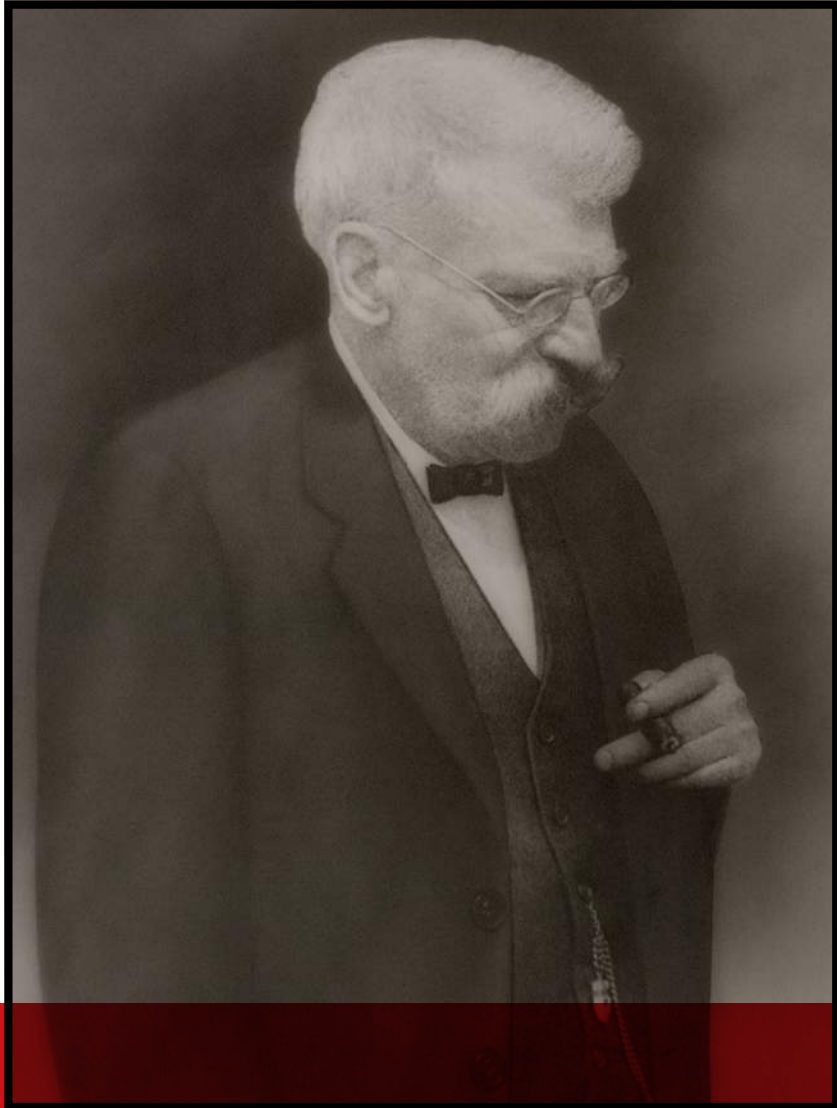


TRADITION CONTINUES...

A century of innovation, quality and expertise

Whether you're new to the die room or have made dies for years, Helmold is a valuable resource for your business. We've been around since 1881, serving customers who use steel rule to make many different products, including: folding cartons; corrugated containers; soft gaskets; automotive parts; various plastic items; and many graphic art products such as business forms, displays, greeting cards and labels.



Julius Helmold 1850–1920

TABLE OF CONTENTS

Company	Pages 4–5
Service & Benefits	Pages 6–9
Cutting Rules	Pages 10–19
Special Rules	Pages 20–29
Contact	Pages 30–31

IN BEST POSITION TO SERVE YOUR NEEDS



The “New Helmold” is now part of a power trio of steel rule brands including “bohlerstrip, and Martin Miller” since the 2006 acquisition by voestalpine Precision Strip LLC of Austria. Together, the group is now the world market leader for flatbed cutting rules. On the one hand, Helmold benefits from the strip steel production know-how, and on the other hand, from the finest raw material available. Since belonging to the group, Helmold has increased product development and has

furthermore invested in new production lines for special steel rule applications in Elk Grove, near Chicago IL. Today, Helmold is the specialist for high customer requirements when it comes to unique packaging applications. To better serve the North American market sales, warehouse and production functions, have been centralized to offer best application consulting in combination with tailor-made steel rule products and our well-known die-making equipment.



The Helmold team

consists of experienced technicians with long-time experience in the die-making industry and specialists for the production of high quality strip steel products. This enables the team to understand the requirements of the market and implement this knowledge into new products. To ensure these resources reach our customers we have long term partnerships with the most important steel rule distributors across North America.

**SERVICE CULTURE
BENEFITS**

SERVICE



GOOD SERVICE RIGHT DOWN TO THE LAST DETAIL

The availability of our steel rule products is mainly due to our well-equipped warehouse and the excellent partnerships with our domestic distributors allowing us very short response times. Standard products are available for shipping one day after ordering. This provides our customers with a very flexible and secure situation to serve their customers. For special products or

custom-made modifications we ensure a delivery time within ten days, often quicker. We work with the most modern state-of-the-art production lines, especially in cutting, hardening and grinding of strip steel products. The high availability of our steel rules also has a big impact on the lot size and gives you the advantage of ordering just in time inventory.



