Roll Marking Tooling

For Marking Flats

Technical Data Sheet

CMT
COLUMBIA
MARKING
TOOLS

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Our goal at Columbia Marking Tools is to engineer and manufacture high quality industrial stamps and dies with high grade tool steel, precision machining, and double pass engraving to make sure that the tools will last as long as possible.

CMT roll marking machines and tooling have been used by manufacturing for over half a century. The marks from these machines and tooling provide a deep clear mark that lasts the life of the product.

Roll Marking Tooling for Marking Flats

Columbia Marking Tools offers a complete line of roll marking tooling. This technical data sheet defines in detail the roll marking tooling used for marking flats. Included in the following white sheet are definitions, drawings, and technical specifications.

Basic Roll Marking: For roll marking, the mark is "rolled" onto the part. It is an economic solution in applications where tonnage requirements make a press too costly. It is also a practical method where fragile parts would be damaged by stamping pressure. This method can be used on both flat and round parts.

Example showing dovetail roll carriage with solid concave roll die marking along the OD of a round part.
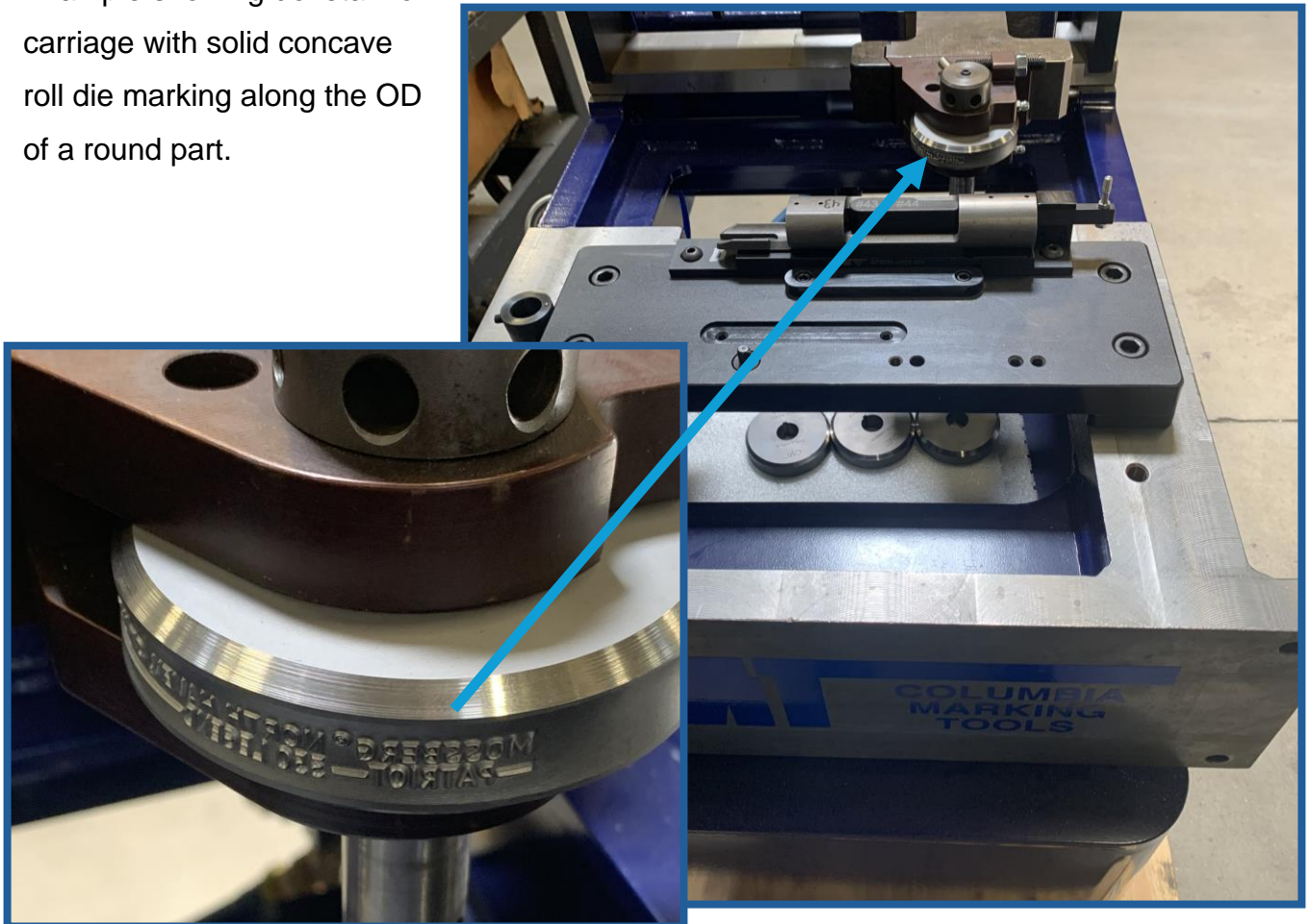
Terminology

Ram Cylinder: The cylinder that moves the tooling toward the workpiece, or part being marked

Slide Cylinder: The cylinder that moves/rolls the tooling across the part

Ram stroke: Amount of approach of the ram cylinder

Slide stroke: Amount of motion of the slide cylinder, or maximum length of mark

Dovetail Mount: Quick release mounting for reduced tooling changeover times. This is a CMT standard

T – Slot Mount: The mounting of the holder uses a nut and screw placed through the holder into a recess in the machine. The holder is slid into place and the nut and screw are tightened to hold securely.

Flat Top Mount: Threaded holes in the holder are secured by screws into press or roll marker.

Roll Carriage: Tooling holder to provide shaft and rotating mechanism for rotating round tooling for roll marking on flat parts.

Roll Die: Round marking tooling with the marking legend on the OD, and the ID to contain a keyway to be placed on a rotating shaft during the roll marking process.

Roll Type Holder: Round holder for individual stamps used during the roll marking process to mark flat parts.

Wedge Type: Individual type for round roll type holder.

*Segment Logo Dies:* Multi-character or logo pieces of marking type.

Shaft: Rotating machine element holding tooling in place during roll marking process.

Keyway: Notch in Tooling to align with key on the shaft and maintain orientation during machine operation.

Roll Type Holder – 1 line

COLUMBIA roll type holders, developed to efficiently mark both flat and contoured surfaces, are designed to hold individual step style wedge type or combinations of wedge type, logo-type, and segment dies. The step in the cover plate retains the type in the holder while a take-up plate, provided with each holder, holds the type in perfect alignment.

The hub extends 1/16" past the cover plate allowing the plate to be released while the holder remains firmly locked in the carriage. A truly time-saving feature.
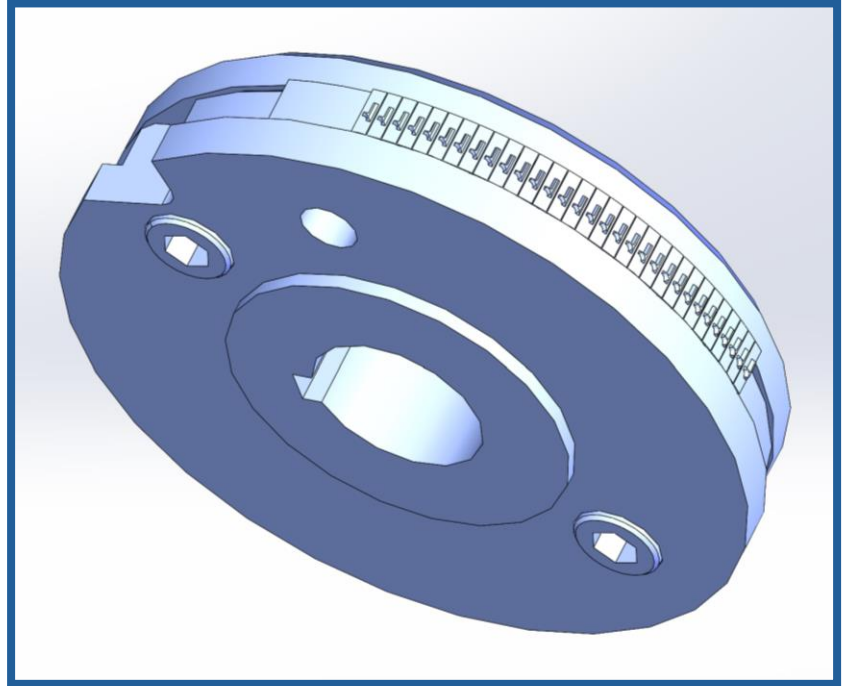
The roll type holder in combination with the dovetail roll carriage minimizes changeover times and reduces tooling costs.

- The no-tooling required changeover of the dovetail allows for quick and easy removal.

- The individual wedge type allows for flexibility of marking legend without the investment in an extensive inventory of roll dies.

- Multi-Character dies offer a time savings in tooling setup for common portions of the marking legend including company name, and part numbers.
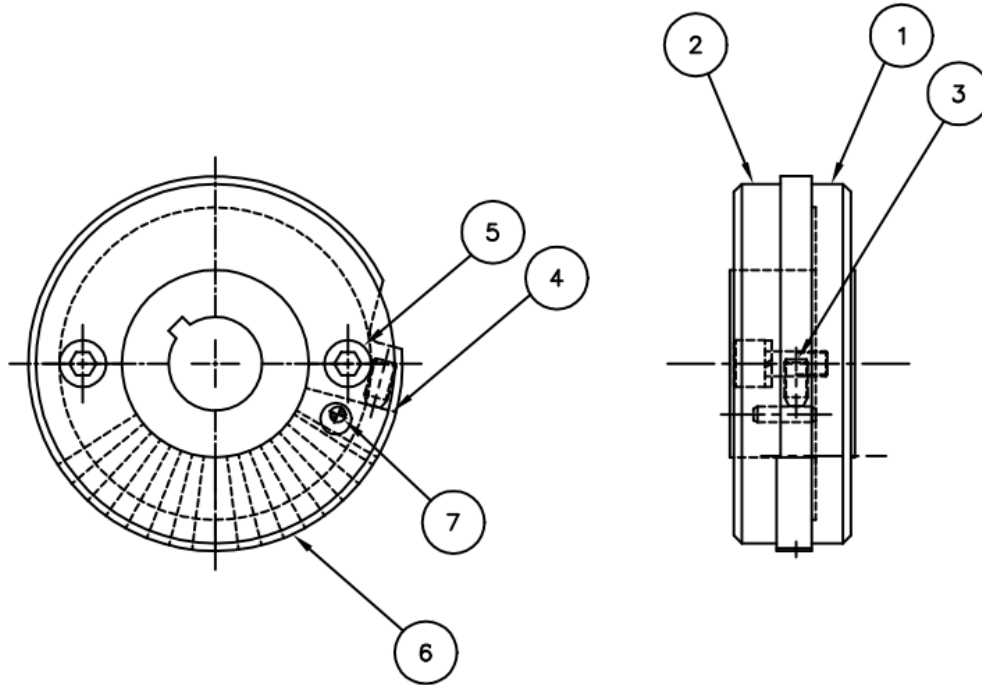
Roll Type Holder Dimensions

Item #	Character Sizes	Qty	"A"	"B"	"C"	Use in Roll Carriage
RMA-2	1/16" 1.6mm	32	7/32" 5.6mm	2" 50.8	3/4" 19mm	DCA-75
	1/8" 3.2mm	16				
RMA-3	1/16" 1.6mm	48	7/32" 5.6mm	3" 76.2mm	3/4" 19mm	DCA-75
	1/8" 3.2mm	24				
RMB-2	3/16" 4.8mm	10	9/32" 7.1mm	2" 50.8	1" 25.4mm	DCA-100
RMB-3	3/16" 4.8mm	16	9/32" 7.1mm	3" 76.2mm	1" 25.4mm	DCA-100
RMC-2	1/4" 6.3mm	8	11/32" 8.7mm	2" 50.8	1" 25.4mm	DCA-100
RMC-3	1/4" 6.3mm	12	11/32" 8.7mm	3" 76.2mm	1" 25.4mm	DCA-100
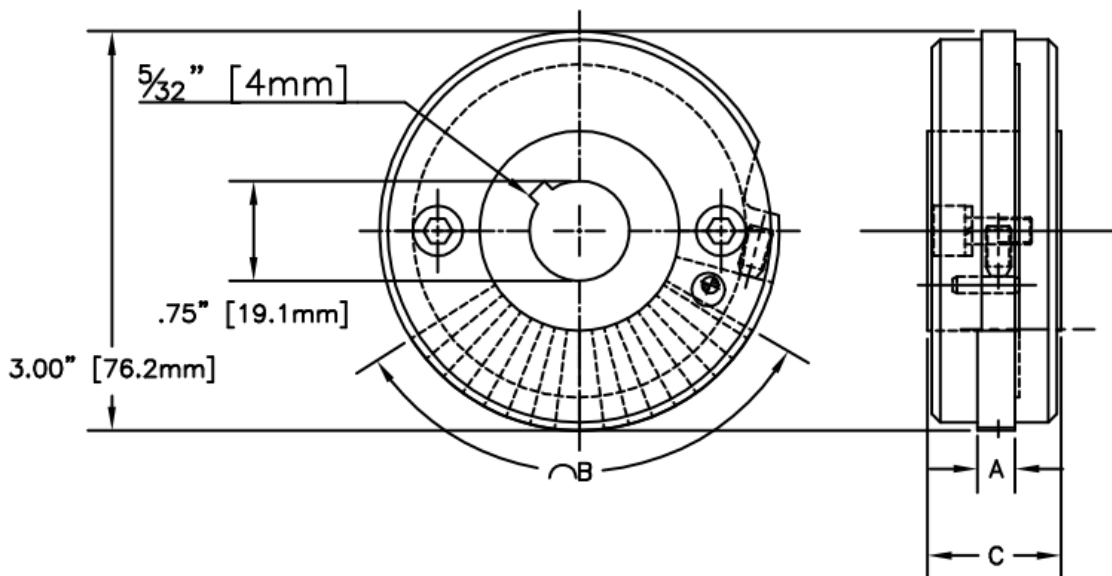
Roll Type Holder Parts

