



(Picture shown is Marathon SLA+ with double roll stand)

THE MARATHON® SLA is the low to mid speed model in the Marathon series of labelers. Marathon roll-fed labelers feature SMARTdrive®, the industry’s first, all-electronic drive train. Based on a four-axis servomotor design supported by up to four variable frequency drives, SMARTdrive® eliminates the mechanical complexity of other labeling machines. As a result, Marathon offers simpler operation, faster changeovers, increased uptime and productivity, and the lowest total cost of ownership over the machine lifetime.

SPEED AND FLEXIBILITY FOR MULTIPLE APPLICATIONS

The Marathon SLA utilizes the in-line roll-fed labeling concept invented by B & H to apply wrap-around labels to cylindrical containers at speeds up to 450 containers per minute. Container handling is performed by B & H’s patented Constant Velocity Starwheel System that accommodates both flattop and air conveyor systems. The SLA also offers a variety of available options to help it run a wide range of applications in the food, beverage, and household product markets.

HIGH PRODUCTIVITY AND LOW TOTAL COST OF OWNERSHIP

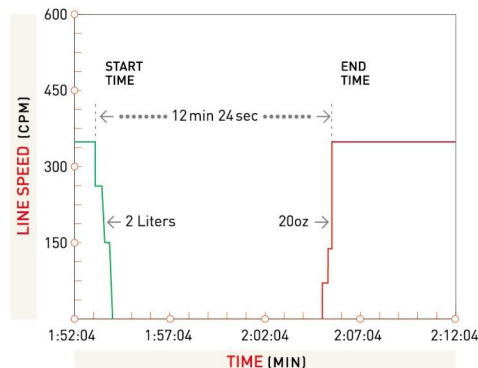
Accurate labeling of containers requires precise synchronization of key machine operations. Marathon is the first labeler to feature SMARTdrive®, a digitally based timing control system using multi-axis, independent servomotors communicating on a high-speed bus to achieve accurate, repeatable synchronization. In other labelers, synchronization is achieved by mechanically linking and timing key components using gears, belts or chains. As these components wear, synchronization becomes harder to achieve and maintain.

Marathon’s simplified SMARTdrive design also uses significantly fewer mechanical parts and delivers more consistent and accurate label application over the machine life. Other benefits include higher reliability and uptime, and lower total cost of ownership over the life of the labeler.

FAST, 15 MINUTE CHANGEOVERS

Key machine set-up parameters are stored in a “recipe” database and downloaded for each container and label combination. The PLC then automatically sets all key components to their zero position so labeling can begin. This eliminates the need for tedious machine adjustments after replacing change parts. Marathon sets a new standard for container changeover time - **less than 15 minutes from one full production speed to the next.**

CHANGEOVER TIME



Actual recorded data taken on changeover from 2 liter to 20 oz containers. Changeover time -- defined as the time between full production speeds -- including the removal and replacement of change parts.

DESIGNED WITH THE OPERATOR IN MIND

Set-up and control is simplified with an operator HMI that swivels for easy viewing. Its color touchscreen interface offers intuitive features such as drop-down menus, graphs, and navigation bars.

MARATHON® SLA HIGHLIGHTS

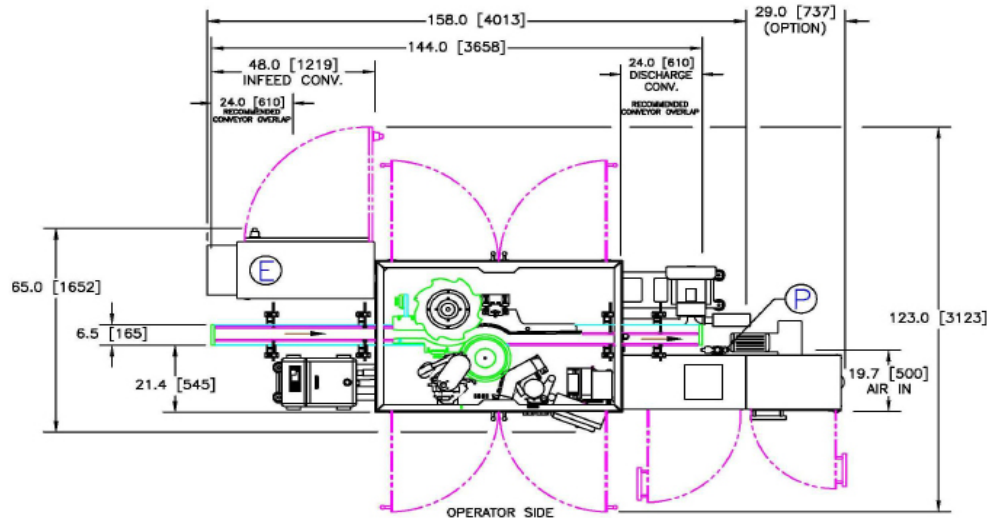
- Everyday production speeds up to 450 containers per minute
- Available in straight-through conveyor configuration
- Allen-Bradley controls and drive train components standard
- Electrical cabinet can be located up to 80’ from labeler
- 15 minute production speed to production speed size changeovers
- Patented constant velocity starwheel system delivers smooth, efficient container handling
- Innovation passive starwheel with secondary roll-on belt system can increase speeds up to 450 containers per minute
- Intelligent Registration Control system is standard
- Marathon SLA PLC can be programmed to execute upstream and downstream line control functions to maximize productivity
- Lower maintenance requirements and lower spare parts consumption versus mechanical or rotary labelers
- Superior Total Financial Impact (TFI) versus other labelers based on higher productivity and lower total cost of ownership

