



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 New Inch Size Shank Style Toolholders and Tool Blocks Available



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.

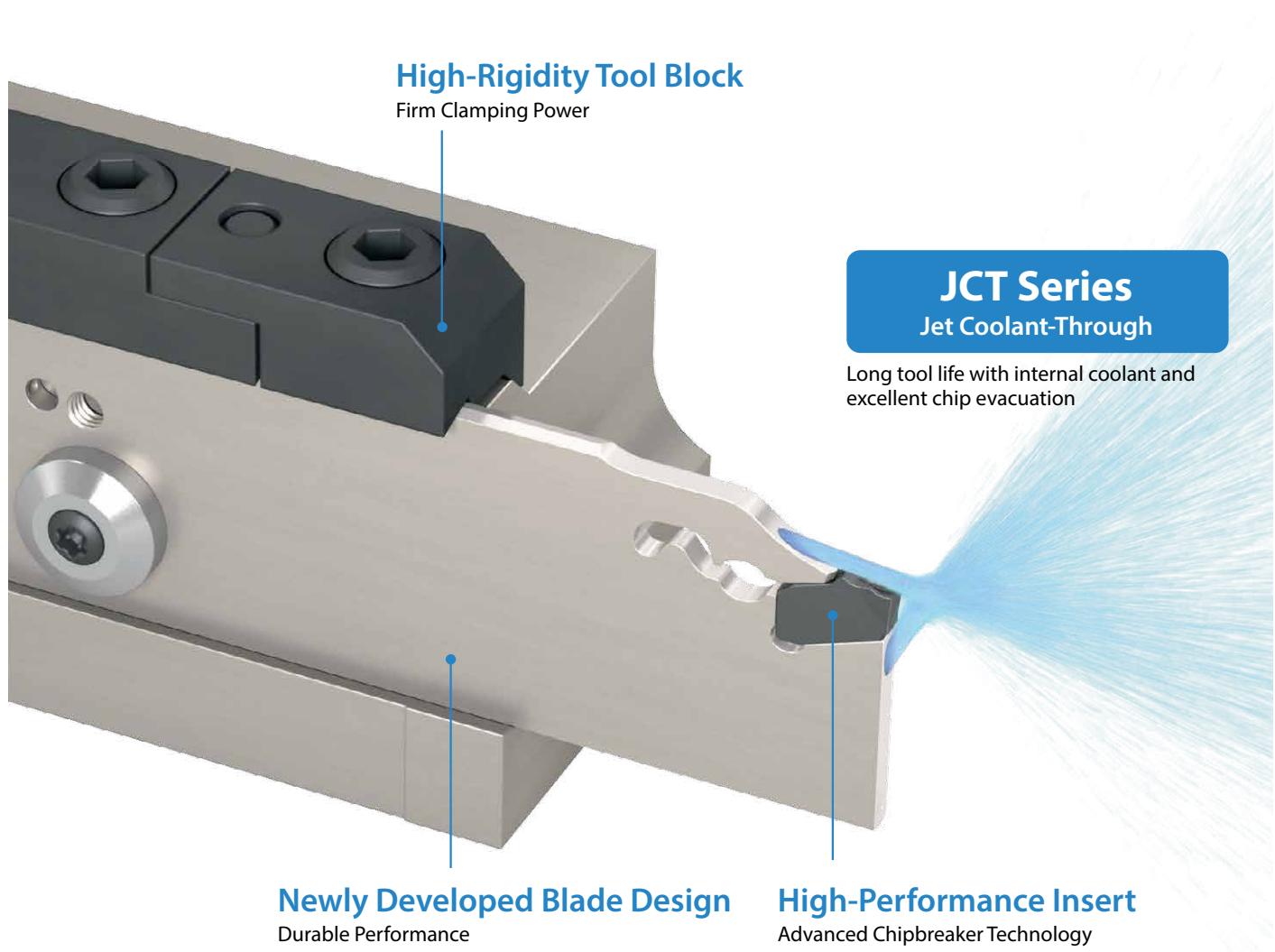
This is usually the final process and is often the bottleneck. Stable tool life without sacrificing productivity is required.

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.

