

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



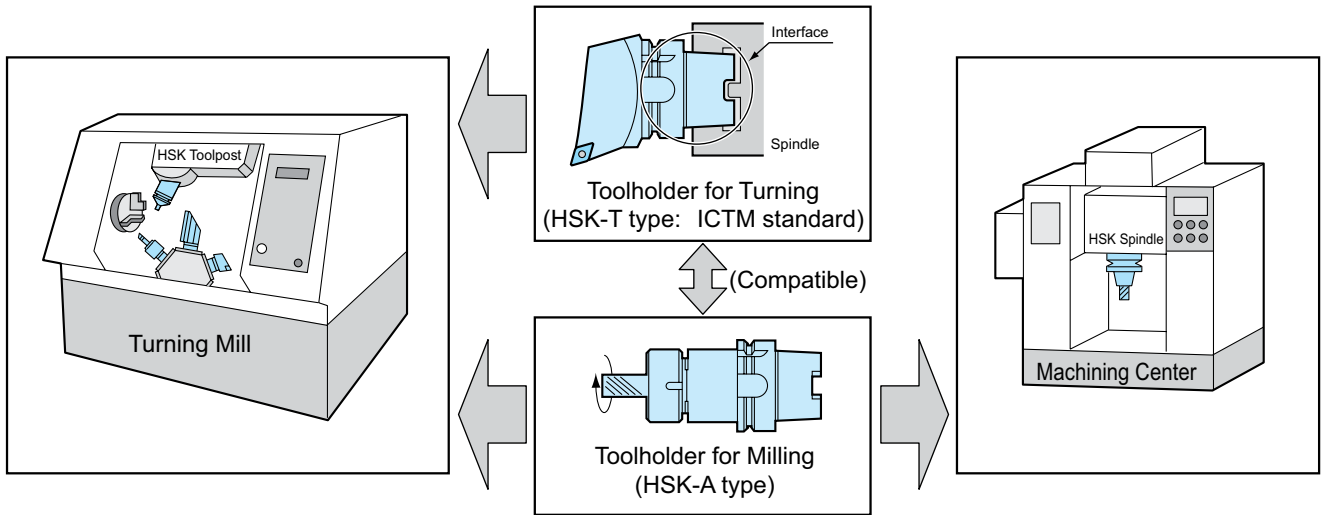
Tools for Turning Mill

Tools for Turning Mill

- Turning mill is the machine tool which combines turning and milling functions. Now the interface (joint part of toolpost and toolholder: equivalent to the arbor for milling) for the turning mill meeting ICTM standard is available.
- ICTM standard is the standard developed by 16 companies in Japan as the interface of turning mill machine 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 shown as HSK-T○○.

Features

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

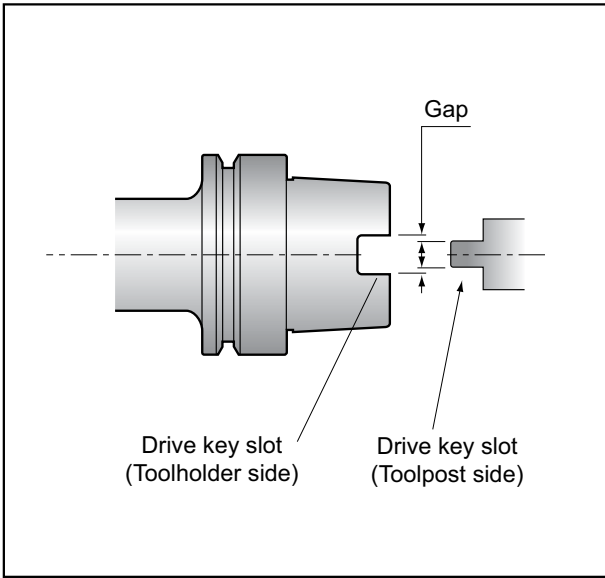


- ② Machining precision at turning has improved by minimizing the gap between the drive key slot at toolholder side and the drive key at toolpost side.

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

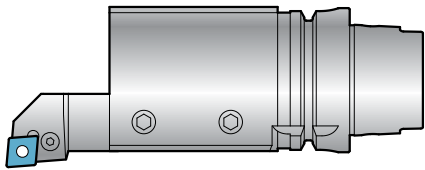
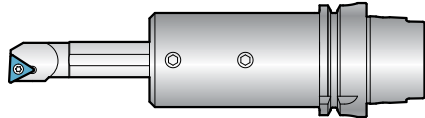
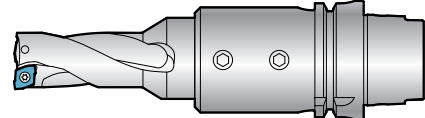
		(mm)						
HSK-A63 Tolerance		12.25	Key tolerance	12.35				
			0.10	Min. gap	0.15	0.08		
						12.5	Keyslottedolerance	12.58
				Max. gap	0.33			
HSK-T63 Tolerance		12.2	12.3	12.4	12.5	12.6		
					0.025			
			12.385	12.41				
			Min. gap	0.015				
						0.035		
					12.425	12.46		
							Max. gap	0.075

Table 2: Effect of the gap

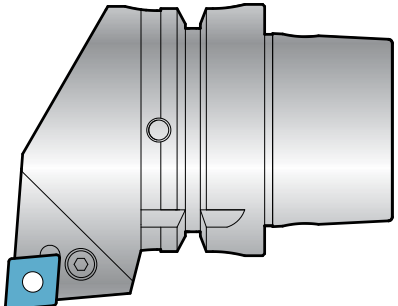
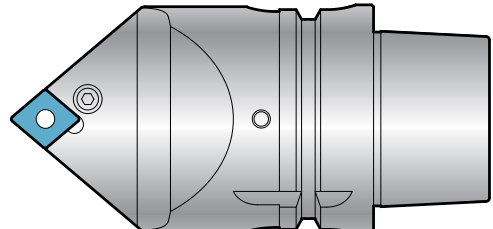


Toolholder Variation


- Conventional Type

For Square Shank	For Boring Bar	For Drill
		
<p>1) For square shank, boring bar, and drill at conventional NC lathe machining.</p> <p>2) Long type for boring bar and short type for drill are available.</p>		

- Solid type Toolholder

Handed Type	Neutral Type(Two types of allover length)
	
<p>1) Solid type toolholder combining interface focusing on rigidity improvement.</p> <p>2) Neutral type is available as double handed tool (right / left) by moving B-spindle of the spindle head.</p> <p>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.</p>	

