

Saw Man-X

N Chip Breaker [Lead angle type]

Insert for pipe and round bar parting off

- Minimizing Burr and PIP size with the lead angle application
- Stable chip control in cutting with rake angle on major cutting edge



Code system

Insert				
KSP	300	R	-	6D
KORLOY Saw Man-X Parting	Cutting edge width 200: 2 mm 300: 3 mm 400: 4 mm	Hand R: Right handed L: Left handed		Lead angle 4D: 4 degree 6D: 6 degree
				-
				N
				Chip breaker N: Negative land
Blade				
KSPB		30		26
KORLOY Saw Man-X Parting Blade		Cutting edge width 20: 2 mm 30: 3 mm 40: 4 mm		Blade height 26: 26 mm 32: 32 mm
Shank				
KSPH	3		25	R
KORLOY Saw Man-X Parting Holder	Cutting edge width 2: 2 mm 3: 3 mm 4: 4 mm		Shank size 16: 1616 20: 2020 25: 2525	Hand R: Right handed L: Left handed

Features

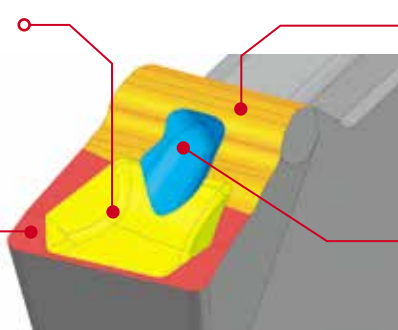
- Controlling size Burr and PIP in pipe and round bar parting off due to applied lead angle
- Enhanced productivity with the application of a rake angle on the major cutting edge and a rear bump that led better chip control
- Stable machinability due to 3-directional V-Rail clamping system

Concave groove on the top surface

- Removing friction on the top surface
- Reduced chip width

Optimized rake angle on the major cutting edge and land

- Reducing cutting load with a rake angle
- Better chip control
- Increased strength with the uneven land application



Rear bump

- Improved chip control on large diameter workpieces

Coolant path design

- Enhanced cooling function with a direct coolant spray on the cutting edge when using coolant type holders

[Effect of applying lead angle]

Insert	Right-handed lead angle	Left-handed lead angle
Controlling PIP size		
Effect	Minimizing PIP size to the direction of cutting part	Minimizing PIP size to the direction of workpiece

Code system

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KSP	300	R	-	6D
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Features

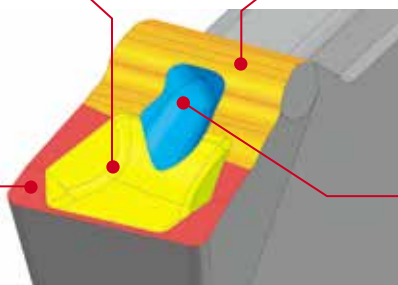
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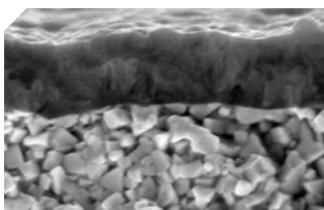
[Effect of applying lead angle]

Insert	Right-handed lead angle	Left-handed lead angle
Controlling PIP size		
Effect	Minimizing PIP size to the direction of cutting part	Minimizing PIP size to the direction of workpiece

Recommended cutting conditions

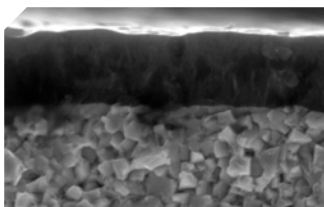
Workpiece				Specific cutting force Kc1 (N/mm ²)	Brinell hardness (HB)	Wear resistance ← • → Toughness			Grooving/parting
ISO	Workpiece materials	ISO (DIN)	AISI			High speed and continuous cutting	Medium, interrupted and continuous cutting	Low speed, interrupted and continuous cutting	
				Grade			C/B		
			PC8110	PC3035	PC5300	N			
			vc (m/min)			fn (mm/rev)			
P	Non-alloy steel	C35	1035	1600	150	-	140	120	0.18
						-	170	150	0.12
		-	200	180	0.06				
		-	120	100	0.18				
		-	150	120	0.12				
	Alloy steel	42CrMo4	4140	1700	180	-	120	100	0.18
						-	150	120	0.12
						-	180	160	0.06
		-	4145	2050	350	-	100	80	0.18
						-	130	120	0.12
-	-	-	-	-	150	140	0.06		
M	Austenitic	X5CrNi18-9 (X2CrNi19-11)	304	2000	180	80	-	60	0.18
						130	-	120	0.12
						170	-	160	0.06
		X5CrNiMo17-12-2	316	2000	180	80	-	60	0.18
						130	-	120	0.12
-	-	-	-	-	170	160	0.06		
K	Gray cast iron	250 (GG25)	No35B	1100	245	100	-	80	0.18
						150	-	120	0.12
						200	-	180	0.06
	Nodular graphite cast iron	450-10	80-55-06	1440	230	80	-	70	0.18
						130	-	110	0.12
-	-	-	-	-	180	160	0.06		

