



# Centering Dovetail Vises

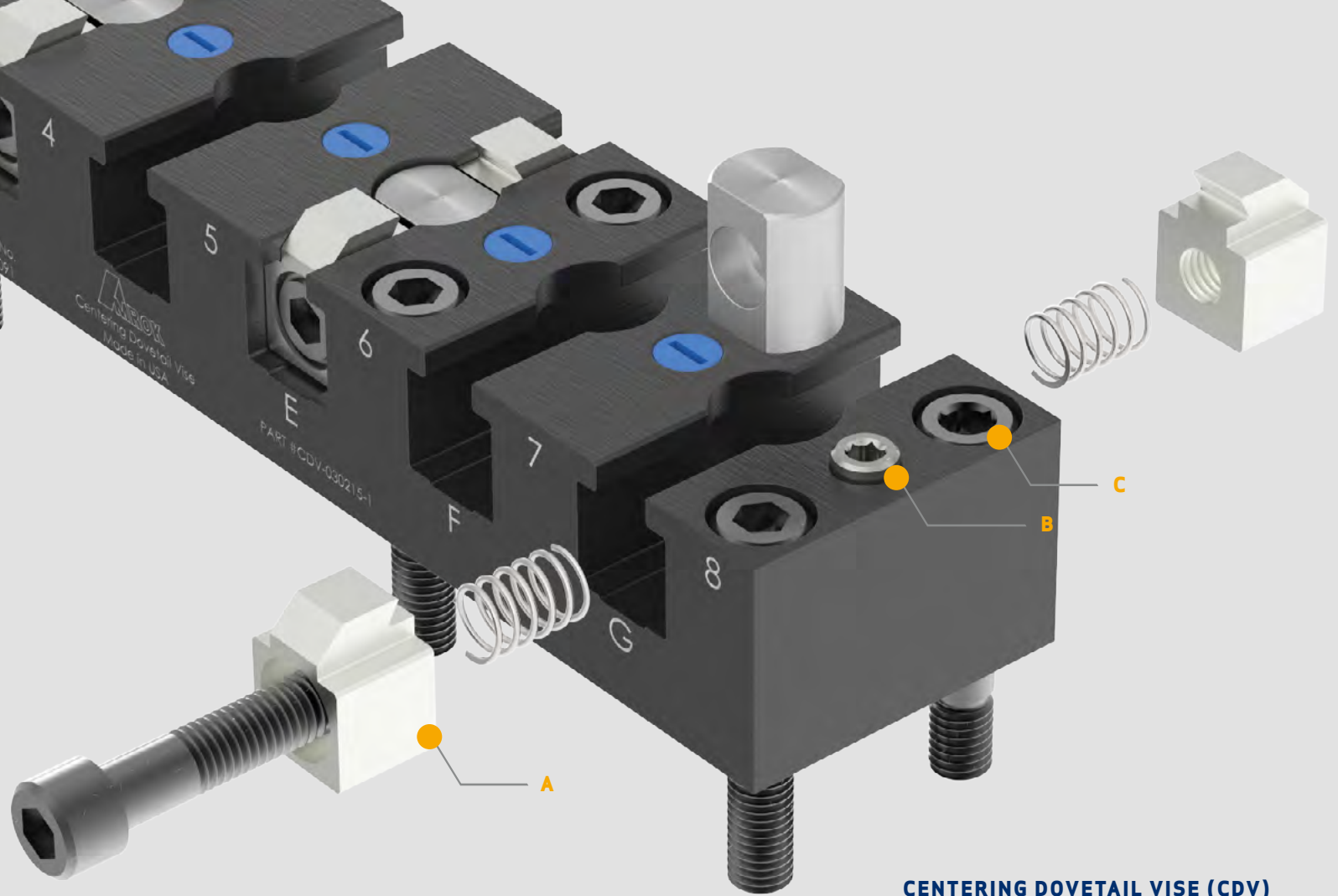
**WORKHOLDING SYSTEM**





# 5-Axis Machining

LEARN ABOUT THE CDV | [AMROKTOMBSTONES.COM](http://AMROKTOMBSTONES.COM)



**CENTERING DOVETAIL VISE (CDV)  
PART #: CDV-030215-1**

## CDV Patent **No. 29/556,091**

**MATERIAL TO BE PRE-MACHINED WITH  
DOVETAIL CUTS WITH 2 LOCATOR PIN HOLES:**

**DOVETAIL CLAMPING WIDTHS ARE AS FOLLOWS:**

**For 3" wide vises: 1.** 1.250"–2.250" wide at outside theoretical sharp corner

**For 6" wide vises: 2.** 2.250"–5.000" wide at outside theoretical sharp corner

**DO NOT LEAVE OUTSIDE CORNERS ON DOVETAIL SHARP.**

- 1.** .150" Tall Dovetail (For CDV-xxxxxx-1 Vises) With .150" Deep Locator Pin Holes
- 2.** .280" Tall Dovetail (For CDV-xxxxxx-2 Vises) With .280" Deep Locator Pin Holes
- 3.** .400" Tall Dovetail (For CDV-xxxxxx-3 Vises) With .280" Deep Locator Pin Holes

