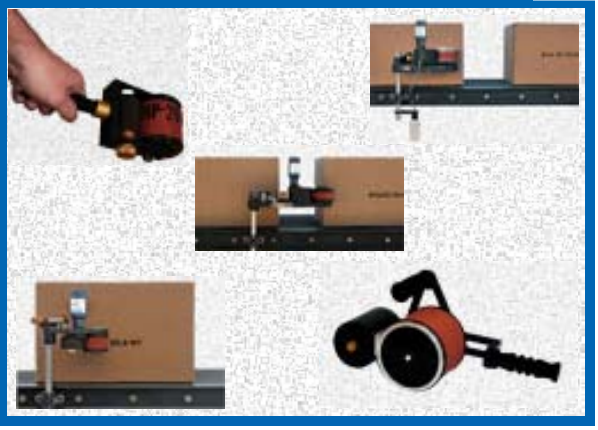
AMERICAN MARKING, INC.

Catalog 2009

STENCILING SYSTEMS

SPECIALTY CODING SYSTEMS

POROUS CODERS



NON-POROUS CODERS

MARKING INKS

AMERICAN MARKING, INC.

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09133

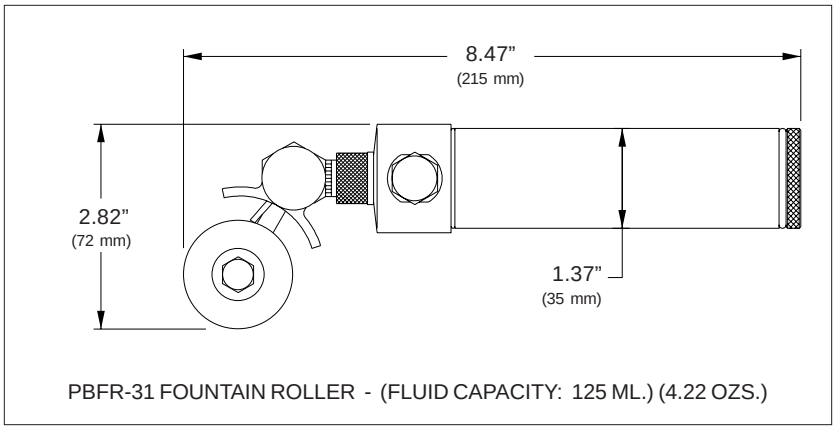
PRESS BUTTON FOUNTAIN ROLLER

The Press Button Fountain Roller is designed with a self-contained ink reservoir in the handle for efficient production stenciling applications. The refillable reservoir holds 4.2 oz. (125 ml) of ink and the precision valve delivers the ink directly to the surface of the roller with the press of a button. Since this system delivers the ink direct to the roll surface, response time is almost instantaneous when more ink is needed on the stencil.

PBFR-31 PRESS BUTTON FOUNTAIN ROLLER UNIT

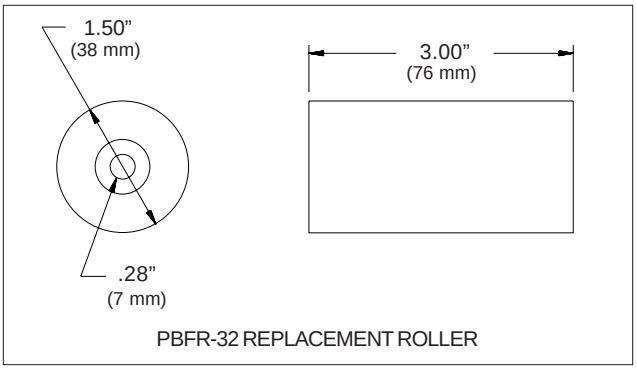
This product is manufactured from precision machined aluminum components and utilizes o-ring seals for leak proof operation. The entire unit can be completely disassembled if cleaning or repair becomes necessary. Type P ink is recommended for stenciling on porous surfaces such as corrugated cartons and paper products.

For non-porous stenciling applications the Press Button unit can be used with TYPE D ink but only where stenciling volume is high and with regular daily use. For low volume non-porous applications we recommend the Roll-A-Stencil Jr. systems.



PBFR-31 FOUNTAIN ROLLER - (FLUID CAPACITY: 125 ML.) (4.22 OZS.)

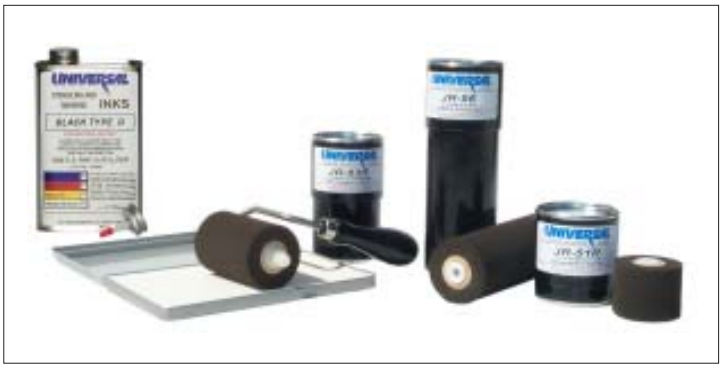
After prolonged use, the foam rollers on any stencil roller applicator will become worn from abrasion and clogged with pigment residue. When the roller shows signs of excessive wear or begins to perform poorly, it should be replaced. The PBFR-33 Felt Wick feeds ink to the roller surface and will also become clogged with pigment after extended use so the felt wick should be replaced when you replace the roller.



PBFR-32 REPLACEMENT ROLLER

PBFR-32 REPLACEMENT ROLLER

PRESS BUTTON FOUNTAIN ROLLER	
STOCK NO.	DESCRIPTION
PBFR-31	PRESS BUTTON FOUNTAIN ROLLER UNIT
PBFR-32	REPLACEMENT ROLLER IN BOX
PBFR-33	REPLACEMENT FELT WICKS (AVAILABLE IN DOZENS ONLY)



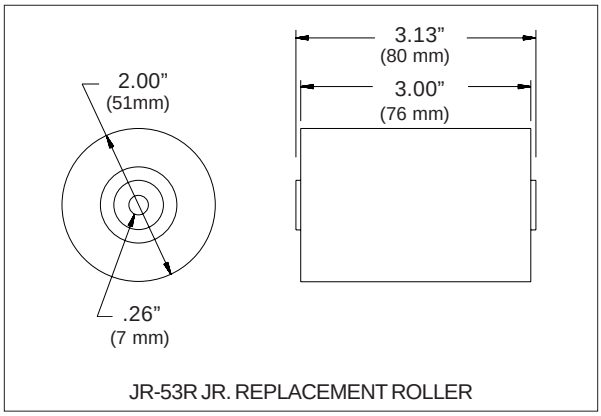
ROLL-A-STENCIL JR. ROLLER SYSTEMS

The Roll-A-Stencil Jr. System is designed for stenciling economy. This system can be used with both porous and non-porous inks. The simplicity of this system makes it most desirable when fast drying, non-porous inks are used. Ink is applied to the Jr. Pad which acts as a supply reservoir. The roller is then rolled across the pad several times where it absorbs enough ink for many stenciled impressions. These units are perfect for stenciling on metal drums, pipes, steel plate, concrete etc. with Type D ink.

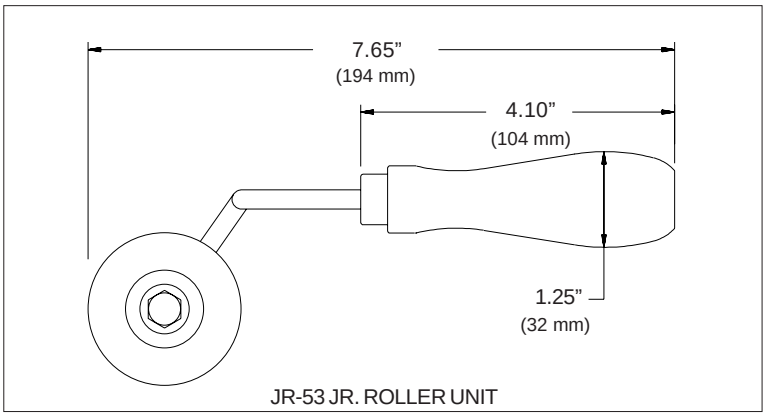
Replacement rollers are made from the highest quality, firm density neoprene foam which is bonded to solid birch wood cores using solvent resistant epoxy. Our rollers are then precision ground between centers, for perfect concentricity. The JR series rollers utilize proprietary splined delrin bushings for a secure fit and smooth rolling action.

JR-51R / JR-53R / JR-56R
REPLACEMENT ROLLERS

1-1/2" / 3" / 6" LENGTHS



JR-53R JR. REPLACEMENT ROLLER



JR-53 JR. ROLLER UNIT

Roll-A-Stencil Jr. Roller Units are constructed of lightweight aircraft grade aluminum alloy frames. Solid birch handles with a black enameled finish are ergonomically designed to fit in the hand and are lighter than competitive units with plastic handles. These exclusive features reduce operator fatigue during production stenciling.

JR-51 / JR-53 / JR-56
ROLLER UNITS

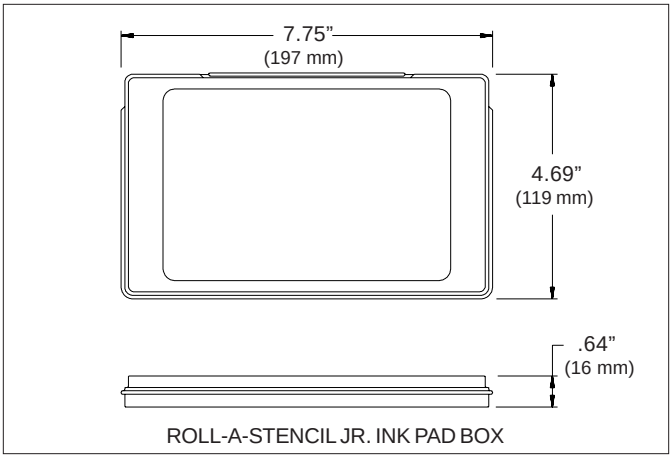
1-1/2" / 3" / 6" LENGTHS

2" DIAMETER ROLL-A-STENCIL JR. ROLLER SYSTEMS	
STOCK NO.	DESCRIPTION
JR-51	1-1/2" WIDE ROLLER UNIT W/COVER
JR-51R	1-1/2" WIDE REPLACEMENT ROLLER W/COVER
JR-53	3" WIDE ROLLER UNIT W/COVER
JR-53K	3" WIDE ROLLER KIT *(CONTAINS 1 ROLLER UNIT W/COVER, 1 PINT OF BLACK TYPE "D" INK AND 1 JR. PAD BOX)*
JR-53R	3" WIDE REPLACEMENT ROLLER W/COVER
JR-56	6" WIDE ROLLER UNIT W/COVER
JR-56R	6" WIDE REPLACEMENT ROLLER W/COVER

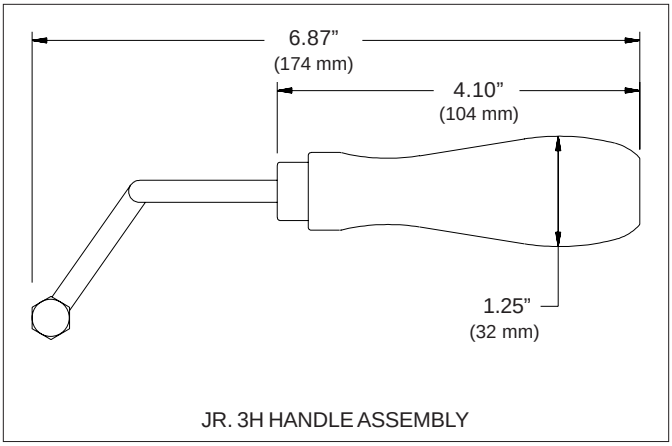
JR. INK PAD BOXES & JR. HANDLE ASSEMBLIES
WITH A PINT OF TYPE D & TYPE P BLACK INK

The Roll-A-Stencil Jr. Handles and Pad Box assembly components can be purchased separately.

JR. PAD BOXES & JR. HANDLE ASSEMBLIES	
STOCK NO.	DESCRIPTION
JR-50	INK PAD BOX WITH A TYPE D FOAM PAD FOR TYPE D & M (ALCOHOL BASE) INKS ONLY
JR-50P	INK PAD BOX WITH A TYPE P POLY FOAM PAD FOR TYPE P & K-1 (OIL BASE) INKS ONLY
JR-1.5H	1-1/2" JR. HANDLE ASSEMBLY
JR-3H	3" JR. HANDLE ASSEMBLY
JR-6H	6" JR. HANDLE ASSEMBLY



ROLL-A-STENCIL JR. INK PAD BOX



JR. 3H HANDLE ASSEMBLY

JR. INK PAD BOX

Roll-A-Stencil Jr. Ink Pad Boxes were designed to re-ink the JR. Roller Systems. These boxes are manufactured from enameled steel and have a hinged lid which closes tightly to prevent solvent evaporation.

*The **JR-50** pad box assembly contains a foam pad for use with alcohol base stencil ink such as Universal Types D and M.*

*The **JR-50P** pad box assembly contains a poly foam pad for use with petroleum base stencil ink such as Universal Types P and K-1.*

JR. HANDLE ASSEMBLY

The Jr. Handle frames are manufactured from aircraft grade aluminum. The enameled, birch wood handles are ergonomically designed to reduce weight which prevents operator fatigue during production stenciling.

Roll-A-Stencil Jr. Replacement Handle assemblies are available without rollers in three standard sizes for roller lengths of 1-1/2", 3" and 6".

Custom sizes are available on a special order basis.

STENCIL CUTTING MACHINE - ELECTRONIC

The SC-5 Stencil Machine is the most advanced cutting system sold at a price lower than that of a Jumbo Manual Stencil Machine. The SC-5 Stencil Machine will cut 1/4" characters and larger. The unique knife saving technology, extra wide 28" bed and the easy to use 7.1 Stencil-CAD software makes this machine the best in its class. The SC-5 Stencil Machine can cut all types of media including .010 thick stencil board, .015 thick stencil board, Ultra-Cut material, magentic material and a various selection of vinyl.

The new Stencil-CAD 7.1 software offers the user a "WYSIWYG" (what you see is what you get) program. Stencil-CAD 7.1 includes hundreds of fonts, clip art pictures, shipping symbols and international fonts. Import files from many Windows based programs including CAD and Corel Draw. Stencil-CAD requires a PC with Windows98 or higher operating system.

SCM-5E - ELECTRONIC STENCIL MACHINE
SHOWN WITH OIL BOARD

ULTRA-CUT *is a .008" thick white polyethylene film, coated with a reusable adhesive which enables you to reposition the stencil as necessary. This strong, durable material conforms to cylindrical surfaces such as pipes & drums. A clay coating makes this material impervious to stencil inks, while the special adhesive makes them easy to remove and reuse. Standard packaging: 22.5" x 100' per roll - 2 rolls per package.*

OIL BOARD *is a high density paper which is impregnated with linseed oil and cured to make it resistant to stencil inks. Standard packaging: .010 Thick 20" x 100' per roll - 2 rolls per package, .010 Thick 12" X 24" sheets - 50 lb. package and .010 Thick 24" x 36" sheets - 50 lb. package.*

POLY NT *is a .004" thick clear polyester film without adhesive which adheres to the backing sheet by a means of a static treatment. Standard packaging: 13.5" x 100' per roll - 1 roll per package.*

MAGNETIC VINYL *is a .015" thick magnetic vinyl ideal for ferrous materials to allow for hands free marking. Impervious to most inks and paints this material is perfect for stenciling on drums, transformers, ammunition, etc. Standard packaging: 24" x 25' per roll - 1 roll per package.*

SC-5 ELECTRONIC STENCIL MACHINE AND ACCESSORIES	
STOCK NUMBER	DESCRIPTION
SCM-5E-UC-KIT	ELECTRONIC SCM KIT WITH 2 ULTRA-CUT MEDIA ROLLS AND 1 BOX OF .015 THICK 24" X 36" OILBOARD
SCM-5E-OB-KIT	ELECTRONIC SCM KIT WITH 2 OILBOARD MEDIA ROLLS AND 1 BOX OF .015 THICK 24" X 36" OILBOARD
SCM-5E-CUTTER	ELECTRONIC CUTTER ONLY
SCM-E-STAND	CUTTER STAND
SCM-5E-SW-BASIC	STENCIL-CAD 7.1 BASIC SOFTWARE
SCM-5E-SW-CLASSIC	STENCIL-CAD 7.1 CLASSIC SOFTWARE
SCM-BLADES	60-DEGREE CUTTING BLADES
SCM-OB-ROLLS	20" X 100 Ft. .010 THICK OILBOARD ROLLS (INCLUDES 2 ROLLS)
SCM-OB-12X24	12" X 24" .010 THICK OILBOARD SHEETS (50 LB. PACKAGE)
SCM-OB-24X36	24" X 36" .010 THICK OILBOARD SHEETS (50 LB. PACKAGE)
SCM-POLY-ROLLS	13.5" X 100 Ft. POLY NT VINYL ROLL WITH A NON-ADHESIVE BACK
SCM-UC-ROLLS	22.5" X 100 Ft. ULTRA-CUT VINYL ROLLS WITH AN ADHESIVE BACK (INCLUDES 2 ROLLS)
SCM-MAG-ROLLS	24" X 25 Ft. MAGNETIC VINYL ROLL

NOTE: *ALL KITS INCLUDE CUTTER, STAND, CABLES, MANUALS FOR SET UP, STENCILCAD BASIC SOFTWARE, TWO 60 DEGREE CUTTING BLADES AND CUTTING MEDIA.*

American Marking offers the finest line of manual and automatic coding systems on the market today. We have made a long term commitment to provide the ultimate in quality and dependability in our contact coding machines. While many of our competitors have shifted their total development efforts toward ink jet technology as the only solution to coding problems, our research and development efforts have produced coding solutions that are, in many cases, not only more cost effective but often far superior in performance.

Ink jet technology has certainly taken the forefront in applications requiring time coding and consecutive numbering but the practicality of using ink jet to apply date and product codes is questionable. A typical ink jet system will be 6-30 times the cost of a standard contact coding system. Contact coding not only requires far less capital investment but in most cases results in superior print quality, substantial savings in operating and long term maintenance costs.

The line of contact coding systems include Hand Printers for applications requiring coding portability, Reciprocating coders for applying codes to small parts where roll coders cannot be used, a wide selection of both porous and non-porous roll coders for conveyed products and web printing and low pressure, atomizing spray markers for non-contact application of color codes. Each of our coders are described in detail in the following sections. Some basic application parameters must be considered in order to determine which coding system is best suited for your application. The following information will be useful in making this determination.

ROLL CODERS

Roll Coders include a wide range of contact coding systems which are characterized by cylindrical print drums which hold rubber printing dies. The print drums on these coders are friction driven, usually by a pair of rubber friction bearer rings which ride on the surface of the product being marked. The inking system on a typical roll coder is usually an ink roller which is mounted tangent to the print drum. As the printing dies are rotated past the ink roll, a thin film of ink is applied to the surface of the dies and then it is transferred to the surface of the product. In essence, this form of coding can be defined as rotary rubber stamping and anything from simple dates and product codes to elaborate logos can be applied by this method. Roll coders are available in a variety of styles and sizes and are typically used for marking flat surfaced, conveyed products such as corrugated cartons, lumber, paper products and both porous and non-porous continuous web materials.

INDEXING AND NON-INDEXING ROLL CODERS

Roll coders are available in two basic types, Indexing and Non-Indexing, which refer to the mechanical operating characteristics of the print drums. The print drum on an indexing roll coder contains a spring mechanism which returns the print drum to the same relative position after each mark is applied. A typical application for an indexing roll coder would be to apply codes to corrugated cartons which are being transported on a power driven conveyor belt. The advantage of an indexing roll coder over a non-indexing type is the ability of the indexing machine to apply the code in the same position, relative to the leading edge of the carton. A small space or gap between cartons is required for the indexing mechanisms to operate properly. The amount of space required between cartons is largely dependent on conveyor line speed and the circumference of the print drum relative to the carton length. Generally speaking, a faster conveyor normally requires a larger space between cartons. A general rule of thumb is to allow a 6" space between cartons at 60 feet per minute conveyor speed.

The print drums on non-indexing roll coders rotate freely on their bearings and will stop at random positions when they disengage from the product. Non-Indexing machines are normally used to apply codes to continuous web materials or cartons being transported on a conveyor belt where no space between cartons exists. In these applications, registering a single code print on each carton is not possible and therefore codes are normally printed multiple times on each product at random positions to ensure that at least one full code is applied. If the circumference of the print drum is more than half the length of the carton side being printed, duplicate printing dies are normally mounted on the print drum to ensure a full code print on each carton.

MOUNTING CONFIGURATIONS

In order to apply codes in the appropriate location on a product, Roll Coders must be mounted in the correct position relative to the products movement on the conveyor or web transport equipment. With the exception of coders designed to be field convertible, the proper mounting configuration for the coder must be determined prior to purchase using the following criteria.

The mounting configuration for all coders is determined by viewing the production line with the product moving away from you. A side mount machine is designed to print on the vertical sides of a product. A top mount machine is designed to print on the horizontal top surface of a product. The specific mounting configurations are shown in Figure 1 for Side Mount machines and Figure 2 for Top Mount machines.

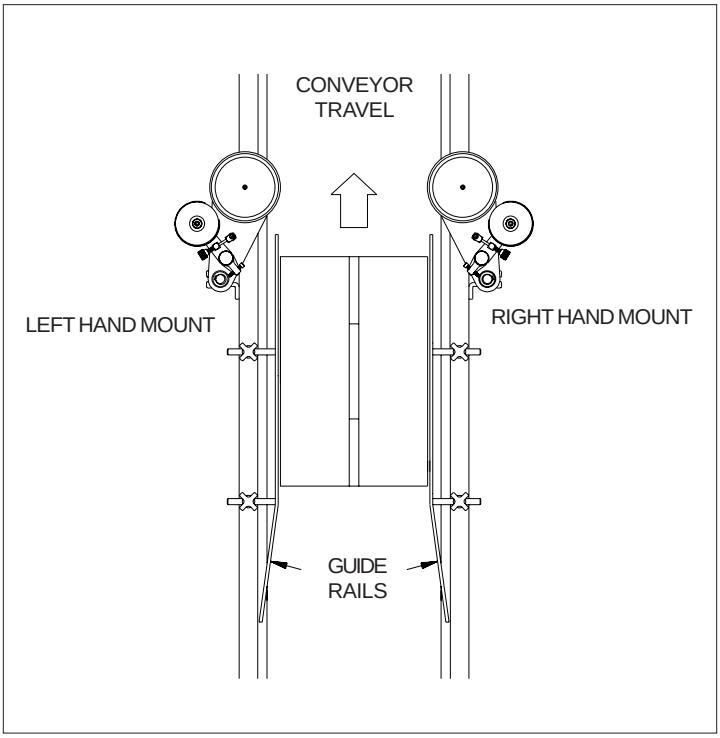


FIGURE 1

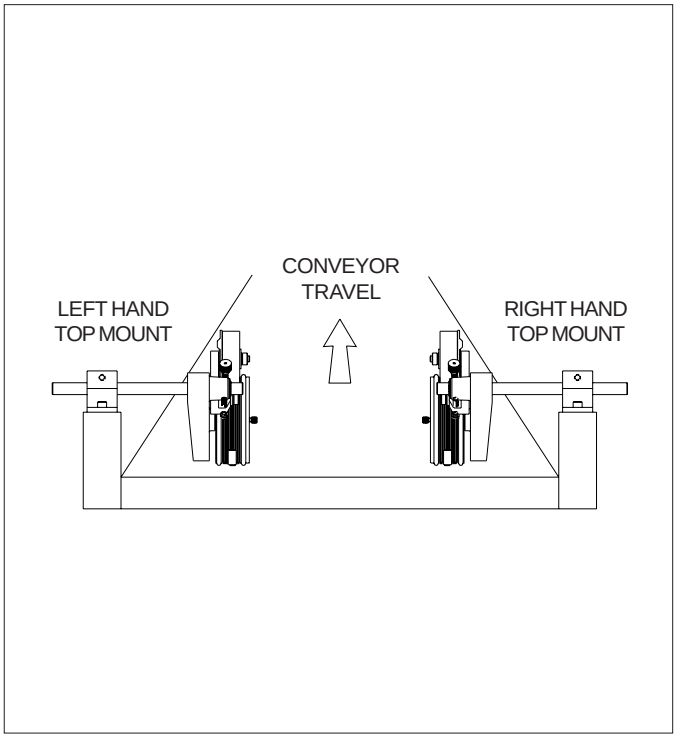


FIGURE 2

SELECTING AN APPROPRIATE SIZE ROLL CODER FOR THE APPLICATION

Roll Coders are available in many sizes and careful consideration must be given to the specific application when making a selection. The first consideration in carton printing applications is the size of the carton being marked and the character size and length of code required. It is very important to understand that the product being marked with a friction driven coder must be capable of rotating the print drum through friction contact with the coders friction bearer rings. In most cases, this means that the carton must be of adequate weight to rotate the print drum without slipping or skidding on the conveyor belt. Indexing coders normally require more force to rotate the print drums than non-indexing coders since the spring indexing mechanisms produce resistance to rotation.

Although a roll coder with a small print drum can be used to print on carton panels with lengths many times the print drum circumference, in most applications, the panel of the carton being printed should be at least two-thirds the print drum circumference. This is particularly important with indexing coders since the print drums must be positively rotated by the product at least 50% or more of the circumference length in order for the spring return mechanisms to work properly. Conveyor line speed will also affect the performance of indexing coders. In applications where conveyor speed is very slow, the carton panel being printed should be of adequate size to drive the print drum through a full 360 degree rotation of the print drum or more for proper indexing action since print drum inertia is reduced at lower line speeds.

Roll coders are also available in various print drum widths which relate to the capacity to hold larger character sizes or multiple lines of characters. For best print quality, it is generally preferable to use the smallest acceptable character size for the job (down to 1/4" character height) and the least number of lines of code possible. Larger and bolder character sizes and multiple lines of text code will always require greater printing pressure and a much more rigid carton surface than a single line of a smaller character, lighter type face code. Ink consumption rates are also greatly increased by using large, bold type styles or logos. Keep in mind that a ½" character code is easily readable from a reasonable distance and in most cases is very easy to apply to the average carton surface with a 1" print width coder.

Selecting a coder with a wider than necessary print width is not recommended since wider friction bearer spacing also requires a more rigid carton surface. It is therefore recommended that the coder selected for the printing application should have the smallest acceptable print width possible for best results.

Small circumference print drums such as those on the Mini-Coders and Hand Printers have a much greater curvature on the face of the print drum than larger machines. Since the printing dies must conform to this curvature, it is generally recommended that the character sizes used on these machines be limited to approximately 5/8" height characters which have a narrow character width and will more easily conform to the curvature of the print drum surface. If larger than 5/8" height characters must be used on the Hand Printers and Mini-Coders, it is recommended that a narrow (condensed) type style is used to minimize the width of the characters. The larger Conveyor Line Printers which have a print drum circumference of approximately 18" can handle character sizes of 1" or more and are available in print widths up to 4" but the same rule of thumb applies to these machines. More lines of text and larger, bolder character sizes will require greater printing pressure and a more rigid carton surface for good quality print.

