

# CMT

**COLUMBIA MARKING TOOLS  
HOT STAMP MARKERS**

*FOR STAND ALONE OR  
INTEGRATED SYSTEMS*

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### 900 SERIES HOT STAMP MARKERS

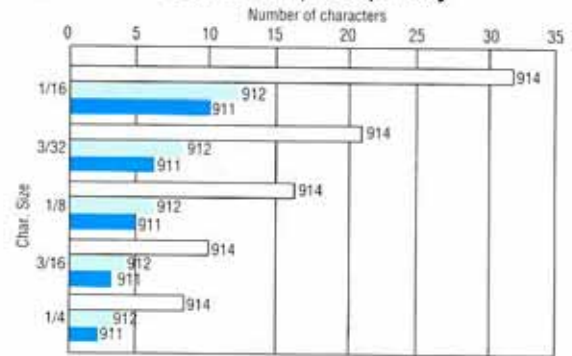
**Columbia** 900 Series consists of three hot stamp markers which are available as individual units that can be incorporated into automated production processes, or mounted in stand alone marking machines.

**Columbia** offers standard and special options for the 900 series hot stamp markers including: bench and floor style machines, numbering heads, foil feeds, and modular controls.

**Columbia** hot stamp type, inserts, and logos are specially manufactured for durability and are recommended for maximum efficiency of the 900 series.

**Columbia** provides continual engineering and design support for its products.

Std Stamp Capacity\*



\*Machine capacity varies with respect to material composition. Columbia requests a sample part to accurately determine the correct unit for your application.



**Columbia** controls the three variables for a quality hot stamp impression:

**1) Pressure** is developed by a double acting air cylinder controlled through an air pressure regulator.\*

\*optional with unit models, standard with bench model package.

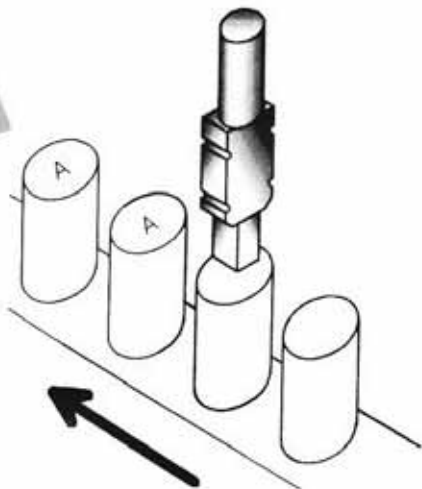
**2) Heat** is developed by high density cartridge heaters, assuring uniform heat distribution. **Columbia** offers a basic internal adjustable heat control thermostat, or thermocouple sensor for use with optional remote digital heat control.

**3) Dwell** for individual units is controlled, in automation, by a timer in an existing on-line controller. For stand alone marking machines, dwell is controlled by either a solid state or pneumatic adjustable timer.





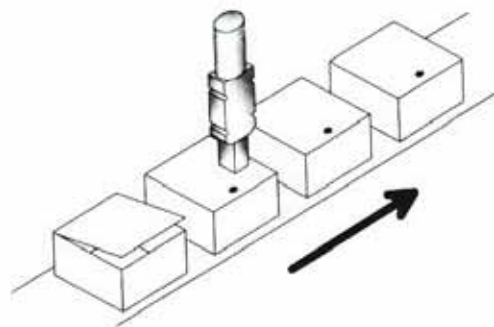
## 900 SERIES HOT STAMP MARKERS APPLICATIONS



**AUTOMATIC PRODUCTION  
LINE MARKING**



**BENCH STYLE MARKING MACHINE**  
(floor style also available)



**HEAT STAKING**

**Columbia** 900 series hot stamp markers are ideal for marking date codes, part numbers, plant codes, shift data, serial numbers, and other product data or heat staking on an infinite variety of plastic parts.

