# Regal Components

*Higher Standards for Molds and Dies*

## Complete lines of Mold & Die Components ready for same day shipping

## Price Catalog No. 2023

Ejector Pins | Core Pins | Ejector Blades

Ejector Sleeves | Die Ejector Pins | Bevel Head Pins

High Conductivity Core Pins | Stainless Steel Ejector Pins

Core Pin Blanks | Precision Punch Blanks

**800-760-5715**

10 Almeida Avenue, East Providence, RI 02914

727-299-0800 727-499-7109 sales@regalcomps.com regalcomps.com

# Complete lines of Mold and Die Components ready for same day shipping

***Regal Components welcomes the opportunity to be your source for standard and custom die and mold components.***

## Quality and Value

This catalog containing our product line of Ejector Pins, Core Pins, Ejector Sleeves, Blades, Perforators, and Precision Punch Blanks, represents our commitment to providing high quality precision products at the lowest possible prices. While others have been forced to downgrade, Regal continues to offer products made to the highest quality standards in the world. For example, our Nitrided Ejector Pins are processed with the latest technology in Ion Nitriding.

## Selection

We offer three different series of ejector pins H-13 Nitrided, H-13 Through-Hardened, and M-2 Thru-Tuff™ - all made to the tightest industry tolerances, to ensure that we will have the right pin for your application. We also offer Ejector Blades, Sleeves, Core Pins, Perforators, Core Pins Blanks and Precision Punch Blanks.

## Service

Orders for standard products can be placed online at our e-commerce site at www.regalcomps.com, by phone, fax or email and are usually shipped the same day. Customized Pins, Sleeves, and Punches can be made to order with head flats, vents, spherical radii, coatings, and other modifications for delivery in typically 2 to 3 weeks.

## Expertise

Regal has personnel with over 40 years experience in mold components to help guide you in making the right component selection for your application.

NTMA PRECISION

MEMBER AMBA

## Terms and Conditions

**Pricing:** All prices are in US dollars and are subject to change without notice.

**Payment Terms:** 1% 10, net 30 days. F.O.B.: Shipping Point, prepaid and added or collect. We accept all major credit cards.

**Shipping:** Shipments will be made via UPS, Federal Express, or other available carrier specified by the customer. We are not responsible for shipping charges, damage, or delays encountered during transportation.

**Returns:** Prior approval must be obtained and you must be issued a RMA number. Upon receipt, returned parts will be inspected and a credit will be issued to the customer's account, less a 15% restocking charge. Unless defective, custom and made-to-order components are not returnable.

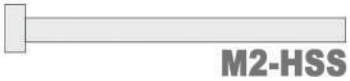
**Warranty:** Due to the wide variety of applications and possible uses by our customers, no warranties are expressed or implied. Regal's liability for items sold hereunder shall be limited solely to the repair or replacement of the items sold hereunder.

## TT
Shoulder Ejector Pins
Standard inch fractional diameters

pg. 4

## TTO/TTD
Shoulder Ejector Pins
Oversized and four-place decimal diameters

pg. 5

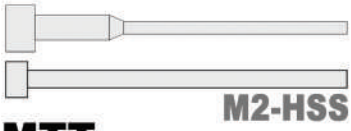



## TT
Straight Ejector Pins
Standard inch fractional diameters

pg. 6

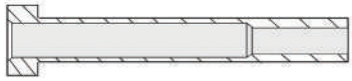
## TTO/TTD
Straight Ejector Pins
Oversized and four-place decimal diameters

pg. 7




## MTT
Shoulder & Straight Ejector Pins
Euro metric

pgs. 8-9



## ESL/MSL
Ejector Sleeves
Standard inch and metric sizes

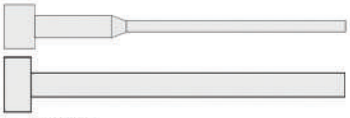
pgs. 10-11

## EBE
Ejector Blades
Standard Inch

pg. 12

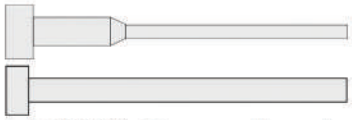
## INOX
Stainless Steel Ejector Pins
Metric, 1-10mm

pg. 13



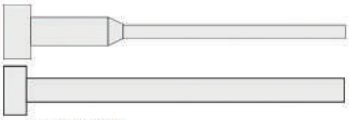
## ERX
Shoulder & Straight Ejector Pins
Standard inch fractional, letter size & .005" oversized diameters

pgs. 14-16



## ERHX Oversized
Oversized Ejector Pins
.001" Increments

pg. 17



## ERHX
Shoulder & Straight Ejector Pins
Standard inch fractional & .005" oversized diameters

pgs. 18-19

## EME
Straight Ejector Pins
Metric, DIN standard

pg. 20

## ERC/ERCX
Standard H-13 Core Pins
30 standard fractional diameters

pg. 21

## QB
M-2 High Speed Steel Perforators / Core Pin Blanks
.001" increments

pgs. 22-23

## QA
High Speed Steel Perforators / Core Pin Blanks
.001" increments

pg. 24

## SQF/SQD
Perforators / Core Pin Blanks
Fractional diameters / Decimal diameters in .001" increments

pg. 25

## B/AB
Perforators / Core Pin Blanks
.001" increments

pg. 26

## PPB/MPB
Precision and Metric Punch Blanks
Fractional (from 1/8"-1") and metric (3,4,5,6 and 8mm) blanks

pg. 27

## BFP
Beryllium-Free Pins
High Conductivity copper based alloy

pg. 28

## EKP
Die Ejector Pins
Standard inch fractional diameters

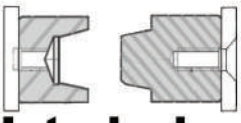
pg. 29

## EJ
Slug Ejector Pins
Replacement Slug ejector components

pg. 29

## BHT
60° Bevel Headed Pins
Standard and non-standard inch fractional diameters

pg. 30



## Interlocks
Round Tapered Interlocks
Interlocks and shoulder plates

pg. 31

## Custom Order Forms
Pins, Blades, Sleeves, WCC Pins, Punches and Perforators

pgs. 32-34

# Shoulder Ejector Pins

## TT Type

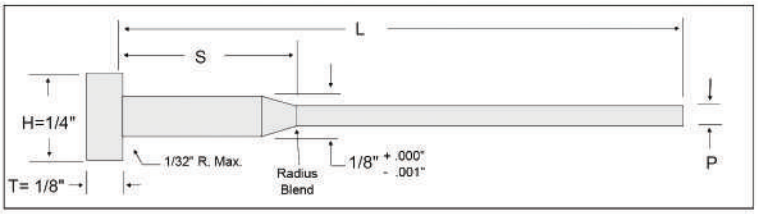
### *STANDARD INCH FRACTIONAL DIAMETERS*

THRU-TUFF™ M-2 HSS Pins
*Hardened-Through HSS*

**Material:** M-2 High Speed Steel, Hardened through 60-63 Rc

Heads drawn for maximum toughness and easy machining.

| HOW TO ORDER: *Specify* | | |
|---|---|---|
| **Quantity** | **Cat. No.** | **Length** |
| *12* | *TT-5-2* | *L-6"* |
| *6* | *TT-8-1/2* | *L-8"* |




*.0003" Diameter Tolerance*

| TOLERANCES | | | |
|---|---|---|---|
| **P** | **H** | **T** | **L** |
| -.0005" -.0008" (See actual diameter below) | + .000" - .010" | + .000" - .002" | + .375" - .000" |

| P | | S | REGAL CATALOG NO. | NET PRICE EACH (US$) | |
|---|---|---|---|---|---|
| NOMINAL PIN DIA. | ACTUAL PIN DIA. | SHOULDER LENGTH | | L-6" | L-8" |
| 1/32" | .0308" / .0305" | 1/2" | TT-2-1/2 | 10.80 | - |
| | | 2" | TT-2-2 | 9.94 | 10.66 |
| | | 3" | TT-2-3 | - | 10.66 |
| | | 4" | TT-2-4 | - | 9.08 |
| 3/64" | .0464" / .0461" | 1/2" | TT-3-1/2 | 6.85 | - |
| | | 2" | TT-3-2 | 6.70 | 8.65 |
| | | 3" | TT-3-3 | - | 8.65 |
| | | 4" | TT-3-4 | - | 7.78 |
| 1/16" | .0620" / .0617" | 1/2" | TT-5-1/2 | 5.90 | 10.95 |
| | | 2" | TT-5-2 | 5.69 | 7.78 |
| | | 3" | TT-5-3 | - | 7.78 |
| | | 4" | TT-5-4 | - | 7.05 |
| 5/64" | .0776" / .0773" | 1/2" | TT-6-1/2 | 5.90 | 10.95 |
| | | 2" | TT-6-2 | 5.69 | 7.78 |
| | | 3" | TT-6-3 | - | 7.78 |
| | | 4" | TT-6-4 | - | 7.05 |
| 3/32" | .0933" / .0930" | 1/2" | TT-7-1/2 | 5.48 | 8.65 |
| | | 2" | TT-7-2 | 5.25 | 6.76 |
| | | 3" | TT-7-3 | - | 6.76 |
| | | 4" | TT-7-4 | - | 6.48 |
| 7/64" | .1089" / .1086" | 1/2" | TT-8-1/2 | 5.48 | 8.65 |
| | | 2" | TT-8-2 | 5.25 | 6.76 |
| | | 3" | TT-8-3 | - | 6.76 |
| | | 4" | TT-8-4 | - | 6.48 |

# Shoulder Ejector Pins

# TTO/TTD Types

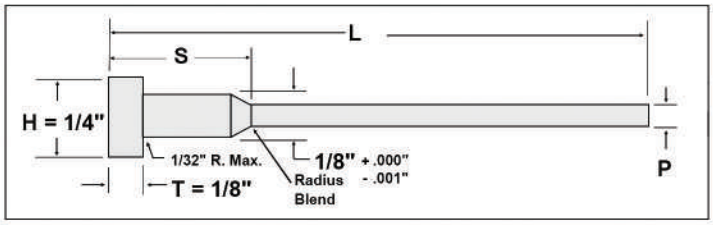
THRU-TUFF™ M-2 HSS Pins
Hardened-Through HSS

## OVERSIZED AND FOUR-PLACE DECIMAL DIAMETERS

| How to order: | Cat. No. +.0005", or +.001, or +.002", or +.005 | Cat. No. D= .xxxx Length |
|---|---|---|
| Examples | TTO-5 +.0005 L-6 | TTD-8 D= .1115 L-6 |

Regal **THRU-TUFF™** M-2 High Speed Steel Hardened-Through Ejector Pins are now available from stock in the oversized diameters of +.0005", +.001", +.002", and +.005". Diameters are held to within .0003" total tolerance (-.0005"/-.0008" from the corresponding nominal oversize diameter). Non-Standard diameters in .0001" increments from .0309" shown in price table below are made to order. Call for delivery.

Diameters in .0001" increments under .0309" can also be made to order. Price and delivery upon request.




*.0003" Diameter Tolerance*

| TOLERANCES | | | | |
|---|---|---|---|---|
| P | | H | T | L |
| STOCK OVERSIZED DIAMETERS | NON-STANDARD OVERSIZED .0001" DIAMETERS | + .000" - .010" | + .000" - .002" | + .375" - .000" |
| -.0005" -.0008" (See actual dia. below) | +.0000" -.0003" | | | |

| P | S | STOCK STANDARD OVERSIZED DIAMETERS | | | | | | | | | | | | MADE-TO-ORDER NON-STANDARD .0001" | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOMINAL PIN DIA. | SHOULDER LENGTH | REGAL CATALOG NO. | ACTUAL PIN DIAMETERS | | | | NET PRICE EACH (US $) L-6" | | | | L-8" | | | | REGAL CATALOG NO. | Diameter Range +.0000" -.0003" | |
| | | | +.0005" | +.001" | +.002" | +.005" | 50-100 | 25-49 | 10-24 | 1-9 | 50-100 | 25-49 | 10-24 | 1-9 | | | |
| 1/32" | 1/2" | TTO-2 | .0313" | .0318" | .0328" | .0358" | 10.08 | 12.10 | 18.77 | 22.91 | - | - | - | - | TTD-2 | .0309" - .0463" | Same Prices as TTO |
| | 2" | | | | | | 9.96 | 11.98 | 18.65 | 22.79 | 14.70 | 16.60 | 21.82 | 25.04 | | | |
| | 3" | | .0310" | .0315" | .0325" | .0355" | - | - | - | - | 14.70 | 16.60 | 21.82 | 25.04 | | | |
| | 4" | | | | | | - | - | - | - | 10.98 | 12.78 | 15.78 | 18.18 | | | |
| 3/64" | 1/2" | TTO-3 | .0469" | .0474" | .0484" | .0514" | 8.84 | 10.68 | 14.35 | 17.80 | 25.74 | 27.54 | 30.54 | 32.94 | TTD-3 | .0465" - .0619" | |
| | 2" | | | | | | 8.71 | 10.55 | 14.15 | 18.58 | 12.24 | 14.14 | 19.36 | 22.58 | | | |
| | 3" | | .0466" | .0471" | .0481" | .0511" | - | - | - | - | 12.24 | 14.14 | 19.36 | 22.58 | | | |
| | 4" | | | | | | - | - | - | - | 11.50 | 13.38 | 18.53 | 25.98 | | | |
| 1/16" | 1/2" | TTO-5 | .0625" | .0630" | .0640" | .0670" | 9.02 | 10.91 | 15.56 | 18.72 | 25.74 | 27.54 | 30.54 | 32.94 | TTD-5 | .0621" - .0775" | |
| | 2" | | | | | | 8.90 | 10.78 | 15.42 | 18.58 | 11.50 | 13.38 | 18.53 | 25.98 | | | |
| | 3" | | .0622" | .0627" | .0637" | .0667" | - | - | - | - | 11.50 | 13.38 | 18.53 | 25.98 | | | |
| | 4" | | | | | | - | - | - | - | 10.86 | 12.74 | 17.84 | 25.27 | | | |
| 5/64" | 1/2" | TTO-6 | .0781" | .0786" | .0796" | .0826" | 9.02 | 10.91 | 15.56 | 18.72 | 23.34 | 25.50 | 28.50 | 30.90 | TTD-6 | .0777" - .0932" | |
| | 2" | | | | | | 8.90 | 10.78 | 15.42 | 18.58 | 11.50 | 13.38 | 18.53 | 25.98 | | | |
| | 3" | | .0778" | .0783" | .0793" | .0823" | - | - | - | - | 11.50 | 13.38 | 18.53 | 25.98 | | | |
| | 4" | | | | | | - | - | - | - | 10.86 | 12.74 | 17.84 | 25.27 | | | |
| 3/32" | 1/2" | TTO-7 | .0938" | .0943" | .0953" | .0983" | 7.86 | 9.71 | 14.26 | 17.36 | 23.34 | 25.50 | 28.50 | 27.49 | TTD-7 | .0934" - .1088" | |
| | 2" | | | | | | 7.66 | 9.55 | 14.04 | 17.16 | 10.62 | 17.56 | 20.92 | 27.49 | | | |
| | 3" | | .0935" | .0940" | .0950" | .0980" | - | - | - | - | 10.62 | 17.56 | 20.92 | 30.48 | | | |
| | 4" | | | | | | - | - | - | - | 10.37 | 12.24 | 17.28 | 30.48 | | | |
| 7/64" | 1/2" | TTO-8 | .1094" | .1099" | .1109" | .1139" | 7.86 | 9.71 | 14.26 | 17.36 | 21.18 | 22.98 | 25.98 | 30.48 | TTD-8 | .1090" - .1244" | |
| | 2" | | | | | | 7.66 | 9.55 | 14.04 | 17.16 | 10.62 | 17.56 | 20.92 | 30.48 | | | |
| | 3" | | .1091" | .1096" | .1106" | .1136" | - | - | - | - | 10.62 | 17.56 | 20.92 | 30.48 | | | |
| | 4" | | | | | | - | - | - | - | 10.37 | 12.24 | 17.28 | 29.78 | | | |

# Straight Ejector Pins

## TT Type

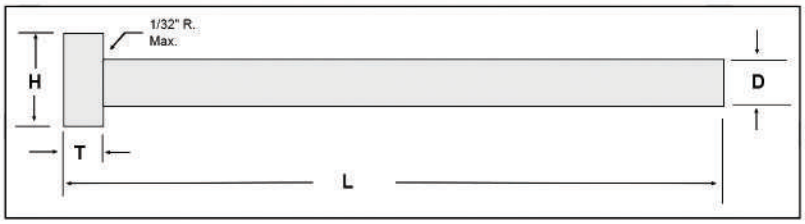
THRU-TUFF™ M-2 HSS Pins
Hardened-Through HSS

### STANDARD INCH FRACTIONAL DIAMETERS

**Material:** M-2 High Speed Steel, Hardened through 60-63 Rc

Heads drawn for maximum toughness and easy machining.

| How to order: Specify | | |
|---|---|---|
| Qty. | Cat. No. | Length |
| 12 | TT-9 | L-6 |
| 6 | TT-13 | L-8 |




*.0003" Diameter Tolerance*

| TOLERANCES | | | |
|---|---|---|---|
| D | H | T | L |
| -.0005"/-.0008" (See actual dia. below) | + .000" - .010" | + .000" - .002" | + .375" - .000" |

| D | | H | T | REGAL CATALOG NO. | NET PRICE EACH (US $) | | |
|---|---|---|---|---|---|---|---|
| NOMINAL PIN DIA. | ACTUAL PIN DIA. | HEAD DIA. | HEAD THICK. | | L-6" | L-8" | L-10" |
| 1/32" | .0308" / .0305" | 1/4" | 1/8" | TT-2 | 10.34 | 21.13 | - |
| 3/64" | .0464" / .0461" | 1/4" | 1/8" | TT-3 | 6.55 | 13.75 | - |
| 1/16" | .0620" / .0617" | 1/4" | 1/8" | TT-5 | 5.66 | 10.48 | 15.63 |
| 5/64" | .0776" / .0773" | 1/4" | 1/8" | TT-6 | 5.66 | 10.48 | - |
| 3/32" | .0933" / .0930" | 1/4" | 1/8" | TT-7 | 5.24 | 8.28 | 13.88 |
| 7/64" | .1089" / .1086" | 1/4" | 1/8" | TT-8 | 5.24 | 8.28 | - |
| 1/8" | .1245" / .1242" | 1/4" | 1/8" | TT-9 | 3.55 | 5.58 | 13.63 |
| 9/64" | .1401" / .1398" | 1/4" | 1/8" | TT-10 | 3.68 | 5.91 | 11.50 |
| 5/32" | .1558" / .1555" | 9/32" | 5/32" | TT-11 | 3.68 | 6.89 | 11.13 |
| 11/64" | .1714" / .1711" | 11/32" | 3/16" | TT-12 | 4.83 | 6.89 | 10.88 |
| 3/16" | .1870" / .1867" | 3/8" | 3/16" | TT-13 | 4.83 | 6.89 | 10.09 |
| 13/64" | .2026" / .2023" | 3/8" | 3/16" | TT-14 | 4.83 | 6.89 | 10.01 |
| 7/32" | .2183" / .2180" | 13/32" | 3/16" | TT-15 | 4.83 | 6.89 | 10.31 |
| 15/64" | .2339" / .2336" | 13/32" | 3/16" | TT-16 | 4.83 | 6.89 | 10.31 |
| 1/4" | .2495" / .2492" | 7/16" | 3/16" | TT-17 | 4.83 | 6.89 | 11.48 |
| 9/32" | .2807" / .2804" | 7/16" | 1/4" | TT-19 | 8.60 | 12.75 | 17.18 |
| 5/16" | .3120" / .3117" | 1/2" | 1/4" | TT-21 | 8.13 | 12.00 | 16.24 |
| 11/32" | .3433" / .3430" | 9/16" | 1/4" | TT-23 | 10.00 | 14.25 | 19.99 |
| 3/8" | .3745" / .3742" | 5/8" | 1/4" | TT-25 | 10.94 | 16.39 | 21.86 |
| 7/16" | .4370" / .4367" | 11/16" | 1/4" | TT-29 | 17.44 | 23.31 | 30.63 |
| 1/2" | .4995" / .4992" | 3/4" | 1/4" | TT-33 | 22.69 | 30.19 | 39.38 |

# Straight Ejector Pins
# TTO/TTD Types

THRU-TUFF™ M-2 HSS Pins
Hardened-Through HSS

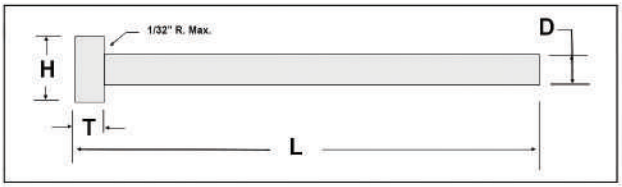
## STOCK OVERSIZED AND FOUR-PLACE DECIMAL DIAMETERS

Regal Thru-Tuff™ M-2 High Speed Steel Hardened-Through Ejector Pins are now available from stock in the oversized diameters of +.0005", +.001",+.002", and +.005". Diameters are held to within .0003" total tolerance (.0005"/-.0008" from the corresponding nominal oversize diameter). NonStandard diameters in .0001" increments from .0309" shown in price table below are made to order. Call for delivery .

