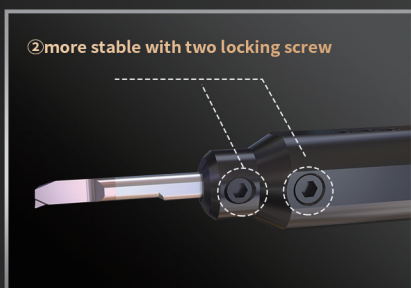
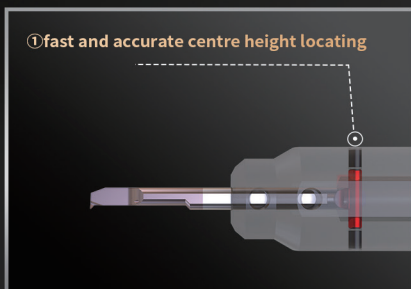


# KSBT SERIES

fast locating small diameter boring tools

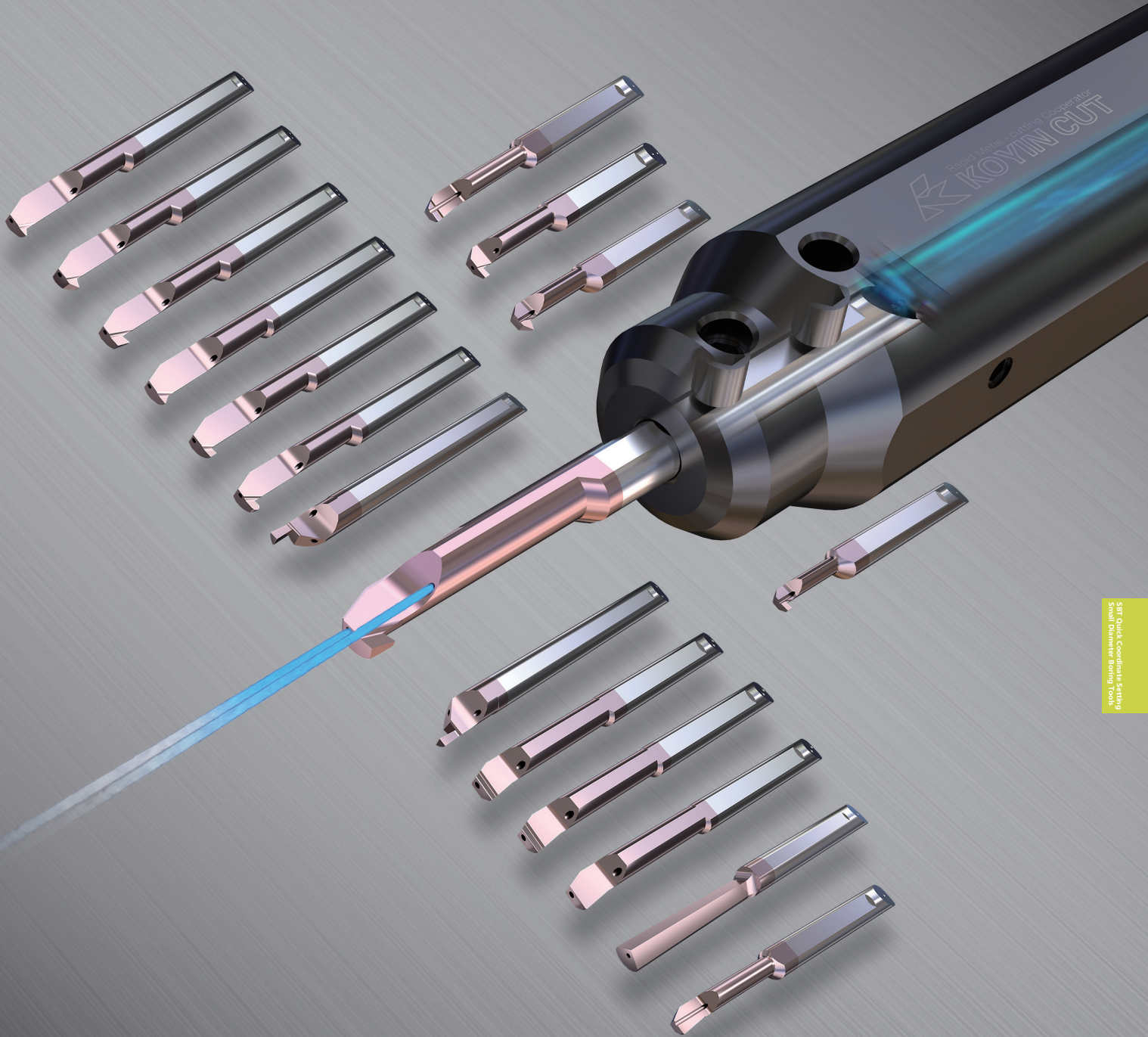


小径内孔刀系列  
SBT快速坐标定位



# SBT SERIES COOLING

SBT Quick Coordinate Setting Small Diameter Boring Tools



SBT Quick Coordinate Setting  
Small Diameter Boring Tools

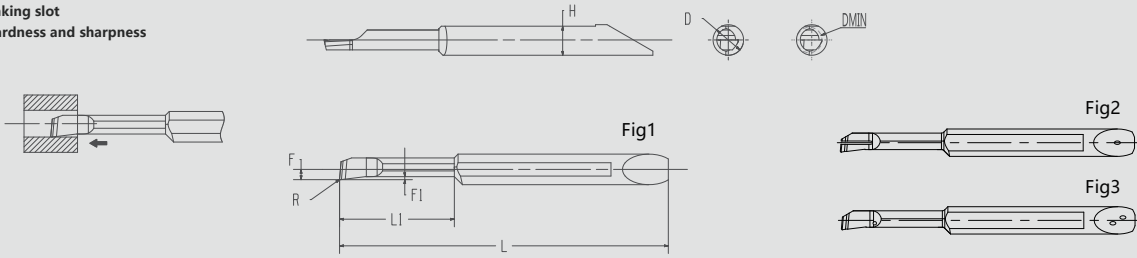
- Fast and accurate centre height locating
- Multiple tools
- inner coolant supply

## Symbols of SBT boring tools

		4: Shank diameter 4		20: Boring diameter 2	08: Effective length 8mm	005: R0.05			H: Parallel geometry		C2=Double jet
