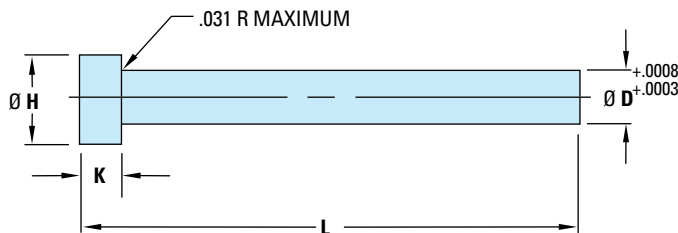


INCH Core Pins - H13 - Standard Medium Hardness



- Precision made of superior quality hotwork die steel standard hardness 30-35 HRC
- Heads are hot-forged for uniform grain flow, higher tensile strength, then annealed to permit easier machining and stamping
- +.0008"/+.0003" tolerance on pin diameter ensures a close fit for coring purposes
- Pin body and head are finish ground
- Centerless ground and polished outer diameter

INCH Core Pins - C

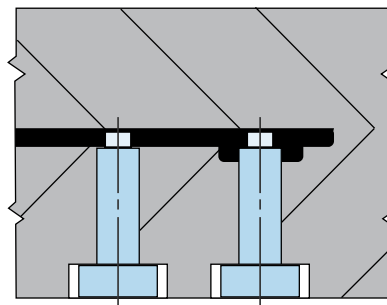
ITEM PREFIX	Ø D PIN DIA	Ø H HEAD DIA	K HEAD THICK	L = LENGTH			
				3'	6	10	14
C7M *	3/32 (.0937)	.250	.125	⚡	⚡	⚡	
C8M *	7/64 (.1093)	.250	.125	⚡	⚡	⚡	
C9M *	1/8 (.1250)	.250	.125	⚡	⚡	⚡	⚡
C10M *	9/64 (.1406)	.250	.125	⚡	⚡	⚡	⚡
C11M *	5/32 (.1562)	.281	.156	⚡	⚡	⚡	⚡
C12M *	11/64 (.1718)	.343	.187	⚡	⚡	⚡	⚡
C13M *	3/16 (.1875)	.375	.187	⚡	⚡	⚡	⚡
C14M *	13/64 (.2031)	.375	.187	⚡	⚡	⚡	⚡
C15M *	7/32 (.2187)	.406	.187	⚡	⚡	⚡	⚡
C17M *	1/4 (.2500)	.437	.187	⚡	⚡	⚡	⚡
C19M *	9/32 (.2812)	.437	.250	⚡	⚡	⚡	⚡
C21M *	5/16 (.3125)	.500	.250	⚡	⚡	⚡	⚡
C23M *	11/32 (.3437)	.562	.250	⚡	⚡	⚡	⚡
C25M *	3/8 (.3750)	.625	.250	⚡	⚡	⚡	⚡
C27M *	13/32 (.4062)	.687	.250	⚡	⚡	⚡	⚡
C29M *	7/16 (.4375)	.687	.250	⚡	⚡	⚡	⚡
C31M *	15/32 (.4687)	.750	.250	⚡	⚡	⚡	⚡
C33M *	1/2 (.5000)	.750	.250	⚡	⚡	⚡	⚡
C35M *	9/16 (.5625)	.812	.250		⚡	⚡	⚡
C37M *	5/8 (.6250)	.875	.250		⚡	⚡	⚡
C41M *	3/4 (.7500)	1.000	.250		⚡	⚡	⚡

*Heads of 3"-length pins are not annealed. If annealed heads on 3"-length pins are required, they must be special ordered. (Alternately, you may purchase 6" pins and cut to required length.)

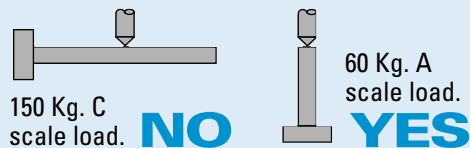
***HOW TO ORDER:** Combine Item Number Prefix and the length (L dimension) desired.

Examples: C9M3, C33M10

Typical application



Hardness checking guidelines



If checking hardness of core pins, do not use method "NO" above, since it will provide an inaccurately low reading. The preferred method is to stand the pin on its head and check the cut end using the A scale, 60 Kg. load as shown above.

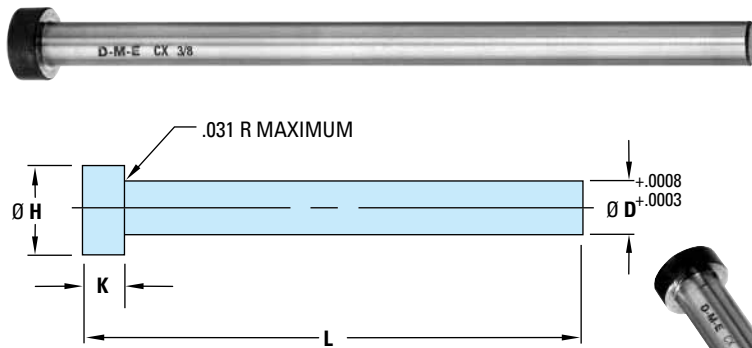
PRECAUTIONS:

The cut end must be parallel to head end, with stem length of 2" minimum. Use cutting fluid to avoid overheating and localized annealing. Position indentation in middle of pin diameter.

