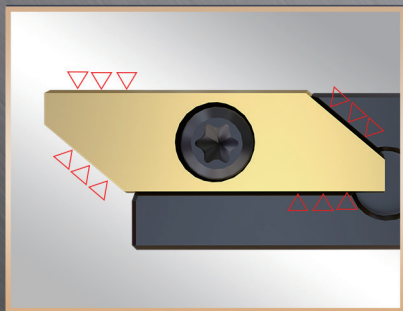
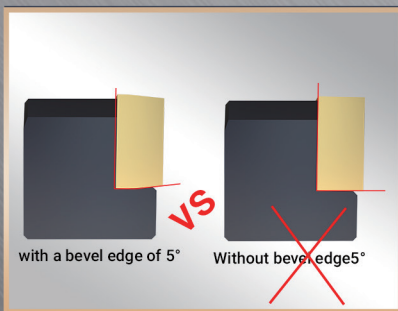




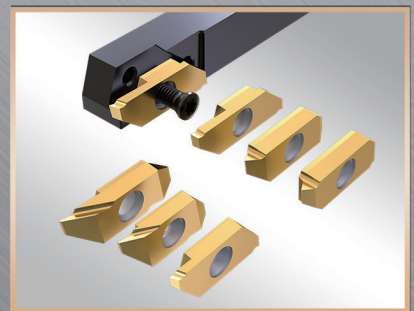
## KS112/16 Series



① Precision Full Lapped



② Stable clamping with 5°



③ One holder for all inserts

## Symbols of KX Tool Holders

KSI: KSI Series		12: 12 Type 16: 16 Type	R: Right handed L: Left handed				M: 150 JX: 120 J: 110 H: 100		S: Halved
Series	Insert size	Holder Direction	-	Holder Height	Holder Width	-	Tool Length	-	Other
KSI	12	R	-	12	12	-	J	-	S

## Symbols of KSI Grooving, circular grooving, back-turning

KSI: KSI Series		G: Grooving tools GT: Back-turning tools R: Circular Grooving Tools B: Back-turning tools	12: 12 Type 16: 16 Type	R: Right handed L: Left handed	070: 0.7 100: 1.0 125: 1.25		300: 3.0 400: 4.0 550: 5.5		R005: R0.05 R010: R0.1 R020: R0.2
Series	Insert Type	Insert size	Insert Direction	Tip width	-	Cutting Depth	-	Nose Radius	
KSI	GT	12	R	125	-	300	-	R005	

## Symbols of KSI parting tools with flat edge

KSI: KSI Series		C: Parting	12: 12 Type 16: 16 Type	R: Right handed L: Left handed	050: 0.5 125: 1.25		S: R0.03-R0.05 P: R0.08
Series	Insert Type	Insert size	Insert Direction	Tip width	-	Nose Radius	
KSI	C	12	R	125	-	S	

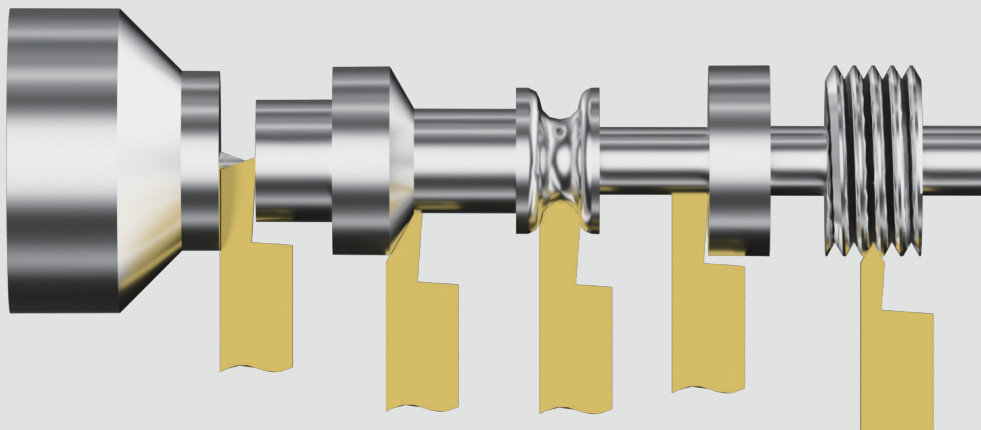
## Symbols of KSI parting tools with lead angle