		6: Shank diameter 6		25: Boring diameter 2.5	125: Effective length 12.5mm	008: R0.08			N: Without chipbreaking slot		C1=Single jet
KH: Boring series	F: Boring			30: Boring diameter 3.0	15: Effective length 15mm	015: R0.15			F: Chip breaking slot with lead angle		Without Inner cooling
<b>Series</b>	<b>Type</b>	<b>Shank diameter</b>	<b>Direction</b>	<b>machinable diameter of boring</b>	<b>Effective length</b>	<b>Nose Radius</b>	<b>-</b>	<b>Geometry</b>	<b>-</b>	<b>inner cooling</b>	
<b>KH</b>	<b>F</b>	<b>4</b>	<b>R</b>	<b>20</b>	<b>08</b>	<b>005</b>	<b>-</b>	<b>H</b>	<b>-</b>	<b>C2</b>	

## Internal processing-boring process

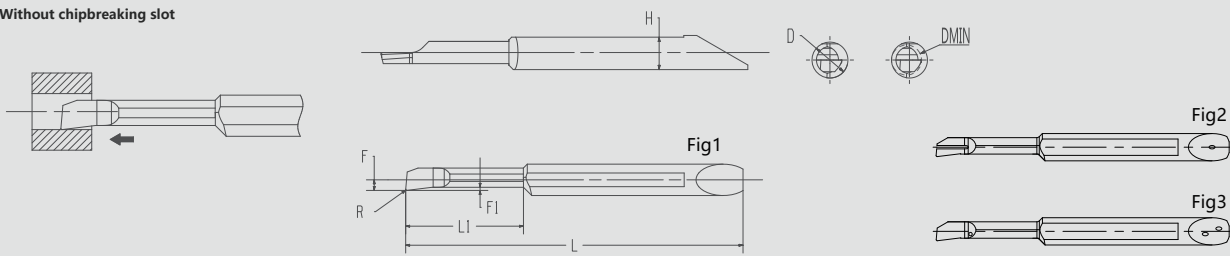
H Chip breaking slot  
Excellent hardness and sharpness



