

**Air Impact Marker
Slide-A-Mark
Model 751/851**

CMT
COLUMBIA
MARKING
TOOLS

Operation Manual

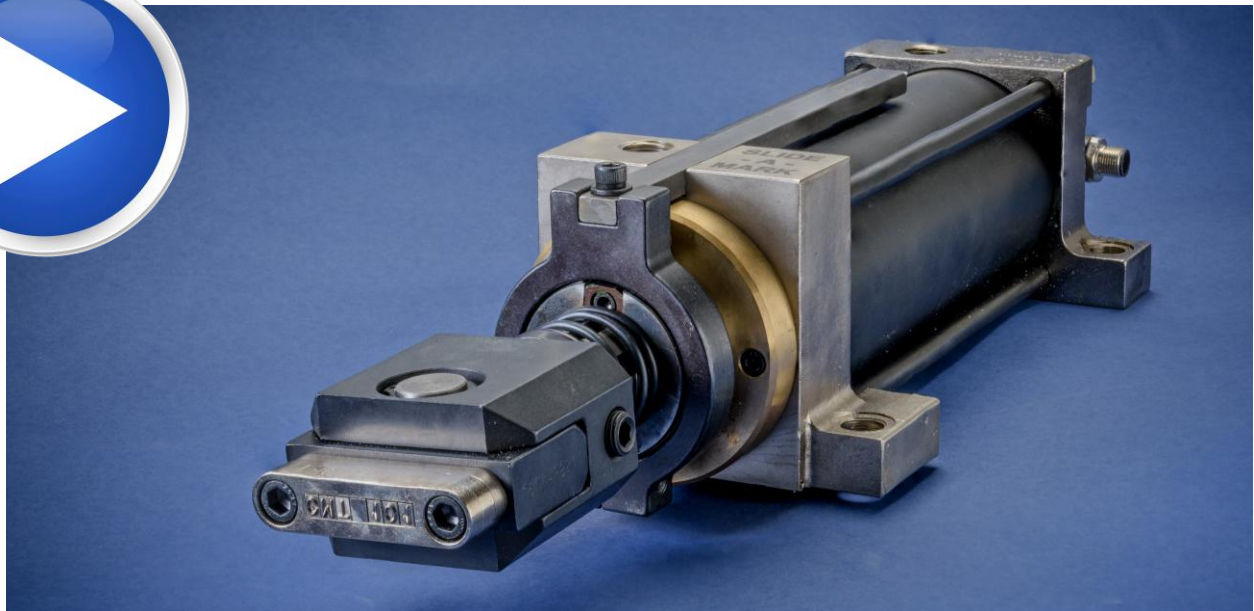
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What is an air impact marker?

An air impact marker is a type of industrial marking tool that utilizes compressed air to create high-impact forces, allowing for quick and durable marking on various materials. Here are some key features and advantages of CMT air impact markers:



1. **Simple Design:** Air impact markers typically have a straightforward and compact design, making them easy to use and integrate into different industrial settings. The simplicity of their design often translates to reliability and ease of maintenance.
2. **Durable Marking:** The high-impact forces generated by these markers result in durable and long-lasting markings on surfaces. This is particularly important in industrial applications where parts may undergo various stresses, including exposure to harsh environmental conditions.
3. **Speed and Efficiency:** Air impact markers are known for their speed and efficiency in marking parts. This is crucial in industrial production processes

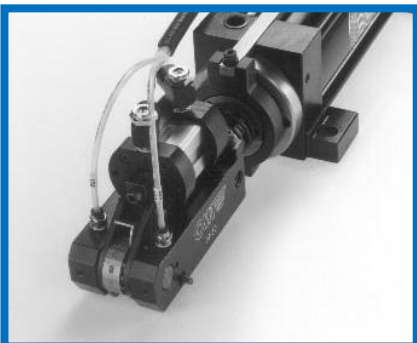
where rapid and accurate marking is essential for maintaining a smooth workflow and high productivity.

4. **Versatility:** These markers can be used on a wide range of materials, including metals, plastics, and composites. This versatility makes them suitable for diverse industrial applications.
5. **Integration with Automation:** The compact design of air impact markers allows for easy integration into both manual and automated production processes. This adaptability is valuable for industries seeking efficient and automated solutions to streamline their production lines.
6. **Low Maintenance:** The robust and simple design of air impact markers often results in low maintenance requirements. This can contribute to cost savings and reduce downtime in industrial settings.
7. **Consistent Marking Quality:** Air impact markers provide consistent marking quality, ensuring uniformity in the marked information on parts. This is important for traceability, quality control, and compliance with industry standards.
8. **Adjustable Settings:** Many air impact markers come with adjustable settings, allowing users to control the force and depth of the marking. This flexibility is useful when working with different materials and applications.

Is an air impact marker an air cylinder?

No.

An air impact marker and an air cylinder serve different purposes, and their design and functionality vary.



The unique telescoping actuation of the Slide-A-Mark makes the use of external tooling possible. The "soft" approach places the tooling in contact with the parts. Then the internal hammer fires.

An air cylinder is a pneumatic device that uses compressed air to generate linear motion. The force it produces is determined by the air pressure and the piston area, as described by the equation $F = P \times A$. The calculation of air cylinder “force” based on the model 751/851 parameters is 80 lbs (calculation shown in image)

On the other hand, an air impact marker, like the model 751/851, operates on the principle of force equals mass times acceleration ($F=MA$). In this case, the acceleration of the rod/stamp holder contributes to the high force output, even though the air pressure may be relatively low. The impact force of 16,000 lbs by the Model 751 is generated by 80 psi and the impact force of 20,000 lbs by Model 851 is generated by 80 psi.

In summary, an air impact marker is not the same as an air cylinder. The force calculation for an air impact marker involves the acceleration of the moving parts, leading to a high force output compared to what would be expected based solely on air pressure and piston area as in a traditional air cylinder.

Cylinder type
Double-acting

Cylinder pressure (P)	80 psi
Piston diameter/bore (D)	3.0 in
Piston area (A ₁)	7.069 in ²
Cylinder force	
Outward stroke force (F ₁)	565.5 lbf

Force Comparison

Model 751/851

Bore Size: 3.0"

Air Cylinder Pressure: 565 lbs

Air Impact Pressure; 16,000 lbs/20,000 Lbs

Slide-A-Mark Advantage

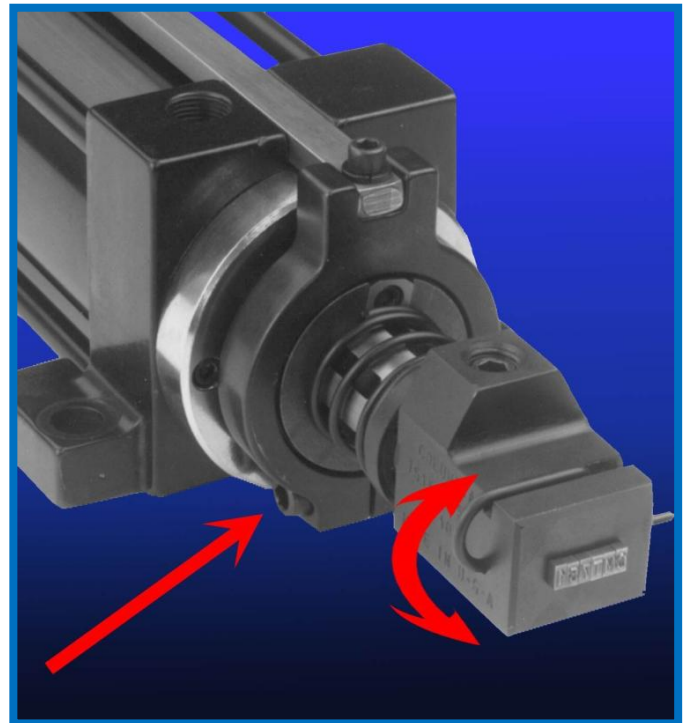
Heavy-Duty Telescoping Air Impact Marking Cylinders

The Columbia Marking Tools SLIDE-A-MARK™ series delivers 6 to 10 tons of marking force with a patented soft-impact air hammer system designed for durability, low noise, and seamless integration into automated production lines.

This heavy-duty marker is ideal for mounting into existing automation where space constraints and fixture clearances make standard approaches costly. Its telescoping action eliminates the need for external approach slides, simplifying installation and operation.

Key Features:

- **Patented Soft-Impact Marking:** Minimizes noise and mechanical shock, ideal for delicate assemblies or noise-sensitive environments. This feature allows for the use of external tooling including: holders, numbering head, and anvils and staking tools.
- **Telescoping Slide Action:** Easily accommodates **stamp holders** for extended legends and **CMT “Select” series numbering heads** for randomized machine codes.
- **Infinite Rod Orientation:** By loosening the rod collar clamp, operators can adjust the radial position of the rod to any angle for maximum flexibility.
- **Consistent Marking Depth:** The internal air hammer delivers uniform force from 1/2" to the full stroke length, ensuring consistent marks even on parts of varying sizes.



The **Slide-A-Mark marking station** offers a high-performance solution for industrial marking applications, combining durability, speed, and precision in a compact package. Key benefits include:

- **Compact Design:** Space-saving layout ideal for tight production environments without sacrificing performance.
- **Sturdy Platform:** Built to handle high-impact marking operations with consistent alignment and support.
- **Optimized Air Valve Placement:** The close proximity of the air valve ensures immediate and powerful impact delivery for consistent marking depth and quality.
- **Optional SAS Covering:** Shown here with the optional **SAS (Sound Abatement System)** for enhanced sound protection—perfect for noise-sensitive workspaces.
- **Rapid Cycle Time:** Efficient design delivers a cycle time of less than 2 seconds, boosting throughput and productivity.
- **Hardened Backup Detail:** Provides solid resistance behind the workpiece, ensuring clear, repeatable marks.
- **Duro Rubber Sound Shielding:** Adds another layer of noise reduction while enhancing operator comfort and safety.

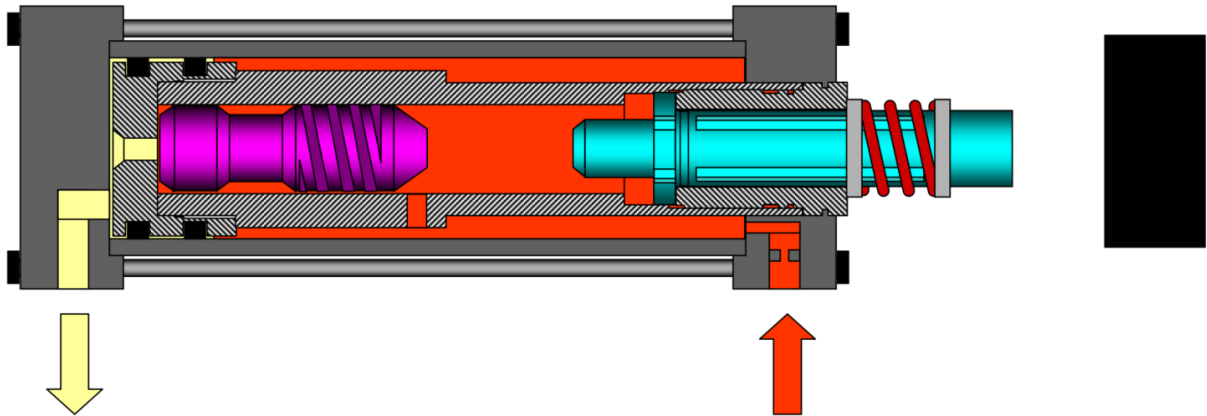
Whether used in standalone setups or integrated into automated lines, the Slide-A-Mark marking station is engineered for rugged reliability and quiet, high-speed operation.



