



**Air Impact Marker
3 Ton Double Acting
Model 288**

Operation Manual

CMT COLUMBIA
MARKING
TOOLS

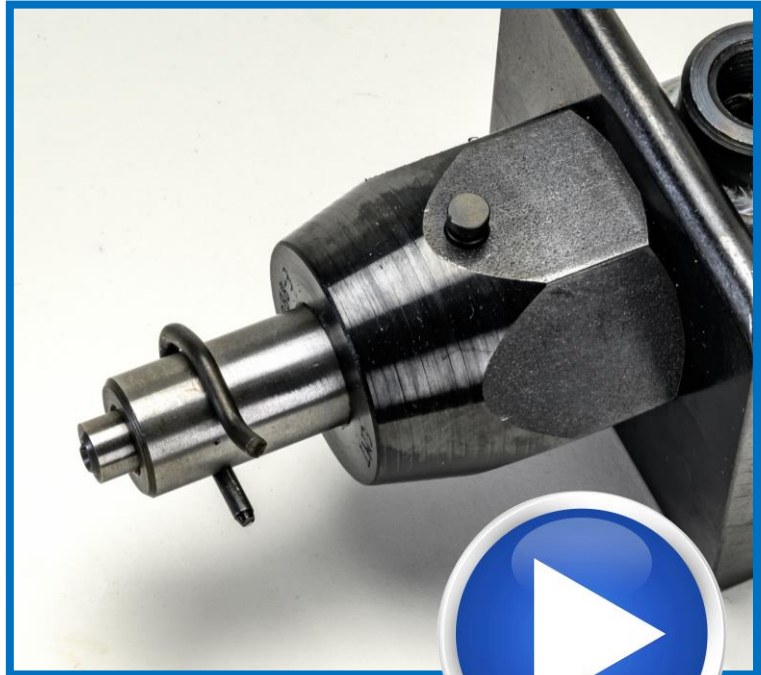
Table of Contents

Table of Contents	1
What is an air impact marker?	2
Is an air impact marker an air cylinder?	3
Product Information	5
Options:	6
Submersible Upgrades	8
Marking Character	9
Marking Pressure Chart	9
Parts Breakdown	9
Model 288 How to Order Guide	11
Overall Dimensions	12
Technical Specifications	12
Installation	13
Warning:	13
Drawing Files	14
Retro-Fit Valve Pack – installation solution	15
Pneumatic Controls	16
Bill of Materials	17
FAQ – Frequently Asked Questions	19
Spare Parts	19
Stamps: Rectangular: CMG Groove Style	20
Stamps: Round CM8X one diameter	20
Stamps: Round CM8Y two diameters	22
Repair Kit	23
Maintenance	24

Troubleshooting table.....	25
Warranty.....	26

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.



Cylinder type
Double-acting ▼

Cylinder pressure (P)	80 psi ▼
Piston diameter/bore (D)	1.125 in ▼
Piston area (A ₁)	0.994 in ² ▼
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 98 parameters is 80 lbs (calculation shown in image)

On the other hand, an air impact marker, like the model 288, 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 6,000 lbs by the Model 288 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.

Force Comparison

Model 288

Bore Size: 1.25”

Air Cylinder Pressure: 80 lbs

Air Impact Pressure; 6,000 lbs

Product Information

The Columbia Model 288 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 8 tons 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 288 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 2.5 to 6" 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:

- Three mounting styles are available for flexibility:
 - Standard angle bracket
 - Reverse angle bracket
 - Straight sub-plate
- Special mountings are available upon request, allowing customization to meet specific application needs.

2. Environment:

- 288 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 CMG Groove type
 - Multi-character OAS75 for CMG Groove type
 - Single character OB for CM8X round insert
 - Single character OY for CM8Y round insert





4. Stroke Length:

- CMT offers 3 stroke length options for
 - 2.5"
 - 4"
 - 6"

5. End Configurations:

- Two different air port locations are available to accommodate different installation constraints:
 - Standard end port
 - Side port for installations with restricted space
- 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 CM8X round insert can mark up to a 3/8" character.

Stamp Capacities Rod Style "A"

(4) Pc's 1/16" Char. CMG06 Stamp Inserts

(2) Pc's 1/8" Char. CMG13 Stamp Inserts

Stamp Capacities Rod Style "AS38"

(6) Pc's 1/16" Char. CMG06 Stamp Inserts

(3) Pc's 1/8" Char. CMG13 Stamp Inserts

Stamp Capacities Rod Style "Y"