CARTON ALIGNMENT ON THE CONVEYOR LINE

Regardless of how much money you spend on a conveyor line coding system, the single most important factor in achieving good print quality is proper carton alignment. Whether you use contact roll coders or ink jet coding systems, improper carton alignment will definitely result in poor print quality and poor print registration. The use of guide rails on the conveyor line, immediately upstream of the printing station, is imperative for good results.

Commercial quality guide rail components are available from a number of manufacturers or they can be fabricated from very inexpensive materials. The basic function of a guide rail is to accurately align the cartons on the conveyor belt and guide them past the coding system in the same position each time. Proper carton alignment not only ensures uniform printing pressure but it also ensures accurate print registration, prevents excessive wear of the friction bearers and printing dies and protects the coding system from possible damage (See Figure 3).

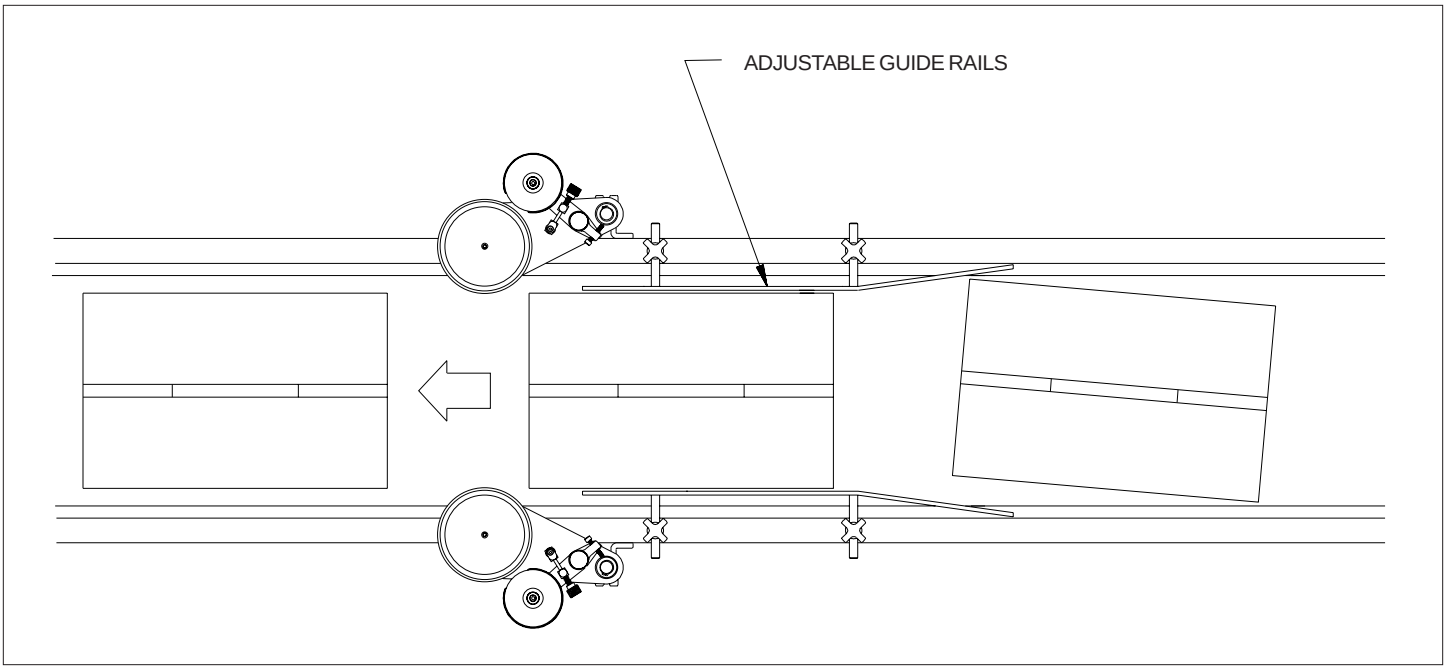


FIGURE 3

WEB PRINTING APPLICATIONS

Applications which require printing on any continuous roll or extruded material such as rolls of paper or plastic film is classified as “web printing”. Only non-indexing coders are used for these applications since the friction bearers on the coder print drum remain in constant contact with the material. Although standard coders designed for porous surface printing can be used in some of these applications, Non-Porous Coders are specifically designed for web printing applications and offer some distinct advantages over conventional coders.

WEB PRINTING CONTINUED

In a typical web printing application, the material is traveling at a relatively high rate of speed and the printed codes are required to dry very rapidly to prevent smearing or transfer of ink when the web is re-rolled. The patented Non-Porous Coders use a proprietary inking system design which applies an extremely thin film of ink to the face of the printing dies. After the code is transferred to the web material, this thin film of ink dries very rapidly.

When printing on continuous web materials, it is best to mount the coder tangent to an idler roll as shown in Figure 4. The idler roll not only ensures accurate control of the material but it also provides the best support for the required printing pressure.

In web printing applications, the rubber friction bearers on the coder's print drum remain in constant contact with the web material. When one printing die is mounted on the coder, the code will be printed on the web repeatedly at intervals equal to the circumference of the print drum. If closer print spacing is required, duplicate sets of printing dies can be mounted on the print drum to achieve the require print repeat interval.

It is important to note that with contact coding, code prints will be applied at random positions relative to any preprinted text or graphics on the web material. Printing the codes at registered positions is not possible with these machines.

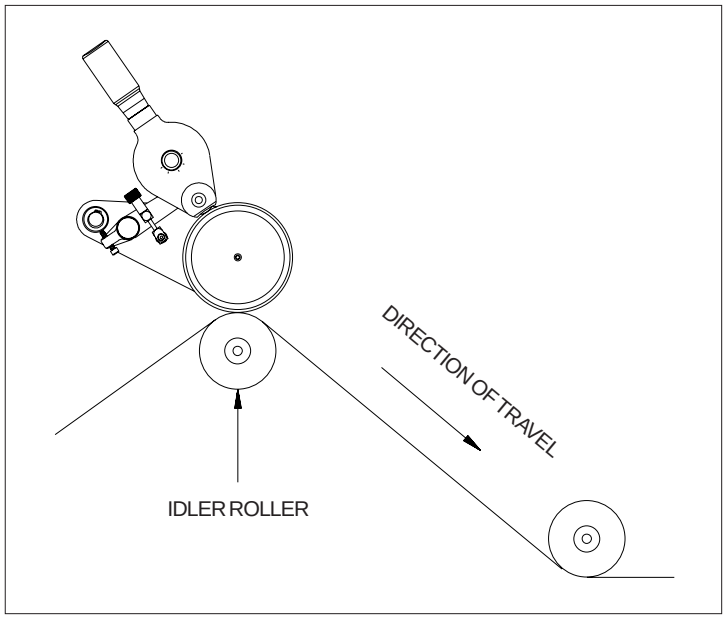


FIGURE 4

When printing on plastic films using #100 alcohol base inks, the Non-Porous Coders will apply marks which dry in as little as 2 seconds at 75 degree Fahrenheit ambient temperature and low humidity. Alcohol base inks dry faster at higher ambient or web temperatures and slower at lower temperatures. High humidity conditions will also retard the drying time of the inks. Please contact our Engineering Department for assistance with specific web printing applications.

MOUNTING BRACKETS

Although they are not always shown in the following coder sections, all of the roll coders are supplied with anodized aluminum mounting brackets. The mounting brackets supplied (See Figure 5) are easily installed on most conveyor lines or other parent equipment. These brackets provide a rigid mounting base for the coder and facilitate fast adjustment of the coder position when changes are required. For coders which have to be used in multiple locations, additional mounting brackets can be ordered separately using stock number CLP-MBA.

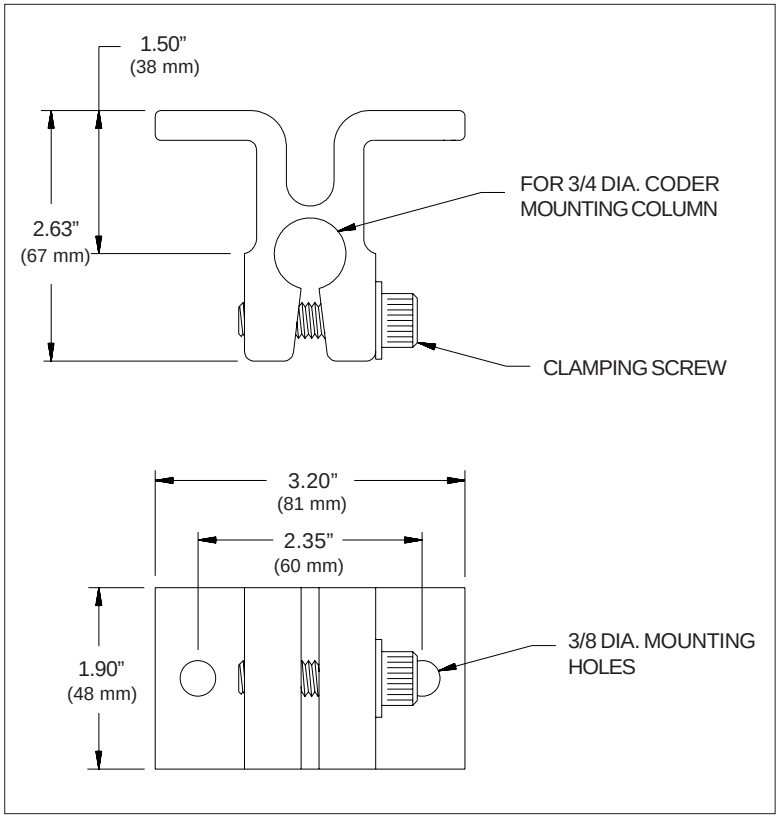


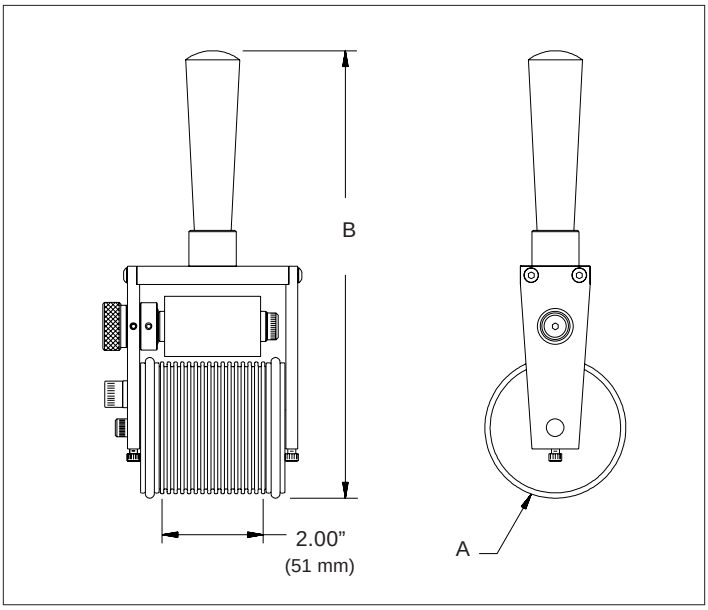
FIGURE 5

MODEL SHOWN: HP-200

Hand Printers are designed for efficient, manual application of codes on cartons or other porous surfaced materials in the shipping room or warehouse where automatic coding is not possible. These lightweight coders are manufactured with anodized aircraft grade aluminum frames, using sealed ball bearings on the non-indexing models and have an eccentric knob for adjusting the ink roller contact to the die face.

Standard features include a dry Microcell ink roll and versatile RIBtype® rubber type. These units are designed for use with #1150 Coder Ink.

POROUS HAND PRINTERS	
STOCK NO.	DESCRIPTION
HP-100NI	SMALL NON-INDEXING HAND PRINTER
HP-200NI	LARGE NON-INDEXING HAND PRINTER
HP-200	LARGE INDEXING HAND PRINTER



Custom sizes are available for special applications. Please contact our Engineering Department for application assistance.

POROUS HAND PRINTER SPECIFICATIONS				
CODER SERIES	PRINT DRUM CIRCUMFERENCE "A"	LENGTH "B"	NET WEIGHT	MAXIMUM DIE SIZE
HP-100NI	6.5" (165 MM) MEASURED AT DIE FACE	8.4" (213 MM)	1 LB. 6 OZ. (.62 KG.)	(US STANDARD) 2"-15 RIBS X 5-9/16" LONG (METRIC CODERS ONLY) 50.8MM -14 RIBS X 141.3 LONG
HP-200NI	9.1" (231 MM) MEASURED AT DIE FACE	9.3" (236 MM)	1 LB. 11 OZ. (.77 KG.)	(US STANDARD) 2"-15 RIBS X 8-3/8" LONG (METRIC CODERS ONLY) 50.8MM -14 RIBS X 212.7MM LONG
HP-200	9.1" (231 MM) MEASURED AT DIE FACE	9.3" (236 MM)	1 LB. 10.5 OZ. (.75 KG.)	(US STANDARD) 2"-15 RIBS X 8-3/8" LONG (METRIC CODERS ONLY) 50.8MM -14 RIBS X 212.7MM LONG

POROUS HAND PRINTERS

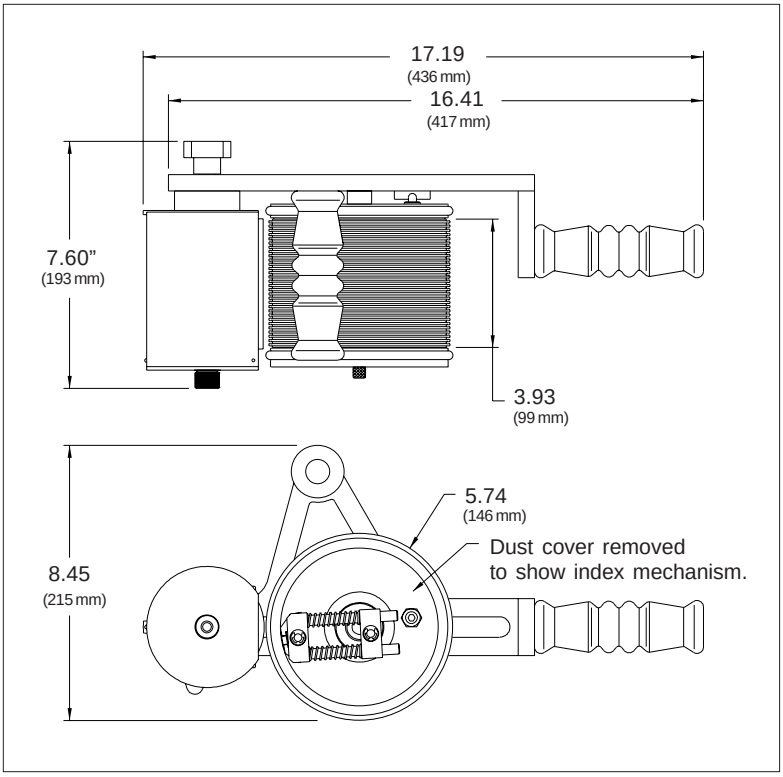
The HPL Large Capacity Hand Printers provide the same large print area capabilities of our standard Conveyor Line Printers where automatic coding is not possible. These hand held coders are designed for marking on cardboard and other porous materials in the shipping room or the warehouse with Universal #1150 coder ink.

MODEL SHOWN: HPL-400 INDEXING PRINTER

Heavy duty construction includes an anodized aircraft aluminum frame, stainless steel axles, sealed ball bearings and an ink roll contact adjustment feature.

These coders are available in 4 standard print widths all with 18" circumference print drums. Included with each coder is a re-inkable dry XF Neoprene Ink Roll and Universal's versatile RIBtype® die fastening system.

Non-indexing Hand Printers continuously print at repeat intervals equal to the drum circumference. The print drum on the indexing printer returns to the same start position after each rotation, allowing for accurate print registration.



For special applications, a variety of other inks are available for use with the re-inkable XF Neoprene ink roll, compatible with both porous and non-porous inks.

POROUS HAND PRINTER SPECIFICATIONS				
CODER SERIES	PRINT WIDTH	MAXIMUM DIE LENGTH	PRINT DRUM CIRCUMFERENCE	NET WEIGHT
HPL-100	1.125" (28.58 MM)	7 RIBS X 16-15/16" LONG (430 MM)	18" (457 MM)	6.1 LBS. (2.8 KG.)
HPL-200	2" (50.8 MM)	14 RIBS X 16-15/16" LONG (430 MM)	18" (457 MM)	6.9 LBS. (3.1 KG.)
HPL-300	3" (76.2 MM)	21 RIBS X 16-15/16" LONG (430 MM)	18" (457 MM)	8 LBS. (3.6 KG.)
HPL-400	4" (101.6 MM)	29 RIBS X 16-15/16" LONG (430 MM)	18" (457 MM)	9.1 LBS. (4.1 KG.)

POROUS MINI-CODERS

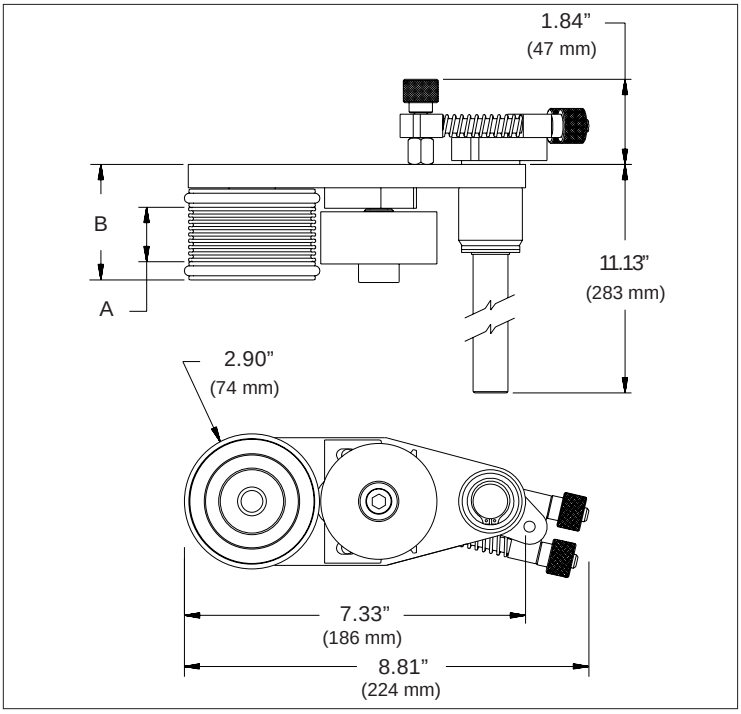
Mini-Coders are designed to apply small character code data to cartons or other flat surface materials. The unique inverted design with a patented spring tension system allows the unit to be installed on either side of the conveyor line without modification. The standard machine is supplied with RIBtype® rubber type, a dry Microcell ink roll and an anodized aluminum mounting bracket.

XF Neoprene ink rolls are optional. Reservoir Ink Cartridge plugs right into the Mini-Coder for convenient, automatic re-inking of the ink roll.

Non-Indexing models have a free turning print drum and are designed to print at random. The Non-Indexing Mini-Coders can print within a 1/2" of the conveyor belt.

Indexing Mini-Coders have an external spring mechanism which returns the print drum to the same starting position after each print thus enabling the operator to precisely adjust the print registration on the product. Since the spring mechanism on indexing models extends 5/8" below the bottom of the print drums, these units can print no closer than 1-1/8" of the conveyor belt. *(See diagram on page 19)*

MODEL SHOWN: MC-10NI



To make type changes easy, all Mini-Coders are equipped with Quick Change Print Drums.

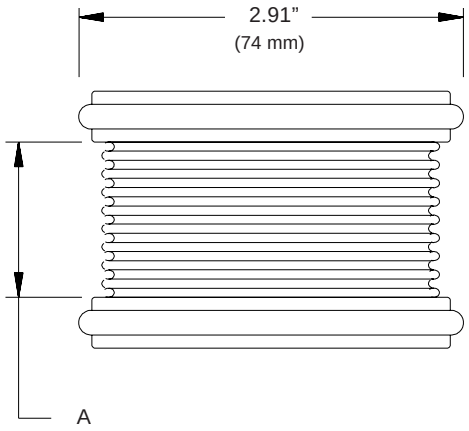
Additional print drums are available to facilitate off-line code changes without stopping production.

POROUS MINI-CODERS WITH QUICK CHANGE PRINT DRUMS				
STOCK NO.	DESCRIPTION	PRINT DRUM CIRCUMFERENCE	DIMENSION "A"	DIMENSION "B"
MC-10NI	1-1/8" NON-INDEXING CODER	9.1" (231 MM)	1.125" (28.5 MM)	2.49" (63 MM)
MC-10	1-1/8" INDEXING CODER	9.1" (231 MM)	1.125" (28.5 MM)	3.11" (79 MM)
MC-20NI	2" NON-INDEXING CODER	9.1" (231 MM)	2" (50.8 MM)	3.54" (90 MM)
MC-20	2" INDEXING CODER	9.1" (231 MM)	2" (50.8 MM)	4.16" (106 MM)

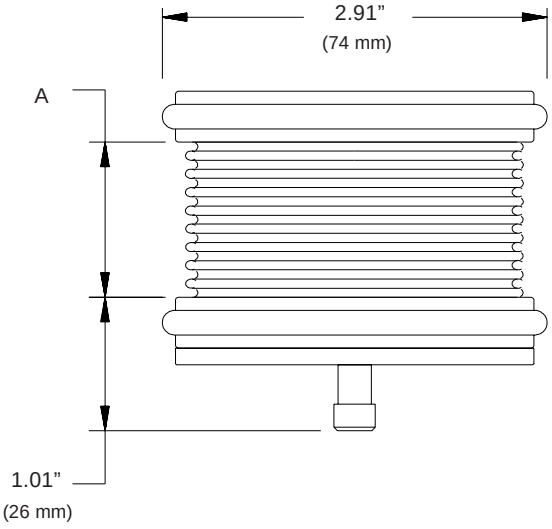
POROUS MINI-CODERS

If your printing operation requires frequent code changes and time is of the essence, code changes as fast as 5 seconds can be accomplished using Quick Change Print Drum Assemblies. Production codes can be set up off-line on the spare drum and when it's time to change codes, simply pull the active print drum off the coder and slip on the replacement. A stainless steel spring plunger holds the drum in place so no tools are required for the changeover.

POROUS MINI-CODER SPECIFICATIONS			
CODER SERIES	NET WEIGHT NON-INDEXING MODELS	NET WEIGHT INDEXING MODELS	MAXIMUM DIE SIZE
MC-10NI	4 LB. 12 OZ. (2.15 KG.)	5 LB. (2.27 KG.)	8 RIBS X 8-3/8" LONG (213 MM)
MC-20NI	5 LB. 2 OZ. (2.32 KG.)	5 LB. 7 OZ. (2.47 KG.)	15 RIBS X 8-3/8" LONG (213 MM)



NON-INDEXING PRINT DRUM



INDEXING PRINT DRUM

POROUS MINI-CODER SPARE QUICK CHANGE PRINT DRUM ASSEMBLIES		
STOCK NO.	DESCRIPTION	PRINT WIDTH "A"
MC-10NI-PDA	1-1/8" NON-INDEXING PRINT DRUM ASSEMBLY	1.125" (28.5 MM)
MC-10-PDA	1-1/8" INDEXING PRINT DRUM ASSEMBLY	1.125" (28.5 MM)
MC-20NI-PDA	2" NON-INDEXING PRINT DRUM ASSEMBLY	2" (50.8 MM)
MC-20-PDA	2" INDEXING PRINT DRUM ASSEMBLY	2" (50.8 MM)

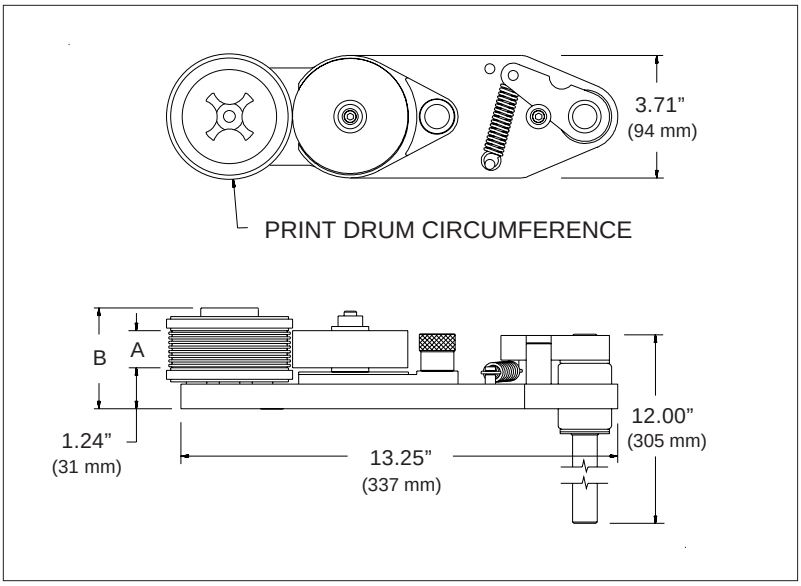
Note: *All Quick Change Print Drum Assemblies come complete with Bearings, Bearer Rings & Ribtype Drum Covers. Indexing Print Drum Assemblies also include Drum Caps for indexing mechanism.*

POROUS MIDSIZE CODERS

A series of Midsize Coders establish a new standard of quality and versatility in contact coding systems. The unique modular design of these machines provides the flexibility to adapt the coder to a wider range of applications than any other system on the market. To provide unsurpassed durability, the frames and print drums on these coders are precision machined from solid aircraft aluminum thus eliminating the use of castings.

Porous Midsize Coders are offered in both 12" & 15" circumference print drum models for more accurate matching of the coder to the carton size. The long frame design and extended deflection capability add to the machine's versatility. When fitted with the optional Reservoir Inking System Cover assembly, the ink rolls are re-inked automatically during the printing operation.

MODEL SHOWN: MS-120 RIGHT HAND SIDE MOUNT
SHOWN WITH OPTIONAL MS-RRC1 COVER

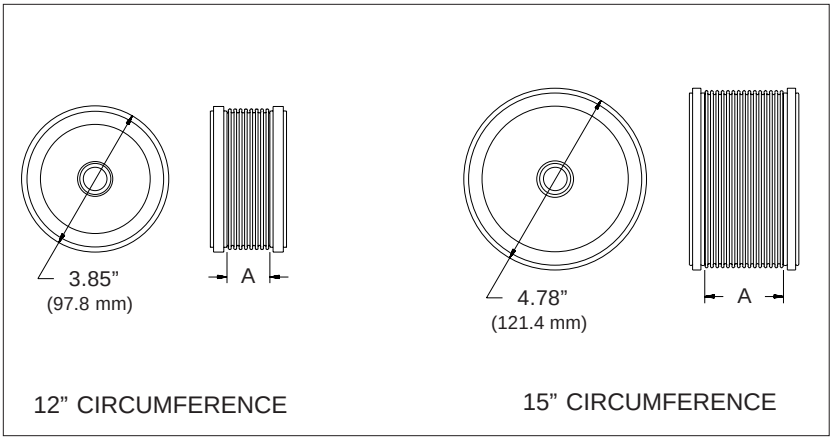


These coders can be ordered for either right-hand or left-hand mounting configuration and are easily field converted if mounting requirements change. The innovative print drum indexing mechanism on these coders was designed to provide both fast response and positive indexing on cartons as short as 55% of the print drum circumference.