KEY TO CHART

- ⚡ Items in stock
- 2-3 week delivery
- Contact D-M-E for quote

INCH Core Pins – High Hardness



- Precision made of superior quality hotwork die steel in high hardness 50-55 HRC
- Heads are hot-forged for uniform grain flow, higher tensile strength, then annealed to permit easier machining and stamping
- +.0008"/+.0003"- tolerance on pin diameter ensures a close fit for coring purposes
- Pin body and head are finish ground
- Centerless ground and liquid polished



INCH Core Pins – CX

ITEM PREFIX	Ø D PIN DIA	Ø H HEAD DIA	K HEAD THICK	LENGTH			
				3'	6	10	14
CX7M *	3/32 (.0937)	.250	.125	⚡	⚡	⚡	
CX8M *	7/64 (.1093)	.250	.125	⚡	⚡	⚡	
CX9M *	1/8 (.1250)	.250	.125	⚡	⚡	⚡	⚡
CX10M *	9/64 (.1406)	.250	.125	⚡	⚡	⚡	⚡
CX11M *	5/32 (.1562)	.281	.156	⚡	⚡	⚡	⚡
CX12M *	11/64 (.1718)	.343	.187	⚡	⚡	⚡	⚡
CX13M *	3/16 (.1875)	.375	.187	⚡	⚡	⚡	⚡
CX14M *	13/64 (.2031)	.375	.187	⚡	⚡	⚡	⚡
CX15M *	7/32 (.2187)	.406	.187	⚡	⚡	⚡	⚡
CX17M *	1/4 (.2500)	.437	.187	⚡	⚡	⚡	⚡
CX19M *	9/32 (.2812)	.437	.250	⚡	⚡	⚡	⚡
CX21M *	5/16 (.3125)	.500	.250	⚡	⚡	⚡	⚡
CX23M *	11/32 (.3437)	.562	.250	⚡	⚡	⚡	⚡
CX25M *	3/8 (.3750)	.625	.250	⚡	⚡	⚡	⚡
CX27M *	13/32 (.4062)	.687	.250	⚡	⚡	⚡	⚡
CX29M *	7/16 (.4375)	.687	.250	⚡	⚡	⚡	⚡
CX31M *	15/32 (.4687)	.750	.250	⚡	⚡	⚡	⚡
CX33M *	1/2 (.5000)	.750	.250	⚡	⚡	⚡	⚡
CX35M *	9/16 (.5625)	.812	.250		⚡	⚡	⚡
CX37M *	5/8 (.6250)	.875	.250		⚡	⚡	⚡
CX41M *	3/4 (.7500)	1.000	.250		⚡	⚡	⚡

Specials available.
See "Special Pins and Sleeves."

QUANTITY DISCOUNTS:

Ejector pins, sleeves, core pins, return pins and sprue puller pins. Discounts apply to current Net Prices. Standard sizes may be combined on one order for quantity discounts.

300 to 599 Less 5%
600 or more Less 10%

*Heads of 3"-length pins are not annealed. If annealed heads on 3"-length pins are required, they must be special ordered. (Alternately, you may purchase 6" pins and cut to required length.)

***HOW TO ORDER: Combine Item Number Prefix and the length (L dimension) desired.**

Examples: CX9M3, CX33M10

KEY TO CHART

- ⚡ Items in stock
- 2-3 week delivery
- Contact D-M-E for quote

Performance Core Pins® – High Conductivity Pins



D-M-E's Performance Core Pins® are precision made using a high-strength, beryllium-free copper alloy, rather than traditional steels used in core pins. This alloy provides several advantages, including better conductivity, increased strength, reduced wear and resistance to rusting. Performance Core Pins are ideal for use in high-volume applications where part quality, fit and finish are critical.

Reduced cycle time

It is often difficult or expensive to adequately cool the area surrounding the core pin in a mold, especially when molding thick-walled parts. Depending on the design of the mold, it may even be impossible to run water lines near the pin, thus greatly increasing cycle times.

The copper-based alloy used in Performance Core Pins can significantly reduce mold cycle times by increasing the rate of heat transfer. The Performance Core Pin, when used in place of traditional C- or CX-type pins, will provide up to 10 times the rate of heat transfer. Heat is transferred at twice the rate of pins made of a beryllium-copper alloy.

In addition, the low-adhesion characteristics of the pins make part ejection faster and easier. All of these advantages combine to reduce the overall cycle time and increase productivity.

Improved part quality

The excellent thermal diffusivity of the pins provide a homogenous temperature profile throughout the core surface. Uniform temperatures result in reduced post-mold shrinkage and warpage, improving the quality of the part. Also, because of the low-adhesion characteristics of the pin, parts are not damaged by adhesion to the pin during part ejection.