Diameters in .0001" increments under .0309" can also be made to order. Price and delivery upon request.

| How to order: | Cat. No. +.0005", or +.001, or +.002", or +.005 | Cat. No. D= .xxxx Length |
|---|---|---|
| Examples | TTO-9 +.0005 L-8 | TTD-11 D= .1575 L-6 |

| TOLERANCES | | | | |
|---|---|---|---|---|
| D | | H | T | L |
| STOCK OVERSIZED DIAMETERS | NON-STANDARD OVERSIZED .0001" DIAMETERS | + .000" - .010" | + .000" - .002" | + .375" - .000" |
| -.0005" -.0008" (See actual dia. below) | +.0000" -.0003" | | | |




| D | H | T | STOCK STANDARD OVERSIZED DIAMETERS | | | | | | | | | | | | | | MADE-TO-ORDER NON-STANDARD .0001" | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | NET PRICE EACH (US $) | | | | | | | | | | | | |
| NOM. PIN DIA. | HEAD DIA. | HEAD THICK | REGAL CTLG. NO. | ACTUAL PIN DIAMETER | | | | L-6" | | | | L-8" | | | | L-10" | | | | REGAL CTLG. NO. | NET PRICE EACH (US $) | |
| | | | | +.0005" | +.001" | +.002" | +.005" | 50-100 | 25-49 | 10-24 | 1-9 | 50-100 | 25-49 | 10-24 | 1-9 | 50-100 | 25-49 | 10-24 | 1-9 | | DIA. RANGE | |
| 1/32" | 1/4" | 1/8" | TTO-2 | .0313" .0310" | .0318" .0315" | .0328" .0325" | .0358" .0355" | 8.40 | 10.08 | 15.64 | 19.09 | - | - | - | - | - | - | - | - | TTD-2 | .0309" - .0463" | Same Prices as TTO |
| 3/64" | 1/4" | 1/8" | TTO-3 | .0469" .0466" | .0474" .0471" | .0484" .0481" | .0514" .0511" | 7.73 | 9.45 | 14.76 | 18.20 | 13.44 | 15.13 | 21.75 | 29.60 | - | - | - | - | TTD-3 | .0465" - .0619" | |
| 1/16" | 1/4" | 1/8" | TTO-5 | .0625" .0622" | .0630" .0627" | .0640" .0637" | .0670" .0667" | 7.73 | 9.45 | 14.76 | 18.20 | 13.44 | 15.13 | 21.75 | 29.60 | - | - | - | - | TTD-5 | .0621" - .0775" | |
| 5/64" | 1/4" | 1/8" | TTO-6 | .0781" .0778" | .0786" .0783" | .0796" .0793" | .0826" .0823" | 7.47 | 8.95 | 14.32 | 17.71 | 13.44 | 15.13 | 21.75 | 29.60 | - | - | - | - | TTD-6 | .0777" - .0932" | |
| 3/32" | 1/4" | 1/8" | TTO-7 | .0938" .0935" | .0943" .0940" | .0953" .0950" | .0983" .0980" | 7.47 | 8.95 | 14.32 | 17.71 | 11.54 | 13.21 | 19.48 | 27.25 | - | - | - | - | TTD-7 | .0934" - .1068" | |
| 7/64" | 1/4" | 1/8" | TTO-8 | .1094" .1091" | .1099" .1096" | .1109" .1106" | .1139" .1136" | 7.47 | 8.95 | 14.32 | 17.71 | 9.08 | 10.74 | 16.57 | 24.21 | - | - | - | - | TTD-8 | .1090" - .1244" | |
| 1/8" | 1/4" | 1/8" | TTO-9 | .1250" .1247" | .1255" .1252" | .1265" .1262" | .1295" .1292" | 5.55 | 7.23 | 12.20 | 15.19 | 9.08 | 10.74 | 16.57 | 24.21 | - | - | - | - | TTD-9 | .1246" - .1400" | |
| 9/64" | 1/4" | 1/8" | TTO-10 | .1406" .1403" | .1411" .1408" | .1421" .1418" | .1451" .1448" | 5.55 | 7.23 | 12.20 | 15.19 | 9.61 | 11.39 | 17.52 | 25.55 | - | - | - | - | TTD-10 | .1402" - .1557" | |
| 5/32" | 9/32" | 5/32" | TTO-11 | .1563" .1560" | .1568" .1565" | .1578" .1575" | .1608" .1605" | 5.55 | 7.23 | 12.20 | 15.19 | 10.37 | 12.04 | 18.11 | 25.80 | - | - | - | - | TTD-11 | .1559" - .1713" | |
| 11/64" | 11/32" | 3/16" | TTO-12 | .1719" .1716" | .1724" .1721" | .1734" .1731" | .1764" .1761" | 7.01 | 8.64 | 13.93 | 17.29 | 10.37 | 12.04 | 18.11 | 25.80 | - | - | - | - | TTD-12 | .1715" - .1869 | |
| 3/16" | 3/8" | 3/16" | TTO-13 | .1875" .1872" | .1880" .1877" | .1890" .1887" | .1920" .1917" | 7.01 | 8.64 | 13.93 | 17.29 | 10.37 | 12.04 | 18.11 | 25.80 | 17.00 | 18.50 | 23.50 | 36.00 | TTD-13 | .1871" - .2025" | |
| 13/64" | 3/8" | 3/16" | TTO-14 | .2031" .2028" | .2036" .2033" | .2046" .2043" | .2076" .2073" | 7.01 | 8.64 | 13.93 | 17.29 | 10.37 | 12.04 | 18.11 | 25.80 | 17.00 | 18.50 | 23.50 | 36.00 | TTD-14 | .2027" - .2182" | |
| 7/32" | 13/32" | 3/16" | TTO-15 | .2188" .2185" | .2193" .2190" | .2203" .2200" | .2233" .2230" | 7.01 | 8.64 | 13.93 | 17.29 | 10.37 | 12.04 | 18.11 | 25.80 | 17.00 | 18.50 | 23.50 | 36.00 | TTD-15 | .2184" - .2338" | |
| 15/64" | 13/32" | 3/16" | TTO-16 | .2344" .2341" | .2349" .2346" | .2359" .2356" | .2389" .2386" | 7.01 | 8.64 | 13.93 | 17.29 | 10.37 | 12.04 | 18.11 | 25.80 | 17.00 | 18.50 | 23.50 | 36.00 | TTD-16 | .2340" - .2494" | |
| 1/4" | 7/16" | 3/16" | TTO-17 | .2500" .2497" | .2505" .2502" | .2515" .2512" | .2545" .2542" | 7.01 | 8.64 | 13.93 | 17.29 | 10.37 | 12.04 | 18.11 | 25.80 | 18.00 | 19.50 | 24.50 | 37.00 | TTD-17 | .2496" - .2544" | |
| 9/32" | 7/16" | 1/4" | TTO-19 | .2812" .2809" | .2817" .2814" | .2827" .2824" | .2857" .2854" | 9.00 | 10.50 | 15.00 | 18.00 | - | - | - | - | 19.00 | 20.50 | 28.00 | 38.00 | TTD-19 | .2806" - .2856" | |
| 5/16" | 1/2" | 1/4" | TTO-21 | .3125" .3122" | .3130" .3127" | .3140" .3137" | .3170" .3167" | 9.00 | 10.50 | 15.00 | 18.00 | - | - | - | - | 19.00 | 20.50 | 28.00 | 38.00 | TTD-21 | .3121" - .3169" | |
| 11/32" | 9/16" | 1/4" | TTO-23 | .3438" .3435" | .3443" .3440" | .3453" .3450" | .3483" .3480" | 10.00 | 11.50 | 14.00 | 19.00 | - | - | - | - | 20.00 | 21.50 | 29.00 | 39.00 | TTD-23 | .3434" - .3482" | |
| 3/8" | 5/8" | 1/4" | TTO-25 | .3750" .3747" | .3755" .3752" | .3765" .3762" | .3795" .3792" | 10.00 | 11.50 | 14.00 | 19.00 | - | - | - | - | 20.00 | 21.50 | 29.00 | 39.00 | TTD-25 | .3746" - .3794" | |
| 7/16" | 11/16" | 1/4" | TTO-29 | .4375" .4372" | .4380" .4377" | .4390" .4387" | .4420" .4417" | 20.50 | 22.50 | 24.50 | 27.50 | - | - | - | - | 28.50 | 30.00 | 37.50 | 47.50 | TTD-29 | .4346" - .4482" | |
| 1/2" | 3/4" | 1/4" | TTO-33 | .5000" .4997" | .5005" .5003" | .5015" .5012" | .5045" .5043" | 24.60 | 27.90 | 29.90 | 32.90 | - | - | - | - | 35.90 | 37.40 | 44.90 | 54.90 | TTD-33 | .4996" - .5044" | |

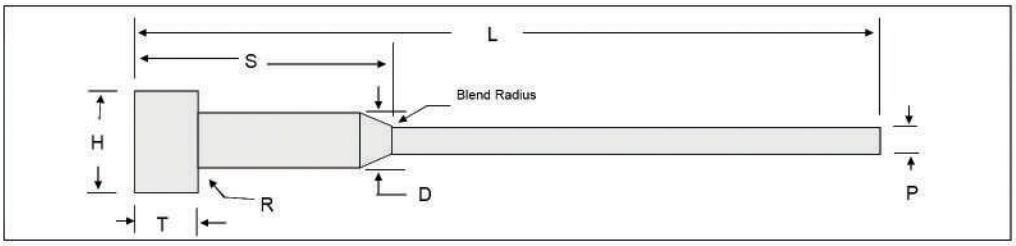
# Shoulder Ejector Pins

## MTT Type

***EURO METRIC***

**Material:** M-2 High Speed Steel, Hardened through 60-63 Rc
Heads drawn for maximum toughness and easy machining.

THRU-TUFF™ M-2 HSS Pins
Hardened-Through HSS




| HOW TO ORDER Specify: | | |
|---|---|---|
| Quantity. | Cat. No. | Length |
| 25 | MTT-10-50 | L-150 |
| 50 | MTT-20-75 | L-150 |

| D | H | T | P | S | REGAL CATALOG NO. | NET PRICE EACH (US$) LENGTHS | |
|---|---|---|---|---|---|---|---|
| SHOULDER DIA. | HEAD DIA. | HEAD THICK. | PIN DIA. | SHOULDER LENGTH | | L-150 | L-200 |
| +0mm -0.1mm | +0mm -0.2mm | +0mm -0.05mm | -.002mm -.008mm | -1mm -2mm | | +1mm -0mm | +1mm -0mm |
| 2 | 4 | 2 | 0.8 | 50 | MTT- 08 - 50 | 9.70 | - |
| 2 | 4 | 2 | | 75 | MTT- 08 - 75 | 9.70 | - |
| 2 | 4 | 2 | 0.9 | 50 | MTT- 09 - 50 | 9.70 | - |
| 2 | 4 | 2 | | 75 | MTT- 09 - 75 | 9.70 | - |
| 2 | 4 | 2 | 1.0 | 35 | MTT- 10 - 35 | 9.70 | - |
| 2 | 4 | 2 | | 50 | MTT- 10 - 50 | 9.70 | 11.75 |
| 2 | 4 | 2 | | 75 | MTT- 10 - 75 | 9.45 | 10.25 |
| 2 | 4 | 2 | 1.1 | 50 | MTT- 11 - 50 | 9.70 | 10.20 |
| 2 | 4 | 2 | | 75 | MTT- 11 - 75 | 9.45 | 9.70 |
| 2 | 4 | 2 | 1.2 | 50 | MTT- 12 - 50 | 9.70 | 10.20 |
| 2 | 4 | 2 | | 75 | MTT- 12 - 75 | 9.45 | 9.70 |
| 2 | 4 | 2 | 1.3 | 50 | MTT- 13 - 50 | 8.90 | 10.10 |
| 2 | 4 | 2 | | 75 | MTT- 13 - 75 | 8.65 | 9.60 |
| 2 | 4 | 2 | 1.4 | 50 | MTT- 14 - 50 | 8.90 | 10.00 |
| 2 | 4 | 2 | | 75 | MTT- 14 - 75 | 8.65 | 9.50 |
| 3 | 6 | 3 | 1.5 | 35 | MTT- 15 - 35 | 7.90 | 10.30 |
| 3 | 6 | 3 | | 50 | MTT- 15 - 50 | 7.90 | 8.80 |
| 3 | 6 | 3 | | 75 | MTT- 15 - 75 | 7.65 | 8.30 |
| 3 | 6 | 3 | 1.6 | 50 | MTT- 16 - 50 | 7.55 | 8.70 |
| 3 | 6 | 3 | | 75 | MTT- 16 - 75 | 7.50 | 8.20 |
| 3 | 6 | 3 | 1.7 | 50 | MTT- 17 - 50 | 7.45 | 8.60 |
| 3 | 6 | 3 | | 75 | MTT- 17 - 75 | 7.40 | 8.10 |
| 3 | 6 | 3 | 1.8 | 50 | MTT- 18 - 50 | 7.30 | 8.50 |
| 3 | 6 | 3 | | 75 | MTT- 18 - 75 | 7.25 | 8.00 |
| 3 | 6 | 3 | 1.9 | 50 | MTT- 19 - 50 | 7.05 | 8.40 |
| 3 | 6 | 3 | | 75 | MTT- 19 - 75 | 7.00 | 7.90 |
| 3 | 6 | 3 | 2.0 | 50 | MTT- 20 - 50 | 6.75 | 8.20 |
| 3 | 6 | 3 | | 75 | MTT- 20 - 75 | 6.70 | 7.70 |
| 3 | 6 | 3 | 2.2 | 50 | MTT- 22 - 50 | 6.55 | 8.00 |
| 3 | 6 | 3 | | 75 | MTT- 22 - 75 | 6.50 | 7.50 |
| 3 | 6 | 3 | 2.5 | 35 | MTT- 25 - 35 | 6.30 | 8.65 |
| 3 | 6 | 3 | | 50 | MTT- 25 - 50 | 6.30 | 7.65 |
| 3 | 6 | 3 | | 75 | MTT- 25 - 75 | 6.25 | 7.15 |

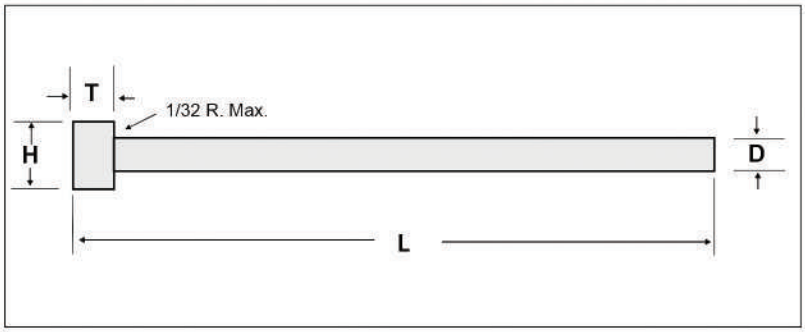
# Straight Ejector Pins
# MTT Type

***EURO METRIC***

THRU-TUFF™ M-2 HSS Pins
Hardened-Through HSS

**Material:** M-2 High Speed Steel, Hardened through 60-63 Rc
Heads drawn for maximum toughness and easy machining.

| HOW TO ORDER: Specify | | |
|---|---|---|
| Quantity | Cat. No. | Length |
| 60 | MTT-5.0 | L-160 |
| 12 | MTT-1.5 | L-125 |




| TOLERANCES (METRIC ISO) | | |
|---|---|---|
| PIN DIA. (D) g6 | | R |
| SIZE | TOLERANCE | |
| 0 to 3 mm | - 0.002 mm<br>- 0.008 mm | 0.3 mm |
| 3.5 to 6 mm | - 0.004 mm<br>- 0.012 mm | 0.3 mm |
| 8.0 to 10 mm | - 0.002 mm<br>- 0.008 mm | 0.5 mm |

| D | | H | T | REGAL CATALOG NO. | NET PRICE EACH (US $) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| PIN DIA. G6 (See table above for actual tolerances) | | HEAD DIA. | HEAD THICK. | | LENGTHS +2.0 mm -0.0 mm | | | | |
| NOMINAL SIZE mm | INCH CONVERSION | +0.0 mm -0.2 mm | +0.0 mm -0.05 mm | | L-100 | L-125 | L-160 | L-200 | L-250 |
| 1.5 | 0.0591 | 3 | 1.5 | MTT-1.5 | 3.20 | 3.60 | 3.99 | 5.59 | - |
| 2 | 0.0787 | 4 | 2 | MTT-2.0 | 3.60 | 3.99 | 4.39 | 5.59 | 7.01 |
| 2.2 | 0.0866 | 4 | 2 | MTT-2.2 | 4.13 | 4.39 | 4.69 | 5.85 | 10.78 |
| 2.5 | 0.0984 | 5 | 2 | MTT-2.5 | 4.13 | 4.39 | 4.69 | 5.85 | 10.78 |
| 3 | 0.1181 | 6 | 3 | MTT-3.0 | 4.06 | 4.29 | 4.52 | 5.62 | 10.78 |
| 3.2 | 0.126 | 6 | 3 | MTT-3.2 | 4.59 | 4.79 | 5.41 | 7.01 | 9.82 |
| 3.5 | 0.1378 | 7 | 3 | MTT-3.5 | 4.59 | 4.79 | 5.41 | 7.01 | 9.82 |
| 4 | 0.1575 | 8 | 3 | MTT-4.0 | 4.79 | 5.02 | 5.61 | 7.01 | 9.82 |
| 4.2 | 0.1654 | 8 | 3 | MTT-4.2 | 5.02 | 5.54 | 5.94 | 7.24 | 9.82 |
| 4.5 | 0.1772 | 8 | 3 | MTT-4.5 | 5.21 | 5.61 | 6.01 | 7.24 | 10.29 |
| 5 | 0.1969 | 10 | 3 | MTT-5.0 | 5.21 | 5.61 | 6.01 | 7.24 | 10.29 |
| 5.2 | 0.2047 | 10 | 3 | MTT-5.2 | 5.61 | 5.81 | 6.20 | 7.47 | 10.52 |
| 5.5 | 0.2165 | 10 | 3 | MTT-5.5 | 5.61 | 5.81 | 6.20 | 7.47 | 11.67 |
| 6 | 0.2362 | 12 | 5 | MTT-6.0 | 5.61 | 5.81 | 6.20 | 7.47 | 13.06 |
| 8 | 0.315 | 14 | 5 | MTT-8.0 | 8.42 | 8.61 | 9.01 | 9.60 | 16.01 |
| 9 | 0.3543 | 14 | 5 | MTT-9.0 | 11.62 | 12.80 | 14.78 | 17.19 | 20.00 |
| 10 | 0.3937 | 16 | 5 | MTT-10.0 | 11.19 | 11.62 | 12.41 | 14.94 | 19.21 |

# Ejector Sleeves

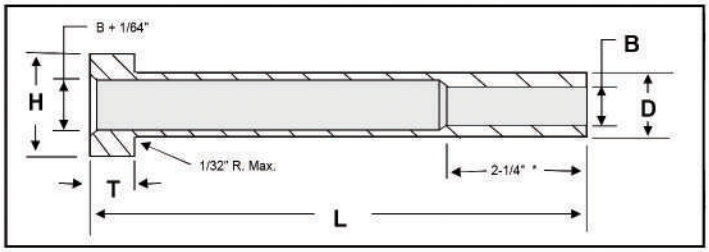
# ESL Type

## Nitrided O.D. & I.D.

***STANDARD INCH***

**Material:** H-13, Nitrided O.D. & I.D. 65-74 Rc
Heads drawn for maximum toughness and easy machining.

| HOW TO ORDER: Specify | | |
|---|---|---|
| Quantity | Catalog No. | Length |
| 6 | ESL-25 | L-5" |
| 24 | ESL-17 | L7" |




| TOLERANCES | | | | |
|---|---|---|---|---|
| I.D. | O.D. | HEAD DIA. | HEAD THICK | O.A.L. |
| B | D | H | T | L |
| +.0005" -.0000" | -.0003" -.0008" | +.000" -.010" | +.000" -.002" | +.125" -.000" |

| REGAL CATALOG NO. | B | D | H | T | NET PRICE EACH (US $) LENGTHS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | I.D. | O.D. | HEAD DIA. | HEAD THICK. | L-3" | L-4" | L-5" | L-6" | L-7" | L-8" |
| ESL-13 | 3/32" | 3/16" | 3/8" | 3/16" | 26.35 | 28.65 | 31.45 | 33.95 | 37.00 | 43.55 |
| ESL-15 | 1/8" | 7/32" | 13/32" | 3/16" | 25.10 | 27.90 | 30.90 | 33.45 | 36.50 | 40.25 |
| ESL-17 | 5/32" | 1/4" | 7/16" | 3/16" | - | 21.30 | 22.30 | 24.10 | 26.35 | 28.90 |
| ESL-21 | 3/16" | 5/16" | 1/2" | 1/4" | - | 21.80 | 23.05 | 25.10 | 27.65 | 30.40 |
| ESL-23 | 7/32" | 11/32" | 9/16" | 1/4" | - | 22.05 | 23.60 | 25.60 | 28.40 | 31.45 |
| ESL-25 | 1/4" | 3/8" | 5/8" | 1/4" | - | 22.55 | 24.10 | 26.35 | 28.90 | 31.95 |
| ESL-29 | 5/16" | 7/16" | 11/16" | 1/4" | - | 23.05 | 25.60 | 28.15 | 30.90 | 34.45 |
| ESL-33 | 3/8" | 1/2" | 3/4" | 1/4" | - | 23.60 | 27.90 | 30.40 | 33.45 | 37.00 |
| ESL-37 | 7/16" | 5/8" | 7/8" | 1/4" | - | 25.35 | 30.40 | 35.50 | 38.50 | 42.55 |
| ESL-39 | 1/2" | 11/16" | 15/16" | 1/4" | - | 26.60 | 31.45 | 37.00 | 40.55 | 44.60 |
| ESL-41 | 9/16" | 3/4" | 1" | 1/4" | - | 33.00 | 36.50 | 40.00 | 44.00 | 48.00 |
| ESL-45 | 5/8" | 7/8" | 1-1/8" | 1/4" | - | 37.50 | 41.00 | 45.00 | 49.00 | 53.50 |
| ESL-47 | 3/4" | 1" | 1-1/4" | 1/4" | - | 41.50 | 45.50 | 49.50 | 54.00 | 58.50 |

| REGAL CATALOG NO. | B | D | H | T | NET PRICE EACH (US $) LENGTHS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | I.D. | O.D. | HEAD DIA. | HEAD THICK. | L-9" | L-10" | L-11" | L-12" | L-13" | L-14" |
| ESL-13 | 3/32" | 3/16" | 3/8" | 3/16" | - | 53.80 | - | - | - | - |
| ESL-15 | 1/8" | 7/32" | 13/32" | 3/16" | - | 49.00 | - | - | - | - |
| ESL-17 | 5/32" | 1/4" | 7/16" | 3/16" | 31.95 | 36.00 | - | 47.00 | 76.15 | 79.95 |
| ESL-21 | 3/16" | 5/16" | 1/2" | 1/4" | 33.45 | 37.50 | 41.50 | 46.50 | 72.00 | 75.60 |
| ESL-23 | 7/32" | 11/32" | 9/16" | 1/4" | 35.50 | 39.05 | - | - | 85.00 | 89.25 |
| ESL-25 | 1/4" | 3/8" | 5/8" | 1/4" | 36.00 | 40.05 | 44.50 | 49.50 | 72.90 | 76.55 |
| ESL-29 | 5/16" | 7/16" | 11/16" | 1/4" | 38.50 | 42.55 | 47.50 | 52.50 | 75.15 | 78.90 |
| ESL-33 | 3/8" | 1/2" | 3/4" | 1/4" | 44.05 | 45.60 | 50.50 | 56.00 | 79.40 | 83.35 |
| ESL-37 | 7/16" | 5/8" | 7/8" | 1/4" | 46.60 | 51.20 | 56.50 | 62.00 | 81.80 | 85.90 |
| ESL-39 | 1/2" | 11/16" | 15/16" | 1/4" | 49.15 | 54.20 | 59.50 | 65.00 | 98.85 | 103.80 |
| ESL-41 | 9/16" | 3/4" | 1" | 1/4" | 53.00 | 57.50 | 63.00 | 68.50 | 94.80 | 99.35 |
| ESL-45 | 5/8" | 7/8" | 1-1/8" | 1/4" | 58.50 | 63.50 | 69.50 | 75.00 | 98.90 | 103.85 |
| ESL-47 | 3/4" | 1" | 1-1/4" | 1/4" | 64.00 | 69.50 | 75.00 | 81.50 | 110.00 | 115.50 |