All porous models of the Midsize Coder come complete with a dry Microcell Ink Roll and print drums which accommodate RIBtype® rubber type. Recommended for use with #1150 Porous Coder Inks.

POROUS MIDSIZE CODERS				
STOCK NO.	DESCRIPTION	PRINT DRUM CIRCUMFERENCE	PRINT WIDTH "A"	DIMENSION "B"
MS-120NI	1-1/8" NON-INDEXING MIDSIZE CODER	12" (305 MM)	1.125" (28.5 MM)	3.05" (77.47 MM)
MS-120	1-1/8" INDEXING MIDSIZE CODER	12" (305 MM)	1.125" (28.5 MM)	3.05" (77.47 MM)
MS-150NI	1-1/8" NON-INDEXING MIDSIZE CODER	15" (381 MM)	1.125" (28.5 MM)	3.05" (77.47 MM)
MS-150	1-1/8" INDEXING MIDSIZE CODER	15" (381 MM)	1.125" (28.5 MM)	3.05" (77.47 MM)
MS-220NI	2" NON-INDEXING MIDSIZE CODER	12" (305 MM)	2" (50.8 MM)	3.66" (93 MM)
MS-220	2" INDEXING MIDSIZE CODER	12" (305 MM)	2" (50.8 MM)	3.66" (93 MM)
MS-250NI	2" NON-INDEXING MIDSIZE CODER	15" (381 MM)	2" (50.8 MM)	3.66" (93 MM)
MS-250	2" INDEXING MIDSIZE CODER	15" (381 MM)	2" (50.8 MM)	3.66" (93 MM)

POROUS MIDSIZE CODER SPECIFICATIONS			
CODER SERIES	NET WEIGHT NON-INDEXING MODELS	NET WEIGHT INDEXING MODELS	MAXIMUM DIE SIZE
MS-120NI	7 LB. 3 OZ. (3.26 KG.)	7 LB. 9.5 OZ. (3.44 KG.)	7 RIBS X 11-3/8" LONG (288 MM)
MS-150NI	7 LB. 8 OZ. (3.40 KG.)	7 LB. 14.5 OZ. (3.59 KG.)	7 RIBS X 14-1/4" LONG (362 MM)
MS-220NI	7 LB. 10.5 OZ. (3.47 KG.)	8 LB. 1 OZ. (3.66 KG.)	14 RIBS X 11-3/8" LONG (288 MM)
MS-250NI	7 LB. 15.5 OZ. (3.61 KG.)	8 LB. 6 OZ. (3.80 KG.)	14 RIBS X 14-1/4" LONG (362 MM)



If your printing operation requires frequent code changes and time is of the essence, code changes as fast as 10 seconds can be accomplished using Quick Change Print Drum Assemblies. Production codes can be set up off-line on the spare drum and when it's time to change codes, simply unscrew the print drum knob, pull the active print drum off the coder and slip on the replacement. The quick change print drum feature not only facilitates off-line code changes when spare drums are ordered but if the print applications change, the print drum size can be readily changed to accommodate the new requirements.

POROUS MIDSIZE CODER SPARE QUICK CHANGE PRINT DRUM ASSEMBLIES		
STOCK NO.	DESCRIPTION	PRINT WIDTH "A"
MSC-120-PDA	1-1/8" PRINT DRUM ASSEMBLY	1.125" (28.5 MM)
MSC-150-PDA	1-1/8" PRINT DRUM ASSEMBLY	1.125" (28.5 MM)
MSC-220-PDA	2" PRINT DRUM ASSEMBLY	2" (50.8 MM)
MSC-250-PDA	2" PRINT DRUM ASSEMBLY	2" (50.8 MM)

RESERVOIR INKING SYSTEM - OPTIONAL

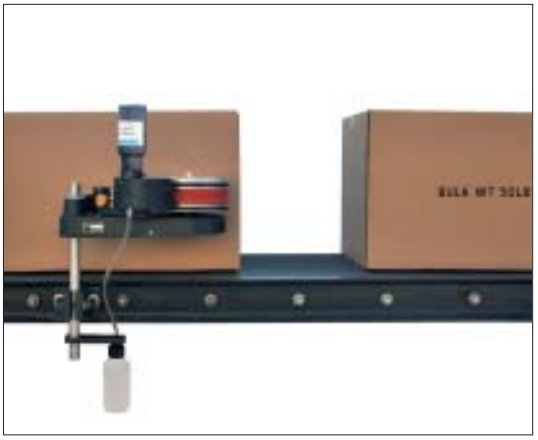
The patented Reservoir Inking System was designed to eliminate the task of re-inking the ink roll manually. Add the appropriate size roll cover and our 4 oz. disposable ink cartridge and this system will automatically apply ink to the ink roll during the printing operation. (Please note that the ink roll on the coder must be pre-inked prior to installing a 4 oz. Reservoir Ink Cartridge). Unlike gravity systems that continue to feed ink when the conveyor line is stopped, the Reservoir Inking System feeds ink only when the machine is actively printing.

MODEL SHOWN: MS-RRC1

ROLL COVERS WITH RESERVOIR SYSTEM MOUNT FOR MIDSIZE CODERS	
STOCK NO.	DESCRIPTION
MS-RRC1	SIDE MOUNT COVER - FOR MS-120 & MS-150
MS-RRC1-LT	LEFT TOP MOUNT COVER - FOR MS-120 & MS-150
MS-RRC1-RT	RIGHT TOP MOUNT COVER - FOR MS-120 & MS-150
MS-RRC2	SIDE MOUNT COVER - FOR MS-220 & MS-250
MS-RRC2-LT	LEFT TOP MOUNT COVER - FOR MS-220 & MS-250
MS-RRC2-RT	RIGHT TOP MOUNT COVER - FOR MS-220 & MS-250

Conveyor Line Printers automatically print data on moving cartons and other flat surfaced materials with unsurpassed accuracy and legibility. These machines are mounted directly to the conveyor line and require no power or operator assistance to print high quality impressions thousands of times a day. Available in both indexing (spot printing) and non-indexing (continuous printing) styles.

The durable construction of these machines includes a heavy duty, urethane finished, cast aluminum frame, sealed ball bearings in the print drum and extensive use of stainless steel for columns and shafts. The indexing models use an exclusive twin compression spring drum return mechanism which produces incredibly fast and accurate indexing action and extreme durability.

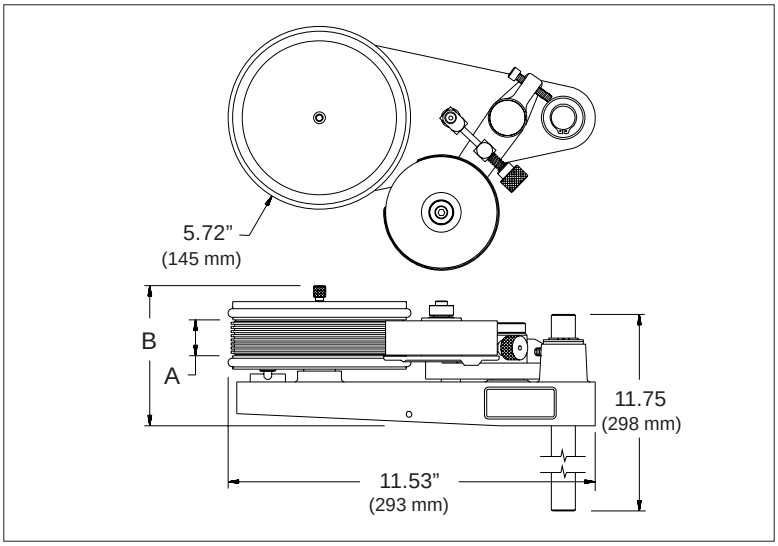


MODEL SHOWN: CLP-100 RIGHT HAND SIDE MOUNT
SHOWN WITH OPTIONAL CLP-RRC1 COVER

The standard Conveyor Line Printers are designed for printing on porous surfaces using #1150 ink.

Other standard features include an anodized aluminum mounting bracket, a dry Microcell ink roll and the versatile RIBtype® rubber type.

Although these machines are easily field convertible, for convenience, specify right-hand or left-hand mount when ordering.



POROUS CONVEYOR LINE PRINTERS				
STOCK NO.	DESCRIPTION	PRINT DRUM CIRCUMFERENCE	PRINT WIDTH "A"	DIMENSION "B"
CLP-100NI	1-1/8" NON-INDEXING CONVEYOR LINE PRINTER	18" (457 MM)	1.125" (28.5 MM)	4.40" (112 MM)
CLP-100	1-1/8" INDEXING CONVEYOR LINE PRINTER	18" (457 MM)	1.125" (28.5 MM)	4.40" (112 MM)
CLP-200NI	2" NON-INDEXING CONVEYOR LINE PRINTER	18" (457 MM)	2" (50.8 MM)	5.32" (135 MM)
CLP-200	2" INDEXING CONVEYOR LINE PRINTER	18" (457 MM)	2" (50.8 MM)	5.32" (135 MM)
CLP-300NI	3" NON-INDEXING CONVEYOR LINE PRINTER	18" (457 MM)	3" (76.2 MM)	6.27" (159 MM)
CLP-300	3" INDEXING CONVEYOR LINE PRINTER	18" (457 MM)	3" (76.2 MM)	6.27" (159 MM)
CLP-400NI	4" NON-INDEXING CONVEYOR LINE PRINTER	18" (457 MM)	4" (101.6 MM)	7.27" (185 MM)
CLP-400	4" INDEXING CONVEYOR LINE PRINTER	18" (457 MM)	4" (101.6 MM)	7.27" (185 MM)

POROUS CONVEYOR LINE PRINTER SPECIFICATIONS			
CODER SERIES	NET WEIGHT NON-INDEXING MODELS	NET WEIGHT INDEXING MODELS	MAXIMUM DIE SIZE
CLP-100NI	8 LB. 14 OZ. (4.03 KG.)	9 LB. 5.5 OZ. (4.23 KG.)	7 RIBS X 16-15/16" LONG (430 MM)
CLP-200NI	9 LB. 7 OZ. (4.28 KG.)	9 LB. 14.5 OZ. (4.50 KG.)	14 RIBS X 16-15/16" LONG (430 MM)
CLP-300NI	10 LB. 5 OZ. (4.68 KG.)	10 LB. 12.5 OZ. (4.89 KG.)	21 RIBS X 16-15/16" LONG (430 MM)
CLP-400NI	10 LB. 15 OZ. (4.96 KG.)	11 LB. 6.5 OZ. (5.17 KG.)	29 RIBS X 16-15/16" LONG (430 MM)

RESERVOIR INKING SYSTEM - OPTIONAL

To eliminate the task of re-inking the ink roll manually, a patented Reservoir Inking System can be used with any of the CLP series printers. Add the appropriate size roll cover and our 4 oz. disposable ink cartridges will automatically apply ink to the ink roll during the printing operation. (Please note that the ink roll on the coder must be pre-inked prior to installing a 4 oz. Reservoir Ink Cartridge). Unlike gravity systems that continue to feed ink when the conveyor line is stopped, the Reservoir Inking System feeds ink only when the machine is actively printing. Figure A shows a Side Mount Roll Cover and Figure B shows a Top Mount Roll Cover.

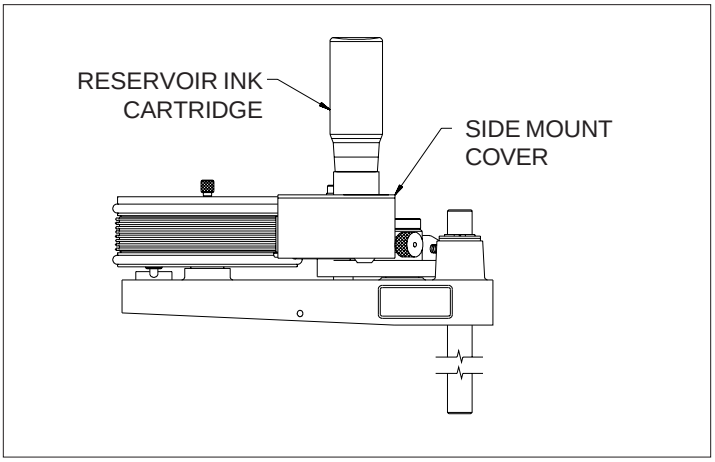


FIGURE A

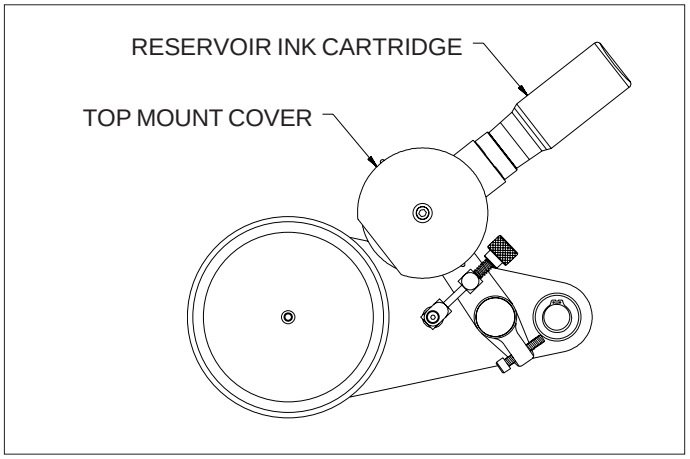


FIGURE B

ROLL COVERS W/RESERVOIR SYSTEM MOUNT FOR CONVEYOR LINE PRINTERS	
STOCK NO.	DESCRIPTION
CLP-RRC1	SIDE MOUNT COVER FOR CLP-100 SERIES PRINTERS
CLP-RRC1-T	TOP MOUNT COVER FOR CLP-100 SERIES PRINTERS
CLP-RRC2	SIDE MOUNT COVER FOR CLP-200 SERIES PRINTERS
CLP-RRC2-T	TOP MOUNT COVER FOR CLP-200 SERIES PRINTERS
CLP-RRC3	SIDE MOUNT COVER FOR CLP-300 SERIES PRINTERS
CLP-RRC3-LT	LEFT TOP MOUNT COVER FOR CLP-300 SERIES PRINTERS
CLP-RRC3-RT	RIGHT TOP MOUNT COVER FOR CLP-300 SERIES PRINTERS
CLP-RRC4	SIDE MOUNT COVER FOR CLP-400 SERIES PRINTERS
CLP-RRC4-T	TOP MOUNT COVER FOR CLP-400 SERIES PRINTERS

MODEL SHOWN: CLP-RRC1

MICROCELL CODER 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. It is recommended for use with* ***#1150 Ink*** *or equivalent for printing on corrugated cartons and other* ***porous*** *surface materials. These rolls are* ***re-inkable*** *for maximum economy.*

HAND PRINTER MICROCELL INK ROLLS	
STOCK NO.	ROLL FACE
HP-100RM	2"

MINI-CODER MICROCELL INK ROLLS	
STOCK NO.	ROLL FACE
MC-10MC	1-1/8"
MC-20MC	2"

MIDSIZE CODER MICROCELL INK ROLLS	
STOCK NO.	ROLL FACE
MS-MC1	1-1/8"
MS-MC2	2"

CONVEYOR LINE PRINTER MICROCELL INK ROLLS	
STOCK NO.	ROLL FACE
CLP-MC1	1-1/8"
CLP-MC2	2"
CLP-MC3	3"
CLP-MC4	4"

Note: *Ink rolls must be pre-inked before use with the patented 4 oz. Reservoir Inking System Cartridges. To order rolls pre-inked with #1150 Ink, add a "P" suffix to the stock number followed by the color code number listed below. Example: A CLP-MC2-P2 stock number designates a 2" face Microcell Roll pre-inked with Red ink.*

Color Codes: 1 = Black, 2 = Red, 3 = Green, 4 = Blue, 9 = Violet

XF NEOPRENE CODER ROLLS

***XF NEOPRENE** ink rolls are made from extra firm density foam. Although not quite as durable as Microcell, XF Neoprene rolls offer slightly higher print quality and are recommended where 3 or 4 lines of type are required. These rolls can be used with **#1150 Ink** for **porous** applications. These rolls are **re-inkable** for maximum economy.*

HAND PRINTER XF NEOPRENE INK ROLLS	
STOCK NO.	ROLL FACE
HP-100RX	2"

MINI-CODER XF NEOPRENE INK ROLLS	
STOCK NO.	ROLL FACE
MC-10XC	1-1/8"
MC-20XC	2"

MIDSIZE CODER XF NEOPRENE INK ROLLS	
STOCK NO.	ROLL FACE
MS-XC1	1-1/8"
MS-XC2	2"

CONVEYOR LINE PRINTER XF NEOPRENE INK ROLLS	
STOCK NO.	ROLL FACE
CLP-XC1	1-1/8"
CLP-XC2	2"
CLP-XC3	3"
CLP-XC4	4"

***Note:** Ink rolls must be pre-inked before use with the patented 4 oz. Reservoir Inking System Cartridges. To order rolls pre-inked with #1150 Ink, add a "P" suffix to the stock number followed by the color code number listed below. Example: A CLP-XC2-P2 stock number designates a 2" face XF Neoprene Roll pre-inked with Red ink.*

Color Codes: 1 = Black, 2 = Red, 3 = Green, 4 = Blue, 9 = Violet

NEOPRENE *ink rolls are made from soft density foam material. Because this material has a larger cell structure, it is highly recommended for use with* ***Pigmented Inks*** *for carton printing on* ***porous*** *materials****.*** *Although this material is not as durable as XF Neoprene, it provides an acceptable print quality when a lighter touch is required. These rolls are re-inkable for maximum economy.*

HAND PRINTER NEOPRENE INK ROLLS	
STOCK NO.	ROLL FACE
HP-100RN	2"

MINI-CODER NEOPRENE INK ROLLS	
STOCK NO.	ROLL FACE
MC-10FC	1-1/8"
MC-20FC	2"

MIDSIZE CODER NEOPRENE INK ROLLS	
STOCK NO.	ROLL FACE
MS-FC1	1-1/8"
MS-FC2	2"

CONVEYOR LINE PRINTER NEOPRENE INK ROLLS	
STOCK NO.	ROLL FACE
CLP-FC1	1-1/8"
CLP-FC2	2"
CLP-FC3	3"
CLP-FC4	4"

Note: *Ink rolls must be pre-inked before use with Universal's patented 4 oz. Reservoir Inking System Cartridges. To order rolls pre-inked with Universal Ink, add a "P" suffix to the stock number followed by the color code number listed below. Example: A CLP-FC2-P2 stock number designates a 2" face Neoprene Roll pre-inked with Red ink.*

Color Codes: 1 = Black, 2 = Red, 3 = Green, 4 = Blue, 9 = Violet

NON-POROUS HAND PRINTER

U.S. Patent No. 5,109,769 - E.P. Patent No. 0508971

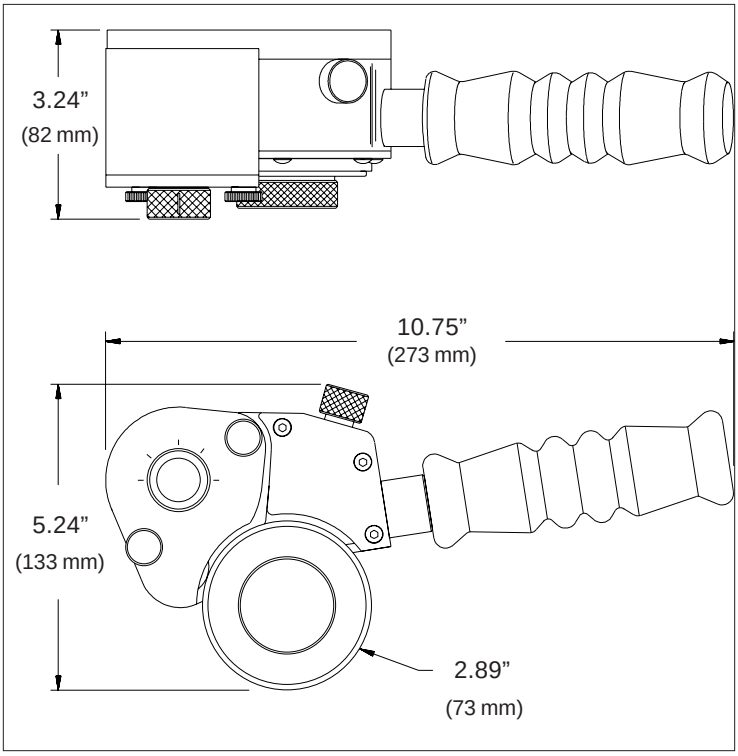
MODEL SHOWN: HPNP-100

The Non-Porous Hand Printer fills the requirement for a portable, hand held roll coder. These coders are ideal for printing alloy specifications on metal sheets or printing lot numbers, date codes and product identification information on plastic, glass, rubber and any flat, non-porous surface that require fast drying solvent based inks. The Non-Porous Hand Printer is precision machined from aircraft grade aluminum alloy with a black & gold anodized finish. A pair of sealed ball bearings provide smooth, accurate rotation of the print drum and an ergonomic foam handle grip makes the unit comfortable for use in production applications. This unit utilizes the unique technology of our patented Non-Porous Inking System which incorporates both an ink roll and a finely engraved anilox roll in a tightly sealed aluminum housing. This design effectively prevents the evaporation of solvents from the enclosed ink roll and allows the usage of inks that dry as fast as 2 seconds at 75 degree F ambient temperatures.

	NON-POROUS HAND PRINTERS
STOCK NO.	DESCRIPTION
HPNP-100NI	NON-INDEXING NON-POROUS HAND PRINTER
HPNP-100	INDEXING NON-POROUS HAND PRINTER
HPNP-100-PDA	REPLACEMENT PRINT DRUM

The Non-Porous Hand Printer is supplied with one of our Type MT disposable ink rolls but can be ordered with the optional re-inkable XF Neoprene Ink Roll. The RIBtype® rubber type and /or logo dies are sold separately.

The HPNP-100 indexing model has a print drum cam indexing mechanism which returns the print drum to the same starting position after every part is marked. The indexing model can also be used in a non-indexing "continuous print" mode for applying repeat imprints down long lengths of material. The HPNP-100NI non-indexing model is designed for continuous print applications only but can be field upgraded with an optional indexing kit if desired. Whether indexing or non-indexing, the print drum on both models are easily removable for convenience during type setting and print registration position is easily adjustable which provides for accurate print registration on smaller parts.



STOCK NUMBER	PRINT DRUM CIRCUMFERENCE	NET WEIGHT	MAXIMUM DIE SIZE
HPNP-100NI	9.1" (231 MM)	2 LB. 2.5 OZ. (.98 KG.)	8 RIBS X 8-3/8" LONG (213 MM)
HPNP-100	9.1" (231 MM)	2 LB. 3.5 OZ. (1.00 KG.)	8 RIBS X 8-3/8" LONG (213 MM)
HPNP-100-PDA	9.1" (231 MM)	.369 LB. (.167 KG.)	8 RIBS X 8-3/8" LONG (213 MM)

U.S. Patent No. 5,109,769 - E.P. Patent No. 0508971

The Mini-Coder has a 9" print drum circumference and is available only in a 1" print width. Top Mount versions are used for printing on horizontal surfaces such as continuous web materials and Side Mount versions are used primarily for printing on the sides of cartons or other vertical surfaces. The Mini-Coder is available in both indexing and non-indexing styles.

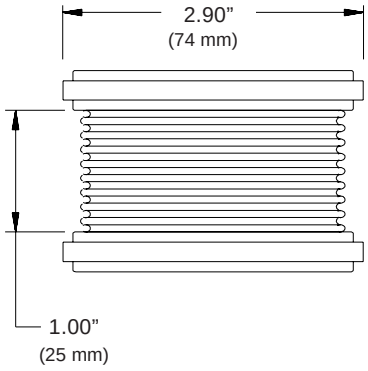
All Non-Porous Mini-Coders are equipped with Quick Change Print Drums. Additional print drums are available to facilitate off-line code changes. (See ordering information below for extra Quick Change Print Drums.)

MODEL SHOWN: MC-10NI-NPLT

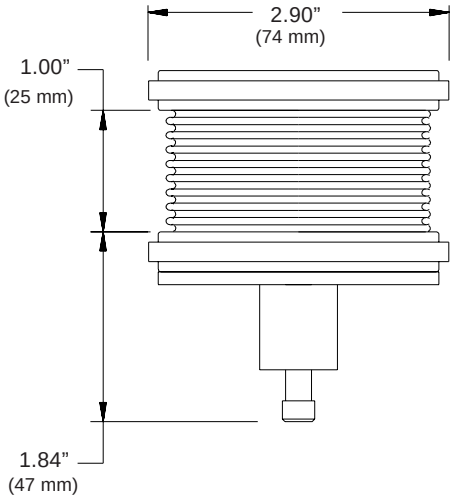
NON-POROUS MINI-CODERS	
STOCK NO.	DESCRIPTION
MC-10NI-NPLT	1" NON-INDEXING MINI-CODER - LEFT HAND TOP MOUNT
MC-10NI-NPRT	1" NON-INDEXING MINI-CODER - RIGHT HAND TOP MOUNT
MC-10NI-NPLS	1" NON-INDEXING MINI-CODER - LEFT HAND SIDE MOUNT
MC-10NI-NPRS	1" NON-INDEXING MINI-CODER - RIGHT HAND SIDE MOUNT
MC-10-NPLT	1" INDEXING MINI-CODER - LEFT HAND TOP MOUNT
MC-10-NPRT	1" INDEXING MINI-CODER - RIGHT HAND TOP MOUNT
MC-10-NPLS	1" INDEXING MINI-CODER - LEFT HAND SIDE MOUNT
MC-10-NPRS	1" INDEXING MINI-CODER - RIGHT HAND SIDE MOUNT

NON-INDEXING PRINT DRUM - INDEXING PRINT DRUM

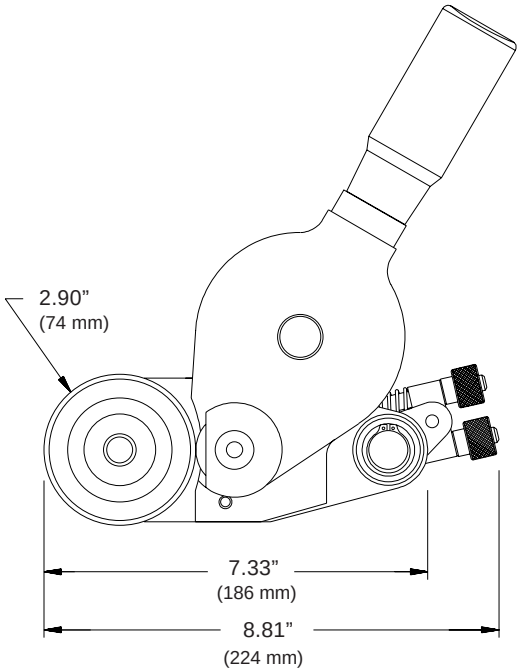
SPARE QUICK CHANGE PRINT DRUMS FOR NON-POROUS MINI-CODERS	
STOCK NO.	DESCRIPTION
MC-10NI-PDA-NP	1" NON-INDEXING PRINT DRUM ASSEMBLY
MC-10-PDA-NP	1" INDEXING PRINT DRUM ASSEMBLY

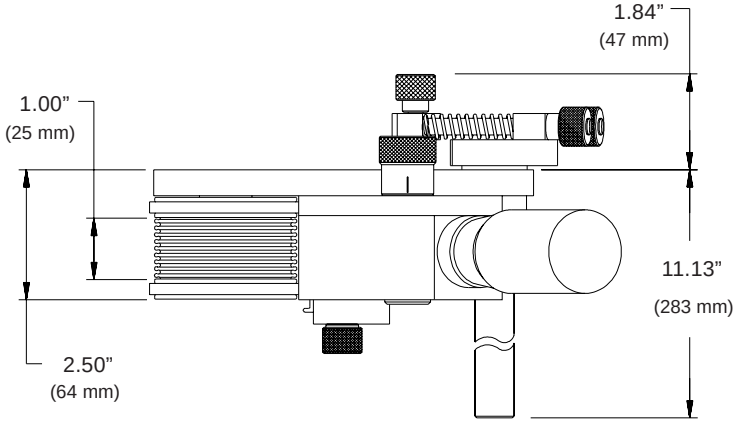


NON-INDEXING PRINT DRUM



INDEXING PRINT DRUM





STOCK NUMBER	PRINT DRUM CIRCUMFERENCE	NET WEIGHT	MAXIMUM DIE SIZE
MC-10NI	9.1” (231 MM)	4 LB. 10 OZ. (2.10 KG.)	8 RIBS X 8-3/8” LONG (213 MM)
MC-10	9.1” (231 MM)	4 LB. 5 OZ. (1.96 KG.)	8 RIBS X 8-3/8” LONG (213 MM)

NON-POROUS MIDSIZE CODERS

U.S. Patent No. 5,109,769 - E.P. Patent No. 0508971

Non-Porous Midsize Coders were designed to satisfy several specific application requirements and supplement the capabilities of our other Non-Porous coders. The patented non-porous inking system design enables the use of extremely fast drying alcohol base inks with drying times typically in the 2 second range at 75 deg. F. ambient temperatures.