Dichotomy of the Slide-A-Mark cycle

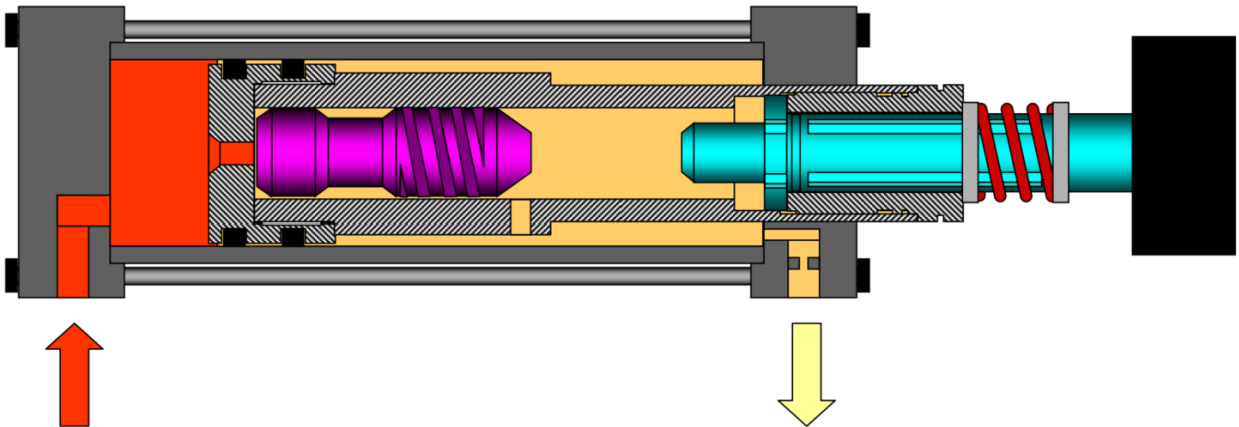
1. Retraced position

- Marker positioned at a 90 degree angle to the marking surface



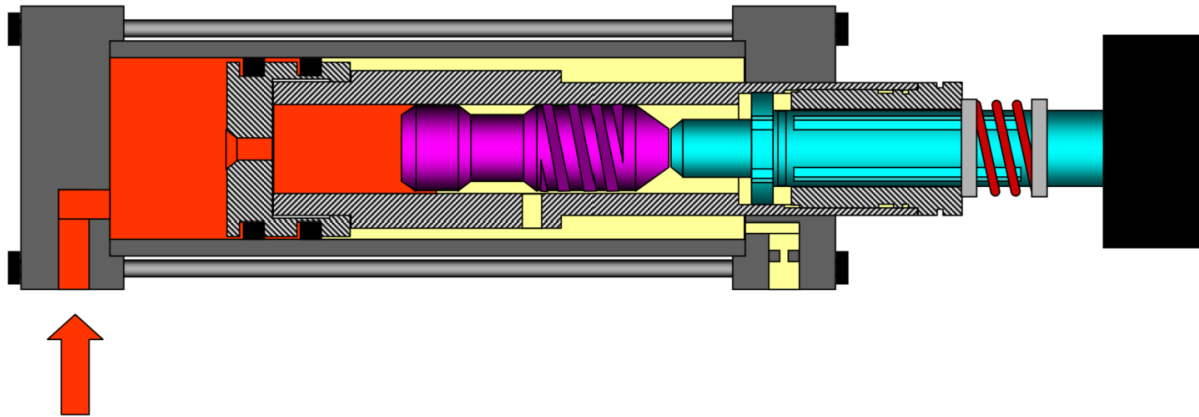
2. Slide-A-Mark advance

- The valve initiates the marking cycle via compressed air into the rear air port. Valve to be position no more than 3' from the marker for maximum efficiency. Marker makes "soft" impact with the part.



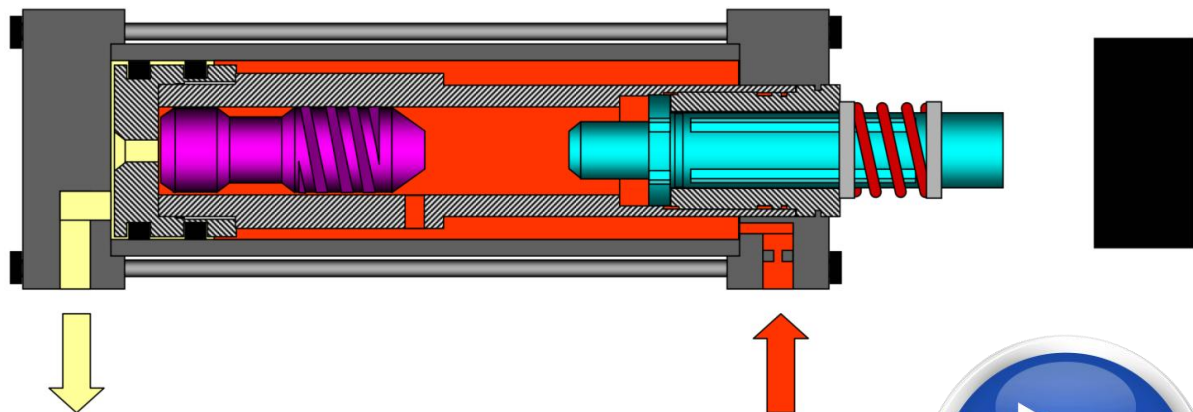
3. Hammer fires

- Internal hammer fires when the air in the forward chamber is released due to pressure on the spring.



4. Marker retracts

- Valve changes the compressed air flow and returns the marker to the retract position. Please note that compressed air flow is required to keep the marker from moving out of the retract position.



While the Slide-A-Mark provides a complex action sequence, the speed and efficiency of the process makes this system the perfect solution for part marking and tracking.



Product Information

The Columbia Model 751/851 is an impact marking cylinder designed for robust and reliable performance. Here are the key features:



1. **Design:** The model is built as a rugged pneumatic tool with various rod configurations for marking stamps or tooling, allowing it to deliver powerful impact blows.
2. **Impact Force:** Capable of delivering a substantial impact force of up to 20,000 lbs at 80 psi (pounds per square inch). This makes it suitable for various industrial marking applications.
3. **Telescoping action:** The tooling approaches the part, and the tooling must contact the part and compress the spring for the internal hammer to fire with the impact force. This method of actuation allows for the use of external tooling and holders.
4. **Dependability:** The Slide-A-Mark is built to CMT's high industrial standard and is a dependable marker, offering deep marking with extremely fast cycle times.
5. **Rod Action:** Air forward air return double acting air cylinder for reliable and repetitive operation in automated applications.
6. **Keyed Non-Rotating Rod:** The rod is designed as keyed and non-rotating, ensuring precision and accuracy in the marking process.

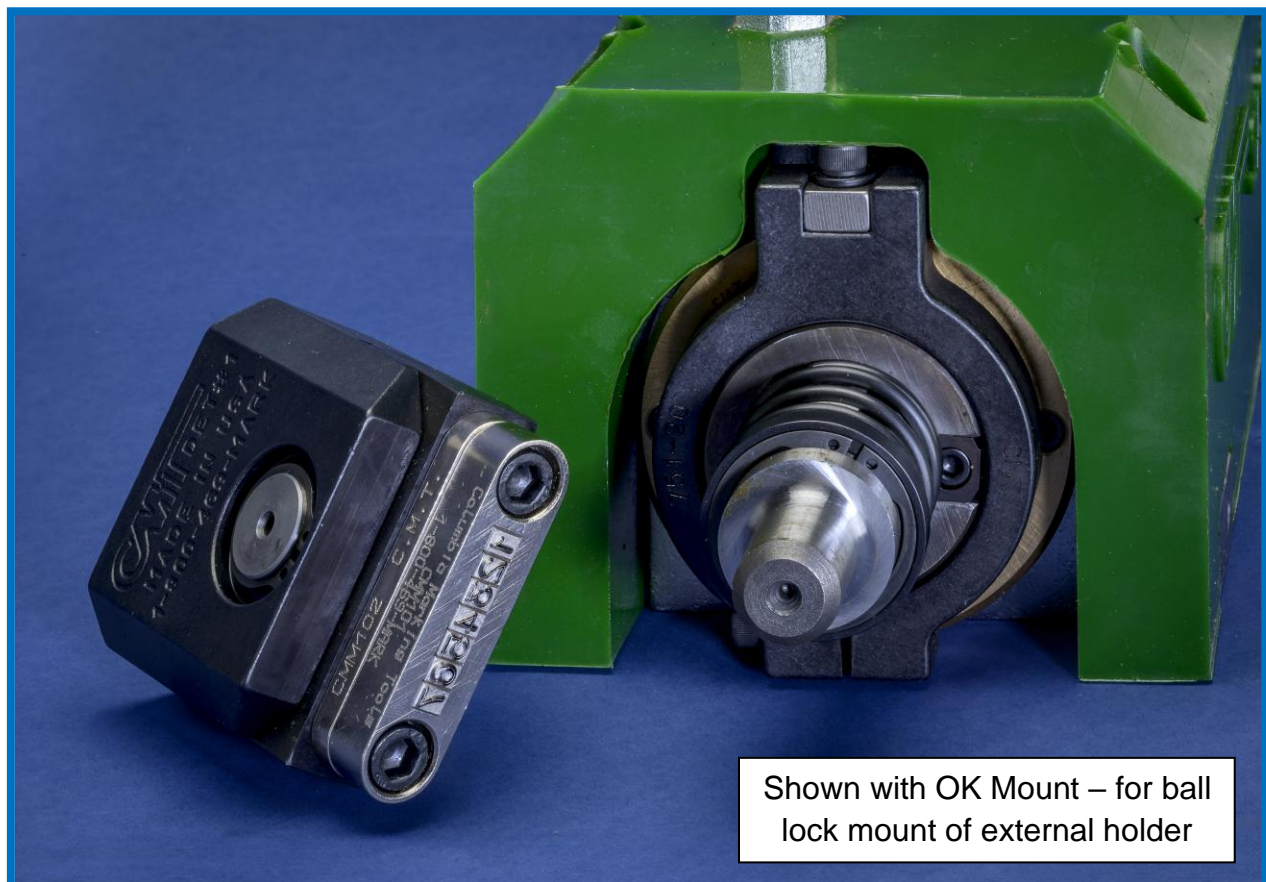
Options

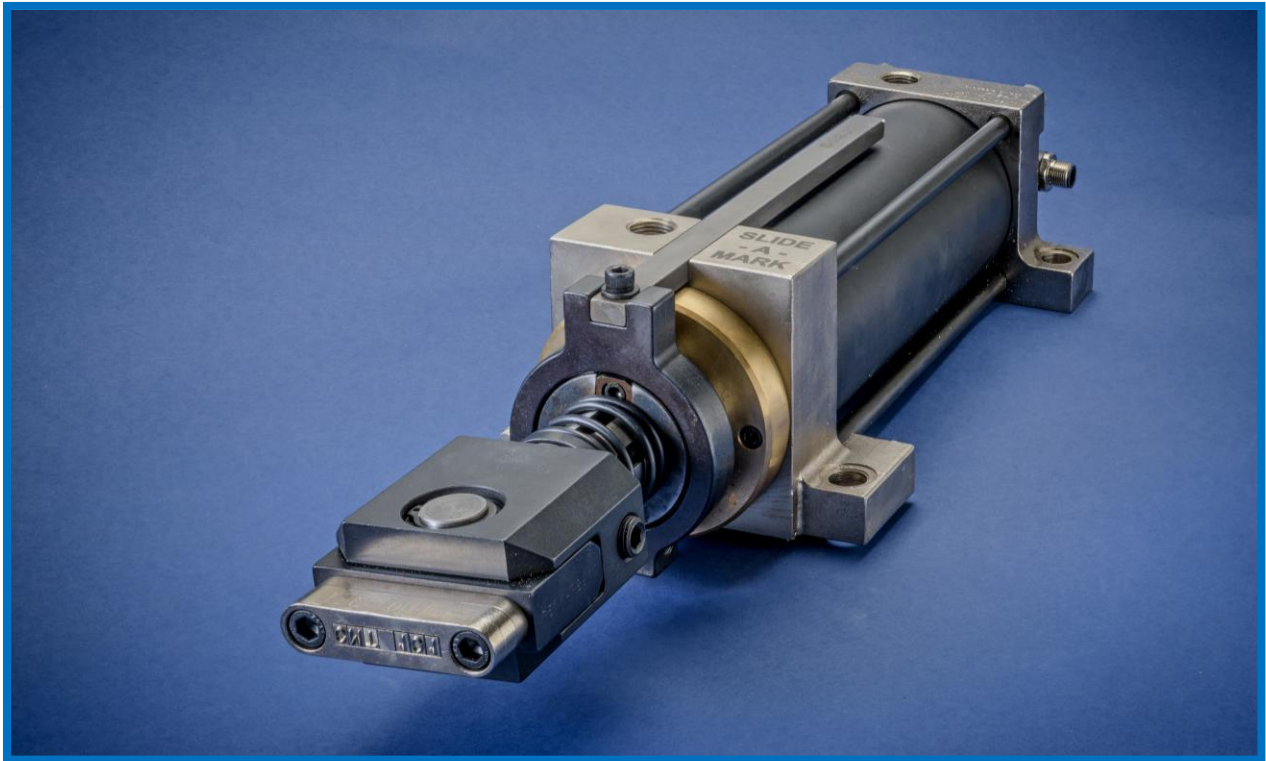
1. Tonnage Options

- Two tonnage options :
 - 751 – 8 ton
 - 851 – 10 ton

2. Rod Styles:

- Five standard rod styles are offered:
 - Multi-character OA for CMG Groove type
 - Multi-character OAS75 CMG Groove type with extra wide pocket
 - Single character OB for CM9X round insert
 - Tooling mount OK for external holders and tooling using a “Quick Release” ball lock
 - Tooling mount OH for external holders and tooling using a rugged press shank style mount





