UNIVERSAL

STENCILING & MARKING   SYSTEMS

OWNER'S MANUAL

POROUS
MINI-CODER
ALL MODELS

INSTALLATION - OPERATION - MAINTENANCE

TABLE OF CONTENTS

PREFACE

Universal MC-10 and MC-20 Series Mini-Coders provide a fast, accurate and automatic method of printing date codes, manufacturer I.D.'s, lot numbers or any other limited size text message on cartons or other flat surfaced porous materials. Mini-Coders are available in both Non-Indexing (random printing) and Indexing (spot or registered printing) models.

The compact size of the Mini-Coder and its unique design features enable these coders to be mounted in any mounting orientation required for side, top and bottom printing. For added convenience, optional 4 Oz. Reservoir Ink Cartridges can be used to automatically re-ink the Ink Rolls when the coders are used in Side Mount and Top Mount installations.

The following pages of this manual explain the installation, operation and maintenance of the Mini-Coders and are the key to trouble free printing.

QUICK START
PAGES 11 THRU 16

This manual was written with a full understanding that very few people like to read manuals or have the time to do so. To accommodate those who have little time to spare, we have included a Quick Start section which will get your coder operating in just a few minutes.

CODER SPECIFICATIONS

The specification section includes drawings with the basic dimensions of the coders, net weights, maximum die capacities, maximum print width and print drum circumferences. This section also lists the specifications for the printing dies and an explanation of the Indexing and Non-Indexing models and the various mounting configurations.

SPECIFICATIONS

POROUS MINI-CODER SPECIFICATIONS
Model Shown: MC-10NI
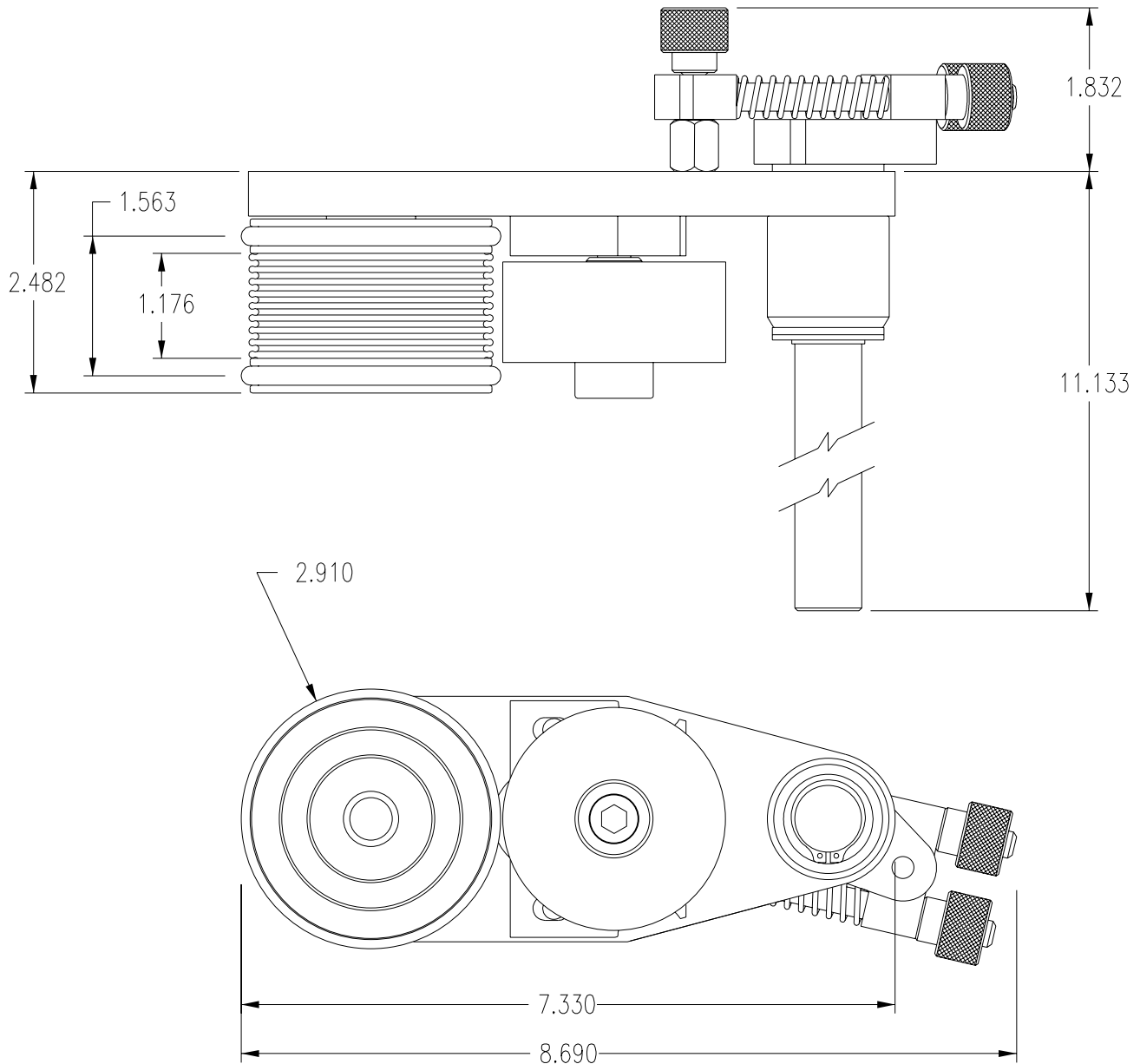
NET WEIGHT: *4 LBS. - 12 OZ. (2.15 KG.)*
MAXIMUM DIE SIZE - US STANDARD: *1" (8 RIBS) X 8-3/8" LENGTH*
MAXIMUM DIE SIZE - METRIC CODERS ONLY: *25.4 MM (7 RIBS) X 212.7 MM LENGTH*
PRINT DRUM CIRCUMFERENCE: *APPROXIMATELY 9.1" (231 MM) MEASURED AT DIE FACE*

SPECIFICATIONS

POROUS MINI-CODER SPECIFICATIONS
Model Shown: MC-10
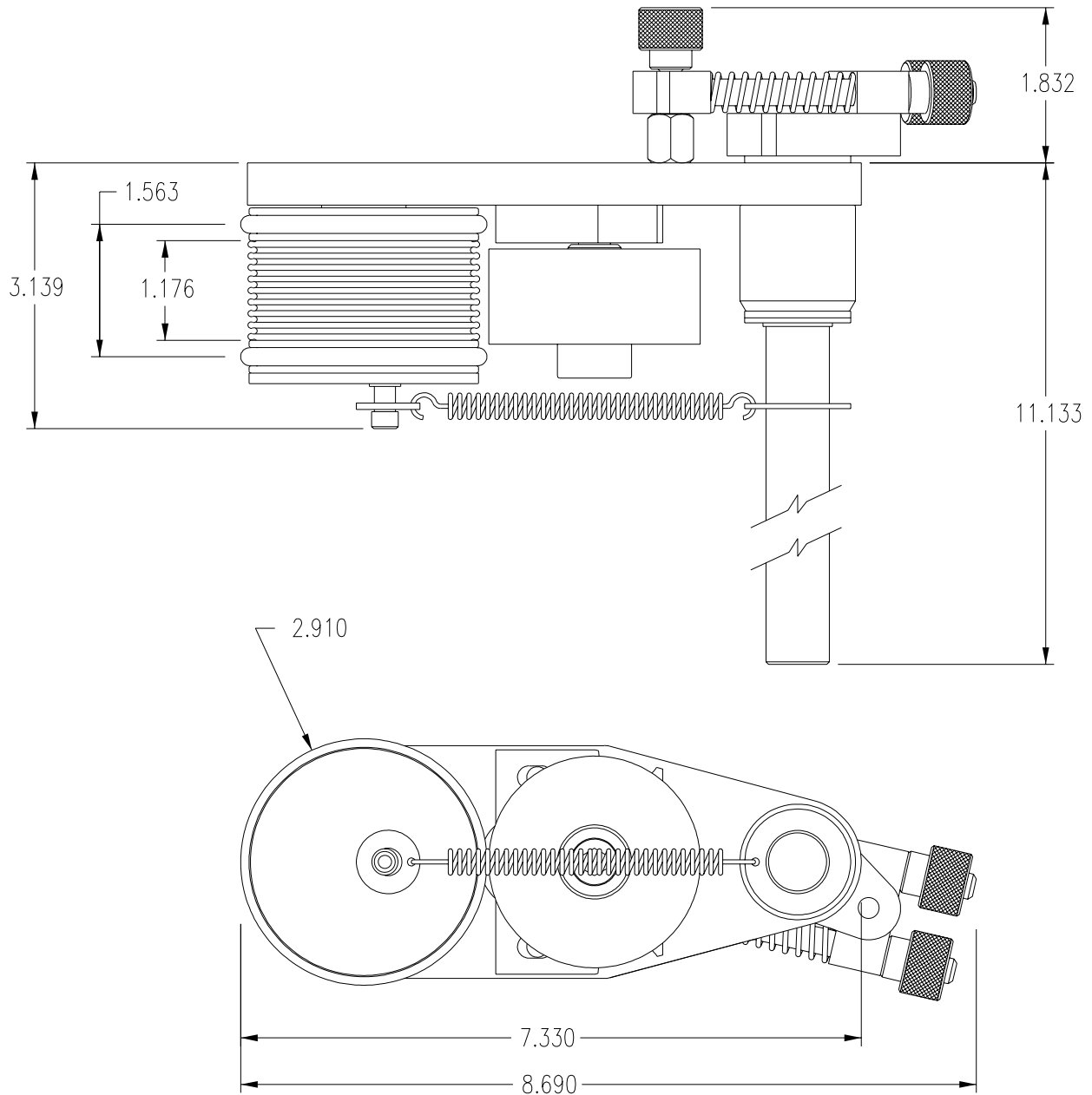
NET WEIGHT: 5 LBS. (2.27 KG.)
MAXIMUM DIE SIZE - US STANDARD: 1" (8 RIBS) X 8-3/8" LENGTH
MAXIMUM DIE SIZE - METRIC CODERS ONLY: 25.4 MM (7 RIBS) X 212.7 MM LENGTH
PRINT DRUM CIRCUMFERENCE: APPROXIMATELY 9.1" (231 MM) MEASURED AT DIE FACE

