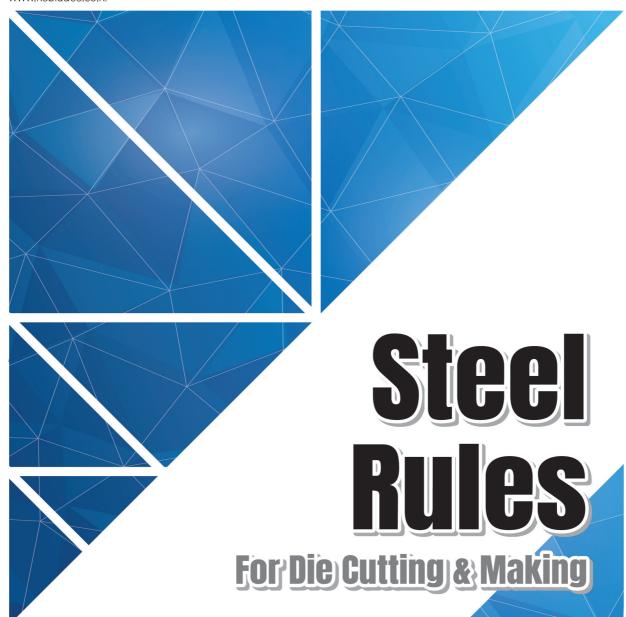
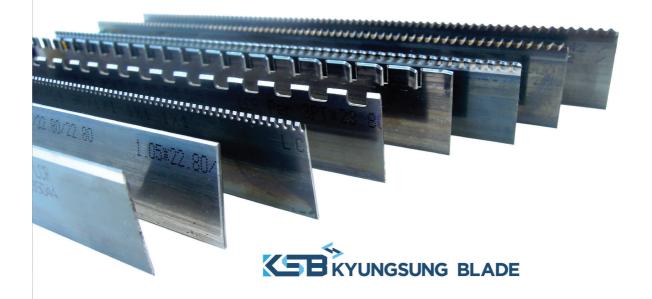
www.ksblades.co.kr























1980's

1989.05

Founded "Kyung Sung Precision Company"

2000's

2000.07

Commended as an Export Promising Superior Company by small and Medium Business Administration.

2002.03

Selected as a Specializing Enterprise of Parts Materials by Ministry of Commerce Industry and Energy

2006.01

"LCR" brand launching

2009.01

Obtained the patents with Special Grinding Machine and Cutting rule



2010's

2010.12

Moved to Asan Technovalley Industrial Complex (8314m2)

2013.08

Established Company Technologies Laboratory

2013.12

Technology Innovation Company (INO-BIZ) certificate

2014.01

Acquired ISO 9001 Quality Control System and 14001 Environmental System

2017.04

Root-tech specialized company designation

2017.09

Obtained the patent with Auto riveting system.



2010's

2018.08

Designated as a "Promising Small and Medium Enterprise in Export" by Republic of Korea.

2019.02

Applied for the patent with "Automotive riveting device".

2019.04

Applied for the patent with "Measuring apparatus and blade forming equipment using the same"

2019.11

Obtained Korean World-class Product Award 2019





The Perfect Solution for Die Cutting and Making

Best Quality Best Service Endless Development

The first-class Steel rules, Bread slicing blades, Bandsaw blades.











KSB Flat Steel Rules

LC> Cutting Rules

DUREX Series: Shaved Bevel & Edge-hardened Rules

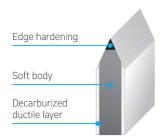
DUREX Series are the most commonly used rules with its ideal combination of hardness and flexibility 52 edge is standard.

42° angle requires less cutting pressure, gives a longer cutting life and reduces slivers and dust. Decarbonization provides good bendability. It is edge hardened from 54Rc to 60Rc to increase rule life. Available with shaved edges up to 50mm(1.968") high depending on thickness.