3. Stroke Length:

- CMT offers 4 stroke length options for
 - 2.5"
 - 4"
 - 6"
 - 8"

4. End Configurations:

- Standard
- Integrated return positions sensor four options
 - DC – 24VDC Sourcing Euroconnector
 - AC – 110VAC Mini Connector
 - Rear turn only
 - Advance and return

5. Compressed Air:

- Lubricated air
- Dry Air

Marking Character Capacity

Stamp Capacities Rod Style “B”

(1) Pc CM9X round insert can mark up to a 3/8” character.

Stamp Capacities Rod Style “A”

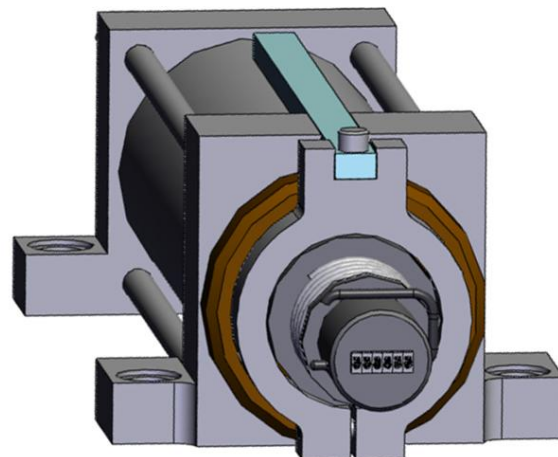
(10) Pc’s 1/16” Char. CMG06 Stamp Inserts

(5) Pc’s 1/8” Char. CMG13 Stamp Inserts

Stamp Capacities Rod Style “AS75”

(12) Pc’s 1/16” Char. CMG06 Stamp Inserts

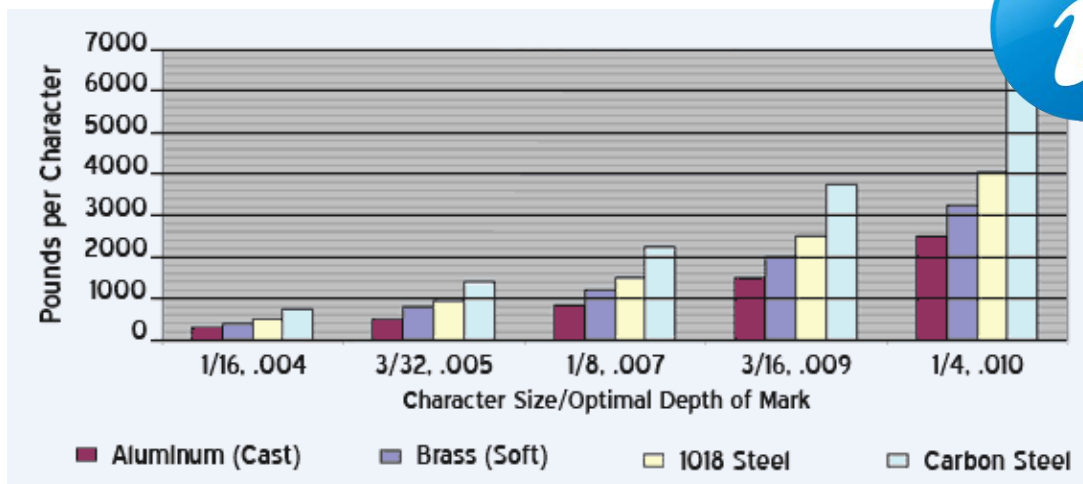
(6) Pc’s 1/8” Char. CMG13 Stamp Inserts



The Slide-A-Mark has a “soft” impact and can use external tooling. Two standard tooling options:

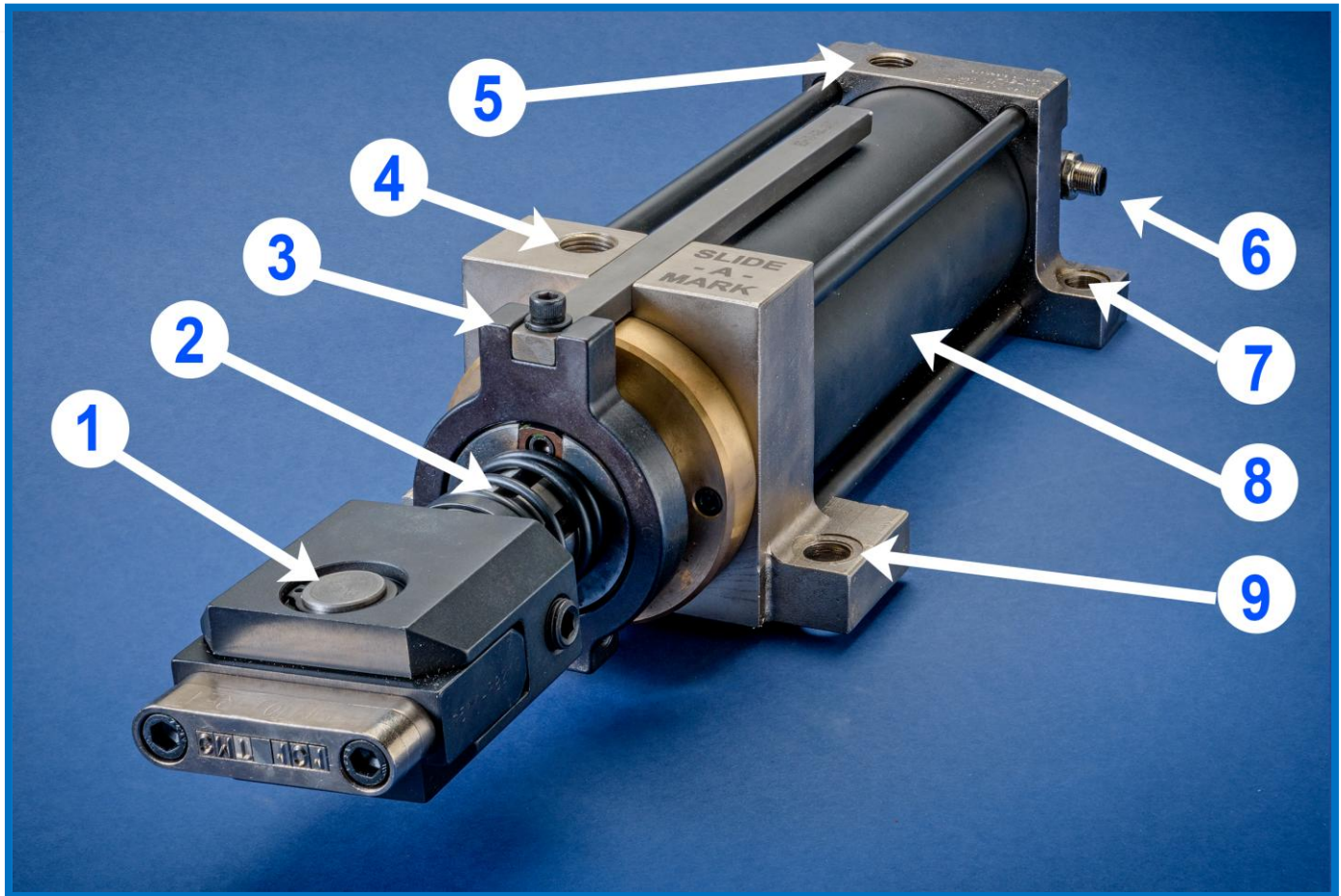
- “K” – Ball lock mount is designed for use with a ball and double set screw retention method to keep the ball seated in the tool mount.
- “H” – Press shank mount for tooling operations with extreme vibrations and application force.

Marking Pressure Chart



Pressure chart and character size explained in detail.

Parts Breakdown



1. Holder & Type – optional tooling used with Ball lock rod style Kt
2. Compression Spring
3. Collar and guide rod
4. Return air port
5. Advance air port
6. Optional Upgrade – return position sensor
7. Rear cap and mounting holes
8. Sleeve
9. Front cap and mounting holes

Model Slide-A-Mark How to Order Guide

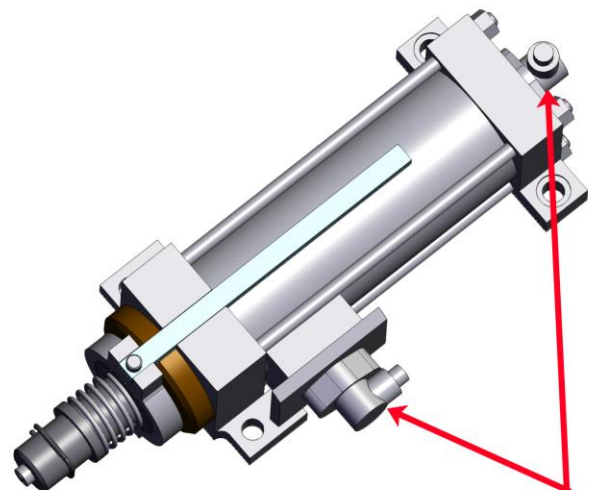
<i>Feature</i>	<i>Symbol</i>	<i>Example</i>
Tonnage		751-OK-40-E1-NL
8-ton	751	X
10-ton	851	
Rod Style		
Round Pocket 1/2"	OB	
Rectangular Pocket 1/4" x 5/8"	OA	
Rectangular Pocket 1/4" x 6/8"	OAS75	
Standard Holder Mount	OK	X
Press Shank	OH	
Stroke Length		
2.5"	25	
4.0"	40	
6.0"	60	
8.0"	80	X
End configuration		
Standard	00	
24VDC Return Sensor	E1	
24VDC Adv and Ret Sensor	E2	X
110VAC Return Sensor	P1	
110VAC Adv and Ret Sensor	P2	X
Compressed Air		
Lubricated	-	
Dry	NL	

Notes:

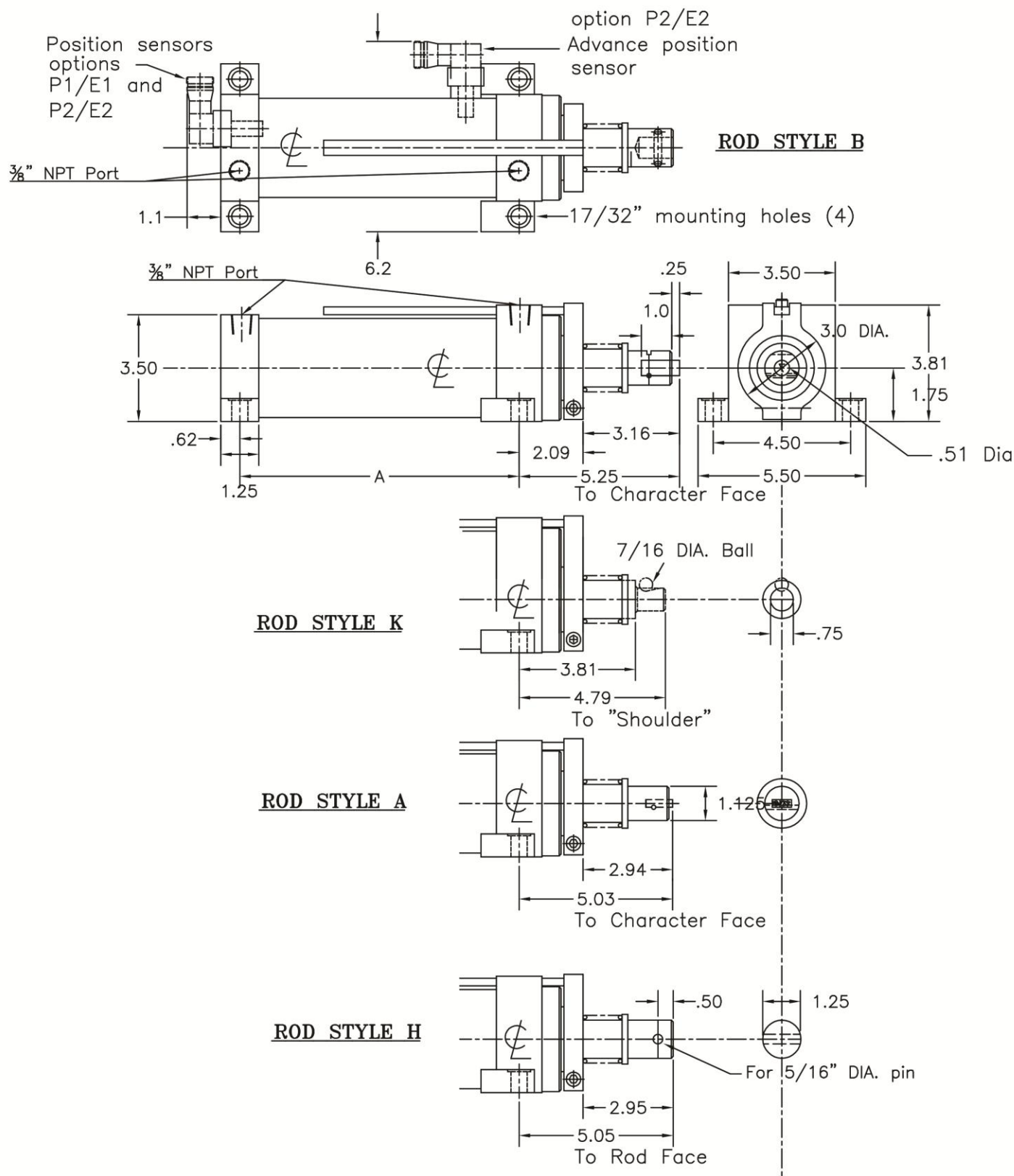
- The force selection should be based on the total force required to mark the entire mark.
- Stroke length provides the reach for the Slide-A-Mark to connect with the part. While at the same time assuring the tooling is out of the way of any part handling.

- The E2 option provides a position sensor in both the advance and retract positions. The advance sensor may be slightly adjusted to accommodate the part position.

WARNING – the Slide-A-Mark does not have to extended to the full length of stroke to mark the part – the E2 option is not viable when marking parts of different sizes.



Overall Dimensions

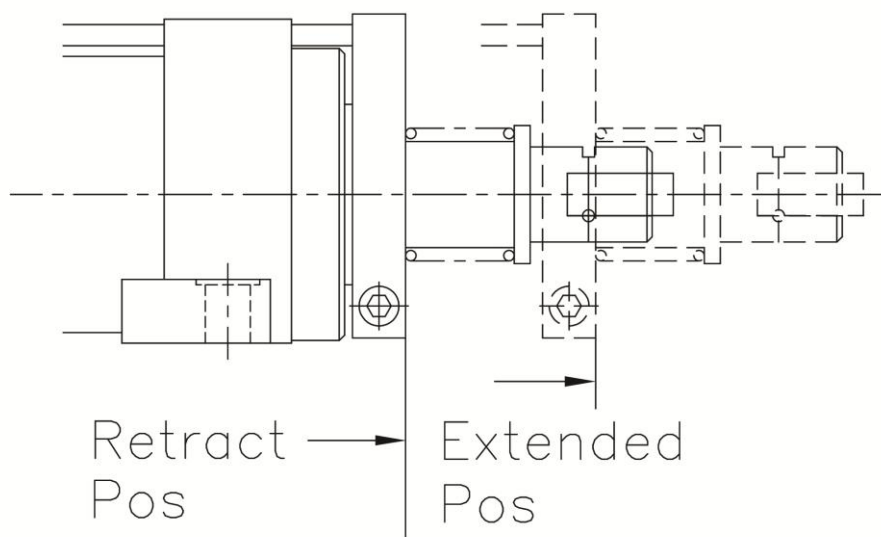


The dimensions vary by the features selected.

- a) The stroke length will affect the length of the Slide-A-Mark body. The character shows the dimension "A" between the mounting holes
- b) The size of the Holder will extend out from the mounting face

Stroke Length	"A"
2.5"	.9.16'
4.0"	10.66"
6.0"	12.66"
8.0"	14.66"

The collar and sleeve will extend out during the marking cycle.



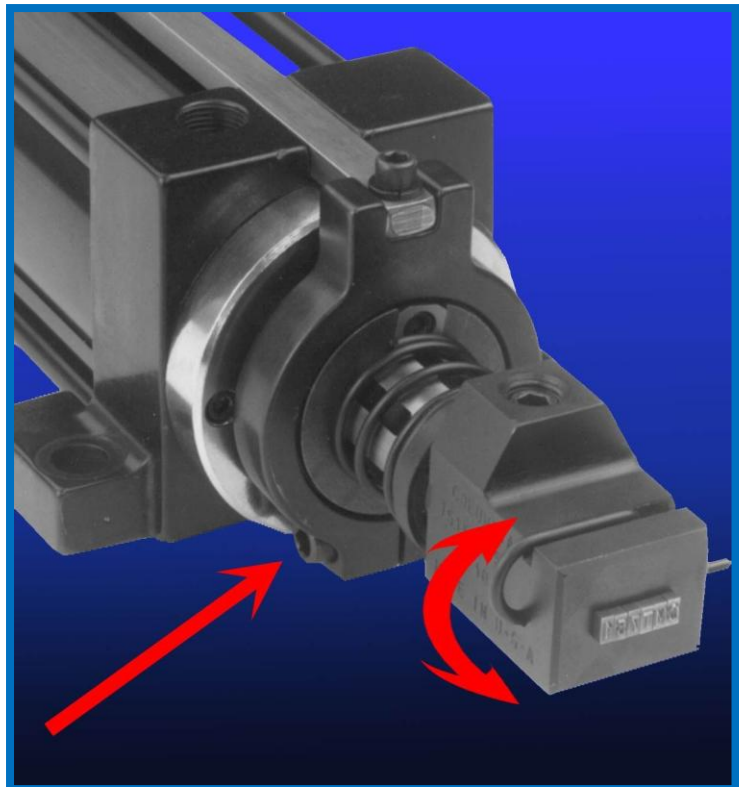
751K – K style Holder Standard

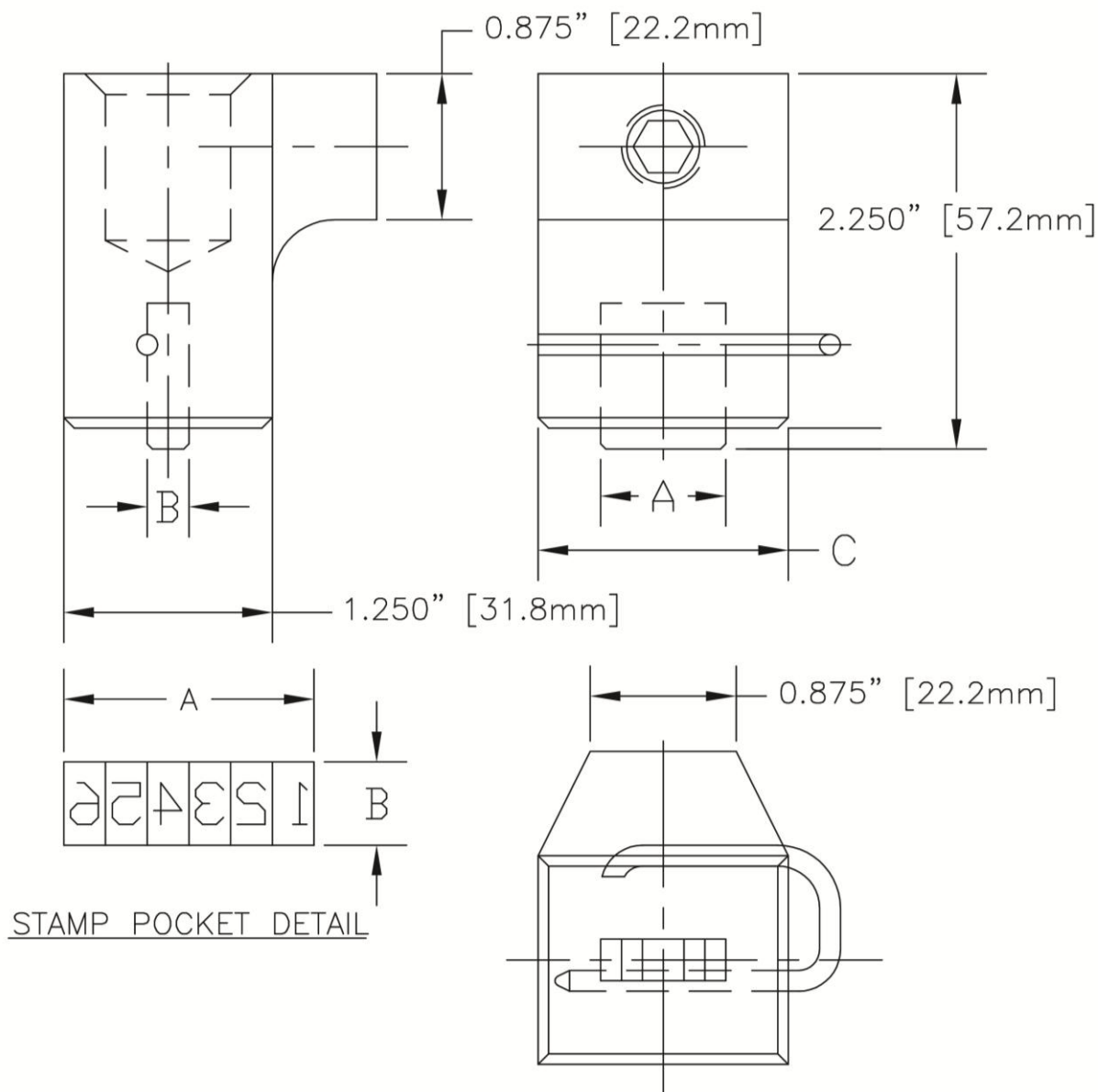
The Slide-A-Mark K style holder is offered in a wide range of stamp capacities. The outer dimension of the holder is dependent on the stamp capacity .

Item #	"A"	"B"	"C"	1/16"	3/32"	1/8"	5/32"	3/16"	1/4"
751KA5010	.50"	.25"	1.5"	8	(5)	4			
751KA7510	.75"	.25"	1.5"	12	8	6			
751KA10010	1.0"	.25"	2.25"	16	(10)	8			
751KA15010	1.5"	.25"	2.25"	24	16	12			
751KA20010	2.0"	.25"	3.25"	32	(21)	16			
751KB7510	.75"	.31"	1.5"				4	4	
751KB15010	1.5"	.31"	2.25"				8	8	
751KB22510	2.5"	.31"	3.25"				12	12	
751KC10010	1.0"	.38"	2.25"						4
751KC20010	2.0"	.38"	3.25"						8

Orientation of holder

The holder orientation provided is the with the base of the characters at the 6 o'clock position. The characters and holder may be adjusted as required by loosening the collar. Then rotate the holder to the required position and retighten.





