



# KPK Series

High-Performance Cut-Off Solutions



Unique Design for Superior Performance in Cut-Off Operations

Easy insert replacement

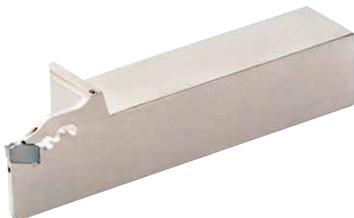
Strong clamping mechanism for added safety and security

Long tool life and stable machining with unique chipbreaker designs

Jet coolant-through styles available (JCT)



New Blades, Shank Style Toolholder and Insert Lineup Expansion



# KPK Series

High-Performance Cut-Off Solutions



Easy Insert Replacement Reduces Downtime

High-Performance, Long Tool Life and Stable Machining with Strong Clamping Mechanism

## CUT-OFF SOLUTIONS

During cut-off operations, insert cutting widths of only a few millimeters are used to cut to the center of the workpiece.

This is usually the final process and is often the bottleneck. Stable tool life without sacrificing productivity is required.

### CHALLENGE

Due to the narrow insert and blade widths, rigidity is difficult to achieve. Cutting speed reaches zero at the center of the workpiece, increasing cutting load. Chip control issues and tool damage are common problems.

### SOLUTION

The KPK Series features new insert, blade, and tool block designs for rigid, safe, and secure cut-off operations.



# 1 Easy Insert Replacement

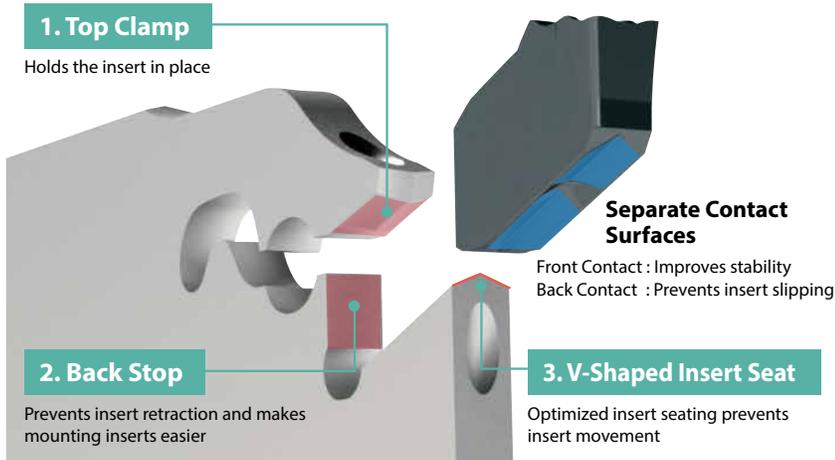


Reduce down time with fast insert replacement  
Turn wrench slightly to release insert

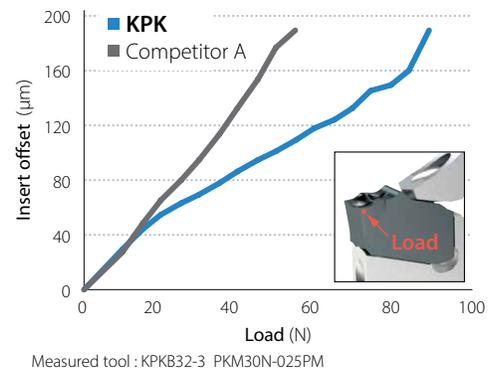
No hammer or screw required  
Self-clamping

# 2 Firm Insert Clamp Ensures Added Safety and Security

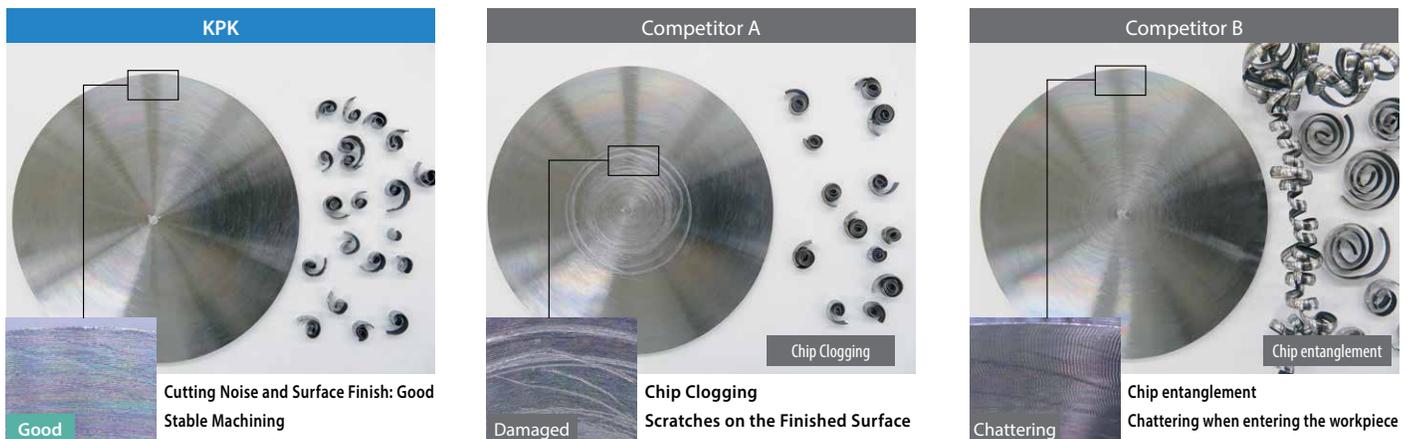
The firmly secured insert uses three contact surfaces to eliminate sliding or chattering



Insert Deviation Comparison (Internal Evaluation)



Cutting Performance Comparison (Internal Evaluation)



Cutting Conditions : n = 320 RPM (constant) , Vc = ~ 330 sfm, f = 0.005 ipr, Wet (External coolant) Workpiece : 4137 (ø 3.937") Cutting Edge Width : 0.118" (3mm), PM Chipbreaker

# 3 Unique Chipbreaker Designs for Long Tool Life and Stable Machining

Advanced chipbreaker technology inherited from KGD lineup provides excellent chip control



**PM Chipbreaker**  
General Purpose

**Insert Grades**

- Steel : PR1625
- Stainless Steel : PR1535
- Cast Iron and Aluminum : GW15

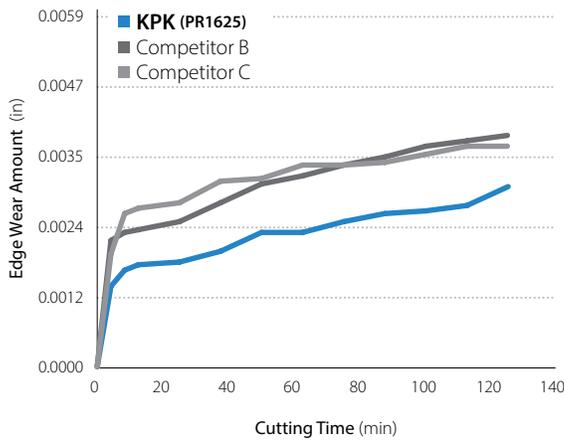


**PH Chipbreaker**  
Tough Edge  
High-Feed

**Insert Grades**

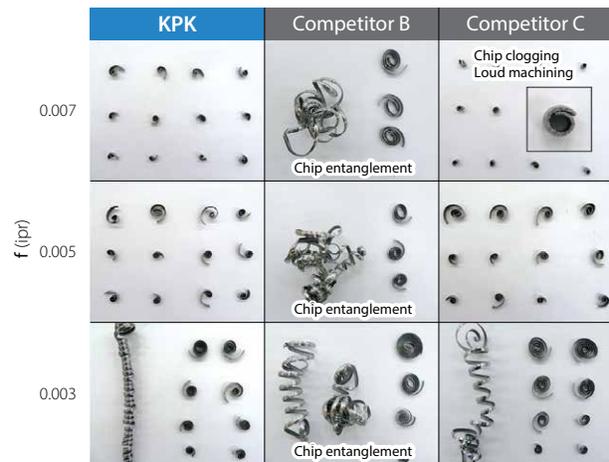
- Steel : PR1625
- Stainless Steel : PR1535