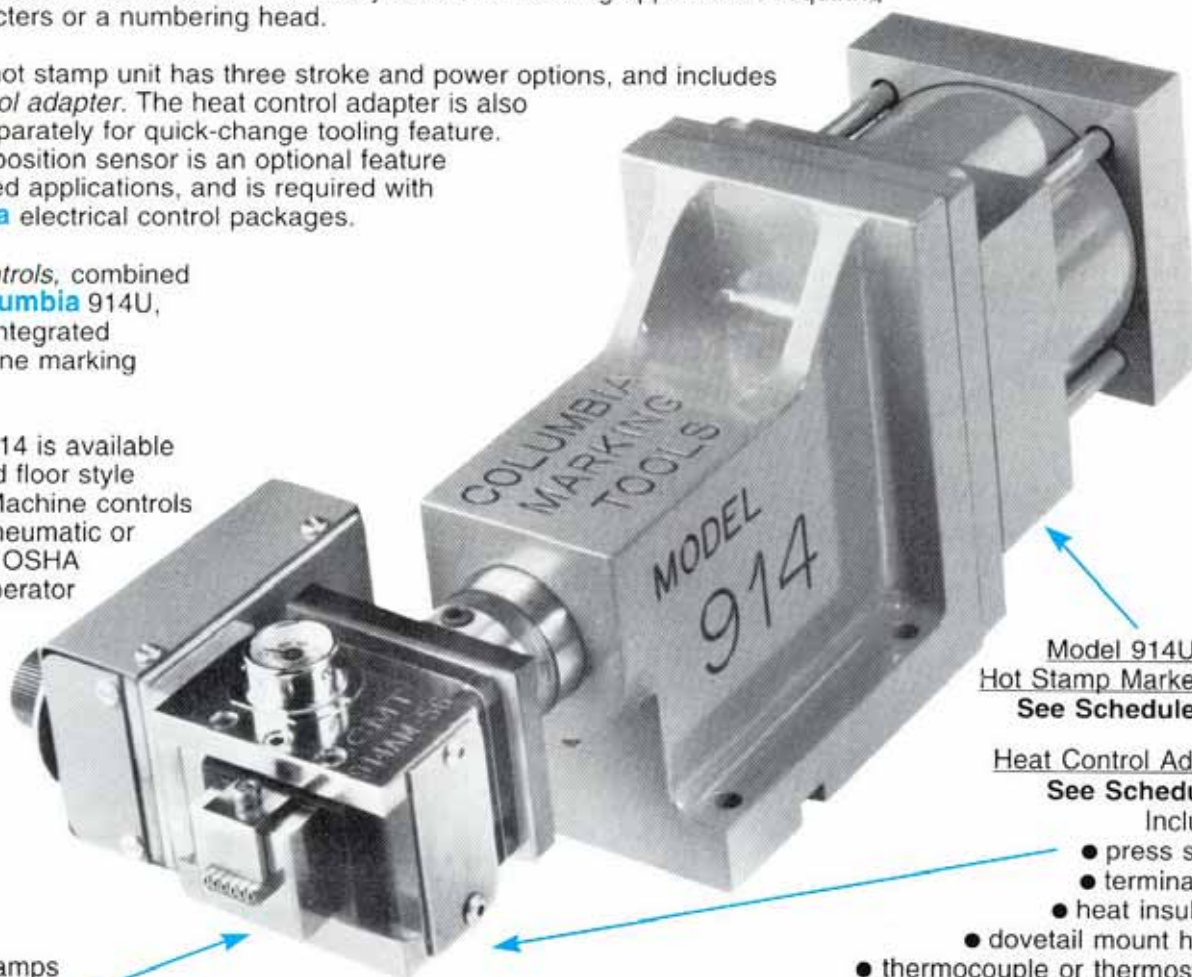
## MODEL 914 HOT STAMP MARKER

**Columbia** Model 914, the largest of the 900 series hot stamp markers, delivers up to 1 ton of pressure. The Model 914 is ideally suited for marking applications requiring many characters or a numbering head.

Model 914 hot stamp unit has three stroke and power options, and includes a *heat control adapter*. The heat control adapter is also available separately for quick-change tooling feature. The retract position sensor is an optional feature for automated applications, and is required with all **Columbia** electrical control packages.

Modular controls, combined with the **Columbia** 914U, provide an integrated production line marking process.

**Columbia** 914 is available in bench and floor style machines. Machine controls are either pneumatic or electric with OSHA approved operator controls.



Model 914U  
Hot Stamp Marker Unit  
See Schedule A

Heat Control Adapter  
**See Schedule B**

- press shank
- terminal box
- heat insulation
- dovetail mount holder
- thermocouple or thermoswitch
- 3 ft of high temp. power cable
- 2 high density cartridge heaters
  - may be ordered separately

Holder & Stamps  
**See Schedule C**

Quick-change dovetail mount *stamp holders* can be mounted and removed in seconds for fast, simple change over. Standard 914 holders use CMSH-step style hot stamps (see page 11).

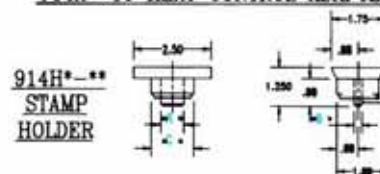
Schedule C								
Model 914 Std Holders & Stamp Insert Capacity								
Symbol	Character Size					Dim.		
	1/16	3/32	1/8	3/16	1/4	A	B	C
914HA-75	12	8	6			0.75	0.25	1.38
914HA-100	16	10	8			1.00	0.25	1.50
914HA-150	24	16	12			1.50	0.25	2.00
914HA-200	32	21	16			2.00	0.25	2.50
914HB-75				4		0.75	0.31	1.38
914HB-100				6		1.00	0.31	1.50
914HB-150				8		1.50	0.31	2.00
914HB-200				10		2.00	0.31	2.50
914HC-100					4	1.00	0.38	1.50
914HC-200					8	2.00	0.38	2.50

**Schedule B**  
**Columbia Model 914 Heat Control Adapter**

Feature	Symbol	Example
for Model 914	914A	914AJ-56
<i>Heat Sensor</i>		
J wire thermocouple monitoring*	J	
manually adjusted thermostwitch	M	
560 watt unit	56	

\*for remote heat control, other thermocouples are available on request

914A\*-56 HEAT CONTROL ADAPTER



### MODEL 914 HOT STAMP MARKER

#### HOW TO ORDER

To Order: Select only those symbols that represent marker feature required and place them in the sequence indicated by the example.

Schedule A Columbia Model 914, Hot Stamp Marker		
MODEL/FEATURE	Symbol	Example
Model 914 Hot Stamp	914	914BEC-J-10-03-0
Automation Unit	U00*	
Special Design	S*	
Bench Style Machine	B__	
Floor Style Machine	F__	
<i>Machine Controls</i>		
pneumatic controls	P C	
electric controls	E C	
electric with foil feed	E F	
<i>Heat Control</i>		
with 914AJ-56 heat control	J	
with 914AM-56 heat control	M	
none	O	
<i>Stroke</i>		
1.00" max.	10	
2.00" max.	20	
3.00" max.	30	
<i>Power</i> Dim 'D'		
360 lbs. force	4.12	03
1000 lbs. force	4.88	10
2000 lbs. force (80 PSI rating)	9.76	20
<i>Position Sensor</i>		
none	O	
retract position sensor***	R	

\*automation unit is offered without controls, for modular controls (see page 101).