(1) Pc CM8Y round insert can mark larger character and longer marking legends. *

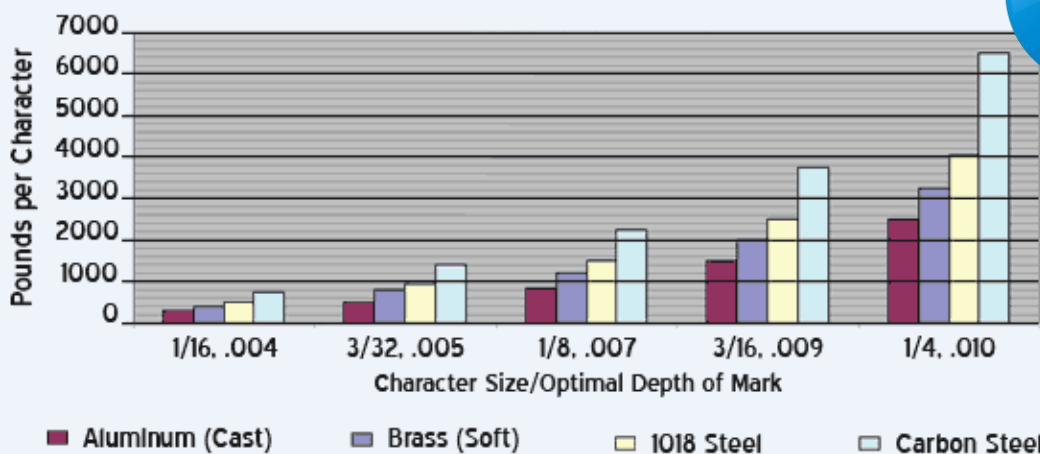
*Warning unit may not have force required to indent larger character and legends depending on the material being marked. Please review parameters with marking pressure chart



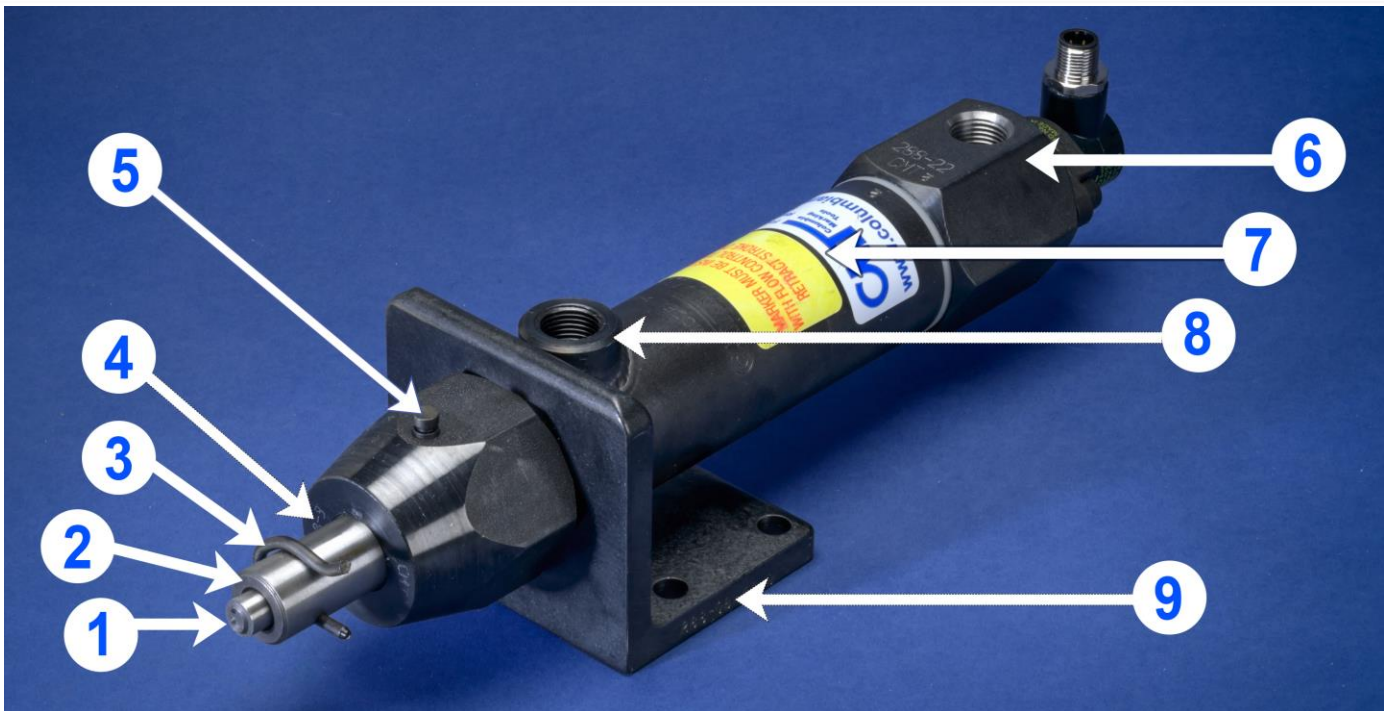
Marking Pressure Chart



Pressure chart and character size explained in detail.