Production possibilities for custom-made steel rule products:

- height reduction of steel rules
- bevel sharpening
- edge hardening
- perforating, punching for various increments of notching or spacing.
- cut to length
- different coiling directions and inside diameters
- available coatings via outside vendors ie. teflon and tin-coated cutting edge
- OEM blades for custom use



SEVEN FUNDAMENTAL FUNCTIONS

HELMOLD 65 ULTRAFLEX

HELMOLD 70

HELMOLD 80

HELMOLD 85

HELMOLD LAZER BLADE

HELMOLD LAZER BLADE D

HELMOLD LAZER BLADE H

HELMOLD LAZER BLADE HD

CUTTING RULES



SEVEN FUNDAMENTAL FUNCTIONS



All your needs from one hand.

Helmold offers a wide range of products for nearly every application for the die-cutting industry. It is your advantage to get all your flat rule cutting products from our totally integrated group. As pioneers in the world of rules, we developed and were the first to produce cutting, creasing, perforating, zipper and wave rules. Today, we offer many additional types of rules including laser creasing rule, and combination cut and crease rule.



1. **Cutting rule** is designed to cleanly cut through the material being processed.
2. **Perforating rule** is designed to make alternate cuts in paper so that the material can be cleanly separated. This is widely used in the production of business forms.
3. **Creasing rule** is used to make a crease or score in material to create a flexible bend without the material cracking.
4. **Combination Cut and Crease rule** is used when it is necessary for an alternate cut and crease to be used to assist in the folding of a carton or box.
5. **Narrow top** is unique in that the face is thinner than the body, which produces a finer bead without a major change in die construction kerf.
6. **Wave rule** has a more specialized application. It is used for design effect in making greeting cards and novelties as well as many other products. Helmold has developed a special wave rule with a slot in the center that is used as a tear strip for carton applications.
7. **Zipper** or **Tear Edge rule** was developed by Helmold to produce a tear strip in cartons and corrugated boxes. This rule is available in over fifteen standard styles.

FLATBED CUTTING RULES

Our special edge hardening equipment allows us to offer Lazer Blade cutting rules with very precise edge hardness up to 58 RC. Furthermore, Helmold offers through-hardened cutting and creasing rule ideal for economically priced die-cutting jobs.

Through-hardened cutting rules

Economical and stabile version of steel rules for rough application due to high body and edge hardness.

Helmold 65 Ultraflex

body/edge hardness 45 RC

Helmold 70

body/edge hardness 50 RC

Helmold 80

body/edge hardness 54 RC

Helmold 85

body/edge hardness 58 RC

Edge hardened cutting rules

High rule and die-life due to extreme hard cutting edge in combination with a soft body hardness for optimized working on automatic bending machines.

Helmold Lazer Blade

body hardness 34 RC

edge hardness 57 RC

Helmold Lazer Blade H

body hardness 45 RC

edge hardness 57 RC

Deep edge hardened cutting rules

This rules offer highest stability on the cutting edge and longest tool life time especially when cutting rigid and abrasive materials.

Helmold Lazer Blade D

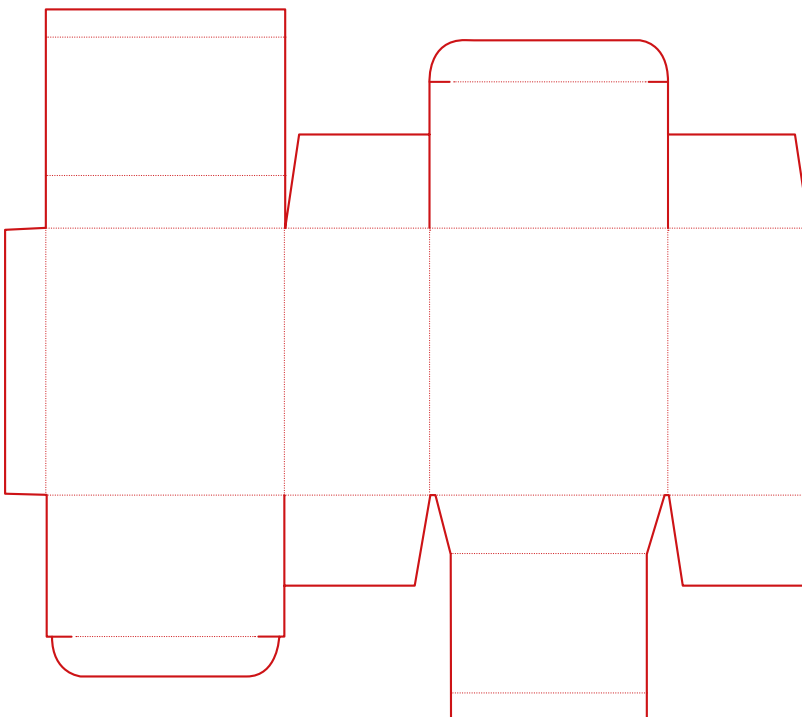
body hardness 34 RC

edge hardness 57 RC

Helmold Lazer Blade HD







body hardness 45 RC

edge hardness 57 RC



Choosing a Bevel

Today there are many more styles of bevels available. We still offer a standard Helmold bevel of 60°, but our new 2 pt. shaved edge rule with a more acute angle of 53° or 42° (available in center face and center face long bevel style) requires less pressure when die cutting. We offer the following styles:

						
	CFB	CFLB	FB	MBB	SFB	SFLB
Ground (GE)	•	•			•	•
Shaved (SE)	•	•			•	•
60°	•	•			•	•
53°	•	•			•	
42°	•	•			•	
Distance (d)			.002	.004	.007	

Ground bevels only available in 60°

Primary angle is shaved, secondary angle maybe ground or shaved



CFB Center Face Bevel which is located in the center of the rule thickness;

CFLB Center Face Long Bevel which is used to help minimize press pressure when cutting thick material;
1/8" SE or GE
3/16" or 1/4" GE only

FB Flush Bevel

MBB Minimum Back Bevel

SFB Side Face Bevel which is located close to one side (usually 0.005" to 0.008" from one side of the rule, but also available for limited application with the bevel 0.003" to 0.005" from one side of the rule);

SFLB Side Face Long Bevel also used to minimize press pressure when cutting thick material, this bevel creates a cleaner cut with less crush on the finished material.