Wear Resistance Comparison (Internal Evaluation)



Cutting Conditions : n = 955 RPM (constant), Vc = ~ 490 sfm  
f = 0.005 ipr (~  $\phi 0.394''$  : f = 0.002 ipr) Wet (External Coolant)  
Workpiece : 4131 ( $\phi 1.969''$ ) Cutting Width : 0.118" (3mm), PM Chipbreaker

Chip Control Comparison (Internal Evaluation)

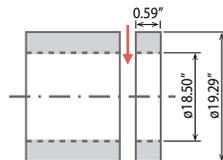


Cutting Conditions : n = RPM (constant), Vc = ~ 390 sfm, Wet (External Coolant)  
Workpiece : 4131 ( $\phi 1.969''$ ) Cutting Width : 0.118" (3mm), PM Chipbreaker

**SOLUTION 1** Tool Life x 1.3  
Stable chip curls

**Rings**  
(High Carbon Chromium Steel)

External Coolant



**KPK** 34 pcs/corner



**Competitor D** 25 pcs/corner



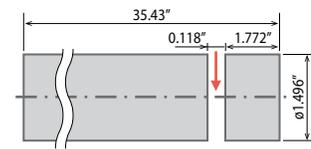
Cutting Conditions : n = 90 RPM (Constant), Vc = ~ 460 sfm, f = 0.002 ipr,  
Wet (External Coolant) KPKB32-3 PKM30N-025PM PR1625

(User Evaluation)

**SOLUTION 2** Machining efficiency doubled in stainless steel  
Stable machining is possible

**Adapter**  
(316)

External Coolant



**KPK**



**Competitor E**

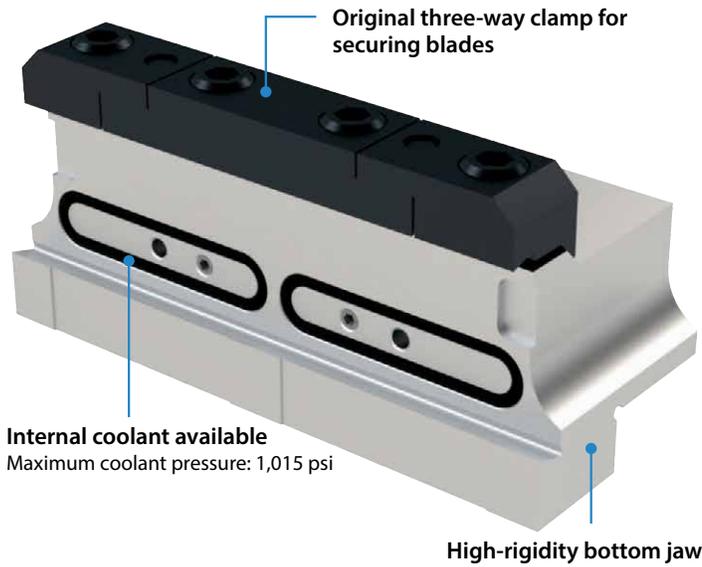
Cutting Conditions : n = 1,450 RPM (Constant), Vc = ~ 570 sfm, f = 0.002 ipr (Inching: 0.039")  
Wet (External Coolant) KPKB32-3 PKM30N-025PM PR1535

(User Evaluation)

# 4

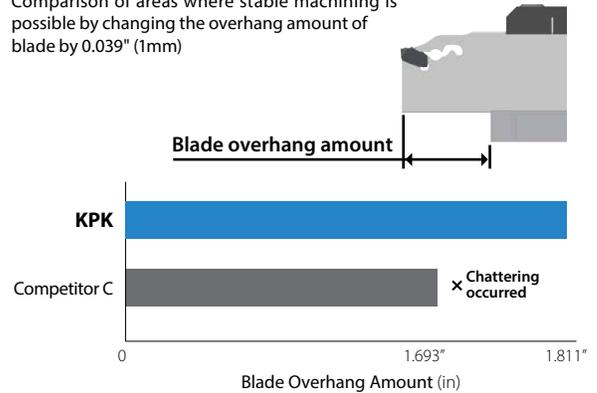
## Rigid Tool Holder Block Prevents Chattering and Provides Internal Coolant

### KPKTB-JCT



### Chatter Resistance Comparison (Internal evaluation)

Comparison of areas where stable machining is possible by changing the overhang amount of blade by 0.039" (1mm)



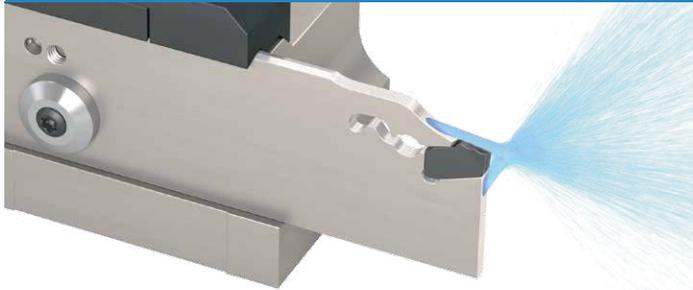
Cutting Conditions : n = 650 RPM (Constant), Vc = ~ 330 sfm, f = 0.005 ipr  
Wet (Internal Coolant : Normal Pressure), Workpiece : 4137 (ø1.969")  
Cutting Width : 0.118" (3mm), PM Chipbreaker

### Note

**KTKTB type is compatible** with internal coolant with an optional internal connector. (~ 145 psi)

\*Refer to page 10 for the supply method (Type C).

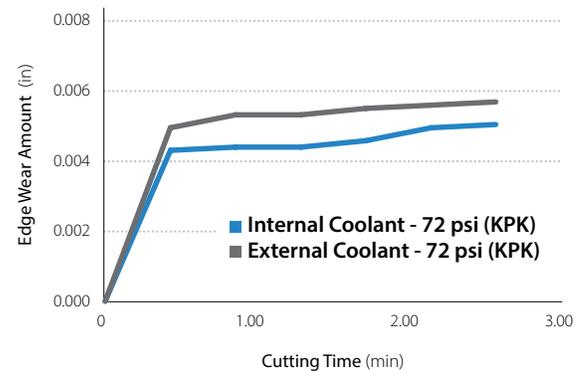
### JCT series supports internal coolant for improved tool life under normal pressure



KPKB-JCT maximum overhang length while using internal coolant is as follows:  
Size 26 : 1.575" (40mm) Size 32 : 2.323" (59mm)

Coolant is supplied directly to the rake and the flank face of the cutting edge for increased tool life and improved chip control

### Wear Resistance Comparison (Internal Evaluation)



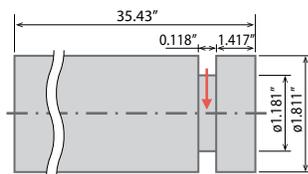
Cutting Conditions : Vc = 100 sfm (Constant), f = 0.004 ipr,  
Cutting Depth : 0.394", Wet  
Workpiece : Inconel 718 (ø3.937") Cutting Width : 0.118" (3mm), PM Chipbreaker