**VICE MOUNTING OPTIONS:**

- 1.** Can be mounted end to end to suit the length of your part

### **A. JAWS**

15° or 30° options

### **B. LOCATING PIN**

Ø.4999"–.4995" X .125"  
above top surface using  
#CDV-LOCPIN-1

Ø.4999"–.4995" X .250"  
above top surface using  
#CDV-LOCPIN-2

### **C. PRECISION LOCATING SCREW FOR LOCATING & MOUNTING VISE**

(Ø.500" body / 1/2-13 thread)

#AMF-87996 (2) included #AMF-87543  
for center hole mtg. (purchase separately)

# New Design. **More Possibilities.**

Here are the advantages of using our CDV:

## **STANDARDIZATION**

- + All parts are prepped in the same manner
- + All manufacturing operations are set up the same way
- + All parts are clamped and located the same way

## **COST SAVINGS**

- + Parts can be prepped off-line at a reduced mfg. cost
- + Many different parts can be held using the same CDV
- + Requires minimal excess stock to clamp and locate parts
- + No additional custom workholding components are required

## **TIME SAVINGS**

- + No change-over of jaws to hold different parts
- + No additional components needed to clamp and locate parts
- + No adjusting of stop to locate parts
- + 5 sided machining of parts is made possible
- + Multiple parts can be machined on a single CDV

## **EASE OF USE**

- + All parts are clamped and located the same way
- + Easily load and unload parts
- + Virtually no training is required for operators
- + Additional jaw assemblies can be added quickly
- + Easy to disassemble if maintenance is required

## **SCRAP REDUCTION**

- + Eliminates distortion in machined parts do to clamping forces
- + Securely holds parts so they do not become loose during machining
- + Machined parts can be removed and precisely reloaded in CDV

## **FITS ON A STANDARD 2" GRID SYSTEMS**

All vises are designed to fit on the industry standard 2" center to center hole pattern using Precision Screws and 1/2-13 SHCS (included in each assembly). This grid system mounting allows for between center mounting, on center mounting, Bridgeport mounting, and T-slot mounting; all with no additional subplate for tombstone mounting. The two outside holes and the center hole closest to each end are precision mounting holes.

## **HIGH TORQUE/HEAVY LOADS**

Various Jaw widths and heights for better load distribution and workpiece clamping.

### **Jaw heights for the following applications:**

1. .125" tall jaws for light to medium machining
2. .250" tall jaws for medium to heavy machining
3. .375" tall jaws for heavy machining



# Published **Dimensional Tolerances**

Part centering accuracy of less than .001" depending on the locating hole size machined in the part prepping operation.

## **CHOOSE STANDARD VISE SIZES RANGING FROM:**

3.00" wide x 3.00", 5.00", 7.00", 15.00", 23.00" long.

6.00" wide x 5.00", 7.00", 15.00", 23.00" long.

All vise bases are 2.000 ±.001 high

**Special CDV assemblies are available upon request.**

**TOP & BOTTOM SURFACE // .001" IN STEEL & LESS THAN .0015 IN ALUMINUM  
PRECISION MOUNTING HOLES +/- 0.001" BETWEEN CENTERS  
BASE THICKNESS HELD TO +/- 0.001"**

## **PIN SIZES:**

Ø.4999"–.4995" X .125" tall above top surface (-1 vise assy.)

Ø.4999"–.4995" X .250" tall above top surface (-2 & -3 vise assy.)

## **STANDARD JAW SIZES RANGING FROM:**

.125" tall X .540" wide (-1 vise assy.)

.250" tall X .540" wide (-2 vise assy.)

.375" tall X 1.90" wide (-3 vise assy.)



# Quality Starts at the Fixture

**AMPROK**  
Centering Dovefall Vise  
Made in USA

PART #CDV-030223-1

E  
PATENT No.  
9/556,091

# Aluminum or Steel Base

We offer our CDV assemblies base material in both a **Hard Coat Anodized Aluminum** and **4340 Alloy Steel hardened to Rc 32-36**.

If you have a pallet load capacity issue as a lot of today's small high speed machine center have you may choose to use the standard CDV. This is a good

choice if you are machining parts made of aluminum or other similar soft material.

If pallet load capacity is not an issue and you are machining steel, alloy or cast iron parts we recommend you use the standard hardened steel CDV. Just add "S" to the end of the CDV part number.



\*Pins, jaws, and center plug are 17-4PH stainless steel hardened to 40-45 Rc (see pages 12-13).

**HARD COAT ANODIZED ALUMINUM**



**4340 ALLOY STEEL  
HDN. TO Rc 32-36**





# Options

When You Need Them

# Jaw Assembly **Replacement Parts**

All Jaw types are interchangeable for any CDV. They can be used together on the same base as long as the dovetail is prepped for the tallest Jaw you plan to use on the CDV.

**\*Jaws are hardened to 40-45 Rc.**



## **A. JAW, C'BORED**

#CDV-03JKIT-1-D1  
#CDV-03JKIT-1-15-D1  
#CDV-03JKIT-2-D1  
#CDV-03JKIT-2-15-D1  
#CDV-03JKIT-3-D1  
#CDV-03JKIT-3-15-D1

## **B. CENTER PLUG**

#CDV-03JKIT-1-D3

## **C. SPRING**

**For 3" Wide Vise:**

#AME-MEC-01-2414

**For 6" Wide Vise:**

#AME-MEC-01-2415

## **D. JAW, TAPPED**

#CDV-03JKIT-1-D2  
#CDV-03JKIT-1-15-D2  
#CDV-03JKIT-2-D2  
#CDV-03JKIT-2-15-D2  
#CDV-03JKIT-3-D2  
#CDV-03JKIT-3-15-D2

## **E. SOCKET HEAD CAP SCREW**

**For 3" Wide Vise:**

1/2-13 x 2.75 LG.