KSI: KSI Series		C: Parting	12: 12 Type 16: 16 Type	R: Right handed L: Left handed	050: 0.5 125: 1.25	20D: 20° 16D: 16° 11D: 11°	R: Right leaded L: Left leaded		N: Without chipbreaking slot and nose radius S: R0.03-R0.05 P: R0.08
Series	Insert Type	Insert size	Insert Direction	Tip width	-	Lead angle	Lead direction	-	Nose Radius/other
KSI	C	12	R	125	-	16D	R	-	S

## Symbols of KSI threading

KSI: KSI Series		T: Threading	12: 12 Type 16: 16 Type	R: Right handed L: Left handed	040: 0.4 080: 0.8 165: 1.65		A: Left B: Right N: Central		R025: 0.25 R020: 0.2 R010: 0.1 R005: 0.05
Series	Insert Shape	Insert size	Insert Direction	Tip width	-	Blade shape	-	Nose Radius	
KSI	T	12	R	040	-	A	-	R010	

## Application Examples of 12 series



Maximum Diameter of parting is 12mm

**Parting**

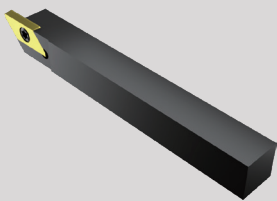
**Back-turning**

**Profiling**

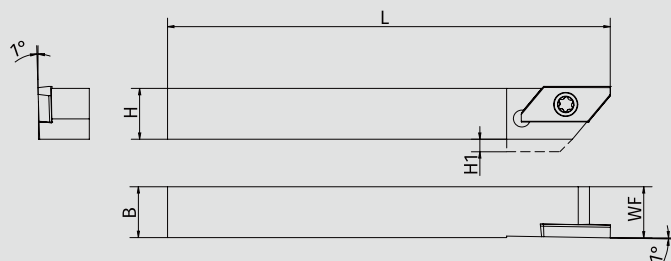
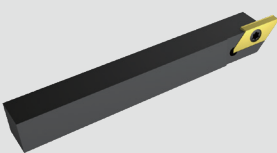
**Grooving**

**Threading**

## Tool holders of 12 series



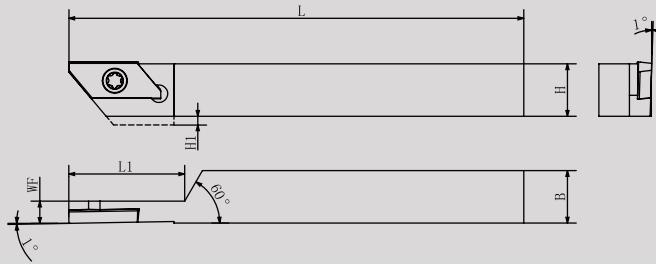
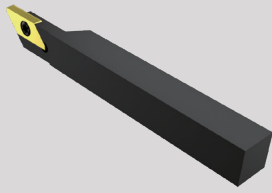
• Right Handed Tool holder



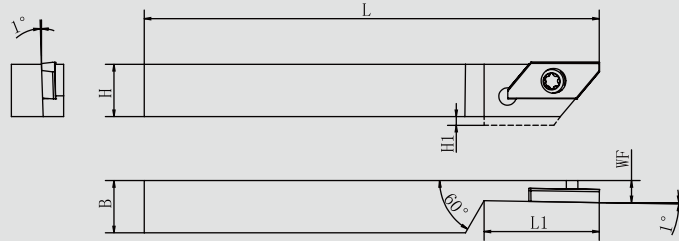
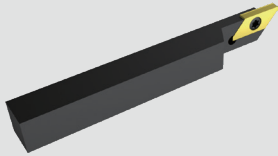
• Left handed holders

Type	Size(mm)					Accessories		Corresponding Insert
	H	H1	B	WF	L	Screw	Wrenth	
KSI12%-1010-J	10	2	10	10	110	KS-35065-T	KW-T15	KSI□12% □□□
KSI12%-1212-J	12	0	12	12	110			
KSI12%-1616-J	16	0	16	16	110			
KSI12%-2020-J	20	0	20	20	110			