Detail #	Description	Qty
1	Hub	1
2	Cover	1
3	#10-32 Set Screw x 3/8"	1
4	Spacer	1
5	Socket Head Ca	2
6	CMW stamps (purchased separately)	Varies
7	Dowel Pin 1/8" x 1/2	1

Roll Type Holder – 2 Line

Item #	Character Sizes	Qty	"A"	"B"	"C"	Shaft	Use in Roll Carriage
2RMA-2	1/16" 1.6mm	32	.369" 9.4mm	2" 50.8	1" 25.4mm	A	DCA-100
	1/8" 3.2mm	16				A	
2RMA-3	1/16" 1.6mm	48	.369" 9.4mm	3" 76.2mm	1" 25.4mm	A	DCA-100
	1/8" 3.2mm	24				A	
2RMB-2	3/16" 4.8mm	10	.5" 12.6mm	2" 50.8mm	1.5" 38.1mm	C	DCC-150
2RMB-3	3/16" 4.8mm	16	.5 12.6mm	3" 76.2mm	1.5" 38.1mm	C	DCC-150
2RMC-2	1/4" 6.3mm	8	.531" 13.5mm	2" 50.8mm	1.5" 38.1mm	C	DCC-150
2RMC-3	1/4" 6.3mm	12	.531" 13.5mm	3" 76.2mm	1.5" 38.1mm	C	DCC-150

Standard roll type holder uses CMW wedge type

A= Standard
S = .75" [19.1]
K = .16" [4.0mm]

C= Large
S = 1.0" [25.4mm]
K = .187" [4.8mm]

3.00" [76.2mm]

Roll Type Holder Parts

Detail #	Descrption	Qty
1	Hub	1
2	Cover	1
3	#10-32 Set Screw x 3/8"	2
4	Spacer	2
5	Socket Head Cap Screw	2
6	CMW stamps (purchased separately)	Varies
7	Dowel Pin 1/8" x 1/2	1
8	2nd Line Plate	1

Roll Type Holder – 3 Line

Item #	Character Sizes	Qty	"A"	"B"	"C"	Use in Roll Carriage
3RMA-2	1/16" 1.6mm	32	.380" 9.6mm	2" 50.8	1.63" 41.4mm	DCC-175
	1/8" 3.2mm	16				
3RMA-3	1/16" 1.6mm	48	.380" 9.6mm	3" 76.2mm	1.63" 41.4mm	DCC-175
	1/8" 3.2mm	24				
3RMB-2	3/16" 4.8mm	10	.5" 12.6mm	2" 50.8mm	2" 50.8mm	DCC-200
3RMB-3	3/16" 4.8mm	16	.5 12.6mm	3" 76.2mm	2" 50.8mm	DCC-200
3RMC-2	1/4" 6.3mm	8	.531" 13.5mm	2" 50.8mm	2" 50.8mm	DCC-200
3RMC-3	1/4" 6.3mm	12	.531" 13.5mm	3" 76.2mm	2" 50.8mm	DCC-200

Standard roll type holder uses CMW wedge type

Roll Type Holder Parts

Detail #	Descrption	Qty
1	Hub	1
2	Cover	1
3	#10-32 Set Screw x 3/8"	3
4	Spacer	3
5	Socket Head Cap Screw	2
6	CMW stamps (purchased separately)	Varies
7	Dowel Pin 1/8" x 1/2	1
8	2nd and 3rd Line Plate	2

Standard Wedge Type – CMW

For use in 3" diameter holders.

Technical Specifications:

- Double pass engraved (NOT EDM)

- W-1 Tool Steel

- 45 Degree engraving angle

- Sharp face character

- Gothic standard (San Serif) font

- Heat treated to 57-59 Rc

- Deburred

- Acc Coating for long life
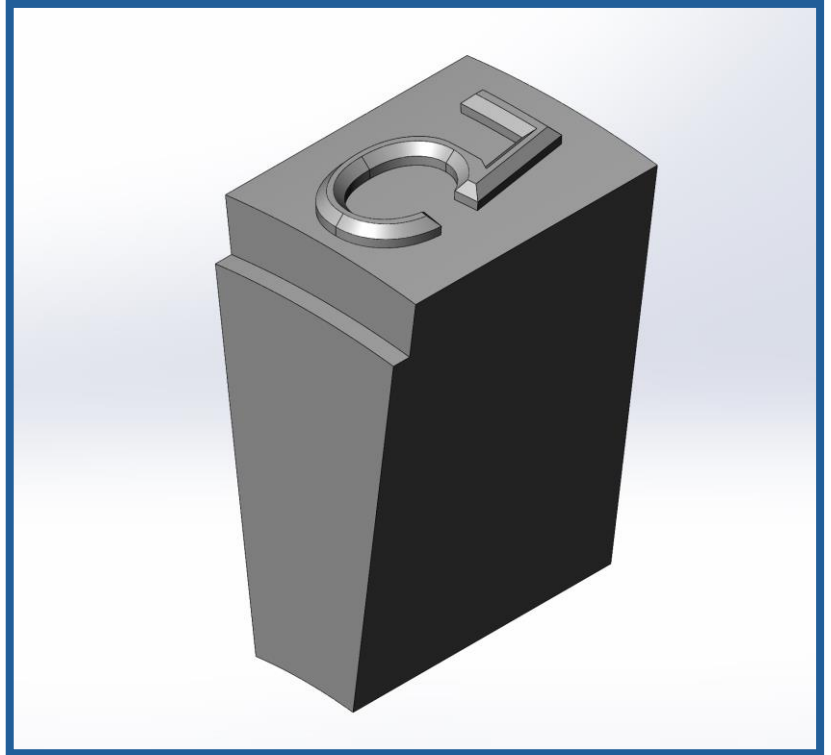
What Makes Columbia Marking Tools different?

- ✓ Quality Materials

- ✓ Precision Machining

- ✓ Double Pass Engraved

- ✓ Superior Heat Treating

Columbia Marking Tools manufactures all our stamps and dies in United States of America. Our factory in Chesterfield Michigan maintains the highest quality manufacturing standards.
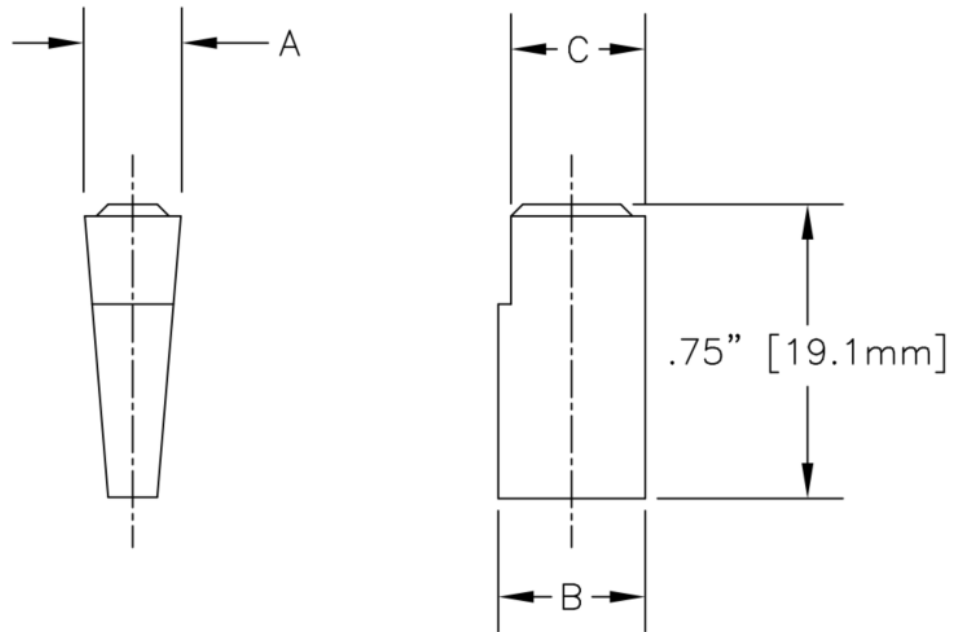
Drawing

A = Width

B = Height Base

C = Height Top

Char Size – Measured from the top of the character.

Char Width – Style 2A, width is 50% of the character size.

Tolerance - +.000"/-.001" on all dimensions.

.75" [19.1mm]

Standard Dimensions

Char. Size	Catalog Number	"A"	"B"	"C"	Engraving Depth
1/16" 1.6mm	CMW06	1/16" 1.6mm	1/4" 6.3mm	7/32" 5.6mm	.018" .5mm
3/32" 2.4mm	CMW09	3/32" 2.4mm	1/4" 6.3mm	7/32" 5.6mm	.020" .5mm
1/8" 3.2mm	CMW13	1/8" 3.2mm	1/4" 6.3mm	7/32" 5.6mm	.023" .6mm
3/16" 4.8mm	CMW19	3/16" 4.8mm	5/16" 7.9mm	9/32" 7.1mm	.025" .6mm
1/4" 6.3mm	CMW25	1/4" 6.3mm	3/8" 9.5mm	11/32" 8.7mm	.030" .8mm

How to Order Standard Stamps

Build catalog number as shown.

1) Start with the basic model/stamp style.

2) Add the 2-digit character size notation.

3) Finish with the reading, alpha-numeri characters, punctuation codes, or Symbol numbers. Some symbols may require a double sized insert.

To order individual LETTERS and FIGURES add suffix of actual letter or figure to part number

CMW	09	-A
Style	Char Size	Letter or Figure

To order BLANK SPACERS add suffix of "-00" to part number

CMW	13	-00
Style	Char Size	Blank Spacer

To order PUNCTUATION add suffix from table to part number

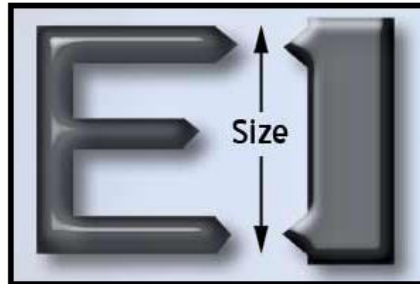| CMW	25	-RR
Style	Char Size	Asterisk Suffix

2 Digit Character Size

- 1/32" – 03
- 1/16" – 06
- 3/32" – 09
- 1/8 – 13
- 5/32" – 16
- 3/16" – 19
- ¼" – 25
- 5/16" – 31
- 3/8" – 38
- 1/2" - 50

Character Face Styles
Standard Sharp Face

Standard CMF Flat Stamps are engraved as sharp face characters. This type of face style is engraved with a sharp edge. A sharp face tool penetrates more easily than flat face style.

Custom Dot Style

Dot Style Characters are engraved with a series of conical dots for the lowest possible stress when marking. Recommended for high pressure fittings, aircraft, and other parts where sharp tools might disrupt the molecular structure of the metal.
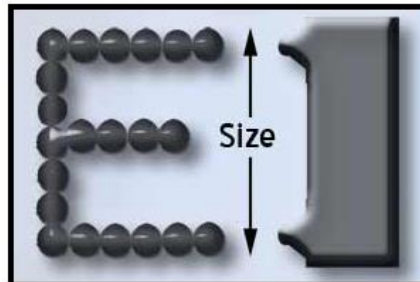
To order individual DOT STYLE letters and figures add DOT notation to part number as shown.

CMW	09	DOT	-A
Style	Char Size	Dot-Style Notation	Letter or Figure

How to Order Multi-character or Logo Dies

To order LOGO DIES (multiple character stamps) in Wedge stamp style add prefix "S" and suffix of ACTUAL LEGEND to catalog number.