**For 6" Wide Vise:**

1/2-13 x 6.00 LG. FULL THREAD

**DIFFERENT HEIGHTS FOR VARIOUS JOB REQUIREMENTS**

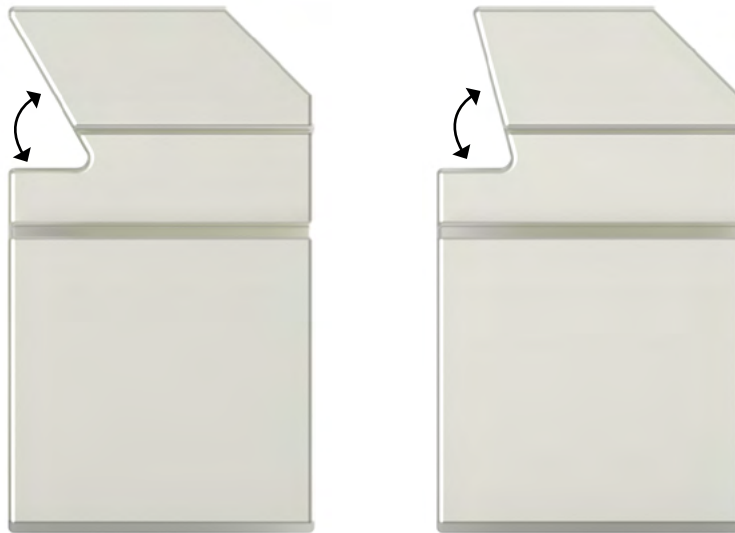


**.125" TALL**

**.250" TALL**

**.375" TALL**

**STANDARD 30° OPTION. ALSO AVAILABLE IN A 15° OPTION.**



**30° ANGLE**

**15° ANGLE**

(Add -15 to end of part number)

**VARIOUS JAW OPTIONS ADJUST TO DIFFERENT MANUFACTURING NEEDS**

30° jaws are used for all vise assemblies numbers shown.

For 15° jaws add -15 to the end of the vise assembly number.

# Vise Assembly **Replacement Parts**

EASILY CHANGE JAW KITS FOR DIFFERENT HEIGHTS

All components of our CDV are available to be purchased individually. Please contact us for price and delivery.



FOR ONLINE ORDERS VISIT:  
[AMROKTOMBSTONES.COM](https://www.amroktombstones.com)



**PRECISION DOWEL SCREW**

#AMF-87996

For 1.00" Off Center Hole Locating and Mounting



**PRECISION CENTER DOWEL SCREW**

#AMF-87543

For Center Hole Locating and Mounting



**LOCATING PIN, THREADED**

PART #CDV-LOCPIN-2

Ø.4999"-.4995" X .250" TALL

Material: 17-4PH Stainless Steel Rc Hardness to 40-45



**LOCATING PIN, THREADED**

PART #CDV-LOCPIN-1

Ø.4999"-.4995" X .125" TALL

Material: 17-4PH Stainless Steel Rc Hardness to 40-45



**PLASTIC HOLE PLUG**

#AMF-87944



**PLUG, C'BORED HOLE**

#AMF-59815



# Customized For You, Choose a Vise That Fits.

## CHOOSE STANDARD VISE SIZES RANGING FROM:

3.00" wide x 3.00", 5.00", 7.00", 15.00", 23.00" long.

6.00" wide x 5.00", 7.00", 15.00", 23.00" long.

All vise bases are 2.000 ±.001 high

## PIN SIZES:

Ø.4999"–.4995" X .125" tall above top surface (-1 vise assy.)

Ø.4999"–.4995" X .250" tall above top surface (-2 & -3 vise assy.)

## STANDARD JAW SIZES RANGING FROM:

.125" tall X .540" wide (-1 vise assy.)

.250" tall X .540" wide (-2 vise assy.)

.375" tall X 1.90" wide (-3 vise assy.)

Special CDV assemblies are available upon request.

## + INCREASED EFFICIENCY

With the capability of smaller jaw widths, operators are able to more densely pack parts onto the tombstone, reducing overall cycle time.



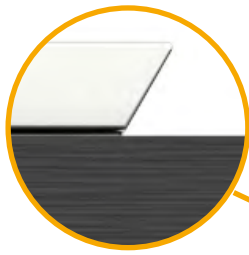
**Easy Setup** Using  
Centerline or Outside  
Locating Holes

