

**Air Impact Marker
Mite-E-Mark
Model 78**

Operation Manual



CMT
Columbia
Marking
Tools

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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 Mite-E-Mark packs a punch for its small size. The compact Model 78 can fit into tight spaces and provide production marking of station ID and QC marks in fully automated production.

Cylinder type Double-acting ▾

Cylinder pressure (P)	80 psi ▾
Piston diameter/bore (D)	1.125 in ▾
Piston area (A ₁)	0.994 in² ▾
Cylinder force	
Outward stroke force (F ₁)	79.52 lbf ▾

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 78 parameters is 80 lbs (calculation shown in image)

On the other hand, an air impact marker, like the model 78, 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 1,500 lbs by the Model 78 is generated by 80 psi for the 1” stroke, and 2,500 lbs for the 2” stroke.

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.

Force Comparison

Model 78

Bore Size: 1.25”

Air Cylinder Pressure: 80 lbs

Air Impact Pressure; 1,500 lbs (1” stroke) and 2,500 lbs (2” stroke)

Product Information

The Columbia Model 78 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 pockets at the rod end for stamp character inserts, allowing it to deliver powerful impact blows.
2. **Impact Force:** Capable of delivering a substantial impact force of up to 2,500 lbs at 80 psi (pounds per square inch). This makes it suitable for various industrial marking applications.
3. **Shock Absorption:** The cylinder is equipped with patented shock-absorbing bumpers at both ends of the stroke. This feature is designed to prevent damage to the marker during the forward stroke and reduce shock during the return stroke.
4. **Dependability:** The Model 78 is highlighted as a dependable marker, offering reliable performance while maintaining a low investment cost.
5. **Rod Action:** The rod features a spring return action, enhancing efficiency and contributing to a quick return stroke.
6. **Keyed Non-Rotating Rod:** The rod is designed as keyed and non-rotating, ensuring precision and accuracy in the marking process.
7. **Stroke Length:** The model offers 1" and 2" inches of stroke, providing versatility for different marking requirements.

8. Compressed Air

Requirement: CMT offers both lubricated air and dry air models

9. Integrated Return Sensor:

CMT offers integrated sensor option to signal that the marker has returned to the retracted position.



Options

1. Mounting Styles:

- Two mounting styles are available for flexibility:
 - Foot mount
 - Rear mount

2. Environment:

- 78 is designed for industrial part marking, but some industrial environments offer additional challenges.
 - Industrial – standard unit
 - SUBK – Enhances tool longevity in extreme wet environments
 - SUBU – Design for complete submersion or use in vacuum environments

3. Rod Styles:

- Four standard rod styles are offered to hold stamps:
 - Multi-character OA for CMF Flat type
 - Multi-character GA for CMV Groove type
 - Single character OB for CM7X round insert
 - Single character GB for CM7G round insert



The 078FNOB10 offers the most compact configuration of the CMT Mite-E-Mark.



The 078FKOB10E offers a great configuration for station ID of the CMT Mite-E-Mark.

4. Stroke Length:

- CMT offers 2 stroke length options for
 - 1"
 - 2"

5. End Configurations:

- Standard
- Integrated return positions sensor two options
 - DC – 24VDC Sourcing Euroconnector
 - AC – 110VAC Mini Connector



Submersible Upgrades

Columbia Marking Tools has always designed its air impact markers for rugged industrial environments, but some applications demand even more durability. That's why we're introducing a new submersible upgrade, engineered to withstand extreme conditions, including wet and high-temperature environments.

Key Upgrades:

- **Armorclad Tool Coating** – A thin chrome barrier that protects against rust and corrosion in wet or humid environments.
- **Upgraded Viton Seals** – Designed to maintain reliable operation even in high-temperature conditions.
- **SUBK Model** – Features Armorclad coating and Viton seals, making it ideal for demanding environments with exposure to moisture and heat.
- **SUBU Model** – Built for complete submersion in **leak test tanks and vacuum test stations**, featuring a design with no keyway to prevent water ingress.

With these enhancements, Columbia Marking Tools continues to push the boundaries of durability and performance in industrial marking solutions.



Best for applications:

- Wet
- Submerged
- Heat
- Corrosive



Marking Character Capacity

Stamp Capacities Rod Style "B"

(1) Pc CM7X round insert can mark up to a 3/16" character.

Stamp Capacities Rod Style "GB"

(1) Pc CM7G round insert can mark up to a 3/16" character.

Stamp Capacities Rod Style "A"

(4) Pc's 1/16" Char. CMF06 Stamp Inserts

(2) Pc's 1/8" Char. CMF13 Stamp Inserts

Stamp Capacities Rod Style "GA"

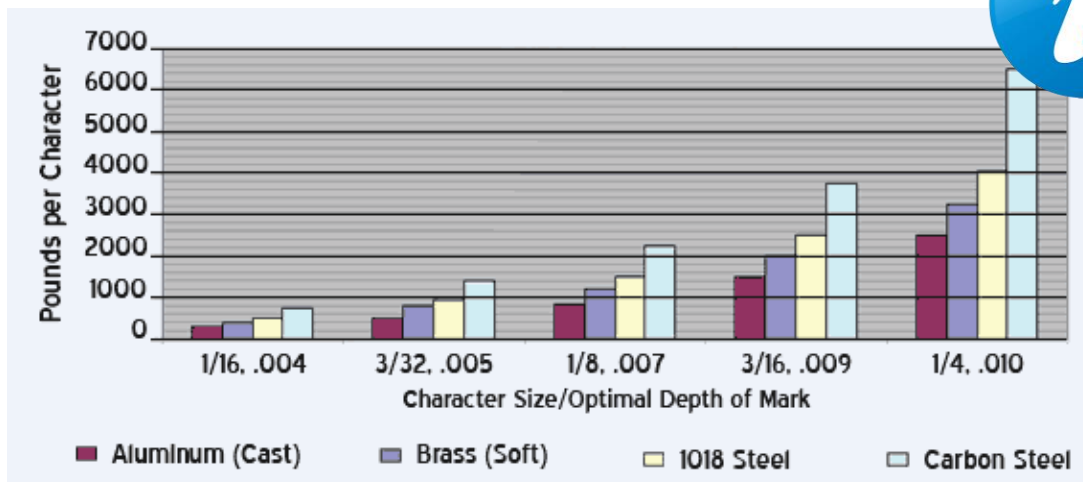
(4) Pc's 1/16" Char. CMV06 Stamp Inserts

