

# HSK-T Tooling Systems for Turning Mill

**World  
standard  
ISO**  
for Turning Mill  
**HSK**  
TOOLING SYSTEM

## Set screw holders for Round shank

For through-spindle coolant  
CC type



For nozzle-coolant  
CN type



➔ P.69

## Insert holders for Square-shank

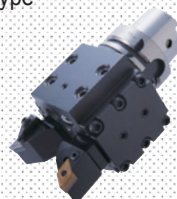
For external turning and cutting off  
SV type



For external / face turning  
SA type



For external / face turning  
SB type



For external / face turning  
SC type



For external / face turning  
SN type



For face turning  
SH type



➔ P.70

BLANK TOOL

CHECKING ARBOR



➔ P.72



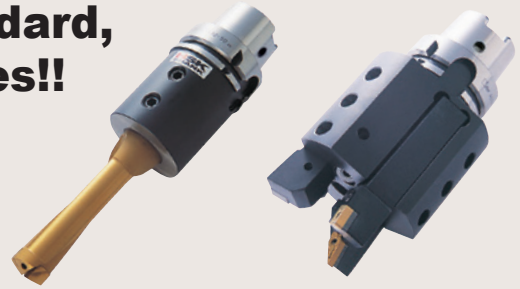
➔ P.72



# HSK-T TOOLING SYSTEMS for TURNING MILL

## The obvious choice for ISO standard, HSK-T specs turning mill spindles!!

- ▷ A full range of milling tool holders, covering 70% of multi-tasking machine applications!
- ▷ Compatible with machining center holders!
- ▷ Supplied by tool holder manufacturer world wide!
- ▷ Extensive line-up and reasonable price!



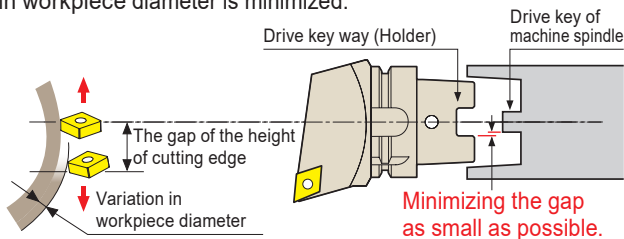
### Standardized by many machine tool manufacturers!

<b>OKUMA</b> · MULTUS SERIES · MACTURN SERIES etc	<b>DMG MORI</b> · NT (NTX) Series · CTX Series	<b>Nakamura-tome</b> Precision Industry · Super NTJX Series · Super NTMX Series etc	<b>YAMAZAKI MAZAK</b> · INTEGREX i Series J Series e Series etc
<b>MATSUURA MACHINERY CORPORATION</b> · CUBLEX Series	<b>HERMLE</b> · MT Series	<b>HORKOS</b> · NS70 Version	

## Turning tools (HSK-T standard)

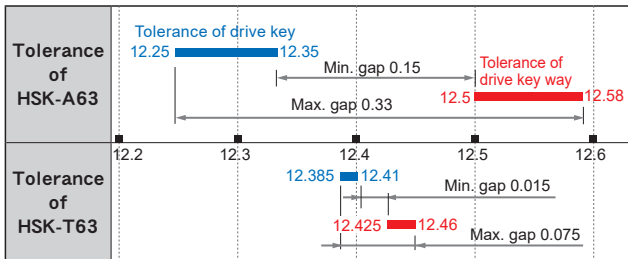
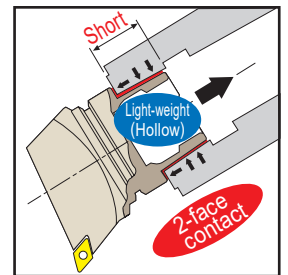
### Maintains high precision during turning operation

By using an ICTM tool holder, which minimizes the gap between the machine spindle drive key and tool holder drive key way, the height of the cutting edge is maintained precisely and variation in workpiece diameter is minimized.



### High bending rigidity

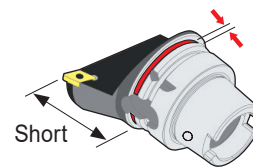
During turning, the cutting force of a spindle axis becomes very large. Therefore, a rigid, two-face-contact clamping system performs very well.



### Designed to shorten undercut area

We made an undercut area thicker and as short as possible in order to increase the holder rigidity.

Improved rigidity!