\*\*special designs receive a 5 digit alphanumeric code, example 914S-A1234

\*\*\*2 wire, 110 V AC proximity switch; required for CMT electrical controls.

**Machine controls** are either pneumatic or electric (PLC). All controls include air filter, pressure regulator lubricator, and air shutoff valve with lockout.

#### PC, Pneumatic controls include:

- air dual anti-tie down anti-repeat palm buttons
- air valves
- pneumatic timer
- basic heat control (for use with thermoswitch)

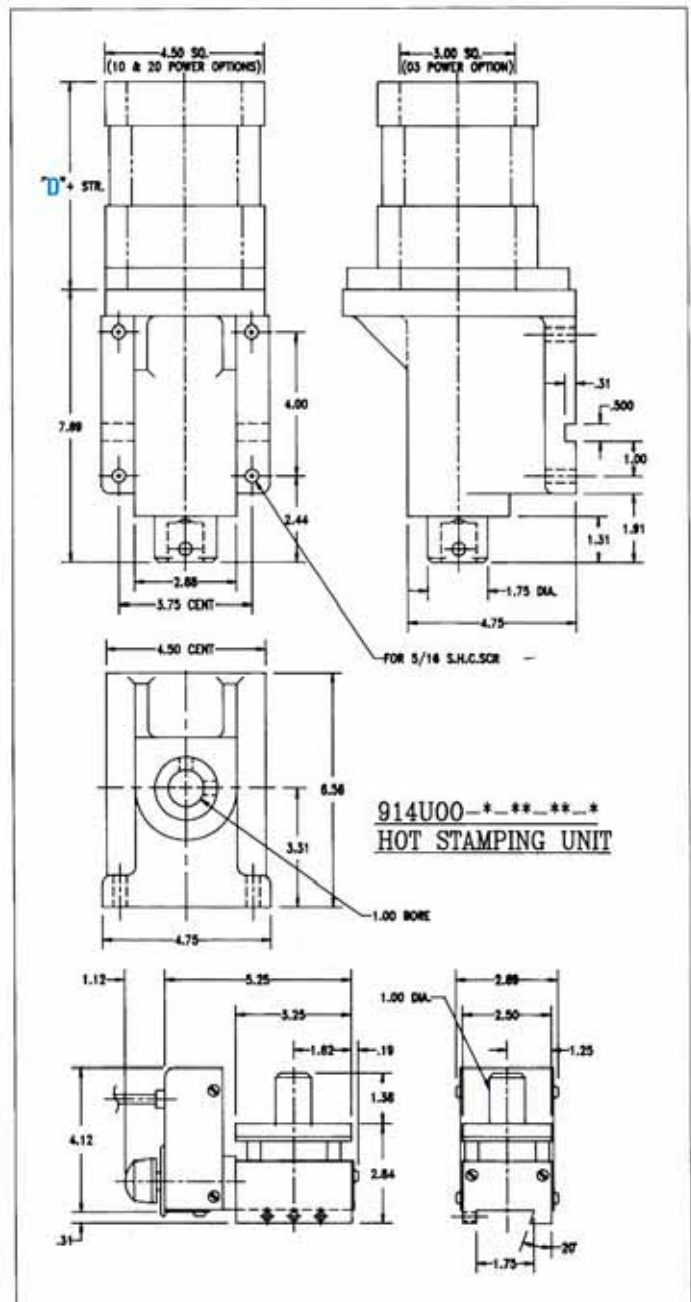
#### EC, Electric controls include:

- ergonomic touchless anti-tie down anti-repeat palm buttons\*
- electric valves
- solid state adjustable timer
- digital remote heat control (for use with thermocouple)

In addition to the electrical control package above, EF includes a foil feed mechanism and controls.

\*Electric palm buttons may be replaced with a part present cycle start, and pass through safety guarding.

#### MOUNTING DIMENSIONS



For Dimension D see Schedule A  
(Dimension D+(2 x STR) for power =20)

#### Standard Specifications:

max. ram force - 2000 lbs  
operating pressure - 20 to 80 psi  
max. temperature - 450 degrees f  
dwell time - 0 to 20 seconds  
electrical requirements - 120 V AC  
standard imprint area - 2" x 3/8"  
(Larger sizes available on request)