Grade features



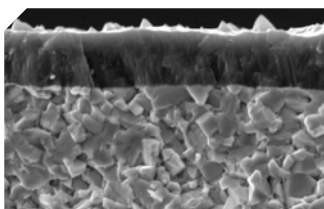
PC3035 ^{New}

- Application of the exclusive grooving substrate with stable machinability and the coating layer with a good wear resistance
- New TiAlN layer with excellent wear resistance and high temperature hardness
- Exclusive grooving substrate with excellent fracture resistance and stable machinability



PC5300

- High toughness ultra-fine substrate and the coating layer with good wear resistance and high temperature hardness
- New TiAlN layer with excellent wear resistance and high temperature hardness
- Ultra-fine substrate with good chipping resistance and high toughness



PC8110

- Application of the substrate and PVD coating layer good for high temperature cutting
- PVD coating layer with high temperature hardness and high temperature oxidation resistance
- Substrate good for high wear resistance and plastic deformation resistance under high temperature

Performance evaluation

Wear resistance

Workpiece 42CrMo4 (Ø100)

Cutting conditions $vc(m/min) = 120$, $fn(mm/rev) = 0.12$, $ap(mm) = 10$ (parting), wet

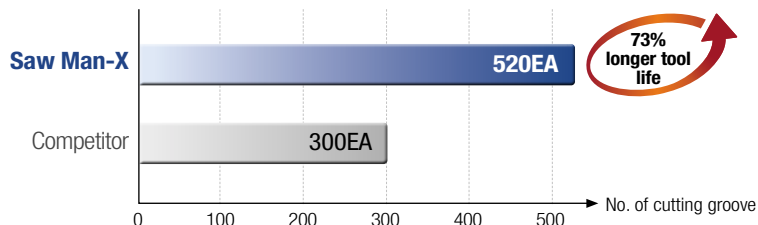
Tools **Insert** KSP300R-6D-N(PC5300) **Holder** KSPB3026



[Saw Man-X]

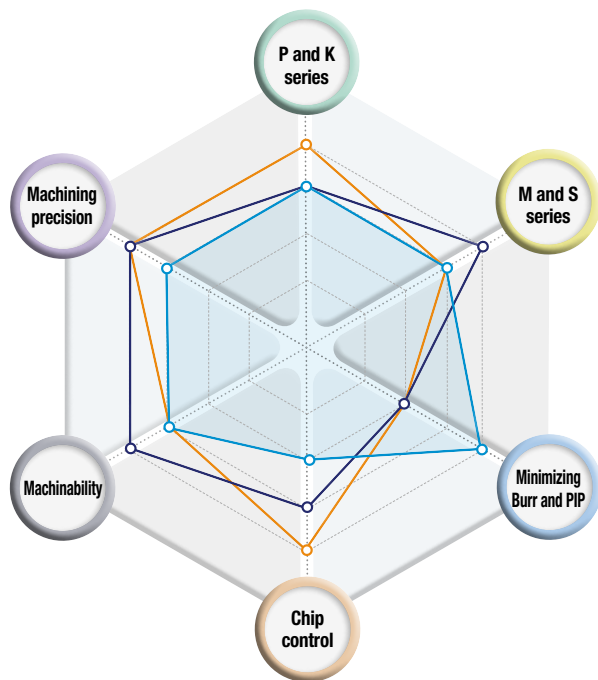


[Competitor]



Saw Man-X chip breakers selection guide

○ N Chip breaker
 ○ S Chip breaker
 ○ N Chip breaker (lead angle)



N Chip breaker

- Negative land applied cutting edge
- 1st recommended chip breaker for steel and cast iron
- Suitable for interrupted and high feed cutting



S Chip breaker New

- Sharp cutting edge
- 1st recommended chip breaker for stainless steel and HRSA cutting
- Suitable for continuous and high speed cutting


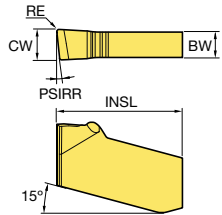


N Chip breaker (lead angle) New

- Lead angle and negative land applied cutting edge
- For parting off pipe and round bar
- Minimizing Burr and PIP size



Type	P and K series	M and S series	Minimizing Burr and PIP	Chip control	Machinability	Machining precision
N Chip breaker	★★★★	★★★	★★	★★★★	★★★	★★★★
S Chip breaker New	★★★	★★★★	★★	★★★	★★★★	★★★★
N Chip breaker (lead angle) New	★★★	★★★	★★★★	★★	★★★	★★★