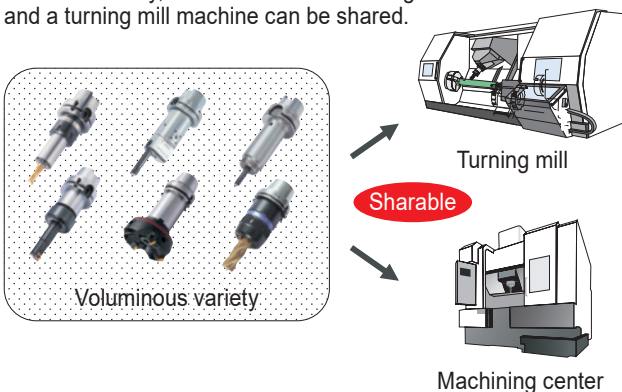


Undercut area  
 Width 4 mm  
 Depth 0.5 mm

## Rotating tools (HSK-A standard)

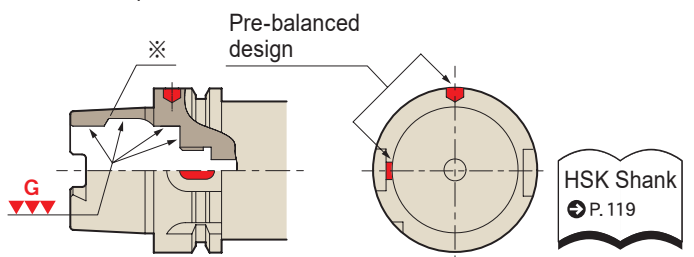
### Compatible with machining center

Needless to say, the holder of a machining center and a turning mill machine can be shared.



### Pre-balanced design

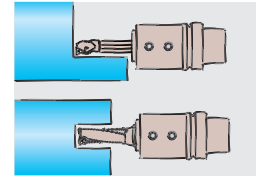
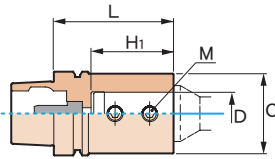
The HSK-A-type shank is unbalanced in its standard form, but at MST we have applied our original pre-balancing to make the tool holders applicable for high-speed machining. According to DIN standards, only the area marked with ※ in the hollow shank needs to be finished. However, MST provides perfect finishing for all areas after heat treatment in order to improve balance.



HSK Shank  
 P. 119

# Set screw holders for Round shank

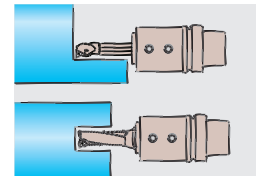
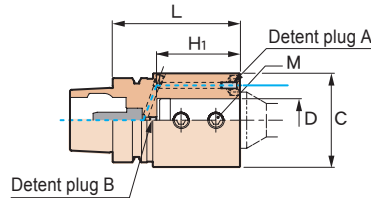
## CC type for through-spindle coolant



CODE	L	φD	φC	H <sub>1</sub>	M	Kg
<b>T40</b> -CC32- 90	90	32	58	62	M12	1.2
<b>T50</b> -CC32- 85	85	32	62	62	M12	1.4
<b>T63</b> -CC32- 90	90	32	62	62	M12	1.6
-CC40-100	100	40	68	72		2
<b>T100</b> -CC40-105	105	40	82	72	M12	4.5
-CC50-115	115	50	92	82	M14	5.3

- **Option**
  - Sleeve for set screw holder (SS)
- **Std. Access.**
  - Coolant duct→P.104
- **Note**
  - Available for both boring bar and indexable drill.

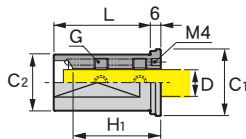
## CN type for nozzle-coolant



CODE	L	φD	φC	H <sub>1</sub>	M	Kg
<b>T40</b> -CN32- 95	95	32	70	62	M12	2
<b>T50</b> -CN32-100	100	32	70	62	M12	2.1
<b>T63</b> -CN32- 95	95	32	70	62	M12	2.2
-CN40-105	105	40	78	71		2.7
<b>T100</b> -CN40-115	115	40	82	72	M12	4.9
-CN50-125	125	50	92	82	M14	5.8

- **Option**
  - Sleeve for set screw holder (SS)
- **Std. Access.**
  - Coolant duct→P.104
  - Detent plug for a nozzle A = Set screw (M5-12L)
  - Detent plug for Center through B = Set screw (M5-5L)
- **Note**
  - The coolant nozzle direction is adjustable.
  - Nozzle-coolant type is available for through-spindle coolant.
  - Available for both boring bar and indexable drill.