POROUS MINI-CODER SPECIFICATIONS
Model Shown: MC-20NI
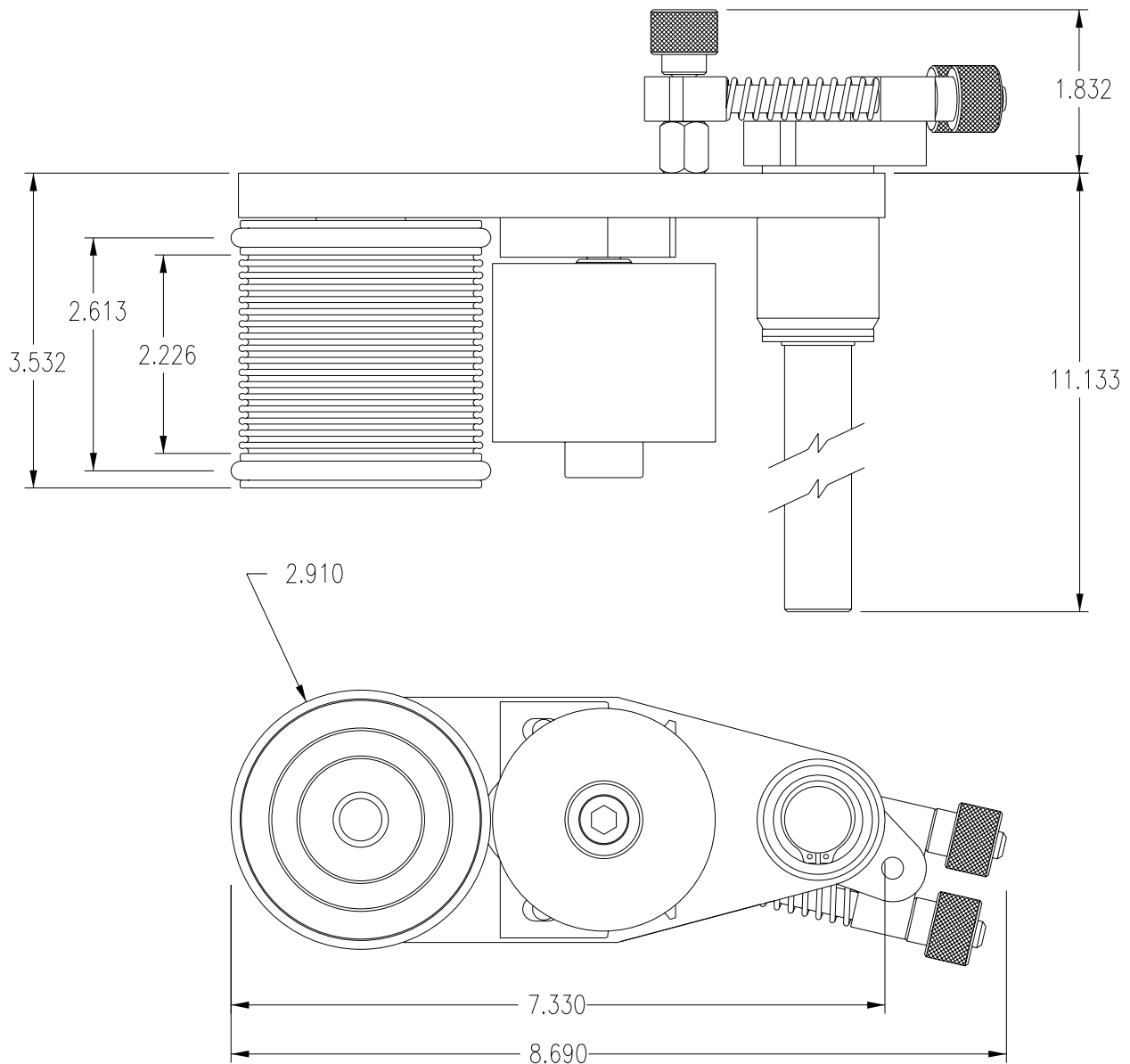
NET WEIGHT: 5 LBS. - 2 OZ. (2.32 KG.)
MAXIMUM DIE SIZE - US STANDARD: 1-15/16" (15 RIBS) X 8-3/8" LENGTH
MAXIMUM DIE SIZE - METRIC CODERS ONLY: 49.2 MM (7 RIBS) X 212.7 MM LENGTH
PRINT DRUM CIRCUMFERENCE: APPROXIMATELY 9.1 (231 MM) MEASURED AT DIE FACE

POROUS MINI-CODER SPECIFICATIONS
Model Shown: MC-20
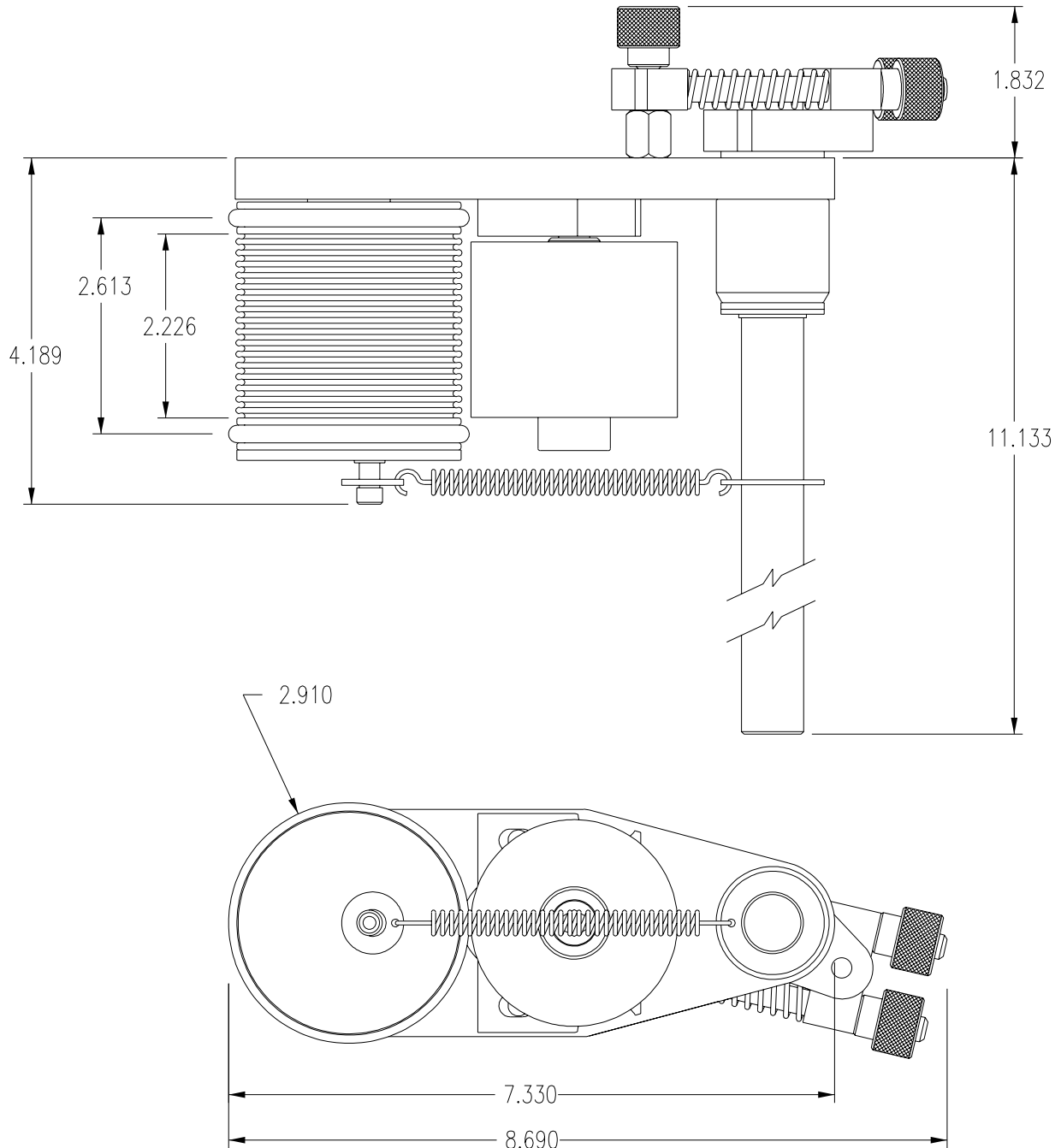
NET WEIGHT: 5 LBS. - 7 OZ. (2.47 KG.)
MAXIMUM DIE SIZE - US STANDARD: 1-15/16" (15 RIBS) X 8-3/8" LENGTH
MAXIMUM DIE SIZE - METRIC CODERS ONLY: 49.2 MM (7 RIBS) X 212.7 MM LENGTH
PRINT DRUM CIRCUMFERENCE: APPROXIMATELY 9.1" (231 MM) MEASURED AT DIE FACE

SPECIFICATIONS

INDEXING AND NON-INDEXING MODELS

Universal Mini-Coders are available in both indexing and non-indexing models.

Indexing coders contain a print drum spring return mechanism which provides print registration capabilities when carton printing (see Figure 1). As the trailing edge of a carton passes the coder, the print drum automatically rotates back to the same starting or "home" position. There must be adequate space between cartons at any given line speed for this mechanism to work properly. Printing with an indexing coder will allow the imprint on each carton to be registered in the same position relative to the leading edge of the carton. The code will repeat every 9.1" down the length of the carton.
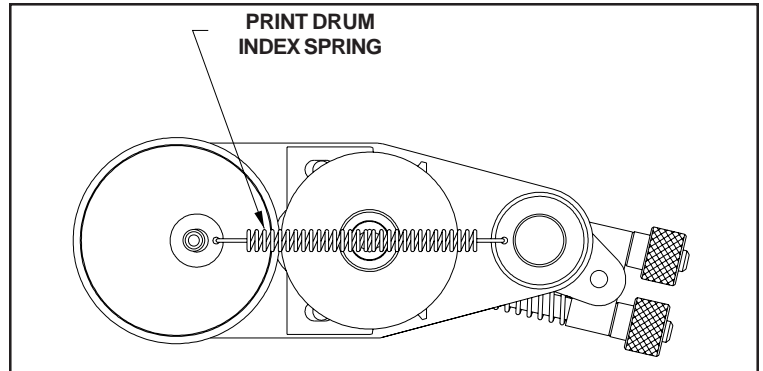

**PRINT DRUM
INDEX SPRING**

FIGURE 1

Non-indexing coders have print drums which simply rotate on bearings with no spring return mechanism. These coders are normally used for web printing applications where the print drum stays in contact with the web at all times. If used in carton printing applications, when the trailing edge of a carton passes the coder, the print drum rotation stops at a random position. When the next carton engages the print drum, the code will begin printing at a random position relative to the leading edge of the carton and repeat the code every 9.1" down the length of the carton.

MOUNTING CONFIGURATION

The mounting configuration of a coder is determined by how the machine is mounted in relation to the product and its movement. All references to mounting configuration are made as though you are viewing the production line with the product moving away from you. Universal Mini-Coders are field adjustable for each mounting configuration shown in Figures 2 and 3.
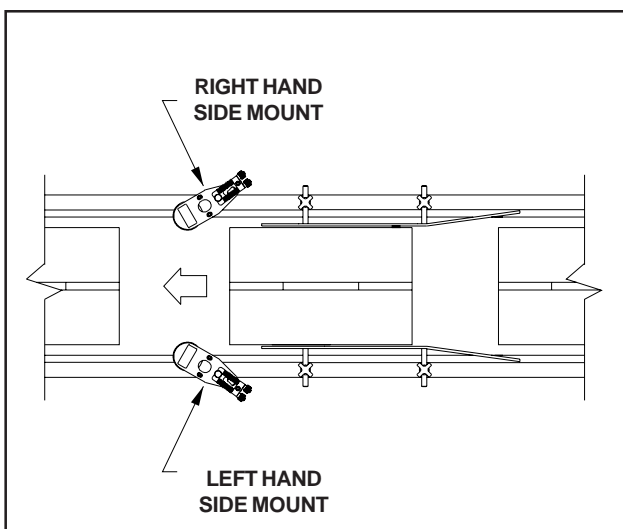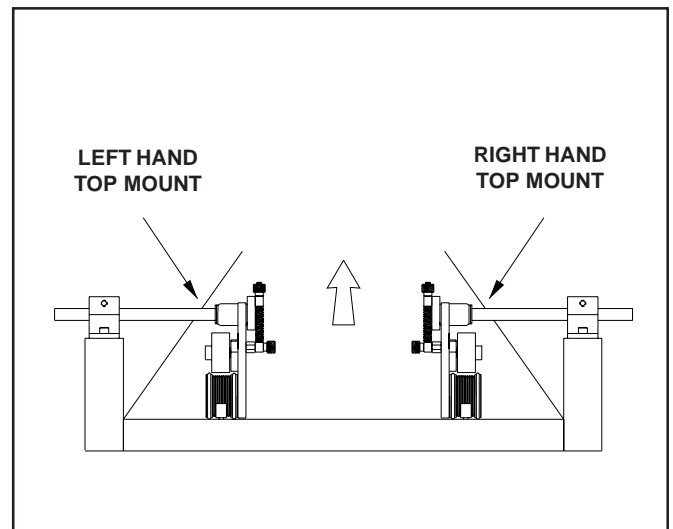

**RIGHT HAND
SIDE MOUNT**

**LEFT HAND
SIDE MOUNT**

FIGURE 2

**LEFT HAND
TOP MOUNT**

**RIGHT HAND
TOP MOUNT**

FIGURE 3

RIBtype® PRINTING DIES

Universal Non-Porous Coders are designed to use RIBtype® printing dies which have a molded rib backing. The ribs on the back of the die snap into mating ribs in the Drum Cover on the print drum as shown.

The standard printing dies are available in sets with many sizes and character styles. The sets are a combination of individual alphabetic and numeric characters or in sets containing numeric characters only. These character sets or "sorts" can be used to make up text messages and code numbers as necessary.