Spare Parts

- 751KH-2 Steel Ball
- 751KH-3 Set screw
- 751KH-4-200 – "A" dimensions .50" and .75"
- 751KH-4-300 – "A" dimensions 1.0" and 1.5"
- 751KH-4-350 – "A" dimension 2.0"



751KFL – Floating Holder K Style Holders and Anvils

Overcoming Uneven Surfaces in Sheet Metal Marking with the CMT Floating Holder



When marking sheet metal parts with longer legends, maintaining consistent mark depth and clarity across the full length can be challenging—especially when the marking surface isn't perfectly flat or the part isn't aligned perpendicular to the marking tool.

To solve this, Columbia Marking Tools developed the **"Floating" Holder**, a specialized adapter designed to

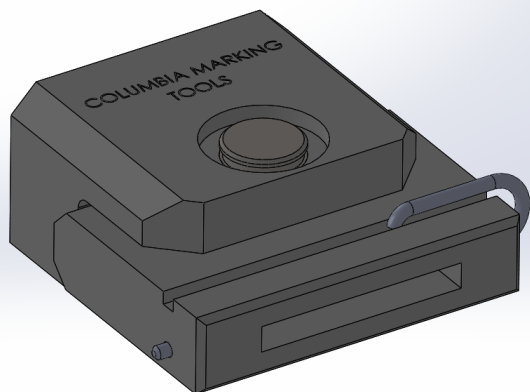
compensate for surface irregularities and deliver a uniform mark from end to end.

The floating holder features an independent holder (or anvil) that “floats” on a shaft. This shaft connects the holder to the main body of the adapter, which then mounts to the ball screw drive on the Slide-A-Mark marking system. Thanks to this unique design, the holder can pivot and adjust within a range of 1 to 10 degrees—allowing it to follow slight offsets or curves in the material. As a result, the marking head remains in consistent contact with the part, ensuring crisp, legible characters across the entire marking legend.

Whether you're working with warped, angled, or otherwise non-uniform surfaces, the CMT Floating Holder helps maintain precision and mark quality—reducing the need for part rework or repositioning.

How to Order 751K “Floating” Holders/Anvil

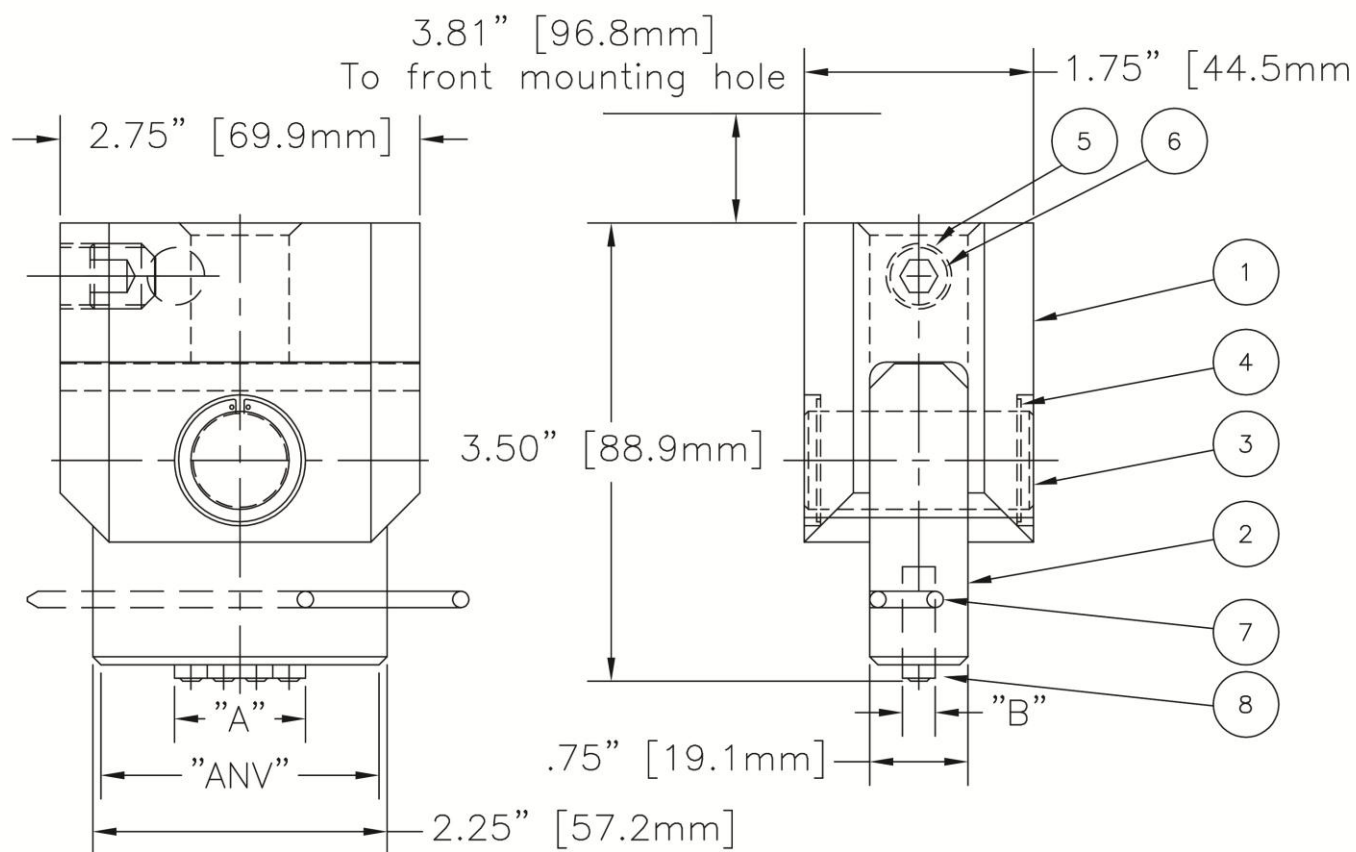
Item Number	“A”	“B”	Description	#char	Type
751KAFL150	1/4”	1.5”	Holder	12	CMG13 (1/8”)
751KAFL200	1/4”	2.0”	Holder	16	CMG13 (1/8”)
751KBFL150	2.362”	1.5”	Holder	8	CMG19 (3/16”)
751KBFL225	2.688”	2.25”	Holder	12	CMG19 (3/16”)
751KFL150ANV	AN = 1.5”		Anvil	None	
751KFL200ANV	AN = 2.0”		Anvil	None	



The “floating” holder does not include the stamps. Listed in Blue, these are purchased separately.

The anvil is used for facilitating marking on the opposite side of the part from the marking unit. This offered a great solution for sheet metal parts with difficult part handling aspects.

Item	Part Number	
1	751KFLP8201D01	Body
2	751K#####D02	Adapter – Custom per design
3	751KFLP8210D03	Shaft
4	751KFLP8210D09	Retaining Ring (2)
5	751KH03	Set Screw
6	751KH02	Steel Ball
7	E9880-3	Spring Clip
8	CMG size per Design	Stamps



751KFL – Stamping Adapters and Anvils



CMT offer a complete series of adapters for our Slide-A-Mark Rod style “K” with the ball screw mount. These adapters facilitate the use of standard automotive type and retainers.

Also included is an option for a “anvil”. This will provide a hammer front for the Slide-A-Mark that is part of a solution to mark on the back side of a part.

The adapter assemblies are designed to be used with the respective retainer and backing plate noted in the how to order chart

How to Order 751K Adapter

Item Number	“A”	“B”	Retainer	#char	Type
751KFLP8210	2.0”	3.30”	CMM101	7	CMM103
751KFLAM3043	2.0”	3.30”	CMMRN18	7	CMM018
751KFLR4240	2.362”	3.30”	CMMRN18R1900	10	CMM018
751KFLR7810	2.688”	3.30”	CMRN18R7810	12	CMM018
751KFLAD7786	1.38”	3.36”	CMM5	5	CMM180
751KFLV5564	1.683”	3.36”	CMM9	9	CMM180
751KP8210ANV	-NA	2.56”	Anvil	0	NA

Two purchasing options for the 751KFL adapters:

1) Adapter assembly only

- a. Does not include the retainer, backing plate and set of stamps. Items not included are shown in blue.

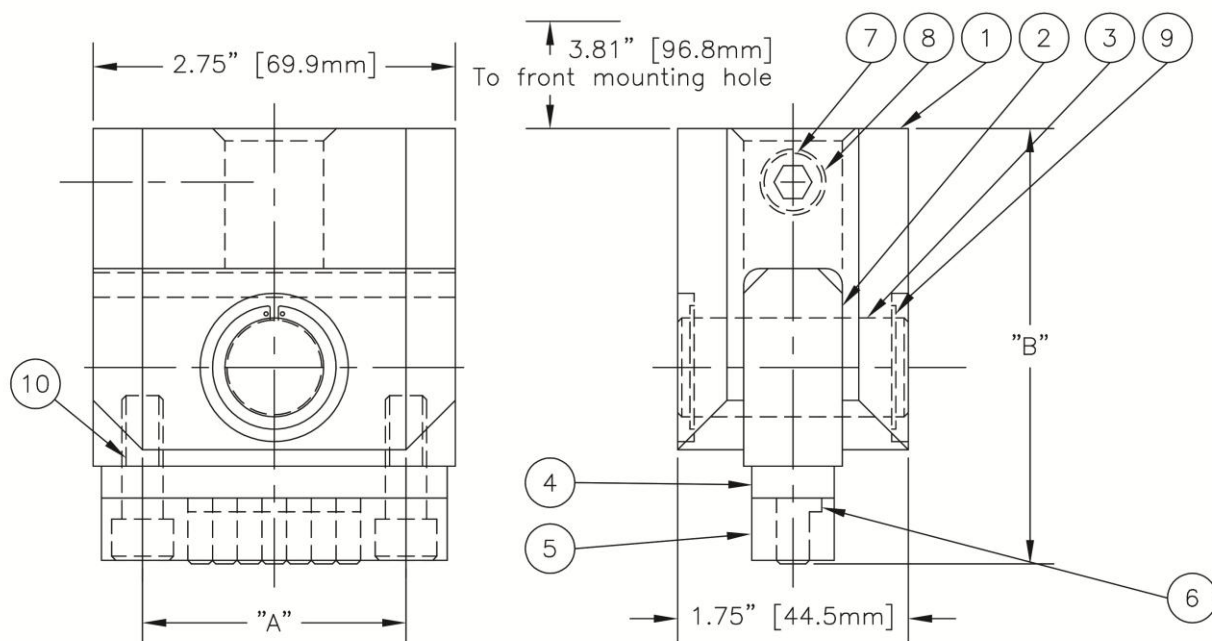
2) Complete assembly

- a. Includes complete detail list shown. Includes a full figure set of stamps 0 through 9
- b. For the complete assembly add "A" to the end of the item number.

Complete **A**ssembly Example:

751KFLP8210**A** – includes retainer, backing plate, and full set of type.

Item	Part Number	
1	751KFLP8201D01	Body
2	751KFL####D02	Adapter – Custom per design
3	751KFLP8210D03	Shaft
4	Retainer	per design
5	Backing Plate	Per design
6	Stamps	Per design
7	751KH03	Set Screw
8	751KH02	Steel Ball
9	751KFLP8210D09	Retaining Ring (2)
10	Mounting Screws	Per design (2)



Technical Specifications

Recommended Air Hose: 1/2" ID Minimum

Recommended Air Valve: 1/2 3-way or 4-way solenoid valve

Operating Pressure: 20 to 80 psi

Maximum Marking Pressure: 16,000 lbs for the Model 751 and 20,000 lbs for the Model 851, at 80 psi.

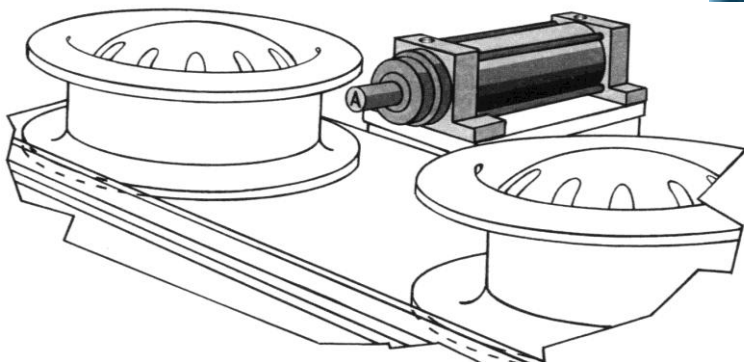
Installation

Mounting:

Mounting holes are in the housing, and the use of (4) 1/2" SHCS is required. The Model 751/851 markers require a sturdy, level platform for mounting.