## Sleeve for set screw holders

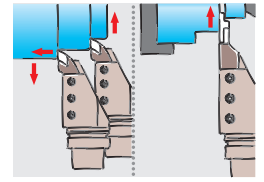
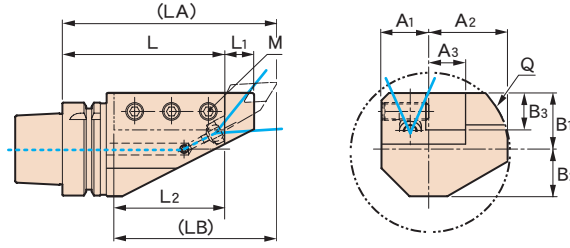


CODE	L	φD	φC <sub>1</sub>	φC <sub>2</sub>	H <sub>1</sub>	G
<b>SS32- 8</b>	55	8	38	32	35	M 6
-10					40	M 8
-12					45	
-16					50	
-20						
-25					58	※
<b>SS40- 8</b>	60	8	46	40	35	M 6
-10					40	M 8
-12					45	
-16					50	
-20						M10
-25					58	
-32					62	※

- **Note**
  - Items marked with ※ in the G section of the list means they are screw-tightening type.
  - Available for both boring bar and indexable drill.

# Insert holders for Square-shank

## SV type for external turning and cutting off



CODE	L	L <sub>1</sub>	L <sub>2</sub>	(LA)	(LB)	A <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	M	Q	kg
<b>T40</b> -SV2020R- 90	90	15	60	120	90	24.5	39	20	25	22	20	M10	78	1.5
-SV2020L- 90														
<b>T50</b> -SV2020R- 95	95	15	60	125	90	25	43.5	20	25	25	20	M10	87	1.9
-SV2020L- 95														
<b>T63</b> -SV2020R-105	105	20	70	135	100	32	45	20	33	32	20	M12	90	2.7
-SV2020L-105														
-SV2525R-105※								105	135	45	28		90	2.7
-SV2525L-105※														
-SV2525R-105D	115	145	53.5	38	108	3.3								
-SV2525L-105D														
-SV2525R-115	115	145	53.5	38	108	3.3								
-SV2525L-115														
<b>T100</b> -SV2525R-150	150	20	70	190	150	37	59	25	48	43	25	M12	118	9.1
-SV2525L-150														
-SV3232R-150		25	100	195	145	40	68.5	32	47	32	M14	137	9.3	
-SV3232L-150														

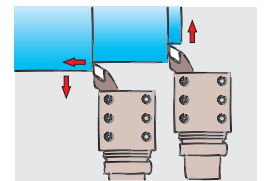
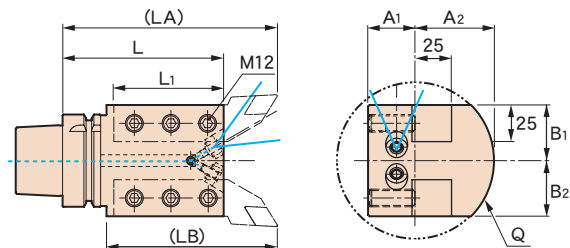
- Std. Access.  
 ● Coolant duct→P.104

- Note  
 ● The coolant nozzle direction is adjustable.

- Caution  
 ● The maximum coolant pressure for the nozzle on the holder is 1.5MPa.  
 ● The holder marked with ※ in the chart cannot be installed on the Mazak INTEGREX I and J series.

## SA type for external / face turning

The multi-inserts type holder reduces using holders quantity, it saves A.T.C. magazine pot.



CODE	L	L <sub>1</sub>	(LA)	(LB)	A <sub>1</sub>	A <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>	Q	kg
<b>T63</b> -SA2525-105※	105	70	135	100	32	54	38	38	108	3.7
-115										
<b>T100</b> -SA2525-150	150	70	185	105	37	59	48	48	118	9.3

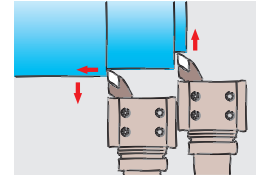
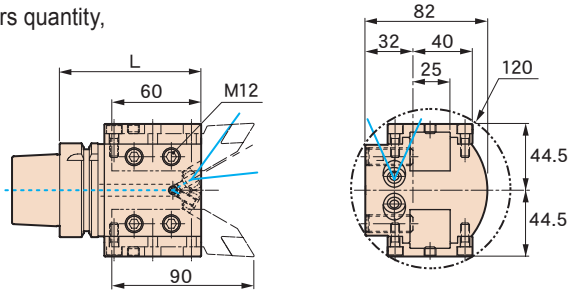
- Std. Access.  
 ● Coolant duct→P.104  
 ● Detent plug for a nozzle=Set screw(M5-12L)(Ex.) When using only right-hand, plug the nozzle on the left-hand side.