All DUREX series are designed perfectly for using with automatic bending equipment (Rule processor)

DUREX-S (DUREX52-SB1 / DUREX52-SB2)

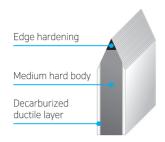
Has very good bendability, outstanding flexibility and durability. It's suitable for automatic bending machinery.



Hardness	Body 340HV (34HRC)	Edge 630HV(57HRC)
Thickness (pt/mm)	2pt/0.71mm , 3pt/1.05mm , 4pt/1.42mm	
Heights (mm)	2pt(15mm~30mm) , 3pt(15mm~30mm) , 4pt(23mm~40mm)	
Bevel Form	CF , CFDB	
Edge Angle	52° (Standard) / 42° (Option)	
Bendability	2pt(0.35R 130°)	/ 3pt(0.5R 120°)

DUREX-M (DUREX52-MB1 / DUREX52-MB2)

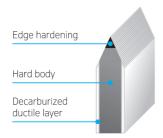
Excellent bending properties with long service life of an extra hard cutting edge.



Hardness	Body 370HV (38HRC)	Edge 630HV(57HRC)
Thickness (pt/mm)	2pt/0.71mm, 3pt/1.05mm, 4pt/1.42mm	
Heights (mm)	1.5pt(12mm~23.80mm) / 2pt(15mm~30mm) 3pt(15mm~50mm)	
Bevel Form	CF , CFDB	
Edge Angle	52° (Standard) / 42° (Option)	
Bendability	2pt(0.5R 120°) / 3pt(0.75R 120°)	

DUREX-H (DUREX52-HB1 / DUREX52-HB2)

Solution for resisting extra impact and for cutting hard plastics and other difficult materials.

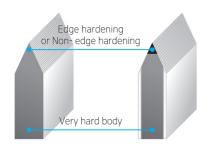


Hardness	Body 395HV (40HRC)	Edge 630HV(57HRC)
Thickness (pt/mm)	2pt/0.71mm, 3pt/1.05mm, 4pt/1.42mm	
Heights (mm)	1.5pt(12mm~23.80mm) / 2pt(15mm~30mm) 3pt(15mm~50mm)	
Bevel Form	CF , CFDB	
Edge Angle	52° (Standard) / 42° (Option)	
Bendability	2pt(0.75R 110°)	/ 3pt(1.0R 110°)

AMAX Series: Ground Bevel & Through-hardened or Edge-hardened Rules

Amax series are for straight work, slight bends and circular bends 1/8" diameter with AMAX55 and 1/4" diameter with AMAX65.

It is ideal for abrasive materials, gasket, rubber, leather, cork, felts etc.

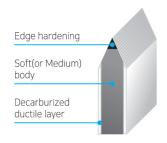


	AMAX55	AMAX65
Body Hardness	400HV (41HRC)	460HV (46HRC)
Edge Hardness	680HV((60HRC)
Thickness (pt/mm)	2pt/0.71mm	
Heights (mm)	23.30mm~23.80mm	
Bevel Form	CF, CFDB	, SF , SFDB
Edge Angle	52° (Standard) / 42° (Option)	
Bendability	1.5R 90°	3.0R 90°

FINE Series: Very Precise and Sharp Ground Rules

Very precise ground rule. Edge hardened to 54Rc on an excellent bendable body.

Fine is ideal for cutting labels, coated paperboard, thin plastics, gaskets, membrane switch, name plates, laminated folding cartons, etc.

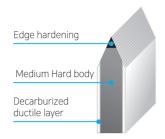


Hardness	Body 340HV(34HRC) 370HV (38HRC)	
	Edge 580HV(54HRC)	
Thickness (pt/mm)	1.5pt/0.53mm , 2pt/0.71mm , 3pt/1.05mm	
Heights (mm)	23.30mm~23.80mm	
Bevel Form	CF , CFDB , SF , SFDB	
Edge Angle	52° (Standard) / 42° (Option)	
Bendability	2pt(0.35R 120°) / 3pt(0.5R 120°)	

Label Rules

Very precise ground rule with extremely sharp cutting edge. It is optimized for all kinds of label, film, foils and parts in the electronic industry.