Best practice suggestion:

When designing the mount for the marker, it includes adjustability to change distance and ensure the marker is square with the part being marked.



Marker must per mounted perpendicular to the marking surface.



CMT offers all required components for easy installation of the Slide-A-Mark.

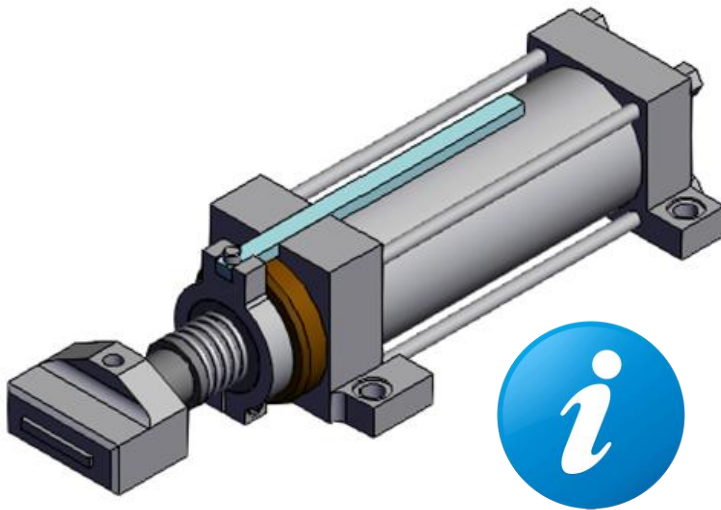
- Retro-fit Valve pack with properly sized valve and OSHA safety lockout (page 27)
 - AD/DC
 - Lubricated or Dry Air
- Hoses and fitting Kit
 - **751AKIT** - includes (2) hoses and (2) fittings
- Sensor cable
 - **RK306F** – cable for 110VAC sensor, 6 foot long
 - **RKT42M** – cable for 24VDC sensor, 2 meters long

Test Maring Available

PR-751



Drawing Files



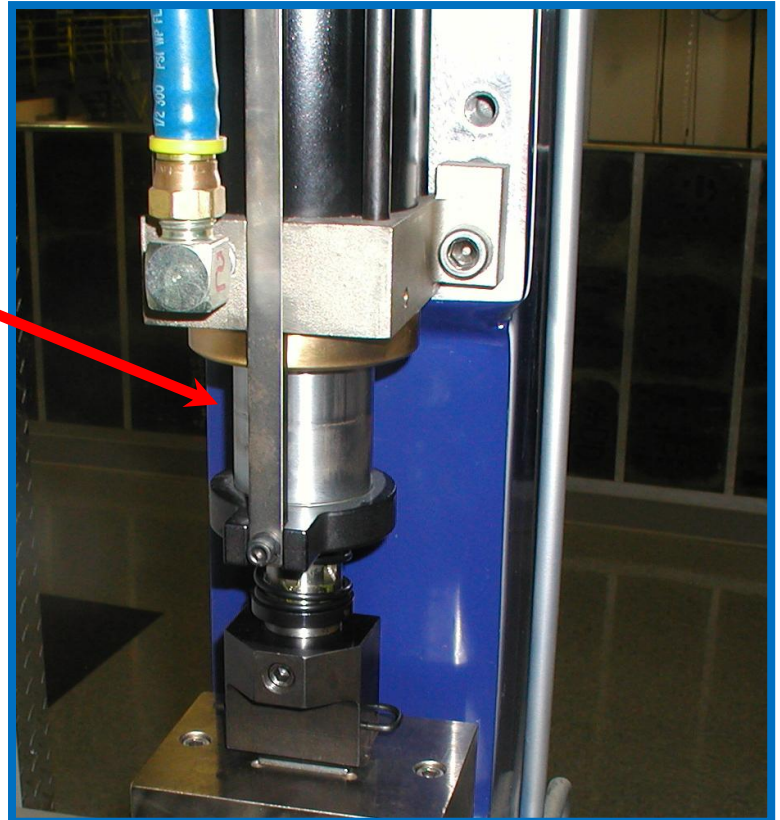
Drawings for all the models. CAD files formats of many different configurations.

Please remember the SUB version has the same outside dimensions as the standard industrial configurations.

Important points for installation:

- Mounting surface to be sturdy stable piece. Not on slide or other approach mechanisms.
- Workpiece marking surface to be positioned at 90 degrees from the operational motion of the air impact marker.
- Speed control suggested for use on the retract air port.
- Valve to be positioned less than 3 ft from the marker.
- When extended the front collar moves forward. The inner sleeve is exposed.

The Slide-A-Mark can mark parts at different distances from the retracted position with the same amount of force.



FAQ – Frequently Asked Questions

Q: How long for shipment/delivery of the Model 751/851?

A: 1 week or less for standard models. CMT has all the components in stock, and it is assembled and tested per customer order.

Please note - these units are not on the shelf ready to ship. Each unit is tested for both stamp configuration and pressure.

Q: How much is it for a Model 751/851?

A: The Model 751/851 is priced per the features/options selected. Please provide a complete part number for a quotation.

Q: How to get a quotation on the Model 751/851?

A: Use the easy [on-line form](#), or email to quotes@columbiamt.com. Remember to include the complete part number from the How-to-Order chart, and the address the quotation should be addressed to.

Q: What is the force of the Model 751?

A: The Model 751 has a maximum impact force of 16,000 lbs at 80 psi. The Model 851 has a maximum impact force of 20,000 lbs at 80 psi. There is a non-linear parabolic relationship between the incoming air pressure and resulting force.

Q: How far should the marker be mounted from the part?

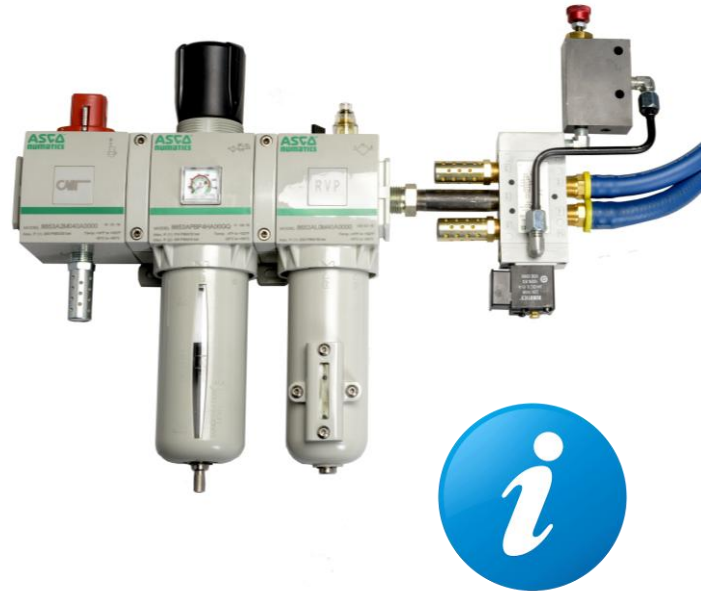
A: The furthest the marker should be mounted so that the stamp face is 1/8" to 1/4" less than the stroke length. The closest the marker should be mounted from the part is 1". And for best practice the marker location should have some adjustment.



• Retro-Fit Valve Pack – installation solution

The easy-to-use valve pack from Columbia Marking Tools for the air impact markers includes

- Filter- Regulator to both clean the air supply and control the air pressure used during the air impact marker application.
- Lock out – safety lock out as required by OSHA for standard safety protocols during maintenance and repair.
- Lubricator – for the lubricated air supply
- Valve – either 3-way for the single acting air impact markers, or 4-way for the double acting air impact markers.
- Assembled and ready to mount



Item #	Single/Double Acting	DC/AC	Lubricated/Dry Air
RVPD	Double	AC	Lubricated
RVPDDC	Double	DC	Lubricated
RVPDNL	Double	AC	Dry
RVPDDCNL	Double	DC	Dry

Select the valve pack required from the item chart. The three options include:

- 1) Solenoid controls are available for DC or AC.
- 2) Filter/Lubricator is dependent on the type of shop air provided. Either Dry air or lubricated air.

Pneumatic Controls

Air Requirements:

The Model 751/851 is a double acting air cylinder. This system requires compressed air to both advance and retract the marking tool. CMT recommends 1/2" minimum shop airline. Maximum operating pressure of 80 psi, minimum operating pressure of 20 psi. Please note that the airline length between the valve and marker should not exceed 3'. The marker has 3/8" NPT advance and retract air-ports.

Adjustments:

Increased air pressure marks deeper, and decreased air pressure marks lighter. To regulate marking pressure, adjust the regulator on FRL (Filter/Regulator/Lubricator combo unit). The FRL is part of the Retro-Fit Valve Package.

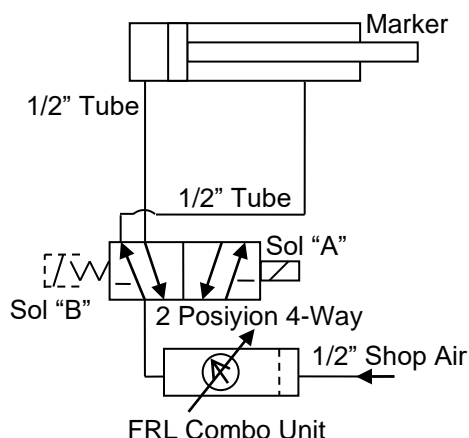
Electrical Sequence for Double Solenoid Valve:

To advance marker, energize solenoid "A". To return marker and reset, de-energize solenoid "A" and ENERGIZE solenoid "B".

Electrical Sequence for Spring Return Valve:

To advance marker, energize solenoid "A". To return marker and reset, de-energize solenoid "A" after part is marked.