- Reduces cycle times
- Ten times better conductivity than steel
- Moldstar 150® (C18000) beryllium-free copper-based alloy
- Hardness of 90-98 Rockwell B
- Available in 21 diameters and four lengths

Lower machining costs

The high thermal conductivity of Performance Core Pins reduces the need for complex cooling designs that can require hours of additional machining. Plus, the pins require no additional heat treatment and can be machined using conventional methods or EDM.

Longer service life

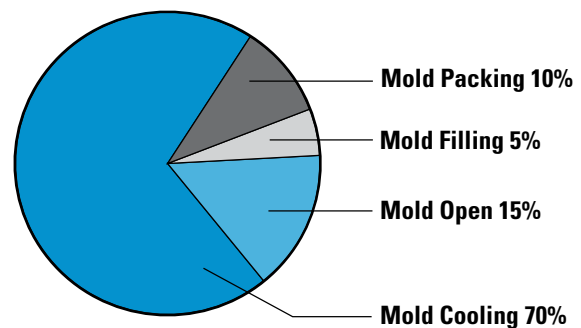
Performance Core Pins have a high resistance to thermal stress, wear and abrasion. This assures long life under virtually any molding conditions. With appropriate alteration to pin diameter, they can be used in conjunction with standard ejector sleeves. The dissimilar metals and compatible coefficient of friction will reduce metal-to-metal pick up and wear.

Wide range of sizes

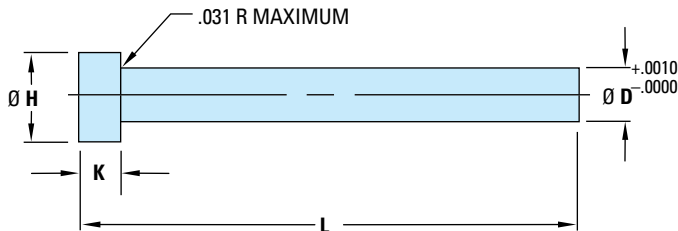
Performance Core Pins are available in 18 pin diameters from 3/32- to 3/4- and 3-, 6-, 14- or 20-inch lengths.

Typical Mold

As shown in the pie chart, mold cooling comprises the largest part of the mold cycle. Performance Core Pins can significantly reduce this mold cooling portion to reduce overall cycle time!



Performance Core Pins® - High Conductivity Pins



- Moldstar 150® (C18000) beryllium-free copper-based alloy
- Ten times better conductivity than steel
- Reduces cycle times
- Hardness of 90-98 Rockwell B
- Specials are also available upon request

PCL Performance Core Pins – PCL

ITEM PREFIX	Ø D PIN DIA	Ø H HEAD DIA	K HEAD THICK	L = LENGTH			
				3	6	14	20
PCL07 *	3/32 (.0937)	.250	.125	⚡	⚡	⚡	
PCL09 *	1/8 (.1250)	.250	.125	⚡	⚡	⚡	⚡
PCL11 *	5/32 (.1562)	.281	.156	⚡	⚡	⚡	
PCL12 *	11/64 (.1718)	.343	.187	⚡	⚡	⚡	
PCL13 *	3/16 (.1875)	.375	.187	⚡	⚡	⚡	⚡
PCL14 *	13/64 (.2031)	.375	.187	⚡	⚡	⚡	
PCL15 *	7/32 (.2187)	.406	.187	⚡	⚡	⚡	⚡
PCL17 *	1/4 (.2500)	.437	.187	⚡	⚡	⚡	⚡
PCL19 *	9/32 (.2812)	.437	.250	⚡	⚡	⚡	
PCL21 *	5/16 (.3125)	.500	.250	⚡	⚡	⚡	⚡
PCL23 *	11/32 (.3437)	.562	.250	⚡	⚡	⚡	
PCL25 *	3/8 (.3750)	.625	.250	⚡	⚡	⚡	⚡
PCL27 *	13/32 (.4062)	.687	.250	⚡	⚡	⚡	
PCL29 *	7/16 (.4375)	.687	.250	⚡	⚡	⚡	
PCL33 *	1/2 (.5000)	.750	.250	⚡	⚡	⚡	
PCL35 *	9/16 (.5625)	.812	.250	⚡	⚡	⚡	
PCL37 *	5/8 (.6250)	.875	.250	⚡	⚡	⚡	
PCL41 *	3/4 (.7500)	1.000	.250	⚡	⚡	⚡	

Performance Core Pins® are produced by Performance Alloys & Services, Inc. under U.S. Patent Number 5,020,770.

Issue date June 4, 1991.
Foreign patents pending.

***HOW TO ORDER:** Combine Item Number Prefix and the length (L dimension) desired.

- Precede single digit lengths with a zero

Examples: PCL2514, PCL0703, PCL2520

QUANTITY DISCOUNTS:
Ejector pins, sleeves, core pins, return pins and sprue puller pins. Discounts apply to current Net Prices. Standard sizes may be combined on one order for quantity discounts.
300 to 599 Less 5%
600 or more Less 10%

KEY TO CHART

- ⚡ Items in stock
- ⬜ 2-3 week delivery
- Contact D-M-E for quote

INCH Pins, Sleeves, Blades | Performance Core Pins® – High Conductivity Pins