

**PRODUCT TOLERANCES**

Height tolerance	±0.020 mm
Straightness	Max 0.10 mm/0.5 m length
Camber/Dish	Max 0.10% of height
Coil set	Max 5 mm/1 m length
Twist	Max 0.5 mm/1 m length

HSS Die-Cutting rules are normally only 2pt, 3pt and 4pt

**THICKNESS TOLERANCES**

Thickness	Thickness	Thickness
0.71	2	±0.015
1.05	3	±0.020
1.42	4	±0.028

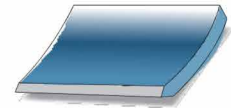
**Straightness**

Deviation from a straight line – peak height maximum ±0.10 mm in 0.5 m lengths.



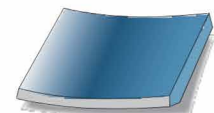
**Camber or Dish**

Maximum unflatness 0.10% of the height



**Coil Set**

Deviation from straight line – maximum peak height 5 mm/1 m for cut length and 10 mm/1 m for coils.



**Twist**

Maximum 0.5 mm in 1 m lengths.



THICKNESS/ HEIGHT MM			2 PT				3 PT		4 PT	
	PACK QUANTITIES (METERS)									
			COILS	LENGTHS	COILS	LENGTHS	COILS	LENGTHS	COILS	LENGTHS
≤23.80	-	-	100	100	-	-	50	60	50	50
30	-	-	-	-	-	-	50	50	-	-
31.75	-	-	-	-	-	-	50	50	-	-
32.00	-	-	-	-	-	-	50	-	-	-
38.10	-	-	-	-	-	-	50	25	-	-
40	-	-	-	-	-	-	50	25	-	-
50	-	-	-	-	-	-	50	25	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-



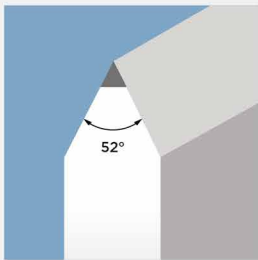
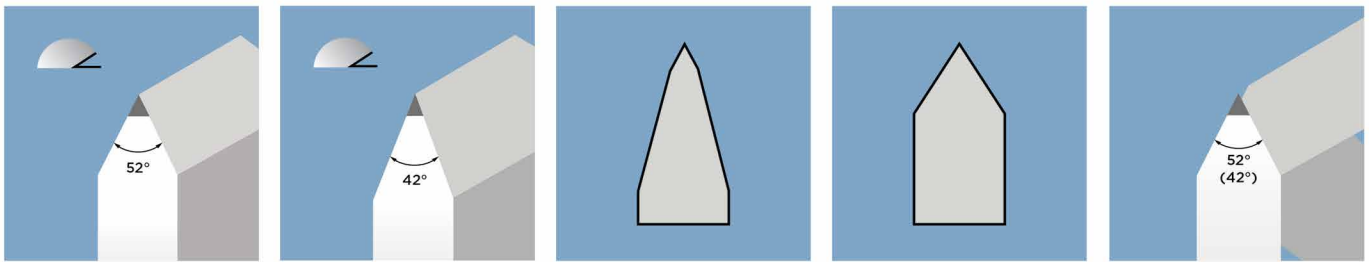
Anti-clockwise wound



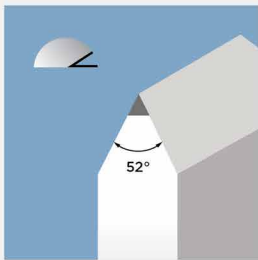
Clockwise wound

**Straight Pack:** Containing 1 meter cut length rules, the straight packs have a tear cap allowing ease of access to the rules, while providing safe rule storage.