# Metric Ejector Sleeves

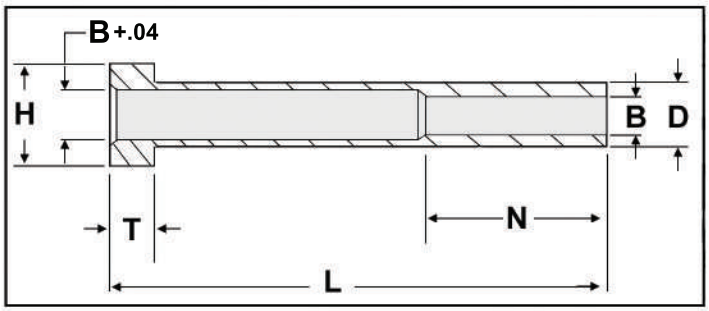
## MSL Type

***METRIC, DIN STANDARD***

**Material:** H-13, Nitrided O.D. & I.D. 68-72 Rc

## *Nitrided O.D. & I.D.*

| HOW TO ORDER: Specify | | |
|---|---|---|
| Quantity | Catalog No. | Length |
| 12 | MSL-2.0 | L-200 |
| 6 | MSL-10.0 | L-250 |




| TOLERANCES | | | | |
|---|---|---|---|---|
| I.D. | O.D. | HEAD DIA. | HEAD THICK | O.A.L. |
| B | D | H | T | L |
| g6 | H5 | +0.0 mm -0.2 mm | +0.0 mm -0.5 mm | +2 -0 |

| REGAL CATALOG NO. | B | D | H | T | N | NET PRICE EACH (US $) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | I.D. | O.D. | HEAD DIA. | HEAD THICK. | BEARING LENGTH | LENGTHS | | | | | | | | | | |
| | | | | | | 75 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 350 |
| MSL-01.5 | 1.5 | 3 | 6 | 3 | 35.00 | 60.10 | 103.02 | 110.05 | 113.87 | - | - | - | - | - | - | - |
| MSL-01.7 | 1.7 | 3 | 6 | 3 | 35.00 | 50.87 | 67.33 | - | 44.56 | - | - | - | - | - | - | - |
| MSL-02.0 | 2 | 4 | 8 | 3 | 35.00 | 46.16 | - | 66.54 | - | 61.50 | 123.15 | - | - | - | - | - |
| MSL-02.2 | 2.2 | 4 | 8 | 3 | 35.00 | 48.78 | 59.20 | - | 84.50 | 66.77 | - | - | - | - | - | - |
| MSL-02.5 | 2.5 | 5 | 10 | 3 | 35.00 | 41.17 | 39.88 | - | - | 104.41 | 135.52 | 121.94 | - | - | - | - |
| MSL-02.7 | 2.7 | 5 | 10 | 3 | 45.00 | - | 42.24 | 72.98 | 90.33 | 104.69 | 138.98 | 78.90 | 112.17 | - | - | - |
| MSL-03.0 | 3 | 5 | 10 | 3 | 45.00 | 44.87 | 50.35 | 52.45 | 53.77 | 65.05 | 117.09 | 125.73 | 113.15 | - | - | - |
| MSL-03.2 | 3.2 | 5 | 10 | 3 | 45.00 | 58.91 | - | 69.39 | 74.09 | 90.16 | 109.00 | 145.04 | 140.47 | - | - | - |
| MSL-03.5 | 3.5 | 6 | 12 | 5 | 45.00 | - | 59.42 | 53.52 | 57.07 | 62.41 | 71.33 | - | 118.27 | - | - | - |
| MSL-03.7 | 3.7 | 6 | 12 | 5 | 45.00 | 69.33 | 50.63 | 112.45 | - | 65.88 | 157.75 | - | - | - | - | - |
| MSL-04.0 | 4 | 6 | 12 | 5 | 45.00 | 59.87 | 48.62 | 46.45 | 52.07 | 68.37 | 63.63 | 88.05 | 101.97 | - | - | - |
| MSL-04.2 | 4.2 | 8 | 14 | 5 | 45.00 | 174.29 | 65.66 | 54.23 | 83.00 | - | 72.63 | - | 103.67 | - | - | - |
| MSL-04.5 | 4.5 | 8 | 14 | 5 | 45.00 | 19.70 | 16.87 | 21.07 | 29.51 | - | 38.17 | 45.42 | 50.24 | - | - | - |
| MSL-05.0 | 5 | 8 | 14 | 5 | 45.00 | 38.06 | 43.02 | 48.19 | 69.01 | 64.71 | 63.27 | 69.72 | 102.17 | - | - | - |
| MSL-05.2 | 5.2 | 8 | 14 | 5 | 45.00 | 38.06 | 49.83 | - | 53.54 | 61.17 | 63.27 | 68.13 | 75.72 | - | - | - |
| MSL-06.0 | 6 | 10 | 16 | 5 | 45.00 | 46.55 | 44.71 | 68.42 | 55.43 | 60.19 | 64.53 | 103.39 | 74.77 | - | - | - |
| MSL-06.2 | 6.2 | 10 | 16 | 5 | 45.00 | 55.33 | 55.37 | 49.39 | 70.67 | 72.87 | - | - | 78.32 | - | - | - |
| MSL-06.5 | 6.5 | 10 | 16 | 5 | 45.00 | - | 59.78 | 55.24 | 72.73 | - | - | - | - | - | - | - |
| MSL-08.0 | 8 | 12 | 20 | 7 | 45.00 | 41.22 | 46.03 | 51.67 | 57.18 | 61.52 | 66.75 | 71.76 | 100.50 | 83.46 | 89.85 | 207.38 |
| MSL-08.2 | 8.2 | 12 | 20 | 7 | 45.00 | 46.88 | 47.88 | - | - | - | 66.05 | 75.37 | - | - | 89.84 | 187.30 |
| MSL-08.5 | 8.6 | 12 | 20 | 7 | 45.00 | 19.86 | 20.24 | 44.09 | 30.12 | - | 40.24 | 57.00 | 53.37 | 55.29 | 60.41 | - |
| MSL-10.0 | 10 | 14 | 22 | 7 | 45.00 | - | 59.22 | 54.66 | 69.96 | 64.12 | 70.07 | 87.03 | 93.47 | - | 100.95 | 177.34 |
| MSL-10.5 | 10.5 | 14 | 22 | 7 | 45.00 | - | 49.53 | - | 59.80 | 64.10 | 70.06 | - | - | - | 106.08 | - |
| MSL-11.0 | 11 | 14 | 22 | 7 | 45.00 | - | - | 32.80 | - | 45.91 | 52.50 | 59.06 | 76.67 | - | 78.70 | - |
| MSL-12.0 | 12 | 16 | 22 | 7 | 45.00 | - | 77.58 | 58.43 | 81.84 | 64.54 | 70.63 | 74.77 | 86.25 | 85.17 | 78.72 | 200.42 |
| MSL-12.5 | 12.5 | 16 | 22 | 7 | 45.00 | - | 49.94 | 58.88 | - | - | 74.77 | 74.88 | 80.46 | - | 78.69 | 144.25 |
| MSL-14.0 | 14 | 18 | 24 | 9 | 45.00 | - | 72.15 | 75.61 | 77.31 | 78.42 | 92.80 | - | 130.92 | 129.37 | 164.81 | 209.26 |
| MSL-16.0 | 16 | 20 | 26 | 9 | 50.00 | - | - | 78.49 | 84.95 | 99.06 | 111.79 | - | - | - | - | - |
| MSL-18.0 | 18 | 22 | 28 | 9 | 50.00 | - | 79.17 | 60.65 | 101.58 | - | 158.22 | - | - | - | - | - |

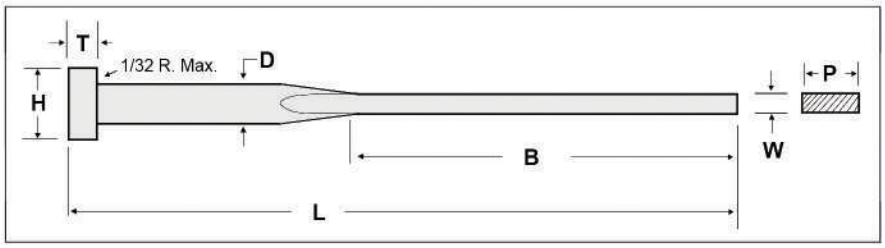
# Ejector Blades
# EBE Type

| HOW TO ORDER: Specify | | |
|---|---|---|
| Quantity | Cat. No. | Length |
| 60 | EBE11-324 - | 6 |
| 12 | EBE17-624 - | 9 |

### *U.S. STANDARD INCH*

**Material:** H-13 Hotwork Die Steel
**Blade Hardness:** 50-54 RC

Heads annealed for easy machining.

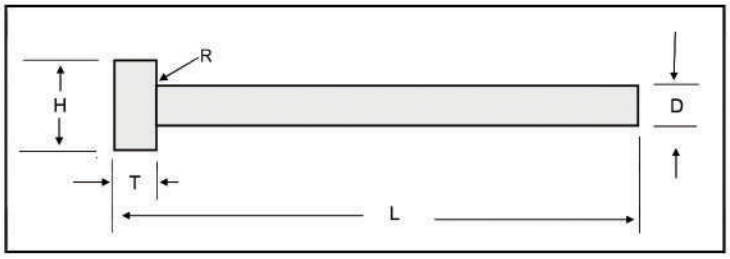



| REGAL CATALOG NO. | W | P | D | B | H | T | NET PRICE EACH (US$) L - STANDARD OVERALL LENGTH +.12" -.00" | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | +.0000" -.0003" | +.0000" -.0003" | +.000" -.001" | +.09" -.00" | +.000" -.010" | +.000" -.002" | | | | | | | | |
| | BLADE THICK. | BLADE WIDTH | PIN DIA. | BLADE LENGTH | HEAD DIA. | HEAD THICK. | 5" | 6" | 6-3/8" | 7-3/8" | 8" | 8-3/8" | 9-3/8" | 10-3/8" |
| | | | | | | | -5 | -6 | | -7 | -8 | | -9 | -10 |
| EBE9-244 | .024" | .100" | .125" | 4-3/8" | 1/4" | 1/8" | - | - | 20.77 | - | - | - | - | - |
| EBE9-323 | .032" | .100" | .125" | 3" | | | 19.63 | 20.01 | - | - | - | - | - | - |
| EBE9-324 | .032" | .100" | .125" | 4-3/8" | | | - | - | 20.77 | 20.77 | - | - | - | - |
| EBE9-463 | .046" | .100" | .125" | 3" | | | 19.63 | 20.01 | - | - | - | - | - | - |
| EBE9-464 | .046" | .100" | .125" | 4-3/8" | | | - | - | 20.77 | 20.77 | - | - | - | - |
| EBE11-244 | .024" | .140" | .156" | 4-3/8" | 9/32" | 5/32" | - | - | 20.77 | - | - | - | - | - |
| EBE11-323 | .032" | .140" | .156" | 3" | | | - | 20.01 | - | - | 20.85 | - | - | - |
| EBE11-324 | .032" | .140" | .156" | 4-3/8" | | | - | - | 20.77 | 20.77 | - | 21.62 | - | - |
| EBE11-463 | .046" | .140" | .156" | 3" | | | - | 20.01 | - | - | 23.16 | - | - | - |
| EBE11-464 | .046" | .140" | .156" | 4-3/8" | | | - | - | 20.77 | 20.77 | - | 21.62 | - | - |
| EBE13-244 | .024" | .172" | .187" | 4-3/8" | 3/8" | 3/16" | - | - | 25.63 | - | - | - | - | - |
| EBE13-323 | .032" | .172" | .187" | 3" | | | - | 24.86 | - | - | 25.70 | - | - | - |
| EBE13-324 | .032" | .172" | .187" | 4-3/8" | | | - | - | 25.63 | 25.63 | - | 26.32 | - | - |
| EBE13-463 | .046" | .172" | .187" | 3" | | | - | 24.86 | - | - | 25.70 | - | - | - |
| EBE13-464 | .046" | .172" | .187" | 4-3/8" | | | - | - | 25.63 | 25.63 | - | 26.32 | - | - |
| EBE13-623 | .062" | .172" | .187" | 3" | | | - | 24.86 | - | - | 25.70 | - | - | - |
| EBE13-624 | .062" | .172" | .187" | 4-3/8" | | | - | - | 25.63 | 25.63 | - | 26.32 | - | - |
| EBE17-323 | .032" | .234" | .250" | 3" | 7/16" | 3/16" | 25.40 | 27.23 | - | - | 27.66 | - | - | - |
| EBE17-324 | .032" | .234" | .250" | 4-3/8" | | | - | - | 28.00 | 28.00 | - | 28.76 | 29.61 | 30.41 |
| EBE17-463 | .046" | .234" | .250" | 3" | | | 25.40 | 27.23 | - | - | 27.66 | - | - | - |
| EBE17-464 | .046" | .234" | .250" | 4-3/8" | | | - | - | 28.00 | 28.00 | - | 36.41 | 29.61 | 30.41 |
| EBE17-623 | .062" | .234" | .250" | 3" | | | 25.40 | 27.23 | - | - | 27.66 | - | - | - |
| EBE17-624 | .062" | .234" | .250" | 4-3/8" | | | - | - | 28.00 | 28.00 | - | 28.76 | 29.42 | 30.41 |
| EBE21-324 | .032" | .296" | .312" | 4-3/8" | 1/2" | 1/4" | - | - | 32.02 | 33.58 | - | 34.20 | 35.04 | 35.96 |
| EBE21-464 | .046" | .296" | .312" | 4-3/8" | | | - | - | 31.18 | 32.74 | - | 33.35 | 34.20 | 35.04 |
| EBE21-624 | .062" | .296" | .312" | 4-3/8" | | | - | - | 30.34 | 31.90 | - | 33.09 | 33.93 | 35.04 |
| EBE21-784 | .078" | .296" | .312" | 4-3/8" | | | - | - | 29.61 | 31.25 | - | 32.63 | 33.74 | 34.58 |
| EBE25-324 | .032" | .359" | .375" | 4-3/8" | 5/8" | 1/4" | - | - | 36.18 | 41.31 | - | 37.94 | 38.40 | 39.21 |
| EBE25-464 | .046" | .359" | .375" | 4-3/8" | | | - | - | 35.54 | 36.53 | - | 37.10 | 37.49 | 38.33 |
| EBE25-624 | .062" | .359" | .375" | 4-3/8" | | | - | - | 35.16 | 36.15 | - | 36.87 | 37.03 | 37.87 |
| EBE25-784 | .078" | .359" | .375" | 4-3/8" | | | - | - | 34.70 | 35.69 | - | 36.23 | 36.69 | 37.53 |
| EBE33-625 | .062" | .484" | .500" | 5-3/8" | 3/4" | 1/4" | - | - | - | - | - | 53.78 | 54.62 | 55.43 |
| EBE33-785 | .078" | .484" | .500" | 5-3/8" | | | - | - | - | - | - | 53.78 | 54.62 | 55.43 |

# Stainless Steel Ejector Pins

## INOX Type

**Material:** 17Cr Stainless Steel
**Hardened Through:** 52-55 Rc
**Heads Drawn:** 40-45 Rc




| HOW TO ORDER: Specify | | |
|---|---|---|
| Quantity | Cat. No. | Length |
| 60 | INOX- 3.0 | L-160 |
| 12 | INOX-10.0 | L-250 |

| TOLERANCES (METRIC ISO) | | |
|---|---|---|
| PIN DIA. (D) g6 | | R |
| SIZE | TOLERANCE | |
| 0 to 3 mm | - .002 mm<br>- .008 mm | 0.3 mm |
| 3.5 to 6 mm | - .004 mm<br>- .012 mm | 0.3 mm |
| 8.0 to 10 mm | - .008 mm<br>- .014 mm | 0.5 mm |

## Properties

- High wear resistance
- Suitable for polished finish
- Good machineability
- Withstands surface treatment or coating at temperature higher than 200°C (Tin, Nitriding, Etc.)
- 17% Cr stainless steel

## Applications

- Processing plastics with abrasive and corrosive fillers where acid fire resistance vapors additives and molding gas may be present
- Tools for the medical and food industries
- Molding of PVC
- Capable of hot working up to 500°C

| D | | H | T | REGAL CATALOG NUMBER | NET PRICE EACH (US$) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | LENGTHS +2.0 mm -0.0 mm | | | | |
| PIN DIA. g6 | | HEAD DIA. | HEAD THICK. | | | | | | |
| NOMINAL SIZE | INCH CONVERSION | *+0.0 mm -0.2 mm* | *+0.0 mm -0.05 mm* | | L-100 | L-125 | L-160 | L-200 | L-250 |
| 1.0 | 0.0394 | 3 | 2 | INOX-1.0 | 4.25 | - | - | - | - |
| 1.5 | 0.0591 | 3 | 2 | INOX-1.5 | 4.75 | 5.25 | 9.75 | 14.75 | - |
| 2.0 | 0.0787 | 4 | 2 | INOX-2.0 | 4.75 | 6.25 | 12.25 | 14.25 | - |
| 2.5 | 0.0984 | 5 | 2 | INOX-2.5 | 5.25 | 8.00 | 13.75 | 15.25 | - |
| 3.0 | 0.1181 | 6 | 3 | INOX-3.0 | 5.75 | 9.25 | 14.75 | 16.75 | 23.25 |
| 3.5 | 0.1378 | 7 | 3 | INOX-3.5 | 6.25 | 12.25 | 15.75 | 18.25 | 24.25 |
| 4.0 | 0.1575 | 8 | 3 | INOX-4.0 | 6.75 | 14.25 | 16.75 | 19.25 | 25.45 |
| 5.0 | 0.1969 | 10 | 3 | INOX-5.0 | 7.75 | 15.25 | 18.25 | 20.75 | 26.75 |
| 6.0 | 0.2362 | 12 | 5 | INOX-6.0 | 9.25 | 16.75 | 19.25 | 21.75 | 28.25 |
| 8.0 | 0.3150 | 14 | 5 | INOX-8.0 | 10.75 | 18.25 | 20.75 | 23.25 | 29.25 |
| 10.0 | 0.3937 | 16 | 5 | INOX-10.0 | 14.25 | 20.75 | 23.25 | 25.75 | 30.75 |

# Shoulder Ejector Pins

# ERX Type

## H-13 Nitrided

| Interchangeable with |
|---|
| DME Type EX |
| PCS Type NP |
| Progressive Type EP |

### STANDARD INCH FRACTIONAL & .005" OVERSIZED DIAMETERS

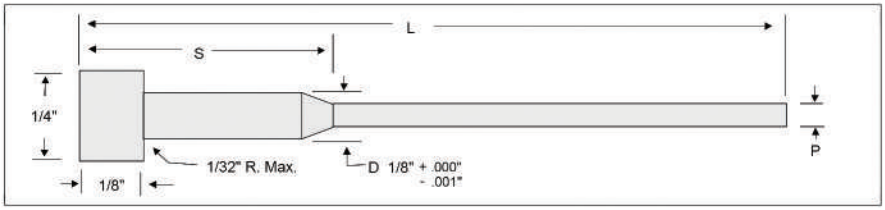
**Material:** H-13 Hotwork Die Steel
**Core:** Hardened throught to 41-45 Rc
**Surface:** Ion nitrided to 65-74 Rc