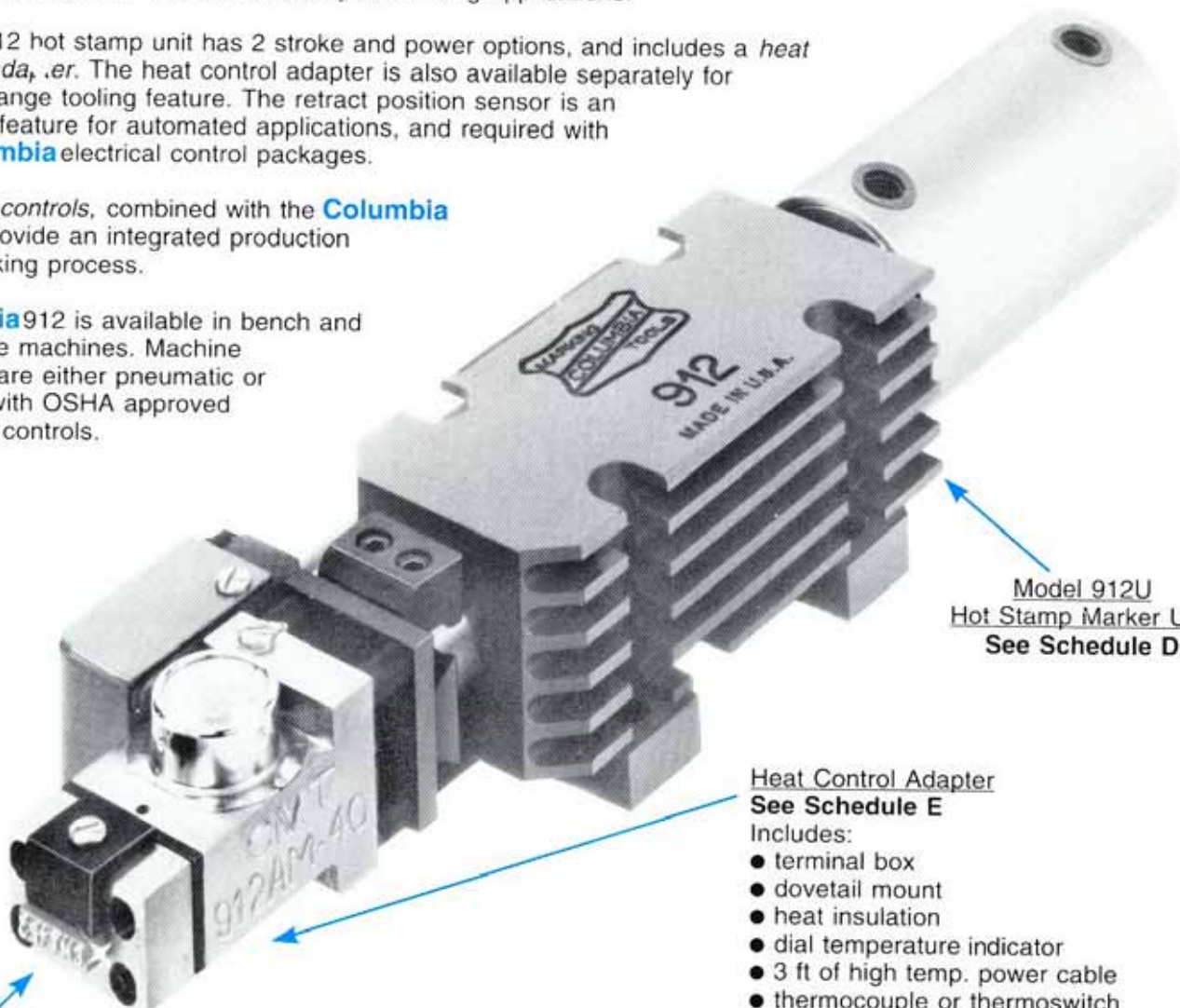
### MODEL 912 HOT STAMP MARKER

The versatile **Columbia** Model 912 air operated hot stamp marker, delivering up to 360 lbs of force, is utilized in the widest variety of marking applications.

Model 912 hot stamp unit has 2 stroke and power options, and includes a *heat control adapter*. The heat control adapter is also available separately for quick-change tooling feature. The retract position sensor is an optional feature for automated applications, and required with all **Columbia** electrical control packages.

Modular controls, combined with the **Columbia** 912U, provide an integrated production line marking process.

**Columbia** 912 is available in bench and floor style machines. Machine controls are either pneumatic or electric with OSHA approved operator controls.



Model 912U  
Hot Stamp Marker Unit  
See Schedule D

Heat Control Adapter  
See Schedule E

- Includes:
- terminal box
  - dovetail mount
  - heat insulation
  - dial temperature indicator
  - 3 ft of high temp. power cable
  - thermocouple or thermoswitch
  - may be ordered separately

#### Holder & Stamps

##### See Schedule F

Model 912 has 3 standard holders for CMSH step style type, and 1 standard holder for 7XH round-inserts (see page 11).

Schedule F Model 912 Std Holders & Stamp Insert Capacity								
Symbol	Character Size					Dim.		
	1/16	3/32	1/8	3/16	1/4	A	B	
912HA-75	12	8	6			0.75	0.25	
912HB-75				4		0.75	0.31	
912HC-75					3	0.75	0.38	
912HX-7	1	1	1	1	1	0.25 diam.		

Schedule E Columbia Model 912 Heat Control Adapter		
Feature	Symbol	Example
for Model 912	912A	912AJ-40
<i>Heat Sensor</i>		
J wire thermocouple monitoring*	J	
manually adjusted thermoswitch	M	
400 watt unit	40	

\*for remote heat control, other thermocouples are available on request.

### MODEL 912 HOT STAMP MARKER

#### HOW TO ORDER

To Order: Select only those symbols that represent marker feature required and place them in the sequence indicated by the example.

Schedule D Columbia Model 912 Hot Stamp Marker		
MODEL/FEATURE	Symbol	Example
Model 912 Hot Stamp	912	912BEC-J-10-03-0
Automation Unit	U00*	
Special Design	S**	
Bench Style Machine	B	
Floor Style Machine	F	
<i>Machine Controls</i>		
pneumatic controls	P C	
electric controls	E C	
electric with foil feed	E F	
<i>Heat Control</i>		
with 912AJ-40 heat control	J	
with 912AM-40 heat control	M	
none	O	
<i>Stroke</i> Dim 'C'		
1.00" max.	4.25	10
2.00" max.	5.25	20
<i>Power</i> Dim 'D'		
240 lbs. force	2.25	02
360 lbs. force (80 PSI rating)	2.75	03
<i>Position Sensor</i>		
none	O	
retract position sensor**	R	

\*automation unit is offered without controls. for modular controls (see page 10).