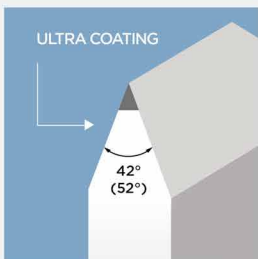
**Coil Pack:** Non-dispensing coil packs contain rules in either anti-clockwise wound or clockwise wound formats to ideally suit individual types of automated bending machines.



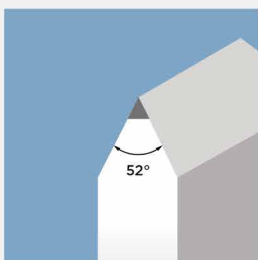
**NON EDGE HARDENED**  
A broad range of standard multi-purpose cutting rules. these cutting rules are available in a range of body hardnesses which are ideal for shorter runs.



**EDGE HARDENED**  
The ideal combination of edge hardness and flexibility for diecutting a wide range of materials. The well controlled decarburisation allows a 2 point rule to be bent to a maximum of 150°.



**COATED EDGE**  
Available with both 42° and 52° edge, its friction reducing coating gives easier penetration into the substrate. The cutting edge remains sharper longer. Gives considerable make-ready advantages; such as costly downtime, reduces slivers and dust.



**SCORING RULE**  
With our precise manufacturing capabilities we can offer a variety of heights, maintaining good bendability without compromising the integrity of the material. Performs well on shorter and medium runs.

Point sizes:	2, 3, and 4.
Heights:	Up to 50mm.
Availability:	Coils and metre lengths.
Applications:	Ideal for shorter runs on a broad range of carton and corrugated box work.

Point sizes:	2, 3 and 4.
Heights:	Up to 23.80mm.
Availability:	Coils and metre lengths.
Applications:	For solid and corrugated box work and all commonly used substrates. The main benefit with edge hardened rule, is the durability for longer runs.

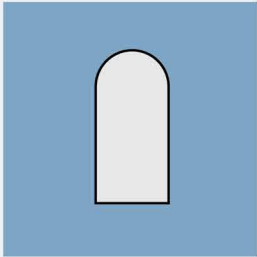
Point sizes:	2, 3 and 4.
Heights:	Up to 23.80mm.
Availability:	Coils and metre lengths.
Applications:	A rule for solid and corrugated box work. Ideally suited to food, pharmaceutical and medical packaging. For longer runs and reduced swarf contamination.

Point sizes:	2, 3 and 4.
Heights:	Up to 50mm.
Availability:	Coils and metre lengths.
Applications:	Used to score the box work rather than cut through it. Premium material used with 52° cutting edge.



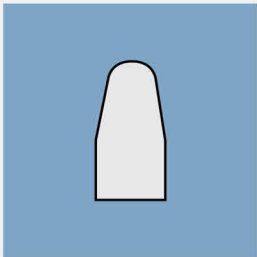
**Harborough Strip Steel Limited**  
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**ROUND PROFILE**

A fine 'wrap-around' profile, eliminates any tendency of board cracking caused by 'shoulders' in creasing rules with a flatter profile. The thickness is precisely compatible with our cutting rules.



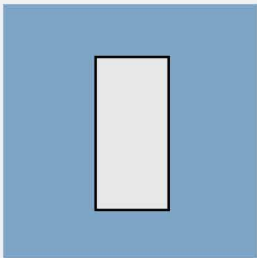
**SPECIAL PROFILE**

A creasing rule that allows reduced size head to be used for tighter, smaller creases without having to change the cut or profile on the die board. The tip of the creasing rule is thinner than the body but the body rigidity is maintained.

Point sizes:	2, 3, and 4.
Heights:	Up to 50mm.
Availability:	Coils and metre lengths.
Applications:	A selection of creasing rules for all substrates. Our manufacturing capabilities can offer any height creasing rule in increments of 0.05mm

Point sizes:	2, 3, and 4. Various head sizes.
Heights:	Up to 50mm.
Availability:	Coils and metre lengths.
Applications:	Ideal for intricate box work designs and where tighter creasing is required in restricted areas.