## 12 series-halved holders



• Right Handed Tool holder

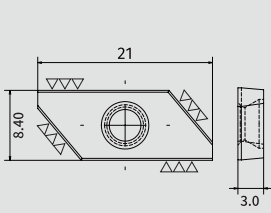


• Left handed holders

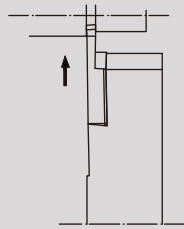
Type	Size(mm)						Accessories		Corresponding Insert
	H	H1	B	WF	L	L1	Screw	Wrenth	
KSI12 $\frac{9}{16}$ -1010-J-S	10	2	10	7.2	110	22	KS-3504-T	KW-T15	KSI□12 $\frac{9}{16}$ □□□
KSI12 $\frac{9}{16}$ -1212-J-S	12	0	12	7.2	110	26			

## 12 series-grooving

• Workblank



• Application Examples

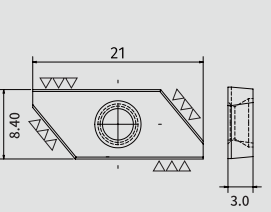


P	Soft steel	◆	◇	◆			
	Carbon steel/alloy steel	◆	◇	◆			
M	Martensitic	◇	◆	◆	◆		
	Austenitic	◆	◆	◆	◆		
K	Grey Cast Iron			◇			
	Ductile Cast Iron			◇			
N	Nonferrous					◆	◆
S	Heat Resisting Alloy		◆	◆	◆		
	Titanium Alloy		◆	◆	◆		
H	Hardened Materials			◆			

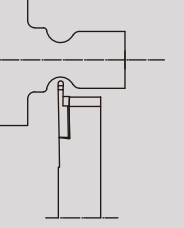
shape Right Handed Tool	Type	Size			PVD Coated Cemented Carbide					cemented carbide
		W	L	R	KPM30N	KXM15S	KHS10M	KMS20	KCN10D	
	KSIG12 <sup>R</sup> /L 070-300-R005	0.7	3.0	0.05		●	●			
	KSIG12 <sup>R</sup> /L 100-400-R005	1.0	4.0	0.05		●	●			
	KSIG12 <sup>R</sup> /L 100-400-R010			0.1		●	●			
	KSIG12 <sup>R</sup> /L 125-400-R005	1.25	4.0	0.05		●	●			
	KSIG12 <sup>R</sup> /L 125-400-R010			0.1		●	●			
	KSIG12 <sup>R</sup> /L 150-500-R005	1.5	5.0	0.05		●	●			
	KSIG12 <sup>R</sup> /L 150-500-R010			0.1		●	●			
	KSIG12 <sup>R</sup> /L 150-500-R020			0.2		●	●			
	KSIG12 <sup>R</sup> /L 200-600-R005	2.0	6.0	0.05		●	●			
	KSIG12 <sup>R</sup> /L 200-600-R010			0.1		●	●			
	KSIG12 <sup>R</sup> /L 200-600-R020			0.2		●	●			
	KSIG12 <sup>R</sup> /L 250-700-R005	2.5	7.0	0.05		●	●			
	KSIG12 <sup>R</sup> /L 250-700-R010			0.1		●	●			
	KSIG12 <sup>R</sup> /L 250-700-R020			0.2		●	●			

## 12 series-grooving

• Workblank



• Application Examples



P	Soft steel	◆	◇	◆			
	Carbon steel/alloy steel	◆	◇	◆			
M	Martensitic	◇	◆	◆	◆		
	Austenitic	◆	◆	◆	◆		
K	Grey Cast Iron			◇			
	Ductile Cast Iron			◇			
N	Nonferrous					◆	◆
S	Heat Resisting Alloy		◆	◆	◆		
	Titanium Alloy		◆	◆	◆		
H	Hardened Materials			◆			

shape Right Handed Tool	Type	Size			PVD Coated Cemented Carbide					cemented carbide
		W	L	R	KPM30N	KXM15S	KHS10M	KMS20	KCN10D	
	KSIR12 <sup>R</sup> /L 070-160-R035	0.7	1.6	0.35		●	●			
	KSIR12 <sup>R</sup> /L 100-200-R050	1	2.0	0.5		●	●			
	KSIR12 <sup>R</sup> /L 150-300-R075	1.5	3.0	0.75		●	●			
	KSIR12 <sup>R</sup> /L 200-300-R100	2	3.0	1		●	●			
	KSIR12 <sup>R</sup> /L 250-400-R125	2.5	4.0	1.25		●	●			