(2) Pc's 1/8" Char. CMV13 Stamp Inserts



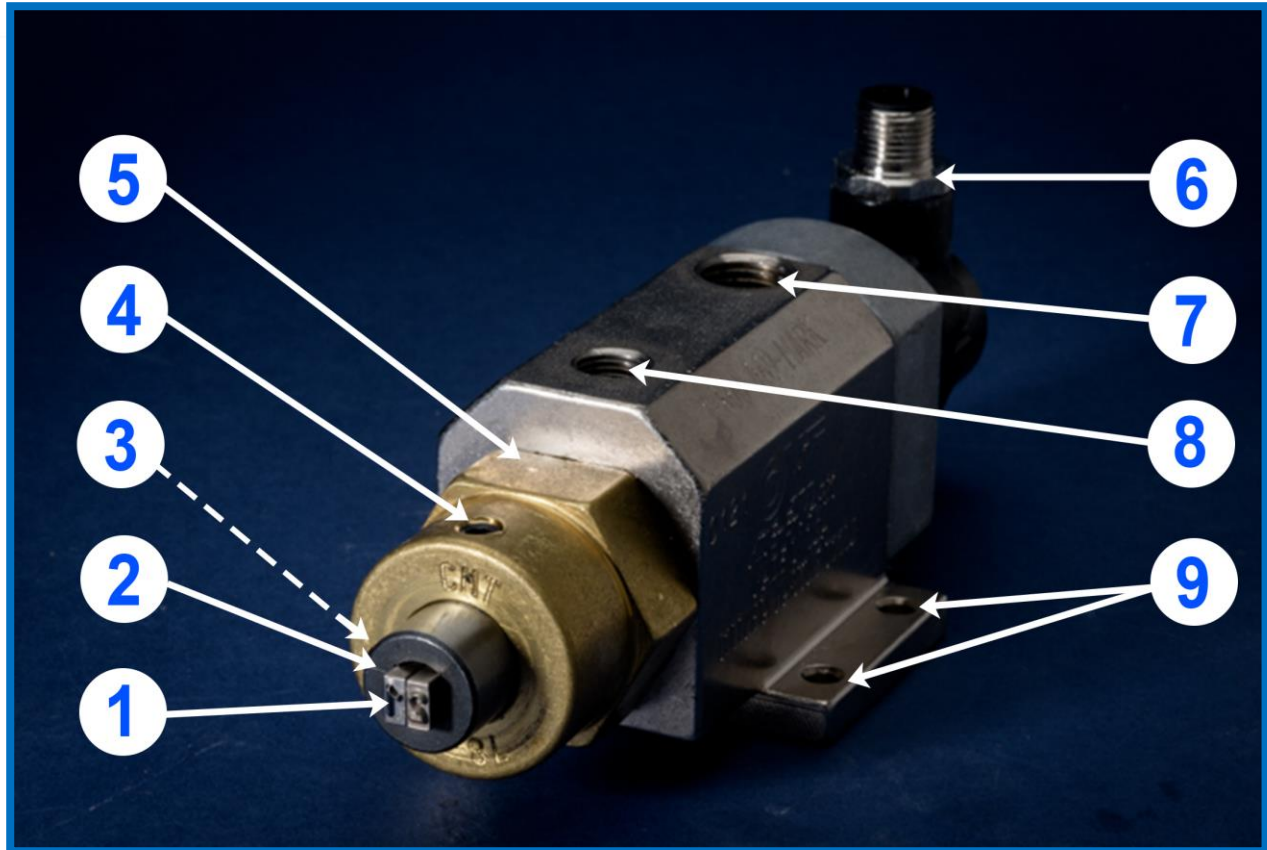
"GA" and "GB" Rods for systems with excessive vibrations. The standard "OA" and "OB" rods use a set screw to retain the stamps. For most applications this works very well. However, machines with excessive vibrations can cause the stamps to randomly fall out. CMT has a solution. The "GA" and "GB" rod use a pin and oring to assure solid retention for shaking machines.

Marking Pressure Chart



Pressure chart and character size explained in detail.

Parts Breakdown



1. Stamp – wearable part
2. Rod/Stamp holder
3. Set screw – retains stamp wearable part (hidden)
4. Keyway – maintains orientation of stamp(s), At base of unit.
5. Front nut – Remove for maintenance
6. Optional Upgrade – return position sensor
7. Advance air port 1/4" NPT
8. Return air port 1/8" NPT
9. Foot Mounting

Model 78 How to Order Guide

<i>Feature</i>	<i>Symbol</i>	<i>Example</i>
Environment		78-FN-OB-10-NL
<i>Industrial</i>	78	X
<i>Extreme Debris</i>	78SUB(K)	
<i>Submersible</i>	78SUB(N)	
Mounting		
<i>Foot Mount</i>	F	X
<i>Rear Mount</i>	R	
Rotating		
<i>Non-Keyed (rotating)</i>	N	X
<i>Keyed (non-rotating)</i>	K	
Rod Style		
<i>Rectangular Pocket 1/4" x 1/4"</i>	OA	
<i>Rectangular Pocket 1/4" x 1/4" with pin and oring</i>	GB	
<i>Round Pocket 1/4"</i>	OB	X
<i>Round Pocket 1/4" with pin and oring</i>	GB	
Stroke Length		
<i>1.0"</i>	10	
<i>2.0"</i>	20	X
End configuration		
<i>Standard</i>	-	X
<i>24VDC Return Sensor</i>	E	
<i>110VAC Return Sensor</i>	D	
Compressed Air		
<i>Lubricated</i>	-	
<i>Dry</i>	NL	X