Parts Breakdown



1. Stamp – wearable part
2. Rod/Stamp holder
3. Spring clip – retaining clip wearable part
4. Keyway – maintains orientation of stamp(s), At base of unit.
5. Front nut – do not remove, will void warranty
6. Rear end cap with side air port and sensor – remove for seal replacement
7. Sleeve
8. Return air port
9. Mounting bracket – do not remove, will void warranty

Model 288 How to Order Guide

<i>Feature</i>	<i>Symbol</i>	<i>Example</i>
Mounting		288-OA-40-DNL
Standard angle bracket	288	X
Reverse angle bracket	288R	
Sub-plate	288SP	
Environment		
Industrial	-	X
Extreme Debris	SUBK	
Submersible	SUBU	
Rod/Type Holder		
Round Pocket	OB	
Rectangular Pocket 1/4" x 3/8"	OA	X
Rectangular Pocket 1/4" x 15/32"	OAS38	
Machined Front Face for Anvil (larger characters)	OY	
Stroke Length		
2.5"	25	
4.0"	40	X
6.0"	60	
End configuration		
Standard end port	EF	
Side port	SF	
24VDC Return Sensor	D	X
110VAC Return Sensor	P	
Compressed Air		
Lubricated	-	
Dry	NL	X

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

- **SUBK** – This upgrade includes a specialized tool coating that enhances longevity in extreme wet environments.
- **SUBU** – This upgrade includes the tool coating and removes the keyway, allowing full system functionality in vacuum environments or when submerged in leak testing tanks.

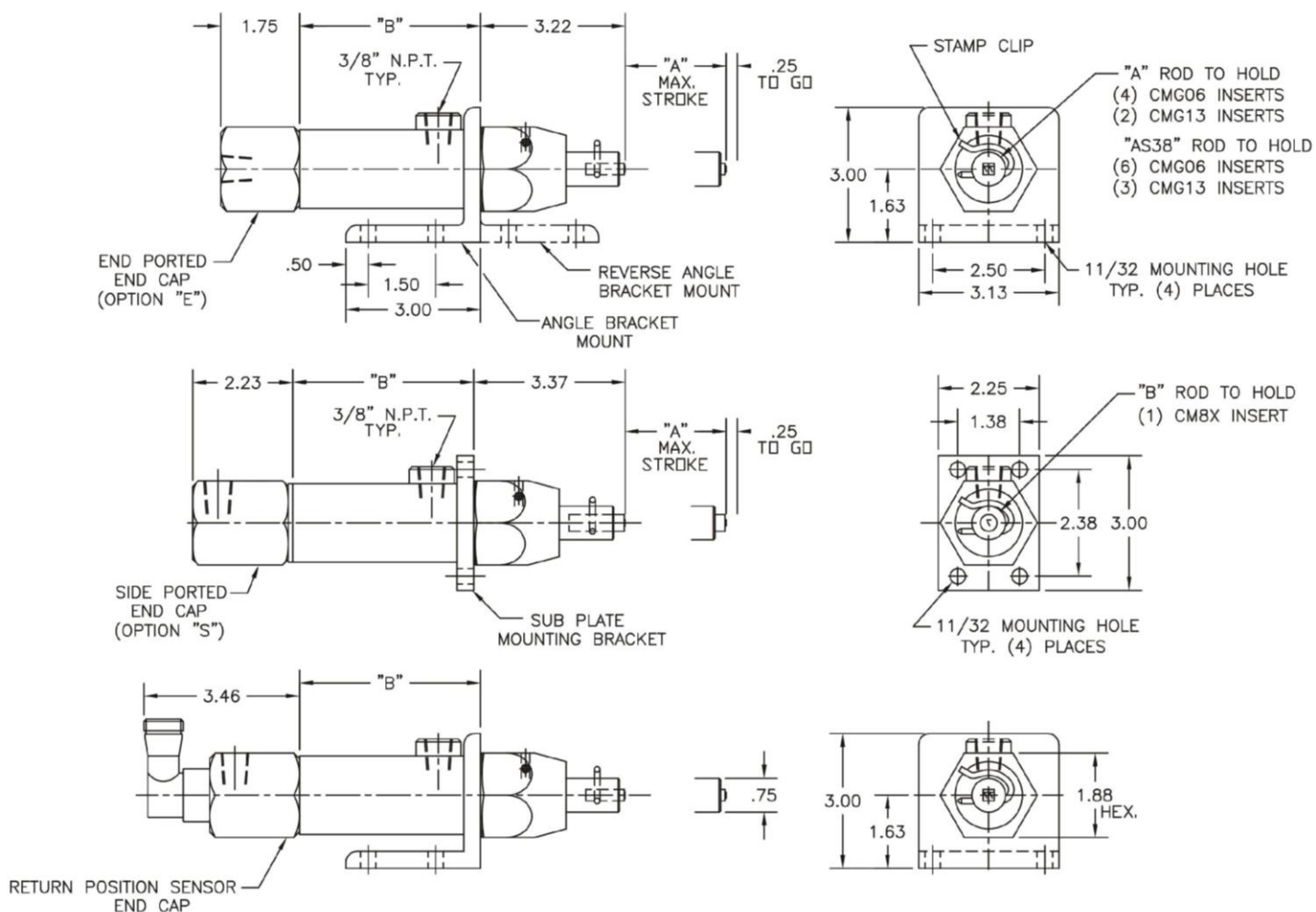


End port – shown above

Return Sensor - shown below.