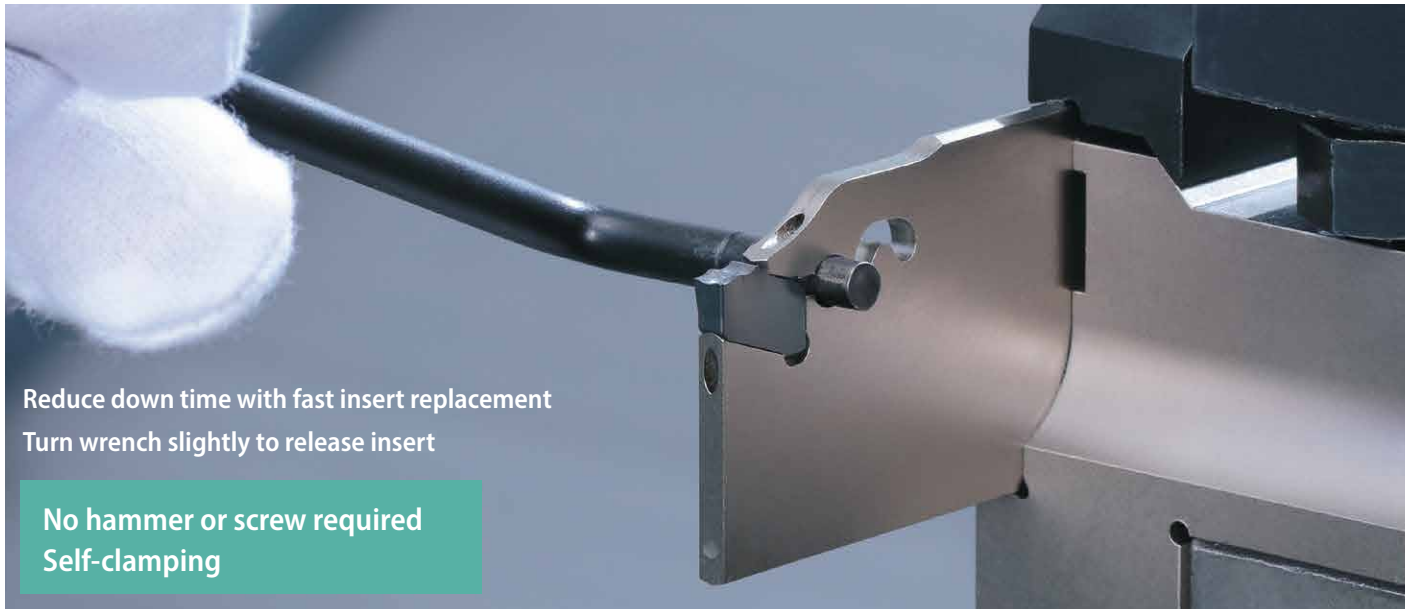
SOLUTION

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



1

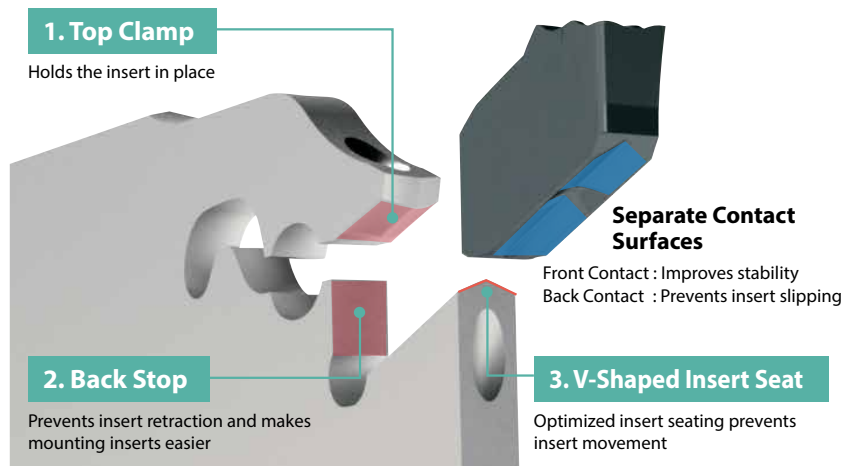
Easy Insert Replacement



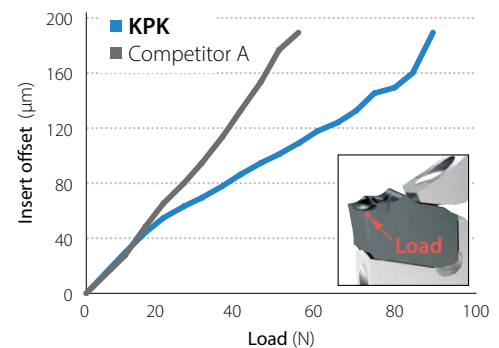
2

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) , $V_c \sim 330$ sfm, $f = 0.005$ ipr, Wet (External coolant) Workpiece : 4137 ($\phi 3.937''$) 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



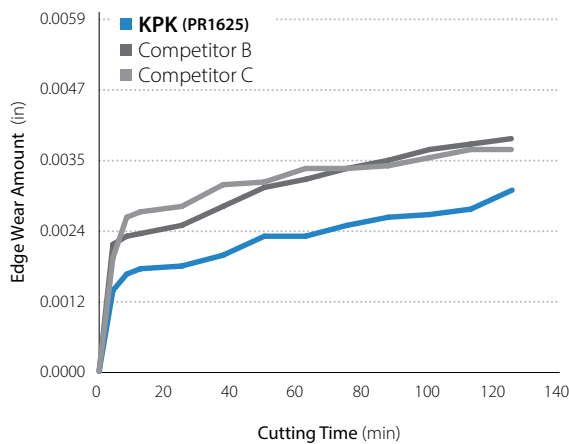
PH Chipbreaker

Tough Edge
High-Feed

Insert Grades

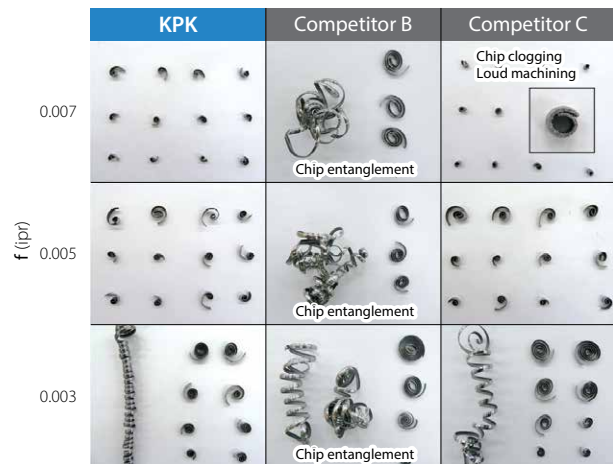
Steel : PR1625
Stainless Steel : PR1535

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)



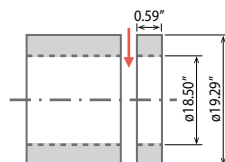
Cutting Conditions : n = RPM (constant), Vc = ~ 390 sfm, Wet (External Coolant)
Workpiece : 4131 ($\phi 1.969''$) Cutting Width : 0.118" (3mm), PM Chipbreaker

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

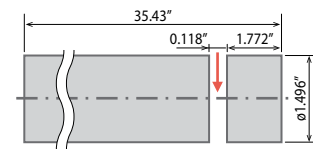
(User Evaluation)

SOLUTION 2

Machining efficiency doubled in stainless steel
Stable machining is possible

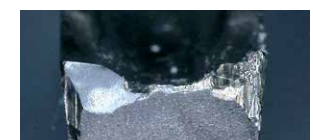
Adapter
(316)

External Coolant



KPK

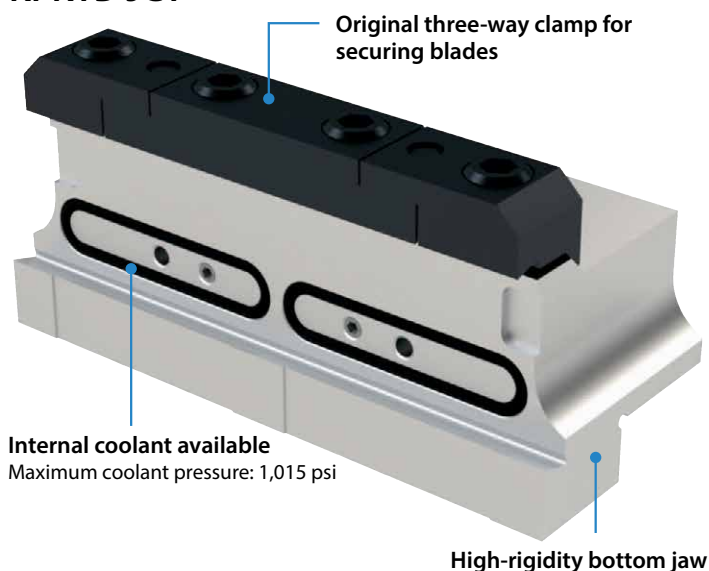
Cutting Conditions : n = 1,450 RPM (Constant), Vc = ~ 570 sfm, f = 0.002 ipr (Inching: 0.039")
Wet (External Coolant) KPKB32-3 PKM30N-025PM PR1535