Grades : ◆ Recommended ◆ Suitable ◇ Applicable ● Standard Stock

## 12 Series-parting

• Workblank 	• Application Examples 	P	Soft steel	◆	◇	◆				
			Carbon steel/alloy steel	◆	◇	◆				
		M	Martensitic	◇	◆	◆	◆			
			Austenitic	◆	◆	◆	◆			
		K	Grey Cast Iron			◇				
			Ductile Cast Iron			◇				
		N	Nonferrous					◆	◆	
		S	Heat Resisting Alloy		◆	◆	◆			
			Titanium Alloy		◆	◆	◆			
		H	Hardened Materials			◆				

shape Right Handed Tool	Type	Size				PVD Coated Cemented Carbide					cemented carbide KCN10
		W	DMax	R	D	KPM30N	KXM15S	KH10M	KMS20	KCN10D	
	KSIC12 <sup>R</sup> /L 050-16DR-S	0.5	5	0.05	16°		●	●			
	KSIC12 <sup>R</sup> /L 070-16DR-S	0.7	8				●	●			
	KSIC12 <sup>R</sup> /L 100-16DR-S	1					●	●			
	KSIC12 <sup>R</sup> /L 125-16DR-S	1.25					●	●			
	KSIC12 <sup>R</sup> /L 150-16DR-S	1.5					●	●			
	KSIC12 <sup>R</sup> /L 200-16DR-S	2					●	●			
	KSIC12 <sup>R</sup> /L 050-20DR-S	0.5	5	0.05	20°		●	●			
	KSIC12 <sup>R</sup> /L 070-20DR-S	0.7	8				●	●			
	KSIC12 <sup>R</sup> /L 100-20DR-S	1					●	●			
	KSIC12 <sup>R</sup> /L 125-20DR-S	1.25					●	●			
	KSIC12 <sup>R</sup> /L 150-20DR-S	1.5					●	●			
	KSIC12 <sup>R</sup> /L 200-20DR-S	2					●	●			
	KSIC12 <sup>R</sup> /L 050-S	0.5	5	0.05	0°		●	●			
	KSIC12 <sup>R</sup> /L 070-S	0.7	8				●	●			
	KSIC12 <sup>R</sup> /L 100-S	1					●	●			
	KSIC12 <sup>R</sup> /L 125-S	1.25					●	●			
	KSIC12 <sup>R</sup> /L 150-S	1.5					●	●			
	KSIC12 <sup>R</sup> /L 200-S	2					●	●			

## 12 Series-back-turning

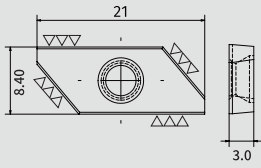
• Workblank 	• Application Examples 	P	Soft steel	◆	◇	◆				
			Carbon steel/alloy steel	◆	◇	◆				
		M	Martensitic	◇	◆	◆	◆			
			Austenitic	◆	◆	◆	◆			
		K	Grey Cast Iron			◇				
			Ductile Cast Iron			◇				
		N	Nonferrous					◆	◆	
		S	Heat Resisting Alloy		◆	◆	◆			
			Titanium Alloy		◆	◆	◆			
		H	Hardened Materials			◆				

shape	Type	Size				PVD Coated Cemented Carbide					cemented carbide KCN10
		W	L	R	W1	KPM30N	KXM15S	KH10M	KMS20	KCN10D	
	KSIB12 <sup>R</sup> /L 025-280-R005	0.25	2.8	<0.05	1.5		●	●			
	KSIB12 <sup>R</sup> /L 030-460-R005	0.3	4.6	<0.05	2.8		●	●			
	KSIB12 <sup>R</sup> /L 030-460-R015			<0.15			●	●			

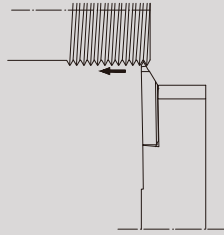
Grades: ◆ Recommended ◇ Suitable ◇ Applicable ● Standard Stock