Keyed unit, non-rotating, and longer – shown above

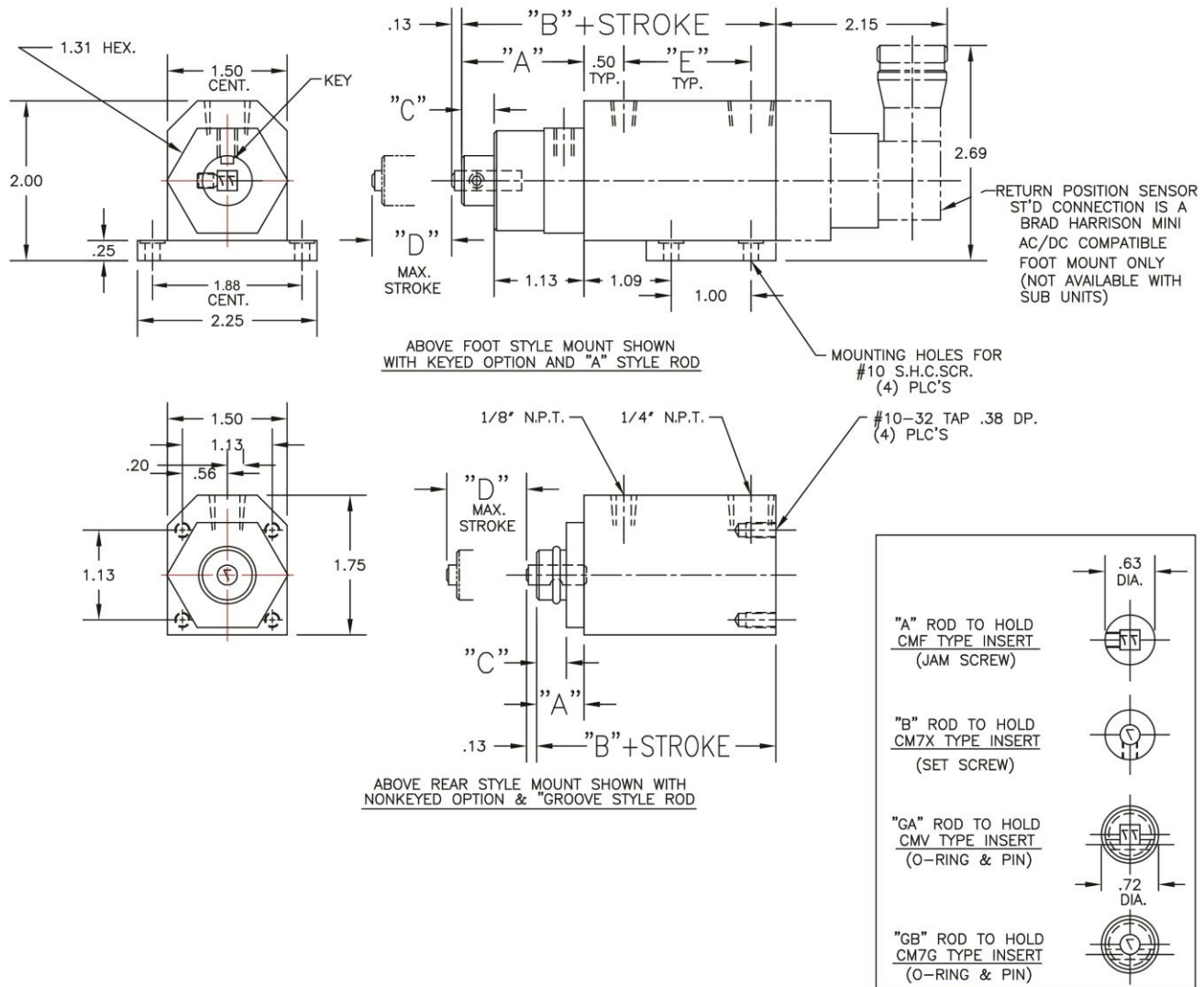
Non-keyed unit, rotating and shorter – shown below



78 is designed for industrial part marking, but some extreme environments require additional coating to ensure long-term performance.

- **SUB(K)** – This upgrade includes a specialized tool coating that enhances longevity in extreme wet environments. Select SUB and K options.
- **SUB(N)** – This upgrade includes the tool coating and removes the keyway, allowing full system functionality in vacuum environments or when submerged in leak testing tanks. Select SUB and N options.

Overall Dimensions



Feature	"A"	"B"+ Stroke	"C"	"D"	"E"
Keyed – K	.59	2	.38		
Non-Keyed - N	1.53	2.94	.41		
1" Stroke				.94	1.59
2" Stroke				1.94	2.59

The dimensions vary by the features selected. Please see above chart for variable dimensions. The best way to ensure that the compact Mite-E-Mark Model 78 fits into your design is to use CAD files.

Technical Specifications

Recommended Air Hose: 3/8" ID Minimum

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

Operating Pressure: 20 to 80 psi

Maximum Marking Pressure: 1,500 lbs (1" stroke) and 2,000 lbs (2" stroke) (at 80 psi)

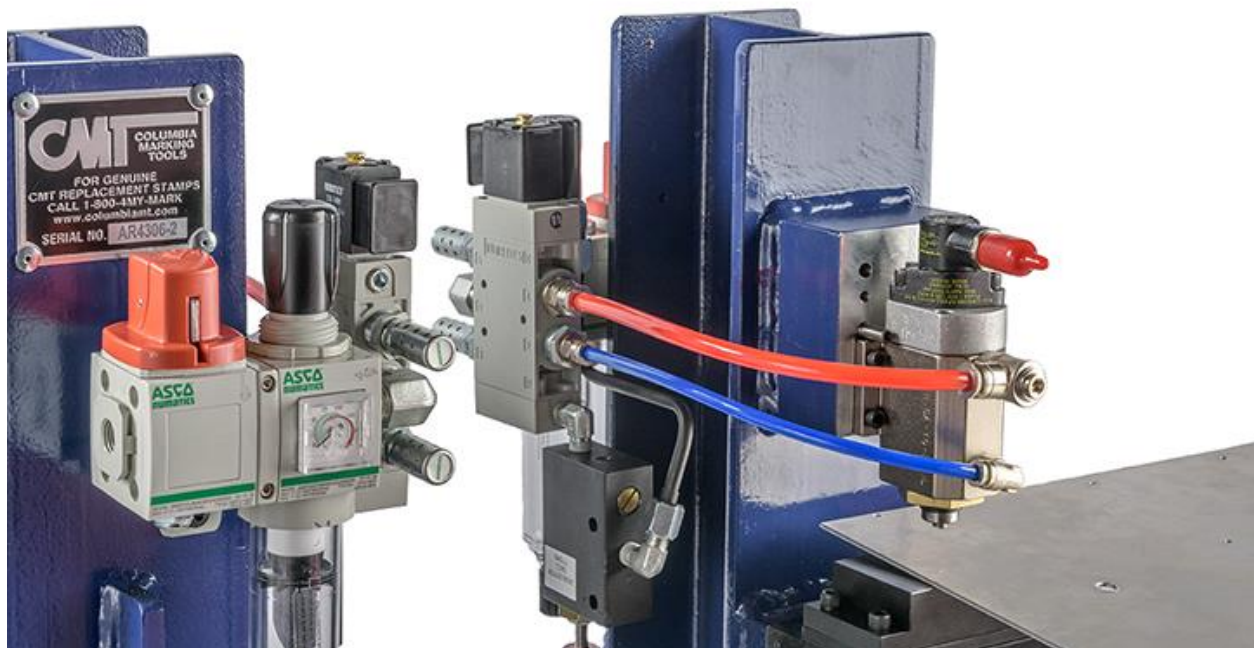
Installation

Mounting:

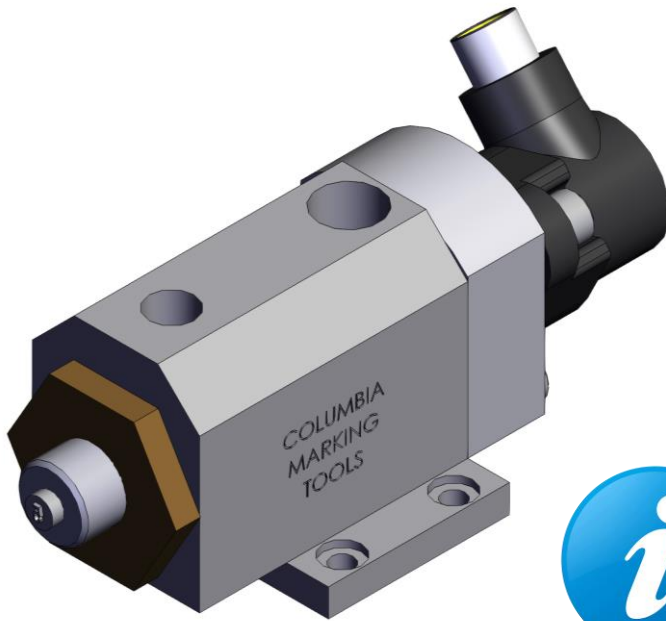
Mounting holes are in the housing, and the use of 10-32 screws is required. The Model 78 markers require a sturdy, level platform for mounting. For optimum power, the marker should be mounted so that the extended stamp face stamp should engage workpiece at 1/16" to go of the total stroke length.

Best practice suggestion:

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



Drawing Files



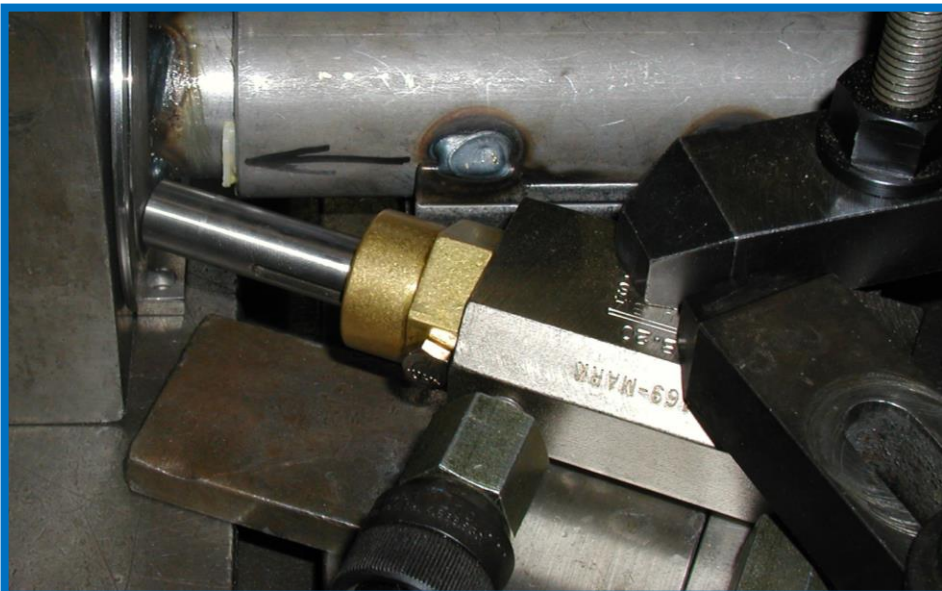
Drawings for all the models. CAD files formats of many different configurations.

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.
- The .62" or .73" diameter rod extends to contact the workpiece. Workpiece

distance from the retracted marker are based on stroke length. Please see the table.

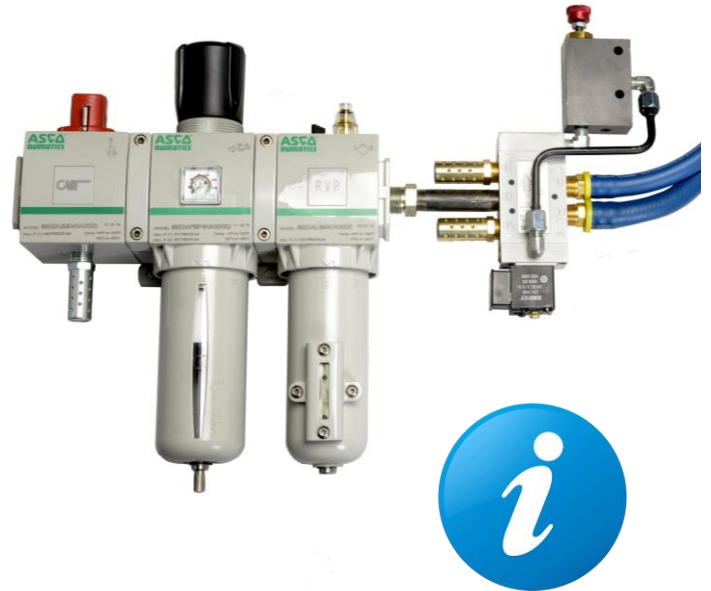


Stroke	Workpiece Distance
1"	.94"
2"	1.94"

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 78 is a double acting air cylinder. This system requires compressed air to both advance and retract the marking tool. CMT recommends 3/8" 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 1/4" NPT advance and 1/8" NPT retracting 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.

