

The background is a solid red color. A white cross shape is centered on the page. A red saw blade graphic is positioned vertically, passing through the center of the cross. The blade has a circular hole at the top and bottom, and a serrated edge on the right side. The text "MAK-A-KEY" is written in a bold, black, sans-serif font across the horizontal bar of the cross. The trademark symbol "TM" is located at the bottom right of the word "KEY".

# **MAK-A-KEY™**

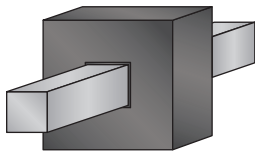
**Cut, File, & Fit™**  
**Precision Key Stock**

# MAK-A-KEY™

## PRECISION KEY STOCK

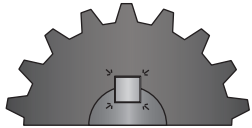
### Production Quality

Key stock, or "bright steel," refers to square and rectangle bars that are drawn to exacting tolerances with sharp corners, perpendicular and parallel sides, and smooth, bright surface finishes.



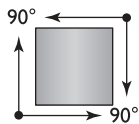
**Cold Drawn  
Bright Steel**

Manufacturing true key stock to tight tolerances is challenging as tolerances for square and rectangle key stock tend to be more precise than for rounds or other forms because of the desired interference fit into the key way.



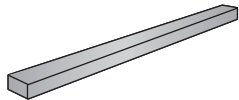
**Sharp Corners**

During production, as material passes through a die, stresses from cold working are introduced that may cause twisting. To produce superior finished results, G.L. Huyett has supported the development of cold drawing technologies while working in concert with U.S. and international steel mills.



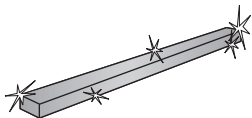
**Perpendicular  
Planes**

Though harder to draw and more difficult to install, key stock with sharp corners is desired so that the interference fit of the key into the corners of the key way is optimized to reduce bearing stresses.



**Straight**

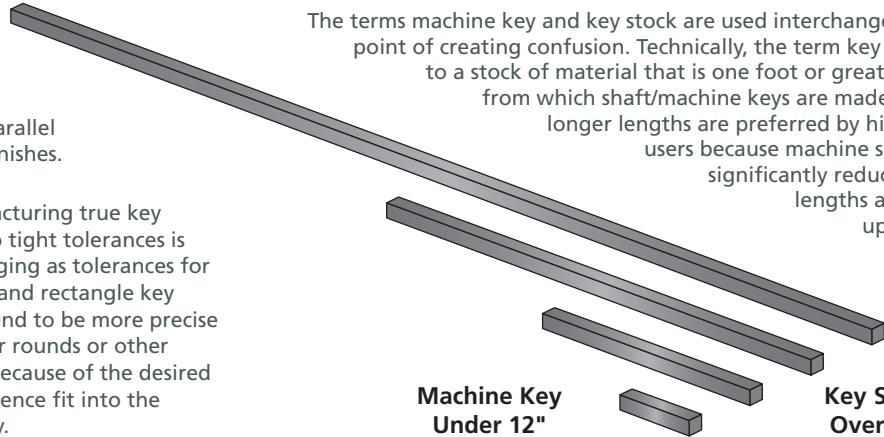
Key stock is more costly and difficult to produce, but it is near-finished when drawn compared to conventional steel bars. To produce a bright finish, key stock can be treated to produce a surface finish that is more uniform and precise compared to rounds and other forms.



**Bright**

### Key Stock vs. Machine Keys

The terms machine key and key stock are used interchangeably to the point of creating confusion. Technically, the term key stock refers to a stock of material that is one foot or greater in length from which shaft/machine keys are made. Generally, longer lengths are preferred by high quantity users because machine setup time is significantly reduced. Custom lengths are available upon request.



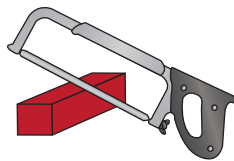
**Machine Key  
Under 12"**

**Key Stock  
Over 12"**

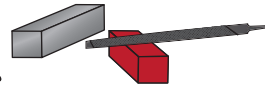
Key stock is available in any length from 1' to 12'

### Cut, File, & Fit™

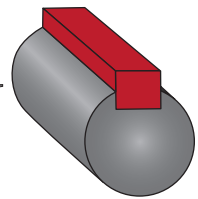
A key may be cut from stock in the field and fitted into a key way for aftermarket repairs, or in contract shops that use short production runs.



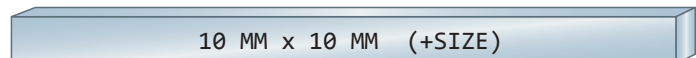
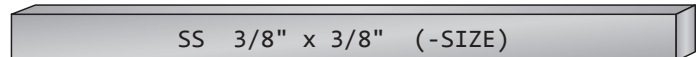
**Cut to Length**



**File**



**Fit into Key Way**



1', 3', 6', 305 mm, and 1,000 mm stainless steel and plated key stock are marked for easy identification

For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).

Prices, materials, dimensions, tolerances, designs, and grades subject to change without notice. © 2017 G.L. Huyett

\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.



G.L. Huyett's plain carbon and stainless steel parts are RoHS compliant.  
See Platings & Finishes on page 34 for more information.

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## MATERIAL CODES

G.L. Huyett stocks over 1,000,000 lbs. of key stock in a wide variety of material. Material/finish combinations may not be available in all sizes. Unless specifically stated, our standard key stock (30 series) is any one of the following grades, subject to market availability: 1018, 1035, 1045, 1095, 1215, or 8630.

Prefix	Material / Finish	Tolerance
04	Aluminum,♦♦ Plain	Bilateral (+/-)
06	Brass,♦♦ Plain	Bilateral (+/-)
12	Nylon,♦♦ Plain	Bilateral (+/-)
30	Cold Finished Bright Steel, Plain*	Undersize (-)
31	Cold Finished Bright Steel, Zinc Trivalent**	Undersize (-)
35	Cold Finished Bright Steel, Plain*	Oversize (+)
36	Cold Finished Bright Steel, Zinc Trivalent**	Oversize (+)
45	Cold Finished Bright Steel, Plain* (1045)	Undersize (-)
46	Cold Finished Bright Steel, Zinc Trivalent** (1045)	Undersize (-)

Prefix	Material / Finish	Tolerance
55	High Carbon Steel,♦♦ Plain* (1095)	Bilateral (+/-)
60	Moltrup Quality Steel, Plain* (8630)	Oversize (+)
65	Cold Finished Alloy Steel, Plain* (4140)	Undersize (-)
66	Cold Finished Alloy Steel, Zinc Trivalent** (4140)	Undersize (-)
70	300 Series Stainless Steel, Plain	Undersize (-)
75	300 Series Stainless Steel, Plain	Oversize (+)
80	316 Stainless Steel, Plain	Undersize (-)
85	416 Stainless Steel, Plain	Undersize (-)



DIN/ISO 6880 is the most common European specification for key stock. Our 30 series steel is undersized and meets this tolerance specification. 35 series steel is oversized and drawn to bar stock tolerances.

**For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).**

Prices, materials, dimensions, tolerances, designs, and grades subject to change without notice. © 2017 G.L. Huyett

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When two parts are designed to be pieced together, there may be play or looseness between them or they may be tight to the point they are nearly bonded. This degree of tightness or looseness is referred to as "fit." The fit between a shaft, key stock, and the mating component can be critical to the operation and safety of the assembly.

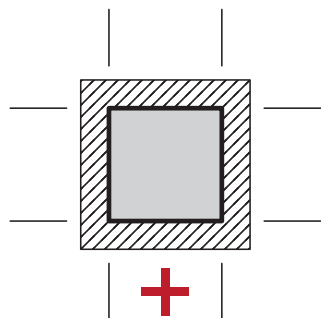
Before the age of the assembly line and interchangeable parts, skilled craftsmen known as "fitters" were required to piece together mating parts. Since the parts were usually hand-crafted,

production was limited to one assembly at a time. The craftsman employed a system of cut, try, cut again, try again to eventually achieve proper fit between components.

With the advent of the assembly line, it became necessary to supply parts that could be used interchangeably, so that any one like part could be used to complete the component. It is extremely difficult to produce exactly identical parts, a system of tolerances and specifications was developed to determine when parts were close enough to be interchangeable.

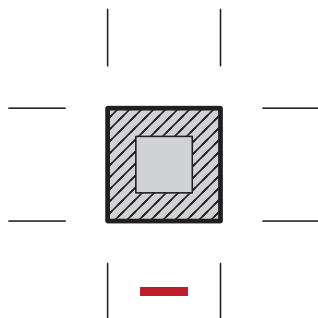
## Nominal Sizing Tolerances

**Tolerance** is the limit of how much a part can deviate from its nominal or named size. Tolerances can deviate greater than the nominal size (referred to as oversize), less than the nominal size (referred to as undersize), or both (referred to as bilateral).



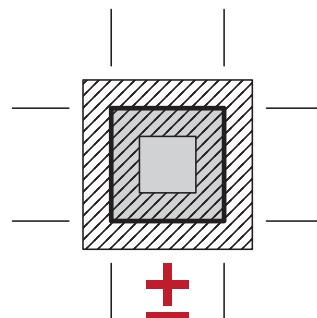
**Cut, File, & Fit™**  
(Oversize Tolerance)

These tolerances cannot be smaller than the nominal size but may be larger.



**Cut & Fit™**  
(Undersize Tolerance)

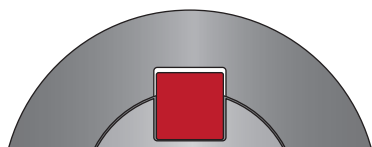
These tolerances cannot be larger than the nominal size but may be smaller.



**Standard™**  
(Bilateral Tolerance)

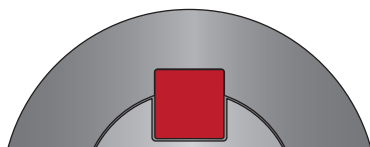
These tolerances may be either smaller or larger than the nominal size.

## ANSI B17.1 Keys & Key Way Fit Classes



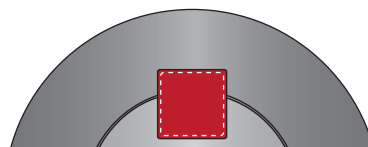
**Class 1**

Sometimes called a clearance fit, the key width will be slightly smaller than the key way allowing the shaft and component piece to slide over each other.



**Class 2**

Also known as a transition fit, the key width and the key way can have a slight clearance fit or a slight interference fit. Generally this fit is sufficient to hold mating parts together while still allowing for disassembly.



**Class 3**

This is an interference fit, meaning the key will be larger than the key way and will encounter interference during installation. Some means of force or the use of temperature differential is required for installation. ANSI B17.1 does not have specific standards for this class of fit.

For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).

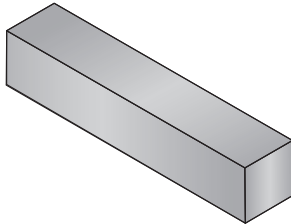
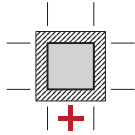
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### CUT, FILE, & FIT™

(Oversize Tolerance)

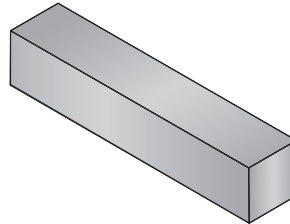
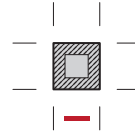
The actual size of oversize material will be at least the specified size and may be slightly larger than the specified size within the acceptable tolerance range.



### CUT & FIT™

(Undersize Tolerance)

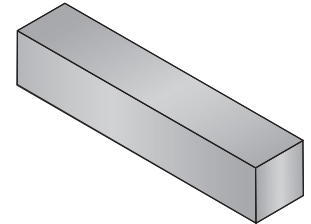
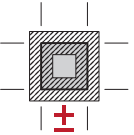
The actual size of undersize material will be no more than the specified size and may be slightly smaller than the specified size within the acceptable tolerance range.



### STANDARD™

(Bilateral Tolerance)

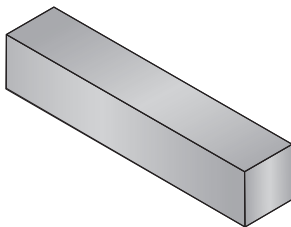
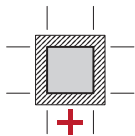
The actual size of bilateral material may be slightly larger or slightly smaller than the specified size within the acceptable tolerance range.



### MOLTRUP

(Oversize Tolerance)

Moltrup key stock is tightly toleranced oversize material designed to provide a tight, interference fit when a Class 2 fit is desired.

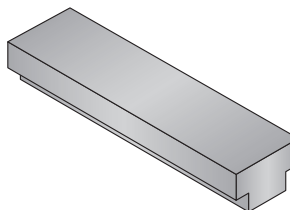


### STEP KEY STOCK

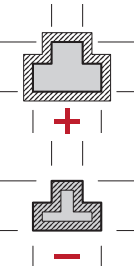
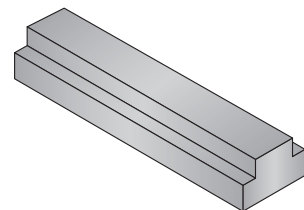
(Oversize or Undersize Tolerance)

Step key stock is used when worn or damaged key ways have been repaired. Type 1 is designed for use in key ways of repaired gears, sprockets, pulleys, and other hub assembly components. Type 2 is designed for use in repaired shaft key ways.

Type 1



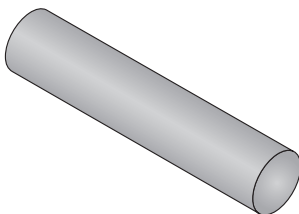
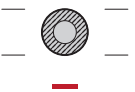
Type 2



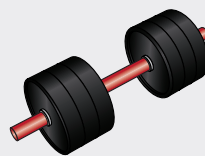
### ROUND

(Undersize Tolerance)

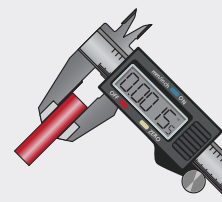
Round key stock may be used as a rotating device or to connect or align components. It can be easily welded, machined, or fabricated.



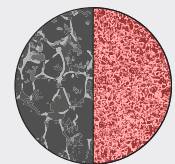
### COLD DRAWN BRIGHT STEEL



Stronger



Tighter Tolerances



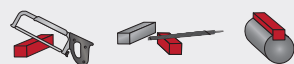
Finer Surface Finish

All of G.L. Huyett's key stock, shafting, and machine keys are produced using cold drawn bright steel. While higher in cost than traditional cold drawn steel, bright steel is stronger, made to tighter tolerances, and has a finer surface finish.

For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).