## 12 Series-parting

• Workblank



• Application Examples

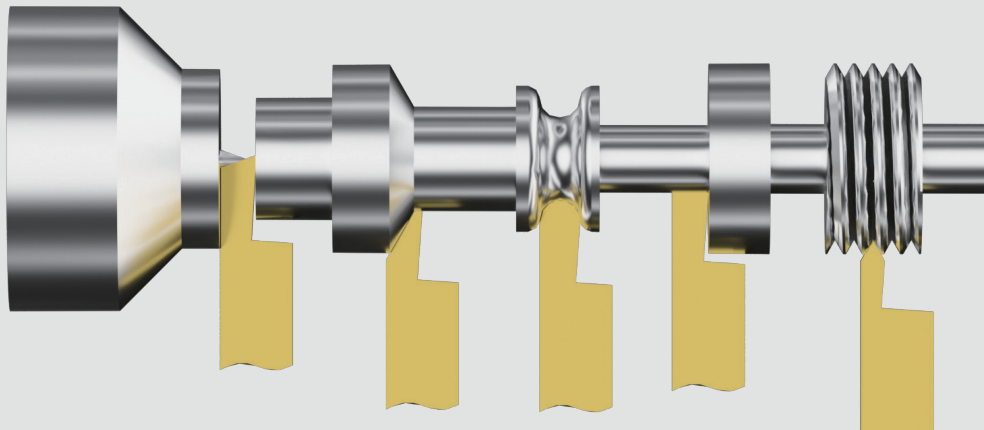


P	Soft steel	◆	◇	◇			
	Carbon steel/alloy steel	◆	◇	◇			
M	Martensitic	◇	◆	◆	◆		
	Austenitic	◆	◆	◆	◆		
K	Grey Cast Iron			◇			
	Ductile Cast Iron			◇			
N	Nonferrous					◆	◆
S	Heat Resisting Alloy		◆	◆	◆		
	Titanium Alloy		◆	◆	◆		
H	Hardened Materials					◆	

shape Right Handed Tool	Type	Size						PVD Coated Cemented Carbide					cemented carbide
		F	A	R	Pitch (MM)	Teeth per inch (TPI)	KPM30N	KXM15S	KHS10M	KMS20	KCN10D	KCN10	
	Type A  KSIT12 <sup>®</sup> /L 040-A-R005	0.4	60°	0.05	0.2~0.75	127~34		●	●				
	 KSIT12 <sup>®</sup> /L 080-A-R005	0.8	60°	0.05	0.4~1.25	63~21		●	●				
	Type B  KSIT12 <sup>®</sup> /L 040-B-R005	0.4	60°	0.05	0.2~0.75	127~34		●	●				
	 KSIT12 <sup>®</sup> /L 080-B-R005	0.8	60°	0.05	0.4~1.25	63~21		●	●				
	Type N  KSIT12 <sup>®</sup> /L150-N-R010	1.5	60°	0.1	1.0~1.5	25~17		●	●				

Grades: ◆ Recommended    ◇ Suitable    ◇ Applicable    ● Standard Stock

## Application Examples of 16 series



Maximum Diameter of parting is 16mm

**Parting**

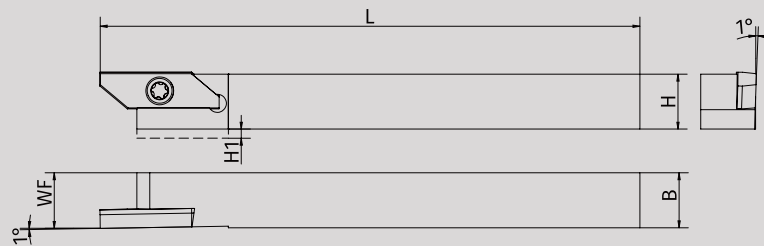
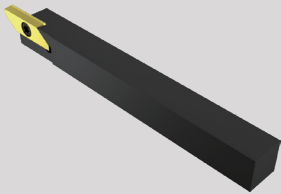
**Back-turning**

**Profiling**

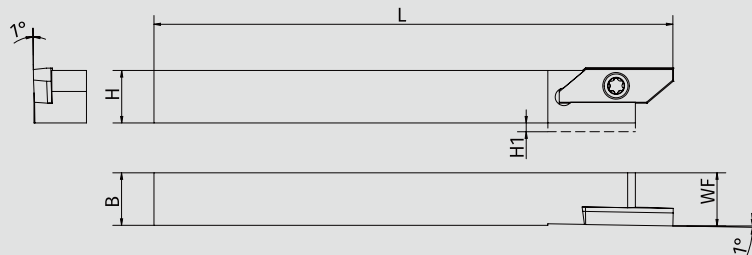
**Grooving**

**Threading**

## Tool holders of 16 series



• Right Handed Tool holder

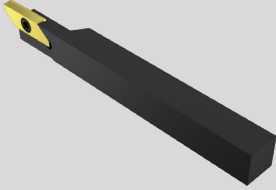
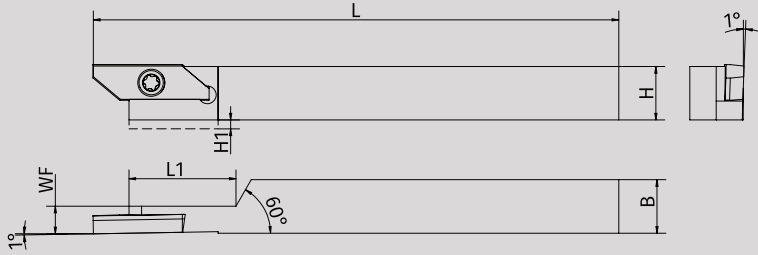