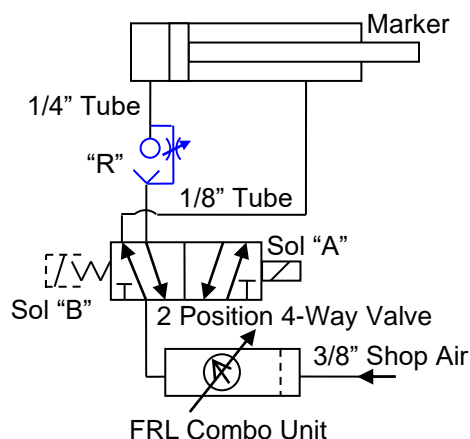
Electrical Sequence for Double Solenoid Valve:

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



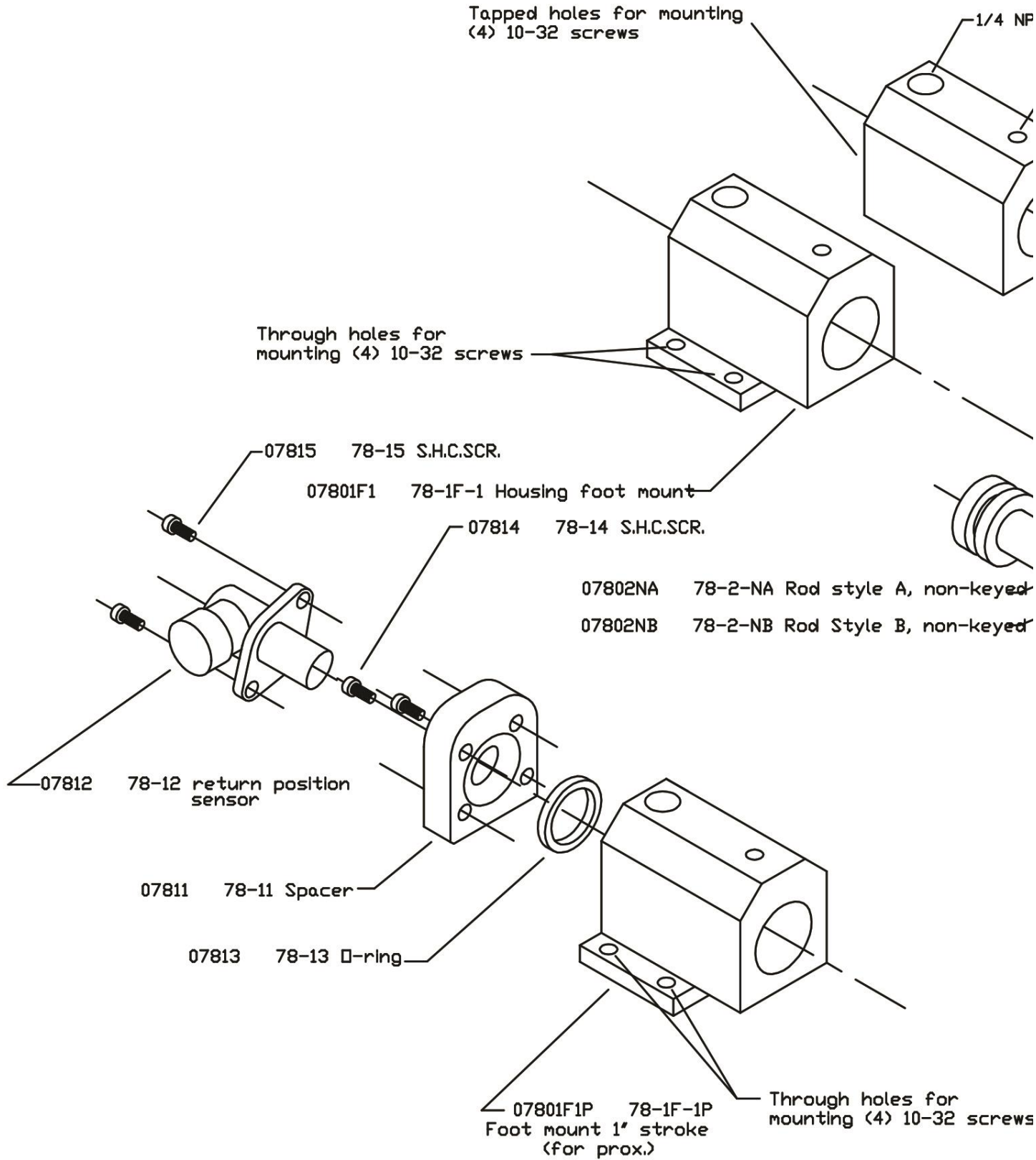
Speed Control Adjustment:

Adjust speed control "R" to control speed of retract motion. **DO NOT install speed control on the forward (rod) port of the marker.**

Note:

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

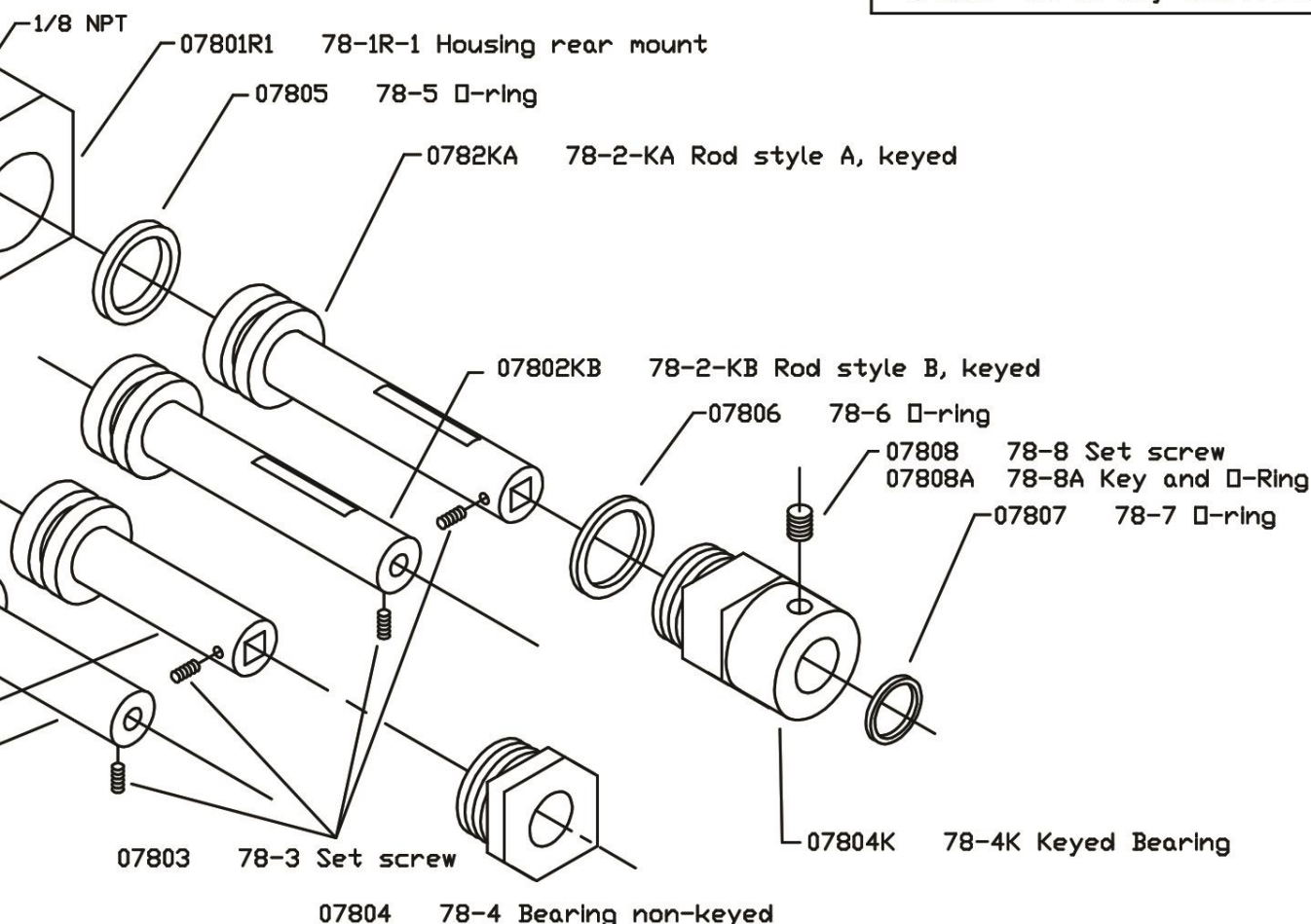
Bill of Materials



078RKSN 78-RKSN Repair Kit

Includes:

07803	78-3 Set screw
07805	78-5 O-ring
07806	78-6 O-ring
07807	78-7 O-ring
07808	78-8 Set screw
07808A	78-8A Key and O-ring



- For the 2" stroke – add "20" to Det 2 Rod part number. Example: 07802KB is the part number for a 1" stroke and 07802KB20 for 2" stroke.
- For the GB rod replace "B" with "GB". Example: 07802NB for standard B style rod, and 07802NGB for Pin and O-ring retention design for application with high vibrations.
- Always good to include complete unit number with any spare parts order, and CMT service can cross reference required parts.
- NL (dry air) and SUB (extreme environment) have different Seal styles. Please order as part of the Repair kit.

FAQ – Frequently Asked Questions

Q: How long for shipment/delivery of the Model 78?

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 78?

A: The Model 288 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 78?

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 78?

A: The Model 78 has a maximum impact force of 2,500 lbs (for 2" stroke) at 80 psi. There is a non-linear parabolic relationship between the incoming air pressure and resulting force.

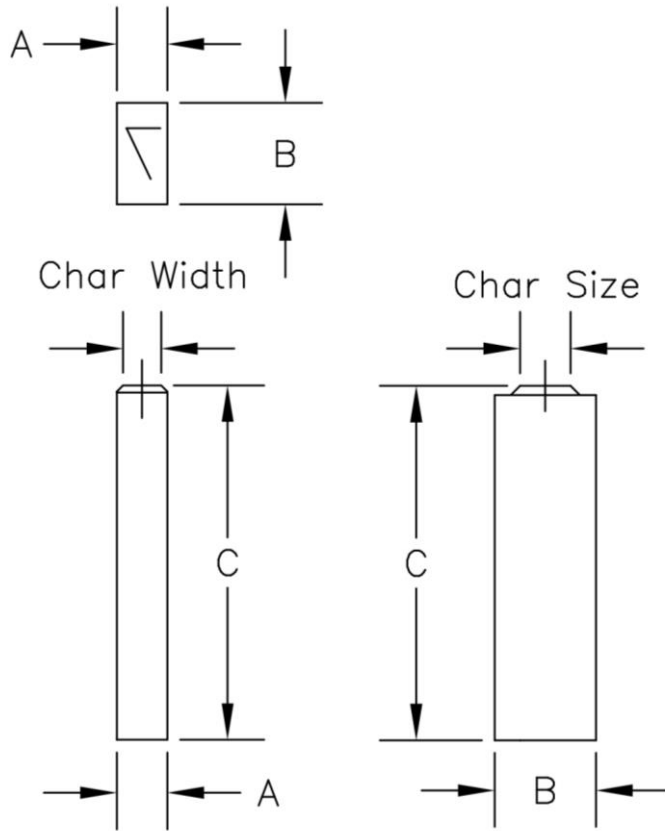
Q: How far should the marker be mounted from the part?

A: For optimum power, the marker should be mounted so that the stamp face is .94" from the part to be marked for a 1" stroke and 1.94" for a 2" stroke. And for best practice the marker location should have some adjustment.



Spare Parts

Flat Stamps - CMF



A = Width

B = Height

C = Length

Char Size – Measured from the top of the character.

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

Tolerance - $+.000"/-0.001"$ on all dimensions.



Standard Flat Dimensions

Char. Size	Catalog Number	"A"	"B"	"C"	Engraving Depth
1/16" 1.6mm	CMF06	1/16" 1.6mm	1/4" 6.3mm	7/8" 22.2mm	.018" .5mm
3/32" 2.4mm	CMF09	3/32" 2.4mm	1/4" 6.3mm		.020" .5mm
1/8" 3.2mm	CMF13	1/8" 3.2mm	1/4" 6.3mm		.023" .6mm

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.

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

CMF	09	-A
Style	Char Size	Letter or Figure

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

CMF	13	-00
Style	Char Size	Blank Spacer

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

CMF	13	-RR
Style	Char Size	Asterisk Suffix

2 Digit Character Size

- 1/16" – 06
- 3/32" – 09
- 1/8 – 13



Center Groove – CMV

These stamps have the groove near the middle of the stamp. The CMV style groove stamps are uniquely used in the Mite-E-Mark 78-GA rod. The Mite-E-Mark GA rod is offered for applications with “extreme” vibrations. GA uses the upgraded Pin and O ring method of retention, and this is the most secure method of retention.