The Midsize Coders are precision machined entirely from aircraft grade aluminum alloys and stainless steel for extreme durability, no castings are used. Sealed ball bearings ensure smooth rotation of both the print drum and the anilox roll and minimize the drive force required for operation, a particularly important feature when printing on thin web materials. These coders are supplied in either right-hand or left-hand mounting configurations and either top or side mount styles.

MODEL SHOWN: MS-120NI-NPLT

NON-POROUS MIDSIZE CODERS WITH 12" PRINT DRUM CIRCUMFERENCE	
STOCK NUMBER	DESCRIPTION
MS-120NI-NPLT	1" NON-INDEXING MIDSIZE PRINTER - LEFT HAND TOP MOUNT
MS-120NI-NPRT	1" NON-INDEXING MIDSIZE PRINTER - RIGHT HAND TOP MOUNT
MS-120NI-NPLS	1" NON-INDEXING MIDSIZE PRINTER - LEFT HAND SIDE MOUNT
MS-120NI-NPRS	1" NON-INDEXING MIDSIZE PRINTER - RIGHT HAND SIDE MOUNT
MS-120-NPLT	1" INDEXING MIDSIZE PRINTER - LEFT HAND TOP MOUNT
MS-120-NPRT	1" INDEXING MIDSIZE PRINTER - RIGHT HAND TOP MOUNT
MS-120-NPLS	1" INDEXING MIDSIZE PRINTER - LEFT HAND SIDE MOUNT
MS-120-NPRS	1" INDEXING MIDSIZE PRINTER - RIGHT HAND SIDE MOUNT
MS-220NI-NPLT	2" NON-INDEXING MIDSIZE PRINTER - LEFT HAND TOP MOUNT
MS-220NI-NPRT	2" NON-INDEXING MIDSIZE PRINTER - RIGHT HAND TOP MOUNT
MS-220NI-NPLS	2" NON-INDEXING MIDSIZE PRINTER - LEFT HAND SIDE MOUNT
MS-220NI-NPRS	2" NON-INDEXING MIDSIZE PRINTER - RIGHT HAND SIDE MOUNT
MS-220-NPLT	2" INDEXING MIDSIZE PRINTER - LEFT HAND TOP MOUNT
MS-220-NPRT	2" INDEXING MIDSIZE PRINTER - RIGHT HAND TOP MOUNT
MS-220-NPLS	2" INDEXING MIDSIZE PRINTER - LEFT HAND SIDE MOUNT
MS-220-NPRS	2" INDEXING MIDSIZE PRINTER - RIGHT HAND SIDE MOUNT

NON-POROUS MIDSIZE CODERS

U.S. Patent No. 5,109,769 - E.P. Patent No. 0508971

EXCLUSIVE FEATURES

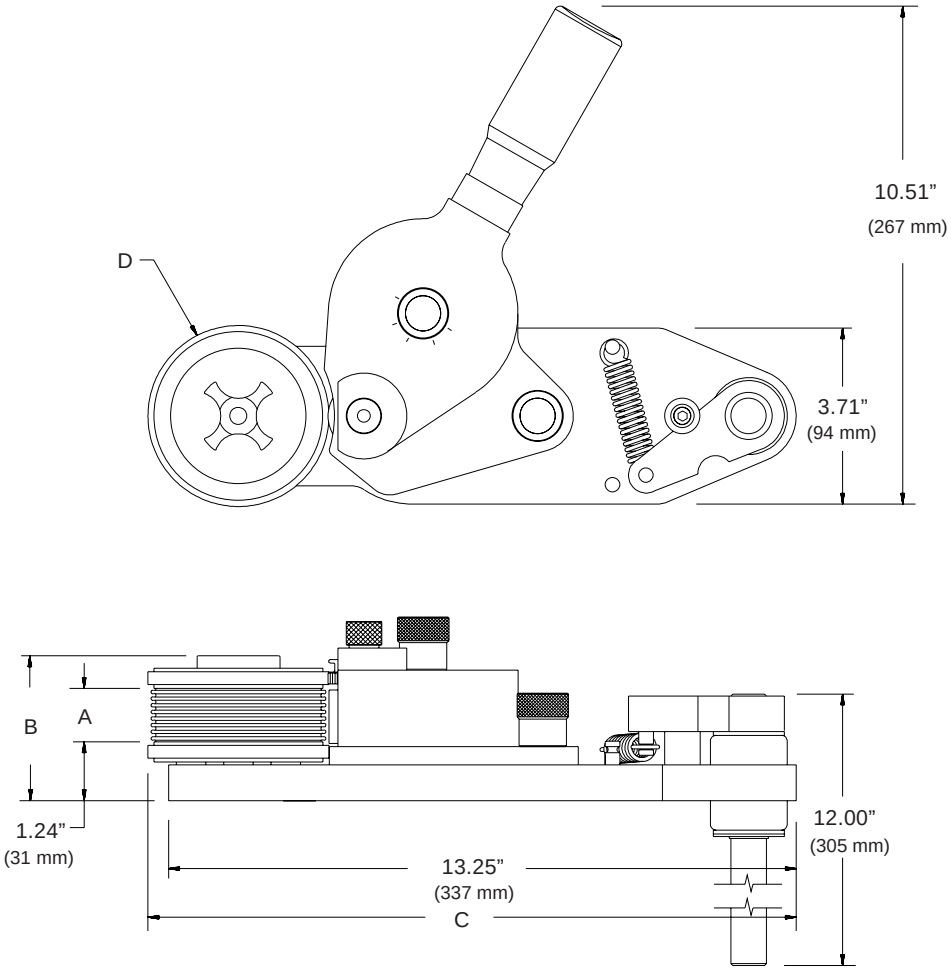
For web printing applications, interchangeable print drums on the Midsize Coder will provide either 12" or 15" print repeat intervals with a single printing die mounted on the drum. For carton printing applications, this feature facilitates precise print registration on a wider variety of carton sizes. Manually repositioning the printing dies is not necessary, adjusting print registration on a carton simply requires loosening the print drum retaining knob and rotating the print drum to a different index position.

RESERVOIR INKING SYSTEM - OPTIONAL

The patented Reservoir Inking System was designed to eliminate the task of re-inking the ink roll manually. Add the appropriate size roll cover and our 4 oz. disposable ink cartridges will automatically apply ink to the ink roll during the printing operation. (Please note that the ink roll on the coder must be pre-inked prior to installing a 4 oz. Reservoir Ink Cartridge). Unlike gravity systems that continue to feed ink when the conveyor line is stopped, Universal's Reservoir Inking System feeds ink only when the machine is actively printing.

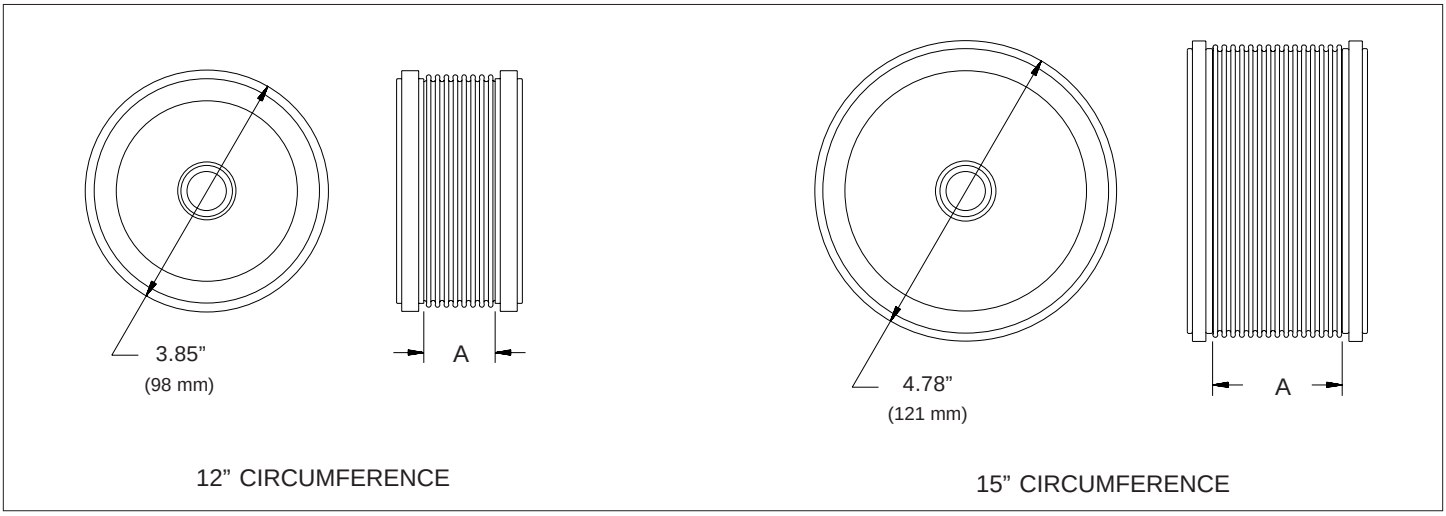
MODEL SHOWN: MS-250NI-NPLT

NON-POROUS MIDSIZE CODERS WITH 15" PRINT DRUM CIRCUMFERENCE	
STOCK NUMBER	DESCRIPTION
MS-150NI-NPLT	1" NON-INDEXING MIDSIZE PRINTER - LEFT HAND TOP MOUNT
MS-150NI-NPRT	1" NON-INDEXING MIDSIZE PRINTER - RIGHT HAND TOP MOUNT
MS-150NI-NPLS	1" NON-INDEXING MIDSIZE PRINTER - LEFT HAND SIDE MOUNT
MS-150NI-NPRS	1" NON-INDEXING MIDSIZE PRINTER - RIGHT HAND SIDE MOUNT
MS-150-NPLT	1" INDEXING MIDSIZE PRINTER - LEFT HAND TOP MOUNT
MS-150-NPRT	1" INDEXING MIDSIZE PRINTER - RIGHT HAND TOP MOUNT
MS-150-NPLS	1" INDEXING MIDSIZE PRINTER - LEFT HAND SIDE MOUNT
MS-150-NPRS	1" INDEXING MIDSIZE PRINTER - RIGHT HAND SIDE MOUNT
MS-250NI-NPLT	2" NON-INDEXING MIDSIZE PRINTER - LEFT HAND TOP MOUNT
MS-250NI-NPRT	2" NON-INDEXING MIDSIZE PRINTER - RIGHT HAND TOP MOUNT
MS-250NI-NPLS	2" NON-INDEXING MIDSIZE PRINTER - LEFT HAND SIDE MOUNT
MS-250NI-NPRS	2" NON-INDEXING MIDSIZE PRINTER - RIGHT HAND SIDE MOUNT
MS-250-NPLT	2" INDEXING MIDSIZE PRINTER - LEFT HAND TOP MOUNT
MS-250-NPRT	2" INDEXING MIDSIZE PRINTER - RIGHT HAND TOP MOUNT
MS-250-NPLS	2" INDEXING MIDSIZE PRINTER - LEFT HAND SIDE MOUNT
MS-250-NPRS	2" INDEXING MIDSIZE PRINTER - RIGHT HAND SIDE MOUNT



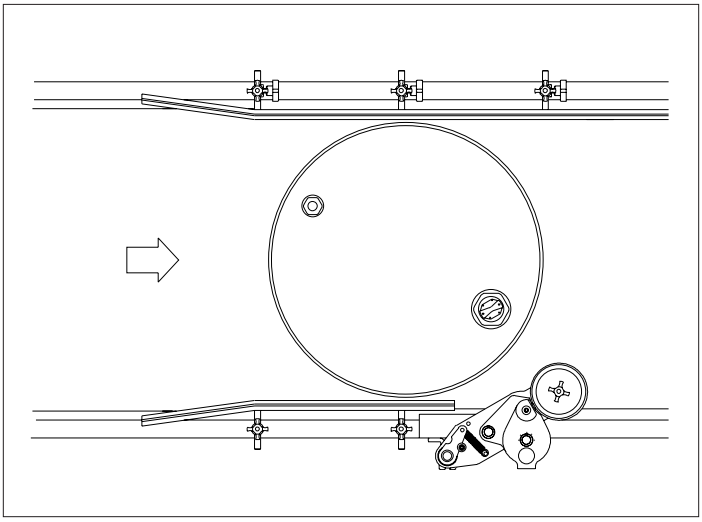
NON-POROUS MIDSIZE CODER SPECIFICATIONS				
CODER SERIES	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	DIMENSION "D"
MS-120	1" (25.4 MM)	3.88" (152 MM)	13.68" (348 MM)	12.00" (305 MM)
MS-150	1" (25.4 MM)	3.88" (152 MM)	14.16" (360 MM)	15.00" (381 MM)
MS-220	2" (50.8 MM)	4.75" (187 MM)	13.68" (348 MM)	12.00" (305 MM)
MS-250	2" (50.8 MM)	4.75" (187 MM)	14.16" (360 MM)	15.00" (381 MM)

CODER SERIES	PRINT DRUM CIRCUMFERENCE	NET WEIGHT INDEXING MODELS	NET WEIGHT NON-INDEXING MODELS	MAXIMUM DIE SIZE
MS-120	12.0 (305 MM)	9 LB. 8 OZ. (4.31 KG.)	9 LB. 2 OZ. (4.14 KG.)	7 RIBS X 11-3/8" L. (289 MM)
MS-150	15.0 (381 MM)	9 LB. 15 OZ. (4.51 KG.)	9 LB. 9 OZ. (4.34 KG.)	7 RIBS X 14-1/4" L. (362 MM)
MS-220	12.0 (305 MM)	10 LB. 2 OZ. (4.59 KG.)	9 LB. 12 OZ. (4.42 KG.)	14 RIBS X 11-3/8" L. (289 MM)
MS-250	15.0 (381 MM)	10 LB. 12 OZ. (4.88 KG.)	10 LB. 6 OZ. (4.71 KG.)	14 RIBS X 14-1/4" L. (362 MM)

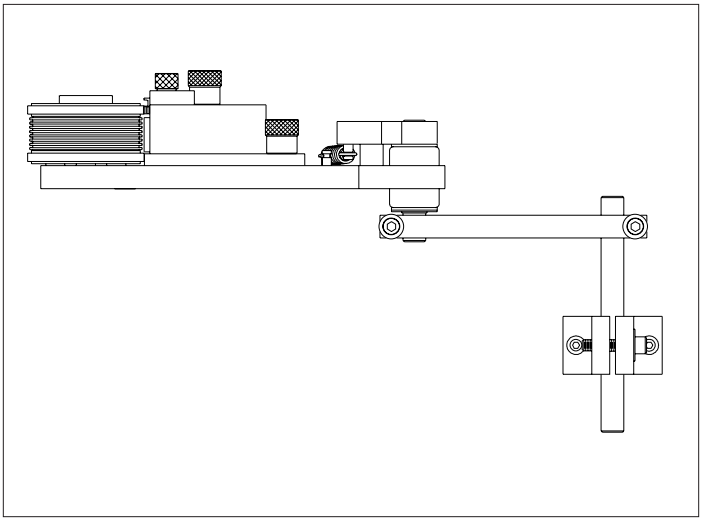


If your printing operation requires frequent code changes and time is of the essence, code changes as fast as 10 seconds can be accomplished using the Quick Change Print Drum Assemblies. Production codes can be set up off-line on the spare drum and when it's time to change codes, simply unscrew the print drum knob, pull the active print drum off the coder and slip on the replacement. The quick change print drum feature not only facilitates off-line code changes when spare drums are ordered but if the print applications change, the print drum size can be readily changed to accommodate the new requirements.

SPARE QUICK CHANGE PRINT DRUM ASSEMBLIES FOR NON-POROUS MIDSIZE CODERS		
STOCK NO.	DESCRIPTION	PRINT WIDTH "A"
MSC-120-PDA-NP	1" PRINT DRUM ASSEMBLY	1.00" (25.4 MM)
MSC-150-PDA-NP	1" PRINT DRUM ASSEMBLY	1.00" (25.4 MM)
MSC-220-PDA-NP	2" PRINT DRUM ASSEMBLY	2.00" (50.8 MM)
MSC-250-PDA-NP	2" PRINT DRUM ASSEMBLY	2.00" (50.8 MM)



The long frame design and extended deflection capability enable these coders to print on the side of large metal or plastic drums as they travel down a belt conveyor.



For applications requiring an extremely long reach, Offset Bracket modifications are available on all models.

U.S. Patent No. 5,109,769 - E.P. Patent No. 0508971

Non-Porous Conveyor Line Printers provide the ultimate in low maintenance printing on all types of non-porous materials. The revolutionary design of our patented Non-Porous Inking System makes printing on waxed and varnished cartons, plastic films, rubber, metal or glass as easy as printing on porous materials with conventional printers, even with inks that dry as fast as 2 seconds at 75 degree F. ambient temperatures. These machines receive ink automatically on demand from our patented, disposable Reservoir Ink Cartridges and can be used with both dye and pigmented base, fast drying marking inks. Ideal for web printing applications.

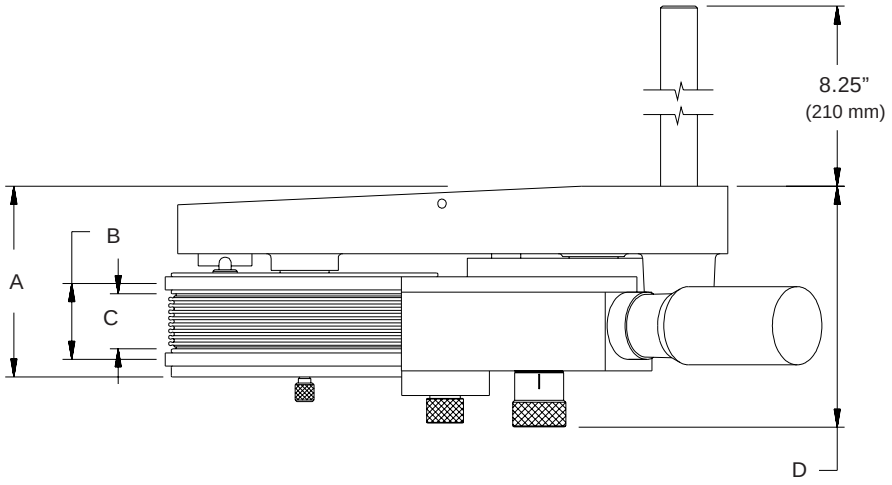
EXCLUSIVE FEATURES:

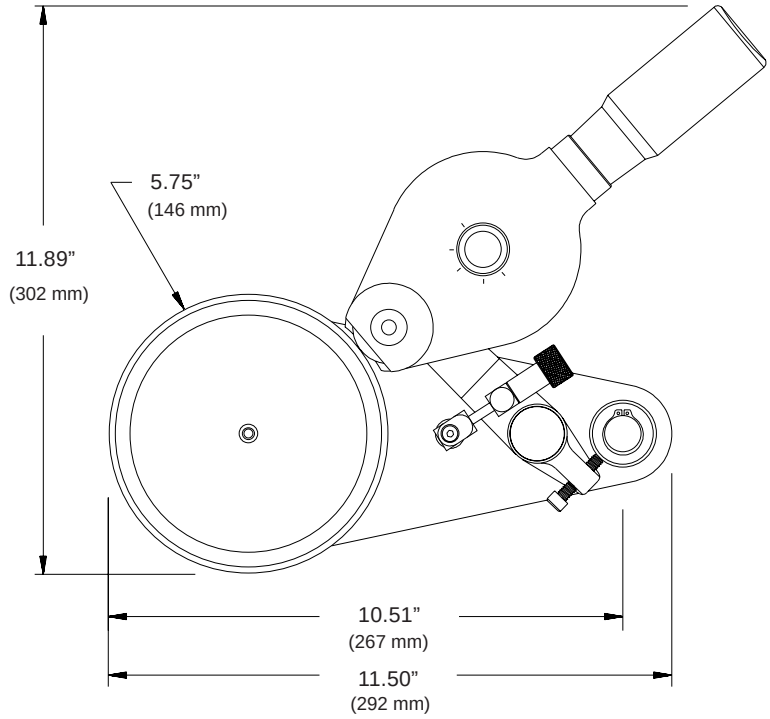
The Non-Porous Conveyor Line Printer has an 18" print drum circumference and comes standard in either a 1" or 2" print width. Top Mount versions are used for printing on horizontal surfaces such as continuous web materials and Side Mount versions are used primarily for printing on the sides of cartons or other vertical surfaces.

The Non-Porous Conveyor Line Printers are available in both Indexing and Non-Indexing styles.

MODEL SHOWN: CLP-100NI-NPRT

NON-POROUS CONVEYOR LINE PRINTERS	
STOCK NUMBER	DESCRIPTION
CLP-100NI-NPLT	1" NON-INDEXING CONVEYOR LINE PRINTER - LEFT HAND TOP MOUNT
CLP-100NI-NPRT	1" NON-INDEXING CONVEYOR LINE PRINTER - RIGHT HAND TOP MOUNT
CLP-100NI-NPLS	1" NON-INDEXING CONVEYOR LINE PRINTER - LEFT HAND SIDE MOUNT
CLP-100NI-NPRS	1" NON-INDEXING CONVEYOR LINE PRINTER - RIGHT HAND SIDE MOUNT
CLP-100-NPLT	1" INDEXING CONVEYOR LINE PRINTER - LEFT HAND TOP MOUNT
CLP-100-NPRT	1" INDEXING CONVEYOR LINE PRINTER - RIGHT HAND TOP MOUNT
CLP-100-NPLS	1" INDEXING CONVEYOR LINE PRINTER - LEFT HAND SIDE MOUNT
CLP-100-NPRS	1" INDEXING CONVEYOR LINE PRINTER - RIGHT HAND SIDE MOUNT
CLP-200NI-NPLT	2" NON-INDEXING CONVEYOR LINE PRINTER - LEFT HAND TOP MOUNT
CLP-200NI-NPRT	2" NON-INDEXING CONVEYOR LINE PRINTER - RIGHT HAND TOP MOUNT
CLP-200NI-NPLS	2" NON-INDEXING CONVEYOR LINE PRINTER - LEFT HAND SIDE MOUNT
CLP-200NI-NPRS	2" NON-INDEXING CONVEYOR LINE PRINTER - RIGHT HAND SIDE MOUNT
CLP-200-NPLT	2" INDEXING CONVEYOR LINE PRINTER - LEFT HAND TOP MOUNT
CLP-200-NPRT	2" INDEXING CONVEYOR LINE PRINTER - RIGHT HAND TOP MOUNT
CLP-200-NPLS	2" INDEXING CONVEYOR LINE PRINTER - LEFT HAND SIDE MOUNT
CLP-200-NPRS	2" INDEXING CONVEYOR LINE PRINTER - RIGHT HAND SIDE MOUNT





NON-POROUS CONVEYOR LINE PRINTER SPECIFICATIONS				
CODER SERIES	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	DIMENSION "D"
CLP-100	3.9" (99 MM)	1.60" (40.6 MM)	1" (25.4 MM)	5.0" (127 MM)
CLP-200	4.8" (122 MM)	2.49" (63 MM)	2" (50.8 MM)	5.9" (150 MM)

CODER SERIES	PRINT DRUM CIRCUMFERENCE	NET WEIGHT INDEXING MODELS	NET WEIGHT NON-INDEXING MODELS	MAXIMUM DIE SIZE
CLP-100	18.0" (457 MM)	10 LB. 12 OZ. (4.88 KG.)	10 LB. 5 OZ. (4.68 KG.)	7 RIBS X 16-15/16" L. (430 MM)
CLP-200	18.0" (457 MM)	11 LB. 5 OZ. (5.13 KG.)	10 LB. 14 OZ. (4.93 KG.)	14 RIBS X 16-15/16" L. (430 MM)

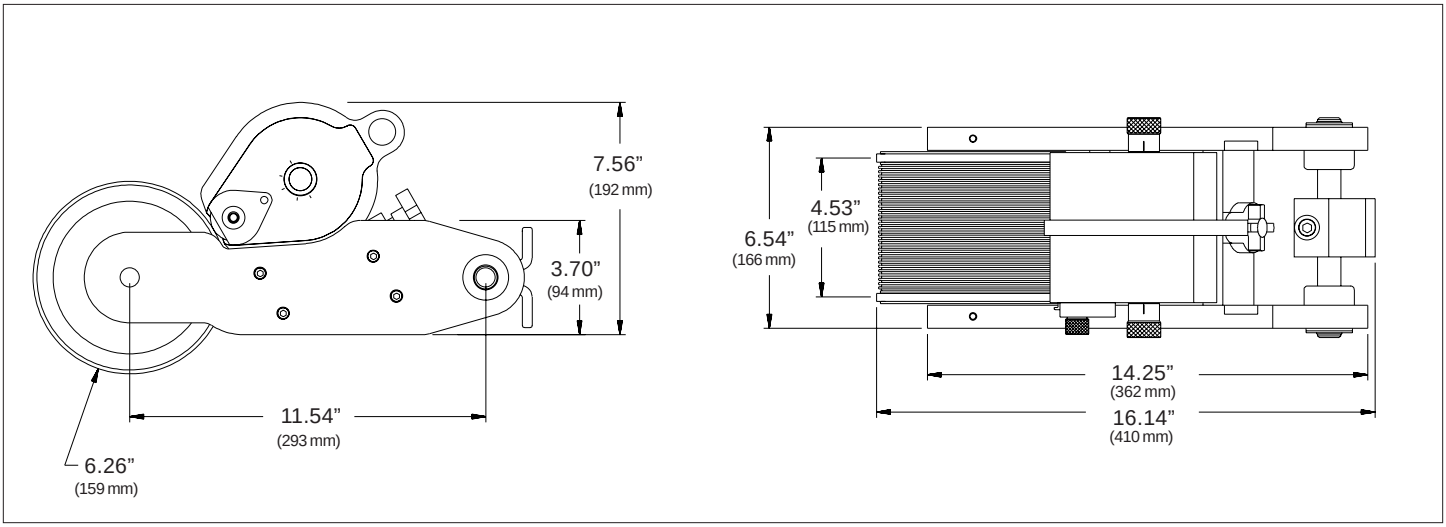
MODEL SHOWN: WPNP-400NI

The WPNP-400NI Non-Porous Web Printers meet the requirements for printing large text messages and logos on continuous web materials. Our disposable Type MT Ink Rolls provide fast drying, permanent marks on plastic films, metal, rubber and glass materials.