- Blank Type

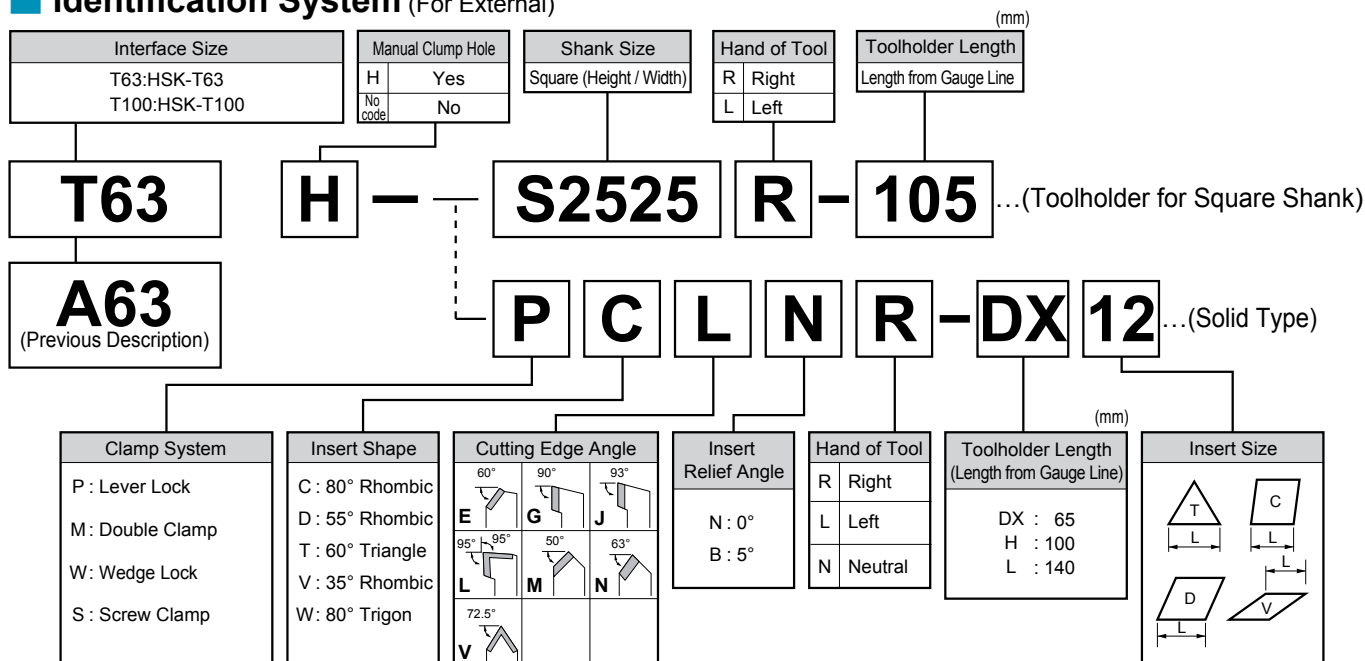


1) Blank type for special order is available.
2) Interface part is already processed based on HSK-T Standard.

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

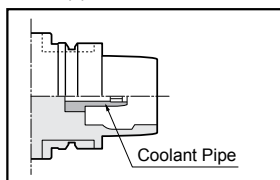
Tools for Turning Mill

Identification System (For External)

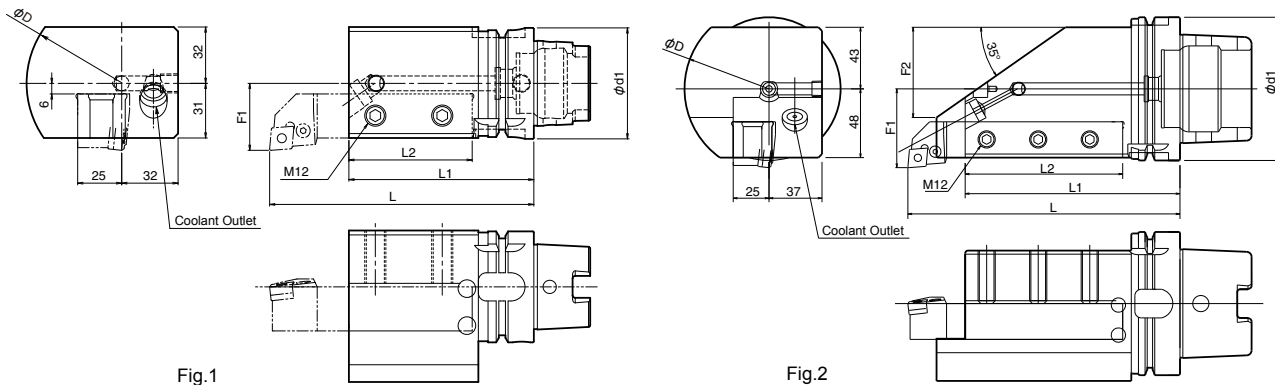


Coolant Pipe

- Coolant pipe is built into toolholder.






Toolholder for Square Shank (For External / Facing)