FIGURE 4

Printing dies are also available in "logo" form in which a complete text message, company logo or trademark is photographically reproduced from black and white art work on a single piece of rib backed rubber. These "logo" dies are more dimensionally stable than individual characters when installed on the print drum so they generally produce better print quality and are much faster to change in the field. For details on ordering custom logo dies, please contact our Customer Service Department.
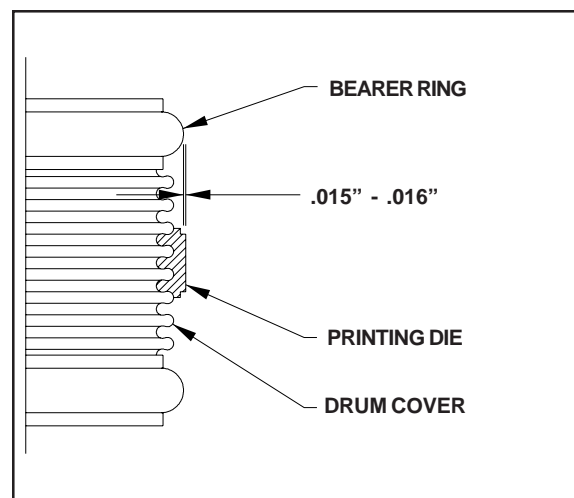

FIGURE 5

The dies are manufactured to precision thickness tolerances which are very critical to the performance of these coders. When installed, the face of the printing die should extend only .015" - .016" beyond the radius of the Bearer Rings as shown in Figure 5. Using dies that do not meet the design specifications will result in poor print quality and possible damage to the transfer roll.

Although there are several competitive rib backed die systems available, it is very important to note that they are not all made to the same rib spacing or thickness specifications and are not interchangeable.

CODER MODELS DESIGNED FOR METRIC RIBtype® PRINTING DIES

Universal also offers Metric RIBtype® Die Systems for use in countries where metric character sizes are the standard. The Metric dies are thicker and the rib spacing differs slightly from the standard printing dies therefore the two versions are not compatible. To accommodate the differences, the print drums for Metric dies are machined to a slightly different diameter from the U.S. versions. The model numbers on Metric coders will have a "-T" suffix and have a distinct pink color.

SPECIFICATIONS

INK ROLLS

Universal offers three ink roll options for the Mini-Coders - each with unique characteristics which will help determine the suitability for a specific printing application. The coders are designed to accommodate all three types of ink rolls without modification. A detailed review of your printing requirements will determine the best choice of ink rolls for your particular application. All of these rolls are **re-inkable** for maximum economy.

MICROCELL INK ROLLS

Microcell ink rolls are the most durable rolls available on the market today. This material is an extremely tough, hard density urethane foam which will last up to a year or more under normal conditions. Unless otherwise specified, Microcell Rolls are supplied with all new Mini-Coders and are recommended for use with **Universal #1150 Ink** or equivalent for printing on corrugated cartons and other **porous** surface materials.
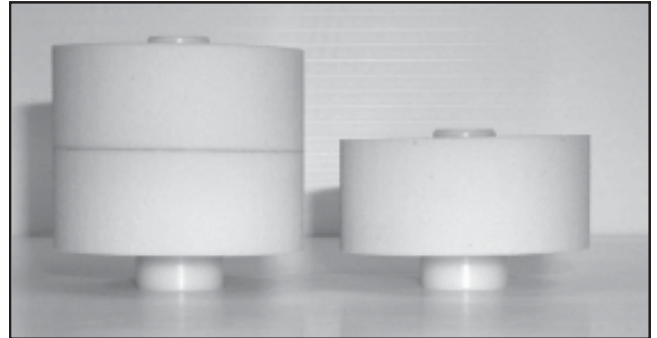
FIGURE 6

XF NEOPRENE INK ROLLS

Universal's XF Neoprene Ink Rolls are made from an extra firm density neoprene material. While not quite as durable as Microcell, the extremely fine cell structure of these rolls provides exceptionally good print quality particularly when using small character printing dies. Due to their greater ability to compensate for slight die thickness variations, these rolls are also recommended to correct print quality problems when multiple lines of text are required.

FIGURE 7

NEOPRENE INK ROLLS

Universal's Neoprene ink rolls are made from a soft density neoprene material. Because this material has a larger cell structure, it is recommended for use with heavily **Pigmented Inks** for carton printing on **porous** materials**.**
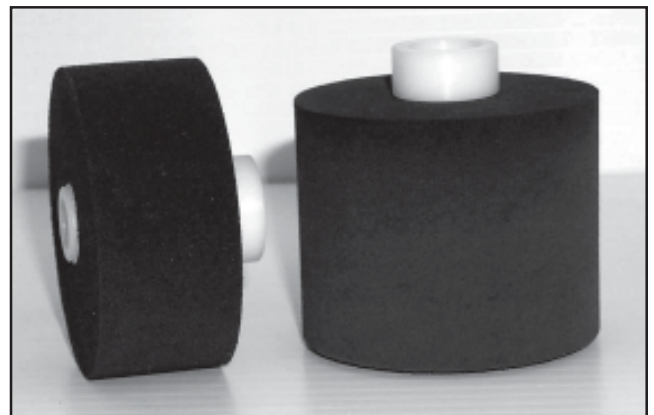
FIGURE 8

QUICK START

PREPARING THE CODER FOR OPERATION

Universal Mini-Coders are shipped from the factory fully assembled and, unless otherwise specified, include a dry Microcell Ink Roll. *The Ink Roll must be manually pre-inked prior to use.* **Dry Ink Rolls cannot be properly inked using only the 4 Oz. Reservoir Ink Cartridges. The following instructions will guide you through the inking and installation process and have your coder ready to use in a few minutes. If you ordered a pre-inked roll, skip to page 13.**

1- If you have an Indexing Mini-Coder, detach the print drum index spring by lifting the Spring Attachment Ring off the bearing post on the Index Cap Assembly.
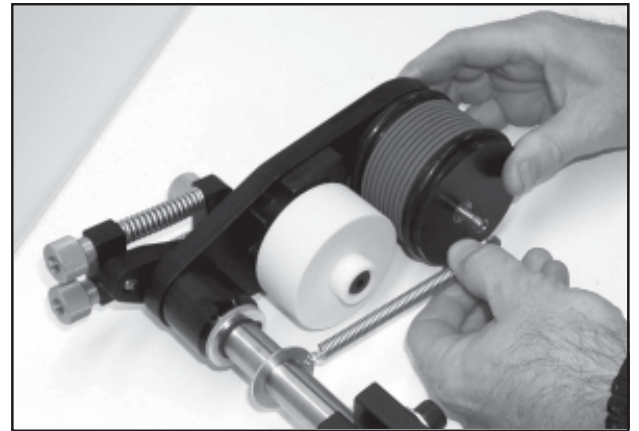

FIGURE 9

2- **Using a 3/16" hex wrench, remove the Ink Roller Axle by turning it counterclockwise.**

FIGURE 10

3. **Remove the Ink Roller Axle and Ink Roller from the coder.**

FIGURE 11

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QUICK START

PRE-INKING THE MICROCELL INK ROLL

1 - Fill a clean dry container with enough ink to allow the ink roll to fully submerge.

> Microcell Ink Rolls are designed for use with Universal #1150 Ink for marking on porous surfaces. The ink rolls must be pre-inked manually prior to installation on the coder. The 4 Oz. Reservoir Ink Cartridges cannot be used to ink a dry roller.
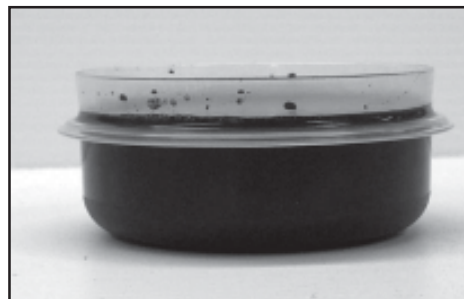
FIGURE 12

2 - Carefully place the ink roll into the ink with the plastic hub up. *Do not force the roll to submerge.* **The top surface of the roll must remain dry during this process.**

> The roll should be allowed to float, undisturbed, in the container of ink. Leaving the top surface of the roll dry allows air to escape as the ink is absorbed from the bottom. Forcing the roll under the surface of the ink will prevent the roll from absorbing ink properly.
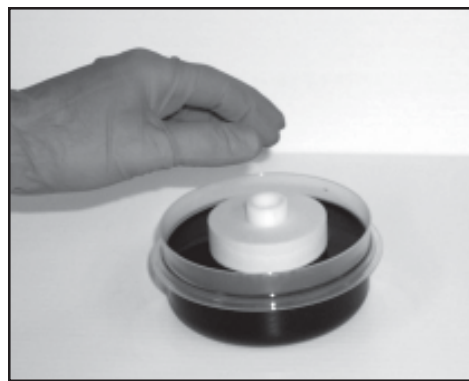
FIGURE 13

3 - As the roll absorbs ink it will begin to sink into the container. When the top surface becomes fully saturated the roll has absorbed as much ink as possible.

> This process normally takes 20-25 minutes but be patient. Proper inking of a dry roll is critical to ensure good performance of the roll. When fully saturated, a 1" face roll will hold approximately 2.5 ounces (74 ml.) of ink. A 2" face roll will hold approximately 5 ounces (148 ml) of ink.

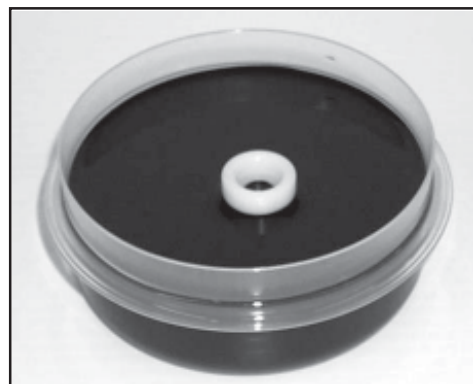FIGURE 14

4 - Remove the Ink Roll from the container and blot the excess ink from the surface. Place a round shaft through the core (a screw driver or pencil will work nicely) and roll the ink roll across a clean piece of paper or cardboard to remove excess ink. Note: Coder inks will stain porous surfaces. Placing a plastic bag under the paper will protect your bench surface.
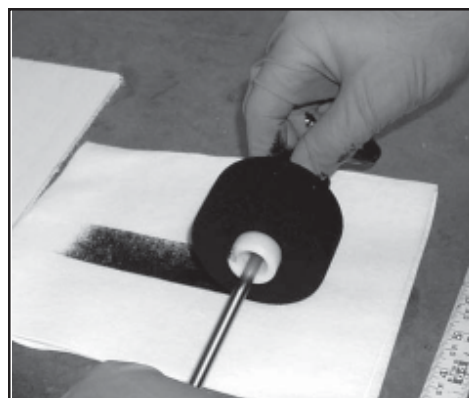
FIGURE 15

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QUICK START

If you received a pre-inked ink roll with your coder, the roll will normally be slightly oversaturated with ink. Refer to step 4 on page 12 to prepare the roll for installation.

INSTALLING THE PRE-INKED ROLL

1 - If not already removed, use a 3/16" hex wrench and remove the Ink Roller Axle from the coder by turning it counterclockwise.
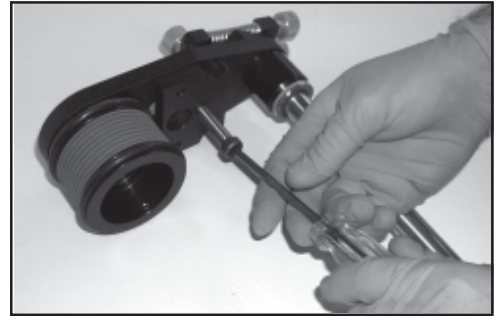
FIGURE 16

2 - Using a 3/16" hex wrench, slightly loosen the two socket head cap screws which secure the Reservoir Mounting Pad. Slide the Reservoir Mounting Pad away from the Print Drum as far as possible and lightly tighten the two screws.

Moving the Reservoir Mounting Pad towards the rear of the coder will enable the ink roll to be installed without contacting the Print Drum.

FIGURE 17

3 - Insert the Ink Roller Axle through the core of the Ink Roller and screw the axle into the threaded hole in the Reservoir Mounting Pad.

FIGURE 18

4- Using the 3/16" hex wrench, continue turning the Ink Roller Axle in the clockwise direction until it stops. Tighten slightly but do not apply excessive torque.

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FIGURE 19

INSTALLING THE PRINTING DIES

Universal Mini-Coders have a unique Quick Change print drum feature to facilitate off line die changes. Although it is not necessary to remove the print drum to install the printing dies, it generally makes installation easier.

To remove the Print Drum from the Coder, grip the Print Drum firmly and pull it off the axle as shown. A small stainless steel ball plunger installed in the axle will release the Print Drum when adequate force is applied.

Note: A thin brass washer is installed on the Print Drum Axle and should remain on the Axle when the Print Drum is removed. If this washer should come off when the Print Drum is removed, be sure to place it back on the Axle before the Print Drum is reinstalled.