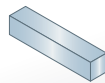
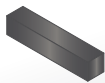
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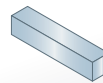
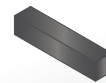


### CUT, FILE, & FIT™

Oversize Tolerance



Size	Carbon Steel, Plain*		Carbon Steel, Zinc Trivalent**	
	12" Bars	36" Bars	12" Bars	36" Bars
1/16" Square	3500620062-12	3500620062-36	3600620062-12	—
3/32" Square	3500930093-12	3500930093-36	3600930093-12	—
7/64" Square	3501090109-12	—	3601090109-12	—
1/8" Square	3501250125-12	3501250125-36	3601250125-12	3601250125-36
1/8" × 3/16"	3501250187-12	—	3601250187-12	—
1/8" × 1/4"	3501250250-12	—	3601250250-12	—
1/8" × 3/8"	3501250375-12	—	3601250375-12	—
1/8" × 1/2"	3501250500-12	—	3601250500-12	—
1/8" × 5/8"	3501250625-12	—	3601250625-12	—
1/8" × 3/4"	3501250750-12	—	3601250750-12	—
5/32" Square	3501560156-12	3501560156-36	3601560156-12	3601560156-36
3/16" Square	3501870187-12	3501870187-36	3601870187-12	3601870187-36
3/16" × 1/4"	3501870250-12	—	3601870250-12	—
3/16" × 5/16"	3501870312-12	—	3601870312-12	—
3/16" × 3/8"	3501870375-12	—	3601870375-12	—
3/16" × 7/16"	3501870437-12	—	3601870437-12	—
3/16" × 1/2"	3501870500-12	—	3601870500-12	—
3/16" × 5/8"	3501870625-12	—	3601870625-12	—
3/16" × 7/8"	3501870875-12	—	3601870875-12	—
7/32" Square	3502180218-12	3502180218-36	3602180218-12	—
1/4" Square	3502500250-12	3502500250-36	3602500250-12	3602500250-36
1/4" × 5/16"	3502500312-12	—	3602500312-12	—
1/4" × 3/8"	3502500375-12	—	3602500375-12	—
1/4" × 7/16"	3502500437-12	—	3602500437-12	—
1/4" × 1/2"	3502500500-12	—	3602500500-12	—
1/4" × 9/16"	3502500562-12	—	3602500562-12	—
1/4" × 5/8"	3502500625-12	—	3602500625-12	—
1/4" × 3/4"	3502500750-12	—	3602500750-12	—
9/32" Square	3502810281-12	3502810281-36	3602810281-12	—
5/16" Square	3503120312-12	3503120312-36	3603120312-12	3603120312-36
5/16" × 3/8"	3503120375-12	—	3603120375-12	—
5/16" × 7/16"	3503120437-12	—	3603120437-12	—
5/16" × 1/2"	3503120500-12	—	3603120500-12	—
5/16" × 9/16"	3503120562-12	—	3603120562-12	—
5/16" × 5/8"	3503120625-12	—	3603120625-12	—
5/16" × 3/4"	3503120750-12	—	3603120750-12	—
3/8" Square	3503750375-12	3503750375-36	3603750375-12	3603750375-36



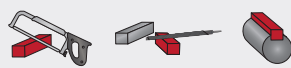
Size	Carbon Steel, Plain*		Carbon Steel, Zinc Trivalent**	
	12" Bars	36" Bars	12" Bars	36" Bars
3/8" × 7/16"	3503750437-12	—	3603750437-12	—
3/8" × 1/2"	3503750500-12	—	3603750500-12	—
3/8" × 9/16"	3503750562-12	—	3603750562-12	—
3/8" × 5/8"	3503750625-12	—	3603750625-12	—
3/8" × 3/4"	3503750750-12	—	3603750750-12	—
3/8" × 1"	3503751000-12	—	3603751000-12	—
7/16" Square	3504370437-12	3504370437-36	3604370437-12	3604370437-36
7/16" × 1/2"	3504370500-12	—	3604370500-12	—
7/16" × 9/16"	3504370562-12	—	3604370562-12	—
7/16" × 5/8"	3504370625-12	—	3604370625-12	—
7/16" × 3/4"	3504370750-12	—	3604370750-12	—
1/2" Square	3505000500-12	3505000500-36	3605000500-12	3605000500-36
1/2" × 9/16"	3505000562-12	—	3605000562-12	—
1/2" × 5/8"	3505000625-12	—	3605000625-12	—
1/2" × 11/16"	3505000687-12	—	3605000687-12	—
1/2" × 3/4"	3505000750-12	—	3605000750-12	—
1/2" × 7/8"	3505000875-12	—	3605000875-12	—
1/2" × 1"	3505001000-12	—	3605001000-12	—
9/16" Square	3505620562-12	3505620562-36	3605620562-12	3605620562-36
9/16" × 5/8"	3505620625-12	—	3605620625-12	—
9/16" × 3/4"	3505620750-12	—	3605620750-12	—
9/16" × 1"	3505621000-12	—	3605621000-12	—
9/16" × 1-1/4"	3505621250-12	—	3605621250-12	—
5/8" Square	3506250625-12	3506250625-36	3606250625-12	3606250625-36
5/8" × 11/16"	3506250687-12	—	3606250687-12	—
5/8" × 3/4"	3506250750-12	—	3606250750-12	—
5/8" × 7/8"	3506250875-12	—	3606250875-12	—
5/8" × 1"	3506251000-12	—	3606251000-12	—
5/8" × 1-1/4"	3506251250-12	—	3606251250-12	—
11/16" Square	3506870687-12	3506870687-36	3606870687-12	3606870687-36
11/16" × 3/4"	3506870750-12	—	3606870750-12	—
11/16" × 7/8"	3506870875-12	—	3606870875-12	—
11/16" × 1"	3506871000-12	—	3606871000-12	—
3/4" Square	3507500750-12	3507500750-36	3607500750-12	3607500750-36
3/4" × 7/8"	3507500875-12	—	3607500875-12	—
3/4" × 1"	3507501000-12	—	3607501000-12	—
3/4" × 1-1/8"	3507501125-12	—	3607501125-12	—

1' and 3' stainless steel and plated key stock is marked for easy identification.

For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).

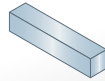
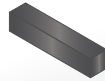
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\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.

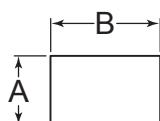


### CUT, FILE, & FIT™

Oversize Tolerance



Size	Carbon Steel, Plain*		Carbon Steel, Zinc Trivalent**	
	12" Bars	36" Bars	12" Bars	36" Bars
3/4" x 1-1/4"	3507501250-12	—	3607501250-12	—
3/4" x 1-1/2"	3507501500-12	—	3607501500-12	—
3/4" x 1-3/4"	3507501750-12	—	3607501750-12	—
13/16" Square	3508120812-12	3508120812-36	3608120812-12	3608120812-36
7/8" Square	3508750875-12	3508750875-36	3608750875-12	3608750875-36
7/8" x 1"	3508751000-12	—	3608751000-12	—
7/8" x 1-1/8"	3508751125-12	—	3608751125-12	—
7/8" x 1-1/4"	3508751250-12	—	3608751250-12	—
15/16" Square	3509370937-12	—	3609370937-12	—
1" Square	3510001000-12	3510001000-36	3610001000-12	3610001000-36
1" x 1-1/8"	3510001125-12	—	3610001125-12	—
1" x 1-1/4"	3510001250-12	—	3610001250-12	—
1" x 1-1/2"	3510001500-12	—	3610001500-12	—
1" x 2"	3510002000-12	—	3610002000-12	—
1-1/16" Square	3510621062-12	—	3610621062-12	—
1-1/8" Square	3511251125-12	—	3611251125-12	—
1-1/8" x 1-1/4"	3511251250-12	—	3611251250-12	—
1-3/16" Square	3511871187-12	3511871187-36	3611871187-12	—
1-1/4" Square	3512501250-12	3512501250-36	3612501250-12	3612501250-36
1-1/4" x 1-3/8"	3512501375-12	—	3612501375-12	—
1-1/4" x 1-1/2"	3512501500-12	—	3612501500-12	—
1-1/4" x 1-3/4"	3512501750-12	—	3612501750-12	—
1-5/16" Square	3513121312-12	—	3613121312-12	—
1-3/8" Square	3513751375-12	3513751375-36	3613751375-12	3613751375-36
1-7/16" Square	3514371437-12	—	3614371437-12	—
1-1/2" Square	3515001500-12	3515001500-36	3615001500-12	3615001500-36
1-1/2" x 1-3/4"	3515001750-12	—	3615001750-12	—
1-1/2" x 2"	3515002000-12	—	3615002000-12	—
1-5/8" Square	3516251625-12	—	3616251625-12	—
1-3/4" Square	3517501750-12	3517501750-36	3617501750-12	3617501750-36
1-7/8" Square	3518751875-12	—	3618751875-12	—
2" Square	3520002000-12	3520002000-36	3620002000-12	3620002000-36



### Measuring Inch Key Stock

Inch key stock is available in square or flat/rectangle profiles and is identified by height (A), then width (B).

### OVERSIZE TOLERANCES

Size	Squares	Size	Flats/Rectangles
.0625 – .7500"	+.0020/-0"	.1875 – .7500"	+.0030/-0"
>.7500 – 1.5000"	+.0030/-0"	>.7500 – 1.5000"	+.0040/-0"
>1.5000 – 3.0000"	+.0040/-0"	>1.5000 – 3.0000"	+.0050/-0"

LENGTH TOLERANCE FOR 12 – 36" KEY STOCK: +0/- .125"

Additional sizes up to 6" available as special order. Nonstandard lengths up to 12 feet are also available. Lengths over 3 feet may be subject to a packing charge. Visit [huyett.com](http://huyett.com) or contact our friendly sales team today for more details.

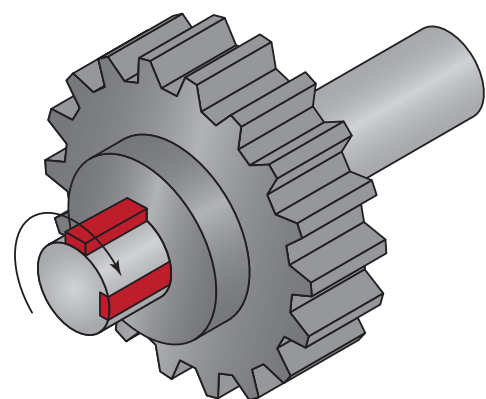


Visit [www.huyett.com](http://www.huyett.com) to download Material and Compliance Certifications in your Account Order History.

A **Certificate of Compliance** certifies that your parts meet the required specifications. G.L. Huyett provides this document at NO CHARGE on all shipments and is available on every packing slip for each item that contains a Certificate.

**Material Certifications** verify a material's chemical and physical properties and state a product made of metal is in compliance with international standards organizations such as ANSI and ASME, and bear the Heat Number from the cast from which the material was created.

[www.huyett.com/MyAccount/OrderHistory](http://www.huyett.com/MyAccount/OrderHistory)

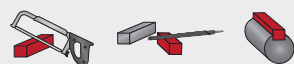


Key stock and machine keys may shear under stress to protect people and expensive equipment.

For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).

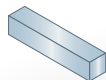
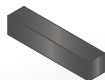
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\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.



### CUT, FILE, & FIT™

OverSize Tolerance



Size	Carbon Steel, Plain*		Carbon Steel, Zinc Trivalent**	
	305 mm Bars	1,000 mm Bars	305 mm Bars	1,000 mm Bars
4 mm Square	350404-305	350404-1000	360404-305	360404-1000
5 mm Square	350505-305	350505-1000	360505-305	360505-1000
6 mm Square	350606-305	350606-1000	360606-305	360606-1000
7 mm Square	350707-305	350707-1000	360707-305	360707-1000
8 mm × 5 mm	350805-305	—	360805-305	—
8 mm × 7 mm	350807-305	350807-1000	360807-305	360807-1000
8 mm Square	350808-305	350808-1000	360808-305	360808-1000
10 mm × 6 mm	351006-305	—	361006-305	—
10 mm × 8 mm	351008-305	351008-1000	361008-305	361008-1000
10 mm Square	351010-305	351010-1000	361010-305	361010-1000
12 mm × 6 mm	351206-305	—	361206-305	—
12 mm × 8 mm	351208-305	351208-1000	361208-305	361208-1000
12 mm × 10 mm	351210-305	—	361210-305	—
12 mm Square	351212-305	351212-1000	361212-305	361212-1000
14 mm × 6 mm	351406-305	—	361406-305	—
14 mm × 9 mm	351409-305	351409-1000	361409-305	361409-1000
14 mm Square	351414-305	351414-1000	361414-305	361414-1000
16 mm × 7 mm	351607-305	—	361607-305	—
16 mm × 10 mm	351610-305	351610-1000	361610-305	361610-1000
16 mm Square	351616-305	351616-1000	361616-305	361616-1000
18 mm × 7 mm	351807-305	—	361807-305	—
18 mm × 11 mm	351811-305	351811-1000	361811-305	361811-1000
18 mm Square	351818-305	351818-1000	361818-305	361818-1000
20 mm × 8 mm	352008-305	—	362008-305	—
20 mm × 12 mm	352012-305	352012-1000	362012-305	362012-1000
20 mm Square	352020-305	352020-1000	362020-305	362020-1000
22 mm × 9 mm	352209-305	—	362209-305	—
22 mm × 14 mm	352214-305	352214-1000	362214-305	362214-1000
22 mm Square	352222-305	—	362222-305	—
25 mm × 14 mm	352514-305	352514-1000	362514-305	362514-1000
25 mm Square	352525-305	—	362525-305	—
28 mm × 16 mm	352816-305	—	362816-305	—
28 mm × 25 mm	352825-305	—	362825-305	—
32 mm × 18 mm	353218-305	—	363218-305	—
37 mm × 20 mm	—	353620-1000	—	363620-1000
36 mm × 20 mm	353620-305	—	363620-305	—
40 mm × 22 mm	354022-305	—	364022-305	—

305 mm and 1,000 mm plated key stock is marked for easy identification.

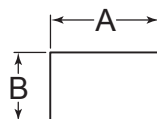
**For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).**

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\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.

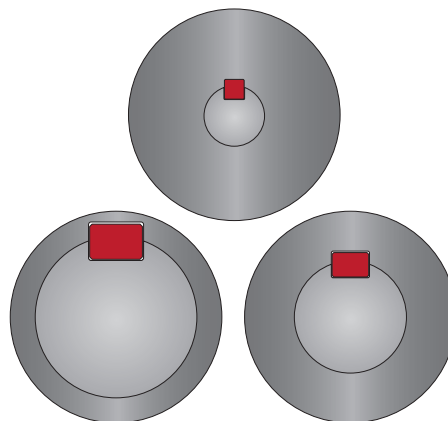
OVERSIZE TOLERANCES		
Size	Squares	Flats/Rectangles
All Sizes	+.076/-0 mm	
LENGTH TOLERANCE FOR 305 – 1,000 mm KEY STOCK: +0/-3.175 mm		

Additional sizes up to 50 mm available as special order. Nonstandard lengths up to 4 meters are also available. Lengths over 1 meter may be subject to a packing charge. Visit [huyett.com](http://huyett.com) or contact our friendly sales team today for more details.



### Measuring Metric Key Stock

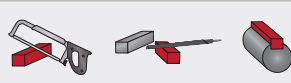
Metric key stock is available in square or flat/rectangle profiles and is identified by width (A), then height (B).



### Sizing keys to shafts

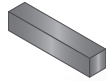
Unless the mating hub lacks clearance, small shafts generally use square keys. Larger shaft diameters (over 170 mm or 6.5") use rectangular keys.





### CUT, FILE, & FIT™

Oversize Tolerance



Size	Moltrup Quality Steel, Plain* (1045 or 8630)	
	12" Bars	36" Bars
1/8" Square	6001250125-12	6001250125-36
3/16" Square	6001870187-12	6001870187-36
1/4" Square	6002500250-12	6002500250-36
5/16" Square	6003120312-12	6003120312-36
3/8" Square	6003750375-12	6003750375-36
7/16" Square	6004370437-12	–
1/2" Square	6005000500-12	6005000500-36
5/8" Square	6006250625-12	6006250625-36
3/4" Square	6007500750-12	6007500750-36
7/8" Square	6008750875-12	6008750875-36
1" Square	6010001000-12	6010001000-36
1-1/4" Square	6012501250-12	–
1-1/2" Square	6015001500-12	–

### MOLTRUP OVERSIZE TOLERANCES

Size	Squares	Flats/Rectangles	
		Width	Height
.0625 – 1.2500"	+.0010/-0"	+.0010/-0"	±.0050"
>1.2500 – 3.0000"	+.0020/-0"	+.0020/-0"	±.0050"

LENGTH TOLERANCE FOR 12 – 36" KEY STOCK: +0/- .125"

Additional sizes up to 6" available as special order. Nonstandard lengths up to 12 feet are also available. Lengths over 3 feet may be subject to a packing charge. Visit [huyett.com](http://huyett.com) or contact our friendly sales team today for more details.