# Maximum Width. Minimum Width.

**CDV-06XXXX-X**

5.000" MAX\*

2.250" MAX\*

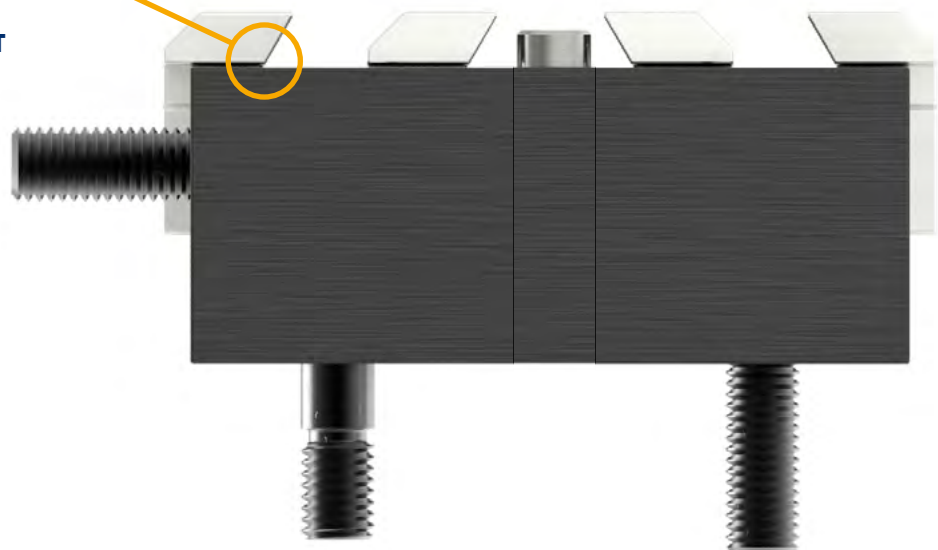


**SHARP POINT**

**CDV-03XXXX-X**

2.250" MAX\*

1.250" MIN\*



\*TO THEORETICAL SHARP POINT

# CDV Options

CDV assemblies are available in a variety of sizes and jaw styles so you can customize your vise to clamp and hold parts of all sizes.

Mount the CDV on a tombstone or machine pallet directly for horizontal machining or vertical machining.

We designed the CDV to accommodate the industry standard 2 inch grid.

## PART NUMBER SUFFIX GUIDE

**CDV-030203-1** | Hard coat aluminum base x30° Jaw

**CDV-030203-1-15** | Hard coat aluminum base x15° Jaw

**CDV-030203-1S** | Harden steel base x30° Jaw

**CDV-030203-1S-15** | Harden steel base x15° Jaw

**(S) = Steel**

**(15) = 15°**

**Standard with no suffix is Hard Coat Aluminum Bases with 30° Jaws**

**VISIT [AMROKTOMBSTONES.COM](http://AMROKTOMBSTONES.COM)**

TO SEE OUR FULL PRICING OPTIONS ONLINE



### **CDV-030203-1**

Size 3" wide x 2" high x 3" long

Jaw .125" tall x .540" wide x30°

Loc. Pin Ø.4999"-.4995" x .125" tall

### **CDV-030203-2**

Size 3" wide x 2" high x 3" long

Jaw .250" tall x .540" wide x30°

Loc. Pin Ø.4999"-.4995" x .250" tall

### **CDV-030203-3**

Size 3" wide x 2" high x 3" long

Jaw .375" tall x 1.90" wide x30°

Loc. Pin Ø.4999"-.4995" x .250" tall



# Workholding Systems for **Gripping Work**



## **CDV-030205-1**

Size 3" wide x 2" high x 5" long

Jaw .125" tall x .540" wide x 30°

Loc. Pin Ø.4999"–.4995" x .125" tall



## **CDV-030205-2**

Size 3" wide x 2" high x 5" long

Jaw .250" tall x .540" wide x 30°

Loc. Pin Ø.4999"–.4995" x .250" tall



## **CDV-030205-3**

Size 3" wide x 2" high x 5" long

Jaw .375" tall x 1.90" wide x 30°

Loc. Pin Ø.4999"–.4995" x .250" tall

Special CDV assemblies are available upon request.

# More Options For Flexibility

Part centering accuracy of less than .001" depending on the locating hole size machined in the part prepping operation.

## **PIN SIZES:**

Ø.4999"–.4995" X .125" tall above top surface (-1 vise assy.)

Ø.4999"–.4995" X .250" tall above top surface (-2 & -3 vise assy.)

## **STANDARD VISE SIZES WITH 15° OR 30° JAWS RANGING FROM:**

3.00" wide x 3.00", 5.00", 7.00", 15.00", 23.00" long.

6.00" wide x 5.00", 7.00", 15.00", 23.00" long.

All vise bases are 2.000 ±.001 high

## **STANDARD JAW SIZES RANGING FROM:**

.125" tall X .540" wide (-1 vise assy.)

.250" tall X .540" wide (-2 vise assy.)

.375" tall X 1.90" wide (-3 vise assy.)

[VISIT AMROKTOMBSTONES.COM](http://VISIT AMROKTOMBSTONES.COM)

TO SEE OUR FULL PRICING OPTIONS ONLINE



### **CDV-030207-1**

Size 3" wide x 2" high x 7" long

Jaw .125" tall x .540" wide x30°

Loc. Pin Ø.4999"–.4995" x .125" tall

### **CDV-030207-2**

Size 3" wide x 2" high x 7" long

Jaw .250" tall x .540" wide x30°

Loc. Pin Ø.4999"–.4995" x .250" tall

### **CDV-030207-3**

Size 3" wide x 2" high x 7" long

Jaw .375" tall x 1.90" wide x30°

Loc. Pin Ø.4999"–.4995" x .250" tall



**CDV-030215-1**

Size 3" wide x 2" high x 15" long  
Jaw .125" tall x .540" wide x 30°  
Loc. Pin Ø.4999"-.4995" x .125" tall



**CDV-030215-2**

Size 3" wide x 2" high x 15" long  
Jaw .250" tall x .540" wide x 30°  
Loc. Pin Ø.4999"-.4995" x .250" tall