Choosing a Quality

Helmold is committed to meeting or exceeding all IADD specifications. Every foot of rule is continuously laser-checked for the highest accuracy: during processing, and then again during packaging. Because our quality control process is so advanced, we are able to offer an "Ultra-Precise" grade shaved rule with a height tolerance of ± 0.0008 ".



Point	Thickness	Feet/Box	Weight/Box	Feet/Coil	Weight/Coil
1 pt	.014	500	22.9lb	600	26.8lb
1 ½ pt	.021	335	22.9lb	400	27.5lb
2 pt	.028	250	22.9lb	300	27.5lb
3 pt	.042	165	22.9lb	200	27.5lb
4 pt	.056	125	23.5lb	150	27.5lb
6 pt	.084	85	23.5lb	N.A.	N.A.

Quantity in feet (.937 Height)

FLATBED CUTTING RULES

Helmold 65 Ultraflex

Ultraflex is a through-hardened cutting rule with the same body and edge hardness. This rule offers good life and is our all-purpose, recommended utility rule.



Body Hardness	45 RC
Bendability	Will take an .016-R/2 point
Thickness	1.5 pt / 2 pt / 3 pt / 4 pt
Heights	.375" thru 2.000"
Bevel Finish	Shaved edge in 42°, 53° and 60°
	Buffed edge in 42°, 53° and 60°
	Ground edge in 42° and 53°, .500" thru 2.000"
Bevel Angles	42°, 53°, 60°

Helmold 70

Helmold 70 is a through-hardened cutting rule that offers increased beam strength yielding improved cutting life for the packaging industry. This product would be classified as a hard rule resulting in longer durability for more abrasive cutting situations.



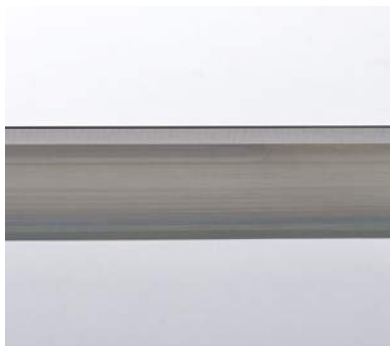
Body Hardness	Body 50 RC
Bendability	~.067 R
Thickness	2 pt
Heights	.250" thru .975"
Bevel Finish	Shaved edge in 42°, 53° and 60°, .250" thru .975"
	Buffed edge in 42°, 53° and 60°
	and 60°, .500" thru .937"
Bevel Angles	42°, 53°, 60°

Body Hardness	Body 50 RC
Bendability	~.067 R
Thickness	3 pt
Heights	.250" thru .500"
Bevel Finish	Shaved edge in 42°, 53° and 60°, .250" thru .975"
	Buffed edge in 42°, 53° and 60°
	and 60°, .500" thru .937"
Bevel Angles	42°, 53°, 60°

Body Hardness	Body 50 RC
Bendability	~.067 R
Thickness	4 pt
Heights	.500" thru 1.250"
Bevel Finish	Shaved edge in 42°, 53° and 60°
	Buffed edge in 42°, 53° and 60°
	and 60°
Bevel Angles	42°, 53°, 60°

Helmold 80 – extra hard

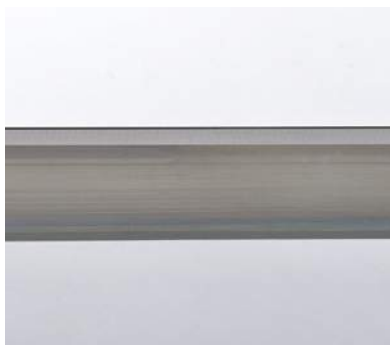
Helmold 80 recommended usage is for applications which require very high beam strength for straight use only. There is an 80S and 80M available for applications that require long life and improved bendability.



Body Hardness	Body 54 RC
Bendability	Straight work only
Thickness	2 pt
Heights	.500" thru .937"
Bevel Finish	Shaved edge in 60°
	Buffed edge in 60°
	Ground edge in 60°
Bevel Angles	60°

Helmold 85 – very hard

Helmold 85 rule would be for straight work only and for the most extreme wear applications.

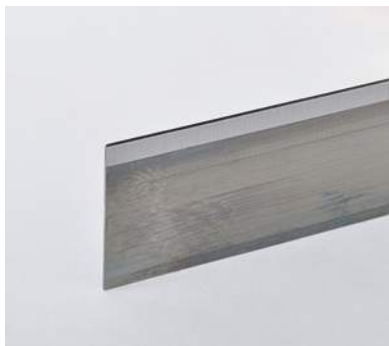


Body Hardness	Body 58 RC
Bendability	Straight work only
Thickness	2 pt
Heights	.500" thru .937"
Bevel Finish	Ground edge in 60°
Bevel Angles	60°

FLATBED CUTTING RULES

Helmold Lazer Blade

Lazer Blade is an edge hardened rule that offers a softer body with a hardened-edge making this very attractive for many applications. This would be commonly used in packaging, folding carton and kiss-cut applications.