**Regal ERX Nitrided Ejector Pins** are made from the finest grade of H-13 hotwork die steel. The heads are hot forged and stress relieved for uniform grain flow and high tensile strength. The core is hardened through to 41-45 Rc and the surface is ion nitrided to 65-74 Rc. Diameters are precision ground to a high surface finish (6-10 rms) and .0003" tolerance.

| HOW TO ORDER | | | | |
|---|---|---|---|---|
| Specify: | Quantity | Catalog Number | If Oversize | Length |
| *Examples:* | *24* | *ERX-5-2* | | *L-6"* |
| | *48* | *ERX-3-2* | *+.005"* | *L-10"* |

***.0003" Diameter Tolerance***

| TOLERANCES | | | |
|---|---|---|---|
| P | H | T | L |
| - .0005"<br>- .0008" | + .000"<br>- .010" | + .000"<br>- .002" | + .375"<br>- .000" |




| P | | S | REGAL CATALOG NO. | NET PRICE EACH (US$) | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | L-4" | L-6" | L-10" | | L-14" |
| NOMINAL PIN DIA. | ACTUAL PIN DIA. | SHOULDER LENGTH | | STD. DIA. | STD. DIA. | STD. DIA. | +.005" DIA. | STD. DIA. |
| 1/32" | .0308" / .0305" | 1/2" | ERX-2-1/2 | - | 6.45 | - | - | - |
| | | 2" | ERX-2-2 | - | 6.35 | - | - | - |
| | | 3" | ERX-2-3 | - | - | 8.03 | - | - |
| | | 4" | ERX-2-4 | - | - | 8.03 | - | - |
| 3/64" | .0464" / .0461" | 1/2" | ERX-3-1/2 | 4.15 | 3.93 | 5.42 | 5.98 | 6.94 |
| | | 2" | ERX-3-2 | 4.06 | 3.91 | 4.79 | 5.76 | 6.72 |
| | | 3" | ERX-3-3 | - | - | 4.79 | - | - |
| | | 4" | ERX-3-4 | - | - | 4.79 | - | - |
| 1/16" | .0620" / .0617" | 1/2" | ERX-5-1/2 | 3.91 | 3.55 | 5.07 | 5.64 | 6.53 |
| | | 2" | ERX-5-2 | 3.81 | 3.47 | 4.83 | 5.42 | 6.17 |
| | | 3" | ERX-5-3 | - | - | 4.64 | - | - |
| | | 4" | ERX-5-4 | - | - | 4.83 | - | - |
| 5/64" | .0776" / .0773" | 1/2" | ERX-6-1/2 | 3.91 | 3.55 | 5.07 | 5.64 | 6.62 |
| | | 2" | ERX-6-2 | 3.81 | 3.47 | 4.83 | 5.42 | 6.27 |
| | | 3" | ERX-6-3 | - | - | 4.64 | - | - |
| | | 4" | ERX-6-4 | - | - | 4.83 | - | - |
| 3/32" | .0933" / .0930" | 1/2" | ERX-7-1/2 | 3.51 | 3.20 | 4.60 | 5.18 | 6.27 |
| | | 2" | ERX-7-2 | 3.42 | 3.11 | 4.37 | 4.95 | 6.02 |
| | | 3" | ERX-7-3 | - | - | 4.18 | - | - |
| | | 4" | ERX-7-4 | - | - | 4.37 | - | - |
| 7/64" | .1089" / .1086" | 1/2" | ERX-8-1/2 | 3.51 | 3.20 | 4.60 | 5.18 | 6.27 |
| | | 2" | ERX-8-2 | 3.42 | 3.11 | 4.37 | 4.95 | 5.90 |
| | | 3" | ERX-8-3 | - | - | 4.18 | - | - |
| | | 4" | ERX-8-4 | - | - | 4.37 | - | |

# Straight Ejector Pins
# ERX Type

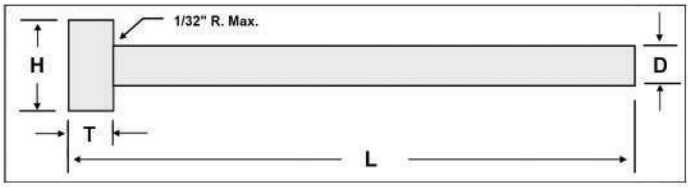
## H-13 Nitrided

***STANDARD INCH FRACTIONAL & .005" OVERSIZED DIAMETERS***

**Material:** H-13 Hotwork die steel
**Core:** Hardened throughout to 41-45 Rc
**Surface:** Ion nitrided to 65-74 Rc

| HOW TO ORDER: Specify | | |
|---|---|---|
| Quantity | Cat. No. | Length |
| 60 | ERX-17 | L-6" |
| 12 | ERX-25 | L-10" |

**Interchangeable with**
DME Type EX
PCS Type NP
Progressive Type EP




***.0003" Diameter Tolerance***

| TOLERANCES | | | | |
|---|---|---|---|---|
| D | | H | T | L |
| UP TO 1/2" DIA. & 14" LONG | -.0005" -.0008" | +.000" .010" | +.000" -.002" | +.375" .000" |
| OVER 1/2" DIA. & 14" LONG | -.0003" -.0008" | | | |

| D | | H | T | REGAL | L-4" | L-6" | L-10" | | L-14" | | L-18" | | L-25" | L-36" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PIN DIA. | | HEAD | HEAD | CATALOG | STD. | STD. | STD. | +.005" | STD. | +.005" | STD. | +.005" | STD. | STD. |
| NOMINAL SIZE | DECIMAL EQUIV. | DIA. | THICK. | NO. | DIA. | DIA. | DIA. | DIA. | DIA. | DIA. | DIA. | DIA. | DIA. | DIA. |
| 3/64" | .0469" | 1/4" | 1/8" | ERX-3 | 4.24 | 4.30 | 7.50 | - | 10.35 | - | - | - | - | - |
| 1/16" | .0625" | 1/4" | 1/8" | ERX-5 | 3.95 | 4.00 | 5.17 | 6.02 | 9.35 | - | - | - | - | - |
| 5/64" | .0781" | 1/4" | 1/8" | ERX-6 | 3.95 | 4.00 | 4.83 | 6.02 | 9.35 | - | - | - | - | - |
| 3/32" | .0938" | 1/4" | 1/8" | ERX-7 | 3.56 | 3.61 | 4.06 | 5.28 | 6.90 | - | - | - | - | - |
| 7/64" | .1094" | 1/4" | 1/8" | ERX-8 | 3.56 | 3.61 | 4.06 | 5.28 | 6.90 | - | - | - | - | - |
| 1/8" | .1250" | 1/4" | 1/8" | ERX-9 | 1.90 | 1.96 | 2.20 | 2.48 | 2.75 | 2.95 | 6.38 | - | 14.93 | - |
| 9/64" | .1406" | 1/4" | 1/8" | ERX-10 | - | 2.30 | 2.35 | 2.67 | 3.20 | - | 6.07 | - | - | - |
| 5/32" | .1563" | 9/32" | 5/32" | ERX-11 | 1.99 | 2.05 | 2.30 | 2.59 | 2.96 | 3.26 | 4.13 | - | 14.93 | - |
| 11/64" | .1719" | 11/32" | 3/16" | ERX-12 | 2.39 | 2.45 | 2.50 | 2.84 | 3.32 | - | - | - | - | - |
| 3/16" | .1875" | 3/8" | 3/16" | ERX-13 | 2.05 | 2.10 | 2.45 | 2.76 | 3.26 | 3.50 | 4.28 | - | 6.12 | - |
| 13/64" | .2031" | 3/8" | 3/16" | ERX-14 | - | 2.60 | 2.74 | - | 3.52 | - | - | - | - | - |
| 7/32" | .2188" | 13/32" | 3/16" | ERX-15 | 2.19 | 2.24 | 2.73 | 3.06 | 3.62 | - | 9.00 | - | 6.63 | - |
| 15/64" | .2344" | 13/32" | 3/16" | ERX-16 | - | - | 3.00 | - | 3.88 | - | - | - | - | - |
| 1/4" | .2500" | 7/16" | 3/16" | ERX-17 | 2.34 | 2.39 | 2.98 | 3.34 | 3.86 | 4.27 | 4.95 | 5.60 | 7.13 | 24.95 |
| 17/64" | .2656" | 7/16" | 1/4" | ERX-18 | - | - | 3.52 | - | 4.21 | - | - | - | 7.55 | - |
| 9/32" | .2813" | 7/16" | 1/4" | ERX-19 | 2.77 | 2.87 | 3.65 | 3.75 | 4.35 | - | 5.80 | - | 8.05 | - |
| 19/64" | .2969" | 1/2" | 1/4" | ERX-20 | - | - | 3.86 | - | 4.85 | - | - | - | - | - |
| 5/16" | .3125" | 1/2" | 1/4" | ERX-21 | 3.06 | 3.16 | 4.06 | 4.15 | 4.85 | 5.40 | 6.38 | 6.99 | 8.66 | 32.13 |
| 21/64" | .3281" | 9/16" | 1/4" | ERX-22 | - | - | 4.35 | - | 5.65 | - | - | - | 9.37 | - |
| 11/32" | .3438" | 9/16" | 1/4" | ERX-23 | 3.51 | 3.56 | 4.55 | 4.70 | 5.73 | - | - | - | 9.70 | |
| 23/64" | .3594" | 5/8" | 1/4" | ERX-24 | - | - | 4.85 | - | 6.13 | - | - | - | - | - |
| 3/8" | .3750" | 5/8" | 1/4" | ERX-25 | 3.71 | 3.75 | 5.05 | 5.24 | 6.19 | 6.77 | 8.35 | 9.18 | 11.88 | 31.61 |
| 13/32" | .4063" | 11/16" | 1/4" | ERX-27 | 4.11 | 4.15 | 5.63 | 5.90 | 7.28 | - | 9.60 | - | 13.82 | - |
| 7/16" | .4375" | 11/16" | 1/4" | ERX-29 | 4.46 | 4.55 | 6.19 | 6.43 | 7.87 | 8.62 | 10.70 | - | 15.45 | 34.31 |
| 15/32" | .4688" | 3/4" | 1/4" | ERX-31 | 5.73 | 5.83 | 6.78 | 7.02 | 11.29 | - | 11.82 | - | 17.58 | - |
| 1/2" | .5000" | 3/4" | 1/4" | ERX-33 | 5.29 | 5.44 | 7.37 | 7.71 | 9.69 | 10.29 | 12.80 | - | 19.02 | 37.98 |
| 9/16" | .5625" | 13/16" | 1/4" | ERX-35 | - | 6.72 | 9.17 | - | 11.68 | - | 15.25 | - | 21.82 | - |
| 5/8" | .6250" | 7/8" | 1/4" | ERX-37 | - | 8.96 | 12.37 | - | 15.59 | - | 20.24 | - | 28.32 | - |
| 11/16" | .6875" | 15/16" | 1/4" | ERX-39 | - | 11.80 | 14.59 | - | 20.57 | - | 23.87 | - | 33.06 | - |
| 3/4" | .7500" | 1" | 1/4" | ERX-41 | - | 12.49 | 16.77 | - | 21.33 | - | 27.32 | - | 37.59 | - |
| 7/8" | .8750" | 1-1/8" | 1/4" | ERX-45 | - | 26.80 | 31.51 | - | 53.53 | - | 75.61 | - | 97.58 | - |
| 1" | 1.000" | 1-1/4" | 1/4" | ERX-47 | - | 28.06 | 31.51 | - | 62.04 | - | 80.27 | - | 103.90 | - |

# Straight Ejector Pins

# ERX Type

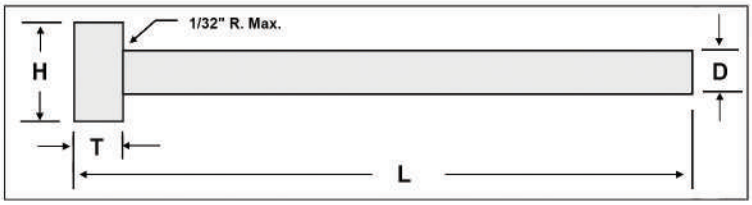
## LETTER SIZE

**Material:** H-13 Hotwork die steel
**Core:** Hardened throughout to 41-45 Rc
**Surface:** Ion nitrided to 65-74 Rc

## H-13 Nitrided

| HOW TO ORDER: Specify | | |
|---|---|---|
| Quantity | Cat. No. | Length |
| 60 | ERX-L | L-10" |
| 12 | ERX-R | L-10" |

| Interchangeable with |
|---|
| DME Type EX |
| PCS Type NP |
| Progressive Type EP |




*.0003" Diameter Tolerance*

| TOLERANCES | | | |
|---|---|---|---|
| D | H | T | L |
| -.0005" -.0008" | +.000" .010" | +.000" -.002" | +.375" .000" |

| D | | H | T | REGAL CATALOG NO. | L-10" |
|---|---|---|---|---|---|
| PIN DIA. | | HEAD DIA. | HEAD THICK. | | STD. DIA. |
| NOMINAL SIZE | DECIMAL EQUIV. | | | | |
| B | .2380" | 7/16" | 3/16" | ERX-B | 4.39 |
| C | .2420" | 7/16" | 3/16" | ERX-C | 4.44 |
| D | .2460" | 7/16" | 3/16" | ERX-D | 4.59 |
| F | .2570" | 7/16" | 3/16" | ERX-F | 4.64 |
| G | .2610" | 7/16" | 1/4" | ERX-G | 4.69 |
| I | .2720" | 7/16" | 1/4" | ERX-I | 4.85 |
| J | .2770" | 7/16" | 1/4" | ERX-J | 4.90 |
| L | .2900" | 1/2" | 1/4" | ERX-L | 5.20 |
| M | .2950" | 1/2" | 1/4" | ERX-M | 5.25 |
| N | .3020" | 1/2" | 1/4" | ERX-N | 5.36 |
| P | .3230" | 9/16" | 1/4" | ERX-P | 5.66 |
| Q | .3320" | 9/16" | 1/4" | ERX-Q | 5.87 |
| R | .3390" | 9/16" | 1/4" | ERX-R | 5.97 |
| U | .3680" | 9/16" | 1/4" | ERX-U | 6.48 |
| V | .3770" | 9/16" | 1/4" | ERX-V | 6.63 |
| W | .3860" | 9/16" | 1/4" | ERX-W | 6.63 |
| X | .3970" | 11/16" | 1/4" | ERX-X | 6.99 |

# Oversized Ejector Pins

## ERHX Type

## *H-13 Hardened-Through*

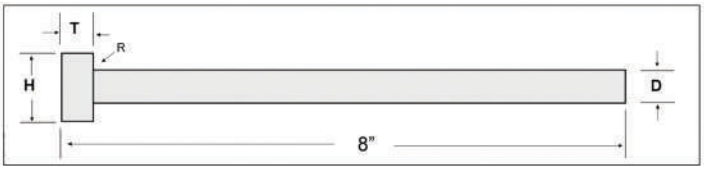
### *.001" INCREMENTS*

| HOW TO ORDER: Specify | | | |
|---|---|---|---|
| Quantity | Cat. No. | Oversize | Pin Dia. |
| 60 | ERHX-5-2 | OS+.001" | D=.0640" |
| 12 | ERHX-7-2 | OS+.003" | D=.0963" |
| 24 | ERHX-17 | OS+.006" | D=.2555" |

| TOLERANCES | | | |
|---|---|---|---|
| D & P | H | T | L |
| -.0000"<br>-.0003" | +.000"<br>-.010" | +.000"<br>-.002" | +.375"<br>-.000" |

*Interchangeable with*

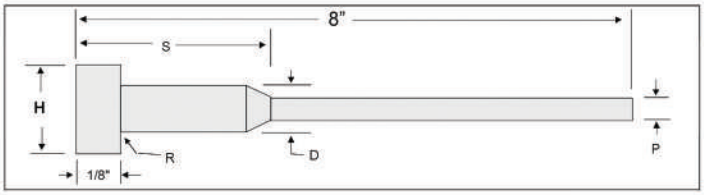
PCS Type P




| REGAL CATALOG NUMBER | OVERSIZE | PIN DIAMETER | NET PRICE EACH (US$) |
|---|---|---|---|
| ERHX-9 L-8" | OS +.001" | 0.1255 | 10.32 |
| | OS +.002" | 0.1265 | |
| | OS +.003" | 0.1275 | |
| | OS +.004" | 0.1285 | |
| ERHX-11 L-8" | OS +.001" | 0.1567 | 10.38 |
| | OS +.002" | 0.1577 | |
| | OS +.003" | 0.1587 | |
| | OS +.004" | 0.1597 | |
| ERHX-13 L-8" | OS +.001" | 0.1880 | 11.73 |
| | OS +.002" | 0.1890 | |
| | OS +.003" | 0.1900 | |
| | OS +.004" | 0.1910 | |
| ERHX-17 L-8" | OS +.001" | 0.2505 | 12.25 |
| | OS +.002" | 0.2515 | |
| | OS +.003" | 0.2525 | |
| | OS +.004" | 0.2535 | |
| | OS +.006" | 0.2555 | |
| | OS +.007" | 0.2565 | |
| | OS +.008" | 0.2575 | |

*Interchangeable with*

PCS Type SP




| REGAL CATALOG NUMBER | OVERSIZE | PIN DIAMETER | NET PRICE EACH (US$) |
|---|---|---|---|
| ERHX-3-1/2 L-8" | OS +.001" | 0.0474 | 16.36 |
| | OS +.002" | 0.0484 | |
| | OS +.003" | 0.0494 | |
| | OS +.004" | 0.0504 | |
| ERHX-5-1/2 L-8" | OS +.001" | 0.0630 | 14.51 |
| | OS +.002" | 0.0640 | |
| | OS +.003" | 0.0650 | |
| | OS +.004" | 0.0660 | |
| ERHX-6-1/2 L-8" | OS +.001" | 0.0786 | 14.51 |
| | OS +.002" | 0.0796 | |
| | OS +.003" | 0.0806 | |
| | OS +.004" | 0.0816 | |
| ERHX-7-1/2 L-8" | OS +.001" | 0.0943 | 14.07 |
| | OS +.002" | 0.0953 | |
| | OS +.003" | 0.0963 | |
| | OS +.004" | 0.0973 | |
| ERHX-8-1/2 L-8" | OS +.001" | 0.1099 | 13.17 |
| | OS +.002" | 0.1109 | |
| | OS +.003" | 0.1119 | |
| | OS +.004" | 0.1129 | |
| ERHX-3-2 L-8" | OS +.001" | 0.0474 | 16.36 |
| | OS +.002" | 0.0484 | |
| | OS +.003" | 0.0494 | |
| | OS +.004" | 0.0504 | |
| ERHX-5-2 L-8" | OS +.001" | 0.0630 | 13.68 |
| | OS +.002" | 0.0640 | |
| | OS +.003" | 0.0650 | |
| | OS +.004" | 0.0660 | |
| ERHX-6-2 L-8" | OS +.001" | 0.0786 | 13.68 |
| | OS +.002" | 0.0796 | |
| | OS +.003" | 0.0806 | |
| | OS +.004" | 0.0816 | |
| ERHX-7-2 L-8" | OS +.001" | 0.0943 | 13.17 |
| | OS +.002" | 0.0953 | |
| | OS +.003" | 0.0963 | |
| | OS +.004" | 0.0973 | |
| ERHX-8-2 L-8" | OS +.001" | 0.1099 | 13.17 |
| | OS +.002" | 0.1109 | |
| | OS +.003" | 0.1119 | |
| | OS +.004" | 0.1129 | |

# Shoulder Ejector Pins

# ERHX Type

## H-13 Hardened-Through

### STANDARD INCH FRACTIONAL AND .005" OVERSIZED DIAMETERS

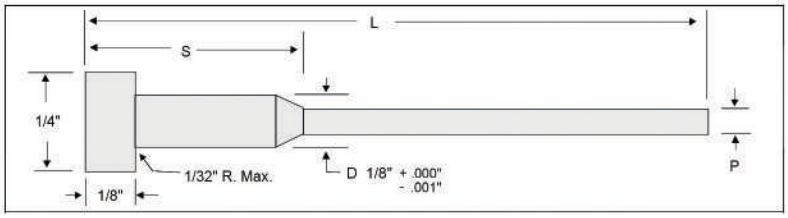
## H-13 Nitrided

| Interchangeable with |
|---|
| PCS Type SP |

**Material:** H-13 Hotwork die steel
**Core:** Hardened throughout to 50-55 Rc
**Surface:** Ion nitrided to 65-74 Rc

Heads annealed for easy machining.

| HOW TO ORDER | | | | |
|---|---|---|---|---|
| **Specify:** | **Quantity** | **Catalog Number** | **If Oversize** | **Length** |
| *Examples:* | *24* | *ERHX-7-1/2* | | *L-6"* |
| | *48* | *ERHX--5-2* | *+.005"* | *L-10"* |




*.0003" Diameter Tolerance*

| TOLERANCES | | | |
|---|---|---|---|
| **P** | **H** | **T** | **L** |
| - .0005"<br>- .0008" | + .000"<br>- .010" | + .000"<br>- .002" | + .375"<br>- .000" |

| P | | S | REGAL CATALOG NO. | PCS CROSS-REFERENCE* | NET PRICE L-6" | L-10" | | L-14" | |
|---|---|---|---|---|---|---|---|---|---|
| NOMINAL PIN DIA. | ACTUAL PIN DIA. | SHOULDER LENGTH | | | STD. DIA. | STD. DIA. | +.005" DIA. | STD. DIA. | +.005" DIA. |
| 1/32" | .0308" / .0305" | 1/2" | ERHX-2-1/2 | SP3-(L)1/2 | 7.35 | - | - | - | - |
| | | 2" | ERHX-2-2 | SP3-(L)2 | 7.25 | 10.35 | 11.50 | - | - |
| | | 3" | ERHX-2-3 | SP3-(L)3 | - | 9.15 | 10.10 | - | - |
| | | 4" | ERHX-2-4 | SP3-(L)4 | - | 9.15 | 10.10 | - | - |
| 3/64" | .0464" / .0461" | 1/2" | ERHX-3-1/2 | SP4-(L)1/2 | 4.25 | 6.50 | - | - | - |
| | | 2" | ERHX-3-2 | SP4-(L)2 | 4.05 | 4.65 | 5.40 | - | - |
| | | 3" | ERHX-3-3 | SP4-(L)3 | - | 5.10 | 6.15 | - | - |
| | | 4" | ERHX-3-4 | SP4-(L)4 | - | 5.70 | 6.15 | - | - |
| 1/16" | .0620" / .0617" | 1/2" | ERHX-5-1/2 | SP5-(L)1/2 | 3.95 | 4.90 | 5.60 | - | - |
| | | 2" | ERHX-5-2 | SP5-(L)2 | 3.85 | 4.50 | 5.40 | 6.20 | 7.15 |
| | | 3" | ERHX-5-3 | SP5-(L)3 | - | 4.75 | 5.85 | - | - |
| | | 4" | ERHX-5-4 | SP5-(L)4 | - | 5.30 | 6.45 | - | - |
| 5/64" | .0776" / .0773" | 1/2" | ERHX-6-1/2 | SP6-(L)1/2 | 3.95 | 4.90 | 5.70 | - | - |
| | | 2" | ERHX-6-2 | SP6-(L)2 | 3.85 | 4.50 | 5.10 | 6.20 | 7.15 |
| | | 3" | ERHX-6-3 | SP6-(L)3 | - | 4.75 | 5.85 | - | - |
| | | 4" | ERHX-6-4 | SP6-(L)4 | - | 5.30 | 6.45 | - | - |
| 3/32" | .0933" / .0930" | 1/2" | ERHX-7-1/2 | SP7-(L)1/2 | 3.60 | 4.55 | 5.10 | - | - |
| | | 2" | ERHX-7-2 | SP7-(L)2 | 3.40 | 4.30 | 4.90 | 5.80 | 6.75 |
| | | 3" | ERHX-7-3 | SP7-(L)3 | - | 4.30 | 5.35 | - | - |
| | | 4" | ERHX-7-4 | SP7-(L)4 | - | 4.75 | 5.85 | - | - |
| 7/64" | .1089" / .1086" | 1/2" | ERHX-8-1/2 | SP8-(L)1/2 | 3.60 | 4.55 | 5.10 | - | - |
| | | 2" | ERHX-8-2 | SP8-(L)2 | 3.40 | 4.05 | 4.60 | 5.80 | 6.75 |
| | | 3" | ERHX-8-3 | SP8-(L)3 | - | 4.30 | 5.35 | - | - |
| | | 4" | ERHX-8-4 | SP8-(L)4 | - | 4.75 | 5.85 | - | - |

*These parts are not manufactured by PCS, but are interchangeable with PCS parts. Replace the (L) with the length for the full PCS catalog number; for example, SP3-62.