FIGURE 20

To make die installation easier, we suggest you moisten a sponge with water containing a small amount of liquid detergent. Lightly moisten the back of the printing die then immediately press the die into the drum cover. Do not apply too much liquid or the dies will slip during printing. *Note: Do not apply silicone, oil or any other lubricating agent to the rib backing or the dies will not hold properly during printing.*

Install the Printing Dies on the Print Drum by aligning the ribbed backing on the dies with the mating drum covering on the Print Drum and pressing firmly until they are completely engaged. It is best to install the dies as close to the middle of the print area on the Print Drum as possible.

Individual character codes or text messages are installed in a mirror image of normal written text. In other words install in a right to left direction as shown. When printed, codes or text installed in this orientation will print in normal left to right order.
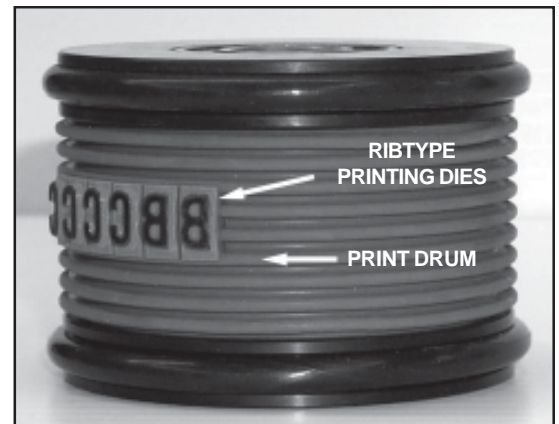
FIGURE 21

When using small individual characters with only a two or three rib backing, an optional Type Blocking Kit should be used to support the leading and trailing ends of the type as shown.

Characters which have only a 2 or 3 rib backing do not have the stability of the larger character sizes when snapped into the drum cover. Adding the rib backed type blocks on either side of the code will provide added stability and prevent the characters from shifting during printing. The Type Blocks are not as thick as the Type and will not pick up ink from the Ink Roll.
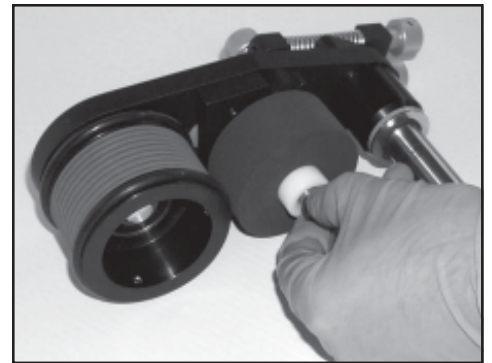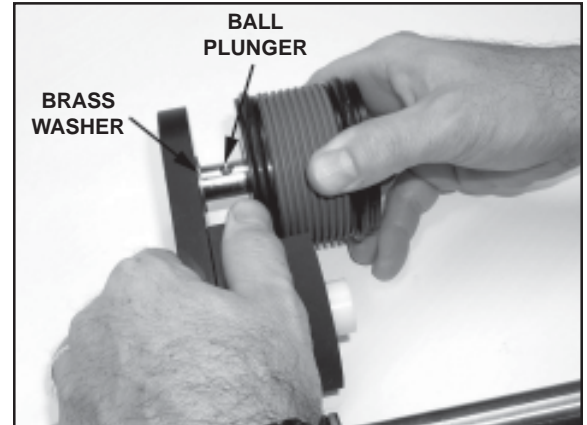

FIGURE 22

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ADJUSTING THE INK ROLL / DIE FACE CONTACT PRESSURE

1- **Using a 3/16" hex wrench, slightly loosen the two socket head cap screws to enable the position of the Reservoir Mounting Pad to be adjusted.**
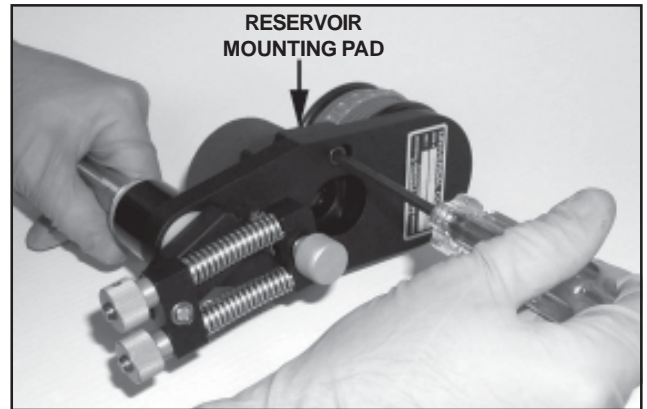

FIGURE 23

2 -**Rotate the Print Drum to a position where the printing dies will contact ink roll. Slide the Reservoir Mounting Pad toward the print drum until the lnk Roll just contacts the face of the printing dies then lightly tighten the two socket head cap screws.**
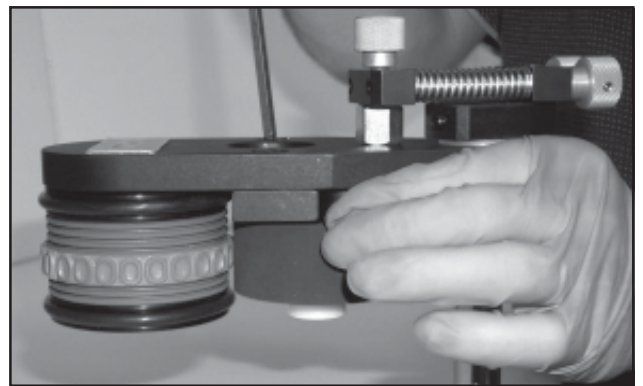
FIGURE 24

3 - **Rotate the Print Drum and observe the die face/ink roll contact. *The dies should contact the ink roll with adequate pressure to rotate the ink roll and transfer ink only to the face of the printing dies.* Excessive contact pressure will transfer too much ink to the die face and result in poor print quality. When proper adjustment has been achieved, tighten the two mounting screws.**

   Note: The ink roll should never be positioned so far forward that it contacts the Drum Covering on the Print Drum.

FIGURE 25

USING THE 4 OZ. RESERVOIR INK CARTRIDGES

It is important to understand the Mini-Coder receives the ink required for printing from the pre-saturated ink roller. Depending on the printing application, the coder will operate for hours and possibly days before more ink is required. *The 4 Oz. Reservoir Ink Cartridges are used only to re-ink the roll when necessary and should not be installed until the printed marks indicate a need for more ink.* Installing a 4 ounce Reservoir Ink Cartridge prematurely will result in over saturation of the ink roll, poor print quality and ink dripping from the coder.

SIDE MOUNT CODER INSTALLATIONS

The Reservoir Mounting Pad on the Mini-Coder is designed to accommodate the 4 Oz. Reservoir Ink Cartridge when the coder is installed to print on the vertical sides of cartons. When the printed codes become light, indicating a need for more ink, a Reservoir Ink Cartridge can be installed by removing the white plastic cap and pressing the bottle into the hole in the Reservoir Mounting Pad as shown in Figure 26. A slight twisting action will make installation easier. The bottle should be pressed into the mounting hole until the plastic ball contacts the top surface of the Ink Roll. Positive contact of the plastic ball tip with the ink roll is imperative for proper operation.
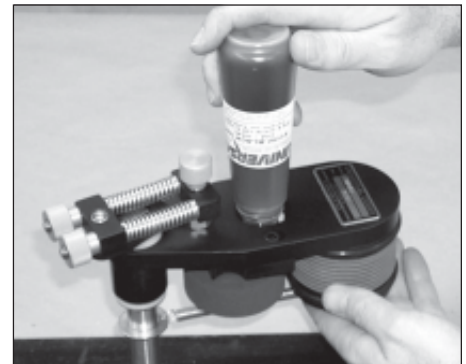

FIGURE 26

TOP MOUNT CODER INSTALLATIONS

When the Mini-Coder is installed to print on the tops of cartons or on a moving web of material, an optional Hinged Bottle Bracket is required for the installation of the 4 Oz. Reservoir Ink Cartridge as shown in Figure 27.

The MC-HBB Hinged Bottle Bracket is slipped over the hub of the coder Baseplate and is secured in place with a set screw. The 4 Oz. Reservoir Ink Cartridge is installed in the bracket arm and the plastic ball tip of the cartridge rides on the face of the ink roll during the re-inking operation.

FIGURE 27

OPTIONAL HINGED BOTTLE BRACKET ASSEMBLY

The optional MC-HBB Hinged Bottle Bracket assembly is designed to be easily installed in the field and facilitates the use of the 4 Oz. Reservoir Ink Cartridges when the coder is mounted to print on the tops of cartons.

To install the MC-HBB, remove the Mounting Bracket Assembly from the Mounting Column and slide the Hinged Bottle Bracket over the hub on the Coder Baseplate and tighten the set screw "A" as shown in Figure 28. Install a 4 Oz. Reservoir Cartridge by pressing the smooth neck of the cartridge through the hole in the arm. Plastic ball "B" should contact the Ink Roll in the center of the roll face. When the ink roll is adequately inked, the mounting arm can be flipped back to position "C".
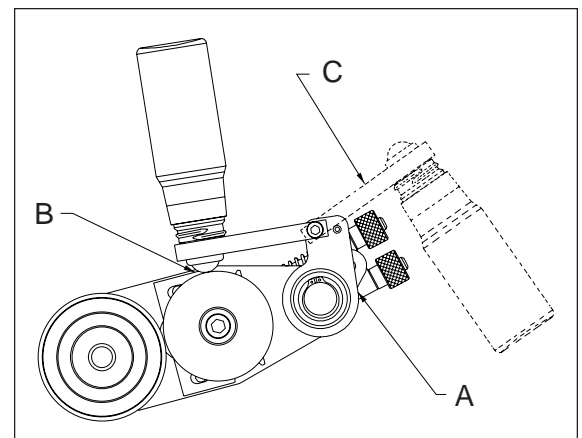

FIGURE 28

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CARTON ALIGNMENT

Proper alignment of the cartons as they pass the printing station is imperative as shown in Figure 29 and will normally require the use of guide rails on the conveyor line. Improper alignment will produce poor print quality, poor print registration, and in extreme cases, could damage the spring tension mechanism of the coder.
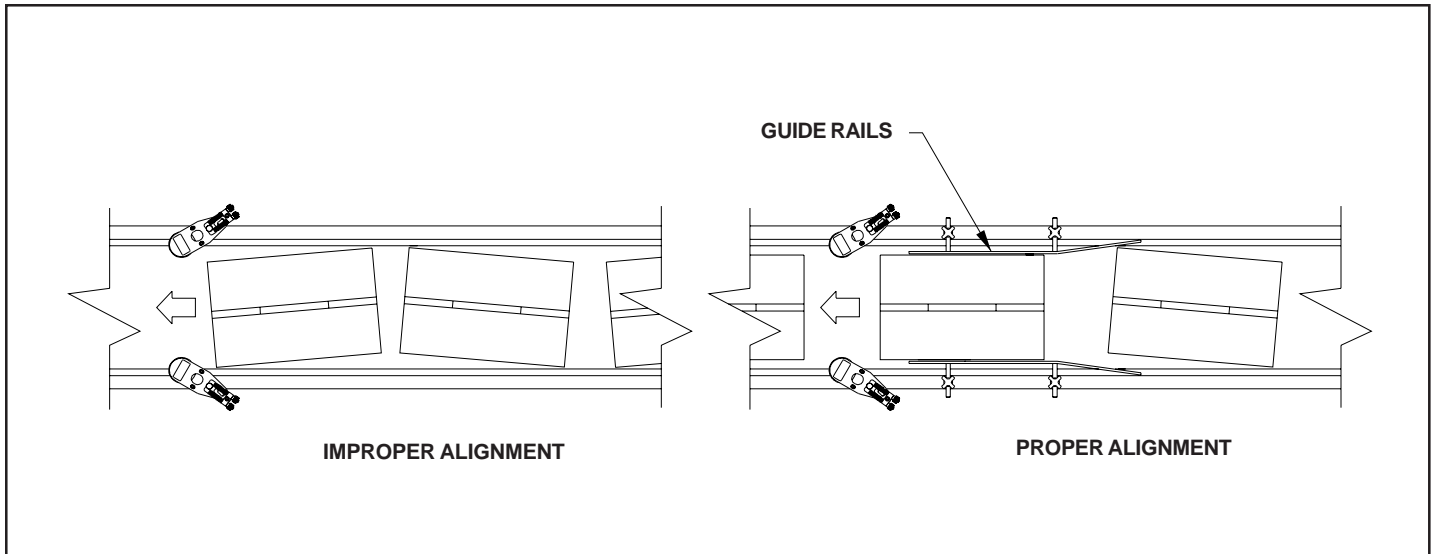

FIGURE 29

In most applications, installation of the coder can be accomplished by attaching the mounting bracket to the side rails of the powered conveyor using two 3/8" machine bolts. The coders should be mounted as close as possible to the end of the guide rails to ensure that proper carton alignment is maintained at the printing station.