Shape	Type	minimum boring diameter	Minimum boring diameter (mm)								PVD Coated Cemented Carbide		Applicable holders	
		DMIN	D	H	L	L1	F	F1	R	Fig	KHS10M	KCH15D		
	KHF4R 2008-008-H	2	4	3.6	35	8	0.85	0.25	0.08	1			KHP4●●●	
	KHF4R 25125-008-H	2.5	4	3.6	40	12.5	1.1	0.25	0.08	1				
	KHF4R 25125-015-H								0.15	1				
	KHF4R 3013-008-H	3	4	3.6	43	13	1.35	0.35	0.08	1				
	KHF4R 3013-015-H								0.15	1				
	KHF4R 4015-008-H	4	4	3.6	49	15	1.86	0.4	0.08	1				
KHF4R 4015-015-H	0.15								1					
	KHF6R 5020-008-H	5	6	5.6	58	20	2.35	0.5	0.08	1			KHP6●●●	
	KHF6R 5020-015-H								0.15	1				
	KHF6R 6025-008-H	6	6	5.6	63	25	2.85	0.6	0.08	1				
	KHF6R 6025-015-H								0.15	1				
	KHF4R 2008-008-H-C1	2	4	3.6	35	8	0.85	0.25	0.08	2			KHP4●●●JCT	
	KHF4R 25125-008-H-C1										2.5	4		3.6
	KHF4R 25125-015-H-C1	0.15	2											
	KHF4R 3013-008-H-C1	3	4	3.6	43	13	1.35	0.35	0.08	2				
	KHF4R 3013-015-H-C1								0.15	2				
	KHF4R 4015-008-H-C2	4	4	3.6	49	15	1.86	0.4	0.08	3				
	KHF4R 4015-015-H-C2								0.15	3				
	KHF6R 5020-008-H-C2	5	6	5.6	58	20	2.35	0.5	0.08	3				
	KHF6R 5020-015-H-C2								0.15	3				
	KHF6R 6025-008-H-C2	6	6	5.6	63	25	2.85	0.6	0.08	3				KHP6●●●JCT
	KHF6R 6025-015-H-C2								0.15	3				

# Internal processing-boring process

Without chipbreaking slot

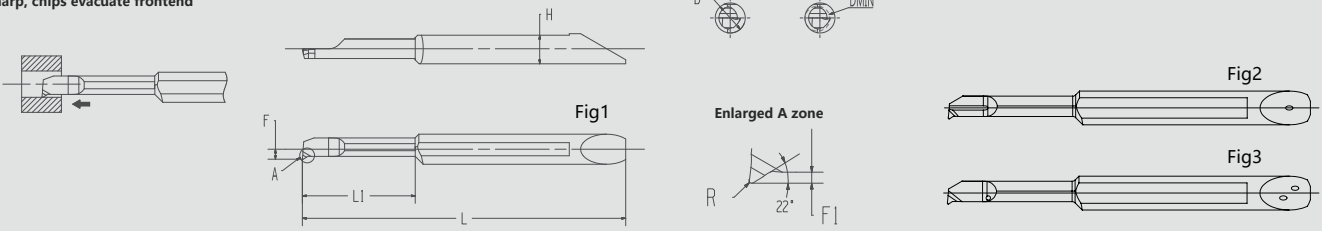


Shape	Type	minimum boring diameter	Minimum boring diameter (mm)								PVD Coated Cemented Carbide		Applicable holders	
		DMIN	D	H	L	L1	F	F1	R	Fig	KHS10M	KCH15D		
	KHF4R 2008-008-N	2	4	3.6	35	8	0.85	0.25	0.08	1			KHP4 ●●●	
	KHF4R 25125-008-N	2.5	4	3.6	40	12.5	1.1	0.25	0.08	1				
	KHF4R 25125-015-N								0.15	1				
	KHF4R 3013-008-N	3	4	3.6	43	13	1.35	0.35	0.08	1				KHP4 ●●●
	KHF4R 3013-015-N								0.15	1				
	KHF4R 4015-008-N	4	4	3.6	49	15	1.86	0.4	0.08	1				KHP6 ●●●
	KHF4R 4015-015-N								0.15	1				
	KHF6R 5020-008-N	5	6	5.6	58	20	2.35	0.5	0.08	1			KHP6 ●●●	
	KHF6R 5020-015-N								0.15	1				
	KHF6R 6025-008-N	6	6	5.6	63	25	2.85	0.6	0.08	1			KHP6 ●●●	
	KHF6R 6025-015-N								0.15	1				
		KHF4R 2008-008-N-C1	2	4	3.6	35	8	0.85	0.25	0.08	2			KHP4 ●●●JCT
KHF4R 25125-008-N-C1		2.5	4	3.6	40	12.5	1.1	0.25	0.08	2				
KHF4R 25125-015-N-C1									0.15	2				
KHF4R 3013-008-N-C2		3	4	3.6	43	13	1.35	0.35	0.08	3			KHP4 ●●●JCT	
KHF4R 3013-015-N-C2									0.15	3				
KHF4R 4015-008-N-C2		4	4	3.6	49	15	1.86	0.4	0.08	3			KHP6 ●●●JCT	
KHF4R 4015-015-N-C2									0.15	3				
KHF6R 5020-008-N-C2		5	6	5.6	58	20	2.35	0.5	0.08	3			KHP6 ●●●JCT	
KHF6R 5020-015-N-C2									0.15	3				
KHF6R 6025-008-N-C2		6	6	5.6	63	25	2.85	0.6	0.08	3			KHP6 ●●●JCT	
KHF6R 6025-015-N-C2									0.15	3				