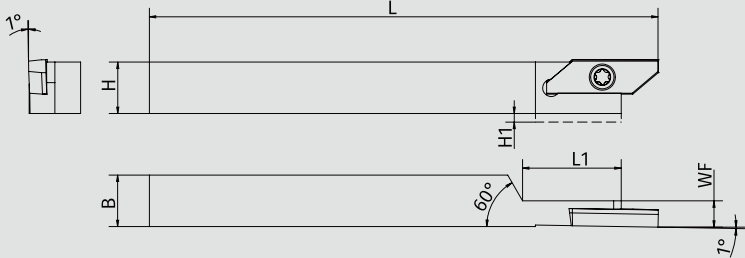


• Left handed holders

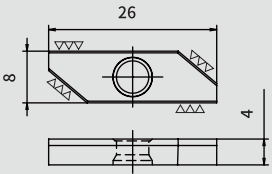
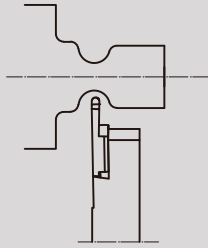
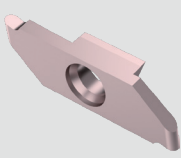
Type	Size(mm)					Accessories		Corresponding Insert
	H	H1	B	WF	L	Screw	Wrenth	
KSI16%-1010-J	10	2	10	10	110	KS-4508-T	KW-T15	KSI□16% □□□
KSI16%-1212-J	12	0	12	12	110			
KSI16%-1616-J	16	0	16	16	110			
KSI16%-2020-J	20	0	20	20	110			



## 16 series-halved holders

		• Right Handed Tool holder							
		• Left handed holders							
Type	Size(mm)						Accessories		Corresponding Insert
	H	H1	B	WF	L	L1	Screw	Wrenth	
KSI16 <sup>8</sup> / <sub>L</sub> -1010-J-S	10	2	10	7.2	110	22	KS-4508-T	KW-T15	KSI□16 <sup>8</sup> / <sub>L</sub> □□□
KSI16 <sup>8</sup> / <sub>L</sub> -1212-J-S	12	0	12	7.2	110	26			

## 16 series-circular grooving

• Workblank 	• Application Examples 	P Soft steel Carbon steel/alloy steel	◆	◇	◆					
		M Martensitic Austenitic	◆	◇	◆	◆				
		K Grey Cast Iron Ductile Cast Iron			◆	◆				
		N Nonferrous						◆	◆	
		S Heat Resisting Alloy Titanium Alloy			◆	◆	◆	◆		
		H Hardened Materials						◆		
shape Right Handed Tool	Type	Size			PVD Coated Cemented Carbide					cemented carbide
		W	L	R	KPM30N	KXM15S	KHS10M	KMS20	KCN10D	KCN10
	KSIR16 <sup>8</sup> / <sub>L</sub> 200-300-R100	2.0	3.0	1		●	●			
	KSIR16 <sup>8</sup> / <sub>L</sub> 250-300-R125	2.5	3.0	1.25		●	●			
	KSIR16 <sup>8</sup> / <sub>L</sub> 300-400-R150	3.0	4.0	1.5		●	●			