S	CMW	13	-FoMoCo
Logo Die	Style	Char Size	Stamp reads "FoMoCo". Width is A*6

S	CMW	13	-COMPANY
Logo Die	Style	Char Size	Stamp reads "COMPANY". Width is A*7

Benefits of multi-character dies

1. Characters are exactly lined up.

2. Ability to reduce spacing or marking length.

3. Same wear, all characters mark same depth.

4. Easily add custom logos or characters

For Custom logo dies, please email artwork or logo, stamp style, and size required to quotes@columbiamt.com.
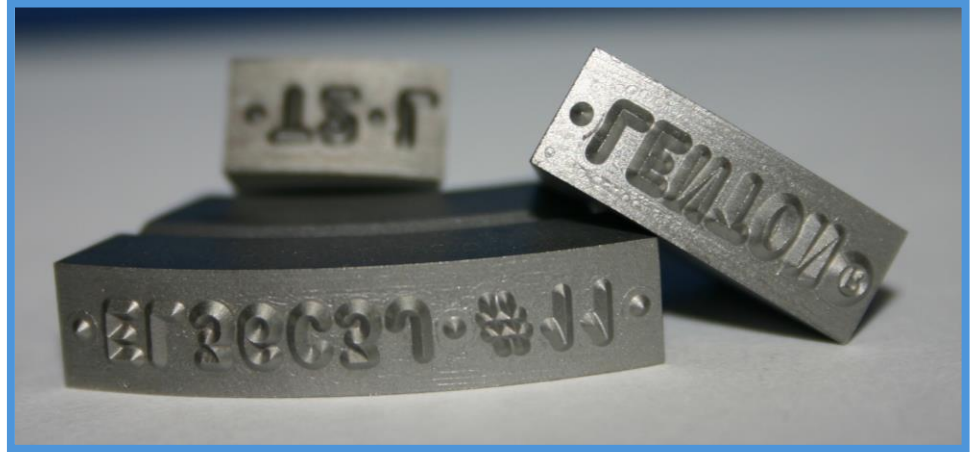
Multi-character Dimensions

MA = Width is determined by the number of character and spaces. Multiple the standard width of A by the total number of character and spaces.
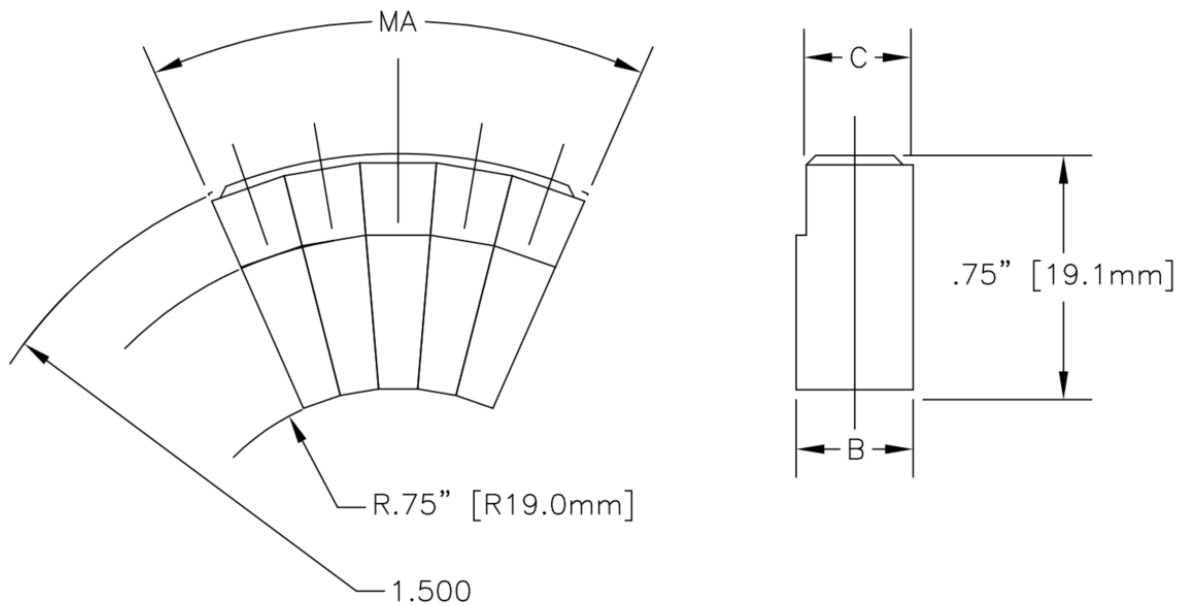
B = Height Base

C = Height Top

Char Size – Measured from the top of the character.

Char Width – Style 2A, width is 50% of the character size.

Tolerance - +.000"/-.001" on all dimensions.

Consideration for overall length of multi-character stamps:

- Spaces may be reduced to less than 1 standard space wide.
- Narrow characters may be reduced less than 1 standard space wide.
- A double wide stamp blank is required for some of the symbols. Symbols where the width is about the same as the height. One example is Symbol #110.

Roll Type Holder – 3/8" and 1/2" characters

Roll marking of large characters provides:

- Reduced force over press marking. Less stress on part to assure even heat-treating process.

- Increased through put over dot-peen and scribe.

- Maximum depth of any marking method.

- Best method to assure mark will be visible after coating or painting process.
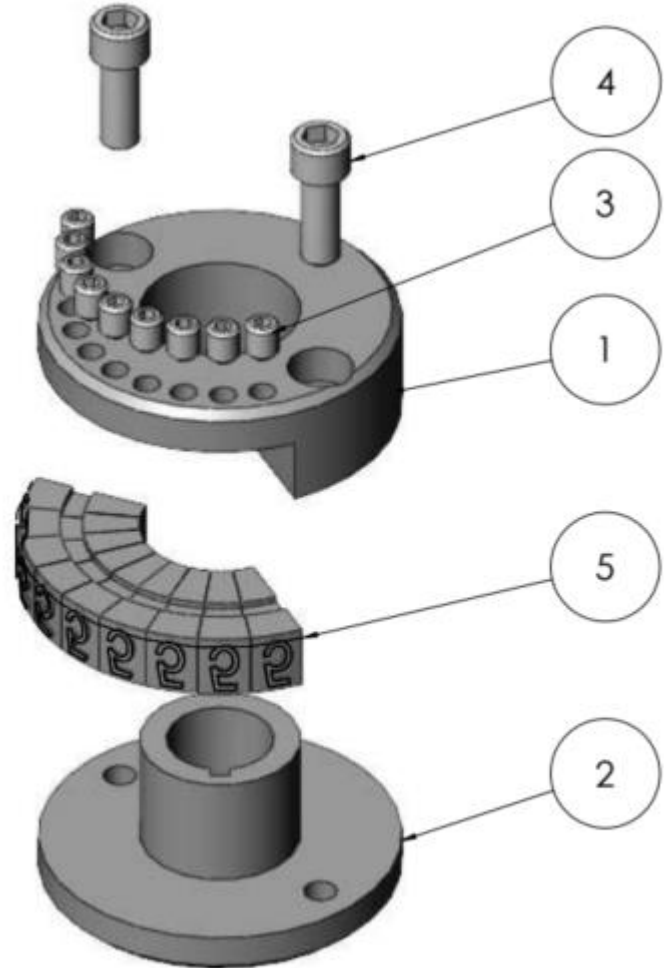
Ø 3.375" [85.7mm]

Ø 1" [25.4mm]

A

1.5" [38.1mm]
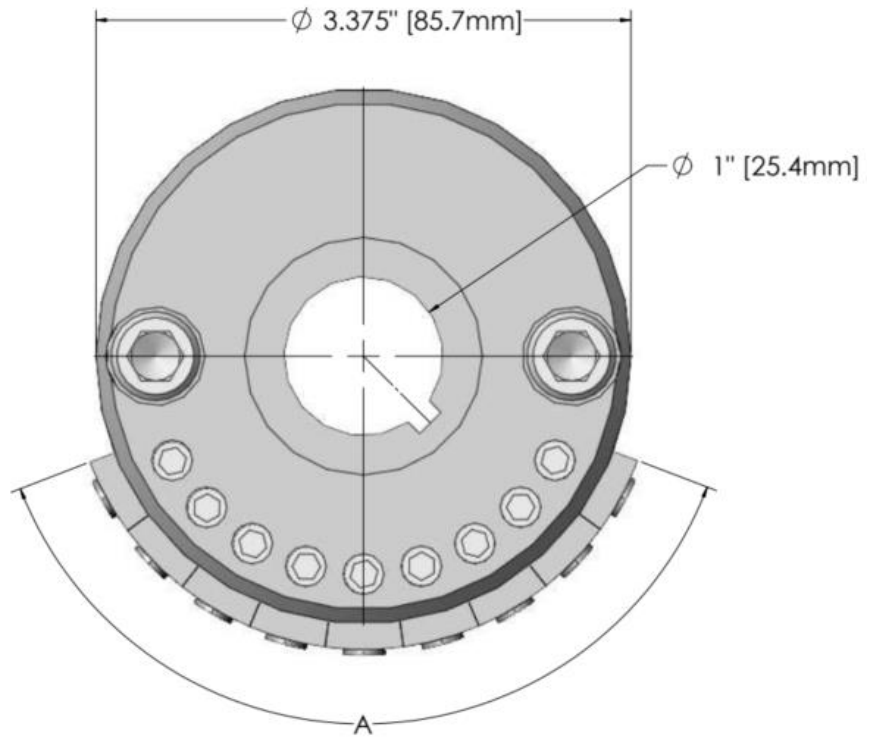
Item #	Character Sizes	Qty	"A"	Use in Roll Carriage
RME40	3/8" 9.8mm	10	3.75" 95.2mm	DCC-150
RMF50	1/2" 12.7mm	9	4.5" 114.3mm	DCC-150

Large character roll type holder uses CMD wedge type.

Roll Type Holder Parts

The RME40 and RMF50 are considered 3.75" diameter holders. The measure is taken from the top of the stamps to the center point.

Detail #	Descrption	Qty
1	Holder Body	1
2	Holder Retainer	1
3	Socket Set Screws – stamp retention	Varies
4	Socket Head Cap Screw	2
5	CMD Stamps (purchased separately)	Varies

Large Wedge Type – CMD
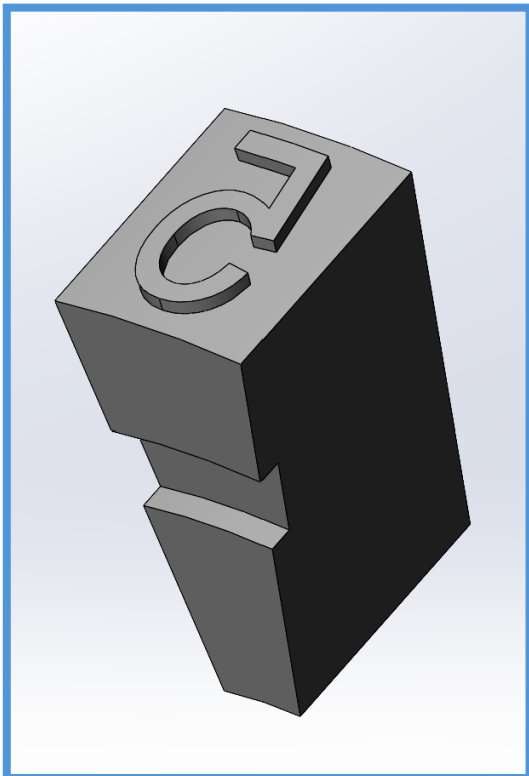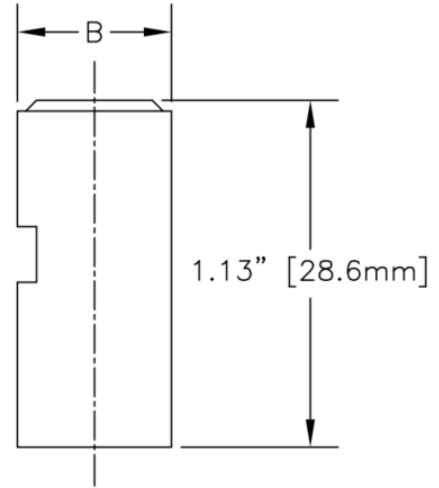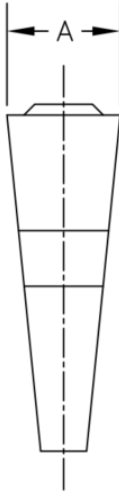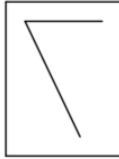
For use in 3.75" diameter holders.

A = Width

B = Height Top

Char Size – Measured from the top of the character.

Char Width – Style 2A, width is 50% of the character size.

Tolerance - +.000"/-.001" on all dimensions.