## MOLTRUP STEEL COMPANY

Moltrup Steel is considered one of the most important and pioneering steel companies in the niche business of bright steel for keys and key stock. Founded in Beaver Falls, PA, in 1914 by Stephen and J. T. Moltrup, the company was the inventor of what was known as the "Moltrup Die," which is a sectional die that allows adjustments to be made in the die without removal from the die bench. Moltrup was an early adopter of automation and by 1924, they had developed a drawbench capable of drawing four bars at a time, known as "the Duplex." Inventor J. T. Moltrup was said to have developed the concept after touring a bread factory in Battle Creek, MI.

Precision drawn bright steel served many uses. Moltrup steel was used to produce crankshafts for Liberty airplanes in World War I; and for engraving and foundry plates, including engraving plates for the Federal Bureau of Printing and Engraving. These plates were used to produce paper money and food stamps.

During the mid-twentieth century, Moltrup steel was often used in hand tools, such as the shafts for screwdrivers, and according to a 1969 company biography, "wherever close fit or fine finishes are required, including the auto, appliance, business machine, computer, and machine tool industries."

### Moltrup or Moltrip?

While the correct spelling is "Moltrup," at some point early in its history someone spelled it with an "i." Both versions are still used today.

Although the name is commonly used to reference a particular kind of steel, it is not an actual grade.



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**For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).**

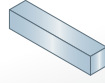
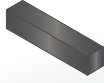
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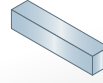
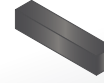


### CUT & FIT™

Undersize Tolerance



Size	Carbon Steel, Plain*		Carbon Steel, Zinc Trivalent**	
	12" Bars	36" Bars	12" Bars	36" Bars
1/16" Square	3000620062-12	3000620062-36	3100620062-12	–
3/32" Square	3000930093-12	3000930093-36	3100930093-12	–
3/32" × 3/16"	3000930187-12	–	3100930187-12	–
1/8" Square	3001250125-12	3001250125-36	3101250125-12	3101250125-36
1/8" × 3/16"	3001250187-12	3001250187-36	3101250187-12	–
1/8" × 1/4"	3001250250-12	3001250250-36	3101250250-12	–
1/8" × 3/8"	3001250375-12	–	3101250375-12	–
1/8" × 1/2"	3001250500-12	–	3101250500-12	–
5/32" Square	3001560156-12	3001560156-36	3101560156-12	–
3/16" Square	3001870187-12	3001870187-36	3101870187-12	3101870187-36
3/16" × 1/4"	3001870250-12	3001870250-36	3101870250-12	–
3/16" × 5/16"	3001870312-12	3001870312-36	3101870312-12	–
3/16" × 3/8"	3001870375-12	3001870375-36	3101870375-12	–
3/16" × 1/2"	3001870500-12	–	3101870500-12	–
7/32" Square	3002180218-12	3002180218-36	3102180218-12	–
7/32" × 1/4"	3002180250-12	–	3102180250-12	–
1/4" Square	3002500250-12	3002500250-36	3102500250-12	3102500250-36
1/4" × 5/16"	3002500312-12	3002500312-36	3102500312-12	–
1/4" × 3/8"	3002500375-12	3002500375-36	3102500375-12	–
1/4" × 7/16"	3002500437-12	–	3102500437-12	–
1/4" × 1/2"	3002500500-12	3002500500-36	3102500500-12	–
1/4" × 9/16"	3002500562-12	–	3102500562-12	–
1/4" × 5/8"	3002500625-12	–	3102500625-12	–
1/4" × 3/4"	3002500750-12	3002500750-36	3102500750-12	–
9/32" Square	3002810281-12	–	3102810281-12	–
5/16" Square	3003120312-12	3003120312-36	3103120312-12	3103120312-36
5/16" × 3/8"	3003120375-12	3003120375-36	3103120375-12	–
5/16" × 7/16"	3003120437-12	–	3103120437-12	–
5/16" × 1/2"	3003120500-12	3003120500-36	3103120500-12	–
5/16" × 5/8"	3003120625-12	3003120625-36	3103120625-12	–
5/16" × 3/4"	3003120750-12	–	3103120750-12	–
3/8" Square	3003750375-12	3003750375-36	3103750375-12	3103750375-36
3/8" × 7/16"	3003750437-12	–	3103750437-12	–
3/8" × 1/2"	3003750500-12	3003750500-36	3103750500-12	–
3/8" × 5/8"	3003750625-12	3003750625-36	3103750625-12	–
3/8" × 3/4"	3003750750-12	–	3103750750-12	–
3/8" × 1"	3003751000-12	–	3103751000-12	–
7/16" Square	3004370437-12	3004370437-36	3104370437-12	3104370437-36



Size	Carbon Steel, Plain*		Carbon Steel, Zinc Trivalent**	
	12" Bars	36" Bars	12" Bars	36" Bars
7/16" × 1/2"	3004370500-12	3004370500-36	3104370500-12	–
7/16" × 5/8"	3004370625-12	3004370625-36	3104370625-12	–
7/16" × 3/4"	3004370750-12	–	3104370750-12	–
1/2" Square	3005000500-12	3005000500-36	3105000500-12	3105000500-36
1/2" × 9/16"	3005000562-12	–	3105000562-12	–
1/2" × 5/8"	3005000625-12	3005000625-36	3105000625-12	–
1/2" × 3/4"	3005000750-12	3005000750-36	3105000750-12	–
1/2" × 7/8"	3005000875-12	3005000875-36	3105000875-12	–
1/2" × 1"	3005001000-12	3005001000-36	3105001000-12	–
9/16" Square	3005620562-12	3005620562-36	3105620562-12	3105620562-36
9/16" × 5/8"	3005620625-12	–	3105620625-12	–
9/16" × 3/4"	3005620750-12	–	3105620750-12	–
9/16" × 7/8"	3005620875-12	–	3105620875-12	–
5/8" Square	3006250625-12	3006250625-36	3106250625-12	3106250625-36
5/8" × 3/4"	3006250750-12	3006250750-36	3106250750-12	–
5/8" × 7/8"	3006250875-12	3006250875-36	3106250875-12	–
5/8" × 1"	3006251000-12	–	3106251000-12	–
11/16" Square	3006870687-12	3006870687-36	3106870687-12	–
11/16" × 7/8"	3006870875-12	–	3106870875-12	–
3/4" Square	3007500750-12	3007500750-36	3107500750-12	3107500750-36
3/4" × 7/8"	3007500875-12	3007500875-36	3107500875-12	–
3/4" × 1"	3007501000-12	3007501000-36	3107501000-12	–
3/4" × 1-1/8"	3007501125-12	–	3107501125-12	–
3/4" × 1-1/4"	3007501250-12	–	3107501250-12	–
3/4" × 1-1/2"	3007501500-12	3007501500-36	3107501500-12	–
13/16" Square	3008120812-12	3008120812-36	3108120812-12	–
7/8" Square	3008750875-12	3008750875-36	3108750875-12	3108750875-36
7/8" × 1"	3008751000-12	3008751000-36	3108751000-12	–
7/8" × 1-1/8"	3008751125-12	–	3108751125-12	–
7/8" × 1-1/4"	3008751250-12	3008751250-36	3108751250-12	–
15/16" Square	3009370937-12	3009370937-36	3109370937-12	–
1" Square	3010001000-12	3010001000-36	3110001000-12	3110001000-36
1" × 1-1/8"	3010001125-12	3010001125-36	3110001125-12	–
1" × 1-1/4"	3010001250-12	3010001250-36	3110001250-12	–
1" × 1-1/2"	3010001500-12	3010001500-36	3110001500-12	–
1" × 1-3/4"	3010001750-12	–	3110001750-12	–
1" × 2"	3010002000-12	–	3110002000-12	–
1-1/16" Square	3010621062-12	3010621062-36	310621062-12	–

For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).

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\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.

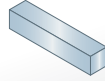
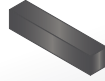
## COLD FINISHED BRIGHT STEEL KEY STOCK – ASTM A29 / A108

INCH



### CUT & FIT™

Undersize Tolerance



Size	Carbon Steel, Plain*		Carbon Steel, Zinc Trivalent**	
	12" Bars	36" Bars	12" Bars	36" Bars
1-1/8" Square	3011251125-12	3011251125-36	3111251125-12	–
1-1/8" x 1-1/4"	3011251250-12	3011251250-36	3111251250-12	–
1-3/16" Square	–	3011871187-36	–	–
1-1/4" Square	3012501250-12	3012501250-36	3112501250-12	3112501250-36
1-1/4" x 1-1/2"	3012501500-12	–	3112501500-12	–
1-1/4" x 1-3/4"	3012501750-12	–	3112501750-12	–
1-3/8" Square	3013751375-12	3013751375-36	3113751375-12	–
1-1/2" Square	3015001500-12	3015001500-36	3115001500-12	3115001500-36
1-1/2" x 1-3/4"	3015001750-12	3015001750-36	3115001750-12	–
1-1/2" x 2"	3015002000-12	3015002000-36	3115002000-12	–
1-5/8" Square	3016251625-12	–	3116251625-12	–
1-3/4" Square	3017501750-12	3017501750-36	3117501750-12	3117501750-36
2" Square	3020002000-12	3020002000-36	3120002000-12	–
2-1/2" Square	3025002500-12	3025002500-36	3125002500-12	–

1' and 3' plated key stock is marked for easy identification.

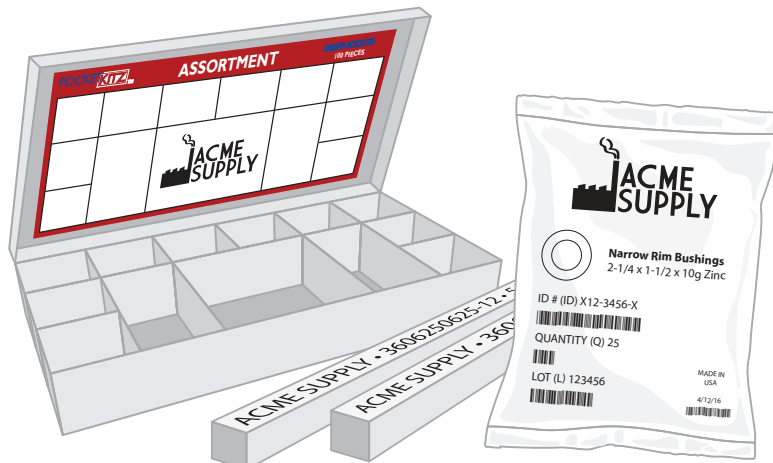
### UNDERSIZE TOLERANCES

Size	Squares	Size	Flats/Rectangles
.0625 – .7500"	+0/- .0020"	.0938 – .7500"	+0/- .0030"
>.7500 – 1.5000"	+0/- .0030"	>.7500 – 1.5000"	+0/- .0040"
>1.5000 – 2.5000"	+0/- .0040"	>1.5000 – 3.0000"	+0/- .0050"
>2.5000"	+0/- .0060"	>3.0000"	+0/- .0060"

LENGTH TOLERANCE FOR 12 – 36" KEY STOCK: +0/- .125"

Additional sizes up to 6" available as special order. Nonstandard lengths up to 12 feet are also available. Lengths over 3 feet may be subject to a packing charge. Visit [huyett.com](http://huyett.com) or contact our friendly sales team today for more details.

## CUSTOM PACKAGING & LABELING SOLUTIONS



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For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).

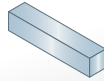
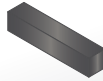
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\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.



### CUT & FIT™

Undersize Tolerance



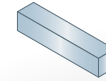
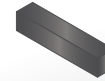
Size	Carbon Steel, Plain*		Carbon Steel, Zinc Trivalent**	
	305 mm Bars	1,000 mm Bars	305 mm Bars	1,000 mm Bars
2 mm Square	300202-305	–	310202-305	–
3 mm Square	300303-305	300303-1000	310303-305	310303-1000
4 mm Square	300404-305	300404-1000	310404-305	310404-1000
5 mm × 3 mm	300503-305	300503-1000	310503-305	310503-1000
5 mm Square	300505-305	300505-1000	310505-305	310505-1000
6 mm × 4 mm	300604-305	–	310604-305	–
6 mm × 5 mm	300605-305	–	310605-305	–
6 mm Square	300606-305	300606-1000	310606-305	310606-1000
7 mm Square	300707-305	300707-1000	310707-305	310707-1000
8 mm × 5 mm	300805-305	300805-1000	310805-305	310805-1000
8 mm × 6 mm	300806-305	300806-1000	310806-305	310806-1000
8 mm × 7 mm	300807-305	300807-1000	310807-305	310807-1000
8 mm Square	300808-305	300808-1000	310808-305	310808-1000
9 mm Square	300909-305	–	310909-305	–
10 mm × 6 mm	301006-305	301006-1000	311006-305	311006-1000
10 mm × 8 mm	301008-305	301008-1000	311008-305	311008-1000
10 mm Square	301010-305	301010-1000	311010-305	311010-1000
12 mm × 6 mm	301206-305	301206-1000	311206-305	311206-1000
12 mm × 8 mm	301208-305	301208-1000	311208-305	311208-1000
12 mm × 10 mm	301210-305	301210-1000	311210-305	311210-1000
12 mm Square	301212-305	301212-1000	311212-305	311212-1000
14 mm × 6 mm	301406-305	301406-1000	311406-305	311406-1000
14 mm × 7 mm	301407-305	–	311407-305	–
14 mm × 8 mm	301408-305	–	311408-305	–
14 mm × 9 mm	301409-305	301409-1000	311409-305	311409-1000
14 mm × 10 mm	301410-305	–	311410-305	–
14 mm × 12 mm	301412-305	–	311412-305	–
14 mm Square	301414-305	301414-1000	311414-305	311414-1000
16 mm × 7 mm	301607-305	–	311607-305	–
16 mm × 10 mm	301610-305	301610-1000	311610-305	311610-1000
16 mm Square	301616-305	301616-1000	311616-305	311616-1000
18 mm × 7 mm	301807-305	–	311807-305	–
18 mm × 11 mm	301811-305	301811-1000	311811-305	311811-1000
18 mm × 12 mm	301812-305	–	311812-305	–
18 mm × 14 mm	301814-305	–	311814-305	–
18 mm Square	301818-305	301818-1000	311818-305	311818-1000
20 mm × 8 mm	302008-305	302008-1000	312008-305	312008-1000

305 mm and 1,000 mm plated key stock is marked for easy identification.

**For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).**

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\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.



Size	Carbon Steel, Plain*		Carbon Steel, Zinc Trivalent**	
	305 mm Bars	1,000 mm Bars	305 mm Bars	1,000 mm Bars
20 mm × 12 mm	302012-305	302012-1000	312012-305	312012-1000
20 mm Square	302020-305	302020-1000	312020-305	312020-1000
22 mm × 9 mm	302209-305	–	312209-305	–
22 mm × 14 mm	302214-305	302214-1000	312214-305	312214-1000
22 mm Square	302222-305	302222-1000	312222-305	312222-1000
24 mm × 24 mm	302424-305	–	312424-305	–
25 mm × 14 mm	302514-305	302514-1000	312514-305	312514-1000
25 mm Square	302525-305	302525-1000	312525-305	312525-1000
28 mm × 10 mm	–	302810-1000	–	312810-1000
28 mm × 16 mm	302816-305	302816-1000	312816-305	312816-1000
28 mm × 25 mm	302825-305	–	312825-305	–
28 mm Square	302828-305	–	312828-305	–
30 mm Square	303030-305	–	313030-305	–
32 mm × 18 mm	303218-305	303218-1000	313218-305	313218-1000
32 mm Square	303232-305	–	313232-305	–
37 mm × 20 mm	–	303620-1000	–	313620-1000
36 mm × 20 mm	303620-305	–	313620-305	–
41 mm × 22 mm	–	304022-1000	–	314022-1000
40 mm × 22 mm	304022-305	–	314022-305	–
45 mm × 25 mm	304525-305	304525-1000	314525-305	314525-1000

### UNDERSIZE TOLERANCES

Size	Squares (ISO h9)	Flats/Rectangles
0 – 3 mm	+0/-0.025 mm	See “DIN/ISO 6880 Standard Tolerancing for Flat Metric Steels,” on page 13.
>3 – 6 mm	+0/-0.030 mm	
>6 – 10 mm	+0/-0.036 mm	
>10 – 19 mm	+0/-0.043 mm	
>19 – 30 mm	+0/-0.052 mm	
>30 – 50 mm	+0/-0.062 mm	

LENGTH TOLERANCE FOR 305 – 1,000 mm KEY STOCK: +0/-3.175 mm

Additional sizes up to 50 mm available as special order. Nonstandard lengths up to 4 meters are also available. Lengths over 1 meter may be subject to a packing charge. Visit [huyett.com](http://huyett.com) or contact our friendly sales team today for more details.