**CDV-030215-3**

Size 3" wide x 2" high x 15" long  
Jaw .375" tall x 1.90" wide x 30°  
Loc. Pin Ø.4999"-.4995" x .250" tall



**CDV-030223-1**

Size 3" wide x 2" high x 23" long  
Jaw .125" tall x .540" wide x 30°  
Loc. Pin Ø.4999"-.4995" x .125" tall



**CDV-030223-2**

Size 3" wide x 2" high x 23" long  
Jaw .250" tall x .540" wide x 30°  
Loc. Pin Ø.4999"-.4995" x .250" tall



**CDV-030223-3**

Size 3" wide x 2" high x 23" long  
Jaw .375" tall x 1.90" wide x 30°  
Loc. Pin Ø.4999"-.4995" x .250" tall

# Centering Dovetail Vise Systems



## CDV-060205-1

Size 6" wide x 2" high x 5" long  
Jaw .125" tall x .540" wide x 30°  
Loc. Pin  $\varnothing$ .4999"–.4995" x .125" tall



## CDV-060205-2

Size 6" wide x 2" high x 5" long  
Jaw .250" tall x .540" wide x 30°  
Loc. Pin  $\varnothing$ .4999"–.4995" x .250" tall



## CDV-060205-3

Size 6" wide x 2" high x 5" long  
Jaw .375" tall x 1.90" wide x 30°  
Loc. Pin  $\varnothing$ .4999"–.4995" x .250" tall



## CDV-060207-1

Size 6" wide x 2" high x 7" long  
Jaw .125" tall x .540" wide x 30°  
Loc. Pin  $\varnothing$ .4999"–.4995" x .125" tall



## CDV-060207-2

Size 6" wide x 2" high x 7" long  
Jaw .250" tall x .540" wide x 30°  
Loc. Pin  $\varnothing$ .4999"–.4995" x .250" tall



## CDV-060207-3

Size 6" wide x 2" high x 7" long  
Jaw .375" tall x 1.90" wide x 30°  
Loc. Pin  $\varnothing$ .4999"–.4995" x .250" tall



**CDV-060215-1**

Size 6" wide x 2" high x 15" long  
Jaw .125" tall x .540" wide x30°  
Loc. Pin Ø.4999"-.4995" x .125" tall



**CDV-060215-2**

Size 6" wide x 2" high x 15" long  
Jaw .250" tall x .540" wide x30°  
Loc. Pin Ø.4999"-.4995" x .250" tall



**CDV-060215-3**

Size 6" wide x 2" high x 15" long  
Jaw .375" tall x 1.90" wide x30°  
Loc. Pin Ø.4999"-.4995" x .250" tall



**CDV-060223-1**

Size 6" wide x 2" high x 23" long  
Jaw .125" tall x .540" wide x30°  
Loc. Pin Ø.4999"-.4995" x .125" tall



**CDV-060223-2**

Size 6" wide x 2" high x 23" long  
Jaw .250" tall x .540" wide x30°  
Loc. Pin Ø.4999"-.4995" x .250" tall



**CDV-060223-3**

Size 6" wide x 2" high x 23" long  
Jaw .375" tall x 1.90" wide x30°  
Loc. Pin Ø.4999"-.4995" x .250" tall

# Get a Grip on Your Work.

Our CDV's are a Stress Free Clamping Solution.



## **CDV-03JKIT-1**

.125" tall x .540" wide x 30°  
Dovetail Width: 1.250"–2.250"



## **CDV-03JKIT-2**

.250" tall x .540" wide x 30°  
Dovetail Width: 1.250"–2.250"



## **CDV-03JKIT-3**

.375" tall" x 1.90" wide x 30°  
Dovetail Width: 1.250"–2.250"



## **CDV-03JKIT-1-15**

.125" tall x .540" wide x 15°  
Dovetail Width: 1.250"–2.250"



## **CDV-03JKIT-2-15**

.250" tall x .540" wide x 15°  
Dovetail Width: 1.250"–2.250"



## **CDV-03JKIT-3-15**

.375" tall x 1.90" wide x 15°  
Dovetail Width: 1.250"–2.250"



**CDV-06JKIT-1**

.125" tall x .540" wide x 30°  
Dovetail Width: 2.250"–5.000"



**CDV-06JKIT-2**

.250" tall x .540" wide x 30°  
Dovetail Width: 2.250"–5.000"



**CDV-06JKIT-3**

.375" tall x 1.90" wide x 30°  
Dovetail Width: 2.250"–5.000"



**CDV-06JKIT-1-15**

.125" tall x .540" wide x 15°  
Dovetail Width: 2.250"–5.000"



**CDV-06JKIT-2-15**

.250" tall x .540" wide x 15°  
Dovetail Width: 2.250"–5.000"

