

Beating the competition to the punch



Helmold Cutting Punches: Extensive Inventory – Intensive Quality

Like our famous steel rule, all Helmold punches begin with high-quality, highly-uniform raw material. Every Helmold punch is case-hardened to a depth of 0.003" to 0.005" and a nominal Rockwell hardness of Rc 60-62. This ensures the integrity of each punch and repeatability from punch to punch.

For heavy duty applications, we also offer power punches that have been deep case-hardened and tempered to improve durability and prevent brittleness. The resulting Rc 54

case, combined with the shock absorbing ductile core, deliver a superior product for difficult cutting applications.

Helmold maintains a wide variety of standard cutting sizes from $\frac{1}{32}$ " to $2 \frac{63}{64}$ " and heights from 0.918" to 1.500".

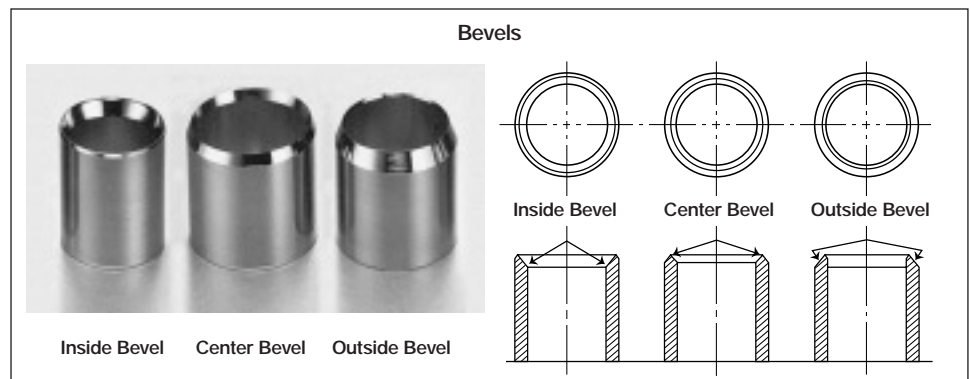
With the Helmold laser measuring system, we can determine the exact height of each punch. This allows us to supply you with punches that are guaranteed to be within specification, eliminating punch height variation problems during make-ready.



How to Specify Your Punch Bevel

- **Inside Bevel:** available from $\frac{5}{64}$ " to $2 \frac{63}{64}$ " in increments of $\frac{1}{64}$ ". Decimal sizes also available within this range.
- **Center Bevel:** available from $\frac{1}{16}$ " to $2 \frac{15}{16}$ " in increments of $\frac{1}{16}$ ".

- **Outside Bevel:** available from $\frac{1}{32}$ " to $2 \frac{59}{64}$ " in increments of $\frac{1}{64}$ ". Decimal sizes also available within this range.
- **Ejector Springs:** inserted in tube punches to prevent the material from sticking in the punch. Ejector Springs are available in cutting diameters from $\frac{3}{32}$ " to $\frac{55}{64}$ ".