## DIN/ISO TOLERANCES

### DIN/ISO 6880 STANDARD TOLERANCING FOR FLAT/RECTANGLE METRIC STEELS

Width × Height	Width Tolerance (ISO h9)	Height Tolerance
8 mm × 7 mm	+0/-0.036 mm	+0/-0.090 mm (ISO h11)
10 mm × 8 mm	+0/-0.036 mm	+0/-0.036 mm (ISO h9)
12 mm × 8 mm	+0/-0.043 mm	+0/-0.036 mm (ISO h9)
12 mm × 10 mm		+0/-0.090 mm (ISO h11)
14 mm × 9 mm		
16 mm × 10 mm		
18 mm × 11 mm		
20 mm × 12 mm	+0/-0.052 mm	+0/-0.110 mm (ISO h11)
22 mm × 14 mm		
25 mm × 14 mm		+0/-0.130 mm (ISO h11)
25 mm × 22 mm		+0/-0.110 mm (ISO h11)
28 mm × 16 mm		+0/-0.130 mm (ISO h11)
28 mm × 25 mm		

DIN/ISO 6880 key stock is the standard for metric key stock worldwide. It is drawn to close undersize tolerance to yield a tight fit in the mating key way. As the material is drawn, the steel may be bead blasted to remove surface imperfections and increase brightness.

DIN/ISO 6880 is the most common European key stock standard

DIN/ISO 6880 is made to a C45 designation (AISI 1045) for carbon steel and A4 (AISI 316) for stainless steel. In some instances, we may substitute DIN/ISO 174 or DIN/ISO 178 for stainless steel only.

### DIN 174 FLAT/RECTANGLE MATERIAL (ISO TOLERANCE h11)

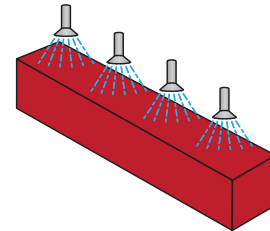
Width	Tolerance	Height	Tolerance
5 – 6 mm	+0/-0.075 mm	1.5 – 3 mm	+0/-0.060 mm
8 – 10 mm	+0/-0.090 mm	4 – 6 mm	+0/-0.075 mm
12 – 18 mm	+0/-0.110 mm	8 – 10 mm	+0/-0.090 mm
20 – 30 mm	+0/-0.130 mm	12 – 16 mm	+0/-0.110 mm
32 – 50 mm	+0/-0.160 mm	20 – 30 mm	+0/-0.130 mm

### DIN 178 SQUARE MATERIAL (ISO TOLERANCE h11)

Height & Width	Tolerance
0 – 3 mm	+0/-0.060 mm
>3 – 6 mm	+0/-0.075 mm
>6 – 10 mm	+0/-0.090 mm
>10 – 18 mm	+0/-0.110 mm
>18 – 30 mm	+0/-0.130 mm
>30 – 50 mm	+0/-0.160 mm

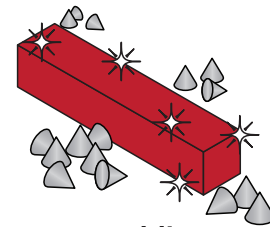
## SECONDARY PROCESSES

Depending on your application, a secondary process may be necessary.



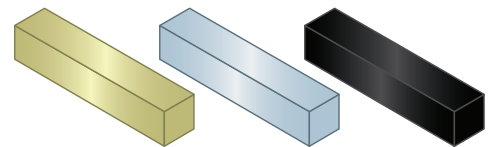
### Heat Treating

Heat treating is used to increase strength by raising the temperature of the steel and then cooling it in a controlled manner to change its grain structure.



### Tumbling

Parts are tumbled to remove burrs prior to shipment or plating. Using friction, the tumbling media is engineered to polish parts in a controlled manner.



### Plating

The primary purpose of plating is to protect steel from oxidation and corrosion. Zinc electroplating is one of the most common types of electroplating.



## Learn More

G.L. Huyett's *Engineering Handbook* gives an in-depth explanation of heat treating and other finishing processes.

Visit [www.huyett.com/catalogs](http://www.huyett.com/catalogs) to download a free copy today

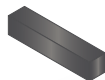
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\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.

### STANDARD™

Bilateral Tolerance



Size	High Carbon Steel, ** Plain* (1095)	
	12" Bars	36" Bars
1/16" Square	5500620062-12	5500620062-36
3/32" Square	5500930093-12	5500930093-36
1/8" Square	5501250125-12	5501250125-36
1/8" x 3/16"	5501250187-12	–
1/8" x 1/4"	5501250250-12	–
5/32" Square	5501560156-12	–
3/16" Square	5501870187-12	5501870187-36
3/16" x 1/4"	5501870250-12	–
3/16" x 3/8"	5501870375-12	–
1/4" Square	5502500250-12	5502500250-36
1/4" x 5/16"	5502500312-12	–
1/4" x 3/8"	5502500375-12	–
1/4" x 1/2"	5502500500-12	–
5/16" Square	5503120312-12	5503120312-36
5/16" x 3/8"	5503120375-12	–
5/16" x 1/2"	5503120500-12	–
3/8" Square	5503750375-12	5503750375-36
3/8" x 7/16"	5503750437-12	–
3/8" x 1/2"	5503750500-12	–
3/8" x 5/8"	5503750625-12	–
3/8" x 3/4"	5503750750-12	–
7/16" Square	5504370437-12	–
7/16" x 1/2"	5504370500-12	–
7/16" x 5/8"	5504370625-12	–
1/2" Square	5505000500-12	5505000500-36
1/2" x 5/8"	5505000625-12	–
1/2" x 3/4"	5505000750-12	–
1/2" x 1"	5505001000-12	–
9/16" Square	5505620562-12	–
5/8" Square	5506250625-12	5506250625-36
5/8" x 3/4"	5506250750-12	–
5/8" x 7/8"	5506250875-12	–
3/4" Square	5507500750-12	–
3/4" x 7/8"	5507500875-12	–
3/4" x 1"	5507501000-12	–
7/8" Square	5508750875-12	–
1" Square	5510001000-12	–
1-1/4" Square	5512501250-12	–

### HIGH CARBON STEEL♦♦ BILATERAL TOLERANCES

Size	Squares	Size	Flats/Rectangles
.0625 – .1875"	±.0005"	.0925 – .6250"	±.0010"
>.1875 – .6250"	±.0010"		
>.6250 – 1.0000"	±.0015"	>.6250 – .7500"	±.0015"
>1.0000"	±.0040"		

LENGTH TOLERANCE FOR 12 – 36" KEY STOCK: +0/- .125"

Additional sizes up to 6" available as special order. Nonstandard lengths up to 12 feet are also available. Lengths over 3 feet may be subject to a packing charge. Visit [huyett.com](http://huyett.com) or contact our friendly sales team today for more details.



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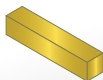
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\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.

### STANDARD™

Bilateral Tolerance



Size	Aluminum,** Plain (6061-T6)	Brass,** Plain (C360)
	12" Bars	12" Bars
1/8" Square	0401250125-12	0601250125-12
3/16" Square	0401870187-12	0601870187-12
1/4" Square	0402500250-12	0602500250-12
5/16" Square	0403120312-12	0603120312-12
3/8" Square	0403750375-12	0603750375-12
7/16" Square	0404370437-12	0604370437-12
1/2" Square	0405000500-12	0605000500-12
5/8" Square	0406250625-12	0606250625-12
3/4" Square	0407500750-12	0607500750-12
1" Square	0410001000-12	0610001000-12
1-1/4" Square	0412501250-12	0612501250-12
1-1/2" Square	0415001500-12	0615001500-12

1" brass key stock is marked for easy identification.

Though they are generally more expensive than mild, carbon, and stainless steel, iron-free nonferrous metals like aluminum, brass, copper, nickel, and zinc are non-magnetic, highly resistant to corrosion, and possess higher conductivity.

### ALUMINUM\*\* BILATERAL TOLERANCES

Size	Squares	Flats/Rectangles
.1250 – .3750"	±.0080"	
>.3750 – .6250"	±.0090"	
>.6250 – .8750"	±.0100"	
>.8750 – 1.2500"	±.0120"	
>1.2500 – 1.7500"	±.0140"	
>1.7500 – 2.5000"	±.0240"	

LENGTH TOLERANCE FOR 12 – 36" KEY STOCK: +0/- .125"

### BRASS\*\* BILATERAL TOLERANCES

Size	Squares	Flats/Rectangles
.1250"	±.0020"	
.1875 – .5000"	±.0030"	
>.5000 – 1.0000"	±.0040"	
>1.0000 – 2.0000"	±.0050"	

LENGTH TOLERANCE FOR 12 – 36" KEY STOCK: +0/- .125"

Additional sizes up to 6" available as special order. Nonstandard lengths up to 12 feet are also available. Lengths over 3 feet may be subject to a packing charge. Visit [huyett.com](http://huyett.com) or contact our friendly sales team today for more details.

## CARE & HANDLING OF PLAIN FINISH PARTS

### 30-Day Limited Warranty for Surface Finish

A special sealer and treatment is applied to all plain finish parts to prevent corrosion, and specially formulated plastic liners are used to protect parts from the atmosphere. It is vital that the following handling instructions be maintained:

1. Inspect containers upon receipt.
2. Do not remove parts from original packing until ready for use.
3. After opening containers, **reroll the inner liner and reclose the box** for storage.
4. When touching plain finished parts, **wear neoprene, latex, or thick cotton gloves** to prevent hand oils from contacting the surface of the parts.
5. **Avoid allowing human sweat or any other type of contaminant** to contact the surface of the parts.

Surface corrosion can appear in as little as 24 hours if plain finish parts are not handled correctly, especially during the months of June, July, August, and September in North America. Improper handling will void any and all warranties.

To learn more, visit:  
**[Huyett.com/Handling](http://Huyett.com/Handling)**



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**For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).**

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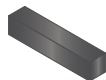
\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.



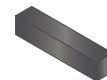


### CUT & FIT™

Undersize Tolerance



Size	Alloy Steel, Plain* (4140)	
	12" Bars	36" Bars
1/8" Square	6501250125-12	–
3/16" Square	6501870187-12	–
1/4" Square	6502500250-12	6502500250-36
5/16" Square	6503120312-12	6503120312-36
3/8" Square	6503750375-12	–
1/2" Square	6505000500-12	6505000500-36
5/8" Square	6506250625-12	6506250625-36
3/4" Square	6507500750-12	6507500750-36
7/8" Square	6508750875-12	6508750875-36
1" Square	6510001000-12	6510001000-36
1-1/8" Square	6511251125-12	–
1-1/4" Square	6512501250-12	–
1-3/8" Square	6513751375-12	–
1-1/2" Square	6515001500-12	–
1-3/4" Square	6517501750-12	–



Size	Alloy Steel, Plain* (4140)	
	12" Bars	36" Bars
2" Square	6520002000-12	–
2-1/2" Square	6525002500-12	–
3" Square	6530003000-12	–

### ALLOY STEEL UNDERSIZE TOLERANCES

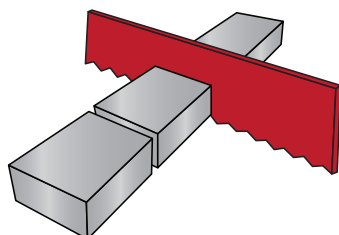
Size	Squares	Flats/Rectangles
.0625 – .7500"	+0/- .0050"	
>.7500 – 1.5000"	+0/- .0060"	
>1.5000 – 3.000"	+0/- .0070"	

LENGTH TOLERANCE FOR 12 – 36" KEY STOCK: +0/- .125"

Additional sizes up to 6" available as special order. Nonstandard lengths up to 12 feet are also available. Lengths over 3 feet may be subject to a packing charge. Visit [huyett.com](http://huyett.com) or contact our friendly sales team today for more details.

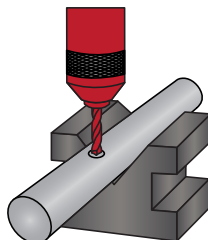
## CUSTOM MANUFACTURING CAPABILITIES

Our state-of-the-art manufacturing facility is capable of producing custom key stock and machine keys. With our extensive experience in the automotive, power transmission, and agricultural industries, your special is our specialty.



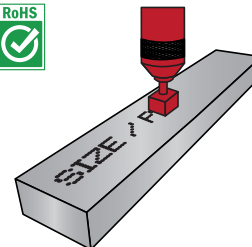
### Sawing

Lengths can be cut up to 144" with profiles from 1/8" to 6".



### Drilling

Usually performed with turning or milling operations.



### Marking

Inkjet printing capabilities to mark information directly on parts using RoHS compliant ink.

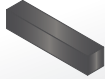
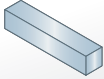
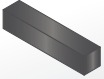
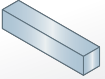
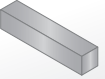
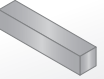
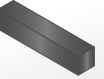
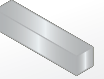
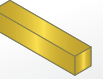
For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).

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\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.



### 6' BARS FOR LESS RUN OUT

									
Size	Carbon Steel, Plain,* Oversize	Carbon Steel, Zinc Trivalent,** Oversize	Carbon Steel, Plain,* Undersize	Carbon Steel, Zinc Trivalent,** Undersize	300 Series Stainless Steel, Undersize	Alloy Steel Plain* (4140), Undersize	High Carbon Standard, Plain* (1095), Bilateral	Aluminum,** Plain (6061-T6), Bilateral	Brass,** Plain (C360), Bilateral
	72" Bars	72" Bars	72" Bars	72" Bars	72" Bars	72" Bars	72" Bars	72" Bars	72" Bars
1/8" Square	3501250125-72	3601250125-72	3001250125-72	3101250125-72	7001250125-72	6501250125-72	5501250125-72	0401250125-72	0601250125-72
3/16" Square	3501870187-72	3601870187-72	3001870187-72	3101870187-72	7001870187-72	6501870187-72	5501870187-72	0401870187-72	0601870187-72
1/4" Square	3502500250-72	3602500250-72	3002500250-72	3102500250-72	7002500250-72	6502500250-72	5502500250-72	0402500250-72	0602500250-72
5/16" Square	3503120312-72	3603120312-72	3003120312-72	3103120312-72	7003120312-72	6503120312-72	5503120312-72	0403120312-72	0603120312-72
3/8" Square	3503750375-72	3603750375-72	3003750375-72	3103750375-72	7003750375-72	6503750375-72	5503750375-72	0403750375-72	0603750375-72
1/2" Square	3505000500-72	3605000500-72	3005000500-72	3105000500-72	7005000500-72	6505000500-72	5505000500-72	0405000500-72	0605000500-72
5/8" Square	3506250625-72	3606250625-72	3006250625-72	3106250625-72	7006250625-72	6506250625-72	5506250625-72	0406250625-72	0606250625-72
3/4" Square	3507500750-72	3607500750-72	3007500750-72	3107500750-72	7007500750-72	6507500750-72	5507500750-72	0407500750-72	0607500750-72
7/8" Square	3508750875-72	3608750875-72	3008750875-72	3108750875-72	7008750875-72	6508750875-72	5508750875-72	0408750875-72	0608750875-72
1" Square	3510001000-72	3610001000-72	3010001000-72	3110001000-72	7010001000-72	6510001000-72	5510001000-72	0410001000-72	0610001000-72

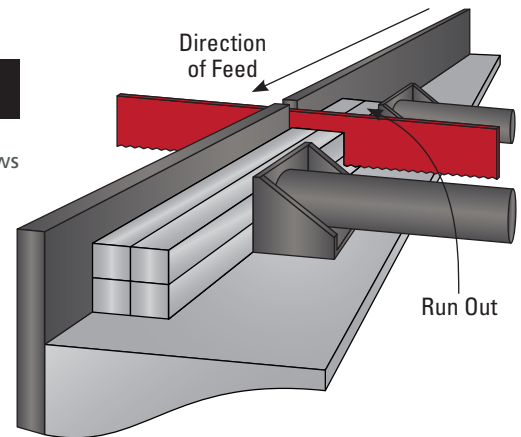
Length tolerance for 6' key stock: +0/- .250".