Before tightening the mounting bolts, check alignment of the print drum. It is very important for proper tracking that the top of the print drum is parallel to the top of the conveyor (see Figure 30) and the side of the print drum is parallel to the side of the carton (see Figure 31). Once this alignment has been achieved, tighten the mounting bolts.
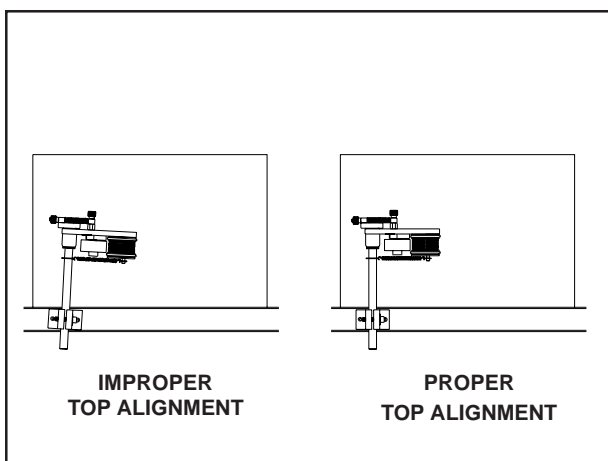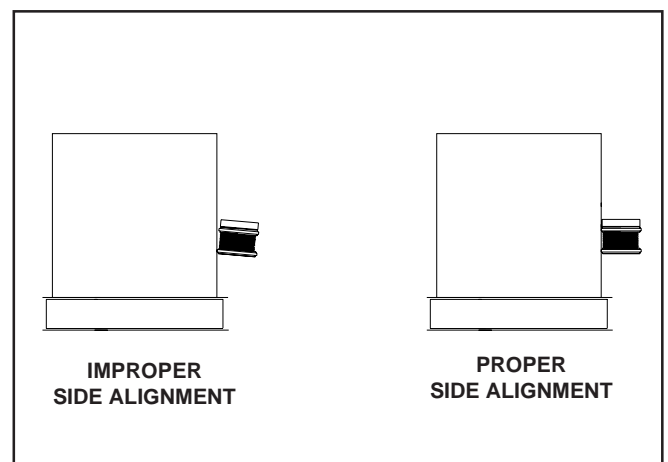

FIGURE 30

FIGURE 31

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Universal Mini-Coders are designed so the frame of the machine will pivot on the mounting column. This allows the print drum to deflect, or swing, on contact with the leading edge of the carton a maximum of 2". It is recommended that cartons be aligned between guide rails with no more than 1/4" clearance on each side as shown in Figure 32. This should allow ample clearance for cartons and protect your coder from damage.

CLEARANCE 1/4"

PRINTERS MOUNTED IN
CLOSE PROXIMITY TO
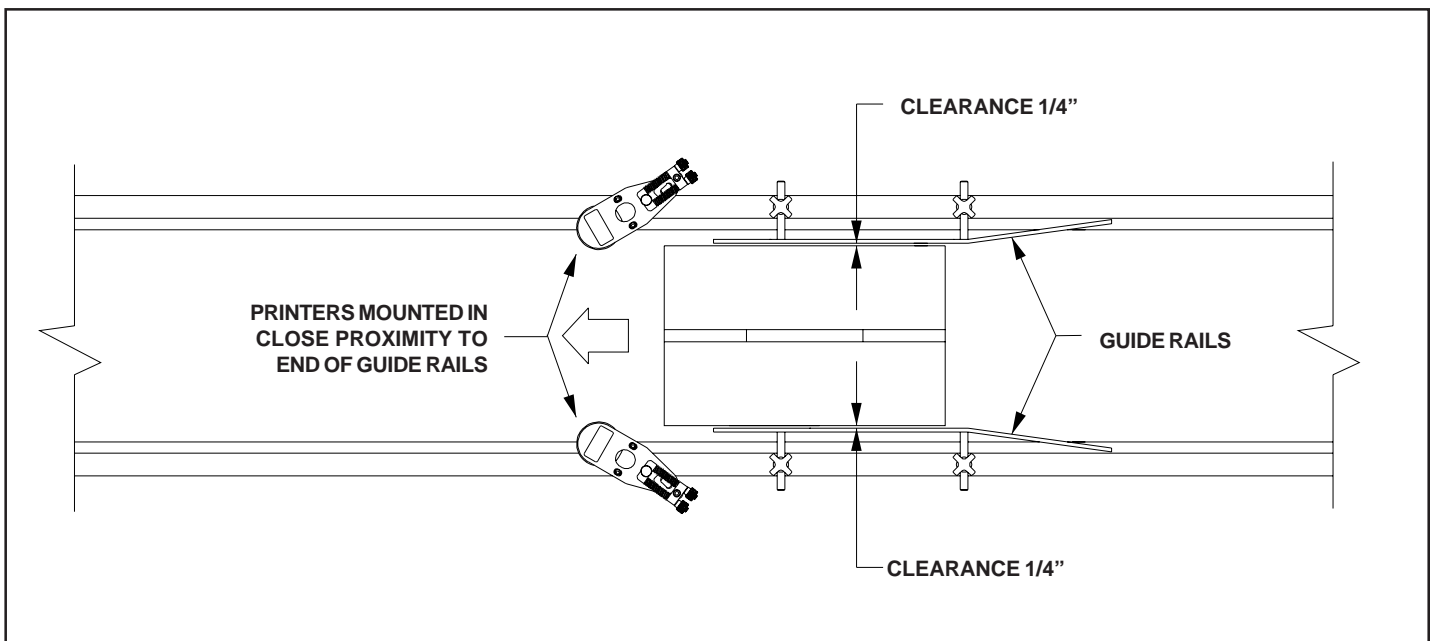END OF GUIDE RAILS

GUIDE RAILS

CLEARANCE 1/4"

FIGURE 32

The unique spring tension mechanism of the Mini-Coder is designed to press the print drum against the side of the carton as it passes the coder. This pressure is necessary to accomplish the friction drive rotation of the print drum and ensure enough printing pressure to give you a sharp impression. The spring tension mechanism will also compensate for slight variations in the width of the cartons or carton alignment by allowing the coder to pivot on the mounting column and prevent jamming the conveyor line. Excessive pressure, caused by improperly guided cartons, will result in smudged impressions and could cause damage to the spring tension mechanism.

SETTING THE SPRING TENSION MECHANISM

The spring tension mechanism on the Mini-Coder is adjustable for either Right Hand or Left Hand mounting configurations as indicated on page 8. When properly set, this adjustment allows the coder to deflect or pivot in only one direction - away from the carton. It is easiest to make this adjustment with the coder mounted on the conveyor.

Install the Mounting Bracket on the side of the conveyor line and loosen the Mounting Column Clamping Screw (Figure 33). Slip the Mounting Column into the Bracket and tighten the Mounting Column Clamping Screw.
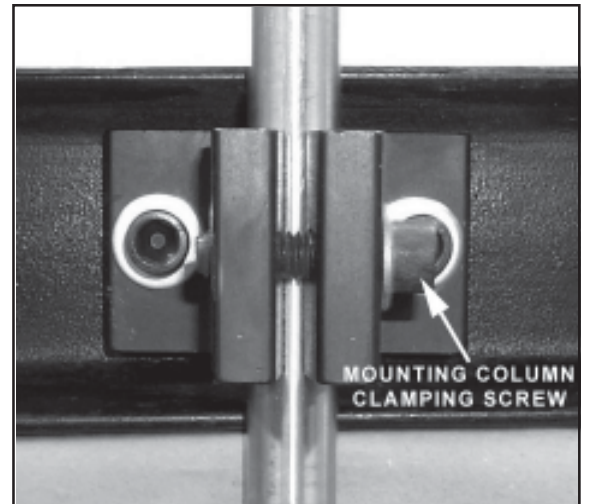

FIGURE 33

Using a 5/64" hex wrench, loosen the nylon tipped set screws in the two Tension Adjusting Knobs.

FIGURE 34

Loosen the Tension Adjusting Knobs by turning them counterclockwise until the coder can be pivoted on the Mounting Column in both the clockwise and counterclockwise direction.
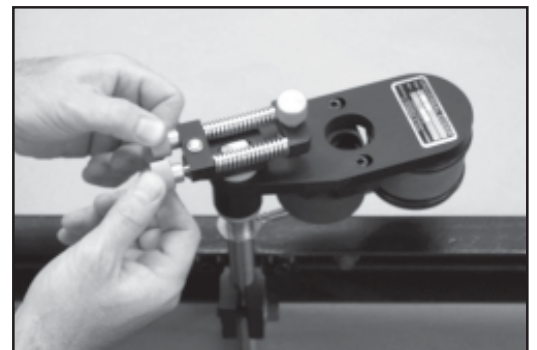

FIGURE 35

Rotate the coder baseplate, moving the print drum away from the carton side. For a Right Hand Mount, rotate the coder baseplate in a clockwise direction as viewed from the top. Rotate the coder Baseplate counterclockwise for a Left Hand Mount.

Rotate the Baseplate on the Mounting Column until the Cam Block is at an approximate 30 Degree angle to the coder Baseplate as shown in Figure 36 and Figure 37.
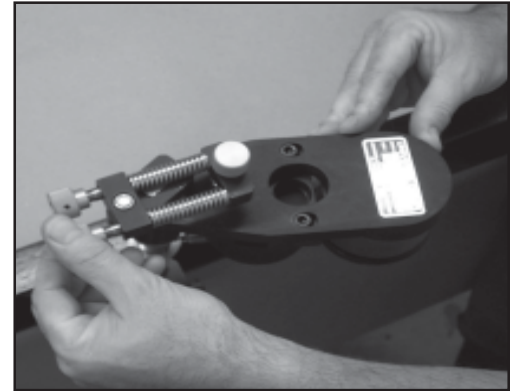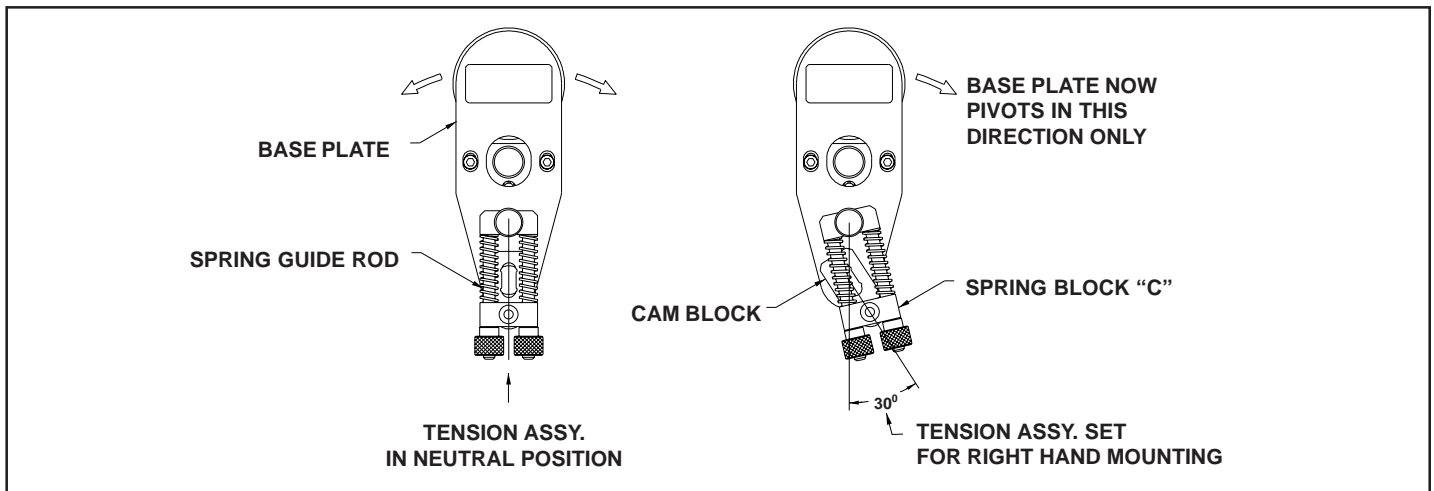