These coders are designed for top mount installations and are only available in a non-indexing (continuous print) model.

EXCLUSIVE FEATURES:

- A 4" (102mm) print width capacity and a 19.68" (500mm) circumference Print Drum for large text messages.
- A modular version of the patented Non-Porous Inking System which can be removed from the machine in seconds without the use of tools for off-line ink roll replacement.
- A rugged, dual frame, anodized aluminum construction with stainless steel shafts and axles.
- RIBtype® rubber type is available in standard and metric styles.



Note: *WPNP-400NI Web Printer is a special order product. Extended lead time is required.*

NON-POROUS WPNP WEB PRINTERS	
STOCK NO.	DESCRIPTION
WPNP-400NI	4" NON-INDEXING WPNP WEB PRINTER - TOP MOUNT (INK ROLL SOLD SEPARATELY)

NON-POROUS WPNP WEB PRINTER SPECIFICATIONS			
CODER SERIES	PRINT DRUM CIRCUMFERENCE	NET WEIGHT NON-INDEXING MODELS	MAXIMUM DIE SIZE
WPNP-400NI	19.68" (500 MM)	21 LB. 9 OZ. (9.78 KG.)	30 RIBS X 18-3/4" L. (476 MM)

NON-POROUS WPNP WEB PRINTERS

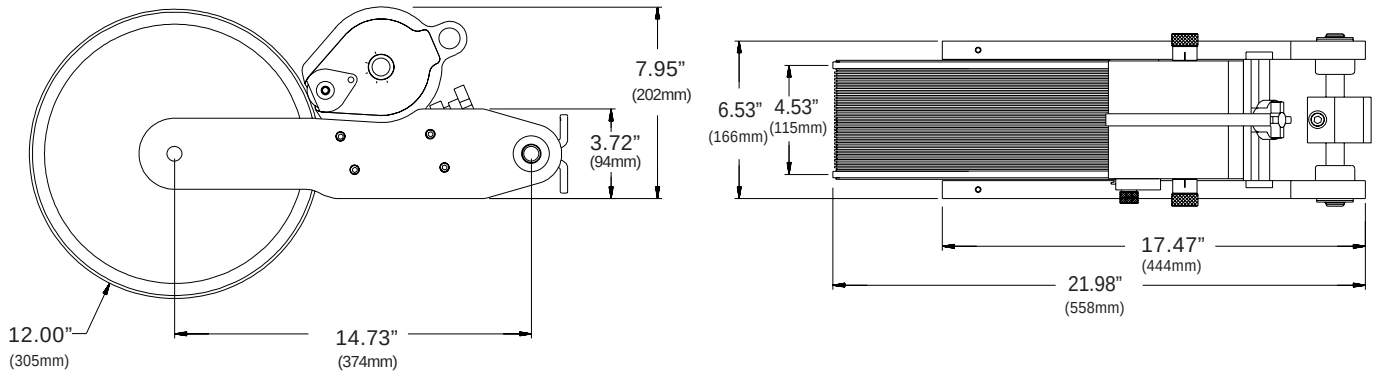
The WPNP-400NI-12 Non-Porous Web Printers have a 12" diameter Print Drum to provide a 37.69" print repeat interval giving you more room for larger logos and text messages on web materials. Disposable Type MT Ink Rolls provide fast drying, permanent marks on plastic films, metal, rubber and glass materials.

These web printers are designed for top mount installations and are only available in a non-indexing (continuous print) model.

MODEL SHOWN: WPNP-400NI-12

EXCLUSIVE FEATURES:

- A 4" (102mm) print width capacity and a 37.7" (958mm) circumference Print Drum for large text messages.
- A modular version of the patented Non-Porous Inking System which can be removed from the machine in seconds without the use of tools for off-line ink roll replacement.
- A rugged, dual frame, anodized aluminum construction with stainless steel shafts and axles.
- RIBtype® rubber type is available in standard and metric styles.



NON-POROUS WPNP-400NI-12 WEB PRINTER SPECIFICATIONS

Note: *WPNP-400NI-12 Web Printer is a special order product. Extended lead time is required.*

NON-POROUS WPNP WEB PRINTERS	
STOCK NO.	DESCRIPTION
WPNP-400NI-12	4" NON-INDEXING WPNP WEB PRINTER - TOP MOUNT (INK ROLL SOLD SEPARATELY)

NON-POROUS WPNP WEB PRINTER SPECIFICATIONS			
CODER SERIES	PRINT DRUM CIRCUMFERENCE	NET WEIGHT NON-INDEXING MODELS	MAXIMUM DIE SIZE
WPNP-400NI-12	37.7" (958 MM)	36 LB. 4.5 OZ. (16.46 KG.)	30 RIBS X 36" L. (914 MM)

XF NEOPRENE INK ROLLS

***XF NEOPRENE** ink rolls are made from extra firm density foam. XF Neoprene rolls offer slightly higher print quality and are recommended where 3 or 4 lines of type are required. This material performs exceptionally well with **Universal #100 Fast Dry Ink** on **non-porous** materials (roll covers required). These rolls are **re-inkable** for maximum economy.*

NON-POROUS HAND PRINTER XF NEOPRENE INK ROLLS	
STOCK NO.	ROLL FACE
HPNP-100RX	1"

NON-POROUS MINI-CODER, MIDSIZE CODER & CONVEYOR LINE PRINTER XF NEOPRENE INK ROLLS	
STOCK NO.	ROLL FACE
NP-XC1	1"
NP-XC2	2"

***Note:** Ink rolls must be pre-inked before use with Universal's patented 4 oz. Reservoir Inking System Cartridges. To order rolls pre-inked with Universal Ink, add a "P" suffix to the stock number followed by the color code number listed below. Example: A NP-XC2-P2 stock number designates a 2" face Non-Porous Roll pre-inked with Red ink.*

Color Codes: 1 = Black, 2 = Red, 3 = Green, 4 = Blue, 5 = Yellow, 6 = White, 9 = Violet

In an effort to further simplify applications requiring the printing of code data on non-porous materials, ***Type MT*** *ink rolls, which are* ***disposable*** *by design, produce very dense black marks which dry in 8-10 seconds at 75 degree F. ambient temperatures on most non-porous surfaces. These disposable rolls will yield up to 500,000 impressions in average usage. The roll is simply installed on the coder and replaced when the ink capacity is depleted eliminating the need for handling liquid inks. These rolls are impregnated with fast drying solvent based inks and are designed for use only with our line of Non-Porous Coders.*

The Type MT rolls were initially developed for use on our Non-Porous Hand Printer which does not have the option of using 4 oz. Reservoir Ink Cartridges for automatic re-inking. The material performance was so exceptional that additional sizes were developed for the other Non-Porous Coders.

Specific Application Advantages: *Extensive testing with these new high capacity disposable ink rolls have proven them invaluable in two specific applications:*

2" & 4" Non-Porous Coder Applications: *Since their introduction, all of our 2" print width Non-Porous Coders have had print speed limitations related only to the 4 oz. Reservoir Ink Cartridges ability to keep up with the ink delivery requirements of these larger capacity coders. Beyond the relatively low operating speed range, the 4 oz. cartridges would produce noticeable color density variations on multi-line codes or wide logos. Since the Type MT rolls are not re-inked externally, color density variation problems are no longer an issue. They provide a very uniform color density across the full print width capacity of the coder. The 4" print width WPNP Non-Porous Web Printers with the 4" Type MT ink roll is ideal for printing large text messages and logos on continous web materials.*

Bottom Mount Non-Porous Coder Applications: *In all previous applications for printing on the bottom of web materials, custom bottom mount inking system cover assemblies were required for the Non-Porous Coders. In addition, the coders had to be installed in a very specific mounting attitude in order to facilitate the use of the 4 oz. Reservoir Ink Cartridges. Since 4 oz. Reservoir Ink Cartridges are not used with the Type MT ink rolls, there is no longer any restriction on the mounting attitude of the coder or the configuration of the inking system cover when these rolls are used.*

NON-POROUS HAND PRINTER TYPE MT INK ROLLS	
STOCK NO.	DESCRIPTION
HPNP-MT1-P1	BLACK TYPE MT INK ROLL - DISPOSABLE

NON-POROUS WPNP, CLP, MIDSIZE & MINI-CODER TYPE MT INK ROLLS	
STOCK NO.	DESCRIPTION
NP-MT1-P1	1" BLACK TYPE MT INK ROLL - DISPOSABLE
NP-MT2-P1	2" BLACK TYPE MT INK ROLL - DISPOSABLE
WPNP-MT4-P1	4" BLACK TYPE MT INK ROLL - DISPOSABLE - EXTENDED LEAD TIME REQUIRED

Note: *The MT Type Ink Rolls in additional colors are available by special order. Extended lead time required.*

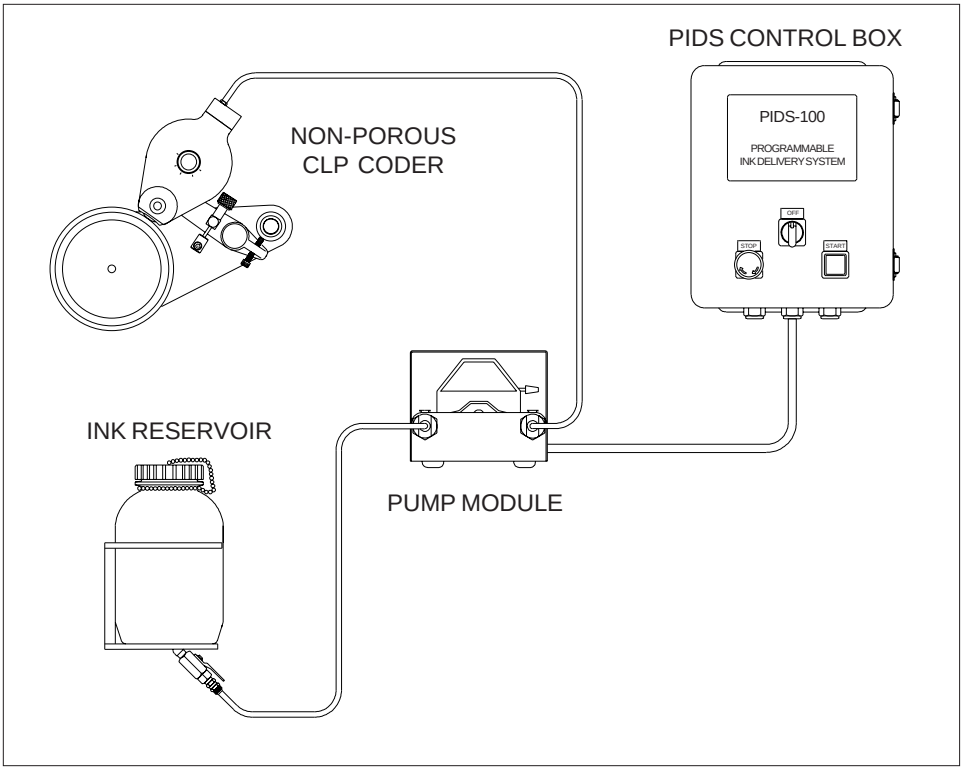
Programmable Ink Delivery Systems were developed as an advanced method of supplying ink "on demand" to all types of contact coding equipment. The PIDS systems combine the simplicity of electronic programming and the accuracy of peristaltic metering pumps to automatically deliver precise amounts of ink to the coders at prescribed intervals. This unique method of ink delivery greatly reduces inking system maintenance and ensures consistent high quality code printing.

MODEL SHOWN: PIDS 100

PIDS systems are available in one, two, three and four head models and can be electrically interfaced with parent equipment to further automate control of the ink delivery process.

The positive displacement peristaltic pump heads used in the PIDS systems move ink through progressive waves of contraction and relaxation of a resilient pump tube. Since ink never touches any of the pumps component parts, maintenance on the system is limited to replacing the pump tube after approximately 1,000 hours of operation.

The unique design of the pump head and Universal's quick disconnect replacement pump tube assembly facilitates pump tube changes in less than 10 seconds. There are no seals to leak, no valves to clog or wear and only one moving part, simplicity at its best!



Connecting the PIDS Systems to a Universal Non-Porous Coder requires the use of a special ***Wiper Adapter and a modified Inking System Cover*** *for the coder. Ink from the PIDS pump is injected between two thin plastic wipers which in turn "wipe" the ink uniformly across the face of the ink roll at a regulated rate during each cycle of the pump.*

PROGRAMMABLE INK DELIVERY SYSTEM	
STOCK NO.	DESCRIPTION
PIDS-100	SINGLE HEAD PROGRAMMABLE INK DELIVERY SYSTEM - 115 VAC 60 HZ
PIDS-200	TWO HEAD PROGRAMMABLE INK DELIVERY SYSTEM - 115 VAC 60 HZ
PIDS-300	THREE HEAD PROGRAMMABLE INK DELIVERY SYSTEM - 115 VAC 60 HZ
PIDS-400	FOUR HEAD PROGRAMMABLE INK DELIVERY SYSTEM - 115 VAC 60 HZ

RIBtype® RUBBER TYPE

RIBtype® interchangeable, rubber type, is available in a variety of styles to fit most rib base coders and marking machines. Letter & number assortment sets contain letters, numbers, punctuation marks and currency symbols. The quantity of letters in these sets are based on frequency of use for example more A's & E's than Q's & Z's. Number assortment sets contain numbers, punctuation marks and currency symbols.

"5A" & "3A" *sets include a variety of letters, numbers, punctuation and currency symbols.*

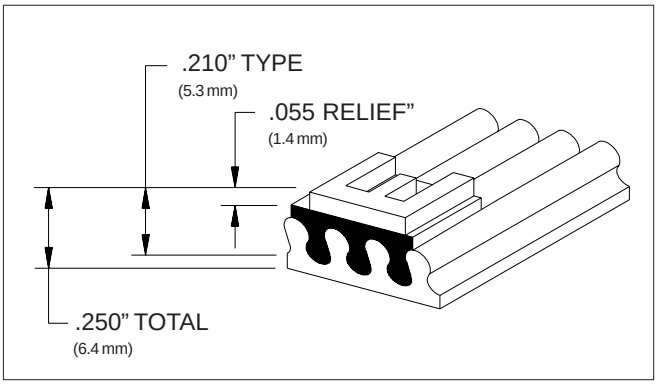
"5F" & "4F" *figure sets include either 5 or 4 of each number 0-9 along with punctuation and currency symbols.*

"15FS" & "12FS" *super number sets offer the most economical way to buy "F" sets. Each "FS" set contains 3 times the quantity of characters in a "F" figure set at about 2-1/2 times the cost.*

Pages 42 through 45 show the standard typestyles available and at the bottom of each page a chart shows a complete list of characters and quantities per set. Larger sizes or other typestyles are available by special order.

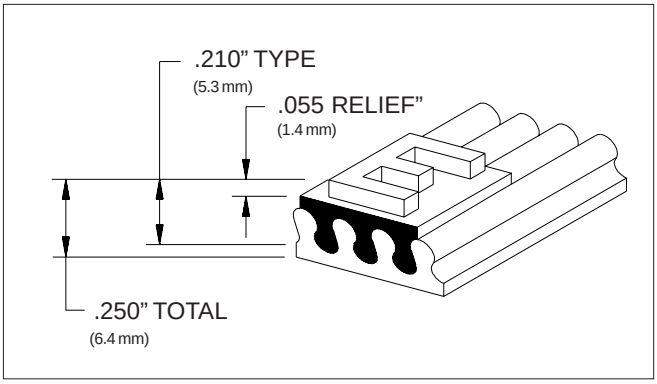
STANDARD (HORIZONTAL) RUBBER TYPE

Standard ribbed rubber type is manufactured to a nominal thickness of .210" with a thickness tolerance of +/- .003". We guarantee it! We also guarantee the alignment of our type will meet the same exacting tolerances. With standard rubber type, lines of text run parallel to the ribs on a coder drum as indicated on the diagram to the right.



VERTICAL RUBBER TYPE

Vertical rubber type logos and single sort characters are manufactured to the same exacting tolerances as standard rubber type. A vertical rib orientation is used when the printed code needs to read from top to bottom or bottom to top. The rib backing on these dies runs perpendicular to the line of text as indicated on the diagram to the right.



When ordering please indicate character size, style and maximum length, if space is limited.

"Single Line Logotype" *is a single line of characters molded in one piece such as a word or code and provides superior quality impressions over combinations of single characters because of uniform typeface wear. They also save time and minimize costly spelling and coding errors.*

"Multiple Line Mats" *are two or more lines of text on a single piece. When only part of the text changes, a hole or notch can be cut out of the die and a logo or individual characters can easily be inserted.*

"Sorts" *are single letters, numbers or punctuation marks and can be custom made in any quantity.*

"Mirror Image Type" *is a "mirror" image of normal text and is used in offset equipment when the type does not print directly on the object. It is also used when printing on the inside of clear packaging.*

Special designs, trademarks and typestyles can be created or reproduced to add to your logo or multi line mats.
For best results please supply 600 DPI, black and white, camera ready art work.

A STYLE RIBTYPE REGULAR TYPESTYLE

STYLE & SIZE	TYPESTYLE SAMPLE	TYPE FACE HEIGHT	NO. OF RIBS	LETTER & NUMBER ASSORTMENT		"F" NUMBER ASSORTMENT		"FS" NUMBER ASSORTMENT	
				SET	STK. #	SET	STK. #	SET	STK. #
A7	RIBTYPE 123456789012	1/16" 1.59 MM	2	5A	UR-A7	5F	UR-A7F	15FS	UR-A7FS
A8	RIBTYPE 1234567	5/64" 1.98 MM	2	5A	UR-A8	5F	UR-A8F	15FS	UR-A8FS
A9	RIBTYPE 1234	7/64" 2.78 MM	2	5A	UR-A9	5F	UR-A9F	15FS	UR-A9FS
A10	RIBTYPE 123	1/8" 3.18 MM	2	5A	UR-A10	5F	UR-A10F	15FS	UR-A10FS
A11	RIBTYP 123	9/64" 3.57 MM	2	5A	UR-A11	5F	UR-A11F	15FS	UR-A11FS
A12	RIBTY 12	3/16" 4.76 MM	2	5A	UR-A12	4F	UR-A12F	12FS	UR-A12FS
A13	RIBT1	1/4" 6.35 MM	3	5A	UR-A13	4F	UR-A13F	12FS	UR-A13FS
A14	RIB1	5/16" 7.94 MM	3	5A	UR-A14	4F	UR-A14F	12FS	UR-A14FS
A15	RB3	3/8" 9.53 MM	3	5A	UR-A15	4F	UR-A15F	12FS	UR-A15FS
A15.5	RI4	7/16" 11.1 MM	4	5A	UR-A15.5	4F	UR-A15.5F	12FS	UR-A15.5FS
A16	R2	1/2" 12.7 MM	4	5A	UR-A16	4F	UR-A16F	12FS	UR-A16FS
A17	R1	5/8" 15.9 MM	5	5A	UR-A17	4F	UR-A17F	12FS	UR-A17FS
A18	RI	3/4" 19.0 MM	6	3A	UR-A18	4F	UR-A18F	12FS	UR-A18FS

THE CHART BELOW SHOWS THE CONTENTS OF THE A STYLE TYPE SETS

CHARACTERS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	1	2	3	4	5	6	7	8	9	0	.	,	-	&	$	'	/	¢	TOTAL PIECES
5A SETS	5	4	5	4	6	4	4	4	5	2	2	5	3	5	5	4	2	5	5	5	3	2	3	2	3	2	3	2	2	2	2	2	2	2	3	4	4	3	1	1	2			136
3A SETS	3	2	3	2	4	2	2	2	3	2	1	2	2	3	3	2	1	3	3	3	2	2	2	1	2	1	3	2	2	2	2	2	2	2	3	4	3	4	1	1	1			94
5F Number Assortment - ***For Styles A11 and Smaller***																											5	5	5	5	5	5	5	5	5	5	2	1			1		1	1	56
4F Number Assortment - ***For Styles A12 and Larger***																											4	4	4	4	4	4	4	4	4	4	2	1			1		1	1	46
15FS Super Number Assortment - ***For Styles A11 and Smaller***																											15	15	15	15	15	15	15	15	15	15	6	3			3		3	3	168
12FS Super Number Assortment - ***For Styles A12 and Larger***																											12	12	12	12	12	12	12	12	12	12	6	3			3		3	3	138

B STYLE

RIBTYPE

REGULAR CONDENSED

STYLE & SIZE	TYPESTYLE SAMPLE	TYPE FACE HEIGHT	NO. OF RIBS	LETTER & NUMBER ASSORTMENT		"F" NUMBER ASSORTMENT		"FS" NUMBER ASSORTMENT	
				SET	STK. #	SET	STK. #	SET	STK. #
B10	RIBTYPE 12345678	1/8" 3.18 MM	2	5A	UR-B10	5F	UR-B10F	15FS	UR-B10FS
B11	RIBTYPE 123456	9/64" 3.57 MM	2	5A	UR-B11	5F	UR-B11F	15FS	UR-B11FS
B12	RIBTYPE 123	3/16" 4.76 MM	2	5A	UR-B12	4F	UR-B12F	12FS	UR-B12FS
B13	RIBTY12	1/4" 6.35 MM	2	5A	UR-B13	4F	UR-B13F	12FS	UR-B13FS
B14	RIBTY3	5/16" 7.94 MM	3	5A	UR-B14	4F	UR-B14F	12FS	UR-B14FS
B15	RIB4	3/8" 9.53 MM	3	5A	UR-B15	4F	UR-B15F	12FS	UR-B15FS
B16	RB3	1/2" 12.7 MM	4	5A	UR-B16	4F	UR-B16F	12FS	UR-B16FS
B17	RIB	5/8" 15.9 MM	5	5A	UR-B17	4F	UR-B17F	12FS	UR-B17FS
B18	RT	3/4" 19.0 MM	6	3A	UR-B18	4F	UR-B18F	12FS	UR-B18FS
B19	R I	1" 25.4 MM	8	3A	UR-B19	4F	UR-B19F	---------	----------

THE CHART BELOW SHOWS THE CONTENTS OF THE B STYLE TYPE SETS

CHARACTERS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	1	2	3	4	5	6	7	8	9	0	.	,	-	&	$	'	/	¢	TOTAL PIECES
5A SETS	5	4	5	4	6	4	4	4	5	2	2	5	3	5	5	4	2	5	5	5	3	2	3	2	3	2	3	2	2	2	2	2	2	2	3	4	4	3	1	1	2			136
3A SETS	3	2	3	2	4	2	2	2	3	2	1	2	2	3	3	2	1	3	3	3	2	2	2	1	2	1	3	2	2	2	2	2	2	2	3	4	3	4	1	1	1			94
5F Number Assortment - ***For Styles B11 and Smaller***																											5	5	5	5	5	5	5	5	5	2	1			1		1	1	56
4F Number Assortment - ***For Styles B12 and Larger***																											4	4	4	4	4	4	4	4	4	2	1			1		1	1	46
15FS Super Number Assortment - ***For Styles B11 and Smaller***																											15	15	15	15	15	15	15	15	15	6	3			3		3	3	168
12FS Super Number Assortment - ***For Styles B12 and Larger***																											12	12	12	12	12	12	12	12	12	6	3			3		3	3	138

U STYLE

RIBTYPE

BOLD TYPESTYLE

STYLE & SIZE	TYPESTYLE SAMPLE	TYPE FACE HEIGHT	NO. OF RIBS	LETTER & NUMBER ASSORTMENT		"F" NUMBER ASSORTMENT		"FS" NUMBER ASSORTMENT	
				SET	STK. #	SET	STK. #	SET	STK. #
U70	RIBTYPE12345	1/8" 3.18 MM	2	5A	UR-U70	5F	UR-U70F	15FS	UR-U70FS
U71	RIBTYPE1234	5/32" 3.97 MM	2	5A	UR-U71	5F	UR-U71F	15FS	UR-U71FS
U72	RBTY123	3/16" 4.76 MM	2	5A	UR-U72	4F	UR-U72F	12FS	UR-U72FS
U73	RBTY123	1/4" 6.35 MM	2	5A	UR-U73	4F	UR-U73F	12FS	UR-U73FS
U74	RIBT12	5/16" 7.94 MM	3	5A	UR-U74	4F	UR-U74F	12FS	UR-U74FS
U75	RIB12	3/8" 9.53 MM	3	5A	UR-U75	4F	UR-U75F	12FS	UR-U75FS
U75.5	RBT1	7/16" 11.1 MM	4	5A	UR-U75.5	4F	UR-U75.5F	12FS	UR-U75.5FS
U76	RB1	1/2" 12.7 MM	4	5A	UR-U76	4F	UR-U76F	12FS	UR-U76FS
U77	RB	5/8" 15.9 MM	5	3A	UR-U77	4F	UR-U77F	12FS	UR-U77FS
U78	RI	3/4" 19.0 MM	6	3A	UR-U78	4F	UR-U78F	12FS	UR-U78FS
U79	RI	15/16" 23.8 MM	7	3A	UR-U79	4F	UR-U79F	12FS	UR-U79FS

THE CHART BELOW SHOWS THE CONTENTS OF THE U STYLE TYPE SETS

CHARACTERS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	1	2	3	4	5	6	7	8	9	0	.	,	-	&	$	'	/	¢	TOTAL PIECES
5A SETS	5	4	5	4	6	4	4	4	5	2	2	5	3	5	5	4	2	5	5	5	3	2	3	2	3	2	3	2	2	2	2	2	2	2	2	3	4	4	3	1	1	2			136
3A SETS	3	2	3	2	4	2	2	2	3	2	1	2	2	3	3	2	1	3	3	3	2	2	2	1	2	1	3	2	2	2	2	2	2	2	2	3	4	3	4	1	1	1			94
5F Number Assortment - ***For Styles U71 and Smaller***																											5	5	5	5	5	5	5	5	5	5	2	1			1		1	1	56
4F Number Assortment - ***For Styles U72 and Larger***																											4	4	4	4	4	4	4	4	4	4	2	1			1		1	1	46
15FS Super Number Assortment - ***For Styles U71 and Smaller***																											15	15	15	15	15	15	15	15	15	15	6	3			3		3	3	168
12FS Super Number Assortment - ***For Styles U72 and Larger***																											12	12	12	12	12	12	12	12	12	12	6	3			3		3	3	138

G STYLE RIBTYPE BOLD CONDENSED

STYLE & SIZE	TYPESTYLE SAMPLE	TYPE FACE HEIGHT	NO. OF RIBS	LETTER & NUMBER ASSORTMENT		"F" NUMBER ASSORTMENT		"FS" NUMBER ASSORTMENT	
				SET	STK. #	SET	STK. #	SET	STK. #
G73	RIBTY1234	1/4" 6.35 MM	2	5A	UR-G73	4F	UR-G73F	12FS	UR-G73FS
G74	RIBTY123	5/16" 7.94 MM	3	5A	UR-G74	4F	UR-G74F	12FS	UR-G74FS
G75	RIBT12	3/8" 9.53 MM	3	5A	UR-G75	4F	UR-G75F	12FS	UR-G75FS
G76	RB12	1/2" 12.7 MM	4	5A	UR-G76	4F	UR-G76F	12FS	UR-G76FS
G77	RB1	5/8" 15.9 MM	5	5A	UR-G77	4F	UR-G77F	12FS	UR-G77FS
G78	RI3	3/4" 19.0 MM	6	5A	UR-G78	4F	UR-G78F	12FS	UR-G78FS
G79	R3	15/16" 23.8 MM	7	3A	UR-G79	4F	UR-G79F	12FS	UR-G79FS

THE CHART BELOW SHOWS THE CONTENTS OF THE G STYLE TYPE SETS

CHARACTERS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	1	2	3	4	5	6	7	8	9	0	.	,	-	&	$	'	/	¢	TOTAL PIECES
5A SETS	5	4	5	4	6	4	4	4	5	2	2	5	3	5	5	4	2	5	5	5	3	2	3	2	3	2	3	2	2	2	2	2	2	2	3	4	4	3	1	1	2			136
3A SETS	3	2	3	2	4	2	2	2	3	2	1	2	2	3	3	2	1	3	3	3	2	2	2	1	2	1	3	2	2	2	2	2	2	2	3	4	3	4	1	1	1			94
4F Number Assortment - ***For Styles G73 thru G79***																											4	4	4	4	4	4	4	4	4	4	2	1			1		1	1	46
12FS Super Number Assortment - ***For Styles G73 thru G79***																											12	12	12	12	12	12	12	12	12	12	6	3			3		3	3	138

If you frequently need custom stamps and can't wait for delivery, the Handle Stamp Mounts are the perfect solution. These wood handled hand stamps are rib backed to be used with RIBtype® rubber type, single characters or your company logo to make your own personalized stamp right when you need to.