\*\*special designs receive a 5 digit alphanumeric code, example 912S-A1234

\*\*2 wire, 20-250 V AC/DC proximity switch, required for CMT electrical controls.

**Machine controls** are either pneumatic or electric (PLC). All controls include air filter, pressure regulator, lubricator, and air shutoff valve with lockout.

#### PC, Pneumatic controls include:

- air dual anti-tie down anti-repeat palm buttons
- air valves
- pneumatic timer
- basic heat control (for use with thermoswitch)

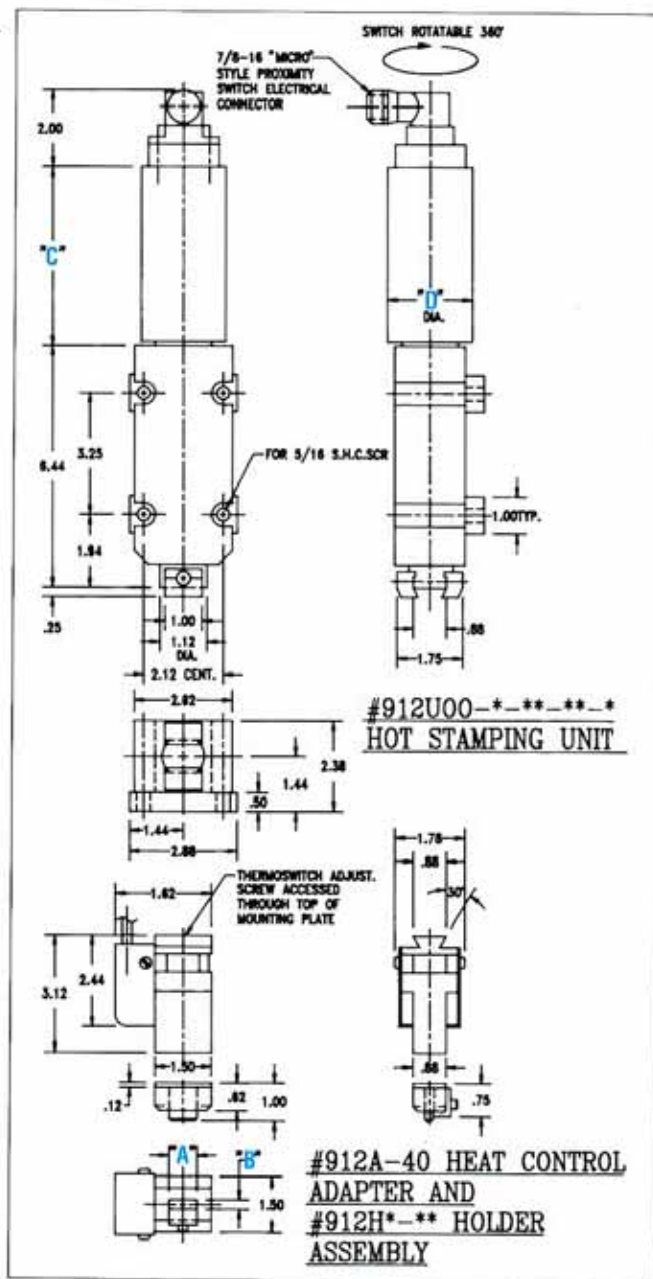
#### EC, Electric controls include:

- ergonomic touchless anti-tie down anti-repeat palm buttons\*
- electric valves
- solid state adjustable timer
- digital remote heat control (for use with thermocouple)

In addition to the electrical control package above, EF includes a foil feed mechanism and controls.

\*Electric palm buttons may be replaced with a part present cycle start, and pass through safety guarding.

#### MOUNTING DIMENSIONS



For dimensions A & B see schedule F  
For dimensions C & D see schedule D

#### Standard Specifications:

max. ram force - 360 lbs  
operating pressure - 20 to 80 psi  
max. temperature - 450 degrees f  
dwell time - 0 to 20 seconds  
electrical requirements - 120 V AC  
standard imprint area - 3/4" x 3/8"  
(Larger sizes available on request)