FIGURE 36

FIGURE 37

While holding the Coder Baseplate in this position, turn the Tension Adjusting Knobs clockwise until they both contact Spring Block "C" (See Figure 38). You can now release pressure on the Coder Baseplate and the coder will stay in the rotated position. After making this adjustment properly, the coder baseplate will only pivot in one direction - away from the carton side.
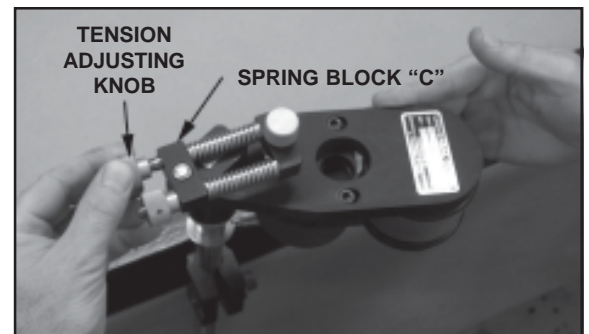

FIGURE 38

This adjustment not only configures the coder to deflect or rotate in one direction only for the appropriate mounting configuration but it also affects the initial tension of the spring mechanism. Adjusting the Tension Adjusting Knobs to hold the Cam Block in a greater than 30 degree angle to the Coder Baseplate will increase the amount of pressure exerted by the print drum against the side of the carton with the same amount of coder deflection. It is important to understand, however, that although increasing the initial spring tension can be beneficial in some printing applications, it also proportionally reduces the deflection range of the coder. To prevent possible damage to the coder, it is very important to ensure that the guide rails on the conveyor line are adjusted to prevent the cartons from compressing the springs to their full limits. If the springs are allowed to compress to their limit, it could stall the carton on the conveyor and in extreme cases could damage the tension mechanism or Hex Pivot Post.

Retighten the 2 nylon tip set screws in the Tension Adjusting Knobs to keep them in position. Note: Do not over tighten the set screws - they should only be snug.
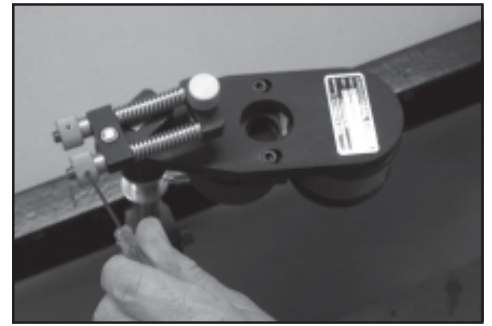
FIGURE 39

Loosen the Mounting Column Clamping Screw (Figure 40) and position the printer to the required height for printing. Swing the printer into position so that the print drum will lightly contact the side of the cartons as they emerge from between the guide rails. Tighten the Mounting Column Clamping Screw.

Check the print drum contact with the cartons while the conveyor is under power and reposition the coder in the Mounting Bracket as necessary to obtain approximately 1/4" - 3/8" deflection (see Figure 41).

MOUNTING COLUMN CLAMPING SCREW

FIGURE 40

PIVOT POINT

ADJUST FOR 1/4" TO 3/8" DEFLECTION

PIVOT POINT

FIGURE 41

PRE-INKING NEOPRENE and XF NEOPRENE INK ROLLS

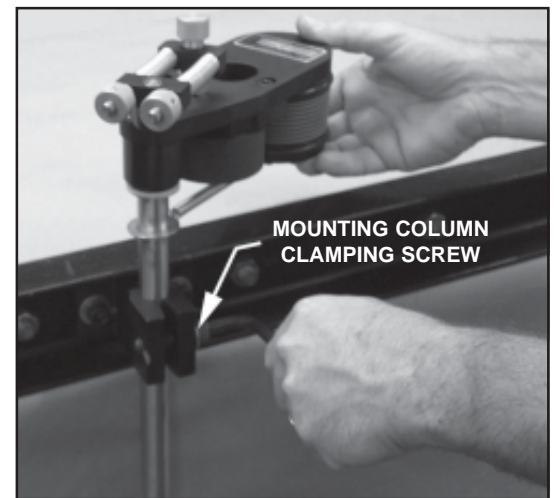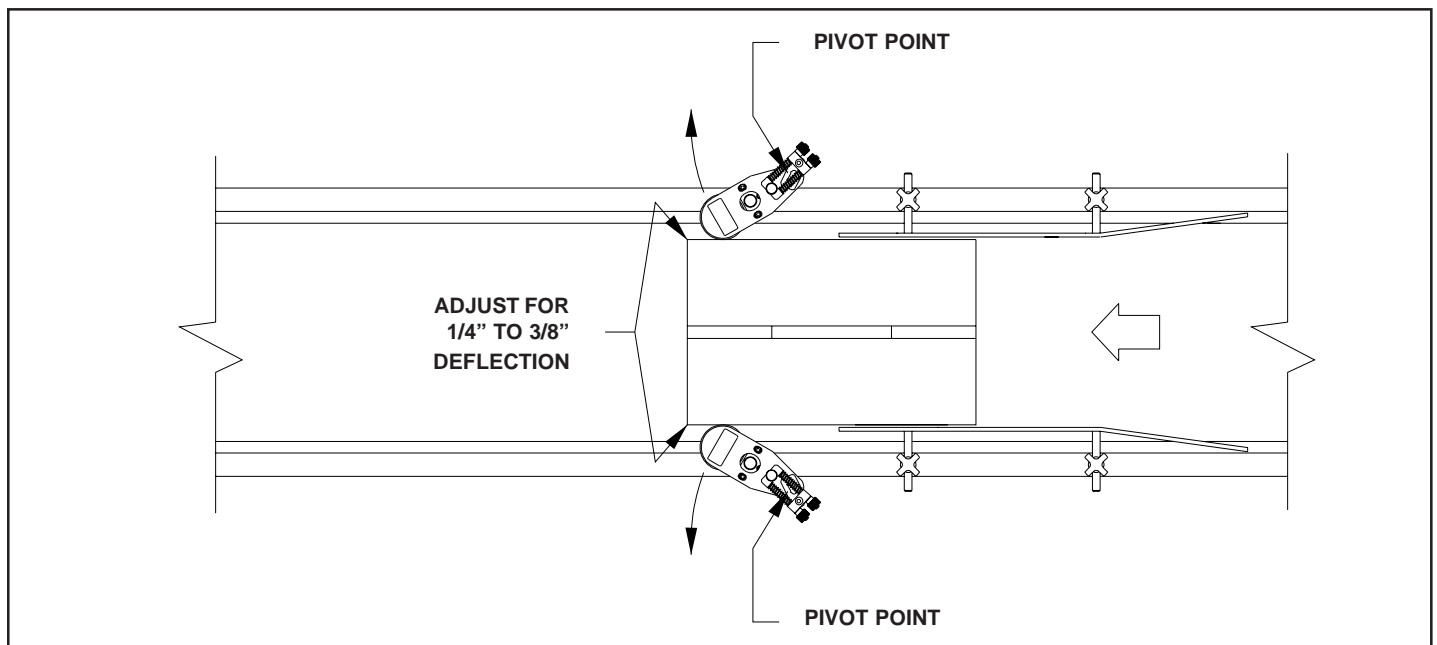Ink Rolls made from Neoprene materials are inked using a different procedure than inking the Microcell Ink Rolls.

Inks will stain clothing, furniture, carpeting and your hands. Rubber gloves should be worn during the following procedures.

1 - Remove the dry roll from the plastic bag. Pour 2.5 to 3 oz. of ink into a clean container which is large enough to accommodate the ink roll. When fully saturated, a 1" face roll will hold approximately 2.5 ounces (74 ml.) of ink and a 2" face roll will hold approximately 5 ounces of ink (148 ml.).
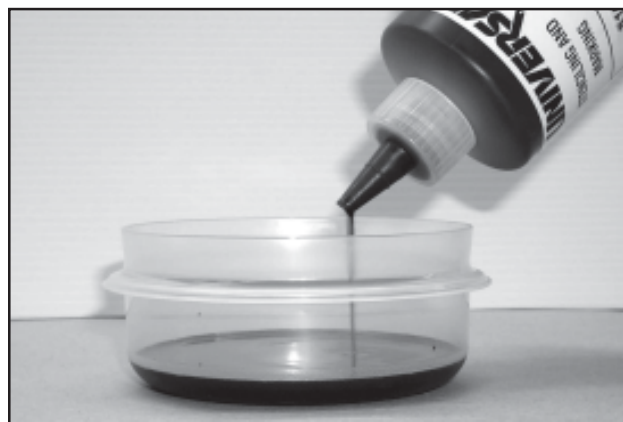
FIGURE 42

2 - Removing the plastic core from the ink roll may make the inking process easier. The core can be removed by pulling it out of the foam sleeve by the large end.

Carefully place the roll into the container of ink. Using your finger tips, firmly press down on the foam side of the ink roll and then release the pressure.   Repeat this process several times while rotating the roll in the container and pressing on different areas. This will force the air out of the roll and the voids will be filled with ink.
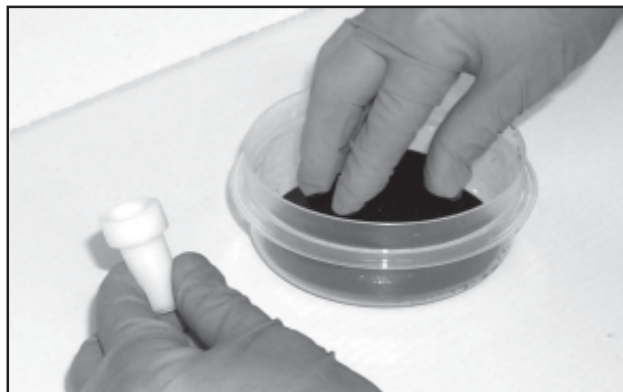
FIGURE 43

3 - Turn the roll over in the container and repeat the above steps until the roll is fully saturated
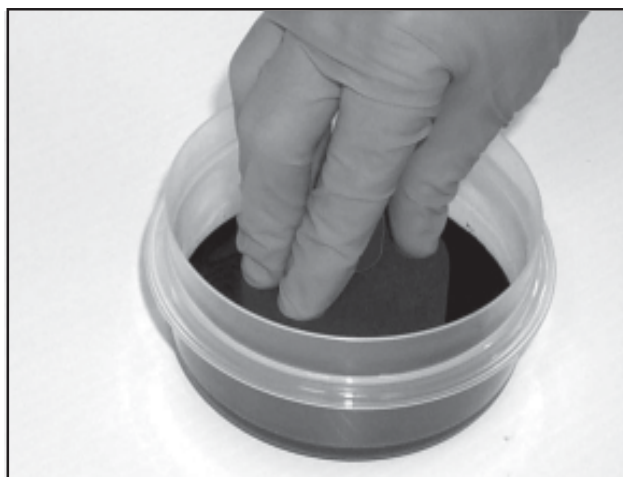
FIGURE 44

4 - Inspect the roll to ensure it is completely saturated with ink but not dripping wet. **If the surface of the roll seems excessively wet after inking, remove the excess ink by blotting the roll on a clean paper towel or other absorbent material.**

FIGURE 45

5 - Replace the plastic core if it was previously removed.
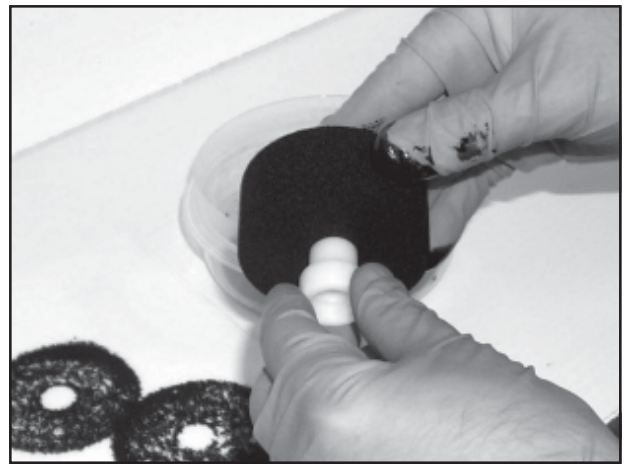
FIGURE 46

6 - After reinstalling the core, inserting a rod through the core and while pressing down lightly, roll the roller across a clean piece of paper. If in doubt about the proper saturation level of the ink roll, it is better to blot off more ink than necessary than to install an over saturated roll on the coder.