- -Very sharp cutting edge
- -Tight height tolerance
- -Super fine ground bevel
- -Perfect cutting performance

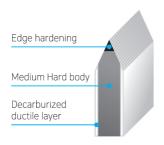


Hardness	Body 370HV(38HRC)	Edge 580HV(54HRC)
Thickness (pt/mm)	1.3pt/0.45mm	1.5pt/0.53mm
Heights (mm)	8.0mm~	12.00mm
Bevel Form	CF	
Edge Angle	42° (Standard)	
Bendability	0.35R 130°	

VF Series: Very sharp ground high rules

Very precise and sharp ground rule with excellent cutting performance.

A fine ground edge makes it an ideal rule for cutting more difficult and hard materials like gasket rubber, vacuum forming, carpet, car seat covers etc.



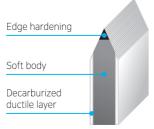
	2-1/4 05	(-1/4 (0)
	3pt(1.05mm)	4pt(1,42mm)
Hardness	Body 380HV(39HRC)	Body 360HV(37HRC)
naturiess	Edge 650HV(58HRC)	
Heights (mm)	30mm~50mm	30mm~40mm
Bevel Form	CF , CFDB , SF , SFDB	
Edge Angle	52° 42°	52°
Bendability	1.0R 110°	1.5R 90°

EZRA Series : The high-class shaved & ground rules

EZRA-P is the polished shaving rule and EZRA-G is extremely sharp ground rule.

EZRA is the next generation perfect cutting rules for excellent cutting performance with extreme bendability, super precision specification and long time press work.

- -Fantastic bendability
- -Exceedingly polished sharp edge
- -Absolutely increased knife lifetime
- -Significantly reducing cutting force
- -Preventing paper particulates
- -Cosmetic and Medical package
- -Laminated resin films
- -Metallized papers
- -Adhesive tape and parts



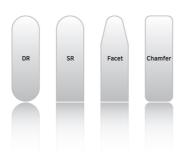
	EZRA-P	EZRA-G
Body Hardness	340HV (34HRC)	340HV(34HRC)
Edge Hardness	650HV(58HRC)	610HV(56HRC)
Thickness (pt/mm)	1.5pt/0.53mm	2pt/0.71mm
Heights (mm)	23.30mm~23.80mm	
Bevel Form	CF , CFDB , SF , SFDB	
Edge Angle	52° (Standard) / 42° (Option)	
Bendahility	0.35R 150°	0.35R 120°



LC> Creasing Rule

- -Perfect profile geometry and very tight height tolerance.
- -Precise radius and shape for perfect creasing.
- -Special dimensions are also available

Soft Creasing Rule: Non-hardened and Non-tempered creasing rules for normal package boxes. Hard Creasing Rule: Hardened and Tempered creasing rules for difficult materials to crease.



	Soft Creasing	Hard Creasing
Hardness	260HV(24HRC)	380HV(39HRC)
Thickness (mm)	2pt/0.71mm 3pt/1.	05mm 4pt/1.42mm
Heights (mm)	2pt(15mm~30mm)/3pt(15mr	m~50mm)/4pt(20mm~40mm)
Profile	DR , SR , Facet , Chamfer	
Color	White Metal	Dark Blue

Facet creasing

Body 2pt(0.71mm), Profile 1.5pt(0.53mm), Angle 52°

For the perfect creasing of high-value packaging like cosmetic, cigarette, medical etc.

Lc> Stripping Rule

- -For stripping at die cutting of high speed.
- -Flat with teeth stripping rule is recommended for Laminated or Coated papers.
- -LCR stripping rule is the optimum solution for perfect ejecting.





	Soft Stripping	Hard Stripping
Hardness	260HV(24HRC)	380HV(39HRC)
Thickness (mm)	3pt/1.	05mm
Heights (mm)	Soft (50mm/55mm) Ha	rd(30mm/40mm/50mm)
Profile	DR, SR, Flat with teeth	
Color	White Metal	Dark Blue

Lc> Spacing Rule

-LCR Spacing Rules are available in all common plywood sizes.