Overall Dimensions



Stroke	Dim "A"	Dim "B"
2 1/2"	2.25"	4.03"
4"	3.75"	5.53"
6"	5.75"	7.53"



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: 6,000 lbs (at 80 psi)

Installation

Mounting:

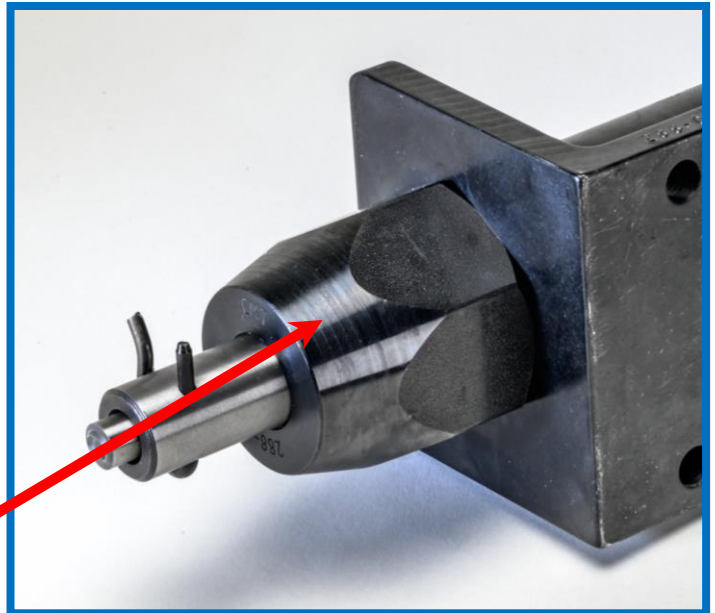
Mounting holes are in the mounting bracket, and the use of 5/16-18 socket head cap screws with lock washers is required. The Model 288 markers require a sturdy, level platform for mounting. For optimum power, the marker should be mounted so that the extended stamp face stamp should engage workpiece at 1/8" to 1/4" 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.

Warning:

Removing the front cap voids the warranty.

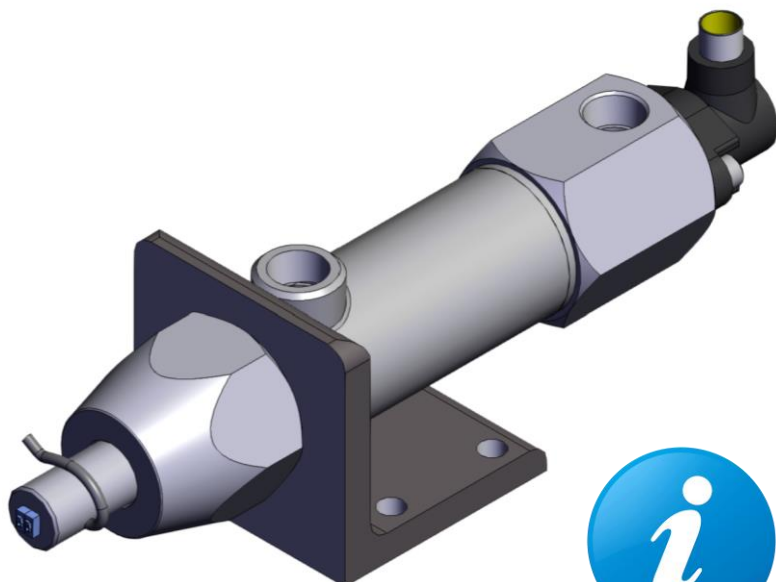


The mounting bracket, front nut, and the sleeve of the cylinder are assembled with such force that after assembly the cylinder is internally honed. To disassemble the part would require such pressure that the cylinder would be damaged.

CMT does provide custom assembly upon order placement. Please provide the complete model number and position of the ports or bracket required in clock position as looking at the front of the marker. For example, the standard position of the base of the characters is 6 o'clock, the base of the standard angle bracket is 6 o'clock, and the standard front port or side port position is noon or 12 o'clock.

Please note that if the mounting bracket is removed from the sleeve this voids the warranty.

Drawing Files



Drawings for all the models.

CAD files formats of many different configurations.

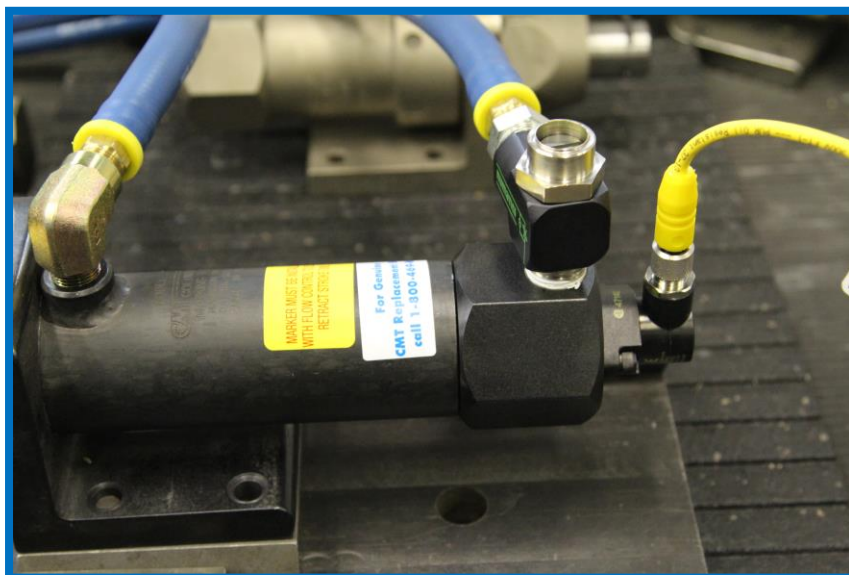
Please remember the SUBU and SUBK have the same outside dimensions as the standard industrial configurations.

