

Saw Man-X

S Chip Breaker

Inserts for stainless steel and HRSA grooving and parting off

- Excellent tool life by minimizing cutting load machining M and S materials with V shaped sharp cutting edge application
- Enhanced chip control and productivity by the high feed cutting optimized chip breaker application



Code system

Insert				
KSP	300	-	020	- S
KORLOY Saw Man-X Parting	Cutting edge width 200: 2 mm 300: 3 mm 400: 4 mm		Nose r 020: 0.2 mm 030: 0.3 mm	Chip breaker S: Sharp cutting edge 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

- Longer tool life when machining M and S materials by applying V-shape design and sharp edge
- Maximized chip evacuation function with the implementation of a concave structure and variable wave shape on the top surface of the insert
- Stable machinability due to 3-directional V-Rail clamping system

Variable wave shape on top surface

- Reduced chip width
- Preventing scratches on the workpieces

Rear bump

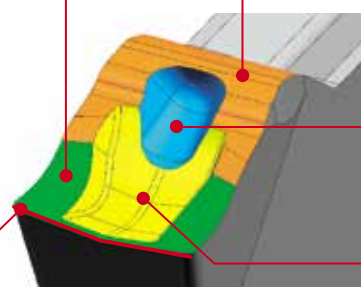
- Improved chip control on large diameter workpieces

Coolant path design

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

V-shaped cutting edge

- Good surface finish
- Enhanced machinability for M and S materials



Concave groove on the top surface

- Removing friction on the top surface
- Reduced chip width

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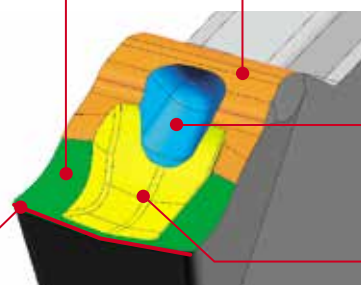
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Concave groove on the top surface

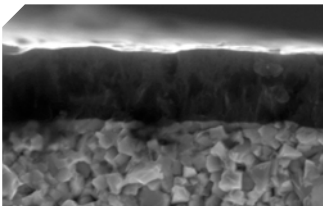
- Removing friction on the top surface
- Reduced chip width



Recommended cutting conditions

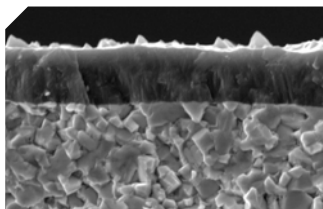
Workpiece				Specific cutting force Kc1 (N/mm ²)	Brinell hardness (HB)	Wear resistance ← • → Toughness		Grooving/parting
ISO	Workpiece materials	ISO (DIN)	AISI			High speed and continuous cutting	Low speed, interrupted and continuous cutting	
				Grade		C/B		
				PC8110	PC5300	S		
				vc(m/min)		fn(mm/rev)		
M	Austenitic	X5CrNi18-9 (X2CrNi19-11)	304	2000	180	80	60	0.20
						150	130	0.15
						180	160	0.06
		X5CrNiMo17-12-2	316	2000	180	80	60	0.20
						150	130	0.15
						180	160	0.06
S	Steel	-	Inconel909	2400	200	65	55	0.15
						80	70	0.10
						95	85	0.05
	Nikel	15156-3	Inconel625	2650	250	45	35	0.15
						60	50	0.10
						75	65	0.05
		9723	Inconel718	2900	350	30	25	0.15
						40	35	0.10
						50	45	0.05
	Titanium alloy	-	B265 (ASTM)	1300	400	45	35	0.15
						60	50	0.10
						75	65	0.05
5832-11		Ti-6Al-4V	1400	950	35	25	0.15	
					50	40	0.10	
						65	55	0.05

Grade features



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
- Exclusive grooving substrate with excellent fracture resistance and stable machinability



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

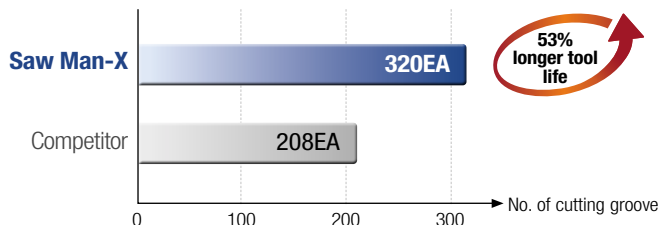
Workpiece	X5CrNi18-9(Ø100)
Cutting conditions	vc(m/min) = 120, fn(mm/rev) = 0.15, ap(mm) = 7. wet
Tools	Insert KSP300-02-S(PC5300) Holder KSPB3026