Competitor E

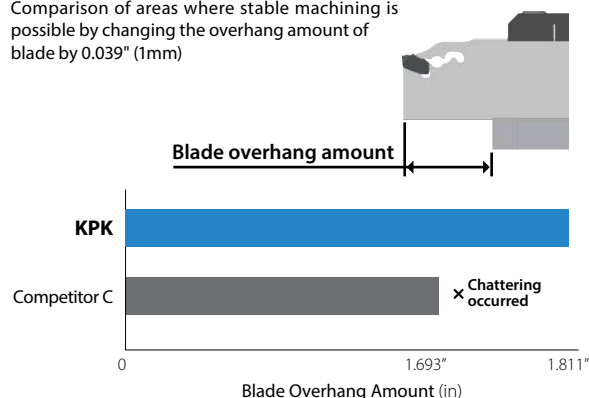
(User Evaluation)

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)



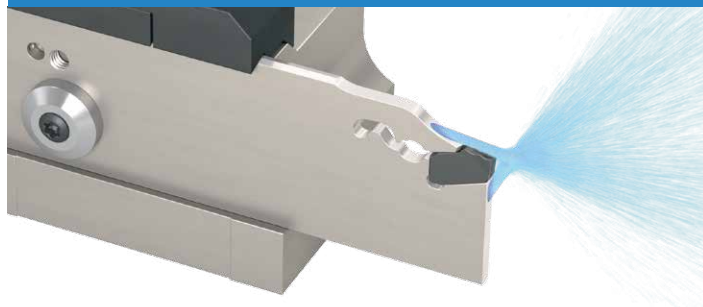
Cutting Conditions : $n = 650$ RPM (Constant), $V_c \sim 330$ sfm, $f = 0.005$ ipr
Wet (Internal Coolant : Normal Pressure), Workpiece : 4137 ($\phi 1.969$)
Cutting Width : 0.118" (3mm), PM Chipbreaker

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



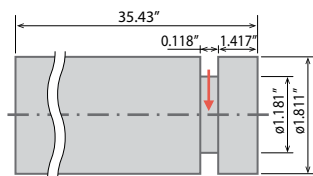
KPKB-JCT maximum overhang length while using internal coolant is as follows:
Size 26 : 1.575" (40mm) Size 32 : 2.323" (59mm)

SOLUTION 3

Doubled tool life
Reduced fracturing

Machine Part
(304)

Internal Coolant



KPK

60 pcs/corner (Stable)

Competitor F

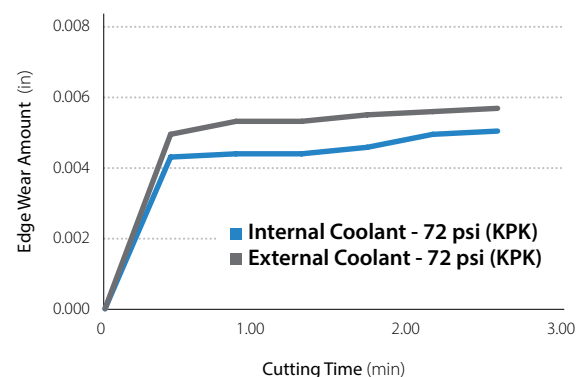
30 pcs/corner (Unstable)

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

(User Evaluation)

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 : $V_c = 100$ sfm (Constant), $f = 0.004$ ipr,
Cutting Depth : 0.394", Wet
Workpiece : Inconel 718 ($\phi 3.937$) Cutting Width : 0.118" (3mm), PM Chipbreaker

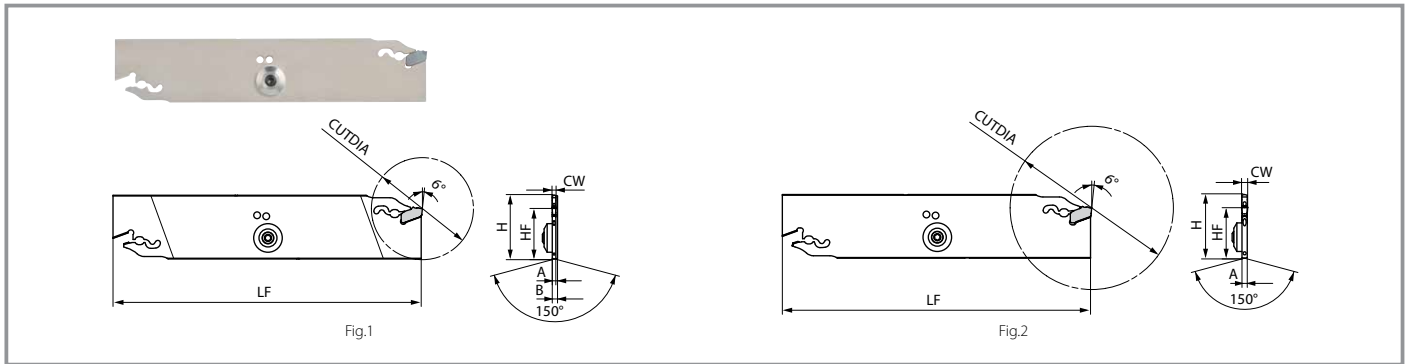
Chip Control Comparison (Internal Evaluation)



Cutting conditions : $n = 780$ RPM (Constant), $V_c = 390$ sfm, $f = 0.003$ ipr,
Wet Workpiece : 4131 ($\phi 1.969$) Cutting Width : 0.118" (3mm), PM Chipbreaker

Blades (Coolant-Through)

KPKB-JCT



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					
																						
KPKB	26-1JCT	●	35	26	21.4	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								PKM20... PKM24...
	26-3JCT	●	75					-	2.6					3.0		Fig. 2					PKM30...	
	26-4JCT	●	80						3.4					4.0								PKM40...
	26-5JCT	●	80						4.2					4.8 5.0								PKM48... PKM50...
KPKB	32-1JCT	●	35	32	25.0	150	1.4	1.6	Fig. 1					Coolant Plug Screw Tightening Torque 3.0 Nm				PKM16...	KPKTB○○-32JCT KTKTB○○-32 KTKTBFO-32			
	32-2JCT	●	50					1.8										2.0 2.4				
	32-3JCT	●	100					-	2.6					3.0	Fig. 2						PKM30...	
	32-4JCT	●	100						3.4					4.0								PKM40...
	32-5JCT	●	120						4.2					4.8 5.0								PKM48... PKM50...
	32-6JCT	●	120						5.4					6.0								PKM60...

See page 18 for insert mounting and removal instructions.