“INNOVATION FOR THE LONG RUN®”

MARATHON® SLA SPECIFICATIONS⁺

PRINCIPLES OF OPERATION

Roll-fed labels are supplied from a roll in the form of a continuous web, fed in precise registration with a printed graphic, cut in precise registration, transferred to a rotating vacuum drum, and then a hot melt adhesive is applied to the label using a rotating glue wheel. Cut labels with adhesive are then applied to individual containers which are rotated to complete the label application process. During this process, containers enter the labeler via an infeed conveyor, and are then metered and separated by a rotating feed screw and pocketed starwheel or by a rotating constant velocity starwheel. The starwheel delivers containers to a rotating vacuum drum that transports the label from the cutter, to the glue wheel, and then onto the container as described above. Precise label application is achieved by rolling the container across the label-bearing surface of the vacuum drum. The labeled container then ends contact with the vacuum drum, and it exits the labeler via a discharge conveyor.



GENERAL FEATURES

CONVEYOR: straight-through conveyor configuration, stainless steel, left hand feed

TABLETOP & LOWER GUARDING: stainless steel

UPPER GUARDING: swing out, polycarbonate doors with safety interlocks standard

MAIN DRIVE SYSTEM: SMARTdrive®, all electronic drive train with four servo axes and three to four variable frequency drives

PLC: Allen-Bradley

HOT-MELT SYSTEM: Nordson re-circulating, continuous flow

VACUUM SYSTEM: multi-valve system with independent controls

ELECTRONICS ENCLOSURE: dual cabinets, stainless steel; built-in air conditioner

OPERATOR CONTROL STATION: color HMI touch-screen

CHANGE PARTS: color-coded, Rapid Changeover (RCO®) change parts standard

CONTAINER HANDLING FEATURES

CONTAINER INFEED: patented Constant Velocity Starwheel System for smooth container handling and fast changeovers

AUTOMATIC LINE SPEED CONTROLS: automatic adjustment of machine speed based on container supply at infeed and discharge

MISSING CONTAINER DETECTION & ALARMS: standard

ROLL-ON PAD: fine adjustment for pitch control

LABEL HANDLING FEATURES

REGISTRATION CONTROL: Allen-Bradley, Marathon Intelligent Registration Control System standard

LABEL ROLL STANDS: single, enclosed label roll stand with automatic tensioning system standard

LOW REEL ALARM: detects low reel status and automatic alarm notifies operator; label countdown capability allows operator to minimize butt-roll label scrap

BROKEN WEB SAFETY & ALARM: detects broken web condition and automatically shuts down machine

VACUUM DRUM SAFETY & ALARM: detects missing label on vacuum drum and automatically shuts down machine

ADVANCED HMI FEATURES

SYSTEM SECURITY: configurable by site and by logon ID

EXTENSIVE TROUBLESHOOTING DISPLAYS: standard

DOWNLOADABLE SET-UP RECIPES: Easy machine set-up and fast changeovers

AVAILABLE OPTIONS

INVIATION™ CUTTER

WEBTRACKER

ROLL-ON BELT SYSTEM

SECOND ROLL STAND

REMOTE ACCESS MODULE

QUICK RELEASE HAND VALVES FOR LABEL ROLL CORE CHUCKS

ADDITIONAL SETS OF RCO CHANGEPARTS

INVIATION PASSIVE STARWHEEL SYSTEM

SIEMENS PLC AND DRIVE TRAIN

Speed Range*:

Base model:
50 - 200 CPM (containers per minute)

With roll-on belt:
50 - 350 CPM

With roll-on belt and Inviation passive starwheel:
50 - 450 CPM

Container Handling:

B & H's patented Constant Velocity Starwheel System

Container Diameter Range*:

Label Panel Diameter Range:
Marathon SLA: 1.88 - 5.02 in (47.8 - 127.5mm)
Marathon SLA+: 1.88 - 6.14 in (47.8 - 155.9mm)

Label Size Range*:

Length (for complete wrap):
Marathon SLA: 6.28 - 16.24 in (159.5 - 412.5 mm)
Marathon SLA+: 6.28 - 19.79 in (159.5 - 502.6mm)

Width:

Marathon SLA/SLA+: 1.0 - 9.5 in (25.4 - 241 mm)

Container Materials:

Plastic, glass, metal, fiberboard

Label Materials:

Paper, PP, BOPP, PVC, PE, and PS, in single and multi-layer structures

Ambient Operating Conditions:

Temperature: 50° - 120° F (10° - 49° C)
Relative Humidity: 10 - 90%, non-condensing

Controls and Drive Train:

Allen-Bradley - Standard
Siemens - Available Option

Electrical:

Main voltage: 380 - 480 VAC; 3 phase;
40 amps max

Air:

80 PSI via 0.5 NPT;
Consumption approximately 2 CFM

Conveyor Configuration:

Straight-through, left-hand infeed, stainless steel

Conveyor Height: Adjustable 36.5 to 39.0 in (927mm - 991mm)

+ Specifications subject to change without notice.

* Container diameter, label length, and speed range specifications are based on a standard machine configuration. Applications outside of this range require evaluation by B & H.

B & H Labeling Systems

3461 Roeding Road
Ceres, California 95307-9442

Tel: +1.209.537.5785

Fax: +1.209.537.6854

www.bhlabeling.com