### SOLUTION 3

**Doubled tool life  
Reduced fracturing**

### Machine Part (304)

Internal Coolant



KPK

**60 pcs/corner (Stable)**

Competitor F

**30 pcs/corner (Unstable)**

Cutting conditions : Vc = 215 sfm (Constant), f = 0.002 ipr,  
Wet (Internal Coolant 508 psi) KPKB32-3JCT PKM30N-025PM PR1535

(User Evaluation)

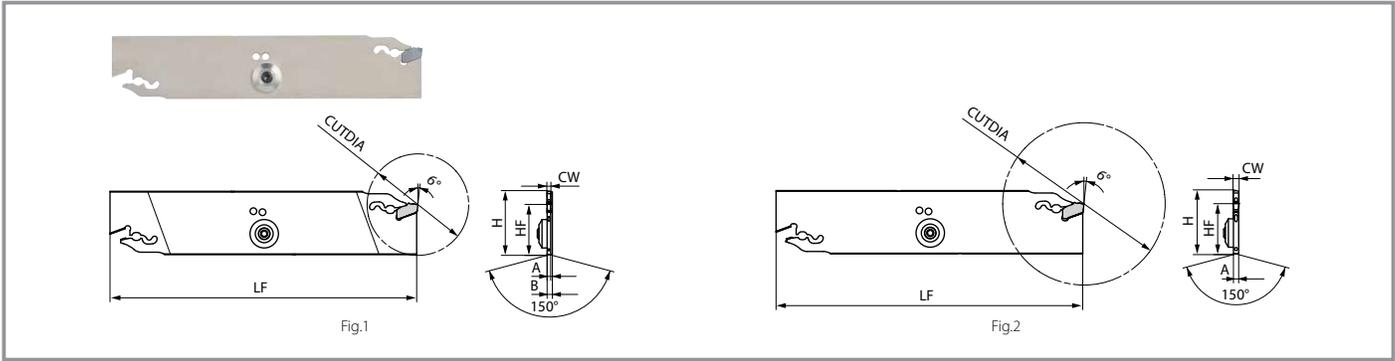
### Chip Control Comparison (Internal Evaluation)



Cutting conditions : n = 780 RPM (Constant), Vc = 390 sfm, f = 0.003 ipr,  
Wet Workpiece : 4131 (ø1.969") Cutting Width : 0.118" (3mm), PM Chipbreaker

# Blades

## KPKB-JCT (Coolant-Through)



### Blade Dimensions (Metric Sizes)

Pressure Resistance: 1,015 psi

Part Number	Stock	Cutting Dia.	Dimensions (mm)					Edge Width (mm)	Drawing	Parts				Applicable Inserts	Applicable Tool Block					
			CUTDIA	*H	HF	B	LF			A	CW	Insert Wrench	Coolant Plug			Screw	Wrench			
<b>NEW</b> KPKB 26-1JCT	●	35	26	21.4	2.6	110	1.4	1.6	Fig. 1	LPW-5	CCP-4	SB-4065TR	FT-15	PKM16...	KPKTB○○-26JCT KTKTB○○-26					
26-2JCT	●	50					1.8	2.0						2.4						
26-3JCT	●	75					2.6	3.0	Fig. 2					PKM30...						
26-4JCT	●	80					3.4	4.0						PKM40...						
<b>NEW</b> 26-5JCT	●	80					4.2	4.8	5.0					PKM48...						
						PKM50...														
<b>NEW</b> KPKB 32-1JCT	●	35	32	25.0	2.6	150	1.4	1.6	Fig. 1					Coolant Plug Screw Tightening Torque 3.0 Nm				PKM16...	KPKTB○○-32JCT KTKTB○○-32 KTKTBF○○-32	
32-2JCT	●	50					1.8	2.0										2.4		
32-3JCT	●	100					2.6	3.0	Fig. 2									PKM20...		
32-4JCT	●	100			3.4		4.0	PKM24...												
<b>NEW</b> 32-5JCT	●	120			4.2		4.8	5.0	PKM30...											
									PKM40...											
<b>NEW</b> 32-6JCT	●	120			5.4		6.0	PKM48...												
						PKM50...														
						PKM60...														

See page 15 for insert mounting and removal instructions.

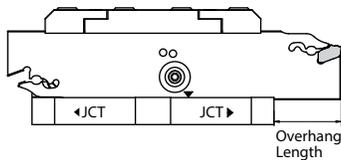
When using internal coolant with KTKTB, KTKTBF type tool holder blocks, coolant supply piping (CCN -5) sold separately.

\*H : Length between virtual vertices

● : Standard Item

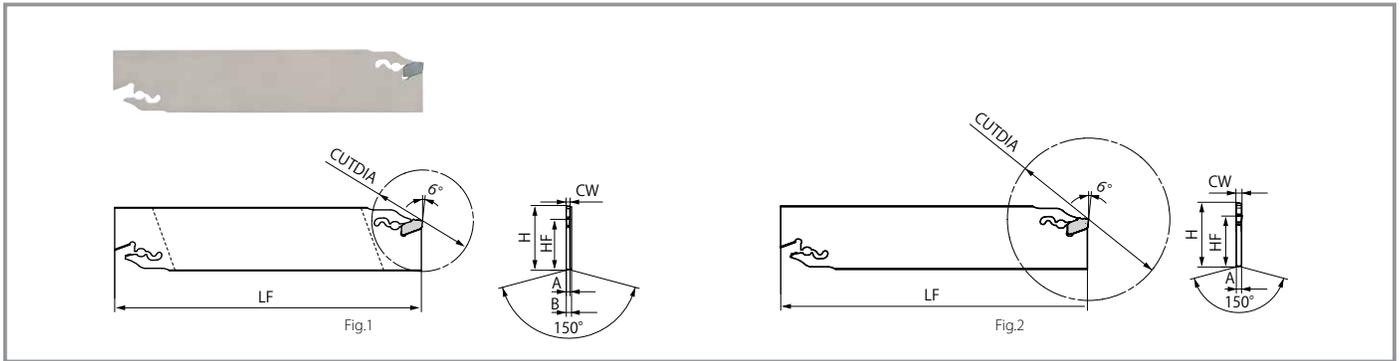
### Minimum / Maximum Overhang Length While Using Internal Coolant

Part Number	Overhang Length	
	Min.	Max.
KPKB26-1JCT	15	34.5
KPKB26-2/3/4JCT	20	40
KPKB26-5JCT	23	43
KPKB32-1JCT	18	49
	13	
	27.5	
KPKB32-2/3/4JCT	27.5	59
	22.5	
	31.5	
KPKB32-5/6JCT	31.5	63
	26.5	
	26.5	