1.13" [28.6mm]

Char. Size	Catalog Number	"A"	"B"	Engraving Depth
3/8" 9.8mm	CMD38	3/8" 9.8mm	1/2" 12.7mm	.035" .9mm
1/2" 12.7mm	CMD50	1/2" 12.7mm	5/8" 15.9mm	.050" 1.3mm

Technical Specifications:

- Double pass engraved (NOT EDM)
- W-1 Tool Steel
- 45 Degree engraving angle
- Sharp face character
- Gothic standard (San Serif) font
- Heat treated to 57-59 Rc
- Deburred
- Acc Coating for long life

Standard Font

Columbia Marking Tools uses a font called "Gothic". This sans serif font is plain and easy to read.

ABCDEFGHIJKLM
NOPQRSTUVWXYZ
0123456789
" # / , : . * ~ - > < + % $ = & ×

The alpha/numeric listing above is a reference for the style of font CMT uses. However, there are slight variations between different manufacturing processes.

Even from year to year, the exact font changes slightly. The top part on figure 3, or the top flag on the figure one may be slightly more curved or a different size. CMT strongly recommends providing a picture or rubbing for the exact font recreation when required.

Roll Die Standard - CMKA

The CMT Roll Carriage series DCA use the CMKA 3" roll dies. These quality dies are designed for high volume marking and industrial use. The roll dies are offered in three sizes to fit into the respective roll carriages.

- CMKA75 – .75" width
- CMKA100 – 1.00" width
- CMKA125 – 1.25" Width

Optional 2ⁿᵈ Keyway upgrade This upgrade includes 2 keyways with two identical readings. The double engraved roll dies offer extended life and a cost savings over the purchase of 2 dies. The marking legend must be under 4.5" in length for this great cost saving feature

How to Order

| Catalog Number	Symbol	Example
Roll Carriage DCA75 DCA100 DCA125	CMKA75 CMKA100 CMKA125	CMKA100-25-2
Character Size 1/16" 3/32" 1/8" 3/16" 1/4"	06 09 13 19 25	
Keyway 1 2	- 2	

Technical Specifications:

- Double pass engraved (NOT EDM)
- 0-1 Tool Steel
- 45 Degree engraving angle
- Sharp face character
- Gothic standard (San Serif) font
- Heat treated to 57-59 Rc
- Deburred

Select Roll Die then provide reading

Provide the roll die catalog number then provide the reading. The reading should include any required spaces, and reflection the proper use of capitals and small case characters. If there is any marking legend lengths these also should be noted.

Drawing

Ø.75" [Ø19.1mm]

Optional
2nd Keyway

⁵⁄₃₂" [3.9mm]
Keyway

A

3.00" [76.2mm]

.06" [1.6mm] x 45°
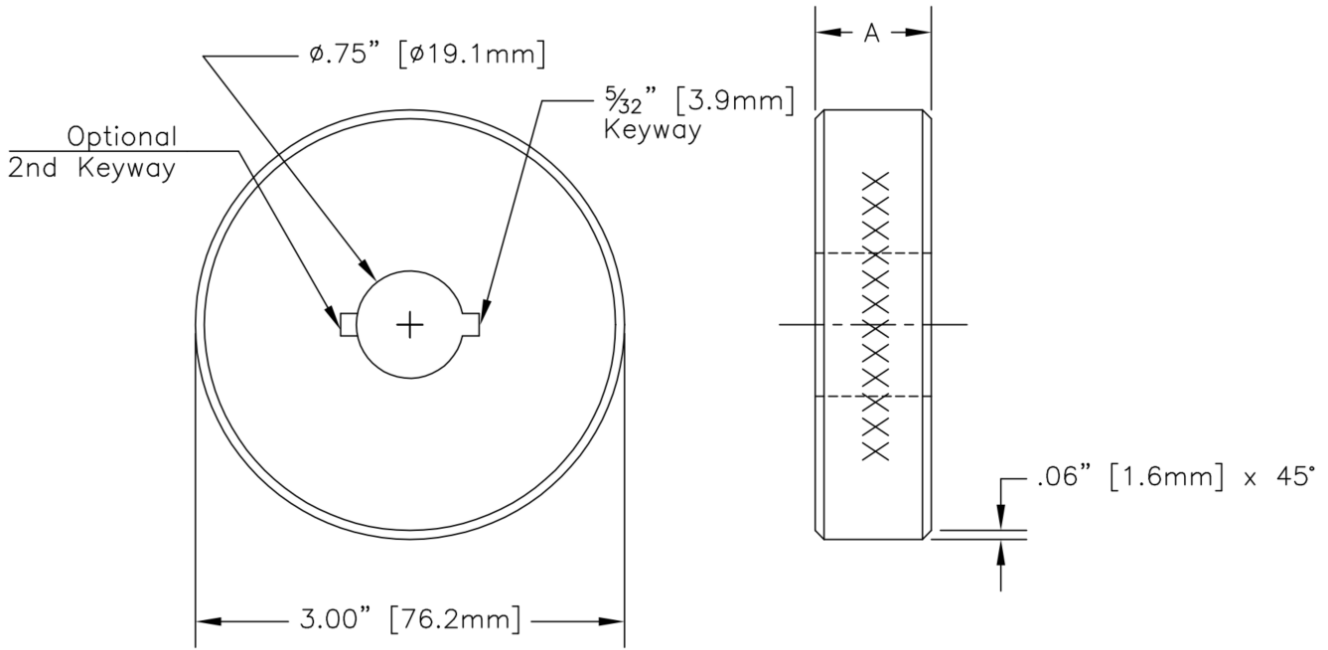
Roll Die Large - CMKC

The CMT Roll Carriage series DCC use the CMKC 3" roll dies. These quality dies are designed for high volume marking and industrial use. The roll dies are offered in three sizes to fit into the respective roll carriages.

- CMKC150 – 1.50" width
- CMKC175 – 1.75" width
- CMKC200 – 2.00" width
- CMKC225 – 2.25" Width

Optional 2nd Keyway upgrade This upgrade includes 2 keyways with two identical readings. The double engraved roll dies offer extended life and a cost savings over the purchase of 2 dies. The marking legend must be under 4.5" in length for this great cost saving feature

How to Order

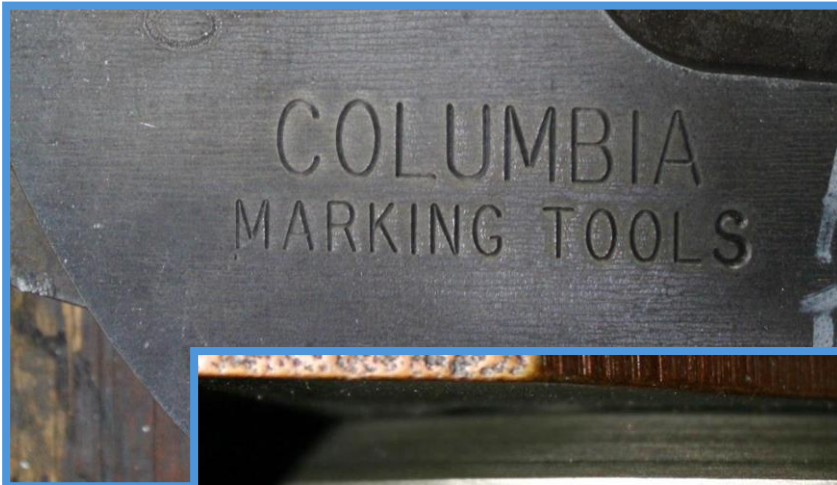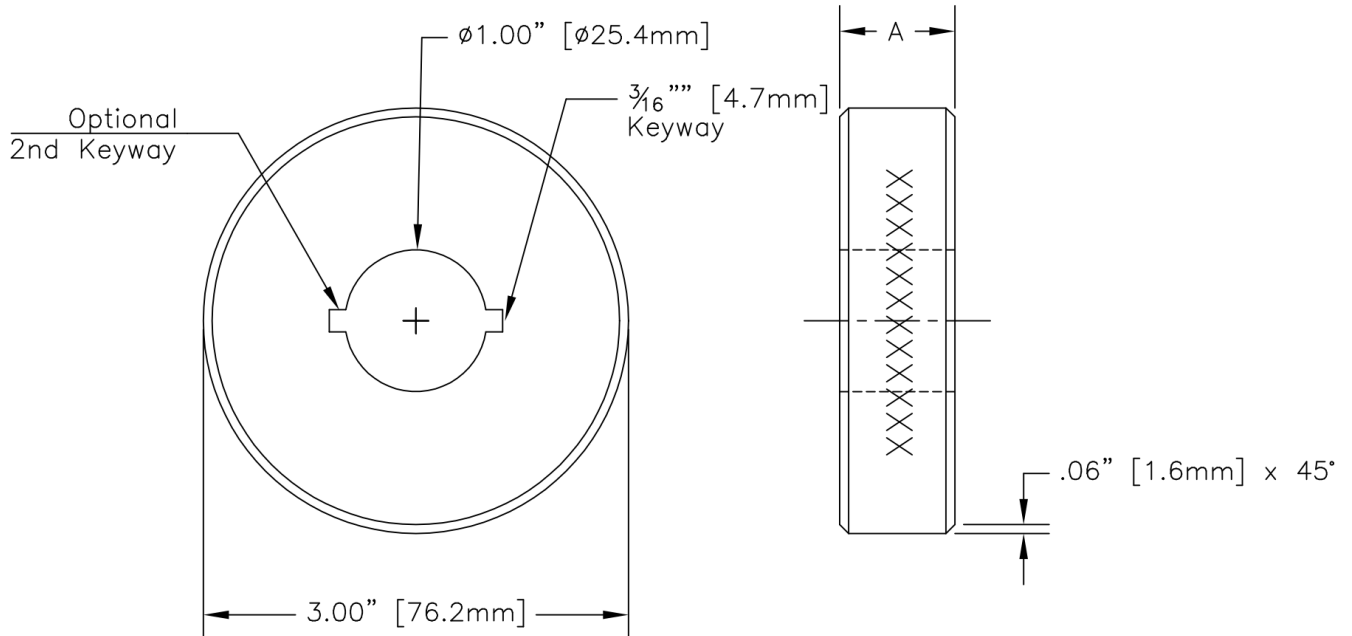| Catalog Number	Symbol	Example
Roll Carriage DCC150 DCC175 DCC200 DCC225	 CMKC150 CMKC175 CMKC200 CMKC225	CMKC200-25-2
Character Size 1/16" 3/32" 1/8" 3/16" 1/4"	 06 09 13 19 25	
Keyway 1 2	 - 2	

Technical Specifications:

- Double pass engraved (NOT EDM)
- 0-1 Tool Steel
- 45 Degree engraving angle
- Sharp face character
- Gothic standard (San Serif) font
- Heat treated to 57-59 Rc
- Deburred

Select Roll Die then provide reading

Provide the roll die catalog number then provide the reading. The reading should include any required spaces, and reflection the proper use of capitals and small case characters. If there are any marking legend lengths these also should be noted.

Drawing

Ø1.00" [Ø25.4mm]

³⁄₁₆ "" [4.7mm]
Keyway

Optional
2nd Keyway

A

.06" [1.6mm] x 45˚

3.00" [76.2mm]

COLUMBIA
MARKING TOOLS

MADE IN U.S.A.
MARGAS REGISTRADAS
SMITH & WESSON
SPRINGFIELD, MASS.
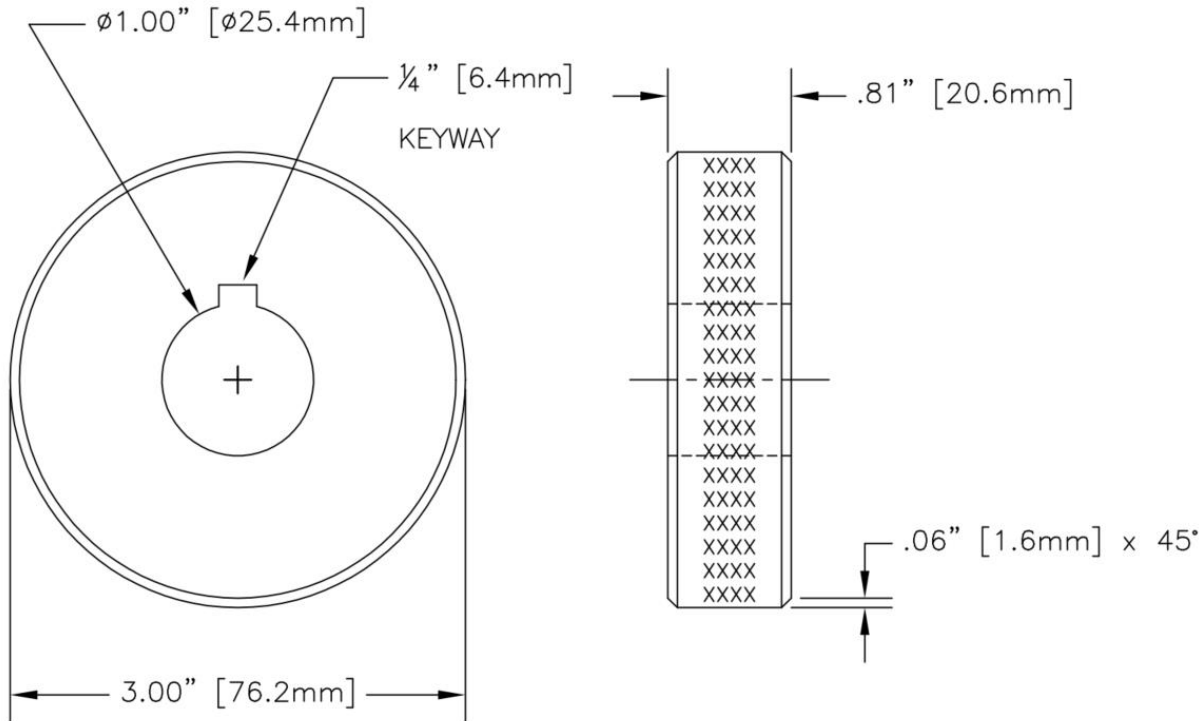
Bar Stock Marking Roll Die – CML

The CMT bar stock markers use the CML 3" roll dies. These quality dies are designed for high volume marking and industrial use.