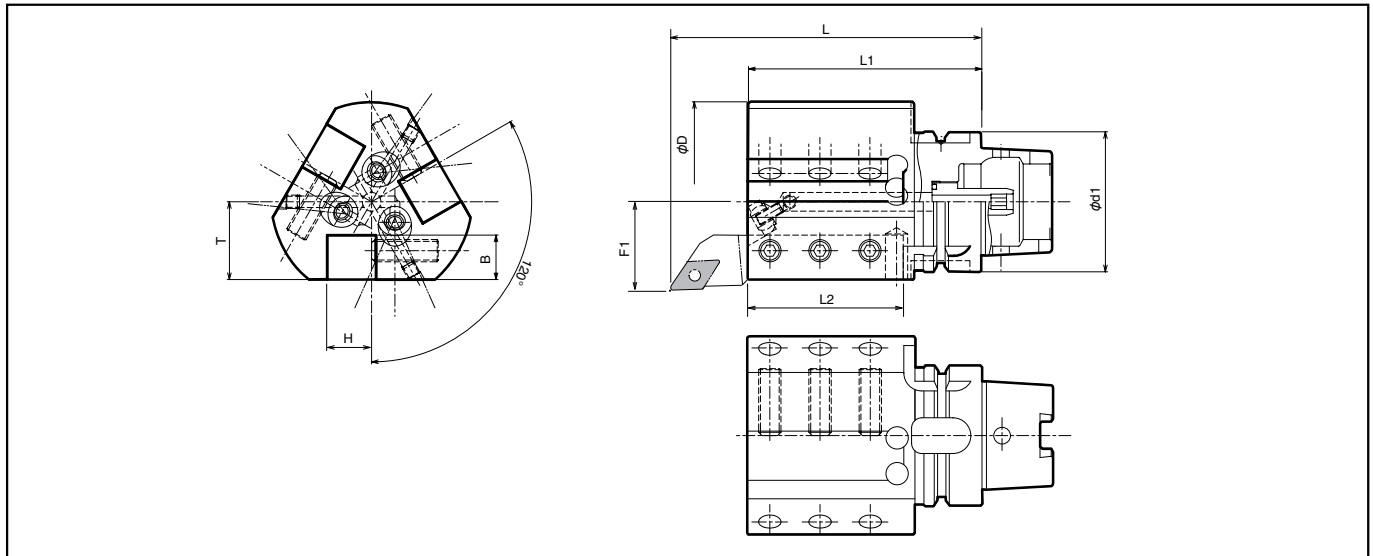
- Right-hand shown

Toolholder Dimensions






Description		(Previous Description)	Std.	Dimension (mm)							Drawing	Spare Parts		
												Clamp Screw	Wrench	Coolant Pipe
				ød1	øD	L	L1	L2	F1	F2				
T63H-	S2525R-105	A63-WH- S2525R-105 S2525L-105	●	63	108	150	105	70	38	-	Fig.1	HS12X25	LW-6	CL63-1
	●													
T100H-	S2525R-150	-	●	100	118	190	150	110	55	63	Fig.2	HS12X30	LW-6	CL100-1
	●													

- Coolant outlet direction is adjustable.
- For 25mm square shank.

Toolholder for Square Shank (For External / Facing)

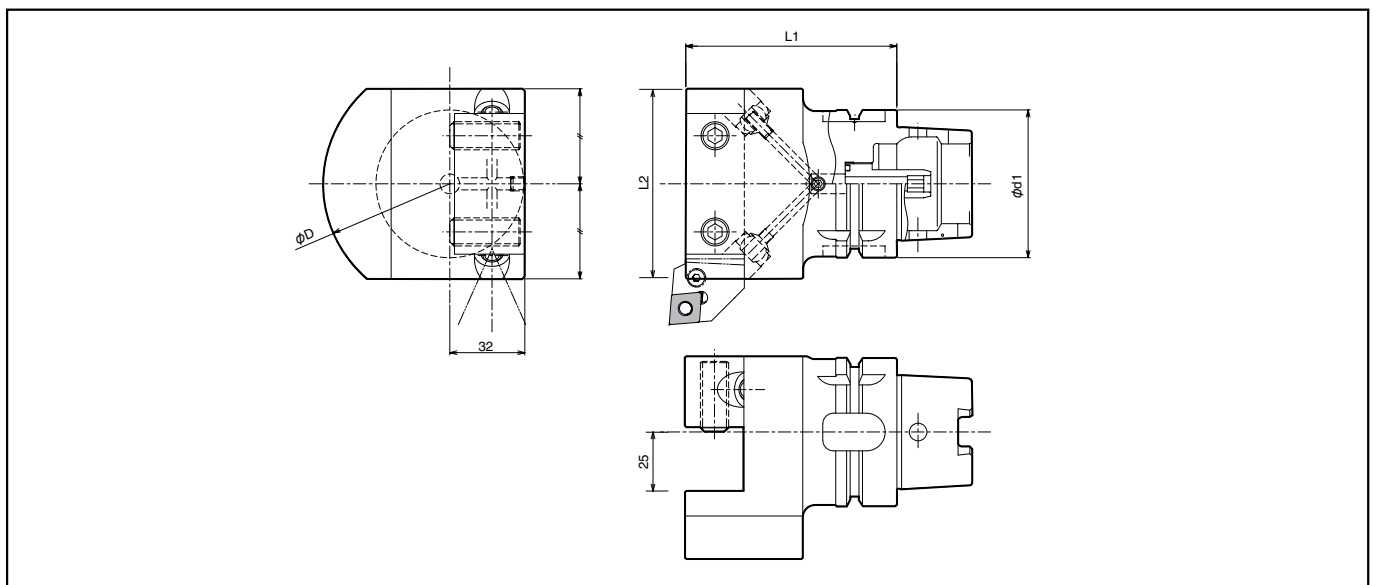


Toolholder Dimensions




Description	Attachment holder Shank Dimension	Std.	Dimension (mm)										Spare Parts		
													Clamp Screw	Wrench	Coolant Pipe
					H	B	T	L	L1	L2	F1				
T63H- S2020R-105T	(20mm square)	●	63	90	20	20	35	150	105	70	40	HS12X30	LW-6	CL63-1	
T100H- S2525R-150T	(25mm square)	●	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		
								Clamp Screw	Wrench	Coolant Pipe
				ød1	øD	L1	L2			
T63H-	S2525-90F	-	●	63	108	90	HS12X30	LW-6	CL63-1	
	S2525-120F	●	120							
T100H-	S2525-105F	-	●	100	118	105			CL100-1	
	S2525-150F	●	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)

N



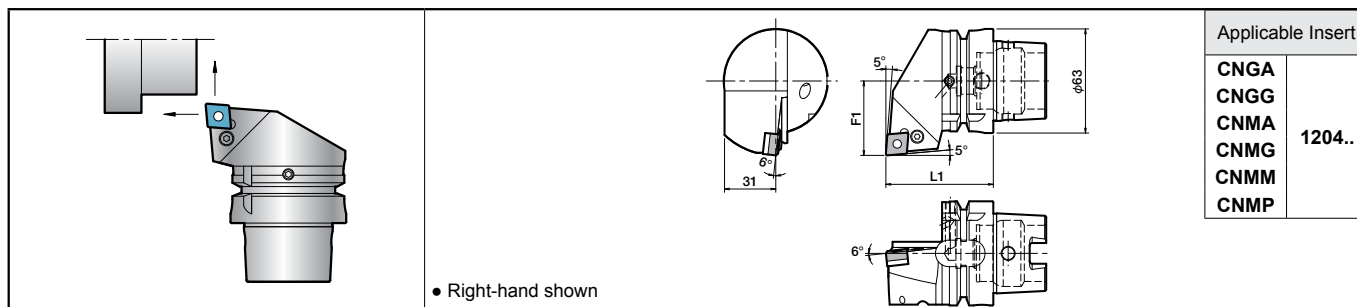
Tools for Turning Mill



N5

Tools for Turning Mill

PCLN (External / Facing)