Figure 8 ribs to the inch for depth.

To compute number of ribs for the depth, add 1 rib to total ribs on mat or logo to be used.

HANDLE STAMP MOUNTS

Also available is the Aluminum "G" Handle Stamp Mount. This handle stamp mount is designed for the larger stamps 5" and up. The handle, which is "U" shaped, is made from a cast aluminum material and is fastened to the stamp mount with 4 screws, 2 on each end, 4" apart. Because of this special feature in the fastening of the handle to the stamp mount, when pressure is applied, the result is a deep, uniformed impression. When a larger hand stamp is required, the Aluminum "G" Handle Stamp Mount is the recommended choice. Contact our Customer Service Department to assist you in ordering RIBtype® Handle Stamp Mounts & the Aluminum "G" Handle.

ALUMINUM "G" HANDLE STAMP MOUNT

These are non stock items. Extended lead time is required.

RIBtype® LOGO DIE ORDER FORM

Mail: *2435 Vale Drive - Birmingham, AL 35244* - **Phone:** *800-685-6275* - **Fax:** *423-843-0535* - **E-mail:** *garyamericanmark@aol.com*

To order a logo die: Enter the qty. required and the style number in the left hand columns. Print or type the text on the form as indicated in the example below. Leave blank spaces where required and include all punctuation. Note: Spaces and punctuation count as a character for pricing. Multiply the number of characters or spaces on the die times the appropriate cost per character as indicated in the sample chart. For a Vertical Rib die, add a "VR" suffix to the style code, for example: A13VR.

EXAMPLE

QTY.	STYLE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
2	A13	S	T	A	N	D	A	R	D		L	O	G	O		D	I	E											
2	A13 VR	V	E	R	T	I	C	A	L		R	I	B		L	O	G	O		D	I	E							
EXAMPLE 1 - STYLE A13 LOGO DIE: 17 CHARACTERS X PRICE PER CH. = TOTAL EACH X QUANTITY 2 = TOTAL COST																													
EXAMPLE 1 - STYLE A13 VR LOGO DIE: 21 CHARACTERS X PRICE PER CH. = TOTAL EACH X QUANTITY 2 = TOTAL COST																													

ORDER FORM

QTY.	STYLE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28

Company:		P.O. No.:	
Attn:		Date:	
Address:		Fax No.:	
Address:		Ship Via:	
Address:		Signature:	

KORTHO HOT QUICK CODER

The unique hot ink technology, provides a clean, sharp, nearly instant dry impression at a high rate printing speed of 300 prints/min. Whether you make 10,000 or 100,000 prints a day, the Kortho Hot Quick Coder offers a perfect solution for a variety of coding applications. The standard mounting hardware allows quick installation and precise adjustment of coder position. Although this mounting hardware is heavy duty in material, it is small in dimension and has no mounting restrictions.

MODEL SHOWN: HQCD-100
W/FINE ADJUST COLLAR

System Includes:

1. ***Digital Control Box.***
2. ***Print Head.***
3. ***Power Cord.***
4. ***Standard Mounting Bracket Assembly.***
5. ***Flat Type Holder with removable handle.***

Kortho Hot Quick Coders can be used on almost any material and surface with up to three lines of text in a maximum printing area of 12 x 24 mm. The unique spring loaded jumping head, with its "butterfly touch" even allows you to make a perfect print on moving products at a max. speed of 60m/min.

KORTHO HOT QUICK CODER	
STOCK NO.	DESCRIPTION
HQCD-100	KORTHO HOT QUICK CODER W/CONTROL, STANDARD MOUNTING HARDWARE & FLAT TYPE HOLDER
HQC-100-FAB	FINE ADJUST COLLAR

Specifications:

Print Area: 0.472" X 0.945" - (12 x 24 mm)

Printing Speed Max: 300 Prints/min.

Product Speed Max: 196 Ft./min. - (60m/min.)

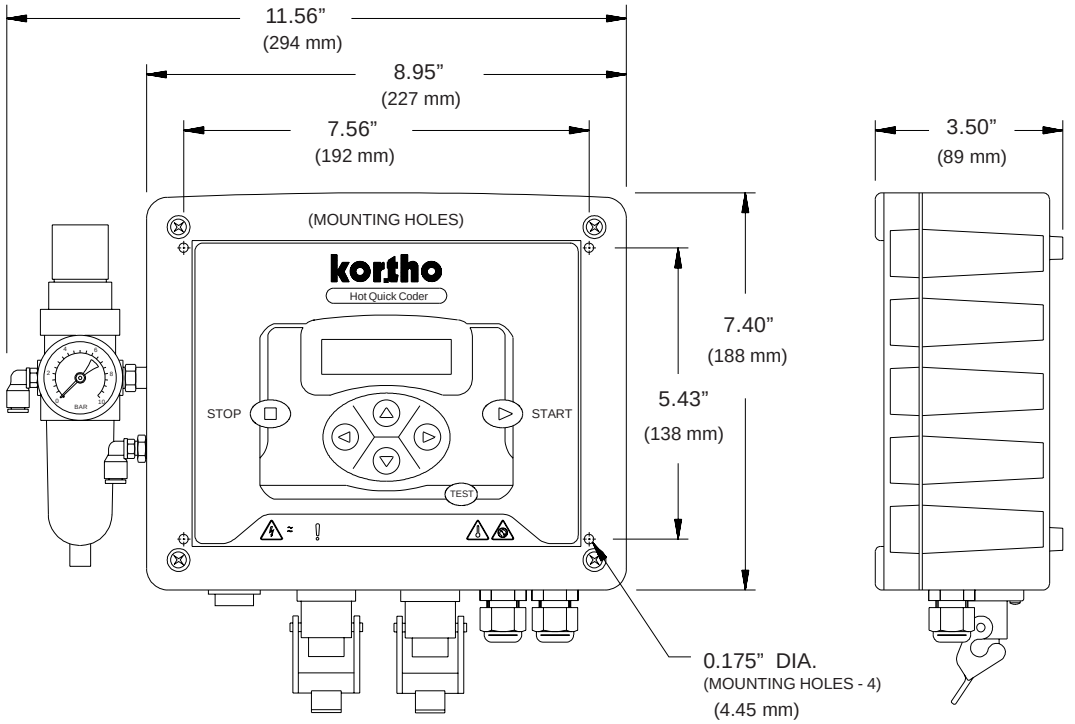
Electrical: 110-130 VAC/1 A.
220-240 VAC/0.5 A.

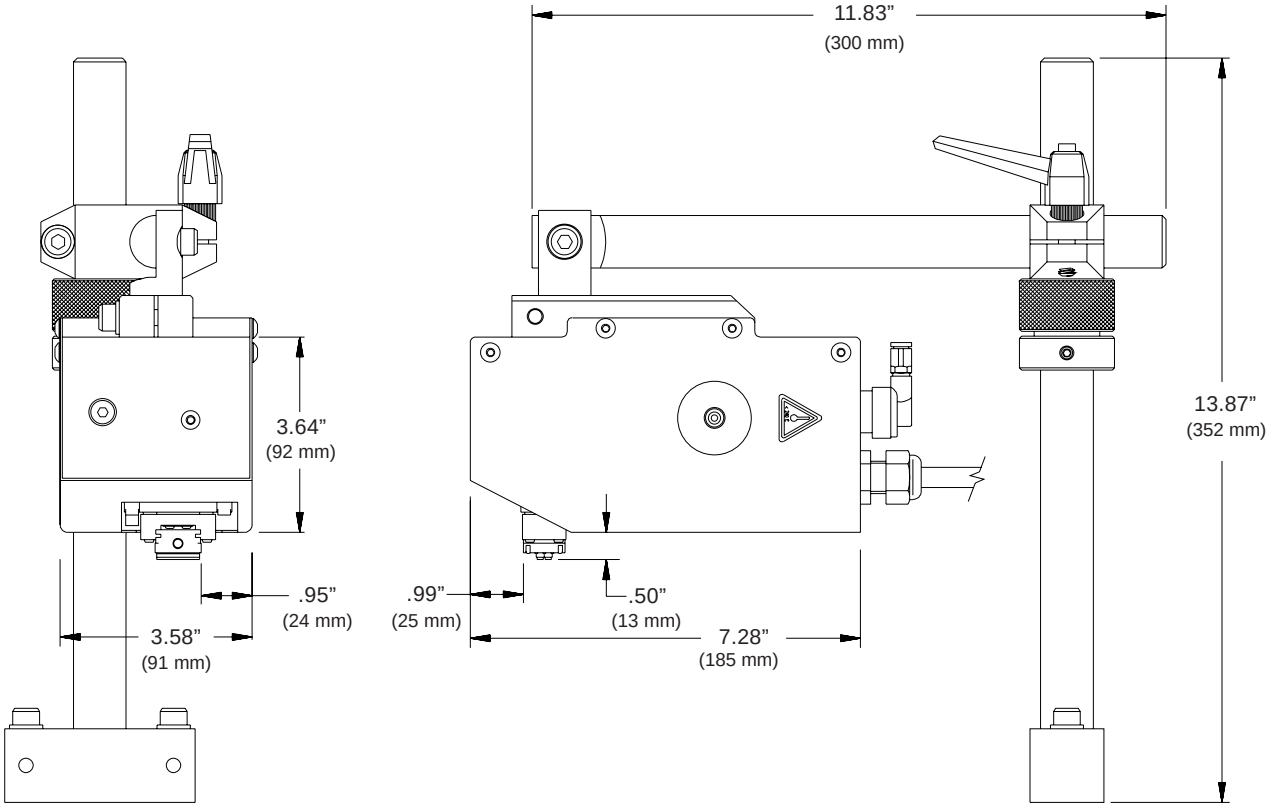
Working Pressure: 56 PSI - (4 bar)

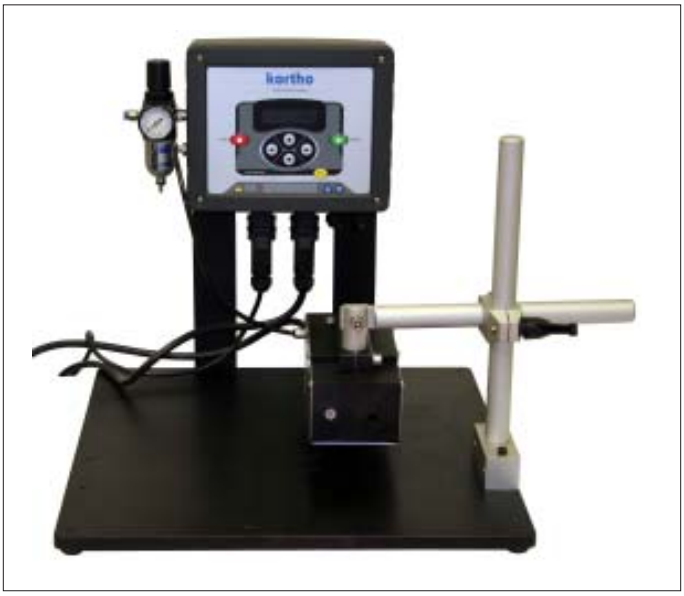
Weight: Coder: 4.7 Lbs. - (2.13 Kg,)
Control: 4.9 Lbs. - (2.2 Kg.)

FINE ADJUST COLLAR

The Fine Adjust Collar can be installed on the mounting column of the Standard Mounting Bracket Assembly to provide precision adjustment capabilities when positioning the Print Head. Total adjustment range is approximatly 1/2".


11.56”
(294 mm)
8.95”
(227 mm)
7.56”
(192 mm)
3.50”
(89 mm)
(MOUNTING HOLES)
kortho
Hot Quick Coder
STOP
START
TEST
7.40”
(188 mm)
5.43”
(138 mm)
0.175” DIA.
(MOUNTING HOLES - 4)
(4.45 mm)


11.83”
(300 mm)
3.64”
(92 mm)
.95”
(24 mm)
3.58”
(91 mm)
.99”
(25 mm)
.50”
(13 mm)
7.28”
(185 mm)
13.87”
(352 mm)



MODEL SHOWN: HQC-100
W/KORTHO HOT QUICK CODER BENCH MOUNT STAND - 12" X 18"

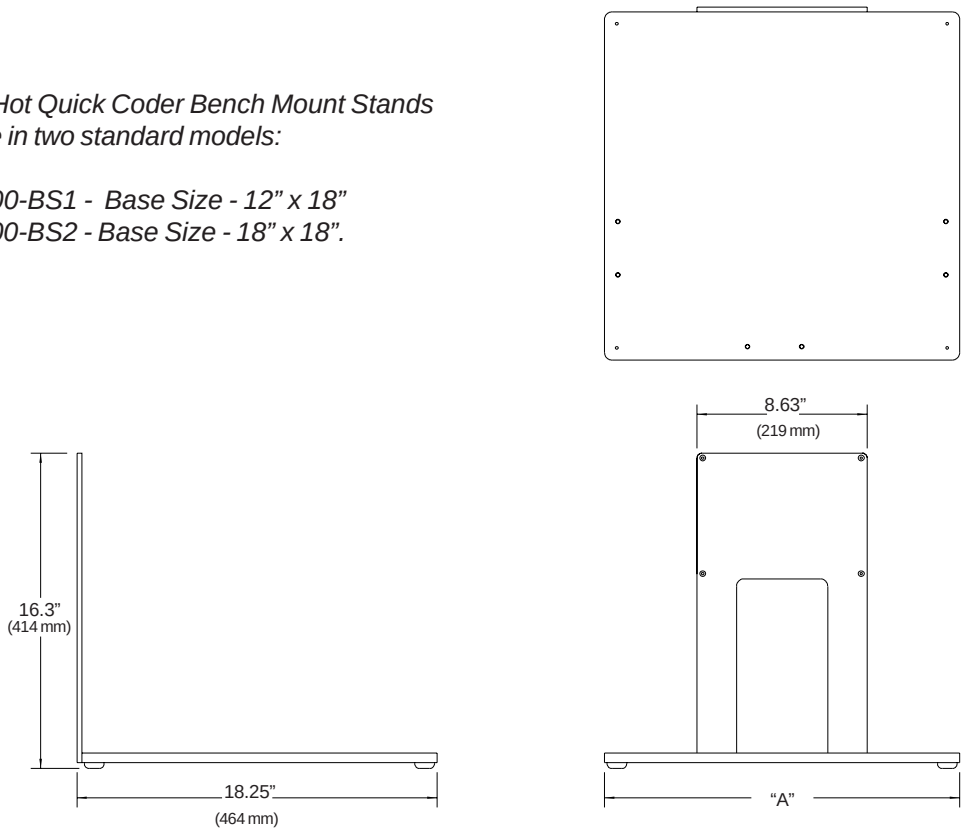
The problem for bench top marking applications is easy with the Kortho Hot Quick Coder Bench Mount Stands. The base plates on these stands are manufactured from heavy duty, anodized 1/2" thick aluminum and feature cushioned rubber feet. Threaded mounting holes in the base provide three locations for the installation of the standard Kortho Print Head mounting bracket assembly. A vertical mounting plate with 4 threaded holes provide a convenient mount for the Kortho Control Box. The aluminum base can be machined for mounting permanent part fixtures or temporary locating fixtures can be attached with double backed tape.

Model No: HQC-100-BS1
Net Weight: 13.54 lbs (6.16 Kg)
Dimension A = 12" (305 mm)

Model No: HQC-100-BS2
Net Weight: 19.03 lbs (8.65 Kg)
Dimension A = 18" (457 mm)

The Kortho Hot Quick Coder Bench Mount Stands are available in two standard models:

The HQC-100-BS1 - Base Size - 12" x 18"
The HQC-100-BS2 - Base Size - 18" x 18".



KORTHO HOT QUICK CODER BENCH MOUNT STANDS	
STOCK NO.	DESCRIPTION
HQC-100-BS1	KORTHO HOT QUICK CODER BENCH MOUNT STAND - 12" X 18"
HQC-100-BS2	KORTHO HOT QUICK CODER BENCH MOUNT STAND - 18" X 18"

NOTE: ALL MOUNTING HARDWARE INCLUDED

KORTHO HOT QUICK CODER ROLLS & TYPE HOLDERS

Ink rolls, which are dry to the touch at room temperature, are preheated prior to use in the self-contained heating system. The Kortho Hot Quick Coder utilizes hot ink technology to provide clean, sharp, nearly instant dry impressions at a high rate of speed. When hot, the ink in the roll becomes fluid and is then ready for operation. A spare roll can be stored in the unit's preheat chamber during production to keep it ready for immediate use.

Ink rolls are supplied in convenient six-pack boxes and are available in the following colors:
black, red, green, blue, yellow and white.

REPLACEMENT INK ROLLS FOR HQC-100 CODERS	
STOCK NO.	DESCRIPTION
HQC-6-BK	S-11 BLACK HOT QUICK CODER INK ROLLS - 6/PK
HQC-6-RD	S-14 RED HOT QUICK CODER INK ROLLS - 6/PK
HQC-6-GR	S-17 GREEN HOT QUICK CODER INK ROLLS - 6/PK
HQC-6-BL	S-12 BLUE HOT QUICK CODER INK ROLLS - 6/PK
HQC-6-YL	S-16 YELLOW HOT QUICK CODER INK ROLLS - 6/PK
HQC-6-WH	S-15 WHITE HOT QUICK CODER INK ROLLS - 6/PK
TYPE HOLDERS FOR HQC-100 CODERS	
HQC-100-FTH	FLAT TYPE HOLDER WITH REMOVABLE HANDLE
HQC-100-THCONCAVE	CONCAVE TYPE HOLDER WITH REMOVABLE HANDLE
HQC-100-THCONVEX	CONVEX TYPE HOLDER WITH REMOVABLE HANDLE

Special nonmetallic type is set up off-line in the units quick change type holders to facilitate code changes in seconds.

HQC-100-FTH
FLAT TYPE HOLDER

Additional HQC-100-FTH Flat Type Holders are available to enable setting up codes off line for extremely fast code changes during production. Having a spare eliminates the need to let the active Type Holder cool down for comfortable handling. Print Area: 12mm x 24mm (Approx: 0.5" x 1.0")

The HQC-100-THCONCAVE Type Holders are designed for use in applying codes along the length of cylindrical parts such as round bottles and cans. The concave shape of this type holder conforms to the curvature of the cylinder and enables multiple lines to be printed. The ribbed rubber mat hold the type and provides a cushion to ensure a clear imprint

HQC-100-THCONCAVE
CONCAVED TYPE HOLDER

HQC-100-THCONVEX
CONVEXED TYPE HOLDER

The HQC-100-THCONVEX Type Holders are designed for use in applying codes to the bottoms of aerosol cans. The convex shape of the type holder conforms to the curvature of the can bottom. A ribbed rubber mat holds the type and provides a slight cushion to ensure a clear imprint.

HQC-100-FPT

The Foot Pedal Trigger is designed for manual initiation of the marking cycle. This triggering device is commonly used when the coder is bench mounted and products are manually placed under the marking head for imprinting.

The HQC-100-FPT Kit includes a Foot Pedal Switch, an 8 Foot Cable and installation instructions.

The HQC-100-MST Micro-Switch is a contact trigger used to initiate the print cycle of the HQC. This unit is permanently mounted to the production line and has a 2.5" long trip lever with a low (2.5 Oz.) operating force. Body Dimensions: 2.1" x 1.55" x 0.84".

The HQC-100-MST Kit includes a Microswitch, Dust Proof Enclosure, 6 Foot Cable, Mounting Screws and installation instructions.

HQC-100-MST

HQC-100-PCT-D

The HQC-100-PCT-D is a compact NPN, intelligent reflective beam photocell which is used for non-contact triggering of the HQC marking cycle. This photocell features both automatic and manual calibration options, digital readout, and a sensing range of up to 11.81" (300mm). This sensor excels in applications where product shape, color variations and even clear packaging materials can cause other photocells to fail. Body Dimensions: 1.4" x 0.785" x 0.48".

The HQC-100-PCT-D Kit includes the Photocell, Mounting Bracket, 6 Foot Cable and installation instructions. IP-67 Rated for harsh, wet environments.

The HQC-100-PCT-LR is a compact, long range retro-reflective Photocell which is which is used for non-contact triggering of the HQC marking cycle. This unit has an effective range up to 10 feet and is rated for harsh environments and suitable for installation in wet areas. Body Dimensions: 2.6" x 1.21" x 0.48".

The HQC-100-PCT-LR Kit includes the Photocell, mounting bracket, 6 foot cable and 3" diameter reflector.

Note: The HQC-100-PCT-LR Kit is not recommended for sensing clear plastic or glass containers. The Gray and Black wires are not used and must be individually insullated with tape or heat shrink to prevent grounding.

HQC-100-PCT-LR

KORTHO HOT QUICK CODER TRIGGERING DEVICES	
STOCK NO.	DESCRIPTION
HQC-100-FPT	FOOT PEDAL TRIGGER KIT
HQC-100-MST	MICRO-SWITCH TRIGGER KIT
HQC-100-PCT-D	PHOTOCELL TRIGGER KIT
HQC-100-PCT-LR	PHOTOCELL TRIGGER KIT - LONG RANGE

HIGH-TEMP RIBtype® SILICONE TYPE

The Kortho Hot Quick Coder utilizes High-Temp RIBtype® silicone type. This interchangeable ribbed type is available in a variety of sizes as shown below. The High-Temp rubber type is for the Kortho Hot Quick Coder only. All boxed sets contain an assortment of characters, including punctuation, in varying quantities. The chart below shows the quantity of each character in our listed boxed sets.

A + ASSORTMENT																										
CHARACTER	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
QUANTITY IN SET	7	5	5	5	7	5	5	5	5	5	5	5	5	7	5	5	3	5	5	5	5	5	5	3	3	5
CHARACTERS	Å	Ä	Ö	Ü	Æ	Ø	1	2	3	4	5	6	7	8	9	0	.	,	-	/						
QUANTITY IN SET	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	3	1	1						

C + ASSORTMENT																										
FIGURES	1	2	3	4	5	6	7	8	9	0	.	,	-	/												
QUANTITY IN SET	9	9	9	9	9	9	9	9	9	9	2	3	2	2												

STYLE NO.	*FACE HEIGHT	LETTER TYPE SAMPLE	FIGURE TYPE SAMPLE
2/8	2 mm = 5/64"	DEFGHIJKLMNOPQRSTUVWXYZAB	01234567890123456789012345678 9
2/10	2.5 mm = 3/32"	CDEFGHIJKLMNOPQRSTUVW	0123456789012345678901234 56
2/12	3 mm = 1/8"	XYZABCDEFGHIJKLMNO	5678901234567890123456 7
2/14	3.5 mm = 9/64"	PQRSTUVWXYZABCDEF	78901234567890123 456
2/16	4 mm = 5/32"	GHJKLMNOPQRSTU	7890123456789012 3
2/20	5 mm = 3/16"	VWXYZABCDEFG	4567890123456 78

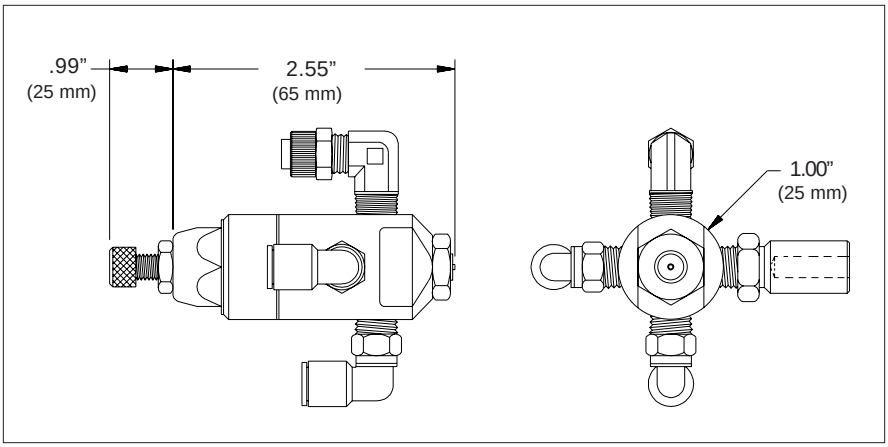
*** TYPE FACE HEIGHTS ARE APPROXIMATE**

HIGH-TEMP RIBtype® METRIC SILICONE TYPE			
STYLE - RIBS - SIZE	MAXIMUM DIE SIZE	STOCK NO. A+ ASSORTMENT	STOCK NO. C+ ASSORTMENT
2/8 - 2 RIBS - 2 MM:	2 LINES - 13 CHARACTERS MAX	UR-28A+	UR-28C+
2/10 - 2 RIBS - 2.5 MM:	2 LINES - 11 CHARACTERS MAX	UR-210A+	UR-210C+
2/12 - 2 RIBS - 3 MM:	2 LINES - 9 CHARACTERS MAX	UR-212A+	UR-212C+
2/14 - 2 RIBS - 3.5 MM:	2 LINES - 9 CHARACTERS MAX	UR-214A+	UR-214C+
2/16 - 2 RIBS - 4 MM:	2 LINES - 7 CHARACTERS MAX	UR-216A+	UR-216C+
2/20 - 2 RIBS - 5 MM:	2 LINES - 6 CHARACTERS MAX	UR-220A+	UR-220C+

Micro-Spray Markers are designed for non-contact spot marking applications where color coded dots are required for product identification or acceptance/rejection indication. These low pressure atomizing jet spray marking units can produce up to 180 marks per minute, thus providing a high degree of marking flexibility at typical automation speeds.