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.



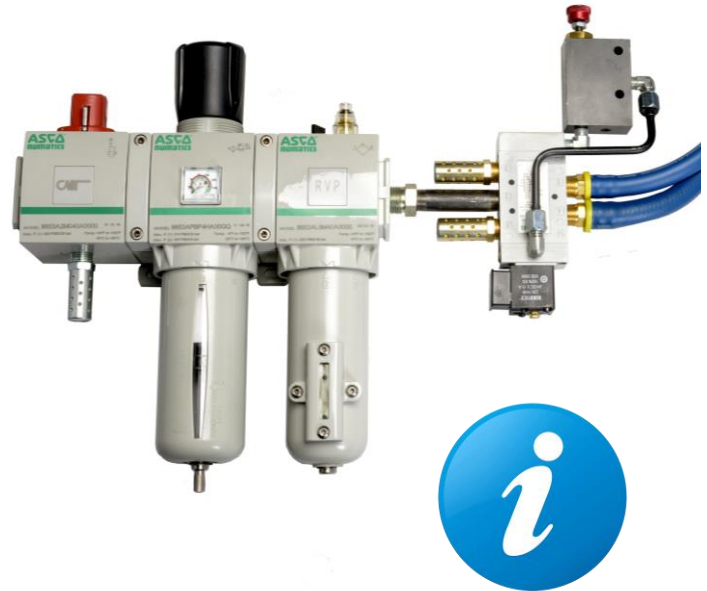
Stroke	Workpiece Distance
2 1/2"	2.25"
4"	3.75"
6"	5.75"

- Valve to be positioned less than 3 ft from the marker.
- The 1.125" diameter rod extends to contact the workpiece. Workpiece distance from the retracted marker are based on stroke length. Please see table.

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:

Model 288 is air powered for the forward motion, and the return motion is spring controlled. CMT recommends a 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:

Increase air pressure to mark deeper. Decrease air pressure to mark lighter. To regulate marking pressure, adjust FRL (Filter/Regulator/Lubricator unit). Sold separately with valve.

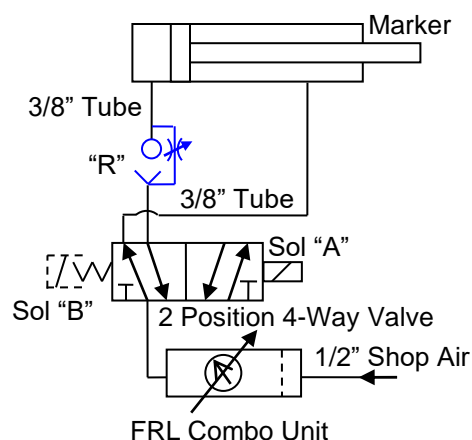
Electrical Sequence for Double Solenoid Valve:

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



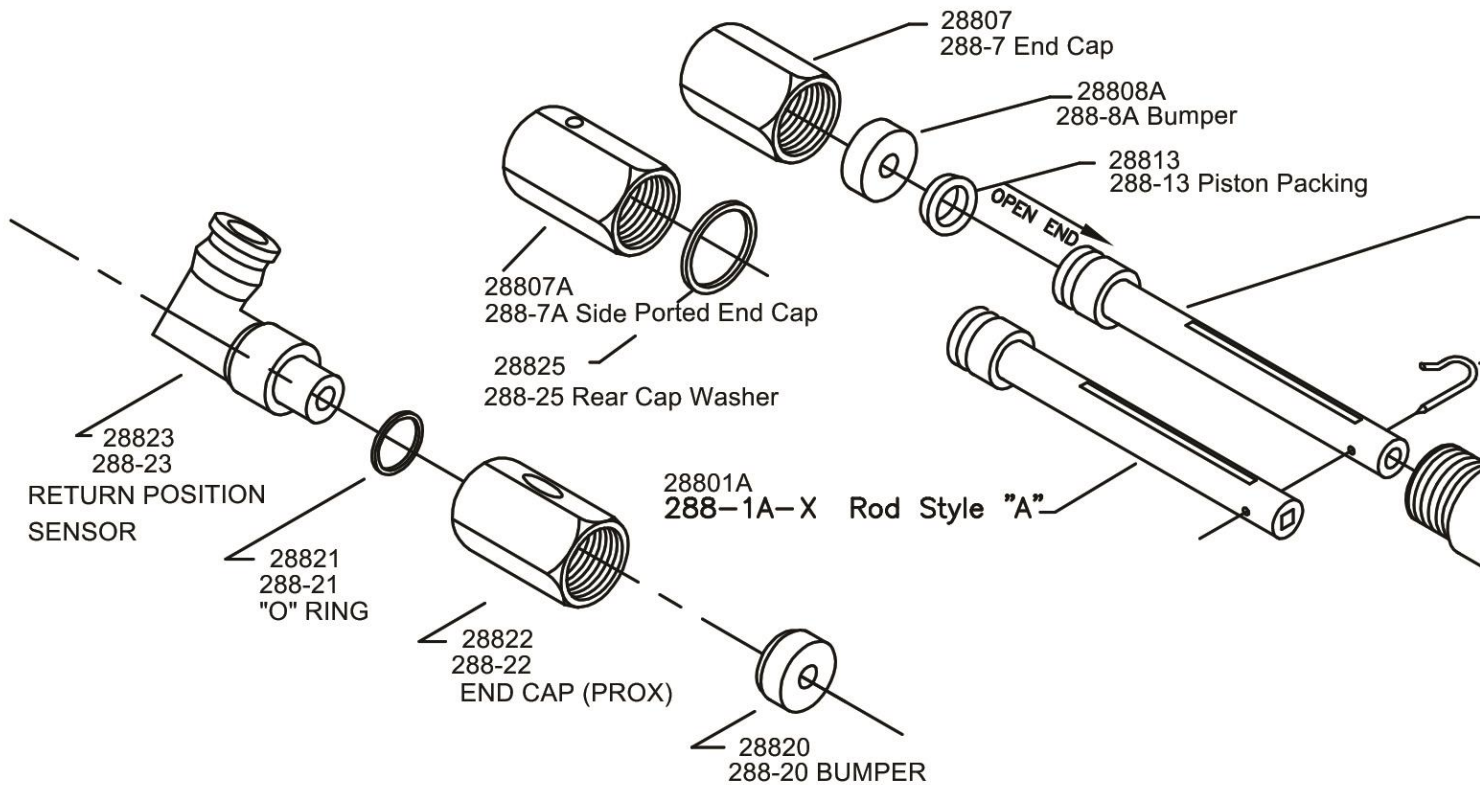
Speed Control Adjustment:

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 most efficient operation, electrical signal approximately .06 to .10 seconds.

Bill of Materials



- Specify the stroke length required when order the 288-01A or 288-01B rods
- The following items are not sold separately –
 - 288-4 Bracket
 - 288-5 Sleeve
 - 288-3 Front Nut

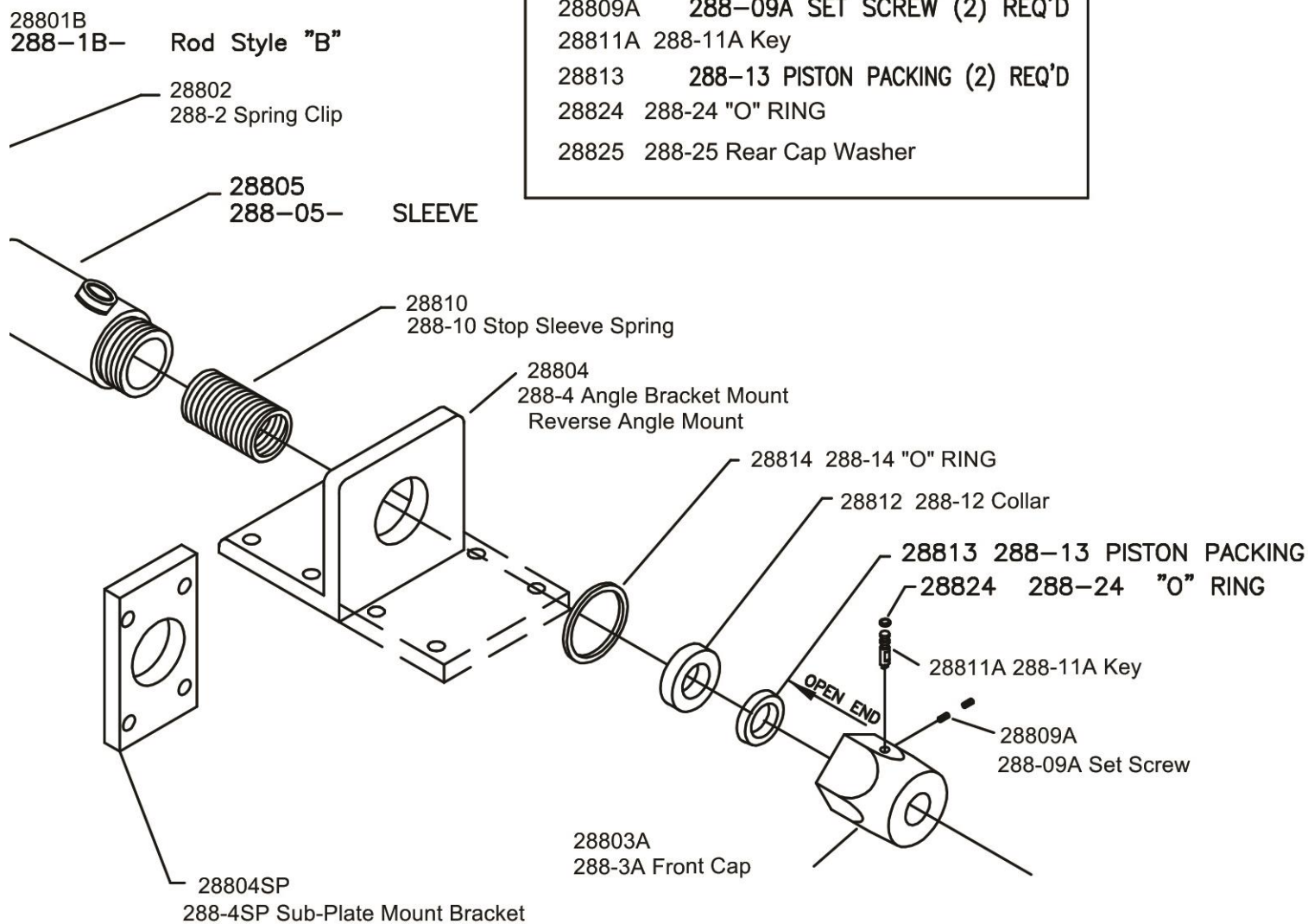
Reminder – The return position sensor may be rotated