# Straight Ejector Pins

# ERHX Type

## H-13 Hardened-Through

### STANDARD INCH

**Material:** H-13 Hotwork die steel
**Core:** Hardened through to 50-55 Rc
**Surface:** Ion nitrided to 65-74 Rc

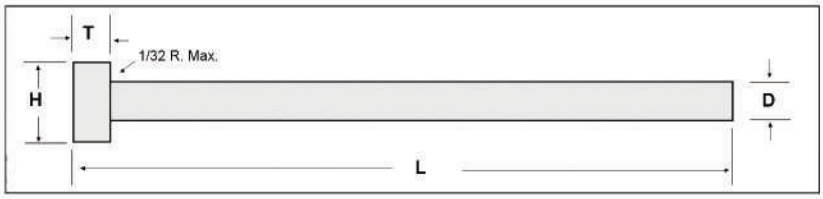
Heads annealed for easy machining.

| HOW TO ORDER: Specify | | | |
|---|---|---|---|
| Quantity | Cat. No. | (If .005" O.S.) | Length |
| 60 | ERHX-25 | +.005" | L-10" |
| 12 | ERHX-7 | | L-6" |
| 24 | ERHX-5A | | L-6" |

| Interchangeable with |
|---|
| DME Type THX<br>PCS Type P |

.0003" Diameter Tolerance

| TOLERANCES | | | |
|---|---|---|---|
| D | H | T | L |
| -.0005"<br>-.0008" | +.000"<br>-.010" | +.000"<br>-.002" | +.375"<br>-.000" |




| D | | H | T | REGAL CAT. NO. | PCS CROSS REFERENCE | NET PRICE EACH (US$) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | L-6" | L-8" | L-10" | | L-14" | |
| PIN DIA. | | HEAD DIA. | HEAD THICK. | | | STD. DIA. | STD. DIA. | STD. DIA. | +.005" OVERSIZE DIA. | STD. DIA. | +.005"' OVERSIZE DIA. |
| NOMINAL SIZE | DECIMAL EQUIV. | | | | | | | | | | |
| 1/32 | 0.0313 | 1/8 | 1/8 | ERHX-2A | P3 | 9.29 | 9.75 | 10.90 | | | |
| 3/64 | 0.0469 | 5/32 | 1/8 | ERHX-3A | P4 | 5.35 | 6.25 | 6.75 | - | - | - |
| 1/16 | 0.0625 | 3/16 | 1/8 | ERHX-5A | P5 | 5.00 | 5.52 | 5.86 | 6.15 | 6.40 | |
| 5/64 | 0.0781 | 13/64 | 1/8 | ERHX-6A | P6 | 5.00 | 5.52 | 5.86 | 6.15 | - | |
| 3/32 | 0.0938 | 7/32 | 1/8 | ERHX-7A | P7 | 4.54 | 5.00 | 5.86 | 5.61 | 6.89 | |
| 7/64 | 0.1094 | 15/64 | 1/8 | ERHX-8A | P8 | 4.54 | 5.00 | 5.86 | 5.61 | 6.89 | |
| 3/64 | 0.0469 | 1/4 | 1/8 | ERHX-3 | NON STD. | 4.30 | - | - | - | - | - |
| 1/16 | 0.0625 | 1/4 | 1/8 | ERHX-5 | NON STD. | 4.05 | - | 4.75 | 5.3 | - | - |
| 5/64 | 0.0781 | 1/4 | 1/8 | ERHX-6 | NON STD. | 4.05 | - | 4.75 | 5.30 | - | - |
| 3/32 | 0.0938 | 1/4 | 1/8 | ERHX-7 | NON STD. | 3.65 | - | 4.10 | 4.85 | - | - |
| 7/64 | 0.1094 | 1/4 | 1/8 | ERHX-8 | NON STD. | 3.65 | - | 4.10 | 4.85 | - | - |
| 1/8 | 0.1250 | 1/4 | 1/8 | ERHX-9 | P9 | 1.95 | - | 2.15 | 2.25 | 2.50 | 2.80 |
| 9/64 | 0.1406 | 1/4 | 1/8 | ERHX-10 | P10 | 2.15 | - | 2.35 | 3.15 | 3.05 | - |
| 5/32 | 0.1563 | 9/32 | 5/32 | ERHX-11 | P11 | 2.05 | - | 2.30 | 2.40 | 2.80 | 3.05 |
| 11/64 | 0.1719 | 11/32 | 3/16 | ERHX-12 | P12 | 2.30 | - | 2.50 | 3.35 | 3.05 | - |
| 3/16 | 0.1875 | 3/8 | 3/16 | ERHX-13 | P13 | 2.10 | - | 2.45 | 2.55 | 3.10 | 3.30 |
| 13/64 | 0.2031 | 3/8 | 3/16 | ERHX-14 | P14 | 2.55 | - | 2.70 | - | 3.25 | - |
| 7/32 | 0.2188 | 13/32 | 3/16 | ERHX-15 | P15 | 2.30 | - | 2.70 | 2.95 | 3.35 | - |
| 15/64 | 0.2344 | 13/32 | 3/16 | ERHX-16 | P16 | 2.85 | - | 3.00 | - | 3.70 | - |
| 1/4 | 0.2500 | 7/16 | 3/16 | ERHX-17 | P17 | 2.45 | - | 3.00 | 3.10 | 3.70 | 4.00 |
| 17/64 | 0.2656 | 7/16 | 1/4 | ERHX-18 | P18 | 3.25 | - | 3.35 | - | 4.05 | - |
| 9/32 | 0.2813 | 7/16 | 1/4 | ERHX-19 | P19 | 2.75 | - | 3.45 | 3.55 | 4.20 | - |
| 19/64 | 0.2969 | 1/2 | 1/4 | ERHX-20 | P20 | 3.65 | - | 3.80 | - | 4.70 | - |
| 5/16 | 0.3125 | 1/2 | 1/4 | ERHX-21 | P21 | 3.05 | - | 3.80 | 3.90 | 4.75 | 5.25 |
| 21/64 | 0.3281 | 9/16 | 1/4 | ERHX-22 | P22 | 4.00 | - | 4.20 | - | 5.30 | - |
| 11/32 | 0.3438 | 9/16 | 1/4 | ERHX-23 | P23 | 3.40 | - | 4.30 | 4.55 | 5.50 | - |
| 23/64 | 0.3594 | 5/8 | 1/4 | ERHX-24 | P24 | 4.40 | - | 4.75 | - | 5.95 | - |
| 3/8 | 0.3750 | 5/8 | 1/4 | ERHX-25 | P25 | 3.65 | - | 4.85 | 5.05 | 6.00 | 6.35 |
| 25/64 | 0.3906 | 37/64 | 1/4 | ERHX-26 | P26 | 5.35 | - | 5.90 | - | - | - |
| 13/32 | 0.4063 | 11/16 | 1/4 | ERHX-27 | P26 | 4.00 | - | 5.30 | 5.70 | 6.90 | - |
| 27/64 | 0.4219 | 11/16 | 1/4 | ERHX-28 | P28 | 5.25 | - | 6.75 | - | - | - |
| 7/16 | 0.4375 | 11/16 | 1/4 | ERHX-29 | P29 | 4.35 | - | 5.90 | 6.15 | 7.60 | 8.40 |
| 29/64 | 0.4531 | 45/64 | 1/4 | ERHX-30 | P30 | 5.70 | - | 7.05 | - | - | - |
| 15/32 | 0.4688 | 3/4 | 1/4 | ERHX-31 | P31 | 5.10 | - | 6.45 | 6.85 | 9.30 | - |
| 31/64 | 0.4844 | 3/4 | 1/4 | ERHX-32 | P32 | 6.20 | - | 8.15 | - | - | - |
| 1/2 | 0.5000 | 3/4 | 1/4 | ERHX-33 | P33 | 5.15 | - | 6.95 | 7.45 | 9.15 | 9.75 |
| 9/16 | 0.5625 | 7/8 | 1/4 | ERHX-35 | P35 | 7.40 | - | 10.45 | - | 13.70 | - |
| 5/8 | 0.6250 | 3/4 | 1/4 | ERHX-37 | P37 | 10.44 | - | 14.40 | - | 18.40 | - |

# Metric Ejector Pins

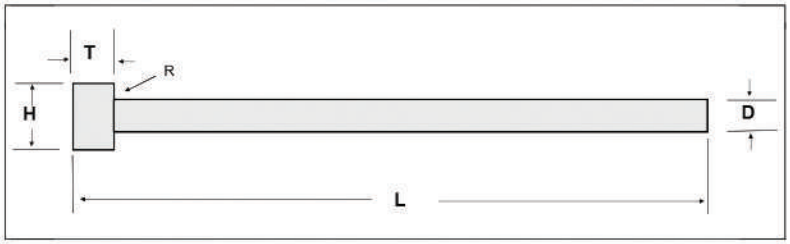
## EME Type

***Nitrided***

***METRIC, DIN STANDARD***

**Material:** H-13 Hotwork Die Steel (1.2344)
**Core:** Hardened through to 41-45 Rc
**Surface:** Ion Nitrided to 65-74 Rc

630, 800 and 1000 mm lengths are available per quotation




| HOW TO ORDER: Specify | | |
|---|---|---|
| Quantity | Cat. No. | Length |
| 60 | EME-2.5 | L-160 |
| 12 | EME-10.0 | L-250 |

| TOLERANCES (METRIC ISO) | | | | | |
|---|---|---|---|---|---|
| PIN DIA. (D) g6 | | R | | | |
| SIZE | TOLERANCE | | H | T | L |
| 0 to 3 mm | - .002 mm<br>- .008 mm | 0.3 mm | + 0.0 mm<br>- 0.2 mm | + 0.0 mm<br>- 0.5 mm | + 2.0 mm<br>- 0.0 mm |
| 3.5 to 6 mm | - .002 mm<br>- .008 mm | 0.3 mm | | | |
| 6.5 to 10 mm | - .002 mm<br>- .008 mm | 0.5 mm | | | |
| 11 to 18 mm | - .006 mm<br>- .017 mm | 0.8 mm | | | |
| 20 to 25 mm | - .006 mm<br>- .017 mm | 0.8 mm | | | |

| D | | H | T | REGAL CATALOG NO. | NET PRICE EACH (US $) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| PIN DIA. | | HEAD DIA. | HEAD THICK. | | L-160 | L-250 | L-315 | L-400 | L-500 |
| NOMINAL SIZE | INCH CONVERSION | | | | | | | | |
| 2 | 0.0787 | 4 | 2 | EME-2.0 | 3.32 | 3.42 | 4.55 | - | - |
| 2.5 | 0.0984 | 5 | 2 | EME-2.5 | 3.37 | 3.67 | 4.28 | - | - |
| 3 | 0.1181 | 6 | 3 | EME-3.0 | 2.60 | 3.83 | 4.08 | 4.56 | 6.00 |
| 3.5 | 0.1378 | 7 | 3 | EME-3.5 | 3.98 | 4.69 | 5.66 | 5.19 | 6.30 |
| 4 | 0.1575 | 8 | 3 | EME-4.0 | 2.81 | 4.18 | 4.49 | 5.30 | 6.50 |
| 4.5 | 0.1772 | 8 | 3 | EME-4.5 | 4.39 | 5.51 | 6.27 | 6.27 | 7.40 |
| 5 | 0.1969 | 10 | 3 | EME-5.0 | 3.01 | 3.88 | 4.95 | 6.14 | 7.40 |
| 5.5 | 0.2165 | 10 | 3 | EME-5.5 | 4.64 | 5.87 | 6.73 | 6.42 | 7.70 |
| 6 | 0.2362 | 12 | 5 | EME-6.0 | 3.77 | 5.41 | 6.27 | 7.88 | 8.99 |
| 6.5 | 0.2559 | 12 | 5 | EME-6.5 | 5.15 | 7.19 | 8.31 | 8.85 | 11.69 |
| 7 | 0.2756 | 12 | 5 | EME-7.0 | 5.51 | 7.85 | 8.98 | 8.85 | 11.69 |
| 8 | 0.315 | 14 | 5 | EME-8.0 | 4.90 | 7.19 | 8.52 | 10.61 | 11.86 |
| 9 | 0.3543 | 14 | 5 | EME-9.0 | 6.63 | 10.10 | 11.63 | 11.16 | 15.28 |
| 10 | 0.3937 | 16 | 5 | EME-10.0 | 5.76 | 8.67 | 10.15 | 12.50 | 15.28 |
| 11 | 0.4331 | 16 | 5 | EME-11.0 | 8.77 | 13.46 | 15.91 | 15.40 | 22.16 |
| 12 | 0.4724 | 18 | 7 | EME-12.0 | 6.78 | 9.79 | 13.46 | 14.41 | 20.68 |
| 12.5 | 0.4921 | 18 | 7 | EME-12.5 | 8.26 | 11.73 | 15.35 | 15.40 | 22.16 |
| 14 | 0.5512 | 22 | 7 | EME-14.0 | 8.57 | 12.65 | 18.45 | 26.68 | - |
| 16 | 0.6299 | 22 | 7 | EME-16.0 | 9.59 | 14.59 | 19.00 | 27.55 | - |
| 18 | 0.7087 | 24 | 7 | EME-18.0 | - | 19.18 | 39.75 | 58.00 | - |
| 20 | 0.7874 | 26 | 8 | EME-20.0 | - | 22.44 | 40.50 | 59.45 | - |
| 25 | 0.9843 | 32 | 10 | EME-25.0 | - | 39.22 | 56.75 | 83.52 | - |

# Standard H-13 Core Pins

## ERC Type

***STANDARD HARDNESS 30-35 Rc***

## ERCX Type

***HIGH HARDNESS 50-55 Rc***

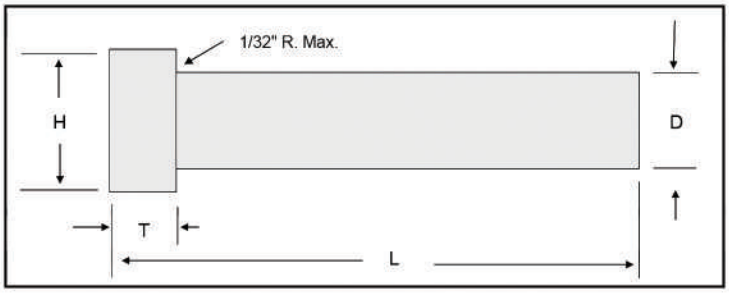
***30 STANDARD FRACTIONAL DIAMETERS***

***14" LENGTHS ARE AVAILABLE PER QUOTATION***

***ERCX- HEADS ANNEALED***

| HOW TO ORDER | | | |
|---|---|---|---|
| Specify: | Qty. | Catalog No. | L-Length |
| Examples: | 24 | ERC--19 | L-6" |
| | 12 | ERCX-17 | L-3" |

| TOLERANCES | | | |
|---|---|---|---|
| D | H | T | L |
| +.001" -.000" | +.000" -.010" | +.000" -.002" | +.375" -.000" |




| STANDARD HARDNESS 30-35 Rc | | | | D | H | T | HIGH HARDNESS 50-55 Rc | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| REGAL CATALOG NO. | NET PRICE EACH (US$) L-3" | L-6" | L-10" | BODY DIA. | HEAD DIA. | HEAD THICK. | REGAL CATALOG NO. | NET PRICE EACH (US$) L-3" | L-6" | L-10" |
| ERC-3 | 4.90 | 5.51 | - | 3/64" | 1/4" | 1/8" | ERCX-3 | 5.10 | 5.76 | - |
| ERC-5 | 4.64 | 5.15 | - | 1/16" | 1/4" | 1/8" | ERCX-5 | 4.85 | 5.41 | - |
| ERC-6 | 4.23 | 4.64 | - | 5/64" | 1/4" | 1/8" | ERCX-6 | 4.44 | 4.90 | - |
| ERC-7 | 3.62 | 3.72 | 4.34 | 3/32" | 1/4" | 1/8" | ERCX-7 | 3.83 | 3.98 | 4.69 |
| ERC-8 | 3.72 | 3.88 | 4.59 | 7/64" | 1/4" | 1/8" | ERCX-8 | 3.93 | 4.08 | 4.90 |
| ERC-9 | 2.24 | 2.30 | 3.06 | 1/8" | 1/4" | 1/8" | ERCX-9 | 2.40 | 2.50 | 3.21 |
| ERC-10 | 2.24 | 2.35 | 3.06 | 9/64" | 1/4" | 1/8" | ERCX-10 | 2.40 | 2.60 | 3.21 |
| ERC-11 | 2.30 | 2.40 | 3.11 | 5/32" | 9/32" | 5/32" | ERCX-11 | 2.50 | 2.60 | 3.21 |
| ERC-12 | 2.30 | 2.40 | 3.21 | 11/64" | 11/32" | 3/16" | ERCX-12 | 2.55 | 2.65 | 3.42 |
| ERC-13 | 2.35 | 2.45 | 3.26 | 3/16" | 3/8" | 3/16" | ERCX-13 | 2.55 | 2.70 | 3.42 |
| ERC-14 | 2.40 | 2.50 | 3.32 | 13/64" | 3/8" | 3/16" | ERCX-14 | 2.60 | 2.75 | 3.57 |
| ERC-15 | 2.45 | 2.60 | 3.42 | 7/32" | 13/32" | 3/16" | ERCX-15 | 2.65 | 2.81 | 3.57 |
| ERC-16 | 3.42 | 3.98 | - | 15/64" | 13/32" | 3/16" | ERCX-16 | 3.62 | 4.23 | - |
| ERC-17 | 2.65 | 2.75 | 3.67 | 1/4" | 7/16" | 3/16" | ERCX-17 | 2.86 | 3.01 | 3.88 |
| ERC-18 | 3.67 | 4.23 | - | 17/64" | 7/16" | 1/4" | ERCX-18 | 3.93 | 4.54 | - |
| ERC-19 | 2.91 | 3.01 | 4.03 | 9/32" | 7/16" | 1/4" | ERCX-19 | 3.16 | 3.32 | 4.34 |
| ERC-20 | 3.98 | 4.54 | - | 19/64" | 1/2" | 1/4" | ERCX-20 | 4.23 | 4.85 | - |
| ERC-21 | 3.21 | 3.32 | 4.44 | 5/16" | 1/2" | 1/4" | ERCX-21 | 3.47 | 3.62 | 4.79 |
| ERC-22 | 4.23 | 4.85 | - | 21/64" | 9/16" | 1/4" | ERCX-22 | 4.54 | 5.20 | - |
| ERC-23 | 3.47 | 3.62 | 4.79 | 11/32" | 9/16" | 1/4" | ERCX-23 | 3.77 | 3.98 | 5.30 |
| ERC-24 | 4.64 | 5.25 | - | 23/64" | 5/8" | 1/4" | ERCX-24 | 4.90 | 5.61 | - |
| ERC-25 | 3.88 | 4.03 | 5.30 | 3/8" | 5/8" | 1/4" | ERCX-25 | 4.13 | 4.39 | 5.81 |
| ERC-27 | 4.34 | 4.54 | 5.76 | 13/32" | 11/16" | 1/4" | ERCX-27 | 4.64 | 4.95 | 6.32 |
| ERC-29 | 4.69 | 4.85 | 6.32 | 7/16" | 11/16" | 1/4" | ERCX-29 | 5.00 | 5.20 | 6.94 |
| ERC-31 | 5.20 | 5.41 | 6.89 | 15/32" | 3/4" | 1/4" | ERCX-31 | 5.56 | 5.97 | 7.60 |
| ERC-33 | 5.56 | 5.76 | 7.40 | 1/2" | 3/4" | 1/4" | ERCX-33 | 5.87 | 6.27 | 8.21 |
| ERC-35 | - | 6.89 | 9.18 | 9/16" | 13/16" | 1/4" | ERCX-35 | - | 7.50 | 10.00 |
| ERC-37 | - | 8.21 | 10.76 | 5/8" | 7/16" | 1/4" | ERCX-37 | - | 8.77 | 11.88 |
| ERC-39 | - | 13.26 | - | 11/16" | 15/16 | 1/4" | ERCX-39 | - | 14.18 | - |
| ERC-41 | - | 11.12 | 14.69 | 3/4" | 1" | 1/4" | ERCX-41 | - | 12.09 | 16.32 |

# M-2 High Speed Steel Perforators / Core Pin Blanks

## QB Type

### .001" INCREMENTS

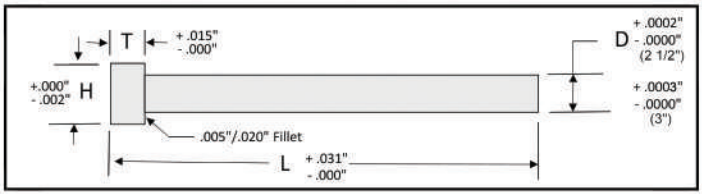
**Precision Form Ground**
**Hardness: 60-63 Rc**

Including the popular fractions - 1/32", 3/64", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 3/16", 7/32", 1/4", 9/32", 5/16", and 3/8".