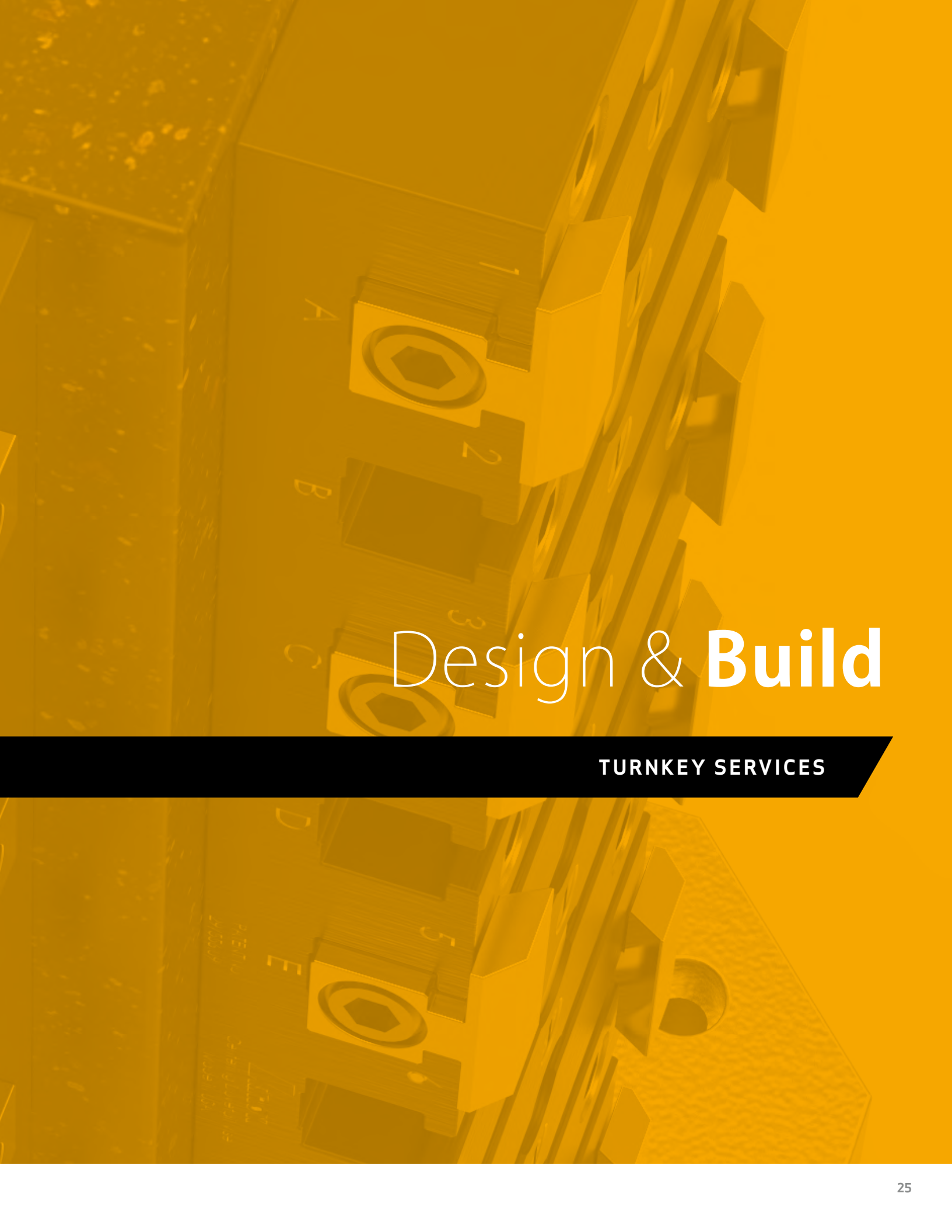


**CDV-06JKIT-3-15**

.375" tall x 1.90" wide x 15°  
Dovetail Width: 2.250"–5.000"



