previous Description)	Std.	Dimension (mm)			Spare Parts			Applicable Insert ➔ G10~G12		
			L1	F1	T	Clamp Set	Wrench	Coolant Pipe			
T63H-	KGBAR-16	A63-WH-	KGBAR-16	<input type="checkbox"/>	67	45	2.5	LGBA-16RS	FT-15	CL63-1	GBA32R type
	KGBAR-22-15		KGBAR-22-15	<input type="checkbox"/>	67	45	4.0	LGBA-22RS			FT-15
	KGBAR-22-25		KGBAR-22-25	<input type="checkbox"/>			4.5				
	KGBAR-22-35		KGBAR-22-35	<input type="checkbox"/>			5.5				
T63H-	KGBAL-16	A63-WH-	KGBAL-16	<input type="checkbox"/>	67	45	2.5	LGBA-16LS	FT-15	CL63-1	GBA32L type
	KGBAL-22-15		KGBAL-22-15	<input type="checkbox"/>	67	45	4.0	LGBA-22LS			FT-15
	KGBAL-22-25		KGBAL-22-25	<input type="checkbox"/>			4.5				
	KGBAL-22-35		KGBAL-22-35	<input type="checkbox"/>			5.5				

* For details of applicable inserts, please refer to the General Catalog.

• Dimension T shows the distance from the Toolholder to the cutting edge.

KTN (Threading)



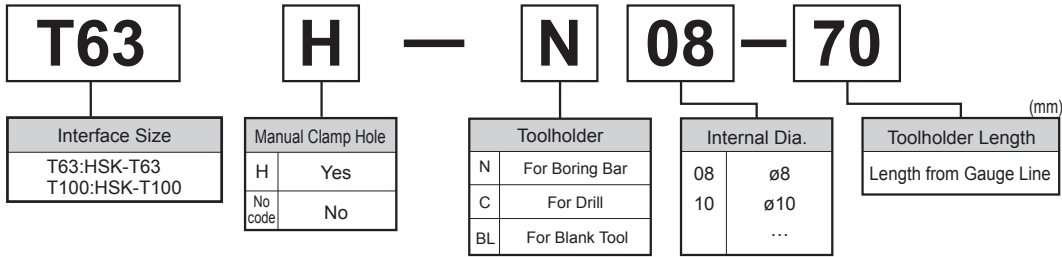
Toolholder Dimensions

Description	(Previous Description)	Std.	Dimension (mm)		Spare Parts					Applicable Insert ➔ J6,J8,J10, J12,J14		
			L1	F1	Clamp Set	Wrench	Shim	Shim Screw	Coolant Pipe			
T63H-	KTNR-16	A63-WH-	KTNR-16	<input type="checkbox"/>	67	45	CPS-5S	FT-15	TN-32 (TNW-32)*	SP3X8	CL63-1	16ER type
	KTNR-22		KTNR-22	<input type="checkbox"/>			CPS-6S	LW-3	TN-43	SP3X8	CL63-1	22ER type

* Shim: Please purchase TNW-32 separately when using 2-threaded type threading insert. (e.g. 16ER○○○ISO-M02)

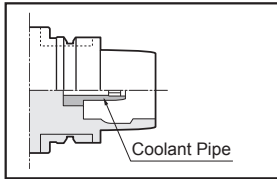
* For details of applicable inserts, please refer to the General Catalog.

Identification System (For Boring Bar / Drill / Blank Tool)