Body Hardness	Body 34 RC + Edge 57 RC
Bendability	Will take an .012 R/2 point
Thickness	1.5 pt / 2 pt / 3 pt / 4 pt
Heights	.500" thru .937"
Bevel Finish	Shaved edge in 42°, 53° and 60°
	Buffed edge in 42°, 53° and 60°
	Ground edge in 60°
Bevel Angles	42°, 53°, 60°

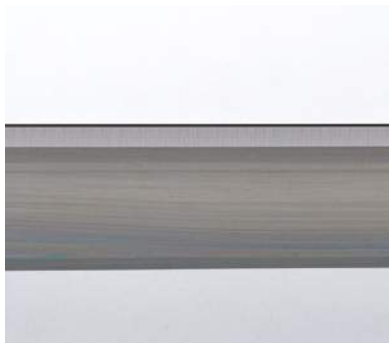
Helmold Lazer Blade D

Lazer Blade D has all the characteristics of Lazer Blade and extra deeded edge hardening.

Body Hardness	Body 34 RC + Edge 57 RC
Bendability	Will take an .012 R/2 point
Thickness	1.5 pt / 2 pt / 3 pt / 4 pt
Heights	.500" thru .937"
Bevel Finish	Shaved edge in 42°, 53° and 60°
	Buffed edge in 42°, 53° and 60°
	Ground edge in 60°
Bevel Angles	42°, 53°, 60°

Helmold Lazer Blade H

Lazer Blade H has all the characteristics of Lazer Blade with increased body hardness for more durable and abrasive applications.



Body Hardness	Body 45 RC + Edge 57 RC
Bendability	Will take an .016 R/2 point
Thickness	2 pt / 3 pt / 4 pt
Heights	.500" thru 2.000"
Bevel Finish	Shaved edge in 42°, 53° and 60°
	Buffed edge in 42°, 53° and 60°
	Ground edge in 42°, 53° and 60°
Bevel Angles	42°, 53°, 60°

Helmold Lazer Blade HD

Lazer Blade HD has all the characteristics of Lazer Blade H and extra deep edge hardening.

Body Hardness	Body 45 RC + Edge 57 RC
Bendability	Will take an .016 R/2 point
Thickness	2 pt / 3 pt / 4 pt
Heights	.500" thru 2.000"
Bevel Finish	Shaved edge in 42°, 53° and 60°
	Buffed edge in 42°, 53° and 60°
	Ground edge in 60°
Bevel Angles	42°, 53°, 60°

Choosing a Temper

According to thickness and hardness there are different possibilities in achieving the required bending radius. For a complete overview see the data sheet with the possible angels and radius of all Helmold steel qualities.

Description	Bend (Die Test)				
	1 pt.	1 ½ pt.	2 pt.	3 pt.	4 pt.
Helmold 65 Ultraflex		#X3M #X3F	#X3M #X3F	#1M #1F	
Helmold 70			#X3M #X3F		
Helmold 80 – extra hard Helmold 85 – very hard			#2M #2F		
Helmold Lazer Blade Helmold Lazer Blade D	#2M #2F	#2M #2F	#UT14 #2F	#21M #2F	#23M
Helmold Lazer Blade H Helmold Lazer Blade HD		#21M #21F	#21M #21F	#22M #25F	#25M #17F
			#22M #22F	#24M #17F	#18M #17F
			#23M #23F		
			Straight work only	Straight work only	

Note: Bends shown are from actual impressions of bent rule, but are not actual size here.



COMBINATION CUT AND CREASE RULES

PERFORATING RULES

WAVE RULES

STEEL SPACING LEADS

TEAR EDGE RULES (ZIPPER RULES)

CREASING RULES

HELMOLD CREASING RULE

REVERSE LASER CREASE

SPECIAL RULES



SPECIAL RULES



For the majority of packaging solutions there are more than one cutting or creasing rule needed in cutting-dies. There is a high demand for specialties, like combination or zipper rules. Required on the one hand to enhance folding of the carton and on the other hand for many innovative ways to open and close the packaging. As a result, Helmold is offering a wide portfolio of special rules, which we are able to facilitate in a fast and flexible manner due to our well-equipped production site.

In dialog with our valued customers and converters across the United States we develop new technical and economical solutions for the die-cutting market. This is a win-win-win situation for all of us, rule producer, die-makers and converters.



Combination Cut and Crease Rules

Helmold's combination cut and crease rule provides a cost effective solution when the die requires alternating cuts and creases. This rule is available in 1/2, 2, 3, and 4 pt. thicknesses with creasing depths of 0.005" to 0.490". Strip length and depth options are shown in the chart at the right.

Options for space widths:
from .62" to 1.000"
Controlled Depth
from .005" to .490"
Max Strip Length
none



Perforating Rules

Helmold offers the largest variety and best quality perforating rule to the business forms, corrugated, folding carton and label industries. We use only superior high carbon steel in the manufacture of our perforating rule. The result is longer press life and fewer set-ups. Our advanced manufacturing process produces a clean, precise space which doesn't require a secondary bevel to remove a burr. Helmold customers enjoy a tooth and space accuracy which is unsurpassed in the industry.

Our perforating rule is available in virtually any combination of teeth and spaces, controlled depths, tempers, bevels, heights, cut lengths or coils. For wider perforation spaces than those indicated here, see the combination cut and crease rule section.