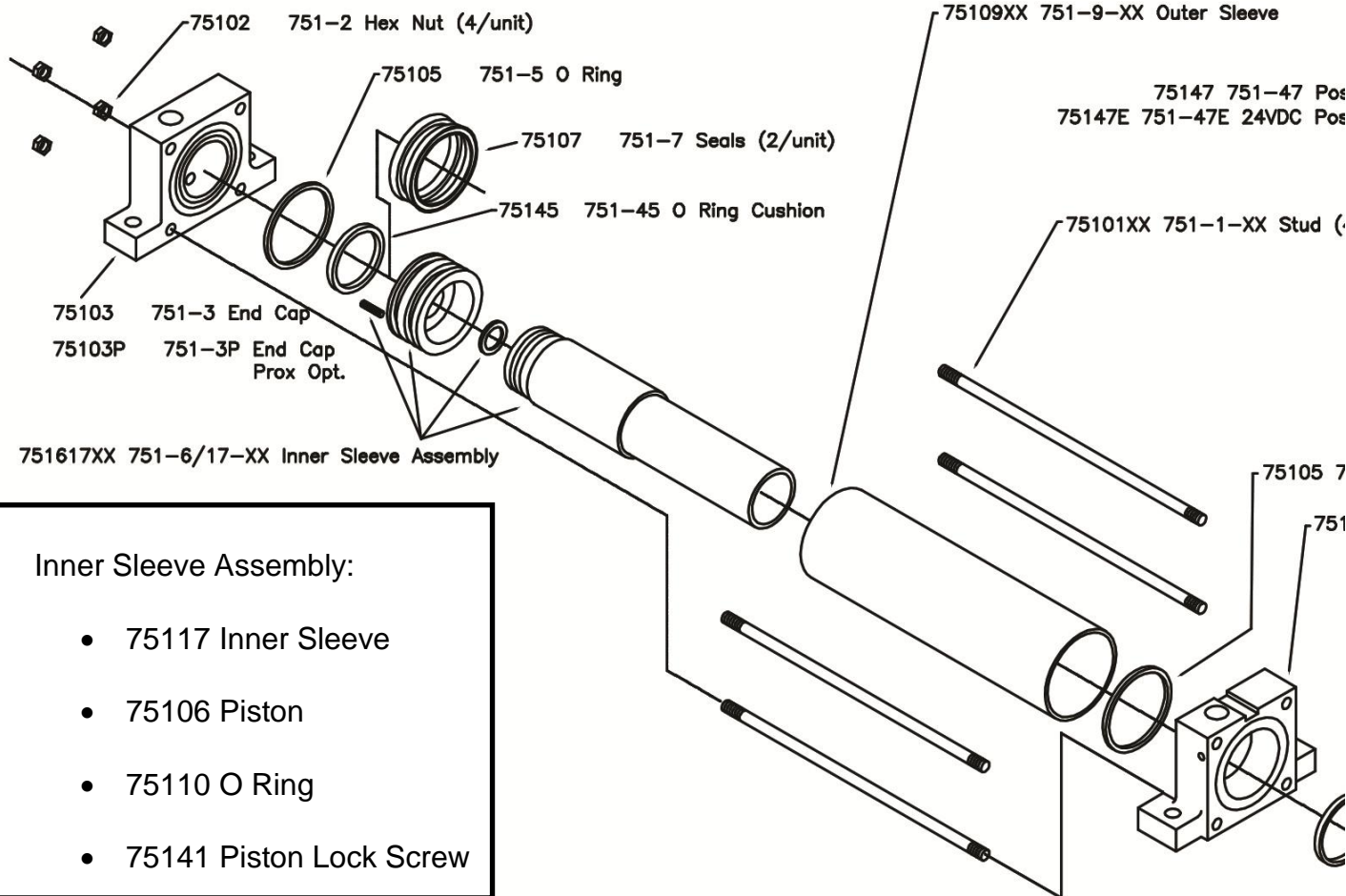
Suggested Pneumatic Control Diagram



Note:

For the most efficient operation, electrical signal energizing solenoid "A" should be very short, approximately .06 to .10 seconds.

Bill of Materials

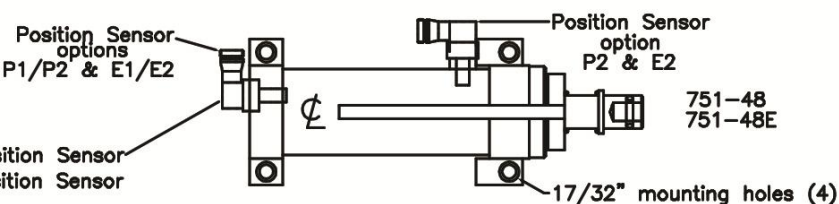


Inner Sleeve Assembly:

- 75117 Inner Sleeve
- 75106 Piston
- 75110 O Ring
- 75141 Piston Lock Screw

Replace "XX" with the (2) figure denotation of the stroke length.

- 2.5" = 25
- 4.0" = 40
- 6.0" = 60
- 8.0" = 80



4/unit)

751-5 O Ring

751-16 Front Cap

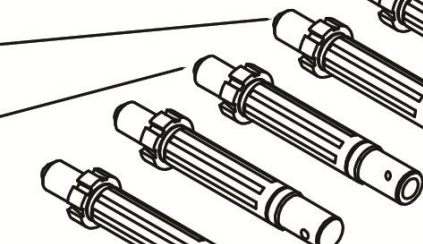
75111 751-11 Seal

75123 751-23 Inner Sleeve Bushing

75125 751-25 Bushing Screw (4/unit)

75115AXX 751-15A-XX "A" Spool

ge Hammer
Hammer



7515H-XX "H" Spool

75104 751-4 O Ring

75112 751-12 O Ring

75126 751-26 Bushing

75114 751-14 Compression Spring

75132 751-32 Tru-arc Collar

75113 751-13 Tru-arc Ring

75124 751-24 Collar Clamp Screw

75121XX 751-21-XX Guide Rod

75121LSXX 751-21-XX Limit Switch Guide Rod

75142 751-42 Spring Clip

75118 751-18 Screw

75119 751-19 Key

75135 751-35 Limit Switch Dog Screw

75134 751-34 Limit Switch Dog

75130 751-30 Guide Rod Lock Washer

75122 751-22 Guide Rod Screw

75120 751-20 Collar

75146 751-46 Lock Ring

Repair Kits

751RKSN – Standard

751RKSNNL - Non-Lube

751RKSV – Hot applications

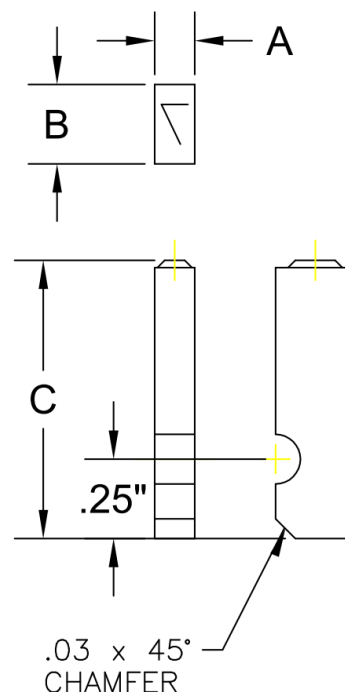
- 75104 O Ring
- 75105 O Ring (2)
- 75107 Seal (2)
- 75110 O Ring
- 75111 Seal
- 75112 O Ring
- 75145 O Ring Cushion

Spare Parts

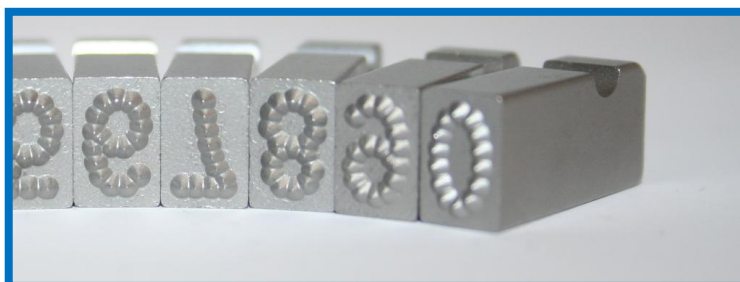
Stamps: Rectangular: CMG Groove Style

Style G Groove Type				
Char Size	A	B	C	Catalog No.
1/16"	1/16"	1/4"	7/8"	CMG06-
3/32"	3/32"			CMG09-
1/8"	1/8"			CMG13-
5/32"	5/32"			CMG016N-
3/16"	3/16"	5/16"	3/8"	CMG19
1/4"	1/4"	3/8"		CMG25--

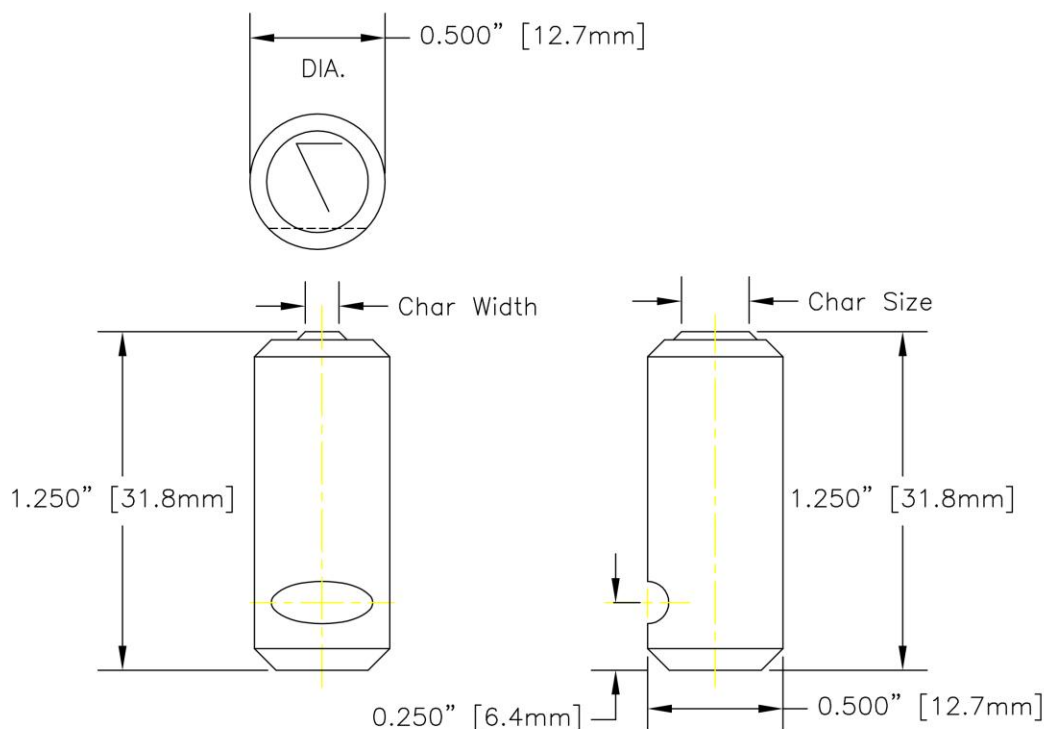
- When ordering please use the character required after the dash. Example "CMG13-A" would be for the 1/8" letter A.
- Symbols and punctuation are available – please see [on-line list for reference](#).
- Special length characters may be needed to mark in recess. Dimension "C" is available up to 3" long.
- Dot Style characters are a great solution for reducing the required force needed to mark a specific character size. For example – if the tool is not capable to mark a 1/8" character into the material you are marking, please try the CMG13DOT the dot style configuration reduces the force needed to mark the part.



Example of Dot Style Face



Stamps: Round CM9X one diameter



CM9X How to Order

Char. Size	Catalog Number	Engraving Depth
3/32" 2.4mm	CM9X09	.020" .5mm
1/8" 3.2mm	CM9X13	.023" .6mm
5/32" 4mm	CM9X16	.025" .6mm
3/16" 4.8mm	CM9X19	.025" .6mm
1/4" 6.3mm	CM9X25	.030" .8mm
3/8" 9.8mm	CM9X38	.035" .9mm

- When ordering please use the character required after the dash. Example "CM9X13-A" would be for the 1/8" letter A.
- Symbols and punctuation are available – please see [on-line list for reference](#).
- Special length characters may be needed to mark in recess. Lengths are available up to 3" long.
- Dot Style characters are a great solution for reducing the required force needed to mark a specific character size. For example – if the tool is not capable to mark a 3/16" character into the material you are marking, please try the CM9X19DOT the dot style configuration reduces the force needed to mark the part.

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-numeric characters, punctuation codes, or Symbol numbers. Some symbols may require a double sized insert.