Technical Specifications:

- Double pass engraved (NOT EDM)

- 0-1 Tool Steel

- 45 Degree engraving angle

- Sharp face character

- Gothic standard (San Serif) font

- Heat treated to 57-59 Rc

- Deburred

Drawing

Char. Size	Catalog Number	Maximum # of Characters	Engraving Depth
1/16" 1.6mm	CML06	8	.018" .5mm
3/32" 2.4mm	CML09	6	.020" .5mm
1/8" 3.2mm	CML13	4	.023" .6mm
Varies	CML-LOGO	1/8" [3.2mm] x 3/8" [9.8mm]	Varies

How to Order Roll Dies

To order ROLL DIES for 2020 and 4040 bar stock marking machines add suffix reading or ACTUAL LEGEND to catalog number.

| CML	13	-CMT
Style	Char Size	Stamp reads "CMT".

Bar stock Marking Wafer Dies and Holder

The wafer die holder holds multiple individual wafer or character roll dies. These wafer dies are interchangeable. They can be used in groups to make different variable readings required on bar stock – including Material Identification, Heart Codes, Date Codes, Lot Numbers.
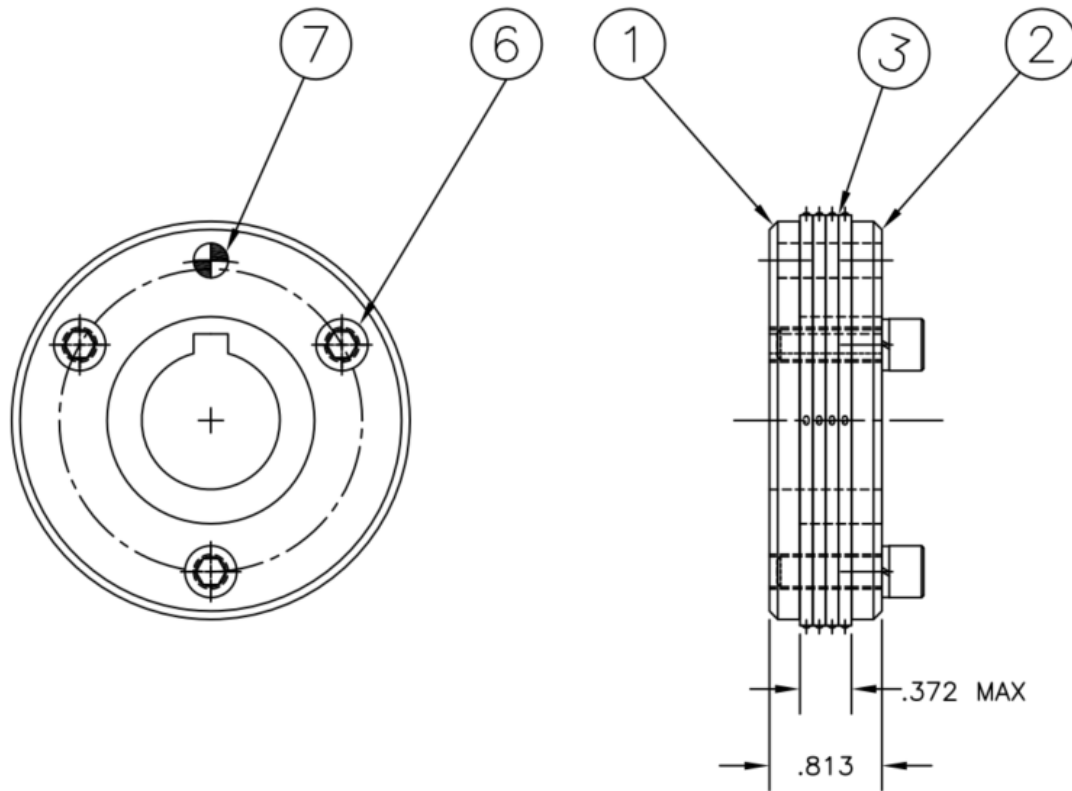
The wafer dies offer:

a) Reduced tooling costs over Solid roll dies

b) Flexible marking legends

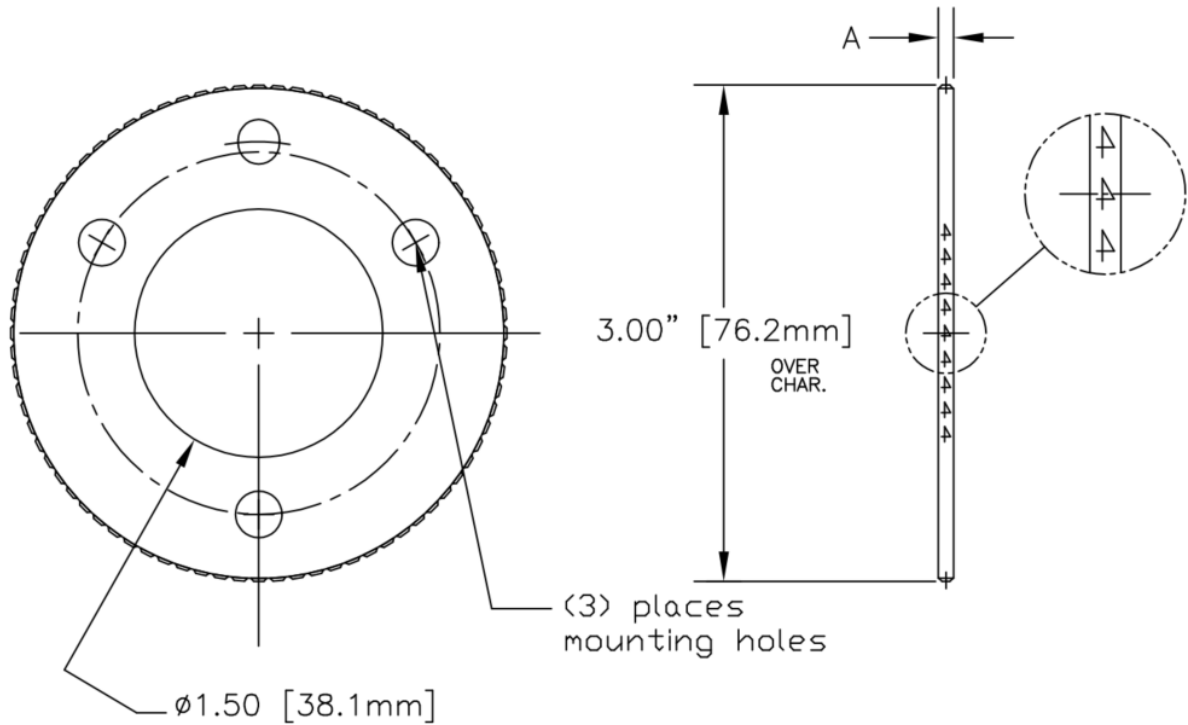Spaces and custom character may also be engraved n the wafer dies.
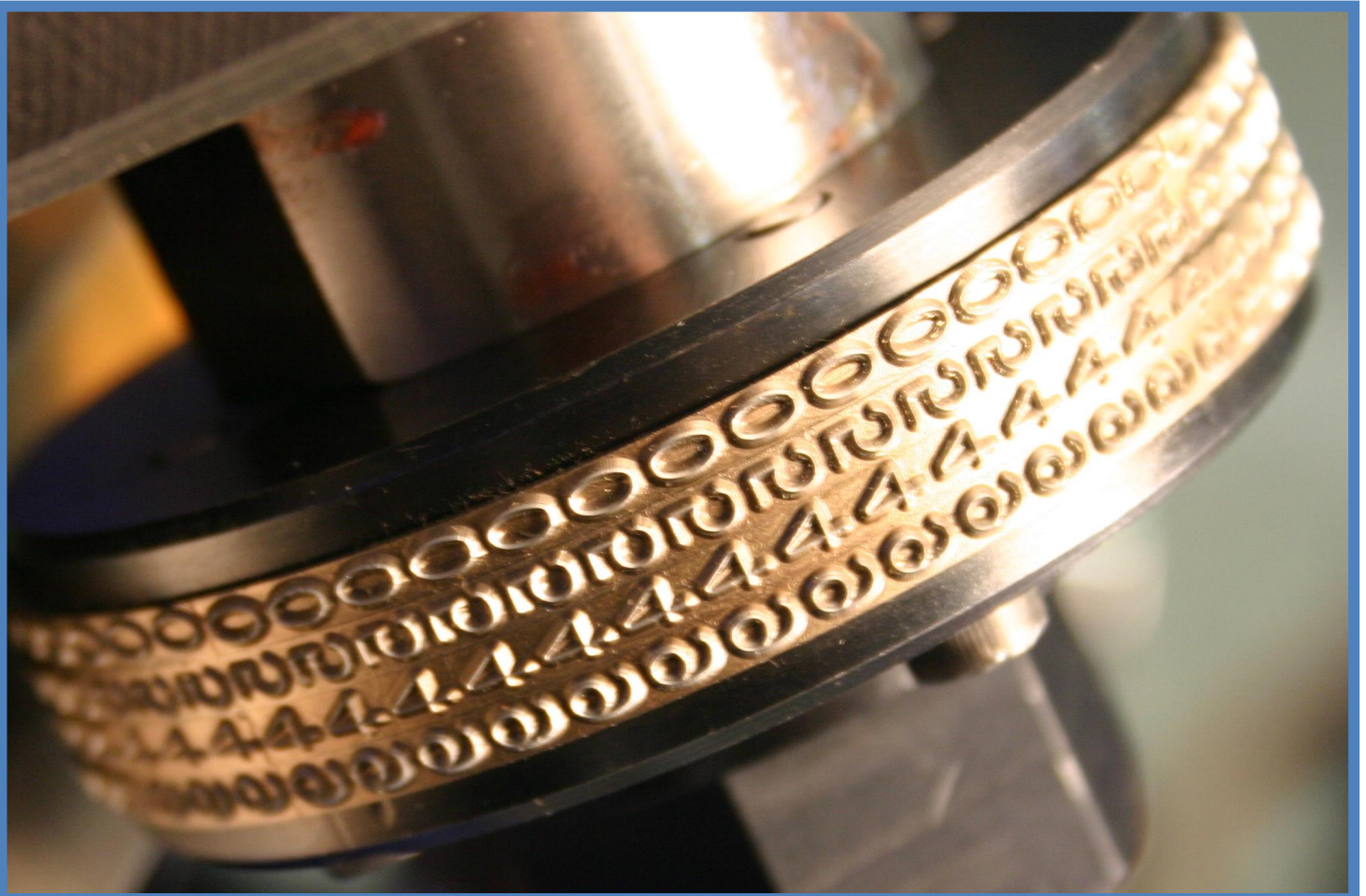
Wafer Die Holder – RMWDH

.372 MAX

.813

Detail #	Catalog #	Descrption	Qty
1	RMWDH-01	Holder Body	1
2	RMWDH-02	Holder Retainer	1
3	Wafer Dies	Purchased separately	Varies
6	RMWDH-06	Socket Head Cap Screw	2
7	RMWDH-07	Dowel Pin	1

Wafer Dies – RMWD

3.00" [76.2mm] OVER CHAR.