Perforating Rule up to 1.000"

Point	Hardness	Min. Space	Max. Space	Min. Tooth	Min. Height	Max. Height	Std Depth
1.5	65	0.016	1.000	0.028	0.500	1.500	0.125
2	50	0.016	1.000	0.028	0.500	0.937	0.125
2	65	0.020	1.000	0.028	0.500	2.000	0.125
2	70	0.024	1.000	0.028	0.500	0.970	0.125
3	50	0.031	1.000	0.031	0.500	0.937	0.188
3	65	0.031	1.000	0.062	0.500	2.000	0.188
3	70	0.039	1.000	0.062	0.500	0.937	0.188
4	65	0.062	1.000	0.062	0.500	2.000	0.188

Common Perforating Patterns

For the business form and carton industries



4 T x .039 S (.211" x .039")



4 T x .046 S (.204" x .046")



6 T x .040 S (.127" x .040")



8 T x .039 S (.086" x .039")



9 T x .032 S (.079" x .032")



10 T x .032 S (.068" x .032")



12 T x .039 S (.044" x .039")



12 T x .032 S (.051" x .032")

(Teeth per inch and decimal spacing)

For the corrugated industry (Fractional tooth width and spacing)



1/4 T x 1/16 S (.250" x .062")



3/16 T x 1/16 S (.187" x .062")



3/8 T x 1/8 S (.375" x .125")



3/16 T x 3/32 S (.187" x .093")



1/8 T x 1/16 S (.125" x .062")



1/8 T x 1/8 S (.125" x .125")

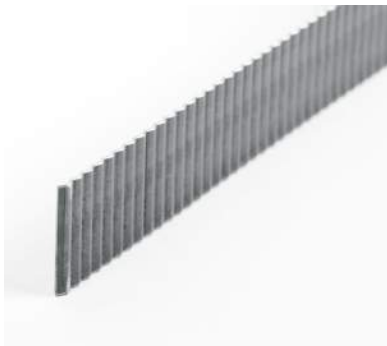


1/16 T x 1/16 S (.062" x .062")



1/16 T x 1/32 S (.062" x .031")

SPECIAL RULES

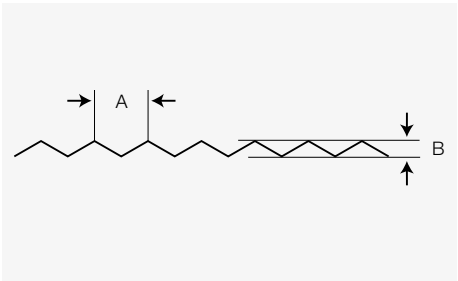
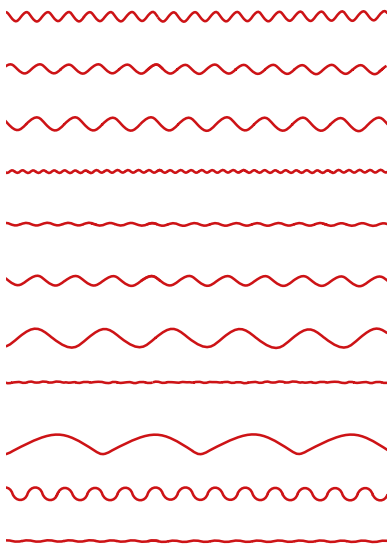


Wave Rules

Helmold is the only producer of wave and zipper rules with the rule shape spread over the complete height of the rule. This gives the rule a very exact form and a very precise line in the center of the rule and a much higher stability. Helmold is offering the wave rule in multiple numbers of standard dimensions and also provides the possibility for new customized versions.

Profiles

Thickness	Description	Type of Wave	Length	Dim. A	Dim. B
1.5 pt	Fine Angle	Full Body	27.25	0.123	0.050
1.5 pt	Medium Angle	Full Body	26.5	0.185	0.065
1.5 pt	Coarse Angle	Full Body	24.75	0.225	0.095
1.5 pt	Deckle Edge	Flat Body	30	–	–
2 pt	Fine Angle	Full Body	29.25	0.133	0.045
2 pt	Medium Angle	Full Body	28.5	0.220	0.065
2 pt	Coarse Angle	Full Body	27	0.384	0.112
2 pt	Deckle Edge	Flat Body	30	–	–
2 pt	Scalloped Wave	Full Body	28.5	0.493	0.098
1.5 pt	Close Wave	Full Body	25.75	0.164	0.084
2 pt	Corrugated Edge	Flat Body	30	–	0.043
3 pt	Corrugated Edge	Flat Body	30	–	0.050
3 pt	Micro	Flat Body	30	–	0.040



Steel Spacing Leads

Steel leads are used to replace cutting or creasing rule in a die when a modification is required. Lead height matches dieboard thickness.



Steel Leads

Thickness	Height
1 pt.	.500 .625 .687 .750
1½ pt.	.500 .625 .750
2 pt.	.500 .625 .750
3 pt.	.500 .625 .750
4 pt.	.500 .625 .750
6 pt.	.500 .625 .750



SPECIAL RULES

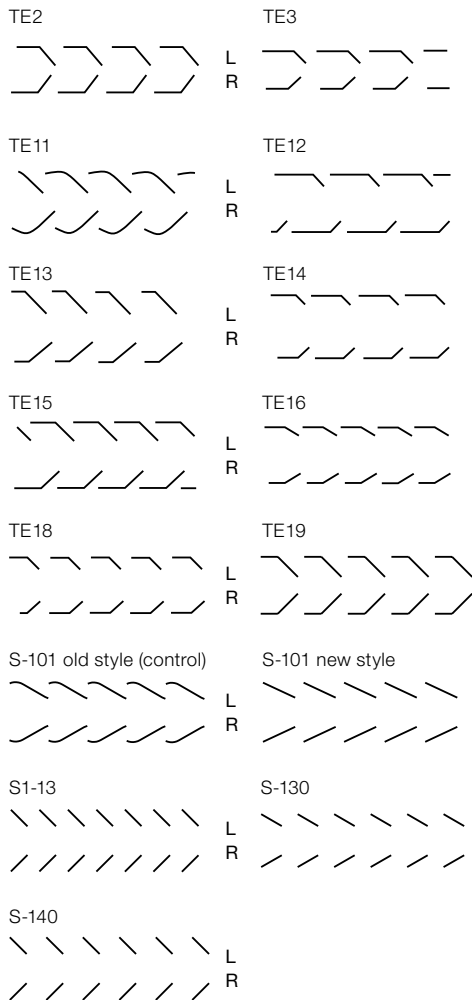


Tear Edge Rules (Zipper Rules)