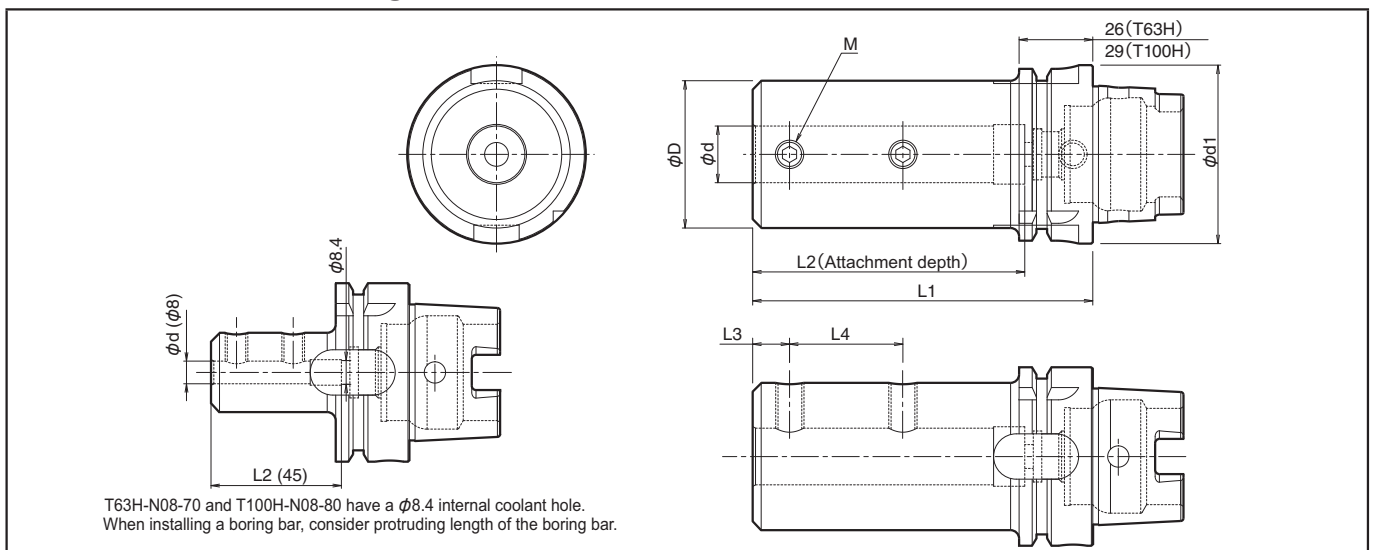


Coolant Pipe

• Coolant pipe is built into toolholder.



Toolholder for Boring Bar / Drill



Toolholder Dimensions

Description	(Previous Description)	Std.	Dimension (mm)								Spare Parts			Remarks			
			ϕd	$\phi d1$	ϕD	L1	L2	L3	L4	M	Clamp Screw	Wrench	Coolant Pipe				
T63H- N08-70 N10-80 N12-90 N16-100 N20-120 N25-140 N32-160	A63-WH- N08-70 N10-80 N12-90 N16-100 N20-120 N25-140 N32-160	<input type="checkbox"/>	8	63	28	70	45	9	20	M8	HS8X10	LW-4	CL63-1	Boring Bar Installation			
		<input type="checkbox"/>	10		35	80	55	9	22		HS8X12						
		<input type="checkbox"/>	12		42	90	65	9	22		M10				HS10X16		
		<input type="checkbox"/>	16		48	100	75	11	30								
		<input type="checkbox"/>	20		52	120	95	13	40								
		<input type="checkbox"/>	25		56	140	115	13	50							M12	HS12X16 HS12X12
		<input type="checkbox"/>	32		56	160	135	13	60								
T63H- C20-75 C25-85 C32-90 C40-100	A63-WH- C20-75 C25-85 C32-90 C40-100	<input type="checkbox"/>	20	63	52	75	50	13	22	M10	HS10X16	LW-5	CL63-1	* For Drill Installation			
		<input type="checkbox"/>	25		56	85	58	15	28	M12	HS12X16						
		<input type="checkbox"/>	32		56	90	62	15	30	M16	HS16X12						
		<input type="checkbox"/>	40		68	100	72	18	35								
T100H- N08-80 N10-90 N12-100 N16-110 N20-130 N25-150 N32-170	-	<input type="checkbox"/>	8	100	28	80	45	9	20	M8	HS8X10	LW-4	CL100-1	Boring Bar Installation			
		<input type="checkbox"/>	10		35	90	55	9	22		M10				HS10X16		
		<input type="checkbox"/>	12		42	100	65	9	22								
		<input type="checkbox"/>	16		48	110	75	11	30								
		<input type="checkbox"/>	20		52	130	95	13	40							M12	HS12X18 HS12X20
		<input type="checkbox"/>	25		62	150	115	13	50								
T100H- C20-85 C25-90 C32-95 C40-105	-	<input type="checkbox"/>	20	100	52	85	50	13	22	M10	HS10X16	LW-5	CL100-1	* For Drill Installation			
		<input type="checkbox"/>	25		62	90	58	15	20	M16	HS16X18						
		<input type="checkbox"/>	32		72	95	62	15	20								
		<input type="checkbox"/>	40		82	105	72	15	25								