A = Width

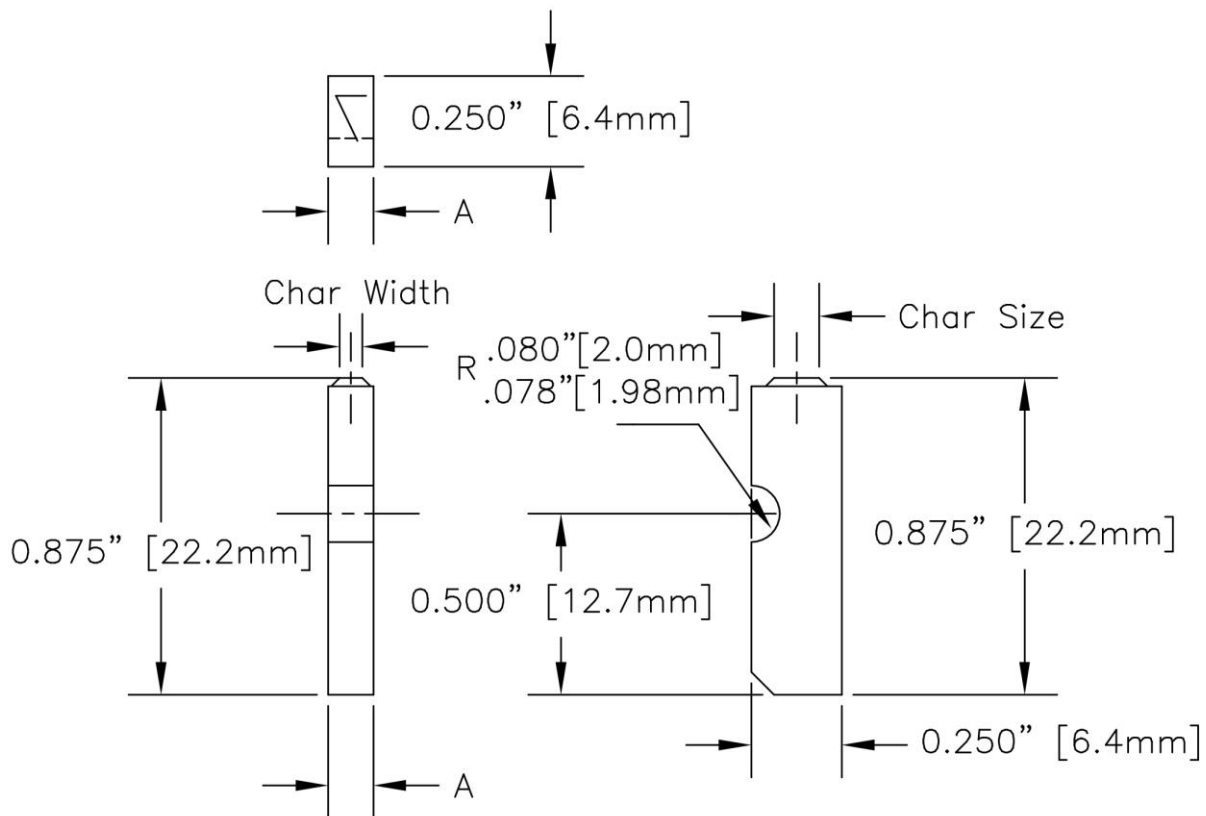
Char Size – Measured from the top of the character.

B = .25” [6.4mm]

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

C = .875” [22.2mm]

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



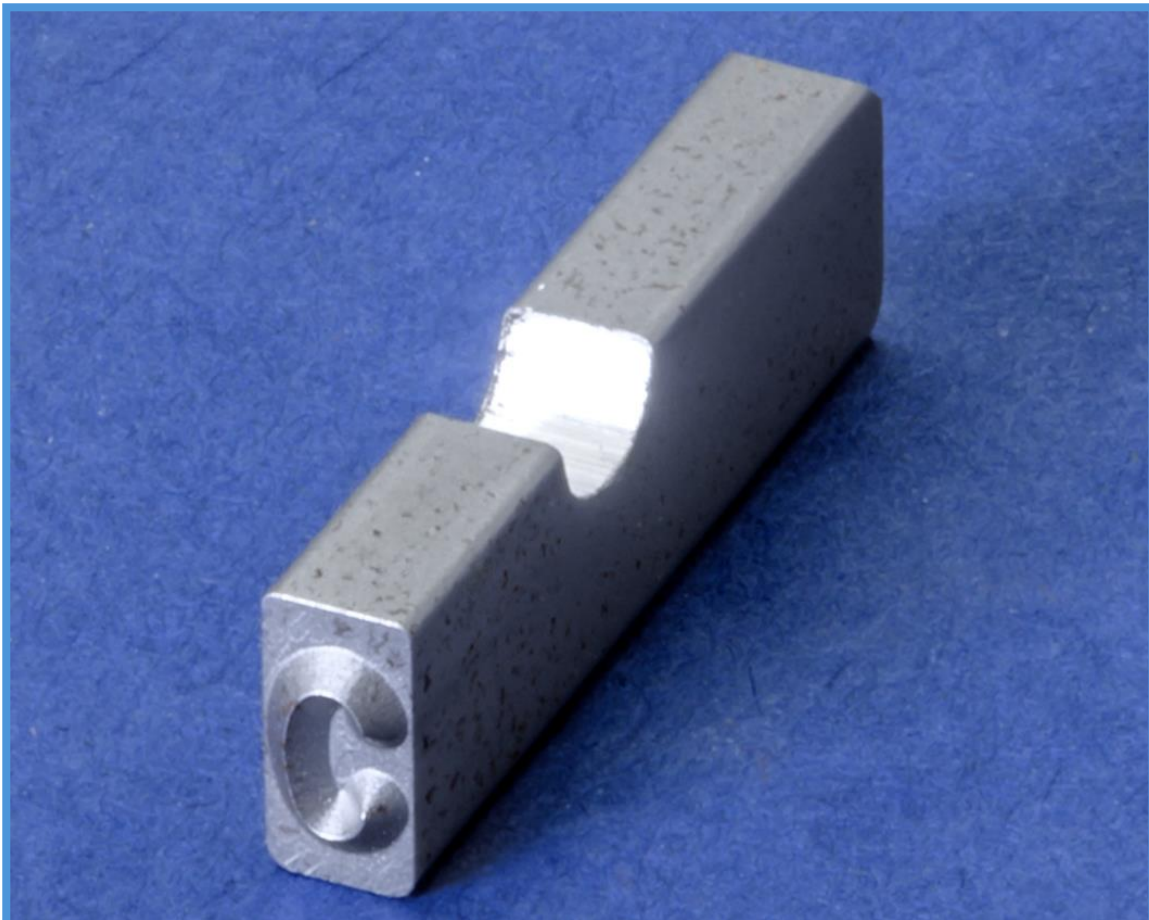
Center Groove Dimensions

Char. Size	Catalog Number	"A"	Engraving Depth
1/16" 1.6mm	CMV06	1/16" 1.6mm	.018" .5mm
3/32" 2.4mm	CMV09	3/32" 2.4mm	.020" .5mm
1/8" 3.2mm	CMV13	1/8" 3.2mm	.023" .6mm

The CMV has limited character sizes available because of the limited type capacity of the Model 78 Mite-E-Mark.