### HOT STAMP MARKER MODEL 911 MITE-E-HOT

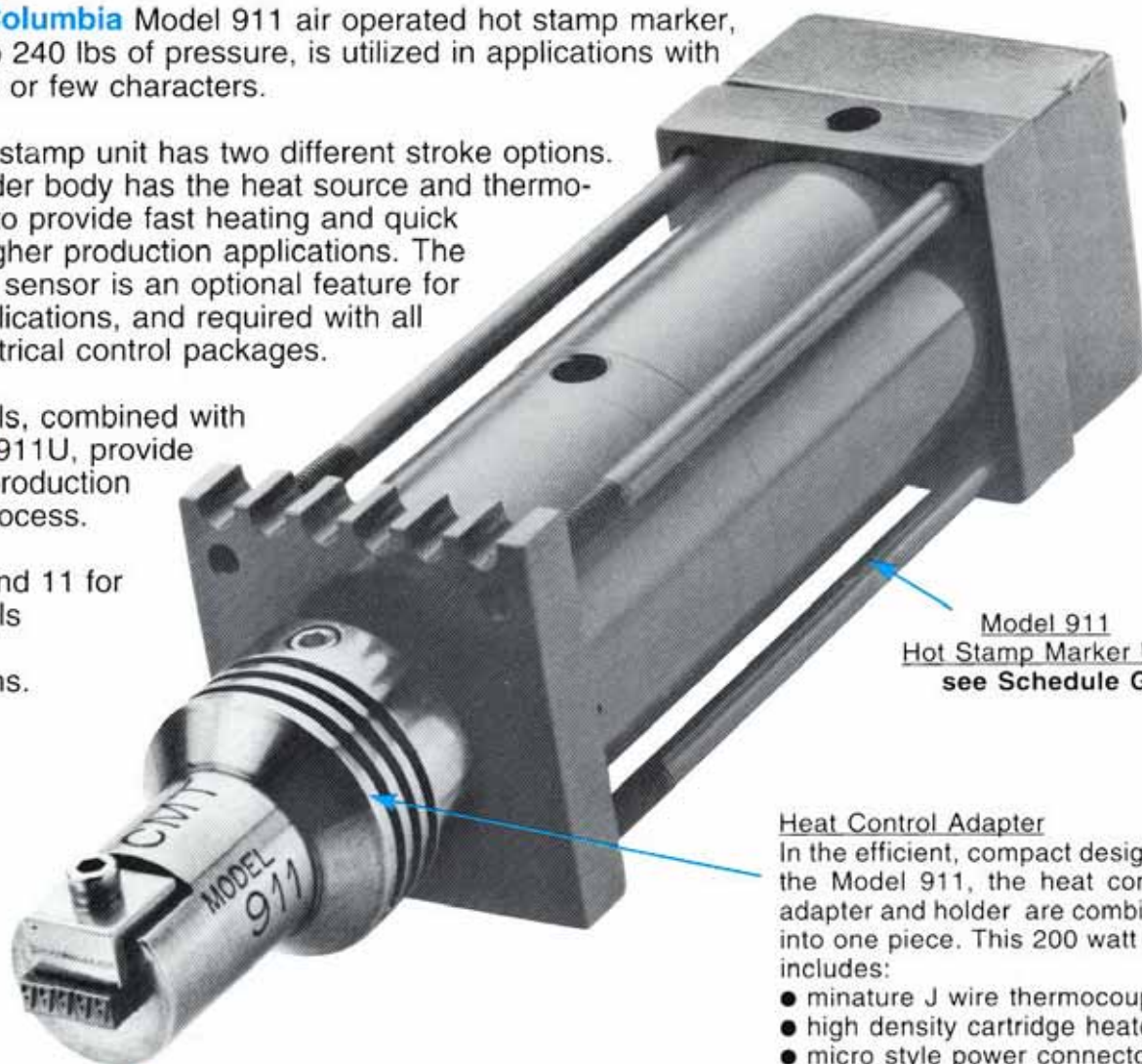
The compact **Columbia** Model 911 air operated hot stamp marker, delivering up to 240 lbs of pressure, is utilized in applications with restricted space or few characters.

Model 911 Hot stamp unit has two different stroke options. The stamp holder body has the heat source and thermocouple built in to provide fast heating and quick recovery for higher production applications. The retract position sensor is an optional feature for automated applications, and required with all **Columbia** electrical control packages.

Modular controls, combined with the **Columbia** 911U, provide an integrated production line marking process.

See page 10 and 11 for modular controls and additional standard options.

**Columbia** also designs machines and tooling for unique applications.



Model 911  
Hot Stamp Marker Unit  
see Schedule G

#### Heat Control Adapter

In the efficient, compact design of the Model 911, the heat control adapter and holder are combined into one piece. This 200 watt unit includes:

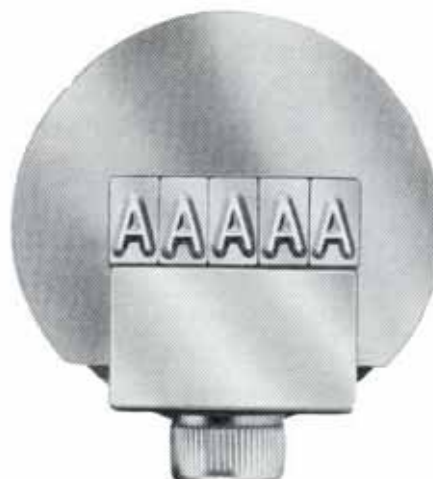
- miniature J wire thermocouple\*
  - high density cartridge heater
  - micro style power connector
- \*for remote heat control

#### Holder Body & Stamps see Schedule H

Model 911 has 3 standard holders for CMSH step style type, and 1 standard holder for 7XH round inserts (see page 11).

Schedule H Holder Body Stamp Insert Capacities							
Holder Style	Character Size					Dim.	
	1/16	3/32	1/8	3/16	1/4	A	B
911HA-62	10	6*	5			0.62	0.25
911HB-56				3		0.56	0.31
911HC-50					2	0.50	0.38
911HX-7	1	1	1	1		.25 Diam.	

\*Requires 1/16" spacer



Model 911HA-62 shown with CSMH type.

### MODEL 911 HOT STAMP MARKER

#### MOUNTING DIMENSIONS

#### HOW TO ORDER

To Order: Select only those symbols that represent marker feature required and place them in the sequence indicated by the example.

Schedule G Columbia Model 911U Hot Stamp Marker Unit		
MODEL/FEATURE	Symbol	Example
911 Hot Stamp Unit	911U	911UA-10-0
<i>Holder Body</i>		
with 911HA-62	A	
with 911HB-56	B	
with 911HC-50	C	
with 911HX-7	X	
special	S*	
<i>Stroke Option</i> Dim. 'C'		
1.00" max.	2.56      10	
2.00" max.	3.56      20	
<i>Position Sensor</i>		
none	O	
retract position sensor**	R	

\*Special designs receive a 5 digit alphanumeric code, example 911US-A1234.