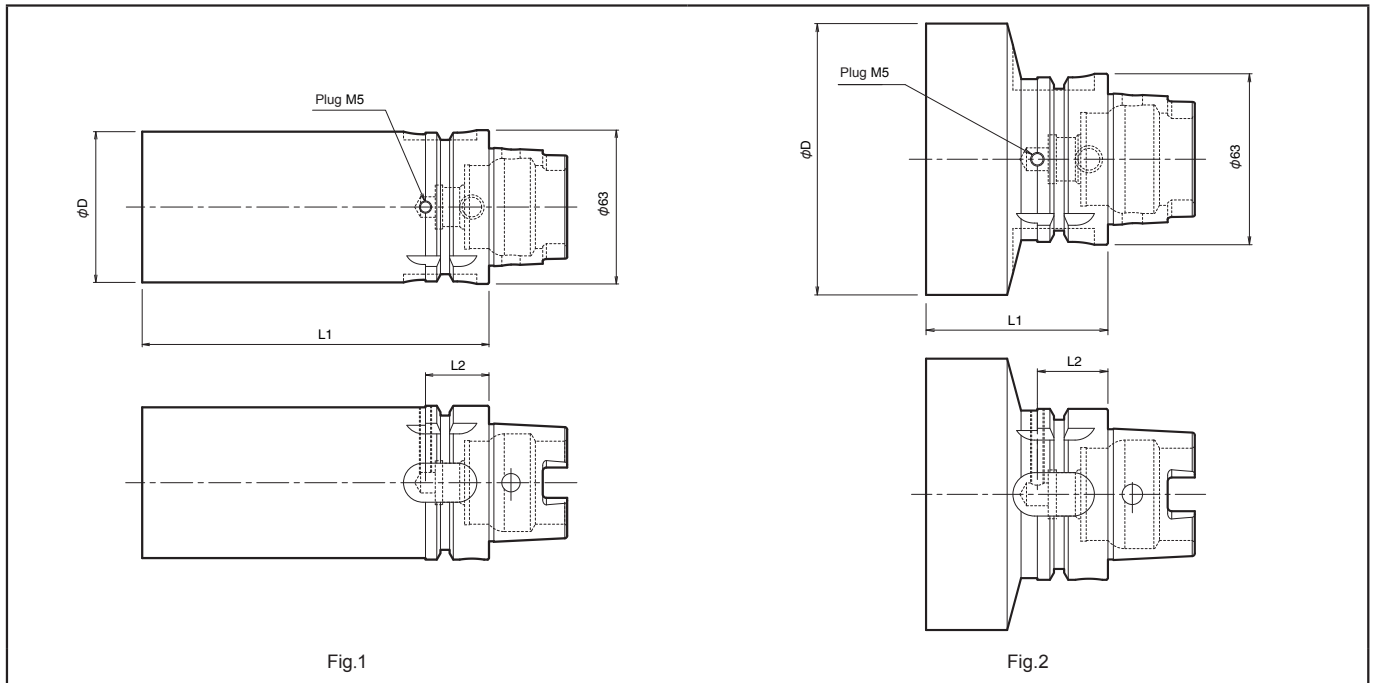
* Shorter than the toolholder for boring bar.

● : Std. Item □ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)


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Tools for Turning Mill

Tools for Turning Mill

Blank Tool



Toolholder Dimensions

Description	(Previous Description)	Std.	Dimension (mm)			Drawing	Spare Parts
			ϕD	L1	*L2		Coolant Pipe
T63H-	BL62-102	A63-WH-	62	102	29	Fig.1	 CL63-1
	BL62-142	BL62-102		142			
	BL100-67	BL62-142	100	67		Fig.2	

* L2 indicates the length from gauge line to plug.

Blank tool is for special order of toolholder.

- ① Interface part is based on HSK-T standard.
- ② Tool tip is also heat-treated. Do not re-heat again to avoid deformation of interface.
 Material: SNCM439
 Hardness: 40~45HRC

CAUTION

It may be necessary to empty the adjacent pot inside the ATC magazine of the machine depending on the tool size. (Large tool registration setup)
 For details, please refer to the instruction of Machine manufacturer.