For 12' bars and custom lengths, contact our friendly sales team today at 785-392-3017.

### WHAT IS RUN OUT?

Run out is the leftover/unused bar that rests behind the blade of a bandsaw. Bandsaws use clamping power on both sides of the blade to hold a workpiece rigid as it is cut. On most bandsaws, there is a distance between the clamp on the feed side of the blade. As the bar is fed for cutting, there is a point where there is not enough bar length to allow for clamping on both sides of the blade.

This runout exists on a "per bar" basis, and is the same length, regardless of overall bar length. In higher volume applications, the use of a longer length bar can significantly reduce run out and the associated costs in waste. A 6' bar has 50% less waste than a 3' bar, and 84% less waste than a 1' bar. For this reason, MAK-A-KEY key stock is offered in 6' bar lengths.

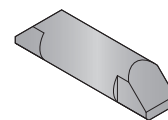


### ALWAYS CUTTING THE SAME KEY?

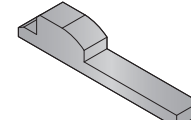
We have the world's largest selection of 1', 3', 6', and 12' lengths of key stock in plain carbon or zinc plated steel, special grades, and nonferrous material up to 3" square. We can produce machine keys and key stock to any specification.

When requesting quotes for custom and/or heat treated parts please provide a print whenever possible.

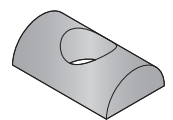
### Examples of what we can do for you



Half-Round Key with Milled ends



Flywheel Key



Half-Round Key with Hole

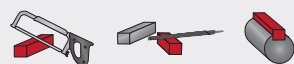


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For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).

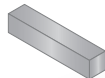
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\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.



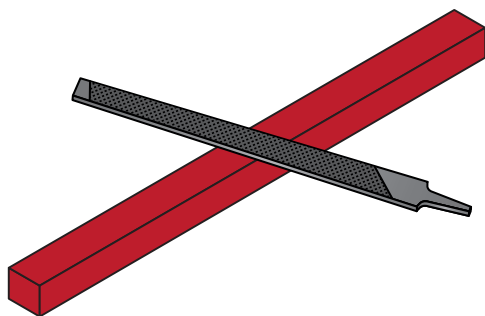
### CUT, FILE, & FIT™

OverSize Tolerance



Size	300 Series SS, Plain	
	12" Bars	36" Bars
1/8" Square	7501250125-12	7501250125-36
5/32" Square	7501560156-12	–
3/16" Square	7501870187-12	7501870187-36
1/4" Square	7502500250-12	7502500250-36
5/16" Square	7503120312-12	7503120312-36
3/8" Square	7503750375-12	7503750375-36
7/16" Square	7504370437-12	7504370437-36
1/2" Square	7505000500-12	7505000500-36
9/16" Square	7505620562-12	–
5/8" Square	7506250625-12	7506250625-36
3/4" Square	7507500750-12	7507500750-36
7/8" Square	7508750875-12	–
1" Square	7510001000-12	7510001000-36
1-1/8" Square	7511251125-12	–

1" and 3" stainless steel key stock is marked for easy identification.



Key stock may be filed or surface ground to fit.



**Need a Material Certification or Certificate of Compliance? Visit [www.huyett.com](http://www.huyett.com) to download free certifications from your Account Order History.**  
[www.huyett.com/MyAccount/OrderHistory](http://www.huyett.com/MyAccount/OrderHistory)

### OVERSIZE TOLERANCES

Size	Squares	Flats/Rectangles
.0625 – .5625"	+.0030/-0"	
>.5625 – 1.0000"	+.0050/-0"	
>1.0000 – 2.0000"	+.0060/-0"	

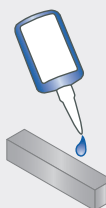
LENGTH TOLERANCE FOR 12 – 36" KEY STOCK: +0/- .125"

Additional sizes up to 6" available as special order. Nonstandard lengths up to 12 feet are also available. Lengths over 3 feet may be subject to a packing charge. Visit [huyett.com](http://huyett.com) or contact our friendly sales team today for more details.

### IDENTIFYING STAINLESS STEEL

#### Chemical Testing

Place a drop of 20% nitric acid solution on a cleaned portion of the specimen.



Stainless steel will remain unstained

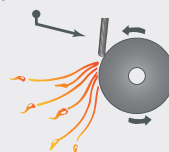


Carbon steel will turn dark

#### Mechanical Testing

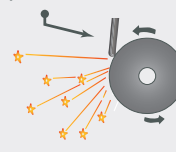
Hold the specimen with pliers and place it against a grinding wheel.

Specimen



Stainless steel will produce curved tails

Specimen



Carbon steel will look like fireworks

For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).

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## STAINLESS STEEL KEY STOCK – ASTM A276 / A484

INCH



### CUT & FIT™

Undersize Tolerance



Size	300 Series SS, Plain		316 SS, Plain		416 SS, Plain (ASTM A582)
	12" Bars	36" Bars	12" Bars	36" Bars	12" Bars
3/32" Square	7000930093-12	—	8000930093-12	—	—
7/64" Square	—	—	8001090109-12	—	—
1/8" Square	7001250125-12	7001250125-36	8001250125-12	8001250125-36	—
1/8" × 3/16"	7001250187-12	—	8001250187-12	—	—
1/8" × 1/4"	7001250250-12	—	8001250250-12	—	—
5/32" Square	7001560156-12	—	8001560156-12	—	—
3/16" Square	7001870187-12	7001870187-36	8001870187-12	8001870187-36	8501870187-12
3/16" × 1/4"	7001870250-12	—	8001870250-12	—	—
3/16" × 1/2"	7001870500-12	—	8001870500-12	—	—
1/4" Square	7002500250-12	7002500250-36	8002500250-12	8002500250-36	8502500250-12
1/4" × 5/16"	7002500312-12	—	8002500312-12	—	—
1/4" × 3/8"	7002500375-12	—	8002500375-12	—	—
1/4" × 1/2"	7002500500-12	—	8002500500-12	—	—
5/16" Square	7003120312-12	7003120312-36	8003120312-12	8003120312-36	8503120312-12
5/16" × 3/8"	7003120375-12	—	8003120375-12	—	—
3/8" Square	7003750375-12	7003750375-36	8003750375-12	8003750375-36	8503750375-12
3/8" × 1/2"	7003750500-12	—	8003750500-12	—	—
7/16" Square	7004370437-12	7004370437-36	8004370437-12	8004370437-36	—
1/2" Square	7005000500-12	7005000500-36	8005000500-12	8005000500-36	8505000500-12
1/2" × 5/8"	7005000625-12	—	8005000625-12	—	—
1/2" × 3/4"	7005000750-12	—	8005000750-12	—	—
1/2" × 1"	7005001000-12	—	8005001000-12	—	—
9/16" Square	7005620562-12	7005620562-36	8005620562-12	8005620562-36	—
5/8" Square	7006250625-12	7006250625-36	8006250625-12	8006250625-36	8506250625-12
5/8" × 3/4"	7006250750-12	—	8006250750-12	—	—
5/8" × 1"	7006251000-12	—	8006251000-12	—	—
3/4" Square	7007500750-12	7007500750-36	8007500750-12	8007500750-36	8507500750-12
3/4" × 1"	7007501000-12	—	8007501000-12	—	—
7/8" Square	7008750875-12	7008750875-36	8008750875-12	8008750875-36	8508750875-12
1" Square	7010001000-12	7010001000-36	8010001000-12	8010001000-36	8510001000-12
1-1/8" Square	7011251125-12	—	8011251125-12	—	—
1-1/4" Square	7012501250-12	—	—	—	—
1-3/8" Square	7013751375-12	—	—	—	—
1-1/2" Square	7015001500-12	—	—	—	—
1-5/8" Square	7016251625-12	—	—	—	—
1-3/4" Square	7017501750-12	—	—	—	—
2" Square	7020002000-12	—	—	—	—

1' and 3' stainless steel key stock is marked for easy identification.

**For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).**

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\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.

### UNDERSIZE TOLERANCES

#### Squares

Size	Tolerance
.0937 – .3120"	+0/- .0020"
>.3120 – .5000"	+0/- .0030"
>.5000 – 1.0000"	+0/- .0040"
>1.0000 – 2.0000"	+0/- .0060"

#### Flats/Rectangles

##### Size (Width)

.0625 – .3750"	±.0050"
>.3750 – 1.0000"	±.0040"
>1.0000 – 2.0000"	±.0060"

##### Size (Height)

.0350 – 1.0000"	±.0020"
>1.0000 – 2.0000"	±.0030"

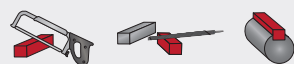
**LENGTH TOLERANCE FOR  
12 – 36" KEY STOCK: +0/- .125"**

Additional sizes up to 6" available as special order. Nonstandard lengths up to 144" are also available. Lengths over 36" may be subject to a packing charge. Visit [huyett.com](http://huyett.com) or contact our friendly sales team today for more details.



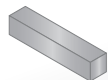
**18-8 is not a specification  
for stainless steel**

**G.L. Huyett considers  
18-8 to be any 300 series  
stainless steel**



### CUT, FILE, & FIT™

Override Tolerance



Size	300 Series SS, Plain
	305 mm Bars
4 mm Square	750404-305
5 mm Square	750505-305
6 mm Square	750606-305
7 mm Square	750707-305
8 mm × 7 mm	750807-305
8 mm Square	750808-305
10 mm × 8 mm	751008-305
10 mm Square	751010-305
12 mm × 8 mm	751208-305
12 mm Square	751212-305
14 mm × 9 mm	751409-305
14 mm Square	751414-305
16 mm Square	751616-305
18 mm × 12 mm	751812-305
18 mm Square	751818-305
20 mm Square	752020-305
22 mm Square	752222-305
24 mm Square	752424-305

305 mm stainless steel key stock is marked for easy identification.

### OVERSIZE TOLERANCES

Size	Squares	Flats/Rectangles
All Sizes	+0/-0.076 mm	
LENGTH TOLERANCE FOR 305 – 1,000 mm KEY STOCK: +0/-3.175 mm		

Additional sizes up to 50 mm available as special order. Nonstandard lengths up to 4 meters are also available. Lengths over 1 meter may be subject to a packing charge. Visit [huyett.com](http://huyett.com) or contact our friendly sales team today for more details.

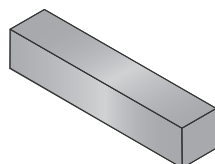


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[www.huyett.com/MyAccount/OrderHistory](http://www.huyett.com/MyAccount/OrderHistory)

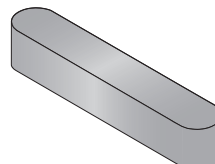
## CUT & FINISHED MACHINE KEYS

Looking for machine keys? We have the world's largest selection of key stock in plain carbon or zinc plated steel, special grades, and nonferrous material up to 3" square. Let us produce and finish machine keys to your specifications for just about any application including automated assembly lines.

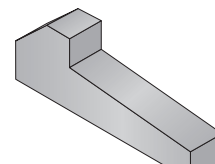
For more information, visit [www.huyett.com](http://www.huyett.com) or give one of our friendly, knowledgeable sales representatives a call today at 785-392-3017.



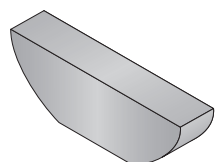
**Form B Keys**



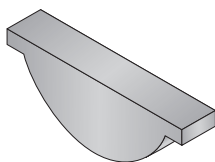
**Form A Keys**



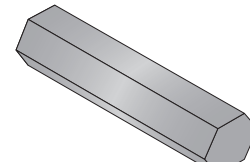
**Gib Head Keys**



**Woodruff Keys**



**Hi-Pro Keys**



**Hex Keys & Shafts**

**For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).**

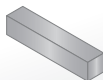
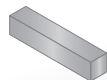
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\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.



### CUT & FIT™

Undersize Tolerance



Size	300 Series SS, Plain		316 SS, Plain
	305 mm Bars	1,000 mm Bars	305 mm Bars
2 mm Square	700202-305	700202-1000	800202-305
3 mm Square	700303-305	700303-1000	800303-305
4 mm Square	700404-305	700404-1000	800404-305
5 mm Square	700505-305	700505-1000	800505-305
6 mm Square	700606-305	700606-1000	800606-305
7 mm Square	700707-305	700707-1000	800707-305
8 mm × 7 mm	700807-305	700807-1000	800807-305
8 mm Square	700808-305	700808-1000	800808-305
10 mm × 6 mm	701006-305	–	801006-305
10 mm × 8 mm	701008-305	701008-1000	801008-305
10 mm Square	701010-305	701010-1000	801010-305
12 mm × 8 mm	701208-305	701208-1000	801208-305
12 mm × 10 mm	701210-305	701210-1000	801210-305
12 mm Square	701212-305	701212-1000	801212-305
14 mm × 9 mm	701409-305	701409-1000	801409-305
14 mm × 12 mm	701412-305	–	801412-305
14 mm Square	701414-305	701414-1000	801414-305
16 mm × 10 mm	701610-305	–	801610-305
16 mm Square	701616-305	–	801616-305
18 mm × 11 mm	701811-305	701811-1000	801811-305
18 mm Square	701818-305	–	–
20 mm × 12 mm	702012-305	702012-1000	802012-305
20 mm Square	702020-305	–	–
22 mm × 14 mm	702214-305	–	802214-305
22 mm Square	702222-305	–	–
25 mm × 14 mm	702514-305	–	802514-305
28 mm × 16 mm	702816-305	–	802816-305
32 mm × 18 mm	703218-305	–	803218-305

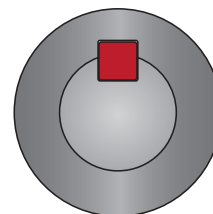
305 mm and 1,000 mm stainless steel key stock is marked for easy identification.

### UNDERSIZE TOLERANCES

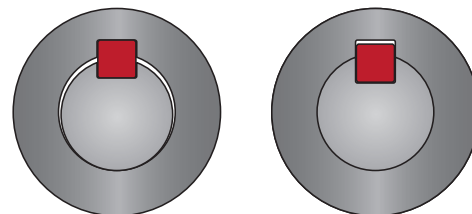
Size	Squares (ISO h9)	Flats/Rectangles
0 – 3 mm	+0/-0.025 mm	See “DIN/ISO 6880 Standard Tolerancing for Flat Metric Steels,” on page 13.
>3 – 6 mm	+0/-0.030 mm	
>6 – 10 mm	+0/-0.036 mm	
>10 – 19 mm	+0/-0.043 mm	
>19 – 30 mm	+0/-0.052 mm	
>30 – 50 mm	+0/-0.062 mm	

LENGTH TOLERANCE FOR 305 – 1,000 mm KEY STOCK: +0/-3.175 mm

Additional sizes up to 50 mm available as special order. Nonstandard lengths up to 4 meters are also available. Lengths over 1 meter may be subject to a packing charge. Visit [huyett.com](http://huyett.com) or contact our friendly sales team today for more details.



Generally, the key, shaft, and hub fit snugly together



A key way that is too tall or too short results in improper seating between the hub and shaft



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**For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).**

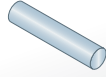
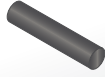
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\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.