FIGURE 47

23

CLEANING PRINTING DIES

During printing, the Printing Dies will tend to pick up both airborne dust and any dust or dirt on the surface of the material being printed. After some period of use, the accumulation of contaminates on the dies will cause degradation of the print quality. Whe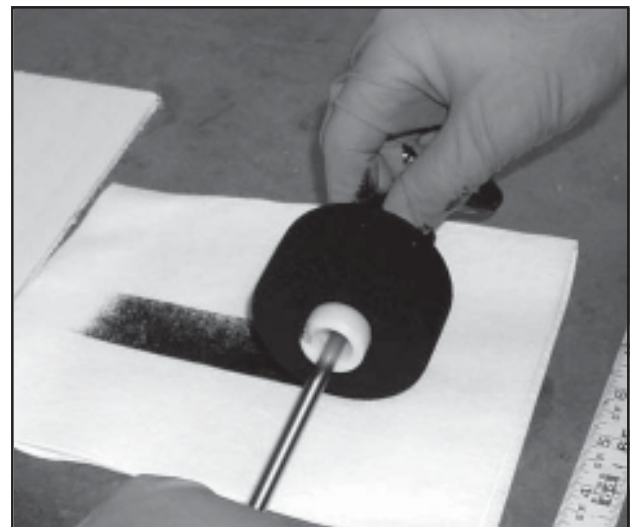n this happens, the dies should be cleaned or replaced. Cleaning the printing dies is a very easy process and, excluding excessive wear to the die face, will restore the print quality of the die to like new condition.

Universal #1150 Ink is a glycol base ink which can be easily be cleaned from the dies without the use of solvents. The easiest method of cleaning Printing Dies is to scrub the die face with a toothbrush using liquid dish detergent and water. Since the ink residue will stain, it is highly recommended that you wear a pair of rubber gloves, safety glasses and an apron to protect your clothing. (Naturally, the toothbrush will never be suitable for oral hygiene use after this process.)

1 - Place the contaminated die on top of several layers of paper towels to absorb the excess liquid. Pour just enough soapy water on the face of the printing die to cover the die face as shown in Figure 48.

FIGURE 48

2 - Using the toothbrush, carefully scrub the face of the die to remove the contamination and old ink as shown in Figure 49. Add more soapy water as necessary and repeat the process until the die is clean. Rinse the dies in clean water.

FIGURE 49

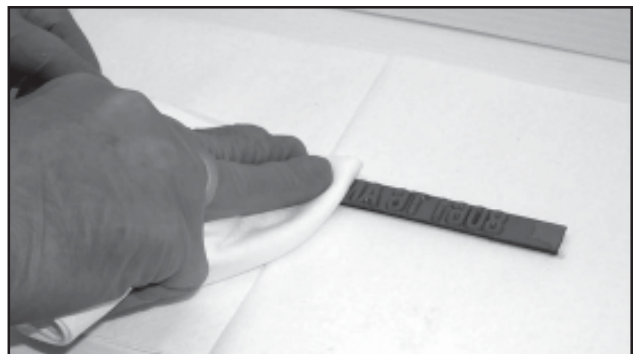**3 - Blot the surface of the die with a clean paper towel to dry and reinstall the clean dies on the coder.**

FIGURE 50

QUICK CHANGE PRINT DRUM ADJUSTMENT

QUICK CHANGE PRINT DRUM - ADJUSTING THE SPRING PLUNGER

When reinstalling, thread the Plunger into the Axle until the ball tip extends just slightly beyond the surface of the Axle. Do not allow any part of the Plunger body to extend beyond the surface of the Axle or it will bind on the Print Drum Bearing during installation of the Print Drum.

The Quick Change Print Drum feature of the Mini-Coder is facilitated by the use of a stainless steel spring plunger assembly in the Print Drum Axle. When the Print Drum is installed, the ball tip of the plunger retracts automatically to enable the inner race of the first Print Drum Bearing to pass. When the Print Drum is fully installed, the ball tip of the plunger extends and locks the Print Drum in position.
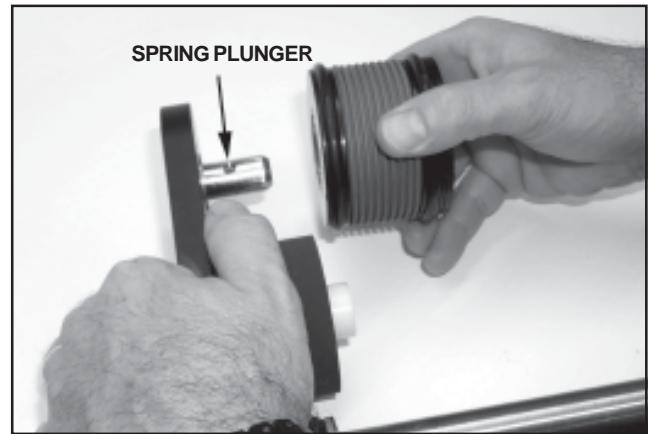
SPRING PLUNGER

FIGURE 51

If the stainless steel spring plunger, Figure 51, is removed from the Print Drum Axle, it must be reinstalled and accurately adjusted for proper operation. Improper adjustment will make the print drum very difficult to install and/or remove.

To remove the Spring Plunger from the Print Drum Axle, use a small screwdriver and turn the Plunger body Counterclockwise as shown in Figure 52.

TURN SCREW
COUNTER CLOCKWISE TO REMOVE

BALL POSITION
TOO FAR OUT

CORRECT BALL
POSITION

FIGURE 52

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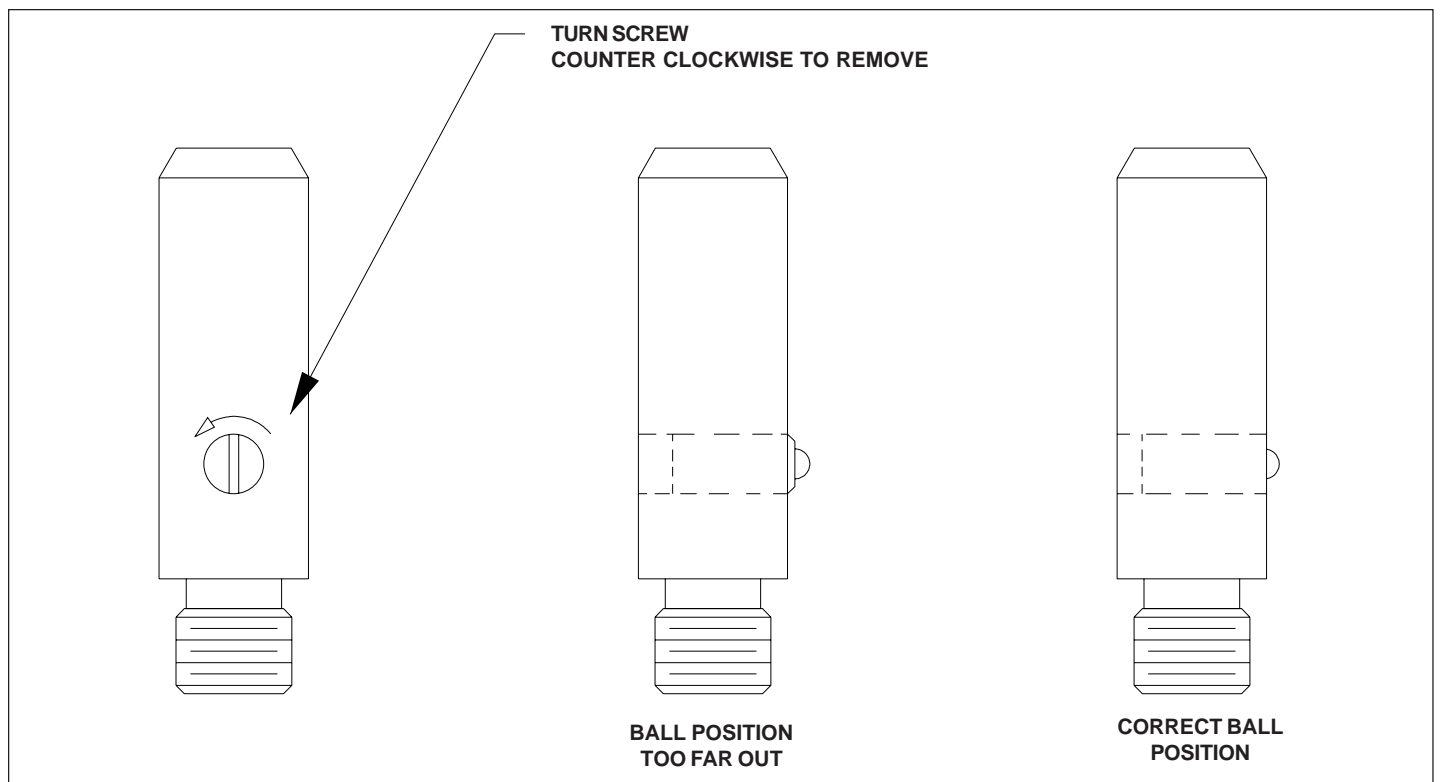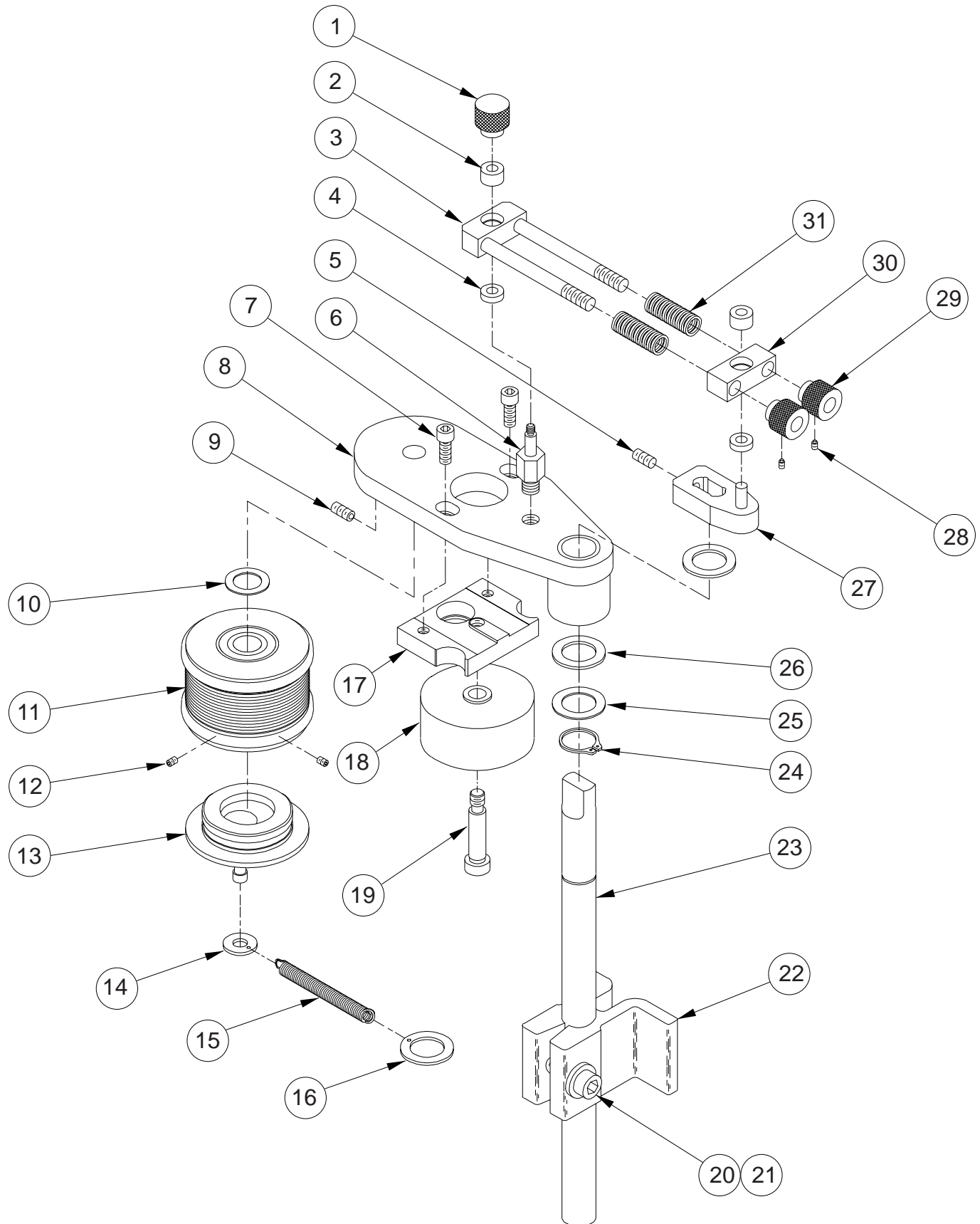| KEY NO.	PART NUMBER	QTY. REQD.	DESCRIPTION
1	MC-15	1	TENSION BLOCK RETAINING KNOB
2	CB-05	2	BEARING, NEEDLE
3	MC-103	1	PIVOT BLOCK ASSEMBLY "A"
4	MC-19	2	DELRIN BUSHING
5	MC-17	1	SET SCREW, 1/4-20 X 1/2" LG CPS
6	MC-06	1	HEX PIVOT POST
7	MC-02	2	SCREW, 1/4-20 X 5/8" LG SHC
8	MC-100	1	BASE PLATE ASSEMBLY FOR MC-10
	MC-200		BASE PLATE ASSEMBLY FOR MC-20
9	MC-55	1	PLUNGER, SPRING FOR QC MC
10	CW-04	1	BRASS WASHER
11	MC-10NI-PDA	1	1-1/8" NON-INDEXING MINI-CODER P.D. ASSEMBLY
	MC-10-PDA		1-1/8" INDEXING MINI-CODER P.D. ASSEMBLY
	MC-20NI-PDA		2" NON-INDEXING MINI-CODER P.D. ASSEMBLY
	MC-20-PDA		2" INDEXING MINI-CODER P.D. ASSEMBLY
	MC-10NI-PDA-T		1-1/8" NON-INDEXING MINI-CODER P.D. ASSEMBLY - METRIC
	MC-10-PDA-T		1-1/8" INDEXING MINI-CODER P.D. ASSEMBLY - METRIC
	MC-20NI-PDA-T		2" NON-INDEXING MINI-CODER P.D. ASSEMBLY - METRIC
	MC-20-PDA-T		2" INDEXING MINI-CODER P.D. ASSEMBLY - METRIC
12	HP-06	3	SET SCREW, 8-32 X 3/16" CPS
13	MC-ICA	1	INDEX CAP ASSEMBLY
14	MC-56	1	SPRING ATTACHMENT RING - SMALL
15	MC-25	1	SPRING, DRUM INDEX
16	CW-01M	1	SPRING ATTACHMENT RING - LARGE
17	MC-08	1	RESERVOIR MOUNTING PAD
18	MC-10MC	1	1-1/8" MC MICROCELL REPLACEMENT ROLL
	MC-20MC		2" MC MICROCELL REPLACEMENT ROLL
19	MC-41	1	INK ROLL AXLE FOR 1-1/8"
	HP-14		INK ROLL AXLE FOR 2"
20	CW-02	1	3/8" STEEL FLAT WASHER