SPT Quick Coordinate setting Small Diameter Boring Tools

# Internal processing-boring process

F Chip breaking slot with lead angle  
Sharp, chips evacuate frontend



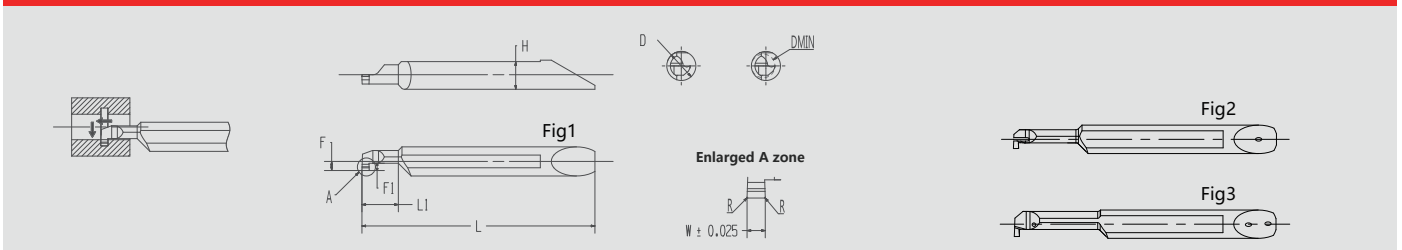
Shape	Type	minimum boring diameter	Minimum boring diameter (mm)								PVD Coated Cemented Carbide		Applicable holders							
		DMIN	D	H	L	L1	F	F1	R	Fig	KHS10M	KCH15D								
	KHF4R 2008-005-F	2	4	3.6	35	8	0.85	0.25	0.05	1			KHP4 ●●●							
	KHF4R 25125-005-F	2.5	4	3.6	40	12.5	1.1	0.3	0.05	1										
	KHF4R 25125-015-F								0.15	1										
	KHF4R 3013-005-F	3	4	3.6	43	13	1.35	0.4	0.05	1				KHP4 ●●●						
	KHF4R 3013-015-F								0.15	1										
	KHF4R 4015-005-F	4	4	3.6	49	15	1.86	0.5	0.05	1				KHP6 ●●●						
KHF4R 4015-015-F	0.15								1											
	KHF6R 5020-005-F	5	6	5.6	58	20	2.35	0.7	0.05	1			KHP6 ●●●							
	KHF6R 5020-015-F								0.15	1										
	KHF6R 6025-005-F	6	6	5.6	63	25	2.85	0.9	0.05	1										
	KHF6R 6025-015-F								0.15	1										
	KHF4R 2008-005-F-C1	2	4	3.6	35	8	0.85	0.25	0.05	2			KHP4 ●●●JCT							
	KHF4R 25125-005-F-C1								2.5	4	3.6	40		12.5	1.1	0.3	0.05	2		
	KHF4R 25125-015-F-C1																0.15	2		
	KHF4R 3013-005-F-C2	3	4	3.6	43	13	1.35	0.4	0.05	3			KHP4 ●●●JCT							
	KHF4R 3013-015-F-C2								0.15	3										
	KHF4R 4015-005-F-C2	4	4	3.6	49	15	1.86	0.5	0.05	3			KHP6 ●●●JCT							
	KHF4R 4015-015-F-C2								0.15	3										
	KHF6R 5020-005-F-C2	5	6	5.6	58	20	2.35	0.7	0.05	3			KHP6 ●●●JCT							
	KHF6R 5020-015-F-C2								0.15	3										
	KHF6R 6025-005-F-C2	6	6	5.6	63	25	2.85	0.9	0.05	3			KHP6 ●●●JCT							
	KHF6R 6025-015-F-C2								0.15	3										