### CUT & FIT™

Undersize Tolerance 

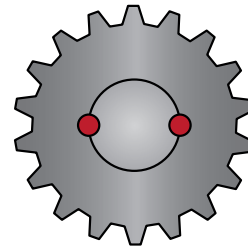


Size (Diameter)	Carbon Steel, Plain*		Carbon Steel, Zinc Trivalent**	
	12" Bars	36" Bars	12" Bars	36" Bars
1/8"	RK-0125-12	RK-0125-36	RKZ-0125-12	RKZ-0125-36
5/32"	–	–	RKZ-0156-12	–
3/16"	RK-0187-12	RK-0187-36	RKZ-0187-12	RKZ-0187-36
1/4"	RK-0250-12	RK-0250-36	RKZ-0250-12	RKZ-0250-36
5/16"	RK-0312-12	RK-0312-36	RKZ-0312-12	RKZ-0312-36
3/8"	RK-0375-12	RK-0375-36	RKZ-0375-12	RKZ-0375-36
7/16"	RK-0437-12	RK-0437-36	RKZ-0437-12	RKZ-0437-36
1/2"	RK-0500-12	RK-0500-36	RKZ-0500-12	RKZ-0500-36
9/16"	RK-0562-12	RK-0562-36	RKZ-0562-12	RKZ-0562-36
5/8"	RK-0625-12	RK-0625-36	RKZ-0625-12	RKZ-0625-36
3/4"	RK-0750-12	RK-0750-36	RKZ-0750-12	RKZ-0750-36
13/16"	RK-0812-12	RK-0812-36	–	–
7/8"	RK-0875-12	RK-0875-36	RKZ-0875-12	RKZ-0875-36
1"	RK-1000-12	RK-1000-36	RKZ-1000-12	RKZ-1000-36
1-1/8"	RK-1125-12	RK-1125-36	–	–
1-3/16"	RK-1187-12	–	–	–
1-1/4"	RK-1250-12	RK-1250-36	–	–
1-3/8"	–	RK-1375-36	–	–
1-1/2"	RK-1500-12	RK-1500-36	–	–
1-5/8"	RK-1625-12	RK-1625-36	–	–
1-3/4"	RK-1750-12	RK-1750-36	–	–
1-7/8"	RK-1875-12	RK-1875-36	–	–
2"	RK-2000-12	RK-2000-36	–	–

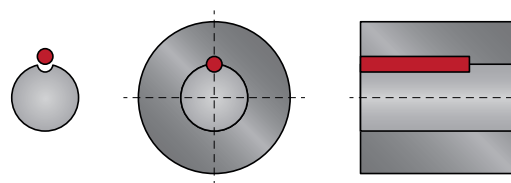
1' and 3' plated key stock is marked for easy identification.

UNDERSIZE TOLERANCES		
Size	Plain	Zinc Trivalent**
.0625 – 1.5000"	+0/-.0020"	
>1.5000 – 2.5000"	+0/-.0030"	
LENGTH TOLERANCE FOR 12 – 36" KEY STOCK: +0/-.125"		

Additional sizes up to 6" available as special order. Nonstandard lengths up to 12 feet are also available. Lengths over 3 feet may be subject to a packing charge. Visit [huyett.com](http://huyett.com) or contact our friendly sales team today for more details.



Depending on your application,  
round key stock may be used as shafting  
and/or cut-to-length machine keys



Round keys, or pin keys, are cylindrical keys inserted into a cylindrical key way that has been drilled and reamed partly in the shaft and partly in the hub while the application is assembled. A tight interference fit is required between the key and the key way to ensure uniformity along the length of the key.

Compared with square, parallel, or hex keys this design results in lower stress concentration making it appropriate for low power applications such as fastening a collar and pulley to a shaft.

For more information on types of fits, see "Getting the Right Fit," on page 4.



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For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).

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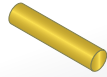
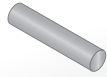
\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.

## STAINLESS STEEL & BRASS ROUND KEY STOCK

## INCH

### STANDARD™

Bilateral Tolerance



Size (Diameter)	300 Series SS, Plain**		Brass, Plain** (C360)	
	12" Bars	36" Bars	12" Bars	36" Bars
3/16"	RKS-0187-12	—	—	—
1/4"	RKS-0250-12	RKS-0250-36	—	RKB-0250-36
5/16"	RKS-0312-12	RKS-0312-36	—	RKB-0312-36
3/8"	RKS-0375-12	RKS-0375-36	—	RKB-0375-36
7/16"	RKS-0437-12	RKS-0437-36	—	—
1/2"	RKS-0500-12	RKS-0500-36	—	RKB-0500-36
9/16"	—	RKS-0562-36	—	—
5/8"	RKS-0625-12	RKS-0625-36	RKB-0625-12	RKB-0625-36
3/4"	RKS-0750-12	RKS-0750-36	RKB-0750-12	RKB-0750-36
13/16"	—	—	—	—
7/8"	RKS-0875-12	RKS-0875-36	RKB-0875-12	RKB-0875-36
1"	RKS-1000-12	RKS-1000-36	RKB-1000-12	RKB-1000-36
1-1/8"	RKS-1125-12	RKS-1125-36	—	—
1-3/16"	RKS-1187-12	RKS-1187-36	—	—
1-1/4"	RKS-1250-12	RKS-1250-36	—	—
1-3/8"	RKS-1375-12	RKS-1375-36	—	—
1-7/16"	RKS-1437-12	RKS-1437-36	—	—
1-1/2"	RKS-1500-12	RKS-1500-36	—	—

1' and 3' stainless steel and brass key stock is marked for easy identification.

### 300 SERIES SS\*\* BILATERAL TOLERANCES

Size	Plain
.0625 – .3125"	±.0010"
>.3125 – .4375"	±.0015"
>.4375 – .8750"	±.0020"
>.8750 – 1.4375"	±.0250"
>1.4375 – 2.0000"	±.0030"

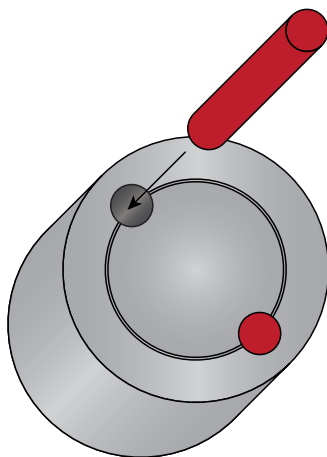
LENGTH TOLERANCE FOR 12 – 36" KEY STOCK: +0/-.125"

### BRASS\*\* BILATERAL TOLERANCES

Size	Plain
.1250 – .5000"	±.0020"
>.5000 – 1.1250"	±.0030"
>1.1250 – 2.2500"	±.0040"

LENGTH TOLERANCE FOR 12 – 36" KEY STOCK: +0/-.125"

Additional sizes up to 6" available as special order. Nonstandard lengths up to 12 feet are also available. Lengths over 3 feet may be subject to a packing charge. Visit [huyett.com](http://huyett.com) or contact our friendly sales team today for more details.



An advantage of round key stock is that it can be installed in holes bored in assembled applications for a precise fit.

Don't see what you're looking for? Contact [sales@huyett.com](mailto:sales@huyett.com) or call 785-392-3017



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For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).

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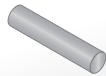
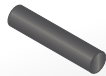
\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.





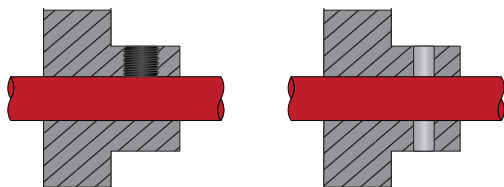
### CUT & FIT™

Undersize Tolerance 



Size (Diameter)	Carbon Steel, Plain*	Stainless Steel, Plain
	1,000 mm	1,000 mm
4 mm	RKM-004-1000	RKMS-004-1000
5 mm	RKM-005-1000	RKMS-005-1000
6 mm	RKM-006-1000	RKMS-006-1000
7 mm	–	RKMS-007-1000
8 mm	RKM-008-1000	RKMS-008-1000
9 mm	RKM-009-1000	RKMS-009-1000
10 mm	RKM-010-1000	RKMS-010-1000
12 mm	RKM-012-1000	RKMS-012-1000
15 mm	RKM-015-1000	RKMS-015-1000
16 mm	–	RKMS-016-1000
18 mm	–	RKMS-018-1000
20 mm	RKM-020-1000	RKMS-020-1000
25 mm	RKM-025-1000	RKMS-025-1000
30 mm	RKM-030-1000	–
40 mm	RKM-040-1000	–
50 mm	RKM-050-1000	–

1,000 mm stainless steel key stock is marked for easy identification.

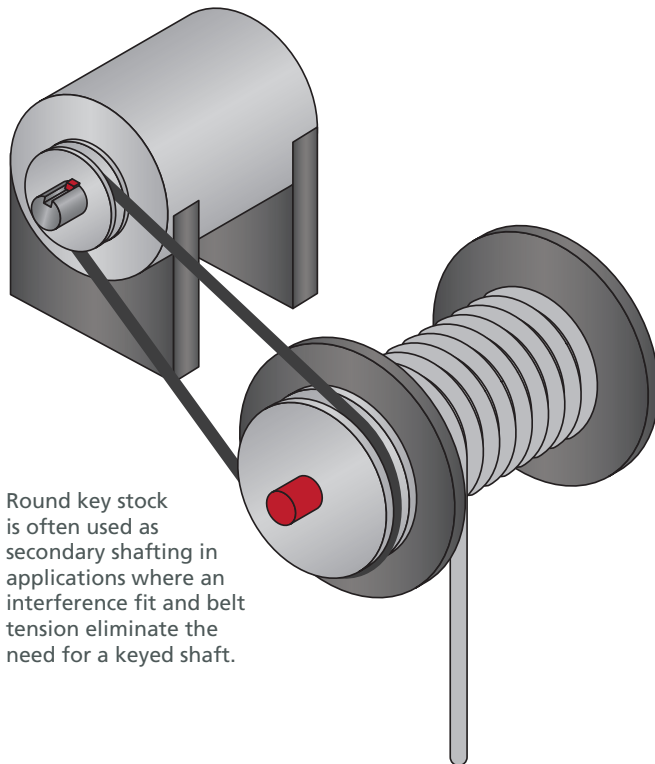


Rather than using a machine key, round key stock may be held in place with a set screw or a dowel pin.

UNDERSIZE TOLERANCES	
Diameter	Tolerance
3 mm	+0/-0.020 mm
>3 – 6 mm	+0/-0.030 mm
>6 – 18 mm	+0/-0.040 mm
>18 – 30 mm	+0/-0.050 mm
>30 – 50 mm	+0/-0.060 mm
>50 – 70 mm	+0/-0.070 mm

LENGTH TOLERANCE FOR 305 – 1,000 mm KEY STOCK: +0/-3.175 mm

Additional sizes up to 50 mm available as special order. Nonstandard lengths up to 4 meters are also available. Lengths over 1 meter may be subject to a packing charge. Visit [huyett.com](http://huyett.com) or contact our friendly sales team today for more details.



Round key stock is often used as secondary shafting in applications where an interference fit and belt tension eliminate the need for a keyed shaft.



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For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).

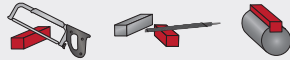
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\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.



## COLD FINISHED BRIGHT STEEL STEP KEY STOCK

INCH



### CUT, FILE, & FIT™

Oversize Tolerance

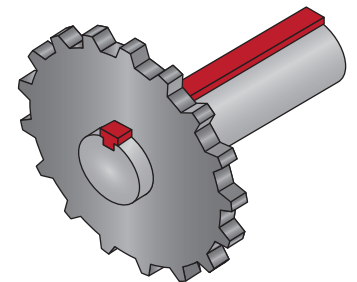
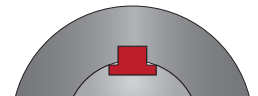
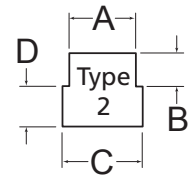
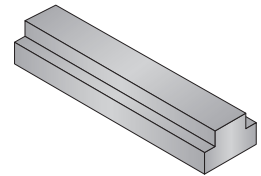
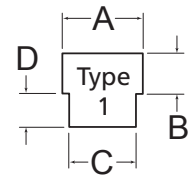
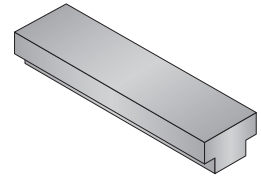


Carbon Steel, Zinc Trivalent**						
12" Bars	Size	Type	A (Width)	C (Width 2)	B (Height)	D (Height 2)
SK001-1	3/16" x 1/8"	1	.1875"	.1250"	.0938"	.0625"
SK002-2	3/16" x 1/4"	2	.1875"	.2500"	.0938"	.0938"
SK003-2	3/16" x 1/4"	2	.1875"	.2500"	.0938"	.1250"
SK004-2	1/4" x 5/16"	2	.2500"	.3125"	.1250"	.1250"
SK005-2	1/4" x 3/8"	2	.2500"	.3750"	.1250"	.1250"
SK006-2	1/4" x 3/8"	2	.2500"	.3750"	.1250"	.1875"
SK007-1	3/8" x 5/16"	1	.3750"	.3125"	.1875"	.1250"
SK008-1	3/8" x 5/16"	1	.3750"	.3125"	.1875"	.1563"
SK009-2	3/8" x 7/16"	2	.3750"	.4375"	.1875"	.1563"
SK010-2	3/8" x 1/2"	2	.3750"	.5000"	.1875"	.1875"
SK011-2	3/8" x 1/2"	2	.3750"	.5000"	.1875"	.2500"
SK012-1	1/2" x 7/16"	1	.5000"	.4375"	.2500"	.1563"
SK013-2	1/2" x 9/16"	2	.5000"	.5625"	.2500"	.1875"
SK014-2	1/2" x 5/8"	2	.5000"	.6250"	.2500"	.1875"
SK015-2	1/2" x 5/8"	2	.5000"	.6250"	.2500"	.3125"
SK016-2	1/2" x 11/16"	2	.5000"	.6875"	.2500"	.2500"
SK017-1	5/8" x 3/8"	1	.6250"	.3750"	.3125"	.1875"
SK018-2	5/8" x 11/16"	2	.6250"	.6875"	.3125"	.2500"
SK019-1	3/4" x 1/2"	1	.7500"	.5000"	.3750"	.2500"
SK020-1	3/4" x 5/8"	1	.7500"	.6250"	.3750"	.1875"
SK021-1	3/4" x 5/8"	1	.7500"	.6250"	.3750"	.3125"
SK023-2	3/4" x 13/16"	2	.7500"	.8125"	.3750"	.2813"
SK024-2	3/4" x 7/8"	2	.7500"	.8750"	.3750"	.4375"
SK025-2	3/4" x 15/16"	2	.7500"	.9375"	.3750"	.3125"
SK026-2	3/4" x 1"	2	.7500"	1.0000"	.3750"	.5000"
SK027-1	1" x 7/8"	1	1.0000"	.8750"	.5000"	.4375"

1' plated step key stock is marked for easy identification.

### TOLERANCES

Tolerances for step key stock are dependent upon the material from which it is made. For material and tolerance information, contact [sales@huyett.com](mailto:sales@huyett.com) or 785-392-3017.



Step key stock is used in repair and maintenance operations to fix broken key ways.

For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).

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### CUT & FIT™

Undersize Tolerance



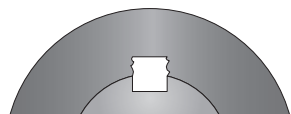
300 Series SS, Plain						
12" Bars	Size	Type	A (Width)	C (Width 2)	B (Height)	D (Height 2)
SKS02-2	3/16" × 1/4"	2	0.1875"	0.2500"	0.0938"	0.0938"
SKS04-2	1/4" × 5/16"	2	0.2500"	0.3125"	0.1250"	0.1250"
SKS05-2	1/4" × 3/8"	2	0.2500"	0.3750"	0.1250"	0.1250"
SKS06-2	1/4" × 3/8"	2	0.2500"	0.3750"	0.1250"	0.1875"
SKS08-1	3/8" × 5/16"	1	0.3750"	0.3125"	0.1875"	0.1563"
SKS14-2	1/2" × 5/8"	2	0.5000"	0.6250"	0.2500"	0.1875"

1' stainless steel step key stock is marked for easy identification.