# Blades

## KPKB (Not Coolant-Through)



### Blade Dimensions (Metric Sizes)

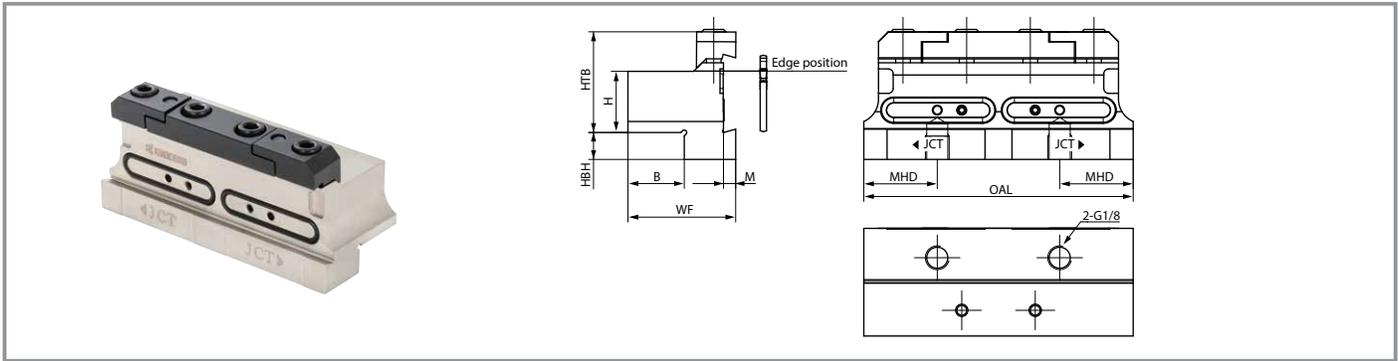
Part Number	Stock	Cutting Dia.	Dimensions (mm)						Edge Width (mm)	Drawing	Parts	Applicable Inserts	Applicable Tool Block
			CUTDIA	*H	HF	B	LF	A			CW		
<b>NEW</b> KPKB 19-1	●	32	19	15.7	2.6	86	1.4	1.6	Fig.1	LPW-5	PKM16...	KTKTB○○-19	
<b>NEW</b> 19-2	●	40			-		1.8	2.0	2.4		Fig.2		PKM20... PKM24...
<b>NEW</b> KPKB 26-1	●	35	26	21.4	2.6	110	1.4	1.6	Fig.1		PKM16...	KPKTB○○-26JCT KTKTB○○-26	
26-2	●	50			-		1.8	2.0	2.4		Fig.2		PKM20... PKM24...
26-3	●	75			2.6		3.0	4.0	PKM30...				
26-4	●	80			3.4		4.0		PKM40...				
<b>NEW</b> 26-5	●	80			-		4.2	4.8	5.0		Fig.2		PKM48... PKM50...
<b>NEW</b> KPKB 32-1	●	35	32	25.0	2.6	150	1.4	1.6	Fig.1		PKM16...	KPKTB○○-32JCT KTKTB○○-32 KTKTBF○○-32	
32-2	●	50					1.8	2.0			2.4		Fig.2
32-3	●	100			2.6		3.0	4.0	PKM30...				
32-4	●	100			3.4		4.0		PKM40...				
<b>NEW</b> 32-5	●	120			-		4.2	4.8	5.0		Fig.2		
<b>NEW</b> 32-6	●	120			5.4		6.0	PKM60...					

See page 15 for insert mounting and removal instructions.  
\*H : Length between virtual vertices

● : Standard Item

# Tool Block

## KPKTB-JCT (Coolant-Through)



### Tool Block Dimensions (Metric Sizes)

Pressure Resistance: 1,015 psi

Part Number	Stock	Dimensions (mm)								Spare Parts						Applicable Blade
		H	HTB	HBH	B	WF	M	MHD	OAL	Clamp Set Switchblade type	Screw	Wrench	O-ring	Plug 1	Plug 2	
KPKTB 20-26JCT	●	20	33	12.4	19	39	4	23.5	86	BCS-2	HH6x16	LW-5	GR-020	HS3x4	HSG1/8X8.0	KPKB26-○JCT KTKB26-○
20-32JCT	●	20		16		40		25	100	BCS-3			GR-026	HS4x4		KPKB32-○JCT KTKB32-○
25-32JCT	●	25	41	11	23	44	5	30	110	BCS-4			GR-029			
32-32JCT	●	32		5	29	50										

Includes only one **HSG1/8X8.0** plug.

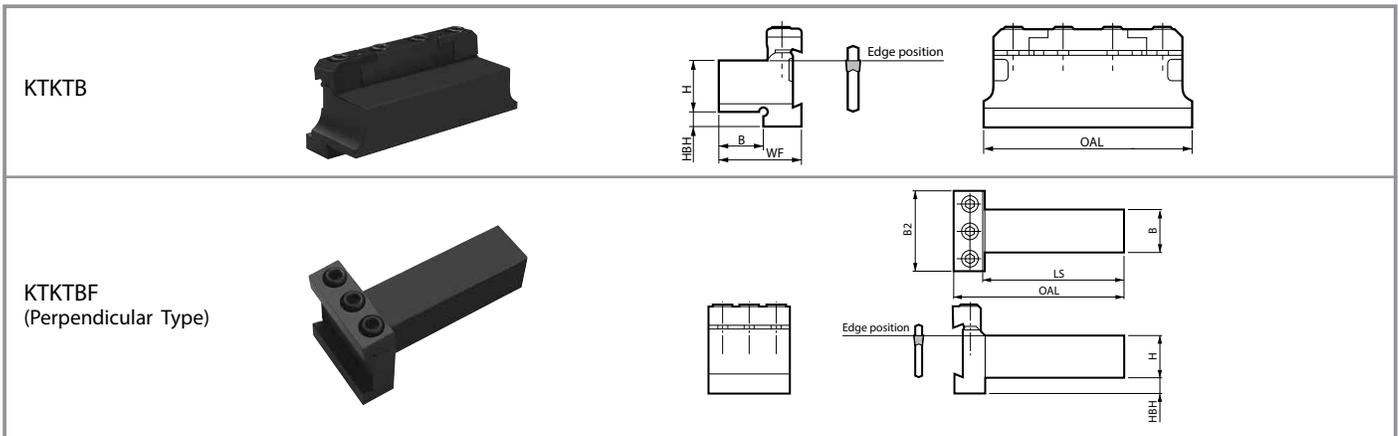
KPKTB-JCT type block is also compatible with conventional KTKB type blades.

See page 11 for coolant piping parts.

When using internal coolant, the coolant may appear to leak slightly, but this should not affect machining performance. (If the O-ring is damaged, order a new one separately.)

● : Standard Item

## KTKTB / KTKTBF (Not Coolant-Through)



### Tool Block Dimensions (Inch & Metric Sizes)

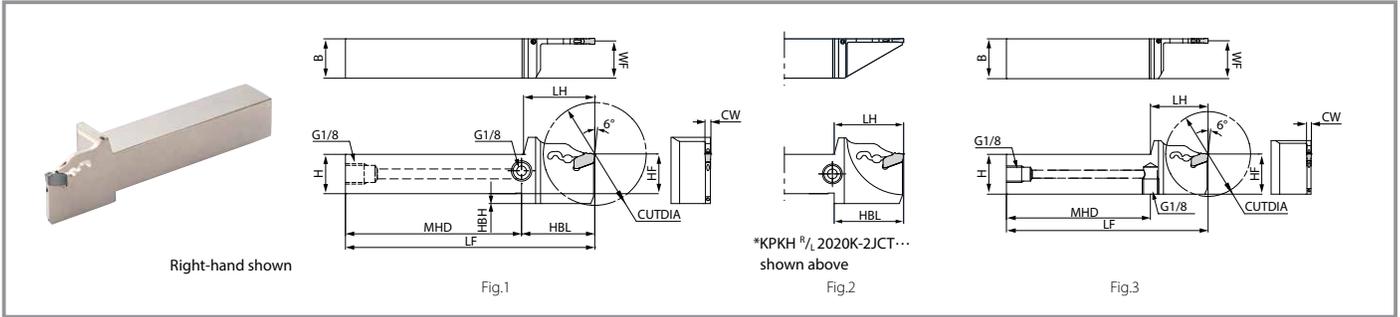
Part Number	Stock	Unit	Dimensions						Spare Parts				Applicable Blade
			H	HBH	B	WF B2	OAL	LS	Clamp Set		Screw	Wrench	
KTKTB 19-26	●	inch	0.75	0.39	0.720	1.39	3.39	-	BCS-2	-	HH6x30	LW-5	KPKB26-○ KPKB26-○JCT KPKB32-○ KPKB32-○JCT
25.4-32	●		1.00	0.30	0.905	1.65	4.33		BCS-4				
KTKTB 16-19	●	mm	16	4	15.5	29.5	76	-	BCS-2	-	HH6x30	LW-4	KPKB19-○
20-19	●		20		19	34							
16-26	●		16	13	15.5	31.5	86	-	BCS-2	-	HH6x30	LW-5	KPKB26-○ KPKB26-○JCT
20-26	●		20	9	19	36							
20-32	●		20	13	19	38	100	-	BCS-3	-	HH6x30	LW-5	KPKB32-○ KPKB32-○JCT
25-32	●		25	8	23	42							
32-32	●	32	5	29	48	110	BCS-4						
KTKTBF 25-32	●		25	9.5	25	48	102	84.5	-	BCS-5	HH6x30	LW-5	KPKB32-○ KPKB32-○JCT
32-32	●		32	2.5	32		117	99.5					

Can be used with internal coolant by utilizing compatible coolant piping (CCN-5).