	Soft	Hard
Hardness	260HV(24HRC)	380HV(39HRC)
Thickness (mm)	1.3pt(0.45mm)	~4pt(1.42mm)
Heights (mm)	15mm ,17mm ,18mm , 20mm	
Profile	DR , SR , Chamfer	
Color	White Metal	Dark Blue

Perforating Rule -LCR Perforating Rules are available in any combination of gap and tooth with exact same pitches.



Hardness	340HV(34HRC), 370HV(38HRC), 395HV(40HRC)	
Thickness (mm)	1.3pt(0.45mm)~4pt(1.42mm)	
Heights (mm)	8.0mm~50mm	
Tooth & Gap	(0.5mm~20mm) X (0.5mm~20mm)	
Depth	2pt : 2.5mm(Standard) , Max 4.0mm	
Bevel	CF	

LC> Combination Cut-Crease Rule

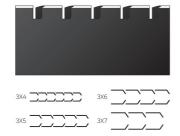
LCR Combination Cut-Crease Rules are available in any combination of Cut and Crease with exact same pitches.



Hardness 340HV(34HRC), 370HV(38HRC), 395HV(40HRC)			
Thickness (pt/mm)	2pt(0.71mm)~3pt(1.05mm)		
Heights (mm)	23.30mm~23.80mm		
Cut & Crease 5X5 , 6X6 , 7X7 , 8X8 , 10X10 etc			
Crease Height	22.00mm~23.60mm		
Bevel CF			

Lc> Zipper Rule

LCR Zipper Rules are used pairwise to tear off and open a box easily.

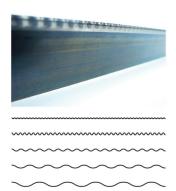


Hardness	Body 340HV(34HRC), 370HV(38HRC), 395HV(40HRC)
	Edge 630HV(57HRC)
Thickness (pt/mm)	2pt(0.71mm)~3pt(1.05mm)
Heights	23.30mm~23.80mm
Kerf.	3.0(3-4~3-12)
Bevel & Packaging	CF Pairs

L←**२** Wave Rule

LCR Wave Rules are available in a large range of popular pitches including special pitches produced to customer's specific requirements.

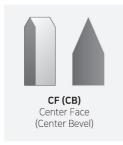
Note: The cutting edge is waved with a straight back.



Hardness	Body 340HV(34HRC), 370HV(38HRC), 395HV(40HRC)
	Edge 630HV(57HRC)
Thickness (pt/mm)	2pt(0.71mm)~3pt(1.05mm)
Heights	23.30mm ~ 23.80mm
Pitches	1P 2P 3P 4P 5P
Bevel & Packaging	CF CFDB / Coils or Bars

Flat Technical Information

Edge Profile & Angle









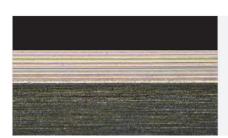








Bevel Surface and Characteristic



Shaved bevel

- Very high degree of accuracy and edge straightness as well as excellent bending properties.
- Longer life span than ground type.
- For the materials like Manila, corrugated boxes, all kinds of package.
- Less edge crack than ground type.



Ground bevel

- Good cutting results due to micro-teeth on the bevel.
- For the materials like plastics, rubber and laminate etc.
- The high sharpness and low friction reduce formation of dust and angel hairs.
- In comparison to the shaved execution, it has a slightly reduced bendability.