● : Standard Item

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

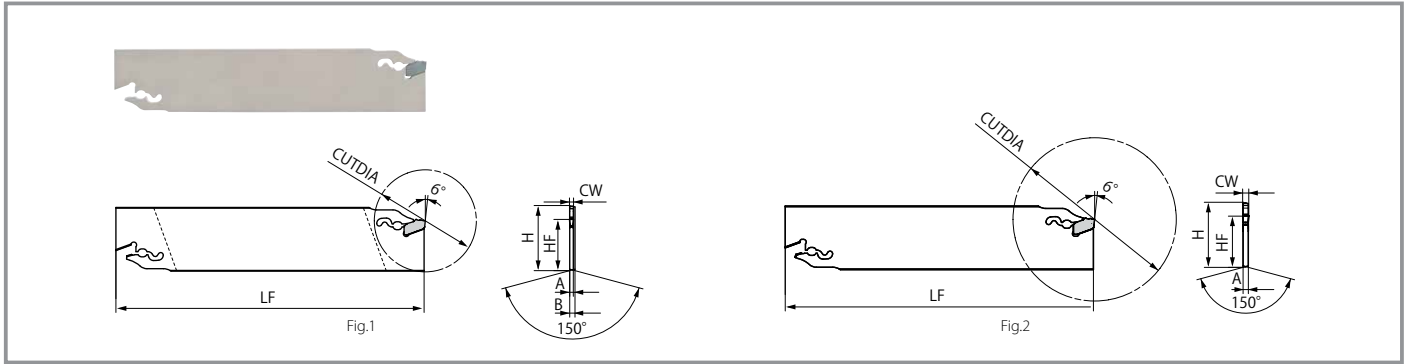
*H : Length between virtual vertices

Minimum / Maximum Overhang Length While Using Internal Coolant

	Part Number		Overhang Length	
	Blade	Tool Holder Block	Min.	Max.
	KPKB26-1JCT	KPKTB20-26JCT	15	34.5
	KPKB26-2/3/4JCT		20	40
	KPKB26-5JCT		23	43
KPKB32-1JCT	KPKTB20-32JCT	KPKTB25-32JCT	18	49
			13	
			27.5	59
KPKB32-2/3/4JCT	KPKTB20-32JCT	KPKTB25-32JCT	22.5	
			31.5	63
			26.5	

Blades (Not Coolant-Through)

KPKB



Blade Dimensions (Metric Sizes)

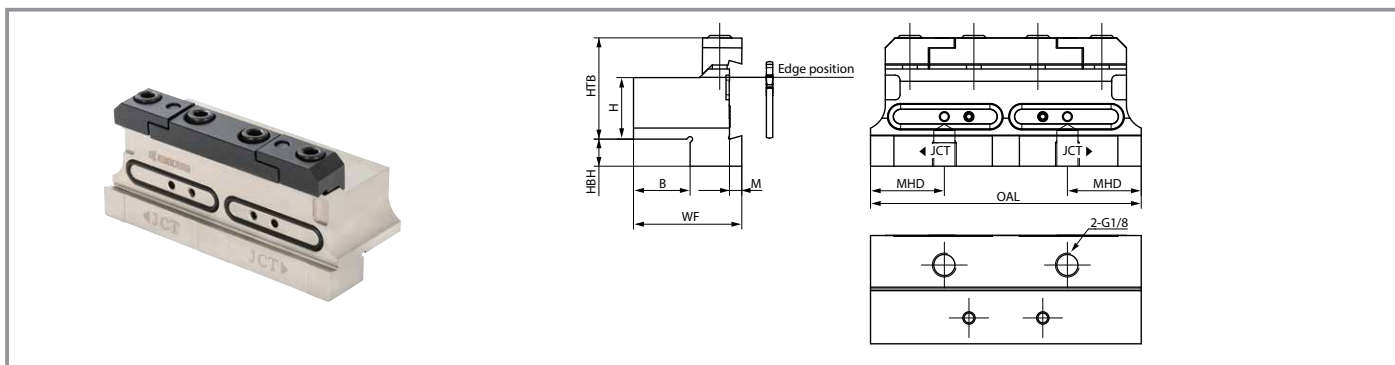
Part Number	Stock	Cutting Dia.	Dimensions (mm)						Edge Width (mm)	Drawing	Parts	Applicable Inserts	Applicable Tool Block
											Insert Wrench		
		CUTDIA	*H	HF	B	LF	A	CW					
KPKB 19-1	●	32	19	15.7	2.6	86	1.4	1.6	Fig.1	LPW-5	PKM16...	KTKTB○○-19	
19-2	●	40			-		1.8	2.0 2.4	Fig.2		PKM20... PKM24...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

See page 18 for insert mounting and removal instructions.
*H : Length between virtual vertices

● : Standard Item

Tool Block (Coolant-Through)

KPKTB-JCT



Tool Block Dimensions (Metric Sizes)

Pressure Resistance: 1,015 psi

Unit	Part Number	Stock	Dimensions								Spare Parts						Applicable Blade			
			H	HTB	HBH	B	WF	M	MHD	OAL	Clamp Set 	Screw 	Wrench 	O-ring 	Plug 1 	Plug 2 				
NEW inch	KPKTB 19-26JCT	●	0.75	1.260	0.525	0.720	1.508	0.157	0.925	3.386	BCS-2	HH6x16	LW-5	GR-020	HS3x4	HSG1/8X8.0	KPKB26-○JCT KTKB26-○			
	19-32JCT	●	0.75	1.299	0.667	0.720	1.547	0.197	0.984	3.937	BCS-3			GR-026	HS4x4		KPKB32-○JCT KTKB32-○			
	25.4-32JCT	●	1.00	1.614	0.417	0.906	1.732		1.181	4.331	BCS-4			GR-029			HSG1/8X8.0	KPKB32-○JCT KTKB32-○		
	31.8-32JCT	●	1.25	1.850	0.207	1.142	1.969			4.331										
mm	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	41	16		40	5	25	100	BCS-3			GR-026	HS4x4		HSG1/8X8.0	KPKB32-○JCT KTKB32-○		
	25-32JCT	●	25		11				23	44	30			110					BCS-4	GR-029
	32-32JCT	●	32		5				29	50										