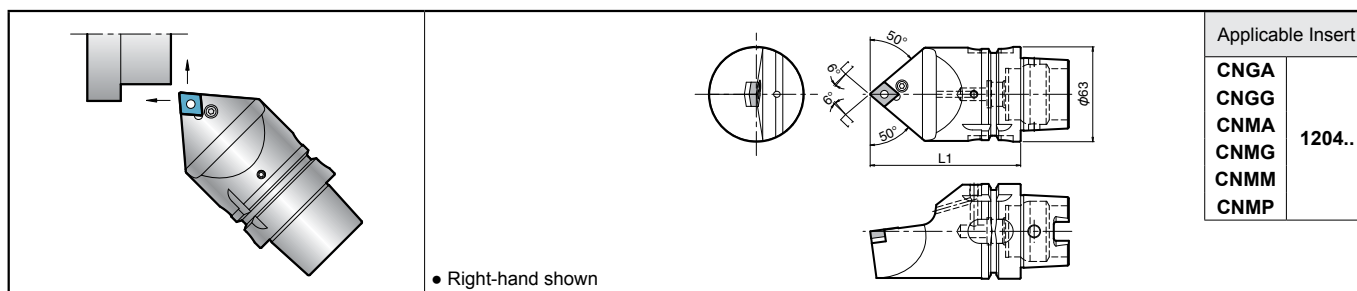


Toolholder Dimensions

Description	(Previous Description)	Std.	Dimension (mm)		Spare Parts						
			L1	F1	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench	Coolant Pipe
T63H- PCLNR-DX12 PCLNL-DX12	A63-WH- PCLNR-DX12 PCLNL-DX12	●	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)

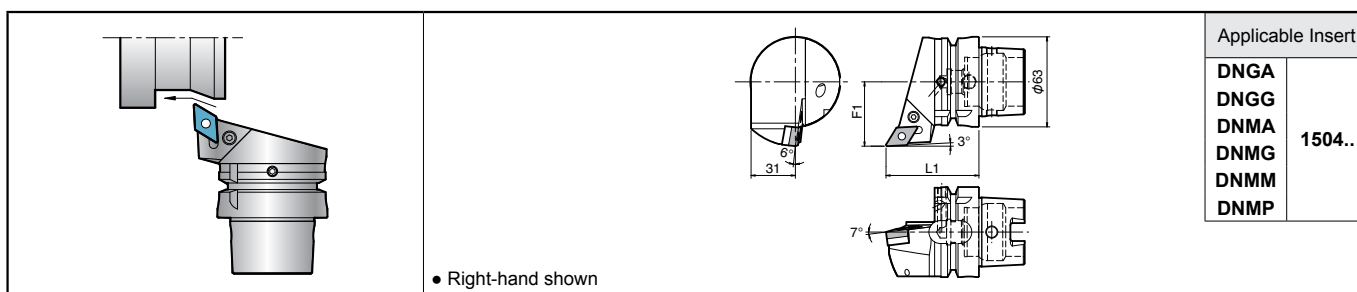


Toolholder Dimensions

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

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

PDJN (External / Copying)



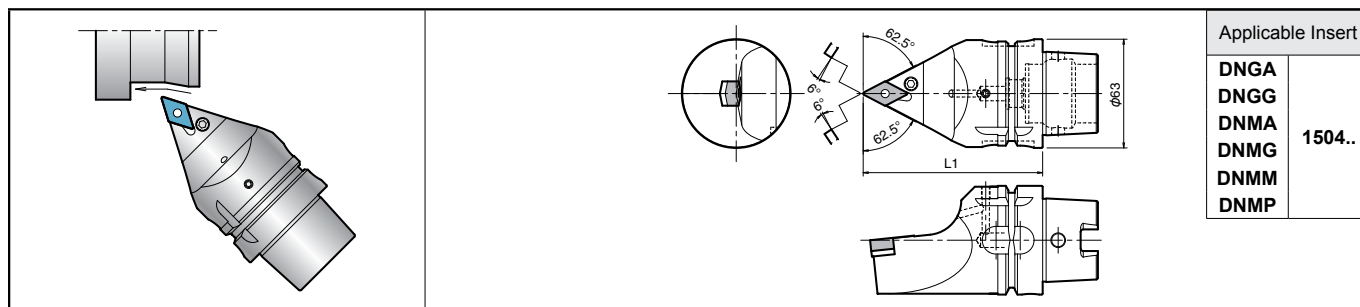
Toolholder Dimensions

Description	(Previous Description)	Std.	Dimension (mm)		Spare Parts						
			L1	F1	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench	Coolant Pipe
T63H- PDJNR-DX15 PDJNL-DX15	A63-WH- PDJNR-DX15 PDJNL-DX15	●	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)

PDNN (External / Copying)

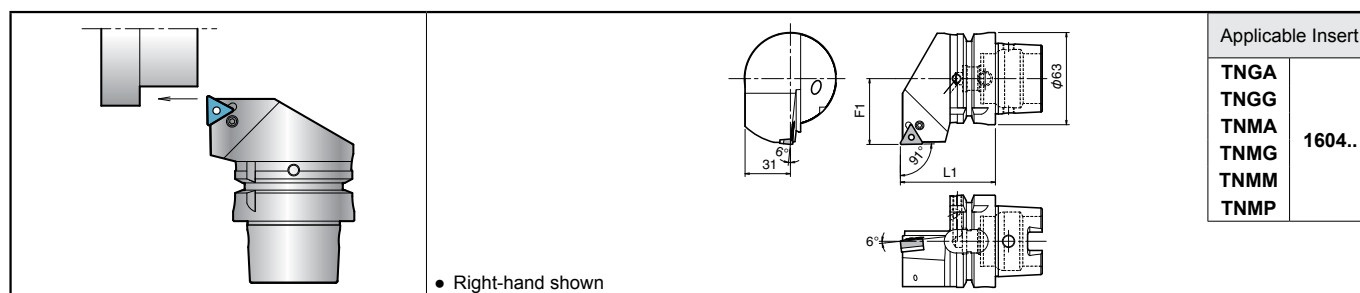


● Toolholder Dimensions








Description		(Previous Description)		Std.	Dimension (mm)	Spare Parts						
						Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench	Coolant Pipe
					L1							
T63H-	PDNNN-H15	A63-WH-	PDNNN-H15	●	100	LL-3N	LS-2N	LD-42	LSP-2	PC-2	LW-3	CL63-1
	PDNNN-I 15		PDNNN-I 15	●	140	(LL-3)	(LS-2)					