Grades: ◆ Recommended ◆ Suitable ◇ Applicable ● Standard Stock

## 16 series-grooving (can be used in axial machining)

Workblank		Application Examples		Material			Material					
				P	Soft steel	◆	◇	◆				
					Carbon steel/alloy steel	◆	◇	◆				
				M	Martensitic	◇	◆	◆	◆			
					Austenitic	◆	◆	◆	◆			
				K	Grey Cast Iron			◇				
					Ductile Cast Iron			◇				
				N	Nonferrous					◆	◆	
				S	Heat Resisting Alloy		◆	◆	◆			
					Titanium Alloy		◆	◆	◆			
				H	Hardened Materials			◆				

shape Right Handed Tool	Type	Size			PVD Coated Cemented Carbide					cemented carbide
		W	L	R	KPM30N	KXM15S	KHST10M	KMS20	KCN10D	
	KSIGT16%/L 100-250-R010	1	2.5	0.1		●	●			
	KSIGT16%/L 125-300-R010	1.25	3	0.1		●	●			
	KSIGT16%/L 150-300-R010	1.5	3	0.1		●	●			
	KSIGT16%/L 150-300-R020	1.5	3	0.2		●	●			
	KSIGT16%/L 175-400-R010	1.75	4	0.1		●	●			
	KSIGT16%/L 175-400-R020	1.75	4	0.2		●	●			
	KSIGT16%/L 200-400-R010	2	4	0.1		●	●			
	KSIGT16%/L 200-400-R020	2	4	0.2		●	●			
	KSIGT16%/L 250-600-R010	2.5	6	0.1		●	●			
	KSIGT16%/L 250-600-R020	2.5	6	0.2		●	●			
	KSIGT16%/L 300-700-R010	3	7	0.1		●	●			
	KSIGT16%/L 300-700-R020	3	7	0.2		●	●			

## 16 series-back-turning

Workblank		Application Examples		Material			Material					
				P	Soft steel	◆	◇	◆				
					Carbon steel/alloy steel	◆	◇	◆				
				M	Martensitic	◇	◆	◆	◆			
					Austenitic	◆	◆	◆	◆			
				K	Grey Cast Iron			◇				
					Ductile Cast Iron			◇				
				N	Nonferrous					◆	◆	
				S	Heat Resisting Alloy		◆	◆	◆			
					Titanium Alloy		◆	◆	◆			
				H	Hardened Materials			◆				

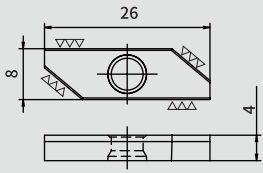
shape Right Handed Tool	Type	Size				PVD Coated Cemented Carbide					cemented carbide
		W	L	R	W1	KPM30N	KXM15S	KHST10M	KMS20	KCN10D	
	KSIB16%/L 030-630-R005	0.3	6.3	<0.05	3.3		●	●			
	KSIB16%/L 030-630-R010			<0.1			●	●			

Grades: ◆ Recommended ◇ Suitable ◇ Applicable ● Standard Stock

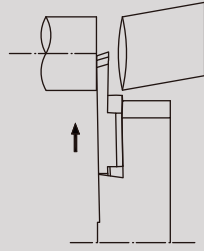
KS16 Tools for Small Parts

# 16 series-parting

• Workblank



• Application Examples



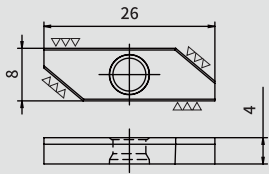
P	Soft steel	◆	◇	◇				
	Carbon steel/alloy steel	◆	◇	◇				
M	Martensitic	◇	◆	◆	◆			
	Austenitic	◆	◆	◆	◆			
K	Grey Cast Iron			◇				
	Ductile Cast Iron			◇				
N	Nonferrous					◆		◆
S	Heat Resisting Alloy		◆	◆	◆			
	Titanium Alloy		◆	◆	◆			
H	Hardened Materials					◆		

shape Right Handed Tool		Type	Size				PVD Coated Cemented Carbide						cemented carbide
			W	DMax	R	D	KPM30N	KXM15S	KHS10M	KMS20	KCN10D	KCN10	
		KSIC16 <sup>R</sup> / <sub>L</sub> 150-16DR-S	1.5	16	0.05	16°		●	●				
		KSIC16 <sup>R</sup> / <sub>L</sub> 200-16DR-S	2.0					●	●				
		KSIC16 <sup>R</sup> / <sub>L</sub> 150-20DR-S	1.5	16	0.05	20°		●	●				
		KSIC16 <sup>R</sup> / <sub>L</sub> 200-20DR-S	2.0					●	●				
		KSIC16 <sup>R</sup> / <sub>L</sub> 070-S	0.7	8	0.05	0°		●	●				
		KSIC16 <sup>R</sup> / <sub>L</sub> 100-S	1	12	0.05			●	●				
		KSIC16 <sup>R</sup> / <sub>L</sub> 125-S	1.25	12	0.05			●	●				
		KSIC16 <sup>R</sup> / <sub>L</sub> 150-S	1.5	16	0.05			●	●				
		KSIC16 <sup>R</sup> / <sub>L</sub> 175-S	1.75	16	0.05			●	●				
		KSIC16 <sup>R</sup> / <sub>L</sub> 200-S	2	16	0.05			●	●				
		KSIC16 <sup>R</sup> / <sub>L</sub> 200-P	2	16	0.08			●	●				
		KSIC16 <sup>R</sup> / <sub>L</sub> 300-S	3	16	0.05			●	●				
		KSIC16 <sup>R</sup> / <sub>L</sub> 300-P	3	16	0.08			●	●				