● : Standard Item

# Shank Style Toolholders

## KPKH-JCT (Coolant-Through) NEW



### Toolholder Dimensions (Metric Sizes)

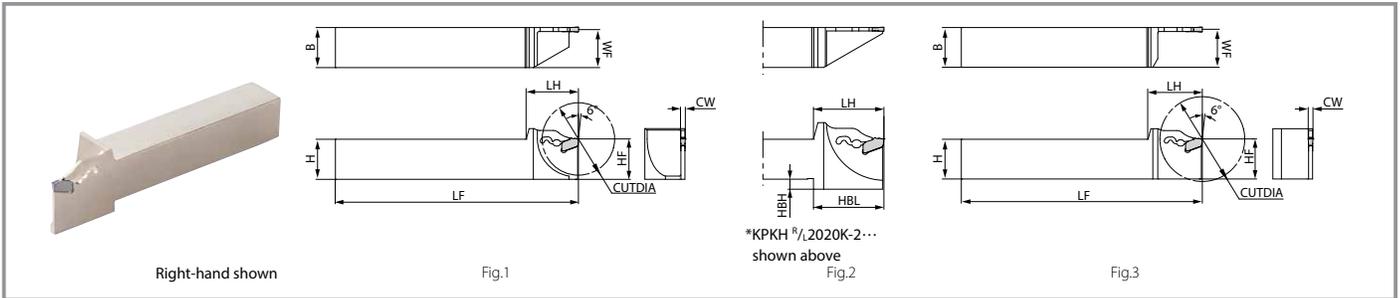
Pressure Resistance : ~2,175 psi

Part Number	Stock		Cutting Dia.	Dimensions (mm)										Edge Width (mm)	Drawing	Spare Parts		Applicable Inserts
	R	L		CUTDIA	H	HF	HBH	B	LF	LH	WF	HBL	MHD			CW	Insert Wrench	
	KPKH <sup>R/L</sup> 2020K-2JCT	●	●	38	20	20	5	20	125	35.1	19.15	35.1	89	2.0		Fig.2	LPW-5	
2020K-3JCT	●	●	52	25	25	-	25	36		18.75	37	88	3.0	Fig.1				
2525K-3JCT	●	●	53					23.75		-	89	4.0	Fig.3					
2020K-4JCT	●	●	62	20	20	5	20	42.5		18.35	42	83	4.0	Fig.1				
2525K-4JCT	●	●	68	25	25	-	25	23.35		-	82	4.0	Fig.3					

See page 15 for insert mounting and removal instructions.  
See page 11 for coolant piping parts.

● : Standard Item

## KPKH (Not Coolant-Through) NEW



### Toolholder Dimensions (Metric Sizes)

Part Number	Stock		Cutting Dia.	Dimensions (mm)										Edge Width (mm)	Drawing	Spare Parts		Applicable Inserts
	R	L		CUTDIA	H	HF	HBH	B	LF	LH	WF	HBL	CW			Insert Wrench	Plug	
	KPKH <sup>R/L</sup> 2020K-2	●	●	38	20	20	5	20	125	33.1	19.15	33.1	2.0	Fig.2		LPW-5		
2020K-3	●	●	52	25	25	-	25	34		18.75	-	3.0	Fig.3					
2525M-3	●	●	53					23.75	-	3.0								
2020K-4	●	●	62	20	20	-	20	125	40.5	18.35	-	4.0	Fig.3					
2525M-4	●	●	68	25	25	-	25	150	23.35	-	4.0							
2525M-5	●	●	79	25	25	-	25	150	45.9	22.95	-	4.8 5.0	Fig.1					
KPKH <sup>R/L</sup> 2020K-3D35	●	●	35	20	20	-	20	125	32.5	18.75	-	3.0		Fig.1		PKM30... PKM40...		
2525M-3D45	●	●	45	25	25	-	25	150		23.75	-	3.0						
2020K-4D45	●	●	45	20	20	-	20	125	35	18.35	-	4.0	Fig.1		PKM30... PKM40...			
2525M-4D45	●	●	45	25	25	-	25	150		23.35	-	4.0						

See page 15 for insert mounting and removal instructions.

● : Standard Item

# Applicable Inserts

Shape Right-hand (R) Shown	Part Number	Dimensions (in)			Angle PSIR <sup>°</sup>	MEGACOAT NANO		Carbide	
		CW		RE		PR1625	PR1535	GW15	
		in	mm		R			L	R
Without Lead Angle  General Purpose  Tough Edge	<b>NEW</b> PKM 16N-015PM	0.063	1.6	0.006	-	●	●	●	●
	20N-020PM	0.079	2.0	0.008		●	●	●	●
	<b>NEW</b> 24N-020PM	0.094	2.4	0.008		●	●	●	●
	30N-025PM	0.118	3.0	0.010		●	●	●	●
	40N-030PM	0.157	4.0	0.012		●	●	●	●
	<b>NEW</b> 48N-030PM	0.189	4.8	0.012		●	●	●	●
	<b>NEW</b> 50N-030PM	0.197	5.0	0.012		●	●	●	●
	<b>NEW</b> 60N-035PM	0.236	6.0	0.014		●	●	●	●
	PKM 20N-020PH	0.079	2.0	0.008		●	●	●	●
	30N-030PH	0.118	3.0	0.012		●	●	●	●
	40N-030PH	0.157	4.0	0.012		●	●	●	●
	<b>NEW</b> 50N-030PH	0.197	5.0	0.012		●	●	●	●
<b>NEW</b> 60N-040PH	0.236	6.0	0.016	●	●	●	●		
With Lead Angle	<b>NEW</b> PKM 16 <sup>°</sup> L-015PM-6D	0.063	1.6	0.006	6°	●	●	●	●
	20 <sup>°</sup> L-020PM-6D	0.079	2.0	0.008		●	●	●	●
	<b>NEW</b> 24 <sup>°</sup> L-020PM-6D	0.094	2.4	0.008		●	●	●	●
	30 <sup>°</sup> L-025PM-6D	0.118	3.0	0.010		●	●	●	●
	40 <sup>°</sup> L-030PM-6D	0.157	4.0	0.012		●	●	●	●
	<b>NEW</b> 50 <sup>°</sup> L-030PM-6D	0.197	5.0	0.012		●	●	●	●

● Standard Item

## Recommended Cutting Conditions ★ 1st Recommendation ☆ 2nd Recommendation

### PM Chipbreaker

Workpiece	Cutting Speed Vc (sfm)			Feed f (ipr)			Notes
	MEGACOAT NANO		Carbide	Edge Width CW (mm)			
	PR1625	PR1535	GW15	1.6	2 ~ 4	4.8 ~ 6	
Carbon Steel	★ 260 - 720	☆ 260 - 720	-	0.001 - 0.005	0.003 - 0.007	0.004 - 0.009	Wet
Alloy Steel	★ 230 - 660	☆ 230 - 660	-				
Stainless Steel	☆ 200 - 490	★ 200 - 490	-	0.001 - 0.003	0.002 - 0.005	0.003 - 0.006	
Cast Iron	-	-	★ 160 - 330	0.001 - 0.003	0.003 - 0.007	0.004 - 0.009	
Aluminum Alloy	-	-	★ 660 - 1480	0.001 - 0.003	0.003 - 0.007	0.004 - 0.009	
Brass	-	-	★ 330 - 660				

Reduce feed to 1/2 ~ 1/3 at the center of the workpiece.