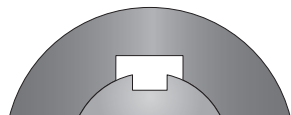
### TOLERANCES

Tolerances for step key stock are dependent upon the material from which it is made. For material and tolerance information, contact [sales@huyett.com](mailto:sales@huyett.com) or 785-392-3017.

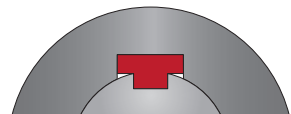
#### Type 1



Sidewalls of the hub assembly key way are severely damaged

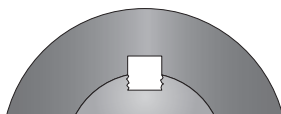


The key way is broached to a larger size to repair the damaged hub

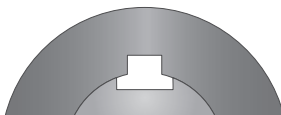


A type 1 step key is used to fill the mismatched key ways

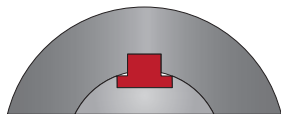
#### Type 2



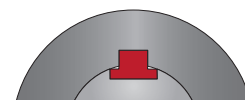
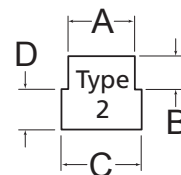
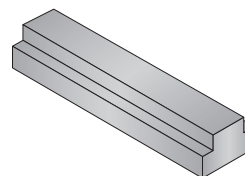
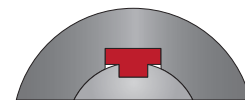
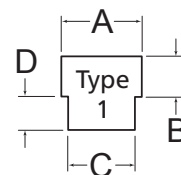
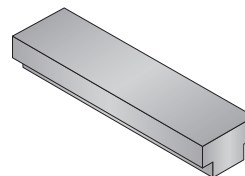
Sidewalls of the shaft key way are severely damaged



The shaft key way is broached to a larger size to repair the damaged shaft



To account for the curvature of the shaft a type 2 step key is used to fill the mismatched key ways



Step key stock is used when worn or damaged key ways have been repaired.

Type 1 is designed for use in key ways of repaired gears, sprockets, pulleys, and other hub assembly components.

Type 2 is designed for use in repaired shaft key ways.

For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).

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## COLD FINISHED BRIGHT STEEL STEP KEY STOCK

INCH

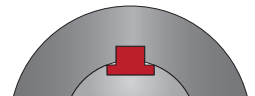
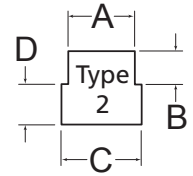
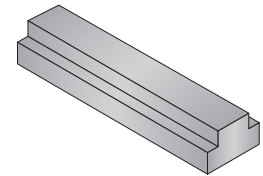
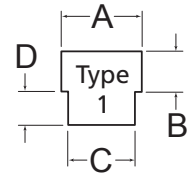
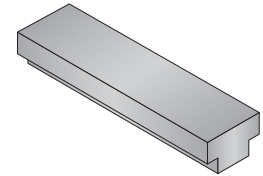


### CUT & FIT™

Undersize Tolerance



Carbon Steel, Zinc Trivalent**						
12" Bars	Size	Type	A (Width)	C (Width 2)	B (Height)	D (Height 2)
SK01-1	3/16" x 1/8"	1	.1875"	.1250"	.0938"	.0625"
SK02-2	3/16" x 1/4"	2	.1875"	.2500"	.0938"	.0938"
SK03-2	3/16" x 1/4"	2	.1875"	.2500"	.0938"	.1250"
SK04-2	1/4" x 5/16"	2	.2500"	.3125"	.1250"	.1250"
SK05-2	1/4" x 3/8"	2	.2500"	.3750"	.1250"	.1250"
SK06-2	1/4" x 3/8"	2	.2500"	.3750"	.1250"	.1875"
SK07-1	3/8" x 5/16"	1	.3750"	.3125"	.1875"	.1250"
SK08-1	3/8" x 5/16"	1	.3750"	.3125"	.1875"	.1563"
SK09-2	3/8" x 7/16"	2	.3750"	.4375"	.1875"	.1563"
SK10-2	3/8" x 1/2"	2	.3750"	.5000"	.1875"	.1875"
SK11-2	3/8" x 1/2"	2	.3750"	.5000"	.1875"	.2500"
SK12-1	1/2" x 7/16"	1	.5000"	.4375"	.2500"	.1563"
SK13-2	1/2" x 9/16"	2	.5000"	.5625"	.2500"	.1875"
SK14-2	1/2" x 5/8"	2	.5000"	.6250"	.2500"	.1875"
SK15-2	1/2" x 5/8"	2	.5000"	.6250"	.2500"	.3125"
SK16-2	1/2" x 11/16"	2	.5000"	.6875"	.2500"	.2500"
SK17-1	5/8" x 3/8"	1	.6250"	.3750"	.3125"	.1875"
SK18-2	5/8" x 11/16"	2	.6250"	.6875"	.3125"	.2500"
SK19-1	3/4" x 1/2"	1	.7500"	.5000"	.3750"	.2500"
SK20-1	3/4" x 5/8"	1	.7500"	.6250"	.3750"	.1875"
SK21-1	3/4" x 5/8"	1	.7500"	.6250"	.3750"	.3125"
SK22-1	3/4" x 11/16"	1	.7500"	.6875"	.3750"	.2500"
SK23-2	3/4" x 13/16"	2	.7500"	.8125"	.3750"	.2813"
SK24-2	13/16" x 7/8"	2	.7500"	.8750"	.3750"	.4375"
SK25-2	3/4" x 15/16"	2	.7500"	.9375"	.3750"	.3125"
SK26-2	3/4" x 1"	2	.7500"	1.0000"	.3750"	.5000"
SK27-1	1" x 7/8"	1	1.0000"	.8750"	.5000"	.4375"



1' plated step key stock is marked for easy identification.

### TOLERANCES

Tolerances for step key stock are dependent upon the material from which it is made. For material and tolerance information, contact [sales@huyett.com](mailto:sales@huyett.com) or 785-392-3017.

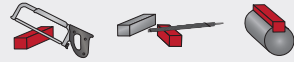


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### CUT, FILE, & FIT™

Oversize Tolerance



### Carbon Steel ASTM A29 / A108 Zinc Trivalent\*\* 12" Square Bars 60 Bar Assortment

Display box included

#### DISP-KSZC060-OV

Qty	12" Bars	Height	Width
10	3601250125-12	1/8"	1/8"
10	3601870187-12	3/16"	3/16"
10	3602500250-12	1/4"	1/4"
10	3603120312-12	5/16"	5/16"
10	3603750375-12	3/8"	3/8"
5	3604370437-12	7/16"	7/16"
5	3605000500-12	1/2"	1/2"

See page 7 for tolerances



### Carbon Steel ASTM A29 / A108 Zinc Trivalent\*\* 12" Square Bars 31 Bar Assortment

Display box included

#### DISP-KSZC031-OV

Qty	12" Bars	Height	Width
5	3601870187-12	3/16"	3/16"
5	3602500250-12	1/4"	1/4"
5	3603120312-12	5/16"	5/16"
5	3603750375-12	3/8"	3/8"
3	3604370437-12	7/16"	7/16"
3	3605000500-12	1/2"	1/2"

See page 7 for tolerances



### Carbon Steel C45K (1045) Zinc Trivalent\*\* 305 mm Square Bars 31 Bar Assortment

Display box included

#### DISP-KSMZY031-OV

Qty	305 mm Bars	Height	Width
5	360404-305	4 mm	4 mm
5	360505-305	5 mm	5 mm
5	360606-305	6 mm	6 mm
5	360707-305	7 mm	7 mm
5	360808-305	8 mm	8 mm
3	361010-305	10 mm	10 mm
3	361212-305	12 mm	12 mm

See page 8 for tolerances



### 300 Series Stainless Steel ASTM A276 / A484 Plain 12" Square Bars 31 Bar Assortment

Display box included

#### DISP-KSS031-OV

Qty	12" Bars	Height	Width
5	7501870187-12	3/16"	3/16"
5	7502500250-12	1/4"	1/4"
5	7503120312-12	5/16"	5/16"
5	7503750375-12	3/8"	3/8"
3	7504370437-12	7/16"	7/16"
3	7505000500-12	1/2"	1/2"

See page 18 for tolerances

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## KEY STOCK ASSORTMENTS



### CUT & FIT™

Undersize Tolerance



#### Carbon Steel ASTM A29 / A108 Zinc Trivalent\*\* 12" Square Bars 31 Bar Assortment

Display box included

##### DISP-KSZC031

Qty	12" Bars	Height	Width
5	3101250125-12	1/8"	1/8"
5	3101870187-12	3/16"	3/16"
5	3102500250-12	1/4"	1/4"
5	3103120312-12	5/16"	5/16"
5	3103750375-12	3/8"	3/8"
3	3104370437-12	7/16"	7/16"
3	3105000500-12	1/2"	1/2"

See page 11 for tolerances



#### Carbon Steel DIN/ISO 6880 C45K (1045) Plain 305 mm Bars 31 Bar Assortment

Display box included

##### DISP-KSM031

Qty	305 mm Bars	Height	Width
4	300404-305	4 mm	4 mm
4	300505-305	5 mm	5 mm
4	300606-305	6 mm	6 mm
3	300808-305	8 mm	8 mm
3	301010-305	10 mm	10 mm
3	301212-305	12 mm	12 mm
2	301414-305	14 mm	14 mm
2	301616-305	16 mm	16 mm
2	301818-305	18 mm	18 mm
2	302020-305	20 mm	20 mm
2	302222-305	22 mm	22 mm

See page 12 for tolerances



#### Carbon Steel DIN/ISO 6880 C45K (1045) Zinc Trivalent\*\* 305 mm Square Bars 31 Bar Assortment

Display box included

##### DISP-KSMZY031

Qty	305 mm Bars	Height	Width
5	310404-305	4 mm	4 mm
5	310505-305	5 mm	5 mm
5	310606-305	6 mm	6 mm
5	310707-305	7 mm	7 mm
5	310808-305	8 mm	8 mm
3	311010-305	10 mm	10 mm

See page 12 for tolerances



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### CUT & FIT™

Undersize Tolerance



### 300 Series Stainless Steel ASTM A276 / A484 Plain 12" Square Bars 31 Bar Assortment

Display box included

#### DISP-KSS031

Qty	12" Bars	Height	Width
5	7001250125-12	1/8"	1/8"
5	7001870187-12	3/16"	3/16"
5	7002500250-12	1/4"	1/4"
5	7003120312-12	5/16"	5/16"
5	7003750375-12	3/8"	3/8"
3	7004370437-12	7/16"	7/16"
3	7005000500-12	1/2"	1/2"

See page 19 for tolerances



### 300 Series Stainless Steel DIN/ISO 6880 A4 / 316 Plain 305 mm Square Bars 31 Bar Assortment

Display box included

#### DISP-KSMS031

Qty	305 mm Bars	Height	Width
5	700404-305	4 mm	4 mm
5	700505-305	5 mm	5 mm
5	700606-305	6 mm	6 mm
5	700707-305	7 mm	7 mm
5	700808-305	8 mm	8 mm
3	701010-305	10 mm	10 mm
3	701212-305	12 mm	12 mm

See page 20 for tolerances

### STANDARD™

Bilateral Tolerance



### Brass C360 12" Square Bars 31 Bar Assortment

Display box included

#### DISP-KSB031

Qty	12" Bars	Height	Width
5	0601250125-12	1/8"	1/8"
5	0601870187-12	3/16"	3/16"
5	0602500250-12	1/4"	1/4"
5	0603120312-12	5/16"	5/16"
5	0603750375-12	3/8"	3/8"
3	0604370437-12	7/16"	7/16"
3	0605000500-12	1/2"	1/2"

See page 23 for tolerances

For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).

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## STEP KEY STOCK ASSORTMENTS

INCH

### CUT, FILE, & FIT™

Oversize  
Tolerance



#### Step Key Stock 7 Bar Assortment of Common Sizes



**Carbon Steel**  
**ASTM A29 / A108**  
**Zinc Trivalent\*\***  
**12" Bars – Squares & Flats/Rectangles**

#### DISP-SK0007

Qty	12" Bars	Size	Type	A Width	C Width 2	B Height	D Height 2
1	SK001-1	3/16" × 1/8"	1	3/16"	1/8"	3/32"	1/16"
1	SK003-2	3/16" × 1/4"	2	3/16"	1/4"	3/32"	1/8"
1	SK004-2	1/4" × 5/16"	2	1/4"	5/16"	1/8"	1/8"
1	SK006-2	1/4" × 3/8"	2	1/4"	3/8"	1/8"	3/16"
1	SK008-1	3/8" × 5/16"	1	3/8"	5/16"	3/16"	5/32"
1	SK011-2	3/8" × 1/2"	2	3/8"	1/2"	3/16"	1/4"
1	SK015-2	1/2" × 5/8"	2	1/2"	5/8"	1/4"	5/16"

### CUT & FIT™

Undersize  
Tolerance



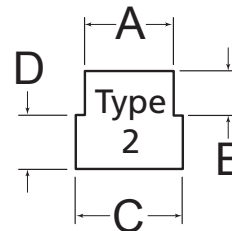
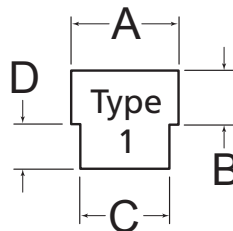
#### Step Key Stock 7 Bar Assortment of Common Sizes



**Carbon Steel**  
**ASTM A29 / A108**  
**Zinc Trivalent\*\***  
**12" Bars – Squares & Flats/Rectangles**

#### DISP-SK007

Qty	12" Bars	Size	Type	A Width	C Width 2	B Height	D Height 2
1	SK01-1	3/16" × 1/8"	1	3/16"	1/8"	3/32"	1/16"
1	SK03-2	3/16" × 1/4"	2	3/16"	1/4"	3/32"	1/8"
1	SK04-2	1/4" × 5/16"	2	1/4"	5/16"	1/8"	1/8"
1	SK06-2	1/4" × 3/8"	2	1/4"	3/8"	1/8"	3/16"
1	SK08-1	3/8" × 5/16"	1	3/8"	5/16"	3/16"	5/32"
1	SK11-2	3/8" × 1/2"	2	3/8"	1/2"	3/16"	1/4"
1	SK15-2	1/2" × 5/8"	2	1/2"	5/8"	1/4"	5/16"



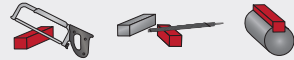
#### TOLERANCES

Tolerances for step key stock are dependent upon the material from which it is made.  
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For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).