Standard Seamless Tube Punches



O.D.	Cut Size Outside Bevel		Cut Size Center Bevel	Cut Size Inside Bevel			
1/8"		1/32"	3/64"	1/16"	5/64"	3/32"	7/64"
3/16"	5/64"	3/32"	7/64"	1/8"	9/64"	5/32"	11/64"
1/4"	9/64"	5/32"	11/64"	3/16"	13/64"	7/32"	15/64"
5/16"	13/64"	7/32"	15/64"	1/4"	17/64"	9/32"	19/64"
3/8"	17/64"	9/32"	19/64"	5/16"	21/64"	11/32"	23/64"
7/16"	21/64"	11/32"	23/64"	3/8"	25/64"	13/32"	27/64"
1/2"	25/64"	13/32"	27/64"	7/16"	29/64"	15/32"	31/64"
9/16"	29/64"	15/32"	31/64"	1/2"	33/64"	17/32"	35/64"
5/8"	33/64"	17/32"	35/64"	9/16"	37/64"	19/32"	39/64"
11/16"	37/64"	19/32"	39/64"	5/8"	41/64"	21/32"	43/64"
3/4"	41/64"	21/32"	43/64"	11/16"	45/64"	23/32"	47/64"
13/16"	45/64"	23/32"	47/64"	3/4"	49/64"	25/32"	51/64"
7/8"	49/64"	25/32"	51/64"	13/16"	53/64"	27/32"	55/64"
15/16"	53/64"	27/32"	55/64"	7/8"	57/64"	29/32"	59/64"
1"	57/64"	29/32"	59/64"	15/16"	61/64"	31/32"	63/64"
1 1/16"	61/64"	31/32"	63/64"	1"	1 1/64"	1 1/32"	1 3/64"
1 1/8"	1 1/64"	1 1/32"	1 3/64"	1 1/16"	1 5/64"	1 3/32"	1 7/64"
1 3/16"	1 5/64"	1 3/32"	1 7/64"	1 1/8"	1 9/64"	1 5/32"	1 11/64"
1 1/4"	1 9/64"	1 5/32"	1 11/64"	1 3/16"	1 13/64"	1 7/32"	1 15/64"
1 5/16"	1 13/64"	1 7/32"	1 15/64"	1 1/4"	1 17/64"	1 9/32"	1 19/64"
1 3/8"	1 17/64"	1 9/32"	1 19/64"	1 5/16"	1 21/64"	1 11/32"	1 23/64"
1 7/16"	1 21/64"	1 11/32"	1 23/64"	1 3/8"	1 25/64"	1 13/32"	1 27/64"
1 1/2"	1 25/64"	1 13/32"	1 27/64"	1 7/16"	1 29/64"	1 15/32"	1 31/64"
1 9/16"	1 29/64"	1 15/32"	1 31/64"	1 1/2"	1 33/64"	1 17/32"	1 35/64"
1 5/8"	1 33/64"	1 17/32"	1 35/64"	1 9/16"	1 37/64"	1 19/32"	1 39/64"
1 11/16"	1 37/64"	1 19/32"	1 39/64"	1 5/8"	1 41/64"	1 21/32"	1 43/64"
1 3/4"	1 41/64"	1 21/32"	1 43/64"	1 11/16"	1 45/64"	1 23/32"	1 47/64"

Standard Heights: .918", .923", .937" and 1.000". Other heights available.

Note: Same size increments available up to 3" O.D.

Ordering Example: (please specify the following)

Quantity	Cut Size	Bevel	Spring	O.D.	Height
100	1 2 1/32"	O.B.	No	1 3/4"	.937"

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Straight Wall Punches



Straight wall punches have the same size cutting edge and tube diameter. They are used to give the straightest possible cut to the material or when space is a factor in the die. Straight wall punches are available from $\frac{3}{64}$ " to 3". They are deep case hardened for added strength.

Also available in outside bevel with cutting edge and hole size the same.

Ordering Example: (please specify the following)

Quantity	Cut Size	Style	Height
200	$\frac{1}{2}$ "	I.B. Straight Wall	.937"

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Side-Outlet Punches



These punches pick up the slug and feed it through the "side" of the punch. The "self-stripping" feature eliminates the need to hand strip the slug from the product after being die cut. Side outlet punches are available with or without a knurled base. The knurled base will keep the punch from turning in the die during the diecutting operation.

These punches are also available with or without a relieved shoulder depending on the type of product being die cut. For difficult cutting applications, these side outlet punches can be supplied in tool steel.

O.D.	Cut Size		
	16ths	32nds	64ths
$\frac{3}{16}$ "	$\frac{1}{16}$ "	$\frac{3}{32}$ "	$\frac{5}{64}$ " - $\frac{7}{64}$ "
$\frac{1}{4}$ "	$\frac{1}{8}$ "	$\frac{3}{32}$ " - $\frac{5}{32}$ "	$\frac{7}{64}$ " - $\frac{9}{64}$ " - $\frac{11}{64}$ "
$\frac{5}{16}$ "	$\frac{3}{16}$ "		$\frac{13}{64}$ "
$\frac{3}{8}$ "	$\frac{1}{4}$ "	$\frac{7}{32}$ "	$\frac{15}{64}$ " - $\frac{17}{64}$ "
$\frac{7}{16}$ "	$\frac{5}{16}$ "	$\frac{9}{32}$ "	$\frac{19}{64}$ " - $\frac{21}{64}$ "
$\frac{1}{2}$ "	$\frac{3}{8}$ "	$\frac{11}{32}$ "	$\frac{23}{64}$ "
$\frac{9}{16}$ "		$\frac{13}{32}$ "	$\frac{25}{64}$ " - $\frac{27}{64}$ "
$\frac{5}{8}$ "	$\frac{7}{16}$ "	$\frac{15}{32}$ "	$\frac{29}{64}$ " - $\frac{31}{64}$ "
$\frac{3}{4}$ "	$\frac{1}{2}$ " - $\frac{9}{16}$ "	$\frac{17}{32}$ "	$\frac{33}{64}$ " - $\frac{35}{64}$ "
$\frac{7}{8}$ "	$\frac{5}{8}$ "	$\frac{19}{32}$ "	
1"	$\frac{11}{16}$ "		

Standard Heights: .918", .923", .937" and 1.000".