KEY NO.	PART NUMBER	QTY. REQD.	DESCRIPTION
21	CF-09	1	SCREW, 3/8-16 X 1-1/2" SHC
22	CM-17	1	BRACKET, MOUNTING COLUMN
23	MC-39	1	MOUNTING COLUMN
24	CF-13	1	SNAP RING FOR 3/4" SHAFT
25	CW-01	1	3/4" STEEL FLAT WASHER
26	CW-05	2	3/4" NYLON FLAT WASHER
27	MC-104	1	CAM BLOCK ASSEMBLY
28	CF-05	2	SET SCREW, 8-32 X 3/16" S.S. NTS
29	MC-14	2	TENSION ADJUSTING KNOB
30	CM-33	1	BLOCK "C" SPRING
31	MC-36	2	TENSION SPRING

IMPORTANT NOTE FOR ORDERING PRINT DRUM PARTS & ASSEMBLIES

Universal Mini-Coders are available in both indexing and non-indexing models with either standard or metric RIBtype® rings. When ordering replacement print drums it is important to note that the print drum for indexing models are supplied with 3 threaded holes under the bottom bearer ring to accommodate the index cap assembly set screws.

Due to the differences in the thickness between the metric and the standard RIBtype® Die Systems, the print drums are machined to slightly different diameters to accommodate the appropriate rings. Be sure to check the part numbers & descriptions carefully when ordering replacement parts.

POROUS MINI-CODER PRINT DRUM
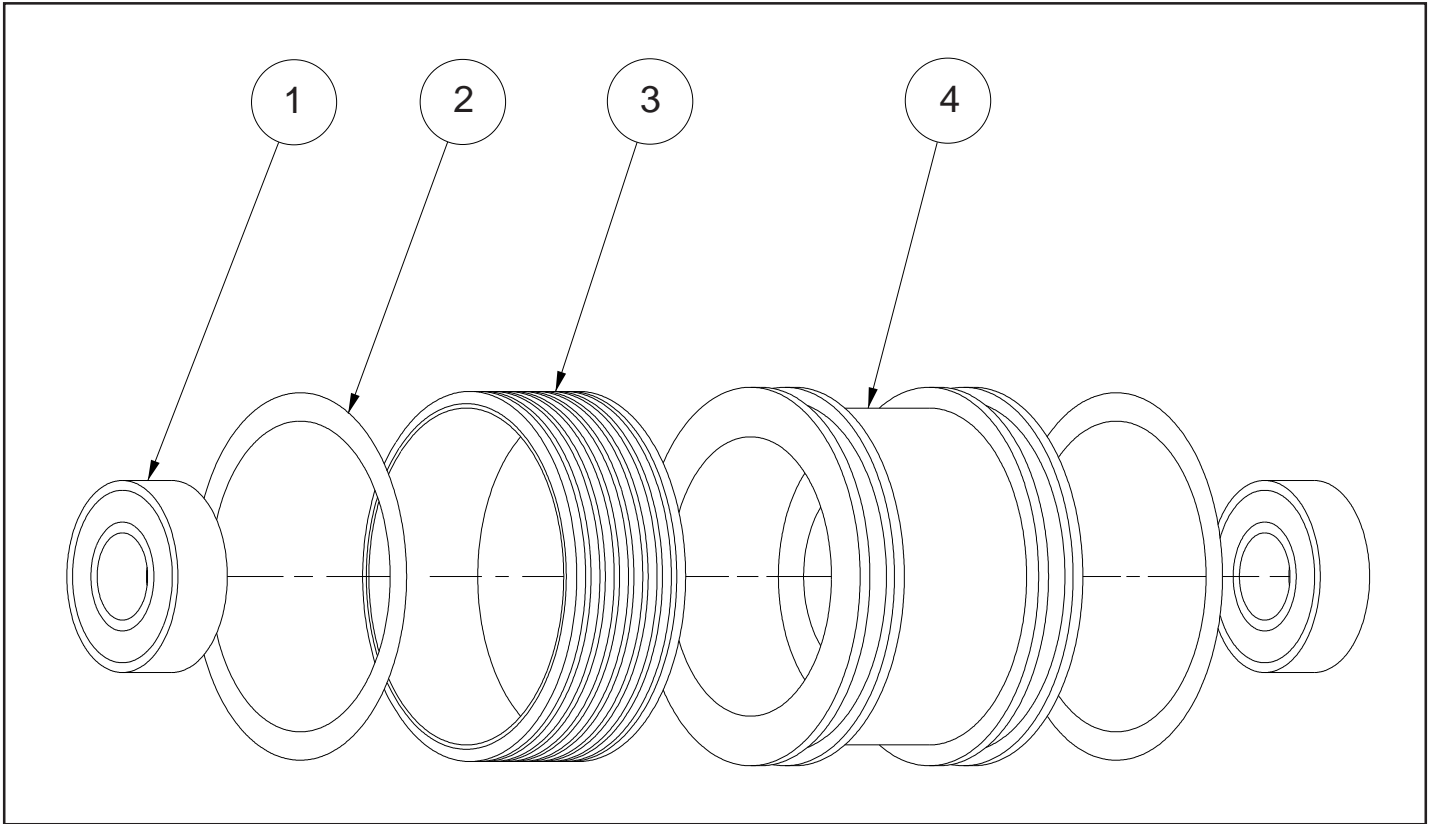
KEY NO.	PART NUMBER	QTY. REQD.	DESCRIPTION
1	CB-04	2	BEARING, PRINT DRUM
2	MC-01	2	PRINT DRUM BEARER RING
3	MC-43	1	RIBtype® RING 1-1/8" MC
	MC-21		RIBtype® RING 2" MC
	MC-43T		RIBtype® RING 1-1/8" MC - METRIC
	MC-21T		RIBtype® RING 2" MC - METRIC
4	MC-26	1	PRINT DRUM 1-1/8" NON-INDEXING MC
	MC-26-I		PRINT DRUM 1-1/8" INDEXING MC
	MC-07		PRINT DRUM 2" NON-INDEXING MC
	MC-07-I		PRINT DRUM 2" INDEXING MC
	MC-26-T		PRINT DRUM 1-1/8" NON-INDEXING MC - METRIC
	MC-26-I-T		PRINT DRUM 1-1/8" INDEXING MC - METRIC
	MC-07-T		PRINT DRUM 2" NON-INDEXING MC - METRIC
	MC-07-I-T		PRINT DRUM 2" INDEXING MC - METRIC

POROUS MINI-CODER HINGED BOTTLE BRACKET
MC-HBB - FOR TOP MOUNT INSTALLATION
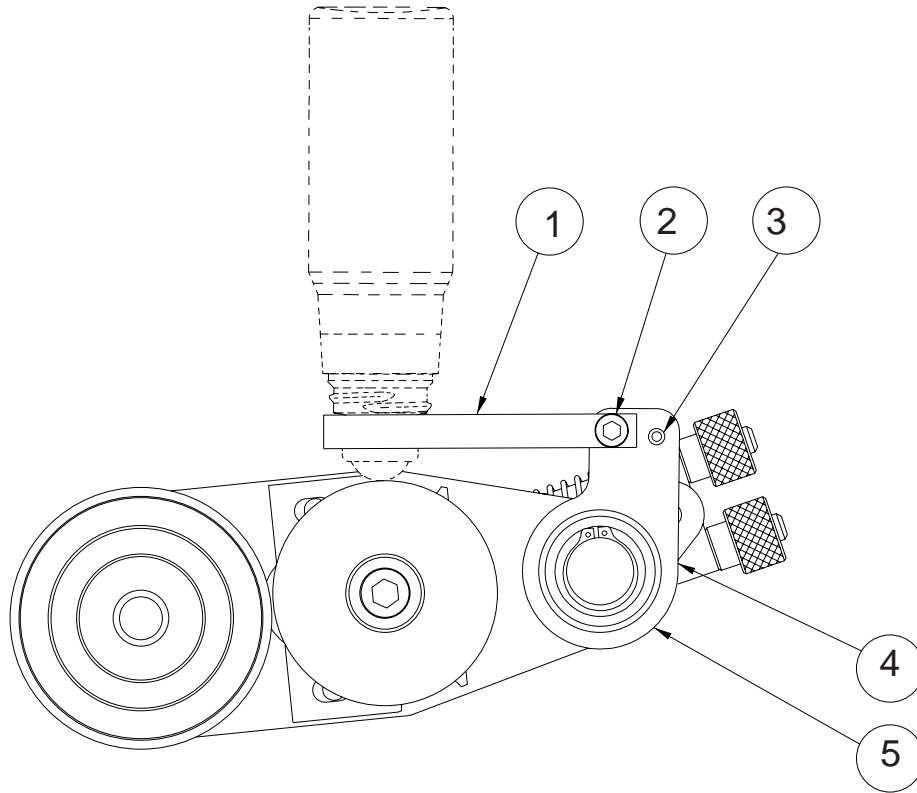
KEY NO.	PART NUMBER	QTY. REQD.	DESCRIPTION
1	MC-HBB02	1	1-1/8" & 2" MINI-CODER ARM
2	MRM-CI-03	1	SHOULDER SCREW, .250 DIA. X .500 LG
3	CR-16	1	COMPRESSION PIN FOR HINGED BRACKET
4	CF-05	1	SET SCREW, 8-32 X 3/16" S.S. NTS
5	MC-HBB01	1	MOUNTING BRACKET