(3) places mounting holes

ø1.50 [38.1mm]

Char. Size	Catalog Number	A	Engraving Depth
1/16" 1.6mm	RMWD06	1/16" 1.6mm	.018" .5mm
3/32" 2.4mm	RMWD09	3/32" 2.4mm	.020" .5mm
Spacer	RMWD0600	1/16" 1.6mm	Spacer
Spacer	RMWD0900	3/32" 2.4mm	Spacer*
Spacer	RMWD0500	.046" 1.2mm	Spacer**

*Used to center (2) RMWD06
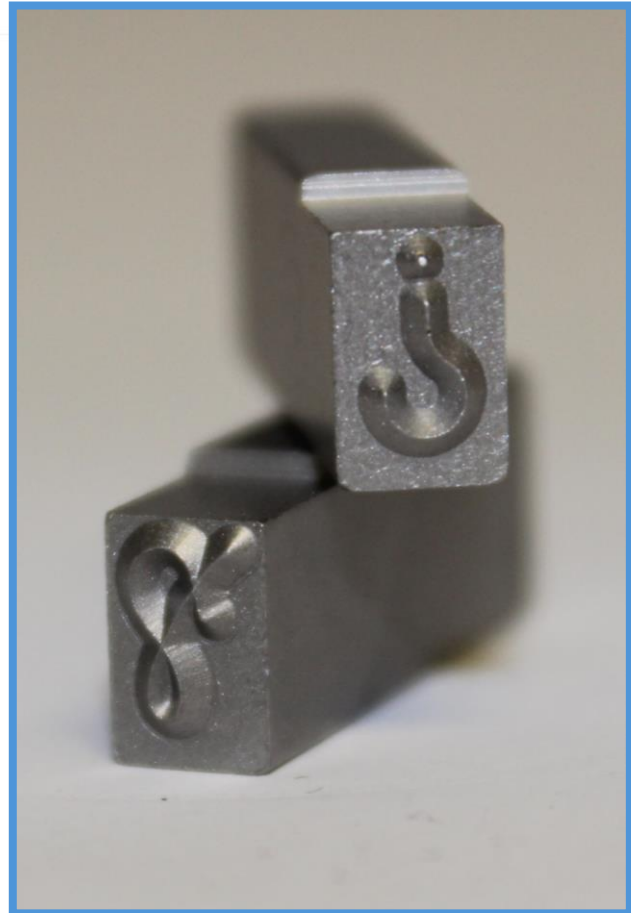**Used to center (3) RMWD06

Punctuation

All CMT standard die and stamps are available with a wide variety of punctuation or symbols.

How to order:
For a CMW38 3/8" wedge type with an Ampersand - the following code would be used:
**CMW38AA**

To order punctuation on a die or stamps use the appropriate code from the following list.

-AA Ampersand (&)
-BB Dollar Sign ($)
-BS Back Slash (\)
-CC Comma (,)
-DD Dash (-)
-EE Equals Sign (=)
-GG Semi Colon (;)
-HH Apostrophe (')
-II Inch Mark, Quotes (")
-JJ Underscore (_)
-KK Question Mark (?)
-LL Colon (:)
-MM Multiplication (X)
-NN Number Sign (#)
-Degree Symbol (°)

-PP Period (.)
-QQ Percent Sign (%)
-RR Asterisk (*)
-SS Slash, Diagonal (/)
-TT Number Sign (#)
-US Underscore (_) use JJ
-UU Plus Sign (+)
-VV Left Parenthesis [(]
-WW Right Parenthesis [)]
-YY Exclamation Point (!)
-ZZ At Sign (@)
REG- Registration Symbol (®)
PEN- Pentastar
PUN- Punctuation Other Examples < > ^ ~ [ ]

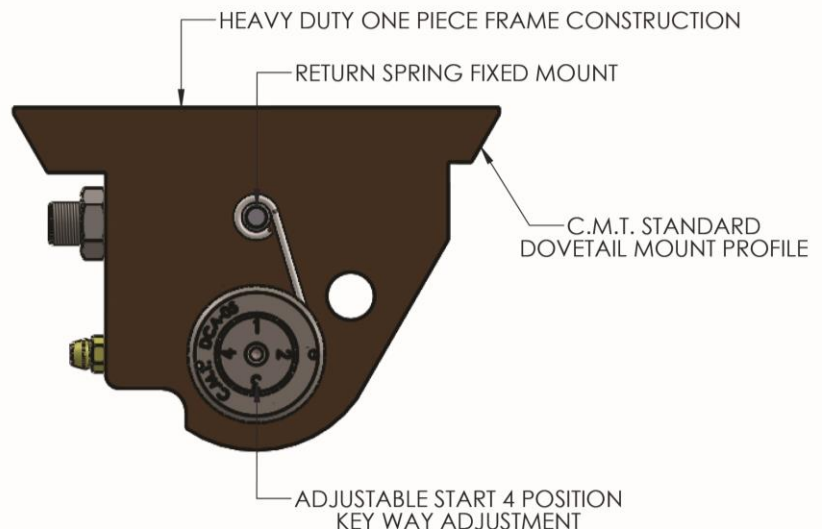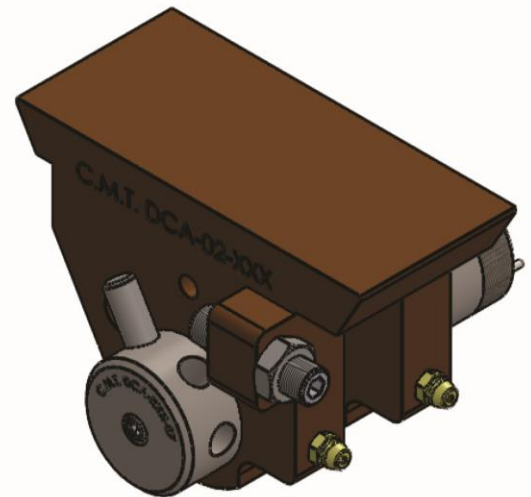## Roll Carriage Standard – DCA Style
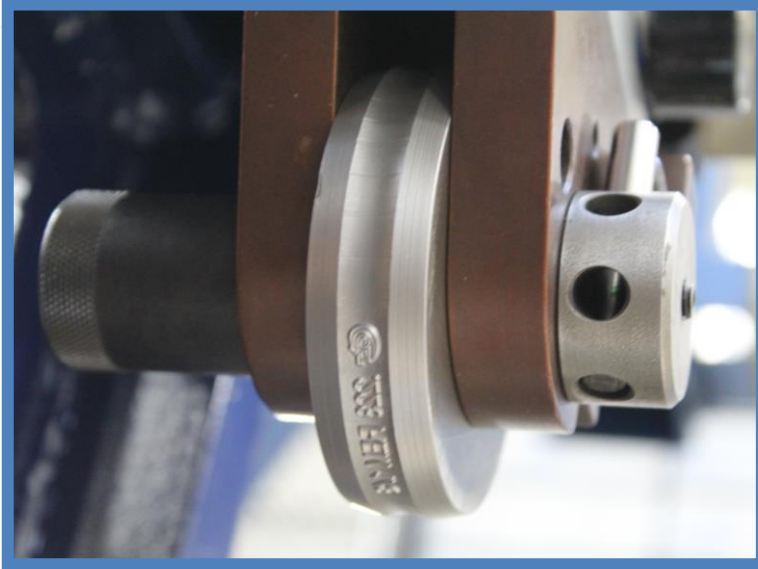
A key element in the roll marking process of marking on flat parts is the roll carriage.

Roll Carriage: Tooling holder to provide shaft and rotating mechanism for rotating round tooling for roll marking on flat parts.
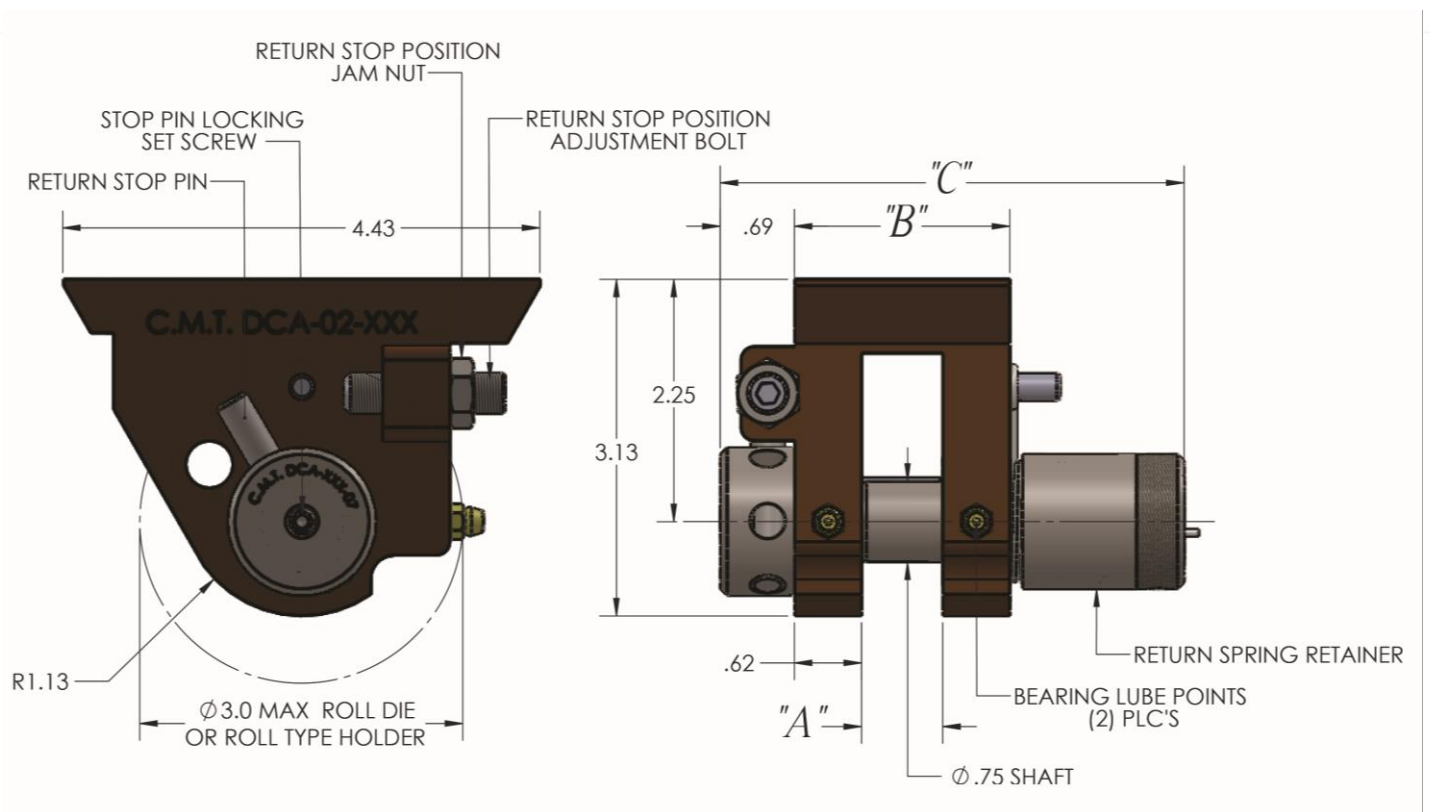
The CMT roll carriage classic design comes standard with a dovetail mount. The dovetail mount allows to quick tooling changeover, and precision positioning every time. The durable design is built to the extremely high CMT industrial tooling standards.