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

●: Standard Item

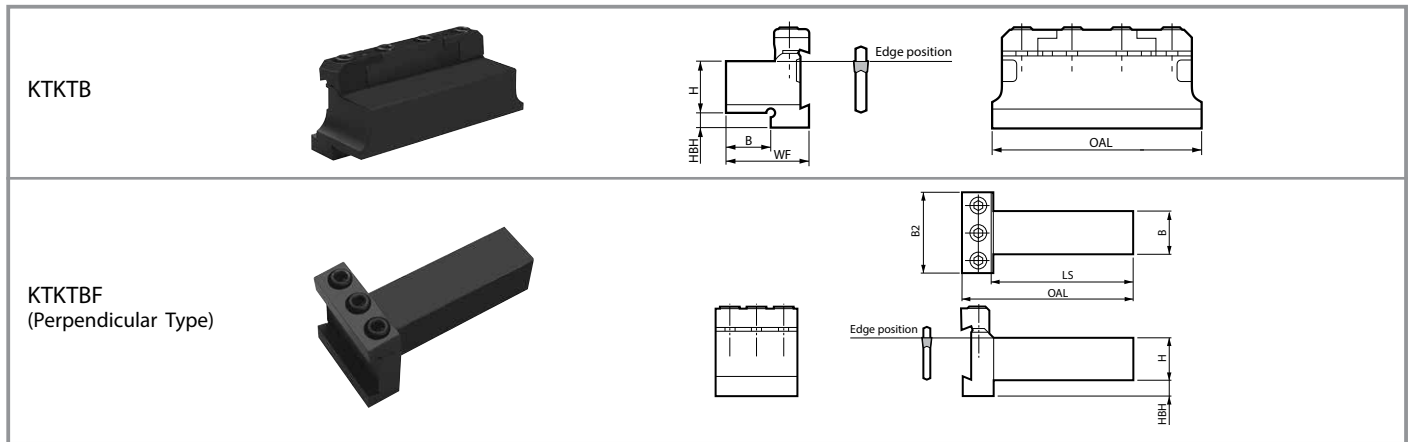
KPKTB-JCT type block is also compatible with conventional KTKB type blades.

See page 17 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.)

Tool Block (Not Coolant-Through)

KTKTB / KTKTBF



Tool Block Dimensions (Inch & Metric Sizes)

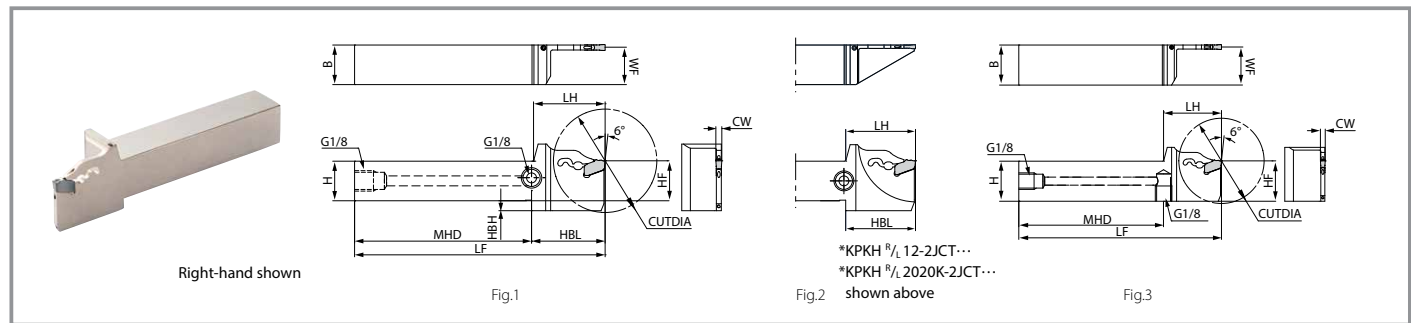
Unit	Part Number	Stock	Dimensions						Spare Parts					Applicable Blade
									Clamp Set		Screw	Wrench		
			H	HBH	B	WF B2	OAL	LS						
inch	KTKTB 19-26	●	0.75	0.39	0.720	1.39	3.39	-	BCS-2	-	HH6x30	LW-5	KPKB26-○ KPKB26-○JCT	
	25.4-32	●	1.00	0.30	0.905	1.65	4.33		BCS-4				KPKB32-○ KPKB32-○JCT	
mm	KTKTB 16-19	●	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	110							
	32-32	●	32	5	29	48								
	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

Integral Style Toolholders (Coolant-Through)

KPKH-JCT



Toolholder Dimensions

Pressure Resistance : ~2,175 psi

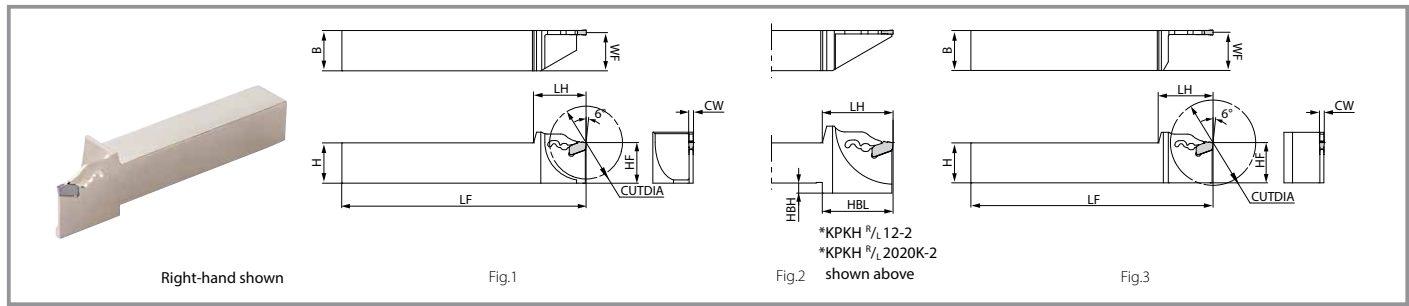
Unit	Part Number	Stock		Cutting Dia.	Dimensions										Edge Width	Drawing	Spare Parts		Applicable Inserts
		R	L		CUTDIA	H	HF	HBH	B	LF	LH	WF	HBL	MHD			CW	Insert Wrench	
																			
inch	KPKH ^{R/L} 12-2JCT	●	●	1.500	0.750	0.750	0.234	0.750	5.000	1.382	0.717	1.358	3.583	0.079 0.094	Fig.2	LPW-5	HSG1/8X8.0	PKM20... PKM24...	
	12-3JCT	●	●	2.000	0.750	0.750	0.234	0.750		1.417	0.701	1.433	3.543	0.118	Fig.1			PKM30...	
	16-3JCT	●	●	2.100	1.000	1.000	-	1.000		1.417	0.951	-	3.583		Fig.3				PKM40...
	12-4JCT	●	●	2.400	0.750	0.750	0.234	0.750		1.673	0.685	1.630	3.346		0.157				
	16-4JCT	●	●	2.600	1.000	1.000	-	1.000		1.673	0.935	-	3.346	Fig.3					
mm	KPKH ^{R/L} 2020K-2JCT	●	●	38	20	20	5	20	125	35.1	19.15	35.1	89	2.0 2.4	Fig.2	LPW-5	HSG1/8X8.0	PKM20... PKM24...	
	2020K-3JCT	●	●	52						36	18.75	37	88	3.0	Fig.1			PKM30...	
	2525K-3JCT	●	●	53	25	25	-	25			23.75	-	89		Fig.3				
	2020K-4JCT	●	●	62	20	20	5	20		42.5	18.35	42	83	4.0	Fig.1			PKM40...	
	2525K-4JCT	●	●	68	25	25	-	25			23.35	-	82		Fig.3				

See page 18 for insert mounting and removal instructions.
See page 11 for coolant piping parts.