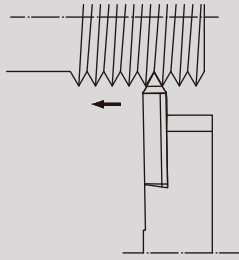
Grades: ◆ Recommended ◇ Suitable ◇ Applicable ● Standard Stock

# 16 series-parting

• Workblank



• Application Examples



P	Soft steel	◆	◇	◆				
	Carbon steel/alloy steel	◆	◇	◆				
M	Martensitic	◇	◆	◆	◆			
	Austenitic	◆	◆	◆	◆			
K	Grey Cast Iron			◇				
	Ductile Cast Iron			◇				
N	Nonferrous						◆	◆
S	Heat Resisting Alloy			◆	◆	◆		
	Titanium Alloy			◆	◆	◆		
H	Hardened Materials						◆	

shape Right Handed Tool	Type	Size					PVD Coated Cemented Carbide					cemented carbide	
		F	A	R	Pitch (MM)	Teeth per inch (TPI)	KPM30N	KXM15S	KHS10M	KMS20	KCN10D		KCN10
	Type A												
	KSIT16 <sup>®</sup> /L 040-A-R005	0.4	60°	0.05	0.2~0.75	127~34		●	●				
	KSIT16 <sup>®</sup> /L 080-A-R005	0.8	60°	0.05	0.4~1.25	63~21		●	●				
	Type B												
	KSIT16 <sup>®</sup> /L 040-B-R005	0.4	60°	0.05	0.2~0.75	127~34		●	●				
	KSIT16 <sup>®</sup> /L 080-B-R005	0.8	60°	0.05	0.4~1.25	63~21		●	●				
	Type N												
	KSIT16 <sup>®</sup> /L 175-N-R010	1.75	60°	0.1	0.8~3.5	31~7		●	●				
	KSIT16 <sup>®</sup> /L 175-N-R015	1.75	60°	0.15	1.0~3.5	25~7		●	●				
	KSIT16 <sup>®</sup> /L 175-N-R020	1.75	60°	0.2	1.5~3.5	16~7		●	●				
	KSIT16 <sup>®</sup> /L 175-N-R025	1.75	60°	0.25	1.75~3.5	14~7		●	●				

Grades: ◆ Recommended ◇ Suitable ◇ Applicable ● Standard Stock

## Recommend Application Parameter

### KSI12/16 Series

processing materials	Carbon Steel, Alloy Steel	Stainless Steel	Cast Iron	Heat Resisting Alloy/Titanium Alloy	Nonferrous			
Insert Grades	KPM30N	KXM15S	KHS10M	KHS10M	KXM15S	KMS20	KCN10D	KCN10
Cutting Speed Vc(m/min)	60-180	60-180	60-130	80-200	30-60	30-80	240-450	150-300

Grooving tools								
Edge width	0.7-1.25	1.5-3.0						
Feeding Speed f(mm/rev)	0.01-0.05	0.02-0.1						

grooving (can be used in axial machining)								
Edge width	1.0-1.5	1.75-2.5	3					
Radial feed f(mm/rev)	0.01-0.05	0.02-0.08	0.02-0.1					
Cross feed f(mm/rev)	AP: W*0.2 0.02-0.05	AP: W*0.2 0.02-0.1	AP: W*0.2 0.02-0.15					

Threading Tools	Type A	Type B	Type N					
Cutting Depth Ap(mm)	0.02-0.05	0.02-0.05	0.03-0.08					

Back-turning tools								
Cutting Depth Ap(mm)	0.05-6.0							
Cross feed f(mm/rev)	0.02-0.08							

Parting tools								
Edge width	0.5-1.0	1.25-3						
Cross feed f(mm/rev)	0.008-0.04	0.015-0.06						