Currently Stocking 4" and 6" of various sizes. Please call to confirm availability.

| HOW TO ORDER | | | | | |
|---|---|---|---|---|---|
| Specify: | Qty. | Type | Dia. | X | Length |
| *Examples* | *25* | *QB* | *.125* | *X* | *2-1/2* |
| | *50* | *QB* | *.016* | *X* | *2* |

For lengths up to 3", 4", 8" and 10" call for quotation.




| D | H | T | NET PRICE EACH PER QUANTITY (US $) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DIAMETER .001" INCREMENTS | Head Dia. | Head Thick. | L - LENGTH | | | | | | | | | | | | | | |
| | | | 2" | | | | | 2-1/2" | | | | | 3" | | | | |
| | | | 50-100 | 25-49 | 12-24 | 5-11 | 1-4 | 50-100 | 25-49 | 12-24 | 5-11 | 1-4 | 50-100 | 25-49 | 12-24 | 5-11 | 1-4 |
| .010 - .014 | 1/32" | 1/16" | 4.75 | 5.18 | 5.84 | 7.95 | 9.54 | - | - | - | - | - | - | - | - | - | - |
| .015 - .019 | 1/32" | 1/16" | 3.97 | 4.33 | 4.87 | 6.63 | 7.95 | - | - | - | - | - | - | - | - | - | - |
| .020 - .029 | 3/64" | 1/16" | 3.18 | 3.48 | 3.91 | 5.33 | 6.39 | - | - | - | - | - | - | - | - | - | - |
| .030 - .036 | 1/16" | 1/16" | - | - | - | - | - | | | | | | | | | | |
| .037 - .046 | 5/64" | 1/16" | - | - | - | - | - | 2.55 | 2.77 | 3.11 | 4.26 | 5.13 | - | - | - | - | - |
| .047 - .055 | 3/32" | 3/32" | - | - | - | - | - | | | | | | | | | | |
| .056 - .064 | 7/64" | 3/32" | - | - | - | - | - | | | | | | | | | | |
| .065 - .078 | 1/8" | 3/32" | - | - | - | - | - | 2.72 | 2.99 | 3.34 | 4.54 | 5.45 | 3.14 | 3.41 | 3.84 | 5.26 | 6.19 |
| .079 - .087 | 9/64" | 3/32" | - | - | - | - | - | | | | | | | | | | |
| .088 - .099 | 5/32" | 3/32" | - | - | - | - | - | | | | | | | | | | |
| .100 - .120 | 11/64" | 3/32" | - | - | - | - | - | 2.99 | 3.32 | 3.71 | 5.05 | 6.06 | 3.48 | 3.81 | 4.27 | 5.82 | 6.97 |
| .121 - 131 | 3/16" | 1/8" | - | - | - | - | - | | | | | | | | | | |
| .132 - .147 | 13/64" | 1/8" | - | - | - | - | - | | | | | | | | | | |
| .148 - .163 | 7/32" | 1/8" | - | - | - | - | - | 3.18 | 3.48 | 3.91 | 5.33 | 6.39 | 3.67 | 4.00 | 4.48 | 6.13 | 7.32 |
| .164 - .179 | 15/64" | 1/8" | - | - | - | - | - | | | | | | | | | | |
| .180 - .194 | 1/4" | 1/8" | - | - | - | - | - | | | | | | | | | | |
| .195 - .210 | 17/64 | 1/8" | - | - | - | - | - | 3.67 | 4.00 | 4.48 | 6.12 | 7.32 | 4.20 | 4.59 | 5.17 | 7.04 | 8.44 |
| .211 - .225 | 9/32" | 1/8" | - | - | - | - | - | | | | | | | | | | |

# M-2 High Speed Steel Perforators / Core Pin Blanks

## QB Type

***.001" INCREMENTS***

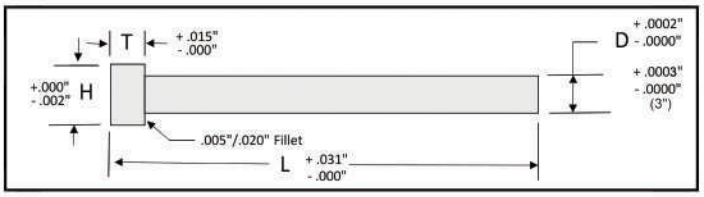
**Precision Form Ground**
**Hardness: 60-63 Rc**

Including the popular fractions - 1/32", 3/64", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 3/16", 7/32", 1/4", 9/32", 5/16", and 3/8".

Currently Stocking 4" and 6" of various sizes. Please call to confirm availability.

| HOW TO ORDER | | | | | |
|---|---|---|---|---|---|
| Specify: | Qty. | Type | Dia. | X | Length |
| *Examples* | 25 | QB | .125 | X | 2-1/2 |
| | 50 | QB | .016 | X | 2 |

For lengths up to 3", 4", 8" and 10" call for quotation.




| D | H | T | NET PRICE EACH PER QUANTITY (US $) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DIAMETER .001" INCREMENTS | Head Dia. | Head Thick. | L - LENGTH | | | | | | | | | | | | | | |
| | | | 2" | | | | | 2-1/2" | | | | | 3" | | | | |
| | | | 50-100 | 25-49 | 12-24 | 5-11 | 1-4 | 50-100 | 25-49 | 12-24 | 5-11 | 1-4 | 50-100 | 25-49 | 12-24 | 5-11 | 1-4 |
| .226 - .241 | 19/64" | 1/8" | - | - | - | - | - | 4.21 | 4.61 | 5.17 | 7.04 | 8.44 | 4.85 | 5.30 | 5.95 | 7.79 | 9.73 |
| .242 - .250 | 5/16" | 3/16" | - | - | - | - | - | | | | | | | | | | |
| .251 - .256 | 5/16" | 3/16" | - | - | - | - | - | | | | | | | | | | |
| .257 - .272 | 21/64" | 3/16" | - | - | - | - | - | 4.21 | 4.61 | 5.17 | 7.04 | 8.44 | 4.85 | 5.30 | 5.95 | 7.79 | 9.73 |
| .273 - .288 | 11/32" | 3/16" | - | - | - | - | - | | | | | | | | | | |
| .289 - .304 | 23/64" | 3/16" | - | - | - | - | - | | | | | | | | | | |
| .305 - .320 | 3/8" | 3/16" | - | - | - | - | - | 4.73 | 5.16 | 5.77 | 7.88 | 9.43 | 5.41 | 5.94 | 6.63 | 10.78 | 17.86 |
| .321 - .336 | 25/64" | 3/16" | - | - | - | - | - | | | | | | | | | | |
| .337 - .352 | 13/32" | 3/16" | - | - | - | - | - | | | | | | | | | | |
| .353 - .368 | 27/64" | 3/16" | - | - | - | - | - | 5.12 | 5.60 | 6.27 | 8.54 | 10.24 | 5.85 | 6.44 | 7.22 | 11.43 | 18.50 |
| .369 - .380 | 7/16" | 3/16" | - | - | - | - | - | | | | | | | | | | |
| .381 - .396 | 29/64" | 3/16" | - | - | - | - | - | | | | | | | | | | |
| .397 - .411 | 15/32" | 3/16" | - | - | - | - | - | 5.97 | 6.52 | 7.32 | 9.99 | 11.98 | 6.84 | 7.52 | 8.42 | 12.76 | 19.88 |
| .412 - .427 | 31/64" | 3/16" | - | - | - | - | - | | | | | | | | | | |
| .428 - .443 | 1/2" | 3/16" | - | - | - | - | - | | | | | | | | | | |
| .444 - .458 | 33/64" | 3/16" | - | - | - | - | - | 6.76 | 7.39 | 8.30 | 11.31 | 13.58 | 7.78 | 8.54 | 9.54 | 14.00 | 21.13 |
| .459 - .474 | 17/32" | 3/16" | - | - | - | - | - | | | | | | | | | | |
| .475 - .489 | 35/64" | 3/16" | - | - | - | - | - | | | | | | | | | | |
| .490 - .505 | 9/16" | 3/16" | - | - | - | - | - | 7.58 | 8.29 | 9.30 | 12.70 | 15.23 | 8.70 | 9.54 | 10.69 | 15.23 | 22.38 |

# M-2 High Speed Steel Perforators / Core Pin Blanks

**Precision Form Ground**

## QA Type

***.001" INCREMENTS***

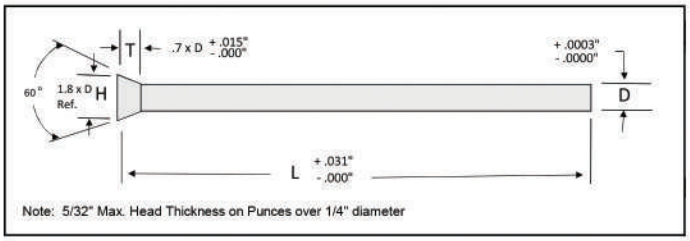
**Hardness:** 60-63 Rc

Including the popular fractions - 1/32", 3/64", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 3/16", 7/32", 1/4", 9/32", 5/16", and 3/8".

Currently Stocking 4" and 6" of various sizes. Please call to confirm availability.

| HOW TO ORDER | | | | | |
|---|---|---|---|---|---|
| Specify: | Qty. | Type | Dia. | X | Length |
| *Example* | *50* | *QA* | *.040* | *X* | *2-1/2* |

For lengths up to 3", 4", 8" and 10" call for quotation.




Note: 5/32" Max. Head Thickness on Punces over 1/4" diameter

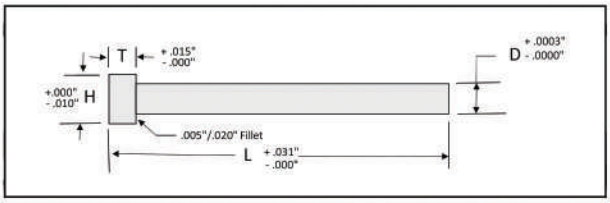
| D | NET PRICE EACH PER QUANTITY (US $) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Diameter .001" increments | L - Length | | | | | | | | | | | | | | |
| | 2" | | | | | 2-1/2" | | | | | 6" | | | | |
| | 50 - 100 | 25 - 49 | 10 - 24 | 5 - 9 | 1 - 4 | 50 - 100 | 25 - 49 | 10 - 24 | 5 - 9 | 1 - 4 | 50 - 100 | 25 - 49 | 10 - 24 | 5 - 9 | 1 - 4 |
| .010 - .014 | 4.46 | 4.90 | 5.50 | 7.47 | 8.96 | - | - | - | - | - | - | - | - | - | - |
| .015 - .019 | 3.73 | 4.09 | 4.56 | 6.22 | 7.47 | - | - | - | - | - | - | - | - | - | - |
| .020 - .029 | 3.04 | 3.34 | 3.74 | 5.14 | 6.16 | - | - | - | - | - | - | - | - | - | - |
| .030 - .055 | - | - | - | - | - | 2.36 | 2.60 | 2.94 | 3.99 | 4.81 | - | - | - | - | - |
| .056 - .087 | - | - | - | - | - | 2.55 | 2.79 | 3.13 | 4.25 | 5.12 | 9.98 | 10.92 | 12.26 | 16.63 | 23.18 |
| .088 - .131 | - | - | - | - | - | 2.84 | 3.11 | 3.50 | 4.79 | 5.72 | 9.54 | 10.46 | 11.71 | 16.04 | 22.58 |
| .132 - .179 | - | - | - | - | - | 2.98 | 3.27 | 3.66 | 5.02 | 6.01 | 9.69 | 10.60 | 11.89 | 16.24 | 22.78 |
| .180 - .225 | - | - | - | - | - | 3.45 | 3.77 | 4.22 | 5.74 | 6.88 | 10.12 | 11.09 | 12.45 | 16.84 | 23.38 |
| .226 - .250 | - | - | - | - | - | 3.89 | 4.25 | 4.76 | 6.49 | 7.80 | 10.56 | 11.59 | 12.97 | 17.44 | 23.95 |
| .251 - .336 | - | - | - | - | - | 4.35 | 4.74 | 5.33 | 7.26 | 8.70 | 11.04 | 12.07 | 13.56 | 18.06 | 24.60 |
| .337 - .375 | - | - | - | - | - | 4.72 | 5.14 | 5.77 | 7.86 | 9.44 | 11.39 | 12.49 | 14.00 | 18.54 | 25.08 |

# Perforators / Core Pin Blanks

## SQ

**Material:** High Speed Steel (HSS), 60-63 Rc
**Length:** 2-1/2”

| HOW TO ORDER | | | | | | |
|---|---|---|---|---|---|---|
| Specify: | Qty. | Type | Dia. | X | Length | Steel |
| *Examples* | 25 | SQF | .125 | x | 2-1/2 | HSS |
| | 50 | SQD | .157 | x | 2-1/2 | HSS |




## SQF Type

### *FRACTIONAL DIAMETERS*

| D | H | T | NET PRICE EACH PER QUANTITY (US $) | | | | |
|---|---|---|---|---|---|---|---|
| BODY DIA. FRACTIONAL | HEAD DIA. | HEAD THICK. | HIGH SPEED STEEL | | | | |
| | | | 100 | 50 - 99 | 25 - 49 | 10 - 24 | 1 - 9 |
| .0625" | * 3/32" | 1/8" | 2.97 | 3.28 | 3.64 | 4.48 | 6.08 |
| .0937" | 5/32" | 1/8" | | | | | |
| .1250" | 3/16" | 1/8" | | | | | |
| .1562" | 7/32" | 1/8" | 3.18 | 3.47 | 3.86 | 4.71 | 6.33 |
| .1875" | 1/4" | 1/8" | | | | | |
| .2187" | 9/32" | 1/8" | 3.47 | 3.77 | 4.17 | 5.02 | 6.68 |
| .2500" | 5/16" | 1/8" | | | | | |
| .3125" | 7/16" | 3/16" | 4.66 | 4.95 | 5.41 | 6.37 | 8.16 |
| .3750" | 1/2" | 3/16" | 4.95 | 5.26 | 5.70 | 6.68 | 8.54 |

* Optional Head Diameter of 1/8 can be made to order. Price upon quotation.

## SQD Type

### *DECIMAL DIAMETERS IN .001 INCREMENTS*

| D | H | T | NET PRICE EACH PER QUANTITY (US$) | | | | |
|---|---|---|---|---|---|---|---|
| BODY DIA. DECIMAL | HEAD DIA. | HEAD THICK. | HIGH SPEED STEEL | | | | |
| | | | 100 | 50 - 99 | 25 - 49 | 10 - 24 | 1 - 9 |
| .030" - .062" | * 3/32" | 1/8" | 3.56 | 3.98 | 4.46 | 5.69 | 7.40 |
| .063" - .093" | 5/32" | 1/8" | | | | | |
| .094" - .124" | 3/16" | 1/8" | | | | | |
| .126' - .156" | 7/32" | 1/8" | 3.77 | 4.19 | 4.67 | 5.92 | 7.67 |
| .157" - .187' | 1/4" | 1/8" | | | | | |
| .188" - .218" | 9/32" | 1/8" | 4.26 | 4.66 | 5.18 | 6.46 | 8.28 |
| .219" - .249" | 5/16" | 1/8" | | | | | |
| .251" - .312" | 7/16" | 3/16" | 5.05 | 5.45 | 6.01 | 7.37 | 9.24 |
| .313" - .374" | 1/2" | 3/16" | 5.34 | 5.74 | 6.32 | 7.71 | 9.64 |

* Optional Head Diameter of 1/8 can be made to order. Price upon quotation.

# Perforators / Core Pin Blanks

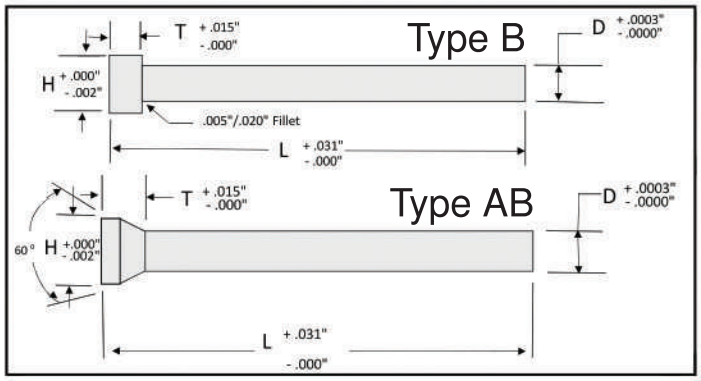
| HOW TO ORDER | | | | | |
|---|---|---|---|---|---|
| Specify: | Qty. | Type | Dia. | X | Length |
| *Examples* | 25 | AB-18 | .295 | X | 3 |
| | 50 | B-1 | .031 | X | 2-1/2 |

## B and AB Type

***.001" INCREMENTS***

**Precision Form Ground**
**Material: M-2 Steel, 60-63 Rc**

Including the popular fractions - 1/32", 3/64", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 3/16", 7/32", 1/4", 9/32", 5/16", and 3/8"




| AB Type | B Type | D | H | T | L | | | NET PRICE EACH PER QUANTITY (US $) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | DIAMETER .001" INCREMENTS | HEAD DIA. | HEAD THICK. | OVERALL LENGTHS | | | | | | | | |
| | | | | | 2" | 2-1/2" | 3" | 100 | 50 - 99 | 25 - 49 | 10 - 24 | 5 - 9 | 1 - 4 |
| 1/0 | 1/0 | .025 - .029 | .060 | 3/32" | 2" | - | - | 4.75 | 5.09 | 5.66 | 6.68 | 8.31 | 9.66 |
| 1 | 1 | .030 - .040 | .070 | 3/32" | 2" | 2-1/2" | - | 4.28 | 4.60 | 5.11 | 6.04 | 7.55 | 9.08 |
| 2 | 2 | .041 - .055 | .085 | 3/32" | 2" | 2-1/2" | - | 4.12 | 4.35 | 4.90 | 5.79 | 7.18 | 8.54 |
| 3 | 3 | .056 - .070 | .100 | 3/32" | 2" | 2-1/2" | - | 3.85 | 4.07 | 4.52 | 5.34 | 6.62 | 7.95 |
| 4 | 4 | .071 - .085 | .115 | 3/32" | 2" | 2-1/2" | - | | | | | | |
| 5 | 5 | .086 - .100 | .130 | 3/32" | 2" | 2-1/2" | - | | | | | | |
| 6 | 6 | .101 - .115 | .145 | 3/32" | - | 2-1/2" | - | | | | | | |
| 7 | 7 | .116 - .130 | .160 | 3/32" | - | 2-1/2" | - | 4.12 | 4.39 | 4.90 | 5.79 | 7.18 | 8.54 |
| 8 | 8 | .131 - .145 | .175 | 3/32" | - | 2-1/2" | - | | | | | | |
| 9 | 9 | .146 - 160 | .190 | 3/32" | - | 2-1/2" | - | | | | | | |
| 10 | 10 | .161 - .175 | .205 | 1/8" | - | 2-1/2" | - | 4.39 | 4.66 | 5.18 | 6.16 | 7.64 | 8.97 |
| 11 | 11 | .176 - .190 | .220 | 1/8" | - | 2-1/2" | - | | | | | | |
| 12 | 12 | .191 - .205 | .235 | 1/8" | - | 2-1/2" | - | 4.49 | 4.78 | 5.33 | 6.32 | 7.86 | 9.21 |
| 13 | 13 | .206 - .220 | .250 | 1/8" | - | 2-1/2" | - | | | | | | |
| 14 | 14 | .221 - .235 | .265 | 1/8" | - | 2-1/2" | - | 4.75 | 5.02 | 5.62 | 6.67 | 8.31 | 9.66 |
| 15 | 15 | .236 - .250 | .280 | 1/8" | - | 2-1/2" | - | | | | | | |
| 16 | 16 | .251 - .265 | .295 | 1/8" | - | 2-1/2" | - | 5.12 | 5.58 | 6.32 | 7.31 | 8.86 | 10.20 |
| 17 | 17 | .266 - .280 | .310 | 1/8" | - | - | 3" | | | | | | |
| 18 | 18 | .281 - .295 | .325 | 1/8" | - | - | 3" | | | | | | |
| 19 | 19 | .296 - .310 | .340 | 1/8" | - | - | 3" | 5.40 | 5.84 | 6.63 | 7.69 | 9.32 | 10.65 |
| 20 | 20 | .311 - .325 | .355 | 3/16" | - | - | 3" | | | | | | |
| 21 | 21 | .326 - .340 | .370 | 3/16" | - | - | 3" | 5.75 | 6.19 | 6.95 | 8.15 | 9.98 | 11.34 |
| 22 | 22 | .341 - .355 | .385 | 3/16" | - | - | 3" | 6.03 | 6.47 | 7.26 | 8.51 | 10.43 | 11.56 |
| 23 | 23 | .356 - .370 | .400 | 3/16" | - | - | 3" | 6.31 | 6.56 | 7.59 | 8.88 | 10.88 | 12.22 |
| 24 | 24 | .371 - .385 | .415 | 3/16" | - | - | 3" | 6.56 | 6.84 | 7.88 | 9.23 | 11.34 | 12.68 |