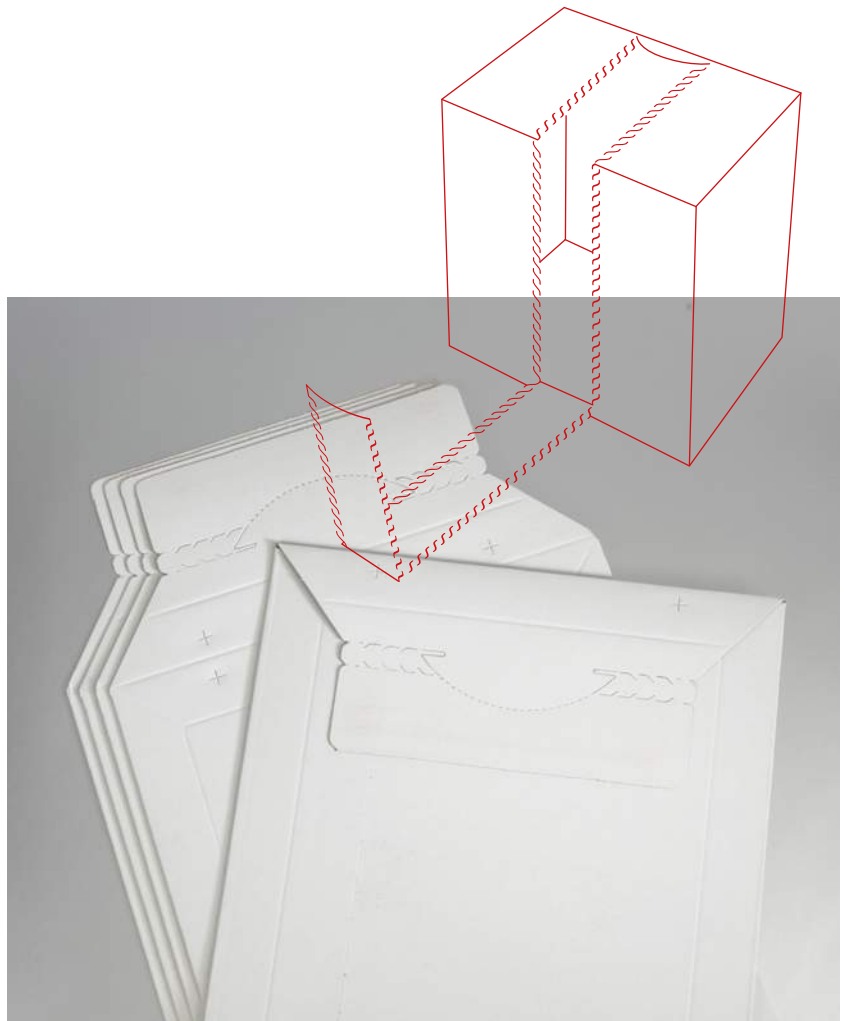
Tear edge rule is used to produce the “zipper opening” in ice cream, tissue, foil and plastic bag carton to name a few. The true advantage of Helmold’s tear edge rule is that it can be bent from the bevel edge to the base, making it the strongest tear edge available.

Other manufacturers don’t make their rule this way. This special design prevents the teeth from snapping off and causing the zipper on the carton to fail.

When ordering your die, insist on the rule that will give your costumers the best product; specify Helmold tear edge rule.

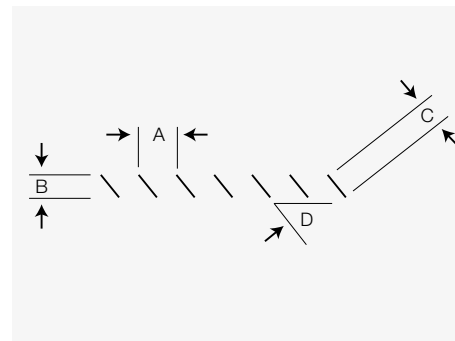


Note: Profiles are smaller than actual size.



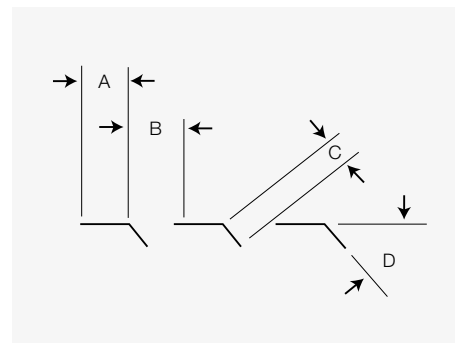
Zipper Rule Specifications

	A	B	C	D
S-101 (old style)	0.113	0.065	0.113	30
S-101 (new style)	0.111	0.041	0.097	25
S1-13	0.078	0.045	0.064	45
S-130	0.100	0.026	0.065	30
S-140	0.100	0.046	0.065	45