Non-Standard Heights: 1.125", 1.250", 1.500" and 2.000".

Ordering Example: (please specify the following)

Quantity	Cut Size	Style	Height
100	$\frac{3}{16}$ "	Side Outlet	.937"

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Feed-Thru Punches



These punches are designed to capture the slug and feed it through the punch for easy stripping. They are commonly used in gasket cutting operations on clicker-type presses where the secondary stripping of the slugs is eliminated. Feed-thru punches are available in three styles:

Bored: "B"

This punch has a deeper throat and thick wall for maximum strength. They are available in $\frac{1}{16}$ " increments (which measure $\frac{1}{64}$ " over the stated cutting edge) and $\frac{1}{32}$ " increments (which measure "exact" on the stated cutting edge). Special bored feed-thru punches are available in $\frac{1}{16}$ "

increments that measure "exact" on the stated cutting edge.

Spun: "S"

This punch has a minimum throat which reduces cutting pressure. Available in $\frac{1}{64}$ " increments that measure "exact" on the cutting edge. Generally used for thicker material.

Wag: "W"

This punch is available with thick or thin wall tubing and can be specified in $\frac{1}{64}$ " increments that measure "exact" on the cutting edge. Generally used for thinner material.

O.D.	CUT SIZES								
	Standard "W" Style					Standard "S" Style		Standard "B" Style	
	16ths	32nds	64ths	Thin Wall	X-Thin Wall	16ths	32nds	64ths	32nds
1/8"	1/16"					1/16"			
3/16"	1/16"	3/32"	5/64"	7/64"	1/8"	1/16"			3/32"
1/4"	1/8"	5/32"	9/64"	11/64"	3/16"	1/8"	3/32"	9/64"	5/32"
5/16"	3/16"	7/32"	13/64"	15/64"	1/4"	3/16"	5/32"	13/64"	7/32"
3/8"	1/4"	9/32"	17/64"	19/64"	5/16"	1/4"	7/32"	17/64"	9/32"
7/16"	5/16"	11/32"	21/64"	23/64"	3/8"	5/16"	9/32"	21/64"	11/32"
1/2"	3/8"	13/32"	25/64"	27/64"	7/16"	3/8"	11/32"	25/64"	13/32"
9/16"	7/16"	15/32"	29/64"	31/64"	1/2"	7/16"	13/32"	29/64"	15/32"
5/8"	1/2"	17/32"	33/64"	35/64"	9/16"	1/2"	15/32"	33/64"	17/32"
11/16"	9/16"	19/32"	37/64"	39/64"	5/8"	9/16"	17/32"	37/64"	19/32"
3/4"	5/8"	21/32"	41/64"	43/64"	11/16"	5/8"	19/32"	41/64"	21/32"
13/16"	11/16"	23/32"	45/64"	47/64"		11/16"	21/32"	45/64"	23/32"
7/8"	3/4"	25/32"	49/64"	51/64"		3/4"	23/32"	49/64"	25/32"
15/16"	13/16"	27/32"	53/64"	55/64"		13/16"	25/32"	53/64"	27/32"
1"	7/8"	29/32"	57/64"	59/64"		7/8"	27/32"	57/64"	29/32"
1 1/16"	15/16"	31/32"	61/64"	63/64"		15/16"	29/32"	61/64"	31/32"
1 1/8"	1"	1 1/32"	1 1/64"	1 3/64"		1"	31/32"	1 1/64"	1 1/32"

Standard Height for "W" Style: .937". Standard Heights for "S" and "B" Style: .918", .923", .937" and 1.000".