● : Standard Item

Integral Style Toolholders (Not Coolant-Through)

KPKH



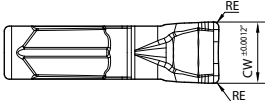
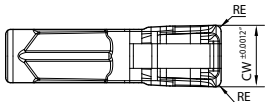
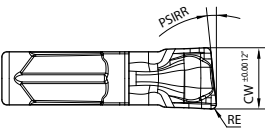
Toolholder Dimensions

Unit	Part Number	Stock		Cutting Dia.	Dimensions									Edge Width	Drawing	Spare Parts	Applicable Inserts
		R	L	CUTDIA	H	HF	HBH	B	LF	LH	WF	HBL	CW	Insert Wrench			
																	
NEW inch	KPKH $\frac{R}{L}$ 12-2	●	●	1.500	0.750	0.750	0.234	0.750	5.000	1.303	0.717	1.303	0.079 0.094	Fig.2	LPW-5	PKM20... PKM24...	
	12-3	●	●	2.000	0.750	0.750	-	0.750	5.000	1.339	0.701	-	0.118	Fig.3		PKM30...	
	16-3	●	●	2.100	1.000	1.000	-	1.000	6.000	1.339	0.951	-				PKM40...	
	12-4	●	●	2.400	0.750	0.750	-	0.750	5.000	1.594	0.685	-	0.157			PKM48... PKM50...	
	16-4	●	●	2.600	1.000	1.000	-	1.000	6.000	1.594	0.935	-				PKM40...	
	16-5	●	●	3.100	1.000	1.000	-	1.000	6.000	1.807	0.919	-	0.189 0.197			PKM48... PKM50...	
mm	KPKH $\frac{R}{L}$ 2020K-2	●	●	38	20	20	5	20	125	33.1	19.15	33.1	2.0 2.4	Fig.2	LPW-5	PKM20... PKM24...	
	2020K-3	●	●	52			-			34	18.75	-	3.0	PKM30...			
	2525M-3	●	●	53	25	25	-	25	150		40.5	23.75	-	4.0		PKM40...	
	2020K-4	●	●	62	20	20	-	20	125	18.35		-	4.0	PKM48... PKM50...			
	2525M-4	●	●	68	25	25	-	25	150	23.35	-	4.8 5.0	PKM40...				
	2525M-5	●	●	79	25	25	-	25	150	45.9	22.95	-	4.8 5.0	PKM40...			
mm	KPKH $\frac{R}{L}$ 2020K-3D35	●	●	35	20	20	-	20	125	32.5	18.75	-	3.0	Fig.1		PKM30...	
	2525M-3D45	●	●	45	25	25	-	25	150		23.75		3.0			PKM40...	
	2020K-4D45	●	●	45	20	20	-	20	125	35	18.35	-	4.0			PKM40...	
	2525M-4D45	●	●	45	25	25	-	25	150		23.35		4.0			PKM40...	

See page 18 for insert mounting and removal instructions.

● : Standard Item

Applicable Inserts

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

● : Standard Item

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

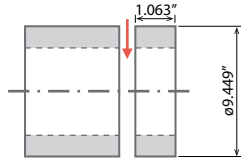
Workpiece	Cutting Speed Vc (sfm)			Feed f (ipr)			Notes
	MEGACOAT NANO		Carbide	Edge Width CW (mm)			
	PR1625	PR1535	GW15	2	3 ~ 4	5 ~ 6	
Carbon Steel	260 [★] - 720	260 [☆] - 720	-	0.004 - 0.009	0.006 - 0.011	0.006 - 0.014	Wet
Alloy Steel	230 [★] - 660	230 [☆] - 660	-				
Stainless Steel	200 [☆] - 490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

Competitor G

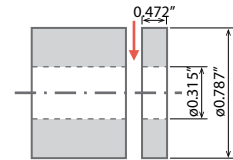
f = 0.0035 ipr

x 2.0

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)

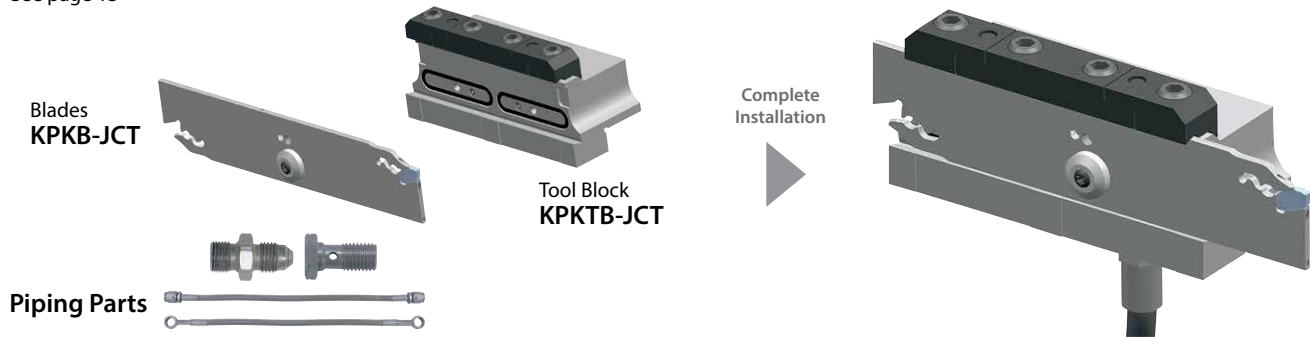
Superior Cut-Off Performance



A : Coolant Hose Assembly

Maximum coolant pressure: 1,015 psi

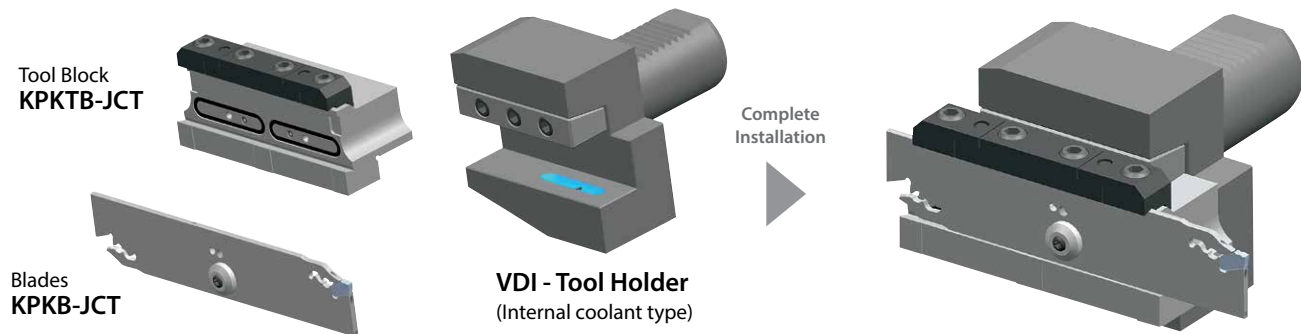
See page 13



B : VDI Holder Assembly

(Internal coolant type)