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

PTGN (External)

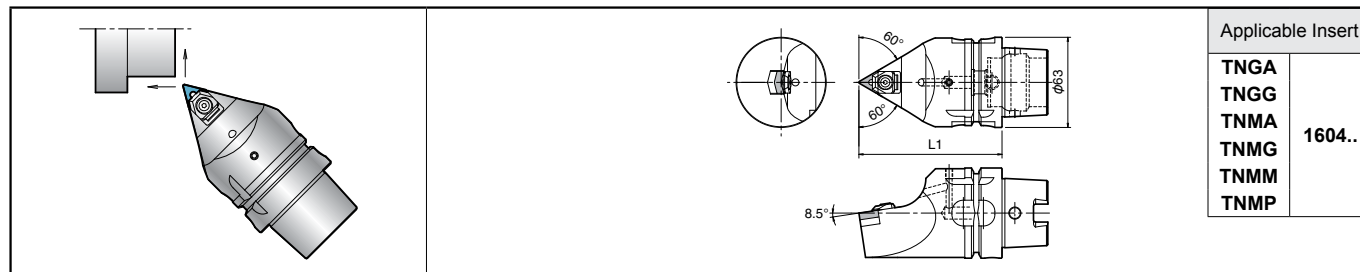


● Toolholder Dimensions








Description		(Previous Description)		Std.	Dimension (mm)		Spare Parts						
					L1	F1	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench	Coolant Pipe
													
T63H-	PTG NR-DX16	A63-WH-	PTG NR-DX16	●	65	45	LL-1N	LS-1N	LT-32N	LSP-1	PC-1	FH-2.5	CL63-1
	PTGNL-DX16		PTGNL-DX16	●			(LL-1)	(LS-1)	(LT-32)				

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

WTEN (External)



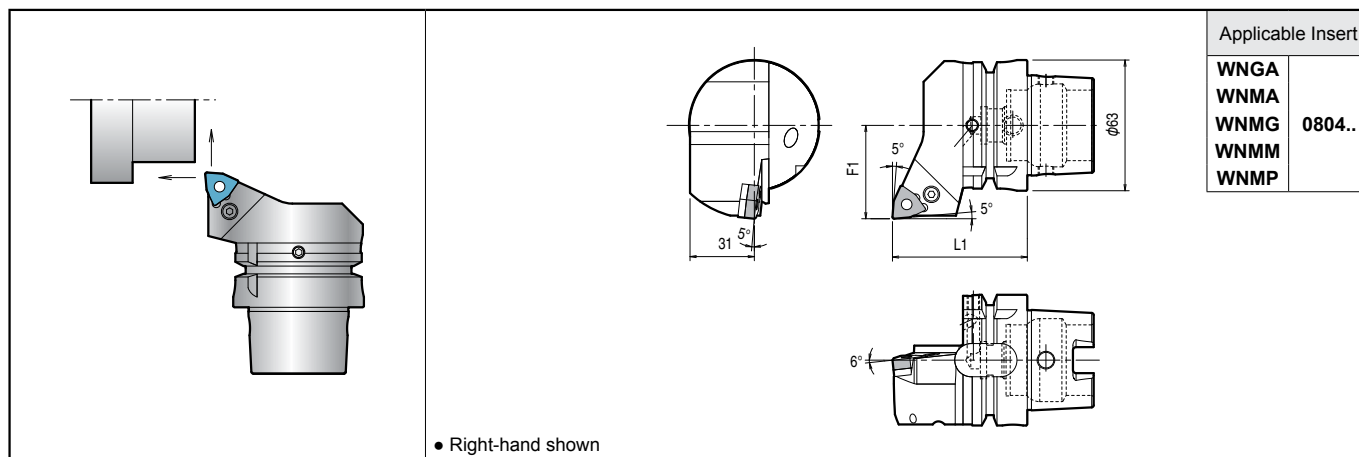
● Toolholder Dimensions

Description	(Previous Description)	Std.	Dimension (mm)	Spare Parts							
			L1								
T63H- WTENN-H16	A63-WH- WTENN-H16	●	100	WCS-1N	WTN-33	WP-1S	WN-1	LW-3	WSP-1	CL63-	
WTENN-L 16	WTENN-L 16	●	140								

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

Tools for Turning Mill

PWLN (External / Facing)