Ordering Example: (please specify the following)

Quantity	Cut Size	Style	Height
50	1/4"	W	.937"

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O.D.	CUT SIZES	
	Oversized	
	16ths	32nds
1 3/16"	1 1/16"	1 3/32"
1 1/4"	1 1/8"	1 5/32"
1 5/16"	1 3/16"	1 7/32"
1 3/8"	1 1/4"	1 9/32"
1 7/16"	1 5/16"	1 11/32"
1 1/2"	1 3/8"	1 13/32"
1 9/16"	1 7/16"	1 15/32"
*1 5/8"	1 1/2"	1 17/32"
1 11/16"	1 37/64"	1 19/32"
1 3/4"	1 41/64"	1 21/32"
1 13/16"	1 45/64"	1 23/32"
1 7/8"	1 49/64"	1 25/32"
1 15/16"	1 53/64"	1 27/32"
2"	1 57/64"	1 29/32"
2 1/8"	2 1/64"	2 1/32"
2 1/4"	2 9/64"	2 5/32"
2 3/8"	2 17/64"	2 9/32"
2 1/2"	2 25/64"	2 13/32"
2 5/8"	2 33/64"	2 17/32"
2 3/4"	2 41/64"	2 21/32"
2 7/8"	2 49/64"	2 25/32"
3"	2 57/64"	2 29/32"

*Max O.D. for wag and spun is 1 5/8"

Cup Punches



Outside Diameter	Cut Size Outside Bevel			Cut Size Center Bevel	Cut Size Inside Bevel		
	16ths	32nds	64ths		64ths	32nds	16ths
1/8"		1/32"	3/64"	1/16"	5/64"	3/32"	7/64"
3/16"	5/64"	3/32"	7/64"	1/8"	9/64"	5/32"	11/64"
1/4"	9/64"	5/32"	11/64"	3/16"	13/64"	7/32"	15/64"
5/16"	13/64"	7/32"	15/64"	1/4"	17/64"	9/32"	19/64"
3/8"	17/64"	9/32"	19/64"	5/16"	21/64"	11/32"	23/64"
7/16"	21/64"	11/32"	23/64"	3/8"	25/64"	13/32"	27/64"
1/2"	25/64"	13/32"	27/64"	7/16"	29/64"	15/32"	31/64"

Standard Heights: .918", .923", .937" and 1.000". Other heights available.

These punches are made from a solid steel rod. They are used when additional strength is required from the punch. Cup punches are available with inside, center or outside bevels.

Ordering Example: (please specify the following)

Quantity	Cut Size	Style	Height
200	1/4"	C.B.	.937"

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Serrated Punches



Serrated punches are used in rotary diecutting of corrugated boxes. They are made from our standard tube punch. These punches are designed to cut into a soft cutting pad and are used in conjunction with serrated cutting rule. Serrated punches are available in inside, center and outside bevels.

Standard Heights are .937" and 1.000" (.970" and 1.030" old size). Other heights are available. Serrated punches are available in the same diameters as standard seamless tube punches (see page 17).

Pin Point and Embossing Punches



These punches are made from a solid rod. They are used to penetrate the material and assist in the gluing operation. Pin point punches are available in rod sizes up to $\frac{5}{16}$ ".

Embossing punches are similar to pin point punches except they come with a "rounded nose".

Base O.D.
$\frac{3}{32}$ "
$\frac{1}{8}$ "
$\frac{3}{16}$ "
$\frac{1}{4}$ "
$\frac{5}{16}$ "

Ordering Example: (please specify the following)

Quantity	Diameter	Style	Height
100	$\frac{1}{4}$ "	Emb.	.937"

Call us toll-free at: 800-323-8898

Specialty Punches



Helmold manufactures a variety of specialty punches which are custom made to each customer's specifications. Listed below are some of the types of punches available. For specific information regarding any of these punches, please contact our sales department.

Long Bevel

A longer bevel helps prevent the "crushing" of the material during the diecutting operation.

Thin Wall

Made of special thin wall tubing for special applications when a larger clearance hole is needed in feed-thru punches.

Heavy Wall

Made of a thicker walled tubing to make the punch stronger and more durable; or if a larger O.D. is needed.

Notched

Has "notches" machined in so that the slug can be removed by the customer as desired.

Relieved

The outside or the inside of the bevel is relieved for that special cutting application.

Oval

Made from our tube punch. We determine what round punch is required to obtain the desired oval. Depending on the finished dimensions, these punches can be made from our inside, center, or outside bevel punches.

Power Punches

Deep case hardened and tempered to improve durability and prevent brittleness for heavy-duty applications.