Specifications

8" lengths, 2 pt. body.
S series



Tear Edge Specifications

	A			B			C			D		
	Nominal	Min	Max	Nominal	Min	Max	Nominal	Min	Max	Nominal	Min	Max
TE2	0.187	0.184	0.191	0.200	0.197	0.203	0.188	0.185	0.191	44	43	45
TE3	0.250	0.248	0.151	0.194	0.193	0.196	0.125	0.124	0.127	44	43	45
TE11	0.313	0.31	0.315	0.057	0.055	0.06	0.053	0.05	0.055	44	43	45
TE12	0.313	0.3085	0.3165	0.127	0.123	0.131	0.125	0.121	0.129	49	48	50
TE13	0.130	0.127	0.133	0.244	0.241	0.247	0.260	0.257	0.263	44	43	45
TE14	0.250	0.247	0.253	0.148	0.145	0.151	0.125	0.122	0.128	44	43	45
TE15	0.156	0.1545	0.1575	0.189	0.188	0.191	0.250	0.249	0.252	44	43	45
TE16	0.188	0.184	0.192	0.136	0.132	0.14	0.125	0.121	0.129	44	43	45
TE18	0.156	0.1525	0.160	0.186	0.182	0.189	0.125	0.122	0.129	44	43	45
TE19	0.094	0.090	0.098	0.145	0.141	0.149	0.156	0.152	0.160	44	43	45

SPECIAL RULES



Creasing Rules

Helmold's hard (40 Rc) crease rule comes in the traditional profile with a radiused top and flat bottom, as well as a dual radiused profile. This shape allows either edge to be used for scoring, will not splitter wood, and produces well defined scores while inhibiting board cracking.

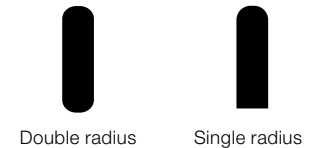
Helmold stocks all standard creasing rule heights, and can custom manufacture virtually any size quickly. Our creasing rule is designed for all applications in the packaging and folding carton industry. The smooth face and quality tolerance makes this a selection for all applications.

Crease Standard Heights (in.)

Available in cut lengths or coils

1 ½ & 2 pt	3 pt	4 pt
.885 .895 .900	.890 .895	.840 .860
.902 .905 .906	.900 .905	.875 .890
.907.908 .910	.906 .907	.895 .900
.912 .914 .915	.910 .912	.905 .906
.916 .917 .918	.915 .918	.907 .910
.920 .921 .922	.923 .930	.912 .918
.923 .924 .925	.937 .950	.923 .937
.926 .927 .937	.960 .970	.940

Other heights and profiles are available.
Call for details.



All double round crease is printed top and bottom so the printing can always be read.

Helmold Creasing Rule

Helmold creasing rule is designed for all applications in the packaging and folding carton industry. The smooth face and quality tolerances make this a selection for all applications.

Body Hardness	1.5 pt = 45 RC
	2 pt + 3 pt = 40 RC
	4 pt + 6 pt = 35 RC
Bendability	Straight work only
Thickness	1.5 pt / 2 pt / 3 pt / 4 pt / 6 pt
Heights	1.5 pt = .500" thru 1.500"
	2 pt + 3 pt = .500" thru 2.000"
	4 pt = .500" thru 2.000"
	6 pt = .500" thru 1.250"
Bevel Finish	single round (SR), double round (DR)

Reverse Laser Crease

Laser Creasing rule provides a wider scoring edge while fitting in standard 2 pt. die slot.

Reverse Laser Crease

Body (A)	Face (B)
2 pt	1 pt
2 pt	1.5 pt
3 pt	1 pt
3 pt	1.5 pt
3 pt	2 pt

Available in 30" lengths.