The DCA series is designed for roll dies and holders of 3/4" to 1 1/4" wide.
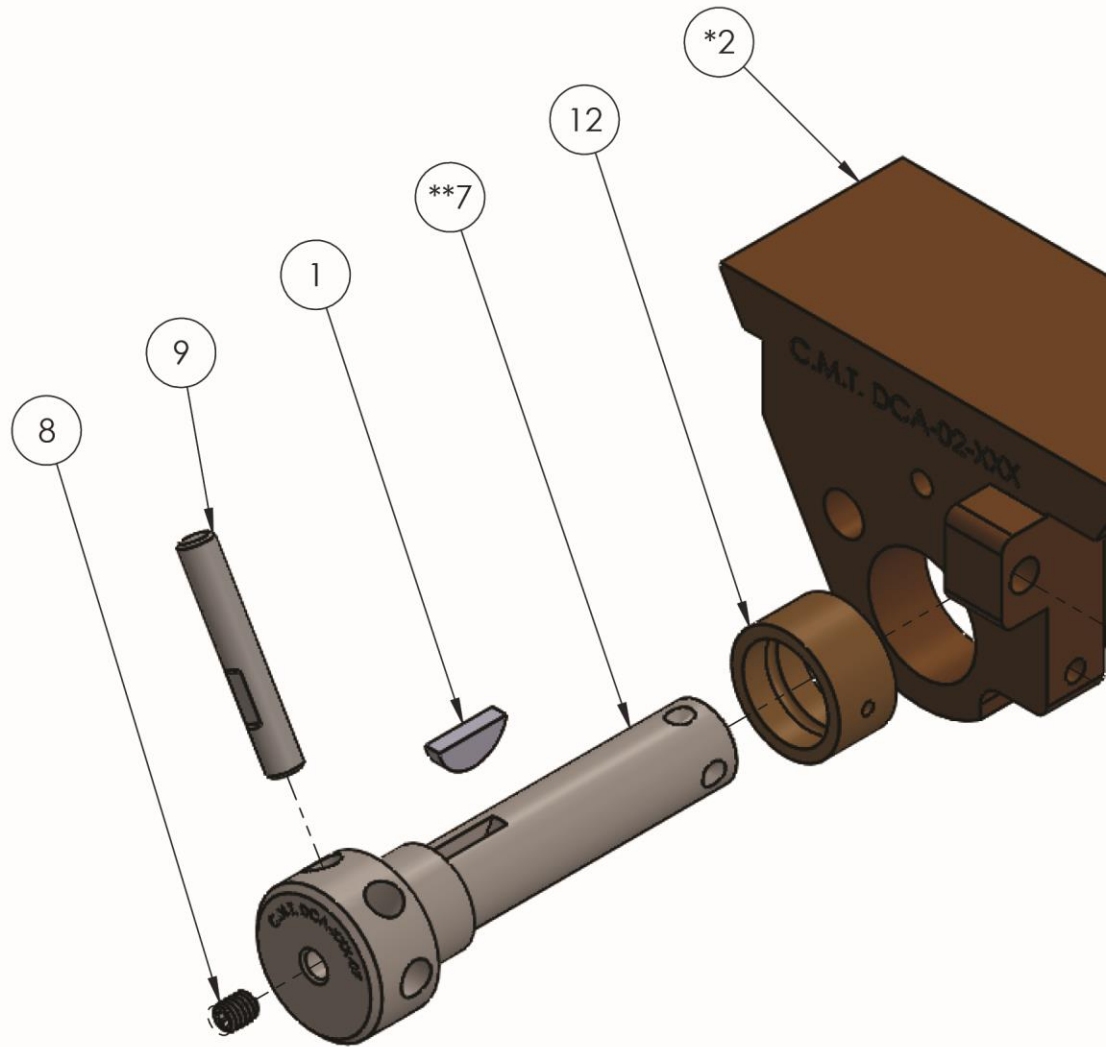The DCA roll carriage has a 3/4" shaft.

HEAVY DUTY ONE PIECE FRAME CONSTRUCTION

RETURN SPRING FIXED MOUNT

C.M.T. STANDARD DOVETAIL MOUNT PROFILE

ADJUSTABLE START 4 POSITION KEY WAY ADJUSTMENT

How to Order – DCA

| Catalog #	A	B	C
DCA75	.75" [19.5mm]	2.0" [50.8mm]	4.31" [109.5mm]
DCA100	1.00" [25.4mm]	2.25' [57.15mm]	4.56" [115.8mm]
DCA125	1.50" [38.1mm]	2.50" [63.5mm]	4.81" [122.2mm]

Details

XXX – While most of the details of the DCA series are interchangeable the SHAFT and the FRAME are unique to the cataog number. Replace as follows

- DCA75 – 075
- DCA100 – 100
- DCA125 - 125

Detail #	Catalog #	Descrption	Qty
1	DCA-01	Key	1
2	DCA-02-XXX	Frame	1
3	DCA-03	Dowel	1
4	DCA-04-LH DCA-04-RH	Return Spring LH/RH	1
5	DCA-05	CAP	1
6	DCA-06	Set Screw	1
7	DCA-07-XXX	Shaft	1
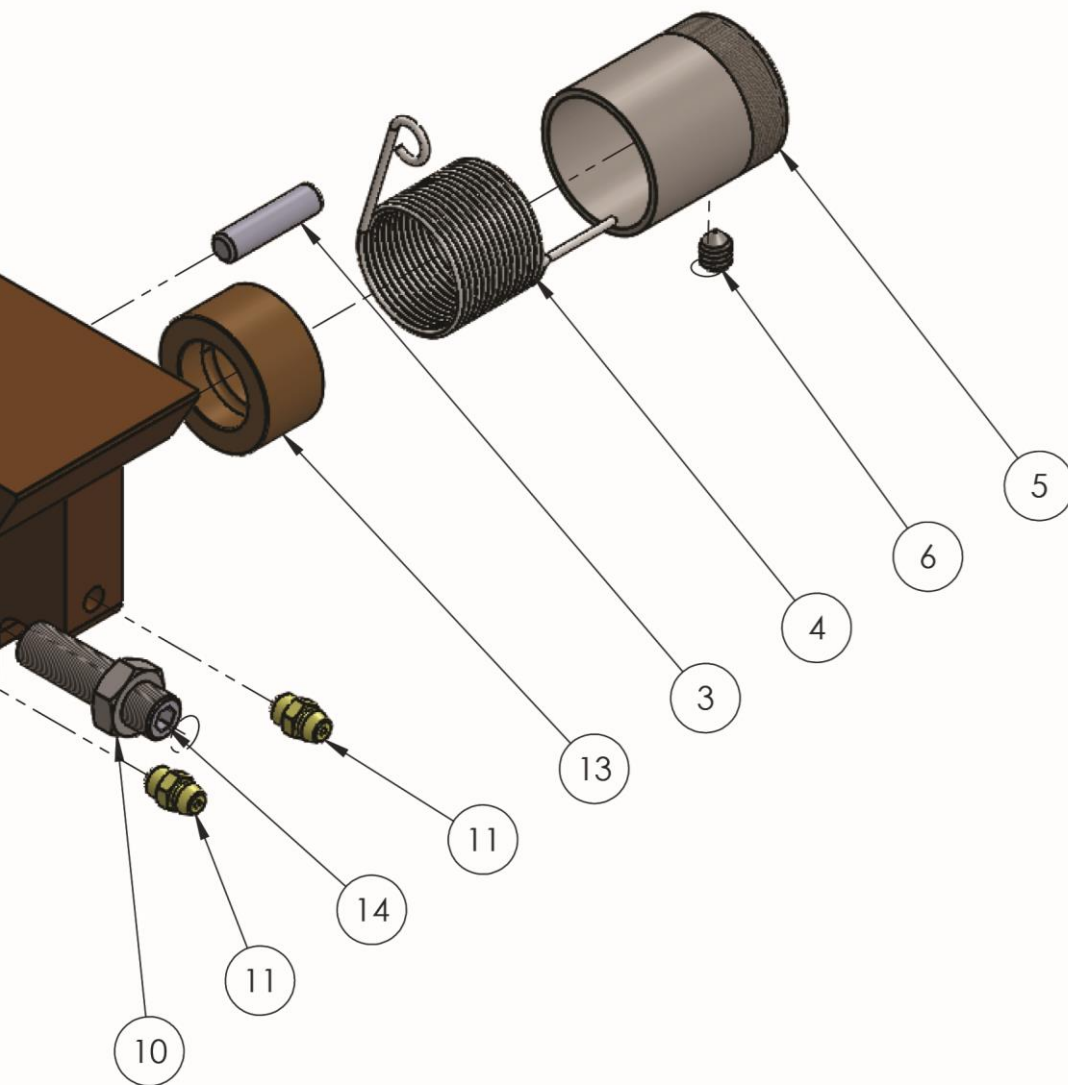
Detail #	Catalog #	Descrption	Qty
8	DCA-08	Set Screw	1
9	DCA-09	Stop Pin	1
10	DCA-10	Jam Nit	1
11	DCA-11	Grease Fitting	2
12	DCA-12	Bearing	1
13	DCA-13	Bearing	1
14	DCA-14	Set Screw	1

The DCA-04 Return Spring is offered in either LH left hand (standard) or RH right hand.

CMT offers complete repair services to rebuild and repair roll carriages.
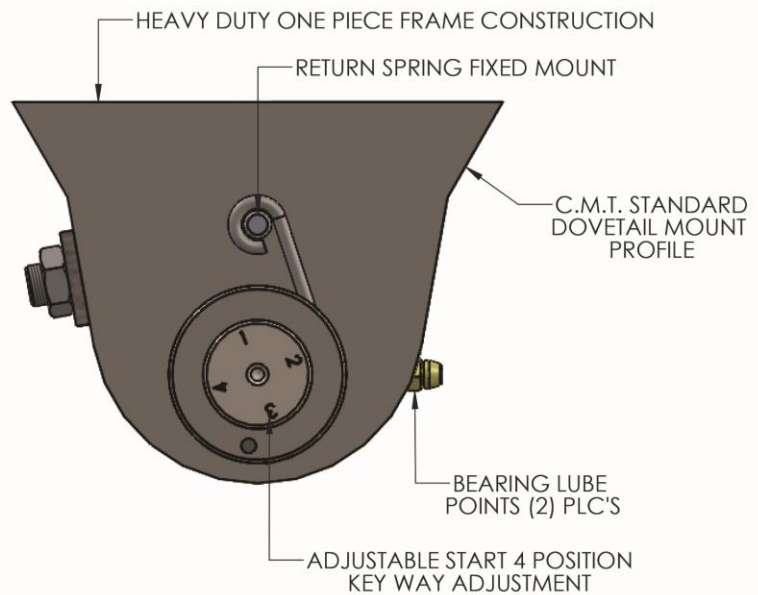
Roll Carriage Large - DCC Style

A key element in the roll marking process of marking on flat parts is the roll carriage.

Roll Carriage: Tooling holder to provide shaft and rotating mechanism for rotating round tooling for roll marking on flat parts.
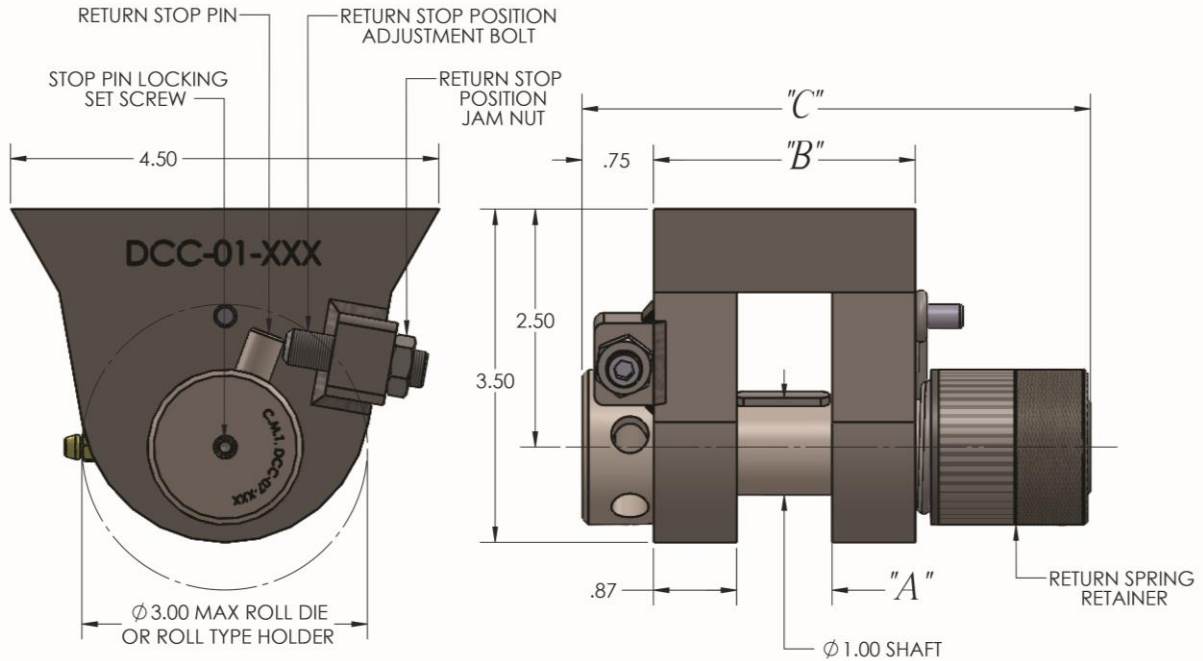

DCC-01-XXX
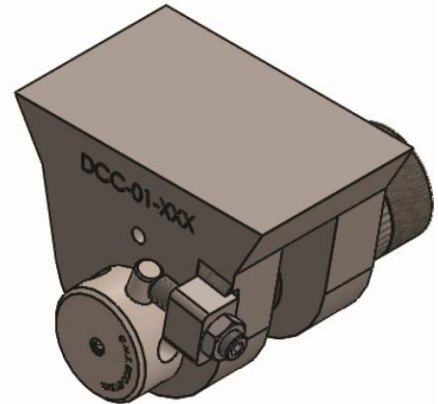
The CMT heavy duty roll carriage design comes standard with a dovetail mount. The dovetail mount allows to quick tooling changeover, and precision positioning every time. The durable design is built to the extremely high CMT industrial tooling standards.

The DCC series is designed for roll dies and holders of 1 3/4" to 2 1/4" wide. The DCA roll carriage has a 1" shaft.