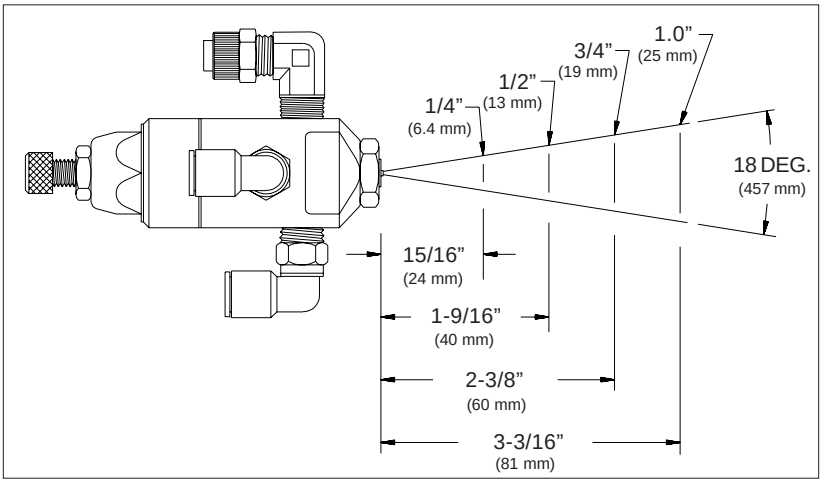
Spot or stripe sizes are adjustable from 1/4" minimum to a maximum of 1". These units may be mounted near automation and sensitive test equipment, placed in marking stations on the production line, or attached to robot arms. The Micro-Spray Marker is capable of marking in any attitude and the fast cycle rates make it ideal for high speed marking applications.

MODEL SHOWN: USMR-20AF



Micro-Spray Marker Systems require 5-12 PSI atomizing air pressure and 70-80 PSI trigger air pressure to operate. Remote gravity feed or pressurized ink reservoirs can handle extremely fast drying dye or pigmented inks for both porous and non-porous marking applications. These markers excel when marking operations require extremely fast drying inks on non-porous surfaces. A gold plated stainless steel clean out needle seats in the nozzle orifice after every cycle to ensure that the marker will continue to print even after prolonged idle periods. The USMR-20AF unit features an adjustable fluid control to regulate the volume of ink being applied per marking cycle. The adjustable model is recommended when more precise control over spot or stripe size is required and drying time is critical.

MICRO-SPRAY MARKERS	
STOCK NO.	DESCRIPTION
USMR-20	MICRO-SPRAY MARKER
USMR-20AF	MICRO-SPRAY MARKER WITH ADJUSTABLE FLUID CONTROL
USMR-PRK	STANDARD PARTS REPAIR KIT (REBUILDS 1 MARKER) FOR ALCOHOL BASE INKS ONLY
USMR-SRK	STANDARD SEAL REPAIR KIT (REBUILDS 1 MARKER) FOR ALCOHOL BASE INKS ONLY
USMR-PRK-VI	SPECIAL PARTS REPAIR KIT (REBUILDS 1 MARKER) FOR PETROLEUM BASE INKS ONLY
USMR-SRK-VI	SPECIAL SEAL REPAIR KIT (REBUILDS 1 MARKER) FOR PETROLEUM BASE INKS ONLY



SPRAY PATTERN

The Micro-Spray Markers fire an 18 degree conical spray pattern as shown in the figure to the left. The diameter of the spot or the width of the stripe mark being applied depends on the proximity of the part from the marker nozzle.

MODEL SHOWN: USMR-MSA-SM

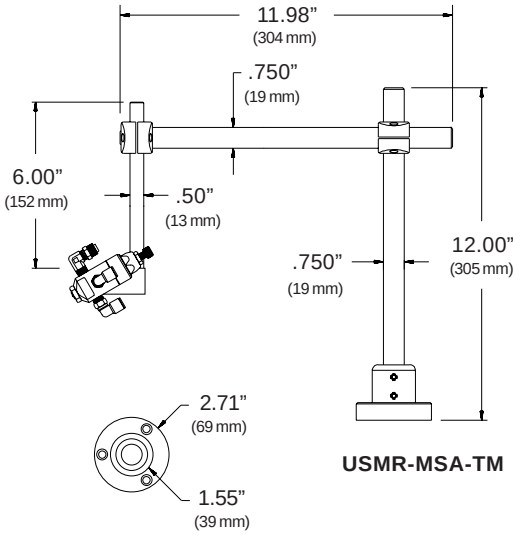
To simplify installation of the USMR-20 Series Micro-Spray Markers, a mounting system has been developed which provides positioning adjustments in 7 independent axes. The modular mounting system design enables the non-contact spray markers to be positioned in any attitude required to apply marks to any surface of irregularly shaped parts. The system utilizes polished stainless steel support bars and right angle blocks to facilitate accurate positioning of the marker body. The split block style clamps can be loosened and tightened repeatedly without marring the shafts.

This mounting system is available with both side mount and top mount bases to accommodate mounting on nearly any type of parent equipment.

Both of these mounting system models include two 3/4" diameter x 12" long stainless steel columns and one ½" diameter x 6" long shaft, a mounting base, two right angle blocks and an adjustable mounting block for the marker. Custom length columns and shafts are available by special order.

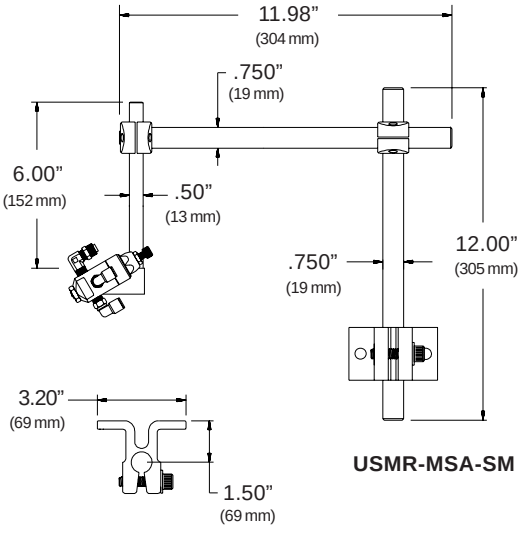
MODEL SHOWN: USMR-MSA-TM

USMR-20 MOUNTING SYSTEM	
STOCK NO.	DESCRIPTION
USMR-MSA-SM	USMR-MOUNTING SYSTEM - SIDE MOUNT WITH 12" MOUNTING COLUMN
USMR-MSA-SMR	USMR-MOUNTING SYSTEM - SIDE MOUNT WITH 36" MOUNTING COLUMN & RESERVOIR BRACKET
USMR-MSA-TM	USMR-MOUNTING SYSTEM - TOP MOUNT WITH 12" MOUNTING COLUMN
USMR-MSA-TMR	USMR-MOUNTING SYSTEM - TOP MOUNT WITH 36" MOUNTING COLUMN & RESERVOIR BRACKET



USMR-MSA-TM

TOP VIEW BASE

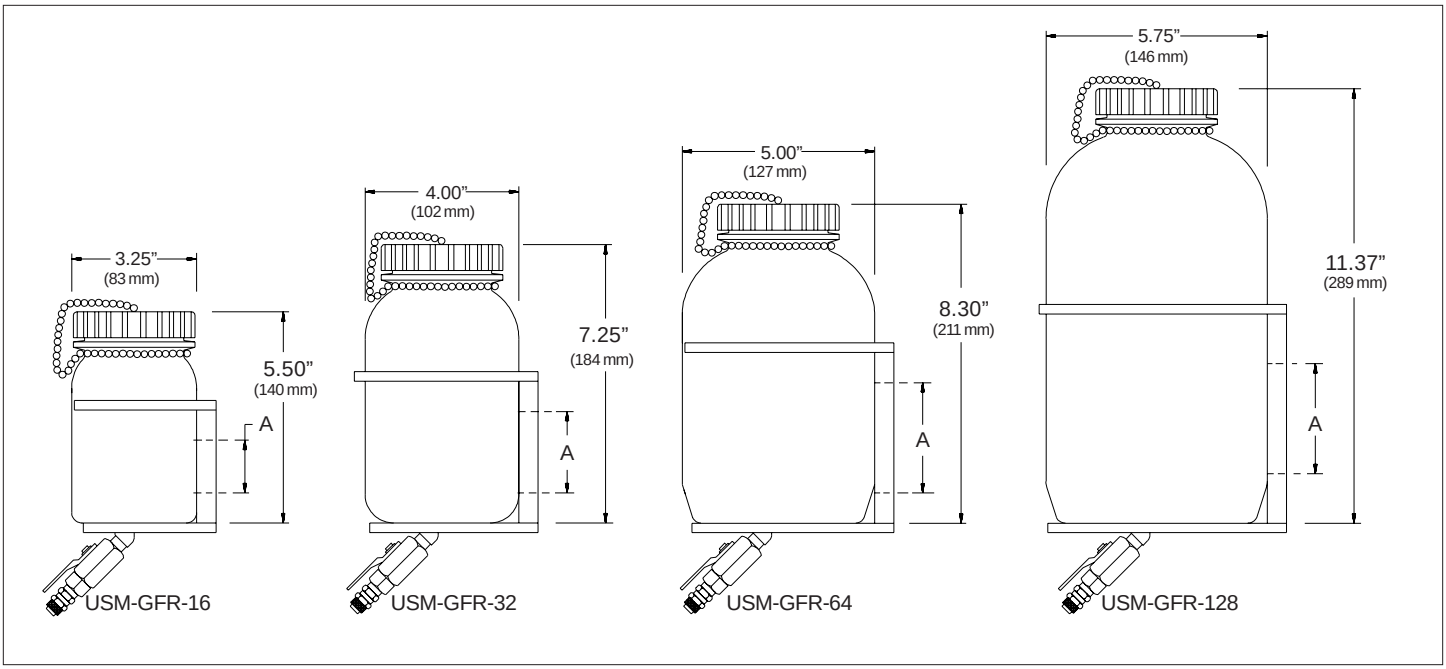


USMR-MSA-SM

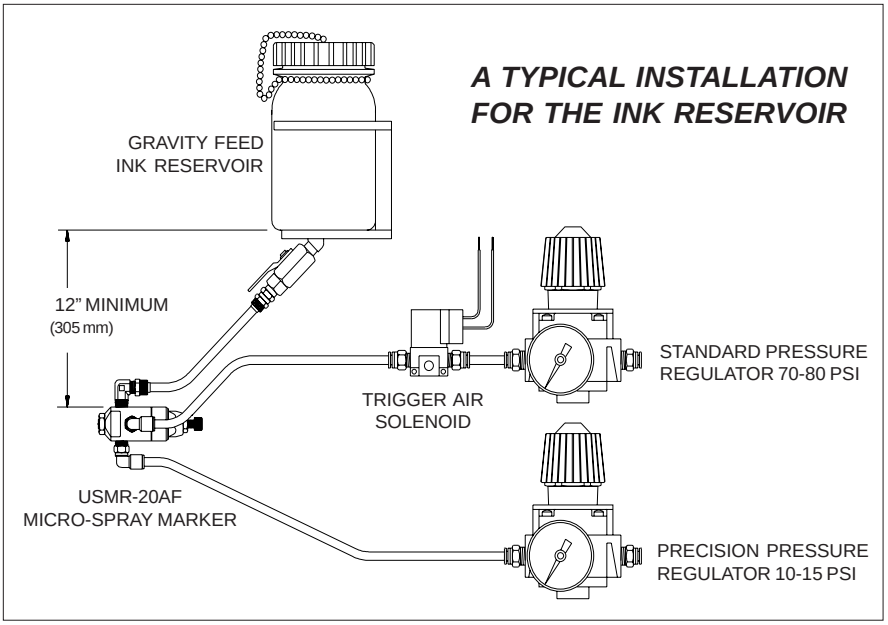
TOP VIEW BRACKET

INK RESERVOIRS

USM-GFR Gravity Feed Ink Reservoirs are used with both the USMR-20 Series Spot Markers and the PIDS Programmable Ink Delivery Systems. The reservoirs are available in 4 standard sizes with 16 Oz., 32 Oz., 64 Oz. and 128 Oz. capacities. All models include a mounting bracket and a brass ball valve with a compression type tube fitting for the standard 1/4" OD poly connecting tubes. The large diameter neck design with a threaded lid simplifies filling the reservoir. These units are compatible with both glycol and alcohol base coding inks and the ink level can be visually monitored through the translucent sides of the reservoir.



INK RESERVOIRS		
STOCK NO.	DESCRIPTION	MOUNTING HOLE SPACING "A"
USM-GFR-16	16 OZ. GRAVITY FEED INK RESERVOIR	1.37"
USM-GFR-32	32 OZ. GRAVITY FEED INK RESERVOIR	2.12"
USM-GFR-64	64 OZ. GRAVITY FEED INK RESERVOIR	2.87"
USM-GFR-128	128 OZ. GRAVITY FEED INK RESERVOIR	2.87"



INSTALLATION

When an electrical signal is applied to the 3-way solenoid valve, the marker will fire until the signal is removed. A 100 millisecond signal duration is required to apply a 1/4" spot mark. A one-shot timer can be used to control the signal duration from a micro-switch or scanner.

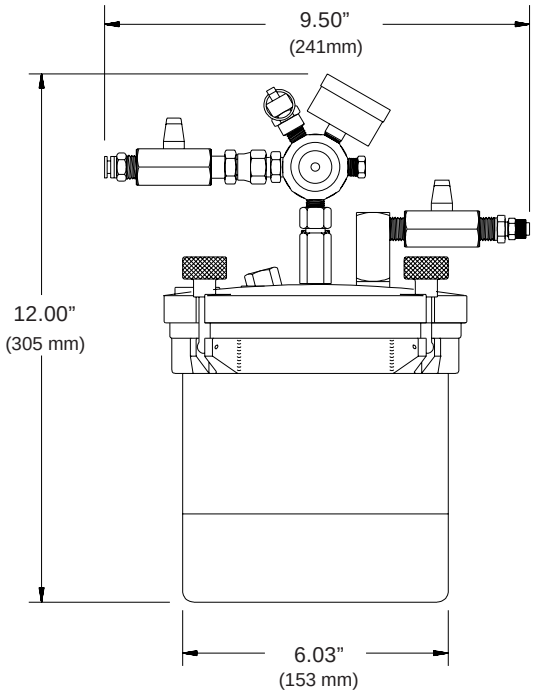
Please contact our Engineering Department for application assistance and ink selection recommendations. Additional equipment such as Pressure Regulators, Solenoids and One-Shot Timers are listed in the Control Components section of this catalog.

MODEL SHOWN: USM-80601

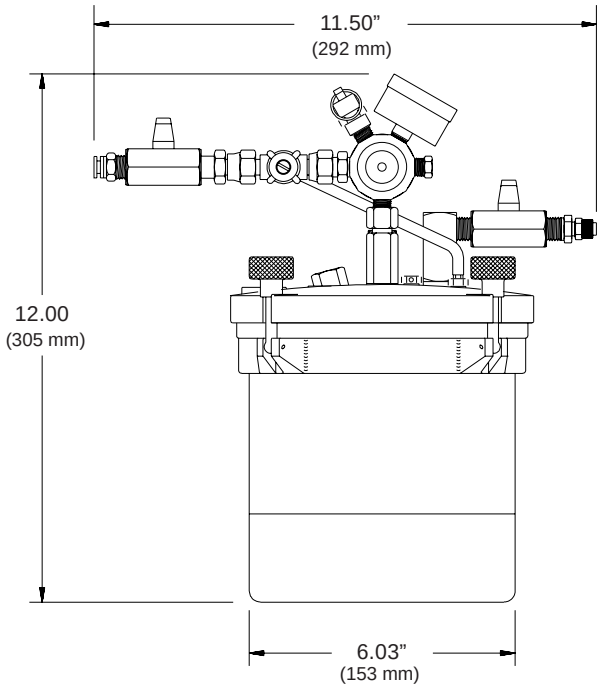
USM-80600 Pressure Reservoirs are used to increase the ink supply pressure to the USMR-20AF markers. Higher supply pressure allows more ink to flow into the atomizing air stream in a given time interval. The use of a pressure reservoir enables shorter duration triggering signals to be used and results in a faster reaction time for the marker. The pressure reservoirs are also recommended in applications requiring higher ink volume delivery. For most applications, tank pressure is set to 2-3 psi.

The USM-80600 is a 64oz. capacity unit complete with pressure regulator, gauge and disposable liner. The USM-80601 unit is similar to the USM-80600 but includes a pneumatically operated ink agitation system which keeps pigmented inks in uniform suspension during use. Disposable liners are available for both units.

PRESSURE RESERVOIRS	
MODEL NO.	DESCRIPTION
USM-80600	64 OZ. PRESSURE RESERVOIR
USM-80601	64 OZ. PRESSURE RESERVOIR WITH AGITATOR
USM-80356	12 PAK REPLACEMENT DISPOSABLE CAN LINERS



USM-80600 - 64 oz. PRESSURE RESERVOIR



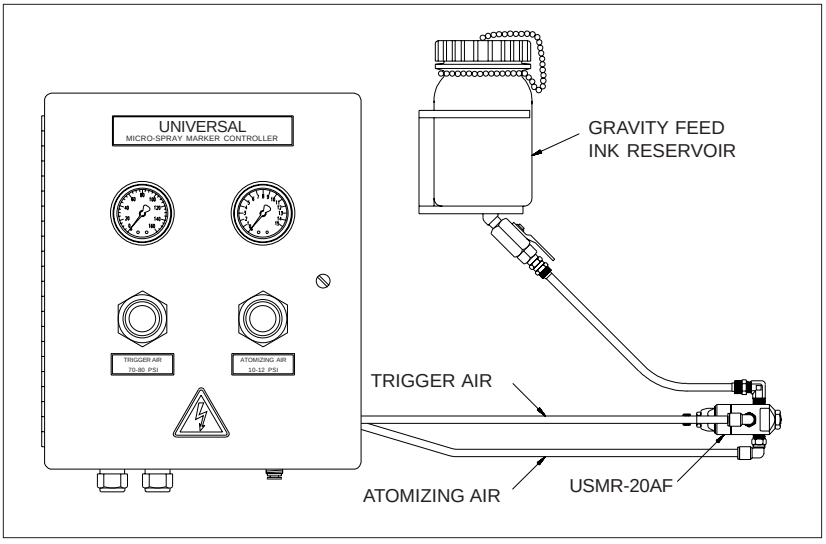
USM-80601 - 64 oz. PRESSURE RESERVOIR WITH AGITATOR

USM-100 and USM-100A Series Micro-Spray Marker Controllers have been designed to control the function of one or more USMR-20 Series Micro-Spray Markers in spot or stripe marking applications. These control systems incorporate the required pneumatic and electronic components in an easy to install package. Both controllers require connection to a source of clean, dry 80-100 psi compressed air and 115 VAC 60 Hz electrical power for operation.

The USM-100 & USM-100A Controllers are identical in design except for the signal inputs they will accept for initiate triggering. The USM-100 Controller accepts only a dry contact closure input signal to initiate the marking cycle. The contact closure signal is typically supplied by either a micro switch, control relay or a relay output from a programmable logic controller. When a momentary or maintained contact initiate signal is received by the controller, the marker will spray for the time duration set on the controllers adjustable one-shot timer. The standard one-shot timer outputs a .05-1 second signal to the solenoid valves and is adjusted by a potentiometer inside the cabinet. Optional one-shot timers are available to cover a wide range of output signal durations.

Since some parent equipment outputs an electrical signal of a specified voltage when the marking cycle is to be initiated, the USM-100A Controller contains an auxiliary plug-in relay to convert the electrical signal to the dry contact closure signal required for the Controller. The auxiliary relay is selected with a coil rated for the voltage of the supplied signal.

MODEL SHOWN: USM-100



To apply a spot mark to a part, the one-shot timer is set to output a trigger signal duration of approximately 100 milliseconds. On moving parts, stripe marks are applied as the part passes the stationary marker and the length of the stripe is determined by the distance the part travels in the time interval set on the one-shot timer. For example, if the one-shot timer is set for a 1 second trigger signal duration and the part is moving at a velocity of 60 feet per minute, a 1 foot stripe mark will be applied.

Note: *Special function controls, including those with Programmable Logic Controllers , are available upon request. Contact our Engineering Department for details.*

MICRO-SPRAY MARKER CONTROLLERS	
STOCK NO.	DESCRIPTION
USM-100	MICRO-SPRAY MARKER CONTROLLER - WITH DRY CONTACT CLOSURE INITIATE
USM-100A120	MICRO-SPRAY MARKER CONTROLLER - WITH 120 VAC RELAY INITIATE
USM-100A24	MICRO-SPRAY MARKER CONTROLLER - WITH 24 VDC RELAY INITIATE
USM-103DS	MICRO-SPRAY MARKER PNEUMATIC CONTROLLER - WITH 115 VAC DUAL SOLENOID
USM-104DS	MICRO-SPRAY MARKER PNEUMATIC CONTROLLER - WITH 12 VDC DUAL SOLENOID
USM-105DS	MICRO-SPRAY MARKER PNEUMATIC CONTROLLER - WITH 24 VDC DUAL SOLENOID

The following is a partial listing of the pneumatic and electrical control components we stock for automatic marking system installations. These components are typically used in conjunction with Micro-Spray Marker applications.

If you need assistance in selecting the proper control components please contact our Engineering Department.

PNEUMATIC PRESSURE REGULATORS	
STOCK NO.	DESCRIPTION
USM-LPR1	PRECISION PNEUMATIC PRESSURE REGULATORS 0-15 PSI
USM-LPG1	PRECISION PNEUMATIC PRESSURE GAUGE 0-30 PSI
USM-SPR1	STANDARD PNEUMATIC PRESSURE REGULATORS 0-125 PSI
USM-SPG1	STANDARD PNEUMATIC PRESSURE GAUGE 0-160 PSI
USM-RMB1	MOUNTING BRACKET FOR PRESSURE REGULATORS

SOLENOID VALVES	
STOCK NO.	DESCRIPTION
USM-SOL1	3-WAY SOLENOID VALVE - 115 VAC COIL
USM-SOL2	3-WAY SOLENOID VALVE - 12 VDC COIL
USM-SOL3	3-WAY SOLENOID VALVE - 24 VDC COIL

SCANNERS & TIMERS	
STOCK NO.	DESCRIPTION
MRM-ATC-DS1	ATC DIFFUSE BEAM SCANNER TD-ON & TD-OFF SELECT
MRM-SSAC-01	ONE SHOT TIMER .05-1 SECOND ADJUSTABLE TIMING RANGE
MRM-SSAC-02	OCTAL SOCKET FOR ONE SHOT TIMER

TUBES & FITTINGS	
STOCK NO.	DESCRIPTION
USMR-TK1	TUBE & FITTING KIT FOR SINGLE SOLENOID SYSTEM. KIT CONTAINS: 6FT. NATURAL POLY TUBE FOR RESERVOIR, 12 FT. POLY AIR TUBE, PUSH TYPE TUBE FITTINGS FOR STANDARD & PRECISION REGULATORS & A SOLENOID VALVE.
USMR-TK2	TUBE & FITTING KIT FOR DUAL SOLENOID SYSTEM. KIT CONTAINS: 6FT. NATURAL POLY TUBE FOR RESERVOIR, 20 FT. POLY AIR TUBE, PUSH TYPE TUBE FITTINGS FOR STANDARD & PRECISION REGULATORS & DUAL SOLENOID VALVE.
CT-02	1/4" O.D. NATURAL POLY TUBE FOR INK RESERVOIR
CT-02R	1/4" O.D. NATURAL POLY TUBE FOR INK RESERVOIR - 100 FOOT. ROLL
CT-03	1/4" O.D. BLACK POLY TUBE FOR PNEUMATIC CONNECTIONS
CT-03R	1/4" O.D. BLACK POLY TUBE FOR PNEUMATIC CONNECTIONS - 100 FOOT ROLL

INTRODUCTION:

Inks can be formulated in an infinite number of ways to meet specific application requirements. The inks listed in this catalog are standard formulations which are intended to cover most marking applications. Although the application recommendations made in this catalog are based on tests conducted by Universal, the customer should conduct performance tests for their specific application to ensure that the inks selected meet their specific application requirements. In all cases, our inks are formulated for ***industrial use only!***

We utilize two basic solvent types in the manufacture of inks, alcohol and petroleum solvents. There are various grades of solvent within each type, which basically relate to the speed by which the solvents evaporate or dry. In addition to solvent variations, some inks are pigmented, which contain ground solids to impart color to the ink and some are dye type which contain liquid color. It is important to thoroughly understand the characteristics of the various inks prior to making a selection for a particular application. The type of ink selected must be compatible with both the material being marked and the applicator with which the ink will be applied. Although inks designed for non-porous use can be used on porous surfaces, this is generally not recommended since it is more costly and the higher resin content of the non-porous inks may cause unnecessary problems for the consumer.

DRYING CHARACTERISTICS

These stenciling and marking inks dry in one of two ways. Porous surface inks dry through absorption into the material being marked, leaving the pigment or dye color in the material fibers. Corrugated cartons and kraft paper are good examples of porous surfaced materials. Since inks are not capable of being absorbed into a non-porous surface, such as metal or plastic, non-porous inks dry through evaporation of the ink solvents, leaving the dye or pigment on the surface of the material. Some amount of resin or "binder" is added to the formulation to bind the pigment or dye to the surface once the solvents have dissipated. The amount and type of resin used in the formulation determines the ability of the ink to resist chipping, peeling, weathering and subsequent solvent resistance. It is also important to note that the ambient temperature and humidity in the area where inks are applied can have a dramatic affect on the drying characteristics of inks. Generally speaking, the warmer the ambient temperature and the lower the humidity, the faster the inks will dry

FADE RESISTANCE

In applications where resistance to fading is required, generally only pigmented inks will perform satisfactorily. Most dye type inks will fade rapidly when exposed to direct sunlight for prolonged periods. Since pigmented inks contain layers of finely ground solids when applied, they are much more resistant to fading and will perform somewhat like an exterior paint. For fade and weather resistance, it is generally recommended to use a non-porous pigmented ink even on porous surface materials. The additional amount of resin in these ink formulations help to hold the pigments in place under exposure to water spray and abrasion.