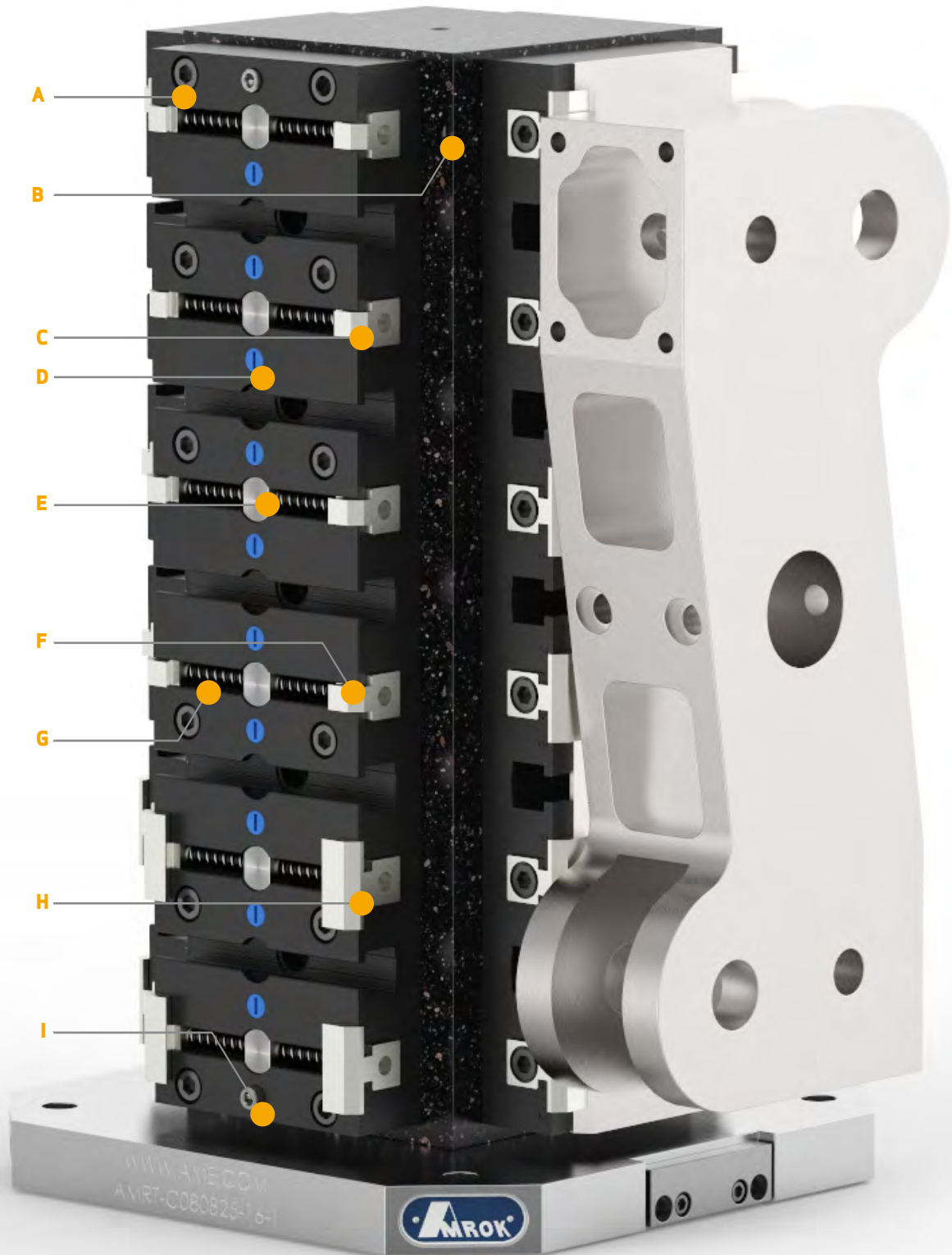




# Design & **Build**

**TURNKEY SERVICES**

# Bundle Packages



# Centering Dovetail Mounting Options for All Jobs

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## A. PRECISION LOCATING SCREW

Part #: AMF-87996

## B. EPOXY TOMBSTONE

AMRT-C080825-16-1

## C. CDV JAW-1

Part #: CDV-06JKIT-1

## D. PLASTIC HOLE PLUG

Part #: AMF-87944

## E. CENTER PLUG

CDV-03JKIT-D3

## F. CDV JAW-2

Part #: CDV-06JKIT-02

## G. SPRINGS

AME-MEC-01-2415

## H. CDV JAW-3

Part #: CDV-06JKIT-03

## I. LOCATING PIN

Part #: CDV-LOCPIN-1

Part #: CDV-LOCPIN-2

We built the Amrok brand at Advanced Machine & Engineering through our own experience in our own shop. As our engineers have designed innovative work holding systems, we've witnessed them transform the performance of our milling department. That's how AMROK was born. Now we making similar transformations for manufacturers throughout North America.

When we're working with industrial giants or small job shops we listen closely to their machining challenges so that we can design and build a better fixture. That's what we did with the AMROK CDV line.

If you're looking for a complete fixture featuring the CDV, we have a full line of tombstones, grid plates, or customized grids ready to mount directly to your machine table.

# True Centering. **Absolutely.**

The locating pin design allows for machined parts to be easily removed and precisely loaded into the CDV.

Part centering accuracy beyond .001" when machining the part to be located on the precision locating pin.

## **PIN SIZES:**

Ø.4999"–.4995" X .125" tall above top surface (-1 vise assy.)

Ø.4999"–.4995" X .250" tall above top surface (-2 & -3 vise assy.)

**CENTERED BY THE LOCATING PINS**





Mounts on Industry  
**Standard 2" Grid**

# Vertical or **Horizontal Machining**

All vises are designed to fit on the industry standard 2" center to center hole pattern using Precision Screws and 1/2-13 SHCS (included in each assembly).

## **MOUNTING WITHOUT A SUB PLATE:**

- + On-Center Mounting
- + Between Center Mounting
- + Bridgeport Mounting
- + T-Slot Mounting

This grid system mounting allows for between center mounting, on center mounting, Bridgeport mounting, and T-slot mounting; all with no additional subplate for tombstone mounting. So it is very easy to use our CDV on a Horizontal or Vertical Machine Center.