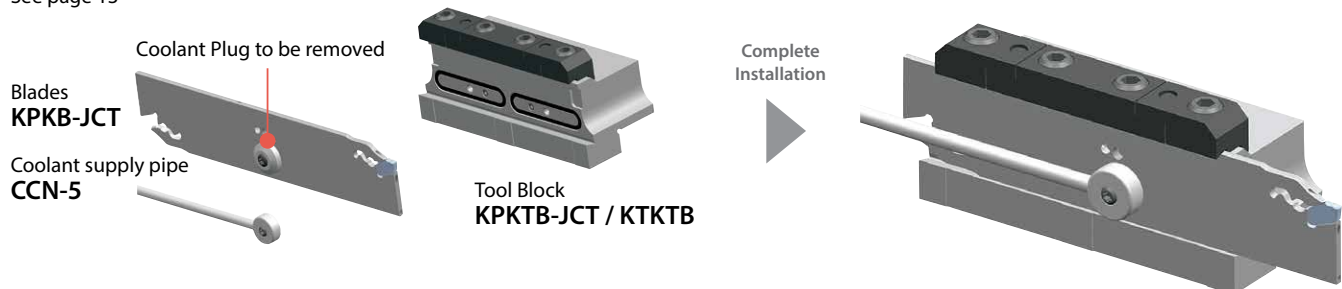
Maximum coolant pressure: 1,015 psi



C : Coolant Pipe Assembly

Maximum coolant pressure: 145 psi

See page 13



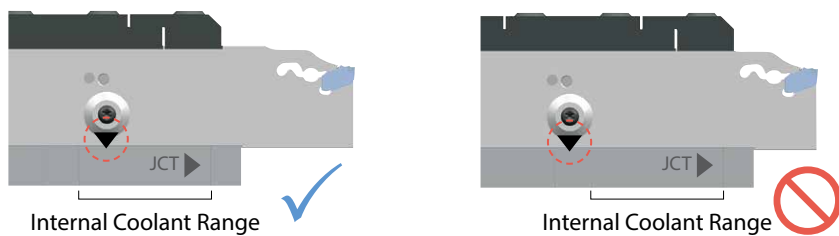
Coolant Supply Pipe Mounting Method

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

Precautions

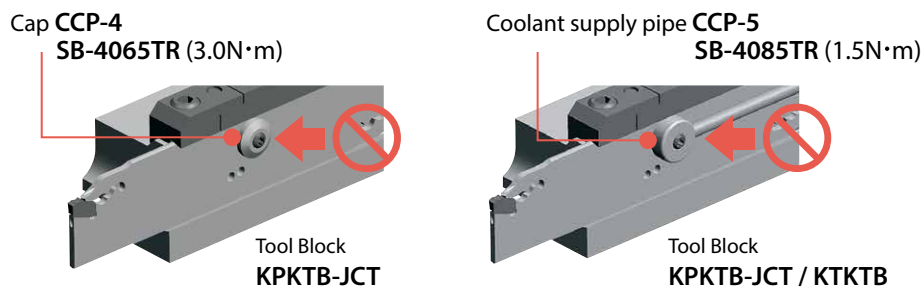
When mounting KPKB-JCT blade

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



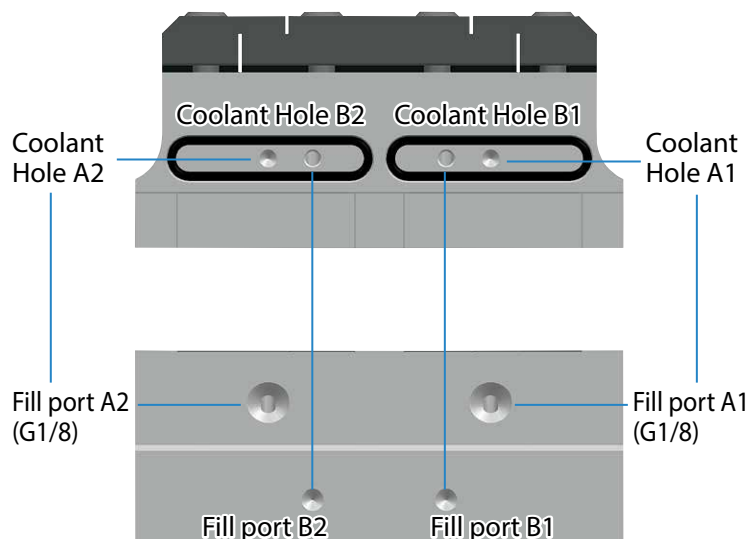
When the cap and coolant supply pipe are mounted

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



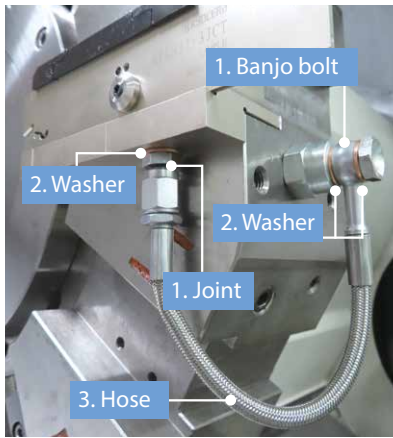
When using a tool block

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

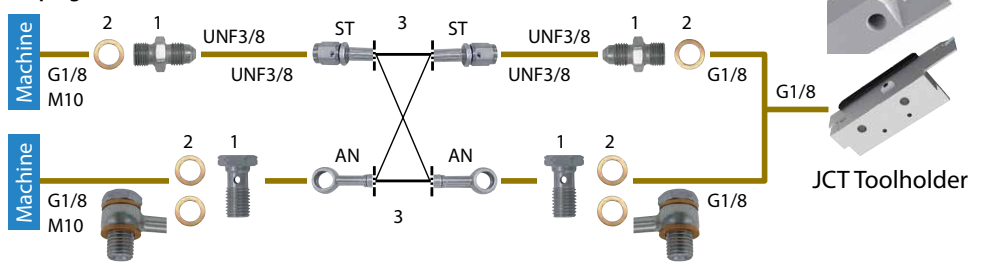
Connection Method and Piping Parts



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
	J-M10X1.5-UNF3/8	●	M10X1.5
	BB-G1/8	●	G1/8
	BB-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)
					L
	HS-ST-ST-200	●	UNF3/8	UNF3/8	200
	HS-ST-ST-250	●			250
	HS-ST-AN-200	●	UNF3/8	— (Banjo Bolt)	200
	HS-ST-AN-250	●			250
	HS-AN-AN-200	●	— (Banjo Bolt)	— (Banjo Bolt)	200
	HS-AN-AN-250	●			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)