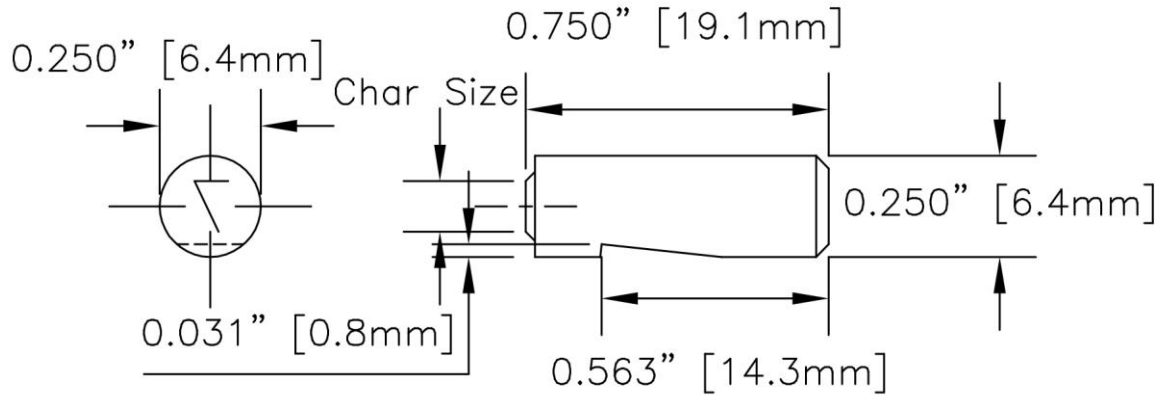
To order individual **CENTER GROOVE** letters and figures add CMV notation to part number as shown.

CMV	13	-A
Style	Char Size	Letter or Figure



CM7X - 1/4" Round Inserts

Char Size – Measured from the top of the character.



Char Width – All sizes are Style 3A, width is 60% of the character size. Except 3/16" character size style 2A, width 50% of the character size.

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

CM7X How to Order

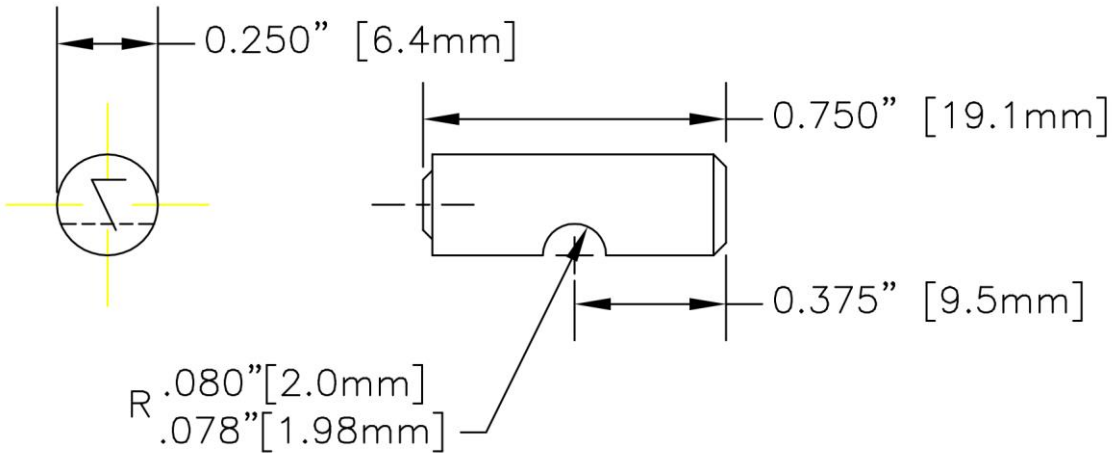
Char. Size	Catalog Number	Engraving Depth
1/16" 1.6mm	CM7X06	.018" .5mm
3/32" 2.4mm	CM7X09	.020" .5mm
1/8" 3.2mm	CM7X13	.023" .6mm
5/32" 4mm	CM7X16	.025" .6mm
3/16" 4.8mm	CM7X19	.025" .6mm



The CM7X inserts are used in the CMT air impact marker Model 78 "OB" rod retained with a set screw.



CM7G – Groove 1/4” Round Inserts



Char Size – Measured from the top of the character.

Char Width – All sizes are Style 3A, width is 60% of the character size. Except 3/16” character size style 2A, width 50% of the character size.

Tolerance - +.000”/-0.001” on all dimensions.

CM7G How to Order

Char. Size	Catalog Number	Engraving Depth
1/16” 1.6mm	CM7G06	.018” .5mm
3/32” 2.4mm	CM7G09	.020” .5mm
1/8” 3.2mm	CM7G13	.023” .6mm
5/32” 4mm	CM7G16	.025” .6mm
3/16” 4.8mm	CM7G19	.025” .6mm



The CM7G inserts are used in the CMT air impact marker Model 78 “GB” rod retained with a pin and o-ring. This is a great solution for applications with significant vibrations

Repair Kit

78RKSX,78RKSXNL, and 78SUBRKSX contain all the wearable parts for model 78:

1. 78-8A Key and O-Ring
2. 78-5 O-Ring
3. 78-3 Set screw
4. 78-6 O-Ring
5. 78-8 Set screw
6. 78-7 O-Ring

78RKSX - for lubricated compressed air source.

78RKSXNL - for dry compressed air source.

78SUBRKSX – 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

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"

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

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

Seal and wearable part

Replacement:

All maintenance is done by the removable of the rear end cap. Replace all parts of the Repair kit.

Maintenance of FRL, Filter, Regulator, Lubricator

Lubrication:

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, in the 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.



Troubleshooting table

Common Issue	Symptoms	How to Fix
Low air pressure	Shallow or incomplete marking.	Turn up air pressure. Check hose size, should be 3/8", and air connection.
High air pressure	Too deep or hard to control marking.	Turn down air pressure. Model 288 should not be connected directly into shop air, may need to install RVP (Retro Fit Valve Pack)
Set screw is too tight	The rod is frozen in place, preventing normal function	Untighten the set screw.
Incomplete seal	The tool is leaking air when pressurized.	Disassemble the 78 from the front fitting and check the O-ring for damage. Replace O-ring if damaged. If the O-ring is not damaged, clean unit and replace lock-tight.
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.

General Provisions

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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).

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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.