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### CUT, FILE, & FIT™

Upsize Tolerance



### Machine Key Kit 7-11 Key Stock Assortment 7 Sizes Fit 11 Key Ways



**Carbon Steel**  
**ASTM A29 / A108**  
**Zinc Trivalent\*\***  
**12" Bars – Squares & Flats/Rectangles**

#### DISP-KSZC007-0V

Qty	12" Bars	Height	Width	File to Fit
1	3601250125-12	1/8"	1/8"	
1	3601870187-12	3/16"	3/16"	
1	3601870250-12	3/16"	1/4"	
1	3602500312-12	1/4"	5/16"	1/4" x 1/4" key way
1	3603120375-12	5/16"	3/8"	5/16" x 5/16" key way
1	3603750437-12	3/8"	7/16"	3/8" x 3/8" key way
1	3604370500-12	7/16"	1/2"	7/16" x 7/16" key way

1' plated key stock is marked for easy identification.  
See page 7 for tolerances

### Machine Key Kit 7-12 Machine Key Assortment 7 Sizes Fit 12 Key Ways



**Carbon Steel**  
**C45K (1045)**  
**Zinc Trivalent\*\***  
**305 mm Bars – Squares & Flats/Rectangles**

#### DISP-KSMZY007-0V

Qty	305 mm Bars	Height	Width	File to Fit
1	360404-305	4 mm	4 mm	
1	360505-305	5 mm	5 mm	
1	360807-305	7 mm	8 mm	7 mm x 7 mm key way
1	361006-305	6 mm	10 mm	6 mm x 6 mm key way
1	361208-305	8 mm	12 mm	8 mm x 8 mm key way
1	361210-305	10 mm	12 mm	10 mm x 10 mm key way
1	362012-305	12 mm	20 mm	12 mm x 12 mm key way

305 mm plated key stock is marked for easy identification.  
See page 8 for tolerances



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## ROUND KEY STOCK ASSORTMENTS

INCH



### CUT & FIT™

Undersize Tolerance



**Carbon Steel**  
**ASTM A29 / A108**  
**Zinc Trivalent\*\***  
**12" Round Bars**  
**60 Bar Assortment**

Display box included

#### DISP-RKZ060

Qty	12" Bars	Size (Diameter)
10	RKZ-0125-12	1/8"
10	RKZ-0187-12	3/16"
10	RKZ-0250-12	1/4"
10	RKZ-0312-12	5/16"
10	RKZ-0375-12	3/8"
5	RKZ-0437-12	7/16"
5	RKZ-0500-12	1/2"

See page 22 for tolerances



**Carbon Steel**  
**ASTM A29 / A108**  
**Zinc Trivalent\*\***  
**12" Round Bars**  
**10 Bar Assortment**

#### DISP-RKZ010

Qty	12" Bars	Size (Diameter)
1	RKZ-0125-12	1/8"
2	RKZ-0187-12	3/16"
2	RKZ-0250-12	1/4"
2	RKZ-0312-12	5/16"
1	RKZ-0375-12	3/8"
1	RKZ-0437-12	7/16"
1	RKZ-0500-12	1/2"

See page 22 for tolerances



**Carbon Steel**  
**ASTM A29 / A108**  
**Plain\***  
**36" Round Bars**  
**18 Bar Assortment**

#### DISP-RK018

Qty	36" Bars	Size (Diameter)
3	RK-0125-36	1/8"
3	RK-0187-36	3/16"
3	RK-0250-36	1/4"
3	RK-0375-36	3/8"
3	RK-0437-36	7/16"
3	RK-0500-36	1/2"

See page 22 for tolerances

**Carbon Steel**  
**ASTM A29 / A108**  
**Zinc Trivalent\*\***  
**36" Round Bars**  
**12 Bar Assortment**

#### DISP-RK012

Qty	36" Bars	Size (Diameter)
3	RK-0500-36	1/2"
3	RK-0625-36	5/8"
3	RK-0750-36	3/4"
3	RK-0875-36	7/8"

See page 22 for tolerances

1' and 3' plated key stock is marked for easy identification.




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## PLATINGS & FINISHES

G.L. Huyett is committed to maintaining the safety of our environment. The processes for plating and coating steels have the potential of introducing harmful chemical substances to the environment and are strictly controlled. G.L. Huyett complies with all environmental regulations and laws which apply to our products and services. Learn more at [huyett.com/quality](http://huyett.com/quality).

	Plating, Coating, or Finish	For Use on	Degree of Corrosion Resistance	Characteristics	RoHS Compliant
	Rust Inhibitor	All Metals	Varies with type	Oils, greases, etc. Vary in color and film thickness. Usually applied to bare carbon steel. Used to protect parts in temporary storage.	G.L. Huyett uses RoHS compliant rust inhibitor
	Zinc, Electroplated	All Metals	Fair	Blue to blue-white-gray color.	RoHS compliant without supplementary treatments
	Passivating	Stainless Steel	Excellent	Chemical treatment. Removes iron particles and produces a passive or corrosion resistant surface.	RoHS compliant

Have questions about platings and finishes? Contact our sales team at 785-392-3017 or [sales@huyett.com](mailto:sales@huyett.com).

## RoHS – RESTRICTION OF HAZARDOUS SUBSTANCES



European Union legislation restricting the use of hazardous substances in electrical and electronic equipment (RoHS Directive 2002/95/EC) and promoting the collection and recycling of this equipment (WEEE Directive 2002/96/EC) has been in force since February 2003. The legislation provides for the creation of collection schemes where consumers return their used e-waste free of charge. The objective of these schemes is to increase the recycling and/or re-use of these products. It also requires heavy metals such as lead, mercury, cadmium, and hexavalent chromium and flame retardants such as polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE) to be substituted by safer alternatives.

Inadequately treated e-waste poses environmental and health risks. In December 2008, the European Commission therefore proposed to revise the directives on electrical and electronic equipment in order to tackle the fast increasing waste stream of these products. The aim is to increase the amount of e-waste that is appropriately treated and to reduce the volume that goes to disposal. The aim of the RoHS recast was also to reduce administrative burdens and ensure coherency with newer policies and legislation covering, for example, chemicals and the new legislative framework for the marketing of products in the European Union. The RoHS Recast Directive was published in the Official Journal on July 1, 2011.

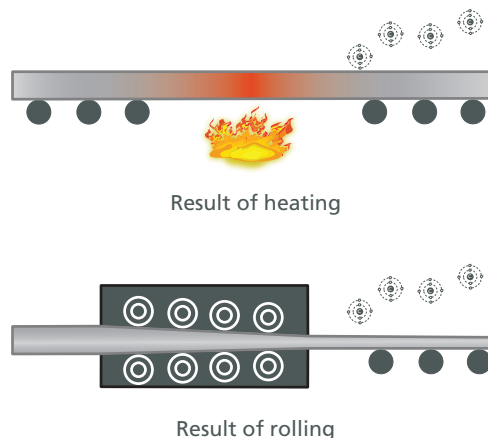
## DECARBURIZATION

Decarburization, also known as decarbonization or decarb, is the reduction of carbon content in steel. This can be an intentional process or a side effect of a process. It can happen in three distinct events: a reaction at the surface, diffusion of carbon atoms, or as a result of carbides dissolving in the steel.

The amount of carbon within a metal determines its hardness. Decarburization occurs when the steel is heated above 700°C (1,292°F) or as a side effect from cold rolling. Reducing carbon in the surface of the steel can result in softer readings when measuring hardness.

This is a serious problem as surface properties can be significantly degraded compared to interior properties. It can reduce the strength of steel and increase shear strain below the surface. Fatigue resistance can be decreased and crack growth and wear rate increased. Decarburization can be remedied on through hardened parts by grinding the surface, while case hardened parts can be carburized in furnaces with inert gas atmospheres.

ASTM A108 Level 1 allows a .010" deep decarburization layer on cold finished steel bar sides up to 5/8". Sides over 5/8" are allowed a maximum of 1.6%. Decarburization will be more likely to occur in medium and high carbon grades. The decarb must be removed prior to testing to accurately measure hardness.



## COUNTRY OF ORIGIN – KEY STOCK & MACHINE KEYS

G.L. Huyett produces precision key stock and machine keys from raw materials into useable lengths, dimensions, and finishes. This substantial transformation is performed in the U.S. and can include milling, cutting, tumbling, plating, and heat treating. The raw material, based on availability and quality requirements, is sourced from mills that meet the highest quality and tolerance

standards and can come from countries that would include the U.S., Canada, Germany, Taiwan, and Italy. Due to the substantial transformation performed by our facilities in the U.S. and the associated costs, these products are designated as *Made in the USA*. Raw Material Country of Origin is available upon request along with the potential processing charge, at the lot level.

**For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).**

## KEY STOCK STANDARDS

The world of key stock is confusing and non-standardized. For the user, it is important to note:

- Key stock is produced to a very high level of precision.
- Inch product tends to be close tolerance oversize if called "key stock" and wider tolerance undersize if called "bar stock."
- Metric parts are nearly always close tolerance undersize.
- The tighter the tolerance, the more the product costs to manufacture.

The addition of other features and attributes such as heat treatment can further complicate production of machine keys. Heat treatment can relieve material stresses, and parts can swell and shrink. In close tolerance key stock applications, the addition of heat treatment can result in additional processing costs for stress relieving, grinding, or milling.

G.L. Huyett's sales team can assist in finding the right balance of specification and cost, so the part yields desirable mechanical benefits at the desired cost.

## ANSI B17.1 KEY STOCK TOLERANCE SPECIFICATIONS

ANSI B17.1 is the prevailing standard for key stock, but even this standard causes confusion. Within the standard are call outs for "Class 1, a clearance or metal-to-metal side fit using bar stock and key way tolerances... This is known as a relatively free fit and applies only to parallel keys." and "Class 2, a side fit, with possible interference or clearance, obtained by using key stock and key way tolerances... This is a relatively tight fit." While the terms "bar stock," "key stock," and "parallel keys" are used in the standard, the definitions are somewhat ambiguous. The standard defines that there are two classes of stock for parallel keys: Class 1; broad, negative tolerance bar stock, and Class 2; close, plus tolerance key stock. There is a Class 3 noted, but no standards are given and it is suggested to use Class 2 for Class 3 applications.

The variance in standards is to account for the availability of material at economic costs in the marketplace. Some refer to the Class 1 standard as "bar stock" and the Class 2 as "key stock" or "true key stock."

Class 2 aligns to the conventional and historical definition of key stock. This specification denotes oversize, close tolerance standards of  $+0.001/-0$ " from nominal on sizes up to 1-1/4". The idea is that such tolerance will ensure a tight fit with minimum rocking of the key in the key way.

Class 1 widens the permitted standards to the standards of ASTM A108 used by the commercial steel industry. It is thought that this second standard was created to ensure a commercially viable alternative to so-called "true key stock."

ANSI B17.1	Key Width		Tolerance
	Over	To (Including)	
Class 1: "A clearance or metal-to-metal side fit obtained by using bar stock keys and key way tolerances."	—	3/4"	$+0/-0.002$ "
	3/4"	1-1/2"	$+0/-0.003$ "
	1-1/2"	2-1/2"	$+0/-0.004$ "
	2-1/2"	3-1/2"	$+0/-0.006$ "
Class 2: "A side fit, with possible interference or clearance, obtained by using key stock and key way tolerances."	—	1-1/4"	$+0.001/-0$ "
	1-1/4"	3"	$+0.002/-0$ "
	3"	3-1/2"	$+0.003/-0$ "

## DIN/ISO



Historically, metric key stock was specified under DIN/ISO 6880 and parallel and tapered keys in DIN/ISO 6885, ISO R773, and ISO 2491. These standards have been withdrawn without replacement standards. Because there was no replacement standard issued, these standards are still in use today with DIN/

ISO 6885 predominating. Contrarily, ANSI standards contemplate close tolerance oversize material for Class 2, and wider tolerance undersize for Class 1; ISO contemplates **only undersize** and only one tolerance specification that is roughly equal to Class 2 ANSI, except the tolerances are under the nominal.

## BRANDING & TRADE NAMES

The traditional branding and trade names for key stock add additional complexity and confusion. Class 2 and ISO key stock are difficult to make, and only specialized mills using specialized equipment can maintain such close tolerances.

Moltrup Steel of Beaver Falls, PA, is one of the more famous brand names for key stock. Moltrup was bought out as the steel industry consolidated in the 1980s. The plant closed and is no longer in operation. Moltrup is still listed on many prints and when listed, the general inference is that the user wants ANSI B17.1 Class 2 fit.

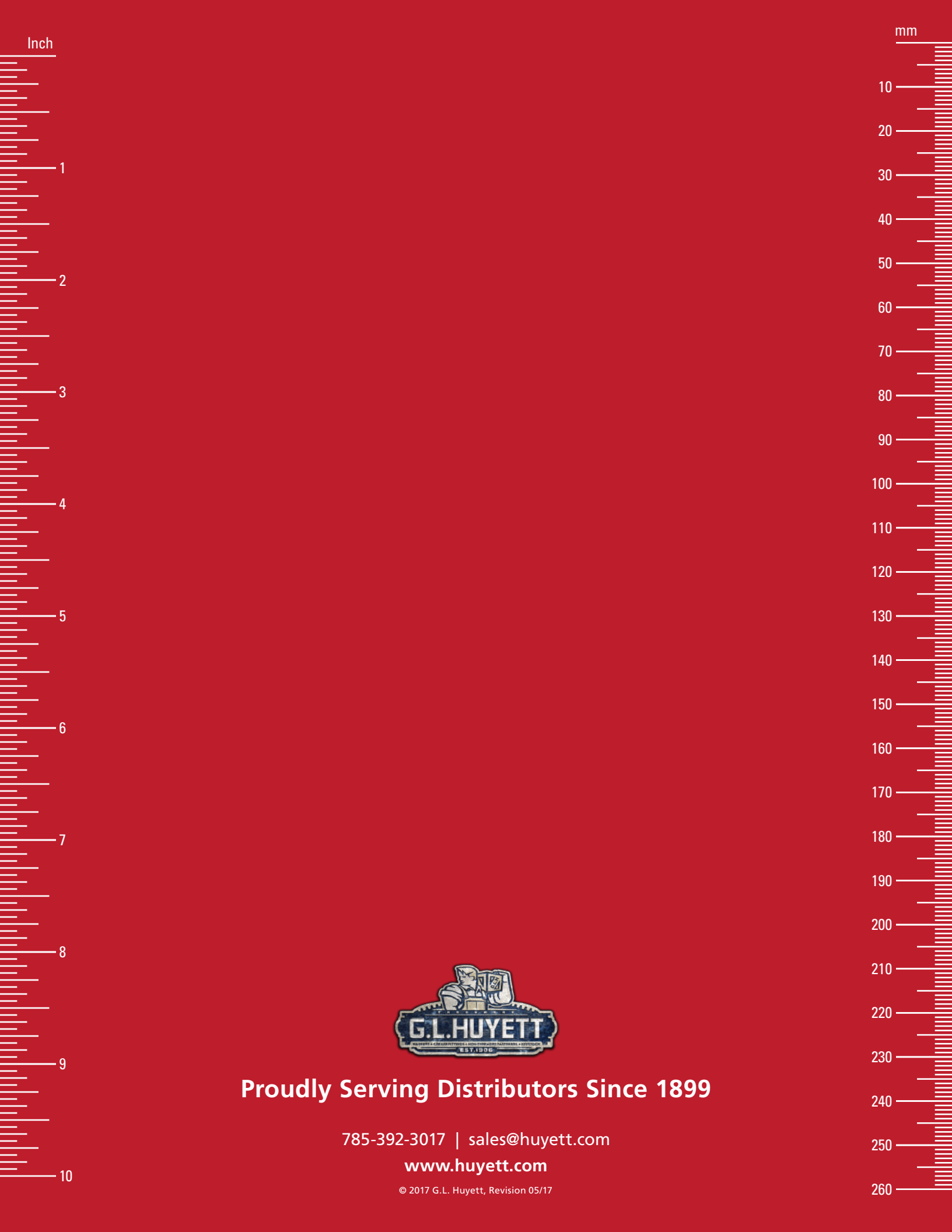
MAK-A-KEY™, originally trademarked by Devan-Johnson Co., was the first branded key stock intended as an aftermarket product. Technically, a machine key is a cut-to-length part for an application, while key stock is a "stock" of material 12" or longer that is cut in the field. MAK-A-KEY's moniker is "Cut, File, & Fit."

MAK-A-KEY was historically advertised as "key stock." The material was actually oversize drawn bar stock. In this regard, MAK-A-KEY is unique. Oversize bar stock is quite rare and rarely specified in applications, however MAK-A-KEY and Moltrup are still commonly referenced by design engineers.

For detailed specifications and tolerances, visit [huyett.com](http://huyett.com).

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\*Limited warranty for surface finish: 30 days from date of shipment. See page 15 for details. \*\*Tolerance dimensions apply prior to plating. \*\*\*Size may vary over or under from nominal size.



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