# Precision Punch Blanks

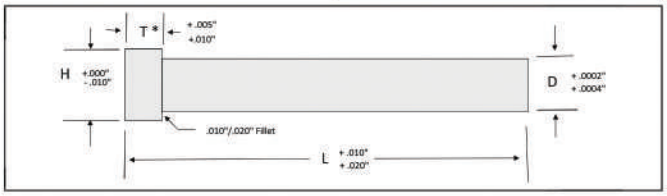
# PPB

**Precision Form-Ground**

| HOW TO ORDER | | | | |
|---|---|---|---|---|
| Specify: | Qty. | Cat. Number | Dia. X | Length |
| Examples: | 25 | PPB-25 | 1/4 x | 2-1/2 |
| | 12 | PPB-100 | 1 x | 3-1/2 |

***FRACTIONAL BLANKS FROM 1/8" THROUGH 1"***

***2", 2-1/2", 3" AND 3-1/2" LENGTHS***




**Material:** M-2 High Speed Steel (HSS) 60-63 Rc.
Heads drawn to 40-55 Rc

| REGAL CATALOG NO. | D | H | T | L | | | | NET PRICE EACH PER QUANTITY (US $) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | BODY DIA. | HEAD DIA. | HEAD THICK. | OVERALL LENGTHS | | | | 50 + | 25 - 49 | 10 - 24 | 1 - 9 |
| PPB-12 | 1/8" | 1/4" | 1/8" (3/16") | 2" | 2 1/2" | | | 8.36 | 9.20 | 10.50 | 11.98 |
| PPB-18 | 3/16" | 5/16" | 1/8" (3/16") | 2" | 2 1/2" | | | 8.36 | 9.20 | 10.50 | 11.98 |
| PPB-25 | 1/4" | 3/8" | 3/16" (1/8") | 2" | 2 1/2" | 3" | | 9.33 | 10.22 | 11.69 | 13.41 |
| PPB-31 | 5/16" | 7/16" | 3/16" (1/8") | 2" | 2 1/2" | 3" | | 9.33 | 10.22 | 11.69 | 13.41 |
| PPB-37 | 3/8" | 1/2" | 3/16" (1/8") | 2" | 2 1/2" | 3" | | 10.81 | 11.86 | 14.16 | 15.52 |
| PPB-43 | 7/16" | 9/16" | 3/16" | 2" | 2 1/2" | 3" | 3 1/2" | 10.81 | 11.86 | 14.16 | 15.52 |
| PPB-50 | 1/2" | 5/8" | 3/16" | 2" | 2 1/2" | 3" | 3 1/2" | 10.81 | 11.86 | 14.16 | 15.52 |
| PPB-62 | 5/8" | 3/4" | 3/16" (1/4") | 2" | 2 1/2" | 3" | 3 1/2" | 14.59 | 18.28 | 18.28 | 21.11 |
| PPB-75 | 3/4" | 7/8" | 3/16" (1/4") | | 2 1/2" | 3" | 3 1/2" | 20.28 | 25.63 | 25.63 | 29.32 |
| PPB-100 | 1" | 1 1/8" | 3/16" (1/4") | | 2 1/2" | 3" | 3 1/2" | 33.98 | 42.66 | 42.66 | 49.04 |

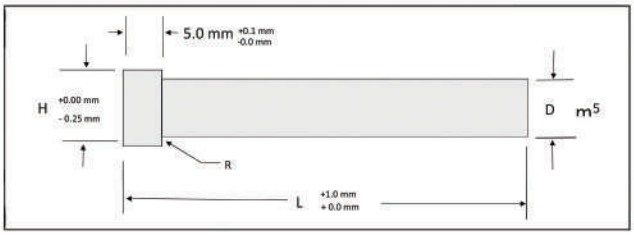
# Metric Punch Blanks

# MPB

**Precision Form-Ground**

| HOW TO ORDER | | | | |
|---|---|---|---|---|
| Specify: | Qty. | Cat. Number | X | Length |
| Examples: | 50 | MPB-6 | X | 63 mm |

***50, 56, 63, 71, 80, 90 AND 100 MM LENGTHS***




**Material:** M-2 High Speed Steel (HSS) 60-63 Rc.
Heads drawn to 40-55 Rc
Made to order, 10 pieces minumum

| REGAL CATALOG NO. | D | | H | NET PRICE EACH PER QUANTITY (US $) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | BODY DIA. | | | L - LENGTH | | | | | | | | |
| | NOMINAL DIA. | m5 TOLERANCE | HEAD DIA. | 50, 56, & 63 mm | | | 71 & 80 mm | | | 90 & 100 mm | | |
| | | | | 50 + | 25 - 49 | 10 - 24 | 50 + | 25 - 49 | 10 - 24 | 50 + | 25 - 49 | 10 - 24 |
| MPB-3 | 3 | $\frac{+0.009}{+0.004}$ | 5 | 6.92 | 8.05 | 9.34 | 7.71 | 8.97 | 10.40 | 9.66 | 11.22 | 12.97 |
| MPB-4 | 4 | $\frac{+0.009}{+0.004}$ | 7 | 7.08 | 8.24 | 9.53 | 8.08 | 9.37 | 10.85 | 10.30 | 11.97 | 13.88 |
| MPB-5 | 5 | $\frac{+0.009}{+0.004}$ | 8 | 8.22 | 9.55 | 11.06 | 8.87 | 10.29 | 11.93 | 10.35 | 12.00 | 13.98 |
| MPB-6 | 6 | $\frac{+0.009}{+0.004}$ | 9 | 9.50 | 11.03 | 12.80 | 10.04 | 11.51 | 13.42 | 10.44 | 12.13 | 14.06 |
| MPB-8 | 8 | $\frac{+0.012}{+0.006}$ | 11 | 10.06 | 11.69 | 13.55 | 10.42 | 12.22 | 14.40 | 10.94 | 12.70 | 14.75 |

# High Conductivity Core Pins

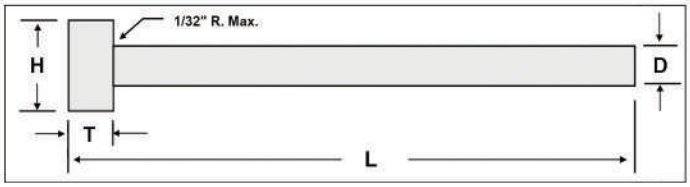
## BFP Type

## Beryllium-Free Pins

| HOW TO ORDER | | | |
|---|---|---|---|
| Specify: | Quantity | Cat. No. | Length |
| | 20 | BFP-17 | L-6" |
| | 12 | BFP-25 | L-14" |

| TOLERANCES | | | |
|---|---|---|---|
| D | H | T | L |
| +.001" -.000" | +.000" -.010" | +.000" -.002" | +.375" -.000" |

**Material:** C-18000 Beryllium Free copper based alloy
**Hardness:** 95-98 Rockwell B (20-25 Rockwell C)
Ten times better conductivity than steel
Two times better conductivity than beryllium copper pins
Reduces cycle times
Specials are available upon request




| D | | H | T | REGAL CATALOG NUMBER | NET PRICE EACH (US$) | | | |
|---|---|---|---|---|---|---|---|---|
| PIN DIA. | | HEAD DIA. | HEAD THICK. | | L-3" | L-6" | L-14" | L-20" |
| NOMINAL SIZE | DECIMAL EQUIV. | | | | | | | |
| 3/32 | 0.09375 | 1/4 | 1/8 | BFP-7 | 19.35 | 21.54 | - | - |
| 1/8 | 0.125 | 1/4 | 1/8 | BFP-9 | 17.85 | 20.09 | 30.72 | 41.31 |
| 5/32 | 0.15625 | 9/32 | 5/32 | BFP-11 | 19.08 | 21.30 | 31.05 | 43.65 |
| 11/64 | 0.171875 | 11/32 | 3/16 | BFP-12 | 18.20 | 21.31 | 30.11 | - |
| 3/16 | 0.1875 | 3/8 | 3/16 | BFP-13 | 18.40 | 21.29 | - | 42.35 |
| 13/64 | 0.203125 | 3/8 | 3/16 | BFP-14 | 18.42 | 21.30 | 29.18 | - |
| 7/32 | 0.21875 | 13/32 | 3/16 | BFP-15 | 20.88 | 23.99 | 29.15 | 50.82 |
| 1/4 | 0.250 | 7/16 | 3/16 | BFP-17 | 20.33 | 23.99 | 35.24 | 49.77 |
| 9/32 | 0.28125 | 7/16 | 1/4 | BFP-19 | 19.34 | 24.00 | 35.24 | - |
| 5/16 | 0.3125 | 1/2 | 1/4 | BFP-21 | 19.53 | 26.69 | 35.26 | 48.17 |
| 3/8 | 0.375 | 5/8 | 1/4 | BFP-25 | 24.00 | 30.78 | 35.24 | - |
| 7/16 | 0.4375 | 11/16 | 1/4 | BFP-29 | 29.44 | 35.55 | 44.87 | - |
| 1/2 | 0.500 | 3/4 | 1/4 | BFP-33 | 28.94 | 34.99 | 57.57 | - |
| 9/16 | 0.5625 | 13/16 | 1/4 | BFP-35 | 33.43 | 41.98 | 56.87 | - |
| 5/8 | 0.625 | 7/8 | 1/4 | BFP-37 | 32.42 | 40.95 | 70.82 | - |
| 3/4 | 0.750 | 1 | 1/4 | BFP-41 | 35.58 | 46.68 | 69.42 | - |

# Die Ejector Pins

## Hardened-Through

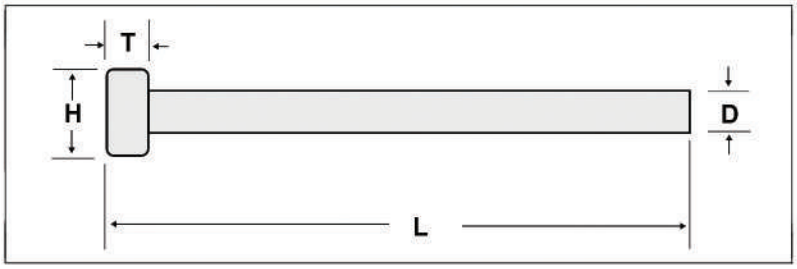
## EKP Type

***STANDARD INCH FRACTIONAL DIAMETERS***

**Material:** Type 52100 Steel
**Hardness:** 58-62 Rc
Heads annealed for easy machining.

| HOW TO ORDER: Specify | | |
|---|---|---|
| Quantity | Cat. No. | Length |
| 100 | EKP-13 | L-6 |
| 10 | EKP-9 | L-4 |

| TOLERANCES | | | |
|---|---|---|---|
| D | H | T | L |
| +.0003" -.0003" | +.000" -.005" | +.005" -.000" | +.031" -.00" |




| D | | H | T | REGAL CATALOG NO. | NET PRICE EACH (US $) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | L-4" | | | L-6" | | | L-10" | | |
| PIN DIA. | | HEAD DIA. | HEAD THICK. | | 100 | 50-99 | 1-49 | 100 | 50-99 | 1-49 | 100 | 50-99 | 1-49 |
| NOMINAL SIZE | DECIMAL EQUIV. | | | | | | | | | | | | |
| 1/16" | 0.0625 | 7/64" | 3/64" | EKP-5 | 3.12 | 3.60 | 4.26 | 4.10 | 4.57 | 5.35 | - | - | - |
| 5/64" | 0.0781 | 9/64" | 3/64" | EKP-6 | 2.92 | 3.33 | 3.95 | 3.82 | 4.26 | 4.96 | - | - | - |
| 3/32" | 0.0938 | 5/32" | 5/64" | EKP-7 | 2.78 | 3.20 | 3.81 | 3.67 | 4.10 | 4.80 | - | - | - |
| 7/64" | 0.1094 | 3/16" | 5/64" | EKP-8 | 2.92 | 3.33 | 3.95 | 3.77 | 4.24 | 4.94 | - | - | - |
| 1/8" | 0.1250 | 7/32" | 3/32" | EKP-9 | 2.60 | 2.91 | 3.45 | 3.32 | 3.71 | 4.33 | 4.48 | 4.98 | 5.72 |
| 9/64" | 0.1406 | 1/4" | 7/64" | EKP-10 | 2.60 | 2.91 | 3.45 | 3.32 | 3.71 | 4.33 | 4.48 | 4.98 | 5.72 |
| 5/32" | 0.1563 | 17/64" | 1/8" | EKP-11 | 2.60 | 2.91 | 3.45 | 3.32 | 3.71 | 4.33 | 4.48 | 4.98 | 5.72 |
| 3/16" | 0.1875 | 5/16" | 9/64" | EKP-13 | 2.71 | 3.08 | 3.63 | 3.46 | 3.90 | 4.49 | 4.64 | 5.11 | 5.89 |
| 7/32" | 0.2188 | 3/8" | 5/32" | EKP-15 | 3.22 | 3.61 | 4.21 | 3.84 | 4.26 | 4.94 | 5.06 | 5.55 | 6.36 |
| 1/4" | 0.2500 | 7/16" | 3/16" | EKP-17 | 3.32 | 3.71 | 4.33 | 4.10 | 4.54 | 5.23 | 5.18 | 5.70 | 6.54 |
| 5/16" | 0.3125 | 1/2" | 1/4" | EKP-21 | 4.23 | 4.68 | 5.35 | 4.48 | 4.90 | 5.66 | 5.60 | 6.13 | 6.97 |
| 3/8" | 0.3750 | 5/8" | 1/4" | EKP-25 | 4.48 | 4.90 | 5.66 | 5.02 | 5.51 | 6.26 | 6.89 | 7.47 | 8.47 |

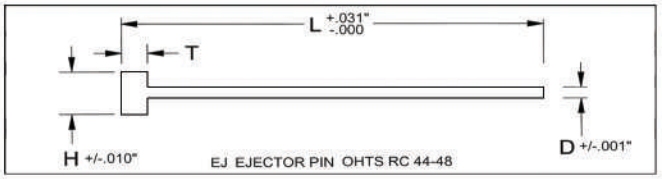
# Slug Ejector Pins

## EJ Type

Replacement slug ejector components for shoulder head and ball-lock type ejector punches.

***(MINIMUM ORDER QTY. 10 PCS.)***

| HOW TO ORDER | | |
|---|---|---|
| Specify: | Qty. | Cat. Number |
| *Examples* | 50 | EJ-3 |
| | 20 | CS-6 |




| REGAL CATALOG NO. | D | H | T | L | NET PRICE EACH PER QUANTITY (US $) | | | |
|---|---|---|---|---|---|---|---|---|
| | PIN DIA. | HEAD DIA. | HEAD THICK. | LENGTH | 100 | 50 - 99 | 25 - 49 | 10 - 24 |
| EJ-2 | .015" | .048" | .031" | 1.11" | 2.74 | 3.13 | 3.98 | 4.89 |
| EJ-2A | .020" | .048" | .031" | 1.11" | 1.42 | 1.86 | 2.67 | 3.57 |
| EJ-3 | .027" | .078" | .047" | 1.38" | 1.35 | 1.79 | 2.56 | 3.47 |
| EJ-4 | .041" | .094" | .062" | 1.94" | 1.35 | 1.79 | 2.56 | 3.47 |
| EJ-6 | .058" | .125" | .062" | 1.94" | 1.35 | 1.79 | 2.56 | 3.47 |
| EJ-9 | .089" | .156" | .094" | 2.22" | 1.42 | 1.86 | 2.67 | 3.57 |
| EJ-12 | .120" | .188* | .094" | 2.22" | 1.95 | 2.52 | 3.64 | 4.88 |

# 60° Bevel Headed Pins

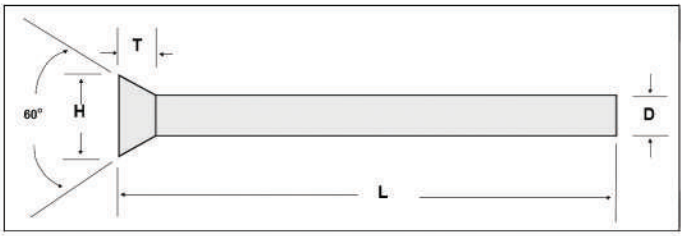
# BHT Types

### *STANDARD AND NON-STANDARD INCH FRACTIONAL DIAMETERS*

**BHT Type:** 52100 Tool Steel, 58-62 Rc, heads drawn.

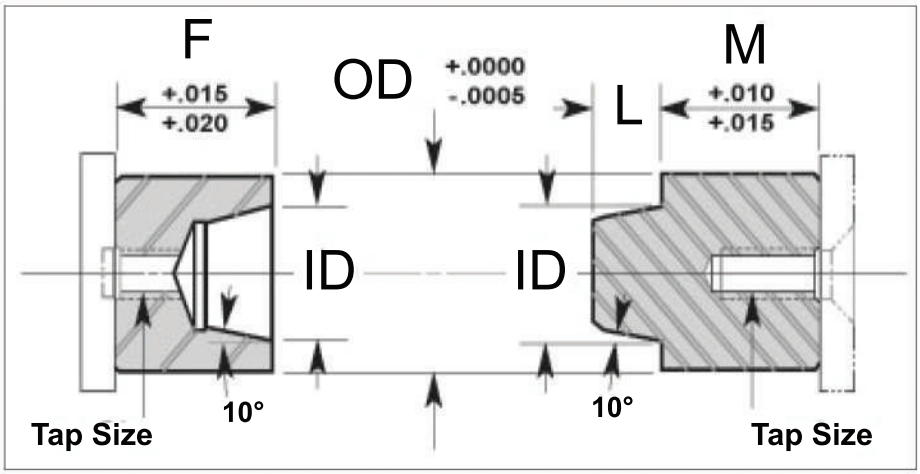
BHT type pins are not recommended for die casting and high temperature molding applications.