**Stripping Rules**



**FLAT**

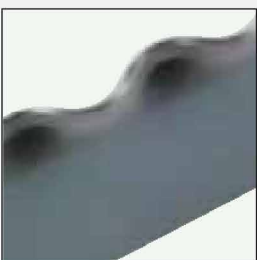
Flat stripping rule is used for conventional applications.

Point sizes:	2, 3 and 4.
Heights:	Up to 50 mm.
Availability:	Coils and metre lengths.
Applications:	Stripping dies for autoplaten machines.



**SPEED**

Speed stripping rule with spikes, is used for gripping and ejecting waste material at extremely high speeds.

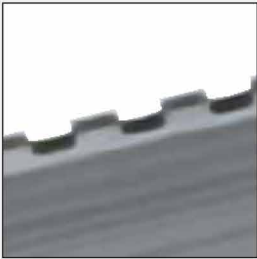


**WAVE EDGE**

Wave Edge rule is used for wider area stripping such as slots.







**PERFORATING**

Available in any tooth and gap configuration with a standard gap relief depth of 3mm. Other gap relief depths can also be manufactured. Precise manufacturing to eliminate burrs which avoids damage to the substrate and gives faster, cleaner running.



**MICRO PERFORATING**

High precision rules made from edge hardened steel with extremely close cut and gap ratios. They are available in shallow (250 micron) Popular pitches include; 30, 50, andm 70 teeth per inch (TPI).



**CUT-CREASE**

Using special tooling to eliminate burrs on the crease height to achieve a clean edge. It is available in any cut and crease height where there is a requirement for the box work to fold easily. It is also used as a reverse crease, aiding the reduction of material stress.



**GLUE FLAP PERFORATING**

Glue flap perforating rule is a 2 x 2 point perforating rule waved to create a 'serpent' profile, that partially penetrates the substrate surface providing a 'key' for effective adhesion. 2 x 4 point and specials are available to suit specific applications.

Point sizes:	2, 3, and 4.
Heights:	Up to 50mm.
Availability:	Coils and metre lengths.
Applications:	Tear off labels, removable panels on paper, corrugated and solid board.

Point sizes:	2 and 3.
Heights:	Up to 50mm.
Availability:	Coils and metre lengths.
Applications:	Business forms, easy tear and fold applications e.g computer printer paper, cheque books and CD inserts.

Point sizes:	2, 3 and 4.
Heights:	Up to 50mm.
Availability:	Coils and metre lengths.
Applications:	Close ratio creasing e.g. gulleys.

Point sizes:	2, and 3
Heights:	Up to 50mm.
Availability:	Coils and metre lengths.
Applications:	Glue flap panels.

Edge hardened wave rules offer excellent bendability and high wear resistance. Special wave profiles can be produced to customer's specific requirements.



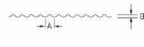

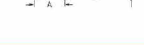

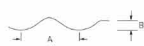





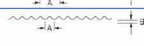
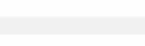




Edge Wave



Full body Wave

Point sizes:	2, 3 and 4.
Heights:	Up to 50mm.
Availability:	Coils and metre lengths.
Applications:	For better creasing in corrugated and fibre boards.

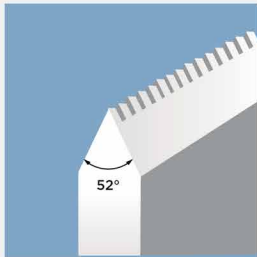
**Wave Rules**

	Pitch (A)	Depth (B)	
	Extra Super Fine	2.0mm	0.5mm
	Super Fine (2pt only)	2.0mm	0.58mm
	Extra Fine	3.2mm	0.65mm
	Fine	4.8mm	0.80mm
	Medium	6.4mm	1.25mm
	Medium Large	7mm	1.25mm
	Large (full body wave)	12.5mm	2.0mm
	Extra Large (full body wave)	19mm	3.7mm
	Tsunami (full body wave)	24mm	8.0mm
	Deckle Edge	N/A	1.30mm max
	Shallow Deckle	N/A	0.70mm max
	Double Deckle	N/A	1.30mm max
	Fine Scalloped	5mm	0.9mm
	Medium Scalloped	7mm	1.0mm
	Ocean	4.0mm	0.6mm
	Zig Zag (full body wave)	24mm	8.0mm