### PH Chipbreaker

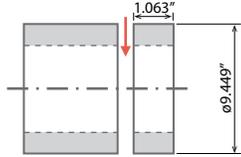
Workpiece	Cutting Speed Vc (sfm)			Feed f (ipr)			Notes
	MEGACOAT NANO		Carbide	Edge Width CW (mm)			
	PR1625	PR1535	GW15	2	3 ~ 4	5 ~ 6	
Carbon Steel	★ 260 - 720	☆ 260 - 720	-	0.004 - 0.009	0.006 - 0.011	0.006 - 0.014	Wet
Alloy Steel	★ 230 - 660	☆ 230 - 660	-				
Stainless Steel	☆ 200 - 490	★ 200 - 490	-	0.002 - 0.005	0.003 - 0.006	0.003 - 0.007	
Cast Iron	-	-	-	-	-	-	
Aluminum Alloy	-	-	-	-	-	-	
Brass	-	-	-	-	-	-	

Reduce feed to 1/2 ~ 1/3 at the center of the workpiece.

## Case Studies

### Rings Forging

Vc = 300 sfm  
 f = 0.007 ipr  
 Wet (External Coolant)  
 Overhang Amount : 2.756"  
 KPKB32-3 PKM30N-025PM PR1535



Machining Efficiency

**KPK**

**f = 0.007 ipr**



Chip control  
Surface finish

Good

Machining Efficiency

x 2.0

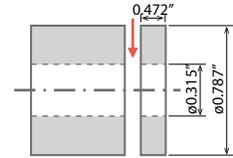
Competitor G

f = 0.0035 ipr

KPK showed good chip control and finished surface with increased feed rates.  
 The machining efficiency ratio was doubled. KPK improves insert mounting speeds.  
 (User Evaluation)

### Machine Part SNCM20

n = 1,530 RPM (Constant)  
 Vc = ~ 330 sfm  
 f = 0.0035 ipr  
 Wet (External Coolant)  
 Overhang Amount : 0.866"  
 KPKB26 -3 PKM30N-025PM PR1625



Tool life

**KPK**

**1,500 pcs/corner (Stable)**

Tool Life

x 1.8

Competitor H

**800 pcs/corner (Unstable)**

Competitor H was unstable with a sudden fracture. KPK increased tool life by 1.8 times that of competitor. Stable machining with good cutting edge  
 (User Evaluation)

## Superior Cut-Off Performance

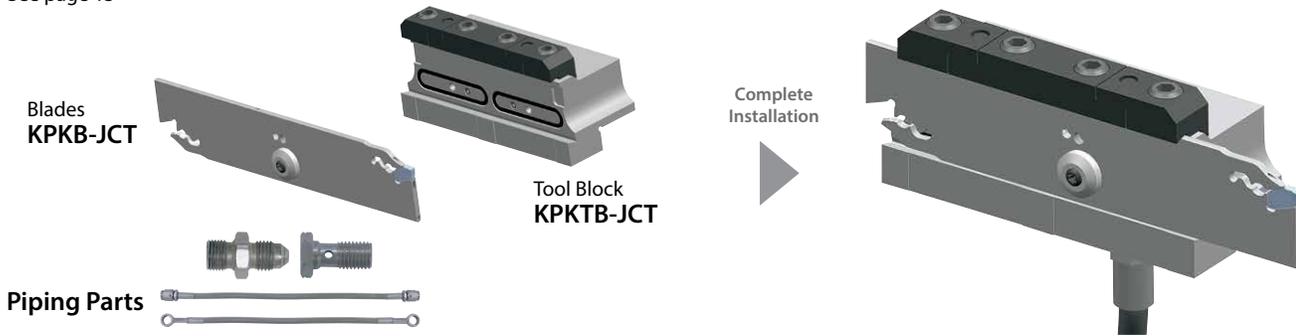


# Internal Coolant Connection Methods (Method will be determined by machine specifications and requirements)

## A : Coolant Hose Assembly

Maximum coolant pressure: 1,015 psi

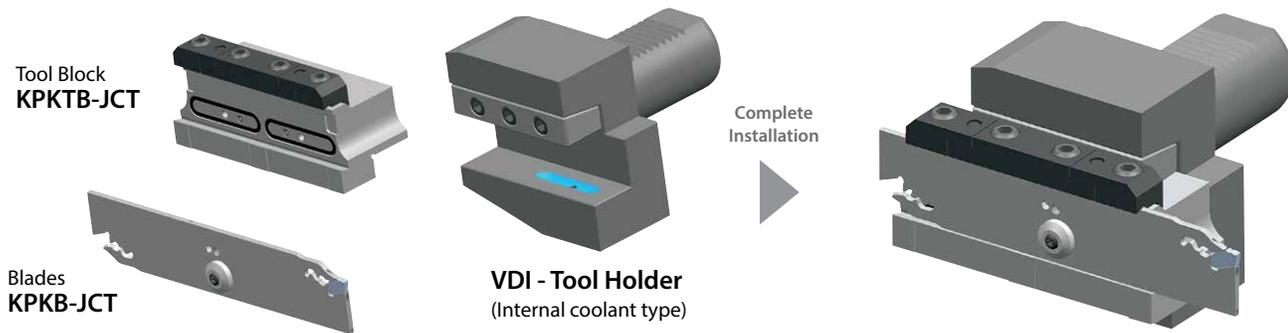
See page 13



## B : VDI Holder Assembly

(Internal coolant type)

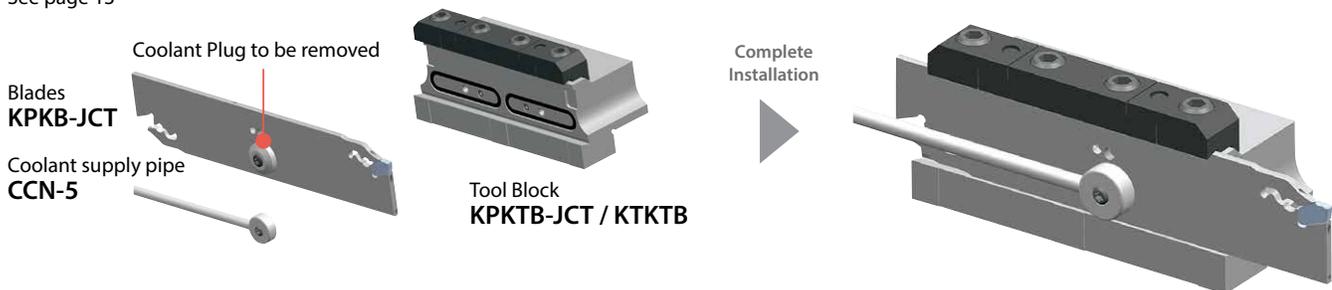
Maximum coolant pressure: 1,015 psi



## C : Coolant Pipe Assembly

Maximum coolant pressure: 145 psi

See page 13



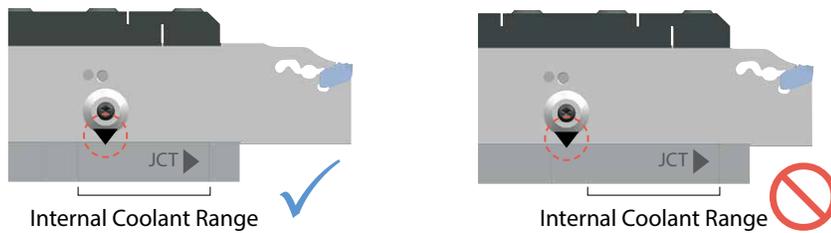
### Coolant Supply Pipe Mounting Method

Attach to the blade with the supplied screw  
Form pipe to the required shape and connect it to the piping of the machine.