HEAVY DUTY ONE PIECE FRAME CONSTRUCTION

RETURN SPRING FIXED MOUNT

C.M.T. STANDARD DOVETAIL MOUNT PROFILE

BEARING LUBE POINTS (2) PLC'S

ADJUSTABLE START 4 POSITION KEY WAY ADJUSTMENT

How to Order – DCC

Catalog #	A	B	C
DCC175	1.75" [44.5mm]	3.5" [88.9mm]	6.09" [154.7mm]
DCC200	2.00" [50.8mm]	3.75' [95.25mm]	6.34" [161.0mm]
DCC225	2.25" [57.1mm]]	4.00" [101.6mm]	6.59" [167.4mm]

Details

Detail #	Catalog #	Descrption	Qty
1	DCC-01-XXX	Frame	1
2	DCC-02	Key	1
3	DCC-03	Stop Pin	1
4	DCC-04	Dowel	1
5	DCC-05	Set Screw	1
6	DCC-06	Set Screw	1
7	DCC-07-XXX	Shaft	1
8	DCC-08	Jam Nut	1
9	DCC-09-LH DCC-09-RH	Std Spring LH/RH	1

XXX – While most of the details of the DCC series are interchangeable the SHAFT and the FRAME are unique to the cataog number. Replace as follows:
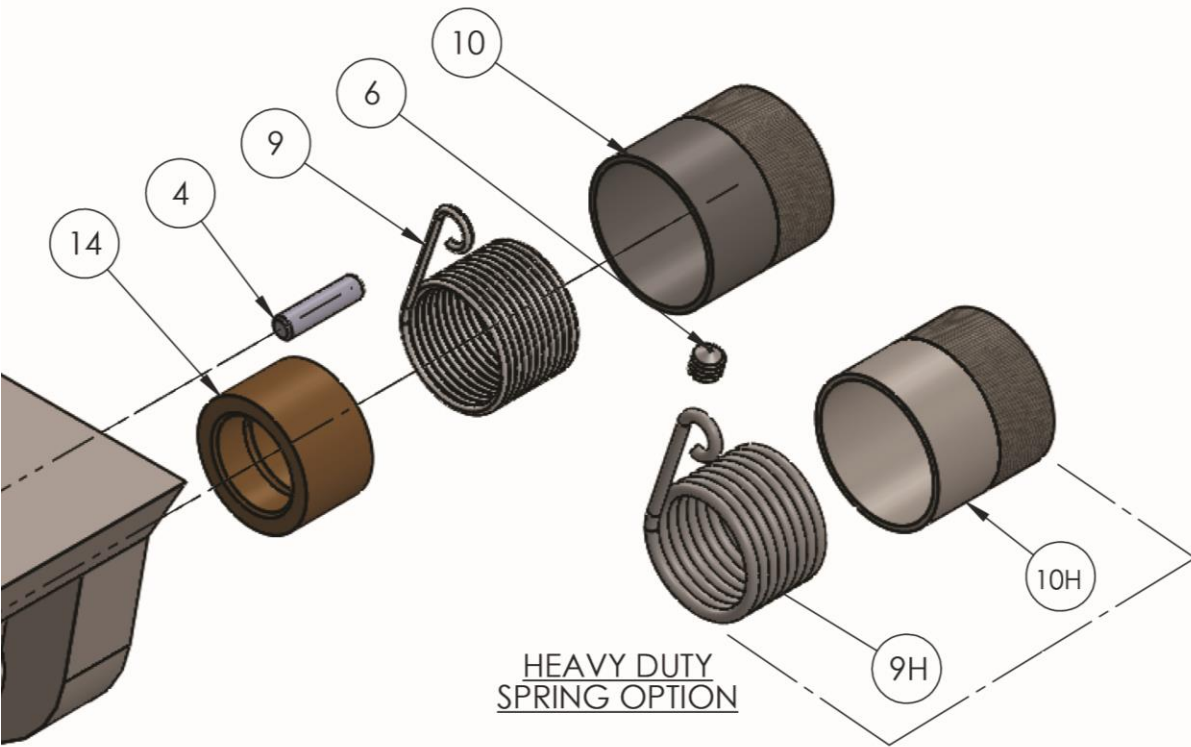
- DCC150 – 150
- DCC175 – 175
- DCC200 - 200
- DCC225 - 225
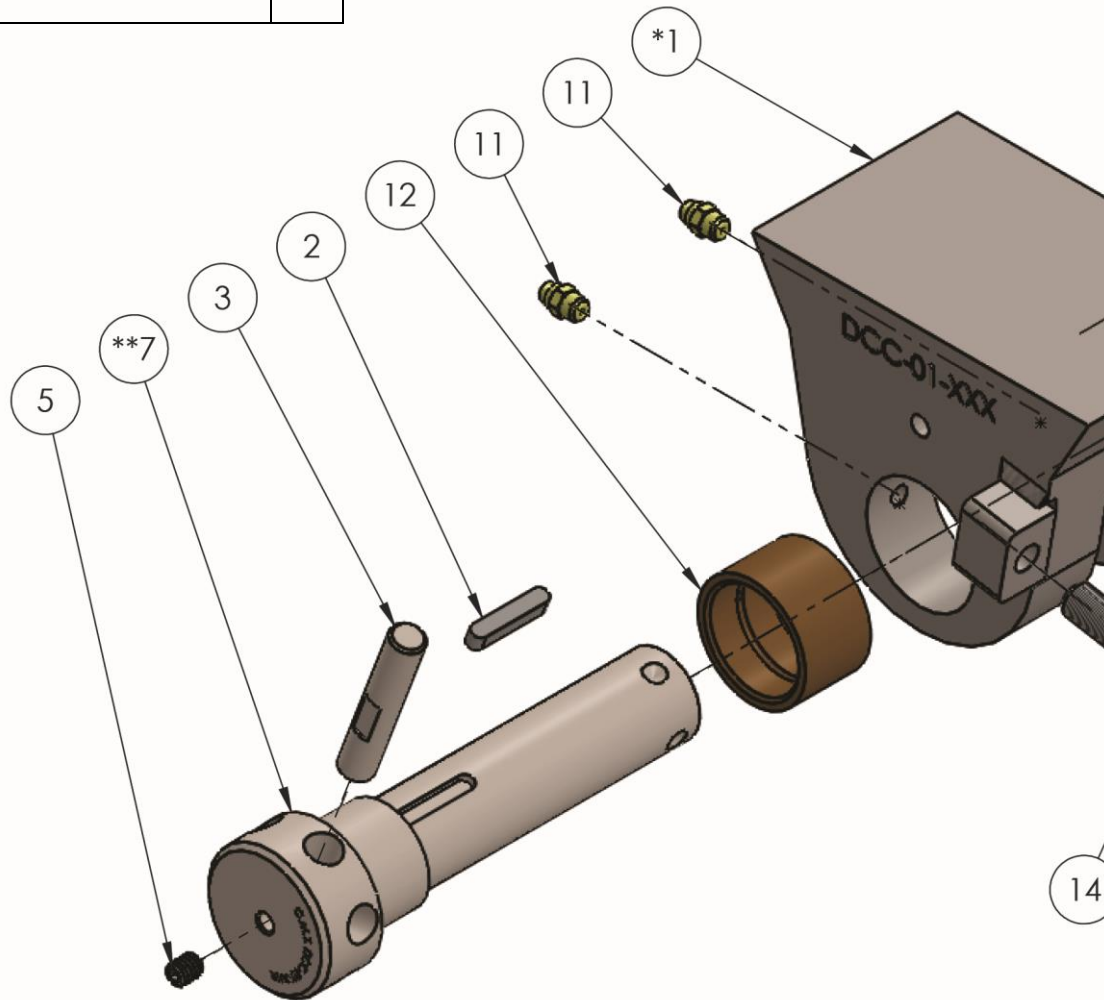
Detail #	Catalog #	Descrption	Qty
9H	DCC-9H-LH DCC-9H-RH	Heavy Duty Spring LH/RH	
10	DCC-10	Spring Housing	1
10H	DCC-10H	Heavy Duty Spring Housing	
11	DCC-11	Grease Fitting	2
12	DCC-12	Front Bearing	1
13	DCC-13	Back Bearing	1
14	DCC-14	Set Screw	1

The DCA-04 Return Spring is offered in either LH left hand (standard) or RH right hand.

CMT offers complete repair services to rebuild and repair roll carriages.

HEAVY DUTY
SPRING OPTION

CMT. offers a **HEAVY-DUTY** upgrade for the return spring. The return spring is a normal wearable component, and for large and heavy tooling the normal spring will require more changes. CMT recommends upgrading to the heavy-duty spring and housing for applications requiring extended tool life.

Custom Roll Dies

Columbia Marking Tools can design and manufacture custom roll dies. CMT can provide a quotation to any customer custom print. The print or the request may be sent to quotes@columbiamt.com.

Quote

Parameters:

- OD – Outer Diameter
- ID – Inner Diameter
- W – Width
- K – Keyway
- K2 – Additional Keyways for multiple positions
- B – Bevel
- Font – Marking layout.
- Material
- Engraving Angle
- Engraving Depth
- Marking pads – example shown in picture below
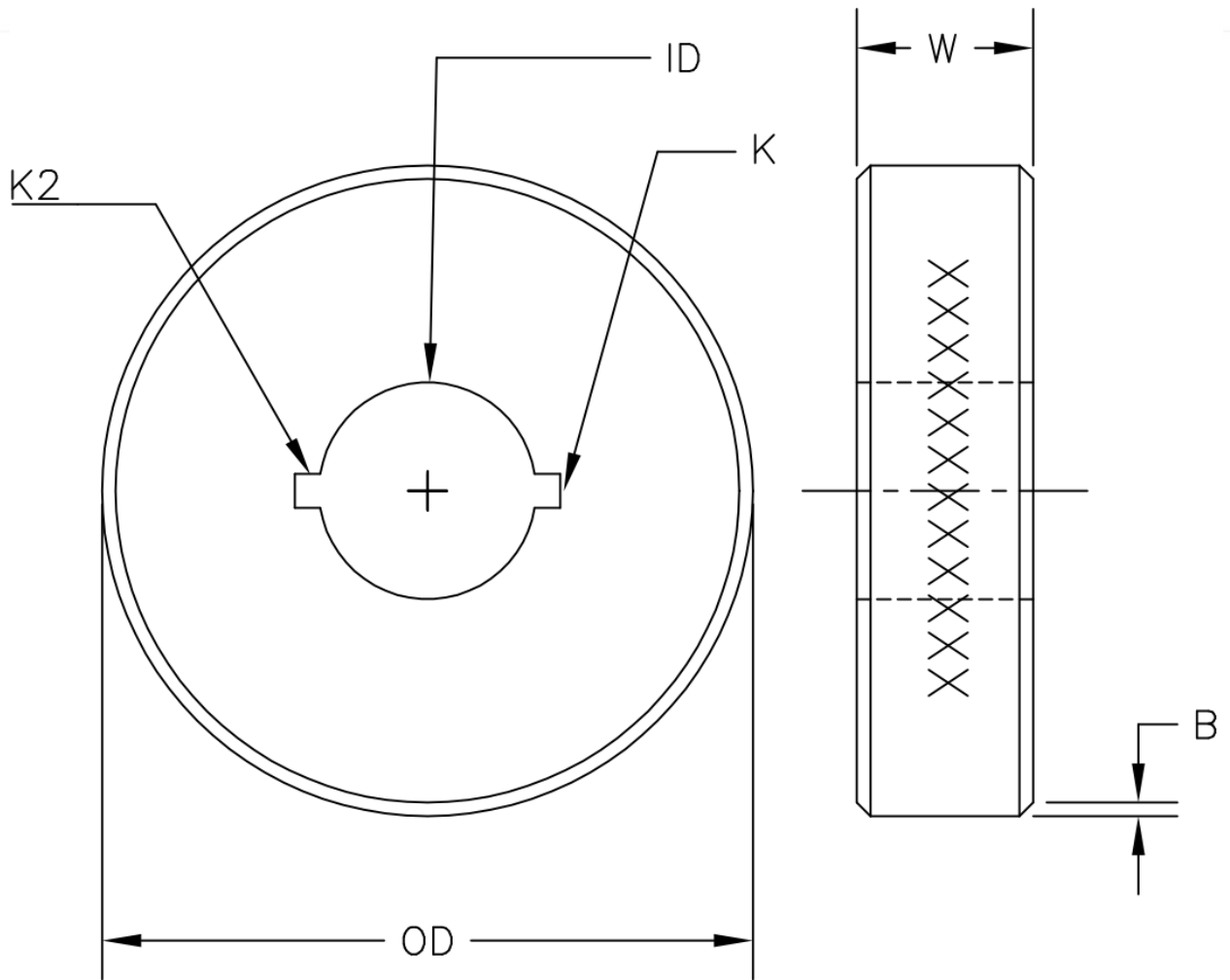
CMT will provide standard parameters for any component not defined by request or print.

If the design is unknown, please provide the final marking information and CMt can completely design the tooling for your application.