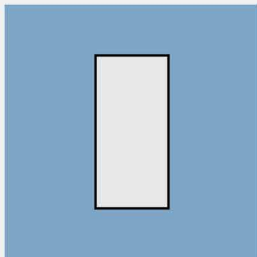
**HAND HOLE PERFORATING**

This rule is available in left and right hand configurations to create top or side access panels. Special hand hole perforating rules can also be manufactured to customers specific requirements. High precision rules made from edge hardened steel.



**PLASTIC CREASE**

An innovative solution, designed exclusively for creasing of plastic materials. High quality crease on plastics and cost effective at the same time. The very fine microteeth give an extremely smooth crease.



**SPACING RULE**

This is a medium hard grade spacing rule with flat edges used for a number of applications. All our stripping rules have great bendability and are available in any size to suit the customers needs

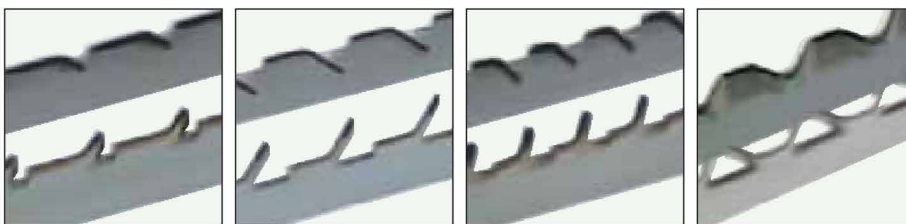
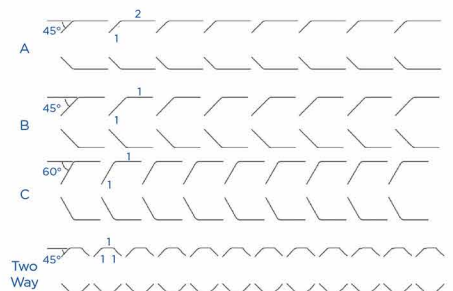
Point sizes:	2, 3 and 4.
Heights:	Up to 50mm.
Availability:	Coils and metre lengths.
Applications:	Where fast, easy access to the product is required shelf ready packaging (SRP), point of sale packaging (POS). Other application include i.e. tissue boxes, confectionery boxes and tea bag cartons.

Point sizes:	2, and 3.
Heights:	Up to 50mm.
Availability:	Coils and metre lengths.
Applications:	Predominately used for plastic box work. Added attributes include; fine microteeth on the edge, close height and depth tolerances and high precision rules made from edge hardened steel..

Point sizes:	2, 3 and 4.
Heights:	Up to 50mm (3pt only) 10mm to 20mm standard range in all thicknesses
Hardness:	380HV (39 HRC).
Availability:	Coils and metre lengths.
Applications:	A selection of spacing rules for all substrates

**Zipper Rule**

A high precision rule made from edge hardened steel, which is precisely manufactured with accurate pitches, constant slit depth and clean edges to avoid any 'drag'. The different asymmetrical shapes shown on the right, are used in a left and right hand combination. There are three standard zipper rules, types A, B and C. A two way symmetrical alternative eliminates the need for left and right versions. By varying the required length ratios indicated on the right, different configurations can be achieved.



A B C Two Way

Point sizes:	2, 3 and 4.
Heights:	Up to 50mm.
Availability:	Coils and metre lengths.
Applications:	Used to create a tear strip on cartons to access the product.