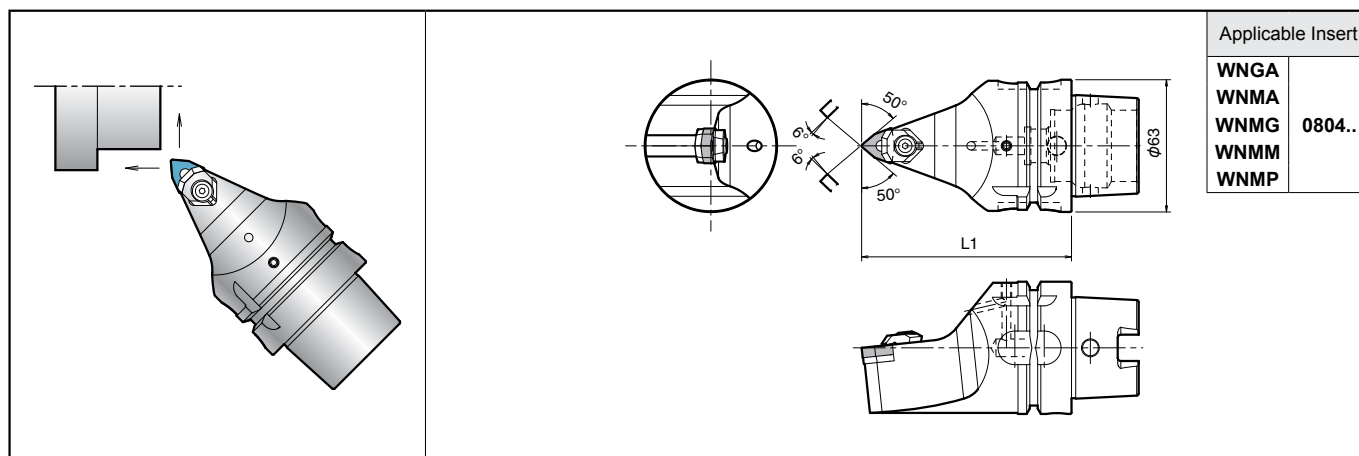


Toolholder Dimensions

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

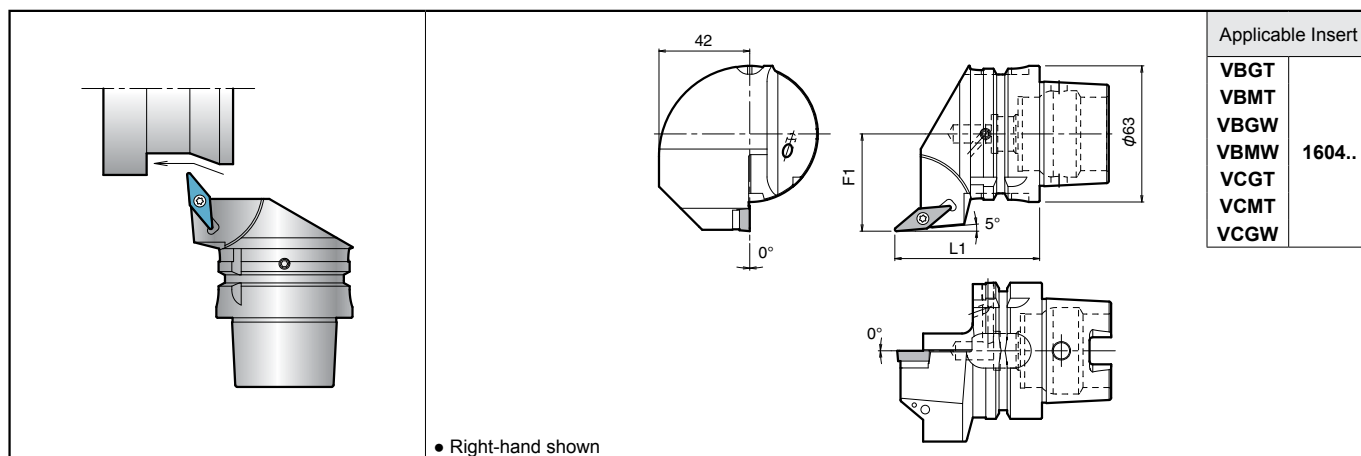
• New descriptions of spare parts (LL-2N, LS-2N, LW-42N) can be used for previous description toolholders.

WWMN (External / Facing)



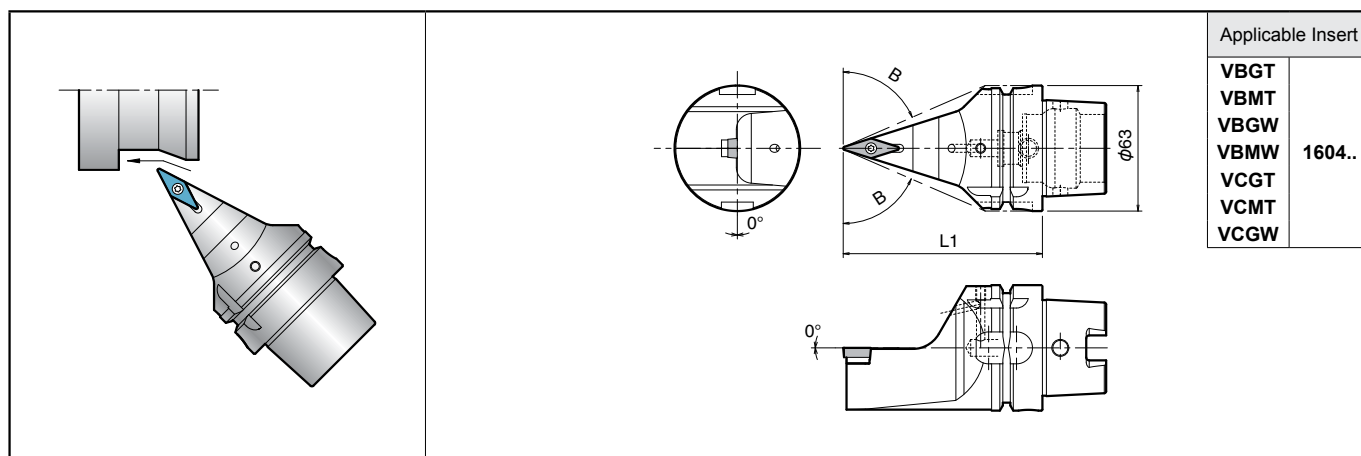
Toolholder Dimensions

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

SVLB (External / Copying)

● Toolholder Dimensions

Description	Std.	Dimension (mm)		Spare Parts						
				Clamp Screw	Wrench	Shim	Shim Screw	Wrench (for Shim Screw)	Coolant Pipe	
		L1	F1							
T63H- SVLBR-DX16N	●	65	45	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4	CL63-1	
	●									

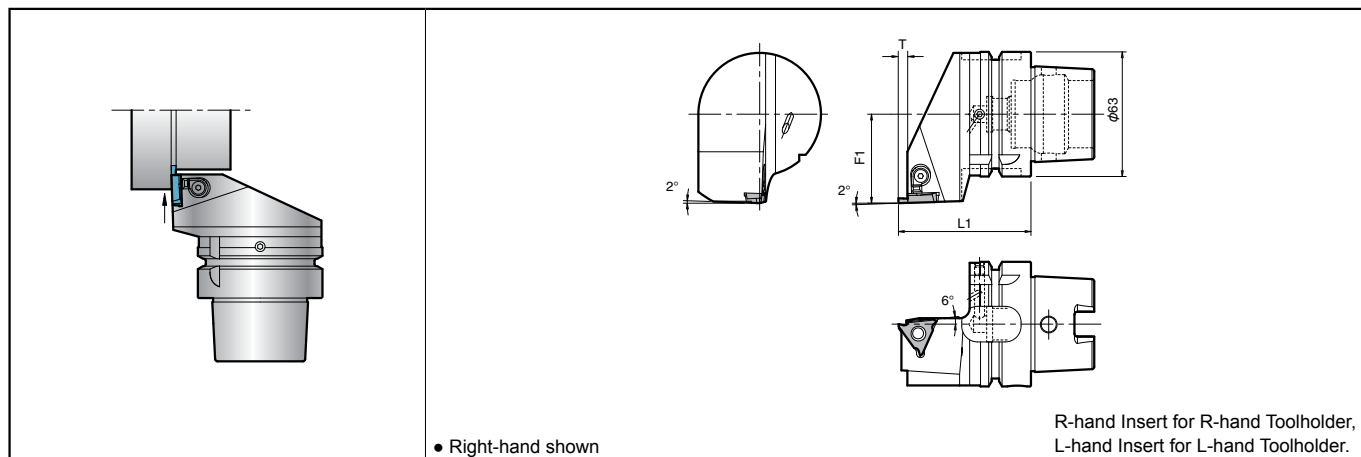
SVVB (External / Copying)