Small Diameter Boring Tools  
SMT Quick-Change Setting

## Symbols of Inner Grooving Tools

KH: boring series	G: Grooving tools	4: shank diameter 4		30: boring diameter 3.0	05: width 0.5		050: groove depth 0.5		C2= double jet
		6: shank diameter 6		40: boring diameter 4.0	075: width 0.75		100: groove depth 1.0		C1=single jet
				50: boring diameter 5.0	10: width 1.0		120: groove depth 1.2		without Inner Cooling
<b>Series</b>	<b>Type</b>	<b>shank diameter</b>	<b>Direction</b>	<b>Machinable diameter of boring</b>	<b>Tip width</b>	<b>—</b>	<b>Machinable groove depth</b>	<b>—</b>	<b>Inner cooling</b>
<b>KH</b>	<b>G</b>	<b>4</b>	<b>R</b>	<b>30</b>	<b>075</b>	<b>—</b>	<b>080</b>	<b>—</b>	<b>C2</b>

## Internal processing-grooving process



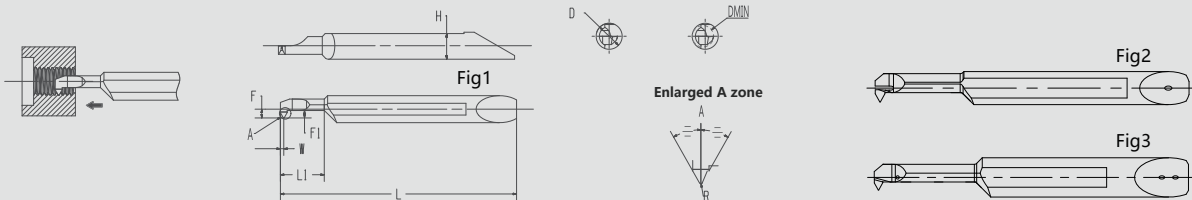
Shape	Type	minimum boring diameter	Minimum boring diameter (mm)										PVD Coated Cemented Carbide		Applicable holders	
			DMIN	W	R	D	H	L	L1	F	F1	Fig	KHS10M	KCH15D		
	KHG4R 3005-050	3	0.5	0.05	4	3.6	37	9	1.3	0.5	1					
	KHG4R 30075-060		0.75							0.6	1					
	KHG4R 3010-070		1							0.7	1					
	KHG4R 4005-050	4	0.5		4	3.6	40	10	1.75	0.5	1					
	KHG4R 40075-060		0.75							0.6	1					
	KHG4R 4010-100		1							0.6	1					
	KHG4R 4015-100		1.5							1	1					
	KHG4R 4020-100		2							1	1					
	KHG4R 4020-100		2							1	1					
	KHG6R 50075-120	5	0.75		6	5.6	53	15	2.8	1.2	1					
	KHG6R 5010-120		1							1.2	1					
	KHG6R 5015-120		1.5							1.2	1					
KHG6R 5020-120	6	2	6	5.6	53	15	3	1.8	1							
KHG6R 6010-180		1						1.8	1							
KHG6R 6015-180		1.5						1.8	1							
KHG6R 6020-180	2	1.8	1	1												
KHG4R 3005-050-C1	3	0.5	0.05	4	3.6	37	9	3	0.5	2						
KHG4R 30075-060-C1		0.75							0.6	2						
KHG4R 3010-070-C1		1							0.7	2						
KHG4R 4005-050-C2	4	0.5		4	3.6	40	10	1.75	0.5	3						
KHG4R 40075-060-C2		0.75							0.6	3						
KHG4R 4010-100-C2		1							0.6	3						
KHG4R 4015-100-C2		1.5							1	3						
KHG4R 4020-100-C2		2							1	3						
KHG4R 4020-100-C2		2							1	3						
KHG6R 50075-120-C2	5	0.75		6	5.6	53	15	2.8	1.2	3						
KHG6R 5010-120-C2		1							1.2	3						
KHG6R 5015-120-C2		1.5							1.2	3						
KHG6R 5020-120-C2	6	2	6	5.6	53	15	3	1.8	3							
KHG6R 6010-180-C2		1						1.8	3							
KHG6R 6015-180-C2		1.5						1.8	3							
KHG6R 6020-180-C2	2	1.8	3	3												