## Precautions

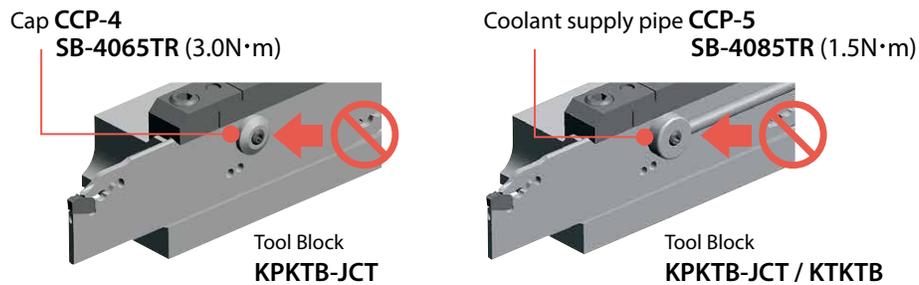
### When mounting KPKB-JCT blade

When using internal coolant, keep the arrow (▼) on the blade within the range marked on the tool block.



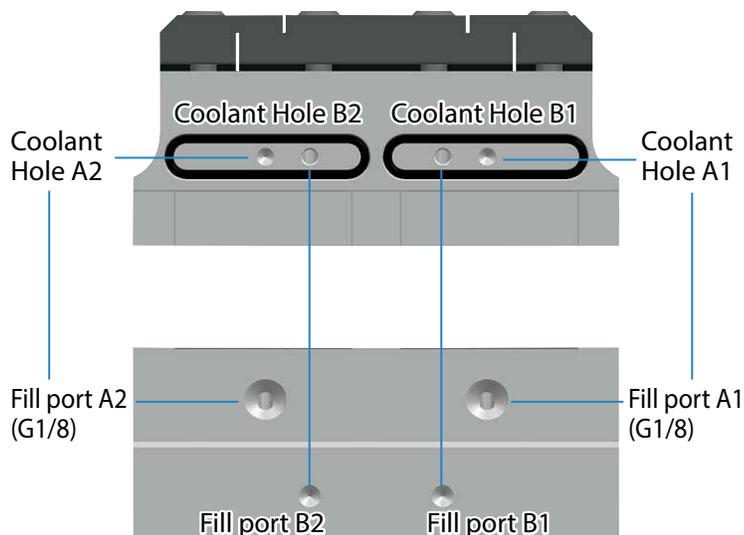
### When the cap and coolant supply pipe are mounted

Coolant cannot be supplied correctly if it is mounted in the wrong position.



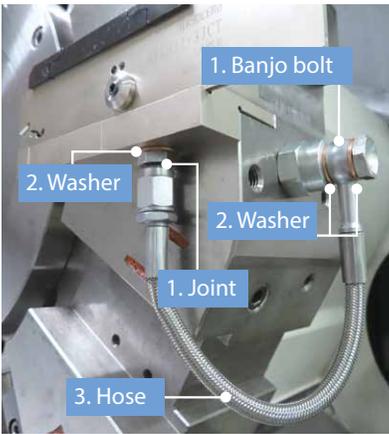
### When using a tool block

When using the discharge port B1 (B2), use a sealant for the filler cap (HSG 1/8 X 8.0) provided as an accessory and attach it to the coolant supply port A1 (A2).



## A : Coolant Hose Assembly

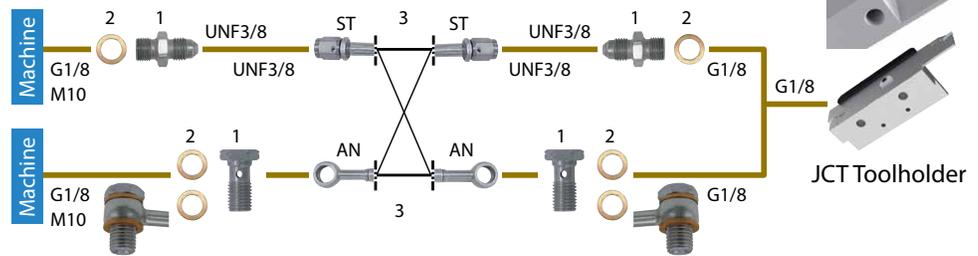
Connection Method and Piping Parts



Easy to use with high-pressure hose and joint

Can be used for internal coolant at normal pressure without a high pressure pump unit  
Banjo bolts (for angled hoses) are also available.

### <Piping Installation Guide>



Depending on machine specifications and piping methods, **1. Joint/Banjo bolt x2 2. Washer x2-4 3. Hose x1**

### 1. Joint / Banjo Bolt (Sold Separately)

Pressure Resistance: ~ 4,350 psi

Shape	Part Number	Stock	Thread Standard	
			Toolholder	Machine Connection Side
	J-G1/8-UNF3/8	●	G1/8	G1/8
	J-M10X1.5-UNF3/8	●	M10X1.5	M10X1.5
Banjo Bolt (for Angled Hoses)	BB-G1/8	●	G1/8	G1/8
	BB-M10X1.5	●	M10X1.5	M10X1.5

●: Standard Item

### 2. Washer (Sold Separately)

Pressure Resistance: ~ 4,350 psi

Shape	Part Number	Stock
	WS-10	●

\*If you are using a banjo bolt, two washers are needed.

●: Standard Item

### 3. Hose (Sold Separately)

Pressure Resistance: ~ 4,350 psi

Shape	Part Number	Stock	Thread Standard		Dimensions (mm)
			Toolholder	Machine Connection Side	L
Straight/Straight	HS-ST-ST-200	●	UNF3/8	UNF3/8	200
	HS-ST-ST-250	●	UNF3/8	UNF3/8	250
Straight/Angled	HS-ST-AN-200	●	UNF3/8	-	200
	HS-ST-AN-250	●	UNF3/8	(Banjo Bolt)	250
Angled/Angled	HS-AN-AN-200	●	-	-	200
	HS-AN-AN-250	●	(Banjo Bolt)	(Banjo Bolt)	250

●: Standard Item

## Precautions

1. Make sure machine door is completely closed before use of these parts.
2. Use appropriate seal for the male thread of the piping parts and make sure the connection is secure. Use plugs to seal off unused coolant holes.
3. Connect and fasten the coolant hose firmly.
4. The use of copper washers may cause leakage but will have no effect on the performance.
5. Commercial piping parts can be used if the thread standards are same. Check the pressure resistance before use.
6. Regularly changing the coolant filter is recommended.