CONTACT AND SALES

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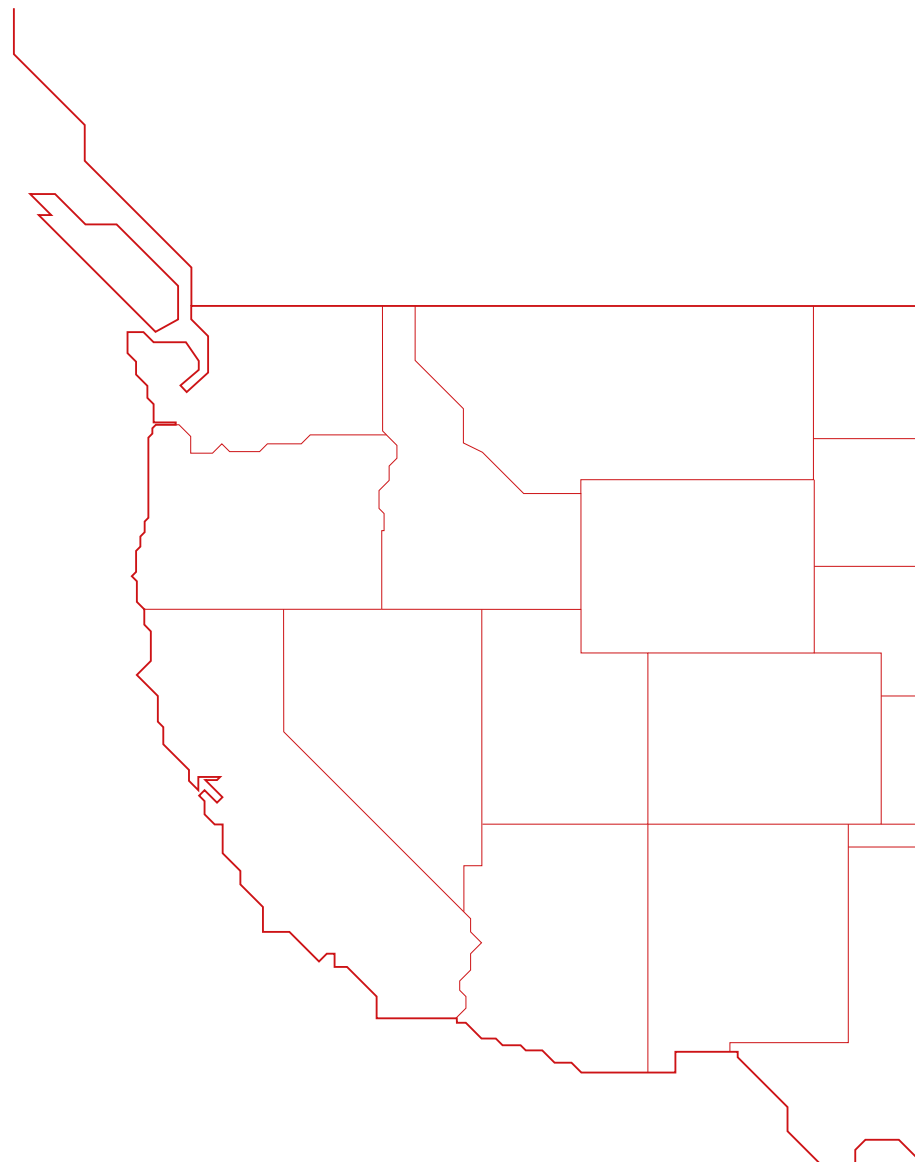
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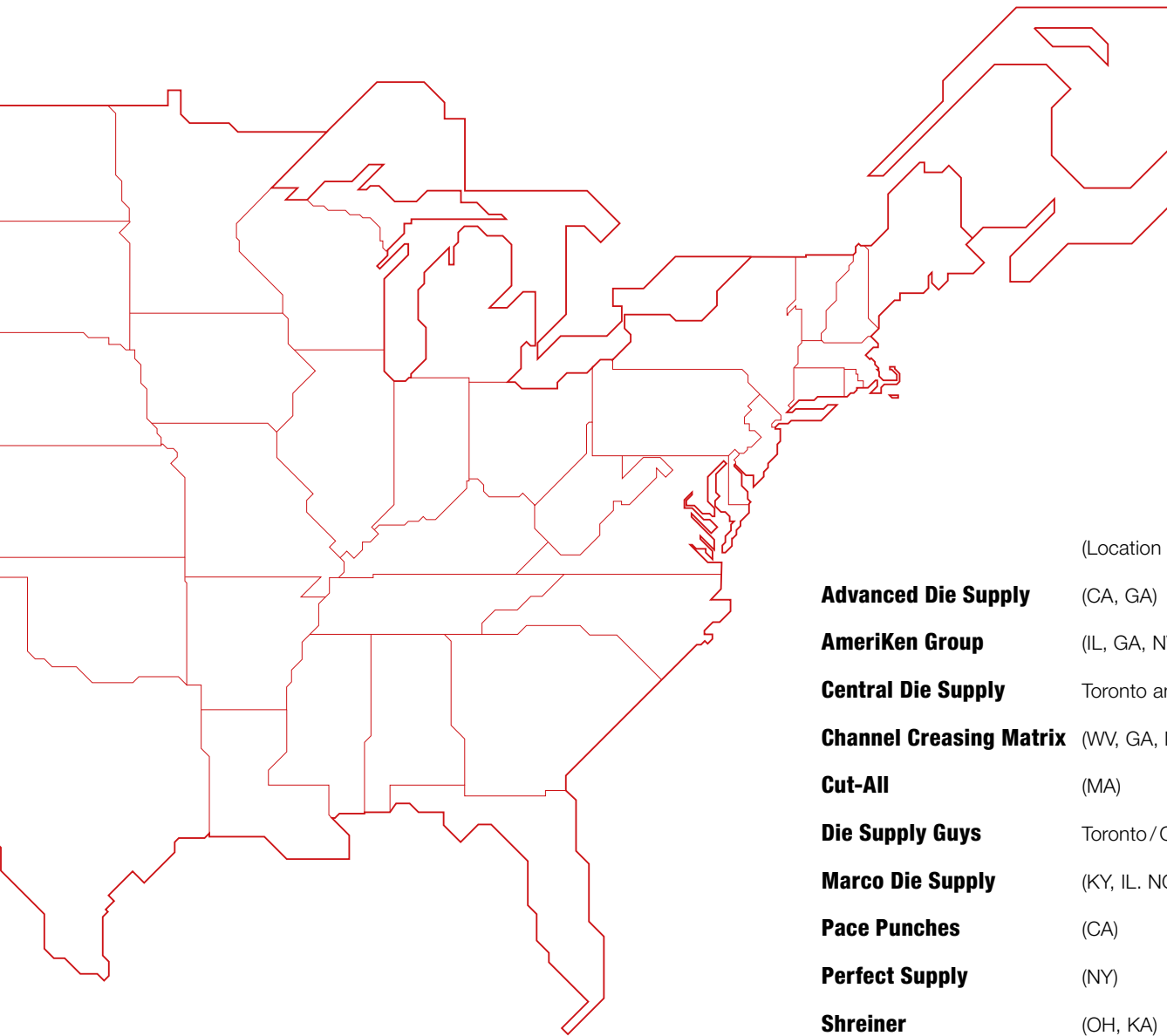
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