# AMROK CDV – Parts List

REFERENCE THESE PART NUMBERS WHEN YOU CONTACT THE AMROK TEAM OR REQUEST CAD FROM AMROKTOMBSTONES.COM







CDV-030205-1



CDV-030203-1



CDV-06JKIT-1  
.125 TALL, 30°



CDV-03JKIT-1-15  
.125 TALL, 15°



CDV-030205-2



CDV-030203-2



CDV-06JKIT-2  
.250 TALL, 30°



CDV-03JKIT-2-15  
.250 TALL, 15°



CDV-030205-3



CDV-030203-3



CDV-06JKIT-3  
.375 TALL, 30°



CDV-06JKIT-1-15  
.125 TALL, 15°



CDV-060205-1



PRECISION SCREW  
#AMF-87543



CDV-06JKIT-3-15  
.375 TALL, 15°



CDV-06JKIT-2-15  
.250 TALL, 15°



CDV-060205-2



PRECISION SCREW  
#AMF-87996



CDV-03JKIT-2  
.250 TALL, 30°



CDV-03JKIT-1  
.125 TALL, 30°



CDV-060205-3



1/2-13 X 2.75" LG FOR 3"  
WIDE VISE  
1/2-13 X 6" LG FOR 6"  
WIDE VISE



CDV-03JKIT-3  
.375 TALL, 30°



CDV-03JKIT-3-15  
.375 TALL, 15°



PLASTIC HOLE PLUG  
#AMF-87944



C'BORED HOLE  
PLUG AMF-59815



CDV-LOCPIN-1  
Ø.4999,.125" TALL



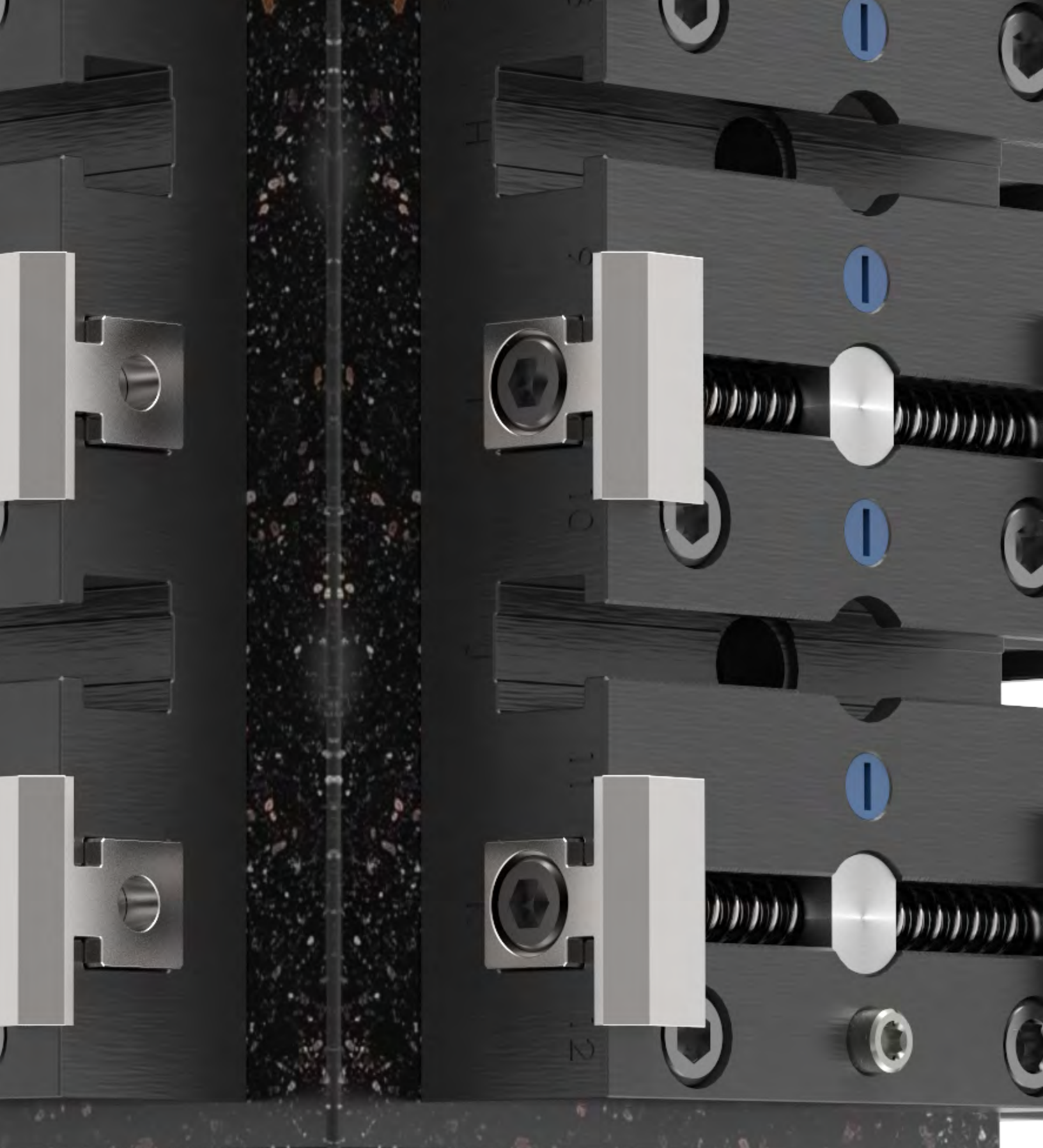
CDV-LOCPIN-2  
Ø.4999,.250" TALL



CDV-SPRING  
#AMEMEC-01-2415



CDV-SPRING  
#AMEMEC-01-2414





## Notes

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**VISIT [AMROKTOMBSTONES.COM](https://www.amroktombstones.com)**  
TO SEE OUR FULL PRICING OPTIONS ONLINE





# Contact Us



**ALVIN GOELLNER, NATIONAL SALES MANAGER**

AMROK WORKHOLDING



**LON MILLER, CHIEF ENGINEER**

AMROK WORKHOLDING



**REX HAMEL, BUSINESS UNIT MANAGER**

AMROK WORKHOLDING



**Ready?** Connect with us to get started.

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ROCKFORD, IL 61103

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**EMAIL** [INFO@AME.COM](mailto:INFO@AME.COM)

**WEBSITE** [WWW.AME.COM](http://WWW.AME.COM)



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**HOLDING WORK IN THE USA SINCE 1966**