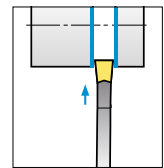
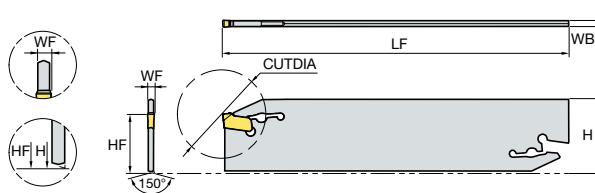
Picture	Designation	Coated			Dimensions (mm)					Geometries
		PC3035	PC5300	PC8110	CW	RE	INSL	PSIRR	BW	
	KSP 200R-6D-N	●	●	●	2.0	0.20	11.1	6°	1.6	
	200L-6D-N				2.0	0.20	11.1	6°	1.6	
	300R-6D-N	●	●	●	3.0	0.20	12.1	6°	2.5	
	300L-6D-N				3.0	0.20	12.1	6°	2.5	
	400R-4D-N	●	●	●	4.0	0.25	12.6	4°	3.3	
	400L-4D-N				4.0	0.25	12.6	4°	3.3	

●: Stock item

KSPB (Blade)



KSP



(mm)

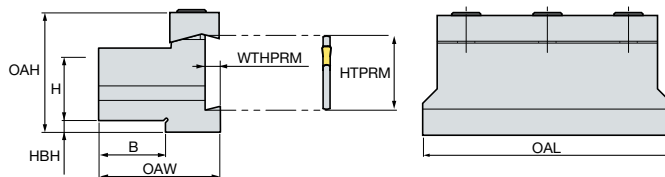
Designation	Stock	Cutting edge width	CUTDIA	H	WB	LF	HF	WF	Wrench
KSPB 2026	●	2	50	26	1.6	110	21	1.8	CW08
2032	●	2	52	32	1.6	150	25	1.8	
3026	●	3	72	26	2.4	110	21	2.7	
3032	●	3	120	32	2.4	150	25	2.7	
4026	●	4	72	26	3.2	110	21	3.6	
4032	●	4	120	32	3.2	150	25	3.6	

●: Stock item

SMBB (Block)



KSPB □□□□
 SPB □□□□ (-S)
 KGTB □□□□



(mm)

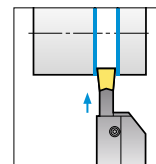
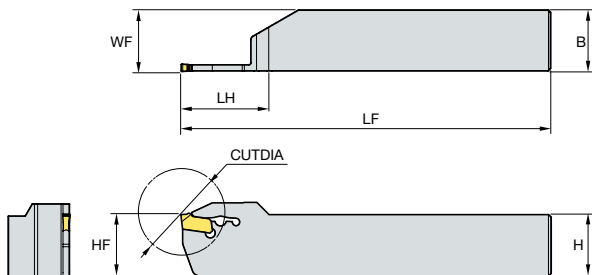
Designation	Stock	H	B	HTPRM	OAL	OAH	HBH	OAW	WTHPRM	Screw	Wrench
SMBB 1626	●	16	12	26	86	43	13	30	5.3	3-M6	HW50L
2026	●	20	19	26	86	43	9	38	5.3	3-M6	
2032	●	20	19	32	100	50	13	38	5.3	4-M6	
2526	●	25	23	26	86	43	4	42	5.3	4-M6	
2532	●	25	23	32	110	50	8	42	5.3	4-M6	
3232	●	32	30	32	110	54	5	48	5.3	4-M6	

●: Stock item

KSPH (Shank)




KSP



R type insert

(mm)

Designation	Stock		Cutting edge width	H=(HF)	B	LH	LF	CUTDIA	WF	Wrench 	
	R	L									
KSPH	216R/L		2	16	16	31	100	46	16.2	CW08	
	220R/L		2	20	20	32	120	48	20.2		
	225R/L	●		2	25	25	33	150	50		25.2
	316R/L			3	16	16	34	100	52		16.2
	320R/L	●		3	20	20	35	120	54		20.2
	325R/L	●		3	25	25	36	150	56		25.2
	420R/L	●		4	20	20	40	120	64		20.4
	425R/L	●		4	25	25	41	150	66		25.4

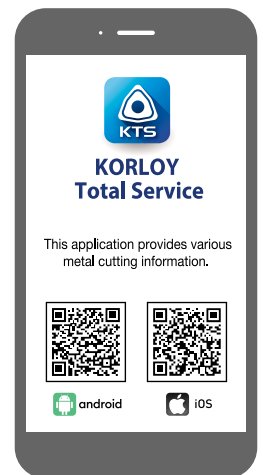
● : Stock item

For the safe metalcutting

- Use safety supplies such as protective gloves to prevent possible injury while touching the edge of tools.
- Use safety glasses or safety cover to hedge possible dangers. Inappropriate usage or excessive cutting condition may lead tool's breakage or even the fragment's scattering.
- Clamp the workpiece tightly enough to prevent its movement while its machining.
- Properly manage the tool change phase because the inordinately used tool can be easily broken under the excessive cutting load or severe wear, and it may threat the operator's safety.
- Use safety cover because chips evacuated during cutting are hot and sharp and may cause burns and cuts. To remove chips safely, stop machining, put on protective gloves, and use a hook or other tools.
- Prepare for fire prevention measures as the use of the non-water soluble cutting oil may cause fire.
- Use safety cover and other safety supplies because the spare parts or the inserts can be pulled out due to centrifugal force while high speed machining.



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