SPT Quick Coordinate setting Small Diameter Boring Tools

## Symbols of SBT Threading Tools

KH: Boring series		T: Threading Tools		4: Shank diameter 4		30: Boring diameter 3		003: R0.03		C2=double jet	
		6: Shank diameter 6		40: Boring diameter 4.0		50: Boring diameter 5.0		005: R0.05		C1=single jet	
								60A:60°		without jet	
Series	Type	Shank diameter	Direction	Machinable diameter of boring	Nose Radius	Thread Angle	Jet				
<b>KH</b>	<b>T</b>	<b>4</b>	<b>R</b>	<b>30</b>	<b>003</b>	<b>60A</b>	<b>C2</b>				

## Internal processing- threading process



Shape	Type	minimum boring diameter	Minimum boring diameter (mm)										Metric thread		Imperial Thread		PVD Coated Cemented Carbide	Applicable holders
			DMIN	D	H	L	L1	F	F1	W	R	Fig	A	Specifications of thread	Pitch (mm)	Specifications of thread		
	KHT4R 30003-60A	3	4	3.6	34	6.5	1.19	1	0.5	0.03Max	1	60°	M4 More than (Fine thread M3.5 More than)	0.35~0.8	No.8-32UNC No.8-36UNF More than	36~32		KHP4●●●
	KHT4R 35003-60A	3.5	4	3.6	36	8.5	1.44	1.2	0.6	0.03Max	1	M4 More than (Fine thread M4.5 More than)	0.5~1.0	No.10-24UNC No.8-36UNF More than	36~24			
	KHT4R 40005-60A	4	4	3.6	38	10.5	1.69	1.2	0.6	0.05Max	1	M5 More than (Fine thread M6 More than)	0.75~1.25	No.12-24UNC No.12-28UNF More than	28~20			
	KHT6R 50005-60A	5	6	5.6	48	15.5	1.94	1.3	0.65	0.05Max	1	M7 More than (Fine thread M6 More than)	0.75~1.5	1/4-28UNC 1/4-28UNF More than	28~18		KHP6●●●	
	KHT6R 60005-60A	6	6	5.6	53	19.5	2.44	1.6	0.8	0.05Max	1	M8 More than (Fine thread M7 More than)	0.75~1.5	5/16-18UNC 5/16-24UNF More than	24~16			
	KHT4R 40005-60A-C1	4	4	3.6	38	10.5	1.69	1.2	0.6	0.05Max	2		M5 More than (Fine thread M6 More than)	0.75~1.25	No.12-24UNC No.12-28UNF More than	28~20		KHP4●●●JCT
	KHT6R 50005-60A-C2	5	6	5.6	48	15.5	1.94	1.3	0.65	0.05Max	3		M7 More than (Fine thread M6 More than)	0.75~1.5	1/4-28UNC 1/4-28UNF More than	28~18		KHP6●●●JCT
	KHT6R 60005-60A-C2	6	6	5.6	53	19.5	2.44	1.6	0.8	0.05Max	3		M8 More than (Fine thread M7 More than)	0.75~1.5	5/16-18UNC 5/16-24UNF More than	24~16		

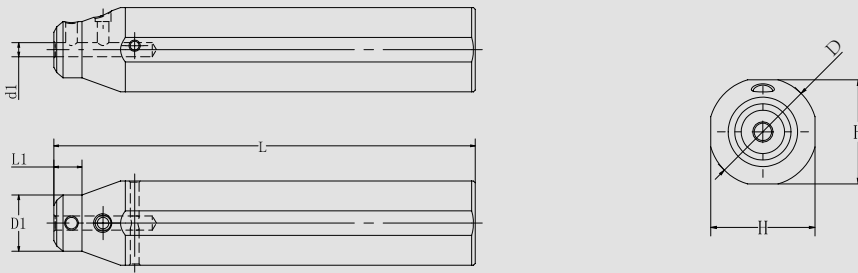
## Symbols of SBT Tool holders

KH: Boring series		P: Tools		4: Shank diameter 4		16: Shank diameter 16		90: Length 90		Without Inner Cooling	
		6: Shank diameter 6		22: Shank diameter 22		1905: Shank diameter 19.05		100: Length 100		JCT: Inner cooling	
		8: Shank diameter 8		25: Shank diameter 25		20: Shank diameter 20		120: Length 120			
		254: Shank diameter 25.4									
Series	Tools	Tool diameter	Shank diameter	Tool Length	Inner cooling						
<b>KH</b>	<b>P</b>	<b>4</b>	<b>20</b>	<b>100</b>	<b>JCT</b>						