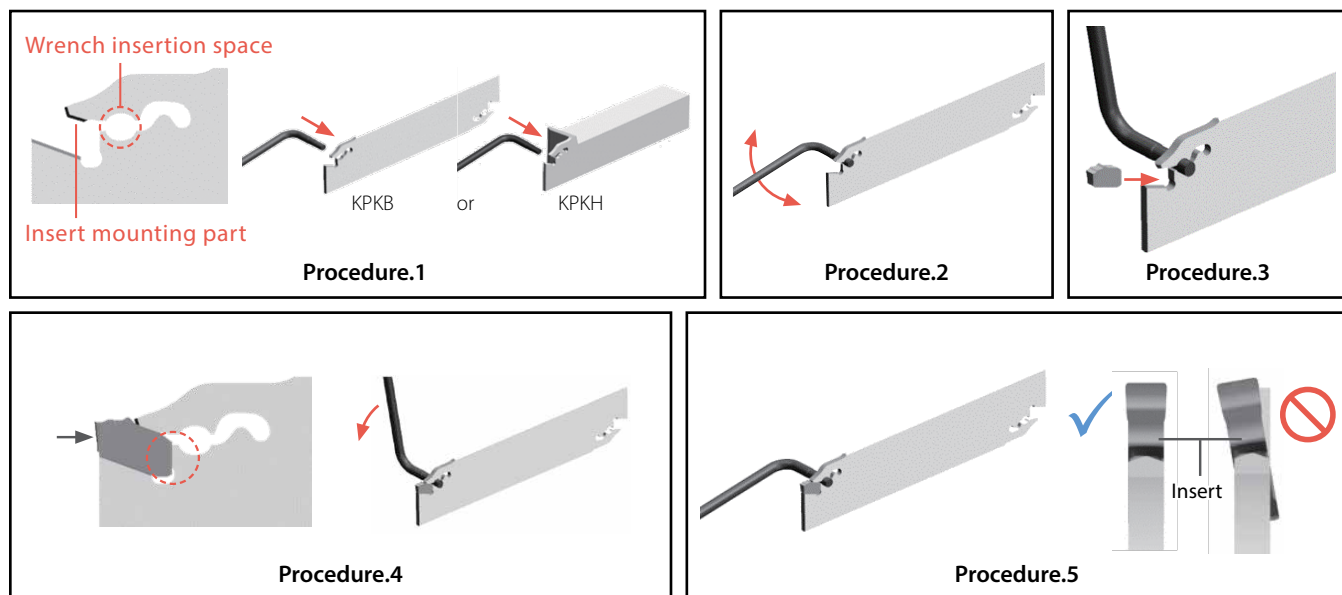
Pressure Resistance: 145 psi

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

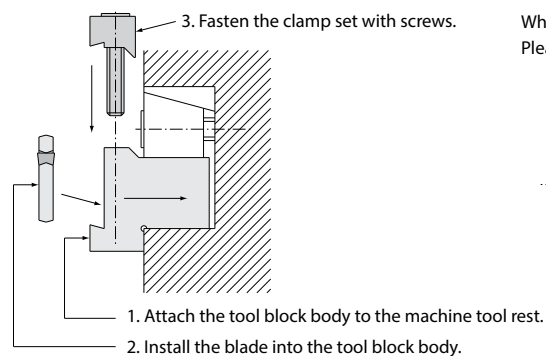
How to Mount and Remove Inserts from Holder or Blade



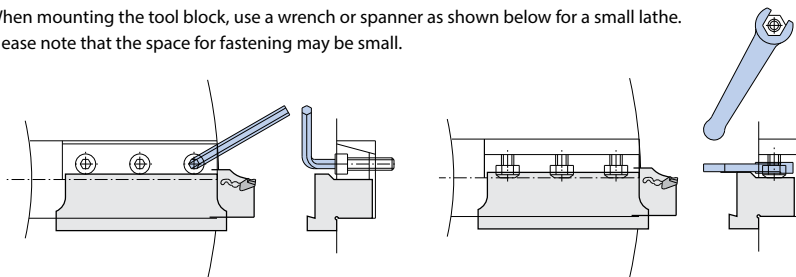
Procedure

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

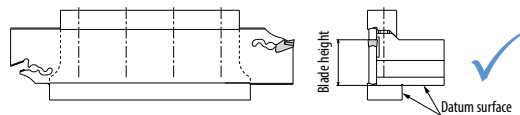


When mounting the tool block, use a wrench or spanner as shown below for a small lathe. Please note that the space for fastening may be small.

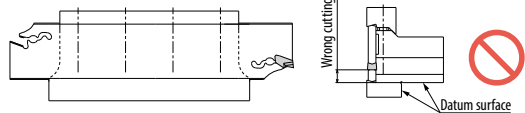


How to Install the Tool Block and Blade

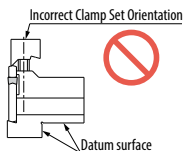
Correct blade installation



Incorrect blade installation



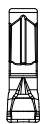
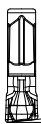
Incorrect Clamp Set Orientation

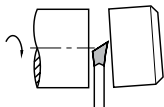
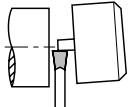
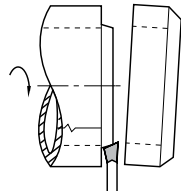
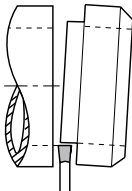


If the clamp set is mounted in the reverse direction, a large gap is created between the tool block main body and the clamp set as shown in the left figure. If you continue to use the product, the blade may break off. Reinstall in the correct orientation.

Lead Angle Direction and Usage

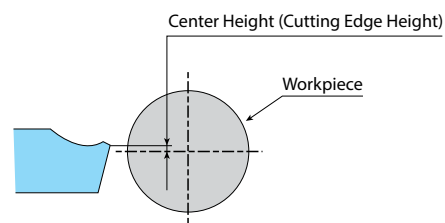
1. If there is no restriction on the finished shape, use an insert without lead angle.
2. Insert with lead angle is recommended to prevent remaining boss.
3. If you want to make the remaining boss smaller when machining small or thin parts, use insert with lead angle.

	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.		

	Right hand (R) Lead Neutral	Neutral
Solid Workpiece		
Hollow Workpiece (Pipe)		

Machining Precautions

1. Set cutting edge height 0.004" (0.1 mm) 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

102 Industrial Park Road
Hendersonville, NC 28792

Customer Service | 800.823.7284 - Option 1
Technical Support | 800.823.7284 - Option 2



Official Website | www.kyoceraprecisiontools.com
Distributor Website | portal.kyoceraprecisiontools.com
Email | cuttingtools@kyocerapti.com