Dimension Tolerances

Hardness

All Rules: Body=±10HV(±1HRC), Edge=±20HV (±2HRC)

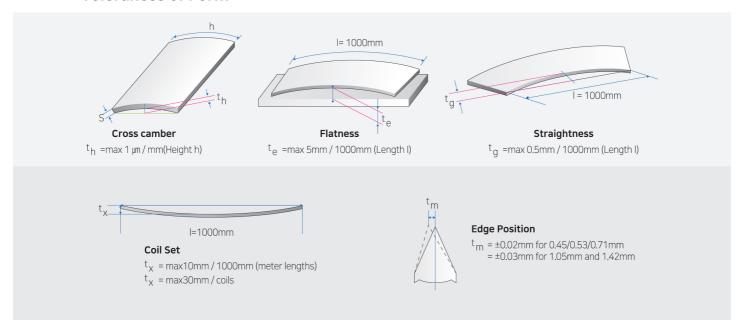
Thickness

	Thickness	Toler	ance	
pt	mm	inch	mm	inch
1.3	0.45	0.018"	±0.01	±0.0004"
1.5	0.53	0.021"	±0.01	±0.0004"
2.0	0.71	0.028"	±0.015	±0.0006"
3.0	1.05	0.041"	±0.015	±0.0006"
4.0	1.42	0.056"	±0.02	±0.0008"

Heights

DUREX &	~23.80mm	±0.02mm
AMAX Series	30mm~50mm	±0.025mm
EZRA-P	23.80mm	±0.01mm
EZRA-G	23.80mm	±0.01mm
FINE Series	23.80mm	±0.02mm
Label Rules	8.0mm~12.0mm	±0.01mm
VF Series	30mm~50mm	±0.025mm

Tolerances of Form



Packing Units

All rule Types (Except wave-edge rule, zipper rule, rotary rule)

	Thickness		Rule Heights							
			<15	5mm	15-2	7mm	28-3	5mm	36-5	0mm
pt	mm	inch	coil	pcs	coil	pcs	coil	pcs	coil	pcs
1.3	0.45	0.018"	130	100						
1.5	0.53	0.021"	130	85	130	130				
2.0	0.71	0.028"			100	100	100	100		
3.0	1.05	0.041"			70	70	60	60	50	50
4.0	1.42	0.056"			50	50	50	50	50	50

Wave Edge Rules

	Thickness	coil	pcs	
pt	mm	inch		
2.0	0.71	0.028"	70	70
3.0	1.05	0.041"	50	50

Zipper Edge Rules

	pcs		
pt	mm	inch	
2.0	0.71	0.028"	20 sets
3.0	1.05	0.041"	15 sets

Rotary Rules

Thickness			coil	pcs	curving
pt	mm	inch			
3.0	1.05	0.041"	70	70	50
4.0	1.42	0.056"	50	50	30

Coil Winding Directions



Conversion Table

	Hardness conversion							
	HV : Vickers Hardness HRC : Rockwell Hardness HS : Shore Hardness							
HS	HRC	HV	HS	HRC	HV	HS	HRC	HV
97	68	940	69	52	544	49	36	354
95	67	900	68	51	528	48	35	345
92	66	865	67	50	513	47	34	336
91	65	832	66	49	498	46	33	327
88	64	800	64	48	484	44	32	318
87	63	772	63	47	471	43	31	310
85	62	746	62	46	458	42	30	302
83	61	720	60	45	446	41	29	294
81	60	697	58	44	434	41	28	286
80	59	674	57	43	423	40	27	279
78	58	653	56	42	412	38	26	272
76	57	633	55	41	402	38	25	266
75	56	613	54	40	392	37	24	260
74	55	595	52	39	382	36	23	254
72	54	577	51	38	372	35	22	248
71	53	560	50	37	363	35	21	243

KSB Rotary Steel Rules

Lc> Rotary Cutting Rules

LCR Rotary cutting rule provides excellent advantages as below.

- -Reduces paper dust
- -Provides excellent anvil life
- -Superior bendability
- -Available standard or edge hardened rule
- -Excellent formability -Eliminates edge crush
- -Available in coils and strips.