[Saw Man-X]

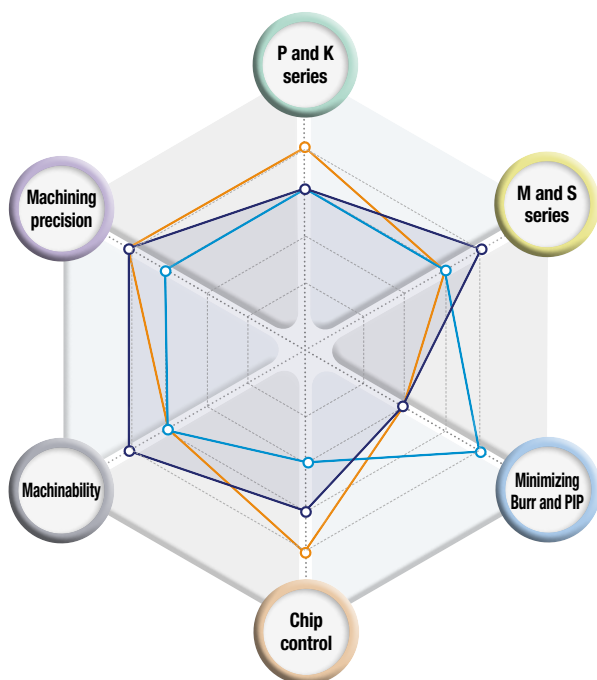


[Competitor]



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	★★★	★★★	★★★★★	★★	★★★	★★★

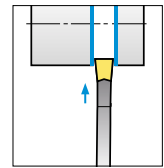
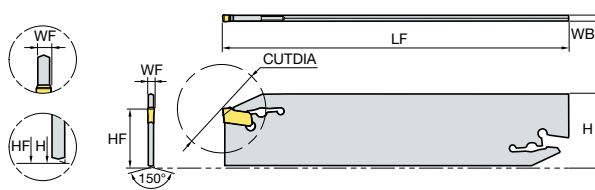
Picture	Designation	Coated			Dimensions (mm)				Geometries
		PC3035	PC5300	PC8110	CW	RE	INSL	BW	
	KSP 200-020-S	●	●		2.0	0.20	11.1	1.6	
	300-020-S	●	●		3.0	0.20	12.1	2.5	
	400-025-S	●	●		4.0	0.25	12.6	3.3	
	500-025-S	●	●		5.0	0.25	13.5	4.3	
	600-035-S	●	●		6.0	0.35	14.5	5.3	

●: Stock item

KSPB (Blade)



KSPB



(mm)

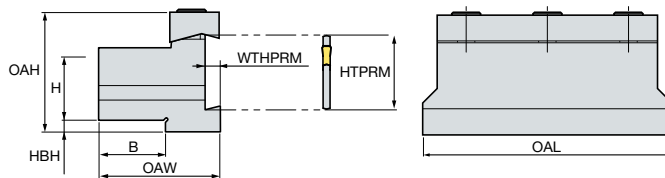
Designation	Stock	Cutting edge width	CUTDIA	H	WB	LF	HF	WF	Wrench
KSPB 2026	●	2	50	26	1.6	110	21	1.8	CW08
2032	●	2	52	32	1.6	150	25	1.8	
3026	●	3	72	26	2.4	110	21	2.7	
3032	●	3	120	32	2.4	150	25	2.7	
4026	●	4	72	26	3.2	110	21	3.6	
4032	●	4	120	32	3.2	150	25	3.6	
5026		5	80	26	4.0	110	21	4.5	CW10
5032	●	5	120	32	4.0	150	25	4.5	
6026		6	120	26	5.2	110	21	5.6	
6032	●	6	120	32	5.2	150	25	5.6	

●: 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	

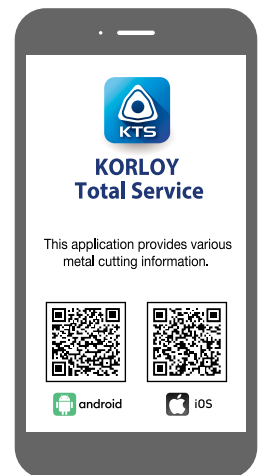
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For the safe metalcutting

- 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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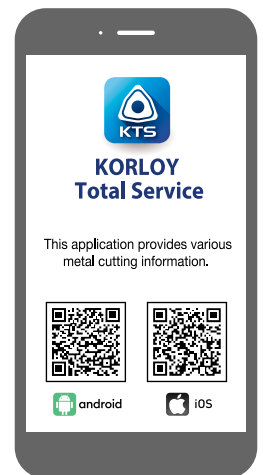


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