288RKS 288-RKS Repair Kit

Includes:

28802 288-2 Spring Clip
 28808A 288-8A Bumper
 28809A 288-09A SET SCREW (2) REQ'D
 28811A 288-11A Key
 28813 288-13 PISTON PACKING (2) REQ'D
 28824 288-24 "O" RING
 28825 288-25 Rear Cap Washer



FAQ – Frequently Asked Questions

Q: How long for shipment/delivery of the Model 288?

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 288?

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 288?

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 288?

A: The Model 288 has a maximum impact force of 6,000 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: For optimum power, the marker should be mounted so that the stamp face is 2 1/8" to 2 3/8" away from the part to be marked for a 2 1/2" stroke model. And for best practice the marker location should have some adjustment.

Stroke	Workpiece Distance
2 1/2"	2.25"
4"	3.75"
6"	5.75"

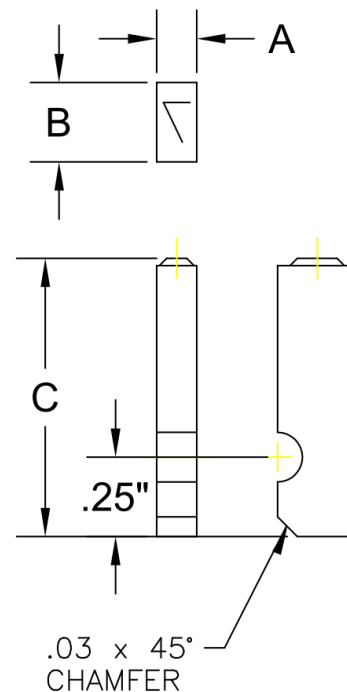


Spare Parts

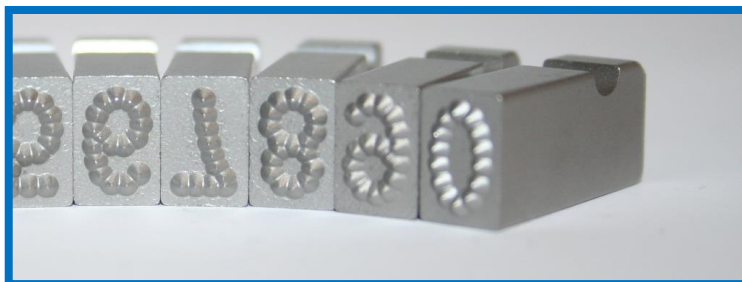
Stamps: Rectangular: CMG Groove Style

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-

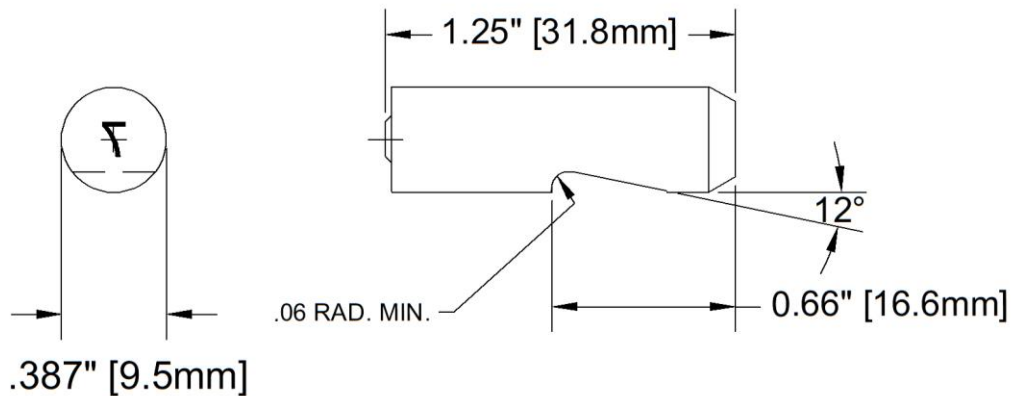
- When ordering please use the character required after the dash. Example "CMG13-A" would be for the 1/8" letter A.
- Symbols and punctuation are available – please see [on-line list for reference](#).
- Special length characters may be needed to mark in recess. Dimension "C" is available up to 3" long.
- 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 CM8X one diameter