- Note  
 ● The coolant nozzle direction is adjustable.

- Caution  
 ● The maximum coolant pressure for the nozzle on the holder is 1.5MPa.  
 ● The holder marked with ※ in the chart cannot be installed on the Mazak INTEGREX I and J series.

## SB type for external / face turning

The multi-inserts type holder reduces using holders quantity, it saves A.T.C. magazine pot.



CODE	L	Kg
<b>T63-SB2525- 95</b> *	95	3.2
<b>-105</b>	105	

### ■ Std. Access.

- Coolant duct → P.104
- Detent plug for a nozzle = Set screw (M5-12L)  
(Ex.) When using only right-hand, plug the nozzle on the left-hand side.

### ■ Note

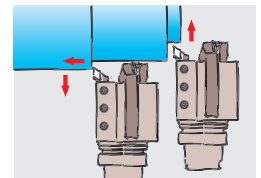
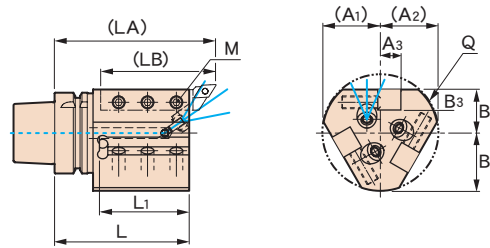
- The coolant nozzle direction is adjustable.

### ■ Caution

- The maximum coolant pressure for the nozzle on the holder is 1.5MPa.
- The holder marked with \* in the chart cannot be installed on the Mazak INTEGREX I and J series.

## SC type for external / face turning

The multi-inserts type holder reduces using holders quantity, it saves A.T.C. magazine pot.



CODE	L	L1	(LA)	(LB)	(A1)	(A2)	A3	B1	B2	B3	M	Q	Kg
<b>T40 -SC1616R- 90</b>	90	60	110	80	38	38	16	30	38.5	16	M10	77	1.7
<b>T50 -SC2020R- 95</b>	95	60	125	90	44.5	44.5	20	35	45	20	M10	90	2.4
<b>T63 -SC2020R-105</b>	105	70	140	105	44.5	44.5	20	35	45	20	M12	90	3.0
<b>T100-SC2525R-150</b>	150	70	185	105	59	59	25	48	59	25	M12	108	9.7

### ■ Std. Access.

- Coolant duct → P.104
- Detent plug for a nozzle = Set screw (M5-12L)

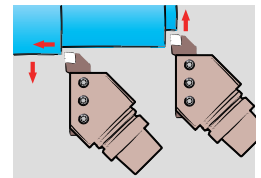
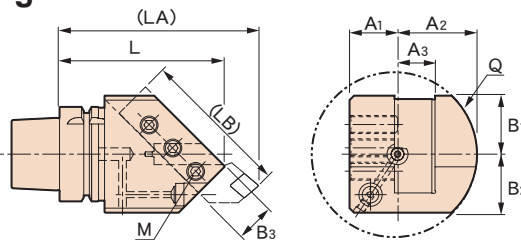
### ■ Note

- The coolant nozzle direction is adjustable.

### ■ Caution

- The maximum coolant pressure for the nozzle on the holder is 1.5MPa.

## SN type for external / face turning



CODE	L	(LA)	(LB)	A1	A2	A3	B1	B2	B3	M	Q	Kg
<b>T40 -SN2020R-100</b>	100	125	80	25	40	20	32	32	20	M10	80	1.7
<b>T50 -SN2020R-110</b>	110	135	85	25	45	20	35	35	20	M10	90	2.2
<b>T63 -SN2020R-110</b>	110	135	85	25	45	20	35	35	20	M10	90	2.5
<b>-SN2020L-110</b>												
<b>-SN2525R-110</b>												
<b>-SN2525L-110</b>												
<b>T100-SN2525R-135</b>	135	165	105	32	54	25	43	43	25	M12	108	6.1
<b>-SN2525L-135</b>												
<b>-SN3232R-135</b>												
<b>-SN3232L-135</b>												

### ■ Std. Access.

- Coolant duct → P.104

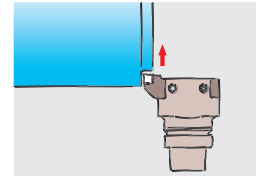
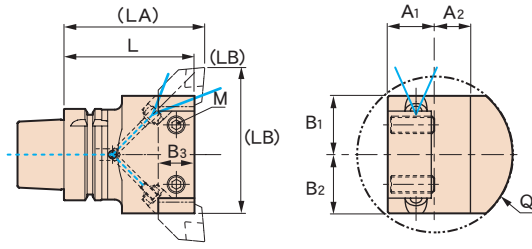
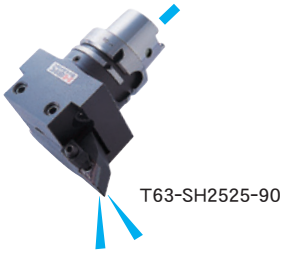
### ■ Note

- The coolant nozzle direction is adjustable.