Hardness	Body 340HV (34HRC) Edge 630HV(57HRC)			
Thickness (pt/mm)	3pt/1.05mm , 4pt/1.42mm			
Heights (mm)	3pt(23.30mm~40mm) 4pt(23.30mm~40mm)			
Pitch (TPI)	Point tooth/U-serrated : 10TPI, 12TPI			
	Point tooth/V-serrated: 8TPI, 10TPI, 12TPI			
	Round tooth/U-serrated : 8TPI, 10TPI			
	Point tooth/U-serrated(Side Bevel): 101	PI, 12TPI		
Bevel Form	CFDB SFDB			
Back Notching Type	SNN SN CNN CN			
Curvatures (mm)	Notched: Ф180mm~, No-Notched: Ф360mm~			

Point tooth / **U-serrated Type** (Including Clean-Cut, Side Bevel)





Round tooth / **U-serrated** (Euro-Cut) **Type**





Point tooth / V-serrated Type







Rotary Creasing Rules

- -Superior bendability
- -Excellent formability
- -Available in coils and strips.



Hardness	Body 340HV(34HRC)~370HV (38HRC)			
Thickness (pt/mm)	4pt/1.42mm			
Heights (mm) 4pt(21.00mm~40.00mm)				
Edge Profile Double Round / Single Round				
Back Notching Type SNN SN CNN CN				
Curvatures (mm) Notched: Ф180mm~, No-Notched: Ф360mm~				

Lc> Rotary Perforating Rules

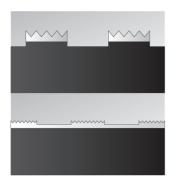
All other metric sizes as well as other dimensions are available as a special order.



Hardness	Body 340HV (34HRC)	Edge 630HV(57HRC)				
						
Thickness (pt/mm)	3pt/1.05mm, 4pt/1.42mm					
Heights (mm)	3pt(23.30mm~40mm)	4pt(23.30mm~40mm)				
Pitch (TPI)		serrated : 10TPI, 12TPI serrated : 8TPI, 10TPI, 12TPI				
Tooth & Gap (mm)	Tooth: 3mm~10mm	Gap:3mm~10mm				
Back Notching Type	SNN SN CNN CN					
Curvatures (mm)	Notched : Φ180mm~, No-Notched : Φ360mm~					

Rotary Combination Cut-Crease Rules

All other metric sizes as well as other dimensions are available as a special order.



Hardness	Body 340HV (34HRC)	Edge 630HV(57HRC)				
Thickness (pt/mm)	3pt/1.05mm, 4pt/1.42mm					
Heights (mm)	3pt(23.30mm~40mm)	4pt(23.30mm~40mm)				
Pitch (TPI)	Point tooth/U-serrated : 10TPI, 12TPI Point tooth/V-serrated : 8TPI, 10TPI, 12TPI					
Cut & Crease (mm)	Cut:3mm~10mm	Crease: 3mm~10mm				
Crease Height (mm)	According to requirement					
Back Notching Type	SNN SN CNN CN					
Curvatures (mm)	Notched : Φ180mm~, No-Notched : Φ360mm~					

LCR Rotary Technical Information

Steel Class: Carbon steel (S50CM) by POSCO in Korea

Rotary Cutting Rule

No.	Edge Shape and TPI	Edge Type	Bevel Form	Hardne	ess(HV)	Straight/	Notch
NO.	Euge Shape and TFI	Edge Shape and TPI Edge Type Bever Fort		Body	Edge	Curved	NOTCH
1			CLDD			Straight	No notched
2	U-serrated (10, 12TPI),	U-serrated (10, 12TPI), V-serrated (8, 10, 12TPI), Ground CFDB Euro-Cut (8, 10TPI)		340	560		Notched
3			CFUB	340	500	Curved	No notched
4						Curvea	Notched

No.	Standard	Standard	Standard S	pec. (mm)	Availab	ole Spec.
NO.	Packing(coil)	Curvatures	Thickness	Height	Height	Curvatures
1	50m		1.42 (4PT)	25.40 (1.0")	0.937"~1.030" 23.80~26.16mm	
2	50m		1.42 (4PT)	25.40 (1.0")	0.937"~1.030" 23.80~26.16mm	
3	30m	487mm	1.42 (4PT)	25.40 (1.0")	0.937"~1.030" 23.80~26.16mm	37_1/2 x 90 (257mm) 38 x 90 (279mm)
4	30m	487mm	1.42 (4PT)	25.40 (1.0")	0.937"~1.030" 23.80~26.16mm	50 x 90 (360mm) 66 x 90 (487mm)