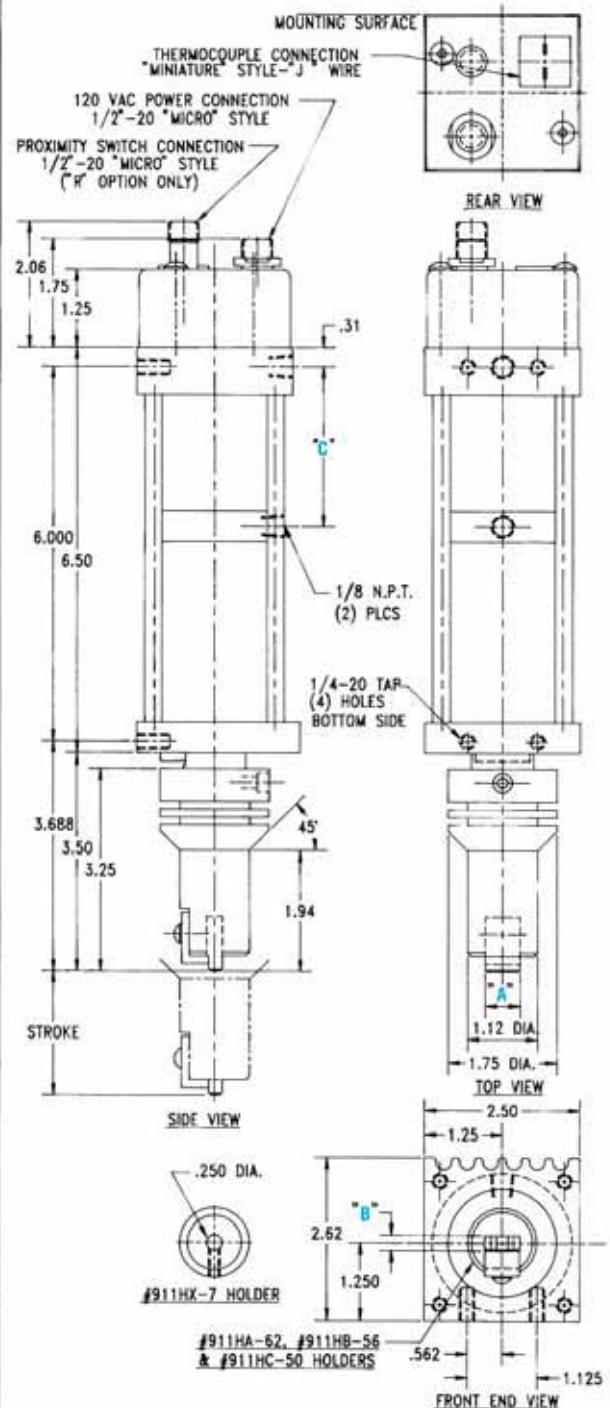
\*\*Required for all CMT elect. control packages, 2-wire, 35-250 V AC proximity switch.



MITE-E-HOT Model 911U enables marking in constricted areas because of its small size.

#### Standard Specifications:

maximum pressure - 225 lbs  
operating pressure - 20 to 80 psi  
maximum temperature - 350 degrees f  
dwell time - 0 to 5 seconds  
electrical requirements - 120 V AC



### COLUMBIA HOT STAMP MARKING OPTIONS

#### HOW TO ORDER

To Order: Select only those symbols that represent the marker feature required and place them in the sequence indicated by the example.

#### Retro-Fit Valve Pack

**ARVP**, air controlled retro-fit valve pack for use with 900C-BH modular heat control, includes: lockout shutoff valve, air filter, pressure regulator with guage, air lubricator, air operated dwell timer, and control valve.

**ERVP**, electric retro-fit valve pack for use with 900C-DH modular heat controls, includes: lockout shutoff valve, air filter, pressure regulator with guage, air lubricator, and solenoid control valve.

#### Retro-Fit Valve Pack

Option	Catalog No.
with pneumatic timer	900ARVP
with electric timer	900ERVP

For use with model 911, 912, and 914 automation units.

#### Foil Feed Mechanism, & Controls

Color imbedded impressions are obtained by using color foil, fed in proper increments by our foil feed unit. Available on Models 914U and 912U, this foil feed accomodates standard 200 foot rolls in widths from 1/2 to 4 inches.

Foil Feed Option	Catalog No.
for Model 914	914FF
for Model 912	912FF

\*Foil Feed mechanism includes digital remote heat controls for use with thermocouple

#### Modular Heat Controls

Modular controls for the 900 series hot stamp markers supply the temperature control and can be combined with a manufacturing system provide an integrated production line process.

The digital remote heat (DH) control is used with a thermocouple heat sensor in the hot stamp marker unit.

Option	Symbol	Example
<b>Modular Heat Controls</b> (for automated units)		911C-DH
for Model 911	911C	
for Model 912	912C	
for Model 914	914C	
Digital Remote (for use with thermocouple)	DH	

For use with model 911, 912, and 914 automation units.



Columbia 912 with a foil feeder.

#### Hot Stamping Foil

Color foil is available in a variety of widths on 200 foot rolls offered in a range of colors and metal finishes. Custom formulating is available for special applications such as chemical and abrasion resistance, heavy coverage, and quick-release. **Columbia** can provide you a detailed guide for temperature setting, dwell time, pressure, material variations, and color, upon request.