### ■ Caution

- The maximum coolant pressure for the nozzle on the holder is 1.5MPa.

# SH type for face turning

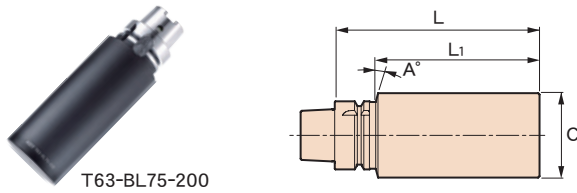


CODE	L	(LA)	(LB)	A <sub>1</sub>	A <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	M	Q	Kg
<b>T40</b> -SH2020- 75	75	79	70	25	20	25	25	20	M12	80	1.2
-120	120	124									1.6
<b>T50</b> -SH2020- 90	90	94	75	25	20	27.5	27.5	20	M12	90	1.8
-120	120	124									2.3
<b>T63</b> -SH2020- 90	90	94	80	32	20	30	30	20	M12	90	2.5
-SH2525- 90		97									100
-120		120	127								3.6
<b>T100</b> -SH2525-105	105	112	120	32	25	48	48	25	M12	118	6.1
-150	150	157									8.8
-SH3232-105	105	113	145	40	32	57	57	32	M14	148	7.7

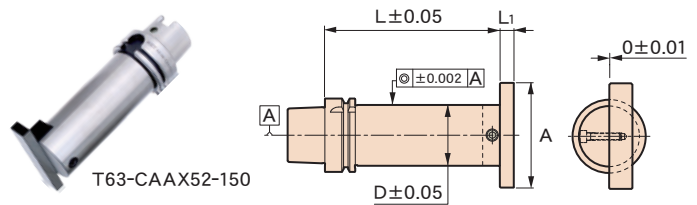
- **Std. Access.**  
 • Coolant duct → P.104 • Detent plug for a nozzle = Set screw (M5-12L)  
 (Ex.) When using only right-hand, plug the nozzle on the left-hand side.
- **Note**  
 • The coolant nozzle direction is adjustable.

- **Caution**  
 • The maximum coolant pressure for the nozzle on the holder is 1.5MPa.

## BLANK TOOL (For additional machining)



## CHECKING ARBOR



CODE	L	L <sub>1</sub>	φC	A°	Kg
<b>T40</b> -BL 32- 35	35	15	32	0	0.3
-BL 48-120	120	97	48	15	1.6
-BL 95- 75	75	52	95		2.9
<b>T50</b> -BL 40- 42	42	16	40	0	0.6
-BL 62-150	150	120	62	15	3.3
-BL105- 90	90	60	105		4.3
<b>T63</b> -BL 52- 45	45	19	52	0	1.0
-BL 75-200	200	168	75	15	6.6
-BL115- 90	90	58	115		5.5
<b>T100</b> -BL 87- 45	45	16	87	0	2.8
-BL100-200	200	166	100		12.6
-BL118-120	120	86	118	15	9.7

CODE	L	L <sub>1</sub>	φD	A	Kg
<b>T40</b> -CAAX32-150	150	10	32	60	1.1
<b>T50</b> -CAAX40-150	150	10	40	70	1.7
<b>T63</b> -CAAX52-150	150	10	52	90	2.9
<b>T100</b> -CAAX60-250	250	12	60	110	7.2

- **Std. Access.**  
 • Coolant duct → P.104  
 • Special case
- **Usage**  
 1. Measure the concentricity of the spindle using cylinder area.  
 2. When using a flat surface, adjustment of the insert position can be verified.  
 3. Confirm and adjust the absolute dimension in the X direction.  
 4. Measure the bending of the spindle using flange surface area.  
 5. Can be used with tool presetter.
- **Note**  
 • ATC repeatability can be observed.  
 • Flatness of square test bar for the datum A is within ±0.01mm.

- **Std. Access.**  
 • Coolant duct → P.104
- **Note**  
 • Material: SNCM439, Heat treatment hardness : 43HRC±2  
 • Hardening depth indicates depth to the center.
- **Caution**  
 • If heat treatment is applied again to a holder produced from a blank tool, the original taper area may be deformed. Therefore, please do not apply heat treatment.