APPLICATION METHODS

Since there are so many types of inks available from various suppliers, it is important to understand the effect different ink solvents can have on the materials used in the ink applicators. In the case of the foam rubber materials used in the production of stencil rollers, pads and coding rollers, the type of foam used, whether synthetic or natural rubber, will determine its compatibility with alcohol or petroleum solvents. There are far too many factors to consider to list them all within the context of this article but we strongly recommend that you consult with our Customer Service or Engineering Departments for specific recommendations if you have any doubt about applicator/ink compatibility.

TYPE P INK

Product Compatibility: Press Button Fountain Roller - JR. Roller & Type P Pad Systems

Type P inks are specially formulated for use on porous surface materials such as cardboard, paper and unpainted wood, etc. Type P oil base inks are pigmented to produce bright opaque marks and they contain a minimum amount of binder to prevent drying out and hardening of the rollers.

TYPE P STENCIL INK		
STOCK NO.	DESCRIPTION	STANDARD PACKAGING
IU-P1PT	TYPE P BLACK - PINT	12/CASE
IU-P1QT	TYPE P BLACK - QUART	12/CASE
IU-P1GL	TYPE P BLACK - GALLON	4/CASE
IU-P2QT	TYPE P RED - QUART (SIMILAR TO PMS COLOR 185)	12/CASE
IU-P2GL	TYPE P RED - GALLON (SIMILAR TO PMS COLOR 185)	4/CASE
IU-PSQT	TYPE P SOLVENT - QUART	12/CASE
IU-PSGL	TYPE P SOLVENT - GALLON	4/CASE

TYPE K-1 INK

K-1 is an oil base stencil ink for use in all of our roller units. This ink is similar to the Type P ink except that it is made with a flat black pigment.

Product Compatibility: Press Button Fountain Roller JR. Roller & Type P Pad Systems

TYPE K-1 STENCIL INK		
STOCK NO.	DESCRIPTION	STANDARD PACKAGING
IU-K1QT	TYPE K-1 BLACK - QUART	12/CASE
IU-K1GL	TYPE K-1 BLACK - GALLON	4/CASE

TYPE D INK

Product Compatibility: Press Button Fountain Roller JR. Roller & Type D Pad Systems

Type D roller ink is specially formulated for stenciling on non-porous surface materials such as steel drums, pipes, metals, glass, plastics, concrete and most painted surfaces. This ink drys in approximately 60 seconds in normal ambient temperatures. Type D is an alcohol base, pigmented ink and stenciled impressions are very opaque and exhibit excellent color density on dark surfaces. This ink offers excellent resistance to fading and adverse weather conditions which makes this ink perfect for stenciling parking lot wheel stops, street signs, curbs and garbage receptacles.

Type D Stencil Inks can be used in Press Button Fountain Rollers but it is only recommended in high volume stenciling applications and the units should be cleaned with Type D Solvent before prolonged storage.

TYPE D STENCIL INK			
STOCK NO.	DESCRIPTION		STANDARD PACKAGING
IU-D1PT	TYPE D BLACK - PINT		12/CASE
IU-D1QT	TYPE D BLACK - QUART		12/CASE
IU-D1GL	TYPE D BLACK - GALLON		4/CASE
IU-D2QT	TYPE D NO LEAD RED - QUART	(SIMILAR TO PMS COLOR 199)	12/CASE
IU-D2GL	TYPE D NO LEAD RED - GALLON	(SIMILAR TO PMS COLOR 199)	4/CASE
IU-D3NLQT	TYPE D NO LEAD GREEN - QUART	(SIMILAR TO PMS COLOR 340)	12/CASE
IU-D3NLGL	TYPE D NO LEAD GREEN - GALLON	(SIMILAR TO PMS COLOR 340)	4/CASE
IU-D4QT	TYPE D LIGHT BLUE - QUART	(SIMILAR TO PMS COLOR 2995)	12/CASE
IU-D4GL	TYPE D LIGHT BLUE - GALLON	(SIMILAR TO PMS COLOR 2995)	4/CASE
IU-DD4QT	TYPE D DARK BLUE - QUART	(SIMILAR TO PMS COLOR 301)	12/CASE
IU-DD4GL	TYPE D DARK BLUE - GALLON	(SIMILAR TO PMS COLOR 301)	4/CASE
IU-D5NLQT	TYPE D NO LEAD YELLOW - QUART	(SIMILAR TO PMS COLOR YELLOW)	12/CASE
IU-D5NLGL	TYPE D NO LEAD YELLOW - GALLON	(SIMILAR TO PMS COLOR YELLOW)	4/CASE
IU-D6QT	TYPE D WHITE - QUART		12/CASE
IU-D6GL	TYPE D WHITE - GALLON		4/CASE
IU-DSQT	TYPE D SOLVENT - QUART		12/CASE
IU-DSGL	TYPE D SOLVENT - GALLON		4/CASE

Special Applications:

Type D Inks can also be used in Non-Porous Coders when the application requires a heavily pigmented, opaque and weather resistant mark. Since Non-porous Coders apply a very thin film of ink to the surfaces being marked, the Type D Inks will dry in approximately 10-12 seconds at 75 Degree F. when applied with these coders.

Product Compatibility: JR. Roller & Type D Pad Systems Formulated for Cold Temperature Applications

Type M roller ink is an extremely fast drying version of the Type D ink for non-porous surfaces. This pigmented, alcohol base ink drys approximately twice as fast as Type D ink and is recommended only for use with Roll-A-Stencil Jr. roller and pad applicators when extremely fast drying characteristics are required. Formulated for stenciling on metal, glass, plastics, concrete, and most painted surfaces where opaque marks and weather resistance is required.

Type M ink is specifically intended for stenciling applications in cold weather conditions where the drying times of standard non-porous roller inks are retarded by the low temperatures. This ink can be used in normal ambient temperatures but it will dry out very rapidly on the rollers and pads under these conditions.

TYPE M STENCIL INK			
STOCK NO.	DESCRIPTION		STANDARD PACKAGING
IU-M1PT	TYPE M BLACK - PINT		12/CASE
IU-M1QT	TYPE M BLACK - QUART		12/CASE
IU-M1GL	TYPE M BLACK - GALLON		4/CASE
IU-M2QT	TYPE M NO LEAD RED - QUART	(SIMILAR TO PMS COLOR 199)	12/CASE
IU-M2GL	TYPE M NO LEAD RED - GALLON	(SIMILAR TO PMS COLOR 199)	4/CASE
IU-M3NLQT	TYPE M NO LEAD GREEN - QUART	(SIMILAR TO PMS COLOR 340)	12/CASE
IU-M3NLGL	TYPE M NO LEAD GREEN - GALLON	(SIMILAR TO PMS COLOR 340)	4/CASE
IU-M4QT	TYPE M LIGHT BLUE - QUART	(SIMILAR TO PMS COLOR 2995)	12/CASE
IU-M4GL	TYPE M LIGHT BLUE - GALLON	(SIMILAR TO PMS COLOR 2995)	4/CASE
IU-M4DQT	TYPE M DARK BLUE - QUART	(SIMILAR TO PMS COLOR 301)	12/CASE
IU-M4DGL	TYPE M DARK BLUE - GALLON	(SIMILAR TO PMS COLOR 301)	4/CASE
IU-M5NLQT	TYPE M NO LEAD YELLOW - QUART	(SIMILAR TO PMS COLOR YELLOW)	12/CASE
IU-M5NLGL	TYPE M NO LEAD YELLOW - GALLON	(SIMILAR TO PMS COLOR YELLOW)	4/CASE
IU-M6QT	TYPE M WHITE - QUART		12/CASE
IU-M6GL	TYPE M WHITE - GALLON		4/CASE
IU-MSQT	TYPE M SOLVENT - QUART		12/CASE
IU-MSGL	TYPE M SOLVENT - GALLON		4/CASE

Special Applications:

Type M Inks can also be used in Non-Porous Coders when the application requires a heavily pigmented, opaque and weather resistant mark. Since Non-porous Coders apply a very thin film of ink to the surfaces being marked, the Type M Inks will dry in approximately 5-7 seconds at 75 Degree F. when applied with these coders.

Product Compatibility: Porous Hand Printers - Mini-Coders - Midsize Coders - Conveyor Line Printers

You can spend thousands of dollars on sophisticated printing systems and still suffer from poor performance if you don't use a good quality coder ink. #1150 coder ink is not a conventional rubber stamp ink with a new label ... it was specially formulated for optimum performance with Porous Hand Printers and all Porous Roll Coding Systems.

This glycol and dye base ink will never dry out your ink rolls even in the hottest environment but will dry almost instantly on cartons or other porous surfaces. Since glycol base inks do not evaporate at room temperature like water base inks you'll get far more impressions per gallon with #1150 ink. The dye colorants used in these inks are noncorrosive and will not damage your equipment.

#1150 CODER INK			
STOCK NO.	DESCRIPTION		STANDARD PACKAGING
IU-C1PT	#1150 BLACK - PINT		12/CASE
IU-C1QT	#1150 BLACK - QUART		12/CASE
IU-C1GL	#1150 BLACK - GALLON		4/CASE
IU-C2PT	#1150 RED - PINT		12/CASE
IU-C2QT	#1150 RED - QUART		12/CASE
IU-C2GL	#1150 RED - GALLON		4/CASE
IU-C3PT	#1150 GREEN - PINT		12/CASE
IU-C3QT	#1150 GREEN - QUART		12/CASE
IU-C3GL	#1150 GREEN - GALLON		4/CASE
IU-C4PT	#1150 DARK BLUE - PINT	(SIMILAR TO PMS COLOR 661)	12/CASE
IU-C4QT	#1150 DARK BLUE - QUART	(SIMILAR TO PMS COLOR 661)	12/CASE
IU-C4GL	#1150 DARK BLUE - GALLON	(SIMILAR TO PMS COLOR 661)	4/CASE
IU-C9PT	#1150 VIOLET - PINT		12/CASE
IU-C9QT	#1150 VIOLET - QUART		12/CASE
IU-C9GL	#1150 VIOLET - GALLON		4/CASE

#1150 Coder Inks are also available in our patented 4 oz. disposable Reservoir Ink Cartridges. These cartridges automatically re-ink your coding rolls during the printing operation and are designed for use with all Porous and Non-Porous Coders.

Product Compatibility: Non-Porous Hand Printers Mini-Coders - Midsize Coders - Conveyor Line Printers

#100 ink is an alcohol and dye base ink designed for printing on non-porous surfaces such as metal, plastic, glass, rubber, waxed and varnished cartons, etc. This ink dries in approximately 2 seconds at 75 degree F. ambient temperatures when applied with Universal Non-Porous Coders. The Universal #100 inks listed below are for use only on XF Neoprene and Neoprene Rolls. ***DO NOT USE #100 INK ON MICROCELL ROLLS.***

Please consult our Customer Service Department for application recommendations for Universal #100 inks.

#100 CODER INK		
STOCK NO.	DESCRIPTION	STANDARD PACKAGING
IU-CN1PT	#100 BLACK - PINT	12/CASE
IU-CN1QT	#100 BLACK - QUART	12/CASE
IU-CN1GL	#100 BLACK - GALLON	4/CASE
IU-CN2PT	#100 RED - PINT	12/CASE
IU-CN2QT	#100 RED - QUART	12/CASE
IU-CN2GL	#100 RED - GALLON	4/CASE
IU-CN3PT	#100 GREEN - PINT	12/CASE
IU-CN3QT	#100 GREEN - QUART	12/CASE
IU-CN3GL	#100 GREEN - GALLON	4/CASE
IU-CN4PT	#100 DARK BLUE - PINT (SIMILAR TO PMS COLOR 286 C)	12/CASE
IU-CN4QT	#100 DARK BLUE - QUART (SIMILAR TO PMS COLOR 286 C)	12/CASE
IU-CN4GL	#100 DARK BLUE - GALLON (SIMILAR TO PMS COLOR 286 C)	4/CASE
IU-CN5NLPT	#100 PIGMENT NO LEAD YELLOW - PINT	12/CASE
IU-CN5NLQT	#100 PIGMENT NO LEAD YELLOW - QUART	12/CASE
IU-CN5NLGL	#100 PIGMENT NO LEAD YELLOW - GALLON	4/CASE
IU-CN6PT	#100 PIGMENT WHITE - PINT	12/CASE
IU-CN6QT	#100 PIGMENT WHITE - QUART	12/CASE
IU-CN6GL	#100 PIGMENT WHITE - GALLON	4/CASE
IU-CN9PT	#100 VIOLET - PINT	12/CASE
IU-CN9QT	#100 VIOLET - QUART	12/CASE
IU-CN9GL	#100 VIOLET - GALLON	4/CASE
IU-CNSQT	#100 SOLVENT - QUART	12/CASE
IU-CNSGL	#100 SOLVENT - GALLON	4/CASE

Note: *Yellow & White #100 inks contain pigment, all other colors are dye base.*

#100 Coder Inks are also available in our patented 4 oz. disposable Reservoir Ink Cartridges. These cartridges automatically re-ink your coding rolls during the printing operation and are designed for use with all Universal Non-Porous Coders.

Although #100 inks are appropriate for most non-porous printing applications, unusual environmental considerations or materials may call for the application of nonstandard inks. The unique design of the Non-Porous Inking System enables it to use a wide variety of special dye and pigment based inks which are not normally compatible with code printing systems.

RESERVOIR INK CARTRIDGES - #1150, #100 INK AND EMPTY

*Our patented Reservoir Inking System can be used on all of our on line Coders to automatically **re-ink** the ink rolls during the printing operation. When the ink content of the roll begins to deplete, simply install a disposable ink cartridge and your ink roll will be re-inked automatically with no ink mess or down time. Unlike gravity feed systems that continue to feed ink when the conveyor line shuts down, our system feeds ink only when the machines are actively printing. In addition, our Reservoir Inking System automatically adjusts the amount of ink being applied to the size of the dies being used.*

POROUS CODER INK CARTRIDGES, #1150 INK

Porous Mini-Coders have a machined port designed to accept the Reservoir Ink Cartridges. Porous Midsize Coders & Conveyor Line Printers require the use of our Reservoir Roll Covers which have a threaded port to accept the Ink Cartridges.

POROUS RESERVOIR INK CARTRIDGES - #1150 INK		
STOCK NO.	DESCRIPTION	STANDARD PACKAGING
IU-C14	#1150 BLACK - 4 OZ. CARTRIDGE	20/CASE
IU-C24	#1150 RED - 4 OZ. CARTRIDGE	20/CASE
IU-C34	#1150 GREEN - 4 OZ. CARTRIDGE	20/CASE
IU-C44	#1150 DARK BLUE - 4 OZ. CARTRIDGE	20/CASE
IU-C94	#1150 VIOLET - 4 OZ. CARTRIDGE	20/CASE

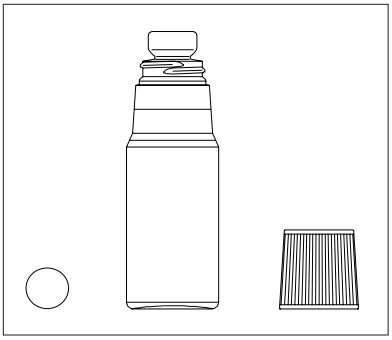
NON-POROUS CODER INK CARTRIDGES, #100 INK

All of our Non-Porous Coders have a Non-Porous Inking System designed to accept the Reservoir Ink Cartridges. Our #100 inks are for use only in the Non-Porous Coders because the ink dries too fast for machines with conventional inking systems. Other dye and pigment base non-porous inks are available for special printing applications. Please contact Customer Service for application recommendations.

RESERVOIR INK CARTRIDGES - #100 INK		
STOCK NO.	DESCRIPTION	STANDARD PACKAGING
IU-CN14	#100 BLACK - 4 OZ. CARTRIDGE	20/CASE
IU-CN24	#100 RED - 4 OZ. CARTRIDGE	20/CASE
IU-CN34	#100 GREEN - 4 OZ. CARTRIDGE	20/CASE
IU-CN44	#100 DARK BLUE - 4 OZ. CARTRIDGE	20/CASE
IU-CN5NL4	#100 NO LEAD YELLOW - PIGMENTED - 4 OZ. CARTRIDGE	20/CASE
IU-CN64	#100 WHITE - PIGMENTED - 4 OZ. CARTRIDGE	20/CASE
IU-CN94	#100 VIOLET - 4 OZ. CARTRIDGE	20/CASE

EMPTY INK CARTRIDGES

Non-Porous Printers have the unique ability to handle a wide variety of special application inks, so we offer our patented Reservoir Ink Cartridges empty. The IU-CE4 cartridge assembly consists of three separate parts; the 4 oz. bottle, ball and cap. After the bottle is filled with ink, the ball is snapped into the socket and the cap is installed. Recommended for alcohol & glycol base inks only.

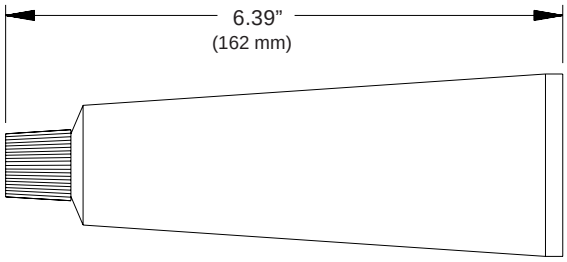


INK CARTRIDGES - EMPTY	
STOCK NO.	DESCRIPTION
IU-CE4	EMPTY 4 OZ. RESERVOIR INK CARTRIDGE ASSEMBLY

Note: These cartridges are not compatible with ketone or petroleum base inks and cannot be refilled after use. Once the ball is snapped into the socket of the 4 oz. bottle it cannot be removed without damaging the ball and socket.

REMOVES INK FROM HANDS LIKE MAGIC!

Reduran Hand Cleaner is the most effective hand cleaner on the market for removing dye base ink from hands. This hand cleaner works on all alkaline reducible dyes such as those contained in Universal's #100, #1150 and FD Marker Inks. Reduran is available in convenient 100 ml. tubes.



REDURAN - 100 ML. TUBE

REDURAN SPECIAL HAND CLEANER		
STOCK NO.	DESCRIPTION	LIST PRICE
MRM-HC04	REDURAN SPECIAL HAND CLEANER - 100 ML. TUBE	CALL FOR PRICING

CUSTOM INK ROLLS

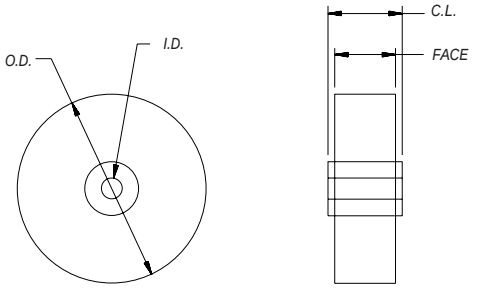
Along with our standard line of coding rolls, custom ink rolls for all types of applications are available. Using three standard materials, Microcell, XF Neoprene & Neoprene, our Custom Ink Roll Department can offer our customers custom manufactured ink rolls usually at a lower cost than the original equipment manufacturer and deliveries are normally 72 hours or less. Our custom ink rolls can be shipped dry or pre-inked. Pre-inked rolls can be used as disposables but all of the standard materials used in the manufacture of ink rolls are re-inkable for better marking economy.

If you require a special roll material or a special core or bushing material for your marking application, we can manufacture a custom roller from a variety of different types of materials to any specification required. Contact our Engineering Department for assistance on your specific application then copy the order form on the next page to use when ordering.

CUSTOM INK ROLL ORDER FORM

PURCHASE ORDER #:	REQUEST FOR QUOTE ONLY - (PLEASE CHECK BOX)
BILL TO: (PLEASE PRINT OR TYPE)	SHIP TO: (PLEASE PRINT OR TYPE)
COMPANY:	COMPANY:
ATTN:	ATTN:
ADDRESS:	ADDRESS:
CITY: STATE: ZIP:	CITY: STATE: ZIP:
PHONE: ( )	SHIP VIA: (PLEASE PRINT OR TYPE)
FAX:	

STYLE 1 - WITH CORE OR BUSHING



STYLE 1 - WITH CORE OR BUSHING

QUANTITY REQUIRED:

5 PC. ***MINIMUM***

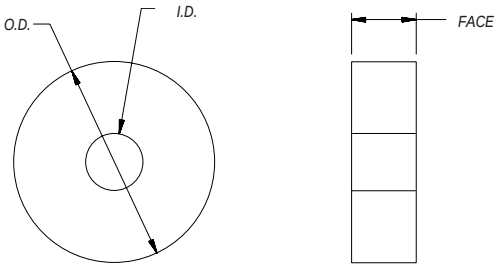
QUANTITY PRICE BREAKS OFFERED AT:

6 - 25 PCS.

26 - 75 PCS.

76 PCS. - UP

STYLE 2 - WITHOUT CORE OR BUSHING



STYLE 2 - WITHOUT CORE

ENTER REQUIREMENTS HERE	CUSTOM INK ROLL SPECIFICATIONS
ORIGINAL MANUFACTURER: ORIGINAL PART NUMBER:	***ORIGINAL MANUFACTURER & PART NUMBER*** - IF YOU HAVE THIS INFORMATION AVAILABLE PLEASE INCLUDE IT. THIS MAY HELP US TO DETERMINE ANY SPECIAL REQUIREMENTS FOR THE ROLLS YOU ARE ORDERING.
MATERIAL (CHECK APPROPRIATE BOX) MICROCELL ☐ XF NEOPRENE ☐ NEOPRENE ☐	**NOTE: ALL INK ROLL MATERIALS ARE RE-INKABLE FOR SUPERIOR MARKING ECONOMY. IF YOU ARE IN DOUBT ABOUT WHAT TO SPECIFY PLEASE CALL CUSTOMER SERVICE FOR ASSISTANCE AT PH: 800-685-6275 OR PH: 800-964-6275** ***MICROCELL*** - AN EXTREMELY DURABLE, HARD DENSITY, URETHANE FOAM MATERIAL FOR USE WITH UNIVERSAL #1150 INK OR EQUIVALENT. THIS MATERIAL IS THE ONE GENERALLY RECOMMENDED FOR PRINTING ON CORRUGATED CARTONS AND OTHER POROUS SURFACES. ***XF NEOPRENE*** - AN EXTRA FIRM DENSITY NEOPRENE FOAM MATERIAL. PERFORMS EXCEPTIONALLY WELL WITH UNIVERSAL #100 FAST DRY INKS ON NON-POROUS SURFACES (ROLL COVERS REQUIRED). IT CAN ALSO BE USED WITH #1150 INKS ON POROUS SURFACES. ***NEOPRENE*** - AN ECONOMICAL, SOFT DENSITY FOAM SIMILAR TO XF NEOPRENE. GENERALLY RECOMMENDED FOR CARTON PRINTING APPLICATIONS WITH UNIVERSAL #1150 INK. CAN BE USED WITH UNIVERSAL #100 (ROLL COVERS REQUIRED).
STYLE (CHECK APPROPRIATE BOX) STYLE 1 SEE DIAGRAM ☐ STYLE 2 SEE DIAGRAM ☐ O.D. (OUTSIDE DIAMETER) FACE (ROLL LENGTH) I.D. (INSIDE DIAMETER) C.L. (CORE LENGTH)	***STYLE 1 ROLLS WITH CORES OR BUSHINGS.*** THE I.D. OR INSIDE DIAMETER OF A CORE OR BUSHING IS VERY CRITICAL AND MUST BE MADE TO TURN FREELY ON THE AXLE ON WHICH IT IS MOUNTED. THE I.D. MEASUREMENT SHOULD BE MADE WITH A PRECISION CALIPER WITH AN ACCURACY OF .001. IF YOU DO NOT HAVE CALIPERS AVAILABLE PLEASE SEND US A SAMPLE ROLL AND WE WILL MEASURE IT FOR YOU. KEEP IN MIND THAT THE I.D. OF A CORE OR BUSHING IS GENERALLY MADE .015 LARGER THAN THE AXLE ON WHICH IT IS DESIGNED TO FIT. FOR INSTANCE, IF YOUR AXLE IS .500 DIAMETER THE I.D. OF THE ROLL CORE OR BUSHING WOULD BE MADE .515. THE EXTRA .015 ALLOWS THE ROLL TO TURN FREELY ON THE AXLE. ***STYLE 2 ROLLS WITHOUT CORE OR BUSHINGS.*** THE I.D. OR INSIDE DIAMETER OF A ROLL WITHOUT A CORE OR BUSHING ARE GENERALLY MADE WITH AN I.D. WHICH IS SLIGHTLY SMALLER THAN THE CORE ON WHICH THEY ARE DESIGNED TO FIT. FOR ROLLS WITH A FACE DIMENSION OF 1-3" THE I.D. SHOULD BE .061 SMALLER THAN THE CORE O.D. FOR ROLLS WITH A FACE OVER 3", THE I.D. SHOULD BE MADE .031 SMALLER THAN THE CORE O.D. **NOTE:** IF **CORE LENGTH** IS NOT SPECIFIED, THE STANDARD CORE LENGTH IS THE ROLL FACE + .250". **THIS APPLIES TO STYLE 1 ROLLS (WITH CORES OR BUSHINGS) ONLY.**
PRE-INK WITH #1150 INK FOR POROUS SURFACES (AVAILABLE FOR ALL ROLL MATERIALS) INK COLOR PRE-INK WITH #100 INK FOR NON-POROUS SURFACES (XF NEOPRENE & NEOPRENE ROLL MATERIAL ONLY) INK COLOR	***INKS:*** **#1150** INK IS GENERALLY RECOMMENDED FOR ALL POROUS SURFACE PRINTING APPLICATIONS. COLORS AVAILABLE IN #1150 INK ARE BLACK, RED, GREEN, DARK BLUE & VIOLET. **#100** INK IS RECOMMENDED FOR NON-POROUS APPLICATIONS. **(ROLL COVERS ARE REQUIRED FOR #100 INKS)** COLORS AVAILABLE IN #100 INK ARE BLACK, RED, GREEN, DARK BLUE, YELLOW PIGMENTED, WHITE PIGMENTED & VIOLET. **IF YOU WANT YOUR ROLLS PRE-INKED PRIOR TO SHIPPING, PLEASE ENTER YOUR REQUIREMENTS IN THE SPACE INDICATED. FOR SPECIAL INK REQUIREMENTS, PLEASE CONTACT CUSTOMER SERVICE.**

PLEASE COPY THIS FORM & MAIL, E-MAIL OR FAX TO:

MAIL: AMERICAN MARKING, INC. • 2435 VALE DRIVE • BIRMINGHAM, AL 35244

PHONE: 800-685-6275 • FAX: 423-843-0535 • E-MAIL: garyamericanmark@aol.com

2435 Vale Drive - Birmingham, AL 35244 U. S. A.

Reginal Sales Office Phone: 800 - 685-6275 Fax: 423-843-0535

Corporate Office Phone: 800-964-6275 Fax: 205-733-1720

E-mail: garyamericanmark@aol.com Website: www.americanmarking.com