▶ Other curvatures are available. Minimum Curvature is Ø180

Straight and Curved Type



SNNStraight No-Notched



SN Straight Notched(Parallel)



SNStraight Notched(Tapered)



CNNCurved No-Notched



CNCurved Notched(Parallel)



CNCurved Notched(Tapered)

Edge Shape and TPI



Point-Tooth /U-Serrated Type



Point-Tooth /V-Serrated Type



Round-Tooth /U-Serrated Type (Euro-Cut)

Rotary Creasing Rule

No.	Edge Round Type	Hardness (HV)	lardness (HV) Straight/ Notch		Standard Standard	Available Spec. (mm)					
NO.	Euge Round Type	naiuliess (nv)	Curved	Noteri	Packing	Curvatures	Thickness	Height	Curvatures		
1		2/0.270	340~370	Straight	No notched	50m		3pt/4pt (1.05/1.42)	0.787"~0.945" 20.00~24.00mm		
2	Double Round			270 270	3/0-270	Straight	Notched	50m		3pt/4pt (1.05/1.42)	0.787"~0.945" 20.00~24.00mm
3	Single Round	340~370		540*570	Curved	No notched	30m	487mm	3pt/4pt (1.05/1.42)	0.787"~0.945" 20.00~24.00mm	37_1/2 x 90 (257mm 38 x 90 (279mm)
4					Curveu	Notched	30m	487mm	3pt/4pt (1.05/1.42)	0.787"~0.945" 20.00~24.00mm	50 x 90 (360mm) 66 x 90 (487mm)

▶ Other curvatures are available. Minimum Curvature is Ø180

Rotary Perforating Rule

No.	Edge Shape and TPI	Edge Type Bevel Form Hardness(HV)		Straight / Curved	Notch	Standard									
NO.	Euge Shape and 171	Euge Type	bevei Form	Body	Edge	Straight / Curveu	Noteri	Pitch(mm)							
1						Straight	No notched								
2	U-serrated (10, 12TPI) V-serrated (10, 12TPI)	Ground	CFDB	CFDB	CFDB	CFDB 34	CFDB 34	CFDB 34	CFDB	340	340 560	560	Curved	No notched	3x3 6x6 10x10
3						Curved	Notched								

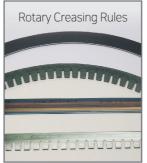
No.	Standard	Standard		Available 9	Spec. (mm)	
NO.	Packing	Curvatures	Thickness	Height	Curvatures	Pitch
1	50m		3pt/4pt (1.05/1.42)	0.937"~1.039" 23.80~26.40mm		
2	30m	487m	3pt/4pt (1.05/1.42)	0.937"~1.039" 23.80~26.40mm	37_1/2 x 90 (257mm) 38 x 90 (279mm)	3x3~10x10
3	30m	487m	3pt/4pt (1.05/1.42)	0.937"~1.039" 23.80~26.40mm	50 x 90 (360mm) 66 x 90 (487mm)	

▶ Other curvatures are available. Minimum Curvature is Ø180

Rotary Steel Rules









Flat Steel Rules

























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Die Punch

High Quality Punch for Die Mould



ITEM	Size (φ)	interval (mm)	Thickness (mm)	Height (mm)	Hardness (HRC)
Side Ejection	2.0~10.0	0.5mm	3	23.30~23.80	53
Round punch	1.0~20.0	0.5mm	1.0	23.30~23.80	55
Spring punch	2.0~10.0	0.5mm	1.0	23.30~23.80	53

^{*} Other kinds of thickness, height and hardness are available.

Tray Sealing Knife

For all types of sealing machines. We can make serrated tray sealer knife to suit all tray sizes and configurations with best prices.



Thickness (mm)	0.5 ~ 1.4
Width (mm)	MAX 60
Raw Material	Stainless Steel