● Toolholder Dimensions




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



KGBA (External Grooving)



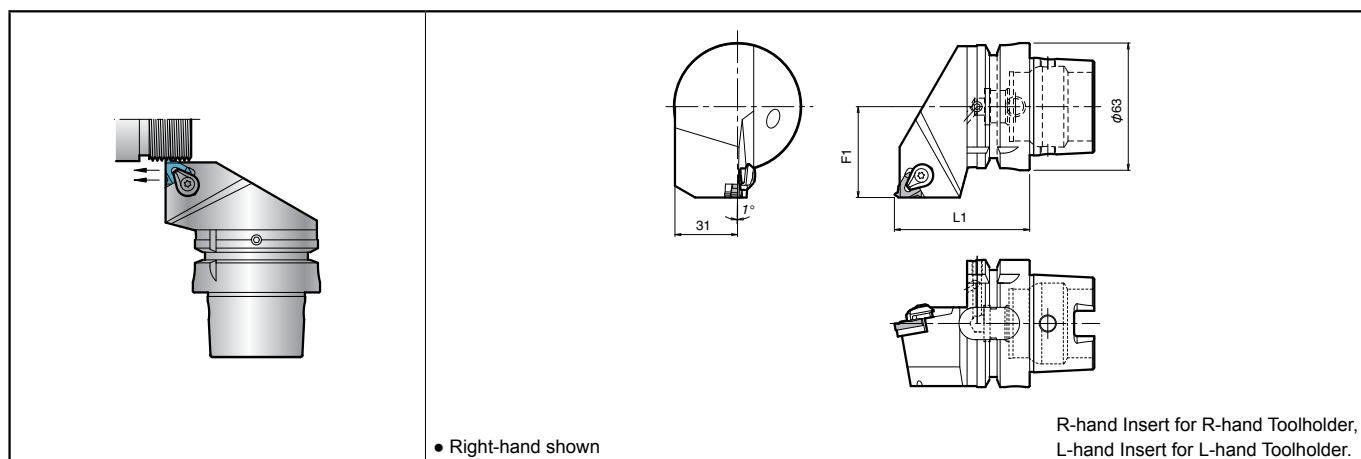
Toolholder Dimensions

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	●	67	45	2.5	LGBA-16RS	FT-15	CL63-1	GBA32R type	
	KGBAR-22-15		KGBAR-22-15	●	67	45	4.0	LGBA-22RS			GBA43R type	
	KGBAR-22-25		KGBAR-22-25	●								4.5
	KGBAR-22-35		KGBAR-22-35	●								
T63H-	KGBAL-16	A63-WH-	KGBAL-16	●	67	45	2.5	LGBA-16LS	FT-15	CL63-1	GBA32L type	
	KGBAL-22-15		KGBAL-22-15	●	67	45	4.0	LGBA-22LS			GBA43L type	
	KGBAL-22-25		KGBAL-22-25	●								4.5
	KGBAL-22-35		KGBAL-22-35	●								






* 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
						Clamp Set	Wrench	Shim	Shim Screw	Coolant Pipe	
				L1	F1						
T63H-	KTNR-16	A63-WH- KTNR-16	●	67	45	CPS-5S	FT-15	TN-32 (TNW-32)*	SP3X8	CL63-1	16ER type
	KTNR-22	KTNR-22	●			CPS-6S	LW-3	TN-43	SP3X8	CL63-1	22ER type

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

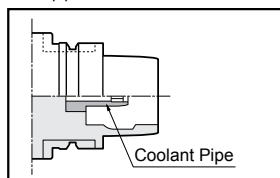
* For details of applicable inserts, please refer to the General Catalog.

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

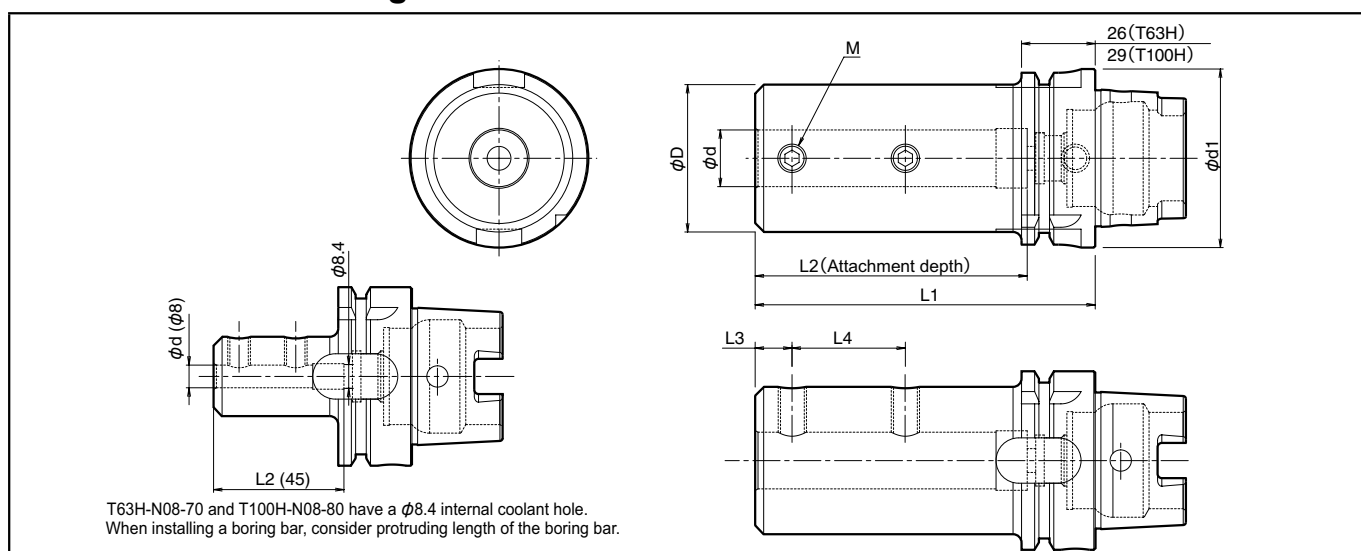
T63	H	—	N	08	—	70	(mm)
Interface Size	Manual Clamp Hole		Toolholder	Internal Dia.		Toolholder Length	
T63:HSK-T63 T100:HSK-T100	H Yes No code No		N For Boring Bar C For Drill BL For Blank Tool	08 $\phi 8$ 10 $\phi 10$...		Length from Gauge Line	

Coolant Pipe




- Coolant pipe is built into toolholder.