- When ordering please use the character required after the dash. Example "CM8X13-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

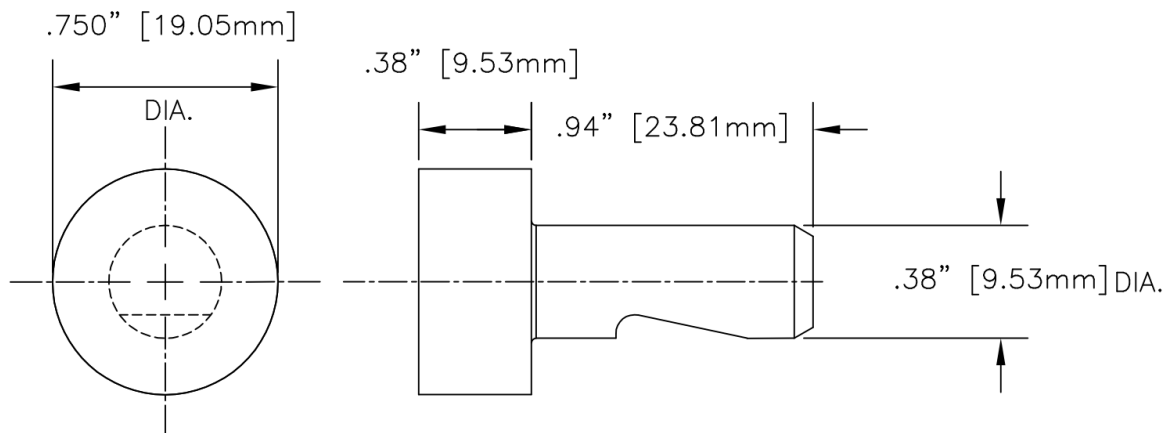
CM8X Round Insert	
Char Size	Catalog No
1/16"	CM8X06-
3/32"	CM8X09-
1/8"	CM8X13-
5/32"	CM8X16-
3/16"	CM8X19-
1/4"	CM8X25-

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 CM8X19DOT the dot style configuration reduces the force needed to mark the part.



Example of Dot Style Face

Stamps: Round CM8Y two diameters



- The CM8Y inserts are for use in the rod style “Y”.
- The model 88 has limited force and it is best to review the parameters for marking before purchasing a Custom CM8Y insert.
- The CM8Y is a great insert for Tier style marking of small characters.
Example: 12 above 34 in 1/16” characters



CM8Y Round Insert		
Catalog No	Char Size	# of Char
CM8Y06C#-	1/16”	Up to (10)
CM8Y09C#-	3/32”	Up to (7)
CM8Y13C#-	1/8”	Up to (5)
CM8Y16C#-	5/32”	Up to (4)
CM8Y19C#-	3/16”	Up to (3)
CM8Y25C#-	1/4”	Up to (2)
CM8YLOGO	Custom Logo <5/8”	
CM8YCUST	Custom character layout to fit 5/8” circle	
CM8YANVIL	Blank hammer end, for use as anvil	

- The CM8Y can be purchased as an “Anvil”. The blunt force can be used for non-marking assembly operations, or to provide the force needed to mark characters sitting on the reverse side of the part from the marker.

Repair Kit

288RKSNNL, 288RKSNNL, and 288SUBRKSNNL contain all the wearable parts for model 288:

1. 288-25 Rear Cap Washer
2. 288-11A and 288-24 Key and O Ring
3. 288-8A Bumper
4. 288-9A Set Screw (2 pieces)
5. 288-13 Piston Packing (2 pieces)
6. 288-2 Spring Clip

288RKSNNL - for lubricated compressed air source.

288RKSNNL - for dry compressed air source.

288SUBRKSNNL – 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"

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 1/2", 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.
Set screw is not set in place	The rod is spinning freely	Align the slash in the rod with the position of the set screw and tighten.
Incomplete seal	The tool is leaking air when pressurized.	Disassemble the 288 from the rear 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

COLUMBIA MARKING TOOLS MAKES NO EXPRESS WARRANTIES OR CONDITIONS BEYOND THOSE STATED IN THIS WARRANTY STATEMENT. CMT DISCLAIMS ALL OTHER WARRANTIES AND CONDITIONS, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE UNLESS AUTHORIZED BY CMT'S GENERAL MANAGEMENT. SOME STATES (OR JURISDICTIONS) DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES OR CONDITIONS, SO THIS LIMITATION MAY NOT APPLY TO YOU.

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.