| HOW TO ORDER: Specify | | | | |
|---|---|---|---|---|
| Qty. | Type | Dia. | X | Length |
| 100 | BHT | 1/8 | x | 6 |
| 50 | BHT | 3/16 | x | 4 |




| STANDARD FRACTIONAL DIAMETERS | | | | | | | | | NON-STANDARD DECIMAL DIAMETERS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D | L | H | T | NET PRICE EACH PER QUANTITY (US $) | | | | | D | L | NET PRICE EACH PER QUANTITY (US $) | | | |
| PIN DIA. | Length | Head Dia. | Head Thick. | BHT Type 52100 TS | | | | | PIN DIA. | Length | BHT Type 52100 TS | | | |
| + .0003" - .0003" | + .031" - .00" | + .000" - .010" | + .015" - .000" | 100 | 50 - 99 | 25 - 49 | 10 - 24 | 1 - 9 | + .0003" - .0003" | + .06" - .00" | 100 | 50 - 99 | 25 - 49 | 10 - 24 |
| 1/16" | 4" | 0.113 | 0.044 | 1.48 | 1.74 | 2.21 | 2.77 | 3.63 | .047"-.078" | 4" | 2.94 | 3.61 | 5.34 | 9.85 |
| | 6" | | | 1.89 | 2.15 | 2.63 | 3.31 | 4.23 | | 6" | - | - | - | - |
| 5/64" | 4" | 0.141 | 0.055 | 1.48 | 1.74 | 2.21 | 2.77 | 3.63 | | | | | | |
| | 6" | | | 1.89 | 2.15 | 2.63 | 3.31 | 4.23 | | | | | | |
| 3/32" | 4" | 0.169 | 0.066 | 1.47 | 1.71 | 2.12 | 2.67 | 3.45 | .079"-.109" | 4" | 2.84 | 3.40 | 4.99 | 8.99 |
| | 6" | | | 1.88 | 2.10 | 2.58 | 3.17 | 4.04 | | 6" | 3.27 | 4.23 | 6.24 | 10.37 |
| 7/64" | 4" | 0.197 | 0.077 | 1.47 | 1.71 | 2.12 | 2.67 | 3.45 | | | | | | |
| | 6" | | | 1.88 | 2.10 | 2.58 | 3.17 | 4.04 | | | | | | |
| 1/8" | 4" | 0.225 | 0.088 | 1.29 | 1.49 | 1.87 | 2.33 | 3.02 | .110"-.124" | 4" | 2.49 | 3.00 | 4.39 | 7.92 |
| | 6" | | | 1.52 | 1.71 | 2.10 | 2.59 | 3.29 | | 6" | 2.67 | 3.42 | 5.07 | 8.46 |
| 9/64" | 4" | 0.253 | 0.098 | 1.31 | 1.52 | 1.90 | 2.36 | 3.03 | .126"-.156" | 4" | 2.57 | 3.09 | 4.45 | 8.00 |
| | 6" | | | 1.54 | 1.75 | 2.12 | 2.63 | 3.32 | | 6" | 2.74 | 3.53 | 5.16 | 8.55 |
| 5/32" | 4" | 0.281 | 0.109 | 1.31 | 1.52 | 1.90 | 2.36 | 3.03 | | | | | | |
| | 6" | | | 1.54 | 1.75 | 2.12 | 2.63 | 3.32 | | | | | | |
| 11/64" | 4" | 0.309 | 0.120 | 1.39 | 1.55 | 1.94 | 2.43 | 3.11 | .157"-.187" | 4" | 2.67 | 3.18 | 4.55 | 8.27 |
| | 6" | | | 1.57 | 1.78 | 2.16 | 2.67 | 3.36 | | 6" | 2.84 | 3.98 | 6.65 | 10.06 |
| 3/16" | 4" | 0.338 | 0.131 | 1.39 | 1.55 | 1.94 | 2.43 | 3.11 | | | | | | |
| | 6" | | | 1.57 | 1.78 | 2.16 | 2.67 | 3.36 | | | | | | |
| 13/64" | 4" | 0.366 | 0.142 | 1.90 | 2.10 | 2.50 | 3.02 | 3.76 | .188"-.218" | 4" | 3.00 | 3.53 | 4.89 | 8.63 |
| | 6" | | | 2.34 | 2.51 | 2.95 | 3.47 | 4.28 | | 6" | 3.34 | 4.46 | 7.17 | 10.62 |
| 7/32" | 4" | 0.394 | 0.153 | 1.90 | 2.10 | 2.50 | 3.02 | 3.76 | | | | | | |
| | 6" | | | 2.34 | 2.51 | 2.95 | 3.47 | 4.28 | | | | | | |
| 15/64" | 4" | 0.415 | 0.156 | 2.03 | 2.19 | 2.60 | 3.16 | 3.89 | .219"-.249" | 4" | 3.18 | 3.69 | 5.07 | 8.82 |
| | 6" | | | 2.45 | 2.66 | 3.08 | 3.63 | 4.45 | | 6" | 3.42 | 4.56 | 7.27 | 10.68 |
| 1/4" | 4" | 0.430 | 0.156 | 2.03 | 2.19 | 2.60 | 3.16 | 3.89 | | | | | | |
| | 6" | | | 2.45 | 2.66 | 3.08 | 3.63 | 4.45 | | | | | | |

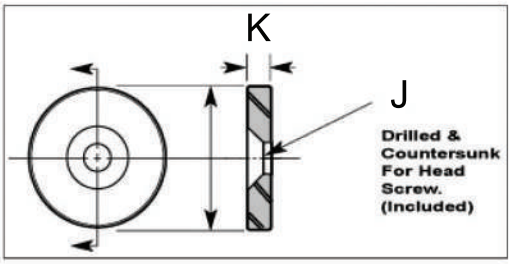
# Round Tapered Interlocks




| FEMALE | | | | | | MALE | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OD +.0000 -0.0005 | ID | TAP SIZE | F +0.015 +0.020 | REGAL CATALOG NO. | NET PRICE EACH (US $) | OD +.0000 -0.0005 | ID | L | TAP SIZE | M +.010 +.015 | REGAL CATALOG NO. | NET PRICE EACH (US $) |
| 1/2" | 5/16" | 10-24 | 11/16" | RFT04-11 | 21.00 | 1/2" | 5/16" | 1/4" | 10-24 | 11/16" | RMT04-11 | 21.00 |
| | | | 7/8" | RFT04-14 | | | | | | 7/8" | RMT04-14 | |
| | | | 1-3/16" | RFT04-19 | | | | | | 1-3/16" | RMT04-19 | |
| | | | 1-3/8" | RFT04-22 | | | | | | 1-3/8" | RMT04-22 | |
| 3/4" | 1/2" | 1/4-20 | 11/16" | RFT06-11 | 22.00 | 3/4" | 1/2" | 9/32" | 1/4-20 | 11/16" | RMT06-11 | 22.00 |
| | | | 7/8" | RFT06-14 | | | | | | 7/8" | RMT06-14 | |
| | | | 1-3/16" | RFT06-19 | | | | | | 1-3/16" | RMT06-19 | |
| | | | 1-3/8" | RFT06-22 | | | | | | 1-3/8" | RMT06-22 | |
| 1 | 5/8" | 1/4-20 | 11/16" | RFT08-11 | 23.00 | 1 | 5/8" | 1-1/32" | 1/4-20 | 11/16" | RMT08-11 | 23.00 |
| | | | 7/8" | RFT08-14 | | | | | | 7/8" | RMT08-14 | |
| | | | 1-3/16" | RFT08-19 | | | | | | 1-3/16" | RMT08-19 | |
| | | | 1-3/8" | RFT08-22 | | | | | | 1-3/8" | RMT08-22 | |
| 1-1/2" | 1 | 5/16-18 | 1-1/8" | RFT12-18 | 29.00 | 1-1/2" | 1 | 1/2" | 5/16-18 | 1-1/8" | RMT12-18 | 29.00 |
| | | | 1-3/8" | RFT12-22 | | | | | | 1-3/8" | RMT12-22 | |
| | | | 1-5/8" | RFT12-26 | | | | | | 1-5/8" | RMT12-26 | |
| 2" | 1-1/2" | 5/16-18 | 1-1/8" | RFT16-18 | 34.00 | 2" | 1-1/2" | 1/2" | 5/16-18 | 1-1/8" | RMT16-18 | 34.00 |
| | | | 1-3/8" | RFT16-22 | | | | | | 1-3/8" | RMT16-22 | |
| | | | 1-5/8" | RFT16-26 | | | | | | 1-5/8" | RMT16-26 | |

# Shoulder Plates

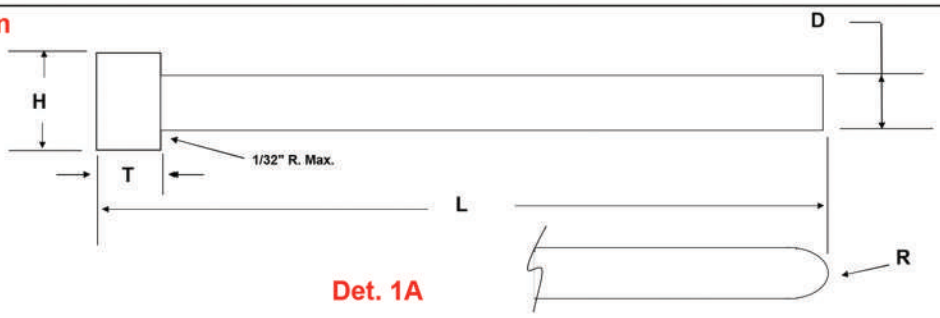
| OD MALE OR FEMALE | H DIA. | K +.000 -.0005 | J | REGAL CATALOG NO. | NET PRICE EACH (US $) |
|---|---|---|---|---|---|
| 1/2" | 1-1/16" | 3/16" | 10-24 | SP-04 | 3.00 |
| 3/4" | 1" | 3/16" | 1/4-20 | SP-06 | 3.10 |
| 1" | 1-3/16" | 3/16" | 1/4-20 | SP-08 | 3.20 |
| 1-1/2" | 1-11/16" | 1/4" | 5/16-18 | SP-12 | 4.50 |
| 2" | 2-3/16" | 1/4" | 5/16-18 | SP-16 | 6.50 |



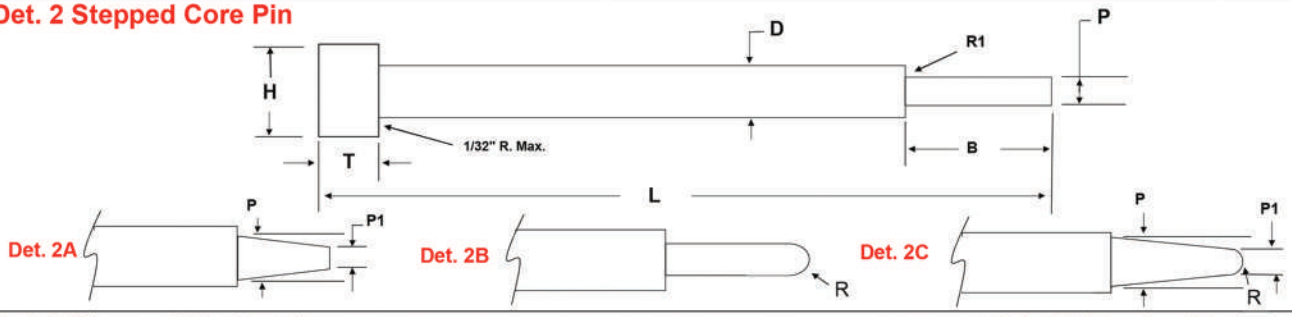
# Custom Pins & Blades

Fax to 727-499-7109 or email to sales@regalcomps.com

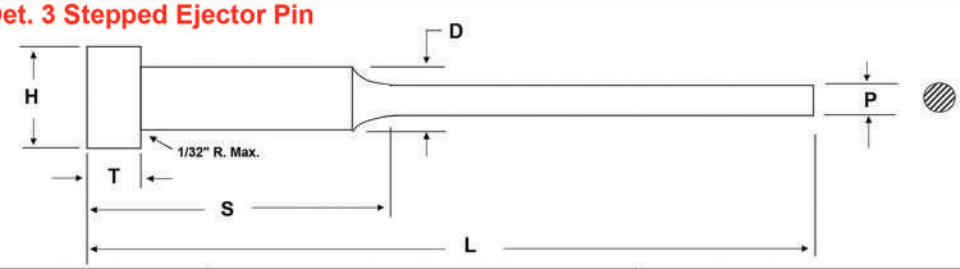
## Det. 1 Straight Pin



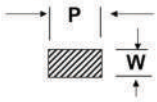

## Det. 2 Stepped Core Pin




## Det. 3 Stepped Ejector Pin




## Det. 3A Ejector Blade



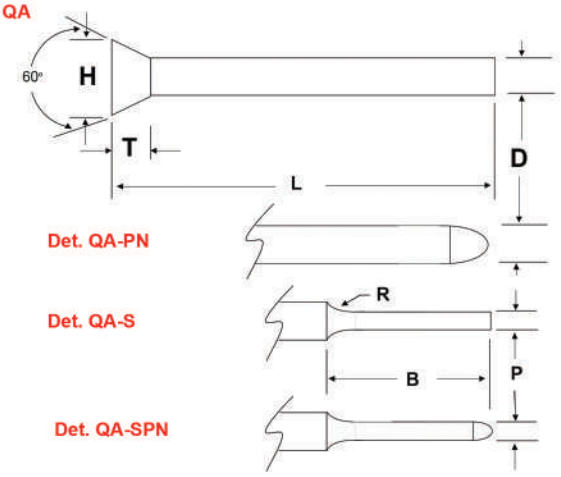

| Qty. | Detail | Dimensions | | Tolerances | |
|---|---|---|---|---|---|
| | | D | | + | - |
| | | H | | + | - |
| Material: | | T | | + | - |
| | | L | | + | - |
| Hardness: | | S | | + | - |
| | | P | | + | - |
| Modify Cat. No./Part No. | Mfr. | W | | + | - |
| | | R | | + | - |
| Notes & Comments | | R1 | | + | - |
| | | B | | + | - |
| | | P1 | | + | - |

| Contact Name: | Company Name: | Address | |
|---|---|---|---|
| Phone No. | Fax No. | E-Mail Address: | Date: |
| Ref. R. F. Q No. ☐ P. O. No. | Special Instructions/Requirements: | | |

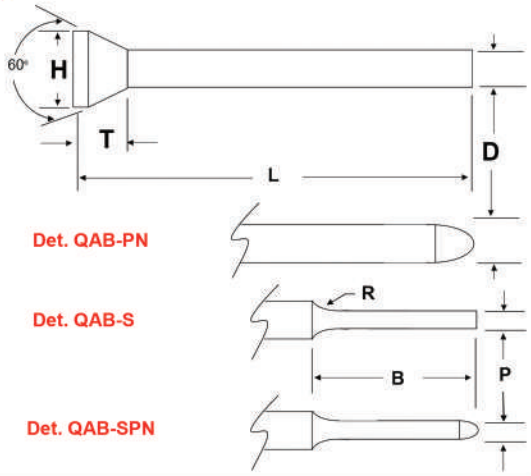
# Custom Punches & Perforators

Fax to 727-499-7109 or email to sales@regalcomps.com

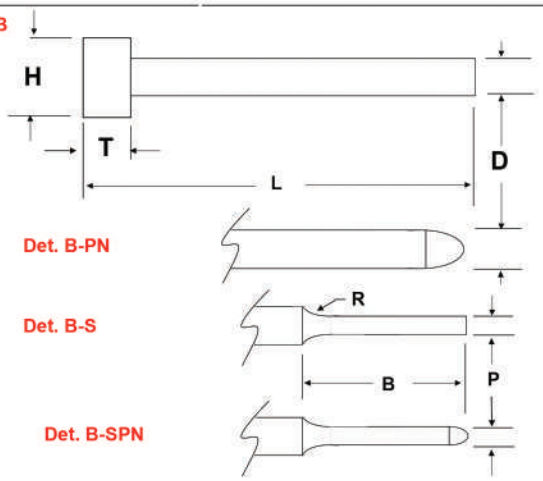
Det. QA




Det. QAB




Det. QB




Det. C
PER YOUR SKETCH

| Qty. | Detail |
|---|---|
| | |

Material:

Hardness:

| Modify Cat. No./Part No. | Mfr. |
|---|---|
| | |

Notes & Comments

| | Dimensions | Tolerances | |
|---|---|---|---|
| D | | + | - |
| H | | + | - |
| T | | + | - |
| L | | + | - |
| P | | + | - |
| B | | + | - |
| R | | + | - |

| Contact Name: | Company Name: | Address |
|---|---|---|
| | | |

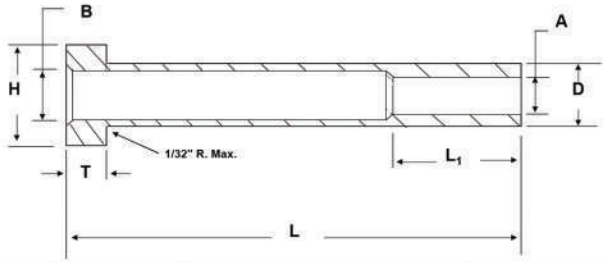
| Phone No. | Fax No. | E-Mail Address: | Date: |
|---|---|---|---|
| | | | |

| Ref. R. F. Q No. ☐ P. O. No. | Special Instructions/Requirements: |
|---|---|
| | |

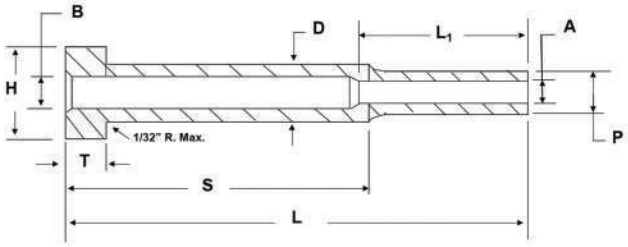
# Custom Sleeves & Water-Cooled Core Pins

Fax to 727-499-7109 or email to sales@regalcomps.com

**Det. ESL-1 Straight Ejector Sleeve**

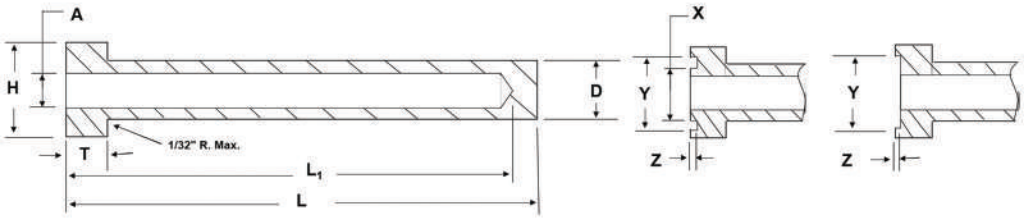



**Det. ESL-2 Stepped Ejector Sleeve**




**Det. WCC Water-Cooled Core Pin**

**Det. WCC-1** **Det. WCC-2**




| Qty. | Detail | Material | Hardness Rc |
|---|---|---|---|
| | | | |

Modify Cat. No./Part No.

Manufacturer

Notes & Comments

| Dimensions | | Tolerances | |
|---|---|---|---|
| A | | + | - |
| B | | + | - |
| D | | + | - |
| H | | + | - |
| L | | + | - |
| $L_1$ | | + | - |
| P | | + | - |
| R | | + | - |
| $R_1$ | | + | - |
| S | | + | - |
| T | | + | - |
| X | | + | - |
| Y | | + | - |
| Z | | + | - |

| Contact Name: | Company Name: | Address | |
|---|---|---|---|
| Phone No. | Fax No. | E-Mail Address: | Date: |
| Ref. R. F. Q No. ☐ P. O. No. | Special Instructions/Requirements: | | |

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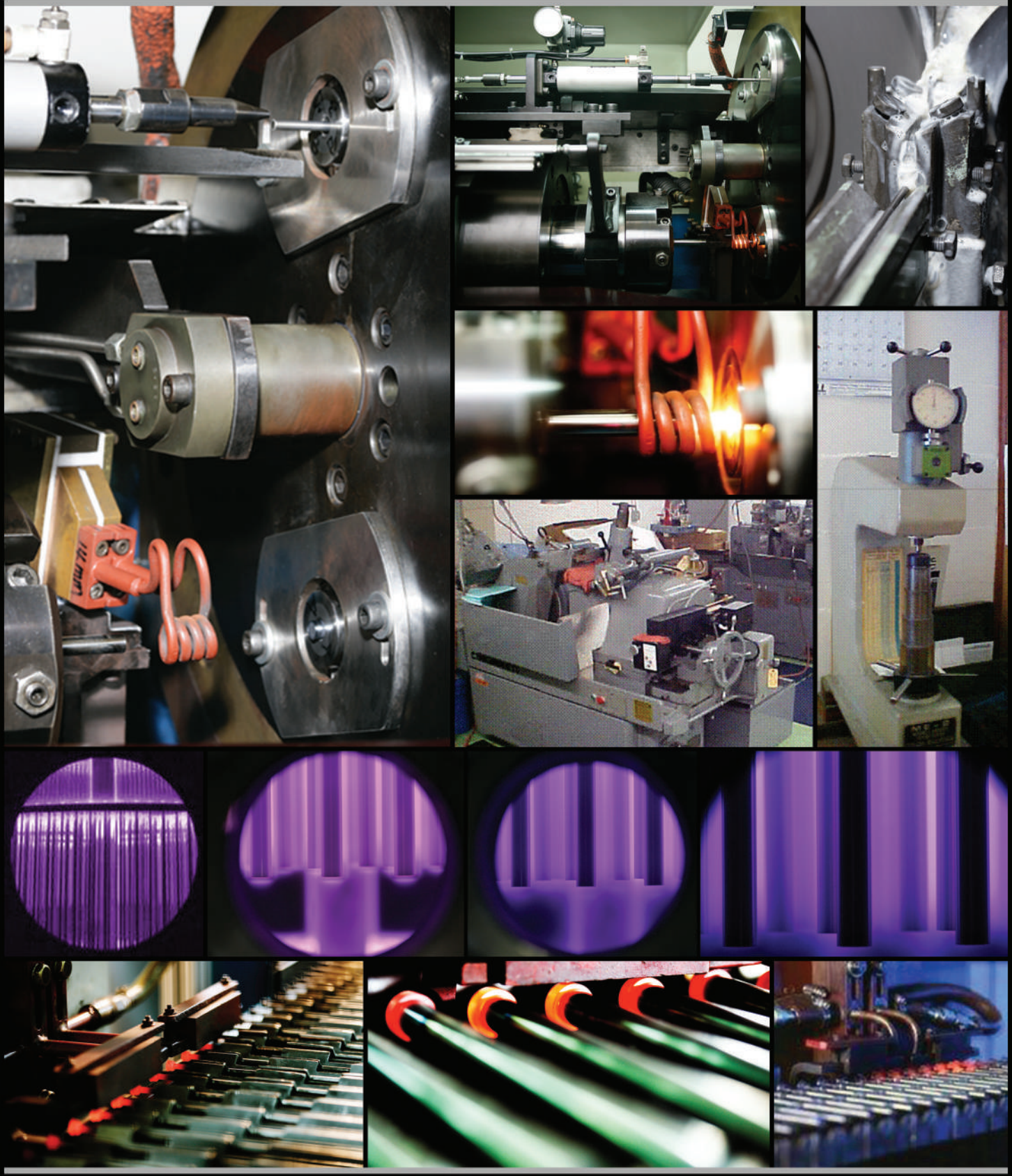


**Regal Components, Inc.**

10 Almeida Avenue, East Providence, RI 02914

727-299-0800 727-499-7109 sales@regalcomps.com regalcomps.com

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Components can be ground to a tolerance of ±0.000050 inches, with tips as small as 0.002 inches and lengths up to 14 inches. Custom details such as tapers, rings, vents, ribs and spirals can be shaped using wire EDM. In addition to standard tool steel, components can be made of powdered steels, stainless steel and copper alloys including M-2, A-2, H-13, S-7, PMM-4, PM 10V 420SS for greater control over thermal transfer, tensile strength, hardness and other physical properties. The molding surface can be polished, coated and/or plated.

Regal Components
*Higher Standards for Molds and Dies*

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