### COLUMBIA HOT STAMP MARKING

#### Numbering Heads

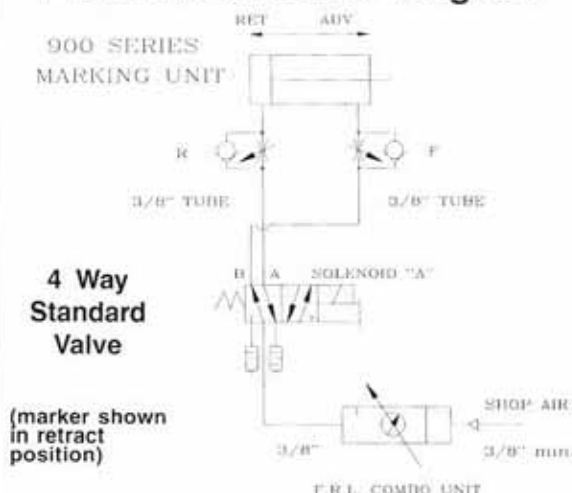
**Columbia** model 123H automatic and 30H non-automatic numbering heads are available tooling options on Model 914 hot stamping units and machines. Our heads feature:

- Ampco bronze wheels
- press shank or dovetail mount
- multiple controlled heat profile cartridge heaters for uniform heat
- heat resistant power cord (pre-wired)
- choice of thermocouple or self contained thermostat
- a patented pawl system that allows easy setting and positive alignment
- character sizes from 1/16" to 2"
- sturdy frames



Columbia 123H automatic numbering head with 4 numeric wheels and press shank mount.

#### Pneumatic Control Diagram



**Electrical sequence for solenoid valve**

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

**Speed Control Adjustment**

Adjust speed control "F" to control speed of forward motion.

Adjust speed control "R" to control speed of retract motion.

### GUIDE TO ORDERING HOT STAMP STEEL TYPE AND INSERTS

Columbia's easy method of ordering steel type and inserts by catalog number



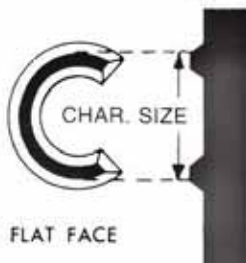
To order individual LETTERS and FIGURES, add suffix of actual letter or figure to catalog number

**CMS**  
Style

**09**  
Char Size

**A**  
Letter or Figure

#### Measuring Letters & Figures



#### STYLE CMSH

Char Size	A	B	Catalog No.
1/16	1/16	1/4	CMSH06-
3/32	3/32	1/4	CMSH09-
1/8	1/8	1/4	CMSH13-
3/16	3/16	5/16	CMSH19-
1/4	1/4	3/8	CMSH25-

Made from wear resistant tool steel, and heat treated inhouse, these high quality stamp inserts stand up best under high production marking conditions.

#### STYLE CM7XH

Char Size	Catalog No.
1/16	CM7XH06-
3/32	CM7XH09-
1/8	CM7XH13-
3/16	CM7XH19-

# CMT

## COLUMBIA MARKING TOOLS

*Columbia ...Dedicated marking specialists, setting the standards for quality equipment, backed by "True Customer Service".*

Columbia designs and manufactures quality marking products for the manufacturing industry and component producers while introducing innovative ideas to customize marking systems for increased efficiency.

In addition to hot stamp marking, Columbia offers a complete line of marking equipment.



### Warranty

Seller warrants the goods sold hereunder to be free from defects in material and workmanship. This warranty shall terminate twelve months after date of shipment from Seller's plant and claims not made in writing within such period are waived.

The above warranty does not extend to goods damaged after date of shipment from the Seller's plant where damage is not directly due to a defect in material workmanship, nor does it apply to goods altered or repaired by anyone other than the Seller's authorized employees, nor to goods furnished by Buyer or acquired at Buyer's request and/or to Buyer's specifications.

When claiming a breach of warranty, Buyer must notify Seller promptly whereupon Seller will issue shipping instructions for return to Seller (transportation cost prepaid by Buyer). When goods sold hereunder are proven not as warranted, Seller's sole obligation under this warranty shall be to repair or replace the goods, at its option, without charge to Buyer.

Consequential damages: In no event shall Seller be liable for consequential or special damages arising out of delay in or failure of delivery, defects in material or workmanship, or arising out of a breach by Seller of any other term or obligation of Seller under this contract.

The above warranty comprises Seller's sole and entire warranty obligation and liability to Buyer, its customers and assigns in connection with goods sold hereunder. All other warranties, express or implied, including but not limited to, warranties of mechanical fitness, are expressly excluded.

### Service Policy

On hot stamp markers returned to the factory for repairs, it is standard policy for the Hot Stamp Marker Division to make such part replacements as will put the hot stamp marker in as good as new condition. Should the condition of the returned hot stamp marker be such that expenses for repair would exceed the cost of a new marker, you will be notified.

Address all correspondence and make shipments to: Service Department, Columbia Marking Tools, 42600 Executive Dr., Harrison Twp., MI 48045



AIR IMPACT MARKERS

NUMBERING HEADS  
(roll & straight style)

HYDRAULIC  
MARKING MACHINES

HAND STAMPS

MARKING DIES

ROLL DIES

STAMP HOLDERS

INSPECTION  
HAMMERS

AUTOMATIC  
MARKING  
MACHINES

PNEUMATIC  
MARKING  
MACHINES

STEEL STAMPS



SINGLE BLOW AIR  
HAMMERS



TAG MARKERS



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Chesterfield, MI 48047  
Phone: 586.949.8400 Fax: 586.949.8401  
[www.columbiamt.com](http://www.columbiamt.com)

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... everytime**