2 Digit Character Size

- 1/16" – 06
- 3/32" – 09
- 1/8 – 13
- 5/32" – 16
- 3/16" – 18
- 1/4" - 25

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

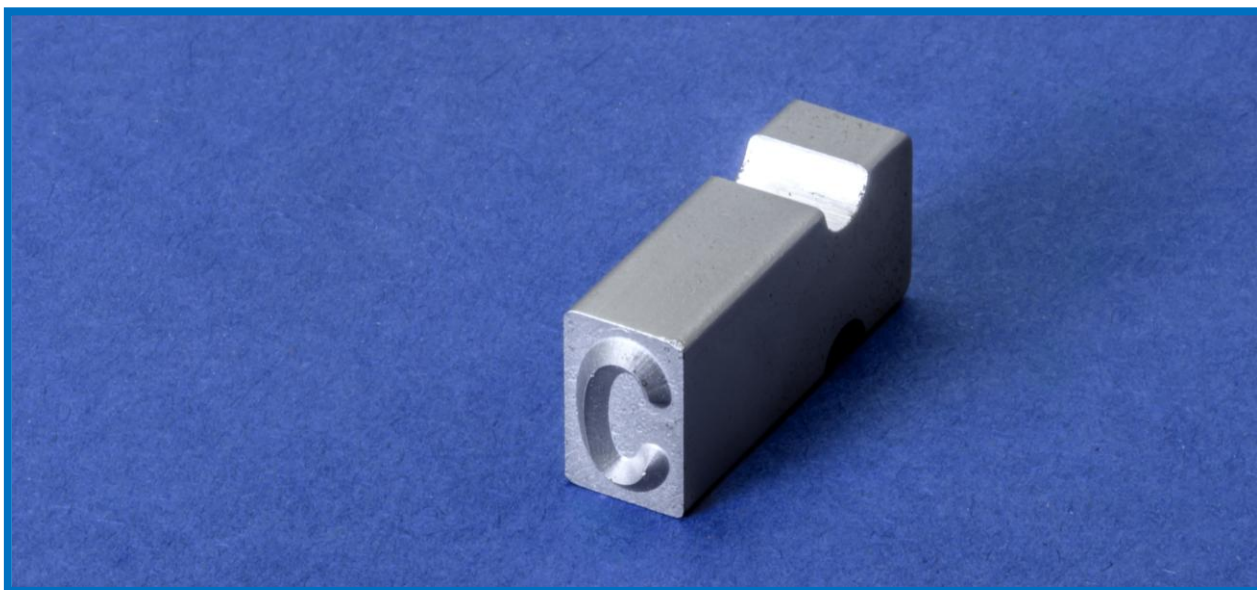
CMG	09	-A
Style	Char Size	Letter or Figure

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

CMG	13	-00
Style	Char Size	Blank Spacer

To order **PUNCTUATION** add suffix from [table](#)

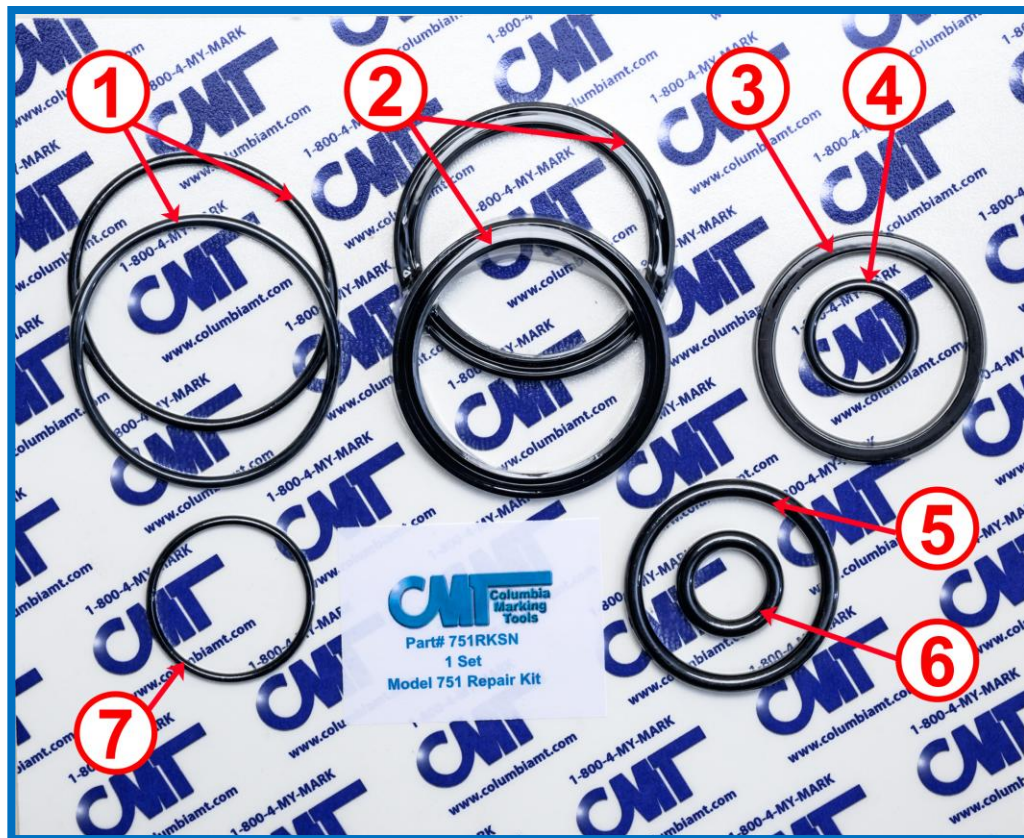
CMG	13	-RR
Style	Char Size	Asterisk Suffix



Repair Kit

751RКСN, 751RКСNNL, and 751RКСNV contain all the most common wearable arts for model 751 and 851:

1. 751-5 O-Ring (2)
2. 751-7 Seals (2)
3. 751-45 O-Ring Cushion
4. 751-4 O-Ring
5. 751-11 Seal
6. 751-10 O-Ring
7. 751-12 O-Ring



751RКСN - for lubricated compressed air source.

751RКСNNL - for dry compressed air source.

751RКСNV – for hot environments (Viton Seals)



CMT provides repair services. Cylinder repairs get the benefit of 10% discount on parts, and CMT warranties the repair for 90 days.

Maintenance

Shut off all air and electrical power prior to performing any and all maintenance.

Stamp Replacement:

Not using worn stamps is key to keeping a great looking mark, and a functioning air impact marker. If worn stamps are used in the system, higher than normal air pressure must be used to indent the worn stamps to the depth of new stamps. The worn stamps will not provide the clear impression of the new stamps, and the higher-than-normal air

pressure will age the seals, spring, and unit prematurely.

Stamps should be replaced when the engraving depth is worn by 50%.

Engraving Depth		
Char Size	Engraving Depth New	50% wear
1/16"	.018"	.009"
3/32"	.020"	.010"
1/8"	.023"	.012"
5/32"	.025"	.013"
3/16"	.025"	.013"
1/4"	.030"	.015"



Step 2 – Remove 751-24 collar screw.

To replace or change the spool in your Slide-A-Mark unit:

1. Pull rod or spool forward to extended position.
2. Remove **751-24** collar screw.
3. Use a screwdriver to open collar. Then push collar back over outer sleeve.
4. Remove **751-13** lock ring.
5. Remove collar and guide rod assembly.
6. Unscrew bushing and spool from the remaining 751 assembly.
7. Push Tru-Arc collar back.
8. Remove **751-13** Tru-Arc ring with spanner pliers.
9. Remove **751-32** Tru-Arc collar.
10. Remove **751-18** screw and **751-19** key from bushing.
11. Remove bushing.
12. Change spool and reassemble by following steps in reverse order.

Seal and wearable part Replacement:

All maintenance is done by the removable of the spool and noted. Replace all parts of the Repair kit.

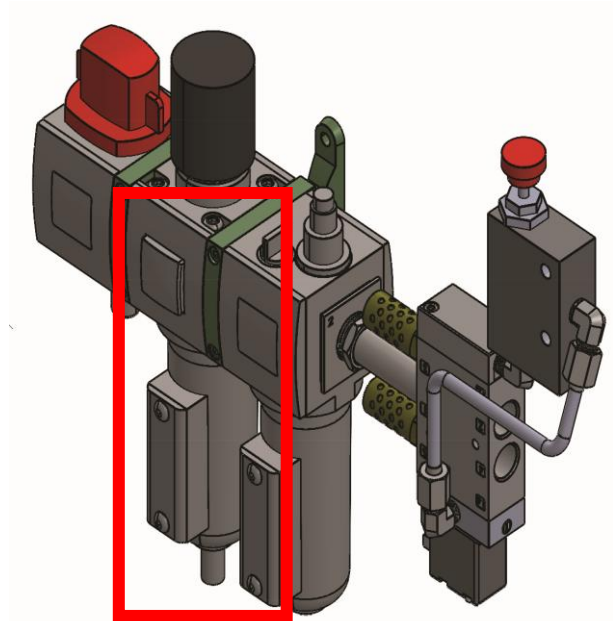
Maintenance of FRL, Filter, Regulator, Lubricator

Lubrication (for Lubricated Air Supply):

To the lubricator, next to the regulator, add 10W "light" industrial hydraulic oil to lubricator bowl and adjust oil flow to approximately 1 drop for every 30-50 cycles.

Air Filter:

Also, check and clean/change as required. The frequency of cleaning/changing is dependent on environment and plant air system. Do not allow excess water to fill filter bowl. Cleaning/changing the filter is needed for both lubricated and dry air supply.



Troubleshooting table

Common Issue	Symptoms	How to Fix
Low air pressure	Shallow or incomplete marking.	Turn up air pressure. Check hose size, should be 1/2", and air connection.
High air pressure	Too deep or hard to control marking.	Turn down air pressure. Model 751/851 should not be connected directly into shop air, may need to install RVP (Retro Fit Valve Pack)
Collar is too tight	The rod is frozen in place, preventing normal function	Untighten collar. Should be set to allow movement of the holder/rod end freely advance and retract.
Valve Timing	Air leaking out of front end	This is a timing issue with the valve. The rod should only be extended long enough to mark the part. Once the dies hit the part, the mark is complete and tool should be retracted.
Worn stamps	Shallow or incomplete mark, or having to use higher air pressure	Replace with new stamps.

Most common issues are due to insufficient air supply. CMT strongly recommends the purchase of the RVP to assure a regulated compressed air source.

More helpful hints can be found online.



Warranty

Limited One-Year Warranty

Columbia Marking Tools manufactures its hardware products from parts and components that are new or equivalent to new in accordance with industry-standard practices. Columbia warrants that the hardware products it manufactures will be free from defects in materials and workmanship. The warranty term is one year beginning on the date of invoice, as further described in the following text.

Damage due to shipping the products to you is covered under this warranty. Otherwise, this warranty does not cover damage due to external causes, including accident, abuse, misuse, problems with electrical power, servicing not authorized by Columbia Marking Tools, usage not in accordance with product instructions, failure to perform required preventive maintenance, and problems caused by use of parts and components not supplied by CMT.

This warranty does not cover any items that are in one or more of the following categories: software; external devices (except as specifically noted); accessories, parts or components added to a Columbia system after the system is shipped from CMT; accessories, parts or components that are not installed in the Columbia Marking Tools factory or associative companies; or accessories, parts or components that are sold with an expressed specific warranty in place of being covered under this warranty.

Columbia will repair or replace products covered under this limited warranty that are returned to Columbia's facility. To request warranty service, you must call Columbia's Return Material Authorization or Service Department within the warranty period. If warranty service is required, Columbia will issue a Return Material Authorization Number. You must ship the products back to Columbia in their original or equivalent packaging, prepay shipping charges, and insure the shipment or accept the risk of loss or damage during shipment. Columbia will ship the repaired or replacement products to you (freight prepaid) if you use an address in the continental U.S., where applicable. Shipments to other locations will be made freight collect. Columbia Marking Tools will not take responsibility for the cost of transportation required for the unit to be returned to the purchaser/owner.

NOTE: Before you ship the product(s) to Columbia, back up the data on the hard-disk drive(s) and any other storage device(s) in the product(s). Remove any removable media, such as diskettes, CDs, or PC Cards. CMT does not accept liability for lost data or software. ** CMT owns all parts removed from repaired products. Columbia Marking Tools will use new and reconditioned parts made by various manufacturers in performing warranty repairs and building replacement products. If Columbia repairs or replaces a product, its warranty term is not extended.

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COLUMBIA MARKING TOOLS' RESPONSIBILITY FOR MALFUNCTIONS AND DEFECTS IN HARDWARE IS LIMITED TO REPAIR AND REPLACEMENT AS SET FORTH IN THIS WARRANTY

STATEMENT. THESE WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE (OR JURISDICTION TO JURISDICTION).

COLUMBIA MARKING TOOLS DOES NOT ACCEPT LIABILITY BEYOND THE REMEDIES SET FORTH IN THIS WARRANTY STATEMENT OR LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION ANY LIABILITY FOR PRODUCTS NOT BEING AVAILABLE FOR USE OR FOR LOST DATA OR SOFTWARE.

SOME STATES (OR JURISDICTIONS) DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE PRECEDING EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU.

These provisions apply to CMT's limited one-year warranty only. For provisions of any service contract covering your system, refer to your invoice or the separate service contract that you will receive.

In any instance in which Columbia issues a Return Materials Authorization Number, Columbia Marking Tools must receive the product(s) for repair prior to the expiration of the warranty period in order for the repair(s) to be covered by the warranty.