## C: Coolant Pipe Assembly

Piping Parts

### Coolant Supply Pipe (Sold Separately)

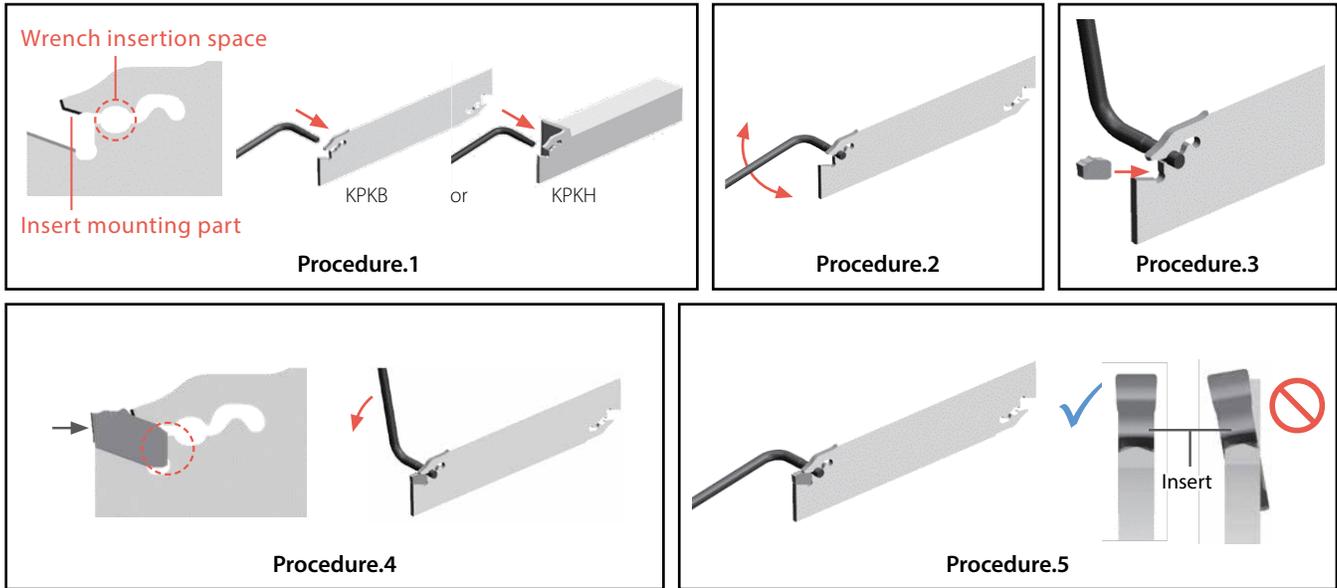
Pressure Resistance: 145 psi

Shape	Part Number	Stock	Dimensions (mm)				Spare Parts (Screw)
			A	B	C	D	
	CCN-5	●	190	16	5	6	SB-4085TR

Use wrench (FT-15) supplied with the blade when connecting.

●: Standard Item

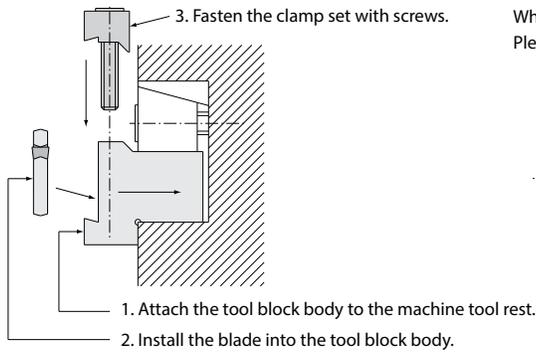
# How to Mount and Remove Inserts from Blade



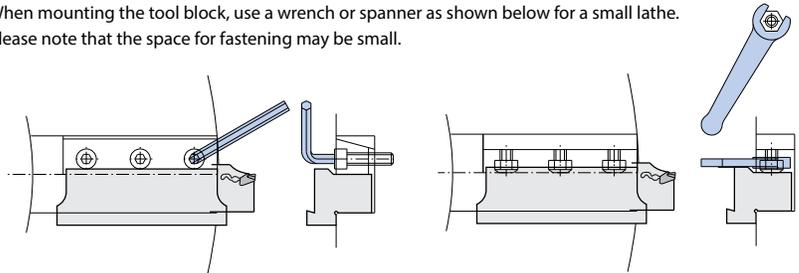
## Procedure

1. Use compressed air or other measures to remove chips from the insert mounting area and slide wrench into hole shown.
2. Turn the wrench.
3. Slide the insert into the insert pocket. (When removing the insert, follow the same procedure and remove it at step 3.)
4. Push insert in until the back of the insert contacts the blade's back stop surface.
5. Make sure that the insert is set straight.

# Tool Block and Blade Installation Guide

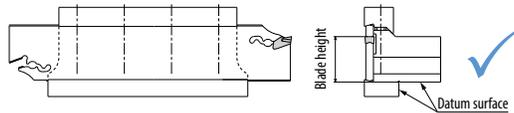


When mounting the tool block, use a wrench or spanner as shown below for a small lathe. Please note that the space for fastening may be small.

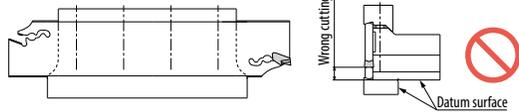


## How to Install the Tool Block and Blade

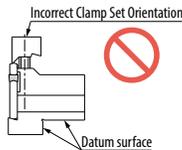
### Correct blade installation



### Incorrect blade installation



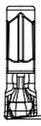
### Incorrect Clamp Set Orientation

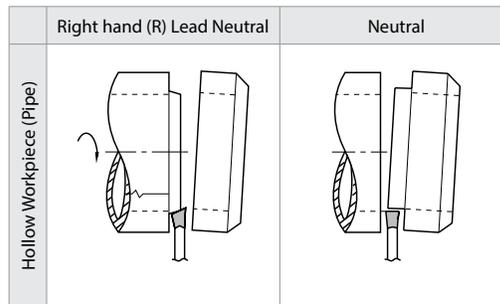
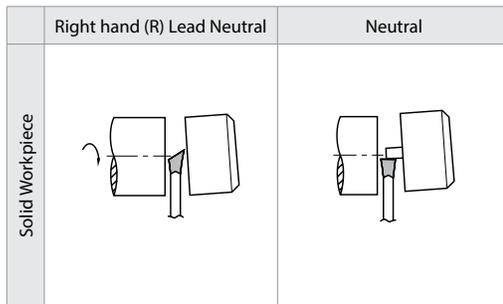


If the clamp set is mounted in the reverse direction, a large gap is created between the tool block main body and the clamp set as shown in the left figure. If you continue to use the product, the blade may break off. Reinstall in the correct orientation.

# Lead Angle Direction and Usage

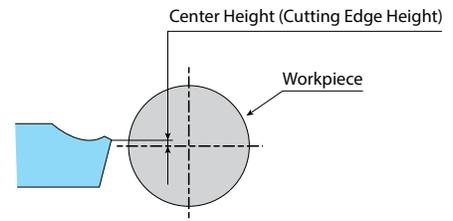
1. If there is no restriction on the finished shape, use an insert without lead angle.
2. Insert with lead angle is recommended to prevent remaining boss.
3. If you want to make the remaining boss smaller when machining small or thin parts, use insert with lead angle.

	N (Neutral)	R (Right hand)	L (Left hand)
Handed insert with lead angle			
	· Inserts with lead angle (PSIR R/L) reduce burrs at cut-off machining. · The larger the lead angle (PSIR R/L), the smaller the cutting force. The feed also needs to be smaller.		



## Machining Precautions

1. Set cutting edge height 0.004" (0.1mm) above core height.
  2. Machining with ample supply of coolant is recommended
  3. Machine at constant speeds to gain stable tool life
  4. Make the cut-off as close as possible to the chuck
  5. To prevent impacts, reduce feed rate by 1/2 ~ 1/3 when nearing the center of the workpiece
- Excessive use of the insert may cause chipping or damage to the holder



### KYOCERA Precision Tools

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