Toolholder for Boring Bar / Drill



Toolholder Dimensions

Description		(Previous Description)	Std.	Dimension (mm)								Spare Parts			Remarks	
												Clamp Screw	Wrench	Coolant Pipe		
				ød	ød1	øD	L1	L2	L3	L4	M					
T63H-	N08-70	A63-WH-	N08-70	●	8	63	28	70	45	9	20	M8	HS8X10	LW-4	CL63-1	Boring Bar Installation
	N10-80		●	10	35		80	55	9	22	HS8X12					
	N12-90		●	12	42		90	65	9	22	M10	HS10X16	LW-5			
	N16-100		●	16	48		100	75	11	30		HS12X16	LW-6			
	N20-120		●	20	52		120	95	13	40	HS12X12					
	N25-140		●	25	56		140	115	13	50	M12	HS12X12				
	N32-160		●	32	56		160	135	13	60		HS16X12	LW-8			
T63H-	C20-75	A63-WH-	C20-75	●	20	63	52	75	50	13	22	M10	HS10X16	LW-5	CL63-1	* For Drill Installation
	C25-85		●	25	56		85	58	15	28	M12	HS12X16	LW-6			
	C32-90		●	32	56		90	62	15	30	HS12X12					
	C40-100		●	40	68		100	72	18	35	M16	HS16X12	LW-8			
T100H-	N08-80	-	●	8	100	28	80	45	9	20	M8	HS8X10	LW-4	CL100-1	Boring Bar Installation	
	N10-90		●	10		35	90	55	9	22		HS8X12				
	N12-100		●	12		42	100	65	9	22	M10	HS10X16	LW-5			
	N16-110		●	16		48	110	75	11	30		HS12X18	LW-6			
	N20-130		●	20		52	130	95	13	40	HS12X20					
	N25-150		●	25		62	150	115	13	50	M12	HS10X16	LW-5			
	N32-170		●	32		72	170	135	13	60		HS16X18				LW-8
T100H-	C20-85	-	●	20	100	52	85	50	13	22	M10	HS10X16	LW-5	CL100-1	* For Drill Installation	
	C25-90		●	25		62	90	58	15	20	M16	HS16X18	LW-8			
	C32-95		●	32		72	95	62	15	20		HS16X20				
	C40-105		●	40		82	105	72	15	25	M16	HS16X20	LW-8			

* Shorter than the toolholder for boring bar.

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

N



Tools for Turning Mill

Blank Tool

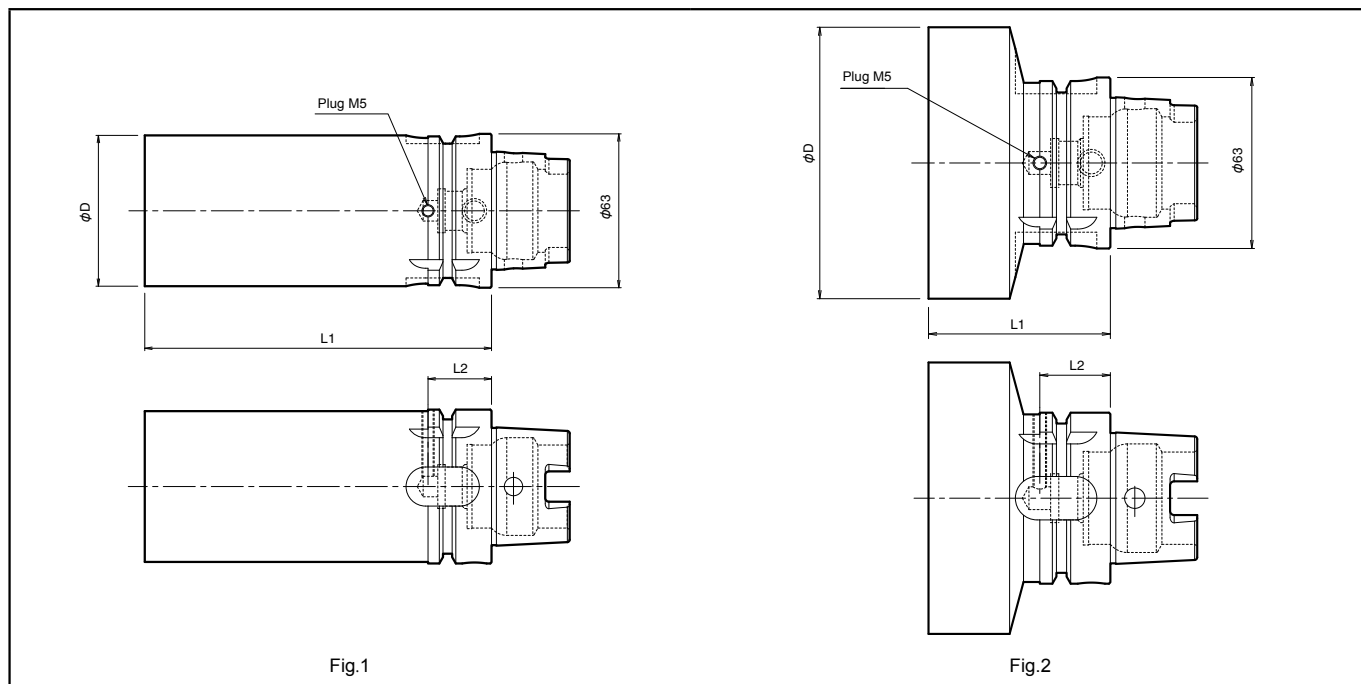



Fig.1

Fig.2

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			142				
	BL100-67		100	67		Fig.2		

* L2 indicates the length from gauge line to plug.

N

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 builder.