## Accessories

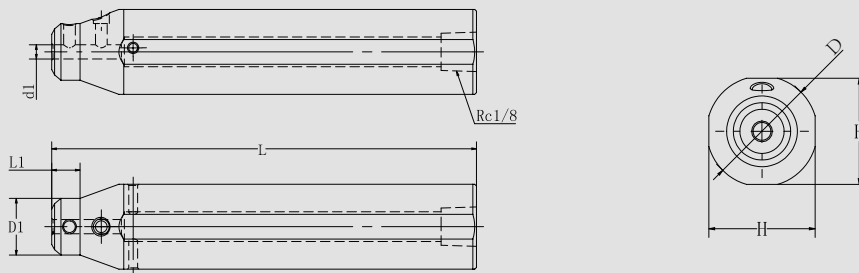
Symbols of tool holders	Lock screw (for insert)	Wrench	Lock screw (for pin)	Wrench	locating pin
KHP□-16 □□□□	KS-4004-SH	KW-LH2	KS-3002-SH	KW-LH1.5	KLP-2511
KHP□-1905 □□□□					
KHP□-20 □□□□					
KHP□-22 □□□□					KLP-2514
KHP□-25 □□□□					
KHP□-254 □□□□					

## Internal processing-tool holders



Shape	Type	Stock	Size (mm)						Corresponding Insert
			D	D1	d1	L	L1	H	
	KHP4-16-90		16	11	4	90	8	15	KH□4R □□□
	KHP4-1905-100		19.05	14		100		18	
	KHP4-20-100		20	15		100		19	
	KHP4-22-120		22	17		120		21	
	KHP4-25-120		25	20		120		24	
	KHP4-254-120		25.4	20.4		120		24.4	
	KHP6-16-90		16	13	6	90	8	15	KH□6R □□□
	KHP6-1905-100		19.05	14		100		18	
	KHP6-20-100		20	15		100		19	
	KHP6-22-120		22	17		120		21	
	KHP6-25-120		25	20		120		24	
	KHP6-254-120		25.4	20.4		120		24.4	

## Internal processing-holders with jet



Shape	Type	Stock	Size (mm)						Corresponding Insert
			D	D1	d1	L	L1	H	
	KHP4-16-90-JCT		16	11	4	90	8	15	KH□4R □□□
	KHP4-1905-100-JCT		19.05	14		100		18	
	KHP4-20-100-JCT		20	15		100		19	
	KHP4-22-120-JCT		22	17		120		21	
	KHP4-25-120-JCT		25	20		120		24	
	KHP4-254-120-JCT		25.4	20.4		120		24.4	
	KHP6-16-90-JCT		16	13	6	90	8	15	KH□6R □□□
	KHP6-1905-100-JCT		19.05	14		100		18	
	KHP6-20-100-JCT		20	15		100		19	
	KHP6-22-120-JCT		22	17		120		21	
	KHP6-25-120-JCT		25	20		120		24	
	KHP6-254-120-JCT		25.4	20.4		120		24.4	



## Recommend Application Parameter

### SBT small diameter boring tools

Machined Materials	Carbon Steel, Alloy Steel	Stainless Steel		Cast Iron	Heat Resisting Alloy/Titanium Alloy		Nonferrous	
Insert Grades	KHS10M	KCH15D	KHS10M	KHS10M	KHS10M	KCH15D	KCN10	KCN10D
Cutting Speed Vc(m/min)	60-150	50-180	60-120	60-150	50-60	40-80	100-180	120-250

	Boring tools	Inner grooving tools	Threading tools					
Edge width of grooving	0.01-0.2	—	0.015-0.05					
Feeding Speed f(mm/rev)	0.02-0.1	0.02-0.05	—					